Nacelle Aerodynamic and Inertial Loads (NAIL) Project
Contract NAS3-15325

CSCL 01C G3/05 12625

FOR EARLY DOMESTIC DISSEMINATION
ERRATA

p. viii, line 6
change to Wing Upper Surface

p. 2, lines 1 through 4
delete; add "During the IPSA portion of the NAIL program, surface static pressures were measured as follows on both the inboard and outboard engine installations:

• Internal and external inlet surfaces
• Engine core cowlings
• Pylon
• Neighboring upper and lower wing surfaces

A data base at these locations was acquired at Mach numbers 0.77, 0.80, 0.86, and 0.91 through three test flights."

p. 3, line 7
change NASI to NAS1

p. 6, line 11
change 499 to 557 and 322 to 380

p. 9, line 26
change $\left( W_A \sqrt{\frac{\theta T_2}{\delta T_2}} \right)$ to $W_A \sqrt{\frac{\theta T_2}{\delta T_2}}$

p. 10, insert
$\infty$ free stream value
$\alpha$ angle of attack

$\theta T_2$ total temperature ratio at engine face, $T_2 / T_{SLS}$
$\rho$ air density, slug/ft$^3$
$\theta$ circumferential position, degrees

$\delta T_2$ total pressure ratio at engine face, $P_2 / P_{SLS}$

p. 10, line 20
add SUBSCRIPTS after $T_2$ and before $f$

p. 10, line 22
change "pylon-core cowl intersection" to "pylon-fan cowl intersection"

pp. 11 & 12, line 1
change "pylon-fan cowl intersection" to "pylon-core cowl intersection"

p. 16, figure 5
at top of photograph, obliterated callouts are 809, 834, and 870, reading left to right

p. 16, figure 6
callouts reading from top to bottom in lower left-hand corner are
Inboard aileron
Trailing-edge flaps
p. 25, figure 9
in table for outboard engine (No. 4) change the Point T NAC STA value from 216.12 to 206.10

delete "Side View" from over bulleted items

in upper right hand corner, change "2°" callout to "2-deg pitch-up"

p. 28, line 2
change to "...up to 2 deg relative to the WRP (fig. 9)."

p. 28, line 10
change to "...WLT for each engine using distances given in figure 9."

p. 28, line 17
add after "...or WBL 834 outboard."—"This reference nacelle station is labeled NAC STA in figure 9."

p. 29, table 4
in table, change 301.07 cm (118.53 in) to 301.056 cm (118.526 in)

under \( r_{EXT/L_k} \) (first part of table) change values to

\[
\begin{align*}
0.2869 \\
0.2859 \\
0.2829 \\
0.2812 \\
0.2799 \\
0.2781 \\
0.2765 \\
0.2747 \\
0.2730 \\
0.2708 \\
0.2696 \\
0.2662 \\
0.2638
\end{align*}
\]

and in second column \( r_{EXT/L_k} \) change 0.2329 to 0.2330

p. 35, table 7
change callout M to G (upper left-hand corner)

change \( C_m = 206.080 \) cm (81.134 in) to \( C_g = 206.080 \) cm (81.134 in)

\( X,Y = 0 \) at \( m \) to \( X,Y = 0 \) at \( G \)

change first line of table to

\[
\begin{align*}
X/C_g \\
Y/C_g \\
z/C_g
\end{align*}
\]

p. 36, table 8
in INBOARD and OUTBOARD tables interchange \( Y/C_n \) and \( Z/C_n \) headings
in INBOARD and OUTBOARD tables interchange $Y/C_n$ and $Z/C_n$ headings

replace with two new pages

delete 0.2750 and 0.4750 under WBL 445, UPPER and close up

change NAC WL 180 to NAC WL 155 and change NAC WL 155 to NAC WL 180

change title to Accelerometer Installation (Thrust Link)

line 14, add "Surge valve bleed position" in second column

change $M_C$ and $V_C$ to read $M_D$ and $V_D$

replace

change 10 ft/s to 5 ft/s

APPENDIX A

delete Engine 4 callout and boxed data

change CONDITION 117, 1.5g to CONDITION 117, 1.6g

change CONDITION 121, 1.5g to CONDITION 121, 1.6g

replace

replace

APPENDIX B

delete data point at 1.25 on 090-deg plot

delete data point between 1.25 and 1.50 on 150-deg plot

delete data points between 1.25 and 1.75
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-12, figure B-1</td>
<td>delete data points between 1.25 and 1.75</td>
</tr>
<tr>
<td>B-13, figure B-1</td>
<td>delete data points between 1.00 and 1.50</td>
</tr>
<tr>
<td>B-29, figure B-2</td>
<td>delete data points between 1.25 and 1.75</td>
</tr>
<tr>
<td>B-30, figure B-2</td>
<td>delete data points between 1.25 and 1.50 on 090-deg plot</td>
</tr>
<tr>
<td></td>
<td>delete data points between 1.25 and 1.50 on 150-deg plot</td>
</tr>
<tr>
<td>B-31, figure B-2</td>
<td>delete data points between 1.50 and 1.75</td>
</tr>
<tr>
<td>B-32, figure B-2</td>
<td>delete data points between 1.00 and 1.75</td>
</tr>
<tr>
<td>B-33, figure B-2</td>
<td>delete data points between 1.00 and 1.75</td>
</tr>
<tr>
<td>B-49, figure B-3</td>
<td>delete data points between 1.25 and 1.75</td>
</tr>
<tr>
<td>B-50, figure B-3</td>
<td>delete data point at 1.25</td>
</tr>
<tr>
<td>B-51, figure B-3</td>
<td>delete data points between 1.00 and 1.50</td>
</tr>
<tr>
<td>B-52, figure B-3</td>
<td>delete data points between 1.25 and 1.75</td>
</tr>
<tr>
<td>B-53, figure B-3</td>
<td>delete data points between 1.00 and 1.75</td>
</tr>
<tr>
<td>B-54, figure B-3</td>
<td>delete data points between 1.00 and 1.75</td>
</tr>
<tr>
<td>B-85 through B-87, figure B-5</td>
<td>delete local Mach = 0.0 data points</td>
</tr>
<tr>
<td>B-89, figure B-5</td>
<td>replace graph</td>
</tr>
<tr>
<td>B-91, figure B-5</td>
<td>WBL 870, replace graph</td>
</tr>
<tr>
<td>B-101 through B-103, figure B-5</td>
<td>delete local Mach = 0.0 data points</td>
</tr>
<tr>
<td>B-106, figure B-5</td>
<td>WBL 870, replace graph</td>
</tr>
<tr>
<td>B-116 through B-118, figure B-7</td>
<td>delete local Mach = 0.0 data points</td>
</tr>
<tr>
<td>B-121, figure B-7</td>
<td>WBL 870, replace graph</td>
</tr>
<tr>
<td>B-135, figure B-8</td>
<td>WBL 870, replace graph</td>
</tr>
</tbody>
</table>

Replaced entirely

MICROFICHE
NACELLE AERODYNAMIC AND INFERTIAL LOADS (NAIL) PROJECT

TEST REPORT

Contract NAS1-15325
MAY 1981

BOEING COMMERCIAL AIRPLANE COMPANY
FOREWORD

This document constitutes the test report of work conducted under NASA contract NAS1-15325 from October 1979 through November 1980. The contract was managed by the NASA Energy Efficient Transport Office (EETPO), headed by Mr. R. V. Hood—a part of the Aircraft Energy Efficiency (ACEE) program organization at the Langley Research Center. Mr. D. B. Middleton and Mr. K. W. Heising were the technical monitors for the contract. The work was performed within the Vice-President-Engineering and the Vice-President-Flight Operations organizations of the Boeing Commercial Airplane Company. Key contractor personnel responsible for the contract work were:

G. W. Hanks          F. J. Davenport
Program Manager      Structures Technology

R. L. Martin          F. W. McIlroy
Project Manager       Flight Test Instrumentation

K. H. Dickenson       C. D. Beard
Structures Technology Flight Test Instrumentation

W. R. Lambert         E. L. Wallace
Propulsion Technology Flight Test Analysis

W. F. Wilson          R. D. LaBounty
Flight Test Operations Industrial Engineering Flight Test Support

B. W. Farquhar        B. G. Skelton
Propulsion Technology Flight Test and Crew Training Support

Results of the total program, including analysis of the test data contained in this report, will be provided in a separate NASA contractor report.

The test effort was conducted in cooperation with the Pratt and Whitney Aircraft Company, who were supported by the NASA Lewis Research Center under Contract NAS3-20632.
Principal measurements and calculations used during these studies were in customary units.
<table>
<thead>
<tr>
<th>TABLES</th>
<th>ORIGINAL PAGE IS OF POOR QUALITY</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Wing Coordinates</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>2 Engine 3 Pylon Coordinates</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>3 Engine 4 Pylon Coordinates</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>4 Engines 3 and 4 Core Cowl Coordinates</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>5 Engines 3 and 4 Inlet Coordinates</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>6 Engines 3 and 4 Fan Cowl Coordinates</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>7 Engines 3 and 4 Pylon-Fan Cowl Intersection</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>8 Engine 3 Wing-Pylon Intersection</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>9 Engine 4 Wing-Pylon Intersection</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>10 Pylon-Core Cowl Intersection</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>11 Wing Pressure Orifice Locations</td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>12 Engine 3 Pylon Pressure Orifice Locations</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>13 Engine 4 Pylon Pressure Orifice Locations</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>14 Engine 3 Inlet Pressure Orifice Locations</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>15 Engine 4 Inlet Pressure Orifice Locations</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>16 Engines 3 and 4 Core Cowl Pressure Orifice Locations</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>17 Lateral Offset of Wing Pressure Belt Pressure Orifices From Wing Buttock Line</td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>18 Test Conditions Flown</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>19 Inboard Aileron</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>20 Pressure Coefficient</td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>21 Summary of Measurements of Engine Performance</td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>22Engine Fuel-Flow Data</td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>23 Measurements for Engine Clearance</td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>24 Measurements of Turbine Case Temperature</td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>25 Engine 3 A-Flange Resultants</td>
<td></td>
<td>83</td>
</tr>
<tr>
<td>A-1 Engine 3 Pressure Port Locations</td>
<td></td>
<td>A-3</td>
</tr>
<tr>
<td>A-2 Pressure Corrections for Instrumentation Problems</td>
<td></td>
<td>A-6</td>
</tr>
<tr>
<td>A-3 Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 101 (612K)</td>
<td></td>
<td>A-7</td>
</tr>
<tr>
<td>A-4 Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 101 (538K)</td>
<td></td>
<td>A-8</td>
</tr>
<tr>
<td>A-5 Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 101 (647K)</td>
<td></td>
<td>A-9</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>A-6</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 118</td>
<td>A-10</td>
</tr>
<tr>
<td>A-7</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 102</td>
<td>A-11</td>
</tr>
<tr>
<td>A-8</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 103</td>
<td>A-12</td>
</tr>
<tr>
<td>A-9</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 104</td>
<td>A-13</td>
</tr>
<tr>
<td>A-10</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 105</td>
<td>A-14</td>
</tr>
<tr>
<td>A-11</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 106</td>
<td>A-15</td>
</tr>
<tr>
<td>A-12</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 107</td>
<td>A-16</td>
</tr>
<tr>
<td>A-13</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 108</td>
<td>A-17</td>
</tr>
<tr>
<td>A-14</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 109</td>
<td>A-18</td>
</tr>
<tr>
<td>A-15</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 110</td>
<td>A-19</td>
</tr>
<tr>
<td>A-16</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 111</td>
<td>A-20</td>
</tr>
<tr>
<td>A-17</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 112</td>
<td>A-21</td>
</tr>
<tr>
<td>A-18</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 113</td>
<td>A-22</td>
</tr>
<tr>
<td>A-19</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 114</td>
<td>A-23</td>
</tr>
<tr>
<td>A-20</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 115</td>
<td>A-24</td>
</tr>
<tr>
<td>A-21</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 116</td>
<td>A-25</td>
</tr>
<tr>
<td>A-22</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 117</td>
<td>A-26</td>
</tr>
<tr>
<td>A-23</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 120</td>
<td>A-27</td>
</tr>
<tr>
<td>A-24</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 121</td>
<td>A-28</td>
</tr>
<tr>
<td>A-25</td>
<td>Fourier-Bessel Coefficients for Engine 3 Pressures, Condition 123</td>
<td>A-29</td>
</tr>
<tr>
<td>B-1</td>
<td>Summary of Selected Test Condition Averages</td>
<td>B-3</td>
</tr>
<tr>
<td>B-2</td>
<td>Tabulated Data for Test 273-09, Condition 1.00.137.001</td>
<td>B-4</td>
</tr>
<tr>
<td>FIGURES</td>
<td>ORIGINAL PAGE IS OF POOR QUALITY</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>RA001 Test Airplane</td>
<td>Page 14</td>
</tr>
<tr>
<td>2</td>
<td>Inboard Engine Buildup</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Inboard Inlet Removal</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Inboard Engine Removal</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Pressure Orifice Configuration</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>Upper Wing Surface</td>
<td>16</td>
</tr>
<tr>
<td>7</td>
<td>747 Elastic Wing Twist</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>Wing Coordinate System</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>Nacelle Coordinate System</td>
<td>25</td>
</tr>
<tr>
<td>10</td>
<td>Inboard Engine Pressure Taps</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>Inboard Inlet Pressure Taps</td>
<td>45</td>
</tr>
<tr>
<td>12</td>
<td>Pressure Transducer</td>
<td>47</td>
</tr>
<tr>
<td>13</td>
<td>Pressure Transducer Installation</td>
<td>47</td>
</tr>
<tr>
<td>14</td>
<td>Pressure Transducer Box</td>
<td>48</td>
</tr>
<tr>
<td>15</td>
<td>Cowl Door Pressure Taps</td>
<td>48</td>
</tr>
<tr>
<td>16</td>
<td>Outboard Engine Pressure Taps</td>
<td>49</td>
</tr>
<tr>
<td>17</td>
<td>Inertial Data Sensors</td>
<td>49</td>
</tr>
<tr>
<td>18</td>
<td>Q-FLEX Accelerometer</td>
<td>50</td>
</tr>
<tr>
<td>19</td>
<td>Rate Gyro</td>
<td>50</td>
</tr>
<tr>
<td>20</td>
<td>Accelerometer and Rate Gyro</td>
<td>51</td>
</tr>
<tr>
<td>21</td>
<td>Accelerometer Installation (Thrust Link)</td>
<td>53</td>
</tr>
<tr>
<td>22</td>
<td>Clearance Monitoring System</td>
<td>53</td>
</tr>
<tr>
<td>23</td>
<td>Laser Generator Boxes</td>
<td>54</td>
</tr>
<tr>
<td>24</td>
<td>Fan Video Camera Installation</td>
<td>56</td>
</tr>
<tr>
<td>25</td>
<td>Turbine Video Camera Installation</td>
<td>56</td>
</tr>
<tr>
<td>26</td>
<td>Fan Laser Probe</td>
<td>57</td>
</tr>
<tr>
<td>27</td>
<td>Turbine Laser Probe</td>
<td>58</td>
</tr>
<tr>
<td>28</td>
<td>Turbine Laser Probe Installed</td>
<td>58</td>
</tr>
<tr>
<td>29</td>
<td>Laser Proximity Probe Locations</td>
<td>59</td>
</tr>
<tr>
<td>30</td>
<td>Laser System Video Monitors and Controls</td>
<td>60</td>
</tr>
<tr>
<td>31</td>
<td>Laser Video Tape Recorder</td>
<td>60</td>
</tr>
<tr>
<td>32</td>
<td>Nitrogen System</td>
<td>61</td>
</tr>
<tr>
<td>33</td>
<td>Expanded Engine Performance</td>
<td>61</td>
</tr>
<tr>
<td>FIGURES (Continued)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>34 Typical Cross-Section of Wing Pressure Belt</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>35 Acceptance Flight Profile</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>36 View of Pressure Ports.</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>37 Airborne Data Analysis and Monitoring System</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>38 Test Airplane Interior View.</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>39 Sign Convention for Steady-State Loads, Engine 3</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>40 Inlet Pitching Moment Time History, 538 000 lb Gross Weight Takeoff</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>41 Inlet Airload Moment Time History, 647 000 lb Gross Weight Takeoff</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>42 Airload Moment Time History, Stall Warning Maneuver, Flaps 10</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>A-1 Pressure Data Coordinate Conventions</td>
<td>A-30</td>
<td></td>
</tr>
<tr>
<td>A-2 Engine No. 3 Inlet Pressures, Condition 101, 612K GW Takeoff (Flaps 20).</td>
<td>A-31</td>
<td></td>
</tr>
<tr>
<td>A-3 Engine No. 3 Cowl Pressures, Condition 101, 612K GW Takeoff (Flaps 20).</td>
<td>A-32</td>
<td></td>
</tr>
<tr>
<td>A-4 Engine No. 3 Inlet Pressures, Condition 101, 538K GW Takeoff (Flaps 10).</td>
<td>A-33</td>
<td></td>
</tr>
<tr>
<td>A-5 Engine No. 3 Cowl Pressures, Condition 101, 538K GW Takeoff (Flaps 10).</td>
<td>A-34</td>
<td></td>
</tr>
<tr>
<td>A-6 Engine No. 3 Inlet Pressures, Condition 101, 647K GW Takeoff (Flaps 10).</td>
<td>A-35</td>
<td></td>
</tr>
<tr>
<td>A-7 Engine No. 3 Cowl Pressures, Condition 101, 647K GW Takeoff (Flaps 10).</td>
<td>A-36</td>
<td></td>
</tr>
<tr>
<td>A-8 Engine No. 3 Inlet Pressures, Condition 118, 780K GW Simulated Takeoff (FLaps 10)</td>
<td>A-37</td>
<td></td>
</tr>
<tr>
<td>A-9 Engine No. 3 Cowl Pressures, Condition 118, 780K GW Simulated Takeoff (Flaps 10)</td>
<td>A-38</td>
<td></td>
</tr>
<tr>
<td>A-10 Engine No. 3 Inlet Pressures, Condition 102, Low Climb</td>
<td>A-39</td>
<td></td>
</tr>
<tr>
<td>A-11 Engine No. 3 Cowl Pressures, Condition 102, Low Climb</td>
<td>A-40</td>
<td></td>
</tr>
<tr>
<td>A-12 Engine No. 3 Inlet Pressures, Condition 103, Mid Climb</td>
<td>A-41</td>
<td></td>
</tr>
<tr>
<td>A-13 Engine No. 3 Cowl Pressures, Condition 103, Mid Climb</td>
<td>A-42</td>
<td></td>
</tr>
<tr>
<td>A-14 Engine No. 3 Inlet Pressures, Condition 104, High M Cruise</td>
<td>A-43</td>
<td></td>
</tr>
<tr>
<td>A-15 Engine No. 3 Cowl Pressures, Condition 104, High M Cruise</td>
<td>A-44</td>
<td></td>
</tr>
<tr>
<td>A-16 Engine No. 3 Inlet Pressures, Condition 105, Low M Cruise</td>
<td>A-45</td>
<td></td>
</tr>
<tr>
<td>A-17 Engine No. 3 Cowl Pressures, Condition 105, Low M Cruise</td>
<td>A-46</td>
<td></td>
</tr>
</tbody>
</table>
FIGURES (Continued)

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-18</td>
<td>Engine No. 3 Inlet Pressures, Condition 106, Maximum M.</td>
</tr>
<tr>
<td>A-19</td>
<td>Engine No. 3 Cowl Pressures, Condition 106, Maximum M.</td>
</tr>
<tr>
<td>A-20</td>
<td>Engine No. 3 Inlet Pressures, Condition 107, Inflight Relight</td>
</tr>
<tr>
<td>A-21</td>
<td>Engine No. 3 Cowl Pressures, Condition 107, Inflight Relight</td>
</tr>
<tr>
<td>A-22</td>
<td>Engine No. 3 Inlet Pressures, Condition 108, Maximum q.</td>
</tr>
<tr>
<td>A-23</td>
<td>Engine No. 3 Cowl Pressures, Condition 108, Maximum q.</td>
</tr>
<tr>
<td>A-24</td>
<td>Engine No. 3 Inlet Pressures, Condition 109, Stall Warning (Flaps Up)</td>
</tr>
<tr>
<td>A-25</td>
<td>Engine No. 3 Cowl Pressures, Condition 109, Stall Warning (Flaps Up)</td>
</tr>
<tr>
<td>A-26</td>
<td>Engine No. 3 Inlet Pressures, Condition 110, Stall Warning (Flaps 10)</td>
</tr>
<tr>
<td>A-27</td>
<td>Engine No. 3 Cowl Pressures, Condition 110, Stall Warning (Flaps 10)</td>
</tr>
<tr>
<td>A-28</td>
<td>Engine No. 3 Inlet Pressures, Condition 111, Stall Warning (Flaps 30)</td>
</tr>
<tr>
<td>A-29</td>
<td>Engine No. 3 Cowl Pressures, Condition 111, Stall Warning (Flaps 30)</td>
</tr>
<tr>
<td>A-30</td>
<td>Engine No. 3 Inlet Pressures, Condition 112, Idle Descent</td>
</tr>
<tr>
<td>A-31</td>
<td>Engine No. 3 Cowl Pressures, Condition 112, Idle Descent</td>
</tr>
<tr>
<td>A-32</td>
<td>Engine No. 3 Inlet Pressures, Condition 113, Approach</td>
</tr>
<tr>
<td>A-33</td>
<td>Engine No. 3 Cowl Pressures, Condition 113, Approach</td>
</tr>
<tr>
<td>A-34</td>
<td>Engine No. 3 Inlet Pressures, Condition 114, Touch and Go</td>
</tr>
<tr>
<td>A-35</td>
<td>Engine No. 3 Cowl Pressures, Condition 114, Touch and Go</td>
</tr>
<tr>
<td>A-36</td>
<td>Engine No. 3 Inlet Pressures, Condition 115, Thrust Reverse</td>
</tr>
<tr>
<td>A-37</td>
<td>Engine No. 3 Cowl Pressures, Condition 115, Thrust Reverse</td>
</tr>
<tr>
<td>A-38</td>
<td>Engine No. 3 Inlet Pressures, Condition 116, 2.0g Left Turn (Flaps Up)</td>
</tr>
<tr>
<td>A-39</td>
<td>Engine No. 3 Cowl Pressures, Condition 116, 2.0g Left Turn (Flaps Up)</td>
</tr>
<tr>
<td>A-40</td>
<td>Engine No. 3 Inlet Pressures, Condition 117, 1.6 Left Turn (Flaps 30)</td>
</tr>
<tr>
<td>A-41</td>
<td>Engine No. 3 Cowl Pressures, Condition 117, 1.6 Left Turn (Flaps 30)</td>
</tr>
<tr>
<td>A-42</td>
<td>Engine No. 3 Inlet Pressures, Condition 120, 2.0g Right Turn (Flaps Up)</td>
</tr>
</tbody>
</table>

Page
A-47
A-48
A-49
A-50
A-51
A-52
A-53
A-54
A-55
A-56
A-57
A-58
A-59
A-60
A-61
A-62
A-63
A-64
A-65
A-66
A-67
A-68
A-69
A-70
A-71
FIGURES (Continued)

A-43  Engine No. 3 Cowl Pressures, Condition 120, 2.0g Right Turn (Flaps Up) .............................................. A-72
A-44  Engine No. 3 Inlet Pressures, Condition 121, 1.6g Right Turn (Flaps 30) .................................................. A-73
A-45  Engine No. 3 Cowl Pressures, Condition 121, 1.6g Right Turn (Flaps 30) .................................................. A-74
A-46  Engine No. 3 Inlet Pressures, Condition 123, Airplane Stall ................................................................. A-75
A-47  Engine No. 3 Cowl Pressures, Condition 123, Airplane Stall ................................................................. A-76
A-48  Engine No. 4 Inlet Pressures, Condition 101, 612K Gross Weight Takeoff ..................................................... A-77
A-49  Engine No. 4 Inlet Pressures, Condition 101, 538K Gross Weight Takeoff ..................................................... A-78
A-50  Engine No. 4 Inlet Pressures, Condition 101, 647K Gross Weight Takeoff ..................................................... A-79
A-51  Engine No. 4 Inlet Pressures, Condition 118, 780K Gross Weight Simulated Takeoff ...................................... A-80
A-52  Engine No. 4 Inlet Pressures, Condition 102, Low Climb ........................................................................... A-81
A-53  Engine No. 4 Inlet Pressures, Condition 103, Mid Climb ........................................................................... A-82
A-54  Engine No. 4 Inlet Pressures, Condition 104, High M Cruise ..................................................................... A-83
A-55  Engine No. 4 Inlet Pressures, Condition 105, Low M Cruise .............................................................. A-84
A-56  Engine No. 4 Inlet Pressures, Condition 106, Maximum M ......................................................................... A-85
A-57  Engine No. 4 Inlet Pressures, Condition 107, Inflight Relight ................................................................. A-86
A-58  Engine No. 4 Inlet Pressures, Condition 108, Maximum q ........................................................................ A-87
A-59  Engine No. 4 Inlet Pressures, Condition 109, Stall Warning (Flaps Up) ......................................................... A-88
A-60  Engine No. 4 Inlet Pressures, Condition 110, Stall Warning (Flaps 10) ......................................................... A-89
A-61  Engine No. 4 Inlet Pressures, Condition 111, Stall Warning (Flaps 30) ......................................................... A-90
A-62  Engine No. 4 Inlet Pressures, Condition 112, Idle Descent ................................................................. A-91
A-63  Engine No. 4 Inlet Pressures, Condition 113, Approach ............................................................................ A-92
A-64  Engine No. 4 Inlet Pressures, Condition 114, Touch and Go ................................................................. A-93
A-65  Engine No. 4 Inlet Pressures, Condition 115, Thrust Reverse ................................................................. A-94
A-66  Engine No. 4 Inlet Pressures, Condition 116, 2.0g Left Turn (Flaps Up) ....................................................... A-95
A-67  Engine No. 4 Inlet Pressures, Condition 117, 1.6g Left Turn (Flaps 30) ......................................................... A-96
<table>
<thead>
<tr>
<th>FIGURES (Concluded)</th>
<th>ORIGINAL PAGE IS OF POOR QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-68</td>
<td>Engine No. 4 Inlet Pressures, Condition 120, 2.0g Right Turn (Flaps Up)</td>
</tr>
<tr>
<td>A-69</td>
<td>Engine No. 4 Inlet Pressures, Condition 121, 1.6g Right Turn (Flaps Up)</td>
</tr>
<tr>
<td>A-70</td>
<td>Engine No. 4 Inlet Pressures, Condition 123, Airplane Stall</td>
</tr>
<tr>
<td>A-71</td>
<td>Airplane Center-of-Gravity Accelerations, Mild Gust</td>
</tr>
<tr>
<td>A-72</td>
<td>Engine No. 3 Wing/Strut Accelerations, Mild Gust</td>
</tr>
<tr>
<td>A-73</td>
<td>Engine No. 4 Wing/Strut Accelerations, Mild Gust</td>
</tr>
<tr>
<td>A-74</td>
<td>Engine Angular Rates, Mild Gust</td>
</tr>
<tr>
<td>A-75</td>
<td>Engine No. 3 Accelerations, Mild Gust</td>
</tr>
<tr>
<td>A-76</td>
<td>Engine No. 4 Accelerations, Mild Gust</td>
</tr>
<tr>
<td>A-77</td>
<td>Airplane Center-of-Gravity Normal Acceleration, Hard Landing</td>
</tr>
<tr>
<td>A-78</td>
<td>Airplane Center-of-Gravity Angular Rates, Hard Landing</td>
</tr>
<tr>
<td>A-79</td>
<td>Engine No. 3 Wing/Strut Accelerations, Hard Landing</td>
</tr>
<tr>
<td>A-80</td>
<td>Engine No. 4 Wing/Strut Accelerations, Hard Landing</td>
</tr>
<tr>
<td>A-81</td>
<td>Engine Angular Rates, Hard Landing</td>
</tr>
<tr>
<td>A-82</td>
<td>Engine No. 3 Accelerations, Hard Landing</td>
</tr>
<tr>
<td>A-83</td>
<td>Engine No. 4 Accelerations, Hard Landing</td>
</tr>
<tr>
<td>B-1</td>
<td>Sample of Pressure Coefficient Data (Test 273-12, Condition 1.00.137.001.1)</td>
</tr>
<tr>
<td>B-2</td>
<td>Sample of Pressure Coefficient Data (Test 273-12, Condition 1.00.137.002)</td>
</tr>
<tr>
<td>B-3</td>
<td>Sample of Pressure Coefficient Data (Test 273-12, Condition 1.00.137.003)</td>
</tr>
<tr>
<td>B-4</td>
<td>Sample of Pressure Coefficient Data (Test 273-12, Condition 1.00.137.004)</td>
</tr>
<tr>
<td>B-5</td>
<td>Sample of Local Mach Number Data (Test 273-12, Condition 1.00.137.001.1)</td>
</tr>
<tr>
<td>B-6</td>
<td>Sample of Local Mach Number Data (Test 273-12, Condition 1.00.137.002)</td>
</tr>
<tr>
<td>B-7</td>
<td>Sample of Local Mach Number Data (Test 273-12, Condition 1.00.137.003)</td>
</tr>
<tr>
<td>B-8</td>
<td>Sample of Local Mach Number Data (Test 273-15, Condition 1.00.137.004)</td>
</tr>
</tbody>
</table>
1.0 SUMMARY

The Nacelle Aerodynamics and Inertial Loads (NAIL) program comprised a series of test flights that produced an in-flight measured data base of the aerodynamic and inertial loads imposed on right-hand inboard and outboard JT9D engines installed on the Boeing 747 RA001 test bed aircraft. Wing and engine installed performance data were also obtained. In this report the aerodynamic and inertial loads portion of the test program is referred to as the flight loads, and the wing and engine installed performance portion is referred to as the installed propulsion system aerodynamics (IPSA).

During the flight loads portion of the test program, surface static pressures were measured on the:

- Internal and external surfaces of the inboard inlet
- External surface of the fan cowl doors of the inboard nacelle
- External surface of the fan exhaust sleeve of the inboard nacelle
- Internal and external surfaces of the outboard inlet

Linear accelerations and pitch and yaw rates were also measured on both inboard and outboard nacelle and pylon installations.

The following measurements were made simultaneously with the surface static pressure measurements:

- Engine clearance changes on both inboard and outboard engines
- Turbine case temperature on the inboard engine
- Engine performance on both inboard and outboard engines

The resulting data were correlated with the flight loads. These measurements—

- Duplicated a portion of the airplane flight acceptance test profile
- Demonstrated the effects of variations in takeoff gross weight
- Illustrated the effects of high-g maneuvers
During the IPSA portion of the NAIL program, surface static pressures were measured on the nacelle, pylon, and neighboring wing surfaces on engines 3 and 4 (inboard and outboard). A data base was acquired at Mach numbers 0.77, 0.80, 0.86, and 0.91 through three flights of the RA001.

Pressure coefficient and local Mach number distributions were plotted for each row of pressure orifices. A geometrical description of the surfaces and pressure orifice locations on the nacelle, pylon, and wing is provided. The IPSA data base, derived from a full-scale flight vehicle, should assist in verification and development of analytical models and eventually provide the ability to predict wing-mounted propulsion system performance.
2.0 INTRODUCTION

The test program recommended in the feasibility study (ref. 1) describes a flight test in which flight loads and engine clearance changes can be measured simultaneously on the 747/JT9D engine installation. NASA-Langley and NASA-Lewis Research Centers authorized and jointly funded this program under separate contracts for Boeing Commercial Airplane Company (BCAC) and Pratt & Whitney Aircraft (P&WA). The BCAC effort, Nacelle Aerodynamic and Inertial Loads (NAIL) project, was funded by NASA-Langley under Task 4.3 of contract NAS1-15325. The P&WA effort was funded by NASA-Lewis under Task V, JT9D Engine Diagnostic Flight Loads Test program, contract NAS3-20632. Subsequently, the BCAC contract was revised to include the installed propulsion system aerodynamics (IPSA) effort. The successful completion of this joint test program was only possible through the continuous and extensive coordination between BCAC and P&WA and the excellent cooperation of the NASA-Langley and NASA-Lewis Research Centers. This document reports the BCAC effort during the test program and represents early release of flight test data.

The testing was conducted on the Boeing-owned 747 RA001 test bed airplane during the concurrent 767/JT9D-7R4 engine development program. Following a functional check flight conducted from Boeing Field International (BFI) on 3 October 1980, the airplane and test personnel were ferried to Valley Industrial Park (GSG) near Glasgow, Montana, on 7 October 1980. The combined NAIL and 767/JT9D-7R4 test flights were conducted at the Glasgow remote test site, and the airplane was returned to Seattle on 26 October 1980.

2.1 OBJECTIVES

Objectives of the NAIL flight test program were to:

- Measure flight loads (aerodynamic and inertial) typical of acceptance test and revenue service
- Explore the effects of gross weight, sink rate, pitch rate, and various maneuvers on nacelle loads
- Measure simultaneously engine clearance closures and engine performance changes
• Provide a data base for designing improved propulsion systems (performance retention)

• Provide a data base of pressures measured on wing, pylon, and nacelle surfaces of both inboard and outboard propulsion installations of commercial transport-sized aircraft and to gather information on airflow patterns surrounding the powerplant installations using static pressure surveys

2.2 BACKGROUND

Since introduction of the jet engine into commercial transport service, historical data have indicated that deterioration of engine specific fuel consumption (SFC) occurs over the life of installed engines. Until recent shortages in fuel and the resulting high fuel costs, increases in fuel consumption were considered to be a nuisance rather than a technical problem requiring a solution. Motivated by fuel shortages and costs, the NASA Engine Component Improvement (ECI) program (part of the NASA Aircraft Energy Efficiency program) was made responsible for determining the cause of and potential solutions to installed engine SFC deterioration. As part of the ECI program, BCAC assisted P&W under their NASA-Lewis contract NAS3-20632 during evaluation of the problem. It was found that the SFC of engines increased from 0.5% to 6% from the time of removal from the acceptance test stand followed by installation and operation on the airplane for a given period of time. Measurement of rotor blades at the outer diameter and inspection of the inner surface of engine cases indicated that definite interference occurred between the blades and the case. This interference resulted in increased clearance and gas flow leakage between the blades and the outside case. The study found that 87% of the increase in SFC was due to flight loads occurring within the first 50 flight cycles.

Factors contributing significantly to engine performance losses are divided into engine loads and flight loads, as follows:

• Engine loads (those loads not related to the flight environment)
  • Internal engine pressures
  • Thermal loads due to temperature differentials
  • Thrust loads—fore and aft
  • Centrifugal loads
Flight loads (those loads imposed by the flight environment)
- Aerodynamic pressures
- Inertial forces

A finite element model analysis using these factors predicted a 1% increase in SFC at sea level due to the aircraft acceptance flight test.

Aircraft fuel consumption is proportional to aircraft drag. Thus to reduce fuel consumption, drag should be minimized. Most mechanisms of drag production are understood and are predictable to some degree, with the exception of a component termed "interference drag." This drag results from disruption of the flow over the wing caused by the wing-mounted propulsion system in the vicinity of the propulsion system. This interruption interferes with the wing performance. Current techniques for estimating and minimizing interference drag rely heavily on comprehensive test programs that independently vary a set of parameters believed to significantly influence interference. Current analytical technology is sufficiently advanced so that transonic potential flows around arbitrary three-dimensional bodies can be accurately predicted. However, the development of analytical techniques depends extensively on experimental results for comparison of the predicted results. Development of analytical techniques to model the physics of flow about propulsion systems installed near wings has been initiated and some of the techniques are nearing completion. However, the comprehensive data base to which these predictions could be compared is lacking.

2.3 APPROACH

Recommendations and conclusions of previous studies prescribed a feasible cost-effective approach to the NASA-funded NAIL/JT9D Flight Loads flight test program. This joint program involved BCAC and P&WA, funded by NASA-Langley and by NASA-Lewis, respectively.

A 15-hour flight test program covering portions of the acceptance flight profile, variations in takeoff and landing conditions, and high-g turns was chosen to measure simultaneously the flight loads (cause) and engine clearance changes (effect) associated with engine performance deterioration. The flight test program used the Boeing-owned 747 RA001 aircraft.
Aerodynamic loads were measured by 252 static pressure ports on the inboard nacelle (engine 3) and 45 static pressure ports on the outboard nacelle (engine 4).

Inertial loads were measured by six accelerometers and two rate gyros on both the inboard and outboard engines. The pylon and strut interface of both engines was equipped with an additional six accelerometers. The resulting engine clearance changes were measured by laser proximity probes on the fan of both engines and on the high-pressure turbine of the inboard engine. The expanded engine performance instrumentation and 20 high-pressure turbine thermocouples provided additional data on the inboard engine for resolving clearance and performance changes.

The IPSA pressure data were obtained in the neighborhood of both engines by a total of 499 static pressure orifices; 322 of these were arranged in rows above and below the wing and on each side of both pylons and core cowls. The remaining data, on both inlets and fan cowls, were acquired from part of the aerodynamic loads instrumentation.
### 3.0 SYMBOLS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$A_n$</td>
<td>Fourier-Bessel coefficient for nth cosine harmonic</td>
</tr>
<tr>
<td>AC</td>
<td>axial acceleration</td>
</tr>
<tr>
<td>ACCEL</td>
<td>acceleration</td>
</tr>
<tr>
<td>ADAMS</td>
<td>airborne data analysis and monitor system</td>
</tr>
<tr>
<td>A-flange</td>
<td>engine front flange at nacelle station 100</td>
</tr>
<tr>
<td>$A_x$</td>
<td>acceleration in x-direction</td>
</tr>
<tr>
<td>$A_y$</td>
<td>acceleration in y-direction</td>
</tr>
<tr>
<td>$A_z$</td>
<td>acceleration in z-direction</td>
</tr>
<tr>
<td>$B_n$</td>
<td>Fourier-Bessel coefficient for nth sine harmonic</td>
</tr>
<tr>
<td>BCAC</td>
<td>Boeing Commercial Airplane Company</td>
</tr>
<tr>
<td>BFI</td>
<td>Boeing Field International, Seattle, Washington</td>
</tr>
<tr>
<td>CG</td>
<td>center of gravity</td>
</tr>
<tr>
<td>$C_p$</td>
<td>pressure coefficient</td>
</tr>
<tr>
<td>deg</td>
<td>degrees</td>
</tr>
<tr>
<td>ECI</td>
<td>engine component improvement program</td>
</tr>
<tr>
<td>EPR</td>
<td>engine pressure ratio</td>
</tr>
<tr>
<td>$E_3$</td>
<td>engine position 3</td>
</tr>
<tr>
<td>$E_4$</td>
<td>engine position 4</td>
</tr>
<tr>
<td>ft</td>
<td>feet</td>
</tr>
<tr>
<td>FLTRD</td>
<td>filtered</td>
</tr>
<tr>
<td>FS</td>
<td>front spar</td>
</tr>
<tr>
<td>FT</td>
<td>flight test</td>
</tr>
<tr>
<td>$F_x$</td>
<td>force in the x-direction</td>
</tr>
<tr>
<td>$F_y$</td>
<td>force in the y-direction</td>
</tr>
<tr>
<td>$F_z$</td>
<td>force in the z-direction</td>
</tr>
<tr>
<td>g</td>
<td>acceleration of gravity</td>
</tr>
<tr>
<td>GSG</td>
<td>Valley Industrial Park, northeastern Montana</td>
</tr>
</tbody>
</table>
GW  airplane gross weight

HP  pressure altitude

HPC IGV POS  high-pressure compressor inlet guide vane position

HPT  high-pressure turbine

HWLDG  heavyweight landing

Hz  hertz (cycles per second)

IGDA  interactive graphics data analysis

in  inch

in-kip  1000 inch-pounds

INLET STA  inlet station, value increases moving aft along inlet centerline

IPSA  installed propulsion system aerodynamics

IRIG  inter-range instrumentation group master clock

kn, KTS  knots

cas  knots calibrated airspeed, indicated airspeed corrected for position error (calibrated airspeed equals true airspeed in standard atmosphere at sea level)

LAST  final formatted tape produced by the flight test data system

lb  pound

LH  left hand

lbm  pounds mass

M  Mach number, ratio of true airspeed to the velocity of sound

MC  design cruise Mach number

MX  moment about the x-axis

MY  moment about the y-axis

Mz  moment about the z-axis

min  minutes

NAC BL  nacelle buttock line, value increases moving outboard in the nacelle coordinate system
NAC STA: nacelle station, value increases moving aft in the nacelle coordinate system
NAC WL: nacelle waterline, value increases moving up in the nacelle coordinate system
NAIL: nacelle aerodynamics and inertial loads
NASA: National Aeronautics and Space Administration
NASTRAN: NASA structural analysis
N1: low-pressure rotor speed
N2: high-pressure rotor speed

OCLK: clock position

P: pressure
PC: pressure coefficient
POS: position
PSI (lb/in²): pounds per square inch
P₅: static pressure
PS3: low-pressure compressor discharge static pressure
PS4: high-pressure compressor discharge static pressure
P₁: total pressure
PT2.5: fan stream total pressure at exit guide vane
PT3: low-pressure compressor discharge total pressure
PT7: low-pressure turbine discharge total pressure
PWR LVR ANG: power lever angle
P&WA: Pratt & Whitney Aircraft

q,Q: dynamic pressure, \( \frac{1}{2} \rho v^2 \)

RA001: Boeing-owned 747-100 research aircraft 1
RH: right hand
rms: root mean square
RWA: referred engine airflow, \( (W_A \sqrt{\theta_{T_2}/\theta_{T_2}}) \)
sec: seconds
S: arc length along surface from highlight
Sₙ₀m: nominal arc length along surface
SFC  specific fuel consumption
SLS  sea level standard

TO  takeoff
TR  thrust reverse
TT  total temperature
TT3  low-pressure compressor discharge total temperature
TT4.5  high-pressure compressor discharge total temperature
TT6  high-pressure turbine discharge total temperature
TT7  low-pressure turbine discharge total temperature

V  true airspeed, feet per second
Vc  design cruise speed
Vs  stalling speed or the minimum steady flight speed at which airplane is controllable

WA  engine airflow
WBL  wing buttock line, value increases by moving outboard
Wf  fuel flow rate
WFS  wing front spar
WRP  wing reference plane
WUT  windup turn, a level turn produced by increasing the angle of bank at a prescribed rate

free stream value
angle of attack

T2  total temperature ratio at engine face, T T2 /T SLS

T2  total pressure ratio at engine face, P T2 /P SLS

f  fan cowl

pylon-core cowl intersection
h  highlight

inlet

k  core cowl

l  engine 4 wing-pylon intersection
m  pylon-fan cowl intersection
n  engine 3 wing-pylon intersection
s  pylon (strut)
w  wing
4.0 TEST DESCRIPTION AND RESULTS

4.1 TEST DESCRIPTION

The Boeing-owned 747 RA001 test bed aircraft (fig. 1) was the basis of the Nacelle Aerodynamic and Inertial Load (NAIL) flight test program, which comprised two basic studies and data collection systems divided into the flight loads and installed propulsion system aerodynamics (IPSA) programs. Where necessary, discussion of the flight loads and IPSA portions are separated for clarity. However, airplane and performance data were used by both programs, and some of the flight loads pressure data were used by the IPSA program.

4.1.1 Test Vehicle

4.1.1.1 Flight Loads

The NAIL program required fabrication and installation effort to provide the means to collect, control, and maintain the quality and quantity of data obtained. The flight loads portion of the program required instrumentation of the inboard and outboard engines (i.e., positions 3 and 4). Highest emphasis was placed on engine 3, which is shown on the wing during the buildup period (fig. 2).

Likewise, during the postflight test phase, refurbishment was necessary to prepare the aircraft for the next program. Inlet 3 (fig. 3) was removed followed by engine 3 (fig. 4), which was shipped to Pratt and Whitney Aircraft (P&W A) for further static testing followed by an analytical teardown and refurbishment.

4.1.1.2 Installed Propulsion System Aerodynamics

Description of the basic B-747 test vehicle pertinent to the IPSA program requires a geometrical definition of the fan inlet, fan cowl, pylon, and core cowl for an inboard and an outboard engine installation and requires neighboring wing geometry for each engine. This description is provided by defining the local geometry with relative positions and contours of pressure orifice rows and wing-pylon, pylon-nacelle intersections. Figures 5 and 6 describe the location and nomenclature for the pressure orifice rows.
Figure 1. RA001 Test Airplane

Figure 2. Inboard Engine Buildup
Figure 3. Inboard Inlet Removal

Figure 4. Inboard Engine Removal
Figure 5. Pressure Orifice Configuration

Figure 6. Upper Wing Surface
Wing Geometry—Coordinates defining the wing cross-sectional profiles (table 1) are measured along and perpendicular to the wing reference plane (WRP). The WRP is an untwisted plane with 7-deg dihedral and +2-deg angle of incidence to the aircraft body centerline. The coordinates given in table 1 orient the wing profiles as they are in the no-load or jig position, so that the wing leading edges are not necessarily on WRP. See figure 7 for a plot of the jig wing twist. The in-flight wing twist, measured at 50% chord, varies with airplane Mach number and gross weight. In figure 7, the elastic wing twist is plotted for a Mach number of 0.86 at two representative airplane gross weights.

The spanwise location of each wing cross-sectional profile is denoted by a wing buttock line (WBL), which defines a plane perpendicular to the WRP (fig. 8). The relative fore and aft location of the wing cross-sectional profile at each WBL due to wing sweep is also shown in figure 8. Here, the leading-edge sweep angle is identified inboard and outboard of WBL 470 (inboard engine) and WBL 834 (outboard engine).

The leading-edge sweep angle is measured in the WRP relative to a line that is perpendicular to each WBL (470 and 834) and passes through the intersection of the WBL plane and the projection of the wing leading edge in the WRP (fig. 8). The wing leading-edge sweep is constant between WBL 445 and 834. However, it changes outboard of WBL 834 (outboard engine).

Also at WBL 834, a fairing extends from the outboard strut over the wing leading edge. Fairing coordinates given in table 1 are along the intersection of the WBL 834 plane and the fairing surface.

Engine Nacelle and Pylon Geometry—Coordinates defining engine nacelle and pylon geometry are given in a second coordinate system, the nacelle, which is shown in relation to the WRP in figures 8 and 9.

Pylon cross-sectional coordinates (tables 2 and 3) are measured along and perpendicular to the nacelle buttock line (NAC BL) 0.0, which defines a plane perpendicular to the WRP that is toed inboard 2-deg relative to the WBL plane (fig. 8). Depending on engine location, the origin of this 2-deg toe-in is at the intersection of the WBL 470/834 plane and the WRP at the projection of the WBL 470/834 wing profile leading edge. These profile leading edges are labeled T (figs. 8 and 9). A side view of the pylon and engine nacelle (fig. 9) shows that the pylon coordinates (tables 2 and 3) are contained in nacelle
Table 1. Wing Coordinates

$X_w = 0 \text{ at wing leading edge}$

<table>
<thead>
<tr>
<th>$X_w/C_w$</th>
<th>$Y_{\text{UPPER}}/C_w$</th>
<th>$Y_{\text{LOWER}}/C_w$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>-0.00205</td>
<td>0.00205</td>
</tr>
<tr>
<td>0.01</td>
<td>0.00901</td>
<td>0.00695</td>
</tr>
<tr>
<td>0.02</td>
<td>0.01414</td>
<td>0.00837</td>
</tr>
<tr>
<td>0.03</td>
<td>0.01791</td>
<td>0.00965</td>
</tr>
<tr>
<td>0.05</td>
<td>0.02333</td>
<td>0.01196</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03198</td>
<td>0.01665</td>
</tr>
<tr>
<td>0.15</td>
<td>0.03790</td>
<td>0.02058</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04234</td>
<td>0.02393</td>
</tr>
<tr>
<td>0.25</td>
<td>0.04550</td>
<td>0.02682</td>
</tr>
<tr>
<td>0.30</td>
<td>0.04783</td>
<td>0.02910</td>
</tr>
<tr>
<td>0.35</td>
<td>0.04953</td>
<td>0.03067</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05032</td>
<td>0.03103</td>
</tr>
<tr>
<td>0.45</td>
<td>0.05002</td>
<td>0.03064</td>
</tr>
<tr>
<td>0.50</td>
<td>0.04902</td>
<td>0.02951</td>
</tr>
<tr>
<td>0.55</td>
<td>0.04712</td>
<td>0.02761</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04401</td>
<td>0.02533</td>
</tr>
<tr>
<td>0.65</td>
<td>0.03996</td>
<td>0.02269</td>
</tr>
<tr>
<td>0.70</td>
<td>0.03493</td>
<td>0.01987</td>
</tr>
<tr>
<td>0.75</td>
<td>0.02915</td>
<td>0.01691</td>
</tr>
<tr>
<td>0.80</td>
<td>0.02338</td>
<td>0.01398</td>
</tr>
<tr>
<td>1.00</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 1. Wing Coordinates (Continued)

<table>
<thead>
<tr>
<th>$\frac{X}{C_w}$</th>
<th>$\frac{Y_{UPPER}}{C_w}$</th>
<th>$\frac{Y_{LOWER}}{C_w}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>-0.00125</td>
<td>0.00125</td>
</tr>
<tr>
<td>0.01</td>
<td>0.00628</td>
<td>0.00578</td>
</tr>
<tr>
<td>0.02</td>
<td>0.01429</td>
<td>0.00694</td>
</tr>
<tr>
<td>0.03</td>
<td>0.01796</td>
<td>0.00797</td>
</tr>
<tr>
<td>0.05</td>
<td>0.02331</td>
<td>0.00988</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03210</td>
<td>0.01386</td>
</tr>
<tr>
<td>0.15</td>
<td>0.03828</td>
<td>0.01742</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04289</td>
<td>0.02063</td>
</tr>
<tr>
<td>0.25</td>
<td>0.04622</td>
<td>0.02362</td>
</tr>
<tr>
<td>0.30</td>
<td>0.04870</td>
<td>0.02624</td>
</tr>
<tr>
<td>0.35</td>
<td>0.05060</td>
<td>0.02820</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05180</td>
<td>0.02909</td>
</tr>
<tr>
<td>0.45</td>
<td>0.05208</td>
<td>0.02912</td>
</tr>
<tr>
<td>0.50</td>
<td>0.05154</td>
<td>0.02840</td>
</tr>
<tr>
<td>0.55</td>
<td>0.05023</td>
<td>0.02687</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04779</td>
<td>0.02488</td>
</tr>
<tr>
<td>0.65</td>
<td>0.04429</td>
<td>0.02251</td>
</tr>
<tr>
<td>0.70</td>
<td>0.03999</td>
<td>0.01983</td>
</tr>
<tr>
<td>0.75</td>
<td>0.03488</td>
<td>0.01636</td>
</tr>
<tr>
<td>0.80</td>
<td>0.02877</td>
<td>0.01265</td>
</tr>
<tr>
<td>1.00</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

WBL 510  $C_w = 892.44 \text{ cm (351.35 in)}$
Table 1. Wing Coordinates (Continued)

<table>
<thead>
<tr>
<th>WBL 470</th>
<th>( C_w = 962\text{cm (374.94 in)} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X_w/C_w )</td>
<td>( Y_{UPPER}/C_w )</td>
</tr>
<tr>
<td>0.00</td>
<td>-0.00171</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03190</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04246</td>
</tr>
<tr>
<td>0.30</td>
<td>0.04803</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05078</td>
</tr>
<tr>
<td>0.50</td>
<td>0.04990</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04539</td>
</tr>
<tr>
<td>0.70</td>
<td>0.03689</td>
</tr>
<tr>
<td>0.80</td>
<td>0.02528</td>
</tr>
<tr>
<td>1.00</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBL 834</th>
<th>( C_w = 619.49\text{cm (243.89 in)} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X_w/C_w )</td>
<td>( Y_{UPPER}/C_w )</td>
</tr>
<tr>
<td>0.00</td>
<td>0.0</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03801</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04797</td>
</tr>
<tr>
<td>0.30</td>
<td>0.05289</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05551</td>
</tr>
<tr>
<td>0.50</td>
<td>0.05416</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04937</td>
</tr>
<tr>
<td>0.70</td>
<td>0.04125</td>
</tr>
<tr>
<td>0.80</td>
<td>0.03009</td>
</tr>
<tr>
<td>1.00</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAIRING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.129</td>
<td>-0.029</td>
</tr>
<tr>
<td>-0.087</td>
<td>-0.015</td>
</tr>
<tr>
<td>-0.025</td>
<td>0.005</td>
</tr>
<tr>
<td>0.037</td>
<td>0.015</td>
</tr>
</tbody>
</table>
Table 1. Wing Coordinates (Continued)

<table>
<thead>
<tr>
<th>( \frac{X_W}{C_W} )</th>
<th>( \frac{Y_{UPPER}}{C_W} )</th>
<th>( \frac{Y_{LOWER}}{C_W} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01135</td>
<td>0.00464</td>
</tr>
<tr>
<td>0.02</td>
<td>0.01674</td>
<td>0.00536</td>
</tr>
<tr>
<td>0.03</td>
<td>0.02142</td>
<td>0.00599</td>
</tr>
<tr>
<td>0.05</td>
<td>0.02701</td>
<td>0.00722</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03705</td>
<td>0.01043</td>
</tr>
<tr>
<td>0.15</td>
<td>0.04296</td>
<td>0.01377</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04717</td>
<td>0.01706</td>
</tr>
<tr>
<td>0.25</td>
<td>0.05014</td>
<td>0.02011</td>
</tr>
<tr>
<td>0.30</td>
<td>0.05228</td>
<td>0.02269</td>
</tr>
<tr>
<td>0.35</td>
<td>0.05371</td>
<td>0.02440</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05458</td>
<td>0.02511</td>
</tr>
<tr>
<td>0.45</td>
<td>0.05470</td>
<td>0.02491</td>
</tr>
<tr>
<td>0.50</td>
<td>0.05387</td>
<td>0.02400</td>
</tr>
<tr>
<td>0.55</td>
<td>0.05201</td>
<td>0.02249</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04919</td>
<td>0.02023</td>
</tr>
<tr>
<td>0.65</td>
<td>0.04554</td>
<td>0.01817</td>
</tr>
<tr>
<td>0.70</td>
<td>0.04114</td>
<td>0.01558</td>
</tr>
<tr>
<td>0.75</td>
<td>0.03598</td>
<td>0.01297</td>
</tr>
<tr>
<td>0.80</td>
<td>0.03003</td>
<td>0.01037</td>
</tr>
<tr>
<td>1.00</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 1. Wing Coordinates (Concluded)

<table>
<thead>
<tr>
<th>$\frac{X_w}{C_w}$</th>
<th>$\frac{Y_{UPPER}}{C_w}$</th>
<th>$\frac{Y_{LOWER}}{C_w}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>-0.00140</td>
<td>0.00140</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01034</td>
<td>0.00617</td>
</tr>
<tr>
<td>0.02</td>
<td>0.01591</td>
<td>0.00699</td>
</tr>
<tr>
<td>0.03</td>
<td>0.02008</td>
<td>0.00753</td>
</tr>
<tr>
<td>0.05</td>
<td>0.02723</td>
<td>0.00881</td>
</tr>
<tr>
<td>0.10</td>
<td>0.03685</td>
<td>0.01204</td>
</tr>
<tr>
<td>0.15</td>
<td>0.04298</td>
<td>0.01528</td>
</tr>
<tr>
<td>0.20</td>
<td>0.04715</td>
<td>0.01842</td>
</tr>
<tr>
<td>0.25</td>
<td>0.05017</td>
<td>0.02128</td>
</tr>
<tr>
<td>0.30</td>
<td>0.05234</td>
<td>0.02366</td>
</tr>
<tr>
<td>0.35</td>
<td>0.05383</td>
<td>0.02511</td>
</tr>
<tr>
<td>0.40</td>
<td>0.05476</td>
<td>0.02557</td>
</tr>
<tr>
<td>0.45</td>
<td>0.05498</td>
<td>0.02519</td>
</tr>
<tr>
<td>0.50</td>
<td>0.05417</td>
<td>0.02404</td>
</tr>
<tr>
<td>0.55</td>
<td>0.05238</td>
<td>0.02238</td>
</tr>
<tr>
<td>0.60</td>
<td>0.04966</td>
<td>0.02025</td>
</tr>
<tr>
<td>0.65</td>
<td>0.04608</td>
<td>0.01774</td>
</tr>
<tr>
<td>0.70</td>
<td>0.04183</td>
<td>0.01499</td>
</tr>
<tr>
<td>0.75</td>
<td>0.03685</td>
<td>0.01226</td>
</tr>
<tr>
<td>0.80</td>
<td>0.03093</td>
<td>0.00953</td>
</tr>
<tr>
<td>1.00</td>
<td>0.00140</td>
<td>-0.00140</td>
</tr>
</tbody>
</table>
Figure 7. 747 Elastic Wing Twist
Figure 8. Wing Coordinate System
Figure 9. Nacelle Coordinate System
Table 2. Engine 3 Pylon Coordinates

NAC WL 155 \( C_s = 735.43 \text{cm} \) (289.54 in)

<table>
<thead>
<tr>
<th>( \frac{X_s}{C_s} )</th>
<th>( \frac{\pm Z}{C_s} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.0163</td>
<td>0.01160</td>
</tr>
<tr>
<td>0.0336</td>
<td>0.01596</td>
</tr>
<tr>
<td>0.0508</td>
<td>0.01889</td>
</tr>
<tr>
<td>0.0681</td>
<td>0.02110</td>
</tr>
<tr>
<td>0.1199</td>
<td>0.02549</td>
</tr>
<tr>
<td>0.2063</td>
<td>0.03046</td>
</tr>
<tr>
<td>0.3099</td>
<td>0.03447</td>
</tr>
<tr>
<td>0.3962</td>
<td>0.03658</td>
</tr>
<tr>
<td>0.4826</td>
<td>0.03758</td>
</tr>
<tr>
<td>0.5344</td>
<td>0.03785</td>
</tr>
<tr>
<td>0.5689</td>
<td>0.03782</td>
</tr>
<tr>
<td>0.6725</td>
<td>0.03271</td>
</tr>
<tr>
<td>0.7589</td>
<td>0.02601</td>
</tr>
<tr>
<td>0.8970</td>
<td>0.01140</td>
</tr>
<tr>
<td>1.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

NAC WL 180 \( C_s = 722.91 \text{cm} \) (284.61 in)

<table>
<thead>
<tr>
<th>( \frac{X_s}{C_s} )</th>
<th>( \frac{\pm Z}{C_s} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.0155</td>
<td>0.01511</td>
</tr>
<tr>
<td>0.0300</td>
<td>0.02161</td>
</tr>
<tr>
<td>0.0506</td>
<td>0.02582</td>
</tr>
<tr>
<td>0.0857</td>
<td>0.03380</td>
</tr>
<tr>
<td>0.1033</td>
<td>0.03672</td>
</tr>
<tr>
<td>0.1209</td>
<td>0.03925</td>
</tr>
<tr>
<td>0.1560</td>
<td>0.04343</td>
</tr>
<tr>
<td>0.2087</td>
<td>0.04778</td>
</tr>
<tr>
<td>0.2614</td>
<td>0.05035</td>
</tr>
<tr>
<td>0.2966</td>
<td>0.05109</td>
</tr>
<tr>
<td>0.3493</td>
<td>0.05119</td>
</tr>
<tr>
<td>0.4722</td>
<td>0.05035</td>
</tr>
<tr>
<td>0.5074</td>
<td>0.04887</td>
</tr>
<tr>
<td>0.6479</td>
<td>0.03738</td>
</tr>
<tr>
<td>0.7885</td>
<td>0.02245</td>
</tr>
<tr>
<td>1.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 3. Engine 4 Pylon Coordinates

![Diagram of engine pylon coordinates]

<table>
<thead>
<tr>
<th>NAC WL 155</th>
<th>$C_s = 684.30\text{cm (269.41 in)}$</th>
<th>NAC WL 180</th>
<th>$C_s = 608.46\text{cm (239.55 in)}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{X_s}{C_s}$</td>
<td>$\frac{\pm Z}{C_s}$</td>
<td>$\frac{\pm Z}{C_s}$</td>
<td>$\frac{-Z}{C_s}$</td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>-0.01536</td>
<td>0.01536</td>
</tr>
<tr>
<td>0.0361</td>
<td>0.01715</td>
<td>0.02150</td>
<td>0.03515</td>
</tr>
<tr>
<td>0.0546</td>
<td>0.02030</td>
<td>0.02818</td>
<td>0.03707</td>
</tr>
<tr>
<td>0.0732</td>
<td>0.02268</td>
<td>0.03323</td>
<td>0.03903</td>
</tr>
<tr>
<td>0.1289</td>
<td>0.02739</td>
<td>0.03720</td>
<td>0.04099</td>
</tr>
<tr>
<td>0.2217</td>
<td>0.03274</td>
<td>0.04396</td>
<td>0.04513</td>
</tr>
<tr>
<td>0.3330</td>
<td>0.03704</td>
<td>0.04671</td>
<td>0.04721</td>
</tr>
<tr>
<td>0.4258</td>
<td>0.03931</td>
<td>0.05677</td>
<td>0.05677</td>
</tr>
<tr>
<td>0.5186</td>
<td>0.04050</td>
<td>0.05982</td>
<td>0.05982</td>
</tr>
<tr>
<td>0.6300</td>
<td>0.03890</td>
<td>0.06070</td>
<td>0.06070</td>
</tr>
<tr>
<td>0.6671</td>
<td>0.03615</td>
<td>0.04959</td>
<td>0.04959</td>
</tr>
<tr>
<td>0.7228</td>
<td>0.03062</td>
<td>0.04483</td>
<td>0.04483</td>
</tr>
<tr>
<td>0.8156</td>
<td>0.02153</td>
<td>0.02204</td>
<td>0.02204</td>
</tr>
<tr>
<td>0.8898</td>
<td>0.01344</td>
<td>0.00434</td>
<td>0.00434</td>
</tr>
<tr>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
water line (NAC WL) planes, which are perpendicular to the NAC BL 0.0 plane and pitched up to 2 deg relative to the WRP.

The proper orientation of each NAC WL plane containing the coordinates in tables 2 and 3 is achieved by first locating the reference NAC WL T plane (fig. 9) which passes through the wing leading edge at WBL 470/834. The leading-edge point may be located relative to the WRP by using coordinates given in table 1. This reference NAC WL corresponds to NAC WL 192.86 for the inboard engine and NAC WL 189.00 for the outboard engine. Coordinates defining the pylon cross-sectional profile are given for both engine pylons at NAC WL 155 and NAC WL 180. These NAC WLs can be located from the reference NAC WL for each engine (fig. 9).

Each nacelle coordinate system is an isolated coordinate system. To provide for the proper position of each engine NAC WL relative to the other, the reference NAC WL plane must be positioned to account for the difference in elevation between the inboard and outboard engine installations due to WRP dihedral.

The fore and aft positions of NAC WL 155 and 180 profiles on each pylon are found by locating a reference nacelle station (NAC STA) passing through the wing leading-edge point at WBL 470 (inboard) or WBL 834 (outboard). Lines representing NAC STA are perpendicular to the intersection of a NAC WL plane and NAC BL 0.0 plane; distances between NAC STA are measured parallel to the intersection. At point T, the NAC STA reference for the inboard pylon is 216.12; for the outboard pylon, 206.10 (fig. 9).

The outboard pylon pressure port row at NAC WL 180 has an unsymmetric profile (table 3). The contour of the fairing at WBL 834 shifts the pylon leading edge to the inboard side of NAC BL 0.0.

The inlet, fan cowl, and core cowl surface geometries are the same on both engines. Each engine centerline is coincident with NAC WL 100. The core cowl is a body of revolution between 30 and 330 deg (table 4). This cowl is defined by radii measured from NAC WL 100 at points between NAC STA 152 and NAC STA 270.526. The inlet and fan cowl profiles are given along constant inlet angles measured about the inlet centerline, which lies in the NAC BL 0.0 plane, pitched down (drooped) 4 deg relative to the engine centerline at NAC STA 97.23 (fig. 9). The fan inlet cross-sectional profile coordinates (table 5) are measured along and perpendicular to the inlet axis for five circumferential
Table 4. Engines 3 and 4 Core Cowl Coordinates

ENGINE G (NAC WL 100)

<table>
<thead>
<tr>
<th>X_k/L_k</th>
<th>R_EXT/L_k</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.2867</td>
</tr>
<tr>
<td>0.0338</td>
<td>0.2858</td>
</tr>
<tr>
<td>0.1519</td>
<td>0.2829</td>
</tr>
<tr>
<td>0.2362</td>
<td>0.2811</td>
</tr>
<tr>
<td>0.2953</td>
<td>0.2799</td>
</tr>
<tr>
<td>0.3797</td>
<td>0.2782</td>
</tr>
<tr>
<td>0.4472</td>
<td>0.2764</td>
</tr>
<tr>
<td>0.4978</td>
<td>0.2746</td>
</tr>
<tr>
<td>0.5315</td>
<td>0.2708</td>
</tr>
<tr>
<td>0.5653</td>
<td>0.2696</td>
</tr>
<tr>
<td>0.5822</td>
<td>0.2697</td>
</tr>
<tr>
<td>0.6243</td>
<td>0.2696</td>
</tr>
<tr>
<td>0.6497</td>
<td>0.2638</td>
</tr>
</tbody>
</table>

X_k = 0 at NAC STA 152, L_k = 301.07 cm (118.53 in)
Table 5. Engines 3 and 4 Inlet Coordinates

<table>
<thead>
<tr>
<th>( \theta_i = 30 )</th>
<th>( \theta_i = 60 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{X_i}{R_h} )</td>
<td>( \frac{R_{EXT}}{R_h} )</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>0.2651</td>
<td>0.8957</td>
</tr>
<tr>
<td>0.1853</td>
<td>0.8991</td>
</tr>
<tr>
<td>0.1196</td>
<td>0.9094</td>
</tr>
<tr>
<td>0.0776</td>
<td>0.9217</td>
</tr>
<tr>
<td>0.0302</td>
<td>0.9461</td>
</tr>
<tr>
<td>0.0037</td>
<td>0.9786</td>
</tr>
<tr>
<td>0.0069</td>
<td>1.0000</td>
</tr>
<tr>
<td>0.0248</td>
<td>1.0158</td>
</tr>
<tr>
<td>0.0647</td>
<td>1.0303</td>
</tr>
<tr>
<td>0.1379</td>
<td>1.0493</td>
</tr>
<tr>
<td>0.2155</td>
<td>1.0714</td>
</tr>
<tr>
<td>0.3448</td>
<td>1.0877</td>
</tr>
<tr>
<td>0.4963</td>
<td>1.1061</td>
</tr>
</tbody>
</table>

\( \theta_i = 0 \) at INLET HILITE
\( R_h = 117.86 \text{cm} (46.40 \text{ in}) \)

\( R_{INT} \) and \( R_{EXT} \) are in centimeters (inches).
### Table 5. Engines 3 and 4 Inlet Coordinates (Concluded)

<table>
<thead>
<tr>
<th>$\theta_i = 90$</th>
<th>$\theta_i = 150$</th>
<th>$\theta_i = 180$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_i/R_h$</td>
<td>$R_{EXT}/R_h$</td>
<td>$R_{INT}/R_h$</td>
</tr>
<tr>
<td>0.2651</td>
<td>0.8957</td>
<td>0.8957</td>
</tr>
<tr>
<td>0.1853</td>
<td>0.8991</td>
<td>0.9126</td>
</tr>
<tr>
<td>0.1196</td>
<td>0.9094</td>
<td>0.9261</td>
</tr>
<tr>
<td>0.0776</td>
<td>0.9217</td>
<td>0.9518</td>
</tr>
<tr>
<td>0.0302</td>
<td>0.9461</td>
<td>0.9829</td>
</tr>
<tr>
<td>0.0037</td>
<td>0.9786</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>1.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>0.0009</td>
<td>1.0158</td>
<td>1.0158</td>
</tr>
<tr>
<td>0.0248</td>
<td>1.0303</td>
<td>1.0303</td>
</tr>
<tr>
<td>0.0647</td>
<td>1.0493</td>
<td>1.0493</td>
</tr>
<tr>
<td>0.1379</td>
<td>1.0714</td>
<td>1.0714</td>
</tr>
<tr>
<td>0.2155</td>
<td>1.0877</td>
<td>1.0877</td>
</tr>
<tr>
<td>0.3448</td>
<td>1.1061</td>
<td>1.1061</td>
</tr>
<tr>
<td>0.4963</td>
<td>1.1200</td>
<td>1.1200</td>
</tr>
</tbody>
</table>

*ORIGINAL PAGE IS OF POOR QUALITY*
angles measured about the inlet centerline. At these same inlet angles, the fan cowl
cross-sectional profiles are defined relative to the engine centerline. Coordinates in table
6 give the angle about the engine centerline for each point with the distance to the
surface measured along and perpendicular to NAC WL 100.

Pylon-fan cowl, pylon-core cowl, and wing-pylon intersections are defined along axes of
the nacelle coordinate system (tables 7 through 10). These tables include the information
necessary to locate these intersections. The pylon-core cowl intersection is separated
into three sections between NAC STA 220 and 270.526 to define a pylon-core cowl fairing
surface (table 10).

The pressure orifice positions on the defined profiles are given in tables 11 through 16. A
pressure orifice is found in the profile plane at the intersection of the aircraft surface and
a line normal to the X direction at the nondimensional position given by X/C or X/L.

4.1.2 Instrumentation

The NAIL program was an ambitious undertaking in terms of number of measurements
obtained. There were 693 pressure measurements, 30 accelerometers, 7 rate gyros, 12
blade clearance measurements, and 20 thermocouples for required test data. Numerous
thermocouples were used to provide temperature information on heat-sensitive instrumen-
tation. Finally, expanded engine performance data were provided by an additional 68
measurement channels. The quantity and quality of the data obtained were excellent.

Instrumentation placed on or near the numbers 3 and 4 engine and pylon was designed to
further the understanding of the flight loads (cause) and engine clearance changes (effect)
associated with engine deterioration and to provide information on the flight environment
of the engine and wing interface.

4.1.2.1 Flight Loads

Pressure Instrumentation—Most of the pressure instrumentation was placed on the inlet of
engine 3 (figs. 10 and 11). It was believed that the inboard engine was subject to higher
angles of attack than the outboard engine because wing bending reduced the incidence of
the outboard nacelle and because the outboard nacelle was less affected by upflow
induced by the wing flaps. Therefore, the inboard nacelle sustained greater loads and was
chosen for a more detailed survey using 252 pressure taps.
Table 6. Engines 3 and 4 Fan Cowl Coordinates

<table>
<thead>
<tr>
<th>θ_1 (°)</th>
<th>X_f/L_f</th>
<th>R_f/L_f</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.356</td>
<td>0.0</td>
<td>0.5540</td>
</tr>
<tr>
<td>30.928</td>
<td>0.1125</td>
<td>0.5663</td>
</tr>
<tr>
<td>30.568</td>
<td>0.2123</td>
<td>0.5732</td>
</tr>
<tr>
<td>29.975</td>
<td>0.3821</td>
<td>0.5771</td>
</tr>
<tr>
<td>29.261</td>
<td>0.5851</td>
<td>0.5675</td>
</tr>
<tr>
<td>28.483</td>
<td>0.7892</td>
<td>0.5447</td>
</tr>
<tr>
<td>28.168</td>
<td>0.8669</td>
<td>0.5358</td>
</tr>
<tr>
<td>27.579</td>
<td>1.0000</td>
<td>0.5148</td>
</tr>
</tbody>
</table>

X_f = 0 at NAC STA 61.86
L_f = 228.96 cm (90.14 in)

<table>
<thead>
<tr>
<th>θ_1 (°)</th>
<th>X_f/L_f</th>
<th>R_f/L_f</th>
</tr>
</thead>
<tbody>
<tr>
<td>62.262</td>
<td>0.0147</td>
<td>0.5641</td>
</tr>
<tr>
<td>61.634</td>
<td>0.1125</td>
<td>0.5727</td>
</tr>
<tr>
<td>60.020</td>
<td>0.2123</td>
<td>0.5781</td>
</tr>
<tr>
<td>60.001</td>
<td>0.3821</td>
<td>0.5802</td>
</tr>
<tr>
<td>55.843</td>
<td>1.0000</td>
<td>0.5148</td>
</tr>
</tbody>
</table>
Table 6. Engines 3 and 4 Fan Cowl Coordinates (Concluded)

### $\theta_i = 90$

<table>
<thead>
<tr>
<th>$\theta_f$</th>
<th>$\frac{X_f}{L_f}$</th>
<th>$\frac{R_f}{L_f}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.483</td>
<td>0.0349</td>
<td>0.5771</td>
</tr>
<tr>
<td>91.929</td>
<td>0.1125</td>
<td>0.5816</td>
</tr>
<tr>
<td>91.234</td>
<td>0.2123</td>
<td>0.5846</td>
</tr>
<tr>
<td>90.071</td>
<td>0.3821</td>
<td>0.5835</td>
</tr>
<tr>
<td>88.642</td>
<td>0.5851</td>
<td>0.5885</td>
</tr>
<tr>
<td>87.080</td>
<td>0.7892</td>
<td>0.5446</td>
</tr>
<tr>
<td>86.449</td>
<td>0.8669</td>
<td>0.5358</td>
</tr>
<tr>
<td>85.265</td>
<td>1.0000</td>
<td>0.5148</td>
</tr>
</tbody>
</table>

### $\theta_i = 150$

<table>
<thead>
<tr>
<th>$\theta_f$</th>
<th>$\frac{X_f}{L_f}$</th>
<th>$\frac{R_f}{L_f}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>151.141</td>
<td>0.0697</td>
<td>0.5973</td>
</tr>
<tr>
<td>150.997</td>
<td>0.1125</td>
<td>0.5974</td>
</tr>
<tr>
<td>150.665</td>
<td>0.2123</td>
<td>0.5957</td>
</tr>
<tr>
<td>150.096</td>
<td>0.3821</td>
<td>0.5865</td>
</tr>
<tr>
<td>149.383</td>
<td>0.5851</td>
<td>0.5687</td>
</tr>
<tr>
<td>148.603</td>
<td>0.7892</td>
<td>0.5446</td>
</tr>
<tr>
<td>148.289</td>
<td>0.8669</td>
<td>0.5358</td>
</tr>
<tr>
<td>147.700</td>
<td>1.0000</td>
<td>0.5148</td>
</tr>
</tbody>
</table>

### $\theta_i = 180$

<table>
<thead>
<tr>
<th>$\theta_f$</th>
<th>$\frac{X_f}{L_f}$</th>
<th>$\frac{R_f}{L_f}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>180.000</td>
<td>0.0771</td>
<td>0.6001</td>
</tr>
<tr>
<td>180.000</td>
<td>0.1125</td>
<td>0.6000</td>
</tr>
<tr>
<td>180.000</td>
<td>0.2123</td>
<td>0.5975</td>
</tr>
<tr>
<td>180.000</td>
<td>0.3821</td>
<td>0.5867</td>
</tr>
<tr>
<td>180.000</td>
<td>1.0000</td>
<td>0.5148</td>
</tr>
</tbody>
</table>
Table 7. Engines 3 and 4 Pylon-Fan Cowl Intersection

C_m = 206.080 cm (81.134 in)  X, Y = 0 @ m  Z = 0 @ NAC BL 0

<table>
<thead>
<tr>
<th>X/C_m</th>
<th>Y/C_m</th>
<th>±Z/C_m</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.1661</td>
<td>0.00801</td>
<td>0.0620</td>
</tr>
<tr>
<td>0.2894</td>
<td>0.00900</td>
<td>0.0779</td>
</tr>
<tr>
<td>0.4127</td>
<td>0.00579</td>
<td>0.0886</td>
</tr>
<tr>
<td>0.5369</td>
<td>-0.00345</td>
<td>0.0959</td>
</tr>
<tr>
<td>0.6715</td>
<td>-0.02305</td>
<td>0.1019</td>
</tr>
<tr>
<td>0.8437</td>
<td>-0.04055</td>
<td>0.1071</td>
</tr>
<tr>
<td>0.9919</td>
<td>-0.06471</td>
<td>0.1090</td>
</tr>
</tbody>
</table>
Table 8. Engine 3 Wing-Pylon Intersection

<table>
<thead>
<tr>
<th>OUTBOARD</th>
<th>X/Cn</th>
<th>Y/Cn</th>
<th>Z/Cn</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>-0.0751</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>0.0075</td>
<td>-0.0297</td>
<td>0.0051</td>
<td></td>
</tr>
<tr>
<td>0.0553</td>
<td>0.0703</td>
<td>0.0133</td>
<td></td>
</tr>
<tr>
<td>0.1167</td>
<td>0.1369</td>
<td>0.0167</td>
<td></td>
</tr>
<tr>
<td>0.2195</td>
<td>0.2123</td>
<td>0.0181</td>
<td></td>
</tr>
<tr>
<td>0.3304</td>
<td>0.2762</td>
<td>0.0171</td>
<td></td>
</tr>
<tr>
<td>0.4909</td>
<td>0.3451</td>
<td>0.0133</td>
<td></td>
</tr>
<tr>
<td>0.6923</td>
<td>0.4117</td>
<td>0.0068</td>
<td></td>
</tr>
<tr>
<td>1.0077</td>
<td>0.4813</td>
<td>-0.0038</td>
<td></td>
</tr>
<tr>
<td>1.8171</td>
<td>0.5465</td>
<td>-0.0324</td>
<td></td>
</tr>
<tr>
<td>4.5412</td>
<td>0.4772</td>
<td>-0.0922</td>
<td></td>
</tr>
<tr>
<td>5.3294</td>
<td>0.4120</td>
<td>-0.0802</td>
<td></td>
</tr>
<tr>
<td>6.1500</td>
<td>0.3400</td>
<td>-0.0485</td>
<td></td>
</tr>
<tr>
<td>6.9789</td>
<td>0.2748</td>
<td>0.0024</td>
<td></td>
</tr>
<tr>
<td>8.0122</td>
<td>0.2014</td>
<td>0.0830</td>
<td></td>
</tr>
<tr>
<td>8.9315</td>
<td>0.1359</td>
<td>0.1648</td>
<td></td>
</tr>
<tr>
<td>9.5572</td>
<td>0.0679</td>
<td>0.2284</td>
<td></td>
</tr>
<tr>
<td>10.0000</td>
<td>0.0000</td>
<td>0.2745</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INBOARD</th>
<th>X/Cn</th>
<th>Y/Cn</th>
<th>Z/Cn</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>-0.0751</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>0.0109</td>
<td>-0.1375</td>
<td>-0.0089</td>
<td></td>
</tr>
<tr>
<td>0.0536</td>
<td>-0.2048</td>
<td>-0.0205</td>
<td></td>
</tr>
<tr>
<td>0.1403</td>
<td>-0.2751</td>
<td>-0.0348</td>
<td></td>
</tr>
<tr>
<td>0.2823</td>
<td>-0.3458</td>
<td>-0.0509</td>
<td></td>
</tr>
<tr>
<td>0.4909</td>
<td>-0.4120</td>
<td>-0.0690</td>
<td></td>
</tr>
<tr>
<td>0.8462</td>
<td>-0.4793</td>
<td>-0.0915</td>
<td></td>
</tr>
<tr>
<td>1.7044</td>
<td>-0.5318</td>
<td>-0.1260</td>
<td></td>
</tr>
<tr>
<td>3.5137</td>
<td>-0.5179</td>
<td>-0.1526</td>
<td></td>
</tr>
<tr>
<td>4.2818</td>
<td>-0.4803</td>
<td>-0.1417</td>
<td></td>
</tr>
<tr>
<td>5.2533</td>
<td>-0.4100</td>
<td>-0.1048</td>
<td></td>
</tr>
<tr>
<td>6.0623</td>
<td>-0.3441</td>
<td>-0.0608</td>
<td></td>
</tr>
<tr>
<td>6.9789</td>
<td>-0.2758</td>
<td>0.0048</td>
<td></td>
</tr>
<tr>
<td>8.0122</td>
<td>-0.2038</td>
<td>0.0884</td>
<td></td>
</tr>
<tr>
<td>8.9315</td>
<td>-0.1379</td>
<td>0.1703</td>
<td></td>
</tr>
<tr>
<td>9.5572</td>
<td>-0.0690</td>
<td>0.2311</td>
<td></td>
</tr>
<tr>
<td>10.0000</td>
<td>0.0000</td>
<td>0.2745</td>
<td></td>
</tr>
</tbody>
</table>

\( C_n = 74.407 \text{cm} \) (29.294 in)  \( X, Y = 0 @ N \) \( Z = 0 @ \text{NACBL} 0 \)
Table 9. Engine 4 Wing-Pylon Intersection

\[
\begin{array}{c}
\text{C} = 62.365 \text{cm (24.553 in)} \quad \text{X, Y} = 0 @ \text{L} \quad \text{Z} = 0 @ \text{NAC BL 0}
\end{array}
\]

### OUTBOARD

<table>
<thead>
<tr>
<th>X/Cₐ</th>
<th>Y/Cₐ</th>
<th>Z/Cₐ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>-0.0411</td>
<td>0.0000</td>
</tr>
<tr>
<td>0.0049</td>
<td>0.0000</td>
<td>0.0024</td>
</tr>
<tr>
<td>0.0468</td>
<td>0.0855</td>
<td>0.0065</td>
</tr>
<tr>
<td>0.1275</td>
<td>0.1654</td>
<td>0.0086</td>
</tr>
<tr>
<td>0.2366</td>
<td>0.2342</td>
<td>0.0094</td>
</tr>
<tr>
<td>0.4411</td>
<td>0.3275</td>
<td>0.0081</td>
</tr>
<tr>
<td>0.6920</td>
<td>0.4114</td>
<td>0.0049</td>
</tr>
<tr>
<td>1.0048</td>
<td>0.4891</td>
<td>-0.0004</td>
</tr>
<tr>
<td>1.5318</td>
<td>0.5747</td>
<td>-0.0118</td>
</tr>
<tr>
<td>2.5910</td>
<td>0.6337</td>
<td>-0.0391</td>
</tr>
<tr>
<td>3.5804</td>
<td>0.5967</td>
<td>-0.0546</td>
</tr>
<tr>
<td>4.0138</td>
<td>0.5653</td>
<td>-0.0509</td>
</tr>
<tr>
<td>4.8597</td>
<td>0.4883</td>
<td>-0.0216</td>
</tr>
<tr>
<td>5.6588</td>
<td>0.4077</td>
<td>-0.0269</td>
</tr>
<tr>
<td>6.4273</td>
<td>0.3340</td>
<td>0.0863</td>
</tr>
<tr>
<td>7.3498</td>
<td>0.2484</td>
<td>0.1682</td>
</tr>
<tr>
<td>8.2727</td>
<td>0.1637</td>
<td>0.2501</td>
</tr>
<tr>
<td>9.1952</td>
<td>0.0786</td>
<td>0.3319</td>
</tr>
<tr>
<td>10.0000</td>
<td>0.0045</td>
<td>0.4036</td>
</tr>
</tbody>
</table>

### INBOARD

<table>
<thead>
<tr>
<th>X/Cₐ</th>
<th>Y/Cₐ</th>
<th>Z/Cₐ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>-0.0411</td>
<td>0.0000</td>
</tr>
<tr>
<td>0.0053</td>
<td>-0.0819</td>
<td>-0.0029</td>
</tr>
<tr>
<td>0.0525</td>
<td>-0.1637</td>
<td>-0.0090</td>
</tr>
<tr>
<td>0.1592</td>
<td>-0.2484</td>
<td>-0.0171</td>
</tr>
<tr>
<td>0.3063</td>
<td>-0.3234</td>
<td>-0.0261</td>
</tr>
<tr>
<td>0.5441</td>
<td>-0.4085</td>
<td>-0.0383</td>
</tr>
<tr>
<td>0.8590</td>
<td>-0.4863</td>
<td>-0.0521</td>
</tr>
<tr>
<td>1.4096</td>
<td>-0.5698</td>
<td>-0.0729</td>
</tr>
<tr>
<td>2.5093</td>
<td>-0.6256</td>
<td>-0.0949</td>
</tr>
<tr>
<td>3.8724</td>
<td>-0.5735</td>
<td>-0.0644</td>
</tr>
<tr>
<td>4.9143</td>
<td>-0.4863</td>
<td>-0.0069</td>
</tr>
<tr>
<td>5.6588</td>
<td>-0.4134</td>
<td>0.0452</td>
</tr>
<tr>
<td>6.5813</td>
<td>-0.3258</td>
<td>0.1197</td>
</tr>
<tr>
<td>7.5038</td>
<td>-0.2391</td>
<td>0.1959</td>
</tr>
<tr>
<td>8.2727</td>
<td>-0.1666</td>
<td>0.2598</td>
</tr>
<tr>
<td>9.1952</td>
<td>-0.0823</td>
<td>0.3364</td>
</tr>
<tr>
<td>9.9943</td>
<td>-0.0053</td>
<td>0.4032</td>
</tr>
</tbody>
</table>

---

37
Table 10. Pylon-Core Cowl Intersection (To Be Submitted in Final Report)
Table 10. Pylon-Core Cowl Intersection

\[ C_m = 301.056 \text{ cm (118.526 in)} \quad X, Y = 0 \text{ at } M \quad Z = 0 \text{ at NAC BL 0} \]

<table>
<thead>
<tr>
<th>( X_m/C_m )</th>
<th>( Y_m/C_m )</th>
<th>( \pm Z_m/C_m )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>0.2797</td>
<td>0.0636</td>
</tr>
<tr>
<td>0.0377</td>
<td>0.2786</td>
<td>0.0638</td>
</tr>
<tr>
<td>0.0697</td>
<td>0.2780</td>
<td>0.0640</td>
</tr>
<tr>
<td>0.1336</td>
<td>0.2773</td>
<td>0.0643</td>
</tr>
<tr>
<td>0.1976</td>
<td>0.2771</td>
<td>0.0647</td>
</tr>
<tr>
<td>0.2296</td>
<td>0.2771</td>
<td>0.0649</td>
</tr>
<tr>
<td>0.2935</td>
<td>0.2771</td>
<td>0.0651</td>
</tr>
<tr>
<td>0.3575</td>
<td>0.2770</td>
<td>0.0653</td>
</tr>
<tr>
<td>0.3894</td>
<td>0.2769</td>
<td>0.0653</td>
</tr>
<tr>
<td>0.4454</td>
<td>0.2764</td>
<td>0.0653</td>
</tr>
<tr>
<td>0.4909</td>
<td>0.2754</td>
<td>0.0650</td>
</tr>
<tr>
<td>0.5402</td>
<td>0.2738</td>
<td>0.0631</td>
</tr>
</tbody>
</table>
Table 10. Pylon-Core Cowl Intersection (Concluded)

<table>
<thead>
<tr>
<th>AFT SECTION</th>
<th>UPPER</th>
<th>MIDDLE</th>
<th>LOWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>(x_m/C_m)</td>
<td>(y_m/C_m)</td>
<td>(\pm z_m/C_m)</td>
<td>(x_m/C_m)</td>
</tr>
<tr>
<td>0.5737</td>
<td>0.2775</td>
<td>0.0621</td>
<td>0.2724</td>
</tr>
<tr>
<td>0.6159</td>
<td>0.2834</td>
<td>0.0604</td>
<td>0.2696</td>
</tr>
<tr>
<td>0.6581</td>
<td>0.2895</td>
<td>0.0582</td>
<td>0.2662</td>
</tr>
<tr>
<td>0.7003</td>
<td>0.2955</td>
<td>0.0555</td>
<td>0.2594</td>
</tr>
<tr>
<td>0.7159</td>
<td>0.2972</td>
<td>0.0543</td>
<td>0.2574</td>
</tr>
<tr>
<td>0.7333</td>
<td>0.2980</td>
<td>0.0534</td>
<td>0.2550</td>
</tr>
<tr>
<td>0.7425</td>
<td>0.2985</td>
<td>0.0532</td>
<td>0.2540</td>
</tr>
<tr>
<td>0.7846</td>
<td>0.2939</td>
<td>0.0495</td>
<td>0.2480</td>
</tr>
<tr>
<td>0.8268</td>
<td>0.2887</td>
<td>0.0458</td>
<td>0.2415</td>
</tr>
<tr>
<td>0.8690</td>
<td>0.2786</td>
<td>0.0475</td>
<td>0.2349</td>
</tr>
<tr>
<td>0.9112</td>
<td>0.2683</td>
<td>0.0354</td>
<td>0.2276</td>
</tr>
<tr>
<td>0.9534</td>
<td>0.2542</td>
<td>0.0300</td>
<td>0.2194</td>
</tr>
<tr>
<td>0.9956</td>
<td>0.2410</td>
<td>0.0247</td>
<td>0.2109</td>
</tr>
<tr>
<td>1.0000</td>
<td>0.2394</td>
<td>0.0240</td>
<td>0.2096</td>
</tr>
</tbody>
</table>

\(C_m = 301.056 \text{ cm (118.526 in)}\) \(X, Y = 0\) at \(M\) \(Z = 0\) at NAC BL 0

Original page is of poor quality.
Table 11. Wing Pressure Orifice Locations

<table>
<thead>
<tr>
<th>WBL 445</th>
<th>WBL 470</th>
<th>WBL 510</th>
<th>WBL 809</th>
<th>WBL 834</th>
<th>WBL 870</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xw/Cw</td>
<td>Xw/Cw</td>
<td>Xw/Cw</td>
<td>Xw/Cw</td>
<td>Xw/Cw</td>
<td>Xw/Cw</td>
</tr>
<tr>
<td>UP/</td>
<td>LO/</td>
<td>UP/</td>
<td>LO/</td>
<td>UP/</td>
<td>LO/</td>
</tr>
<tr>
<td>FLUSH</td>
<td>FLUSH</td>
<td>FLUSH</td>
<td>FLUSH</td>
<td>FLUSH</td>
<td>FLUSH</td>
</tr>
<tr>
<td>0.0100</td>
<td>0.0090</td>
<td>0.0100</td>
<td>0.0090</td>
<td>0.0100</td>
<td>0.0100</td>
</tr>
<tr>
<td>0.0200</td>
<td>0.0223</td>
<td>0.0200</td>
<td>0.0207</td>
<td>0.0190</td>
<td>0.0165</td>
</tr>
<tr>
<td>0.0300</td>
<td>0.0300</td>
<td>0.0300</td>
<td>0.0300</td>
<td>0.0300</td>
<td>0.0300</td>
</tr>
<tr>
<td>0.0500</td>
<td>0.0487</td>
<td>0.2000</td>
<td>0.0500</td>
<td>0.0500</td>
<td>0.0500</td>
</tr>
<tr>
<td>0.0750</td>
<td>0.1000</td>
<td>0.3000</td>
<td>0.0750</td>
<td>0.1000</td>
<td>0.1015</td>
</tr>
<tr>
<td>0.1000</td>
<td>0.1500</td>
<td>0.4000</td>
<td>0.1000</td>
<td>0.1472</td>
<td>0.1500</td>
</tr>
<tr>
<td>0.1500</td>
<td>0.5000</td>
<td>0.1500</td>
<td>0.1500</td>
<td>0.1500</td>
<td>0.1500</td>
</tr>
<tr>
<td>BELT</td>
<td>BELT</td>
<td>BELT</td>
<td>BELT</td>
<td>BELT</td>
<td>BELT</td>
</tr>
<tr>
<td>0.2000</td>
<td>0.1950</td>
<td>0.6000</td>
<td>0.2000</td>
<td>0.1972</td>
<td>0.2000</td>
</tr>
<tr>
<td>0.2250</td>
<td>0.2453</td>
<td>0.2250</td>
<td>0.2472</td>
<td>0.2250</td>
<td>0.2500</td>
</tr>
<tr>
<td>0.2500</td>
<td>0.2953</td>
<td>0.2500</td>
<td>0.2972</td>
<td>0.2466</td>
<td>0.3000</td>
</tr>
<tr>
<td>0.2750</td>
<td>0.3453</td>
<td>0.2750</td>
<td>0.3472</td>
<td>0.3000</td>
<td>0.3500</td>
</tr>
<tr>
<td>0.3043</td>
<td>0.3953</td>
<td>0.3043</td>
<td>0.3972</td>
<td>0.3500</td>
<td>0.4000</td>
</tr>
<tr>
<td>0.3543</td>
<td>0.4454</td>
<td>0.3543</td>
<td>0.4472</td>
<td>0.4000</td>
<td>0.4500</td>
</tr>
<tr>
<td>0.4037</td>
<td>0.4954</td>
<td>0.4037</td>
<td>0.4972</td>
<td>0.4500</td>
<td>0.5000</td>
</tr>
<tr>
<td>0.4538</td>
<td>0.5455</td>
<td>0.4538</td>
<td>0.5472</td>
<td>0.5000</td>
<td>0.5500</td>
</tr>
<tr>
<td>0.4750</td>
<td>0.5955</td>
<td>0.4750</td>
<td>0.5972</td>
<td>0.5500</td>
<td>0.6000</td>
</tr>
<tr>
<td>0.5060</td>
<td>0.6455</td>
<td>0.5060</td>
<td>0.6472</td>
<td>0.6000</td>
<td>0.6500</td>
</tr>
<tr>
<td>0.6250</td>
<td>0.6554</td>
<td>0.6250</td>
<td>0.6572</td>
<td>0.7000</td>
<td>0.7500</td>
</tr>
<tr>
<td>0.6500</td>
<td>0.6594</td>
<td>0.6500</td>
<td>0.6700</td>
<td>0.7000</td>
<td>0.7500</td>
</tr>
<tr>
<td>0.6561</td>
<td>0.7049</td>
<td>0.6561</td>
<td>0.7000</td>
<td>0.8000</td>
<td>0.8500</td>
</tr>
<tr>
<td>0.7562</td>
<td>0.8049</td>
<td>0.7562</td>
<td>0.8000</td>
<td>0.8500</td>
<td>0.9000</td>
</tr>
</tbody>
</table>

X measured along chord line
Xw/Cw tolerance ±0.0005
Table 12. Engine 3 Pylon Pressure Orifice Locations

X MEASURED ALONG NAC BL 0.0
$X_S/C_s$ TOLERANCE ±0.0005

<table>
<thead>
<tr>
<th>NAC WL 155</th>
<th>NAC WL 180</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_S/C_s$</td>
<td>$X_S/C_s$</td>
</tr>
<tr>
<td>INBD AND OUTBD</td>
<td>INBD AND OUTBD</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0163</td>
<td>0.0169</td>
</tr>
<tr>
<td>0.0349</td>
<td>0.0330</td>
</tr>
<tr>
<td>0.0508</td>
<td>0.0506</td>
</tr>
<tr>
<td>0.0750</td>
<td>0.0752</td>
</tr>
<tr>
<td>0.1234</td>
<td>0.9898</td>
</tr>
<tr>
<td>0.2146</td>
<td>0.1279</td>
</tr>
<tr>
<td>0.3043</td>
<td>0.1600</td>
</tr>
<tr>
<td>0.3938</td>
<td>0.2136</td>
</tr>
<tr>
<td>0.4865</td>
<td>0.2614</td>
</tr>
<tr>
<td>0.5392</td>
<td>0.2966</td>
</tr>
<tr>
<td>0.5724</td>
<td>0.3493</td>
</tr>
<tr>
<td>0.6207</td>
<td>0.4757</td>
</tr>
<tr>
<td>0.6725</td>
<td>0.6514</td>
</tr>
<tr>
<td>0.7589</td>
<td>0.7885</td>
</tr>
<tr>
<td>0.8279</td>
<td></td>
</tr>
<tr>
<td>0.9005</td>
<td></td>
</tr>
</tbody>
</table>
Table 13. Engine 4 Pylon Pressure Orifice Locations

X measured along NAC BL 0.0
$X_s/C_s$ tolerance ±0.0005

<table>
<thead>
<tr>
<th>NAC WL 180</th>
<th>NAC WL 155</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_s/C_s$</td>
<td>$X_s/C_s$</td>
</tr>
<tr>
<td>INBD AND OUTBD</td>
<td>INBD AND OUTBD</td>
</tr>
<tr>
<td>0.0175</td>
<td>0.0474</td>
</tr>
<tr>
<td>0.0375</td>
<td>0.0666</td>
</tr>
<tr>
<td>0.0546</td>
<td>0.0875</td>
</tr>
<tr>
<td>0.0806</td>
<td>0.1092</td>
</tr>
<tr>
<td>0.1326</td>
<td>0.1460</td>
</tr>
<tr>
<td>0.2306</td>
<td>0.1793</td>
</tr>
<tr>
<td>0.3321</td>
<td>0.2169</td>
</tr>
<tr>
<td>0.4295</td>
<td>0.2837</td>
</tr>
<tr>
<td>0.5229</td>
<td>0.3371</td>
</tr>
<tr>
<td>0.5762</td>
<td>0.3785</td>
</tr>
<tr>
<td>0.6237</td>
<td>0.4423</td>
</tr>
<tr>
<td>0.6671</td>
<td>0.5901</td>
</tr>
<tr>
<td>0.7228</td>
<td>0.8158</td>
</tr>
<tr>
<td>0.8156</td>
<td>0.9641</td>
</tr>
<tr>
<td>0.8898</td>
<td></td>
</tr>
</tbody>
</table>
Table 14. Engine 3 Inlet Pressure Orifice Locations

![Diagram showing orifice locations on an engine inlet with angles and dimensions]

### Table 14. Engine 3 Inlet Pressure Orifice Locations

<table>
<thead>
<tr>
<th>$\theta_i$</th>
<th>$\theta_i = 30^\circ$</th>
<th>$\theta_i = 90^\circ$</th>
<th>$\theta_i = 150^\circ$</th>
<th>$\theta_i = 210^\circ$</th>
<th>$\theta_i = 270^\circ$</th>
<th>$\theta_i = 330^\circ$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
</tr>
<tr>
<td>0.079*</td>
<td>0.077*</td>
<td>0.080*</td>
<td>0.080*</td>
<td>0.081*</td>
<td>0.079*</td>
<td></td>
</tr>
<tr>
<td>0.051*</td>
<td>0.053*</td>
<td>0.050*</td>
<td>0.050*</td>
<td>0.055*</td>
<td>0.051*</td>
<td></td>
</tr>
<tr>
<td>0.034*</td>
<td>0.033*</td>
<td>0.034*</td>
<td>0.034*</td>
<td>0.037*</td>
<td>0.034*</td>
<td></td>
</tr>
<tr>
<td>0.014*</td>
<td>0.014*</td>
<td>0.014*</td>
<td>0.014*</td>
<td>0.014*</td>
<td>0.014*</td>
<td></td>
</tr>
<tr>
<td>0.002*</td>
<td>0.002*</td>
<td>0.002*</td>
<td>0.002*</td>
<td>0.002*</td>
<td>0.002*</td>
<td></td>
</tr>
<tr>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>0.004</td>
<td>0.004</td>
<td>0.005</td>
<td>0.005</td>
<td>0.004</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>0.010</td>
<td>0.011</td>
<td>0.012</td>
<td>0.012</td>
<td>0.011</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>0.025</td>
<td>0.026</td>
<td>0.030</td>
<td>0.030</td>
<td>0.028</td>
<td>0.026</td>
<td></td>
</tr>
<tr>
<td>0.056</td>
<td>0.061</td>
<td>0.063</td>
<td>0.062</td>
<td>0.062</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>0.086</td>
<td>0.091</td>
<td>0.095</td>
<td>0.095</td>
<td>0.090</td>
<td>0.086</td>
<td></td>
</tr>
<tr>
<td>0.122</td>
<td>0.128</td>
<td>0.146</td>
<td>0.146</td>
<td>0.128</td>
<td>0.122</td>
<td></td>
</tr>
<tr>
<td>0.168</td>
<td>0.174</td>
<td>0.183</td>
<td>0.181</td>
<td>0.172</td>
<td>0.178</td>
<td></td>
</tr>
<tr>
<td>0.212</td>
<td>0.227</td>
<td>0.227</td>
<td>0.224</td>
<td>0.218</td>
<td>0.214</td>
<td></td>
</tr>
<tr>
<td>0.261</td>
<td>0.277</td>
<td>0.277</td>
<td>0.275</td>
<td>0.267</td>
<td>0.262</td>
<td></td>
</tr>
<tr>
<td>0.336</td>
<td>0.348</td>
<td>0.345</td>
<td>0.343</td>
<td>0.339</td>
<td>0.337</td>
<td></td>
</tr>
<tr>
<td>0.457</td>
<td>0.463</td>
<td>0.458</td>
<td>0.455</td>
<td>0.453</td>
<td>0.454</td>
<td></td>
</tr>
<tr>
<td>0.572</td>
<td>0.576</td>
<td>0.571</td>
<td>0.569</td>
<td>0.567</td>
<td>0.570</td>
<td></td>
</tr>
<tr>
<td>0.645</td>
<td>0.647</td>
<td>0.639</td>
<td>0.639</td>
<td>0.639</td>
<td>0.645</td>
<td></td>
</tr>
<tr>
<td>0.718</td>
<td>0.719</td>
<td>0.710</td>
<td>0.708</td>
<td>0.711</td>
<td>0.718</td>
<td></td>
</tr>
<tr>
<td>0.824</td>
<td>0.824</td>
<td>0.813</td>
<td>0.810</td>
<td>0.816</td>
<td>0.827</td>
<td></td>
</tr>
<tr>
<td>0.994</td>
<td>0.997</td>
<td>0.994</td>
<td>0.991</td>
<td>0.990</td>
<td>0.994</td>
<td></td>
</tr>
</tbody>
</table>
Table 15. Engine 4 Inlet Pressure Orifice Locations

<table>
<thead>
<tr>
<th>$\Theta_i$</th>
<th>$\Theta_i = 60^\circ$</th>
<th>$\Theta_i = 180^\circ$</th>
<th>$\Theta_i = 300^\circ$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X/C$</td>
<td>$X/C$</td>
<td>$X/C$</td>
<td></td>
</tr>
<tr>
<td>0.441*</td>
<td>0.426*</td>
<td>0.424*</td>
<td></td>
</tr>
<tr>
<td>0.322*</td>
<td>0.318*</td>
<td>0.322*</td>
<td></td>
</tr>
<tr>
<td>0.232*</td>
<td>0.244*</td>
<td>0.228*</td>
<td></td>
</tr>
<tr>
<td>0.167*</td>
<td>0.178*</td>
<td>0.164*</td>
<td></td>
</tr>
<tr>
<td>0.104*</td>
<td>0.107*</td>
<td>0.101*</td>
<td></td>
</tr>
<tr>
<td>0.050*</td>
<td>0.052*</td>
<td>0.048*</td>
<td></td>
</tr>
<tr>
<td>0.021*</td>
<td>0.021*</td>
<td>0.021*</td>
<td></td>
</tr>
<tr>
<td>0.432</td>
<td>0.455</td>
<td>0.434</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- X/C TOLERANCE ±0.003
- X = 0 @ HILITE
- C sub 60 = C sub 300 = 283.44 cm (111.59 in)
- C sub 180 = 271.11 cm (106.74 in)
Table 16. Engine 3 and 4 Core Cowl Pressure Orifice Locations

\[ \theta_k = 30^\circ \text{ AND } 330^\circ \]

\[ \frac{X_k}{L_k} \pm 0.0007 \]

<table>
<thead>
<tr>
<th>( \frac{X_k}{L_k} )</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0363</td>
<td>0.6817</td>
</tr>
<tr>
<td>0.1552</td>
<td>0.6918</td>
</tr>
<tr>
<td>0.2405</td>
<td>0.7024</td>
</tr>
<tr>
<td>0.2928</td>
<td>0.7410</td>
</tr>
<tr>
<td>0.3797</td>
<td>0.7745</td>
</tr>
<tr>
<td>0.4472</td>
<td>0.8085</td>
</tr>
<tr>
<td>0.4995</td>
<td>0.8380</td>
</tr>
<tr>
<td>0.5315</td>
<td>0.8672</td>
</tr>
<tr>
<td>0.5703</td>
<td>0.9010</td>
</tr>
<tr>
<td>0.5822</td>
<td>0.9205</td>
</tr>
<tr>
<td>0.6277</td>
<td>0.9545</td>
</tr>
<tr>
<td>0.6497</td>
<td>0.9947</td>
</tr>
</tbody>
</table>

ENGINE C (NAC WL 100)
SIDE VIEW

ENGINE C (NAC WL 100)
SIDE VIEW

CORE COWL
REAR VIEW
Figure 10. Inboard Engine Pressure Taps

Figure 11. Inboard Inlet Pressure Taps
The greatest deviations from ambient pressure and most rapid variations of pressure with distance occur near the inlet lip. Contribution of the lip area to the overall force and moment is very large. Because of this contribution, 144 taps in 12 rows, 30 deg apart, were located in the lip area. Aft of the lip, 60-deg circumferential spacing of the rows provided adequate definition.

Each pressure tap was connected to an Endevco pressure transducer (fig. 12) by approximately 8 ft of 0.061-in inside diameter copper tubing to ensure that lag effects were equalized. The transducers were mounted in temperature controlled boxes in groups of 22 (figs. 13 and 14). Each transducer measured differential pressure between the tap and a reference pressure.

Further pressure measurements were obtained on the fan cowl doors of engine 3 (fig. 15). The arrangement was two rows of pressure taps, one on each side of both cowl doors, 30 deg from the top. Each pressure tap was connected to its individual transducer by copper tubing except at the hinges of the fan cowl doors, where a small section of copper tubing was replaced by a piece of flexible clear polymer. This flexible section enabled the doors to function throughout the test program.

The pressure instrumentation on engine 4 was designed to substantiate a finding of the feasibility study (ref. 1), which suggested that engine deterioration was independent of position. Therefore, engine 4 inlet was instrumented with three rows of 15 pressure taps each spaced 120 deg apart (fig. 16) for a total of 45 measurements. These measurements were sufficient to indicate relative load levels between inboard and outboard inlets.

Inertial Loads Instrumentation—Instrumentation for inertial loads consisted of accelerometers and rate gyros located on the engine and pylon (fig. 17) and the aircraft center of gravity. Linear accelerations were measured by Q-FLEX accelerometers (fig. 18). These instruments were used on both test engines and at their fore and aft wing and pylon interface. For angular accelerations two axes of a three-axis Northrop rate gyro mounted on the two test engines (figs. 19 and 20) were used.

Location of accelerometers and rate gyros is referenced by clock position, looking aft. Accelerometers were placed on the engines so that lateral accelerations were measured in the lateral direction at NAC STA 46 at 3 o'clock and at NAC STA 100 at 6 o'clock. Vertical accelerations were measured at NAC STA 46 at 6 o'clock, NAC STA 100 at
Figure 12. Pressure Transducer

Figure 13. Pressure Transducer Installation
Figure 14. Pressure Transducer Box

Figure 15. Cowl Door Pressure Taps
Figure 16. Outboard Engine Pressure Taps

- Clockwise from front
- 15 each at 60, 180, and 300 deg

Figure 17. Inertial Data Sensors

- Inboard and outboard engines
- Six near strut attach points
- Front spar
- Four near fan face
- Two near inlet tip
Figure 18. Q-FLEX Accelerometer

Figure 19. Rate Gyro
Figure 20. Accelerometer and Rate Gyro
the lateral direction at NAC STA 46 at 3 o'clock and at NAC STA 100 at 6 o'clock. Vertical accelerations were measured at NAC STA 46 at 6 o'clock, NAC STA 100 at 3 o'clock, and NAC STA 100 at 9 o'clock, and longitudinal acceleration was at NAC STA 100 at 6 o'clock. Rate gyros were placed at NAC STA 100 at 3 o'clock and were used to measure pitch and yaw rate. A total of six accelerometers and one rate gyro per engine permitted calculation of the translational and angular accelerations at the engine center of gravity.

Accelerations were also measured at the pylon/wing interfaces. The lateral accelerations were measured at the wing front spar and the rear thrust link attach point (fig. 21). The vertical accelerations were measured inboard and outboard of the front spar attach point and on the rear thrust link attach point. In the longitudinal direction, accelerations were measured only at the front spar. Each interface had a total of six linear accelerometers.

Basic airplane information was also recorded, including pitch, yaw, and roll angles, along with side-slip and angle of attack. Angular accelerations about all three axes were measured at the aircraft center of gravity.

**Clearance Measurement System**—Engine clearance change measurements were made by P&WA simultaneously with flight load application. Measurements were made on the fan and first-stage high-pressure turbine on the inboard engine and the fan stage of the outboard engine by a laser proximity system for each stage. Each clearance monitoring system consisted of: (1) the laser assembly (four lasers per box), (2) the input fiber optic assembly, (3) video camera assembly, (4) laser probe assembly (four probes per stage), (5) video monitor, and (6) video tape recorder (fig. 22).

In accordance with the interface agreement between the two companies, P&WA provided all clearance monitoring system components and made the necessary engine preparations. Operation and maintenance of the system during testing were also the responsibility of P&WA. P&WA provided to BCAC the equipment necessary for installation in the airplane during the layup period prior to testing.

Laser assemblies were installed in a rack inside the airplane cabin (fig. 23). Four laser assemblies of four laser generators per box were installed in the rack, which provided one spare box to facilitate changeover in flight should a laser generator malfunction.
Figure 21. Acceleron Installation (Thrust Link)

Figure 22. Clearance Monitoring System
Figure 23. Laser Generator Boxes
Video cameras were installed in the "dog house" (fig. 24) for the fans on the inboard and outboard engines and in the "kneecap" (fig. 25) of the wing and pylon intersection for the turbine of the inboard engine. The input fiber optic leads were divided in the camera box installation into four separate leads and routed to each laser probe assembly. A fan laser probe assembly is shown in figure 26 and a turbine laser probe assembly is shown in figures 27 and 28. The fan and turbine probe radial locations, which are essentially 90 deg apart, are shown in figure 29.

Reflected light from the engine blades was transmitted back through the probe and through the coherent output fiber optic to the video camera. At the video camera the reflected light was converted to a video signal and transmitted through a cable to the airplane cabin. In the cabin, clearance values were read on the video monitors (fig. 30) and were recorded on a video tape recorder (fig. 31).

In addition to the aforementioned components to the laser system, a gaseous nitrogen system was required to cool and purge the high-pressure turbine laser probes. BCAC provided the system, which was located in the forward cargo hold (fig. 32). Components of the gaseous nitrogen system included storage racks for 56 nitrogen bottles, the nitrogen bottles, the high-pressure manifolds and regulators, control valves, pressure sensors, probe temperature sensors and readout, tubing, and the flow-controlling orifice that is built into the high-pressure turbine probes. The system was configured to provide nitrogen for approximately 13 hours of operation without resupply.

**Expanded Engine Performance**—Expanded engine performance data (fig. 33) were required for the P&WA effort to correlate measured engine clearance changes or closures with performance losses. Primary emphasis was on engine 3, which had complete instrumentation (fig. 33). Minimum instrumentation to define engine speed and engine airflow and power level was provided for engine 4. Instrumentation for engine 3 was typical of that used for a performance engine test program and was compatible with that used during the pre- and postprogram base engine calibrations at the P&WA Middletown test facility. To better correlate data, the Boeing-owned flight high- and low-rotor speed tachometers (N2 and N1, respectively) and the fuel flow meter were calibrated by P&WA and were used during the pre- and postcalibration at P&WA. The tachometers and flow meter were used on this engine throughout the entire NAIL program.
Figure 24. Fan Video Camera Installation

Figure 25. Turbine Video Camera Installation
Figure 26. Fan Laser Probe
Figure 27. Turbine Laser Probe

Figure 28. Turbine Laser Probe Installed

Figure 29. Turbine Laser Probe Installed
Figure 29. Laser Proximity Probe Locations
Figure 30. Laser System Video Monitors and Controls

Figure 31. Laser Video Tape Recorder
### Figure 32. Nitrogen System

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2</td>
<td>High-pressure (H.P.) rotor speed</td>
</tr>
<tr>
<td>N1</td>
<td>Low-pressure (L.P.) rotor speed</td>
</tr>
<tr>
<td>TT7</td>
<td>L.P. turbine discharge total temperature</td>
</tr>
<tr>
<td>TT4.5</td>
<td>H.P. compressor discharge total temperature</td>
</tr>
<tr>
<td>TT3</td>
<td>L.P. compressor discharge total temperature</td>
</tr>
<tr>
<td>TT6</td>
<td>H.P. turbine discharge total temperature</td>
</tr>
<tr>
<td>PT7</td>
<td>L.P. turbine discharge total pressure</td>
</tr>
<tr>
<td>PT3</td>
<td>L.P. compressor discharge total pressure</td>
</tr>
<tr>
<td>PT2.5</td>
<td>Fan stream total pressure at exit guide vane</td>
</tr>
<tr>
<td>PS3</td>
<td>L.P. compressor discharge static pressure</td>
</tr>
<tr>
<td>PS4</td>
<td>H.P. compressor discharge static pressure</td>
</tr>
<tr>
<td>HPC IGV POS</td>
<td>H.P. compressor inlet guide vane position</td>
</tr>
<tr>
<td>PWR LVR ANG</td>
<td>Power lever angle</td>
</tr>
<tr>
<td>Surge bleed valve POS</td>
<td>Pylon airbleed shut-off valve position</td>
</tr>
<tr>
<td>Pylon valve POS</td>
<td>Pressure regulator</td>
</tr>
<tr>
<td>Air control valve, HPC</td>
<td>Fuel flow rate (computed)</td>
</tr>
<tr>
<td>Wf</td>
<td>Total fuel burned</td>
</tr>
</tbody>
</table>

### Figure 33. Expanded Engine Performance
4.1.2.2 Installed Propulsion System Aerodynamics

Instrumentation—Selection of the pressure measurement system used for this program was guided by the need to obtain pressure measurements on the wing, pylon, and core cowl only during quasi-steady-state airplane operating conditions. Accordingly, in these areas, a 24-port scanivalve pressure sampling system, which samples 12 ports per second, was compatible with the normal time frame for maintaining quasi-steady-state airplane operating conditions. The option of using individual transducers for each measurement, as on the inlet and fan cowl, thereby allowing a simultaneous sampling of each pressure, was not overlooked. Not enough transducers could be purchased from appropriate manufacturers in the time frame available to complete the test program.

A Gould Statham Model PM 131TC (+17.2 kPa [+2.5 lb/in²]) differential-pressure transducer was used in all scanivalve modules. Specifications for the transducer were as follows: combined nonlinearity and hysteresis of less than +0.75% full scale, thermal sensitivity shift less than 0.01%/°F from -65°F to +250°F (-54°C to +121°C), and thermal zero shift less than 0.01% full scale/°F from -65°F to +250°F (-54°C to +121°C). The natural frequency of the transducer diaphragm was 3500 Hz. The transducer output resulting from an acceleration stimulus applied perpendicular to the plane of the diaphragm was 0.2% of full scale per g for vibration frequencies to approximately 20% of the diaphragm natural frequency. Above the natural frequency, the response increased in accordance with the behavior of an undamped single-degree-of-freedom system.

Each scanivalve transducer housing was fitted with a thermostatically controlled heater jacket, which maintained a 10°C (50°F) operating environment for the transducer given ambient temperatures below 10°C (50°F). The heater system, however, did not maintain a 10°C (50°F) environment if the ambient temperatures were above 10°C (50°F). This condition seemed likely to occur only in the scanivalve assemblies mounted in the engine pylon where engine bleed air ducts transfer heat into the pylon bays. To monitor the temperature at each scanivalve location, a thermocouple was installed on each scanivalve assembly.

The impact of airplane- or engine-induced vibration on the installed pressure transducers was assessed during the ferry flight to the remote test site. It was assumed that the highest vibration levels would be encountered in scanivalve installation in the engine pylon. Piezoelectric accelerometers were bonded onto the installed scanivalve assembly
and g-levels were measured in a direction perpendicular to the plane of the transducer diaphragm during cruise conditions approximating the required test conditions. The highest measured acceleration level was approximately 0.9 g rms at 230 Hz that would produce an output of 0.18% of full scale, based on the transducer acceleration sensitivity.

Other sources of measurement error involved signal gain, analog-to-digital conversion stability, and sampling speed. Testing transducers showed nonlinearity and hysteresis to be ±0.82% at worst and ±0.30% on an average. Based on pre- and postflight system calibrations and monitored in-flight operating conditions, the analog-to-digital conversion error was ±2%. Scanivalve sampling speed was found to be significant only in shock areas. A 6.9 kPa (1 lb/in²) pressure drop between the first 12 ports and the last 12 ports introduced a ±1% error. The accuracy of measured pressures was estimated to be ±3% in low-pressure gradient areas and ±4% in shock areas.

Static pressure orifices were installed on the pylon and core cowl of inboard and outboard engines 3 and 4 and on the wing in the vicinity of both engines. Three rows of surface-static pressures on the upper surface of the wing and two rows on the lower surface were installed near both engines, (figs. 5 and 6). Two rows of surface static pressures on each side of the engine pylon were installed on engines 3 and 4 (fig. 6). Finally, two rows of surface static pressures were installed on each side of the engine core cowl of engines 3 and 4 (fig. 6).

Surface-static pressure orifices were installed flush to the local wing, pylon, and core cowl surface except for the wing-pressure orifices, which were located over or aft of the wing fuel tanks. In these areas, pressure belts were bonded to the wing surface and faired into the surface (fig. 34). The location of the transition from flush orifices to pressure belt orifices is documented for each wing pressure measurement row (see table 1).

To improve the accuracy of actually locating a position of the pressure orifice on the wing, pylon, or core cowl, computer-generated surface-profile templates marked with the desired orifice location were used in regions experiencing large changes in surface curvature. The actual location of installed pressure orifices deviated in some cases from the desired location because of interference with, for example, structural members and anti-icing ducts. Actual locations were checked again after installation. Orifice positions tabulated in tables 11 to 16 represent the actual installed pressure orifice position plus or minus the tolerance indicated with each group of coordinates.
Figure 34. Typical Cross-Section of Wing Pressure Belt
Orifice positions on the engine 3 fan inlet and cowl did not deviate from the angular position of the profile. Engine 4 fan inlet and cowl orifices deviated from the angular position of the profiles a maximum of \( \pm 2 \) deg. The other significant deviation occurred on both engines 3 and 4 NAC WL 155 and 180 pressure orifice rows. The NAC WL values were within \( \pm 1.78 \) cm (0.7 in).

Additional clarification of locations for those pressure orifices located in the upper and lower surface wing pressure belts is necessary. For belt-located pressure orifices, one pressure orifice was allocated to one belt tube. Because the belt tubes were arranged laterally to provide a low profile, the orifice locations gradually deviated laterally due to tube width, resulting in increasing orifice distance from the start of the pressure belt. Table 17 presents the manner and amount of deviation for each pressure belt orifice at a given WBL.

### 4.1.3 Test Conditions and Procedures

#### 4.1.3.1 Flight Loads

Testing for performance degradation was accomplished in several well defined stages. Such testing was necessary to measure engine clearance changes resulting from various flight maneuvers. Once the installation and fabrication on the test bed aircraft was completed, an engine ground calibration was performed prior to the functional check flight. This calibration enabled comparison with the test stand calibrations by P&W A and provided a data base line for the flight test program.

It was suspected that the first 1% loss in performance due to engine clearance changes occurred during the production flight test acceptance profile (fig. 35). Therefore, this profile was chosen as the basis of the first test flight and was followed by a second ground calibration. Subsequent flights contained high-g turns and variations in takeoff gross weight. Under the test plan, each series of tests required a ground calibration after the particular series. Using these calibrations, performance deterioration was determined for each series of tests. The final ground calibration was performed after completing all flight testing. In all, five ground calibrations were conducted during the NAIL flight test program.
Table 17. Lateral Offset of Wing Pressure Belt Pressure Orifices From Wing Buttock Line

<table>
<thead>
<tr>
<th>WBL 445</th>
<th>WBL 510</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UPPER SURFACE</strong></td>
<td><strong>LOWER SURFACE</strong></td>
</tr>
<tr>
<td>$X_{W/CW}$</td>
<td>OFFSET X $0.1588 \text{ cm (1/16&quot;)}$</td>
</tr>
<tr>
<td>0.2000</td>
<td>0</td>
</tr>
<tr>
<td>0.2250</td>
<td>-3</td>
</tr>
<tr>
<td>0.2500</td>
<td>-6</td>
</tr>
<tr>
<td>0.2750</td>
<td>-9</td>
</tr>
<tr>
<td>0.3043</td>
<td>-12</td>
</tr>
<tr>
<td>0.3543</td>
<td>-15</td>
</tr>
<tr>
<td>0.4037</td>
<td>-18</td>
</tr>
<tr>
<td>0.4538</td>
<td>-21</td>
</tr>
<tr>
<td>0.4750</td>
<td>-24</td>
</tr>
<tr>
<td>0.5060</td>
<td>-27</td>
</tr>
<tr>
<td>0.5250</td>
<td>3</td>
</tr>
<tr>
<td>0.5554</td>
<td>6</td>
</tr>
<tr>
<td>0.6049</td>
<td>9</td>
</tr>
<tr>
<td>0.6551</td>
<td>12</td>
</tr>
<tr>
<td>0.7049</td>
<td>15</td>
</tr>
<tr>
<td>0.7552</td>
<td>18</td>
</tr>
<tr>
<td>0.8049</td>
<td>21</td>
</tr>
</tbody>
</table>

WBL 470

<table>
<thead>
<tr>
<th><strong>UPPER SURFACE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_{W/CW}$</td>
</tr>
<tr>
<td>0.2000</td>
</tr>
<tr>
<td>0.3000</td>
</tr>
<tr>
<td>0.4000</td>
</tr>
<tr>
<td>0.5000</td>
</tr>
<tr>
<td>0.6000</td>
</tr>
</tbody>
</table>
Table 17. Lateral Offset of Wing Pressure Belt Pressure Orifices From Wing Buttock Line (Concluded)

<table>
<thead>
<tr>
<th>WBL 809</th>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
<th>WBL 870</th>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$X_{W/CW}$</td>
<td>OFFSET X 0.1588 cm (1/16&quot;)</td>
<td>$X_{W/CW}$</td>
<td>OFFSET X 0.1588 cm (1/16&quot;)</td>
<td>$X_{W/CW}$</td>
</tr>
<tr>
<td></td>
<td>0.2000</td>
<td>0.2000</td>
<td>0.2000</td>
<td>0.2000</td>
<td>0.2043</td>
</tr>
<tr>
<td></td>
<td>0.2250</td>
<td>-3</td>
<td>0.2500</td>
<td>-3</td>
<td>0.2543</td>
</tr>
<tr>
<td></td>
<td>0.2466</td>
<td>-6</td>
<td>0.3000</td>
<td>-6</td>
<td>0.3043</td>
</tr>
<tr>
<td></td>
<td>0.3000</td>
<td>-9</td>
<td>0.3500</td>
<td>-9</td>
<td>0.3543</td>
</tr>
<tr>
<td></td>
<td>0.3500</td>
<td>-12</td>
<td>0.4000</td>
<td>-12</td>
<td>0.4043</td>
</tr>
<tr>
<td></td>
<td>0.4000</td>
<td>-15</td>
<td>0.4500</td>
<td>-15</td>
<td>0.4543</td>
</tr>
<tr>
<td></td>
<td>0.4500</td>
<td>-18</td>
<td>0.5000</td>
<td>-18</td>
<td>0.5043</td>
</tr>
<tr>
<td></td>
<td>0.5000</td>
<td>-21</td>
<td>0.5500</td>
<td>3</td>
<td>0.5543</td>
</tr>
<tr>
<td></td>
<td>0.5250</td>
<td>3</td>
<td>0.6000</td>
<td>6</td>
<td>0.6043</td>
</tr>
<tr>
<td></td>
<td>0.6000</td>
<td>9</td>
<td>0.6500</td>
<td>9</td>
<td>0.6543</td>
</tr>
<tr>
<td></td>
<td>0.6500</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.7000</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.7500</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.8000</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WBL 834</td>
<td>UPPER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X_{W/CW}$</td>
<td>OFFSET X 0.1588 cm (1/16&quot;)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2405</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.3000</td>
<td>-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.4000</td>
<td>-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.5000</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.6000</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 35. Acceptance Flight Profile
The final test conditions (table 18) of the NAIL program resulted from compromise and various flight restrictions. Originally NAIL was to be a standalone flight program. However, the flight test was conducted concurrently with the 767/JT9D-7R4 test program, which imposed certain flight restrictions on RA001. The most notable restrictions were to remain within the 767 design cruise speed and Mach number \(V_C\) and \(M_C\) limits of 360 kcas and \(M = 0.86\) until the completion of all JT9D-7R4 test conditions and to limit nacelle loads to 80% of the design limit. Upon completion of the JT9D-7R4 program, the 767 design envelope \(V_C\) and \(M_C\) limits of 420 kcas and \(M = 0.91\) were applied to the NAIL program.

Several restrictions were imposed on the NAIL program—not because of the NAIL flight test profile but because of inclement weather (i.e., rain, snow, hail, fog, high wind, and wide variations in temperature). Moisture caused problems for the RA001 in that only engine 1 had thermal anti-ice protection. Therefore, no flights were conducted into known or suspected icing conditions. The pressure instrumentation (fig. 36) was not to be exposed to visible moisture to ensure that water did not enter the lines and freeze.

Use of laser probes for detection of engine clearance changes dictated adherence to three conditions: that the nitrogen purge and cooling system operate whenever engine 3 was used, that nitrogen cooling be required for the camera environmental housings when ambient ground conditions dictated, and that the aircraft heading prevent sunlight from entering the inlet and interfering with laser readings.

Because a functional check flight and a ferry flight to the remote test site were required prior to any NAIL data collection effort, it was necessary to restrict the level of power to prevent performance losses in the analytically built engine 3. Therefore, all flights prior to the first data flight were limited to an engine pressure ratio (EPR) of 1.18 with no bleeds during takeoff and maintained a locked throttle climb to 10,000 ft at which time normal operation resumed.

As a result of the concurrent testing programs, data were taken over approximately 33 hours of flight time instead of over the initially planned 15-hour maximum. The increased flight time resulted in a substantially larger quantity of data to survey and select from for analysis and provided additional conditions for analysis. The result of this concurrent testing was that additional data were obtained, yet flight hours charged to the NASA program were considerably fewer than planned.
<table>
<thead>
<tr>
<th>Test condition</th>
<th>Test no.</th>
<th>Event time</th>
<th>Pressure altitude, ft</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 612K gross weight takeoff (flaps 20)</td>
<td>273-7</td>
<td>6:41:44</td>
<td>2 553</td>
<td>0.250</td>
</tr>
<tr>
<td>101 538K gross weight takeoff (flaps 10)</td>
<td>273-10</td>
<td>9:44:10</td>
<td>2 667</td>
<td>0.239</td>
</tr>
<tr>
<td>101 647K gross weight takeoff (flaps 10)</td>
<td>273-11</td>
<td>10:13:52</td>
<td>2 634</td>
<td>0.254</td>
</tr>
<tr>
<td>101 780K gross weight simulated takeoff (flaps 10)</td>
<td>273-15</td>
<td>8:13:18</td>
<td>3 646</td>
<td>0.296</td>
</tr>
<tr>
<td>102 Low climb</td>
<td>273-10</td>
<td>9:46:00</td>
<td>5 861</td>
<td>0.367</td>
</tr>
<tr>
<td>103 Mid climb</td>
<td>273-7</td>
<td>7:28:44</td>
<td>17 187</td>
<td>0.599</td>
</tr>
<tr>
<td>104 High M cruise</td>
<td>273-7</td>
<td>7:49:26</td>
<td>35 481</td>
<td>0.859</td>
</tr>
<tr>
<td>105 Low M cruise</td>
<td>273-7</td>
<td>7:55:40</td>
<td>35 512</td>
<td>0.772</td>
</tr>
<tr>
<td>106 Max M</td>
<td>273-15</td>
<td>12:09:27</td>
<td>36 978</td>
<td>0.906</td>
</tr>
<tr>
<td>107 Inflight relight</td>
<td>273-7</td>
<td>8:12:53</td>
<td>27 859</td>
<td>0.721</td>
</tr>
<tr>
<td>108 Maximum q</td>
<td>273-15</td>
<td>11:39:00</td>
<td>24 513</td>
<td>0.836</td>
</tr>
<tr>
<td>109 Stall warning (flaps up)</td>
<td>273-7</td>
<td>8:18:58</td>
<td>16 964</td>
<td>0.391</td>
</tr>
<tr>
<td>110 Stall warning (flaps 10)</td>
<td>273-7</td>
<td>8:22:26</td>
<td>16 239</td>
<td>0.347</td>
</tr>
<tr>
<td>111 Stall warning (flaps 30)</td>
<td>273-7</td>
<td>8:24:52</td>
<td>17 049</td>
<td>0.270</td>
</tr>
<tr>
<td>112 Idle descent</td>
<td>273-7</td>
<td>8:28:56</td>
<td>8 450</td>
<td>0.439</td>
</tr>
<tr>
<td>113 Approach</td>
<td>273-7</td>
<td>8:34:27</td>
<td>6 003</td>
<td>0.265</td>
</tr>
<tr>
<td>114 Touch and go</td>
<td>273-7</td>
<td>8:40:36</td>
<td>2 561</td>
<td>0.263</td>
</tr>
<tr>
<td>115 Thrust reverse</td>
<td>273-7</td>
<td>8:46:00</td>
<td>2 561</td>
<td>0.179</td>
</tr>
<tr>
<td>116 2.0g left turn (flaps up)</td>
<td>273-10</td>
<td>13:33:58</td>
<td>8 397</td>
<td>0.487</td>
</tr>
<tr>
<td>117 1.6g left turn (flaps 30)</td>
<td>273-10</td>
<td>13:41:07</td>
<td>8 202</td>
<td>0.260</td>
</tr>
<tr>
<td>120 2.0g right turn (flaps up)</td>
<td>273-15</td>
<td>11:04:03</td>
<td>8 240</td>
<td>0.476</td>
</tr>
<tr>
<td>121 1.6g right turn (flaps 30)</td>
<td>273-15</td>
<td>11:07:25</td>
<td>8 278</td>
<td>0.266</td>
</tr>
<tr>
<td>123 Airplane stall</td>
<td>273-10</td>
<td>13:26:17</td>
<td>9 000</td>
<td>0.207</td>
</tr>
</tbody>
</table>

**Figure 36. View of Pressure Ports**

70
4.1.3.2 Installed Propulsion System Aerodynamics

Four test conditions were flown during the IPSA program. The test conditions included level flight at \( M = 0.77, 0.80, \) and 0.86 and at \( M = 0.91 \), a condition that required the airplane to be put into a shallow dive. The test conditions flown at \( M = 0.77, 0.86, \) and 0.91 satisfied the contract commitment and were coincident with flight load conditions. All test conditions were flown at a representative cruise altitude.

Preflight and postflight calibrations of the pressure measuring system were performed for each test flight. During a test flight, seven flight condition parameters were monitored online with a multichannel pen recorder. These parameters included flight Mach number, ambient total temperature, angle of attack, heading, pressure altitude, sideslip, and inboard aileron position. These parameters were used collectively to determine the stability of the airplane prior to and during the recording of measured pressure data. In each parameter, the deviations allowed for approximately a 30-sec period during which measured data were recorded; these deviations are:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mach number</td>
<td>( \pm 0.001 )</td>
</tr>
<tr>
<td>Ambient total temp.</td>
<td>( \pm 0.1^\circ C )</td>
</tr>
<tr>
<td>Angle of attack</td>
<td>( \pm 0.25 ) deg</td>
</tr>
<tr>
<td>Heading</td>
<td>( \pm 0.2 ) deg</td>
</tr>
<tr>
<td>Pressure altitude</td>
<td>( \pm 3.048 ) m (( \pm 10 ) ft)</td>
</tr>
<tr>
<td>Sideslip</td>
<td>( \pm 0.25 ) deg</td>
</tr>
<tr>
<td>Aileron position</td>
<td>( \pm 1 ) deg</td>
</tr>
</tbody>
</table>

All test conditions were flown with the airplane autopilot engaged and in the altitude hold mode.

Because all measured pressure data were acquired during cruise conditions, no wing leading- or trailing-edge devices that would alter the basic wing geometry described in table 1 were deployed with the exception of the inboard aileron. In cruise, the inboard aileron provided small amounts of roll control and was combined with various amounts of midspan spoiler deployment for larger rolling moment inputs. During data recordings, some small aileron deflections, well below those levels causing limited spoiler deployment, were required to maintain level flight. Accordingly, this small amount of inboard aileron deflection effectively changed the local wing camber at WBLs 445, 470, and 510.
For reference, the geometrical arrangement of the inboard aileron at WBLs of 445 and 510 including the wing line location is presented in table 19. The outboard aileron was locked out during cruise and therefore was an inactive control surface at 0-deg deflection.

4.1.4 Test Data Format

The data collected during the NAIL program required careful use of the airborne data analysis and monitor system (ADAMS) and of the final data system. Of particular concern was the ability to assess real-time data quality for flight decisions, because 1023 channels of measurements were being made during the combined test program and no ground-based analysis system was available at the remote site. It was necessary to send the flight tape to Seattle shortly after completion of the day's testing. This requirement did not allow rerunning the tape on the ADAMS. Therefore, essentially all decisions were based upon real-time data obtained from the ADAMS during flight. Further development of the onboard ADAMS and the combined use of the final data system in conjunction with the flight test interactive graphics data analysis (IGDA) site aided in coping with this problem.

The basic ADAMS (fig. 37) could not handle the volume of data required by the JT9D-7R4 and NAIL programs. The expanded data handling capabilities of the analysis groups doubled that of the basic system by using a second ADAMS on the RA001. The quantity of data collected during the program required system modification in order to minimize testing and preflight delays. These modifications to the onboard flight test system (fig. 38) provided adequate remote-base support to the flight test program. Several hardware and software changes to the basic ADAMS were implemented to accomplish this support.

Two other significant hardware changes were made to the basic ADAMS. First, a fixed head disk for program and measurement information storage was used. The fixed head disk eliminated loading of information through Cartrifiles each time the system was brought online. This improvement was vital because activating the system required 1 to 2 min rather than 15 min as projected, based on the number of measurements required. A 15-min delay was unacceptable in terms of cost, if the system should malfunction once airborne. Further, rapid selection of preselected data sources was also a requirement in view of the quantity of data being measured and the concurrent test program to permit
Table 19. Inboard Aileron

<table>
<thead>
<tr>
<th>DISTANCE MEASURED IN WRP, cm (in)</th>
<th>WBL 445</th>
<th>WBL 510</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading edge to aileron hinge centerline</td>
<td>830.78</td>
<td>680.54</td>
</tr>
<tr>
<td>(327.08)</td>
<td></td>
<td>(267.93)</td>
</tr>
<tr>
<td>Leading edge to upper surface skin break line</td>
<td>827.58</td>
<td>677.34</td>
</tr>
<tr>
<td>(325.82)</td>
<td></td>
<td>(266.67)</td>
</tr>
<tr>
<td>Leading edge to lower surface skin break line</td>
<td>828.47</td>
<td>677.77</td>
</tr>
<tr>
<td>(326.17)</td>
<td></td>
<td>(266.84)</td>
</tr>
</tbody>
</table>
Figure 37. Airborne Data Analysis and Monitoring System

Figure 38. Test Airplane Interior View
the test engineers to track their respective data. Second, a data measurement selector was incorporated into the ADAMS. This was necessary because approximately 1023 measurements were obtained during the flight test. The data measurement selector sent data preselected for output to the digital-to-analog converter.

The original ADAMS software could not support the NAIL program during remote base operation. An onboard pressure coefficient (PC) program was lacking, and thus development of an interim program that satisfied the needs of analysis was necessary. The PC program was developed to use the Brush recorder as a quasigraphics system and to use the line printer for summary outputs. The program could calculate pressure coefficients for up to 16 measurement groups with a maximum of 20 pressure ports each. The output of the program was displayed on the Brush recorder while a summary table of port differential pressures and pressure coefficient values was printed on the line printer. This information was output either continuously or upon keyboard command for a predetermined time interval. The program provided real-time information for determining data quality and for making decisions on subsequent test conditions.

Data were supplied in the forms of tables, computer-generated graphs, and data files on magnetic tapes. Table 20 is an example of a pressure coefficient data table. Engine performance and fuel flow examples are given in tables 21 and 22. An example of an engine clearance data table is given in table 23. Finally, table 24 is an example of a turbine case temperature table. The magnetic tape data files included all the above examples and basic airplane data for all flight conditions, plus acceleration data for the heavyweight landing.

4.2 TEST RESULTS

4.2.1 Aerodynamic and Inertial Loads

4.2.1.1 Aerodynamic Loads

Pressures were measured at 252 ports in 12 rows nominally 30 deg apart on the inlet and fan cowl of engine 3. The actual spacing varied slightly for some ports because of installation and arrangement requirements. (See Appendix A for details.) Fourteen ports were found to have defective or doubtful transducers, and the indicated pressures of those ports were not used. Pressure data are presented graphically and in tabular form in Appendix A.
### Table 20. Pressure Coefficient

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>TEST</th>
<th>PRESSURE COEFFICIENT</th>
<th>REQUEST NO. 2591-0309</th>
</tr>
</thead>
<tbody>
<tr>
<td>757-100</td>
<td>273-07</td>
<td></td>
<td>DATE 10/13/50 TIME 0347</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COORDINATION CE</th>
<th>ALPHA</th>
<th>PRESS-INLET E3 PTO1 240R</th>
<th>PRESS-INLET E3 PTO2 240R</th>
<th>PRESS-INLET E3 PTO3 240R</th>
<th>PRESS-INLET E3 PTO4 240R</th>
<th>PRESS-INLET E3 PTO5 240R</th>
<th>PRESS-INLET E3 PTO6 240R</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PS1</td>
<td>CP</td>
<td>PS1</td>
<td>CP</td>
<td>PS1</td>
<td>CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3211</td>
<td></td>
<td>3212</td>
<td></td>
<td>3213</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONDITION AVERAGES</th>
<th>CALIBRATED AIRSPEED 145.3 KNOTS</th>
<th>MACH NUMBER 0.245</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRESSURE ALTITUDE 6072 FEET</td>
<td>FLAP POSITION</td>
</tr>
<tr>
<td></td>
<td>DYNAMIC PRESSURE 0.495 PSI</td>
<td>LANDING GEAR UP</td>
</tr>
<tr>
<td></td>
<td>NORMAL ACCELERATION 1.643 G</td>
<td>GROSS WEIGHT 0 LBS</td>
</tr>
</tbody>
</table>

*Note: Table content is not legible due to image quality.*
<table>
<thead>
<tr>
<th>Aircraft Model</th>
<th>747-1200</th>
<th>Test</th>
<th>273-15</th>
<th>J19 ENG PERF SUMMARY</th>
<th>REQUEST NO</th>
<th>1316.0101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplane Number</td>
<td>RA001</td>
<td></td>
<td></td>
<td></td>
<td>DATE</td>
<td>10/31/80</td>
</tr>
<tr>
<td>Time</td>
<td>0515</td>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>0515</td>
</tr>
</tbody>
</table>

### Engine Performance Summary

**Airplane Data**

<table>
<thead>
<tr>
<th>HP FEET</th>
<th>M</th>
<th>V KTS</th>
<th>DELTAM DEG C</th>
<th>TAM DEG C</th>
<th>T13 DEG C</th>
<th>PSI</th>
<th>IT1 IN HG</th>
<th>IN HG</th>
</tr>
</thead>
<tbody>
<tr>
<td>24076</td>
<td>.601</td>
<td>364.8</td>
<td>2.5</td>
<td>-30.2</td>
<td>-12.7</td>
<td>11.56</td>
<td>14.75</td>
<td>0.3863</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4930</td>
<td>0.8920</td>
<td>0.9345</td>
</tr>
</tbody>
</table>

### Gas Generator Summary

<table>
<thead>
<tr>
<th>ENG</th>
<th>FGH</th>
<th>RFN</th>
<th>SFC</th>
<th>N1</th>
<th>N2</th>
<th>T6</th>
<th>T7</th>
<th>NF</th>
<th>WT</th>
<th>P25PT1</th>
<th>P54</th>
<th>SBV</th>
<th>SVA</th>
<th>PLA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STS</td>
<td>RFN</td>
<td>R5FC</td>
<td>R1</td>
<td>R2</td>
<td>RT6</td>
<td>R7</td>
<td>RRF</td>
<td>RWF</td>
<td>NWAT</td>
<td>PT7PT1</td>
<td>P54PT7</td>
<td>BPR</td>
<td>SGP</td>
</tr>
<tr>
<td>1</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td>2</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
</tbody>
</table>

### Thrust Calculation Detail Summary

| ENG | FGF | RGF | FGP | FRAM | WIP | WIP | P25PAM | P13PAM | P13PAM | P13PAM | P13PAM | P13PAM | P13PAM | P13PAM | CDF | CDF | CDF | AP1R | FP1R | FP1R | FP1R | FP1R | CGF | CGF | CGF | CGF | CGF |
|-----|-----|-----|-----|------|-----|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-----|-----|------|------|------|------|------|-----|-----|-----|-----|-----|
|     | STS | RFN | R5FC | R6F | R7F | RRF | RWF | NWAT | PT7PT1 | P54PT7 | BPR | SGP | P0S | DEG | DEG | DEG | DEG | DEG | DEG | DEG | DEG | DEG | DEG | DEG | DEG |
| 1   | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA |
| 2   | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA |
| 3   | 176.7 | 259.4 | 336.9 | 666 | 1.70 | 1.39 | 1.01 | 0.96 | 0.97 | 20.11 | 318 | 1.38 | 1.35 | 7.22 | 0.0 |
| 4   | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA | NDA |

**ALL VALUES PRINTED ARE CONDITION AVERAGES**
### Table 22. Engine Fuel-Flow Data

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>747-100</th>
<th>TEST 273-15</th>
<th>ENGINE FUEL FLOW DATA</th>
<th>ENGINE MODEL</th>
<th>P&amp;W A J190-3/7</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>COORDINATION TIME</th>
<th>WF</th>
<th>LB/H</th>
<th>RSFC D TIME</th>
<th>DRUF</th>
<th>PNTS</th>
<th>DFFN</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-27-40.086</td>
<td>3</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
<td>IDU</td>
<td>NDA</td>
</tr>
<tr>
<td>11-27-45.086</td>
<td>3</td>
<td>5039</td>
<td>10938</td>
<td>698</td>
<td>782</td>
<td>8000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AVERAGE</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>5039</td>
<td>10938</td>
<td>698</td>
<td>782</td>
<td>8000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO. OF POINTS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST VALUES</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SWF</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>APRSFC</td>
<td>0</td>
<td>0</td>
<td>-3</td>
<td>-3</td>
<td>-3</td>
<td>-3</td>
</tr>
<tr>
<td>APSFC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDU NO. DFFN</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**REQUEST NO: 1316.0101**
**DATE: 10/31/80**
**TIME: 0515**
### Table 23. Measurements for Engine Clearance

<table>
<thead>
<tr>
<th>HR MIN SEC</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-33-00.094</td>
<td>122330</td>
<td>47516</td>
<td>26711</td>
<td>95729</td>
<td>51066</td>
<td>114197</td>
<td>88564</td>
<td>26678</td>
<td>131500</td>
<td>46295</td>
<td>525124</td>
<td>71984</td>
<td>663</td>
</tr>
<tr>
<td>11-33-01.094</td>
<td>36532</td>
<td>20544</td>
<td>40145</td>
<td>513694</td>
<td>110881</td>
<td>97832</td>
<td>40017</td>
<td>135408</td>
<td>93683</td>
<td>202843</td>
<td>171795</td>
<td>665</td>
<td></td>
</tr>
<tr>
<td>11-33-02.094</td>
<td>67871</td>
<td>81184</td>
<td>21025</td>
<td>522980</td>
<td>164188</td>
<td>118429</td>
<td>57459</td>
<td>-22605</td>
<td>164531</td>
<td>147272</td>
<td>136784</td>
<td>665</td>
<td></td>
</tr>
<tr>
<td>11-33-03.094</td>
<td>89431</td>
<td>62683</td>
<td>93670</td>
<td>78185</td>
<td>114310</td>
<td>40017</td>
<td>21199</td>
<td>-56614</td>
<td>133856</td>
<td>35955</td>
<td>668</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-33-04.094</td>
<td>28802</td>
<td>22480</td>
<td>26764</td>
<td>366478</td>
<td>95245</td>
<td>40654</td>
<td>95245</td>
<td>35025</td>
<td>113298</td>
<td>665</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-33-05.094</td>
<td>89431</td>
<td>62683</td>
<td>93670</td>
<td>78185</td>
<td>114310</td>
<td>40017</td>
<td>21199</td>
<td>-56614</td>
<td>133856</td>
<td>35955</td>
<td>668</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-33-06.094</td>
<td>46251</td>
<td>429913</td>
<td>65211</td>
<td>25852</td>
<td>915753</td>
<td>79214</td>
<td>117399</td>
<td>50277</td>
<td>238734</td>
<td>282841</td>
<td>668</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-33-07.094</td>
<td>903625</td>
<td>509110</td>
<td>65211</td>
<td>102934</td>
<td>106994</td>
<td>13696</td>
<td>87215</td>
<td>116089</td>
<td>161553</td>
<td>290041</td>
<td>665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-33-08.094</td>
<td>28776</td>
<td>463855</td>
<td>-2067</td>
<td>44409</td>
<td>473544</td>
<td>128682</td>
<td>133877</td>
<td>61544</td>
<td>236291</td>
<td>110098</td>
<td>485999</td>
<td>182904</td>
<td></td>
</tr>
<tr>
<td>11-33-09.094</td>
<td>57671</td>
<td>513224</td>
<td>11274</td>
<td>57644</td>
<td>447807</td>
<td>81271</td>
<td>70027</td>
<td>9235</td>
<td>40864</td>
<td>44237</td>
<td>226584</td>
<td>270698</td>
<td>661</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COORDINATION</th>
<th>HPT 120 DEG</th>
<th>HPT 300 DEG</th>
<th>HPT 210 DEG</th>
<th>HPT 300 DEG</th>
<th>HPT 120 DEG</th>
<th>HPT 300 DEG</th>
<th>HPT 120 DEG</th>
<th>HPT 300 DEG</th>
<th>HPT 120 DEG</th>
<th>HPT 300 DEG</th>
<th>HPT 120 DEG</th>
<th>HPT 300 DEG</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
<td>MILS</td>
</tr>
<tr>
<td>2680</td>
<td>2681</td>
<td>2682</td>
<td>2683</td>
<td>2684</td>
<td>2685</td>
<td>2686</td>
<td>2687</td>
<td>2688</td>
<td>2689</td>
<td>2690</td>
<td>2691</td>
<td>5100</td>
</tr>
</tbody>
</table>

| AVERAGE       | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           | 10           |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MINIMUM       | 28776       | 429913      | 2067        | 26764       | 366478      | 78185       | 65758       | 95245       | 40654       | 95245       | 78185       | 65758       |
| MAXIMUM       | 122330      | 513224      | 11274       | 57644       | 447807      | 81271       | 70027       | 9235        | 40864       | 44237       | 226584      | 270698      |

| STD DEVIATION | 28927       | 29753       | 51236       | 27432       | 49021       | 22201       | 24322       | 26670       | 73834       | 85028       | 155952      | 83660       |

| NO. OF POINTS | 10           | 7            | 10           | 10           | 8            | 10           | 10           | 10           | 10           | 10           | 8            | 10           |
### Table 24. Measurements of Turbine Case Temperature

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>TEST</th>
<th>REQUEST NO</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>747-100</td>
<td>273-15</td>
<td>1316.0101</td>
<td>10/11/00</td>
<td>1H15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COORDINATION TIME</th>
<th>TEMP M-FLANGE TIP 180 RAD</th>
<th>TEMP M-FLANGE TIP 300 RAD</th>
<th>TEMP M-FLANGE ROOT 60 RAD</th>
<th>TEMP M-FLANGE ROOT 180 RAD</th>
<th>TEMP M-FLANGE ROOT 300 RAD</th>
<th>TEMP M-FLANGE ROOT 120 RAD</th>
<th>TEMP M-FLANGE ROOT 240 RAD</th>
<th>TEMP M-FLANGE TIP 0 RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
<td>DEGF</td>
</tr>
<tr>
<td>5102</td>
<td>5103</td>
<td>5104</td>
<td>5105</td>
<td>5106</td>
<td>5107</td>
<td>5108</td>
<td>5109</td>
<td>5110</td>
</tr>
<tr>
<td>HR MIN SEC</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRPLANE NUMBER</th>
<th>RA001</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TEMP M-FLANGE TIP 180 RAD</th>
<th>TEMP M-FLANGE TIP 300 RAD</th>
<th>TEMP M-FLANGE ROOT 60 RAD</th>
<th>TEMP M-FLANGE ROOT 180 RAD</th>
<th>TEMP M-FLANGE ROOT 300 RAD</th>
<th>TEMP M-FLANGE ROOT 120 RAD</th>
<th>TEMP M-FLANGE ROOT 240 RAD</th>
<th>TEMP M-FLANGE TIP 0 RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>652</td>
<td>717</td>
<td>670</td>
<td>689</td>
<td>709</td>
<td>707</td>
<td>707</td>
<td>-1353</td>
</tr>
<tr>
<td>655</td>
<td>725</td>
<td>672</td>
<td>691</td>
<td>704</td>
<td>707</td>
<td>711</td>
<td>-1319</td>
</tr>
<tr>
<td>655</td>
<td>722</td>
<td>672</td>
<td>689</td>
<td>709</td>
<td>707</td>
<td>711</td>
<td>-1319</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>668</td>
<td>689</td>
<td>707</td>
<td>702</td>
<td>707</td>
<td>-1386</td>
</tr>
<tr>
<td>652</td>
<td>720</td>
<td>670</td>
<td>687</td>
<td>709</td>
<td>707</td>
<td>707</td>
<td>-1368</td>
</tr>
<tr>
<td>652</td>
<td>717</td>
<td>665</td>
<td>691</td>
<td>711</td>
<td>711</td>
<td>713</td>
<td>-1331</td>
</tr>
<tr>
<td>650</td>
<td>715</td>
<td>670</td>
<td>689</td>
<td>711</td>
<td>707</td>
<td>707</td>
<td>-1368</td>
</tr>
<tr>
<td>652</td>
<td>717</td>
<td>668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1343</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1355</td>
</tr>
<tr>
<td>655</td>
<td>717</td>
<td>668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1355</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1355</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEMP M-FLANGE TIP 180 RAD</th>
<th>TEMP M-FLANGE TIP 300 RAD</th>
<th>TEMP M-FLANGE ROOT 60 RAD</th>
<th>TEMP M-FLANGE ROOT 180 RAD</th>
<th>TEMP M-FLANGE ROOT 300 RAD</th>
<th>TEMP M-FLANGE ROOT 120 RAD</th>
<th>TEMP M-FLANGE ROOT 240 RAD</th>
<th>TEMP M-FLANGE TIP 0 RAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>652</td>
<td>718</td>
<td>-669</td>
<td>689</td>
<td>709</td>
<td>705</td>
<td>709</td>
<td>-1366</td>
</tr>
<tr>
<td>650</td>
<td>715</td>
<td>-665</td>
<td>675</td>
<td>704</td>
<td>698</td>
<td>707</td>
<td>-1360</td>
</tr>
<tr>
<td>655</td>
<td>726</td>
<td>-672</td>
<td>691</td>
<td>711</td>
<td>711</td>
<td>711</td>
<td>-1296</td>
</tr>
<tr>
<td>652</td>
<td>715</td>
<td>-670</td>
<td>687</td>
<td>707</td>
<td>698</td>
<td>709</td>
<td>-1355</td>
</tr>
<tr>
<td>655</td>
<td>717</td>
<td>-668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1343</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>-668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1355</td>
</tr>
<tr>
<td>652</td>
<td>715</td>
<td>-670</td>
<td>689</td>
<td>711</td>
<td>707</td>
<td>707</td>
<td>-1368</td>
</tr>
<tr>
<td>655</td>
<td>717</td>
<td>-668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1368</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>-668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1343</td>
</tr>
<tr>
<td>650</td>
<td>717</td>
<td>-668</td>
<td>691</td>
<td>709</td>
<td>724</td>
<td>707</td>
<td>-1355</td>
</tr>
</tbody>
</table>

| AVERAGE | 652 | 718 | -669 | 689 | 709 | 705 | 709 | -1366 | 716 | 725 | 1016 | 794 | 797 | 752 |
| MINIMUM | 650 | 715 | -665 | 689 | 704 | 705 | 707 | -1360 | 709 | 720 | 1010 | 790 | 794 | 750 |
| MAXIMUM | 655 | 726 | -672 | 691 | 711 | 711 | 711 | -1296 | 717 | 728 | 1021 | 801 | 803 | 756 |
| STD DEVIATION | 2 | 3 | 2 | 2 | 3 | 2 | 24 | 3 | 2 | 4 | 3 | 3 | 2 |
| NO. OF POINTS | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
To compute resultant airloads from the pressure data, a previously developed computer program was used. It approximates the inlet and cowl geometry as a series of conical frustums and adjusts for the tilt of the inlet axis with respect to the nacelle centerline by insertion of wedge-shaped surfaces. This procedure was checked by comparison to a method based on a complete three-dimensional geometry definition. Resultant forces differed by less than 3%, and resultant yaw and pitching moments at the engine face differed by less than 1%. (Rolling moments differed by 3.5% but are not significant loads.)

Figure 39 shows the coordinate system for the resultant loads.

Table 25 gives resultant loads along with key airplane and engine parameters for 23 flight conditions.

**Takeoffs**—Four takeoffs—one at flaps 20 deg and 612 000 lb gross weight and three at flaps 10 deg and gross weights of 538 000, 647 000, and 780 000 lb (simulated)—were selected for detailed loads analyses. For two takeoffs, time histories of resultant loads were calculated for the purpose of correlating maximum clearance changes, whenever they occurred, with the aerodynamic loads. For the 780 000 lb takeoff, which was simulated by a pullup maneuver at 1000 ft above ground level, the analysis was done at the instant the correct airplane lift coefficient was reached.

The flaps 20 deg, 612 000 lb gross weight takeoff was the initial takeoff for the entire test program. Peak load was reached at inter-range instrumentation group master clock (IRIG) time 6:41:44. The pitching moment at the A-flange was 329 000 in-lb.

The 538 000 lb takeoff occurred during test 273-10, and the time history covers the IRIG span of 9:44:00 to 9:44:11. Time histories of A-flange pitching moment and airflow sensor vane angle* during the takeoff rotation are given in figure 40. The direct relationship of load to flow angle is evident. Also note that the maximum moment for this condition (401 000 in-lb) is considerably higher than the maximum for the flaps 20-deg takeoff, table 25.

---

*The airflow sensor vanes are mounted on both sides of the fuselage near the flight deck. The flow angles indicated by the vanes are influenced by flap setting, wing upwash, body crossflow, and other factors and should not be construed as airplane angle of attack.
Figure 39. Sign Convention for Steady-State Loads, Engine 3
<table>
<thead>
<tr>
<th>Condition</th>
<th>Airspeed, KCAS</th>
<th>Pressure altitude, ft</th>
<th>Mach number</th>
<th>Referred airflow, lb/s</th>
<th>Load factor, g</th>
<th>$F_x$, lb</th>
<th>$F_y$, lb</th>
<th>$M_x$, in-lb</th>
<th>$M_y$, in-lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>101  612K gross weight takeoff (flaps 20)</td>
<td>157.8</td>
<td>2553</td>
<td>0.250</td>
<td>1549</td>
<td>1.14</td>
<td>6001</td>
<td>-2754</td>
<td>-147736</td>
<td>-328780</td>
</tr>
<tr>
<td>101  538K gross weight takeoff (flaps 10)</td>
<td>151.0</td>
<td>2667</td>
<td>0.239</td>
<td>1527</td>
<td>1.26</td>
<td>7197</td>
<td>-2916</td>
<td>-152292</td>
<td>-400756</td>
</tr>
<tr>
<td>101  647K gross weight takeoff (flaps 10)</td>
<td>160.1</td>
<td>2634</td>
<td>0.254</td>
<td>1524</td>
<td>1.17</td>
<td>7921</td>
<td>-3112</td>
<td>-159325</td>
<td>-424987</td>
</tr>
<tr>
<td>101  780K gross weight simulated takeoff (flaps 10)</td>
<td>183.6</td>
<td>3646</td>
<td>0.296</td>
<td>1573</td>
<td>1.20</td>
<td>8344</td>
<td>-2757</td>
<td>-134045</td>
<td>-430154</td>
</tr>
<tr>
<td>102  Low climb</td>
<td>218.8</td>
<td>5861</td>
<td>0.367</td>
<td>1539</td>
<td></td>
<td>4670</td>
<td>-1067</td>
<td>-45361</td>
<td>-206043</td>
</tr>
<tr>
<td>103  Mid climb</td>
<td>290.4</td>
<td>17187</td>
<td>0.599</td>
<td>1622</td>
<td></td>
<td>4084</td>
<td>-588</td>
<td>-25756</td>
<td>-125891</td>
</tr>
<tr>
<td>104  High M cruise</td>
<td>291.3</td>
<td>35481</td>
<td>0.859</td>
<td>1633</td>
<td></td>
<td>2469</td>
<td>-1023</td>
<td>-36317</td>
<td>-59441</td>
</tr>
<tr>
<td>105  Low M cruise</td>
<td>258.3</td>
<td>35512</td>
<td>0.772</td>
<td>1604</td>
<td></td>
<td>3478</td>
<td>-1131</td>
<td>-42237</td>
<td>-106150</td>
</tr>
<tr>
<td>106  Max M</td>
<td>299.0</td>
<td>36978</td>
<td>0.906</td>
<td>1642</td>
<td></td>
<td>302</td>
<td>-464</td>
<td>-15779</td>
<td>+19317</td>
</tr>
<tr>
<td>107  Inflight relight</td>
<td>285.7</td>
<td>27859</td>
<td>0.721</td>
<td>1365</td>
<td></td>
<td>3277</td>
<td>-736</td>
<td>-25639</td>
<td>-84847</td>
</tr>
<tr>
<td>108  Maximum q</td>
<td>357.5</td>
<td>24513</td>
<td>0.836</td>
<td>1617</td>
<td></td>
<td>-1410</td>
<td>+984</td>
<td>29060</td>
<td>+98411</td>
</tr>
<tr>
<td>109  Stall warning (flaps up)</td>
<td>188.4</td>
<td>16964</td>
<td>0.391</td>
<td>1591</td>
<td></td>
<td>5437</td>
<td>-1384</td>
<td>-63775</td>
<td>-243214</td>
</tr>
<tr>
<td>110  Stall warning (flaps 10)</td>
<td>169.2</td>
<td>16239</td>
<td>0.347</td>
<td>1621</td>
<td></td>
<td>6229</td>
<td>-2142</td>
<td>-97024</td>
<td>-304770</td>
</tr>
<tr>
<td>111  Stall warning (flaps 30)</td>
<td>129.3</td>
<td>17049</td>
<td>0.270</td>
<td>1633</td>
<td></td>
<td>3927</td>
<td>-1292</td>
<td>-72893</td>
<td>-220730</td>
</tr>
<tr>
<td>112  Idle descent</td>
<td>249.7</td>
<td>8450</td>
<td>0.439</td>
<td>748</td>
<td></td>
<td>4130</td>
<td>-1124</td>
<td>-29669</td>
<td>-97234</td>
</tr>
<tr>
<td>113  Approach</td>
<td>157.4</td>
<td>6003</td>
<td>0.265</td>
<td>1547</td>
<td></td>
<td>3707</td>
<td>-1411</td>
<td>-71607</td>
<td>-201864</td>
</tr>
<tr>
<td>114  Touch and go</td>
<td>168.5</td>
<td>2561</td>
<td>0.263</td>
<td>1589</td>
<td></td>
<td>4388</td>
<td>-2321</td>
<td>-125622</td>
<td>-241654</td>
</tr>
<tr>
<td>115  Thrust reverse</td>
<td>113.2</td>
<td>2561</td>
<td>0.179</td>
<td>1369</td>
<td></td>
<td>44</td>
<td>-10</td>
<td>-17298</td>
<td>-40963</td>
</tr>
<tr>
<td>116  2.0g left turn (flaps up)</td>
<td>277.5</td>
<td>8397</td>
<td>0.487</td>
<td>1562</td>
<td>1.99</td>
<td>7212</td>
<td>-3459</td>
<td>-133292</td>
<td>-264186</td>
</tr>
<tr>
<td>117  1.6g left turn (flaps 30)</td>
<td>143.0</td>
<td>8202</td>
<td>0.260</td>
<td>1539</td>
<td>1.61</td>
<td>5293</td>
<td>-3672</td>
<td>-191221</td>
<td>-284557</td>
</tr>
<tr>
<td>120  2.0g right turn (flaps up)</td>
<td>272.1</td>
<td>8240</td>
<td>0.476</td>
<td>1196</td>
<td>2.04</td>
<td>7634</td>
<td>-1629</td>
<td>-47455</td>
<td>-239481</td>
</tr>
<tr>
<td>121  1.6g right turn (flaps 30)</td>
<td>151.3</td>
<td>8278</td>
<td>0.266</td>
<td>1435</td>
<td>1.60</td>
<td>5416</td>
<td>-359</td>
<td>-10105</td>
<td>-282023</td>
</tr>
<tr>
<td>123  Airplane stall</td>
<td>115.7</td>
<td>9000</td>
<td>0.207</td>
<td>1551</td>
<td></td>
<td>6072</td>
<td>-1613</td>
<td>-89181</td>
<td>-366818</td>
</tr>
</tbody>
</table>
Figure 40. Inlet Pitching Moment Time History, 538 000 lb Gross Weight Takeoff
The 647,000 lb takeoff occurred during test 273-11 between IRIG time 10:13:46 and 10:13:55. The pitching moment time history (fig. 41) shows that the maximum aero-
dynamic load occurred at IRIG 10:13:52, with a nose-up moment of 425,000 in-lb. The
load factor was 1.17g.

The simulated high gross weight takeoff occurred during test 273-15 at IRIG 8:13:18. The
actual gross weight was 696,500 lb. The simulation was achieved by performing a pullup
starting at 185 kn and 3646 ft altitude (about 1000 ft above ground) to produce the same
airplane lift coefficient that would occur during a 780,000 lb takeoff. (The original
intention was to simulate an 820,000 lb gross weight takeoff. However, insufficient
allowance was made for speed reduction due to increasing climb gradient in the pullup
maneuver.) The moment at the A-flange was 430,100 in-lb.

Other Cases—Airloads for conditions other than takeoff were generally of substantially
lesser magnitude. However, certain cases were analyzed in greater detail because of
possible adverse combinations of aerodynamic loads and thermal transients in the engine.
Figure 42 shows a time history of the pitching moment at the engine face, engine airflow,
and body vane angle for condition 110 (stall warning 10 deg flaps). The maximum
moment (305,000 in-lb) coincided with maximum engine airflow, although the maximum
vane angle occurred earlier in the maneuver. The result shows that engine airflow is of
comparable importance to angle of attack in determining inlet airloads.

Other cases given special attention were the turns at constant altitude to achieve a
specified load factor. Engine clearance changes during these maneuvers were due to a
combination of aerodynamic loads, g-loads, and gyroscopic loads. Condition 116,
nominally a 2g turn to the left, was run during test 273-10 and achieved a load factor of
1.99 at IRIG 13:33:58. The A-flange moment was 264,200 in-lb. The indicated pitch rate
was 4.29 deg/s and the yaw rate was about 2.9 deg/s on both engines. A 2g turn to the
right was performed during test 273-15 (condition 120) at IRIG 11:04:03. The moment was
239,500 in-lb, pitch rate was 5.5 deg/s, and yaw rate was 2.8 deg/s. Turns of 1.6g at flaps
30 deg. were performed to the right and to the left. The left turn occurred during test
273-10, IRIG 13:41:07 (condition 117) with a moment of 284,600 in-lb, pitch rate of
6.5 deg/s, and yaw rate of 3.7 deg/s. The right turn occurred during test 273-15
(condition 121) at IRIG 11:07:25 with a moment of 282,000 in-lb, pitch rate of 7 deg/s, and
yaw rate of 4.7 deg/s. Finally, an airplane stall occurred during test 273-10. The
moment peaked at 367,000 in-lb at IRIG 13:26:16. This relatively high load level resulted
from a very high angle of attack.
Figure 41. Inlet Airload Moment Time History, 647 000 lb Gross Weight Takeoff
Figure 42. Airload Moment Time History, Stall Warning Maneuver, Flaps 10
In this section all loads pertain to engine 3. Preliminary review of the test data indicated that the pressures on engine 4 were very close to the pressures of engine 3, implying that the loads were about equal. Comparison of the aerodynamic loads determined in the NAIL program with the loads predicted in task IIIA of the JT9D diagnostic program (ref. 2), indicate that:

- The most critical loads were higher than predicted because of higher angles of attack than had been expected.
- The cosine law for the circumferential pressure distribution assumed in task IIIA is only a rough approximation of the actual distribution, especially in the critical region near the highlight.
- The phase angle of the cosine distribution is about 20 deg from the vertical near the highlight and further into the inlet approaches 0 deg.

4.2.1.2 Inertial Loads

Normal accelerations measured during takeoff and flight did not exceed 1.3g except during the high-g turn maneuvers. No significant turbulence was experienced during the NAIL program. The difference between g-loads measured at the airplane center of gravity and those measured on engines 3 and 4 was within the scatter of the data. In other words, the instruments responded only to steady-state accelerations of the whole airplane, experiencing no significant contributions from wing or nacelle flexible modes.

An exception to the steady-state accelerations occurred during a hard landing in test 273-15. The airplane landed at 690 000 lb gross weight with 297 000 lb fuel and a sink rate of approximately 10 ft/s. Touchdown occurred at IRIG 8:20:49. Vertical acceleration at the airplane center of gravity was 1.53g, with peaks of 2g at engine 4 and 1.7g at engine 3. This case was selected for dynamic analysis. Another exception occurred during test 273-10 during which a mild gust was encountered at IRIG 12:11:52. Normal accelerations were 1.08g at the airplane center of gravity and 1.3g at the engines. Details of all these cases are shown in Appendix A.

Pitch rates during takeoffs did not exceed 3 deg/s, the peak value being achieved before reaching the maximum load factor.
4.2.2 Installed Propulsion System Aerodynamics

Surface static pressures were measured on the nacelle and pylon of engine 3 (inboard) and engine 4 (outboard) and on neighboring wing surfaces during three separate test flights over the span of the test period. The initial flight, test 273-09, acquired data at $M = 0.77$, 0.80, and 0.86 and revealed instrumentation problems, which were partially corrected for a second flight, test 237-12. The third flight, test 273-15, was flown primarily to fulfill the remaining NASA conditions, which included $M = 0.91$. The $M = 0.91$ test was not flown until the end of the NAIL program when the speed restriction was removed concerning the other Boeing developmental programs.

Data plots of the measured pressures are presented in Appendix B.
5.0 REFERENCES


APPENDIX A

1.0 Pressures

The locations of pressure ports on engine 3 are shown in table A-1.

The coordinate system is shown in figure A-1. The arc length from the highlight to the port under considerations is denoted by "s." Positive values signify an external port and negative values signify an internal port.

The θ coordinate is the azimuth angle measured from the top and clockwise looking at the inlet from the front.

A distinction was made between nominal values and actual values of s and θ. The nominal values \( s_{\text{nom}} \) and \( \theta_{\text{nom}} \) are convenient for the computerized plotting of the data. In practice, installing the pressure taps at the nominal location was not always possible because of structural interferences. Consequently the actual \( s \) and \( \theta \) are also listed. Small discrepancies in actual pressure values resulting from these location shifts were accounted for by interpolation in the pressure integration process. The axial coordinate \( z \) (the normal distance from the highlight plane) is also listed.

Several pressure transducers gave unreliable or obviously erroneous readings. Therefore, pressures were determined by averaging values measured at adjacent ports using suitable weighting for geometric relationships. The ports for which such systematic substitutions were made are listed in table A-2. Pressures that still appeared to be erroneous after this substitution were corrected manually before they were plotted.

A complete description of the pressure distribution function \( p(s,\theta) \) at any point on the inlet is required to obtain inlet loads through integration. Because pressure was measured only at the pressure taps, an interpolation scheme was needed to determine the pressure at other locations. In the circumferential direction the Fourier-Bessel formula was used:

\[
p(\theta) = A_0 + \sum A_n \cos (n\theta) + \sum B_n \sin (n\theta)
\]
The use of this formula leads to a \( p(\theta) \) function that fits every measured point exactly and ensures maximum smoothness in between. In the \( s \)-direction a linear interpolation was used between measured points.

The coefficients \( A_n \) and \( B_n \) for all flight conditions are listed in tables A-3 to A-25. (Note that in the lip area, 12 coefficients are tabulated, because pressures were measured at 12 \( \theta \) values. Elsewhere, only six coefficients are available, because only six \( \theta \) values were instrumented.)

The axial pressure distributions for each flight condition and value of \( \theta \) are shown graphically in figures A-2 to A-47. The pressures are plotted in terms of pressure coefficient versus nominal arc lengths. Each flight condition is covered by two pages, one (inlet pressures) pertaining to the rows of pressure ports that extend all the way into the inlet (i.e., \( \theta = 0 \) deg, 60 deg) and the other (cowl pressures) pertaining to the rows that extend to the trailing edge of the fan cowl (i.e., \( \theta = 30 \) deg, 90 deg).

On engine 4, pressure taps were installed at three circumferential locations, \( \theta = 60 \) deg, 180 deg, and 300 deg. Axial pressure distributions are shown in figures A-48 to A-70. No Fourier-Bessel coefficients were calculated for this engine because no integration was carried out. The pressures were measured mainly for the purpose of comparison with engine 3 pressures. Note that for some of the test conditions the power level of engine 4 was considerably different from engine 3.

2.0 INERTIAL LOADS

Recorded accelerations on inlets and strut-wing intersections are presented in figures A-71 to A-83 for both engines for conditions when dynamically interesting events occurred:

- Mild gust during test 273-10
- Hard landing during test 273-15

The graphs show airplane parameters measured at airplane center of gravity and engine accelerations and angular rates. Engine accelerations were filtered to pass only frequencies below 40 Hz. Pitch and yaw rates were filtered to 5 Hz.
<table>
<thead>
<tr>
<th>PORT NO.</th>
<th>S</th>
<th>NOMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>15</td>
<td>31.00</td>
</tr>
<tr>
<td>27</td>
<td>18</td>
<td>31.00</td>
</tr>
<tr>
<td>25</td>
<td>19</td>
<td>31.00</td>
</tr>
<tr>
<td>29</td>
<td>24</td>
<td>31.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>S</th>
<th>NOMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>-33.23</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-56.50</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>38.00</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>31.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>-5.50</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-8.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>-10.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-5.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>S</th>
<th>NOMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>-11.00</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>-56.50</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>38.00</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>31.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>S</th>
<th>NOMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>-7.50</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>-7.50</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>-0.50</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>-1.71</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>3.63</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>5.55</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>6.42</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>8.49</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>THETA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>2.31</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>3.58</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>PORT NO.</td>
<td>NOM S (IN)</td>
<td>Z (IN)</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>1</td>
<td>-56.50</td>
<td>53.32</td>
</tr>
<tr>
<td>2</td>
<td>-51.21</td>
<td>47.61</td>
</tr>
<tr>
<td>3</td>
<td>-44.21</td>
<td>41.97</td>
</tr>
<tr>
<td>4</td>
<td>-34.21</td>
<td>36.32</td>
</tr>
<tr>
<td>5</td>
<td>-32.21</td>
<td>31.28</td>
</tr>
<tr>
<td>6</td>
<td>-28.21</td>
<td>25.85</td>
</tr>
<tr>
<td>7</td>
<td>-24.21</td>
<td>21.44</td>
</tr>
<tr>
<td>8</td>
<td>-20.21</td>
<td>18.70</td>
</tr>
<tr>
<td>9</td>
<td>-17.21</td>
<td>15.95</td>
</tr>
<tr>
<td>10</td>
<td>-14.21</td>
<td>11.64</td>
</tr>
<tr>
<td>11</td>
<td>-11.00</td>
<td>8.77</td>
</tr>
<tr>
<td>12</td>
<td>-8.00</td>
<td>5.92</td>
</tr>
<tr>
<td>13</td>
<td>-5.50</td>
<td>3.63</td>
</tr>
<tr>
<td>14</td>
<td>-3.00</td>
<td>1.41</td>
</tr>
<tr>
<td>15</td>
<td>-1.00</td>
<td>.17</td>
</tr>
<tr>
<td>16</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>17</td>
<td>1.00</td>
<td>.32</td>
</tr>
<tr>
<td>18</td>
<td>2.00</td>
<td>1.16</td>
</tr>
<tr>
<td>19</td>
<td>4.00</td>
<td>3.01</td>
</tr>
<tr>
<td>20</td>
<td>6.00</td>
<td>7.98</td>
</tr>
<tr>
<td>21</td>
<td>9.00</td>
<td>11.06</td>
</tr>
<tr>
<td>22</td>
<td>13.69</td>
<td>14.78</td>
</tr>
<tr>
<td>23</td>
<td>19.00</td>
<td>19.27</td>
</tr>
<tr>
<td>24</td>
<td>25.00</td>
<td>23.95</td>
</tr>
<tr>
<td>25</td>
<td>31.00</td>
<td>29.42</td>
</tr>
<tr>
<td>26</td>
<td>38.00</td>
<td>36.71</td>
</tr>
<tr>
<td>27</td>
<td>50.00</td>
<td>40.82</td>
</tr>
<tr>
<td>28</td>
<td>62.00</td>
<td>60.63</td>
</tr>
<tr>
<td>29</td>
<td>74.26</td>
<td>68.50</td>
</tr>
<tr>
<td>30</td>
<td>77.00</td>
<td>75.59</td>
</tr>
<tr>
<td>31</td>
<td>98.13</td>
<td>91.01</td>
</tr>
<tr>
<td>32</td>
<td>107.94</td>
<td>106.39</td>
</tr>
<tr>
<td>PORT NO.</td>
<td>NOMINAL THETA=240. DEG</td>
<td>NOMINAL THETA=270. DEG</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Z (IN)</td>
<td>S (IN)</td>
<td>THETA (DEG)</td>
</tr>
<tr>
<td>1</td>
<td>56.50</td>
<td>53.34</td>
</tr>
<tr>
<td>2</td>
<td>51.21</td>
<td>47.63</td>
</tr>
<tr>
<td>3</td>
<td>44.21</td>
<td>41.99</td>
</tr>
<tr>
<td>4</td>
<td>38.21</td>
<td>36.34</td>
</tr>
<tr>
<td>5</td>
<td>32.21</td>
<td>31.40</td>
</tr>
<tr>
<td>6</td>
<td>28.21</td>
<td>25.97</td>
</tr>
<tr>
<td>7</td>
<td>24.21</td>
<td>21.50</td>
</tr>
<tr>
<td>8</td>
<td>20.21</td>
<td>18.76</td>
</tr>
<tr>
<td>9</td>
<td>17.21</td>
<td>16.01</td>
</tr>
<tr>
<td>10</td>
<td>14.21</td>
<td>11.54</td>
</tr>
<tr>
<td>11</td>
<td>11.00</td>
<td>8.58</td>
</tr>
<tr>
<td>12</td>
<td>8.00</td>
<td>5.65</td>
</tr>
<tr>
<td>13</td>
<td>5.50</td>
<td>3.60</td>
</tr>
<tr>
<td>14</td>
<td>3.00</td>
<td>1.37</td>
</tr>
<tr>
<td>15</td>
<td>-1.00</td>
<td>0.17</td>
</tr>
<tr>
<td>16</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>17</td>
<td>1.00</td>
<td>0.32</td>
</tr>
<tr>
<td>18</td>
<td>2.00</td>
<td>1.16</td>
</tr>
<tr>
<td>19</td>
<td>4.00</td>
<td>2.98</td>
</tr>
<tr>
<td>20</td>
<td>6.00</td>
<td>8.06</td>
</tr>
<tr>
<td>21</td>
<td>9.00</td>
<td>10.95</td>
</tr>
<tr>
<td>22</td>
<td>13.65</td>
<td>14.73</td>
</tr>
<tr>
<td>23</td>
<td>19.00</td>
<td>18.99</td>
</tr>
<tr>
<td>24</td>
<td>25.00</td>
<td>23.97</td>
</tr>
<tr>
<td>25</td>
<td>31.00</td>
<td>29.46</td>
</tr>
<tr>
<td>26</td>
<td>38.00</td>
<td>37.38</td>
</tr>
<tr>
<td>27</td>
<td>50.00</td>
<td>50.05</td>
</tr>
<tr>
<td>28</td>
<td>62.00</td>
<td>60.63</td>
</tr>
<tr>
<td>29</td>
<td>74.26</td>
<td>70.71</td>
</tr>
<tr>
<td>30</td>
<td>77.00</td>
<td>75.59</td>
</tr>
<tr>
<td>31</td>
<td>98.13</td>
<td>93.95</td>
</tr>
<tr>
<td>32</td>
<td>107.94</td>
<td>106.39</td>
</tr>
</tbody>
</table>
### Table A-2. Pressure Corrections for Instrumentation Problems

#### Engine 3

<table>
<thead>
<tr>
<th>Row No.</th>
<th>$\theta$ (deg)</th>
<th>Port No.</th>
<th>Averaged from:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Row, port</td>
<td>Row, port</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>29</td>
<td>2, 28</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>2</td>
<td>3, 1</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>11</td>
<td>3, 10</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>14</td>
<td>3, 13</td>
</tr>
<tr>
<td>4</td>
<td>90</td>
<td>15</td>
<td>4, 14</td>
</tr>
<tr>
<td>4</td>
<td>90</td>
<td>29</td>
<td>4, 28</td>
</tr>
<tr>
<td>5</td>
<td>120</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>180</td>
<td>12</td>
<td>7, 11</td>
</tr>
<tr>
<td>7</td>
<td>180</td>
<td>15</td>
<td>7, 14</td>
</tr>
<tr>
<td>7</td>
<td>180</td>
<td>22</td>
<td>7, 21</td>
</tr>
<tr>
<td>8</td>
<td>210</td>
<td>29</td>
<td>8, 28</td>
</tr>
<tr>
<td>9</td>
<td>240</td>
<td>18</td>
<td>9, 17</td>
</tr>
<tr>
<td>10</td>
<td>270</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>300</td>
<td>20</td>
<td>10, 20</td>
</tr>
<tr>
<td>11</td>
<td>300</td>
<td>21</td>
<td>10, 21</td>
</tr>
<tr>
<td>11</td>
<td>300</td>
<td>22</td>
<td>10, 22</td>
</tr>
<tr>
<td>12</td>
<td>330</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

#### Engine 4

<table>
<thead>
<tr>
<th>Row No.</th>
<th>$\theta$ (deg)</th>
<th>Port No.</th>
<th>Averaged from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>180</td>
<td>9</td>
<td>2, 8</td>
</tr>
<tr>
<td>3</td>
<td>300</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>ROW NO.</td>
<td>Z (IN)</td>
<td>A(0) (PSI)</td>
<td>A(1) (PSI)</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>-1.2155</td>
<td>.3119</td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-1.3906</td>
<td>.2381</td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.6120</td>
<td>.2576</td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.9477</td>
<td>.2542</td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-2.2990</td>
<td>.2963</td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-2.6569</td>
<td>.3170</td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-2.8691</td>
<td>.3810</td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-3.0263</td>
<td>.5413</td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-3.1147</td>
<td>.5896</td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.8102</td>
<td>1.0192</td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-4.2116</td>
<td>1.4903</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-4.0698</td>
<td>1.5537</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-3.3663</td>
<td>1.9624</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-3.3156</td>
<td>2.8146</td>
</tr>
<tr>
<td>15</td>
<td>1.072</td>
<td>-2.9354</td>
<td>3.1801</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-1.4110</td>
<td>2.1947</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>-.0637</td>
<td>.4552</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-.3181</td>
<td>-.0129</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-.3003</td>
<td>-.3196</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-.2268</td>
<td>-.3380</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-.1246</td>
<td>-.3177</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0049</td>
<td>-.1410</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.0430</td>
<td>-.2286</td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.0145</td>
<td>-.1748</td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>.0086</td>
<td>-.1570</td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.0052</td>
<td>-.1361</td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-.0308</td>
<td>-.0436</td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.0337</td>
<td>-.0807</td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>-.0600</td>
<td>-.0520</td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.0000</td>
<td>-.0304</td>
</tr>
<tr>
<td>31</td>
<td>85.576</td>
<td>-.0283</td>
<td>-.0118</td>
</tr>
<tr>
<td>32</td>
<td>106.366</td>
<td>.0511</td>
<td>-.0079</td>
</tr>
</tbody>
</table>
### Table A-4.

Fourier - Bessel Coefficients for Engine Number Three Pressures

\[ P(\Theta) = A(0) + \Sigma (A(n) \cos(n \Theta) + B(n) \sin(n \Theta)) \]

**Condition 101, 538K Gross Weight Takeoff (Flaps 10)**

**Engine Number Three**

**Altitude:** 2667 ft  **Mach Number:** 0.239

**Corrected Airflow:** 1527 lb/sec

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-1.2653</td>
<td>.3071</td>
<td>-.0549</td>
<td>.0249</td>
<td>.0712</td>
<td>-.0121</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.799</td>
<td>-1.3932</td>
<td>.2962</td>
<td>-.0397</td>
<td>-.0062</td>
<td>.0425</td>
<td>-.0284</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.6332</td>
<td>.2481</td>
<td>-.0563</td>
<td>.0022</td>
<td>-.0177</td>
<td>-.0185</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.9373</td>
<td>.2790</td>
<td>-.0019</td>
<td>.0212</td>
<td>-.0430</td>
<td>-.0299</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-2.3164</td>
<td>.3508</td>
<td>.0058</td>
<td>.0195</td>
<td>-.0648</td>
<td>-.0008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>25.166</td>
<td>-2.6013</td>
<td>.3550</td>
<td>.0016</td>
<td>.0049</td>
<td>-.0598</td>
<td>-.0293</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-2.8569</td>
<td>.4149</td>
<td>-.0036</td>
<td>.0559</td>
<td>-.1633</td>
<td>-.0894</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-2.9484</td>
<td>.5920</td>
<td>-.0211</td>
<td>.0341</td>
<td>-.1532</td>
<td>-.0442</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-3.1305</td>
<td>.7117</td>
<td>.0038</td>
<td>.0340</td>
<td>-.2336</td>
<td>-.0324</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.4066</td>
<td>1.2550</td>
<td>.1704</td>
<td>-.0939</td>
<td>-.4454</td>
<td>-.0724</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-4.1913</td>
<td>1.7501</td>
<td>-.0297</td>
<td>.0027</td>
<td>-.5449</td>
<td>-.0015</td>
<td>.1030</td>
<td>-.0588</td>
<td>-.0604</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-4.9800</td>
<td>1.8086</td>
<td>.0313</td>
<td>.0405</td>
<td>.0642</td>
<td>-.0799</td>
<td>.1595</td>
<td>-.0347</td>
<td>-.0187</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-5.8393</td>
<td>2.6442</td>
<td>-.2160</td>
<td>-.0388</td>
<td>-.1472</td>
<td>-.1450</td>
<td>.0423</td>
<td>.0978</td>
<td>.0032</td>
<td>-.1877</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-7.1914</td>
<td>3.7211</td>
<td>-.0483</td>
<td>-.1475</td>
<td>.0226</td>
<td>-.1441</td>
<td>.3750</td>
<td>.0895</td>
<td>-.0840</td>
<td>-.0324</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>-9.2315</td>
<td>3.6531</td>
<td>-.0954</td>
<td>.0708</td>
<td>-.1682</td>
<td>-.0591</td>
<td>.1233</td>
<td>.2255</td>
<td>.1154</td>
<td>-.0828</td>
<td>-.0231</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-1.7403</td>
<td>2.7211</td>
<td>-.1229</td>
<td>.0684</td>
<td>-.0513</td>
<td>-.1041</td>
<td>.2934</td>
<td>.1820</td>
<td>-.1418</td>
<td>-.0597</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>-2.7774</td>
<td>.7305</td>
<td>-.2459</td>
<td>-.1305</td>
<td>-.0225</td>
<td>-.0478</td>
<td>.2813</td>
<td>.2052</td>
<td>.0497</td>
<td>-.0449</td>
<td>-.0471</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-1.644</td>
<td>.0169</td>
<td>-.0226</td>
<td>.0333</td>
<td>.0178</td>
<td>-.0126</td>
<td>.0341</td>
<td>.0559</td>
<td>.0037</td>
<td>-.0085</td>
<td>-.0044</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-3.2374</td>
<td>-.3167</td>
<td>-.0641</td>
<td>-.0204</td>
<td>.0443</td>
<td>.0064</td>
<td>.0668</td>
<td>.0566</td>
<td>.0037</td>
<td>-.0085</td>
<td>-.0044</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-1.1858</td>
<td>-.3403</td>
<td>-.0080</td>
<td>.0135</td>
<td>.0184</td>
<td>.0022</td>
<td>.0662</td>
<td>.0201</td>
<td>-.0174</td>
<td>-.0029</td>
<td>-.0170</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>.1008</td>
<td>-.3458</td>
<td>-.0167</td>
<td>.0094</td>
<td>-.0078</td>
<td>.1274</td>
<td>.0085</td>
<td>-.0523</td>
<td>.0030</td>
<td>-.0255</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0146</td>
<td>-.2831</td>
<td>.0307</td>
<td>.0201</td>
<td>.0512</td>
<td>-.0038</td>
<td>.0848</td>
<td>.0637</td>
<td>-.0187</td>
<td>-.0263</td>
<td>.0154</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>.0234</td>
<td>-.2824</td>
<td>.0318</td>
<td>.0198</td>
<td>.0723</td>
<td>-.0823</td>
<td>-.0073</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.0187</td>
<td>-.2366</td>
<td>.0385</td>
<td>.0198</td>
<td>.1159</td>
<td>-.0452</td>
<td>-.0075</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>.0355</td>
<td>-.2049</td>
<td>.0750</td>
<td>.0198</td>
<td>.0879</td>
<td>-.0922</td>
<td>-.0126</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>.0448</td>
<td>-.1673</td>
<td>.0598</td>
<td>-.0198</td>
<td>.1126</td>
<td>-.0837</td>
<td>-.0170</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.0767</td>
<td>-.1374</td>
<td>.0858</td>
<td>-.0219</td>
<td>.1330</td>
<td>-.0540</td>
<td>-.0089</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.0714</td>
<td>-.0755</td>
<td>.0944</td>
<td>-.0294</td>
<td>.1568</td>
<td>-.0498</td>
<td>.0037</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>.0431</td>
<td>-.0759</td>
<td>.0913</td>
<td>-.0338</td>
<td>.1554</td>
<td>-.0560</td>
<td>.0057</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.0441</td>
<td>-.0493</td>
<td>.0950</td>
<td>-.0296</td>
<td>.1592</td>
<td>-.0447</td>
<td>.0083</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>95.576</td>
<td>.0070</td>
<td>-.0235</td>
<td>.0940</td>
<td>-.0038</td>
<td>.2041</td>
<td>-.0932</td>
<td>-.0229</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.986</td>
<td>.0029</td>
<td>-.0260</td>
<td>.0960</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-5.

FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES

\[
P(\Theta) = A(0) + \Sigma(N)\cos(\Theta) + B(N)\sin(\Theta)
\]

CONDITION 101, 647K GROSS WEIGHT TAKEOFF (FLAPS 10) TEST 273-11 IRIG 10:13:51.6

ALTITUDE = 2634. FT. MACH NUMBER = 0.254 CORRECTED AIRFLOW = 1524. LB/SEC

| ROW | Z (IN) | A(0) (PSI) | A(1) (PSI) | A(2) (PSI) | A(3) (PSI) | A(4) (PSI) | A(5) (PSI) | A(6) (PSI) | B(1) (PSI) | B(2) (PSI) | B(3) (PSI) | B(4) (PSI) | B(5) (PSI) |
|-----|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1   | 54.05 | -1.1662    | .3417      | -.0027     | .0336      | -0.0683    | -0.0306    |            |            |            |            |            |            |            |
| 2   | 48.789| -1.9738    | .3132      | -.0032     | .0087      | -0.0804    | .0020      |            |            |            |            |            |            |            |
| 3   | 41.907| -1.5479    | .2544      | -.0025     | .0001      | -0.0415    | .0630      |            |            |            |            |            |            |            |
| 4   | 36.013| -1.8756    | .3278      | -.0046     | .0356      | -1.0055    | .0162      |            |            |            |            |            |            |            |
| 5   | 30.118| -2.1989    | .3315      | .0338      | -.0029     | -0.0499    | .0336      |            |            |            |            |            |            |            |
| 6   | 26.166| -2.5647    | .4222      | -.0212     | .0037      | -0.0514    | .0096      |            |            |            |            |            |            |            |
| 7   | 22.196| -2.7454    | .4341      | .0656      | .0762      | -1.1777    | .0237      |            |            |            |            |            |            |            |
| 8   | 18.211| -2.8934    | .6924      | -.0494     | .0088      | -1.1678    | .0059      |            |            |            |            |            |            |            |
| 9   | 15.214| -3.0146    | .7777      | .0632      |            | -1.2265    | .0252      |            |            |            |            |            |            |            |
| 10  | 12.215| -3.4489    | 1.1173     | -.1317     | .1900      | -.0202     | .4123      |            |            |            |            |            |            |            |
| 11  | 9.009 | -4.0966    | 1.6516     | .0094      | -.0558     | .0341      | -.1217     | .1208      | -.5931     | .0463      | -.0575     | -.0637     | -.0718     |
| 12  | 6.037 | -3.9634    | 1.9817     | .0920      | -.0375     | .0713      | -.0389     | -.0367     | -.6650     | -.0864     | -.1003     | -.0205     | -.0614     |
| 13  | 3.629 | -4.5242    | 2.8427     | .2480      | -.2135     | -.0373     | -.1371     | .1100      | -.1550     | -.5411     | .1307      | .0475      | -.2022     |
| 14  | 1.413 | -4.4928    | 3.8458     | .0054      | -.0559     | -.1744     | .1488      | -.0626     | -.1591     | .4468      | -.0495     | -.0513     | -.0122     |
| 15  | .172  | -3.0392    | 3.7371     | -.2515     | -.0934     | .1493      | .0498      | -.1362     | .3472      | .1555      | .0480      | .0218      |            |
| 16  | 0.000 | -1.6151    | 2.6195     | -.2755     | -.1482     | -.0318     | .0585      | -.0550     | -.1690     | .3829      | -.0237     | -.1119     | .0742      |
| 17  | .924  | -2.4119    | .6023      | -.0421     | -.1072     | -.0068     | .0367      | -.2042     | .2544      | .0197      | .0335      | .0541      |            |
| 18  | 1.156 | -1.822    | -.1747     | -.1549     | -.0489     | -.0174     | -.0197     | -.0109     | .0344      | .1177      | -.0121     | -.0189      | -.0299     |
| 19  | 3.007 | -2.783    | -.3981     | -.1913     | -.0161     | -.0140     | -.0115     | -.0056     | .1557      | .0509      | -.0031     | -.0171      | -.0155     |
| 20  | 4.886 | -1.529    | -.4372     | -.0466     | -.0226     | -.0313     | -.0223     | -.0017     | .1823      | -.0319     | -.0114     | -.0037      | .0099      |
| 21  | 7.782 | .0798     | -.4271     | -.0156     | -.0120     | -.0156     | -.0051     | -.0017     | .2035      | .0038      | -.0135     | .0053       | .0093      |
| 22  | 12.404| .0170     | -.3032     | -.0271     | -.0206     | -.0062     | -.0471     | -.0110     | .0982      | -.0764     | -.0065      | -.0544     | .0256      |
| 23  | 17.679| .0044     | -.2827     | -.0071     |            |            |            |            | .1186      | -.0052      | -.0192      |            |            |
| 24  | 23.652| -.0023    | -.2548     | -.0428     |            |            |            |            | .0817      | -.0383      | -.0133      |            |            |
| 25  | 29.638| -.0136    | -.2220     | -.0561     |            |            |            |            | .0940      | -.0673      | -.0040      |            |            |
| 26  | 36.633| -.0339    | -.1883     | -.0574     |            |            |            |            | .1017      | -.1119      | -.0104      |            |            |
| 27  | 48.631| -.0703    | -.1589     | -.0924     |            |            |            |            | .1309      | -.1000      | -.0151      |            |            |
| 28  | 60.627| -.0722    | -.1083     | -.1073     |            |            |            |            | .1557      | -.0509      | -.0093      |            |            |
| 29  | 72.863| -.0359    | -.0866     | .1029      |            |            |            |            | .1736      | -.0562      | -.0062      |            |            |
| 30  | 75.593| -.0356    | -.0580     | .1006      |            |            |            |            | .1781      | -.0662      | -.0043      |            |            |
| 31  | 96.576| -.0390    | .0305      | .0676      |            |            |            |            | .1499      | .0015       | -.0245      |            |            |
| 32  | 106.386| .0101  | -.0054     | -.0660     |            |            |            |            | -.0006     | .0013       | -.0008      |            |            |
### Table A-6.

FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE

\[ P(\theta) = A(0) + \Sigma [A(n) \cos(n\theta) + B(n) \sin(n\theta)] \]

CONDITION 118, 780K GROSS WEIGHT SIMULATED TAKEOFF (FLAPS 10) TEST 273-15 IRIG 8:13:18

ALTITUDE = 3646. FT  
MACH NUMBER = 0.296  
CORRECTED AIRFLOW = 1573. LB/SEC

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>( Z ) (IN)</th>
<th>( A(0) ) (PSI)</th>
<th>( A(1) ) (PSI)</th>
<th>( A(2) ) (PSI)</th>
<th>( A(3) ) (PSI)</th>
<th>( A(4) ) (PSI)</th>
<th>( A(5) ) (PSI)</th>
<th>( B(1) ) (PSI)</th>
<th>( B(2) ) (PSI)</th>
<th>( B(3) ) (PSI)</th>
<th>( B(4) ) (PSI)</th>
<th>( B(5) ) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-1.0658</td>
<td>0.2357</td>
<td>-0.0487</td>
<td>-0.0043</td>
<td>-0.511</td>
<td>-0.537</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.799</td>
<td>-1.2145</td>
<td>0.2617</td>
<td>-0.0282</td>
<td>-0.0126</td>
<td>-0.366</td>
<td>-0.368</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.4520</td>
<td>0.2862</td>
<td>-0.0414</td>
<td>-0.0112</td>
<td>-0.0417</td>
<td>-0.0414</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.7687</td>
<td>0.2827</td>
<td>-0.0251</td>
<td>-0.0086</td>
<td>-0.0353</td>
<td>-0.0570</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-2.1792</td>
<td>0.3493</td>
<td>-0.0394</td>
<td>-0.0066</td>
<td>-0.0464</td>
<td>-0.0345</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.146</td>
<td>-2.5303</td>
<td>0.3831</td>
<td>-0.0135</td>
<td>-0.0002</td>
<td>-0.0044</td>
<td>-0.0521</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.156</td>
<td>-2.7464</td>
<td>0.4463</td>
<td>-0.0118</td>
<td>-0.0045</td>
<td>-0.1839</td>
<td>0.0752</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-2.8955</td>
<td>0.6903</td>
<td>-0.0743</td>
<td>-0.0026</td>
<td>-0.1275</td>
<td>-0.0198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-3.1718</td>
<td>1.3369</td>
<td>-0.0804</td>
<td>-0.0733</td>
<td>-0.3818</td>
<td>0.0373</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.7718</td>
<td>1.2269</td>
<td>-0.0804</td>
<td>-0.0733</td>
<td>-0.3818</td>
<td>0.0373</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-4.2763</td>
<td>2.2764</td>
<td>-0.3622</td>
<td>0.0321</td>
<td>-0.5323</td>
<td>0.1741</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-3.9914</td>
<td>2.1040</td>
<td>-0.3075</td>
<td>0.0621</td>
<td>-0.6146</td>
<td>0.0114</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-3.4211</td>
<td>2.7305</td>
<td>-0.3743</td>
<td>-0.1155</td>
<td>-0.1252</td>
<td>0.0448</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-2.8926</td>
<td>3.4801</td>
<td>-0.4624</td>
<td>-0.0391</td>
<td>-0.1354</td>
<td>0.0769</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.172</td>
<td>-2.2986</td>
<td>3.3849</td>
<td>-0.3661</td>
<td>-0.0934</td>
<td>-0.1775</td>
<td>0.0850</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-2.8660</td>
<td>2.0301</td>
<td>-0.3551</td>
<td>-0.0981</td>
<td>-0.6930</td>
<td>0.2875</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>-0.9819</td>
<td>0.0284</td>
<td>-0.3467</td>
<td>-0.0656</td>
<td>-0.6930</td>
<td>0.2875</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-0.3123</td>
<td>-0.4925</td>
<td>-0.2052</td>
<td>-0.0071</td>
<td>-0.1730</td>
<td>-0.0125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-0.2976</td>
<td>-0.5266</td>
<td>-0.0585</td>
<td>-0.0201</td>
<td>-0.4477</td>
<td>-0.1132</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.866</td>
<td>-0.2613</td>
<td>-0.4006</td>
<td>-0.0273</td>
<td>-0.0857</td>
<td>-1.0229</td>
<td>-1.0679</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-1.733</td>
<td>-0.3213</td>
<td>-0.0117</td>
<td>-1.1422</td>
<td>-1.1659</td>
<td>-1.2600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-1.0597</td>
<td>-0.3724</td>
<td>-0.0485</td>
<td>-0.0072</td>
<td>-0.0599</td>
<td>-0.0146</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-1.0593</td>
<td>-0.3663</td>
<td>-0.0369</td>
<td>-1.0686</td>
<td>-0.0573</td>
<td>0.0029</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-0.7596</td>
<td>-0.3300</td>
<td>0.0027</td>
<td>0.0845</td>
<td>0.0703</td>
<td>-0.0138</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-0.9459</td>
<td>-0.2570</td>
<td>0.0934</td>
<td>1.4050</td>
<td>0.0049</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-1.0000</td>
<td>-0.2039</td>
<td>0.0534</td>
<td>0.0943</td>
<td>-0.0998</td>
<td>0.0078</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-1.0131</td>
<td>-0.1711</td>
<td>-0.0395</td>
<td>1.2677</td>
<td>0.0016</td>
<td>-0.0144</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-1.1791</td>
<td>-1.1096</td>
<td>1.2339</td>
<td>1.7780</td>
<td>0.0129</td>
<td>-0.0130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.363</td>
<td>-0.9760</td>
<td>-0.0336</td>
<td>1.0666</td>
<td>1.9979</td>
<td>0.0365</td>
<td>0.0065</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.553</td>
<td>-0.8037</td>
<td>-0.0430</td>
<td>1.0717</td>
<td>1.9789</td>
<td>0.0323</td>
<td>0.0033</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>-0.0997</td>
<td>-0.0070</td>
<td>1.2049</td>
<td>1.8888</td>
<td>-0.0189</td>
<td>0.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>0.0649</td>
<td>0.0164</td>
<td>0.4830</td>
<td>0.0842</td>
<td>-0.0285</td>
<td>0.0834</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW NO.</td>
<td>Z (IN)</td>
<td>A(0) (PSI)</td>
<td>A(1) (PSI)</td>
<td>A(2) (PSI)</td>
<td>A(3) (PSI)</td>
<td>A(4) (PSI)</td>
<td>A(5) (PSI)</td>
<td>B(1) (PSI)</td>
<td>B(2) (PSI)</td>
<td>B(3) (PSI)</td>
<td>B(4) (PSI)</td>
<td>B(5) (PSI)</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>-4769</td>
<td>1437</td>
<td>-0122</td>
<td>0169</td>
<td>-0139</td>
<td>-0289</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-6266</td>
<td>1112</td>
<td>-0180</td>
<td>-0066</td>
<td>-0251</td>
<td>-0048</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-8567</td>
<td>1413</td>
<td>-0007</td>
<td>0078</td>
<td>0073</td>
<td>-0211</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-11651</td>
<td>1434</td>
<td>-0176</td>
<td>0277</td>
<td>0286</td>
<td>0187</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-14911</td>
<td>2197</td>
<td>0317</td>
<td>0086</td>
<td>0059</td>
<td>0002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-17904</td>
<td>1786</td>
<td>0309</td>
<td>-0002</td>
<td>0009</td>
<td>0099</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-19869</td>
<td>2048</td>
<td>0167</td>
<td>0362</td>
<td>0754</td>
<td>0745</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-20664</td>
<td>3633</td>
<td>-0114</td>
<td>-0093</td>
<td>0231</td>
<td>-0012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-21862</td>
<td>3478</td>
<td>0030</td>
<td>-0077</td>
<td>0273</td>
<td>0278</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-26789</td>
<td>6373</td>
<td>-0491</td>
<td>0397</td>
<td>0092</td>
<td>1341</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.005</td>
<td>-23348</td>
<td>9972</td>
<td>0176</td>
<td>-0188</td>
<td>-0007</td>
<td>-0286</td>
<td>0402</td>
<td>-1414</td>
<td>0236</td>
<td>0349</td>
<td>-0453</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-27238</td>
<td>9553</td>
<td>0522</td>
<td>-0344</td>
<td>-0124</td>
<td>-0190</td>
<td>-0253</td>
<td>2150</td>
<td>0275</td>
<td>0447</td>
<td>0239</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-25197</td>
<td>10655</td>
<td>0290</td>
<td>-0411</td>
<td>-0063</td>
<td>-0185</td>
<td>-0571</td>
<td>-4138</td>
<td>0564</td>
<td>1540</td>
<td>-0161</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-18334</td>
<td>14002</td>
<td>0072</td>
<td>-0382</td>
<td>0072</td>
<td>-1115</td>
<td>0554</td>
<td>-0105</td>
<td>3240</td>
<td>0564</td>
<td>0379</td>
</tr>
<tr>
<td>15</td>
<td>0.172</td>
<td>-24411</td>
<td>12420</td>
<td>-1469</td>
<td>0211</td>
<td>0168</td>
<td>-0304</td>
<td>0464</td>
<td>3025</td>
<td>0503</td>
<td>0761</td>
<td>0340</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>7709</td>
<td>4693</td>
<td>1567</td>
<td>0014</td>
<td>0201</td>
<td>0245</td>
<td>0327</td>
<td>1434</td>
<td>0740</td>
<td>0420</td>
<td>0416</td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>6117</td>
<td>5627</td>
<td>-0056</td>
<td>-0324</td>
<td>1259</td>
<td>0043</td>
<td>0721</td>
<td>2135</td>
<td>0730</td>
<td>1271</td>
<td>-0383</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>4659</td>
<td>-6004</td>
<td>-0516</td>
<td>0014</td>
<td>0237</td>
<td>0362</td>
<td>-0052</td>
<td>1375</td>
<td>0184</td>
<td>0111</td>
<td>-0215</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>2193</td>
<td>-5074</td>
<td>-0345</td>
<td>0116</td>
<td>0127</td>
<td>0058</td>
<td>0036</td>
<td>1016</td>
<td>0375</td>
<td>-0148</td>
<td>-0074</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>0580</td>
<td>-4357</td>
<td>-0455</td>
<td>0056</td>
<td>0119</td>
<td>0054</td>
<td>0046</td>
<td>0777</td>
<td>0277</td>
<td>0039</td>
<td>0041</td>
</tr>
<tr>
<td>21</td>
<td>7.792</td>
<td>-1167</td>
<td>-3472</td>
<td>-0431</td>
<td>0473</td>
<td>0183</td>
<td>0112</td>
<td>0143</td>
<td>1446</td>
<td>0479</td>
<td>0361</td>
<td>0165</td>
</tr>
<tr>
<td>22</td>
<td>12.401</td>
<td>-1783</td>
<td>-2045</td>
<td>-0256</td>
<td>0278</td>
<td>0086</td>
<td>0565</td>
<td>0119</td>
<td>0283</td>
<td>0730</td>
<td>-0254</td>
<td>0079</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-1769</td>
<td>-2411</td>
<td>-0040</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-1335</td>
<td>-1965</td>
<td>-0151</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-1588</td>
<td>-1500</td>
<td>0202</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-1417</td>
<td>-1204</td>
<td>-0078</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-1636</td>
<td>-1027</td>
<td>0475</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-1510</td>
<td>-0735</td>
<td>0813</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.683</td>
<td>-0844</td>
<td>-0426</td>
<td>0536</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>-0662</td>
<td>-0161</td>
<td>0163</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>-0289</td>
<td>0173</td>
<td>0552</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>0719</td>
<td>-0484</td>
<td>0149</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A-8.

Fourier-Bessel Coefficients for Engine Number Three Pressures

\[ P(\theta) = a(0) + \sigma(a(n) \cos(n\theta) + b(n) \sin(n\theta)) \]

<table>
<thead>
<tr>
<th>ALTITUDE= 17187 FT</th>
<th>CONDITION 103, M_ID CLIMB</th>
<th>TEST 273-7</th>
<th>IRIG 7:28:44.5</th>
<th>CORRECTED AIRFLOW= 1622 LB/SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO.</td>
<td>Z</td>
<td>A(0) (PSI)</td>
<td>A(1) (PSI)</td>
<td>A(2) (PSI)</td>
</tr>
<tr>
<td>-----</td>
<td>---</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>.6780</td>
<td>.1108</td>
<td>.0059</td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>.5332</td>
<td>.0590</td>
<td>.0236</td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>.3252</td>
<td>.0997</td>
<td>.0257</td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>.0588</td>
<td>.0527</td>
<td>.0003</td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-.2328</td>
<td>.1261</td>
<td>.0025</td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-.4907</td>
<td>1.085</td>
<td>.0039</td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-.6346</td>
<td>1.030</td>
<td>.0117</td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>.7180</td>
<td>1.969</td>
<td>.0174</td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.7562</td>
<td>1.969</td>
<td>.0173</td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-.2934</td>
<td>0.224</td>
<td>.0115</td>
</tr>
<tr>
<td>11</td>
<td>9.099</td>
<td>-.1200</td>
<td>0.572</td>
<td>.0223</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-.8481</td>
<td>0.8046</td>
<td>.0557</td>
</tr>
<tr>
<td>13</td>
<td>3.622</td>
<td>-.3792</td>
<td>0.4556</td>
<td>.1265</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>.5771</td>
<td>.5384</td>
<td>.0537</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>1.7740</td>
<td>.2684</td>
<td>.0535</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>1.6788</td>
<td>-.3672</td>
<td>.0554</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.0110</td>
<td>-.8994</td>
<td>.0712</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-.4162</td>
<td>-.6648</td>
<td>.1387</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.5571</td>
<td>.5556</td>
<td>.0896</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-.6477</td>
<td>-.4848</td>
<td>.0729</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-.7882</td>
<td>-.3258</td>
<td>.0854</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-.7108</td>
<td>2.442</td>
<td>.0689</td>
</tr>
<tr>
<td>23</td>
<td>17.678</td>
<td>-.5881</td>
<td>2.682</td>
<td>.0636</td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-.4693</td>
<td>1.737</td>
<td>.0908</td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.4457</td>
<td>1.1227</td>
<td>.0449</td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.3996</td>
<td>.0850</td>
<td>.0437</td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-.4001</td>
<td>1.324</td>
<td>.0148</td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.3611</td>
<td>1.0010</td>
<td>.0148</td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>-.0001</td>
<td>1.0010</td>
<td>.0148</td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>-.1745</td>
<td>1.0024</td>
<td>.0436</td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>-.1682</td>
<td>1.003</td>
<td>.0436</td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>-.1827</td>
<td>.0859</td>
<td>.0388</td>
</tr>
</tbody>
</table>
Table A-9.
FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES
P(THETA) = A(0) + SIGMA( A(0)CO1(THETA) + B(N)SIN(THETA))

CONDITION 104, HIGH-MACH CRUISE TEST 273-7 IRIG 7:49:26.4

ALTITUDE= 35481. FT  MACH NUMBER= 0.859  CORRECTED AIRFLOW= 1633. LB/SEC

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>1.2549</td>
<td>.0419</td>
<td>.0049</td>
<td>.0114</td>
<td>.0061</td>
<td>.0254</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>1.1642</td>
<td>-.0023</td>
<td>.0186</td>
<td>.0110</td>
<td>-.0114</td>
<td>-.0137</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>1.0483</td>
<td>.0513</td>
<td>-.0163</td>
<td>-.0047</td>
<td>.0182</td>
<td>.0302</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>.8918</td>
<td>.0273</td>
<td>-.0039</td>
<td>-.0042</td>
<td>-.0038</td>
<td>-.0057</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>.7167</td>
<td>.0458</td>
<td>.0023</td>
<td>-.0062</td>
<td>.0107</td>
<td>.0097</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>.5626</td>
<td>.0239</td>
<td>.0037</td>
<td>-.0183</td>
<td>.0052</td>
<td>.0169</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>.4900</td>
<td>.0158</td>
<td>.0004</td>
<td>.0053</td>
<td>-.0235</td>
<td>.0096</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>.4549</td>
<td>.0523</td>
<td>-.0074</td>
<td>-.0063</td>
<td>-.0114</td>
<td>-.0112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.4287</td>
<td>.0395</td>
<td>.0293</td>
<td>.0039</td>
<td>-.0329</td>
<td>-.0079</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>.0382</td>
<td>.3064</td>
<td>-.1760</td>
<td>-.1527</td>
<td>-.3341</td>
<td>.2500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>.2773</td>
<td>.1387</td>
<td>-.0211</td>
<td>-.0262</td>
<td>.0119</td>
<td>.0017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>.4804</td>
<td>.1123</td>
<td>.0249</td>
<td>-.0100</td>
<td>-.0006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>.8530</td>
<td>.0988</td>
<td>.0376</td>
<td>-.0107</td>
<td>.0318</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.419</td>
<td>1.4538</td>
<td>.1215</td>
<td>.0224</td>
<td>.0116</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>.9564</td>
<td>.0936</td>
<td>-.0190</td>
<td>.0409</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>1.4382</td>
<td>-.1428</td>
<td>.0141</td>
<td>.0117</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.3311</td>
<td>.2788</td>
<td>.0267</td>
<td>.0511</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1.135</td>
<td>.3033</td>
<td>.5747</td>
<td>-.0130</td>
<td>.0155</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.8094</td>
<td>.4139</td>
<td>-.0972</td>
<td>-.0242</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-.1026</td>
<td>-.3695</td>
<td>-.0876</td>
<td>.0092</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-.1635</td>
<td>-.2509</td>
<td>-.1111</td>
<td>.0014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-.1295</td>
<td>-.0751</td>
<td>.0725</td>
<td>.1358</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.3105</td>
<td>-.1388</td>
<td>.1854</td>
<td>.0213</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-.1267</td>
<td>-.2145</td>
<td>-.3147</td>
<td>.0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.1039</td>
<td>-.1499</td>
<td>-.2650</td>
<td>.2674</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.6817</td>
<td>.0123</td>
<td>.0759</td>
<td>.2456</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>43.631</td>
<td>-.4925</td>
<td>.0172</td>
<td>.0585</td>
<td>.1280</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.4461</td>
<td>.0324</td>
<td>.0102</td>
<td>.0551</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>-.2016</td>
<td>.0640</td>
<td>-.0377</td>
<td>.1810</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>-.1883</td>
<td>.0939</td>
<td>.0269</td>
<td>.0553</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0334</td>
<td>.0490</td>
<td>.0271</td>
<td>.0328</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>108.386</td>
<td>.2275</td>
<td>.1129</td>
<td>-.1250</td>
<td>.1867</td>
<td>.0485</td>
<td>1.500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A-10.
FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE

\[
P(\theta) = A(0) + \Sigma A(n) \cos(n\theta) + B(n) \sin(n\theta)
\]

CONDITION 105, LOW-MACH CRUISE TEST 273-7 IRIG 7:56:40.5

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>.9171</td>
<td>.0445</td>
<td>.0039</td>
<td>.0037</td>
<td>.0046</td>
<td>.0200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>.6477</td>
<td>.0218</td>
<td>.0042</td>
<td>.0022</td>
<td>.0001</td>
<td>.0006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>.7408</td>
<td>.0550</td>
<td>-.0111</td>
<td>.0002</td>
<td>.0072</td>
<td>.0142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>.6045</td>
<td>.0401</td>
<td>.0014</td>
<td>.0014</td>
<td>.0009</td>
<td>.0026</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>.4582</td>
<td>.0632</td>
<td>.0027</td>
<td>.0036</td>
<td>.0001</td>
<td>.0079</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>.3263</td>
<td>.0811</td>
<td>.0024</td>
<td>.0154</td>
<td>.0142</td>
<td>.0095</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>.2620</td>
<td>.0726</td>
<td>.0038</td>
<td>.0102</td>
<td>.0350</td>
<td>.0127</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>.2295</td>
<td>.1205</td>
<td>.0109</td>
<td>.0052</td>
<td>.0219</td>
<td>.0082</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.2010</td>
<td>.1230</td>
<td>.0144</td>
<td>.0005</td>
<td>.0279</td>
<td>.0065</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>.1745</td>
<td>.4389</td>
<td>.1660</td>
<td>.1618</td>
<td>.3662</td>
<td>.2795</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>.0632</td>
<td>.3366</td>
<td>.1020</td>
<td>.0131</td>
<td>.0137</td>
<td>.0077</td>
<td>.0316</td>
<td>.0786</td>
<td>.0062</td>
<td>.0474</td>
<td>.0157</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>.2367</td>
<td>.3029</td>
<td>.0195</td>
<td>.0094</td>
<td>.0073</td>
<td>.0096</td>
<td>.0043</td>
<td>.1186</td>
<td>.0140</td>
<td>.0156</td>
<td>.0136</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>.5323</td>
<td>.2954</td>
<td>.0362</td>
<td>.0208</td>
<td>.0177</td>
<td>.0158</td>
<td>.0153</td>
<td>.1369</td>
<td>.0137</td>
<td>.0250</td>
<td>.0021</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>1.0399</td>
<td>.2920</td>
<td>.0233</td>
<td>.0031</td>
<td>.0148</td>
<td>.0133</td>
<td>.0053</td>
<td>.0080</td>
<td>.0127</td>
<td>.0049</td>
<td>.0139</td>
</tr>
<tr>
<td>15</td>
<td>1.275</td>
<td>1.5024</td>
<td>.5051</td>
<td>.0284</td>
<td>.0448</td>
<td>.0643</td>
<td>.0379</td>
<td>.0158</td>
<td>.0356</td>
<td>.0396</td>
<td>.0494</td>
<td>.0140</td>
</tr>
<tr>
<td>16</td>
<td>1.000</td>
<td>1.0997</td>
<td>.3475</td>
<td>.0058</td>
<td>.0164</td>
<td>.0237</td>
<td>.0046</td>
<td>.0010</td>
<td>.1311</td>
<td>.0182</td>
<td>.0255</td>
<td>.0383</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.3536</td>
<td>.7175</td>
<td>.0132</td>
<td>.0616</td>
<td>.0475</td>
<td>.1109</td>
<td>.1144</td>
<td>.3094</td>
<td>.1038</td>
<td>.1578</td>
<td>.0222</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>.8790</td>
<td>1.0059</td>
<td>.1186</td>
<td>.1572</td>
<td>.0876</td>
<td>.0250</td>
<td>.0878</td>
<td>.2941</td>
<td>.1183</td>
<td>.0769</td>
<td>.1269</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.8025</td>
<td>.7697</td>
<td>.1784</td>
<td>.0598</td>
<td>.0141</td>
<td>.0255</td>
<td>.0231</td>
<td>.3111</td>
<td>.0811</td>
<td>.0114</td>
<td>.0898</td>
</tr>
<tr>
<td>20</td>
<td>4.866</td>
<td>.9942</td>
<td>.8150</td>
<td>.0477</td>
<td>.0881</td>
<td>.0501</td>
<td>.1049</td>
<td>.0940</td>
<td>.2825</td>
<td>.0091</td>
<td>.0249</td>
<td>.0392</td>
</tr>
<tr>
<td>21</td>
<td>7.762</td>
<td>.1036</td>
<td>.6643</td>
<td>.2448</td>
<td>.1558</td>
<td>.1044</td>
<td>.0465</td>
<td>.0286</td>
<td>.3231</td>
<td>.1119</td>
<td>.0524</td>
<td>.0589</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.8653</td>
<td>.3685</td>
<td>1.1926</td>
<td>.0702</td>
<td>.0873</td>
<td>.1195</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>.5767</td>
<td>.1450</td>
<td>.0564</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.4315</td>
<td>.0887</td>
<td>.0558</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.633</td>
<td>.4207</td>
<td>.0604</td>
<td>.0315</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>.3731</td>
<td>.0311</td>
<td>.0230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.3910</td>
<td>.1092</td>
<td>.0211</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.2913</td>
<td>.0479</td>
<td>.0983</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.633</td>
<td>.1461</td>
<td>.0191</td>
<td>.0054</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.1649</td>
<td>.0266</td>
<td>.0418</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>86.576</td>
<td>.0414</td>
<td>.0429</td>
<td>.0012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>100.386</td>
<td>.1889</td>
<td>.0771</td>
<td>.0462</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-11.

**FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES**

\[
P(\theta) = A(0) + \sigma(0) \cos(n \theta) + B(n) \sin(n \theta)
\]

**CONDITION 106, MAXIMUM MACH NUMBER**

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>(Z)</th>
<th>(A(0)) (PSI)</th>
<th>(A(1)) (PSI)</th>
<th>(A(2)) (PSI)</th>
<th>(A(3)) (PSI)</th>
<th>(A(4)) (PSI)</th>
<th>(A(5)) (PSI)</th>
<th>(B(1)) (PSI)</th>
<th>(B(2)) (PSI)</th>
<th>(B(3)) (PSI)</th>
<th>(B(4)) (PSI)</th>
<th>(B(5)) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>54.051</td>
<td>-0.022</td>
<td>-0.0267</td>
<td>0.0040</td>
<td>-0.0014</td>
<td>-0.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>48.789</td>
<td>-0.0421</td>
<td>0.0164</td>
<td>-0.0159</td>
<td>-0.0325</td>
<td>-0.0073</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>41.907</td>
<td>0.0202</td>
<td>0.0105</td>
<td>-0.0133</td>
<td>-0.0218</td>
<td>-0.0094</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>36.019</td>
<td>-0.0014</td>
<td>0.0151</td>
<td>-0.0123</td>
<td>-0.0463</td>
<td>-0.0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>30.118</td>
<td>0.0532</td>
<td>0.0257</td>
<td>-0.0236</td>
<td>-0.0316</td>
<td>-0.0257</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>26.166</td>
<td>-0.0271</td>
<td>0.0183</td>
<td>0.0040</td>
<td>-0.0143</td>
<td>0.00255</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>22.196</td>
<td>0.0451</td>
<td>0.0062</td>
<td>-0.0058</td>
<td>-0.0420</td>
<td>0.0378</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>18.211</td>
<td>-0.0060</td>
<td>-0.0109</td>
<td>-0.0181</td>
<td>-0.0181</td>
<td>-0.0055</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>15.214</td>
<td>0.0584</td>
<td>0.0049</td>
<td>-0.0390</td>
<td>-0.0377</td>
<td>0.0300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>12.215</td>
<td>-0.0214</td>
<td>-0.0190</td>
<td>-0.0214</td>
<td>-0.2217</td>
<td>0.0723</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>9.005</td>
<td>-0.0275</td>
<td>0.0065</td>
<td>0.0202</td>
<td>0.0075</td>
<td>-0.0514</td>
<td>-0.0769</td>
<td>-0.0738</td>
<td>-0.0235</td>
<td>-0.0074</td>
<td>-0.0304</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>6.037</td>
<td>0.0655</td>
<td>0.0265</td>
<td>0.0104</td>
<td>-0.0087</td>
<td>0.0102</td>
<td>0.0232</td>
<td>-0.1187</td>
<td>0.0184</td>
<td>0.0320</td>
<td>0.1100</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>3.629</td>
<td>-0.1553</td>
<td>0.0058</td>
<td>0.0874</td>
<td>-0.0058</td>
<td>0.0002</td>
<td>0.0103</td>
<td>0.0530</td>
<td>-0.1043</td>
<td>-0.0358</td>
<td>-0.0455</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>1.413</td>
<td>-0.0676</td>
<td>0.0446</td>
<td>0.0225</td>
<td>0.0103</td>
<td>0.0266</td>
<td>0.0037</td>
<td>0.0515</td>
<td>0.0163</td>
<td>0.0091</td>
<td>0.0293</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>1.217</td>
<td>0.0001</td>
<td>0.0219</td>
<td>0.0281</td>
<td>0.1360</td>
<td>0.0419</td>
<td>0.0136</td>
<td>0.0107</td>
<td>0.1177</td>
<td>0.0488</td>
<td>0.0237</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>0.000</td>
<td>0.1353</td>
<td>0.1353</td>
<td>0.0278</td>
<td>0.4050</td>
<td>0.0073</td>
<td>0.0515</td>
<td>0.0701</td>
<td>0.0035</td>
<td>0.0365</td>
<td>0.0054</td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>0.324</td>
<td>-0.0511</td>
<td>0.0602</td>
<td>0.0557</td>
<td>0.0115</td>
<td>0.0577</td>
<td>0.1494</td>
<td>0.0336</td>
<td>0.0129</td>
<td>0.1106</td>
<td>0.2109</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>1.156</td>
<td>-0.0150</td>
<td>0.0153</td>
<td>0.0118</td>
<td>0.0349</td>
<td>0.0137</td>
<td>0.0228</td>
<td>0.0744</td>
<td>0.2776</td>
<td>0.0952</td>
<td>0.0299</td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>3.007</td>
<td>-0.1124</td>
<td>0.0576</td>
<td>0.0251</td>
<td>0.1392</td>
<td>0.0980</td>
<td>0.0431</td>
<td>0.3233</td>
<td>0.0561</td>
<td>0.1089</td>
<td>0.0337</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>4.496</td>
<td>-0.9370</td>
<td>0.0271</td>
<td>0.0372</td>
<td>0.1605</td>
<td>0.1156</td>
<td>0.0908</td>
<td>0.0661</td>
<td>0.1335</td>
<td>0.0686</td>
<td>0.0293</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>7.782</td>
<td>-0.8966</td>
<td>0.1706</td>
<td>0.0075</td>
<td>0.1383</td>
<td>0.1791</td>
<td>0.1457</td>
<td>0.0658</td>
<td>0.0526</td>
<td>0.1317</td>
<td>0.1098</td>
</tr>
<tr>
<td>22</td>
<td>22</td>
<td>12.404</td>
<td>-1.1893</td>
<td>0.0641</td>
<td>0.0673</td>
<td>0.1533</td>
<td>0.0073</td>
<td>0.0677</td>
<td>0.0678</td>
<td>0.0271</td>
<td>0.1712</td>
<td>0.1212</td>
</tr>
<tr>
<td>23</td>
<td>23</td>
<td>17.679</td>
<td>-1.2841</td>
<td>0.0264</td>
<td>0.1227</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>23.652</td>
<td>-1.2159</td>
<td>0.0176</td>
<td>0.3283</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>25</td>
<td>29.638</td>
<td>-1.1378</td>
<td>0.1100</td>
<td>0.2093</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>26</td>
<td>36.633</td>
<td>-1.1096</td>
<td>0.0931</td>
<td>0.1914</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>27</td>
<td>48.631</td>
<td>-1.0564</td>
<td>0.1249</td>
<td>0.1625</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>28</td>
<td>60.627</td>
<td>-1.0654</td>
<td>0.0032</td>
<td>0.1706</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>29</td>
<td>72.863</td>
<td>-1.0671</td>
<td>0.0053</td>
<td>0.2264</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>30</td>
<td>75.533</td>
<td>-1.1555</td>
<td>0.0074</td>
<td>0.0303</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>31</td>
<td>96.576</td>
<td>0.0828</td>
<td>0.0024</td>
<td>0.0047</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>32</td>
<td>106.986</td>
<td>0.0009</td>
<td>0.0270</td>
<td>0.0135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW NO.</td>
<td>Z (IN)</td>
<td>A(0) (PSI)</td>
<td>A(1) (PSI)</td>
<td>A(2) (PSI)</td>
<td>A(3) (PSI)</td>
<td>A(4) (PSI)</td>
<td>A(5) (PSI)</td>
<td>A(6) (PSI)</td>
<td>B(1) (PSI)</td>
<td>B(2) (PSI)</td>
<td>B(3) (PSI)</td>
<td>B(4) (PSI)</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>1.3631</td>
<td>.0380</td>
<td>.0039</td>
<td>.0019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>1.3162</td>
<td>.0041</td>
<td>.0109</td>
<td>.0031</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>1.2166</td>
<td>.0372</td>
<td>-.0145</td>
<td>.0028</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>1.0936</td>
<td>.0329</td>
<td>.0073</td>
<td>-.0088</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>.9645</td>
<td>.0612</td>
<td>.0064</td>
<td>-.0066</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.165</td>
<td>.8619</td>
<td>.0424</td>
<td>.0008</td>
<td>-.0082</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>.8053</td>
<td>.0484</td>
<td>.0070</td>
<td>.0124</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>.7905</td>
<td>.0789</td>
<td>-.0102</td>
<td>-.0052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.7794</td>
<td>.0511</td>
<td>-.0012</td>
<td>.0145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>.6168</td>
<td>.1895</td>
<td>.0189</td>
<td>.0040</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.099</td>
<td>.7151</td>
<td>.2258</td>
<td>.0281</td>
<td>-.0113</td>
<td>-.0200</td>
<td>-.0139</td>
<td>-.0365</td>
<td>-.0613</td>
<td>-.0050</td>
<td>-.0293</td>
<td>-.0163</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>.8454</td>
<td>.1754</td>
<td>.0206</td>
<td>-.0129</td>
<td>-.0115</td>
<td>-.0323</td>
<td>-.0163</td>
<td>-.0992</td>
<td>-.0109</td>
<td>-.0069</td>
<td>.0179</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>1.1843</td>
<td>.2128</td>
<td>.0099</td>
<td>-.0037</td>
<td>.0446</td>
<td>-.0112</td>
<td>-.0334</td>
<td>-.0852</td>
<td>-.0138</td>
<td>-.0011</td>
<td>.0169</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>1.6347</td>
<td>.1896</td>
<td>.0082</td>
<td>.0090</td>
<td>.0006</td>
<td>.0011</td>
<td>.0081</td>
<td>.0618</td>
<td>.0133</td>
<td>.0163</td>
<td>.0212</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>1.8213</td>
<td>.0818</td>
<td>-.0114</td>
<td>.0705</td>
<td>.0621</td>
<td>.0814</td>
<td>.0169</td>
<td>.0172</td>
<td>.0451</td>
<td>.0572</td>
<td>.0215</td>
</tr>
<tr>
<td>16</td>
<td>.000</td>
<td>.9195</td>
<td>.3745</td>
<td>.0070</td>
<td>.0157</td>
<td>.0907</td>
<td>.0086</td>
<td>.0032</td>
<td>.1391</td>
<td>.0277</td>
<td>.0046</td>
<td>.0533</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>2.0476</td>
<td>1.1553</td>
<td>.0681</td>
<td>.1541</td>
<td>.0102</td>
<td>.0332</td>
<td>.0655</td>
<td>.5039</td>
<td>.0752</td>
<td>.1052</td>
<td>.0312</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>1.7535</td>
<td>1.1831</td>
<td>.0948</td>
<td>.1634</td>
<td>.0011</td>
<td>.0551</td>
<td>.0108</td>
<td>.3537</td>
<td>.0234</td>
<td>.1328</td>
<td>.2905</td>
</tr>
<tr>
<td>20</td>
<td>4.866</td>
<td>1.7517</td>
<td>1.1938</td>
<td>.0272</td>
<td>.1131</td>
<td>.0551</td>
<td>.1609</td>
<td>.0345</td>
<td>.3046</td>
<td>.0345</td>
<td>.0202</td>
<td>.1052</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>1.3295</td>
<td>1.4524</td>
<td>.0766</td>
<td>.0435</td>
<td>.0780</td>
<td>.0838</td>
<td>.0596</td>
<td>3.268</td>
<td>1.122</td>
<td>.0985</td>
<td>.0291</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.9079</td>
<td>.0342</td>
<td>.0803</td>
<td>.0470</td>
<td>.0320</td>
<td>.0758</td>
<td>.1901</td>
<td>.0602</td>
<td>.1275</td>
<td>.1074</td>
<td>.0878</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>.8128</td>
<td>.1238</td>
<td>.0845</td>
<td>.0546</td>
<td>.0822</td>
<td>.0654</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.6079</td>
<td>.0864</td>
<td>.0977</td>
<td>.0546</td>
<td>.0822</td>
<td>.0654</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.639</td>
<td>.5055</td>
<td>.0503</td>
<td>.0710</td>
<td>.0413</td>
<td>.0079</td>
<td>.0026</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>.4758</td>
<td>.0348</td>
<td>.0382</td>
<td>.0079</td>
<td>.0951</td>
<td>.0152</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.4535</td>
<td>.1103</td>
<td>.0026</td>
<td>.0005</td>
<td>.0696</td>
<td>.0127</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.3824</td>
<td>.0706</td>
<td>.1090</td>
<td>.0107</td>
<td>.0656</td>
<td>.0299</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.603</td>
<td>.2378</td>
<td>.0014</td>
<td>.0405</td>
<td>.0050</td>
<td>.0356</td>
<td>.0140</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.1724</td>
<td>.0121</td>
<td>.0367</td>
<td>.0702</td>
<td>.0352</td>
<td>.0125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0170</td>
<td>.0371</td>
<td>.0350</td>
<td>.2037</td>
<td>.0131</td>
<td>.1128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>100.386</td>
<td>.2043</td>
<td>.0687</td>
<td>.0558</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table A-12.

FOURIER - BESSSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES

\[ P(\theta) = A(0) + \Sigma (A(N) \cos(N \theta) + B(N) \sin(N \theta)) \]

CONDITION 107, INFLIGHT RELIGHT
MACH NUMBER = 0.721
TEST 273-7 IRIG 8:12:53.5
CORRECTED AIRFLOW = 1365. LB/SEC

ALTITUDE = 27589. FT
<table>
<thead>
<tr>
<th>ROW</th>
<th>Z</th>
<th>A(0)</th>
<th>A(1)</th>
<th>A(2)</th>
<th>A(3)</th>
<th>A(4)</th>
<th>A(5)</th>
<th>A(6)</th>
<th>B(1)</th>
<th>B(2)</th>
<th>B(3)</th>
<th>B(4)</th>
<th>B(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(IN)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>1.8899</td>
<td>-.0321</td>
<td>-.006</td>
<td>.0023</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>1.7625</td>
<td>-.0526</td>
<td>.0163</td>
<td>-.0107</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>1.5806</td>
<td>.0237</td>
<td>.0105</td>
<td>-.0134</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>1.3198</td>
<td>.0157</td>
<td>.0296</td>
<td>-.0118</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>1.0608</td>
<td>.0282</td>
<td>.0195</td>
<td>-.0139</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>.8478</td>
<td>-.0859</td>
<td>-.0035</td>
<td>-.0092</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>.6978</td>
<td>.1154</td>
<td>.0022</td>
<td>.0006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>.6716</td>
<td>-.0716</td>
<td>.0269</td>
<td>-.0132</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.6181</td>
<td>.1553</td>
<td>.0290</td>
<td>-.0157</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>.2119</td>
<td>.1318</td>
<td>-.0096</td>
<td>.0492</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>.3716</td>
<td>-.1040</td>
<td>.0097</td>
<td>.0423</td>
<td>-.0089</td>
<td>.0085</td>
<td>-.0703</td>
<td>.0527</td>
<td>.0046</td>
<td>.0008</td>
<td>-.0218</td>
<td>.0121</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>.6670</td>
<td>.2269</td>
<td>.0276</td>
<td>.0396</td>
<td>-.0544</td>
<td>-.0354</td>
<td>-.0230</td>
<td>.0433</td>
<td>-.0346</td>
<td>-.0026 -</td>
<td>.0427</td>
<td>.0236</td>
</tr>
<tr>
<td>13</td>
<td>9.629</td>
<td>1.3210</td>
<td>.3184</td>
<td>.0065</td>
<td>.0646</td>
<td>.0212</td>
<td>.0206</td>
<td>.0192</td>
<td>.0988</td>
<td>.0532</td>
<td>-.0228</td>
<td>.1027</td>
<td>-.0253</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>2.1955</td>
<td>.1595</td>
<td>.0216</td>
<td>.0171</td>
<td>-.0542</td>
<td>.0310</td>
<td>.0001</td>
<td>.0363</td>
<td>.0188</td>
<td>-.0122</td>
<td>.0005</td>
<td>.0178</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>3.0086</td>
<td>.0276</td>
<td>.0213</td>
<td>.0440</td>
<td>-.1643</td>
<td>-.0799</td>
<td>.0132</td>
<td>-.0301</td>
<td>.0063</td>
<td>-.0694</td>
<td>-.0028</td>
<td>-.0799</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>2.1532</td>
<td>.1499</td>
<td>.0266</td>
<td>.0169</td>
<td>.0188</td>
<td>.0316</td>
<td>.0048</td>
<td>-.0526</td>
<td>.0233</td>
<td>-.0975</td>
<td>-.0622</td>
<td>-.1010</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.6420</td>
<td>.2720</td>
<td>.0005</td>
<td>.0469</td>
<td>-.0342</td>
<td>.0726</td>
<td>-.0677</td>
<td>-.0708</td>
<td>-.0602</td>
<td>.0423</td>
<td>.0725</td>
<td>-.2500</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>1.9168</td>
<td>.7576</td>
<td>.0051</td>
<td>.0801</td>
<td>-.0602</td>
<td>-.0495</td>
<td>.0725</td>
<td>-.1638</td>
<td>-.0050</td>
<td>-.0562</td>
<td>-.0146</td>
<td>-.0384</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>1.3862</td>
<td>.7122</td>
<td>.0107</td>
<td>.1125</td>
<td>-.1357</td>
<td>-.0211</td>
<td>.0364</td>
<td>-.0017</td>
<td>.1538</td>
<td>.1810</td>
<td>.0910</td>
<td>.0598</td>
</tr>
<tr>
<td>20</td>
<td>4.806</td>
<td>1.6484</td>
<td>.6227</td>
<td>.0156</td>
<td>-.0585</td>
<td>-.1638</td>
<td>-.1744</td>
<td>-.0889</td>
<td>-.1550</td>
<td>-.0934</td>
<td>-.0689</td>
<td>.1027</td>
<td>.0720</td>
</tr>
<tr>
<td>21</td>
<td>7.702</td>
<td>1.8445</td>
<td>.2838</td>
<td>.0624</td>
<td>-.1020</td>
<td>-.2404</td>
<td>-.1792</td>
<td>-.0623</td>
<td>-.1063</td>
<td>-.0516</td>
<td>-.1063</td>
<td>-.1297</td>
<td>.0160</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>2.1683</td>
<td>.3480</td>
<td>.1604</td>
<td>.2299</td>
<td>-.0167</td>
<td>-.1212</td>
<td>.1516</td>
<td>-.2312</td>
<td>-.2864</td>
<td>.1721</td>
<td>.0375</td>
<td>.0764</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>2.2677</td>
<td>.3113</td>
<td>.1315</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>2.0116</td>
<td>.3773</td>
<td>.1290</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>1.5213</td>
<td>.9247</td>
<td>.2902</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.533</td>
<td>.8321</td>
<td>.0703</td>
<td>.0487</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.9501</td>
<td>.1725</td>
<td>.0263</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.8591</td>
<td>.1402</td>
<td>.0434</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>.9099</td>
<td>.0854</td>
<td>.0192</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.4531</td>
<td>.0244</td>
<td>.0324</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0757</td>
<td>.0137</td>
<td>.0135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>105.886</td>
<td>.4439</td>
<td>.0013</td>
<td>.0147</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW NO.</td>
<td>Z (IN)</td>
<td>A(0)</td>
<td>A(1)</td>
<td>A(2)</td>
<td>A(3)</td>
<td>A(4)</td>
<td>A(5)</td>
<td>A(6)</td>
<td>B(1)</td>
<td>B(2)</td>
<td>B(3)</td>
<td>B(4)</td>
<td>B(5)</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>-2761</td>
<td>1448</td>
<td>0.074</td>
<td>0.022</td>
<td></td>
<td></td>
<td></td>
<td>0.0193</td>
<td>-0.0115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-3815</td>
<td>1104</td>
<td>0.0125</td>
<td>0.0016</td>
<td></td>
<td></td>
<td></td>
<td>0.0168</td>
<td>-0.0106</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-5477</td>
<td>1355</td>
<td>0.0249</td>
<td>0.0016</td>
<td></td>
<td></td>
<td></td>
<td>0.0350</td>
<td>-0.0071</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-7624</td>
<td>1355</td>
<td>0.0123</td>
<td>0.0143</td>
<td></td>
<td></td>
<td></td>
<td>0.0200</td>
<td>-0.0032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-10046</td>
<td>1783</td>
<td>0.0013</td>
<td>0.0012</td>
<td></td>
<td></td>
<td></td>
<td>0.0008</td>
<td>-0.0149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-12198</td>
<td>2097</td>
<td>0.0046</td>
<td>0.0053</td>
<td></td>
<td></td>
<td></td>
<td>0.0032</td>
<td>-0.0037</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-13409</td>
<td>2406</td>
<td>0.0212</td>
<td>0.0372</td>
<td></td>
<td></td>
<td></td>
<td>-0.0678</td>
<td>0.0357</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-14340</td>
<td>3755</td>
<td>0.0173</td>
<td>0.0003</td>
<td></td>
<td></td>
<td></td>
<td>-0.0394</td>
<td>0.0097</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-14805</td>
<td>4481</td>
<td>0.0043</td>
<td>0.0150</td>
<td></td>
<td></td>
<td></td>
<td>-0.0488</td>
<td>0.0131</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-1974</td>
<td>8743</td>
<td>0.1425</td>
<td>0.0958</td>
<td></td>
<td></td>
<td></td>
<td>-0.2966</td>
<td>0.1229</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-2076</td>
<td>1155</td>
<td>0.0328</td>
<td>0.0184</td>
<td>0.0056</td>
<td>0.0052</td>
<td>0.0060</td>
<td>-0.2052</td>
<td>0.0615</td>
<td>0.0418</td>
<td>0.0607</td>
<td>0.0080</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-9270</td>
<td>1.1605</td>
<td>0.0395</td>
<td>0.0238</td>
<td>-0.0015</td>
<td>-0.0105</td>
<td>-0.0194</td>
<td>-0.2761</td>
<td>0.0229</td>
<td>0.0664</td>
<td>0.0139</td>
<td>0.0066</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-7872</td>
<td>1.2985</td>
<td>0.2175</td>
<td>0.0437</td>
<td>-0.0583</td>
<td>0.0012</td>
<td>0.0314</td>
<td>-0.4748</td>
<td>0.0701</td>
<td>0.1696</td>
<td>0.0255</td>
<td>0.0066</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-3482</td>
<td>1.5679</td>
<td>0.0311</td>
<td>0.0458</td>
<td>-0.0750</td>
<td>0.0554</td>
<td>0.0107</td>
<td>-0.4238</td>
<td>0.0671</td>
<td>0.0775</td>
<td>0.0217</td>
<td>0.0062</td>
</tr>
<tr>
<td>15</td>
<td>0.172</td>
<td>-2912</td>
<td>1.3415</td>
<td>0.1809</td>
<td>0.0366</td>
<td>0.0041</td>
<td>0.0443</td>
<td>0.0441</td>
<td>-0.3556</td>
<td>0.1068</td>
<td>0.0745</td>
<td>0.0118</td>
<td>0.0190</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>3666</td>
<td>4574</td>
<td>0.2650</td>
<td>0.0140</td>
<td>0.0293</td>
<td>0.0326</td>
<td>0.0243</td>
<td>-0.1314</td>
<td>0.1419</td>
<td>0.0240</td>
<td>0.0385</td>
<td>0.0081</td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>3310</td>
<td>6306</td>
<td>0.1817</td>
<td>0.0457</td>
<td>0.1010</td>
<td>0.0255</td>
<td>0.0322</td>
<td>-0.2544</td>
<td>0.1515</td>
<td>0.0586</td>
<td>0.0065</td>
<td>0.0748</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>2489</td>
<td>7101</td>
<td>0.1503</td>
<td>0.0258</td>
<td>0.0131</td>
<td>0.0129</td>
<td>0.0046</td>
<td>-0.1965</td>
<td>0.0586</td>
<td>0.0144</td>
<td>0.0031</td>
<td>0.0073</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>1350</td>
<td>5792</td>
<td>0.0702</td>
<td>0.0341</td>
<td>0.0030</td>
<td>0.0056</td>
<td>0.0051</td>
<td>-0.1664</td>
<td>0.0280</td>
<td>0.0017</td>
<td>0.0066</td>
<td>0.0015</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>0475</td>
<td>5064</td>
<td>0.0675</td>
<td>0.0127</td>
<td>0.0130</td>
<td>0.0216</td>
<td>0.0014</td>
<td>-0.1487</td>
<td>0.0149</td>
<td>0.0051</td>
<td>0.0006</td>
<td>0.0131</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>0630</td>
<td>-4155</td>
<td>0.0524</td>
<td>0.0365</td>
<td>0.0341</td>
<td>0.0187</td>
<td>0.0041</td>
<td>-0.1731</td>
<td>0.0284</td>
<td>0.0077</td>
<td>0.0107</td>
<td>0.0090</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-1101</td>
<td>-2738</td>
<td>0.0370</td>
<td>0.0320</td>
<td>0.0187</td>
<td>0.0564</td>
<td>0.0103</td>
<td>0.0513</td>
<td>0.0652</td>
<td>0.0249</td>
<td>0.0046</td>
<td>0.0355</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-0724</td>
<td>-2702</td>
<td>0.0162</td>
<td>0.0734</td>
<td>0.0380</td>
<td>0.0136</td>
<td></td>
<td></td>
<td>0.0439</td>
<td>0.0710</td>
<td>0.0060</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-0570</td>
<td>-2126</td>
<td>0.0014</td>
<td>0.0734</td>
<td>0.0470</td>
<td>0.0136</td>
<td></td>
<td></td>
<td>0.0694</td>
<td>0.0175</td>
<td>0.0127</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-0626</td>
<td>-1646</td>
<td>0.0247</td>
<td>0.0694</td>
<td>0.0175</td>
<td>0.0127</td>
<td></td>
<td></td>
<td>0.0553</td>
<td>0.0436</td>
<td>0.0036</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-0539</td>
<td>-1327</td>
<td>0.0263</td>
<td>0.0553</td>
<td>0.0436</td>
<td>0.0036</td>
<td></td>
<td></td>
<td>0.0627</td>
<td>0.0264</td>
<td>0.0027</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-0708</td>
<td>-1052</td>
<td>0.0516</td>
<td>0.0627</td>
<td>0.0264</td>
<td>0.0027</td>
<td></td>
<td></td>
<td>0.1131</td>
<td>0.0123</td>
<td>0.0066</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.637</td>
<td>-0032</td>
<td>-0016</td>
<td>0.0900</td>
<td>0.1131</td>
<td>0.0123</td>
<td>0.0066</td>
<td></td>
<td></td>
<td>0.1296</td>
<td>0.0136</td>
<td>0.0161</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.583</td>
<td>-0214</td>
<td>-0144</td>
<td>0.0804</td>
<td>0.1296</td>
<td>0.0136</td>
<td>0.0161</td>
<td></td>
<td></td>
<td>0.1128</td>
<td>0.0108</td>
<td>0.0111</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>0011</td>
<td>0018</td>
<td>0.0789</td>
<td>0.1128</td>
<td>0.0108</td>
<td>0.0111</td>
<td></td>
<td></td>
<td>0.1042</td>
<td>0.0081</td>
<td>0.0149</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>0064</td>
<td>0263</td>
<td>0.0669</td>
<td>0.1042</td>
<td>0.0081</td>
<td>0.0149</td>
<td></td>
<td></td>
<td>0.1506</td>
<td>0.0025</td>
<td>0.0220</td>
<td></td>
</tr>
</tbody>
</table>
### Table A-15.

**Fourier - Bessel Coefficients for Engine Number Three Pressures**

\[ P(\theta) = A(0) + \Sigma A(n) \cos(n\theta) + B(n) \sin(n\theta) \]

**Condition 110, Stall Warning (FLAPS 10)**

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-5.287</td>
<td>1.811</td>
<td>0.114</td>
<td>0.0348</td>
<td>0.0066</td>
<td>0.0187</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-6.618</td>
<td>1.422</td>
<td>-0.0039</td>
<td>0.0036</td>
<td>-0.0170</td>
<td>-0.0175</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-8.205</td>
<td>1.413</td>
<td>-0.0018</td>
<td>-0.0062</td>
<td>-0.0024</td>
<td>-0.0198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.0728</td>
<td>1.416</td>
<td>-0.0100</td>
<td>-0.0172</td>
<td>-0.0299</td>
<td>-0.00012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-1.326</td>
<td>2.217</td>
<td>0.0357</td>
<td>-0.0009</td>
<td>0.0068</td>
<td>-0.0186</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-1.547</td>
<td>2.197</td>
<td>0.0416</td>
<td>0.0027</td>
<td>-0.0006</td>
<td>-0.0162</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-1.6964</td>
<td>2.865</td>
<td>-0.0014</td>
<td>0.0324</td>
<td>-0.0823</td>
<td>0.0126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-1.7902</td>
<td>4.265</td>
<td>-0.0009</td>
<td>-0.0049</td>
<td>-0.0675</td>
<td>-0.0009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.244</td>
<td>-1.8529</td>
<td>5.494</td>
<td>0.0422</td>
<td>0.0040</td>
<td>-0.0802</td>
<td>-0.0290</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-2.4470</td>
<td>0.947</td>
<td>1.486</td>
<td>-0.0780</td>
<td>0.0040</td>
<td>-0.0774</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.000</td>
<td>-2.7601</td>
<td>1.6242</td>
<td>-1.442</td>
<td>0.0707</td>
<td>0.0247</td>
<td>-0.1308</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-2.6707</td>
<td>1.7576</td>
<td>-0.789</td>
<td>-0.0798</td>
<td>0.0362</td>
<td>-0.0661</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-2.5904</td>
<td>1.9187</td>
<td>-0.2102</td>
<td>-0.0604</td>
<td>-0.0885</td>
<td>0.0272</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-2.1722</td>
<td>2.1972</td>
<td>0.0358</td>
<td>-0.0479</td>
<td>-0.1212</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.172</td>
<td>-1.0175</td>
<td>1.8936</td>
<td>-0.2129</td>
<td>0.0786</td>
<td>-0.0115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-1.742</td>
<td>1.0006</td>
<td>-0.2864</td>
<td>-0.0657</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>-1.934</td>
<td>3.084</td>
<td>-0.2250</td>
<td>-0.0702</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-2.617</td>
<td>5.329</td>
<td>-0.1709</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-2.037</td>
<td>5.297</td>
<td>-0.0960</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>1.045</td>
<td>4.816</td>
<td>-0.339</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>0.0204</td>
<td>4.155</td>
<td>-0.335</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-0.0359</td>
<td>2.977</td>
<td>0.0154</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-0.0463</td>
<td>2.735</td>
<td>0.0068</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-0.0262</td>
<td>2.530</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-0.0273</td>
<td>2.017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-0.0295</td>
<td>1.720</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>43.631</td>
<td>-0.0457</td>
<td>1.215</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-0.0428</td>
<td>0.845</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>-0.0026</td>
<td>0.493</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.533</td>
<td>-0.0141</td>
<td>0.247</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>0.0529</td>
<td>0.035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>0.0853</td>
<td>0.043</td>
<td>0.0976</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Altitude = 16239 FT**

**Mach Number = 0.347**

**Corrected airflow = 1621 LB/SEC**

**Test 273-7 IRIG 8:22:26**
<table>
<thead>
<tr>
<th>NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-7723</td>
<td>1489</td>
<td>.0065</td>
<td>.0172</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-8654</td>
<td>1294</td>
<td>.0021</td>
<td>.0041</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-10550</td>
<td>1263</td>
<td>-.0229</td>
<td>.0025</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-12754</td>
<td>1268</td>
<td>-.0136</td>
<td>.0220</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-15251</td>
<td>1569</td>
<td>.0093</td>
<td>-.0034</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.106</td>
<td>-17693</td>
<td>1576</td>
<td>.0084</td>
<td>.0011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-19176</td>
<td>1947</td>
<td>-.0185</td>
<td>.0388</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.721</td>
<td>-20203</td>
<td>3006</td>
<td>-.0118</td>
<td>.0069</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-20874</td>
<td>3601</td>
<td>.0167</td>
<td>.0242</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-27097</td>
<td>111</td>
<td>.2450</td>
<td>.1419</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-29508</td>
<td>1.2136</td>
<td>-.1272</td>
<td>.0586</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-2.8361</td>
<td>1.1918</td>
<td>.0207</td>
<td>-.0508</td>
<td>.0019</td>
<td>.0107</td>
<td>-.0492</td>
<td>.3878</td>
<td>.0281</td>
<td>.0557</td>
<td>.0651</td>
<td>.0333</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-2.9101</td>
<td>1.3854</td>
<td>.0906</td>
<td>-.0922</td>
<td>.0162</td>
<td>.0523</td>
<td>.6970</td>
<td>2.194</td>
<td>1.161</td>
<td>3.020</td>
<td>.0987</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-2.7348</td>
<td>1.8451</td>
<td>.0510</td>
<td>.0116</td>
<td>.1108</td>
<td>-.0008</td>
<td>.0930</td>
<td>.5737</td>
<td>.0610</td>
<td>.0865</td>
<td>.0417</td>
<td>.0523</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>-1.7020</td>
<td>.8956</td>
<td>.1242</td>
<td>.0385</td>
<td>.0395</td>
<td>-.1189</td>
<td>.0528</td>
<td>.5706</td>
<td>1.394</td>
<td>.0194</td>
<td>.0862</td>
<td>.0611</td>
</tr>
<tr>
<td>16</td>
<td>.000</td>
<td>-1.7024</td>
<td>1.2416</td>
<td>-.0694</td>
<td>.0351</td>
<td>.0304</td>
<td>.0262</td>
<td>.0687</td>
<td>.4445</td>
<td>.0818</td>
<td>.0982</td>
<td>.0450</td>
<td>.0058</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.0654</td>
<td>.2537</td>
<td>.0653</td>
<td>.0189</td>
<td>.0526</td>
<td>.0261</td>
<td>.0457</td>
<td>-.0765</td>
<td>.0461</td>
<td>.0502</td>
<td>.0605</td>
<td>.0468</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>.2725</td>
<td>.0904</td>
<td>-.0529</td>
<td>.0253</td>
<td>.0073</td>
<td>.0116</td>
<td>.0035</td>
<td>.0218</td>
<td>.0370</td>
<td>.0037</td>
<td>.0051</td>
<td>.0129</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.2404</td>
<td>.2027</td>
<td>-.0441</td>
<td>-.0777</td>
<td>.0101</td>
<td>-.0061</td>
<td>.0002</td>
<td>.0814</td>
<td>.0114</td>
<td>.0075</td>
<td>.0005</td>
<td>.0013</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>.1794</td>
<td>.2162</td>
<td>-.0259</td>
<td>.0045</td>
<td>.0045</td>
<td>.0030</td>
<td>.0063</td>
<td>.0843</td>
<td>.0147</td>
<td>.0049</td>
<td>.0055</td>
<td>.0045</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>.1130</td>
<td>.2035</td>
<td>-.0185</td>
<td>-.0115</td>
<td>-.0097</td>
<td>-.0049</td>
<td>-.0043</td>
<td>.0914</td>
<td>.0033</td>
<td>.0003</td>
<td>.0046</td>
<td>.0060</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0548</td>
<td>-.1410</td>
<td>.0127</td>
<td>.0098</td>
<td>.0035</td>
<td>.0224</td>
<td>.0077</td>
<td>.0525</td>
<td>.0258</td>
<td>.0140</td>
<td>.0034</td>
<td>.0172</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>.0547</td>
<td>-.1458</td>
<td>.0089</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>.226</td>
<td>.0563</td>
<td>-.1261</td>
<td>.0138</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>.0353</td>
<td>-.1056</td>
<td>.0178</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>.0272</td>
<td>-.0943</td>
<td>.0186</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.0099</td>
<td>-.0764</td>
<td>.0346</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.0024</td>
<td>-.0520</td>
<td>.0493</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>.0238</td>
<td>-.0311</td>
<td>.0431</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.0315</td>
<td>-.0185</td>
<td>.0432</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>86.576</td>
<td>.0502</td>
<td>-.0112</td>
<td>.0498</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>.0630</td>
<td>.0040</td>
<td>.0561</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-17.

<table>
<thead>
<tr>
<th>ROW</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>1.2639</td>
<td>.0157</td>
<td>-.0056</td>
<td>.0040</td>
<td>.0118</td>
<td>.0323</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>1.2000</td>
<td>-.0008</td>
<td>.0083</td>
<td>.0064</td>
<td>-.0127</td>
<td>.0075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>1.1914</td>
<td>.0344</td>
<td>-.0011</td>
<td>-.0006</td>
<td>-.0042</td>
<td>.0228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>1.1364</td>
<td>.0325</td>
<td>-.0003</td>
<td>-.0040</td>
<td>.0066</td>
<td>.0030</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>1.0848</td>
<td>.0452</td>
<td>-.0028</td>
<td>.0073</td>
<td>.0068</td>
<td>.0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.154</td>
<td>1.0431</td>
<td>.0584</td>
<td>-.0027</td>
<td>-.0121</td>
<td>.0023</td>
<td>.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.156</td>
<td>1.0409</td>
<td>.0793</td>
<td>-.0075</td>
<td>.0013</td>
<td>-.0164</td>
<td>.0022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>1.0443</td>
<td>.0982</td>
<td>-.0020</td>
<td>.0013</td>
<td>-.0205</td>
<td>.0148</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>.0332</td>
<td>.1152</td>
<td>.0205</td>
<td>.0029</td>
<td>.0053</td>
<td>.0375</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>.0902</td>
<td>.2084</td>
<td>-.0098</td>
<td>.0222</td>
<td>.0374</td>
<td>.0114</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>.0727</td>
<td>.2381</td>
<td>.0117</td>
<td>-.0105</td>
<td>-.0022</td>
<td>-.0141</td>
<td>-.0435</td>
<td>-.0618</td>
<td>.0112</td>
<td>.0062</td>
<td>.0070</td>
<td>.0192</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>.1272</td>
<td>.2314</td>
<td>.0060</td>
<td>-.0151</td>
<td>.0046</td>
<td>-.0157</td>
<td>-.0055</td>
<td>-.0663</td>
<td>.0165</td>
<td>.0044</td>
<td>.0045</td>
<td>.0342</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>1.2796</td>
<td>.2060</td>
<td>-.0570</td>
<td>-.0197</td>
<td>.0483</td>
<td>-.0082</td>
<td>-.0285</td>
<td>-.0493</td>
<td>.0218</td>
<td>-.0253</td>
<td>-.0059</td>
<td>.0397</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>1.3977</td>
<td>.0371</td>
<td>-.0260</td>
<td>.0396</td>
<td>.0179</td>
<td>-.0069</td>
<td>-.0027</td>
<td>-.0377</td>
<td>-.0010</td>
<td>-.0011</td>
<td>-.0327</td>
<td>.0549</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>.8220</td>
<td>.2355</td>
<td>.0119</td>
<td>.0873</td>
<td>-.0580</td>
<td>.0403</td>
<td>.0100</td>
<td>.1446</td>
<td>.0582</td>
<td>.0084</td>
<td>-.0435</td>
<td>-.0893</td>
</tr>
<tr>
<td>16</td>
<td>.000</td>
<td>.7917</td>
<td>1.4563</td>
<td>.0402</td>
<td>.0959</td>
<td>.1351</td>
<td>.0472</td>
<td>.0324</td>
<td>.4827</td>
<td>.0693</td>
<td>-.0261</td>
<td>.1008</td>
<td>.1185</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.27635</td>
<td>-.1818</td>
<td>.3996</td>
<td>.4196</td>
<td>.5883</td>
<td>-.4559</td>
<td>-.6023</td>
<td>.5912</td>
<td>.5202</td>
<td>.9275</td>
<td>.0958</td>
<td>.6130</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-.2736</td>
<td>1.8405</td>
<td>.2842</td>
<td>.2987</td>
<td>.0044</td>
<td>.0093</td>
<td>1.758</td>
<td>.3893</td>
<td>.1673</td>
<td>-.0765</td>
<td>-.3055</td>
<td>.0716</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>1.4961</td>
<td>1.0829</td>
<td>.2399</td>
<td>.1418</td>
<td>.0796</td>
<td>.0047</td>
<td>.0159</td>
<td>.3908</td>
<td>.0912</td>
<td>.1020</td>
<td>.0822</td>
<td>.0115</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>1.2394</td>
<td>-.0047</td>
<td>.0220</td>
<td>.0327</td>
<td>-.0335</td>
<td>.0042</td>
<td>.1598</td>
<td>.0495</td>
<td>.0031</td>
<td>.0048</td>
<td>.0536</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.792</td>
<td>-.9726</td>
<td>-.4377</td>
<td>-.0430</td>
<td>-.0316</td>
<td>-.0664</td>
<td>-.0135</td>
<td>-.0118</td>
<td>.2926</td>
<td>.0420</td>
<td>.0243</td>
<td>-.0441</td>
<td>-.0052</td>
</tr>
<tr>
<td>22</td>
<td>12.204</td>
<td>-.8101</td>
<td>-.3539</td>
<td>.0914</td>
<td>.1350</td>
<td>.0401</td>
<td>.0524</td>
<td>.1064</td>
<td>.0405</td>
<td>-.1545</td>
<td>.0752</td>
<td>.0059</td>
<td>.1011</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.6234</td>
<td>-.3465</td>
<td>.0879</td>
<td>.0814</td>
<td>-.0802</td>
<td>-.0255</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-.4811</td>
<td>-.2932</td>
<td>-.1119</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.4124</td>
<td>-.2017</td>
<td>.0459</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.3266</td>
<td>-.1404</td>
<td>-.0281</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-.2903</td>
<td>-.1410</td>
<td>.0170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.2335</td>
<td>-.0617</td>
<td>.1045</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>-.1294</td>
<td>-.0047</td>
<td>.0320</td>
<td>-.1168</td>
<td>.0335</td>
<td>.0042</td>
<td>.1598</td>
<td>.0495</td>
<td>.0031</td>
<td>.0048</td>
<td>.0536</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>-.0965</td>
<td>.0049</td>
<td>.0540</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0250</td>
<td>.0264</td>
<td>.0528</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>.1516</td>
<td>.0701</td>
<td>-.0098</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-18.

**FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES**

\[ P(\theta) = A(0) + \sigma \left( A(1) \cos(n \theta) + B(1) \sin(n \theta) \right) \]

**CONDITION 113, APPROACH**

**TEST 273-7**

**IRIG B:34:27**

**CORRECTED AIRFLOW = 1547. LB/SEC**

<table>
<thead>
<tr>
<th>Row No.</th>
<th>( Z ) (IN)</th>
<th>( A(0) ) (PSI)</th>
<th>( A(1) ) (PSI)</th>
<th>( A(2) ) (PSI)</th>
<th>( A(3) ) (PSI)</th>
<th>( A(4) ) (PSI)</th>
<th>( A(5) ) (PSI)</th>
<th>( B(1) ) (PSI)</th>
<th>( B(2) ) (PSI)</th>
<th>( B(3) ) (PSI)</th>
<th>( B(4) ) (PSI)</th>
<th>( B(5) ) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-0.924</td>
<td>0.156</td>
<td>-0.005</td>
<td>0.037</td>
<td>0.023</td>
<td>0.007</td>
<td>0.017</td>
<td>0.074</td>
<td>0.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-1.137</td>
<td>0.147</td>
<td>0.034</td>
<td>0.010</td>
<td>0.012</td>
<td>0.026</td>
<td>0.016</td>
<td>0.020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.386</td>
<td>0.157</td>
<td>0.002</td>
<td>0.027</td>
<td>0.004</td>
<td>0.008</td>
<td>0.024</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.578</td>
<td>0.163</td>
<td>-0.010</td>
<td>0.037</td>
<td>0.016</td>
<td>0.014</td>
<td>0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.111</td>
<td>-1.705</td>
<td>0.165</td>
<td>-0.003</td>
<td>0.007</td>
<td>0.009</td>
<td>0.009</td>
<td>0.013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-2.218</td>
<td>0.191</td>
<td>-0.010</td>
<td>0.050</td>
<td>0.003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-2.454</td>
<td>0.237</td>
<td>0.056</td>
<td>0.069</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-2.544</td>
<td>0.324</td>
<td>-0.065</td>
<td>0.042</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-2.634</td>
<td>0.431</td>
<td>0.031</td>
<td>0.047</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.375</td>
<td>0.688</td>
<td>-0.089</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-3.509</td>
<td>0.968</td>
<td>-0.029</td>
<td>0.020</td>
<td>0.007</td>
<td>0.016</td>
<td>0.068</td>
<td>0.023</td>
<td>0.026</td>
<td>0.046</td>
<td>0.049</td>
</tr>
<tr>
<td>12</td>
<td>6.007</td>
<td>-3.897</td>
<td>0.973</td>
<td>-0.241</td>
<td>-0.024</td>
<td>-0.024</td>
<td>-0.038</td>
<td>-0.046</td>
<td>-0.032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.639</td>
<td>-4.562</td>
<td>1.130</td>
<td>-0.054</td>
<td>-0.001</td>
<td>0.067</td>
<td>-0.066</td>
<td>-0.031</td>
<td>-0.032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-3.186</td>
<td>1.608</td>
<td>-0.041</td>
<td>-1.023</td>
<td>0.022</td>
<td>0.087</td>
<td>0.037</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.172</td>
<td>-1.875</td>
<td>1.913</td>
<td>-0.043</td>
<td>0.012</td>
<td>-0.087</td>
<td>-0.057</td>
<td>0.070</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-5.355</td>
<td>2.262</td>
<td>0.067</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>-2.007</td>
<td>1.463</td>
<td>0.041</td>
<td>-0.010</td>
<td>-0.056</td>
<td>0.049</td>
<td>0.068</td>
<td>0.027</td>
<td>0.023</td>
<td>-1.331</td>
<td>-0.717</td>
</tr>
<tr>
<td>18</td>
<td>1.186</td>
<td>-4.482</td>
<td>1.466</td>
<td>-0.049</td>
<td>-0.020</td>
<td>0.012</td>
<td>-0.017</td>
<td>0.043</td>
<td>0.070</td>
<td>0.026</td>
<td>0.012</td>
<td>-0.083</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-3.149</td>
<td>-2.029</td>
<td>-0.013</td>
<td>0.004</td>
<td>-0.016</td>
<td>-0.012</td>
<td>0.033</td>
<td>0.042</td>
<td>0.010</td>
<td>-0.016</td>
<td>0.013</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-2.158</td>
<td>-2.606</td>
<td>0.019</td>
<td>-0.010</td>
<td>-0.179</td>
<td>0.034</td>
<td>0.077</td>
<td>0.019</td>
<td>-0.009</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-1.031</td>
<td>-2.219</td>
<td>-0.018</td>
<td>-0.001</td>
<td>0.002</td>
<td>0.016</td>
<td>0.112</td>
<td>0.003</td>
<td>0.002</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-1.037</td>
<td>-1.557</td>
<td>-0.003</td>
<td>-0.004</td>
<td>0.013</td>
<td>0.171</td>
<td>0.034</td>
<td>0.001</td>
<td>0.002</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-0.104</td>
<td>-1.195</td>
<td>-0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.632</td>
<td>-0.102</td>
<td>-1.318</td>
<td>0.012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.633</td>
<td>-0.077</td>
<td>-1.142</td>
<td>0.006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-0.156</td>
<td>-0.937</td>
<td>-0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>43.531</td>
<td>-0.326</td>
<td>-0.628</td>
<td>0.020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-0.421</td>
<td>-0.982</td>
<td>0.043</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.063</td>
<td>-0.415</td>
<td>-0.387</td>
<td>0.019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>79.593</td>
<td>-0.003</td>
<td>-0.176</td>
<td>0.046</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>-0.085</td>
<td>-0.027</td>
<td>0.039</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.355</td>
<td>-0.024</td>
<td>-0.138</td>
<td>0.040</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A-19.

FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES

\[ P(\theta) = A(0) + \sum \{A(n) \cos(n\theta) + B(n) \sin(n\theta) \} \]

CONDITION 114, TOUCH AND GO

ALTIMETER = 2561. FT
MACH NUMBER = 0.263
TEST 273-2 IRIG 8/40:30:1
CORRECTED AIRFLOW = 1585. LB/SEC

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z</th>
<th>A(0)</th>
<th>A(1)</th>
<th>A(2)</th>
<th>A(3)</th>
<th>A(4)</th>
<th>A(5)</th>
<th>A(6)</th>
<th>B(1)</th>
<th>B(2)</th>
<th>B(3)</th>
<th>B(4)</th>
<th>B(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
<td>(PSI)</td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>-1.2423</td>
<td>.2260</td>
<td>.0114</td>
<td>.0279</td>
<td>.0107</td>
<td>.0333</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-1.3951</td>
<td>.2037</td>
<td>.0097</td>
<td>.0268</td>
<td>.0329</td>
<td>.0119</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.6942</td>
<td>.1932</td>
<td>.0238</td>
<td>.0024</td>
<td>.0238</td>
<td>.0334</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-2.0402</td>
<td>.1906</td>
<td>.0274</td>
<td>.0245</td>
<td>.0299</td>
<td>.0086</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-2.4476</td>
<td>.2415</td>
<td>.0092</td>
<td>.0221</td>
<td>.0347</td>
<td>.0278</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-2.8186</td>
<td>.2262</td>
<td>.0131</td>
<td>.0013</td>
<td>.0269</td>
<td>.0100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-3.0504</td>
<td>.2456</td>
<td>.0418</td>
<td>.0456</td>
<td>.0212</td>
<td>.0414</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-3.2089</td>
<td>.3667</td>
<td>.0495</td>
<td>.0161</td>
<td>.1026</td>
<td>.0100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-3.3275</td>
<td>.4329</td>
<td>.0018</td>
<td>.0256</td>
<td>.1242</td>
<td>.0195</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.0792</td>
<td>.8133</td>
<td>.1193</td>
<td>.0816</td>
<td>.3961</td>
<td>.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-4.2609</td>
<td>1.5533</td>
<td>.0547</td>
<td>.0295</td>
<td>.0373</td>
<td>.0289</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-4.1433</td>
<td>1.3605</td>
<td>.5531</td>
<td>.1202</td>
<td>.1714</td>
<td>.0627</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-4.1699</td>
<td>1.9831</td>
<td>.2495</td>
<td>.1063</td>
<td>.0967</td>
<td>.0225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>.7172</td>
<td>-5.4068</td>
<td>2.2309</td>
<td>.0057</td>
<td>.0629</td>
<td>.0624</td>
<td>.1107</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-1.0083</td>
<td>1.5795</td>
<td>.0577</td>
<td>.0346</td>
<td>.0638</td>
<td>.0689</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.2451</td>
<td>-2.778</td>
<td>.0091</td>
<td>.0017</td>
<td>.0821</td>
<td>.0507</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>.4916</td>
<td>-1.038</td>
<td>.0156</td>
<td>.0347</td>
<td>.0162</td>
<td>.0096</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.4029</td>
<td>-2.489</td>
<td>.0520</td>
<td>.0668</td>
<td>.0077</td>
<td>.0012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>.2880</td>
<td>-2.647</td>
<td>.0342</td>
<td>.0017</td>
<td>.0031</td>
<td>.0072</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>.1662</td>
<td>-2.471</td>
<td>.0338</td>
<td>.0168</td>
<td>.0600</td>
<td>.0052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0812</td>
<td>-1.616</td>
<td>.0005</td>
<td>.0026</td>
<td>.063</td>
<td>.0304</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>.0687</td>
<td>-1.745</td>
<td>.0089</td>
<td>.0035</td>
<td>.0109</td>
<td>.0224</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.0498</td>
<td>-1.405</td>
<td>.0013</td>
<td>.0026</td>
<td>.0606</td>
<td>.0077</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>.0385</td>
<td>-1.277</td>
<td>.0085</td>
<td>.0090</td>
<td>.0263</td>
<td>.0053</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>.0293</td>
<td>-1.120</td>
<td>.0004</td>
<td>.0095</td>
<td>.0394</td>
<td>.0012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>.0024</td>
<td>-0.984</td>
<td>.0264</td>
<td>.0870</td>
<td>.0033</td>
<td>.0077</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>.0014</td>
<td>-0.726</td>
<td>.0047</td>
<td>.1203</td>
<td>.0047</td>
<td>.0050</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>.0031</td>
<td>-0.676</td>
<td>.0552</td>
<td>.0853</td>
<td>.0163</td>
<td>.0160</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>.0366</td>
<td>-0.248</td>
<td>.0326</td>
<td>.1264</td>
<td>.0006</td>
<td>.0088</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0756</td>
<td>-0.026</td>
<td>.0407</td>
<td>.1192</td>
<td>.0005</td>
<td>.0155</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>.0970</td>
<td>.0145</td>
<td>.0467</td>
<td>.1501</td>
<td>.0070</td>
<td>.0075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>A(0)</td>
<td>A(1)</td>
<td>A(2)</td>
<td>A(3)</td>
<td>A(4)</td>
<td>A(5)</td>
<td>A(6)</td>
<td>B(1)</td>
<td>B(2)</td>
<td>B(3)</td>
<td>B(4)</td>
<td>B(5)</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>54.051</td>
<td>-0.3566</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-0.3565</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-0.3564</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-0.3563</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-0.3562</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-0.3561</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-0.3560</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-0.3559</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-0.3558</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-0.3557</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.909</td>
<td>-0.3556</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.937</td>
<td>-0.3555</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.929</td>
<td>-0.3554</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.813</td>
<td>-0.3553</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.000</td>
<td>-0.3552</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-0.3551</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.000</td>
<td>-0.3550</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>0.000</td>
<td>-0.3549</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.000</td>
<td>-0.3548</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.000</td>
<td>-0.3547</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.000</td>
<td>-0.3546</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>0.000</td>
<td>-0.3545</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>0.000</td>
<td>-0.3544</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>0.000</td>
<td>-0.3543</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.000</td>
<td>-0.3542</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0.000</td>
<td>-0.3541</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>0.000</td>
<td>-0.3540</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>0.000</td>
<td>-0.3539</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>0.000</td>
<td>-0.3538</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.000</td>
<td>-0.3537</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>0.000</td>
<td>-0.3536</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>0.000</td>
<td>-0.3535</td>
<td>-0.022</td>
<td>0.0199</td>
<td>0.0314</td>
<td>-0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
.~

~

,

\

1

I

Table A-21.

00

FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES
P(THETAl-A(O)

ROW

NO.

I

2
3
4
5
6
'I'

~
IV

,

VI

6t. •

7
8
9
10
11
~2

,

13

.J.•. '

'';

h~

is

'f"
",.

16

17

18
19
20
21

..\.

22

23

&

24

25
26
27
28
29
30
3~

32

z

( IN)
54.051
48.789
41.907
36.019
30.118
26.166
22.196
18.211
15.214
12.215
9.009
ri.037
.1.629
1.413
.172
0.000
.324
1.156
3.007
4.886
7.782
12.404
17.679
23.652
29.638
36.633
48.631
60.627
72.863
75.593
96,576
106,386

.1281
.2640
.1316
.1083
-.1314
.1703
.2072
-.4616
.2692
-.7974
.1772
-1.0615
-1.2836
.2457
-1.3373
.4288
-1.4437
.4468
-1.8907
.8090
-2.1006 1.1932
-1.7958 1. 1411
-1 . -1055 1.2401
-.4567 1.4096
1.0349
.8838
1.3851 -.3968
.2314 -1.7001
-. 'j510 -1.4350
-.2599 -1.0382
-.4280 -.8477
-.5624 -.6215
-.5198 -.4570
-.4640 -.4653
-.3679 -.3442
-.3657 -.2766
-.3076 -.1908
-.3231 -.191 a
-.2846 -.1157
-.1849 -.OS73
-.1306 -.0104
.0402
.0415
.1402 -.0935

-.0134
.0054
-.0038
.0665
.0463
.0530
-.0064
.0104
-.0108
-.0481
.0574
.0290
.2394
.0424
-.1150
-.2134
-.3180
-.1490
-.1289
-.0774
-.1040
.0600
-.0906
-.0659
-.0067
-.0317
.0518
.1245
,0785
.0754
.0795
-.0118

.0535
.0139
.0334
.0308
.0046
-.0315
.0344
.0035
.0011
.0237
-.0505
-.0436
-.0573
-.0217
.0223
-.0146
-.0405
-.0252
-.0680
-.0224
-.0824
.0779

SIGMA( A(N)COS(NTHETAl

'TI;;O

-.0078
.0105
-.0825
-.1266
-.0564
.0044
.0519
.0154
-.0148
-.0718
-.0788
.0358

-.0172
-.0533
' .0005
.0790
.0014
.0223
-.0033
.0117
.0288
-.0269
.... 0345
.1039

-05
0 '...,
-

~

B(N)SIN(NTHETAl )
IRIG 13:33:6
TEST 273·10
CONDITION 116. 2.0g LEFT TURN (FLAPS UPI
CORRECTED AIRFLOWa 1562. LB/SEC
MACH NUMBER- 0.487
ALTITUDE- 8397. FT
B(3)
B( 1)
B(2)
B(4)
A(5)
A(S)
A( 1)
A(3)
A(4l
A(2)
A(O)
(PSI)
(PSI)
(PS I)
(PSI)
(PSI)
(PS! l
(PSI)
(PSI l
(PSI l
(PS I)
(PSI)
+

.0183
-.0380
.0245
.0091
.0208
-.0075
.0109
-.0190
.0253
.0273
-.0145
.0609

-.0577
-.0881
.0009
-.0616
-.0240
-.0861
-.1466
-.1260
-.1697
-.2491
-.4310
-.S473
-.8742
-.7652
-.4907
.1711
.7529
.6857
.5103
.4922
.4556
.1916
.1727
.1569
.1864
.1101
.1152
.2140
.2142
.2067
.1766
.1704

-.0171
.0237
-.0079
.0432
-.0289
-.0051
.0005
.0081
.0187
-.0991
.0730
.0164
.1055
.1282
.2557
.2858
.2275
.1001
.0988
.0909
.0787
-.1449
-.0515
-.0869
-.0190
-.1000
-.0489
.0527
.0154
.0324
.0339
-.0724

0 ......

::of!
,o"f,J

B(5)
(PS I l

C

:r;.

r:.::

~.J'1

~m

~~

.

~

.0094
.0960
.1507
.0543
.0790
-.0536
.0250
-.0286
.0043
-.0299
.0166
-.0774
-.0647
-.0147
.0109
-,0153
-,0162
.0357
,0270
.0369
.0360
-,0300

-.0347
.0155
-.0089
-.0026
.0144
-.0281
-.0655
-.0075
.0393
.0075
-.0508
-.0086

.0137
-.0479
-.1072
.0064
-.0399
-.0040
-.0831
-.0240
-.0290
.0311
.0328
.0832

H

•

<t

."t) :
~: ~

,."

~!! ~ ~~

.. '-

LO

'9

en
0

'"LO
'"

. ,J

J

\!I"

" ..-

~;:::;:==---

_":::"'-.::::!.~;:..-:::::..

e

..t=~"""...,

,..."r


<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-.9499</td>
<td>.2009</td>
<td>-.0089</td>
<td>.0167</td>
<td></td>
<td></td>
<td></td>
<td>-.0914</td>
<td>-.0072</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.769</td>
<td>-.10971</td>
<td>.1845</td>
<td>.0061</td>
<td>-.0082</td>
<td></td>
<td></td>
<td></td>
<td>-.0767</td>
<td>-.0112</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.2762</td>
<td>1.1802</td>
<td>-.0019</td>
<td>.0187</td>
<td></td>
<td></td>
<td></td>
<td>-.0353</td>
<td>.0058</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.5752</td>
<td>.1938</td>
<td>.0270</td>
<td>.0161</td>
<td></td>
<td></td>
<td></td>
<td>-.0802</td>
<td>.0098</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-1.8452</td>
<td>.2620</td>
<td>.0242</td>
<td>.0232</td>
<td></td>
<td></td>
<td></td>
<td>-.0557</td>
<td>.0073</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-2.1227</td>
<td>.2305</td>
<td>.0095</td>
<td>.0023</td>
<td></td>
<td></td>
<td></td>
<td>-.1029</td>
<td>-.0226</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-2.2970</td>
<td>.2815</td>
<td>-.0295</td>
<td>.0540</td>
<td></td>
<td></td>
<td></td>
<td>-.2186</td>
<td>.0540</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-2.3877</td>
<td>.4417</td>
<td>.0353</td>
<td>.0101</td>
<td></td>
<td></td>
<td></td>
<td>-.2351</td>
<td>-.0313</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-2.4740</td>
<td>.4980</td>
<td>-.0139</td>
<td>.0266</td>
<td></td>
<td></td>
<td></td>
<td>-.2357</td>
<td>-.0004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.0055</td>
<td>.6407</td>
<td>-.0044</td>
<td>.0322</td>
<td></td>
<td></td>
<td></td>
<td>-.3800</td>
<td>-.1120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-3.3737</td>
<td>1.3271</td>
<td>.0266</td>
<td>.0589</td>
<td>.0139</td>
<td>.0876</td>
<td>.0751</td>
<td>-.7391</td>
<td>.0709</td>
<td>.0517</td>
<td>.0150</td>
<td>.0724</td>
</tr>
<tr>
<td>12</td>
<td>6.090</td>
<td>-3.2616</td>
<td>1.2591</td>
<td>.0868</td>
<td>.0066</td>
<td>.0390</td>
<td>.0319</td>
<td>.0118</td>
<td>-.8404</td>
<td>.0467</td>
<td>.0908</td>
<td>.0083</td>
<td>.0469</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-3.5811</td>
<td>1.7594</td>
<td>.5596</td>
<td>-.2120</td>
<td>-.1460</td>
<td>-.0575</td>
<td>.1209</td>
<td>1.6501</td>
<td>.2929</td>
<td>.3379</td>
<td>.0424</td>
<td>.2434</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-3.5744</td>
<td>2.4727</td>
<td>.2308</td>
<td>.0107</td>
<td>-.2344</td>
<td>.1569</td>
<td>.0073</td>
<td>1.8790</td>
<td>.4276</td>
<td>.1355</td>
<td>.0209</td>
<td>.0992</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>-2.3305</td>
<td>2.5667</td>
<td>-.1501</td>
<td>-.0112</td>
<td>-.0807</td>
<td>-.1509</td>
<td>.0823</td>
<td>1.6187</td>
<td>.0955</td>
<td>.0242</td>
<td>.0648</td>
<td>.0700</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>1.0625</td>
<td>1.6854</td>
<td>.0412</td>
<td>-.0776</td>
<td>.0346</td>
<td>.0561</td>
<td>-.0507</td>
<td>-.1847</td>
<td>.3868</td>
<td>.1195</td>
<td>-.0755</td>
<td>.0423</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>.0522</td>
<td>.2474</td>
<td>.0615</td>
<td>-.0162</td>
<td>-.1126</td>
<td>-.0211</td>
<td>.0571</td>
<td>-.2192</td>
<td>.2568</td>
<td>.0439</td>
<td>-.0049</td>
<td>.0406</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>.2109</td>
<td>1.1608</td>
<td>.0172</td>
<td>-.0146</td>
<td>.0212</td>
<td>.0027</td>
<td>.0034</td>
<td>.0493</td>
<td>.1584</td>
<td>.0174</td>
<td>.0115</td>
<td>.0170</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>.2008</td>
<td>.3100</td>
<td>-.0277</td>
<td>.0009</td>
<td>.0210</td>
<td>.0245</td>
<td>.1419</td>
<td>.0751</td>
<td>.0071</td>
<td>.0007</td>
<td>.0082</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>4.866</td>
<td>.1311</td>
<td>.3711</td>
<td>-.0115</td>
<td>.0059</td>
<td>-.0020</td>
<td>.0305</td>
<td>.0128</td>
<td>.1516</td>
<td>.0147</td>
<td>.0304</td>
<td>.0082</td>
<td>.0216</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>.0572</td>
<td>.2791</td>
<td>-.0068</td>
<td>.0073</td>
<td>.0068</td>
<td>.0089</td>
<td>.0086</td>
<td>.1791</td>
<td>.0029</td>
<td>-.0152</td>
<td>.0005</td>
<td>.0353</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-.0267</td>
<td>.2338</td>
<td>-.0026</td>
<td>.0085</td>
<td>-.0145</td>
<td>.0322</td>
<td>-.0007</td>
<td>.1381</td>
<td>.0554</td>
<td>-.0089</td>
<td>-.0168</td>
<td>.0193</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.0521</td>
<td>.2084</td>
<td>-0.0074</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-.0564</td>
<td>.1943</td>
<td>-.0099</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.0690</td>
<td>.1714</td>
<td>.0277</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.0740</td>
<td>-.1378</td>
<td>-.0013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-.0984</td>
<td>-.1095</td>
<td>-.0386</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.0929</td>
<td>-.0384</td>
<td>.0429</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>-.0544</td>
<td>-.0700</td>
<td>-.0432</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.593</td>
<td>-.0604</td>
<td>-.0253</td>
<td>.0410</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>-.0267</td>
<td>.0061</td>
<td>.0412</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>-.0381</td>
<td>-.0232</td>
<td>.0245</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-23.

<table>
<thead>
<tr>
<th>ROW</th>
<th>Z</th>
<th>A(0)</th>
<th>A(1)</th>
<th>A(2)</th>
<th>A(3)</th>
<th>A(4)</th>
<th>A(5)</th>
<th>A(6)</th>
<th>B(1)</th>
<th>B(2)</th>
<th>B(3)</th>
<th>B(4)</th>
<th>B(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>1.0189</td>
<td>0.0574</td>
<td>-0.0143</td>
<td>-0.0081</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>0.9030</td>
<td>0.4060</td>
<td>-0.0197</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>0.8245</td>
<td>0.0814</td>
<td>-0.0291</td>
<td>-0.0157</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>0.6528</td>
<td>0.0963</td>
<td>-0.0222</td>
<td>-0.0115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>0.4968</td>
<td>0.1745</td>
<td>-0.0278</td>
<td>-0.0024</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>0.3763</td>
<td>0.1842</td>
<td>-0.0064</td>
<td>-0.0082</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>0.2945</td>
<td>0.2578</td>
<td>0.0171</td>
<td>-0.0146</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>0.2881</td>
<td>0.3540</td>
<td>-0.0261</td>
<td>-0.0145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>0.2679</td>
<td>0.3611</td>
<td>-0.0114</td>
<td>-0.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>0.2287</td>
<td>0.6807</td>
<td>-0.0408</td>
<td>-0.0545</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>0.4118</td>
<td>0.3358</td>
<td>-0.0075</td>
<td>-0.0311</td>
<td>-0.0182</td>
<td>-0.0352</td>
<td>-0.0288</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>0.7111</td>
<td>0.8819</td>
<td>-0.0416</td>
<td>-0.0589</td>
<td>-0.0270</td>
<td>-0.0437</td>
<td>-0.0223</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>0.4775</td>
<td>0.9297</td>
<td>-0.0015</td>
<td>-0.0235</td>
<td>-0.0248</td>
<td>-0.0205</td>
<td>-0.0332</td>
<td>-0.1640</td>
<td>-0.0297</td>
<td>-0.0025</td>
<td>-0.0629</td>
<td>-0.0095</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>0.8816</td>
<td>0.9405</td>
<td>-0.0767</td>
<td>-0.0664</td>
<td>-0.0405</td>
<td>-0.0452</td>
<td>-0.0175</td>
<td>-0.2413</td>
<td>-0.0808</td>
<td>-0.0012</td>
<td>-0.0822</td>
<td>-0.0032</td>
</tr>
<tr>
<td>15</td>
<td>0.172</td>
<td>1.2911</td>
<td>0.0151</td>
<td>-0.2531</td>
<td>0.0187</td>
<td>0.0512</td>
<td>0.0486</td>
<td>0.0406</td>
<td>-1.3555</td>
<td>0.0813</td>
<td>-0.0054</td>
<td>-0.0794</td>
<td>-0.0632</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>0.5610</td>
<td>1.6444</td>
<td>-0.3972</td>
<td>0.0519</td>
<td>0.0768</td>
<td>0.0871</td>
<td>0.0392</td>
<td>3.4899</td>
<td>1.6622</td>
<td>-1.1235</td>
<td>-1.1148</td>
<td>-0.0870</td>
</tr>
<tr>
<td>17</td>
<td>0.324</td>
<td>1.5881</td>
<td>3.7798</td>
<td>-1.1986</td>
<td>0.2200</td>
<td>0.2124</td>
<td>0.1101</td>
<td>0.0218</td>
<td>0.4010</td>
<td>1.1992</td>
<td>-0.0988</td>
<td>-0.1468</td>
<td>-0.2950</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>4.1821</td>
<td>2.6135</td>
<td>-1.4874</td>
<td>0.3176</td>
<td>0.1795</td>
<td>0.1093</td>
<td>0.0532</td>
<td>0.5013</td>
<td>1.7111</td>
<td>0.0244</td>
<td>-0.0285</td>
<td>0.0050</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>6.8137</td>
<td>1.4123</td>
<td>-0.1617</td>
<td>0.0560</td>
<td>0.0914</td>
<td>0.0878</td>
<td>0.0101</td>
<td>0.3625</td>
<td>1.6564</td>
<td>0.0833</td>
<td>1.3090</td>
<td>0.0499</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-7.198</td>
<td>-9.921</td>
<td>-0.0263</td>
<td>-0.0917</td>
<td>-1.783</td>
<td>-1.380</td>
<td>0.0552</td>
<td>-0.2545</td>
<td>-0.0146</td>
<td>-0.1647</td>
<td>-0.0354</td>
<td>-0.0626</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>-6.209</td>
<td>-5.972</td>
<td>-0.0242</td>
<td>-0.1566</td>
<td>-1.967</td>
<td>-1.388</td>
<td>0.0333</td>
<td>1.673</td>
<td>-1.265</td>
<td>0.0172</td>
<td>-1.339</td>
<td>0.0141</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>-6.854</td>
<td>-5.815</td>
<td>0.0021</td>
<td>-0.1304</td>
<td>0.0438</td>
<td>0.0822</td>
<td>0.0583</td>
<td>-0.0307</td>
<td>-0.2138</td>
<td>-0.1435</td>
<td>-0.0090</td>
<td>-0.0747</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-5.516</td>
<td>-4.749</td>
<td>0.0417</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-4.077</td>
<td>-4.497</td>
<td>-0.0942</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.538</td>
<td>-3.594</td>
<td>-3.111</td>
<td>-0.0311</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>35.633</td>
<td>-2.931</td>
<td>-2.474</td>
<td>-0.0048</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>39.631</td>
<td>-2.288</td>
<td>-3.024</td>
<td>-0.0811</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-2.231</td>
<td>-1.065</td>
<td>-0.1645</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.863</td>
<td>-1.366</td>
<td>-0.513</td>
<td>0.1139</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>75.553</td>
<td>-0.682</td>
<td>0.030</td>
<td>0.1279</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>95.576</td>
<td>-0.737</td>
<td>-0.441</td>
<td>0.1215</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>108.366</td>
<td>0.2035</td>
<td>0.0374</td>
<td>0.1078</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A-24.

FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES

Pu(THETA) x A(O) + SIGMA( A(N)cos(NTHETA) + B(N)sin(NTHETA) )

CONDITION 121, 15g RIGHT TURN (FLAPS 30) TEST 273-15 IRIG 11:07:27.4

ALTITUDE= 8221. FT MACH NUMBER= 0.265 CORRECTED AIRFLOW= 1434. LB/SEC

<table>
<thead>
<tr>
<th>ROW</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-.6732</td>
<td>.1498</td>
<td>-.0138</td>
<td>-.0183</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.052</td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-.7798</td>
<td>.1657</td>
<td>-.0122</td>
<td>-.0023</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.027</td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-.9172</td>
<td>.1715</td>
<td>-.0252</td>
<td>-.0033</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0197</td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.1840</td>
<td>.1943</td>
<td>.0112</td>
<td>.0057</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.0228</td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-1.3924</td>
<td>2636</td>
<td>.0303</td>
<td>.0076</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.0075</td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-1.6032</td>
<td>2932</td>
<td>.0160</td>
<td>.0173</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0265</td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-1.7629</td>
<td>3668</td>
<td>.0093</td>
<td>.0219</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.0460</td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-1.8378</td>
<td>5273</td>
<td>-.0407</td>
<td>-.0031</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.0088</td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-1.8909</td>
<td>6131</td>
<td>.0243</td>
<td>.0036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.0028</td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-2.5918</td>
<td>1.4074</td>
<td>.0293</td>
<td>.0033</td>
<td>.0374</td>
<td>.0622</td>
<td>.0361</td>
<td>-.0105</td>
<td>.0388</td>
<td>.0606</td>
<td>.0556</td>
<td>-0.0001</td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-2.5741</td>
<td>1.5408</td>
<td>.0463</td>
<td>.0525</td>
<td>.0216</td>
<td>.0370</td>
<td>-.0111</td>
<td>-1.550</td>
<td>.0030</td>
<td>.0346</td>
<td>.0347</td>
<td>-0.0012</td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-2.6406</td>
<td>1.8284</td>
<td>.2496</td>
<td>.0088</td>
<td>-.1157</td>
<td>-.0440</td>
<td>.0973</td>
<td>-.2668</td>
<td>.0002</td>
<td>.1899</td>
<td>.0714</td>
<td>-1.905</td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-2.7513</td>
<td>2.7746</td>
<td>-.0998</td>
<td>.0750</td>
<td>.2075</td>
<td>.1373</td>
<td>-.0770</td>
<td>-.3283</td>
<td>.0394</td>
<td>-.0797</td>
<td>.0005</td>
<td>-0.0431</td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>-1.8514</td>
<td>2.7858</td>
<td>-.3798</td>
<td>-.1449</td>
<td>.0565</td>
<td>-.1185</td>
<td>.0618</td>
<td>-.3696</td>
<td>.0837</td>
<td>.0444</td>
<td>.0331</td>
<td>-0.0387</td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-8.6687</td>
<td>1.7891</td>
<td>.4421</td>
<td>.1134</td>
<td>-.0101</td>
<td>.0419</td>
<td>.0204</td>
<td>.2554</td>
<td>.0897</td>
<td>.0377</td>
<td>-0.0656</td>
<td>-0.0056</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>-.0375</td>
<td>.1373</td>
<td>-.3615</td>
<td>-.0979</td>
<td>-.0999</td>
<td>-.0236</td>
<td>-.0318</td>
<td>-.0385</td>
<td>.0594</td>
<td>-.0100</td>
<td>-.0394</td>
<td>.0486</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-.1743</td>
<td>-.3116</td>
<td>-.1799</td>
<td>.0664</td>
<td>.0055</td>
<td>.0283</td>
<td>-.0032</td>
<td>.0037</td>
<td>.0681</td>
<td>.0092</td>
<td>-.0237</td>
<td>.0205</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>-.2564</td>
<td>-.3128</td>
<td>-.0391</td>
<td>.0195</td>
<td>-.0765</td>
<td>-.1310</td>
<td>-.0366</td>
<td>.0644</td>
<td>.0972</td>
<td>.0925</td>
<td>.0949</td>
<td>.0567</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>-.2585</td>
<td>-.2696</td>
<td>-.0120</td>
<td>.0865</td>
<td>-.1233</td>
<td>-.1293</td>
<td>-.0438</td>
<td>-.0736</td>
<td>-.0484</td>
<td>-.0862</td>
<td>-.0204</td>
<td>.0171</td>
</tr>
<tr>
<td>21</td>
<td>7.792</td>
<td>-.2090</td>
<td>-.1840</td>
<td>-.0207</td>
<td>-.1320</td>
<td>-.1567</td>
<td>-.1322</td>
<td>-.0603</td>
<td>.1074</td>
<td>-.2077</td>
<td>-.1956</td>
<td>-.0334</td>
<td>.0151</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0016</td>
<td>-.2832</td>
<td>.0374</td>
<td>-.0420</td>
<td>-.0035</td>
<td>-.0304</td>
<td>-.0189</td>
<td>.0190</td>
<td>-.0633</td>
<td>-.0455</td>
<td>-.0359</td>
<td>-.0042</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.0482</td>
<td>-.2636</td>
<td>.0404</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>-.0133</td>
<td>-.2406</td>
<td>.0396</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.0305</td>
<td>-.2103</td>
<td>.0755</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.0337</td>
<td>-.1704</td>
<td>.0662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>48.631</td>
<td>-.0501</td>
<td>-.1357</td>
<td>.0918</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>60.627</td>
<td>-.0445</td>
<td>-.1002</td>
<td>.1110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>72.663</td>
<td>-.0192</td>
<td>-.0964</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>79.659</td>
<td>-.0509</td>
<td>-.1103</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>96.576</td>
<td>.0195</td>
<td>.0460</td>
<td>.1037</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>106.386</td>
<td>.0270</td>
<td>-.0411</td>
<td>.1157</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A-25.

**FOURIER - BESSEL COEFFICIENTS FOR ENGINE NUMBER THREE PRESSURES**

\[
P(\theta) = a(0) + \sigma(\alpha(n)\cos(n\theta) + b(n)\sin(n\theta))
\]

**CONDITION 123, AIRPLANE STALL**

**ALTITUDE = 9000. FT**

**MACH NUMBER = 0.207**

**TEST 273-10 IRIG 13:26:16.8**

**CORRECTED AIRFLOW = 1551. LB/SEC**

<table>
<thead>
<tr>
<th>ROW NO.</th>
<th>Z (IN)</th>
<th>A(0) (PSI)</th>
<th>A(1) (PSI)</th>
<th>A(2) (PSI)</th>
<th>A(3) (PSI)</th>
<th>A(4) (PSI)</th>
<th>A(5) (PSI)</th>
<th>A(6) (PSI)</th>
<th>B(1) (PSI)</th>
<th>B(2) (PSI)</th>
<th>B(3) (PSI)</th>
<th>B(4) (PSI)</th>
<th>B(5) (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.051</td>
<td>-1.1657</td>
<td>.2974</td>
<td>-.0420</td>
<td>.0230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>48.789</td>
<td>-1.2851</td>
<td>.2406</td>
<td>-.0307</td>
<td>.0046</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>41.907</td>
<td>-1.4541</td>
<td>.2422</td>
<td>-.0234</td>
<td>.0035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>36.019</td>
<td>-1.7063</td>
<td>.2241</td>
<td>-.0220</td>
<td>.0158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.118</td>
<td>-1.9749</td>
<td>.3137</td>
<td>-.0244</td>
<td>.0158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>26.166</td>
<td>-2.2512</td>
<td>.2665</td>
<td>.0079</td>
<td>-.0059</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>22.196</td>
<td>-2.4336</td>
<td>.3446</td>
<td>.0114</td>
<td>.0119</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>18.211</td>
<td>-2.5427</td>
<td>.5000</td>
<td>-.0067</td>
<td>.0085</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15.214</td>
<td>-2.6339</td>
<td>.3854</td>
<td>.0341</td>
<td>-.0201</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12.215</td>
<td>-3.1906</td>
<td>.3637</td>
<td>-.0541</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.009</td>
<td>-3.9556</td>
<td>1.4117</td>
<td>-.0893</td>
<td>.0605</td>
<td>-.1062</td>
<td>.1130</td>
<td>-.2487</td>
<td>-.0483</td>
<td>.1296</td>
<td>-.0693</td>
<td>-.0169</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.037</td>
<td>-3.6103</td>
<td>1.7308</td>
<td>.0802</td>
<td>-.0565</td>
<td>-.0455</td>
<td>.0066</td>
<td>-.0406</td>
<td>.0765</td>
<td>-.1304</td>
<td>-.2473</td>
<td>-.1731</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>3.629</td>
<td>-4.4217</td>
<td>2.9746</td>
<td>.0351</td>
<td>-.2304</td>
<td>.0176</td>
<td>.0660</td>
<td>-.0458</td>
<td>.4339</td>
<td>-.1482</td>
<td>-.0868</td>
<td>-.1093</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1.413</td>
<td>-4.5505</td>
<td>3.6060</td>
<td>.1008</td>
<td>-.1533</td>
<td>.0435</td>
<td>.0110</td>
<td>-.0761</td>
<td>.2162</td>
<td>-.2239</td>
<td>-.1410</td>
<td>-.0331</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>.172</td>
<td>-3.4679</td>
<td>3.7221</td>
<td>-.1600</td>
<td>-.1958</td>
<td>-.1498</td>
<td>.0725</td>
<td>-.8680</td>
<td>.1864</td>
<td>-.1399</td>
<td>-.0684</td>
<td>-.0092</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.000</td>
<td>-2.0984</td>
<td>2.6943</td>
<td>-.1430</td>
<td>-.1516</td>
<td>-.0877</td>
<td>.1195</td>
<td>-.0613</td>
<td>.6834</td>
<td>.1163</td>
<td>-.1384</td>
<td>-.0723</td>
<td>-.0031</td>
</tr>
<tr>
<td>17</td>
<td>.324</td>
<td>-5.9555</td>
<td>1.0157</td>
<td>-.2368</td>
<td>-.0547</td>
<td>-.0402</td>
<td>.0123</td>
<td>-.2228</td>
<td>.3337</td>
<td>.0588</td>
<td>.1155</td>
<td>-.0409</td>
<td>-.0323</td>
</tr>
<tr>
<td>18</td>
<td>1.156</td>
<td>-.0488</td>
<td>.1940</td>
<td>-.0660</td>
<td>-.0555</td>
<td>-.0052</td>
<td>.0205</td>
<td>-.0045</td>
<td>-.0615</td>
<td>.0269</td>
<td>-.0257</td>
<td>-.0064</td>
<td>-.0189</td>
</tr>
<tr>
<td>19</td>
<td>3.007</td>
<td>1.1214</td>
<td>1.4713</td>
<td>-.0427</td>
<td>-.0279</td>
<td>.0140</td>
<td>.0127</td>
<td>-.0053</td>
<td>-.0579</td>
<td>.0359</td>
<td>-.0303</td>
<td>-.0018</td>
<td>-.0082</td>
</tr>
<tr>
<td>20</td>
<td>4.886</td>
<td>1.1013</td>
<td>.0110</td>
<td>.0569</td>
<td>.0173</td>
<td>.0110</td>
<td>.0247</td>
<td>-.0074</td>
<td>.0169</td>
<td>.0076</td>
<td>-.0474</td>
<td>-.0095</td>
<td>.0281</td>
</tr>
<tr>
<td>21</td>
<td>7.782</td>
<td>.0936</td>
<td>.2154</td>
<td>.0072</td>
<td>-.0008</td>
<td>.0155</td>
<td>.0002</td>
<td>-.0033</td>
<td>.0244</td>
<td>.0119</td>
<td>-.0241</td>
<td>.0034</td>
<td>.0246</td>
</tr>
<tr>
<td>22</td>
<td>12.404</td>
<td>.0177</td>
<td>.1910</td>
<td>.0367</td>
<td>-.0256</td>
<td>.0076</td>
<td>.0305</td>
<td>-.0001</td>
<td>.0183</td>
<td>.0532</td>
<td>-.0299</td>
<td>.0069</td>
<td>-.0023</td>
</tr>
<tr>
<td>23</td>
<td>17.679</td>
<td>-.0027</td>
<td>.1839</td>
<td>.0256</td>
<td>.0516</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>23.652</td>
<td>.0021</td>
<td>.1475</td>
<td>.0516</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>29.638</td>
<td>-.0097</td>
<td>.1537</td>
<td>.0866</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>36.633</td>
<td>-.0239</td>
<td>.1245</td>
<td>.0826</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>43.631</td>
<td>-.0489</td>
<td>.1088</td>
<td>.1024</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>50.627</td>
<td>-.0416</td>
<td>.0903</td>
<td>.1058</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>57.623</td>
<td>-.0311</td>
<td>.0757</td>
<td>.0579</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>64.593</td>
<td>-.0312</td>
<td>.0690</td>
<td>.1009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>71.567</td>
<td>-.0238</td>
<td>.0578</td>
<td>.0929</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>78.536</td>
<td>-.0262</td>
<td>.0250</td>
<td>.1190</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure A-1. Pressure Data Coordinate Conventions
Figure A.2. Engine No. 3 Inlet Pressures, Condition 101, 612K GW Takeoff (Flaps 20)
Figure A-3. Engine No. 3 Cowl Pressures, Condition 101, 612K GW Takeoff (Flaps 20)
Figure A-4. Engine No. 3 Inlet Pressures, Condition 101, 538K GW Takeoff (Flaps 10)
Figure A-5. Engine No. 3 Cowl Pressures, Condition 101, 538K GW Takeoff (Flaps 10)
Figure A-6. Engine No. 3 Inlet Pressures, Condition 101, 647K GW Takeoff (Flaps 10)
Figure A-7. Engine No. 3 Cowl Pressures, Condition 101, 647K GW Takeoff (Flaps 10)
Figure A-8. Engine No. 3 Inlet Pressures, Condition 118, 780K GW Simulated Takeoff (Flaps 10)
Figure A-9. Engine No. 3 Cowl Pressures, Condition 118, 780K GW Simulated Takeoff (Flaps 10)
Figure A-10. Engine No. 3 Inlet Pressures, Condition 102, Low Climb
Figure A-11. Engine No. 3 Cowl Pressures, Condition 102, Low Climb
Figure A-12. Engine No. 3 Inlet Pressures, Condition 103, Mid Climb
Figure A-13. Engine No. 3 Cowl Pressures, Condition 103, Mid Climb
Figure A-14. Engine No. 3 Inlet Pressures, Condition 104, High M Cruise
Figure A-15. Engine No. 3 Cowl Pressures, Condition 104, High M Cruise
Figure A-16. Engine No. 3 Inlet Pressures, Condition 105, Low M Cruise
Figure A-17. Engine No. 3 Cowl Pressures, Condition 105, Low M Cruise
Figure A-18. Engine No. 3 Inlet Pressures, Condition 106, Maximum $M$
Figure A-19. Engine No. 3 Cowl Pressures, Condition 106, Maximum M
Figure A-20. Engine No. 3 Inlet Pressures, Condition 107, Inflight Relight
Figure A-21. Engine No. 3 Cowl Pressures, Condition 107, Inflight Relight
Figure A-22. Engine No. 3 Inlet Pressures, Condition 108, Maximum $q$
Figure A-23. Engine No. 3 Cowl Pressures, Condition 108, Maximum q
Figure A-24. Engine No. 3 Inlet Pressures, Condition 109, Stall Warning (Flaps Up)
Figure A-25. Engine No. 3 Cowl Pressures, Condition 109, Stall Warning (Flaps Up)
Figure A-26. Engine No. 3 Inlet Pressures, Condition 110, Stall Warning (Flaps 10)
Figure A-27. Engine No. 3 Cowl Pressures, Condition 110, Stall Warning (Flaps 10)
Figure A-28. Engine No. 3 Inlet Pressures, Condition 111, Stall Warning (Flaps 30)
Figure A-29. Engine No. 3 Cowl Pressures, Condition 111, Stall Warning (Flaps 30)
Figure A-30. Engine No. 3 Inlet Pressures, Condition 112, Idle Descent
Figure A-31. Engine No. 3 Cowl Pressures, Condition 112, Idle Descent
Figure A-32. Engine No. 3 Inlet Pressures, Condition 113, Approach
Figure A-33. Engine No. 3 Cowl Pressures, Condition 113, Approach
Figure A-34. Engine No. 3 Inlet Pressures, Condition 114, Touch and Go
Figure A-35. Engine No. 3 Cowl Pressures, Condition 114, Touch and Go
Figure A-36. Engine No. 3 Inlet Pressures, Condition 115, Thrust Reverse
Figure A-37. Engine No. 3 Cowl Pressures, Condition 115, Thrust Reverse
Figure A-38. Engine No. 3 Inlet Pressures, Condition 116, 2.0g Left Turn (Flaps Up)
Figure A-39. Engine No. 3 Cowl Pressures, Condition 116, 2.0g Left Turn (Flaps Up)
Figure A-40. Engine No. 3 Inlet Pressures, Condition 117, 1.6g Left Turn (Flaps 30)
Figure A-41. Engine No. 3 Cowl Pressures, Condition 117, 1.6g Left Turn (Flaps 30)
Figure A-42. Engine No. 3 Inlet Pressures, Condition 120, 2.0g Right Turn (Flaps Up)
Figure A-43. Engine No. 3 Cowl Pressures, Condition 120, 2.0g Right Turn (Flaps Up)
Figure A-44. Engine No. 3 Inlet Pressures, Condition 121, 1.6g Right Turn (Flaps 30)
Figure A-45. Engine No. 3 Cowl Pressures, Condition 121, 1.6g Right Turn (Flaps 30)
Figure A-46. Engine No. 3 Inlet Pressures, Condition 123, Airplane Stall
Figure A-47. Engine No. 3 Cowl Pressures, Condition 123, Airplane Stall
Figure A-48. Engine No. 4 Inlet Pressures, Condition 101, 612K Gross Weight Takeoff
Figure A-49. Engine No. 4 Inlet Pressures, Condition 101, 538K Gross Weight Takeoff
Figure A-50. Engine No. 4 Inlet Pressures, Condition 101, 647K Gross Weight Takeoff
Figure A-51. Engine No. 4 Inlet Pressures, Condition 118, 780K Gross Weight Simulated Takeoff
Figure A-52. Engine No. 4 Inlet Pressures, Condition 102, Low Climb
Figure A-53. Engine No. 4 Inlet Pressures, Condition 103, Mid Climb
Figure A-54. Engine No. 4 Inlet Pressures, Condition 104, High M Cruise
Figure A-55. Engine No. 4 Inlet Pressures, Condition 105, Low M Cruise
Figure A-56. Engine No. 4 Inlet Pressures, Condition 106, Maximum M
Figure A-57. Engine No. 4 Inlet Pressures, Condition 107, Inflight Relight
Figure A-58. Engine No. 4 Inlet Pressures, Condition 108, Maximum q
Figure A-59. Engine No. 4 Inlet Pressures, Condition 109, Stall Warning (Flaps Up)
Figure A-60. Engine No. 4 Inlet Pressures, Condition 110, Stall Warning (Flaps 10)
Figure A-61. Engine No. 4 Inlet Pressures, Condition 111, Stall Warning (Flaps 30)
Figure A-62. Engine No. 4 Inlet Pressures, Condition 112, Idle Descent
Figure A-63. Engine No. 4 Inlet Pressures, Condition 113, Approach
Figure A-64. Engine No. 4 Inlet Pressures, Condition 114, Touch and Go
Figure A-65. Engine No. 4 Inlet Pressures, Condition 115, Thrust Reverse
Figure A-66. Engine No. 4 Inlet Pressures, Condition 116, 2.0g Left Turn (Flaps Up)
Figure A-67. Engine No. 4 Inlet Pressures, Condition 117, 1.6g Left Turn (Flaps 30)
Figure A-68. Engine No. 4 Inlet Pressures, Condition 120, 2.0g Right Turn (Flaps Up)
Figure A-69. Engine No. 4 Inlet Pressures, Condition 121, 1.6g Right Turn (Flaps 30)
Figure A-70. Engine No. 4 Inlet Pressures, Condition 123, Airplane Stall
Figure A-71. Airplane Center-of-Gravity Accelerations, Mild Gust
Figure A-72. Engine No. 3 Wing/Strut Accelerations, Mild Gust
Figure A-73. Engine No. 4 Wing/Strut Accelerations, Mild Gust
Figure A-74. Engine Angular Rates, Mild Gust
Figure A-75. Engine No. 3 Accelerations, Mild Gust
Figure A-16. Engine No. 4 Accelerations, Mild Gust
Figure A-77. Airplane Center-of-Gravity Normal Acceleration, Hard Landing
Figure A-78. Airplane Center-of-Gravity Angular Rates, Hard Landing
Figure A-79. Engine No. 3 Wing/Strut Accelerations, Hard Landing
Figure A-80. Engine No. 4 Wing/Strut Accelerations, Hard Landing
Figure A-81. Engine Angular Rates, Hard Landing
Figure A-82. Engine No. 3 Accelerations, Hard Landing

A-111
Figure A-83. Engine No. 4 Accelerations, Hard Landing
Figure A-93. Engine No. 4 Accelerations, Hard Landing (Concluded)
<table>
<thead>
<tr>
<th>Test</th>
<th>Condition</th>
<th>Mach</th>
<th>Pressure altitude, m (ft)</th>
<th>Gross weight, kg (lbm)</th>
<th>Dynamic pressure, kPa (lb/in²)</th>
<th>Calibrated airspeed, km/h (kn)</th>
<th>Alpha, deg</th>
<th>Free-stream total pressure, kPa (lb/in²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>273-09</td>
<td>0.001</td>
<td>0.866</td>
<td>12 270 (40 256)</td>
<td>206 025 (454 207)</td>
<td>9.722 (1.410)</td>
<td>487.4 (263.2)</td>
<td>1.6</td>
<td>30.2051 (4.3809)</td>
</tr>
<tr>
<td></td>
<td>0.002.1</td>
<td>0.767</td>
<td>12 478 (40 938)</td>
<td>199 759 (440 393)</td>
<td>7.384 (1.071)</td>
<td>418.7 (226.1)</td>
<td>3.3</td>
<td>26.4583 (3.8375)</td>
</tr>
<tr>
<td></td>
<td>0.003</td>
<td>0.798</td>
<td>12 353 (40 528)</td>
<td>204 452 (450 740)</td>
<td>8.156 (1.183)</td>
<td>442.1 (238.7)</td>
<td>2.8</td>
<td>27.8258 (4.0358)</td>
</tr>
<tr>
<td>273-12</td>
<td>0.001.1</td>
<td>0.864</td>
<td>11 909 (39 073)</td>
<td>219 686 (484 325)</td>
<td>10.239 (1.485)</td>
<td>499.7 (269.8)</td>
<td>1.9</td>
<td>31.9047 (4.6274)</td>
</tr>
<tr>
<td></td>
<td>0.002</td>
<td>0.762</td>
<td>12 029 (39 466)</td>
<td>216 518 (477 337)</td>
<td>7.826 (1.135)</td>
<td>430.4 (232.4)</td>
<td>3.6</td>
<td>28.2684 (4.1000)</td>
</tr>
<tr>
<td></td>
<td>0.003</td>
<td>0.800</td>
<td>12 002 (39 376)</td>
<td>218 881 (482 550)</td>
<td>8.660 (1.256)</td>
<td>455.2 (245.8)</td>
<td>2.9</td>
<td>29.4584 (4.2726)</td>
</tr>
<tr>
<td>273-15</td>
<td>0.001</td>
<td>0.855</td>
<td>11 591 (38 028)</td>
<td>216 946 (478 283)</td>
<td>10.556 (1.531)</td>
<td>506.2 (273.3)</td>
<td>1.7</td>
<td>33.2491 (4.8224)</td>
</tr>
<tr>
<td></td>
<td>0.002</td>
<td>0.776</td>
<td>11 596 (38 045)</td>
<td>218 678 (482 102)</td>
<td>8.694 (1.261)</td>
<td>454.1 (245.2)</td>
<td>3.0</td>
<td>30.6829 (4.4502)</td>
</tr>
<tr>
<td></td>
<td>0.003</td>
<td>0.802</td>
<td>11 601 (38 060)</td>
<td>218 085 (480 796)</td>
<td>9.267 (1.344)</td>
<td>470.6 (254.1)</td>
<td>2.6</td>
<td>31.4448 (4.5607)</td>
</tr>
<tr>
<td></td>
<td>0.004</td>
<td>0.906</td>
<td>11 432 (37 505)</td>
<td>216 125 (476 473)</td>
<td>12.162 (1.764)</td>
<td>547.1 (295.4)</td>
<td>1.0</td>
<td>36.0100 (5.2228)</td>
</tr>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>------------</td>
<td>---------</td>
<td>------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>-0.032922</td>
<td>0.881700</td>
<td>1.0</td>
<td>-0.065627</td>
<td>0.898070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.0542130</td>
<td>1.151200</td>
<td>2.0</td>
<td>0.095627</td>
<td>0.906140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>0.0763680</td>
<td>1.247900</td>
<td>3.0</td>
<td>0.058936</td>
<td>0.894720</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>0.0883810</td>
<td>1.312300</td>
<td>4.0</td>
<td>0.031856</td>
<td>0.881170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>0.0923170</td>
<td>1.395000</td>
<td>5.0</td>
<td>0.035185</td>
<td>0.884830</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>0.0969550</td>
<td>1.467100</td>
<td>6.0</td>
<td>0.046008</td>
<td>0.882850</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>0.1016860</td>
<td>1.508600</td>
<td>7.0</td>
<td>0.093059</td>
<td>0.911870</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>0.1062600</td>
<td>1.548300</td>
<td>8.0</td>
<td>0.035610</td>
<td>0.683990</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>0.1110960</td>
<td>1.570800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WBL 470**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.0390650</td>
<td>1.330300</td>
<td>1.0</td>
<td>-0.039081</td>
<td>0.906840</td>
</tr>
<tr>
<td>2.0</td>
<td>0.0472790</td>
<td>1.153000</td>
<td>2.0</td>
<td>0.081600</td>
<td>0.725860</td>
</tr>
<tr>
<td>3.0</td>
<td>0.0576850</td>
<td>1.371400</td>
<td>3.0</td>
<td>0.032210</td>
<td>0.702210</td>
</tr>
<tr>
<td>4.0</td>
<td>0.0607300</td>
<td>1.382000</td>
<td>4.0</td>
<td>0.019008</td>
<td>0.855840</td>
</tr>
<tr>
<td>5.0</td>
<td>0.0656090</td>
<td>1.393000</td>
<td>5.0</td>
<td>0.054095</td>
<td>0.892250</td>
</tr>
<tr>
<td>6.0</td>
<td>0.0707300</td>
<td>1.473000</td>
<td>6.0</td>
<td>0.056514</td>
<td>0.837240</td>
</tr>
<tr>
<td>7.0</td>
<td>0.0759200</td>
<td>1.277800</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WBL 510**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.118570</td>
<td>0.924740</td>
<td>1.0</td>
<td>-0.060707</td>
<td>0.895600</td>
</tr>
<tr>
<td>2.0</td>
<td>0.1342000</td>
<td>1.104500</td>
<td>2.0</td>
<td>0.065665</td>
<td>0.899800</td>
</tr>
<tr>
<td>3.0</td>
<td>0.1484700</td>
<td>1.118500</td>
<td>3.0</td>
<td>0.079551</td>
<td>0.905070</td>
</tr>
<tr>
<td>4.0</td>
<td>0.1643450</td>
<td>1.120900</td>
<td>4.0</td>
<td>0.096983</td>
<td>0.913840</td>
</tr>
<tr>
<td>5.0</td>
<td>0.1716800</td>
<td>1.256100</td>
<td>5.0</td>
<td>0.064056</td>
<td>0.892250</td>
</tr>
<tr>
<td>6.0</td>
<td>0.1769300</td>
<td>1.256200</td>
<td>6.0</td>
<td>0.019008</td>
<td>0.855840</td>
</tr>
<tr>
<td>7.0</td>
<td>0.1889000</td>
<td>1.238700</td>
<td>7.0</td>
<td>0.003575</td>
<td>0.863520</td>
</tr>
<tr>
<td>8.0</td>
<td>0.2036550</td>
<td>1.129300</td>
<td>8.0</td>
<td>0.021262</td>
<td>0.854720</td>
</tr>
<tr>
<td>9.0</td>
<td>0.2137000</td>
<td>1.174000</td>
<td>9.0</td>
<td>0.056514</td>
<td>0.837240</td>
</tr>
<tr>
<td>10.0</td>
<td>0.2184700</td>
<td>1.181900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.0</td>
<td>0.2245000</td>
<td>1.186400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td>0.2315250</td>
<td>1.238700</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.0</td>
<td>0.2385100</td>
<td>1.193600</td>
<td>13.0</td>
<td>0.125940</td>
<td>0.802910</td>
</tr>
<tr>
<td>14.0</td>
<td>0.2451400</td>
<td>1.236400</td>
<td>14.0</td>
<td>0.056969</td>
<td>0.832560</td>
</tr>
<tr>
<td>15.0</td>
<td>0.2511400</td>
<td>1.245600</td>
<td>15.0</td>
<td>0.057667</td>
<td>0.831270</td>
</tr>
<tr>
<td>16.0</td>
<td>0.2571200</td>
<td>1.257600</td>
<td>16.0</td>
<td>0.057611</td>
<td>0.894050</td>
</tr>
<tr>
<td>17.0</td>
<td>0.2631000</td>
<td>1.284300</td>
<td>17.0</td>
<td>0.050702</td>
<td>0.890590</td>
</tr>
<tr>
<td>18.0</td>
<td>0.2685600</td>
<td>1.307100</td>
<td>18.0</td>
<td>0.050702</td>
<td>0.890590</td>
</tr>
<tr>
<td>19.0</td>
<td>0.2739600</td>
<td>1.353300</td>
<td>19.0</td>
<td>0.050702</td>
<td>0.890590</td>
</tr>
<tr>
<td>20.0</td>
<td>0.2785100</td>
<td>1.381500</td>
<td>20.0</td>
<td>0.050702</td>
<td>0.890590</td>
</tr>
</tbody>
</table>

**Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001**

2
### Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)

#### ENGINE 3WL 180

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>X/C - %</td>
</tr>
<tr>
<td>1.7</td>
<td></td>
<td>78.7</td>
</tr>
<tr>
<td>3.3</td>
<td></td>
<td>65.1</td>
</tr>
<tr>
<td>5.1</td>
<td></td>
<td>47.6</td>
</tr>
<tr>
<td>7.5</td>
<td></td>
<td>34.9</td>
</tr>
<tr>
<td>10.0</td>
<td></td>
<td>29.6</td>
</tr>
<tr>
<td>12.8</td>
<td></td>
<td>26.1</td>
</tr>
<tr>
<td>16.0</td>
<td></td>
<td>21.4</td>
</tr>
<tr>
<td>21.4</td>
<td></td>
<td>16.0</td>
</tr>
<tr>
<td>26.1</td>
<td></td>
<td>12.8</td>
</tr>
<tr>
<td>29.6</td>
<td></td>
<td>10.0</td>
</tr>
<tr>
<td>47.6</td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>65.1</td>
<td></td>
<td>5.1</td>
</tr>
<tr>
<td>78.7</td>
<td></td>
<td>3.3</td>
</tr>
</tbody>
</table>

#### ENGINE 3WL 155

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>X/C - %</td>
</tr>
<tr>
<td>3.5</td>
<td></td>
<td>90.0</td>
</tr>
<tr>
<td>5.1</td>
<td></td>
<td>82.8</td>
</tr>
<tr>
<td>7.5</td>
<td></td>
<td>75.9</td>
</tr>
<tr>
<td>12.3</td>
<td></td>
<td>67.2</td>
</tr>
<tr>
<td>21.5</td>
<td></td>
<td>62.0</td>
</tr>
<tr>
<td>30.4</td>
<td></td>
<td>57.2</td>
</tr>
<tr>
<td>39.3</td>
<td></td>
<td>53.8</td>
</tr>
<tr>
<td>48.5</td>
<td>-0.189040</td>
<td>48.5</td>
</tr>
<tr>
<td>53.8</td>
<td>-0.190840</td>
<td>53.8</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.189040</td>
<td>39.3</td>
</tr>
<tr>
<td>62.0</td>
<td>-0.189040</td>
<td>30.4</td>
</tr>
<tr>
<td>67.2</td>
<td>-0.189040</td>
<td>21.5</td>
</tr>
<tr>
<td>75.9</td>
<td>-0.189040</td>
<td>12.3</td>
</tr>
<tr>
<td>82.8</td>
<td>-0.189040</td>
<td>7.5</td>
</tr>
<tr>
<td>90.0</td>
<td>-0.189040</td>
<td>5.1</td>
</tr>
</tbody>
</table>

#### ENGINE 3030 deg INLET RADIAL

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CF</td>
<td>X/C - %</td>
</tr>
<tr>
<td>7.7</td>
<td>0.249220</td>
<td>0.4</td>
</tr>
<tr>
<td>5.0</td>
<td>0.376180</td>
<td>1.1</td>
</tr>
<tr>
<td>3.3</td>
<td>0.532610</td>
<td>2.7</td>
</tr>
<tr>
<td>1.3</td>
<td>0.861860</td>
<td>5.8</td>
</tr>
<tr>
<td>0.2</td>
<td>1.161300</td>
<td>8.8</td>
</tr>
<tr>
<td>0.0</td>
<td>0.754790</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>57.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99.4</td>
</tr>
</tbody>
</table>

Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)
### ENGINE 3090 deg INLET RADIAL

<table>
<thead>
<tr>
<th>COND. 1.00.137.001</th>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X/C$</td>
<td>$CP$</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>7.7</td>
<td>0.213440</td>
<td>0.759690</td>
</tr>
<tr>
<td>5.0</td>
<td>0.307250</td>
<td>0.713170</td>
</tr>
<tr>
<td>3.3</td>
<td>0.518850</td>
<td>0.605710</td>
</tr>
<tr>
<td>1.3</td>
<td>0.708380</td>
<td>0.455900</td>
</tr>
<tr>
<td>0.0</td>
<td>0.852670</td>
<td>0.415850</td>
</tr>
</tbody>
</table>

### ENGINE 3150 deg INLET RADIAL

<table>
<thead>
<tr>
<th>COND. 1.00.137.001</th>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X/C$</td>
<td>$CP$</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>9.0</td>
<td>0.164500</td>
<td>0.783870</td>
</tr>
<tr>
<td>5.2</td>
<td>0.341270</td>
<td>0.696190</td>
</tr>
<tr>
<td>3.6</td>
<td>0.481250</td>
<td>0.625210</td>
</tr>
<tr>
<td>1.5</td>
<td>0.813750</td>
<td>0.440390</td>
</tr>
<tr>
<td>0.2</td>
<td>1.116300</td>
<td>0.199820</td>
</tr>
<tr>
<td>0.0</td>
<td>0.861890</td>
<td>0.409890</td>
</tr>
</tbody>
</table>

### ENGINE 3210 deg INLET RADIAL

<table>
<thead>
<tr>
<th>COND. 1.00.137.001</th>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X/C$</td>
<td>$CP$</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>8.2</td>
<td>0.146900</td>
<td>0.792810</td>
</tr>
<tr>
<td>5.2</td>
<td>0.369760</td>
<td>0.681890</td>
</tr>
<tr>
<td>3.6</td>
<td>0.558820</td>
<td>0.596840</td>
</tr>
<tr>
<td>1.5</td>
<td>0.836390</td>
<td>0.426230</td>
</tr>
<tr>
<td>0.3</td>
<td>1.158700</td>
<td>0.141660</td>
</tr>
<tr>
<td>0.0</td>
<td>0.885170</td>
<td>0.394530</td>
</tr>
</tbody>
</table>

Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)
Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)
**Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)**

### WBL 809

**CONDITION 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.291400</td>
<td>1.013700</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.579420</td>
<td>1.172900</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.740180</td>
<td>1.270900</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.829670</td>
<td>1.329600</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.031500</td>
<td>1.477100</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.151400</td>
<td>1.578300</td>
</tr>
<tr>
<td>22.5</td>
<td>***</td>
<td>1.342700</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.713030</td>
<td>1.253700</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.763110</td>
<td>1.285600</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.610780</td>
<td>1.191300</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.690310</td>
<td>1.238900</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.311320</td>
<td>1.024200</td>
</tr>
<tr>
<td>52.4</td>
<td>***</td>
<td>1.035400</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.332350</td>
<td>1.043600</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.347700</td>
<td>1.022900</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.312140</td>
<td>1.024700</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.308720</td>
<td>1.022900</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.234310</td>
<td>0.983930</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.183300</td>
<td>0.947440</td>
</tr>
</tbody>
</table>

**LOWER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.0</td>
<td>0.078344</td>
<td>0.826430</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.004400</td>
<td>0.867480</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.053951</td>
<td>0.892220</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.062316</td>
<td>0.895400</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.060060</td>
<td>0.895400</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.128090</td>
<td>0.929550</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.376970</td>
<td>1.059300</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.387660</td>
<td>1.065700</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.277010</td>
<td>1.006200</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.099552</td>
<td>0.915130</td>
</tr>
<tr>
<td>10.0</td>
<td>0.112030</td>
<td>0.897800</td>
</tr>
<tr>
<td>5.0</td>
<td>0.389780</td>
<td>0.671820</td>
</tr>
<tr>
<td>3.0</td>
<td>0.431900</td>
<td>0.659700</td>
</tr>
<tr>
<td>2.0</td>
<td>0.408600</td>
<td>0.652300</td>
</tr>
<tr>
<td>1.0</td>
<td>0.332940</td>
<td>0.700340</td>
</tr>
</tbody>
</table>

### WBL 834

**CONDITION 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.0</td>
<td>-0.960380</td>
<td>1.422300</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.808740</td>
<td>1.315600</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.388120</td>
<td>1.054500</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.401490</td>
<td>1.072600</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.346510</td>
<td>1.039700</td>
</tr>
</tbody>
</table>

### WBL 870

**CONDITION 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.099081</td>
<td>0.914800</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.218770</td>
<td>0.975900</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.715060</td>
<td>1.255000</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.841620</td>
<td>1.337700</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.899720</td>
<td>1.378200</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.818960</td>
<td>1.322400</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.869220</td>
<td>1.356000</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.812330</td>
<td>1.318000</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.719650</td>
<td>1.257900</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.408640</td>
<td>1.076500</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.332960</td>
<td>1.035700</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.405270</td>
<td>1.074600</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.408230</td>
<td>1.076300</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.427980</td>
<td>1.037000</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.443430</td>
<td>1.095800</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.422510</td>
<td>1.084100</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.342510</td>
<td>1.040800</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.255760</td>
<td>0.915080</td>
</tr>
</tbody>
</table>

**LOWER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.0</td>
<td>0.041331</td>
<td>0.844760</td>
</tr>
<tr>
<td>55.0</td>
<td>0.008123</td>
<td>0.861250</td>
</tr>
<tr>
<td>50.0</td>
<td>0.004526</td>
<td>0.863040</td>
</tr>
<tr>
<td>45.0</td>
<td>0.006066</td>
<td>0.862270</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.012179</td>
<td>0.871360</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.011529</td>
<td>0.871060</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.013479</td>
<td>0.872000</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.017455</td>
<td>0.873980</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.046658</td>
<td>0.885570</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.024750</td>
<td>0.877620</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.028691</td>
<td>0.879590</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.023079</td>
<td>0.876790</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.015533</td>
<td>0.875030</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.028728</td>
<td>0.879600</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.062171</td>
<td>0.896330</td>
</tr>
<tr>
<td>0.9</td>
<td>-0.097367</td>
<td>0.914020</td>
</tr>
<tr>
<td>0.8</td>
<td>-0.243080</td>
<td>0.988480</td>
</tr>
<tr>
<td>ENGINE 4 WL 180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COND. 1.00.137.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INBOARD SURFACE</td>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>6.7</td>
<td>0.424400</td>
<td>0.654290</td>
</tr>
<tr>
<td>8.7</td>
<td>0.507700</td>
<td>0.611510</td>
</tr>
<tr>
<td>10.9</td>
<td>0.523440</td>
<td>0.603310</td>
</tr>
<tr>
<td>14.5</td>
<td>0.396390</td>
<td>0.688480</td>
</tr>
<tr>
<td>17.9</td>
<td>0.168110</td>
<td>0.782080</td>
</tr>
<tr>
<td>21.8</td>
<td>0.068386</td>
<td>0.831370</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.400110</td>
<td>1.071800</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.562480</td>
<td>1.163000</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.292260</td>
<td>1.008900</td>
</tr>
<tr>
<td>58.9</td>
<td>0.027765</td>
<td>0.851480</td>
</tr>
<tr>
<td>81.5</td>
<td>0.132020</td>
<td>0.799910</td>
</tr>
<tr>
<td>96.4</td>
<td>0.190060</td>
<td>0.771240</td>
</tr>
</tbody>
</table>

| ENGINE 4 WL 155 |
| COND. 1.00.137.001 |
| INBOARD SURFACE | X/C - % | CP | LOCAL MACH | OUTBOARD SURFACE | X/C - % | CP | LOCAL MACH |
| 3.7 | -0.131060 | 0.931050 | 89.0 | 0.082263 | 0.852450 |
| 5.5 | -0.164130 | 0.947680 | 81.5 | 0.015297 | 0.857680 |
| 8.1 | -0.142410 | 0.936820 | 72.2 | -0.243010 | 0.984500 |
| 13.3 | 0.006875 | 0.861870 | 66.6 | -0.112900 | 0.910500 |
| 23.1 | 0.204310 | 0.756010 | 57.2 | -0.149150 | 0.940300 |
| 23.1 | 0.298260 | 0.851480 | 52.2 | -0.049124 | 0.899800 |
| 32.0 | 0.313940 | 1.025600 | 33.1 | 0.017518 | 0.856580 |
| 62.4 | -0.607500 | 1.194900 | 23.1 | 0.061974 | 0.834530 |
| 66.6 | -0.639380 | 1.208500 | 13.3 | -0.103580 | 0.917150 |
| 72.2 | -0.063398 | 0.906990 | 8.1 | -0.251980 | 0.993110 |
| 81.5 | 0.038132 | 0.868350 | 5.5 | -0.211410 | 0.972100 |
| 89.0 | 0.004983 | 0.862810 | 3.7 | -0.204750 | 0.985680 |
| 96.8 | 0.167190 | 0.782540 | 1.8 | -0.125210 | 0.928080 |

| ENGINE 4 030 deg CORE COWL |
| COND. 1.00.137.001 |
| OUTBOARD SURFACE | X/C - % | CP | LOCAL MACH |
| 3.6 | 0.311160 | 0.711210 |
| 15.5 | 0.099388 | 0.820970 |
| 24.0 | -0.235670 | 0.984650 |
| 29.2 | -0.265550 | 1.000200 |
| 37.9 | -0.131970 | 0.931510 |
| 44.7 | -0.328240 | 1.033200 |
| 49.9 | -0.321580 | 1.029700 |
| 53.1 | -0.571290 | 1.168100 |
| 57.0 | -0.365370 | 1.052100 |
| 58.2 | -0.398600 | 1.071000 |
| 62.7 | -0.373390 | 1.057400 |
| 64.9 | -0.546510 | 1.153700 |
| 68.1 | -0.356830 | 1.048500 |
| 69.1 | -0.280190 | 1.007800 |
| 70.2 | -0.344620 | 1.041900 |
| 74.0 | -0.345290 | 1.042300 |
| 77.4 | -0.548680 | 1.155000 |
| 80.8 | -0.373400 | 1.057400 |
| 83.8 | -0.362480 | 1.051500 |
| 85.7 | -0.360240 | 1.050300 |
| 90.1 | -0.259740 | 0.997150 |
| 92.0 | -0.005920 | 0.866240 |
| 95.4 | 0.028036 | 0.851350 |
| 99.4 | 0.036179 | 0.847320 |

Table B-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Continued)
### ENGINE 4060 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>44.1</td>
<td>0.689150</td>
<td>0.513710</td>
<td>2.7</td>
<td>-0.843820</td>
<td>1.339200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32.2</td>
<td>0.689150</td>
<td>0.513710</td>
<td>6.1</td>
<td>-0.831640</td>
<td>1.331000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23.1</td>
<td>0.689150</td>
<td>0.513710</td>
<td>12.6</td>
<td>-0.919410</td>
<td>1.392300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.6</td>
<td>0.689150</td>
<td>0.513710</td>
<td>17.0</td>
<td>-0.857110</td>
<td>1.348400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.2</td>
<td>0.689150</td>
<td>0.513710</td>
<td>26.3</td>
<td>-0.739200</td>
<td>1.270300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.9</td>
<td>0.689150</td>
<td>0.513710</td>
<td>32.7</td>
<td>-0.668600</td>
<td>1.228200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>0.689150</td>
<td>0.513710</td>
<td>43.2</td>
<td>-0.218820</td>
<td>0.975930</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0</td>
<td>0.689150</td>
<td>0.513710</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4180 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42.5</td>
<td>0.654830</td>
<td>0.532850</td>
<td>6.2</td>
<td>-0.625990</td>
<td>1.200400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31.7</td>
<td>0.474400</td>
<td>0.628700</td>
<td>9.5</td>
<td>-0.603580</td>
<td>1.187100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24.4</td>
<td>0.296030</td>
<td>0.713750</td>
<td>13.2</td>
<td>-0.610240</td>
<td>1.191000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.3</td>
<td>0.245960</td>
<td>0.743600</td>
<td>17.8</td>
<td>-0.267310</td>
<td>1.001100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11.1</td>
<td>0.079730</td>
<td>0.825750</td>
<td>23.1</td>
<td>-0.649040</td>
<td>1.214300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.5</td>
<td>0.299629</td>
<td>0.718650</td>
<td>31.7</td>
<td>-0.192420</td>
<td>0.982350</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.4</td>
<td>0.673320</td>
<td>0.521500</td>
<td>42.5</td>
<td>-0.245960</td>
<td>0.743600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0</td>
<td>0.673320</td>
<td>0.521500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4300 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42.399990</td>
<td>0.660870</td>
<td>0.629540</td>
<td>2.7</td>
<td>-0.763380</td>
<td>1.285300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32.200001</td>
<td>0.521000</td>
<td>0.604590</td>
<td>5.8</td>
<td>-0.637220</td>
<td>1.207200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.759999</td>
<td>0.388720</td>
<td>0.673350</td>
<td>12.7</td>
<td>-0.690980</td>
<td>1.243600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.400000</td>
<td>0.286550</td>
<td>0.722450</td>
<td>17.1</td>
<td>-0.722310</td>
<td>1.259600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.900000</td>
<td>0.168660</td>
<td>0.781820</td>
<td>25.4</td>
<td>-0.731240</td>
<td>1.265200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.700000</td>
<td>0.306980</td>
<td>0.713300</td>
<td>33.0</td>
<td>-0.767280</td>
<td>1.238400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.000000</td>
<td>0.696780</td>
<td>0.594200</td>
<td>43.3</td>
<td>-0.658670</td>
<td>1.226300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.000000</td>
<td>0.854860</td>
<td>0.414440</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8-2. Tabulated Data for Test 273-09, Condition 1.00.137.001 (Concluded)
### Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1

<table>
<thead>
<tr>
<th>Cond. 1.00.137.002.1</th>
<th>Upper Surface</th>
<th>Lower Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>WBL 445</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>-0.238530</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>-1.287300</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>-1.410500</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>-1.425000</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>-1.445300</td>
</tr>
<tr>
<td></td>
<td>10.0</td>
<td>-1.448200</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>-0.484545</td>
</tr>
<tr>
<td></td>
<td>20.0</td>
<td>-0.593300</td>
</tr>
<tr>
<td></td>
<td>22.5</td>
<td>-0.577550</td>
</tr>
<tr>
<td></td>
<td>25.0</td>
<td>-0.591580</td>
</tr>
<tr>
<td></td>
<td>30.0</td>
<td>-0.559840</td>
</tr>
<tr>
<td></td>
<td>35.0</td>
<td>-0.563950</td>
</tr>
<tr>
<td></td>
<td>40.0</td>
<td>-0.543020</td>
</tr>
<tr>
<td></td>
<td>45.0</td>
<td>-0.472020</td>
</tr>
<tr>
<td></td>
<td>50.0</td>
<td>-0.475910</td>
</tr>
<tr>
<td></td>
<td>52.4</td>
<td>-0.438570</td>
</tr>
<tr>
<td></td>
<td>55.0</td>
<td>-0.421530</td>
</tr>
<tr>
<td></td>
<td>60.0</td>
<td>-0.377720</td>
</tr>
<tr>
<td></td>
<td>65.0</td>
<td>-0.293350</td>
</tr>
<tr>
<td></td>
<td>70.0</td>
<td>-0.214140</td>
</tr>
<tr>
<td></td>
<td>75.0</td>
<td>-0.101070</td>
</tr>
<tr>
<td></td>
<td>80.0</td>
<td>-0.017336</td>
</tr>
<tr>
<td>WBL 470</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WBL 510</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1**
### ENGINE 3 WL 180

**COND. 1.00.137.002.1**

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>78.7</td>
<td>0.016448</td>
</tr>
<tr>
<td>5.3</td>
<td>65.1</td>
<td>0.080638</td>
</tr>
<tr>
<td>5.1</td>
<td>47.6</td>
<td>0.147650</td>
</tr>
<tr>
<td>7.5</td>
<td>34.9</td>
<td>0.114760</td>
</tr>
<tr>
<td>10.0</td>
<td>29.6</td>
<td>0.096452</td>
</tr>
<tr>
<td>12.8</td>
<td>26.1</td>
<td>0.102310</td>
</tr>
<tr>
<td>16.0</td>
<td>21.4</td>
<td>0.102420</td>
</tr>
<tr>
<td>21.4</td>
<td>16.0</td>
<td>-0.098192</td>
</tr>
<tr>
<td>26.1</td>
<td>12.8</td>
<td>-0.099744</td>
</tr>
<tr>
<td>29.6</td>
<td>10.0</td>
<td>-0.088381</td>
</tr>
<tr>
<td>47.6</td>
<td>7.5</td>
<td>-0.087912</td>
</tr>
<tr>
<td>65.1</td>
<td>5.1</td>
<td>-0.086564</td>
</tr>
<tr>
<td>78.7</td>
<td>3.3</td>
<td>-0.014101</td>
</tr>
<tr>
<td></td>
<td>1.7</td>
<td>-0.097266</td>
</tr>
</tbody>
</table>

**OUTBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3 WL 155

**COND. 1.00.137.002.1**

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>90.0</td>
<td>0.135410</td>
</tr>
<tr>
<td>5.1</td>
<td>82.8</td>
<td>0.139220</td>
</tr>
<tr>
<td>7.5</td>
<td>75.9</td>
<td>0.106400</td>
</tr>
<tr>
<td>12.3</td>
<td>67.2</td>
<td>0.098989</td>
</tr>
<tr>
<td>21.5</td>
<td>62.0</td>
<td>0.014724</td>
</tr>
<tr>
<td>30.4</td>
<td>57.2</td>
<td>-0.036088</td>
</tr>
<tr>
<td>39.3</td>
<td>53.9</td>
<td>-0.011741</td>
</tr>
<tr>
<td>48.5</td>
<td>48.3</td>
<td>-0.061021</td>
</tr>
<tr>
<td>53.8</td>
<td>39.3</td>
<td>-0.056028</td>
</tr>
<tr>
<td>57.2</td>
<td>30.4</td>
<td>-0.045960</td>
</tr>
<tr>
<td>62.0</td>
<td>21.5</td>
<td>-0.032087</td>
</tr>
<tr>
<td>67.2</td>
<td>12.3</td>
<td>-0.159180</td>
</tr>
<tr>
<td>75.9</td>
<td>7.5</td>
<td>0.263280</td>
</tr>
<tr>
<td>82.8</td>
<td>5.1</td>
<td>0.313300</td>
</tr>
</tbody>
</table>

**OUTBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3 030 deg INLET RADIAL

**COND. 1.00.137.002.1**

**INNER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>0.171420</td>
<td>0.692650</td>
</tr>
<tr>
<td>5.0</td>
<td>0.347100</td>
<td>0.615190</td>
</tr>
<tr>
<td>3.3</td>
<td>0.499420</td>
<td>0.545050</td>
</tr>
<tr>
<td>1.3</td>
<td>0.879070</td>
<td>0.340550</td>
</tr>
<tr>
<td>0.2</td>
<td>1.119000</td>
<td>0.121530</td>
</tr>
<tr>
<td>0.0</td>
<td>0.579850</td>
<td>0.506240</td>
</tr>
</tbody>
</table>

**OUTER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.851140</td>
<td>1.148900</td>
</tr>
<tr>
<td>1.1</td>
<td>-1.229200</td>
<td>1.354400</td>
</tr>
<tr>
<td>1.1</td>
<td>-1.110000</td>
<td>1.285300</td>
</tr>
<tr>
<td>1.8</td>
<td>-0.961570</td>
<td>1.205100</td>
</tr>
<tr>
<td>8.8</td>
<td>-0.862730</td>
<td>1.154700</td>
</tr>
<tr>
<td>12.5</td>
<td>-0.752380</td>
<td>1.100600</td>
</tr>
<tr>
<td>15.7</td>
<td>-0.634030</td>
<td>1.044800</td>
</tr>
<tr>
<td>21.1</td>
<td>-0.481940</td>
<td>0.975540</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.340170</td>
<td>0.912930</td>
</tr>
<tr>
<td>33.5</td>
<td>-0.363610</td>
<td>0.923180</td>
</tr>
<tr>
<td>45.5</td>
<td>-0.323330</td>
<td>0.909500</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.121310</td>
<td>0.818420</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.019510</td>
<td>0.774840</td>
</tr>
<tr>
<td>71.8</td>
<td>-0.013070</td>
<td>0.767760</td>
</tr>
<tr>
<td>82.4</td>
<td>0.131700</td>
<td>0.709820</td>
</tr>
<tr>
<td>99.4</td>
<td>0.279900</td>
<td>0.645150</td>
</tr>
</tbody>
</table>

*Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1 (Continued)*

10
### ENGINE 3 090 deg INLET RADIAL

**COND. 1.00.137.003**

### INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>0.088145</td>
<td>0.758250</td>
</tr>
<tr>
<td>5.0</td>
<td>0.180220</td>
<td>0.716650</td>
</tr>
<tr>
<td>3.3</td>
<td>0.357410</td>
<td>0.635260</td>
</tr>
<tr>
<td>1.3</td>
<td>0.591570</td>
<td>0.474640</td>
</tr>
<tr>
<td>0.1</td>
<td>N/A</td>
<td>***</td>
</tr>
<tr>
<td>0.0</td>
<td>0.870320</td>
<td>0.364430</td>
</tr>
</tbody>
</table>

### OUTER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.233640</td>
<td>0.903680</td>
</tr>
<tr>
<td>1.1</td>
<td>-0.483850</td>
<td>1.020800</td>
</tr>
<tr>
<td>2.8</td>
<td>-0.403150</td>
<td>0.982340</td>
</tr>
<tr>
<td>6.1</td>
<td>-0.489430</td>
<td>1.021300</td>
</tr>
<tr>
<td>12.9</td>
<td>-0.566390</td>
<td>1.060900</td>
</tr>
<tr>
<td>17.4</td>
<td>-0.365520</td>
<td>0.964660</td>
</tr>
<tr>
<td>22.7</td>
<td>-0.225670</td>
<td>0.900030</td>
</tr>
<tr>
<td>27.7</td>
<td>-0.267030</td>
<td>0.918990</td>
</tr>
<tr>
<td>34.7</td>
<td>-0.245410</td>
<td>0.909070</td>
</tr>
<tr>
<td>46.2</td>
<td>-0.274290</td>
<td>0.922340</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.240990</td>
<td>0.907400</td>
</tr>
<tr>
<td>64.7</td>
<td>-0.113390</td>
<td>0.849010</td>
</tr>
<tr>
<td>71.9</td>
<td>-0.068863</td>
<td>0.828910</td>
</tr>
<tr>
<td>82.4</td>
<td>0.041403</td>
<td>0.779230</td>
</tr>
<tr>
<td>99.6</td>
<td>0.228770</td>
<td>0.694570</td>
</tr>
</tbody>
</table>

### ENGINE 3 150 deg INLET RADIAL

**COND. 1.00.137.003**

### INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>-0.035718</td>
<td>0.813990</td>
</tr>
<tr>
<td>5.2</td>
<td>0.130820</td>
<td>0.739000</td>
</tr>
<tr>
<td>4.6</td>
<td>0.265290</td>
<td>0.677870</td>
</tr>
<tr>
<td>1.5</td>
<td>0.636560</td>
<td>0.498400</td>
</tr>
<tr>
<td>0.2</td>
<td>1.054900</td>
<td>0.221550</td>
</tr>
<tr>
<td>0.0</td>
<td>0.961080</td>
<td>0.301440</td>
</tr>
</tbody>
</table>

### OUTER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.110050</td>
<td>0.748140</td>
</tr>
<tr>
<td>1.2</td>
<td>-0.085730</td>
<td>0.856520</td>
</tr>
<tr>
<td>2.9</td>
<td>-0.185490</td>
<td>0.851710</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.287710</td>
<td>0.928520</td>
</tr>
<tr>
<td>9.4</td>
<td>-0.400800</td>
<td>0.981230</td>
</tr>
<tr>
<td>14.5</td>
<td>-0.435750</td>
<td>0.997770</td>
</tr>
<tr>
<td>18.2</td>
<td>-0.465800</td>
<td>1.012000</td>
</tr>
<tr>
<td>22.7</td>
<td>-0.250350</td>
<td>0.925120</td>
</tr>
<tr>
<td>27.7</td>
<td>-0.311960</td>
<td>0.939730</td>
</tr>
<tr>
<td>34.5</td>
<td>-0.238420</td>
<td>0.900580</td>
</tr>
<tr>
<td>45.7</td>
<td>-0.198710</td>
<td>0.887720</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.150830</td>
<td>0.865970</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.086039</td>
<td>0.836060</td>
</tr>
<tr>
<td>71.0</td>
<td>-0.065378</td>
<td>0.827350</td>
</tr>
<tr>
<td>81.3</td>
<td>0.019150</td>
<td>0.789300</td>
</tr>
<tr>
<td>99.4</td>
<td>0.205070</td>
<td>0.705080</td>
</tr>
</tbody>
</table>

### ENGINE 3 210 deg INLET RADIAL

**COND. 1.00.137.003**

### INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>-0.039522</td>
<td>0.815700</td>
</tr>
<tr>
<td>5.2</td>
<td>0.189480</td>
<td>0.712440</td>
</tr>
<tr>
<td>3.6</td>
<td>0.352320</td>
<td>0.637630</td>
</tr>
<tr>
<td>1.5</td>
<td>0.704070</td>
<td>0.462450</td>
</tr>
<tr>
<td>0.3</td>
<td>1.113300</td>
<td>0.154480</td>
</tr>
<tr>
<td>0.0</td>
<td>0.946700</td>
<td>0.312100</td>
</tr>
</tbody>
</table>

### OUTER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>-0.003277</td>
<td>0.799390</td>
</tr>
<tr>
<td>1.2</td>
<td>-0.361430</td>
<td>0.962760</td>
</tr>
<tr>
<td>2.9</td>
<td>-0.292430</td>
<td>0.930700</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.498410</td>
<td>1.027800</td>
</tr>
<tr>
<td>9.3</td>
<td>-0.543220</td>
<td>1.043500</td>
</tr>
<tr>
<td>14.4</td>
<td>-0.545570</td>
<td>1.050700</td>
</tr>
<tr>
<td>16.1</td>
<td>-0.428400</td>
<td>0.994290</td>
</tr>
<tr>
<td>22.4</td>
<td>-0.356300</td>
<td>0.960350</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.340400</td>
<td>0.952940</td>
</tr>
<tr>
<td>34.2</td>
<td>-0.351000</td>
<td>0.957880</td>
</tr>
<tr>
<td>45.5</td>
<td>-0.251650</td>
<td>0.911930</td>
</tr>
<tr>
<td>56.9</td>
<td>-0.175770</td>
<td>0.877290</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.143360</td>
<td>0.862580</td>
</tr>
<tr>
<td>70.8</td>
<td>-0.112550</td>
<td>0.848640</td>
</tr>
<tr>
<td>81.0</td>
<td>0.005742</td>
<td>0.795320</td>
</tr>
<tr>
<td>99.0</td>
<td>0.170510</td>
<td>0.721050</td>
</tr>
</tbody>
</table>

*Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1 (Continued)*
### Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1 (Continued)

#### ENGINE 3270 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>0.747800</td>
<td>0.111310</td>
<td>0.4</td>
<td>0.739850</td>
<td>0.263920</td>
<td>1.0</td>
</tr>
<tr>
<td>5.5</td>
<td>0.600380</td>
<td>0.431360</td>
<td>1.0</td>
<td>-0.093312</td>
<td>0.764110</td>
<td>1.2</td>
</tr>
<tr>
<td>3.7</td>
<td>0.430940</td>
<td>0.760470</td>
<td>6.2</td>
<td>-0.800950</td>
<td>0.430940</td>
<td>6.2</td>
</tr>
<tr>
<td>1.3</td>
<td>0.072828</td>
<td>1.157100</td>
<td>9.0</td>
<td>-0.902000</td>
<td>0.430940</td>
<td>9.0</td>
</tr>
<tr>
<td>0.1</td>
<td>**********</td>
<td>********</td>
<td>12.8</td>
<td>-0.916700</td>
<td>0.430940</td>
<td>12.8</td>
</tr>
<tr>
<td>0.0</td>
<td>**********</td>
<td>********</td>
<td>17.2</td>
<td>-0.563650</td>
<td>0.430940</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.7</td>
<td>-0.303970</td>
<td>0.430940</td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.6</td>
<td>-0.300740</td>
<td>0.430940</td>
<td>26.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.8</td>
<td>-0.256520</td>
<td>0.430940</td>
<td>33.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.2</td>
<td>-0.317370</td>
<td>0.430940</td>
<td>45.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>56.6</td>
<td>-0.339890</td>
<td>0.430940</td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>-0.205740</td>
<td>0.430940</td>
<td>63.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.1</td>
<td>-0.161040</td>
<td>0.430940</td>
<td>71.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.5</td>
<td>-0.023708</td>
<td>0.430940</td>
<td>81.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.0</td>
<td>0.138070</td>
<td>0.430940</td>
<td>99.0</td>
</tr>
</tbody>
</table>

#### ENGINE 3330 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>0.680290</td>
<td>0.260020</td>
<td>0.4</td>
<td>-0.643100</td>
<td>0.260020</td>
<td>1.1</td>
</tr>
<tr>
<td>4.8</td>
<td>0.620020</td>
<td>0.389920</td>
<td>1.1</td>
<td>-1.189700</td>
<td>0.389920</td>
<td>2.7</td>
</tr>
<tr>
<td>3.2</td>
<td>0.518360</td>
<td>0.595030</td>
<td>5.8</td>
<td>-1.087700</td>
<td>0.595030</td>
<td>8.8</td>
</tr>
<tr>
<td>1.2</td>
<td>0.346660</td>
<td>0.897300</td>
<td>12.6</td>
<td>-0.891460</td>
<td>0.897300</td>
<td>12.6</td>
</tr>
<tr>
<td>0.2</td>
<td>0.222600</td>
<td>1.053800</td>
<td>17.8</td>
<td>-0.690320</td>
<td>1.053800</td>
<td>17.8</td>
</tr>
<tr>
<td>0.0</td>
<td>0.485880</td>
<td>0.658610</td>
<td>21.4</td>
<td>-0.343180</td>
<td>0.658610</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.1</td>
<td>-0.319470</td>
<td>0.658610</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.7</td>
<td>-0.239320</td>
<td>0.658610</td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.4</td>
<td>-0.267690</td>
<td>0.658610</td>
<td>45.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
<td>-0.299900</td>
<td>0.658610</td>
<td>57.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.5</td>
<td>-0.191740</td>
<td>0.658610</td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
<td>-0.114660</td>
<td>0.658610</td>
<td>71.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.7</td>
<td>0.009995</td>
<td>0.658610</td>
<td>82.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.138790</td>
<td>0.658610</td>
<td>99.4</td>
</tr>
</tbody>
</table>
### WBL 809

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>Upper Surface</th>
<th>Lower Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-1.248500</td>
<td>1.366100</td>
</tr>
<tr>
<td>2.0</td>
<td>-1.301000</td>
<td>1.393600</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.357200</td>
<td>1.437100</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.487700</td>
<td>1.524900</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.399800</td>
<td>1.462500</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.102400</td>
<td>1.281100</td>
</tr>
<tr>
<td>22.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.558390</td>
<td>1.010000</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.506220</td>
<td>0.986430</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.531320</td>
<td>0.997750</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.490020</td>
<td>0.979240</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.536840</td>
<td>1.000200</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.522230</td>
<td>0.993650</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.538340</td>
<td>1.000900</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.457220</td>
<td>0.964510</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.418470</td>
<td>0.947320</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.345320</td>
<td>0.915170</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.327560</td>
<td>0.907420</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.246670</td>
<td>0.872330</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.187320</td>
<td>0.846750</td>
</tr>
</tbody>
</table>

### WBL 834

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>Upper Surface</th>
<th>Lower Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.0</td>
<td>-0.665810</td>
<td>1.059600</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.571700</td>
<td>1.016100</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.599440</td>
<td>1.028800</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.502410</td>
<td>0.984720</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.358640</td>
<td>0.921000</td>
</tr>
</tbody>
</table>

### WBL 870

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>Upper Surface</th>
<th>Lower Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.490390</td>
<td>0.979320</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.591330</td>
<td>1.025100</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.102100</td>
<td>1.238700</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.746940</td>
<td>1.098000</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.696360</td>
<td>1.073900</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.655920</td>
<td>1.054900</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.600960</td>
<td>1.029500</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.540980</td>
<td>1.002100</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.560860</td>
<td>1.011200</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.528190</td>
<td>0.996340</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.529190</td>
<td>0.997680</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.515090</td>
<td>0.990420</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.551590</td>
<td>1.006900</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.502850</td>
<td>0.984920</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.481780</td>
<td>0.975460</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.410860</td>
<td>0.943950</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.331740</td>
<td>0.909250</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.278430</td>
<td>0.886070</td>
</tr>
</tbody>
</table>

Table B3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1 (Continued)
### ENGINE 4 WL 180

#### COND. 1.00.137.002.1

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>( \chi/C ) - %</th>
<th>( \chi/C ) - %</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>0.537700</td>
<td>0.526760</td>
<td>98.4</td>
<td>0.135150</td>
</tr>
<tr>
<td>8.7</td>
<td>0.647550</td>
<td>0.472130</td>
<td>81.5</td>
<td>0.092349</td>
</tr>
<tr>
<td>10.9</td>
<td>0.732050</td>
<td>0.427570</td>
<td>58.9</td>
<td>0.037398</td>
</tr>
<tr>
<td>14.5</td>
<td>0.816460</td>
<td>0.488020</td>
<td>44.2</td>
<td>0.038336</td>
</tr>
<tr>
<td>17.9</td>
<td>0.393740</td>
<td>0.594090</td>
<td>37.7</td>
<td>0.074703</td>
</tr>
<tr>
<td>21.6</td>
<td>0.303460</td>
<td>0.634690</td>
<td>33.7</td>
<td>0.144610</td>
</tr>
<tr>
<td>33.7</td>
<td>0.115470</td>
<td>0.815920</td>
<td>8.7</td>
<td>0.175040</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.135250</td>
<td>0.824390</td>
<td>10.9</td>
<td>-0.164640</td>
</tr>
<tr>
<td>41.5</td>
<td>0.051403</td>
<td>0.744430</td>
<td>14.5</td>
<td>0.154990</td>
</tr>
<tr>
<td>58.9</td>
<td>0.169510</td>
<td>0.693480</td>
<td>17.9</td>
<td>0.393740</td>
</tr>
<tr>
<td>66.4</td>
<td>0.225780</td>
<td>0.668950</td>
<td>6.7</td>
<td>-0.159030</td>
</tr>
</tbody>
</table>

### ENGINE 4 WL 155

#### COND. 1.00.137.002.1

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>( \chi/C ) - %</th>
<th>( \chi/C ) - %</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.122640</td>
<td>0.818590</td>
<td>96.8</td>
<td>0.171570</td>
</tr>
<tr>
<td>3.7</td>
<td>0.135380</td>
<td>0.824540</td>
<td>89.0</td>
<td>0.114060</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.090809</td>
<td>0.805350</td>
<td>81.5</td>
<td>0.107780</td>
</tr>
<tr>
<td>8.1</td>
<td>0.012261</td>
<td>0.761200</td>
<td>66.6</td>
<td>-0.020028</td>
</tr>
<tr>
<td>13.3</td>
<td>0.276400</td>
<td>0.666900</td>
<td>62.4</td>
<td>-0.077987</td>
</tr>
<tr>
<td>23.1</td>
<td>0.472290</td>
<td>0.557620</td>
<td>57.5</td>
<td>-0.079933</td>
</tr>
<tr>
<td>33.1</td>
<td>0.506420</td>
<td>0.490670</td>
<td>52.2</td>
<td>-0.033915</td>
</tr>
<tr>
<td>43.0</td>
<td>0.124630</td>
<td>0.712900</td>
<td>43.0</td>
<td>0.780980</td>
</tr>
<tr>
<td>52.2</td>
<td>0.135160</td>
<td>0.824350</td>
<td>33.1</td>
<td>-0.032750</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.245210</td>
<td>0.871700</td>
<td>23.1</td>
<td>0.042780</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.154580</td>
<td>0.832690</td>
<td>13.3</td>
<td>-0.106650</td>
</tr>
<tr>
<td>66.6</td>
<td>-0.070687</td>
<td>0.796740</td>
<td>8.1</td>
<td>0.297100</td>
</tr>
<tr>
<td>72.2</td>
<td>0.042059</td>
<td>0.748430</td>
<td>5.5</td>
<td>0.271730</td>
</tr>
<tr>
<td>81.5</td>
<td>0.038707</td>
<td>0.749880</td>
<td>5.7</td>
<td>0.272200</td>
</tr>
<tr>
<td>89.0</td>
<td>-0.147980</td>
<td>0.702810</td>
<td>1.8</td>
<td>0.097286</td>
</tr>
<tr>
<td>96.8</td>
<td>0.014790</td>
<td>0.707980</td>
<td>1.6</td>
<td>0.097286</td>
</tr>
</tbody>
</table>

### ENGINE 4 030 deg CORE COWL

#### COND. 1.00.137.002.1

**OUTBOARD SURFACE**

<table>
<thead>
<tr>
<th>( \chi/C ) - %</th>
<th>( \chi/C ) - %</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.187630</td>
<td>0.694290</td>
<td>96.8</td>
<td>0.171570</td>
</tr>
<tr>
<td>15.5</td>
<td>0.209440</td>
<td>0.678220</td>
<td>89.0</td>
<td>0.114060</td>
</tr>
<tr>
<td>24.0</td>
<td>0.055781</td>
<td>0.790350</td>
<td>81.5</td>
<td>0.107780</td>
</tr>
<tr>
<td>29.2</td>
<td>0.216160</td>
<td>0.859160</td>
<td>66.6</td>
<td>-0.020028</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.109430</td>
<td>0.813340</td>
<td>62.4</td>
<td>-0.077987</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.347630</td>
<td>0.916180</td>
<td>57.5</td>
<td>-0.079933</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.325840</td>
<td>0.906670</td>
<td>52.2</td>
<td>-0.033915</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.493600</td>
<td>0.880770</td>
<td>43.0</td>
<td>0.780980</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.356930</td>
<td>0.924530</td>
<td>33.1</td>
<td>-0.032750</td>
</tr>
<tr>
<td>59.2</td>
<td>0.127730</td>
<td>0.907490</td>
<td>23.1</td>
<td>0.042780</td>
</tr>
<tr>
<td>62.7</td>
<td>0.435310</td>
<td>0.954780</td>
<td>13.3</td>
<td>-0.106650</td>
</tr>
<tr>
<td>66.4</td>
<td>0.320600</td>
<td>0.904390</td>
<td>8.1</td>
<td>0.297100</td>
</tr>
<tr>
<td>69.1</td>
<td>0.195040</td>
<td>0.850060</td>
<td>5.5</td>
<td>0.271730</td>
</tr>
<tr>
<td>69.1</td>
<td>0.022038</td>
<td>0.775920</td>
<td>5.7</td>
<td>0.272200</td>
</tr>
<tr>
<td>74.0</td>
<td>0.276090</td>
<td>0.845600</td>
<td>1.8</td>
<td>0.097286</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.358150</td>
<td>0.920790</td>
<td>1.6</td>
<td>0.097286</td>
</tr>
<tr>
<td>80.8</td>
<td>0.413840</td>
<td>0.945270</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.373200</td>
<td>0.927380</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>88.7</td>
<td>0.261110</td>
<td>0.878560</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>90.1</td>
<td>0.152830</td>
<td>0.831950</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.022905</td>
<td>0.776240</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.012331</td>
<td>0.771970</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
<tr>
<td>99.4</td>
<td>0.014005</td>
<td>0.760480</td>
<td>0.0</td>
<td>0.097286</td>
</tr>
</tbody>
</table>

*Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1(Continued)*
### Table B-3. Tabulated Data for Test 273-09, Condition 1.00.137.002.1 (Concluded)

#### Engine 4060 deg Inlet Radial

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.1</td>
<td>0.597620</td>
<td>0.497450</td>
<td>2.7</td>
<td>-1.096800</td>
<td>1.274600</td>
</tr>
<tr>
<td>32.2</td>
<td>0.202500</td>
<td>0.679120</td>
<td>6.1</td>
<td>-0.731960</td>
<td>1.090800</td>
</tr>
<tr>
<td>23.1</td>
<td>0.156502</td>
<td>0.513510</td>
<td>12.6</td>
<td>-0.557540</td>
<td>1.009600</td>
</tr>
<tr>
<td>16.6</td>
<td>0.185570</td>
<td>0.685500</td>
<td>17.0</td>
<td>-0.522040</td>
<td>0.993560</td>
</tr>
<tr>
<td>10.2</td>
<td>0.306500</td>
<td>0.633280</td>
<td>25.3</td>
<td>-0.304810</td>
<td>0.897520</td>
</tr>
<tr>
<td>4.9</td>
<td>0.698400</td>
<td>0.445450</td>
<td>32.7</td>
<td>-0.311760</td>
<td>0.900540</td>
</tr>
<tr>
<td>0.0</td>
<td>0.646000</td>
<td>0.473020</td>
<td>43.2</td>
<td>-0.297440</td>
<td>0.876980</td>
</tr>
</tbody>
</table>

#### Engine 4180 deg Inlet Radial

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.5</td>
<td>0.546240</td>
<td>0.522650</td>
<td>6.2</td>
<td>0.003431</td>
<td>0.765010</td>
</tr>
<tr>
<td>31.7</td>
<td>0.341760</td>
<td>0.617590</td>
<td>9.5</td>
<td>****</td>
<td>****</td>
</tr>
<tr>
<td>24.4</td>
<td>0.128460</td>
<td>0.711250</td>
<td>13.2</td>
<td>-0.328150</td>
<td>0.907680</td>
</tr>
<tr>
<td>17.8</td>
<td>0.041857</td>
<td>0.748530</td>
<td>17.8</td>
<td>-0.282050</td>
<td>0.897640</td>
</tr>
<tr>
<td>11.1</td>
<td>0.221070</td>
<td>0.861260</td>
<td>27.2</td>
<td>-0.061771</td>
<td>0.792920</td>
</tr>
<tr>
<td>5.5</td>
<td>0.037589</td>
<td>0.782570</td>
<td>34.5</td>
<td>-0.236240</td>
<td>0.867820</td>
</tr>
<tr>
<td>2.4</td>
<td>0.384740</td>
<td>0.598180</td>
<td>45.5</td>
<td>-0.193470</td>
<td>0.845390</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td></td>
<td></td>
<td>****</td>
</tr>
</tbody>
</table>

#### Engine 4300 deg Inlet Radial

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.3</td>
<td>0.572340</td>
<td>0.509930</td>
<td>2.7</td>
<td>-1.152700</td>
<td>1.309500</td>
</tr>
<tr>
<td>32.2</td>
<td>0.417330</td>
<td>0.583310</td>
<td>5.8</td>
<td>-0.704110</td>
<td>1.077600</td>
</tr>
<tr>
<td>22.7</td>
<td>0.282550</td>
<td>0.643970</td>
<td>12.7</td>
<td>-0.704020</td>
<td>1.077600</td>
</tr>
<tr>
<td>16.4</td>
<td>0.190870</td>
<td>0.684200</td>
<td>17.1</td>
<td>-0.497300</td>
<td>0.982430</td>
</tr>
<tr>
<td>9.9</td>
<td>0.094521</td>
<td>0.725830</td>
<td>26.4</td>
<td>-0.487050</td>
<td>0.977830</td>
</tr>
<tr>
<td>4.7</td>
<td>0.261620</td>
<td>0.633220</td>
<td>33.0</td>
<td>-0.445960</td>
<td>0.955560</td>
</tr>
<tr>
<td>2.0</td>
<td>0.686060</td>
<td>0.452220</td>
<td>43.3</td>
<td>-0.360070</td>
<td>0.921630</td>
</tr>
<tr>
<td>0.0</td>
<td>0.709610</td>
<td>0.439680</td>
<td></td>
<td></td>
<td>****</td>
</tr>
</tbody>
</table>
### Table B-4: Tabulated Data for Test 273-09, Condition 1.00.137.003

#### WBL 445

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.197630</td>
<td>0.859040</td>
<td>65.0</td>
<td>-0.027317</td>
<td>0.810200</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.998250</td>
<td>1.203100</td>
<td>60.0</td>
<td>-0.017630</td>
<td>0.905840</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.172400</td>
<td>1.401500</td>
<td>55.0</td>
<td>-0.025365</td>
<td>0.809320</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.275200</td>
<td>1.472500</td>
<td>50.0</td>
<td>-0.018909</td>
<td>0.836420</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.248700</td>
<td>1.453600</td>
<td>45.0</td>
<td>-0.007371</td>
<td>0.801230</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.104300</td>
<td>1.357300</td>
<td>40.0</td>
<td>-0.026643</td>
<td>0.809900</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.478490</td>
<td>1.018200</td>
<td>35.0</td>
<td>-0.010415</td>
<td>0.802590</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.446680</td>
<td>1.003000</td>
<td>30.0</td>
<td>-0.052513</td>
<td>0.821550</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.455470</td>
<td>1.007200</td>
<td>25.0</td>
<td>-0.062428</td>
<td>0.826020</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.499940</td>
<td>1.028500</td>
<td>20.0</td>
<td>-0.112830</td>
<td>0.848770</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.537730</td>
<td>1.046900</td>
<td>15.0</td>
<td>-0.180620</td>
<td>0.879490</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.615720</td>
<td>1.085400</td>
<td>10.0</td>
<td>-0.093805</td>
<td>0.755700</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.661320</td>
<td>1.111800</td>
<td>5.0</td>
<td>-0.419220</td>
<td>0.806150</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.530510</td>
<td>1.043300</td>
<td>3.0</td>
<td>-0.452420</td>
<td>0.590310</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.501190</td>
<td>1.029100</td>
<td>2.0</td>
<td>-0.470340</td>
<td>0.581680</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.434750</td>
<td>0.997310</td>
<td>1.0</td>
<td>-0.525640</td>
<td>0.554880</td>
</tr>
</tbody>
</table>

#### WBL 470

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.074000</td>
<td>1.333000</td>
<td>65.0</td>
<td>-0.050347</td>
<td>0.727690</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.591210</td>
<td>1.073200</td>
<td>60.0</td>
<td>-0.055690</td>
<td>0.737970</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.661650</td>
<td>1.108500</td>
<td>55.0</td>
<td>-0.019472</td>
<td>0.774820</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.742080</td>
<td>1.150000</td>
<td>50.0</td>
<td>-0.009688</td>
<td>0.762320</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.565650</td>
<td>1.056100</td>
<td>45.0</td>
<td>0.009688</td>
<td>0.727690</td>
</tr>
<tr>
<td>60.0</td>
<td>***</td>
<td>****</td>
<td>40.0</td>
<td>0.090347</td>
<td>0.727690</td>
</tr>
</tbody>
</table>

#### WBL 510

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.567580</td>
<td>1.014200</td>
<td>65.0</td>
<td>-0.019370</td>
<td>0.774770</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.761230</td>
<td>1.104900</td>
<td>60.0</td>
<td>-0.016990</td>
<td>0.773760</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.940040</td>
<td>1.194000</td>
<td>55.0</td>
<td>-0.003751</td>
<td>0.768090</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.126400</td>
<td>1.294500</td>
<td>50.0</td>
<td>-0.019472</td>
<td>0.774820</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.744120</td>
<td>1.096700</td>
<td>45.0</td>
<td>-0.049689</td>
<td>0.752320</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.697920</td>
<td>1.074700</td>
<td>40.0</td>
<td>-0.093457</td>
<td>0.727690</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.761820</td>
<td>1.105200</td>
<td>35.0</td>
<td>-0.066490</td>
<td>0.737970</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.723800</td>
<td>1.086900</td>
<td>30.0</td>
<td>-0.064913</td>
<td>0.738630</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.771600</td>
<td>1.109900</td>
<td>25.0</td>
<td>-0.114650</td>
<td>0.717220</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.684090</td>
<td>1.062800</td>
<td>20.0</td>
<td>-0.137400</td>
<td>0.707390</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.658210</td>
<td>1.056000</td>
<td>15.0</td>
<td>-0.220430</td>
<td>0.671290</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.643960</td>
<td>1.049400</td>
<td>10.0</td>
<td>-0.181760</td>
<td>0.681560</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.655250</td>
<td>1.054600</td>
<td>5.0</td>
<td>-0.258700</td>
<td>0.654500</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.594980</td>
<td>1.026700</td>
<td>3.0</td>
<td>-0.279790</td>
<td>0.645190</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.574660</td>
<td>1.017400</td>
<td>2.0</td>
<td>-0.267900</td>
<td>0.650450</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.597310</td>
<td>1.023200</td>
<td>1.0</td>
<td>-0.273580</td>
<td>0.647940</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.570450</td>
<td>1.015500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td>-0.559830</td>
<td>1.010700</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.493460</td>
<td>0.983400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.430250</td>
<td>0.952540</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.346950</td>
<td>0.915890</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 8-4. Tabulated Data for Test 273-09, Condition 1.00137.003 (Continued)

#### ENGINE 3 WLI80

**COND. 1.00.137.003**

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.7</td>
<td>***</td>
</tr>
<tr>
<td>3.3</td>
<td>65.1</td>
</tr>
<tr>
<td>5.1</td>
<td>47.6</td>
</tr>
<tr>
<td>7.5</td>
<td>34.9</td>
</tr>
<tr>
<td>10.0</td>
<td>29.6</td>
</tr>
<tr>
<td>12.8</td>
<td>25.1</td>
</tr>
<tr>
<td>16.0</td>
<td>21.4</td>
</tr>
<tr>
<td>21.4</td>
<td>16.0</td>
</tr>
<tr>
<td>26.1</td>
<td>12.8</td>
</tr>
<tr>
<td>29.6</td>
<td>10.0</td>
</tr>
<tr>
<td>47.6</td>
<td>7.5</td>
</tr>
<tr>
<td>65.1</td>
<td>5.1</td>
</tr>
<tr>
<td>78.7</td>
<td>3.3</td>
</tr>
<tr>
<td>1.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

#### ENGINE 3 WL155

**COND. 1.00.137.003**

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>3.5</td>
<td>***</td>
</tr>
<tr>
<td>5.1</td>
<td>82.8</td>
</tr>
<tr>
<td>7.5</td>
<td>75.9</td>
</tr>
<tr>
<td>12.3</td>
<td>67.2</td>
</tr>
<tr>
<td>21.5</td>
<td>62.0</td>
</tr>
<tr>
<td>30.4</td>
<td>57.2</td>
</tr>
<tr>
<td>39.3</td>
<td>53.8</td>
</tr>
<tr>
<td>48.5</td>
<td>48.5</td>
</tr>
<tr>
<td>53.8</td>
<td>39.3</td>
</tr>
<tr>
<td>57.2</td>
<td>30.4</td>
</tr>
<tr>
<td>62.0</td>
<td>21.5</td>
</tr>
<tr>
<td>67.7</td>
<td>12.3</td>
</tr>
<tr>
<td>75.9</td>
<td>7.5</td>
</tr>
<tr>
<td>82.8</td>
<td>5.1</td>
</tr>
<tr>
<td>90.0</td>
<td>3.3</td>
</tr>
</tbody>
</table>

#### ENGINE 3 030 deg INLET RADIAL

**COND. 1.00.137.003**

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>7.7</td>
<td>0.212970</td>
</tr>
<tr>
<td>5.0</td>
<td>0.039150</td>
</tr>
<tr>
<td>3.3</td>
<td>0.169110</td>
</tr>
<tr>
<td>1.3</td>
<td>0.088450</td>
</tr>
<tr>
<td>0.2</td>
<td>1.127100</td>
</tr>
<tr>
<td>0.0</td>
<td>0.067392</td>
</tr>
<tr>
<td>0.4</td>
<td>0.433300</td>
</tr>
<tr>
<td>25.1</td>
<td>0.343030</td>
</tr>
<tr>
<td>33.5</td>
<td>0.366620</td>
</tr>
<tr>
<td>45.6</td>
<td>0.353230</td>
</tr>
<tr>
<td>57.2</td>
<td>0.139220</td>
</tr>
<tr>
<td>64.5</td>
<td>0.017339</td>
</tr>
<tr>
<td>71.8</td>
<td>0.019175</td>
</tr>
<tr>
<td>82.4</td>
<td>0.115390</td>
</tr>
<tr>
<td>99.4</td>
<td>0.271460</td>
</tr>
</tbody>
</table>
Table B-4. Tabulated Data for Test 273-09, Condition 1.00.137.003 (Continued)
### ENGINE 3270 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>0.041149</td>
<td>0.748840</td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>0.207320</td>
<td>0.677020</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>0.375120</td>
<td>0.602540</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>0.720510</td>
<td>0.433810</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td>1.142700</td>
<td>0.072407</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.083359</td>
<td>0.802160</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>-0.877880</td>
<td>1.162300</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>-0.033930</td>
<td>1.047400</td>
<td></td>
</tr>
<tr>
<td>5.2</td>
<td>-1.003400</td>
<td>1.228000</td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>-0.753310</td>
<td>1.101100</td>
<td></td>
</tr>
<tr>
<td>12.8</td>
<td>-0.776100</td>
<td>1.112100</td>
<td></td>
</tr>
<tr>
<td>17.2</td>
<td>-0.402780</td>
<td>0.940390</td>
<td></td>
</tr>
<tr>
<td>21.7</td>
<td>-0.304630</td>
<td>0.297440</td>
<td></td>
</tr>
<tr>
<td>26.6</td>
<td>-0.297080</td>
<td>0.941600</td>
<td></td>
</tr>
<tr>
<td>32.8</td>
<td>-0.249650</td>
<td>0.873610</td>
<td></td>
</tr>
<tr>
<td>45.2</td>
<td>-0.313350</td>
<td>0.901250</td>
<td></td>
</tr>
<tr>
<td>56.6</td>
<td>-0.331740</td>
<td>0.909250</td>
<td></td>
</tr>
<tr>
<td>63.9</td>
<td>-0.206900</td>
<td>0.855180</td>
<td></td>
</tr>
<tr>
<td>71.1</td>
<td>-0.165420</td>
<td>0.837340</td>
<td></td>
</tr>
<tr>
<td>81.5</td>
<td>-0.030081</td>
<td>0.779360</td>
<td></td>
</tr>
<tr>
<td>99.0</td>
<td>0.115620</td>
<td>0.716800</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3330 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>0.245470</td>
<td>0.660320</td>
<td></td>
</tr>
<tr>
<td>4.8</td>
<td>0.368720</td>
<td>0.605440</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>0.596640</td>
<td>0.497930</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>0.876470</td>
<td>0.342230</td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>1.025600</td>
<td>0.230380</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.531810</td>
<td>0.505280</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.794750</td>
<td>1.121100</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>-1.354800</td>
<td>1.433100</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>-1.169500</td>
<td>1.319200</td>
<td></td>
</tr>
<tr>
<td>5.8</td>
<td>-1.221560</td>
<td>1.349900</td>
<td></td>
</tr>
<tr>
<td>8.8</td>
<td>-1.258700</td>
<td>1.372300</td>
<td></td>
</tr>
<tr>
<td>12.6</td>
<td>-0.883270</td>
<td>1.165000</td>
<td></td>
</tr>
<tr>
<td>17.8</td>
<td>-0.380700</td>
<td>0.930600</td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td>-0.341410</td>
<td>0.913470</td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td>-0.386730</td>
<td>0.933330</td>
<td></td>
</tr>
<tr>
<td>33.7</td>
<td>-0.247870</td>
<td>0.872850</td>
<td></td>
</tr>
<tr>
<td>45.4</td>
<td>-0.262300</td>
<td>0.879080</td>
<td></td>
</tr>
<tr>
<td>57.0</td>
<td>-0.281230</td>
<td>0.887280</td>
<td></td>
</tr>
<tr>
<td>64.5</td>
<td>-0.185290</td>
<td>0.845870</td>
<td></td>
</tr>
<tr>
<td>71.8</td>
<td>-0.106930</td>
<td>0.813070</td>
<td></td>
</tr>
<tr>
<td>82.7</td>
<td>0.012331</td>
<td>0.761190</td>
<td></td>
</tr>
<tr>
<td>99.4</td>
<td>0.132070</td>
<td>0.709700</td>
<td></td>
</tr>
</tbody>
</table>

*Table B-4. Tabulated Data for Test 273-09, Condition 1.00.137.003 (Continued)*
### Table B-4. Tabulated Data for Test 273-09, Condition 1.00.137.003 (Continued)

- **WBL 809**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.850260</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.985520</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.170300</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.323900</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.416100</td>
</tr>
<tr>
<td>22.5</td>
<td>***</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.498260</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.445710</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.500410</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.594850</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.533050</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.530220</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.533700</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.472910</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.423110</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.344840</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.317010</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.250510</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.182780</td>
</tr>
</tbody>
</table>

- **WBL 834**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.554160</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.591560</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.615530</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.509550</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.358470</td>
</tr>
</tbody>
</table>

- **WBL 870**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.342800</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.504140</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.935820</td>
</tr>
<tr>
<td>15.0</td>
<td>-1.067800</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.626100</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.559890</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.607510</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.541780</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.555160</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.540970</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.531990</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.511670</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.540350</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.520130</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.480870</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.409110</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.338310</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.275910</td>
</tr>
</tbody>
</table>
Table B-4. Tabulated Data for Test 273-09, Condition 1.00.137.003 (Continued)
Table 8-4. Tabulated Data for Test 273-09, Condition 1.00.137.003 (Concluded)
### Table B-5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1

**WBL 445**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>LOWER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.436770</td>
<td>1.089100</td>
<td>65.0</td>
<td>-0.069733</td>
<td>0.898010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>-0.641680</td>
<td>1.209100</td>
<td>60.0</td>
<td>-0.064769</td>
<td>0.895530</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>-0.914440</td>
<td>1.315300</td>
<td>55.0</td>
<td>-0.064534</td>
<td>0.895410</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>-1.093750</td>
<td>1.376500</td>
<td>50.0</td>
<td>-0.061955</td>
<td>0.894130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-1.056500</td>
<td>1.491700</td>
<td>45.0</td>
<td>-0.024360</td>
<td>0.875370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>-0.974940</td>
<td>1.428300</td>
<td>40.0</td>
<td>-0.022661</td>
<td>0.874530</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>-0.876010</td>
<td>1.357100</td>
<td>35.0</td>
<td>-0.029232</td>
<td>0.877800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>-0.760080</td>
<td>1.292700</td>
<td>30.0</td>
<td>-0.058116</td>
<td>0.892200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.5</td>
<td>-0.532410</td>
<td>1.142500</td>
<td>25.0</td>
<td>-0.111010</td>
<td>0.918720</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.523520</td>
<td>1.142800</td>
<td>20.0</td>
<td>-0.054790</td>
<td>1.214300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.563340</td>
<td>1.160300</td>
<td>15.0</td>
<td>-0.040120</td>
<td>1.071300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.583610</td>
<td>1.172100</td>
<td>10.0</td>
<td>-0.056587</td>
<td>0.891440</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td>-0.681410</td>
<td>1.230500</td>
<td>5.0</td>
<td>0.293710</td>
<td>0.718250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td>-0.670480</td>
<td>1.223800</td>
<td>5.0</td>
<td>0.355480</td>
<td>0.687480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>-0.720240</td>
<td>1.254600</td>
<td>2.0</td>
<td>0.382840</td>
<td>0.673760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52.4</td>
<td>-0.709440</td>
<td>1.247800</td>
<td>2.0</td>
<td>0.382840</td>
<td>0.673760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td>-0.714780</td>
<td>1.251200</td>
<td>2.0</td>
<td>0.382840</td>
<td>0.673760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.484650</td>
<td>1.115600</td>
<td>1.0</td>
<td>0.423660</td>
<td>0.653150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.481390</td>
<td>1.347000</td>
<td>1.0</td>
<td>0.423660</td>
<td>0.653150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.362280</td>
<td>1.048700</td>
<td>1.0</td>
<td>0.653150</td>
<td>0.653150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.195590</td>
<td>0.961640</td>
<td>1.0</td>
<td>0.653150</td>
<td>0.653150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.074493</td>
<td>0.900390</td>
<td>1.0</td>
<td>0.653150</td>
<td>0.653150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WBL 470**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>-0.861390</td>
<td>1.347000</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>-0.475890</td>
<td>1.110700</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>-0.585100</td>
<td>1.172900</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>-0.711460</td>
<td>1.249100</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>-0.742980</td>
<td>1.268900</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>-0.714780</td>
<td>1.251200</td>
<td></td>
</tr>
<tr>
<td>6.5</td>
<td>-0.484650</td>
<td>1.115600</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>-0.362280</td>
<td>1.048700</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-0.195590</td>
<td>0.961640</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>-0.074493</td>
<td>0.900390</td>
<td></td>
</tr>
</tbody>
</table>

**WBL 510**

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.152580</td>
<td>0.939730</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>-0.352420</td>
<td>1.043500</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>-0.422480</td>
<td>1.081300</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>-0.699420</td>
<td>1.235400</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>-0.729190</td>
<td>1.267400</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>-0.729470</td>
<td>1.257400</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>-0.725030</td>
<td>1.254700</td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>-0.720380</td>
<td>1.254700</td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>-0.510910</td>
<td>1.130300</td>
<td></td>
</tr>
<tr>
<td>22.5</td>
<td>-0.522430</td>
<td>1.136900</td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.573230</td>
<td>1.160000</td>
<td></td>
</tr>
<tr>
<td>27.5</td>
<td>-0.580340</td>
<td>1.174900</td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.591260</td>
<td>1.176500</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.609690</td>
<td>1.187400</td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td>-0.674440</td>
<td>1.234200</td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td>-0.722670</td>
<td>1.256100</td>
<td></td>
</tr>
<tr>
<td>47.5</td>
<td>-0.722510</td>
<td>1.256000</td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>-0.746580</td>
<td>1.272500</td>
<td></td>
</tr>
<tr>
<td>52.4</td>
<td>-0.770490</td>
<td>1.286500</td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td>-0.796220</td>
<td>1.303300</td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.849380</td>
<td>1.338800</td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.845490</td>
<td>1.338200</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.310170</td>
<td>1.021100</td>
<td></td>
</tr>
<tr>
<td>X/C (%)</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td>X/C (%)</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>1.7</td>
<td>0.194850</td>
<td>0.767120</td>
<td>78.7</td>
</tr>
<tr>
<td>3.3</td>
<td>0.169450</td>
<td>0.779630</td>
<td>65.1</td>
</tr>
<tr>
<td>5.1</td>
<td>0.075842</td>
<td>0.825700</td>
<td>47.6</td>
</tr>
<tr>
<td>7.5</td>
<td>0.307200</td>
<td>0.711540</td>
<td>34.9</td>
</tr>
<tr>
<td>10.0</td>
<td>0.441100</td>
<td>0.644280</td>
<td>29.6</td>
</tr>
<tr>
<td>12.8</td>
<td>0.429720</td>
<td>0.650070</td>
<td>26.1</td>
</tr>
<tr>
<td>15.0</td>
<td>0.237600</td>
<td>0.745900</td>
<td>21.4</td>
</tr>
<tr>
<td>21.4</td>
<td>-0.119800</td>
<td>0.923150</td>
<td>7.5</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.277020</td>
<td>1.003700</td>
<td>5.1</td>
</tr>
<tr>
<td>29.6</td>
<td>-0.400250</td>
<td>1.069200</td>
<td>3.3</td>
</tr>
<tr>
<td>33.9</td>
<td>-0.159920</td>
<td>0.943450</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Table B.5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1 (Continued)**

**COND. 1.00.137.001.1**

### Outboard Surface

<table>
<thead>
<tr>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>-0.025014</td>
<td>0.875700</td>
<td>90.0</td>
<td>0.088895</td>
<td>0.819320</td>
</tr>
<tr>
<td>12.3</td>
<td>-0.027447</td>
<td>0.876910</td>
<td>82.8</td>
<td>0.109490</td>
<td>0.809170</td>
</tr>
<tr>
<td>21.5</td>
<td>0.143600</td>
<td>0.792480</td>
<td>75.9</td>
<td>0.054394</td>
<td>0.836340</td>
</tr>
<tr>
<td>39.3</td>
<td>0.167800</td>
<td>0.780370</td>
<td>67.2</td>
<td>0.041190</td>
<td>0.842870</td>
</tr>
<tr>
<td>48.5</td>
<td>0.024269</td>
<td>0.851240</td>
<td>62.0</td>
<td>-0.056145</td>
<td>0.906510</td>
</tr>
<tr>
<td>53.8</td>
<td>-0.168840</td>
<td>0.947980</td>
<td>57.2</td>
<td>-0.174970</td>
<td>0.951110</td>
</tr>
<tr>
<td>57.2</td>
<td>****</td>
<td>****</td>
<td>48.5</td>
<td>-0.169580</td>
<td>0.948360</td>
</tr>
<tr>
<td>62.0</td>
<td>-0.037240</td>
<td>1.203800</td>
<td>39.3</td>
<td>-0.057260</td>
<td>0.891770</td>
</tr>
<tr>
<td>67.2</td>
<td>-0.177600</td>
<td>0.952470</td>
<td>30.4</td>
<td>0.010574</td>
<td>0.858030</td>
</tr>
<tr>
<td>75.9</td>
<td>0.016645</td>
<td>0.855020</td>
<td>21.5</td>
<td>0.060459</td>
<td>0.835350</td>
</tr>
<tr>
<td>82.8</td>
<td>0.042535</td>
<td>0.842210</td>
<td>12.3</td>
<td>-0.158300</td>
<td>0.942650</td>
</tr>
<tr>
<td>90.0</td>
<td>0.059533</td>
<td>0.833810</td>
<td>7.5</td>
<td>-0.301080</td>
<td>1.016300</td>
</tr>
<tr>
<td>99.4</td>
<td>-0.004322</td>
<td>0.865420</td>
<td>5.1</td>
<td>-0.267360</td>
<td>0.998650</td>
</tr>
</tbody>
</table>

**COND. 1.00.137.001.1**

### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.391190</td>
<td>0.695600</td>
<td>0.363520</td>
<td>1.049400</td>
<td></td>
</tr>
<tr>
<td>24.0</td>
<td>-0.042404</td>
<td>0.884360</td>
<td>58.2</td>
<td>-0.427490</td>
<td>1.084000</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.133750</td>
<td>0.930200</td>
<td>62.7</td>
<td>-0.517430</td>
<td>1.134000</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.264500</td>
<td>0.997170</td>
<td>64.9</td>
<td>-0.462750</td>
<td>1.103400</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.007193</td>
<td>0.865840</td>
<td>68.1</td>
<td>-0.490570</td>
<td>1.118900</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.215360</td>
<td>0.971770</td>
<td>69.1</td>
<td>-0.440750</td>
<td>1.093000</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.211440</td>
<td>0.969760</td>
<td>70.2</td>
<td>-0.389990</td>
<td>1.063600</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.363520</td>
<td>1.049400</td>
<td>74.0</td>
<td>-0.472930</td>
<td>1.109100</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.427490</td>
<td>1.084000</td>
<td>77.4</td>
<td>-0.497000</td>
<td>1.122500</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.517430</td>
<td>1.134000</td>
<td>80.8</td>
<td>-0.363580</td>
<td>1.049500</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.462750</td>
<td>1.103400</td>
<td>83.8</td>
<td>-0.324950</td>
<td>0.928900</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.490570</td>
<td>1.118900</td>
<td>86.7</td>
<td>-0.344700</td>
<td>1.093000</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.389990</td>
<td>1.063600</td>
<td>90.1</td>
<td>-0.186310</td>
<td>0.956890</td>
</tr>
<tr>
<td>92.0</td>
<td>0.030406</td>
<td>0.846900</td>
<td>95.4</td>
<td>0.052636</td>
<td>0.837210</td>
</tr>
<tr>
<td>99.4</td>
<td>0.064323</td>
<td>0.831440</td>
<td>24.0</td>
<td>-0.042404</td>
<td>0.884360</td>
</tr>
</tbody>
</table>

**ENGINE 3WL 180**

**ENGINE 3WL 155**

**ENGINE 3030 deg CORE COWL**
### Table B.5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1 (Continued)

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th></th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.7</td>
<td>0.377880</td>
<td>0.676250</td>
<td></td>
<td>0.4</td>
<td>-0.143770</td>
<td>0.935260</td>
</tr>
<tr>
<td>5.0</td>
<td>0.579960</td>
<td>0.572100</td>
<td></td>
<td>1.1</td>
<td>-0.680650</td>
<td>1.230000</td>
</tr>
<tr>
<td>3.3</td>
<td>0.763570</td>
<td>0.499500</td>
<td></td>
<td>2.7</td>
<td>-0.655640</td>
<td>1.214800</td>
</tr>
<tr>
<td>1.3</td>
<td>***</td>
<td>***</td>
<td></td>
<td>5.8</td>
<td>-0.654900</td>
<td>1.214400</td>
</tr>
<tr>
<td>0.2</td>
<td>***</td>
<td>***</td>
<td></td>
<td>8.8</td>
<td>-0.663250</td>
<td>1.219400</td>
</tr>
<tr>
<td>0.0</td>
<td>1.158500</td>
<td>0.139670</td>
<td></td>
<td>12.5</td>
<td>-0.964720</td>
<td>1.420700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16.7</td>
<td>-0.959930</td>
<td>1.417200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21.1</td>
<td>-1.044000</td>
<td>1.481700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26.1</td>
<td>-0.726350</td>
<td>1.256700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.5</td>
<td>-0.277700</td>
<td>1.004000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45.8</td>
<td>-0.366950</td>
<td>1.051200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.2</td>
<td>-0.173270</td>
<td>0.950240</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64.5</td>
<td>-0.013416</td>
<td>0.869940</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
<td>-0.049930</td>
<td>0.889140</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>82.4</td>
<td>0.089307</td>
<td>0.819120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.033841</td>
<td>0.846510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th></th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.7</td>
<td>0.295610</td>
<td>0.716870</td>
<td></td>
<td>0.4</td>
<td>-0.028420</td>
<td>0.877390</td>
</tr>
<tr>
<td>5.0</td>
<td>0.482400</td>
<td>0.623150</td>
<td></td>
<td>1.1</td>
<td>-0.469850</td>
<td>1.107300</td>
</tr>
<tr>
<td>3.3</td>
<td>0.746840</td>
<td>0.479350</td>
<td></td>
<td>2.8</td>
<td>-0.303310</td>
<td>1.017300</td>
</tr>
<tr>
<td>1.3</td>
<td>1.093400</td>
<td>0.224150</td>
<td></td>
<td>6.1</td>
<td>-0.538790</td>
<td>1.146200</td>
</tr>
<tr>
<td>0.1</td>
<td>***</td>
<td>***</td>
<td></td>
<td>9.0</td>
<td>-0.628850</td>
<td>1.198700</td>
</tr>
<tr>
<td>0.0</td>
<td>***</td>
<td>***</td>
<td></td>
<td>12.9</td>
<td>-0.700920</td>
<td>1.242500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.4</td>
<td>-0.620220</td>
<td>1.193500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22.7</td>
<td>-0.502940</td>
<td>1.125800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
<td>-0.471470</td>
<td>1.108200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34.7</td>
<td>-0.275120</td>
<td>1.002700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46.2</td>
<td>-0.335940</td>
<td>1.034700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>-0.306280</td>
<td>1.020100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64.7</td>
<td>-0.153160</td>
<td>0.940010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.9</td>
<td>-0.105180</td>
<td>0.915780</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>82.4</td>
<td>0.024845</td>
<td>0.850960</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99.6</td>
<td>0.040024</td>
<td>0.843450</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th></th>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>0.245050</td>
<td>0.742340</td>
<td></td>
<td>0.4</td>
<td>0.047612</td>
<td>0.839700</td>
</tr>
<tr>
<td>5.2</td>
<td>0.430400</td>
<td>0.649700</td>
<td></td>
<td>1.2</td>
<td>-0.241830</td>
<td>0.985410</td>
</tr>
<tr>
<td>3.6</td>
<td>0.596500</td>
<td>0.583240</td>
<td></td>
<td>2.9</td>
<td>-0.278720</td>
<td>1.004300</td>
</tr>
<tr>
<td>1.5</td>
<td>0.967010</td>
<td>0.393410</td>
<td></td>
<td>6.2</td>
<td>-0.445490</td>
<td>1.096100</td>
</tr>
<tr>
<td>0.2</td>
<td>***</td>
<td>***</td>
<td></td>
<td>9.4</td>
<td>-0.147200</td>
<td>1.171500</td>
</tr>
<tr>
<td>0.0</td>
<td>1.053400</td>
<td>0.263720</td>
<td></td>
<td>14.5</td>
<td>-0.839260</td>
<td>1.331900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18.2</td>
<td>-0.765790</td>
<td>1.283500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22.7</td>
<td>-0.700270</td>
<td>1.242100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
<td>-0.729390</td>
<td>1.256900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34.5</td>
<td>-0.272880</td>
<td>1.001500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45.7</td>
<td>-0.260390</td>
<td>0.986440</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
<td>-0.213160</td>
<td>0.970650</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>-0.131420</td>
<td>0.929010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.0</td>
<td>-0.106960</td>
<td>0.916680</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>81.3</td>
<td>0.033337</td>
<td>0.844290</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.037813</td>
<td>0.844540</td>
</tr>
</tbody>
</table>
### Table B-5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1 (Continued)

#### ENGINE 3 210 deg INLET RADIAL

**Condition 1.00.137.001.1**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9.3</td>
</tr>
</tbody>
</table>

#### ENGINE 3 270 deg INLET RADIAL

**Condition 1.00.137.001.1**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>93.0</td>
</tr>
</tbody>
</table>

#### ENGINE 3 330 deg INLET RADIAL

**Condition 1.00.137.001.1**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
<th>CP</th>
<th>X/C - %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
</tr>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>0.327320</td>
<td>1.030100</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.661410</td>
<td>1.218300</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>0.790090</td>
<td>1.299300</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>0.865980</td>
<td>1.350100</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-1.065100</td>
<td>1.499500</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>-1.183600</td>
<td>1.601100</td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>-0.915120</td>
<td>1.384600</td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>-0.760970</td>
<td>1.280400</td>
<td></td>
</tr>
<tr>
<td>22.5</td>
<td>-0.747880</td>
<td>1.272000</td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.881020</td>
<td>1.360800</td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.668500</td>
<td>1.222600</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.751970</td>
<td>1.274100</td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td>-0.603690</td>
<td>1.183800</td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td>-0.328160</td>
<td>0.903600</td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>-0.338180</td>
<td>1.035900</td>
<td></td>
</tr>
<tr>
<td>52.4</td>
<td>-0.400030</td>
<td>1.069000</td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td>-0.369110</td>
<td>1.049600</td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.370950</td>
<td>1.053400</td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.320590</td>
<td>1.026000</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.324720</td>
<td>1.028700</td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.243540</td>
<td>0.986290</td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.173800</td>
<td>0.950500</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>0.900550</td>
<td>1.374200</td>
</tr>
<tr>
<td>24.0</td>
<td>0.981500</td>
<td>1.433300</td>
</tr>
<tr>
<td>30.0</td>
<td>0.789250</td>
<td>1.298700</td>
</tr>
<tr>
<td>40.0</td>
<td>0.368210</td>
<td>1.051900</td>
</tr>
<tr>
<td>50.0</td>
<td>0.430580</td>
<td>1.085700</td>
</tr>
<tr>
<td>60.0</td>
<td>0.353860</td>
<td>1.044200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>2.0</td>
<td>0.243540</td>
<td>0.986290</td>
</tr>
<tr>
<td>3.0</td>
<td>0.173800</td>
<td>0.950500</td>
</tr>
<tr>
<td>5.0</td>
<td>0.320590</td>
<td>1.026000</td>
</tr>
<tr>
<td>7.5</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>10.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>15.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>20.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>22.5</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>25.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>30.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>35.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>40.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>45.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>50.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>52.4</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>55.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>60.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>65.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>70.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>75.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
<tr>
<td>80.0</td>
<td>0.324720</td>
<td>1.028700</td>
</tr>
</tbody>
</table>

Table 8-5. Tabulated Data for Test 2/3-12, Condition 1.00.137.001.1 (Continued)
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>0.411200</td>
<td>0.659460</td>
<td>96.4</td>
<td>0.132160</td>
<td>0.797990</td>
</tr>
<tr>
<td>8.7</td>
<td>0.494170</td>
<td>0.617070</td>
<td>81.5</td>
<td>0.097082</td>
<td>0.815280</td>
</tr>
<tr>
<td>10.9</td>
<td>0.501610</td>
<td>0.613230</td>
<td>58.9</td>
<td>0.019438</td>
<td>0.853600</td>
</tr>
<tr>
<td>14.5</td>
<td>0.379350</td>
<td>0.675510</td>
<td>44.2</td>
<td>-0.076189</td>
<td>0.902230</td>
</tr>
<tr>
<td>17.9</td>
<td>0.147280</td>
<td>0.790550</td>
<td>37.7</td>
<td>-0.032985</td>
<td>0.904640</td>
</tr>
<tr>
<td>21.6</td>
<td>0.026942</td>
<td>0.849930</td>
<td>33.7</td>
<td>-0.057013</td>
<td>0.891640</td>
</tr>
<tr>
<td>28.4</td>
<td>-0.183350</td>
<td>0.955370</td>
<td>28.4</td>
<td>0.016275</td>
<td>0.855190</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.449380</td>
<td>1.090000</td>
<td>21.6</td>
<td>0.044451</td>
<td>0.841260</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.585990</td>
<td>1.173400</td>
<td>17.9</td>
<td>0.036337</td>
<td>0.844280</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.328860</td>
<td>1.039090</td>
<td>14.5</td>
<td>-0.051665</td>
<td>0.888970</td>
</tr>
<tr>
<td>58.9</td>
<td>-0.010927</td>
<td>0.868690</td>
<td>10.9</td>
<td>-0.132860</td>
<td>0.925740</td>
</tr>
<tr>
<td>81.5</td>
<td>0.113380</td>
<td>0.807240</td>
<td>6.7</td>
<td>0.143150</td>
<td>0.934940</td>
</tr>
<tr>
<td>96.4</td>
<td>0.163550</td>
<td>0.782540</td>
<td>4.7</td>
<td>-0.055752</td>
<td>0.891010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>-0.151410</td>
<td>0.939130</td>
<td>96.8</td>
<td>0.148610</td>
<td>0.789900</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.157090</td>
<td>0.942000</td>
<td>89.0</td>
<td>0.087925</td>
<td>0.819750</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.181880</td>
<td>0.954620</td>
<td>81.5</td>
<td>0.072864</td>
<td>0.827220</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.182770</td>
<td>0.955070</td>
<td>72.2</td>
<td>0.013538</td>
<td>0.856550</td>
</tr>
<tr>
<td>13.3</td>
<td>-0.024478</td>
<td>0.875430</td>
<td>66.6</td>
<td>-0.117380</td>
<td>0.921920</td>
</tr>
<tr>
<td>23.1</td>
<td>0.184970</td>
<td>0.771980</td>
<td>62.4</td>
<td>-0.231180</td>
<td>0.979110</td>
</tr>
<tr>
<td>33.1</td>
<td>0.358700</td>
<td>0.688680</td>
<td>57.5</td>
<td>-0.244880</td>
<td>0.986990</td>
</tr>
<tr>
<td>43.0</td>
<td>0.188030</td>
<td>0.770470</td>
<td>52.2</td>
<td>-0.153130</td>
<td>0.954000</td>
</tr>
<tr>
<td>52.2</td>
<td>-0.066242</td>
<td>0.896260</td>
<td>43.0</td>
<td>-0.049866</td>
<td>0.888070</td>
</tr>
<tr>
<td>57.7</td>
<td>-0.314890</td>
<td>1.023600</td>
<td>33.1</td>
<td>0.014529</td>
<td>0.855060</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.612280</td>
<td>1.189090</td>
<td>23.1</td>
<td>0.074567</td>
<td>0.826380</td>
</tr>
<tr>
<td>66.6</td>
<td>-0.636190</td>
<td>1.203100</td>
<td>13.3</td>
<td>-0.084786</td>
<td>0.905540</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.052874</td>
<td>0.909600</td>
<td>8.1</td>
<td>-0.273380</td>
<td>1.001800</td>
</tr>
<tr>
<td>81.5</td>
<td>0.042563</td>
<td>0.842180</td>
<td>5.5</td>
<td>-0.222930</td>
<td>0.973560</td>
</tr>
<tr>
<td>89.0</td>
<td>0.012488</td>
<td>0.857070</td>
<td>3.7</td>
<td>-0.208340</td>
<td>0.968160</td>
</tr>
<tr>
<td>96.8</td>
<td>0.164640</td>
<td>0.781990</td>
<td>1.8</td>
<td>-0.185370</td>
<td>0.956400</td>
</tr>
</tbody>
</table>

Table B-5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1 (Continued)
### Table B-5. Tabulated Data for Test 273-12, Condition 1.00.137.001.1 (Concluded)

#### ENGINE 4 060 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>INNER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td>OUTER SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44.1</td>
<td>0.679220</td>
<td>0.518000</td>
<td>2.7</td>
<td>-0.834200</td>
<td>1.328500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.2</td>
<td>0.342840</td>
<td>0.693800</td>
<td>6.1</td>
<td>-0.820000</td>
<td>1.319000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.1</td>
<td>0.342840</td>
<td>0.693800</td>
<td>12.6</td>
<td>-0.900070</td>
<td>1.373900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.6</td>
<td>0.342840</td>
<td>0.693800</td>
<td>17.0</td>
<td>-0.862010</td>
<td>1.347400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.2</td>
<td>0.342840</td>
<td>0.693800</td>
<td>26.3</td>
<td>-0.725820</td>
<td>1.258100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.9</td>
<td>0.412750</td>
<td>0.586700</td>
<td>32.7</td>
<td>-0.569790</td>
<td>1.164000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.746950</td>
<td>0.479290</td>
<td>43.2</td>
<td>-0.235830</td>
<td>0.992310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.817670</td>
<td>0.436720</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ENGINE 4 180 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>INNER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td>OUTER SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.5</td>
<td>0.687850</td>
<td>0.513160</td>
<td>6.2</td>
<td>-0.524910</td>
<td>1.138300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.7</td>
<td>0.503200</td>
<td>0.512410</td>
<td>9.5</td>
<td>-0.564500</td>
<td>1.161000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.4</td>
<td>0.279880</td>
<td>0.725120</td>
<td>13.2</td>
<td>-0.593390</td>
<td>1.181300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.8</td>
<td>0.234320</td>
<td>0.747650</td>
<td>17.8</td>
<td>-0.616890</td>
<td>1.191600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.1</td>
<td>0.112710</td>
<td>0.807580</td>
<td>27.2</td>
<td>-0.269540</td>
<td>0.999790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>0.280460</td>
<td>0.724580</td>
<td>34.5</td>
<td>-0.648210</td>
<td>1.210300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>0.317750</td>
<td>0.312590</td>
<td>45.5</td>
<td>-0.202660</td>
<td>0.965250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ENGINE 4 300 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>INNER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td>OUTER SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.3</td>
<td>0.680720</td>
<td>0.517160</td>
<td>2.7</td>
<td>-0.775910</td>
<td>1.290000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.2</td>
<td>0.540870</td>
<td>0.592770</td>
<td>5.8</td>
<td>-0.636240</td>
<td>1.203200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.7</td>
<td>0.370770</td>
<td>0.679920</td>
<td>12.7</td>
<td>-0.701600</td>
<td>1.243000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.4</td>
<td>0.271440</td>
<td>0.729290</td>
<td>17.1</td>
<td>-0.723820</td>
<td>1.260000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.9</td>
<td>0.151140</td>
<td>0.788660</td>
<td>26.4</td>
<td>-0.736040</td>
<td>1.264500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.7</td>
<td>0.288490</td>
<td>0.720480</td>
<td>33.0</td>
<td>-0.771700</td>
<td>1.287300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.684810</td>
<td>0.514970</td>
<td>43.3</td>
<td>-0.669410</td>
<td>1.223200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.861020</td>
<td>0.409220</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPPER SURFACE</td>
<td>LOWER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>X/C - %</strong></td>
<td><strong>CP</strong></td>
<td><strong>LOCAL MACH</strong></td>
<td><strong>X/C - %</strong></td>
<td><strong>CP</strong></td>
<td><strong>LOCAL MACH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>-1.174700</td>
<td>1.310400</td>
<td>65.0</td>
<td>-0.023016</td>
<td>0.771490</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>-1.482300</td>
<td>1.504600</td>
<td>60.0</td>
<td>-0.018421</td>
<td>0.769540</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>-1.618400</td>
<td>1.606800</td>
<td>55.0</td>
<td>-0.01287</td>
<td>0.767350</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>-1.648200</td>
<td>1.631100</td>
<td>50.0</td>
<td>-0.00238</td>
<td>0.762810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-1.563500</td>
<td>1.509000</td>
<td>45.0</td>
<td>0.000135</td>
<td>0.761650</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>-0.941880</td>
<td>1.185400</td>
<td>40.0</td>
<td>0.011390</td>
<td>0.756860</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>-0.632290</td>
<td>1.036500</td>
<td>35.0</td>
<td>0.026838</td>
<td>0.773110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>-0.668820</td>
<td>1.053300</td>
<td>30.0</td>
<td>0.039609</td>
<td>0.778540</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.5</td>
<td>-0.662730</td>
<td>1.051800</td>
<td>25.0</td>
<td>0.053812</td>
<td>0.784570</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.665460</td>
<td>1.047800</td>
<td>20.0</td>
<td>0.07314</td>
<td>0.784530</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.630940</td>
<td>1.028000</td>
<td>15.0</td>
<td>0.202540</td>
<td>0.674950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.646050</td>
<td>1.005000</td>
<td>10.0</td>
<td>0.481600</td>
<td>0.550010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td>-0.543560</td>
<td>0.996320</td>
<td>5.0</td>
<td>0.541560</td>
<td>0.521540</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td>-0.522360</td>
<td>0.986840</td>
<td>3.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>-0.515100</td>
<td>0.983590</td>
<td>2.0</td>
<td>0.513390</td>
<td>0.535030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.460600</td>
<td>0.960790</td>
<td>1.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.375320</td>
<td>0.922140</td>
<td>1.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.350620</td>
<td>0.892000</td>
<td>1.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.188250</td>
<td>0.841720</td>
<td>1.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.098917</td>
<td>0.803730</td>
<td>1.0</td>
<td>0.564940</td>
<td>0.510280</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8-6. Tabulated Data for Test 273-12, Condition 1.00.137.002
### ENGINE 3WL 180

**COND. 1.00.137.002**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>0.119990</td>
<td>0.710510</td>
<td>78.7</td>
<td>0.022723</td>
<td>0.752040</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>0.092872</td>
<td>0.722120</td>
<td>65.1</td>
<td>0.104050</td>
<td>0.718880</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>0.221770</td>
<td>0.666000</td>
<td>47.6</td>
<td>0.162530</td>
<td>0.692220</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>0.268080</td>
<td>0.646370</td>
<td>34.9</td>
<td>0.129270</td>
<td>0.706530</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>0.311660</td>
<td>0.555840</td>
<td>29.6</td>
<td>0.123820</td>
<td>0.708870</td>
<td></td>
</tr>
<tr>
<td>12.8</td>
<td>0.610690</td>
<td>0.487740</td>
<td>26.1</td>
<td>0.149330</td>
<td>0.714400</td>
<td></td>
</tr>
<tr>
<td>16.0</td>
<td>0.500890</td>
<td>0.540930</td>
<td>21.4</td>
<td>0.134630</td>
<td>0.704430</td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td>0.166710</td>
<td>0.690430</td>
<td>16.0</td>
<td>-0.098617</td>
<td>0.803600</td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td>0.022785</td>
<td>0.752020</td>
<td>12.8</td>
<td>-0.112670</td>
<td>0.809500</td>
<td></td>
</tr>
<tr>
<td>29.6</td>
<td>0.019428</td>
<td>0.753440</td>
<td>10.0</td>
<td>-0.089867</td>
<td>0.799830</td>
<td></td>
</tr>
<tr>
<td>34.9</td>
<td>0.046659</td>
<td>0.741850</td>
<td>7.5</td>
<td>-0.089391</td>
<td>0.799790</td>
<td></td>
</tr>
<tr>
<td>47.6</td>
<td>0.030199</td>
<td>0.748860</td>
<td>5.1</td>
<td>-0.089679</td>
<td>0.777150</td>
<td></td>
</tr>
<tr>
<td>65.1</td>
<td>-0.136450</td>
<td>0.703450</td>
<td>3.3</td>
<td>-0.036360</td>
<td>0.804950</td>
<td></td>
</tr>
<tr>
<td>78.7</td>
<td>0.097242</td>
<td>0.720250</td>
<td>1.7</td>
<td>-0.101840</td>
<td>0.804950</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3WL 155

**COND. 1.00.137.002**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>0.077332</td>
<td>0.729760</td>
<td>90.0</td>
<td>0.138700</td>
<td>0.702480</td>
<td></td>
</tr>
<tr>
<td>12.3</td>
<td>0.080273</td>
<td>0.727500</td>
<td>82.8</td>
<td>0.148210</td>
<td>0.698400</td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>0.234660</td>
<td>0.661070</td>
<td>75.9</td>
<td>0.110270</td>
<td>0.714670</td>
<td></td>
</tr>
<tr>
<td>30.4</td>
<td>0.371800</td>
<td>0.600320</td>
<td>71.7</td>
<td>0.115030</td>
<td>0.712630</td>
<td></td>
</tr>
<tr>
<td>39.3</td>
<td>0.309630</td>
<td>0.628070</td>
<td>67.2</td>
<td>0.265730</td>
<td>0.750430</td>
<td></td>
</tr>
<tr>
<td>48.5</td>
<td>0.204090</td>
<td>0.674270</td>
<td>67.2</td>
<td>-0.022070</td>
<td>0.771070</td>
<td></td>
</tr>
<tr>
<td>53.8</td>
<td>0.027839</td>
<td>0.749860</td>
<td>53.8</td>
<td>-0.005914</td>
<td>0.764220</td>
<td></td>
</tr>
<tr>
<td>57.2</td>
<td>-****</td>
<td>-****</td>
<td>48.5</td>
<td>-0.075255</td>
<td>0.793670</td>
<td></td>
</tr>
<tr>
<td>62.0</td>
<td>-0.102050</td>
<td>0.805050</td>
<td>39.3</td>
<td>-0.058400</td>
<td>0.786520</td>
<td></td>
</tr>
<tr>
<td>67.2</td>
<td>-0.042492</td>
<td>0.779760</td>
<td>30.4</td>
<td>-0.128718</td>
<td>0.773910</td>
<td></td>
</tr>
<tr>
<td>75.9</td>
<td>0.029771</td>
<td>0.749030</td>
<td>21.5</td>
<td>-0.037005</td>
<td>0.745620</td>
<td></td>
</tr>
<tr>
<td>82.8</td>
<td>0.053541</td>
<td>0.738910</td>
<td>12.3</td>
<td>-0.142140</td>
<td>0.822090</td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td>0.083608</td>
<td>0.726080</td>
<td>7.5</td>
<td>-0.287140</td>
<td>0.884040</td>
<td></td>
</tr>
<tr>
<td>91.1</td>
<td>-0.030230</td>
<td>0.890560</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3030 deg CORE COWL

**COND. 1.00.137.002**

<table>
<thead>
<tr>
<th>OUTBOARD SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>0.258430</td>
<td>0.650610</td>
<td></td>
</tr>
<tr>
<td>24.0</td>
<td>-0.012016</td>
<td>0.766810</td>
<td></td>
</tr>
<tr>
<td>29.2</td>
<td>-0.224710</td>
<td>0.857230</td>
<td></td>
</tr>
<tr>
<td>37.9</td>
<td>-0.260510</td>
<td>0.872600</td>
<td></td>
</tr>
<tr>
<td>44.7</td>
<td>-0.025260</td>
<td>0.772440</td>
<td></td>
</tr>
<tr>
<td>49.9</td>
<td>-0.365840</td>
<td>0.918020</td>
<td></td>
</tr>
<tr>
<td>53.1</td>
<td>-0.073429</td>
<td>0.792890</td>
<td></td>
</tr>
<tr>
<td>57.0</td>
<td>-0.475730</td>
<td>0.967900</td>
<td></td>
</tr>
<tr>
<td>58.2</td>
<td>-0.343520</td>
<td>0.909320</td>
<td></td>
</tr>
<tr>
<td>62.7</td>
<td>-0.383090</td>
<td>0.925510</td>
<td></td>
</tr>
<tr>
<td>64.9</td>
<td>-0.555610</td>
<td>1.001700</td>
<td></td>
</tr>
<tr>
<td>68.1</td>
<td>-0.317440</td>
<td>0.897080</td>
<td></td>
</tr>
<tr>
<td>69.1</td>
<td>-0.074118</td>
<td>0.793200</td>
<td></td>
</tr>
<tr>
<td>70.2</td>
<td>-0.091740</td>
<td>0.800070</td>
<td></td>
</tr>
<tr>
<td>74.0</td>
<td>-0.127140</td>
<td>0.815710</td>
<td></td>
</tr>
<tr>
<td>77.4</td>
<td>-0.326050</td>
<td>0.906800</td>
<td></td>
</tr>
<tr>
<td>80.8</td>
<td>-0.233180</td>
<td>0.860900</td>
<td></td>
</tr>
<tr>
<td>83.8</td>
<td>-0.335530</td>
<td>0.904890</td>
<td></td>
</tr>
<tr>
<td>86.7</td>
<td>-0.222780</td>
<td>0.858060</td>
<td></td>
</tr>
<tr>
<td>90.1</td>
<td>-0.171920</td>
<td>0.834770</td>
<td></td>
</tr>
<tr>
<td>92.0</td>
<td>-0.084756</td>
<td>0.797700</td>
<td></td>
</tr>
<tr>
<td>95.4</td>
<td>-0.106200</td>
<td>0.715630</td>
<td></td>
</tr>
<tr>
<td>99.4</td>
<td>0.046539</td>
<td>0.741900</td>
<td></td>
</tr>
</tbody>
</table>

Table 8-6. Tabulated Data for Test 273-12, Condition 1.00.137.002 (Continued)
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>0.346580</td>
<td>0.612100</td>
<td>0.4</td>
<td>-0.477080</td>
<td>0.966730</td>
</tr>
<tr>
<td>5.0</td>
<td>0.598260</td>
<td>0.493930</td>
<td>1.1</td>
<td>-1.096700</td>
<td>1.266900</td>
</tr>
<tr>
<td>3.3</td>
<td>0.797070</td>
<td>0.388000</td>
<td>2.7</td>
<td>-1.064700</td>
<td>1.249500</td>
</tr>
<tr>
<td>1.3</td>
<td>****</td>
<td>****</td>
<td>5.8</td>
<td>-0.862380</td>
<td>1.145600</td>
</tr>
<tr>
<td>0.2</td>
<td>****</td>
<td>****</td>
<td>8.8</td>
<td>-0.862960</td>
<td>1.145900</td>
</tr>
<tr>
<td>0.0</td>
<td>1.121800</td>
<td>0.112830</td>
<td>12.5</td>
<td>-0.771430</td>
<td>1.101500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16.7</td>
<td>-0.633110</td>
<td>0.103690</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.1</td>
<td>-0.482290</td>
<td>0.969030</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.1</td>
<td>-0.342740</td>
<td>0.908010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.5</td>
<td>-0.357920</td>
<td>0.914880</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.6</td>
<td>-0.324430</td>
<td>0.900100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.2</td>
<td>-0.115320</td>
<td>0.810950</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.5</td>
<td>-0.018005</td>
<td>0.769360</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
<td>0.003964</td>
<td>0.760020</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.4</td>
<td>0.138150</td>
<td>0.702730</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.047249</td>
<td>0.741600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>0.111350</td>
<td>0.714220</td>
<td>0.4</td>
<td>0.220450</td>
<td>0.667190</td>
</tr>
<tr>
<td>5.0</td>
<td>0.294360</td>
<td>0.634820</td>
<td>1.1</td>
<td>-0.160870</td>
<td>0.830110</td>
</tr>
<tr>
<td>3.3</td>
<td>0.522840</td>
<td>0.530540</td>
<td>2.7</td>
<td>0.229970</td>
<td>0.859540</td>
</tr>
<tr>
<td>1.3</td>
<td>0.990770</td>
<td>0.257520</td>
<td>9.0</td>
<td>-0.390680</td>
<td>0.928200</td>
</tr>
<tr>
<td>0.1</td>
<td>****</td>
<td>****</td>
<td>12.9</td>
<td>-0.468520</td>
<td>0.962940</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td>17.4</td>
<td>-0.297280</td>
<td>0.884000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.7</td>
<td>-0.187140</td>
<td>0.841250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
<td>-0.225150</td>
<td>0.858760</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.7</td>
<td>-0.227710</td>
<td>0.858570</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>46.2</td>
<td>-0.246000</td>
<td>0.866400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
<td>-0.205570</td>
<td>0.849120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.7</td>
<td>-0.082567</td>
<td>0.799210</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.9</td>
<td>-0.048913</td>
<td>0.782490</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.4</td>
<td>0.054221</td>
<td>0.738630</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.6</td>
<td>0.054313</td>
<td>0.738510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>-0.042274</td>
<td>0.779670</td>
<td>0.4</td>
<td>0.438460</td>
<td>0.570010</td>
</tr>
<tr>
<td>5.2</td>
<td>0.130500</td>
<td>0.706000</td>
<td>1.2</td>
<td>0.159270</td>
<td>0.693640</td>
</tr>
<tr>
<td>3.6</td>
<td>0.254180</td>
<td>0.652170</td>
<td>2.9</td>
<td>-0.010334</td>
<td>0.765100</td>
</tr>
<tr>
<td>1.5</td>
<td>0.701410</td>
<td>0.441070</td>
<td>6.2</td>
<td>-0.158150</td>
<td>0.829910</td>
</tr>
<tr>
<td>0.2</td>
<td>****</td>
<td>****</td>
<td>9.4</td>
<td>-0.240120</td>
<td>0.857730</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td>14.5</td>
<td>-0.284550</td>
<td>0.829330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18.2</td>
<td>-0.275700</td>
<td>0.879120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.7</td>
<td>-0.179390</td>
<td>0.837960</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
<td>-0.227960</td>
<td>0.858680</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.5</td>
<td>-0.171560</td>
<td>0.834620</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.7</td>
<td>-0.151820</td>
<td>0.826220</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
<td>-0.114340</td>
<td>0.810280</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>-0.054874</td>
<td>0.785020</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.0</td>
<td>-0.040106</td>
<td>0.778750</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.3</td>
<td>0.052094</td>
<td>0.735330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.055731</td>
<td>0.737930</td>
</tr>
</tbody>
</table>

Table B-6. Tabulated Data for Test 273-12, Condition 1.00.137.002 (Continued)
### Table B-6. Tabulated Data for Test 273-12, Condition 1.00.137.002 (Continued)

<table>
<thead>
<tr>
<th>ENGINE 3210 deg INLET RADIAL</th>
<th>CONDITION 1.00.137.002</th>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>8.2</td>
<td>0.014127</td>
<td>0.755690</td>
<td>0.5</td>
<td>-0.554100</td>
<td>0.515540</td>
</tr>
<tr>
<td>5.2</td>
<td>0.294140</td>
<td>0.634920</td>
<td>1.2</td>
<td>-0.001699</td>
<td>0.760980</td>
</tr>
<tr>
<td>3.6</td>
<td>0.532500</td>
<td>0.525920</td>
<td>2.9</td>
<td>-0.128340</td>
<td>0.816230</td>
</tr>
<tr>
<td>1.5</td>
<td>0.978740</td>
<td>0.267150</td>
<td>6.2</td>
<td>-0.415910</td>
<td>0.939840</td>
</tr>
<tr>
<td>0.3</td>
<td>****</td>
<td>****</td>
<td>9.3</td>
<td>-0.440450</td>
<td>0.950580</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td>14.4</td>
<td>-0.409700</td>
<td>0.937120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 3270 deg INLET RADIAL</th>
<th>CONDITION 1.00.137.002</th>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>8.1</td>
<td>0.227060</td>
<td>0.664300</td>
<td>0.4</td>
<td>-0.033563</td>
<td>0.775970</td>
</tr>
<tr>
<td>5.5</td>
<td>0.458780</td>
<td>0.560640</td>
<td>1.0</td>
<td>-0.648280</td>
<td>1.043800</td>
</tr>
<tr>
<td>3.7</td>
<td>0.669730</td>
<td>0.457710</td>
<td>2.7</td>
<td>-0.553300</td>
<td>1.001600</td>
</tr>
<tr>
<td>1.3</td>
<td>****</td>
<td>****</td>
<td>6.2</td>
<td>-1.057900</td>
<td>1.245900</td>
</tr>
<tr>
<td>0.1</td>
<td>****</td>
<td>****</td>
<td>9.0</td>
<td>-0.708320</td>
<td>1.100000</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td>12.8</td>
<td>-0.686780</td>
<td>1.061700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.2</td>
<td>-0.388600</td>
<td>0.927920</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.7</td>
<td>-0.305600</td>
<td>0.819180</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25.6</td>
<td>-0.297620</td>
<td>0.885500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.8</td>
<td>-0.249890</td>
<td>0.860600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.2</td>
<td>-0.304300</td>
<td>0.893200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>56.6</td>
<td>-0.331550</td>
<td>0.903170</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>-0.208240</td>
<td>0.850260</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.1</td>
<td>-0.168040</td>
<td>0.533120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.5</td>
<td>-0.030297</td>
<td>0.774580</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.0</td>
<td>-0.052961</td>
<td>0.739160</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 3330 deg INLET RADIAL</th>
<th>CONDITION 1.00.137.002</th>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>7.5</td>
<td>0.437540</td>
<td>0.570410</td>
<td>0.4</td>
<td>-0.386300</td>
<td>0.927170</td>
</tr>
<tr>
<td>4.8</td>
<td>0.631470</td>
<td>0.477310</td>
<td>1.1</td>
<td>-1.197400</td>
<td>1.323500</td>
</tr>
<tr>
<td>3.2</td>
<td>0.879380</td>
<td>0.337600</td>
<td>2.7</td>
<td>-1.104200</td>
<td>1.271000</td>
</tr>
<tr>
<td>1.2</td>
<td>****</td>
<td>****</td>
<td>5.8</td>
<td>-1.184500</td>
<td>1.316000</td>
</tr>
<tr>
<td>0.2</td>
<td>****</td>
<td>****</td>
<td>8.8</td>
<td>-1.277200</td>
<td>1.370500</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
<td>****</td>
<td>12.6</td>
<td>-0.700060</td>
<td>1.067800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.8</td>
<td>-0.386100</td>
<td>0.926300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.4</td>
<td>-0.354470</td>
<td>0.913050</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25.1</td>
<td>-0.394600</td>
<td>0.930570</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.7</td>
<td>-0.253090</td>
<td>0.869430</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.4</td>
<td>-0.257950</td>
<td>0.871510</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
<td>-0.282200</td>
<td>0.831920</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64.5</td>
<td>-0.182710</td>
<td>0.839370</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
<td>-0.107680</td>
<td>0.807450</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82.7</td>
<td>-0.014124</td>
<td>0.755700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>-0.044640</td>
<td>0.742710</td>
</tr>
</tbody>
</table>
### Upper Surface

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-1.363600</td>
<td>1.424600</td>
</tr>
<tr>
<td>2.0</td>
<td>-1.409500</td>
<td>1.454700</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.473800</td>
<td>1.498600</td>
</tr>
<tr>
<td>4.0</td>
<td>-1.496200</td>
<td>1.514400</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.296300</td>
<td>1.382300</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.130500</td>
<td>1.285500</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.933410</td>
<td>1.181100</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.747260</td>
<td>1.090000</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.384970</td>
<td>0.926340</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.602460</td>
<td>1.022900</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.502860</td>
<td>0.978160</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.536620</td>
<td>0.993200</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.500730</td>
<td>0.977200</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.542010</td>
<td>0.995610</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.514860</td>
<td>0.983490</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.509550</td>
<td>0.981130</td>
</tr>
<tr>
<td>52.5</td>
<td>-0.469200</td>
<td>0.963290</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.429430</td>
<td>0.945750</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.349040</td>
<td>0.910730</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.326430</td>
<td>0.900950</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.255000</td>
<td>0.870240</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.188720</td>
<td>0.841930</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.141300</td>
<td>0.806240</td>
</tr>
</tbody>
</table>

### Cond. 1.00.137.002

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.0</td>
<td>-0.866970</td>
<td>1.148800</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.671660</td>
<td>1.054800</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.589290</td>
<td>1.016500</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.574490</td>
<td>1.010200</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.512280</td>
<td>0.982330</td>
</tr>
</tbody>
</table>

### Upper Surface

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.557630</td>
<td>0.939050</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.583110</td>
<td>1.014100</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.673330</td>
<td>1.055400</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.837340</td>
<td>1.133300</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.070900</td>
<td>1.252900</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.167300</td>
<td>1.306200</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.740000</td>
<td>1.083000</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.745230</td>
<td>1.089100</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.657700</td>
<td>1.048200</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.502390</td>
<td>1.022900</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.537810</td>
<td>0.939300</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.561712</td>
<td>1.006900</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.535180</td>
<td>0.992500</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.525750</td>
<td>0.983300</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.515340</td>
<td>0.983700</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.534630</td>
<td>0.992310</td>
</tr>
<tr>
<td>52.5</td>
<td>-0.485890</td>
<td>0.970630</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.474470</td>
<td>0.965570</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.408860</td>
<td>0.936750</td>
</tr>
</tbody>
</table>

### Lower Surface

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.0</td>
<td>-0.326860</td>
<td>0.901140</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.280380</td>
<td>0.881130</td>
</tr>
</tbody>
</table>

**Table B-6. Tabulated Data for Test 273-12, Condition 1.00.137.002** (Continued)
### Table B-6. Tabulated Data for Test 273-12, Condition 1.00.137.002 (Continued)

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>6.7</td>
<td>0.474980</td>
<td>0.553090</td>
<td>96.4</td>
</tr>
<tr>
<td>8.7</td>
<td>0.607320</td>
<td>0.499420</td>
<td>81.5</td>
</tr>
<tr>
<td>10.9</td>
<td>0.682740</td>
<td>0.450920</td>
<td>58.9</td>
</tr>
<tr>
<td>14.5</td>
<td>0.582820</td>
<td>0.501540</td>
<td>44.2</td>
</tr>
<tr>
<td>17.9</td>
<td>0.347090</td>
<td>0.611410</td>
<td>37.7</td>
</tr>
<tr>
<td>21.6</td>
<td>0.260110</td>
<td>0.649870</td>
<td>33.7</td>
</tr>
<tr>
<td>28.4</td>
<td>0.002351</td>
<td>0.760700</td>
<td>28.4</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.162500</td>
<td>0.830760</td>
<td>21.6</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.191060</td>
<td>0.842920</td>
<td>17.9</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.188000</td>
<td>0.841620</td>
<td>14.5</td>
</tr>
<tr>
<td>58.9</td>
<td>0.020630</td>
<td>0.752920</td>
<td>10.9</td>
</tr>
<tr>
<td>81.5</td>
<td>0.148530</td>
<td>0.698260</td>
<td>6.7</td>
</tr>
<tr>
<td>96.4</td>
<td>0.176590</td>
<td>0.686160</td>
<td>4.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.8</td>
<td>-0.170190</td>
<td>0.834040</td>
<td>96.8</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.169010</td>
<td>0.833540</td>
<td>89.0</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.185630</td>
<td>0.840610</td>
<td>81.5</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.132160</td>
<td>0.817850</td>
<td>72.2</td>
</tr>
<tr>
<td>13.3</td>
<td>0.029327</td>
<td>0.749220</td>
<td>66.6</td>
</tr>
<tr>
<td>23.1</td>
<td>0.236800</td>
<td>0.660020</td>
<td>62.4</td>
</tr>
<tr>
<td>33.1</td>
<td>0.444250</td>
<td>0.567340</td>
<td>57.5</td>
</tr>
<tr>
<td>43.0</td>
<td>0.322780</td>
<td>0.622200</td>
<td>52.2</td>
</tr>
<tr>
<td>52.2</td>
<td>0.073823</td>
<td>0.730260</td>
<td>43.0</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.141700</td>
<td>0.821900</td>
<td>33.1</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.241940</td>
<td>0.864650</td>
<td>23.1</td>
</tr>
<tr>
<td>66.6</td>
<td>-0.134540</td>
<td>0.818870</td>
<td>13.3</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.066185</td>
<td>0.789820</td>
<td>8.1</td>
</tr>
<tr>
<td>81.5</td>
<td>0.033317</td>
<td>0.747530</td>
<td>5.5</td>
</tr>
<tr>
<td>98.0</td>
<td>0.059815</td>
<td>0.737520</td>
<td>3.7</td>
</tr>
<tr>
<td>98.8</td>
<td>0.179200</td>
<td>0.685030</td>
<td>1.8</td>
</tr>
<tr>
<td>ENGINE 4060 deg INLET RADIAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COND. 1.00.137.002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INNER SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X/C - %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44.1</td>
<td>0.580570</td>
<td>0.502650</td>
<td></td>
</tr>
<tr>
<td>32.2</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>23.2</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>16.6</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>10.2</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>4.9</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.678040</td>
<td>0.671460</td>
<td></td>
</tr>
<tr>
<td>OUTER SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X/C - %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>-1.079200</td>
<td>1.257400</td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>-0.801180</td>
<td>1.115800</td>
<td></td>
</tr>
<tr>
<td>12.6</td>
<td>-0.550940</td>
<td>0.995630</td>
<td></td>
</tr>
<tr>
<td>17.0</td>
<td>-0.540720</td>
<td>0.995630</td>
<td></td>
</tr>
<tr>
<td>26.3</td>
<td>-0.305990</td>
<td>0.899830</td>
<td></td>
</tr>
<tr>
<td>32.7</td>
<td>-0.324690</td>
<td>0.903570</td>
<td></td>
</tr>
<tr>
<td>43.2</td>
<td>-0.263880</td>
<td>0.874050</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 4180 deg INLET RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COND. 1.00.137.002</td>
</tr>
<tr>
<td>INNER SURFACE</td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>42.5</td>
</tr>
<tr>
<td>31.7</td>
</tr>
<tr>
<td>24.4</td>
</tr>
<tr>
<td>17.8</td>
</tr>
<tr>
<td>11.1</td>
</tr>
<tr>
<td>5.5</td>
</tr>
<tr>
<td>2.4</td>
</tr>
<tr>
<td>0.0</td>
</tr>
<tr>
<td>OUTER SURFACE</td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>6.2</td>
</tr>
<tr>
<td>9.5</td>
</tr>
<tr>
<td>13.2</td>
</tr>
<tr>
<td>17.8</td>
</tr>
<tr>
<td>27.2</td>
</tr>
<tr>
<td>34.5</td>
</tr>
<tr>
<td>45.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 4300 deg INLET RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COND. 1.00.137.002</td>
</tr>
<tr>
<td>INNER SURFACE</td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>42.3</td>
</tr>
<tr>
<td>32.2</td>
</tr>
<tr>
<td>22.7</td>
</tr>
<tr>
<td>16.4</td>
</tr>
<tr>
<td>9.9</td>
</tr>
<tr>
<td>4.7</td>
</tr>
<tr>
<td>2.0</td>
</tr>
<tr>
<td>0.0</td>
</tr>
<tr>
<td>OUTER SURFACE</td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>2.7</td>
</tr>
<tr>
<td>5.8</td>
</tr>
<tr>
<td>12.7</td>
</tr>
<tr>
<td>17.1</td>
</tr>
<tr>
<td>25.4</td>
</tr>
<tr>
<td>32.0</td>
</tr>
<tr>
<td>43.3</td>
</tr>
</tbody>
</table>

Table B-6. Tabulated Data for Test 273-12, Condition 1.00.137.002 (Concluded)
### Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>-0.849040</td>
<td>1.210500</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>-1.069900</td>
<td>1.339800</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>-1.251300</td>
<td>1.460300</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>-1.373200</td>
<td>1.551800</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>-1.456000</td>
<td>1.531000</td>
</tr>
<tr>
<td></td>
<td>10.0</td>
<td>-1.263800</td>
<td>1.469300</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>-0.626520</td>
<td>1.093500</td>
</tr>
<tr>
<td></td>
<td>20.0</td>
<td>-0.483720</td>
<td>1.023100</td>
</tr>
<tr>
<td></td>
<td>22.5</td>
<td>-0.512520</td>
<td>1.037000</td>
</tr>
<tr>
<td></td>
<td>25.0</td>
<td>-0.536870</td>
<td>1.048900</td>
</tr>
<tr>
<td></td>
<td>30.0</td>
<td>-0.605280</td>
<td>1.082800</td>
</tr>
<tr>
<td></td>
<td>35.0</td>
<td>-0.674370</td>
<td>1.117800</td>
</tr>
<tr>
<td></td>
<td>40.0</td>
<td>-0.760550</td>
<td>1.162700</td>
</tr>
<tr>
<td></td>
<td>45.0</td>
<td>-0.624510</td>
<td>1.092400</td>
</tr>
<tr>
<td></td>
<td>50.0</td>
<td>-0.583580</td>
<td>1.072000</td>
</tr>
<tr>
<td></td>
<td>52.4</td>
<td>-0.546210</td>
<td>1.053500</td>
</tr>
<tr>
<td></td>
<td>55.0</td>
<td>-0.555110</td>
<td>1.057900</td>
</tr>
<tr>
<td></td>
<td>60.0</td>
<td>-0.466650</td>
<td>1.014900</td>
</tr>
<tr>
<td></td>
<td>62.5</td>
<td>-0.378120</td>
<td>0.972700</td>
</tr>
<tr>
<td></td>
<td>70.0</td>
<td>-0.298050</td>
<td>0.935360</td>
</tr>
<tr>
<td></td>
<td>75.0</td>
<td>-0.192320</td>
<td>0.836730</td>
</tr>
<tr>
<td></td>
<td>80.0</td>
<td>-0.086534</td>
<td>0.838660</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOWER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>-0.030000</td>
<td>0.813120</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>-0.026079</td>
<td>0.811350</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>-0.024065</td>
<td>0.810440</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>-0.025970</td>
<td>0.811300</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>-0.009061</td>
<td>0.803670</td>
</tr>
<tr>
<td></td>
<td>10.0</td>
<td>-0.010156</td>
<td>0.804170</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>-0.014578</td>
<td>0.806160</td>
</tr>
<tr>
<td></td>
<td>20.0</td>
<td>-0.068662</td>
<td>0.830580</td>
</tr>
<tr>
<td></td>
<td>22.5</td>
<td>-0.120960</td>
<td>0.854260</td>
</tr>
<tr>
<td></td>
<td>25.0</td>
<td>-0.090419</td>
<td>0.758790</td>
</tr>
<tr>
<td></td>
<td>30.0</td>
<td>-0.037272</td>
<td>0.782210</td>
</tr>
<tr>
<td></td>
<td>35.0</td>
<td>-0.009061</td>
<td>0.781300</td>
</tr>
<tr>
<td></td>
<td>40.0</td>
<td>-0.025382</td>
<td>0.781040</td>
</tr>
<tr>
<td></td>
<td>45.0</td>
<td>-0.059510</td>
<td>0.772740</td>
</tr>
<tr>
<td></td>
<td>50.0</td>
<td>-0.025998</td>
<td>0.787860</td>
</tr>
<tr>
<td></td>
<td>55.0</td>
<td>-0.063463</td>
<td>0.788760</td>
</tr>
<tr>
<td></td>
<td>60.0</td>
<td>-0.084113</td>
<td>0.787560</td>
</tr>
<tr>
<td></td>
<td>62.5</td>
<td>-0.055048</td>
<td>0.787600</td>
</tr>
<tr>
<td></td>
<td>65.0</td>
<td>-0.059048</td>
<td>0.787600</td>
</tr>
<tr>
<td></td>
<td>70.0</td>
<td>-0.059048</td>
<td>0.787600</td>
</tr>
<tr>
<td></td>
<td>75.0</td>
<td>-0.059048</td>
<td>0.787600</td>
</tr>
<tr>
<td></td>
<td>80.0</td>
<td>-0.059048</td>
<td>0.787600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>-0.436850</td>
<td>1.000600</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>-0.617920</td>
<td>1.089100</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>-0.769230</td>
<td>1.167300</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>-0.905710</td>
<td>1.201100</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>-1.038600</td>
<td>1.320400</td>
</tr>
<tr>
<td></td>
<td>10.0</td>
<td>-0.906280</td>
<td>1.107200</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>-0.599250</td>
<td>1.074800</td>
</tr>
<tr>
<td></td>
<td>20.0</td>
<td>-0.681780</td>
<td>1.121600</td>
</tr>
<tr>
<td></td>
<td>22.5</td>
<td>-0.699780</td>
<td>1.130900</td>
</tr>
<tr>
<td></td>
<td>25.0</td>
<td>-0.742630</td>
<td>1.153200</td>
</tr>
<tr>
<td></td>
<td>27.5</td>
<td>-0.713450</td>
<td>1.137000</td>
</tr>
<tr>
<td></td>
<td>30.0</td>
<td>-0.704970</td>
<td>1.133500</td>
</tr>
<tr>
<td></td>
<td>35.0</td>
<td>-0.708320</td>
<td>1.135300</td>
</tr>
<tr>
<td></td>
<td>40.0</td>
<td>-0.772640</td>
<td>1.169100</td>
</tr>
<tr>
<td></td>
<td>45.0</td>
<td>-0.592950</td>
<td>1.064900</td>
</tr>
<tr>
<td></td>
<td>47.5</td>
<td>-0.589010</td>
<td>1.074700</td>
</tr>
<tr>
<td></td>
<td>50.0</td>
<td>-0.627330</td>
<td>1.093900</td>
</tr>
<tr>
<td></td>
<td>52.4</td>
<td>-0.555150</td>
<td>1.062300</td>
</tr>
<tr>
<td></td>
<td>55.0</td>
<td>-0.568550</td>
<td>1.064500</td>
</tr>
<tr>
<td></td>
<td>60.0</td>
<td>-0.477590</td>
<td>1.020100</td>
</tr>
<tr>
<td></td>
<td>65.0</td>
<td>-0.394760</td>
<td>0.980610</td>
</tr>
<tr>
<td></td>
<td>70.0</td>
<td>-0.301710</td>
<td>0.937060</td>
</tr>
</tbody>
</table>
### Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>0.124600</td>
<td>0.743340</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>0.082530</td>
<td>0.762350</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>0.134670</td>
<td>0.738780</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>0.269930</td>
<td>0.677130</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>0.467540</td>
<td>0.584250</td>
<td></td>
</tr>
<tr>
<td>12.8</td>
<td>0.523680</td>
<td>0.556840</td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>0.393550</td>
<td>0.619580</td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td>0.006051</td>
<td>0.796860</td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td>-0.136910</td>
<td>0.861490</td>
<td></td>
</tr>
<tr>
<td>34.9</td>
<td>-0.075134</td>
<td>0.824770</td>
<td></td>
</tr>
<tr>
<td>47.6</td>
<td>-0.055798</td>
<td>0.762090</td>
<td></td>
</tr>
<tr>
<td>65.1</td>
<td>0.083107</td>
<td>0.793080</td>
<td></td>
</tr>
<tr>
<td>78.7</td>
<td>0.014426</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>0.003068</td>
<td>0.798200</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>0.090995</td>
<td>0.758530</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>0.128700</td>
<td>0.741480</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>0.090222</td>
<td>0.758890</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>0.065516</td>
<td>0.770030</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>0.047092</td>
<td>0.778500</td>
<td></td>
</tr>
<tr>
<td>12.8</td>
<td>0.072882</td>
<td>0.766170</td>
<td></td>
</tr>
<tr>
<td>16.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>78.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>-0.012683</td>
<td>0.805300</td>
<td></td>
</tr>
<tr>
<td>12.3</td>
<td>-0.003316</td>
<td>0.801080</td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>0.172010</td>
<td>0.721850</td>
<td></td>
</tr>
<tr>
<td>30.4</td>
<td>0.309130</td>
<td>0.850040</td>
<td></td>
</tr>
<tr>
<td>39.3</td>
<td>0.229370</td>
<td>0.857330</td>
<td></td>
</tr>
<tr>
<td>48.6</td>
<td>0.095836</td>
<td>0.756440</td>
<td></td>
</tr>
<tr>
<td>53.3</td>
<td>-0.070196</td>
<td>0.831270</td>
<td></td>
</tr>
<tr>
<td>57.2</td>
<td>***</td>
<td>****</td>
<td></td>
</tr>
<tr>
<td>62.0</td>
<td>-0.178890</td>
<td>0.880600</td>
<td></td>
</tr>
<tr>
<td>67.2</td>
<td>-0.083105</td>
<td>0.837110</td>
<td></td>
</tr>
<tr>
<td>75.9</td>
<td>0.004751</td>
<td>0.797440</td>
<td></td>
</tr>
<tr>
<td>82.8</td>
<td>0.031861</td>
<td>0.795210</td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td>0.071330</td>
<td>0.767410</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0</td>
<td>0.114880</td>
<td>0.747740</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>0.153530</td>
<td>0.738500</td>
<td></td>
</tr>
<tr>
<td>24.0</td>
<td>0.084600</td>
<td>0.761300</td>
<td></td>
</tr>
<tr>
<td>39.3</td>
<td>0.086400</td>
<td>0.760570</td>
<td></td>
</tr>
<tr>
<td>57.2</td>
<td>-0.041235</td>
<td>0.811890</td>
<td></td>
</tr>
<tr>
<td>62.0</td>
<td>-0.093959</td>
<td>0.842020</td>
<td></td>
</tr>
<tr>
<td>67.2</td>
<td>-0.015603</td>
<td>0.806630</td>
<td></td>
</tr>
<tr>
<td>75.9</td>
<td>0.041797</td>
<td>0.780730</td>
<td></td>
</tr>
<tr>
<td>82.8</td>
<td>-0.158150</td>
<td>0.871150</td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td>-0.302850</td>
<td>0.937660</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.272290</td>
<td>0.676040</td>
<td></td>
</tr>
<tr>
<td>24.0</td>
<td>0.068116</td>
<td>0.795920</td>
<td></td>
</tr>
<tr>
<td>29.2</td>
<td>-0.168420</td>
<td>0.875830</td>
<td></td>
</tr>
<tr>
<td>37.9</td>
<td>-0.317130</td>
<td>0.944220</td>
<td></td>
</tr>
<tr>
<td>44.7</td>
<td>0.040900</td>
<td>0.779700</td>
<td></td>
</tr>
<tr>
<td>49.9</td>
<td>-0.359500</td>
<td>0.960420</td>
<td></td>
</tr>
<tr>
<td>53.1</td>
<td>-0.218090</td>
<td>0.890820</td>
<td></td>
</tr>
<tr>
<td>57.0</td>
<td>-0.339340</td>
<td>0.954200</td>
<td></td>
</tr>
<tr>
<td>58.2</td>
<td>-0.417170</td>
<td>0.991220</td>
<td></td>
</tr>
<tr>
<td>62.7</td>
<td>-0.333640</td>
<td>0.951910</td>
<td></td>
</tr>
<tr>
<td>64.9</td>
<td>-0.538410</td>
<td>1.049700</td>
<td></td>
</tr>
<tr>
<td>68.1</td>
<td>-0.567280</td>
<td>1.063900</td>
<td></td>
</tr>
<tr>
<td>69.1</td>
<td>-0.245310</td>
<td>0.911010</td>
<td></td>
</tr>
<tr>
<td>70.2</td>
<td>-0.114090</td>
<td>0.851140</td>
<td></td>
</tr>
<tr>
<td>74.0</td>
<td>-0.038673</td>
<td>0.837370</td>
<td></td>
</tr>
<tr>
<td>77.4</td>
<td>-0.183980</td>
<td>0.882920</td>
<td></td>
</tr>
<tr>
<td>80.8</td>
<td>-0.302460</td>
<td>0.937400</td>
<td></td>
</tr>
<tr>
<td>83.8</td>
<td>-0.248430</td>
<td>0.912450</td>
<td></td>
</tr>
<tr>
<td>86.7</td>
<td>-0.244030</td>
<td>0.910420</td>
<td></td>
</tr>
<tr>
<td>90.1</td>
<td>-0.182020</td>
<td>0.882300</td>
<td></td>
</tr>
<tr>
<td>92.0</td>
<td>-0.101930</td>
<td>0.845530</td>
<td></td>
</tr>
<tr>
<td>95.4</td>
<td>-0.079241</td>
<td>0.763840</td>
<td></td>
</tr>
<tr>
<td>99.4</td>
<td>-0.017616</td>
<td>0.807530</td>
<td></td>
</tr>
</tbody>
</table>
- **ENGINE 3 030 deg INLET RADIAL**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0</td>
<td>0.647130</td>
<td>0.494020</td>
</tr>
<tr>
<td>5.5</td>
<td>0.627350</td>
<td>0.392410</td>
</tr>
<tr>
<td>3.3</td>
<td>1.100900</td>
<td>0.171980</td>
</tr>
<tr>
<td>1.5</td>
<td>1.451100</td>
<td>0.732110</td>
</tr>
<tr>
<td>0.2</td>
<td>0.605080</td>
<td>0.137003</td>
</tr>
<tr>
<td>0.0</td>
<td>1.000000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.412250</td>
<td>0.988880</td>
</tr>
<tr>
<td>1.1</td>
<td>-0.985720</td>
<td>1.288880</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.942880</td>
<td>1.263500</td>
</tr>
<tr>
<td>5.8</td>
<td>-0.933080</td>
<td>1.257800</td>
</tr>
<tr>
<td>8.8</td>
<td>-0.838950</td>
<td>1.204900</td>
</tr>
<tr>
<td>12.5</td>
<td>-1.149700</td>
<td>1.390800</td>
</tr>
<tr>
<td>16.7</td>
<td>-0.601270</td>
<td>1.080800</td>
</tr>
<tr>
<td>21.1</td>
<td>-0.447670</td>
<td>1.005700</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.334430</td>
<td>0.952280</td>
</tr>
<tr>
<td>33.5</td>
<td>-0.364570</td>
<td>0.959220</td>
</tr>
<tr>
<td>45.6</td>
<td>0.043839</td>
<td>0.778440</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.140010</td>
<td>0.862900</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.016258</td>
<td>0.806910</td>
</tr>
<tr>
<td>71.8</td>
<td>-0.018845</td>
<td>0.808080</td>
</tr>
<tr>
<td>82.4</td>
<td>0.114700</td>
<td>0.747810</td>
</tr>
<tr>
<td>99.4</td>
<td>0.039320</td>
<td>0.781840</td>
</tr>
</tbody>
</table>

- **ENGINE 3 090 deg INLET RADIAL**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0</td>
<td>0.647130</td>
<td>0.494020</td>
</tr>
<tr>
<td>5.5</td>
<td>0.627350</td>
<td>0.392410</td>
</tr>
<tr>
<td>3.3</td>
<td>1.100900</td>
<td>0.171980</td>
</tr>
<tr>
<td>1.5</td>
<td>1.451100</td>
<td>0.732110</td>
</tr>
<tr>
<td>0.2</td>
<td>0.605080</td>
<td>0.137003</td>
</tr>
<tr>
<td>0.0</td>
<td>1.000000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.412250</td>
<td>0.988880</td>
</tr>
<tr>
<td>1.1</td>
<td>-0.985720</td>
<td>1.288880</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.942880</td>
<td>1.263500</td>
</tr>
<tr>
<td>5.8</td>
<td>-0.933080</td>
<td>1.257800</td>
</tr>
<tr>
<td>8.8</td>
<td>-0.838950</td>
<td>1.204900</td>
</tr>
<tr>
<td>12.5</td>
<td>-1.149700</td>
<td>1.390800</td>
</tr>
<tr>
<td>16.7</td>
<td>-0.601270</td>
<td>1.080800</td>
</tr>
<tr>
<td>21.1</td>
<td>-0.447670</td>
<td>1.005700</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.334430</td>
<td>0.952280</td>
</tr>
<tr>
<td>33.5</td>
<td>-0.364570</td>
<td>0.959220</td>
</tr>
<tr>
<td>45.6</td>
<td>0.043839</td>
<td>0.778440</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.140010</td>
<td>0.862900</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.016258</td>
<td>0.806910</td>
</tr>
<tr>
<td>71.8</td>
<td>-0.018845</td>
<td>0.808080</td>
</tr>
<tr>
<td>82.4</td>
<td>0.114700</td>
<td>0.747810</td>
</tr>
<tr>
<td>99.4</td>
<td>0.039320</td>
<td>0.781840</td>
</tr>
</tbody>
</table>

- **ENGINE 3 150 deg INLET RADIAL**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>0.149400</td>
<td>0.732110</td>
</tr>
<tr>
<td>5.2</td>
<td>0.318770</td>
<td>0.654570</td>
</tr>
<tr>
<td>3.6</td>
<td>0.465100</td>
<td>0.585420</td>
</tr>
<tr>
<td>1.5</td>
<td>0.870770</td>
<td>0.385100</td>
</tr>
<tr>
<td>0.2</td>
<td>0.605080</td>
<td>0.137003</td>
</tr>
<tr>
<td>0.0</td>
<td>1.000000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.412250</td>
<td>0.988880</td>
</tr>
<tr>
<td>1.1</td>
<td>-0.985720</td>
<td>1.288880</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.942880</td>
<td>1.263500</td>
</tr>
<tr>
<td>5.8</td>
<td>-0.933080</td>
<td>1.257800</td>
</tr>
<tr>
<td>8.8</td>
<td>-0.838950</td>
<td>1.204900</td>
</tr>
<tr>
<td>12.5</td>
<td>-1.149700</td>
<td>1.390800</td>
</tr>
<tr>
<td>16.7</td>
<td>-0.601270</td>
<td>1.080800</td>
</tr>
<tr>
<td>21.1</td>
<td>-0.447670</td>
<td>1.005700</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.334430</td>
<td>0.952280</td>
</tr>
<tr>
<td>33.5</td>
<td>-0.364570</td>
<td>0.959220</td>
</tr>
<tr>
<td>45.6</td>
<td>0.043839</td>
<td>0.778440</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.140010</td>
<td>0.862900</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.016258</td>
<td>0.806910</td>
</tr>
<tr>
<td>71.8</td>
<td>-0.018845</td>
<td>0.808080</td>
</tr>
<tr>
<td>82.4</td>
<td>0.114700</td>
<td>0.747810</td>
</tr>
<tr>
<td>99.4</td>
<td>0.039320</td>
<td>0.781840</td>
</tr>
</tbody>
</table>

---

Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)
### ENGINE 3 210 deg INLET RADIAL

#### CONDITION 1.00.137.003

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>0.3</td>
<td>0.243450</td>
</tr>
<tr>
<td>0.0</td>
<td>0.479310</td>
</tr>
<tr>
<td>3.6</td>
<td>0.589830</td>
</tr>
<tr>
<td>1.5</td>
<td>1.096200</td>
</tr>
<tr>
<td>0.3</td>
<td>****</td>
</tr>
<tr>
<td>0.0</td>
<td>****</td>
</tr>
<tr>
<td>10.7</td>
<td>0.137003</td>
</tr>
<tr>
<td>14.4</td>
<td>0.137003</td>
</tr>
<tr>
<td>5.2</td>
<td>0.137003</td>
</tr>
<tr>
<td>45.5</td>
<td>0.137003</td>
</tr>
<tr>
<td>56.9</td>
<td>0.137003</td>
</tr>
<tr>
<td>70.6</td>
<td>0.137003</td>
</tr>
<tr>
<td>81.0</td>
<td>0.000800</td>
</tr>
<tr>
<td>99.0</td>
<td>0.000800</td>
</tr>
</tbody>
</table>

### ENGINE 3 3270 deg INLET RADIAL

#### CONDITION 1.00.137.003

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>0.4</td>
<td>0.061003</td>
</tr>
<tr>
<td>1.0</td>
<td>0.069960</td>
</tr>
<tr>
<td>2.7</td>
<td>0.073460</td>
</tr>
<tr>
<td>6.2</td>
<td>0.873000</td>
</tr>
<tr>
<td>9.0</td>
<td>0.912180</td>
</tr>
<tr>
<td>12.8</td>
<td>-0.891400</td>
</tr>
<tr>
<td>17.2</td>
<td>-0.662910</td>
</tr>
<tr>
<td>21.7</td>
<td>-0.308700</td>
</tr>
<tr>
<td>26.6</td>
<td>-0.308700</td>
</tr>
<tr>
<td>33.8</td>
<td>-0.258190</td>
</tr>
<tr>
<td>45.2</td>
<td>-0.320050</td>
</tr>
<tr>
<td>56.6</td>
<td>-0.342310</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.208580</td>
</tr>
<tr>
<td>71.1</td>
<td>-0.164886</td>
</tr>
<tr>
<td>81.5</td>
<td>-0.024487</td>
</tr>
<tr>
<td>99.0</td>
<td>0.045249</td>
</tr>
</tbody>
</table>

### ENGINE 3 3330 deg INLET RADIAL

#### CONDITION 1.00.137.003

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>OUTER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>0.4</td>
<td>-0.299020</td>
</tr>
<tr>
<td>1.1</td>
<td>-1.064100</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.964720</td>
</tr>
<tr>
<td>5.8</td>
<td>-1.062300</td>
</tr>
<tr>
<td>8.8</td>
<td>-1.162700</td>
</tr>
<tr>
<td>12.6</td>
<td>-0.905430</td>
</tr>
<tr>
<td>17.8</td>
<td>-0.793310</td>
</tr>
<tr>
<td>21.4</td>
<td>-0.376310</td>
</tr>
<tr>
<td>25.1</td>
<td>-0.309440</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.237230</td>
</tr>
<tr>
<td>45.4</td>
<td>0.266900</td>
</tr>
<tr>
<td>57.0</td>
<td>0.301740</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.193010</td>
</tr>
<tr>
<td>71.8</td>
<td>-0.116690</td>
</tr>
<tr>
<td>82.7</td>
<td>0.010743</td>
</tr>
<tr>
<td>99.4</td>
<td>0.036190</td>
</tr>
</tbody>
</table>

**Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)**
### WBL 809

**COND. 1.00.137.003**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.761050</td>
<td>1.877300</td>
</tr>
<tr>
<td>2.0</td>
<td>-1.013200</td>
<td>1.305000</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.179900</td>
<td>1.410900</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.320100</td>
<td>1.510700</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.463900</td>
<td>1.627400</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.531300</td>
<td>1.888700</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.955700</td>
<td>1.270900</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.725950</td>
<td>1.144500</td>
</tr>
<tr>
<td>22.5</td>
<td>* ***</td>
<td>1.144500</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.491380</td>
<td>1.026800</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.448400</td>
<td>1.006100</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.504280</td>
<td>1.033000</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.498220</td>
<td>1.030100</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.529710</td>
<td>1.045400</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.580380</td>
<td>1.044800</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.496530</td>
<td>1.029300</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.472680</td>
<td>1.017800</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.459760</td>
<td>0.959450</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.328410</td>
<td>0.949480</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.251630</td>
<td>0.913920</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.192400</td>
<td>0.856760</td>
</tr>
</tbody>
</table>

### WBL 834

**COND. 1.00.137.003**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>-1.142400</td>
<td>1.386000</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.559330</td>
<td>1.050000</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.592810</td>
<td>1.076000</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.594610</td>
<td>1.074000</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.516290</td>
<td>1.038900</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.352790</td>
<td>0.960870</td>
</tr>
</tbody>
</table>

### WBL 870

**COND. 1.00.137.003**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.281890</td>
<td>0.927880</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.497200</td>
<td>1.029560</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.543640</td>
<td>1.052200</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.710170</td>
<td>1.136200</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.947110</td>
<td>1.205300</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.039700</td>
<td>1.321100</td>
</tr>
<tr>
<td>15.0</td>
<td>-1.014550</td>
<td>1.305800</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.609610</td>
<td>1.085000</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.550360</td>
<td>1.055500</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.604750</td>
<td>1.082500</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.525410</td>
<td>1.043300</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.543490</td>
<td>1.052200</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.526500</td>
<td>1.043900</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.534110</td>
<td>1.047600</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.515710</td>
<td>1.038600</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.525750</td>
<td>1.043500</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.507190</td>
<td>1.034400</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.473130</td>
<td>1.018000</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.402060</td>
<td>0.804060</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.337580</td>
<td>0.853750</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.269850</td>
<td>0.922320</td>
</tr>
</tbody>
</table>

**LOWER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.0</td>
<td>0.014378</td>
<td>0.793100</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.011901</td>
<td>0.804950</td>
</tr>
<tr>
<td>55.0</td>
<td>0.003360</td>
<td>0.798070</td>
</tr>
<tr>
<td>50.0</td>
<td>0.011874</td>
<td>0.794230</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.015576</td>
<td>0.805610</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.018771</td>
<td>0.808050</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.011831</td>
<td>0.804920</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.006960</td>
<td>0.802730</td>
</tr>
<tr>
<td>25.0</td>
<td>0.000794</td>
<td>0.799230</td>
</tr>
<tr>
<td>20.0</td>
<td>0.005219</td>
<td>0.797230</td>
</tr>
<tr>
<td>15.0</td>
<td>0.042085</td>
<td>0.780600</td>
</tr>
<tr>
<td>10.0</td>
<td>0.094572</td>
<td>0.756910</td>
</tr>
<tr>
<td>7.5</td>
<td>0.101810</td>
<td>0.753840</td>
</tr>
<tr>
<td>5.0</td>
<td>0.088806</td>
<td>0.759530</td>
</tr>
<tr>
<td>3.0</td>
<td>0.100010</td>
<td>0.754450</td>
</tr>
<tr>
<td>2.0</td>
<td>0.104900</td>
<td>0.752250</td>
</tr>
<tr>
<td>1.0</td>
<td>0.024846</td>
<td>0.788380</td>
</tr>
</tbody>
</table>

---

*Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)*
### Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>0.459000</td>
<td>0.588380</td>
<td>96.4</td>
<td>0.137110</td>
<td>0.737680</td>
</tr>
<tr>
<td>8.7</td>
<td>0.555600</td>
<td>0.535950</td>
<td>81.5</td>
<td>0.119140</td>
<td>0.745820</td>
</tr>
<tr>
<td>10.9</td>
<td>0.625070</td>
<td>0.505560</td>
<td>58.9</td>
<td>0.024704</td>
<td>0.788450</td>
</tr>
<tr>
<td>14.5</td>
<td>0.512860</td>
<td>0.562160</td>
<td>44.2</td>
<td>0.010081</td>
<td>0.795040</td>
</tr>
<tr>
<td>17.9</td>
<td>0.270200</td>
<td>0.677010</td>
<td>37.7</td>
<td>0.016201</td>
<td>0.792290</td>
</tr>
<tr>
<td>21.6</td>
<td>0.183340</td>
<td>0.716710</td>
<td>33.7</td>
<td>0.050972</td>
<td>0.776600</td>
</tr>
<tr>
<td>28.4</td>
<td>-0.061270</td>
<td>0.836280</td>
<td>28.4</td>
<td>0.082240</td>
<td>0.762490</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.245290</td>
<td>0.911000</td>
<td>21.6</td>
<td>0.141040</td>
<td>0.735900</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.242210</td>
<td>0.909580</td>
<td>17.9</td>
<td>0.057168</td>
<td>0.773600</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.218850</td>
<td>0.898860</td>
<td>14.5</td>
<td>-0.047702</td>
<td>0.821110</td>
</tr>
<tr>
<td>56.9</td>
<td>-0.000039</td>
<td>0.799610</td>
<td>10.9</td>
<td>-0.153840</td>
<td>0.869190</td>
</tr>
<tr>
<td>81.5</td>
<td>0.134730</td>
<td>0.738760</td>
<td>8.7</td>
<td>-0.173990</td>
<td>0.878370</td>
</tr>
<tr>
<td>96.4</td>
<td>0.174910</td>
<td>0.720540</td>
<td>4.7</td>
<td>-0.117500</td>
<td>0.852690</td>
</tr>
</tbody>
</table>

### Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Continued)

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>-0.178000</td>
<td>0.880200</td>
<td>96.8</td>
<td>0.154720</td>
<td>0.729700</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.186760</td>
<td>0.884190</td>
<td>89.0</td>
<td>0.106030</td>
<td>0.751740</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.217800</td>
<td>0.893380</td>
<td>81.5</td>
<td>0.102950</td>
<td>0.753130</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.176850</td>
<td>0.879670</td>
<td>72.2</td>
<td>0.078111</td>
<td>0.768990</td>
</tr>
<tr>
<td>13.3</td>
<td>0.010871</td>
<td>0.794690</td>
<td>66.6</td>
<td>-0.039426</td>
<td>0.817370</td>
</tr>
<tr>
<td>23.1</td>
<td>0.205530</td>
<td>0.706610</td>
<td>62.4</td>
<td>-0.122950</td>
<td>0.855180</td>
</tr>
<tr>
<td>33.1</td>
<td>0.395630</td>
<td>0.618600</td>
<td>57.5</td>
<td>-0.111890</td>
<td>0.850140</td>
</tr>
<tr>
<td>40.0</td>
<td>0.273410</td>
<td>0.675540</td>
<td>52.2</td>
<td>-0.077676</td>
<td>0.834660</td>
</tr>
<tr>
<td>52.2</td>
<td>0.017291</td>
<td>0.791790</td>
<td>43.0</td>
<td>-0.050350</td>
<td>0.822300</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.220520</td>
<td>0.899640</td>
<td>33.1</td>
<td>-0.018831</td>
<td>0.808080</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.353350</td>
<td>0.961360</td>
<td>23.1</td>
<td>0.047740</td>
<td>0.776050</td>
</tr>
<tr>
<td>66.6</td>
<td>-0.191480</td>
<td>0.886340</td>
<td>13.3</td>
<td>-0.109010</td>
<td>0.843850</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.071015</td>
<td>0.831650</td>
<td>8.1</td>
<td>-0.315410</td>
<td>0.943420</td>
</tr>
<tr>
<td>81.5</td>
<td>0.026364</td>
<td>0.787700</td>
<td>5.5</td>
<td>-0.275010</td>
<td>0.924710</td>
</tr>
<tr>
<td>96.8</td>
<td>0.035578</td>
<td>0.783490</td>
<td>3.7</td>
<td>-0.279510</td>
<td>0.926790</td>
</tr>
<tr>
<td>99.0</td>
<td>0.170380</td>
<td>0.722370</td>
<td>1.8</td>
<td>-0.224380</td>
<td>0.901400</td>
</tr>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44.1</td>
<td>0.638340</td>
<td>0.498640</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.2</td>
<td>0.246590</td>
<td>0.687840</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.1</td>
<td>0.635150</td>
<td>0.503430</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.6</td>
<td>0.300790</td>
<td>0.662890</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.2</td>
<td>0.3**</td>
<td>0.6**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.9</td>
<td>0.335350</td>
<td>0.623450</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.710330</td>
<td>0.460070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.744150</td>
<td>0.441240</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.5</td>
<td>0.643740</td>
<td>0.495810</td>
</tr>
<tr>
<td>31.7</td>
<td>0.448300</td>
<td>0.593510</td>
</tr>
<tr>
<td>24.4</td>
<td>0.204580</td>
<td>0.707030</td>
</tr>
<tr>
<td>17.6</td>
<td>0.141140</td>
<td>0.735850</td>
</tr>
<tr>
<td>11.1</td>
<td>-0.017293</td>
<td>0.807380</td>
</tr>
<tr>
<td>5.5</td>
<td>0.109530</td>
<td>0.750100</td>
</tr>
<tr>
<td>2.4</td>
<td>0.1**</td>
<td>0.1**</td>
</tr>
<tr>
<td>0.0</td>
<td>0.1**</td>
<td>0.1**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.3</td>
<td>0.646290</td>
<td>0.494460</td>
</tr>
<tr>
<td>32.2</td>
<td>0.504680</td>
<td>0.566170</td>
</tr>
<tr>
<td>22.7</td>
<td>0.394680</td>
<td>0.647090</td>
</tr>
<tr>
<td>15.4</td>
<td>0.243790</td>
<td>0.693130</td>
</tr>
<tr>
<td>9.9</td>
<td>0.141790</td>
<td>0.735550</td>
</tr>
<tr>
<td>4.7</td>
<td>0.296810</td>
<td>0.664740</td>
</tr>
<tr>
<td>2.0</td>
<td>0.702300</td>
<td>0.464470</td>
</tr>
<tr>
<td>0.0</td>
<td>0.752100</td>
<td>0.435740</td>
</tr>
</tbody>
</table>

Table B-7. Tabulated Data for Test 273-12, Condition 1.00.137.003 (Concluded)
### Table 8-8. Tabulated Data for Test 273-15, Condition 1.00.137.001

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.442900</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.664580</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.842480</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.921580</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.059100</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.961990</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.851310</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.559680</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.515980</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.522000</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.516230</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.529810</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.687330</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.671030</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.684620</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.626220</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.649310</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.641500</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.496340</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.733620</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.188270</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.094238</td>
</tr>
</tbody>
</table>

### Table 8-8. Tabulated Data for Test 273-15, Condition 1.00.137.001

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.199390</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.364250</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.499900</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.699270</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.740390</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.722880</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.458690</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.490380</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.560410</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.617040</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.595960</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.596090</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.571950</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.682430</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.766120</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.736520</td>
</tr>
</tbody>
</table>

**WBL 445**

**WBL 470**

**WBL 510**

**WBL 510**
### ENGINE 3 WL 180

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>-0.108690</td>
<td>0.908310</td>
<td>79.7</td>
<td>-0.0303450</td>
<td>0.834680</td>
<td></td>
</tr>
<tr>
<td>12.3</td>
<td>-0.049811</td>
<td>0.879210</td>
<td>65.1</td>
<td>0.047316</td>
<td>0.831600</td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>0.143700</td>
<td>0.794570</td>
<td>47.6</td>
<td>0.089065</td>
<td>0.811230</td>
<td></td>
</tr>
<tr>
<td>30.4</td>
<td>0.293550</td>
<td>0.711370</td>
<td>34.9</td>
<td>0.022868</td>
<td>0.843550</td>
<td></td>
</tr>
<tr>
<td>39.3</td>
<td>0.162050</td>
<td>0.775670</td>
<td>29.6</td>
<td>-0.043726</td>
<td>0.876210</td>
<td></td>
</tr>
<tr>
<td>47.1</td>
<td>0.0158290</td>
<td>0.933030</td>
<td>26.0</td>
<td>-0.057546</td>
<td>0.891900</td>
<td></td>
</tr>
<tr>
<td>55.8</td>
<td>0.009969</td>
<td>0.849660</td>
<td>21.4</td>
<td>-0.038545</td>
<td>0.872680</td>
<td></td>
</tr>
<tr>
<td>57.2</td>
<td>0.183890</td>
<td>0.945870</td>
<td>15.0</td>
<td>-0.025640</td>
<td>0.916730</td>
<td></td>
</tr>
<tr>
<td>62.0</td>
<td>0.624040</td>
<td>1.181700</td>
<td>10.0</td>
<td>-0.090287</td>
<td>0.899190</td>
<td></td>
</tr>
<tr>
<td>67.2</td>
<td>0.138330</td>
<td>0.923350</td>
<td>5.1</td>
<td>0.047063</td>
<td>0.808450</td>
<td></td>
</tr>
<tr>
<td>75.9</td>
<td>0.005825</td>
<td>0.851980</td>
<td>5.1</td>
<td>-0.041496</td>
<td>0.875120</td>
<td></td>
</tr>
<tr>
<td>82.8</td>
<td>0.029277</td>
<td>0.840410</td>
<td>5.1</td>
<td>-0.041496</td>
<td>0.875120</td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td>0.058129</td>
<td>0.826320</td>
<td>5.1</td>
<td>-0.041496</td>
<td>0.875120</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3 WL 155

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTBOARD SURFACE</th>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0</td>
<td>0.091039</td>
<td>0.810270</td>
<td>78.7</td>
<td>-0.010890</td>
<td>0.908310</td>
<td></td>
</tr>
<tr>
<td>92.8</td>
<td>0.091039</td>
<td>0.810270</td>
<td>78.7</td>
<td>-0.010890</td>
<td>0.908310</td>
<td></td>
</tr>
<tr>
<td>75.9</td>
<td>0.048199</td>
<td>0.839070</td>
<td>75.9</td>
<td>0.046609</td>
<td>0.831940</td>
<td></td>
</tr>
<tr>
<td>67.2</td>
<td>0.046609</td>
<td>0.831940</td>
<td>67.2</td>
<td>0.046609</td>
<td>0.831940</td>
<td></td>
</tr>
<tr>
<td>62.0</td>
<td>-0.082038</td>
<td>0.895100</td>
<td>62.0</td>
<td>-0.082038</td>
<td>0.895100</td>
<td></td>
</tr>
<tr>
<td>57.2</td>
<td>-0.170030</td>
<td>0.938910</td>
<td>57.2</td>
<td>-0.170030</td>
<td>0.938910</td>
<td></td>
</tr>
<tr>
<td>53.8</td>
<td>-0.134740</td>
<td>0.921260</td>
<td>53.8</td>
<td>-0.134740</td>
<td>0.921260</td>
<td></td>
</tr>
<tr>
<td>49.5</td>
<td>-0.155320</td>
<td>0.932050</td>
<td>49.5</td>
<td>-0.155320</td>
<td>0.932050</td>
<td></td>
</tr>
<tr>
<td>39.3</td>
<td>-0.197080</td>
<td>0.879650</td>
<td>39.3</td>
<td>-0.197080</td>
<td>0.879650</td>
<td></td>
</tr>
<tr>
<td>30.4</td>
<td>-0.150310</td>
<td>0.933030</td>
<td>30.4</td>
<td>-0.150310</td>
<td>0.933030</td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>0.054700</td>
<td>0.827990</td>
<td>21.5</td>
<td>0.054700</td>
<td>0.827990</td>
<td></td>
</tr>
<tr>
<td>12.3</td>
<td>-0.158310</td>
<td>0.933030</td>
<td>12.3</td>
<td>-0.158310</td>
<td>0.933030</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-0.320500</td>
<td>1.015700</td>
<td>7.5</td>
<td>-0.320500</td>
<td>1.015700</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>-0.283130</td>
<td>0.998970</td>
<td>5.1</td>
<td>-0.283130</td>
<td>0.998970</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3 030 deg CORE COWL

**COND. 1.00.137.001**

<table>
<thead>
<tr>
<th>X/C (%)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.361580</td>
<td>0.677760</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.036313</td>
<td>0.872480</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.132270</td>
<td>0.920040</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.257340</td>
<td>0.976100</td>
</tr>
<tr>
<td>44.7</td>
<td>0.006523</td>
<td>0.851540</td>
</tr>
<tr>
<td>49.9</td>
<td>0.213080</td>
<td>0.960590</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.223230</td>
<td>0.965270</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.371210</td>
<td>1.042100</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.397000</td>
<td>1.055800</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.479930</td>
<td>1.105050</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.437270</td>
<td>1.077300</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.450540</td>
<td>1.084500</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.348150</td>
<td>1.030000</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.350080</td>
<td>1.031000</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.482990</td>
<td>1.102200</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.389910</td>
<td>1.052000</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.285850</td>
<td>0.997710</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.256320</td>
<td>0.987940</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.193360</td>
<td>0.950630</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.085426</td>
<td>0.969070</td>
</tr>
<tr>
<td>92.0</td>
<td>0.036330</td>
<td>0.836969</td>
</tr>
<tr>
<td>95.4</td>
<td>0.062170</td>
<td>0.824430</td>
</tr>
<tr>
<td>99.4</td>
<td>0.045997</td>
<td>0.832240</td>
</tr>
</tbody>
</table>

Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.305550</td>
<td>0.705460</td>
<td>0.0</td>
<td>0.305550</td>
<td>0.705460</td>
</tr>
<tr>
<td>0.1</td>
<td>0.386714</td>
<td>0.803900</td>
<td>0.1</td>
<td>0.386714</td>
<td>0.803900</td>
</tr>
<tr>
<td>0.2</td>
<td>0.307208</td>
<td>0.851630</td>
<td>0.2</td>
<td>0.307208</td>
<td>0.851630</td>
</tr>
<tr>
<td>0.3</td>
<td>0.297330</td>
<td>0.737760</td>
<td>0.3</td>
<td>0.297330</td>
<td>0.737760</td>
</tr>
<tr>
<td>0.4</td>
<td>0.239730</td>
<td>0.813620</td>
<td>0.4</td>
<td>0.239730</td>
<td>0.813620</td>
</tr>
<tr>
<td>0.5</td>
<td>0.084170</td>
<td>0.886000</td>
<td>0.5</td>
<td>0.084170</td>
<td>0.886000</td>
</tr>
<tr>
<td>0.6</td>
<td>0.006356</td>
<td>0.907920</td>
<td>0.6</td>
<td>0.006356</td>
<td>0.907920</td>
</tr>
<tr>
<td>0.7</td>
<td>0.020914</td>
<td>0.865000</td>
<td>0.7</td>
<td>0.020914</td>
<td>0.865000</td>
</tr>
<tr>
<td>0.8</td>
<td>0.107900</td>
<td>0.971110</td>
<td>0.8</td>
<td>0.107900</td>
<td>0.971110</td>
</tr>
<tr>
<td>0.9</td>
<td>0.083360</td>
<td>0.971110</td>
<td>0.9</td>
<td>0.083360</td>
<td>0.971110</td>
</tr>
</tbody>
</table>

Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)
### ENGINE 3 150 deg INLET RADIAL

**COND. 1.00.137.001**  
**INNER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>0.102220</td>
<td>0.904810</td>
<td>0.4</td>
<td>0.013569</td>
<td>0.861390</td>
</tr>
<tr>
<td>5.2</td>
<td>0.289970</td>
<td>0.713610</td>
<td>1.2</td>
<td>0.314530</td>
<td>1.012500</td>
</tr>
<tr>
<td>3.6</td>
<td>0.469420</td>
<td>0.623590</td>
<td>2.9</td>
<td>0.326690</td>
<td>1.018800</td>
</tr>
<tr>
<td>1.5</td>
<td>0.811420</td>
<td>0.435380</td>
<td>6.2</td>
<td>0.479940</td>
<td>1.100500</td>
</tr>
<tr>
<td>0.2</td>
<td>1.156200</td>
<td>0.135700</td>
<td>9.4</td>
<td>0.582440</td>
<td>1.157700</td>
</tr>
<tr>
<td>0.0</td>
<td>0.883450</td>
<td>0.389370</td>
<td>14.5</td>
<td>0.833450</td>
<td>1.310500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18.2</td>
<td>0.756140</td>
<td>1.261200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.7</td>
<td>0.669030</td>
<td>1.208100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
<td>0.435220</td>
<td>1.076200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.5</td>
<td>0.297720</td>
<td>1.003800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.7</td>
<td>0.265040</td>
<td>0.987030</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
<td>0.171160</td>
<td>0.939470</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>0.135560</td>
<td>0.921670</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>71.0</td>
<td>0.105580</td>
<td>0.906760</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.3</td>
<td>0.001888</td>
<td>0.853810</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
<td>0.210290</td>
<td>0.752140</td>
</tr>
</tbody>
</table>

**LOCAL MACH**

<table>
<thead>
<tr>
<th>LOCH MACH</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.804810</td>
<td>0.815000</td>
</tr>
<tr>
<td>0.713610</td>
<td>0.726500</td>
</tr>
<tr>
<td>0.623590</td>
<td>0.637400</td>
</tr>
<tr>
<td>0.435380</td>
<td>0.449300</td>
</tr>
<tr>
<td>0.135700</td>
<td>0.150700</td>
</tr>
<tr>
<td>0.389370</td>
<td>0.404300</td>
</tr>
</tbody>
</table>

### ENGINE 3 210 deg INLET RADIAL

**COND. 1.00.137.001**  
**INNER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>0.131720</td>
<td>0.790440</td>
<td>0.5</td>
<td>-0.138600</td>
<td>0.921930</td>
</tr>
<tr>
<td>5.2</td>
<td>0.318460</td>
<td>0.699100</td>
<td>1.2</td>
<td>-0.439310</td>
<td>1.105100</td>
</tr>
<tr>
<td>3.6</td>
<td>0.508540</td>
<td>0.603560</td>
<td>2.9</td>
<td>-0.348000</td>
<td>1.030000</td>
</tr>
<tr>
<td>1.5</td>
<td>0.823880</td>
<td>0.427670</td>
<td>6.2</td>
<td>-0.591940</td>
<td>1.153200</td>
</tr>
<tr>
<td>0.3</td>
<td>1.151100</td>
<td>0.144110</td>
<td>9.3</td>
<td>-0.754350</td>
<td>1.250000</td>
</tr>
<tr>
<td>0.0</td>
<td>0.880460</td>
<td>0.391360</td>
<td>14.4</td>
<td>-0.762750</td>
<td>1.253000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18.1</td>
<td>-0.639020</td>
<td>1.226100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.4</td>
<td>-0.761350</td>
<td>1.264400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27.5</td>
<td>-0.671610</td>
<td>1.209700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34.2</td>
<td>-0.341200</td>
<td>1.026400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45.5</td>
<td>-0.288050</td>
<td>0.998840</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>56.9</td>
<td>-0.204910</td>
<td>0.958460</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63.9</td>
<td>-0.166660</td>
<td>0.937220</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>70.8</td>
<td>-0.124290</td>
<td>0.916070</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81.0</td>
<td>0.019575</td>
<td>0.845150</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.0</td>
<td>0.194700</td>
<td>0.759750</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.861390</td>
</tr>
<tr>
<td>0.815000</td>
</tr>
<tr>
<td>0.726500</td>
</tr>
<tr>
<td>0.637400</td>
</tr>
<tr>
<td>0.550700</td>
</tr>
<tr>
<td>0.404300</td>
</tr>
</tbody>
</table>

---

Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)
### ENGINE 3270 deg INLET RADIAL

**COND. 1.00, 137.001**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - % CP</td>
<td>LOCAL MACH</td>
<td>X/C - % CP</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>8.1 0.201200</td>
<td>0.756380</td>
<td>0.4 0.063466</td>
<td>0.985900</td>
</tr>
<tr>
<td>5.5 0.330120</td>
<td>0.693340</td>
<td>1.0 -0.812930</td>
<td>1.297200</td>
</tr>
<tr>
<td>3.7 0.505480</td>
<td>0.605130</td>
<td>2.7 -0.583560</td>
<td>1.158400</td>
</tr>
<tr>
<td>1.3 0.828290</td>
<td>0.424910</td>
<td>6.2 -0.874590</td>
<td>1.211500</td>
</tr>
<tr>
<td>0.1 1.190800</td>
<td>0.051072</td>
<td>9.0 -0.783140</td>
<td>1.278100</td>
</tr>
<tr>
<td>0.0 0.775540</td>
<td>0.457100</td>
<td>12.8 -0.883930</td>
<td>1.344100</td>
</tr>
<tr>
<td>1.9 0.330630</td>
<td>0.566620</td>
<td>17.2 -0.695580</td>
<td>1.224000</td>
</tr>
<tr>
<td>0.1 0.191650</td>
<td>0.765780</td>
<td>21.7 -0.561970</td>
<td>1.146100</td>
</tr>
<tr>
<td>0.0 0.144680</td>
<td>0.856170</td>
<td>26.6 -0.002934</td>
<td>0.765510</td>
</tr>
</tbody>
</table>

### ENGINE 3330 deg INLET RADIAL

**COND. 1.00, 137.001**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - % CP</td>
<td>LOCAL MACH</td>
<td>X/C - % CP</td>
<td>LOCAL MACH</td>
</tr>
<tr>
<td>7.5 0.282110</td>
<td>0.716990</td>
<td>0.4 -0.343100</td>
<td>1.027400</td>
</tr>
<tr>
<td>4.8 0.399280</td>
<td>0.658970</td>
<td>1.1 -0.912430</td>
<td>1.363000</td>
</tr>
<tr>
<td>3.2 0.566620</td>
<td>0.573320</td>
<td>2.7 -0.739490</td>
<td>1.250800</td>
</tr>
<tr>
<td>1.2 0.905470</td>
<td>0.374500</td>
<td>5.8 -0.838920</td>
<td>1.314100</td>
</tr>
<tr>
<td>0.2 1.103600</td>
<td>0.207090</td>
<td>8.8 -0.880270</td>
<td>1.341600</td>
</tr>
<tr>
<td>0.0 0.765780</td>
<td>0.462890</td>
<td>12.6 -0.686150</td>
<td>1.218400</td>
</tr>
<tr>
<td>1.9 0.330630</td>
<td>0.566620</td>
<td>17.8 -0.797700</td>
<td>1.287400</td>
</tr>
<tr>
<td>0.1 0.191650</td>
<td>0.765780</td>
<td>21.4 -0.810250</td>
<td>1.295500</td>
</tr>
<tr>
<td>0.0 0.144680</td>
<td>0.856170</td>
<td>26.1 -0.806790</td>
<td>1.293200</td>
</tr>
<tr>
<td>0.0 0.144680</td>
<td>0.856170</td>
<td>33.7 -0.315100</td>
<td>1.012800</td>
</tr>
<tr>
<td>45.4 -0.223050</td>
<td>0.965630</td>
<td>57.0 -0.320050</td>
<td>1.015400</td>
</tr>
<tr>
<td>64.5 -0.197430</td>
<td>0.947640</td>
<td>71.8 -0.123020</td>
<td>0.915720</td>
</tr>
<tr>
<td>82.7 -0.017948</td>
<td>1.045950</td>
<td>89.4 -0.159230</td>
<td>0.770400</td>
</tr>
</tbody>
</table>

*Table B-8. Tabulated Data for Test 273-15, Condition 1.00, 137.001 (Continued)*
### Table B-8: Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)

**WBL 809**

**COND. 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>-0.231930</td>
<td>0.970140</td>
<td>65.0</td>
<td>0.009763</td>
<td>0.859520</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.350860</td>
<td>1.031400</td>
<td>60.0</td>
<td>-0.058396</td>
<td>0.894330</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.673270</td>
<td>1.210700</td>
<td>55.0</td>
<td>-0.066712</td>
<td>0.897410</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.827210</td>
<td>1.306400</td>
<td>50.0</td>
<td>-0.158660</td>
<td>0.933210</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.977690</td>
<td>1.409700</td>
<td>45.0</td>
<td>0.194770</td>
<td>0.759720</td>
</tr>
<tr>
<td>15.0</td>
<td>-1.066300</td>
<td>1.476500</td>
<td>40.0</td>
<td>-0.004437</td>
<td>0.856910</td>
</tr>
<tr>
<td>20.0</td>
<td>-1.204600</td>
<td>1.592700</td>
<td>35.0</td>
<td>0.381460</td>
<td>0.667860</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.949010</td>
<td>1.389200</td>
<td>30.0</td>
<td>0.140630</td>
<td>0.761000</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.865950</td>
<td>1.332000</td>
<td>25.0</td>
<td>-0.228610</td>
<td>0.968450</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.832550</td>
<td>1.309900</td>
<td>20.0</td>
<td>-0.485930</td>
<td>1.038000</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.675010</td>
<td>1.211700</td>
<td>15.0</td>
<td>-0.410650</td>
<td>1.063100</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.515480</td>
<td>1.120100</td>
<td>10.0</td>
<td>-0.249090</td>
<td>0.978880</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.280100</td>
<td>0.994740</td>
<td>5.0</td>
<td>-0.414780</td>
<td>0.651200</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.248690</td>
<td>0.978570</td>
<td>3.0</td>
<td>0.430090</td>
<td>0.643490</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.366010</td>
<td>1.034900</td>
<td>1.0</td>
<td>0.137300</td>
<td>0.787720</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.334200</td>
<td>1.075200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.438390</td>
<td>1.077900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.409080</td>
<td>1.062200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.338820</td>
<td>1.025100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.331490</td>
<td>1.021300</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WBL 834**

**COND. 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>-0.907510</td>
<td>1.360200</td>
<td>65.0</td>
<td>-0.050410</td>
<td>0.830080</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.961410</td>
<td>1.398000</td>
<td>60.0</td>
<td>-0.199400</td>
<td>0.844970</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.318790</td>
<td>1.041700</td>
<td>55.0</td>
<td>-0.010393</td>
<td>0.849330</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.465440</td>
<td>1.092600</td>
<td>50.0</td>
<td>-0.023702</td>
<td>0.843130</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.478340</td>
<td>1.067200</td>
<td>45.0</td>
<td>-0.004537</td>
<td>0.856960</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.390700</td>
<td>1.052400</td>
<td>40.0</td>
<td>-0.010012</td>
<td>0.859640</td>
</tr>
</tbody>
</table>

**WBL 870**

**COND. 1.00.137.001**

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.041313</td>
<td>0.875020</td>
<td>65.0</td>
<td>0.050401</td>
<td>0.830080</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.273360</td>
<td>0.991290</td>
<td>60.0</td>
<td>-0.199400</td>
<td>0.844970</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.330950</td>
<td>1.021000</td>
<td>55.0</td>
<td>-0.010393</td>
<td>0.849330</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.940810</td>
<td>1.383400</td>
<td>50.0</td>
<td>-0.023702</td>
<td>0.843130</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.825300</td>
<td>1.305200</td>
<td>45.0</td>
<td>-0.004537</td>
<td>0.856960</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.879690</td>
<td>1.312100</td>
<td>40.0</td>
<td>-0.010012</td>
<td>0.859640</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.944760</td>
<td>1.382800</td>
<td>35.0</td>
<td>-0.018058</td>
<td>0.863590</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.899490</td>
<td>1.348100</td>
<td>30.0</td>
<td>-0.009155</td>
<td>0.859220</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.892300</td>
<td>1.351100</td>
<td>25.0</td>
<td>-0.025246</td>
<td>0.867120</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.889440</td>
<td>1.348100</td>
<td>20.0</td>
<td>-0.018570</td>
<td>0.865340</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.441130</td>
<td>0.797400</td>
<td>15.0</td>
<td>-0.006589</td>
<td>0.857960</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.349860</td>
<td>1.033900</td>
<td>10.0</td>
<td>-0.034826</td>
<td>0.837690</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.420070</td>
<td>1.068400</td>
<td>7.5</td>
<td>0.017370</td>
<td>0.846230</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.489110</td>
<td>1.105400</td>
<td>5.0</td>
<td>-0.002822</td>
<td>0.856120</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.562700</td>
<td>1.145800</td>
<td>3.0</td>
<td>-0.045611</td>
<td>0.877130</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.559050</td>
<td>1.144400</td>
<td>2.0</td>
<td>-0.118170</td>
<td>0.913010</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.557160</td>
<td>1.143400</td>
<td>1.0</td>
<td>-0.181450</td>
<td>0.944600</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.554580</td>
<td>1.141900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.498200</td>
<td>1.115000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.360360</td>
<td>1.039000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.291750</td>
<td>1.009700</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)

<table>
<thead>
<tr>
<th>X/C (% INBOARD SURFACE)</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C (% OUTBOARD SURFACE)</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>0.381670</td>
<td>0.667770</td>
<td>96.4</td>
<td>0.125260</td>
<td>0.793590</td>
</tr>
<tr>
<td>8.7</td>
<td>0.464310</td>
<td>0.625200</td>
<td>81.5</td>
<td>0.104420</td>
<td>0.803750</td>
</tr>
<tr>
<td>10.9</td>
<td>0.468070</td>
<td>0.624290</td>
<td>58.9</td>
<td>0.020328</td>
<td>0.844790</td>
</tr>
<tr>
<td>14.5</td>
<td>0.354120</td>
<td>0.681460</td>
<td>44.2</td>
<td>-0.078560</td>
<td>0.893390</td>
</tr>
<tr>
<td>17.9</td>
<td>0.123410</td>
<td>0.794490</td>
<td>37.7</td>
<td>-0.097079</td>
<td>0.899420</td>
</tr>
<tr>
<td>21.6</td>
<td>0.020535</td>
<td>0.844690</td>
<td>33.7</td>
<td>-0.067079</td>
<td>0.897720</td>
</tr>
<tr>
<td>28.4</td>
<td>-0.236000</td>
<td>0.972220</td>
<td>28.4</td>
<td>0.010112</td>
<td>0.849780</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.461260</td>
<td>1.090300</td>
<td>21.6</td>
<td>0.047242</td>
<td>0.831630</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.615560</td>
<td>1.176800</td>
<td>17.9</td>
<td>0.039912</td>
<td>0.835220</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.299940</td>
<td>1.004500</td>
<td>14.5</td>
<td>-0.043911</td>
<td>0.876300</td>
</tr>
<tr>
<td>58.9</td>
<td>-0.031437</td>
<td>0.870160</td>
<td>10.9</td>
<td>-0.134240</td>
<td>0.921020</td>
</tr>
<tr>
<td>81.5</td>
<td>0.100040</td>
<td>0.805880</td>
<td>8.7</td>
<td>-0.142580</td>
<td>0.925180</td>
</tr>
<tr>
<td>96.4</td>
<td>0.137110</td>
<td>0.787820</td>
<td>6.7</td>
<td>-0.090546</td>
<td>0.899310</td>
</tr>
</tbody>
</table>

**Local Mach**

- **ENGINE 4 WL 180**
  - COND. 1.00.137.001
  - INBOARD SURFACE
  - OUTBOARD SURFACE

- **ENGINE 4 WL 155**
  - COND. 1.00.137.001
  - INBOARD SURFACE
  - OUTBOARD SURFACE
### ENGINE 4 030 deg CORE COWL

**COND. 1.00.137.001**

**OUTBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.316250</td>
<td>0.700190</td>
</tr>
<tr>
<td>15.5</td>
<td>0.175240</td>
<td>0.769240</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.119240</td>
<td>0.913550</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.220330</td>
<td>0.964260</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.069063</td>
<td>0.888700</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.307890</td>
<td>1.009100</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.315950</td>
<td>1.013300</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.473410</td>
<td>1.096900</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.374540</td>
<td>1.043900</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.385570</td>
<td>1.049700</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.350520</td>
<td>1.031300</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.433160</td>
<td>1.075100</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.280430</td>
<td>0.994920</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.190940</td>
<td>0.949420</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.304370</td>
<td>1.007300</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.288850</td>
<td>0.992250</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.472800</td>
<td>1.096600</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.401230</td>
<td>1.058000</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.433840</td>
<td>1.075500</td>
</tr>
<tr>
<td>85.7</td>
<td>-0.357930</td>
<td>1.035200</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.120770</td>
<td>0.914310</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.041550</td>
<td>0.875160</td>
</tr>
<tr>
<td>95.4</td>
<td>0.054657</td>
<td>0.828020</td>
</tr>
<tr>
<td>99.4</td>
<td>0.047608</td>
<td>0.831460</td>
</tr>
</tbody>
</table>

### ENGINE 4 330 deg CORE COWL

**COND. 1.00.137.001**

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.408290</td>
<td>0.654460</td>
</tr>
<tr>
<td>15.5</td>
<td>0.054067</td>
<td>0.861300</td>
</tr>
<tr>
<td>24.0</td>
<td>0.116510</td>
<td>0.797860</td>
</tr>
<tr>
<td>29.2</td>
<td>0.030661</td>
<td>0.839740</td>
</tr>
<tr>
<td>37.9</td>
<td>0.103990</td>
<td>0.804010</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.076999</td>
<td>0.892620</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.012547</td>
<td>0.860890</td>
</tr>
<tr>
<td>53.1</td>
<td>0.188810</td>
<td>0.948350</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.209240</td>
<td>0.958650</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.113230</td>
<td>0.910560</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.378000</td>
<td>1.045700</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.575810</td>
<td>1.154000</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.452500</td>
<td>1.085600</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.456880</td>
<td>1.065800</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.394660</td>
<td>1.054600</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.560190</td>
<td>1.145100</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.641110</td>
<td>1.191700</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.771550</td>
<td>1.270800</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.761260</td>
<td>1.264400</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.590870</td>
<td>1.162600</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.368810</td>
<td>1.051400</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.330790</td>
<td>1.021000</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.200240</td>
<td>0.954110</td>
</tr>
<tr>
<td>99.4</td>
<td>-0.080350</td>
<td>0.894270</td>
</tr>
</tbody>
</table>

*Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Continued)*
### Table B-8. Tabulated Data for Test 273-15, Condition 1.00.137.001 (Concluded)

#### ENGINE 4 060 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X/C - %</td>
<td></td>
<td></td>
<td>X/C - %</td>
<td></td>
</tr>
<tr>
<td>44.1</td>
<td>0.690110</td>
<td>0.505390</td>
<td>2.7</td>
<td>-0.857580</td>
<td>1.326400</td>
</tr>
<tr>
<td>32.2</td>
<td>0.275350</td>
<td>0.726300</td>
<td>6.1</td>
<td>-0.823480</td>
<td>1.307300</td>
</tr>
<tr>
<td>28.1</td>
<td>0.676500</td>
<td>0.513990</td>
<td>12.6</td>
<td>-0.924510</td>
<td>1.371900</td>
</tr>
<tr>
<td>18.0</td>
<td>0.323070</td>
<td>0.696820</td>
<td>17.0</td>
<td>-0.838210</td>
<td>1.313600</td>
</tr>
<tr>
<td>10.2</td>
<td>••••••••</td>
<td>••••••••</td>
<td>26.3</td>
<td>-0.698210</td>
<td>1.225500</td>
</tr>
<tr>
<td>4.9</td>
<td>0.397110</td>
<td>0.662750</td>
<td>32.7</td>
<td>-0.242060</td>
<td>0.975290</td>
</tr>
<tr>
<td>2.0</td>
<td>0.705240</td>
<td>0.497870</td>
<td>43.2</td>
<td>-0.267750</td>
<td>0.988410</td>
</tr>
<tr>
<td>0.0</td>
<td>0.756720</td>
<td>0.468230</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ENGINE 4 180 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X/C - %</td>
<td></td>
<td></td>
<td>X/C - %</td>
<td></td>
</tr>
<tr>
<td>42.5</td>
<td>0.667410</td>
<td>0.519020</td>
<td>6.2</td>
<td>-0.589600</td>
<td>1.151800</td>
</tr>
<tr>
<td>31.7</td>
<td>0.486860</td>
<td>0.614680</td>
<td>9.5</td>
<td>-0.577370</td>
<td>1.154300</td>
</tr>
<tr>
<td>24.4</td>
<td>0.273310</td>
<td>0.721300</td>
<td>13.2</td>
<td>-0.606970</td>
<td>1.171800</td>
</tr>
<tr>
<td>17.8</td>
<td>0.237980</td>
<td>0.736610</td>
<td>17.8</td>
<td>-0.627350</td>
<td>1.183600</td>
</tr>
<tr>
<td>11.1</td>
<td>0.087216</td>
<td>0.812130</td>
<td>27.2</td>
<td>-0.270410</td>
<td>0.989770</td>
</tr>
<tr>
<td>5.5</td>
<td>0.284500</td>
<td>0.715810</td>
<td>34.5</td>
<td>-0.243340</td>
<td>0.975940</td>
</tr>
<tr>
<td>2.4</td>
<td>0.626670</td>
<td>0.541300</td>
<td>45.5</td>
<td>-0.139710</td>
<td>0.969520</td>
</tr>
<tr>
<td>0.0</td>
<td>••••••••</td>
<td>••••••••</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ENGINE 4 300 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE</th>
<th>Cp</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X/C - %</td>
<td></td>
<td></td>
<td>X/C - %</td>
<td></td>
</tr>
<tr>
<td>42.3</td>
<td>0.669370</td>
<td>0.518500</td>
<td>2.7</td>
<td>-0.790730</td>
<td>1.283000</td>
</tr>
<tr>
<td>32.2</td>
<td>0.517050</td>
<td>0.599170</td>
<td>5.8</td>
<td>-0.650290</td>
<td>1.197000</td>
</tr>
<tr>
<td>22.7</td>
<td>0.360430</td>
<td>0.678320</td>
<td>12.7</td>
<td>-0.683050</td>
<td>1.216500</td>
</tr>
<tr>
<td>16.4</td>
<td>0.273140</td>
<td>0.721390</td>
<td>17.1</td>
<td>-0.734480</td>
<td>1.247700</td>
</tr>
<tr>
<td>9.9</td>
<td>0.151900</td>
<td>0.780610</td>
<td>26.4</td>
<td>-0.741470</td>
<td>1.252100</td>
</tr>
<tr>
<td>4.7</td>
<td>0.283020</td>
<td>0.716530</td>
<td>33.0</td>
<td>-0.759130</td>
<td>1.263000</td>
</tr>
<tr>
<td>2.0</td>
<td>0.689870</td>
<td>0.506530</td>
<td>43.3</td>
<td>-0.243960</td>
<td>0.976270</td>
</tr>
<tr>
<td>0.0</td>
<td>0.849610</td>
<td>0.411440</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.941840</td>
<td>1.213900</td>
<td>65.0</td>
<td>-0.016946</td>
<td>0.783250</td>
</tr>
<tr>
<td>2.0</td>
<td>-1.275300</td>
<td>1.403900</td>
<td>60.0</td>
<td>-0.012981</td>
<td>0.781530</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.299500</td>
<td>1.424600</td>
<td>55.0</td>
<td>-0.014565</td>
<td>0.782220</td>
</tr>
<tr>
<td>4.0</td>
<td>-1.403900</td>
<td>1.515700</td>
<td>50.0</td>
<td>-0.017476</td>
<td>0.783480</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.926130</td>
<td>1.205600</td>
<td>45.0</td>
<td>0.000782</td>
<td>0.775540</td>
</tr>
<tr>
<td>6.0</td>
<td>-0.504130</td>
<td>0.998910</td>
<td>40.0</td>
<td>0.005008</td>
<td>0.779800</td>
</tr>
<tr>
<td>7.0</td>
<td>-0.663030</td>
<td>1.073400</td>
<td>35.0</td>
<td>0.016153</td>
<td>0.782910</td>
</tr>
<tr>
<td>8.0</td>
<td>-0.643680</td>
<td>1.065400</td>
<td>30.0</td>
<td>0.047127</td>
<td>0.796370</td>
</tr>
<tr>
<td>9.0</td>
<td>-0.649760</td>
<td>1.066600</td>
<td>25.0</td>
<td>0.070413</td>
<td>0.806500</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.627340</td>
<td>1.065400</td>
<td>20.0</td>
<td>0.089741</td>
<td>0.814900</td>
</tr>
<tr>
<td>11.0</td>
<td>-0.638290</td>
<td>1.016000</td>
<td>15.0</td>
<td>0.125210</td>
<td>0.830340</td>
</tr>
<tr>
<td>12.0</td>
<td>-0.546470</td>
<td>1.018500</td>
<td>10.0</td>
<td>0.141340</td>
<td>0.714240</td>
</tr>
<tr>
<td>13.0</td>
<td>-0.553610</td>
<td>1.021800</td>
<td>5.0</td>
<td>0.430660</td>
<td>0.584210</td>
</tr>
<tr>
<td>14.0</td>
<td>-0.543980</td>
<td>1.002000</td>
<td>0.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.515070</td>
<td>1.003900</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>16.0</td>
<td>-0.454640</td>
<td>0.975300</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>17.0</td>
<td>-0.369480</td>
<td>0.937920</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>18.0</td>
<td>-0.299070</td>
<td>0.906590</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>19.0</td>
<td>-0.186320</td>
<td>0.857010</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.104960</td>
<td>0.821520</td>
<td>1.0</td>
<td>0.546080</td>
<td>0.529250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.0</td>
<td>-0.575690</td>
<td>1.092100</td>
<td>65.0</td>
<td>-0.030071</td>
<td>0.788950</td>
</tr>
<tr>
<td>12.0</td>
<td>-0.669750</td>
<td>1.076600</td>
<td>60.0</td>
<td>-0.010004</td>
<td>0.780230</td>
</tr>
<tr>
<td>13.0</td>
<td>-0.664620</td>
<td>1.074200</td>
<td>55.0</td>
<td>-0.019809</td>
<td>0.784490</td>
</tr>
<tr>
<td>14.0</td>
<td>-0.559360</td>
<td>1.024400</td>
<td>50.0</td>
<td>-0.049902</td>
<td>0.797570</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.569200</td>
<td>1.013300</td>
<td>45.0</td>
<td>0.006184</td>
<td>0.773200</td>
</tr>
<tr>
<td>16.0</td>
<td>-0.519600</td>
<td>1.003900</td>
<td>40.0</td>
<td>0.091904</td>
<td>0.735860</td>
</tr>
<tr>
<td>17.0</td>
<td>-0.509300</td>
<td>0.999500</td>
<td>35.0</td>
<td>0.059989</td>
<td>0.749780</td>
</tr>
<tr>
<td>18.0</td>
<td>-0.697400</td>
<td>1.003900</td>
<td>30.0</td>
<td>0.070248</td>
<td>0.745310</td>
</tr>
<tr>
<td>19.0</td>
<td>-0.664620</td>
<td>1.003900</td>
<td>25.0</td>
<td>0.099889</td>
<td>0.732380</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.705560</td>
<td>1.100200</td>
<td>20.0</td>
<td>0.099889</td>
<td>0.732380</td>
</tr>
<tr>
<td>21.0</td>
<td>-0.559360</td>
<td>1.059100</td>
<td>15.0</td>
<td>0.184920</td>
<td>0.695090</td>
</tr>
<tr>
<td>22.0</td>
<td>-0.546480</td>
<td>1.102000</td>
<td>10.0</td>
<td>0.155060</td>
<td>0.708220</td>
</tr>
<tr>
<td>23.0</td>
<td>-0.546480</td>
<td>1.102000</td>
<td>5.0</td>
<td>0.228240</td>
<td>0.675940</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.559360</td>
<td>1.059100</td>
<td>0.0</td>
<td>0.228240</td>
<td>0.675940</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.546480</td>
<td>1.059100</td>
<td>1.0</td>
<td>0.239410</td>
<td>0.670990</td>
</tr>
</tbody>
</table>
Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)
### Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.818180</td>
<td>1.149700</td>
<td>0.4</td>
<td>0.815800</td>
<td>1.149700</td>
</tr>
<tr>
<td>1.1</td>
<td>-1.174600</td>
<td>1.345800</td>
<td>1.1</td>
<td>-1.174600</td>
<td>1.345800</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.997720</td>
<td>1.244200</td>
<td>2.7</td>
<td>-0.997720</td>
<td>1.244200</td>
</tr>
<tr>
<td>5.8</td>
<td>-0.852550</td>
<td>1.167200</td>
<td>5.8</td>
<td>-0.852550</td>
<td>1.167200</td>
</tr>
<tr>
<td>8.8</td>
<td>-0.874480</td>
<td>1.178500</td>
<td>8.8</td>
<td>-0.874480</td>
<td>1.178500</td>
</tr>
<tr>
<td>12.5</td>
<td>-0.737580</td>
<td>1.109600</td>
<td>12.5</td>
<td>-0.737580</td>
<td>1.109600</td>
</tr>
<tr>
<td>16.7</td>
<td>-0.631430</td>
<td>1.058300</td>
<td>16.7</td>
<td>-0.631430</td>
<td>1.058300</td>
</tr>
<tr>
<td>21.1</td>
<td>-0.477080</td>
<td>0.986520</td>
<td>21.1</td>
<td>-0.477080</td>
<td>0.986520</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.352840</td>
<td>0.930390</td>
<td>26.1</td>
<td>-0.352840</td>
<td>0.930390</td>
</tr>
<tr>
<td>33.5</td>
<td>-0.366200</td>
<td>0.935470</td>
<td>33.5</td>
<td>-0.366200</td>
<td>0.935470</td>
</tr>
<tr>
<td>45.6</td>
<td>-0.346550</td>
<td>0.926790</td>
<td>45.6</td>
<td>-0.346550</td>
<td>0.926790</td>
</tr>
<tr>
<td>57.2</td>
<td>-0.136340</td>
<td>0.835190</td>
<td>57.2</td>
<td>-0.136340</td>
<td>0.835190</td>
</tr>
<tr>
<td>64.5</td>
<td>-0.071103</td>
<td>0.800790</td>
<td>64.5</td>
<td>-0.071103</td>
<td>0.800790</td>
</tr>
<tr>
<td>71.8</td>
<td>0.001905</td>
<td>0.775060</td>
<td>71.8</td>
<td>0.001905</td>
<td>0.775060</td>
</tr>
<tr>
<td>82.4</td>
<td>0.119010</td>
<td>0.724020</td>
<td>82.4</td>
<td>0.119010</td>
<td>0.724020</td>
</tr>
<tr>
<td>99.4</td>
<td>0.274540</td>
<td>0.655330</td>
<td>99.4</td>
<td>0.274540</td>
<td>0.655330</td>
</tr>
<tr>
<td>ENGINE 3 150 deg INLET RADIAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COND. 1.00.137.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INNER SURFACE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X/C - %</td>
<td>CP</td>
<td>LOCAL MACH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.990240</td>
<td>0.265040</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>1.094900</td>
<td>0.163030</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>0.232470</td>
<td>0.674060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>0.033839</td>
<td>0.751160</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>0.612870</td>
<td>0.496080</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>-0.113730</td>
<td>0.891340</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2</td>
<td>-0.078564</td>
<td>0.910880</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.2</td>
<td>-0.394180</td>
<td>0.948990</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.5</td>
<td>0.226470</td>
<td>0.874720</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.2</td>
<td>-0.264540</td>
<td>0.923940</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.7</td>
<td>-0.338150</td>
<td>0.948990</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.7</td>
<td>0.295090</td>
<td>0.904830</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.5</td>
<td>-0.266470</td>
<td>0.874720</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.7</td>
<td>-0.187500</td>
<td>0.857520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.0</td>
<td>-0.088900</td>
<td>0.814530</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.9</td>
<td>-0.079977</td>
<td>0.810650</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.0</td>
<td>-0.058366</td>
<td>0.801260</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.3</td>
<td>0.029396</td>
<td>0.762840</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99.4</td>
<td>0.210710</td>
<td>0.693700</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| OUTER SURFACE                 |</p>
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.223420</td>
<td>0.678080</td>
</tr>
<tr>
<td>1.2</td>
<td>-0.078564</td>
<td>0.910880</td>
</tr>
<tr>
<td>2.9</td>
<td>-0.113730</td>
<td>0.891340</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.264540</td>
<td>0.923940</td>
</tr>
<tr>
<td>9.4</td>
<td>-0.338150</td>
<td>0.948990</td>
</tr>
<tr>
<td>14.5</td>
<td>-0.394180</td>
<td>0.948990</td>
</tr>
<tr>
<td>18.2</td>
<td>-0.264540</td>
<td>0.923940</td>
</tr>
<tr>
<td>22.7</td>
<td>-0.338150</td>
<td>0.948990</td>
</tr>
<tr>
<td>27.7</td>
<td>0.295090</td>
<td>0.904830</td>
</tr>
<tr>
<td>34.5</td>
<td>-0.266470</td>
<td>0.874720</td>
</tr>
<tr>
<td>45.7</td>
<td>-0.187500</td>
<td>0.857520</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.088900</td>
<td>0.814530</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.079977</td>
<td>0.810650</td>
</tr>
<tr>
<td>71.0</td>
<td>-0.058366</td>
<td>0.801260</td>
</tr>
<tr>
<td>81.3</td>
<td>0.029396</td>
<td>0.762840</td>
</tr>
<tr>
<td>99.4</td>
<td>0.210710</td>
<td>0.693700</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.815120</td>
</tr>
<tr>
<td>0.761160</td>
</tr>
<tr>
<td>0.496080</td>
</tr>
<tr>
<td>0.646110</td>
</tr>
<tr>
<td>0.480000</td>
</tr>
<tr>
<td>0.158930</td>
</tr>
<tr>
<td>0.285010</td>
</tr>
<tr>
<td>0.187500</td>
</tr>
<tr>
<td>0.088900</td>
</tr>
<tr>
<td>0.079977</td>
</tr>
<tr>
<td>0.058366</td>
</tr>
<tr>
<td>0.029396</td>
</tr>
<tr>
<td>0.210710</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.891340</td>
</tr>
<tr>
<td>0.923940</td>
</tr>
<tr>
<td>0.948990</td>
</tr>
<tr>
<td>0.904830</td>
</tr>
<tr>
<td>0.874720</td>
</tr>
<tr>
<td>0.857520</td>
</tr>
<tr>
<td>0.814530</td>
</tr>
<tr>
<td>0.810650</td>
</tr>
<tr>
<td>0.801260</td>
</tr>
<tr>
<td>0.762840</td>
</tr>
<tr>
<td>0.693700</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.678080</td>
</tr>
<tr>
<td>0.910880</td>
</tr>
<tr>
<td>0.891340</td>
</tr>
<tr>
<td>0.923940</td>
</tr>
<tr>
<td>0.948990</td>
</tr>
<tr>
<td>0.904830</td>
</tr>
<tr>
<td>0.874720</td>
</tr>
<tr>
<td>0.857520</td>
</tr>
<tr>
<td>0.814530</td>
</tr>
<tr>
<td>0.810650</td>
</tr>
<tr>
<td>0.762840</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.760820</td>
</tr>
<tr>
<td>0.893850</td>
</tr>
<tr>
<td>0.885960</td>
</tr>
<tr>
<td>0.977060</td>
</tr>
<tr>
<td>0.957100</td>
</tr>
<tr>
<td>0.976310</td>
</tr>
<tr>
<td>0.938520</td>
</tr>
<tr>
<td>0.915850</td>
</tr>
<tr>
<td>0.911580</td>
</tr>
<tr>
<td>0.922510</td>
</tr>
<tr>
<td>0.857710</td>
</tr>
<tr>
<td>0.846980</td>
</tr>
<tr>
<td>0.837020</td>
</tr>
<tr>
<td>0.821380</td>
</tr>
<tr>
<td>0.765560</td>
</tr>
<tr>
<td>0.703050</td>
</tr>
</tbody>
</table>

Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)
Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>-0.861170</td>
<td>1.171700</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.954070</td>
<td>1.220500</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.124900</td>
<td>1.316200</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.358800</td>
<td>1.463100</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.498600</td>
<td>1.566800</td>
</tr>
<tr>
<td>15.0</td>
<td>-1.429000</td>
<td>1.614300</td>
</tr>
<tr>
<td>20.0</td>
<td>-1.068600</td>
<td>1.283600</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.820980</td>
<td>1.151200</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.660740</td>
<td>1.072300</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.530260</td>
<td>1.011000</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.480840</td>
<td>0.988240</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.516690</td>
<td>1.004700</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.490780</td>
<td>0.992780</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.525580</td>
<td>1.008800</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.505550</td>
<td>0.999530</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.462230</td>
<td>0.979750</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.412650</td>
<td>0.957300</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.338180</td>
<td>0.923950</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.321480</td>
<td>0.916530</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>-0.762120</td>
<td>1.121700</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.670740</td>
<td>1.077100</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.561800</td>
<td>1.025600</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.588810</td>
<td>1.037300</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.493460</td>
<td>0.994020</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.362720</td>
<td>0.934900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.349380</td>
<td>0.928940</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.513510</td>
<td>1.029700</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.595520</td>
<td>1.041800</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.288800</td>
<td>1.417500</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.052000</td>
<td>1.298900</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.108400</td>
<td>1.306500</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.778830</td>
<td>1.130000</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.725160</td>
<td>1.103500</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.665600</td>
<td>1.074700</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.621340</td>
<td>1.053500</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.533720</td>
<td>1.014900</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.569390</td>
<td>1.027500</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.562320</td>
<td>1.025800</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.562800</td>
<td>1.026100</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.550040</td>
<td>1.020100</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.559670</td>
<td>1.024600</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.533420</td>
<td>1.012400</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.508840</td>
<td>1.001100</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.443800</td>
<td>0.971380</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.377080</td>
<td>0.941320</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.314690</td>
<td>0.913510</td>
</tr>
</tbody>
</table>
### ENGINE 4 WL 180

**COND. 1.00.137.002**

#### INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7</td>
<td>0.440160</td>
<td>0.579790</td>
</tr>
<tr>
<td>8.7</td>
<td>0.540710</td>
<td>0.531890</td>
</tr>
<tr>
<td>10.9</td>
<td>0.620430</td>
<td>0.492260</td>
</tr>
<tr>
<td>14.5</td>
<td>0.800020</td>
<td>0.755150</td>
</tr>
<tr>
<td>17.9</td>
<td>0.720170</td>
<td>0.657290</td>
</tr>
<tr>
<td>21.6</td>
<td>0.168440</td>
<td>0.702350</td>
</tr>
<tr>
<td>28.4</td>
<td>-0.000525</td>
<td>0.876120</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.229910</td>
<td>0.881470</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.242100</td>
<td>0.878780</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.235960</td>
<td>0.792380</td>
</tr>
<tr>
<td>58.9</td>
<td>-0.089302</td>
<td>0.730380</td>
</tr>
<tr>
<td>96.4</td>
<td>0.143070</td>
<td>0.713490</td>
</tr>
</tbody>
</table>

#### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.4</td>
<td>0.131520</td>
<td>0.718550</td>
</tr>
<tr>
<td>81.5</td>
<td>0.115050</td>
<td>0.725320</td>
</tr>
<tr>
<td>58.9</td>
<td>0.039968</td>
<td>0.756510</td>
</tr>
<tr>
<td>44.2</td>
<td>0.040573</td>
<td>0.777880</td>
</tr>
<tr>
<td>37.7</td>
<td>0.023761</td>
<td>0.765560</td>
</tr>
<tr>
<td>33.7</td>
<td>0.061506</td>
<td>0.749130</td>
</tr>
<tr>
<td>28.4</td>
<td>0.120850</td>
<td>0.723220</td>
</tr>
<tr>
<td>21.6</td>
<td>0.165020</td>
<td>0.703850</td>
</tr>
<tr>
<td>17.9</td>
<td>0.074865</td>
<td>0.743310</td>
</tr>
</tbody>
</table>

### ENGINE 4 WL 155

**COND. 1.00.137.002**

#### INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>-0.217190</td>
<td>0.870540</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.225450</td>
<td>0.874170</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.240400</td>
<td>0.880720</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.185450</td>
<td>0.856640</td>
</tr>
<tr>
<td>13.3</td>
<td>-0.011084</td>
<td>0.780710</td>
</tr>
<tr>
<td>23.1</td>
<td>0.189820</td>
<td>0.692940</td>
</tr>
<tr>
<td>33.1</td>
<td>0.372050</td>
<td>0.611270</td>
</tr>
<tr>
<td>43.0</td>
<td>0.249720</td>
<td>0.666410</td>
</tr>
<tr>
<td>52.2</td>
<td>0.000301</td>
<td>0.775760</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.191220</td>
<td>0.850170</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.294490</td>
<td>0.904580</td>
</tr>
<tr>
<td>66.6</td>
<td>-0.160150</td>
<td>0.845580</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.062689</td>
<td>0.803140</td>
</tr>
<tr>
<td>81.5</td>
<td>0.032740</td>
<td>0.761650</td>
</tr>
<tr>
<td>89.8</td>
<td>0.155306</td>
<td>0.752690</td>
</tr>
<tr>
<td>96.8</td>
<td>0.172240</td>
<td>0.700590</td>
</tr>
</tbody>
</table>

#### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.8</td>
<td>0.131520</td>
<td>0.718550</td>
</tr>
<tr>
<td>81.5</td>
<td>0.115050</td>
<td>0.725320</td>
</tr>
<tr>
<td>58.9</td>
<td>0.039968</td>
<td>0.756510</td>
</tr>
<tr>
<td>44.2</td>
<td>0.040573</td>
<td>0.777880</td>
</tr>
<tr>
<td>37.7</td>
<td>0.023761</td>
<td>0.765560</td>
</tr>
<tr>
<td>33.7</td>
<td>0.061506</td>
<td>0.749130</td>
</tr>
<tr>
<td>28.4</td>
<td>0.120850</td>
<td>0.723220</td>
</tr>
<tr>
<td>21.6</td>
<td>0.165020</td>
<td>0.703850</td>
</tr>
</tbody>
</table>

---

*Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)*

59
# ENGINE 4030 deg CORE COWL

## COND. 1.00.137.002

### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.210300</td>
<td>0.653090</td>
</tr>
<tr>
<td>15.5</td>
<td>0.231120</td>
<td>0.674670</td>
</tr>
<tr>
<td>24.0</td>
<td>0.016584</td>
<td>0.783110</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.156190</td>
<td>0.843860</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.176970</td>
<td>0.852940</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.262610</td>
<td>0.890300</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.204530</td>
<td>0.884990</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.420770</td>
<td>0.900970</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.235050</td>
<td>0.878390</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.233130</td>
<td>0.880170</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.556630</td>
<td>1.023200</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.518630</td>
<td>1.005600</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.142890</td>
<td>0.838050</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.048471</td>
<td>0.796970</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.100640</td>
<td>0.819660</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.198070</td>
<td>0.882160</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.314640</td>
<td>0.913510</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.242190</td>
<td>0.891510</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.258170</td>
<td>0.888550</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.243580</td>
<td>0.883010</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.114470</td>
<td>0.825680</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.116440</td>
<td>0.826560</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.018049</td>
<td>0.783740</td>
</tr>
<tr>
<td>99.4</td>
<td>0.081384</td>
<td>0.740460</td>
</tr>
</tbody>
</table>

# ENGINE 4330 deg CORE COWL

## COND. 1.00.137.002

### INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.416240</td>
<td>0.590930</td>
</tr>
<tr>
<td>15.5</td>
<td>-0.044587</td>
<td>0.795280</td>
</tr>
<tr>
<td>24.0</td>
<td>0.097010</td>
<td>0.733650</td>
</tr>
<tr>
<td>29.2</td>
<td>0.164410</td>
<td>0.704130</td>
</tr>
<tr>
<td>37.9</td>
<td>0.072350</td>
<td>0.744400</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.054984</td>
<td>0.799800</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.013609</td>
<td>0.781820</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.064558</td>
<td>0.803050</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.187600</td>
<td>0.857580</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.289440</td>
<td>0.902340</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.275400</td>
<td>0.896140</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.312490</td>
<td>0.912550</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.310140</td>
<td>0.911510</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.369150</td>
<td>0.937780</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.463000</td>
<td>0.980110</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.480840</td>
<td>0.998250</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.444560</td>
<td>0.971730</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.337550</td>
<td>0.923670</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.214650</td>
<td>0.869430</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.248150</td>
<td>0.884140</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.258370</td>
<td>0.885840</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.142780</td>
<td>0.838010</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.043007</td>
<td>0.794590</td>
</tr>
<tr>
<td>99.4</td>
<td>-0.017252</td>
<td>0.783400</td>
</tr>
</tbody>
</table>

Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Continued)
### ENGINE 4060 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.1</td>
<td>0.618060</td>
<td>0.493450</td>
<td>2.7</td>
<td>-1.044200</td>
<td>1.269900</td>
</tr>
<tr>
<td>32.2</td>
<td>***</td>
<td>***</td>
<td>6.1</td>
<td>-0.777310</td>
<td>1.129200</td>
</tr>
<tr>
<td>23.1</td>
<td>***</td>
<td>***</td>
<td>12.6</td>
<td>-0.594390</td>
<td>1.040800</td>
</tr>
<tr>
<td>16.6</td>
<td>0.222420</td>
<td>0.678520</td>
<td>17.0</td>
<td>-0.524130</td>
<td>1.008100</td>
</tr>
<tr>
<td>10.2</td>
<td>**</td>
<td>**</td>
<td>26.3</td>
<td>-0.309130</td>
<td>0.911050</td>
</tr>
<tr>
<td>4.9</td>
<td>0.317490</td>
<td>0.636050</td>
<td>32.7</td>
<td>-0.323920</td>
<td>0.917610</td>
</tr>
<tr>
<td>2.0</td>
<td>0.660370</td>
<td>0.471690</td>
<td>43.2</td>
<td>-0.269310</td>
<td>0.893450</td>
</tr>
<tr>
<td>0.0</td>
<td>0.669700</td>
<td>0.466820</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4180 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.5</td>
<td>0.583370</td>
<td>0.510980</td>
<td>6.2</td>
<td>-0.039265</td>
<td>0.792960</td>
</tr>
<tr>
<td>31.7</td>
<td>0.380800</td>
<td>0.607250</td>
<td>9.5</td>
<td>-0.314960</td>
<td>0.913630</td>
</tr>
<tr>
<td>24.4</td>
<td>0.129150</td>
<td>0.719580</td>
<td>13.2</td>
<td>-0.366430</td>
<td>0.936550</td>
</tr>
<tr>
<td>17.8</td>
<td>0.066932</td>
<td>0.746750</td>
<td>17.8</td>
<td>-0.303250</td>
<td>0.908440</td>
</tr>
<tr>
<td>11.1</td>
<td>-0.156430</td>
<td>0.843950</td>
<td>27.2</td>
<td>-0.052764</td>
<td>0.811600</td>
</tr>
<tr>
<td>5.5</td>
<td>0.013769</td>
<td>0.769900</td>
<td>34.5</td>
<td>-0.256160</td>
<td>0.897650</td>
</tr>
<tr>
<td>2.4</td>
<td>0.379900</td>
<td>0.607670</td>
<td>45.5</td>
<td>-0.194070</td>
<td>0.860400</td>
</tr>
<tr>
<td>0.0</td>
<td>***</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4300 deg INLET RADIAL

<table>
<thead>
<tr>
<th>INNER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>OUTER SURFACE X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.3</td>
<td>0.598060</td>
<td>0.503540</td>
<td>2.7</td>
<td>-1.042900</td>
<td>1.269100</td>
</tr>
<tr>
<td>32.2</td>
<td>0.431160</td>
<td>0.583980</td>
<td>5.8</td>
<td>-0.731960</td>
<td>1.106900</td>
</tr>
<tr>
<td>22.7</td>
<td>0.263900</td>
<td>0.600800</td>
<td>12.7</td>
<td>-0.617330</td>
<td>1.051700</td>
</tr>
<tr>
<td>16.4</td>
<td>0.179870</td>
<td>0.597310</td>
<td>17.1</td>
<td>-0.490130</td>
<td>0.992510</td>
</tr>
<tr>
<td>9.9</td>
<td>0.068149</td>
<td>0.746230</td>
<td>20.4</td>
<td>-0.485200</td>
<td>0.990230</td>
</tr>
<tr>
<td>4.7</td>
<td>0.228010</td>
<td>0.676050</td>
<td>33.0</td>
<td>-0.438230</td>
<td>0.968300</td>
</tr>
<tr>
<td>2.0</td>
<td>0.660280</td>
<td>0.471750</td>
<td>43.3</td>
<td>-0.361000</td>
<td>0.934130</td>
</tr>
<tr>
<td>0.0</td>
<td>0.748150</td>
<td>0.424390</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table B-9. Tabulated Data for Test 273-15, Condition 1.00.137.002 (Concluded)*

61
### Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.777040</td>
<td>1.171500</td>
<td>65.0</td>
<td>-0.026633</td>
<td>0.813610</td>
</tr>
<tr>
<td>2.0</td>
<td>-1.012900</td>
<td>1.309300</td>
<td>60.0</td>
<td>-0.024485</td>
<td>0.812640</td>
</tr>
<tr>
<td>3.0</td>
<td>-1.173800</td>
<td>1.412100</td>
<td>55.0</td>
<td>-0.025555</td>
<td>0.813130</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.301900</td>
<td>1.503300</td>
<td>50.0</td>
<td>-0.022327</td>
<td>0.811670</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.305300</td>
<td>1.505800</td>
<td>45.0</td>
<td>-0.013730</td>
<td>0.807770</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.204700</td>
<td>1.433300</td>
<td>40.0</td>
<td>-0.012116</td>
<td>0.807040</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.456150</td>
<td>1.012600</td>
<td>35.0</td>
<td>-0.018832</td>
<td>0.810080</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.570690</td>
<td>1.068600</td>
<td>30.0</td>
<td>-0.066426</td>
<td>0.831640</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.550909</td>
<td>1.058400</td>
<td>25.0</td>
<td>-0.095994</td>
<td>0.845060</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.594850</td>
<td>1.080700</td>
<td>20.0</td>
<td>-0.128000</td>
<td>0.859610</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.605970</td>
<td>1.086200</td>
<td>15.0</td>
<td>-0.233720</td>
<td>0.903410</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.653810</td>
<td>1.110500</td>
<td>10.0</td>
<td>0.075811</td>
<td>0.767260</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.754030</td>
<td>1.152200</td>
<td>5.0</td>
<td>0.393890</td>
<td>0.820940</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.567300</td>
<td>1.066900</td>
<td>3.0</td>
<td>0.443910</td>
<td>0.597090</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.552120</td>
<td>1.059500</td>
<td>2.0</td>
<td>0.487180</td>
<td>0.576140</td>
</tr>
<tr>
<td>52.4</td>
<td>****</td>
<td>****</td>
<td>1.0</td>
<td>0.525910</td>
<td>0.557120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.0</td>
<td>-0.804380</td>
<td>1.189900</td>
<td>65.0</td>
<td>-0.035109</td>
<td>0.817440</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.568610</td>
<td>1.076600</td>
<td>60.0</td>
<td>-0.043873</td>
<td>0.817440</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.639670</td>
<td>1.103300</td>
<td>55.0</td>
<td>-0.042516</td>
<td>0.820800</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.682810</td>
<td>1.125400</td>
<td>50.0</td>
<td>-0.063348</td>
<td>0.830250</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.569020</td>
<td>1.067800</td>
<td>5.0</td>
<td>0.099867</td>
<td>0.806020</td>
</tr>
<tr>
<td>60.0</td>
<td>****</td>
<td>****</td>
<td>10.0</td>
<td>0.082539</td>
<td>0.764220</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.418330</td>
<td>0.994450</td>
<td>65.0</td>
<td>-0.035109</td>
<td>0.817440</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.571830</td>
<td>1.069200</td>
<td>60.0</td>
<td>-0.043873</td>
<td>0.817440</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.754200</td>
<td>1.182800</td>
<td>55.0</td>
<td>-0.042516</td>
<td>0.820800</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.944510</td>
<td>1.268600</td>
<td>50.0</td>
<td>-0.063348</td>
<td>0.830250</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.934880</td>
<td>1.253000</td>
<td>45.0</td>
<td>-0.099867</td>
<td>0.806020</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.514050</td>
<td>1.040700</td>
<td>40.0</td>
<td>0.082539</td>
<td>0.764220</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.653840</td>
<td>1.102700</td>
<td>35.0</td>
<td>0.045599</td>
<td>0.781400</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.699450</td>
<td>1.134000</td>
<td>30.0</td>
<td>0.054285</td>
<td>0.777000</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.662460</td>
<td>1.125200</td>
<td>25.0</td>
<td>0.091801</td>
<td>0.760200</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.708520</td>
<td>1.138500</td>
<td>20.0</td>
<td>0.105000</td>
<td>0.754040</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.660500</td>
<td>1.127100</td>
<td>15.0</td>
<td>0.161270</td>
<td>0.728500</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.685850</td>
<td>1.127000</td>
<td>10.0</td>
<td>0.121900</td>
<td>0.746370</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.659430</td>
<td>1.113400</td>
<td>5.0</td>
<td>0.203190</td>
<td>0.703390</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.632050</td>
<td>1.099400</td>
<td>3.0</td>
<td>0.224950</td>
<td>0.699440</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.584860</td>
<td>1.079700</td>
<td>2.0</td>
<td>0.160580</td>
<td>0.728810</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.615440</td>
<td>0.910900</td>
<td>1.0</td>
<td>0.168920</td>
<td>0.725020</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.629970</td>
<td>1.098400</td>
<td>10.0</td>
<td>0.121900</td>
<td>0.746370</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.540670</td>
<td>1.053700</td>
<td>5.0</td>
<td>0.203190</td>
<td>0.703390</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.565600</td>
<td>1.066100</td>
<td>3.0</td>
<td>0.224950</td>
<td>0.699440</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.491580</td>
<td>1.029700</td>
<td>2.0</td>
<td>0.160580</td>
<td>0.728810</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.405120</td>
<td>0.986160</td>
<td>1.0</td>
<td>0.168920</td>
<td>0.725020</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.315250</td>
<td>0.945920</td>
<td>1.0</td>
<td>0.168920</td>
<td>0.725020</td>
</tr>
</tbody>
</table>
Table 8-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)
Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)
Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)

65
<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>0.118070</td>
<td>0.748110</td>
</tr>
<tr>
<td>5.5</td>
<td>0.253280</td>
<td>0.696440</td>
</tr>
<tr>
<td>3.7</td>
<td>0.446390</td>
<td>0.595900</td>
</tr>
<tr>
<td>1.3</td>
<td>0.774060</td>
<td>0.425330</td>
</tr>
<tr>
<td>0.1</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>0.0</td>
<td>0.766940</td>
<td>0.429450</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.061554</td>
<td>0.829430</td>
</tr>
<tr>
<td>1.0</td>
<td>-0.068480</td>
<td>1.225200</td>
</tr>
<tr>
<td>2.7</td>
<td>-0.353120</td>
<td>1.051000</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.898000</td>
<td>1.248600</td>
</tr>
<tr>
<td>9.0</td>
<td>-0.892400</td>
<td>1.238700</td>
</tr>
<tr>
<td>12.5</td>
<td>-0.843340</td>
<td>1.211200</td>
</tr>
<tr>
<td>17.2</td>
<td>-0.589000</td>
<td>0.877700</td>
</tr>
<tr>
<td>21.7</td>
<td>-0.306070</td>
<td>0.941540</td>
</tr>
<tr>
<td>26.5</td>
<td>-0.297450</td>
<td>0.937520</td>
</tr>
<tr>
<td>33.6</td>
<td>-0.257850</td>
<td>0.919150</td>
</tr>
<tr>
<td>45.2</td>
<td>-0.314680</td>
<td>0.945560</td>
</tr>
<tr>
<td>56.6</td>
<td>-0.336930</td>
<td>0.955900</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.207190</td>
<td>0.895810</td>
</tr>
<tr>
<td>71.1</td>
<td>-0.156820</td>
<td>0.872750</td>
</tr>
<tr>
<td>81.5</td>
<td>-0.021335</td>
<td>0.811210</td>
</tr>
<tr>
<td>99.0</td>
<td>0.145910</td>
<td>0.735460</td>
</tr>
</tbody>
</table>

Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)
### Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)

#### COND. 1.00.137.003

**UPPER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>-0.585300</td>
<td>1.057900</td>
<td>65.0</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.639910</td>
<td>1.103400</td>
<td>60.0</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.970390</td>
<td>1.283800</td>
<td>55.0</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.207200</td>
<td>1.435000</td>
<td>50.0</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.331400</td>
<td>1.523800</td>
<td>45.0</td>
</tr>
<tr>
<td>15.0</td>
<td>-1.395100</td>
<td>1.576400</td>
<td>40.0</td>
</tr>
<tr>
<td>20.0</td>
<td>-1.447400</td>
<td>1.620600</td>
<td>35.0</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.205880</td>
<td>0.895210</td>
<td>30.0</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.893850</td>
<td>1.239500</td>
<td>25.0</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.646620</td>
<td>1.106800</td>
<td>20.0</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.493150</td>
<td>1.025600</td>
<td>15.0</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.439330</td>
<td>1.004500</td>
<td>10.0</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.493940</td>
<td>1.030900</td>
<td>5.0</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.507200</td>
<td>1.037300</td>
<td>3.0</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.247410</td>
<td>0.914330</td>
<td>1.0</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.513380</td>
<td>1.040300</td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.513370</td>
<td>1.040300</td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.466020</td>
<td>1.017300</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.422200</td>
<td>0.996290</td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.341960</td>
<td>0.958320</td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.330820</td>
<td>0.953100</td>
<td></td>
</tr>
</tbody>
</table>

**LOWER SURFACE**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.0</td>
<td>-0.518950</td>
<td>1.043100</td>
<td>1.0</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.436250</td>
<td>1.003000</td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.360640</td>
<td>0.967100</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.312930</td>
<td>0.944730</td>
<td></td>
</tr>
</tbody>
</table>

**WBL 834**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>-1.066200</td>
<td>1.342200</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.582830</td>
<td>1.074600</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.606210</td>
<td>1.086400</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.577520</td>
<td>1.072000</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.496560</td>
<td>1.032100</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.357970</td>
<td>0.965840</td>
</tr>
</tbody>
</table>

**WBL 870**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.238790</td>
<td>0.910350</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.477840</td>
<td>1.023000</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.505490</td>
<td>1.036500</td>
</tr>
<tr>
<td>5.0</td>
<td>-1.165200</td>
<td>1.406300</td>
</tr>
<tr>
<td>7.5</td>
<td>-1.011700</td>
<td>1.308600</td>
</tr>
<tr>
<td>10.0</td>
<td>-1.045800</td>
<td>1.329400</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.627100</td>
<td>1.096900</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.628300</td>
<td>1.098000</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.600680</td>
<td>1.083600</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.648640</td>
<td>1.107900</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.562500</td>
<td>1.064500</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.543310</td>
<td>1.057500</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.540970</td>
<td>1.053900</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.560300</td>
<td>1.063400</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.552710</td>
<td>1.059700</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.548320</td>
<td>1.057500</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.554670</td>
<td>1.060600</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.518950</td>
<td>1.043100</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.436250</td>
<td>1.003000</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.360640</td>
<td>0.967100</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.312930</td>
<td>0.944730</td>
</tr>
</tbody>
</table>
### ENGINE 4 WL 180

**COND. 1.00.137.003**

#### INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>0.410200</td>
<td>0.613200</td>
</tr>
<tr>
<td>8.7</td>
<td>0.526440</td>
<td>0.556860</td>
</tr>
<tr>
<td>10.9</td>
<td>0.562110</td>
<td>0.539060</td>
</tr>
<tr>
<td>14.5</td>
<td>0.459450</td>
<td>0.589810</td>
</tr>
<tr>
<td>17.9</td>
<td>0.219390</td>
<td>0.701860</td>
</tr>
<tr>
<td>21.6</td>
<td>0.111850</td>
<td>0.750940</td>
</tr>
<tr>
<td>28.4</td>
<td>0.148390</td>
<td>0.868910</td>
</tr>
<tr>
<td>33.7</td>
<td>0.297790</td>
<td>0.937690</td>
</tr>
<tr>
<td>37.7</td>
<td>0.283110</td>
<td>0.930870</td>
</tr>
<tr>
<td>44.2</td>
<td>0.280080</td>
<td>0.929460</td>
</tr>
<tr>
<td>58.9</td>
<td>-0.046553</td>
<td>0.822630</td>
</tr>
<tr>
<td>81.5</td>
<td>0.100720</td>
<td>0.755990</td>
</tr>
<tr>
<td>96.4</td>
<td>0.139380</td>
<td>0.738220</td>
</tr>
</tbody>
</table>

#### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.4</td>
<td>0.410200</td>
<td>0.613200</td>
</tr>
<tr>
<td>88.7</td>
<td>0.526440</td>
<td>0.556860</td>
</tr>
<tr>
<td>110.9</td>
<td>0.562110</td>
<td>0.539060</td>
</tr>
<tr>
<td>142.5</td>
<td>0.459450</td>
<td>0.589810</td>
</tr>
<tr>
<td>174.7</td>
<td>0.219390</td>
<td>0.701860</td>
</tr>
<tr>
<td>206.4</td>
<td>0.111850</td>
<td>0.750940</td>
</tr>
<tr>
<td>278.4</td>
<td>0.148390</td>
<td>0.868910</td>
</tr>
<tr>
<td>333.7</td>
<td>0.297790</td>
<td>0.937690</td>
</tr>
<tr>
<td>377.7</td>
<td>0.283110</td>
<td>0.930870</td>
</tr>
<tr>
<td>444.2</td>
<td>0.280080</td>
<td>0.929460</td>
</tr>
<tr>
<td>588.9</td>
<td>-0.046553</td>
<td>0.822630</td>
</tr>
<tr>
<td>818.5</td>
<td>0.100720</td>
<td>0.755990</td>
</tr>
<tr>
<td>966.4</td>
<td>0.139380</td>
<td>0.738220</td>
</tr>
</tbody>
</table>

### ENGINE 4 WL 155

**COND. 1.00.137.003**

#### INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.210150</td>
<td>0.897180</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.230010</td>
<td>0.906320</td>
</tr>
<tr>
<td>5.5</td>
<td>0.253990</td>
<td>0.917380</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.195800</td>
<td>0.890950</td>
</tr>
<tr>
<td>13.3</td>
<td>-0.028443</td>
<td>0.814440</td>
</tr>
<tr>
<td>23.1</td>
<td>0.166550</td>
<td>0.726100</td>
</tr>
<tr>
<td>33.1</td>
<td>0.363100</td>
<td>0.653460</td>
</tr>
<tr>
<td>43.0</td>
<td>0.227160</td>
<td>0.698430</td>
</tr>
<tr>
<td>52.2</td>
<td>-0.033930</td>
<td>0.816920</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.230800</td>
<td>0.906860</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.386130</td>
<td>0.979150</td>
</tr>
<tr>
<td>66.6</td>
<td>0.200540</td>
<td>0.892770</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.061235</td>
<td>0.829320</td>
</tr>
<tr>
<td>81.5</td>
<td>0.028242</td>
<td>0.786790</td>
</tr>
<tr>
<td>89.0</td>
<td>0.039547</td>
<td>0.793560</td>
</tr>
<tr>
<td>96.8</td>
<td>0.155630</td>
<td>0.731060</td>
</tr>
</tbody>
</table>

#### OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.8</td>
<td>0.155630</td>
<td>0.731060</td>
</tr>
<tr>
<td>89.0</td>
<td>0.039547</td>
<td>0.793560</td>
</tr>
<tr>
<td>81.5</td>
<td>0.028242</td>
<td>0.786790</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.061235</td>
<td>0.829320</td>
</tr>
<tr>
<td>66.6</td>
<td>0.200540</td>
<td>0.892770</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.386130</td>
<td>0.979150</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.230800</td>
<td>0.906860</td>
</tr>
<tr>
<td>52.2</td>
<td>-0.033930</td>
<td>0.816920</td>
</tr>
<tr>
<td>43.0</td>
<td>0.227160</td>
<td>0.698430</td>
</tr>
<tr>
<td>33.1</td>
<td>0.363100</td>
<td>0.653460</td>
</tr>
<tr>
<td>23.1</td>
<td>0.166550</td>
<td>0.726100</td>
</tr>
<tr>
<td>13.3</td>
<td>-0.028443</td>
<td>0.814440</td>
</tr>
<tr>
<td>8.1</td>
<td>-0.195800</td>
<td>0.890950</td>
</tr>
<tr>
<td>5.5</td>
<td>0.253990</td>
<td>0.917380</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.230010</td>
<td>0.906320</td>
</tr>
</tbody>
</table>

Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)

---

68
**ENGINE 4 030 deg CORE COWL**

COND. 1.00.137.003

OUTBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.231780</td>
<td>0.696310</td>
</tr>
<tr>
<td>15.5</td>
<td>0.258500</td>
<td>0.883540</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.011948</td>
<td>0.805970</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.126390</td>
<td>0.858880</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.251420</td>
<td>0.916190</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.269280</td>
<td>0.924450</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.268260</td>
<td>0.896300</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.260570</td>
<td>0.920410</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.274550</td>
<td>0.926830</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.221390</td>
<td>0.902340</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.464400</td>
<td>1.016500</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.566670</td>
<td>1.066600</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.426910</td>
<td>0.998550</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.144450</td>
<td>0.867110</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.213140</td>
<td>0.896550</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.266770</td>
<td>0.922350</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.262810</td>
<td>0.921450</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.362910</td>
<td>0.966180</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.177610</td>
<td>0.882260</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.150730</td>
<td>0.869970</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.153440</td>
<td>0.871200</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.164940</td>
<td>0.876470</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.021455</td>
<td>0.811270</td>
</tr>
<tr>
<td>99.4</td>
<td>0.033870</td>
<td>0.786240</td>
</tr>
</tbody>
</table>

**ENGINE 4 330 deg CORE COWL**

COND. 1.00.137.003

INBOARD SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.396460</td>
<td>0.619730</td>
</tr>
<tr>
<td>15.5</td>
<td>-0.033905</td>
<td>0.830500</td>
</tr>
<tr>
<td>24.0</td>
<td>-0.062052</td>
<td>0.764440</td>
</tr>
<tr>
<td>29.2</td>
<td>0.051870</td>
<td>0.773570</td>
</tr>
<tr>
<td>37.9</td>
<td>0.125800</td>
<td>0.744500</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.105640</td>
<td>0.839410</td>
</tr>
<tr>
<td>49.9</td>
<td>0.123300</td>
<td>0.857470</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.112830</td>
<td>0.852720</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.024702</td>
<td>0.812730</td>
</tr>
<tr>
<td>58.2</td>
<td>0.140730</td>
<td>0.869510</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.319860</td>
<td>0.947520</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.430580</td>
<td>1.005100</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.433310</td>
<td>1.022600</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.455960</td>
<td>1.012500</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.444870</td>
<td>1.007200</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.512410</td>
<td>1.039900</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.562510</td>
<td>1.064500</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.503740</td>
<td>1.035600</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.306850</td>
<td>0.942550</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.190960</td>
<td>0.888340</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.189620</td>
<td>0.887750</td>
</tr>
<tr>
<td>92.0</td>
<td>0.160780</td>
<td>0.874560</td>
</tr>
<tr>
<td>95.4</td>
<td>0.054818</td>
<td>0.826380</td>
</tr>
<tr>
<td>99.4</td>
<td>-0.010038</td>
<td>0.806100</td>
</tr>
</tbody>
</table>

*Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Continued)*
<table>
<thead>
<tr>
<th>ENGINE 4 060 deg INLET RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COND. 1.00.137.003</strong></td>
</tr>
<tr>
<td><strong>INNER SURFACE</strong></td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>44.1</td>
</tr>
<tr>
<td>32.2</td>
</tr>
<tr>
<td>23.1</td>
</tr>
<tr>
<td>16.6</td>
</tr>
<tr>
<td>10.2</td>
</tr>
<tr>
<td>4.9</td>
</tr>
<tr>
<td>2.0</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 4 180 deg INLET RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COND. 1.00.137.003</strong></td>
</tr>
<tr>
<td><strong>INNER SURFACE</strong></td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>42.5</td>
</tr>
<tr>
<td>31.7</td>
</tr>
<tr>
<td>24.4</td>
</tr>
<tr>
<td>17.8</td>
</tr>
<tr>
<td>11.1</td>
</tr>
<tr>
<td>5.5</td>
</tr>
<tr>
<td>2.4</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE 4 300 deg INLET RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COND. 1.00.137.003</strong></td>
</tr>
<tr>
<td><strong>INNER SURFACE</strong></td>
</tr>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>42.3</td>
</tr>
<tr>
<td>32.2</td>
</tr>
<tr>
<td>22.7</td>
</tr>
<tr>
<td>16.4</td>
</tr>
<tr>
<td>9.9</td>
</tr>
<tr>
<td>4.7</td>
</tr>
<tr>
<td>2.0</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

*Table B-10. Tabulated Data for Test 273-15, Condition 1.00.137.003 (Concluded)*
### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>Lower Surface</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.141780</td>
<td>0.981170</td>
<td>65.0</td>
<td>-0.126890</td>
<td>0.973630</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>-0.424230</td>
<td>1.142200</td>
<td>60.0</td>
<td>-0.117520</td>
<td>0.968580</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>-0.521560</td>
<td>1.201900</td>
<td>55.0</td>
<td>-0.0935874</td>
<td>0.956920</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>-0.714720</td>
<td>1.330700</td>
<td>50.0</td>
<td>-0.072029</td>
<td>0.944140</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>-0.788600</td>
<td>1.384600</td>
<td>45.0</td>
<td>-0.029275</td>
<td>0.921360</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>-0.756340</td>
<td>1.350700</td>
<td>40.0</td>
<td>-0.009635</td>
<td>0.900830</td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>-0.680300</td>
<td>1.306500</td>
<td>35.0</td>
<td>-0.000549</td>
<td>0.905620</td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>-0.739090</td>
<td>1.348100</td>
<td>30.0</td>
<td>-0.024504</td>
<td>0.918880</td>
<td></td>
</tr>
<tr>
<td>22.5</td>
<td>-0.482260</td>
<td>1.177300</td>
<td>25.0</td>
<td>-0.775220</td>
<td>1.374700</td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>-0.491030</td>
<td>1.169800</td>
<td>20.0</td>
<td>-0.665560</td>
<td>1.296400</td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>-0.469470</td>
<td>1.164700</td>
<td>15.0</td>
<td>-0.396200</td>
<td>1.125000</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>-0.505640</td>
<td>1.192000</td>
<td>10.0</td>
<td>-0.119700</td>
<td>0.969780</td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td>-0.609750</td>
<td>1.252800</td>
<td>5.0</td>
<td>-0.240600</td>
<td>0.780540</td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td>-0.579940</td>
<td>1.239200</td>
<td>3.0</td>
<td>-0.287600</td>
<td>0.756180</td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td>-0.589520</td>
<td>1.245600</td>
<td>2.0</td>
<td>-0.336040</td>
<td>0.731000</td>
<td></td>
</tr>
<tr>
<td>52.4</td>
<td>-0.551980</td>
<td>1.287100</td>
<td>1.0</td>
<td>-0.346370</td>
<td>0.725810</td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td>-0.724010</td>
<td>1.337300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>-0.781520</td>
<td>1.379300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td>-0.782850</td>
<td>1.380300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td>-0.723580</td>
<td>1.337000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>-0.629870</td>
<td>1.272200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.0</td>
<td>-0.278380</td>
<td>1.057400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.704410</td>
<td>1.323400</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.431870</td>
<td>1.146700</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.466490</td>
<td>1.167800</td>
</tr>
<tr>
<td>4.0</td>
<td>-0.616880</td>
<td>1.263300</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.649090</td>
<td>1.285200</td>
</tr>
<tr>
<td>60.0</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>-0.094694</td>
<td>0.956270</td>
</tr>
<tr>
<td>2.0</td>
<td>-0.180880</td>
<td>1.005900</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.301120</td>
<td>1.070200</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.463840</td>
<td>1.165100</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.553400</td>
<td>1.222100</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.480360</td>
<td>1.176300</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.466740</td>
<td>1.167900</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.390700</td>
<td>1.122200</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.430440</td>
<td>1.145900</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.497960</td>
<td>1.187200</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.490710</td>
<td>1.182700</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.492110</td>
<td>1.183500</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.528880</td>
<td>1.206600</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.578820</td>
<td>1.238500</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.684130</td>
<td>1.305200</td>
</tr>
<tr>
<td>47.5</td>
<td>-0.637190</td>
<td>1.277100</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.659920</td>
<td>1.291900</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.674630</td>
<td>1.302700</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.704370</td>
<td>1.323400</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.800200</td>
<td>1.393400</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.815250</td>
<td>1.404800</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.836560</td>
<td>1.421400</td>
</tr>
</tbody>
</table>
### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>1.7</td>
<td>0.266210</td>
</tr>
<tr>
<td>3.3</td>
<td>0.245240</td>
</tr>
<tr>
<td>5.1</td>
<td>0.034515</td>
</tr>
<tr>
<td>7.5</td>
<td>0.346460</td>
</tr>
<tr>
<td>10.0</td>
<td>0.451110</td>
</tr>
<tr>
<td>12.8</td>
<td>0.384430</td>
</tr>
<tr>
<td>16.0</td>
<td>0.168900</td>
</tr>
<tr>
<td>21.4</td>
<td>-0.189510</td>
</tr>
<tr>
<td>26.1</td>
<td>-0.335150</td>
</tr>
<tr>
<td>34.9</td>
<td>-0.425190</td>
</tr>
<tr>
<td>47.6</td>
<td>-0.053968</td>
</tr>
<tr>
<td>65.1</td>
<td>0.037056</td>
</tr>
<tr>
<td>78.7</td>
<td>-0.042226</td>
</tr>
</tbody>
</table>

### ENGINE 3 WL 155

<table>
<thead>
<tr>
<th>INBOARD SURFACE</th>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
<td>CP</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.293649</td>
</tr>
<tr>
<td>12.3</td>
<td>-0.056697</td>
</tr>
<tr>
<td>21.5</td>
<td>0.104290</td>
</tr>
<tr>
<td>30.4</td>
<td>0.301860</td>
</tr>
<tr>
<td>39.3</td>
<td>0.147420</td>
</tr>
<tr>
<td>48.5</td>
<td>0.004926</td>
</tr>
<tr>
<td>53.8</td>
<td>-0.164590</td>
</tr>
<tr>
<td>57.2</td>
<td>***</td>
</tr>
<tr>
<td>62.0</td>
<td>-0.317940</td>
</tr>
<tr>
<td>67.2</td>
<td>-0.044970</td>
</tr>
<tr>
<td>75.9</td>
<td>0.170310</td>
</tr>
<tr>
<td>82.8</td>
<td>0.102610</td>
</tr>
<tr>
<td>90.0</td>
<td>0.098683</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3 030 deg CORE COWL

<table>
<thead>
<tr>
<th>OUTBOARD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>3.6</td>
</tr>
<tr>
<td>24.0</td>
</tr>
<tr>
<td>29.2</td>
</tr>
<tr>
<td>37.9</td>
</tr>
<tr>
<td>44.7</td>
</tr>
<tr>
<td>49.9</td>
</tr>
<tr>
<td>53.1</td>
</tr>
<tr>
<td>57.0</td>
</tr>
<tr>
<td>58.2</td>
</tr>
<tr>
<td>62.7</td>
</tr>
<tr>
<td>64.9</td>
</tr>
<tr>
<td>68.1</td>
</tr>
<tr>
<td>69.1</td>
</tr>
<tr>
<td>70.2</td>
</tr>
<tr>
<td>74.0</td>
</tr>
<tr>
<td>77.4</td>
</tr>
<tr>
<td>80.8</td>
</tr>
<tr>
<td>83.8</td>
</tr>
<tr>
<td>86.7</td>
</tr>
<tr>
<td>90.1</td>
</tr>
<tr>
<td>92.0</td>
</tr>
<tr>
<td>95.4</td>
</tr>
<tr>
<td>99.4</td>
</tr>
</tbody>
</table>

72
Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.480410</td>
<td>0.655060</td>
<td>0.4</td>
<td>-0.242860</td>
<td>1.037300</td>
</tr>
<tr>
<td>24.0</td>
<td>0.400480</td>
<td>0.697310</td>
<td>1.1</td>
<td>-0.441900</td>
<td>1.216200</td>
</tr>
<tr>
<td>29.2</td>
<td>0.071524</td>
<td>0.669360</td>
<td>2.7</td>
<td>-0.438000</td>
<td>1.186200</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.087182</td>
<td>0.652280</td>
<td>5.8</td>
<td>-0.447460</td>
<td>1.156200</td>
</tr>
<tr>
<td>44.7</td>
<td>0.264850</td>
<td>0.767980</td>
<td>8.8</td>
<td>-0.561310</td>
<td>1.227200</td>
</tr>
<tr>
<td>49.9</td>
<td>0.105920</td>
<td>0.846530</td>
<td>12.5</td>
<td>-0.769230</td>
<td>1.370200</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.085631</td>
<td>0.951440</td>
<td>16.7</td>
<td>-0.793940</td>
<td>1.386200</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.087522</td>
<td>0.952440</td>
<td>21.1</td>
<td>-0.885240</td>
<td>1.460300</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.128330</td>
<td>0.971980</td>
<td>25.1</td>
<td>-0.646500</td>
<td>1.263400</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.054105</td>
<td>0.934580</td>
<td>33.5</td>
<td>-0.746800</td>
<td>1.355000</td>
</tr>
<tr>
<td>64.9</td>
<td>0.120650</td>
<td>0.972070</td>
<td>45.6</td>
<td>-0.642330</td>
<td>1.281000</td>
</tr>
<tr>
<td>66.1</td>
<td>-0.302190</td>
<td>1.070360</td>
<td>56.7</td>
<td>-0.785000</td>
<td>1.258900</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.443660</td>
<td>1.153900</td>
<td>64.5</td>
<td>-0.146470</td>
<td>0.984260</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.324470</td>
<td>1.083600</td>
<td>71.8</td>
<td>-0.054618</td>
<td>0.934850</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.304800</td>
<td>1.072400</td>
<td>82.4</td>
<td>0.070299</td>
<td>0.869000</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.507370</td>
<td>1.193100</td>
<td>99.4</td>
<td>0.242810</td>
<td>0.779390</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>0.237300</td>
<td>0.782250</td>
<td>0.4</td>
<td>-0.242860</td>
<td>1.037300</td>
</tr>
<tr>
<td>5.0</td>
<td>0.357850</td>
<td>0.719630</td>
<td>1.1</td>
<td>-0.544190</td>
<td>1.216200</td>
</tr>
<tr>
<td>3.3</td>
<td>0.556350</td>
<td>0.617450</td>
<td>2.7</td>
<td>-0.449200</td>
<td>1.152200</td>
</tr>
<tr>
<td>1.9</td>
<td>0.867750</td>
<td>0.430890</td>
<td>5.8</td>
<td>-0.547460</td>
<td>1.156200</td>
</tr>
<tr>
<td>0.0</td>
<td>1.174690</td>
<td>0.152860</td>
<td>8.8</td>
<td>-0.561310</td>
<td>1.227200</td>
</tr>
<tr>
<td>0.0</td>
<td>0.827650</td>
<td>0.456560</td>
<td>12.5</td>
<td>-0.769230</td>
<td>1.370200</td>
</tr>
<tr>
<td>7.7</td>
<td>0.214690</td>
<td>0.793960</td>
<td>16.7</td>
<td>-0.793940</td>
<td>1.386200</td>
</tr>
<tr>
<td>5.0</td>
<td>0.305400</td>
<td>0.746930</td>
<td>21.1</td>
<td>-0.885240</td>
<td>1.460300</td>
</tr>
<tr>
<td>3.3</td>
<td>0.498800</td>
<td>0.645250</td>
<td>25.1</td>
<td>-0.646500</td>
<td>1.263400</td>
</tr>
<tr>
<td>1.9</td>
<td>0.825300</td>
<td>0.468070</td>
<td>33.5</td>
<td>-0.746800</td>
<td>1.355000</td>
</tr>
<tr>
<td>0.1</td>
<td>0.157300</td>
<td>0.030700</td>
<td>45.6</td>
<td>-0.642330</td>
<td>1.281000</td>
</tr>
<tr>
<td>0.0</td>
<td>0.878530</td>
<td>0.423520</td>
<td>56.7</td>
<td>-0.785000</td>
<td>1.258900</td>
</tr>
<tr>
<td>7.7</td>
<td>0.214690</td>
<td>0.793960</td>
<td>64.5</td>
<td>-0.146470</td>
<td>0.984260</td>
</tr>
<tr>
<td>5.0</td>
<td>0.305400</td>
<td>0.746930</td>
<td>71.8</td>
<td>-0.054618</td>
<td>0.934850</td>
</tr>
<tr>
<td>3.3</td>
<td>0.498800</td>
<td>0.645250</td>
<td>82.4</td>
<td>0.070299</td>
<td>0.869000</td>
</tr>
<tr>
<td>1.9</td>
<td>0.825300</td>
<td>0.468070</td>
<td>99.4</td>
<td>0.242810</td>
<td>0.779390</td>
</tr>
</tbody>
</table>
### ENGINE 3 150 deg INLET RADIAL

**COND. 1.00.137.004**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.200610</td>
<td>0.801260</td>
</tr>
<tr>
<td>0.1</td>
<td>0.383260</td>
<td>0.706340</td>
</tr>
<tr>
<td>0.2</td>
<td>0.556130</td>
<td>0.614300</td>
</tr>
<tr>
<td>0.3</td>
<td>0.683480</td>
<td>0.420210</td>
</tr>
<tr>
<td>0.4</td>
<td>1.174000</td>
<td>0.153850</td>
</tr>
<tr>
<td>0.5</td>
<td>0.852280</td>
<td>0.440780</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>-0.041906</td>
<td>0.928050</td>
</tr>
<tr>
<td>1.2</td>
<td>-0.680370</td>
<td>1.306600</td>
</tr>
<tr>
<td>2.9</td>
<td>-0.342460</td>
<td>1.094000</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.473180</td>
<td>1.171900</td>
</tr>
<tr>
<td>9.4</td>
<td>-0.568150</td>
<td>1.231600</td>
</tr>
<tr>
<td>14.5</td>
<td>-0.804800</td>
<td>1.396800</td>
</tr>
<tr>
<td>18.2</td>
<td>-0.780870</td>
<td>1.378800</td>
</tr>
<tr>
<td>22.7</td>
<td>-0.730230</td>
<td>1.341800</td>
</tr>
<tr>
<td>27.7</td>
<td>-0.754890</td>
<td>1.359600</td>
</tr>
<tr>
<td>34.5</td>
<td>-0.635360</td>
<td>1.275900</td>
</tr>
<tr>
<td>45.7</td>
<td>-0.627520</td>
<td>1.270600</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.491080</td>
<td>1.182900</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.410260</td>
<td>1.133900</td>
</tr>
<tr>
<td>71.0</td>
<td>-0.055741</td>
<td>0.933450</td>
</tr>
<tr>
<td>81.3</td>
<td>0.035914</td>
<td>0.887010</td>
</tr>
<tr>
<td>99.4</td>
<td>0.233310</td>
<td>0.794310</td>
</tr>
</tbody>
</table>

### ENGINE 3 210 deg INLET RADIAL

**COND. 1.00.137.004**

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>0.219970</td>
<td>0.791220</td>
</tr>
<tr>
<td>0.5</td>
<td>0.409270</td>
<td>0.692690</td>
</tr>
<tr>
<td>6.2</td>
<td>0.589280</td>
<td>0.596150</td>
</tr>
<tr>
<td>1.5</td>
<td>0.692560</td>
<td>0.414080</td>
</tr>
<tr>
<td>0.3</td>
<td>1.168500</td>
<td>0.162580</td>
</tr>
<tr>
<td>0.0</td>
<td>0.859290</td>
<td>0.436230</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>-0.135230</td>
<td>0.978170</td>
</tr>
<tr>
<td>1.2</td>
<td>-0.638780</td>
<td>1.278200</td>
</tr>
<tr>
<td>2.9</td>
<td>-0.522880</td>
<td>1.202800</td>
</tr>
<tr>
<td>6.2</td>
<td>-0.565730</td>
<td>1.230100</td>
</tr>
<tr>
<td>9.3</td>
<td>-0.662020</td>
<td>1.294000</td>
</tr>
<tr>
<td>14.4</td>
<td>-0.778430</td>
<td>1.377000</td>
</tr>
<tr>
<td>18.1</td>
<td>-0.705400</td>
<td>1.324100</td>
</tr>
<tr>
<td>22.4</td>
<td>-0.773210</td>
<td>1.373100</td>
</tr>
<tr>
<td>27.5</td>
<td>-0.713540</td>
<td>1.329900</td>
</tr>
<tr>
<td>34.2</td>
<td>-0.778010</td>
<td>1.376700</td>
</tr>
<tr>
<td>45.5</td>
<td>-0.738960</td>
<td>1.348000</td>
</tr>
<tr>
<td>56.9</td>
<td>-0.555790</td>
<td>1.223700</td>
</tr>
<tr>
<td>63.9</td>
<td>-0.487100</td>
<td>1.180400</td>
</tr>
<tr>
<td>70.8</td>
<td>-0.633224</td>
<td>0.939440</td>
</tr>
<tr>
<td>81.0</td>
<td>0.066885</td>
<td>0.870790</td>
</tr>
<tr>
<td>99.0</td>
<td>0.231070</td>
<td>0.785480</td>
</tr>
</tbody>
</table>

*Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)*
### ENGINE 3270 deg INLET RADIAL

**COND. 1.00.137.004**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>0.242890</td>
<td>0.779360</td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>0.275610</td>
<td>0.710340</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>0.554200</td>
<td>0.615330</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>0.853440</td>
<td>0.440010</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td>1.195500</td>
<td>0.114560</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.822530</td>
<td>0.459820</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.063521</td>
<td>0.939580</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>-0.701270</td>
<td>1.321200</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>-0.522650</td>
<td>1.202600</td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>-0.578580</td>
<td>1.238400</td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>-0.659820</td>
<td>1.292500</td>
<td></td>
</tr>
<tr>
<td>12.8</td>
<td>-0.747190</td>
<td>1.354000</td>
<td></td>
</tr>
<tr>
<td>17.2</td>
<td>-0.633780</td>
<td>1.274800</td>
<td></td>
</tr>
<tr>
<td>21.7</td>
<td>-0.518720</td>
<td>1.200200</td>
<td></td>
</tr>
<tr>
<td>25.6</td>
<td>-0.512320</td>
<td>1.196100</td>
<td></td>
</tr>
<tr>
<td>33.8</td>
<td>-0.484250</td>
<td>1.178700</td>
<td></td>
</tr>
<tr>
<td>45.2</td>
<td>-0.531060</td>
<td>1.207500</td>
<td></td>
</tr>
<tr>
<td>56.6</td>
<td>-0.722530</td>
<td>1.336300</td>
<td></td>
</tr>
<tr>
<td>63.9</td>
<td>-0.435660</td>
<td>1.143400</td>
<td></td>
</tr>
<tr>
<td>71.1</td>
<td>-0.110500</td>
<td>0.967240</td>
<td></td>
</tr>
<tr>
<td>81.5</td>
<td>0.044384</td>
<td>0.882560</td>
<td></td>
</tr>
<tr>
<td>99.0</td>
<td>0.221300</td>
<td>0.790540</td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 3330 deg INLET RADIAL

**COND. 1.00.137.004**

<table>
<thead>
<tr>
<th>INNER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>0.234950</td>
<td>0.757550</td>
<td></td>
</tr>
<tr>
<td>4.8</td>
<td>0.409830</td>
<td>0.692370</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>0.542850</td>
<td>0.621500</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>0.882300</td>
<td>0.420990</td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>1.119400</td>
<td>0.225590</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.863920</td>
<td>0.433180</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTER SURFACE</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>-0.141810</td>
<td>0.981730</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>-0.659470</td>
<td>1.312900</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>-0.659470</td>
<td>1.312900</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>-0.504920</td>
<td>1.191500</td>
<td></td>
</tr>
<tr>
<td>5.8</td>
<td>-0.630040</td>
<td>1.272300</td>
<td></td>
</tr>
<tr>
<td>8.8</td>
<td>-0.712380</td>
<td>1.329000</td>
<td></td>
</tr>
<tr>
<td>12.6</td>
<td>-0.535470</td>
<td>1.210700</td>
<td></td>
</tr>
<tr>
<td>17.8</td>
<td>-0.649500</td>
<td>1.285400</td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td>-0.695690</td>
<td>1.299200</td>
<td></td>
</tr>
<tr>
<td>25.1</td>
<td>-0.650610</td>
<td>1.286200</td>
<td></td>
</tr>
<tr>
<td>33.7</td>
<td>-0.509420</td>
<td>1.194500</td>
<td></td>
</tr>
<tr>
<td>45.4</td>
<td>-0.506240</td>
<td>1.192300</td>
<td></td>
</tr>
<tr>
<td>57.0</td>
<td>-0.662640</td>
<td>1.294400</td>
<td></td>
</tr>
<tr>
<td>64.5</td>
<td>-0.258440</td>
<td>1.046100</td>
<td></td>
</tr>
<tr>
<td>71.8</td>
<td>-0.084823</td>
<td>0.950880</td>
<td></td>
</tr>
<tr>
<td>82.7</td>
<td>0.039997</td>
<td>0.884860</td>
<td></td>
</tr>
<tr>
<td>99.4</td>
<td>0.172010</td>
<td>0.815090</td>
<td></td>
</tr>
</tbody>
</table>

*Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)*
### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)

<table>
<thead>
<tr>
<th>UPPER SURFACE</th>
<th>LOWER SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C (- %)</td>
<td>CP</td>
</tr>
<tr>
<td>2.0</td>
<td>0.104630</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.092752</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.315540</td>
</tr>
<tr>
<td>7.5</td>
<td>-0.510680</td>
</tr>
<tr>
<td>10.0</td>
<td>-0.676540</td>
</tr>
<tr>
<td>15.0</td>
<td>-0.769840</td>
</tr>
<tr>
<td>20.0</td>
<td>-0.911310</td>
</tr>
<tr>
<td>22.5</td>
<td>-0.912911</td>
</tr>
<tr>
<td>25.0</td>
<td>-0.709550</td>
</tr>
<tr>
<td>30.0</td>
<td>-0.663790</td>
</tr>
<tr>
<td>35.0</td>
<td>-0.633100</td>
</tr>
<tr>
<td>40.0</td>
<td>-0.659360</td>
</tr>
<tr>
<td>45.0</td>
<td>-0.688280</td>
</tr>
<tr>
<td>50.0</td>
<td>-0.547910</td>
</tr>
<tr>
<td>52.4</td>
<td>-0.119910</td>
</tr>
<tr>
<td>55.0</td>
<td>-0.657000</td>
</tr>
<tr>
<td>60.0</td>
<td>-0.716500</td>
</tr>
<tr>
<td>65.0</td>
<td>-0.780290</td>
</tr>
<tr>
<td>70.0</td>
<td>-0.365620</td>
</tr>
<tr>
<td>75.0</td>
<td>-0.190630</td>
</tr>
<tr>
<td>80.0</td>
<td>-0.154500</td>
</tr>
</tbody>
</table>

### Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)
### Engine 4 WL 180

**Condition: 1.00.137.004**

#### Inboard Surface

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7</td>
<td>0.337800</td>
<td>0.730090</td>
<td>96.4</td>
<td>0.112940</td>
<td>0.845780</td>
</tr>
<tr>
<td>8.7</td>
<td>0.402150</td>
<td>0.696440</td>
<td>91.5</td>
<td>0.068863</td>
<td>0.869770</td>
</tr>
<tr>
<td>10.9</td>
<td>0.357990</td>
<td>0.719350</td>
<td>98.9</td>
<td>0.002835</td>
<td>0.904420</td>
</tr>
<tr>
<td>14.5</td>
<td>0.254860</td>
<td>0.773180</td>
<td>44.2</td>
<td>0.157090</td>
<td>0.990990</td>
</tr>
<tr>
<td>17.9</td>
<td>0.051685</td>
<td>0.878770</td>
<td>37.7</td>
<td>0.232940</td>
<td>1.031900</td>
</tr>
<tr>
<td>21.6</td>
<td>-0.039116</td>
<td>0.926640</td>
<td>33.7</td>
<td>-0.256780</td>
<td>1.045300</td>
</tr>
<tr>
<td>28.4</td>
<td>-0.318140</td>
<td>1.080000</td>
<td>28.4</td>
<td>-0.066813</td>
<td>0.941420</td>
</tr>
<tr>
<td>33.7</td>
<td>-0.457200</td>
<td>1.162100</td>
<td>21.6</td>
<td>0.018434</td>
<td>0.895190</td>
</tr>
<tr>
<td>37.7</td>
<td>-0.574750</td>
<td>1.235900</td>
<td>17.9</td>
<td>0.057636</td>
<td>0.875640</td>
</tr>
<tr>
<td>44.2</td>
<td>-0.787930</td>
<td>1.384300</td>
<td>14.5</td>
<td>-0.012095</td>
<td>0.912300</td>
</tr>
<tr>
<td>58.9</td>
<td>-0.024836</td>
<td>0.919040</td>
<td>10.9</td>
<td>-0.091055</td>
<td>0.954340</td>
</tr>
<tr>
<td>81.5</td>
<td>0.081237</td>
<td>0.863320</td>
<td>8.7</td>
<td>-0.088993</td>
<td>0.953200</td>
</tr>
<tr>
<td>96.4</td>
<td>0.131790</td>
<td>0.836980</td>
<td>6.7</td>
<td>-0.022968</td>
<td>0.918040</td>
</tr>
</tbody>
</table>

#### Outboard Surface

<table>
<thead>
<tr>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/C - %</td>
</tr>
<tr>
<td>0.337800</td>
</tr>
<tr>
<td>0.696440</td>
</tr>
<tr>
<td>0.773180</td>
</tr>
<tr>
<td>0.878770</td>
</tr>
<tr>
<td>0.926640</td>
</tr>
<tr>
<td>1.080000</td>
</tr>
<tr>
<td>1.162100</td>
</tr>
<tr>
<td>1.235900</td>
</tr>
<tr>
<td>1.384300</td>
</tr>
<tr>
<td>0.919040</td>
</tr>
<tr>
<td>0.863320</td>
</tr>
<tr>
<td>0.836980</td>
</tr>
</tbody>
</table>

### Engine 4 WL 155

**Condition: 1.00.137.004**

#### Inboard Surface

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
<th>X/C - %</th>
<th>CP</th>
<th>Local Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>-0.480470</td>
<td>1.176500</td>
<td>96.8</td>
<td>0.152550</td>
<td>0.826180</td>
</tr>
<tr>
<td>3.7</td>
<td>-0.461370</td>
<td>1.164800</td>
<td>89.0</td>
<td>0.083462</td>
<td>0.862130</td>
</tr>
<tr>
<td>5.5</td>
<td>-0.567220</td>
<td>1.231200</td>
<td>81.5</td>
<td>0.076140</td>
<td>0.865970</td>
</tr>
<tr>
<td>6.1</td>
<td>-0.540850</td>
<td>1.214300</td>
<td>72.2</td>
<td>-0.012841</td>
<td>0.912720</td>
</tr>
<tr>
<td>13.3</td>
<td>-0.089345</td>
<td>0.953430</td>
<td>65.6</td>
<td>-0.372500</td>
<td>1.116000</td>
</tr>
<tr>
<td>23.1</td>
<td>0.132260</td>
<td>0.838750</td>
<td>62.4</td>
<td>-0.465210</td>
<td>1.167100</td>
</tr>
<tr>
<td>33.1</td>
<td>0.325300</td>
<td>0.736570</td>
<td>57.5</td>
<td>-0.340160</td>
<td>1.092700</td>
</tr>
<tr>
<td>43.0</td>
<td>0.107160</td>
<td>0.849810</td>
<td>52.2</td>
<td>-0.159220</td>
<td>0.991240</td>
</tr>
<tr>
<td>52.2</td>
<td>-0.121580</td>
<td>0.970780</td>
<td>43.0</td>
<td>-0.007400</td>
<td>0.909770</td>
</tr>
<tr>
<td>57.5</td>
<td>-0.389010</td>
<td>1.121300</td>
<td>33.1</td>
<td>0.054566</td>
<td>0.877240</td>
</tr>
<tr>
<td>62.4</td>
<td>-0.557370</td>
<td>1.224700</td>
<td>23.1</td>
<td>0.068991</td>
<td>0.863770</td>
</tr>
<tr>
<td>65.6</td>
<td>-0.706930</td>
<td>1.325200</td>
<td>13.3</td>
<td>-0.177340</td>
<td>1.001200</td>
</tr>
<tr>
<td>72.2</td>
<td>-0.557880</td>
<td>1.225100</td>
<td>8.1</td>
<td>-0.526390</td>
<td>1.207000</td>
</tr>
<tr>
<td>81.5</td>
<td>0.003700</td>
<td>0.903970</td>
<td>5.5</td>
<td>-0.478870</td>
<td>1.175500</td>
</tr>
<tr>
<td>89.0</td>
<td>0.044663</td>
<td>0.882440</td>
<td>3.7</td>
<td>-0.470820</td>
<td>1.170600</td>
</tr>
<tr>
<td>96.8</td>
<td>0.173200</td>
<td>0.815470</td>
<td>1.8</td>
<td>-0.381930</td>
<td>1.117200</td>
</tr>
</tbody>
</table>

**Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)**

77
**ENGINE 4030 deg CORE COWL**

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.463790</td>
<td>0.663820</td>
</tr>
<tr>
<td>15.5</td>
<td>0.369220</td>
<td>0.713590</td>
</tr>
<tr>
<td>24.0</td>
<td>0.005500</td>
<td>0.903010</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.022165</td>
<td>0.917620</td>
</tr>
<tr>
<td>37.9</td>
<td>-0.002837</td>
<td>0.907410</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.261430</td>
<td>1.047800</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.280460</td>
<td>1.058500</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.366940</td>
<td>1.108300</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.292700</td>
<td>1.065500</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.267860</td>
<td>1.051400</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.478140</td>
<td>1.174900</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.480180</td>
<td>1.176200</td>
</tr>
<tr>
<td>68.1</td>
<td>-0.446900</td>
<td>1.155900</td>
</tr>
<tr>
<td>69.1</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.493680</td>
<td>1.184600</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.558050</td>
<td>1.225200</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.523550</td>
<td>1.203200</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.595690</td>
<td>1.249600</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.539850</td>
<td>1.213600</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.559980</td>
<td>1.226400</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.488230</td>
<td>1.181200</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.346080</td>
<td>1.109200</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.123930</td>
<td>0.972080</td>
</tr>
<tr>
<td>99.4</td>
<td>0.010576</td>
<td>0.900360</td>
</tr>
</tbody>
</table>

**ENGINE 4330 deg CORE COWL**

<table>
<thead>
<tr>
<th>X/C</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.520050</td>
<td>0.633770</td>
</tr>
<tr>
<td>15.5</td>
<td>-0.034666</td>
<td>0.924250</td>
</tr>
<tr>
<td>24.0</td>
<td>0.062547</td>
<td>0.873060</td>
</tr>
<tr>
<td>29.2</td>
<td>-0.126140</td>
<td>0.973240</td>
</tr>
<tr>
<td>37.9</td>
<td>0.006311</td>
<td>0.902590</td>
</tr>
<tr>
<td>44.7</td>
<td>-0.021497</td>
<td>0.917260</td>
</tr>
<tr>
<td>49.9</td>
<td>-0.054965</td>
<td>0.935030</td>
</tr>
<tr>
<td>53.1</td>
<td>-0.168950</td>
<td>0.996560</td>
</tr>
<tr>
<td>57.0</td>
<td>-0.269630</td>
<td>1.052400</td>
</tr>
<tr>
<td>58.2</td>
<td>-0.223000</td>
<td>1.026400</td>
</tr>
<tr>
<td>62.7</td>
<td>-0.252530</td>
<td>1.042800</td>
</tr>
<tr>
<td>64.9</td>
<td>-0.442200</td>
<td>1.153000</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.454200</td>
<td>1.180300</td>
</tr>
<tr>
<td>69.1</td>
<td>-0.505130</td>
<td>1.191700</td>
</tr>
<tr>
<td>70.2</td>
<td>-0.561300</td>
<td>1.227300</td>
</tr>
<tr>
<td>74.0</td>
<td>-0.505490</td>
<td>1.191900</td>
</tr>
<tr>
<td>77.4</td>
<td>-0.625390</td>
<td>1.269200</td>
</tr>
<tr>
<td>80.8</td>
<td>-0.717590</td>
<td>1.332800</td>
</tr>
<tr>
<td>83.8</td>
<td>-0.666090</td>
<td>1.296800</td>
</tr>
<tr>
<td>86.7</td>
<td>-0.771490</td>
<td>1.371900</td>
</tr>
<tr>
<td>90.1</td>
<td>-0.805090</td>
<td>1.397200</td>
</tr>
<tr>
<td>92.0</td>
<td>-0.761140</td>
<td>1.364300</td>
</tr>
<tr>
<td>95.4</td>
<td>-0.681670</td>
<td>1.307600</td>
</tr>
<tr>
<td>99.4</td>
<td>-0.429870</td>
<td>1.145600</td>
</tr>
</tbody>
</table>

*Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Continued)*
### ENGINE 4 060 deg INLET RADIAL

**COND. 1.00.137.004**  
INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.1</td>
<td>0.678920</td>
<td>0.545860</td>
<td>2.7</td>
<td>-0.653200</td>
<td>1.287900</td>
</tr>
<tr>
<td>32.2</td>
<td>0.248460</td>
<td>0.776470</td>
<td>6.1</td>
<td>-0.646200</td>
<td>1.283200</td>
</tr>
<tr>
<td>23.1</td>
<td>0.651230</td>
<td>0.581600</td>
<td>12.6</td>
<td>-0.777390</td>
<td>1.376600</td>
</tr>
<tr>
<td>16.6</td>
<td>0.273070</td>
<td>0.763710</td>
<td>17.0</td>
<td>-0.753330</td>
<td>1.345400</td>
</tr>
<tr>
<td>10.2</td>
<td>***</td>
<td>***</td>
<td>26.3</td>
<td>-0.660280</td>
<td>1.292800</td>
</tr>
<tr>
<td>4.9</td>
<td>0.325660</td>
<td>0.736400</td>
<td>32.7</td>
<td>-0.712630</td>
<td>1.329200</td>
</tr>
<tr>
<td>2.0</td>
<td>0.655810</td>
<td>0.559010</td>
<td>43.2</td>
<td>-0.699070</td>
<td>1.319000</td>
</tr>
<tr>
<td>0.0</td>
<td>0.88110</td>
<td>0.443480</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4 180 deg INLET RADIAL

**COND. 1.00.137.004**  
INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.5</td>
<td>0.660740</td>
<td>0.556220</td>
<td>6.2</td>
<td>-0.558410</td>
<td>1.225400</td>
</tr>
<tr>
<td>31.7</td>
<td>0.475880</td>
<td>0.657470</td>
<td>9.5</td>
<td>-0.604240</td>
<td>1.255200</td>
</tr>
<tr>
<td>24.4</td>
<td>0.257240</td>
<td>0.771920</td>
<td>13.2</td>
<td>-0.617680</td>
<td>1.264100</td>
</tr>
<tr>
<td>17.8</td>
<td>0.221020</td>
<td>0.790680</td>
<td>17.8</td>
<td>-0.617510</td>
<td>1.264000</td>
</tr>
<tr>
<td>11.1</td>
<td>0.075594</td>
<td>0.866230</td>
<td>27.2</td>
<td>-0.313490</td>
<td>1.077300</td>
</tr>
<tr>
<td>5.5</td>
<td>0.325490</td>
<td>0.736480</td>
<td>34.5</td>
<td>-0.682240</td>
<td>1.337900</td>
</tr>
<tr>
<td>2.4</td>
<td>0.676810</td>
<td>0.547070</td>
<td>45.5</td>
<td>-0.576260</td>
<td>1.236900</td>
</tr>
<tr>
<td>0.0</td>
<td>***</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE 4 300 deg INLET RADIAL

**COND. 1.00.137.004**  
INNER SURFACE

<table>
<thead>
<tr>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
<th>X/C - %</th>
<th>CP</th>
<th>LOCAL MACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.3</td>
<td>0.655040</td>
<td>0.559450</td>
<td>2.7</td>
<td>-0.516250</td>
<td>1.198600</td>
</tr>
<tr>
<td>32.2</td>
<td>0.495340</td>
<td>0.647090</td>
<td>5.8</td>
<td>-0.457890</td>
<td>1.162500</td>
</tr>
<tr>
<td>22.7</td>
<td>0.320760</td>
<td>0.738940</td>
<td>12.7</td>
<td>-0.591450</td>
<td>1.246800</td>
</tr>
<tr>
<td>16.4</td>
<td>0.213800</td>
<td>0.794430</td>
<td>17.1</td>
<td>-0.604940</td>
<td>1.255600</td>
</tr>
<tr>
<td>9.9</td>
<td>0.046549</td>
<td>0.881420</td>
<td>26.4</td>
<td>-0.645850</td>
<td>1.283000</td>
</tr>
<tr>
<td>4.7</td>
<td>0.189920</td>
<td>0.806800</td>
<td>33.0</td>
<td>-0.678300</td>
<td>1.305200</td>
</tr>
<tr>
<td>2.0</td>
<td>0.622800</td>
<td>0.577510</td>
<td>43.3</td>
<td>-0.517480</td>
<td>1.263900</td>
</tr>
<tr>
<td>0.0</td>
<td>0.952510</td>
<td>0.371930</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table B-11. Tabulated Data for Test 273-15, Condition 1.00.137.004 (Concluded)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)

- PRESSURE DIST WBL 445 - IPSA

- PRESSURE DIST WBL 470 TOP-IPSA
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001) (Continued)
• ENGINE 3 ~ 150 DEGREE RADIAL - NAIL

Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)

83
Engine 3 - 270 Degree Radial Nail

-1.00
-0.75
-0.50
-0.25
0.00
0.25
0.50
0.75
1.00
1.25
Port Location - Percent of Chord

Pressure Coefficient \(-C_p\)

Engine 3 - 330 Degree Radial Nail

-1.00
-0.75
-0.50
-0.25
0.00
0.25
0.50
0.75
1.00
1.25
Port Location - Percent of Chord

Pressure Coefficient \(-C_p\)

\[\begin{array}{ll}
H_p &= 12270\text{ m (40 266 ft)} \\
GW &= 206 025\text{ kg (454 207 lbm)} \\
Q &= 9.722\text{ kPa (1.410 PSI)} \\
V_c &= 487.4\text{ km/h (283 2 KTS)} \\
M &= 0.866 \\
\alpha &= 1.6\text{ deg} \\
FLAPS &= 0\text{ deg} \\
LANDING GEAR UP &
\end{array}\]

Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001) (Continued)
Figure 8.1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
<table>
<thead>
<tr>
<th>H_p</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 270 m (40 250 ft)</td>
<td>0.806</td>
</tr>
</tbody>
</table>

GW = 206 025 kg (454 207 lbm)  
Q = 9.722 kPa (1.410 PSI)  
Vc = 487.4 km/h (263.2 KTS)  

Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001) (Continued)
Figure 8.1 Pressure Coefficient Data (Test 273-02)
Condition 1.00, 1.37, 0.35 (Continued)
Figure 8-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-1. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.001) (Concluded)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00, 137,002.1) (Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)
Figure B.2. Pressure Coefficient Plots (Test 273-09, Condition 1.00, 137, 002.1) (Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
**CONDITION STABILITY**

Figure 8-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)

- $H_p = 12.4758\text{m (40.938 ft)}$
- $M = 0.767$
- $C_W = 199.759\text{ kg (440.393 lbf)}$
- $\alpha = 3.3^\circ$
- $Q = 7.284\text{ kPa (1.071 PSI)}$
- $V_c = 418.7\text{ km/h (226.1 KTS)}$
- FLAPS = 0 deg
- LANDING GEAR UP
CONTROL SURFACE POSITION

Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)

- Hp = 12.47 m (40.938 ft)
- GW = 1997.5 kg (4403.9 lbm)
- \( \alpha \) = 3.3 deg
- PFLAPS = 0 deg
- V_a = 418.7 km/h (260.1 KTS)
- LANDING GEAR UP

104
Figure B-2. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)

- $H_p = 12478$ m (40938 ft)
- $GW = 199759$ kg (440393 lbm)
- $\alpha = 3.3$ deg
- $Q = 7.384$ kPa (1.071 PSI)
- $V_c = 418.7$ km/h (226.1 KTS)
- LANDING GEAR UP
Figure 8.2. Pressure Coefficient Plots (Test 273-08, Condition 16.137.002.1) (Concluded)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure 8.3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.13/.003)(Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure B-3. Pressure Coefficient Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure 8.3: Pressure Coefficient Plots (Test 27309, Condition 1.00.137.0003 [Continued])

- CONDITION STABILITY

- CONDITIONS
  - \( H_0 = 12353 \text{m (40528 ft)} \)
  - \( GW = 304452 \text{kg (670 740 lbs)} \)
  - \( Q = 8.156 \text{kPa (1.183 PSI)} \)
  - \( \alpha = 2.8 \text{ deg} \)
  - \( F = 0 \text{ deg} \)
  - \( V_{c} = 442.1 \text{ km/h (228.7 KT)} \)
  - LANDING GEAR UP
Figure B-3. Pressure Coefficient Plots (Test 273-09), Condition 1.00.137.003 (Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
Figure B.4. Pressure Coefficient Plots (Test 273-12, Condition 1.00,137.001.1)(Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
- ENGINE 3 ~ 330 DEGREE RADIAL–NAIL

Figure 8-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-4. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure 8-4. Pressure Coefficient Data
(Test 273-12, Condition 1.00.137.001.1)
(Continued)
Figure 8-4. Pressure Coefficient Data
(Test 273-12, Condition 1.00, 137, 001.1)
(Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00, 137, 002)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B.5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00, 137, 002) (Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B.7. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B.5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 100.137.002)(Continued)
Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002) (Continued)
**CONTROL SURFACE POSITION**

Figure B-5. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.002)(Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)
Figure 8-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00, 137.003) (Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003) [Continued]
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00, 137.003) (Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure 8-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure B-6. Pressure Coefficient Plots (Test 273-12, Condition 1.00.137.003)(Concluded)
Figure B-6. Pressure Coefficient Data
(Test 273-12, Condition 1.00.137.003) (Continued)
CONTROL SURFACE POSITION

- Figure B-6: Pressure Coefficient Data (Test 273-12, Condition 1.00.137.003)
  (Continued)
Figure 8-6. Pressure Coefficient Data (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
**PRESSURE COEFFICIENTS ~ NAIL PROG.**
ENGINE 3 ~ 210 DEGREE RADIAL

- PRESSURE COEFFICIENTS ~ NAIL PROG.
ENGINE 3 ~ 270 DEGREE RADIAL

<table>
<thead>
<tr>
<th>PORT LOCATION - % CHORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.00</td>
</tr>
<tr>
<td>-0.75</td>
</tr>
<tr>
<td>-0.50</td>
</tr>
<tr>
<td>-0.25</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>0.25</td>
</tr>
<tr>
<td>0.50</td>
</tr>
<tr>
<td>0.75</td>
</tr>
<tr>
<td>1.00</td>
</tr>
<tr>
<td>1.25</td>
</tr>
</tbody>
</table>

**Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001)(Continued)**

- \( H_p = 11.591 \text{m (38,028 ft)} \)
- \( M = 0.855 \)
- \( G = 216,946 \text{ kg (478,283 lbm)} \)
- \( \alpha = 1.7 \text{ deg} \)
- \( Q = 10.556 \text{ kPa (1.531 PSI)} \)
- \( V_c = 506.2 \text{ km/h (273.3 KTS)} \)
- FLAPS = 0 deg
- LANDING GEAR UP
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00, 137.001) (Continued)
Figure 8-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-7. Pressure Coefficient Plots (Test 273.15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-7. Pressure Coefficient Plots (Test 273-15, Condition 1.0, 137.001°C (Continued))
Figure B.7. Pressure Coefficient Plots (Test 273-15, Condition)

- CONTROL SURFACE POSITION

Variables: 
- $H_p = 11.551$ m (38.02 ft)
- $G_W = 216,946$ kg (478,283 lb)
- $V = 10.556$ kPa (1.531 PSII)
- $V_C = 508.2$ km/h (273.3 KTS)
- $M = 0.855$
- $\alpha = 1.7$ deg
- FLAPS = 0 deg
- LANDING GEAR UP
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 100.137.002)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002)(Continued)
• PRESSURE COEFFICIENTS ~ NAIL PROG.
ENGINE 3 ~ 030 DEGREE RADIAL

• PRESSURE COEFFICIENTS ~ NAIL PROG.
ENGINE 3 ~ 090 DEGREE RADIAL

Figure 8-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002)(Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002)(Continued)
ENGINE 3-270 DEGREE RADIAL ~ NAIL

ENGINE 3-330 DEGREE RADIAL ~ NAIL

Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002)(Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 100.137.002)(Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-8. Pressure Coefficient Plots (Test 273.15, Condition 1.00.137.002) (Continued)
Figure B-8. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.002) (Continued)

187
Figure 8.8: Pressure Coefficient Plots (Test 273.15, Condition 1.00, 137.002 kg (300 lb))

- $V_c = 454.1$ km/h (245 KTS)
- $Q = 0.03$ deg
- $V = 0$ deg
- $M = 0.776$ (38045 kg (8421 lb/m)
- $a = 8.694$ kPa (1.261 PSI)

Condition Stability
Figure B.1.0/12.0 Test Condition

Conditions:
- $W = 111,680$ kg (246,749 lb)
- $C_{L} = 0.074$
- Landing Gear Up

Coordinate Time: HR-MIN-SEC
Figure 8-8: Pressure Coefficient Plots (Test 273-15, Condition 0.00, 137°F, 245°F, Combined)
Figure B.9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003) (Continued)
Figure 8.9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)

194
ENGINE 3 ~ 150 DEGREE RADIAL-NAIL

-0.50
-0.25
0
0.25
0.50
0.75
1.00
1.25

PRESSURE COEFFICIENT \( \sim C_P \)

PORT LOCATION \( \sim \% \) CHORD

INNER SURFACE

ENGINE 3 ~ 210 DEGREE RADIAL-NAIL

-1.00
-0.75
-0.50
-0.25
0
0.25
0.50
0.75
1.00
1.25

PRESSURE COEFFICIENT \( \sim C_P \)

PORT LOCATION \( \sim \% \) CHORD

INNER SURFACE

\[ \begin{align*}
H_p &= 11601 \text{ m} \ (38060 \text{ ft}) \\
GW &= 218085 \text{ kg} \ (480796 \text{ lbm}) \\
\alpha &= 9.267 \text{ kPa} \ (1.344 \text{ PSI}) \\
V_c &= 470.6 \text{ km/h} \ (254.1 \text{ KTS}) \\
M &= 0.802 \\
\angle &= 2.6 \text{ deg} \\
\text{FLAPS} &= 0 \text{ deg} \\
\text{LANDING GEAR} &= \text{UP}
\end{align*} \]

Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003) (Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)

PORT LOCATION-PERCENT OF CHORD

PORT LOCATION-PERCENT OF CHORD
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00137.003)(Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-9. Pressure Coefficient Plots
(Test 273-15, Condition 1.00.137.003)(Continued)

- CONDITION STABILITY

- \( H_p = 11,601 \text{ m (38,060 ft)} \)
- \( G_W = 218,085 \text{ kg (480,796 lbm)} \)
- \( \alpha = 2.6 \text{ deg} \)
- \( Q = 9,267 \text{ kPa (1,344 PSf)} \)
- \( V_c = 470.6 \text{ km/h (264.1 KTS)} \)

LANDING GEAR UP
Figure 8-9. Pressure Coefficient Plots
(Test 273-15, Condition 1.00.137.003)(Concluded)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00, 137.004) (Continued)
Figure B-5. Sample of Local Mach Number Data (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 100.137.004) (Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 100.137.004) (Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B.9. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-10. Pressure Coefficient Plots (Test 273-15, Condition 1.00,137,004)(Continued)
**Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)**

- \( H_p = 12,270 \text{m} \) (40,256 ft)
- \( G_W = 266,025 \text{ kg} \) (584,297 lbm)
- \( Q = 9.722 \text{ kPa} \) (1.410 PSi)
- \( V_C = 487.4 \text{ km/h} \) (263.2 KTS)
- \( M = 0.856 \)
- \( \alpha = 1.6 \text{ deg} \)
- FLAPS = 0 deg
- LANDING GEAR UP
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 100.137.001) (Continued)
Figure B.11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001) (Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)(Continued)

- $H_p = 12,270 \text{ m} (40,256 \text{ ft})$
- $GW = 206,025 \text{ kg} (454,207 \text{ lbm})$
- $Q = 9.722 \text{ kPa} (1.410 \text{ PSI})$
- $V_c = 487.4 \text{ km/h} (263.2 \text{ KTS})$
- $M = 0.866$
- $\alpha = 1.6 \text{ deg}$
- FLAPS = 0 deg
- LANDING GEAR UP
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001)(Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001) (Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001) (Continued)
Figure B-11. Local Mach Number Plots (Test 273-09, Condition 1.00.137.001) (Concluded)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)

233
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1)(Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 100.137.002.1) (Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1,00.137.002.1)(Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1) (Continued)
Figure B-12. Local Mach Number Plots (Test 273-09, Condition 1.00.137.002.1) (Concluded)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003) (Continued)
ENGINE 3 ~ 210 DEGREE RADIAL ~ NAIL

ENGINE 3 ~ 270 DEGREE RADIAL ~ NAIL

Figure B.13. Local Mach Number Plots (Test 273-09, Condition 1.00,137.003)(Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003)(Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003) (Continued)
Figure B-13. Local Mach Number Plots (Test 273-09, Condition 100.137.003) (Continued)
Figure B.13. Local Mach Number Plots (Test 273-09, Condition 1.00.137.003) (Concluded)
Figure B-14. Local Mach Number Plots  (Test 273-12, Condition 1.00.137.001.1)
Figure B.14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
ENGINE 3 ~ 030 DEGREE RADIAL - NAIL

ENGINE 3 ~ 090 DEGREE RADIAL - NAIL

\[ H_p = 11,909 \text{ m (39,073 ft)} \]
\[ GW = 219,686 \text{ kg (484,325 lbm)} \]
\[ Q = 10.239 \text{ kPa (1.485 PSI)} \]
\[ V_c = 499.7 \text{ km/h (269.8 KTS)} \]
\[ M = 0.864 \]
\[ \alpha = 1.9 \text{ deg} \]
FLAPS = 0 deg
LANDING GEAR UP

Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
**ENGINE 3 ~ 150 DEGREE RADIAL ~ NAIL**

- ENGINE
- 3
- 150 DEGREE RADIAL
- NAIL

- LOCAL MACH NO.
- 1.4
- 1.2
- 1.0
- 0.8
- 0.6
- 0.4
- 0.2
- 0.0

- PORT LOCATION ~ % CHORD
- 40
- 60
- 80
- 100

**ENGINE 3 ~ 210 DEGREE RADIAL ~ NAIL**

- LOCAL MACH NO.
- 1.4
- 1.2
- 1.0
- 0.8
- 0.6
- 0.4
- 0.2
- 0.0

- PORT LOCATION ~ % CHORD
- 40
- 60
- 80
- 100

**Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)**

<table>
<thead>
<tr>
<th>H_p</th>
<th>11 909m (39 073 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G_W</td>
<td>219 686 kg (484 325 lbm)</td>
</tr>
<tr>
<td>Q</td>
<td>10.239 kPa (1.485 PSI)</td>
</tr>
<tr>
<td>V_c</td>
<td>499.7 km/h (269.8 KTS)</td>
</tr>
</tbody>
</table>

- M = 0.864
- a = 1.9 deg
- FLAPS = 0 deg
- LANDING GEAR UP
Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)

- ENGINE 3 ~ 270 DEGREE RADIAL ~ NAIL PROGRAM

- ENGINE 3 ~ 330 DEGREE RADIAL ~ NAIL PROGRAM

\[ H_p = 11,909 \text{ m (39,073 ft)} \]
\[ GW = 219,086 \text{ kg (484,325 lbm)} \]
\[ Q = 10.239 \text{ kPa (1.485 PSI)} \]
\[ V_c = 499.7 \text{ km/h (269.8 KTS)} \]

\[ M = 0.864 \]
\[ \alpha = 1.9 \text{ deg} \]

FLAPS = 0 deg
LANDING GEAR UP
Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
Figure 8-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Continued)
Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1)(Continued)
Figure B-14. Local Mach Number Plots (Test 273-12, Condition 1.00.137.001.1) (Concluded)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002)

- **HP**: 12,029 m (39,466 ft)
- **GW**: 216,516 kg (477,337 lbm)
- **Q**: 7.826 kPa (1.135 PSI)
- **V_c**: 430.4 km/h (232.4 KTS)
- **M**: 0.762
- **α**: 3.6 deg
- **FLAPS**: 0 deg
- **LANDING GEAR UP**

---

---
<table>
<thead>
<tr>
<th>HP</th>
<th>12 029m (39 466 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW</td>
<td>216 516 kg (477 337 lbrm)</td>
</tr>
<tr>
<td>Q</td>
<td>7.826 kPa (1.135 PSI)</td>
</tr>
<tr>
<td>Vc</td>
<td>430.4 km/h (232.4 KTS)</td>
</tr>
</tbody>
</table>

M = 0.762
α = 3.6 deg
FLAPS = 0 deg
LANDING GEAR UP

Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002)(Continued)
**ENGINE 4 WL180 ~ IPSA**

- **HP** = 12 029 m (39 466 ft)
- **GW** = 216 816 kg (477 337 lbm)
- **Q** = 7.826 kPa (1.135 PSI)
- **Vc** = 430.4 km/h (232.4 KTS)

M = 0.762
\( \alpha = 3.6 \text{ deg} \)
FLAPS = 0 deg
LANDING GEAR UP

*Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002)(Continued)*

270
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Continued)
Figure B-15. Local Mach Number Plots (Test 273-12, Condition 1.00.137.002) (Concluded)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003) (Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003)(Continued)

- LOCAL MACH NUMBER ~ IPSA PROGRAM
  ENGINE 4 WL155

- LOCAL MACH NUMBER ~ NAIL PROGRAM
  ENGINE 4 ~ 060 DEGREE RADIAL

<table>
<thead>
<tr>
<th>Port Location</th>
<th>% Chord</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

---

$H_p = 12,002\text{m (39,376 ft)}$

$GW = 218,881\text{ kg (482,550 lbm)}$

$Q = 8,660\text{ kPa (1,256 PSI)}$

$V_c = 455.2\text{ km/h (245.8 KTS)}$

$M = 0.800$

$\alpha = 2.0\text{ deg}$

FLAPS = 0 deg

LANDING GEAR UP
Figure B-16. Local Mach Number Plots (Test 273-12, Condition 1.00.137.003) (Concluded)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001) (Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001)(Continued)
Figure B-17. Local Mach Number Plots (Test 273-15, Condition 1.00.137.001) (Concluded)
Figure B-18. Locals Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002)(Continued)

<table>
<thead>
<tr>
<th>HP</th>
<th>11 596 m (38 045 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW</td>
<td>218,678 kg (482,102 lbm)</td>
</tr>
<tr>
<td>Q</td>
<td>8.694 kPa (1.261 PSI)</td>
</tr>
<tr>
<td>V_C</td>
<td>454.1 km/h (245.2 KTS)</td>
</tr>
</tbody>
</table>

M = 0.776
α = 3.0 deg

FLAPS = 0 deg,
LANDING GEAR UP
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002)(Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Continued)
Figure B.18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002)(Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002)(Continued)
Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Continued)
LOCAL MACH NUMBER ~ IPSA PROGRAM
ENGINE 4 WL155

M = 0.776

H_p = 11,596 m (38,045 ft)
GW = 218,678 kg (482,102 lbm)
O = 8,694 kPa (1,261 PSI)
V_c = 454.1 km/h (245.2 KTS)
FLAPS = 0 deg
LANDING GEAR UP

Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00.137.002)(Continued)
**ENGINE 4  CORE 330 DEG ~ IPSA**

**INBOARD SURFACE**

<table>
<thead>
<tr>
<th>LOCAL MACH NUMBER</th>
<th>PORT LOCATION</th>
<th>PERCENT CHORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>1.0</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>0.8</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.6</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.4</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.2</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.0</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

**ENGINE 4 ~ 060 DEGREE RADIAL ~ NAIL**

**INNER SURFACE**

**OUTER SURFACE**

<table>
<thead>
<tr>
<th>LOCAL MACH NUMBER</th>
<th>PORT LOCATION</th>
<th>PERCENT CHORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>1.2</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>1.0</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.8</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.6</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.4</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.2</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>0.0</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

**Figure B-18. Local Mach Number Plots (Test 273-15, Condition 1.00,137.002)(Continued)**

- \(H_p = 11.596\) m (38.045 ft)
- \(G_W = 218.678\) kg (479.102 lbm)
- \(Q = 8.694\) kPa (1.261 PSI)
- \(V_c = 454.1\) km/h (245.2 KTS)
- \(M = 0.776\)
- \(\alpha = 3.0\) deg
- FLAPS = 0 deg
- LANDING GEAR UP

12539-396
Local Mach Number Plots (Test 273-15, Condition 1.00.137.002) (Concluded)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Continued)
<table>
<thead>
<tr>
<th>LOCAL MACH NUMBER ~ NAIL PROGRAM</th>
<th>ENGINE 3 ~ 090 DEGREE RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O: INNER SURFACE</td>
</tr>
<tr>
<td></td>
<td>X: OUTER SURFACE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL MACH NUMBER ~ NAIL PROGRAM</th>
<th>ENGINE 3 ~ 150 DEGREE RADIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O: INNER SURFACE</td>
</tr>
<tr>
<td></td>
<td>X: OUTER SURFACE</td>
</tr>
</tbody>
</table>

- $H_p = 11601$ m (38060 ft)
- $GW = 218085$ kg (480796 lbm)
- $Q = 9.267$ kPa (1.344 PSI)
- $V_c = 470.6$ km/h (254.1 KTS)
- $M = 0.802$
- $\alpha = 2.6$ deg
- FLAPS = 0 deg
- LANDING GEAR UP

**Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)** (Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)(Continued)
**LOCAL MACH NUMBER ~ NAIL PROGRAM**

**ENGINE 3 ~ 330 DEGREE RADIAL**

---

**Figure B.19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Continued)**

- \( H_p = 11601 \text{m (38060 ft)} \)
- \( G_W = 218085 \text{kg (480796 lbm)} \)
- \( Q = 9.267 \text{kPa (1.344 PSI)} \)
- \( V_c = 470.6 \text{km/h (254.1 KTS)} \)

- **M = 0.802**
- **\( \alpha = 2.6 \text{deg} \)**
- **FLAPS = 0 deg**
- **LANDING GEAR UP**

---

- **INNER SURFACE**
- **OUTER SURFACE**

---

PORT LOCATION ~ % CHORD

---

**LOCAL MACH NO.**

---

1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0

0 20 40 60 80 100
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)(Continued)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_p$</td>
<td>$11,601$ m ($38,060$ ft)</td>
</tr>
<tr>
<td>$G_W$</td>
<td>$218,085$ kg ($480,786$ lbm)</td>
</tr>
<tr>
<td>$Q$</td>
<td>$9.267$ kPa (1.344 PSI)</td>
</tr>
<tr>
<td>$V_c$</td>
<td>$470.6$ km/h ($254.1$ KTS)</td>
</tr>
</tbody>
</table>

$M = 0.802$

$\alpha = 2.6$ deg

FLAPS = 0 deg

LANDING GEAR UP
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003)(Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Continued)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Concluded)
Figure B-19. Local Mach Number Plots (Test 273-15, Condition 1.00.137.003) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)

<table>
<thead>
<tr>
<th>HP</th>
<th>11,432 m (37,506 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW</td>
<td>216,125 kg (476,473 lbm)</td>
</tr>
<tr>
<td>Q</td>
<td>12,162 kPa (1,764 PSI)</td>
</tr>
<tr>
<td>Vc</td>
<td>547.1 km/h (295.4 KTS)</td>
</tr>
</tbody>
</table>

M = 0.006
a = 1.0 deg
FLAPS = 0 deg
LANDING GEAR UP
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00,137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004)(Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B.20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Continued)
Figure B-20. Local Mach Number Plots (Test 273-15, Condition 1.00.137.004) (Concluded)