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NASA-CR-133979) A LOW SPEED WIND TUNNEL TEST OF THE 0.050 SCALE NASA-JSC SHUTTLE ORBITER 089B TO DETERMINE THE LONGITUDINAL AND (Vought Aeronautics, Dallas, Tex.) ~~244~~ 246 p HC $14.25 CSCL 22B

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REPORT NO. LSWT 422

PAGE NO. 1 OF 244

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VOUGHT AERONAUTICS

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TITLE

# A LOW SPEED WIND TUNNEL TEST OF THE 0.050 SCALE NASA-JSC SHUTTLE ORBITER 089B TO DETERMINE THE LONGITUDINAL AND LATERAL-DIRECTIONAL EFFECTS OF CONTROL SURFACE MODIFICATIONS

| SUBMITTED UNDER | |
|---|---|
| REPORT NO. LSWT 422 | DATED 8 June 1973 |
| MODEL 0.050 Scale 089B Orbiter | CONTRACT NO. NAS 9-12731 |
| DATE ISSUED | SUPERSEDING |

LOW SPEED WIND TUNNEL

TEST NO. 422

TEST DATES: 24 April - 2 May 1973


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R. H. Oldenbuttel
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R. M. White, Supervisor
Low Speed Wind Tunnel

J. M. Cooksey — APPROVED
J. M. Cooksey, Chief
Gas Dynamics Laboratories


/dm

REVISIONS

| DATE | REV BY | PAGES AFFECTED | REMARKS |
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# I. INTRODUCTION

## General Information

| | |
|---|---|
| VSD Test Number | 422 |
| NASA-JSC Test Number | MA-14 |
| Facility | VSD Low Speed Wind Tunnel(15 by 20-foot Test Section) |
| Test Dates | 24 April - 2 May 1973 |
| Test Dynamic Pressure | 6.60 pound per square foot |
| Occupancy Time | 61.75 hours |
| Test Authorization | NAS 9-12731 |
| NASA Test Representative | E. B. Chambliss |
| VSD Test Engineer | R. H. Oldenbuttel |

## Test Objective

The purpose of this test was to determine the longitudinal and lateral-directional effects of control surface modifications to the Orbiter 089B.



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## II. TEST FACILITY, MODEL, AND INSTRUMENTATION

### Test Facility

The Vought Systems Division Low Speed Wind Tunnel is a horizontal, single-return facility having tandem test sections of 7 by 10 and 15 by 20 feet. The test dynamic pressure is generated by a 20-foot diameter, six-blade, fixed-pitch proprller which is driven by a 1500-horsepower electric motor. Test velocities of 230 and 52 miles per hour can be obtained in the 7 by 10 and 15 by 20-foot test sections, respectively.

### Model

The basic 0.050 scale model of the NASA-JSC Shuttle Orbiter 089B consisted of a wood fuselage with machined aluminum wing spars and vertical fin. All wood surfaces were covered with a layer of glass fiber for added strength.

The fuselage contained a stainless steel beam which was fastened to the adapter of the VSD VTB-6 internal strain-gage balance. An electrolytic bubble package which was used to measure model pitch angles was installed in the model adjacent to the root section of the left wing.

The wing assembly was fastened to the fuselage support block. The elevons were machined of aluminum and were attached to the wing spars by spanwise steel rods. The inboard end of the rods were attached to manually adjustable deflection brackets.

Two sizes of horizontal tails were tested at a high and low position on the aft fuselage section. Other configurations tested were gothic canards which were mounted to the forward section of the fuselage and switch-blade canards which were installed at the leading edge root



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II. TEST FACILITY, MODEL, AND INSTRUMENTATION(cont'd)

section of the wing.

The model was installed in the test section on the VSD VTB-6 internal strain gage balance. The balance was fastened to a straight sting which was attached to the offset sting adapter(LST289, sheet 3) of the standard support system.

Transition strips of Number 36 grit were applied to the upper and lower surfaces of the wings and horizontal tails; both sides of the vertical tail and to the fuselage nose. The grit strips varied in width from 0.125 to 0.188 inches and were applied at 10 percent chord.

Instrumentation

The forces and moments on the model were measured with the VTB-6 internal strain gage balance. The balance was installed such that it was rolled -90 degrees with respect to the model. This was done to use the more sensitive balance side force gages to measure model normal force and pitching moment.

The model geometric angle of attack was set with gravity-sensing, electrolytic levels. The levels were fastened to a bracket which was mounted to the fuselage beam adjacent to the left wing. A separate level was used to measure each angle of attack.

II. TEST FACILITY, MODEL, AND INSTRUMENTATION(cont'd)

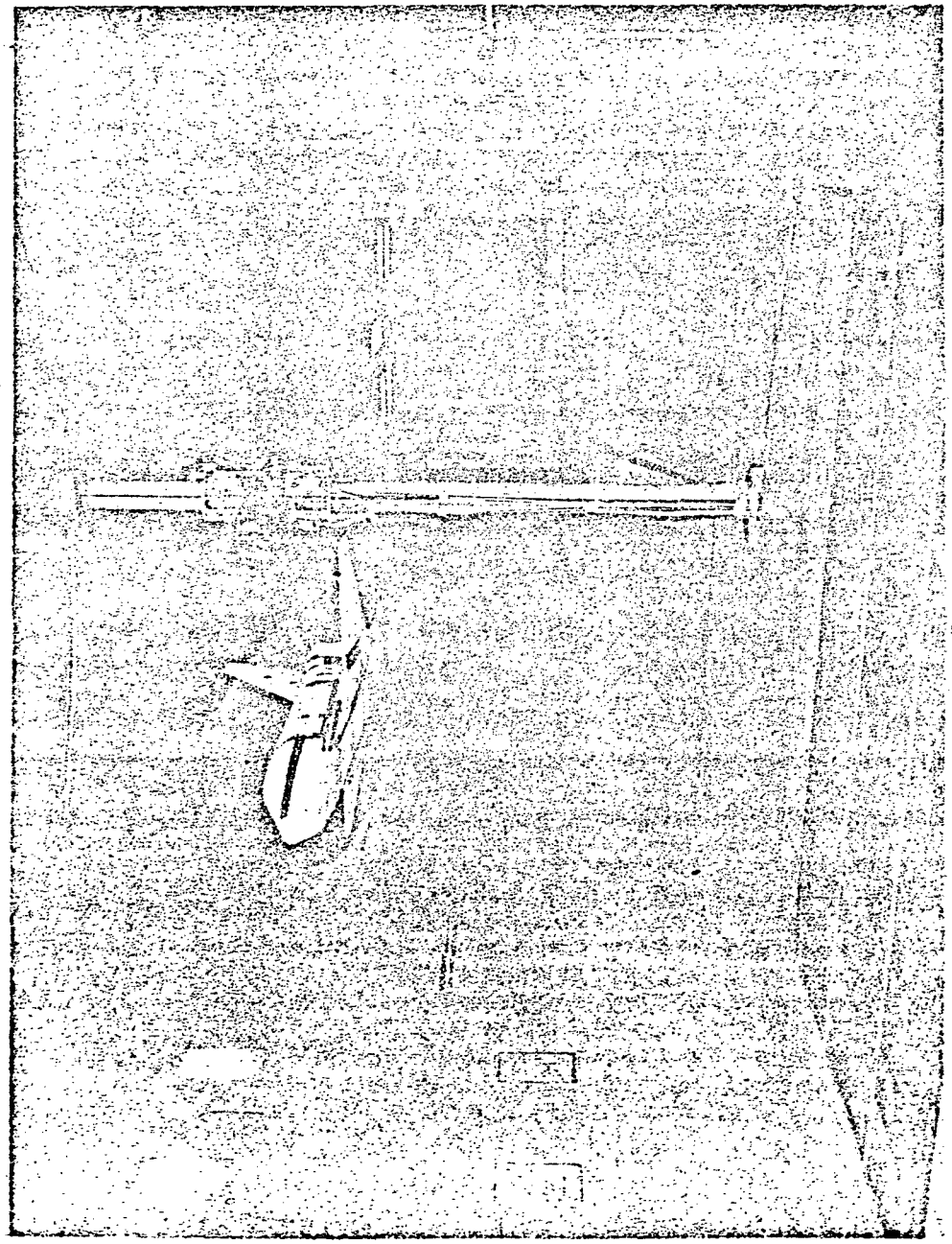

Figure 1. Forward View of Model Installation

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION (cont'd)

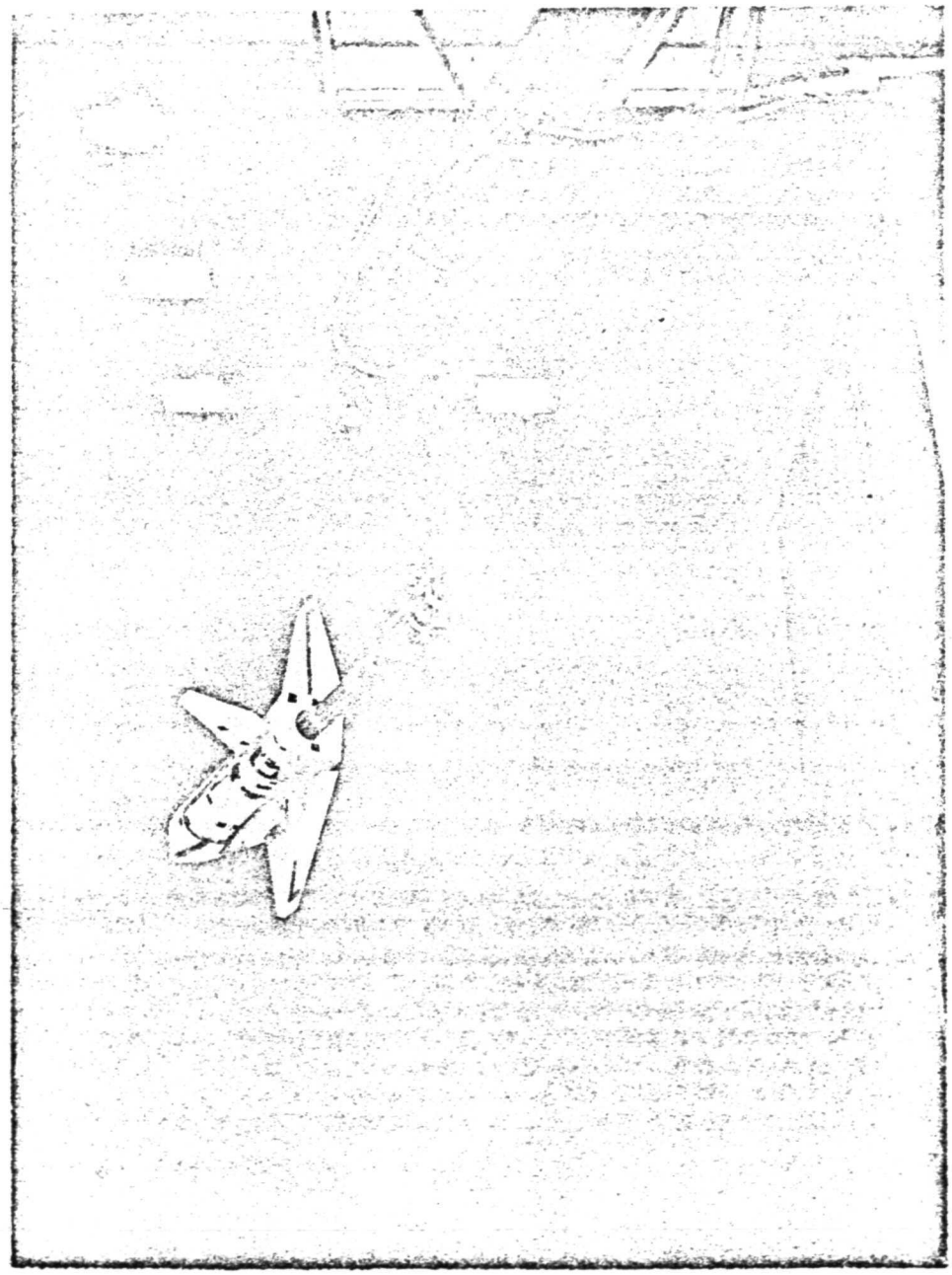

Figure 2. Aft View of Model Installation

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION (cont'd)

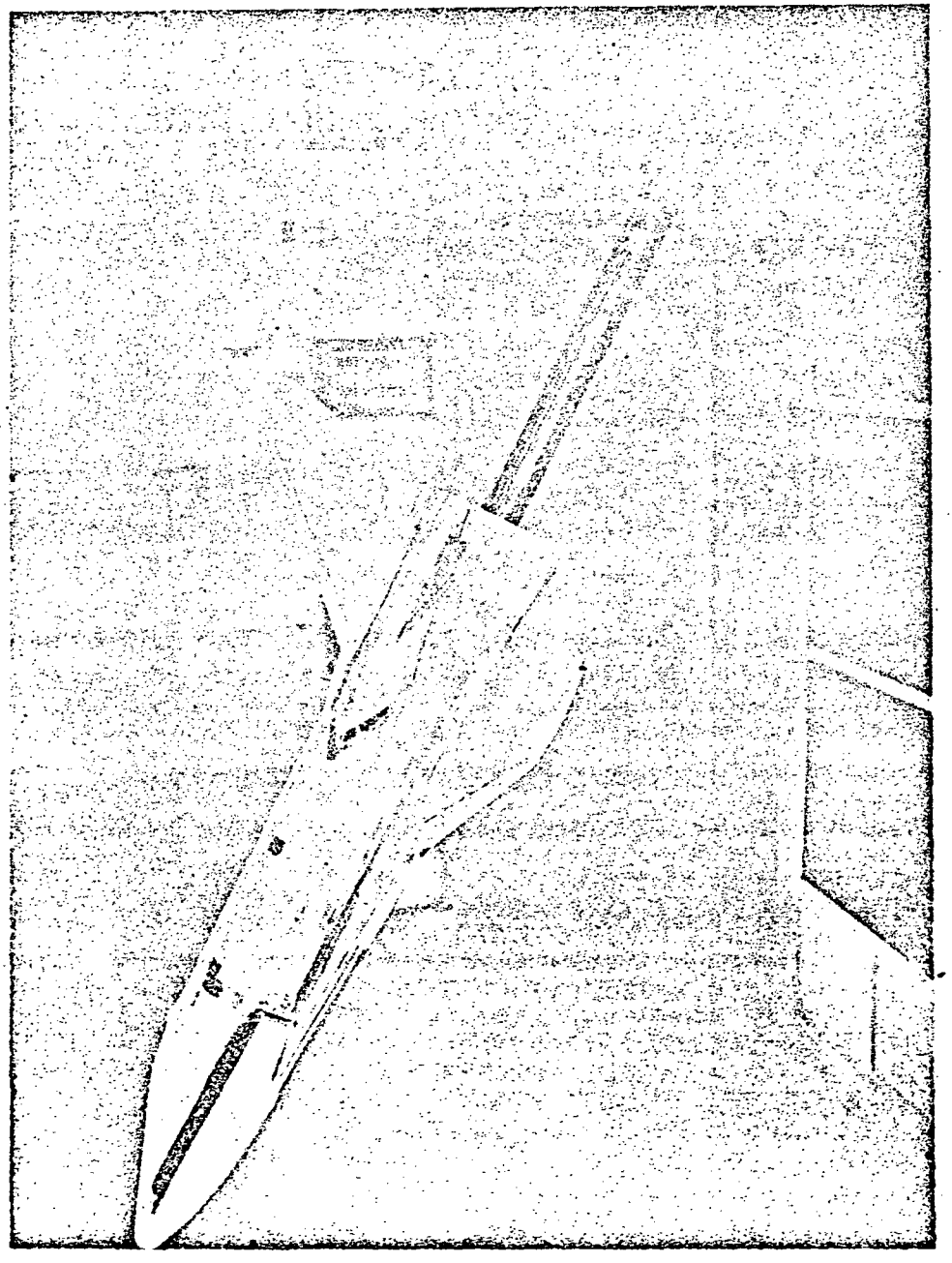

Figure 3. Profile View of 089B Shuttle Orbiter

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION(cont'd)

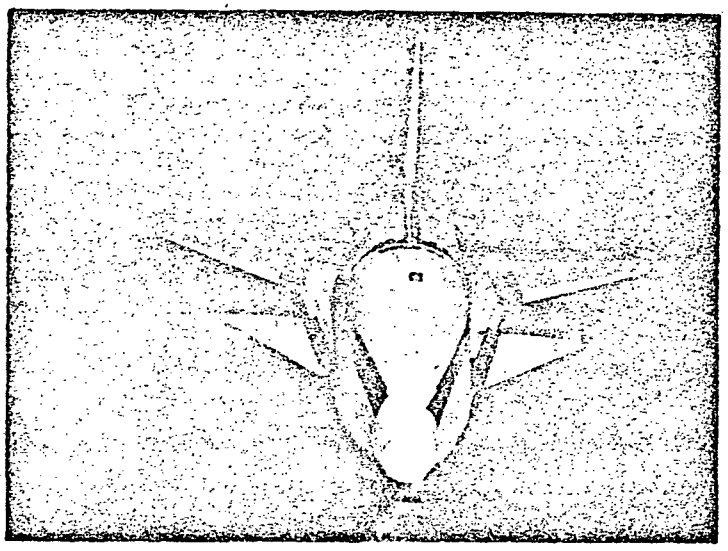

Figure 4. Basic 089B with Switch-Blade Canards.

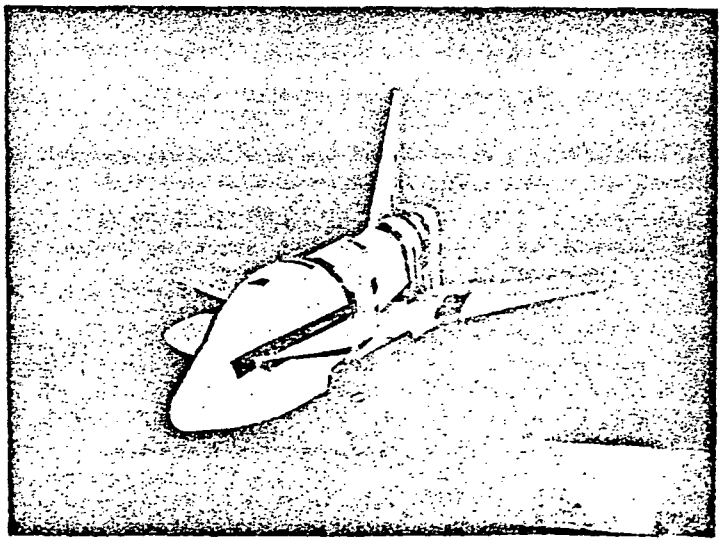

Figure 5. Basic 089B with Gothic Canards.

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION (cont'd)

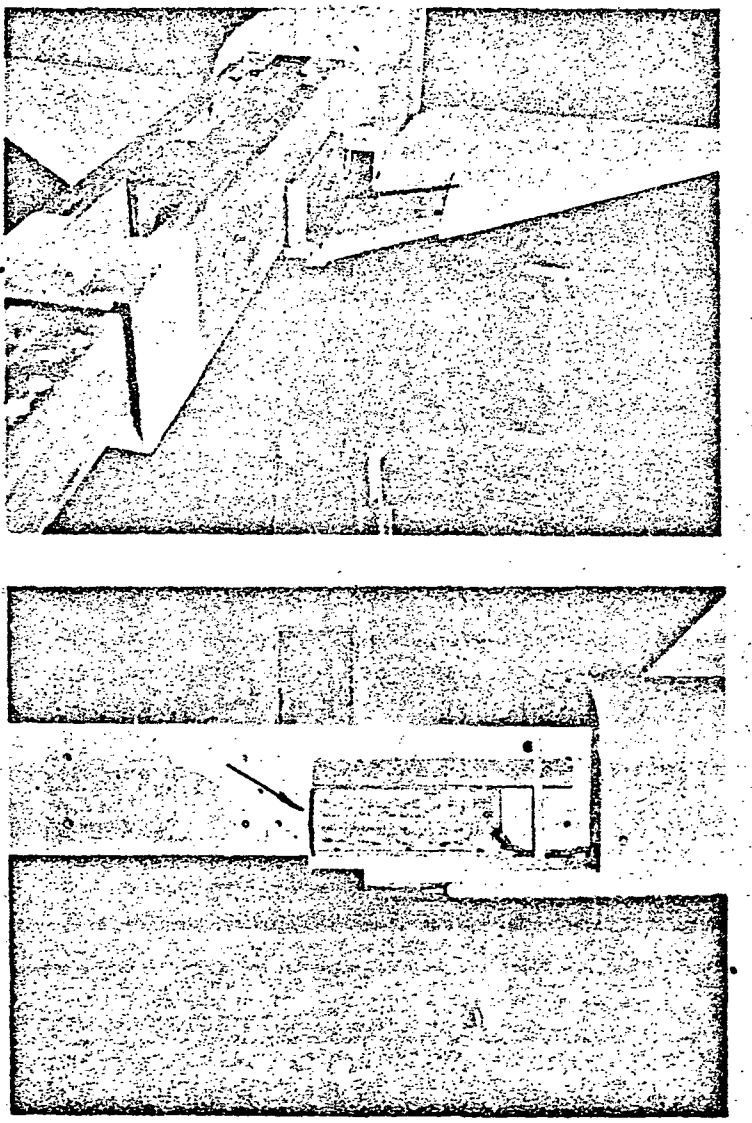

Figure 6. Electrolytic Bubble Levels

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION (cont'd)

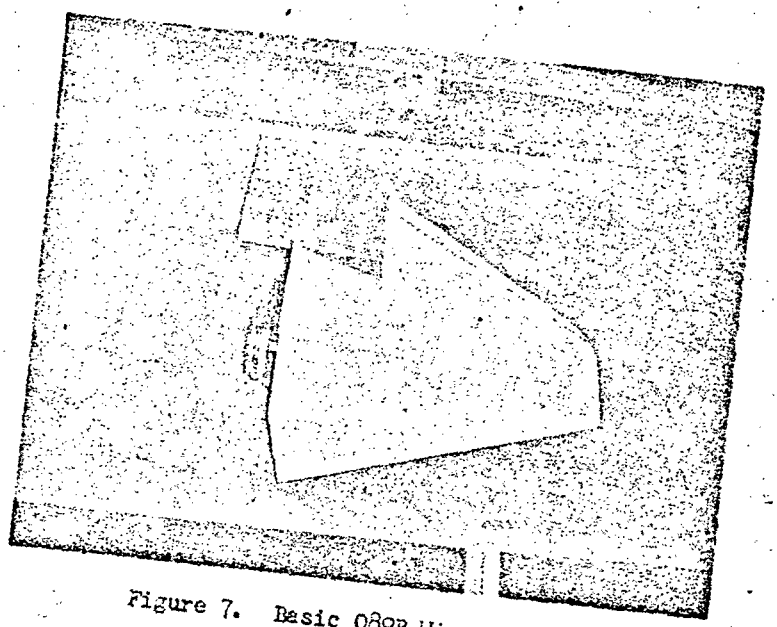

Figure 7. Basic 089B Wing

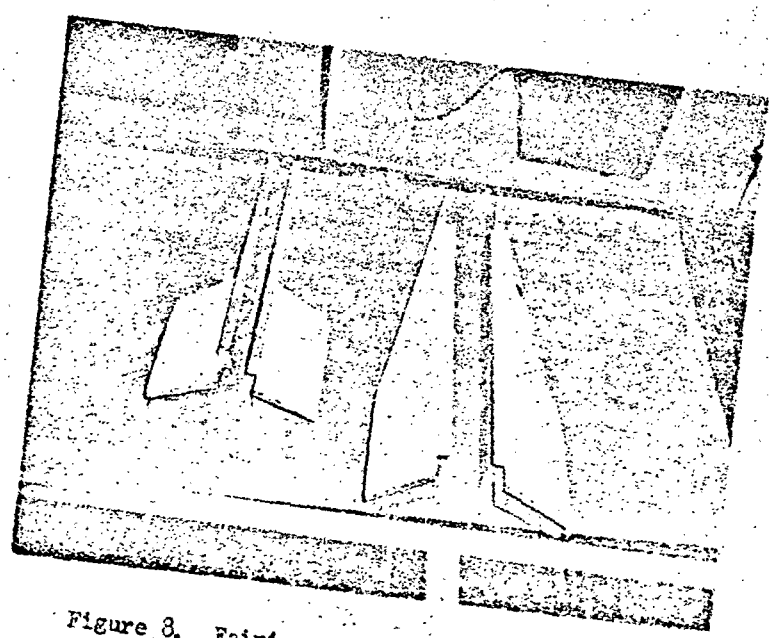

Figure 8. Fairings for $W_1$ and $W_2$ Wings

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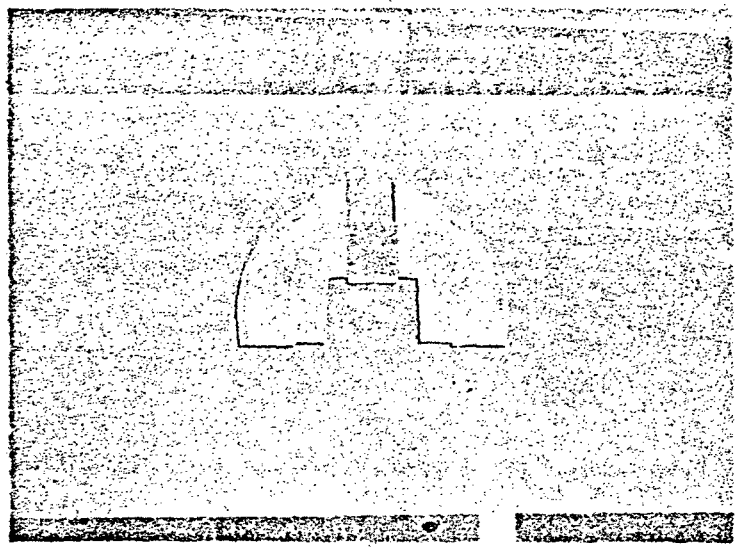

Figure 9. Gothic Canard

Figure 10. Switch-Blade Canards.

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II. TEST FACILITY, MODEL, AND INSTRUMENTATION(con'td)

Figure 11. Axle-Mounted Horizontal Tails($H_1^1$ and $H_2^1$)

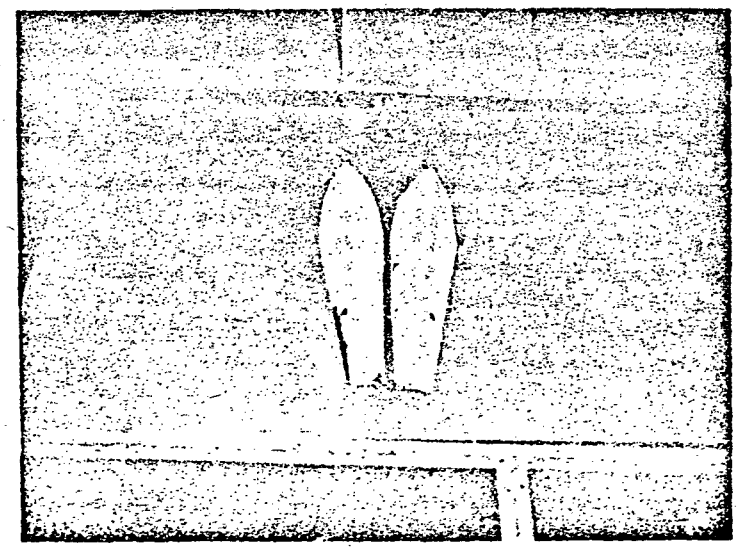

Figure 12. Horizontal Tail Root Fairings

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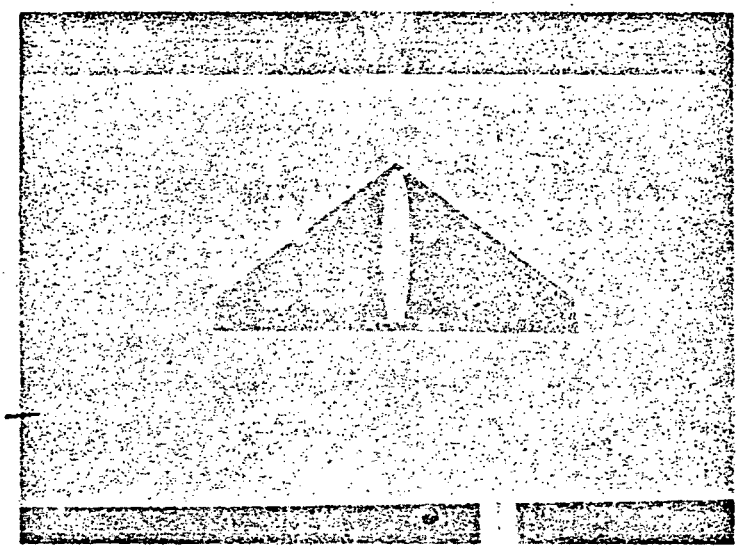

Figure 13. Small One-Piece Horizontal Tail($H_1^S$)

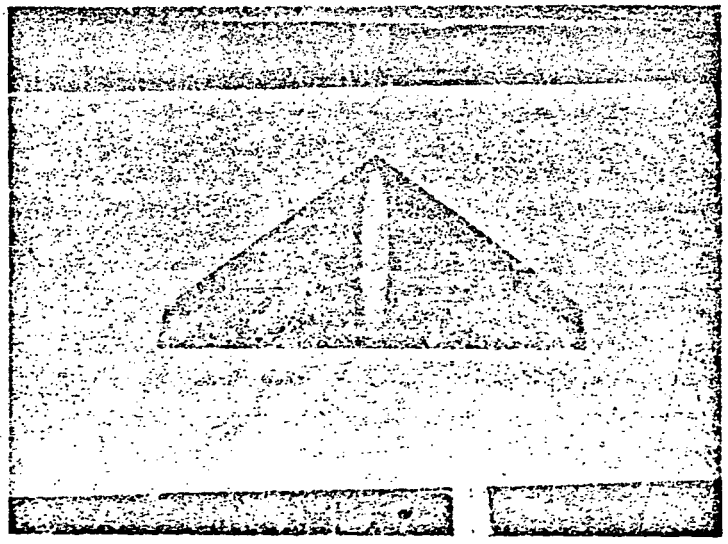

Figure 14. Large One-Piec Horizontal Tail($H_2^S$)

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## III. TEST PROCEDURE AND RESULTS

The 0.050 scale model of the NASA-JSC 089B Shuttle Orbiter was tested in the Vought Systems Division 15 by 20-foot test section of the Low Speed Wind Tunnel. The test was conducted during the period of 24 April to 2 May 1973.

A total of 103 data runs was made which consisted of pitch runs through a range from zero to 28 degrees at a zero yaw angle and yaw runs from $\beta = -6$ to $+6$ degrees while at fixed pitch angles of 0,4,10,16 or 20 degrees. The entire test was run at a freestream dynamic pressure of 6.60 pounds per square foot with the model at the center of the test section.

At each data point, data from the VTB-6 internal strain gage balance was sampled with the digital data system. Also recorded were the model angles of pitch and yaw and the test section static pressure.

The results of this test are presented in the form of tabulated aerodynamic coefficient data about the model moment reference center.



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## IV. NOMENCLATURE AND SYMBOLS

| Symbol | Description |
|---|---|
| $\alpha$ | Model geometric angle of attack, degrees |
| $\Psi$ | Model geometric yaw angle, degrees |
| b | Wing span, feet |
| B.L. | Buttock line, inches |
| $\bar{c}$ | Mean geometric chord, inches |
| $C_A$ | Axial force coefficient uncorrected for base pressures, axial force/qS |
| $C_D$ | Drag coefficient, drag/qS |
| $C_L$ | Lift coefficient, lift/qS |
| $C_\ell$ | Rolling moment coefficient, rolling moment/qSb |
| $C_m$ | Pitching moment coefficient, pitching moment/qS$\bar{c}$ |
| $C_N$ | Normal force coefficient, N/qS |
| $C_n$ | Yawing moment coefficient, yawing moment/qS |
| $C_Y$ | Side force coefficient, side force/qS |
| F.S. | Fuselage station, inches |
| M.R.C. | Moment reference center, inches |
| $P_s$ | Test section static pressure |
| q | Test dynamic pressure corrected for blockage and compressibility, pounds per square foot |
| RN/FT | Reynolds number per foot |
| S | Wing area, square feet |
| Temp | Test section temperature, degrees Fahrenheit |
| V | Test section freestream velocity, feet per second |
| W.L. | Water line, inches |



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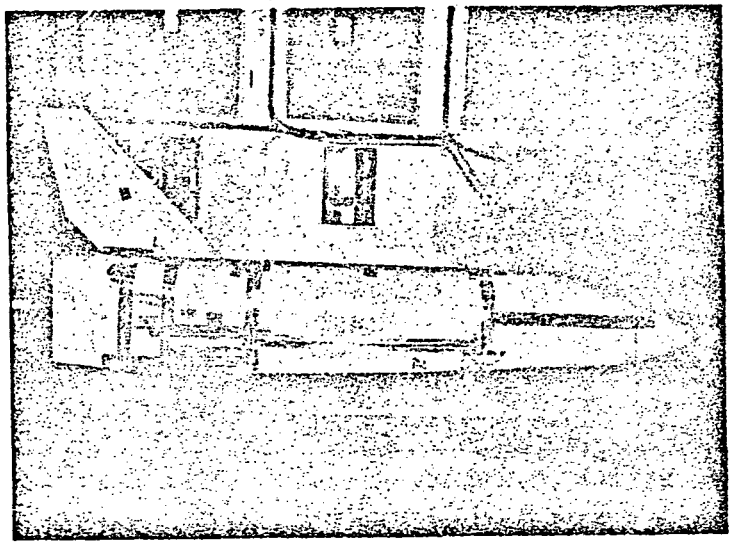
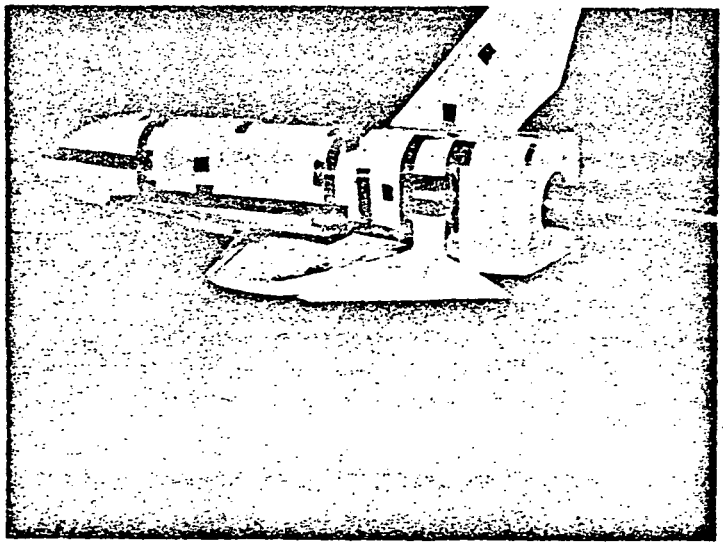
IV. NOMENCLATURE AND SYMBOLS (cont'd)

$B_1$ 040A body with a 4.45-inch aft end extension.

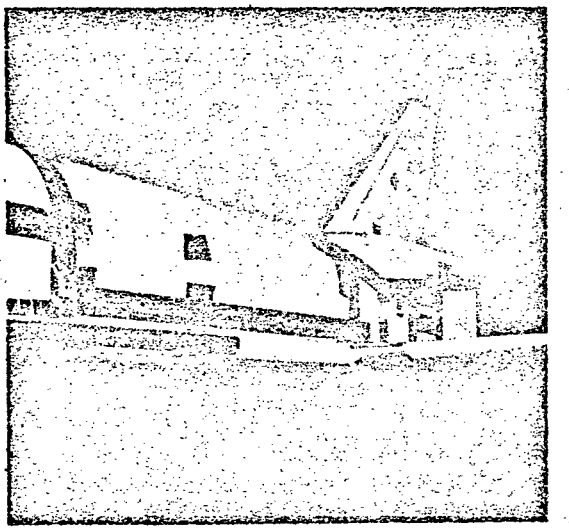


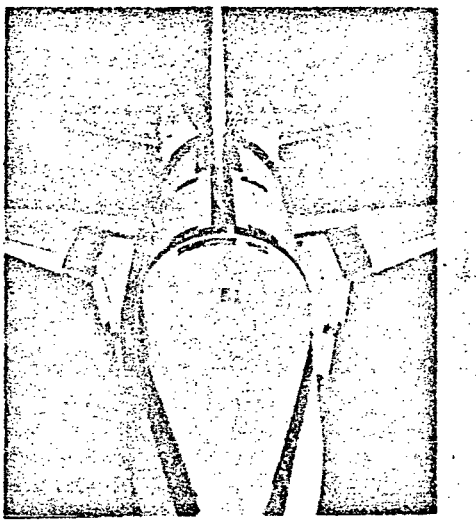
$e^n$ Elevator. Superscript denotes deflection, degrees.



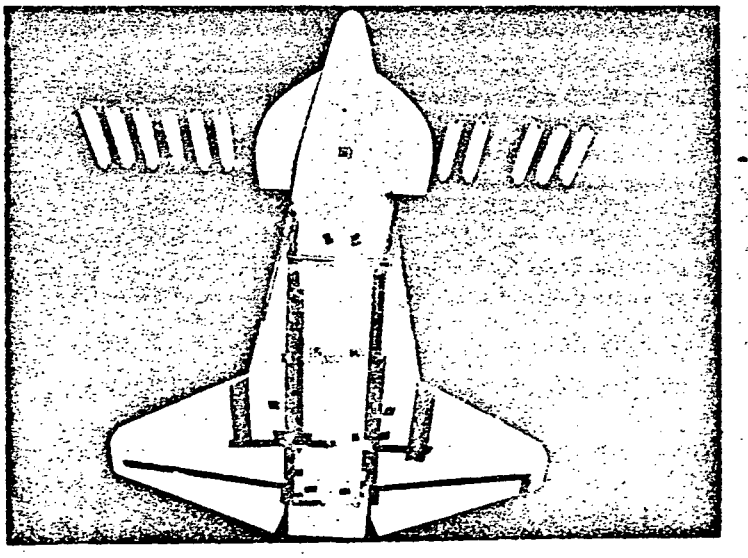
IV. NOMENCLATURE AND SYMBOLS (cont'd)

F Horizontal tail fairings.



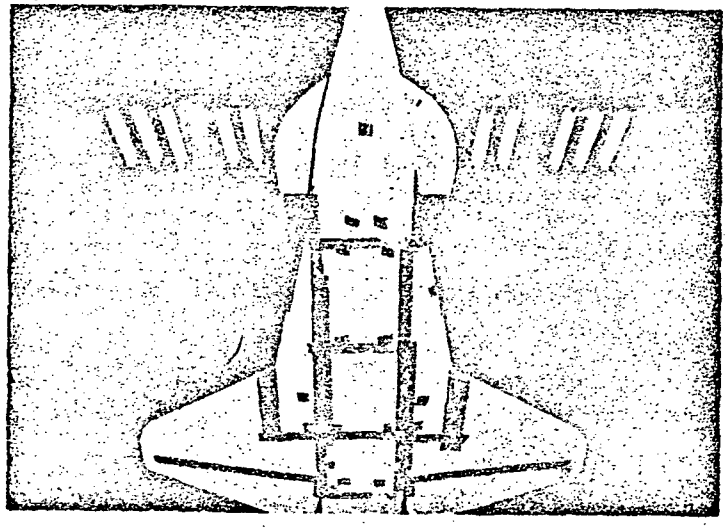


$GC_1$ Gothic canard located in the forward position such that the trailing edge of the canard was located 22.50 inches forward of the intersection of the wing and glove leading edges.

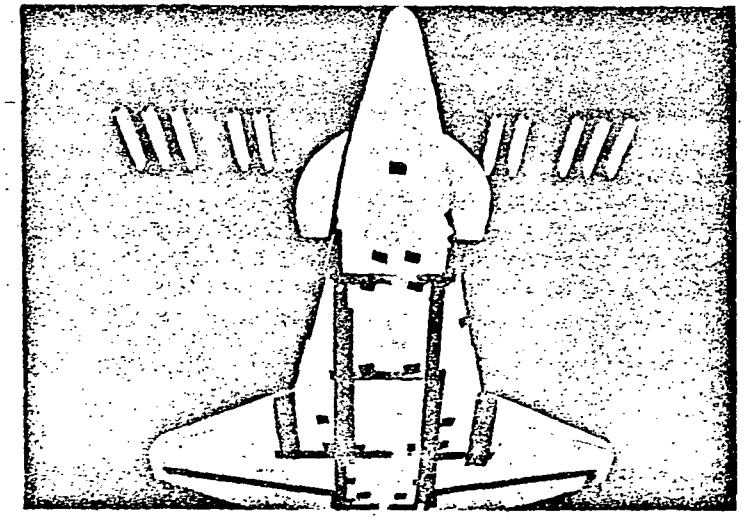


IV. NOMENCLATURE AND SYMBOLS (cont'd)

$GC_2$ Gothic canard located in the mid position such that the trailing edge of the canard was located 20.0 inches forward of the intersection of the wing and glove leading edges.



$GC_3$ Gothic canard located in the aft position such that the trailing edge of the canard was located 17.50 inches forward of the intersection of the wing and glove leading edges.



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IV. NOMENCLATURE AND SYMBOLS (cont'd)

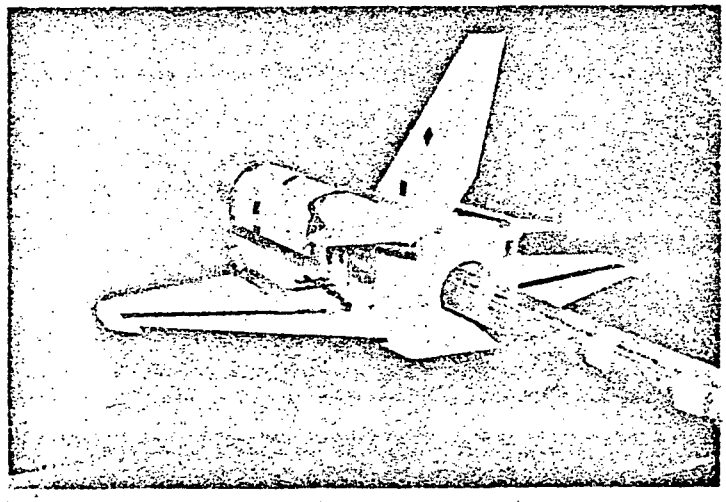
$H_{1F}^{X,Y}$ Small horizontal tail. Subscript "F" denotes root fairing.

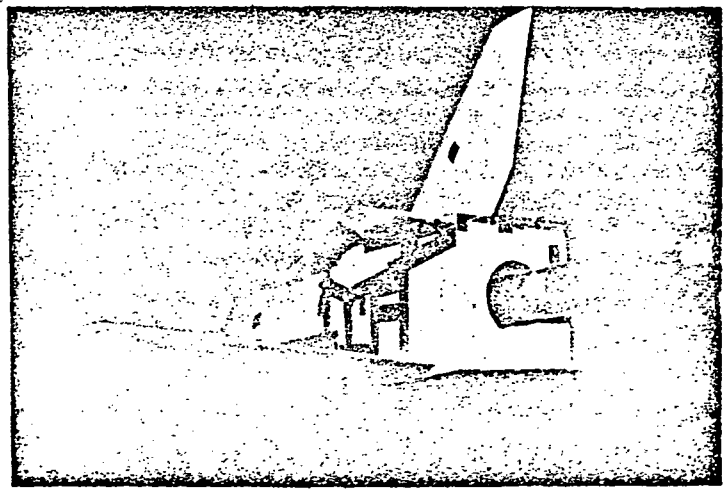
Superscript "X" denotes vertical location as follows:

X = 1; tail in low position mounted to axle which passes through fuselage

X = 2; one-piece tail (having same planform as tail in low position) mounted to top of fuselage.

Additional superscript "Y" denotes incidence, degrees





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IV. NOMENCLATURE AND SYMBOLS (cont'd)

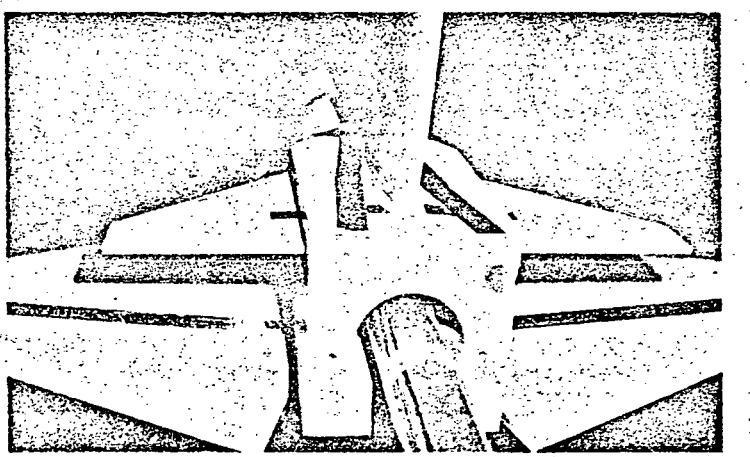
$h_{2F}^{X,Y}$ Large horizontal tail. Subscript "F" denotes root fairing.

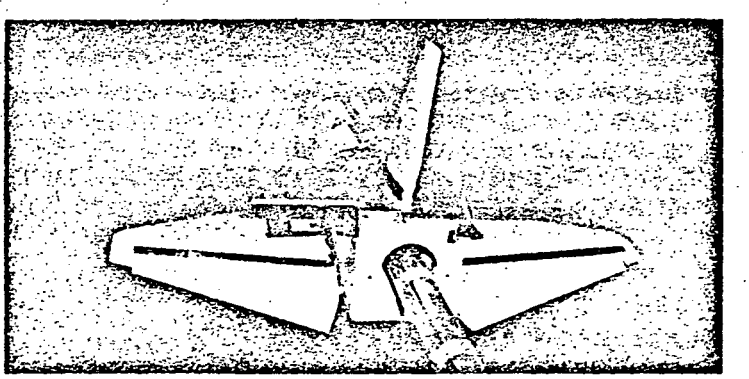
Superscript "X" denotes vertical location as follows:

X = 1; tail in low position mounted to axle which passes through fuselage

X = 2; one-piece tail (having same planform as tail in low position) mounted to top of fuselage

Additional superscript "Y" denotes incidence, degrees





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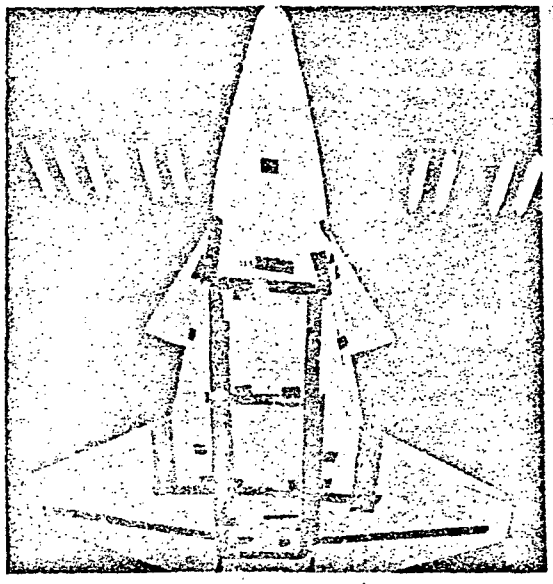
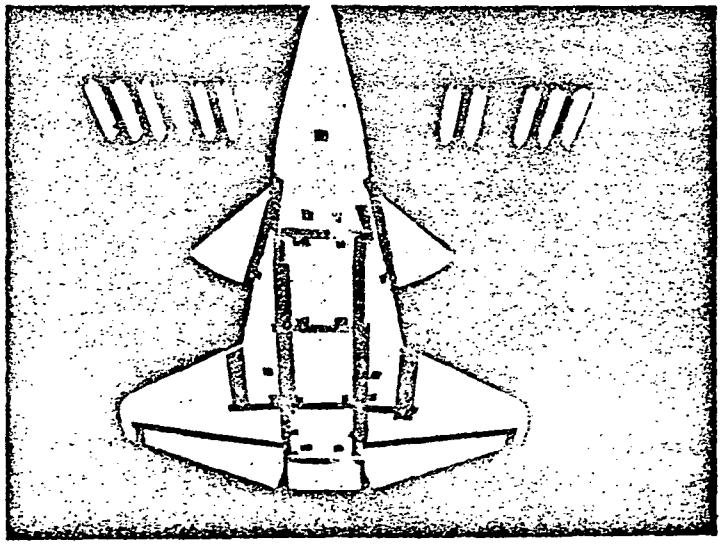
IV. NOMENCLATURE AND SYMBOLS (cont'd)

$SC_1$ - Switch-blade canard located at leading edge of wing glove and having a sweep-back angle of 62 degrees.



$SC_2$ - Switch-blade canard located at leading edge of wing glove and having a sweep-back angle of 45 degrees.



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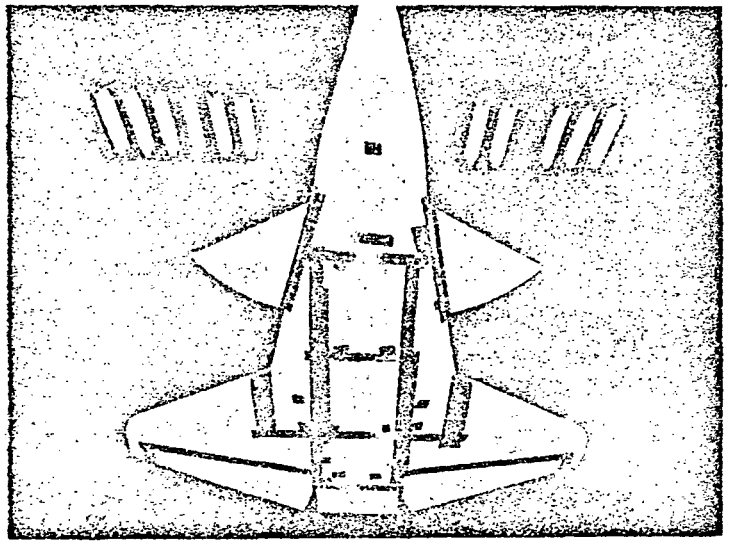
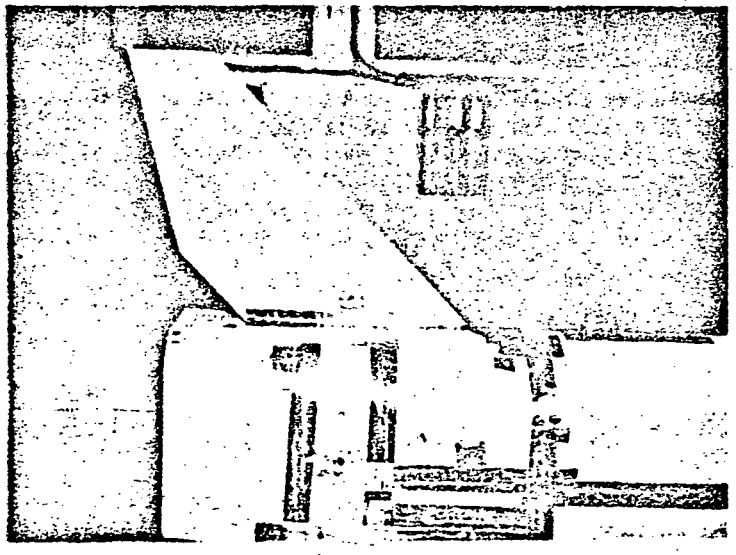
IV. NOMENCLATURE AND SYMBOLS (cont'd)

$SC_3$ Switch-blade canard located at leading edge of wing glove and having a sweep-back angle of 35 degrees.

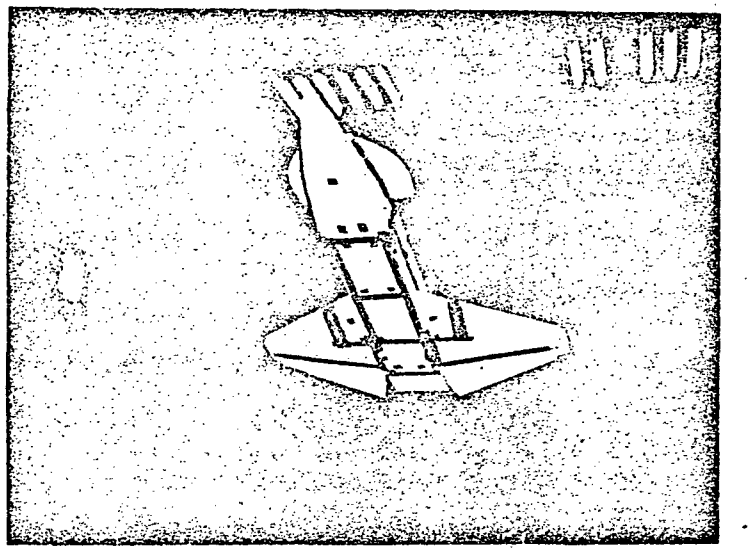


$V_1$ Vertical tail.

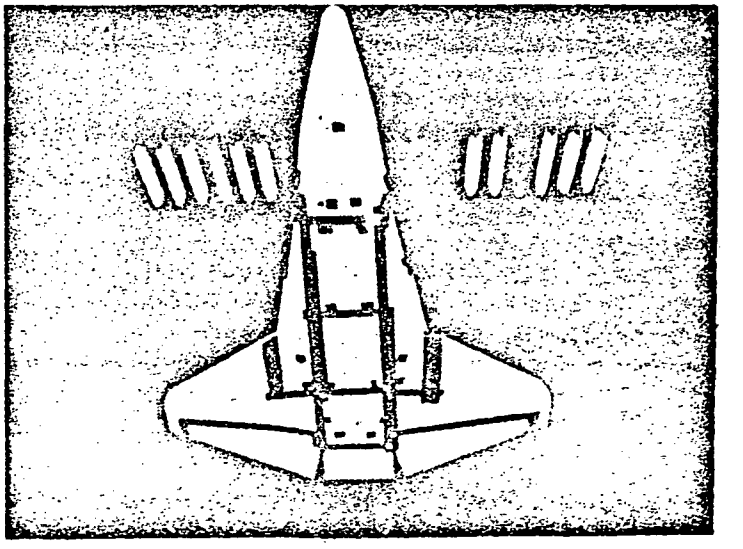


IV. NOMENCLATURE AND SYMBOLS(cont'd)

$W_1$ Basic wing with no glove.



$W_2$ Double-delta wing formed by $W_1$ and leading edge glove.



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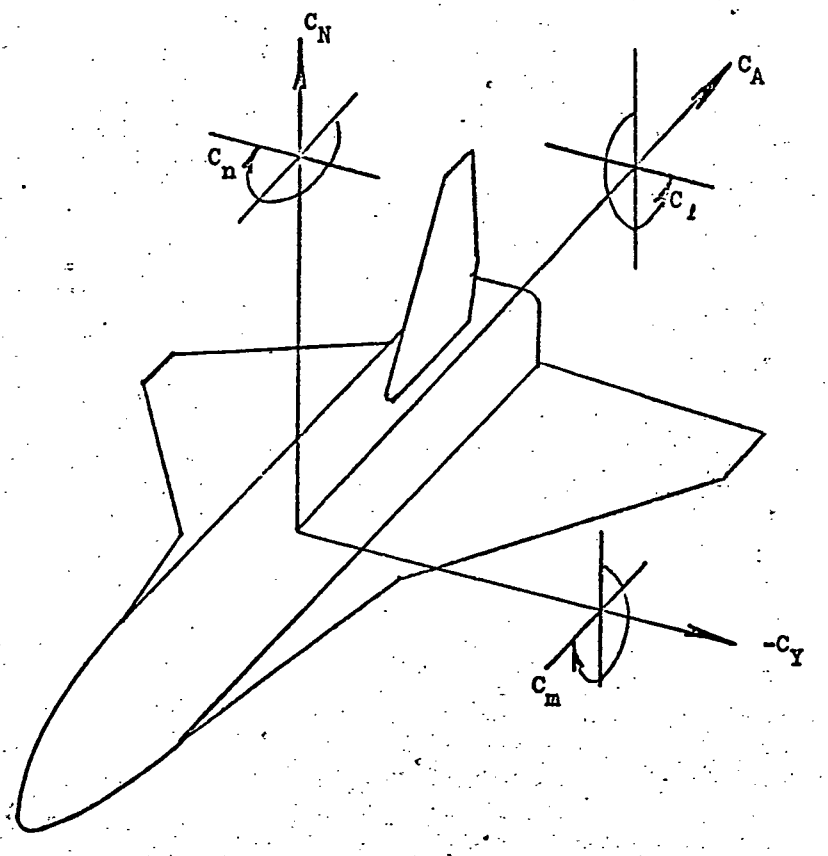
IV. NOMENCLATURE AND SYMBOLS (cont'd)

MODEL SIGN CONVENTION

FORCE DIAGRAM - BODY AXES




SURFACE DEFLECTIONS AND SIGN CONVENTIONS

The deflection of all movable surfaces is defined as the acute angle between adjacent model reference planes measured perpendicular to the hinge line. A positive deflection of a surface in a horizontal plane (model upright) places the trailing edge of the surface down. A positive deflection of a surface in the vertical plane of the model places the trailing edge of the surface to the left of the model centerline.

## V. MODEL DIMENSIONAL DATA

### 0.050 Scale Orbiter 089B

**Body - $B_1$**

| | |
|---|---|
| Length, inches | 7.000 |
| Maximum Width, inches | 10.200 |
| Maximum Depth, inches | 11.900 |

**Gothic Canard -- $GC_1$, $GC_2$, $GC_3$**

| | $GC_1$ | $GC_2$ | $GC_3$ |
|---|---|---|---|
| Area exposed per side, square inches | 58.930 | 52.070 | 46.510 |
| Semispan exposed, inches | 4.222 | 3.850 | 3.610 |
| Root chord exposed, inches | 12.270 | 12.000 | 11.800 |

**Horizontal Tail, Small ($H_1$)**

(Exposed Data)

| | |
|---|---|
| Area, square inches | 88.992 |
| Span(equivalent), inches | 13.800 |
| Aspect Ratio | 2.140 |
| Taper Ratio | 0.303 |
| Root chord, inches | 9.900 |
| Tip chord, inches | 3.000 |
| Hingeline, inches | 63.720 |
| Trailing edge, inches | 67.250 |
| Theoretical apex, inches | 52.250 |

**Horizontal Tail, Large($H_2$)**

(Exposed Data)

| | |
|---|---|
| Area, square inches | 162.720 |
| Span(equivalent), inches | 19.195 |
| Aspect ratio | 2.266 |
| Taper ratio | 0.277 |
| Root chord, inches | 13.270 |
| Tip chord, inches | 3.675 |
| Hingeline, inches | 63.720 |
| Trailing edge, inches | 68.400 |
| Theoretical apex, inches | 50.030 |

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V. MODEL DIMENSIONAL DATA (cont'd)

Switch-Blade Canards -- $SC_1$, $SC_2$, $SC_3$

| | $SC_1$ | $SC_2$ | $SC_3$ |
|---|---|---|---|
| Area, square inches | 30.340 | 60.670 | 78.520 |
| Sweep-back angle at leading edge, degrees | 62.0 | 45.0 | 35.0 |

Vertical Tail - $V_1$

| | |
|---|---|
| Area, square inches | 143.600 |
| Span(exposed), inches | 15.250 |
| Root chord(exposed, inches | 15.750 |
| Tip chord(exposed), inches | 4.750 |
| Sweep-back of leading edge, degrees | 45.000 |
| Sweep-back of trailing edge, degrees | 15.000 |

Wings - $W_1$ and $W_2$

| | $W_1$ (Basic - No Glove) | $W_2$ (Double-Delta) |
|---|---|---|
| Area(planform), square inches | 1231.200 | 1671.120 |
| Span(equivalent), inches | 55.790 | 55.790 |
| Aspect Ratio | 2.525 | 1.860 |
| Taper Ratio | 0.200 | 0.091 |
| Aerodynamic Twist, degrees | 0.000 | 0.000 |
| Sweep-back Angle at Leading edge, degrees | 35.000 | 79.000(Glove) |
| MAC, inches | 25.355 | 43.975 |
| Fuselage station of 0.25 MAC, inches | 49.670 | 36.410 |
| Break, inches | --- | 42.700 |
| B.L. of Break, inches | --- | 9.950 |

## VI. REFERENCES

1. Chambliss, E. B., Pretest Memo for Test of Modified Shuttle Orbiter 0893 in VSD Low Speed Wind Tunnel (15 by 20-foot Test Section), NASA-JSC Test Number MA-14, 24 April 1973.

2. Pope, Alan, Wind Tunnel Testing, Second Edition, John Wiley and Sons, New York, 1966.

3. Holbrook, J. W., Low Speed Wind Tunnel Handbook, LTV Publication No. AER-EOR-12995-B, May 1968.



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## VII. DATA REDUCTION

Raw counts from the VTB-6 internal strain-gage balance were converted to six-component force and moment data(lift, drag, pitching moment, side force, yawing moment, and rolling moment) and reduced to coefficients. The data were resolved about the model moment reference center and referenced to body and stability axes. Corrections were made for the effects of solid and wake blockage and static weight tares. The balance was installed such that it was rolled -90 degrees with respect to the model.

### Data Reduction Factors

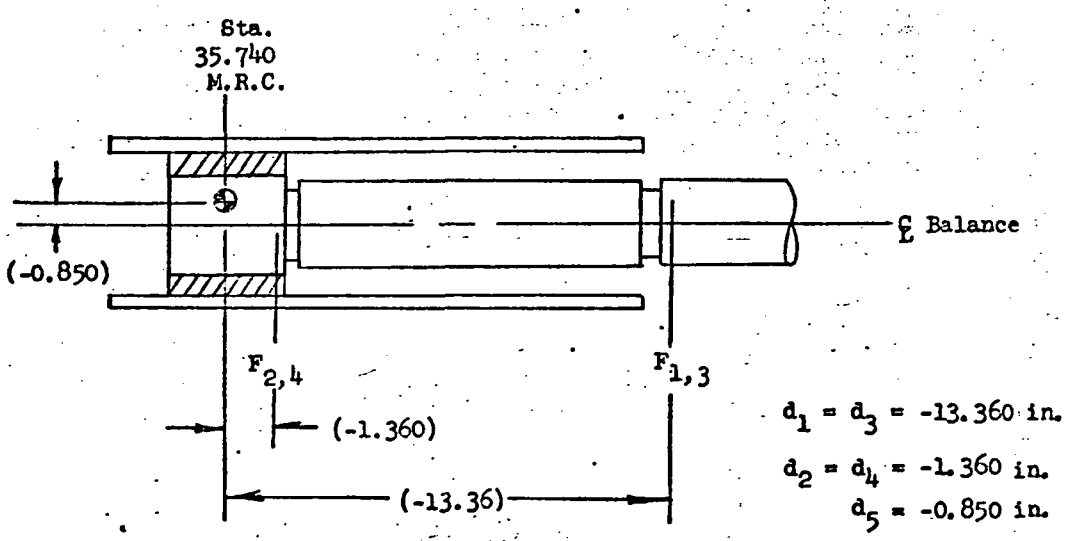
$S_{REF}$ = 1231.200 inches$^2$

$\bar{c}$ = 25.355 inches

b = 55.790 inches

q = 6.60 pounds per square foot

### Balance "d" Distances



VII. DATA REDUCTION(cont'd)

Blockage and Compressibility Correction

The blockage and compressibility corrections were combined into one expression and applied to $q_{set}$ (piezometer differential pressure). This enabled the test dynamic pressure to be set to a predetermined value.

$$q_{set} = q\left(\frac{1}{5.20 \times q_u/q_{piez}}\right)(1 + M^2/4)\left(\frac{1}{1 + 2\epsilon_b}\right)$$

where:

$q_{set}$ = piezometer differential pressure, inches of water

$q$ = desired test dynamic pressure, pounds per square foot

$q_u/q_{piez}$ = piezometer calibration factor

$1 + M^2/4$ = compressibility correction term where M = Mach Number

$\frac{1}{1 + 2\epsilon_b}$ = Solid and wake blockage correction

$$\epsilon_b = \frac{1}{4}\,\frac{\text{Model Frontal Area}}{\text{Test section cross-sectional area}}$$

Body to Stability Axes Transfer Equations ($\phi_{model}$ = 0 Degrees)

$$C_{L_S} = C_{N_B} \cos\alpha \cos\phi - C_{Y_B} \cos\alpha \sin\phi - C_{A_B} \sin\alpha$$

$$C_{D_S} = C_{A_B} \cos\alpha + C_{N_B} \sin\alpha \cos\phi - C_{Y_B} \sin\alpha \sin\phi$$

$$C_{m_S} = C_{m_B} \cos\phi - b/\bar{c}\, C_{n_B} \sin\phi$$

$$C_{Y_S} = C_{Y_B} \cos\phi + C_{N_B} \sin\phi$$

$$C_{n_S} = C_{n_B} \cos\alpha \cos\phi + \bar{c}/b\, C_{m_B} \cos\alpha \sin\phi - C_{\ell_B} \sin\alpha$$

$$C_{\ell_S} = C_{\ell_B} \cos\alpha + C_{n_B} \sin\alpha \cos\phi + \bar{c}/b\, C_{m_B} \sin\alpha \sin\phi$$

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## VIII. DATA PRESENTATION


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| 2 | Tabulated Data Column Heading Notation. . . . | 38 |
| 3 | Tabulated Data | |
| | Stability Axes Coefficient Data . . . . . | 39 |
| | Body Axes Coefficient Data. . . . . | 142 |


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VOUGHT AERONAUTICS

REPORT NO. 2-59730/3R-3638
PAGE NO. 33

LOW SPEED WIND TUNNEL TEST 422 RUN INDEX

0.050 SCALE 0.03 MODEL 15 by 20 FOOT TEST SECTION
Orbiter

| RUN NO | MODEL CONDITIONS: CONFIGURATION | α RANGE (DEG) | ψ RANGE (DEG) | TUNNEL CONDITIONS: q (PSF) | $q_{SET}$ (IN-$H_2O$) | TEMP (°F) | BARO PRESS (IN-Hg) | DATA RECORDED: INT. BAL. | Press. | CORRECTIONS: STATIC TARE | | | | REMARKS | ENGR | DATE 1973 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | $W_2$ $B_1$ $V_1$ $\delta_e^0$ | 0/28 | 0 | 6.60 | 30.86 | 101 | 29.41 | ✓ | | 1 | | | | Transition strips on model for all data runs | RHO | 4/26 |
| 2 | | 0 | +6/-6 | | | 105 | 29.40 | | | — | | | | | | |
| 3 | | 4 | | | | 107 | | | | — | | | | | | |
| 4 | | 10 | | | | | | | | — | | | | | | |
| 5 | | 16 | | | | | | | | — | | | | | | |
| 6 | | 20 | | | | | | | | — | | | | | | |
| 7 | $\delta_e^{-10}$ | 0/28 | 0 | | | 87 | | | | 1 | | | | | | |
| 8 | $\delta_e^{+10}$ | | | | | 88 | | | | 1 | | | | | | |
| 9 | $H_{1F}^{1,0}$ $\delta_e^0$ | | | | | 86 | 29.42 | | | 9 | | | | Tape loose<br>No trip strip on horizontal tail | | |
| 10 | | | | | | 82 | 29.68 | | | 9 | | | | Retaped H.T. fairings with aluminum tape. Put grit on H.T. | | 4/27 |
| 11 | | 0 | +6/-6 | | | 85 | | | | — | | | | | | |
| 12 | | 4 | | | | 87 | | | | — | | | | | | |
| 13 | | 10 | | | | 87 | | | | — | | | | | | |
| 14 | | 16 | | | | 94 | | | | — | | | | | | |
| 15 | | 20 | | | | 97 | | | | — | | | | | | |
| 16 | $\delta_e^{-10}$ | 0/28 | 0 | | | 91 | 29.67 | | | 9 | | | | | | |
| 17 | $\delta_e^{+10}$ | | | | | 88 | | | | | | | | | | |
| 18 | $H_{1F}^{1,10}$ | | | | | 87 | | | | | | | | | | |
| 19 | $\delta_e^{-10}$ | | | | | 85 | | | | | | | | | | |
| 20 | $\delta_e^0$ | | | | | 85 | 29.66 | | | | | | | | | |
| 21 | $H_{1F}^{1,-10}$ | | | | | 85 | 29.66 | | | | | | | | | |
| 22 | $\delta_e^{-10}$ | | | | | 85 | 29.64 | | | | | | | | | |
| 23 | $\delta_e^{+10}$ | | | | | 85 | 29.64 | | | | | | | | | |
| 24 | $H_{2F}^{1,0}$ | | | | | 84 | 29.62 | | | 24 | | | | | | |
| 25 | $\delta_e^{-10}$ | | | | | 84 | 29.62 | | | 24 | | | | | | |

*Indicates static tare taken

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VOUGHT AERONAUTICS

LOW SPEED WIND TUNNEL TEST 422 RUN INDEX

0.050 SCALE 0598 MODEL 15 by 20 FOOT TEST SECTION

Orbiter

REPORT NO 2-59730/3N-5608

PAGE NO. 34

| RUN NO | MODEL CONDITIONS: CONFIGURATION | α RANGE (DEG) | ψ RANGE (DEG) | TUNNEL CONDITIONS: q (PSF) | $q_{SET}$ (IN-$H_2O$) | TEMP (°F) | BARO PRESS (IN-Hg) | DATA RECORDED: INT. BAL. | Press | CORRECTIONS: STATIC TARE | | | | REMARKS | ENGR | DATE 1973 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | $W_2$ $B_1$ $V_1$ $H_{2S}^{1,0}$ $\delta_e^0$ | 0/28 | 0 | 6.60 | 20.86 | 86 | 29.60 | ✓ | | 24 | | | | | RHO | 4/27 |
| 27 | | 0 | +6/-6 | | | 89 | | | | — | | | | | | |
| 28 | | 4 | | | | 90 | | | | — | | | | | | |
| 29 | | 10 | | | | 90 | | | | — | | | | | | |
| 30 | | 16 | | | | 88 | | | | — | | | | | | |
| 31 | | 20 | | | | 88 | | | | — | | | | | | |
| 32 | $H_{2F}^{1,+10}$ | 0/28 | 0 | | | 88 | | | | 24 | | | | | | |
| 33 | $\delta_e^{-10}$ | | | | | 88 | | | | 24 | | | | | | |
| 34 | $\delta_e^{+10}$ | | | | | 90 | 29.57 | | | 24 | | | | | | |
| *35 | $H_{2F}^{2,10}$ $\delta_e^0$ | | | | | 90 | 29.57 | | | 35 | | | | | | |
| 36 | | 0 | +6/-6 | | | 93 | 29.34 | | | — | | | | | | 4/30 |
| 37 | | 10 | | | | 93 | 29.34 | | | — | | | | | | |
| 38 | | 20 | | | | 93 | 29.34 | | | — | | | | | | |
| 39 | $H_{1F}^{2,0}$ | 0 | | | | 95 | 29.32 | | | — | | | | | | |
| 40 | | 10 | | | | 95 | | | | — | | | | | | |
| 41 | | 20 | | | | 95 | | | | — | | | | | | |
| *42 | | 0/28 | 0 | | | 95 | | | | 42 | | | | | | |
| *43 | Horiz. Tail (F) Fairings On | | | | | 95 | | | | 43 | | | | | | |
| *44 | $SC_1$ | | | | | 90 | 29.33 | | | 44 | | | | | | |
| 45 | | 0 | +6/-6 | | | 92 | | | | — | | | | | | |
| 46 | | 10 | | | | 92 | | | | — | | | | | | |
| 47 | | 20 | | | | 92 | | | | — | | | | | | |
| 48 | $\delta_e^{+10}$ | 0/28 | 0 | | | 92 | | | | 44 | | | | | | |
| 49 | $\delta_e^{-10}$ | | | | | 90 | | | | | | | | | | |
| 50 | $SC_2$ $\delta_e^0$ | | | | | 94 | | | | | | | | | | |

*Indicates static tare taken

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VOUGHT AERONAUTICS

REPORT NO 2-59730/3H-3698
PAGE NO. 35

LOW SPEED WIND TUNNEL TEST 422 RUN INDEX

0.050 SCALE 0899 MODEL 15 by 20 FOOT TEST SECTION

Orbiter

| MODEL CONDITIONS: CONFIGURATION | α RANGE (DEG) | ψ RANGE (DEG) | TUNNEL CONDITIONS: q (PSF) | $q_{SET}$ (IN-$H_2O$) | TEMP (°F) | BARO PRESS (IN-Hg) | DATA RECORDED: INT. BAL. | Press. | CORRECTIONS: STATIC TARE | | | | REMARKS | ENGR | DATE 1973 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $W_2$ $B_1$ $V_1$ $SC_2$ $\delta_e^0$ | 0 | +6/-6 | 6.60 | 20.86 | 92 | 29.33 | ✓ | | — | | | | | RHO | 4/30 |
| | 10 | | | | | | | | — | | | | | | |
| | 20 | | | | | | | | — | | | | | | |
| $SC_3$ | 0 | | | | | | | | — | | | | | | |
| | 10 | | | | | | | | — | | | | | | |
| | 20 | | | | | | | | — | | | | | | |
| | 0/28 | 0 | | | | | | | 44 | | | | | | |
| $\delta_e^{+10}$ | | | | | | | | | 44 | | | | | | |
| $\delta_e^{-10}$ | | | | | | | | | 44 | | | | | | |
| $GC_1$ $\delta_e^0$ | | | | | 91 | 29.29 | | | 60 | | | | | | |
| $GC_3$ | | | | | | 29.29 | | | 61 | | | | | | |
| $GC_2$ | | | | | | 29.28 | | | 62 | | | | | JBV | |
| | 0 | +6/-6 | | | | | | | — | | | | | | |
| | 10 | | | | 94 | | | | — | | | | | | |
| | 20 | | | | 96 | | | | — | | | | | | |
| $\delta_e^{+10}$ | 0/28 | 0 | | | 95 | | | | 62 | | | | | | |
| $\delta_e^{-10}$ | | | | | 95 | 29.26 | | | 62 | | | | | | |
| $\delta_e^0$ | | | | | 94 | 29.24 | | | 001 | | | | | | |
| $H_{2F}^{1,-10}$ | | | | | 92 | | | | 24 | | | | | | |
| $\delta_e^{-10}$ | | | | | 94 | | | | | | | | | | |
| $\delta_e^{+10}$ | | | | | 94 | 29.22 | | | | | | | | | |
| $W_1$ $B_1$ $V_1$ $\delta_e^0$ | | | | | 90 | 29.26 | | | 72 | | | | | | |
| $H_{2F}^{1,+10}$ | | | | | 90 | 29.24 | | | | | | | | RHO | 5/1 |
| $H_{2F}^{1,+10}$ | | | | | 90 | 29.24 | | | | | | | | | |
| --- | | | | | 102 | 29.24 | | | 75 | | | | | JBV | |

*Indicates static tare taken

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VOUGHT AERONAUTICS

LOW SPEED WIND TUNNEL TEST 422 RUN INDEX

0.050 SCALE 0899 MODEL 15 by 20 FOOT TEST SECTION

Orbiter

REPORT NO. 2-59730/3R-5698

PAGE NO. 36

| RUN NO | MODEL CONDITIONS: CONFIGURATION | α RANGE (DEG) | ψ RANGE (DEG) | TUNNEL CONDITIONS: q (PSF) | $q_{SET}$ (IN-$H_2O$) | TEMP (°F) | BARO PRESS (IN-Hg) | DATA RECORDED: INT. BAL. | Press. | CORRECTIONS: STATIC TARE | | | | REMARKS | ENGR | DATE 1973 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76 | $W_1$ $B_1$ $V_1$ $\delta_e^0$ | 0 | +6/-6 | 6.60 | 20.86 | 102 | 29.24 | ✓ | | — | | | | | JBV | 5/1 |
| 77 | | 10 | | | | 104 | | | | — | | | | | | |
| 78 | | 20 | | | | 106 | | | | — | | | | | | |
| 79 | $\delta_e^{-10}$ | 0/28 | 0 | | | 104 | | | | 75 | | | | | | |
| 80 | $\delta_e^{+10}$ | | | | | 104 | 29.26 | | | 75 | | | | | | |
| 81 | $GC_2$ | | | | | 102 | | | | 81 | | | | | | |
| 82 | $\delta_e^{-10}$ | | | | | 102 | | | | 81 | | | | | | |
| 83 | $\delta_e^0$ | | | | | 103 | 29.28 | | | 81 | | | | | | |
| 84 | | 0 | +6/-6 | | | 102 | | | | — | | | | | | |
| 85 | | 10 | | | | 103 | | | | — | | | | | | |
| 86 | | 20 | | | | 105 | | | | — | | | | | | |
| 87 | $GC_3$ | 0/28 | 0 | | | 101 | 29.30 | | | 87 | | | | | | |
| 88 | $GC_1$ | | | | | 99 | 29.32 | | | 88 | | | | | | |
| 89 | ---- $GC_2$ | | | | | 90 | 29.36 | | | 89 | | | | | | |
| 90 | | 0 | +6/-6 | | | 90 | | | | — | | | | | | |
| 91 | | 10 | | | | 92 | | | | — | | | | | | |
| 92 | | 20 | | | | 92 | | | | — | | | | | | |
| 93 | ----- | 0 | | | | 96 | | | | — | | | | | | |
| 94 | | 10 | | | | 97 | | | | — | | | | | | |
| 95 | | 20 | | | | 99 | | | | — | | | | | | |
| 96 | | 0/28 | 0 | | | 100 | | | | 96 | | | | | | |
| 97 | $W_2$ $B_1$ $V_1$ $\delta_e^0$ | 0/28 | 0 | | | 80 | 29.65 | | | 97 | | | | | RHO | 5/2 |
| 98 | $SC_1$ | 16 | +6/-6 | | | 80 | | | | — | | | | | | |
| 99 | $SC_2$ $\delta_e^{+10}$ | 0/28 | 0 | | | 94 | | | | 99 | | | | | | |
| 00 | $\delta_e^{-10}$ | 0/28 | 0 | | | 94 | | | | 99 | | | | | | |

*Indicates static tare taken

LOW SPEED WIND TUNNEL TEST 422 RUN INDEX

0.050 SCALE 0693 MODEL 15 by 20 FOOT TEST SECTION
Orbiter

| RUN NO | MODEL CONDITIONS: CONFIGURATION | α RANGE (DEG) | ψ RANGE (DEG) | TUNNEL CONDITIONS: q (PSF) | $q_{REF}$ (IN-H2O) | TEMP (°F) | BARO PRESS (IN-Hg) | DATA RECORDED: INT. BAL. | PROBE | CORRECTIONS: STATIC TARE | | | REMARKS | ENGR | DATE 1973 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | $V_2$ $B_1$ $V_1$ $SC_2$ $\delta^0_e$ | 0/28 | -2 | 6.60 | 20.86 | 94 | 29.65 | ✓ | | 99 | | | | RHO | 5/2 |
| 102 | | 16 | +6/-6 | | | | | | | — | | | | | |
| 103 | $OC_2$ | 16 | +6/-6 | | | | 29.62 | | | — | | | | | |

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VIII. DATA PRESENTATION(cont'd)

## TABULATED DATA

### Column Heading Notation

| | |
|---|---|
| ALPHA | Model geometric angle of attack, degrees |
| BETA | Model geometric sideslip angle, degrees |
| CA | Axial force coefficient, axial force/qS |
| CD | Drag coefficient, drag/qS |
| CL | Lift coefficient, lift/qS |
| CM | Pitching moment coefficient, pitching moment/qS$\bar{c}$ |
| CN | Normal force coefficient, normal force/qS |
| CONF | Model configuration |
| CRM | Rolling moment coefficient, rolling moment/qSb |
| CY | Side force coefficient, side force/qS |
| CYM | Yawing moment coefficient, yawing moment/qSb |
| L/D | Ratio of lift to drag |
| MACH | Freestream Mach Number |
| PO | Ambient static pressure, pounds per square inch absolute |
| PT | Data point number |
| QPSF | Test dynamic pressure corrected for blockage and compressibility, pounds per square foot |
| RN/FT | Reynolds number per foot |
| TEMP | Test section temperature, degrees Fahrenheit |
| VEL-FPS | Test section freestream velocity based on corrected q, feet per second |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 1

TEMP = 101.
RN/FTX10-6= 0.442645 VEL-FPS= 76.029

PO= 14.4450
MACH= 0.0680

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0175 | -0.0083 | -0.0017 | 0.0030 | 0.7269 |
| 2 | 2.01 | -0.00 | 0.1191 | 0.0468 | -0.0602 | -0.0031 | -0.0016 | 0.0018 | 2.5439 |
| 3 | 4.03 | -0.00 | 0.2252 | 0.0424 | -0.1035 | -0.0034 | -0.0016 | 0.0019 | 5.3085 |
| 4 | 5.86 | -0.00 | 0.3214 | 0.0505 | -0.1459 | 0.0016 | -0.0014 | 0.0007 | 6.3579 |
| 5 | 7.99 | -0.00 | 0.4354 | 0.0815 | -0.1994 | 0.0012 | -0.0012 | 0.0008 | 5.3407 |
| 6 | 10.01 | -0.00 | 0.5465 | 0.1149 | -0.2485 | -0.0018 | -0.0017 | 0.0017 | 4.7544 |
| 7 | 12.01 | -0.00 | 0.6503 | 0.1549 | -0.2958 | -0.0020 | -0.0008 | 0.0021 | 4.1954 |
| 8 | 14.00 | -0.00 | 0.7530 | 0.2022 | -0.3445 | -0.0024 | -0.0011 | 0.0018 | 3.7226 |
| 9 | 16.03 | -0.00 | 0.8602 | 0.2622 | -0.4028 | -0.0055 | 0.0011 | 0.0019 | 3.2795 |
| 10 | 18.01 | -0.00 | 0.9974 | 0.3327 | -0.4708 | -0.0032 | 0.0018 | 0.0016 | 2.9974 |
| 11 | 20.10 | -0.00 | 1.1155 | 0.4045 | -0.5252 | -0.0036 | 0.0029 | 0.0023 | 2.7572 |
| 12 | 22.03 | -0.00 | 1.1312 | 0.4539 | -0.5163 | -0.0008 | 0.0000 | 0.0028 | 2.4920 |
| 13 | 23.97 | -0.00 | 1.0867 | 0.4919 | -0.4844 | -0.0111 | 0.0064 | 0.0007 | 2.2092 |
| 14 | 25.97 | -0.00 | 1.0170 | 0.5194 | -0.4479 | 0.0029 | 0.0061 | -0.0028 | 1.9577 |
| 15 | 28.01 | -0.00 | 0.9947 | 0.5641 | -0.4395 | -0.0025 | 0.0025 | 0.0006 | 1.7632 |
| 16 | 0.00 | 0.00 | 0.0375 | 0.0353 | -0.0230 | -0.0138 | -0.0016 | 0.0032 | 1.0613 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 2

TEMP = 105. PO= 14.4401
RN/FTX10-6= 0.438609 VEL-FPS= 76.306 MACH= 0.0682

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0202 | -0.0001 | -0.0018 | 0.0006 | 0.9429 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0281 | -0.0296 | 0.0980 | 0.0029 | -0.0237 | 1.3785 |
| 3 | 0.00 | -4.00 | 0.0323 | 0.0305 | -0.0231 | 0.0571 | 0.0016 | -0.0148 | 1.0594 |
| 4 | 0.00 | -2.00 | 0.0323 | 0.0305 | -0.0202 | 0.0298 | -0.0003 | -0.0079 | 1.0581 |
| 5 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0211 | -0.0029 | -0.0021 | 0.0007 | 0.9408 |
| 6 | -0.00 | 1.99 | 0.0351 | 0.0307 | -0.0231 | -0.0384 | -0.0033 | 0.0094 | 1.1447 |
| 7 | -0.00 | 3.99 | 0.0348 | 0.0284 | -0.0258 | -0.0685 | -0.0055 | 0.0175 | 1.2249 |
| 8 | -0.00 | 5.99 | 0.0432 | 0.0262 | -0.0323 | -0.0987 | -0.0067 | 0.0244 | 1.6476 |
| [illegible] | 0.00 | 0.00 | 0.0342 | 0.0306 | -0.0212 | -0.0110 | -0.0010 | 0.0020 | 1.1195 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 3

TEMP = 105.
RN/FTX10-6= 0.438437 VEL-FPS= 76.336

PO= 14.4401
MACH= 0.0683

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2248 | 0.0330 | -0.1031 | -0.0008 | -0.0021 | 0.0003 | 6.8096 |
| 2 | 4.03 | -6.00 | 0.2363 | 0.0290 | -0.1115 | 0.0976 | 0.0039 | -0.0251 | 8.1488 |
| 3 | 4.03 | -4.00 | 0.2338 | 0.0335 | -0.1072 | 0.0648 | 0.0023 | -0.0168 | 6.9716 |
| 4 | 4.03 | -2.00 | 0.2315 | 0.0334 | -0.1041 | 0.0266 | 0.0009 | -0.0079 | 6.9277 |
| 5 | 4.03 | -0.00 | 0.2335 | 0.0336 | -0.1047 | -0.0089 | -0.0015 | 0.0021 | 6.9417 |
| 6 | 4.02 | 1.99 | 0.2279 | 0.0333 | -0.1047 | -0.0336 | -0.0036 | 0.0096 | 6.8417 |
| 7 | 4.02 | 3.99 | 0.2332 | 0.0314 | -0.1087 | -0.0665 | -0.0056 | 0.0174 | 7.4167 |
| [illegible] | 4.02 | 5.99 | 0.2373 | 0.0295 | -0.1149 | -0.0994 | -0.0076 | 0.0251 | 8.0392 |
| [illegible] | 4.03 | -0.00 | 0.2290 | 0.0356 | -0.1040 | -0.0062 | -0.0016 | 0.0015 | 6.4212 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 4

TEMP = 107.
RN/FTX10-6= 0.436587 VEL-FPS= 76.449

PO= 14.4401
MACH= 0.0684

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5495 | 0.1107 | -0.2480 | -0.0018 | -0.0015 | 0.0005 | 4.9633 |
| 2 | 10.01 | -6.00 | 0.5549 | 0.1067 | -0.2550 | 0.0994 | 0.0044 | -0.0259 | 5.1978 |
| 3 | 10.01 | -4.00 | 0.5556 | 0.1092 | -0.2509 | 0.0656 | 0.0019 | -0.0177 | 5.0839 |
| 4 | 10.01 | -2.00 | 0.5507 | 0.1108 | -0.2491 | 0.0255 | 0.0002 | -0.0078 | 4.9669 |
| 5 | 10.01 | -0.00 | 0.5495 | 0.1107 | -0.2480 | -0.0017 | -0.0012 | 0.0005 | 4.9634 |
| 6 | 10.01 | 1.99 | 0.5539 | 0.1092 | -0.2501 | -0.0374 | -0.0037 | 0.0104 | 5.0721 |
| 7 | 10.01 | 3.99 | 0.5529 | 0.1067 | -0.2522 | -0.0703 | -0.0055 | 0.0185 | 5.1793 |
| 8 | 10.01 | 5.99 | 0.5594 | 0.1056 | -0.2586 | -0.1005 | -0.0077 | 0.0249 | 5.2946 |
| 9 | 10.01 | -0.00 | 0.5526 | 0.1112 | -0.2497 | -0.0018 | -0.0015 | 0.0005 | 4.9663 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE .0
QPSF = 6.60 RUN NO. 5

TEMP = 107. PO= 14.4401
RN/FTX10-6= 0.436634 VEL-FPS= 76.441 MACH= 0.0683

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8725 | 0.2585 | -0.4062 | -0.0028 | 0.0005 | 0.0014 | 3.3748 |
| 2 | 16.03 | -6.00 | 0.8687 | 0.2499 | -0.4066 | 0.1064 | -0.0004 | -0.0251 | 3.4755 |
| 3 | 16.03 | -4.00 | 0.8674 | 0.2544 | -0.4035 | 0.0764 | 0.0000 | -0.0180 | 3.4087 |
| 4 | 16.03 | -2.00 | 0.8734 | 0.2563 | -0.4048 | 0.0299 | -0.0000 | -0.0085 | 3.4079 |
| 5 | 16.03 | -0.00 | 0.8767 | 0.2597 | -0.4079 | -0.0055 | 0.0009 | 0.0014 | 3.3751 |
| 6 | 16.03 | 1.99 | 0.8744 | 0.2591 | -0.4081 | -0.0384 | 0.0007 | 0.0110 | 3.3739 |
| 7 | 16.03 | 3.99 | 0.8795 | 0.2558 | -0.4134 | -0.0739 | 0.0022 | 0.0191 | 3.4372 |
| 8 | 16.03 | 5.99 | 0.8797 | 0.2536 | -0.4183 | -0.1097 | 0.0002 | 0.0272 | 3.4663 |
| 9 | 16.03 | -0.00 | 0.8697 | 0.2528 | -0.4034 | -0.0056 | 0.0001 | 0.0022 | 3.4396 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 6

TEMP = 107.
RN/FTX10-6= 0.436650 VEL-FPS= 76.438

PO= 14.4401
MACH= 0.0683

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1179 | 0.3979 | -0.5235 | -0.0117 | 0.0035 | 0.0018 | 2.8090 |
| 2 | 20.10 | -6.00 | 1.1234 | 0.3899 | -0.5320 | 0.1081 | -0.0042 | -0.0247 | 2.8811 |
| 3 | 20.10 | -4.00 | 1.1216 | 0.3917 | -0.5273 | 0.0754 | -0.0038 | -0.0174 | 2.8630 |
| 4 | 20.10 | -2.00 | 1.1209 | 0.3965 | -0.5260 | 0.0372 | -0.0011 | -0.0090 | 2.8265 |
| 5 | 20.10 | -0.00 | 1.1159 | 0.3972 | -0.5220 | -0.0144 | 0.0041 | 0.0022 | 2.8093 |
| 6 | 20.09 | 1.99 | 1.1118 | 0.3957 | -0.5188 | -0.0471 | 0.0063 | 0.0106 | 2.8094 |
| 7 | 20.09 | 3.99 | 1.1121 | 0.3909 | -0.5199 | -0.0854 | 0.0078 | 0.0201 | 2.8446 |
| [illegible] | 20.09 | 5.99 | 1.1225 | 0.3924 | -0.5313 | -0.1183 | 0.0092 | 0.0265 | 2.8604 |
| [illegible] | 20.10 | -0.00 | 1.1210 | 0.3991 | -0.5247 | -0.0090 | 0.0038 | 0.0016 | 2.8088 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 7

TEMP = 87.
RN/FTX10-6= 0.457119 VEL-FPS= 75.076

PO= 14.4401
MACH= 0.0671

CONF= W2B1V1E(-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2259 | 0.0454 | 0.1646 | -0.0093 | -0.0003 | 0.0022 | -4.9759 |
| 2 | 2.01 | -0.00 | -0.1253 | 0.0365 | 0.1311 | -0.0067 | -0.0009 | 0.0016 | -3.4300 |
| 3 | 4.03 | -0.00 | -0.0198 | 0.0258 | 0.0887 | -0.0071 | -0.0008 | 0.0017 | -0.7677 |
| 4 | 5.86 | -0.00 | 0.0776 | 0.0308 | 0.0476 | -0.0073 | -0.0006 | 0.0023 | 2.5168 |
| 5 | 7.99 | -0.00 | 0.1830 | 0.0442 | 0.0020 | -0.0022 | -0.0005 | 0.0005 | 4.1334 |
| 6 | 10.01 | -0.00 | 0.3022 | 0.0676 | -0.0515 | -0.0053 | -0.0008 | 0.0018 | 4.4657 |
| 7 | 12.01 | -0.00 | 0.4135 | 0.0979 | -0.1024 | -0.0002 | -0.0008 | 0.0018 | 4.2214 |
| 8 | 14.00 | -0.00 | 0.5230 | 0.1359 | -0.1532 | -0.0115 | -0.0000 | 0.0026 | 3.8466 |
| 9 | 16.03 | -0.00 | 0.6376 | 0.1868 | -0.2113 | -0.0064 | 0.0012 | 0.0021 | 3.4129 |
| 10 | 18.01 | -0.00 | 0.7564 | 0.2451 | -0.2685 | -0.0013 | 0.0014 | 0.0013 | 3.0858 |
| 11 | 20.10 | -0.00 | 0.8856 | 0.3086 | -0.3299 | 0.0008 | 0.0009 | 0.0009 | 2.8692 |
| 12 | 22.03 | -0.00 | 0.9715 | 0.3702 | -0.3679 | -0.0047 | 0.0021 | 0.0017 | 2.6242 |
| 13 | 23.97 | -0.00 | 0.9642 | 0.4131 | -0.3553 | -0.0017 | 0.0041 | 0.0000 | 2.3342 |
| 14 | 25.97 | -0.00 | 0.9330 | 0.4488 | -0.3392 | 0.0038 | 0.0030 | -0.0022 | 2.0786 |
| 15 | 28.01 | -0.00 | 0.8863 | 0.4814 | -0.3218 | 0.0064 | -0.0026 | 0.0006 | 1.8410 |
| 16 | 0.00 | 0.00 | -0.2092 | 0.0336 | 0.1689 | -0.0092 | -0.0006 | 0.0021 | -6.2227 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60 RUN NO. 8

TEMP = 88. PO= 14.4401
RN/FTX10-6= 0.456026 VEL-FPS= 75.150 MACH= 0.0672

CONF= W2B1V1E(10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2767 | 0.0416 | -0.2128 | -0.0020 | -0.0022 | 0.0015 | 6.6395 |
| 2 | 2.01 | -0.00 | 0.3709 | 0.0620 | -0.2552 | 0.0031 | -0.0028 | -0.0001 | 5.9754 |
| 3 | 4.03 | -0.00 | 0.4795 | 0.0667 | -0.3024 | 0.0000 | -0.0021 | 0.0000 | 7.1788 |
| 4 | 5.86 | -0.00 | 0.5781 | 0.0811 | -0.3477 | -0.0002 | -0.0024 | 0.0002 | 7.1286 |
| 5 | 7.99 | -0.00 | 0.6986 | 0.1274 | -0.4068 | 0.0020 | -0.0021 | -0.0002 | 5.4814 |
| 6 | 10.01 | -0.00 | 0.7942 | 0.1676 | -0.4483 | 0.0017 | -0.0020 | 0.0003 | 4.7384 |
| 7 | 12.01 | -0.00 | 0.8773 | 0.2168 | -0.4841 | 0.0015 | -0.0011 | 0.0008 | 4.0452 |
| 8 | 14.00 | -0.00 | 0.9746 | 0.2712 | -0.5312 | 0.0067 | -0.0000 | -0.0001 | 3.5928 |
| 9 | 16.03 | -0.00 | 1.0967 | 0.3442 | -0.5997 | 0.0062 | 0.0009 | -0.0003 | 3.1862 |
| 10 | 18.01 | -0.00 | 1.2188 | 0.4187 | -0.6583 | 0.0031 | 0.0019 | 0.0000 | 2.9103 |
| 11 | 20.10 | -0.00 | 1.1949 | 0.6614 | -0.6373 | 0.0040 | 0.0041 | -0.0004 | 1.8065 |
| 12 | 22.03 | -0.00 | 1.1999 | 0.5053 | -0.6063 | -0.0015 | 0.0033 | 0.0010 | 2.3744 |
| 13 | 23.97 | -0.00 | 1.1645 | 0.5582 | -0.5847 | -0.0037 | 0.0077 | -0.0010 | 2.0860 |
| 14 | 25.97 | -0.00 | 1.1148 | 0.5917 | -0.5575 | 0.0098 | 0.0013 | -0.0041 | 1.8840 |
| 15 | 28.01 | -0.00 | 1.0502 | 0.6210 | -0.5220 | -0.0059 | 0.0055 | -0.0023 | 1.6910 |
| 16 | 0.00 | 0.00 | 0.2788 | 0.0510 | -0.2161 | -0.0047 | -0.0024 | 0.0010 | 5.4577 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 9

TEMP = 86. PO= 14.4499
RN/FTX10-6= 0.458315 VEL-FPS= 74.985 MACH= 0.0670

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0118 | 0.0304 | -0.0079 | 0.0054 | -0.0012 | 0.0003 | 0.3873 |
| 2 | 2.01 | -0.00 | 0.1121 | 0.0347 | -0.0537 | -0.0003 | -0.0004 | 0.0006 | 3.2226 |
| 3 | 4.03 | -0.00 | 0.2200 | 0.0397 | -0.1026 | -0.0007 | -0.0007 | 0.0007 | 5.5407 |
| 4 | 5.86 | -0.00 | 0.3218 | 0.0459 | -0.1476 | 0.0016 | -0.0012 | -0.0003 | 7.0099 |
| 5 | 7.99 | -0.00 | 0.4405 | 0.0680 | -0.2015 | 0.0039 | -0.0008 | 0.0001 | 6.4715 |
| 6 | 10.01 | -0.00 | 0.5465 | 0.1078 | -0.2510 | 0.0008 | -0.0013 | 0.0004 | 5.0678 |
| 7 | 12.01 | -0.00 | 0.6449 | 0.1489 | -0.2937 | 0.0033 | -0.0008 | 0.0009 | 4.3301 |
| 8 | 14.00 | -0.00 | 0.7433 | 0.1925 | -0.3369 | 0.0004 | 0.0010 | 0.0011 | 3.8607 |
| 9 | 16.03 | -0.00 | 0.8418 | 0.2495 | -0.3851 | 0.0028 | 0.0025 | 0.0000 | 3.3739 |
| 10 | 18.01 | -0.00 | 0.9610 | 0.3132 | -0.4428 | 0.0105 | 0.0006 | -0.0001 | 3.0677 |
| 11 | 20.10 | -0.00 | 1.0668 | 0.3789 | -0.4882 | 0.0076 | 0.0025 | -0.0002 | 2.8154 |
| 12 | 22.03 | -0.00 | 1.0955 | 0.4316 | -0.4840 | 0.0023 | 0.0024 | 0.0010 | 2.5363 |
| 13 | 23.97 | -0.00 | 1.0518 | 0.4632 | -0.4509 | 0.0001 | 0.0069 | -0.0017 | 2.2706 |
| 14 | 25.97 | -0.00 | 0.9972 | 0.5044 | -0.4254 | 0.0056 | 0.0001 | -0.0005 | 1.9768 |
| 15 | 28.01 | -0.00 | 0.9338 | 0.5286 | -0.3926 | 0.0114 | 0.0014 | -0.0028 | 1.7665 |
| 16 | 0.00 | 0.00 | 0.0215 | 0.0352 | -0.0125 | -0.0055 | -0.0011 | 0.0013 | 0.6103 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 10

TEMP = 82.
RN/FTX10-6= 0.464529 VEL-FPS= 74.403

PO= 14.5776
MACH= 0.0665

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0204 | 0.0352 | -0.0129 | 0.0053 | -0.0019 | -0.0001 | 0.5794 |
| 2 | 2.01 | -0.00 | 0.1153 | 0.0325 | -0.0562 | 0.0050 | -0.0012 | -0.0000 | 3.5417 |
| 3 | 4.03 | -0.00 | 0.2244 | 0.0377 | -0.1061 | 0.0019 | -0.0011 | 0.0006 | 5.9524 |
| 4 | 5.86 | -0.00 | 0.3276 | 0.0512 | -0.1533 | 0.0043 | -0.0011 | 0.0001 | 6.3919 |
| 5 | 7.99 | -0.00 | 0.4436 | 0.0685 | -0.2055 | 0.0066 | -0.0009 | -0.0004 | 6.4723 |
| 6 | 10.01 | -0.00 | 0.5532 | 0.1066 | -0.2551 | 0.0063 | -0.0007 | 0.0001 | 5.1865 |
| 7 | 12.01 | -0.00 | 0.6507 | 0.1526 | -0.2989 | 0.0006 | -0.0000 | 0.0013 | 4.2638 |
| 8 | 14.00 | -0.00 | 0.7491 | 0.1915 | -0.3400 | 0.0058 | 0.0006 | -0.0000 | 3.9101 |
| 9 | 16.03 | -0.00 | 0.8579 | 0.2517 | -0.3951 | 0.0055 | 0.0021 | 0.0000 | 3.4074 |
| 10 | 18.01 | -0.00 | 0.9668 | 0.3127 | -0.4459 | 0.0077 | -0.0002 | 0.0002 | 3.0915 |
| 11 | 20.10 | -0.00 | 1.0751 | 0.3845 | -0.4937 | 0.0047 | 0.0007 | 0.0005 | 2.7960 |
| 12 | 22.03 | -0.00 | 1.1064 | 0.4360 | -0.4929 | -0.0004 | 0.0029 | 0.0003 | 2.5372 |
| 13 | 23.97 | -0.00 | 1.0224 | 0.4551 | -0.4357 | -0.0051 | 0.0073 | -0.0011 | 2.2463 |
| 14 | 25.97 | -0.00 | 0.9944 | 0.5030 | -0.4238 | 0.0058 | 0.0055 | -0.0046 | 1.9768 |
| 15 | 28.01 | -0.00 | 0.9568 | 0.5356 | -0.4064 | 0.0088 | 0.0054 | -0.0061 | 1.7862 |
| 16 | 0.00 | 0.00 | 0.0269 | 0.0282 | -0.0141 | -0.0055 | -0.0014 | 0.0013 | 0.9539 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 11

TEMP = 85.
RN/FTX10-6= 0.461299 VEL-FPS= 74.606

PO= 14.5776
MACH= 0.0667

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0192 | 0.0422 | -0.0135 | -0.0000 | -0.0011 | 0.0016 | 0.4560 |
| 2 | 0.00 | -6.00 | 0.0303 | 0.0374 | -0.0232 | 0.1008 | 0.0026 | -0.0232 | 0.8093 |
| 3 | 0.00 | -4.00 | 0.0248 | 0.0398 | -0.0187 | 0.0708 | 0.0014 | -0.0163 | 0.6250 |
| 4 | 0.00 | -2.00 | 0.0194 | 0.0422 | -0.0136 | 0.0272 | -0.0005 | -0.0062 | 0.4599 |
| 5 | 0.00 | 0.00 | 0.0214 | 0.0422 | -0.0146 | -0.0001 | -0.0018 | 0.0016 | 0.5067 |
| 6 | -0.00 | 1.99 | 0.0190 | 0.0423 | -0.0158 | -0.0329 | -0.0033 | 0.0092 | 0.4487 |
| 7 | -0.00 | 3.99 | 0.0219 | 0.0401 | -0.0196 | -0.0602 | -0.0046 | 0.0161 | 0.5463 |
| | -0.00 | 5.99 | 0.0293 | 0.0378 | -0.0247 | -0.0876 | -0.0062 | 0.0235 | 0.7743 |
| | 0.00 | 0.00 | 0.0214 | 0.0422 | -0.0146 | -0.0028 | -0.0021 | 0.0023 | 0.5062 |

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OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 12

PD= 14.5776

TEMP = 87.
RN/FTX10-6= 0.459156 VEL-FPS= 74.743 MACH= 0.0668

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2257 | 0.0354 | -0.1047 | -0.0035 | -0.0010 | 0.0008 | 6.3691 |
| 2 | 4.03 | -6.00 | 0.2356 | 0.0360 | -0.1149 | 0.1030 | 0.0035 | -0.0247 | 6.5423 |
| 3 | 4.03 | -4.00 | 0.2342 | 0.0406 | -0.1117 | 0.0729 | 0.0019 | -0.0170 | 5.7635 |
| 4 | 4.03 | -2.00 | 0.2279 | 0.0378 | -0.1069 | 0.0538 | -0.0003 | -0.0108 | 6.0208 |
| 5 | 4.03 | -0.00 | 0.2297 | 0.0404 | -0.1066 | 0.0046 | -0.0015 | 0.0000 | 5.6842 |
| 6 | 4.02 | 1.99 | 0.2307 | 0.0382 | -0.1084 | -0.0281 | -0.0031 | 0.0083 | 6.0363 |
| 7 | 4.02 | 3.99 | 0.2304 | 0.0383 | -0.1111 | -0.0583 | -0.0048 | 0.0154 | 6.0171 |
| [illegible] | 4.02 | 5.99 | 0.2347 | 0.0340 | -0.1158 | -0.1075 | -0.0061 | 0.0258 | 6.8937 |
| [illegible] | 4.03 | -0.00 | 0.2298 | 0.0381 | -0.1069 | -0.0035 | -0.0017 | 0.0009 | 6.0328 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 13

TEMP = 85.
RN/FTX10-6= 0.461283 VEL-FPS= 74.608

PO= 14.5776
MACH= 0.0667

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5535 | 0.1114 | -0.2554 | -0.0018 | -0.0015 | 0.0006 | 4.9644 |
| 2 | 10.01 | -6.00 | 0.5610 | 0.1079 | -0.2624 | 0.0966 | 0.0047 | -0.0242 | 5.1999 |
| 3 | 10.01 | -4.00 | 0.5573 | 0.1096 | -0.2585 | 0.0583 | 0.0024 | -0.0153 | 5.0812 |
| 4 | 10.01 | -2.00 | 0.5559 | 0.1118 | -0.2551 | 0.0364 | 0.0002 | -0.0087 | 4.9711 |
| 5 | 10.01 | -0.00 | 0.5556 | 0.1118 | -0.2550 | -0.0100 | -0.0007 | 0.0029 | 4.9667 |
| 6 | 10.01 | 1.99 | 0.5522 | 0.1113 | -0.2552 | -0.0374 | -0.0034 | 0.0098 | 4.9595 |
| 7 | 10.01 | 3.99 | 0.5533 | 0.1092 | -0.2584 | -0.0731 | -0.0046 | 0.0178 | 5.0637 |
| [illegible] | 10.01 | 5.99 | 0.5577 | 0.1077 | -0.2632 | -0.1033 | -0.0068 | 0.0259 | 5.1742 |
| [illegible] | 10.01 | -0.00 | 0.5535 | 0.1114 | -0.2544 | -0.0046 | -0.0017 | 0.0012 | 4.9646 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 14

PO= 14.5776

TEMP = 94.
RN/FTX10-6= 0.451753 VEL-FPS= 75.225 MACH= 0.0673

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8500 | 0.2519 | -0.3909 | -0.0026 | 0.0023 | 0.0002 | 3.3740 |
| 2 | 16.03 | -6.00 | 0.8522 | 0.2451 | -0.3965 | 0.1093 | 0.0010 | -0.0257 | 3.4769 |
| 3 | 16.03 | -4.00 | 0.8495 | 0.2467 | -0.3926 | 0.0793 | 0.0013 | -0.0191 | 3.4423 |
| 4 | 16.03 | -2.00 | 0.8491 | 0.2516 | -0.3914 | 0.0328 | 0.0005 | -0.0088 | 3.3745 |
| 5 | 16.03 | -0.00 | 0.8531 | 0.2528 | -0.3912 | -0.0027 | 0.0010 | 0.0006 | 3.3743 |
| 6 | 16.03 | 1.99 | 0.8497 | 0.2519 | -0.3918 | -0.0382 | 0.0007 | 0.0098 | 3.3727 |
| 7 | 16.03 | 3.99 | 0.8511 | 0.2500 | -0.3950 | -0.0684 | -0.0003 | 0.0175 | 3.4044 |
| 8 | 16.03 | 5.99 | 0.8575 | 0.2495 | -0.4028 | -0.1096 | -0.0007 | 0.0263 | 3.4359 |
| 9 | 16.03 | -0.00 | 0.8510 | 0.2522 | -0.3910 | 0.0000 | 0.0011 | -0.0000 | 3.3741 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 15

TEMP = 97.
RN/FTX10-6= 0.448607 VEL-FPS= 75.436

PO= 14.5776
MACH= 0.0674

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.0722 | 0.3859 | -0.4936 | -0.0088 | 0.0017 | 0.0018 | 2.7779 |
| 2 | 20.10 | -6.00 | 1.0796 | 0.3786 | -0.5046 | 0.1192 | -0.0059 | -0.0251 | 2.8514 |
| 3 | 20.10 | -4.00 | 1.0788 | 0.3808 | -0.4999 | 0.0729 | -0.0030 | -0.0165 | 2.8326 |
| 4 | 20.10 | -2.00 | 1.0702 | 0.3826 | -0.4924 | 0.0402 | -0.0015 | -0.0090 | 2.7967 |
| 5 | 20.10 | -0.00 | 1.0770 | 0.3852 | -0.4966 | 0.0047 | 0.0008 | -0.0000 | 2.7956 |
| 6 | 20.09 | 1.99 | 1.0776 | 0.3830 | -0.4960 | -0.0388 | 0.0054 | 0.0095 | 2.8135 |
| 7 | 20.09 | 3.99 | 1.0723 | 0.3811 | -0.4946 | -0.0879 | 0.0078 | 0.0190 | 2.8133 |
| 8 | 20.09 | 5.99 | 1.0798 | 0.3815 | -0.5025 | -0.1181 | 0.0079 | 0.0258 | 2.8301 |
| 9 | 20.10 | -0.00 | 1.0740 | 0.3841 | -0.4945 | -0.0061 | 0.0021 | 0.0016 | 2.7959 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 16

TEMP = 91.
RN/FTX10-6= 0.454766 VEL-FPS= 75.041

PO= 14.5727
MACH= 0.0671

CONF= W2B1V1E(-10)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2204 | 0.0289 | 0.1661 | -0.0011 | -0.0018 | 0.0008 | -7.6017 |
| 2 | 2.01 | -0.00 | -0.1187 | 0.0274 | 0.1225 | -0.0069 | -0.0012 | 0.0016 | -4.3227 |
| 3 | 4.03 | -0.00 | -0.0170 | 0.0261 | 0.0768 | -0.0072 | -0.0015 | 0.0018 | -0.6534 |
| 4 | 5.86 | -0.00 | 0.0824 | 0.0315 | 0.0318 | -0.0021 | -0.0012 | 0.0006 | 2.6159 |
| 5 | 7.99 | -0.00 | 0.1979 | 0.0418 | -0.0180 | 0.0029 | -0.0014 | 0.0000 | 4.7324 |
| 6 | 10.01 | -0.00 | 0.3137 | 0.0674 | -0.0691 | -0.0055 | -0.0008 | 0.0019 | 4.6482 |
| 7 | 12.01 | -0.00 | 0.4162 | 0.0986 | -0.1148 | -0.0031 | -0.0009 | 0.0014 | 4.2180 |
| 8 | 14.00 | -0.00 | 0.5237 | 0.1362 | -0.1622 | -0.0035 | -0.0011 | 0.0015 | 3.8441 |
| 9 | 16.03 | -0.00 | 0.6232 | 0.1778 | -0.2077 | 0.0044 | -0.0002 | -0.0000 | 3.5053 |
| 10 | 18.01 | -0.00 | 0.7437 | 0.2385 | -0.2650 | 0.0066 | -0.0013 | -0.0002 | 3.1180 |
| 11 | 20.10 | -0.00 | 0.8662 | 0.3015 | -0.3232 | 0.0090 | 0.0001 | -0.0008 | 2.8729 |
| 12 | 22.03 | -0.00 | 0.9437 | 0.3613 | -0.3556 | 0.0007 | 0.0018 | 0.0011 | 2.6114 |
| 13 | 23.97 | -0.00 | 0.9329 | 0.3938 | -0.3328 | -0.0015 | 0.0046 | 0.0003 | 2.3688 |
| 14 | 25.97 | -0.00 | 0.8802 | 0.4227 | -0.3031 | 0.0041 | 0.0020 | -0.0011 | 2.0820 |
| 15 | 28.01 | -0.00 | 0.8186 | 0.4423 | -0.2735 | 0.0125 | 0.0004 | -0.0032 | 1.8509 |
| 16 | 0.00 | 0.00 | -0.2085 | 0.0383 | 0.1612 | -0.0066 | -0.0017 | 0.0016 | -5.4298 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 17

TEMP = 88. PO= 14.5727
RN/FTX10-6= 0.457985 VEL-FPS= 74.828 MACH= 0.0669

CONF= N2B1V1E(+10)H1(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2469 | 0.0555 | -0.1896 | -0.0017 | -0.0024 | 0.0014 | 4.4483 |
| 2 | 2.01 | -0.00 | 0.3529 | 0.0636 | -0.2385 | -0.0021 | -0.0014 | 0.0005 | 5.5461 |
| 3 | 4.03 | -0.00 | 0.4588 | 0.0722 | -0.2876 | 0.0002 | -0.0018 | 0.0000 | 6.3510 |
| 4 | 5.86 | -0.00 | 0.5620 | 0.0911 | -0.3381 | -0.0001 | -0.0017 | 0.0001 | 6.1678 |
| 5 | 7.99 | -0.00 | 0.6889 | 0.1283 | -0.3973 | 0.0048 | -0.0018 | -0.0004 | 5.3673 |
| 6 | 10.01 | -0.00 | 0.7823 | 0.1677 | -0.4377 | 0.0073 | -0.0017 | 0.0006 | 4.6629 |
| 7 | 12.01 | -0.00 | 0.8630 | 0.2233 | -0.4727 | -0.0010 | -0.0007 | 0.0007 | 3.8647 |
| 8 | 14.00 | -0.00 | 0.9535 | 0.2730 | -0.5122 | 0.0070 | 0.0010 | 0.0000 | 3.4921 |
| 9 | 16.03 | -0.00 | 1.0592 | 0.3404 | -0.5662 | 0.0093 | 0.0020 | -0.0002 | 3.1114 |
| 10 | 18.01 | -0.00 | 1.1653 | 0.4108 | -0.6182 | 0.0116 | -0.0008 | 0.0005 | 2.8362 |
| 11 | 20.10 | -0.00 | 1.2133 | 0.4611 | -0.6219 | 0.0011 | 0.0059 | 0.0000 | 2.6306 |
| 12 | 22.03 | -0.00 | 1.1634 | 0.5054 | -0.5753 | 0.0041 | 0.0019 | 0.0013 | 2.3016 |
| 13 | 23.97 | -0.00 | 1.1277 | 0.5415 | -0.5518 | -0.0062 | 0.0079 | 0.0000 | 2.0823 |
| 14 | 25.97 | -0.00 | 1.0522 | 0.5738 | -0.5125 | 0.0022 | 0.0036 | -0.0020 | 1.8337 |
| 15 | 28.01 | -0.00 | 1.0162 | 0.6080 | -0.4938 | 0.0131 | -0.0013 | -0.0017 | 1.6714 |
| 16 | 0.00 | 0.00 | 0.2534 | 0.0555 | -0.1924 | -0.0017 | -0.0024 | 0.0009 | 4.5635 |

E

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 18

TEMP = 87. PO= 14.5727
RN/FTX10-6= 0.459050 VEL-FPS= 74.760 MACH= 0.0668

CONF= N281V1E(10)H1(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2902 | 0.0582 | -0.2312 | 0.0032 | -0.0022 | -0.0002 | 4.9843 |
| 2 | 2.01 | -0.00 | 0.3895 | 0.0699 | -0.2774 | 0.0029 | -0.0022 | -0.0000 | 5.5671 |
| 3 | 4.03 | -0.00 | 0.5004 | 0.0826 | -0.3298 | 0.0025 | -0.0028 | 0.0001 | 6.0571 |
| 4 | 5.86 | -0.00 | 0.6025 | 0.1003 | -0.3773 | -0.0033 | -0.0023 | 0.0003 | 6.0030 |
| 5 | 7.99 | -0.00 | 0.7243 | 0.1336 | -0.4354 | 0.0044 | -0.0022 | -0.0003 | 5.4175 |
| 6 | 10.01 | -0.00 | 0.8198 | 0.1795 | -0.4771 | 0.0015 | -0.0009 | 0.0007 | 4.5664 |
| 7 | 12.01 | -0.00 | 0.8999 | 0.2315 | -0.5124 | 0.0013 | -0.0002 | 0.0001 | 3.8868 |
| 8 | 14.00 | -0.00 | 0.9956 | 0.2864 | -0.5585 | 0.0010 | 0.0008 | 0.0004 | 3.4760 |
| 9 | 16.03 | -0.00 | 1.0992 | 0.3572 | -0.6136 | 0.0034 | 0.0009 | 0.0003 | 3.0769 |
| 10 | 18.01 | -0.00 | 1.2200 | 0.4341 | -0.6737 | 0.0056 | 0.0001 | -0.0000 | 2.8102 |
| 11 | 20.10 | -0.00 | 1.3014 | 0.5017 | -0.7012 | 0.0028 | -0.0000 | 0.0001 | 2.5940 |
| 12 | 22.03 | -0.00 | 1.2476 | 0.5377 | -0.6515 | -0.0020 | 0.0019 | 0.0011 | 2.3201 |
| 13 | 23.97 | -0.00 | 1.1719 | 0.5642 | -0.5990 | -0.0067 | 0.0072 | -0.0007 | 2.0769 |
| 14 | 25.97 | -0.00 | 1.0883 | 0.5891 | -0.5475 | -0.0061 | 0.0071 | -0.0004 | 1.8473 |
| 15 | 28.01 | -0.00 | 1.0342 | 0.6124 | -0.5100 | 0.0156 | -0.0027 | -0.0029 | 1.6886 |
| 16 | 0.00 | 0.00 | 0.2966 | 0.0559 | -0.2349 | -0.0049 | -0.0027 | 0.0011 | 5.3030 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 19

TEMP = 85.
RN/FTX10-6= 0.461225 VEL-FPS= 74.618

PO= 14.5727
MACH= 0.0667

CONF= W2B1V1E(-10)H1(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.1790 | 0.0433 | 0.1294 | -0.0014 | -0.0007 | 0.0004 | -4.1292 |
| 2 | 2.01 | -0.00 | -0.0812 | 0.0431 | 0.0861 | -0.0018 | -0.0013 | 0.0005 | -1.8820 |
| 3 | 4.03 | -0.00 | 0.0263 | 0.0436 | 0.0380 | 0.0032 | -0.0021 | -0.0005 | 0.6042 |
| 4 | 5.86 | -0.00 | 0.1220 | 0.0500 | -0.0044 | -0.0052 | -0.0012 | 0.0002 | 2.4395 |
| 5 | 7.99 | -0.00 | 0.2293 | 0.0536 | -0.0501 | 0.0053 | -0.0015 | -0.0005 | 4.2764 |
| 6 | 10.01 | -0.00 | 0.3474 | 0.0832 | -0.1034 | -0.0004 | -0.0014 | 0.0008 | 4.1723 |
| 7 | 12.01 | -0.00 | 0.4583 | 0.1199 | -0.1545 | 0.0019 | -0.0012 | 0.0002 | 3.8205 |
| 8 | 14.00 | -0.00 | 0.5666 | 0.1569 | -0.2019 | -0.0011 | -0.0013 | 0.0010 | 3.6193 |
| 9 | 16.03 | -0.00 | 0.6729 | 0.2046 | -0.2551 | 0.0094 | -0.0004 | -0.0006 | 3.2876 |
| 10 | 18.01 | -0.00 | 0.7986 | 0.2617 | -0.3158 | 0.0089 | -0.0002 | -0.0011 | 3.0508 |
| 11 | 20.10 | -0.00 | 0.9273 | 0.3293 | -0.3783 | 0.0113 | 0.0007 | -0.0010 | 2.8155 |
| 12 | 22.03 | -0.00 | 1.0129 | 0.3975 | -0.4144 | 0.0083 | 0.0008 | -0.0009 | 2.5482 |
| 13 | 23.97 | -0.00 | 1.0175 | 0.4372 | -0.4035 | 0.0086 | 0.0031 | -0.0015 | 2.3271 |
| 14 | 25.97 | -0.00 | 0.9684 | 0.4663 | -0.3669 | 0.0036 | 0.0033 | -0.0023 | 2.0767 |
| 15 | 28.01 | -0.00 | 0.8974 | 0.4819 | -0.3210 | 0.0041 | 0.0039 | -0.0034 | 1.8620 |
| 16 | 0.00 | 0.00 | -0.1704 | 0.0457 | 0.1254 | -0.0070 | -0.0016 | 0.0011 | -3.7255 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 20

TEMP = 85. PO= 14.5678
RN/FTX10-6= 0.461119 VEL-FPS= 74.635 MACH= 0.0667

CONF= W2B1V1E(0)H1(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0561 | 0.0355 | -0.0497 | -0.0004 | -0.0012 | 0.0012 | 1.5789 |
| 2 | 2.01 | -0.00 | 0.1562 | 0.0414 | -0.0950 | -0.0062 | -0.0013 | 0.0009 | 3.7724 |
| 3 | 4.03 | -0.00 | 0.2641 | 0.0455 | -0.1433 | -0.0011 | -0.0014 | 0.0003 | 5.7992 |
| 4 | 5.86 | -0.00 | 0.3652 | 0.0578 | -0.1899 | -0.0015 | -0.0014 | -0.0000 | 6.3145 |
| 5 | 7.99 | -0.00 | 0.4830 | 0.0768 | -0.2417 | 0.0008 | -0.0018 | -0.0000 | 6.2899 |
| 6 | 10.01 | -0.00 | 0.5897 | 0.1182 | -0.2931 | 0.0032 | -0.0013 | 0.0004 | 4.9876 |
| 7 | 12.01 | -0.00 | 0.6883 | 0.1633 | -0.3370 | 0.0056 | -0.0010 | 0.0003 | 4.2133 |
| [illegible] | 14.00 | -0.00 | 0.7909 | 0.2072 | -0.3818 | 0.0054 | 0.0002 | -0.0004 | 3.8166 |
| [illegible] | 16.03 | -0.00 | 0.9135 | 0.2731 | -0.4473 | 0.0076 | 0.0011 | -0.0007 | 3.3447 |
| 10 | 18.01 | -0.00 | 1.0315 | 0.3367 | -0.5053 | 0.0072 | 0.0010 | -0.0001 | 3.0625 |
| 11 | 20.10 | -0.00 | 1.1407 | 0.4090 | -0.5521 | 0.0070 | 0.0021 | -0.0011 | 2.7886 |
| 12 | 22.03 | -0.00 | 1.1752 | 0.4696 | -0.5575 | 0.0043 | 0.0018 | -0.0004 | 2.5025 |
| 13 | 23.97 | -0.00 | 1.1419 | 0.5014 | -0.5267 | 0.0074 | 0.0024 | -0.0015 | 2.2771 |
| 14 | 25.97 | -0.00 | 1.0459 | 0.5207 | -0.4673 | 0.0026 | 0.0032 | -0.0025 | 2.0084 |
| 15 | 28.01 | -0.00 | 0.9720 | 0.5412 | -0.4177 | 0.0167 | 0.0014 | -0.0048 | 1.7960 |
| 16 | 0.00 | 0.00 | 0.0637 | 0.0379 | -0.0526 | -0.0032 | -0.0018 | 0.0013 | 1.6798 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 21

TEMP = 85.
RN/FTX10-6= 0.461070 VEL-FPS= 74.643

PO= 14.5678
MACH= 0.0667

CONF= W2B1V1E(0)H1(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0217 | 0.0395 | 0.0302 | -0.0023 | -0.0017 | 0.0011 | -0.5492 |
| 2 | 2.01 | -0.00 | 0.0762 | 0.0401 | -0.0148 | 0.0000 | -0.0014 | 0.0005 | 1.8966 |
| 3 | 4.03 | -0.00 | 0.1830 | 0.0414 | -0.0626 | -0.0030 | -0.0013 | 0.0007 | 4.4188 |
| 4 | 5.86 | -0.00 | 0.2835 | 0.0486 | -0.1076 | 0.0047 | -0.0015 | -0.0009 | 5.8276 |
| 5 | 7.99 | -0.00 | 0.3953 | 0.0636 | -0.1576 | 0.0016 | -0.0014 | 0.0002 | 6.2073 |
| 6 | 10.01 | -0.00 | 0.5086 | 0.1054 | -0.2091 | 0.0013 | -0.0011 | 0.0008 | 4.8213 |
| 7 | 12.01 | -0.00 | 0.6008 | 0.1439 | -0.2495 | 0.0010 | -0.0006 | 0.0014 | 4.1745 |
| 8 | 14.00 | -0.00 | 0.6951 | 0.1849 | -0.2914 | 0.0035 | -0.0005 | 0.0002 | 3.7590 |
| 9 | 16.03 | -0.00 | 0.7944 | 0.2427 | -0.3384 | 0.0087 | 0.0008 | 0.0002 | 3.2726 |
| 10 | 18.01 | -0.00 | 0.9101 | 0.3060 | -0.3950 | 0.0083 | 0.0012 | 0.0001 | 2.9733 |
| 11 | 20.10 | -0.00 | 1.0240 | 0.3703 | -0.4437 | 0.0026 | 0.0021 | 0.0011 | 2.7653 |
| 12 | 22.03 | -0.00 | 1.0413 | 0.4192 | -0.4326 | 0.0028 | 0.0028 | 0.0007 | 2.4836 |
| 13 | 23.97 | -0.00 | 0.9617 | 0.4378 | -0.3791 | -0.0045 | 0.0073 | 0.0004 | 2.1965 |
| 14 | 25.97 | -0.00 | 0.9371 | 0.4772 | -0.3744 | 0.0034 | 0.0027 | -0.0013 | 1.9635 |
| 15 | 28.01 | -0.00 | 0.9095 | 0.5155 | -0.3700 | 0.0224 | -0.0033 | -0.0030 | 1.7644 |
| 16 | 0.00 | 0.00 | -0.0174 | 0.0418 | 0.0274 | -0.0024 | -0.0014 | 0.0005 | -0.4156 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 22

TEMP = 85.
RN/FTX10-6= 0.460989 VEL-FPS= 74.656

PO= 14.5579
MACH= 0.0668

CONF= W2B1V1E(-10)H1(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2528 | 0.0426 | 0.2026 | -0.0007 | -0.0010 | 0.0007 | -5.9236 |
| 2 | 2.01 | -0.00 | -0.1517 | 0.0423 | 0.1585 | -0.0037 | -0.0005 | 0.0009 | -3.5830 |
| 3 | 4.03 | -0.00 | -0.0441 | 0.0403 | 0.1095 | -0.0041 | -0.0008 | 0.0005 | -1.0940 |
| 4 | 5.86 | -0.00 | 0.0527 | 0.0445 | 0.0665 | -0.0071 | -0.0007 | 0.0011 | 1.1834 |
| 5 | 7.99 | -0.00 | 0.1635 | 0.0460 | 0.0201 | -0.0020 | -0.0009 | 0.0000 | 3.5485 |
| 6 | 10.01 | -0.00 | 0.2760 | 0.0699 | -0.0298 | 0.0003 | -0.0008 | 0.0005 | 3.9457 |
| 7 | 12.01 | -0.00 | 0.3827 | 0.1055 | -0.0774 | -0.0027 | -0.0005 | 0.0012 | 3.6265 |
| 8 | 14.00 | -0.00 | 0.4870 | 0.1363 | -0.1220 | -0.0030 | -0.0002 | 0.0023 | 3.5722 |
| 9 | 16.03 | -0.00 | 0.5887 | 0.1845 | -0.1704 | 0.0076 | 0.0006 | -0.0005 | 3.1902 |
| 10 | 18.01 | -0.00 | 0.6992 | 0.2359 | -0.2206 | 0.0044 | 0.0000 | 0.0004 | 2.9638 |
| 11 | 20.10 | -0.00 | 0.8248 | 0.2958 | -0.2775 | 0.0041 | 0.0020 | -0.0008 | 2.7878 |
| 12 | 22.03 | -0.00 | 0.9037 | 0.3573 | -0.3092 | 0.0012 | 0.0023 | -0.0004 | 2.5290 |
| 13 | 23.97 | -0.00 | 0.8794 | 0.3848 | -0.2780 | -0.0010 | 0.0020 | 0.0002 | 2.2850 |
| 14 | 25.97 | -0.00 | 0.8267 | 0.4118 | -0.2553 | 0.0045 | -0.0004 | -0.0018 | 2.0072 |
| 15 | 28.01 | -0.00 | 0.8138 | 0.4554 | -0.2572 | 0.0046 | 0.0030 | -0.0031 | 1.7869 |
| 16 | 0.00 | 0.00 | -0.2495 | 0.0450 | 0.2019 | -0.0089 | -0.0012 | 0.0010 | -5.5405 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 23

TEMP = 85.
RN/FTX10-6= 0.460989 VEL-FPS= 74.656

PO= 14.5579
MACH= 0.0668

CONF= W2B1V1E(10)H1(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2080 | 0.0715 | -0.1517 | -0.0013 | -0.0023 | 0.0008 | 2.9067 |
| 2 | 2.01 | -0.00 | 0.3091 | 0.0757 | -0.1984 | 0.0010 | -0.0020 | 0.0003 | 4.0798 |
| 3 | 4.03 | -0.00 | 0.4178 | 0.0854 | -0.2469 | 0.0006 | -0.0020 | -0.0000 | 4.8926 |
| 4 | 5.86 | -0.00 | 0.5269 | 0.1059 | -0.2998 | 0.0002 | -0.0020 | -0.0004 | 4.9720 |
| 5 | 7.99 | -0.00 | 0.6424 | 0.1332 | -0.3546 | 0.0053 | -0.0022 | -0.0010 | 4.8213 |
| 6 | 10.01 | -0.00 | 0.7444 | 0.1773 | -0.3996 | 0.0023 | -0.0018 | 0.0007 | 4.1970 |
| 7 | 12.01 | -0.00 | 0.8173 | 0.2251 | -0.4305 | 0.0049 | -0.0005 | 0.0004 | 3.6303 |
| 8 | 14.00 | -0.00 | 0.9015 | 0.2717 | -0.4649 | 0.0074 | 0.0000 | -0.0003 | 3.3180 |
| 9 | 16.03 | -0.00 | 1.0091 | 0.3426 | -0.5246 | 0.0097 | 0.0002 | -0.0009 | 2.9447 |
| 10 | 18.01 | -0.00 | 1.1125 | 0.4129 | -0.5717 | 0.0066 | -0.0017 | 0.0004 | 2.6939 |
| 11 | 20.10 | -0.00 | 1.1783 | 0.4654 | -0.5865 | 0.0068 | 0.0024 | 0.0000 | 2.5313 |
| 12 | 22.03 | -0.00 | 1.1075 | 0.4948 | -0.5197 | -0.0006 | 0.0037 | 0.0018 | 2.2379 |
| 13 | 23.97 | -0.00 | 1.0476 | 0.5206 | -0.4845 | -0.0028 | 0.0059 | -0.0004 | 2.0120 |
| 14 | 25.97 | -0.00 | 0.9949 | 0.5506 | -0.4656 | 0.0133 | -0.0022 | -0.0038 | 1.8067 |
| 15 | 28.01 | -0.00 | 0.9925 | 0.5979 | -0.4761 | 0.0133 | -0.0010 | -0.0019 | 1.6601 |
| 16 | 0.00 | 0.00 | 0.2112 | 0.0715 | -0.1520 | -0.0040 | -0.0023 | 0.0004 | 2.9526 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 24

TEMP = 84.
RN/FTX10-6= 0.461918 VEL-FPS= 74.611

PO= 14.5481
MACH= 0.0667

CONF= W2B1V1E(10)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2268 | 0.0577 | -0.1714 | -0.0070 | -0.0017 | 0.0016 | 3.9320 |
| 2 | 2.01 | -0.00 | 0.3283 | 0.0649 | -0.2204 | -0.0019 | -0.0017 | 0.0004 | 5.0549 |
| 3 | 4.03 | -0.00 | 0.4448 | 0.0758 | -0.2746 | -0.0050 | -0.0016 | 0.0012 | 5.8652 |
| 4 | 5.86 | -0.00 | 0.5503 | 0.0921 | -0.3247 | -0.0027 | -0.0019 | 0.0007 | 5.9722 |
| 5 | 7.99 | -0.00 | 0.6715 | 0.1305 | -0.3840 | -0.0004 | -0.0013 | 0.0001 | 5.1445 |
| 6 | 10.01 | -0.00 | 0.7679 | 0.1699 | -0.4265 | -0.0061 | -0.0013 | 0.0015 | 4.5195 |
| 7 | 12.01 | -0.00 | 0.8479 | 0.2175 | -0.4588 | -0.0063 | -0.0001 | 0.0018 | 3.8971 |
| 8 | 14.00 | -0.00 | 0.9327 | 0.2725 | -0.4959 | -0.0092 | 0.0017 | 0.0015 | 3.4219 |
| 9 | 16.03 | -0.00 | 1.0320 | 0.3397 | -0.5427 | -0.0040 | 0.0020 | 0.0001 | 3.0379 |
| 10 | 18.01 | -0.00 | 1.1288 | 0.4036 | -0.5853 | 0.0038 | 0.0003 | 0.0003 | 2.7967 |
| 11 | 20.10 | -0.00 | 1.1887 | 0.4644 | -0.5959 | -0.0068 | 0.0048 | 0.0012 | 2.5596 |
| 12 | 22.03 | -0.00 | 1.1391 | 0.5004 | -0.5554 | -0.0251 | 0.0135 | 0.0027 | 2.2762 |
| 13 | 23.97 | -0.00 | 1.1211 | 0.5488 | -0.5472 | 0.0017 | 0.0008 | -0.0017 | 2.0426 |
| 14 | 25.97 | -0.00 | 1.0223 | 0.5643 | -0.4921 | 0.0022 | 0.0013 | -0.0015 | 1.8117 |
| 15 | 28.01 | -0.00 | 0.9943 | 0.5988 | -0.4800 | -0.0030 | 0.0022 | -0.0006 | 1.6602 |
| 16 | 0.00 | 0.00 | 0.2376 | 0.0624 | -0.1765 | -0.0070 | -0.0013 | 0.0016 | 3.8078 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 25

TEMP = 84.

PO= 14.5481

RN/FTX10-6= 0.461951 VEL-FPS= 74.606 MACH= 0.0667

CONF= W2B1V1E(-10)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2118 | 0.0337 | 0.1607 | -0.0066 | -0.0007 | 0.0015 | -6.2817 |
| 2 | 2.01 | -0.00 | -0.1095 | 0.0349 | 0.1123 | -0.0069 | -0.0005 | 0.0016 | -3.1377 |
| 3 | 4.03 | -0.00 | -0.0013 | 0.0297 | 0.0644 | -0.0046 | -0.0009 | 0.0011 | -0.0444 |
| 4 | 5.86 | -0.00 | 0.0961 | 0.0330 | 0.0205 | -0.0050 | -0.0018 | 0.0013 | 2.9105 |
| 5 | 7.99 | -0.00 | 0.2133 | 0.0465 | -0.0314 | -0.0080 | -0.0009 | 0.0019 | 4.5884 |
| 6 | 10.01 | -0.00 | 0.3278 | 0.0725 | -0.0834 | -0.0084 | -0.0005 | 0.0019 | 4.5219 |
| 7 | 12.01 | -0.00 | 0.4354 | 0.1005 | -0.1296 | -0.0087 | -0.0003 | 0.0020 | 4.3320 |
| 8 | 14.00 | -0.00 | 0.5365 | 0.1419 | -0.1731 | -0.0063 | -0.0007 | 0.0015 | 3.7798 |
| 9 | 16.03 | -0.00 | 0.6324 | 0.1853 | -0.2105 | -0.0064 | 0.0007 | 0.0017 | 3.4123 |
| 10 | 18.01 | -0.00 | 0.7407 | 0.2375 | -0.2596 | -0.0040 | 0.0014 | 0.0014 | 3.1189 |
| 11 | 20.10 | -0.00 | 0.8660 | 0.3063 | -0.3146 | -0.0043 | 0.0020 | 0.0006 | 2.8270 |
| 12 | 22.03 | -0.00 | 0.9394 | 0.3620 | -0.3395 | -0.0044 | 0.0034 | 0.0011 | 2.5952 |
| 13 | 23.97 | -0.00 | 0.9286 | 0.4020 | -0.3233 | -0.0068 | 0.0046 | -0.0006 | 2.3096 |
| 14 | 25.97 | -0.00 | 0.8882 | 0.4292 | -0.3006 | -0.0040 | 0.0026 | -0.0017 | 2.0693 |
| 15 | 28.01 | -0.00 | 0.8295 | 0.4480 | -0.2697 | -0.0036 | 0.0032 | -0.0029 | 1.8515 |
| 16 | 0.00 | 0.00 | -0.2021 | 0.0337 | 0.1562 | -0.0094 | -0.0010 | 0.0011 | -5.9864 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 26

TEMP = 86.
RN/FTX10-6= 0.459622 VEL-FPS= 74.772

PO= 14.5383
MACH= 0.0669

CONF= W261V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0065 | 0.0351 | -0.0011 | -0.0054 | -0.0014 | 0.0012 | 0.1877 |
| 2 | 2.01 | -0.00 | 0.1056 | 0.0358 | -0.0495 | -0.0030 | -0.0010 | 0.0007 | 2.8636 |
| 3 | 4.03 | -0.00 | 0.2212 | 0.0397 | -0.1008 | -0.0007 | -0.0014 | 0.0002 | 5.5610 |
| 4 | 5.86 | -0.00 | 0.3194 | 0.0480 | -0.1465 | -0.0092 | -0.0005 | 0.0010 | 6.6510 |
| 5 | 7.99 | -0.00 | 0.4398 | 0.0727 | -0.2017 | -0.0096 | -0.0007 | 0.0017 | 6.0474 |
| 6 | 10.01 | -0.00 | 0.5497 | 0.1084 | -0.2512 | -0.0045 | -0.0011 | 0.0011 | 5.0707 |
| 7 | 12.01 | -0.00 | 0.6485 | 0.1425 | -0.2932 | -0.0102 | -0.0003 | 0.0023 | 4.5497 |
| 8 | 14.00 | -0.00 | 0.7303 | 0.1916 | -0.3285 | -0.0050 | -0.0009 | 0.0012 | 3.8104 |
| 9 | 16.03 | -0.00 | 0.8348 | 0.2474 | -0.3757 | -0.0025 | 0.0012 | 0.0000 | 3.3740 |
| 10 | 18.01 | -0.00 | 0.9426 | 0.3120 | -0.4243 | -0.0083 | 0.0017 | 0.0011 | 3.0206 |
| 11 | 20.10 | -0.00 | 1.0427 | 0.3748 | -0.4604 | -0.0029 | 0.0028 | -0.0000 | 2.7818 |
| 12 | 22.03 | -0.00 | 1.0555 | 0.4226 | -0.4523 | -0.0162 | 0.0078 | 0.0016 | 2.4972 |
| 13 | 23.97 | -0.00 | 1.0442 | 0.4700 | -0.4439 | -0.0134 | 0.0065 | 0.0001 | 2.2215 |
| 14 | 25.97 | -0.00 | 0.9888 | 0.5028 | -0.4146 | -0.0023 | 0.0034 | -0.0032 | 1.9664 |
| 15 | 28.01 | -0.00 | 0.9209 | 0.5190 | -0.3783 | 0.0006 | 0.0003 | -0.0024 | 1.7744 |
| 16 | 0.00 | 0.00 | 0.0141 | 0.0351 | -0.0054 | -0.0109 | -0.0010 | 0.0014 | 0.4009 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 27

TEMP = 88.
RN/FTX10-6= 0.457458 VEL-FPS= 74.914

PO= 14.5383
MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0108 | 0.0421 | -0.0040 | -0.0054 | -0.0010 | 0.0018 | 0.2580 |
| 2 | 0.00 | -6.00 | 0.0186 | 0.0373 | -0.0135 | 0.1037 | 0.0032 | -0.0239 | 0.4996 |
| 3 | 0.00 | -4.00 | 0.0154 | 0.0420 | -0.0082 | 0.0682 | 0.0014 | -0.0162 | 0.3673 |
| 4 | 0.00 | -2.00 | 0.0131 | 0.0421 | -0.0071 | 0.0273 | 0.0007 | -0.0073 | 0.3115 |
| 5 | 0.00 | 0.00 | 0.0130 | 0.0421 | -0.0042 | 0.0000 | -0.0014 | 0.0005 | 0.3106 |
| 6 | -0.00 | 1.99 | 0.0138 | 0.0422 | -0.0079 | -0.0382 | -0.0029 | 0.0094 | 0.3275 |
| 7 | -0.00 | 3.99 | 0.0179 | 0.0400 | -0.0104 | -0.0656 | -0.0048 | 0.0173 | 0.4492 |
| 8 | -0.00 | 5.99 | 0.0197 | 0.0377 | -0.0160 | -0.0984 | -0.0057 | 0.0244 | 0.5231 |
| 9 | 0.00 | 0.00 | 0.0130 | 0.0421 | -0.0051 | -0.0054 | -0.0017 | 0.0018 | 0.3088 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 28

TEMP = 90.

PO= 14.5383

RN/FTX10-6= 0.455358 VEL-FPS= 75.048 MACH= 0.0671

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2219 | 0.0445 | -0.1020 | 0.0019 | -0.0014 | 0.0001 | 4.9842 |
| 2 | 4.03 | -6.00 | 0.2344 | 0.0405 | -0.1113 | 0.1030 | 0.0039 | -0.0252 | 5.7759 |
| 3 | 4.03 | -4.00 | 0.2287 | 0.0425 | -0.1076 | 0.0675 | 0.0026 | -0.0169 | 5.3735 |
| 4 | 4.03 | -2.00 | 0.2242 | 0.0446 | -0.1036 | 0.0320 | 0.0004 | -0.0085 | 5.0229 |
| 5 | 4.03 | -0.00 | 0.2251 | 0.0447 | -0.1031 | -0.0034 | -0.0006 | 0.0013 | 5.0297 |
| 6 | 4.02 | 1.99 | 0.2281 | 0.0450 | -0.1052 | -0.0363 | -0.0029 | 0.0091 | 5.0631 |
| 7 | 4.02 | 3.99 | 0.2301 | 0.0429 | -0.1098 | -0.0637 | -0.0054 | 0.0162 | 5.3561 |
| 8 | 4.02 | 5.99 | 0.2343 | 0.0410 | -0.1151 | -0.0939 | -0.0067 | 0.0238 | 5.7108 |
| 9 | 4.03 | -0.00 | 0.2229 | 0.0446 | -0.1034 | -0.0089 | -0.0009 | 0.0010 | 4.9951 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 29

TEMP = 90.
RN/FTX10-6= 0.455358 VEL-FPS= 75.048

PO= 14.5383
MACH= 0.0671

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5499 | 0.1132 | -0.2524 | -0.0045 | -0.0014 | -0.0012 | 4.8574 |
| 2 | 10.01 | -6.00 | 0.5568 | 0.1071 | -0.2607 | 0.1049 | 0.0057 | -0.0252 | 5.1975 |
| 3 | 10.01 | -4.00 | 0.5553 | 0.1092 | -0.2560 | 0.0748 | 0.0031 | -0.0177 | 5.0823 |
| 4 | 10.01 | -2.00 | 0.5527 | 0.1112 | -0.2540 | 0.0473 | 0.0004 | -0.0107 | 4.9690 |
| 5 | 10.01 | -0.00 | 0.5509 | 0.1134 | -0.2534 | -0.0100 | -0.0004 | 0.0023 | 4.8581 |
| 6 | 10.01 | 1.99 | 0.5543 | 0.1117 | -0.2558 | -0.0320 | -0.0035 | 0.0097 | 4.9622 |
| 7 | 10.01 | 3.99 | 0.5533 | 0.1092 | -0.2584 | -0.0704 | -0.0054 | 0.0174 | 5.0637 |
| 8 | 10.01 | 5.99 | 0.5581 | 0.1054 | -0.2632 | -0.1033 | -0.0070 | 0.0246 | 5.2910 |
| 9 | 10.01 | -0.00 | 0.5524 | 0.1113 | -0.2534 | -0.0100 | -0.0005 | 0.0017 | 4.9638 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 30

TEMP = 88.

PO= 14.5383
RN/FTX10-6= 0.457474 VEL-FPS= 74.912 MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8341 | 0.2496 | -0.3767 | 0.0001 | 0.0010 | 0.0005 | 3.3409 |
| 2 | 16.03 | -6.00 | 0.8306 | 0.2436 | -0.3778 | 0.1068 | 0.0016 | -0.0252 | 3.4093 |
| 3 | 16.03 | -4.00 | 0.8351 | 0.2473 | -0.3791 | 0.0767 | 0.0020 | -0.0181 | 3.3757 |
| 4 | 16.03 | -2.00 | 0.8313 | 0.2487 | -0.3738 | 0.0412 | 0.0016 | -0.0095 | 3.3420 |
| 5 | 16.03 | -0.00 | 0.8356 | 0.2525 | -0.3775 | 0.0110 | 0.0004 | -0.0007 | 3.3091 |
| 6 | 16.03 | 1.99 | 0.8390 | 0.2511 | -0.3803 | -0.0381 | 0.0014 | 0.0108 | 3.3403 |
| 7 | 16.03 | 3.99 | 0.8363 | 0.2480 | -0.3813 | -0.0628 | 0.0002 | 0.0176 | 3.3717 |
| 8 | 16.03 | 5.99 | 0.8448 | 0.2482 | -0.3897 | -0.1040 | -0.0019 | 0.0271 | 3.4034 |
| 9 | 16.03 | -0.00 | 0.8394 | 0.2511 | -0.3776 | -0.0025 | 0.0009 | 0.0001 | 3.3417 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 31

TEMP = 88.
RN/FTX10-6= 0.457474 VEL-FPS= 74.912

PO= 14.5383
MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.0398 | 0.3762 | -0.4617 | -0.0030 | 0.0017 | 0.0009 | 2.7633 |
| 2 | 20.10 | -6.00 | 1.0514 | 0.3730 | -0.4760 | 0.1196 | -0.0038 | -0.0254 | 2.8188 |
| 3 | 20.10 | -4.00 | 1.0425 | 0.3722 | -0.4688 | 0.0869 | -0.0025 | -0.0184 | 2.8008 |
| 4 | 20.10 | -2.00 | 1.0467 | 0.3763 | -0.4683 | 0.0432 | -0.0007 | -0.0095 | 2.7815 |
| 5 | 20.10 | -0.00 | 1.0397 | 0.3762 | -0.4627 | -0.0003 | 0.0023 | 0.0017 | 2.7633 |
| 6 | 20.09 | 1.99 | 1.0463 | 0.3762 | -0.4672 | -0.0331 | 0.0043 | 0.0097 | 2.7803 |
| 7 | 20.09 | 3.99 | 1.0529 | 0.3763 | -0.4731 | -0.0768 | 0.0063 | 0.0191 | 2.7979 |
| 8 | 20.09 | 5.99 | 1.0512 | 0.3733 | -0.4770 | -0.1152 | 0.0066 | 0.0261 | 2.8157 |
| 9 | 20.10 | -0.00 | 1.0448 | 0.3781 | -0.4649 | -0.0003 | 0.0013 | 0.0010 | 2.7630 |

F

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 32

TEMP = 88.
RN/FTX10-6= 0.457539 VEL-FPS= 74.901

PO= 14.5383
MACH= 0.0670

CONF= W2B1V1E(0)H2F(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0783 | 0.0427 | -0.0712 | -0.0033 | -0.0011 | 0.0013 | 1.8301 |
| 2 | 2.01 | -0.00 | 0.1781 | 0.0494 | -0.1183 | -0.0037 | -0.0010 | 0.0008 | 3.6028 |
| 3 | 4.03 | -0.00 | 0.2919 | 0.0571 | -0.1705 | 0.0013 | -0.0011 | 0.0002 | 5.1093 |
| 4 | 5.86 | -0.00 | 0.3933 | 0.0727 | -0.2200 | 0.0009 | -0.0014 | -0.0001 | 5.4052 |
| 5 | 7.99 | -0.00 | 0.5106 | 0.0998 | -0.2736 | -0.0021 | -0.0010 | 0.0000 | 5.1121 |
| 6 | 10.01 | -0.00 | 0.6163 | 0.1374 | -0.3220 | -0.0025 | -0.0008 | 0.0006 | 4.4831 |
| 7 | 12.01 | -0.00 | 0.7183 | 0.1748 | -0.3647 | -0.0054 | -0.0001 | 0.0017 | 4.1091 |
| 8 | 14.00 | -0.00 | 0.8193 | 0.2242 | -0.4120 | 0.0023 | -0.0000 | -0.0001 | 3.6534 |
| 9 | 16.03 | -0.00 | 0.9250 | 0.2863 | -0.4623 | -0.0033 | 0.0014 | 0.0007 | 3.2305 |
| 10 | 18.01 | -0.00 | 1.0465 | 0.3491 | -0.5190 | -0.0010 | 0.0016 | 0.0000 | 2.9970 |
| 11 | 20.10 | -0.00 | 1.1585 | 0.4257 | -0.5667 | 0.0014 | 0.0033 | -0.0002 | 2.7216 |
| 12 | 22.03 | -0.00 | 1.1815 | 0.4772 | -0.5602 | -0.0038 | 0.0016 | 0.0005 | 2.4757 |
| 13 | 23.97 | -0.00 | 1.1460 | 0.5161 | -0.5311 | -0.0087 | 0.0082 | -0.0007 | 2.2204 |
| 14 | 25.97 | -0.00 | 1.0547 | 0.5328 | -0.4699 | 0.0053 | 0.0026 | -0.0030 | 1.9793 |
| 15 | 28.01 | -0.00 | 1.0103 | 0.5564 | -0.4360 | 0.0028 | 0.0006 | -0.0026 | 1.8155 |
| 16 | 0.00 | 0.00 | 0.0815 | 0.0404 | -0.0732 | -0.0006 | -0.0012 | 0.0001 | 2.0150 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 33

TEMP = 88.
RN/FTX10-6= 0.457409 VEL-FPS= 74.922

PO= 14.5363
MACH= 0.0670

CONF= W2B1V1E(-10)H2F(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.1496 | 0.0483 | 0.0977 | 0.0009 | -0.0004 | -0.0003 | -3.0959 |
| 2 | 2.01 | -0.00 | -0.0532 | 0.0491 | 0.0525 | 0.0006 | -0.0007 | 0.0004 | -1.0827 |
| 3 | 4.03 | -0.00 | 0.0584 | 0.0509 | 0.0032 | -0.0024 | -0.0003 | 0.0000 | 1.1490 |
| 4 | 5.86 | -0.00 | 0.1557 | 0.0609 | -0.0417 | -0.0055 | -0.0004 | 0.0013 | 2.5575 |
| 5 | 7.99 | -0.00 | 0.2637 | 0.0730 | -0.0892 | 0.0022 | -0.0010 | 0.0001 | 3.6120 |
| 6 | 10.01 | -0.00 | 0.3819 | 0.0992 | -0.1434 | -0.0089 | 0.0000 | 0.0009 | 3.8476 |
| 7 | 12.01 | -0.00 | 0.4907 | 0.1343 | -0.1896 | -0.0038 | -0.0005 | 0.0014 | 3.6518 |
| 8 | 14.00 | -0.00 | 0.5959 | 0.1742 | -0.2364 | -0.0041 | 0.0002 | 0.0013 | 3.4203 |
| 9 | 16.03 | -0.00 | 0.7027 | 0.2233 | -0.2860 | -0.0017 | 0.0007 | 0.0005 | 3.1470 |
| 10 | 18.01 | -0.00 | 0.8235 | 0.2774 | -0.3420 | 0.0087 | 0.0005 | -0.0008 | 2.9677 |
| 11 | 20.10 | -0.00 | 0.9552 | 0.3522 | -0.4041 | -0.0025 | 0.0024 | 0.0000 | 2.7114 |
| 12 | 22.03 | -0.00 | 1.0289 | 0.4117 | -0.4320 | -0.0080 | 0.0046 | 0.0003 | 2.4990 |
| 13 | 23.97 | -0.00 | 1.0429 | 0.4590 | -0.4240 | 0.0003 | 0.0034 | -0.0013 | 2.2722 |
| 14 | 25.97 | -0.00 | 0.9723 | 0.4708 | -0.3692 | 0.0036 | 0.0035 | -0.0042 | 2.0650 |
| 15 | 28.01 | -0.00 | 0.9032 | 0.4850 | -0.3215 | -0.0013 | 0.0043 | -0.0035 | 1.8621 |
| 16 | 0.00 | 0.00 | -0.1431 | 0.0507 | 0.0962 | -0.0072 | -0.0010 | 0.0011 | -2.8228 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 34

TEMP = 90.
RN/FTX10-6= 0.455124 VEL-FPS= 75.087

PO= 14.5236
MACH= 0.0671

CONF= W281V1E(10)H2F(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2987 | 0.0606 | -0.2389 | 0.0004 | -0.0021 | 0.0004 | 4.9252 |
| 2 | 2.01 | -0.00 | 0.3999 | 0.0727 | -0.2885 | 0.0028 | -0.0015 | -0.0000 | 5.4954 |
| 3 | 4.03 | -0.00 | 0.5150 | 0.0861 | -0.3431 | 0.0051 | -0.0019 | -0.0011 | 5.9816 |
| 4 | 5.86 | -0.00 | 0.6174 | 0.1091 | -0.3951 | 0.0020 | -0.0021 | 0.0002 | 5.6584 |
| 5 | 7.99 | -0.00 | 0.7393 | 0.1477 | -0.4525 | 0.0016 | -0.0014 | -0.0002 | 5.0026 |
| 6 | 10.01 | -0.00 | 0.8337 | 0.1916 | -0.4950 | 0.0040 | -0.0010 | 0.0001 | 4.3493 |
| 7 | 12.01 | -0.00 | 0.9201 | 0.2384 | -0.5309 | 0.0011 | -0.0002 | 0.0001 | 3.8596 |
| 8 | 14.00 | -0.00 | 1.0181 | 0.3018 | -0.5794 | 0.0008 | 0.0012 | 0.0003 | 3.3726 |
| 9 | 16.03 | -0.00 | 1.1209 | 0.3709 | -0.6297 | -0.0021 | 0.0023 | 0.0001 | 3.0215 |
| 10 | 18.01 | -0.00 | 1.2228 | 0.4325 | -0.6747 | 0.0002 | 0.0015 | -0.0002 | 2.8267 |
| 11 | 20.10 | -0.00 | 1.2768 | 0.6919 | -0.7003 | -0.0019 | 0.0059 | 0.0003 | 1.8451 |
| 12 | 22.03 | -0.00 | 1.2560 | 0.5461 | -0.6548 | -0.0098 | 0.0094 | 0.0005 | 2.2997 |
| 13 | 23.97 | -0.00 | 1.2025 | 0.5831 | -0.6158 | -0.0041 | 0.0061 | -0.0014 | 2.0621 |
| 14 | 25.97 | -0.00 | 1.0980 | 0.5991 | -0.5501 | 0.0017 | 0.0009 | -0.0030 | 1.8327 |
| 15 | 28.01 | -0.00 | 1.0371 | 0.6165 | -0.5075 | -0.0031 | 0.0042 | -0.0017 | 1.6820 |
| 16 | 0.00 | 0.00 | 0.3041 | 0.0606 | -0.2421 | -0.0022 | -0.0018 | 0.0005 | 5.0111 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 35
QPSF = 6.60 RUN NO. 35

TEMP = 90. PD= 14.5236
RN/FTX10-6= 0.455140 VEL-FPS= 75.084 MACH= 0.0671

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0265 | 0.0353 | -0.0222 | 0.0025 | -0.0012 | 0.0005 | 0.7528 |
| 2 | 2.01 | -0.00 | 0.1278 | 0.0355 | -0.0703 | -0.0005 | -0.0014 | 0.0007 | 3.6008 |
| 3 | 4.03 | -0.00 | 0.2380 | 0.0388 | -0.1202 | -0.0009 | -0.0014 | 0.0008 | 6.1347 |
| 4 | 5.86 | -0.00 | 0.3407 | 0.0551 | -0.1731 | 0.0013 | -0.0011 | 0.0002 | 6.1770 |
| 5 | 7.99 | -0.00 | 0.4605 | 0.0758 | -0.2271 | 0.0009 | -0.0017 | 0.0004 | 6.0697 |
| 6 | 10.01 | -0.00 | 0.5776 | 0.1136 | -0.2818 | 0.0005 | -0.0009 | 0.0004 | 5.0837 |
| 7 | 12.01 | -0.00 | 0.6789 | 0.1565 | -0.3285 | 0.0002 | -0.0007 | 0.0010 | 4.3377 |
| 8 | 14.00 | -0.00 | 0.7726 | 0.2002 | -0.3718 | -0.0000 | -0.0011 | 0.0006 | 3.8592 |
| 9 | 16.03 | -0.00 | 0.8798 | 0.2583 | -0.4230 | -0.0003 | 0.0011 | 0.0000 | 3.4052 |
| 10 | 18.01 | -0.00 | 0.9909 | 0.3233 | -0.4760 | 0.0075 | 0.0013 | -0.0002 | 3.0648 |
| 11 | 20.10 | -0.00 | 1.1057 | 0.3960 | -0.5260 | 0.0045 | 0.0026 | -0.0000 | 2.7921 |
| 12 | 22.03 | -0.00 | 1.1340 | 0.4374 | -0.5225 | -0.0007 | 0.0034 | 0.0007 | 2.5923 |
| 13 | 23.97 | -0.00 | 1.1234 | 0.4956 | -0.5146 | -0.0004 | 0.0059 | -0.0023 | 2.2663 |
| 14 | 25.97 | -0.00 | 1.0504 | 0.5256 | -0.4776 | 0.0105 | 0.0001 | -0.0024 | 1.9982 |
| 15 | 28.01 | -0.00 | 0.9912 | 0.5543 | -0.4410 | -0.0051 | 0.0078 | -0.0020 | 1.7881 |
| 16 | 0.00 | 0.00 | 0.0330 | 0.0376 | -0.0247 | -0.0002 | -0.0015 | 0.0006 | 0.8780 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 36

TEMP = 93.
RN/FTX10-6= 0.450414 VEL-FPS= 75.554

PO= 14.4106
MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0276 | 0.0400 | -0.0229 | -0.0029 | -0.0011 | 0.0017 | 0.6908 |
| 2 | 0.00 | -6.00 | 0.0366 | 0.0351 | -0.0306 | 0.1008 | 0.0039 | -0.0238 | 1.0403 |
| 3 | 0.00 | -4.00 | 0.0289 | 0.0375 | -0.0254 | 0.0653 | 0.0021 | -0.0156 | 0.7713 |
| 4 | 0.00 | -2.00 | 0.0277 | 0.0399 | -0.0239 | 0.0407 | 0.0002 | -0.0077 | 0.6959 |
| 5 | 0.00 | 0.00 | 0.0266 | 0.0399 | -0.0215 | -0.0001 | -0.0011 | 0.0006 | 0.6657 |
| 6 | -0.00 | 1.99 | 0.0284 | 0.0377 | -0.0243 | -0.0439 | -0.0032 | 0.0107 | 0.7543 |
| 7 | -0.00 | 3.99 | 0.0292 | 0.0355 | -0.0284 | -0.0740 | -0.0044 | 0.0187 | 0.8230 |
| 8 | -0.00 | 5.99 | 0.0355 | 0.0332 | -0.0320 | -0.1041 | -0.0066 | 0.0262 | 1.0673 |
| 9 | 0.00 | 0.00 | 0.0309 | 0.0400 | -0.0232 | -0.0083 | -0.0010 | 0.0019 | 0.7728 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 37

TEMP = 93. PO= 14.4106
RN/FTX10-6= 0.450366 VEL-FPS= 75.562 MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5761 | 0.1157 | -0.2818 | -0.0048 | -0.0014 | 0.0012 | 4.9772 |
| 2 | 10.01 | -6.00 | 0.5852 | 0.1100 | -0.2889 | 0.1073 | 0.0044 | -0.0266 | 5.3180 |
| 3 | 10.01 | -4.00 | 0.5811 | 0.1141 | -0.2855 | 0.0744 | 0.0025 | -0.0191 | 5.0923 |
| 4 | 10.01 | -2.00 | 0.5799 | 0.1139 | -0.2830 | 0.0388 | 0.0004 | -0.0093 | 5.0889 |
| 5 | 10.01 | -0.00 | 0.5750 | 0.1155 | -0.2808 | -0.0076 | -0.0017 | 0.0014 | 4.9762 |
| 6 | 10.01 | 1.99 | 0.5763 | 0.1134 | -0.2807 | -0.0377 | -0.0039 | 0.0111 | 5.0790 |
| 7 | 10.01 | 3.99 | 0.5817 | 0.1121 | -0.2866 | -0.0679 | -0.0062 | 0.0186 | 5.1857 |
| 8 | 10.01 | 5.99 | 0.5827 | 0.1101 | -0.2916 | -0.1118 | -0.0074 | 0.0275 | 5.2915 |
| 9 | 10.01 | -0.00 | 0.5783 | 0.1161 | -0.2815 | -0.0103 | -0.0013 | 0.0014 | 4.9793 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 38

TEMP = 93.
RN/FTX10-6= 0.450350 VEL-FPS= 75.564

PO= 14.4106
MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1034 | 0.4051 | -0.5278 | 0.0045 | 0.0018 | -0.0003 | 2.7233 |
| 2 | 20.10 | -6.00 | 1.1143 | 0.4015 | -0.5368 | 0.1164 | -0.0014 | -0.0267 | 2.7749 |
| 3 | 20.10 | -4.00 | 1.1046 | 0.4030 | -0.5288 | 0.0755 | -0.0009 | -0.0185 | 2.7409 |
| 4 | 20.10 | -2.00 | 1.1077 | 0.4067 | -0.5282 | 0.0427 | -0.0008 | -0.0099 | 2.7237 |
| 5 | 20.10 | -0.00 | 1.1075 | 0.4066 | -0.5281 | -0.0009 | 0.0020 | 0.0009 | 2.7233 |
| 6 | 20.09 | 1.99 | 1.1012 | 0.4044 | -0.5247 | -0.0501 | 0.0039 | 0.0117 | 2.7228 |
| 7 | 20.09 | 3.99 | 1.0997 | 0.4014 | -0.5258 | -0.0856 | 0.0060 | 0.0208 | 2.7392 |
| 8 | 20.09 | 5.99 | 1.1111 | 0.4008 | -0.5334 | -0.1213 | 0.0059 | 0.0279 | 2.7722 |
| 9 | 20.10 | -0.00 | 1.1126 | 0.4085 | -0.5308 | -0.0092 | 0.0016 | 0.0013 | 2.7230 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 39

TEMP = 95. PO= 14.4008
RN/FTX10-6= 0.448155 VEL-FPS= 75.723 MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 0.00 | -6.00 | 0.0398 | 0.0352 | -0.0332 | 0.1062 | 0.0025 | -0.0245 | 1.1302 |
| 3 | 0.00 | -4.00 | 0.0343 | 0.0375 | -0.0286 | 0.0762 | 0.0010 | -0.0164 | 0.9142 |
| 4 | 0.00 | -2.00 | 0.0310 | 0.0399 | -0.0256 | 0.0352 | -0.0000 | -0.0075 | 0.7759 |
| 5 | 0.00 | 0.00 | 0.0308 | 0.0400 | -0.0260 | 0.0052 | -0.0019 | 0.0004 | 0.7701 |
| 6 | -0.00 | 1.99 | 0.0327 | 0.0401 | -0.0275 | -0.0330 | -0.0033 | 0.0092 | 0.8172 |
| 7 | -0.00 | 3.99 | 0.0336 | 0.0378 | -0.0293 | -0.0685 | -0.0048 | 0.0175 | 0.8882 |
| 8 | -0.00 | 5.99 | 0.0408 | 0.0356 | -0.0367 | -0.1014 | -0.0063 | 0.0256 | 1.1452 |
| 9 | 0.00 | 0.00 | 0.0340 | 0.0400 | -0.0276 | -0.0057 | -0.0017 | 0.0013 | 0.8495 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 40

TEMP = 95.
RN/FTX10-6= 0.448155 VEL-FPS= 75.723

PO= 14.4008
MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5623 | 0.1084 | -0.2689 | -0.0020 | -0.0016 | 0.0006 | 5.1857 |
| 2 | 10.01 | -6.00 | 0.5678 | 0.1044 | -0.2739 | 0.1074 | 0.0042 | -0.0261 | 5.4358 |
| 3 | 10.01 | -4.00 | 0.5641 | 0.1062 | -0.2709 | 0.0664 | 0.0025 | -0.0161 | 5.3097 |
| 4 | 10.01 | -2.00 | 0.5636 | 0.1085 | -0.2690 | 0.0308 | 0.0001 | -0.0079 | 5.1901 |
| 5 | 10.01 | -0.00 | 0.5634 | 0.1086 | -0.2685 | 0.0006 | -0.0014 | -0.0000 | 5.1872 |
| 6 | 10.01 | 1.99 | 0.5657 | 0.1067 | -0.2699 | -0.0349 | -0.0038 | 0.0104 | 5.3001 |
| 7 | 10.01 | 3.99 | 0.5664 | 0.1070 | -0.2736 | -0.0787 | -0.0054 | 0.0204 | 5.2938 |
| 8 | 10.01 | 5.99 | 0.5690 | 0.1027 | -0.2782 | -0.0871 | -0.0085 | 0.0257 | 5.5363 |
| 9 | 10.01 | -0.00 | 0.5634 | 0.1086 | -0.2676 | -0.0074 | -0.0013 | 0.0018 | 5.1870 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 41

TEMP = 95.
RN/FTX10-6= 0.448219 VEL-FPS= 75.712

PO= 14.4008
MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1122 | 0.4034 | -0.5287 | -0.0036 | 0.0025 | 0.0013 | 2.7570 |
| 2 | 20.10 | -6.00 | 1.1108 | 0.3952 | -0.5358 | 0.1273 | -0.0034 | -0.0268 | 2.8101 |
| 3 | 20.10 | -4.00 | 1.1130 | 0.3986 | -0.5328 | 0.0836 | -0.0021 | -0.0183 | 2.7921 |
| 4 | 20.10 | -2.00 | 1.1112 | 0.4004 | -0.5285 | 0.0481 | -0.0013 | -0.0099 | 2.7747 |
| 5 | 20.10 | -0.00 | 1.1130 | 0.4012 | -0.5300 | 0.0044 | 0.0010 | 0.0005 | 2.7740 |
| 6 | 20.09 | 1.99 | 1.1087 | 0.3997 | -0.5282 | -0.0419 | 0.0046 | 0.0111 | 2.7738 |
| 7 | 20.09 | 3.99 | 1.1112 | 0.3982 | -0.5319 | -0.0829 | 0.0065 | 0.0194 | 2.7903 |
| 8 | 20.09 | 5.99 | 1.1077 | 0.3945 | -0.5319 | -0.1130 | 0.0071 | 0.0266 | 2.8076 |
| 9 | 20.10 | -0.00 | 1.1110 | 0.4004 | -0.5280 | 0.0045 | 0.0024 | -0.0005 | 2.7743 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 42
QPSF = 6.60

RUN NO. 42

TEMP = 95.
RN/FTX10-6= 0.448123 VEL-FPS= 75.728

PO= 14.4008
MACH= 0.0677

CONF= W281V1E(0)HIF(2,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0329 | 0.0377 | -0.0270 | -0.0084 | -0.0010 | 0.0014 | 0.8737 |
| 2 | 2.01 | -0.00 | 0.1278 | 0.0354 | -0.0698 | -0.0005 | -0.0008 | 0.0001 | 3.6025 |
| 3 | 4.03 | -0.00 | 0.2337 | 0.0384 | -0.1185 | -0.0036 | -0.0014 | 0.0003 | 6.0717 |
| 4 | 5.86 | -0.00 | 0.3406 | 0.0480 | -0.1677 | -0.0067 | -0.0010 | 0.0005 | 7.0889 |
| 5 | 7.99 | -0.00 | 0.4567 | 0.0729 | -0.2220 | -0.0017 | -0.0010 | 0.0004 | 6.2628 |
| 6 | 10.01 | -0.00 | 0.6178 | 0.1470 | -0.3010 | -0.0049 | -0.0010 | 0.0006 | 4.2025 |
| 7 | 12.01 | -0.00 | 0.6685 | 0.1494 | -0.3172 | -0.0051 | -0.0013 | 0.0013 | 4.4740 |
| 8 | 14.00 | -0.00 | 0.7625 | 0.1975 | -0.3608 | -0.0053 | -0.0001 | 0.0016 | 3.8592 |
| 9 | 16.03 | -0.00 | 0.8713 | 0.2534 | -0.4152 | -0.0057 | -0.0001 | 0.0012 | 3.4378 |
| 10 | 18.01 | -0.00 | 0.9986 | 0.3209 | -0.4758 | 0.0020 | -0.0001 | 0.0004 | 3.1118 |
| 11 | 20.10 | -0.00 | 1.1154 | 0.3946 | -0.5293 | -0.0091 | 0.0036 | 0.0011 | 2.8255 |
| 12 | 22.03 | -0.00 | 1.1123 | 0.4310 | -0.5097 | -0.0061 | 0.0032 | 0.0010 | 2.5802 |
| 13 | 23.97 | -0.00 | 1.1067 | 0.4830 | -0.5013 | -0.0005 | 0.0025 | -0.0007 | 2.2911 |
| 14 | 25.97 | -0.00 | 1.0292 | 0.5126 | -0.4631 | -0.0002 | 0.0004 | 0.0001 | 2.0076 |
| 15 | 28.01 | -0.00 | 0.9810 | 0.5462 | -0.4320 | -0.0079 | 0.0043 | -0.0030 | 1.7960 |
| 16 | 0.00 | 0.00 | 0.0340 | 0.0353 | -0.0270 | -0.0057 | -0.0014 | 0.0013 | 0.9627 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 43
QPSF = 6.60

RUN NO. 43

TEMP = 95.
RN/FTX10-6= 0.448171 VEL-FPS= 75.720

PO= 14.4008
MACH= 0.0677

CONF= W2B1V1E(0)F

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0297 | 0.0330 | -0.0247 | -0.0029 | -0.0011 | 0.0007 | 0.9016 |
| 2 | 2.01 | -0.00 | 0.1249 | 0.0306 | -0.0638 | -0.0059 | -0.0010 | 0.0014 | 4.0763 |
| 3 | 4.03 | -0.00 | 0.2267 | 0.0355 | -0.1076 | 0.0046 | -0.0016 | -0.0004 | 6.3811 |
| 4 | 5.86 | -0.00 | 0.3293 | 0.0467 | -0.1519 | -0.0011 | -0.0010 | 0.0003 | 7.0487 |
| 5 | 7.99 | -0.00 | 0.4462 | 0.0665 | -0.2037 | -0.0015 | -0.0013 | 0.0004 | 6.7061 |
| 6 | 10.01 | -0.00 | 0.5576 | 0.1074 | -0.2545 | -0.0045 | -0.0011 | 0.0011 | 5.1894 |
| 7 | 12.01 | -0.00 | 0.6537 | 0.1484 | -0.3004 | 0.0005 | -0.0008 | 0.0009 | 4.4026 |
| 8 | 14.06 | -0.00 | 0.7568 | 0.1911 | -0.3465 | 0.0029 | -0.0009 | 0.0004 | 3.9588 |
| 9 | 16.03 | -0.00 | 0.8668 | 0.2544 | -0.4075 | 0.0025 | 0.0009 | 0.0005 | 3.4062 |
| 10 | 19.05 | -0.00 | 0.9814 | 0.2333 | -0.4466 | 0.0075 | -0.0000 | -0.0004 | 4.2061 |
| 11 | 20.10 | -0.00 | 1.1026 | 0.3923 | -0.5200 | -0.0008 | 0.0029 | 0.0005 | 2.8103 |
| 12 | 22.03 | -0.00 | 1.1296 | 0.4431 | -0.5175 | -0.0033 | 0.0056 | 0.0005 | 2.5489 |
| 13 | 23.97 | -0.00 | 1.1002 | 0.4851 | -0.4913 | -0.0030 | 0.0057 | -0.0003 | 2.2678 |
| 14 | 26.99 | -0.00 | 1.0106 | 0.4245 | -0.4206 | 0.0162 | -0.0032 | -0.0022 | 2.3805 |
| 15 | 28.01 | -0.00 | 0.9967 | 0.5492 | -0.4363 | 0.0190 | -0.0033 | -0.0022 | 1.8146 |
| 16 | 0.00 | 0.00 | 0.0362 | 0.0330 | -0.0275 | -0.0029 | -0.0011 | 0.0007 | 1.0973 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 44

TEMP = 90.
RN/FTX10-6= 0.453471 VEL-FPS= 75.361

PO= 14.4057
MACH= 0.0674

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0278 | 0.0329 | -0.0180 | -0.0001 | -0.0022 | 0.0016 | [illegible] |
| 2 | 2.01 | -0.00 | 0.1295 | 0.0400 | -0.0542 | -0.0030 | -0.0010 | 0.0012 | [illegible] |
| 3 | 4.03 | -0.00 | 0.2365 | 0.0477 | -0.0919 | -0.0060 | -0.0008 | 0.0014 | [illegible] |
| 4 | 5.86 | -0.00 | 0.3312 | 0.0512 | -0.1232 | 0.0019 | -0.0014 | 0.0001 | [illegible] |
| 5 | 7.99 | -0.00 | 0.4540 | 0.0790 | -0.1655 | -0.0010 | -0.0015 | 0.0003 | [illegible] |
| 6 | 10.01 | -0.00 | 0.5615 | 0.1170 | -0.2047 | -0.0039 | -0.0010 | 0.0009 | [illegible] |
| 7 | 12.01 | -0.00 | 0.6702 | 0.1632 | -0.2423 | 0.0040 | -0.0015 | -0.0002 | [illegible] |
| 8 | 14.00 | -0.00 | 0.7684 | 0.2077 | -0.2770 | 0.0011 | -0.0012 | 0.0009 | [illegible] |
| 9 | 16.03 | -0.00 | 0.8680 | 0.2659 | -0.3123 | 0.0010 | -0.0004 | 0.0007 | [illegible] |
| 10 | 18.01 | -0.00 | 0.9582 | 0.3259 | -0.3432 | -0.0018 | 0.0000 | 0.0018 | [illegible] |
| 11 | 20.10 | -0.00 | 1.0464 | 0.3951 | -0.3767 | 0.0007 | -0.0002 | 0.0007 | [illegible] |
| 12 | 22.03 | -0.00 | 1.1221 | 0.4665 | -0.4057 | -0.0047 | 0.0031 | 0.0007 | [illegible] |
| 13 | 23.97 | -0.00 | 1.2193 | 0.5476 | -0.4471 | -0.0076 | 0.0044 | 0.0007 | [illegible] |
| 14 | 25.97 | -0.00 | 1.2653 | 0.6244 | -0.4596 | -0.0022 | 0.0018 | 0.0004 | [illegible] |
| 15 | 28.01 | -0.00 | 1.2675 | 0.6929 | -0.4507 | 0.0139 | -0.0061 | 0.0005 | [illegible] |
| 16 | 0.00 | 0.00 | 0.0398 | 0.0329 | -0.0208 | -0.0083 | -0.0010 | 0.0013 | [illegible] |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 45

TEMP = 92.
RN/FTX10-6= 0.451332 VEL-FPS= 75.506

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0344 | 0.0352 | -0.0181 | -0.0028 | -0.0014 | 0.0006 | 0.9774 |
| 2 | 0.00 | -6.00 | 0.0411 | 0.0304 | -0.0271 | 0.0981 | 0.0040 | -0.0232 | 1.3509 |
| 3 | 0.00 | -4.00 | 0.0379 | 0.0328 | -0.0212 | 0.0599 | 0.0022 | -0.0154 | 1.1562 |
| 4 | 0.00 | -2.00 | 0.0356 | 0.0352 | -0.0202 | 0.0353 | 0.0002 | -0.0076 | 1.0126 |
| 5 | 0.00 | 0.00 | 0.0332 | 0.0353 | -0.0204 | -0.0110 | -0.0016 | 0.0025 | 0.9410 |
| 6 | -0.00 | 1.99 | 0.0341 | 0.0330 | -0.0208 | -0.0357 | -0.0036 | 0.0093 | 1.0346 |
| 7 | -0.00 | 3.99 | 0.0370 | 0.0331 | -0.0261 | -0.0685 | -0.0048 | 0.0174 | 1.1186 |
| 8 | -0.00 | 5.99 | 0.0433 | 0.0308 | -0.0297 | -0.0986 | -0.0067 | 0.0244 | 1.4037 |
| 9 | 0.00 | 0.00 | 0.0321 | 0.0352 | -0.0194 | -0.0083 | -0.0017 | 0.0019 | 0.9118 |

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ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 46

TEMP = 92.
RN/FTX10-6= 0.451348 VEL-FPS= 75.503

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5694 | 0.1161 | -0.2066 | -0.0066 | -0.0011 | 0.0016 | 4.9044 |
| 2 | 10.01 | -6.00 | 0.5770 | 0.1125 | -0.2137 | 0.0974 | 0.0073 | -0.0254 | 5.1267 |
| 3 | 10.01 | -4.00 | 0.5734 | 0.1142 | -0.2092 | 0.0645 | 0.0044 | -0.0161 | 5.0174 |
| 4 | 10.01 | -2.00 | 0.5707 | 0.1162 | -0.2063 | 0.0289 | 0.0018 | -0.0072 | 4.9098 |
| 5 | 10.01 | -0.00 | 0.5715 | 0.1165 | -0.2077 | -0.0121 | -0.0010 | 0.0018 | 4.9060 |
| 6 | 10.01 | 1.99 | 0.5670 | 0.1157 | -0.2073 | -0.0341 | -0.0050 | 0.0099 | 4.8979 |
| 7 | 10.01 | 3.99 | 0.5703 | 0.1141 | -0.2116 | -0.0698 | -0.0076 | 0.0193 | 4.9933 |
| 8 | 10.01 | 5.99 | 0.5715 | 0.1120 | -0.2138 | -0.0973 | -0.0104 | 0.0262 | 5.1015 |
| 9 | 10.01 | -0.00 | 0.5705 | 0.1163 | -0.2071 | -0.0012 | -0.0018 | 0.0004 | 4.9057 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 47

TEMP = 92.
RE/FTX10-6= 0.451332 VEL-FPS= 75.506

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.0452 | 0.3921 | -0.3764 | 0.0007 | 0.0005 | 0.0010 | 2.6651 |
| 2 | 20.10 | -6.00 | 1.0537 | 0.3877 | -0.3881 | 0.0934 | -0.0043 | -0.0199 | 2.7171 |
| 3 | 20.10 | -4.00 | 1.0509 | 0.3892 | -0.3828 | 0.0661 | -0.0045 | -0.0148 | 2.6987 |
| 4 | 20.10 | -2.00 | 1.0443 | 0.3918 | -0.3759 | 0.0252 | -0.0029 | -0.0054 | 2.6652 |
| 5 | 20.10 | -0.00 | 1.0452 | [illegible] | -0.3760 | 0.0035 | 0.0011 | 0.0007 | 2.6652 |
| 6 | 20.09 | 1.99 | 1.0418 | [illegible] | -0.3775 | -0.0293 | 0.0022 | 0.0083 | 2.6644 |
| 7 | 20.09 | 3.99 | 1.0373 | [illegible] | -0.3770 | -0.0674 | 0.0061 | 0.0163 | 2.6809 |
| 8 | 20.09 | 5.99 | 1.0376 | [illegible] | -0.3853 | -0.0840 | 0.0047 | 0.0215 | 2.6973 |
| 9 | 20.10 | -0.00 | 1.0462 | 0.3925 | -0.3765 | 0.0062 | 0.0011 | 0.0000 | 2.6653 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 48

TEMP = 92.
RN/FTX10-6= 0.451348 VEL-FPS= 75.503

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(10)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2759 | 0.0556 | -0.2071 | -0.0046 | -0.0024 | 0.0016 | 4.9562 |
| 2 | 2.01 | -0.00 | 0.3723 | 0.0690 | -0.2424 | -0.0021 | -0.0020 | -0.0000 | 5.3957 |
| 3 | 4.03 | -0.00 | 0.4772 | 0.0828 | -0.2814 | -0.0023 | -0.0020 | 0.0000 | 5.7610 |
| 4 | 5.86 | -0.00 | 0.5828 | 0.1024 | -0.3199 | 0.0001 | -0.0020 | -0.0004 | 5.6897 |
| 5 | 7.99 | -0.00 | 0.7038 | 0.1371 | -0.3626 | -0.0001 | -0.0020 | -0.0003 | 5.1323 |
| 6 | 10.01 | -0.00 | 0.8039 | 0.1830 | -0.3977 | -0.0030 | -0.0014 | 0.0002 | 4.3930 |
| 7 | 12.01 | -0.00 | 0.8931 | 0.2339 | -0.4289 | -0.0004 | -0.0020 | 0.0003 | 3.8176 |
| 8 | 14.00 | -0.00 | 0.9863 | 0.2926 | -0.4586 | -0.0004 | 0.0004 | 0.0003 | 3.3705 |
| 9 | 16.03 | -0.00 | 1.0745 | 0.3560 | -0.4891 | -0.0006 | -0.0002 | 0.0011 | 3.0175 |
| 10 | 18.01 | -0.00 | 1.1512 | 0.4198 | -0.5136 | -0.0006 | 0.0004 | 0.0008 | 2.7418 |
| 11 | 20.10 | -0.00 | 1.2181 | 0.4918 | -0.5341 | -0.0006 | 0.0008 | 0.0006 | 2.4767 |
| 12 | 22.03 | -0.00 | 1.2887 | 0.5708 | -0.5594 | -0.0088 | 0.0027 | 0.0019 | 2.2576 |
| 13 | 23.97 | -0.00 | 1.3384 | 0.6402 | -0.5722 | -0.0007 | 0.0013 | 0.0003 | 2.0905 |
| 14 | 25.97 | -0.00 | 1.3608 | 0.7112 | -0.5704 | -0.0141 | 0.0044 | 0.0022 | 1.9134 |
| 15 | 28.01 | -0.00 | 1.3307 | 0.7646 | -0.5434 | -0.0165 | 0.0045 | 0.0039 | 1.7403 |
| 16 | 0.00 | 0.00 | 0.2769 | 0.0533 | -0.2085 | -0.0074 | -0.0027 | 0.0017 | 5.1908 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 49

TEMP = 90.
RN/FTX10-6= 0.453438 VEL-FPS= 75.366

PO= 14.4057
MACH= 0.0674

CONF= W2B1V1E(-10)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2157 | 0.0382 | 0.1711 | -0.0038 | -0.0013 | 0.0009 | -5.6336 |
| 2 | 2.01 | -0.00 | -0.1207 | 0.0366 | 0.1354 | -0.0067 | -0.0012 | 0.0011 | -3.2949 |
| 3 | 4.03 | -0.00 | -0.0090 | 0.0358 | 0.0969 | -0.0042 | -0.0002 | 0.0004 | -0.2529 |
| 4 | 5.86 | -0.00 | 0.0829 | 0.0406 | 0.0650 | -0.0098 | -0.0009 | 0.0018 | 2.0435 |
| 5 | 7.99 | -0.00 | 0.2039 | 0.0539 | 0.0268 | -0.0046 | -0.0013 | 0.0006 | 3.7773 |
| 6 | 10.01 | -0.00 | 0.3187 | 0.0796 | -0.0120 | -0.0075 | -0.0004 | 0.0012 | 4.0039 |
| 7 | 12.01 | -0.00 | 0.4280 | 0.1148 | -0.0541 | -0.0050 | -0.0007 | 0.0012 | 3.7274 |
| 8 | 14.00 | -0.00 | 0.5422 | 0.1521 | -0.0945 | -0.0107 | -0.0000 | 0.0018 | 3.5649 |
| 9 | 16.03 | -0.00 | 0.6430 | 0.1971 | -0.1327 | -0.0081 | 0.0008 | 0.0021 | 3.2608 |
| 10 | 18.01 | -0.00 | 0.7480 | 0.2535 | -0.1698 | -0.0029 | -0.0002 | 0.0017 | 2.9499 |
| 11 | 20.10 | -0.00 | 0.8495 | 0.3115 | -0.2059 | -0.0004 | -0.0001 | 0.0010 | 2.7272 |
| 12 | 22.03 | -0.00 | 0.9399 | 0.3766 | -0.2423 | -0.0060 | 0.0009 | 0.0014 | 2.4819 |
| 13 | 23.97 | -0.00 | 1.0353 | 0.4487 | -0.2803 | -0.0062 | 0.0015 | 0.0017 | 2.3069 |
| 14 | 25.97 | -0.00 | 1.0942 | 0.5240 | -0.3035 | -0.0009 | -0.0002 | 0.0000 | 2.0882 |
| 15 | 28.01 | -0.00 | 1.1251 | 0.5918 | -0.3101 | -0.0035 | 0.0014 | 0.0015 | 1.9010 |
| 16 | 0.00 | 0.00 | -0.2136 | 0.0336 | 0.1692 | -0.0147 | -0.0012 | 0.0023 | -6.3498 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 50

TEMP = 92.

PO= 14.4057
RN/FTX10-6= 0.451316 VEL-FPS= 75.508 MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0383 | 0.0516 | -0.0199 | -0.0055 | -0.0010 | 0.0013 | 0.7514 |
| 2 | 2.01 | -0.00 | 0.1292 | 0.0305 | -0.0421 | -0.0111 | -0.0008 | 0.0020 | 4.2285 |
| 3 | 4.03 | -0.00 | 0.2441 | 0.0457 | -0.0718 | -0.0084 | -0.0011 | 0.0014 | 5.3391 |
| 4 | 5.86 | -0.00 | 0.3449 | 0.0571 | -0.1005 | -0.0031 | -0.0015 | 0.0002 | 6.0371 |
| 5 | 7.99 | -0.00 | 0.4713 | 0.0834 | -0.1374 | -0.0060 | -0.0014 | 0.0004 | 5.6473 |
| 6 | 10.01 | -0.00 | 0.5831 | 0.1180 | -0.1702 | -0.0089 | -0.0007 | 0.0015 | 4.9380 |
| 7 | 12.01 | -0.00 | 0.6923 | 0.1627 | -0.2053 | -0.0008 | -0.0009 | 0.0002 | 4.2546 |
| 8 | 14.00 | -0.00 | 0.7991 | 0.2100 | -0.2398 | -0.0092 | -0.0004 | 0.0015 | 3.8039 |
| 9 | 16.03 | -0.00 | 0.9019 | 0.2702 | -0.2730 | 0.0015 | -0.0003 | 0.0006 | 3.3373 |
| 10 | 18.01 | -0.00 | 1.0016 | 0.3322 | -0.3139 | 0.0040 | -0.0005 | 0.0000 | 3.0144 |
| 11 | 20.10 | -0.00 | 1.1168 | 0.4130 | -0.3611 | -0.0016 | -0.0002 | 0.0013 | 2.7035 |
| 12 | 22.03 | -0.00 | 1.2139 | 0.4984 | -0.4019 | -0.0018 | 0.0014 | 0.0006 | 2.4353 |
| 13 | 23.97 | -0.00 | 1.2868 | 0.5772 | -0.4249 | -0.0019 | 0.0001 | 0.0006 | 2.2294 |
| 14 | 25.97 | -0.00 | 1.3220 | 0.6542 | -0.4317 | -0.0072 | 0.0018 | -0.0000 | 2.0206 |
| 15 | 28.01 | -0.00 | 1.3590 | 0.7358 | -0.4364 | 0.0065 | 0.0005 | -0.0030 | 1.8468 |
| 16 | 0.00 | 0.00 | 0.0377 | 0.0329 | -0.0183 | -0.0055 | -0.0014 | 0.0013 | 1.1465 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 51

TEMP = 92. PO= 14.4057
RN/FTX10-6= 0.451316 VEL-FPS= 75.508 MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0378 | 0.0329 | -0.0164 | -0.0082 | -0.0010 | 0.0019 | 1.1495 |
| 2 | 0.00 | -6.00 | 0.0468 | 0.0280 | -0.0232 | 0.1009 | 0.0039 | -0.0233 | 1.6689 |
| 3 | 0.00 | -4.00 | 0.0391 | 0.0304 | -0.0194 | 0.0709 | 0.0020 | -0.0163 | 1.2864 |
| 4 | 0.00 | -2.00 | 0.0400 | 0.0328 | -0.0199 | 0.0353 | 0.0006 | -0.0081 | 1.2197 |
| 5 | 0.00 | 0.00 | 0.0389 | 0.0329 | -0.0165 | -0.0055 | -0.0014 | 0.0013 | 1.1832 |
| 6 | -0.00 | 1.99 | 0.0375 | 0.0330 | -0.0182 | -0.0520 | -0.0030 | 0.0109 | 1.1373 |
| 7 | -0.00 | 3.99 | 0.0416 | 0.0307 | -0.0226 | -0.0684 | -0.0048 | 0.0174 | 1.3537 |
| 8 | -0.00 | 5.99 | 0.0424 | 0.0285 | -0.0267 | -0.0931 | -0.0068 | 0.0231 | 1.4576 |
| 9 | 0.00 | 0.00 | 0.0389 | 0.0329 | -0.0156 | -0.0110 | -0.0016 | 0.0025 | 1.1837 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 52

TEMP = 92.
RN/FTX10-6= 0.451316 VEL-FPS= 75.508

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5899 | 0.1169 | -0.1720 | -0.0007 | -0.0014 | 0.0002 | 5.0461 |
| 2 | 10.01 | -6.00 | 0.5991 | 0.1111 | -0.1781 | 0.1007 | 0.0086 | -0.0264 | 5.3877 |
| 3 | 10.01 | -4.00 | 0.5939 | 0.1150 | -0.1737 | 0.0569 | 0.0059 | -0.0162 | 5.1603 |
| 4 | 10.01 | -2.00 | 0.5917 | 0.1147 | -0.1711 | 0.0430 | 0.0011 | -0.0104 | 5.1572 |
| 5 | 10.01 | -0.00 | 0.5921 | 0.1173 | -0.1712 | -0.0143 | -0.0009 | 0.0017 | 5.0475 |
| 6 | 10.01 | 1.99 | 0.5901 | 0.1146 | -0.1723 | -0.0309 | -0.0048 | 0.0091 | 5.1472 |
| 7 | 10.01 | 3.99 | 0.5919 | 0.1151 | -0.1756 | -0.0721 | -0.0080 | 0.0182 | 5.1426 |
| 8 | 10.01 | 5.99 | 0.5956 | 0.1111 | -0.1798 | -0.1023 | -0.0112 | 0.0265 | 5.3601 |
| 9 | 10.01 | -0.00 | 0.5889 | 0.1167 | -0.1700 | -0.0034 | -0.0015 | 0.0009 | 5.0457 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 53

TEMP = 92.
RN/FTX10-6= 0.451267 VEL-FPS= 75.516

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1093 | 0.4152 | -0.3562 | 0.0038 | -0.0002 | 0.0005 | 2.6713 |
| 2 | 20.10 | -6.00 | 1.1232 | 0.4127 | -0.3654 | 0.0944 | 0.0079 | -0.0266 | 2.7215 |
| 3 | 20.10 | -4.00 | 1.1221 | 0.4149 | -0.3678 | 0.0724 | 0.0055 | -0.0196 | 2.7046 |
| 4 | 20.10 | -2.00 | 1.1172 | 0.4156 | -0.3628 | 0.0340 | -0.0029 | -0.0098 | 2.6879 |
| 5 | 20.10 | -0.00 | 1.1164 | 0.4178 | -0.3591 | 0.0038 | -0.0008 | 0.0007 | 2.6716 |
| 6 | 20.09 | 1.99 | 1.1218 | 0.4175 | -0.3644 | -0.0401 | -0.0027 | 0.0123 | 2.6868 |
| 7 | 20.09 | 3.99 | 1.1224 | 0.4153 | -0.3657 | -0.0649 | -0.0058 | 0.0213 | 2.7025 |
| 8 | 20.09 | 5.99 | 1.1207 | 0.4123 | -0.3705 | -0.0952 | -0.0080 | 0.0285 | 2.7177 |
| 9 | 20.10 | -0.00 | 1.1163 | 0.4178 | -0.3609 | 0.0065 | -0.0007 | 0.0001 | 2.6715 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 54

TEMP = 92.

PO= 14.4057
RN/FTX10-6= 0.451348 VEL-FPS= 75.503 MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0313 | 0.0399 | -0.0143 | -0.0055 | -0.0014 | 0.0018 | 0.7849 |
| 2 | 0.00 | -6.00 | 0.0403 | 0.0350 | -0.0211 | 0.0982 | 0.0043 | -0.0232 | 1.1500 |
| 3 | 0.00 | -4.00 | 0.0359 | 0.0374 | -0.0175 | 0.0764 | 0.0020 | -0.0160 | 0.9606 |
| 4 | 0.00 | -2.00 | 0.0359 | 0.0398 | -0.0143 | 0.0354 | 0.0003 | -0.0081 | 0.9024 |
| 5 | 0.00 | 0.00 | 0.0369 | 0.0398 | -0.0129 | -0.0055 | -0.0014 | 0.0012 | 0.9254 |
| 6 | -0.00 | 1.99 | 0.0344 | 0.0376 | -0.0153 | -0.0301 | -0.0037 | 0.0086 | 0.9152 |
| 7 | -0.00 | 3.99 | 0.0428 | 0.0377 | -0.0197 | -0.0630 | -0.0055 | 0.0162 | 1.1368 |
| 8 | -0.00 | 5.99 | 0.0436 | 0.0355 | -0.0243 | -0.1013 | -0.0063 | 0.0234 | 1.2265 |
| 9 | 0.00 | 0.00 | 0.0357 | 0.0399 | -0.0151 | -0.0000 | -0.0014 | 0.0011 | 0.8950 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 55

TEMP = 92.

PO= 14.4057
RN/FTX10-6= 0.451364 VEL-FPS= 75.500 MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRN | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5982 | 0.1204 | -0.1488 | -0.0058 | -0.0007 | 0.0013 | 4.9654 |
| 2 | 10.01 | -6.00 | 0.6080 | 0.1172 | -0.1561 | 0.0956 | 0.0098 | -0.0260 | 5.1852 |
| 3 | 10.01 | -4.00 | 0.6022 | 0.1186 | -0.1510 | 0.0736 | 0.0053 | -0.0189 | 5.0763 |
| 4 | 10.01 | -2.00 | 0.6016 | 0.1209 | -0.1501 | 0.0379 | 0.0024 | -0.0095 | 4.9729 |
| 5 | 10.01 | -0.00 | 0.5994 | 0.1206 | -0.1485 | 0.0132 | -0.0005 | -0.0015 | 4.9826 |
| 6 | 10.01 | 1.99 | 0.6011 | 0.1210 | -0.1513 | -0.0279 | -0.0048 | 0.0089 | 4.9648 |
| 7 | 10.01 | 3.99 | 0.6023 | 0.1190 | -0.1550 | -0.0581 | -0.0084 | 0.0167 | 5.0601 |
| 8 | 10.01 | 5.99 | 0.6045 | 0.1171 | -0.1578 | -0.1048 | -0.0116 | 0.0238 | 5.1585 |
| 9 | 10.01 | -0.00 | 0.6014 | 0.1210 | -0.1500 | -0.0031 | -0.0008 | 0.0007 | 4.9686 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 56

TEMP = 92.
RN/FTX10-6= 0.451364 VEL-FPS= 75.500

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1348 | 0.4192 | -0.3308 | -0.0011 | 0.0010 | -0.0021 | 2.7067 |
| 2 | 20.10 | -6.00 | 1.1497 | 0.4171 | -0.3434 | 0.1003 | 0.0089 | -0.0307 | 2.7565 |
| 3 | 20.10 | -4.00 | 1.1469 | 0.4185 | -0.3371 | 0.0673 | 0.0049 | -0.0205 | 2.7400 |
| 4 | 20.10 | -2.00 | 1.1393 | 0.4207 | -0.3274 | 0.0263 | 0.0038 | -0.0100 | 2.7076 |
| 5 | 20.10 | -0.00 | 1.1360 | 0.4196 | -0.3280 | 0.0097 | 0.0002 | -0.0028 | 2.7071 |
| 6 | 20.09 | 1.99 | 1.1387 | 0.4207 | -0.3324 | -0.0314 | -0.0015 | 0.0079 | 2.7062 |
| 7 | 20.09 | 3.99 | 1.1410 | 0.4192 | -0.3398 | -0.0590 | -0.0042 | 0.0198 | 2.7213 |
| 8 | 20.09 | 5.99 | 1.1444 | 0.4181 | -0.3455 | -0.0838 | -0.0070 | 0.0276 | 2.7367 |
| 9 | 20.10 | -0.00 | 1.1465 | 0.4285 | -0.3347 | -0.0011 | 0.0022 | -0.0020 | 2.6754 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 57

TEMP = 92.
RN/FTX10-6= 0.451332 VEL-FPS= 75.506

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0259 | 0.0328 | -0.0118 | -0.0027 | -0.0011 | 0.0017 | 0.7889 |
| 2 | 2.01 | -0.00 | 0.1294 | 0.0398 | -0.0327 | -0.0027 | -0.0006 | 0.0011 | 3.2501 |
| 3 | 4.03 | -0.00 | 0.2432 | 0.0525 | -0.0589 | -0.0028 | -0.0005 | 0.0006 | 4.6286 |
| 4 | 5.86 | -0.00 | 0.3505 | 0.0645 | -0.0839 | -0.0001 | -0.0004 | 0.0005 | 5.4297 |
| 5 | 7.99 | -0.00 | 0.4801 | 0.0915 | -0.1173 | -0.0030 | -0.0009 | 0.0007 | 5.2451 |
| 6 | 10.01 | -0.00 | 0.5944 | 0.1293 | -0.1495 | -0.0031 | -0.0006 | 0.0001 | 4.5965 |
| 7 | 12.01 | -0.00 | 0.7034 | 0.1743 | -0.1804 | -0.0004 | -0.0005 | 0.0000 | 4.0346 |
| 8 | 14.00 | -0.00 | 0.8168 | 0.2213 | -0.2148 | -0.0005 | 0.0006 | 0.0003 | 3.6898 |
| 9 | 16.03 | -0.00 | 0.9170 | 0.2815 | -0.2488 | -0.0034 | 0.0006 | 0.0009 | 3.2566 |
| 10 | 18.01 | -0.00 | 1.0268 | 0.3548 | -0.2886 | 0.0045 | 0.0006 | -0.0010 | 2.8934 |
| 11 | 20.10 | -0.00 | 1.1236 | 0.4251 | -0.3262 | -0.0011 | 0.0007 | -0.0032 | 2.6432 |
| 12 | 22.03 | -0.00 | 1.2332 | 0.5108 | -0.3691 | 0.0040 | -0.0000 | -0.0013 | 2.4139 |
| 13 | 23.97 | -0.00 | 1.3070 | 0.5933 | -0.3849 | 0.0014 | 0.0011 | -0.0013 | 2.2029 |
| 14 | 25.97 | -0.00 | 1.3699 | 0.6875 | -0.4021 | 0.0095 | -0.0015 | -0.0039 | 1.9926 |
| 15 | 28.01 | -0.00 | 1.3678 | 0.7556 | -0.3783 | 0.0022 | 0.0080 | -0.0060 | 1.8102 |
| 16 | 0.00 | 0.00 | 0.0412 | 0.0399 | -0.0150 | -0.0082 | -0.0010 | 0.0019 | 1.0326 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 58

TEMP = 92.
RN/FTX10-6= 0.451348 VEL-FPS= 75.503

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(10)SC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2653 | 0.0485 | -0.1977 | 0.0036 | -0.0015 | 0.0002 | 5.4665 |
| 2 | 2.01 | -0.00 | 0.3723 | 0.0640 | -0.2226 | 0.0008 | -0.0014 | -0.0001 | 5.8093 |
| 3 | 4.03 | -0.00 | 0.4927 | 0.0835 | -0.2535 | 0.0035 | -0.0013 | -0.0002 | 5.8966 |
| 4 | 5.86 | -0.00 | 0.6075 | 0.1045 | -0.2824 | 0.0034 | -0.0016 | -0.0001 | 5.8141 |
| 5 | 7.99 | -0.00 | 0.7355 | 0.1409 | -0.3149 | 0.0006 | -0.0011 | -0.0001 | 5.2170 |
| 6 | 10.01 | -0.00 | 0.8468 | 0.1875 | -0.3465 | -0.0022 | -0.0005 | 0.0004 | 4.5157 |
| 7 | 12.01 | -0.00 | 0.9488 | 0.2427 | -0.3786 | -0.0023 | -0.0002 | -0.0001 | 3.9091 |
| 8 | 14.00 | -0.00 | 1.0566 | 0.3022 | -0.4098 | 0.0057 | -0.0001 | -0.0010 | 3.4963 |
| 9 | 16.03 | -0.00 | 1.1477 | 0.3690 | -0.4372 | 0.0002 | 0.0009 | -0.0000 | 3.1098 |
| 10 | 18.01 | -0.00 | 1.2419 | 0.4436 | -0.4679 | 0.0083 | 0.0002 | -0.0012 | 2.7989 |
| 11 | 20.10 | -0.00 | 1.3466 | 0.5283 | -0.5117 | 0.0080 | -0.0007 | -0.0020 | 2.5487 |
| 12 | 22.03 | -0.00 | 1.4330 | 0.6186 | -0.5436 | 0.0079 | -0.0007 | -0.0020 | 2.3164 |
| 13 | 23.97 | -0.00 | 1.4718 | 0.6988 | -0.5417 | 0.0081 | 0.0004 | -0.0020 | 2.1060 |
| 14 | 25.97 | -0.00 | 1.4540 | 0.7685 | -0.5063 | 0.0194 | -0.0046 | -0.0055 | 1.8917 |
| 15 | 28.01 | -0.00 | 1.4624 | 0.8415 | -0.4884 | -0.0043 | 0.0067 | -0.0030 | 1.7377 |
| 16 | 0.00 | 0.00 | 0.2773 | 0.0555 | -0.2016 | 0.0008 | -0.0021 | 0.0003 | 4.9877 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60 RUN NO. 59

TEMP = 92. PO= 14.4057
RN/FTX10-6= 0.451316 VEL-FPS= 75.508 MACH= 0.0675

CONF= W2B1V1E(-10)SC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2137 | 0.0313 | 0.1684 | -0.0092 | -0.0010 | 0.0022 | -6.8265 |
| 2 | 2.01 | -0.00 | -0.1144 | 0.0343 | 0.1505 | -0.0092 | -0.0004 | 0.0016 | -3.3324 |
| 3 | 4.03 | -0.00 | -0.0075 | 0.0355 | 0.1296 | -0.0092 | -0.0002 | 0.0021 | -0.2132 |
| 4 | 5.86 | -0.00 | 0.1038 | 0.0398 | 0.1066 | -0.0011 | -0.0007 | 0.0008 | 2.6037 |
| 5 | 7.99 | -0.00 | 0.2244 | 0.0586 | 0.0771 | -0.0066 | -0.0004 | 0.0010 | 3.8239 |
| 6 | 10.01 | -0.00 | 0.3462 | 0.0837 | 0.0429 | -0.0040 | -0.0000 | 0.0008 | 4.1331 |
| 7 | 12.01 | -0.00 | 0.4612 | 0.1210 | 0.0093 | -0.0014 | -0.0000 | 0.0007 | 3.8087 |
| 8 | 14.00 | -0.00 | 0.5770 | 0.1575 | -0.0273 | -0.0016 | -0.0003 | 0.0003 | 3.6635 |
| 9 | 16.03 | -0.00 | 0.6907 | 0.2100 | -0.0634 | -0.0017 | 0.0001 | 0.0007 | 3.2893 |
| 10 | 18.01 | -0.00 | 0.8025 | 0.2703 | -0.1038 | 0.0008 | 0.0010 | -0.0002 | 2.9680 |
| 11 | 20.10 | -0.00 | 0.9176 | 0.3380 | -0.1515 | 0.0005 | 0.0012 | -0.0026 | 2.7140 |
| 12 | 22.03 | -0.00 | 1.0312 | 0.4199 | -0.1979 | -0.0052 | -0.0000 | -0.0007 | 2.4555 |
| 13 | 23.97 | -0.00 | 1.1259 | 0.4983 | -0.2222 | 0.0029 | 0.0013 | -0.0017 | 2.2591 |
| 14 | 25.97 | -0.00 | 1.1982 | 0.5814 | -0.2394 | 0.0083 | -0.0023 | -0.0031 | 2.0608 |
| 15 | 28.01 | -0.00 | 1.2475 | 0.6664 | -0.2433 | 0.0087 | 0.0023 | -0.0058 | 1.8720 |
| 16 | 0.00 | 0.00 | -0.2070 | 0.0383 | 0.1681 | -0.0092 | -0.0009 | 0.0016 | -5.4041 |

C2

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 60
QPSF = 6.60

RUN NO. 60

TEMP = 91.
RN/FTX10-6= 0.452148 VEL-FPS= 75.475

PO= 14.3860
MACH= 0.0675

CONF= W2B1V1E(0)GC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0300 | 0.0352 | -0.0197 | 0.0026 | -0.0008 | 0.0010 | 0.8505 |
| 2 | 2.01 | -0.00 | 0.1286 | 0.0376 | -0.0517 | -0.0003 | -0.0017 | 0.0017 | 3.4146 |
| 3 | 4.03 | -0.00 | 0.2368 | 0.0477 | -0.0849 | -0.0004 | -0.0009 | 0.0012 | 4.9645 |
| 4 | 5.86 | -0.00 | 0.3407 | 0.0592 | -0.1172 | 0.0020 | -0.0014 | -0.0003 | 5.7514 |
| 5 | 7.99 | -0.00 | 0.4616 | 0.0846 | -0.1518 | 0.0019 | -0.0010 | -0.0004 | 5.4552 |
| 6 | 10.01 | -0.00 | 0.5804 | 0.1225 | -0.1880 | 0.0017 | -0.0015 | -0.0002 | 4.7360 |
| 7 | 12.01 | -0.00 | 0.6892 | 0.1693 | -0.2181 | -0.0037 | 0.0001 | 0.0006 | 4.0658 |
| 8 | 14.00 | -0.00 | 0.8029 | 0.2207 | -0.2490 | -0.0037 | 0.0006 | 0.0005 | 3.6373 |
| 9 | 16.03 | -0.00 | 0.9318 | 0.2863 | -0.2934 | -0.0039 | 0.0020 | 0.0000 | 3.2545 |
| 10 | 18.01 | -0.00 | 1.0723 | 0.3603 | -0.3397 | 0.0013 | 0.0019 | -0.0001 | 2.9759 |
| 11 | 20.10 | -0.00 | 1.2148 | 0.4465 | -0.3864 | 0.0010 | 0.0019 | -0.0007 | 2.7206 |
| 12 | 22.03 | -0.00 | 1.3133 | 0.5258 | -0.4043 | 0.0038 | 0.0020 | -0.0004 | 2.4975 |
| 13 | 23.97 | -0.00 | 1.3761 | 0.5984 | -0.4024 | 0.0014 | 0.0046 | 0.0000 | 2.2993 |
| 14 | 25.97 | -0.00 | 1.4034 | 0.6749 | -0.3922 | 0.0043 | 0.0014 | 0.0007 | 2.0791 |
| 15 | 28.01 | -0.00 | 1.4609 | 0.7655 | -0.4021 | -0.0008 | 0.0044 | 0.0016 | 1.9083 |
| 16 | 0.00 | 0.00 | 0.0386 | 0.0353 | -0.0217 | -0.0083 | -0.0010 | 0.0024 | 1.0958 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 61
QPSF = 6.60 RUN NO. 61

TEMP = 91. PO= 14.3860
RN/FTX10-6= 0.452051 VEL-FPS= 75.491 MACH= 0.0675

CONF= W2B1V1E(0)GC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0234 | 0.0329 | -0.0177 | 0.0026 | -0.0009 | 0.0010 | 0.7130 |
| 2 | 2.01 | -0.00 | 0.1264 | 0.0352 | -0.0533 | -0.0057 | -0.0009 | 0.0019 | 3.5836 |
| 3 | 4.03 | -0.00 | 0.2216 | 0.0419 | -0.0873 | -0.0005 | -0.0003 | 0.0006 | 5.2782 |
| 4 | 5.86 | -0.00 | 0.3279 | 0.0509 | -0.1230 | -0.0007 | -0.0006 | 0.0001 | 6.4559 |
| 5 | 7.99 | -0.00 | 0.4536 | 0.0742 | -0.1639 | 0.0017 | -0.0010 | -0.0003 | 6.1136 |
| 6 | 10.01 | -0.00 | 0.5699 | 0.1137 | -0.2056 | 0.0015 | -0.0009 | -0.0003 | 5.0087 |
| 7 | 12.01 | -0.00 | 0.6777 | 0.1600 | -0.2407 | 0.0068 | -0.0004 | -0.0011 | 4.2350 |
| 8 | 14.00 | -0.00 | 0.7918 | 0.2135 | -0.2807 | 0.0012 | 0.0003 | -0.0000 | 3.7081 |
| 9 | 16.03 | -0.00 | 0.9245 | 0.2773 | -0.3327 | -0.0017 | 0.0023 | -0.0005 | 3.3331 |
| 10 | 18.01 | -0.00 | 1.0588 | 0.3491 | -0.3846 | 0.0034 | 0.0016 | -0.0016 | 3.0328 |
| 11 | 20.10 | -0.00 | 1.1956 | 0.4376 | -0.4372 | 0.0004 | 0.0021 | -0.0006 | 2.7319 |
| 12 | 22.03 | -0.00 | 1.2899 | 0.5146 | -0.4646 | 0.0085 | 0.0015 | -0.0019 | 2.5065 |
| 13 | 23.97 | -0.00 | 1.3548 | 0.5925 | -0.4734 | 0.0058 | 0.0006 | -0.0009 | 2.2866 |
| 14 | 25.97 | -0.00 | 1.4006 | 0.6668 | -0.4772 | 0.0007 | 0.0058 | -0.0035 | 2.1003 |
| 15 | 28.01 | -0.00 | 1.4361 | 0.7533 | -0.4783 | 0.0007 | 0.0029 | -0.0028 | 1.9062 |
| 16 | 0.00 | 0.00 | 0.0364 | 0.0353 | -0.0220 | -0.0056 | -0.0007 | 0.0013 | 1.0335 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 62

TEMP = 91.
RN/FTX10-6= 0.452027 VEL-FPS= 75.495

PD= 14.3811
MACH= 0.0675

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0342 | 0.0353 | -0.0219 | -0.0110 | -0.0010 | 0.0020 | 0.9704 |
| 2 | 2.01 | -0.00 | 0.1286 | 0.0376 | -0.0522 | -0.0030 | -0.0010 | 0.0012 | 3.4136 |
| 3 | 4.03 | -0.00 | 0.2314 | 0.0450 | -0.0867 | -0.0086 | -0.0001 | 0.0019 | 5.1403 |
| 4 | 5.86 | -0.00 | 0.3333 | 0.0538 | -0.1206 | -0.0088 | -0.0004 | 0.0014 | 6.1908 |
| 5 | 7.99 | -0.00 | 0.4551 | 0.0814 | -0.1591 | -0.0036 | -0.0004 | 0.0008 | 5.5878 |
| 6 | 10.01 | -0.00 | 0.5745 | 0.1216 | -0.1988 | -0.0010 | -0.0008 | -0.0002 | 4.7226 |
| 7 | 12.01 | -0.00 | 0.6789 | 0.1673 | -0.2304 | -0.0011 | -0.0000 | 0.0001 | 4.0568 |
| 8 | 14.00 | -0.00 | 0.7936 | 0.2186 | -0.2642 | -0.0039 | 0.0012 | 0.0004 | 3.6302 |
| 9 | 16.03 | -0.00 | 0.9229 | 0.2816 | -0.3165 | -0.0015 | 0.0014 | -0.0002 | 3.2773 |
| 10 | 18.01 | -0.00 | 1.0611 | 0.3520 | -0.3643 | 0.0036 | 0.0018 | -0.0001 | 3.0138 |
| 11 | 20.10 | -0.00 | 1.1987 | 0.4359 | -0.4106 | -0.0047 | 0.0018 | 0.0001 | 2.7494 |
| 12 | 22.03 | -0.00 | 1.3022 | 0.5193 | -0.4412 | -0.0020 | 0.0027 | -0.0004 | 2.5075 |
| 13 | 23.97 | -0.00 | 1.3632 | 0.5932 | -0.4430 | 0.0061 | -0.0006 | 0.0000 | 2.2977 |
| 14 | 25.97 | -0.00 | 1.4071 | 0.6773 | -0.4412 | -0.0015 | 0.0043 | -0.0016 | 2.0772 |
| 15 | 28.01 | -0.00 | 1.4340 | 0.7517 | -0.4378 | -0.0042 | 0.0017 | 0.0009 | 1.9075 |
| 16 | 0.00 | 0.00 | 0.0299 | 0.0353 | -0.0215 | -0.0056 | -0.0011 | 0.0013 | 0.8456 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 63

TEMP = 91. PG= 14.3811
RN/FTX10-6= 0.452027 VEL-FPS= 75.495 MACH= 0.0675

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0278 | 0.0376 | -0.0187 | -0.0055 | -0.0011 | 0.0013 | 0.7397 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0328 | -0.0288 | 0.0954 | 0.0040 | -0.0231 | 1.1838 |
| 3 | 0.00 | -4.00 | 0.0323 | 0.0351 | -0.0223 | 0.0626 | 0.0022 | -0.0144 | 0.9208 |
| 4 | 0.00 | -2.00 | 0.0312 | 0.0352 | -0.0212 | 0.0326 | 0.0006 | -0.0075 | 0.8855 |
| 5 | 0.00 | 0.00 | 0.0288 | 0.0376 | -0.0215 | -0.0001 | -0.0011 | 0.0011 | 0.7653 |
| 6 | -0.00 | 1.99 | 0.0341 | 0.0353 | -0.0223 | -0.0384 | -0.0026 | 0.0088 | 0.9642 |
| 7 | -0.00 | 3.99 | 0.0326 | 0.0331 | -0.0262 | -0.0685 | -0.0042 | 0.0180 | 0.9853 |
| 8 | -0.00 | 5.99 | 0.0388 | 0.0309 | -0.0312 | -0.1013 | -0.0053 | 0.0245 | 1.2581 |
| 9 | 0.00 | 0.00 | 0.0321 | 0.0352 | -0.0203 | -0.0056 | -0.0011 | 0.0013 | 0.9111 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 64

TEMP = 94.
RN/FTX10-6= 0.448896 VEL-FPS= 75.703

PO= 14.3811
MACH= 0.0677

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5742 | 0.1168 | -0.1976 | -0.0010 | -0.0008 | -0.0002 | 4.9151 |
| 2 | 10.01 | -6.00 | 0.5833 | 0.1111 | -0.2042 | 0.0948 | 0.0087 | -0.0256 | 5.2494 |
| 3 | 10.01 | -4.00 | 0.5829 | 0.1134 | -0.2009 | 0.0620 | 0.0057 | -0.0168 | 5.1371 |
| 4 | 10.01 | -2.00 | 0.5770 | 0.1148 | -0.1982 | 0.0263 | 0.0023 | -0.0084 | 5.0229 |
| 5 | 10.01 | -0.00 | 0.5755 | 0.1218 | -0.1993 | -0.0038 | -0.0011 | -0.0001 | 4.7237 |
| 6 | 10.01 | 1.99 | 0.5767 | 0.1197 | -0.1997 | -0.0449 | -0.0042 | 0.0095 | 4.8152 |
| 7 | 10.01 | 3.99 | 0.5769 | 0.1175 | -0.2019 | -0.0670 | -0.0077 | 0.0170 | 4.5092 |
| 8 | 10.01 | 5.99 | 0.5815 | 0.1137 | -0.2080 | -0.1054 | -0.0105 | 0.0249 | 5.1131 |
| 9 | 10.01 | -0.00 | 0.5776 | 0.1222 | -0.1999 | -0.0065 | -0.0004 | -0.0001 | 4.7265 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 65

TEMP = 96.
RN/FTX10-6= 0.446824 VEL-FPS= 75.843

PO= 14.3811
MACH= 0.0678

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1966 | 0.4352 | -0.4109 | -0.0019 | 0.0025 | -0.0008 | 2.7495 |
| 2 | 20.10 | -6.00 | 1.1761 | 0.4199 | -0.4044 | 0.1102 | 0.0017 | -0.0281 | 2.8004 |
| 3 | 20.10 | -4.00 | 1.1835 | 0.4277 | -0.4061 | 0.0691 | 0.0005 | -0.0187 | 2.7667 |
| 4 | 20.10 | -2.00 | 1.1936 | 0.4315 | -0.4087 | 0.0417 | 0.0005 | -0.0102 | 2.7660 |
| 5 | 20.10 | -0.00 | 1.1946 | 0.4344 | -0.4094 | -0.0019 | 0.0020 | -0.0000 | 2.7496 |
| 6 | 20.09 | 1.99 | 1.1942 | 0.4319 | -0.4096 | -0.0430 | 0.0030 | 0.0096 | 2.7649 |
| 7 | 20.09 | 3.99 | 1.1827 | 0.4252 | -0.4033 | -0.0730 | 0.0039 | 0.0184 | 2.7814 |
| 8 | 20.09 | 5.99 | 1.1723 | 0.4214 | -0.4001 | -0.1059 | 0.0026 | 0.0271 | 2.7815 |
| 9 | 20.10 | -0.00 | 1.2051 | 0.4408 | -0.4127 | -0.0019 | 0.0019 | -0.0005 | 2.7338 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 66

TEMP = 95.
RN/FTX10-6= 0.447882 VEL-FPS= 75.769

PO= 14.3811
MACH= 0.0677

CONF= W2B1V1E(10)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2702 | 0.0533 | -0.2104 | -0.0047 | -0.0024 | 0.0010 | 5.0631 |
| 2 | 2.01 | -0.00 | 0.3692 | 0.0619 | -0.2447 | -0.0021 | -0.0020 | 0.0005 | 5.9639 |
| 3 | 4.03 | -0.00 | 0.4766 | 0.0757 | -0.2796 | -0.0023 | -0.0020 | 0.0006 | 6.2937 |
| 4 | 5.86 | -0.00 | 0.5795 | 0.0926 | -0.3160 | 0.0001 | -0.0020 | 0.0000 | 6.2554 |
| 5 | 7.99 | -0.00 | 0.7104 | 0.1380 | -0.3617 | -0.0055 | -0.0012 | -0.0003 | 5.1462 |
| 6 | 10.01 | -0.00 | 0.8121 | 0.1819 | -0.3926 | -0.0001 | -0.0011 | 0.0000 | 4.4625 |
| 7 | 12.01 | -0.00 | 0.9083 | 0.2371 | -0.4165 | -0.0001 | -0.0003 | -0.0000 | 3.8330 |
| 8 | 14.00 | -0.00 | 1.0181 | 0.2980 | -0.4534 | -0.0003 | 0.0000 | -0.0001 | 3.4162 |
| 9 | 16.03 | -0.00 | 1.1578 | 0.3776 | -0.5121 | -0.0032 | 0.0025 | -0.0002 | 3.0656 |
| 10 | 18.01 | -0.00 | 1.2866 | 0.4567 | -0.5573 | -0.0035 | 0.0010 | 0.0001 | 2.8168 |
| 11 | 20.10 | -0.00 | 1.4123 | 0.5457 | -0.5974 | 0.0017 | 0.0018 | 0.0002 | 2.5877 |
| 12 | 22.03 | -0.00 | 1.4605 | 0.6125 | -0.5887 | -0.0060 | 0.0039 | -0.0005 | 2.3845 |
| 13 | 23.97 | -0.00 | 1.4998 | 0.6938 | -0.5807 | 0.0022 | 0.0017 | -0.0006 | 2.1617 |
| 14 | 25.97 | -0.00 | 1.5142 | 0.7672 | -0.5607 | -0.0054 | 0.0050 | 0.0002 | 1.9736 |
| 15 | 28.01 | -0.00 | 1.5302 | 0.8439 | -0.5503 | 0.0081 | -0.0035 | 0.0011 | 1.8132 |
| 16 | 0.00 | 0.00 | 0.2789 | 0.0533 | -0.2134 | -0.0019 | -0.0021 | 0.0004 | 5.2249 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 67

TEMP = 93.
RN/FTX10-6= 0.449849 VEL-FPS= 75.649

PO= 14.3713
MACH= 0.0676

CONF= W2B1V1E(-10)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2189 | 0.0359 | 0.1728 | -0.0037 | -0.0007 | 0.0009 | -6.0934 |
| 2 | 2.01 | -0.00 | -0.1181 | 0.0296 | 0.1383 | -0.0067 | -0.0009 | 0.0016 | -3.9824 |
| 3 | 4.03 | -0.00 | -0.0173 | 0.0328 | 0.1042 | -0.0068 | -0.0004 | 0.0016 | -0.5292 |
| 4 | 5.86 | -0.00 | 0.0825 | 0.0381 | 0.0740 | -0.0070 | -0.0003 | 0.0016 | 2.1667 |
| 5 | 7.99 | -0.00 | 0.2004 | 0.0509 | 0.0384 | -0.0044 | 0.0000 | 0.0009 | 3.9302 |
| 6 | 10.01 | -0.00 | 0.3191 | 0.0747 | 0.0016 | -0.0073 | -0.0003 | 0.0000 | 4.2683 |
| 7 | 12.01 | -0.00 | 0.4426 | 0.1129 | -0.0395 | -0.0102 | 0.0000 | 0.0011 | 3.9152 |
| 8 | 14.00 | -0.00 | 0.5541 | 0.1499 | -0.0708 | -0.0022 | -0.0001 | 0.0004 | 3.6959 |
| 9 | 16.03 | -0.00 | 0.6764 | 0.2040 | -0.1127 | -0.0051 | 0.0006 | 0.0002 | 3.3149 |
| 10 | 18.01 | -0.00 | 0.8171 | 0.2634 | -0.1580 | 0.0028 | 0.0008 | -0.0012 | 3.1017 |
| 11 | 20.10 | -0.00 | 0.9620 | 0.3400 | -0.2102 | -0.0000 | 0.0024 | -0.0000 | 2.8294 |
| 12 | 22.03 | -0.00 | 1.0807 | 0.4203 | -0.2497 | 0.0051 | 0.0019 | -0.0006 | 2.5714 |
| 13 | 23.97 | -0.00 | 1.1802 | 0.4974 | -0.2770 | 0.0051 | 0.0022 | -0.0009 | 2.3724 |
| 14 | 25.97 | -0.00 | 1.2333 | 0.5755 | -0.2801 | 0.0051 | -0.0000 | -0.0005 | 2.1429 |
| 15 | 28.01 | -0.00 | 1.2795 | 0.6441 | -0.2845 | 0.0053 | 0.0016 | -0.0009 | 1.9864 |
| 16 | 0.00 | 0.00 | -0.2081 | 0.0359 | 0.1692 | -0.0065 | -0.0013 | 0.0015 | -5.7872 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 68

TEMP = 94.
RN/FTX10-6= 0.448670 VEL-FPS= 75.741

PO= 14.3615
MACH= 0.0677

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0189 | -0.0028 | -0.0008 | 0.0012 | 0.7261 |
| 2 | 2.01 | -0.00 | 0.1203 | 0.0445 | -0.0598 | -0.0031 | -0.0007 | 0.0012 | 2.7034 |
| 3 | 4.03 | -0.00 | 0.2253 | 0.0424 | -0.1035 | -0.0034 | -0.0003 | 0.0013 | 5.3099 |
| 4 | 5.86 | -0.00 | 0.3262 | 0.0463 | -0.1470 | -0.0010 | -0.0007 | 0.0002 | 7.0365 |
| 5 | 7.99 | -0.00 | 0.4393 | 0.0773 | -0.2000 | -0.0014 | -0.0002 | 0.0008 | 5.6799 |
| 6 | 10.01 | -0.00 | 0.5520 | 0.1087 | -0.2500 | 0.0009 | -0.0006 | 0.0003 | 5.0744 |
| 7 | 12.01 | -0.00 | 0.6502 | 0.1500 | -0.2951 | -0.0020 | -0.0001 | 0.0020 | 4.3325 |
| 8 | 14.00 | -0.00 | 0.7484 | 0.1938 | -0.3419 | -0.0051 | 0.0008 | 0.0013 | 3.8604 |
| 9 | 16.03 | -0.00 | 0.8638 | 0.2535 | -0.4035 | -0.0001 | 0.0005 | 0.0013 | 3.4064 |
| 10 | 18.01 | -0.00 | 0.9893 | 0.3227 | -0.4655 | 0.0021 | 0.0005 | 0.0013 | 3.0657 |
| 11 | 20.10 | -0.00 | 1.1058 | 0.3934 | -0.5174 | -0.0007 | 0.0039 | 0.0013 | 2.8104 |
| 12 | 22.03 | -0.00 | 1.1366 | 0.4434 | -0.5174 | -0.0059 | 0.0074 | 0.0004 | 2.5630 |
| 13 | 23.97 | -0.00 | 1.0750 | 0.4789 | -0.4732 | 0.0078 | -0.0003 | 0.0002 | 2.2446 |
| 14 | 25.97 | -0.00 | 1.0337 | 0.5146 | -0.4527 | 0.0052 | -0.0010 | -0.0005 | 2.0064 |
| 15 | 28.01 | -0.00 | 0.9707 | 0.5406 | -0.4228 | 0.0055 | -0.0012 | -0.0023 | 1.7955 |
| 16 | 0.00 | 0.00 | 0.0364 | 0.0376 | -0.0226 | -0.0056 | -0.0007 | 0.0013 | 0.9686 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 69

TEMP = 92.
RN/FTX10-6= 0.450726 VEL-FPS= 75.607

PO= 14.3615
MACH= 0.0676

CONF= W2B1V1E(0)H2F(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0682 | 0.0508 | 0.0701 | 0.0007 | -0.0007 | -0.0001 | -1.3431 |
| 2 | 2.01 | -0.00 | 0.0346 | 0.0500 | 0.0214 | 0.0031 | -0.0004 | -0.0007 | 0.6907 |
| 3 | 4.03 | -0.00 | 0.1454 | 0.0501 | -0.0285 | 0.0027 | -0.0007 | -0.0006 | 2.8579 |
| 4 | 5.86 | -0.00 | 0.2436 | 0.0536 | -0.0728 | -0.0003 | -0.0010 | -0.0004 | 4.5414 |
| 5 | 7.99 | -0.00 | 0.3663 | 0.0735 | -0.1294 | -0.0007 | -0.0006 | 0.0001 | 4.9827 |
| 6 | 10.01 | -0.00 | 0.4722 | 0.1106 | -0.1775 | -0.0037 | -0.0004 | 0.0003 | 4.2673 |
| 7 | 12.01 | -0.00 | 0.5663 | 0.1434 | -0.2183 | -0.0040 | 0.0000 | 0.0008 | 3.9472 |
| 8 | 14.00 | -0.00 | 0.6545 | 0.1865 | -0.2543 | -0.0042 | -0.0003 | 0.0015 | 3.5090 |
| 9 | 16.03 | -0.00 | 0.7379 | 0.2358 | -0.2902 | -0.0017 | -0.0001 | 0.0008 | 3.1290 |
| 10 | 18.01 | -0.00 | 0.8509 | 0.2962 | -0.3428 | 0.0033 | -0.0001 | 0.0007 | 2.8726 |
| 11 | 20.10 | -0.00 | 0.9497 | 0.3575 | -0.3802 | -0.0022 | 0.0022 | 0.0011 | 2.6587 |
| 12 | 22.03 | -0.00 | 0.9623 | 0.3992 | -0.3654 | -0.0181 | 0.0075 | 0.0034 | 2.4102 |
| 13 | 23.97 | -0.00 | 0.9252 | 0.4367 | -0.3486 | -0.0017 | 0.0019 | -0.0001 | 2.1186 |
| 14 | 25.97 | -0.00 | 0.9043 | 0.4741 | -0.3501 | -0.0045 | 0.0018 | -0.0012 | 1.9075 |
| 15 | 28.01 | -0.00 | 0.8918 | 0.5033 | -0.3534 | -0.0018 | 0.0008 | -0.0002 | 1.7720 |
| 16 | 0.00 | 0.00 | -0.0574 | 0.0532 | 0.0660 | -0.0047 | -0.0009 | 0.0005 | -1.0799 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

04/30/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 70

TEMP = 94.
RN/FTX10-6= 0.448638 VEL-FPS= 75.747

PO= 14.3615
MACH= 0.0677

CONF= W2B1V1E(-10)H2F(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2770 | 0.0518 | 0.2275 | -0.0031 | -0.0006 | 0.0013 | -5.3466 |
| 2 | 2.01 | -0.00 | -0.1773 | 0.0482 | 0.1821 | -0.0007 | -0.0002 | 0.0002 | -3.6741 |
| 3 | 4.03 | -0.00 | -0.0642 | 0.0410 | 0.1306 | -0.0039 | -0.0007 | 0.0015 | -1.5634 |
| 4 | 5.86 | -0.00 | 0.0277 | 0.0394 | 0.0885 | -0.0069 | -0.0000 | 0.0016 | 0.7028 |
| 5 | 7.99 | -0.00 | 0.1448 | 0.0503 | 0.0375 | 0.0008 | -0.0005 | 0.0003 | 2.8753 |
| 6 | 10.01 | -0.00 | 0.2560 | 0.0734 | -0.0128 | -0.0049 | 0.0000 | 0.0010 | 3.4882 |
| 7 | 12.01 | -0.00 | 0.3610 | 0.1007 | -0.0580 | -0.0025 | 0.0001 | 0.0010 | 3.5840 |
| 8 | 14.00 | -0.00 | 0.4628 | 0.1373 | -0.1009 | -0.0055 | 0.0000 | 0.0017 | 3.3697 |
| 9 | 16.03 | -0.00 | 0.5447 | 0.1764 | -0.1327 | -0.0030 | -0.0006 | 0.0024 | 3.0871 |
| 10 | 18.01 | -0.00 | 0.6525 | 0.2252 | -0.1785 | -0.0087 | 0.0011 | 0.0021 | 2.8966 |
| 11 | 20.10 | -0.00 | 0.7694 | 0.2901 | -0.2296 | -0.0089 | 0.0035 | 0.0012 | 2.6522 |
| 12 | 22.03 | -0.00 | 0.8316 | 0.3402 | -0.2486 | -0.0089 | 0.0049 | 0.0016 | 2.4444 |
| 13 | 23.97 | -0.00 | 0.8197 | 0.3783 | -0.2291 | -0.0140 | 0.0060 | 0.0011 | 2.1667 |
| 14 | 25.97 | -0.00 | 0.8028 | 0.4104 | -0.2324 | -0.0004 | 0.0045 | -0.0018 | 1.9563 |
| 15 | 28.01 | -0.00 | 0.7796 | 0.4370 | -0.2376 | 0.0020 | 0.0013 | -0.0027 | 1.7837 |
| 16 | 0.00 | 0.00 | -0.2705 | 0.0541 | 0.2255 | -0.0113 | -0.0005 | 0.0021 | -4.9931 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 71

TEMP = 94.
RN/FTX10-6= 0.448509 VEL-FPS= 75.769

PO= 14.3516
MACH= 0.0677

CONF= W2B1V1E(10)H2F(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.1541 | 0.0827 | -0.1019 | 0.0019 | -0.0017 | -0.0004 | 1.561[illegible] |
| 2 | 2.01 | -0.00 | 0.2570 | 0.0875 | -0.1488 | -0.0011 | -0.0012 | 0.0003 | 2.936[illegible] |
| 3 | 4.03 | -0.00 | 0.3708 | 0.0934 | -0.2023 | -0.0015 | -0.0016 | -0.0006 | 3.969[illegible] |
| 4 | 5.86 | -0.00 | 0.4747 | 0.1072 | -0.2528 | -0.0019 | -0.0019 | -0.0004 | 4.426[illegible] |
| 5 | 7.99 | -0.00 | 0.5934 | 0.1401 | -0.3109 | -0.0133 | -0.0008 | 0.0014 | 4.235[illegible] |
| 6 | 10.01 | -0.00 | 0.6902 | 0.1792 | -0.3540 | -0.0081 | -0.0007 | 0.0019 | 3.850[illegible] |
| 7 | 12.01 | -0.00 | 0.7727 | 0.2224 | -0.3850 | -0.0082 | 0.0000 | 0.0017 | 3.474[illegible] |
| 8 | 14.00 | -0.00 | 0.8397 | 0.2703 | -0.4109 | -0.0056 | 0.0006 | 0.0009 | 3.106[illegible] |
| 9 | 16.03 | -0.00 | 0.9333 | 0.3300 | -0.4576 | -0.0086 | 0.0011 | 0.0021 | 2.827 |
| 10 | 18.01 | -0.00 | 1.0447 | 0.3952 | -0.5102 | -0.0062 | 0.0027 | 0.0014 | 2.643[illegible] |
| 11 | 20.10 | -0.00 | 1.1013 | 0.4541 | -0.5187 | -0.0141 | 0.0084 | 0.0017 | 2.425[illegible] |
| 12 | 22.03 | -0.00 | 1.0369 | 0.4708 | -0.4597 | -0.0163 | 0.0051 | 0.0034 | 2.202[illegible] |
| 13 | 23.97 | -0.00 | 1.0099 | 0.5138 | -0.4526 | -0.0190 | 0.0048 | 0.0029 | 1.965[illegible] |
| 14 | 25.97 | -0.00 | 0.9804 | 0.5513 | -0.4532 | 0.0079 | -0.0018 | 0.0004 | 1.779[illegible] |
| 15 | 28.01 | -0.00 | 0.9737 | 0.5877 | -0.4610 | -0.0109 | 0.0047 | -0.0018 | 1.656[illegible] |
| 16 | 0.00 | 0.00 | 0.1595 | 0.0828 | -0.1046 | -0.0063 | -0.0019 | 0.0004 | 1.925[illegible] |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 72

TEMP = 90.
RN/FTX10-6= 0.452976 VEL-FPS= 75.443

PO= 14.3713
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0651 | 0.0555 | 0.0664 | 0.0007 | -0.0010 | 0.0004 | -1.17 |
| 2 | 2.01 | -0.00 | 0.0334 | 0.0477 | 0.0183 | 0.0003 | -0.0013 | 0.0010 | 0.69 |
| 3 | 4.03 | -0.00 | 0.1373 | 0.0497 | -0.0354 | -0.0027 | -0.0006 | 0.0006 | 2.76 |
| 4 | 5.86 | -0.00 | 0.2412 | 0.0606 | -0.0869 | -0.0031 | -0.0009 | 0.0008 | 3.97 |
| 5 | 7.99 | -0.00 | 0.3537 | 0.0719 | -0.1435 | -0.0009 | -0.0005 | 0.0007 | 4.91 |
| 6 | 10.01 | -0.00 | 0.4660 | 0.0955 | -0.2007 | -0.0040 | -0.0003 | 0.0014 | 4.87 |
| 7 | 12.01 | -0.00 | 0.5612 | 0.1284 | -0.2509 | -0.0045 | -0.0006 | 0.0016 | 4.37 |
| 8 | 14.00 | -0.00 | 0.6405 | 0.1666 | -0.2936 | -0.0020 | 0.0011 | 0.0017 | 3.84 |
| 9 | 16.03 | -0.00 | 0.6896 | 0.2151 | -0.3231 | 0.0031 | -0.0016 | 0.0001 | 3.20 |
| 10 | 18.01 | -0.00 | 0.7169 | 0.2628 | -0.3452 | 0.0002 | -0.0008 | 0.0012 | 2.72 |
| 11 | 20.10 | -0.00 | 0.7366 | 0.3072 | -0.3676 | 0.0028 | 0.0008 | -0.0000 | 2.39 |
| 12 | 22.03 | -0.00 | 0.7155 | 0.3453 | -0.3720 | -0.0023 | 0.0068 | -0.0024 | 2.07 |
| 13 | 23.97 | -0.00 | 0.7205 | 0.3748 | -0.3896 | 0.0026 | 0.0014 | -0.0003 | 1.92 |
| 14 | 25.97 | -0.00 | 0.7454 | 0.4160 | -0.4150 | -0.0191 | 0.0074 | 0.0058 | 1.79 |
| 15 | 28.01 | -0.00 | 0.7365 | 0.4562 | -0.4143 | -0.0056 | 0.0039 | 0.0052 | 1.61 |
| 16 | 0.00 | 0.00 | -0.0597 | 0.0508 | 0.0657 | -0.0074 | -0.0006 | 0.0012 | -1.17 |

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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 73

TEMP = 90.
RN/FTX10-6= 0.452813 VEL-FPS= 75.470

PO= 14.3615
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0782 | 0.0475 | -0.0741 | 0.0020 | -0.0015 | 0.0006 | 1.6464 |
| 2 | 2.01 | -0.00 | 0.1755 | 0.0517 | -0.1248 | -0.0010 | -0.0011 | 0.0008 | 3.3914 |
| 3 | 4.03 | -0.00 | 0.2845 | 0.0614 | -0.1800 | -0.0042 | -0.0006 | 0.0009 | 4.6318 |
| 4 | 5.86 | -0.00 | 0.3870 | 0.0746 | -0.2323 | -0.0046 | -0.0006 | 0.0010 | 5.1862 |
| 5 | 7.99 | -0.00 | 0.5028 | 0.0942 | -0.2920 | -0.0024 | -0.0006 | 0.0005 | 5.3330 |
| 6 | 10.01 | -0.00 | 0.6042 | 0.1237 | -0.3453 | -0.0028 | -0.0002 | 0.0011 | 4.8829 |
| 7 | 12.01 | -0.00 | 0.7046 | 0.1627 | -0.3992 | -0.0059 | -0.0003 | 0.0018 | 4.3294 |
| 8 | 14.00 | -0.00 | 0.7904 | 0.2102 | -0.4473 | 0.0018 | 0.0001 | 0.0010 | 3.7589 |
| 9 | 16.03 | -0.00 | 0.8505 | 0.2702 | -0.4864 | 0.0042 | -0.0005 | 0.0006 | 3.1474 |
| 10 | 18.01 | -0.00 | 0.8750 | 0.3132 | -0.4989 | -0.0039 | -0.0001 | 0.0025 | 2.7935 |
| 11 | 20.10 | -0.00 | 0.8742 | 0.3563 | -0.4965 | -0.0037 | 0.0040 | -0.0002 | 2.4535 |
| 12 | 22.03 | -0.00 | 0.8273 | 0.3890 | -0.4672 | -0.0062 | 0.0023 | 0.0015 | 2.1264 |
| 13 | 23.97 | -0.00 | 0.7895 | 0.4059 | -0.4447 | -0.0059 | 0.0023 | 0.0020 | 1.9446 |
| 14 | 25.97 | -0.00 | 0.7646 | 0.4333 | -0.4292 | -0.0057 | 0.0044 | 0.0014 | 1.7645 |
| 15 | 28.01 | -0.00 | 0.7572 | 0.4674 | -0.4300 | -0.0273 | 0.0096 | 0.0060 | 1.6201 |
| 16 | 0.00 | 0.00 | 0.0814 | 0.0451 | -0.0747 | -0.0089 | -0.0014 | 0.0015 | 1.8027 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 74

TEMP = 90.
RN/FTX10-6= 0.452781 VEL-FPS= 75.476

PO= 14.3615
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0097 | 0.0375 | -0.0052 | -0.0000 | -0.0015 | 0.0005 | 0.2596 |
| 2 | 2.01 | -0.00 | 0.1096 | 0.0394 | -0.0555 | -0.0031 | -0.0010 | 0.0013 | 2.7815 |
| 3 | 4.03 | -0.00 | 0.2119 | 0.0415 | -0.1077 | -0.0008 | -0.0014 | 0.0002 | 5.0997 |
| 4 | 5.86 | -0.00 | 0.3197 | 0.0599 | -0.1625 | -0.0040 | -0.0016 | 0.0010 | 5.3290 |
| 5 | 7.99 | -0.00 | 0.4367 | 0.0725 | -0.2211 | -0.0071 | -0.0007 | 0.0017 | 6.0226 |
| 6 | 10.01 | -0.00 | 0.5415 | 0.0977 | -0.2759 | -0.0021 | -0.0012 | 0.0011 | 5.5399 |
| 7 | 12.01 | -0.00 | 0.6351 | 0.1352 | -0.3256 | 0.0001 | -0.0016 | 0.0007 | 4.6945 |
| 8 | 14.00 | -0.00 | 0.7224 | 0.1781 | -0.3736 | -0.0029 | -0.0002 | 0.0017 | 4.0545 |
| 9 | 16.03 | -0.00 | 0.7665 | 0.2331 | -0.4040 | 0.0050 | -0.0007 | -0.0000 | 3.2879 |
| 10 | 18.01 | -0.00 | 0.7979 | 0.2800 | -0.4229 | 0.0021 | -0.0025 | 0.0018 | 2.8491 |
| 11 | 20.10 | -0.00 | 0.7945 | 0.3239 | -0.4256 | 0.0023 | 0.0012 | -0.0006 | 2.4524 |
| 12 | 22.03 | -0.00 | 0.7545 | 0.3641 | -0.4126 | -0.0109 | 0.0059 | 0.0012 | 2.0721 |
| 13 | 23.97 | -0.00 | 0.7535 | 0.3923 | -0.4167 | -0.0005 | -0.0035 | 0.0039 | 1.9206 |
| 14 | 25.97 | -0.00 | 0.7617 | 0.4319 | -0.4266 | -0.0111 | 0.0052 | 0.0030 | 1.7636 |
| 15 | 28.01 | -0.00 | 0.7478 | 0.4649 | -0.4210 | -0.0029 | 0.0020 | 0.0038 | 1.6094 |
| 16 | 0.00 | 0.00 | 0.0119 | 0.0375 | -0.0053 | -0.0054 | -0.0014 | 0.0012 | 0.3176 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 75

TEMP = 102.
RN/FTX10-6= 0.440464 VEL-FPS= 76.300

PO= 14.3615
MACH= 0.0682

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0288 | 0.0282 | -0.0208 | -0.0056 | -0.0014 | 0.0013 | 1.018 |
| 2 | 2.01 | -0.00 | 0.1270 | 0.0330 | -0.0654 | -0.0086 | -0.0009 | 0.0020 | 3.838 |
| 3 | 4.03 | -0.00 | 0.2271 | 0.0403 | -0.1138 | -0.0063 | -0.0012 | 0.0015 | 5.631 |
| 4 | 5.86 | -0.00 | 0.3169 | 0.0455 | -0.1575 | -0.0094 | -0.0014 | 0.0022 | 6.957 |
| 5 | 7.99 | -0.00 | 0.4280 | 0.0664 | -0.2114 | -0.0071 | -0.0014 | 0.0017 | 6.438 |
| 6 | 10.01 | -0.00 | 0.5355 | 0.0965 | -0.2638 | -0.0047 | -0.0011 | 0.0012 | 5.545 |
| 7 | 12.01 | -0.00 | 0.6270 | 0.1334 | -0.3133 | -0.0078 | -0.0006 | 0.0018 | 4.696 |
| 8 | 14.00 | -0.00 | 0.7086 | 0.1770 | -0.3587 | -0.0027 | -0.0002 | 0.0005 | 4.003 |
| 9 | 16.03 | -0.00 | 0.7670 | 0.2283 | -0.3991 | -0.0056 | 0.0027 | 0.0009 | 3.359 |
| 10 | 18.01 | -0.00 | 0.7787 | 0.2762 | -0.4131 | -0.0086 | -0.0003 | 0.0026 | 2.819 |
| 11 | 20.10 | -0.00 | 0.8152 | 0.3266 | -0.4372 | -0.0060 | 0.0012 | 0.0008 | 2.495 |
| 12 | 22.03 | -0.00 | 0.7914 | 0.3641 | -0.4343 | -0.0113 | 0.0035 | 0.0017 | 2.173 |
| 13 | 23.97 | -0.00 | 0.7767 | 0.3899 | -0.4314 | -0.0086 | 0.0012 | 0.0020 | 1.991 |
| 14 | 25.97 | -0.00 | 0.7605 | 0.4287 | -0.4301 | -0.0275 | 0.0066 | 0.0060 | 1.773 |
| 15 | 28.01 | -0.00 | 0.7786 | 0.4790 | -0.4534 | -0.0167 | 0.0062 | 0.0014 | 1.625 |
| 16 | 0.00 | 0.00 | 0.0342 | 0.0306 | -0.0222 | -0.0083 | -0.0014 | 0.0019 | 1.117 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 76

TEMP = 102.
RN/FTX10-6= 0.440543 VEL-FPS= 76.286

PO= 14.3615
MACH= 0.0682

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0320 | 0.0329 | -0.0221 | -0.0056 | -0.0007 | 0.0023 | 0.9724 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0258 | -0.0286 | 0.1008 | 0.0036 | -0.0238 | 1.5067 |
| 3 | 0.00 | -4.00 | 0.0323 | 0.0305 | -0.0245 | 0.0708 | 0.0020 | -0.0168 | 1.0594 |
| 4 | 0.00 | -2.00 | 0.0300 | 0.0305 | -0.0219 | 0.0298 | 0.0006 | -0.0074 | 0.9830 |
| 5 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0216 | -0.0001 | -0.0012 | 0.0006 | 0.9402 |
| 6 | -0.00 | 1.99 | 0.0329 | 0.0306 | -0.0230 | -0.0275 | -0.0031 | 0.0085 | 1.0749 |
| 7 | -0.00 | 3.99 | 0.0359 | 0.0284 | -0.0268 | -0.0685 | -0.0045 | 0.0180 | 1.2620 |
| 8 | -0.00 | 5.99 | 0.0388 | 0.0262 | -0.0315 | -0.0959 | -0.0061 | 0.0248 | 1.4818 |
| 9 | 0.00 | 0.00 | 0.0309 | 0.0306 | -0.0219 | -0.0056 | -0.0011 | 0.0018 | 1.0108 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 77

TEMP = 104.
RN/FTX10-6= 0.438486 VEL-FPS= 76.433

PO= 14.3615
MACH= 0.0683

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5378 | 0.0898 | -0.2636 | -0.0047 | -0.0012 | 0.0012 | 5.9863 |
| 2 | 10.01 | -6.00 | 0.5460 | 0.0887 | -0.2713 | 0.0991 | 0.0039 | -0.0241 | 6.1518 |
| 3 | 10.01 | -4.00 | 0.5406 | 0.0878 | -0.2671 | 0.0608 | 0.0025 | -0.0159 | 6.1540 |
| 4 | 10.01 | -2.00 | 0.5436 | 0.0955 | -0.2671 | 0.0389 | -0.0003 | -0.0092 | 5.6888 |
| 5 | 10.01 | -0.00 | 0.5409 | 0.0975 | -0.2656 | -0.0020 | -0.0012 | 0.0011 | 5.5463 |
| 6 | 10.01 | 1.99 | 0.5452 | 0.0960 | -0.2694 | -0.0404 | -0.0025 | 0.0114 | 5.6779 |
| 7 | 10.01 | 3.99 | 0.5439 | 0.0958 | -0.2712 | -0.0678 | -0.0048 | 0.0172 | 5.6726 |
| 8 | 10.01 | 5.99 | 0.5482 | 0.0943 | -0.2760 | -0.1007 | -0.0063 | 0.0252 | 5.6063 |
| 9 | 10.01 | -0.00 | 0.5434 | 0.0955 | -0.2671 | 0.0033 | -0.0011 | 0.0003 | 5.6648 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 78

TEMP = 106.
RN/FTX10-6= 0.436493 VEL-FPS= 76.571

PO= 14.3615
MACH= 0.0685

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.8002 | 0.3236 | -0.4306 | -0.0032 | -0.0003 | 0.0024 | 2.4725 |
| 2 | 20.10 | -6.00 | 0.8415 | 0.3212 | -0.4497 | 0.0815 | 0.0033 | -0.0128 | 2.6195 |
| 3 | 20.10 | -4.00 | 0.8219 | 0.3240 | -0.4436 | 0.0568 | 0.0011 | -0.0082 | 2.5361 |
| 4 | 20.10 | -2.00 | 0.8162 | 0.3270 | -0.4397 | 0.0349 | -0.0003 | -0.0034 | 2.4961 |
| 5 | 20.10 | -0.00 | 0.8073 | 0.3262 | -0.4358 | 0.0049 | 0.0020 | -0.0004 | 2.4745 |
| 6 | 20.09 | 1.99 | 0.8118 | 0.3230 | -0.4358 | -0.0226 | -0.0026 | 0.0052 | 2.5133 |
| 7 | 20.09 | 3.99 | 0.8173 | 0.3226 | -0.4431 | -0.0528 | -0.0037 | 0.0107 | 2.5330 |
| 8 | 20.09 | 5.99 | 0.8406 | 0.3213 | -0.4542 | -0.0800 | 0.0027 | 0.0127 | 2.5162 |
| 9 | 20.10 | -0.00 | 0.8151 | 0.3266 | -0.4386 | 0.0020 | -0.0023 | 0.0013 | 2.4952 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 79

TEMP = 104.
RN/FTX10-6= 0.438486 VEL-FPS= 76.433

PO= 14.3615
MACH= 0.0683

CONF= W1B1V1E(-10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2156 | 0.0335 | 0.1731 | -0.0092 | -0.0006 | 0.0021 | -6.420 |
| 2 | 2.01 | -0.00 | -0.1177 | 0.0344 | 0.1259 | -0.0041 | -0.0009 | 0.0010 | -3.413 |
| 3 | 4.03 | -0.00 | -0.0193 | 0.0283 | 0.0802 | -0.0153 | -0.0006 | 0.0025 | -0.681 |
| 4 | 5.86 | -0.00 | 0.0727 | 0.0304 | 0.0376 | -0.0130 | -0.0009 | 0.0020 | 2.387 |
| 5 | 7.99 | -0.00 | 0.1807 | 0.0465 | -0.0151 | -0.0079 | -0.0006 | 0.0019 | 3.885 |
| 6 | 10.01 | -0.00 | 0.2893 | 0.0608 | -0.0658 | -0.0056 | -0.0013 | 0.0014 | 4.757 |
| 7 | 12.01 | -0.00 | 0.3905 | 0.0909 | -0.1212 | -0.0060 | -0.0006 | 0.0014 | 4.294 |
| 8 | 14.00 | -0.00 | 0.4890 | 0.1229 | -0.1743 | -0.0009 | -0.0005 | 0.0002 | 3.976 |
| 9 | 16.03 | -0.00 | 0.5658 | 0.1713 | -0.2253 | -0.0068 | 0.0010 | 0.0017 | 3.301 |
| 10 | 18.01 | -0.00 | 0.6156 | 0.2192 | -0.2639 | -0.0044 | -0.0001 | 0.0009 | 2.807 |
| 11 | 20.10 | -0.00 | 0.6610 | 0.2639 | -0.2930 | 0.0062 | -0.0014 | -0.0011 | 2.505 |
| 12 | 22.03 | -0.00 | 0.6452 | 0.2986 | -0.2980 | -0.0101 | 0.0014 | 0.0035 | 2.160 |
| 13 | 23.97 | -0.00 | 0.6515 | 0.3252 | -0.3030 | -0.0234 | 0.0104 | 0.0015 | 2.003 |
| 14 | 25.97 | -0.00 | 0.6259 | 0.3567 | -0.2981 | 0.0115 | -0.0045 | 0.0033 | 1.754 |
| 15 | 28.01 | -0.00 | 0.6431 | 0.3950 | -0.3170 | -0.0049 | -0.0019 | 0.0027 | 1.628 |
| 16 | 0.00 | 0.00 | -0.2135 | 0.0336 | 0.1716 | -0.0147 | -0.0012 | 0.0023 | -6.351 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 80

TEMP = 104.
RN/FTX10-6= 0.438675 VEL-FPS= 76.400

PO= 14.3713
MACH= 0.0683

CONF= W1B1V1E(10)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2765 | 0.0511 | -0.2178 | 0.0006 | -0.0025 | -0.0001 | 5.4119 |
| 2 | 2.01 | -0.00 | 0.3749 | 0.0599 | -0.2643 | 0.0003 | -0.0024 | 0.0010 | 6.2524 |
| 3 | 4.03 | -0.00 | 0.4733 | 0.0688 | -0.3128 | -0.0028 | -0.0024 | 0.0007 | 6.8759 |
| 4 | 5.86 | -0.00 | 0.5759 | 0.0857 | -0.3604 | -0.0004 | -0.0027 | 0.0008 | 6.7183 |
| 5 | 7.99 | -0.00 | 0.6827 | 0.1182 | -0.4165 | -0.0035 | -0.0016 | 0.0009 | 5.7723 |
| 6 | 10.01 | -0.00 | 0.7815 | 0.1584 | -0.4652 | -0.0012 | -0.0019 | 0.0010 | 4.9319 |
| 7 | 12.01 | -0.00 | 0.8644 | 0.1977 | -0.5094 | 0.0011 | -0.0020 | 0.0005 | 4.3721 |
| 8 | 14.00 | -0.00 | 0.9054 | 0.2518 | -0.5352 | 0.0036 | -0.0029 | 0.0008 | 3.5954 |
| 9 | 16.03 | -0.00 | 0.9336 | 0.3045 | -0.5563 | -0.0018 | 0.0002 | 0.0018 | 3.0661 |
| [illegible] | 18.01 | -0.00 | 0.9484 | 0.3550 | -0.5692 | 0.0033 | -0.0053 | 0.0019 | 2.6714 |
| [illegible] | 20.10 | -0.00 | 0.9241 | 0.3976 | -0.5592 | -0.0017 | 0.0011 | 0.0026 | 2.3240 |
| 12 | 22.03 | -0.00 | 0.8545 | 0.4209 | -0.5211 | -0.0095 | 0.0007 | 0.0036 | 2.0303 |
| 13 | 23.97 | -0.00 | 0.8622 | 0.4546 | -0.5338 | -0.0069 | 0.0003 | 0.0049 | 1.8964 |
| 14 | 25.97 | -0.00 | 0.8671 | 0.5078 | -0.5428 | -0.0256 | 0.0108 | 0.0040 | 1.7074 |
| 15 | 28.01 | -0.00 | 0.8650 | 0.5578 | -0.5552 | 0.0094 | 0.0011 | -0.0002 | 1.5507 |
| 16 | 0.00 | 0.00 | 0.2776 | 0.0511 | -0.2179 | -0.0048 | -0.0024 | 0.0011 | 5.4322 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60

RUN NO. 81

TEMP = 102.
RN/FTX10-6= 0.440653 VEL-FPS= 76.267

PO= 14.3713
MACH= 0.0682

CONF= W1B1V1E(10)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2721 | 0.0511 | -0.2179 | 0.0006 | -0.0022 | 0.0003 | 5.324 |
| 2 | 2.01 | -0.00 | 0.3688 | 0.0619 | -0.2531 | 0.0031 | -0.0018 | -0.0001 | 5.951 |
| 3 | 4.03 | -0.00 | 0.4747 | 0.0781 | -0.2932 | -0.0052 | -0.0016 | 0.0007 | 6.078 |
| 4 | 5.86 | -0.00 | 0.5830 | 0.0955 | -0.3309 | 0.0027 | -0.0018 | -0.0010 | 6.104 |
| 5 | 7.99 | -0.00 | 0.7020 | 0.1299 | -0.3739 | 0.0052 | -0.0015 | -0.0011 | 5.404 |
| 6 | 10.01 | -0.00 | 0.8096 | 0.1722 | -0.4112 | 0.0022 | -0.0012 | -0.0015 | 4.700 |
| 7 | 12.01 | -0.00 | 0.9092 | 0.2183 | -0.4460 | 0.0020 | -0.0017 | -0.0008 | 4.163 |
| 8 | 14.00 | -0.00 | 0.9886 | 0.2764 | -0.4692 | -0.0007 | -0.0021 | -0.0000 | 3.576 |
| 9 | 16.03 | -0.00 | 1.0398 | 0.3387 | -0.4795 | -0.0006 | -0.0017 | -0.0001 | 3.069 |
| 10 | 18.01 | -0.00 | 1.0871 | 0.3964 | -0.4889 | 0.0020 | -0.0022 | 0.0005 | 2.742 |
| 11 | 20.10 | -0.00 | 1.1211 | 0.4585 | -0.4879 | 0.0050 | -0.0010 | 0.0006 | 2.445 |
| 12 | 22.03 | -0.00 | 1.1237 | 0.5135 | -0.4703 | 0.0104 | -0.0074 | 0.0042 | 2.188 |
| 13 | 23.97 | -0.00 | 1.1395 | 0.5662 | -0.4571 | 0.0134 | -0.0078 | 0.0033 | 2.012 |
| 14 | 25.97 | -0.00 | 1.1092 | 0.6186 | -0.4298 | -0.0075 | 0.0032 | 0.0036 | 1.792 |
| 15 | 28.01 | -0.00 | 1.1301 | 0.6808 | -0.4343 | 0.0032 | -0.0004 | 0.0051 | 1.659 |
| 16 | 0.00 | 0.00 | 0.2776 | 0.0534 | -0.2175 | -0.0020 | -0.0025 | 0.0004 | 5.1957 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSO LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60

RUN NO. 82

TEMP = 102.
RN/FTX10-6= 0.440622 VEL-FPS= 76.273

PO= 14.3713
MACH= 0.0682

CONF= W1B1V1E(-10)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2234 | 0.0336 | 0.1723 | -0.0010 | -0.0011 | 0.0008 | -6.6477 |
| 2 | 2.01 | -0.00 | -0.1227 | 0.0295 | 0.1344 | -0.0094 | -0.0008 | 0.0017 | -4.1516 |
| 3 | 4.03 | -0.00 | -0.0211 | 0.0350 | 0.0969 | -0.0097 | -0.0011 | 0.0012 | -0.6047 |
| 4 | 5.86 | -0.00 | 0.0763 | 0.0305 | 0.0659 | -0.0017 | -0.0009 | 0.0004 | 2.5024 |
| 5 | 7.99 | -0.00 | 0.2022 | 0.0490 | 0.0253 | -0.0073 | -0.0006 | 0.0012 | 4.1242 |
| 6 | 10.01 | -0.00 | 0.3136 | 0.0644 | -0.0106 | -0.0048 | -0.0003 | 0.0005 | 4.8678 |
| 7 | 12.01 | -0.00 | 0.4265 | 0.0953 | -0.0531 | -0.0023 | -0.0007 | 0.0000 | 4.4728 |
| 8 | 14.00 | -0.00 | 0.5377 | 0.1388 | -0.0931 | 0.0001 | -0.0008 | -0.0005 | 3.8713 |
| 9 | 16.03 | -0.00 | 0.6342 | 0.1848 | -0.1269 | -0.0000 | -0.0012 | 0.0002 | 3.4304 |
| 10 | 18.01 | -0.00 | 0.7308 | 0.2430 | -0.1644 | -0.0056 | 0.0003 | 0.0016 | 3.0071 |
| 11 | 20.10 | -0.00 | 0.7994 | 0.3005 | -0.1842 | -0.0002 | -0.0006 | 0.0023 | 2.6603 |
| 12 | 22.03 | -0.00 | 0.8456 | 0.3528 | -0.1968 | -0.0003 | -0.0012 | 0.0032 | 2.3967 |
| 13 | 23.97 | -0.00 | 0.8815 | 0.4079 | -0.1995 | -0.0028 | 0.0004 | 0.0032 | 2.1611 |
| 14 | 25.97 | -0.00 | 0.9061 | 0.4653 | -0.2070 | 0.0001 | 0.0049 | -0.0039 | 1.9472 |
| 15 | 28.01 | -0.00 | 0.9428 | 0.5285 | -0.2181 | 0.0000 | 0.0032 | 0.0021 | 1.7837 |
| 16 | 0.00 | 0.00 | -0.2093 | 0.0383 | 0.1673 | -0.0066 | -0.0020 | 0.0010 | -5.4601 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60

RUN NO. 83

TEMP = 103.
RN/FTX10-6= 0.439781 VEL-FPS= 76.313

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0265 | 0.0283 | -0.0225 | -0.0084 | -0.0014 | 0.0025 | 0.9364 |
| 2 | 2.01 | -0.00 | 0.1230 | 0.0305 | -0.0581 | -0.0058 | -0.0007 | 0.0008 | 4.0303 |
| 3 | 4.03 | -0.00 | 0.2269 | 0.0401 | -0.0956 | -0.0060 | -0.0005 | 0.0014 | 5.6566 |
| 4 | 5.86 | -0.00 | 0.3332 | 0.0492 | -0.1321 | -0.0008 | -0.0010 | 0.0002 | 6.7671 |
| 5 | 7.99 | -0.00 | 0.4496 | 0.0689 | -0.1699 | -0.0037 | -0.0002 | 0.0002 | 6.5172 |
| 6 | 10.01 | -0.00 | 0.5637 | 0.1032 | -0.2098 | -0.0012 | -0.0009 | -0.0002 | 5.4596 |
| 7 | 12.01 | -0.00 | 0.6689 | 0.1415 | -0.2482 | -0.0015 | -0.0012 | -0.0000 | 4.7262 |
| 8 | 14.00 | -0.00 | 0.7715 | 0.1941 | -0.2826 | -0.0043 | -0.0003 | 0.0003 | 3.9751 |
| 9 | 16.03 | -0.00 | 0.8451 | 0.2471 | -0.3053 | -0.0044 | -0.0002 | 0.0003 | 3.4197 |
| 10 | 18.01 | -0.00 | 0.9339 | 0.3156 | -0.3403 | -0.0018 | -0.0004 | 0.0015 | 2.9587 |
| 11 | 20.10 | -0.00 | 0.9726 | 0.3703 | -0.3435 | 0.0009 | 0.0003 | 0.0005 | 2.6261 |
| 12 | 22.03 | -0.00 | 0.9970 | 0.4255 | -0.3389 | 0.0010 | -0.0011 | 0.0028 | 2.3428 |
| 13 | 23.97 | -0.00 | 1.0353 | 0.4853 | -0.3414 | -0.0014 | 0.0008 | 0.0026 | 2.1321 |
| 14 | 25.97 | -0.00 | 1.0288 | 0.5369 | -0.3322 | -0.0096 | -0.0008 | 0.0092 | 1.9152 |
| 15 | 28.01 | -0.00 | 1.0592 | 0.6050 | -0.3405 | -0.0065 | 0.0033 | 0.0020 | 1.7507 |
| 16 | 0.00 | 0.00 | 0.0374 | 0.0330 | -0.0243 | -0.0138 | -0.0013 | 0.0026 | 1.1344 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 84

TEMP = 102.
RN/FTX10-6= 0.440780 VEL-FPS= 76.245

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0341 | 0.0400 | -0.0262 | -0.0029 | -0.0014 | 0.0012 | 0.851[illegible] |
| 2 | 0.00 | -6.00 | 0.0366 | 0.0352 | -0.0297 | 0.0953 | 0.0033 | -0.0231 | 1.040[illegible] |
| 3 | 0.00 | -4.00 | 0.0376 | 0.0375 | -0.0275 | 0.0681 | 0.0021 | -0.0151 | 1.003[illegible] |
| 4 | 0.00 | -2.00 | 0.0365 | 0.0399 | -0.0241 | 0.0298 | 0.0003 | -0.0079 | 0.9158 |
| 5 | 0.00 | 0.00 | 0.0341 | 0.0400 | -0.0243 | -0.0110 | -0.0006 | 0.0020 | 0.8537 |
| 6 | -0.00 | 1.99 | 0.0350 | 0.0377 | -0.0271 | -0.0357 | -0.0030 | 0.0088 | 0.9267 |
| 7 | -0.00 | 3.99 | 0.0358 | 0.0378 | -0.0290 | -0.0740 | -0.0041 | 0.0182 | 0.9461 |
| 8 | -0.00 | 5.99 | 0.0442 | 0.0356 | -0.0341 | -0.1041 | -0.0060 | 0.0257 | 1.2422 |
| 9 | 0.00 | 0.00 | 0.0363 | 0.0400 | -0.0245 | -0.0138 | -0.0013 | 0.0026 | 0.9058 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 85

TEMP = 103.
RN/FTX10-6= 0.439781 VEL-FPS= 76.313

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5677 | 0.0992 | -0.2109 | -0.0013 | -0.0017 | -0.0006 | 5.7220 |
| 2 | 10.01 | -6.00 | 0.5766 | 0.1006 | -0.2187 | 0.0946 | 0.0078 | -0.0243 | 5.7309 |
| 3 | 10.01 | -4.00 | 0.5715 | 0.1045 | -0.2147 | 0.0617 | 0.0047 | -0.0160 | 5.4683 |
| 4 | 10.01 | -2.00 | 0.5681 | 0.1039 | -0.2130 | 0.0370 | 0.0016 | -0.0091 | 5.4644 |
| 5 | 10.01 | -0.00 | 0.5697 | 0.1067 | -0.2132 | -0.0013 | -0.0012 | 0.0003 | 5.3386 |
| 6 | 10.01 | 1.99 | 0.5720 | 0.1048 | -0.2137 | -0.0369 | -0.0039 | 0.0087 | 5.4565 |
| 7 | 10.01 | 3.99 | 0.5720 | 0.1026 | -0.2177 | -0.0781 | -0.0070 | 0.0184 | 5.5751 |
| 8 | 10.01 | 5.99 | 0.5753 | 0.1009 | -0.2211 | -0.1083 | -0.0093 | 0.0259 | 5.7012 |
| 9 | 10.01 | -0.00 | 0.5718 | 0.1070 | -0.2134 | -0.0013 | -0.0012 | -0.0001 | 5.3399 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 86

TEMP = 105.
RN/FTX10-6= 0.437794 VEL-FPS= 76.448

PO= 14.3811
MACH= 0.0684

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.9685 | 0.3788 | -0.3414 | 0.0009 | -0.0001 | 0.0018 | 2.5567 |
| 2 | 20.10 | -6.00 | 0.9969 | 0.3818 | -0.3671 | 0.0880 | -0.0061 | -0.0104 | 2.6107 |
| 3 | 20.10 | -4.00 | 0.9922 | 0.3851 | -0.3628 | 0.0498 | -0.0038 | -0.0030 | 2.5762 |
| 4 | 20.10 | -2.00 | 0.9645 | 0.3798 | -0.3445 | 0.0281 | -0.0030 | -0.0008 | 2.5391 |
| 5 | 20.10 | -0.00 | 0.9703 | 0.3795 | -0.3462 | -0.0045 | -0.0008 | 0.0028 | 2.5565 |
| 6 | 20.09 | 1.99 | 0.9842 | 0.3822 | -0.3537 | -0.0344 | 0.0053 | 0.0038 | 2.5756 |
| 7 | 20.09 | 3.99 | 0.9859 | 0.3829 | -0.3589 | -0.0618 | 0.0066 | 0.0061 | 2.5746 |
| 8 | 20.09 | 5.99 | 0.9892 | 0.3792 | -0.3654 | -0.0891 | 0.0089 | 0.0102 | 2.6032 |
| 9 | 20.10 | -0.00 | 0.9772 | 0.3796 | -0.3489 | -0.0072 | 0.0008 | 0.0006 | 2.5744 |

C

VSD LOW-SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 87
QPSF = 6.60 RUN NO. 87

TEMP = 101. PO= 14.3909
RN/FTX10-6= 0.441973 VEL-FPS= 76.145 MACH= 0.0681

CONF= W1B1V1E(0)GC3

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0242 | 0.0330 | -0.0239 | -0.0056 | -0.0008 | 0.0007 | 0.7358 |
| 2 | 2.01 | -0.00 | 0.1261 | 0.0353 | -0.0598 | -0.0031 | -0.0010 | 0.0007 | 3.5694 |
| 3 | 4.03 | -0.00 | 0.2364 | 0.0431 | -0.1010 | -0.0088 | -0.0005 | 0.0015 | 5.4749 |
| 4 | 5.86 | -0.00 | 0.3339 | 0.0517 | -0.1365 | -0.0009 | -0.0014 | -0.0002 | 6.4564 |
| 5 | 7.99 | -0.00 | 0.4453 | 0.0732 | -0.1778 | -0.0011 | -0.0010 | -0.0002 | 6.0829 |
| 6 | 10.01 | -0.00 | 0.5676 | 0.1040 | -0.2209 | -0.0041 | -0.0010 | -0.0006 | 5.4543 |
| 7 | 12.01 | -0.00 | 0.6732 | 0.1449 | -0.2598 | -0.0043 | -0.0005 | -0.0001 | 4.6459 |
| 8 | 14.00 | -0.00 | 0.7714 | 0.1918 | -0.2975 | 0.0008 | -0.0013 | -0.0017 | 4.0216 |
| 9 | 16.03 | -0.00 | 0.8467 | 0.2502 | -0.3261 | -0.0047 | -0.0008 | -0.0005 | 3.3832 |
| 10 | 18.01 | -0.00 | 0.9146 | 0.3095 | -0.3510 | 0.0060 | -0.0015 | -0.0012 | 2.9549 |
| 11 | 20.10 | -0.00 | 0.9649 | 0.3727 | -0.3642 | -0.0018 | 0.0039 | -0.0024 | 2.5886 |
| 12 | 22.03 | -0.00 | 0.9957 | 0.4279 | -0.3713 | 0.0033 | -0.0021 | -0.0002 | 2.3267 |
| 13 | 23.97 | -0.00 | 1.0063 | 0.4856 | -0.3685 | -0.0043 | 0.0054 | -0.0052 | 2.0722 |
| 14 | 25.97 | -0.00 | 0.9776 | 0.5252 | -0.3476 | 0.0037 | -0.0021 | -0.0013 | 1.8613 |
| 15 | 28.01 | -0.00 | 1.0447 | 0.6057 | -0.3749 | 0.0009 | -0.0009 | -0.0019 | 1.7247 |
| 16 | 0.00 | 0.00 | 0.0320 | 0.0306 | -0.0234 | -0.0056 | -0.0011 | 0.0007 | 1.0444 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 88
QPSF = 6.60

RUN NO. 88

TEMP = 99.
RN/FTX10-6= 0.444118 VEL-FPS= 75.987

PO= 14.4008
MACH= 0.0679

CONF= W1B1V1E(0)GC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0232 | 0.0306 | -0.0209 | -0.0083 | -0.0014 | 0.0019 | 0.7601 |
| 2 | 2.01 | -0.00 | 0.1263 | 0.0329 | -0.0570 | 0.0050 | -0.0012 | 0.0004 | 3.8344 |
| 3 | 4.03 | -0.00 | 0.2334 | 0.0428 | -0.0934 | -0.0006 | -0.0014 | -0.0003 | 5.4445 |
| 4 | 5.86 | -0.00 | 0.3312 | 0.0512 | -0.1237 | 0.0046 | -0.0012 | -0.0010 | 6.4580 |
| 5 | 7.99 | -0.00 | 0.4569 | 0.0746 | -0.1646 | -0.0009 | -0.0010 | -0.0008 | 6.1191 |
| 6 | 10.01 | -0.00 | 0.5667 | 0.1013 | -0.2006 | -0.0066 | -0.0011 | -0.0000 | 5.5939 |
| 7 | 12.01 | -0.00 | 0.6787 | 0.1458 | -0.2359 | 0.0041 | -0.0007 | -0.0009 | 4.6539 |
| 8 | 14.00 | -0.00 | 0.7825 | 0.1894 | -0.2667 | -0.0041 | 0.0000 | -0.0009 | 4.1315 |
| 9 | 16.03 | -0.00 | 0.8515 | 0.2512 | -0.2900 | -0.0014 | 0.0004 | -0.0011 | 3.3898 |
| 10 | 18.01 | -0.00 | 0.9305 | 0.3092 | -0.3098 | -0.0016 | -0.0023 | 0.0009 | 3.0085 |
| 11 | 20.10 | -0.00 | 0.9926 | 0.3824 | -0.3247 | -0.0041 | 0.0005 | 0.0005 | 2.5957 |
| 12 | 22.03 | -0.00 | 1.0231 | 0.4307 | -0.3206 | -0.0065 | 0.0046 | 0.0005 | 2.3751 |
| 13 | 23.97 | -0.00 | 1.0426 | 0.4882 | -0.3144 | -0.0092 | 0.0012 | 0.0038 | 2.1353 |
| 14 | 25.97 | -0.00 | 1.0151 | 0.5323 | -0.2849 | 0.0070 | -0.0076 | 0.0077 | 1.9071 |
| 15 | 28.01 | -0.00 | 1.0678 | 0.6117 | -0.2983 | -0.0034 | 0.0006 | 0.0026 | 1.7456 |
| 16 | 0.00 | 0.00 | 0.0331 | 0.0329 | -0.0231 | -0.0083 | -0.0014 | 0.0014 | 1.0058 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 89
QPSF = 6.60 RUN NO. 89

TEMP = 90. PO= 14.4302
RN/FTX10-6= 0.453868 VEL-FPS= 75.295 MACH= 0.0673

CONF= B1V1GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0164 | 0.0257 | 0.0003 | 0.0000 | -0.0005 | 0.0016 | -0.6392 |
| 2 | 2.01 | -0.00 | -0.0036 | 0.0231 | 0.0106 | -0.0025 | -0.0007 | 0.0017 | -0.1566 |
| 3 | 4.03 | -0.00 | 0.0135 | 0.0264 | 0.0223 | 0.0003 | -0.0004 | 0.0010 | 0.5115 |
| 4 | 5.86 | -0.00 | 0.0303 | 0.0215 | 0.0344 | 0.0005 | -0.0003 | 0.0009 | 1.4136 |
| 5 | 7.99 | -0.00 | 0.0489 | 0.0322 | 0.0485 | 0.0035 | -0.0000 | 0.0002 | 1.5185 |
| 6 | 10.01 | -0.00 | 0.0774 | 0.0342 | 0.0620 | -0.0017 | 0.0001 | 0.0008 | 2.2627 |
| 7 | 12.01 | -0.00 | 0.1021 | 0.0446 | 0.0754 | -0.0014 | 0.0002 | 0.0008 | 2.2903 |
| 8 | 14.00 | -0.00 | 0.1322 | 0.0605 | 0.0901 | -0.0011 | 0.0005 | 0.0012 | 2.1818 |
| 9 | 16.03 | -0.00 | 0.1567 | 0.0702 | 0.1046 | -0.0009 | 0.0004 | 0.0017 | 2.2300 |
| 10 | 18.01 | -0.00 | 0.1818 | 0.0819 | 0.1215 | -0.0033 | 0.0007 | 0.0022 | 2.2193 |
| 11 | 20.10 | -0.00 | 0.2138 | 0.1035 | 0.1362 | -0.0030 | 0.0012 | 0.0019 | 2.0647 |
| 12 | 22.03 | -0.00 | 0.2353 | 0.1181 | 0.1512 | -0.0082 | 0.0018 | 0.0029 | 1.9920 |
| 13 | 23.97 | -0.00 | 0.2678 | 0.1421 | 0.1595 | -0.0026 | 0.0015 | 0.0028 | 1.8835 |
| 14 | 25.97 | -0.00 | 0.2949 | 0.1643 | 0.1716 | -0.0024 | 0.0016 | 0.0033 | 1.7951 |
| 15 | 28.01 | -0.00 | 0.3218 | 0.1840 | 0.1806 | -0.0049 | 0.0020 | 0.0030 | 1.7485 |
| 16 | 0.00 | 0.00 | -0.0066 | 0.0257 | -0.0003 | -0.0109 | -0.0010 | 0.0025 | -0.2569 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 90

TEMP = 90.
RN/FTX10-6= 0.453884 VEL-FPS= 75.292

PO= 14.4302
MACH= 0.0673

CONF= B1V1GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0131 | 0.0304 | 0.0013 | -0.0054 | -0.0004 | 0.0023 | -0.4312 |
| 2 | 0.00 | -6.00 | -0.0028 | 0.0278 | -0.0013 | 0.0904 | 0.0081 | -0.0198 | -0.1022 |
| 3 | 0.00 | -4.00 | -0.0095 | 0.0303 | 0.0005 | 0.0575 | 0.0052 | -0.0122 | -0.3147 |
| 4 | 0.00 | -2.00 | -0.0118 | 0.0303 | 0.0016 | 0.0438 | 0.0021 | -0.0063 | -0.3893 |
| 5 | 0.00 | 0.00 | -0.0131 | 0.0281 | 0.0023 | -0.0108 | -0.0007 | 0.0030 | -0.4663 |
| 6 | -0.00 | 1.99 | -0.0111 | 0.0281 | -0.0009 | -0.0273 | -0.0038 | 0.0090 | -0.3969 |
| 7 | -0.00 | 3.99 | -0.0103 | 0.0259 | -0.0027 | -0.0657 | -0.0066 | 0.0163 | -0.3965 |
| 8 | -0.00 | 5.99 | -0.0051 | 0.0260 | -0.0063 | -0.1013 | -0.0091 | 0.0229 | -0.1978 |
| 9 | 0.00 | 0.00 | -0.0099 | 0.0281 | -0.0001 | -0.0136 | -0.0006 | 0.0031 | -0.3528 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 91

TEMP = 92.
RN/FTX10-6= 0.451760 VEL-FPS= 75.434

PO= 14.4302
MACH= 0.0674

CONF= B1V1GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.0774 | 0.0342 | 0.0625 | -0.0071 | 0.0003 | 0.0015 | 2.2625 |
| 2 | 10.01 | -6.00 | 0.0941 | 0.0346 | 0.0528 | 0.0940 | 0.0042 | -0.0195 | 2.7176 |
| 3 | 10.01 | -4.00 | 0.0866 | 0.0333 | 0.0585 | 0.0667 | 0.0028 | -0.0129 | 2.5995 |
| 4 | 10.01 | -2.00 | 0.0814 | 0.0372 | 0.0616 | 0.0229 | 0.0013 | -0.0056 | 2.1873 |
| 5 | 10.01 | -0.00 | 0.0769 | 0.0365 | 0.0615 | -0.0071 | 0.0000 | 0.0016 | 2.1065 |
| 6 | 10.01 | 1.99 | 0.0814 | 0.0350 | 0.0608 | -0.0427 | -0.0008 | 0.0090 | 2.3267 |
| 7 | 10.01 | 3.99 | 0.0869 | 0.0337 | 0.0559 | -0.0674 | -0.0026 | 0.0157 | 2.5765 |
| 8 | 10.01 | 5.99 | 0.0919 | 0.0347 | 0.0500 | -0.1003 | -0.0040 | 0.0226 | 2.6467 |
| 9 | 10.01 | -0.00 | 0.0812 | 0.0372 | 0.0611 | -0.0071 | 0.0003 | 0.0010 | 2.1802 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 92

TEMP = 92.
RN/FTX10-6= 0.451696 VEL-FPS= 75.445

PO= 14.4302
MACH= 0.0675

CONF= B1V1GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.2117 | 0.1028 | 0.1350 | -0.0112 | 0.0015 | 0.0026 | 2.0589 |
| 2 | 20.10 | -6.00 | 0.2297 | 0.1043 | 0.1225 | 0.0871 | 0.0028 | -0.0110 | 2.2023 |
| 3 | 20.10 | -4.00 | 0.2180 | 0.1050 | 0.1307 | 0.0570 | 0.0010 | -0.0064 | 2.0759 |
| 4 | 20.10 | -2.00 | 0.2129 | 0.1031 | 0.1348 | 0.0297 | 0.0006 | -0.0030 | 2.0655 |
| 5 | 20.10 | -0.00 | 0.2086 | 0.1017 | 0.1357 | -0.0140 | 0.0016 | 0.0027 | 2.0513 |
| 6 | 20.09 | 1.99 | 0.2107 | 0.1050 | 0.1340 | -0.0414 | 0.0012 | 0.0042 | 2.0061 |
| 7 | 20.09 | 3.99 | 0.2173 | 0.1025 | 0.1314 | -0.0688 | 0.0006 | 0.0102 | 2.1129 |
| 8 | 20.09 | 5.99 | 0.2288 | 0.1019 | 0.1238 | -0.0908 | -0.0005 | 0.0138 | 2.2451 |
| 9 | 20.10 | -0.00 | 0.2127 | 0.1032 | 0.1349 | -0.0140 | 0.0016 | 0.0027 | 2.0612 |

VSD LOW-SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 93

TEMP = 96.
RN/FTX10-6= 0.447576 VEL-FPS= 75.715

PO= 14.4302
MACH= 0.0677

CONF= B1V1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0119 | 0.0233 | 0.0033 | -0.0026 | -0.0005 | 0.0017 | -0.51[illegible] |
| 2 | 0.00 | -6.00 | -0.0039 | 0.0208 | -0.0024 | 0.0985 | 0.0083 | -0.0217 | -0.19[illegible] |
| 3 | 0.00 | -4.00 | -0.0116 | 0.0232 | 0.0018 | 0.0657 | 0.0054 | -0.0141 | -0.501[illegible] |
| 4 | 0.00 | -2.00 | -0.0117 | 0.0233 | 0.0028 | 0.0301 | 0.0026 | -0.0064 | -0.505[illegible] |
| 5 | 0.00 | 0.00 | -0.0103 | 0.0233 | 0.0032 | 0.0000 | -0.0005 | 0.0016 | -0.463[illegible] |
| 6 | -0.00 | 1.99 | -0.0099 | 0.0234 | 0.0023 | -0.0328 | -0.0037 | 0.0087 | -0.42[illegible] |
| 7 | -0.00 | 3.99 | -0.0091 | 0.0212 | -0.0017 | -0.0630 | -0.0066 | 0.0156 | -0.432[illegible] |
| 8 | -0.00 | 5.99 | -0.0007 | 0.0190 | -0.0055 | -0.0904 | -0.0096 | 0.0225 | -0.037[illegible] |
| 9 | 0.00 | 0.00 | -0.0097 | 0.0233 | 0.0032 | -0.0026 | -0.0005 | 0.0017 | -0.416[illegible] |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 94

TEMP = 97.
RN/FTX10-6= 0.446536 VEL-FPS= 75.786

PO= 14.4302
MACH= 0.0678

CONF= B1V1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.0306 | 0.0288 | 0.0228 | 0.0004 | 0.0001 | 0.0015 | 1.0627 |
| 2 | 10.01 | -6.00 | 0.0466 | 0.0268 | 0.0133 | 0.0933 | 0.0025 | -0.0190 | 1.7413 |
| 3 | 10.01 | -4.00 | 0.0366 | 0.0274 | 0.0186 | 0.0660 | 0.0014 | -0.0124 | 1.3350 |
| 4 | 10.01 | -2.00 | 0.0343 | 0.0271 | 0.0207 | 0.0222 | 0.0009 | -0.0054 | 1.2679 |
| 5 | 10.01 | -0.00 | 0.0327 | 0.0292 | 0.0222 | -0.0105 | 0.0003 | 0.0018 | 1.1204 |
| 6 | 10.01 | 1.99 | 0.0351 | 0.0273 | 0.0203 | -0.0379 | -0.0008 | 0.0079 | 1.2631 |
| 7 | 10.01 | 3.99 | 0.0395 | 0.0258 | 0.0173 | -0.0625 | -0.0017 | 0.0144 | 1.5305 |
| 8 | 10.01 | 5.99 | 0.0450 | 0.0245 | 0.0119 | -0.0872 | -0.0023 | 0.0203 | 1.8340 |
| 9 | 10.01 | -0.00 | 0.0289 | 0.0261 | 0.0235 | 0.0004 | -0.0002 | 0.0015 | 1.1053 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 95

TEMP = 99. PO= 14.4302
RN/FTX10-6= 0.444532 VEL-FPS= 75.916 MACH= 0.0679

CONF= B1V1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.0895 | 0.0645 | 0.0342 | -0.0046 | 0.0010 | 0.0024 | 1.386 |
| 2 | 20.10 | -6.00 | 0.1035 | 0.0645 | 0.0253 | 0.0908 | -0.0021 | -0.0146 | 1.605 |
| 3 | 20.10 | -4.00 | 0.0963 | 0.0619 | 0.0292 | 0.0663 | -0.0012 | -0.0101 | 1.555 |
| 4 | 20.10 | -2.00 | 0.0906 | 0.0648 | 0.0332 | 0.0308 | -0.0001 | -0.0040 | 1.396 |
| 5 | 20.10 | -0.00 | 0.0894 | 0.0645 | 0.0342 | -0.0156 | 0.0014 | 0.0032 | 1.386 |
| 6 | 20.09 | 1.99 | 0.0893 | 0.0645 | 0.0338 | -0.0429 | 0.0022 | 0.0091 | 1.383 |
| 7 | 20.09 | 3.99 | 0.0947 | 0.0616 | 0.0309 | -0.0730 | 0.0029 | 0.0145 | 1.537 |
| 8 | 20.09 | 5.99 | 0.1034 | 0.0624 | 0.0252 | -0.1004 | 0.0037 | 0.0186 | 1.656 |
| 9 | 20.10 | -0.00 | 0.0888 | 0.0693 | 0.0335 | -0.0101 | 0.0011 | 0.0026 | 1.282 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 96
QPSF = 6.60

RUN NO. 96

TEMP = 100.
RN/FTX10-6= 0.443504 VEL-FPS= 75.987

PO= 14.4302
MACH= 0.0679

CONF= B1V1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0075 | 0.0210 | 0.0031 | -0.0054 | -0.0005 | 0.0012 | -0.3585 |
| 2 | 2.01 | -0.00 | -0.0036 | 0.0185 | 0.0070 | -0.0053 | -0.0001 | 0.0017 | -0.1955 |
| 3 | 4.03 | -0.00 | 0.0090 | 0.0192 | 0.0098 | -0.0052 | -0.0000 | 0.0017 | 0.4686 |
| 4 | 5.86 | -0.00 | 0.0138 | 0.0224 | 0.0145 | -0.0052 | -0.0002 | 0.0017 | 0.6187 |
| 5 | 7.99 | -0.00 | 0.0219 | 0.0241 | 0.0180 | -0.0051 | -0.0001 | 0.0017 | 0.9092 |
| 6 | 10.01 | -0.00 | 0.0342 | 0.0271 | 0.0212 | -0.0050 | 0.0002 | 0.0016 | 1.2615 |
| 7 | 12.01 | -0.00 | 0.0452 | 0.0308 | 0.0246 | -0.0049 | -0.0000 | 0.0017 | 1.4697 |
| 8 | 14.00 | -0.00 | 0.0523 | 0.0367 | 0.0276 | -0.0103 | 0.0004 | 0.0029 | 1.4231 |
| 9 | 16.03 | -0.00 | 0.0680 | 0.0434 | 0.0300 | -0.0048 | 0.0002 | 0.0021 | 1.5672 |
| 10 | 18.01 | -0.00 | 0.0791 | 0.0498 | 0.0323 | -0.0102 | 0.0008 | 0.0033 | 1.5890 |
| 11 | 20.10 | -0.00 | 0.0931 | 0.0608 | 0.0342 | -0.0101 | 0.0010 | 0.0032 | 1.5296 |
| 12 | 22.03 | -0.00 | 0.1014 | 0.0681 | 0.0376 | -0.0128 | 0.0011 | 0.0032 | 1.4882 |
| 13 | 23.97 | -0.00 | 0.1152 | 0.0786 | 0.0396 | -0.0100 | 0.0012 | 0.0031 | 1.4646 |
| 14 | 25.97 | -0.00 | 0.1234 | 0.0905 | 0.0432 | -0.0099 | 0.0014 | 0.0024 | 1.3633 |
| 15 | 28.01 | -0.00 | 0.1340 | 0.0995 | 0.0460 | -0.0125 | 0.0018 | 0.0028 | 1.3463 |
| 16 | 0.00 | 0.00 | -0.0075 | 0.0210 | 0.0026 | -0.0054 | -0.0005 | 0.0012 | -0.3594 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 97
QPSF = 6.60

RUN NO. 97

TEMP = 80.
RN/FTX10-6= 0.466574 VEL-FPS= 74.288

PO= 14.5628
MACH= 0.0664

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0194 | 0.0025 | -0.0012 | 0.0010 | 0.7256 |
| 2 | 2.01 | -0.00 | 0.1206 | 0.0328 | -0.0608 | 0.0050 | -0.0012 | 0.0005 | 3.6764 |
| 3 | 4.03 | -0.00 | 0.2254 | 0.0400 | -0.1044 | 0.0074 | -0.0015 | -0.0000 | 5.6232 |
| 4 | 5.86 | -0.00 | 0.3340 | 0.0542 | -0.1525 | 0.0016 | -0.0010 | 0.0007 | 6.1570 |
| 5 | 7.99 | -0.00 | 0.4439 | 0.0756 | -0.2016 | 0.0039 | -0.0020 | 0.0009 | 5.8637 |
| 6 | 10.01 | -0.00 | 0.5544 | 0.1068 | -0.2524 | -0.0046 | -0.0017 | 0.0012 | 5.1875 |
| 7 | 12.01 | -0.00 | 0.6564 | 0.1466 | -0.2990 | 0.0059 | -0.0024 | 0.0000 | 4.4761 |
| 8 | 14.00 | -0.00 | 0.7614 | 0.1947 | -0.3493 | 0.0056 | -0.0014 | -0.0000 | 3.9097 |
| 9 | 16.03 | -0.00 | 0.8718 | 0.2608 | -0.4086 | 0.0107 | -0.0009 | -0.0008 | 3.3430 |
| 10 | 18.01 | -0.00 | 1.0064 | 0.3258 | -0.4738 | 0.0021 | 0.0010 | 0.0005 | 3.0885 |
| 11 | 20.10 | -0.00 | 1.1183 | 0.4005 | -0.5228 | 0.0046 | 0.0024 | -0.0006 | 2.7918 |
| 12 | 22.03 | -0.00 | 1.1440 | 0.4540 | -0.5212 | 0.0020 | 0.0033 | -0.0004 | 2.5194 |
| 13 | 23.97 | -0.00 | 1.0897 | 0.4855 | -0.4814 | 0.0051 | 0.0024 | -0.0009 | 2.2445 |
| 14 | 25.97 | -0.00 | 1.0316 | 0.5214 | -0.4540 | 0.0026 | 0.0017 | -0.0018 | 1.9782 |
| 15 | 28.01 | -0.00 | 0.9750 | 0.5535 | -0.4261 | 0.0083 | -0.0012 | -0.0017 | 1.7613 |
| 16 | 0.00 | 0.00 | 0.0365 | 0.0399 | -0.0217 | -0.0056 | -0.0010 | 0.0013 | 0.9131 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 98

TEMP = 80.
RN/FTX10-6= 0.466557 VEL-FPS= 74.290

PO= 14.5628
MACH= 0.0664

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8706 | 0.2642 | -0.3157 | 0.0009 | -0.0003 | 0.0013 | 3.2947 |
| 2 | 16.03 | -6.00 | 0.8750 | 0.2580 | -0.3209 | 0.1023 | 0.0037 | -0.0248 | 3.3911 |
| 3 | 16.03 | -4.00 | 0.8716 | 0.2619 | -0.3167 | 0.0749 | 0.0025 | -0.0173 | 3.3275 |
| 4 | 16.03 | -2.00 | 0.8695 | 0.2613 | -0.3132 | 0.0312 | 0.0023 | -0.0084 | 3.3264 |
| 5 | 16.03 | -0.00 | 0.8645 | 0.2624 | -0.3105 | 0.0010 | 0.0003 | 0.0011 | 3.2941 |
| 6 | 16.03 | 1.99 | 0.8700 | 0.2617 | -0.3159 | -0.0346 | -0.0021 | 0.0098 | 3.3241 |
| 7 | 16.03 | 3.99 | 0.8708 | 0.2620 | -0.3187 | -0.0621 | -0.0032 | 0.0179 | 3.3231 |
| 8 | 16.03 | 5.99 | 0.8696 | 0.2569 | -0.3221 | -0.0841 | -0.0049 | 0.0254 | 3.3846 |
| 9 | 16.03 | -0.00 | 0.8686 | 0.2636 | -0.3141 | 0.0037 | -0.0005 | 0.0007 | 3.2945 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60

RUN NO. 99

TEMP = 94.
RN/FTX10-6= 0.451601 VEL-FPS= 75.250

PO= 14.5628
MACH= 0.0673

CONF= W2B1V1E(10)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2750 | 0.0602 | -0.2030 | 0.0008 | -0.0024 | 0.0008 | 4.5612 |
| 2 | 2.01 | -0.00 | 0.3696 | 0.0687 | -0.2301 | 0.0007 | -0.0020 | 0.0004 | 5.3745 |
| 3 | 4.03 | -0.00 | 0.4857 | 0.0831 | -0.2628 | 0.0060 | -0.0021 | -0.0002 | 5.8349 |
| 4 | 5.86 | -0.00 | 0.5939 | 0.1126 | -0.2949 | 0.0005 | -0.0018 | 0.0005 | 5.2711 |
| 5 | 7.99 | -0.00 | 0.7183 | 0.1459 | -0.3336 | 0.0030 | -0.0021 | 0.0005 | 4.9235 |
| 6 | 10.01 | -0.00 | 0.8220 | 0.1905 | -0.3632 | 0.0002 | -0.0015 | 0.0011 | 4.3148 |
| 7 | 12.01 | -0.00 | 0.9291 | 0.2363 | -0.3953 | 0.0055 | -0.0021 | 0.0000 | 3.9309 |
| 8 | 14.00 | -0.00 | 1.0169 | 0.2949 | -0.4233 | 0.0082 | -0.0009 | -0.0008 | 3.4477 |
| 9 | 16.03 | -0.00 | 1.1201 | 0.3662 | -0.4573 | 0.0053 | -0.0003 | -0.0003 | 3.0580 |
| 10 | 18.01 | -0.00 | 1.2163 | 0.4431 | -0.4958 | 0.0051 | -0.0009 | 0.0016 | 2.7447 |
| 11 | 20.10 | -0.00 | 1.3188 | 0.5235 | -0.5393 | 0.0022 | 0.0004 | 0.0012 | 2.5190 |
| 12 | 22.03 | -0.00 | 1.3984 | 0.6126 | -0.5693 | -0.0006 | -0.0000 | 0.0021 | 2.2826 |
| 13 | 23.97 | -0.00 | 1.4380 | 0.6868 | -0.5766 | 0.0048 | -0.0001 | 0.0008 | 2.0954 |
| 14 | 25.97 | -0.00 | 1.4428 | 0.7533 | -0.5571 | 0.0108 | 0.0021 | -0.0006 | 1.9151 |
| 15 | 28.01 | -0.00 | 1.4132 | 0.8107 | -0.5266 | 0.0083 | -0.0009 | -0.0002 | 1.7431 |
| 16 | 0.00 | 0.00 | 0.2782 | 0.0603 | -0.2051 | -0.0046 | -0.0024 | 0.0016 | 4.6120 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60

RUN NO. 100

TEMP = 94.

PO= 14.5628

RN/FTX10-6= 0.451665 VEL-FPS= 75.239 MACH= 0.0673

CONF= WIB1V1E(-10)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2211 | 0.0335 | 0.1731 | 0.0017 | -0.0004 | 0.0012 | -6.5859 |
| 2 | 2.01 | -0.00 | -0.1244 | 0.0316 | 0.1466 | 0.0016 | -0.0006 | 0.0013 | -3.9263 |
| 3 | 4.03 | -0.00 | -0.0146 | 0.0352 | 0.1193 | -0.0012 | -0.0005 | 0.0008 | -0.4155 |
| 4 | 5.86 | -0.00 | 0.0893 | 0.0456 | 0.0943 | 0.0014 | -0.0007 | 0.0008 | 1.9600 |
| 5 | 7.99 | -0.00 | 0.2070 | 0.0516 | 0.0622 | 0.0013 | -0.0004 | 0.0002 | 4.0094 |
| 6 | 10.01 | -0.00 | 0.3216 | 0.0796 | 0.0274 | 0.0011 | -0.0009 | 0.0009 | 4.0384 |
| 7 | 12.01 | -0.00 | 0.4476 | 0.1113 | -0.0117 | -0.0044 | -0.0002 | 0.0015 | 4.0218 |
| 8 | 14.00 | -0.00 | 0.5626 | 0.1517 | -0.0504 | 0.0007 | -0.0002 | 0.0013 | 3.7065 |
| 9 | 16.03 | -0.00 | 0.6747 | 0.2057 | -0.0888 | 0.0033 | -0.0007 | 0.0014 | 3.2798 |
| 10 | 18.01 | -0.00 | 0.7823 | 0.2641 | -0.1312 | 0.0003 | 0.0003 | 0.0012 | 2.9612 |
| 11 | 20.10 | -0.00 | 0.8905 | 0.3285 | -0.1751 | 0.0055 | 0.0001 | 0.0006 | 2.7106 |
| 12 | 22.03 | -0.00 | 0.9925 | 0.4020 | -0.2134 | 0.0081 | -0.0000 | 0.0000 | 2.4688 |
| 13 | 23.97 | -0.00 | 1.0775 | 0.4746 | -0.2439 | 0.0025 | 0.0001 | 0.0007 | 2.2700 |
| 14 | 25.97 | -0.00 | 1.1514 | 0.5512 | -0.2674 | 0.0105 | -0.0013 | 0.0000 | 2.0887 |
| 15 | 28.01 | -0.00 | 1.2044 | 0.6308 | -0.2824 | 0.0106 | -0.0003 | -0.0017 | 1.9092 |
| 16 | 0.00 | 0.00 | -0.2060 | 0.0383 | 0.1666 | -0.0065 | -0.0006 | 0.0015 | -5.3760 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60

RUN NO. 101

TEMP = 94.
RN/FTX10-6= 0.451553 VEL-FPS= 75.258

PO= 14.5628
MACH= 0.0673

CONF= WIB1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | -0.00 | 1.99 | 0.0288 | 0.0282 | -0.0160 | -0.0301 | -0.0027 | 0.0091 | 1.0213 |
| 2 | 2.01 | 1.99 | 0.1246 | 0.0351 | -0.0405 | -0.0330 | -0.0033 | 0.0093 | 3.5476 |
| 3 | 4.02 | 1.99 | 0.2387 | 0.0430 | -0.0712 | -0.0304 | -0.0033 | 0.0088 | 5.5445 |
| 4 | 5.86 | 1.99 | 0.3454 | 0.0619 | -0.1002 | -0.0414 | -0.0036 | 0.0104 | 5.5740 |
| 5 | 7.99 | 1.99 | 0.4647 | 0.0825 | -0.1350 | -0.0307 | -0.0044 | 0.0099 | 5.6277 |
| 6 | 10.01 | 1.99 | 0.5793 | 0.1198 | -0.1690 | -0.0309 | -0.0046 | 0.0101 | 4.8337 |
| 7 | 12.01 | 1.99 | 0.6942 | 0.1584 | -0.2042 | -0.0338 | -0.0046 | 0.0110 | 4.3823 |
| 8 | 13.99 | 1.99 | 0.8046 | 0.2139 | -0.2421 | -0.0312 | -0.0037 | 0.0104 | 3.7610 |
| 9 | 16.03 | 1.99 | 0.9062 | 0.2740 | -0.2757 | -0.0286 | -0.0036 | 0.0105 | 3.3071 |
| 10 | 18.01 | 1.99 | 1.0096 | 0.3423 | -0.3163 | -0.0315 | -0.0025 | 0.0105 | 2.9490 |
| 11 | 20.09 | 1.99 | 1.1229 | 0.4179 | -0.3636 | -0.0264 | -0.0035 | 0.0115 | 2.6870 |
| 12 | 22.03 | 1.99 | 1.2159 | 0.4993 | -0.3992 | -0.0293 | -0.0027 | 0.0133 | 2.4361 |
| 13 | 23.97 | 1.99 | 1.2817 | 0.5724 | -0.4196 | -0.0320 | -0.0009 | 0.0129 | 2.2392 |
| 14 | 25.97 | 1.99 | 1.3298 | 0.6554 | -0.4320 | -0.0399 | 0.0058 | 0.0123 | 2.0217 |
| 15 | 28.01 | 1.99 | 1.3545 | 0.7281 | -0.4286 | -0.0397 | 0.0066 | 0.0125 | 1.8602 |
| 16 | -0.00 | 1.99 | 0.0397 | 0.0330 | -0.0198 | -0.0411 | -0.0032 | 0.0100 | 1.2029 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 102

TEMP = 94. PO= 14.5628
RN/FTX10-6= 0.451585 VEL-FPS= 75.253 MACH= 0.0673

CONF= WIB1V1E(0)SC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9079 | 0.2768 | -0.2751 | -0.0038 | 0.0000 | 0.0017 | 3.2793 |
| 2 | 16.03 | -6.00 | 0.9024 | 0.2653 | -0.2800 | 0.0948 | 0.0074 | -0.0252 | 3.4006 |
| 3 | 16.03 | -4.00 | 0.9052 | 0.2711 | -0.2776 | 0.0592 | 0.0057 | -0.0162 | 3.3392 |
| 4 | 16.03 | -2.00 | 0.9066 | 0.2739 | -0.2754 | 0.0344 | 0.0017 | -0.0084 | 3.3091 |
| 5 | 16.03 | -0.00 | 0.9092 | 0.2723 | -0.2745 | -0.0120 | 0.0007 | 0.0024 | 3.3381 |
| 6 | 16.03 | 1.99 | 0.9120 | 0.2732 | -0.2774 | -0.0341 | -0.0033 | 0.0112 | 3.3373 |
| 7 | 16.03 | 3.99 | 0.9144 | 0.2716 | -0.2821 | -0.0589 | -0.0063 | 0.0192 | 3.3662 |
| 8 | 16.03 | 5.99 | 0.9129 | 0.2713 | -0.2866 | -0.0973 | -0.0080 | 0.0267 | 3.3642 |
| 9 | 16.03 | -0.00 | 0.9148 | 0.2764 | -0.2760 | -0.0066 | -0.0008 | 0.0032 | 3.3095 |

VSD LOW SPEED WIND TUNNEL TEST 422
STABILITY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 103

TEMP = 94.
RN/FTX10-6= 0.451368 VEL-FPS= 75.289

PO= 14.5481
MACH= 0.0673

CONF= WIB1V1E(0)GC2

| PT | ALPHA | BETA | CL | CD | CM | CY | CRM | CYM | L/D |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9188 | 0.2730 | -0.3097 | -0.0016 | -0.0014 | 0.0005 | 3.3646 |
| 2 | 16.03 | -6.00 | 0.9101 | 0.2654 | -0.3095 | 0.0998 | 0.0049 | -0.0274 | 3.4252 |
| 3 | 16.03 | -4.00 | 0.9125 | 0.2686 | -0.3078 | 0.0696 | 0.0019 | -0.0187 | 3.3965 |
| 4 | 16.03 | -2.00 | 0.9128 | 0.2712 | -0.3065 | 0.0312 | 0.0000 | -0.0094 | 3.3651 |
| 5 | 16.03 | -0.00 | 0.9230 | 0.2742 | -0.3110 | 0.0038 | -0.0007 | -0.0003 | 3.3653 |
| 6 | 16.03 | 1.99 | 0.9216 | 0.2740 | -0.3131 | -0.0453 | -0.0001 | 0.0101 | 3.3636 |
| 7 | 16.03 | 3.99 | 0.9200 | 0.2711 | -0.3128 | -0.0673 | -0.0024 | 0.0189 | 3.3929 |
| 8 | 16.03 | 5.99 | 0.9187 | 0.2660 | -0.3166 | -0.1031 | -0.0056 | 0.0279 | 3.4531 |
| 9 | 16.03 | -0.00 | 0.9239 | 0.2745 | -0.3134 | -0.0124 | 0.0013 | 0.0012 | 3.3648 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 1

TEMP = 101.
RN/FTX10-6= 0.442645 VEL-FPS= 76.029

PD= 14.4450
MACH= 0.0680

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0175 | -0.0083 | -0.0017 | 0.0030 |
| 2 | 2.01 | -0.00 | 0.1206 | 0.0426 | -0.0602 | -0.0031 | -0.0017 | 0.0013 |
| 3 | 4.03 | -0.00 | 0.2277 | 0.0265 | -0.1035 | -0.0034 | -0.0017 | 0.0018 |
| 4 | 5.86 | -0.00 | 0.3249 | 0.0174 | -0.1459 | 0.0016 | -0.0014 | 0.0006 |
| 5 | 7.99 | -0.00 | 0.4425 | 0.0201 | -0.1994 | 0.0012 | -0.0014 | 0.0007 |
| 6 | 10.01 | -0.00 | 0.5581 | 0.0181 | -0.2485 | -0.0018 | -0.0019 | 0.0013 |
| 7 | 12.01 | -0.00 | 0.6683 | 0.0161 | -0.2958 | -0.0020 | -0.0012 | 0.0019 |
| 8 | 14.00 | -0.00 | 0.7795 | 0.0141 | -0.3445 | -0.0024 | -0.0015 | 0.0014 |
| 9 | 16.03 | -0.00 | 0.8992 | 0.0145 | -0.4028 | -0.0055 | 0.0005 | 0.0021 |
| 10 | 18.01 | -0.00 | 1.0514 | 0.0080 | -0.4708 | -0.0032 | 0.0012 | 0.0021 |
| 11 | 20.10 | -0.00 | 1.1865 | -0.0033 | -0.5252 | -0.0036 | 0.0019 | 0.0032 |
| 12 | 22.03 | -0.00 | 1.2189 | -0.0034 | -0.5163 | -0.0008 | -0.0010 | 0.0026 |
| 13 | 23.97 | -0.00 | 1.1929 | 0.0078 | -0.4844 | -0.0111 | 0.0055 | 0.0033 |
| 14 | 25.97 | -0.00 | 1.1417 | 0.0215 | -0.4479 | 0.0029 | 0.0067 | 0.0000 |
| 15 | 28.01 | -0.00 | 1.1432 | 0.0308 | -0.4395 | -0.0025 | 0.0018 | 0.0019 |
| 16 | 0.00 | 0.00 | 0.0375 | 0.0353 | -0.0230 | -0.0138 | -0.0016 | 0.0032 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 2

TEMP = 105.
RN/FTX10-6= 0.438609 VEL-FPS= 76.306

PO= 14.4401
MACH= 0.0682

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0202 | -0.0001 | -0.0018 | 0.0006 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0281 | -0.0296 | 0.0980 | 0.0029 | -0.0237 |
| 3 | 0.00 | -4.00 | 0.0323 | 0.0305 | -0.0231 | 0.0571 | 0.0016 | -0.0148 |
| 4 | 0.00 | -2.00 | 0.0323 | 0.0305 | -0.0202 | 0.0298 | -0.0003 | -0.0079 |
| 5 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0211 | -0.0029 | -0.0021 | 0.0007 |
| 6 | -0.00 | 1.99 | 0.0351 | 0.0307 | -0.0231 | -0.0384 | -0.0033 | 0.0094 |
| 7 | -0.00 | 3.99 | 0.0348 | 0.0284 | -0.0258 | -0.0685 | -0.0055 | 0.0175 |
| 8 | -0.00 | 5.99 | 0.0432 | 0.0262 | -0.0323 | -0.0987 | -0.0067 | 0.0244 |
| 9 | 0.00 | 0.00 | 0.0342 | 0.0306 | -0.0212 | -0.0110 | -0.0010 | 0.0020 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 3

TEMP = 105.
RN/FTX10-6= 0.438437 VEL-FPS= 76.336

PO= 14.4401
MACH= 0.0683

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2266 | 0.0171 | -0.1031 | -0.0008 | -0.0021 | 0.0001 |
| 2 | 4.03 | -6.00 | 0.2377 | 0.0123 | -0.1115 | 0.0976 | 0.0057 | -0.0247 |
| 3 | 4.03 | -4.00 | 0.2356 | 0.0170 | -0.1072 | 0.0648 | 0.0035 | -0.0166 |
| 4 | 4.03 | -2.00 | 0.2333 | 0.0170 | -0.1041 | 0.0266 | 0.0014 | -0.0078 |
| 5 | 4.03 | -0.00 | 0.2353 | 0.0171 | -0.1047 | -0.0089 | -0.0016 | 0.0020 |
| 6 | 4.02 | 1.99 | 0.2296 | 0.0172 | -0.1047 | -0.0336 | -0.0043 | 0.0093 |
| 7 | 4.02 | 3.99 | 0.2348 | 0.0149 | -0.1087 | -0.0665 | -0.0068 | 0.0169 |
| 8 | 4.02 | 5.99 | 0.2387 | 0.0127 | -0.1149 | -0.0994 | -0.0094 | 0.0245 |
| 9 | 4.03 | -0.00 | 0.2309 | 0.0194 | -0.1040 | -0.0062 | -0.0017 | 0.0014 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 4

TEMP = 107. PO= 14.4401
RN/FTX10-6= 0.436587 VEL-FPS= 76.449 MACH= 0.0684

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5603 | 0.0134 | -0.2480 | -0.0018 | -0.0016 | 0.0003 |
| 2 | 10.01 | -6.00 | 0.5650 | 0.0086 | -0.2550 | 0.0994 | 0.0088 | -0.0247 |
| 3 | 10.01 | -4.00 | 0.5661 | 0.0109 | -0.2509 | 0.0666 | 0.0050 | -0.0171 |
| 4 | 10.01 | -2.00 | 0.5616 | 0.0134 | -0.2491 | 0.0255 | 0.0016 | -0.0076 |
| 5 | 10.01 | -0.00 | 0.5603 | 0.0134 | -0.2480 | -0.0017 | -0.0013 | 0.0003 |
| 6 | 10.01 | 1.99 | 0.5644 | 0.0112 | -0.2501 | -0.0374 | -0.0054 | 0.0096 |
| 7 | 10.01 | 3.99 | 0.5631 | 0.0089 | -0.2522 | -0.0703 | -0.0086 | 0.0172 |
| 8 | 10.01 | 5.99 | 0.5692 | 0.0067 | -0.2586 | -0.1005 | -0.0119 | 0.0231 |
| 9 | 10.01 | -0.00 | 0.5636 | 0.0134 | -0.2497 | -0.0018 | -0.0016 | 0.0003 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 5

TEMP = 107. PO= 14.4401
RN/FTX10-6= 0.436634 VEL-FPS= 76.441 MACH= 0.0683

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9100 | 0.0075 | -0.4062 | -0.0028 | 0.0001 | 0.0015 |
| 2 | 16.03 | -6.00 | 0.9039 | 0.0003 | -0.4066 | 0.1064 | 0.0065 | -0.0242 |
| 3 | 16.03 | -4.00 | 0.9039 | 0.0050 | -0.4035 | 0.0764 | 0.0050 | -0.0173 |
| 4 | 16.03 | -2.00 | 0.9103 | 0.0051 | -0.4048 | 0.0299 | 0.0023 | -0.0082 |
| 5 | 16.03 | -0.00 | 0.9143 | 0.0075 | -0.4079 | -0.0055 | 0.0005 | 0.0016 |
| 6 | 16.03 | 1.99 | 0.9119 | 0.0076 | -0.4081 | -0.0384 | -0.0023 | 0.0108 |
| 7 | 16.03 | 3.99 | 0.9159 | 0.0030 | -0.4134 | -0.0739 | -0.0031 | 0.0190 |
| 8 | 16.03 | 5.99 | 0.9155 | 0.0008 | -0.4183 | -0.1097 | -0.0073 | 0.0262 |
| 9 | 16.03 | -0.00 | 0.9057 | 0.0028 | -0.4034 | -0.0056 | -0.0004 | 0.0021 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 6

TEMP = 107.
RN/FTX10-6= 0.436650 VEL-FPS= 76.438

PO= 14.4401
MACH= 0.0683

CONF= W281V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1866 | -0.0103 | -0.5235 | -0.0117 | 0.0027 | 0.0029 |
| 2 | 20.10 | -6.00 | 1.1889 | -0.0198 | -0.5320 | 0.1081 | 0.0045 | -0.0247 |
| 3 | 20.10 | -4.00 | 1.1879 | -0.0174 | -0.5273 | 0.0754 | 0.0023 | -0.0176 |
| 4 | 20.10 | -2.00 | 1.1889 | -0.0127 | -0.5260 | 0.0372 | 0.0019 | -0.0088 |
| 5 | 20.10 | -0.00 | 1.1845 | -0.0103 | -0.5220 | -0.0144 | 0.0031 | 0.0035 |
| 6 | 20.09 | 1.99 | 1.1800 | -0.0103 | -0.5188 | -0.0471 | 0.0022 | 0.0122 |
| 7 | 20.09 | 3.99 | 1.1787 | -0.0149 | -0.5199 | -0.0854 | 0.0004 | 0.0215 |
| 8 | 20.09 | 5.99 | 1.1890 | -0.0171 | -0.5313 | -0.1183 | -0.0003 | 0.0281 |
| 9 | 20.10 | -0.00 | 1.1899 | -0.0103 | -0.5247 | -0.0090 | 0.0030 | 0.0028 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 7

TEMP = 87.

PO= 14.4401
RN/FTX10-6= 0.457119 VEL-FPS= 75.076 MACH= 0.0671

CONF= W2B1V1E(-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2259 | 0.0454 | 0.1646 | -0.0093 | -0.0003 | 0.0022 |
| 2 | 2.01 | -0.00 | -0.1239 | 0.0409 | 0.1311 | -0.0067 | -0.0009 | 0.0016 |
| 3 | 4.03 | -0.00 | -0.0179 | 0.0271 | 0.0887 | -0.0071 | -0.0009 | 0.0016 |
| 4 | 5.86 | -0.00 | 0.0803 | 0.0227 | 0.0476 | -0.0073 | -0.0009 | 0.0022 |
| 5 | 7.99 | -0.00 | 0.1873 | 0.0183 | 0.0020 | -0.0022 | -0.0006 | 0.0004 |
| 6 | 10.01 | -0.00 | 0.3093 | 0.0140 | -0.0515 | -0.0053 | -0.0011 | 0.0017 |
| 7 | 12.01 | -0.00 | 0.4249 | 0.0097 | -0.1024 | -0.0002 | -0.0012 | 0.0015 |
| 8 | 14.00 | -0.00 | 0.5404 | 0.0054 | -0.1532 | -0.0115 | -0.0006 | 0.0025 |
| 9 | 16.03 | -0.00 | 0.6644 | 0.0034 | -0.2113 | -0.0064 | 0.0006 | 0.0024 |
| 10 | 18.01 | -0.00 | 0.7951 | -0.0008 | -0.2685 | -0.0013 | 0.0009 | 0.0017 |
| 11 | 20.10 | -0.00 | 0.9377 | -0.0144 | -0.3299 | 0.0008 | 0.0005 | 0.0011 |
| 12 | 22.03 | -0.00 | 1.0395 | -0.0212 | -0.3679 | -0.0047 | 0.0013 | 0.0024 |
| 13 | 23.97 | -0.00 | 1.0489 | -0.0143 | -0.3553 | -0.0017 | 0.0037 | 0.0017 |
| 14 | 25.97 | -0.00 | 1.0354 | -0.0051 | -0.3392 | 0.0038 | 0.0037 | -0.0006 |
| 15 | 28.01 | -0.00 | 1.0086 | 0.0087 | -0.3218 | 0.0064 | -0.0026 | -0.0006 |
| 16 | 0.00 | 0.00 | -0.2092 | 0.0336 | 0.1689 | -0.0092 | -0.0006 | 0.0021 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 8

TEMP = 88.

PO= 14.4401
RN/FTX10-6= 0.456026 VEL-FPS= 75.150 MACH= 0.0672

CONF= W2B1V1E(10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2767 | 0.0416 | -0.2128 | -0.0020 | -0.0022 | 0.0015 |
| 2 | 2.01 | -0.00 | 0.3728 | 0.0489 | -0.2552 | 0.0031 | -0.0028 | -0.0002 |
| 3 | 4.03 | -0.00 | 0.4830 | 0.0329 | -0.3024 | 0.0000 | -0.0021 | -0.0000 |
| 4 | 5.86 | -0.00 | 0.5834 | 0.0215 | -0.3477 | -0.0002 | -0.0025 | -0.0000 |
| 5 | 7.99 | -0.00 | 0.7096 | 0.0290 | -0.4068 | 0.0020 | -0.0021 | -0.0005 |
| 6 | 10.01 | -0.00 | 0.8112 | 0.0269 | -0.4483 | 0.0017 | -0.0020 | -0.0000 |
| 7 | 12.01 | -0.00 | 0.9032 | 0.0295 | -0.4841 | 0.0015 | -0.0013 | 0.0005 |
| 8 | 14.00 | -0.00 | 1.0112 | 0.0274 | -0.5312 | 0.0067 | -0.0000 | -0.0001 |
| 9 | 16.03 | -0.00 | 1.1491 | 0.0279 | -0.5997 | 0.0062 | 0.0010 | -0.0000 |
| 10 | 18.01 | -0.00 | 1.2885 | 0.0213 | -0.6583 | 0.0031 | 0.0018 | 0.0005 |
| 11 | 20.10 | -0.00 | 1.3494 | 0.2105 | -0.6373 | 0.0040 | 0.0040 | 0.0009 |
| 12 | 22.03 | -0.00 | 1.3019 | 0.0184 | -0.6063 | -0.0015 | 0.0026 | 0.0022 |
| 13 | 23.97 | -0.00 | 1.2908 | 0.0368 | -0.5847 | -0.0037 | 0.0075 | 0.0021 |
| 14 | 25.97 | -0.00 | 1.2613 | 0.0436 | -0.5575 | 0.0098 | 0.0029 | -0.0031 |
| 15 | 28.01 | -0.00 | 1.2188 | 0.0550 | -0.5220 | -0.0059 | 0.0059 | 0.0005 |
| 16 | 0.00 | 0.00 | 0.2788 | 0.0510 | -0.2161 | -0.0047 | -0.0024 | 0.0010 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 9

TEMP = 86.

PO= 14.4499
RN/FTX10-6= 0.458315 VEL-FPS= 74.985 MACH= 0.0670

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0118 | 0.0304 | -0.0079 | 0.0054 | -0.0012 | 0.0003 |
| 2 | 2.01 | -0.00 | 0.1132 | 0.0308 | -0.0537 | -0.0003 | -0.0004 | 0.0006 |
| 3 | 4.03 | -0.00 | 0.2222 | 0.0241 | -0.1026 | -0.0007 | -0.0007 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.3248 | 0.0127 | -0.1476 | 0.0016 | -0.0011 | -0.0004 |
| 5 | 7.99 | -0.00 | 0.4457 | 0.0061 | -0.2015 | 0.0039 | -0.0008 | 0.0000 |
| 6 | 10.01 | -0.00 | 0.5569 | 0.0111 | -0.2510 | 0.0008 | -0.0013 | 0.0002 |
| [illegible] | 12.01 | -0.00 | 0.6618 | 0.0114 | -0.2937 | 0.0033 | -0.0010 | 0.0007 |
| [illegible] | 14.00 | -0.00 | 0.7678 | 0.0070 | -0.3369 | 0.0004 | 0.0007 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.8780 | 0.0073 | -0.3851 | 0.0028 | 0.0024 | 0.0007 |
| 10 | 18.01 | -0.00 | 1.0108 | 0.0007 | -0.4428 | 0.0105 | 0.0006 | 0.0000 |
| 11 | 20.10 | -0.00 | 1.1321 | -0.0107 | -0.4882 | 0.0076 | 0.0024 | 0.0006 |
| 12 | 22.03 | -0.00 | 1.1774 | -0.0108 | -0.4840 | 0.0023 | 0.0019 | 0.0018 |
| 13 | 23.97 | -0.00 | 1.1492 | -0.0041 | -0.4509 | 0.0001 | 0.0070 | 0.0012 |
| 14 | 25.97 | -0.00 | 1.1174 | 0.0167 | -0.4254 | 0.0056 | 0.0003 | -0.0004 |
| 15 | 28.01 | -0.00 | 1.0727 | 0.0281 | -0.3926 | 0.0114 | 0.0026 | -0.0018 |
| 16 | 0.00 | 0.00 | 0.0215 | 0.0352 | -0.0125 | -0.0055 | -0.0011 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 10

TEMP = 82. PO= 14.5776
RN/FTX10-6= 0.464529 VEL-FPS= 74.403 MACH= 0.0665

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0204 | 0.0352 | -0.0129 | 0.0053 | -0.0019 | -0.0001 |
| 2 | 2.01 | -0.00 | 0.1164 | 0.0285 | -0.0562 | 0.0050 | -0.0012 | -0.0000 |
| 3 | 4.03 | -0.00 | 0.2265 | 0.0218 | -0.1061 | 0.0019 | -0.0011 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.3312 | 0.0174 | -0.1533 | 0.0043 | -0.0011 | 0.0000 |
| 5 | 7.99 | -0.00 | 0.4488 | 0.0061 | -0.2055 | 0.0066 | -0.0008 | -0.0005 |
| 6 | 10.01 | -0.00 | 0.5633 | 0.0088 | -0.2551 | 0.0063 | -0.0008 | 0.0000 |
| 7 | 12.01 | -0.00 | 0.6682 | 0.0138 | -0.2989 | 0.0006 | -0.0003 | 0.0013 |
| 8 | 14.00 | -0.00 | 0.7732 | 0.0047 | -0.3400 | 0.0058 | 0.0006 | 0.0000 |
| 9 | 16.03 | -0.00 | 0.8940 | 0.0050 | -0.3951 | 0.0055 | 0.0020 | 0.0006 |
| 10 | 18.01 | -0.00 | 1.0162 | -0.0015 | -0.4459 | 0.0077 | -0.0002 | 0.0001 |
| 11 | 20.10 | -0.00 | 1.1417 | -0.0083 | -0.4937 | 0.0047 | 0.0004 | 0.0007 |
| 12 | 22.03 | -0.00 | 1.1891 | -0.0107 | -0.4929 | -0.0004 | 0.0026 | 0.0014 |
| 13 | 23.97 | -0.00 | 1.1191 | 0.0004 | -0.4357 | -0.0051 | 0.0071 | 0.0019 |
| 14 | 25.97 | -0.00 | 1.1142 | 0.0166 | -0.4238 | 0.0058 | 0.0070 | -0.0016 |
| 15 | 28.01 | -0.00 | 1.0963 | 0.0235 | -0.4064 | 0.0088 | 0.0077 | -0.0029 |
| 16 | 0.00 | 0.00 | 0.0269 | 0.0282 | -0.0141 | -0.0055 | -0.0014 | 0.0013 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 11

TEMP = 85.
RN/FTX10-6= 0.461299 VEL-FPS= 74.606

PO= 14.5776
MACH= 0.0667

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0192 | 0.0422 | -0.0135 | -0.0000 | -0.0011 | 0.0016 |
| 2 | 0.00 | -6.00 | 0.0303 | 0.0374 | -0.0232 | 0.1008 | 0.0026 | -0.0232 |
| 3 | 0.00 | -4.00 | 0.0248 | 0.0398 | -0.0187 | 0.0708 | 0.0014 | -0.0163 |
| 4 | 0.00 | -2.00 | 0.0194 | 0.0422 | -0.0136 | 0.0272 | -0.0005 | -0.0062 |
| 5 | 0.00 | 0.00 | 0.0214 | 0.0422 | -0.0146 | -0.0001 | -0.0018 | 0.0016 |
| 6 | -0.00 | 1.99 | 0.0190 | 0.0423 | -0.0158 | -0.0329 | -0.0033 | 0.0092 |
| 7 | -0.00 | 3.99 | 0.0219 | 0.0401 | -0.0196 | -0.0602 | -0.0046 | 0.0161 |
| 8 | -0.00 | 5.99 | 0.0293 | 0.0378 | -0.0247 | -0.0876 | -0.0062 | 0.0235 |
| 9 | 0.00 | 0.00 | 0.0214 | 0.0422 | -0.0146 | -0.0028 | -0.0021 | 0.0023 |

E

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 12

TEMP = 87.
RN/FTX10-6= 0.459156 VEL-FPS= 74.743

PO= 14.5776
MACH= 0.0668

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2276 | 0.0194 | -0.1047 | -0.0035 | -0.0011 | 0.0007 |
| 2 | 4.03 | -6.00 | 0.2376 | 0.0193 | -0.1149 | 0.1030 | 0.0053 | -0.0244 |
| 3 | 4.03 | -4.00 | 0.2365 | 0.0240 | -0.1117 | 0.0729 | 0.0031 | -0.0169 |
| 4 | 4.03 | -2.00 | 0.2300 | 0.0217 | -0.1069 | 0.0538 | 0.0003 | -0.0108 |
| 5 | 4.03 | -0.00 | 0.2320 | 0.0241 | -0.1066 | 0.0046 | -0.0015 | -0.0000 |
| 6 | 4.02 | 1.99 | 0.2328 | 0.0219 | -0.1084 | -0.0281 | -0.0037 | 0.0081 |
| 7 | 4.02 | 3.99 | 0.2325 | 0.0220 | -0.1111 | -0.0583 | -0.0059 | 0.0150 |
| 8 | 4.02 | 5.99 | 0.2365 | 0.0174 | -0.1158 | -0.1075 | -0.0079 | 0.0253 |
| 9 | 4.03 | -0.00 | 0.2319 | 0.0218 | -0.1069 | -0.0035 | -0.0017 | 0.0007 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 13

TEMP = 85. PO= 14.5776
RN/FTX10-6= 0.461283 VEL-FPS= 74.608 MACH= 0.0667

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5644 | 0.0135 | -0.2554 | -0.0018 | -0.0016 | 0.0003 |
| 2 | 10.01 | -6.00 | 0.5712 | 0.0086 | -0.2624 | 0.0966 | 0.0088 | -0.0230 |
| 3 | 10.01 | -4.00 | 0.5679 | 0.0110 | -0.2585 | 0.0583 | 0.0051 | -0.0147 |
| 4 | 10.01 | -2.00 | 0.5668 | 0.0134 | -0.2551 | 0.0364 | 0.0017 | -0.0085 |
| 5 | 10.01 | -0.00 | 0.5666 | 0.0135 | -0.2550 | -0.0100 | -0.0012 | 0.0027 |
| 6 | 10.01 | 1.99 | 0.5631 | 0.0136 | -0.2552 | -0.0374 | -0.0051 | 0.0091 |
| 7 | 10.01 | 3.99 | 0.5639 | 0.0113 | -0.2584 | -0.0731 | -0.0076 | 0.0166 |
| 8 | 10.01 | 5.99 | 0.5679 | 0.0091 | -0.2632 | -0.1033 | -0.0112 | 0.0243 |
| 9 | 10.01 | -0.00 | 0.5644 | 0.0135 | -0.2544 | -0.0046 | -0.0019 | 0.0009 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 14

TEMP = 94. PO= 14.5776
RN/FTX10-6= 0.451753 VEL-FPS= 75.225 MACH= 0.0673

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8865 | 0.0074 | -0.3909 | -0.0026 | 0.0021 | 0.0009 |
| 2 | 16.03 | -6.00 | 0.8868 | 0.0002 | -0.3965 | 0.1093 | 0.0081 | -0.0244 |
| 3 | 16.03 | -4.00 | 0.8846 | 0.0025 | -0.3926 | 0.0793 | 0.0066 | -0.0180 |
| 4 | 16.03 | -2.00 | 0.8856 | 0.0073 | -0.3914 | 0.0328 | 0.0029 | -0.0083 |
| 5 | 16.03 | -0.00 | 0.8898 | 0.0074 | -0.3912 | -0.0027 | 0.0008 | 0.0009 |
| 6 | 16.03 | 1.99 | 0.8863 | 0.0075 | -0.3918 | -0.0382 | -0.0019 | 0.0097 |
| 7 | 16.03 | 3.99 | 0.8871 | 0.0052 | -0.3950 | -0.0684 | -0.0052 | 0.0167 |
| 8 | 16.03 | 5.99 | 0.8931 | 0.0030 | -0.4028 | -0.1096 | -0.0079 | 0.0251 |
| 9 | 16.03 | -0.00 | 0.8876 | 0.0074 | -0.3910 | 0.0000 | 0.0011 | 0.0003 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 15

TEMP = 97. PO= 14.5776
RN/FTX10-6= 0.448607 VEL-FPS= 75.436 MACH= 0.0674

CONF= W2B1V1E(0)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1395 | -0.0059 | -0.4936 | -0.0088 | 0.0010 | 0.0023 |
| 2 | 20.10 | -6.00 | 1.1440 | -0.0154 | -0.5046 | 0.1192 | 0.0030 | -0.0256 |
| 3 | 20.10 | -4.00 | 1.1440 | -0.0130 | -0.4999 | 0.0729 | 0.0027 | -0.0165 |
| 4 | 20.10 | -2.00 | 1.1365 | -0.0083 | -0.4924 | 0.0402 | 0.0016 | -0.0090 |
| 5 | 20.10 | -0.00 | 1.1438 | -0.0082 | -0.4966 | 0.0047 | 0.0008 | 0.0002 |
| 6 | 20.09 | 1.99 | 1.1436 | -0.0105 | -0.4960 | -0.0388 | 0.0017 | 0.0108 |
| 7 | 20.09 | 3.99 | 1.1380 | -0.0104 | -0.4946 | -0.0879 | 0.0008 | 0.0205 |
| 8 | 20.09 | 5.99 | 1.1452 | -0.0126 | -0.5025 | -0.1181 | -0.0013 | 0.0269 |
| 9 | 20.10 | -0.00 | 1.1406 | -0.0082 | -0.4945 | -0.0061 | 0.0016 | 0.0016 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 16

TEMP = 91. PO= 14.5727
RN/FTX10-6= 0.454766 VEL-FPS= 75.041 MACH= 0.0671

CONF= W2B1V1E(-10)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2204 | 0.0289 | 0.1661 | -0.0011 | -0.0018 | 0.0008 |
| 2 | 2.01 | -0.00 | -0.1177 | 0.0316 | 0.1225 | -0.0069 | -0.0013 | 0.0016 |
| 3 | 4.03 | -0.00 | -0.0152 | 0.0272 | 0.0768 | -0.0072 | -0.0016 | 0.0016 |
| 4 | 5.86 | -0.00 | 0.0851 | 0.0229 | 0.0318 | -0.0021 | -0.0013 | 0.0004 |
| 5 | 7.99 | -0.00 | 0.2018 | 0.0138 | -0.0180 | 0.0029 | -0.0014 | -0.0001 |
| 6 | 10.01 | -0.00 | 0.3206 | 0.0119 | -0.0691 | -0.0055 | -0.0012 | 0.0017 |
| 7 | 12.01 | -0.00 | 0.4276 | 0.0098 | -0.1148 | -0.0031 | -0.0012 | 0.0011 |
| 8 | 14.00 | -0.00 | 0.5411 | 0.0055 | -0.1622 | -0.0035 | -0.0014 | 0.0012 |
| 9 | 16.03 | -0.00 | 0.6481 | -0.0012 | -0.2077 | 0.0044 | -0.0002 | -0.0000 |
| 10 | 18.01 | -0.00 | 0.7810 | -0.0031 | -0.2650 | 0.0066 | -0.0012 | -0.0006 |
| 11 | 20.10 | -0.00 | 0.9171 | -0.0144 | -0.3232 | 0.0090 | 0.0004 | -0.0007 |
| 12 | 22.03 | -0.00 | 1.0103 | -0.0189 | -0.3556 | 0.0007 | 0.0012 | 0.0017 |
| 13 | 23.97 | -0.00 | 1.0125 | -0.0192 | -0.3328 | -0.0015 | 0.0040 | 0.0022 |
| 14 | 25.97 | -0.00 | 0.9764 | -0.0054 | -0.3031 | 0.0041 | 0.0023 | -0.0001 |
| 15 | 28.01 | -0.00 | 0.9305 | 0.0059 | -0.2735 | 0.0125 | 0.0019 | -0.0026 |
| 16 | 0.00 | 0.00 | -0.2085 | 0.0383 | 0.1612 | -0.0066 | -0.0017 | 0.0016 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 17

TEMP = 88. PO= 14.5727
RN/FTX10-6= 0.457985 VEL-FPS= 74.828 MACH= 0.0669

CONF= W2B1V1E(+10)H1(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2469 | 0.0555 | -0.1896 | -0.0017 | -0.0024 | 0.0014 |
| 2 | 2.01 | -0.00 | 0.3549 | 0.0511 | -0.2385 | -0.0021 | -0.0014 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.4628 | 0.0398 | -0.2876 | 0.0002 | -0.0018 | -0.0001 |
| 4 | 5.86 | -0.00 | 0.5684 | 0.0331 | -0.3381 | -0.0001 | -0.0017 | -0.0000 |
| 5 | 7.99 | -0.00 | 0.7001 | 0.0312 | -0.3973 | 0.0048 | -0.0018 | -0.0007 |
| 6 | 10.01 | -0.00 | 0.7996 | 0.0291 | -0.4377 | 0.0073 | -0.0017 | 0.0003 |
| [illegible] | 12.01 | -0.00 | 0.8905 | 0.0387 | -0.4727 | -0.0010 | -0.0009 | 0.0006 |
| [illegible] | 14.00 | -0.00 | 0.9912 | 0.0343 | -0.5122 | 0.0070 | 0.0010 | 0.0003 |
| 9 | 16.03 | -0.00 | 1.1120 | 0.0346 | -0.5682 | 0.0093 | 0.0020 | 0.0002 |
| 10 | 18.01 | -0.00 | 1.2353 | 0.0303 | -0.6182 | 0.0116 | -0.0009 | 0.0003 |
| 11 | 20.10 | -0.00 | 1.2979 | 0.0162 | -0.6219 | 0.0011 | 0.0056 | 0.0021 |
| 12 | 22.03 | -0.00 | 1.2681 | 0.0321 | -0.5753 | 0.0041 | 0.0013 | 0.0019 |
| 13 | 23.97 | -0.00 | 1.2505 | 0.0365 | -0.5518 | -0.0062 | 0.0072 | 0.0032 |
| 14 | 25.97 | -0.00 | 1.1972 | 0.0549 | -0.5125 | 0.0022 | 0.0041 | -0.0002 |
| 15 | 28.01 | -0.00 | 1.1827 | 0.0595 | -0.4938 | 0.0131 | -0.0003 | -0.0021 |
| 16 | 0.00 | 0.00 | 0.2534 | 0.0555 | -0.1924 | -0.0017 | -0.0024 | 0.0009 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60

RUN NO. 18

TEMP = 87.
RN/FTX10-6= 0.459050 VEL-FPS= 74.760

PO= 14.5727
MACH= 0.0668

CONF= W2B1V1E(10)H1(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2902 | 0.0582 | -0.2312 | 0.0032 | -0.0022 | -0.0002 |
| 2 | 2.01 | -0.00 | 0.3917 | 0.0562 | -0.2774 | 0.0029 | -0.0022 | -0.0001 |
| 3 | 4.03 | -0.00 | 0.5049 | 0.0472 | -0.3298 | 0.0025 | -0.0028 | -0.0000 |
| 4 | 5.86 | -0.00 | 0.6096 | 0.0382 | -0.3773 | -0.0033 | -0.0024 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.7358 | 0.0316 | -0.4354 | 0.0044 | -0.0021 | -0.0006 |
| 6 | 10.01 | -0.00 | 0.8385 | 0.0342 | -0.4771 | 0.0015 | -0.0010 | 0.0005 |
| [illegible] | 12.01 | -0.00 | 0.9264 | 0.0391 | -0.5124 | 0.0013 | -0.0003 | 0.0000 |
| [illegible] | 14.00 | -0.00 | 1.0353 | 0.0370 | -0.5585 | 0.0010 | 0.0007 | 0.0006 |
| 9 | 16.03 | -0.00 | 1.1551 | 0.0398 | -0.6136 | 0.0034 | 0.0007 | 0.0005 |
| 10 | 18.01 | -0.00 | 1.2945 | 0.0355 | -0.6737 | 0.0056 | 0.0001 | 0.0000 |
| 11 | 20.10 | -0.00 | 1.3945 | 0.0239 | -0.7012 | 0.0028 | -0.0001 | 0.0001 |
| 12 | 22.03 | -0.00 | 1.3582 | 0.0305 | -0.6515 | -0.0020 | 0.0013 | 0.0017 |
| 13 | 23.97 | -0.00 | 1.3001 | 0.0393 | -0.5990 | -0.0067 | 0.0068 | 0.0022 |
| 14 | 25.97 | -0.00 | 1.2364 | 0.0529 | -0.5475 | -0.0061 | 0.0066 | 0.0027 |
| 15 | 28.01 | -0.00 | 1.2007 | 0.0549 | -0.5100 | 0.0156 | -0.0010 | -0.0038 |
| 16 | 0.00 | 0.00 | 0.2966 | 0.0559 | -0.2349 | -0.0049 | -0.0027 | 0.0011 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 19

TEMP = 85. PO= 14.5727
RN/FTX10-6= 0.461225 VEL-FPS= 74.618 MACH= 0.0667

CONF= W2B1V1E(-10)H1(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.1790 | 0.0433 | 0.1294 | -0.0014 | -0.0007 | 0.0004 |
| 2 | 2.01 | -0.00 | -0.0797 | 0.0460 | 0.0861 | -0.0018 | -0.0013 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.0293 | 0.0416 | 0.0380 | 0.0032 | -0.0020 | -0.0007 |
| 4 | 5.86 | -0.00 | 0.1265 | 0.0372 | -0.0044 | -0.0052 | -0.0012 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.2345 | 0.0211 | -0.0501 | 0.0053 | -0.0014 | -0.0007 |
| 6 | 10.01 | -0.00 | 0.3566 | 0.0215 | -0.1034 | -0.0004 | -0.0016 | 0.0005 |
| 7 | 12.01 | -0.00 | 0.4732 | 0.0219 | -0.1545 | 0.0019 | -0.0012 | 0.0000 |
| 8 | 14.00 | -0.00 | 0.5878 | 0.0152 | -0.2019 | -0.0011 | -0.0015 | 0.0006 |
| 9 | 16.03 | -0.00 | 0.7033 | 0.0109 | -0.2551 | 0.0094 | -0.0002 | -0.0007 |
| 10 | 18.01 | -0.00 | 0.8404 | 0.0019 | -0.3158 | 0.0089 | 0.0000 | -0.0011 |
| 11 | 20.10 | -0.00 | 0.9840 | -0.0093 | -0.3783 | 0.0113 | 0.0010 | -0.0006 |
| 12 | 22.03 | -0.00 | 1.0881 | -0.0114 | -0.4144 | 0.0083 | 0.0011 | -0.0005 |
| 13 | 23.97 | -0.00 | 1.1073 | -0.0139 | -0.4035 | 0.0086 | 0.0035 | -0.0001 |
| 14 | 25.97 | -0.00 | 1.0749 | -0.0049 | -0.3669 | 0.0036 | 0.0040 | -0.0005 |
| 15 | 28.01 | -0.00 | 1.0186 | 0.0040 | -0.3210 | 0.0041 | 0.0050 | -0.0012 |
| 16 | 0.00 | 0.00 | -0.1704 | 0.0457 | 0.1254 | -0.0070 | -0.0016 | 0.0011 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 20

TEMP = 85. PO= 14.5678
RN/FTX10-6= 0.461119 VEL-FPS= 74.635 MACH= 0.0667

CONF= W2B1V1E(0)H1(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0561 | 0.0355 | -0.0497 | -0.0004 | -0.0012 | 0.0012 |
| 2 | 2.01 | -0.00 | 0.1576 | 0.0359 | -0.0950 | -0.0062 | -0.0014 | 0.0009 |
| 3 | 4.03 | -0.00 | 0.2666 | 0.0268 | -0.1433 | -0.0011 | -0.0014 | 0.0002 |
| 4 | 5.86 | -0.00 | 0.3691 | 0.0201 | -0.1899 | -0.0015 | -0.0014 | -0.0002 |
| 5 | 7.99 | -0.00 | 0.4890 | 0.0088 | -0.2417 | 0.0008 | -0.0018 | -0.0002 |
| 6 | 10.01 | -0.00 | 0.6013 | 0.0138 | -0.2931 | 0.0032 | -0.0014 | 0.0002 |
| 7 | 12.01 | -0.00 | 0.7072 | 0.0165 | -0.3370 | 0.0056 | -0.0010 | 0.0001 |
| 8 | 14.00 | -0.00 | 0.8175 | 0.0097 | -0.3818 | 0.0054 | 0.0003 | -0.0003 |
| 9 | 16.03 | -0.00 | 0.9534 | 0.0102 | -0.4473 | 0.0076 | 0.0013 | -0.0003 |
| 10 | 18.01 | -0.00 | 1.0851 | 0.0012 | -0.5053 | 0.0072 | 0.0010 | 0.0002 |
| 11 | 20.10 | -0.00 | 1.2118 | -0.0077 | -0.5521 | 0.0070 | 0.0024 | -0.0003 |
| 12 | 22.03 | -0.00 | 1.2655 | -0.0054 | -0.5575 | 0.0043 | 0.0018 | 0.0003 |
| 13 | 23.97 | -0.00 | 1.2471 | -0.0058 | -0.5267 | 0.0074 | 0.0028 | -0.0004 |
| 14 | 25.97 | -0.00 | 1.1684 | 0.0100 | -0.4673 | 0.0026 | 0.0040 | -0.0009 |
| 15 | 28.01 | -0.00 | 1.1123 | 0.0212 | -0.4177 | 0.0167 | 0.0035 | -0.0036 |
| 16 | 0.00 | 0.00 | 0.0637 | 0.0379 | -0.0526 | -0.0032 | -0.0018 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 21

TEMP = 85. PO= 14.5678
RN/FT X10-6= 0.461070 VEL-FPS= 74.643 MACH= 0.0667

CONF= W2B1V1E(0)H1(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0217 | 0.0395 | 0.0302 | -0.0023 | -0.0017 | 0.0011 |
| 2 | 2.01 | -0.00 | 0.0775 | 0.0374 | -0.0148 | 0.0000 | -0.0014 | 0.0005 |
| 3 | 4.03 | -0.00 | 0.1855 | 0.0284 | -0.0626 | -0.0030 | -0.0013 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.2870 | 0.0194 | -0.1076 | 0.0047 | -0.0014 | -0.0011 |
| 5 | 7.99 | -0.00 | 0.4003 | 0.0080 | -0.1576 | 0.0016 | -0.0014 | 0.0000 |
| 6 | 10.01 | -0.00 | 0.5192 | 0.0154 | -0.2091 | 0.0013 | -0.0013 | 0.0006 |
| 7 | 12.01 | -0.00 | 0.6176 | 0.0156 | -0.2495 | 0.0010 | -0.0009 | 0.0012 |
| 8 | 14.00 | -0.00 | 0.7192 | 0.0112 | -0.2914 | 0.0035 | -0.0006 | 0.0001 |
| 9 | 16.03 | -0.00 | 0.8305 | 0.0139 | -0.3384 | 0.0087 | 0.0007 | 0.0004 |
| 10 | 18.01 | -0.00 | 0.9601 | 0.0096 | -0.3950 | 0.0083 | 0.0011 | 0.0005 |
| 11 | 20.10 | -0.00 | 1.0889 | -0.0040 | -0.4437 | 0.0026 | 0.0015 | 0.0018 |
| 12 | 22.03 | -0.00 | 1.1225 | -0.0019 | -0.4326 | 0.0028 | 0.0023 | 0.0017 |
| 13 | 23.97 | -0.00 | 1.0567 | 0.0092 | -0.3791 | -0.0045 | 0.0065 | 0.0034 |
| 14 | 25.97 | -0.00 | 1.0514 | 0.0186 | -0.3744 | 0.0034 | 0.0030 | 0.0000 |
| 15 | 28.01 | -0.00 | 1.0451 | 0.0279 | -0.3700 | 0.0224 | -0.0015 | -0.0043 |
| 16 | 0.00 | 0.00 | -0.0174 | 0.0418 | 0.0274 | -0.0024 | -0.0014 | 0.0005 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 22

TEMP = 85. PO= 14.5579
RN/FTX10-6= 0.460989 VEL-FPS= 74.656 MACH= 0.0668

CONF= W2B1V1E(-10)H1(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2528 | 0.0426 | 0.2026 | -0.0007 | -0.0010 | 0.0007 |
| 2 | 2.01 | -0.00 | -0.1502 | 0.0476 | 0.1585 | -0.0037 | -0.0006 | 0.0009 |
| 3 | 4.03 | -0.00 | -0.0411 | 0.0433 | 0.1095 | -0.0041 | -0.0009 | 0.0004 |
| 4 | 5.86 | -0.00 | 0.0570 | 0.0389 | 0.0665 | -0.0071 | -0.0008 | 0.0011 |
| 5 | 7.99 | -0.00 | 0.1683 | 0.0228 | 0.0201 | -0.0020 | -0.0009 | -0.0000 |
| 6 | 10.01 | -0.00 | 0.2839 | 0.0208 | -0.0298 | 0.0003 | -0.0009 | 0.0004 |
| 7 | 12.01 | -0.00 | 0.3963 | 0.0235 | -0.0774 | -0.0027 | -0.0007 | 0.0010 |
| 8 | 14.00 | -0.00 | 0.5055 | 0.0144 | -0.1220 | -0.0030 | -0.0007 | 0.0022 |
| 9 | 16.03 | -0.00 | 0.6168 | 0.0147 | -0.1704 | 0.0076 | 0.0008 | -0.0002 |
| 10 | 18.01 | -0.00 | 0.7378 | 0.0081 | -0.2206 | 0.0044 | -0.0001 | 0.0004 |
| 11 | 20.10 | -0.00 | 0.8762 | -0.0055 | -0.2775 | 0.0041 | 0.0022 | -0.0001 |
| 12 | 22.03 | -0.00 | 0.9717 | -0.0077 | -0.3092 | 0.0012 | 0.0023 | 0.0005 |
| 13 | 23.97 | -0.00 | 0.9599 | -0.0056 | -0.2780 | -0.0010 | 0.0017 | 0.0010 |
| 14 | 25.97 | -0.00 | 0.9236 | 0.0081 | -0.2553 | 0.0045 | 0.0004 | -0.0018 |
| 15 | 28.01 | -0.00 | 0.9323 | 0.0198 | -0.2572 | 0.0046 | 0.0041 | -0.0013 |
| 16 | 0.00 | 0.00 | -0.2495 | 0.0450 | 0.2019 | -0.0089 | -0.0012 | 0.0010 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 9
QPSF = 6.60 RUN NO. 23

TEMP = 85. PO= 14.5579
RN/FTX10-6= 0.460989 VEL-FPS= 74.656 MACH= 0.0668

CONF= W2B1V1E(10)H1(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2080 | 0.0715 | -0.1517 | -0.0013 | -0.0023 | 0.0008 |
| 2 | 2.01 | -0.00 | 0.3116 | 0.0648 | -0.1984 | 0.0010 | -0.0020 | 0.0002 |
| 3 | 4.03 | -0.00 | 0.4228 | 0.0558 | -0.2469 | 0.0006 | -0.0020 | -0.0001 |
| 4 | 5.86 | -0.00 | 0.5349 | 0.0515 | -0.2998 | 0.0002 | -0.0020 | -0.0006 |
| 5 | 7.99 | -0.00 | 0.6547 | 0.0425 | -0.3546 | 0.0053 | -0.0020 | -0.0013 |
| 6 | 10.01 | -0.00 | 0.7639 | 0.0452 | -0.3996 | 0.0023 | -0.0019 | 0.0004 |
| 7 | 12.01 | -0.00 | 0.8462 | 0.0500 | -0.4305 | 0.0049 | -0.0005 | 0.0003 |
| 8 | 14.00 | -0.00 | 0.9405 | 0.0455 | -0.4649 | 0.0074 | 0.0000 | -0.0002 |
| 9 | 16.03 | -0.00 | 1.0645 | 0.0506 | -0.5246 | 0.0097 | 0.0004 | -0.0008 |
| 10 | 18.01 | -0.00 | 1.1857 | 0.0486 | -0.5717 | 0.0066 | -0.0017 | -0.0001 |
| 11 | 20.10 | -0.00 | 1.2665 | 0.0322 | -0.5865 | 0.0068 | 0.0022 | 0.0008 |
| 12 | 22.03 | -0.00 | 1.2122 | 0.0433 | -0.5197 | -0.0006 | 0.0028 | 0.0030 |
| 13 | 23.97 | -0.00 | 1.1687 | 0.0500 | -0.4845 | -0.0028 | 0.0055 | 0.0019 |
| 14 | 25.97 | -0.00 | 1.1355 | 0.0592 | -0.4656 | 0.0133 | -0.0003 | -0.0043 |
| 15 | 28.01 | -0.00 | 1.1571 | 0.0616 | -0.4761 | 0.0133 | 0.0000 | -0.0022 |
| 16 | 0.00 | 0.00 | 0.2112 | 0.0715 | -0.1520 | -0.0040 | -0.0023 | 0.0004 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 24

TEMP = 84.

PO= 14.5481

RN/FTX10-6= 0.461918 VEL-FPS= 74.611 MACH= 0.0667

CONF= W2B1V1E(10)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2268 | 0.0577 | -0.1714 | -0.0070 | -0.0017 | 0.0016 |
| 2 | 2.01 | -0.00 | 0.3304 | 0.0533 | -0.2204 | -0.0019 | -0.0017 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.4490 | 0.0443 | -0.2746 | -0.0050 | -0.0017 | 0.0011 |
| 4 | 5.86 | -0.00 | 0.5569 | 0.0353 | -0.3247 | -0.0027 | -0.0020 | 0.0005 |
| 5 | 7.99 | -0.00 | 0.6831 | 0.0358 | -0.3840 | -0.0004 | -0.0013 | -0.0000 |
| 6 | 10.01 | -0.00 | 0.7858 | 0.0337 | -0.4265 | -0.0061 | -0.0015 | 0.0012 |
| 7 | 12.01 | -0.00 | 0.8746 | 0.0363 | -0.4588 | -0.0063 | -0.0004 | 0.0018 |
| 8 | 14.00 | -0.00 | 0.9710 | 0.0388 | -0.4959 | -0.0092 | 0.0012 | 0.0019 |
| 9 | 16.03 | -0.00 | 1.0856 | 0.0415 | -0.5427 | -0.0040 | 0.0019 | 0.0006 |
| 10 | 18.01 | -0.00 | 1.1982 | 0.0347 | -0.5853 | 0.0038 | 0.0002 | 0.0004 |
| 11 | 20.10 | -0.00 | 1.2759 | 0.0276 | -0.5959 | -0.0068 | 0.0041 | 0.0028 |
| 12 | 22.03 | -0.00 | 1.2436 | 0.0366 | -0.5554 | -0.0251 | 0.0115 | 0.0075 |
| 13 | 23.97 | -0.00 | 1.2474 | 0.0459 | -0.5472 | 0.0017 | 0.0014 | -0.0012 |
| 14 | 25.97 | -0.00 | 1.1662 | 0.0595 | -0.4921 | 0.0022 | 0.0018 | -0.0007 |
| 15 | 28.01 | -0.00 | 1.1590 | 0.0617 | -0.4800 | -0.0030 | 0.0022 | 0.0004 |
| 16 | 0.00 | 0.00 | 0.2376 | 0.0624 | -0.1765 | -0.0070 | -0.0013 | 0.0016 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60 RUN NO. 25

TEMP = 84. PO= 14.5481
RN/FTX10-6= 0.461951 VEL-FPS= 74.606 MACH= 0.0667

CONF= W2B1V1E(-10)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2118 | 0.0337 | 0.1607 | -0.0066 | -0.0007 | 0.0015 |
| 2 | 2.01 | -0.00 | -0.1082 | 0.0387 | 0.1123 | -0.0069 | -0.0006 | 0.0016 |
| 3 | 4.03 | -0.00 | 0.0007 | 0.0297 | 0.0644 | -0.0046 | -0.0010 | 0.0010 |
| 4 | 5.86 | -0.00 | 0.0989 | 0.0230 | 0.0205 | -0.0050 | -0.0019 | 0.0011 |
| 5 | 7.99 | -0.00 | 0.2177 | 0.0163 | -0.0314 | -0.0080 | -0.0012 | 0.0018 |
| 6 | 10.01 | -0.00 | 0.3354 | 0.0143 | -0.0834 | -0.0084 | -0.0008 | 0.0018 |
| 7 | 12.01 | -0.00 | 0.4467 | 0.0076 | -0.1296 | -0.0087 | -0.0008 | 0.0019 |
| 8 | 14.00 | -0.00 | 0.5549 | 0.0079 | -0.1731 | -0.0063 | -0.0011 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.6590 | 0.0034 | -0.2105 | -0.0064 | 0.0002 | 0.0018 |
| 10 | 18.01 | -0.00 | 0.7779 | -0.0032 | -0.2596 | -0.0040 | 0.0009 | 0.0018 |
| 11 | 20.10 | -0.00 | 0.9186 | -0.0098 | -0.3146 | -0.0043 | 0.0016 | 0.0013 |
| 12 | 22.03 | -0.00 | 1.0066 | -0.0167 | -0.3395 | -0.0044 | 0.0027 | 0.0023 |
| 13 | 23.97 | -0.00 | 1.0118 | -0.0099 | -0.3233 | -0.0068 | 0.0045 | 0.0012 |
| 14 | 25.97 | -0.00 | 0.9865 | -0.0031 | -0.3006 | -0.0040 | 0.0031 | -0.0004 |
| 15 | 28.01 | -0.00 | 0.9427 | 0.0059 | -0.2697 | -0.0036 | 0.0042 | -0.0010 |
| 16 | 0.00 | 0.00 | -0.2021 | 0.0337 | 0.1562 | -0.0094 | -0.0010 | 0.0011 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60 RUN NO. 26

TEMP = 86. PO= 14.5383
RN/FTX10-6= 0.459622 VEL-FPS= 74.772 MACH= 0.0669

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0065 | 0.0351 | -0.0011 | -0.0054 | -0.0014 | 0.0012 |
| 2 | 2.01 | -0.00 | 0.1068 | 0.0331 | -0.0495 | -0.0030 | -0.0011 | 0.0007 |
| 3 | 4.03 | -0.00 | 0.2234 | 0.0241 | -0.1008 | -0.0007 | -0.0014 | 0.0001 |
| 4 | 5.86 | -0.00 | 0.3226 | 0.0151 | -0.1465 | -0.0092 | -0.0006 | 0.0009 |
| 5 | 7.99 | -0.00 | 0.4457 | 0.0108 | -0.2017 | -0.0096 | -0.0009 | 0.0016 |
| 6 | 10.01 | -0.00 | 0.5602 | 0.0111 | -0.2512 | -0.0045 | -0.0012 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.6640 | 0.0044 | -0.2932 | -0.0102 | -0.0008 | 0.0022 |
| 8 | 14.00 | -0.00 | 0.7549 | 0.0093 | -0.3285 | -0.0050 | -0.0011 | 0.0010 |
| 9 | 16.03 | -0.00 | 0.8707 | 0.0072 | -0.3757 | -0.0025 | 0.0011 | 0.0003 |
| 10 | 18.01 | -0.00 | 0.9929 | 0.0052 | -0.4243 | -0.0083 | 0.0013 | 0.0016 |
| 11 | 20.10 | -0.00 | 1.1080 | -0.0062 | -0.4604 | -0.0029 | 0.0026 | 0.0009 |
| 12 | 22.03 | -0.00 | 1.1370 | -0.0040 | -0.4523 | -0.0162 | 0.0065 | 0.0044 |
| 13 | 23.97 | -0.00 | 1.1451 | 0.0051 | -0.4439 | -0.0134 | 0.0059 | 0.0027 |
| 14 | 25.97 | -0.00 | 1.1091 | 0.0189 | -0.4146 | -0.0023 | 0.0045 | -0.0013 |
| 15 | 28.01 | -0.00 | 1.0568 | 0.0256 | -0.3783 | 0.0006 | 0.0014 | -0.0020 |
| 16 | 0.00 | 0.00 | 0.0141 | 0.0351 | -0.0054 | -0.0109 | -0.0010 | 0.0014 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 27

TEMP = 88. PO= 14.5383
RN/FTX10-6= 0.457458 VEL-FPS= 74.914 MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0108 | 0.0421 | -0.0040 | -0.0054 | -0.0010 | 0.0018 |
| 2 | 0.00 | -6.00 | 0.0186 | 0.0373 | -0.0135 | 0.1037 | 0.0032 | -0.0239 |
| 3 | 0.00 | -4.00 | 0.0154 | 0.0420 | -0.0082 | 0.0682 | 0.0014 | -0.0162 |
| 4 | 0.00 | -2.00 | 0.0131 | 0.0421 | -0.0071 | 0.0273 | 0.0007 | -0.0073 |
| 5 | 0.00 | 0.00 | 0.0130 | 0.0421 | -0.0042 | 0.0000 | -0.0014 | 0.0005 |
| 6 | -0.00 | 1.99 | 0.0138 | 0.0422 | -0.0079 | -0.0382 | -0.0029 | 0.0094 |
| 7 | -0.00 | 3.99 | 0.0179 | 0.0400 | -0.0104 | -0.0656 | -0.0048 | 0.0173 |
| 8 | -0.00 | 5.99 | 0.0197 | 0.0377 | -0.0160 | -0.0984 | -0.0057 | 0.0244 |
| 9 | 0.00 | 0.00 | 0.0130 | 0.0421 | -0.0051 | -0.0054 | -0.0017 | 0.0018 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 28

TEMP = 90. PO= 14.5383
RN/FTX10-6= 0.455358 VEL-FPS= 75.048 MACH= 0.0671

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.03 | -0.00 | 0.2245 | 0.0288 | -0.1020 | 0.0019 | -0.0014 | 0.0000 |
| 2 | 4.03 | -6.00 | 0.2367 | 0.0240 | -0.1113 | 0.1030 | 0.0056 | -0.0249 |
| 3 | 4.03 | -4.00 | 0.2312 | 0.0263 | -0.1076 | 0.0675 | 0.0038 | -0.0167 |
| 4 | 4.03 | -2.00 | 0.2268 | 0.0287 | -0.1036 | 0.0320 | 0.0010 | -0.0085 |
| 5 | 4.03 | -0.00 | 0.2277 | 0.0288 | -0.1031 | -0.0034 | -0.0007 | 0.0013 |
| 6 | 4.02 | 1.99 | 0.2307 | 0.0289 | -0.1052 | -0.0363 | -0.0035 | 0.0089 |
| 7 | 4.02 | 3.99 | 0.2326 | 0.0266 | -0.1098 | -0.0637 | -0.0065 | 0.0158 |
| 8 | 4.02 | 5.99 | 0.2366 | 0.0244 | -0.1151 | -0.0939 | -0.0084 | 0.0233 |
| 9 | 4.03 | -0.00 | 0.2255 | 0.0288 | -0.1034 | -0.0089 | -0.0009 | 0.0009 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 29

TEMP = 90.

PO= 14.5383
RN/FTX10-6= 0.455358 VEL-FPS= 75.048 MACH= 0.0671

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5612 | 0.0158 | -0.2524 | -0.0045 | -0.0016 | 0.0009 |
| 2 | 10.01 | -6.00 | 0.5669 | 0.0086 | -0.2607 | 0.1049 | 0.0101 | -0.0238 |
| 3 | 10.01 | -4.00 | 0.5659 | 0.0110 | -0.2560 | 0.0748 | 0.0062 | -0.0169 |
| 4 | 10.01 | -2.00 | 0.5636 | 0.0134 | -0.2540 | 0.0473 | 0.0022 | -0.0105 |
| 5 | 10.01 | -0.00 | 0.5623 | 0.0158 | -0.2534 | -0.0100 | -0.0008 | 0.0021 |
| 6 | 10.01 | 1.99 | 0.5653 | 0.0136 | -0.2558 | -0.0320 | -0.0052 | 0.0089 |
| 7 | 10.01 | 3.99 | 0.5639 | 0.0113 | -0.2584 | -0.0704 | -0.0083 | 0.0161 |
| 8 | 10.01 | 5.99 | 0.5679 | 0.0068 | -0.2632 | -0.1033 | -0.0112 | 0.0232 |
| 9 | 10.01 | -0.00 | 0.5634 | 0.0135 | -0.2534 | -0.0100 | -0.0008 | 0.0016 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 30

TEMP = 88.

PO= 14.5383

KN/FTX10-6= 0.457474 VEL-FPS= 74.912 MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.8706 | 0.0096 | -0.3767 | 0.0001 | 0.0008 | 0.0008 |
| 2 | 16.03 | -6.00 | 0.8656 | 0.0047 | -0.3778 | 0.1068 | 0.0085 | -0.0238 |
| 3 | 16.03 | -4.00 | 0.8709 | 0.0071 | -0.3791 | 0.0767 | 0.0070 | -0.0168 |
| 4 | 16.03 | -2.00 | 0.8677 | 0.0095 | -0.3738 | 0.0412 | 0.0042 | -0.0086 |
| 5 | 16.03 | -0.00 | 0.8728 | 0.0119 | -0.3775 | 0.0110 | 0.0006 | -0.0005 |
| 6 | 16.03 | 1.99 | 0.8758 | 0.0097 | -0.3803 | -0.0381 | -0.0016 | 0.0107 |
| 7 | 16.03 | 3.99 | 0.8723 | 0.0074 | -0.3813 | -0.0628 | -0.0046 | 0.0170 |
| 8 | 16.03 | 5.99 | 0.8805 | 0.0053 | -0.3897 | -0.1040 | -0.0093 | 0.0255 |
| 9 | 16.03 | -0.00 | 0.8761 | 0.0096 | -0.3776 | -0.0025 | 0.0008 | 0.0003 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 31

TEMP = 88.

PO= 14.5383
RN/FTX10-6= 0.457474 VEL-FPS= 74.912 MACH= 0.0670

CONF= W2B1V1E(0)H2(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1057 | -0.0039 | -0.4617 | -0.0030 | 0.0013 | 0.0015 |
| 2 | 20.10 | -6.00 | 1.1155 | -0.0110 | -0.4760 | 0.1196 | 0.0051 | -0.0252 |
| 3 | 20.10 | -4.00 | 1.1069 | -0.0086 | -0.4688 | 0.0869 | 0.0039 | -0.0181 |
| 4 | 20.10 | -2.00 | 1.1123 | -0.0062 | -0.4683 | 0.0432 | 0.0026 | -0.0091 |
| 5 | 20.10 | -0.00 | 1.1057 | -0.0039 | -0.4627 | -0.0003 | 0.0015 | 0.0024 |
| 6 | 20.09 | 1.99 | 1.1119 | -0.0061 | -0.4672 | -0.0331 | 0.0007 | 0.0106 |
| 7 | 20.09 | 3.99 | 1.1181 | -0.0083 | -0.4731 | -0.0768 | -0.0006 | 0.0201 |
| 8 | 20.09 | 5.99 | 1.1155 | -0.0105 | -0.4770 | -0.1152 | -0.0027 | 0.0268 |
| [illegible] | 20.10 | -0.00 | 1.1111 | -0.0038 | -0.4649 | -0.0003 | 0.0009 | 0.0014 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 32

TEMP = 88.
RN/FTX10-6= 0.457539 VEL-FPS= 74.901

PO= 14.5383
MACH= 0.0670

CONF= W2B1V1E(0)H2F(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0783 | 0.0427 | -0.0712 | -0.0033 | -0.0011 | 0.0013 |
| 2 | 2.01 | -0.00 | 0.1797 | 0.0431 | -0.1183 | -0.0037 | -0.0011 | 0.0008 |
| 3 | 4.03 | -0.00 | 0.2952 | 0.0364 | -0.1705 | 0.0013 | -0.0011 | 0.0002 |
| 4 | 5.86 | -0.00 | 0.3986 | 0.0321 | -0.2200 | 0.0009 | -0.0014 | -0.0002 |
| 5 | 7.99 | -0.00 | 0.5196 | 0.0278 | -0.2736 | -0.0021 | -0.0010 | -0.0001 |
| 6 | 10.01 | -0.00 | 0.6308 | 0.0281 | -0.3220 | -0.0025 | -0.0009 | 0.0004 |
| 7 | 12.01 | -0.00 | 0.7390 | 0.0214 | -0.3647 | -0.0054 | -0.0005 | 0.0016 |
| 8 | 14.00 | -0.00 | 0.8492 | 0.0194 | -0.4120 | 0.0023 | 0.0000 | -0.0001 |
| 9 | 16.03 | -0.00 | 0.9681 | 0.0197 | -0.4623 | -0.0033 | 0.0012 | 0.0010 |
| 10 | 18.01 | -0.00 | 1.1032 | 0.0084 | -0.5190 | -0.0010 | 0.0015 | 0.0005 |
| 11 | 20.10 | -0.00 | 1.2343 | 0.0016 | -0.5667 | 0.0014 | 0.0032 | 0.0009 |
| 12 | 22.03 | -0.00 | 1.2742 | -0.0007 | -0.5602 | -0.0038 | 0.0013 | 0.0011 |
| 13 | 23.97 | -0.00 | 1.2568 | 0.0059 | -0.5311 | -0.0087 | 0.0078 | 0.0027 |
| 14 | 25.97 | -0.00 | 1.1815 | 0.0170 | -0.4699 | 0.0053 | 0.0037 | -0.0015 |
| 15 | 28.01 | -0.00 | 1.1533 | 0.0167 | -0.4360 | 0.0028 | 0.0017 | -0.0020 |
| 16 | 0.00 | 0.00 | 0.0815 | 0.0404 | -0.0732 | -0.0006 | -0.0012 | 0.0001 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 33

TEMP = 88.

PO= 14.5383

RN/FTX10-6= 0.457409 VEL-FPS= 74.922 MACH= 0.0670

CONF= W2B1V1E(-10)H2F(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.1496 | 0.0483 | 0.0977 | 0.0009 | -0.0004 | 0.0003 |
| 2 | 2.01 | -0.00 | -0.0514 | 0.0510 | 0.0525 | 0.0006 | -0.0007 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.0619 | 0.0466 | 0.0032 | -0.0024 | -0.0003 | 0.0000 |
| 4 | 5.86 | -0.00 | 0.1611 | 0.0446 | -0.0417 | -0.0055 | -0.0005 | 0.0012 |
| 5 | 7.99 | -0.00 | 0.2713 | 0.0356 | -0.0892 | 0.0022 | -0.0010 | -0.0000 |
| 6 | 10.01 | -0.00 | 0.3933 | 0.0313 | -0.1434 | -0.0089 | -0.0001 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.5080 | 0.0292 | -0.1896 | -0.0038 | -0.0008 | 0.0013 |
| 8 | 14.00 | -0.00 | 0.6204 | 0.0249 | -0.2364 | -0.0041 | -0.0001 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.7371 | 0.0205 | -0.2860 | -0.0017 | 0.0005 | 0.0007 |
| 10 | 18.01 | -0.00 | 0.8689 | 0.0092 | -0.3420 | 0.0087 | 0.0007 | -0.0006 |
| 11 | 20.10 | -0.00 | 1.0181 | 0.0026 | -0.4041 | -0.0025 | 0.0023 | 0.0008 |
| 12 | 22.03 | -0.00 | 1.1082 | -0.0042 | -0.4320 | -0.0080 | 0.0041 | 0.0020 |
| 13 | 23.97 | -0.00 | 1.1394 | -0.0044 | -0.4240 | 0.0003 | 0.0037 | 0.0001 |
| 14 | 25.97 | -0.00 | 1.0803 | -0.0025 | -0.3692 | 0.0036 | 0.0050 | -0.0022 |
| 15 | 28.01 | -0.00 | 1.0252 | 0.0040 | -0.3215 | -0.0013 | 0.0055 | -0.0010 |
| 16 | 0.00 | 0.00 | -0.1431 | 0.0507 | 0.0962 | -0.0072 | -0.0010 | 0.0011 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/27/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 34

TEMP = 90.
RN/FTX10-6= 0.455124 VEL-FPS= 75.087

PO= 14.5236
MACH= 0.0671

CONF= W2B1V1E(10)H2F(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2987 | 0.0606 | -0.2389 | 0.0004 | -0.0021 | 0.0004 |
| 2 | 2.01 | -0.00 | 0.4022 | 0.0586 | -0.2885 | 0.0028 | -0.0015 | -0.0001 |
| 3 | 4.03 | -0.00 | 0.5198 | 0.0497 | -0.3431 | 0.0051 | -0.0018 | -0.0012 |
| 4 | 5.86 | -0.00 | 0.6253 | 0.0454 | -0.3951 | 0.0020 | -0.0021 | -0.0000 |
| 5 | 7.99 | -0.00 | 0.7527 | 0.0434 | -0.4525 | 0.0016 | -0.0014 | -0.0004 |
| 6 | 10.01 | -0.00 | 0.8543 | 0.0437 | -0.4950 | 0.0040 | -0.0010 | -0.0000 |
| 7 | 12.01 | -0.00 | 0.9496 | 0.0416 | -0.5309 | 0.0011 | -0.0002 | 0.0000 |
| 8 | 14.00 | -0.00 | 1.0608 | 0.0466 | -0.5794 | 0.0008 | 0.0011 | 0.0006 |
| 9 | 16.03 | -0.00 | 1.1797 | 0.0469 | -0.6297 | -0.0021 | 0.0022 | 0.0007 |
| 10 | 18.01 | -0.00 | 1.2966 | 0.0332 | -0.6747 | 0.0002 | 0.0015 | 0.0001 |
| 11 | 20.10 | -0.00 | 1.4368 | 0.2111 | -0.7003 | -0.0019 | 0.0054 | 0.0023 |
| 12 | 22.03 | -0.00 | 1.3691 | 0.0351 | -0.6548 | -0.0098 | 0.0085 | 0.0040 |
| 13 | 23.97 | -0.00 | 1.3357 | 0.0441 | -0.6158 | -0.0041 | 0.0062 | 0.0011 |
| 14 | 25.97 | -0.00 | 1.2495 | 0.0576 | -0.5501 | 0.0017 | 0.0021 | -0.0023 |
| 15 | 28.01 | -0.00 | 1.2052 | 0.0572 | -0.5075 | -0.0031 | 0.0046 | 0.0004 |
| 16 | 0.00 | 0.00 | 0.3041 | 0.0606 | -0.2421 | -0.0022 | -0.0018 | 0.0005 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 35
QPSF = 6.60

RUN NO. 35

TEMP = 90.
RN/FTX10-6= 0.455140 VEL-FPS= 75.084

PO= 14.5236
MACH= 0.0671

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0265 | 0.0353 | -0.0222 | 0.0025 | -0.0012 | 0.0005 |
| 2 | 2.01 | -0.00 | 0.1290 | 0.0309 | -0.0703 | -0.0005 | -0.0015 | 0.0006 |
| 3 | 4.03 | -0.00 | 0.2401 | 0.0219 | -0.1202 | -0.0009 | -0.0014 | 0.0007 |
| 4 | 5.86 | -0.00 | 0.3446 | 0.0200 | -0.1731 | 0.0013 | -0.0011 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.4666 | 0.0110 | -0.2271 | 0.0009 | -0.0017 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.5885 | 0.0114 | -0.2818 | 0.0005 | -0.0010 | 0.0002 |
| 7 | 12.01 | -0.00 | 0.6966 | 0.0117 | -0.3285 | 0.0002 | -0.0010 | 0.0008 |
| 8 | 14.00 | -0.00 | 0.7981 | 0.0073 | -0.3718 | -0.0000 | -0.0012 | 0.0003 |
| 9 | 16.03 | -0.00 | 0.9170 | 0.0053 | -0.4230 | -0.0003 | 0.0011 | 0.0003 |
| 10 | 18.01 | -0.00 | 1.0423 | 0.0010 | -0.4760 | 0.0075 | 0.0013 | 0.0001 |
| 11 | 20.10 | -0.00 | 1.1744 | -0.0080 | -0.5260 | 0.0045 | 0.0024 | 0.0008 |
| 12 | 22.03 | -0.00 | 1.2153 | -0.0198 | -0.5225 | -0.0007 | 0.0029 | 0.0020 |
| 13 | 23.97 | -0.00 | 1.2279 | -0.0035 | -0.5146 | -0.0004 | 0.0063 | 0.0003 |
| 14 | 25.97 | -0.00 | 1.1745 | 0.0125 | -0.4776 | 0.0105 | 0.0012 | -0.0021 |
| 15 | 28.01 | -0.00 | 1.1354 | 0.0238 | -0.4410 | -0.0051 | 0.0079 | 0.0019 |
| 16 | 0.00 | 0.00 | 0.0330 | 0.0376 | -0.0247 | -0.0002 | -0.0015 | 0.0006 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 36

TEMP = 93. PO= 14.4106
RN/FTX10-6= 0.450414 VEL-FPS= 75.554 MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0276 | 0.0400 | -0.0229 | -0.0029 | -0.0011 | 0.0017 |
| 2 | 0.00 | -6.00 | 0.0366 | 0.0351 | -0.0306 | 0.1008 | 0.0039 | -0.0238 |
| 3 | 0.00 | -4.00 | 0.0289 | 0.0375 | -0.0254 | 0.0653 | 0.0021 | -0.0156 |
| 4 | 0.00 | -2.00 | 0.0277 | 0.0399 | -0.0239 | 0.0407 | 0.0002 | -0.0077 |
| 5 | 0.00 | 0.00 | 0.0266 | 0.0399 | -0.0215 | -0.0001 | -0.0011 | 0.0006 |
| 6 | -0.00 | 1.99 | 0.0284 | 0.0377 | -0.0243 | -0.0439 | -0.0032 | 0.0107 |
| 7 | -0.00 | 3.99 | 0.0292 | 0.0355 | -0.0284 | -0.0740 | -0.0044 | 0.0187 |
| 8 | -0.00 | 5.99 | 0.0355 | 0.0332 | -0.0320 | -0.1041 | -0.0066 | 0.0262 |
| 9 | 0.00 | 0.00 | 0.0309 | 0.0400 | -0.0232 | -0.0083 | -0.0010 | 0.0019 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 37

TEMP = 93.

PO= 14.4106
RN/FTX10-6= 0.450366 VEL-FPS= 75.562 MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5874 | 0.0137 | -0.2818 | -0.0048 | -0.0016 | 0.0010 |
| 2 | 10.01 | -6.00 | 0.5954 | 0.0065 | -0.2889 | 0.1073 | 0.0090 | -0.0255 |
| 3 | 10.01 | -4.00 | 0.5921 | 0.0113 | -0.2855 | 0.0744 | 0.0058 | -0.0184 |
| 4 | 10.01 | -2.00 | 0.5909 | 0.0113 | -0.2830 | 0.0388 | 0.0020 | -0.0091 |
| 5 | 10.01 | -0.00 | 0.5864 | 0.013[illegible] | -0.2808 | -0.0076 | -0.0019 | 0.0011 |
| 6 | 10.01 | 1.99 | 0.5873 | 0.0115 | -0.2807 | -0.0377 | -0.0058 | 0.0102 |
| [illegible] | 10.01 | 3.99 | 0.5923 | 0.0093 | -0.2866 | -0.0679 | -0.0094 | 0.0172 |
| 8 | 10.01 | 5.99 | 0.5930 | 0.0071 | -0.2916 | -0.1118 | -0.0121 | 0.0257 |
| 9 | 10.01 | -0.00 | 0.5896 | 0.0137 | -0.2815 | -0.0103 | -0.0015 | 0.0011 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 38

TEMP = 93.
RN/FTX10-6= 0.450350 VEL-FPS= 75.564

PO= 14.4106
MACH= 0.0676

CONF= W2B1V1E(0)H2F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1755 | 0.0013 | -0.5278 | 0.0045 | 0.0018 | 0.0002 |
| 2 | 20.10 | -6.00 | 1.1844 | -0.0057 | -0.5368 | 0.1164 | 0.0078 | -0.0255 |
| 3 | 20.10 | -4.00 | 1.1758 | -0.0010 | -0.5288 | 0.0755 | 0.0054 | -0.0177 |
| 4 | 20.10 | -2.00 | 1.1800 | 0.0013 | -0.5282 | 0.0427 | 0.0026 | -0.0096 |
| 5 | 20.10 | -0.00 | 1.1798 | 0.0013 | -0.5281 | -0.0009 | 0.0015 | 0.0015 |
| 6 | 20.09 | 1.99 | 1.1732 | 0.0014 | -0.5247 | -0.0501 | -0.0003 | 0.0123 |
| 7 | 20.09 | 3.99 | 1.1707 | -0.0008 | -0.5258 | -0.0856 | -0.0015 | 0.0216 |
| 8 | 20.09 | 5.99 | 1.1812 | -0.0053 | -0.5334 | -0.1213 | -0.0040 | 0.0282 |
| 9 | 20.10 | -0.00 | 1.1852 | 0.0014 | -0.5308 | -0.0092 | 0.0010 | 0.0018 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 39

TEMP = 95. PO= 14.4008
RN/FTX10-6= 0.448155 VEL-FPS= 75.723 MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 2 | 0.00 | -6.00 | 0.0398 | 0.0352 | -0.0332 | 0.1062 | 0.0025 | -0.0245 |
| 3 | 0.00 | -4.00 | 0.0343 | 0.0375 | -0.0286 | 0.0762 | 0.0010 | -0.0164 |
| 4 | 0.00 | -2.00 | 0.0310 | 0.0399 | -0.0256 | 0.0352 | -0.0000 | -0.0075 |
| 5 | 0.00 | 0.00 | 0.0308 | 0.0400 | -0.0260 | 0.0052 | -0.0019 | 0.0004 |
| 6 | -0.00 | 1.99 | 0.0327 | 0.0401 | -0.0275 | -0.0330 | -0.0033 | 0.0092 |
| 7 | -0.00 | 3.99 | 0.0336 | 0.0378 | -0.0293 | -0.0685 | -0.0048 | 0.0175 |
| 8 | -0.00 | 5.99 | 0.0408 | 0.0356 | -0.0367 | -0.1014 | -0.0063 | 0.0256 |
| 9 | 0.00 | 0.00 | 0.0340 | 0.0400 | -0.0276 | -0.0057 | -0.0017 | 0.0013 |

6

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 40

TEMP = 95.
RN/FTX10-6= 0.448155 VEL-FPS= 75.723

PO= 14.4008
MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5726 | 0.0089 | -0.2689 | -0.0020 | -0.0016 | 0.0003 |
| 2 | 10.01 | -6.00 | 0.5773 | 0.0041 | -0.2739 | 0.1074 | 0.0086 | -0.0249 |
| 3 | 10.01 | -4.00 | 0.5740 | 0.0065 | -0.2709 | 0.0664 | 0.0053 | -0.0154 |
| 4 | 10.01 | -2.00 | 0.5739 | 0.0089 | -0.2690 | 0.0308 | 0.0014 | -0.0077 |
| 5 | 10.01 | -0.00 | 0.5737 | 0.0089 | -0.2685 | 0.0006 | -0.0014 | -0.0002 |
| 6 | 10.01 | 1.99 | 0.5757 | 0.0067 | -0.2699 | -0.0349 | -0.0055 | 0.0096 |
| 7 | 10.01 | 3.99 | 0.5764 | 0.0068 | -0.2736 | -0.0787 | -0.0089 | 0.0192 |
| 8 | 10.01 | 5.99 | 0.5782 | 0.0022 | -0.2782 | -0.0871 | -0.0128 | 0.0238 |
| 9 | 10.01 | -0.00 | 0.5737 | 0.0089 | -0.2676 | -0.0074 | -0.0016 | 0.0016 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 41

TEMP = 95. PO= 14.4008
RN/FTX10-6= 0.448219 VEL-FPS= 75.712 MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1831 | -0.0033 | -0.5287 | -0.0036 | 0.0019 | 0.0021 |
| 2 | 20.10 | -6.00 | 1.1789 | -0.0104 | -0.5358 | 0.1273 | 0.0059 | -0.0264 |
| 3 | 20.10 | -4.00 | 1.1822 | -0.0080 | -0.5328 | 0.0836 | 0.0042 | -0.0179 |
| 4 | 20.10 | -2.00 | 1.1811 | -0.0057 | -0.5285 | 0.0481 | 0.0021 | -0.0097 |
| 5 | 20.10 | -0.00 | 1.1831 | -0.0056 | -0.5300 | 0.0044 | 0.0008 | 0.0008 |
| 6 | 20.09 | 1.99 | 1.1785 | -0.0055 | -0.5282 | -0.0419 | 0.0005 | 0.0120 |
| 7 | 20.09 | 3.99 | 1.1804 | -0.0077 | -0.5319 | -0.0829 | -0.0005 | 0.0204 |
| 8 | 20.09 | 5.99 | 1.1758 | -0.0100 | -0.5319 | -0.1130 | -0.0024 | 0.0274 |
| 9 | 20.10 | -0.00 | 1.1810 | -0.0056 | -0.5280 | 0.0045 | 0.0024 | 0.0002 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 42
QPSF = 6.60

RUN NO. 42

TEMP = 95.

PO= 14.4008
RN/FTX10-6= 0.448123 VEL-FPS= 75.728 MACH= 0.0677

CONF= W2B1V1E(0)H1F(2,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0329 | 0.0377 | -0.0270 | -0.0084 | -0.0010 | 0.0014 |
| 2 | 2.01 | -0.00 | 0.1290 | 0.0309 | -0.0698 | -0.0005 | -0.0008 | 0.0001 |
| 3 | 4.03 | -0.00 | 0.2358 | 0.0219 | -0.1185 | -0.0036 | -0.0014 | 0.0002 |
| 4 | 5.86 | -0.00 | 0.3437 | 0.0129 | -0.1677 | -0.0067 | -0.0010 | 0.0004 |
| 5 | 7.99 | -0.00 | 0.4624 | 0.0086 | -0.2220 | -0.0017 | -0.0010 | 0.0003 |
| 6 | 10.01 | -0.00 | 0.6340 | 0.0373 | -0.3010 | -0.0049 | -0.0011 | 0.0004 |
| 7 | 12.01 | -0.00 | 0.6849 | 0.0069 | -0.3172 | -0.0051 | -0.0016 | 0.0010 |
| 8 | 14.00 | -0.00 | 0.7876 | 0.0072 | -0.3608 | -0.0053 | -0.0005 | 0.0016 |
| 9 | 16.03 | -0.00 | 0.9074 | 0.0029 | -0.4152 | -0.0057 | -0.0004 | 0.0011 |
| 10 | 18.01 | -0.00 | 1.0489 | -0.0036 | -0.4758 | 0.0020 | -0.0002 | 0.0003 |
| 11 | 20.10 | -0.00 | 1.1830 | -0.0126 | -0.5293 | -0.0091 | 0.0029 | 0.0023 |
| 12 | 22.03 | -0.00 | 1.1927 | -0.0175 | -0.5097 | -0.0061 | 0.0026 | 0.0021 |
| 13 | 23.97 | -0.00 | 1.2075 | -0.0083 | -0.5013 | -0.0005 | 0.0026 | 0.0003 |
| 14 | 25.97 | -0.00 | 1.1498 | 0.0100 | -0.4631 | -0.0002 | 0.0003 | 0.0003 |
| 15 | 28.01 | -0.00 | 1.1226 | 0.0214 | -0.4320 | -0.0079 | 0.0052 | -0.0006 |
| 16 | 0.00 | 0.00 | 0.0340 | 0.0353 | -0.0270 | -0.0057 | -0.0014 | 0.0013 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 43
QPSF = 6.60

RUN NO. 43

TEMP = 95.
RN/FTX10-6= 0.448171 VEL-FPS= 75.720

PO= 14.4008
MACH= 0.0677

CONF= W281V1E(0)F

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0297 | 0.0330 | -0.0247 | -0.0029 | -0.0011 | 0.0007 |
| 2 | 2.01 | -0.00 | 0.1259 | 0.0262 | -0.0638 | -0.0059 | -0.0011 | 0.0013 |
| 3 | 4.03 | -0.00 | 0.2286 | 0.0195 | -0.1076 | 0.0046 | -0.0015 | -0.0005 |
| 4 | 5.86 | -0.00 | 0.3323 | 0.0128 | -0.1519 | -0.0011 | -0.0011 | 0.0002 |
| 5 | 7.99 | -0.00 | 0.4511 | 0.0038 | -0.2037 | -0.0015 | -0.0014 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.5677 | 0.0088 | -0.2545 | -0.0045 | -0.0013 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.6703 | 0.0091 | -0.3004 | 0.0005 | -0.0009 | 0.0008 |
| 8 | 14.00 | -0.00 | 0.7806 | 0.0024 | -0.3465 | 0.0029 | -0.0009 | 0.0002 |
| 9 | 16.03 | -0.00 | 0.9034 | 0.0052 | -0.4075 | 0.0025 | 0.0007 | 0.0008 |
| 10 | 19.05 | -0.00 | 1.0038 | -0.0998 | -0.4466 | 0.0075 | 0.0001 | -0.0004 |
| 11 | 20.10 | -0.00 | 1.1703 | -0.0104 | -0.5200 | -0.0008 | 0.0025 | 0.0015 |
| 12 | 22.03 | -0.00 | 1.2133 | -0.0128 | -0.5175 | -0.0033 | 0.0049 | 0.0025 |
| 13 | 23.97 | -0.00 | 1.2025 | -0.0037 | -0.4913 | -0.0030 | 0.0054 | 0.0019 |
| 14 | 26.99 | -0.00 | 1.0932 | -0.0804 | -0.4206 | 0.0162 | -0.0019 | -0.0034 |
| 15 | 28.01 | -0.00 | 1.1379 | 0.0168 | -0.4363 | 0.0190 | -0.0018 | -0.0035 |
| 16 | 0.00 | 0.00 | 0.0362 | 0.0330 | -0.0275 | -0.0029 | -0.0011 | 0.0007 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60 RUN NO. 44

TEMP = 90. PO= 14.4057
RN/FTX10-6= 0.453471 VEL-FPS= 75.361 MACH= 0.0674

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0278 | 0.0329 | -0.0180 | -0.0001 | -0.0022 | 0.0016 |
| 2 | 2.01 | -0.00 | 0.1308 | 0.0354 | -0.0542 | -0.0030 | -0.0010 | 0.0012 |
| 3 | 4.03 | -0.00 | 0.2392 | 0.0310 | -0.0919 | -0.0060 | -0.0009 | 0.0013 |
| 4 | 5.86 | -0.00 | 0.3347 | 0.0171 | -0.1232 | 0.0019 | -0.0014 | 0.0000 |
| 5 | 7.99 | -0.00 | 0.4606 | 0.0150 | -0.1655 | -0.0010 | -0.0016 | 0.0001 |
| 6 | 10.01 | -0.00 | 0.5733 | 0.0176 | -0.2047 | -0.0039 | -0.0011 | 0.0007 |
| 7 | 12.01 | -0.00 | 0.6895 | 0.0201 | -0.2423 | 0.0040 | -0.0015 | -0.0005 |
| 8 | 14.00 | -0.00 | 0.7959 | 0.0156 | -0.2770 | 0.0011 | -0.0014 | 0.0006 |
| 9 | 16.03 | -0.00 | 0.9077 | 0.0158 | -0.3123 | 0.0010 | -0.0006 | 0.0006 |
| 10 | 18.01 | -0.00 | 1.0120 | 0.0136 | -0.3432 | -0.0018 | -0.0005 | 0.0018 |
| 11 | 20.10 | -0.00 | 1.1185 | 0.0115 | -0.3767 | 0.0007 | -0.0004 | 0.0006 |
| 12 | 22.03 | -0.00 | 1.2152 | 0.0116 | -0.4057 | -0.0047 | 0.0026 | 0.0018 |
| 13 | 23.97 | -0.00 | 1.3366 | 0.0048 | -0.4471 | -0.0076 | 0.0037 | 0.0024 |
| 14 | 25.97 | -0.00 | 1.4110 | 0.0072 | -0.4596 | -0.0022 | 0.0014 | 0.0012 |
| 15 | 28.01 | -0.00 | 1.4445 | 0.0164 | -0.4507 | 0.0139 | -0.0057 | -0.0024 |
| 16 | 0.00 | 0.00 | 0.0398 | 0.0329 | -0.0208 | -0.0083 | -0.0010 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 45

TEMP = 92.

PO= 14.4057
RN/FTX10-6= 0.451332 VEL-FPS= 75.506 MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0344 | 0.0352 | -0.0181 | -0.0028 | -0.0014 | 0.0006 |
| 2 | 0.00 | -6.00 | 0.0411 | 0.0304 | -0.0271 | 0.0981 | 0.0040 | -0.0232 |
| 3 | 0.00 | -4.00 | 0.0379 | 0.0328 | -0.0212 | 0.0599 | 0.0022 | -0.0154 |
| 4 | 0.00 | -2.00 | 0.0356 | 0.0352 | -0.0202 | 0.0353 | 0.0002 | -0.0076 |
| 5 | 0.00 | 0.00 | 0.0332 | 0.0353 | -0.0204 | -0.0110 | -0.0016 | 0.0025 |
| 6 | -0.00 | 1.99 | 0.0341 | 0.0330 | -0.0208 | -0.0357 | -0.0036 | 0.0093 |
| 7 | -0.00 | 3.99 | 0.0370 | 0.0331 | -0.0261 | -0.0685 | -0.0048 | 0.0174 |
| 8 | -0.00 | 5.99 | 0.0433 | 0.0308 | -0.0297 | -0.0986 | -0.0067 | 0.0244 |
| 9 | 0.00 | 0.00 | 0.0321 | 0.0352 | -0.0194 | -0.0083 | -0.0017 | 0.0019 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 46

TEMP = 92. PO= 14.4057
RN/FTX10-6= 0.451348 VEL-FPS= 75.503 MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5809 | 0.0153 | -0.2066 | -0.0066 | -0.0014 | 0.0014 |
| 2 | 10.01 | -6.00 | 0.5878 | 0.0104 | -0.2137 | 0.0974 | 0.0117 | -0.0238 |
| 3 | 10.01 | -4.00 | 0.5845 | 0.0128 | -0.2092 | 0.0645 | 0.0071 | -0.0151 |
| 4 | 10.01 | -2.00 | 0.5823 | 0.0152 | -0.2063 | 0.0289 | 0.0030 | -0.0068 |
| 5 | 10.01 | -0.00 | 0.5831 | 0.0153 | -0.2077 | -0.0121 | -0.0013 | 0.0016 |
| 6 | 10.01 | 1.99 | 0.5785 | 0.0154 | -0.2073 | -0.0341 | -0.0067 | 0.0088 |
| 7 | 10.01 | 3.99 | 0.5814 | 0.0131 | -0.2116 | -0.0698 | -0.0109 | 0.0177 |
| 8 | 10.01 | 5.99 | 0.5823 | 0.0109 | -0.2138 | -0.0973 | -0.0148 | 0.0240 |
| 9 | 10.01 | -0.00 | 0.5820 | 0.0153 | -0.2071 | -0.0012 | -0.0018 | 0.0001 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE= 0
QPSF = 6.60 RUN NO. 47

TEMP = 92. PO= 14.4057
RN/FTX10-6= 0.451332 VEL-FPS= 75.506 MACH= 0.0675

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1163 | 0.0091 | -0.3764 | 0.0007 | 0.0001 | 0.0011 |
| 2 | 20.10 | -6.00 | 1.1228 | 0.0020 | -0.3881 | 0.0934 | 0.0027 | -0.0202 |
| 3 | 20.10 | -4.00 | 1.1207 | 0.0044 | -0.3828 | 0.0661 | 0.0008 | -0.0155 |
| 4 | 20.10 | -2.00 | 1.1153 | 0.0091 | -0.3759 | 0.0252 | -0.0008 | -0.0060 |
| 5 | 20.10 | -0.00 | 1.1163 | 0.0091 | -0.3760 | 0.0035 | 0.0007 | 0.0010 |
| 6 | 20.09 | 1.99 | 1.1128 | 0.0092 | -0.3775 | -0.0293 | -0.0007 | 0.0086 |
| 7 | 20.09 | 3.99 | 1.1071 | 0.0069 | -0.3770 | -0.0674 | 0.0001 | 0.0174 |
| 8 | 20.09 | 5.99 | 1.1066 | 0.0047 | -0.3853 | -0.0840 | -0.0029 | 0.0218 |
| 9 | 20.10 | -0.00 | 1.1174 | 0.0091 | -0.3765 | 0.0062 | 0.0010 | 0.0004 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 48

TEMP = 92.

PO= 14.4057
RN/FTX10-6= 0.451348 VEL-FPS= 75.503 MACH= 0.0675

CONF= W2B1V1E(10)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2759 | 0.0556 | -0.2071 | -0.0046 | -0.0024 | 0.0016 |
| 2 | 2.01 | -0.00 | 0.3745 | 0.0558 | -0.2424 | -0.0021 | -0.0020 | -0.0000 |
| 3 | 4.03 | -0.00 | 0.4818 | 0.0490 | -0.2814 | -0.0023 | -0.0020 | -0.0000 |
| 4 | 5.86 | -0.00 | 0.5902 | 0.0423 | -0.3199 | 0.0001 | -0.0020 | -0.0006 |
| 5 | 7.99 | -0.00 | 0.7160 | 0.0378 | -0.3626 | -0.0001 | -0.0019 | -0.0006 |
| 6 | 10.01 | -0.00 | 0.8235 | 0.0404 | -0.3977 | -0.0030 | -0.0014 | -0.0000 |
| 7 | 12.01 | -0.00 | 0.9223 | 0.0429 | -0.4289 | -0.0004 | -0.0020 | -0.0000 |
| 8 | 14.00 | -0.00 | 1.0278 | 0.0453 | -0.4586 | -0.0004 | 0.0003 | 0.0004 |
| 9 | 16.03 | -0.00 | 1.1310 | 0.0455 | -0.4891 | -0.0006 | -0.0005 | 0.0009 |
| 10 | 18.01 | -0.00 | 1.2246 | 0.0432 | -0.5136 | -0.0006 | 0.0001 | 0.0009 |
| 11 | 20.10 | -0.00 | 1.3129 | 0.0433 | -0.5341 | -0.0006 | 0.0005 | 0.0009 |
| 12 | 22.03 | -0.00 | 1.4087 | 0.0457 | -0.5594 | -0.0088 | 0.0018 | 0.0028 |
| 13 | 23.97 | -0.00 | 1.4830 | 0.0411 | -0.5722 | -0.0007 | 0.0010 | 0.0009 |
| 14 | 25.97 | -0.00 | 1.5349 | 0.0433 | -0.5704 | -0.0141 | 0.0030 | 0.0039 |
| 15 | 28.01 | -0.00 | 1.5339 | 0.0500 | -0.5434 | -0.0165 | 0.0021 | 0.0056 |
| 16 | 0.00 | 0.00 | 0.2769 | 0.0533 | -0.2085 | -0.0074 | -0.0027 | 0.0017 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60 RUN NO. 49

TEMP = 90. PO= 14.4057
RN/FTX10-6= 0.453438 VEL-FPS= 75.366 MACH= 0.0674

CONF= W281V1E(-10)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2157 | 0.0382 | 0.1711 | -0.0038 | -0.0013 | 0.0009 |
| 2 | 2.01 | -0.00 | -0.1193 | 0.0408 | 0.1354 | -0.0067 | -0.0012 | 0.0010 |
| 3 | 4.03 | -0.00 | -0.0065 | 0.0363 | 0.0969 | -0.0042 | -0.0002 | 0.0004 |
| 4 | 5.86 | -0.00 | 0.0867 | 0.0319 | 0.0650 | -0.0098 | -0.0011 | 0.0017 |
| 5 | 7.99 | -0.00 | 0.2094 | 0.0250 | 0.0268 | -0.0046 | -0.0014 | 0.0004 |
| 6 | 10.01 | -0.00 | 0.3277 | 0.0229 | -0.0120 | -0.0075 | -0.0006 | 0.0011 |
| 7 | 12.01 | -0.00 | 0.4425 | 0.0232 | -0.0541 | -0.0050 | -0.0009 | 0.0010 |
| 8 | 14.00 | -0.00 | 0.5629 | 0.0164 | -0.0945 | -0.0107 | -0.0004 | 0.0017 |
| 9 | 16.03 | -0.00 | 0.6724 | 0.0119 | -0.1327 | -0.0081 | 0.0001 | 0.0022 |
| 10 | 18.01 | -0.00 | 0.7897 | 0.0098 | -0.1698 | -0.0029 | -0.0008 | 0.0015 |
| 11 | 20.10 | -0.00 | 0.9048 | 0.0006 | -0.2059 | -0.0004 | -0.0004 | 0.0009 |
| 12 | 22.03 | -0.00 | 1.0133 | -0.0014 | -0.2423 | -0.0060 | 0.0003 | 0.0016 |
| 13 | 23.97 | -0.00 | 1.1283 | -0.0106 | -0.2803 | -0.0062 | 0.0007 | 0.0022 |
| 14 | 25.97 | -0.00 | 1.2132 | -0.0081 | -0.3035 | -0.0009 | -0.0002 | -0.0001 |
| 15 | 28.01 | -0.00 | 1.2713 | -0.0058 | -0.3101 | -0.0035 | 0.0005 | 0.0020 |
| 16 | 0.00 | 0.00 | -0.2136 | 0.0336 | 0.1692 | -0.0147 | -0.0012 | 0.0023 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 50

TEMP = 92.
RN/FTX10-6= 0.451316 VEL-FPS= 75.508

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0383 | 0.0516 | -0.0199 | -0.0055 | -0.0010 | 0.0013 |
| 2 | 2.01 | -0.00 | 0.1302 | 0.0260 | -0.0421 | -0.0111 | -0.0009 | 0.0020 |
| 3 | 4.03 | -0.00 | 0.2467 | 0.0284 | -0.0718 | -0.0084 | -0.0012 | 0.0013 |
| 4 | 5.86 | -0.00 | 0.3490 | 0.0215 | -0.1005 | -0.0031 | -0.0015 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.4784 | 0.0170 | -0.1374 | -0.0060 | -0.0014 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.5947 | 0.0148 | -0.1702 | -0.0089 | -0.0009 | 0.0013 |
| 7 | 12.01 | -0.00 | 0.7110 | 0.0150 | -0.2053 | -0.0008 | -0.0010 | 0.0000 |
| 8 | 14.00 | -0.00 | 0.8262 | 0.0105 | -0.2398 | -0.0092 | -0.0008 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.9414 | 0.0106 | -0.2730 | 0.0015 | -0.0005 | 0.0004 |
| 10 | 18.01 | -0.00 | 1.0552 | 0.0062 | -0.3139 | 0.0040 | -0.0005 | -0.0001 |
| 11 | 20.10 | -0.00 | 1.1907 | 0.0041 | -0.3611 | -0.0016 | -0.0006 | 0.0011 |
| 12 | 22.03 | -0.00 | 1.3123 | 0.0067 | -0.4019 | -0.0018 | 0.0010 | 0.0011 |
| 13 | 23.97 | -0.00 | 1.4104 | 0.0045 | -0.4249 | -0.0019 | -0.0001 | 0.0006 |
| 14 | 25.97 | -0.00 | 1.4751 | 0.0091 | -0.4317 | -0.0072 | 0.0016 | 0.0007 |
| 15 | 28.01 | -0.00 | 1.5454 | 0.0113 | -0.4364 | 0.0065 | 0.0019 | -0.0024 |
| 16 | 0.00 | 0.00 | 0.0377 | 0.0329 | -0.0183 | -0.0055 | -0.0014 | 0.0013 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 51

TEMP = 92.
RN/FTX10-6= 0.451316 VEL-FPS= 75.508

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0378 | 0.0329 | -0.0164 | -0.0082 | -0.0010 | 0.0019 |
| 2 | 0.00 | -6.00 | 0.0468 | 0.0280 | -0.0232 | 0.1009 | 0.0039 | -0.0233 |
| 3 | 0.00 | -4.00 | 0.0391 | 0.0304 | -0.0194 | 0.0709 | 0.0020 | -0.0163 |
| 4 | 0.00 | -2.00 | 0.0400 | 0.0328 | -0.0199 | 0.0353 | 0.0006 | -0.0081 |
| 5 | 0.00 | 0.00 | 0.0389 | 0.0329 | -0.0165 | -0.0055 | -0.0014 | 0.0013 |
| 6 | -0.00 | 1.99 | 0.0375 | 0.0330 | -0.0182 | -0.0520 | -0.0030 | 0.0109 |
| 7 | -0.00 | 3.99 | 0.0416 | 0.0307 | -0.0226 | -0.0684 | -0.0048 | 0.0174 |
| 8 | -0.00 | 5.99 | 0.0424 | 0.0285 | -0.0267 | -0.0931 | -0.0068 | 0.0231 |
| 9 | 0.00 | 0.00 | 0.0389 | 0.0329 | -0.0156 | -0.0110 | -0.0016 | 0.0025 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 52

TEMP = 92. PO= 14.4057
RN/FTX10-6= 0.451316 VEL-FPS= 75.508 MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.6013 | 0.0125 | -0.1720 | -0.0007 | -0.0014 | 0.0000 |
| 2 | 10.01 | -6.00 | 0.6093 | 0.0052 | -0.1781 | 0.1007 | 0.0130 | -0.0245 |
| 3 | 10.01 | -4.00 | 0.6049 | 0.0100 | -0.1737 | 0.0569 | 0.0087 | -0.0149 |
| 4 | 10.01 | -2.00 | 0.6026 | 0.0100 | -0.1711 | 0.0430 | 0.0029 | -0.0101 |
| 5 | 10.01 | -0.00 | 0.6035 | 0.0125 | -0.1712 | -0.0143 | -0.0012 | 0.0015 |
| 6 | 10.01 | 1.99 | 0.6011 | 0.0102 | -0.1723 | -0.0309 | -0.0063 | 0.0081 |
| 7 | 10.01 | 3.99 | 0.6029 | 0.0104 | -0.1756 | -0.0721 | -0.0111 | 0.0165 |
| 8 | 10.01 | 5.99 | 0.6058 | 0.0058 | -0.1798 | -0.1023 | -0.0157 | 0.0241 |
| 9 | 10.01 | -0.00 | 0.6002 | 0.0125 | -0.1700 | -0.0034 | -0.0017 | 0.0006 |



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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 53

TEMP = 92.
RN/FTX10-6= 0.451267 VEL-FPS= 75.516

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.1844 | 0.0088 | -0.3562 | 0.0038 | -0.0004 | 0.0004 |
| 2 | 20.10 | -6.00 | 1.1966 | 0.0016 | -0.3654 | 0.0944 | 0.0166 | -0.0222 |
| 3 | 20.10 | -4.00 | 1.1964 | 0.0040 | -0.3678 | 0.0724 | 0.0119 | -0.0165 |
| 4 | 20.10 | -2.00 | 1.1920 | 0.0064 | -0.3628 | 0.0340 | 0.0061 | -0.0082 |
| 5 | 20.10 | -0.00 | 1.1920 | 0.0088 | -0.3591 | 0.0038 | -0.0010 | 0.0004 |
| 6 | 20.09 | 1.99 | 1.1970 | 0.0066 | -0.3644 | -0.0401 | -0.0067 | 0.0106 |
| 7 | 20.09 | 3.99 | 1.1967 | 0.0044 | -0.3657 | -0.0649 | -0.0127 | 0.0180 |
| 8 | 20.09 | 5.99 | 1.1942 | 0.0022 | -0.3705 | -0.0952 | -0.0173 | 0.0239 |
| 9 | 20.10 | -0.00 | 1.1919 | 0.0088 | -0.3609 | 0.0065 | -0.0007 | -0.0001 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 54

TEMP = 92.
RN/FTX10-6= 0.451348 VEL-FPS= 75.503

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0313 | 0.0399 | -0.0143 | -0.0055 | -0.0014 | 0.0018 |
| 2 | 0.00 | -6.00 | 0.0403 | 0.0350 | -0.0211 | 0.0982 | 0.0043 | -0.0232 |
| 3 | 0.00 | -4.00 | 0.0359 | 0.0374 | -0.0175 | 0.0764 | 0.0020 | -0.0160 |
| 4 | 0.00 | -2.00 | 0.0359 | 0.0398 | -0.0143 | 0.0354 | 0.0003 | -0.0081 |
| 5 | 0.00 | 0.00 | 0.0369 | 0.0398 | -0.0129 | -0.0055 | -0.0014 | 0.0012 |
| 6 | -0.00 | 1.99 | 0.0344 | 0.0376 | -0.0153 | -0.0301 | -0.0037 | 0.0086 |
| 7 | -0.00 | 3.99 | 0.0428 | 0.0377 | -0.0197 | -0.0630 | -0.0055 | 0.0162 |
| 8 | -0.00 | 5.99 | 0.0436 | 0.0355 | -0.0243 | -0.1013 | -0.0063 | 0.0234 |
| 9 | 0.00 | 0.00 | 0.0357 | 0.0399 | -0.0151 | -0.0000 | -0.0014 | 0.0011 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 55

TEMP = 92.
RN/FTX10-6= 0.451364 VEL-FPS= 75.500

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.6100 | 0.0146 | -0.1488 | -0.0058 | -0.0009 | 0.0012 |
| 2 | 10.01 | -6.00 | 0.6191 | 0.0097 | -0.1561 | 0.0956 | 0.0142 | -0.0239 |
| 3 | 10.01 | -4.00 | 0.6137 | 0.0120 | -0.1510 | 0.0736 | 0.0085 | -0.0177 |
| 4 | 10.01 | -2.00 | 0.6135 | 0.0145 | -0.1501 | 0.0379 | 0.0040 | -0.0089 |
| 5 | 10.01 | -0.00 | 0.6112 | 0.0145 | -0.1485 | 0.0132 | -0.0002 | -0.0015 |
| 6 | 10.01 | 1.99 | 0.6130 | 0.0146 | -0.1513 | -0.0279 | -0.0063 | 0.0079 |
| 7 | 10.01 | 3.99 | 0.6138 | 0.0124 | -0.1550 | -0.0581 | -0.0112 | 0.0149 |
| 8 | 10.01 | 5.99 | 0.6157 | 0.0102 | -0.1578 | -0.1048 | -0.0155 | 0.0214 |
| 9 | 10.01 | -0.00 | 0.6133 | 0.0146 | -0.1500 | -0.0031 | -0.0009 | 0.0005 |

VSD LOW-SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 56

TEMP = 92.
RN/FTX10-6= 0.451364 VEL-FPS= 75.500

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.2098 | 0.0038 | -0.3308 | -0.0011 | 0.0017 | -0.0016 |
| 2 | 20.10 | -6.00 | 1.2230 | -0.0033 | -0.3434 | 0.1003 | 0.0189 | -0.0258 |
| 3 | 20.10 | -4.00 | 1.2209 | -0.0010 | -0.3371 | 0.0673 | 0.0117 | -0.0175 |
| 4 | 20.10 | -2.00 | 1.2145 | 0.0036 | -0.3274 | 0.0263 | 0.0070 | -0.0080 |
| 5 | 20.10 | -0.00 | 1.2111 | 0.0037 | -0.3280 | 0.0097 | 0.0012 | -0.0025 |
| 6 | 20.09 | 1.99 | 1.2139 | 0.0039 | -0.3324 | -0.0314 | -0.0041 | 0.0069 |
| 7 | 20.09 | 3.99 | 1.2156 | 0.0017 | -0.3398 | -0.0590 | -0.0108 | 0.0171 |
| 8 | 20.09 | 5.99 | 1.2185 | -0.0004 | -0.3455 | -0.0838 | -0.0161 | 0.0235 |
| 9 | 20.10 | -0.00 | 1.2240 | 0.0084 | -0.3347 | -0.0011 | 0.0027 | -0.0011 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 57

TEMP = 92.
RN/FTX10-6= 0.451332 VEL-FPS= 75.506

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0259 | 0.0328 | -0.0118 | -0.0027 | -0.0011 | 0.0017 |
| 2 | 2.01 | -0.00 | 0.1307 | 0.0352 | -0.0327 | -0.0027 | -0.0006 | 0.0011 |
| 3 | 4.03 | -0.00 | 0.2463 | 0.0353 | -0.0589 | -0.0028 | -0.0005 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.3553 | 0.0283 | -0.0839 | -0.0001 | -0.0005 | 0.0005 |
| 5 | 7.99 | -0.00 | 0.4881 | 0.0238 | -0.1173 | -0.0030 | -0.0010 | 0.0005 |
| 6 | 10.01 | -0.00 | 0.6078 | 0.0239 | -0.1495 | -0.0031 | -0.0006 | 0.0000 |
| 7 | 12.01 | -0.00 | 0.7243 | 0.0240 | -0.1804 | -0.0004 | -0.0005 | -0.0000 |
| 8 | 14.00 | -0.00 | 0.8461 | 0.0172 | -0.2148 | -0.0005 | 0.0005 | 0.0004 |
| 9 | 16.03 | -0.00 | 0.9591 | 0.0174 | -0.2488 | -0.0034 | 0.0003 | 0.0011 |
| 10 | 18.01 | -0.00 | 1.0862 | 0.0199 | -0.2886 | 0.0045 | 0.0009 | -0.0007 |
| 11 | 20.10 | -0.00 | 1.2012 | 0.0131 | -0.3262 | -0.0011 | 0.0017 | -0.0027 |
| 12 | 22.03 | -0.00 | 1.3347 | 0.0110 | -0.3691 | 0.0040 | 0.0004 | -0.0012 |
| 13 | 23.97 | -0.00 | 1.4354 | 0.0110 | -0.3849 | 0.0014 | 0.0016 | -0.0007 |
| 14 | 25.97 | -0.00 | 1.5327 | 0.0180 | -0.4021 | 0.0095 | 0.0002 | -0.0042 |
| 15 | 28.01 | -0.00 | 1.5625 | 0.0246 | -0.3783 | 0.0022 | 0.0099 | -0.0015 |
| 16 | 0.00 | 0.00 | 0.0412 | 0.0399 | -0.0150 | -0.0082 | -0.0010 | 0.0019 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 58

TEMP = 92.

PO= 14.4057

RN/FTX10-6= 0.451348 VEL-FPS= 75.503 MACH= 0.0675

CONF= W2B1V1E(10)SC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2653 | 0.0485 | -0.1977 | 0.0036 | -0.0015 | 0.0002 |
| 2 | 2.01 | -0.00 | 0.3743 | 0.0509 | -0.2226 | 0.0008 | -0.0014 | -0.0002 |
| 3 | 4.03 | -0.00 | 0.4974 | 0.0487 | -0.2535 | 0.0035 | -0.0013 | -0.0003 |
| 4 | 5.86 | -0.00 | 0.6150 | 0.0418 | -0.2824 | 0.0034 | -0.0016 | -0.0003 |
| 5 | 7.99 | -0.00 | 0.7479 | 0.0372 | -0.3149 | 0.0006 | -0.0011 | -0.0002 |
| 6 | 10.01 | -0.00 | 0.8665 | 0.0374 | -0.3465 | -0.0022 | -0.0006 | 0.0003 |
| 7 | 12.01 | -0.00 | 0.9786 | 0.0398 | -0.3786 | -0.0023 | -0.0002 | -0.0002 |
| 8 | 14.00 | -0.00 | 1.0983 | 0.0376 | -0.4098 | 0.0057 | 0.0001 | -0.0010 |
| 9 | 16.03 | -0.00 | 1.2050 | 0.0377 | -0.4372 | 0.0002 | 0.0009 | 0.0001 |
| 10 | 18.01 | -0.00 | 1.3182 | 0.0378 | -0.4679 | 0.0083 | 0.0005 | -0.0011 |
| 11 | 20.10 | -0.00 | 1.4462 | 0.0334 | -0.5117 | 0.0080 | 0.0000 | -0.0021 |
| 12 | 22.03 | -0.00 | 1.5604 | 0.0359 | -0.5436 | 0.0079 | 0.0001 | -0.0021 |
| 13 | 23.97 | -0.00 | 1.6288 | 0.0404 | -0.5417 | 0.0081 | 0.0012 | -0.0017 |
| 14 | 25.97 | -0.00 | 1.6437 | 0.0541 | -0.5063 | 0.0194 | -0.0017 | -0.0070 |
| 15 | 28.01 | -0.00 | 1.6863 | 0.0561 | -0.4884 | -0.0043 | 0.0073 | 0.0005 |
| 16 | 0.00 | 0.00 | 0.2773 | 0.0555 | -0.2016 | 0.0008 | -0.0021 | 0.0003 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 44
QPSF = 6.60

RUN NO. 59

TEMP = 92.
RN/FTX10-6= 0.451316 VEL-FPS= 75.508

PO= 14.4057
MACH= 0.0675

CONF= W2B1V1E(-10)SC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2137 | 0.0313 | 0.1684 | -0.0092 | -0.0010 | 0.0022 |
| 2 | 2.01 | -0.00 | -0.1131 | 0.0383 | 0.1505 | -0.0092 | -0.0005 | 0.0016 |
| 3 | 4.03 | -0.00 | -0.0050 | 0.0360 | 0.1296 | -0.0092 | -0.0004 | 0.0021 |
| 4 | 5.86 | -0.00 | 0.1073 | 0.0290 | 0.1066 | -0.0011 | -0.0008 | 0.0007 |
| 5 | 7.99 | -0.00 | 0.2304 | 0.0268 | 0.0771 | -0.0066 | -0.0006 | 0.0009 |
| 6 | 10.01 | -0.00 | 0.3555 | 0.0222 | 0.0429 | -0.0040 | -0.0002 | 0.0008 |
| 7 | 12.01 | -0.00 | 0.4763 | 0.0224 | 0.0093 | -0.0014 | -0.0001 | 0.0007 |
| 8 | 14.00 | -0.00 | 0.5980 | 0.0132 | -0.0273 | -0.0016 | -0.0004 | 0.0002 |
| 9 | 16.03 | -0.00 | 0.7219 | 0.0110 | -0.0634 | -0.0017 | -0.0000 | 0.0007 |
| 10 | 18.01 | -0.00 | 0.8467 | 0.0089 | -0.1038 | 0.0008 | 0.0010 | 0.0001 |
| 11 | 20.10 | -0.00 | 0.9779 | 0.0022 | -0.1515 | 0.0005 | 0.0021 | -0.0020 |
| 12 | 22.03 | -0.00 | 1.1134 | 0.0025 | -0.1979 | -0.0052 | 0.0002 | -0.0007 |
| 13 | 23.97 | -0.00 | 1.2313 | -0.0021 | -0.2222 | 0.0029 | 0.0019 | -0.0010 |
| 14 | 25.97 | -0.00 | 1.3319 | -0.0021 | -0.2394 | 0.0083 | -0.0007 | -0.0038 |
| 15 | 28.01 | -0.00 | 1.4143 | 0.0024 | -0.2433 | 0.0087 | 0.0047 | -0.0040 |
| 16 | 0.00 | 0.00 | -0.2070 | 0.0383 | 0.1681 | -0.0092 | -0.0009 | 0.0016 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 60
QPSF = 6.60

RUN NO. 60

TEMP = 91.
RN/FTX10-6= 0.452148 VEL-FPS= 75.475 MACH= 0.0675

PO= 14.3860.

CONF= H281V1E(0)GC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0300 | 0.0352 | -0.0197 | 0.0026 | -0.0008 | 0.0010 |
| 2 | 2.01 | -0.00 | 0.1298 | 0.0331 | -0.0517 | -0.0003 | -0.0017 | 0.0016 |
| 3 | 4.03 | -0.00 | 0.2396 | 0.0309 | -0.0849 | -0.0004 | -0.0010 | 0.0011 |
| 4 | 5.86 | -0.00 | 0.3449 | 0.0240 | -0.1172 | 0.0020 | -0.0013 | -0.0005 |
| 5 | 7.99 | -0.00 | 0.4689 | 0.0195 | -0.1518 | 0.0019 | -0.0009 | -0.0005 |
| 6 | 10.01 | -0.00 | 0.5929 | 0.0197 | -0.1880 | 0.0017 | -0.0015 | -0.0005 |
| 7 | 12.01 | -0.00 | 0.7093 | 0.0222 | -0.2181 | -0.0037 | 0.0000 | 0.0006 |
| 8 | 14.00 | -0.00 | 0.8324 | 0.0199 | -0.2490 | -0.0037 | 0.0004 | 0.0006 |
| 9 | 16.03 | -0.00 | 0.9747 | 0.0178 | -0.2934 | -0.0039 | 0.0019 | 0.0006 |
| 10 | 18.01 | -0.00 | 1.1312 | 0.0110 | -0.3397 | 0.0013 | 0.0019 | 0.0004 |
| 11 | 20.10 | -0.00 | 1.2943 | 0.0019 | -0.3864 | 0.0010 | 0.0020 | -0.0000 |
| 12 | 22.03 | -0.00 | 1.4146 | -0.0051 | -0.4043 | 0.0038 | 0.0021 | 0.0003 |
| 13 | 23.97 | -0.00 | 1.5006 | -0.0123 | -0.4024 | 0.0014 | 0.0042 | 0.0019 |
| 14 | 25.97 | -0.00 | 1.5572 | -0.0078 | -0.3922 | 0.0043 | 0.0009 | 0.0012 |
| 15 | 28.01 | -0.00 | 1.6493 | -0.0102 | -0.4021 | -0.0008 | 0.0031 | 0.0035 |
| 16 | 0.00 | 0.00 | 0.0386 | 0.0353 | -0.0217 | -0.0083 | -0.0010 | 0.0024 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 61
QPSF = 6.60

RUN NO. 61

TEMP = 91.
RN/FTX10-6= 0.452051 VEL-FPS= 75.491

PO= 14.3860
MACH= 0.0675

CONF= W2B1V1E(0)GC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0234 | 0.0329 | -0.0177 | 0.0026 | -0.0009 | 0.0010 |
| 2 | 2.01 | -0.00 | 0.1275 | 0.0308 | -0.0533 | -0.0057 | -0.0010 | 0.0018 |
| 3 | 4.03 | -0.00 | 0.2240 | 0.0263 | -0.0873 | -0.0005 | -0.0004 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.3314 | 0.0171 | -0.1230 | -0.0007 | -0.0007 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.4595 | 0.0103 | -0.1639 | 0.0017 | -0.0010 | -0.0005 |
| 6 | 10.01 | -0.00 | 0.5810 | 0.0129 | -0.2056 | 0.0015 | -0.0009 | -0.0004 |
| 7 | 12.01 | -0.00 | 0.6962 | 0.0154 | -0.2407 | 0.0068 | -0.0002 | -0.0012 |
| 8 | 14.00 | -0.00 | 0.8199 | 0.0156 | -0.2807 | 0.0012 | 0.0002 | 0.0000 |
| 9 | 16.03 | -0.00 | 0.9652 | 0.0112 | -0.3327 | -0.0017 | 0.0024 | 0.0001 |
| 10 | 18.01 | -0.00 | 1.1148 | 0.0045 | -0.3846 | 0.0034 | 0.0020 | -0.0010 |
| 11 | 20.10 | -0.00 | 1.2732 | 0.0001 | -0.4372 | 0.0004 | 0.0022 | 0.0001 |
| 12 | 22.03 | -0.00 | 1.3888 | -0.0067 | -0.4646 | 0.0085 | 0.0021 | -0.0012 |
| 13 | 23.97 | -0.00 | 1.4787 | -0.0091 | -0.4734 | 0.0058 | 0.0010 | -0.0006 |
| 14 | 25.97 | -0.00 | 1.5512 | -0.0139 | -0.4772 | 0.0007 | 0.0068 | -0.0006 |
| 15 | 28.01 | -0.00 | 1.6217 | -0.0093 | -0.4783 | 0.0007 | 0.0039 | -0.0011 |
| 16 | 0.00 | 0.00 | 0.0364 | 0.0353 | -0.0220 | -0.0056 | -0.0007 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 62

TEMP = 91.

PU= 14.3811
RN/FTX10-6= 0.452027 VEL-FPS= 75.495 MACH= 0.0675

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0342 | 0.0353 | -0.0219 | -0.0110 | -0.0010 | 0.0020 |
| 2 | 2.01 | -0.00 | 0.1298 | 0.0331 | -0.0522 | -0.0030 | -0.0010 | 0.0012 |
| 3 | 4.03 | -0.00 | 0.2339 | 0.0286 | -0.0867 | -0.0086 | -0.0002 | 0.0019 |
| 4 | 5.86 | -0.00 | 0.3370 | 0.0194 | -0.1206 | -0.0088 | -0.0005 | 0.0014 |
| 5 | 7.99 | -0.00 | 0.4620 | 0.0173 | -0.1591 | -0.0036 | -0.0005 | 0.0007 |
| 6 | 10.01 | -0.00 | 0.5869 | 0.0198 | -0.1988 | -0.0010 | -0.0008 | -0.0004 |
| 7 | 12.01 | -0.00 | 0.6989 | 0.0223 | -0.2304 | -0.0011 | -0.0000 | 0.0001 |
| 8 | 14.00 | -0.00 | 0.8229 | 0.0201 | -0.2642 | -0.0039 | 0.0011 | 0.0007 |
| 9 | 16.03 | -0.00 | 0.9648 | 0.0158 | -0.3165 | -0.0015 | 0.0014 | 0.0001 |
| 10 | 18.01 | -0.00 | 1.1179 | 0.0066 | -0.3643 | 0.0036 | 0.0018 | 0.0004 |
| 11 | 20.10 | -0.00 | 1.2755 | -0.0024 | -0.4106 | -0.0047 | 0.0016 | 0.0007 |
| 12 | 22.03 | -0.00 | 1.4019 | -0.0070 | -0.4412 | -0.0020 | 0.0027 | 0.0006 |
| 13 | 23.97 | -0.00 | 1.4866 | -0.0118 | -0.4430 | 0.0061 | -0.0006 | -0.0001 |
| 14 | 25.97 | -0.00 | 1.5616 | -0.0073 | -0.4412 | -0.0015 | 0.0046 | 0.0004 |
| 15 | 28.01 | -0.00 | 1.6190 | -0.0097 | -0.4378 | -0.0042 | 0.0011 | 0.0016 |
| 16 | 0.00 | 0.00 | 0.0299 | 0.0353 | -0.0215 | -0.0056 | -0.0011 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 63

TEMP = 91. PO= 14.3811
RN/FTX10-6= 0.452027 VEL-FPS= 75.495 MACH= 0.0675

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0278 | 0.0376 | -0.0187 | -0.0055 | -0.0011 | 0.0013 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0328 | -0.0288 | 0.0954 | 0.0040 | -0.0231 |
| 3 | 0.00 | -4.00 | 0.0324 | 0.0351 | -0.0223 | 0.0626 | 0.0022 | -0.0144 |
| 4 | 0.00 | -2.00 | 0.0312 | 0.0352 | -0.0212 | 0.0326 | 0.0006 | -0.0075 |
| 5 | 0.00 | 0.00 | 0.0288 | 0.0376 | -0.0215 | -0.0001 | -0.0011 | 0.0011 |
| 6 | -0.00 | 1.99 | 0.0341 | 0.0353 | -0.0223 | -0.0384 | -0.0026 | 0.0088 |
| 7 | -0.00 | 3.99 | 0.0326 | 0.0331 | -0.0262 | -0.0685 | -0.0042 | 0.0180 |
| 8 | -0.00 | 5.99 | 0.0388 | 0.0309 | -0.0312 | -0.1013 | -0.0053 | 0.0245 |
| 9 | 0.00 | 0.00 | 0.0321 | 0.0352 | -0.0203 | -0.0056 | -0.0011 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 64

TEMP = 94. PO= 14.3811
RN/FTX10-6= 0.448896 VEL-FPS= 75.703 MACH= 0.0677

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5858 | 0.0151 | -0.1976 | -0.0010 | -0.0008 | -0.0004 |
| 2 | 10.01 | -6.00 | 0.5937 | 0.0079 | -0.2042 | 0.0948 | 0.0130 | -0.0237 |
| 3 | 10.01 | -4.00 | 0.5937 | 0.0103 | -0.2009 | 0.0620 | 0.0085 | -0.0156 |
| 4 | 10.01 | -2.00 | 0.5881 | 0.0127 | -0.1982 | 0.0263 | 0.0037 | -0.0078 |
| 5 | 10.01 | -0.00 | 0.5879 | 0.0198 | -0.1993 | -0.0038 | -0.0011 | -0.0003 |
| 6 | 10.01 | 1.99 | 0.5888 | 0.0176 | -0.1997 | -0.0449 | -0.0058 | 0.0086 |
| 7 | 10.01 | 3.99 | 0.5885 | 0.0154 | -0.2019 | -0.0670 | -0.0105 | 0.0154 |
| 8 | 10.01 | 5.99 | 0.5925 | 0.0108 | -0.2080 | -0.1054 | -0.0147 | 0.0227 |
| 9 | 10.01 | -0.00 | 0.5901 | 0.0198 | -0.1999 | -0.0065 | -0.0004 | -0.0002 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 65

TEMP = 96. PO= 14.3811
RN/FTX10-6= 0.446824 VEL-FPS= 75.843 MACH= 0.0678

CONF= W2B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.2733 | -0.0024 | -0.4109 | -0.0019 | 0.0026 | 0.0001 |
| 2 | 20.10 | -6.00 | 1.2488 | -0.0097 | -0.4044 | 0.1102 | 0.0113 | -0.0258 |
| 3 | 20.10 | -4.00 | 1.2585 | -0.0049 | -0.4061 | 0.0691 | 0.0069 | -0.0174 |
| 4 | 20.10 | -2.00 | 1.2692 | -0.0048 | -0.4087 | 0.0417 | 0.0039 | -0.0094 |
| 5 | 20.10 | -0.00 | 1.2712 | -0.0024 | -0.4094 | -0.0019 | 0.0019 | 0.0006 |
| 6 | 20.09 | 1.99 | 1.2699 | -0.0047 | -0.4096 | -0.0430 | -0.0004 | 0.0101 |
| 7 | 20.09 | 3.99 | 1.2567 | -0.0070 | -0.4033 | -0.0730 | -0.0026 | 0.0187 |
| 8 | 20.09 | 5.99 | 1.2457 | -0.0069 | -0.4001 | -0.1059 | -0.0068 | 0.0263 |
| 9 | 20.10 | -0.00 | 1.2832 | -0.0000 | -0.4127 | -0.0019 | 0.0020 | 0.0001 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 66

TEMP = 95.

PO= 14.3811
RN/FTX10-6= 0.447882 VEL-FPS= 75.769 MACH= 0.0677

CONF= W2B1V1E(10)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2702 | 0.0533 | -0.2104 | -0.0047 | -0.0024 | 0.0010 |
| 2 | 2.01 | -0.00 | 0.3711 | 0.0488 | -0.2447 | -0.0021 | -0.0021 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.4807 | 0.0420 | -0.2796 | -0.0023 | -0.0020 | 0.0004 |
| 4 | 5.86 | -0.00 | 0.5859 | 0.0329 | -0.3160 | 0.0001 | -0.0020 | -0.0001 |
| 5 | 7.99 | -0.00 | 0.7227 | 0.0378 | -0.3617 | -0.0055 | -0.0011 | -0.0004 |
| 6 | 10.01 | -0.00 | 0.8314 | 0.0379 | -0.3926 | -0.0001 | -0.0011 | -0.0001 |
| [illegible] | 12.01 | -0.00 | 0.9383 | 0.0427 | -0.4165 | -0.0001 | -0.0003 | -0.0001 |
| [illegible] | 14.00 | -0.00 | 1.0600 | 0.0429 | -0.4534 | -0.0003 | 0.0000 | -0.0001 |
| 9 | 16.03 | -0.00 | 1.2170 | 0.0432 | -0.5121 | -0.0032 | 0.0025 | 0.0004 |
| 10 | 18.01 | -0.00 | 1.3647 | 0.0364 | -0.5573 | -0.0035 | 0.0009 | 0.0005 |
| 11 | 20.10 | -0.00 | 1.5138 | 0.0272 | -0.5974 | 0.0017 | 0.0016 | 0.0008 |
| 12 | 22.03 | -0.00 | 1.5836 | 0.0200 | -0.5887 | -0.0060 | 0.0038 | 0.0009 |
| 13 | 23.97 | -0.00 | 1.6523 | 0.0245 | -0.5807 | 0.0022 | 0.0018 | 0.0001 |
| 14 | 25.97 | -0.00 | 1.6972 | 0.0265 | -0.5607 | -0.0054 | 0.0044 | 0.0024 |
| 15 | 28.01 | -0.00 | 1.7473 | 0.0263 | -0.5503 | 0.0081 | -0.0036 | -0.0006 |
| 16 | 0.00 | 0.00 | 0.2789 | 0.0533 | -0.2134 | -0.0019 | -0.0021 | 0.0004 |

B

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 62
QPSF = 6.60

RUN NO. 67

TEMP = 93.
RN/FTX10-6= 0.449849 VEL-FPS= 75.649

PO= 14.3713
MACH= 0.0676

CONF= W2B1V1E(-10)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2189 | 0.0359 | 0.1728 | -0.0037 | -0.0007 | 0.0009 |
| 2 | 2.01 | -0.00 | -0.1170 | 0.0338 | 0.1383 | -0.0067 | -0.0009 | 0.0015 |
| 3 | 4.03 | -0.00 | -0.0150 | 0.0339 | 0.1042 | -0.0068 | -0.0005 | 0.0015 |
| 4 | 5.86 | -0.00 | 0.0860 | 0.0294 | 0.0740 | -0.0070 | -0.0004 | 0.0015 |
| 5 | 7.99 | -0.00 | 0.2055 | 0.0226 | 0.0384 | -0.0044 | -0.0001 | 0.0009 |
| 6 | 10.01 | -0.00 | 0.3272 | 0.0181 | 0.0016 | -0.0073 | -0.0003 | -0.0000 |
| 7 | 12.01 | -0.00 | 0.4564 | 0.0183 | -0.0395 | -0.0102 | -0.0001 | 0.0011 |
| 8 | 14.00 | -0.00 | 0.5739 | 0.0114 | -0.0708 | -0.0022 | -0.0002 | 0.0003 |
| 9 | 16.03 | -0.00 | 0.7064 | 0.0093 | -0.1127 | -0.0051 | 0.0005 | 0.0004 |
| 10 | 18.01 | -0.00 | 0.8586 | -0.0021 | -0.1580 | 0.0028 | 0.0011 | -0.0009 |
| 11 | 20.10 | -0.00 | 1.0203 | -0.0112 | -0.2102 | -0.0000 | 0.0023 | 0.0008 |
| 12 | 22.03 | -0.00 | 1.1595 | -0.0157 | -0.2497 | 0.0051 | 0.0020 | 0.0000 |
| 13 | 23.97 | -0.00 | 1.2805 | -0.0250 | -0.2770 | 0.0051 | 0.0024 | 0.0000 |
| 14 | 25.97 | -0.00 | 1.3608 | -0.0227 | -0.2801 | 0.0051 | 0.0002 | -0.0004 |
| 15 | 28.01 | -0.00 | 1.4321 | -0.0322 | -0.2845 | 0.0053 | 0.0019 | -0.0000 |
| 16 | 0.00 | 0.00 | -0.2081 | 0.0359 | 0.1692 | -0.0065 | -0.0013 | 0.0015 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 1
QPSF = 6.60

RUN NO. 68

TEMP = 94.
RN/FTX10-6= 0.448670 VEL-FPS= 75.741

PO= 14.3615
MACH= 0.0677

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0189 | -0.0028 | -0.0008 | 0.0012 |
| 2 | 2.01 | -0.00 | 0.1218 | 0.0402 | -0.0598 | -0.0031 | -0.0007 | 0.0012 |
| 3 | 4.03 | -0.00 | 0.2277 | 0.0264 | -0.1035 | -0.0034 | -0.0004 | 0.0012 |
| 4 | 5.86 | -0.00 | 0.3292 | 0.0127 | -0.1470 | -0.0010 | -0.0007 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.4458 | 0.0154 | -0.2000 | -0.0014 | -0.0003 | 0.0007 |
| 6 | 10.01 | -0.00 | 0.5625 | 0.0111 | -0.2500 | 0.0009 | -0.0007 | 0.0002 |
| 7 | 12.01 | -0.00 | 0.6672 | 0.0114 | -0.2951 | -0.0020 | -0.0005 | 0.0019 |
| 8 | 14.00 | -0.00 | 0.7730 | 0.0070 | -0.3419 | -0.0051 | 0.0004 | 0.0015 |
| 9 | 16.03 | -0.00 | 0.9002 | 0.0051 | -0.4035 | -0.0001 | 0.0001 | 0.0014 |
| 10 | 18.01 | -0.00 | 1.0406 | 0.0009 | -0.4655 | 0.0021 | 0.0001 | 0.0014 |
| 11 | 20.10 | -0.00 | 1.1737 | -0.0104 | -0.5174 | -0.0007 | 0.0032 | 0.0025 |
| 12 | 22.03 | -0.00 | 1.2200 | -0.0152 | -0.5174 | -0.0059 | 0.0067 | 0.0031 |
| 13 | 23.97 | -0.00 | 1.1768 | 0.0007 | -0.4732 | 0.0078 | -0.0004 | 0.0000 |
| 14 | 25.97 | -0.00 | 1.1547 | 0.0099 | -0.4527 | 0.0052 | -0.0006 | -0.0009 |
| 15 | 28.01 | -0.00 | 1.1109 | 0.0214 | -0.4228 | 0.0055 | 0.0000 | -0.0026 |
| 16 | 0.00 | 0.00 | 0.0364 | 0.0376 | -0.0226 | -0.0056 | -0.0007 | 0.0013 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 69

TEMP = 92.
RN/FTX10-6= 0.450726 VEL-FPS= 75.607

PO= 14.3615
MACH= 0.0676

CONF= W2B1V1E(0)H2F(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0682 | 0.0508 | 0.0701 | 0.0007 | -0.0007 | -0.0001 |
| 2 | 2.01 | -0.00 | 0.0363 | 0.0488 | 0.0214 | 0.0031 | -0.0004 | -0.0007 |
| 3 | 4.03 | -0.00 | 0.1486 | 0.0398 | -0.0285 | 0.0027 | -0.0007 | -0.0006 |
| 4 | 5.86 | -0.00 | 0.2478 | 0.0284 | -0.0728 | -0.0003 | -0.0010 | -0.0005 |
| 5 | 7.99 | -0.00 | 0.3730 | 0.0218 | -0.1294 | -0.0007 | -0.0006 | 0.0000 |
| 6 | 10.01 | -0.00 | 0.4843 | 0.0268 | -0.1775 | -0.0037 | -0.0005 | 0.0002 |
| 7 | 12.01 | -0.00 | 0.5838 | 0.0224 | -0.2183 | -0.0040 | -0.0001 | 0.0007 |
| 8 | 14.00 | -0.00 | 0.6801 | 0.0226 | -0.2543 | -0.0042 | -0.0007 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.7743 | 0.0228 | -0.2902 | -0.0017 | -0.0003 | 0.0007 |
| 10 | 18.01 | -0.00 | 0.9008 | 0.0185 | -0.3428 | 0.0033 | -0.0004 | 0.0006 |
| 11 | 20.10 | -0.00 | 1.0148 | 0.0093 | -0.3802 | -0.0022 | 0.0017 | 0.0018 |
| 12 | 22.03 | -0.00 | 1.0418 | 0.0091 | -0.3654 | -0.0181 | 0.0057 | 0.0060 |
| 13 | 23.97 | -0.00 | 1.0229 | 0.0230 | -0.3486 | -0.0017 | 0.0018 | 0.0006 |
| 14 | 25.97 | -0.00 | 1.0206 | 0.0301 | -0.3501 | -0.0045 | 0.0022 | -0.0002 |
| 15 | 28.01 | -0.00 | 1.0237 | 0.0254 | -0.3534 | -0.0018 | 0.0008 | 0.0001 |
| 16 | 0.00 | 0.00 | -0.0574 | 0.0532 | 0.0660 | -0.0047 | -0.0009 | 0.0005 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

04/30/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 70

TEMP = 94.
RN/FTX10-6= 0.448638 VEL-FPS= 75.747

PO= 14.3615
MACH= 0.0677

CONF= W2B1V1E(-10)H2F(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2770 | 0.0518 | 0.2275 | -0.0031 | -0.0006 | 0.0013 |
| 2 | 2.01 | -0.00 | -0.1755 | 0.0544 | 0.1821 | -0.0007 | -0.0002 | 0.0002 |
| 3 | 4.03 | -0.00 | -0.0611 | 0.0454 | 0.1306 | -0.0039 | -0.0008 | 0.0014 |
| 4 | 5.86 | -0.00 | 0.0316 | 0.0364 | 0.0865 | -0.0069 | -0.0001 | 0.0015 |
| 5 | 7.99 | -0.00 | 0.1504 | 0.0297 | 0.0375 | 0.0008 | -0.0005 | 0.0003 |
| 6 | 10.01 | -0.00 | 0.2649 | 0.0277 | -0.0128 | -0.0049 | -0.0001 | 0.0010 |
| 7 | 12.01 | -0.00 | 0.3741 | 0.0233 | -0.0580 | -0.0025 | -0.0001 | 0.0010 |
| 8 | 14.00 | -0.00 | 0.4822 | 0.0213 | -0.1009 | -0.0055 | -0.0003 | 0.0017 |
| 9 | 16.03 | -0.00 | 0.5722 | 0.0191 | -0.1327 | -0.0030 | -0.0013 | 0.0021 |
| 10 | 18.01 | -0.00 | 0.6902 | 0.0124 | -0.1785 | -0.0087 | 0.0004 | 0.0023 |
| 11 | 20.10 | -0.00 | 0.8222 | 0.0080 | -0.2296 | -0.0089 | 0.0028 | 0.0023 |
| 12 | 22.03 | -0.00 | 0.8985 | 0.0034 | -0.2486 | -0.0089 | 0.0039 | 0.0034 |
| 13 | 23.97 | -0.00 | 0.9027 | 0.0125 | -0.2291 | -0.0140 | 0.0051 | 0.0035 |
| 14 | 25.97 | -0.00 | 0.9015 | 0.0172 | -0.2324 | -0.0004 | 0.0049 | 0.0003 |
| 15 | 28.01 | -0.00 | 0.8936 | 0.0197 | -0.2376 | 0.0020 | 0.0025 | -0.0017 |
| 16 | 0.00 | 0.00 | -0.2705 | 0.0541 | 0.2255 | -0.0113 | -0.0005 | 0.0021 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 24
QPSF = 6.60

RUN NO. 71

TEMP = 94.
RN/FTX10-6= 0.448509 VEL-FPS= 75.769

PO= 14.3516
MACH= 0.0677

CONF= W2B1V1E(10)H2F(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.1541 | 0.0827 | -0.1019 | 0.0019 | -0.0017 | -0.0004 |
| 2 | 2.01 | -0.00 | 0.2599 | 0.0784 | -0.1488 | -0.0011 | -0.0012 | 0.0002 |
| 3 | 4.03 | -0.00 | 0.3764 | 0.0671 | -0.2023 | -0.0015 | -0.0016 | -0.0007 |
| 4 | 5.86 | -0.00 | 0.4831 | 0.0581 | -0.2528 | -0.0019 | -0.0019 | -0.0006 |
| 5 | 7.99 | -0.00 | 0.6071 | 0.0562 | -0.3109 | -0.0133 | -0.0010 | 0.0013 |
| 6 | 10.01 | -0.00 | 0.7109 | 0.0565 | -0.3540 | -0.0081 | -0.0010 | 0.0017 |
| 7 | 12.01 | -0.00 | 0.8020 | 0.0566 | -0.3850 | -0.0082 | -0.0003 | 0.0017 |
| 8 | 14.00 | -0.00 | 0.8802 | 0.0591 | -0.4109 | -0.0056 | 0.0003 | 0.0011 |
| 9 | 16.03 | -0.00 | 0.9882 | 0.0594 | -0.4576 | -0.0086 | 0.0004 | 0.0023 |
| 10 | 18.01 | -0.00 | 1.1153 | 0.0528 | -0.5102 | -0.0062 | 0.0021 | 0.0022 |
| 11 | 20.10 | -0.00 | 1.1903 | 0.0480 | -0.5187 | -0.0141 | 0.0073 | 0.0045 |
| 12 | 22.03 | -0.00 | 1.1378 | 0.0475 | -0.4597 | -0.0163 | 0.0034 | 0.0051 |
| 13 | 23.97 | -0.00 | 1.1316 | 0.0591 | -0.4526 | -0.0190 | 0.0032 | 0.0046 |
| 14 | 25.97 | -0.00 | 1.1228 | 0.0662 | -0.4532 | 0.0079 | -0.0018 | -0.0004 |
| 15 | 28.01 | -0.00 | 1.1357 | 0.0615 | -0.4610 | -0.0109 | 0.0050 | 0.0006 |
| 16 | 0.00 | 0.00 | 0.1595 | 0.0828 | -0.1046 | -0.0063 | -0.0019 | 0.0004 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 72

TEMP = 90.
RN/FTX10-6= 0.452976 VEL-FPS= 75.443

PO= 14.3713
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0651 | 0.0555 | 0.0664 | 0.0007 | -0.0010 | 0.0004 |
| 2 | 2.01 | -0.00 | 0.0350 | 0.0465 | 0.0183 | 0.0003 | -0.0013 | 0.0010 |
| 3 | 4.03 | -0.00 | 0.1405 | 0.0399 | -0.0354 | -0.0027 | -0.0006 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.2461 | 0.0356 | -0.0869 | -0.0031 | -0.0009 | 0.0007 |
| 5 | 7.99 | -0.00 | 0.3602 | 0.0220 | -0.1435 | -0.0009 | -0.0006 | 0.0006 |
| 6 | 10.01 | -0.00 | 0.4755 | 0.0130 | -0.2007 | -0.0040 | -0.0006 | 0.0013 |
| 7 | 12.01 | -0.00 | 0.5756 | 0.0087 | -0.2509 | -0.0045 | -0.0009 | 0.0014 |
| 8 | 14.00 | -0.00 | 0.6618 | 0.0067 | -0.2936 | -0.0020 | 0.0007 | 0.0019 |
| 9 | 16.03 | -0.00 | 0.7222 | 0.0163 | -0.3231 | 0.0031 | -0.0016 | -0.0003 |
| 10 | 18.01 | -0.00 | 0.7630 | 0.0282 | -0.3452 | 0.0002 | -0.0012 | 0.0008 |
| 11 | 20.10 | -0.00 | 0.7973 | 0.0354 | -0.3676 | 0.0028 | 0.0007 | 0.0002 |
| 12 | 22.03 | -0.00 | 0.7928 | 0.0518 | -0.3720 | -0.0023 | 0.0072 | 0.0003 |
| 13 | 23.97 | -0.00 | 0.8107 | 0.0496 | -0.3896 | 0.0026 | 0.0014 | 0.0002 |
| 14 | 25.97 | -0.00 | 0.8523 | 0.0475 | -0.4150 | -0.0191 | 0.0041 | 0.0085 |
| 15 | 28.01 | -0.00 | 0.8645 | 0.0568 | -0.4143 | -0.0056 | 0.0010 | 0.0065 |
| 16 | 0.00 | 0.00 | -0.0597 | 0.0508 | 0.0657 | -0.0074 | -0.0006 | 0.0012 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 73

TEMP = 90.
RN/FTX10-6= 0.452813 VEL-FPS= 75.470

PO= 14.3615
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0782 | 0.0475 | -0.0741 | 0.0020 | -0.0015 | 0.0006 |
| 2 | 2.01 | -0.00 | 0.1772 | 0.0455 | -0.1248 | -0.0010 | -0.0011 | 0.0007 |
| 3 | 4.03 | -0.00 | 0.2881 | 0.0412 | -0.1800 | -0.0042 | -0.0007 | 0.0009 |
| 4 | 5.86 | -0.00 | 0.3926 | 0.0346 | -0.2323 | -0.0046 | -0.0007 | 0.0010 |
| 5 | 7.99 | -0.00 | 0.5110 | 0.0234 | -0.2920 | -0.0024 | -0.0007 | 0.0004 |
| 6 | 10.01 | -0.00 | 0.6165 | 0.0167 | -0.3453 | -0.0028 | -0.0004 | 0.0010 |
| 7 | 12.01 | -0.00 | 0.7231 | 0.0125 | -0.3992 | -0.0059 | -0.0006 | 0.0017 |
| 8 | 14.00 | -0.00 | 0.8178 | 0.0128 | -0.4473 | 0.0018 | -0.0000 | 0.0010 |
| 9 | 16.03 | -0.00 | 0.8921 | 0.0248 | -0.4864 | 0.0042 | -0.0007 | 0.0004 |
| 10 | 18.01 | -0.00 | 0.9289 | 0.0272 | -0.4989 | -0.0039 | -0.0009 | 0.0023 |
| 11 | 20.10 | -0.00 | 0.9434 | 0.0342 | -0.4965 | -0.0037 | 0.0038 | 0.0011 |
| 12 | 22.03 | -0.00 | 0.9123 | 0.0503 | -0.4672 | -0.0062 | 0.0016 | 0.0023 |
| 13 | 23.97 | -0.00 | 0.8863 | 0.0501 | -0.4447 | -0.0059 | 0.0012 | 0.0028 |
| 14 | 25.97 | -0.00 | 0.8771 | 0.0546 | -0.4292 | -0.0057 | 0.0033 | 0.0032 |
| 15 | 28.01 | -0.00 | 0.8880 | 0.0570 | -0.4300 | -0.0273 | 0.0056 | 0.0098 |
| 16 | 0.00 | 0.00 | 0.0814 | 0.0451 | -0.0747 | -0.0089 | -0.0014 | 0.0015 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 72
QPSF = 6.60

RUN NO. 74

TEMP = 90.
RN/FTX10-6= 0.452781 VEL-FPS= 75.476

PO= 14.3615
MACH= 0.0675

CONF= W1B1V1E(0)H2F(1,0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0097 | 0.0375 | -0.0052 | -0.0000 | -0.0015 | 0.0005 |
| 2 | 2.01 | -0.00 | 0.1109 | 0.0355 | -0.0555 | -0.0031 | -0.0011 | 0.0012 |
| 3 | 4.03 | -0.00 | 0.2143 | 0.0265 | -0.1077 | -0.0008 | -0.0014 | 0.0001 |
| 4 | 5.86 | -0.00 | 0.3241 | 0.0269 | -0.1625 | -0.0040 | -0.0017 | 0.0008 |
| 5 | 7.99 | -0.00 | 0.4426 | 0.0110 | -0.2211 | -0.0071 | -0.0010 | 0.0015 |
| 6 | 10.01 | -0.00 | 0.5502 | 0.0020 | -0.2759 | -0.0021 | -0.0014 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.6493 | 0.0001 | -0.3256 | 0.0001 | -0.0017 | 0.0003 |
| 8 | 14.00 | -0.00 | 0.7440 | -0.0018 | -0.3736 | -0.0029 | -0.0007 | 0.0015 |
| 9 | 16.03 | -0.00 | 0.8011 | 0.0124 | -0.4040 | 0.0050 | -0.0007 | -0.0002 |
| 10 | 18.01 | -0.00 | 0.8454 | 0.0195 | -0.4229 | 0.0021 | -0.0029 | 0.0009 |
| 11 | 20.10 | -0.00 | 0.8574 | 0.0312 | -0.4256 | 0.0023 | 0.0014 | -0.0001 |
| 12 | 22.03 | -0.00 | 0.8360 | 0.0545 | -0.4126 | -0.0109 | 0.0050 | 0.0034 |
| 13 | 23.97 | -0.00 | 0.8479 | 0.0522 | -0.4167 | -0.0005 | -0.0048 | 0.0021 |
| 14 | 25.97 | -0.00 | 0.8739 | 0.0546 | -0.4266 | -0.0111 | 0.0034 | 0.0050 |
| 15 | 28.01 | -0.00 | 0.8786 | 0.0592 | -0.4210 | -0.0029 | -0.0000 | 0.0043 |
| 16 | 0.00 | 0.00 | 0.0119 | 0.0375 | -0.0053 | -0.0054 | -0.0014 | 0.0012 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 75

TEMP = 102.
RN/FTX10-6= 0.440464 VEL-FPS= 76.300

PO= 14.3615
MACH= 0.0682

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0288 | 0.0282 | -0.0208 | -0.0056 | -0.0014 | 0.0013 |
| 2 | 2.01 | -0.00 | 0.1281 | 0.0286 | -0.0654 | -0.0086 | -0.0010 | 0.0019 |
| 3 | 4.03 | -0.00 | 0.2294 | 0.0242 | -0.1138 | -0.0063 | -0.0013 | 0.0014 |
| 4 | 5.86 | -0.00 | 0.3199 | 0.0129 | -0.1575 | -0.0094 | -0.0016 | 0.0021 |
| 5 | 7.99 | -0.00 | 0.4331 | 0.0062 | -0.2114 | -0.0071 | -0.0017 | 0.0015 |
| 6 | 10.01 | -0.00 | 0.5442 | 0.0019 | -0.2638 | -0.0047 | -0.0013 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.6410 | 0.0000 | -0.3133 | -0.0078 | -0.0009 | 0.0016 |
| 8 | 14.00 | -0.00 | 0.7304 | 0.0003 | -0.3587 | -0.0027 | -0.0003 | 0.0004 |
| 9 | 16.03 | -0.00 | 0.8002 | 0.0076 | -0.3991 | -0.0056 | 0.0024 | 0.0016 |
| 10 | 18.01 | -0.00 | 0.8260 | 0.0218 | -0.4131 | -0.0086 | -0.0011 | 0.0023 |
| 11 | 20.10 | -0.00 | 0.8778 | 0.0266 | -0.4372 | -0.0060 | 0.0008 | 0.0011 |
| 12 | 22.03 | -0.00 | 0.8702 | 0.0407 | -0.4343 | -0.0113 | 0.0026 | 0.0029 |
| 13 | 23.97 | -0.00 | 0.8682 | 0.0406 | -0.4314 | -0.0086 | 0.0002 | 0.0023 |
| 14 | 25.97 | -0.00 | 0.8715 | 0.0523 | -0.4301 | -0.0275 | 0.0033 | 0.0083 |
| 15 | 28.01 | -0.00 | 0.9124 | 0.0572 | -0.4534 | -0.0167 | 0.0048 | 0.0041 |
| 16 | 0.00 | 0.00 | 0.0342 | 0.0306 | -0.0222 | -0.0083 | -0.0014 | 0.0019 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 76

TEMP = 102.
RN/FTX10-6= 0.440543 VEL-FPS= 76.286

PO= 14.3615
MACH= 0.0682

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0320 | 0.0329 | -0.0221 | -0.0056 | -0.0007 | 0.0023 |
| 2 | 0.00 | -6.00 | 0.0388 | 0.0258 | -0.0286 | 0.1008 | 0.0036 | -0.0238 |
| 3 | 0.00 | -4.00 | 0.0323 | 0.0305 | -0.0245 | 0.0708 | 0.0020 | -0.0168 |
| 4 | 0.00 | -2.00 | 0.0300 | 0.0305 | -0.0219 | 0.0298 | 0.0006 | -0.0074 |
| 5 | 0.00 | 0.00 | 0.0310 | 0.0329 | -0.0216 | -0.0001 | -0.0012 | 0.0006 |
| 6 | -0.00 | 1.99 | 0.0329 | 0.0306 | -0.0230 | -0.0275 | -0.0031 | 0.0085 |
| 7 | -0.00 | 3.99 | 0.0359 | 0.0284 | -0.0268 | -0.0685 | -0.0045 | 0.0180 |
| 8 | -0.00 | 5.99 | 0.0388 | 0.0262 | -0.0315 | -0.0959 | -0.0061 | 0.0248 |
| | 0.00 | 0.00 | 0.0309 | 0.0306 | -0.0219 | -0.0056 | -0.0011 | 0.0018 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0.
QPSF = 6.60 RUN NO. 77

TEMP = 104. PO= 14.3615
RN/FTX10-6= 0.438486 VEL-FPS= 76.433 MACH= 0.0683

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5453 | -0.0050 | -0.2636 | -0.0047 | -0.0014 | 0.0009 |
| 2 | 10.01 | -6.00 | 0.5532 | -0.0075 | -0.2713 | 0.0991 | 0.0080 | -0.0230 |
| 3 | 10.01 | -4.00 | 0.5477 | -0.0075 | -0.2671 | 0.0608 | 0.0052 | -0.0153 |
| 4 | 10.01 | -2.00 | 0.5519 | -0.0004 | -0.2671 | 0.0389 | 0.0013 | -0.0091 |
| 5 | 10.01 | -0.00 | 0.5496 | 0.0019 | -0.2656 | -0.0020 | -0.0014 | 0.0009 |
| 6 | 10.01 | 1.99 | 0.5536 | -0.0002 | -0.2694 | -0.0404 | -0.0045 | 0.0108 |
| 7 | 10.01 | 3.99 | 0.5523 | -0.0001 | -0.2712 | -0.0678 | -0.0078 | 0.0161 |
| 8 | 10.01 | 5.99 | 0.5563 | -0.0023 | -0.2760 | -0.1007 | -0.0106 | 0.0237 |
| 9 | 10.01 | -0.00 | 0.5517 | -0.0003 | -0.2671 | 0.0033 | -0.0011 | 0.0001 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 78

TEMP = 106.
RN/FTX10-6= 0.436493 VEL-FPS= 76.571

PO= 14.3615
MACH= 0.0685

CONF= W1B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.8627 | 0.0289 | -0.4306 | -0.0032 | -0.0011 | 0.0022 |
| 2 | 20.10 | -6.00 | 0.9007 | 0.0125 | -0.4497 | 0.0815 | 0.0075 | -0.0109 |
| 3 | 20.10 | -4.00 | 0.8832 | 0.0219 | -0.4436 | 0.0568 | 0.0039 | -0.0073 |
| 4 | 20.10 | -2.00 | 0.8789 | 0.0266 | -0.4397 | 0.0349 | 0.0009 | -0.0033 |
| 5 | 20.10 | -0.00 | 0.8702 | 0.0289 | -0.4358 | 0.0049 | 0.0020 | 0.0002 |
| 6 | 20.09 | 1.99 | 0.8734 | 0.0244 | -0.4358 | -0.0226 | -0.0042 | 0.0039 |
| 7 | 20.09 | 3.99 | 0.8784 | 0.0222 | -0.4431 | -0.0528 | -0.0071 | 0.0088 |
| 8 | 20.09 | 5.99 | 0.8999 | 0.0129 | -0.4542 | -0.0800 | -0.0017 | 0.0128 |
| 9 | 20.10 | -0.00 | 0.8777 | 0.0267 | -0.4386 | 0.0020 | -0.0026 | 0.0004 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 79

TEMP = 104.
RN/FTX10-6= 0.438486 VEL-FPS= 76.433

PU= 14.3615
MACH= 0.0683

CONF= W1B1V1E(-10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYR |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2156 | 0.0335 | 0.1731 | -0.0092 | -0.0006 | 0.0021 |
| 2 | 2.01 | -0.00 | -0.1164 | 0.0386 | 0.1259 | -0.0041 | -0.0010 | 0.0009 |
| 3 | 4.03 | -0.00 | -0.0172 | 0.0296 | 0.0802 | -0.0153 | -0.0008 | 0.0024 |
| 4 | 5.86 | -0.00 | 0.0755 | 0.0228 | 0.0376 | -0.0130 | -0.0011 | 0.0019 |
| 5 | 7.99 | -0.00 | 0.1854 | 0.0209 | -0.0151 | -0.0079 | -0.0008 | 0.0017 |
| 6 | 10.01 | -0.00 | 0.2954 | 0.0095 | -0.0658 | -0.0056 | -0.0015 | 0.0012 |
| 7 | 12.01 | -0.00 | 0.4009 | 0.0076 | -0.1212 | -0.0060 | -0.0008 | 0.0013 |
| 8 | 14.00 | -0.00 | 0.5042 | 0.0010 | -0.1743 | -0.0009 | -0.0006 | 0.0001 |
| 9 | 16.03 | -0.00 | 0.5911 | 0.0094 | -0.2253 | -0.0068 | 0.0005 | 0.0019 |
| 10 | 18.01 | -0.00 | 0.6533 | 0.0181 | -0.2639 | -0.0044 | -0.0004 | 0.0008 |
| 11 | 20.10 | -0.00 | 0.7115 | 0.0206 | -0.2930 | 0.0062 | -0.0009 | -0.0015 |
| 12 | 22.03 | -0.00 | 0.7101 | 0.0348 | -0.2950 | -0.0101 | 0.0000 | 0.0038 |
| 13 | 23.97 | -0.00 | 0.7275 | 0.0324 | -0.3030 | -0.0234 | 0.0089 | 0.0056 |
| 14 | 25.97 | -0.00 | 0.7189 | 0.0464 | -0.2981 | 0.0115 | -0.0056 | 0.0010 |
| 15 | 28.01 | -0.00 | 0.7533 | 0.0466 | -0.3170 | -0.0049 | -0.0030 | 0.0015 |
| 16 | 0.00 | 0.00 | -0.2135 | 0.0336 | 0.1716 | -0.0147 | -0.0012 | 0.0023 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 75
QPSF = 6.60

RUN NO. 80

TEMP = 104.
RN/FTX10-6= 0.438675 VEL-FPS= 76.400

PO= 14.3713
MACH= 0.0683

CONF= W181V1E(10)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2765 | 0.0511 | -0.2178 | 0.0006 | -0.0025 | -0.0001 |
| 2 | 2.01 | -0.00 | 0.3768 | 0.0467 | -0.2643 | 0.0003 | -0.0025 | 0.0009 |
| 3 | 4.03 | -0.00 | 0.4770 | 0.0354 | -0.3128 | -0.0028 | -0.0024 | 0.0005 |
| 4 | 5.86 | -0.00 | 0.5817 | 0.0263 | -0.3604 | -0.0004 | -0.0028 | 0.0005 |
| 5 | 7.99 | -0.00 | 0.6926 | 0.0221 | -0.4165 | -0.0035 | -0.0017 | 0.0007 |
| 6 | 10.01 | -0.00 | 0.7972 | 0.0201 | -0.4652 | -0.0012 | -0.0021 | 0.0006 |
| 7 | 12.01 | -0.00 | 0.8866 | 0.0134 | -0.5094 | 0.0011 | -0.0021 | 0.0001 |
| 8 | 14.00 | -0.00 | 0.9394 | 0.0253 | -0.5352 | 0.0036 | -0.0031 | 0.0000 |
| 9 | 16.03 | -0.00 | 0.9814 | 0.0348 | -0.5563 | -0.0018 | -0.0002 | 0.0018 |
| 10 | 18.01 | -0.00 | 1.0117 | 0.0443 | -0.5692 | 0.0033 | -0.0056 | 0.0001 |
| 11 | 20.10 | -0.00 | 1.0045 | 0.0558 | -0.5592 | -0.0017 | 0.0001 | 0.0029 |
| 12 | 22.03 | -0.00 | 0.9500 | 0.0696 | -0.5211 | -0.0095 | -0.0006 | 0.0036 |
| 13 | 23.97 | -0.00 | 0.9726 | 0.0650 | -0.5338 | -0.0069 | -0.0017 | 0.0046 |
| 14 | 25.97 | -0.00 | 1.0019 | 0.0767 | -0.5428 | -0.0256 | 0.0080 | 0.0083 |
| 15 | 28.01 | -0.00 | 1.0257 | 0.0862 | -0.5552 | 0.0094 | 0.0011 | 0.0003 |
| 16 | 0.00 | 0.00 | 0.2776 | 0.0511 | -0.2179 | -0.0048 | -0.0024 | 0.0011 |

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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60 RUN NO. 81

TEMP = 102. PO= 14.3713
RN/FTX10-6= 0.440653 VEL-FPS= 76.267 MACH= 0.0682

CONF= W1B1V1E(10)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2721 | 0.0511 | -0.2179 | 0.0006 | -0.0022 | 0.0003 |
| 2 | 2.01 | -0.00 | 0.3707 | 0.0489 | -0.2531 | 0.0031 | -0.0018 | -0.0002 |
| 3 | 4.03 | -0.00 | 0.4790 | 0.0445 | -0.2932 | -0.0052 | -0.0016 | 0.0006 |
| 4 | 5.86 | -0.00 | 0.5897 | 0.0353 | -0.3309 | 0.0027 | -0.0017 | -0.0012 |
| 5 | 7.99 | -0.00 | 0.7133 | 0.0309 | -0.3739 | 0.0052 | -0.0014 | -0.0013 |
| 6 | 10.01 | -0.00 | 0.8273 | 0.0288 | -0.4112 | 0.0022 | -0.0009 | -0.0017 |
| 7 | 12.01 | -0.00 | 0.9347 | 0.0243 | -0.4460 | 0.0020 | -0.0015 | -0.0012 |
| 8 | 14.00 | -0.00 | 1.0262 | 0.0291 | -0.4692 | -0.0007 | -0.0020 | -0.0005 |
| 9 | 16.03 | -0.00 | 1.0929 | 0.0384 | -0.4795 | -0.0006 | -0.0016 | -0.0006 |
| 10 | 18.01 | -0.00 | 1.1564 | 0.0408 | -0.4889 | 0.0020 | -0.0022 | -0.0001 |
| 11 | 20.10 | -0.00 | 1.2104 | 0.0453 | -0.4879 | 0.0050 | -0.0012 | 0.0002 |
| 12 | 22.03 | -0.00 | 1.2343 | 0.0545 | -0.4703 | 0.0104 | -0.0085 | 0.0011 |
| 13 | 23.97 | -0.00 | 1.2713 | 0.0543 | -0.4571 | 0.0134 | -0.0085 | -0.0000 |
| 14 | 25.97 | -0.00 | 1.2681 | 0.0703 | -0.4298 | -0.0075 | 0.0013 | 0.0046 |
| 15 | 28.01 | -0.00 | 1.3175 | 0.0703 | -0.4343 | 0.0032 | -0.0028 | 0.0043 |
| 16 | 0.00 | 0.00 | 0.2776 | 0.0534 | -0.2175 | -0.0020 | -0.0025 | 0.0004 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60

RUN NO. 82

TEMP = 102.
RN/FTX10-6= 0.440622 VEL-FPS= 76.273

PO= 14.3713
MACH= 0.0682

CONF= W1B1V1E(-10)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2234 | 0.0336 | 0.1723 | -0.0010 | -0.0011 | 0.0008 |
| 2 | 2.01 | -0.00 | -0.1216 | 0.0338 | 0.1344 | -0.0094 | -0.0009 | 0.0016 |
| 3 | 4.03 | -0.00 | -0.0186 | 0.0364 | 0.0969 | -0.0097 | -0.0011 | 0.0011 |
| 4 | 5.86 | -0.00 | 0.0790 | 0.0225 | 0.0659 | -0.0017 | -0.0009 | 0.0003 |
| 5 | 7.99 | -0.00 | 0.2071 | 0.0204 | 0.0253 | -0.0073 | -0.0007 | 0.0011 |
| 6 | 10.01 | -0.00 | 0.3200 | 0.0089 | -0.0106 | -0.0048 | -0.0004 | 0.0004 |
| 7 | 12.01 | -0.00 | 0.4370 | 0.0044 | -0.0531 | -0.0023 | -0.0007 | -0.0001 |
| 8 | 14.00 | -0.00 | 0.5553 | 0.0047 | -0.0931 | 0.0001 | -0.0007 | -0.0007 |
| 9 | 16.03 | -0.00 | 0.6606 | 0.0025 | -0.1269 | -0.0000 | -0.0013 | -0.0001 |
| 10 | 18.01 | -0.00 | 0.7701 | 0.0051 | -0.1644 | -0.0056 | -0.0001 | 0.0016 |
| 11 | 20.10 | -0.00 | 0.8540 | 0.0075 | -0.1842 | -0.0002 | -0.0014 | 0.0020 |
| 12 | 22.03 | -0.00 | 0.9162 | 0.0098 | -0.1968 | -0.0003 | -0.0023 | 0.0025 |
| 13 | 23.97 | -0.00 | 0.9712 | 0.0144 | -0.1995 | -0.0028 | -0.0009 | 0.0031 |
| 14 | 25.97 | -0.00 | 1.0184 | 0.0214 | -0.2070 | 0.0001 | 0.0061 | -0.0014 |
| 15 | 28.01 | -0.00 | 1.0805 | 0.0238 | -0.2181 | 0.0000 | 0.0018 | 0.0034 |
| 16 | 0.00 | 0.00 | -0.2093 | 0.0383 | 0.1673 | -0.0066 | -0.0020 | 0.0010 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 81
QPSF = 6.60

RUN NO. 83

TEMP = 103.
RN/FTX10-6= 0.439781 VEL-FPS= 76.313

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0265 | 0.0283 | -0.0225 | -0.0084 | -0.0014 | 0.0025 |
| 2 | 2.01 | -0.00 | 0.1240 | 0.0261 | -0.0581 | -0.0058 | -0.0007 | 0.0008 |
| 3 | 4.03 | -0.00 | 0.2291 | 0.0240 | -0.0956 | -0.0060 | -0.0006 | 0.0013 |
| 4 | 5.86 | -0.00 | 0.3365 | 0.0149 | -0.1321 | -0.0008 | -0.0010 | 0.0001 |
| 5 | 7.99 | -0.00 | 0.4548 | 0.0057 | -0.1699 | -0.0037 | -0.0002 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.5731 | 0.0036 | -0.2098 | -0.0012 | -0.0009 | -0.0003 |
| 7 | 12.01 | -0.00 | 0.6837 | -0.0008 | -0.2482 | -0.0015 | -0.0012 | -0.0003 |
| 8 | 14.00 | -0.00 | 0.7956 | 0.0017 | -0.2826 | -0.0043 | -0.0003 | 0.0002 |
| 9 | 16.03 | -0.00 | 0.8805 | 0.0041 | -0.3053 | -0.0044 | -0.0003 | 0.0002 |
| 10 | 18.01 | -0.00 | 0.9857 | 0.0113 | -0.3403 | -0.0018 | -0.0009 | 0.0012 |
| 11 | 20.10 | -0.00 | 1.0407 | 0.0136 | -0.3435 | 0.0009 | 0.0001 | 0.0006 |
| 12 | 22.03 | -0.00 | 1.0838 | 0.0205 | -0.3389 | 0.0010 | -0.0021 | 0.0022 |
| 13 | 23.97 | -0.00 | 1.1432 | 0.0227 | -0.3414 | -0.0014 | -0.0002 | 0.0027 |
| 14 | 25.97 | -0.00 | 1.1601 | 0.0320 | -0.3322 | -0.0096 | -0.0047 | 0.0079 |
| 15 | 28.01 | -0.00 | 1.2193 | 0.0366 | -0.3405 | -0.0065 | 0.0019 | 0.0033 |
| 16 | 0.00 | 0.00 | 0.0374 | 0.0330 | -0.0243 | -0.0138 | -0.0013 | 0.0026 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 84

TEMP = 102.
RN/FTX10-6= 0.440780 VEL-FPS= 76.245

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0341 | 0.0400 | -0.0262 | -0.0029 | -0.0014 | 0.0012 |
| 2 | 0.00 | -6.00 | 0.0366 | 0.0351 | -0.0297 | 0.0953 | 0.0033 | -0.0231 |
| 3 | 0.00 | -4.00 | 0.0376 | 0.0375 | -0.0275 | 0.0681 | 0.0021 | -0.0151 |
| 4 | 0.00 | -2.00 | 0.0365 | 0.0399 | -0.0241 | 0.0298 | 0.0003 | -0.0079 |
| 5 | 0.00 | 0.00 | 0.0341 | 0.0400 | -0.0243 | -0.0110 | -0.0006 | 0.0020 |
| 6 | -0.00 | 1.99 | 0.0350 | 0.0377 | -0.0271 | -0.0357 | -0.0030 | 0.0088 |
| 7 | -0.00 | 3.99 | 0.0358 | 0.0378 | -0.0290 | -0.0740 | -0.0041 | 0.0182 |
| 8 | -0.00 | 5.99 | 0.0442 | 0.0356 | -0.0341 | -0.1041 | -0.0060 | 0.0257 |
| 9 | 0.00 | -0.00 | 0.0363 | 0.0400 | -0.0245 | -0.0138 | -0.0013 | 0.0026 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 85

TEMP = 103.
RN/FTX10-6= 0.439781 VEL-FPS= 76.313

PO= 14.3811
MACH= 0.0682

CONF= W1B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.5763 | -0.0010 | -0.2109 | -0.0013 | -0.0016 | -0.0008 |
| 2 | 10.01 | -6.00 | 0.5853 | -0.0012 | -0.2187 | 0.0946 | 0.0120 | -0.0226 |
| 3 | 10.01 | -4.00 | 0.5809 | 0.0035 | -0.2147 | 0.0617 | 0.0075 | -0.0149 |
| 4 | 10.01 | -2.00 | 0.5776 | 0.0035 | -0.2130 | 0.0370 | 0.0031 | -0.0087 |
| 5 | 10.01 | -0.00 | 0.5795 | 0.0060 | -0.2132 | -0.0013 | -0.0012 | 0.0001 |
| 6 | 10.01 | 1.99 | 0.5815 | 0.0037 | -0.2137 | -0.0369 | -0.0054 | 0.0079 |
| 7 | 10.01 | 3.99 | 0.5811 | 0.0015 | -0.2177 | -0.0781 | -0.0101 | 0.0169 |
| 8 | 10.01 | 5.99 | 0.5841 | -0.0006 | -0.2211 | -0.1083 | -0.0137 | 0.0239 |
| | 10.01 | -0.00 | 0.5817 | 0.0060 | -0.2134 | -0.0013 | -0.0012 | -0.0003 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 86

TEMP = 105. PO= 14.3811
RN/FTX10-6= 0.437794 VEL-FPS= 76.448 MACH= 0.0684

CONF= N1B1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 1.0397 | 0.0229 | -0.3414 | 0.0809 | -0.0008 | 0.0016 |
| 2 | 20.10 | -6.00 | 1.0674 | 0.0160 | -0.3671 | 0.0880 | -0.0021 | -0.0118 |
| 3 | 20.10 | -4.00 | 1.0642 | 0.0207 | -0.3628 | 0.0498 | -0.0025 | -0.0041 |
| 4 | 20.10 | -2.00 | 1.0363 | 0.0253 | -0.3445 | 0.0281 | -0.0025 | -0.0018 |
| 5 | 20.10 | -0.00 | 1.0416 | 0.0230 | -0.3462 | -0.0045 | -0.0017 | 0.0024 |
| 6 | 20.09 | 1.99 | 1.0556 | 0.0207 | -0.3537 | -0.0344 | 0.0037 | 0.0054 |
| 7 | 20.09 | 3.99 | 1.0575 | 0.0208 | -0.3589 | -0.0618 | 0.0041 | 0.0080 |
| 8 | 20.09 | 5.99 | 1.0593 | 0.0163 | -0.3654 | -0.0891 | 0.0048 | 0.0127 |
| 9 | 20.10 | -0.00 | 1.0481 | 0.0207 | -0.3489 | -0.0072 | 0.0006 | 0.0008 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 87
QPSF = 6.60

RUN NO. 87

TEMP = 101.
RN/FTX10-6= 0.441973 VEL-FPS= 76.145

PO= 14.3909
MACH= 0.0681

CONF= W1B1V1E(0)GC3

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0242 | 0.0330 | -0.0239 | -0.0056 | -0.0008 | 0.0007 |
| 2 | 2.01 | -0.00 | 0.1272 | 0.0308 | -0.0598 | -0.0031 | -0.0011 | 0.0007 |
| 3 | 4.03 | -0.00 | 0.2388 | 0.0264 | -0.1010 | -0.0088 | -0.0006 | 0.0014 |
| 4 | 5.86 | -0.00 | 0.3374 | 0.0173 | -0.1365 | -0.0009 | -0.0013 | -0.0003 |
| 5 | 7.99 | -0.00 | 0.4512 | 0.0105 | -0.1778 | -0.0011 | -0.0010 | -0.0003 |
| 6 | 10.01 | -0.00 | 0.5770 | 0.0037 | -0.2209 | -0.0041 | -0.0009 | -0.0007 |
| 7 | 12.01 | -0.00 | 0.6887 | 0.0016 | -0.2598 | -0.0043 | -0.0004 | -0.0002 |
| 8 | 14.00 | -0.00 | 0.7949 | -0.0004 | -0.2975 | 0.0008 | -0.0008 | -0.0020 |
| 9 | 16.03 | -0.00 | 0.8828 | 0.0067 | -0.3261 | -0.0047 | -0.0006 | -0.0007 |
| 10 | 18.01 | -0.00 | 0.9655 | 0.0115 | -0.3510 | 0.0060 | -0.0010 | -0.0016 |
| 11 | 20.10 | -0.00 | 1.0343 | 0.0185 | -0.3642 | -0.0018 | 0.0045 | -0.0009 |
| 12 | 22.03 | -0.00 | 1.0835 | 0.0232 | -0.3713 | 0.0033 | -0.0018 | -0.0010 |
| 13 | 23.97 | -0.00 | 1.1168 | 0.0348 | -0.3685 | -0.0043 | 0.0070 | -0.0025 |
| 14 | 25.97 | -0.00 | 1.1089 | 0.0439 | -0.3476 | 0.0037 | -0.0013 | -0.0021 |
| 15 | 28.01 | -0.00 | 1.2068 | 0.0441 | -0.3749 | 0.0009 | 0.0001 | -0.0021 |
| 16 | 0.00 | 0.00 | 0.0320 | 0.0306 | -0.0234 | -0.0056 | -0.0011 | 0.0007 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 88
QPSF = 6.60

RUN NO. 88

TEMP = 99.
RN/FTX10-6= 0.444118 VEL-FPS= 75.987

PO= 14.4008
MACH= 0.0679

CONF= W1B1V1E(0)GC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0232 | 0.0306 | -0.0209 | -0.0083 | -0.0014 | 0.0019 |
| 2 | 2.01 | -0.00 | 0.1274 | 0.0284 | -0.0570 | 0.0050 | -0.0012 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.2359 | 0.0263 | -0.0934 | -0.0006 | -0.0014 | -0.0004 |
| 4 | 5.86 | -0.00 | 0.3347 | 0.0171 | -0.1237 | 0.0046 | -0.0011 | -0.0011 |
| 5 | 7.99 | -0.00 | 0.4628 | 0.0103 | -0.1646 | -0.0009 | -0.0009 | -0.0009 |
| 6 | 10.01 | -0.00 | 0.5757 | 0.0012 | -0.2006 | -0.0066 | -0.0011 | -0.0002 |
| 7 | 12.01 | -0.00 | 0.6942 | 0.0013 | -0.2359 | 0.0041 | -0.0005 | -0.0011 |
| 8 | 14.00 | -0.00 | 0.8051 | -0.0055 | -0.2667 | -0.0041 | 0.0002 | -0.0008 |
| 9 | 16.03 | -0.00 | 0.8878 | 0.0062 | -0.2900 | -0.0014 | 0.0007 | -0.0009 |
| 10 | 18.01 | -0.00 | 0.9805 | 0.0063 | -0.3098 | -0.0016 | -0.0025 | 0.0001 |
| 11 | 20.10 | -0.00 | 1.0636 | 0.0180 | -0.3247 | -0.0041 | 0.0003 | 0.0007 |
| 12 | 22.03 | -0.00 | 1.1100 | 0.0155 | -0.3206 | -0.0065 | 0.0041 | 0.0022 |
| 13 | 23.97 | -0.00 | 1.1510 | 0.0224 | -0.3144 | -0.0092 | -0.0004 | 0.0040 |
| 14 | 25.97 | -0.00 | 1.1457 | 0.0339 | -0.2849 | 0.0070 | -0.0103 | 0.0035 |
| 15 | 28.01 | -0.00 | 1.2300 | 0.0385 | -0.2983 | -0.0034 | -0.0006 | 0.0026 |
| 16 | 0.00 | 0.00 | 0.0331 | 0.0329 | -0.0231 | -0.0083 | -0.0014 | 0.0014 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 89
QPSF = 6.60

RUN NO. 89

TEMP = 90.
RN/FTX10-6= 0.453868 VEL-FPS= 75.295

PO= 14.4302
MACH= 0.0673

CONF= B1V1GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0164 | 0.0257 | 0.0003 | 0.0000 | -0.0005 | 0.0016 |
| 2 | 2.01 | -0.00 | -0.0028 | 0.0233 | 0.0106 | -0.0025 | -0.0008 | 0.0016 |
| 3 | 4.03 | -0.00 | 0.0153 | 0.0254 | 0.0223 | 0.0003 | -0.0004 | 0.0010 |
| 4 | 5.86 | -0.00 | 0.0324 | 0.0182 | 0.0344 | 0.0005 | -0.0004 | 0.0009 |
| 5 | 7.99 | -0.00 | 0.0529 | 0.0251 | 0.0485 | 0.0035 | -0.0000 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.0821 | 0.0202 | 0.0620 | -0.0017 | 0.0000 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.1092 | 0.0223 | 0.0754 | -0.0014 | 0.0001 | 0.0008 |
| 8 | 14.00 | -0.00 | 0.1429 | 0.0268 | 0.0901 | -0.0011 | 0.0002 | 0.0013 |
| 9 | 16.03 | -0.00 | 0.1700 | 0.0242 | 0.1046 | -0.0009 | -0.0000 | 0.0017 |
| 10 | 18.01 | -0.00 | 0.1983 | 0.0216 | 0.1213 | -0.0033 | 0.0000 | 0.0023 |
| 11 | 20.10 | -0.00 | 0.2364 | 0.0237 | 0.1362 | -0.0030 | 0.0004 | 0.0022 |
| 12 | 22.03 | -0.00 | 0.2624 | 0.0212 | 0.1512 | -0.0082 | 0.0006 | 0.0034 |
| 13 | 23.97 | -0.00 | 0.3024 | 0.0210 | 0.1595 | -0.0026 | 0.0002 | 0.0032 |
| 14 | 25.97 | -0.00 | 0.3371 | 0.0185 | 0.1716 | -0.0024 | -0.0000 | 0.0036 |
| 15 | 28.01 | -0.00 | 0.3706 | 0.0113 | 0.1806 | -0.0049 | 0.0004 | 0.0037 |
| 16 | 0.00 | 0.00 | -0.0066 | 0.0257 | -0.0003 | -0.0109 | -0.0010 | 0.0025 |

ORIGINAL PAGE IS
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VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 90

TEMP = 90. PO= 14.4302
RN/FTX10-6= 0.453884 VEL-FPS= 75.292 MACH= 0.0673

CONF= B1V1GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0131 | 0.0304 | 0.0013 | -0.0054 | -0.0004 | 0.0023 |
| 2 | 0.00 | -6.00 | -0.0028 | 0.0278 | -0.0013 | 0.0904 | 0.0081 | -0.0198 |
| 3 | 0.00 | -4.00 | -0.0095 | 0.0303 | 0.0005 | 0.0575 | 0.0052 | -0.0122 |
| 4 | 0.00 | -2.00 | -0.0118 | 0.0303 | 0.0016 | 0.0438 | 0.0021 | -0.0063 |
| 5 | 0.00 | 0.00 | -0.0131 | 0.0281 | 0.0023 | -0.0108 | -0.0007 | 0.0030 |
| 6 | -0.00 | 1.99 | -0.0111 | 0.0281 | -0.0009 | -0.0273 | -0.0038 | 0.0090 |
| 7 | -0.00 | 3.99 | -0.0103 | 0.0259 | -0.0027 | -0.0657 | -0.0066 | 0.0163 |
| 8 | -0.00 | 5.99 | -0.0051 | 0.0260 | -0.0063 | -0.1013 | -0.0091 | 0.0229 |
| 9 | 0.00 | 0.00 | -0.0099 | 0.0281 | -0.0001 | -0.0136 | -0.0006 | 0.0031 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 91

TEMP = 92.
RN/FTX10-6= 0.451760 VEL-FPS= 75.434

PO= 14.4302
MACH= 0.0674

CONF= B1V1GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.0821 | 0.0202 | 0.0625 | -0.0071 | 0.0001 | 0.0016 |
| 2 | 10.01 | -6.00 | 0.0987 | 0.0177 | 0.0528 | 0.0940 | 0.0076 | -0.0185 |
| 3 | 10.01 | -4.00 | 0.0911 | 0.0177 | 0.0585 | 0.0667 | 0.0050 | -0.0122 |
| 4 | 10.01 | -2.00 | 0.0866 | 0.0225 | 0.0616 | 0.0229 | 0.0023 | -0.0053 |
| 5 | 10.01 | -0.00 | 0.0821 | 0.0225 | 0.0615 | -0.0071 | -0.0002 | 0.0016 |
| 6 | 10.01 | 1.99 | 0.0863 | 0.0203 | 0.0608 | -0.0427 | -0.0023 | 0.0087 |
| 7 | 10.01 | 3.99 | 0.0914 | 0.0180 | 0.0559 | -0.0674 | -0.0053 | 0.0150 |
| 8 | 10.01 | 5.99 | 0.0965 | 0.0182 | 0.0500 | -0.1003 | -0.0078 | 0.0215 |
| 9 | 10.01 | -0.00 | 0.0865 | 0.0225 | 0.0611 | -0.0071 | 0.0001 | 0.0010 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 92

TEMP = 92. PO= 14.4302
RN/FTX10-6= 0.451696 VEL-FPS= 75.445 MACH= 0.0675

CONF= B1V1GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.2341 | 0.0238 | 0.1350 | -0.0112 | 0.0005 | 0.0030 |
| 2 | 20.10 | -6.00 | 0.2515 | 0.0190 | 0.1225 | 0.0871 | 0.0064 | -0.0094 |
| 3 | 20.10 | -4.00 | 0.2408 | 0.0237 | 0.1307 | 0.0570 | 0.0032 | -0.0057 |
| 4 | 20.10 | -2.00 | 0.2354 | 0.0237 | 0.1348 | 0.0297 | 0.0016 | -0.0026 |
| 5 | 20.10 | -0.00 | 0.2308 | 0.0238 | 0.1357 | -0.0140 | 0.0006 | 0.0031 |
| 6 | 20.09 | 1.99 | 0.2340 | 0.0262 | 0.1340 | -0.0414 | -0.0009 | 0.0062 |
| 7 | 20.09 | 3.99 | 0.2393 | 0.0216 | 0.1314 | -0.0688 | -0.0029 | 0.0098 |
| 8 | 20.09 | 5.99 | 0.2498 | 0.0170 | 0.1238 | -0.0908 | -0.0052 | 0.0128 |
| 9 | 20.10 | -0.00 | 0.2352 | 0.0238 | 0.1349 | -0.0140 | 0.0006 | 0.0031 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 93

TEMP = 96.
RN/FTX10-6= 0.447576 VEL-FPS= 75.715

PO= 14.4302
MACH= 0.0677

CONF= B1V1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0119 | 0.0233 | 0.0033 | -0.0026 | -0.0005 | 0.0017 |
| 2 | 0.00 | -6.00 | -0.0039 | 0.0208 | -0.0024 | 0.0985 | 0.0083 | -0.0217 |
| 3 | 0.00 | -4.00 | -0.0116 | 0.0232 | 0.0018 | 0.0657 | 0.0054 | -0.0141 |
| 4 | 0.00 | -2.00 | -0.0117 | 0.0233 | 0.0028 | 0.0301 | 0.0026 | -0.0064 |
| 5 | 0.00 | 0.00 | -0.0108 | 0.0233 | 0.0032 | 0.0000 | -0.0005 | 0.0016 |
| 6 | -0.00 | 1.99 | -0.0099 | 0.0234 | 0.0023 | -0.0328 | -0.0037 | 0.0087 |
| 7 | -0.00 | 3.99 | -0.0091 | 0.0212 | -0.0017 | -0.0630 | -0.0066 | 0.0156 |
| 8 | -0.00 | 5.99 | -0.0007 | 0.0190 | -0.0055 | -0.0904 | -0.0096 | 0.0225 |
| 9 | 0.00 | 0.00 | -0.0097 | 0.0233 | 0.0032 | -0.0026 | -0.0005 | 0.0017 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 94

TEMP = 97.
RN/FTX10-6= 0.446536 VEL-FPS= 75.786

PO= 14.4302
MACH= 0.0678

CONF= B1V1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 10.01 | -0.00 | 0.0352 | 0.0230 | 0.0228 | 0.0004 | -0.0001 | 0.0015 |
| 2 | 10.01 | -6.00 | 0.0506 | 0.0182 | 0.0133 | 0.0933 | 0.0058 | -0.0183 |
| 3 | 10.01 | -4.00 | 0.0408 | 0.0206 | 0.0186 | 0.0660 | 0.0035 | -0.0120 |
| 4 | 10.01 | -2.00 | 0.0385 | 0.0207 | 0.0207 | 0.0222 | 0.0018 | -0.0051 |
| 5 | 10.01 | -0.00 | 0.0373 | 0.0231 | 0.0222 | -0.0105 | 0.0000 | 0.0018 |
| 6 | 10.01 | 1.99 | 0.0393 | 0.0208 | 0.0203 | -0.0379 | -0.0022 | 0.0076 |
| 7 | 10.01 | 3.99 | 0.0434 | 0.0185 | 0.0173 | -0.0625 | -0.0042 | 0.0139 |
| 8 | 10.01 | 5.99 | 0.0486 | 0.0163 | 0.0119 | -0.0872 | -0.0058 | 0.0196 |
| 9 | 10.01 | -0.00 | 0.0330 | 0.0207 | 0.0235 | 0.0004 | -0.0004 | 0.0015 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 95

TEMP = 99. PO= 14.4302
RN/FTX10-6= 0.444532 VEL-FPS= 75.916 MACH= 0.0679

CONF= B1V1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 20.10 | -0.00 | 0.1062 | 0.0298 | 0.0342 | -0.0046 | 0.0000 | 0.0026 |
| 2 | 20.10 | -6.00 | 0.1194 | 0.0250 | 0.0253 | 0.0908 | 0.0029 | -0.0145 |
| 3 | 20.10 | -4.00 | 0.1117 | 0.0250 | 0.0292 | 0.0663 | 0.0023 | -0.0099 |
| 4 | 20.10 | -2.00 | 0.1074 | 0.0297 | 0.0332 | 0.0308 | 0.0012 | -0.0039 |
| 5 | 20.10 | -0.00 | 0.1062 | 0.0298 | 0.0342 | -0.0156 | 0.0002 | 0.0035 |
| 6 | 20.09 | 1.99 | 0.1060 | 0.0299 | 0.0338 | -0.0429 | -0.0010 | 0.0093 |
| 7 | 20.09 | 3.99 | 0.1102 | 0.0253 | 0.0309 | -0.0730 | -0.0022 | 0.0146 |
| 8 | 20.09 | 5.99 | 0.1186 | 0.0231 | 0.0252 | -0.1004 | -0.0028 | 0.0188 |
| 9 | 20.10 | -0.00 | 0.1073 | 0.0345 | 0.0335 | -0.0101 | 0.0001 | 0.0028 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 96
QPSF = 6.60

RUN NO. 96

TEMP = 100.
RN/FTX10-6= 0.443504 VEL-FPS= 75.987

PU= 14.4302
MACH= 0.0679

CONF= B1V1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.0075 | 0.0210 | 0.0031 | -0.0054 | -0.0005 | 0.0012 |
| 2 | 2.01 | -0.00 | -0.0029 | 0.0186 | 0.0070 | -0.0053 | -0.0001 | 0.0017 |
| 3 | 4.03 | -0.00 | 0.0103 | 0.0186 | 0.0098 | -0.0052 | -0.0001 | 0.0017 |
| 4 | 5.86 | -0.00 | 0.0160 | 0.0208 | 0.0145 | -0.0052 | -0.0004 | 0.0017 |
| 5 | 7.99 | -0.00 | 0.0250 | 0.0208 | 0.0180 | -0.0051 | -0.0004 | 0.0017 |
| 6 | 10.01 | -0.00 | 0.0384 | 0.0207 | 0.0212 | -0.0050 | -0.0000 | 0.0017 |
| 7 | 12.01 | -0.00 | 0.0507 | 0.0207 | 0.0246 | -0.0049 | -0.0003 | 0.0016 |
| 8 | 14.00 | -0.00 | 0.0596 | 0.0230 | 0.0276 | -0.0103 | -0.0002 | 0.0029 |
| 9 | 16.03 | -0.00 | 0.0773 | 0.0229 | 0.0300 | -0.0048 | -0.0003 | 0.0021 |
| 10 | 18.01 | -0.00 | 0.0906 | 0.0228 | 0.0323 | -0.0102 | -0.0002 | 0.0034 |
| 11 | 20.10 | -0.00 | 0.1084 | 0.0251 | 0.0342 | -0.0101 | -0.0001 | 0.0034 |
| 12 | 22.03 | -0.00 | 0.1195 | 0.0251 | 0.0376 | -0.0128 | -0.0001 | 0.0034 |
| 13 | 23.97 | -0.00 | 0.1372 | 0.0250 | 0.0396 | -0.0100 | -0.0001 | 0.0033 |
| 14 | 25.97 | -0.00 | 0.1506 | 0.0273 | 0.0432 | -0.0099 | 0.0002 | 0.0027 |
| 15 | 28.01 | -0.00 | 0.1651 | 0.0249 | 0.0460 | -0.0125 | 0.0003 | 0.0033 |
| 16 | 0.00 | 0.00 | -0.0075 | 0.0210 | 0.0026 | -0.0054 | -0.0005 | 0.0012 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 97
QPSF = 6.60

RUN NO. 97

TEMP = 80.
RN/FTX10-6= 0.466574 VEL-FPS= 74.288

PO= 14.5628
MACH= 0.0664

CONF= W2B1V1E(0)

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.0256 | 0.0352 | -0.0194 | 0.0025 | -0.0012 | 0.0010 |
| 2 | 2.01 | -0.00 | 0.1217 | 0.0285 | -0.0608 | 0.0050 | -0.0012 | 0.0004 |
| 3 | 4.03 | -0.00 | 0.2277 | 0.0241 | -0.1044 | 0.0074 | -0.0015 | -0.0001 |
| 4 | 5.86 | -0.00 | 0.3378 | 0.0198 | -0.1525 | 0.0016 | -0.0011 | 0.0006 |
| 5 | 7.99 | -0.00 | 0.4501 | 0.0131 | -0.2016 | 0.0039 | -0.0021 | 0.0006 |
| 6 | 10.01 | -0.00 | 0.5645 | 0.0088 | -0.2524 | -0.0046 | -0.0019 | 0.0009 |
| 7 | 12.01 | -0.00 | 0.6726 | 0.0067 | -0.2990 | 0.0059 | -0.0024 | -0.0004 |
| 8 | 14.00 | -0.00 | 0.7859 | 0.0047 | -0.3493 | 0.0056 | -0.0013 | -0.0003 |
| 9 | 16.03 | -0.00 | 0.9100 | 0.0099 | -0.4086 | 0.0107 | -0.0006 | -0.0010 |
| 10 | 18.01 | -0.00 | 1.0578 | -0.0013 | -0.4738 | 0.0021 | 0.0008 | 0.0008 |
| 11 | 20.10 | -0.00 | 1.1878 | -0.0080 | -0.5228 | 0.0046 | 0.0024 | 0.0002 |
| 12 | 22.03 | -0.00 | 1.2308 | -0.0081 | -0.5212 | 0.0020 | 0.0032 | 0.0008 |
| 13 | 23.97 | -0.00 | 1.1930 | 0.0008 | -0.4814 | 0.0051 | 0.0026 | 0.0001 |
| 14 | 25.97 | -0.00 | 1.1558 | 0.0169 | -0.4540 | 0.0026 | 0.0023 | -0.0009 |
| 15 | 28.01 | -0.00 | 1.1207 | 0.0307 | -0.4261 | 0.0083 | -0.0003 | -0.0021 |
| 16 | 0.00 | 0.00 | 0.0365 | 0.0399 | -0.0217 | -0.0056 | -0.0010 | 0.0013 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 98

TEMP = 80.
RN/FTX10-6= 0.466557 VEL-FPS= 74.290

PO= 14.5628
MACH= 0.0664

CONF= W2B1V1E(0)SC1

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9098 | 0.0135 | -0.3157 | 0.0009 | -0.0006 | 0.0011 |
| 2 | 16.03 | -6.00 | 0.9122 | 0.0063 | -0.3209 | 0.1023 | 0.0105 | -0.0228 |
| 3 | 16.03 | -4.00 | 0.9101 | 0.0110 | -0.3167 | 0.0749 | 0.0072 | -0.0159 |
| 4 | 16.03 | -2.00 | 0.9079 | 0.0111 | -0.3132 | 0.0312 | 0.0045 | -0.0074 |
| 5 | 16.03 | -0.00 | 0.9034 | 0.0135 | -0.3105 | 0.0010 | 0.0000 | 0.0011 |
| 6 | 16.03 | 1.99 | 0.9084 | 0.0113 | -0.3159 | -0.0346 | -0.0048 | 0.0089 |
| 7 | 16.03 | 3.99 | 0.9093 | 0.0114 | -0.3187 | -0.0621 | -0.0081 | 0.0163 |
| 8 | 16.03 | 5.99 | 0.9067 | 0.0068 | -0.3221 | -0.0841 | -0.0118 | 0.0230 |
| 9 | 16.03 | -0.00 | 0.9076 | 0.0135 | -0.3141 | 0.0037 | -0.0007 | 0.0005 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60

RUN NO. 99

TEMP = 94.
RN/FTX10-6= 0.451601 VEL-FPS= 75.250

PO= 14.5628
MACH= 0.0673

CONF= W2B1V1E(10)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.2750 | 0.0602 | -0.2030 | 0.0008 | -0.0024 | 0.0008 |
| 2 | 2.01 | -0.00 | 0.3718 | 0.0557 | -0.2301 | 0.0007 | -0.0020 | 0.0003 |
| 3 | 4.03 | -0.00 | 0.4904 | 0.0488 | -0.2628 | 0.0060 | -0.0020 | -0.0003 |
| 4 | 5.86 | -0.00 | 0.6024 | 0.0513 | -0.2949 | 0.0005 | -0.0019 | 0.0003 |
| 5 | 7.99 | -0.00 | 0.7317 | 0.0445 | -0.3336 | 0.0030 | -0.0022 | 0.0002 |
| 6 | 10.01 | -0.00 | 0.8427 | 0.0446 | -0.3632 | 0.0002 | -0.0017 | 0.0008 |
| 7 | 12.01 | -0.00 | 0.9580 | 0.0377 | -0.3953 | 0.0055 | -0.0020 | -0.0003 |
| 8 | 14.00 | -0.00 | 1.0581 | 0.0402 | -0.4233 | 0.0082 | -0.0006 | -0.0010 |
| 9 | 16.03 | -0.00 | 1.1777 | 0.0427 | -0.4573 | 0.0053 | -0.0001 | -0.0004 |
| 10 | 18.01 | -0.00 | 1.2937 | 0.0452 | -0.4958 | 0.0051 | -0.0014 | 0.0012 |
| 11 | 20.10 | -0.00 | 1.4184 | 0.0385 | -0.5393 | 0.0022 | 0.0000 | 0.0013 |
| 12 | 22.03 | -0.00 | 1.5261 | 0.0433 | -0.5693 | -0.0006 | -0.0008 | 0.0019 |
| 13 | 23.97 | -0.00 | 1.5930 | 0.0433 | -0.5766 | 0.0048 | -0.0005 | 0.0006 |
| 14 | 25.97 | -0.00 | 1.6270 | 0.0453 | -0.5571 | 0.0108 | 0.0021 | 0.0003 |
| 15 | 28.01 | -0.00 | 1.6284 | 0.0520 | -0.5266 | 0.0083 | -0.0006 | -0.0006 |
| 16 | 0.00 | 0.00 | 0.2782 | 0.0603 | -0.2051 | -0.0046 | -0.0024 | 0.0016 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60 RUN NO. 100

TEMP = 94. PO= 14.5628
RN/FTX10-6= 0.451665 VEL-FPS= 75.239 MACH= 0.0673

CONF= WIB1V1E(-10)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | -0.2211 | 0.0335 | 0.1731 | 0.0017 | -0.0004 | 0.0012 |
| 2 | 2.01 | -0.00 | -0.1232 | 0.0360 | 0.1466 | 0.0016 | -0.0007 | 0.0012 |
| 3 | 4.03 | -0.00 | -0.0121 | 0.0361 | 0.1193 | -0.0012 | -0.0005 | 0.0008 |
| 4 | 5.86 | -0.00 | 0.0935 | 0.0362 | 0.0943 | 0.0014 | -0.0008 | 0.0007 |
| 5 | 7.99 | -0.00 | 0.2121 | 0.0223 | 0.0622 | 0.0013 | -0.0004 | 0.0001 |
| 6 | 10.01 | -0.00 | 0.3306 | 0.0224 | 0.0274 | 0.0011 | -0.0010 | 0.0007 |
| 7 | 12.01 | -0.00 | 0.4610 | 0.0156 | -0.0117 | -0.0044 | -0.0005 | 0.0014 |
| 8 | 14.00 | -0.00 | 0.5826 | 0.0111 | -0.0504 | 0.0007 | -0.0005 | 0.0012 |
| 9 | 16.03 | -0.00 | 0.7053 | 0.0113 | -0.0888 | 0.0033 | -0.0011 | 0.0012 |
| 10 | 18.01 | -0.00 | 0.8256 | 0.0093 | -0.1312 | 0.0003 | -0.0000 | 0.0013 |
| 11 | 20.10 | -0.00 | 0.9492 | 0.0025 | -0.1751 | 0.0055 | -0.0000 | 0.0006 |
| 12 | 22.03 | -0.00 | 1.0708 | 0.0003 | -0.2134 | 0.0081 | -0.0000 | 0.0000 |
| 13 | 23.97 | -0.00 | 1.1774 | -0.0041 | -0.2439 | 0.0025 | -0.0002 | 0.0007 |
| 14 | 25.97 | -0.00 | 1.2765 | -0.0087 | -0.2674 | 0.0105 | -0.0012 | -0.0006 |
| 15 | 28.01 | -0.00 | 1.3596 | -0.0087 | -0.2824 | 0.0106 | 0.0005 | -0.0017 |
| 16 | 0.00 | 0.00 | -0.2060 | 0.0383 | 0.1666 | -0.0065 | -0.0006 | 0.0015 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 99
QPSF = 6.60

RUN NO. 101

TEMP = 94.
RN/FTX10-6= 0.451553 VEL-FPS= 75.258

PO= 14.5628
MACH= 0.0673

CONF= WIB1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | -0.00 | 1.99 | 0.0288 | 0.0282 | -0.0160 | -0.0301 | -0.0027 | 0.0091 |
| 2 | 2.01 | 1.99 | 0.1257 | 0.0307 | -0.0405 | -0.0330 | -0.0036 | 0.0092 |
| 3 | 4.02 | 1.99 | 0.2411 | 0.0261 | -0.0712 | -0.0304 | -0.0039 | 0.0086 |
| 4 | 5.86 | 1.99 | 0.3499 | 0.0263 | -0.1002 | -0.0414 | -0.0046 | 0.0100 |
| 5 | 7.99 | 1.99 | 0.4717 | 0.0171 | -0.1350 | -0.0307 | -0.0057 | 0.0091 |
| 6 | 10.01 | 1.99 | 0.5913 | 0.0172 | -0.1690 | -0.0309 | -0.0063 | 0.0092 |
| 7 | 12.01 | 1.99 | 0.7119 | 0.0104 | -0.2042 | -0.0338 | -0.0068 | 0.0098 |
| 8 | 13.99 | 1.99 | 0.8325 | 0.0129 | -0.2421 | -0.0312 | -0.0061 | 0.0092 |
| 9 | 16.03 | 1.99 | 0.9466 | 0.0131 | -0.2757 | -0.0286 | -0.0064 | 0.0091 |
| 10 | 18.01 | 1.99 | 1.0659 | 0.0133 | -0.3163 | -0.0315 | -0.0056 | 0.0092 |
| 11 | 20.09 | 1.99 | 1.1982 | 0.0066 | -0.3636 | -0.0264 | -0.0073 | 0.0096 |
| 12 | 22.03 | 1.99 | 1.3144 | 0.0068 | -0.3992 | -0.0293 | -0.0075 | 0.0113 |
| 13 | 23.97 | 1.99 | 1.4038 | 0.0021 | -0.4196 | -0.0320 | -0.0060 | 0.0114 |
| 14 | 25.97 | 1.99 | 1.4825 | 0.0068 | -0.4320 | -0.0399 | -0.0001 | 0.0137 |
| 15 | 28.01 | 1.99 | 1.5377 | 0.0066 | -0.4286 | -0.0397 | -0.0000 | 0.0141 |
| 16 | -0.00 | 1.99 | 0.0397 | 0.0330 | -0.0198 | -0.0411 | -0.0032 | 0.0100 |

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60

RUN NO. 102

TEMP = 94.
RN/FTX10-6= 0.451585 VEL-FPS= 75.253

PO= 14.5628
MACH= 0.0673

CONF= WIB1V1E(0)SC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9490 | 0.0153 | -0.2751 | -0.0038 | -0.0004 | 0.0017 |
| 2 | 16.03 | -6.00 | 0.9406 | 0.0058 | -0.2800 | 0.0948 | 0.0141 | -0.0222 |
| 3 | 16.03 | -4.00 | 0.9449 | 0.0105 | -0.2776 | 0.0592 | 0.0099 | -0.0139 |
| 4 | 16.03 | -2.00 | 0.9470 | 0.0129 | -0.2754 | 0.0344 | 0.0040 | -0.0076 |
| 5 | 16.03 | -0.00 | 0.9490 | 0.0107 | -0.2745 | -0.0120 | 0.0000 | 0.0025 |
| 6 | 16.03 | 1.99 | 0.9520 | 0.0108 | -0.2774 | -0.0341 | -0.0063 | 0.0098 |
| 7 | 16.03 | 3.99 | 0.9539 | 0.0085 | -0.2821 | -0.0589 | -0.0113 | 0.0167 |
| 8 | 16.03 | 5.99 | 0.9524 | 0.0087 | -0.2866 | -0.0973 | -0.0151 | 0.0234 |
| 9 | 16.03 | -0.00 | 0.9556 | 0.0130 | -0.2760 | -0.0066 | -0.0017 | 0.0029 |

ORIGINAL PAGE IS
OF POOR QUALITY

VSD LOW SPEED WIND TUNNEL TEST 422
BODY AXES

05/02/73

STATIC TARE 0
QPSF = 6.60 RUN NO. 103

TEMP = 94. PO= 14.5481
RN/FTX10-6= 0.451368 VEL-FPS= 75.289 MACH= 0.0673

CONF= WIB1V1E(0)GC2

| PT | ALPHA | BETA | CN | CA | CM | CY | CRM | CYM |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.03 | -0.00 | 0.9585 | 0.0087 | -0.3097 | -0.0016 | -0.0015 | 0.0001 |
| 2 | 16.03 | -6.00 | 0.9481 | 0.0038 | -0.3095 | 0.0998 | 0.0122 | -0.0250 |
| 3 | 16.03 | -4.00 | 0.9513 | 0.0062 | -0.3078 | 0.0696 | 0.0070 | -0.0174 |
| 4 | 16.03 | -2.00 | 0.9522 | 0.0086 | -0.3065 | 0.0312 | 0.0026 | -0.0090 |
| 5 | 16.03 | -0.00 | 0.9629 | 0.0087 | -0.3110 | 0.0038 | -0.0006 | -0.0005 |
| 6 | 16.03 | 1.99 | 0.9614 | 0.0088 | -0.3131 | -0.0453 | -0.0029 | 0.0097 |
| 7 | 16.03 | 3.99 | 0.9591 | 0.0065 | -0.3128 | -0.0673 | -0.0076 | 0.0175 |
| 8 | 16.03 | 5.99 | 0.9565 | 0.0020 | -0.3166 | -0.1031 | -0.0131 | 0.0252 |
| 9 | 16.03 | -0.00 | 0.9638 | 0.0087 | -0.3134 | -0.0124 | 0.0009 | 0.0015 |