NOTICE

THIS DOCUMENT HAS BEEN REPRODUCED FROM MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED IN THE INTEREST OF MAKING AVAILABLE AS MUCH INFORMATION AS POSSIBLE
MODEL AERODYNAMIC TEST RESULTS
FOR TWO VARIABLE CYCLE ENGINE
COANNULAR EXHAUST SYSTEMS
AT SIMULATED TAKEOFF
AND CRUISE CONDITIONS

COMPREHENSIVE DATA REPORT
VOLUME III
GRAPHICAL DATA
BOOK 1

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Under
Contract NAS3-20061
Wind tunnel tests were conducted to evaluate the aerodynamic performance of an advanced coaxial exhaust nozzle for a future supersonic propulsion system. Tests were conducted with two test configurations: 1) a short flap mechanism for fan stream control with an isentropic contoured flow splitter, and 2) an iris fan nozzle with a conical flow splitter. Both designs feature a translating primary plug and an auxiliary inlet ejector.

Tests were conducted at takeoff and simulated cruise conditions. Data were acquired at Mach numbers of 0, 0.36, 0.9, and 2.0 for a wide range of nozzle operating conditions. At simulated supersonic cruise, both configurations demonstrated good performance, comparable to levels assumed in earlier advanced supersonic propulsion studies. However, at subsonic cruise, both configurations exhibited performance that was 6 to 7.5 percent less than the study assumptions. At take-off conditions, the iris configuration performance approached the assumed levels, while the short flap design was 4 to 6 percent less.

* For sale by the National Technical Information Service, Springfield, Virginia 22161
FOREWORD

This report documents the work performed during the Nozzle Performance Tests (Task III) of Contract NAS3-20061. Because of the large amount of information, this report is presented in three Volumes to facilitate its use.

Volume I contains the design layouts and detailed design drawings of the nozzle models.

Volume II contains the tabular aerodynamic data generated in this program.

Volume III contains a graphical presentation of the data.

A complete description of the test hardware and test facilities is contained in the companion Task III Final Report, CR-159818. Significant test results and conclusions are also included in the Final Report.
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INTRODUCTION

This volume contains a graphical presentation of the aerodynamic data acquired during the scale model nozzle performance wind tunnel test.

Section 2 contains an organization guide that can be used to locate the data plots obtained during this program.

Section 3 contains the graphical data and includes plots of:

- Nozzle thrust coefficient parameters
- Nozzle discharge coefficients
- Static pressure distributions
2. Graphical Data Guide

The graphical data have been organized by test configuration for ease of comparison. The data are presented in the same configuration order as listed in the data matrix guide, Table 2-I Volume II. For each configuration, the data are organized by ascending run number.

The graphical data presented consist of plots of nozzle gross thrust coefficient (CFP1), fan nozzle discharge coefficient (CDF) and primary nozzle discharge coefficient (CDP). Normalized model component static pressure distributions are presented as a function of primary total pressure (P1/Ptp), fan total pressure (P1/Ptf) and ambient static pressure (P1/Po) for selected operating conditions. In addition, the supersonic cruise configuration data include plots of nozzle efficiency (ETA1 INT) and secondary-to-fan total pressure pumping characteristic (PTS/PTF).

For each run the nozzle performance parameter plots are presented first, followed by the static pressure distribution plots. Each performance plot is identified in the upper left corner of the page by reading (RDG) number sequence, configuration and run (RUN) number. Wind tunnel and nozzle operating conditions are also defined at the top of the page. Each static pressure distribution plot is identified by run (RUN) number and reading (RDG) number in the upper right corner of the page, followed by a heading that identifies the configuration, model component for which the distribution was measured. The second line of the heading defines the wind tunnel and nozzle operating conditions associated with the reading number.
3. GRAPHICAL DATA
CONFIGURATION C1

SHORT FLAP NOZZLE

SUPERSONIC CRUISE
SUPERSOHNIC CRUISE

RUN 14

\[ P_{\text{TF}}/P_{\text{PO}} = 2.8 \]
\[ \Delta = 2.32 \]
\[ \Phi = 2.6 \]

**NOZZLE EFFICIENCY, ETA 1 INT**

**FAN NOZZLE PRESSURE RATIO, PTF/PO**

\[ M_0 = 1.96 \quad \omega = 0.998 \]

\[ 9.995 \]
\[ 9.998 \]
\[ 9.985 \]
\[ 9.988 \]
\[ 9.986 \]
\[ 9.975 \]
\[ 9.978 \]
\[ 9.965 \]
\[ 9.968 \]

\[ 18 \quad 20 \quad 22 \quad 24 \quad 26 \quad 28 \quad 30 \quad 32 \]
C1
SUPersonic CRUISE
RUN 14
M0 = 1.96 \quad \delta = 0.03

FAN-NOZZLE PRESSURE RATIO, PTF/PO

FAN NOZZLE FLOW COEFFICIENT, CDF
C1
SUPERSONIC CRUISE
RUN 14

$M_0 = 1.96, \omega = 0.888$

$\Phi = 2.6$

$\Delta = 2.32$

FAN NOZZLE PRESSURE RATIO, PTF/PO
C1
SUPersonic CRUISE
RUN 14

\[ \frac{P_{\text{TR}}}{P_{\text{F}}} = \frac{\phi}{2.6} \]

\[ \Delta = 2.32 \]

\[ \phi = 2.6 \]

\[ M = 1.96 \]

\[ \omega = 0.38 \]

SECONDARY TO FAN TOTAL-PRESSURE RATIO, PTF/PTF

FAN NOZZLE PRESSURE RATIO, PTF/PO

ORIGINAL PAGE IS OF POOR QUALITY
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

Ma = 1.96  \( \frac{Pt_r}{Po} = 20.853 \)  \( \frac{Pt_r}{Pt_d} = 2.31 \)  \( w = .888 \)

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

M₀ = 1.96  Prₚ/Pr₀ = 22.652  Prₚ/Ppᵢ = 2.31  Ω = 0.000

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Prₚ/Pr₀

PRESSURE TAP AXIAL LOCATION, x/dₘₜₐₓ
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\[ M_a = 1.96 \quad \frac{P_{\text{tr}}}{P_o} = 25.044 \quad \frac{P_{\text{tr}}}{P_{\text{tip}}} = 2.33 \quad \omega = 0.008 \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{\text{tr}}}{P_o} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\[ \frac{P_*}{P_0} = 27.673 \quad \frac{P_r}{P_0} = 2.32 \quad \frac{\gamma}{\gamma} = 1.38 \]

PRESSURE TAP AXIAL LOCATION: \( \phi_{\text{max}} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$M = 1.96 \quad P_{t/r}/P_0 = 29.928 \quad P_{t/r}/P_{t/p} = 2.32 \quad w = .888$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{t/r}/P_0$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
SUPERSONIC CRUISE

RUN 15

$M_0 = 1.96 \quad \omega = 0.19$

$\frac{P_{FR}/P_{PO}}{\frac{A}{\phi}} = 2.8 \quad 2.32 \quad 2.6$

FAN-NOZZLE PRESSURE RATIO, $P_{FR}/P_{PO}$
C1
SUPERSONIC CRUISE
RUN 15

$M_0 = 1.96, \omega = 0.019$

$P_{fr}/P_{po} = \Box = 2.32$

\[\Phi = 2.6\]
Supersonic Cruise Run 15

\( M_\infty = 1.96 \quad \omega = .319 \)

\( P_{f} / P_{t} = \frac{1}{2.8} \quad \Delta = 2.32 \quad \phi = 2.6 \)

Fan Nozzle Pressure Ratio, PTF/PO
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$\text{Re} = 1.96 \quad \frac{P_{tr}}{P_{ao}} = 19.684 \quad \frac{P_{tr}}{P_{io}} = 2.31 \quad \mu = 0.19$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $\frac{P_{tr}}{P_{ao}}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic Cruise

$M_\infty = 1.96 \quad P_{\infty}/P_0 = 22.492 \quad P_{\infty}/P_\infty = 2.31 \quad \omega = 0.819$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$M_o = 1.96 \quad P_{r_1}/P_o = 24.836 \quad P_{r_2}/P_{r_2} = 2.33 \quad w = 0.819$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_i/P_o$

PRESSURE TAP AXIAL LOCATION, $x/a_{max}$
C1
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\[ M_o = 1.96 \quad P_{tr}/P_o = 27.342 \quad P_{tr}/P_o = 2.33 \quad w = 0.819 \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_l/P_o \)

PRESSURE TAP AXIAL LOCATION, \( x/\Delta x \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

\( \text{Ma} = 1.96 \quad \frac{P_{tr}/P_o}{P_{r}/P_{r}} = 29.37 \quad \frac{P_{tr}/P_{tr}} = 2.32 \quad \omega = 0.819 \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
C1
SUPERSONIC CRUISE
RUN 16
$M_\infty = 1.96 \quad \phi = 0.839$

$P_{r}/P_o = \Delta = 2.32 \quad \phi = 2.6$

FAN NOZZLE PRESSURE RATIO, $P_{r}/P_o$
C1 SUPERSONIC CRUISE

RUN 16

\[ M_0 = 1.96 \quad \omega = 0.339 \]

\[ \frac{P_{TR}/P_{TP}}{\Delta} = 2.8 \quad \phi = 2.6 \]

NOZZLE EFFICIENCY, ETA 1 INT

FAN NOZZLE PRESSURE RATIO, PTF/PO
C1
SUPERSONIC CRUISE
RUN 16

M0 = 1.96  \( \omega = 0.939 \)

\( \frac{P_{TF}}{P_{PO}} = \Phi = 2.6 \)

\( \Delta = 2.32 \)

FAN NOZZLE PRESSURE RATIO, PTF/PO
RDG. 1103-1144

CL
SUPERSONIC CRUISE
RUN 16

$M_0 = 1.96 \quad \omega = 0.839$

$PTF/PO = \square = 2.8$

$\Delta = 2.92$

$\Phi = 2.6$

FAN NOZZLE PRESSURE RATIO, PTF/PO
CI
SUPERSONIC CRUISE
RUN 16

\( \mathbf{M}_0 = 1.96 \quad \mathbf{\omega} = 0.039 \)

\( \mathbf{\Delta} = 2.32 \quad \mathbf{\phi} = 2.6 \)

FAN NOZZLE PRESSURE RATIO, PPF/PO

SECONDARY TO FAN TOTAL-PRESSURE RATIO, PTS/PPF
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

\( M_\infty = 1.96 \)

\( P_{t}\widetilde{r}/P_{\infty} = 19.839 \)

\( P_{t}\widetilde{r}/P_{\infty} = 2.31 \)

\( \omega = 0.839 \)

PRESSURE TAP AXIAL LOCATION, \( x/\text{d}_{\text{max}} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

Ma = 1.96
\( \frac{p_{tr}}{p_o} = 22.493 \)
\( \frac{p_{tr}}{p_{ip}} = 2.31 \)
\( \omega = .839 \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

$M_o = 1.96$  
$P_{r}/P_o = 24.856$  
$P_{fr}/P_{tp} = 2.32$  
$\omega = 0.039$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{l}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

Run 16
RDG=1123
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$M_o = 1.96$, $P_{\text{fr}}/P_o = 27.383$, $P_{\text{fr}}/P_{\text{p}} = 2.33$, $\omega = 0.339$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{\text{fr}}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/a_{\text{max}}$
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

M_o = 1.96  \( \frac{P_{tr}}{P_{a}} = 29.813 \)
\( \frac{P_{tr}}{P_{ta}} = 2.32 \)  \( \omega = 0.039 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{tr}}{P_{a}} \)

PRESSURE TAP AXIAL LOCATION, \( \times/d_{max} \)
CONFIGURATION A₁

IRIS FLAP NOZZLE

SUPersonic CRUISE
ROG 1155-1184

A1
SUPersonic CRUISE
RUN 18

\[ M = 1.96 \quad \Delta = 2.32 \]

\[ Pf/Pp = \square = 2.6 \quad \phi = 2.6 \]

FAN NOZZLE PRESSURE RATIO, PTF/PO
A1
SUPERSOONIC CRUISE
RUN 18

\[ \frac{P_{TF}}{P_{TF_0}} = \frac{1}{2.32} \]
\[ \phi = 2.6 \]

FAN-NOZZLE PRESSURE RATIO, PTF/PO
SUPERSONIC CRUISE

RUN 18

Ma = 1.96  \( \omega = 0.800 \)

PTR/PTP

\[ \square = 2.0 \]

\[ \triangle = 2.32 \]

\[ \odot = 2.6 \]

FAN NOZZLE PRESSURE RATIO, PTF/PO
RDG. 1155-1184

A1
SUPERSONIC CRUISE
RUN 18

\( \frac{P_{TF}}{P_{PF}} = 2.9 \)

\( A = 2.32 \)

\( \phi = 2.6 \)

\( W = 2.45 \)

\( M_0 = 1.96 \)

\( \omega = 0.888 \)

FAN NOZZLE PRESSURE RATIO, PTF/PO

SECONDARY TO FAN TOTAL-PRESSURE RATIO, PTF/PTF

18 20 22 24 26 28 30 32
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

M* = 1.97

\[ \frac{p_{\text{r}}}{p_o} = 19.847 \quad \frac{p_{\text{r}}}{p_{\text{t, p}}} = 2.31 \]

\( \omega = 0.888 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{p_{\text{r}}}{p_o} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\[ M_o = 1.96 \quad P_{r\infty}/P_o = 22.393 \quad P_{r\infty}/P_\infty = 2.31 \quad w = 0.50 \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_{r\infty}/P_o \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\( M_c = 1.96 \) \( \frac{p_r}{p_0} = \frac{24.856}{21.12} \) \( \frac{p_r}{p_r} = 2.33 \) \( \omega = 0.838 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{p_r}{p_0} \)

PRESSURE TAP AXIAL LOCATION, \( \times/d_{\text{max}} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

Ma = 1.96  \( \frac{P_{tr}/P_o}{P_{tr}/P_{tp}} = 27.481 \),  \( \frac{P_{tr}/P_{tp}}{2.33} \)  \( \omega = 0.888 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO,  \( P_{tr}/P_o \)

PRESSURE TAP AXIAL LOCATION,  \( x/d_{max} \)

RUN 18

RDS = 1165

40
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

M_o = 1.96  \quad P_{r}\!/P_o = 29.915  \quad P_{r}\!/P_{a} = 2.31  \quad \omega = 0.333

PRESSURE TAP AXIAL LOCATION, x/d_{max}
SUPersonic CRUISE

RUN 19

M = 1.96

\[ \frac{P_{\text{r}}}{P_{\text{o}}} = \square = 2.8 \]
\[ \Delta = 2.32 \]
\[ \phi = 2.6 \]
A1
SUPersonic CRUISE
RUN 19

$M_o = 1.96$, $\omega = 0.038$

$P_{\text{TR}}/P_{\text{TP}} = \Delta = 2.8$
$\Phi = 2.6$

FAN NOZZLE PRESSURE RATIO, PTF/PO
A1
SUPERSONIC CRUISE
RUN 19

M₀ = 1.96  \( \omega = 0.338 \)

\( \frac{P_{TF}}{P_{OP}} = 2.8 \)
\( \Delta = 2.32 \)
\( \phi = 2.6 \)

FAN NOZZLE PRESSURE RATIO, PTF/PO
Rog 1205-1235

A1
SUPERSONIC CRUISE
RUN 19

Mo = 1.96  \( \alpha = 0.338 \)

\( \frac{P_{tr}}{P_{tp}} = \Delta = 2.91 \)

\( \phi = 2.6 \)

SECONDARY TO FAN TOTAL-PRESSURE RATIO, PTS/PTF

FAN NOZZLE PRESSURE RATIO, PTF/PO
A1
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

M∞ = 1.96  P∞/P₀ = 27.543  P₁/P₁₀ = 2.33  w = 0.839

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P₁/P₀

PRESSURE TAP AXIAL LOCATION, x/dmax
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

Run 19

\( M_\infty = 1.96 \quad P_{\text{t}}/P_\infty = 24.683 \quad P_{\text{r}}/P_{\text{r},\infty} = 2.33 \quad \omega = 0.39 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_{\text{r}}/P_\infty \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)
LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_1/P_0$

EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$M_o = 1.96$

$P_1/P_0 = 22.376$

$P_r/P_r = 2.31$

Run 19

RDG = 1238

$N_o = 1.96$

$P_r/P_r = 22.376$

$P_r/P_r = 2.31$

$u = 0.039$
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

MO = 1.96
PR/P0 = 19.958
P*R/P0 = 2.38

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pi/P0

PRESSURE TAP AXIAL LOCATION, X/LMAX

Run 19
A1 SUPERCRISE
RUN 20
M0 = 1.95 w = 0.928

FAN NOZZLE PRESSURE RATIO, PPF/PO
A1
SUPERSONIC CRUISE
RUN 29
M₀ = 1.95  Ω = 0.828

FAN NOZZLE PRESSURE RATIO, PTF/PO

P₁ᵣ/P₁ᵣ = .Appended
Δ = 2.32
Φ = 2.6
ROG 1248-1277

AI

SUPERSONIC CRUISE

RUN 20

\( M_0 = 1.95 \quad \omega = 0.820 \)

\( P_{Tf}/P_{to} = 2.8 \)

\( \Delta = 2.32 \)

\( \phi = 2.6 \)

FAN NOZZLE PRESSURE RATIO, PTF/PO

FAN NOZZLE FLOW COEFFICIENT, CDF
A1
SUPERSONIC CRUISE
RUN 29

$M_o = 1.95 \quad \omega = 0.828$

$P_{tr}/P_{tp} = \Box = 2.8$
$\triangle = 2.32$
$\star = 2.6$

FAN NOZZLE PRESSURE RATIO, PTF/PO
A1 II SUPERSONIC CRUISE
RUN 29
Mo = 1.95 \( \omega = \theta 29 \)

\[ \frac{P_{\text{fr}}}{P_{\text{tp}}} = \Delta = 2.32 \]

\[ \phi = 2.6 \]

SECONDARY TO FAN TOTAL-PRESSURE RATIO, PTF/PTF

FAN NOZZLE PRESSURE RATIO, PTF/PO

55
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSOONIC CRUISE

\( M_0 = 1.95 \quad P_{tr}/Po = 19.984 \quad P_{tr}/P_T = 2.38 \quad \omega = 0.019 \)

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

\[ \frac{P_{tr}}{P_o} = 22.386 \quad \frac{P_{tr}}{P_{tp}} = 2.32 \quad \omega = 0.23 \]

\text{PRESSURE TAP AXIAL LOCATION: } x/d_{max}
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

\( M_0 = 1.95 \quad P_{tr}/P_o = 24.858 \quad P_{tr}/P_{r} = 2.34 \quad \omega = 0.02 \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
A1
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPERSONIC CRUISE

$M_o = 1.95 \quad \frac{P_{tr}}{P_o} = 27.384 \quad \frac{P_{tr}}{P_{tp}} = 2.32 \quad \omega = 0.219$

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $\frac{P_{tr}}{P_o}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR SHROUD STATIC PRESSURE DISTRIBUTION AT SUPersonic CRUISE

\( M_\infty = 1.95 \quad P_{tr}/P_\infty = 29.278 \quad P_{tr}/P_\infty = 2.32 \quad \omega = 0.828 \)

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_{tr}/P_\infty \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
CONFIGURATION C_2
SHORT FLAP NOZZLE
SUBSONIC CRUISE
C2
SUBSONIC CRUISE
RUN 29

Mo = 0.89

Ptr/Ptr = 1.8
\[ \Delta = 1.97 \]
\[ \phi = 2.2 \]

EJECTOR INLET POSITION
OLAMSHELL POSITION 13°

FAN NOZZLE PRESSURE RATIO, PTF/PO

FAN NOZZLE FLOW COEFFICIENT, CDF
**C2**

**SUBSONIC CRUISE**

**RUN 29**

\[ M_o = 0.89 \]

\[ P_{TF}/P_{0} = \]

- \[ \square = 1.8 \]
- \[ \triangle = 1.97 \]
- \[ \diamond = 2.2 \]

**EJECTOR INLET POSITION**

**CLAMSHHELL POSITION**

**13°**

**PRIMARY-NOZZLE FLOW COEFFICIENT, COP**

**FAN NOZZLE PRESSURE RATIO, PTF/PO**
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M_0 = 0.89  P_{tr}/P_o = 3.507  P_{tr}/P_{tp} = 1.97

EJECTOR INLET POSITION  MIDWAY
CLAMSHELL POSITION  13°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P_{l}/P_{tp}

PRESSURE TAP AXIAL LOCATION: x/d_{max}
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.89 \quad P_{tr}/P_{r} = 3.507 \quad P_{tr}/P_{pd} = 1.97$

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION 13°
- Δ FLOW SPLITTER 0.0

PRESSURE TAP AXIAL LOCATION: $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_0 = 0.89 \quad \frac{P_{In}}{P_0} = 3.507 \quad \frac{P_{In}}{P_{In}} = 1.97 \] at subsonic cruise

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| \[
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<th>0.8</th>
<th>1.0</th>
<th>1.2</th>
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C2 ROG=1696

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_0 = 0.89 \quad \frac{P_{In}}{P_0} = 3.507 \quad \frac{P_{In}}{P_{In}} = 1.97 \] at subsonic cruise
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \text{M} = 0.89 \quad P_{r}/P_{o} = 4.456 \quad P_{t}/P_{t-p} = 1.97 \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_0 = 0.89 \hspace{1cm} P_{r} / P_0 = 4.456 \hspace{1cm} P_{r} / P_{b} = 1.97 \)

**Diagram Description:**

- **EJECTOR INLET POSITION**
- **CLAMSHELL POSITION**
- **FLOW SPLITTER 0.0**

**Pressure Tap Axial Location:** 

\( x / d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_\theta = 0.89 \quad \frac{P_{\text{t}}}{P_\infty} = 4.456 \quad \frac{P_{\text{t}}}{P_{\text{d}}} = 1.97 \] at subsonic cruise

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_1}{P_0} \)**

**PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$
M_o = 0.89 \quad \frac{P_r}{P_e} = 5.242 \quad \frac{P_r}{P_t} = 1.97
$

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $\frac{P_r}{P_t}$</th>
<th>RUN 27</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJECTOR INLET POSITION MIDWAY</td>
<td>CLAMSHELL POSITION 13°</td>
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PRESSURE TAP AXIAL LOCATION, $\frac{x}{c_{max}}$
C2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_o = 0.89  \( \frac{P_{ir}}{P_o} = 5.242 \)  \( \frac{P_{ir}}{P_{r-p}} = 1.97 \)

### EJECTOR INLET POSITION MIDWAY
### CLAMSHELL POSITION 13°

Δ FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, P_{ir}/P_{r-p}

PRESSURE TAP AXIAL LOCATION, x/d_{max}
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M = 0.89 \quad \frac{P_m}{P_o} = 5.242 \quad \frac{P_{in}}{P_o} = 1.97$ AT SUBSONIC CRUISE

- CLAM SHELL POSITION 13°
- FOREBODY INLET
- 90° SHROUD LOCATION
- 85° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION: $\frac{x}{d_{max}}$
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 29
RDG=1699

M_0 = 0.89  Pr/r/Po = 5.991  Pr/r/Pp = 1.96

PRESSURE TAP AXIAL LOCATION, x/dmax
LOCAL STATIC TO FAN TOTAL PRESSURE, $p_i/p_f$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89 \quad P_{tr}/P_o = 5.991 \quad P_{tr}/P_{tp} = 1.96$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>CLAMSHELL POSITION</th>
<th>13°</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREBODY LOCATION</td>
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<td>20° SHROUD LOCATION</td>
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<td>80° SHROUD LOCATION</td>
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</table>

Local to Ambient Static Pressure Ratio, $P_i/P_o$

Pressure Tap Axial Location, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE:

Run 27
RDG=170B

$M_0 = 0.89 \quad \frac{P_{in}}{P_{tot}} = 6.986 \quad \frac{P_{tr}}{P_{tot}} = 1.97$

EJECTOR INLET POSITION
CLAMSHELL POSITION 13°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{tr}/P_{tot}$

PRESSURE TAP AXIAL LOCATION: $x/d_{max}$
PLUS AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.89  \( \frac{P_i}{P_o} = 6.986 \)  \( \frac{P_i}{P_{ip}} = 1.97 \)

EJECTOR INLET POSITION  MIDWAY
CLAMSHELL POSITION  13°

\( \Delta \) FLJW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_i/P_{it} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.89  Pᵣ/P₀ = 6.986  Pᵣ/Pₚ = 1.97  AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION: x/dₘₐₓ
C2
SUBSONIC CRUISE
RUN 30
M_o = 0.90

FAN NOZZLE PRESSURE RATIO, PTF/PO

NOZZLE GROSS THRUST COEFFICIENT, CFPI

EJECTOR INLET POSITION  
CLAM SHELL POSITION  
MIDWAY 17°
ROG. 1718-1751

C2
SUBSONIC CRUISE
RUN 30

\( \frac{P_{TF}}{P_{PO}} = 1.8 \)
\( \Delta = 1.97 \)
\( \phi = 2.2 \)

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 17°

FAN NOZZLE PRESSURE RATIO, PTF/PO
SUBSONIC CRUISE
RUN 39
M₀ = 0.98

EJECTOR INLET POSITION, MIDWAY CLAMSHELL POSITION 17°

FAN NOZZLE PRESSURE RATIO, PTF/PO
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.90  Pᵣ/Pₒ = 3.58  Pᵣ/Pₜ = 1.96

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.90  Pᵣ/Pₒ = 3.58  Pᵣ/Pₜ = 1.96

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ N_o = 0.98 \quad P_t/P_o = 3.588 \quad P_t/P_{tr} = 1.96 \]

### Flow Splitter O.D.

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|JECTOR INLET POSITION MIDWAY |
| LAMINAR POSITION           |

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, ( p_i/P_t )</th>
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<tbody>
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<td>6.9</td>
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<tr>
<th>PRESSURE TAP AXIAL LOCATION: ( x/\alpha_{max} )</th>
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</table>
C2 EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.90 \[ \frac{P_\text{t}}{P_\infty} = 3.508 \quad \frac{P_\text{t}}{P_\text{tp}} = 1.96 \] AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
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<tbody>
<tr>
<td>CLAMSHELL POSITION 17°</td>
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</table>

FOREBODY LOCATION
- 28° SHROUD LOCATION
- 88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_\text{t}}{P_\infty} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_\text{max} \)
C2 PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Ma = 0.98 \( \frac{P_{tr}/P_o}{P_{tr}/P_{fs}} = 4.537 \) \( \frac{P_{tr}/P_{fs}}{P_{tr}/P_{fs}} = 1.98 \)

- EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION 17°
- PRIMARY PLUG
- FLOW SPLITTER 1.0

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{P_{st}}{P_{tr}} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.90 \quad P_{tr}/P_0 = 4.587 \quad P_{tr}/P_{tp} = 1.98 \]

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_{tr}/P_{tp} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.98 \quad \frac{P_{tr}}{P_o} = 4.587 \quad \frac{P_t}{P_r} = 1.98 \text{ AT SUBSONIC CRUISE}$

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_t}{P_r} \)**

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>CLAMSHELL POSITION</th>
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<td>FOREBODY INLET LOCATION</td>
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<td>28° SHROUD LOCATION</td>
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<td>88° SHROUD LOCATION</td>
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**PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)**
### Run 30

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

- $M_o = 0.98$
- $Pr/Pe = 5.238$
- $Pr/Pe = 1.97$

#### Pressure Tap Axial Location: $x/d_{max}$

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_t/P_t$</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
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<tbody>
<tr>
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<td>PRIMARY PLUG</td>
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<td>FLOW SPLITTER 1.0</td>
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LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{1}/P_{T}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

EJECTOR NET POSITION

FLOW SPITTER O.D.

EJECTOR NET POSITION 17, $P_{T}/P_{0} = 5.238$

FLOW SPITTER 0.0

EJECTOR NET POSITION 19, $P_{T}/P_{0} = 1.0$

FLOW SPITTER O.D.

EJECTOR NET POSITION 17, $P_{T}/P_{0} = 1.47$

FLOW SPITTER 0.0

EJECTOR NET POSITION 19, $P_{T}/P_{0} = 5.238$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \text{Mo} = 0.98 \quad \text{P*}/\text{Po} = 5.238 \quad \text{P*/P} = 1.97 \text{ AT SUBSONIC CRUISE} \]

RUN 30

RDG=1732

EJECTOR INLET POSITION MIDWAY

CLAMSHELL POSITION 17°

FOREBODY INLET

20° SHROUD LOCATION

80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P*/\text{Po} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_\infty = 0.98 \quad \frac{P_{\infty}}{P_{\text{atm}}} = 5.985 \quad \frac{P_{\text{atm}}}{P_{\text{in}}} = 1.95$

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>CLAMSHELL POSITION</th>
<th>MIDWAY</th>
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PRESSURE TAP AXIAL LOCATION, $x/d_{\text{max}}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$\frac{P_{\infty}}{P_{\infty}} = 5.985 \quad \frac{P_{\infty}}{P_{T}} = 1.95$

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.98$  $P_{tr}/P_o = 5.985$  $P_{tr}/P_{t} = 1.95$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
## C2

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ M_a = 0.90 \quad P_{tr}/P_{po} = 6.982 \quad P_{tr}/P_{tp} = 1.97 \]

### Graph

- **Ejector Inlet Position Midway**
- **Clamshell Position 17°**
- **Primary Plug**
- **Flow Splitter I.D.**

<table>
<thead>
<tr>
<th>Pressure Tap Axial Location, ( \times \text{c}_{\max} )</th>
<th>( 0.1 )</th>
<th>( 0.2 )</th>
<th>( 0.3 )</th>
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<th>( 0.8 )</th>
<th>( 1.0 )</th>
<th>( 1.2 )</th>
<th>( 1.4 )</th>
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<tbody>
<tr>
<td>Local Static to Primary Total Pressure, ( P_{l}/P_{tp} )</td>
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<tr>
<th>Run 30</th>
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<tr>
<td>RDG=173</td>
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</table>

95
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.92  Pr₁/Pr₀ = 6.982  Pr₁/P₀ = 1.97

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, Pr₁/Pr₀</th>
<th>EJECTOR INLET POSITION</th>
<th>CLAMSHELL POSITION 17°</th>
<th>∆ FLOW SPLITTER O.D.</th>
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<tbody>
<tr>
<td>0.9</td>
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PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.98$, $P_{tr}/P_o = 6.982$, $P_{tr}/P_{tp} = 1.97$ AT SUBSONIC CRUISE

- EJECTOR INLET POSITION
- CLAMSHELL POSITION 17°
- FOREBODY INLET
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/dm$

Run 32
RDG = 1734
**C2 SUBSONIC CRUISE**

**RUN 31**

\[ \text{Mo} = 0.89 \]

**EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION 21°**

**FAN NOZZLE PRESSURE RATIO, PIF/PO**

**Notes:**

- \( P\text{IF}/P_0 = 1.8 \)
- \( \Delta = 1.97 \)
- \( \phi = 2.2 \)
C2
SUBSONIC CRUISE
RUN 31  \(M_o = 0.89\)

\(P_{tr}/P_{tp} = \Delta = 1.97\)
\(\Phi = 2.2\)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

FAN NOZZLE PRESSURE RATIO, PTF/PO
Rog. 1752-1785

C2
SUBSONIC CRUISE
RUN 31
M = 0.89

PTR/PTR = [1.8]
\[ \Delta = 1.97 \]
\[ \phi = 2.2 \]

EJECTOR INLET POSITION MIDWAY CLAM SHELL POSITION 21°

FA' NOZZLE PRESSURE RATIO, PTR/PO

PRIMARY-NOZZLE FLOW COEFFICIENT, COP
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M0 = 0.93  \( \frac{P'_{r}}{P_o} = 3.497 \)  \( \frac{P_{tr}}{P_{tp}} = 1.95 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_0 = 0.98$, $P_{tr}/P_a = 3.497$, $P_{tr}/P_{t+1} = 1.95$

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 21°

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

102
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.90  \( \frac{P*}{P₀} = 3.497 \)  \( \frac{P*}{P*p} = 1.95 \) AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P*}{P₀} \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

FOREBODY INLET
Δ 28° SHROUD LOCATION
◊ 88° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLINTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_1/P_{1p}$

PRESSURE TAP AXIAL LOCATION

PRESSURE TAP AXIAL LOCATION

EJECTOR INLET POSITION

CLAMSHELL POSITION

PRIMARY PLUG EJECTOR PLUG, SPLINTER 1.0

$RDG = 1.764$

$C_2 = 8.9$

$P_1/P_{1p} = 1.3$
### C2 Plug and Splitter Static Pressure Distributions at Subsonic Cruise

**Run 31**

RDG = 1764

\[ M_0 = 0.89 \quad \frac{P_{tr}/P_{o}}{P_{tr}/P_{tp}} = 4.5 \quad P_{tr}/P_{tp} = 1.99 \]

**Pressure Tap Axial Location**

<table>
<thead>
<tr>
<th>Local Static to Fan Total Pressure, ( \frac{p_l}{p_t} )</th>
<th>Flow Splitter O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8</td>
<td>1.0</td>
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<tr>
<td>0.9</td>
<td></td>
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<tr>
<td>0.7</td>
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<tr>
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<td>0.5</td>
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<tr>
<td>0.4</td>
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<td>0.3</td>
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</tr>
<tr>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

**Ejector Inlet Position**
midway

**Clamshell Position**
21°
C2

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.89  Pin/Po = 4.51  Pin/Pt = 1.99 AT SUBSONIC CRUISE

Mo = ...  Pin/Po = ...  Pin/Pt = ...

EJECTOR INLET POSTION  CLAMSHELL POSITION  MIDDLEWAY  FOEBODY  INLET

SHROUD LOCATION  SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pin/Po

PRESSURE TAP AXIAL LOCATION, z / \( z_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.89 \quad P_{r/Po} = 5.243 \quad P_{r/Pp} = 1.97 \]

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.89 \quad \frac{P_{tr}}{P_o} = 5.243 \quad \frac{P_{tr}}{P_{\infty}} = 1.97 \]

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION 21°
- \( \Delta \) FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_{st}/P_{\infty} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89$  $\frac{P_{tr}}{P_o} = 5.243$  $\frac{P_{tr}}{P_{inlet}} = 1.97$ AT SUBSONIC CRUISE

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION 21°
- FOREBODY INLET LOCATION
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $\frac{P_{tr}}{P_o}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.90 \quad \frac{P_{tr}/P_o}{P_t/P_o} = 6.805 \quad \frac{P_{tr}/P_P}{P_t/P_P} = 1.96$

**EJECTOR INLET POSITION** MIDWAY
**CLAMSHELL POSITION** 21°

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_t/P_{tr}$/P/P_P</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
<td>1.0</td>
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<tr>
<td>8.8</td>
<td>1.0</td>
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<td>8.7</td>
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<tr>
<td>8.6</td>
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<td>8.5</td>
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<td>8.4</td>
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<td>8.2</td>
<td>1.0</td>
</tr>
<tr>
<td>8.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**PRIMARIAL PLUG**
**FLOW SPLITTER L.D.**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.23
Pᵣ/P₀ = 6.085
Pᵣ/Pₚ = 1.96

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.90 \hspace{1cm} P_{tr}/P_o = 6.083 \hspace{1cm} P_{tr}/P_tr = 1.96 AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, x/a_max</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJECTOR INLET POSITION MIDEWAY</td>
</tr>
<tr>
<td>CLAMSHELL POSITION 21°</td>
</tr>
<tr>
<td>FOREBODY</td>
</tr>
<tr>
<td>20° SHROUD LOCATION</td>
</tr>
<tr>
<td>80° SHROUD LOCATION</td>
</tr>
</tbody>
</table>
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Ma = 0.98 P_{t}/P_{a} = 6.937 \theta_{t}/\theta_{a} = 1.98

| PRESSURE TAP AXIAL LOCATION, \ x/d_{max} |

Run 31
RDG=1767
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

Run 31
RDG=1767

\[ \frac{p' \gamma}{p_o} = 6.987 \quad \frac{p' \gamma}{p_t} = 1.98 \]

Ejector Inlet Position Midway
Clamshell Position 21°

Δ Flow Splitter 0.0°

Local Static to Fan Total Pressure, \( \frac{p'}{p_t} \)

Pressure Tap Axial Location, \( \frac{x}{d_{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Run 31

RDG=1767

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°
FOREBODY INLET
20° SHROUD LOCATION
80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $p_r/p_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

$M_o = 0.98$

$p_{tr}/p_o = 5.987$

$p_{tr}/p_{in} = 1.98$ AT SUBSONIC CRUISE
SUBSONIC CRUISE

RUN 32  $M_o = 2.8$  $\frac{P_r}{P_o} = 1.97$

EJECTOR INLET POSITION     MINIMUM
CLAM SHELL POSITION  21°

FAN NOZZLE PRESSURE RATIO, $\frac{P_{TF}}{P_o}$

NOZZLE GROSS THRUST COEFFICIENT, CFP1

$M_o$ = 2.8  $\frac{P_r}{P_o}$ = 1.97
C2
SUBSONIC CRUISE
RUN 32  MO=0...  Pf/Po=1.97

---

Mo = 0.8
Po = 0.98

---

FAN-NOZZLE PRESSURE RATIO, PTF/Po
FAN NOZZLE FLOW COEFFICIENT, CD
SUBSONIC CRUISE

M₀ = 0.8
X = 0.90

EJECTOR INLET POSITION MINIMUM CLAMSHHELL POSITION 21°

FAN NOZZLE PRESSURE RATIO, PTF/PO
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 32
RDG=1780

M₀ = 0.81
Pᵣ/Pₒ = 3.495
Pᵣ/Pₚ = 1.98

EJECTOR INLET POSITION
MINIMUM

CLAMSHELL POSITION 21°

PRESSURE TAP AXIAL LOCATION, x/dₓₐₓ

C2 PRIMARY PLUG
FLOW SPLITTER L.O.
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M0 = 0.81  Ptr/P0 = 3.495  Ptr/Pt = 1.98

EJECTOR INLET POSITION MINIMUM CLAMSHELL POSITION 21° Δ FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, P1/PTR

PRESSURE TAP AXIAL LOCATION, X/dmax
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.81$  \hspace{1cm} $P_{tr}/P_o = 3.495$  \hspace{1cm} $P_{tr}/P_{tp} = 1.98$  \hspace{1cm} AT SUBSONIC CRUISE

- EJECTOR INLET POSITION MINIMUM
- CLAMSHELL POSITION 21°
- FOREBODY LOCATION
- 28° SHROUD LOCATION
- 88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_0 = 0.93 \quad \frac{P_\text{tr}}{P_\infty} = 4.486 \quad \frac{P_\text{tr}}{P_{\text{tr}p}} = 1.98 \)

**EJECTOR INLET POSITION**

**CLAM SHELL POSITION** 21°

- Primary Plug
- Flow Splitter 1.0

**LOCAL STATIC TO PRIMARY TOTAL PRESSURE**

\( \frac{P_{\text{st}}}{P_{\text{tr}}} \)

**PRESSURE TAP AXIAL LOCATION**

\( x/d_{\text{max}} \)
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \text{Ma} = 0.03 \)

\( \text{P}_r / \text{P}_o = 4.486 \)

\( \text{P}_r / \text{P}_p = 1.98 \)

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MINIMUM CLAM SHELL POSITION 21°</th>
<th>( \Delta ) FLOW SPLITTER O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \theta )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( 8.9</td>
<td></td>
<td></td>
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<tr>
<td>( 8.8</td>
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<td>( 8.7</td>
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<td>( 8.6</td>
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<td>( 8.5</td>
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<td>( 8.4</td>
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<tr>
<td>( 8.3</td>
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<tr>
<td>( 8.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( 8.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LOCAL STATIC TO FAN TOTAL PRESSURE, \( \text{P}_l / \text{P}_t \)

PRESSURE TAP AXIAL LOCATION, \( x / d_{\text{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.03

P_\text{fr}/P_\text{ao} = 4.486

P_\text{fr}/P_\text{tp} = 1.98

AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P_\text{fr}/P_\text{ao} vs.

PRESSURE TAP AXIAL LOCATION, x/d_{\text{max}}
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mach = 0.25  Pit/Po = 5.255  Pit/Pt = 1.98

EJECTOR INLET POSITION MINIMUM
CLAMSHELL POSITION 21°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE: Pit/Pt

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
C2 PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.05 Pᵣ/Pᵣ₀ = 5.255 Pᵣ/Pᵣ₀ = 1.98

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
C2

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.25  \( \frac{P_{tr}}{P_o} = 5.255 \)  \( \frac{P_{tr}}{P_{tp}} = 1.98 \) AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>Local to Ambient Static Pressure Ratio, ( \frac{P_{tr}}{P_o} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
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<tr>
<td>1.1</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.3</td>
</tr>
<tr>
<td>1.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pressure TAP Axial Location, ( x/d_{max} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.4</td>
</tr>
</tbody>
</table>

Run 32
RDG=1789

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_1/P_{1p}$

| $P_1/P_{1p}$ | 8.9 | 8.8 | 8.7 | 8.6 | 8.5 | 8.4 | 8.3 | 8.2 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.6 | 7.5 | 7.4 | 7.3 | 7.2 | 7.1 | 7.0 | 6.9 | 6.8 | 6.7 | 6.6 | 6.5 | 6.4 | 6.3 | 6.2 | 6.1 | 6.0 | 5.9 | 5.8 | 5.7 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 | 4.8 | 4.7 | 4.6 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | 0.0 |

- PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
- EJECTOR INLET POSITION
- PRIMARY PLUG
- FLAP SPINNER T.I.P.
- CLASHHEEL POSITION
- CLASHHELL MINIMUM
- PLUG AND SPINNER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE $Ma=0.95$
- $P_{1p}/P_0=5.918$
- $P_{1p}/P_0=1.97$
- $RDG=175.9$

Run 32
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_0 = 0.35 \quad \frac{P_{tr}/P_0}{P_{tr}/P_{p,c}} = 5.91 \quad \frac{P_{tr}/P_{c}}{P_{tr}/P_{p,c}} = 1.97 \)

---

**PRESSURE TAP AXIAL LOCATION, \( \times/d_{max} \)**
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M0 = 0.05  Pfr/Pos = 5.918  Pfr/Pp = 1.97 AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pfr/Po</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
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<tr>
<td>0.8</td>
</tr>
<tr>
<td>0.9</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>1.1</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.3</td>
</tr>
</tbody>
</table>

PRESSURE TAP AXIAL LOCATION, x/d_{max}
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.96 \quad \frac{P_{\infty}}{P_0} = 5.931 \quad \frac{P_{\infty}}{P_p} = 1.97 \]

PRESSURE TAP AXIAL LOCATION: \( x/d_{\text{max}} \)
### Plugs and Splitter Static Pressure Distributions at Subsonic Cruise

- **Mach Number (M):** 0.86
- **Plenum/Outlet Ratio (\(P_{pl}/P_0\)):** 5.931
- **Outlet/Plenum Ratio (\(P_{pl}/P_0\)):** 1.97

#### Run 32

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position</th>
<th>Minimum Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>21°</td>
<td>(\Delta)</td>
</tr>
<tr>
<td>0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.7</td>
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<td></td>
</tr>
<tr>
<td>0.6</td>
<td></td>
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<tr>
<td>0.5</td>
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<td></td>
</tr>
<tr>
<td>0.4</td>
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<td></td>
</tr>
<tr>
<td>0.3</td>
<td></td>
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</tr>
<tr>
<td>0.2</td>
<td>(\Delta)</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td>(\Delta)</td>
<td></td>
</tr>
</tbody>
</table>

#### Pressure Tap Axial Location

\(x/d_{max}\)
C2
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION
M₀ = 0.86  Pᵣ/P₀ = 5.931  Pᵣ/Pₚ = 1.97 AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MINIMUM</th>
<th>FOREBODY INLET</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHELL POSITION 21°</td>
<td>△ 28° SHROUD LOCATION</td>
</tr>
<tr>
<td>1.3</td>
<td>◇ 30° SHROUD LOCATION</td>
</tr>
</tbody>
</table>

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pᵣ/P₀

PRESSURE TAP AXIAL LOCATION, x/dmax
RUN 32

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_0 = 0.89  \quad P_{tr}/P_{ao} = 3.484  \quad P_{tr}/P_{pm} = 1.94

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P_{ls}/P_{tp}</th>
</tr>
</thead>
</table>
| \begin{align*}
| P_{ls}/P_{tp} & \\
|  \text{PRESSURE TAP AXIAL LOCATION, } x/d_{max} \\
| \end{align*} |

EJECTOR INLET POSITION  21°  MINIMUM
CLAMSHELL POSITION

\[ \square \quad \text{PRIMARY PLUG} \]
\[ \triangle \quad \text{FLOW SPLITTER 1.0} \]
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{\text{in}}}{P_o} = 3.484 \quad \frac{P_{\text{in}}}{P_p} = 1.94 \]

EJECTOR INLET POSITION MINIMUM CLAMSHELL POSITION 21°

FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_{\text{in}}}{P_{\text{in}}} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)

135
C2 EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{tr}}{P_{o}} = 3.484 \quad \frac{P_{tr}}{P_{p}} = 1.94 \] AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MINIMUM</th>
<th>FOREBODY INLET LOCATION</th>
<th>28° SHROUD LOCATION</th>
<th>88° SHROUD LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHELL POSITION 21°</td>
<td>□</td>
<td>△</td>
<td>♦</td>
<td>♣</td>
</tr>
</tbody>
</table>

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{tr}}{P_{o}} \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_m \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.89  \( \frac{Pt/P_o}{P_t/P_t} = 4.511 \)  \( \frac{Pt/P_t}{P_t/P_t} = 1.98 \)

EJECTOR INLET POSITION MINIMUM
CLAMSHELL POSITION 21°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_t/P_t \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
**Run 32**

**C2**

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.89$  $P_{tr}/P_{so} = 4.511$  $P_{tr}/P_{te} = 1.98$

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>8.0</td>
</tr>
<tr>
<td>0.1</td>
</tr>
<tr>
<td>0.2</td>
</tr>
</tbody>
</table>

**EJECTOR INLET POSITION MINIMUM**

**CLAMSHELL POSITION 21°**

Δ FLOW SPLITTER 0.0

**LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{tr}/P_{tr}$**
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89$, $P_{r}/P_o = 4.511$, $P_{r}/P_{p} = 1.98$ at subsonic cruise

Run 32

RDG=1814
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.89  
Ptr/Po = 5.256  
Ptr/P* = 1.96

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pl/Pp</th>
<th>PRESSURE TAP AXIAL LOCATION, x/dmax</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHELL POSITION 21°</td>
<td>(1) PRIMARY PLUG</td>
</tr>
<tr>
<td>EJECTOR INLET POSITION MINIMUM</td>
<td>(2) FLOW SPLITTER I.D.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>x/dmax</th>
<th>0.8</th>
<th>0.82</th>
<th>0.84</th>
<th>0.86</th>
<th>0.88</th>
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<th>1.4</th>
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<tbody>
<tr>
<td>Pl/Pp</td>
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<td>8.5</td>
<td>8.6</td>
<td>8.7</td>
<td>8.8</td>
</tr>
</tbody>
</table>
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

\( M_o = 0.89 \quad P_{Tr}/P_{\infty} = 5.256 \quad P_{Tr}/P_{TQ} = 1.96 \)

Ejector Inlet Position
Clamshell Position 21°
Δ Flow Splitter 0.0

Local Static to Fan Total Pressure, \( P_{Tr}/P_{TQ} \)

Pressure Tap Axial Location, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_0 = 0.89 \quad P_t/P_0 = 5.256 \quad P_{ty}/P_t = 1.96 \] AT SUBSONIC CRUISE

Pressures Taps Axial Location: \( x/d_{max} \)

Run 32
RDG=1815
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M o = 0.89  P*r/Po = 6.812  P*r/P*=1.93

EJECTOR INLET POSITION MINIMUM
CLAMSHELL POSITION 21°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P*/P*

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.89      Pr/Pe = 6.812      Pr/Pr = 1.98

EJECTOR INLET POSITION MINIMUM
CLAMSHELL POSITION 21°

FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, P1/P1f

PRESSURE TAP AXIAL LOCATION, x/dmax

144
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{tr}}{P_{o}} = 6.812 \quad \frac{P_{pr}}{P_{pp}} = 1.98 \] at subsonic cruise

Run 32
RDG = 1816

**Local to Ambient Static Pressure Ratio, \( \frac{P_{tr}}{P_{o}} \)**

- EJECTOR INLET POSITION
- MINIMUM CLAMSHELL POSITION 21°
- FOREBODY LOCATION
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

**Pressure Tap Axial Location, \( x/d_{max} \)**

145
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M\textsubscript{\infty} = 0.89  P\textsubscript{T}/P\textsubscript{0} = 7.815  P\textsubscript{T}/P\textsubscript{tp} = 1.97

Run 32

PRESSURE TAP AXIAL LOCATION, x/d\textsubscript{max}
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M = 0.89 \quad P_{T1}/P_4 = 7.815 \quad P_{T2}/P_4 = 1.97$

PRESSURE TAP AXIAL LOCATION: $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mach = 0.89  Pr/Po = 7.015  Pr/P′ = 1.97 AT SUBSONIC CRUISE

P/Pe vs. x/dmax

PRESSURE TAP AXIAL LOCATION, x/dmax
C2 SUBSONIC CRUISE
RUN 45 MO=0.95 PTF/PTP=1.97

EJECTOR INLET POSITION
CLAMSHELL POSITION 17°

NOZZLE GROSS THRUST COEFFICIENT, CFPI

FAN NOZZLE PRESSURE RATIO, PTF/PO
C2
SUBSONIC CRUISE
RUN 45  $M_0 = 0.95$  $\frac{P_{in}}{P_0} = 1.97$

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHELL POSITION</td>
<td>17°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAN-NOZZLE FLOW COEFFICIENT, CDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>$M_0$ = 0.8</td>
</tr>
<tr>
<td>$\Delta = 0.36$</td>
</tr>
<tr>
<td>$\Phi = 0.56$</td>
</tr>
<tr>
<td>$\ast = 0.70$</td>
</tr>
<tr>
<td>$\times = 0.80$</td>
</tr>
<tr>
<td>$\Sigma = 0.95$</td>
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</table>

<table>
<thead>
<tr>
<th>FAN NOZZLE PRESSURE RATIO, PTF/PO</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
</tr>
</tbody>
</table>
C2
SUBSONIC CRUISE

RUN 45 MO=0.95 Pfr/Pf=1.97

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

M_o =
□ = 0.96
Δ = 0.93
Φ = 0.56
★ = 0.70
★ = 0.80
★ = 0.90
★ = 0.95

PRIMARY-NOZZLE FLOW COEFFICIENT, C_D

FAN NOZZLE PRESSURE RATIO, PTF/PO

151
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

Ma = 0.82
P*/Po = 3.573
P*/P* = 1.96

C2

Ejector Inlet Position Midway
Clamshell Position 17°

Pressure Tap Axial Location, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.02 P*ρ/Po = 3.573 P*ρ/P*υ = 1.96

PRESSURE TAP AXIAL LOCATION, x/dmax
C2

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.82$  \[ \frac{P_{tr}}{P_o} = 3.573 \quad \frac{P_{tr}}{P_{tp}} = 1.96 \] AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY INLET
△ 20° SHROUD LOCATION
○ 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $\frac{P_r}{P_o}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

Run 45
RDG=2224

154
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.03 \quad P_t/P_o = 4.555 \quad P_t/P_{tip} = 1.96$

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 17°

Δ FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_l/P_{tot}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.83  \( \frac{P_{tr}}{P_o} = 4.555 \)  \( \frac{P_{tr}}{P_{tp}} = 1.96 \) AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

\( M_a = 0.84 \quad P_{tr}/P_{ao} = 5.326 \quad P_{tr}/P_{po} = 1.98 \)

Ejector Inlet Position Midway

Clamshell Position 17°

Primary Plug

Flow Splitter 1.0

Local Static to Primary Total Pressure, \( P_{ls}/P_{tp} \)

Pressure Tap Axial Location, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{\text{Pr}_{r}/\text{Po}}{=5.326} \quad \frac{\text{Pr}_{r}/\text{Pr}_{p}}{=1.98} \]

Local static to fan total pressure, \( \frac{P_{i}}{P_{T}} \)

Pressure tap axial location, \( x/a_{max} \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

\( \Delta \) FLOW SPLITTER O.D.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.4

Pfr/Po = 5.326

Pfr/Pfr = 1.98 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY INLET LOCATION

SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pfr/Po

PRESSURE TAP AXIAL LOCATION, x/dmax
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.35  Prr/Pos = 6.078  Prr/Pp = 1.97

PRESSURE TAP AXIAL LOCATION: x/dmax

1.2

EJECTOR  INLET POSITION  MIDWAY
CLAMSHELL POSITION  17°
PRIMARY PLUG
FLOW SPLITTER 1.0
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.85 \quad P_x/P_\infty = 6.078 \quad P_x/P_{\tau p} = 1.97 \]

<table>
<thead>
<tr>
<th>Local Static to Fan Total Pressure, ( P_x/P_t )</th>
<th>Pressure Tap Axial Location, ( x/d_{max} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>1.2</td>
</tr>
<tr>
<td>3.4</td>
<td>1.3</td>
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<td>3.5</td>
<td>1.4</td>
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<td>3.6</td>
<td>1.5</td>
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<tr>
<td>3.7</td>
<td>1.6</td>
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<tr>
<td>3.8</td>
<td>1.7</td>
</tr>
<tr>
<td>3.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

EJECTOR INLET POSITION 17°
CLAMSHELL POSITION 17°

Flow Splitter O.D.

RUN 45  RDG=2227

162
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_o = 0.65 \quad P_{tr}/P_o = 6.878 \quad P_{tr}/P_{tp} = 1.97 \text{ AT SUBSONIC CRUISE} \]

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY INLET LOCATION
28° SHROUD LOCATION
88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( p_{tr}/p_o \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

163
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.05  Pr/Po = 6.216  Pr/Pr = 1.97

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

PRESSURE TAP AXIAL LOCATION: x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.05 \quad P_t/P_o = 6.216 \quad P_t/P_t = 1.97 \]

### EJECTOR INLET POSITION MIDWAY

<table>
<thead>
<tr>
<th>.LOCAL STATIC TO FAN TOTAL PRESSURE, ( P_t/P_t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
</tr>
</tbody>
</table>

### CLAMSHELL POSITION 17°

| - | - | - | - | - | - | - | - | - |

### FLOW SPLITTER O.D.

| - | - | - | - | - | - | - | - | - |

### PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

[Graph and data points]
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.85

Pr/Po = 6.216

Pr/Ppr = 1.97

AT SUBSONIC CRUISE

EJECTOR INLET POSITION

CLAMSHELL POSITION  17°

FOREBODY INLET

28° SHROUD LOCATION

88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pr/Po

PRESSURE TAP AXIAL LOCATION, x/dmax

Run 45

RDG=2228
Local static to primary total pressure, $p_1/p_{tp}$

Plug and splitter static pressure distributions at subsonic cruise

Mo = 0.95
$p_{ty}/p_o = 5.323$
$p_{ty}/p_{tp} = 1.97$

Ejector inlet position 17°
Clamshell position midway
Flow splitter 1.0
Run 45
DG = 2232

C2

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
**Run 45**

**C2**

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ \text{\( M = 0.95 \)} \quad \text{\( \frac{P_{tr}}{P_o} = 5.323 \)} \quad \text{\( \frac{P_{tr}}{P_{\rho}} = 1.97 \)}

<table>
<thead>
<tr>
<th>Ejector Inlet Position Midway</th>
<th>Clamshell Position 17°</th>
<th>Δ Flow Splitter O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
<td>8.8</td>
<td>8.7</td>
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<td>8.3</td>
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<td>8.1</td>
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<tr>
<td>8.1</td>
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</tbody>
</table>

**Local Static to Fan Total Pressure, \( p_{tr}/p_{tr'} \)**

**Pressure Tap Axial Location, \( x/d_{max} \)**
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.95$, $\frac{P_{tr}}{P_o} = 5.323$, $\frac{P_{tr}}{P_{ip}} = 1.97$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, $\frac{P_{tr}}{P_o}$</th>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY CLAMSHELL POSITION 17°</th>
<th>□ FOREBODY INLET LOCATION</th>
<th>△ 20° SHROUD LOCATION</th>
<th>◊ 80° SHROUD LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
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<td>1.2</td>
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<td>0.6</td>
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</tbody>
</table>

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

169
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.89  Pₛ/Pₛ₀ = 3.571  Pₛ/Pₚₛ = 1.94

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pₛ/Pₚₛ

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ

170
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.89

Prc/Pos = 3.571

Prc/Ptp = 1.94

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION 17°</th>
<th>Δ FLOW SPLITTER O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9</td>
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<tr>
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</table>

PRESSURE TAP AXIAL LOCATION: x/dmax

Run 45
RNG=2236
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\( M_o = 0.89 \quad \frac{P_{re}/P_{o}}{= 3.571} \quad \frac{P_{re}/P_{re}}{= 1.94} \) AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$Ma = 0.89\quad P_{tr}/P_o = 4.574\quad P_{tr}/P_{tp} = 1.98$

EJECTOR INLET POSITION  MIDWAY
CLAM SHELL POSITION  17°

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.89  P_t/P_o = 4.574  P_r/P_r = 1.98

PRESSURE TAP AXIAL LOCATION, x/d_{max}

LOCAL STATIC TO FAN TOTAL PRESSURE, P_l/P_t

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°  Δ FLOW SPLITTER O.D.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.89
P_tr/P_o = 4.574
P_tr/P_f = 1.98 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°
FOREBODY INLET LOCATION
28° SHROUD LOCATION
88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P_tr/P_o

PRESSURE TAP AXIAL LOCATION, x/d_max
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.89  \( \frac{P_{tr}}{P_o} = 5.384 \)  \( \frac{P_{tr}}{P_{tp}} = 1.97 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{p_{st}}{p_{tp}} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.89 \quad \frac{P_{tr}}{P_o} = 5.384 \quad \frac{P_{tr}}{P_{dp}} = 1.97 \]

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>( \Delta ) FLOW SPLITTER 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \beta )</td>
<td>( \psi )</td>
<td>( \theta )</td>
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<tr>
<td>0.8</td>
<td>0.7</td>
<td>0.6</td>
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<td>0.6</td>
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<td>0.4</td>
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<tr>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_{tr}/P_{dp} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.89  \( \frac{P_r}{P_o} = 5.384 \)  \( \frac{P_r}{P_o} = 1.97 \) AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

RUN 45

RDG = 2238

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P}{P_o} \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°
FOREBODY INLET LOCATION
20° SHROUD LOCATION
80° SHROUD LOCATION
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.89\quad P_{tr}/P_o = 6.882\quad P_{tr}/P_{tp} = 1.96$

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

<table>
<thead>
<tr>
<th>Local Static Total Pressure, $p_{l}/p_{tp}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$p_{l}$</td>
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<tr>
<td>$0.9$</td>
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<tr>
<td>$0.1$</td>
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<tr>
<td>$0.0$</td>
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</table>

PRESSURE TAP AXIAL LOCATION: $x/a_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M = 0.89  \( \frac{P_r}{P_o} = 6.882 \)  \( \frac{P_t}{P_p} = 1.96 \)

**EJECTOR INLET POSITION**

**CLAMSHELL POSITION** 17°

**FLOW SPLITTER 0.0**

**LOCAL STATIC TO FAN TOTAL PRESSURE**  \( \frac{p_s}{p_t} \)

**PRESSURE TAP AXIAL LOCATION**  \( \times/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.8
Pᵣ/P₀ = 6.882
Pᵣ/Pₚ = 1.96 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°
∆ FOREBODY INLET LOCATION
△ 20° SHROUD LOCATION
◊ 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pᵣ/P₀

PRESSURE TAP AXIAL LOCATION: x/dₘₐₓ
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_o = 0.89 \quad \frac{p_{tr}/p_o}{p_{tr}/p_{ip}} = 7.885 \quad \frac{p_{tr}/p_{ip}}{p_{ip}} = 1.97 \]

<table>
<thead>
<tr>
<th>Local Static to Primary Total Pressure, ( p_{st}/p_{ip} )</th>
<th>0.8</th>
<th>0.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Tap Axial Location, ( x/d_{max} )</td>
<td>0.2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

\( \text{Run 45} \)

\( \text{RDG} = 2240 \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_ = 0.89
P_{in}/P_{0} = 7.885
P_{fr}/P_{p} = 1.97

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FLOW SPLITTER 0.0

PRESSURE TAP AXIAL LOCATION, x/d_{max}
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.89  \( P_{r}/P_o = 7.885 \)  \( P_{r}/P_{r} = 1.97 \) AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_r/P_o \)

PRESSURE TAP AXIAL LOCATION, \( z/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_a = 0.85$  $P_{tr}/P_o = 5.338$  $P_{tr}/P_{tp} = 1.96$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \text{Re} = \frac{3000 \text{ ft}}{200 \text{ ft/s}} = 15 \quad \frac{\text{ft}}{\text{sec}} \]

\[ \frac{P_{\text{in}}}{P_{\text{a}}} = 5.33 \quad \frac{P_{\text{in}}}{P_{\text{a}}} = 1.96 \text{ at subsonic cruise} \]

- EJECTOR INLET POSITION: MIDWAY
- CAMSHELL POSITION: 17°
- FOREBODY INLET LOCATION
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION: \( x/d_{\text{max}} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.78 \quad P_{r/P_{o}} = 5.343 \quad P_{r/P_{p}} = 1.97$

EJECTOR INLET POSITION HIGHWAY
CLAMSHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{r}/P_{p}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.78  Pr/Po = 5.343  Pr/Po = 1.97

PRESSURE TAP AXIAL LOCATION, x/dmax
C2
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.78$, $\frac{P_{tr}}{P_o} = 5.34$, $\frac{P_{tr}}{P_{tp}} = 1.97$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY LOCATION
$\Delta$ 20° SHROUD LOCATION
$\Diamond$ 80° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$Ma = 0.56 \quad Pr/Po = 5.35 \quad Pr/Pr = 1.98$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
**Run 45**

**C2**

**PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE**

\[ \text{No.} = 0.56 \quad \frac{\text{P}^*}{\text{P}_0} = 5.354 \quad \frac{\text{P}^*_r}{\text{P}^*_{on}} = 1.98 \]

---

<table>
<thead>
<tr>
<th>Pressure Tap Axial Location, ( x/d_{max} )</th>
<th>1.2</th>
<th>1.1</th>
<th>1.0</th>
<th>0.9</th>
<th>0.8</th>
<th>0.7</th>
<th>0.6</th>
<th>0.5</th>
<th>0.4</th>
<th>0.3</th>
<th>0.2</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Static to Fan Total Pressure, ( P_l/P_t )</td>
<td>8.9</td>
<td>8.8</td>
<td>8.7</td>
<td>8.6</td>
<td>8.5</td>
<td>8.4</td>
<td>8.3</td>
<td>8.2</td>
<td>8.1</td>
<td>8.0</td>
<td>7.9</td>
<td>7.8</td>
</tr>
</tbody>
</table>

---

**EJECTOR INLET POSITION MIDDLE**

**CLAMSHELL POSITION 17°**

**Δ FLOW SPLITTER 0.0**

---

192
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.56$  $\frac{P_{r}}{P_{o}} = 5.354$  $\frac{P_{r}}{P_{tp}} = 1.98$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{r}/P_o$</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
</table>

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION 17°
- FOREBODY
- 20° SHROUD
- 80° SHROUD
- INLET LOCATION

(original page is of poor quality)
**C2**

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M = 9.36 \quad P_{r}/P_{o} = 5.367 \quad P_{r}/P_{p} = 1.98 \]

<table>
<thead>
<tr>
<th>Local Static to Primary Total Pressure, ( P_{l}/P_{p} )</th>
<th>Pressure Tap Axial Location, ( x/d_{max} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.9</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
<tr>
<td>1.8</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
<tr>
<td>1.7</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
<tr>
<td>1.6</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
<tr>
<td>1.5</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
<tr>
<td>1.4</td>
<td><img src="image" alt="Pressure Tap Locations" /></td>
</tr>
</tbody>
</table>

**EJECTOR INLET POSITION**

**CLAMSHELL POSITION**

**MIDWAY**

**PRIMARY PLUG**

**FLOW SPLITTER**

---

RUN 45

RDG=2262
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.36
Pᵣ/P₀ = 5.367
Pᵣ/Pᵢ₀ = 1.98

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

△ FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, Pᵣ/Pᵢ₀

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ

195
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.36 \quad \frac{P_{tr}}{P_o} = 5.367 \quad \frac{P_{tr}}{P_{tp}} = 1.98$ AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
C2
SUBSONIC CRUISE
RUN 46 & 47 M0= 0.9 M0 = 0.89

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED

FAN NOZZLE PRESSURE RATIO, PTF/PO
C2 SUBSONIC CRUISE
RUN 46847 $M = 0.9$ $P_{tr}/P_{typ} = 1.97$

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

FAN-NOZZLE PRESSURE RATIO, PTF/PO

FAN NOZZLE FLOW COEFFICIENT, CDF
SUBSONIC CRUISE RUN 1.998

EJECTOR INLET CLAMSHELL POSITION REMOVED MIDWAY

FAN NOZZLE PRESSURE RATIO, PTF/P0

PRIMARY-NOZZLE FLOW COEFFICIENT, CDP

\[ \frac{\text{PTF}}{\text{P0}} \]

\[ \Phi \]

\[ \phi = \frac{\Phi}{\Phi_{\text{ref}}} \]

\[ \phi = \Phi_{\text{ref}} \]

\[ \Phi_{\text{ref}} = \Phi_{\text{ref}} \]

\[ \phi = \Phi_{\text{ref}} \]
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 46
RDG=2273

Mo = 0.89

Plr/Po = 3.572

Plr/Ppt = 1.94

PRESSURE TAP AXIAL LOCATION, x/dmax
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{r}}{P_{s}} = 3.572 \quad \frac{P_{r}}{P_{r}} = 1.94 \]

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

\[ \text{PRESSURE TAP AXIAL LOCATION, } x/d_{max} \]

\[ \text{PRESSURE TAP AXIAL LOCATION, } x/d_{max} \]
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{r}}{P_{0}} = 3.572 \quad \frac{P_{r}}{P_{t}} = 1.94 \] AT SUBSONIC CRUISE

\[ M_0 = 0.89 \]

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{r}}{P_{0}} \)**

**PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)**

RDG=2273
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.89  P*r/Po = 4.588  P*r/P*p = 1.98

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_0 = 0.89 \quad P_{tr}/P_0 = 4.588 \quad P_{tr}/P_{t0} = 1.98$

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION REMOVED Δ</th>
<th>FLOW SPLITTER 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_{tr}/P_{t0}$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{t0}/P_{tr}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89 \quad P_{tr}/P_o = 4.58 \quad P_{tr}/P_{ip} = 1.98$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

Run 46

RDG=2274
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.89  \( \frac{P_{tr}}{P_0} = 5.336 \)  \( \frac{P_{tr}}{P_{tp}} = 1.97 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{P_{tr}}{P_{tp}} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

Run 46

ROG=2275
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.89  \( \frac{P_t}{P_0} = 5.336 \)  \( \frac{P_{t,r}}{P_{t,p}} = 1.97 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED
Δ FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_t}{P_{t,r}} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)

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**EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION**

\( M_0 = 0.89 \quad \frac{P_{tr}}{P_0} = 5.336 \quad \frac{P_{tr}}{P_{tr, P_1}} = 1.97 \) at subsonic cruise

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, ( \frac{P_{tr}}{P_0} )</th>
<th>PRESSURE TAP AXIAL LOCATION, ( x/\text{d}_{max} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>( \times )</td>
</tr>
<tr>
<td>0.6</td>
<td>( \times )</td>
</tr>
<tr>
<td>0.7</td>
<td>( \times )</td>
</tr>
<tr>
<td>0.8</td>
<td>( \times )</td>
</tr>
<tr>
<td>0.9</td>
<td>( \times )</td>
</tr>
<tr>
<td>1.0</td>
<td>( \triangle )</td>
</tr>
<tr>
<td>1.1</td>
<td>( \triangle )</td>
</tr>
<tr>
<td>1.2</td>
<td>( \triangle )</td>
</tr>
<tr>
<td>1.3</td>
<td>( \triangle )</td>
</tr>
</tbody>
</table>

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION REMOVED
- FOREBODY INLET
- \( 20^\circ \) SHROUD LOCATION
- \( 80^\circ \) SHROUD LOCATION

**RDG=2275**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

**Run 46**

**RDG = 2276**

**M0 = 0.89**

\[ \frac{P_{tr}}{P_o} = 6.138 \quad \frac{P_{tr}}{P_p} = 1.96 \]

**LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_{tr}/P_o \)**

**PRESSURE TAP AXIAL LOCATION, \( x/\delta_{max} \)**

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION REMOVED
- PRIMARY PLUG
- FLOW SPLITTER 1.0
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{tr}}{P_o} = 6.188 \quad \frac{P_{tr}}{P_{r}} = 1.96 \]

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED

\[ \frac{P_{tr}}{P_r} \]

LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_{tr}}{P_r} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.89
Pᵣ₀/P₀ = 6.188
Pᵣ/Pₚ₀ = 1.96 AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pᵣ/P₀

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED
FOREBODY
20° SHROUD LOCATION
80° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION, x/dmax
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M_ = 0.93  P_ = 7.115  P_ = 1.97

PRESSURE TAP AXIAL LOCATION, x/d_max
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.98$, $P_\text{tr}/P_o = 7.115$, $P_\text{tr}/P_\text{ps} = 1.97$

**Diagram:**
- Local static to fan total pressure, $P_\text{st}/P_{tr}$
- Pressure tap axial location, $x/d_{\max}$

Legend:
- $\Delta$ Flow splitter O.D.
- Ejector inlet position
- Clamshell position removed

Run 46
RDG=2277
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.90  P₀/ₚ₀ = 7.115  P₀/ₚ₀₁ = 1.97 AT SUBSONIC CRUISE

- EJECTOR INLET POSITION MIDWAY
- FOREBODY
- 20° SHROUD
- 80° SHROUD

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P₀/ₚ₀

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \text{Me} = 0.89 \quad \frac{P_{\text{r}}}{P_{\infty}} = 3.583 \quad \frac{P_{\text{r}}}{P_{\text{t}}}, t = 1.80 \]

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, ( x/d_{\text{max}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
</tr>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>0.7</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.5</td>
</tr>
<tr>
<td>0.4</td>
</tr>
<tr>
<td>0.3</td>
</tr>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>0.1</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

- Primary Plug
- Flow Splitter 1.0
- Ejector Inlet Position
- Clamshell Position
- Removed
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M_ = 0.89  Pr/Pe = 3.583  Pr/Prp = 1.88

PRESSURE-TAP AXIAL LOCATION, x/dmax

PRESSURE - TAP AXIAL LOCATION, x/dmax

PRESSURE - TAP AXIAL LOCATION, x/dmax

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED

Δ FLOW SPLITTER 0.0
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_a = 0.89 \]

\[ P_t/P_o = 4.562 \]

\[ P_t/P_p = 1.81 \]

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY PLUG</td>
<td>FLOW SPLITTER L.O.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, ( P_t/P_p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_t/P_o )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, ( \xi/d_{max} )</th>
</tr>
</thead>
</table>

\( \xi/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M = 0.89$  \quad $\frac{P_{tr}}{P_{ox}} = 4.562$  \quad $\frac{P_{tr}}{P_{p}} = 1.81$

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION REMOVED
- \( \Delta \) FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{tr}/P_{tr}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89$  $\frac{P_{tr}/P_o}{P_{tr}/P_{tp}} = 4.562$  $\frac{P_{tr}/P_{tp}} = 1.81$ AT SUBSONIC CRUISE

- EJECTOR INLET POSITION MIDWAY
- CLAMSHELL POSITION REMOVED
- FOREBODY LOCATION
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M = 0.89 \quad \frac{P_{ir}}{P_{oa}} = 5.348 \quad \frac{P_{ir}}{P_{tp}} = 1.88$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Ma = 0.89  Pit/Po = 5.340  Pit/Pt = 1.80

LOCAL STATIC TO FAN TOTAL PRESSURE, Pit/Pt

PRESSURE TAP AXIAL LOCATION, x/dmax

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED
Δ FLOW SPLITTER 0.0
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89 \quad P_{tr}/P_o = 5.34 \quad P_{tr}/P_{tp} = 1.88$ AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION: $x/d_{max}$

LOCAL TO AMBIENT STATIC PRESSURE RATIO $P_i/P_o$
### C2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_o = 8.89 \)

\( \frac{P_{ir}}{P_o} = 6.899 \)

\( \frac{P_{ir}}{P_{tp}} = 1.81 \)

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, ( \frac{P_{ir}}{P_{ir}} )</th>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION REMOVED</th>
<th>( \Delta ) FLOW SPLITTER O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8</td>
<td></td>
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<tr>
<td>8.7</td>
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<td>8.6</td>
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<td>8.5</td>
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<td>8.4</td>
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<tr>
<td>8.3</td>
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<td></td>
<td></td>
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<td>8.2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

---

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**C2**

**EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION**

\( \text{Mo} = 0.89 \quad \frac{P_{\text{in}}}{P_{\text{e}}} = 0.899 \quad \frac{P_{\text{r}}}{P_{\text{e}}} = 1.81 \) AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>CLAMSHELL POSITION REMOVED</th>
<th>FOREBODY</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \square )</td>
<td>( \triangle )</td>
<td>( \phi )</td>
<td>( 20^\circ ) SHROUD LOCATION</td>
</tr>
</tbody>
</table>

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{\text{r}}}{P_{\text{e}}} \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)**

227
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_e = 0.89$

$P_r/P_o = 7.094$

$P_r/P_{tp} = 1.81$

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_s/P_{tp}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

\[ M = 8.9 \quad P_{tr}/P_{ox} = 7.094 \quad P_{tr}/P_{Yo} = 1.81 \]

### Pressure TAP Axial Location: \( x/d_{max} \)

#### Diagram

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position Removed</th>
<th>( \Delta ) Flow Splitter 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
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<tr>
<td>1.4</td>
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</table>
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_0 = 0.89 \quad P_T/P_0 = 7.094 \quad P_{tr}/P_{tp} = 1.81 \] AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>CLAMSHELL POSITION</th>
<th>REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREBODY</td>
<td>□</td>
<td>△ 20° SHROUD LOCATION</td>
<td>♦ 60° SHROUD LOCATION</td>
</tr>
</tbody>
</table>

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( P_{tr}/P_0 \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_\infty = 0.89 \quad P_{tr}/P_{Po} = 5.354 \quad P_{tr}/P_{tp} = 1.88 \)

**Run 47**

**RDG=2284**

---

**EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION REMOVED**

- ○ PRIMARY PLUG
- ○ FLOW SPLITTER I.D.

---

**LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_{tr}/P_{tp} \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)**

---

231
### LOCAL STATIC TO FAN TOTAL PRESSURE, $p_1/p_0$

<table>
<thead>
<tr>
<th>$x/d_{max}$</th>
<th>$P_{1}$</th>
<th>$P_{2}$</th>
<th>$P_{3}$</th>
<th>$P_{4}$</th>
<th>$P_{5}$</th>
<th>$P_{6}$</th>
<th>$P_{7}$</th>
<th>$P_{8}$</th>
<th>$P_{9}$</th>
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</thead>
<tbody>
<tr>
<td>$P_{1}$</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
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<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>$P_{2}$</td>
<td>2.1</td>
<td>2.2</td>
<td>2.3</td>
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<td>2.5</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

**Diagram Notes:**
- Ejector inlet position high.
- Ejector inlet position removed.
- Flow splitter 0.0 - 1.0.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.89
Pr/Po = 5.35
P'T/P'T = 1.80 AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pr/Po

PRESSURE TAP AXIAL LOCATION, x/dmax

Run 47

RDG = 2284
PRESSURE TAP AXIAL LOCATION, x/dmax

Run 47
RDG=2286

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_0 = 0.89
P*r/P_d = 3.526
P*r/P*p = 1.98

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P/r/P_{p}

EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION REMOVED

PRIME PLUG FLOW SPLITTER I.D.
### C2

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ \begin{align*}
M_o &= -0.30 \\
\frac{p_{in}}{p_o} &= 3.526 \\
\frac{p_{in}}{p_{e}} &= 1.98
\end{align*} \]

#### Pressure Tap Axial Location:

\[ \frac{x}{d_{max}} \]

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position Removed</th>
<th>Flow Splitter O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
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<tr>
<td>1.2</td>
<td>1.2</td>
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<tr>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

\[ \begin{align*}
\text{LOCAL STATIC TO FAN TOTAL PRESSURE, } p_{i}/p_{t}c
\end{align*} \]
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$Mo = -0.88 \quad Pit/Po = 3.526 \quad Pit/PiT = 1.98$ AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[
M_o = 0.54 \quad \frac{P_{tr}}{P_0} = 4.584 \quad \frac{P_{tr}}{P_{pp}} = 1.97
\]

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

\[
\begin{array}{c|c|c}
\text{PRESSURE TAP AXIAL LOCATION, } x/d_{max} & \text{LOCAL STATIC TO PRIMARY TOTAL PRESSURE, } P_{st}/P_t \\
\hline
1.2 & 1.4 & 1.6 & 1.8 & 2.0 & 2.2 & 2.4 \\
\end{array}
\]
PLUG AND SplitTER Static PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.04 \quad \frac{P_{tf}}{P_{in}} = 4.584 \quad \frac{P_{tf}}{P_{tip}} = 1.97 \]

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.84

\[ \frac{P_{tr}}{P_{o}} = 4.584 \quad \frac{P_{tr}}{P_{t}} = 1.97 \] AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

\[ \square \quad \text{FOREBODY INLET} \]
\[ \triangle \quad 20^\circ \text{SHROUD LOCATION} \]
\[ \diamond \quad 80^\circ \text{SHROUD LOCATION} \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{t}}{P_{o}} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)

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Plug and Splitter Static Pressure Distributions at Subsonic Cruise

\[ \frac{P_{i}}{P_{e}} = 5.342 \quad \frac{P_{r}}{P_{i}} = 1.98 \]

Run 47

Local Static to Primary Total Pressure, \( \frac{P_{s}}{P_{t}} \)

Pressure Tap Axial Location, \( \frac{x}{d_{max}} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

MO = 0.85  Pt/Po = 5.342  Pr/Pr = 1.98

FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, Pr/Pt

EJECTOR INLET POSITION MIDWAY CLAMSHELl POSITION REMOVED

PRESSURE TAP AXIAL LOCATION, x/dmax
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M = 0.85  P't/Po = 5.342  P't/P't = 1.98 AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, x/dmax
### C2

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ \text{MO} = 0.95 \quad P_{tr}/P_\infty = 6.101 \quad P_{tr}/P_{t+} = 1.97 \]

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Midway Clamshell Position Removed</th>
<th>Primary Plug</th>
<th>Flow Splitter 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
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</tbody>
</table>

**Pressure Tap Axial Location**

\[ x/d_{max} \]

---

243
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

M = 0.85  Pr/P₀ = 6.101  Pr/Pₚ = 1.97

Ejector inlet position midway
Clamshell position removed

Δ Flow Splitter 0.0

Local Static To Fan Total Pressure, P₁/Pₚ

Pressure Tap Axial Location: x/dₘₚ
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$\text{M}_\infty = 0.85 \quad \frac{P_r}{P_o} = 6.181 \quad \frac{P_r}{P_t} = 1.97 \text{ AT SUBSONIC CRUISE}$

Pressure tap axial location: $x/d_{max}$
CONFIGURATION A₂

IRIS FLAP NOZZLE

SUBSONIC CRUISE
**A2 SUBSONIC CRUISE**

**RUN 33**

**EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION 21°**

\[ \text{M}_0 = 0.89 \]

**FAN NOZZLE PRESSURE RATIO, PTF/PO**

**NOZZLE GROSS THRUST COEFFICIENT, CFPI**

**PTr/Pp**

\[ \Delta = 1.87 \]

\[ \phi = 2.2 \]
A2
SUBSONIC CRUISE
RUN 33
Mo = 0.89

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 21°

FAN-NOZZLE FLOW COEFFICIENT, CDF

FAN NOZZLE PRESSURE RATIO, PTF/PO

PTR/PTP = \( \frac{P_T}{P_T^0} \)
\( \Delta = 0.97 \)
\( \phi = 2.2 \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 33
RDG = 1841

\( M = 0.89 \quad P_{tr}/P_0 = 3.504 \quad P_{tr}/P_{pp} = 1.94 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_{st}/P_{tp} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
### Run 33

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

$$M_o = 0.89 \quad P_{rT}/P_o = 3.524 \quad P_{rT}/P_{TP} = 1.94$$

**Ejector Inlet Position: Midway**

**Clamshell Position: 21°**

**Flow Splitter: 0.0**

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{lT}/P_{rT}$</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
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<td>$\Delta$</td>
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<td>$\Delta$</td>
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</tbody>
</table>

251
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.89 \quad P_{tr}/P_o = 3.504 \quad P_{tr}/P_P = 1.94$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
<th>CLAMSHELL POSITION 21°</th>
<th>FOREBODY INLET 20°</th>
<th>SHROUD LOCATION 20°</th>
<th>SHROUD LOCATION 80°</th>
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</thead>
<tbody>
<tr>
<td>LOCAL TO AMBIENT static pressure ratio, $P_i/P_o$</td>
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<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
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PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

252
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{ir}}{P_o} = 4.497 \quad \frac{P_{ir}}{P_{pp}} = 1.97 \]

**EJECTOR INLET POSITION MIDWAY**

**CLAMSHELL POSITION 21°**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)**
### PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[\text{Ma} = 2.89 \quad \frac{P_{*r}}{P_o} = 4.497 \quad \frac{P_{*r}}{P_{tr}} = 1.97\]

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, (\frac{P_{st}}{P_{tr}})</th>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION 21&quot;</th>
<th>Δ FLOW SPLITTER O.D.</th>
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<td>(\text{S.9})</td>
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<td>(\text{S.5})</td>
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<td>(\text{S.1})</td>
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</tbody>
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PRESSURE TAP AXIAL LOCATION, \(\frac{x}{d_{max}}\)
Run 33
RDG=1842

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.89

$P_{tr}/P_o = 4.497$

$P_{tr}/P_{r} = 1.97$

AT SUBSONIC CRUISE

FOREBODY INLET

FOREBODY INLET POSITION MIDWAY

CLAMSHELL POSITION 21°

28° SHROUD LOCATION

38° SHROUD LOCATION

PRESSURE TAP AXIAL LOCATION, x/dmax
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

$M_o = 0.89 \quad \frac{P_{tr}/P_o}{P_{tr}/P_{p}} = 5.261 \quad \frac{P_{tr}/P_{p}}{P_{p}} = 1.97$

Ejector Inlet Position MIDWAY
Clamshell Position 21°

Primary Plug
Flow Splitter 1.0

Local Static to Primary Total Pressure, $P_{tr}/P_p$
Pressure Tap Axial Location, $x/d_{max}$

256
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \frac{\text{Ptr}}{\text{Po}} = 5.261 \quad \frac{\text{Ptr}}{\text{PtP}} = 1.97 \)

Run 33

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

\( \Delta \) FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, \( \text{P}_{\text{t}} / \text{Ptr} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)

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**EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION**

Run 33

RDG=1843

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, x/dmax</th>
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</table>

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, P1/P0</th>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION 21°</th>
<th>FOREBODY INLET</th>
<th>20° SHROUD LOCATION</th>
<th>80° SHROUD LOCATION</th>
</tr>
</thead>
<tbody>
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<td>🌟</td>
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<td>🌟</td>
</tr>
</tbody>
</table>

**MO = 0.89  P1/P0 = 5.261  P1/P1 = 1.97 AT SUBSONIC CRUISE**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_a = 0.89 \quad \frac{P_{tr}}{P_0} = 6.823 \quad \frac{P_{tr}}{P_{tp}} = 1.96$

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 21°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $\frac{P_{tr}}{P_{tp}}$

PRESSURE TAP AXIAL LOCATION, $\frac{x}{d_{max}}$
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_\infty = 0.89 \quad \text{Pr}/\text{Po} = 6.023 \quad \text{Pr}/\text{Pr}_0 = 1.96 \]

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION 21°</th>
<th>( \Delta ) FLOW SPLITTER 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8</td>
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<tr>
<td>0.7</td>
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<tr>
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<tr>
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</table>

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, ( x/d_{\text{max}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>1.2</td>
</tr>
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<td>1.4</td>
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</tbody>
</table>

260
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89$, $P_{fr}/P_o = 6.023$, $P_{fr}/P_{1p} = 1.96$ AT SUBSONIC CRUISE

- EJECTOR INLET POSITION
- MIDWAY
- CLAMSHELL POSITION 21°
- FOREBODY INLET
- 20° SHROUD LOCATION
- 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{fr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M = 0.98
P\textsubscript{tr}/P\textsubscript{p} = 7.042
P\textsubscript{tr}/P\textsubscript{t} = 1.98

Pressure tap axial location: \( x/d_{max} \)
Plug and splitter static pressure distributions at subsonic cruise

\[ \frac{M}{1.2} = 0.98 \quad \frac{P_{tr}}{P_0} = 7.842 \quad \frac{P_{tr}}{P_{tp}} = 1.98 \]

Ejector inlet position midway
Clamshell position 21°

δ Flow splitter 0.0

Local static to fan total pressure, \( \frac{P_{st}}{P_{tr}} \)

Pressure tap axial location, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{in}}{P_{ao}} = 7.842 \quad \frac{P_{in}}{P_{s}} = 1.98 \text{ AT SUBSONIC CRUISE} \]

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>FOREBODY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHELL POSITION 21°</td>
<td>20° SHROUD</td>
</tr>
<tr>
<td>22° SHROUD LOCATION</td>
<td>80° SHROUD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, ( \frac{P_{in}}{P_{ao}} )</th>
<th>PRESSURE TAP AXIAL LOCATION, ( \frac{x}{d_{max}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>0.2</td>
</tr>
<tr>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>1.1</td>
<td>0.6</td>
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<td>1.2</td>
<td>0.8</td>
</tr>
<tr>
<td>1.3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

ORIGINAL PAGE IS OF POOR QUALITY
A2
SUBSONIC CRUISE
RUN 38  \( M_0 = 0.9 \)  \( M_\infty = 0.89 \)

\[ P_{TF}/P_{PO} = \square = 1.8 \]
\[ \Delta = 1.97 \]
\[ \diamond = 2.2 \]

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

NOZZLE GROSS THRUST COEFFICIENT, CFPI

FAN NOZZLE PRESSURE RATIO, PTF/PO
A2

SUBSONIC CRUISE

RUN 38  MO=0.9  P_{TR}/P_{T}=1.97

FAN NOZZLE PRESSURE RATIO  F/P_0

NOZZLE GROSS THRUST COEFFICIENT  C_F

EJECTOR INLET POSITION  MIDWAY
CLAM SHELL POSITION  REMOVED

M_0 = 0.9
\alpha = 0.98

266
A2
SUBSONIC CRUISE
RUN 38 \( M_0 = 0.9 \), \( \frac{P_T}{P_0} = 1.97 \)

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

FAN-NOZZLE PRESSURE RATIO, PTF/PO
A2
SUBSONIC CRUISE
RUN 38  MO=0.9  Pfr/Ppo=1.97

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION REMOVED

FAN NOZZLE PRESSURE RATIO, PTF/PO
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mo = 0.98

P_t/P_o = 3.528

P_t/P_m = 1.94

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P_t/P_p

PRESSURE TAP AXIAL LOCATION, x/d_max

269
### Plug and Splitter Static Pressure Distributions at Subsonic Cruise

Mo = 0.97  \( \frac{P_r}{P_0} = 3.528 \)  \( \frac{P_r}{P_p} = 1.94' \)

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position</th>
<th>Removed</th>
<th>( \Delta ) Flow Splitter O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>0.1</td>
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<td>0.9</td>
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<td>0.9</td>
</tr>
</tbody>
</table>

**LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_l}{P_t} \)**

**PRESSURE TAP AXIAL LOCATION, \( \chi/d_{max} \)**

270
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M_0 = 0.98

\[ \frac{P_{tr}}{P_0} = 3.528 \quad \frac{P_{tr}}{P_{tr}} = 1.94 \text{ AT SUBSONIC CRUISE} \]

EJECTOR INLET POSITION MIDWAY

CLAMSHELL POSITION REMOVED

[] FOREBODY INLET

\[ \triangle 28^\circ \text{SHROUD LOCATION} \]

\[ \diamond 88^\circ \text{SHROUD LOCATION} \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{tr}}{P_0} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)

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LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_1/\rho_1 P$

PRESSURE TAP AXIAL LOCATION, $x/c_{imax}$

PRESSURE TAP RADIAL LOCATION, $r_{1/2}$

CLAM SHELL NLET POSI TION MIDWAY

CLAM SHELL POSITION REMOVED

PRIMARY PLUG EJECTOR

PRIMARY PLUG REMOVED

PI/Po = 1.02

RDG = 2013

PFR/PI = 4.532

PFR/Po = 1.98

M_o = 0.89

$\gamma$ = 1.4
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.89  Pₛ/Pₒ = 4.532  Pₛ/Pₚ = 1.98

PRESSURE TAP AXIAL LOCATION: x/dₘₐₓ
A2
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_0 = 0.89 \quad P_{fr}/P_\infty = 4.532 \quad P_{fr}/P_{in} = 1.98 \] AT SUBSONIC CRUISE

\[\begin{array}{c|c|c}
\text{LOCAL TO AMBIENT STATIC PRESSURE RATIO}, P_{fr}/P_\infty & \text{FOREBODY INLET LOCATION} & \text{20° SHROUD LOCATION} \\
\hline
1.2 & \square & \triangle \\
1.1 & \square & \triangle \\
1.0 & \square & \triangle \\
0.9 & \square & \triangle \\
0.8 & \square & \triangle \\
0.7 & \square & \triangle \\
0.6 & \square & \triangle \\
\end{array}\]

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

Run 38
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \text{M}_0 = 0.89 \quad \frac{\text{Pr}r/\text{Ps}}{\text{Pr}r/\text{Pt}} = 5.295 \quad \frac{\text{Pr}r/\text{Pt}}{\text{Pt}} = 1.98 \]

- EJECTOR INLET POSITION
- MIDDLE
- CLAM SHELL
- POSITION
- REMOVED
- P RIMARY PLUG
- FLOW SPLITTER

PRESSURE TAP AXIAL LOCATION: \( \text{r}/D_{\text{max}} \)
RUN 38

Plug and splitter static pressure distributions at subsonic cruise

M₀ = 0.89  \( \frac{P_{tr}}{P_o} = 5.295 \)  \( \frac{P_{tr}}{P_{tp}} = 1.98 \)

<table>
<thead>
<tr>
<th>Ejector inlet position</th>
<th>Midway clamshell position</th>
<th>Removed</th>
<th>Δ Flow splitter O.D.</th>
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<tbody>
<tr>
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</table>

Pressure tap axial location: \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.89

Pₜ/P₀ = 5.295
P₟/Pₚ = 1.98 AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, x/dmax

Quality
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.89  Pr/Po = 6.825  Pr/Ptp = 1.96

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pr/Ptp

PRESSURE TAP AXIAL LOCATION, x/dmax.
# A2

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ M_0 = 0.89 \quad P_{tr}/P_0 = 6.025 \quad P_{tr}/P_{tr}=1.96 \]

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position</th>
<th>Removed</th>
<th>( \Delta ) Flow Splitter O.D.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>( \varepsilon )</td>
<td>( \Delta )</td>
<td>( \Delta )</td>
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</table>

**Local Static to Fan Total Pressure, \( P_{tr}/P_{tr} \)**

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</tbody>
</table>

**Pressure Tap Axial Location, \( x/d_{max} \)**

---

**Quality**

---

279
A2

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Re = 3.89  \( \frac{Pt}{P_o} = 6.025 \)  \( \frac{Pt}{Pr} = 1.96 \) AT SUBSONIC CRUISE

\[ \text{LOCAL TO AMBIENT STATIC PRESSURE RATIO, } \frac{P}{P_o} \]

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)

Run 38

RDG=2015
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$$M_0 = 0.89 \quad \frac{P_{tr}}{P_o} = 7.951 \quad \frac{P_{tr}}{P_{tr,0}} = 1.98$$

EJECTOR INLET POSITION MIDDLE
CLAMSHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{l/p, p}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

Run 38

RDC=2016
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.89  P₀/PO = 7.251  Pₛᵣ/Pₛₚ = 1.98

LOCAL STATIC TO FAN TOTAL PRESSURE, Pₜ/Pₜ₀

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
**Ejector Inlet and Shroud Static Pressure Distribution**

**Run 38**

**RDG=2816**

| \( M_o = 0.89 \) | \( P_{ir}/P_{ao} = 7.051 \) | \( P_{ir}/P_{dp} = 1.98 \) at Subsonic Cruise |

**Ejector Inlet Position: Midway**
- Clamshell Position Removed
- Forebody Inlet Location
- 20° Shroud Location
- 80° Shroud Location

**Local to Ambient Static Pressure Ratio, \( P_{ir}/P_{ao} \)**

**Pressure Tap Axial Location, \( x/d_{max} \)**

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<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION REMOVED</th>
<th>PRIMARY PLUG</th>
<th>FLOW SPLITTER L.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_{tr}/P_{tP} = 3.532 )</td>
<td>( P_{tr}/P_{tP} = 1.97 )</td>
<td>( P_{tr}/P_{tP} )</td>
<td>( P_{tr}/P_{tP} )</td>
</tr>
</tbody>
</table>

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_{tr}/P_{tP} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[
\frac{P_{r}}{P_{a}} = 3.532, \quad \frac{P_{r}}{P_{T_a}} = 1.97
\]

**LOCAL STATIC TO FAN TOTAL PRESSURE**

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>CLAMSHELL POSITION</th>
<th>FLOW SPLITTER D.O.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2.9)</td>
<td>(2.8)</td>
<td>(2.7)</td>
</tr>
<tr>
<td>(2.6)</td>
<td>(2.5)</td>
<td>(2.4)</td>
</tr>
<tr>
<td>(2.3)</td>
<td>(2.2)</td>
<td>(2.1)</td>
</tr>
<tr>
<td>(2.0)</td>
<td>(1.9)</td>
<td>(1.8)</td>
</tr>
</tbody>
</table>

**PRESSURE TAP AXIAL LOCATION**

\(x/d_{max}\)

---

**PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE**

\(M_{o} = 0.93\)

\[
\frac{P_{r}}{P_{a}} = 3.532, \quad \frac{P_{r}}{P_{T_a}} = 1.97
\]
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.84
Ptr/Po = 4.528
Ptr/P1p = 1.94

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.8
Ptr/Po = 3.632
Ptr/P1p = 1.97

PRESSURE TAP AXIAL LOCATIONS

A2 RDG = 28%
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.94 \quad P_{tr}/P_{zo} = 4.528 \quad P_{tr}/P_{tp} = 1.94 \]

**Diagram:**
- Ejector inlet position midway
- Clamshell position removed
- Primary plug
- Flow splitter I.D.

**Pressure Tap Axial Locations:**
- \( x/d_{max} \)

**287**
PLUG AND splitter static pressure distributions at subsonic cruise

\( \frac{\rho_r}{\rho_0} = 4.528 \quad \frac{\rho_r}{\rho_{ip}} = 1.94 \)

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAMSHHELL POSITION REMOVED</td>
<td>( \Delta ) FLOW SPLITTER O.D.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>( \frac{x}{d_{max}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
</tr>
</tbody>
</table>

Pressure tap axial location: \( \frac{x}{d_{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.84  Pᵢᵣ/Pₒ = 4.528  Pᵢᵣ/Pᵣp = 1.94 AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ</th>
<th>1.2</th>
<th>1.1</th>
<th>1.0</th>
<th>0.9</th>
<th>0.8</th>
<th>0.7</th>
<th>0.6</th>
<th>0.5</th>
<th>0.4</th>
<th>0.3</th>
<th>0.2</th>
</tr>
</thead>
</table>

Run 38
RDG=2044
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Ma = 0.85
Ptr/Pd = 5.287
Ptr/Ptp = 1.93

EJECTOR INLET POSITION MIDWAY SLAMSHHELL POSITION REMOVED PRIMARY PLUG FLOW SPLITTER 1.0

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P/Ptp

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLINTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.25  Pᵣ/P₀ = 5.287  Pᵣ/Pₚₐ = 1.93

EJECTOR INLET POSITION MIDWAY CLAMSHHELL POSITION REMOVED

Δ FLOW SPLINTER 0.0

PRESSURE TAP AXIAL LOCATION, X/dₘₐₓ
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.85 \quad P_{tr}/P_o = 5.287 \quad P_{tr}/P_{tr} = 1.93$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$x/d_{max}$</td>
</tr>
<tr>
<td>$P_{tr}/P_o$</td>
</tr>
</tbody>
</table>

EJECTOR INLET POSITION HIGHWAY

CLAM SHELL POSITION REMOVED

FOREBODY INLET LOCATION

$28^\circ$ SHROUD LOCATION

$60^\circ$ SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 3.35  Pr/Po = 6.336  Pr/Prp = 1.95

PRESSURE TAP AXIAL LOCATION, x/dmax

293
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_0 = 0.05 \quad P_t/P_0 = 6.036 \quad P_t/P_\infty = 1.95 \)

EJECTOR INLET POSITION MIDWAY CLAMSHELL POSITION REMOVED

\( \Delta \) FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_t/P_r \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.5$, $P_t/P_o = 6.36$, $P_t/P_p = 1.95$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_t/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
A2

SUBSONIC CRUISE

RUN 39

\[ \frac{P_{tr}}{P_{tp}} = 0.898 \]

\[ \Delta = 1.97 \]

\[ \phi = 2.2 \]

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAM SHELL POSITION REMOVED

NOZZLE GROSS THRUST COEFFICIENT, CFP1

FA*: NOZZLE PRESSURE RATIO, PTF/PO

296
A2
SUBSONIC CRUISE
RUN 39
M₀ = 0.98

PTF/P₀ = □ = 1.8
△ = 1.97
◇ = 2.2

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAM SHELL POSITION REMOVED

PRIMARY-NOZZLE FLOW COEFFICIENT, COP

FAN NOZZLE PRESSURE RATIO, PTF/P₀
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.98  Pr/P∞ = 6.125  Pr/P∞ = 1.99

- EJECTOR INLET POSITION MODIFIED MINIMUM
- CLAMSHELL POSITION REMOVED
- PRIMARY PLUG
- FLOW SPLITTER 1 to

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, p<sub>L</sub>/p<sub>T</sub>
PRESSURE TAP AXIAL LOCATION, x/d<sub>max</sub>

Run 39
RDC=2367
### A2
**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

<table>
<thead>
<tr>
<th>Mo</th>
<th>Pir/Pos</th>
<th>Pir/Pt</th>
<th>Prr/Pta</th>
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</thead>
<tbody>
<tr>
<td>0.90</td>
<td>6.125</td>
<td>1.99</td>
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<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Modified Minimum Clamshell Position</th>
<th>Removed</th>
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<tbody>
<tr>
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</table>

#### Graph:
- **Local Static to Fan Total Pressure, Pir/Pir**
- **Pressure Tap Axial Location, x/dmax**

---

300
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.98  Pr/Po = 6.125  Pr/Ptp = 1.99 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAM SHELL POSITION REMOVED

FOREBODY INLET
△ 20° SHROUD LOCATION
△ 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pr/Pr0

PRESSURE TAP AXIAL LOCATION, x/dmax

1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.2 0.4 0.6 0.8 1.0 1.2 1.4

Run 37
RDG=2067

INTERNAL PAGE IS ALSO QUATTRO
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M = 0.95
P_{tr}/P_o = 5.357
P_{tr}/P_{tp} = 1.97

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAMSHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE: P_{tr}/P_{tp}

PRESSURE TAP AXIAL LOCATION: x/d_{max}
### Plug and Splitter Static Pressure Distributions at Subsonic Cruise

**Run 39**

**RDG=2068**

**Flt 2 RDG=2068**

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

**M_o = 0.92**

**Pตรา_Po = 5.357**

**Pตรา_Pp = 1.97**

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Modified Minimum Clamshell Position</th>
<th>Removed</th>
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</thead>
<tbody>
<tr>
<td>0.9</td>
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</table>
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.93$  $P_{tr}/P_o = 0.357$  $P_{tr}/P_{tp} = 1.97$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M₀ = 0.98  P₁₀/Pₐ₀ = 4.689  P₁₁/P₁ₐ = 1.98

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAMSHELL POSITION REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pₛ/P₁ₐ

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \text{MO} = 8.98 \quad \frac{P_{tr}/P_0}{\text{POR}} = 4.689 \quad \frac{P_{tr}/P_{po}}{1.98} \]

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<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MODIFIED MINIMUM</th>
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<tr>
<td>CLAMSHELL POSITION</td>
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</tbody>
</table>

\[ \Delta \text{ FLOW SPLITTER 0.0} \]

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_{tr}/P_{po} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.90  \( \frac{P_{in}}{P_{o}} = 4.69 \)  \( \frac{P_{t}}{P_{o}} = 1.99 \) AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MODIFIED MINIMUM</th>
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<tbody>
<tr>
<td>CLAMSHELL POSITION</td>
<td>REMOVED</td>
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</table>

FOREBODY

\( \triangle \) 20° SHROUD LOCATION

\( \diamond \) 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{t}}{P_{o}} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

ORIGINAL PAGE IS OF POOR QUALITY
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

MO = 0.90

PTR/Po = 3.569

PTR/Pt = 1.94

EJECTOR INLET POSITION
CLAMSHELL POSITION REMOVED

PRIMARY PLUG
FLOW SPLITTER 1.0

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, PTR/Pt

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.93  Pr/Po = 3.569  Pr/Ptp = 1.94

EJECTOR INLET POSITION MODIFIED MINIMUM
CLAMSHELL POSITION REMOVED

△ FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, Pt/Pt c

PRESSURE TAP AXIAL LOCATION: x/dmax

Row 39

RG = 2378
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.98 \quad \frac{P_{tr}/P_0}{P_{tr}/P_{pp}} = 3.569 \quad \frac{P_{tr}/P_{pp}}{P_{pp}} = 1.94$ AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_0$</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
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<tr>
<td>$x/d_{max}$</td>
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</table>

- EJECTOR INLET POSITION MODIFIED MINIMUM
- CLAMSHHELL POSITION REMOVED
- FOREBODY INLET
- $28^\circ$ SHROUD LOCATION
- $88^\circ$ SHROUD LOCATION

Run 39
RDG=2878

A2
 RDG 2171-2223

A2
SUBSONIC CRUISE
RUN 44  MO=0.95 PTF/PTP=1.93

EJECTOR INLET POSITION
CLAMSHELL POSITION 17° MIDWAY

NOZZLE GROSS THRUST COEFFICIENT, CFP1

FAN NOZZLE PRESSURE RATIO, PTF/PO

ORIGINAL PAGE IS OF POOR QUALITY
A2
SUBSONIC CRUISE
RUN 44  M0=0.95  PTF/POP=1.93

EJECTOR INLET POSITION, MIDWAY CLAMSHELL POSITION 17°

FAN-NOZZLE PRESSURE RATIO, PTF/PO
SUBSONIC CRUISE

RUN 44  M₀=0.95  P₁ₚ/Pₖₚ=1.93

EJECTOR INLET POSITION  MIDWAY
CLAM SHELL POSITION  17°
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_0 = 0.94$  
$P_{tr}/P_{o} = 5.272$  
$P_{tr}/P_{P} = 1.97$

EJECTOR INLET POSITION  MIDWAY
CLAM SHELL POSITION  17°

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.94  P*o/P0 = 5.272  P*r/P*p = 1.97

PRESSURE TAP AXIAL LOCATION, x/dmax
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.94$  $P_{tr}/P_{ao} = 5.272$  $P_{tr}/P_{pp} = 1.97$ AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY LOCATION
Θ 20° SHROUD LOCATION
Φ 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_{ao}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.90 \quad P_{tr}/P_0 = 3.537 \quad P_{tr}/P_{tp} = 1.95 \]

EJECTOR INLET POSITION: MIDWAY
CLAMSHELL POSITION: 17°

PRESSURE TAP AXIAL LOCATION: \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{in}}{P_o} = 3.537 \quad \frac{P_{st}}{P_{in}} = 1.95 \]

**Ejector Inlet Position**
- 17°

**Clamshell Position**
- 17°

**Flow Splitter 0.0**

Pressure Tap Axial Location, \( \times/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_o = 0.98 \quad P_{tr}/P_a = 3.537 \quad P_{tr}/P_{to} = 1.95 \] AT SUBSONIC CRUISE

Pressure tap axial location: \( x/d_{max} \)

Run 44

RDG=2184
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \text{Ma} = 0.99 \quad \frac{P_{tr}}{P_0} = 4.524 \quad \frac{P_{tr}}{P_{tp}} = 1.98 \)

**Run 44**

**RDG=2185**

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<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>CLAMSHELL POSITION 17°</th>
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<tbody>
<tr>
<td>PRIMARY PLUG</td>
<td>FLOW SPLITTER L.O.</td>
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</tbody>
</table>

**LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{P_{tr}}{P_{tp}} \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \text{Mo} = 0.9 \), \( \frac{P_{tr}}{P_{tp}} = 4.524 \), \( \frac{P_{tr}}{P_{tp}} = 1.98 \)

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<tr>
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<th>CLAMSHELL POSITION 17°</th>
<th>( \Delta ) FLOW SPLITTER 0.0</th>
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PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.98 \quad \frac{P_{in}}{P_0} = 4.524 \quad \frac{P_{sh}}{P_{in}} = 1.98$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{in}/P_0$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

RUN 44
RDG=2185
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
$M_0 = 0.90$  $P_{rP}/P_o = 5.269$  $P_{rP}/P_{pP} = 1.97$

Pressure tap axial location: $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE  

\( M = 0.9 \)  \( P_{tir}/P_0 = 5.269 \)  \( P_{tir}/P_{tip} = 1.97 \)

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, ( P_{tir}/P_0 )</th>
<th>PRESSURE TAP AXIAL LOCATION, ( x/d_{max} )</th>
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EJECTOR INLET POSITION  MIDWAY
CLAMSHELL POSITION  17°  Δ FLOW SPLITTER 0.0

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{tr}}{P_o} = 5.269 \quad \frac{P_{tr}}{P_{tr}P_o} = 1.97 \] AT SUBSONIC CRUISE

\[ M_o = 0.98 \]

**PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Ma = 0.89  \( \frac{P_{t}}{P_{o}} = 6.948 \)  \( \frac{P_{t}}{P_{p}} = 1.96 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

PRINCIPAL PLUG
FLOW SPLITTER ID.

LOCAL STATIC TO PRIMARY TOTAL PRESSURE: \( P/P_{t} \)

PRESSURE TAP AXIAL LOCATION: \( \times / d_{max} \)
**PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE**

MO = 0.89  \( \frac{Pt/Po}{Pr/Pr} = 6.848 \)  \( \frac{Pt/Pr}{Pr/Pr} = 1.96 \)

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION MIDWAY</th>
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<tbody>
<tr>
<td>CLAMSHELL POSITION 17°</td>
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<th>LOCAL STATIC TO FAN TOTAL PRESSURE, Pt/Ptr</th>
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<tr>
<th>PRESSURE TAP AXIAL LOCATION, ( x/d_{max} )</th>
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<td>1.4</td>
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</table>
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.89$  $P_{tr}/P_{ox} = 6.948$  $P_{tr}/P_{pp} = 1.96$  AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_{ox}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

RDG = 2187

328
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M_0 = 0.98
P_ir/P_0 = 7.845
P_tr/P_tr = 1.98

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P/_P_tr

PRESSURE TAP AXIAL LOCATION, x/d_max
LOCAL STATIC TO FAN TOTAL PRESSURE, $P_l/P_r$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.92$

$P_{r}/P_o = 1.45$

$P_{t}/P_r = 1.98$

CLAMSHELL POSITION

FLOW SPLITTER 0.0*

FLOW SPLITTER MIDWAY 17*

EJECTOR NLET POSITION 17*

ROG=2188

Run 44
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M_0 = 0.98, P_ri/P_0 = 7.845, P_ri/P_0 = 1.98 AT SUBSONIC CRUISE

**Figure**: Pressure tap axial location, x/d_max

**Note**: Run 44, RDG=2188
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M₀ = 0.86  P₀r/P₀ = 5.299  P₀r/P₀ = 1.96

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P₀r/P₀

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
LOCAL STATIC TO FAN TOTAL PRESSURE, $p_t/p_r$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

PLUG, INLET POSITION = 5.297
EJECTOR, INLET POSITION = 17.017
FLOW SPLITTER 0.0

$P_{tr}/P_0 = 1.96$
$P_{tr}/P_0 = 5.297$

$\Delta$ FLOW SPLITTER O.D.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.80  P₀/P₀ = 5.299  P₀/Pₚ = 1.96 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY  
CLAMSHELL POSITION 17°

FOREBODY INLET LOCATION
20° SHROUD LOCATION
80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P₀/P₀

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ

334
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.70 \quad P_t / P_o = 5.279 \quad P_t / P_p = 1.97$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_0 = 0.73, \frac{P_{tr}}{P_{o}} = 5.279, \frac{P_{tr}}{P_{rr}} = 1.97$

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>MIDWAY</th>
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<tr>
<td>CLAMSHELL POSITION 17°</td>
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△ FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{it}/P_{tr}$

PRESSURE TAP AXIAL LOCATION, $x/a_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.75  \( \frac{P_{tr}}{P_0} = 5.279 \)  \( \frac{P_{tr}}{P_{tp}} = 1.97 \) AT SUBSONIC CRUISE

**Pressure Tap Axial Location, x/dmax**

**LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{tr}}{P_0} \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( \frac{M_0}{1.2} = 0.56 \quad \frac{P_{tr}}{P_a} = 5.29 \quad \frac{P_{tr}}{P_t} = 1.97 \)

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION \( 17^\circ \)

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{P_{s}}{P_t} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)
Plug and Splitter Static Pressure Distributions at Subsonic Cruise

$M_0 = 0.56 \quad Pr/Po = 5.298 \quad Pr/Pt = 1.97$

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>CLAMSHHELL POSITION</th>
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Local Static to Fan Total Pressure, $P/P_f$

Pressure Tap Axial Location, $x/d_{max}$

Run 44

RDG = 2211

339
A2
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION
M₀ = 0.56  Pₜᵣ/Pₒ = 5.298  Pₜᵣ/Pₚ = 1.97  AT SUBSONIC CRUISE

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, P₁/Pₒ</th>
<th>EJECTOR INLET POSITION MIDWAY</th>
<th>FOREBODY INLET</th>
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<tr>
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<td>EJECTOR INLET POSITION MIDWAY</td>
<td>20° SHROUD LOCATION</td>
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<td>CLAMSHELL POSITION 17°</td>
<td>80° SHROUD LOCATION</td>
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PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 44

RDG=2216

A2

Mach = 0.36

P*Pa/Pa = 5.318

P*Pa/P*Pa = 1.97

EJECTOR INLET POSITION MIDWAY
CLAM SHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pi/Pi

PRESSURE TAP AXIAL LOCATION, x/dmax
<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, $p_{ls}/p_{tr}$</th>
<th>EJECTOR INLET POSITION</th>
<th>CLAM SHELL POSITION 17°</th>
<th>Δ FLOW SPLITTER O.D.</th>
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PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

Run 44
RDG=2216
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\( M_0 = 0.36 \quad \frac{P_{r}}{P_{e}} = 5.318 \quad \frac{P_{r}}{P_{p}} = 1.97 \) AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_{r}}{P_{e}} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.03 \quad P_{tr}/P_o = 3.537 \quad P_{tr}/P_p = 1.97$

- EJECTOR INLET POSITION
- MIDWAY
- CLAMSHELL POSITION 17°
- PRIMARY PLUG
- FLOW SPLITTER L.O.

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_l/P_T$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{P_{\text{r}}}{P_0} = 3.537 \quad \frac{P_{\text{r}}}{P_{\text{p}}} = 1.97 \]

**EJECTOR INLET POSITION, MIDWAY**

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<thead>
<tr>
<th>( \frac{P_{\text{r}}}{P_0} )</th>
<th>( \frac{P_{\text{r}}}{P_{\text{p}}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.8</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.7</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.6</td>
<td>( \Delta )</td>
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<tr>
<td>0.5</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.4</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.3</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.2</td>
<td>( \Delta )</td>
</tr>
<tr>
<td>0.1</td>
<td>( \Delta )</td>
</tr>
</tbody>
</table>

**LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_{\text{r}}}{P_{\text{r}}} \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)**

<table>
<thead>
<tr>
<th>( x/d_{\text{max}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>0.4</td>
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<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.4</td>
</tr>
</tbody>
</table>

RUN 44

RDG=2219
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.83  Pᵣ/P₀ = 3.537  Pᵣ/Pₚ = 1.97 AT SUBSONIC CRUISE

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

FOREBODY INLET
Δ 25° SHROUD LOCATION
◊ 80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pᵣ/P₀

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

MO = 0.83  Pr/Pr = 4.529  Pr/Pp = 1.97

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17^

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, Pr/Pr

PRESSURE TAP AXIAL LOCATION, x/dmax

347
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.33$  $P_{tr}/P_o = 4.529$  $P_{tr}/P_{tp} = 1.97$

Run 44
RDG=2228

EJECTOR INLET POSITION  MIDWAY
CLAMSHELL POSITION 17°
FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_i/P_{tr}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M_0 = 0.83  \frac{P_{tr}/P_o}{P_{tr}/P_P} = 4.529  \frac{P_{tr}/P_P}{1.97} \text{ AT SUBSONIC CRUISE}

| PRESSURE TAP AXIAL LOCATION: \frac{x}{d_{max}} |
|-----------------|-----------------|-----------------|
| 0.2             | 0.4             | 0.6             |
| 0.8             | 1.0             | 1.2             | 1.4             |

EJECTOR INLET POSITION MEDIUM
CLAMSHELL POSITION 17°
FOREBODY INLET LOCATION
Δ 28° SHROUD LOCATION
◊ 88° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \frac{p_{tr}/p_o}{p_{tr}/p_P}=1.97

P_{tr}/P_P=1.97 AT SUBSONIC CRUISE

P_{tr}/P_o=4.529

M_0 = 0.83

RDG=2228
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M = 0.85$, $\frac{P_t}{P_o} = 5.285$, $\frac{P_t}{P_{Ip}} = 1.98$

EJECTOR INLET POSITION MIDWAY
CLAMSHELL POSITION 17°

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $\frac{P_l}{P_{Ip}}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
### Plug and Splitter Static Pressure Distributions at Subsonic Cruise

**Mach Number**: 0.85

**Captain Pressure Ratio**: 5.285

**Plug/Plug Pressure Ratio**: 1.98

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Clamshell Position</th>
<th>( \Delta ) Flow Splitter 0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{p_r}{p_0} )</td>
<td>( \frac{p_r}{p} ) = 1.98</td>
<td></td>
</tr>
</tbody>
</table>

**Pressure Tap Axial Location**: \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.85  Pirc/Pos = 5.285  Pirc/Ptp = 1.98 AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION, x/dmax

Run 44

RDG=2221
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M = 0.85 \quad P_\text{r}/P_\infty = 6.835 \quad P_\text{r}/P_\infty = 1.96 \]

**LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_\text{l}/P_\infty \)**

**PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ \frac{p_t}{p_r} = 6.835 \]

\[ \frac{p_t}{p_r} = 1.96 \]

 Local static to fan total pressure, \( \frac{p_t}{p_r} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

M₀ = 0.85  Pₜ₀/Pₒ = 6.835  Pₜ/Pₚ = 1.96 AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pₜ/Pₒ

PRESSURE TAP AXIAL LOCATION, x/dₘₐₓ

CLAM SHELL POSITION 17°
FOREBODY 20° SHROUD LOCATION 80° SHROUD LOCATION
RDA 2771-2820

A2
SUBSONIC CRUISE
RUN 63  M0=0.95 Ptf/Pfp=1.96

EJECTOR INLET POSITION  SHROUD REMOVED

NOZZLE GROSS THRUST COEFFICIENT, CFPI

NOZZLE GROSS THRUST COEFFICIENT, CFPI

FAN NOZZLE PRESSURE RATIO, PTF/PO
**Rog. 2771-2820**

A2

**SUBSONIC CRUISE**

**RUN 68**

$\text{MO} = 0.95$  $\text{Pir/Pp} = 1.96$

<table>
<thead>
<tr>
<th>$\text{EJECTOR INLET POSITION SHROUD REMOVED}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\times$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>$\text{FAN NOZZLE PRESSURE RATIO, PTF/PO}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.945$</td>
</tr>
<tr>
<td>$0.950$</td>
</tr>
<tr>
<td>$0.955$</td>
</tr>
<tr>
<td>$0.960$</td>
</tr>
<tr>
<td>$0.965$</td>
</tr>
<tr>
<td>$0.970$</td>
</tr>
<tr>
<td>$0.975$</td>
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</table>

<table>
<thead>
<tr>
<th>$\text{FAN NOZZLE FLOW COEFFICIENT, CDF}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.945$</td>
</tr>
<tr>
<td>$0.950$</td>
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<td>$0.955$</td>
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<tr>
<td>$0.960$</td>
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<td>$0.965$</td>
</tr>
<tr>
<td>$0.970$</td>
</tr>
<tr>
<td>$0.975$</td>
</tr>
</tbody>
</table>

**MO =**

- $\square = 0.9$
- $\triangle = 0.96$
- $\times = 0.95$
- $\times = 0.95$

**FAN NOZZLE PRESSURE RATIO, PTF/PO**
SUBSONIC CRUISE
RUN 63
MO=0.95 Prr/Pp=1.96

EJECTOR INLET POSITION SHROUD REMOVED

PRIMARY-NOZZLE FLOW COEFFICIENT, COP

FAN NOZZLE PRESSURE RATIO PTF/PO

ORIGINAL PAGE IS OF POOR QUALITY
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_0 = 0.95  P_{r/P_0} = 5.292  P_{r/P_{tp}} = 1.97

EJECTOR INLET POSITION SPROUD REMOVED

PRIMARY PLUG
FLOW SPLITTER 1.0

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P_{r/P_{tp}}

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

Run 63
RDG=2776

359
**PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE**

\[ M_o = 0.95 \quad P_{tr}/P_o = 5.292 \quad P_{tr}/P_{tp} = 1.97 \]

<table>
<thead>
<tr>
<th>EJECTOR</th>
<th>INLET POSITION</th>
<th>SHROUD REMOVED</th>
<th>( \Delta ) FLOW SPLITTER O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.7</td>
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<td>3.6</td>
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<td>3.5</td>
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<td></td>
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<tr>
<td>3.4</td>
<td></td>
<td></td>
<td>( \Delta )</td>
</tr>
<tr>
<td>3.3</td>
<td></td>
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<td></td>
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<tr>
<td>3.2</td>
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<tr>
<td>3.1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PRESSURE TAP AXIAL LOCATION:** \( x/d_{max} \)
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.95 \quad \frac{P_t}{P_o} = 5.292 \quad \frac{P_t}{P_i} = 1.97$ AT SUBSONIC CRUISE

EJECTOR INLET POSITION SHROUD REMOVED

- FOREBODY
- $20^\circ$ SHROUD
- $80^\circ$ SHROUD

INLET LOCATION

PRESSURE TAP AXIAL LOCATION: $x/d_{max}$

361
PRESSURE TAP AXIAL LOCATION, \( x/d_{\text{max}} \)

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( P_1/P_{\text{p}} \)

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 6.3

RGS = 2777

\( P_1/P_{\text{p}}: \)
- 3.56
- 1.94

CL, a, w, N, J, r, c, N, J, V, O, Z, H, 0.2, 0.4, 0.8, 1.2, 1.6, 2.0

Table values:
- 9.7
- 6.9
- 3.5
- 9.3
- 0.2
- 0.8
- 1.4
- 1.8
- 2.2
- 2.6
- 3.0
- 3.4

SHROUD REMOVED

EJECTOR INLET POSITION
A2

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.89  \( P_{tr}/Po = 3.56 \)  \( P_{tr}/P_{tip} = 1.94 \)

<table>
<thead>
<tr>
<th>EJECTOR</th>
<th>INLET POSITION</th>
<th>SHROUD REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \triangle )</td>
<td>( \triangle )</td>
<td>( \triangle )</td>
</tr>
</tbody>
</table>

LOCAL STATIC TO FAN TOTAL PRESSURE,  \( P_{s}/P_{tr} \)

PRESSURE TAP AXIAL LOCATION,  \( x/d_{max} \)
A2
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Ma = 0.89  P+P/P0 = 3.568  P+P/P+ = 1.94 AT SUBSONIC CRUISE

EJECTOR INLET POSITION  SHROUD REMOVED

FOREBODY INLET

20° SHROUD LOCATION

80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P/P0

PRESSURE TAP AXIAL LOCATION, x/dmax

RUN 63

RDG=2777

364
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_\infty = 0.89 \quad \frac{P_{r}}{P_{o}} = 4.550 \quad \frac{P_{r}}{P_{i}} = 1.97 \]

**Run 63**

**A2**

**Local Static to Primary Total Pressure, \( \frac{P_{r}}{P_{i}} \)**

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION SHROUD REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
</tr>
<tr>
<td>8.8</td>
</tr>
<tr>
<td>8.7</td>
</tr>
<tr>
<td>8.6</td>
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<td>8.5</td>
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<tr>
<td>8.4</td>
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<tr>
<td>8.3</td>
</tr>
<tr>
<td>8.2</td>
</tr>
<tr>
<td>8.1</td>
</tr>
</tbody>
</table>

**Pressure Tap Axial Location, \( \frac{x}{d_{\text{max}}} \)**
Run 63

Plug and Splitter Static Pressure Distributions at Subsonic Cruise

Mach = 0.89

P_{i}\/P_{o} = 4.558

P_{r}\/P_{t} = 1.97

Pressure Tap Axial Location, x/d_{max}
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \text{M} = 0.89 \quad \frac{P_{tr}}{P_0} = 4.559 \quad \frac{P_{tr}}{P_{tt}} = 1.97 \quad \text{AT SUBSONIC CRUISE} \]

**Run 63**

**RDG=2778**
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

M_o = 0.89  P_{tr}/P_{oz} = 5.307  P_{tr}/P_{tp} = 1.95

EJECTOR INLET POSITION SHROUD REMOVED

PRINCIPAL PLUG
FLOW SPLITTER L.O.

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, P_{tr}/P_{tp}

PRESSURE TAP AXIAL LOCATION, x/d_{max}
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
$M_o = 0.89 \quad \frac{P_{st}}{P_o} = 5.307 \quad \frac{P_{st}}{P_t} = 1.95$

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
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<td>1.2</td>
</tr>
<tr>
<td>1.4</td>
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<tr>
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<td>1.8</td>
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<td>2.0</td>
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<td>2.2</td>
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<tr>
<td>2.4</td>
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<td>2.6</td>
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<tr>
<td>2.8</td>
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<tr>
<td>3.0</td>
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<tr>
<td>3.2</td>
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<tr>
<td>3.4</td>
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<tr>
<td>3.6</td>
</tr>
<tr>
<td>3.8</td>
</tr>
<tr>
<td>4.0</td>
</tr>
</tbody>
</table>

EJECTOR INLET POSITION SHROUD REMOVED

FLOW SPLITTER O.D.

$\Delta$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Mo = 0.89  Pit/Po = 5.387  Pit/PtP = 1.95 AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, Pit/Po:

PRESSURE TAP AXIAL LOCATION, x/dmax
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.89 \quad P_{tr}/P_o = 6.86 \quad P_{tr}/P_{tp} = 1.95$

EJECTOR INLET POSITION SHROUD REMOVED

<table>
<thead>
<tr>
<th>LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{st}/P_{tp}$</th>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>8.8</td>
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</tr>
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<td>8.7</td>
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<td>8.6</td>
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<td>8.5</td>
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<td>8.1</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td></td>
</tr>
</tbody>
</table>
### Pressure Tap Axial Location

Anomalies in pressure tap axial locations are represented with triangles in the graph. The locations are denoted as follows:

- **Ejector Inlet Position Shroud Removed**
- **Flow Splitter O.D.**

### Detailed Data

#### Ejector Inlet Position

- Local Static to Fan Total Pressure, \( p_{ls}/p_{tr} \)
- Pressure tap axial location, \( x/d_{max} \)

#### Flow Splitter O.D.

- Local Static to Fan Total Pressure, \( p_{ls}/p_{tr} \)
- Pressure tap axial location, \( x/d_{max} \)

### Parameters

- Mach Number, \( M_0 = 0.89 \)
- Inlet Static Pressure Ratio, \( P_{tr}/P_o = 6.666 \)
- Total Pressure Ratio, \( P_{tr}/P_{tp} = 1.95 \)

### Graph Description

- The graph illustrates the distribution of static pressure at subsonic cruise conditions for a specific flow configuration.
- The anomalies in the pressure tap locations indicate deviations from expected values.
- The graph is used to analyze the performance and stability of the flow system under the given conditions.
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ \frac{P_{tr}}{P_o} = 6.66 \quad \frac{P_{tr}}{P_{tr}} = 1.95 \] AT SUBSONIC CRUISE

Run 63

RDG=2788

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.89$  $P_{tr}/P_o = 7.058$  $P_{tr}/P_{tp} = 1.97$

<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION, $x/d_{max}$</th>
<th>0.8</th>
<th>0.9</th>
<th>1.0</th>
<th>1.1</th>
<th>1.2</th>
<th>1.3</th>
<th>1.4</th>
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<tbody>
<tr>
<td>EJECTOR</td>
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<td>SHROUD REMOVED</td>
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</tr>
<tr>
<td>FLOW SPLITTER 1.0</td>
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</tr>
</tbody>
</table>
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
M∞ = 0.5, \frac{Pr}{Po} = 7.058, \frac{Pr}{Pp} = 1.97

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION SHROUD REMOVED</th>
<th>Δ FLOW SPLITTER O.D.</th>
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</thead>
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<tr>
<td>0.9</td>
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<tr>
<td>0.8</td>
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<td>0.7</td>
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<td>0.6</td>
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</tr>
<tr>
<td>0.5</td>
<td>Δ</td>
</tr>
<tr>
<td>0.4</td>
<td>Δ</td>
</tr>
<tr>
<td>0.3</td>
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</tr>
<tr>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

LOCAL STATIC TO FAN TOTAL PRESSURE, \frac{P_s}{P_f}

PRESSURE TAP AXIAL LOCATION, \frac{x}{d_{max}}
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

<table>
<thead>
<tr>
<th>Mo</th>
<th>$P_{tr}/P_o$</th>
<th>$P_{tr}/P_{r*}$</th>
<th>AT SUBSONIC CRUISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.89</td>
<td>7.858</td>
<td>1.97</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EJECTOR INLET POSITION</th>
<th>SHROUD REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREBODY</td>
<td>□</td>
</tr>
<tr>
<td>20° SHROUD LOCATION</td>
<td>△</td>
</tr>
<tr>
<td>80° SHROUD LOCATION</td>
<td>◇</td>
</tr>
</tbody>
</table>

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{r*}/P_o$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.80$  \quad $P_{in}/P_o = 5.334$  \quad $P_{in}/P_{in} = 1.95$

LOCAL STATIC TO FAN TOTAL PRESSURE, $P_{in}/P_{in}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Ma = 0.80  Pit/Po = 5.334  Pit/Pt = 1.95

PRESSURE TAP AXIAL LOCATION, x/dmax
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.88$, $P_{tr}/P_o = 5.334$, $P_{tr}/P_{tp} = 1.95$ AT SUBSONIC CRUISE

**Graph:**
- **Axis:** Local to Ambient Static Pressure Ratio, $P/P_o$ vs. Pressure Tap Axial Location, $x/d_{max}$
- **Legend:**
  - EJECTOR INLET POSITION
  - SHROUD REMOVED
  - FOREBODY INLET
  - 20° SHROUD LOCATION
  - 80° SHROUD LOCATION

**Run C3**
**RDG = 2785**
### Plug and Splitter Static Pressure Distributions at Subsonic Cruise

- **Run 63**
- **RDG=2791**

**Parameters:**
- $M_0 = 0.75$
- $P_{tr}/P_{tot} = 5.31$
- $P_{tr}/P_{atm} = 1.97$

<table>
<thead>
<tr>
<th>Local Static to Fan Total Pressure, $P_{tr}/P_{tot}$</th>
<th>Ejector</th>
<th>Inlet Position</th>
<th>Shroud Removed</th>
<th>$\Delta$ Flow Splitter 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\leq 0.7$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0.8$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0.9$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.3$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.4$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pressure Tap Axial Location:** $x/d_{max}$

---

380
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$\frac{P_{tr}}{P_{to}} = 5.310 \quad \frac{P_{tr}}{P_{to}} = 1.97$

EJECTOR INLET POSITION SHROUD REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{l}/P_{t}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$

ORIGINAL PAGE IS OF POOR QUALITY
### Ejector Inlet and Shroud Static Pressure Distribution

**Run 63**

**RDG=2791**

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Shroud Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forebody Inlet Location</td>
<td></td>
</tr>
<tr>
<td>20° Shroud Location</td>
<td></td>
</tr>
<tr>
<td>80° Shroud Location</td>
<td></td>
</tr>
</tbody>
</table>

**Mo = 0.78**

**$P_{tr}/P_{o} = 5.310$**

**$P_{tr}/P_{tp} = 1.97$**

*At Subsonic Cruise*

<table>
<thead>
<tr>
<th>Local to Ambient Static Pressure Ratio, $P_{r}/P_{o}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
</tr>
<tr>
<td>1.3</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.1</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>0.9</td>
</tr>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>0.7</td>
</tr>
<tr>
<td>0.6</td>
</tr>
</tbody>
</table>

**Pressure Tap Axial Location, $x/d_{max}$**

---

382
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_o = 0.56 \quad P_{fr}/P_{in} = 5.314 \quad P_{fr}/P_{ps} = 1.97 \)

<table>
<thead>
<tr>
<th>EJECTOR</th>
<th>INLET POSITION</th>
<th>SHROUD REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( \Delta \) FLOW SPLITTER 0.0

LOCAL STATIC TO FAN TOTAL PRESSURE, \( P_{fr}/P_{in} \)

PRESSURE TAP AXIAL LOCATION, \( x/d_{max} \)

RUN 63
RDG=2799

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A2
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\( M_0 = 0.56 \quad \frac{P_{tr}}{P_{p0}} = 5.314 \quad \frac{P_{tr}}{P_{p0}} = 1.97 \)

EJECTOR INLET POSITION SHROUD REMOVED

PRESSURE TAP AXIAL LOCATION, \( x/d_{ax} \)

RDG=2799
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Run 63

RDG = 2799

EJECTOR INLET POSITION SHROUD REMOVED

FOREBODY

20° SHROUD LOCATION

80° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P/Po

PRESSURE TAP AXIAL LOCATION, x/dmax

A2

M0 = 0.56

Prr/Po = 5.31

Ptr/Ptp = 1.97

AT SUBSONIC CRUISE
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Mₐ = 0.36

Pₜᵣ/Pₒ = 5.340
Pₜᵣ/Pₚ = 1.97

PRESSURE TAP AXIAL LOCATION: x/dₘₐₓ

-run 6-
RDG = 2904
**Run G3**

**Plug and Splitter Static Pressure Distributions at Subsonic Cruise**

\[ M = 0.236 \quad Pr_r/Pr_o = 5.340 \quad Pr_r/Pr_p = 1.97 \]

<table>
<thead>
<tr>
<th>Ejector Inlet Position</th>
<th>Shroud Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \theta )</td>
<td>( \Delta ) Flow Splitter 0.0</td>
</tr>
<tr>
<td>( \theta = 0.9 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.8 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.7 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.6 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.5 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.4 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.3 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.2 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.1 )</td>
<td></td>
</tr>
<tr>
<td>( \theta = 0.0 )</td>
<td></td>
</tr>
</tbody>
</table>

**Local Static to Fan Total Pressure, \( Pr/Pr_f \)**

<table>
<thead>
<tr>
<th>( Pr/Pr_f )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
</tr>
<tr>
<td>0.4</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.8</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.4</td>
</tr>
</tbody>
</table>

**Pressure Tap Axial Location, \( x/d_{max} \)**

387
A2

EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

<table>
<thead>
<tr>
<th>M&lt;sub&gt;o&lt;/sub&gt; = 0.36</th>
<th>P&lt;sub&gt;tr&lt;/sub&gt;/P&lt;sub&gt;o&lt;/sub&gt; = 5.348</th>
<th>P&lt;sub&gt;tr&lt;/sub&gt;/P&lt;sub&gt;TP&lt;/sub&gt; = 1.97 AT SUBSONIC CRUISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJECTOR INLET</td>
<td>FOREBODY LOCATION</td>
<td>INLET LOCATION</td>
</tr>
<tr>
<td>POSITION</td>
<td>□</td>
<td>△ 28° SHROUD</td>
</tr>
<tr>
<td>SHROUD REMOVED</td>
<td>□ 88° SHROUD</td>
<td></td>
</tr>
</tbody>
</table>

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P<sub>tr</sub>/P<sub>o</sub>

PRESSURE TAP AXIAL LOCATION, x/d<sub>max</sub>

Run 63
RDC = 2884
LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_i/P_{\infty}$

PRESSURE TAP AXIAL LOCATION, $x/d_{ax}$

$P_{\infty}/P_0 = 3.55$, $P_i/P_{\infty} = 1.96$

EJECTOR INLET POSITION SHROUD REMOVED

Primary Plug

RDG-2815

Page 389
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE
Mo = 0.93  Pr/Po = 3.554  Pr/Prp = 1.96

EJECTOR INLET POSITION SHROUD REMOVED

FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, Pl/Pr

PRESSURE TAP AXIAL LOCATION, x/dmax
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_0 = 0.03$  \hspace{1cm} $P_{tr}/P_o = 3.554$  \hspace{1cm} $P_{tr}/P_p = 1.96$ AT SUBSONIC CRUISE

$P_{tr}/P_o = \frac{P_{tr}}{P_o}$

<table>
<thead>
<tr>
<th>LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P_{tr}/P_o$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.1</td>
</tr>
<tr>
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<tr>
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<tr>
<td>0.7</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.5</td>
</tr>
</tbody>
</table>

PRESSURE TAP AXIAL LOCATION, $x/d_{ex}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 63

MO = \( \frac{2}{3} \)

\( \frac{p_t}{p_{oo}} = 4.549 \)

\( \frac{p_t}{p_{oo}} = 1.96 \)

<table>
<thead>
<tr>
<th>EJECTOR</th>
<th>INLET POSITION</th>
<th>SHROUD REMOVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9</td>
<td></td>
<td></td>
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<td>3.8</td>
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<td>3.6</td>
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<td>3.5</td>
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<td>3.4</td>
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<tr>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, \( \frac{p_t}{p_{oo}} \)

PRESSURE TAP AXIAL LOCATION: \( \frac{d}{d_{max}} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_0 = 0.24$

$\frac{P_{tr}}{P_{in}} = 4.549$

$\frac{P_{tr}}{P_{in}} = 1.96$

EJECTOR INLET POSITION SHROUD REMOVED

Δ FLOW SPLITTER O.D.

LOCAL STATIC TO FAN TOTAL PRESSURE, $\frac{P_{tr}}{P_{in}}$

PRESSURE TAP AXIAL LOCATION, $\frac{x}{d_{max}}$
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

\[ M_o = 0.04 \quad \frac{P_r}{P_o} = 4.549 \quad \frac{P_{\infty}}{P_r} = 1.96 \text{ AT SUBSONIC CRUISE} \]

LOCAL TO AMBIENT STATIC PRESSURE RATIO, \( \frac{P_r}{P_o} \)

PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{max}} \)

\( \text{Run 63} \)
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

Run 63

RDG=2817

Mo = 0.05
P-tr/Pos = 5.307
P-tr/P-tr = 1.97

PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

EJECTOR INLET POSITION SHROUD REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, p-/p-tr

PRESSURE TAP AXIAL LOCATION, x/dmax
<table>
<thead>
<tr>
<th>PRESSURE TAP AXIAL LOCATION</th>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, $P_i/P_{tr}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1</td>
<td></td>
</tr>
<tr>
<td>B.2</td>
<td></td>
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<tr>
<td>B.3</td>
<td></td>
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<tr>
<td>B.4</td>
<td></td>
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<tr>
<td>B.5</td>
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<tr>
<td>B.6</td>
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<tr>
<td>B.7</td>
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<tr>
<td>B.8</td>
<td></td>
</tr>
<tr>
<td>B.9</td>
<td></td>
</tr>
</tbody>
</table>

**PLUG AND splitter static pressure distributions at subsonic cruise**

- EJECTOR INLET POSITION
- FLIGHT SPLITTER 0.0
- FLIGHT SPLITTER 0.0
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$Re = 0.05$ $Pr/Po = 5.307$ $Pe/Po = 1.97$ AT SUBSONIC CRUISE

LOCAL TO AMBIENT STATIC PRESSURE RATIO, $P/Po$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.65$  
$P_{tr}/P_o = 6.856$  
$P_{tr}/P_{p} = 1.96$

EJECTOR  INLET POSITION  SHROUD REMOVED

$P_{tr}/P_{p}$ vs $x/d_{max}$
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

\[ M_0 = 0.85 \quad \frac{P_{\text{in}}}{P_{\text{total}}} = 6.856 \quad \frac{P_{\text{r}}}{P_{\text{in}}} = 1.96 \]

**EJECTOR INLET POSITION SHROUD REMOVED**

\[ \Delta \text{ FLOW SPLITTER 0.0} \]

**LOCAL STATIC TO FAN TOTAL PRESSURE, \( \frac{P_{\text{static}}}{P_{\text{total}}} \)**

**PRESSURE TAP AXIAL LOCATION, \( \frac{x}{d_{\text{max}}} \)**

**ORIGINAL PAGE IS OF POOR QUALITY**
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

$M_o = 0.95$ $P_{tr}/P_o = 6.056$ $P_{tr}/P_{rp} = 1.96$ AT SUBSONIC CRUISE

PRESSURE TAP AXIAL LOCATION $x/c_{max}$

RUN 63
RDG=2818
PLUG AND SPLITTER STATIC PRESSURE DISTRIBUTIONS AT SUBSONIC CRUISE

$M_o = 0.05$  $\frac{P_{tr}/P_o}{P_{rt}/P_{tp}} = 6.364$  $\frac{P_{tr}/P_{tp}}{P_{rt}} = 1.96$

EJECTOR  INLET POSITION  SHROUD REMOVED

LOCAL STATIC TO PRIMARY TOTAL PRESSURE, $P_{tr}/P_{tp}$

PRESSURE TAP AXIAL LOCATION, $x/d_{max}$
### Plug and Splitter Static Pressure Distributions at Subsonic Cruise

\[ M_0 = 0.85 \quad \frac{P_{tr}}{P_0} = 6.364 \quad \frac{P_{tr}}{P_{s}} = 1.96 \]

**Ejector Inlet Position Shroud Removed**

**Flow Splitter 0.0**

<table>
<thead>
<tr>
<th>LOCAL STATIC TO FAN TOTAL PRESSURE, ( P_{tr}/P_{fr} )</th>
<th>0.1</th>
<th>0.2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
<th>0.9</th>
<th>1.0</th>
<th>1.1</th>
<th>1.2</th>
<th>1.3</th>
<th>1.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_{tr}/P_{fr} )</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
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<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
<td>2.0</td>
<td>2.1</td>
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</tbody>
</table>

**Pressure Tap Axial Location, \( x/d_{max} \)**
EJECTOR INLET AND SHROUD STATIC PRESSURE DISTRIBUTION

Run 63

M_0 = 0.85, P_tr/Po = 6.364, P_tr/P_T = 1.96 at subsonic cruise

EJECTOR INLET POSITION, SHROUD REMOVED

FOREBODY INLET

20° SHROUD LOCATION
60° SHROUD LOCATION

LOCAL TO AMBIENT STATIC PRESSURE RATIO, P_tr/Po

PRESSURE TAP AXIAL LOCATION, x/dmax

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