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ACOUSTIC AND AERODYNAMIC PERFORMANCE INVESTIGATION OF INVERTED VELOCITY PROFILE COANNULAR PLUG NOZZLES

Comprehensive Data Report

VOLUME III

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16. Abstract

This Comprehensive Data Report, comprising three volumes, includes the basic test description and test results which are analyzed and documented in the comparison Final Reports, NASA CR-3149 and CR-2990. Volume I contains a description of the acoustic configurations, test facilities, data reduction techniques, test conditions, and detailed test results from the hot, static acoustic tests at the General Electric Anechoic Chamber. Volume II presents acoustic data comparisons in graphical form. Volume III contains the detailed aerodynamic test results plus the "concept screening and model design report."

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8.0 INTRODUCTION TO AERODYNAMIC PERFORMANCE DATA

This volume of the Comprehensive Data Report contains all the reduced aerodynamic performance data obtained during testing under the "Acoustic and Performance Investigation of Coannular Plug Nozzles," NASA Contract NAS3-19777. In addition, Sections 9.0 and 10.0 give detailed descriptions of the NASA-Lewis 8 x 6 foot supersonic wind tunnel in which the aerodynamic performance tests were conducted and also the data reduction procedures used. Data obtained on the Supersonic Tunnel Association (STA) model, used to evaluate the thrust and flow measurement accuracy of the facility, are included. Copies of the original test log sheets presented in Section 11.0 provide a point-by-point listing of the complete performance test matrix.

Presented in the final section of this volume is the "Concept Screening and Model Design Point" - a contractually required document submitted during the course of the contract.

This report contains the rationale used for concept screening and the detailed model hardware designs of a series of coannular plug nozzles used for acoustic and aerodynamic performance tests on Contract NAS3-19777.

9.0 AERODYNAMIC FACILITY DESCRIPTION

The test program was conducted in the NASA-Lewis 8 x 6 foot supersonic wind tunnel. The test nozzles were mounted to a 21.59-cm (8.5-in.) diameter cylindrical sting which was supported in the test section by a perpendicular strut connected to the tunnel ceiling. A schematic illustrating this mounting system is shown in Figure 1. Air was supplied to the model through tubes running down the strut and emptying into coannular air passages which carried the air aft to the model. The air source was a continuous supply of 310.28 N/cm^2 (450 psig) compressor air which passed through a system of control valves, flowmeters, and into the strut. A schematic of the air supply system is shown in Figure 2. The outer nozzle air was metered through a choked venturi 3.1699 cm (1.248 in.) in diameter at the throat. The inner nozzle air supply was metered through either a 2.8951-cm (1.1398-in.) or 1.0122-cm (0.3985-in.) diameter choked venturi, depending on the flow rate required.

The nozzle thrust was measured with a load cell mounted in the forward portion of the sting. The coannular air passages in the sting were mounted to the load cell and were metric; i.e., forces felt by, and transmitted by, the air passages were measured by the load cell. The air supply tubes running down the strut were fixed to the tunnel ceiling at the top, which was nonmetric (forces here were not felt by the load cell), and to the air passages at the bottom which were metric. These air supply tubes thus formed flexture columns bridging the nonmetric and metric portions of the test rig, creating a force which was accounted for in the balance calibration. Air flow from the tubes entered the sting perpendicular to the sting axis and thus created no entering momentum force on the load cell. The air passages themselves where suspended inside the sting with bearings which supported the concentric passages, but allowed the axial forces to be transmitted to the load cell. Static pressure instrumentation was located on the forward-facing portions of the internal metric hardware so that a tare force could be calculated in cases where internal static pressures were different from ambient. See Section 10.3.

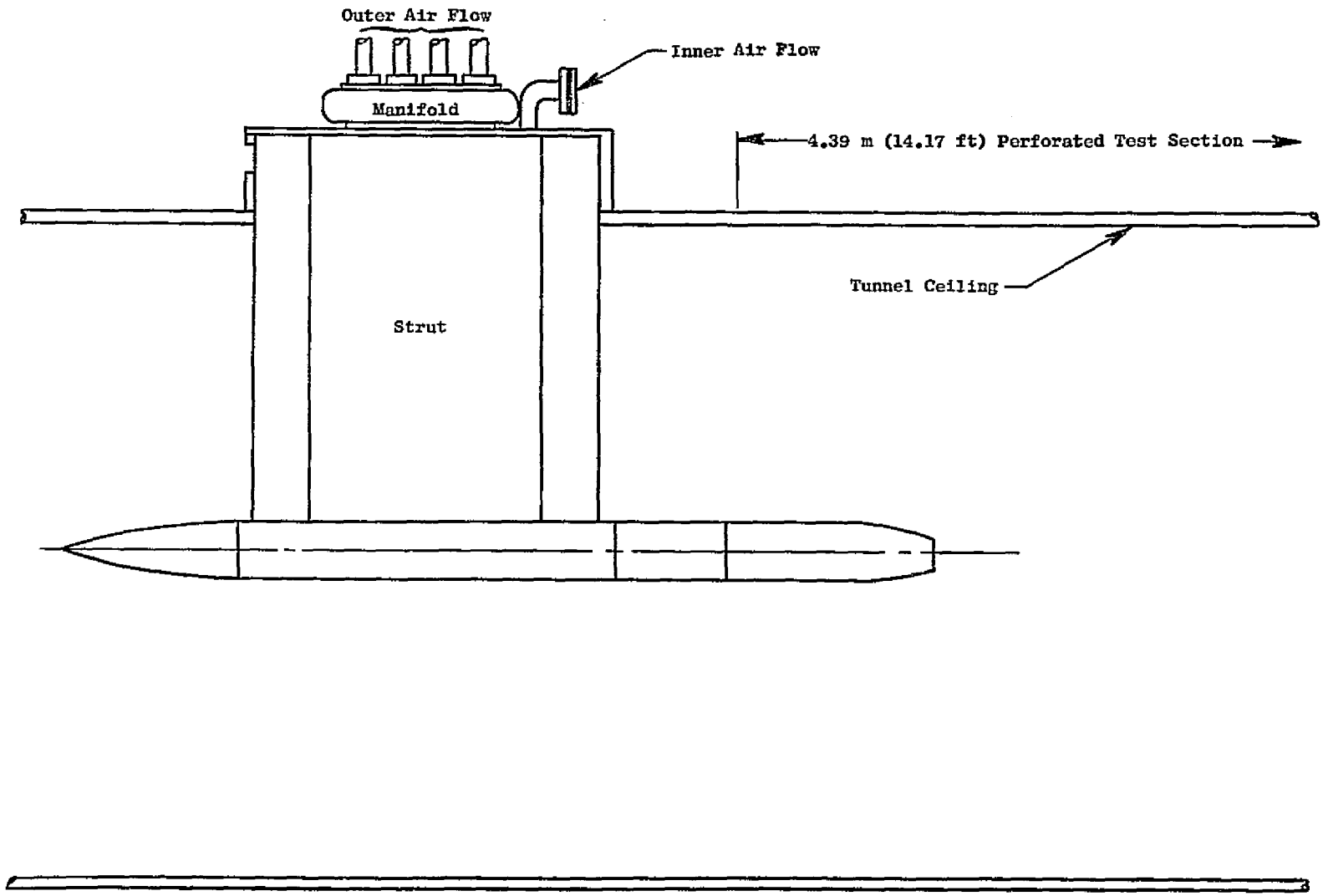

Figure 1. Schematic of Model Mount System.

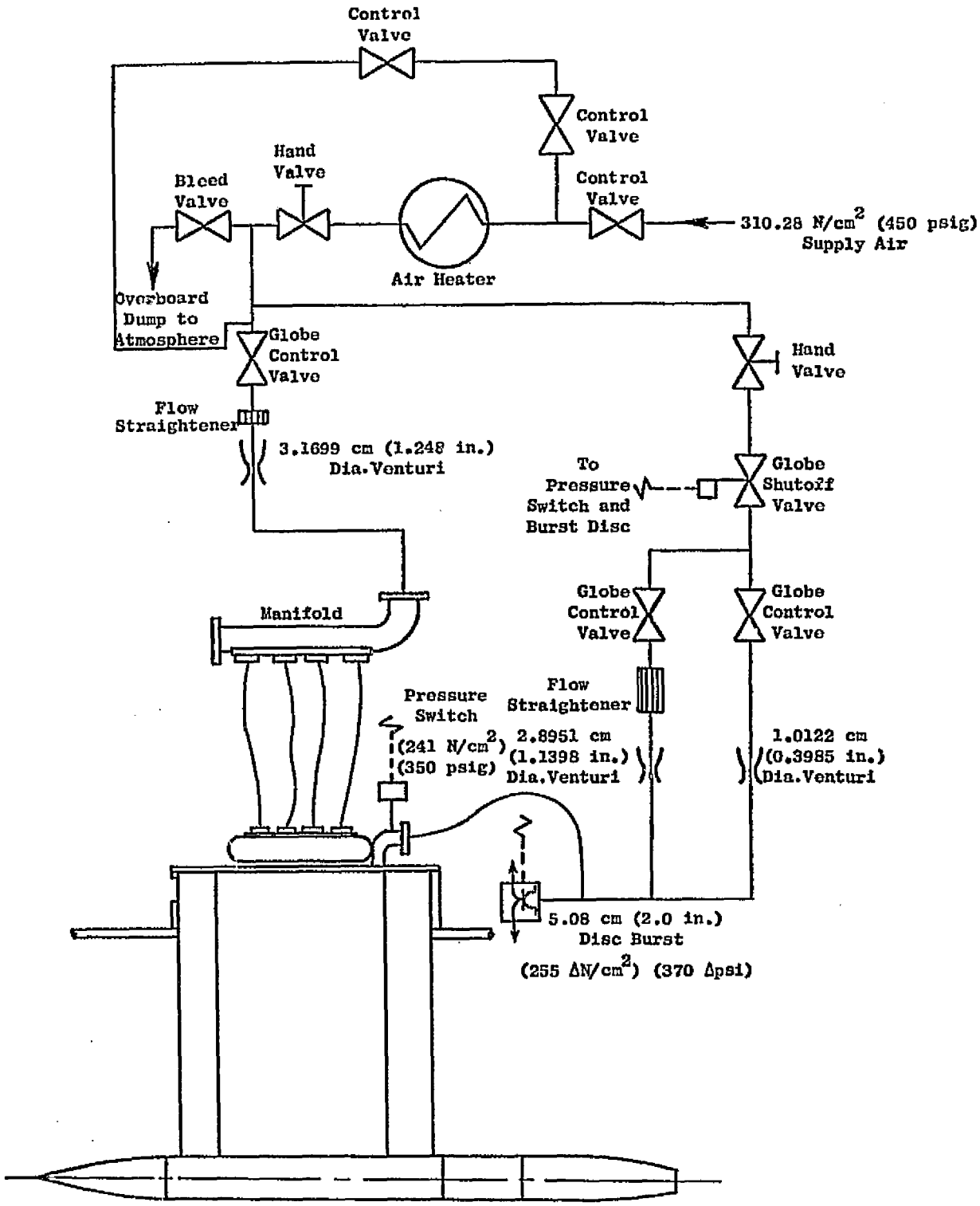

Figure 2. Schematic of Model Air Supply.

The load cell was calibrated by assembling the Supersonic Tunnel Association (STA) model on the sting and applying a known axial force along the centerline of the model and the load cell. This known force was generated by a hydraulic cylinder connected to a circular pad which butted against the STA nozzle exit with the shaft of the hydraulic cylinder pushing at the axis of the nozzle in an axial direction. The correlation of the known applied force and the millivolt output of the load cell comprised the desired calibration. The calibration was made from 0 to 4458 newtons (1000 lb), the maximum allowable balance load.

10.0 AERODYNAMIC DATA REDUCTION PROCEDURES

10.1 FLOW RATES

The mass flow through the outer nozzle was measured with a 3.1699-cm (1.248-in.) throat diameter choked venturi meter, located as shown in Figure 2. The flow rate was calculated using the equation:

$$W_o = C_{D_o} \frac{K_{V_o} P_{T_{V_o}} A_{V_o}}{\sqrt{T_{T_{V_o}}}} \tag{1}$$

The critical flow factor, K_{V_o}, was calculated as a function of total pressure and temperature:

$$K_{V_o} = 0.5282 + a\, T_{T_{V_o}} + b\, T_{T_{V_o}}^2 + c\, T_{T_{V_o}}^3 + (2.698 \times 10^{-5}) P_{T_{V_o}} e^{-.01206(T_{T_{V_o}} - 277.77)} \tag{2}$$

where

$$a = 2.9772 \times 10^{-5}$$
$$b = -6.8656 \times 10^{-8}$$
$$c = 35.0387^{-12}$$

where $T_{T_{V_o}}$ and $P_{T_{V_o}}$ are in K and N/cm^2, respectively.

This equation was obtained by curve-fitting tabulated values in Reference 3.

The meter flow coefficient was calculated as a function of the throat Reynolds number using the following semiempirical relation:

$$C_{D_{V_o}} = 0.9983\ (1 - .0691\ RN^{-0.183}) \tag{3}$$

The 0.9983 factor in the equation is to account for the effects of sonic line distortion.

The meter total pressure, $P_{T_{V_o}}$, was determined by measuring the static pressure, P_{V_o}, upstream of the venturi throat and calculating the total pressure as:

$$P_{T_{V_o}} = P_{V_o} / 0.9995 \tag{4}$$

The 0.9995 factor is the static-to-total pressure ratio for that Mach number based on the ratio of the area at the measurement plane to the meter throat area. The static pressure was measured by six taps, each of which was sampled four times with dummy scanning valves during the taking of each data point. These 24 readings were averaged to determine the static pressure.

The meter total temperature, $T_{T_{V_o}}$, was determined using five platinum resistance thermometers located upstream of the venturi. Each thermometer was read twice and the readings averaged.

The mass flow through the inner nozzle was measured with either of two choked venturi meters located as shown on Figure 2. The flow for high inner flow rates was measured using the 2.8951-cm (1.1398-in.) throat diameter venturi. The flow for the low inner flow rate testing was measured with the 1.0122-cm (0.3985-in.) throat diameter venturi. For both meters, the flow rate was calculated using the equation:

$$W_i = \frac{K_{V_i} P_{V_i}}{55.504 \sqrt{T_{T_{V_i}}}} \tag{5}$$

This equation is based on calibration of the meters made by the manufacturer. The K_{V_i} factors based on this calibration were:

$$K_{V_i} = (-4.0287 \times 10^{-7}) P_{V_i}^{\ 2} + (1.60835 \times 10^{-3}) P_{V_i} + 32.29807 \tag{6}$$

for the 2.8951-cm (1.1398-in.) diameter meter, and:

$$K_{v_i} = (-6.35401 \times 10^{-8})\ P_{V_i}^{\ 2} + (13.77365 \times 10^{-5})\ P_{V_i} + 3.93951 \quad (7)$$

for the 1.0122-cm (0.3985-in.) diameter meter.

The meter static pressure, P_{V_i}, was measured upstream of the venturi throat with four static taps, each of which was read twice and the eight numbers averaged. The venturi total temperatures were measured with three thermocouples (each read twice) located upstream of the meter.

10.2 FLOW COEFFICIENTS

The flow coefficient of a nozzle is defined as the ratio of actual mass flow rate through the nozzle to the ideal isentropic flow rate at the temperature and pressure of the flow:

$$C_D = \frac{\text{measured W}}{\text{ideal W}} \quad (8)$$

The ideal weight flow for the outer nozzle flow was calculated from the relation:

$$W_{I_o} = \frac{K_o\ A_o\ P_{T_o}}{\sqrt{T_{T_o}}} \left(\frac{A^*}{A_o}\right) \quad (9)$$

A_o is the outer nozzle physical throat area and

$$K_o = 0.5282 + a\ T_{T_o} + b\ T_{T_o}^{\ 2} + c\ T_{T_o}^{\ 3} + (2.698 \times 10^{-5}) P_{T_o}\ e^{-.01206(T_{T_o} - 277.77)} \quad (10)$$

where a, b, and c are as given in Section 10.1, and T_{T_o} and P_{T_o} are in K and N/cm^2, respectively.

The nozzle temperature, T_{T_o}, and pressure, P_{T_o}, were measured upstream of the nozzle throat with multielement rakes. These rakes were placed downstream of

choke plates and screens which provided a flow with no pressure profile distortion at the rakes to assure an accurate pressure measurement. The outer nozzle rakes contained eight total pressure probes, the readings of which were averaged to arrive at P_{T_o}, and two thermocouples, the readings of which were averaged. The inner nozzle rakes contained five Pitot tubes and one thermocouple.

For values of nozzle pressure ratio greater than 1.8929, A^*/A_o in the ideal weight flow equation is equal to one. For lower pressure ratios, A^*/A_o was calculated from the isentropic relationships;

$$A^*/A_o = \frac{216}{125} M_o \left(1 + \frac{M_o^2}{5}\right)^{-3} \tag{11}$$

where

$$M_o = \left\{5 \left[\left(\frac{P_{T_o}}{P_a}\right)^{0.28571} - 1\right]\right\}^{1/2} \tag{12}$$

The inner nozzle ideal weight flow was calculated in identical fashion as the outer nozzle, but using the inner nozzle throat area, flow pressure and temperature. For the low inner flow testing, the inner nozzle total pressures required to supply the low flow rates were generally lower than ambient pressure due to the pumping effect of the outer flow. In these cases, the ideal flow rate and flow coefficients are meaningless and were not calculated.

10.3 THRUST MEASUREMENTS

The thrust of the exhaust nozzles is defined as the axial exit momentum of the exhaust flow, plus the excess of exit pressure over ambient pressure times the exit area normal to the axis, minus the axial drag on the nozzle external surface, i.e.,

$$F = \int_{A_{exit}} d\,(WV)_{axial} + \int_{A_{exit}} (P - P_a)\,dA - D_{external} \tag{13}$$

The external drag consists of both the pressure drag on the boattail surface and the axial component of skin friction. Figure 3 shows a control volume applied to the test nozzles. Writing the momentum equation in the axial direction for this control volume demonstrates how the thrust was measured for the tests:

$$F = F_{LC}+F_{AS}+A_1(P_1-P_a)+A_2(P_2-P_a)+A_3(P_3-P_a) \tag{14}$$

where F_{LC} is the axial force applied to the load cell and F_{AS} is the axial force applied at the boundary of the control volume by the air supply tubes. The static pressures P_1, P_2, P_3, and P_4 were measured with two static taps 180° apart at each of the four areas (see Figure 3). The force measuring system was calibrated by applying known forces and correlating this force against the load cell output, as previously described in Section 10.0. This calibration provided a linear relationship between the applied load and the load cell output in millivolts which was used to determine the load cell plus air supply tube force as follows:

$$\text{Applied Load} = a\ (mv)+ b = F_{LC} + F_{AS} \tag{15}$$

where a and b are constants determined by the calibrations and mv is the load cell reading in millivolts. The load cell was sampled 48 times during the taking of each point, the above calculation made for each sample, and the results averaged to yield the measured force.

An adjustment was made to the measured thrust to account for external friction drag on the cylindrical section upstream of the nozzle shroud. The axial force on this 20.32-cm (8.0-in.) diameter section, which extended from the metric-break to the attach-point of the nozzle shrouds, was not included in the nozzle net thrust. The friction drag was calculated by the equation:

$$D_f = \frac{\gamma}{2} P_a M_a^2 A_c C_f \tag{16}$$

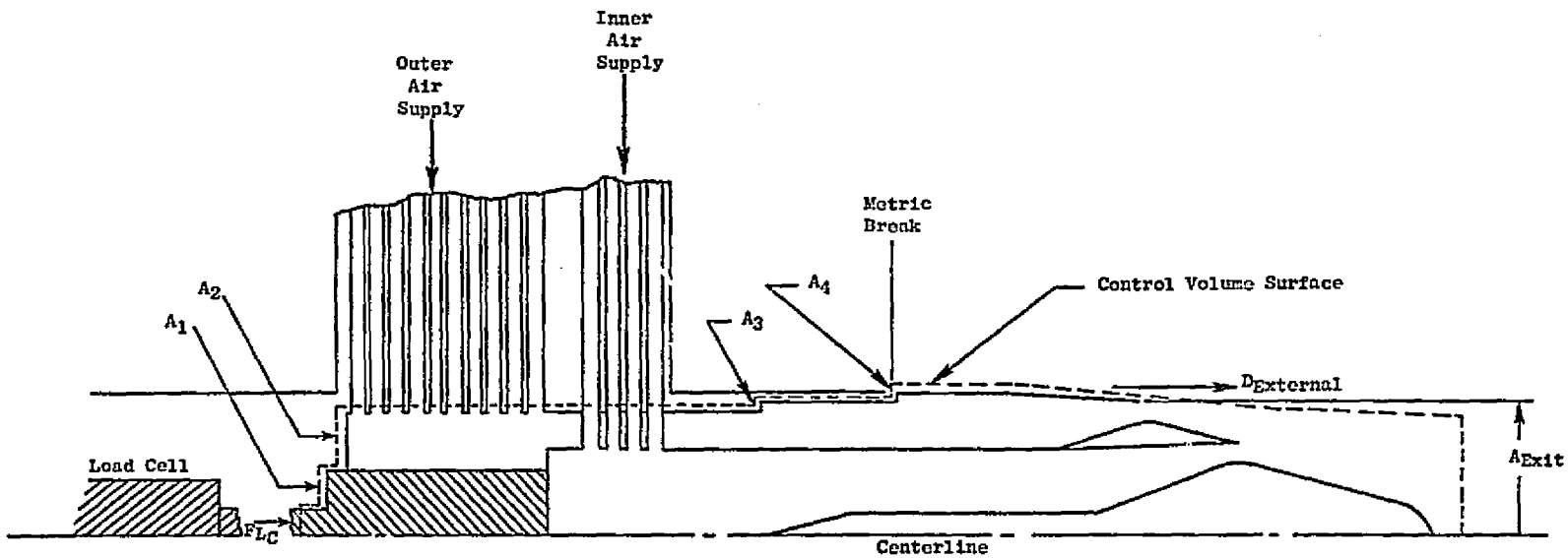

Figure 3. Control Volume Applied to Model Test Setup.

where A_c is the wetted surface area of the cylindrical piece 20.32 cm (8.0 in.) in diameter and 17.78 cm (7.0 in.) in length. The drag coefficient was calculated from

$$C_f = 0.288\ (1 + 0.2\ M_a^2)^{-0.5}\ (\log_{10} RN_x)^{-2.45} \tag{17}$$

where $RN_x = 2.856\ RN_a$, RN_a being the Reynolds number per meter based on the ambient stream Mach number, temperature, and pressure.

The thrust of the nozzles for this test was therefore given by;

$$F = F_{LC}+F_{AS}+A_1(P_1-P_a)+A_2(P_2-P_a)+A_3(P_3-P_a)+A_4(P_4-P_a)+D_f \tag{18}$$

or, substituting the equations by which $F_{LC} + F_{AS}$ and D_f were calculated:

$$F = a(mv)+b+A_1(P_1-P_a)+A_2(P_2-P_a)+A_3(P_3-P_a)+A_4(P_4-P_a)+\frac{\gamma}{2} P_a M_a^2 A_c C_f \tag{19}$$

10.4 THRUST COEFFICIENT

The thrust coefficient is the ratio of the nozzle thrust to the ideal thrust of the inner duct flow plus the ideal thrust of the outer duct flow. The ideal thrust for each stream equals the actual mass flow rate times the ideal velocity, i.e., the velocity of the stream expanded isentropically from the total pressure to the ambient pressure. The equation for the thrust coefficient is thus:

$$C_T = \frac{F}{W_o V_{I_o} + W_i V_{I_i}} \tag{20}$$

The ideal thrust for the nozzles was calculated using the dimensionless ideal-thrust function which is a function of only the nozzle pressure ratio:

$$\frac{W_I V_I}{P_T A^*} = \gamma\left(\frac{2}{\gamma+1}\right)^{\frac{\gamma}{\gamma-1}} \left(\frac{\gamma+1}{\gamma-1}\right)^{1/2} \left[1 - (P_a/P_T)^{\frac{\gamma-1}{\gamma}}\right]^{1/2} \tag{21}$$

$$= 1.81163 \sqrt{1 - (P_a/P_T)^{0.28571}} \quad \text{for } \gamma = 1.4$$

The ideal thrust for the inner and outer streams was then:

$$W_i V_{I_i} = C_{D_i} P_{T_i} A_i \left(\frac{A_i^*}{A_i}\right)\left(\frac{W_{I_i} V_{I_i}}{P_{T_i} A_i^*}\right)$$

$$W_o V_{I_o} = C_{D_o} P_{T_o} A_o \left(\frac{A_o^*}{A_o}\right)\left(\frac{W_{I_o} V_{I_o}}{P_{T_o} A_o^*}\right) \tag{22}$$

For pressure ratios greater than 1.8929, $A^*/A = 1.0$. For pressure ratios less than this, A^*/A was calculated as described in Section 10.2.

During much of the low inner flow rate testing, the total pressure of the inner nozzle flow was lower than ambient. In these cases, the ideal thrust of the inner nozzle was set equal to zero.

For the static thrust tests of the STA model, a dimensionless stream-thrust parameter was also calculated as:

$$f_9 = \frac{F + P_a A_9}{P_T A_9} \tag{23}$$

where A_9 is the STA nozzle exit area.

10.5 PRESSURE DATA

Total pressures in the models and static pressures on the model surfaces were measured with scanning value/transducer arrangements. The individual static pressure readings were also nondimensionalized by the ambient pressure. Pressure forces on the aft-facing portions of the shroud, outer plug, and inner plug were calculated by multiplying the difference between the static pressure at each tap and ambient by an incremental projected area represented by the particular tap and summing the products, i.e.,

$$F_p = \Sigma\ (P-P_a)\Delta A \qquad (24)$$

These pressure forces were also nondimensionalized by the total ideal thrust of the nozzle:

$$\frac{F_p}{W_i\ V_{I_i} + W_o\ V_{I_o}}$$

11.0 AERODYNAMIC MODEL DESCRIPTION

A schematic of the eight model configurations assembled on the sting is shown in Figure 4. Adapters connected the model flowpaths with the inner and outer air supply passages. The nozzle total pressure and temperature measurements were made with instrumentation rakes downstream of flow conditioners (choked plates and screens) which assured a flat total-pressure profile for an accurate measurement. The outer diameter of the models was 20.32 cm, (8.0 in.), which required a reduction from the 21.59 cm (8.5 in.) sting diameter. This reduction was made via a fairing attached to the sting and was therefore nonmetric (not connected to the load cell). The metric break (the separation between the metric and nonmetric portion of the system) was provided by a gap of approximately 0.127 cm (0.05 in.) between the end of the fairing and model shrouds, which were attached to the air supply passages, as shown in Figure 4.

Schematics of the eight model configurations are shown in Figures 5 and 6. The principal nozzle design variables were inner- and outer-nozzle radius ratio and the inner plug geometry. Two inner plug geometries were tested: "conical" plugs which had a constant plug angle from the radius at the crown of the plug aft to the tip radius (Configurations 2, 3, 5, 6 and 7); and "bent" plugs which had an abrupt angle change partway down the plug (Configurations 1, 4, and 8). The two conical plugs had a 2.415 cm (0.951 in.) radius of curvature at the crown of the plug, a 15° plug angle, and a 2.08 cm (0.819 in.) radius circular-arc plug tip. The two bent plugs were the same with the exception that the initial plug angle downstream of the throat was 2.8° and changed abruptly to 15°.

The inner nozzle radius ratio was varied by using inner plugs with different diameters at the crown: the outer flow surface of the inner stream remained fixed. The outer nozzle radius ratio was varied by changing the shroud, with the outer plug geometry remaining the same. All three radius ratio shrouds had cylindrical inner flow surfaces in the region of, and downstream of, the nozzle throat. As a consequence of varying the outer radius ratio in this manner, the amount of boattail area and the boattail angle increased and the outer nozzle throat area decreased as the radius ratio increased.

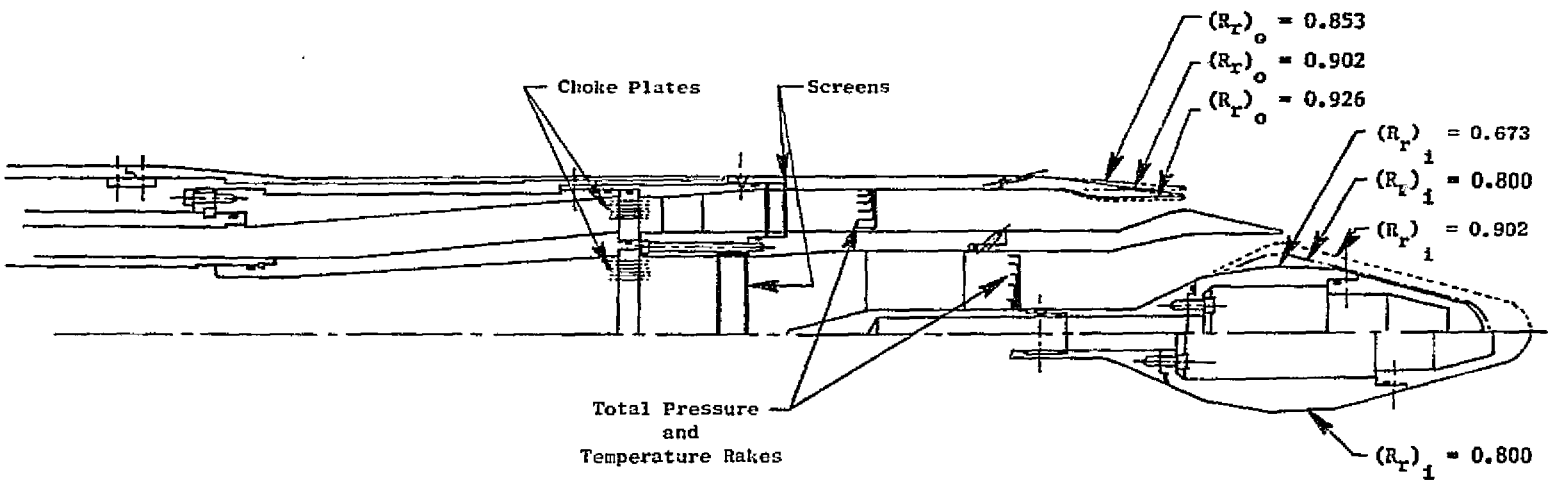

Figure 4. Schematic of Model Assembly.

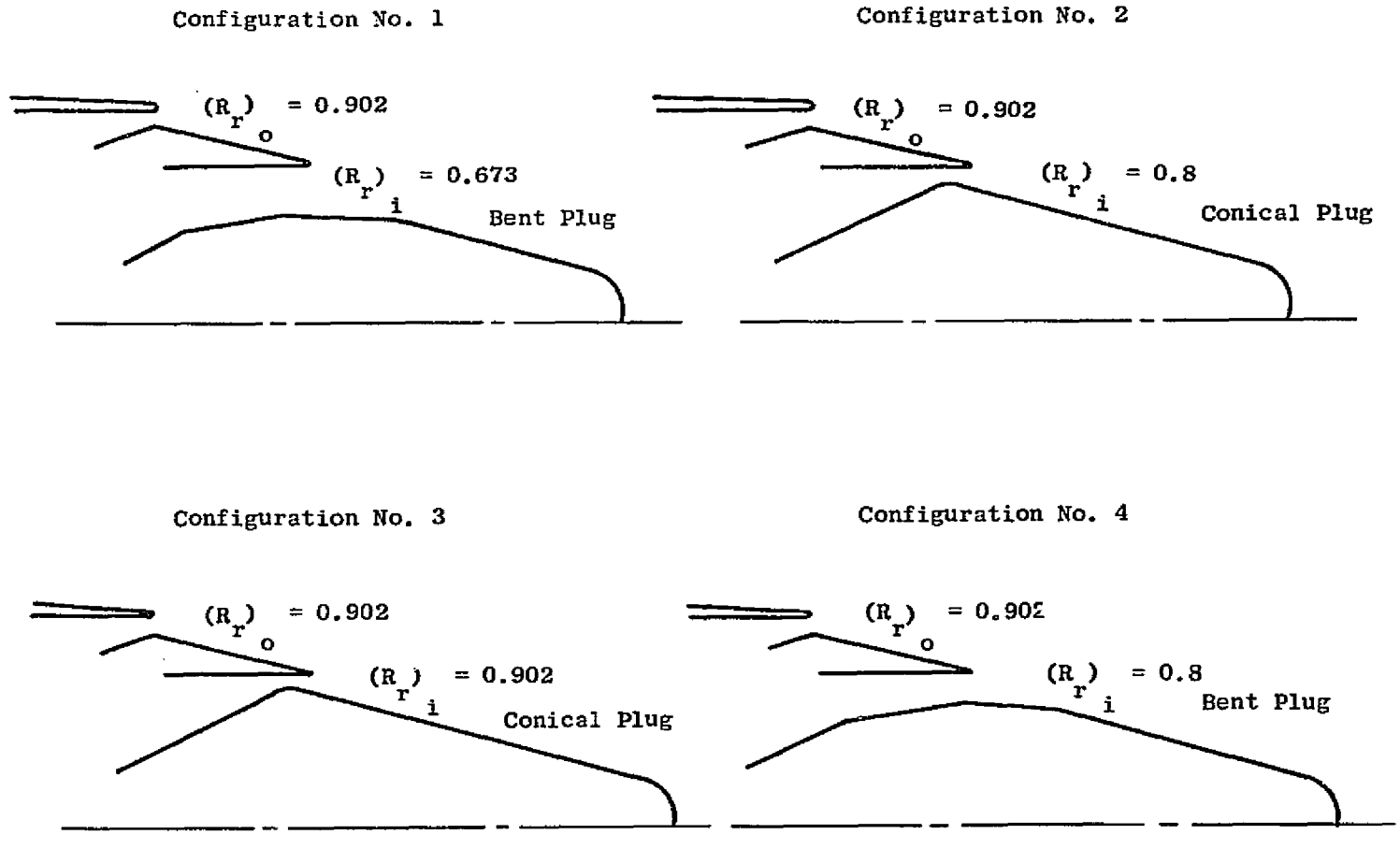

Figure 5. Model Schematics, Configurations 1 Through 4.

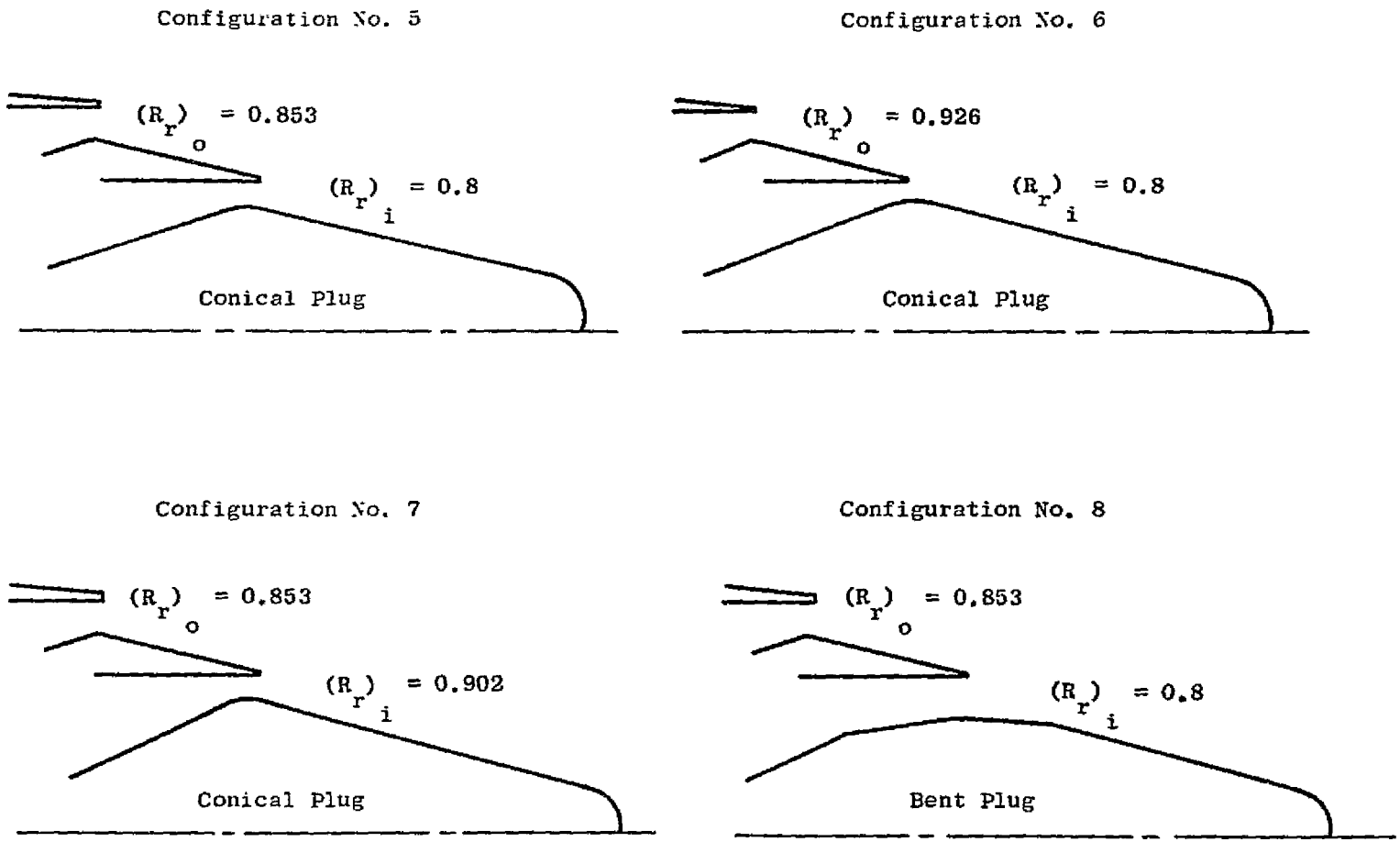

Figure 6. Model Schematics, Configurations 5 Through 8.

A circular arc of 15.24 cm (6.0 in.) was used on all three shrouds in transitioning the outer surface from the 20.32-cm (8.0-in.) diameter cylindrical sting to the conical boattail angle. A table summarizing the key model parameters is given below.

Config. No.	$(R_r)_o$	$(R_r)_i$	A_o^* (cm^2)	A_i^* (cm^2)	Inner Plug Geometry	Shroud Boattail Angle (°)
1	0.902	0.673	45.451	70.819	Bent	8.0
2	0.902	0.8	45.451	46.684	Conical	8.0
3	0.902	0.902	45.451	24.181	Conical	8.0
4	0.902	0.8	45.451	46.684	Bent	8.0
5	0.853	0.8	74.232	46.684	Conical	4.5
6	0.926	0.8	32.968	46.684	Conical	9.7
7	0.853	0.902	74.232	24.181	Conical	4.5
8	0.853	0.8	74.232	46.684	Bent	4.5

In addition to the eight plug-nozzle model configurations, a Supersonic Tunnel Association (STA) model was also tested as a means of verifying the facility accuracy. A sketch of the STA model attached to the model support is shown in Figure 7. The throat diameter of this nozzle was 10.16 cm (4.0 in.) with the remaining dimensions scaled to this diameter as presented in Reference 1.

The model flow surfaces were instrumented with static pressure taps. Each shroud contained 12 external taps spaced axially, starting on the cylindrical section slightly upstream of the boattail arc and continuing aft to the tip of the shroud. The outer plug was instrumented with 15 static taps axially located on the outer surface starting from slightly upstream of the crown of the plug and running down to near the plug tip. The inner plug was instrumented with either 18, 19, or 20 taps, depending on the configuration, which were distributed axially from slightly upstream of the plug crown to the tip of the plug.

Photographs of several of the models and the STA nozzle assembled in the wind tunnel are shown in Figures 8 through 13. Detailed drawings of the model and adapter hardware are presented in Reference 2.

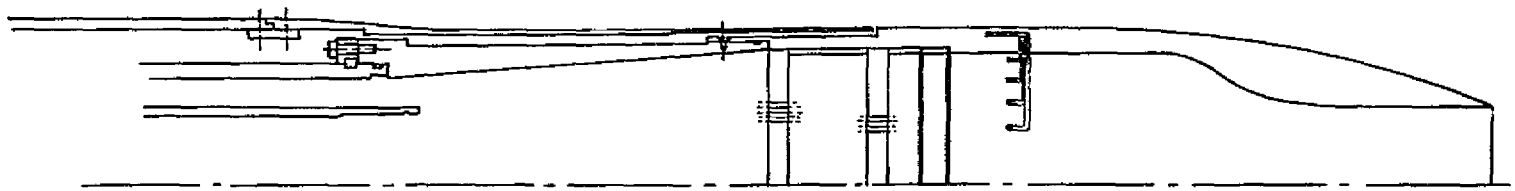

Figure 7. Supersonic Tunnel Association Model Assembly.

Figure 8. Configuration 2 Mounted in NASA Tunnel.

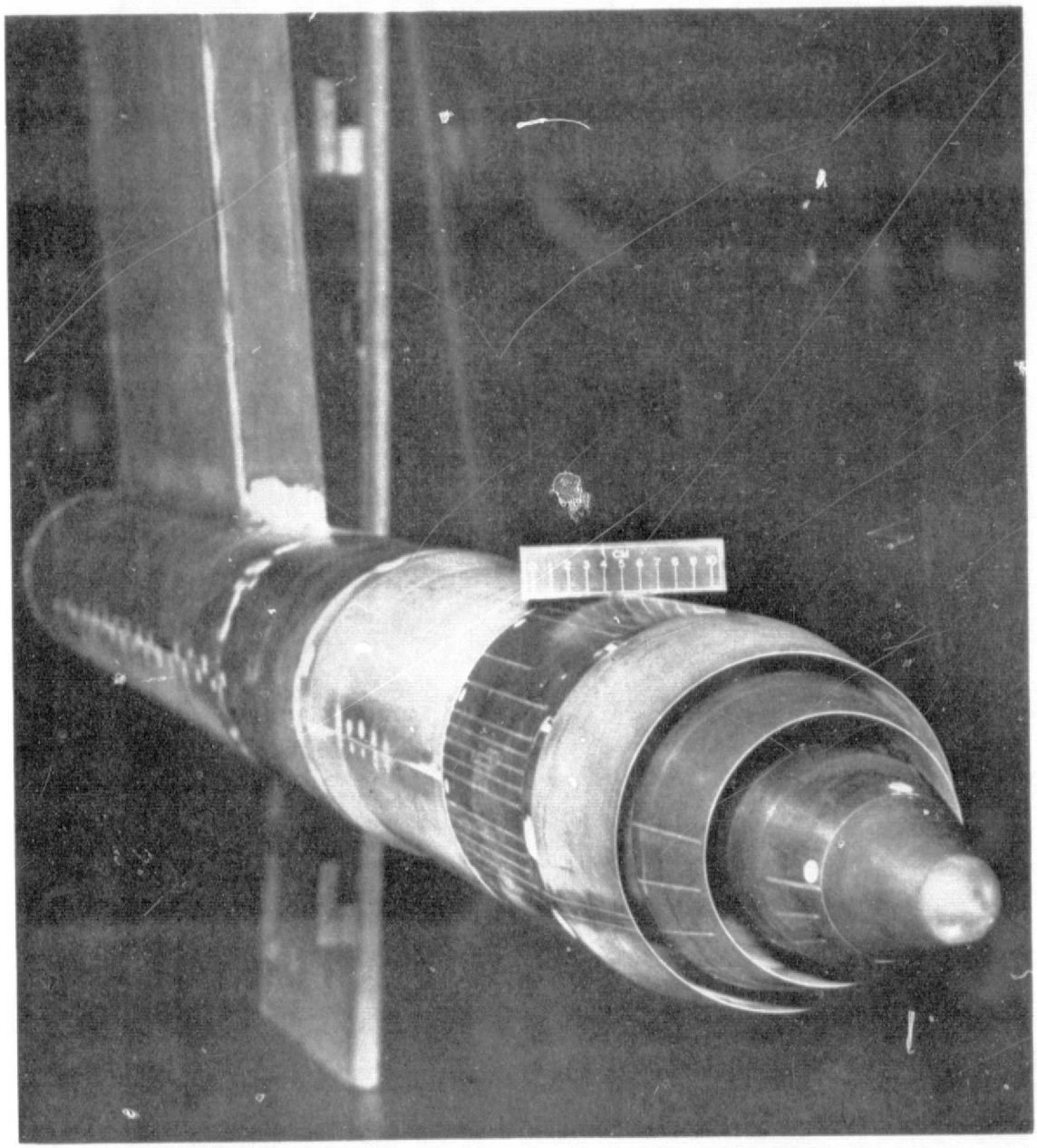

Figure 9. Configuration 4 Mounted in NASA Tunnel.

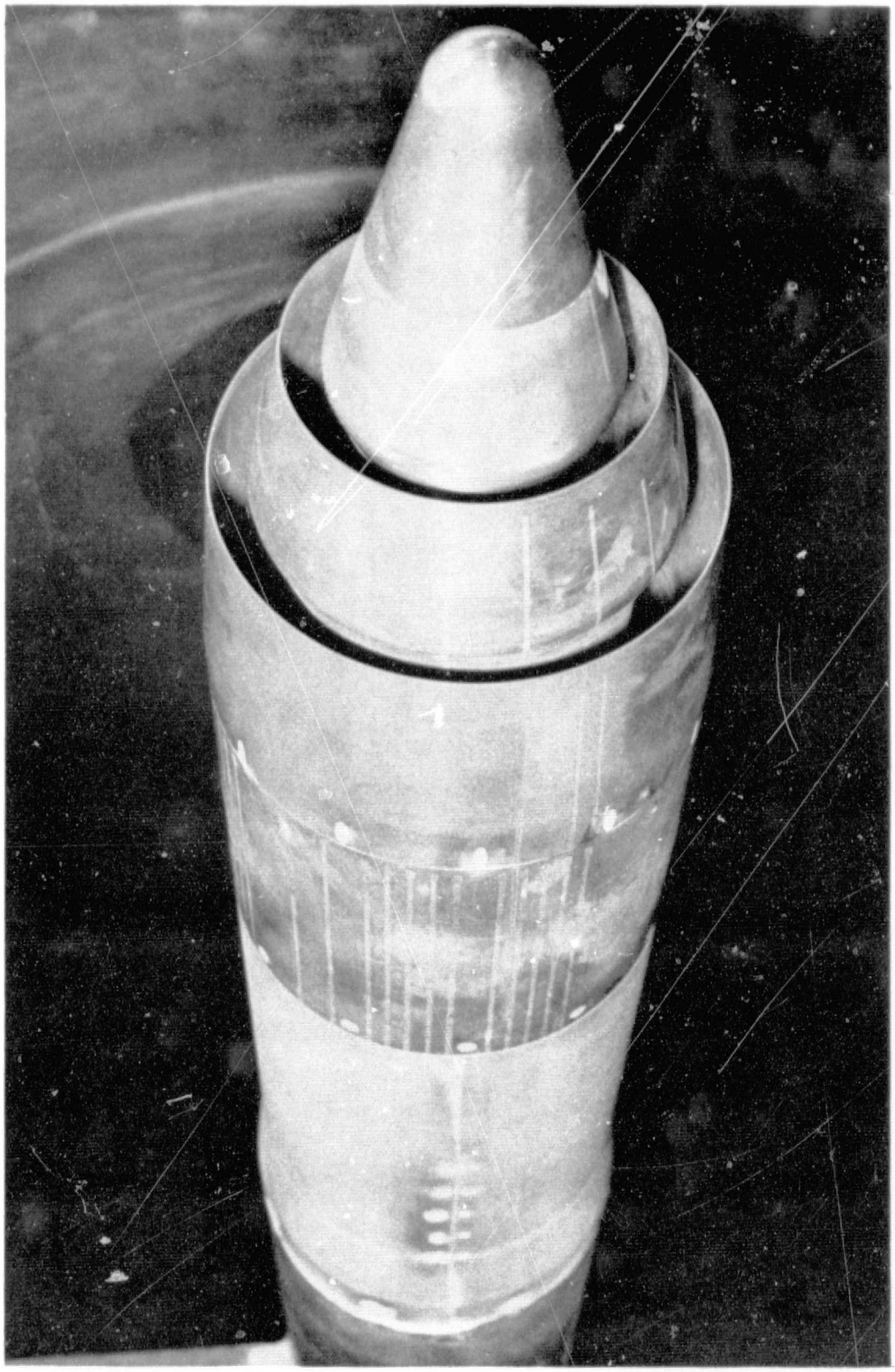

Figure 10. Configuration 5 Mounted in NASA Tunnel.

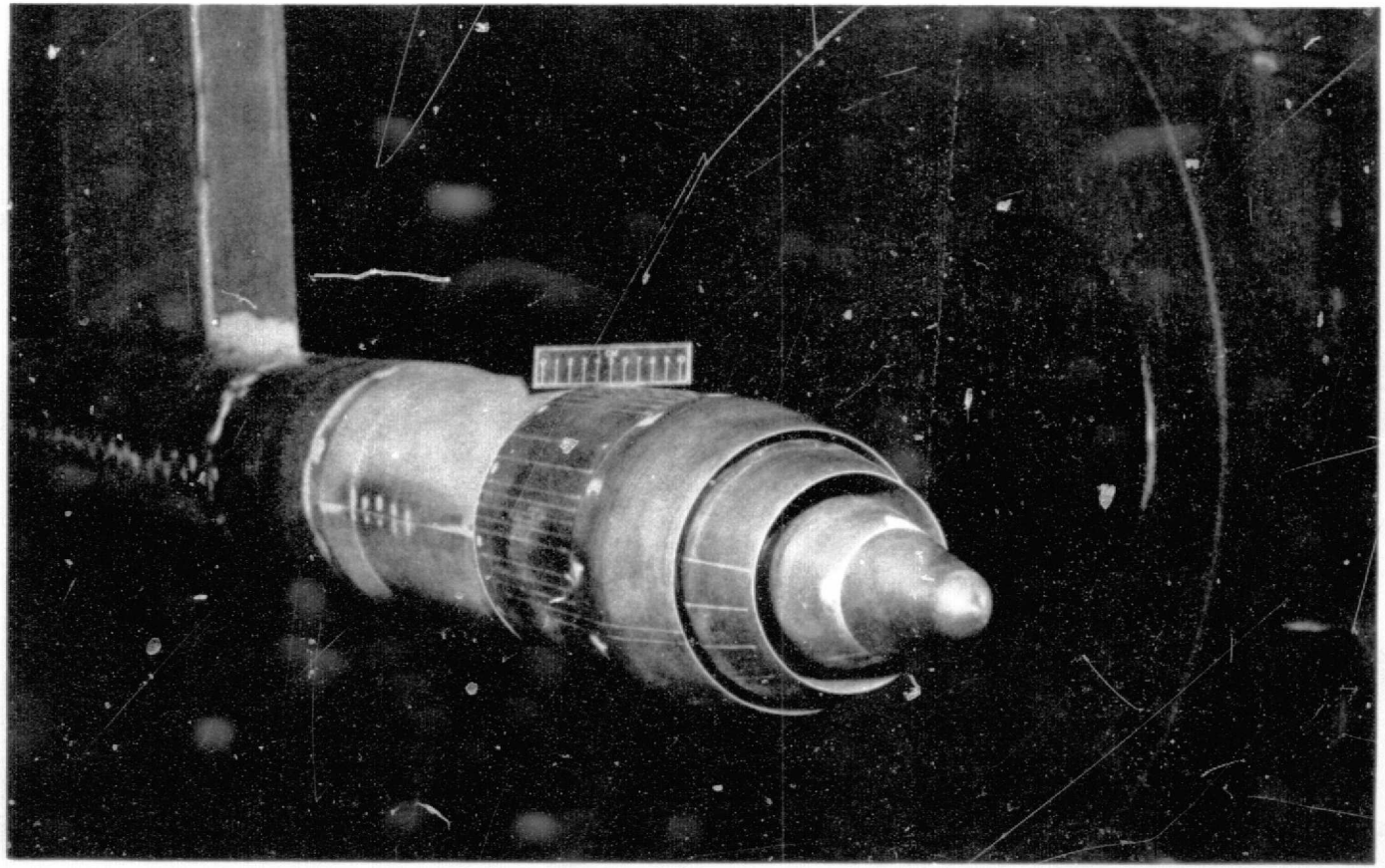

Figure 11. Configuration 6 Mounted in NASA Tunnel.

Figure 12. Configuration 7 Mounted in NASA Tunnel.

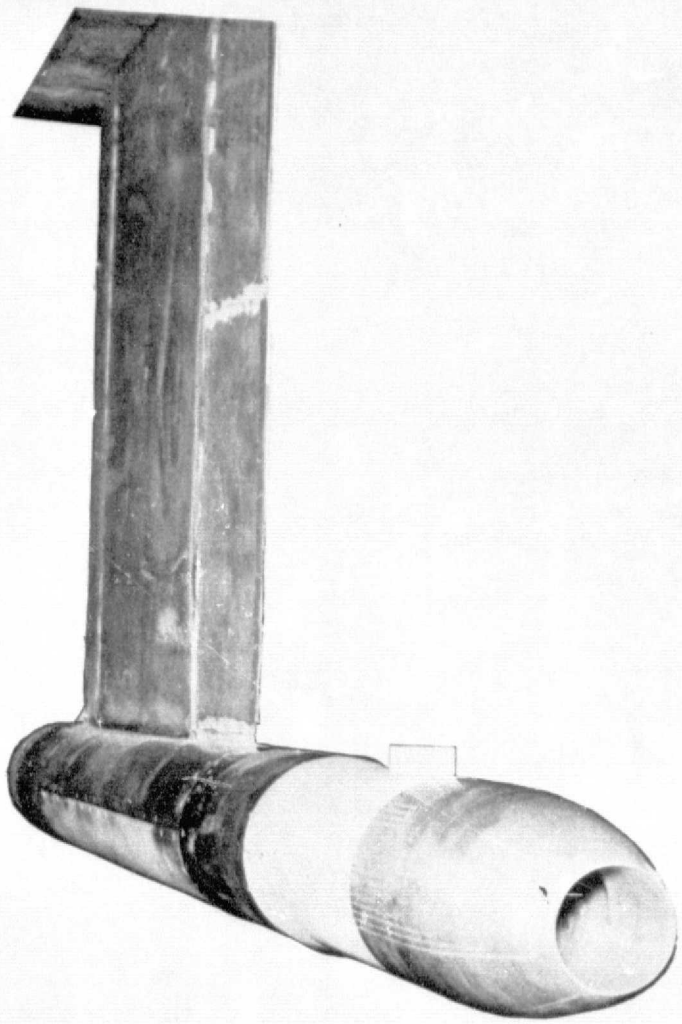

Figure 13. STA Nozzle on NASA Tunnel Mount.

12.0 AERODYNAMIC TEST MATRIX

The detailed test matrix appears in the following tables.

Test Matrix Nomenclature

Rdg	-	Reading Number
M_a	-	Tunnel Mach Number
P_{T_o}/P_a	-	Outer Nozzle Pressure Ratio (Nozzle Pressure Ratio for STA Model)
P_{T_i}/P_a	-	Inner Nozzle Pressure Ratio
$w\sqrt{\tau}$	-	Corrected Weight Flow Ratio, Inner Nozzle Flow to Outer Nozzle Flow

G.E. Co-Annular Nozzles (Test 031) VOL 588

Run #8 4" STA

DATE 6-2-76

ENG.

RDG.	Time	Ma	P_{t_0}/P_a	Inner Flow
328	0114	0	2.0	High
329	0115		1.5	
330			1.0	
331	0123		1.0	no flow
332	0126		1.25	
333	0129		1.5	
334	0132		1.75	
335	0135		2.0	
336	0140		2.5	
337	0141		2.88	
338	0142		2.5	
339	0143		2.0	
340	0144		1.75	
341	0145		1.5	
342	0146		1.25	
343	0147		1.0	
344	0334	0.36	1.25	
345	0338		1.5	
346	0339		1.75	
347	0340		2.0	
348	0341		2.5	
349	0342		2.74	
350	0344		2.5	
351	0345		2.0	
352	0346		1.75	
353	0347		1.5	
354	0349		1.25	
355	0352		1.5	High
356	0353		1.0	
357	0354		2.18	
358	0355		2.0	

G.E. Co-Annular Nozzles Test 0[illegible] No. Vol 58[illegible]

Run #8 4" STA

DATE 6-2-7[illegible]

NO.

RDG.	Time		M_a		P_{to}/P_a		Inner Flow		
359	[illegible]		.36		1.5		High		
360	[illegible]		.40		1.25		No flow		
361	[illegible]				1.5				
362	0410				[illegible].5				
363	0411				[illegible]				
364	0412				[illegible]				
365	0413				[illegible]				
366	0414				2.5				
367	0415				2.0				
368	0416				1.75				
369	0417				1.5				
370	0418				1.25				
371	0420				1.5		High		
372	0421				2.0				
373	0422				2.29				
374	0423				[illegible]				
375	0424				1.5				
376	0434		.45		1.25		No Flow		
377	0435				1.5				
378	0436				1.75				
379	0437				[illegible].0				
380	0438				[illegible].5				
381	0439				[illegible].0				
382	0440				[illegible]				
383	0441				[illegible].0				
384	0442				[illegible]				
385	0443				[illegible].0				
386	0444				1.75				
387	0445				[illegible]				
388	0446				1.25				
389	0448				1.5		High		

NASA C-8010 (10-24-51)

G.E. Co - Annular Nozzles Test Data Vol. 5

Run # 8 4" STA

DATE 6-2-

PG.

RDG.	Time		M_a		P_{to}/P_a		Inner Flow		
390	0419		.45		2.0		Flow		
391	0450				[illegible]				
392	0457				1.0				
393	0452				1.5				
394	0454		[illegible]		[illegible]		No Flow		
395	0500				[illegible]				
396	0501				[illegible]				
397	0503				2.0				
398	0508				[illegible]				
399					[illegible]				

Run #14 Lewis - Dual Flow. Config. 2 (52230 / 52250) DATE 8-10-25 ENG.

RDG.	Time	M_a	P_{t_0}/P_a	P_{t_i}/P_a (High)	Low $W\sqrt{T}$
518	0521	0.36	1.5		0
519	0522				.03
520	0523				0
521	0524		1.5		0
522	0524				.03
523	0542				.06
524	0544		2.0		0
525	0545				.06
526	0546		2.5		0
527	0547				.01
528	0548				.02
529	0549				.03
530	0550				.06
531	0551		3.5		0
532	0552				.03
533	0553				.06
534	0554		2.5		.03
535	0555		1.5		.03
536	0558		1.5	2.5	
537	0600			1.1	
538	0601			1.5	
529	0602			2.5	
540	0603			3.5	
541	0604		2.5	1.1	
542	0605			1.5	
543	0606			2.5	
544	0607			3.5	
545	0608		3.5	1.1	
546	0609			1.5	
547	0610			2.5	
548	0611			3.5	

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

RUN #14 Lewis. Dual Flow Config 2 (52230 52250) DATE 6-10-76

ENG.

RDG.	Time	:	M_a		P_{t_o}/P_a		HIGH P_{t_i}/P_a		LOW $W\sqrt{T}$
549	0620		.45		1.5				0
550	0621								.06
551	0621				2.5				0
552	0622								.06
553	0623				3.5				0
554	0623								.06
555	0624				2.5				.06
556	0624				1.5				.06
557	0625				1.5		2.5		
558	0626						3.5		
559	0626				2.5		2.5		
560	0627						3.5		
561	0627				3.5		2.5		
562	0628						3.5		
563	0656		0		1.5				0
564	0657								.03
565	0658								.06
566	0659				2.0				0
567	0700								.06
568	0701				2.5				0
569	0702								.01
570	0703								.02
571	0704								.03
572	0705								.06
573	0706				3.5				0
574	0707								.03
575	0708								.06
576	0709				2.5				.03
577	0710				1.5				.03
578	0712				1.5		1.1		
579	0713						1.5		

G.E. Co-Annular Nozzles (Test 031)

RUN #14 Lewis-Dual Flow Config 2 (S2236 S2250) J.O. YOE 5881 DATE 6-10-75

ENG.

RDG.	Time		M_a		P_{to}/P_a		High P_{ti}/P_a		Low $W\sqrt{T}$
580	0715		0		1.5		2.5		
581	0715						3.5		
582	0716				2.5		1.1		
583	0717						1.5		
584	0718						2.5		
585	0719						3.5		
586	0720				3.5		1.1		
587	0721						1.5		
588	0722						2.5		
589	0723						3.5		
590	0726				3.5		2.5		
591	0727				2.5		2.5		
592	0728				1.5		2.5		
593	0732				1.5		1.5		
594	0736				1.5		1.1		
595	0738				2.0				0
596	0740								.06
597	0741				1.5				.96
598	0743								0
599	0745				2.5				6
600	0747								0
601	0748				3.5				0
602	0749								.6
603	0751				1.5				6
604	0753								"
605									
606									
607									
608									
609									
610									

NASA C-801B (10-24-51)

G.E. Co-Annular Nozzles (Test 031)

J.O. YOE 5881

Run #15 - Lewis Dual Flow Config 3. (52430 & 52450)

DATE 6-11-76

ENG.

RDG.	Time	.	M_a		P_{to}/P_a		high P_{ti}/P_a		low $w\sqrt{T}$
605	10:23		0.36		1.50		-		.03
606	10:24				2.5		-		.03
607	10:25				3.5		-		.03
608	10:27				1.5		2.5		-
609	10:28				2.5		2.5		-
610	10:29				3.5		2.5		-
611	10:32				2.5		2.5		-
612	0104		0		1.5				0
613	0105								.03
614	0107								.06
615	0108				2.5				0
616	0109								.03
617	0110								.06
618	0111				3.5				0
619	0112								.03
620	0113								.06
621	0115				3.5				0
622	0116				2.5				
623	0117				1.5				
624	0121				1.5		1.1		
625	0128						1.5		
626	0129						2.5		
627	0130						3.5		
628	0131				2.5		1.1		
629	0132						1.5		
630	0133						2.5		
631	0134						3.5		
632	0135				3.5		1.1		
633	0136						1.5		
634	0137						2.5		
635	0138						3.5		

G.E. Co-Annular IVO3316 (Test 051)

Run #15 - Lewis Dual Flow - Config 3 (52430 & 52450)

J.O. YOE 5881

DATE 6-11-76

ENG.

RDG.	Time	.	M_a		P_{to}/P_a		high P_{ti}/P_a		low $w\sqrt{T}$
636	0140		0		3.5		1.1		
637	0141				2.5				
638	0142				1.5				
639	0145						2.5		
640	0217		.36		1.5				0
641	0218								.03
642	0219								.06
643	0220				2.5				0
644	0221								.03
645	0222								.06
646	0223				3.5				0
647	0224								.03
648	0225								.06
649	0229				3.5				0
650	0230				2.5				
651	0231				1.5				
652	0234				1.5		1.1		
653	0235						1.5		
654	0236						2.5		
655	0237						2.5		
656	0238				2.5		1.1		
657	0239						1.5		
658	0240						2.5		
659	0241						3.5		
660	0242				3.5		1.1		
661	0243						1.5		
662	0244						2.5		
663	0245						2.5		
664	0247				2.5		1.1		
665	0248				1.5				
666	0252		.45		1.5				0

G.E. Co-Annular Nozzles (Test 031)

Run #15 - Lewis Dual Flow Config. 3 (52430, 52450)

J.O. YOE 5881

DATE 6-11-76

ENG.

RDG.	Time		M_a		P_{to}/P_a		High P_{ti}/P_a		Low $W\sqrt{T}$
667	0258		.45		1.5				.06
668	0259				2.5				0
669	0300								.06
670	0301				3.5				0
671	0302								.06
672	0304				3.5				.06
673	0305				2.5				
674	0306				1.5				
675	0309				1.5		2.5		
676	0310						3.5		
677	0311				2.5		2.5		
678	0312						2.5		
679	0313				2.5		2.5		
680	0314						3.5		
681	0324				1.5				.06
682	0325				2.5				
683	0326				3.5				
684	0329				1.5		2.5		
685	0330				2.5				
686	0332				3.5		3.5		
687	0333				3.5		2.5		
688									
689									
690									
691									
692									
693									
694									
695									
696									
697									

G.E. Co-Annular Nozzles (Test 031)

Run #16 - Lewis Dual Flow - Config. 7 (51430 & 51450)

U.O. YOE 588

DATE 6-11-76

ENG.

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
688	0429		0.36		1.5		Ref Point		0
689	0431				1.5				0
690	0432								.03
691	0433								.06
692					2.5				0
693									
694									
695									
696									
697									
698									
699									
700									
701									
702									
703									
704									
705									

G.E. Co-Annular Nozzles (Test 031)

Run #17 - Lewis Dual-Flow - Config 7

J.O. YOE 5881

DATE 6-14-76

ENG.

RDG.	Time	.	M_a		P_{t_o}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
							Lewis		Lewis
692	0625		0		1.5				0
693	0626								.03
694	0627								.06
695	0628				2.0				0
696	0629								.03
697	0630								.06
698	0631				2.5				0
699	0632								.03
700	0633								.06
701	0634				3.2				0
702	0635								.03
703	0636								.06
704	0638				2.5				.03
705	0639				2.0				.03
706	0640				1.5				.03
707	0642				3.17				.06
708	0643				1.5		1.1		
709	0646						1.5		
710	0647						2.5		
711	0648						3.5		
712	0649				2.0		1.1		
713	0650						1.5		
714	0651						2.5		
715	0652						3.5		
716	0653				2.5		1.1		
717	0654						1.5		
718	0655						2.5		
719	0656						3.5		
720	0657				3.18		1.1		
721	0658						1.5		
722	0659						2.5		

Run #17. Lewis Dual Flow Config 7

J.O. YOE 5881

DATE 6-14-56

ENG.

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a		$w\sqrt{T}$
123	0700		0		3.4		3.5		
124	0702				2.5		1.1		
125	0703				2.0				
126	0704				1.5				

G.E. Co-Annular Nozzles (Test 031)
Run #19. Lewis Dual Flow Config 7

J.O. YOE 5881
DATE 6-16-76
ENG.

RDG.	Time		M_a		P_{to}/P_a		High P_{ti}/P_a		Low $W\sqrt{T}$
727	0140		0.36		1.5				0
728	0145								.03
729	0146								.06
730	0147				2.0				0
731	0148								.03
732	0149								.06
733	0150				2.5				0
734	0151								.03
735	0152								.06
736	0153				3.0				0
737	0154								.03
738	0155								.06
739	0157				2.5				.03
740	0158				2.0				.03
741	0159				1.5				.03
742	0202				1.5		1.1	BOV (flow sw in closing position)	
743	0204						1.1		
744	0205						1.5		
745	0206						2.5		
746	0207						3.5		
747	0208				2.0		1.1		
748	0209						1.5		
749	0210						2.5		
750	0211						3.5		
751	0212				2.5		1.1		
752	0213						1.5		
753	0214						2.5		
754	0215						3.5		
755	0216				3.0		1.1		
756	0217						1.5		
757	0218						2.5		

G.E. Co-Annular TV0331- (Test 031)

Run #19 - Lewis Dual Flow Config. 7

J.O. YOE 5881

DATE 6-16-76

FNG.

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a (High)		$W\sqrt{T}$ (Low)
758	0219		.36		3.5		3.5		
759	0229		.45		1.5				0
760	0230								.06
761	0231				2.0				0
762	0232								.06
763	0233				2.5				0
764	0234								.06
765	0235				3.3				0
766	0236								.06
767	0237				2.5				0
768	0238				2.0				
769	0239				1.5				
770	0241				1.5		2.5		
771	0242						3.5		
772	0243				2.0		2.5		
773	0244						3.5		
774	0245				2.5		2.5		
775	0246						3.5		
776	0247				3.3		2.5		
777	0248						3.5		
778	0301		.036		1.5				0
779	0302								6
780	0304				2.0				6
781	0305				2.5				0
782	0306								6
783	0307						1		3
784	0329				1.5		2.5		
785	0330						3.5		
786	0334				2.5		2.5		
787	0343		0		2.5				3

NASA-C-8018 (10-24-51)

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run #19 - Lewis Dual Flow Config 7 DATE 6-16-26

ENG.

RDG.	Time		M_a		P_{to}/P_a		Hi-R P_{ti}/P_a		Low $W\sqrt{T}$
788	0536		0		1.5				.03
789	0537				2.0				
790	0538				2.5				
791	0539				3.16				
792	0541				2.5				
793	0543				1.5				0
794	0544				2.0				
795	0545				2.5				
796	0546				3.15				
797	0547				2.5				
798	0612		.45		1.5				.06
799	0613				2.0				
800	0614				2.5				
801	0615				3.36				
802	0616				2.5				
803	0618				1.5				0
804	0619				2				
805	0620				2.5				
806	0621				3.36				
807	0622				2.5				
808	0624				1.5		2.5		
809	0625						3.5		
810	0626				2		2.5		
811	0627						3.5		
812	0628				2.5		2.5		
813	0629						3.5		
814	0630				3.35		2.5		
815	0631						3.5		
816	0632				2		2.5		
817	0633				1.5		2.5		

Run #20 - Lewis Dual Flow (Config. 5)

S.O. 10E 3581

DATE 8-17-76

FNO.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$W\sqrt{T}$
818	[illegible]		0		[illegible]				0
819	[illegible]								.03
820	[illegible]								.06
821	[illegible]				2.0				0
[illegible]	[illegible]								.06
[illegible]	[illegible]				1.5				0
21	[illegible]								.01
25	[illegible]								.02
26	[illegible]								.03
27	[illegible]								.06
[illegible]	[illegible]				1.0				0
[illegible]	[illegible]								.03
830	[illegible]								.06
831	[illegible]				1.5				.05
[illegible]	[illegible]				2.0				
[illegible]	[illegible]				1.0				
[illegible]	[illegible]				1.5		1.1		
835	[illegible]						1.5		
836	[illegible]						2.5		
[illegible]	[illegible]						3.5		
[illegible]	[illegible]				2.0		1.1		
[illegible]	[illegible]						1.5		
[illegible]	[illegible]						2.5		
41	[illegible]						3.5		
842	0434				2.5		1.1		
843	0435						1.5		
844	0436						2.5		
845	0437						3.5		
846	0438				3.20		1.1		
847	0439				3.15		1.5		
848	0440				3.10		2.5		

NASA-C-8018 (10-24-51)

Run #20 - Lewis Dual Flow (Config. 5) DATE 8-17-76

RDG.	Time		M_a		P_{t_0}/P_a		P_{t_i}/P_a High		WT Low
349	0441		0		.07		2.5		
350	0443				2.5		1.1		
351	0464				2.0				
352	[illegible]				1.5				
353	0528		.36		1.5				0
354	[illegible]								.02
355	[illegible]								.06
356	[illegible]		REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR						0
357	[illegible]								.06
358	0533				2.5				0
359	0534								.01
360	[illegible]								.02
361	0536								.03
362	0537								.06
363	0538				2.5				0
364	[illegible]								.03
365	[illegible]								.06
366	[illegible]				2.5				.02
367	[illegible]				2.0				
368	[illegible]				1.5				
369	0546				2.5		1.1		
370	[illegible]						1.5		
371	0548						2.5		
372	[illegible]						[illegible]		
373	[illegible]				2.0		1.5		
374	[illegible]						1.1		
375	[illegible]						2.5		
376	[illegible]						2.5		
377	[illegible]				2.5		1.1		
378	0555						1.5		
379	0556						2.5		

Run #28 - Lewis Dual-Flow (Config 5) DATE 6-12-28

ENG.

RDG.	Time	M_a	P_{t_o}/P_a		P_{t_i}/P_a (Hi in)		$W\sqrt{T}$ (Low)
880	[illegible]	[illegible]	[illegible]		[illegible]		
881	[illegible]		[illegible]		1.1		
882	[illegible]		[illegible]		[illegible]		
883	[illegible]		[illegible]		[illegible]		
884	[illegible]		[illegible]		2.5		
885	[illegible]		[illegible]		[illegible]		0
886	[illegible]		[illegible]		[illegible]		[illegible]
887	[illegible]		[illegible]		[illegible]		0
888	[illegible]		[illegible]		[illegible]		[illegible]
884	[illegible]		[illegible]		[illegible]		0
890	[illegible]		[illegible]		[illegible]		[illegible]
891	[illegible]		[illegible]		[illegible]		0
892	[illegible]		[illegible]		[illegible]		[illegible]
893	[illegible]		[illegible]		[illegible]		
894	[illegible]		[illegible]		[illegible]		
895	[illegible]		[illegible]		[illegible]		
896	[illegible]		1.5		2.5		
897	[illegible]		[illegible]		3.5		
898	[illegible]		2.0		2.5		
899	[illegible]		[illegible]		2.5		
900	[illegible]		2.5		2.5		
901	[illegible]		[illegible]		3.5		
902	[illegible]		3.31		2.5		
903	[illegible]		3.27		3.5		
904	[illegible]		2.0		2.5		
~~905~~							
~~906~~							
~~907~~							
~~908~~							
~~909~~							
~~910~~							

NASA-C-801B (10-24-51)

G.E. Co-Annular Nozzles (Test 031)

Run # 21 - Lewis Dual-Flow Config. 6

J.O. YOE 5881

DATE 6-21-76

PG.

RDG.	Time		M_a		P_{t_o}/P_a		high P_{t_i}/P_a		low $w\sqrt{T}$
905	3:42		0		1.5		-		0
906	3:45		0		1.5				3
907	3:47		0		1.5				6
908	3:49		0		2				0
909	3:50		0		2				3
910	3:50		0		2				6
911	3:52		0		2.5				0
912	3:52		0		2.5				3
913	3:53		0		2.5				6
914	3:54		0		3.5				0
915	3:55		0		2.5				3
916	3:55		0		3.5				6
917	4:10		0		1.5				0
918	4:12		0		3.5				0
919	4:14		0		3.5				3
920	4:15		0		2.5				3
921	4:16		0		2				3
922	4:17		0		1.5				3
923	4:18		0	Bad	1.5		1.1		—
924	4:19		0		1.5		1.1		
925	4:20		0		1.5		1.5		
926	4:21		0		1.5		2.5		
927	4:21		0		1.5		3.5		
928	4:23		0		2		1.1		
929	4:24		0		2		1.5		
930	4:24		0		2		2.5		
931	4:25		0		2		3.5		
932	4:26		0		2.5		1.1		
933	4:27		0		2.5		1.5		
934	4:28		0		2.5		2.5		
935	4:30		0		2.5		3.5		

G.E. Co-Annular Nozzles (Test 031)

Run #21 - Lewis Dual-Flow Config. 6

J.O. YOE 5881

DATE 6-21-76

ENG.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$W\sqrt{T}$
936	4:32		0		3.5		1.1		
937	4:33		0		3.5		1.5		
938	4:34		0		3.5		2.5		
939	4:35		0		3.5		3.5		
940	4:36		0		3.5		1.1		
941	4:37		0		2.5		1.1		
942	4:38		0		1.5		1.1		
943	5:24		.36		1.5				0
944	5:25		.36		1.5				3
945	5:26		.36		1.5				6
946	5:26		.36		2				0
947	5:27		.36		2				3
948	5:28		.36		2				6
949	5:28		.36		2.5				0
950	5:29		.36		2.5				3
951	5:29		.36		2.5				6
952	5:30		.36		3.5				0
953	5:30		.36		3.5				3
954	5:31		.36		3.5				6
955	5:33		.36		2.5				3
956	5:33		.36		1.5				3
957	5:35		.36		2				3
958	5:38		.36		1.5		1.1		
959	5:39		.36		1.5		1.5		
960	5:40		.36		1.5		2.5		
961	5:41		.36		1.5		3.5		
962	5:42		.36		2		1.1		
963	5:43		.36		2		1.5		
964	5:43		.36		2		2.5		
965	5:44		.36		2		3.5		
966	5:47		.36		2.5		1.1		

G.E. Co-Annular Nozzles (Test 031)

Run #21 - Lewis Dual-Flow Config. 6

J.O. YOF 5881

DATE 6-21-76

ENG.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$w\sqrt{T}$
967	5:45		.36		2.5		1.5		
968	5:46		.36		2.5		2.5		
969	5:48		.36		2.5		3.5		
970	5:49		.36		3.5		1.1		
971	5:49		.36		3.5		1.5		
972	5:50		.36		3.5		2.5		
973	5:50		.36		3.5		3.5		
974	5:51		.36		3.5		2.5		
975	5:54		.36		2.5		1.1		
976	5:54		.36		1.5		1.1		
977	5:56		.36		2		1.1		
978	6:06		.45		1.5				
979	6:07		.45		1.5				0
980	6:07		.45		2				0
981	6:08		.45		2				6
982	6:09		.45		2.5				0
983	6:09		.45		2.5				6
984	6:09		.45		3.5				0
985	6:10		.45		3.5				6
986	6:13		.45		3.5				0
987	6:14		.45		2.5				0
988	6:14		.45		2				0
989	6:15		.45		1.5				0
990	6:18		.45		1.5		2.5		
991	6:19		.45		1.5		3.5		
992	6:19		.45		2		2.5		
993	6:20		.45		2		3.5		
994	6:21		.45		2.5		2.5		
995	6:21		.45		2.5		3.5		
996	6:22		.45		3.5		2.5		
997	6:23		.45		3.5		3.5		

G.E. Co-Annular Nozzles (Test 031)

J.O. YOE 5881

RUN #21 Lewis Dual Flow Config #6 DATE 6-21-76

ENG.

RDG.	Time	:	M_a		P_{t_o}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
998	6:25		.45		2.5		2.5		
999	6:25		.45		1.5		2.5		
000	6:32		.36		1.5				0
001	6:32		.36		1.5				6
002	6:33		.36		2				0
003	6:34		.36		2				6
004	6:34		.36		2.5				0
005	6:35		.36		2.5				6
006	6:35		.36		3.5				0
007	6:36		.36		3.5				6
008	6:38		.36		3.5				0
009	6:37		.36		3.5				0
010	6:39		.36		2.5				0
011	6:40		.36		2				0
012	6:41		.36		1.5				0

NASA-C-8018(10-24-51)

G.E. Co-Annular Nozzles (Test 031)

Run # 22 - Lewis Dual Flow Config 4

J.O. YOE 5881

DATE 6-22-76

ENG.

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a		$w\sqrt{T}$
1013	5:29		0		1.5				0
1014	5:29				1.5				0
1015	5:30				1.5				0
1016	5:31				2.0				0
1017	5:32				2.0				3
1018	5:32				2.0				6
1019	5:33				2.5				0
1020	5:34				2.5				1
1021	5:34				2.5				2
1022	5:35				2.5				3
1023	5:36				2.5				6
1024	5:39				3.5				0
1025	5:40				3.5				3
1026	5:40				3.5				6
1027	5:59				3.5				0
1028	6:00				3.5				3
1029	6:01				3.5				6
1030	6:06				2.5				0
1031	6:07				2				0
1032	6:08				1.5				0
1033	6:11				1.5		1.1		
1034	6:12				1.5		1.5		
1035	6:12				1.5		2.5		
1036	6:13				1.5		3.5		
1037	6:14				2		1.1		
1038	6:15				2		1.5		
1039	6:16				2		2.5		
1040	6:16				2		3.5		
1041	6:17				2.5		1.1		
1042	6:18	Bkd			2.5		1.5		
1043	6:19				2.5		2.5		

G.E. Co-Annular Nozzles (Test 031)

J.O. YOE 5881

Run #22 - Lewis Dual Flow Config 4 DATE 6-22-2

ENG.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$w\sqrt{T}$
1044	6:19		0		2.5		3.5		
1045	6:21				3.5		1.1		
1046	6:23				3.5		1.5		
1047	6:24				3.5		2.5		
1048	6:25				3.5		3.5		
1049	6:26				3.5		1.5		
1050	6:26				2.5		1.5		
1051	6.30				3.5		3.5		
1052	6:37				2.5		2.5		
1053	6.38				2.5		2		
1054	6:39				2.5		1.5		
1055	6:41				2		2.5		
1056	6.43				1.5		2.5		

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run #23 Lewis Dual Flow Config #4 DATE 6-23-76 ENG.

RDG.	Time	Exhausters	M_a	P_{t_o}/P_a	high P_{t_i}/P_a	low $w\sqrt{T}$
1052	12:58	ON	0.45	1.5	—	0
1053	1:00	ON		2.0	—	0
1054	1:01	ON		2.5		0
1055	1:02	ON		3.5		0
1061	1:04	ON		3.5		0
1062	1:21	ON		3.5		0
1063	1:22	ON		2.5		0
1064	1:24	ON		2.0		0
1065	1:25	ON		1.5		0
1066	1:32	OFF		1.5		0
1067	1:33			2		0
1068	1:34			2.5		0
1069	1:34			3.5		0
1070	1:37			1.5		0
1071	1:38			1.5		6
1072	1:39			2.5		0
1073	1:39			2.5		6
1074	1:40			3.5		0
1075	1:41		Back	3.5		6
1076	1:43			2.0		0
1077	1:43			2.0		6
1078	1:44			3.5		6
1079	1:48			1.5	2.5	
1080	1:49			1.5	3.5	
1081	1:50			2.0	2.5	
1082	1:51			2.0	2.5	
1083	1:52			2.5	2.5	
1084	1:53			2.5	3.5	
1085	1:54			2.5	2.5	
1086	1:55			2.5	2.5	
1087	1:57		1.5	2.0	2.5	

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

DATE 6-23-76

RUN #23 Lewis Dual flow Config #4 ENG.

RDG.	Time	EXH.	M_a		P_{t_0}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
1088	2:00	OFF	.45		1.5		2.5		
1089	2:08		.36						0
1090	2:09		.36		1.5				3
1091	2:10		.36		1.5				6
1092	2:11								0
	2:11								3
									6
	2:12								0
	2:13								1
	2:14								2
	2:14								3
	2:15								6
1100	2:16		Bad		3.5				0
1101	2:19								3
									6
1102	2:20				3.5				0
1104	2:23				3.5				3
	2:24								3
	2:25								3
							1.1		
							1.5		
							2.5		
1110							3.5		
1111									
1112							1.5		
1113							2.5		
1114							3.5		
1115	2:33						1.1		
1116							1.5		
1117	2:35						2.5		
1118	2:36				2.5		2.5		

G.E. Co-Annular Nozzles (Test 031)

J.O. YOE 5881

Run #23 Lewis Dual Flow - Config #4

DATE 6-23-76

ENG.

RDG.	Time	EXH.	M_a		P_{to}/P_a		P_{ti}/P_a		$W\sqrt{T}$
1119	2:27	OFF	.36		3.5		1.1		
1120	2:33	↓			3.5		1.5		
1121	2:34	↓			3.5		2.5		
1122	2:40				3.5		3.5		
1123									
1124									
1125									
1126									
1127									
1128									

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run # 24 Lewis Dual Flow Config 8 DATE 6-23-76 ENG.

RDG.	Time	.	M_a		P_{t_o}/P_a		P_{t_i}/P_a		$w\sqrt{T}$
1123	4:[illegible]		.45		1.[illegible]				0
[illegible]	4:04		↓		1.5				6
[illegible]	4:04		↓		2.0				0
[illegible]	4:05				2.0				6
[illegible]	4:0[illegible]				[illegible]				0
1128	4:07				[illegible]				6
[illegible]	4:09				[illegible]				0
[illegible]	4:10				2.5				6
[illegible]	4:13				[illegible]				0
[illegible]	4:14				1.5				0
[illegible]	4:18				1.5		2.5		
1134	4:19				1.5		3.5		
1135	4:19				2.0		2.5		
1136	4:20				2.0		3.5		
1137	4:21				2.5		2.5		
1138	4:22				2.5		3.5		
1139	4:23				3.5		2.5		
1140	4:24				2.5		3.5		
1141	4:29		.36		1.5		Bad		
1142	4:30		↓		1.5		Bad		3
1143	4:32				1.5				0
1144	4:33		↓		1.5				3
1145	4:34				1.5				0
1146	4:[illegible]				[illegible]				6
1147	4:35				[illegible]				3
1148	4:[illegible]				[illegible]				6
1149	4:37				[illegible]				3
1150	4:[illegible]				2.5				[illegible]
1151	4:[illegible]				[illegible]				[illegible]
1152	4:40				[illegible]				[illegible]
1153	4:41				[illegible]				3

NASA-C-8018 (10-24-51)

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run #24 Lewis Dual-Flow Config. #8 DATE 6-23-76

FNS.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$w\sqrt{T}$
1154	4:42		3.6		3.5				6
1155	4:44		↓		2.5				3
1156	4:45				2.0				3
1157	4:46				1.5				3
1158	4:48				2.5				0
1159	4:50				1.5		1.1		
1160	4:51				1.5		1.5		
1161	4:52				1.5		2.5		
1162	4:53				1.5		3.5		
1163	4:54				2.0		1.1		
1164	4:55				2.0		1.5		
1165	4:56				2.0		2.5		
1166	4:57				2.0		3.5		
1167	4:58				2.5		1.1		
1168	4:59				2.5		1.5		
1169	5:00				2.5		2.5		
1170	5:01				2.5		3.5		
1171	5:02				3.5		1.1		
1172	5:03				3.5		1.5		
1173	5:05				3.5		2.5		
1174	5:06				3.5		3.5		
1175	5:36		0		1.5				0
1176	5:37		↓		1.5				3
1177	5:38				1.5				6
1178	5:39				2.0				0
1179	5:40				2.0				3
1180	5:41				2.0				6
1181	5:42				2.5				0
1182	5:43				2.5				3
1183	5:44				2.5				6
1184	5:45				3.5				0

NASA-C-801B (10-24-51)

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run # 24 Lewis Dual Flow Config #8 DATE 6-23-78

ENG

RDG.	Time	M_a	P_{t_o}/P_a	P_{t_i}/P_a	$W\sqrt{T}$
1185	5:46	0	3.5		3
1186	5:47	↓	3.5		6
1187	5:49		2.5		3
1188	5:53		1.5		3
1189	5:54		2.0		3
1190	5:55		1.5	1.1	
1191	5:56		1.5	1.5	
1192	5:57		1.5	2.5	
1193	5:58		1.5	3.5	
1194	5:59		2.0	1.1	
1195	6:00		2.0	1.5	
1196	6:00		2.0	2.5	
1197	6:01		2.0	3.5	
1198	6:02		2.5	1.1	
1199	6:03		2.5	1.5	
1200	6:04		2.5	2.5	
1201	6:05		2.5	3.5	
1202	6:06		3.5	1.1	
1203	6:07		3.5	1.5	
1204	6:08		3.5	2.5	
1205	6:09		[illegible]	3.5	
1206	6:12		2.5	1.1	
1207	6:13		2.0	1.1	
1208	6:14		1.5	1.1	

G.E. Co-Annular Nozzles (Test 031)

Run #40 Lewis Dual Flow Conf. 1

J.O. YOE 5881

DATE 7-13-76

ENG.

RDG.	Time 20.00		M_a		OUTER P_{t_o}/P_a		HIGH P_{t_i}/P_a		LOW $W\sqrt{T}$
3076	1640		0		1.5	Air Temp. Too High			0
3077	1642		0		1.5				3
3078	1711		0		1.5				6
3079	1759	20:00	0		2.0				0
3080	1827		0		2.0				3
3081	1852		0		2.0				6
3082	1931		0		2.5				0
3083	2021		0		2.5				3
3084	2021		0		2.5				6
3085	2022		0		3.5				0
3086	2023		0		3.5				3
3087	2023		0		3.5				6
3088	2024		0		4.0				0
3089	2034		0		2.5				0
3090	2027		0		1.5				0
3091	2030		0		1.5		1.3		
3092	2030		0		1.5		1.9		
3093	2031		0		2.0		1.3		
3094	2032		0		2.0		1.9		
3095	2032		0		3.0		1.3		
3096	2033		0		3.0		1.9		
3097	2034		0		4.0		1.3		
3098	2034		0		4.0		1.9		
3099	2035		0		3.0		1.3		
3100	2037		0		3.0		1.3		
3101	2038		0		1.5		1.3		
3102	2051		0		1.5		1.3		
			0				1.9		
			0						

G.E. Co-Annular Nozzles (Test 031)

J.O. YOE 5881

Run #40 Lewis Dual Flow Conf. 1

DATE 2-12-76

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
~~3/03~~	~~2100~~		~~0~~	~~BAD~~	~~1.5~~				~~0~~ →
3/04	2114		0		1.5				1.3
3/05	2114		0		1.5				1.9
3/06	2115		0		2.0				1.3
3/07	2115		0		2.0				1.9
3/08	2116		0		3.0				1.3
3/09	2117		0		3.0				1.9
3/10	2118		0		4.0				1.3
3/11	2118		0		4.0				1.9
3/12	2117		0		3.0				1.3
3/13	2124		0		1.5				0
3/14	2124		0		1.5				3
3/15	2124		0		1.5				6
3/16	2125		0		2.0				0
3/17	2125		0		2.0				3
3/18	2126		0		3.0				6
3/19	2126		0		2.5				0
3/20	2127		0		2.5				3
3/21	2127		0		2.5				6
3/22	2128		0		3.5				0
3/23	2128		0		3.5				3
3/24	2129		0		3.5				6
3/25	2130		0		2.5				0
3/26	2130		0		1.5				0
3/27	2159		.11		1.5				0
3/28	2159		.13		2				3
3/29	2200		.15		1.5				6
3/30	2200		.10		3.0				0
3/31	2201		.15		2.0				3
3/32	2201		.13		2.0				6

NASA-C-8018 (10-24-51)

G.E. Co-Annular Nozzles (Test 031) J.O. YOE 5881

Run # 40 Lewis Dual Flow - Conf. #1 DATE 7-12-76

ENG.

RDG.	Time		M_a		P_{t_o}/P_a		P_{t_i}/P_a		$W\sqrt{T}$
3/33	2201	BAD-T	.45		2.5				0
3/34	2202		.45		2.5				3
3/35	2202		.45		2.5				6
3/36	2203		.45		3.5				0
3/37	2203		.45		3.5				3
3/38	2204		.45		3.5				6
3/39	2204		.45		2.5				0
3/40	2205		.45		2.0				0
3/41	2205		.45		1.5				0
3/42	2206		.45		1.5				3
3/43	2208		.45		1.5				0
3/44	2212		.45		1.5		1.3		
3/45	2212		.45		1.5		1.9		
3/46	2213		.45		2.0		1.3		
3/47	2214		.45		2.0		1.9		
3/48	2215		.45		3.0		1.3		
3/49	2215		.45		3.0		1.9		
3/50	2216		.45		4.0		1.3		
3/51	2216		.45		4.0		1.9		
3/52	2217		.45		3.0		1.3		
3/53	2223		.36		1.5				0
3/54	2224		.36		1.5				3
3/55	2224		.36		1.5				6
3/56	2225		.36		2.0				0
3/57	2225		.36		2.0				3
3/58	2226		.36		2.0				6
3/59	2226		.36		2.5				0
3/60	2227		.36		2.5				3
3/61	2228		.36		2.5				6

NASA-C-8018 (10-24-51)

G.E. Co-Annular Nozzles (Test 031)

Lewis Dual Flow Conf 1

J.O. YOE 5881

RUN 40 DATE 7-12-76

ENG.

RDG.	Time		M_a		P_{to}/P_a		P_{ti}/P_a		$w\sqrt{T}$
3162	2228		.36		3.5				
3163	2228		.36		3.5				0
3164	2229		.36		3.5				3
3165	2230		.36		2.0				6
3166	2230		.36		1.5				6
3167	2233	BAD →	.36		1.5				0
3168	2234		.36		1.5		1.3		
3169	2234		.36		2.0		1.9		
3170	2235		.36		2.0		1.3		
3171	2236		.36		3.0		1.9		
3172	2236		.36		3.2		1.3		
3173	2237		.36		4.0		1.9		
3174	2237		.36		4.0		1.3		
3175	2238		.36		3.0		1.9		
3176	2239		.36		1.5		1.9		

13.0 AERODYNAMIC DATA TABULATION

All the aerodynamic data results are presented in tabular form in this section. The tables are self-explanatory.

Data Summary
Tabulation Nomenclature

RDG	-	Reading Number
GE	-	General Electric Configuration Designation
NASA	-	NASA Configuration Designation
D2	-	Inner Nozzle Flow Meter Throat Diameter
MA	-	Tunnel Mach Number
PTO/PA	-	Outer Nozzle Pressure Ratio
PTI/PA	-	Inner Nozzle Pressure Ratio
OMEGAT	-	Ratio of Inner-to-Outer Nozzle Flow Rates
CDO	-	Outer Nozzle Flow Coefficient
CDI	-	Inner Nozzle Flow Coefficient
CFNET1	-	Nozzle Thrust Coefficient
CFNET2	-	Nozzle Thrust Divided by Ideal Thrust of Outer Nozzle Only
F9	-	Nondimensional Stream Thrust Parameter
DCS	-	Not Applicable to this Data
CDS	-	Not Applicable to this Data
DCSH	-	Integrated Axial Static Pressure Force on Outer Shroud
CDSH	-	Drag Coefficient for Outer Shroud Pressure Drag
DCPL,O	-	Integrated Axial Static Pressure Force on Outer Plug from the Nozzle Throat Aft
DCPL,I	-	Integrated Axial Static Pressure Force on Inner Plug from the Nozzle Throat Aft
DCTOT	-	Total of DCSH; DCPL,O; and DCPL,I

FACILITY 8X6X1 PROGRAM C031 INNER-STREAM

NOZZLE TYPE PLUG CONFIGURATIONS SUPPRESSOR CONFIGURATION

4 INCH STAI(OUTER STREAM ONLY)

THRUST PARAMETERS CONFIGURATION NUMBER OUTER RADIUS RATIO INNER RADIUS RATIO D2 DV0

GE 1000 NASA 10000 0.0000 0.0000 0.0000 1.2480

	ROG	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	F9
	297	0.0091	1.2480	0.9905	0.0000	0.9884	9.9999	0.9974	0.9974	1.1525
	298	0.0285	1.5008	0.9922	0.0000	0.9818	9.9999	0.9879	0.9879	1.2227
	299	0.0337	1.7406	0.9910	0.0000	0.9825	9.9999	0.9872	0.9872	1.2438
	300	0.0472	1.9969	0.9917	0.0000	0.9848	9.9999	0.9898	0.9898	1.2495
	301	0.0510	2.4995	0.9921	0.0000	0.9852	9.9999	0.9902	0.9902	1.2487
	302	0.0565	2.8841	0.9926	0.0000	0.9875	9.9999	0.9888	0.9888	1.2507
	303	0.0520	2.4988	0.9920	0.0000	0.9856	9.9999	0.9907	0.9907	1.2489
	304	0.0421	1.9970	0.9913	0.0000	0.9854	9.9999	0.9896	0.9896	1.2498
	305	0.0298	1.7385	0.9916	0.0000	0.9827	9.9999	0.9862	0.9862	1.2431
	306	0.0207	1.5015	0.9909	0.0000	0.9829	9.9999	0.9858	0.9858	1.2223
	307	0.0148	1.2533	0.9908	0.0000	0.9881	9.9999	0.9885	0.9885	1.1514
	308	0.0285	1.2625	0.9912	0.0000	0.9869	9.9999	0.9966	0.9966	1.1576
	309	0.0272	1.4991	0.9916	0.0000	0.9916	9.9999	0.9942	0.9942	1.2259
	310	0.0356	1.7536	0.9916	0.0000	0.9818	9.9999	0.9942	0.9942	1.2485
	311	0.0440	1.9946	0.9928	0.0000	0.9841	9.9999	0.9945	0.9945	1.2515
	312	0.0520	2.4989	0.9921	0.0000	0.9840	9.9999	0.9943	0.9943	1.2506
	313	0.0548	2.8719	0.9919	0.0000	0.9857	9.9999	0.9927	0.9927	1.2525
	314	0.0515	2.4979	0.9916	0.0000	0.9854	9.9999	0.9939	0.9939	1.2515
	315	0.0492	1.9963	0.9923	0.0000	0.9836	9.9999	0.9948	0.9948	1.2513
	316	0.0343	1.7414	0.9920	0.0000	0.9823	9.9999	0.9905	0.9905	1.2459
1300	317	0.0272	1.5019	0.9915	0.0000	0.9821	9.9999	0.9923	0.9923	1.2355
	318	0.0110	1.2469	0.9911	0.0000	0.9886	9.9999	0.9980	0.9980	1.1624
	319	0.0019	0.9909	0.9915	9999.0000	9.9999	9.9999	9.9999	9.9999	1.0160
	330	-0.0000	0.9915	0.9913	9999.0000	9.9999	9.9999	9.9999	9.9999	1.0264
	331	-0.0000	0.9915	0.9916	9999.0000	9.9999	9.9999	9.9999	9.9999	1.0130
	332	0.0103	1.2627	0.9902	0.0000	0.9889	9.9999	0.9995	0.9995	1.1695
	333	0.0214	1.5014	0.9913	0.0000	0.9824	9.9999	0.9948	0.9948	1.2271
	334	0.0356	1.7476	0.9907	0.0000	0.9827	9.9999	0.9931	0.9931	1.2492
	335	0.0499	1.9965	0.9910	0.0000	0.9856	9.9999	0.9941	0.9941	1.2524
	336	0.0518	2.4987	0.9918	0.0000	0.9852	9.9999	0.9928	0.9928	1.2504
	337	0.0537	2.8728	0.9922	0.0000	0.9856	9.9999	0.9908	0.9908	1.2506
	338	0.0525	2.4977	0.9925	0.0000	0.9855	9.9999	0.9927	0.9927	1.2505
	339	0.0440	1.9956	0.9916	0.0000	0.9849	9.9999	0.9913	0.9913	1.2497
	340	0.0414	1.7459	0.9913	0.0000	0.9832	9.9999	0.9904	0.9904	1.2466
	341	0.0278	1.4996	0.9908	0.0000	0.9823	9.9999	0.9901	0.9901	1.2241
	342	0.0136	1.2503	0.9913	0.0000	0.9884	9.9999	0.9950	0.9950	1.1527
	343	0.0078	0.9908	0.9912	9999.0000	9.9999	9.9999	9.9999	9.9999	1.0140
	344	0.3599	1.2493	0.9942	0.0000	0.9821	9.9999	0.9742	0.9742	1.1437
	345	0.3584	1.4992	0.9948	0.0000	0.9748	9.9999	0.9734	0.9734	1.2089
	346	0.3589	1.7516	0.9953	0.0000	0.9799	9.9999	0.9771	0.9771	1.2344
	347	0.3587	2.0061	0.9941	0.0000	0.9840	9.9999	0.9823	0.9823	1.2418
	348	0.3590	2.5122	0.9934	0.0000	0.9854	9.9999	0.9848	0.9848	1.2429
	349	0.3602	2.7337	0.9957	0.0000	0.9845	9.9999	0.9858	0.9858	1.2437
	350	0.3592	2.5132	0.9956	0.0000	0.9847	9.9999	0.9843	0.9843	1.2419
	351	0.3576	2.0085	0.9943	0.0000	0.9842	9.9999	0.9818	0.9818	1.2409

FACILITY 8X6X1 PROGRAM C031 — INNER-STREAM NOZZLE TYPE — PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

4 INCH STA(OUTER STREAM ONLY)

CONFIGURATION NUMBER GE 1000 NASA 10000 — OUTER RADIUS RATIO 0.0000 — INNER RADIUS RATIO 0.0000 — D2 0.0000 — DXC 1.2480

DRAG PARAMETERS

RDG	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
297	0.0091	1.2480	0.9905	0.0000	0.0000	0.0000	-0.0169	33.1655	0.0000	0.0000	-0.0169
298	0.0295	1.5008	0.9922	0.0000	0.0000	0.0000	-0.0070	2.6064	0.0000	0.0000	-0.0070
299	0.0337	1.7406	0.9910	0.0000	0.0000	0.0000	-0.0047	1.7469	0.0000	0.0000	-0.0047
300	0.0472	1.9969	0.9917	0.0000	0.0000	0.0000	-0.0028	0.6786	0.0000	0.0000	-0.0028
301	0.0510	2.4995	0.9921	0.0000	0.0000	0.0000	-0.0034	0.9970	0.0000	0.0000	-0.0034
302	0.0565	2.8851	0.9926	0.0000	0.0000	0.0000	-0.0024	0.6989	0.0000	0.0000	-0.0024
303	0.0520	2.4988	0.9920	0.0000	0.0000	0.0000	-0.0026	0.7302	0.0000	0.0000	-0.0026
304	0.0421	1.9970	0.9913	0.0000	0.0000	0.0000	-0.0025	0.7656	0.0000	0.0000	-0.0025
305	0.0298	1.7385	0.9916	0.0000	0.0000	0.0000	-0.0041	1.9494	0.0000	0.0000	-0.0041
306	0.0207	1.5015	0.9909	0.0000	0.0000	0.0000	-0.0055	3.9085	0.0000	0.0000	-0.0055
307	0.0148	1.2533	0.9908	0.0000	0.0000	0.0000	-0.0123	9.1496	0.0000	0.0000	-0.0123
308	0.0285	1.2625	0.9912	0.0000	0.0000	0.0000	-0.0120	2.5082	0.0000	0.0000	-0.0120
309	0.0272	1.4991	0.9916	0.0000	0.0000	0.0000	-0.0074	3.0231	0.0000	0.0000	-0.0074
310	0.0356	1.7536	0.9916	0.0000	0.0000	0.0000	-0.0036	1.2074	0.0000	0.0000	-0.0036
311	0.0440	1.9946	0.9928	0.0000	0.0000	0.0000	-0.0029	0.7936	0.0000	0.0000	-0.0029
312	0.0520	2.4989	0.9921	0.0000	0.0000	0.0000	-0.0025	0.7092	0.0000	0.0000	-0.0025
313	0.0548	2.8719	0.9919	0.0000	0.0000	0.0000	-0.0025	0.7634	0.0000	0.0000	-0.0025
314	0.0515	2.4979	0.9916	0.0000	0.0000	0.0000	-0.0021	0.6092	0.0000	0.0000	-0.0021
315	0.0492	1.9963	0.9923	0.0000	0.0000	0.0000	-0.0022	0.4918	0.0000	0.0000	-0.0022
316	0.0343	1.7414	0.9920	0.0000	0.0000	0.0000	-0.0029	1.0361	0.0000	0.0000	-0.0029
317	0.0272	1.5019	0.9915	0.0000	0.0000	0.0000	-0.0052	2.1103	0.0000	0.0000	-0.0052
318	0.0110	1.2469	0.9911	0.0000	0.0000	0.0000	-0.0100	13.3538	0.0000	0.0000	-0.0100
319	0.0019	0.9909	0.9915	9999.0000	0.0000	0.0000	9.9999	331.1060	0.0000	0.0000	9.9999
330	-0.0000	0.9916	0.9913	9999.0000	0.0000	0.0000	9.9999	9.9999	0.0000	0.0000	9.9999
331	-0.0000	0.9915	0.9916	9999.0000	0.0000	0.0000	9.9999	9.9999	0.0000	0.0000	9.9999
332	0.0103	1.2627	0.9902	0.0000	0.0000	0.0000	-0.0126	20.0699	0.0000	0.0000	-0.0126
333	0.0214	1.5014	0.9913	0.0000	0.0000	0.0000	-0.0070	4.6583	0.0000	0.0000	-0.0070
334	0.0356	1.7476	0.9907	0.0000	0.0000	0.0000	-0.0044	1.4824	0.0000	0.0000	-0.0044
335	0.0499	1.9965	0.9910	0.0000	0.0000	0.0000	-0.0020	0.4368	0.0000	0.0000	-0.0020
336	0.0518	2.4987	0.9918	0.0000	0.0000	0.0000	-0.0023	0.6587	0.0000	0.0000	-0.0023
337	0.0537	2.8728	0.9922	0.0000	0.0000	0.0000	-0.0025	0.8136	0.0000	0.0000	-0.0025
338	0.0525	2.4977	0.9925	0.0000	0.0000	0.0000	-0.0025	0.6869	0.0000	0.0000	-0.0025
339	0.0440	1.9956	0.9916	0.0000	0.0000	0.0000	-0.0029	0.8099	0.0000	0.0000	-0.0029
340	0.0414	1.7459	0.9913	0.0000	0.0000	0.0000	-0.0033	0.8191	0.0000	0.0000	-0.0033
341	0.0278	1.4996	0.9908	0.0000	0.0000	0.0000	-0.0053	2.0514	0.0000	0.0000	-0.0053
342	0.0136	1.2503	0.9913	0.0000	0.0000	0.0000	-0.0111	9.7846	0.0000	0.0000	-0.0111
343	0.0078	0.9908	0.9912	9999.0000	0.0000	0.0000	9.9999	27.1657	0.0000	0.0000	9.9999
344	0.3599	1.2493	0.9942	0.0000	0.0000	0.0000	-0.0371	0.0452	0.0000	0.0000	-0.0371
345	0.3584	1.4982	0.9948	0.0000	0.0000	0.0000	-0.0165	0.0383	0.0000	0.0000	-0.0165
346	0.3589	1.7516	0.9953	0.0000	0.0000	0.0000	-0.0114	0.0377	0.0000	0.0000	-0.0114
347	0.3587	2.0051	0.9941	0.0000	0.0000	0.0000	-0.0102	0.0432	0.0000	0.0000	-0.0102
348	0.3590	2.5122	0.9934	0.0000	0.0000	0.0000	-0.0073	0.0439	0.0000	0.0000	-0.0073
349	0.3602	2.7337	0.9957	0.0000	0.0000	0.0000	-0.0051	0.0339	0.0000	0.0000	-0.0051
350	0.3592	2.5132	0.9956	0.0000	0.0000	0.0000	-0.0059	0.0355	0.0000	0.0000	-0.0059
351	0.3576	2.0085	0.9943	0.0000	0.0000	0.0000	-0.0084	0.0358	0.0000	0.0000	-0.0084

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE — INNER-STREAM PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

4 INCH STA(OUTER STREAM ONLY)

THRUST PARAMETERS — CONFIGURATION NUMBER GE 1000 NASA 10000 — OUTER RADIUS RATIO 0.0000 — INNER RADIUS RATIO 0.0000 — D2 0.0000 — DVO 1.2480

RDG	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	F9
352	0.3580	1.7521	0.9947	0.0000	0.9800	9.9999	0.9773	0.9773	1.2346
353	0.3577	1.5006	0.9950	0.0000	0.9730	9.9999	0.9738	0.9738	1.2095
354	0.3574	1.2519	0.9954	0.0000	0.9579	9.9999	0.9632	0.9632	1.1392
360	0.3963	1.2495	0.9938	0.0000	0.9574	9.9999	0.9661	0.9661	1.1389
361	0.3959	1.5019	0.9936	0.0000	0.9722	9.9999	0.9761	0.9761	1.2092
362	0.3959	1.7607	0.9943	0.0000	0.9784	9.9999	0.9789	0.9789	1.2346
363	0.3961	1.9971	0.9929	0.0000	0.9853	9.9999	0.9817	0.9817	1.2416
364	0.3959	2.5004	0.9934	0.0000	0.9852	9.9999	0.9851	0.9851	1.2428
365	0.3964	2.8807	0.9948	0.0000	0.9855	9.9999	0.9847	0.9847	1.2443
366	0.3958	2.5002	0.9935	0.0000	0.9849	9.9999	0.9850	0.9850	1.2425
367	0.3960	1.9973	0.9946	0.0000	0.9846	9.9999	0.9810	0.9810	1.2405
368	0.3950	1.7577	0.9940	0.0000	0.9798	9.9999	0.9787	0.9787	1.2353
369	0.3948	1.5003	0.9935	0.0000	0.9731	9.9999	0.9735	0.9735	1.2081
370	0.3948	1.2497	0.9939	0.0000	0.9567	9.9999	0.9681	0.9681	1.1394
376	0.4444	1.2446	0.9938	0.0000	0.9491	9.9999	0.9637	0.9637	1.1329
377	0.4442	1.5009	0.9939	0.0000	0.9708	9.9999	0.9758	0.9758	1.2078
378	0.4437	1.7489	0.9945	0.0000	0.9774	9.9999	0.9770	0.9770	1.2319
379	0.4443	1.9969	0.9939	0.0000	0.9847	9.9999	0.9819	0.9819	1.2410
380	0.4449	2.4993	0.9926	0.0000	0.9857	9.9999	0.9848	0.9848	1.2428
381	0.4442	3.0060	0.9943	0.0000	0.9860	9.9999	0.9842	0.9842	1.2448
382	0.4432	3.0548	0.9942	0.0000	0.9859	9.9999	0.9830	0.9830	1.2440
383	0.4446	3.0150	0.9945	0.0000	0.9853	9.9999	0.9837	0.9837	1.2439
384	0.4435	2.5006	0.9948	0.0000	0.9855	9.9999	0.9835	0.9835	1.2414
385	0.4432	1.9992	0.9937	0.0000	0.9844	9.9999	0.9794	0.9794	1.2398
386	0.4440	1.7462	0.9937	0.0000	0.9791	9.9999	0.9754	0.9754	1.2319
387	0.4432	1.5008	0.9936	0.0000	0.9709	9.9999	0.9704	0.9704	1.2048
388	0.4428	1.2473	0.9934	0.0000	0.9497	9.9999	0.9630	0.9630	1.1321
394	0.2922	2.5026	0.9959	0.0000	0.9862	9.9999	0.9974	0.9974	1.2566
395	0.2473	2.5000	0.9953	0.0000	0.9864	9.9999	0.9984	0.9984	1.2558
396	0.1942	2.4972	0.9940	0.0000	0.9854	9.9999	0.9986	0.9986	1.2553
397	0.1472	2.4952	0.9925	0.0000	0.9858	9.9999	1.0008	1.0009	1.2576
398	0.1043	2.4964	0.9925	0.0000	0.9859	9.9999	1.0066	1.0066	1.2627

1302

TRANSIENT TUNNEL MACH NUMBER

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
4 INCH STA(OUTER STREAM ONLY)

INNER-STREAM
PLUG CONFIGURATIONS

SUPPRESSOR CONFIGURATION

CONFIGURATION NUMBER GE 1000 NASA 10000 | OUTER RADIUS RATIO 0.0000 | INNER RADIUS RATIO 0.0000 | D2 0.0000 | DVU 1.2480

DRAG PARAMETERS

RDG	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
352	0.3580	1.7521	0.9947	0.0000	0.0000	0.0000	-0.0101	0.0337	0.0000	0.0000	-0.0101
353	0.3577	1.5006	0.9950	0.0000	0.0000	0.0000	-0.0136	0.0317	0.0000	0.0000	-0.0136
354	0.3574	1.2519	0.9954	0.0000	0.0000	0.0000	-0.0197	0.0245	0.0000	0.0000	-0.0197
360	0.3963	1.2495	0.9938	0.0000	0.0000	0.0000	-0.0354	0.0354	0.0000	0.0000	-0.0354
361	0.3959	1.5019	0.9936	0.0000	0.0000	0.0000	-0.0194	0.0371	0.0000	0.0000	-0.0194
362	0.3959	1.7607	0.9943	0.0000	0.0000	0.0000	-0.0145	0.0398	0.0000	0.0000	-0.0145
363	0.3961	1.9971	0.9939	0.0000	0.0000	0.0000	-0.0128	0.0440	0.0000	0.0000	-0.0128
364	0.3959	2.5004	0.9934	0.0000	0.0000	0.0000	-0.0094	0.0457	0.0000	0.0000	-0.0094
365	0.3964	2.8807	0.9948	0.0000	0.0000	0.0000	-0.0071	0.0427	0.0000	0.0000	-0.0071
366	0.3958	2.5002	0.9935	0.0000	0.0000	0.0000	-0.0094	0.0459	0.0000	0.0000	-0.0094
367	0.3960	1.9973	0.9946	0.0000	0.0000	0.0000	-0.0117	0.0402	0.0000	0.0000	-0.0117
368	0.3950	1.7577	0.9940	0.0000	0.0000	0.0000	-0.0152	0.0418	0.0000	0.0000	-0.0152
369	0.3948	1.5003	0.9935	0.0000	0.0000	0.0000	-0.0193	0.0369	0.0000	0.0000	-0.0193
370	0.3948	1.2497	0.9939	0.0000	0.0000	0.0000	-0.0358	0.0362	0.0000	0.0000	-0.0358
376	0.4444	1.2446	0.9938	0.0000	0.0000	0.0000	-0.0425	0.0330	0.0000	0.0000	-0.0425
377	0.4442	1.5009	0.9939	0.0000	0.0000	0.0000	-0.0229	0.0347	0.0000	0.0000	-0.0229
378	0.4437	1.7489	0.9945	0.0000	0.0000	0.0000	-0.0179	0.0385	0.0000	0.0000	-0.0179
379	0.4443	1.9969	0.9939	0.0000	0.0000	0.0000	-0.0140	0.0382	0.0000	0.0000	-0.0140
380	0.4449	2.4993	0.9926	0.0000	0.0000	0.0000	-0.0103	0.0399	0.0000	0.0000	-0.0103
381	0.4442	3.0060	0.9943	0.0000	0.0000	0.0000	-0.0070	0.0353	0.0000	0.0000	-0.0070
382	0.4432	3.0548	0.9942	0.0000	0.0000	0.0000	-0.0079	0.0409	0.0000	0.0000	-0.0079
383	0.4446	3.0150	0.9945	0.0000	0.0000	0.0000	-0.0071	0.0360	0.0000	0.0000	-0.0071
384	0.4435	2.5006	0.9948	0.0000	0.0000	0.0000	-0.0098	0.0380	0.0000	0.0000	-0.0098
385	0.4432	1.9982	0.9937	0.0000	0.0000	0.0000	-0.0141	0.0387	0.0000	0.0000	-0.0141
386	0.4440	1.7482	0.9937	0.0000	0.0000	0.0000	-0.0168	0.0360	0.0000	0.0000	-0.0168
387	0.4432	1.5008	0.9936	0.0000	0.0000	0.0000	-0.0231	0.0350	0.0000	0.0000	-0.0231
388	0.4428	1.2423	0.9934	0.0000	0.0000	0.0000	-0.0432	0.0335	0.0000	0.0000	-0.0432
394	0.2922	2.5026	0.9959	0.0000	0.0000	0.0000	-0.0009	0.0081	0.0000	0.0000	-0.0009
395	0.2473	2.5000	0.9953	0.0000	0.0000	0.0000	-0.0010	0.0122	0.0000	0.0000	-0.0010
396	0.1942	2.4972	0.9940	0.0000	0.0000	0.0000	-0.0027	0.0537	0.0000	0.0000	-0.0027
397	0.1472	2.4952	0.9925	0.0000	0.0000	0.0000	-0.0029	0.1032	0.0000	0.0000	-0.0029
398	0.1043	2.4964	0.9925	0.0000	0.0000	0.0000	-0.0009	0.0606	0.0000	0.0000	-0.0009

1303

FACILITY 8X6X1 PROGRAM C031

INNER-STREAM PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

High Inner Flow

NOZZLE TYPE
4 INCH STATIONER STREAM ONLY)

CONFIGURATION NUMBER OUTER RADIUS RATIO INNER RADIUS RATIO D2 DVO

THRUST PARAMETERS GE 0005 NASA 00051 0.0000 0.0000 1.1398 1.4980

PDG	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	FG
97	0.0039	1.5062	0.0000	0.0000	0.0000	0.9798	1.0005	1.0005	1.2295
98	-0.0000	2.0150	0.0000	0.0000	0.0000	0.9839	0.9950	0.9950	1.2517
99	-0.0000	2.3198	0.0000	0.0000	0.0000	0.9830	0.9996	0.9996	1.2560
100	0.0039	1.5094	0.0000	0.0000	0.0000	0.9791	0.9985	0.9985	1.2294
101	0.0052	2.0108	0.0000	0.0000	0.0000	0.9823	0.9938	0.9938	1.2496
102	-0.0000	2.3109	0.0000	0.0000	0.0000	0.9841	0.9944	0.9944	1.2507
103	0.0033	2.0039	0.0000	0.0000	0.0000	0.9865	0.9985	0.9985	1.2564
104	-0.0000	1.5064	0.0000	0.0000	0.0000	0.9841	1.0050	1.0050	1.2346
175	-0.0000	1.5063	0.0000	0.0000	0.0000	0.9830	0.9924	0.9924	1.2258
176	-0.0000	2.0069	0.0000	0.0000	0.0000	0.9852	0.9931	0.9931	1.2513
177	-0.0000	2.[illegible]54	0.0000	0.0000	0.0000	0.9870	0.9930	0.9930	1.2519
178	-0.0000	2.0061	0.0000	0.0000	0.0000	0.9862	0.9952	0.9952	1.2536
179	0.0006	1.5068	0.0000	0.0000	0.0000	0.9833	0.9999	0.9999	1.2313
180	0.0004	1.5052	0.0000	0.0000	0.0000	0.9841	0.9992	0.9992	1.2311
181	-0.0000	2.0054	0.0000	0.0000	0.0000	0.9863	0.9950	0.9950	1.2535
182	-0.0000	2.2550	0.0000	0.0000	0.0000	0.9877	0.9946	0.9946	1.2538
183	0.0013	2.0065	0.0000	0.0000	0.0000	0.9869	0.9944	0.9944	1.2536
184	-0.0000	1.5064	0.0000	0.0000	0.0000	0.9839	1.0016	1.0016	1.2326
185	0.0032	1.5072	0.0000	0.0000	0.0000	0.9829	1.0025	1.0025	1.2326
186	-0.0000	2.0058	0.0000	0.0000	0.0000	0.9856	0.9966	0.9966	1.2542
187	-0.0000	2.2531	0.0000	0.0000	0.0000	0.9867	0.9961	0.9961	1.2542
188	-0.0000	2.0059	0.0000	0.0000	0.0000	0.9861	0.9972	0.9972	1.2551
189	0.0006	1.5030	0.0000	0.0000	0.0000	0.9825	1.0043	1.0043	1.2335
294	0.0463	2.2382	0.0000	0.0000	0.0000	0.8757	1.0387	1.0387	1.1940
295	0.0508	2.2383	0.0000	0.0000	0.0000	0.9231	1.0618	1.0618	1.2520
320	0.0272	1.2896	0.0000	0.0000	0.0000	0.9858	1.0016	1.0016	1.1794
321	0.0486	1.9854	0.0000	0.0000	0.0000	0.9871	0.9951	0.9951	1.2543
322	0.0523	2.2755	0.0000	0.0000	0.0000	0.9885	0.9950	0.9950	1.2547
323	0.0408	1.9868	0.0000	0.0000	0.0000	0.9874	0.9960	0.9960	1.2553
324	0.0207	1.4897	0.0000	0.0000	0.0000	0.9833	1.0005	1.0005	1.2289
325	0.0208	1.4902	0.0000	0.0000	0.0000	0.9847	1.0045	1.0045	1.2318
326	0.0480	1.9875	0.0000	0.0000	0.0000	0.9863	0.9989	0.9989	1.2565
327	0.0511	2.2744	0.0000	0.0000	0.0000	0.9872	0.9991	0.9991	1.2570
328	0.0453	1.9895	0.0000	0.0000	0.0000	0.9853	1.0021	1.0021	1.2582
329	0.0272	1.4898	0.0000	0.0000	0.0000	0.9836	1.0076	1.0076	1.2329
355	0.3572	1.4888	0.0000	0.0000	0.0000	0.9762	0.9741	0.9741	1.2088
356	0.3579	1.9971	0.0000	0.0000	0.0000	0.9873	0.9802	0.9802	1.2421
357	0.3577	2.1776	0.0000	0.0000	0.0000	0.9870	0.9831	0.9831	1.2431
358	0.3575	1.9988	0.0000	0.0000	0.0000	0.9862	0.9826	0.9826	1.2432
359	0.3570	1.4913	0.0000	0.0000	0.0000	0.9737	0.9805	0.9805	1.2113
371	0.3952	1.4892	0.0000	0.0000	0.0000	0.9737	0.9758	0.9758	1.2081
372	0.3951	1.9876	0.0000	0.0000	0.0000	0.9867	0.9808	0.9808	1.2421
373	0.3952	2.2764	0.0000	0.0000	0.0000	0.9862	0.9847	0.9847	1.2434
374	0.3943	1.9869	0.0000	0.0000	0.0000	0.9874	0.9817	0.9817	1.2432
375	0.3947	1.4904	0.0000	0.0000	0.0000	0.9730	0.9791	0.9791	1.2097

FACILITY AX6X1 PROGRAM C03I

High Inner Flow

NOZZLE TYPE
4 INCH STA(INNER STREAM ONLY)

INNER-STREAM PLUG CONFIGURATIONS

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

CONFIGURATION NUMBER GE C005 NASA 00051

OUTER RADIUS RATIO 0.0000

INNER RADIUS RATIO 0.0000

D2 1.1398

D3 1.9980

RDG	MA	PTO/PA	PTI/PA	OMEGAT	DCS	COS	DCSH	COSH	DCPL,O	DCPL,I	DCTOT
97	0.0039	1.5062	0.0000	0.0000	0.0000	0.0000	-0.0035	69.9187	0.0000	0.0000	-0.0035
98	-0.0000	2.0150	0.0000	0.0000	0.0000	0.0000	-0.0022	9.9999	0.0000	0.0000	-0.0022
99	-0.0000	2.3198	0.0000	0.0000	0.0000	0.0000	-0.0015	9.9999	0.0000	0.0000	-0.0015
100	0.0039	1.5094	0.0000	0.0000	0.0000	0.0000	-0.0033	65.8495	0.0000	0.0000	-0.0033
101	0.0052	2.0108	0.0000	0.0000	0.0000	0.0000	-0.0021	42.7067	0.0000	0.0000	-0.0021
102	-0.0000	2.3109	0.0000	0.0000	0.0000	0.0000	-0.0024	9.9999	0.0000	0.0000	-0.0024
103	0.0033	2.0039	0.0000	0.0000	0.0000	0.0000	-0.0020	101.5221	0.0000	0.0000	-0.0020
104	-0.0000	1.5064	0.0000	0.0000	0.0000	0.0000	-0.0024	9.9999	0.0000	0.0000	-0.0024
175	-0.0000	1.5063	0.0000	0.0000	0.0000	0.0000	-0.0042	9.9999	0.0000	0.0000	-0.0042
176	-0.0000	2.0069	0.0000	0.0000	0.0000	0.0000	-0.0018	9.9999	0.0000	0.0000	-0.0018
177	-0.0000	2.2554	0.0000	0.0000	0.0000	0.0000	-0.0020	9.9999	0.0000	0.0000	-0.0020
178	-0.0000	2.0061	0.0000	0.0000	0.0000	0.0000	-0.0018	9.9999	0.0000	0.0000	-0.0018
179	0.0006	1.5068	0.0000	0.0000	0.0000	0.0000	-0.0028	2168.7170	0.0000	0.0000	-0.0028
180	0.0006	1.5052	0.0000	0.0000	0.0000	0.0000	-0.0039	3030.7646	0.0000	0.0000	-0.0039
181	-0.0000	2.0054	0.0000	0.0000	0.0000	0.0000	-0.0016	9.9999	0.0000	0.0000	-0.0016
182	-0.0000	2.2550	0.0000	0.0000	0.0000	0.0000	-0.0013	9.9999	0.0000	0.0000	-0.0013
183	0.0013	2.0065	0.0000	0.0000	0.0000	0.0000	-0.0012	392.0825	0.0000	0.0000	-0.0012
184	-0.0000	1.5064	0.0000	0.0000	0.0000	0.0000	-0.0018	9.9999	0.0000	0.0000	-0.0018
185	0.0032	1.5072	0.0000	0.0000	0.0000	0.0000	-0.0010	28.4233	0.0000	0.0000	-0.0010
186	-0.0000	2.0068	0.0000	0.0000	0.0000	0.0000	-0.0013	9.9999	0.0000	0.0000	-0.0013
187	-0.0000	2.2531	0.0000	0.0000	0.0000	0.0000	-0.0010	9.9999	0.0000	0.0000	-0.0010
188	-0.0000	2.0069	0.0000	0.0000	0.0000	0.0000	-0.0015	9.9999	0.0000	0.0000	-0.0015
189	0.0006	1.5080	0.0000	0.0000	0.0000	0.0000	0.0003	-224.9377	0.0000	0.0000	0.0003
294	0.0463	2.2382	0.0000	0.0000	0.0000	0.0000	-0.0029	0.7790	0.0000	0.0000	-0.0029
295	0.0508	2.2883	0.0000	0.0000	0.0000	0.0000	-0.0021	0.4978	0.0000	0.0000	-0.0021
320	0.0272	1.2856	0.0000	0.0000	0.0000	0.0000	-0.0113	2.8416	0.0000	0.0000	-0.0113
321	0.0496	1.9854	0.0000	0.0000	0.0000	0.0000	-0.0026	0.5937	0.0000	0.0000	-0.0026
322	0.0523	2.2755	0.0000	0.0000	0.0000	0.0000	-0.0023	0.5502	0.0000	0.0000	-0.0023
323	0.0408	1.9868	0.0000	0.0000	0.0000	0.0000	-0.0038	1.2289	0.0000	0.0000	-0.0038
324	0.0207	1.4897	0.0000	0.0000	0.0000	0.0000	-0.0078	5.3914	0.0000	0.0000	-0.0078
325	0.0298	1.4892	0.0000	0.0000	0.0000	0.0000	-0.0055	1.8547	0.0000	0.0000	-0.0055
326	0.0460	1.9875	0.0000	0.0000	0.0000	0.0000	-0.0039	0.9983	0.0000	0.0000	-0.0039
327	0.0511	2.2744	0.0000	0.0000	0.0000	0.0000	-0.0029	0.7361	0.0000	0.0000	-0.0029
328	0.0455	1.9893	0.0000	0.0000	0.0000	0.0000	-0.0026	0.6662	0.0000	0.0000	-0.0026
329	0.0272	1.4898	0.0000	0.0000	0.0000	0.0000	-0.0067	2.7061	0.0000	0.0000	-0.0067
355	0.3572	1.4888	0.0000	0.0000	0.0000	0.0000	-0.0155	0.0357	0.0000	0.0000	-0.0155
356	0.3579	1.9971	0.0000	0.0000	0.0000	0.0000	-0.0093	0.0392	0.0000	0.0000	-0.0093
357	0.3577	2.1776	0.0000	0.0000	0.0000	0.0000	-0.0086	0.0418	0.0000	0.0000	-0.0086
358	0.3575	1.9988	0.0000	0.0000	0.0000	0.0000	-0.0092	0.0390	0.0000	0.0000	-0.0092
359	0.3570	1.4913	0.0000	0.0000	0.0000	0.0000	-0.0162	0.0375	0.0000	0.0000	-0.0162
371	0.3952	1.4892	0.0000	0.0000	0.0000	0.0000	-0.0236	0.0443	0.0000	0.0000	-0.0236
372	0.3951	1.9876	0.0000	0.0000	0.0000	0.0000	-0.0118	0.0405	0.0000	0.0000	-0.0118
373	0.3952	2.2764	0.0000	0.0000	0.0000	0.0000	-0.0098	0.0415	0.0000	0.0000	-0.0098
374	0.3942	1.9869	0.0000	0.0000	0.0000	0.0000	-0.0143	0.0402	0.0000	0.0000	-0.0143
375	0.3947	1.4904	0.0000	0.0000	0.0000	0.0000	-0.0187	0.0352	0.0000	0.0000	-0.0187

FACILITY 8V6X1 PROGRAM C031 Config 2

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS) | INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG | SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9020 | INNER RADIUS RATIO 0.8000 | DVD 1.2480

THRUST PARAMETERS

PTG	CE	NASA	D2	PA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNETI	CFNET2	F9
518	0002	52230	0.3985	0.3574	1.5040	0.9602	0.0000	1.0230	9.9999	0.8368	0.8368	1.1097
519	0002	52230	0.3985	0.3573	1.5033	0.9717	0.0294	1.0231	9.9999	0.8568	0.8568	1.1116
520	0002	52230	0.3985	0.3581	1.5049	0.9603	0.0000	1.0225	9.9999	0.8368	0.8368	1.1096
521	0002	52230	0.3985	0.3577	1.5057	0.9607	0.0000	1.0231	9.9999	0.8445	0.8445	1.1122
522	0002	52230	0.3985	0.3575	1.5038	0.9717	0.0291	1.0223	9.9999	0.8564	0.8564	1.1112
523	0002	52230	0.3985	0.3579	1.5047	0.9832	0.0594	1.0222	9.9999	0.8722	0.8722	1.1116
524	0002	52230	0.3985	0.3585	2.0063	0.9342	0.0000	0.9856	9.9999	0.8778	0.8778	1.1322
525	0002	52230	0.3985	0.3585	2.0169	0.9751	0.0592	0.9822	9.9999	0.9052	0.9052	1.1287
526	0002	52230	0.3985	0.3586	2.5212	0.9161	0.0000	0.9922	9.9999	0.8961	0.8961	1.1436
527	0002	52230	0.3985	0.3574	2.5150	0.9281	0.0094	0.9851	9.9999	0.9001	0.9001	1.1437
528	0002	52230	0.3985	0.3572	2.5159	0.9372	0.0194	0.9843	9.9999	0.9066	0.9066	1.1443
529	0002	52230	0.3985	0.3575	2.5164	0.9480	0.0293	0.9838	9.9999	0.9107	0.9107	1.1429
530	0002	52230	0.3985	0.3578	2.5172	0.9734	0.0593	0.9842	9.9999	0.9270	0.9270	1.1446
531	0002	52230	0.3985	0.3582	3.5094	0.8853	0.0000	0.9865	9.9999	0.9118	0.9118	1.1682
532	0002	52230	0.3985	0.3586	3.5082	0.9366	0.0292	0.9876	9.9999	0.9298	0.9298	1.1691
533	0002	52230	0.3985	0.3574	3.5046	0.9823	0.0592	0.9876	9.9999	0.9425	0.9425	1.1666
534	0002	52230	0.3985	0.3580	2.5126	0.9473	0.0292	0.9860	9.9999	0.9124	0.9124	1.1454
535	0002	52230	0.3985	0.3572	1.5043	0.9717	0.0291	1.0229	9.9999	0.8662	0.8662	1.1149
536	0002	52250	1.1398	0.3579	1.5055	2.5015	1.7079	1.0221	0.9795	0.9515	3.2997	1.2145
537	0002	52250	1.1398	0.3577	1.5053	1.0781	0.4104	1.0219	1.0235	0.9326	1.1006	1.1476
538	0002	52250	1.1398	0.3570	1.5049	1.4909	1.0116	1.0226	1.0209	0.9421	1.8848	1.2165
539	0002	52250	1.1398	0.3588	1.5065	2.5032	1.7084	1.0222	0.9794	0.9520	3.3027	1.2149
540	0002	52250	1.1398	0.3586	1.5044	3.4980	2.3917	1.0230	0.9805	0.9546	4.7245	1.2182
541	0002	52250	1.1398	0.3574	2.5125	1.0810	0.2375	0.9851	0.9558	0.9481	1.0161	1.1632
542	0002	52250	1.1398	0.3574	2.5127	1.4897	0.5980	0.9852	1.0150	0.9547	1.3442	1.2176
543	0002	52250	1.1398	0.3572	2.5161	2.5018	1.0161	0.9845	0.9795	0.9561	1.9250	1.2154
544	0002	52250	1.1398	0.3574	2.5141	3.4975	1.4226	0.9848	0.9801	0.9619	2.5208	1.2222
545	0002	52250	1.1398	0.3567	3.4921	1.0703	0.1762	0.9909	1.0246	0.9578	1.0031	1.1887
546	0002	52250	1.1398	0.3568	3.5022	1.4890	0.4306	0.9877	1.0222	0.9587	1.2055	1.2257
547	0002	52250	1.1398	0.3581	3.5074	2.5020	0.7263	0.9872	0.9790	0.9592	1.5648	1.2216
548	0002	52250	1.1398	0.3575	3.5060	3.4963	1.0176	0.9872	0.9808	0.9602	1.9364	1.2239
549	0002	52230	0.3985	0.4471	1.5014	0.9624	0.0000	1.0239	9.9999	0.8472	0.8472	1.1114
550	0002	52230	0.3985	0.4471	1.4993	0.9858	0.0594	1.0261	9.9999	0.8773	0.8773	1.1119
551	0002	52230	0.3985	0.4477	2.4982	0.9109	0.0000	0.9848	9.9999	0.8979	0.8979	1.1443
552	0002	52230	0.3985	0.4481	2.5040	0.9763	0.0592	0.9843	9.9999	0.9277	0.9277	1.1433
553	0002	52230	0.3985	0.4477	3.5141	0.8883	0.0000	0.9856	9.9999	0.9107	0.9107	1.1653
554	0002	52230	0.3985	0.4483	3.5136	0.9843	0.0592	0.9859	9.9999	0.9428	0.9428	1.1647
555	0002	52230	0.3985	0.4469	2.5085	0.9781	0.0592	0.9833	9.9999	0.9296	0.9296	1.1434
556	0002	52230	0.3985	0.4463	1.5065	0.9871	0.0595	1.0210	9.9999	0.8919	0.8919	1.1156
557	0002	52250	1.1398	0.4459	1.5010	2.4832	1.7021	1.0233	0.9805	0.9507	3.2887	1.2139
558	0002	52250	1.1398	0.4462	1.5024	3.4991	2.3961	1.0228	0.9800	0.9542	4.7361	1.2169
559	0002	52250	1.1398	0.4458	2.4988	2.4852	1.0147	0.9859	0.9793	0.9583	1.9281	1.2172
560	0002	52250	1.1398	0.4469	2.5030	3.4964	1.4308	0.9843	0.9812	0.9623	2.5341	1.2226
561	0002	52250	1.1398	0.4467	3.5084	2.4854	0.7209	0.9879	0.9791	0.9583	1.9618	1.2214
562	0002	52250	1.1398	0.4468	3.5113	3.5004	1.0172	0.9863	0.9799	0.9609	1.9374	1.2235

FACILITY 8X6X1 PROGRAM C031 Config 2

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OPAC PARAMETERS: OUTER RADIUS RATIO 0.9070; INNER RADIUS RATIO 0.8000; DVO 1.2480

PCC	FE	NASA	O2	NA	PTC/PA	PTI/PA	DIFFRT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
518	0002	52230	0.3985	0.3574	1.5040	0.9602	0.0000	0.0000	0.0000	-0.0327	0.0454	-0.0416	0.0359	-0.0384
519	0002	52230	0.3985	0.3573	1.5038	0.9717	0.0294	0.0000	0.0000	-0.0332	0.0461	-0.0385	0.0285	-0.0432
520	0002	52230	0.3985	0.3581	1.5049	0.9603	0.0000	0.0000	0.0000	-0.0331	0.0458	-0.0396	0.0375	-0.0352
521	0002	52230	0.3985	0.3577	1.5037	0.9607	0.0000	0.0000	0.0000	-0.0332	0.0460	-0.0394	0.0383	-0.0344
522	0002	52230	0.3985	0.3575	1.5038	0.9717	0.0291	0.0000	0.0000	-0.0330	0.0457	-0.0395	0.0286	-0.0439
523	0002	52230	0.3985	0.3579	1.5047	0.9832	0.0594	0.0000	0.0000	-0.0324	0.0449	-0.0363	0.0266	-0.0421
524	0002	52230	0.3985	0.3585	2.0093	0.9342	0.0000	0.0000	0.0000	-0.0201	0.0478	-0.0248	0.0283	-0.0166
525	0002	52230	0.3985	0.3585	2.0169	0.9751	0.0592	0.0000	0.0000	-0.0194	0.0461	-0.0237	0.0213	-0.0217
526	0002	52230	0.3985	0.3586	2.5212	0.9161	0.0000	0.0000	0.0000	-0.0140	0.0472	-0.0335	0.0240	-0.0235
527	0002	52230	0.3985	0.3574	2.5150	0.9281	0.0094	0.0000	0.0000	-0.0137	0.0465	-0.0312	0.0244	-0.0205
528	0002	52230	0.3985	0.3572	2.5159	0.9372	0.0194	0.0000	0.0000	-0.0140	0.0475	-0.0322	0.0226	-0.0236
529	0002	52230	0.3985	0.3575	2.5164	0.9480	0.0293	0.0000	0.0000	-0.0133	0.0451	-0.0315	0.0213	-0.0235
530	0002	52230	0.3985	0.3578	2.5172	0.9734	0.0593	0.0000	0.0000	-0.0137	0.0463	-0.0314	0.0187	-0.0264
531	0002	52230	0.3985	0.3582	3.5094	0.8853	0.0000	0.0000	0.0000	-0.0080	0.0429	-0.0304	0.0201	-0.0183
532	0002	52230	0.3985	0.3586	3.5082	0.9366	0.0292	0.0000	0.0000	-0.0077	0.0412	-0.0293	0.0173	-0.0196
533	0002	52230	0.3985	0.3576	3.5046	0.9823	0.0592	0.0000	0.0000	-0.0074	0.0399	-0.0297	0.0114	-0.0252
534	0002	52230	0.3985	0.3590	2.5126	0.9473	0.0292	0.0000	0.0000	-0.0133	0.0447	-0.0319	0.0219	-0.0233
535	0002	52230	0.3985	0.3572	1.5043	0.9717	0.0291	0.0000	0.0000	-0.0339	0.0472	-0.0376	0.0309	-0.0407
536	0002	52250	1.1398	0.3579	1.5055	2.5019	1.7079	0.0000	0.0000	-0.0084	0.0403	-0.0067	-0.0049	-0.0200
537	0002	52250	1.1398	0.3577	1.5053	1.0781	0.4104	0.0000	0.0000	-0.0261	0.0427	-0.0229	0.0248	-0.0202
538	0002	52250	1.1398	0.3570	1.5049	1.4909	1.0116	0.0000	0.0000	-0.0148	0.0411	-0.0148	0.0182	-0.0113
539	0002	52250	1.1398	0.3588	1.5055	2.5032	1.7084	0.0000	0.0000	-0.0081	0.0386	-0.0064	-0.0050	-0.0195
540	0002	52250	1.1398	0.3586	1.5044	3.4980	2.3917	0.0000	0.0000	-0.0056	0.0383	-0.0013	-0.0061	-0.0130
541	0002	52250	1.1398	0.3574	2.5125	1.0810	0.2325	0.0000	0.0000	-0.0123	0.0445	-0.0284	0.0237	-0.0169
542	0002	52250	1.1398	0.3574	2.5127	1.4897	0.5980	0.0000	0.0000	-0.0092	0.0437	-0.0215	0.0222	-0.0085
543	0002	52250	1.1398	0.3572	2.5161	2.5018	1.0161	0.0000	0.0000	-0.0074	0.0437	-0.0147	0.0076	-0.0136
544	0002	52250	1.1398	0.3574	2.5141	3.4975	1.4226	0.0000	0.0000	-0.0048	0.0426	-0.0093	-0.0093	-0.0224
545	0002	52250	1.1398	0.3567	3.4921	1.0793	0.1762	0.0000	0.0000	-0.0069	0.0393	-0.0258	0.0175	-0.0153
546	0002	52250	1.1398	0.3568	3.5022	1.4890	0.4306	0.0000	0.0000	-0.0056	0.0379	-0.0224	0.0193	-0.0087
547	0002	52250	1.1398	0.3581	3.5074	2.5020	0.7263	0.0000	0.0000	-0.0041	0.0362	-0.0170	0.0116	-0.0095
548	0002	52250	1.1398	0.3575	3.5060	3.4963	1.0176	0.0000	0.0000	-0.0036	0.0395	-0.0136	0.0019	-0.0153
549	0002	52230	0.3985	0.4471	1.5014	0.9624	0.0000	0.0000	0.0000	-0.0540	0.0477	-0.0496	0.0406	-0.0631
550	0002	52230	0.3985	0.4471	1.4993	0.9858	0.0594	0.0000	0.0000	-0.0531	0.0468	-0.0454	0.0302	-0.0693
551	0002	52230	0.3985	0.4477	2.4982	0.9199	0.0000	0.0000	0.0000	-0.0223	0.0476	-0.0408	0.0286	-0.0345
552	0002	52230	0.3985	0.4481	2.5040	0.9763	0.0592	0.0000	0.0000	-0.0221	0.0473	-0.0403	0.0235	-0.0399
553	0002	52230	0.3985	0.4477	3.5141	0.9883	0.0000	0.0000	0.0000	-0.0121	0.0415	-0.0283	0.0239	-0.0164
554	0002	52230	0.3985	0.4483	3.5136	0.9843	0.0592	0.0000	0.0000	-0.0114	0.0393	-0.0276	0.0152	-0.0238
555	0002	52230	0.3985	0.4469	2.5085	0.9781	0.0592	0.0000	0.0000	-0.0218	0.0469	-0.0392	0.0234	-0.0371
556	0002	52230	0.3985	0.4463	1.5065	0.9871	0.0595	0.0000	0.0000	-0.0514	0.0459	-0.0408	0.0304	-0.0618
557	0002	52250	1.1398	0.4459	1.5010	2.4832	1.7021	0.0000	0.0000	-0.0138	0.0423	-0.0082	0.0015	-0.0205
558	0002	52250	1.1398	0.4462	1.5024	3.4991	2.3961	0.0000	0.0000	-0.0094	0.0416	-0.0021	-0.0071	-0.0186
559	0002	52250	1.1398	0.4458	2.4988	2.4952	1.0147	0.0000	0.0000	-0.0101	0.0437	-0.0174	0.0075	-0.0199
560	0002	52250	1.1398	0.4469	2.5030	3.4964	1.4308	0.0000	0.0000	-0.0075	0.0426	-0.0097	-0.0070	-0.0242
561	0002	52250	1.1398	0.4467	3.5084	2.4854	0.7209	0.0000	0.0000	-0.0067	0.0376	-0.0165	0.0195	-0.0037
562	0002	52250	1.1398	0.4468	3.5113	3.5004	1.0172	0.0000	0.0000	-0.0053	0.0369	-0.0137	0.0027	-0.0163

FACILITY 8X4X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS
15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9020 INNER RADIUS RATIO 0.8000 DVD 1.2480

BOC	RE	MASA	PZ	PA	P1Z/PA	P11/PA	PREGAT	CDO	CDI	CFNET1	CFNET2	F9
565	0002	52230	0.3985	0.0033	1.5041	0.9459	0.0000	1.0209	9.9999	0.9269	0.9269	1.1498
564	0002	52230	0.3985	0.0111	1.5042	0.9570	0.0293	1.0201	9.9999	0.9557	0.9557	1.1544
565	0002	52230	0.3985	0.0105	1.5029	0.9679	0.0595	1.0199	9.9999	0.9778	0.9778	1.1569
566	0002	52230	0.3985	0.0274	1.9968	0.9195	0.0000	0.9835	9.9999	0.9343	0.9343	1.1677
567	0002	52230	0.3985	0.0235	1.9968	0.9572	0.0591	0.9835	9.9999	0.9574	0.9574	1.1643
568	0002	52230	0.3985	0.0320	2.4998	0.9032	0.0000	0.9834	9.9999	0.9303	0.9303	1.1715
569	0002	52230	0.3985	0.0229	2.4954	0.9127	0.0094	0.9853	9.9999	0.9339	0.9339	1.1715
570	0002	52230	0.3985	0.0229	2.5000	0.9222	0.0197	0.9835	9.9999	0.9371	0.9371	1.1692
571	0002	52230	0.3985	0.0287	2.4953	0.9329	0.0292	0.9854	9.9999	0.9413	0.9413	1.1691
572	0002	52230	0.3985	0.0471	2.4991	0.9586	0.0591	0.9850	9.9999	0.9568	0.9568	1.1696
573	0002	52230	0.3985	0.0505	3.5042	0.8776	0.0000	0.9878	9.9999	0.9325	0.9325	1.1885
574	0002	52230	0.3985	0.0464	3.5040	0.9287	0.0291	0.9870	9.9999	0.9492	0.9492	1.1867
575	0002	52230	0.3985	0.0515	3.5074	0.9714	0.0591	0.9868	9.9999	0.9618	0.9618	1.1847
576	0002	52230	0.3985	0.0419	2.4991	0.9311	0.0291	0.9848	9.9999	0.9382	0.9382	1.1674
577	0002	52230	0.3985	0.0105	1.5024	0.9570	0.0291	1.0210	9.9999	0.9294	0.9294	1.1453
578	0002	52250	1.1398	0.0098	1.5041	1.0789	0.4231	1.0203	1.0605	0.9857	1.1675	1.1718
579	0002	52250	1.1398	0.0235	1.5036	1.4855	1.0122	1.0204	1.0236	0.9731	1.9441	1.2357
580	0002	52250	1.1398	0.0438	1.5048	2.4861	1.7018	1.0202	0.9797	0.9700	3.3492	1.2293
581	0002	52250	1.1398	0.0548	1.5053	3.4951	2.3928	1.0205	0.9803	0.9670	4.7842	1.2292
582	0002	52250	1.1398	0.0466	2.4985	1.0787	0.2484	0.9845	1.0299	0.9787	1.0529	1.1962
583	0002	52250	1.1398	0.0501	2.4995	1.4884	0.6040	0.9839	1.0197	0.9749	1.3772	1.2342
584	0002	52250	1.1398	0.0563	2.5015	2.4871	1.0162	0.9844	0.9798	0.9713	1.9556	1.2293
585	0002	52250	1.1398	0.0594	2.5007	3.4953	1.4306	0.9854	0.9806	0.9723	2.5605	1.2327
586	0002	52250	1.1398	0.0528	3.4963	1.0798	0.1798	0.9894	1.0426	0.9762	1.0234	1.2038
587	0002	52250	1.1398	0.0538	3.5112	1.4894	0.4205	0.9858	1.0199	0.9718	1.2213	1.2363
588	0002	52250	1.1398	0.0611	3.5087	2.4881	0.7217	0.9879	0.9784	0.9679	1.5774	1.2301
589	0002	52250	1.1398	0.0663	3.5072	3.4946	1.0177	0.9869	0.9814	0.9674	1.9507	1.2317
590	0002	52250	1.1398	0.0590	3.5050	2.4890	0.7234	0.9872	0.9794	0.9678	1.5789	1.2304
591	0002	52250	1.1398	0.0535	2.5015	2.4882	1.0169	0.9837	0.9791	0.9707	1.9553	1.2283
592	0002	52250	1.1398	0.0457	1.5045	2.4888	1.7036	1.0208	0.9800	0.9707	3.3559	1.2302
593	0002	52250	1.1398	0.0255	1.5035	1.4891	1.0151	1.0205	1.0228	0.9741	1.9518	1.2364
594	0002	52250	1.1398	0.0131	1.5047	1.0801	0.4311	1.0198	1.0561	0.9889	1.1788	1.1737
595	0002	52230	0.3985	0.0272	1.9967	0.9204	0.0000	0.9843	9.9999	0.9228	0.9228	1.1619
596	0002	52230	0.3985	0.0248	1.9989	0.9570	0.0591	0.9841	9.9999	0.9501	0.9501	1.1609
597	0002	52230	0.3985	0.0065	1.5043	0.9682	0.0594	1.0199	9.9999	0.9563	0.9563	1.1494
598	0002	52230	0.3985	0.0144	1.5045	0.9472	0.0000	1.0203	9.9999	0.9306	0.9306	1.1503
599	0002	52230	0.3985	0.0307	2.5001	0.9570	0.0592	0.9846	9.9999	0.9551	0.9551	1.1689
600	0002	52230	0.3985	0.0291	2.4979	0.9031	0.0000	0.9851	9.9999	0.9279	0.9279	1.1711
601	0002	52230	0.3985	0.0513	3.5125	0.8773	0.0000	0.9863	9.9999	0.9320	0.9320	1.1871
602	0002	52230	0.3985	0.0529	3.5114	0.9720	0.0591	0.9865	9.9999	0.9623	0.9623	1.1849
603	0002	52230	0.3985	0.0144	1.5046	0.9671	0.0594	1.0203	9.9999	0.9392	0.9392	1.1440
604	0002	52230	0.3985	0.0124	1.5046	0.9670	0.0594	1.0204	9.9999	0.9472	0.9472	1.1469

ACILITY 8X6X1 PROGRAM C931

Config. 2

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

FAC PARAMETERS					OUTER RADIUS RATIO 0.9020		INNER RADIUS RATIO 0.8000		DVO 1.2480					
PTO;	CF	NASA	M2	MA	PT0/PA	PT1/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,0	DCPL,1	DCTOT
563	0002	52230	0.3985	0.0033	1.5041	0.9459	0.0000	0.0000	0.0000	-0.0009	14.7348	-0.0275	0.0192	-0.0091
564	0002	52230	0.3985	0.0111	1.5032	0.9570	0.0293	0.0000	0.0000	-0.0009	1.3590	-0.0263	0.0171	-0.0102
565	0002	52230	0.3985	0.0105	1.5029	0.9579	0.0595	0.0000	0.0000	-0.0010	1.5855	-0.0252	0.0143	-0.0118
566	0002	52230	0.3985	0.0274	1.4968	0.9195	0.0000	0.0000	0.0000	-0.0006	0.2232	-0.0155	0.0161	0.0000
567	0002	52230	0.3985	0.0235	1.4968	0.9572	0.0591	0.0000	0.0000	-0.0009	0.4451	-0.0156	0.0114	-0.0050
568	0002	52230	0.3985	0.0320	2.4998	0.9032	0.0000	0.0000	0.0000	-0.0006	0.2635	-0.0258	0.0165	-0.0099
569	0002	52230	0.3985	0.0229	2.4954	0.9127	0.0094	0.0000	0.0000	-0.0009	0.7584	-0.0260	0.0150	-0.0119
570	0002	52230	0.3985	0.0229	2.5000	0.9222	0.0192	0.0000	0.0000	-0.0009	0.7720	-0.0263	0.0121	-0.0152
571	0002	52230	0.3985	0.0287	2.4953	0.9329	0.0292	0.0000	0.0000	-0.0009	0.4758	-0.0256	0.0108	-0.0158
572	0002	52230	0.3985	0.0471	2.4991	0.9586	0.0591	0.0000	0.0000	-0.0003	0.0568	-0.0253	0.0067	-0.0189
573	0002	52230	0.3985	0.0505	3.5042	0.8776	0.0000	0.0000	0.0000	-0.0005	0.1253	-0.0307	0.0164	-0.0147
574	0002	52230	0.3985	0.0464	3.5040	0.9287	0.0291	0.0000	0.0000	-0.0003	0.1068	-0.0309	0.0152	-0.0160
575	0002	52230	0.3985	0.0515	3.5074	0.9714	0.0591	0.0000	0.0000	-0.0003	0.0715	-0.0322	0.0114	-0.0211
576	0002	52230	0.3985	0.0419	2.4991	0.9311	0.0291	0.0000	0.0000	-0.0002	0.0477	-0.0252	0.0111	-0.0144
577	0002	52230	0.3985	0.0105	1.5024	0.9570	0.0291	0.0000	0.0000	-0.0011	1.7318	-0.0258	0.0191	-0.0068
578	0002	52250	1.1398	0.0098	1.5041	1.0769	0.4231	0.0000	0.0000	-0.0012	2.5479	-0.0178	0.0150	-0.0040
579	0002	52250	1.1398	0.0235	1.5036	1.4855	1.0122	0.0000	0.0000	-0.0008	0.5034	-0.0122	0.0088	-0.0042
580	0002	52250	1.1398	0.0438	1.5048	2.4861	1.7018	0.0000	0.0000	-0.0003	0.0893	-0.0050	-0.0086	-0.0138
581	0002	52250	1.1398	0.0548	1.5053	3.4951	2.3928	0.0000	0.0000	-0.0002	0.0711	-0.0008	-0.0093	-0.0103
582	0002	52250	1.1398	0.0356	2.4986	1.0787	0.2484	0.0000	0.0000	-0.0005	0.1737	-0.0235	0.0144	-0.0096
583	0002	52250	1.1398	0.0501	2.4995	1.4884	0.6040	0.0000	0.0000	-0.0003	0.0605	-0.0181	0.0136	-0.0047
584	0002	52250	1.1398	0.0563	2.5015	2.4871	1.0162	0.0000	0.0000	-0.0003	0.0704	-0.0130	-0.0017	-0.0116
585	0002	52250	1.1398	0.0594	2.5007	3.4953	1.4306	0.0000	0.0000	-0.0003	0.1064	-0.0072	-0.0112	-0.0187
586	0002	52250	1.1398	0.0528	3.4983	1.0798	0.1798	0.0000	0.0000	-0.0003	0.0789	-0.0299	0.0142	-0.0160
587	0002	52250	1.1398	0.0538	3.5112	1.4894	0.4295	0.0000	0.0000	-0.0003	0.0955	-0.0249	0.0166	-0.0086
588	0002	52250	1.1398	0.0611	3.5087	2.4881	0.7217	0.0000	0.0000	-0.0003	0.0990	-0.0194	0.0131	-0.0066
589	0002	52250	1.1398	0.0663	3.5072	3.4946	1.0177	0.0000	0.0000	-0.0003	0.1021	-0.0150	-0.0000	-0.0154
590	0002	52250	1.1398	0.0590	3.5050	2.4890	0.7234	0.0000	0.0000	-0.0004	0.1156	-0.0189	0.0126	-0.0066
591	0002	52250	1.1398	0.0535	2.5015	2.4882	1.0169	0.0000	0.0000	-0.0004	0.1277	-0.0135	0.0019	-0.0120
592	0002	52250	1.1398	0.0457	1.5046	2.4958	1.7036	0.0000	0.0000	-0.0004	0.1216	-0.0050	-0.0073	-0.0127
593	0002	52250	1.1398	0.0255	1.5035	1.4891	1.0151	0.0000	0.0000	-0.0008	0.4178	-0.0120	0.0092	-0.0035
594	0002	52250	1.1398	0.0131	1.5037	1.0803	0.4311	0.0000	0.0000	-0.0011	1.3489	-0.0190	0.0134	-0.0062
595	0002	52230	0.3985	0.0222	1.9967	0.9204	0.0000	0.0000	0.0000	-0.0008	0.4700	-0.0157	0.0157	-0.0008
596	0002	52230	0.3985	0.0248	1.9989	0.9578	0.0591	0.0000	0.0000	-0.0007	0.3227	-0.0143	0.0133	-0.0017
597	0002	52230	0.3985	0.0065	1.5043	0.9692	0.0594	0.0000	0.0000	-0.0012	5.1433	-0.0262	0.0134	-0.0140
598	0002	52230	0.3985	0.0144	1.5046	0.9472	0.0000	0.0000	0.0000	-0.0011	0.9232	-0.0272	0.0197	-0.0086
599	0002	52230	0.3985	0.0307	2.5001	0.9570	0.0592	0.0000	0.0000	-0.0007	0.3131	-0.0265	0.0063	-0.0209
600	0002	52230	0.3985	0.0281	2.4979	0.9031	0.0000	0.0000	0.0000	-0.0007	0.3798	-0.0262	0.0169	-0.0099
601	0002	52230	0.3985	0.0513	3.5125	0.8773	0.0000	0.0000	0.0000	-0.0003	0.0681	-0.0297	0.0168	-0.0131
602	0002	52230	0.3985	0.0529	3.5114	0.9720	0.0591	0.0000	0.0000	-0.0002	0.0514	-0.0312	0.0114	-0.0200
603	0002	52230	0.3985	0.0144	1.5046	0.9671	0.0594	0.0000	0.0000	-0.0010	0.8257	-0.0262	0.0141	-0.0131
604	0002	52230	0.3985	0.0124	1.5046	0.9670	0.0594	0.0000	0.0000	-0.0010	1.1985	-0.0250	0.0153	-0.0107

FACILITY 8X6XL PROGRAM C031

INNER-STREAM

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS: OUTER RADIUS RATIO 0.9020; INNER RADIUS RATIO 0.9070; DVO 1.2480

PTC	CF	NASA	D2	PA	PT2/PA	PT1/PA	DPEGAT	CDO	CDI	CFNET1	CFNET2	F9
605	0003	52430	0.3985	0.3597	1.5079	0.9712	0.0284	1.0218	9.9999	0.9341	0.9341	1.1651
606	0003	52430	0.3985	0.3605	2.5183	0.9379	0.0289	0.9855	9.9999	0.9445	0.9445	1.1940
607	0003	52430	0.3985	0.3610	3.5195	0.9174	0.0289	0.9867	9.9999	0.9501	0.9501	1.2007
608	0003	52450	1.1398	0.3606	1.5069	2.4935	0.8889	1.0219	0.9886	0.9478	2.1619	1.2173
609	0003	52450	1.1398	0.3613	2.5164	2.4964	0.5289	0.9857	0.9878	0.9582	1.4632	1.2205
610	0003	52450	1.1398	0.3614	3.5159	2.4775	0.3745	0.9881	0.9874	0.9580	1.2702	1.2244
611	0003	52450	1.1398	0.3603	2.5181	2.5004	0.5294	0.9853	0.9874	0.9569	1.4618	1.2191
612	0003	52430	0.3985	0.0130	1.5054	0.9403	0.0000	1.0238	9.9999	0.9478	0.9478	1.1825
613	0003	52430	0.3985	0.0144	1.5025	0.9609	0.0288	1.0213	9.9999	0.9542	0.9542	1.1787
614	0003	52430	0.3985	0.0085	1.5053	0.9776	0.0591	1.0200	9.9999	0.9635	0.9635	1.1774
615	0003	52430	0.3985	0.0235	2.4992	0.8707	0.0000	0.9854	9.9999	0.9330	0.9330	1.1914
616	0003	52430	0.3985	0.0352	2.5027	0.9273	0.0291	0.9847	9.9999	0.9485	0.9485	1.1900
617	0003	52430	0.3985	0.0350	2.5021	0.9670	0.0590	0.9849	9.9999	0.9626	0.9626	1.1918
618	0003	52430	0.3985	0.0518	3.5147	0.9256	0.0000	0.9851	9.9999	0.9372	0.9372	1.2041
619	0003	52430	0.3985	0.0535	3.5130	0.9175	0.0290	0.9870	9.9999	0.9539	0.9539	1.2053
620	0003	52430	0.3985	0.0514	3.5137	0.9793	0.0590	0.9860	9.9999	0.9672	0.9672	1.2060
621	0003	52430	0.3985	0.0522	3.5161	0.8258	0.0000	0.9864	9.9999	0.9376	0.9376	1.2055
622	0003	52430	0.3985	0.0313	2.4999	0.8701	0.0000	0.9857	9.9999	0.9300	0.9300	1.1895
623	0003	52430	0.3985	0.0124	1.5045	0.9403	0.0000	1.0207	9.9999	0.9356	0.9356	1.1770
624	0003	52450	1.1398	0.0124	1.5048	1.0893	0.2508	1.0204	1.1278	0.9696	1.0834	1.1949
625	0003	52450	1.1398	0.0313	1.5050	1.5047	0.5357	1.0204	1.0278	0.9680	1.4865	1.2350
626	0003	52450	1.1398	0.0313	1.5043	2.5087	0.8565	1.0208	0.9876	0.9598	2.2058	1.2756
627	0003	52450	1.1398	0.0437	1.5081	3.5173	1.2551	1.0188	0.9874	0.9539	2.9289	1.2732
628	0003	52450	1.1398	0.0320	2.5028	1.0025	0.1574	0.9841	1.1635	0.9715	1.0218	1.2066
629	0003	52450	1.1398	0.0359	2.5004	1.5081	0.3217	0.9852	1.0305	0.9632	1.1782	1.2279
630	0003	52450	1.1398	0.0522	2.5007	2.4947	0.5415	0.9854	0.9875	0.9636	1.4751	1.2266
631	0003	52450	1.1398	0.0523	2.5024	3.4955	0.7450	0.9846	0.9869	0.9661	1.7876	1.2296
632	0003	52450	1.1398	0.0505	3.5243	1.0918	0.1159	0.9835	1.2121	0.9708	1.0030	1.2166
633	0003	52450	1.1398	0.0528	3.5094	1.5107	0.2278	0.9873	1.0241	0.9674	1.1014	1.2352
634	0003	52450	1.1398	0.0551	3.5155	2.5102	0.3780	0.9817	0.9813	0.9667	1.2861	1.2277
635	0003	52450	1.1398	0.0575	3.5108	3.5166	0.5331	0.9868	0.9872	0.9627	1.4761	1.2299
636	0003	52450	1.1398	0.0523	3.5060	1.1173	0.1251	0.9890	1.1680	0.9726	1.0121	1.2245
637	0003	52450	1.1398	0.0378	2.4988	1.1178	0.1739	0.9855	1.1495	0.9726	1.0350	1.2114
638	0003	52450	1.1398	0.0137	1.5056	1.1160	0.2815	1.0212	1.1107	0.9878	1.1351	1.2086
639	0003	52450	1.1398	0.0359	1.5013	3.5113	1.2574	1.0219	0.9875	0.9574	2.9523	1.2263
640	0003	52430	0.3985	0.3556	1.5059	0.9485	0.0000	1.0233	9.9999	0.8758	0.8758	1.1468
641	0003	52430	0.3985	0.3555	1.5072	0.9697	0.0285	1.0220	9.9999	0.8933	0.8933	1.1478
642	0003	52430	0.3985	0.3562	1.5076	0.9862	0.0590	1.0214	9.9999	0.9098	0.9098	1.1498
643	0003	52430	0.3985	0.3572	2.5164	0.8791	0.0000	0.9846	9.9999	0.9153	0.9153	1.1746
644	0003	52430	0.3985	0.3570	2.5148	0.9366	0.0290	0.9853	9.9999	0.9342	0.9342	1.1767
645	0003	52430	0.3985	0.3567	2.5139	0.9775	0.0589	0.9861	9.9999	0.9491	0.9491	1.1794
646	0003	52430	0.3985	0.3580	3.5208	0.8224	0.0000	0.9858	9.9999	0.9256	0.9256	1.1939
647	0003	52430	0.3985	0.3587	3.5268	0.9166	0.0289	0.9846	9.9999	0.9432	0.9432	1.1932
648	0003	52430	0.3985	0.3582	3.5176	0.9785	0.0588	0.9864	9.9999	0.9577	0.9577	1.1973
649	0003	52430	0.3985	0.3581	3.5218	0.8232	0.0000	0.9861	9.9999	0.9289	0.9289	1.1970

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

OUTER RADIUS RATIO: 0.9020

INNER RADIUS RATIO: 0.9029

OVD: 1.2480

RFG	GE	NASA	M2	MA	PT2/PA	PT1/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
605	0003	52430	0.3985	0.3597	1.5070	0.9712	0.0284	0.0000	0.0000	-0.0329	0.0452	-0.0384	0.0434	-0.0277
606	0003	52430	0.3985	0.3605	2.5193	0.9379	0.0289	0.0000	0.0000	-0.0140	0.0467	-0.0370	0.0284	-0.0226
607	0003	52430	0.3985	0.3610	3.5195	0.9174	0.0289	0.0000	0.0000	-0.0078	0.0412	-0.0290	0.0132	-0.0236
608	0003	52450	1.1398	0.3606	1.5068	2.4936	0.8839	0.0000	0.0000	-0.0139	0.0434	-0.0136	0.0112	-0.0163
609	0003	52450	1.1398	0.3613	2.5164	2.4964	0.5289	0.0000	0.0000	-0.0088	0.0444	-0.0239	0.0186	-0.0141
610	0003	52450	1.1398	0.3610	3.5150	2.4775	0.3745	0.0000	0.0000	-0.0054	0.0380	-0.0212	0.0164	-0.0103
611	0003	52450	1.1398	0.3603	2.5181	2.5004	0.5294	0.0000	0.0000	-0.0090	0.0458	-0.0232	0.0136	-0.0136
612	0003	52430	0.3985	0.0140	1.5053	0.9603	0.0000	0.0000	0.0000	-0.0011	1.0964	-0.0310	0.0224	-0.0097
613	0003	52430	0.3985	0.0144	1.5026	0.9609	0.0288	0.0000	0.0000	-0.0013	1.1546	-0.0291	0.0172	-0.0132
614	0003	52430	0.3985	0.0085	1.5053	0.9776	0.0591	0.0000	0.0000	-0.0016	4.0214	-0.0286	0.0153	-0.0129
615	0003	52430	0.3985	0.0235	2.4992	0.8707	0.0000	0.0000	0.0000	-0.0009	0.7077	-0.0271	0.0252	-0.0029
616	0003	52450	0.3985	0.0352	2.5027	0.9273	0.0291	0.0000	0.0000	-0.0006	0.2018	-0.0264	0.0218	-0.0051
617	0003	52430	0.3985	0.0359	2.5021	0.9670	0.0590	0.0000	0.0000	-0.0006	0.2113	-0.0273	0.0179	-0.0100
618	0003	52430	0.3985	0.0518	3.5149	0.8256	0.0000	0.0000	0.0000	-0.0003	0.0780	-0.0319	0.0143	-0.0179
619	0003	52430	0.3985	0.0535	3.5130	0.9175	0.0290	0.0000	0.0000	-0.0002	0.0396	-0.0321	0.0030	-0.0292
620	0003	52430	0.3985	0.0516	3.5137	0.9763	0.0590	0.0000	0.0000	-0.0003	0.0854	-0.0319	0.0097	-0.0225
621	0003	52430	0.3985	0.0522	3.5161	0.8258	0.0000	0.0000	0.0000	-0.0002	0.0631	-0.0314	0.0146	-0.0170
622	0003	52430	0.3985	0.0313	2.4999	0.8701	0.0000	0.0000	0.0000	-0.0008	0.3637	-0.0265	0.0255	-0.0019
623	0003	52430	0.3985	0.0124	1.5045	0.9403	0.0000	0.0000	0.0000	-0.0015	1.7855	-0.0299	0.0240	-0.0075
624	0003	52450	1.1398	0.0124	1.5048	1.0893	0.2508	0.0000	0.0000	-0.0019	2.4410	-0.0249	0.0093	-0.0175
625	0003	52450	1.1398	0.0313	1.5050	1.5047	0.5357	0.0000	0.0000	-0.0010	0.2904	-0.0185	0.0103	-0.0093
626	0003	52450	1.1398	0.0313	1.5043	2.5087	0.8965	0.0000	0.0000	-0.0008	0.3286	-0.0103	0.0034	-0.0077
627	0003	52450	1.1398	0.0437	1.5081	3.5173	1.2551	0.0000	0.0000	-0.0004	0.1166	-0.0034	0.0060	0.0023
628	0003	52450	1.1398	0.0320	2.5028	1.0926	0.1574	0.0000	0.0000	-0.0008	0.3360	-0.0261	0.0095	-0.0173
629	0003	52450	1.1398	0.0359	2.5004	1.5081	0.3217	0.0000	0.0000	-0.0007	0.2893	-0.0230	0.0120	-0.0117
630	0003	52450	1.1398	0.0522	2.5007	2.4942	0.5315	0.0000	0.0000	-0.0002	0.0565	-0.0181	0.0068	-0.0115
631	0003	52450	1.1398	0.0523	2.5026	3.4955	0.7450	0.0000	0.0000	-0.0003	0.0945	-0.0133	0.0011	-0.0125
632	0003	52450	1.1398	0.0509	3.5243	1.0918	0.1159	0.0000	0.0000	-0.0003	0.0746	-0.0296	0.0159	-0.0139
633	0003	52450	1.1398	0.0528	3.5094	1.5107	0.2278	0.0000	0.0000	-0.0003	0.0939	-0.0280	0.0207	-0.0076
634	0003	52450	1.1398	0.0551	3.5156	2.5002	0.3780	0.0000	0.0000	-0.0004	0.1142	-0.0239	0.0157	-0.0096
635	0003	52450	1.1398	0.0575	3.5108	3.5166	0.5331	0.0000	0.0000	-0.0004	0.1137	-0.0204	0.0170	-0.0037
636	0003	52450	1.1398	0.0523	4.5060	1.1173	0.1261	0.0000	0.0000	-0.0003	0.0788	-0.0298	0.0171	-0.0130
637	0003	52450	1.1398	0.0378	2.4998	1.1178	0.1739	0.0000	0.0000	-0.0006	0.2009	-0.0255	0.0117	-0.0144
638	0003	52450	1.1398	0.0137	1.5036	1.1160	0.2815	0.0000	0.0000	-0.0015	1.6755	-0.0233	0.0127	-0.0121
639	0003	52450	1.1398	0.0359	1.5013	3.5113	1.2574	0.0000	0.0000	-0.0007	0.2782	-0.0039	0.0079	0.0032
640	0003	52430	0.3985	0.3559	1.5059	0.9485	0.0000	0.0000	0.0000	-0.0308	0.0433	-0.0430	0.0459	-0.0279
641	0003	52430	0.3985	0.3555	1.5072	0.9697	0.0285	0.0000	0.0000	-0.0319	0.0450	-0.0389	0.0419	-0.0289
642	0003	52430	0.3985	0.3562	1.5076	0.9862	0.0590	0.0000	0.0000	-0.0308	0.0433	-0.0355	0.0410	-0.0253
643	0003	52430	0.3985	0.3572	2.5164	0.8791	0.0000	0.0000	0.0000	-0.0133	0.0453	-0.0368	0.0275	-0.0227
644	0003	52430	0.3985	0.3570	2.5148	0.9366	0.0290	0.0000	0.0000	-0.0135	0.0460	-0.0353	0.0295	-0.0204
645	0003	52430	0.3985	0.3567	2.5139	0.9775	0.0589	0.0000	0.0000	-0.0137	0.0465	-0.0351	0.0299	-0.0198
646	0003	52430	0.3985	0.3580	3.5208	0.8224	0.0000	0.0000	0.0000	-0.0076	0.0412	-0.0292	0.0164	-0.0204
647	0003	52430	0.3985	0.3587	3.5268	0.9166	0.0289	0.0000	0.0000	-0.0074	0.0400	-0.0297	0.0138	-0.0233
648	0003	52430	0.3985	0.3582	3.5176	0.9785	0.0588	0.0000	0.0000	-0.0074	0.0400	-0.0291	0.0180	-0.0185
649	0003	52430	0.3985	0.3581	3.5218	0.8232	0.0000	0.0000	0.0000	-0.0076	0.0410	-0.0282	0.0168	-0.0190

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS — OUTER RADIUS RATIO: 0.9020 — INNER RADIUS RATIO: 0.9020 — DVD: 1.2480

RDC	CF	NASA	D2	MA	PTP/PA	PTT/PA	DVEGAT	CDD	CDI	CFNETI	CFNET2	F9
650	0003	52430	0.3985	0.3591	2.5152	0.9803	0.0000	0.9858	9.9999	0.9195	0.9195	1.1782
651	0003	52430	0.3985	0.3573	1.5050	0.9490	0.0000	1.0233	9.9999	0.9007	0.9007	1.1576
652	0003	52450	1.1398	0.3576	1.5053	1.1145	0.2722	1.0226	1.0846	0.9437	1.0789	1.1841
653	0003	52450	1.1399	0.3576	1.5054	1.5134	0.5382	1.0228	1.0378	0.9494	1.4631	1.2235
654	0003	52450	1.1398	0.3571	1.5060	2.5256	0.8993	1.0225	0.9872	0.9430	2.1734	1.2134
655	0003	52450	1.1398	0.3583	1.5073	3.5252	1.2562	1.0214	0.9878	0.9421	2.8968	1.2130
656	0003	52450	1.1398	0.3581	2.5222	1.1099	0.1610	0.9825	1.0999	0.9578	1.0126	1.1945
657	0003	52450	1.1398	0.3579	2.5172	1.5151	0.3206	0.9843	1.0270	0.9557	1.4689	1.2197
658	0003	52450	1.1398	0.3588	2.5168	2.5257	0.5346	0.9851	0.9960	0.9553	1.4670	1.2172
659	0003	52450	1.1398	0.3588	2.5160	3.5207	0.7461	0.9845	0.9863	0.9548	1.7715	1.2198
660	0003	52450	1.1398	0.3591	3.5203	1.1126	0.1265	0.9861	1.1975	0.9624	1.0008	1.2125
661	0003	52450	1.1398	0.3586	3.5150	1.5175	0.2284	0.9855	1.0258	0.9593	1.0926	1.2263
662	0003	52450	1.1398	0.3584	3.5200	2.5181	0.3802	0.9868	0.9862	0.9580	1.2773	1.2233
663	0003	52450	1.1398	0.3594	3.5149	3.5152	0.5313	0.9868	0.9854	0.9593	1.4690	1.2262
664	0003	52450	1.1398	0.3583	2.5154	1.1073	0.1592	0.9845	1.1004	0.9619	1.0159	1.1995
665	0003	52450	1.1399	0.3574	1.5078	1.1064	0.2642	1.0210	1.0922	0.9541	1.0821	1.1881
666	0003	52430	0.3985	0.4468	1.5051	0.9498	0.0000	1.0220	9.9999	0.9052	0.9052	1.1576
667	0003	52430	0.3985	0.4465	1.5052	0.9877	0.0589	1.0222	9.9999	0.9356	0.9355	1.1594
668	0003	52430	0.3985	0.4467	2.5073	0.8807	0.0000	0.9853	9.9999	0.9255	0.9255	1.1813
669	0003	52430	0.3985	0.4464	2.5114	0.9709	0.0588	0.9838	9.9999	0.9551	0.9551	1.1808
670	0003	52430	0.3985	0.4466	3.5354	0.8240	0.0000	0.9821	9.9999	0.9290	0.9290	1.1930
671	0003	52430	0.3985	0.4460	3.5101	0.9815	0.0590	0.9872	9.9999	0.9615	0.9615	1.2001
672	0003	52430	0.3985	0.4469	3.5215	0.9825	0.0589	0.9859	9.9999	0.9619	0.9619	1.1993
673	0003	52430	0.3985	0.4464	2.5090	0.9789	0.0588	0.9862	9.9999	0.9552	0.9552	1.1814
674	0003	52430	0.3985	0.4469	1.5047	0.9871	0.0590	1.0228	9.9999	0.9392	0.9392	1.1414
675	0003	52450	1.1398	0.4469	1.5063	2.5084	0.8034	1.0215	0.9869	0.9454	2.1643	1.2138
676	0003	52450	1.1399	0.4470	1.5051	3.5136	1.2524	1.0221	0.9867	0.9473	2.9083	1.2160
677	0003	52450	1.1398	0.4467	2.5078	2.5080	0.5327	0.9848	0.9861	0.9569	1.4667	1.2178
678	0003	52450	1.1398	0.4475	2.5176	3.5161	0.7474	0.9819	0.9873	0.9590	1.7764	1.2205
679	0003	52450	1.1398	0.4481	3.5183	2.5056	0.3787	0.9866	0.9865	0.9570	1.2740	1.2217
680	0003	52450	1.1398	0.4491	3.5227	3.5166	0.5316	0.9854	0.9863	0.9594	1.4691	1.2243
681	0003	52430	0.3985	0.3572	1.5071	0.9871	0.0589	1.0229	9.9999	0.9429	0.9429	1.1649
682	0003	52430	0.3985	0.3580	2.5170	0.9783	0.0590	0.9853	9.9999	0.9574	0.9574	1.1846
683	0003	52430	0.3985	0.3581	3.5101	0.9790	0.0589	0.9838	9.9999	0.9628	0.9628	1.2035
684	0003	52450	1.1398	0.3590	1.5070	2.5233	0.8973	1.0218	0.9862	0.9451	2.1741	1.2144
685	0003	52450	1.1398	0.3595	2.5159	2.5251	0.5338	0.9857	0.9853	0.9575	1.4695	1.2192
686	0003	52450	1.1398	0.3595	3.5188	3.5183	0.5317	0.9861	0.9857	0.9587	1.4684	1.2242
687	0003	52450	1.1398	0.3603	3.5080	2.5256	0.3815	0.9899	0.9864	0.9582	1.2795	1.2255

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE — DUAL FLOW (NASA-LEWIS).

INNER-STREAM PLUG CONFIGURATIONS — 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS — OUTER RADIUS RATIO 0.9020 — INNER RADIUS RATIO 0.9020 — DVO 1.2480

RPC	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAY	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCYDY
650	0003	52430	0.3985	0.3591	2.5152	0.8803	0.0000	0.0000	0.0000	-0.0135	0.0453	-0.0352	0.0289	-0.0198
651	0003	52430	0.3985	0.3573	1.5050	0.9490	0.0000	0.0000	0.0000	-0.0324	0.0451	-0.0417	0.0405	-0.0237
652	0003	52450	1.1398	0.3576	1.5053	1.1145	0.2722	0.0000	0.0000	-0.0253	0.0401	-0.0278	0.0336	-0.0195
653	0003	52450	1.1398	0.3576	1.5064	1.5134	0.5382	0.0000	0.0000	-0.0198	0.0425	-0.0235	0.0244	-0.0189
654	0003	52450	1.1398	0.3571	1.5060	2.5256	0.8993	0.0000	0.0000	-0.0135	0.0433	-0.0143	0.0113	-0.0165
655	0003	52450	1.1398	0.3583	1.5073	3.5252	1.2562	0.0000	0.0000	-0.0098	0.0417	-0.0054	0.0056	-0.0096
656	0003	52450	1.1398	0.3581	2.5222	1.1099	0.1610	0.0000	0.0000	-0.0125	0.0446	-0.0331	0.0244	-0.0209
657	0003	52450	1.1398	0.3579	2.5172	1.5151	0.3208	0.0000	0.0000	-0.0107	0.0443	-0.0241	0.0233	-0.0151
658	0003	52450	1.1398	0.3588	2.5158	2.5257	0.5346	0.0000	0.0000	-0.0086	0.0444	-0.0219	0.0199	-0.0106
659	0003	52450	1.1398	0.3588	2.5140	3.5207	0.7461	0.0000	0.0000	-0.0068	0.0420	-0.0157	0.0048	-0.0176
660	0003	52450	1.1398	0.3591	3.5203	1.1126	0.1265	0.0000	0.0000	-0.0070	0.0392	-0.0279	0.0197	-0.0153
661	0003	52450	1.1398	0.3589	3.5150	1.5125	0.2294	0.0000	0.0000	-0.0064	0.0393	-0.0258	0.0221	-0.0101
662	0003	52450	1.1398	0.3584	3.5200	2.5181	0.3802	0.0000	0.0000	-0.0057	0.0409	-0.0214	0.0181	-0.0090
663	0003	52450	1.1398	0.3594	3.5149	3.5152	0.5313	0.0000	0.0000	-0.0045	0.0367	-0.0189	0.0223	-0.0010
664	0003	52450	1.1398	0.3583	2.5154	1.1073	0.1592	0.0000	0.0000	-0.0126	0.0449	-0.0335	0.0232	-0.0229
665	0003	52450	1.1398	0.3574	1.5078	1.1066	0.2642	0.0000	0.0000	-0.0276	0.0436	-0.0295	0.0336	-0.0234
666	0003	52430	0.3985	0.4468	1.5051	0.9498	0.0000	0.0000	0.0000	-0.0532	0.0473	-0.0529	0.0542	-0.0519
667	0003	52430	0.3985	0.4465	1.5052	0.9877	0.0589	0.0000	0.0000	-0.0511	0.0455	-0.0444	0.0455	-0.0499
668	0003	52430	0.3985	0.4467	2.5073	0.8807	0.0000	0.0000	0.0000	-0.0224	0.0484	-0.0438	0.0288	-0.0374
669	0003	52430	0.3985	0.4464	2.5114	0.9799	0.0588	0.0000	0.0000	-0.0218	0.0471	-0.0414	0.0312	-0.0340
670	0003	52430	0.3985	0.4466	3.5354	0.8240	0.0000	0.0000	0.0000	-0.0119	0.0414	-0.0275	0.0276	-0.0118
671	0003	52430	0.3985	0.4460	3.5191	0.9815	0.0590	0.0000	0.0000	-0.0117	0.0407	-0.0278	0.0206	-0.0188
672	0003	52430	0.3985	0.4469	3.5215	0.9825	0.0589	0.0000	0.0000	-0.0114	0.0394	-0.0280	0.0204	-0.0189
673	0003	52430	0.3985	0.4456	2.5090	0.9789	0.0588	0.0000	0.0000	-0.0222	0.0481	-0.0431	0.0314	-0.0339
674	0003	52430	0.3985	0.4449	1.5047	0.9871	0.0590	0.0000	0.0000	-0.0511	0.0459	-0.0433	0.0444	-0.0501
675	0003	52450	1.1398	0.4449	1.5063	2.5084	0.8934	0.0000	0.0000	-0.0215	0.0443	-0.0171	0.0147	-0.0239
676	0003	52450	1.1398	0.4470	1.5051	3.5136	1.2524	0.0000	0.0000	-0.0162	0.0442	-0.0076	0.0074	-0.0164
677	0003	52450	1.1398	0.4467	2.5078	2.5080	0.5527	0.0000	0.0000	-0.0136	0.0451	-0.0301	0.0184	-0.0253
678	0003	52450	1.1398	0.4475	2.5176	3.5161	0.7474	0.0000	0.0000	-0.0113	0.0451	-0.0234	0.0065	-0.0282
679	0003	52450	1.1398	0.4481	3.5183	2.5056	0.3787	0.0000	0.0000	-0.0087	0.0397	-0.0203	0.0155	-0.0135
680	0003	52450	1.1398	0.4491	3.5227	3.5166	0.5316	0.0000	0.0000	-0.0073	0.0382	-0.0187	0.0292	0.0032
681	0003	52430	0.3985	0.3572	1.5071	0.9861	0.0589	0.0000	0.0000	-0.0315	0.0440	-0.0352	0.0411	-0.0255
682	0003	52430	0.3985	0.3580	2.5170	0.9783	0.0590	0.0000	0.0000	-0.0138	0.0466	-0.0350	0.0300	-0.0198
683	0003	52430	0.3985	0.3581	3.5101	0.9790	0.0589	0.0000	0.0000	-0.0078	0.0422	-0.0290	0.0188	-0.0180
684	0003	52450	1.1398	0.3590	1.5070	2.5233	0.8973	0.0000	0.0000	-0.0135	0.0430	-0.0136	0.0116	-0.0155
685	0003	52450	1.1398	0.3595	2.5159	2.5251	0.5338	0.0000	0.0000	-0.0084	0.0432	-0.0216	0.0206	-0.0095
686	0003	52450	1.1398	0.3595	3.5188	3.5183	0.5317	0.0000	0.0000	-0.0049	0.0400	-0.0182	0.0217	-0.0014
687	0003	52450	1.1398	0.3603	3.5[illegible]	2.5256	0.3815	0.0000	0.0000	-0.0055	0.0391	-0.0208	0.0183	-0.0100

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS: OUTER RADIUS RATIO 0.8530; INNER RADIUS RATIO 0.9020; DVO 1.2480

RUN	CF	NASA	M2	MA	PTM/PA	PTI/PA	DVEGAT	CDO	CDI	CFNETI	CFNET2	EG
688	0007	51430	1.1398	0.3581	1.5205	0.9453	0.0000	1.0093	9.9999	0.9278	0.9278	1.1795
689	0007	51430	0.3985	0.3575	1.5193	0.9449	0.0000	1.0107	9.9999	0.9274	0.9274	1.1798
690	0007	51430	0.3985	0.3583	1.5202	0.9811	0.0290	1.0102	9.9999	0.9462	0.9462	1.1813
691	0007	51430	0.3985	0.3575	1.5237	1.0046	0.0591	1.0085	1.9059	0.9526	0.9587	1.1818
692	0007	51430	0.3985	0.0215	1.5167	0.9430	0.0000	1.0085	9.9999	0.9456	0.9456	1.1894
693	0007	51430	0.3985	0.0273	1.5170	0.9762	0.0289	1.0084	9.9999	0.9577	0.9577	1.1883
694	0007	51430	0.3995	0.0137	1.5153	0.9994	0.0591	1.0098	9.9999	0.9695	0.9695	1.1895
695	0007	51430	0.3985	0.0371	2.0177	0.9809	0.0000	0.9773	9.9999	0.9427	0.9427	1.1947
696	0007	51430	0.3995	0.0299	2.0174	0.9632	0.0290	0.9770	9.9999	0.9571	0.9571	1.1936
697	0007	51430	0.3985	0.0286	2.0142	1.0049	0.0589	0.9783	2.4735	0.9668	0.9719	1.1971
698	0007	51430	0.3985	0.0495	2.5207	0.8541	0.0000	0.9791	9.9999	0.9478	0.9478	1.2032
699	0007	51430	0.3985	0.0495	2.5252	0.9481	0.0292	0.9771	9.9999	0.9648	0.9648	1.2016
700	0007	51430	0.3985	0.0504	2.5238	1.0133	0.0591	0.9775	1.8787	0.9718	0.9791	1.2037
701	0007	51430	0.3985	0.0566	3.1584	0.8119	0.0000	0.9784	9.9999	0.9454	0.9454	1.2056
702	0007	51430	0.3985	0.0540	3.1806	0.9580	0.0292	0.9780	9.9999	0.9651	0.9651	1.2057
703	0007	51430	0.3995	0.0542	3.1546	1.0504	0.0589	0.9792	1.2131	0.9657	0.9784	1.2075
704	0007	51430	0.3985	0.0462	2.5215	0.9475	0.0292	0.9793	9.9999	0.9648	0.9648	1.2033
705	0007	51430	0.3985	0.0371	2.0167	0.9627	0.0290	0.9776	9.9999	0.9571	0.9571	1.1960
706	0007	51430	0.3985	0.0247	1.5183	0.9763	0.0289	1.0079	9.9999	0.9522	0.9522	1.1955
707	0007	51430	0.3985	0.0556	3.2001	1.0584	0.0589	0.9795	1.1386	0.9681	0.9817	1.2102
708	0007	51450	1.1398	0.0169	1.5183	1.1214	0.1714	1.0073	1.0799	0.9675	1.0561	1.2049
709	0007	51450	1.1398	0.0260	1.5176	1.5219	0.3314	1.0080	1.0214	0.9657	1.2868	1.2293
710	0007	51450	1.1398	0.0403	1.5173	2.5215	0.5500	1.0081	0.9843	0.9588	1.7149	1.2222
711	0007	51450	1.1398	0.0462	1.5180	3.5192	0.7691	1.0035	0.9820	0.9596	2.1686	1.2217
712	0007	51450	1.1398	0.0365	2.0164	1.1288	0.1339	0.9771	1.0982	0.9732	1.0297	1.2130
713	0007	51450	1.1398	0.0449	2.0184	1.5262	0.2481	0.9753	1.0208	0.9654	1.1550	1.2260
714	0007	51450	1.1398	0.0504	2.0195	2.5190	0.4097	0.9762	0.9841	0.9656	1.4122	1.2243
715	0007	51450	1.1398	0.0517	2.0182	3.5218	0.5731	0.9764	0.9839	0.9642	1.6762	1.2248
716	0007	51450	1.1398	0.0504	2.5242	1.1270	0.1082	0.9770	1.1188	0.9784	1.0186	1.2173
717	0007	51450	1.1398	0.0511	2.5243	1.5266	0.1982	0.9765	1.0201	0.9708	1.1055	1.2266
718	0007	51450	1.1398	0.0549	2.5250	2.5178	0.3268	0.9775	0.9835	0.9684	1.2847	1.2244
719	0007	51450	1.1398	0.0573	2.5249	3.5260	0.4584	0.9763	0.9835	0.9687	1.4750	1.2253
720	0007	51450	1.1398	0.0546	3.2035	1.1245	0.0779	0.9774	1.0334	0.9716	0.9975	1.2145
721	0007	51450	1.1398	0.0566	3.1761	1.5219	0.1544	0.9782	1.0045	0.9717	1.0670	1.2282
722	0007	51450	1.1398	0.0600	3.1614	2.5200	0.2608	0.9782	0.9838	0.9722	1.2030	1.2288
723	0007	51450	1.1398	0.0628	3.1551	3.5213	0.3661	0.9774	0.9842	0.9703	1.3393	1.2282
724	0007	51450	1.1398	0.0511	2.5209	1.1268	0.1082	0.9777	1.1192	0.9776	1.0180	1.2174
725	0007	51450	1.1398	0.0519	2.5165	1.5260	0.1324	0.9765	1.0972	0.9728	1.0290	1.2119
726	0007	51450	1.1398	0.0208	1.5148	1.1260	0.1739	1.0089	1.0742	0.9751	1.0677	1.2094
727	0007	51430	0.3985	0.3570	1.5116	0.9470	0.0000	1.0122	9.9999	0.9321	0.9321	1.1815
728	0007	51430	0.3985	0.3564	1.5133	0.9807	0.0293	1.0124	9.9999	0.9461	0.9461	1.1815
729	0007	51430	0.3985	0.3560	1.5129	1.0041	0.0592	1.0127	2.0252	0.9509	0.9607	1.1837
730	0007	51430	0.3985	0.3568	2.0220	0.9040	0.0000	0.9790	9.9999	0.9396	0.9396	1.1920
731	0007	51430	0.3985	0.3574	2.0249	0.9686	0.0292	0.9735	9.9999	0.9525	0.9525	1.1862
732	0007	51430	0.3985	0.3584	2.0254	1.0111	0.0592	0.9774	1.6581	0.9622	0.9697	1.1929

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OPAC PARAMETERS: OUTER RADIUS RATIO 0.8530; INNER RADIUS RATIO 0.9020; DVD 1.2480

PDG	GE	NASA	ND2	MA	PTO/PA	PTT/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,N	DCPL,T	DCTST
688	0007	51450	1.1398	0.3581	1.5205	0.9453	0.0000	0.0000	0.0000	-0.0134	0.0311	-0.0460	0.0351	-0.0245
689	0007	51430	0.3985	0.3575	1.5150	0.9449	0.0000	0.0000	0.0000	-0.0140	0.0321	-0.0467	0.0363	-0.0244
690	0007	51430	0.3985	0.3583	1.5202	0.9811	0.0290	0.0000	0.0000	-0.0134	0.0306	-0.0413	0.0307	-0.0240
691	0007	51430	0.3985	0.3575	1.5207	1.0046	0.0591	0.0000	0.0000	-0.0130	0.0300	-0.0398	0.0260	-0.0289
692	0007	51430	0.3985	0.0215	1.5167	0.9430	0.0000	0.0000	0.0000	-0.0005	0.3362	-0.0355	0.0212	-0.0149
693	0007	51430	0.3985	0.0273	1.5170	0.9742	0.0289	0.0000	0.0000	-0.0005	0.1904	-0.0320	0.0174	-0.0151
694	0007	51430	0.3985	0.0137	1.5153	0.9994	0.0591	0.0000	0.0000	-0.0007	1.1110	-0.0307	0.0142	-0.0172
695	0007	51430	0.3985	0.0371	2.0177	0.9009	0.0000	0.0000	0.0000	-0.0003	0.1187	-0.0242	0.0204	-0.0041
696	0007	51430	0.3985	0.0299	2.0174	0.9632	0.0290	0.0000	0.0000	-0.0004	0.2274	-0.0248	0.0179	-0.0073
697	0007	51430	0.3985	0.0286	2.0142	1.0049	0.0589	0.0000	0.0000	-0.0007	0.2961	-0.0238	0.0151	-0.0092
698	0007	51430	0.3985	0.0495	2.5207	0.8541	0.0000	0.0000	0.0000	-0.0002	0.0447	-0.0275	0.0191	-0.0096
699	0007	51430	0.3985	0.0495	2.5252	0.9491	0.0292	0.0000	0.0000	-0.0002	0.0568	-0.0262	0.0192	-0.0072
700	0007	51430	0.3985	0.0504	2.5238	1.0133	0.0591	0.0000	0.0000	-0.0002	0.0565	-0.0261	0.0162	-0.0102
701	0007	51430	0.3985	0.0566	3.1584	0.8119	0.0000	0.0000	0.0000	-0.0002	0.0631	-0.0314	0.0244	-0.0072
702	0007	51430	0.3985	0.0549	3.1904	0.9580	0.0292	0.0000	0.0000	-0.0003	0.0905	-0.0348	0.0239	-0.0112
703	0007	51430	0.3985	0.0542	3.1686	1.0504	0.0589	0.0000	0.0000	-0.0003	0.0912	-0.0322	0.0136	-0.0189
704	0007	51430	0.3985	0.0462	2.5215	0.9475	0.0292	0.0000	0.0000	-0.0002	0.0807	-0.0249	0.0190	-0.0062
705	0007	51430	0.3985	0.0371	2.0167	0.9627	0.0290	0.0000	0.0000	-0.0003	0.1106	-0.0244	0.0192	-0.0066
706	0007	51430	0.3985	0.0247	1.5180	0.9763	0.0289	0.0000	0.0000	-0.0005	0.2483	-0.0317	0.0190	-0.0143
707	0007	51430	0.3985	0.0559	3.2001	1.0594	0.0589	0.0000	0.0000	-0.0003	0.0816	-0.0373	0.0143	-0.0232
708	0007	51450	1.1398	0.0169	1.5183	1.1214	0.1714	0.0000	0.0000	-0.0006	0.6517	-0.0280	0.0156	-0.0129
709	0007	51450	1.1398	0.0260	1.5176	1.5219	0.3314	0.0000	0.0000	-0.0005	0.2774	-0.0246	0.0131	-0.0120
710	0007	51450	1.1398	0.0403	1.5173	2.5215	0.5500	0.0000	0.0000	-0.0002	0.0735	-0.0161	0.0053	-0.0111
711	0007	51450	1.1398	0.0462	1.5150	3.5192	0.7691	0.0000	0.0000	-0.0002	0.0616	-0.0073	-0.0052	-0.0157
712	0007	51450	1.1398	0.0365	2.0164	1.1288	0.1339	0.0000	0.0000	-0.0004	0.1521	-0.0225	0.0174	-0.0056
713	0007	51450	1.1398	0.0449	2.0185	1.5262	0.2481	0.0000	0.0000	-0.0002	0.0705	-0.0210	0.0140	-0.0072
714	0007	51450	1.1398	0.0504	2.0195	2.5190	0.4097	0.0000	0.0000	-0.0002	0.0574	-0.0159	-0.0012	-0.0172
715	0007	51450	1.1398	0.0517	2.0182	3.5218	0.5731	0.0000	0.0000	-0.0002	0.0710	-0.0080	-0.0026	-0.0107
716	0007	51450	1.1398	0.0504	2.5242	1.1270	0.1082	0.0000	0.0000	-0.0003	0.0776	-0.0249	0.0164	-0.0088
717	0007	51450	1.1398	0.0511	2.5243	1.5266	0.1982	0.0000	0.0000	-0.0002	0.0590	-0.0220	0.0159	-0.0063
718	0007	51450	1.1398	0.0549	2.5250	2.5178	0.3268	0.0000	0.0000	-0.0002	0.0740	-0.0200	0.0150	-0.0053
719	0007	51450	1.1398	0.0573	2.5248	3.5260	0.4594	0.0000	0.0000	-0.0002	0.0759	-0.0169	0.0101	-0.0070
720	0007	51450	1.1398	0.0546	3.2035	1.1245	0.0779	0.0000	0.0000	-0.0003	0.0894	-0.0377	0.0134	-0.0246
721	0007	51450	1.1398	0.0666	3.1711	1.5219	0.1544	0.0000	0.0000	-0.0003	0.0861	-0.0300	0.0127	-0.0175
722	0007	51450	1.1398	0.0600	3.1614	2.5200	0.2408	0.0000	0.0000	-0.0002	0.0833	-0.0265	0.0145	-0.0123
723	0007	51450	1.1398	0.0628	3.1551	3.5213	0.3661	0.0000	0.0000	-0.0003	0.0864	-0.0223	0.0006	-0.0219
724	0007	51450	1.1398	0.0511	2.5208	1.1268	0.1082	0.0000	0.0000	-0.0002	0.0576	-0.0235	0.0164	-0.0073
725	0007	51450	1.1398	0.0314	2.0166	1.1260	0.1324	0.0000	0.0000	-0.0004	0.2259	-0.0232	0.0165	-0.0072
726	0007	51450	1.1398	0.0209	1.5148	1.1260	0.1739	0.0000	0.0000	-0.0006	0.4765	-0.0280	0.0156	-0.0130
727	0007	51430	0.3985	0.3570	1.5116	0.9470	0.0000	0.0000	0.0000	-0.0139	0.0317	-0.0457	0.0184	-0.0213
728	0007	51430	0.3985	0.3564	1.5133	0.9807	0.0293	0.0000	0.0000	-0.0136	0.0313	-0.0437	0.0298	-0.0275
729	0007	51430	0.3985	0.3560	1.5128	1.0041	0.0592	0.0000	0.0000	-0.0134	0.0309	-0.0421	0.0243	-0.0311
730	0007	51430	0.3985	0.3568	2.0220	0.9040	0.0000	0.0000	0.0000	-0.0090	0.0353	-0.0336	0.0294	-0.0132
731	0007	51430	0.3985	0.3574	2.0349	0.9686	0.0292	0.0000	0.0000	-0.0083	0.0325	-0.0325	0.0277	-0.0130
732	0007	51430	0.3985	0.3584	2.0254	1.0111	0.0592	0.0000	0.0000	-0.0096	0.0339	-0.0315	0.0218	-0.0183

FACILITY SX6X1 PROGRAM C03I

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS — OUTER RADIUS RATIO: 0.8530 — INNER RADIUS RATIO: 0.9020 — DVO: 1.2480

PCO	GE	NASA	D2	PA	PT2/PA	PT1/PA	DNFGAT	FDO	CDT	CFNET1	CFNET2	FO
733	0007	51430	0.3985	0.3596	2.5345	0.8654	0.0000	0.9771	9.9999	0.9644	0.9644	1.1979
734	0007	51430	0.3985	0.3594	2.5364	0.0594	0.0293	0.9771	9.9999	0.9654	0.9654	1.1995
735	0007	51430	0.3985	0.3586	2.5339	1.0227	0.0589	0.9770	1.4406	0.9712	0.9807	1.2024
736	0007	51430	0.3985	0.3597	3.0104	0.8273	0.0000	0.9787	9.9999	0.9650	0.9650	1.2026
737	0007	51430	0.3985	0.3604	3.0241	0.9627	0.0293	0.9777	9.9999	0.9655	0.9655	1.2030
738	0007	51430	0.3985	0.3608	3.0183	1.0481	0.0592	0.9779	1.1867	0.9661	0.9709	1.2042
739	0007	51430	0.3985	0.3609	2.5328	0.9591	0.0292	0.9770	9.9999	0.9641	0.9641	1.1985
740	0007	51430	0.3985	0.3604	2.0253	0.9686	0.0292	0.9777	9.9999	0.9538	0.9538	1.1897
741	0007	51430	0.3985	0.3598	1.5125	0.9811	0.0293	1.0122	9.9999	0.9478	0.9479	1.1921
742	0007	51430	0.3985	0.3607	1.5118	1.1163	0.0000	1.0125	0.0000	1.0499	1.0499	1.2022
743	0007	51450	1.1398	0.3605	1.5129	1.1143	0.1644	1.0109	1.0650	0.9589	1.0413	1.1994
744	0007	51450	1.1398	0.3610	1.5117	1.5171	0.3304	1.0120	1.0913	0.9584	1.2762	1.2243
745	0007	51450	1.1398	0.3604	1.5105	2.5227	0.5510	1.0136	0.9846	0.9545	1.7145	1.2195
746	0007	51450	1.1398	0.3615	1.5103	3.5152	0.7677	1.0131	0.9840	0.9508	2.1521	1.2171
747	0007	51450	1.1398	0.3600	2.0258	1.1140	0.1238	0.9763	1.0870	0.9664	1.0152	1.2045
748	0007	51450	1.1398	0.3596	2.0234	1.5174	0.2457	0.9774	1.0229	0.9609	1.1463	1.2220
749	0007	51450	1.1398	0.3591	2.0247	2.5250	0.4089	0.9768	0.9830	0.9612	1.4048	1.2198
750	0007	51450	1.1398	0.3602	2.0234	3.5163	0.5704	0.9775	0.9844	0.9611	1.6659	1.2219
751	0007	51450	1.1398	0.3591	2.5356	1.1143	0.0992	0.9765	1.0849	0.9710	1.0058	1.2094
752	0007	51450	1.1398	0.3582	2.5326	1.5143	0.1963	0.9770	1.0238	0.9669	1.0985	1.2228
753	0007	51450	1.1398	0.3583	2.5237	2.5287	0.3269	0.9806	0.9822	0.9651	1.2809	1.2223
754	0007	51450	1.1398	0.3584	2.5297	3.5148	0.4557	0.9782	0.9839	0.9671	1.4685	1.2244
755	0007	51450	1.1399	0.3579	3.0175	1.1156	0.0789	0.9775	1.0299	0.9692	0.9949	1.2097
756	0007	51450	1.1398	0.3584	3.0070	1.5211	0.1648	0.9763	1.0154	0.9702	1.0737	1.2247
757	0007	51450	1.1398	0.3579	2.9842	2.5233	0.2768	0.9783	0.9833	0.9676	1.2169	1.2234
758	0007	51450	1.1398	0.3572	2.9745	3.5076	0.3862	0.9786	0.9843	0.9686	1.3653	1.2263
759	0007	51430	0.3985	0.4459	1.5124	0.9459	0.0000	1.0133	9.9999	0.9398	0.9398	1.1852
760	0007	51430	0.3985	0.4446	1.5126	1.0037	0.0591	1.0137	2.1182	0.9618	0.9674	1.1867
761	0007	51430	0.3985	0.4447	2.0139	0.9049	0.0000	0.9758	9.9999	0.9419	0.9419	1.1914
762	0007	51430	0.3985	0.4439	2.0150	1.0111	0.0591	0.9761	1.6427	0.9670	0.9745	1.1945
763	0007	51430	0.3985	0.4460	2.5211	0.8595	0.0000	0.9764	9.9999	0.9488	0.9488	1.1996
764	0007	51430	0.3985	0.4457	2.5185	1.0161	0.0590	0.9772	1.7009	0.9739	0.9820	1.2037
765	0007	51430	0.3985	0.4469	3.3423	0.8675	0.0000	0.9786	9.9999	0.9506	0.9506	1.2036
766	0007	51430	0.3985	0.4468	3.3558	1.1276	0.0590	0.9781	0.8106	0.9676	0.9870	1.2074
767	0007	51430	0.3985	0.4444	2.5177	0.8586	0.0000	0.9773	9.9999	0.9488	0.9488	1.2004
768	0007	51430	0.3985	0.4438	2.0134	0.9046	0.0000	0.9758	9.9999	0.9409	0.9409	1.1909
769	0007	51430	0.3985	0.4430	1.5122	0.9460	0.0000	1.0137	9.9999	0.9381	0.9381	1.1846
770	0007	51450	1.1398	0.4424	1.5123	2.5120	0.5472	1.0130	0.9837	0.9579	1.7126	1.2210
771	0007	51450	1.1398	0.4429	1.5125	3.5196	0.7675	1.0129	0.9839	0.9536	2.1573	1.2188
772	0007	51450	1.1398	0.4419	2.0179	2.5134	0.4089	0.9764	0.9838	0.9644	1.4094	1.2219
773	0007	51450	1.1398	0.4423	2.0171	3.5191	0.5726	0.9772	0.9841	0.9633	1.6742	1.2232
774	0007	51450	1.1398	0.4421	2.5210	2.5117	0.3267	0.9781	0.9846	0.9664	1.2816	1.2218
775	0007	51450	1.1398	0.4426	2.5243	3.5193	0.4577	0.9772	0.9843	0.9673	1.4717	1.2237
776	0007	51450	1.1398	0.4430	3.3261	2.5111	0.2472	0.9780	0.9833	0.9680	1.1815	1.2246
777	0007	51450	1.1398	0.4427	3.3222	3.5152	0.3472	0.9774	0.9845	0.9658	1.3075	1.2237

FACILITY RX4X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OPAC PARAMETERS — OUTER RADIUS RATIO: 0.8530 — INNER RADIUS RATIO: 0.5020 — DVD: 1.2480

RUN	CF	NASA	D2	WA	PT2/PA	PT1/PA	OMEGAT	DFS	CDS	DCSH	CDSH	DCPL,0	DCPL,1	DCTOT
733	0007	51430	0.3985	0.3596	2.5346	0.9654	0.0000	0.0000	0.0000	-0.0058	0.0316	-0.0394	0.0248	-0.0204
734	0007	51430	0.3985	0.3594	2.5354	0.9594	0.0293	0.0000	0.0000	-0.0057	0.0312	-0.0383	0.0249	-0.0191
735	0007	51430	0.3985	0.3586	2.5339	1.0227	0.0589	0.0000	0.0000	-0.0058	0.0321	-0.0373	0.0221	-0.0229
736	0007	51430	0.3985	0.3597	3.0104	0.9275	0.0000	0.0000	0.0000	-0.0041	0.0290	-0.0363	0.0356	-0.0051
737	0007	51430	0.3985	0.3604	3.0761	0.9627	0.0293	0.0000	0.0000	-0.0041	0.0287	-0.0358	0.0297	-0.0101
738	0007	51430	0.3985	0.3608	3.0198	1.0491	0.0592	0.0000	0.0000	-0.0041	0.0290	-0.0352	0.0192	-0.0212
739	0007	51430	0.3985	0.3609	2.5378	0.9591	0.0292	0.0000	0.0000	-0.0059	0.0321	-0.0385	0.0251	-0.0193
740	0007	51430	0.3985	0.3604	2.0253	0.9584	0.0292	0.0000	0.0000	-0.0089	0.0345	-0.0330	0.0270	-0.0149
741	0007	51430	0.3985	0.3598	1.5135	0.9611	0.0293	0.0000	0.0000	-0.0136	0.0307	-0.0437	0.0309	-0.0265
742	0007	51430	0.3985	0.3602	1.5114	1.1183	0.0000	0.0000	0.0000	-0.0138	0.0309	-0.0411	0.0290	-0.0259
743	0007	51450	1.1398	0.3603	1.5129	1.1143	0.1644	0.0000	0.0000	-0.0129	0.0313	-0.0370	0.0260	-0.0239
744	0007	51450	1.1398	0.3610	1.5117	1.5171	0.3304	0.0000	0.0000	-0.0102	0.0303	-0.0324	0.0211	-0.0216
745	0007	51450	1.1398	0.3604	1.5105	2.5227	0.5510	0.0000	0.0000	-0.0076	0.0306	-0.0225	0.0101	-0.0201
746	0007	51450	1.1398	0.3615	1.5108	3.5152	0.7677	0.0000	0.0000	-0.0057	0.0285	-0.0120	-0.0006	-0.0181
747	0007	51450	1.1398	0.3600	2.0258	1.1140	0.1238	0.0000	0.0000	-0.0079	0.0322	-0.0296	0.0243	-0.0133
748	0007	51450	1.1398	0.3596	2.0234	1.5174	0.2457	0.0000	0.0000	-0.0070	0.0321	-0.0269	0.0204	-0.0134
749	0007	51450	1.1398	0.3591	2.0247	2.5250	0.4099	0.0000	0.0000	-0.0058	0.0327	-0.0210	0.0029	-0.0238
750	0007	51450	1.1398	0.3602	2.0234	3.5162	0.5706	0.0000	0.0000	-0.0048	0.0323	-0.0170	0.0006	-0.0163
751	0007	51450	1.1398	0.3591	2.5356	1.1143	0.0992	0.0000	0.0000	-0.0055	0.0311	-0.0361	0.0233	-0.0183
752	0007	51450	1.1398	0.3586	2.5326	1.5163	0.1963	0.0000	0.0000	-0.0050	0.0312	-0.0327	0.0217	-0.0160
753	0007	51450	1.1398	0.3583	2.5237	2.5287	0.3269	0.0000	0.0000	-0.0041	0.0301	-0.0281	0.0224	-0.0098
754	0007	51450	1.1398	0.3584	2.5297	3.5148	0.4557	0.0000	0.0000	-0.0036	0.0300	-0.0230	0.0127	-0.0139
755	0007	51450	1.1398	0.3579	3.0376	1.1156	0.0789	0.0000	0.0000	-0.0040	0.0291	-0.0344	0.0177	-0.0207
756	0007	51450	1.1398	0.3584	3.0070	1.5211	0.1648	0.0000	0.0000	-0.0036	0.0277	-0.0320	0.0139	-0.0167
757	0007	51450	1.1398	0.3579	2.9842	2.5233	0.2768	0.0000	0.0000	-0.0031	0.0277	-0.0286	0.0163	-0.0152
758	0007	51450	1.1398	0.3572	2.9765	3.5076	0.3967	0.0000	0.0000	-0.0030	0.0293	-0.0247	0.0052	-0.0225
759	0007	51430	0.3985	0.4459	1.5124	0.9459	0.0000	0.0000	0.0000	-0.0217	0.0318	-0.0558	0.0379	-0.0396
760	0007	51430	0.3985	0.4446	1.5126	1.0037	0.0591	0.0000	0.0000	-0.0207	0.0307	-0.0483	0.0264	-0.0426
761	0007	51430	0.3985	0.4447	2.0139	0.9049	0.0000	0.0000	0.0000	-0.0135	0.0339	-0.0392	0.0316	-0.0211
762	0007	51430	0.3985	0.4439	2.0150	1.0111	0.0591	0.0000	0.0000	-0.0130	0.0329	-0.0359	0.0242	-0.0246
763	0007	51430	0.3985	0.4460	2.5211	0.9595	0.0000	0.0000	0.0000	-0.0089	0.0315	-0.0392	0.0233	-0.0249
764	0007	51430	0.3985	0.4457	2.5185	1.0161	0.0590	0.0000	0.0000	-0.0088	0.0315	-0.0389	0.0231	-0.0247
765	0007	51430	0.3985	0.4469	3.3423	0.9675	0.0000	0.0000	0.0000	-0.0049	0.0255	-0.0531	0.0372	-0.0208
766	0007	51430	0.3985	0.4468	3.3558	1.1278	0.0590	0.0000	0.0000	-0.0046	0.0246	-0.0510	0.0340	-0.0216
767	0007	51430	0.3985	0.4464	2.5177	0.8586	0.0000	0.0000	0.0000	-0.0092	0.0327	-0.0392	0.0238	-0.0246
768	0007	51430	0.3985	0.4478	2.0134	0.9046	0.0000	0.0000	0.0000	-0.0137	0.0345	-0.0399	0.0313	-0.0223
769	0007	51430	0.3985	0.4430	1.5122	0.9460	0.0000	0.0000	0.0000	-0.0215	0.0319	-0.0554	0.0391	-0.0378
770	0007	51450	1.1398	0.4426	1.5129	2.5120	0.5472	0.0000	0.0000	-0.0112	0.0297	-0.0264	0.0131	-0.0245
771	0007	51450	1.1398	0.4429	1.5125	3.5196	0.7675	0.0000	0.0000	-0.0087	0.0293	-0.0150	-0.0017	-0.0254
772	0007	51450	1.1398	0.4419	2.0179	2.5134	0.4089	0.0000	0.0000	-0.0098	0.0327	-0.0237	0.0033	-0.0291
773	0007	51450	1.1398	0.4423	2.0171	3.5191	0.5726	0.0000	0.0000	-0.0072	0.0319	-0.0137	0.0019	-0.0190
774	0007	51450	1.1398	0.4421	2.5210	2.5117	0.3267	0.0000	0.0000	-0.0064	0.0305	-0.0290	0.0155	-0.0198
775	0007	51450	1.1398	0.4426	2.5240	3.5193	0.4577	0.0000	0.0000	-0.0055	0.0299	-0.0247	0.0152	-0.0149
776	0007	51450	1.1398	0.4430	3.3263	2.5211	0.2472	0.0000	0.0000	-0.0038	0.0245	-0.0426	0.0251	-0.0213
777	0007	51450	1.1398	0.4427	3.3222	3.5152	0.3472	0.0000	0.0000	-0.0034	0.0242	-0.0359	0.0228	-0.0164

FACILITY 8X6XI PROGRAM C03I

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

TABLE PARAMETERS: OUTER RADIUS RATIO 0.8510; INNER RADIUS RATIO 0.6020; DVO 1.2480

RUN	CE	NASA	D2	PA	PTC/PA	PTI/PA	OMEGAT	CDN	CDI	CENETI	CENET2	F9
778	0007	51430	0.3985	0.3575	1.5142	0.9464	0.0000	1.0126	9.9999	0.9396	0.9396	1.1858
779	0007	51430	0.3985	0.3569	1.5143	1.0044	0.0591	1.0119	2.2205	0.9616	0.9669	1.1967
780	0007	51430	0.3985	0.3566	2.0261	1.0105	0.0591	0.9755	1.7013	0.9644	0.9717	1.1937
781	0007	51430	0.3985	0.3578	2.5309	0.8636	0.0000	0.9775	9.9999	0.9491	0.9491	1.2005
782	0007	51430	0.3985	0.3569	2.5318	1.0220	0.0588	0.9760	1.4589	0.9743	0.9837	1.2039
783	0007	51430	0.3985	0.3567	2.5319	0.9582	0.0292	0.9775	9.9999	0.9674	0.9674	1.2015
784	0007	51450	1.1398	0.3569	1.5133	2.5229	0.5494	1.0121	0.9828	0.9576	1.7163	1.2208
785	0007	51450	1.1398	0.3565	1.5142	2.5167	0.7659	1.0120	0.9833	0.9527	2.1509	1.2183
786	0007	51450	1.1398	0.3563	2.5327	2.5254	0.3263	0.9778	0.9825	0.9667	1.2817	1.2218
787	0007	51430	0.3985	0.0033	2.5173	0.9491	0.0291	0.9771	9.9999	0.9740	0.9740	1.2084
788	0007	51430	0.3985	0.0156	1.5134	0.9775	0.0292	1.0091	9.9999	0.9594	0.9594	1.1897
789	0007	51430	0.3985	0.0325	2.0141	0.9640	0.0291	0.9774	9.9999	0.9625	0.9625	1.1973
790	0007	51430	0.3985	0.0462	2.5235	0.9488	0.0291	0.9767	9.9999	0.9665	0.9665	1.2025
791	0007	51430	0.3985	0.0562	3.1662	0.9550	0.0291	0.9783	9.9999	0.9665	0.9665	1.2073
792	0007	51430	0.3985	0.0474	2.5214	0.9490	0.0291	0.9773	9.9999	0.9662	0.9662	1.2027
793	0007	51430	0.3985	0.0110	1.5165	0.9429	0.0000	1.0089	9.9999	0.9401	0.9401	1.1869
794	0007	51430	0.3985	0.0390	2.0174	0.9016	0.0000	0.9770	9.9999	0.9460	0.9460	1.1967
795	0007	51430	0.3985	0.0507	2.5279	0.8[illegible]	0.0000	0.9775	9.9999	0.9498	0.9498	1.2035
796	0007	51430	0.3985	0.0552	3.1616	0.8121	0.0000	0.9786	9.9999	0.9458	0.9458	1.2061
797	0007	51430	0.3985	0.0500	2.5234	0.8548	0.0000	0.9775	9.9999	0.9477	0.9477	1.2019
798	0007	51430	0.3985	0.4452	1.5156	1.0035	0.0591	1.0134	2.1591	0.9409	0.9462	1.1767
799	0007	51430	0.3985	0.4453	2.0219	1.0107	0.0591	0.9754	1.5807	0.9567	0.9640	1.1880
800	0007	51430	0.3985	0.4460	2.5248	1.0156	0.0589	0.9746	1.7339	0.9670	0.9749	1.1966
801	0007	51430	0.3985	0.4467	3.3553	1.1288	0.0590	0.9781	0.8076	0.9645	0.9839	1.2047
802	0007	51430	0.3985	0.4456	2.5256	1.0167	0.0589	0.9773	1.6743	0.9692	0.9773	1.2002
803	0007	51430	0.3985	0.4454	1.5167	0.9455	0.0000	1.0131	9.9999	0.9296	0.9296	1.1807
804	0007	51430	0.3985	0.4452	2.0194	0.9045	0.0000	0.9777	9.9999	0.9388	0.9388	1.1899
805	0007	51430	0.3985	0.4466	2.5260	0.8601	0.0000	0.9779	9.9999	0.9456	0.9456	1.1981
806	0007	51430	0.3985	0.4472	3.3713	0.8697	0.0000	0.9776	9.9999	0.9489	0.9489	1.2012
807	0007	51430	0.3985	0.4455	2.5260	0.8600	0.0000	0.9772	9.9999	0.9444	0.9444	1.1967
808	0007	51450	1.1398	0.4449	1.5171	2.5167	0.5460	1.0123	0.9828	0.9536	1.7014	1.2179
809	0007	51450	1.1398	0.4450	1.5159	2.5105	0.7654	1.0124	0.9839	0.9509	2.1448	1.2169
810	0007	51450	1.1398	0.4446	2.0206	2.5165	0.4079	0.9771	0.9821	0.9623	1.4050	1.2201
811	0007	51450	1.1398	0.4449	2.0194	2.5255	0.5774	0.9771	0.9832	0.9606	1.6689	1.2205
812	0007	51450	1.1398	0.4457	2.5246	2.5140	0.3260	0.9779	0.9830	0.9656	1.2798	1.2206
813	0007	51450	1.1398	0.4455	2.5265	2.5241	0.4572	0.9772	0.9830	0.9655	1.4686	1.2218
814	0007	51450	1.1398	0.4460	3.3555	2.5172	0.2454	0.9777	0.9822	0.9664	1.1776	1.2229
815	0007	51450	1.1398	0.4463	3.3489	2.5236	0.3442	0.9788	0.9829	0.9630	1.3001	1.2217
816	0007	51450	1.1398	0.4445	2.0200	2.5172	0.4087	0.9770	0.9835	0.9616	1.4050	1.2199
817	0007	51450	1.1398	0.4443	1.5152	2.5160	0.5472	1.0126	0.9838	0.9542	1.7051	1.2185

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO: 0.8530

INNER RADIUS RATIO: 0.9020

DVD: 1.2480

DRAG PARAMETERS

PDC	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
779	0007	51430	0.3985	0.3575	1.5142	0.9444	0.0000	0.0000	0.0000	-0.0135	0.0308	-0.0476	0.0350	-0.0261
779	0007	51430	0.3985	0.3569	1.5143	1.0034	0.0591	0.0000	0.0000	-0.0132	0.0304	-0.0422	0.0233	-0.0320
780	0007	51430	0.3985	0.3566	2.0261	1.0105	0.0591	0.0000	0.0000	-0.0086	0.0342	-0.0329	0.0216	-0.0198
781	0007	51430	0.3985	0.3578	2.5309	0.8636	0.0000	0.0000	0.0000	-0.0057	0.0316	-0.0388	0.0241	-0.0204
782	0007	51430	0.3985	0.3569	2.5318	1.0220	0.0588	0.0000	0.0000	-0.0057	0.0320	-0.0377	0.0220	-0.0215
783	0007	51430	0.3985	0.3567	2.5310	0.9582	0.0292	0.0000	0.0000	-0.0059	0.0326	-0.0389	0.0250	-0.0198
784	0007	51450	1.1398	0.3559	1.5133	2.5229	0.5494	0.0000	0.0000	-0.0074	0.0305	-0.0227	0.0097	-0.0204
785	0007	51450	1.1398	0.3565	1.5142	3.5167	0.7659	0.0000	0.0000	-0.0054	0.0281	-0.0123	-0.0019	-0.0196
786	0007	51450	1.1398	0.3563	2.5327	2.5254	0.3263	0.0000	0.0000	-0.0041	0.0304	-0.0282	0.0213	-0.0110
787	0007	51430	0.3985	0.0033	2.5173	0.9491	0.0291	0.0000	0.0000	-0.0002	14.0316	-0.0263	0.0196	-0.0079
788	0007	51430	0.3985	0.0156	1.5134	0.9775	0.0292	0.0000	0.0000	-0.0007	0.8449	-0.0318	0.0191	-0.0134
789	0007	51430	0.3985	0.0325	2.0141	0.9640	0.0291	0.0000	0.0000	-0.0004	0.1963	-0.0256	0.0198	-0.0062
790	0007	51430	0.3985	0.0462	2.5235	0.9488	0.0291	0.0000	0.0000	-0.0002	0.0760	-0.0240	0.0202	-0.0040
791	0007	51430	0.3985	0.0562	3.1662	0.9550	0.0291	0.0000	0.0000	-0.0002	0.0674	-0.0266	0.0241	-0.0007
792	0007	51430	0.3985	0.0474	2.5214	0.9490	0.0291	0.0000	0.0000	-0.0002	0.0688	-0.0239	0.0203	-0.0038
793	0007	51430	0.3985	0.0110	1.5165	0.9429	0.0000	0.0000	0.0000	-0.0008	1.9111	-0.0443	0.0239	-0.0112
794	0007	51430	0.3985	0.0390	2.0174	0.9016	0.0000	0.0000	0.0000	-0.0003	0.1081	-0.0253	0.0222	-0.0035
795	0007	51430	0.3985	0.0502	2.5229	0.8550	0.0000	0.0000	0.0000	-0.0002	0.0562	-0.0241	0.0190	-0.0052
796	0007	51430	0.3985	0.0552	3.1616	0.8121	0.0000	0.0000	0.0000	-0.0003	0.0819	-0.0263	0.0314	0.0048
797	0007	51430	0.3985	0.0509	2.5234	0.8548	0.0000	0.0000	0.0000	-0.0002	0.0525	-0.0237	0.0194	-0.0044
798	0007	51430	0.3985	0.4452	1.5156	1.0035	0.0591	0.0000	0.0000	-0.0208	0.0308	-0.0472	0.0288	-0.0392
799	0007	51430	0.3985	0.4453	2.0219	1.0107	0.0591	0.0000	0.0000	-0.0131	0.0333	-0.0355	0.0251	-0.0235
800	0007	51430	0.3985	0.4460	2.5348	1.0156	0.0589	0.0000	0.0000	-0.0087	0.0311	-0.0386	0.0249	-0.0224
801	0007	51430	0.3985	0.4467	3.3698	1.1288	0.0590	0.0000	0.0000	-0.0046	0.0246	-0.0512	0.0349	-0.0299
802	0007	51430	0.3985	0.4456	2.5256	1.0167	0.0589	0.0000	0.0000	-0.0086	0.0309	-0.0380	0.0249	-0.0217
803	0007	51430	0.3985	0.4453	1.5167	0.9455	0.0000	0.0000	0.0000	-0.0216	0.0320	-0.0545	0.0413	-0.0348
804	0007	51430	0.3985	0.4452	2.0196	0.9045	0.0000	0.0000	0.0000	-0.0134	0.0338	-0.0383	0.0337	-0.0180
805	0007	51430	0.3985	0.4466	2.5260	0.8601	0.0000	0.0000	0.0000	-0.0090	0.0319	-0.0386	0.0256	-0.0222
806	0007	51430	0.3985	0.4472	3.3713	0.8697	0.0000	0.0000	0.0000	-0.0049	0.0257	-0.0531	0.0386	-0.0194
807	0007	51430	0.3985	0.4455	2.5260	0.8600	0.0000	0.0000	0.0000	-0.0089	0.0317	-0.0389	0.0255	-0.0223
808	0007	51450	1.1398	0.4449	1.5171	2.5167	0.5460	0.0000	0.0000	-0.0114	0.0301	-0.0249	0.0152	-0.0211
809	0007	51450	1.1398	0.4450	1.5159	3.5195	0.7654	0.0000	0.0000	-0.0091	0.0305	-0.0141	-0.0010	-0.0244
810	0007	51450	1.1398	0.4446	2.0206	2.5165	0.4079	0.0000	0.0000	-0.0088	0.0324	-0.0232	0.0035	-0.0285
811	0007	51450	1.1398	0.4449	2.0198	3.5255	0.5724	0.0000	0.0000	-0.0074	0.0323	-0.0132	0.0037	-0.0169
812	0007	51450	1.1398	0.4457	2.5246	2.5140	0.3260	0.0000	0.0000	-0.0064	0.0299	-0.0282	0.0190	-0.0156
813	0007	51450	1.1398	0.4455	2.5265	3.5241	0.4572	0.0000	0.0000	-0.0055	0.0299	-0.0246	0.0159	-0.0132
814	0007	51450	1.1398	0.4460	3.3556	2.5172	0.2454	0.0000	0.0000	-0.0038	0.0242	-0.0424	0.0264	-0.0197
815	0007	51450	1.1398	0.4463	3.3488	3.5236	0.3442	0.0000	0.0000	-0.0034	0.0240	-0.0364	0.0212	-0.0185
816	0007	51450	1.1398	0.4445	2.0200	2.5172	0.4087	0.0000	0.0000	-0.0089	0.0327	-0.0231	0.0038	-0.0282
817	0007	51450	1.1398	0.4443	1.5152	2.5160	0.5472	0.0000	0.0000	-0.0115	0.0303	-0.0249	0.0166	-0.0198

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS — OUTER RADIUS RATIO 0.8530 — INNER RADIUS RATIO 0.8000 — DVO 1.2480

PCG	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	F9
818	0005	51230	0.3985	0.0175	1.5153	0.9537	0.0000	1.0097	9.9999	0.9359	0.9359	1.1645
819	0005	51230	0.3985	0.0175	1.5164	0.9726	0.0293	1.0093	9.9999	0.9504	0.9504	1.1640
820	0005	51230	0.3985	0.0253	1.5182	0.9889	0.0593	1.0080	9.9999	0.9638	0.9638	1.1637
821	0005	51230	0.3985	0.0383	2.0175	0.9278	0.0000	0.9776	9.9999	0.9407	0.9407	1.1771
822	0005	51230	0.3985	0.0350	2.0185	0.9888	0.0592	0.9767	9.9999	0.9657	0.9657	1.1739
823	0005	51230	0.3985	0.0500	2.5297	0.9011	0.0000	0.9767	9.9999	0.9458	0.9458	1.1859
824	0005	51230	0.3985	0.0506	2.5289	0.9198	0.0096	0.9764	9.9999	0.9512	0.9512	1.1850
825	0005	51230	0.3985	0.0507	2.5237	0.9370	0.0193	0.9789	9.9999	0.9581	0.9581	1.1873
826	0005	51230	0.3985	0.0480	2.5263	0.9535	0.0290	0.9779	9.9999	0.9621	0.9621	1.1855
827	0005	51230	0.3985	0.0500	2.5247	0.9958	0.0588	0.9783	9.9999	0.9750	0.9750	1.1845
828	0005	51230	0.3985	0.0557	3.1695	0.8831	0.0000	0.9787	9.9999	0.9450	0.9450	1.1928
829	0005	51230	0.3985	0.0562	3.1863	0.9618	0.0291	0.9784	9.9999	0.9595	0.9595	1.1885
830	0005	51230	0.3985	0.0554	3.1807	1.0170	0.0590	0.9774	1.0836	0.9647	0.9721	1.1867
831	0005	51230	0.3985	0.0504	2.5253	0.9536	0.0291	0.9781	9.9999	0.9620	0.9620	1.1855
832	0005	51230	0.3985	0.0363	2.0174	0.9611	0.0291	0.9781	9.9999	0.9553	0.9553	1.1765
833	0005	51230	0.3985	0.0259	1.5181	0.9728	0.0292	1.0086	9.9999	0.9588	0.9588	1.1674
834	0005	51250	1.1398	0.0246	1.5171	1.1102	0.2983	1.0090	1.0224	0.9807	1.1305	1.1911
835	0005	51250	1.1398	0.0428	1.5175	1.5152	0.6309	1.0088	1.0142	0.9741	1.5877	1.2337
836	0005	51250	1.1398	0.0504	1.5179	2.5142	1.0506	1.0089	0.9780	0.9709	2.4344	1.2281
837	0005	51250	1.1398	0.0569	1.5175	3.5158	1.4702	1.0092	0.9783	0.9668	3.2949	1.2269
838	0005	51250	1.1398	0.0350	2.0178	1.1123	0.2169	0.9776	0.9876	0.9787	1.0649	1.1965
839	0005	51250	1.1398	0.0519	2.0181	1.5140	0.4686	0.9777	1.0113	0.9732	1.3309	1.2312
840	0005	51250	1.1398	0.0552	2.0199	2.5132	0.7816	0.9776	0.9765	0.9727	1.8302	1.2281
841	0005	51250	1.1398	0.0607	2.0202	3.5142	1.0964	0.9757	0.9783	0.9711	2.3410	1.2289
842	0005	51250	1.1398	0.0519	2.5254	1.1097	0.1680	0.9779	0.9686	0.9808	1.0393	1.2010
843	0005	51250	1.1398	0.0529	2.5250	1.5145	0.3747	0.9777	1.0114	0.9766	1.2305	1.2315
844	0005	51250	1.1398	0.0607	2.5276	2.5136	0.6251	0.9775	0.9770	0.9740	1.5813	1.2276
845	0005	51250	1.1398	0.0627	2.5264	3.5122	0.8759	0.9775	0.9790	0.9733	1.9435	1.2297
846	0005	51250	1.1398	0.0547	3.2180	1.1090	0.1192	0.9780	0.8787	0.9739	1.0111	1.2005
847	0005	51250	1.1398	0.0577	3.1546	1.5143	0.2958	0.9775	0.9978	0.9746	1.1570	1.2290
848	0005	51250	1.1398	0.0647	3.1143	2.5116	0.5060	0.9790	0.9769	0.9724	1.4220	1.2279
849	0005	51250	1.1398	0.0687	3.0856	3.5118	0.7163	0.9779	0.9784	0.9710	1.6989	1.2279
850	0005	51250	1.1398	0.0505	2.5217	1.1090	0.1682	0.9783	0.9723	0.9801	1.0385	1.2008
851	0005	51250	1.1398	0.0363	2.0157	1.1090	0.2133	0.9778	0.9845	0.9776	1.0612	1.1953
852	0005	51250	1.1398	0.0208	1.5156	1.1092	0.2958	1.0089	1.0166	0.9833	1.1318	1.1916
853	0005	51230	0.3985	0.3557	1.5147	0.9643	0.0000	1.0125	9.9999	0.9185	0.9185	1.1531
854	0005	51230	0.3985	0.3567	1.5159	0.9845	0.0293	1.0122	9.9999	0.9350	0.9350	1.1532
855	0005	51230	0.3985	0.3569	1.5156	1.0011	0.0592	1.0123	1.9956	0.9460	0.9491	1.1534
856	0005	51230	0.3985	0.3576	2.0301	0.9377	0.0000	0.9768	9.9999	0.9307	0.9307	1.1668
857	0005	51230	0.3985	0.3575	2.0188	1.0053	0.0593	0.9824	1.2438	0.9577	0.9629	1.1698
858	0005	51230	0.3985	0.3575	2.5378	0.9146	0.0000	0.9769	9.9999	0.9309	0.9399	1.1778
859	0005	51230	0.3985	0.3575	2.5327	0.9330	0.0096	0.9786	9.9999	0.9470	0.9470	1.1795
860	0005	51230	0.3985	0.3573	2.5421	0.9517	0.0194	0.9759	9.9999	0.9498	0.9498	1.1752
861	0005	51230	0.3985	0.3577	2.5166	0.9702	0.0292	0.9842	9.9999	0.9589	0.9589	1.1825
862	0005	51230	0.3985	0.3576	2.5382	1.0118	0.0588	0.9773	1.0346	0.9633	0.9701	1.1760

ACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)
INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG
SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.8530 INNER RADIUS RATIO 0.8000 DVO 1.2480

RAG PARAMETERS

RDG	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
818	0005	51230	0.3985	0.0175	1.5153	0.9537	0.0000	0.0000	0.0000	-0.0006	0.5414	-0.0325	0.0085	-0.0246
819	0005	51230	0.3985	0.0175	1.5164	0.9726	0.0293	0.0000	0.0000	-0.0007	0.6247	-0.0305	0.0083	-0.0229
820	0005	51230	0.3985	0.0253	1.5182	0.9889	0.0593	0.0000	0.0000	-0.0005	0.2192	-0.0292	0.0100	-0.0196
821	0005	51230	0.3985	0.0383	2.0175	0.9278	0.0000	0.0000	0.0000	-0.0003	0.1040	-0.0244	0.0058	-0.0190
822	0005	51230	0.3985	0.0350	2.0185	0.9888	0.0592	0.0000	0.0000	-0.0004	0.1604	-0.0240	0.0112	-0.0132
823	0005	51230	0.3985	0.0500	2.5297	0.9011	0.0000	0.0000	0.0000	-0.0002	0.0475	-0.0234	0.0062	-0.0174
824	0005	51230	0.3985	0.0506	2.5289	0.9198	0.0096	0.0000	0.0000	-0.0002	0.0441	-0.0231	0.0081	-0.0152
825	0005	51230	0.3985	0.0507	2.5237	0.9370	0.0193	0.0000	0.0000	-0.0002	0.0513	-0.0222	0.0094	-0.0130
826	0005	51230	0.3985	0.0480	2.5263	0.9535	0.0290	0.0000	0.0000	-0.0003	0.0800	-0.0230	0.0102	-0.0130
827	0005	51230	0.3985	0.0500	2.5247	0.9958	0.0588	0.0000	0.0000	-0.0002	0.0621	-0.0232	0.0119	-0.0116
828	0005	51230	0.3985	0.0557	3.1695	0.8831	0.0000	0.0000	0.0000	-0.0002	0.0649	-0.0271	0.0105	-0.0168
829	0005	51230	0.3985	0.0562	3.1863	0.9618	0.0291	0.0000	0.0000	-0.0002	0.0729	-0.0273	0.0059	-0.0217
830	0005	51230	0.3985	0.0554	3.1807	1.0170	0.0590	0.0000	0.0000	-0.0002	0.0795	-0.0268	0.0058	-0.0212
831	0005	51230	0.3985	0.0504	2.5253	0.9536	0.0291	0.0000	0.0000	-0.0002	0.0550	-0.0236	0.0103	-0.0136
832	0005	51230	0.3985	0.0363	2.0174	0.9611	0.0291	0.0000	0.0000	-0.0003	0.1320	-0.0242	0.0095	-0.0151
833	0005	51230	0.3985	0.0259	1.5181	0.9728	0.0292	0.0000	0.0000	-0.0005	0.2021	-0.0304	0.0089	-0.0219
834	0005	51250	1.1398	0.0246	1.5171	1.1102	0.2983	0.0000	0.0000	-0.0005	0.2745	-0.0236	0.0139	-0.0103
835	0005	51250	1.1398	0.0428	1.5175	1.5152	0.6309	0.0000	0.0000	-0.0002	0.0634	-0.0173	0.0103	-0.0072
836	0005	51250	1.1398	0.0504	1.5179	2.5142	1.0506	0.0000	0.0000	-0.0001	0.0381	-0.0022	0.0022	-0.0071
837	0005	51250	1.1398	0.0569	1.5175	3.5158	1.4702	0.0000	0.0000	-0.0002	0.0614	-0.0034	-0.0080	-0.0117
838	0005	51250	1.1398	0.0350	2.0178	1.1123	0.2169	0.0000	0.0000	-0.0004	0.1692	-0.0216	0.0159	-0.0061
839	0005	51250	1.1398	0.0519	2.0181	1.5140	0.4686	0.0000	0.0000	-0.0001	0.0336	-0.0177	0.0150	-0.0028
840	0005	51250	1.1398	0.0552	2.0199	2.5132	0.7818	0.0000	0.0000	-0.0002	0.0687	-0.0114	0.0031	-0.0085
841	0005	51250	1.1398	0.0607	2.0202	3.5142	1.0964	0.0000	0.0000	-0.0002	0.0759	-0.0047	-0.0123	-0.0172
842	0005	51250	1.1398	0.0519	2.5254	1.1097	0.1680	0.0000	0.0000	-0.0002	0.0600	-0.0225	0.0162	-0.0065
843	0005	51250	1.1398	0.0529	2.5250	1.5145	0.3747	0.0000	0.0000	-0.0003	0.0818	-0.0190	0.0157	-0.0036
844	0005	51250	1.1398	0.0607	2.5276	2.5136	0.6251	0.0000	0.0000	-0.0002	0.0704	-0.0150	0.0097	-0.0055
845	0005	51250	1.1398	0.0627	2.5264	3.5122	0.8759	0.0000	0.0000	-0.0002	0.0892	-0.0122	-0.0025	-0.0149
846	0005	51250	1.1398	0.0547	3.2180	1.1090	0.1192	0.0000	0.0000	-0.0003	0.0881	-0.0289	0.0155	-0.0136
847	0005	51250	1.1398	0.0577	3.1546	1.5143	0.2958	0.0000	0.0000	-0.0003	0.0902	-0.0228	0.0138	-0.0092
848	0005	51250	1.1398	0.0647	3.1143	2.5116	0.5060	0.0000	0.0000	-0.0002	0.0772	-0.0192	0.0103	-0.0092
849	0005	51250	1.1398	0.0687	3.0856	3.5118	0.7163	0.0000	0.0000	-0.0002	0.0860	-0.0158	0.0065	-0.0095
850	0005	51250	1.1398	0.0505	2.5217	1.1090	0.1682	0.0000	0.0000	-0.0002	0.0585	-0.0222	0.0162	-0.0062
851	0005	51250	1.1398	0.0363	2.0157	1.1090	0.2133	0.0000	0.0000	-0.0004	0.1596	-0.0220	0.0158	-0.0066
852	0005	51250	1.1398	0.0208	1.5156	1.1092	0.2958	0.0000	0.0000	-0.0005	0.4164	-0.0237	0.0147	-0.0096
853	0005	51230	0.3985	0.3557	1.5147	0.9643	0.0000	0.0000	0.0000	-0.0134	0.0310	-0.0442	0.0157	-0.0420
854	0005	51230	0.3985	0.3567	1.5159	0.9845	0.0293	0.0000	0.0000	-0.0134	0.0309	-0.0408	0.0163	-0.0380
855	0005	51230	0.3985	0.3569	1.5156	1.0011	0.0592	0.0000	0.0000	-0.0132	0.0304	-0.0387	0.0150	-0.0369
856	0005	51230	0.3985	0.3576	2.0301	0.9377	0.0000	0.0000	0.0000	-0.0084	0.0329	-0.0317	0.0124	-0.0277
857	0005	51230	0.3985	0.3575	2.0188	1.0053	0.0593	0.0000	0.0000	-0.0079	0.0313	-0.0287	0.0140	-0.0226
858	0005	51230	0.3985	0.3575	2.5378	0.9146	0.0000	0.0000	0.0000	-0.0058	0.0220	-0.0375	0.0115	-0.0317
859	0005	51230	0.3985	0.3575	2.5327	[illegible]	0.0096	0.0000	0.0000	-0.0059	0.0325	-0.0358	0.0141	-0.0276
860	0005	51230	0.3985	0.3573	2.5421	0.9517	0.0194	0.0000	0.0000	-0.0058	0.0324	-0.0364	0.0155	-0.0267
861	0005	51230	0.3985	0.3577	2.5166	0.9702	0.0292	0.0000	0.0000	-0.0057	0.0314	-0.0374	0.0164	-0.0267
862	0005	51230	0.3985	0.3576	2.5382	1.0118	0.0588	0.0000	0.0000	-0.0058	0.0322	-0.0359	0.0159	-0.0258

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS — OUTER RADIUS RATIO 0.8530 — INNER RADIUS RATIO 0.8000 — DVO 1.2480

PDG	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	COO	COI	CENET1	CENET2	FG
863	0005	51230	0.3985	0.3581	3.0618	0.8995	0.0000	0.9781	9.9999	0.9400	0.9400	1.1837
864	0005	51230	0.3985	0.3580	3.0707	0.9751	0.0292	0.9786	9.9999	0.9552	0.9552	1.1806
865	0005	51230	0.3985	0.3578	3.0683	1.0256	0.0590	0.9789	0.8527	0.9578	0.9669	1.1797
866	0005	51230	0.3985	0.3578	2.5355	0.9692	0.0291	0.9778	9.9999	0.9568	0.9568	1.1772
867	0005	51230	0.3985	0.3570	2.0296	0.9752	0.0291	0.9764	9.9999	0.9470	0.9470	1.1657
868	0005	51230	0.3985	0.3570	1.5160	0.9850	0.0292	1.0120	9.9999	0.9379	0.9379	1.1541
869	0005	51250	1.1398	0.3571	1.5144	1.1148	0.2979	1.0132	1.0020	0.9651	1.1154	1.1834
870	0005	51250	1.1398	0.3577	1.5151	1.5155	0.6300	1.0126	1.0139	0.9607	1.5662	1.2256
871	0005	51250	1.1398	0.3579	1.5159	2.5245	1.0527	1.0119	0.9770	0.9635	2.4236	1.2221
872	0005	51250	1.1398	0.3590	1.5154	3.5163	1.4681	1.0122	0.9776	0.9616	3.2775	1.2220
873	0005	51250	1.1398	0.3578	2.0301	1.1173	0.2135	0.9766	0.9569	0.9672	1.0525	1.1870
874	0005	51250	1.1398	0.3577	2.0267	1.5163	0.4672	0.9780	1.0106	0.9636	1.3164	1.2236
875	0005	51250	1.1398	0.3581	2.0287	2.5251	0.7833	0.9772	0.9777	0.9650	1.8169	1.2214
876	0005	51250	1.1398	0.3581	2.0273	3.5135	1.0928	0.9773	0.9793	0.9667	2.3229	1.2252
877	0005	51250	1.1398	0.3574	2.5331	1.1158	0.1627	0.9781	0.9163	0.9744	1.0321	1.1942
878	0005	51250	1.1398	0.3584	2.5319	1.5175	0.3725	0.9772	1.0050	0.9716	1.2230	1.2256
879	0005	51250	1.1398	0.3587	2.5376	2.5232	0.6249	0.9776	0.9770	0.9701	1.5747	1.2235
880	0005	51250	1.1398	0.3578	2.5367	3.5089	0.8723	0.9770	0.9793	0.9695	1.9298	1.2255
881	0005	51250	1.1398	0.3574	3.1101	1.1167	0.1199	0.9767	0.8254	0.9686	1.0076	1.1918
882	0005	51250	1.1398	0.3577	3.0418	1.5141	0.3066	0.9774	0.9972	0.9716	1.1625	1.2251
883	0005	51250	1.1398	0.3579	2.9974	2.5247	0.5287	0.9782	0.9766	0.9683	1.4442	1.2227
884	0005	51250	1.1398	0.3584	2.9637	3.5053	0.7427	0.9779	0.9763	0.9703	1.7357	1.2256
885	0005	51230	0.3985	0.4481	1.5137	0.9636	0.0000	1.0142	9.9999	0.9228	0.9228	1.1550
886	0005	51230	0.3985	0.4463	1.5150	1.0004	0.0593	1.0133	3.4514	0.9507	0.9524	1.1547
887	0005	51230	0.3985	0.4462	2.0205	0.9385	0.0000	0.9767	9.9999	0.9336	0.9336	1.1677
888	0005	51230	0.3985	0.4453	2.0183	1.0052	0.0591	0.9774	1.2468	0.9567	0.9618	1.1659
889	0005	51230	0.3985	0.4461	2.5292	0.9103	0.0000	0.9767	9.9999	0.9402	0.9402	1.1784
890	0005	51230	0.3985	0.4457	2.5273	1.0063	0.0590	0.9775	1.4117	0.9645	0.9695	1.1764
891	0005	51230	0.3985	0.4461	3.3678	0.9256	0.0000	0.9783	9.9999	0.9440	0.9440	1.1837
892	0005	51230	0.3985	0.4456	3.3790	1.0652	0.0591	0.9785	0.5907	0.9615	0.9755	1.1935
893	0005	51230	0.3985	0.4453	2.5265	1.0066	0.0589	0.9777	1.3777	0.9645	0.9696	1.1765
894	0005	51230	0.3985	0.4447	2.0183	1.0064	0.0590	0.9776	1.1193	0.9547	0.9604	1.1648
895	0005	51230	0.3985	0.4442	1.5163	1.0019	0.0592	1.0125	1.5425	0.9500	0.9539	1.1547
896	0005	51250	1.1398	0.4439	1.5150	2.5056	1.0456	1.0130	0.9781	0.9630	2.4085	1.2220
897	0005	51250	1.1398	0.4452	1.5164	3.5180	1.4709	1.0116	0.9795	0.9601	3.2755	1.2213
898	0005	51250	1.1398	0.4454	2.0191	2.5093	0.7812	0.9773	0.9766	0.9681	1.8206	1.2232
899	0005	51250	1.1398	0.4457	2.0194	3.5168	1.0978	0.9771	0.9789	0.9670	2.3336	1.2248
900	0005	51250	1.1398	0.4451	2.5255	2.5079	0.6243	0.9778	0.9775	0.9698	1.5733	1.2233
901	0005	51250	1.1398	0.4460	2.5270	3.5153	0.8765	0.9771	0.9787	0.9705	1.9388	1.2259
902	0005	51250	1.1398	0.4464	3.3330	2.5072	0.4725	0.9784	0.9775	0.9678	1.3753	1.2236
903	0005	51250	1.1398	0.4464	3.2978	3.5172	0.6707	0.9784	0.9783	0.9694	1.6339	1.2265
904	0005	51250	1.1398	0.4446	2.0197	2.5103	0.7817	0.9770	0.9769	0.9670	1.8189	1.2223

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

OUTER RADIUS RATIO 0.8530 INNER RADIUS RATIO 0.8000 DVD 1.2480

RDG	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
863	0005	51230	0.3985	0.3591	3.0618	0.8995	0.0000	0.0000	0.0000	-0.0040	0.0286	-0.0351	0.0131	-0.0260
864	0005	51230	0.3985	0.3580	3.0707	0.9751	0.0292	0.0000	0.0000	-0.0040	0.0290	-0.0348	0.0096	-0.0292
865	0005	51230	0.3985	0.3578	3.0683	1.0256	0.0590	0.0000	0.0000	-0.0039	0.0285	-0.0345	0.0101	-0.0283
866	0005	51230	0.3985	0.3578	2.5355	0.9692	0.0291	0.0000	0.0000	-0.0057	0.0316	-0.0370	0.0163	-0.0254
867	0005	51230	0.3985	0.3570	2.0296	0.9752	0.0291	0.0000	0.0000	-0.0088	0.0347	-0.0310	0.0157	-0.0241
868	0005	51230	0.3995	0.3570	1.5160	0.9850	0.0292	0.0000	0.0000	-0.0139	0.0320	-0.0405	0.0171	-0.0373
869	0005	51250	1.1398	0.3571	1.5144	1.1148	0.2979	0.0000	0.0000	-0.0106	0.0280	-0.0296	0.0200	-0.0202
870	0005	51250	1.1398	0.3577	1.5151	1.5155	0.6300	0.0000	0.0000	-0.0074	0.0274	-0.0221	0.0148	-0.0147
871	0005	51250	1.1398	0.3579	1.5159	2.5245	1.0527	0.0000	0.0000	-0.0048	0.0276	-0.0125	0.0048	-0.0125
872	0005	51250	1.1398	0.3590	1.5154	3.5163	1.4681	0.0000	0.0000	-0.0034	0.0265	-0.0051	-0.0050	-0.0134
873	0005	51250	1.1398	0.3578	2.0301	1.1173	0.2135	0.0000	0.0000	-0.0072	0.0306	-0.0255	0.0197	-0.0129
874	0005	51250	1.1398	0.3577	2.0267	1.5163	0.4672	0.0000	0.0000	-0.0057	0.0305	-0.0209	0.0182	-0.0084
875	0005	51250	1.1398	0.3581	2.0287	2.5251	0.7833	0.0000	0.0000	-0.0040	0.0297	-0.0134	0.0046	-0.0129
876	0005	51250	1.1398	0.3581	2.0273	3.5135	1.0928	0.0000	0.0000	-0.0033	0.0314	-0.0055	-0.0129	-0.0218
877	0005	51250	1.1398	0.3574	2.5331	1.1158	0.1627	0.0000	0.0000	-0.0052	0.0307	-0.0333	0.0202	-0.0184
878	0005	51250	1.1398	0.3584	2.5319	1.5175	0.3725	0.0000	0.0000	-0.0042	0.0292	-0.0271	0.0201	-0.0113
879	0005	51250	1.1398	0.3587	2.5376	2.5232	0.6249	0.0000	0.0000	-0.0033	0.0298	-0.0217	0.0118	-0.0133
880	0005	51250	1.1398	0.3578	2.5367	3.5089	0.8723	0.0000	0.0000	-0.0027	0.0302	-0.0152	0.0000	-0.0179
881	0005	51250	1.1398	0.3574	3.1101	1.1167	0.1199	0.0000	0.0000	-0.0034	0.0261	-0.0345	0.0194	-0.0184
882	0005	51250	1.1398	0.3577	3.0418	1.5141	0.3066	0.0000	0.0000	-0.0030	0.0262	-0.0291	0.0174	-0.0147
883	0005	51250	1.1398	0.3579	2.9974	2.5247	0.5287	0.0000	0.0000	-0.0025	0.0266	-0.0235	0.0113	-0.0148
884	0005	51250	1.1398	0.3584	2.9637	3.5053	0.7427	0.0000	0.0000	-0.0021	0.0263	-0.0188	0.0070	-0.0139
885	0005	51230	0.3985	0.4481	1.5137	0.9636	0.0000	0.0000	0.0000	-0.0221	0.0321	-0.0524	0.0284	-0.0460
886	0005	51230	0.3985	0.4463	1.5150	1.0004	0.0593	0.0000	0.0000	-0.0210	0.0308	-0.0450	0.0270	-0.0390
887	0005	51230	0.3985	0.4462	2.0205	0.9385	0.0000	0.0000	0.0000	-0.0138	0.0345	-0.0381	0.0193	-0.0326
888	0005	51230	0.3985	0.4453	2.0183	1.0052	0.0591	0.0000	0.0000	-0.0130	0.0329	-0.0341	0.0208	-0.0264
889	0005	51230	0.3985	0.4461	2.5292	0.9103	0.0000	0.0000	0.0000	-0.0090	0.0320	-0.0379	0.0148	-0.0301
890	0005	51230	0.3985	0.4457	2.5273	1.0063	0.0590	0.0000	0.0000	-0.0086	0.0307	-0.0368	0.0188	-0.0266
891	0005	51230	0.3985	0.4461	3.3678	0.9256	0.0000	0.0000	0.0000	-0.0048	0.0256	-0.0519	0.0244	-0.0323
892	0005	51230	0.3985	0.4456	3.3790	1.0652	0.0591	0.0000	0.0000	-0.0046	0.0249	-0.0506	0.0249	-0.0283
893	0005	51230	0.3985	0.4453	2.5265	1.0066	0.0589	0.0000	0.0000	-0.0084	0.0302	-0.0368	0.0191	-0.0262
894	0005	51230	0.3985	0.4447	2.0183	1.0064	0.0590	0.0000	0.0000	-0.0129	0.0327	-0.0338	0.0214	-0.0253
895	0005	51230	0.3985	0.4442	1.5163	1.0019	0.0592	0.0000	0.0000	-0.0202	0.0301	-0.0437	0.0267	-0.0372
896	0005	51250	1.1398	0.4439	1.5150	2.5056	1.0456	0.0000	0.0000	-0.0079	0.0293	-0.0149	0.0098	-0.0130
897	0005	51250	1.1398	0.4452	1.5164	3.5180	1.4709	0.0000	0.0000	-0.0056	0.0280	-0.0068	-0.0037	-0.0160
898	0005	51250	1.1398	0.4454	2.0191	2.5093	0.7812	0.0000	0.0000	-0.0065	0.0307	-0.0153	0.0080	-0.0139
899	0005	51250	1.1398	0.4457	2.0194	3.5168	1.0978	0.0000	0.0000	-0.0050	0.0303	-0.0065	-0.0108	-0.0223
900	0005	51250	1.1398	0.4451	2.5255	2.5079	0.6243	0.0000	0.0000	-0.0051	0.0294	-0.0230	0.0124	-0.0157
901	0005	51250	1.1398	0.4460	2.5270	3.5153	0.8765	0.0000	0.0000	-0.0040	0.0286	-0.0182	0.0014	-0.0209
902	0005	51250	1.1398	0.4464	3.3330	2.5072	0.4725	0.0000	0.0000	-0.0031	0.0233	-0.0340	0.0262	-0.0110
903	0005	51250	1.1398	0.4464	3.2978	3.5172	0.6707	0.0000	0.0000	-0.0026	0.0228	-0.0238	0.0145	-0.0119
904	0005	51250	1.1398	0.4446	2.0197	2.5103	0.7817	0.0000	0.0000	-0.0066	0.0314	-0.0153	0.0077	-0.0142

FACILITY RX6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS
15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9260 INNER RADIUS RATIO 0.9000 DVD 1.2480

PTG	GF	NASA	D2	MA	PT0/PA	PT1/PA	DMFGAT	CDO	CDI	CFNET1	CFNET2	F9
905	0006	53230	0.3985	0.0123	1.5027	0.9462	0.0000	1.0140	9.9999	0.8691	0.8691	1.1177
906	0006	53230	0.3985	0.0143	1.5024	0.9522	0.0286	1.0140	9.9999	0.8755	0.8755	1.1163
907	0006	53230	0.3985	0.0097	1.5028	0.9603	0.0589	1.0136	9.9999	0.8858	0.8858	1.1149
908	0006	53230	0.3985	0.0201	1.9983	0.9197	0.0000	0.9822	9.9999	0.8743	0.8743	1.1310
909	0006	53230	0.3985	0.0097	1.9974	0.9314	0.0297	0.9827	9.9999	0.8831	0.8831	1.1296
910	0006	53230	0.3985	0.0149	1.9986	0.9451	0.0589	0.9823	9.9999	0.8969	0.8969	1.1290
911	0006	53230	0.3985	0.0402	2.5011	0.9018	0.0000	0.9836	9.9999	0.8859	0.8859	1.1411
912	0006	53230	0.3985	0.0305	2.5013	0.9211	0.0288	0.9835	9.9999	0.8971	0.8971	1.1392
913	0006	53230	0.3985	0.0234	2.5006	0.9402	0.0587	0.9836	9.9999	0.9101	0.9101	1.1384
914	0006	53230	0.3985	0.0455	3.5017	0.8795	0.0000	0.9871	9.9999	0.9023	0.9023	1.1619
915	0006	53230	0.3985	0.0415	3.5012	0.9153	0.0291	0.9877	9.9999	0.9170	0.9170	1.1606
916	0006	53230	0.3985	0.0461	3.5016	0.9455	0.0589	0.9862	9.9999	0.9312	0.9312	1.1595
917	0006	53230	0.3985	0.0110	1.4995	0.9454	0.0000	1.0162	9.9999	0.8638	0.8638	1.1169
918	0006	53230	0.3985	0.0479	3.5107	0.8783	0.0000	0.9851	9.9999	0.9017	0.9017	1.1606
919	0006	53230	0.3985	0.0447	3.5088	0.9136	0.0292	0.9857	9.9999	0.9175	0.9175	1.1602
920	0006	53230	0.3985	0.0246	2.4985	0.9205	0.0289	0.9843	9.9999	0.8974	0.8974	1.1400
921	0006	53230	0.3985	0.0220	1.9977	0.9317	0.0290	0.9835	9.9999	0.8815	0.8815	1.1290
922	0006	53230	0.3985	0.0090	1.5020	0.9527	0.0288	1.0152	9.9999	0.8736	0.8736	1.1158
923	0006	53230	0.3985	0.0142	1.5011	1.0989	0.0000	1.0155	9.9999	1.2845	1.2869	1.1504 BAD POINT
924	0006	53250	1.1398	0.0123	1.5022	1.0979	0.6755	1.0154	1.0819	0.9678	1.2880	1.1596
925	0006	53250	1.1398	0.0285	1.5020	1.4930	1.4107	1.0154	1.0204	0.9566	2.2968	1.2245
926	0006	53250	1.1398	0.0512	1.5031	2.4039	2.3560	1.0147	0.9778	0.9590	4.2184	1.2182
927	0006	53250	1.1398	0.0553	1.5035	3.5001	3.3257	1.0142	0.9791	0.9589	6.2296	1.2201
928	0006	53250	1.1398	0.0220	1.9976	1.0874	0.4685	0.9837	1.0681	0.9671	1.1317	1.1651
929	0006	53250	1.1398	0.0324	1.9976	1.4872	1.0428	0.9829	1.0205	0.9598	1.7264	1.2226
930	0006	53250	1.1398	0.0513	2.0001	2.4047	1.7491	0.9832	0.9774	0.9613	2.8590	1.2201
931	0006	53250	1.1398	0.0580	1.9997	3.4860	2.4594	0.9830	0.9789	0.9627	4.0190	1.2229
32	0006	53250	1.1398	0.0311	2.4988	1.1131	0.4192	0.9837	1.0574	0.9616	1.1076	1.1736
933	0006	53250	1.1398	0.0421	2.5004	1.5097	0.8461	0.9840	1.0155	0.9580	1.5210	1.2224
934	0006	53250	1.1398	0.0557	2.5015	2.5057	1.4089	0.9841	0.9774	0.9610	2.3159	1.2189
935	0006	53250	1.1398	0.0560	2.5009	3.5044	1.5742	0.9838	0.9783	0.9645	3.1406	1.2239
936	0006	53250	1.1398	0.0518	3.5095	1.1201	0.3078	0.9856	1.0388	0.9631	1.0581	1.1885
937	0006	53250	1.1398	0.0527	3.5101	1.5114	0.6022	0.9857	1.0151	0.9601	1.3117	1.2265
938	0006	53250	1.1398	0.0600	3.5067	2.5050	1.0015	0.9865	0.9771	0.9573	1.7968	1.2187
939	0006	53250	1.1398	0.0632	3.5103	3.5102	1.4043	0.9858	0.9777	0.9611	2.3108	1.2228
940	0006	53250	1.1398	0.0595	3.5081	1.1232	0.3069	0.9863	1.0400	0.9627	1.0601	1.1893
941	0006	53250	1.1398	0.0311	2.5001	1.1228	0.4337	0.9837	1.0459	0.9661	1.1237	1.1782
942	0006	53250	1.1398	0.0149	1.5048	1.1227	0.7428	1.0135	1.0640	0.9718	1.3641	1.1680
943	0006	53230	0.3985	0.3590	1.5016	0.9552	0.0000	1.0190	9.9999	0.8220	0.8220	1.0972
944	0006	53230	0.3985	0.3592	1.5014	0.9632	0.0286	1.0191	9.9999	0.8324	0.8324	1.0960
945	0006	53230	0.3985	0.3587	1.5010	0.9710	0.0591	1.0189	9.9999	0.8527	0.8527	1.0980
946	0006	53230	0.3985	0.3581	2.0089	0.9321	0.0000	0.9831	9.9999	0.8524	0.8524	1.1133
947	0006	53230	0.3985	0.3587	2.0094	0.9453	0.0288	0.9831	9.9999	0.8712	0.8712	1.1156
948	0006	53230	0.3985	0.3580	2.0085	0.9589	0.0590	0.9831	9.9999	0.8829	0.8829	1.1145
949	0006	53230	0.3985	0.3588	2.5134	0.9139	0.0000	0.9835	9.9999	0.8761	0.8761	1.1286

CILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9250 INNER RADIUS RATIO 0.8000 DVO 1.2480

AG	PARAMETERS												
CG	GE	NASA	02	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
05	0006	53230	0.3985	0.0123	1.5020	0.9462	0.0000	0.0000	0.0000	-0.0014	1.1344	-0.0435	-0.0045	-0.0496
06	0006	53230	0.3985	0.0143	1.5024	0.9522	0.0286	0.0000	0.0000	-0.0015	0.9478	-0.0433	-0.0065	-0.0513
07	0006	53230	0.3985	0.0097	1.5028	0.9603	0.0589	0.0000	0.0000	-0.0012	1.6597	-0.0420	-0.0073	-0.0505
08	0006	53230	0.3985	0.0201	1.9983	0.9197	0.0000	0.0000	0.0000	-0.0008	0.4327	-0.0204	-0.0005	-0.0217
09	0006	53230	0.3985	0.0097	1.9974	0.9314	0.0287	0.0000	0.0000	-0.0013	3.0119	-0.0191	-0.0005	-0.0209
10	0006	53230	0.3985	0.0149	1.9986	0.9451	0.0589	0.0000	0.0000	-0.0011	1.0653	-0.0194	-0.0015	-0.0220
11	0006	53230	0.3985	0.0402	2.5011	0.9018	0.0000	0.0000	0.0000	-0.0001	0.0133	-0.0301	0.0042	-0.0259
12	0006	53230	0.3985	0.0305	2.5013	0.9211	0.0288	0.0000	0.0000	-0.0007	0.2298	-0.0294	0.0011	-0.0290
13	0006	53230	0.3985	0.0234	2.5006	0.9402	0.0587	0.0000	0.0000	-0.0009	0.4875	-0.0295	-0.0012	-0.0316
14	0006	53230	0.3985	0.0455	3.5017	0.8795	0.0000	0.0000	0.0000	-0.0002	0.0499	-0.0246	0.0056	-0.0192
15	0006	53230	0.3985	0.0415	3.5012	0.9153	0.0291	0.0000	0.0000	-0.0004	0.1222	-0.0251	0.0009	-0.0246
16	0006	53230	0.3985	0.0461	3.5076	0.9455	0.0589	0.0000	0.0000	-0.0002	0.0395	-0.0246	0.0072	-0.0175
17	0006	53230	0.3985	0.0110	1.4995	0.9454	0.0000	0.0000	0.0000	-0.0016	1.7223	-0.0434	-0.0024	-0.0475
18	0006	53230	0.3985	0.0479	3.5107	0.8783	0.0000	0.0000	0.0000	-0.0001	0.0791	-0.0295	0.0051	-0.0245
19	0006	53230	0.3985	0.0447	3.5088	0.9136	0.0292	0.0000	0.0000	-0.0002	0.0526	-0.0277	0.0010	-0.0270
20	0006	53230	0.3985	0.0246	2.4985	0.9205	0.0289	0.0000	0.0000	-0.0007	0.3494	-0.0297	0.0014	-0.0290
21	0006	53230	0.3985	0.0220	1.9977	0.9317	0.0290	0.0000	0.0000	-0.0011	0.4842	-0.0184	0.0014	-0.0181
22	0006	53230	0.3985	0.0090	1.5020	0.9527	0.0288	0.0000	0.0000	-0.0017	2.6355	-0.0395	-0.0002	-0.0414
23	0006	53230	0.3985	0.0142	1.5011	1.0984	0.0000	0.0000	0.0000	-0.0016	1.1368	-0.0365	0.0092	-0.0291
24	0006	53250	1.1398	0.0123	1.5022	1.0979	0.6755	0.0000	0.0000	-0.0015	1.6929	-0.0279	0.0056	-0.0238
25	0006	53250	1.1398	0.0285	1.5020	1.4930	1.4107	0.0000	0.0000	-0.0006	0.2379	-0.0171	0.0027	-0.0151
26	0006	53250	1.1398	0.0512	1.5031	2.4839	2.3560	0.0000	0.0000	-0.0001	0.0150	-0.0071	-0.0052	-0.0124
27	0006	53250	1.1398	0.0553	1.5035	3.5001	3.3257	0.0000	0.0000	-0.0003	0.0726	-0.0034	-0.0138	-0.0175
28	0006	53250	1.1398	0.0220	1.9976	1.0874	0.4685	0.0000	0.0000	-0.0009	0.4630	-0.0160	0.0113	-0.0056
29	0006	53250	1.1398	0.0324	1.9976	1.4872	1.0428	0.0000	0.0000	-0.0007	0.2517	-0.0106	0.0101	-0.0012
30	0006	53250	1.1398	0.0513	2.0001	2.4847	1.7491	0.0000	0.0000	-0.0002	0.0510	-0.0055	-0.0114	-0.0171
31	0006	53250	1.1398	0.0580	1.9997	3.4860	2.4594	0.0000	0.0000	-0.0004	0.1007	-0.0022	-0.0058	-0.0084
32	0006	53250	1.1398	0.0311	2.4988	1.1131	0.4192	0.0000	0.0000	-0.0007	0.2716	-0.0270	0.0127	-0.0150
33	0006	53250	1.1398	0.0421	2.5004	1.5097	0.9461	0.0000	0.0000	-0.0004	0.1172	-0.0190	0.0119	-0.0075
34	0006	53250	1.1398	0.0557	2.5015	2.5057	1.4089	0.0000	0.0000	-0.0002	0.0595	-0.0126	0.0053	-0.0076
35	0006	53250	1.1398	0.0560	2.5008	3.5044	1.9742	0.0000	0.0000	-0.0004	0.1398	-0.0087	-0.0137	-0.0229
36	0006	53250	1.1398	0.0518	3.5096	1.1201	0.3028	0.0000	0.0000	-0.0002	0.0360	-0.0263	0.0138	-0.0128
37	0006	53250	1.1398	0.0527	3.5101	1.5114	0.6022	0.0000	0.0000	-0.0003	0.0719	-0.0214	0.0106	-0.0111
38	0006	53250	1.1398	0.0600	3.5067	2.5050	1.0015	0.0000	0.0000	-0.0003	0.0730	-0.0157	0.0036	-0.0124
39	0006	53250	1.1398	0.0632	3.5103	3.5102	1.4043	0.0000	0.0000	-0.0004	0.1116	-0.0126	-0.0048	-0.0178
40	0006	53250	1.1398	0.0505	3.5081	1.1232	0.3069	0.0000	0.0000	-0.0002	0.0511	-0.0272	0.0137	-0.0137
41	0006	53250	1.1398	0.0311	2.5001	1.1228	0.4337	0.0000	0.0000	-0.0007	0.2638	-0.0261	0.0141	-0.0127
42	0006	53250	1.1398	0.0149	1.5048	1.1227	0.7428	0.0000	0.0000	-0.0013	1.0351	-0.0254	0.0075	-0.0192
43	0006	53230	0.3985	0.3590	1.5016	0.9552	0.0000	0.0000	0.0000	-0.0525	0.0520	-0.0533	0.0201	-0.0857
44	0006	53230	0.3985	0.3592	1.5014	0.9632	0.0286	0.0000	0.0000	-0.0521	0.0515	-0.0498	0.0173	-0.0846
45	0006	53230	0.3985	0.3587	1.5010	0.9710	0.0591	0.0000	0.0000	-0.0525	0.0520	-0.0476	0.0157	-0.0844
46	0006	53230	0.3985	0.3581	2.0089	0.9321	0.0000	0.0000	0.0000	-0.0329	0.0567	-0.0269	0.0155	-0.0443
47	0006	53230	0.3985	0.3587	2.0094	0.9453	0.0288	0.0000	0.0000	-0.0338	0.0581	-0.0258	0.0112	-0.0489
48	0006	53230	0.3985	0.3580	2.0085	0.9589	0.0590	0.0000	0.0000	-0.0325	0.0559	-0.0256	0.0115	-0.0466
49	0006	53230	0.3985	0.3588	2.5134	0.9139	0.0000	0.0000	0.0000	-0.0234	0.0569	-0.0228	0.0084	-0.0379

FACILITY 8X6X1 PROGRAM C03I

NOZZLE TYPE — DUAL FLOW (NASA-LEWIS) — INNER-STREAM PLUG CONFIGURATIONS — 15 DEGREE CONICAL PLUG — SUPPRESSOR CONFIGURATION

THRUST PARAMETERS — OUTER RADIUS RATIO 0.9260 — INNER RADIUS RATIO 0.8000 — OVD 1.2480

RDG	GE	NASA	D2	MA	PTC/PA	PTI/PA	DMEGAT	CDO	CDI	CFNET1	CFNET2	FG
950	0006	53230	0.3985	0.3590	2.5114	0.9340	0.0289	0.9842	9.9999	0.8892	0.8992	1.1280
951	0006	53230	0.3985	0.3589	2.5142	0.9540	0.0588	0.9832	9.9999	0.9083	0.9093	1.1298
952	0006	53230	0.3985	0.3597	3.5091	0.8867	0.0300	0.9860	9.9999	0.8947	0.8947	1.1519
953	0006	53230	0.3985	0.3595	3.5099	0.9231	0.0292	0.9855	9.9999	0.9104	0.9104	1.1504
954	0006	53230	0.3985	0.3590	3.5105	0.9531	0.0589	0.9857	9.9999	0.9245	0.9245	1.1505
955	0006	53230	0.3985	0.3588	2.5129	0.9340	0.0289	0.9842	9.9999	0.8908	0.8908	1.1285
956	0006	53250	0.3985	0.3583	1.5027	0.9624	0.0288	1.0191	9.9999	0.8464	0.8464	1.1009
957	0006	53230	0.3985	0.3583	2.0088	0.9459	0.0289	0.9836	9.9999	0.8719	0.8719	1.1158
958	0006	53250	1.1398	0.3577	1.5000	1.1079	0.6771	1.0192	1.0349	0.9363	1.2620	1.1455
959	0006	53250	1.1398	0.3585	1.5020	1.5097	1.4225	1.0184	1.0156	0.9455	2.2984	1.2168
960	0006	53250	1.1398	0.3583	1.5020	2.5174	2.3820	1.0177	0.9776	0.9546	4.2595	1.2117
961	0006	53250	1.1398	0.3585	1.5011	3.4861	3.3063	1.0183	0.9790	0.9569	6.1883	1.2175
962	0006	53250	1.1398	0.3584	2.0120	1.1130	0.5056	0.9821	1.0214	0.9508	1.1469	1.1585
963	0006	53250	1.1398	0.3589	2.0089	1.5083	1.0517	0.9833	1.0145	0.9479	1.7288	1.2158
964	0006	53250	1.1398	0.3587	2.0097	2.5108	1.7653	0.9828	0.9774	0.9583	2.8742	1.2163
965	0006	53250	1.1398	0.3592	2.0105	3.4465	2.4243	0.9823	0.9804	0.9586	3.9387	1.2194
966	0006	53250	1.1398	0.3581	2.5157	1.1160	0.4069	0.9838	1.0160	0.9518	1.0932	1.1643
967	0006	53250	1.1398	0.3581	2.5127	1.5123	0.8437	0.9835	1.0146	0.9511	1.5082	1.2156
968	0006	53250	1.1398	0.3589	2.5145	2.5181	1.4095	0.9833	0.9773	0.9568	2.3062	1.2139
969	0006	53250	1.1398	0.3586	2.5114	3.4548	1.9400	0.9843	0.9799	0.9613	3.0781	1.2210
970	0006	53250	1.1398	0.3591	3.5104	1.1106	0.2876	0.9843	1.0267	0.9539	1.0399	1.1771
971	0006	53250	1.1398	0.3587	3.5107	1.5063	0.6015	0.9849	1.0182	0.9539	1.3014	1.2201
973	0006	53250	1.1398	0.3593	3.5097	3.5230	1.4111	0.9857	0.9786	0.9570	2.3091	1.2185
974	0006	53250	1.1398	0.3607	3.5107	2.5280	1.0096	0.9858	0.9764	0.9527	1.7982	1.2129
975	0006	53250	1.1398	0.3585	2.5166	1.1168	0.4099	0.9824	1.0189	0.9520	1.0950	1.1643
976	0006	53250	1.1398	0.3578	1.5010	1.1155	0.7009	1.0182	1.0358	0.9537	1.3078	1.1544
977	0006	53250	1.1398	0.3577	2.0111	1.1140	0.5107	0.9798	1.0238	0.9546	1.1544	1.1599
978	0006	53230	0.3985	0.4476	1.5034	0.9591	0.0000	1.0194	9.9999	0.8371	0.8371	1.0988
979	0006	53230	0.3985	0.4467	1.5020	0.9726	0.0588	1.0193	9.9999	0.8722	0.8722	1.1021
980	0006	53230	0.3985	0.4478	2.0017	0.9364	0.0000	0.9826	9.9999	0.8715	0.8715	1.1188
981	0006	53230	0.3985	0.4480	2.0029	0.9650	0.0589	0.9821	9.9999	0.8990	0.8990	1.1175
982	0006	53230	0.3985	0.4475	2.5047	0.9179	0.0000	0.9832	9.9999	0.8842	0.8842	1.1305
983	0006	53230	0.3985	0.4480	2.5036	0.9593	0.0587	0.9840	9.9999	0.9149	0.9149	1.1307
984	0006	53230	0.3985	0.4477	3.5137	0.8859	0.0000	0.9858	9.9999	0.8977	0.8977	1.1535
985	0006	53230	0.3985	0.4472	3.5079	0.9516	0.0588	0.9870	9.9999	0.9254	0.9254	1.1517
986	0006	53230	0.3985	0.4461	3.5124	0.8847	0.0000	0.9865	9.9999	0.8952	0.8952	1.1525
987	0006	53230	0.3985	0.4454	2.5036	0.9183	0.0000	0.9840	9.9999	0.8815	0.8815	1.1292
988	0006	53230	0.3985	0.4455	2.0034	0.9358	0.0000	0.9821	9.9999	0.8678	0.8678	1.1172
989	0006	53230	0.3985	0.4448	1.5019	0.9573	0.0000	1.0191	9.9999	0.8503	0.8503	1.1037
990	0006	53250	1.1398	0.4454	1.4997	2.5044	2.3738	1.0195	0.9786	0.9562	4.2523	1.2152
991	0006	53250	1.1398	0.4456	1.5009	3.5257	3.3425	1.0186	0.9786	0.9566	6.2654	1.2148
992	0006	53250	1.1398	0.4451	2.0034	2.5090	1.7665	0.9824	0.9783	0.9577	2.8741	1.2156
993	0006	53250	1.1398	0.4467	2.0033	3.5293	2.4878	0.9814	0.9782	0.9594	4.0519	1.2184
994	0006	53250	1.1398	0.4462	2.5028	2.5080	1.4111	0.9839	0.9785	0.9579	2.3110	1.2152
995	0006	53250	1.1398	0.4470	2.5031	3.5273	1.9880	0.9836	0.9795	0.9608	3.1475	1.2200

CILITY 9X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9260 INNER RADIUS RATIO 0.8000 DVD 1.2480

AC PARAMETERS

NG	GE	MASS	DZ	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
50	0006	53230	0.3985	0.3590	2.5116	0.9340	0.0289	0.0000	0.0000	-0.0229	0.0556	-0.0220	0.0089	-0.0365
51	0006	53230	0.3985	0.3589	2.5142	0.9540	0.0588	0.0000	0.0000	-0.0223	0.0542	-0.0212	0.0121	-0.0314
52	0006	53230	0.3985	0.3597	3.5081	0.8867	0.0000	0.0000	0.0000	-0.0132	0.0509	-0.0375	0.0045	-0.0463
53	0006	53230	0.3985	0.3595	3.5098	0.9231	0.0292	0.0000	0.0000	-0.0136	0.0526	-0.0377	0.0049	-0.0463
54	0006	53230	0.3985	0.3590	3.5105	0.9531	0.0589	0.0000	0.0000	-0.0131	0.0506	-0.0373	0.0108	-0.0396
55	0006	53230	0.3985	0.3588	2.5129	0.9348	0.0289	0.0000	0.0000	-0.0227	0.0552	-0.0229	0.0083	-0.0373
56	0006	53230	0.3985	0.3583	1.5027	0.9624	0.0288	0.0000	0.0000	-0.0538	0.0536	-0.0501	0.0213	-0.0826
57	0006	53230	0.3985	0.3583	2.0088	0.9459	0.0289	0.0000	0.0000	-0.0323	0.0556	-0.0258	0.0130	-0.0450
58	0006	53250	1.1398	0.3577	1.5000	1.1079	0.6771	0.0000	0.0000	-0.0558	0.0480	-0.0246	0.0237	-0.0367
59	0006	53250	1.1398	0.3585	1.5020	1.5097	1.4225	0.0000	0.0000	-0.0186	0.0449	-0.0138	0.0142	-0.0182
60	0006	53250	1.1398	0.3583	1.5020	2.5174	2.3828	0.0000	0.0000	-0.0108	0.0479	-0.0068	0.0025	-0.0152
61	0006	53250	1.1398	0.3585	1.5011	3.4861	3.3063	0.0000	0.0000	-0.0072	0.0461	-0.0024	-0.0109	-0.0205
62	0006	53250	1.1398	0.3584	2.0129	1.1130	0.5056	0.0000	0.0000	-0.0246	0.0512	-0.0156	0.0222	-0.0180
63	0006	53250	1.1398	0.3589	2.0089	1.5093	1.0517	0.0000	0.0000	-0.0158	0.0493	-0.0095	0.0173	-0.0080
64	0006	53250	1.1398	0.3587	2.0097	2.5188	1.7653	0.0000	0.0000	-0.0098	0.0504	-0.0053	-0.0048	-0.0199
65	0006	53250	1.1398	0.3592	2.0105	3.4465	2.4243	0.0000	0.0000	-0.0070	0.0492	-0.0014	-0.0038	-0.0172
66	0006	53250	1.1398	0.3581	2.5157	1.1160	0.4069	0.0000	0.0000	-0.0181	0.0509	-0.0194	0.0212	-0.0164
67	0006	53250	1.1398	0.3581	2.5127	1.5123	0.8437	0.0000	0.0000	-0.0130	0.0501	-0.0142	0.0195	-0.0087
68	0006	53250	1.1398	0.3589	2.5145	2.5181	1.4095	0.0000	0.0000	-0.0085	0.0495	-0.0092	0.0081	-0.0095
69	0006	53250	1.1398	0.3586	2.5114	3.4548	1.9400	0.0000	0.0000	-0.0064	0.0497	-0.0058	-0.0092	-0.0214
70	0006	53250	1.1398	0.3591	3.5104	1.1106	0.2876	0.0000	0.0000	-0.0108	0.0457	-0.0332	0.0169	-0.0272
71	0006	53250	1.1398	0.3587	3.5107	1.5063	0.6015	0.0000	0.0000	-0.0091	0.0481	-0.0262	0.0146	-0.0207
73	0006	53250	1.1398	0.3593	3.5097	3.5230	1.4111	0.0000	0.0000	-0.0047	0.0443	-0.0143	-0.0019	-0.0209
74	0006	53250	1.1398	0.3607	3.5107	2.5290	1.0096	0.0000	0.0000	-0.0060	0.0434	-0.0182	0.0042	-0.0200
75	0006	53250	1.1398	0.3585	2.5166	1.1168	0.4099	0.0000	0.0000	-0.0181	0.0507	-0.0192	0.0214	-0.0159
76	0006	53250	1.1398	0.3578	1.5010	1.1155	0.7009	0.0000	0.0000	-0.0351	0.0478	-0.0240	0.0239	-0.0352
77	0006	53250	1.1398	0.3577	2.0111	1.1140	0.5107	0.0000	0.0000	-0.0253	0.0528	-0.0156	0.0232	-0.0178
78	0006	53230	0.3985	0.4476	1.5034	0.9591	0.0000	0.0000	0.0000	-0.0817	0.0522	-0.0614	0.0567	-0.0864
79	0006	53230	0.3985	0.4467	1.5020	0.9726	0.0588	0.0000	0.0000	-0.0854	0.0547	-0.0599	0.0500	-0.0954
80	0006	53230	0.3985	0.4478	2.0017	0.9364	0.0000	0.0000	0.0000	-0.0522	0.0571	-0.0330	0.0354	-0.0497
81	0006	53230	0.3985	0.4480	2.0029	0.9650	0.0589	0.0000	0.0000	-0.0516	0.0564	-0.0301	0.0342	-0.0476
82	0006	53230	0.3985	0.4475	2.5047	0.9179	0.0000	0.0000	0.0000	-0.0366	0.0569	-0.0374	0.0222	-0.0518
83	0006	53230	0.3985	0.4480	2.5036	0.9593	0.0587	0.0000	0.0000	-0.0344	0.0534	-0.0354	0.0305	-0.0393
84	0006	53230	0.3985	0.4477	3.5137	0.8859	0.0000	0.0000	0.0000	-0.0205	0.0512	-0.0371	0.0134	-0.0442
85	0006	53230	0.3985	0.4472	3.5079	0.9516	0.0588	0.0000	0.0000	-0.0206	0.0514	-0.0402	0.0100	-0.0508
86	0006	53230	0.3985	0.4461	3.5124	0.8847	0.0000	0.0000	0.0000	-0.0204	0.0512	-0.0375	0.0126	-0.0452
87	0006	53230	0.3985	0.4454	2.5036	0.9183	0.0000	0.0000	0.0000	-0.0361	0.0566	-0.0365	0.0216	-0.0510
88	0006	53230	0.3985	0.4455	2.0034	0.9358	0.0000	0.0000	0.0000	-0.0532	0.0589	-0.0334	0.0348	-0.0519
89	0006	53230	0.3985	0.4448	1.5019	0.9573	0.0000	0.0000	0.0000	-0.0853	0.0551	-0.0620	0.0572	-0.0902
90	0006	53250	1.1398	0.4454	1.4997	2.5044	2.3738	0.0000	0.0000	-0.0170	0.0486	-0.0081	0.0095	-0.0156
91	0006	53250	1.1398	0.4456	1.5008	3.5257	3.3425	0.0000	0.0000	-0.0113	0.0474	-0.0023	-0.0040	-0.0176
92	0006	53250	1.1398	0.4451	2.0034	2.5090	1.7665	0.0000	0.0000	-0.0155	0.0516	-0.0060	0.0024	-0.0191
93	0006	53250	1.1398	0.4467	2.0033	3.5293	2.4878	0.0000	0.0000	-0.0109	0.0506	-0.0013	-0.0049	-0.0171
94	0006	53250	1.1398	0.4462	2.5028	2.5080	1.4111	0.0000	0.0000	-0.0137	0.0516	-0.0136	0.0128	-0.0145
95	0006	53250	1.1398	0.4470	2.5031	3.5273	1.9880	0.0000	0.0000	-0.0096	0.0487	-0.0080	-0.0102	-0.0277

FACILITY RX6XL PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9260 INNER RADIUS RATIO 0.8000 OVD 1.2480

PRC	CE	PASA	D2	PA	PTC/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	F9
996	0006	53250	1.1398	0.4480	3.5155	2.5097	1.0025	0.9855	0.9777	0.9548	1.7929	1.2148
997	0006	53250	1.1398	0.4475	3.5115	3.5328	1.4142	0.9842	0.9790	0.9558	2.3102	1.2174
998	0006	53250	1.1398	0.4463	2.5042	2.5051	1.4105	0.9834	0.9791	0.9564	2.3055	1.2139
999	0006	53250	1.1398	0.4459	1.5051	2.5050	2.3720	1.0157	0.9791	0.9567	4.2387	1.2154
1000	0006	53230	0.3985	0.3645	1.5005	0.9556	0.0000	1.0200	9.9999	0.8466	0.8466	1.1047
1001	0006	53230	0.3985	0.3611	1.5011	0.9705	0.0589	1.0196	9.9999	0.8717	0.8717	1.1042
1002	0006	53230	0.3985	0.3580	2.0109	0.9329	0.0000	0.9835	9.9999	0.8624	0.8624	1.1176
1003	0006	53230	0.3985	0.3575	2.0122	0.9597	0.0590	0.9829	9.9999	0.8911	0.8911	1.1178
1004	0006	53230	0.3985	0.3572	2.5142	0.9127	0.0000	0.9848	9.9999	0.8784	0.8784	1.1310
1005	0006	53230	0.3985	0.3578	2.5170	0.9532	0.0587	0.9838	9.9999	0.9092	0.9092	1.1310
1006	0006	53230	0.3985	0.3590	3.5072	0.8672	0.0000	0.9866	9.9999	0.8943	0.8943	1.1518
1007	0006	53230	0.3985	0.3590	3.5115	0.9534	0.0589	0.9858	9.9999	0.9245	0.9245	1.1505
1008	0006	53230	0.3985	0.3597	3.5105	0.8877	0.0000	0.9863	9.9999	0.8936	0.8936	1.1509
1009	0006	53230	0.3985	0.3588	3.0105	0.9049	0.0000	0.9855	9.9999	0.8869	0.8869	1.1387
1010	0006	53230	0.3985	0.3584	2.5152	0.9141	0.0000	0.9843	9.9999	0.8756	0.8756	1.1287
1011	0006	53230	0.3985	0.3575	2.0099	0.9325	0.0000	0.9837	9.9999	0.8601	0.8601	1.1168
1012	0006	53230	0.3985	0.3579	1.5003	0.9555	0.0000	1.0205	9.9999	0.8339	0.8339	1.1010

FACILITY 8X6X1 PROGRAM C03I

NOZZLE TYPE — DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS — 15 DEGREE CONICAL PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS — OUTER RADIUS RATIO 0.9250 — INNER RADIUS RATIO 0.8000 — DVO 1.2480

RDG	CE	NASA	M2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
996	0006	53250	1.1398	0.4430	3.5155	2.5097	1.0025	0.0000	0.0000	-0.0097	0.0456	-0.0232	0.0016	-0.0313
997	0006	53250	1.1398	0.4475	3.5115	3.5328	1.4142	0.0000	0.0000	-0.0076	0.0456	-0.0172	0.0029	-0.0219
998	0006	53250	1.1398	0.4463	2.5042	2.5051	1.4105	0.0000	0.0000	-0.0135	0.0509	-0.0135	0.0129	-0.0141
999	0006	53250	1.1398	0.4459	1.5051	2.5050	2.3720	0.0000	0.0000	-0.0175	0.0498	-0.0078	0.0093	-0.0160
1000	0006	53230	0.3985	0.3645	1.5005	0.9556	0.0000	0.0000	0.0000	-0.0550	0.0528	-0.0533	0.0252	-0.0831
1001	0006	53230	0.3985	0.3611	1.5011	0.9705	0.0589	0.0000	0.0000	-0.0536	0.0524	-0.0474	0.0207	-0.0802
1002	0006	53230	0.3985	0.3580	2.0109	0.9329	0.0000	0.0000	0.0000	-0.0322	0.0555	-0.0253	0.0171	-0.0404
1003	0006	53230	0.3985	0.3575	2.0122	0.9597	0.0590	0.0000	0.0000	-0.0332	0.0575	-0.0243	0.0135	-0.0440
1004	0006	53230	0.3985	0.3572	2.5142	0.9127	0.0000	0.0000	0.0000	-0.0236	0.0580	-0.0225	0.0089	-0.0371
1005	0006	53230	0.3985	0.3578	2.5170	0.9532	0.0597	0.0000	0.0000	-0.0224	0.0549	-0.0200	0.0129	-0.0294
1006	0006	53230	0.3985	0.3590	3.5072	0.8872	0.0000	0.0000	0.0000	-0.0131	0.0509	-0.0387	0.0039	-0.0479
1007	0006	53230	0.3985	0.3590	3.5115	0.9534	0.0599	0.0000	0.0000	-0.0131	0.0508	-0.0389	0.0108	-0.0412
1008	0006	53230	0.3985	0.3597	3.5105	0.8877	0.0000	0.0000	0.0000	-0.0135	0.0521	-0.0381	0.0044	-0.0472
1009	0006	53230	0.3985	0.3588	3.0105	0.9049	0.0000	0.0000	0.0000	-0.0171	0.0538	-0.0306	0.0124	-0.0352
1010	0006	53230	0.3985	0.3584	2.5152	0.9141	0.0000	0.0000	0.0000	-0.0229	0.0560	-0.0201	0.0096	-0.0337
1011	0006	53230	0.3985	0.3575	2.0099	0.9325	0.0000	0.0000	0.0000	-0.0333	0.0577	-0.0261	0.0174	-0.0420
1012	0006	53230	0.3985	0.3579	1.5003	0.9555	0.0000	0.0000	0.0000	-0.0538	0.0536	-0.0498	0.0281	-0.0795

FACILITY 8X6X1 PROGRAM COST

NOZZLE TYPE — INNER-STREAM PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

TRIAL FLOW (NASA-LEWIS) — BENT PLUG

THRUST PARAMETERS — OUTER RADIUS RATIO 0.9020 — INNER RADIUS RATIO 0.8000 — DVO 1.2480

RDC	GE	NASA	D2	MP	PTC/PA	PTE/PA	OMEGAT	CDD	CDI	CFNET1	CFNET2	FG
1013	0004	52330	0.3985	0.0103	1.5032	0.9502	0.0000	1.0210	9.9999	0.9457	0.9457	1.1544
1014	0004	52330	0.3985	0.0129	1.5037	0.9416	0.0290	1.0207	9.9999	0.9481	0.9481	1.1498
1015	0004	52330	0.3985	0.0226	1.5043	0.9749	0.0592	1.0201	9.9999	0.9595	0.9595	1.1474
1016	0004	52330	0.3985	0.0181	2.0028	0.9160	0.0000	0.9842	9.9999	0.9294	0.9294	1.1670
1017	0004	52330	0.3985	0.0257	2.0031	0.9398	0.0291	0.9842	9.9999	0.9416	0.9416	1.1636
1018	0004	52330	0.3985	0.0213	2.0023	0.9633	0.0590	0.9845	9.9999	0.9520	0.9520	1.1596
1019	0004	52330	0.3985	0.0401	2.5071	0.8873	0.0000	0.9850	9.9999	0.9327	0.9327	1.1795
1020	0004	52330	0.3985	0.0342	2.5057	0.8996	0.0094	0.9854	9.9999	0.9351	0.9351	1.1770
1021	0004	52330	0.3985	0.0276	2.5056	0.9128	0.0193	0.9851	9.9999	0.9392	0.9392	1.1747
1022	0004	52330	0.3985	0.0316	2.5059	0.9276	0.0292	0.9850	9.9999	0.9433	0.9433	1.1720
1023	0004	52330	0.3985	0.0349	2.5069	0.9636	0.0590	0.9848	9.9999	0.9558	0.9558	1.1672
1024	0004	52330	0.3985	0.0511	3.5180	0.8435	0.0000	0.9859	9.9999	0.9356	0.9356	1.1991
1025	0004	52330	0.3985	0.0503	3.5015	0.9139	0.0291	0.9914	9.9999	0.9507	0.9507	1.1952
1026	0004	52330	0.3985	0.0543	3.5184	0.9752	0.0590	0.9866	9.9999	0.9625	0.9625	1.1842
1027	0004	52330	0.3985	0.0524	3.4803	0.8485	0.0000	0.9886	9.9999	0.9361	0.9361	1.1998
1028	0004	52330	0.3985	0.0513	3.4895	0.9192	0.0292	0.9894	9.9999	0.9491	0.9491	1.1908
1029	0004	52330	0.3985	0.0513	3.4664	0.9821	0.0591	0.9881	9.9999	0.9629	0.9629	1.1830
1030	0004	52330	0.3985	0.0414	2.5027	0.9641	0.0591	0.9859	9.9999	0.9551	0.9551	1.1677
1031	0004	52330	0.3985	0.0265	2.0045	0.9636	0.0590	0.9842	9.9999	0.9501	0.9501	1.1584
1032	0004	52330	0.3985	0.0194	1.5049	0.9754	0.0593	1.0192	9.9999	0.9516	0.9516	1.1441
1033	0004	52350	1.1398	0.0200	1.5000	1.1163	0.4285	1.0230	0.8732	0.9698	1.1908	1.1417
1034	0004	52350	1.1398	0.0329	1.5004	1.5063	0.9773	1.0220	0.9620	0.9666	1.9106	1.2164
1035	0004	52350	1.1398	0.0510	1.5014	2.5055	1.7135	1.0215	0.9769	0.9575	3.3373	1.2185
1036	0004	52350	1.1398	0.0548	1.5032	3.5265	2.4225	1.0206	0.9817	0.9528	4.7782	1.2181
1037	0004	52350	1.1398	0.0258	2.0033	1.1205	0.3022	0.9844	0.8139	0.9698	1.0934	1.1681
1038	0004	52350	1.1398	0.0426	1.9966	1.5077	0.6999	0.9840	0.9271	0.9660	1.4970	1.2084
1039	0004	52350	1.1398	0.0533	1.9960	2.5059	1.2794	0.9855	0.9776	0.9559	2.3436	1.2172
1040	0004	52350	1.1398	0.0571	2.0022	3.5270	1.8024	0.9849	0.9805	0.9506	3.1708	1.2143
1041	0004	52350	1.1398	0.0355	2.5043	1.1212	0.2271	0.9647	0.7629	0.9689	1.0510	1.1714
1042	0004	52350	1.1398	0.0428	2.5016	1.5164	0.4525	0.9838	0.8758	0.9600	1.3589	1.2021
1043	0004	52350	1.1398	0.0571	2.5031	2.5085	1.0198	0.9855	0.9763	0.9534	1.9267	1.2130
1044	0004	52350	1.1398	0.0598	2.5044	3.5169	1.4338	0.9855	0.9793	0.9465	2.4980	1.2095
1045	0004	52350	1.1398	0.0503	3.5009	1.1106	0.1463	0.9840	0.7180	0.9617	1.0058	1.1786
1046	0004	52350	1.1398	0.0554	3.5109	1.5118	0.3630	0.9895	0.8466	0.9647	1.1777	1.2040
1047	0004	52350	1.1398	0.0608	3.4904	2.5096	0.7316	0.9854	0.9766	0.9459	1.5533	1.2082
1048	0004	52350	1.1398	0.0674	3.4816	3.5368	1.0792	0.9922	0.9787	0.9433	1.9102	1.2093
1049	0004	52350	1.1398	0.0549	3.5102	1.5184	0.3662	0.9877	0.8471	0.9658	1.1820	1.2038
1050	0004	52350	1.1398	0.0504	2.5062	1.5163	0.5404	0.9852	0.8918	0.9652	1.5288	1.2017
1051	0004	52350	1.1398	0.0657	3.4934	3.5367	1.0301	0.9892	0.9799	0.9422	1.9168	1.2079
1052	0004	52350	1.1398	0.0576	2.5063	2.5086	1.0213	0.9847	0.9782	0.9523	1.9252	1.2125
1053	0004	52350	1.1398	0.0528	2.5054	2.0159	0.8155	0.9868	0.9740	0.9568	1.6499	1.2183
1054	0004	52350	1.1398	0.0497	2.5039	1.5182	0.5413	0.9856	0.8913	0.9655	1.3305	1.2020
1055	0004	52350	1.1398	0.0519	2.0042	2.5111	1.2766	0.9853	0.9772	0.9551	2.3365	1.2163
1056	0004	52350	1.1398	0.0514	1.5064	2.5096	1.7138	1.0191	0.9778	0.9577	3.3310	1.2168
1057	0004	52330	0.3985	0.4427	1.5226	0.9504	0.0000	1.0145	9.9999	0.8944	0.8944	1.1328

BAD POINT

TUNNEL EXHAUSTERS OFF

TUNNEL EXHAUSTERS ON

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: RENT PLUG

SUPPRESSOR CONFIGURATION

FAC PARAMETERS — OUTER RADIUS RATIO 0.9020 — INNER RADIUS RATIO 0.8000 — DVD 1.2480

PDG	GF	NASA	M2	MA	PTO/PA	PTI/PA	ONEGAT	DFS	GDS	DFSH	GDSH	DGPL,0	DGPL,I	DGTOT
013	0004	52330	0.3985	0.0103	1.5032	0.9502	0.0000	0.0000	0.0000	-0.0011	1.8554	-0.0323	0.0358	0.0033
014	0004	52330	0.3985	0.0129	1.5037	0.9616	0.0299	0.0000	0.0000	-0.0012	1.2401	-0.0314	0.0298	-0.0028
015	0004	52330	0.3985	0.0226	1.5043	0.9749	0.0592	0.0000	0.0000	-0.0009	0.3227	-0.0297	0.0218	-0.0089
016	0004	52330	0.3985	0.0181	2.0028	0.9160	0.0000	0.0000	0.0000	-0.0010	0.8985	-0.0217	0.0415	0.0189
017	0004	52330	0.3985	0.0252	2.0031	0.9398	0.0291	0.0000	0.0000	-0.0007	0.3459	-0.0215	0.0322	0.0100
018	0004	52330	0.3985	0.0213	2.0023	0.9633	0.0590	0.0000	0.0000	-0.0009	0.5768	-0.0211	0.0272	0.0002
019	0004	52330	0.3985	0.0401	2.5071	0.8873	0.0000	0.0000	0.0000	-0.0002	0.0627	-0.0448	0.0420	-0.0030
020	0004	52330	0.3985	0.0342	2.5057	0.8996	0.0294	0.0000	0.0000	-0.0005	0.1718	-0.0449	0.0381	-0.0072
021	0004	52330	0.3985	0.0278	2.5056	0.9128	0.0193	0.0000	0.0000	-0.0007	0.4163	-0.0449	0.0339	-0.0117
022	0004	52330	0.3985	0.0316	2.5059	0.9276	0.0292	0.0000	0.0000	-0.0006	0.2539	-0.0444	0.0304	-0.0145
023	0004	52330	0.3985	0.0349	2.5069	0.9636	0.0590	0.0000	0.0000	-0.0006	0.2120	-0.0448	0.0206	-0.0248
024	0004	52330	0.3985	0.0511	3.5180	0.8435	0.0000	0.0000	0.0000	-0.0002	0.0443	-0.0348	0.0333	-0.0017
025	0004	52330	0.3985	0.0503	3.5015	0.9139	0.0291	0.0000	0.0000	-0.0002	0.0664	-0.0344	0.0136	-0.0210
026	0004	52330	0.3985	0.0543	3.5184	0.9752	0.0590	0.0000	0.0000	-0.0002	0.0494	-0.0346	0.0135	-0.0214
027	0004	52330	0.3985	0.0524	3.4803	0.8485	0.0000	0.0000	0.0000	-0.0002	0.0540	-0.0344	0.0351	0.0005
028	0004	52330	0.3985	0.0513	3.4895	0.9192	0.0292	0.0000	0.0000	-0.0003	0.0657	-0.0346	0.0139	-0.0209
029	0004	52330	0.3985	0.0513	3.4664	0.9821	0.0591	0.0000	0.0000	-0.0002	0.0640	-0.0320	0.0123	-0.0199
030	0004	52330	0.3985	0.0414	2.5027	0.9641	0.0591	0.0000	0.0000	-0.0003	0.0862	-0.0433	0.0214	-0.0227
031	0004	52330	0.3985	0.0265	2.0045	0.9636	0.0590	0.0000	0.0000	-0.0008	0.3428	-0.0203	0.0235	0.0024
032	0004	52330	0.3985	0.0194	1.5049	0.9754	0.0593	0.0000	0.0000	-0.0009	0.4348	-0.0274	0.0244	-0.0039
033	0004	52350	1.1398	0.0200	1.5000	1.1163	0.4285	0.0000	0.0000	-0.0009	0.4845	-0.0171	-0.0001	-0.0181
034	0004	52350	1.1398	0.0329	1.5004	1.5063	0.9723	0.0000	0.0000	-0.0006	0.1819	-0.0092	-0.0101	-0.0198
035	0004	52350	1.1398	0.0510	1.5014	2.5055	1.7135	0.0000	0.0000	-0.0002	0.0479	-0.0046	-0.0221	-0.0269
036	0004	52350	1.1398	0.0548	1.5032	3.5265	2.4225	0.0000	0.0000	-0.0003	0.0930	-0.0011	-0.0208	-0.0221
037	0004	52350	1.1398	0.0258	2.0033	1.1205	0.3022	0.0000	0.0000	-0.0007	0.3730	-0.0166	0.0037	-0.0137
038	0004	52350	1.1398	0.0426	1.9986	1.5077	0.6999	0.0000	0.0000	-0.0003	0.0763	-0.0104	-0.0058	-0.0165
039	0004	52350	1.1398	0.0533	1.9960	2.5059	1.2794	0.0000	0.0000	-0.0002	0.0605	-0.0067	-0.0213	-0.0282
040	0004	52350	1.1398	0.0571	2.0022	3.5270	1.8024	0.0000	0.0000	-0.0003	0.1009	-0.0023	-0.0245	-0.0272
041	0004	52350	1.1398	0.0355	2.5063	1.1212	0.2271	0.0000	0.0000	-0.0005	0.1743	-0.0409	0.0049	-0.0365
042	0004	52350	1.1398	0.0418	2.5016	1.5168	0.3625	0.0000	0.0000	-0.0002	0.0520	-0.0312	0.0160	-0.0474
043	0004	52350	1.1398	0.0571	2.5031	2.5085	1.0198	0.0000	0.0000	-0.0003	0.0687	-0.0217	-0.0225	-0.0444
044	0004	52350	1.1398	0.0598	2.5044	3.5169	1.4238	0.0000	0.0000	-0.0003	0.0972	-0.0145	-0.0278	-0.0426
045	0004	52350	1.1398	0.0503	3.5009	1.1106	0.1463	0.0000	0.0000	-0.0003	0.0765	-0.0326	0.0100	-0.0229
046	0004	52350	1.1398	0.0554	3.5109	1.5118	0.3630	0.0000	0.0000	-0.0003	0.0896	-0.0274	-0.0024	-0.0301
047	0004	52350	1.1398	0.0608	3.4904	2.5095	0.7316	0.0000	0.0000	-0.0004	0.1092	-0.0196	-0.0221	-0.0421
048	0004	52350	1.1398	0.0674	3.4816	3.5368	1.0292	0.0000	0.0000	-0.0003	0.0966	-0.0160	-0.0285	-0.0448
049	0004	52350	1.1398	0.0549	3.5102	1.5184	0.3662	0.0000	0.0000	-0.0003	0.0778	-0.0269	-0.0024	-0.0296
050	0004	52350	1.1398	0.0504	2.5062	1.5165	0.5404	0.0000	0.0000	-0.0001	0.0273	-0.0308	-0.0058	-0.0367
051	0004	52350	1.1398	0.0657	3.4934	3.5367	1.0301	0.0000	0.0000	-0.0003	0.1085	-0.0156	-0.0285	-0.0444
052	0004	52350	1.1398	0.0576	2.5063	2.5086	1.0213	0.0000	0.0000	-0.0002	0.0645	-0.0212	-0.0228	-0.0442
053	0004	52350	1.1398	0.0528	2.5054	2.0159	0.8155	0.0000	0.0000	-0.0003	0.0694	-0.0246	-0.0185	-0.0434
054	0004	52350	1.1398	0.0497	2.5039	1.5182	0.5413	0.0000	0.0000	-0.0002	0.0366	-0.0308	-0.0059	-0.0368
055	0004	52350	1.1398	0.0519	2.0042	2.5111	1.2766	0.0000	0.0000	-0.0002	0.0683	-0.0066	-0.0212	-0.0281
056	0004	52350	1.1398	0.0514	1.5064	2.5096	1.7138	0.0000	0.0000	-0.0002	0.0531	-0.0042	-0.0210	-0.0254
057	0004	52330	0.3985	0.4427	1.5226	0.9504	0.0000	0.0000	0.0000	-0.0532	0.0493	-0.0562	0.0734	-0.0360

TUNNEL EXHAUSTERS OFF

TUNNEL EXHAUSTERS ON

FACILITY 8X6X1 PROGRAM C03I

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
CENT PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9020 INNER RADIUS RATIO 0.8000 DVD 1.2480

REC	GE	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CENET1	CENET2	F9	
1058	0004	52330	0.3985	0.4429	1.9970	0.9191	0.0000	0.9779	9.9999	0.9138	0.9138	1.1523	
1059	0004	52330	0.3985	0.4414	2.4032	0.8899	0.0000	0.9785	9.9999	0.9291	0.9291	1.1705	
1060	0004	52330	0.3985	0.4403	3.5418	0.8323	0.0000	0.9860	9.9999	0.9278	0.9278	1.1951	TUNNEL
1061	0004	52330	0.3985	0.4393	3.5435	0.8330	0.0000	0.9865	9.9999	0.9268	0.9268	1.1940	EXHAUSTERS
1062	0004	52330	0.3985	0.4440	3.5379	0.8343	0.0000	0.9852	9.9999	0.9278	0.9278	1.1935	ON
1063	0004	52330	0.3985	0.4425	2.5078	0.8912	0.0000	0.9849	9.9999	0.9231	0.9231	1.1700	
1064	0004	52330	0.3985	0.4420	2.0031	0.9190	0.0000	0.9839	9.9999	0.9124	0.9124	1.1544	
1065	0004	52330	0.3985	0.4409	1.5080	0.9518	0.0000	1.0213	9.9999	0.9043	0.9043	1.1366	
1066	0004	52330	0.3985	0.4498	1.5001	0.9535	0.0000	1.0231	9.9999	0.9019	0.9019	1.1346	
1067	0004	52330	0.3985	0.4498	1.9975	0.9188	0.0000	0.9844	9.9999	0.9127	0.9127	1.1549	
1068	0004	52330	0.3985	0.4498	2.5069	0.8916	0.0000	0.9841	9.9999	0.9241	0.9241	1.1700	
1069	0004	52330	0.3985	0.4512	3.5232	0.8354	0.0000	0.9866	9.9999	0.9300	0.9300	1.1958	TUNNEL EXHA
1070	0004	52330	0.3985	0.4483	1.5049	0.9527	0.0000	1.0219	9.9999	0.9006	0.9006	1.1346	OFF
1071	0004	52330	0.3985	0.4478	1.5007	0.9838	0.0595	1.0232	9.9999	0.9250	0.9250	1.1288	
1072	0004	52330	0.3985	0.4487	2.4947	0.8914	0.0000	0.9853	9.9999	0.9248	0.9248	1.1712	
1073	0004	52330	0.3985	0.4480	2.5089	0.9754	0.0592	0.9831	9.9999	0.9481	0.9481	1.1554	
1074	0004	52330	0.3985	0.4487	3.5272	0.8349	0.0000	0.9855	9.9999	0.9283	0.9283	1.1938	
1075	0004	52330	0.3985	0.4479	2.5086	0.9800	0.0591	0.9792	9.9999	0.9564	0.9564	1.2211	BAD POINT
1076	0004	52330	0.3985	0.4467	2.0027	0.9180	0.0000	0.9840	9.9999	0.9107	0.9107	1.1540	
1077	0004	52330	0.3985	0.4471	2.0000	0.9738	0.0591	0.9843	9.9999	0.9373	0.9373	1.1455	
1078	0004	52330	0.3985	0.4477	3.4997	0.9761	0.0592	0.9877	9.9999	0.9585	0.9585	1.1799	
1079	0004	52350	1.1398	0.4475	1.4913	2.5079	1.7176	1.0269	0.9739	0.9517	3.3625	1.2112	
1080	0004	52350	1.1393	0.4476	1.5015	3.5198	2.4077	1.0226	0.9779	0.9521	4.7539	1.2137	
1081	0004	52350	1.1398	0.4482	1.9955	2.5003	1.2769	0.9851	0.9773	0.9506	2.3269	1.2112	
1082	0004	52350	1.1398	0.4491	2.0032	3.5139	1.7905	0.9843	0.9774	0.9500	3.1505	1.2105	
1083	0004	52350	1.1398	0.4484	2.5053	2.5068	1.0191	0.9842	0.9759	0.9496	1.9175	1.2076	
1084	0004	52350	1.1393	0.4485	2.4964	3.5173	1.4343	0.9869	0.9778	0.9463	2.5007	1.2069	
1085	0004	52350	1.1398	0.4484	3.4849	2.5047	0.7302	0.9869	0.9764	0.9447	1.5499	1.2066	
1086	0004	52350	1.1398	0.4491	3.5014	3.5191	1.0227	0.9867	0.9776	0.9409	1.9047	1.2029	
1087	0004	52350	1.1398	0.4472	2.0007	2.5091	1.2781	0.9864	0.9769	0.9491	2.3242	1.2095	
1088	0004	52350	1.1398	0.4469	1.5012	2.5064	1.7136	1.0222	0.9772	0.9493	3.3097	1.2108	
1089	0004	52330	0.3985	0.3571	1.5002	0.9543	0.0000	1.0247	9.9999	0.9164	0.9164	1.1410	
1090	0004	52330	0.3985	0.3563	1.5015	0.9693	0.0291	1.0233	9.9999	0.9265	0.9265	1.1372	
1091	0004	52330	0.3985	0.3565	1.5007	0.9828	0.0593	1.0236	9.9999	0.9373	0.9373	1.1347	
1092	0004	52330	0.3985	0.3575	2.0045	0.9193	0.0000	0.9847	9.9999	0.9168	0.9168	1.1578	
1093	0004	52330	0.3985	0.3576	2.0113	0.9460	0.0290	0.9811	9.9999	0.9344	0.9344	1.1544	
1094	0004	52330	0.3985	0.3584	2.0091	0.9721	0.0589	0.9845	9.9999	0.9418	0.9418	1.1494	
1095	0004	52330	0.3985	0.3589	2.5117	0.8924	0.0000	0.9830	9.9999	0.9265	0.9265	1.1713	
1096	0004	52330	0.3985	0.3583	2.5148	0.9063	0.0094	0.9847	9.9999	0.9298	0.9298	1.1696	
1097	0004	52330	0.3985	0.3592	2.5154	0.9204	0.0193	0.9842	9.9999	0.9346	0.9346	1.1673	
1098	0004	52330	0.3985	0.3594	2.5125	0.9355	0.0292	0.9851	9.9999	0.9398	0.9398	1.1659	
1099	0004	52330	0.3985	0.3592	2.5093	0.9734	0.0592	0.9867	9.9999	0.9531	0.9531	1.1620	
1100	0004	52330	0.3985	0.3606	3.5149	0.8346	0.0000	0.9882	9.9999	0.9316	0.9316	1.1991	BAD POINT
1101	0004	52330	0.3985	0.3614	3.5280	0.9119	0.0291	0.9872	9.9999	0.9450	0.9450	1.1674	
1102	0004	52330	0.3985	0.3604	3.5312	0.9716	0.0590	0.9847	9.9999	0.9621	0.9621	1.1827	

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: CENT PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS — OUTER RADIUS RATIO: 0.9020 — INNER RADIUS RATIO: 0.8000 — DVD: 1.2480

PDG	GF	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT	
1058	0004	52330	0.3985	0.4429	1.9970	0.9191	0.0000	0.0000	0.0000	-0.0325	0.0496	-0.0365	0.0650	-0.0330	TUNNEL
1059	0004	52330	0.3985	0.4414	2.4532	0.8899	0.0000	0.0000	0.0000	-0.0230	0.0500	-0.0588	0.0509	-0.0309	EXHAUST
1060	0004	52330	0.3985	0.4403	3.5418	0.8323	0.0000	0.0000	0.0000	-0.0112	0.0405	-0.0381	0.0452	-0.0042	
1061	0004	52330	0.3985	0.4393	3.5435	0.8330	0.0000	0.0000	0.0000	-0.0115	0.0415	-0.0368	0.0452	-0.0031	ON
1062	0004	52330	0.3985	0.4440	3.5379	0.8343	0.0000	0.0000	0.0000	-0.0119	0.0419	-0.0389	0.0457	-0.0050	
1063	0004	52330	0.3985	0.4425	2.5028	0.8912	0.0000	0.0000	0.0000	-0.0219	0.0479	-0.0577	0.0508	-0.0287	
1064	0004	52330	0.3985	0.4420	2.0031	0.9190	0.0000	0.0000	0.0000	-0.0314	0.0488	-0.0383	0.0635	-0.0063	
1065	0004	52330	0.3985	0.4409	1.5080	0.9518	0.0000	0.0000	0.0000	-0.0539	0.0494	-0.0534	0.0751	-0.0322	
1066	0004	52330	0.3985	0.4498	1.5001	0.9535	0.0000	0.0000	0.0000	-0.0536	0.0467	-0.0541	0.0754	-0.0324	
1067	0004	52330	0.3985	0.4498	1.9976	0.9188	0.0000	0.0000	0.0000	-0.0330	0.0492	-0.0373	0.0662	-0.0041	
1068	0004	52330	0.3985	0.4498	2.5069	0.8916	0.0000	0.0000	0.0000	-0.0225	0.0477	-0.0579	0.0518	-0.0286	EXHAUST
1069	0004	52330	0.3985	0.4512	3.5232	0.8354	0.0000	0.0000	0.0000	-0.0120	0.0408	-0.0396	0.0469	-0.0047	OFF
1070	0004	52330	0.3985	0.4483	1.5048	0.9527	0.0000	0.0000	0.0000	-0.0540	0.0477	-0.0548	0.0752	-0.0336	
1071	0004	52330	0.3985	0.4478	1.5007	0.9838	0.0595	0.0000	0.0000	-0.0525	0.0462	-0.0478	0.0453	-0.0549	
1072	0004	52330	0.3985	0.4487	2.4947	0.9914	0.0000	0.0000	0.0000	-0.0231	0.0491	-0.0587	0.0507	-0.0311	
1073	0004	52330	0.3985	0.4480	2.5089	0.9754	0.0592	0.0000	0.0000	-0.0219	0.0470	-0.0569	0.0329	-0.0460	
1074	0004	52330	0.3985	0.4487	3.5272	0.8349	0.0000	0.0000	0.0000	-0.0121	0.0417	-0.0384	0.0471	-0.0034	
1075	0004	52330	0.3985	0.4479	3.5086	0.9800	0.0591	0.0000	0.0000	-0.0120	0.0410	-0.0427	0.0256	-0.0291	BAD
1076	0004	52330	0.3985	0.4467	2.0027	0.9180	0.0000	0.0000	0.0000	-0.0322	0.0489	-0.0379	0.0552	-0.0050	POINT
1077	0004	52330	0.3985	0.4471	2.0000	0.9738	0.0591	0.0000	0.0000	-0.0318	0.0482	-0.0332	0.0401	-0.0249	
1078	0004	52330	0.3985	0.4477	3.4997	0.9761	0.0592	0.0000	0.0000	-0.0119	0.0407	-0.0404	0.0245	-0.0278	
1079	0004	52350	1.1398	0.4475	1.4913	2.5079	1.7176	0.0000	0.0000	-0.0132	0.0402	-0.0057	-0.0201	-0.0390	
1080	0004	52350	1.1398	0.4476	1.5015	3.5198	2.4077	0.0000	0.0000	-0.0088	0.0388	-0.0006	-0.0174	-0.0269	
1081	0004	52350	1.1398	0.4482	1.5956	2.5003	1.2769	0.0000	0.0000	-0.0117	0.0431	-0.0071	-0.0225	-0.0413	
1082	0004	52350	1.1398	0.4491	2.0032	3.5139	1.7905	0.0000	0.0000	-0.0084	0.0419	-0.0015	-0.0319	-0.0417	
1083	0004	52350	1.1398	0.4484	2.5053	2.5068	1.0191	0.0000	0.0000	-0.0093	0.0401	-0.0224	-0.0223	-0.0540	
1084	0004	52350	1.1398	0.4485	2.4964	3.5173	1.4343	0.0000	0.0000	-0.0071	0.0400	-0.0131	-0.0300	-0.0502	
1085	0004	52350	1.1398	0.4484	3.4849	2.5047	0.7302	0.0000	0.0000	-0.0063	0.0351	-0.0241	-0.0256	-0.0559	
1086	0004	52350	1.1398	0.4491	3.5014	3.5191	1.0227	0.0000	0.0000	-0.0049	0.0336	-0.0184	-0.0310	-0.0543	
1087	0004	52350	1.1398	0.4472	2.0007	2.5081	1.2781	0.0000	0.0000	-0.0116	0.0429	-0.0071	-0.0225	-0.0412	
1088	0004	52350	1.1398	0.4469	1.5012	2.5064	1.7136	0.0000	0.0000	-0.0136	0.0418	-0.0062	-0.0194	-0.0392	
1089	0004	52330	0.3985	0.3571	1.5002	0.9543	0.0000	0.0000	0.0000	-0.0314	0.0434	-0.0439	0.0663	-0.0090	
1090	0004	52330	0.3985	0.3563	1.5015	0.9693	0.0291	0.0000	0.0000	-0.0322	0.0448	-0.0409	0.0525	-0.0206	
1091	0004	52330	0.3985	0.3565	1.5007	0.9828	0.0593	0.0000	0.0000	-0.0320	0.0444	-0.0393	0.0407	-0.0306	
1092	0004	52330	0.3985	0.3575	2.0045	0.9193	0.0000	0.0000	0.0000	-0.0203	0.0482	-0.0307	0.0586	-0.0077	
1093	0004	52330	0.3985	0.3576	2.0113	0.9460	0.0290	0.0000	0.0000	-0.0207	0.0494	-0.0296	0.0474	-0.0030	
1094	0004	52330	0.3985	0.3584	2.0091	0.9721	0.0589	0.0000	0.0000	-0.0199	0.0472	-0.0292	0.0349	-0.0142	
1095	0004	52330	0.3985	0.3589	2.5117	0.8924	0.0000	0.0000	0.0000	-0.0141	0.0472	-0.0538	0.0483	-0.0196	
1096	0004	52330	0.3985	0.3583	2.5148	0.9063	0.0004	0.0000	0.0000	-0.0144	0.0484	-0.0531	0.0458	-0.0217	
1097	0004	52330	0.3985	0.3592	2.5154	0.9204	0.0193	0.0000	0.0000	-0.0143	0.0480	-0.0532	0.0417	-0.0258	
1098	0004	52330	0.3985	0.3594	2.5125	0.9356	0.0292	0.0000	0.0000	-0.0140	0.0468	-0.0504	0.0391	-0.0254	
1099	0004	52330	0.3985	0.3592	2.5093	0.9734	0.0592	0.0000	0.0000	-0.0139	0.0464	-0.0526	0.0306	-0.0359	
1100	0004	52330	0.3985	0.3606	3.5157	0.8364	0.0000	0.0000	0.0000	-0.0078	0.0417	-0.0352	0.0343	-0.0037	BAD
1101	0004	52330	0.3985	0.3614	3.5280	0.9119	0.0291	0.0000	0.0000	-0.0077	0.0409	-0.0329	0.0216	-0.0190	POINT
1102	0004	52330	0.3985	0.3604	3.5312	0.9716	0.0590	0.0000	0.0000	-0.0077	0.0413	-0.0320	0.0204	-0.0193	

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIST

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9020
INNER RADIUS RATIO 0.8000
DVD 1.2480

PDG	GF	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	CDT	CDI	CFNETI	CFNET2	F9
1103	0004	52350	0.3985	0.3607	3.5464	0.8302	0.0000	0.9872	9.9999	0.9304	0.9304	1.1987
1104	0004	52350	0.3985	0.3593	3.5452	0.9122	0.0291	0.9851	9.9999	0.9449	0.9449	1.1859
1105	0004	52350	0.3985	0.3581	3.5192	0.9357	0.0292	0.9844	9.9999	0.9403	0.9403	1.1657
1106	0004	52350	0.3985	0.3578	1.5075	0.9703	0.0291	1.0209	9.9999	0.9254	0.9254	1.1362
1107	0004	52350	1.1398	0.3572	1.4994	1.1115	0.4045	1.0241	0.8420	0.9638	1.1672	1.1546
1108	0004	52350	1.1398	0.3568	1.5003	1.5099	0.9704	1.0240	0.9586	0.9635	1.9053	1.2129
1109	0004	52350	1.1398	0.3574	1.5000	2.5220	1.7241	1.0236	0.9772	0.9549	3.3530	1.2158
1110	0004	52350	1.1398	0.3575	1.5010	3.5097	2.4025	1.0230	0.9785	0.9569	4.7672	1.2187
1111	0004	52350	1.1398	0.3567	2.0049	1.1125	0.2812	0.9844	0.7834	0.9686	1.0797	1.1632
1112	0004	52350	1.1398	0.3557	2.0055	1.5124	0.6944	0.9845	0.9196	0.9645	1.4912	1.2047
1113	0004	52350	1.1398	0.3566	2.0075	2.5179	1.2786	0.9849	0.9774	0.9546	2.3376	1.2148
1114	0004	52350	1.1398	0.3578	2.0097	3.5102	1.7823	0.9840	0.9771	0.9529	3.1449	1.2133
1115	0004	52350	1.1398	0.3566	2.5127	1.1100	0.2055	0.9848	0.7261	0.9680	1.0389	1.1570
1116	0004	52350	1.1398	0.3572	2.5116	1.5109	0.5268	0.9856	0.8760	0.9674	1.3209	1.1989
1117	0004	52350	1.1398	0.3586	2.5123	2.5178	1.0199	0.9855	0.9764	0.9522	1.9243	1.2110
1118	0004	52350	1.1398	0.3593	2.5152	3.5176	1.4295	0.9846	0.9795	0.9471	2.4919	1.2081
1119	0004	52350	1.1398	0.3593	3.5412	1.1133	0.1530	0.9858	0.7517	0.9640	1.0104	1.1829
1120	0004	52350	1.1398	0.3585	3.5114	1.5108	0.3646	0.9855	0.8479	0.9662	1.1803	1.2019
1121	0004	52350	1.1398	0.3595	3.4923	2.5177	0.7328	0.9867	0.9769	0.9473	1.5575	1.2095
1122	0004	52350	1.1398	0.3597	3.4960	3.5184	1.0254	0.9860	0.9781	0.9428	1.9116	1.2051

FACILITY AXSYT PROGRAM COST

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9020 INNER RADIUS RATIO 0.8000 DVO 1.2480

DRAG PARAMETERS

RDG	GE	NASA	D2	MA	PTO/PA	PTI/PA	CHEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
1103	0004	52330	0.3985	0.3607	3.5464	0.8302	0.0000	0.0000	0.0000	-0.0076	0.0410	-0.0311	0.0391	0.0004
1104	0004	52330	0.3985	0.3593	3.5452	0.9122	0.0291	0.0000	0.0000	-0.0071	0.0382	-0.0313	0.0221	-0.0163
1105	0004	52330	0.3985	0.3581	2.5192	0.9357	0.0292	0.0000	0.0000	-0.0138	0.0465	-0.0509	0.0395	-0.0251
1106	0004	52330	0.3985	0.3578	1.5075	0.9703	0.0291	0.0000	0.0000	-0.0302	0.0420	-0.0416	0.0528	-0.0190
1107	0004	52350	1.1398	0.3572	1.4994	1.1115	0.4045	0.0000	0.0000	-0.0242	0.0404	-0.0223	0.0113	-0.0351
1108	0004	52350	1.1398	0.3568	1.5003	1.5099	0.9704	0.0000	0.0000	-0.0148	0.0407	-0.0112	-0.0050	-0.0311
1109	0004	52350	1.1398	0.3574	1.5000	2.5220	1.7241	0.0000	0.0000	-0.0080	0.0386	-0.0056	-0.0210	-0.0345
1110	0004	52350	1.1398	0.3575	1.5010	3.5097	2.4025	0.0000	0.0000	-0.0054	0.0374	-0.0010	-0.0181	-0.0245
1111	0004	52350	1.1398	0.3567	2.0049	1.1135	0.2812	0.0000	0.0000	-0.0168	0.0448	-0.0214	0.0124	-0.0259
1112	0004	52350	1.1398	0.3557	2.0055	1.5124	0.6944	0.0000	0.0000	-0.0119	0.0442	-0.0119	-0.0018	-0.0255
1113	0004	52350	1.1398	0.3566	2.0076	2.5179	1.2706	0.0000	0.0000	-0.0073	0.0430	-0.0069	-0.0215	-0.0357
1114	0004	52350	1.1398	0.3578	2.0097	3.5102	1.7823	0.0000	0.0000	-0.0051	0.0397	-0.0016	-0.0281	-0.0347
1115	0004	52350	1.1398	0.3566	2.5127	1.1100	0.2055	0.0000	0.0000	-0.0125	0.0457	-0.0485	0.0137	-0.0473
1116	0004	52350	1.1398	0.3572	2.5116	1.5109	0.5268	0.0000	0.0000	-0.0093	0.0431	-0.0347	-0.0017	-0.0477
1117	0004	52350	1.1398	0.3586	2.5123	2.5178	1.0199	0.0000	0.0000	-0.0060	0.0409	-0.0235	-0.0234	-0.0529
1118	0004	52350	1.1398	0.3593	2.5152	3.5176	1.4295	0.0000	0.0000	-0.0045	0.0395	-0.0143	-0.0265	-0.0453
1119	0004	52350	1.1398	0.3593	3.5412	1.1133	0.1530	0.0000	0.0000	-0.0066	0.0372	-0.0306	0.0127	-0.0244
1120	0004	52350	1.1398	0.3595	3.5114	1.5108	0.3646	0.0000	0.0000	-0.0052	0.0339	-0.0294	-0.0011	-0.0357
1121	0004	52350	1.1398	0.3595	3.4923	2.5177	0.7328	0.0000	0.0000	-0.0041	0.0355	-0.0226	-0.0166	-0.0433
1122	0004	52350	1.1398	0.3597	3.4960	3.5184	1.0254	0.0000	0.0000	-0.0033	0.0350	-0.0184	-0.0293	-0.0509

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9930 INNER RADIUS RATIO 0.2000 DVD 1.2480

INPUT PARAMETERS

PDC	GF	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	F9
1123	0008	51330	0.3985	0.4478	1.5070	0.9481	0.0000	1.0152	9.9999	0.9257	0.9257	1.1412
1124	0008	51330	0.3985	0.4476	1.5054	0.9966	0.0591	1.0153	9.9999	0.9513	0.9513	1.1550
1125	0008	51330	0.3985	0.4479	2.0054	0.9063	0.0000	0.9787	9.9999	0.9370	0.9370	1.1800
1126	0008	51330	0.3985	0.4486	2.0152	1.0008	0.0591	0.9765	3.0987	0.9588	0.9609	1.1660
1127	0008	51330	0.3985	0.4490	2.5163	0.8708	0.0000	0.9783	9.9999	0.9470	0.9470	1.1937
1128	0008	51330	0.3985	0.4493	2.5146	1.0093	0.0590	0.9779	1.1596	0.9681	0.9742	1.1790
1129	0008	51330	0.3985	0.4509	3.4211	0.9145	0.0000	0.9776	9.9999	0.9472	0.9472	1.1882
1130	0008	51330	0.3985	0.4509	3.4232	1.1098	0.0591	0.9771	0.4616	0.9611	0.9790	1.1779
1131	0008	51330	0.3985	0.4489	2.0176	0.9070	0.0000	0.9759	9.9999	0.9351	0.9351	1.1771
1132	0008	51330	0.3985	0.4477	1.5131	0.9475	0.0000	1.0126	9.9999	0.9247	0.9247	1.1606
1133	0008	51350	1.1398	0.4474	1.5081	2.5064	1.0496	1.0143	0.9764	0.9525	2.3954	1.2134
1134	0008	51350	1.1398	0.4488	1.5084	3.5175	1.4741	1.0141	0.9768	0.9553	3.2779	1.2160
1135	0008	51350	1.1398	0.4485	2.0097	2.5084	0.7837	0.9765	0.9747	0.9534	1.7978	1.2105
1136	0008	51350	1.1398	0.4485	2.0075	3.5124	1.1002	0.9769	0.9763	0.9516	2.3041	1.2102
1137	0008	51350	1.1398	0.4489	2.5106	2.5020	0.6250	0.9794	0.9756	0.9562	1.6529	1.2114
1138	0008	51350	1.1398	0.4495	2.5168	3.5139	0.6783	0.9756	0.9765	0.9544	1.9103	1.2101
1139	0008	51350	1.1398	0.4500	3.3544	2.5089	0.4696	0.9767	0.9755	0.9519	1.3496	1.2074
1140	0008	51350	1.1398	0.4506	3.3105	3.5149	0.6666	0.9772	0.9756	0.9465	1.5904	1.2029
1141	0008	51350	1.1398	0.3564	1.5142	0.9497	0.0000	1.0131	9.9999	0.9361	0.9361	1.1858
1142	0008	51350	1.1398	0.3559	1.5089	1.0053	0.0000	1.0133	0.0000	1.0922	1.0927	1.1662
1143	0008	51330	0.3985	0.3573	1.5087	0.9506	0.0000	1.0131	9.9999	0.9363	0.9363	1.1649
1144	0008	51330	0.3985	0.3566	1.5080	0.9776	0.0292	1.0131	9.9999	0.9466	0.9466	1.1598
1145	0008	51330	0.3985	0.3565	1.5088	0.9982	0.0592	1.0128	9.9999	0.9600	0.9600	1.1583
1146	0008	51330	0.3985	0.3570	2.0188	0.9086	0.0000	0.9762	9.9999	0.9401	0.9401	1.1804
1147	0008	51330	0.3985	0.3580	2.0212	0.9740	0.0291	0.9761	9.9999	0.9542	0.9542	1.1728
1148	0008	51330	0.3985	0.3582	2.0212	1.0039	0.0591	0.9765	1.4400	0.9622	0.9667	1.1691
1149	0008	51330	0.3985	0.3597	2.5287	0.8703	0.0000	0.9780	9.9999	0.9477	0.9477	1.1946
1150	0008	51330	0.3985	0.3594	2.5343	0.9501	0.0291	0.9751	9.9999	0.9636	0.9636	1.1945
1151	0008	51330	0.3985	0.3582	2.5274	1.0095	0.0589	0.9782	1.1534	0.9706	0.9768	1.1816
1152	0008	51330	0.3985	0.3594	3.0752	0.8489	0.0000	0.9779	9.9999	0.9452	0.9452	1.1981
1153	0008	51330	0.3985	0.3587	3.0924	0.9595	0.0292	0.9776	9.9999	0.9622	0.9622	1.1886
1154	0008	51320	0.3985	0.3583	3.0915	1.0275	0.0590	0.9780	0.7108	0.9630	0.9741	1.1925
1155	0008	51330	0.3985	0.3581	2.5317	0.9504	0.0290	0.9768	9.9999	0.9642	0.9642	1.1860
1156	0008	51330	0.3985	0.3580	2.0232	0.9616	0.0291	0.9767	9.9999	0.9524	0.9524	1.1728
1157	0008	51330	0.3985	0.3584	1.5183	0.9777	0.0292	1.0097	9.9999	0.9441	0.9441	1.1586
1158	0008	51330	0.3985	0.3595	3.0464	0.8412	0.0000	0.9783	9.9999	0.9467	0.9467	1.2011
1159	0008	51350	1.1398	0.3577	1.5088	1.1102	0.2413	1.0117	0.8229	0.9636	1.0835	1.1703
1160	0008	51350	1.1398	0.3588	1.5070	1.5078	0.5902	1.0140	0.9510	0.9633	1.5322	1.2129
1161	0008	51350	1.1398	0.3581	1.5070	2.5137	1.0520	1.0137	0.9741	0.9561	2.4108	1.2153
1162	0008	51350	1.1398	0.3600	1.5120	3.5171	1.4678	1.0117	0.9736	0.9604	3.2789	1.2145
1163	0008	51350	1.1398	0.3589	2.0218	1.1116	0.1612	0.9772	0.7373	0.9665	1.0296	1.1757
1164	0008	51350	1.1398	0.3589	2.0167	1.5096	0.4149	0.9774	0.8981	0.9654	1.2786	1.2042
1165	0008	51350	1.1398	0.3596	2.0210	2.5240	0.7833	0.9780	0.9756	0.9547	1.7991	1.2128
1166	0008	51350	1.1398	0.3599	2.0224	3.5166	1.0952	0.9764	0.9774	0.9527	2.2945	1.2117
1167	0008	51350	1.1398	0.3600	2.5298	1.1129	0.1214	0.9777	0.6908	0.9736	1.0161	1.1838

BAD POINTS

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

OUTER RADIUS RATIO 0.8530 INNER RADIUS RATIO 0.8000 DVD 1.2480

PDG	PF	NASA	D2	MA	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
1123	0008	51330	0.3985	0.4478	1.5070	0.9491	0.0000	0.0000	0.0000	-0.0221	0.0319	-0.0583	0.0497	-0.0307
1124	0008	51330	0.3985	0.4476	1.5054	0.9966	0.0591	0.0000	0.0000	-0.0210	0.0302	-0.0498	0.0218	-0.0490
1125	0008	51330	0.3985	0.4479	2.0054	0.9043	0.0000	0.0000	0.0000	-0.0139	0.0343	-0.0392	0.0477	-0.0055
1126	0008	51330	0.3985	0.4486	2.0152	1.0008	0.0591	0.0000	0.0000	-0.0132	0.0327	-0.0359	0.0206	-0.0285
1127	0008	51330	0.3985	0.4490	2.5163	0.8708	0.0000	0.0000	0.0000	-0.0091	0.0318	-0.0381	0.0428	-0.0046
1128	0008	51330	0.3985	0.4493	2.5146	1.0093	0.0590	0.0000	0.0000	-0.0086	0.0302	-0.0362	0.0217	-0.0231
1129	0008	51330	0.3985	0.4509	3.4211	0.9145	0.0000	0.0000	0.0000	-0.0045	0.0240	-0.0553	0.0496	-0.0103
1130	0008	51330	0.3985	0.4509	3.4232	1.1008	0.0591	0.0000	0.0000	-0.0043	0.0233	-0.0510	0.0245	-0.0308
1131	0008	51330	0.3985	0.4489	2.0176	0.9070	0.0000	0.0000	0.0000	-0.0137	0.0339	-0.0396	0.0473	-0.0060
1132	0008	51330	0.3985	0.4477	1.5131	0.9475	0.0000	0.0000	0.0000	-0.0220	0.0319	-0.0572	0.0508	-0.0244
1133	0008	51350	1.1398	0.4474	1.5081	2.5064	1.0496	0.0000	0.0000	-0.0076	0.0277	-0.0120	-0.0170	-0.0346
1134	0008	51350	1.1398	0.4488	1.5084	3.5175	1.4741	0.0000	0.0000	-0.0053	0.0263	-0.0047	-0.0186	-0.0286
1135	0008	51350	1.1398	0.4485	2.0097	2.5084	0.7837	0.0000	0.0000	-0.0064	0.0296	-0.0121	-0.0207	-0.0392
1136	0008	51350	1.1398	0.4485	2.0075	3.5124	1.1002	0.0000	0.0000	-0.0048	0.0288	-0.0052	-0.0329	-0.0429
1137	0008	51350	1.1398	0.4489	2.5106	2.5020	0.6250	0.0000	0.0000	-0.0050	0.0282	-0.0229	-0.0231	-0.0510
1138	0008	51350	1.1398	0.4495	2.5168	3.5139	0.8783	0.0000	0.0000	-0.0039	0.0268	-0.0171	-0.0263	-0.0472
1139	0008	51350	1.1398	0.4500	3.3544	2.5089	0.4696	0.0000	0.0000	-0.0029	0.0209	-0.0231	-0.0110	-0.0370
1140	0008	51350	1.1398	0.4506	3.3105	3.5149	0.6666	0.0000	0.0000	-0.0024	0.0201	-0.0181	-0.0147	-0.0352
1141	0008	51350	1.1398	0.3564	1.5142	0.9457	0.0000	0.0000	0.0000	-0.0140	0.0321	-0.0490	0.0478	-0.0152
1142	0008	51350	1.1398	0.3559	1.5088	1.0853	0.0000	0.0000	0.0000	-0.0123	0.0281	-0.0352	0.0120	-0.0355
1143	0008	51330	0.3985	0.3573	1.5087	0.9506	0.0000	0.0000	0.0000	-0.0142	0.0298	-0.0486	0.0472	-0.0146
1144	0008	51330	0.3985	0.3566	1.5080	0.9776	0.0292	0.0000	0.0000	-0.0137	0.0312	-0.0445	0.0324	-0.0258
1145	0008	51330	0.3985	0.3565	1.5078	0.9982	0.0592	0.0000	0.0000	-0.0134	0.0304	-0.0424	0.0200	-0.0358
1146	0008	51330	0.3985	0.3570	2.0188	0.9086	0.0000	0.0000	0.0000	-0.0086	0.0337	-0.0341	0.0455	0.0028
1147	0008	51330	0.3985	0.3580	2.0212	0.9640	0.0291	0.0000	0.0000	-0.0084	0.0328	-0.0320	0.0309	-0.0095
1148	0008	51330	0.3985	0.3582	2.0212	1.0039	0.0591	0.0000	0.0000	-0.0083	0.0324	-0.0313	0.0185	-0.0209
1149	0008	51330	0.3985	0.3597	2.5287	0.8703	0.0000	0.0000	0.0000	-0.0057	0.0310	-0.0343	0.0424	0.0024
1150	0008	51330	0.3985	0.3594	2.5343	0.9501	0.0291	0.0000	0.0000	-0.0055	0.0301	-0.0342	0.0293	-0.0103
1151	0008	51330	0.3985	0.3582	2.5274	1.0095	0.0589	0.0000	0.0000	-0.0059	0.0324	-0.0339	0.0198	-0.0200
1152	0008	51330	0.3985	0.3594	3.0752	0.9489	0.0000	0.0000	0.0000	-0.0038	0.0276	-0.0342	0.0496	0.0115
1153	0008	51330	0.3985	0.3587	3.0924	0.9595	0.0292	0.0000	0.0000	-0.0038	0.0281	-0.0347	0.0317	-0.0069
1154	0008	51330	0.3985	0.3583	3.0915	1.0375	0.0590	0.0000	0.0000	-0.0037	0.0273	-0.0342	0.0135	-0.0245
1155	0008	51330	0.3985	0.3581	2.5317	0.9504	0.0290	0.0000	0.0000	-0.0058	0.0319	-0.0341	0.0293	-0.0105
1156	0008	51330	0.3985	0.3580	2.0232	0.9616	0.0291	0.0000	0.0000	-0.0089	0.0347	-0.0335	0.0300	-0.0123
1157	0008	51330	0.3985	0.3584	1.5183	0.9777	0.0292	0.0000	0.0000	-0.0134	0.0305	-0.0451	0.0318	-0.0267
1158	0008	51330	0.3985	0.3595	3.0464	0.9412	0.0000	0.0000	0.0000	-0.0041	0.0290	-0.0341	0.0487	0.0106
1159	0008	51350	1.1398	0.3577	1.5088	1.1102	0.2413	0.0000	0.0000	-0.0115	0.0292	-0.0298	0.0097	-0.0316
1160	0008	51350	1.1398	0.3588	1.5070	1.5078	0.5902	0.0000	0.0000	-0.0075	0.0269	-0.0166	-0.0027	-0.0269
1161	0008	51350	1.1398	0.3581	1.5070	2.5137	1.0520	0.0000	0.0000	-0.0049	0.0280	-0.0101	-0.0177	-0.0328
1162	0008	51350	1.1398	0.3600	1.5120	3.5171	1.4678	0.0000	0.0000	-0.0034	0.0256	-0.0039	-0.0179	-0.0252
1163	0008	51350	1.1398	0.3589	2.0218	1.1116	0.1612	0.0000	0.0000	-0.0075	0.0310	-0.0273	0.0129	-0.0219
1164	0008	51350	1.1398	0.3589	2.0167	1.5096	0.4149	0.0000	0.0000	-0.0060	0.0306	-0.0181	-0.0004	-0.0245
1165	0008	51350	1.1398	0.3596	2.0218	2.5240	0.7833	0.0000	0.0000	-0.0040	0.0294	-0.0111	-0.0209	-0.0360
1166	0008	51350	1.1398	0.3599	2.0224	3.5166	1.0952	0.0000	0.0000	-0.0031	0.0288	-0.0047	-0.0345	-0.0423
1167	0008	51350	1.1398	0.3600	2.5298	1.1129	0.1214	0.0000	0.0000	-0.0051	0.0288	-0.0316	0.0136	-0.0231

1337

BAD POINT

FACILITY 8X6X1 PROGRAM C031

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO 0.9530 INNER RADIUS RATIO 0.9000 DVO 1.2480

ROG	GE	NASA	P2	MA	PTP/PA	PTI/PA	PHEGAT	CDO	CDI	CFNETI	CFNET2	E9
1168	0003	51350	1.1398	0.3595	2.5223	1.5113	0.3110	0.9766	0.8401	0.9712	1.1803	1.1992
1169	0009	51350	1.1398	0.3596	2.5132	2.5191	0.6291	0.9780	0.9760	0.9575	1.5606	1.2128
1170	0008	51350	1.1398	0.3600	2.5200	3.5088	0.8727	0.9772	0.9770	0.9559	1.9045	1.2122
1171	0003	51350	1.1398	0.3605	3.1525	1.1137	0.0920	0.9785	0.5806	0.9658	0.9919	1.1929
1172	0009	51350	1.1398	0.3601	3.1428	1.5119	0.2278	0.9771	0.7669	0.9693	1.1089	1.1932
1173	0008	51350	1.1398	0.3604	3.0158	2.5206	0.5242	0.9776	0.9752	0.9523	1.4148	1.2076
1174	0008	51350	1.1398	0.3591	2.9437	3.4937	0.7465	0.9768	0.9767	0.9516	1.7074	1.2076
1175	0009	51330	0.3985	0.0201	1.5057	0.9477	0.0000	1.0113	9.9999	0.9510	0.9510	1.1723
1176	0009	51330	0.3985	0.0168	1.5082	0.9747	0.0293	1.0102	9.9999	0.9616	0.9616	1.1672
1177	0008	51330	0.3985	0.0278	1.5084	0.9932	0.0592	1.0098	9.9999	0.9721	0.9721	1.1651
1178	0008	51330	0.3985	0.0285	2.0067	0.9061	0.0000	0.9781	9.9999	0.9488	0.9488	1.1884
1179	0009	51330	0.3985	0.0330	2.0122	0.9575	0.0291	0.9757	9.9999	0.9602	0.9602	1.1789
1180	0009	51330	0.3985	0.0369	2.0112	0.9958	0.0592	0.9766	9.9999	0.9719	0.9719	1.1754
1181	0009	51330	0.3985	0.0466	2.5147	0.8604	0.0000	0.9778	9.9999	0.9511	0.9511	1.2003
1182	0008	51330	0.3985	0.0492	2.5146	0.9383	0.0291	0.9789	9.9999	0.9668	0.9668	1.1929
1183	0009	51330	0.3985	0.0525	2.5167	0.9971	0.0588	0.9779	9.9999	0.9789	0.9789	1.1866
1184	0008	51330	0.3985	0.0527	3.1695	0.8340	0.0000	0.9775	9.9999	0.9505	0.9505	1.2062
1185	0009	51330	0.3985	0.0537	3.1866	0.9477	0.0291	0.9775	9.9999	0.9653	0.9653	1.1952
1186	0008	51330	0.3985	0.0527	3.1709	1.0213	0.0591	0.9770	0.9675	0.9685	0.9768	1.1991
1187	0008	51330	0.3985	0.0492	2.5319	0.9385	0.0291	0.9742	9.9999	0.9676	0.9676	1.1904
1188	0008	51330	0.3985	0.0253	1.5106	0.9737	0.0292	1.0082	9.9999	0.9661	0.9661	1.1690
1189	0008	51330	0.3985	0.0350	2.0065	0.9587	0.0291	0.9779	9.9999	0.9634	0.9634	1.1814
1190	0009	51350	1.1398	0.0245	1.5033	1.1056	0.2413	1.0107	0.8348	0.9815	1.1015	1.1787
1191	0008	51350	1.1398	0.0395	1.5052	1.5022	0.5911	1.0111	0.9531	0.9749	1.5497	1.2198
1192	0008	51350	1.1398	0.0524	1.5068	2.5049	1.0508	1.0097	0.9723	0.9852	2.4298	1.2210
1193	0009	51350	1.1398	0.0543	1.5135	3.5132	1.4735	1.0092	0.9776	0.9824	3.2912	1.2226
1194	0009	51350	1.1398	0.0343	2.0085	1.1048	0.1618	0.9773	0.7584	0.9792	1.0417	1.1850
1195	0008	51350	1.1398	0.0505	2.0044	1.5062	0.4184	0.9768	0.9025	0.9748	1.2942	1.2120
1196	0008	51350	1.1398	0.0547	2.0085	2.5006	0.7816	0.9772	0.9753	0.9612	1.8094	1.2184
1197	0008	51350	1.1398	0.0583	2.0095	3.5074	1.1001	0.9754	0.9770	0.9574	2.3163	1.2160
1198	0008	51350	1.1398	0.0515	2.5158	1.1055	0.1250	0.9780	0.7321	0.9827	1.0256	1.1926
1199	0009	51350	1.1398	0.0518	2.5109	1.5092	0.3174	0.9774	0.8561	0.9775	1.1925	1.2077
1200	0009	51350	1.1398	0.0587	2.5159	2.5068	0.6252	0.9774	0.9751	0.9620	1.8624	1.2167
1201	0008	51350	1.1398	0.0617	2.5133	3.5052	0.8762	0.9776	0.9762	0.9583	1.9158	1.2149
1202	0008	51350	1.1398	0.0553	3.2430	1.1076	0.0861	0.9786	0.6443	0.9727	0.9993	1.1927
1203	0008	51350	1.1398	0.0555	3.2074	1.5047	0.2313	0.9755	0.7988	0.9734	1.1139	1.2011
1204	0008	51350	1.1398	0.0612	3.1073	2.5092	0.5062	0.9774	0.9745	0.9545	1.3962	1.2101
1205	0008	51350	1.1398	0.0668	3.0543	3.5044	0.7202	0.9784	0.9764	0.9539	1.6751	1.2111
1206	0008	51350	1.1398	0.0512	2.5165	1.1046	0.1246	0.9765	0.7320	0.9831	1.0257	1.1918
1207	0008	51350	1.1398	0.0408	2.0026	1.1040	0.1607	0.9767	0.7533	0.9809	1.0430	1.1853
1208	0009	51350	1.1398	0.0233	1.5107	1.1031	0.2358	1.0096	0.8310	0.9897	1.1061	1.1826

FACILITY 8X6X1 PROGRAM CD21

NOZZLE TYPE
DUAL FLOW (NASA-LEWIS)

INNER-STREAM
PLUG CONFIGURATIONS
BENT PLUG

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

OUTER RADIUS RATIO 0.8530 INNER RADIUS RATIO 0.8000 DVD 1.2480

PRG	CF	MASA	D2	MA	PTO/PA	PTI/PA	PMEGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
1169	0009	51350	1.1398	0.3595	2.5223	1.5112	0.6110	0.0000	0.0000	-0.0044	0.0290	-0.0259	0.0005	-0.0298
1169	0008	51350	1.1398	0.3596	2.5132	2.5191	0.6291	0.0000	0.0000	-0.0032	0.0279	-0.0176	-0.0202	-0.0409
1170	0008	51350	1.1398	0.3609	2.5290	3.5088	0.8727	0.0000	0.0000	-0.0025	0.0270	-0.0131	-0.0262	-0.0417
1171	0008	51350	1.1398	0.3605	3.1525	1.1137	0.0820	0.0000	0.0000	-0.0036	0.0277	-0.0399	0.0122	-0.0313
1172	0008	51350	1.1398	0.3601	3.1428	1.5119	0.2278	0.0000	0.0000	-0.0033	0.0276	-0.0329	0.0013	-0.0339
1173	0008	51350	1.1398	0.3604	3.0158	2.5206	0.5242	0.0000	0.0000	-0.0024	0.0248	-0.0207	-0.0151	-0.0383
1174	0008	51350	1.1398	0.3591	2.9437	3.4937	0.7465	0.0000	0.0000	-0.0020	0.0246	-0.0158	-0.0266	-0.0444
1175	0008	51330	0.3985	0.0201	1.5057	0.9477	0.0000	0.0000	0.0000	-0.0005	0.3647	-0.0365	0.0344	-0.0026
1176	0008	51330	0.3985	0.0168	1.5082	0.9747	0.0293	0.0000	0.0000	-0.0005	0.5540	-0.0339	0.0222	-0.0122
1177	0009	51330	0.3985	0.0278	1.5084	0.9932	0.0592	0.0000	0.0000	-0.0004	0.1454	-0.0325	0.0122	-0.0206
1178	0008	51330	0.3985	0.0285	2.0067	0.9061	0.0000	0.0000	0.0000	-0.0005	0.2957	-0.0278	0.0364	0.0081
1179	0009	51330	0.3985	0.0330	2.0122	0.9575	0.0291	0.0000	0.0000	-0.0004	0.1798	-0.0267	0.0226	-0.0045
1180	0008	51330	0.3985	0.0369	2.0112	0.9868	0.0592	0.0000	0.0000	-0.0004	0.1324	-0.0266	0.0132	-0.0138
1181	0008	51330	0.3985	0.0466	2.5147	0.8604	0.0000	0.0000	0.0000	-0.0002	0.0660	-0.0209	0.0369	0.0158
1182	0009	51330	0.3985	0.0492	2.5146	0.9393	0.0291	0.0000	0.0000	-0.0002	0.0507	-0.0211	0.0245	0.0032
1183	0008	51330	0.3985	0.0525	2.5167	0.9971	0.0538	0.0000	0.0000	-0.0002	0.0511	-0.0210	0.0156	-0.0057
1184	0009	51330	0.3985	0.0527	3.1695	0.8340	0.0000	0.0000	0.0000	-0.0002	0.0836	-0.0262	0.0449	0.0184
1185	0008	51330	0.3985	0.0537	3.1066	0.9477	0.0291	0.0000	0.0000	-0.0003	0.0907	-0.0266	0.0274	0.0006
1186	0008	51330	0.3985	0.0527	3.1709	1.0213	0.0591	0.0000	0.0000	-0.0003	0.1052	-0.0260	0.0081	-0.0192
1187	0009	51330	0.3985	0.0492	2.5319	0.9385	0.0291	0.0000	0.0000	-0.0002	0.0618	-0.0241	0.0241	-0.0002
1188	0008	51330	0.3985	0.0253	1.5106	0.9737	0.0292	0.0000	0.0000	-0.0005	0.2307	-0.0329	0.0230	-0.0103
1189	0008	51330	0.3985	0.0350	2.0065	0.9587	0.0291	0.0000	0.0000	-0.0004	0.1514	-0.0269	0.0231	-0.0042
1190	0008	51350	1.1398	0.0265	1.5030	1.1056	0.2413	0.0000	0.0000	-0.0006	0.2608	-0.0235	0.0036	-0.0205
1191	0008	51350	1.1398	0.0395	1.5052	1.5022	0.5911	0.0000	0.0000	-0.0002	0.0723	-0.0135	-0.0061	-0.0198
1192	0008	51350	1.1398	0.0524	1.5068	2.5049	1.0508	0.0000	0.0000	-0.0001	0.0180	-0.0079	-0.0183	-0.0263
1193	0008	51350	1.1398	0.0543	1.5135	3.5132	1.4735	0.0000	0.0000	-0.0002	0.0832	-0.0030	-0.0178	-0.0210
1194	0008	51350	1.1398	0.0343	2.0085	1.1048	0.1618	0.0000	0.0000	-0.0004	0.1766	-0.0237	0.0074	-0.0167
1195	0008	51350	1.1398	0.0505	2.0044	1.5062	0.4184	0.0000	0.0000	-0.0002	0.0395	-0.0159	-0.0028	-0.0189
1196	0008	51350	1.1398	0.0547	2.0086	2.5006	0.7816	0.0000	0.0000	-0.0002	0.0671	-0.0105	-0.0231	-0.0337
1197	0008	51350	1.1398	0.0583	2.0095	3.5074	1.1001	0.0000	0.0000	-0.0003	0.0906	-0.0046	-0.0288	-0.0337
1198	0008	51350	1.1398	0.0515	2.5158	1.1055	0.1250	0.0000	0.0000	-0.0002	0.0500	-0.0202	0.0092	-0.0112
1199	0008	51350	1.1398	0.0518	2.5108	1.5092	0.3174	0.0000	0.0000	-0.0002	0.0647	-0.0168	-0.0020	-0.0191
1200	0008	51350	1.1398	0.0587	2.5159	2.5068	0.6252	0.0000	0.0000	-0.0002	0.0796	-0.0132	-0.0185	-0.0319
1201	0008	51350	1.1398	0.0617	2.5130	3.5052	0.8762	0.0000	0.0000	-0.0003	0.0987	-0.0096	-0.0273	-0.0372
1202	0008	51350	1.1398	0.0553	3.2430	1.1076	0.0861	0.0000	0.0000	-0.0002	0.0809	-0.0310	0.0071	-0.0242
1203	0008	51350	1.1398	0.0555	3.2074	1.5047	0.2313	0.0000	0.0000	-0.0003	0.1020	-0.0237	-0.0029	-0.0269
1204	0008	51350	1.1398	0.0612	3.1073	2.5092	0.5062	0.0000	0.0000	-0.0003	0.0928	-0.0180	-0.0220	-0.0402
1205	0008	51350	1.1398	0.0668	3.0543	3.5044	0.7202	0.0000	0.0000	-0.0002	0.0864	-0.0140	-0.0168	-0.0310
1206	0008	51350	1.1398	0.0512	2.5165	1.1046	0.1246	0.0000	0.0000	-0.0002	0.0584	-0.0204	0.0093	-0.0113
1207	0008	51350	1.1398	0.0408	2.0026	1.1040	0.1607	0.0000	0.0000	-0.0003	0.0870	-0.0239	0.0073	-0.0168
1208	0008	51350	1.1398	0.0233	1.5107	1.1031	0.2358	0.0000	0.0000	-0.0005	0.3221	-0.0240	0.0035	-0.0210

FACILITY 9X6X1 PROGRAM C031

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

INNER-STREAM PLUG CONFIGURATIONS: BENT PLUG (MODEL 7)

SUPPRESSOR CONFIGURATION

THRUST PARAMETERS

OUTER RADIUS RATIO: 0.9020 INNER RADIUS RATIO: 0.6740 OVD: 1.2480

PCC	CF	NASA	CD	PA	PTC/PA	PTI/PA	FMEGAT	CDI	CDI	CFNET1	CFNET2	FG
3076	0001	52130	0.3985	0.0052	1.5023	0.9233	0.0000	1.0217	9.9999	0.9127	0.9127	1.1233
3077	0001	52130	0.3985	-0.0000	1.4983	0.9565	0.0287	1.0229	9.9999	0.9241	0.9261	1.1278
3078	0001	52130	0.3985	-0.0000	1.5002	0.9649	0.0589	1.0235	9.9999	0.9371	0.9371	1.1263
3079	0001	52130	0.3985	0.0327	1.9975	0.9207	0.0000	0.9966	9.9999	0.9180	0.9180	1.1494
3080	0001	52130	0.3985	0.0150	1.9972	0.9303	0.0288	0.9965	9.9999	0.9244	0.9244	1.1430
3081	0001	52130	0.3985	0.0301	1.9975	0.9545	0.0592	0.9948	9.9999	0.9391	0.9391	1.1408
3082	0001	52130	0.3985	0.0225	2.4971	0.9047	0.0000	0.9837	9.9999	0.9270	0.9270	1.1613
3083	0001	52130	0.3985	0.0497	2.4979	0.9319	0.0289	0.9865	9.9999	0.9375	0.9375	1.1559
3084	0001	52130	0.3985	0.0216	2.4965	0.9557	0.0589	0.9862	9.9999	0.9496	0.9496	1.1515
3085	0001	52130	0.3985	0.0386	3.5089	0.9201	0.0000	0.9882	9.9999	0.9330	0.9330	1.1935
3086	0001	52130	0.3985	0.0533	3.5069	0.9321	0.0291	0.9883	9.9999	0.9485	0.9485	1.1750
3087	0001	52130	0.3985	0.0505	3.5069	0.9737	0.0589	0.9859	9.9999	0.9613	0.9613	1.1677
3088	0001	52130	0.3985	0.0183	1.9993	0.9199	0.0000	0.9847	9.9999	0.9225	0.9225	1.1516
3089	0001	52150	0.3985	0.0360	2.4963	0.9034	0.0000	0.9859	9.9999	0.9288	0.9288	1.1640
3090	0001	52150	0.3985	-0.0000	1.5049	0.9479	0.0000	1.0206	9.9999	0.9607	0.9607	1.1371
3091	0001	52150	1.1398	0.0444	1.5058	1.3207	1.1216	1.0212	0.9174	0.9804	1.8953	1.1895
3092	0001	52150	1.1398	0.0508	1.5025	1.8745	1.9247	1.0177	0.9644	0.9725	3.2648	1.2264
3093	0001	52150	1.1398	0.0502	1.9994	1.3151	0.8061	0.9822	0.8866	0.9859	1.5005	1.1907
3094	0001	52150	1.1398	0.0501	1.9994	1.8679	1.9186	0.9822	0.9574	0.9716	2.2861	1.2231
3095	0001	52150	1.1398	0.0530	3.0137	1.3161	0.5198	0.9822	0.8606	0.9837	1.2541	1.1955
3096	0001	52150	1.1398	0.0505	3.0125	1.9907	0.9225	0.9778	0.9277	0.9748	1.6780	1.2137
3097	0001	52150	1.1398	0.0569	3.9985	1.3204	0.3749	0.9878	0.8230	0.9725	1.1488	1.1986
3098	0001	52150	1.1398	0.0626	3.9979	1.9012	0.6871	0.9884	0.9171	0.9851	1.4604	1.2146
3099	0001	52150	1.1398	0.0432	3.0086	1.3175	0.5205	0.9871	0.8627	0.9771	1.2466	1.1939
3100	0001	52150	1.1398	0.0523	2.0002	1.3157	0.8068	0.9852	0.8895	0.9782	1.4995	1.1992
3101	0001	52150	1.1398	0.0144	1.5041	1.3183	1.1210	1.0218	0.9187	0.9753	1.8933	1.1969
3102	0001	52150	1.1398	0.0477	1.5035	1.3173	1.1179	1.0214	0.9171	0.9732	1.8761	1.1954
3103	0001	52130	0.3985	-0.0000	1.5031	0.9479	0.0000	1.0218	9.9999	0.9196	0.9196	1.1310
3104	0001	52150	1.1398	0.0098	1.5017	1.3156	1.1205	1.0207	0.9181	0.9675	1.8675	1.1925
3105	0001	52150	1.1398	0.0235	1.4991	1.8607	1.9246	1.0231	0.9690	0.9835	3.2332	1.2234
3106	0001	52150	1.1398	0.0308	1.9996	1.3157	0.8064	0.9855	0.8889	0.9713	1.4789	1.1842
3107	0001	52150	1.1398	0.0547	1.9992	1.8651	1.4170	0.9855	0.9608	0.9504	2.2552	1.2168
3108	0001	52150	1.1398	0.0530	3.0084	1.3170	0.5227	0.9871	0.8671	0.9734	1.2430	1.1921
3109	0001	52150	1.1398	0.0530	3.0068	1.8734	0.9248	0.9862	0.9309	0.9619	1.6562	1.2116
3110	0001	52150	1.1398	0.0574	4.0079	1.3229	0.3763	0.9866	0.8241	0.9665	1.1429	1.1933
3111	0001	52150	1.1398	0.0597	3.9968	1.8670	0.6852	0.9878	0.9160	0.9807	1.4318	1.2101
3112	0001	52150	1.1398	0.0552	3.0094	1.3174	0.5220	0.9869	0.8667	0.9711	1.2403	1.1903
3113	0001	52130	0.3985	0.0065	1.5040	0.9487	0.0000	1.0211	9.9999	0.8972	0.8972	1.1737
3114	0001	52130	0.3985	0.0033	1.4997	0.9562	0.0283	1.0231	9.9999	0.9080	0.9080	1.1227
3115	0001	52130	0.3985	0.0222	1.4991	0.9654	0.0584	1.0245	9.9999	0.9213	0.9213	1.1215
3116	0001	52130	0.3985	0.0379	1.9994	0.9213	0.0000	0.9852	9.9999	0.9100	0.9100	1.1454
3117	0001	52130	0.3985	0.0431	1.9979	0.9371	0.0285	0.9862	9.9999	0.9187	0.9187	1.1414
3118	0001	52130	0.3985	0.0105	1.9972	0.9560	0.0588	0.9859	9.9999	0.9259	0.9259	1.1358
3119	0001	52130	0.3985	0.0227	2.4974	0.9034	0.0000	0.9867	9.9999	0.9110	0.9110	1.1547
3120	0001	52130	0.3985	0.0288	2.4992	0.9314	0.0289	0.9862	9.9999	0.9249	0.9249	1.1492

BAD DATA — TUNNEL AIR TEMPERATURE PROBE

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NOZZLE TYPE — PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

DUAL FLOW (CASA-LEWIS) — CENT PLUG (MODEL 7)

DRAG PARAMETERS — OUTER RADIUS RATIO: 0.9020 — INNER RADIUS RATIO: 0.6740 — DVD: 1.2483

PDG	CF	MASA	DP	MA	PTT/PA	PTI/PA	DNFGAT	DCS	CDS	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
3076	0001	52130	0.3985	0.0352	1.5025	0.9488	0.0000	0.0000	0.0000	-0.0012	2.4715	-0.0318	0.0423	0.0093
3077	0001	52130	0.3985	-0.0000	1.4999	0.9565	0.0297	0.0000	0.0300	-0.0006	9.9999	-0.0320	0.0329	0.0006
3078	0001	52130	0.3985	-0.0000	1.5002	0.9648	0.0599	0.0000	0.0000	-0.0006	9.9999	-0.0316	0.0248	-0.0074
3079	0001	52130	0.3985	0.0427	1.9975	0.9207	0.0000	0.0000	0.0000	-0.0001	-0.0254	-0.0152	0.0305	0.0203
3080	0001	52130	0.3985	0.0150	1.9972	0.9383	0.0298	0.0000	0.0000	-0.0008	1.0776	-0.0254	0.0297	0.0095
3081	0001	52130	0.3985	0.0301	1.9975	0.9545	0.0592	0.0000	0.0000	-0.0006	0.1402	-0.0186	0.0228	0.0037
3082	0001	52130	0.3985	0.0235	2.4971	0.9067	0.0000	0.0000	0.0000	-0.0006	0.6958	-0.0356	0.0369	-0.0013
3083	0001	52130	0.3985	0.0497	2.4979	0.9219	0.0299	0.0000	0.0000	-0.0000	0.0065	-0.0378	0.0228	-0.0151
3084	0001	52130	0.3985	0.0216	2.4985	0.9357	0.0599	0.0000	0.0000	-0.0012	1.1017	-0.0382	0.0152	-0.0242
3085	0001	52130	0.3985	0.0386	3.5089	0.8801	0.0000	0.0000	0.0000	-0.0005	0.2111	-0.0287	0.0367	0.0076
3086	0001	52130	0.3985	0.0533	3.5069	0.9321	0.0291	0.0000	0.0000	-0.0001	0.0249	-0.0315	0.0261	-0.0055
3087	0001	52130	0.3985	0.0508	3.5099	0.9737	0.0589	0.0000	0.0000	-0.0001	0.0378	-0.0358	0.0161	-0.0198
3088	0001	52130	0.3985	0.0183	1.9993	0.9199	0.0000	0.0000	0.0000	-0.0012	1.1046	-0.0201	0.0309	0.0175
3089	0001	52130	0.3985	0.0340	2.4963	0.9033	0.0000	0.0000	0.0000	-0.0006	0.2182	-0.0375	0.0345	-0.0037
3090	0001	52130	0.3985	-0.0000	1.5045	0.9479	0.0000	0.0000	0.0300	-0.0006	9.9999	-0.0324	0.0421	0.0091
3091	0001	52150	1.1398	0.0444	1.5058	1.3207	1.1214	0.0000	0.0000	-0.0000	0.0021	-0.0092	-0.0014	-0.0104
3092	0001	52150	1.1398	0.0508	1.5028	1.8745	1.9247	0.0000	0.0000	0.0000	-0.0072	-0.0054	-0.0143	-0.0197
3093	0001	52150	1.1398	0.0503	1.9996	1.3151	0.8061	0.0000	0.0000	-0.0001	0.0130	-0.0096	0.0026	-0.0070
3094	0001	52150	1.1398	0.0501	1.9994	1.8679	1.4106	0.0000	0.0000	-0.0002	0.0491	-0.0052	-0.0129	-0.0183
3095	0001	52150	1.1398	0.0530	3.0137	1.3161	0.5198	0.0000	0.0000	-0.0002	0.0440	-0.0131	0.0047	-0.0086
3096	0001	52150	1.1398	0.0595	3.0125	1.8807	0.9385	0.0000	0.0000	-0.0003	0.0892	-0.0087	-0.0076	-0.0166
3097	0001	52150	1.1398	0.0560	3.0085	1.3204	0.3749	0.0000	0.0000	-0.0003	0.0999	-0.0112	0.0059	-0.0057
3098	0001	52150	1.1398	0.0626	3.0079	1.8012	0.8871	0.0000	0.0000	-0.0004	0.1251	-0.0089	-0.0028	-0.0121
3099	0001	52150	1.1398	0.0432	3.0086	1.3175	0.5205	0.0000	0.0000	-0.0004	0.1369	-0.0126	0.0051	-0.0079
3100	0001	52150	1.1398	0.0523	3.0003	1.3157	0.9062	0.0000	0.0000	-0.0001	-0.0214	-0.0096	0.0023	-0.0070
3101	0001	52150	1.1398	0.0144	1.5041	1.3183	1.1210	0.0000	0.0000	-0.0010	1.6993	-0.0111	-0.0030	-0.0151
3102	0001	52150	1.1398	0.0477	1.5035	1.3173	1.1179	0.0000	0.0000	-0.0003	0.0508	-0.0106	-0.0026	-0.0135
3103	0001	52130	0.3985	-0.0000	1.5031	0.9479	0.0000	0.0000	0.0000	-0.0008	9.9999	-0.0342	0.0407	0.0056
3104	0001	52150	1.1398	0.0198	1.5017	1.3166	1.1205	0.0000	0.0000	-0.0014	4.8139	-0.0120	-0.0051	-0.0171
3105	0001	52150	1.1398	0.0235	1.4991	1.8697	1.9246	0.0000	0.0000	-0.0006	0.6396	-0.0061	-0.0147	-0.0214
3106	0001	52150	1.1398	0.0308	1.9996	1.3157	0.8064	0.0000	0.0000	-0.0007	0.3475	-0.0103	0.0018	-0.0093
3107	0001	52150	1.1398	0.0547	1.9992	1.8651	1.4170	0.0000	0.0000	-0.0002	0.0401	-0.0053	-0.0119	-0.0173
3108	0001	52150	1.1398	0.0530	3.0084	1.3170	0.5227	0.0000	0.0000	-0.0002	0.0383	-0.0140	0.0048	-0.0103
3109	0001	52150	1.1398	0.0530	3.0068	1.8734	0.9248	0.0000	0.0000	-0.0005	0.1599	-0.0115	-0.0072	-0.0192
3110	0001	52150	1.1398	0.0574	4.0079	1.3229	0.3763	0.0000	0.0000	-0.0004	0.1191	-0.0073	0.0064	-0.0013
3111	0001	52150	1.1398	0.0597	3.9968	1.8970	0.6852	0.0000	0.0000	-0.0005	0.1550	-0.0078	-0.0030	-0.0113
3112	0001	52150	1.1398	0.0552	3.0084	1.3174	0.5229	0.0000	0.0000	-0.0003	0.0590	-0.0156	0.0047	-0.0111
3113	0001	52130	0.3985	0.0365	1.5040	0.9487	0.0000	0.0000	0.0000	-0.0007	3.0715	-0.0329	0.0415	0.0079
3114	0001	52130	0.3985	0.0333	1.4997	0.9542	0.0293	0.0000	0.0000	-0.0017	28.7186	-0.0312	0.0335	0.0006
3115	0001	52130	0.3985	0.0322	1.4991	0.9654	0.0584	0.0000	0.0000	-0.0001	0.0237	-0.0295	0.0269	-0.0027
3116	0001	52130	0.3985	0.0379	1.9994	0.9213	0.0000	0.0000	0.0000	-0.0003	0.0457	-0.0187	0.0404	0.0214
3117	0001	52130	0.3985	0.0431	1.9979	0.9371	0.0285	0.0000	0.0000	-0.0001	-0.0130	-0.0178	0.0308	0.0130
3118	0001	52130	0.3985	0.0105	1.9972	0.9540	0.0588	0.0000	0.0000	-0.0012	3.2129	-0.0182	0.0228	0.0035
3119	0001	52130	0.3985	0.0222	2.4974	0.9034	0.0000	0.0000	0.0000	-0.0012	1.0714	-0.0374	0.0358	-0.0029
3120	0001	52130	0.3985	0.0288	2.4992	0.9314	0.0298	0.0000	0.0000	-0.0008	0.4302	-0.0374	0.0235	-0.0148

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FACILITY AXEV1 PROGRAM C031

NOZZLE TYPE — INNER-STREAM PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

DUAL FLOW (NASA-LEWIS) — BENT PLUG (MODEL 7)

THRUST PARAMETERS			OUTER RADIUS RATIO 0.9020		INNER RADIUS RATIO 0.6740		DVO 1.2480					
PCG	CF	NASA	D2	MP	PTO/PA	PTI/PA	OMEGAT	CDO	CDI	CFNET1	CFNET2	E9
3121	0001	52130	0.3985	0.0288	2.4088	0.9570	0.0588	0.9859	9.9999	0.9365	0.9345	1.1437
3122	0001	52130	0.3985	0.0464	3.5071	0.9772	0.0000	0.9875	9.9999	0.9229	0.9229	1.1769
3123	0001	52130	0.3985	0.0519	3.5154	0.9778	0.0288	0.9863	9.9999	0.9386	0.9386	1.1684
3124	0001	52130	0.3985	0.0333	3.5105	0.9683	0.0585	0.9855	9.9999	0.9486	0.9486	1.1600
3125	0001	52130	0.3985	0.0510	2.0005	0.9227	0.0000	0.9853	9.9999	0.9034	0.9034	1.1418
3126	0001	52130	0.3985	-0.0000	1.5032	0.9472	0.0000	1.0214	9.9999	0.9007	0.9007	1.1257
3127	0001	52130	0.3985	0.4486	1.5052	0.9643	0.0000	1.0234	9.9999	0.8533	0.8533	1.1000
3128	0001	52130	0.3985	0.4490	1.5040	0.9772	0.0286	1.0167	9.9999	0.8701	0.8701	1.0958
3129	0001	52130	0.3985	0.4474	1.5008	0.9868	0.0586	1.0241	9.9999	0.8795	0.8795	1.0969
3130	0001	52130	0.3985	0.4485	2.0027	0.9403	0.0000	0.9859	9.9999	0.8747	0.8747	1.1183
3131	0001	52130	0.3985	0.4484	2.0051	0.9600	0.0288	0.9847	9.9999	0.8891	0.8891	1.1143
3132	0001	52130	0.3985	0.4489	2.0059	0.9789	0.0591	0.9846	9.9999	0.9022	0.9022	1.1106
3133	0001	52130	0.3985	0.4486	2.5067	0.9213	0.0000	0.9769	9.9999	0.9012	0.9012	1.1344
3134	0001	52130	0.3985	0.4487	2.5070	0.9511	0.0289	0.9857	9.9999	0.9111	0.9111	1.1308
3135	0001	52130	0.3985	0.4481	2.5072	0.9783	0.0590	0.9857	9.9999	0.9215	0.9215	1.1245
3136	0001	52130	0.3985	0.4492	3.5126	0.9869	0.0000	0.9878	9.9999	0.9092	0.9092	1.1624
3137	0001	52130	0.3985	0.4494	3.5171	0.9957	0.0289	0.9852	9.9999	0.9247	0.9247	1.1538
3138	0001	52130	0.3985	0.4489	3.5167	0.9789	0.0587	0.9873	9.9999	0.9362	0.9362	1.1476
3139	0001	52130	0.3985	0.4487	2.5096	0.9215	0.0000	0.9847	9.9999	0.8952	0.8952	1.1349
3140	0001	52130	0.3985	0.4472	2.0039	0.9396	0.0000	0.9833	9.9999	0.8810	0.8810	1.1205
3141	0001	52130	0.3985	0.4475	1.5016	0.9640	0.0106	1.0135	9.9999X	0.8706	0.8706	1.1026
3142	0001	52130	0.3985	0.4485	1.5060	0.9786	0.0296	1.0210	9.9999	0.8709	0.8709	1.0985
3143	0001	52130	0.3985	0.4468	1.5033	0.9649	0.0000	1.0239	9.9999	0.8564	0.8564	1.1006
3144	0001	52150	1.1398	0.4458	1.5020	1.3197	1.1103	1.0235	0.9082	0.9449	1.8193	1.1694
3145	0001	52150	1.1398	0.4461	1.5000	1.8743	1.0145	1.0245	0.9436	0.9463	2.1664	1.2080
3146	0001	52150	1.1398	0.4457	2.0070	1.3206	0.7988	0.9843	0.8763	0.9563	1.4533	1.1712
3147	0001	52150	1.1398	0.4470	2.0020	1.8749	1.4208	0.9851	0.9593	0.9508	2.2421	1.2083
3148	0001	52150	1.1398	0.4475	3.0135	1.3214	0.4776	0.9857	0.7870	0.9632	1.2081	1.1693
3149	0001	52150	1.1398	0.4488	3.0142	1.8075	0.9160	0.9862	0.9165	0.9583	1.6514	1.1986
3150	0001	52150	1.1398	0.4467	4.0164	1.3244	0.3350	0.9858	0.7336	0.9562	1.1117	1.1713
3151	0001	52150	1.1398	0.4492	4.0225	1.9184	0.6647	0.9865	0.8830	0.9554	1.4126	1.1934
3152	0001	52150	1.1399	0.4455	3.0134	1.3223	0.4783	0.9865	0.7875	0.9621	1.2073	1.1690
3153	0001	52130	0.3985	0.3564	1.5014	0.9601	0.0000	1.0253	9.9999	0.8623	0.8623	1.1061
3154	0001	52130	0.3985	0.3553	1.5021	0.9716	0.0286	1.0253	9.9999	0.8765	0.8765	1.1037
3155	0001	52130	0.3985	0.3577	1.5029	0.9823	0.0589	1.0247	9.9999	0.8945	0.8945	1.1029
3156	0001	52130	0.3985	0.3567	2.0101	0.9364	0.0000	0.9854	9.9999	0.8924	0.8924	1.1285
3157	0001	52130	0.3985	0.3593	2.0096	0.9557	0.0287	0.9857	9.9999	0.9022	0.9022	1.1232
3158	0001	52150	0.3985	0.3569	2.0079	0.9725	0.0590	0.9859	9.9999	0.9171	0.9171	1.1214
3159	0001	52130	0.3985	0.3579	2.5103	0.9177	0.0000	0.9868	9.9999	0.9046	0.9046	1.1434
3160	0001	52130	0.3985	0.3595	2.5140	0.9482	0.0289	0.9860	9.9999	0.9200	0.9200	1.1377
3161	0001	52130	0.3985	0.3579	2.5131	0.9729	0.0589	0.9860	9.9999	0.9287	0.9287	1.1316
3162	0001	52130	0.3985	0.3595	3.5151	0.9857	0.0000	0.9868	9.9999	0.9172	0.9172	1.1684
3163	0001	52130	0.3985	0.3600	3.5134	0.9380	0.0291	0.9883	9.9999	0.9310	0.9310	1.1597
3164	0001	52130	0.3985	0.3598	3.5210	0.9796	0.0588	0.9853	9.9999	0.9430	0.9430	1.1516
3165	0001	52130	0.3985	0.3592	2.0123	0.9347	0.0000	0.9853	9.9999	0.8891	0.8891	1.1279

FACILITY SYEX1 PROGRAM C031 — NOZZLE TYPE: DUAL FLOW (MASS-FLOWS) — INNER-STREAM PLUG CONFIGURATIONS: BENT PLUG (MODEL 7) — SUPPRESSOR CONFIGURATION

OUTER RADIUS RATIO 0.9030 — INNER RADIUS RATIO 0.6760 — DVR 1.2460

DRAG PARAMETERS

RDG	CF	LASA	PR	MA	PTO/PA	PTI/PA	CHPGAT	DCS	CES	DCSH	CDSH	DCPL,O	DCPL,I	DCTOT
3121	0001	52130	0.3985	0.0288	2.4968	0.9579	0.0588	0.0000	0.0000	-0.0317	0.4969	-0.0385	0.0157	-0.0237
3122	0001	52130	0.3985	0.0464	2.5071	0.9772	0.0000	0.0000	0.0000	-0.0005	0.1536	-0.0292	0.0319	0.0022
3123	0001	52130	0.3985	0.0518	3.5156	0.9278	0.0288	0.0000	0.0000	-0.0001	0.0148	-0.0287	0.0226	-0.0062
3124	0001	52130	0.3985	0.0333	3.5105	0.9683	0.0535	0.0000	0.0000	-0.0007	0.4295	-0.0306	0.0120	-0.0193
3125	0001	52130	0.3985	0.0510	2.0005	0.9227	0.0000	0.0000	0.0000	0.0003	-0.0347	-0.0172	0.0412	0.0243
3126	0001	52130	0.3985	-0.0000	1.5033	0.9472	0.0000	0.0000	0.0000	-0.0003	9.9999	-0.0319	0.0426	0.0104
3127	0001	52130	0.3985	0.4436	1.5052	0.9643	0.0000	0.0000	0.0000	-0.0532	0.0470	-0.0531	0.0511	-0.0552
3128	0001	52130	0.3985	0.4490	1.5040	0.9772	0.0286	0.0000	0.0000	-0.0537	0.0469	-0.0482	0.0419	-0.0600
3129	0001	52130	0.3985	0.4474	1.5008	0.9868	0.0596	0.0000	0.0000	-0.0522	0.0460	-0.0469	0.0302	-0.0689
3130	0001	52130	0.3985	0.4495	2.0027	0.9403	0.0000	0.0000	0.0000	-0.0325	0.0491	-0.0357	0.0498	-0.0184
3131	0001	52130	0.3985	0.4496	2.0051	0.9600	0.0288	0.0000	0.0000	-0.0332	0.0502	-0.0361	0.0377	-0.0316
3132	0001	52130	0.3985	0.4499	2.0059	0.9789	0.0591	0.0000	0.0000	-0.0315	0.0475	-0.0339	0.0276	-0.0378
3133	0001	52130	0.3985	0.4486	2.5067	0.9213	0.0000	0.0000	0.0000	-0.0226	0.0480	-0.0509	0.0462	-0.0273
3134	0001	52130	0.3985	0.4487	2.5070	0.9511	0.0289	0.0000	0.0000	-0.0221	0.0472	-0.0491	0.0360	-0.0352
3135	0001	52130	0.3985	0.4481	2.5072	0.9783	0.0589	0.0000	0.0000	-0.0224	0.0480	-0.0484	0.0265	-0.0443
3136	0001	52130	0.3985	0.4492	3.5126	0.8869	0.0000	0.0000	0.0000	-0.0123	0.0423	-0.0261	0.0359	-0.0025
3137	0001	52130	0.3985	0.4494	3.5171	0.9357	0.0289	0.0000	0.0000	-0.0124	0.0425	-0.0253	0.0265	-0.0112
3138	0001	52130	0.3985	0.4499	3.5167	0.9789	0.0587	0.0000	0.0000	-0.0115	0.0396	-0.0253	0.0174	-0.0194
3139	0001	52130	0.3985	0.4487	2.5006	0.9215	0.0000	0.0000	0.0000	-0.0228	0.0488	-0.0485	0.0473	-0.0240
3140	0001	52130	0.3985	0.4472	2.0039	0.9396	0.0000	0.0000	0.0000	-0.0333	0.0505	-0.0355	0.0491	-0.0197
3141	0001	52130	0.3985	0.4475	1.5016	0.9640	0.0106	0.0000	0.0000	-0.0548	0.0479	-0.0539	0.0529	-0.0559
3142	0001	52130	0.3985	0.4485	1.5060	0.9786	0.0286	0.0000	0.0000	-0.0506	0.0447	-0.0452	0.0434	-0.0524
3143	0001	52130	0.3985	0.4468	1.5033	0.9649	0.0000	0.0000	0.0000	-0.0529	0.0470	-0.0508	0.0530	-0.0508
3144	0001	52150	1.1398	0.4458	1.5020	1.3197	1.1103	0.0000	0.0000	-0.0236	0.0405	-0.0101	0.0048	-0.0290
3145	0001	52150	1.1398	0.4461	1.5009	1.8743	1.9145	0.0000	0.0000	-0.0138	0.0408	-0.0049	-0.0104	-0.0290
3146	0001	52150	1.1398	0.4457	2.0070	1.3206	0.7992	0.0000	0.0000	-0.0185	0.0430	-0.0119	0.0082	-0.0221
3147	0001	52150	1.1398	0.4470	2.0020	1.8749	1.4208	0.0000	0.0000	-0.0118	0.0422	-0.0054	-0.0099	-0.0271
3148	0001	52150	1.1398	0.4475	3.0135	1.3214	0.4776	0.0000	0.0000	-0.0118	0.0413	-0.0130	0.0116	-0.0132
3149	0001	52150	1.1398	0.4488	3.0142	1.9075	0.9160	0.0000	0.0000	-0.0081	0.0388	-0.0062	-0.0046	-0.0199
3150	0001	52150	1.1398	0.4467	4.0164	1.3244	0.3350	0.0000	0.0000	-0.0072	0.0345	-0.0352	0.0129	-0.0295
3151	0001	52150	1.1398	0.4492	4.0225	1.9194	0.6647	0.0000	0.0000	-0.0054	0.0324	-0.0239	-0.0012	-0.0305
3152	0001	52150	1.1398	0.4455	3.0136	1.3223	0.4783	0.0000	0.0000	-0.0118	0.0419	-0.0142	0.0121	-0.0139
3153	0001	52130	0.3985	0.3564	1.5014	0.9601	0.0000	0.0000	0.0000	-0.0347	0.0484	-0.0449	0.0498	-0.0298
3154	0001	52130	0.3985	0.3553	1.5021	0.9716	0.0286	0.0000	0.0000	-0.0321	0.0451	-0.0414	0.0397	-0.0338
3155	0001	52130	0.3985	0.3577	1.5029	0.9823	0.0589	0.0000	0.0000	-0.0317	0.0439	-0.0379	0.0307	-0.0398
3156	0001	52130	0.3985	0.3567	2.0101	0.9364	0.0000	0.0000	0.0000	-0.0204	0.0490	-0.0287	0.0472	-0.0019
3157	0001	52130	0.3985	0.3583	2.0096	0.9557	0.0287	0.0000	0.0000	-0.0202	0.0480	-0.0271	0.0362	-0.0111
3158	0001	52130	0.3985	0.3569	2.0079	0.9725	0.0590	0.0000	0.0000	-0.0206	0.0493	-0.0274	0.0272	-0.0208
3159	0001	52130	0.3985	0.3579	2.5103	0.9177	0.0000	0.0000	0.0000	-0.0147	0.0496	-0.0513	0.0435	-0.0225
3160	0001	52130	0.3985	0.3595	2.5140	0.9482	0.0289	0.0000	0.0000	-0.0135	0.0451	-0.0500	0.0340	-0.0295
3161	0001	52130	0.3985	0.3579	2.5131	0.9729	0.0589	0.0000	0.0000	-0.0141	0.0477	-0.0500	0.0263	-0.0378
3162	0001	52130	0.3985	0.3595	3.5151	0.8857	0.0000	0.0000	0.0000	-0.0082	0.0439	-0.0248	0.0317	-0.0014
3163	0001	52130	0.3985	0.3600	3.5134	0.9380	0.0291	0.0000	0.0000	-0.0076	0.0406	-0.0245	0.0219	-0.0102
3164	0001	52130	0.3985	0.3596	3.5210	0.9796	0.0588	0.0000	0.0000	-0.0079	0.0425	-0.0249	0.0093	-0.0236
3165	0001	52130	0.3985	0.3592	2.0123	0.9347	0.0000	0.0000	0.0000	-0.0216	0.0512	-0.0310	0.0468	-0.0058

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NOZZLE TYPE — PLUG CONFIGURATIONS — SUPPRESSOR CONFIGURATION

DUAL FLOW (CASE-I-DUS) — BENT PLUG (MODEL 7)

OUTER RADIUS RATIO 0.0020 — INNER RADIUS RATIO 0.4740 — DVD 1.2480

THRUST PARAMETERS

SEC	CF	MASA	P2	M2	PTO/PA	PTI/PA	CMEGAT	CDT	CDI	CFMFT1	CFMFT2	G
3166	0001	52150	1.1398	0.3615	1.5041	0.5629	0.0000	1.0239	0.0000	0.8784	0.8784	1.1991
3167	0001	52150	1.1398	0.3607	1.5043	1.3354	1.1075	1.0031	0.9065	0.9411	1.8765	1.1721
3168	0001	52150	1.1398	0.3594	1.5009	1.8965	1.8220	1.0149	0.9528	0.9677	3.2529	1.2151
3169	0001	52150	1.1398	0.3602	2.0113	1.3213	0.7994	0.9819	0.8755	0.9622	1.4825	1.1742
3170	0001	52150	1.1398	0.3600	2.0121	1.8816	1.4207	0.9865	0.9600	0.9532	2.2469	1.2104
3171	0001	52150	1.1398	0.3605	3.0147	1.3248	0.6088	0.9800	0.8134	0.9711	1.2301	1.1768
3172	0001	52150	1.1398	0.3597	3.0131	1.8826	0.9109	0.9865	0.9276	0.9579	1.6500	1.2031
3173	0001	52150	1.1398	0.3613	4.0135	1.3212	0.3442	0.9853	0.7558	0.9631	1.1234	1.1793
3174	0001	52150	1.1398	0.3594	4.0154	1.8248	0.6752	0.9861	0.8940	0.9569	1.4234	1.1991
3175	0001	52150	1.1398	0.3607	3.0109	1.3221	0.4979	0.9788	0.8158	0.9686	1.2255	1.1749
3176	0001	52150	1.1398	0.3586	1.5011	1.8784	1.9278	1.0214	0.9663	0.9541	3.2096	1.2144

FACILITY [illegible] PROGRAM C051

INNER-STREAM

NOZZLE TYPE: DUAL FLOW (NASA-LEWIS)

PLUG CONFIGURATIONS: VENT PLUG (MODEL 7)

SUPPRESSOR CONFIGURATION

DRAG PARAMETERS

OUTER RADIUS RATIO: 0.[illegible] INNER RADIUS RATIO: 0.4740 DVR: 1.2400

RDG	CF	[illegible]	[illegible]	[illegible]	PTO/PA	PTI/PA	OMEGAT	DCS	CDS	DCSH	CDSH	DCPL.O	DCPL.I	DCTOT
3166	0001	52130	[illegible]	[illegible]	1.5[illegible]	[illegible]	0.0000	0.0002	0.0000	-0.0334	0.0457	-0.0418	0.0522	-0.0231
~~3167~~	~~0001~~	~~52150~~	~~1.1398~~	~~0.3612~~	~~1.5049~~	~~[illegible]~~	~~[illegible]~~	~~0.0001~~	~~0.0009~~	~~[illegible]~~	~~0.0320~~	~~-0.0096~~	~~[illegible]~~	~~-0.0206~~ BAD POINT
3168	0001	52150	1.1398	0.3596	1.5000	1.8963	1.9220	0.0000	0.0000	-0.0056	0.0390	-0.0045	-0.0114	-0.0244
3169	0001	52150	1.1398	0.3502	2.0110	1.3213	0.7034	0.0000	0.0000	-0.0116	0.0414	-0.0109	0.0065	-0.0150
3170	0001	52150	1.1398	0.3590	2.0121	1.8816	1.4207	0.0000	0.0000	-0.0075	0.0419	-0.0050	-0.0105	-0.0230
3171	0001	52150	1.1398	0.3609	3.0147	1.3248	0.4978	0.0000	0.0000	-0.0076	0.0414	-0.0153	0.0092	-0.0137
3172	0001	52150	1.1398	0.3597	3.0131	1.8926	0.9199	0.0000	0.0000	-0.0053	0.0393	-0.0089	-0.0051	-0.0192
3173	0001	52150	1.1398	0.3613	4.0135	1.3212	0.3442	0.0000	0.0000	-0.0049	0.0358	-0.0277	0.0108	-0.0218
3174	0001	52150	1.1398	0.3596	4.0154	1.9248	0.6752	0.0000	0.0000	-0.0035	0.0325	-0.0184	-0.0027	-0.0246
3175	0001	52150	1.1398	0.3607	3.0159	1.3221	0.4979	0.0000	0.0000	-0.0073	0.0396	-0.0156	0.0095	-0.0134
3176	0001	52150	1.1398	0.3586	1.5011	1.8784	1.9278	0.0000	0.0000	-0.0083	0.0381	-0.0047	-0.0116	-0.0246

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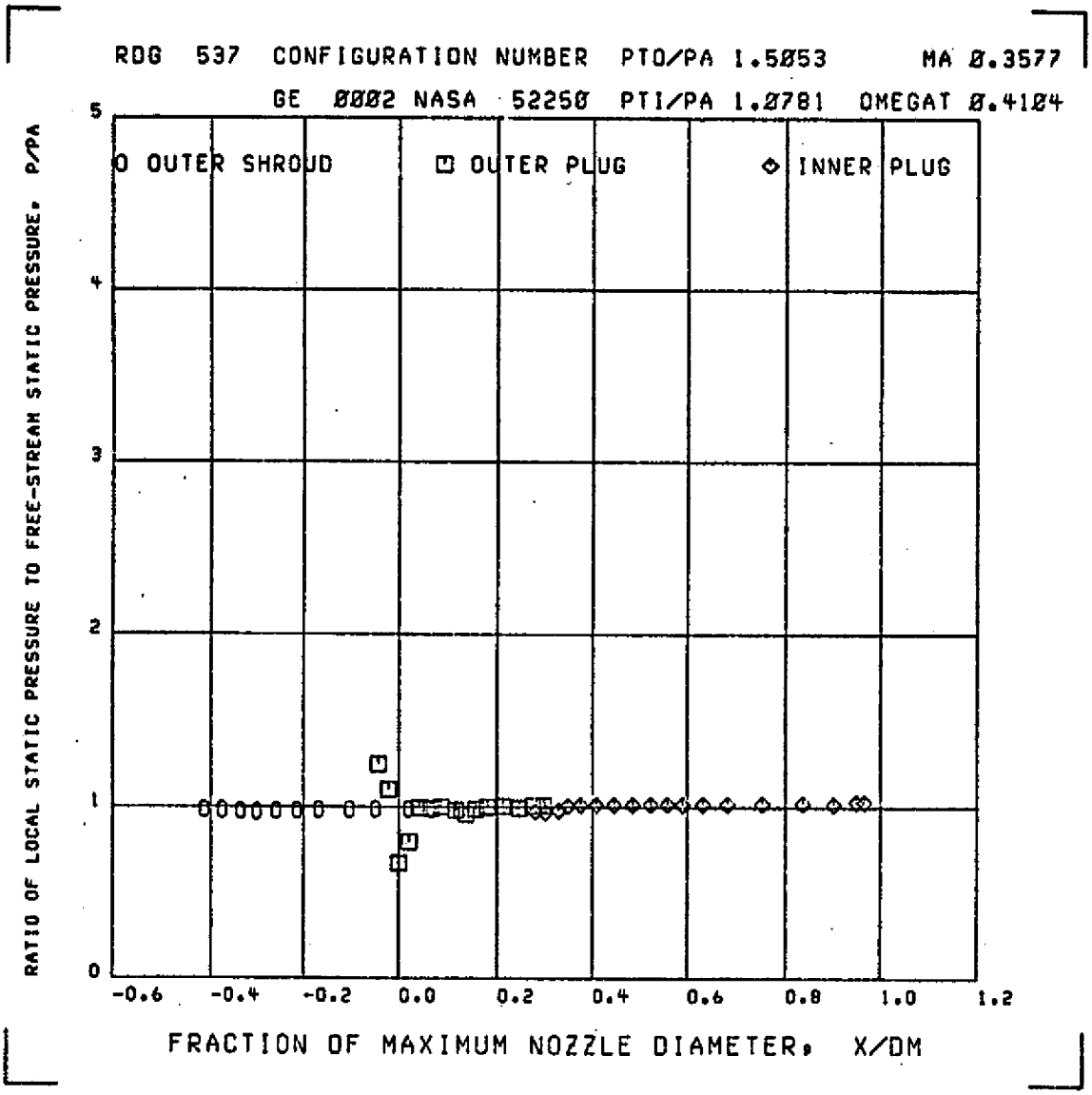
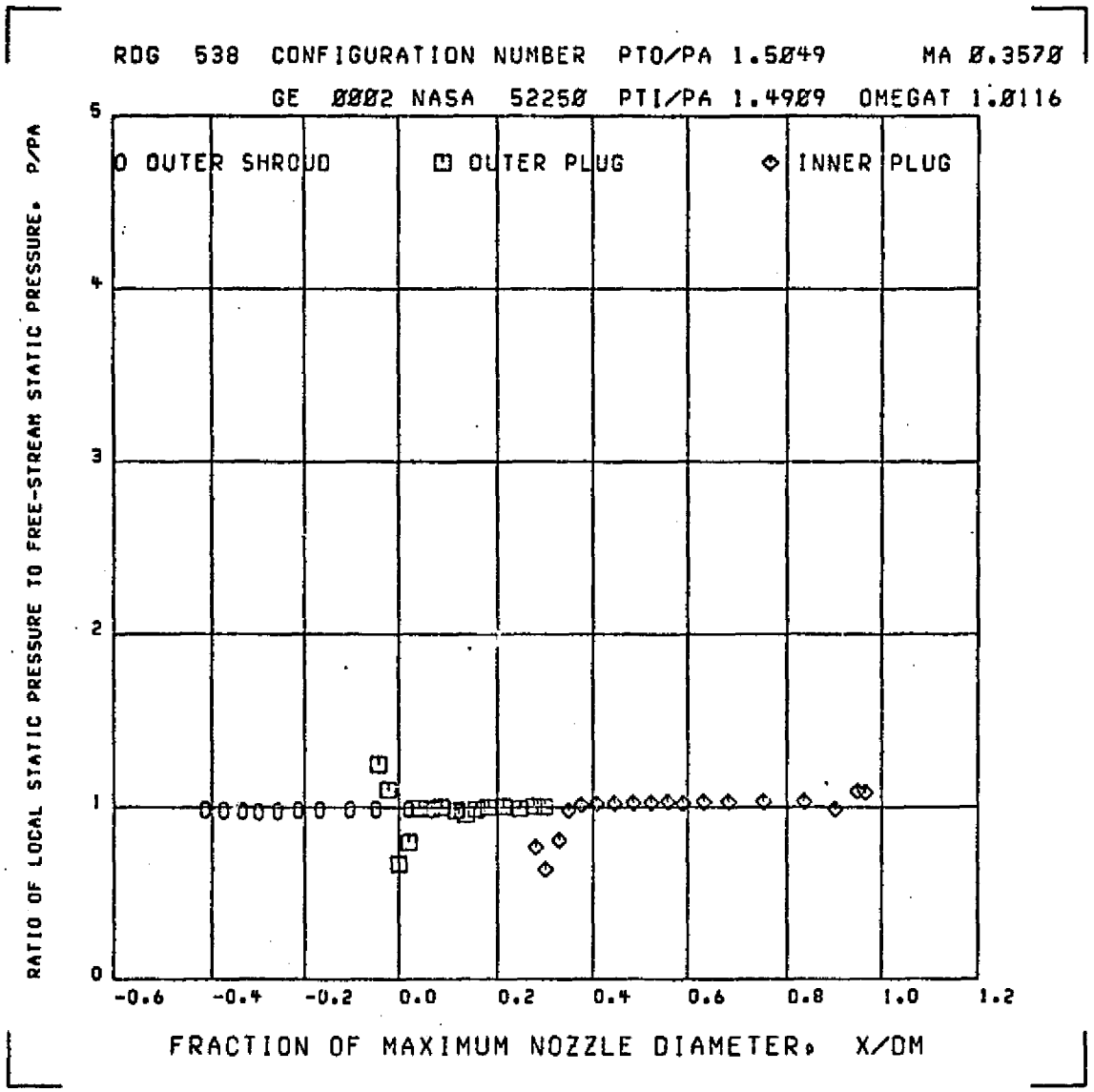
14.0 STATIC PRESSURE PLOTS

This Section presents the values of the static pressures measured at the outer shroud, outer plug, and inner plug of the coannular configurations at selected operating conditions.

Nomenclature

D_M	-	Sting Diameter, 8 Inches
M_A	-	Tunnel Mach Number
OmegaT	-	Weight Flow Ratio, Inner Flow to Outer Flow
P	-	Local Static Pressure
P_A	-	Ambient Pressure
P_{T_i}	-	Inner Stream Total Pressure
P_{T_o}	-	Outer Stream Total Pressure
X	-	Axial Distance from Outer Nozzle Throat


RDG 537 CONFIGURATION NUMBER PTO/PA 1.5053 MA 0.3577
GE 0002 NASA 52250 PTI/PA 1.0781 OMEGAT 0.4104
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
5
4
3
2
1
0
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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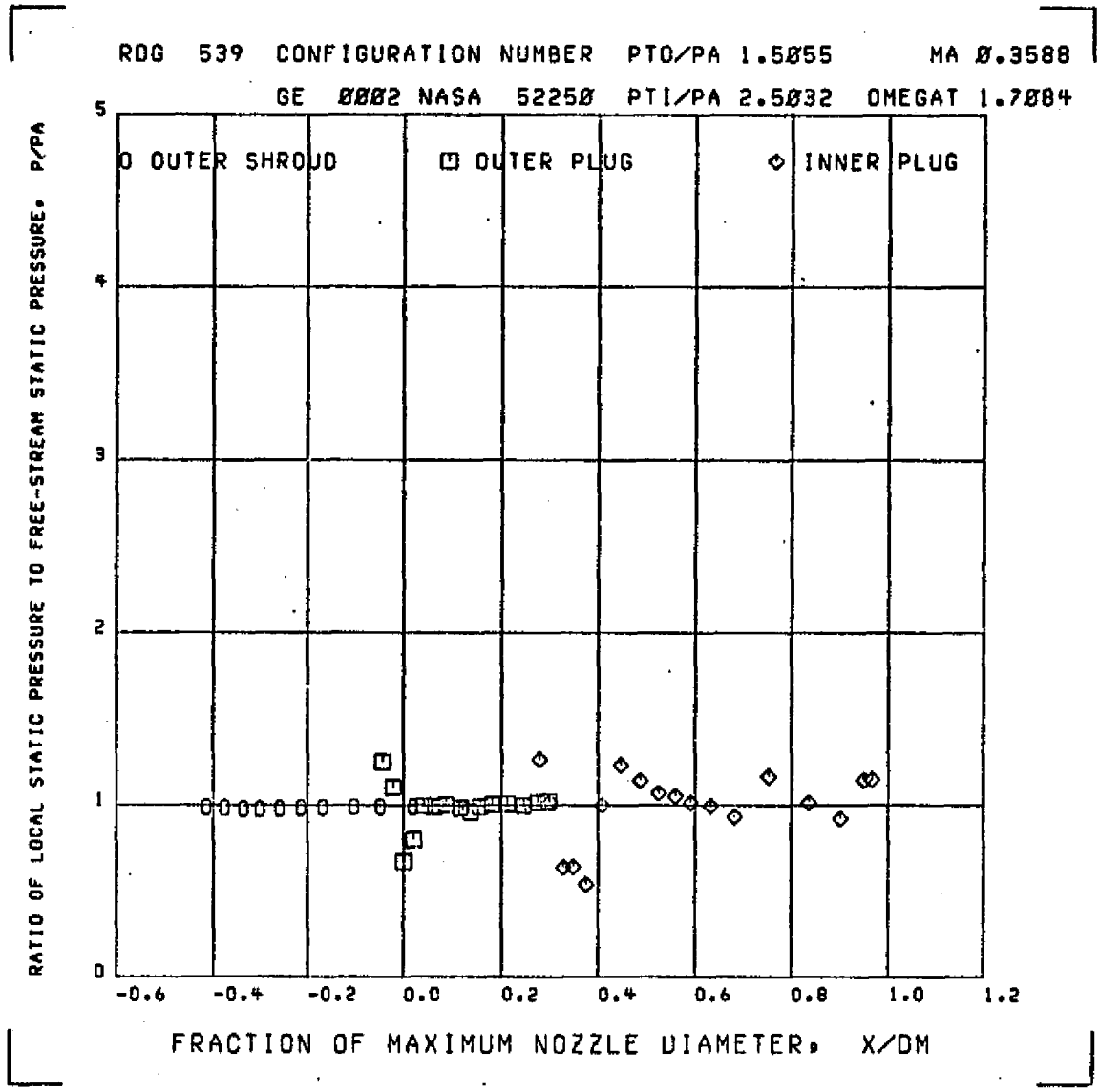
GE 0002 NASA 52250 PTI/PA 1.4909 OMEGAT 1.0116
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
1
2
3
4
5
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0002 NASA 52250 PTI/PA 2.5032 OMEGAT 1.7084
O OUTER SHROUD
⊡ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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0.2
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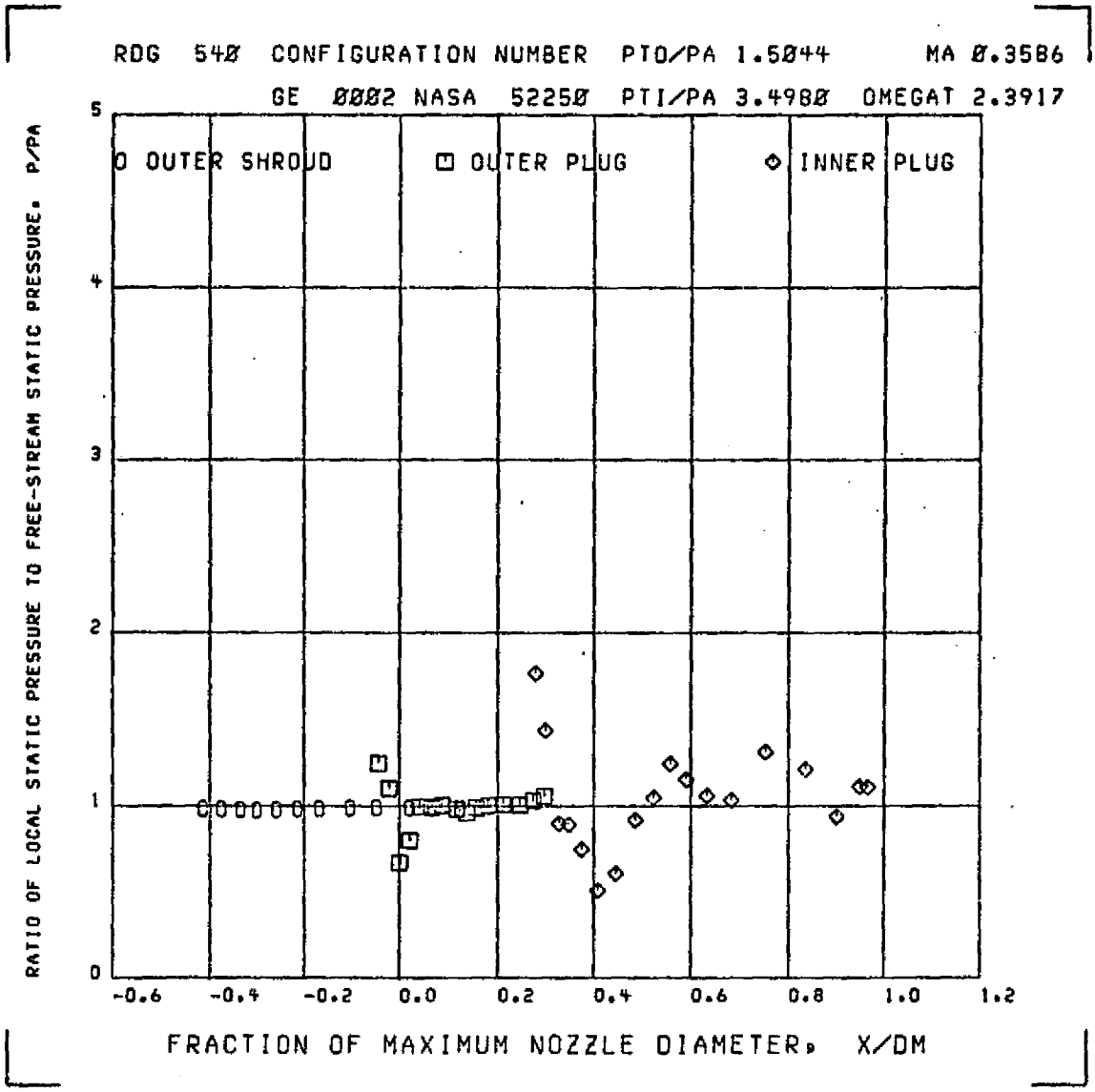
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 540 CONFIGURATION NUMBER PTO/PA 1.5044 MA 0.3586
GE 0002 NASA 52250 PTI/PA 3.4980 OMEGAT 2.3917
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
1
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-0.6
-0.4
-0.2
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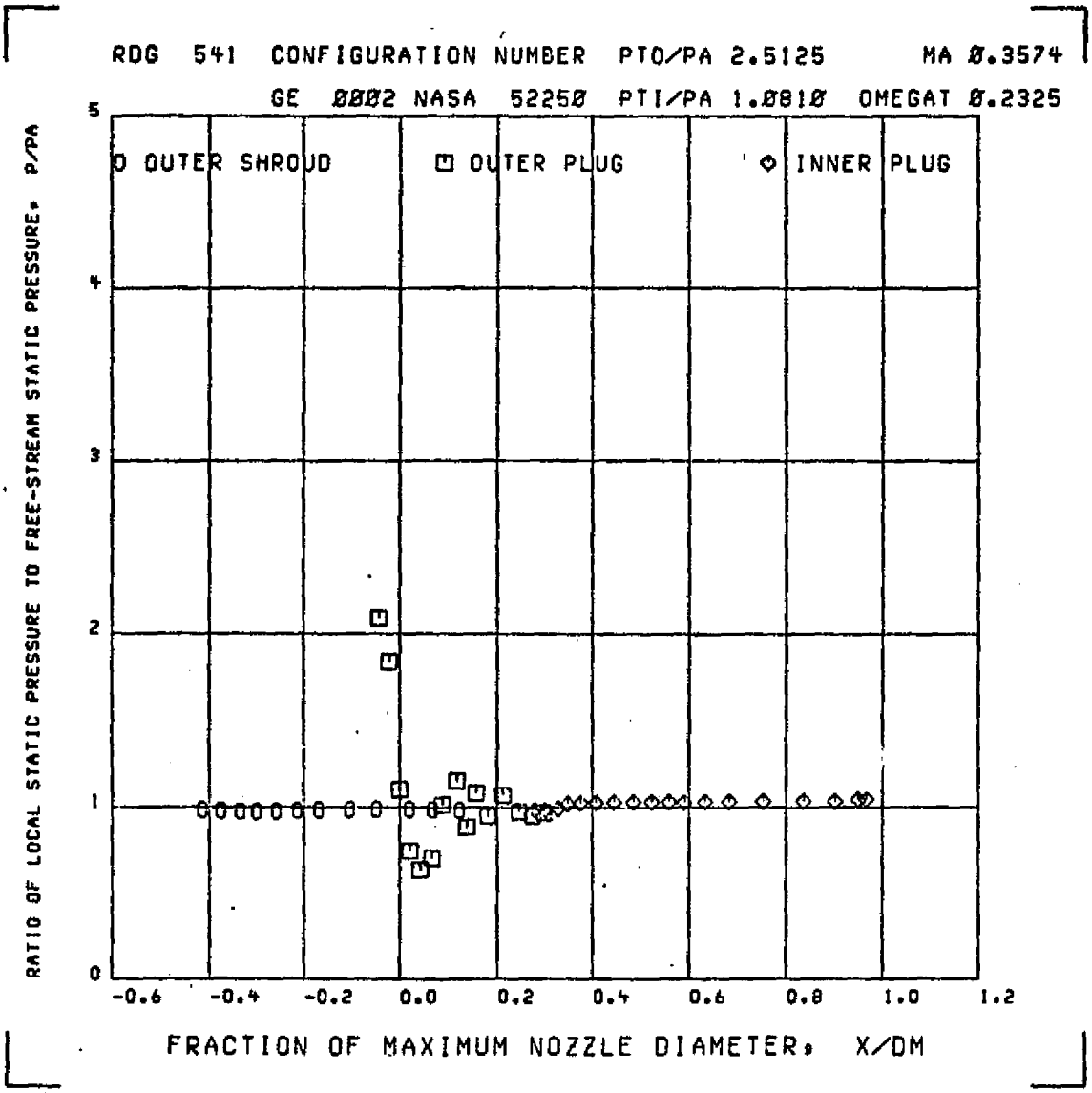
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 541 CONFIGURATION NUMBER PTO/PA 2.5125 MA Ø.3574
GE ØØØ2 NASA 5225Ø PTI/PA 1.Ø81Ø OMEGAT Ø.2325
D OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.4
-0.2
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0.8
1.0
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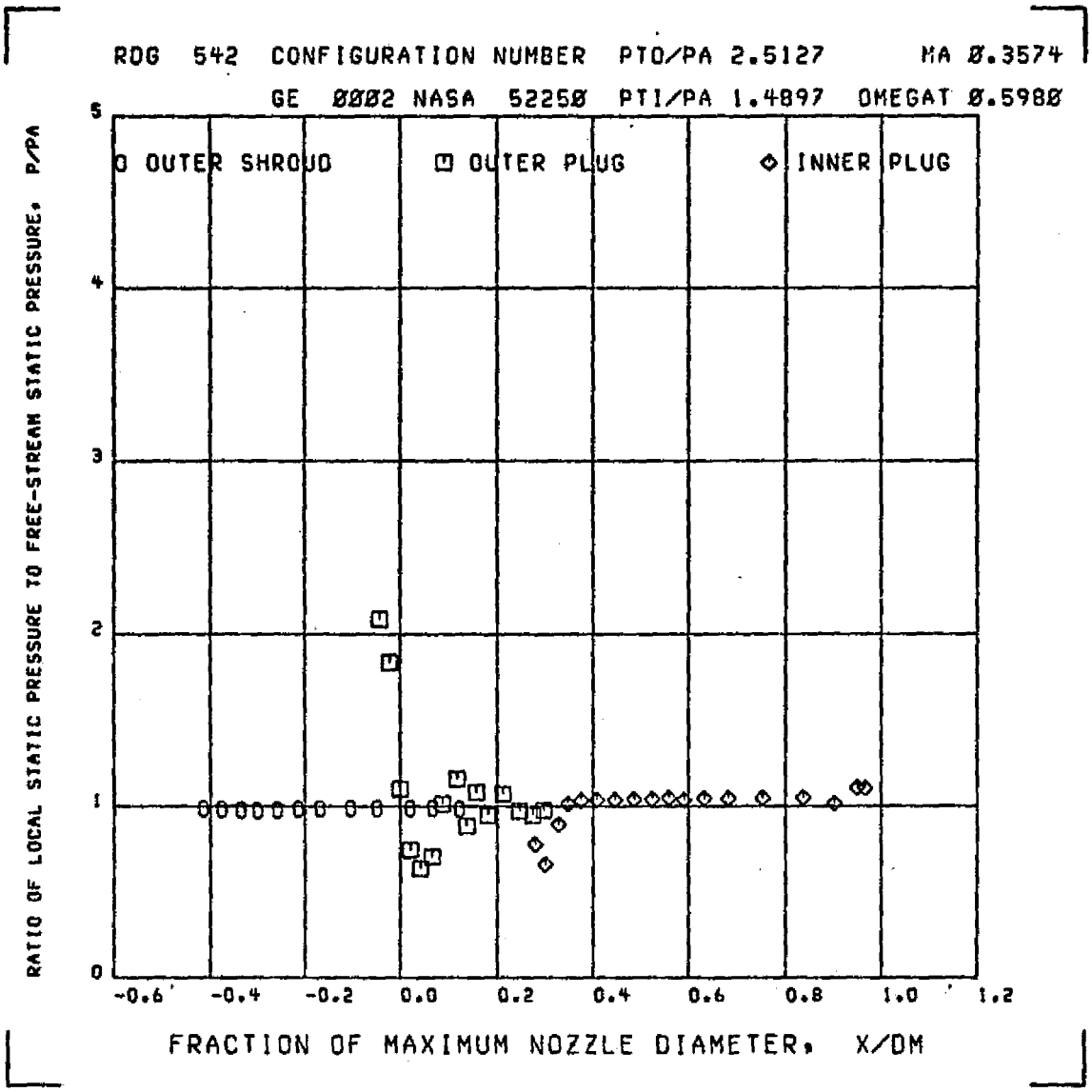
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 542 CONFIGURATION NUMBER PTO/PA 2.5127 MA Ø.3574
GE ØØØ2 NASA 5225Ø PTI/PA 1.4897 OMEGAT Ø.598Ø
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.2
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1.0
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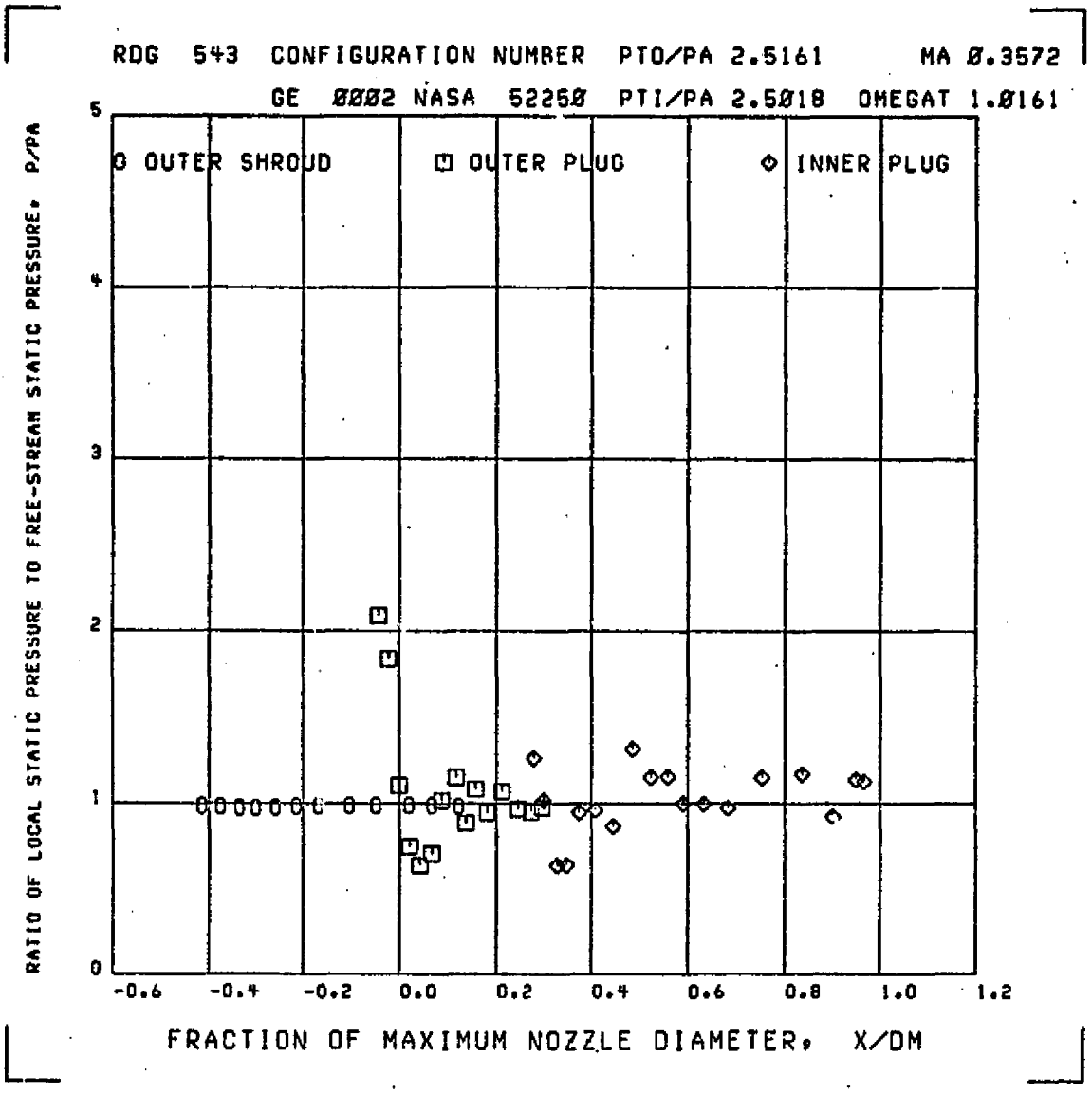
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0002 NASA 52250 PTI/PA 2.5018 OMEGAT 1.0161
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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1.0
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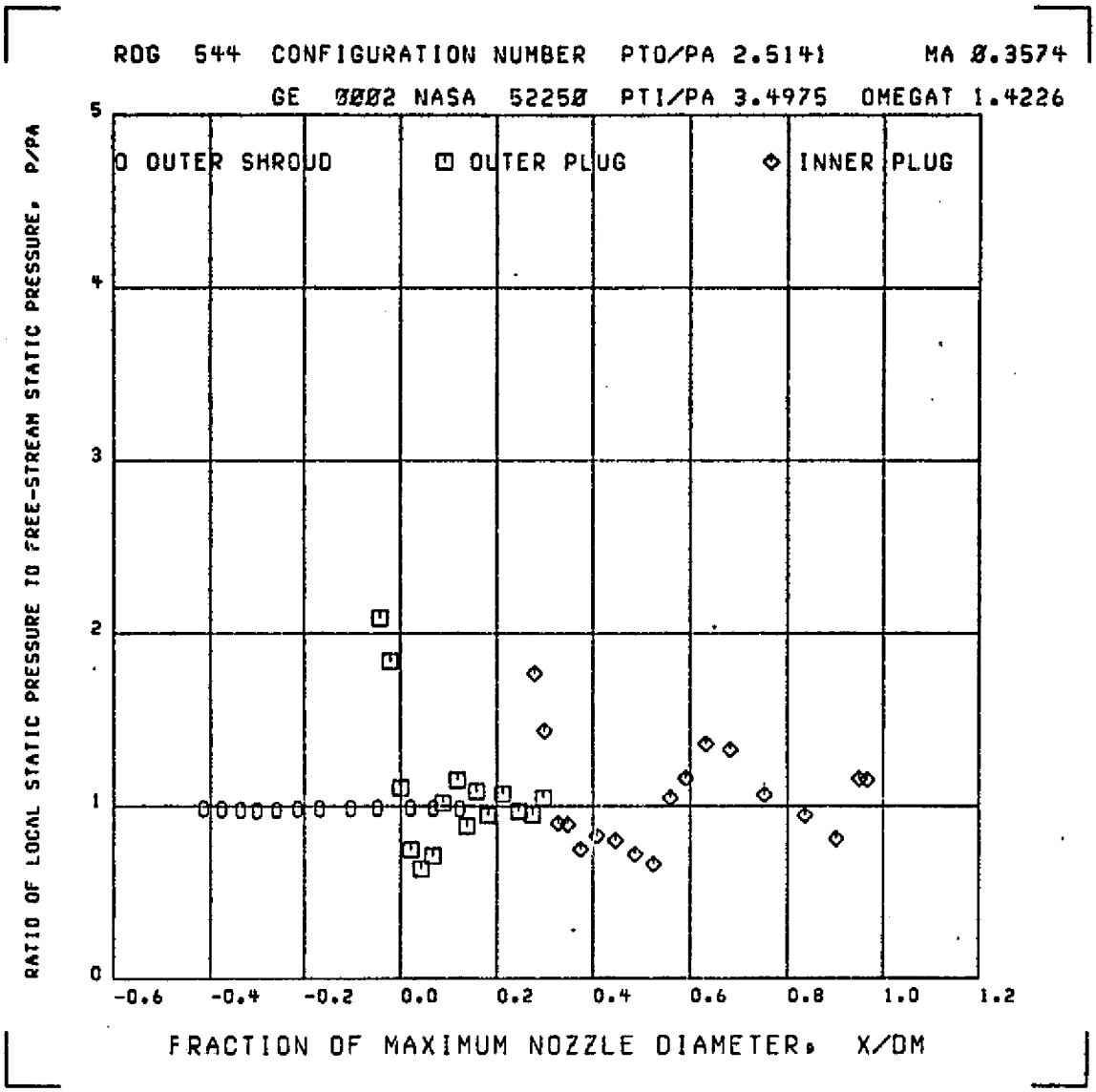
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 544 CONFIGURATION NUMBER PTO/PA 2.5141 MA 0.3574
GE 0002 NASA 52250 PTI/PA 3.4975 OMEGAT 1.4226
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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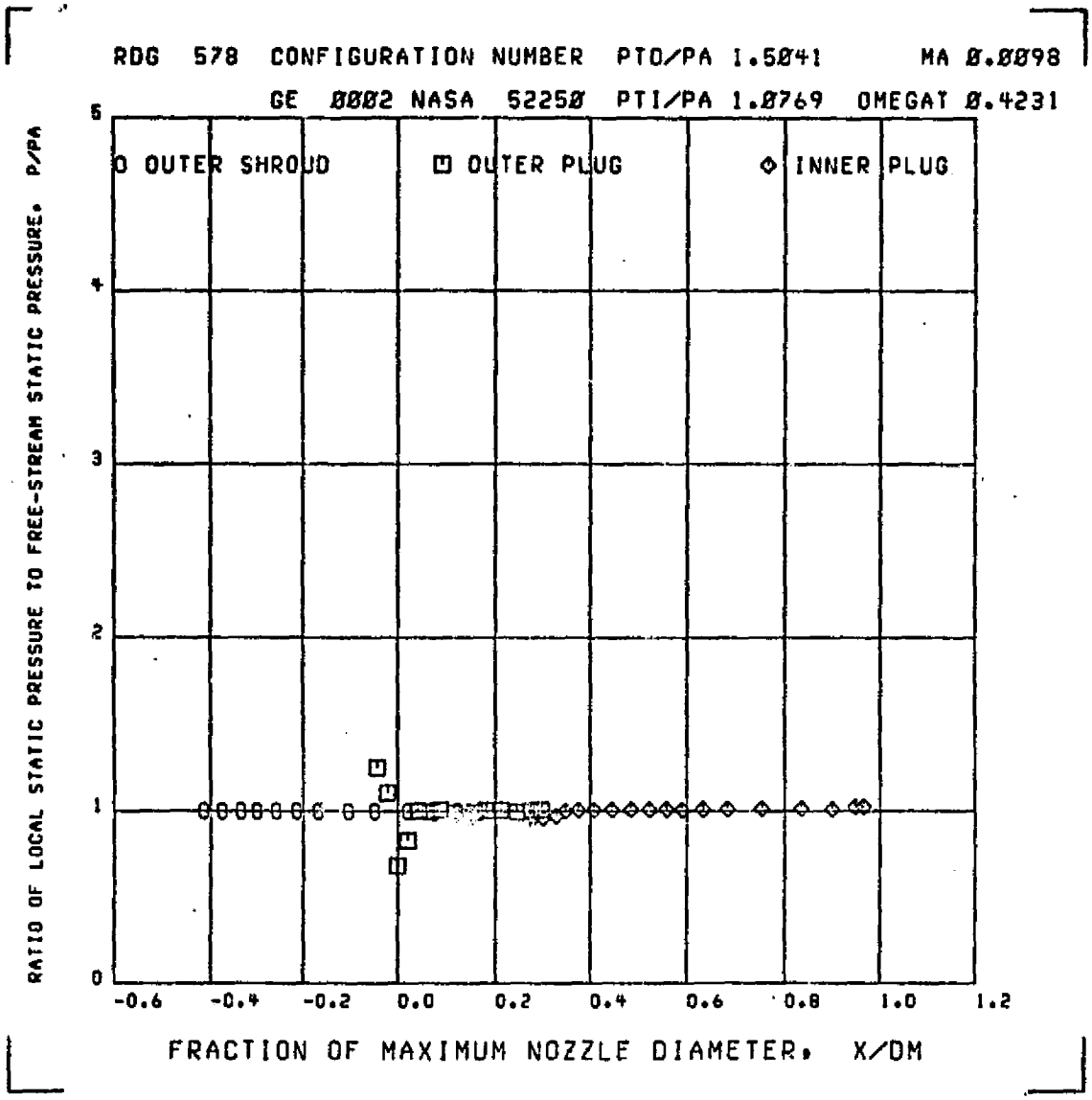
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0002 NASA 52250 PTI/PA 1.0769 OMEGAT 0.4231
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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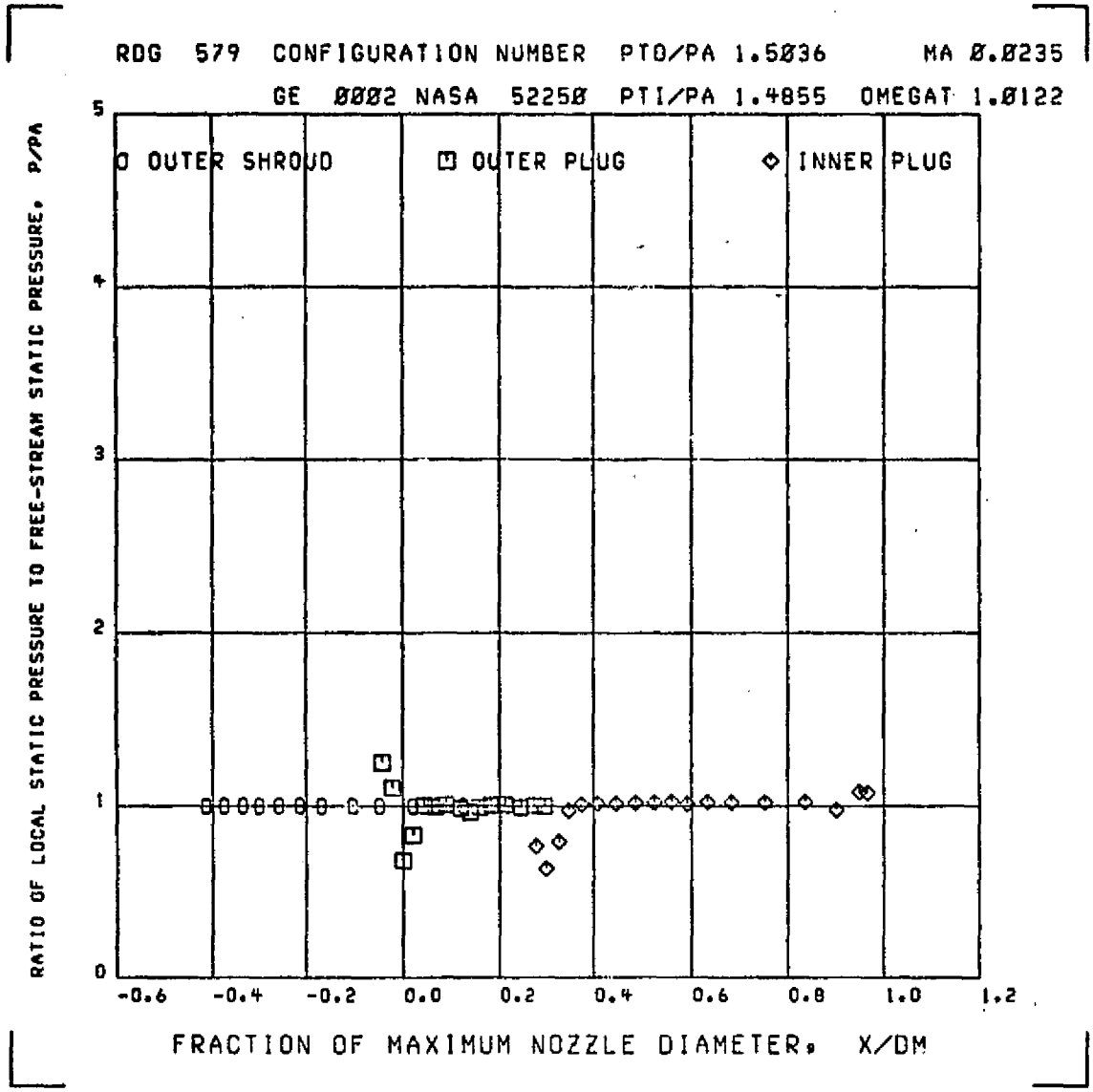
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 579 CONFIGURATION NUMBER PTO/PA 1.5036 MA 0.0235
GE 0002 NASA 52250 PTI/PA 1.4855 OMEGAT 1.0122
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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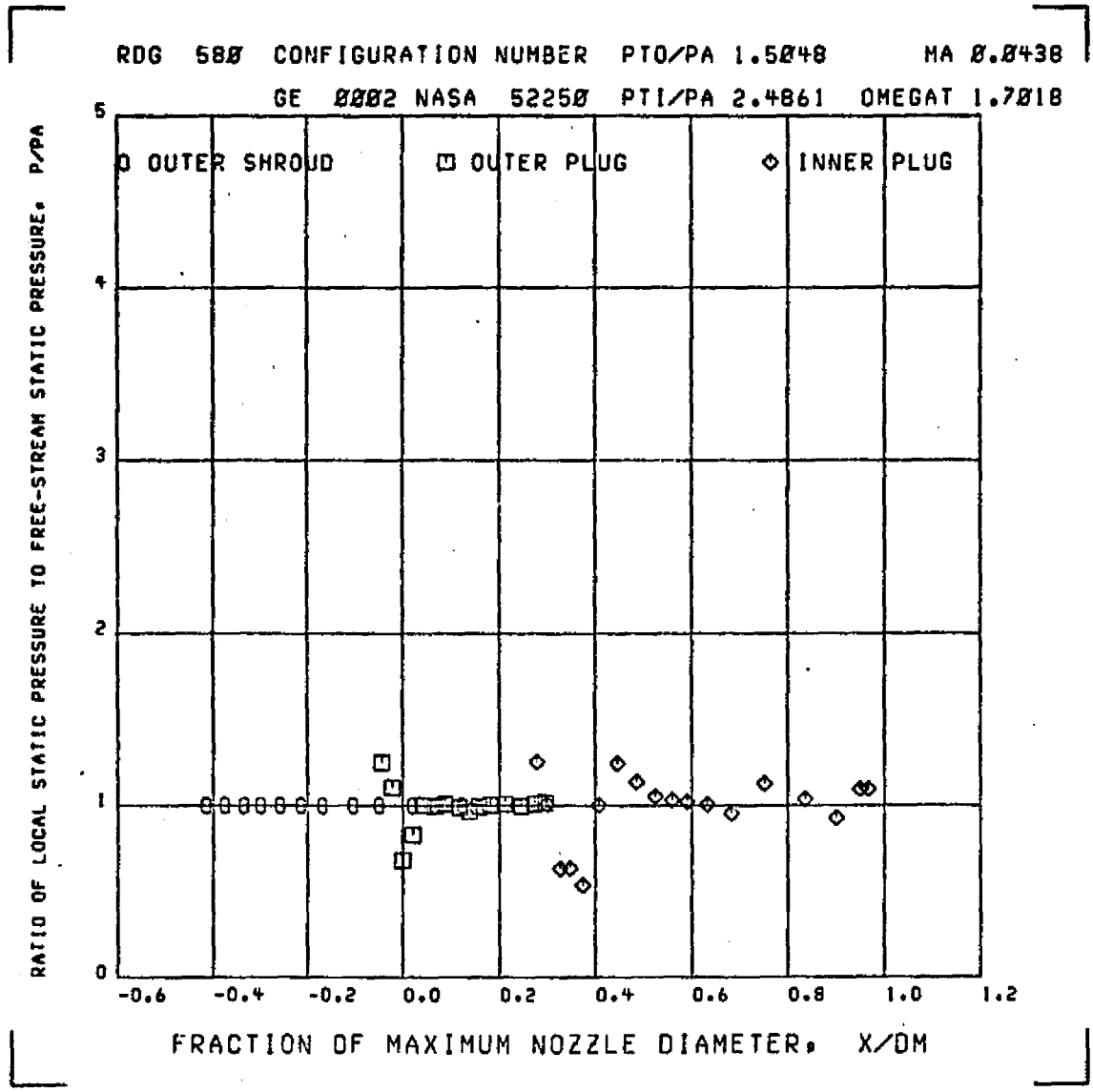
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 580 CONFIGURATION NUMBER PTO/PA 1.5048 MA 0.0438
GE 0002 NASA 52250 PTI/PA 2.4861 OMEGAT 1.7018
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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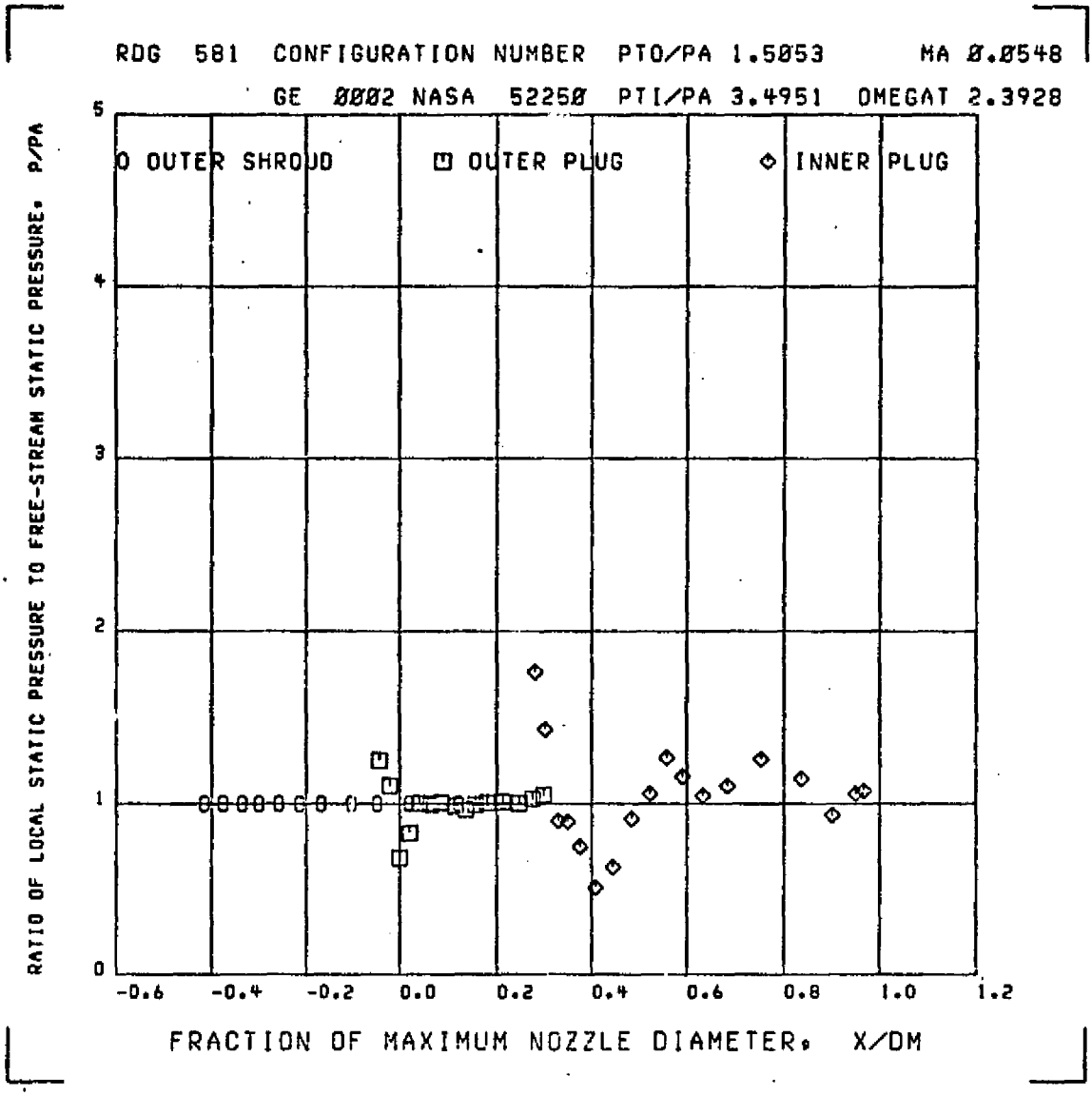
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ2 NASA 52250 PTI/PA 3.4951 OMEGAT 2.3928
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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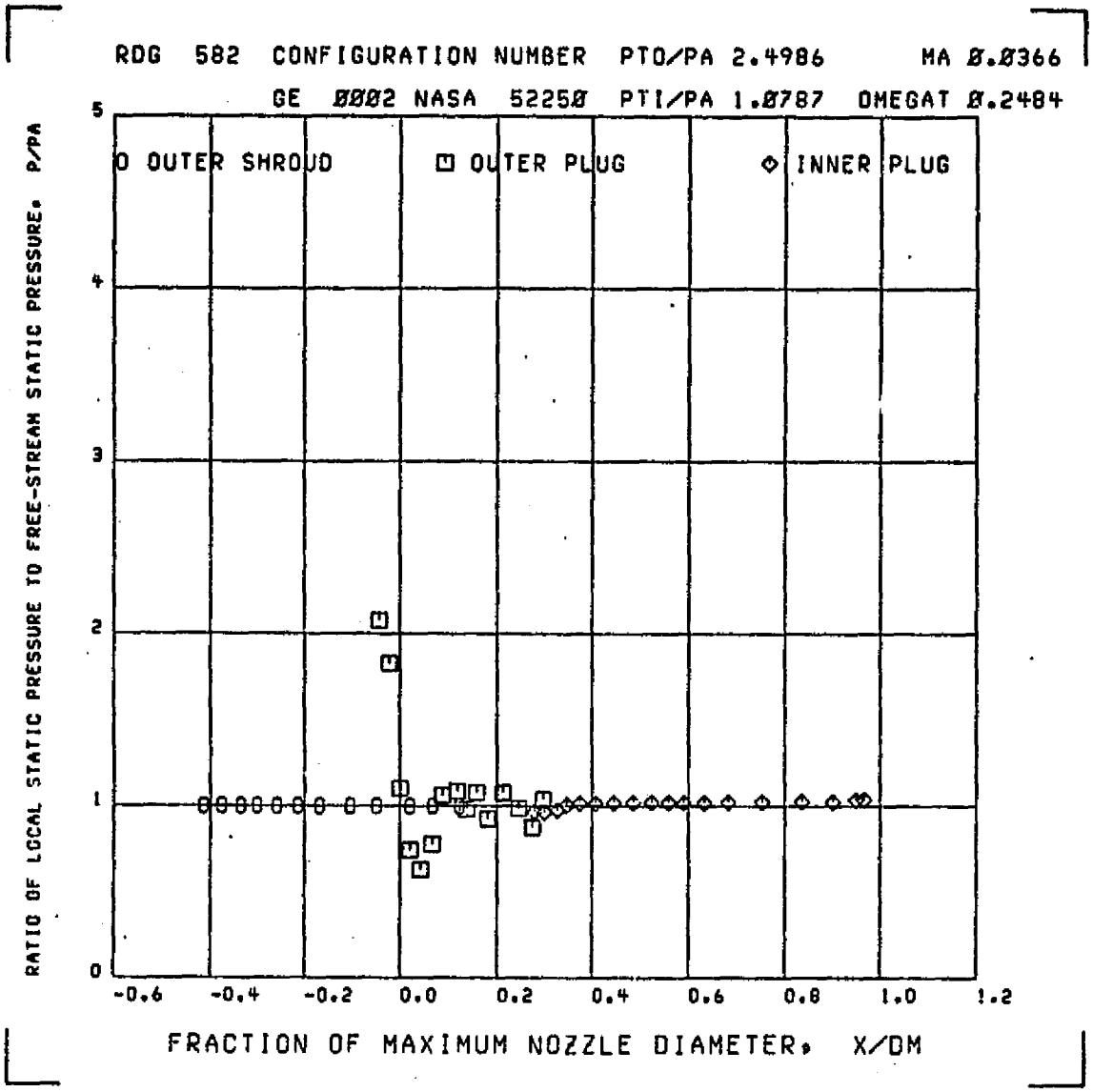
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 582 CONFIGURATION NUMBER PTO/PA 2.4986 MA Ø.Ø366
GE ØØØ2 NASA 5225Ø PTI/PA 1.Ø787 OMEGAT Ø.2484
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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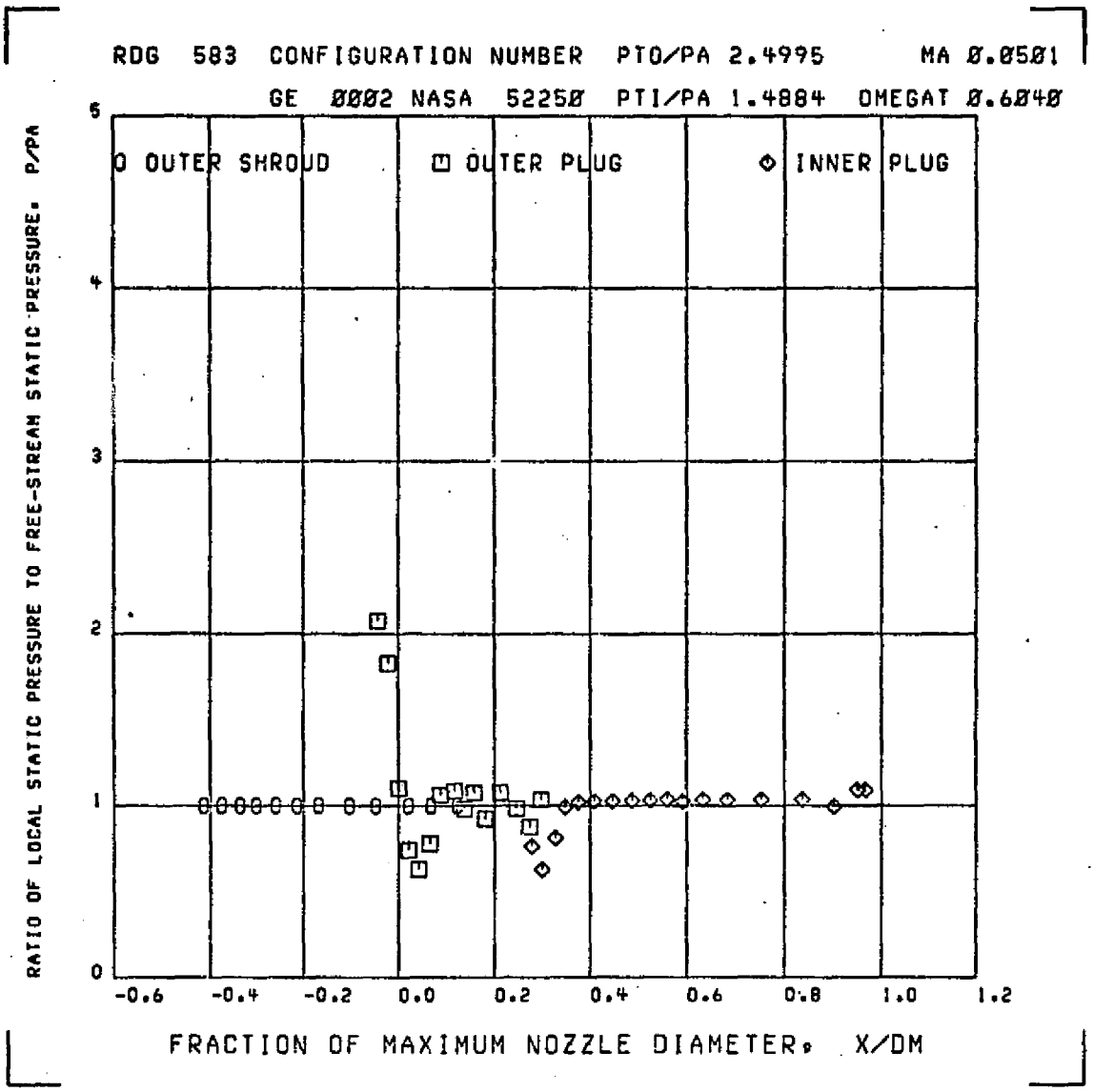
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 583 CONFIGURATION NUMBER PTO/PA 2.4995 MA 0.0501
GE 0002 NASA 52250 PTI/PA 1.4884 OMEGAT 0.6040
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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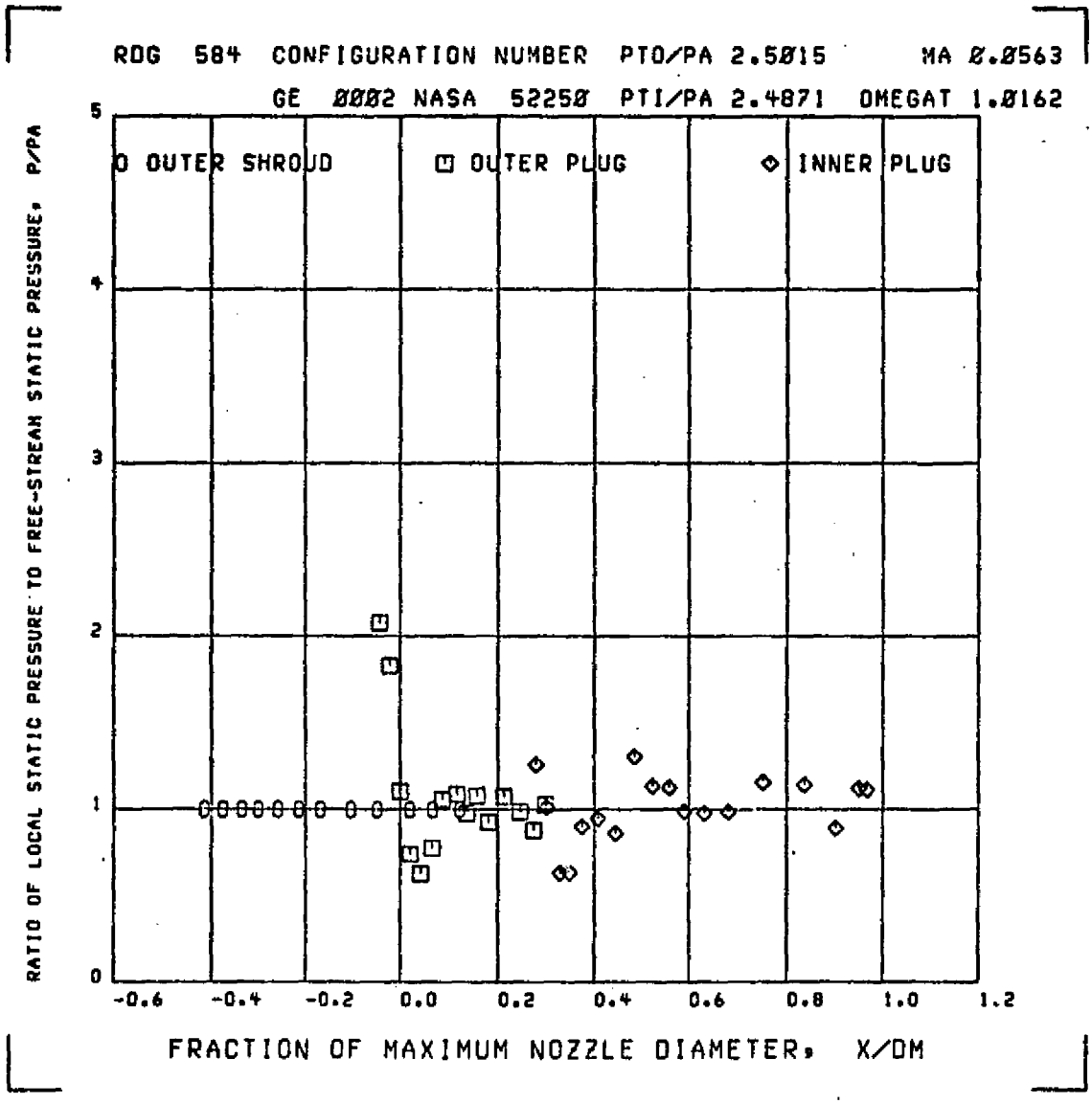
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 584 CONFIGURATION NUMBER PTO/PA 2.5015 MA 0.0563
GE 0002 NASA 52250 PTI/PA 2.4871 OMEGAT 1.0162
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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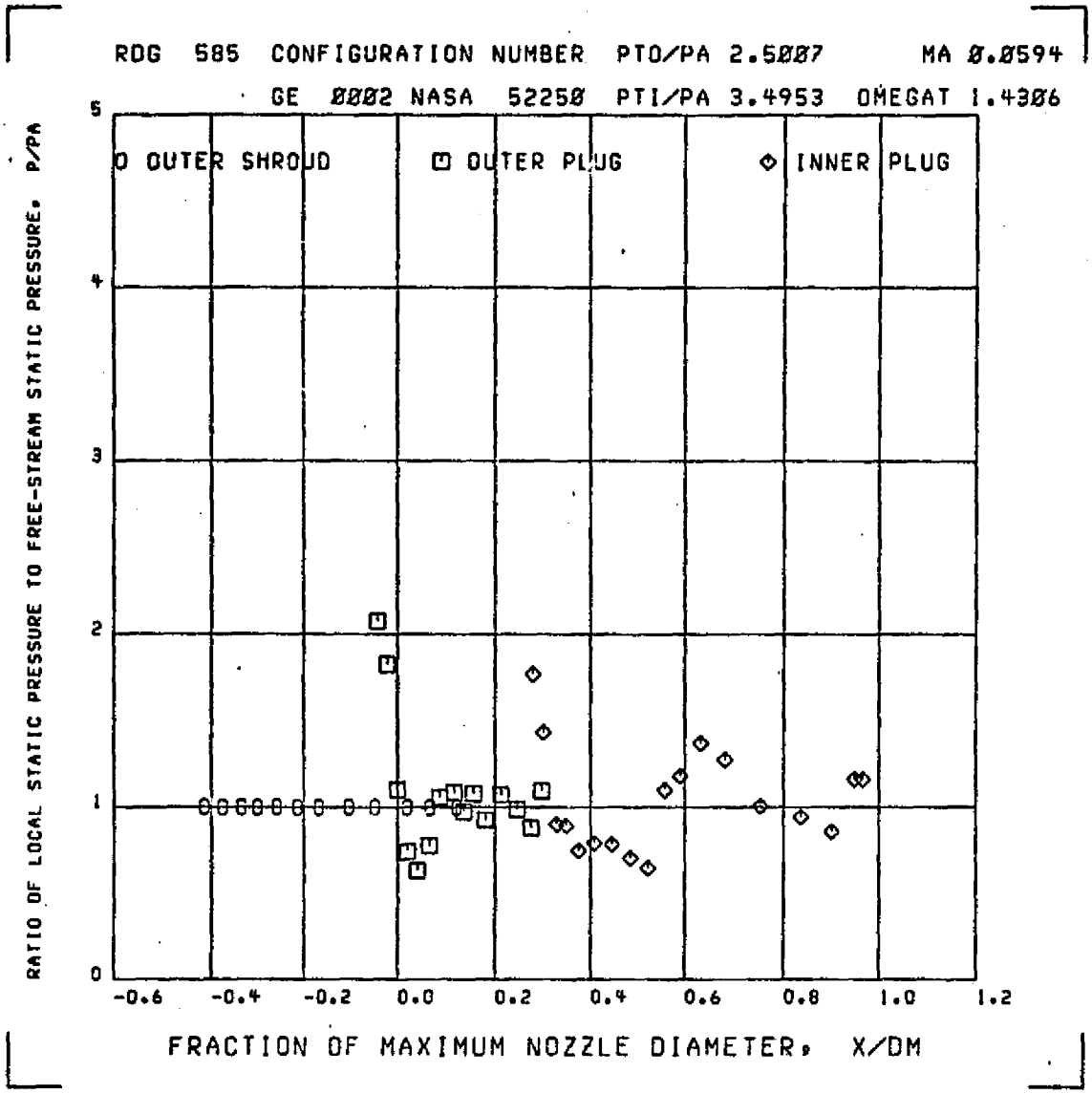
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0002 NASA 52250 PTI/PA 3.4953 OMEGAT 1.4306
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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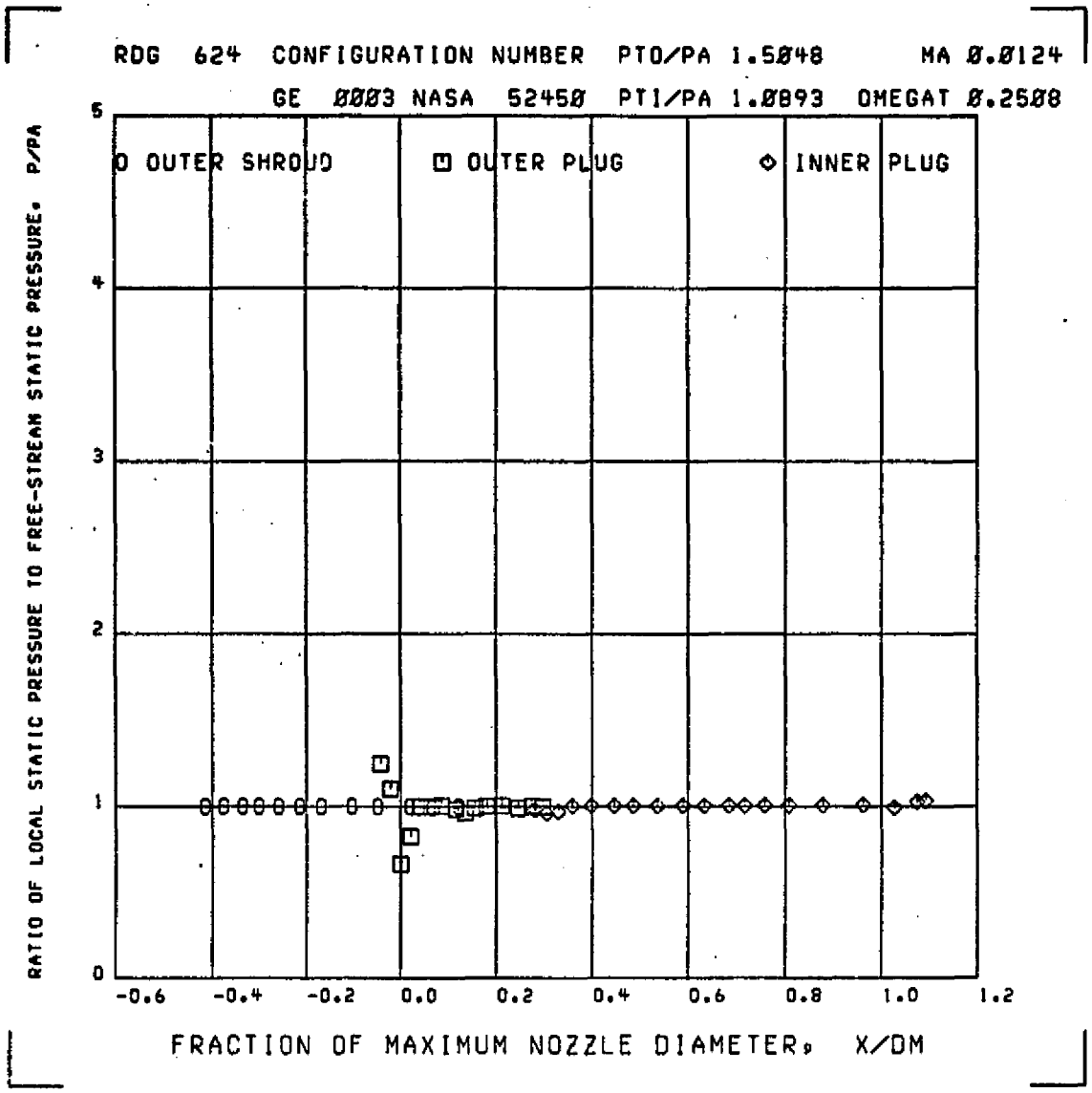
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0003 NASA 52450 PT1/PA 1.0893 OMEGAT 0.2508
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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0.8
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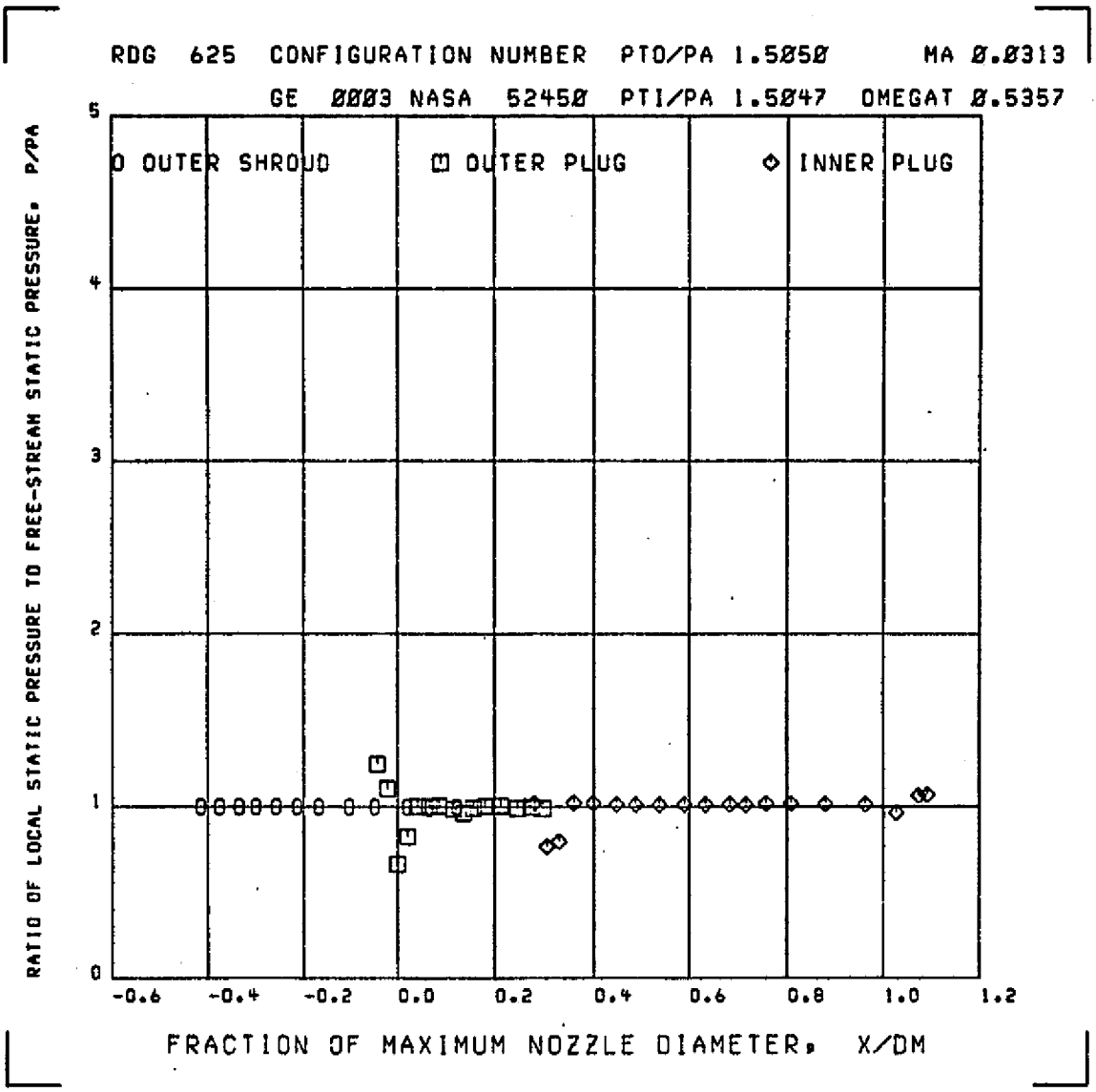
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0003 NASA 52450 PTI/PA 1.5047 OMEGAT 0.5357
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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0.8
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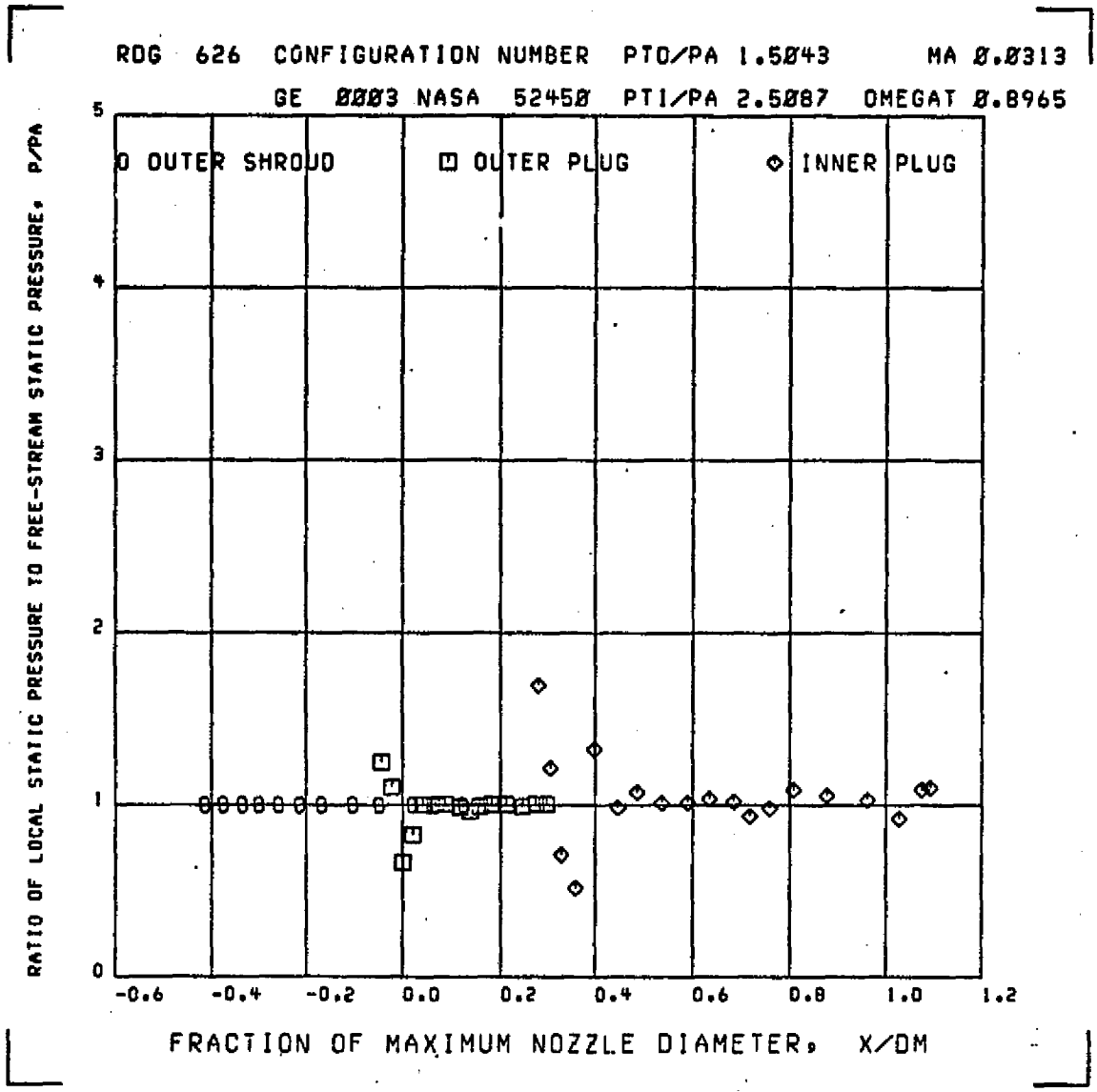
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0003 NASA 52450 PTI/PA 2.5087 OMEGAT 0.8965
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
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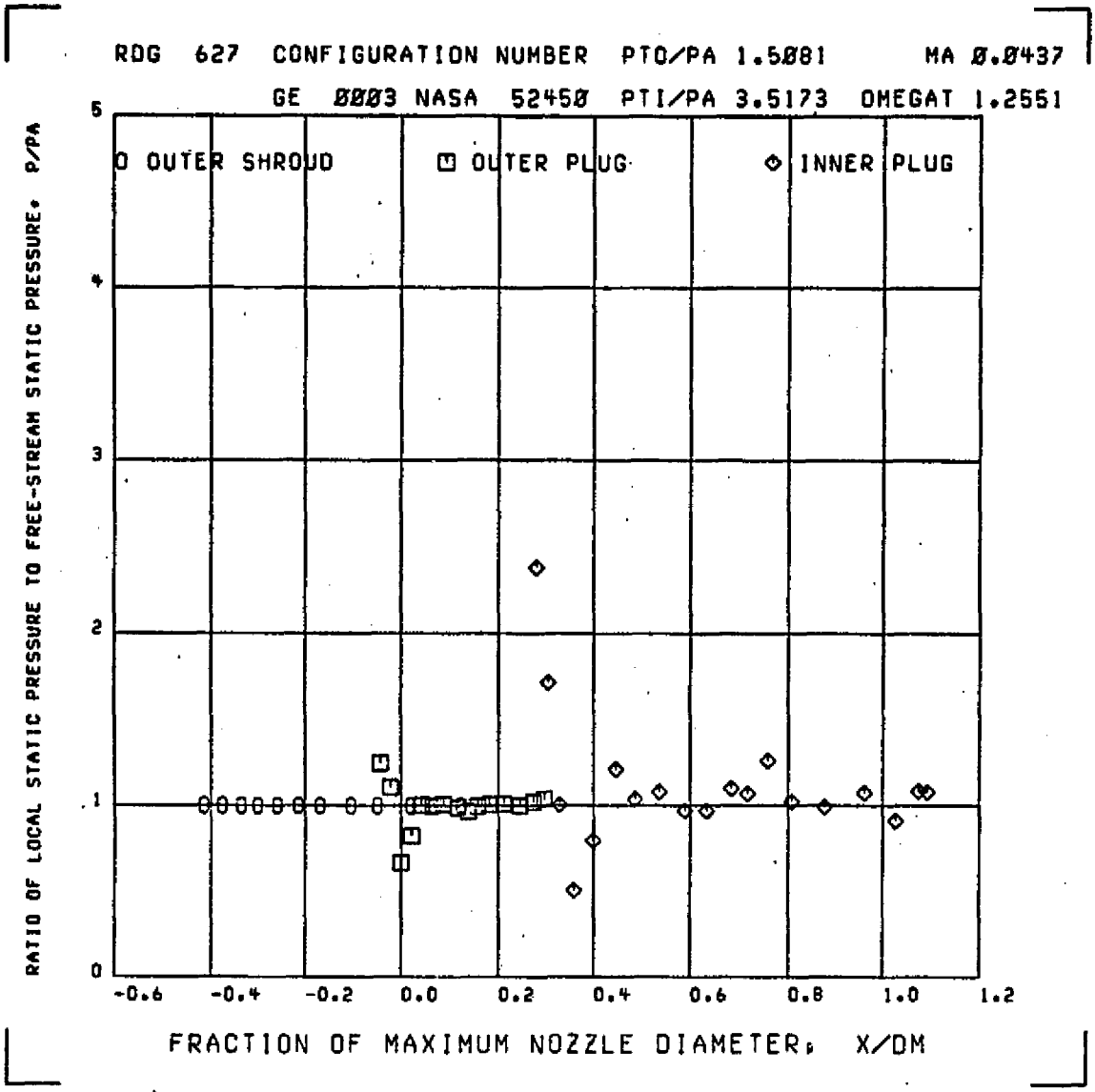
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 627 CONFIGURATION NUMBER PTO/PA 1.5081 MA Ø.Ø437
GE ØØØ3 NASA 5245Ø PTI/PA 3.5173 OMEGAT 1.2551
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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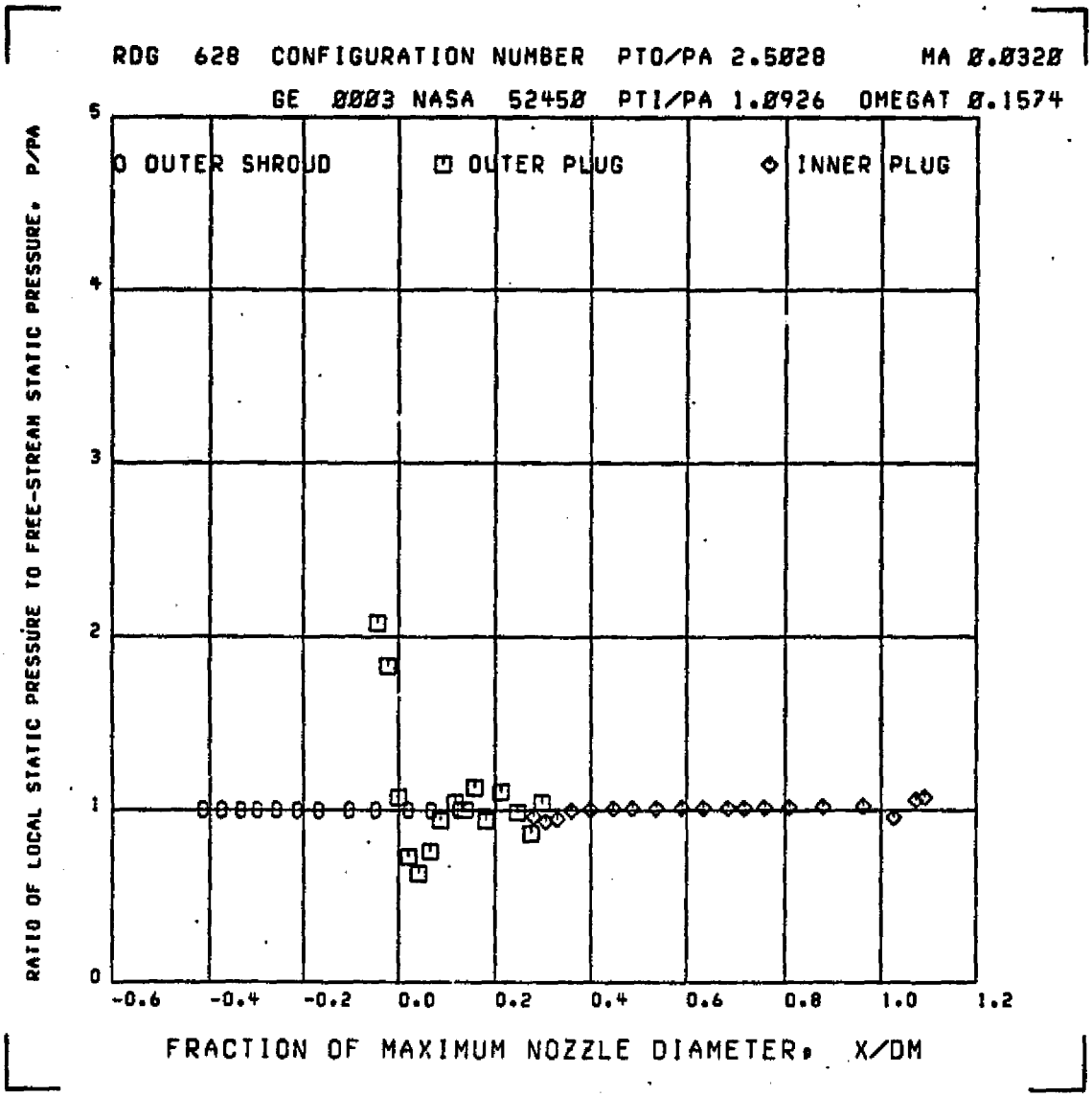
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 628 CONFIGURATION NUMBER PTO/PA 2.5028 MA 0.0320
GE 0003 NASA 52450 PTI/PA 1.0926 OMEGAT 0.1574
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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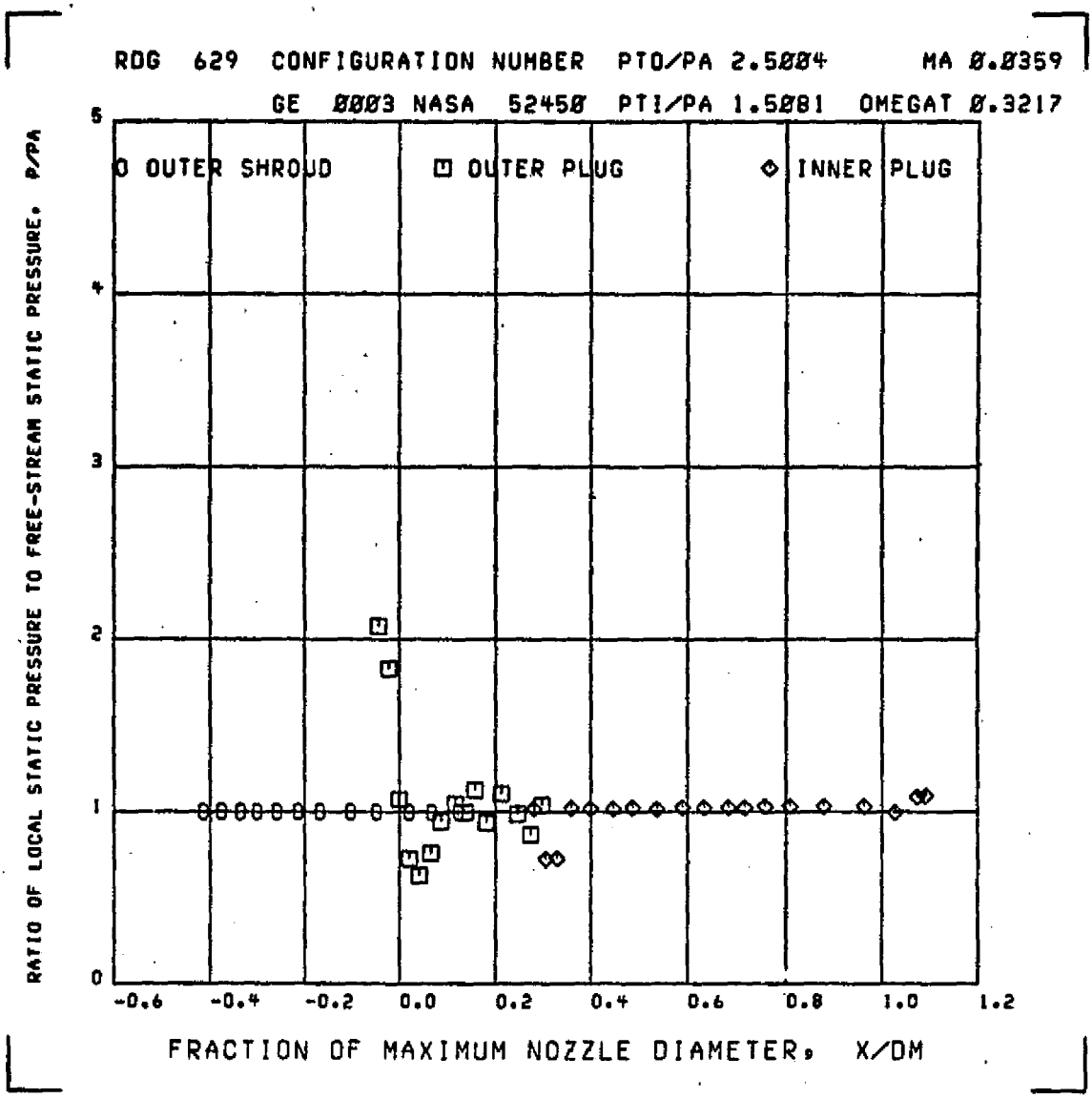
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 629 CONFIGURATION NUMBER PTO/PA 2.5004 MA 0.0359
GE 0003 NASA 52450 PTI/PA 1.5081 OMEGAT 0.3217
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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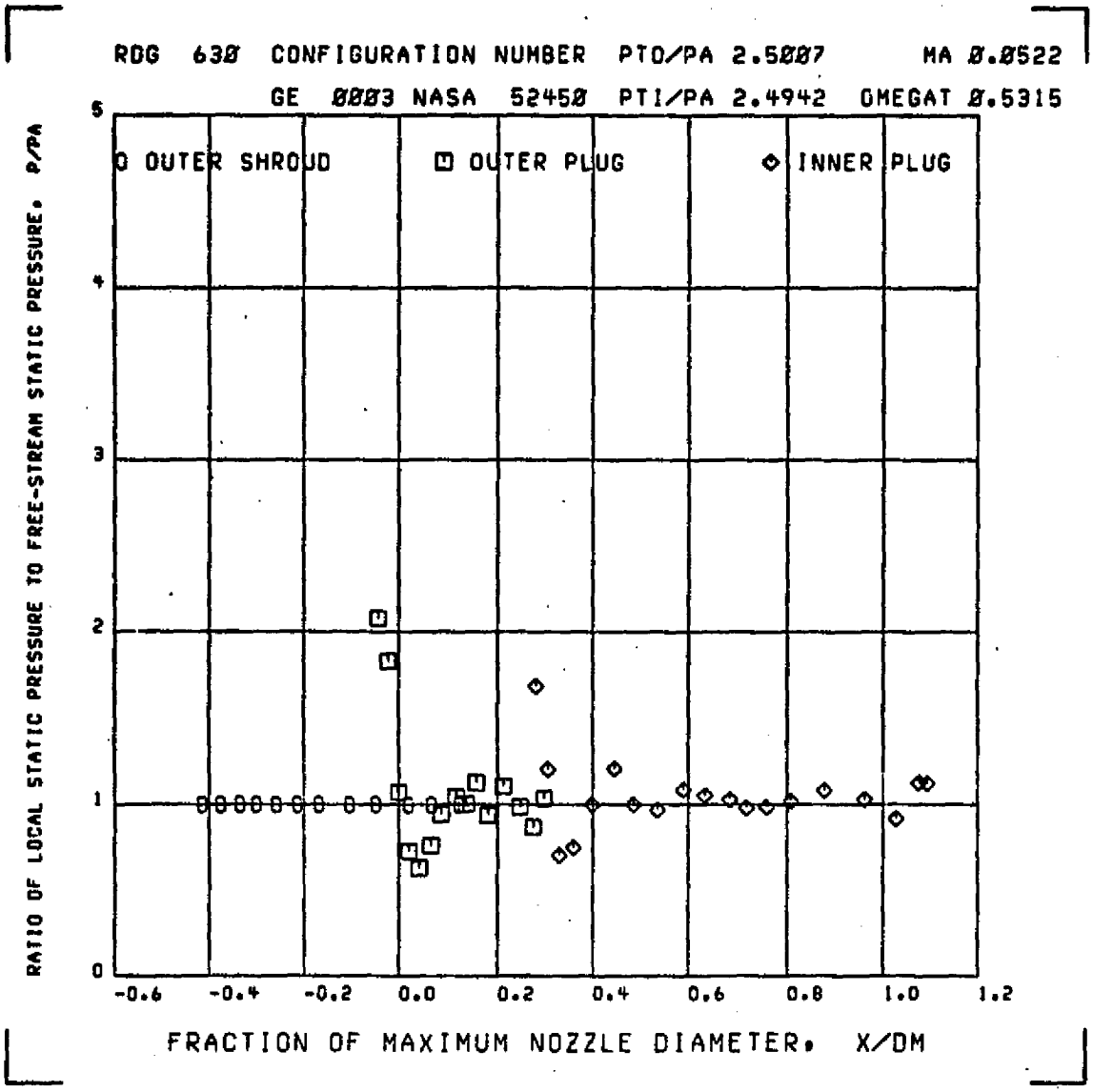
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 630 CONFIGURATION NUMBER PTO/PA 2.5007 MA 0.0522
GE 0003 NASA 52450 PTI/PA 2.4942 OMEGAT 0.5315
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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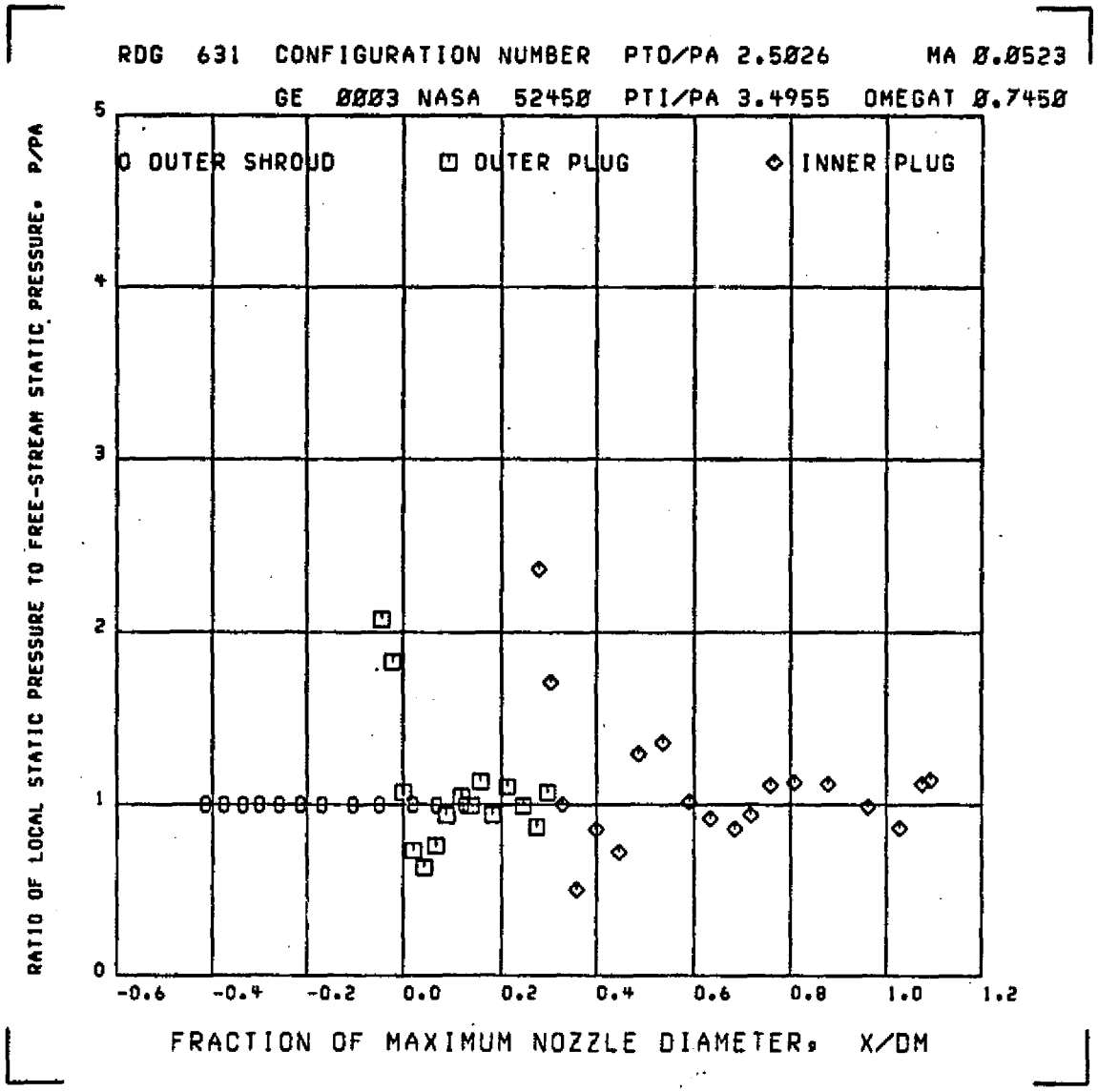
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 631 CONFIGURATION NUMBER PTO/PA 2.5026 MA 0.0523
GE 0003 NASA 52450 PTI/PA 3.4955 OMEGAT 0.7450
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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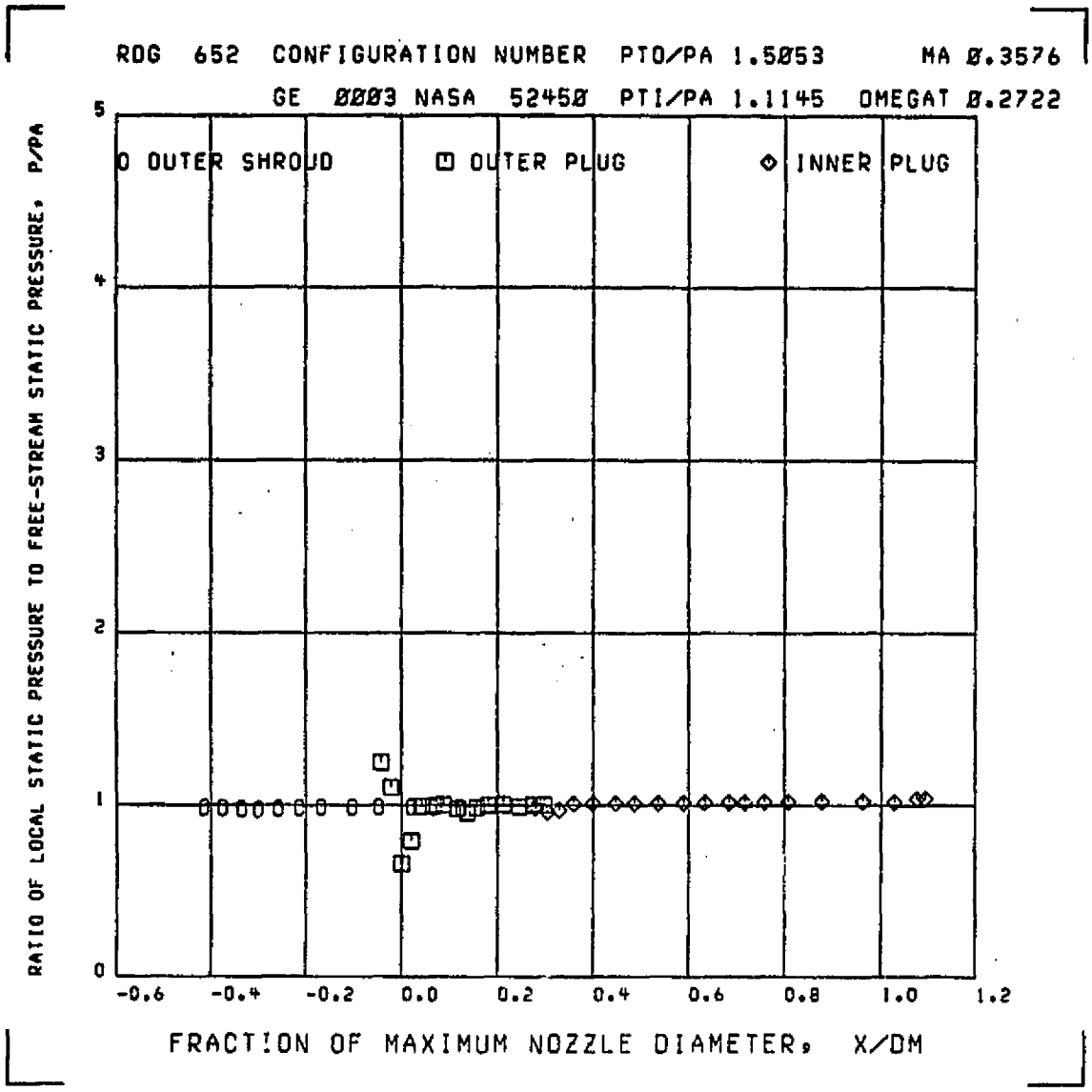
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 652 CONFIGURATION NUMBER PTO/PA 1.5053 MA Ø.3576
GE ØØØ3 NASA 52450 PTI/PA 1.1145 OMEGAT Ø.2722
O OUTER SHROUD
⊡ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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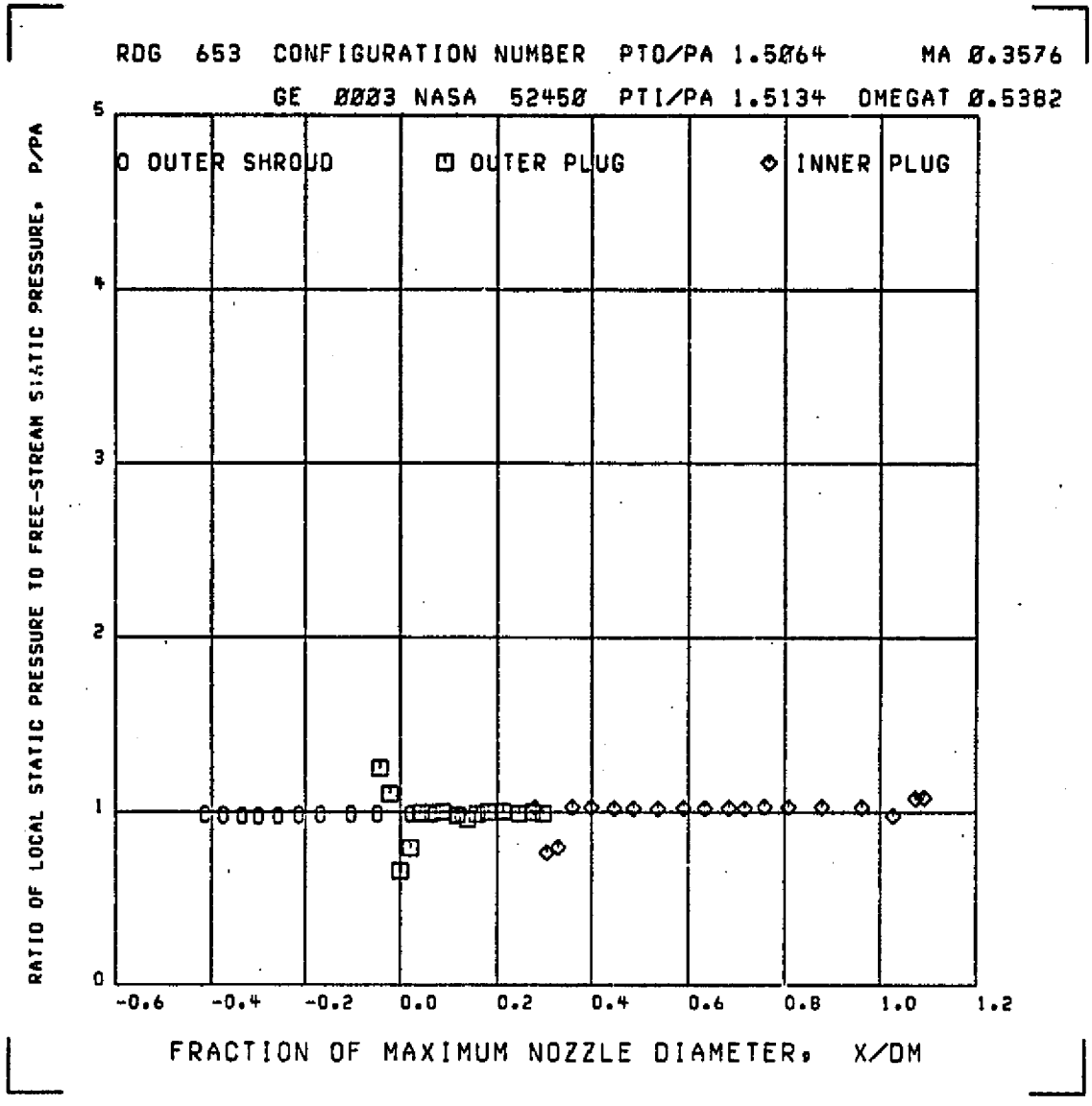
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 653 CONFIGURATION NUMBER PTO/PA 1.5064 MA 0.3576
GE 0003 NASA 52450 PTI/PA 1.5134 OMEGAT 0.5382
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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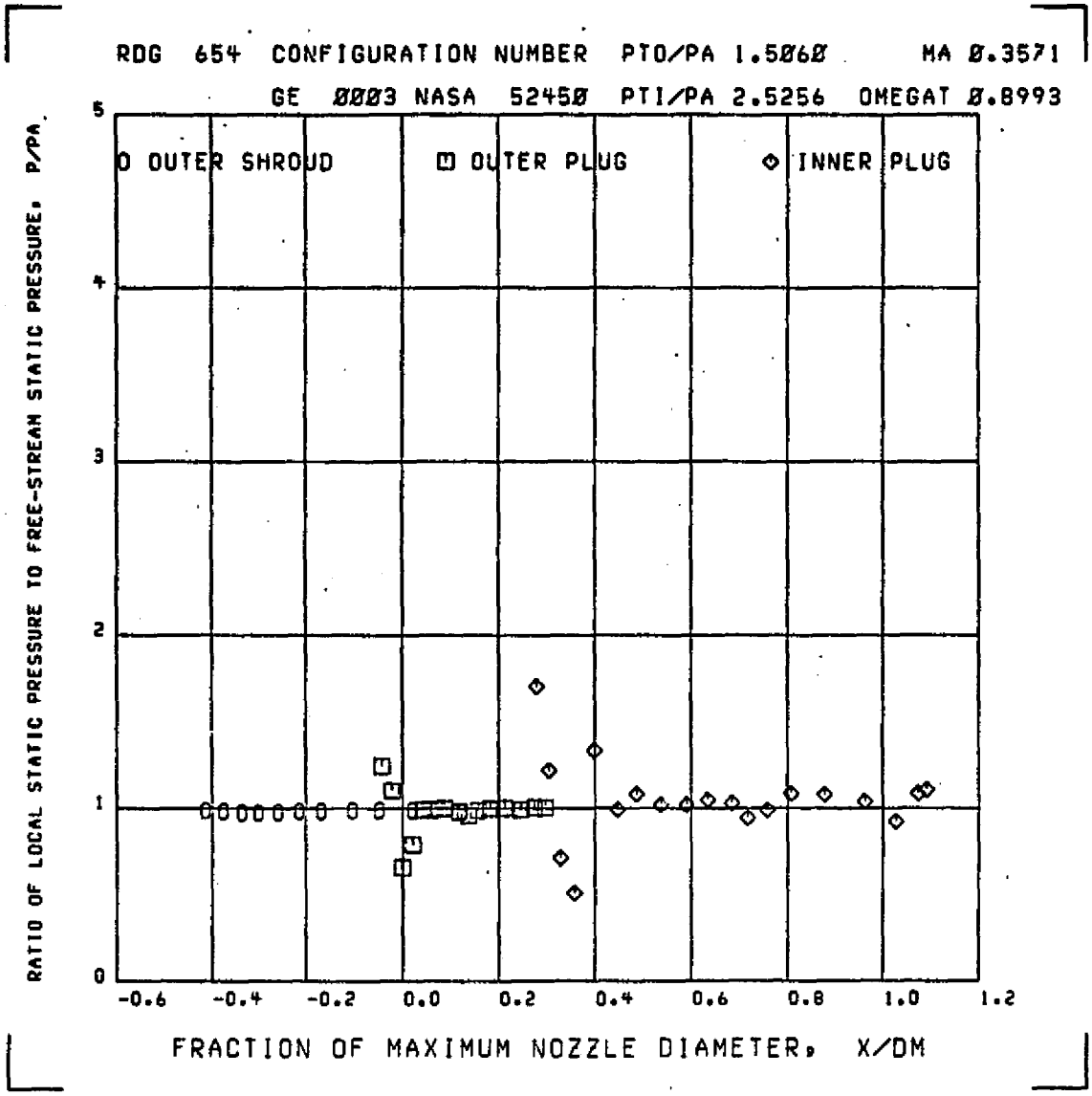
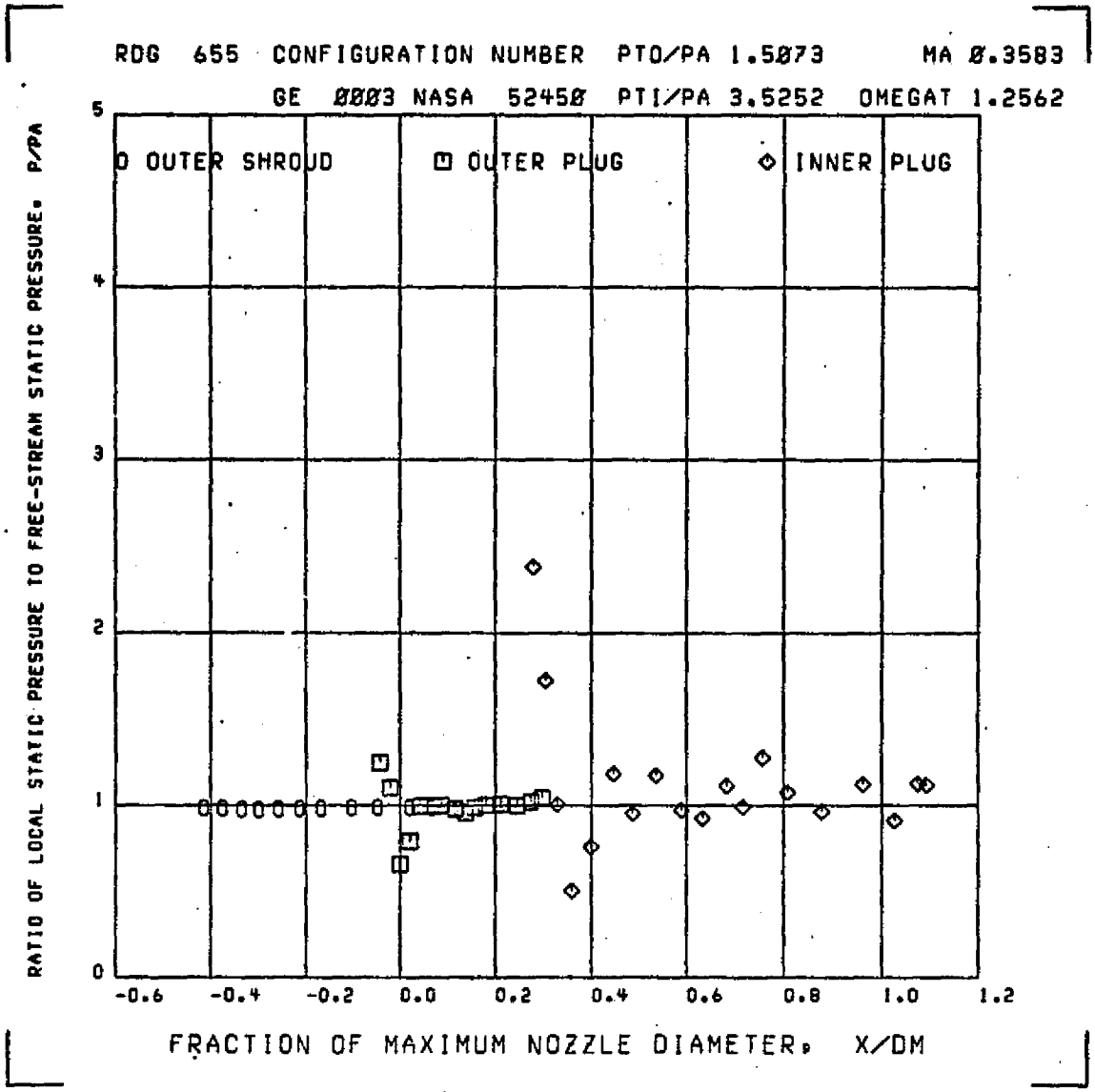
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 654 CONFIGURATION NUMBER PTO/PA 1.5060 MA 0.3571
GE 0003 NASA 52450 PTI/PA 2.5256 OMEGAT 0.8993
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
5
4
3
2
1
0
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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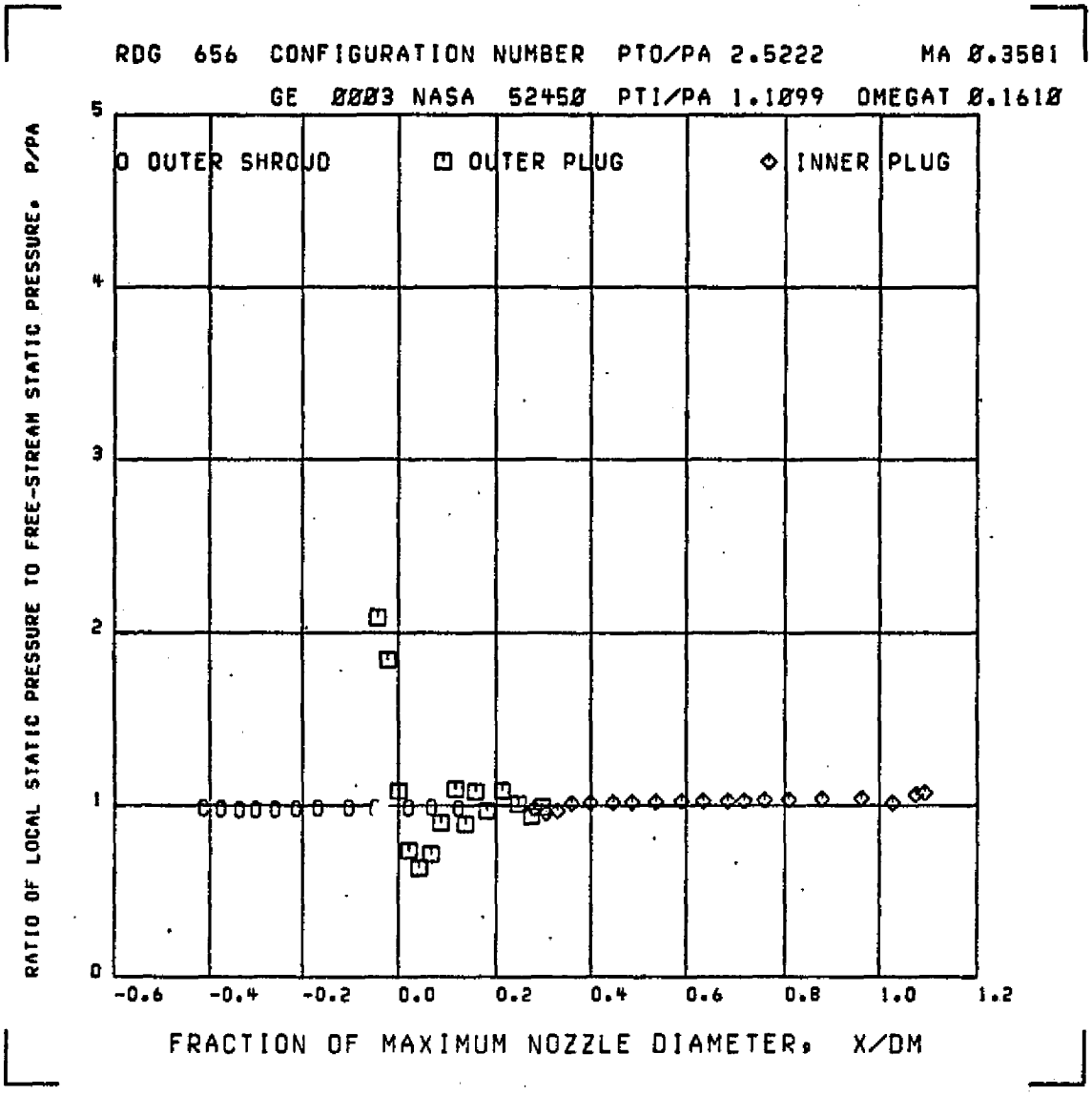
GE 0003 NASA 52450 PTI/PA 3.5252 OMEGAT 1.2562
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
0
1
2
3
4
5
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2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GE ØØØ3 NASA 5245Ø PTI/PA 1.1Ø99 OMEGAT Ø.161Ø
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□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
1
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-0.6
-0.4
-0.2
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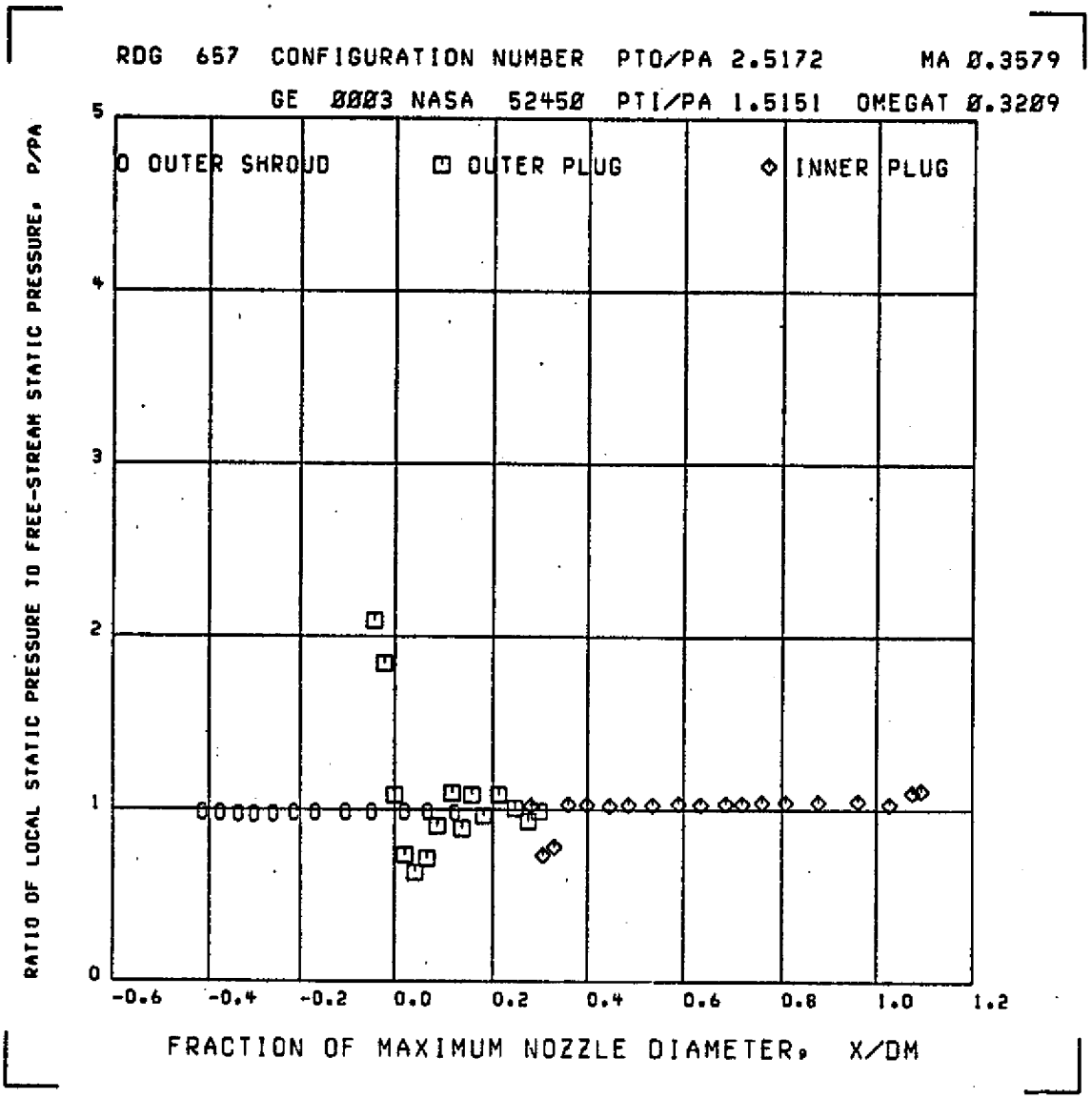
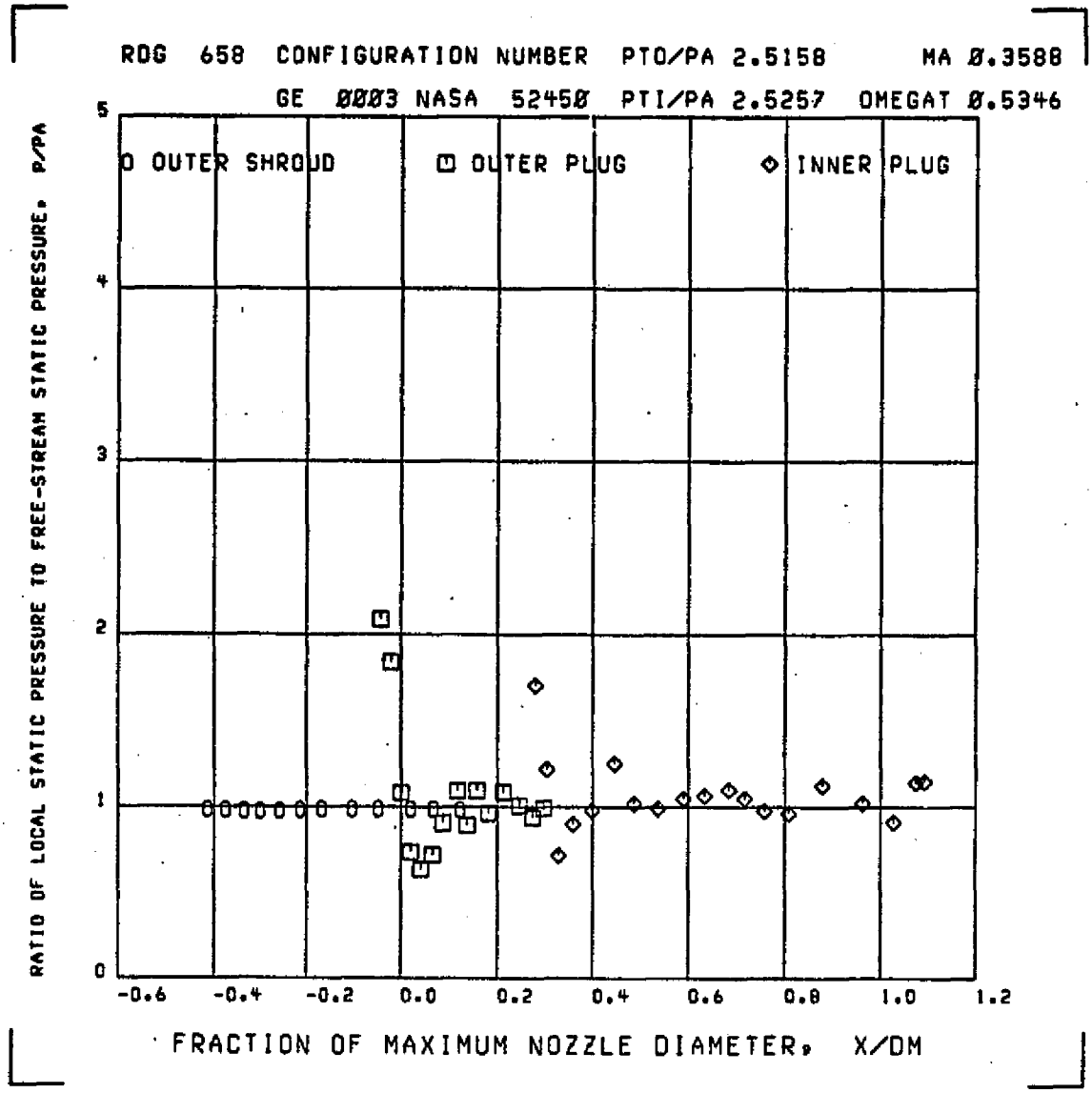
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 657 CONFIGURATION NUMBER PTO/PA 2.5172 MA Ø.3579
GE ØØØ3 NASA 5245Ø PTI/PA 1.5151 OMEGAT Ø.3209
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
5
4
3
2
1
0
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ3 NASA 5245Ø PTI/PA 2.5257 OMEGAT Ø.5346
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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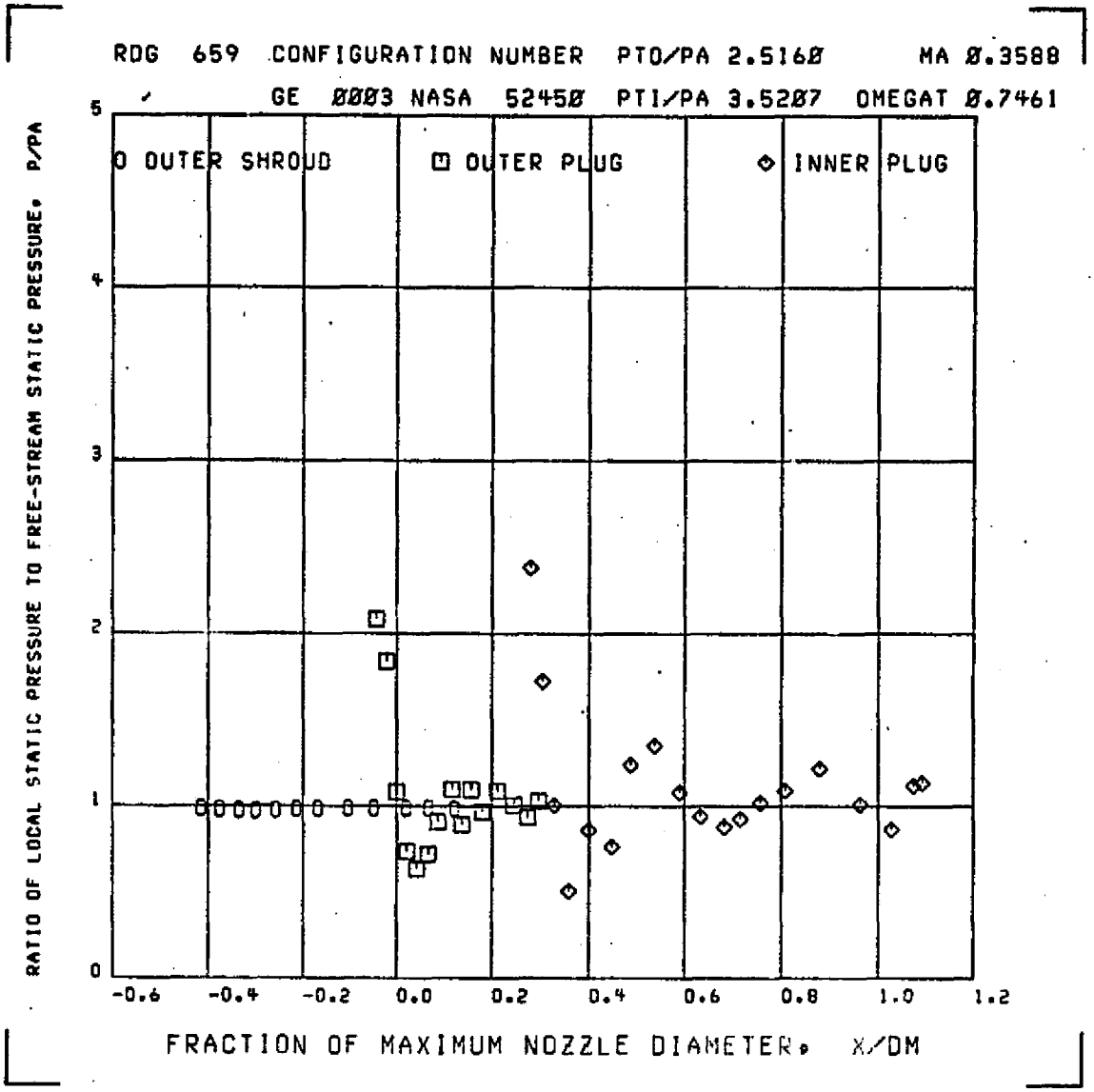
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0003 NASA 52450 PTI/PA 3.5207 OMEGAT 0.7461
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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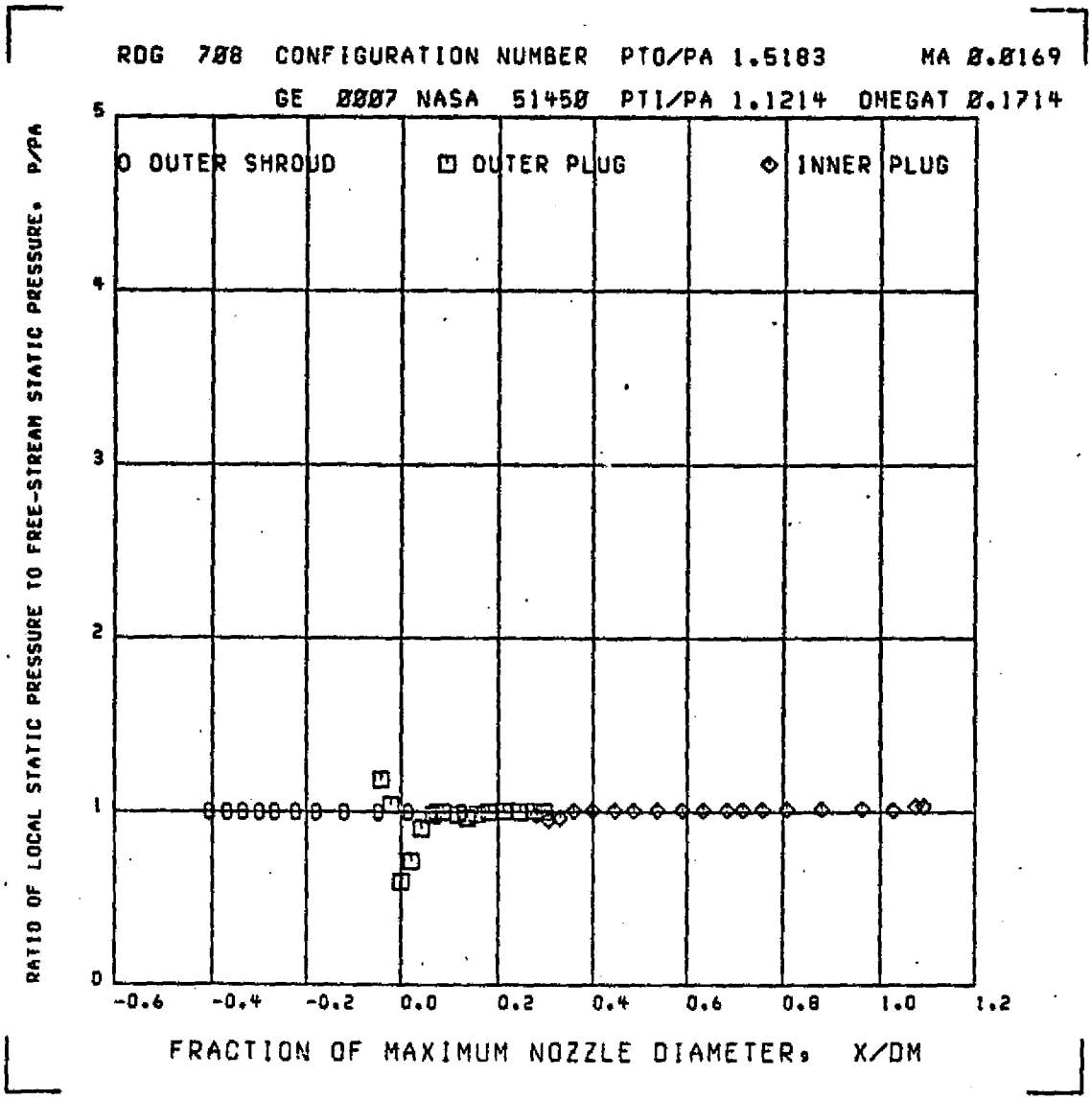
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 708 CONFIGURATION NUMBER PTO/PA 1.5183 MA 0.0169
GE 0007 NASA 51450 PTI/PA 1.1214 OMEGAT 0.1714
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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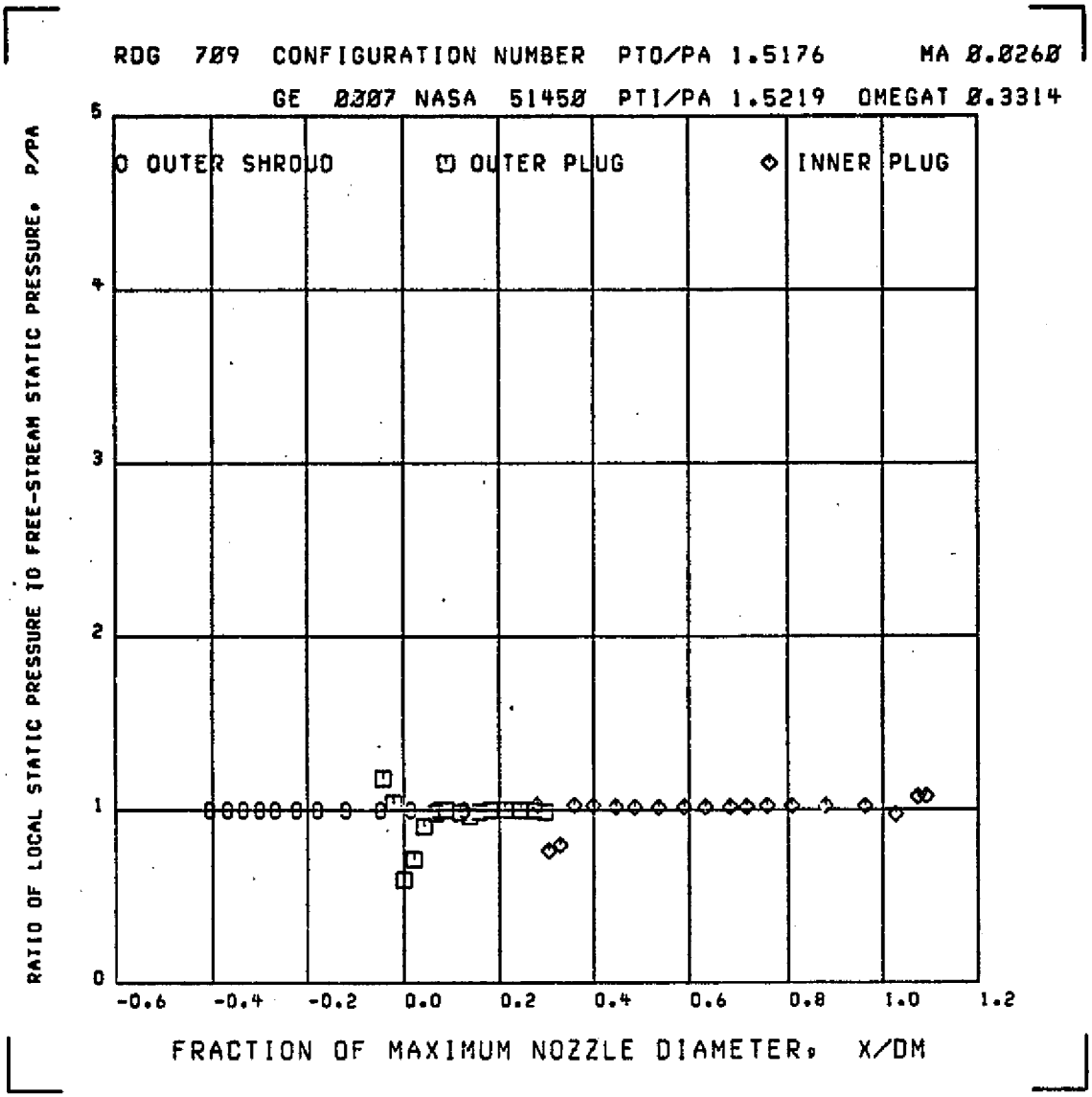
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 709 CONFIGURATION NUMBER PTO/PA 1.5176 MA 0.0260
GE 0307 NASA 51450 PTI/PA 1.5219 OMEGAT 0.3314
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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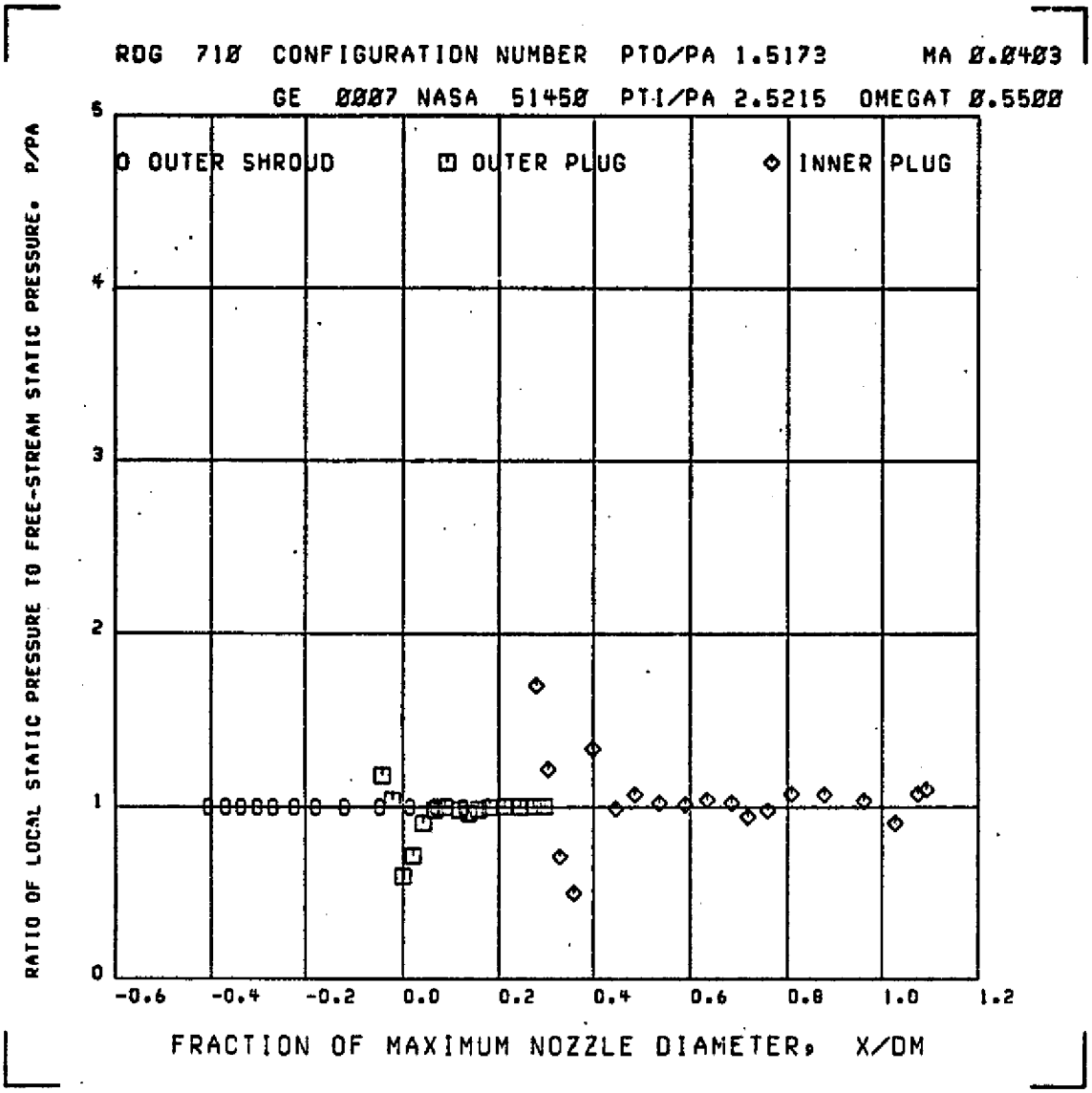
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 710 CONFIGURATION NUMBER PTO/PA 1.5173 MA 0.0403
GE 0007 NASA 51450 PT-I/PA 2.5215 OMEGAT 0.5500
O OUTER SHROUD
⊡ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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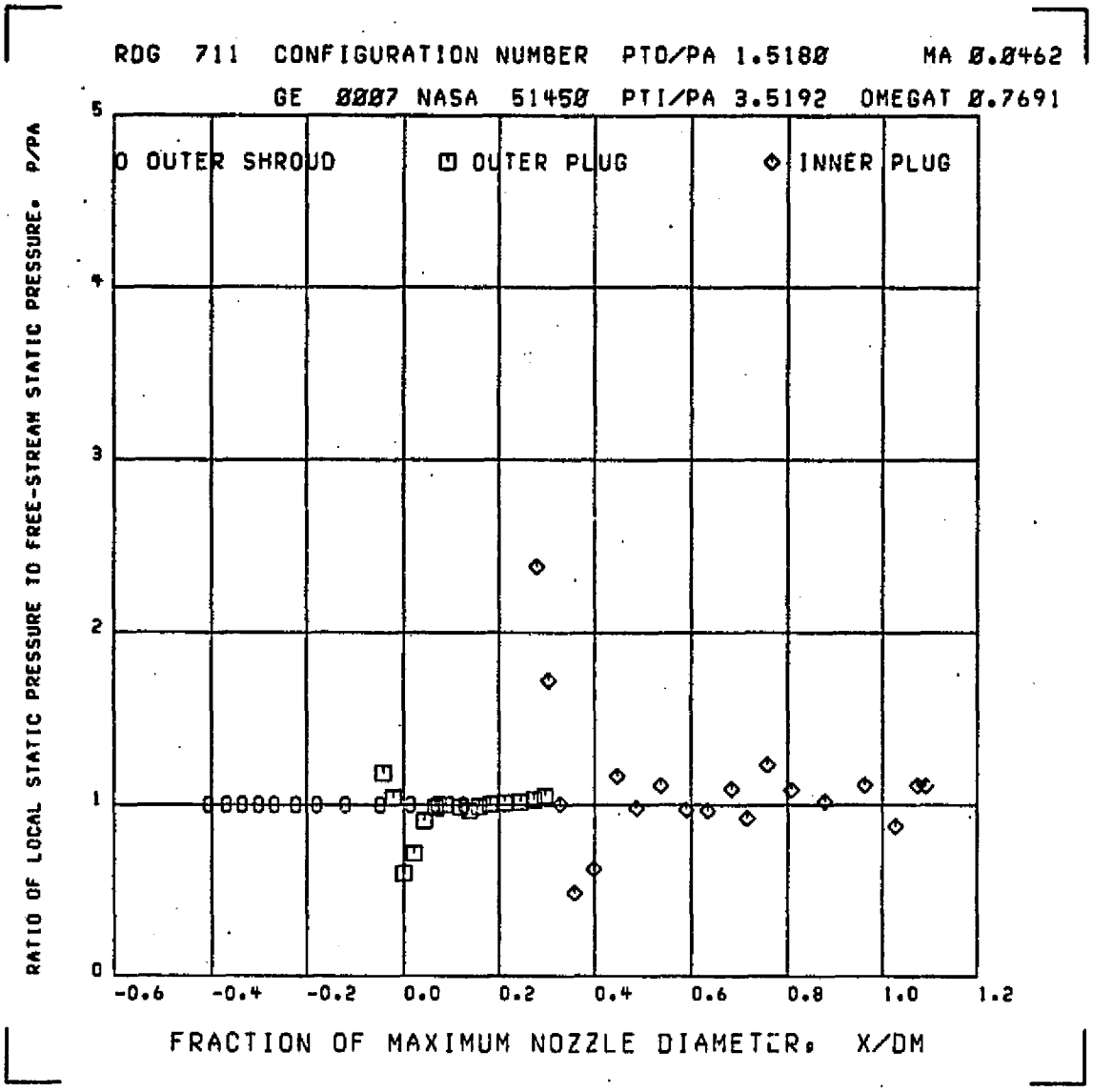
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0007 NASA 51450 PTI/PA 3.5192 OMEGAT 0.7691
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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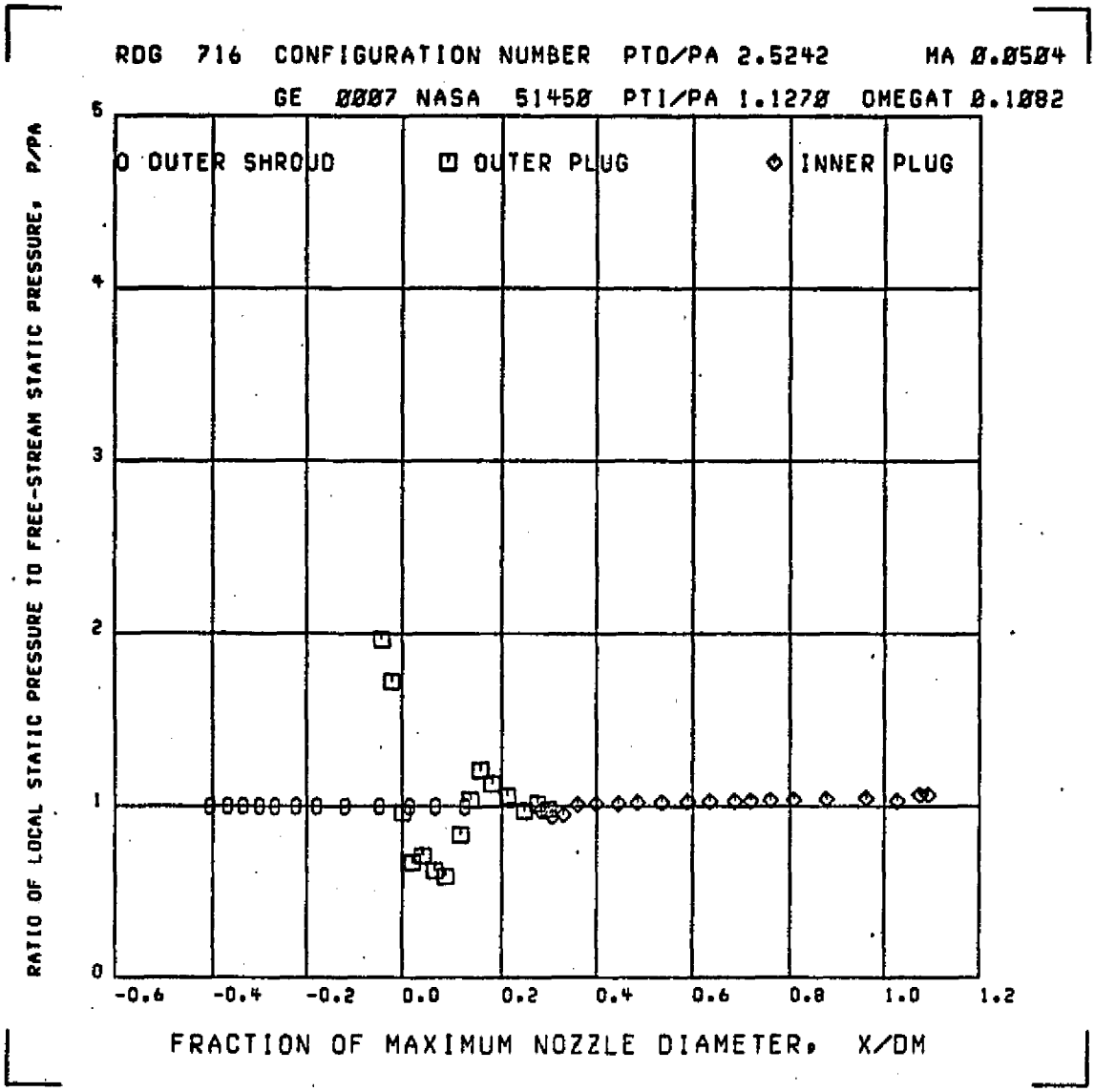
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 716 CONFIGURATION NUMBER PTO/PA 2.5242 MA Ø.Ø5Ø4
GE ØØØ7 NASA 5145Ø PTI/PA 1.127Ø OMEGAT Ø.1Ø82
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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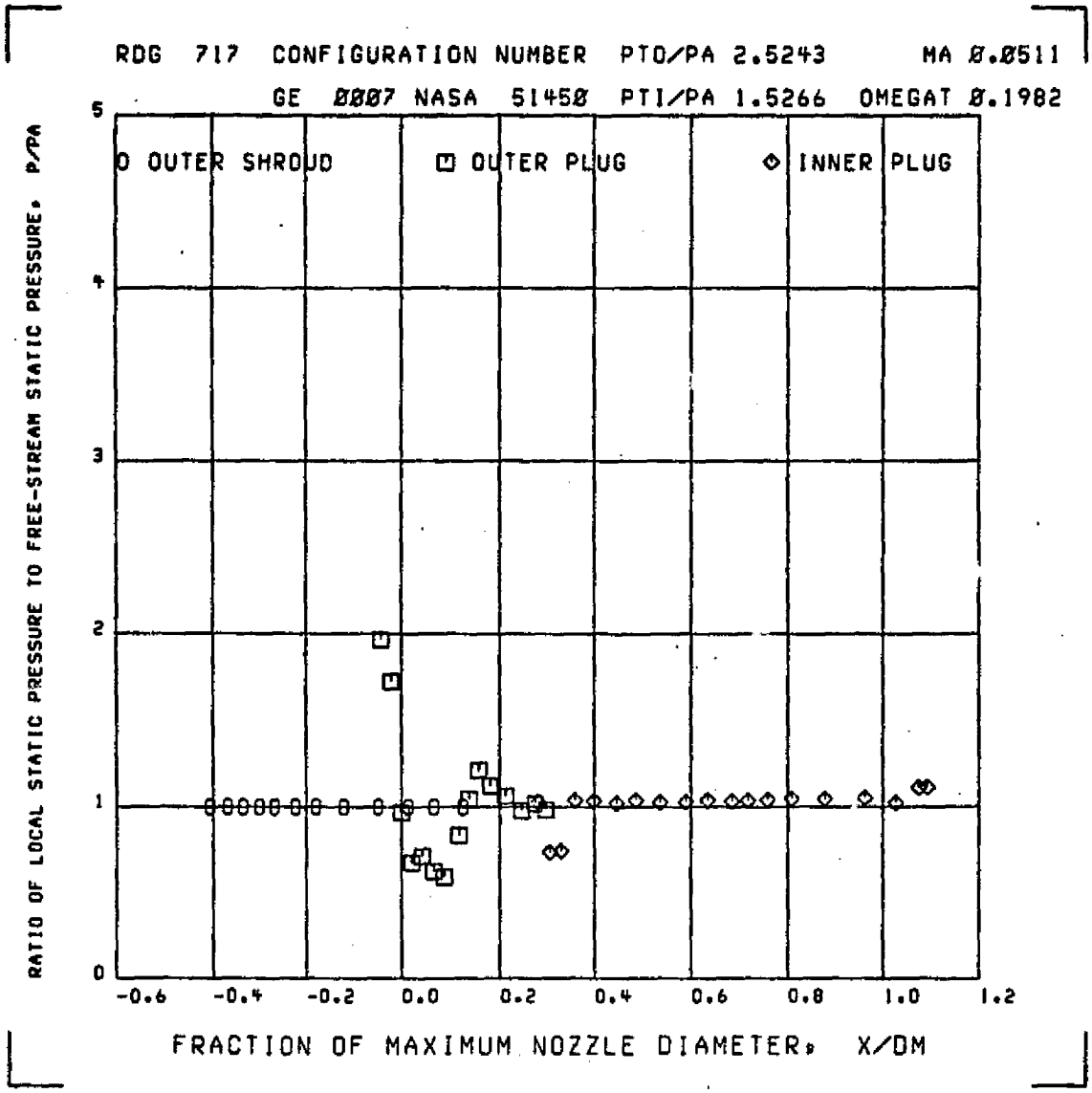
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 717 CONFIGURATION NUMBER PTO/PA 2.5243 MA Ø.Ø511
GE ØØØ7 NASA 5145Ø PTI/PA 1.5266 OMEGAT Ø.1982
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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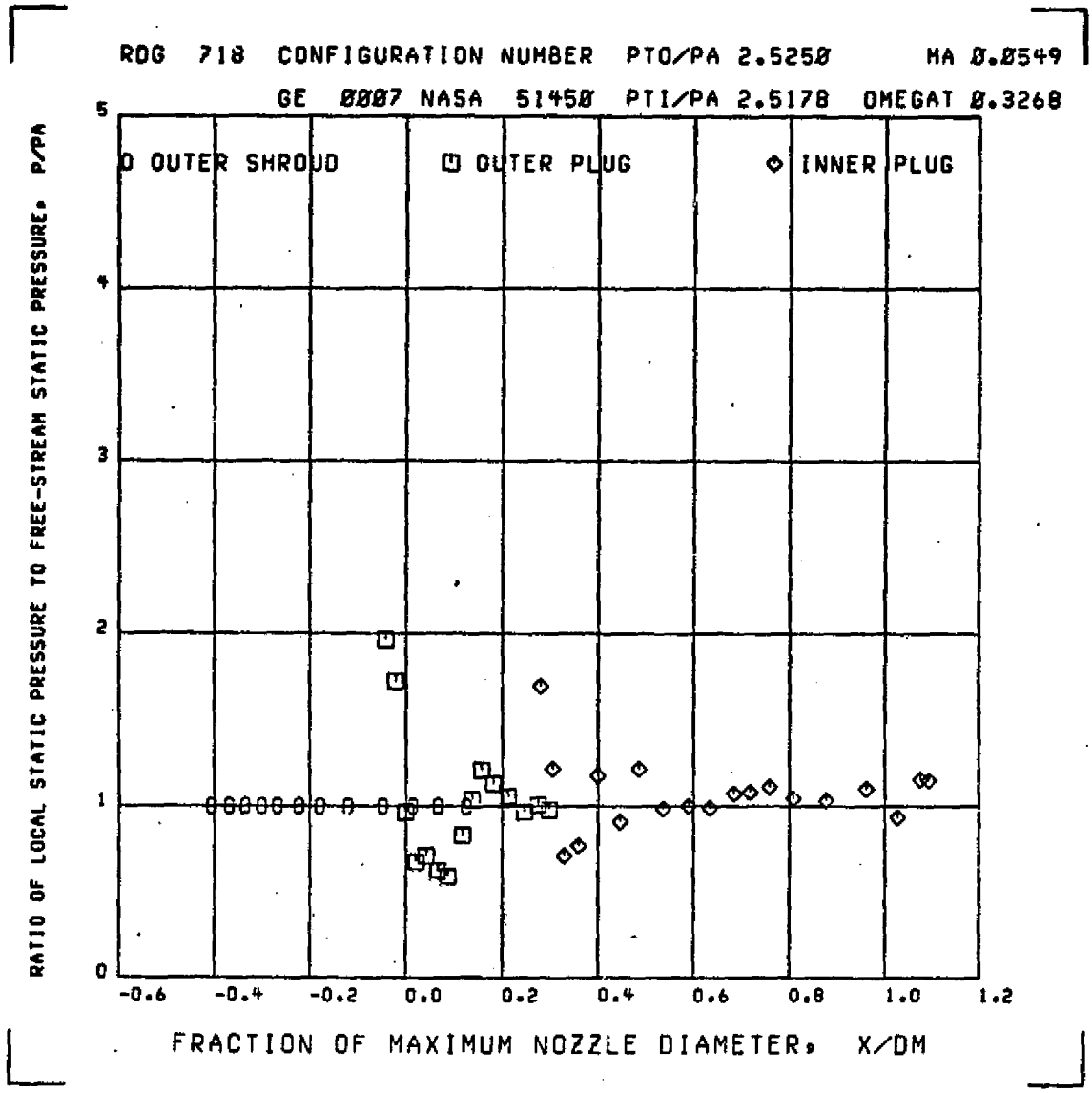
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 718 CONFIGURATION NUMBER PTO/PA 2.5250 MA 0.0549
GE 0007 NASA 51450 PTI/PA 2.5178 OMEGAT 0.3268
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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0.8
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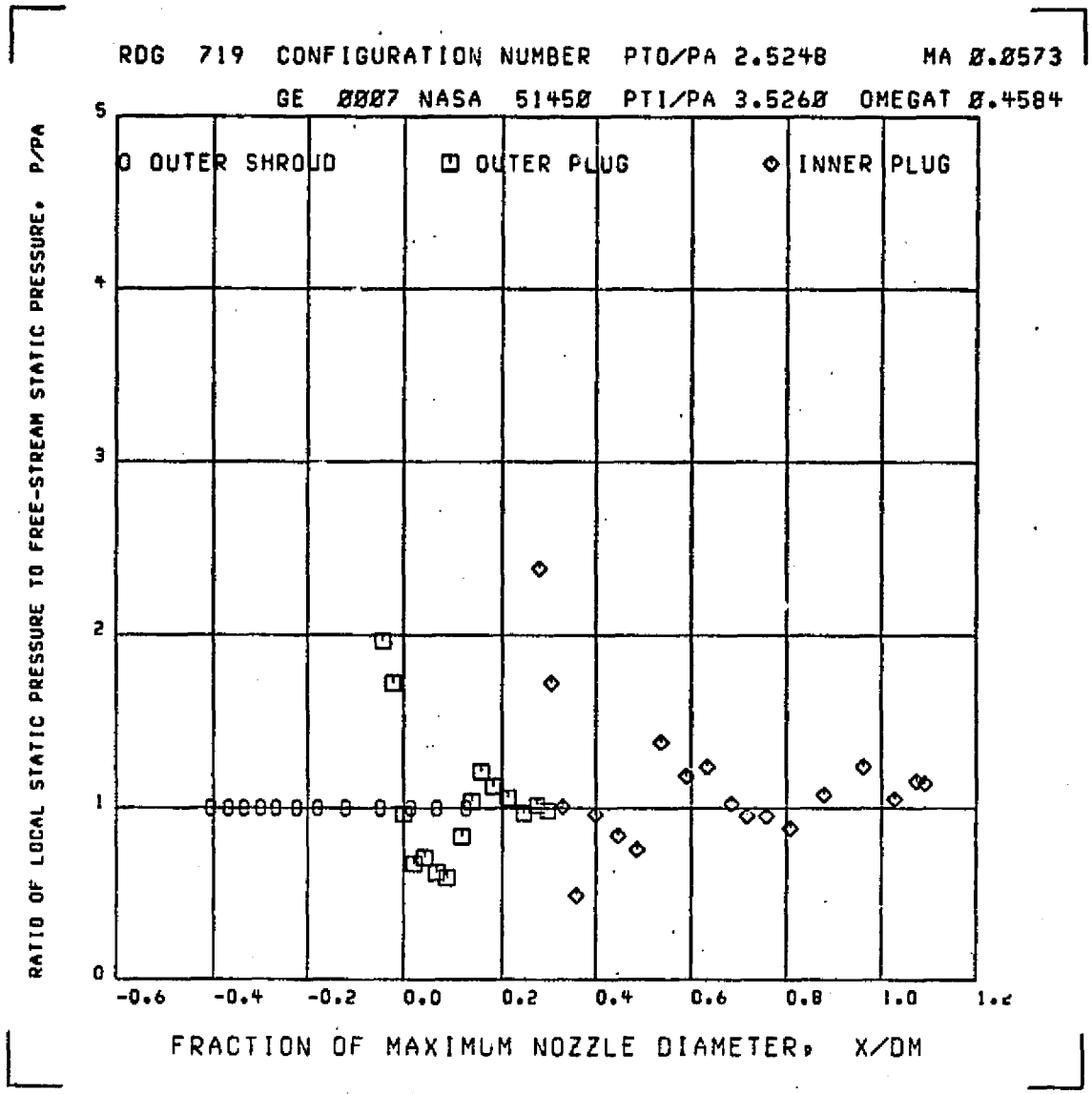
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 719 CONFIGURATION NUMBER PTO/PA 2.5248 MA Ø.Ø573
GE ØØØ7 NASA 5145Ø PTI/PA 3.526Ø OMEGAT Ø.4584
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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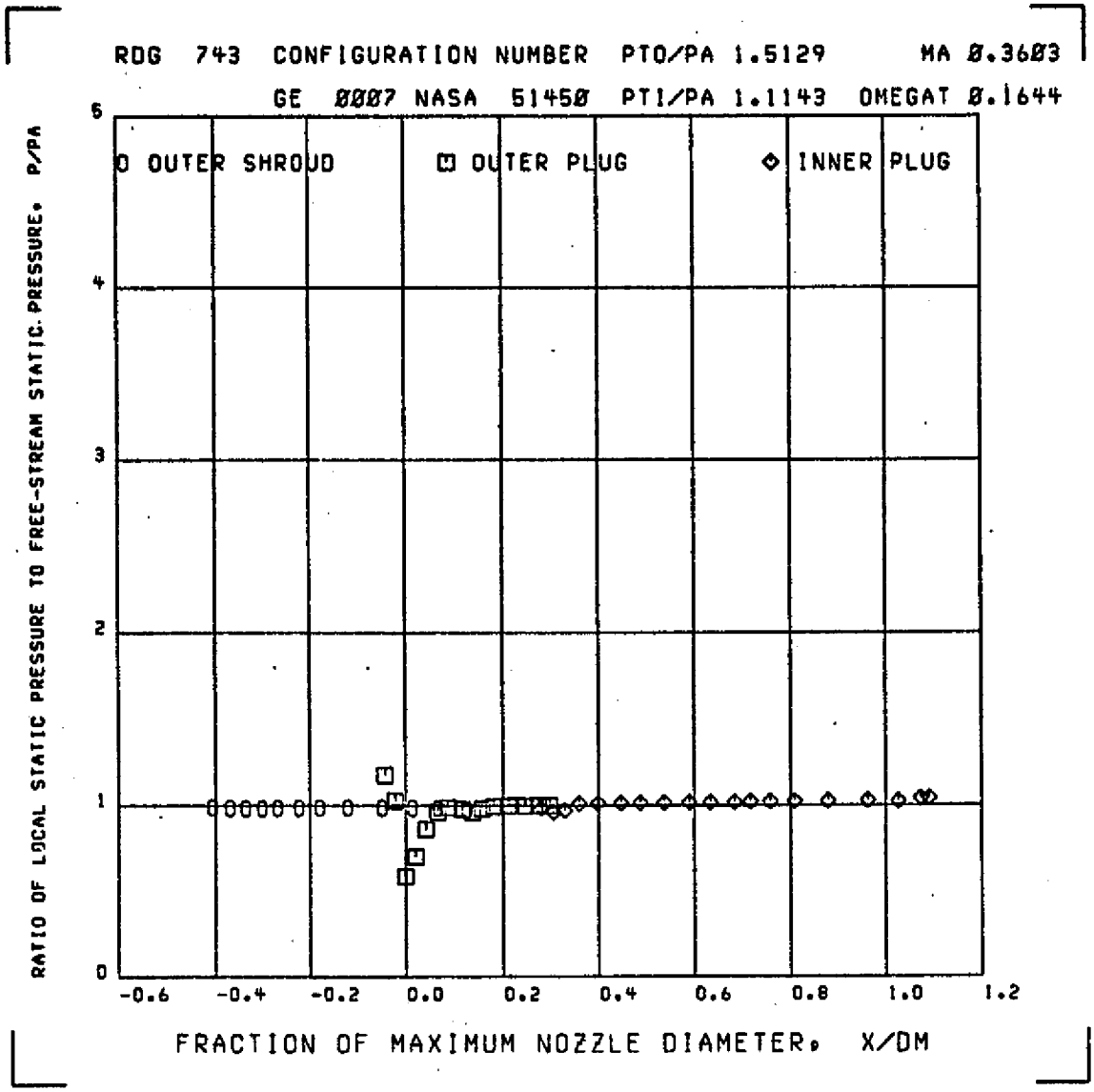
1.0
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 743 CONFIGURATION NUMBER PTO/PA 1.5129 MA 0.3603
GE 0007 NASA 51450 PTI/PA 1.1143 OMEGAT 0.1644
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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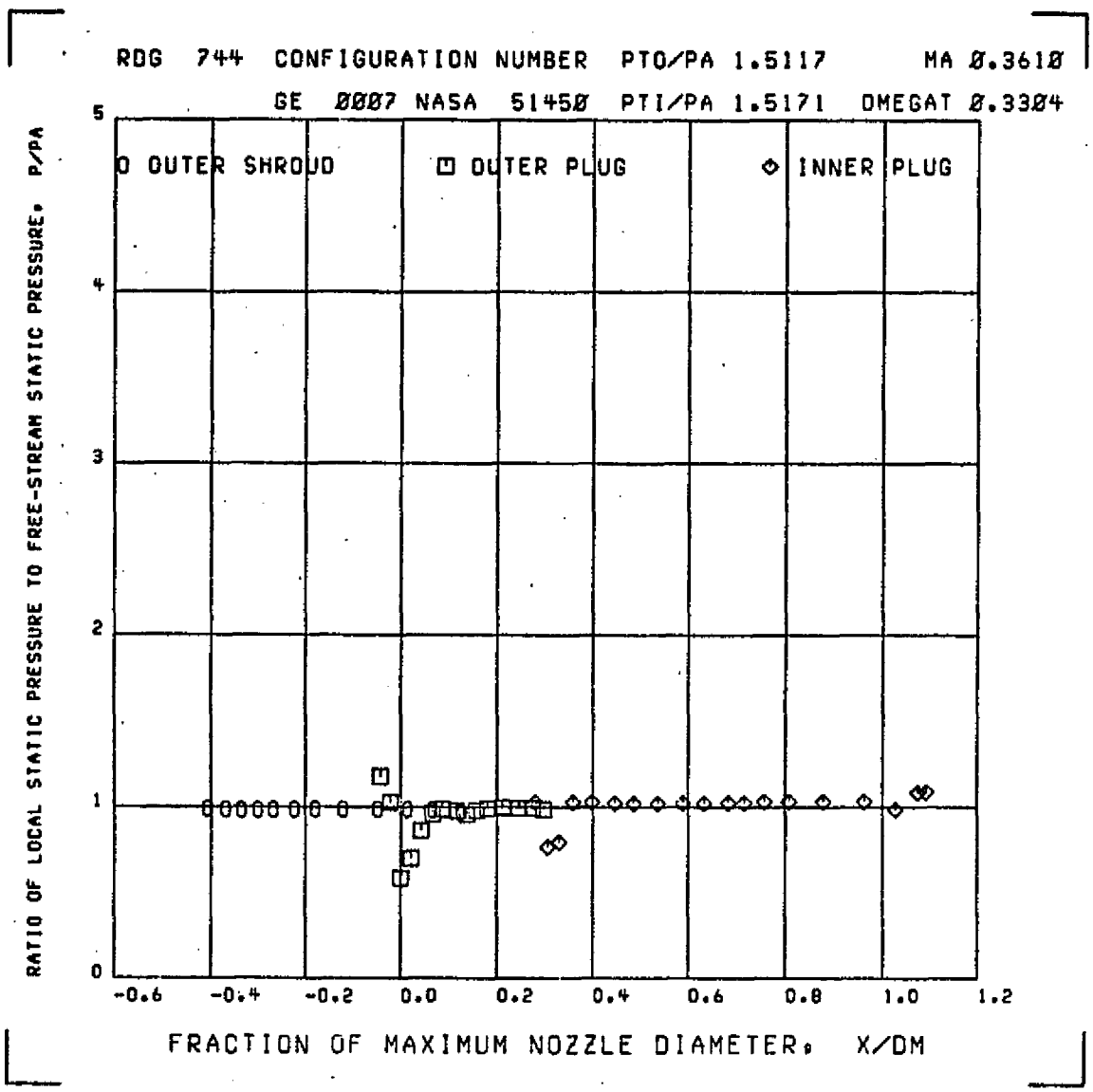
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ7 NASA 5145Ø PTI/PA 1.5171 OMEGAT Ø.33Ø4
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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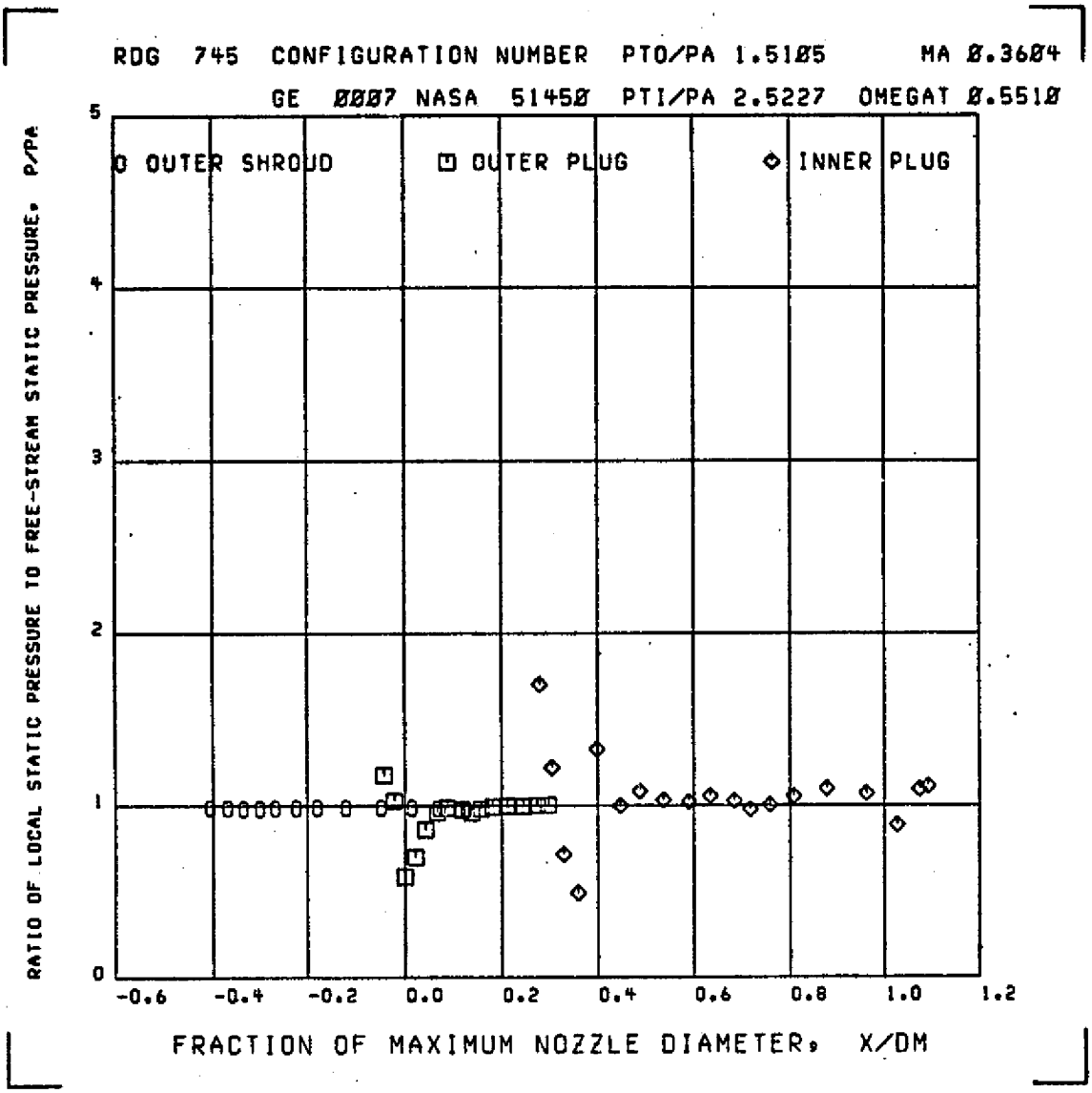
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0007 NASA 51450 PTI/PA 2.5227 OMEGAT 0.5510
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.2
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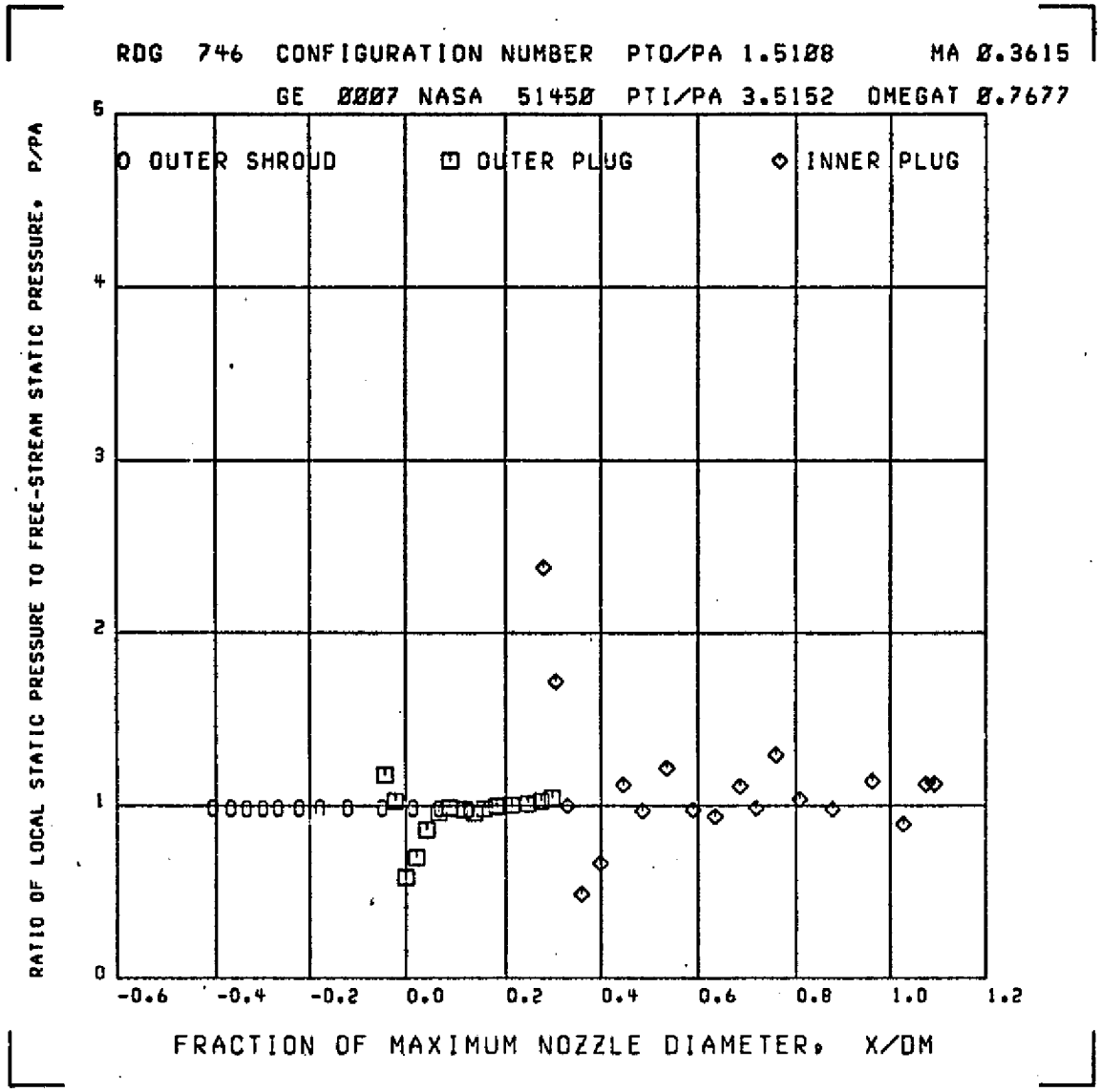
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 746 CONFIGURATION NUMBER PTO/PA 1.5108 MA 0.3615
GE 0007 NASA 51450 PTI/PA 3.5152 OMEGAT 0.7677
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
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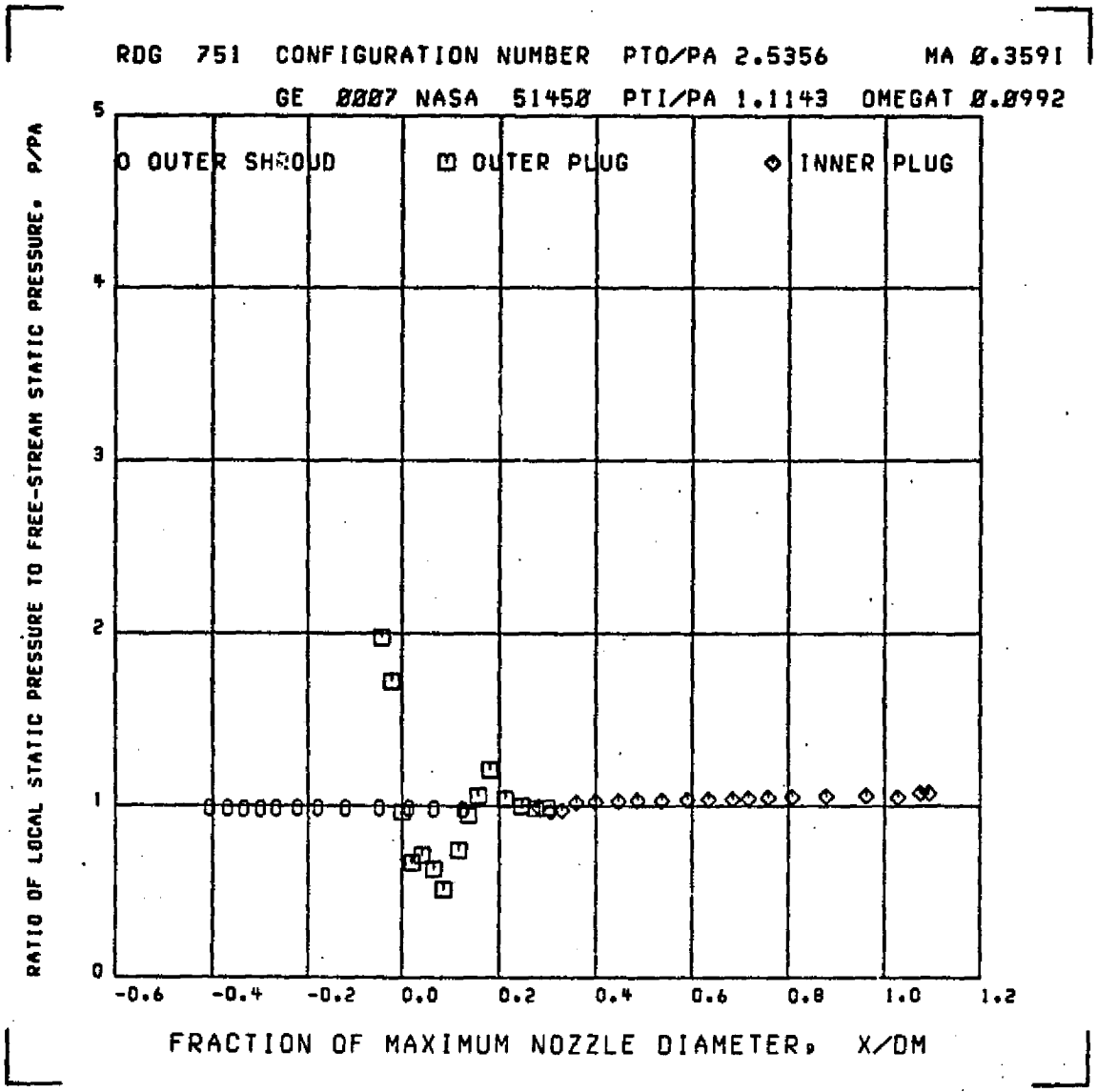
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 751 CONFIGURATION NUMBER PTO/PA 2.5356 MA Ø.3591
GE ØØØ7 NASA 5145Ø PTI/PA 1.1143 OMEGAT Ø.ØØ92
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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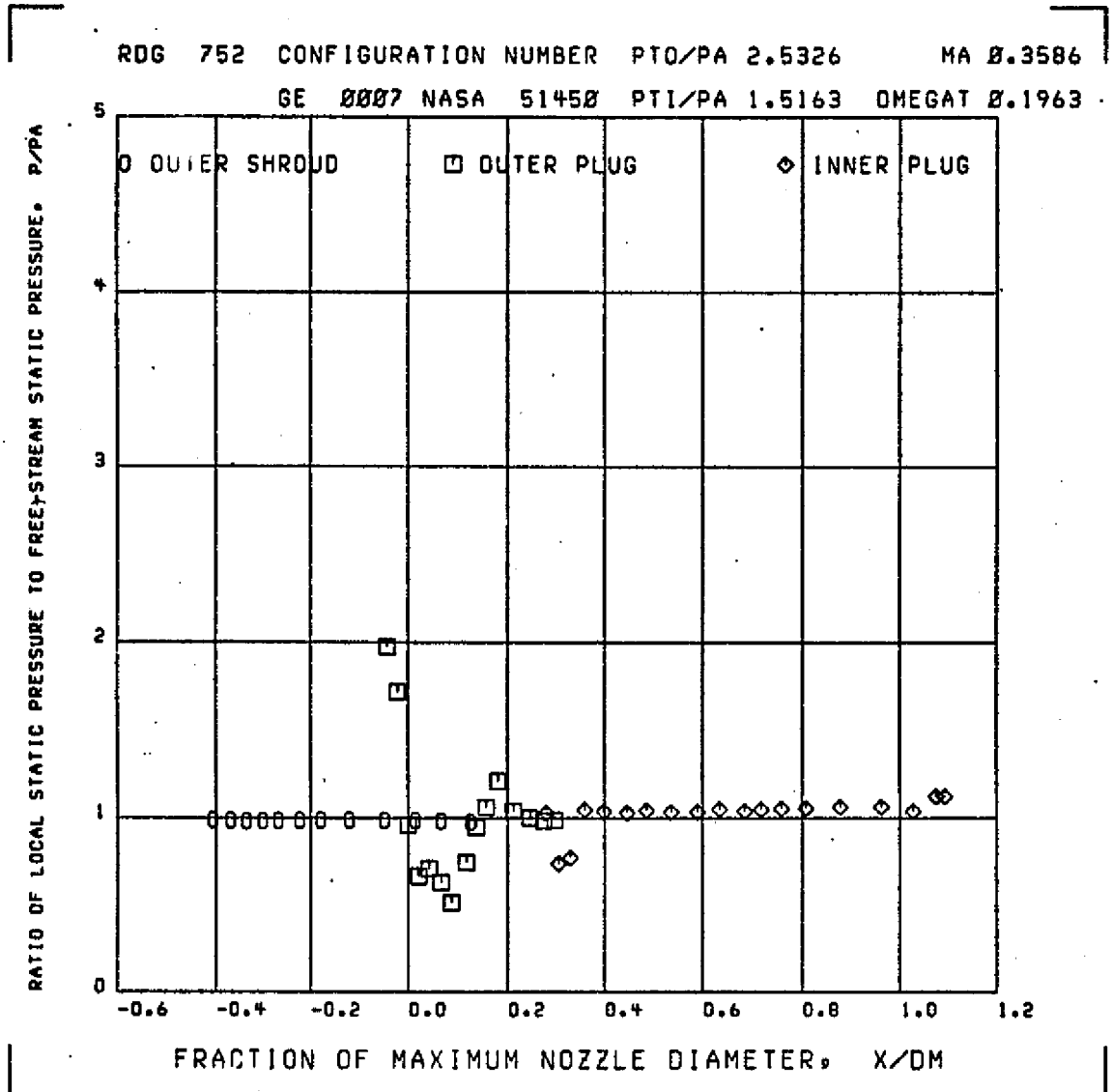
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE Ø007 NASA 5145Ø PTI/PA 1.5163 OMEGAT Ø.1963
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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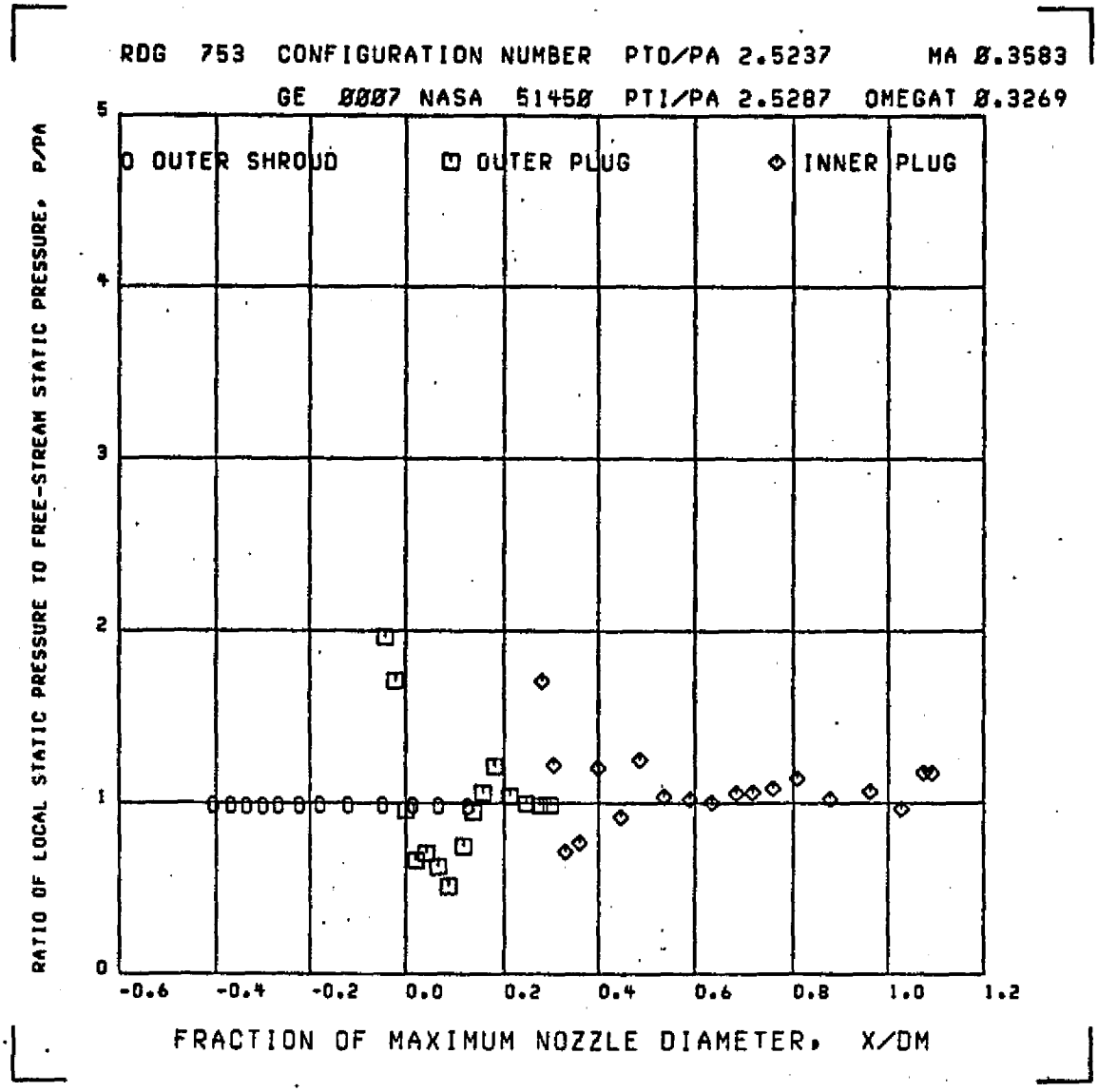
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 753 CONFIGURATION NUMBER PTO/PA 2.5237 MA Ø.3583
GE ØØØ7 NASA 5145Ø PTI/PA 2.5287 OMEGAT Ø.3269
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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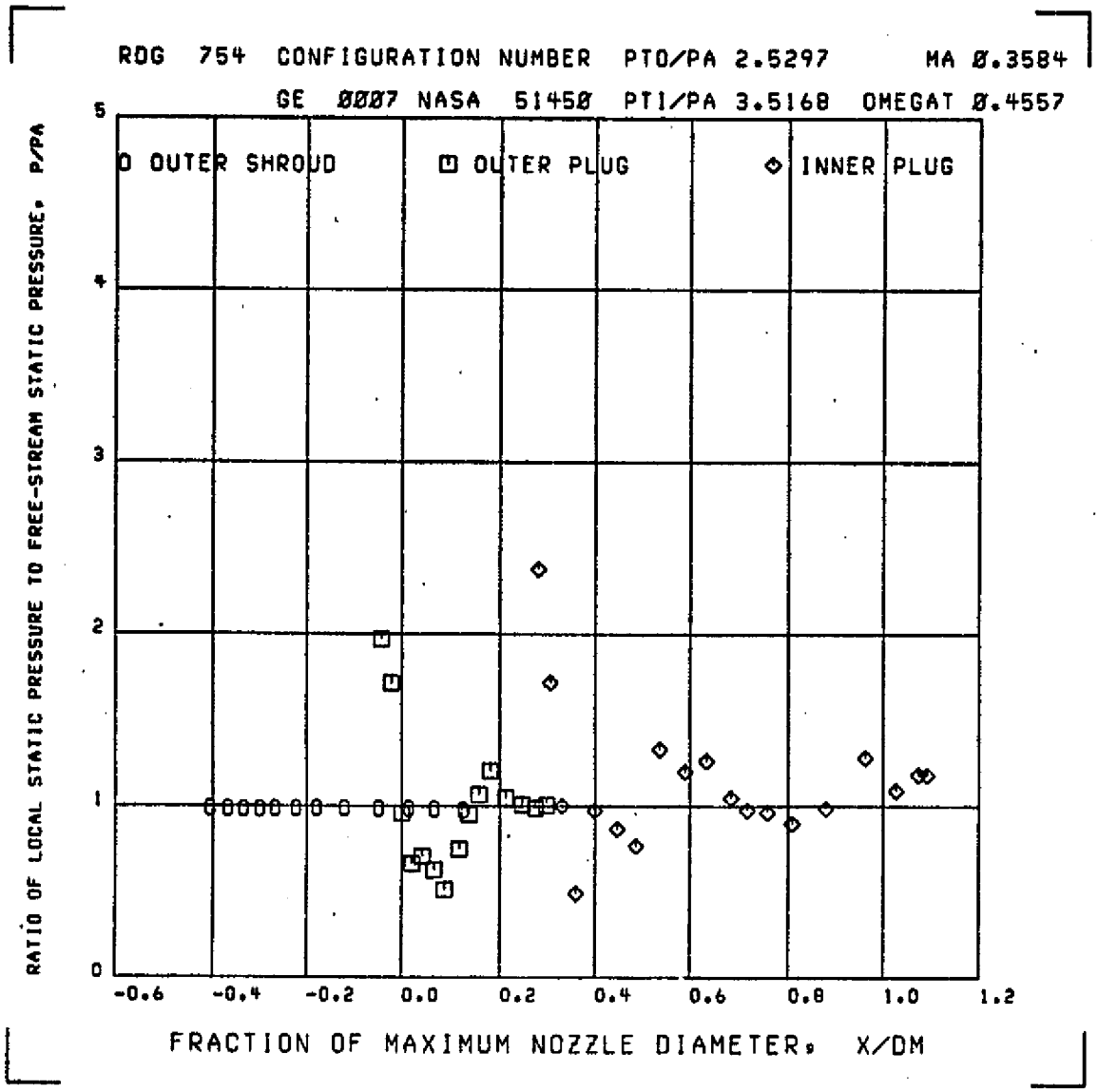
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 754 CONFIGURATION NUMBER PTO/PA 2.5297 MA Ø.3584
GE ØØØ7 NASA 5145Ø PTI/PA 3.5168 OMEGAT Ø.4557
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
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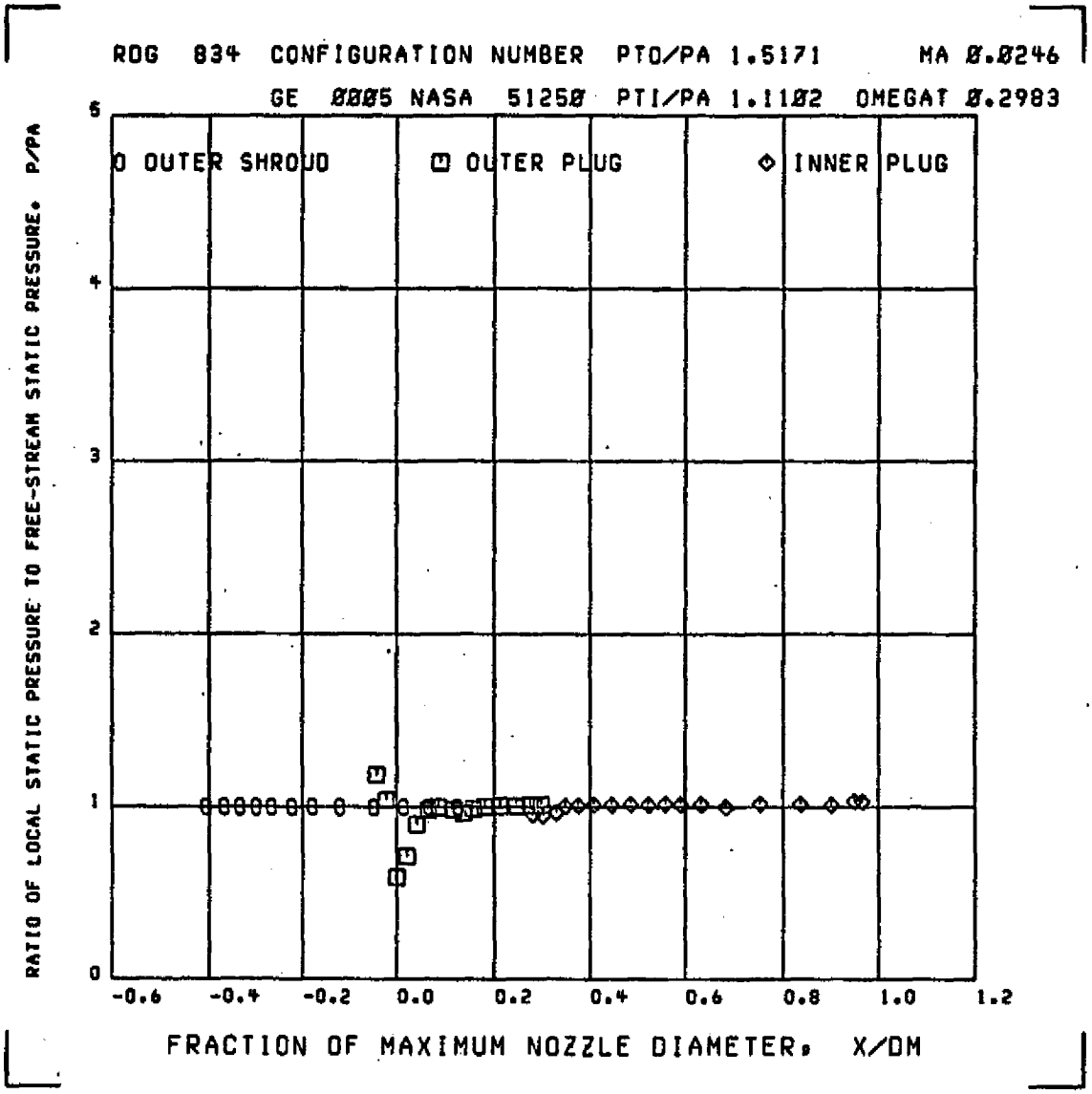
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 834 CONFIGURATION NUMBER PTO/PA 1.5171 MA 0.0246
GE 0005 NASA 51250 PTI/PA 1.1102 OMEGAT 0.2983
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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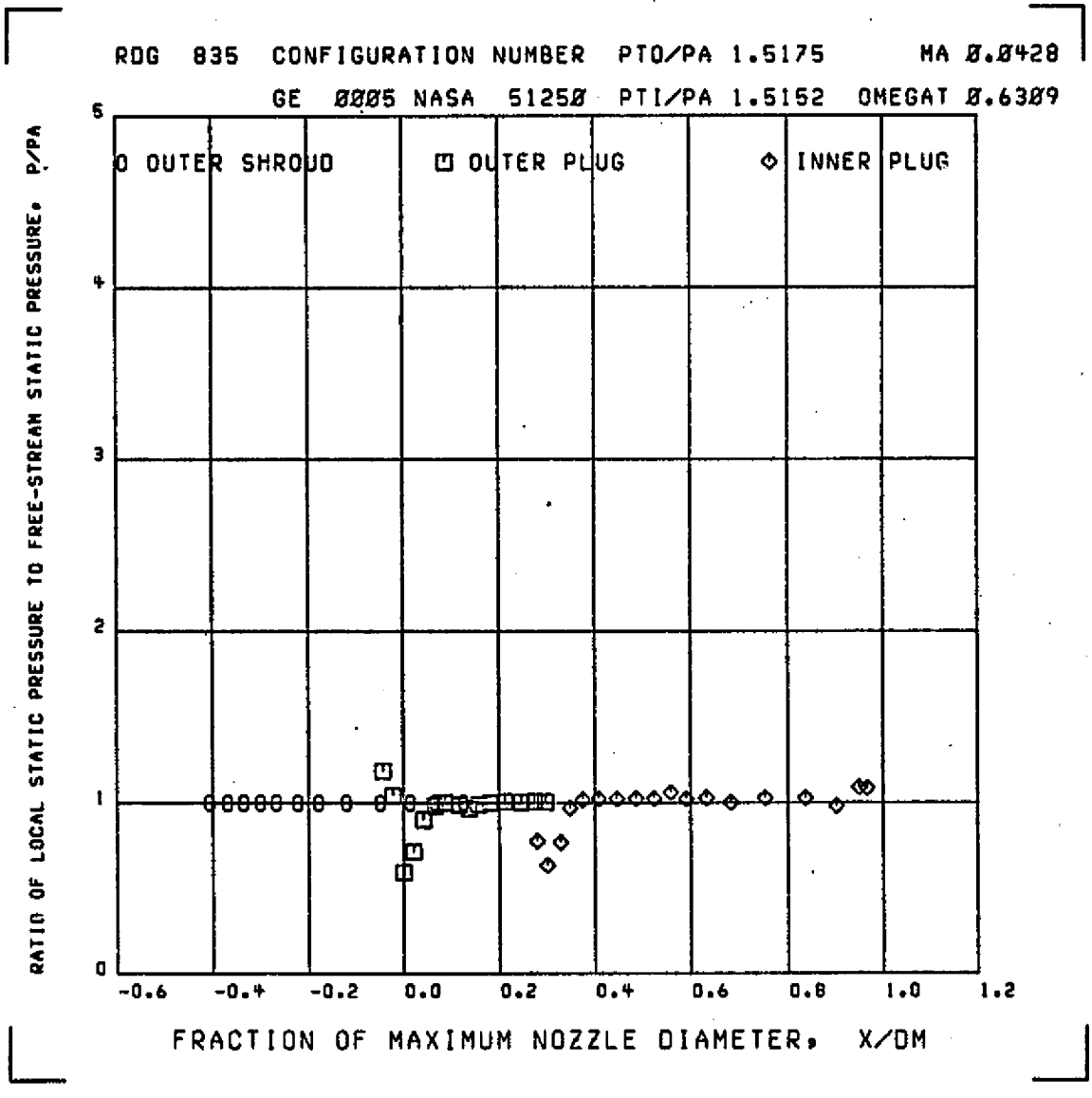
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ5 NASA 5125Ø PTI/PA 1.5152 OMEGAT Ø.63Ø9
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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1.0
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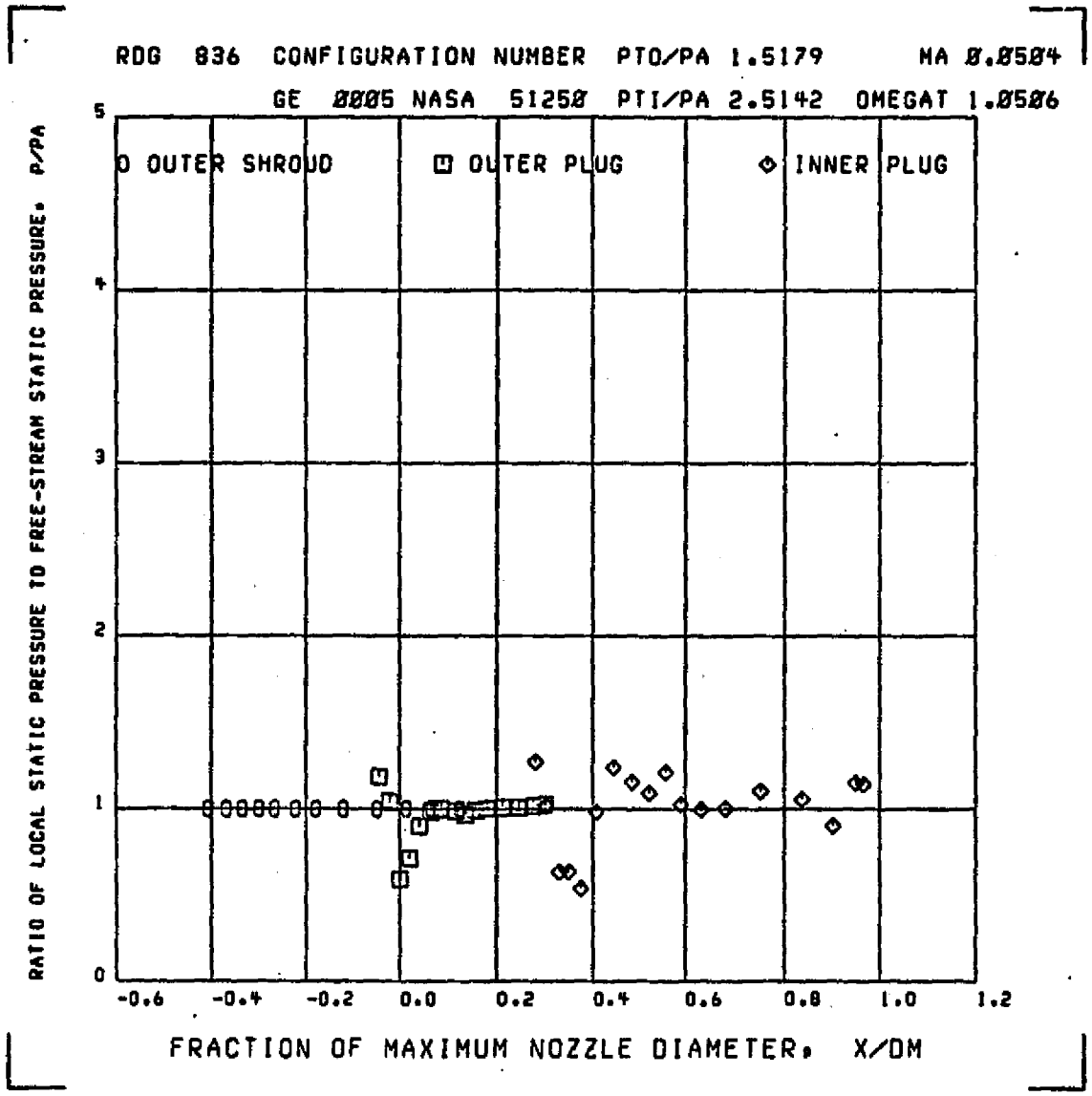
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 836 CONFIGURATION NUMBER PTO/PA 1.5179 MA 0.0504
GE 0005 NASA 51250 PTI/PA 2.5142 OMEGAT 1.0506
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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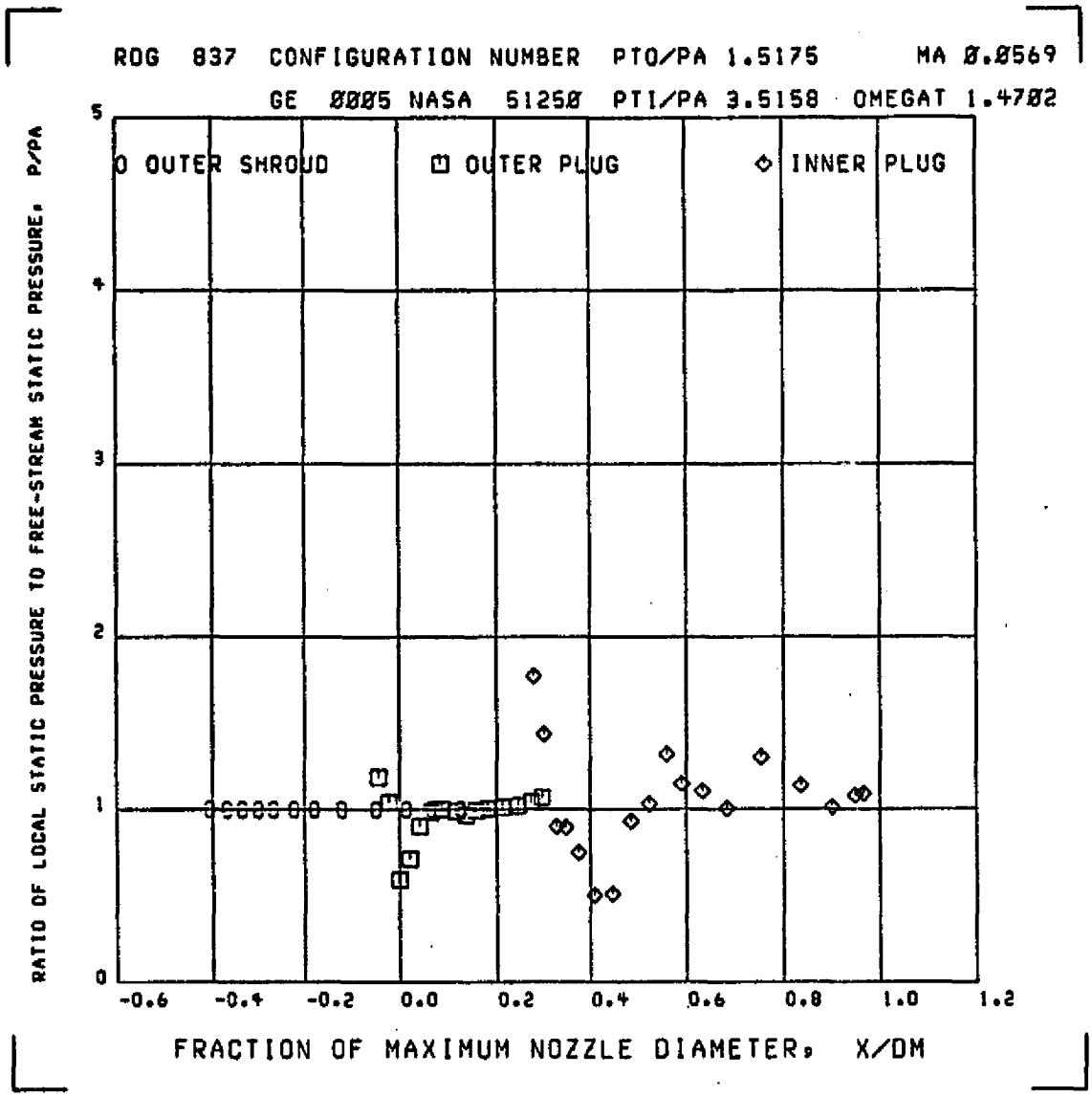
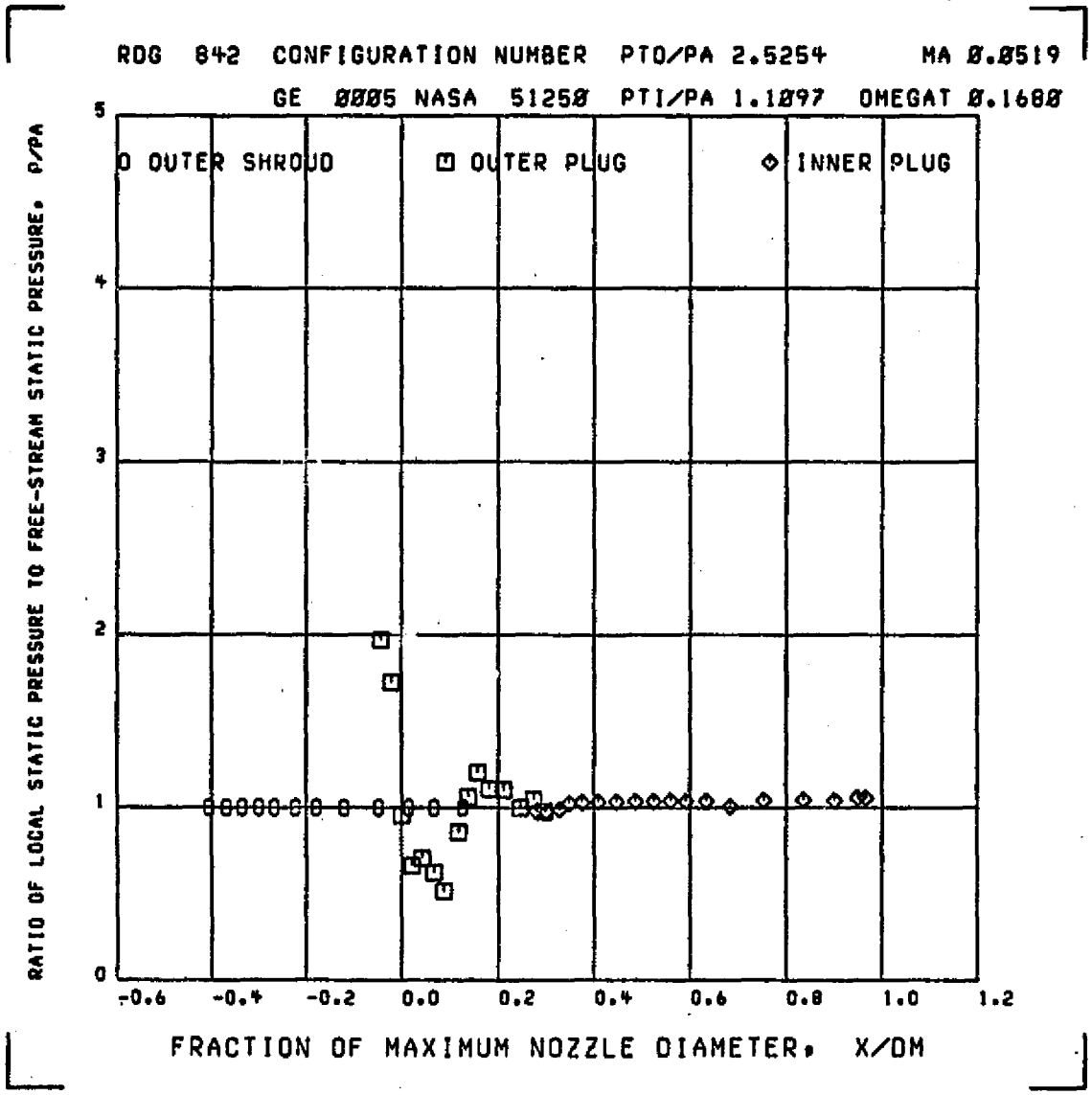
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 837 CONFIGURATION NUMBER PTO/PA 1.5175 MA Ø.Ø569
GE ØØØ5 NASA 5125Ø PTI/PA 3.5158 OMEGAT 1.47Ø2
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
1
2
3
4
5
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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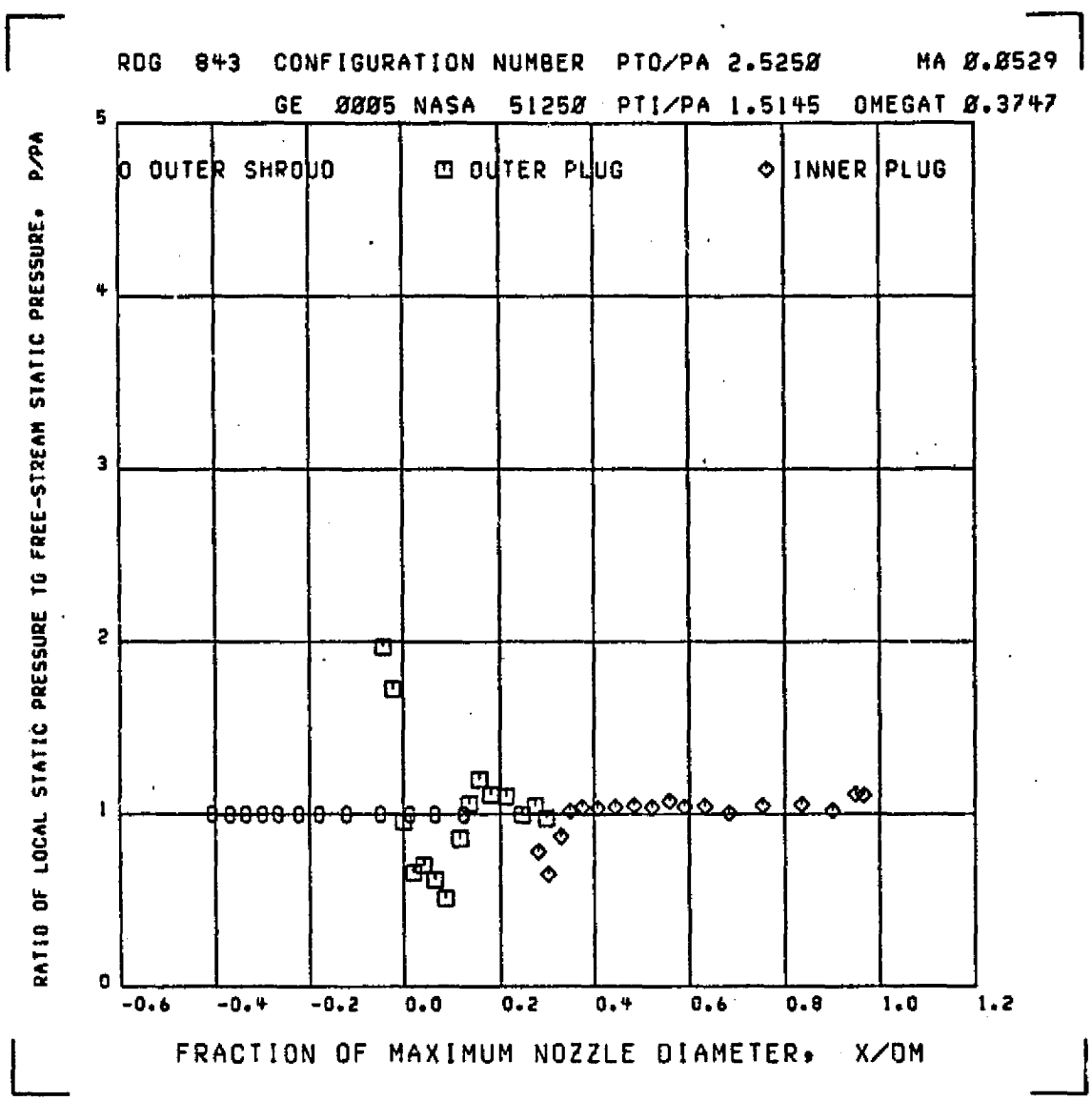
GE ØØØ5 NASA 51258 PTI/PA 1.1Ø97 OMEGAT Ø.168Ø
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
0
1
2
3
4
5
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2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GE 0005 NASA 51250 PTI/PA 1.5145 OMEGAT 0.3747
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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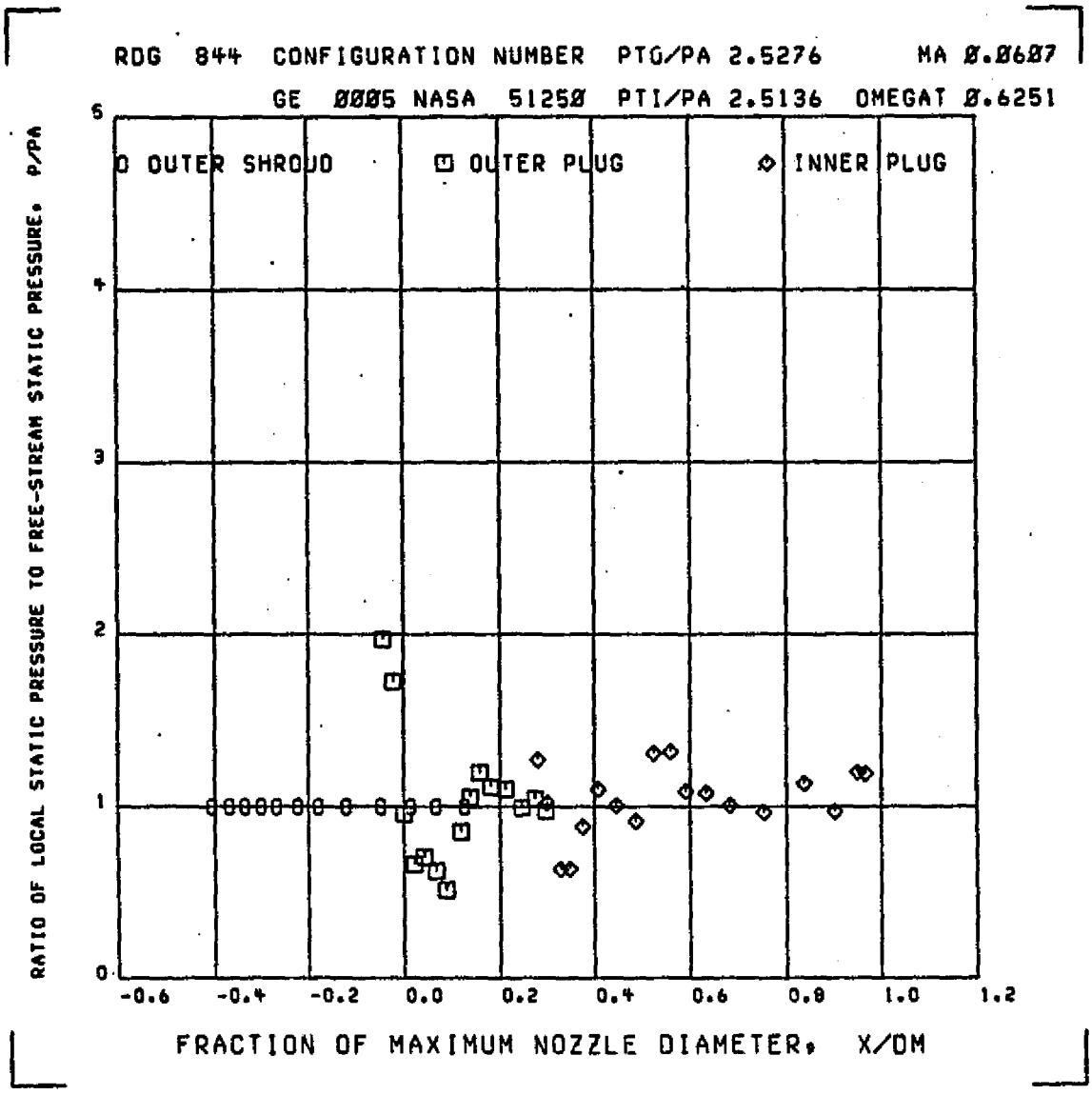
2
3
4
5
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 844 CONFIGURATION NUMBER PTG/PA 2.5276 MA Ø.Ø687
GE ØØØ5 NASA 5125Ø PTI/PA 2.5136 OMEGAT Ø.6251
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
0
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-0.6
-0.4
-0.2
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0.6
0.8
1.0
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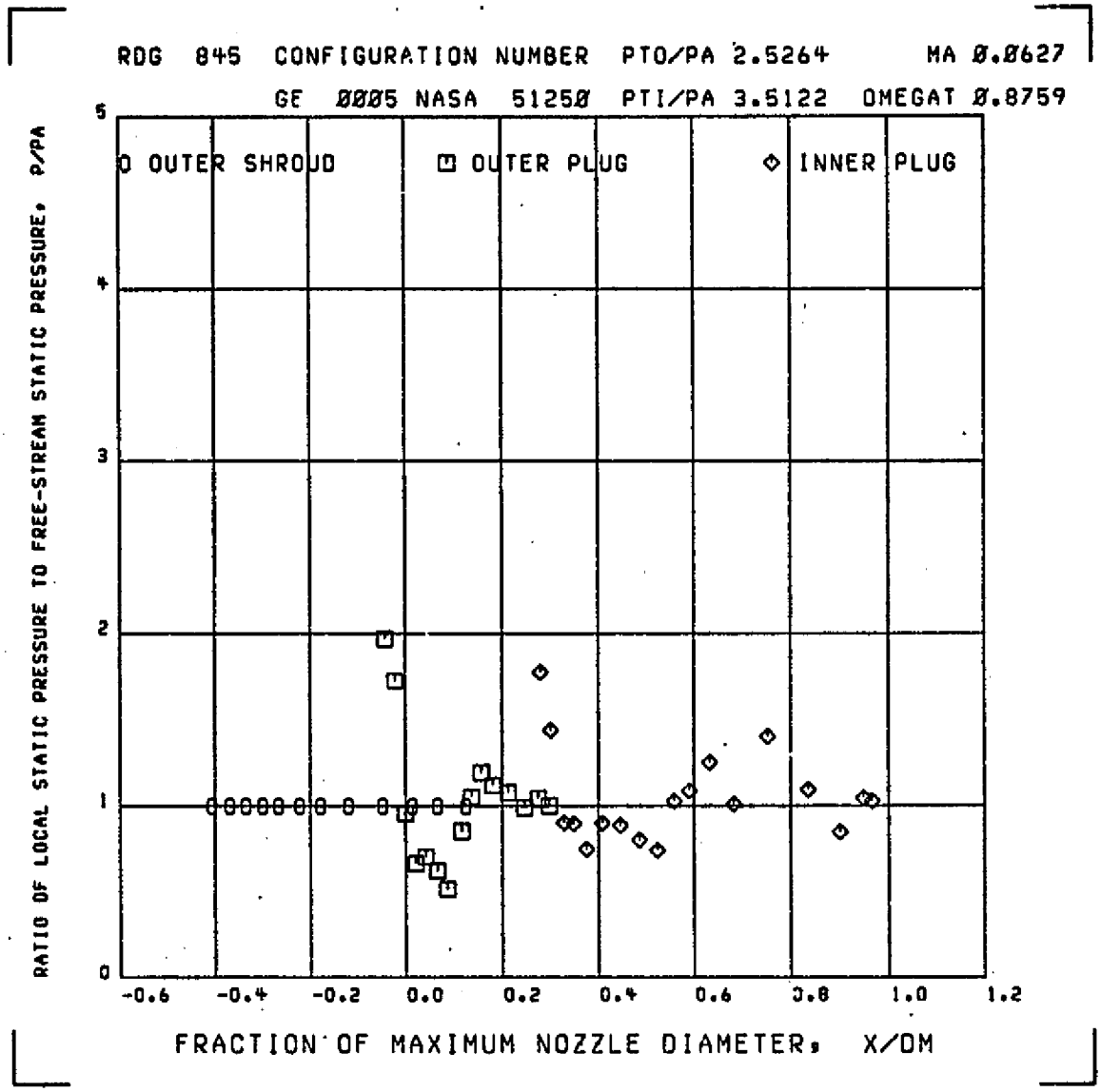
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GE ØØØ5 NASA 5125Ø PTI/PA 3.5122 OMEGAT Ø.8759
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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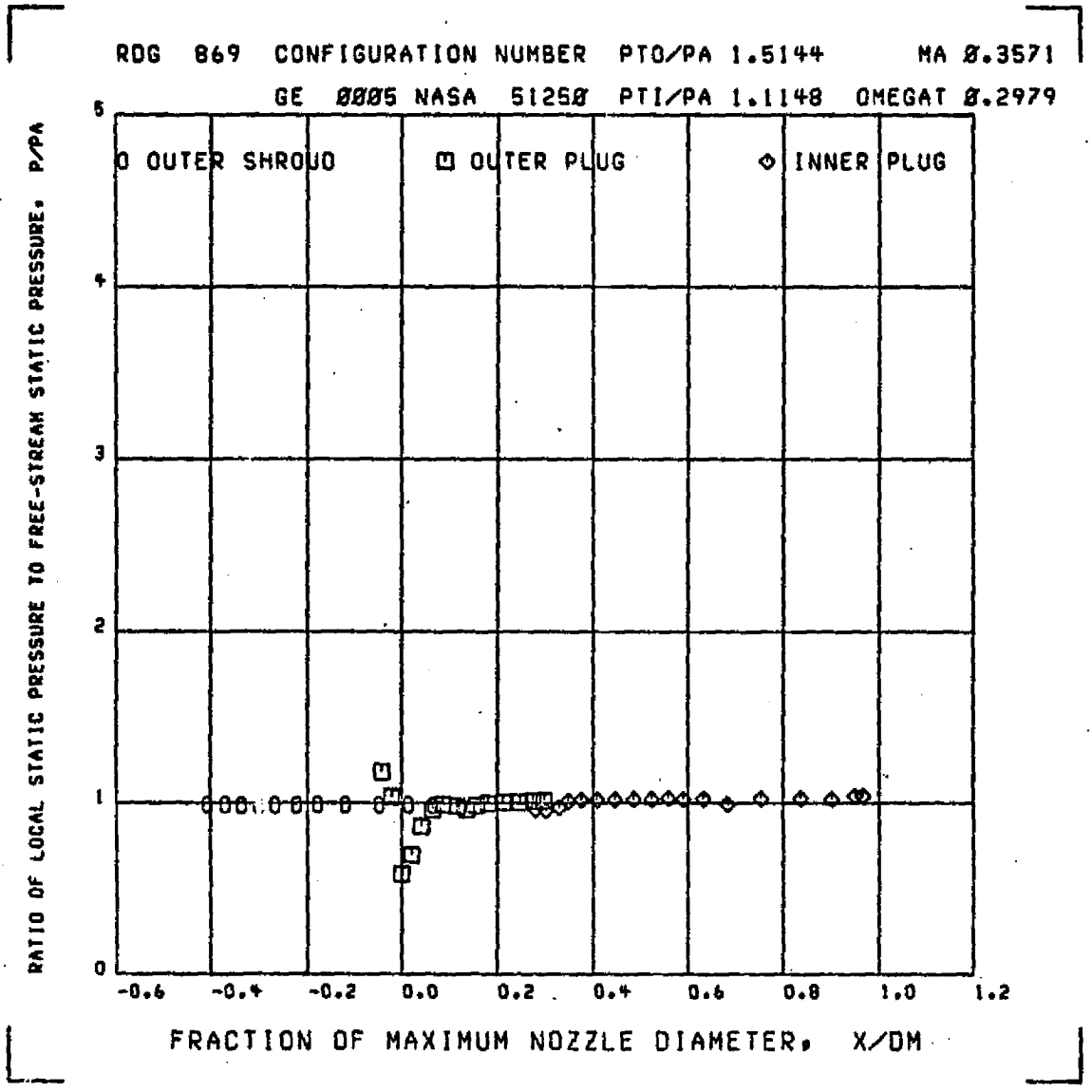
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0005 NASA 51250 PTI/PA 1.1148 OMEGAT 0.2979
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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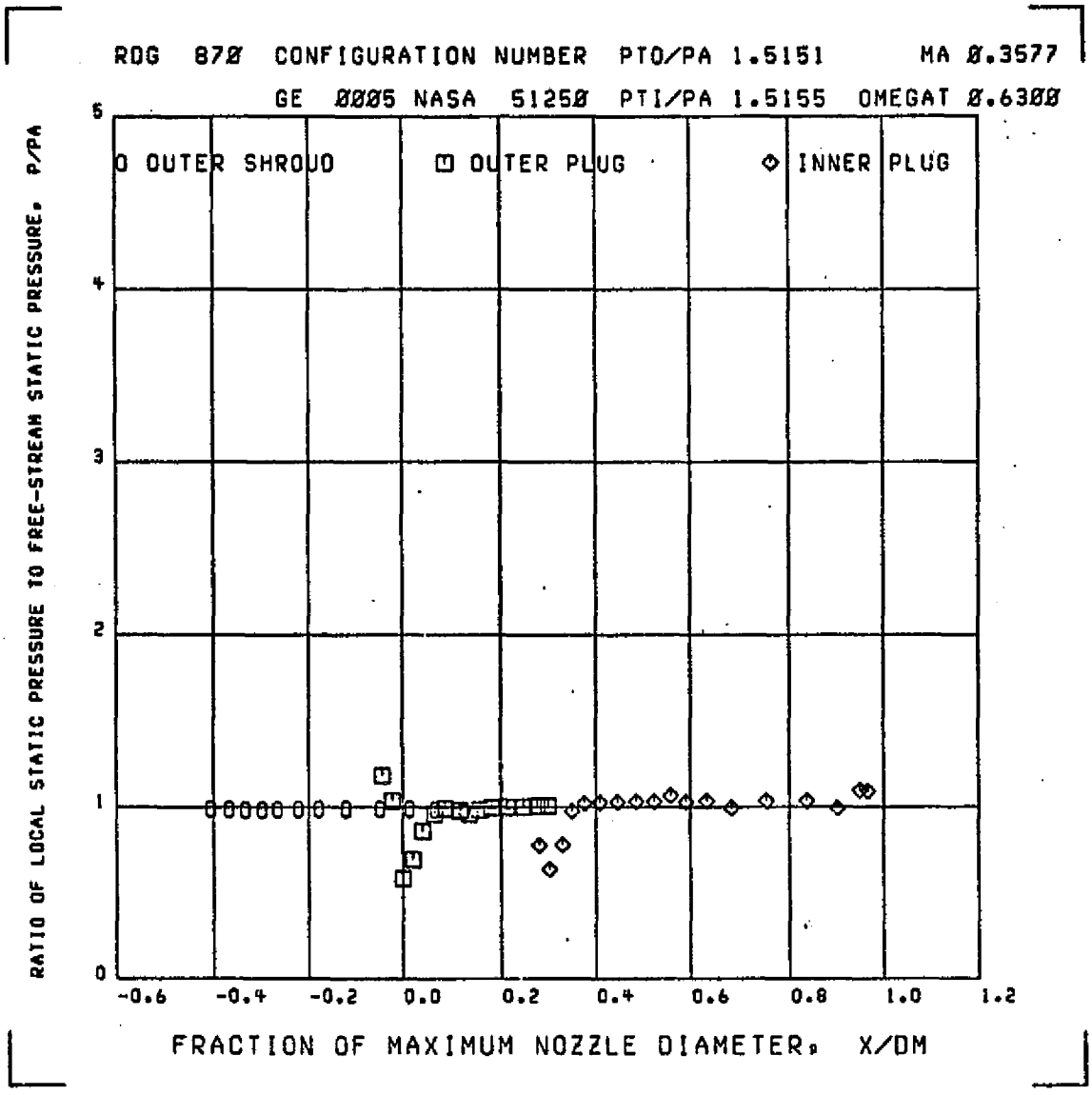
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0005 NASA 51250 PTI/PA 1.5155 OMEGAT 0.6300
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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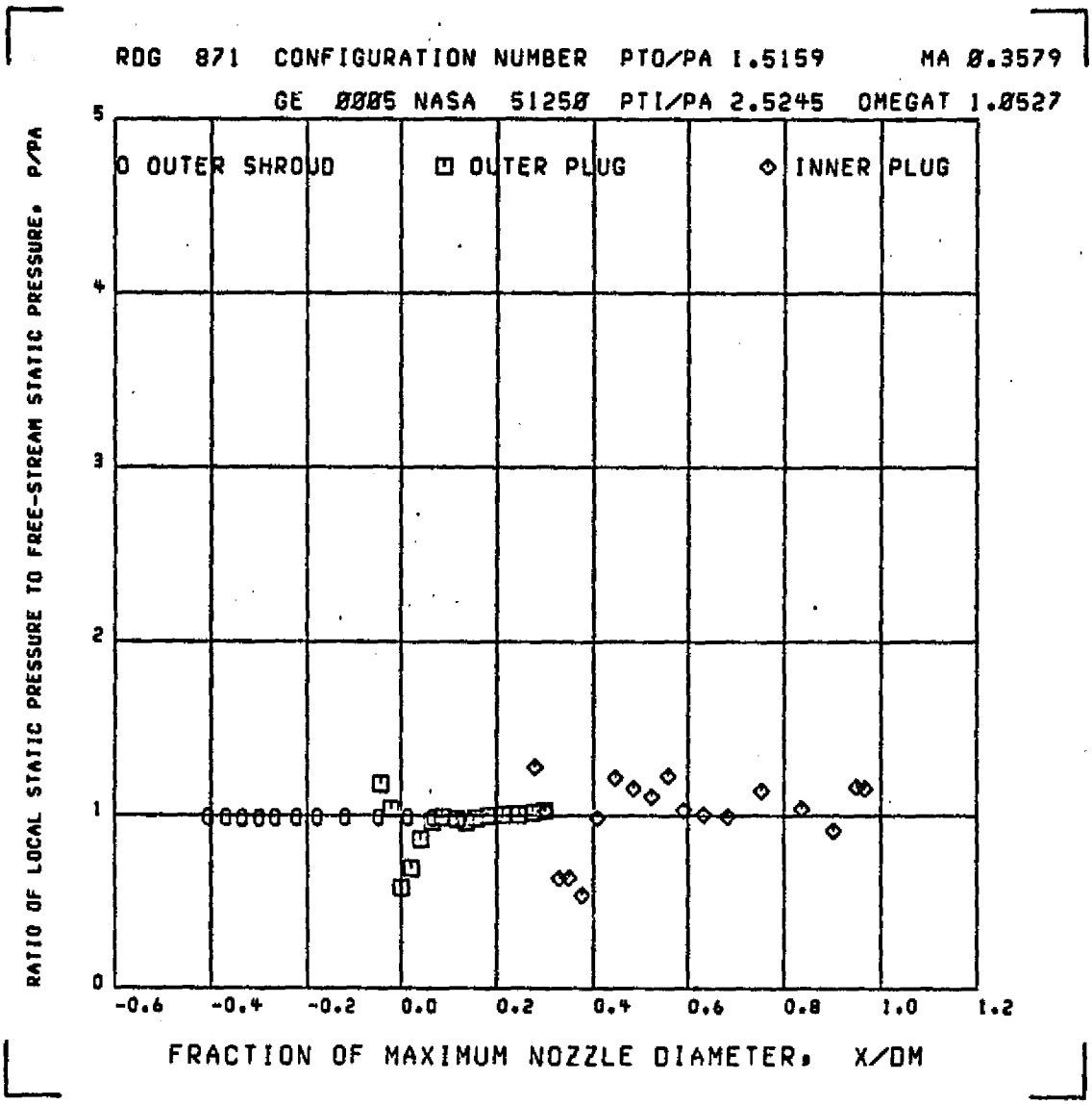
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 871 CONFIGURATION NUMBER PTO/PA 1.5159 MA 0.3579
GE 0005 NASA 51250 PTI/PA 2.5245 OMEGAT 1.0527
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
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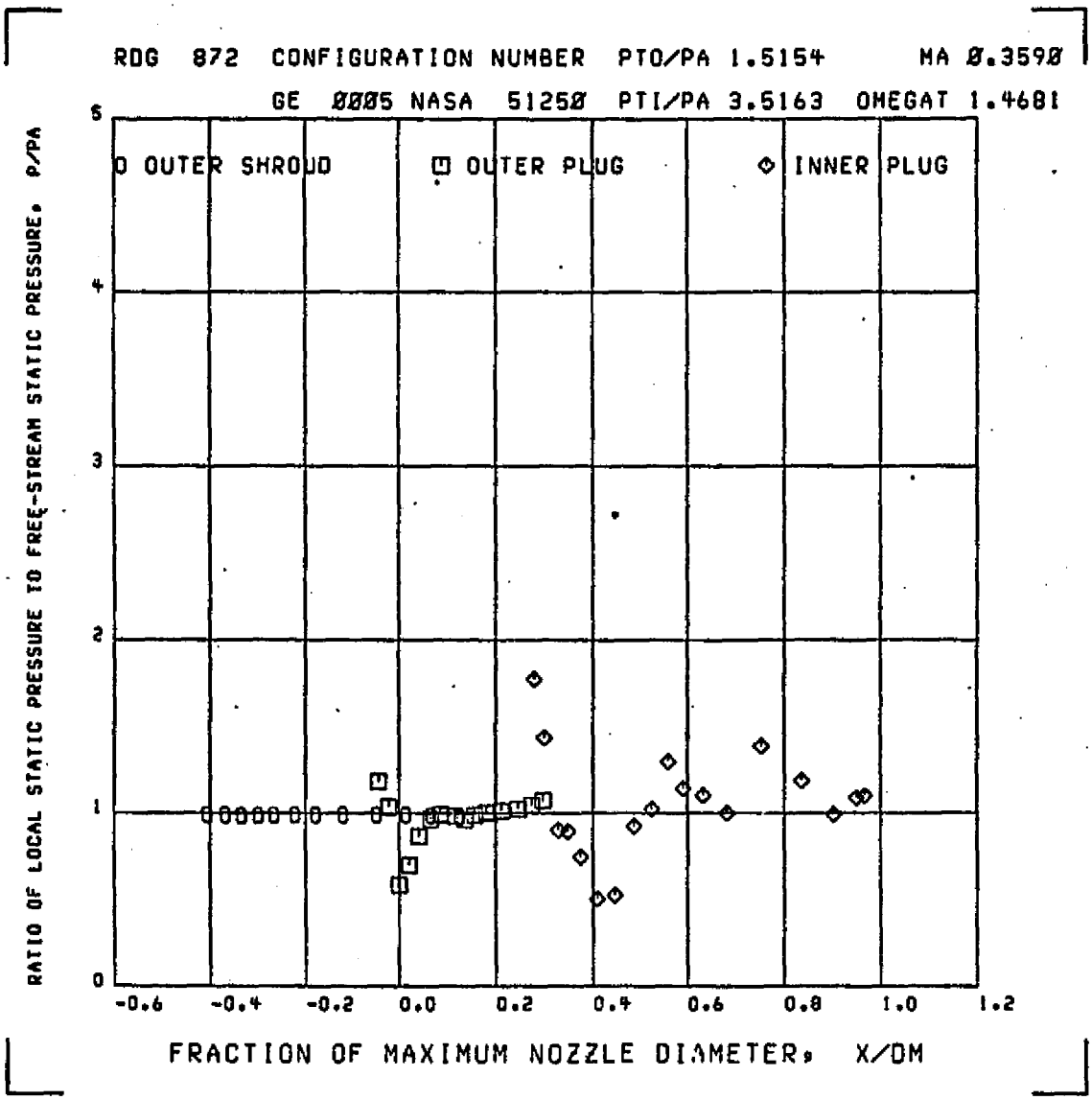
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 872 CONFIGURATION NUMBER PTO/PA 1.5154 MA Ø.359Ø
GE ØØØ5 NASA 5125Ø PTI/PA 3.5163 OMEGAT 1.4681
D OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.4
-0.2
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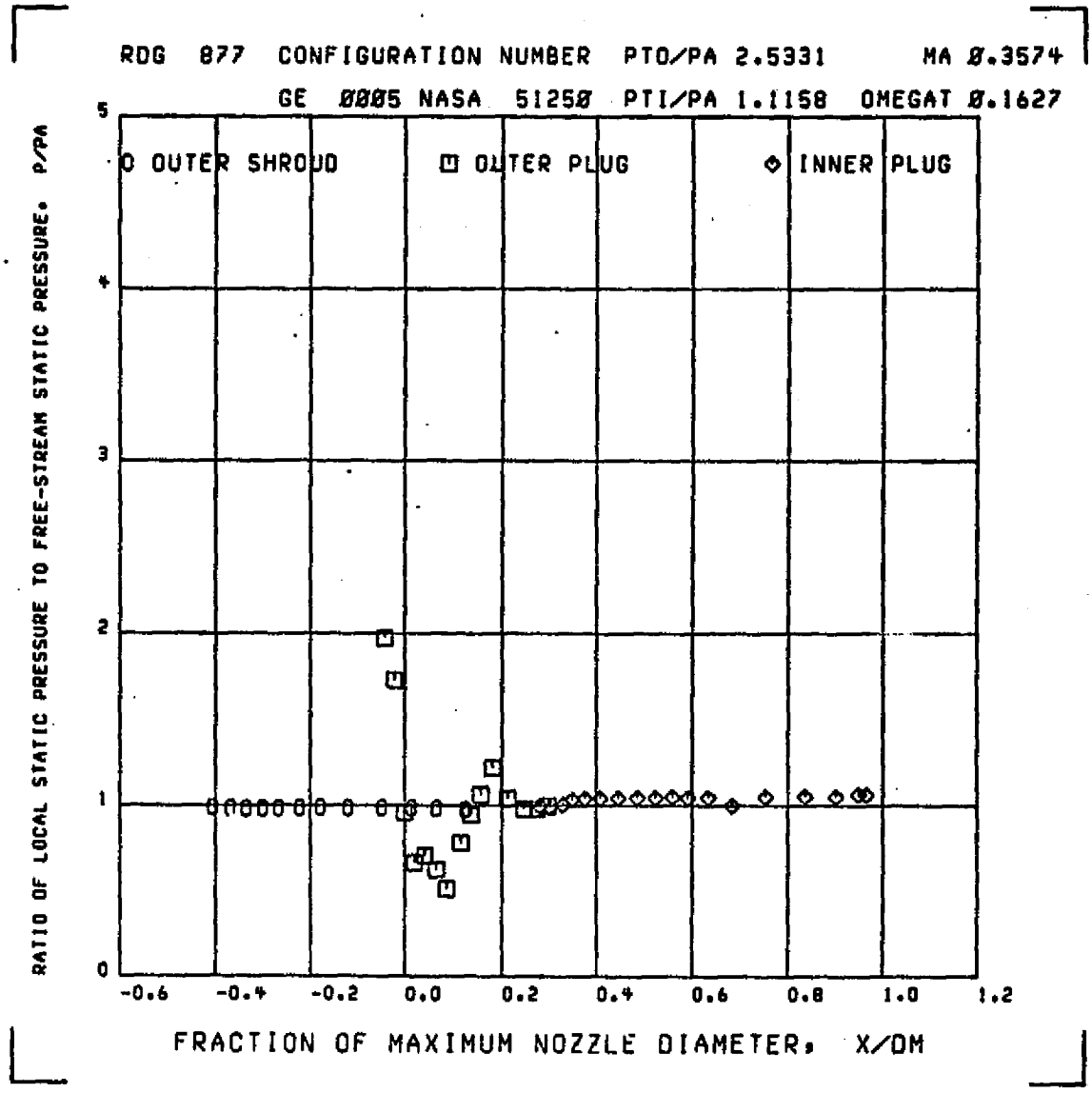
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0005 NASA 51250 PTI/PA 1.1158 OMEGAT 0.1627
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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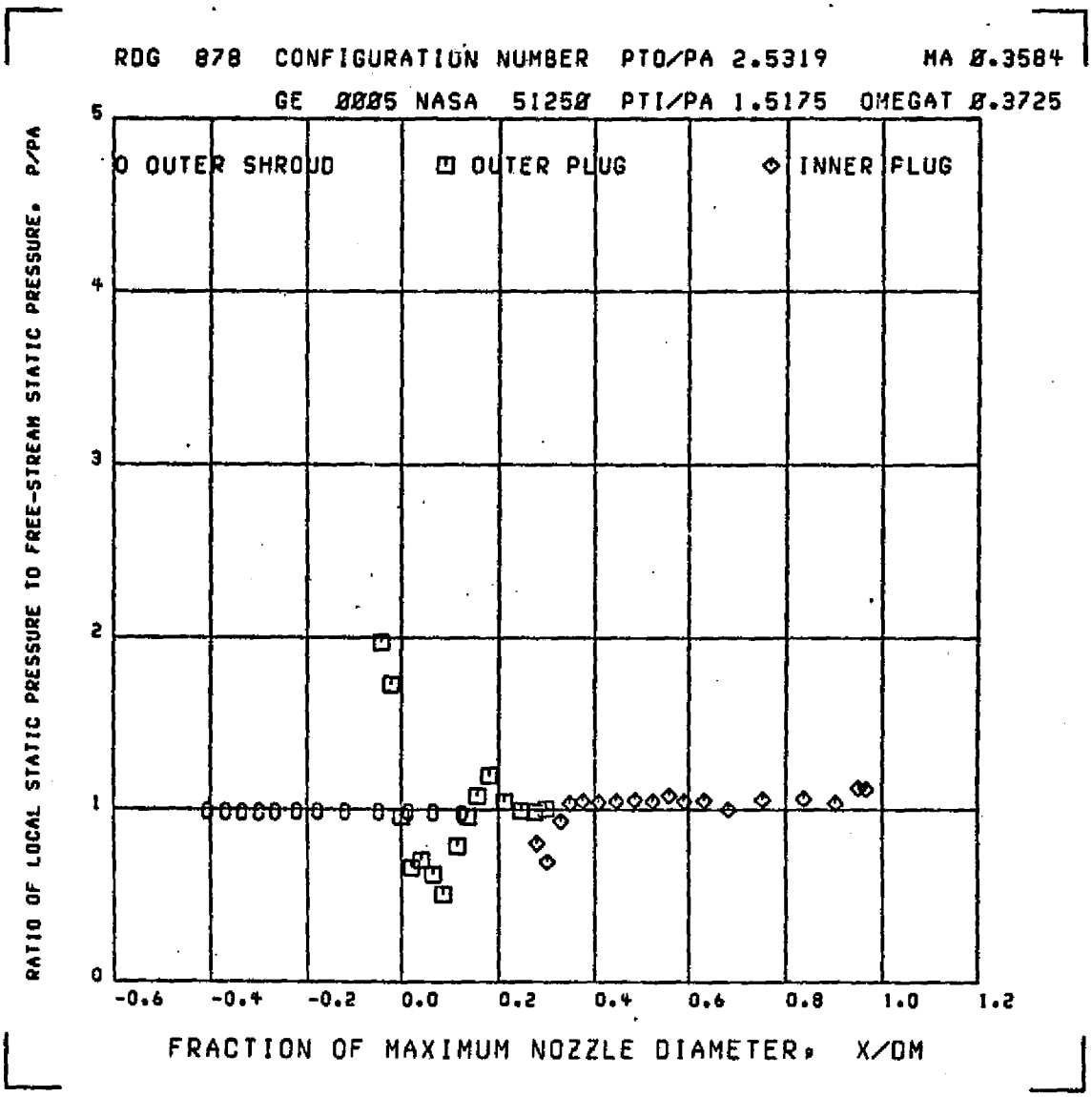
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 878 CONFIGURATION NUMBER PTO/PA 2.5319 MA 0.3584
GE 0005 NASA 51250 PTI/PA 1.5175 OMEGAT 0.3725
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
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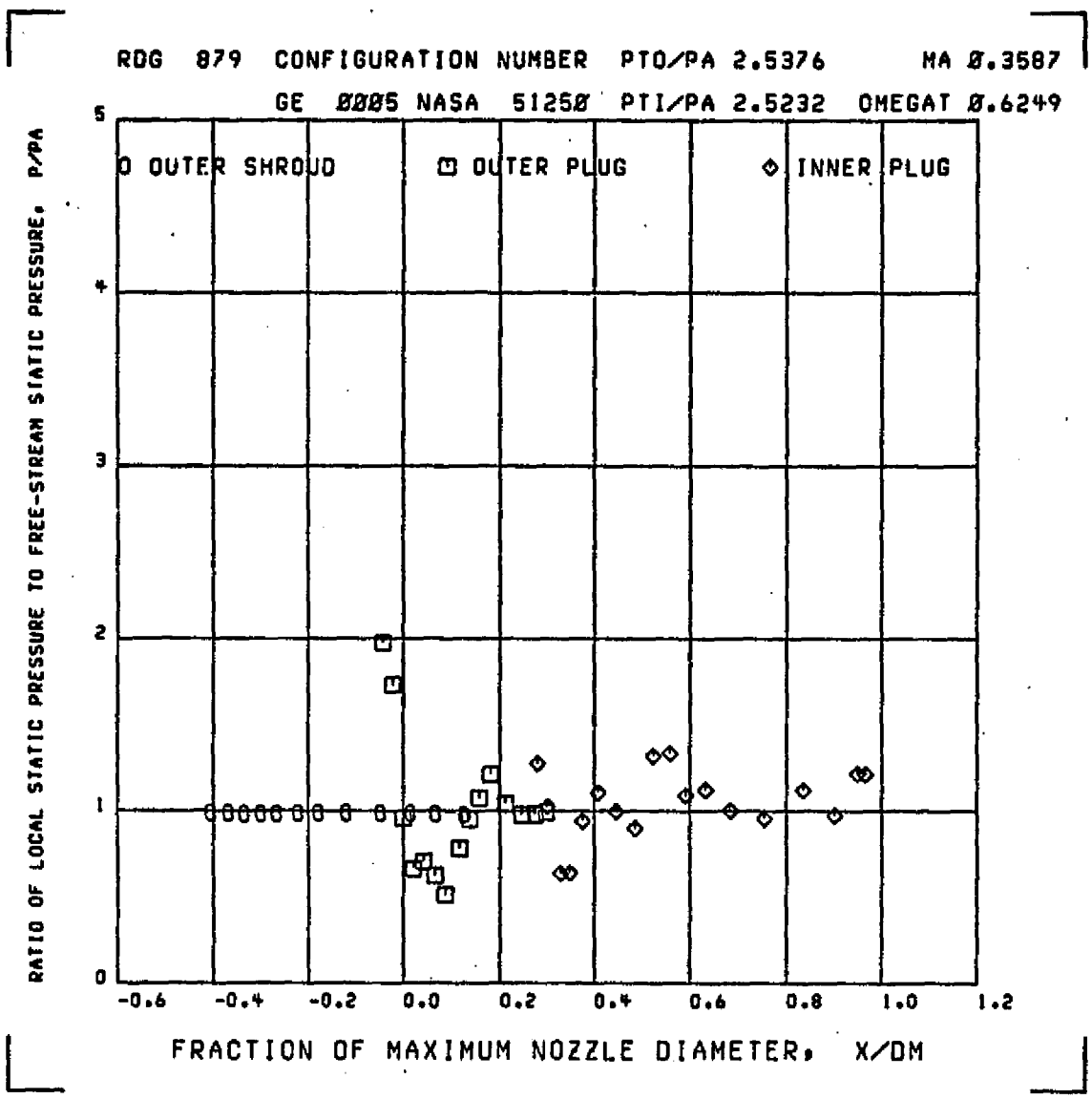
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0005 NASA 51250 PTI/PA 2.5232 OMEGAT 0.6249
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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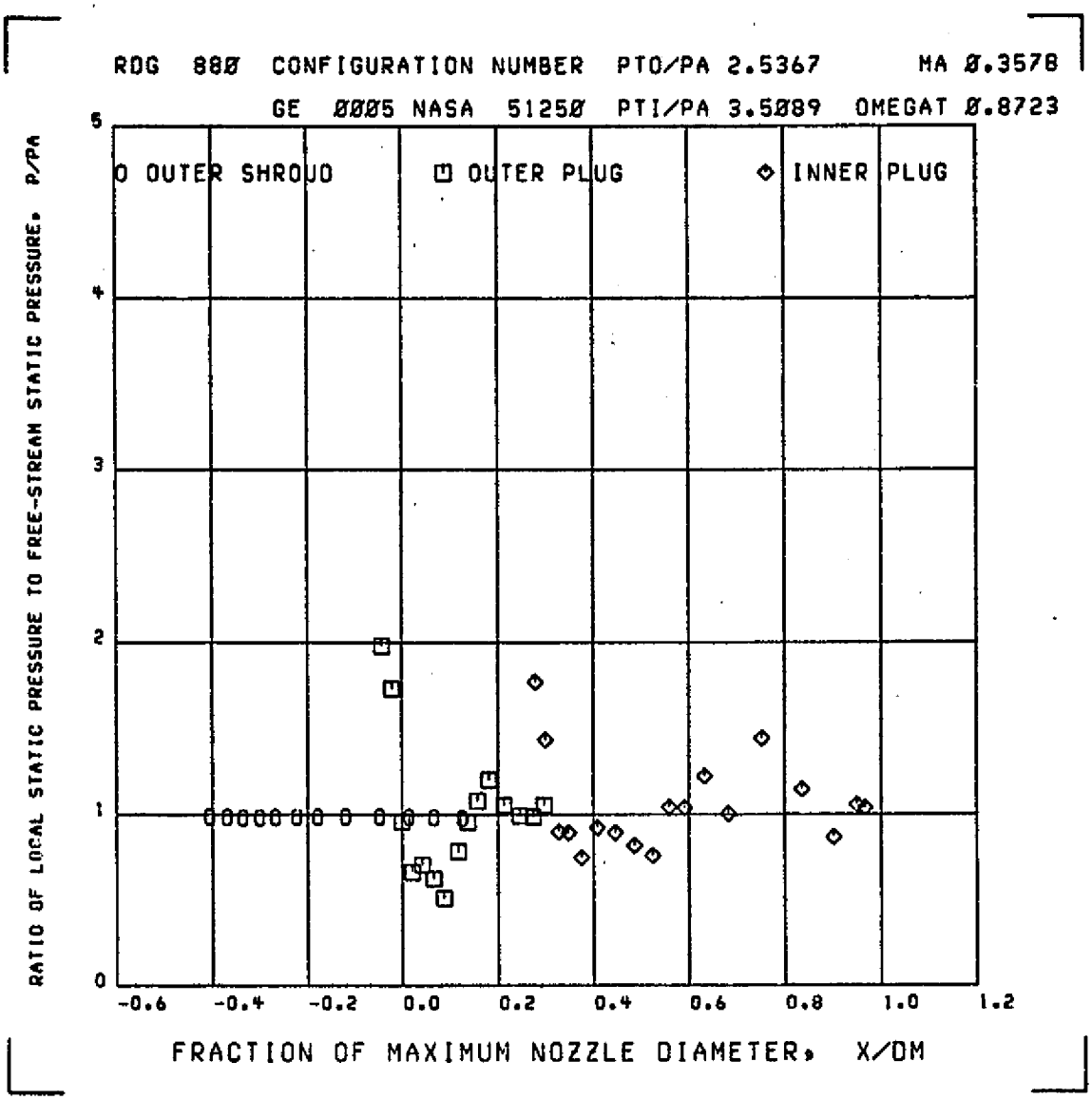
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 880 CONFIGURATION NUMBER PTO/PA 2.5367 MA 0.3578
GE 0005 NASA 51250 PTI/PA 3.5089 OMEGAT 0.8723
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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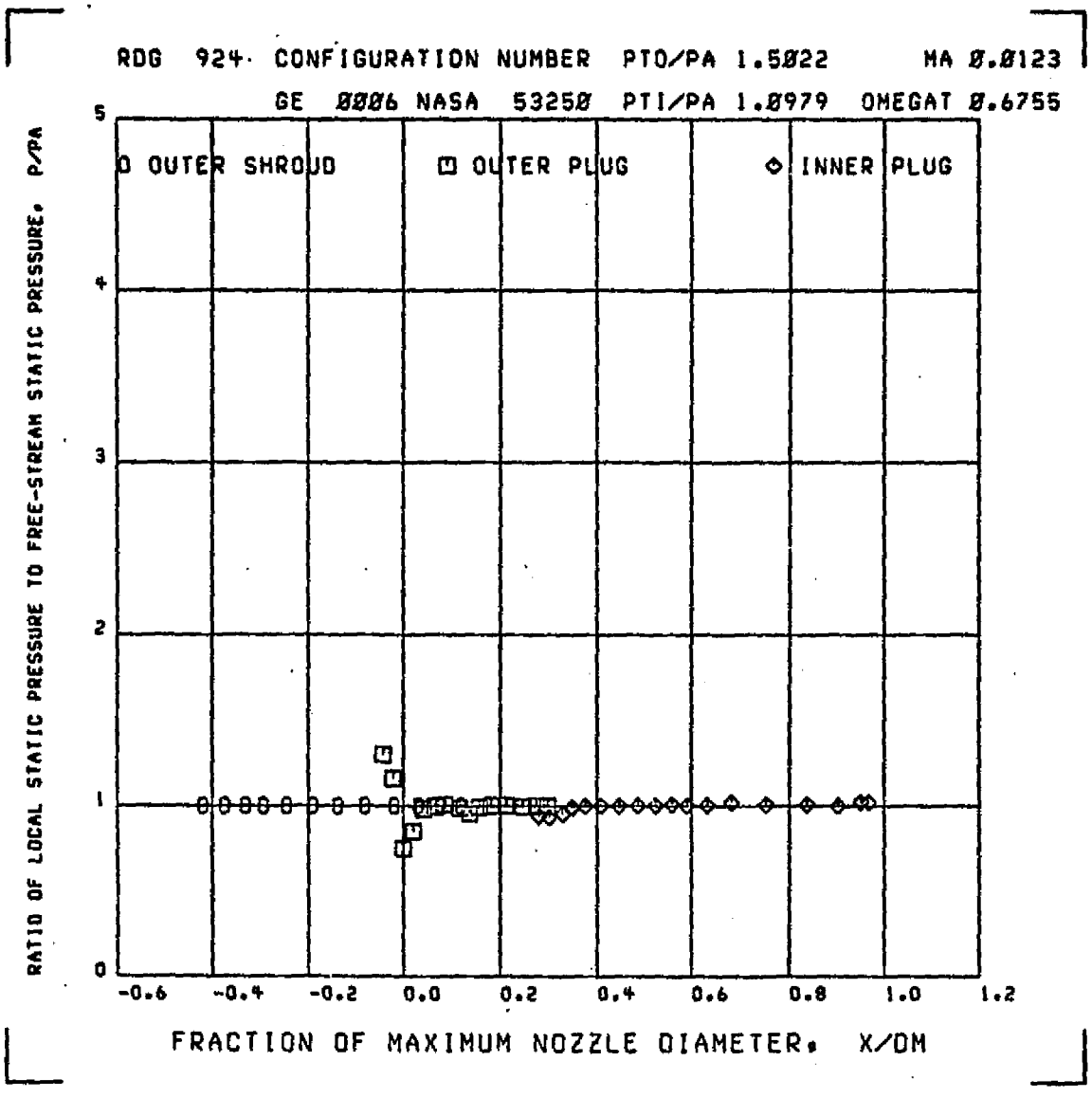
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 924 CONFIGURATION NUMBER PTO/PA 1.5022 MA 0.0123
GE 0006 NASA 53250 PTI/PA 1.0979 OMEGAT 0.6755
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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4
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-0.6
-0.4
-0.2
0.0
0.2
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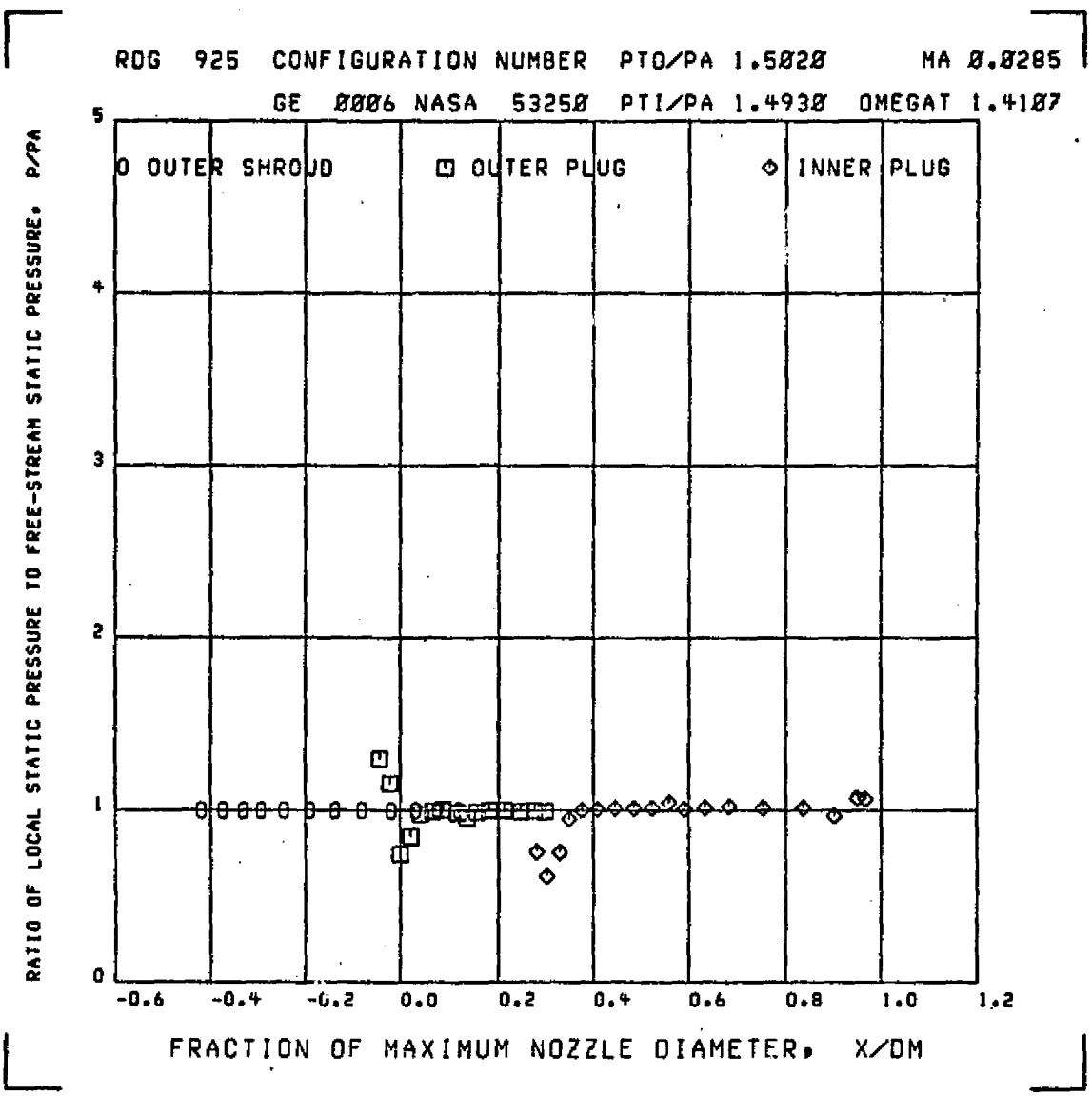
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0006 NASA 53250 PTI/PA 1.4930 OMEGAT 1.4107
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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4
5
-0.6
-0.4
-0.2
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0.2
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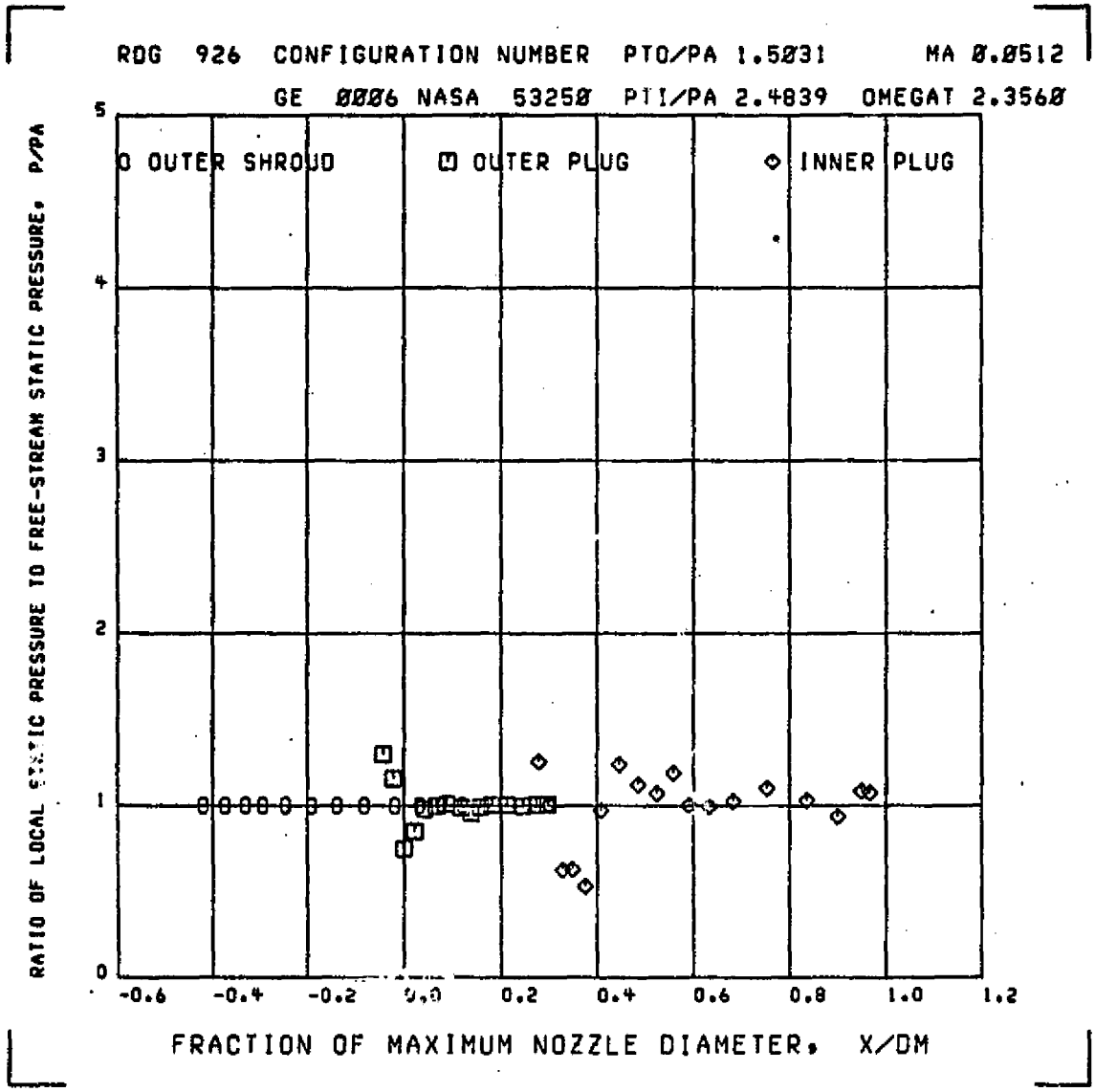
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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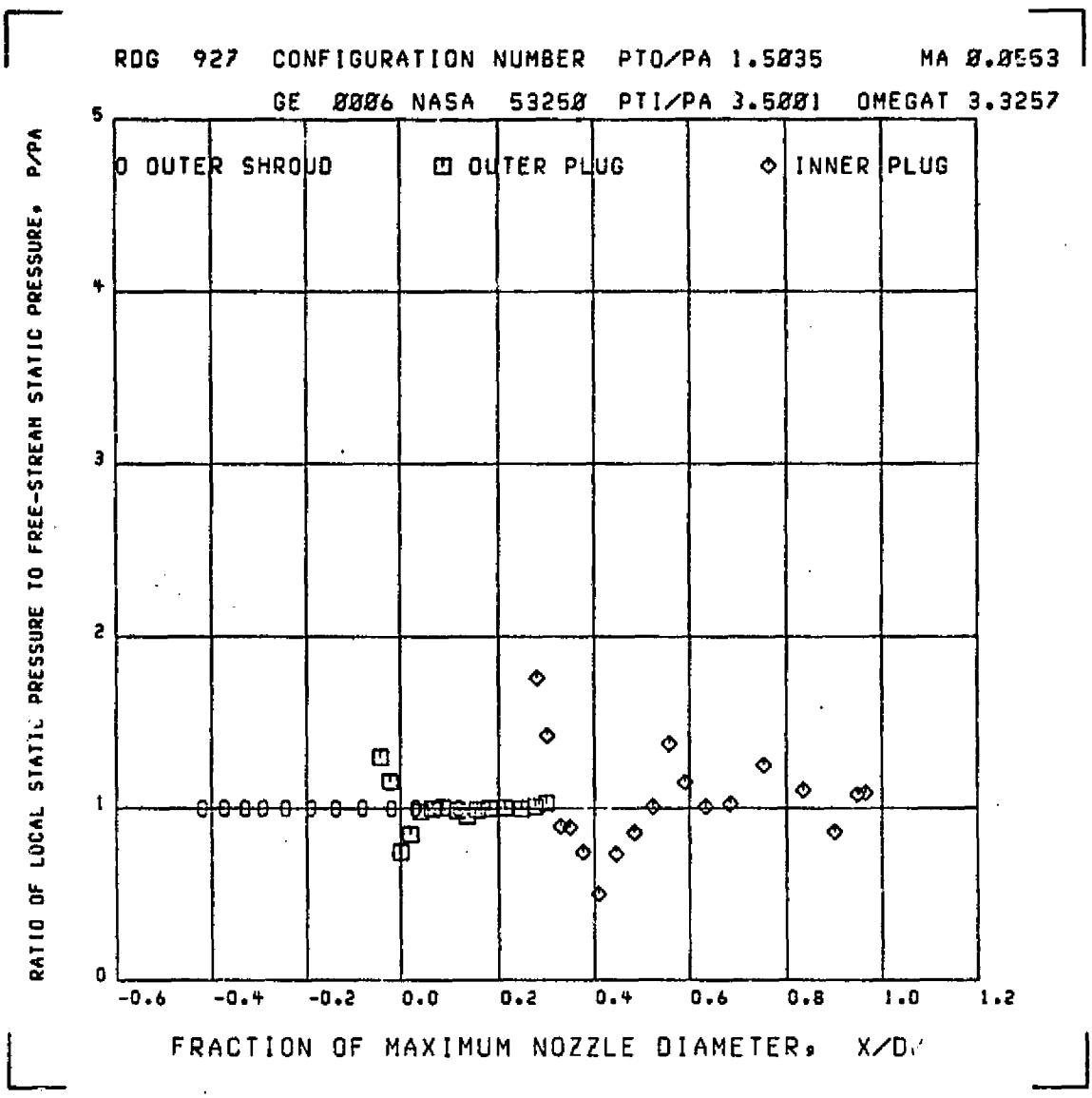
GE 0006 NASA 53250 PTI/PA 2.4839 OMEGAT 2.3560
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
5
4
3
2
1
0
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0006 NASA 53250 PTI/PA 3.5001 OMEGAT 3.3257
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/D
0
1
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-0.6
-0.4
-0.2
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0.2
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0.6
0.8
1.0
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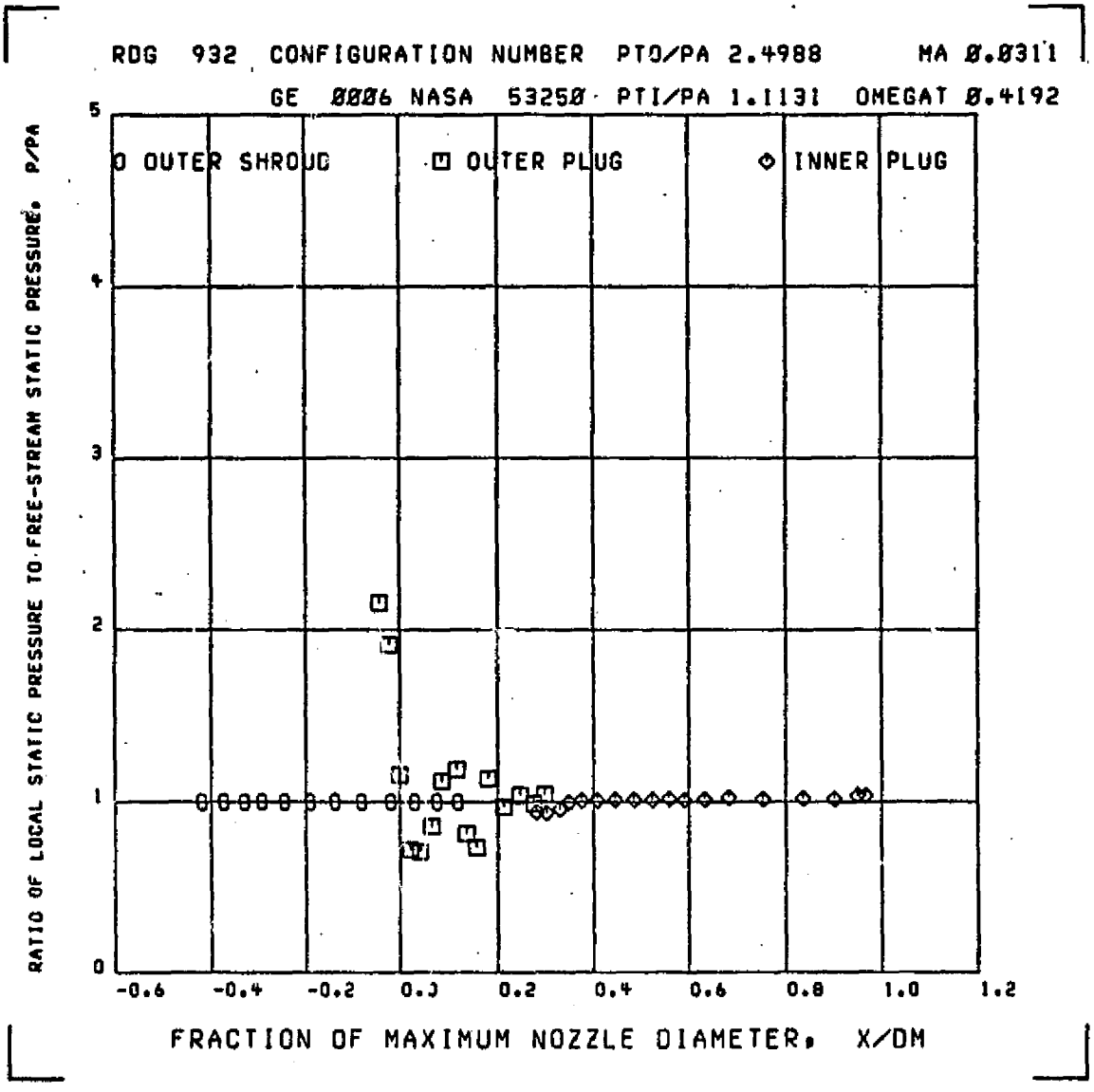
RDG 932 CONFIGURATION NUMBER PTO/PA 2.4988 MA 0.0311
GE 0006 NASA 53250 PTI/PA 1.1131 OMEGAT 0.4192
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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4
5
-0.6
-0.4
-0.2
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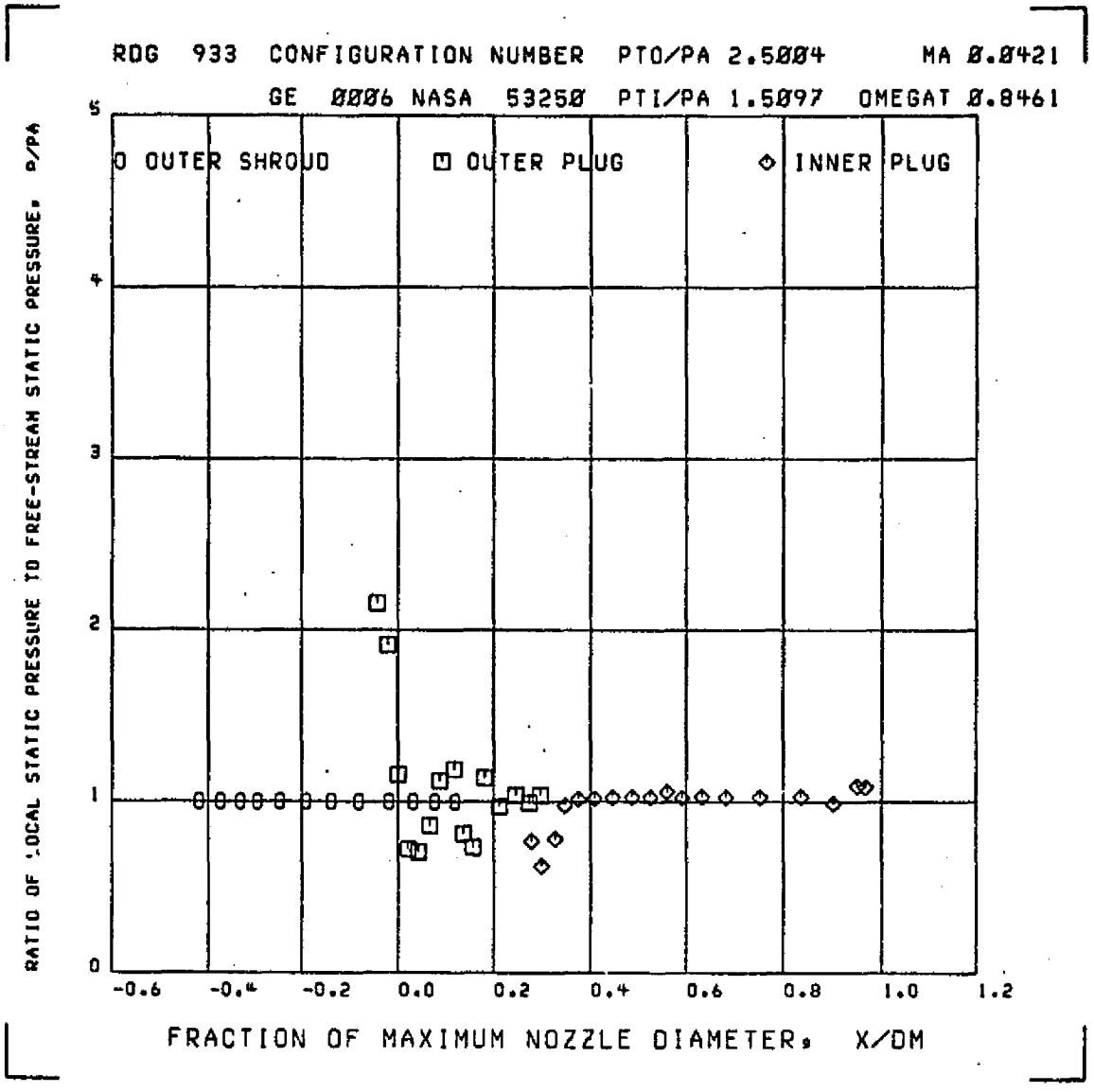
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0006 NASA 53250 PTI/PA 1.5097 OMEGAT 0.8461
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
5
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-0.6
-0.4
-0.2
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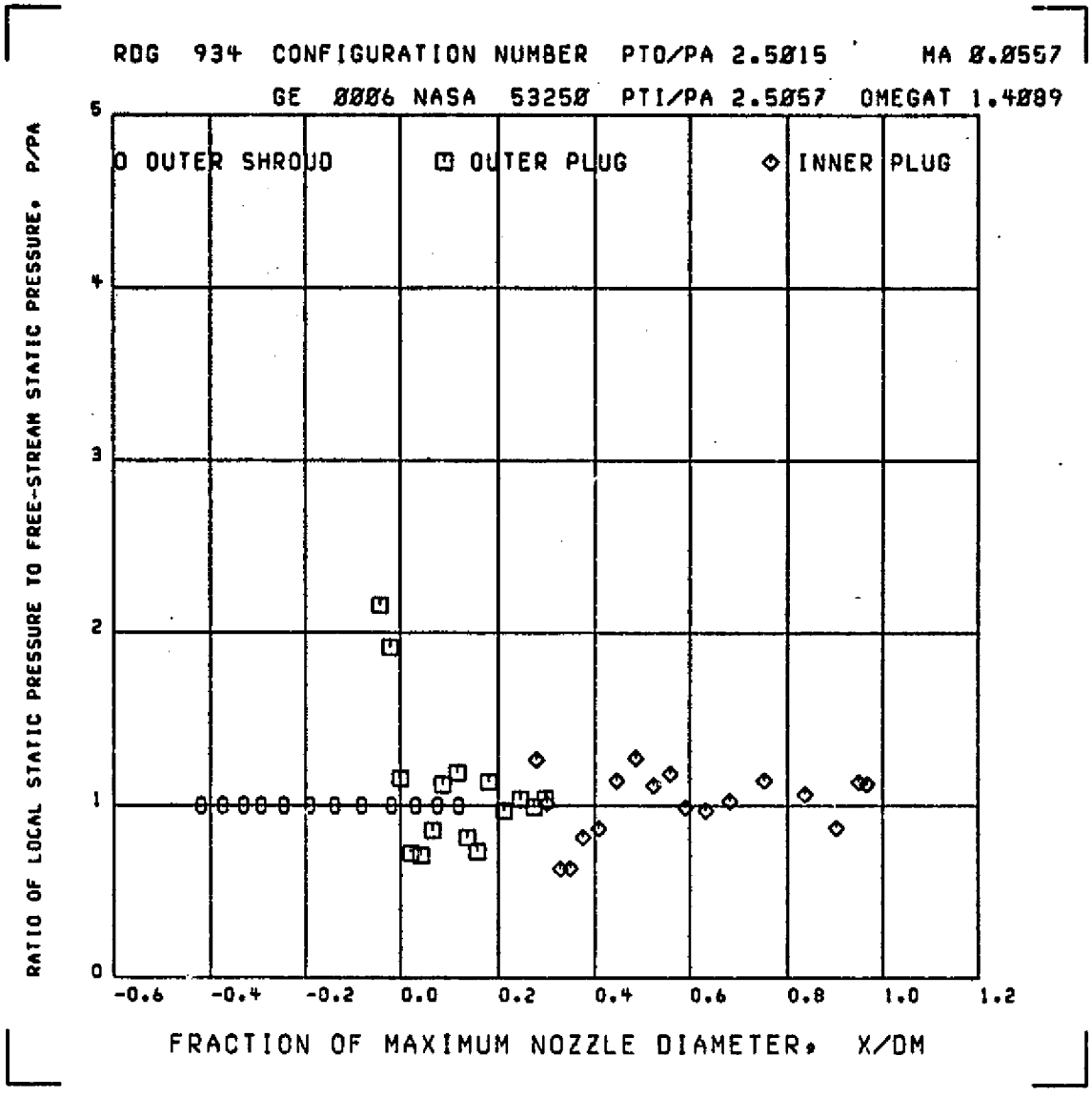
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 934 CONFIGURATION NUMBER PTO/PA 2.5015 MA 0.0557
GE 0006 NASA 53250 PTI/PA 2.5057 OMEGAT 1.4089
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
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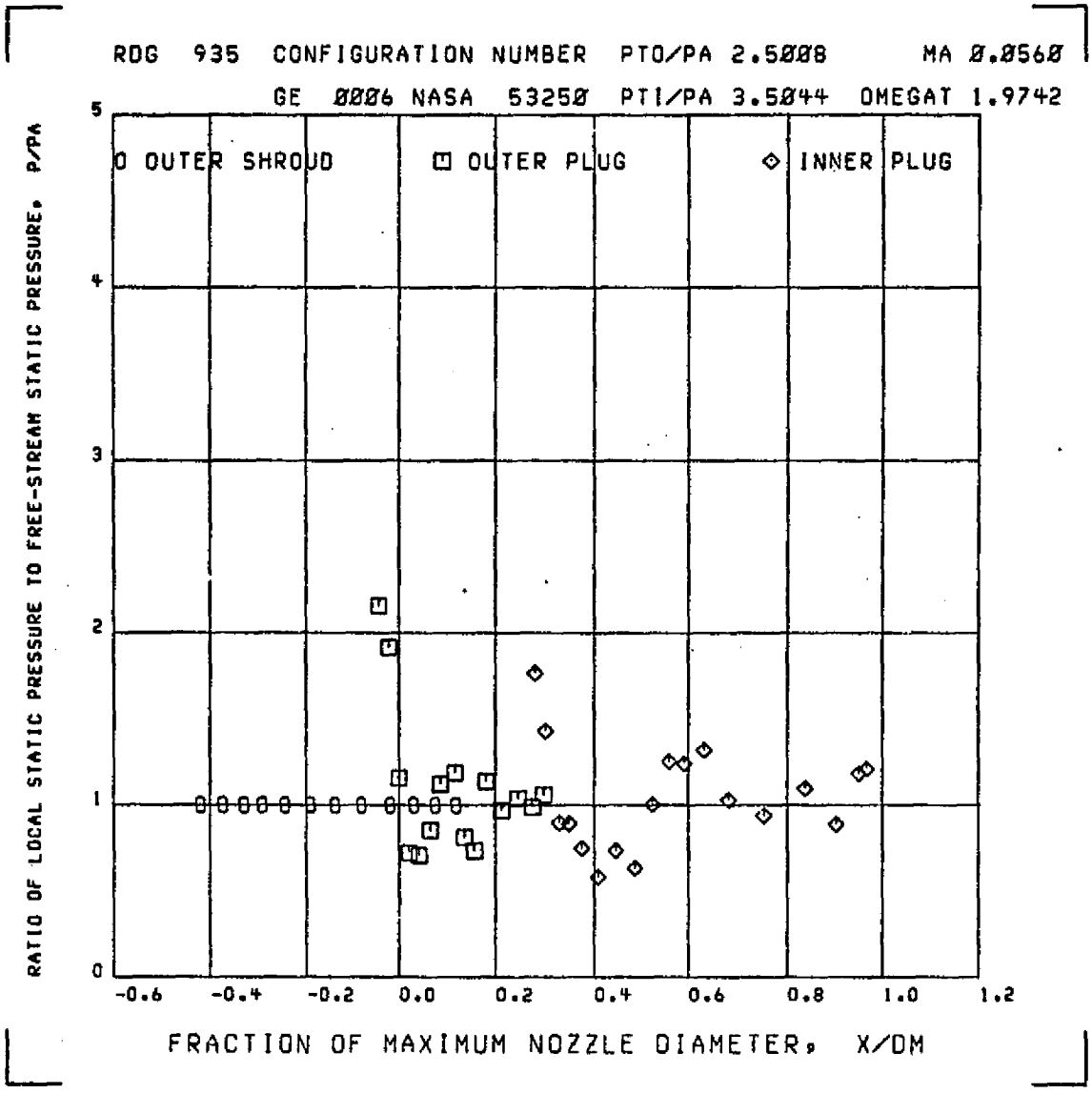
ROG 935 CONFIGURATION NUMBER PTO/PA 2.5008 MA 0.0560
GE 0006 NASA 53250 PTI/PA 3.5044 OMEGAT 1.9742
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
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-0.6
-0.4
-0.2
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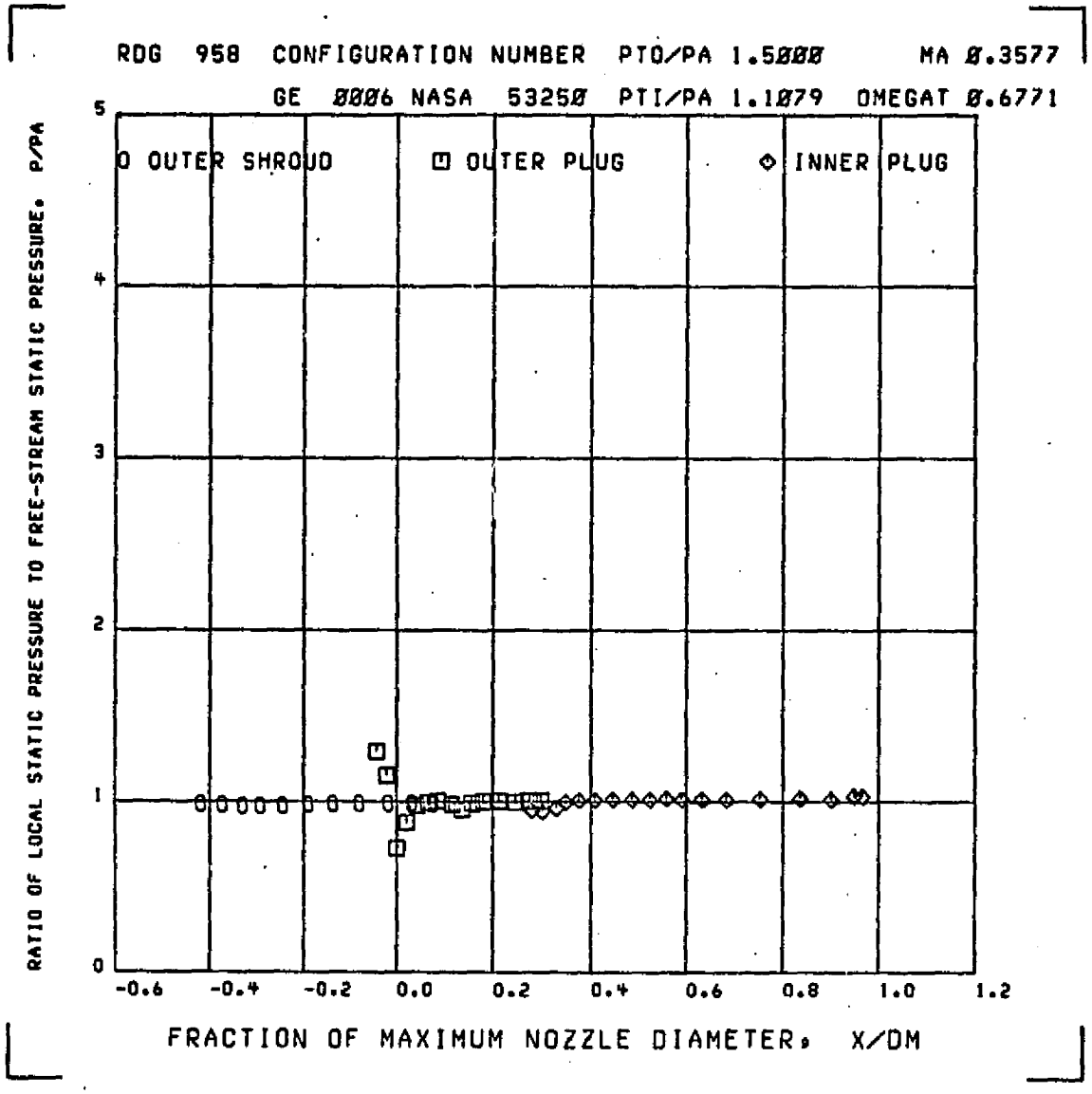
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0006 NASA 53250 PTI/PA 1.1079 OMEGAT 0.6771
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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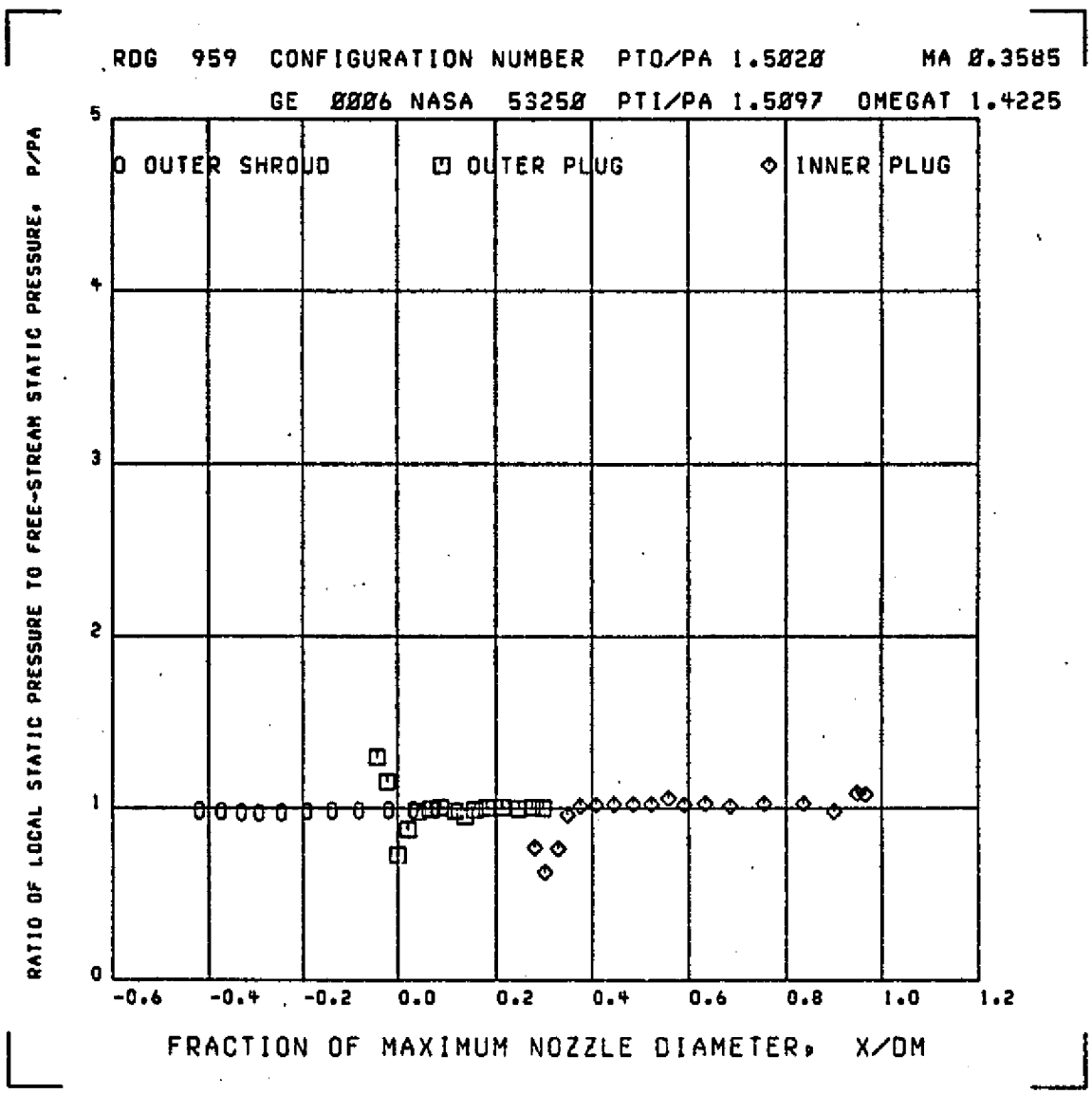
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 959 CONFIGURATION NUMBER PTO/PA 1.5020 MA 0.3585
GE 0006 NASA 53250 PTI/PA 1.5097 OMEGAT 1.4225
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
0
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-0.6
-0.4
-0.2
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1.0
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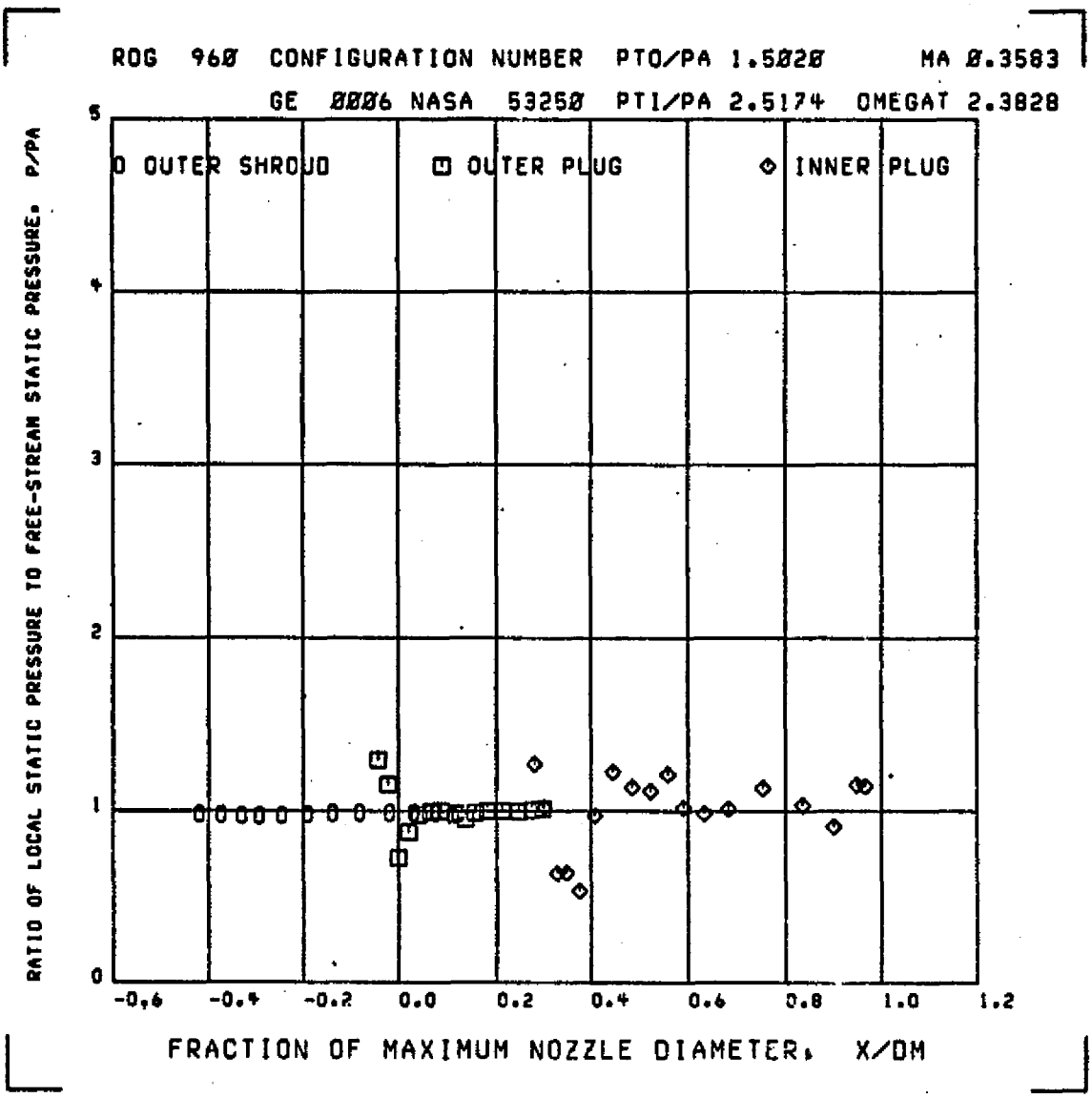
ROG 960 CONFIGURATION NUMBER PTO/PA 1.5020 MA 0.3583
GE 0006 NASA 53250 PTI/PA 2.5174 OMEGAT 2.3828
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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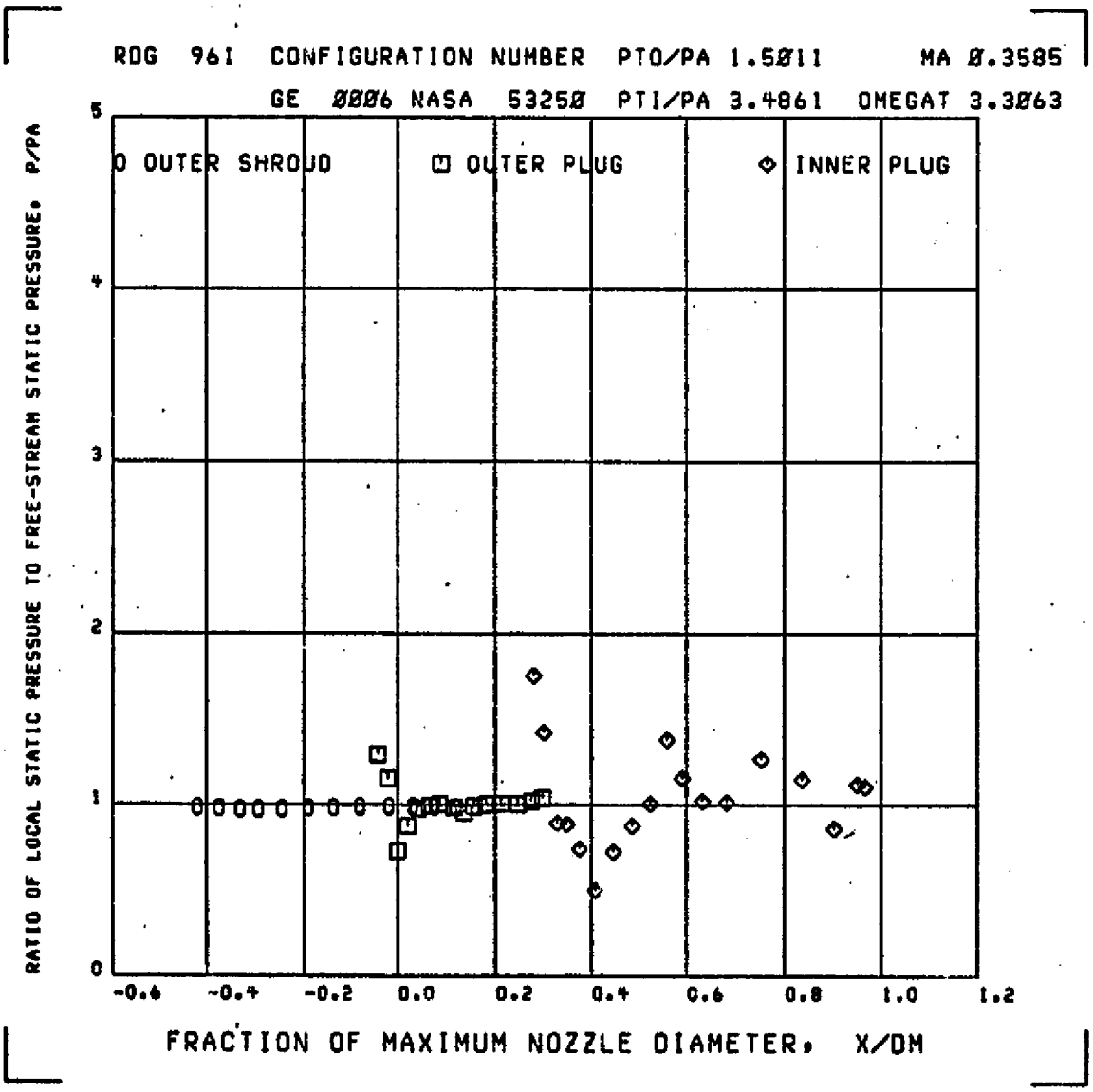
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 961 CONFIGURATION NUMBER PTO/PA 1.5011 MA 0.3585
GE 0006 NASA 53250 PTI/PA 3.4861 OMEGAT 3.3063
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
0
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-0.6
-0.4
-0.2
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1.0
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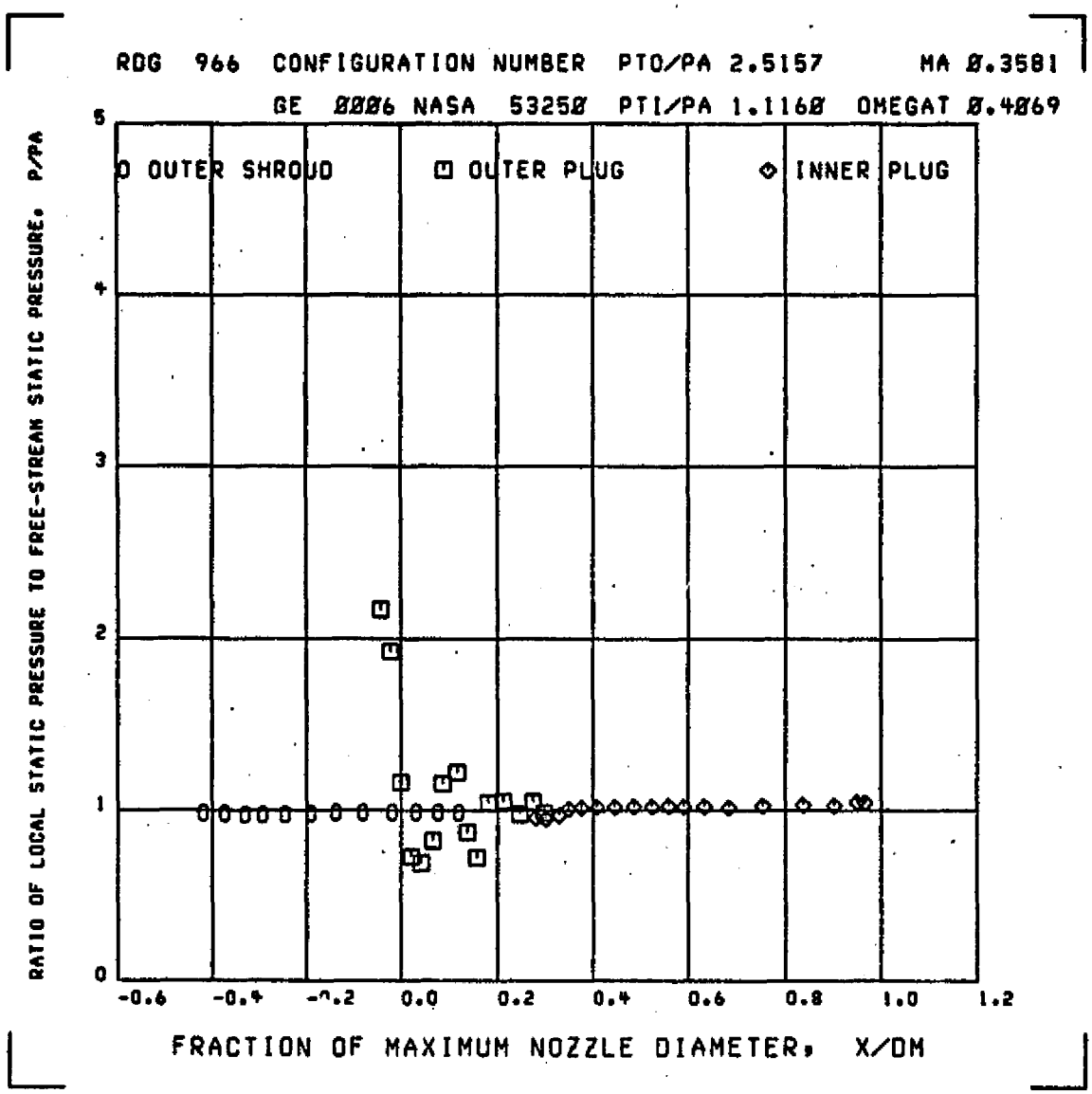
RDG 966 CONFIGURATION NUMBER PTO/PA 2.5157 MA 0.3581
GE 0006 NASA 53250 PTI/PA 1.1160 OMEGAT 0.4069
O OUTER SHROUD
□ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
0
1
2
3
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-0.6
-0.4
-0.2
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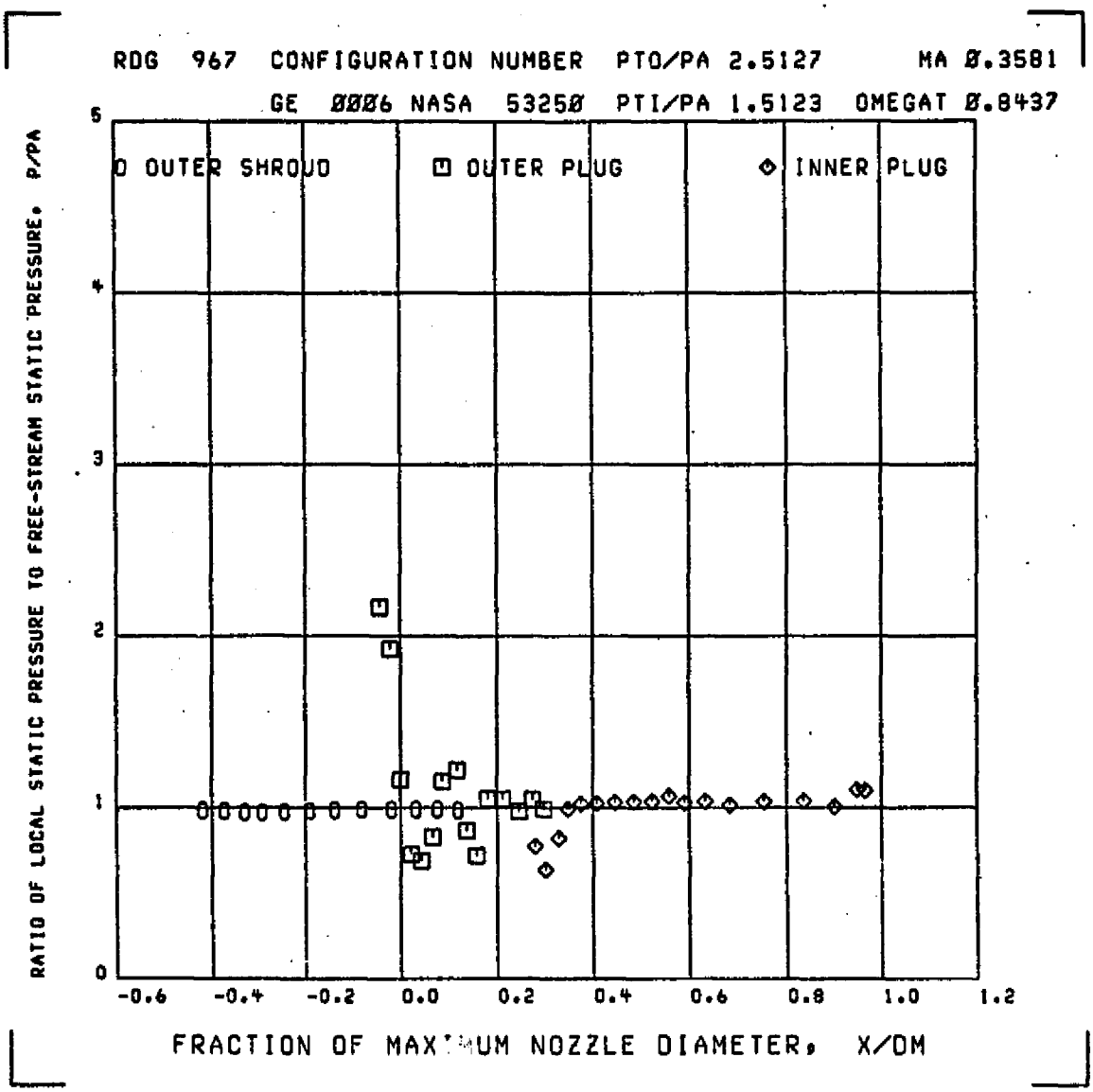
0.6
0.8
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 967 CONFIGURATION NUMBER PTO/PA 2.5127 MA Ø.3581
GE ØØØ6 NASA 5325Ø PTI/PA 1.5123 OMEGAT Ø.8437
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⊡ OUTER PLUG
◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.6
-0.4
-0.2
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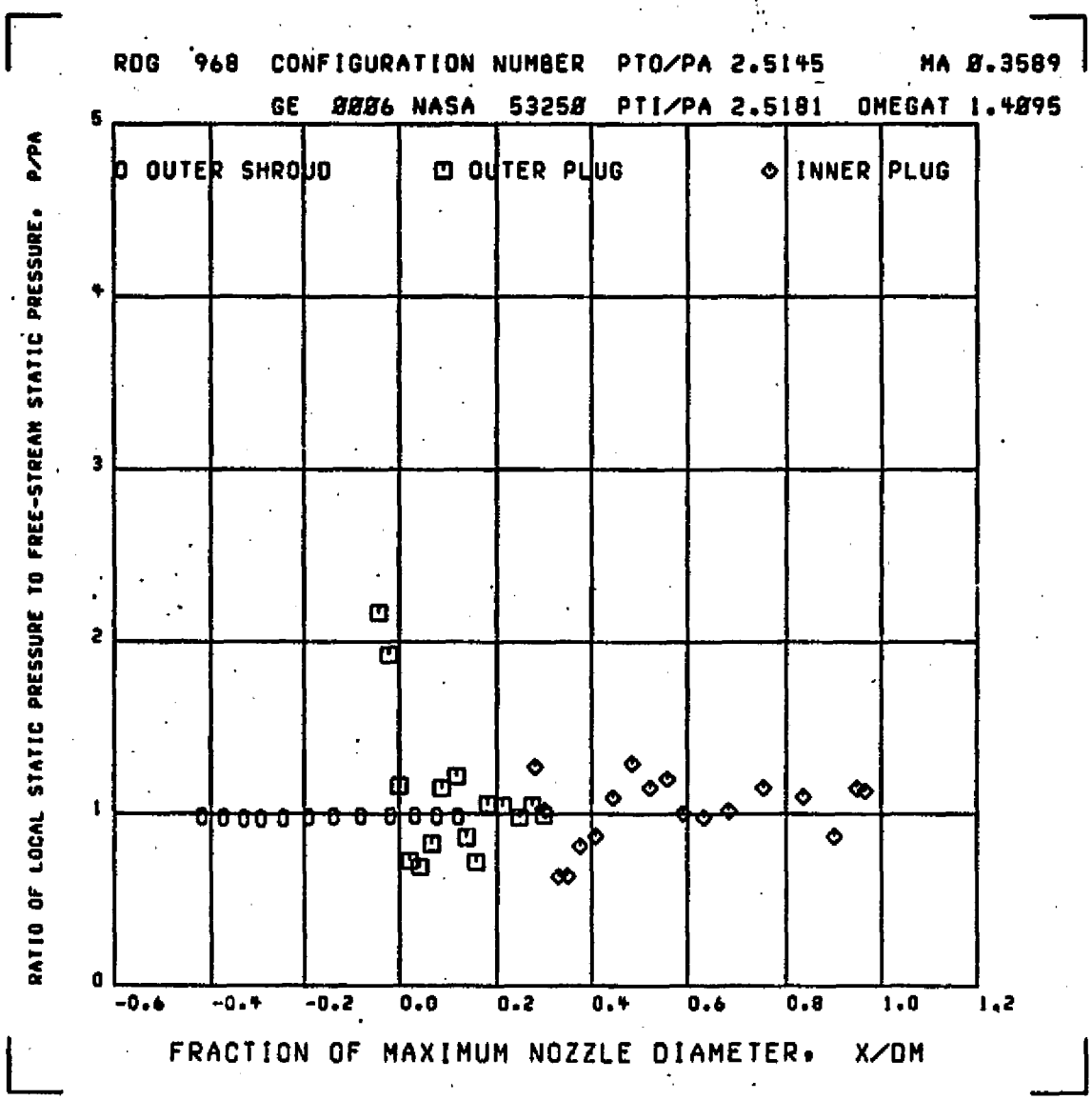
1.0
1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0006 NASA 53258 PTI/PA 2.5181 OMEGAT 1.4095
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OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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-0.2
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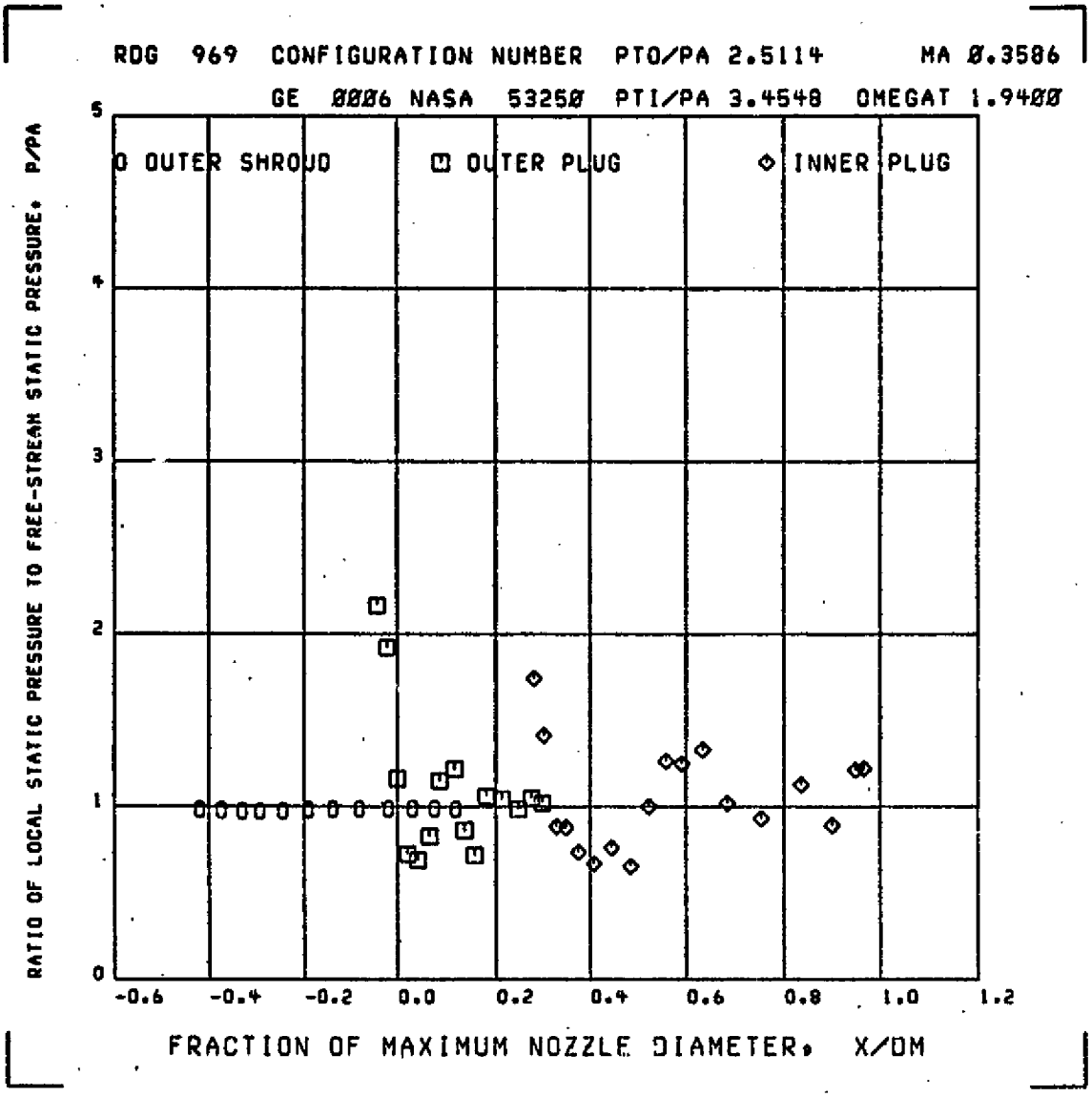
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ6 NASA 5325Ø PTI/PA 3.4548 OMEGAT 1.94ØØ
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◇ INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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1.0
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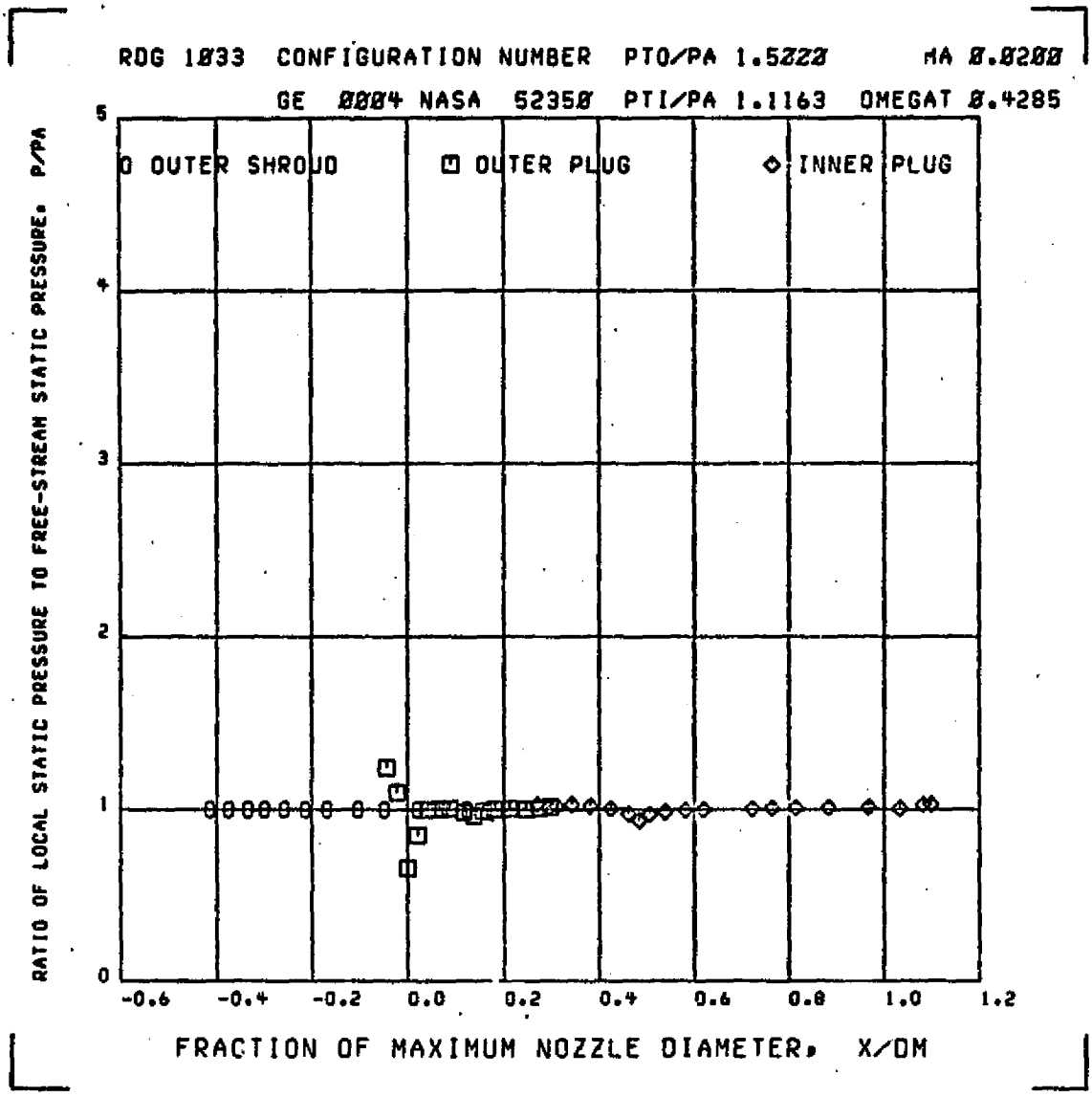
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1033 CONFIGURATION NUMBER PTO/PA 1.5222 MA 0.0200
GE 0004 NASA 52350 PTI/PA 1.1163 OMEGAT 0.4285
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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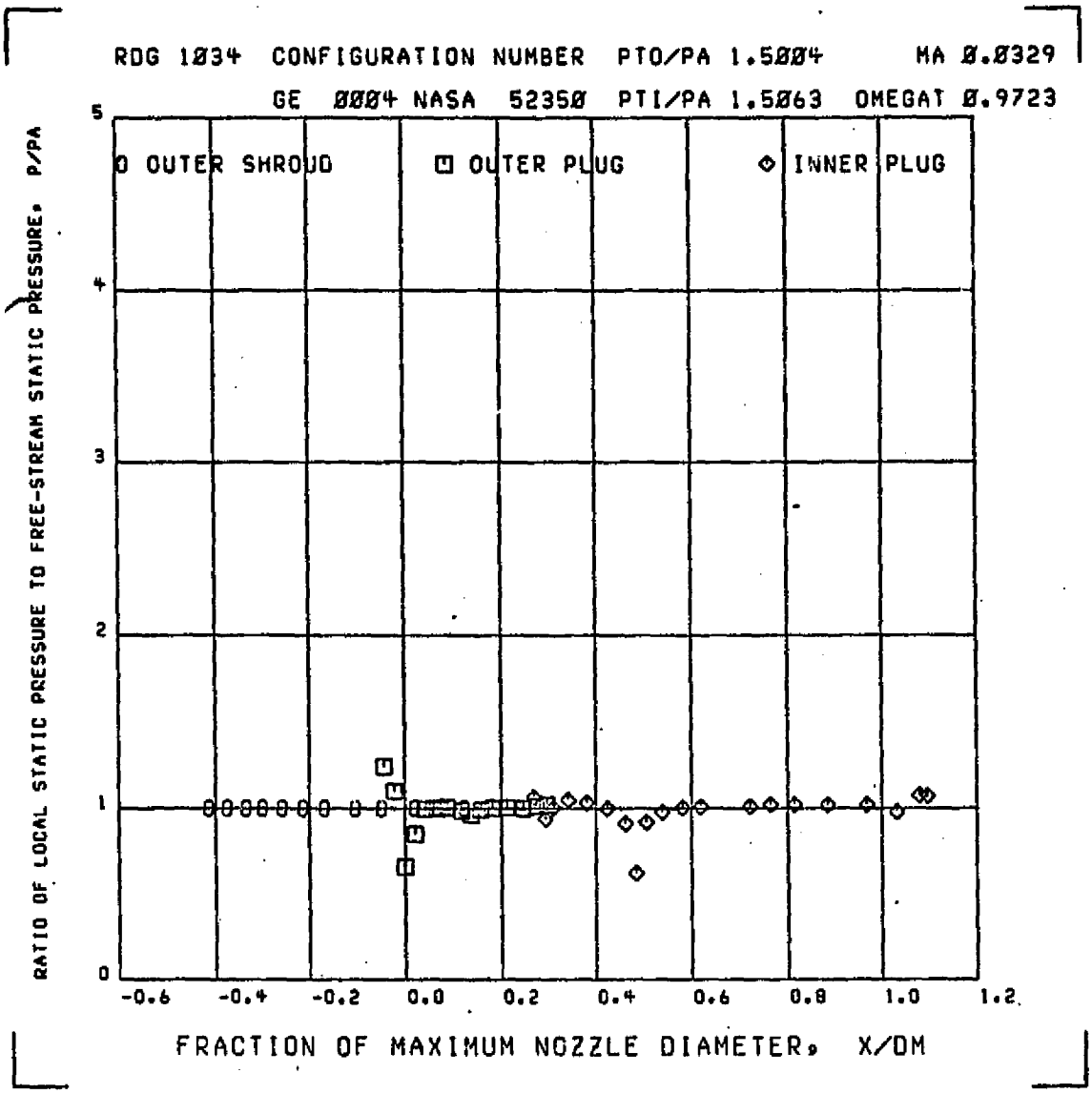
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1034 CONFIGURATION NUMBER PTO/PA 1.5004 MA 0.0329
GE 0004 NASA 52350 PTI/PA 1.5063 OMEGAT 0.9723
OUTER SHROUD
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INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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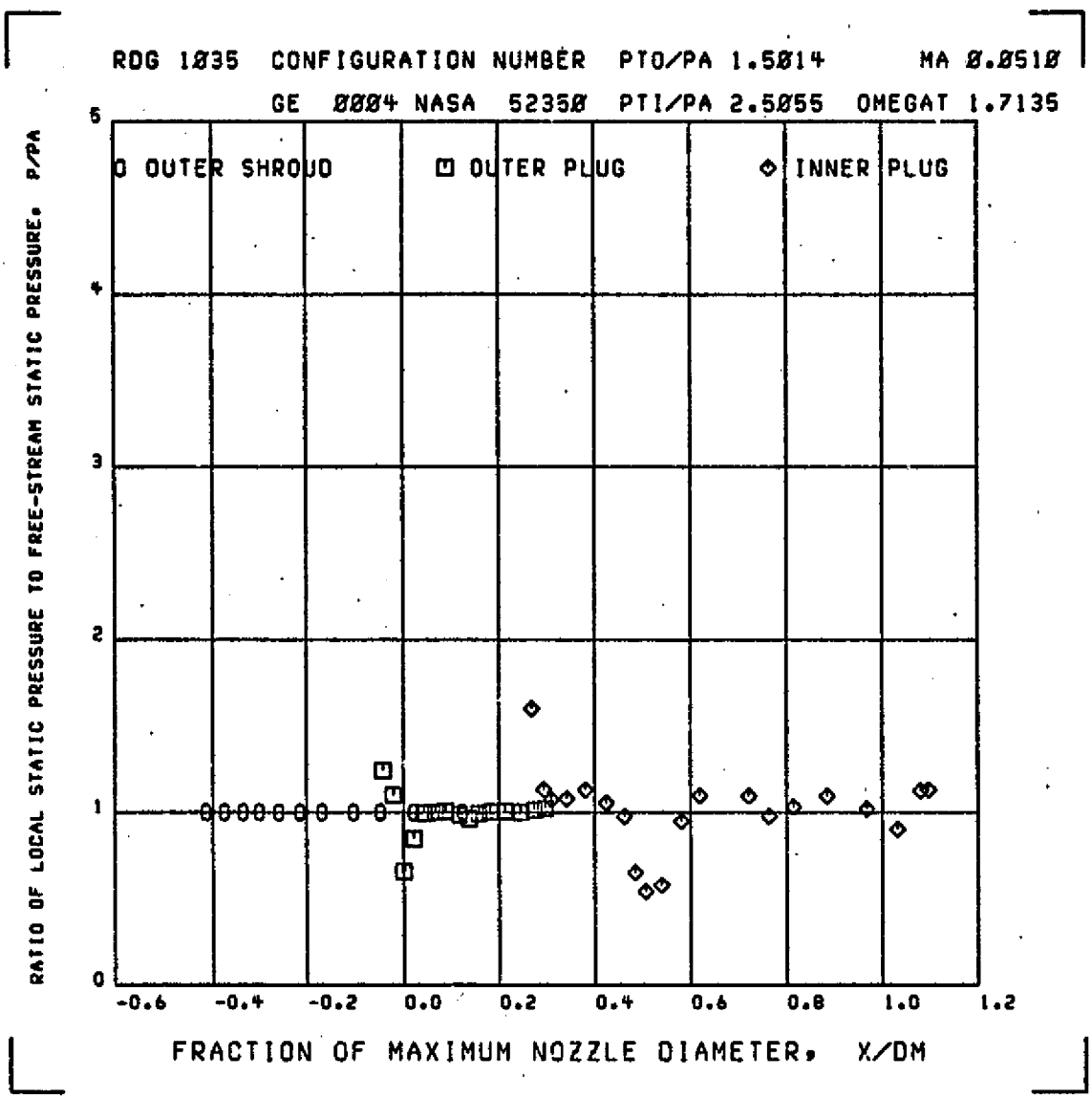
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0004 NASA 52350 PTI/PA 2.5055 OMEGAT 1.7135
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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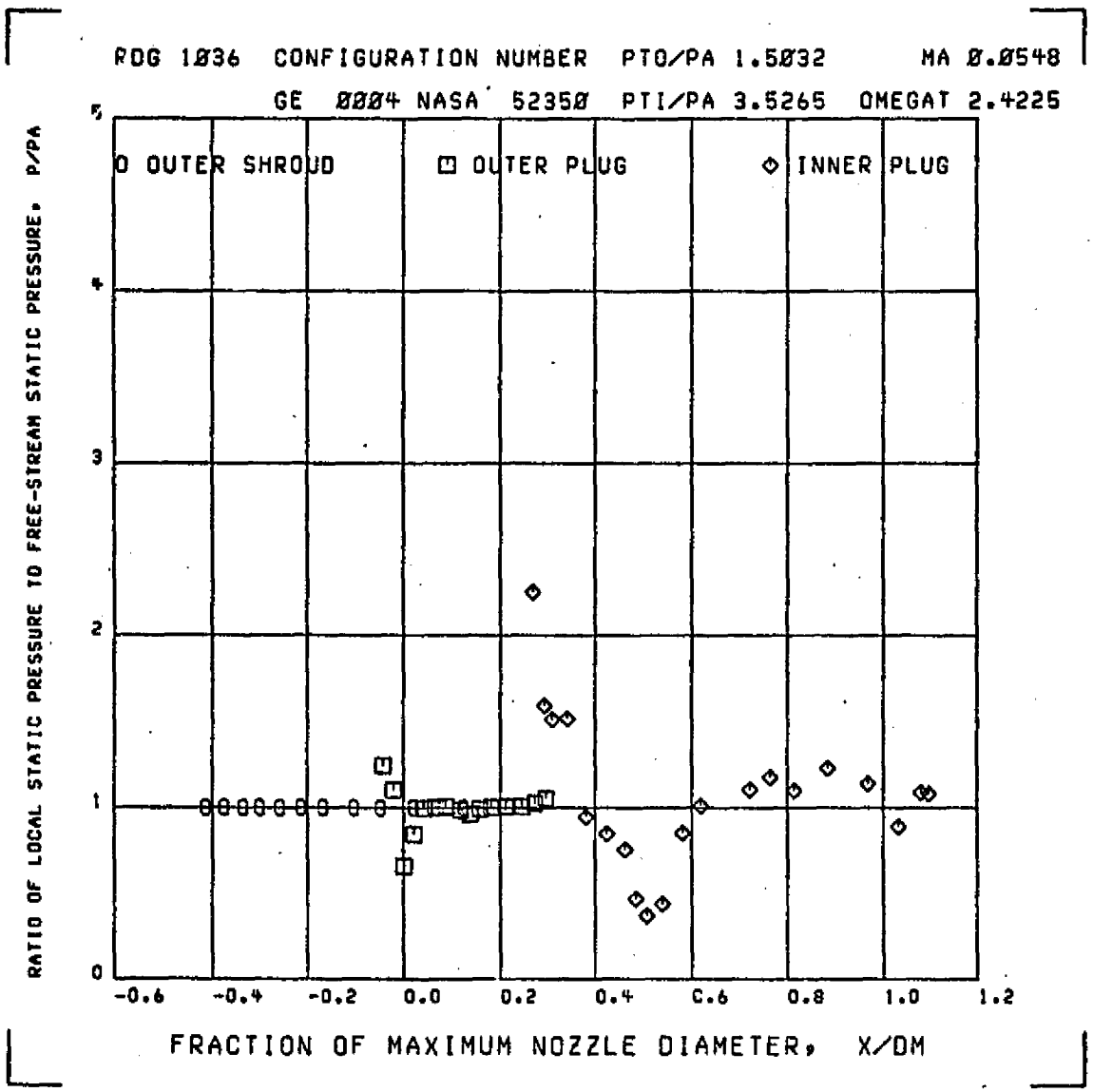
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1Ø36 CONFIGURATION NUMBER PTO/PA 1.5Ø32 MA Ø.Ø548
GE ØØØ4 NASA 52350 PTI/PA 3.5265 OMEGAT 2.4225
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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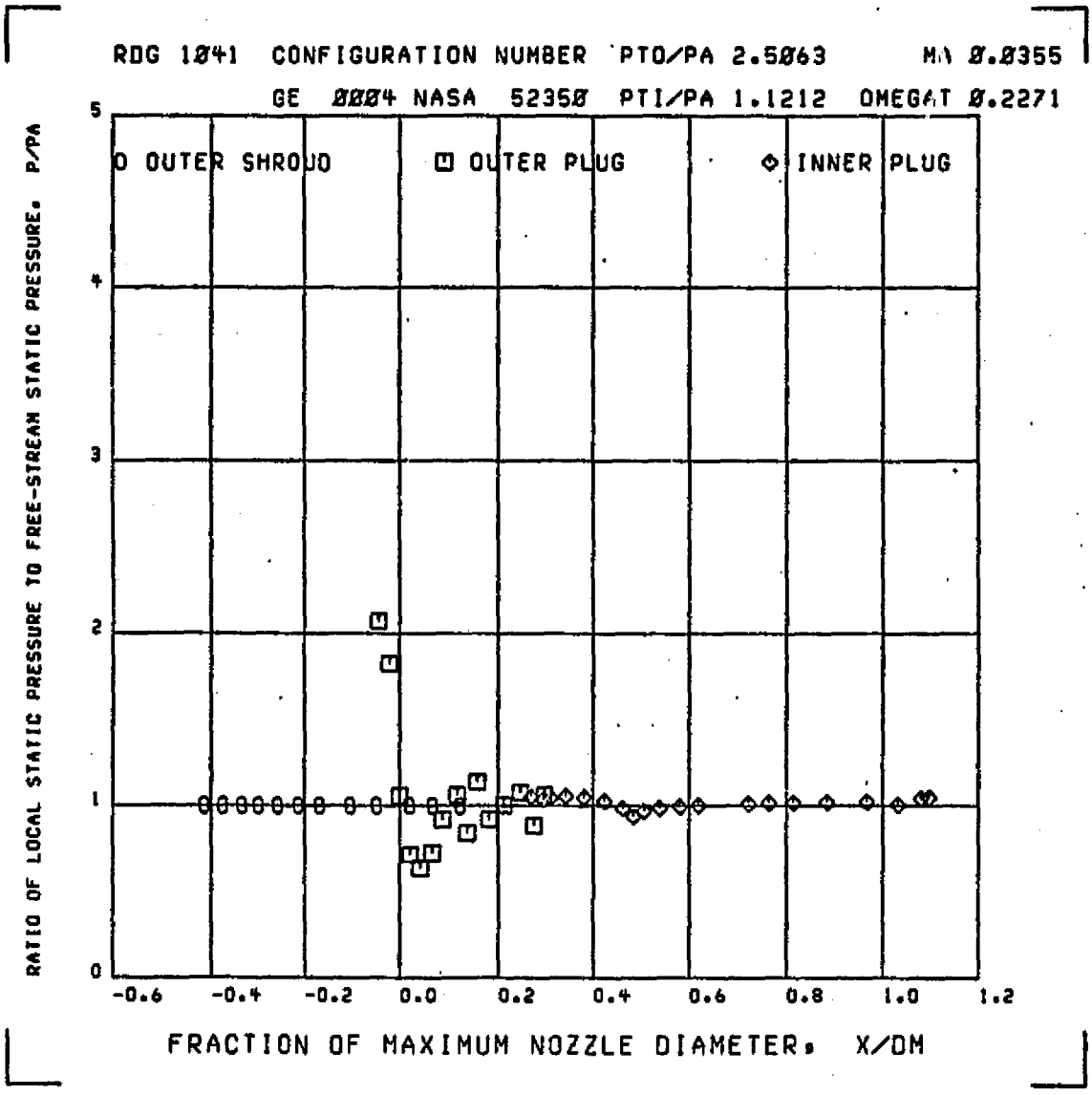
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1Ø41 CONFIGURATION NUMBER PTO/PA 2.5Ø63 MA Ø.Ø355
GE ØØØ4 NASA 52358 PTI/PA 1.1212 OMEGAT Ø.2271
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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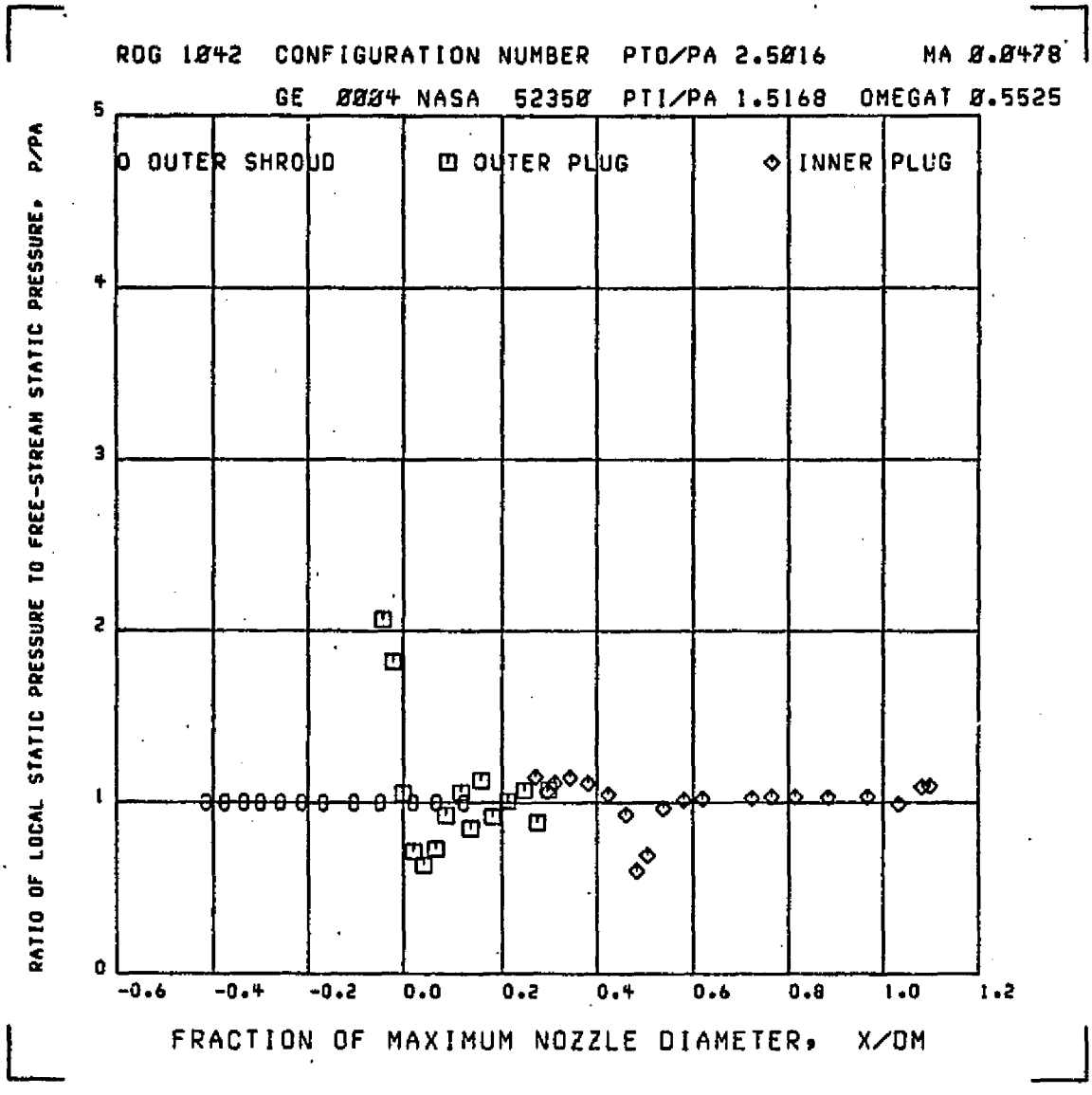
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1Ø42 CONFIGURATION NUMBER PTO/PA 2.5Ø16 MA Ø.Ø478
GE ØØØ4 NASA 52350 PTI/PA 1.5168 OMEGAT Ø.5525
OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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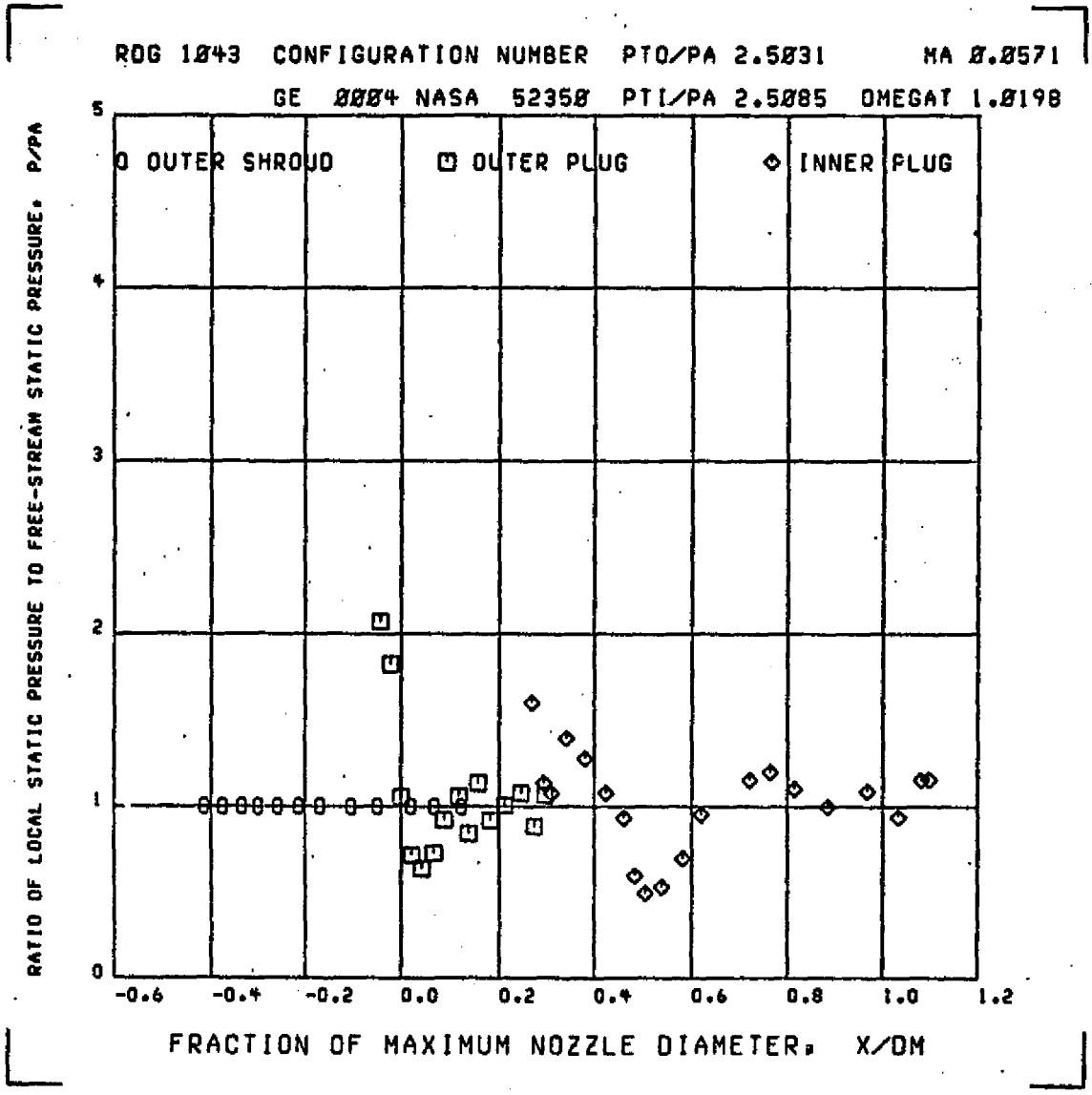
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1Ø43 CONFIGURATION NUMBER PTO/PA 2.5Ø31 MA Ø.Ø571
GE ØØØ4 NASA 5235Ø PTI/PA 2.5Ø85 OMEGAT 1.Ø198
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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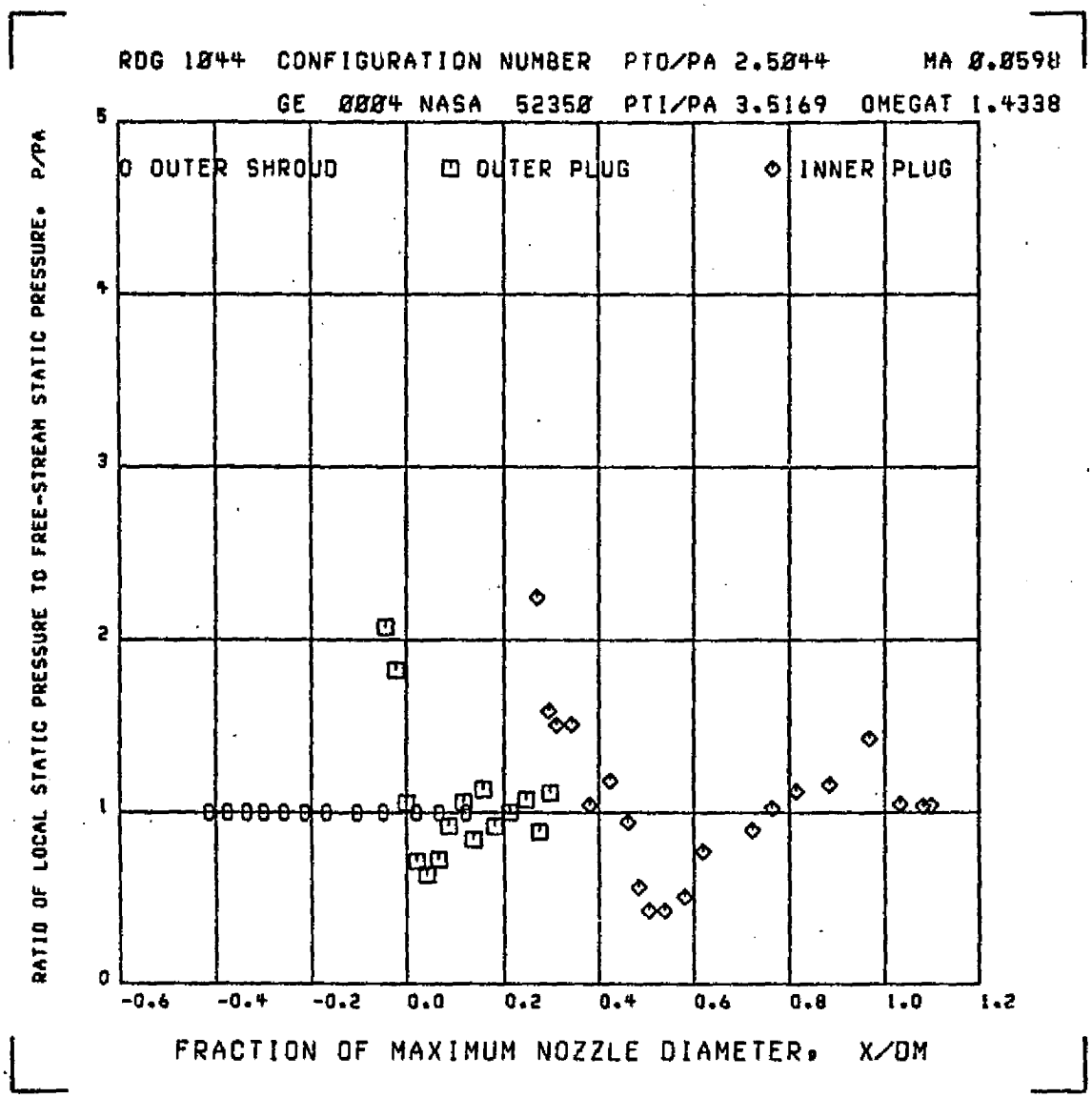
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0004 NASA 52350 PTI/PA 3.5169 OMEGAT 1.4338
O OUTER SHROUD
□ OUTER PLUG
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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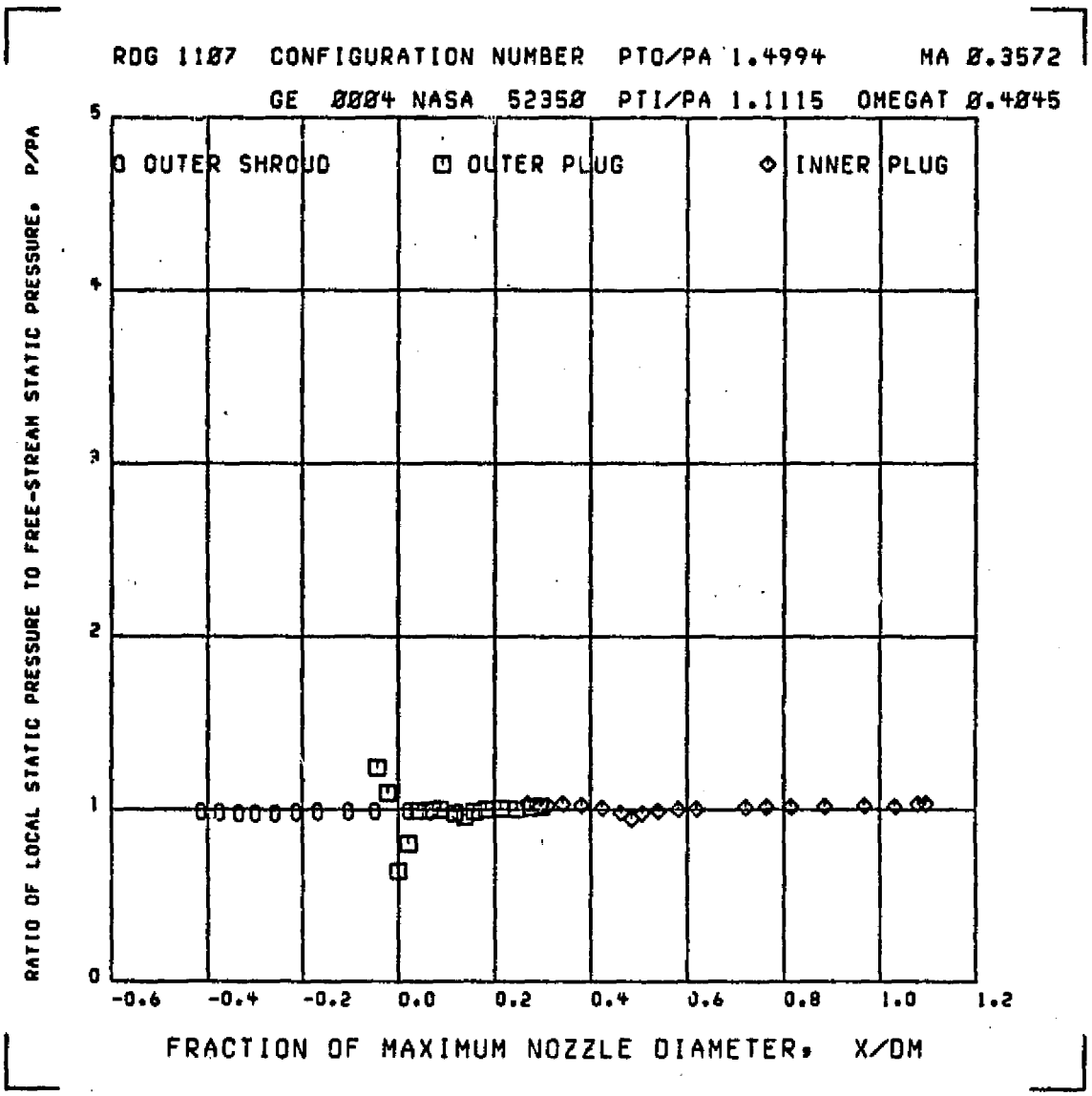
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1107 CONFIGURATION NUMBER PTO/PA 1.4994 MA 0.3572
GE 0004 NASA 52350 PTI/PA 1.1115 OMEGAT 0.4045
OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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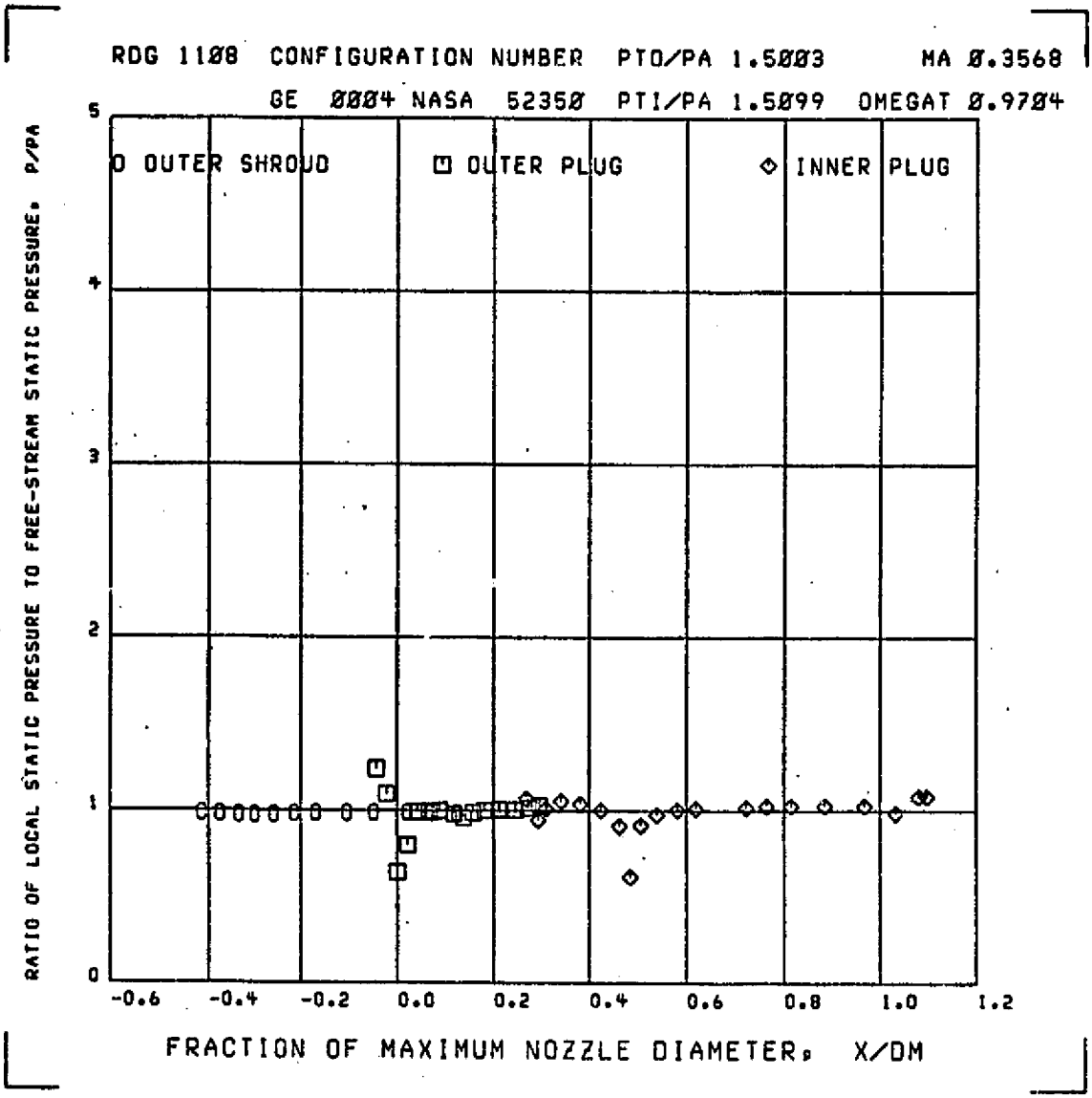
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1108 CONFIGURATION NUMBER PTO/PA 1.5003 MA 0.3568
GE 0004 NASA 52350 PTI/PA 1.5099 OMEGAT 0.9704
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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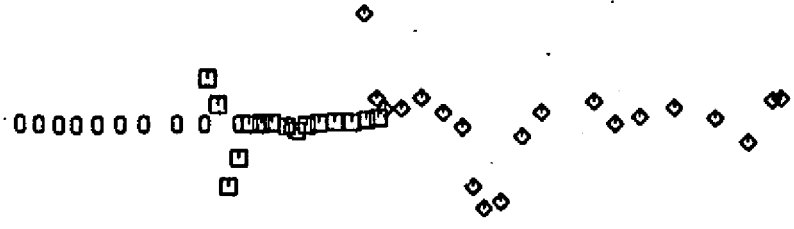
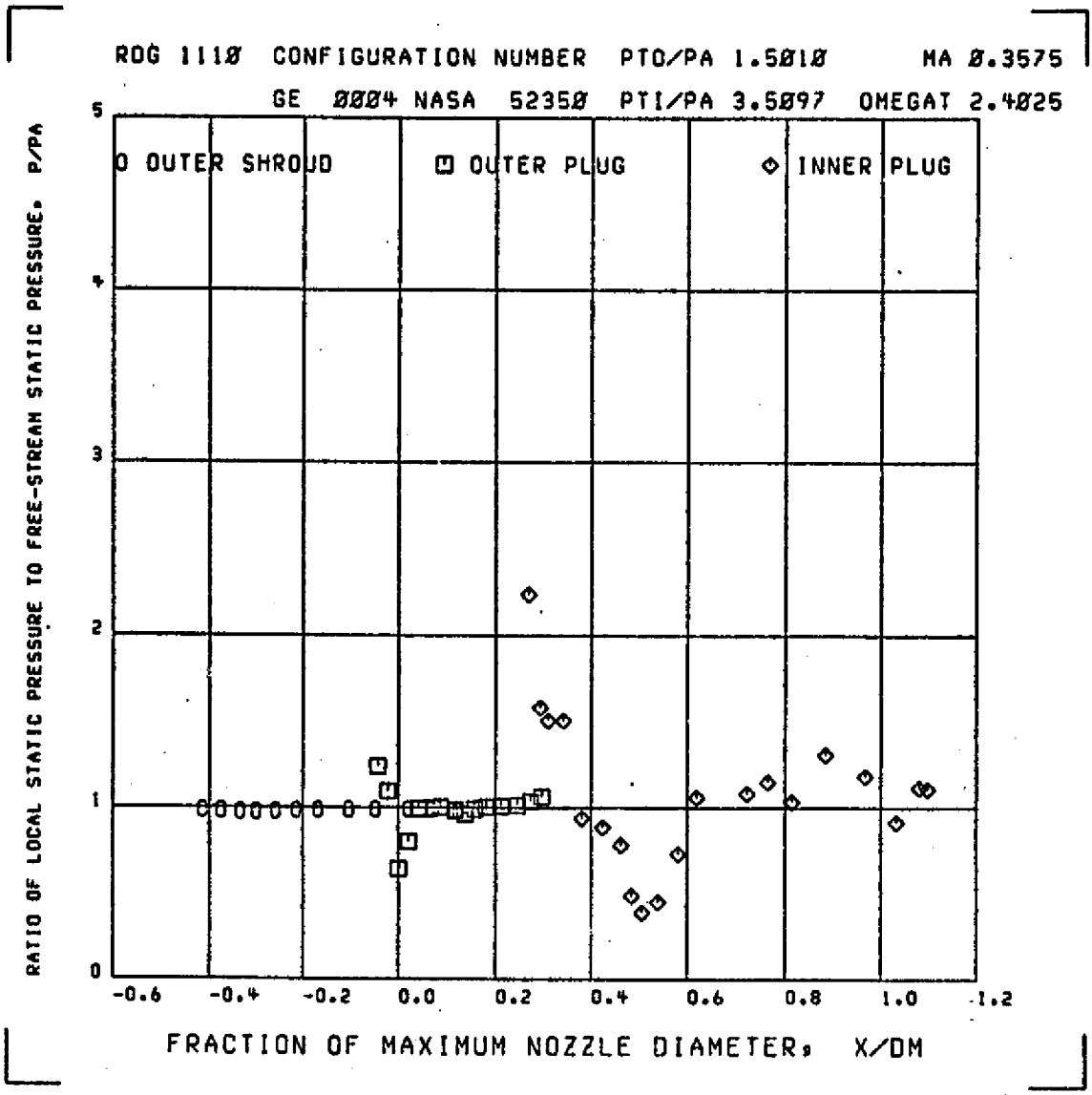
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM

EDG 1109

.5220 OMEGAT 1.7241

O OUTER SHROUD □ OUTER PLUG ◇ INNER PLUG




ROG 1110 CONFIGURATION NUMBER PTO/PA 1.5010 MA 0.3575
GE 0004 NASA 52350 PTI/PA 3.5097 OMEGAT 2.4025
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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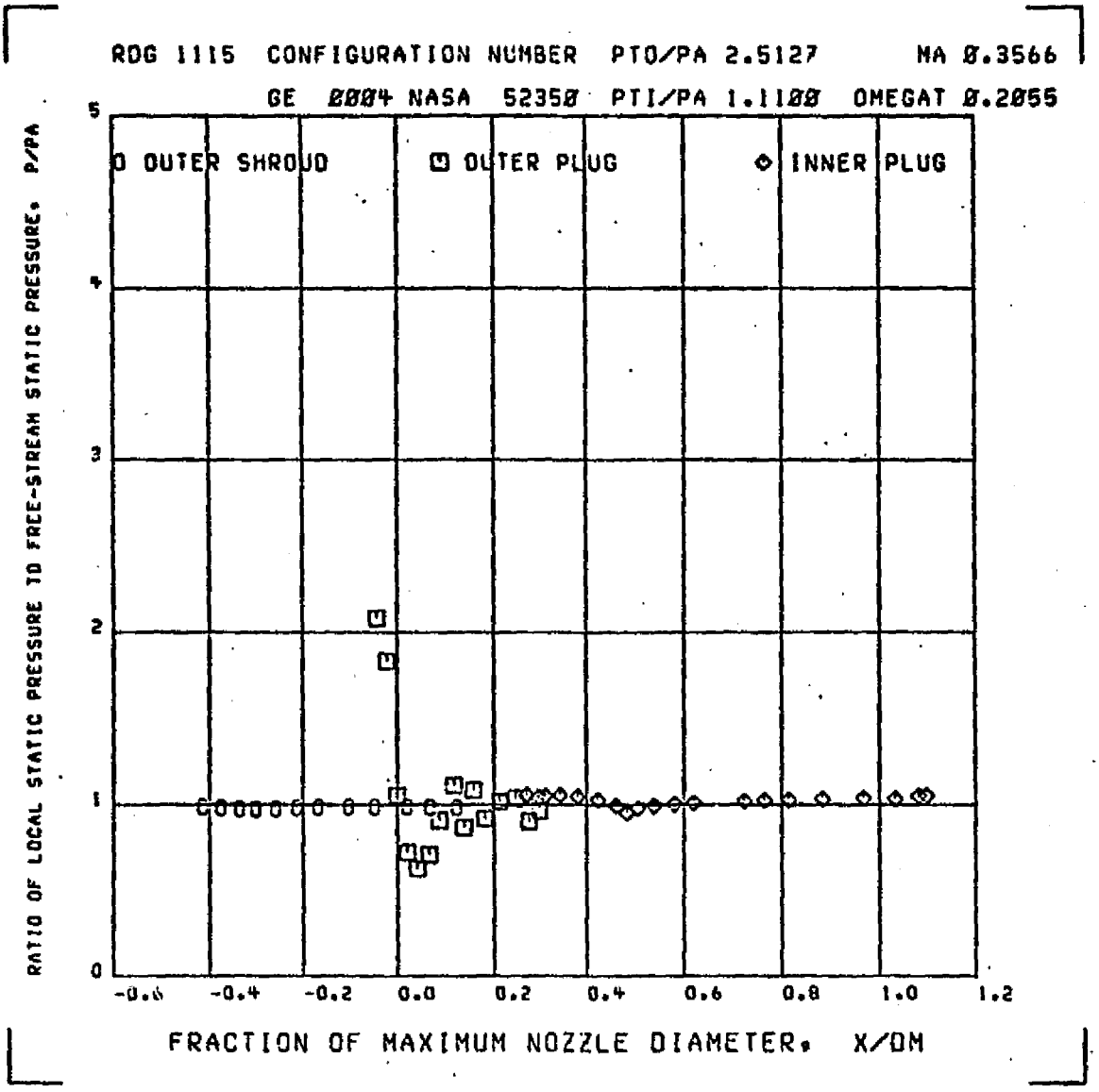
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0004 NASA 52350 PTI/PA 1.1100 OMEGAT 0.2055
OUTER SHROUD
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INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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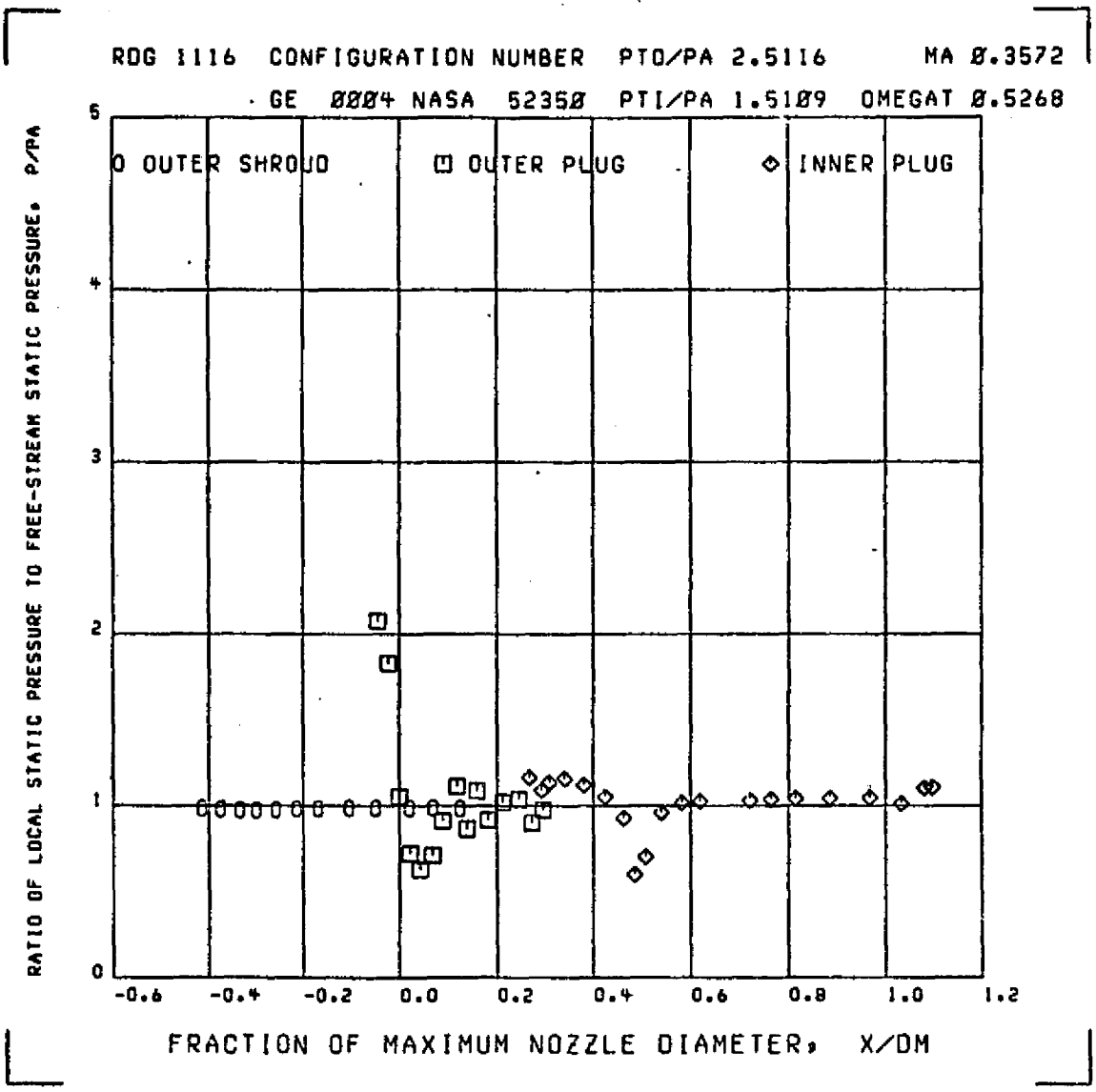
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1116 CONFIGURATION NUMBER PTO/PA 2.5116 MA 0.3572
GE 0004 NASA 52350 PTI/PA 1.5109 OMEGAT 0.5268
O OUTER SHROUD
□ OUTER PLUG
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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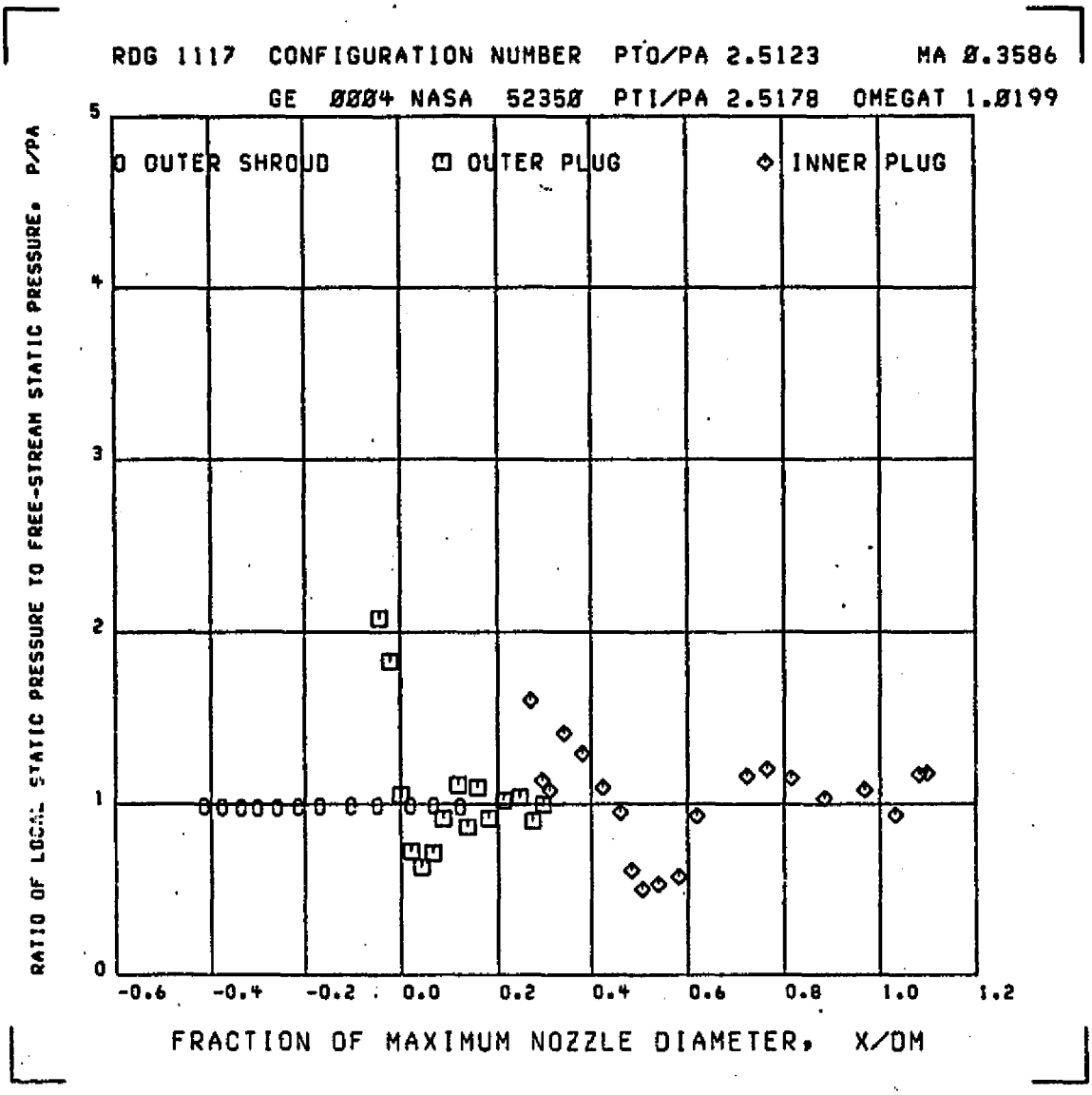
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE ØØØ4 NASA 52358 PTI/PA 2.5178 OMEGAT 1.Ø199
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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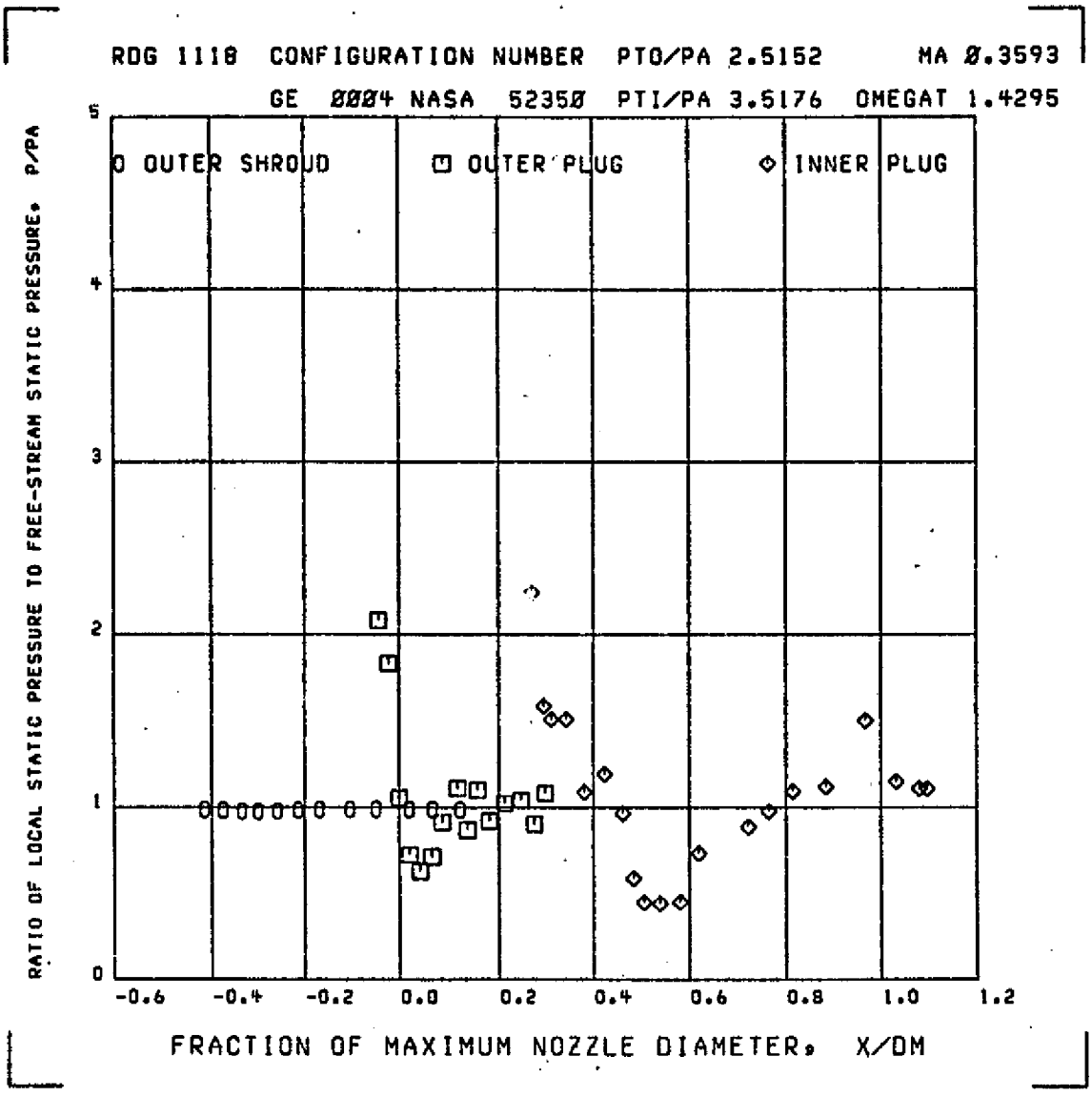
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0004 NASA 52350 PTI/PA 3.5176 OMEGAT 1.4295
O OUTER SHROUD
□ OUTER PLUG
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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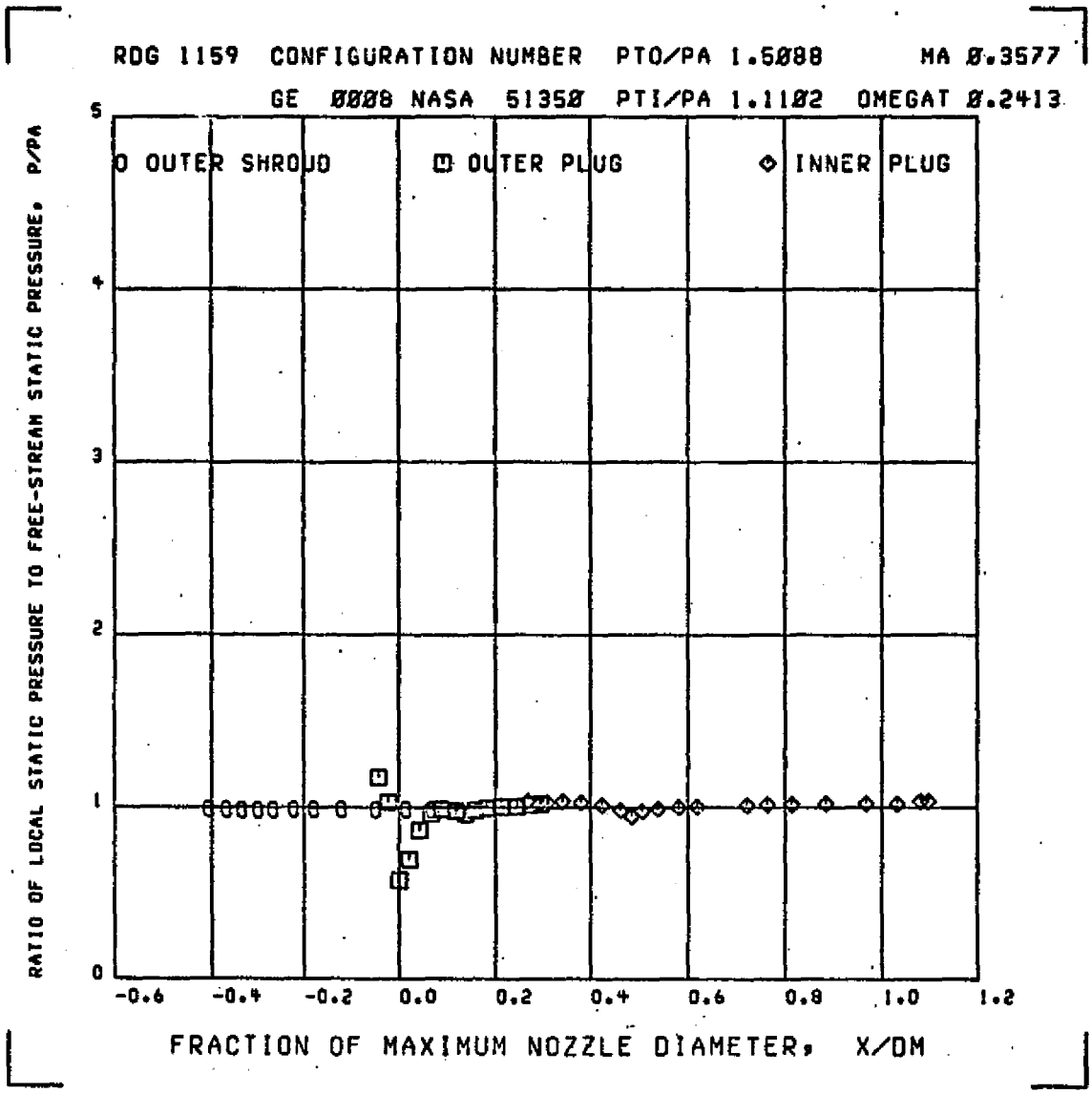
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1159 CONFIGURATION NUMBER PTO/PA 1.5088 MA 0.3577
GE 0008 NASA 51350 PTI/PA 1.1102 OMEGAT 0.2413
O OUTER SHROUD
OUTER PLUG
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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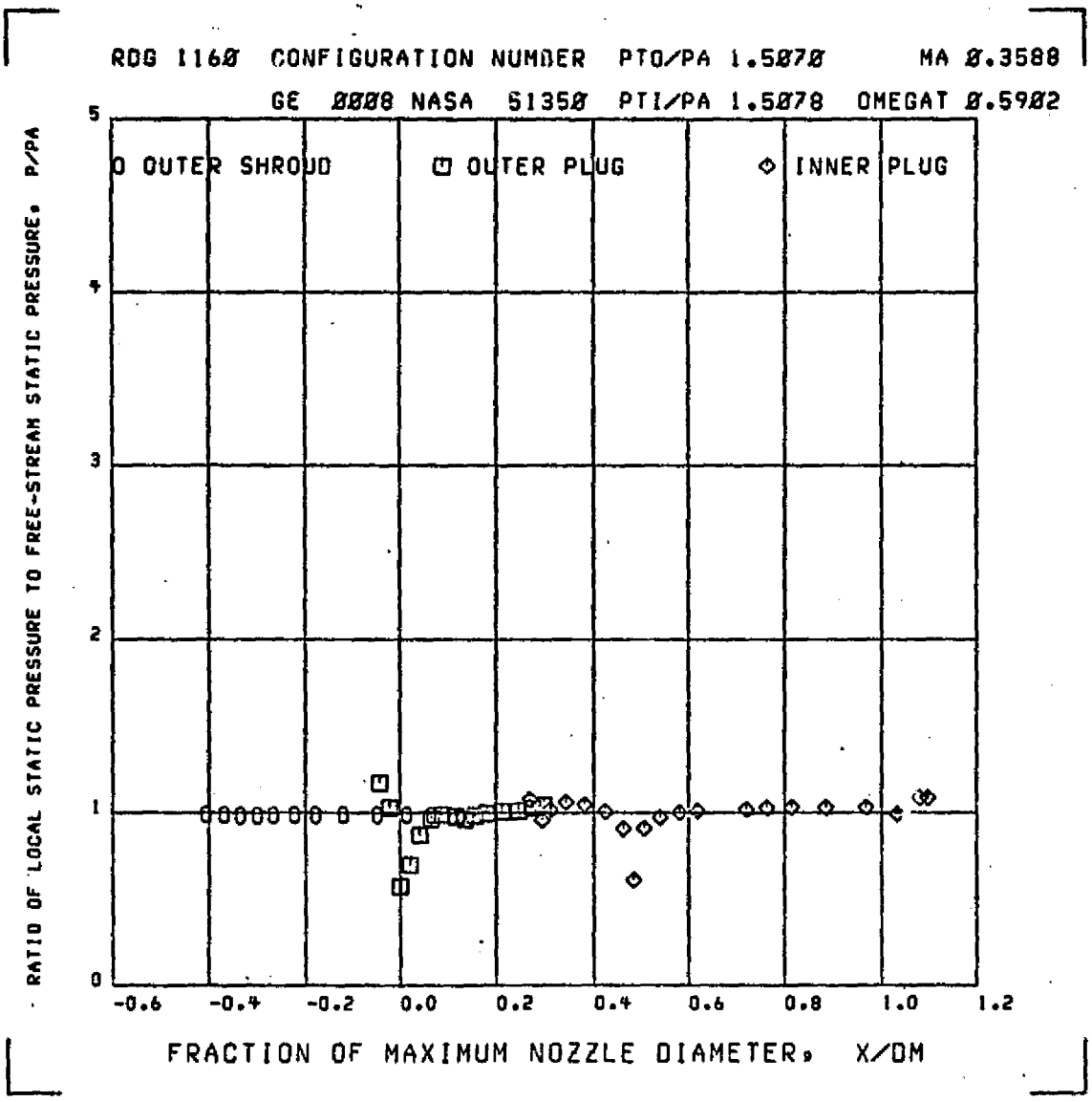
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1160 CONFIGURATION NUMBER PTO/PA 1.5070 MA 0.3588
GE 0008 NASA 51350 PTI/PA 1.5078 OMEGAT 0.5902
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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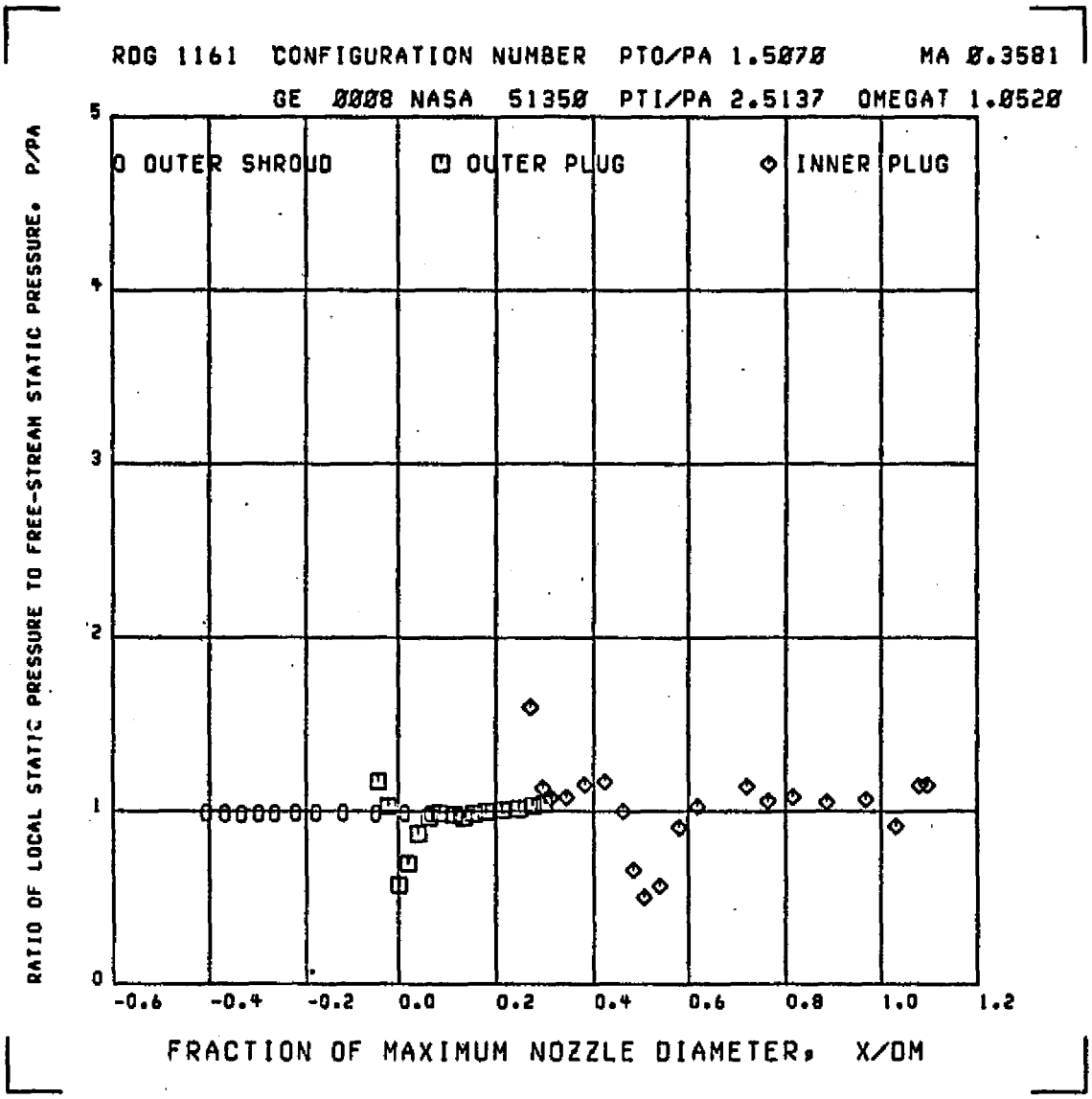
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1161 CONFIGURATION NUMBER PTO/PA 1.5070 MA 0.3581
GE 0008 NASA 51350 PTI/PA 2.5137 OMEGAT 1.0520
OUTER SHROUD
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INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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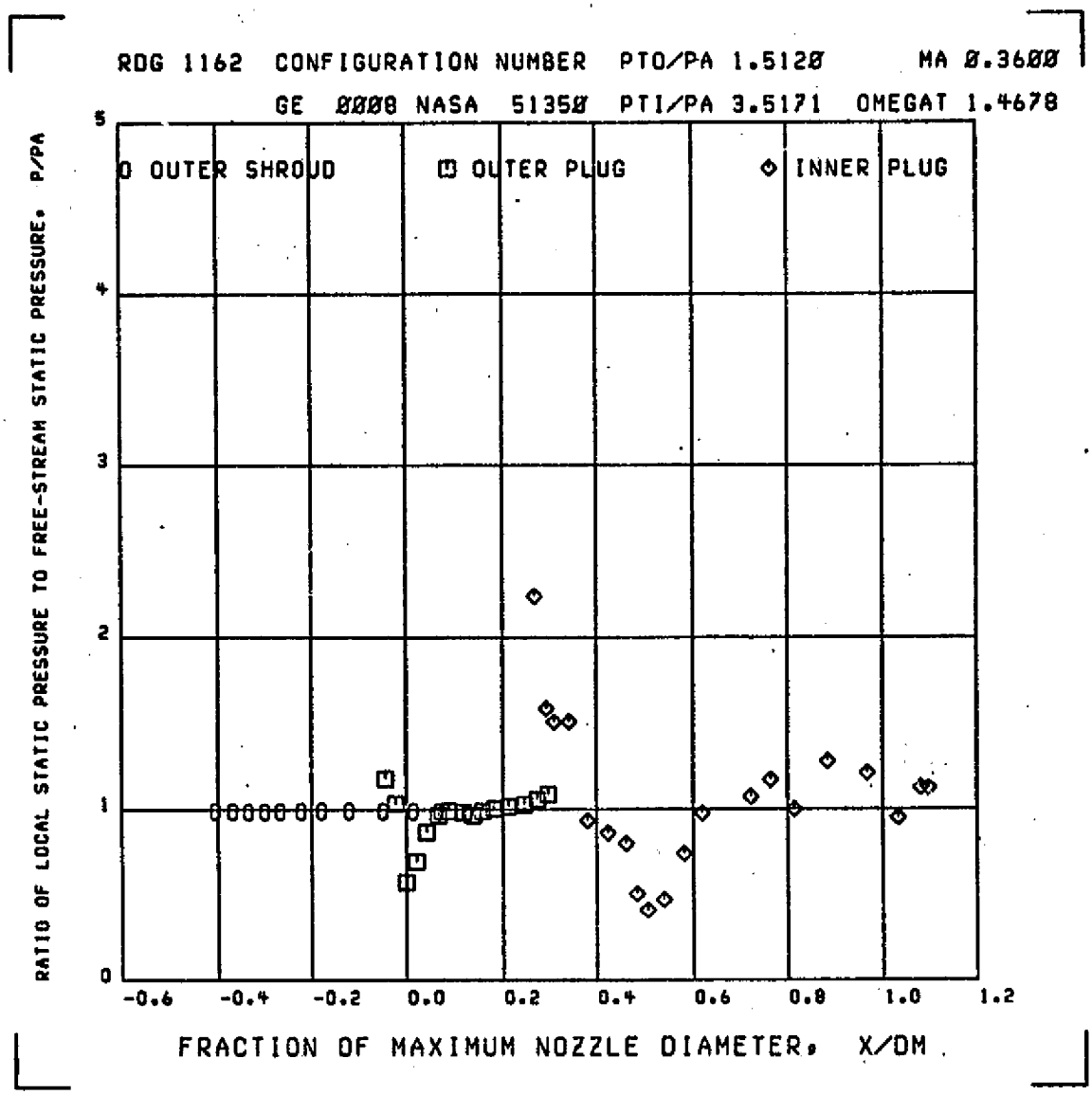
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


RDG 1162 CONFIGURATION NUMBER PTO/PA 1.5120 MA 0.3600
GE 0008 NASA 51350 PTI/PA 3.5171 OMEGAT 1.4678
OUTER SHROUD
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INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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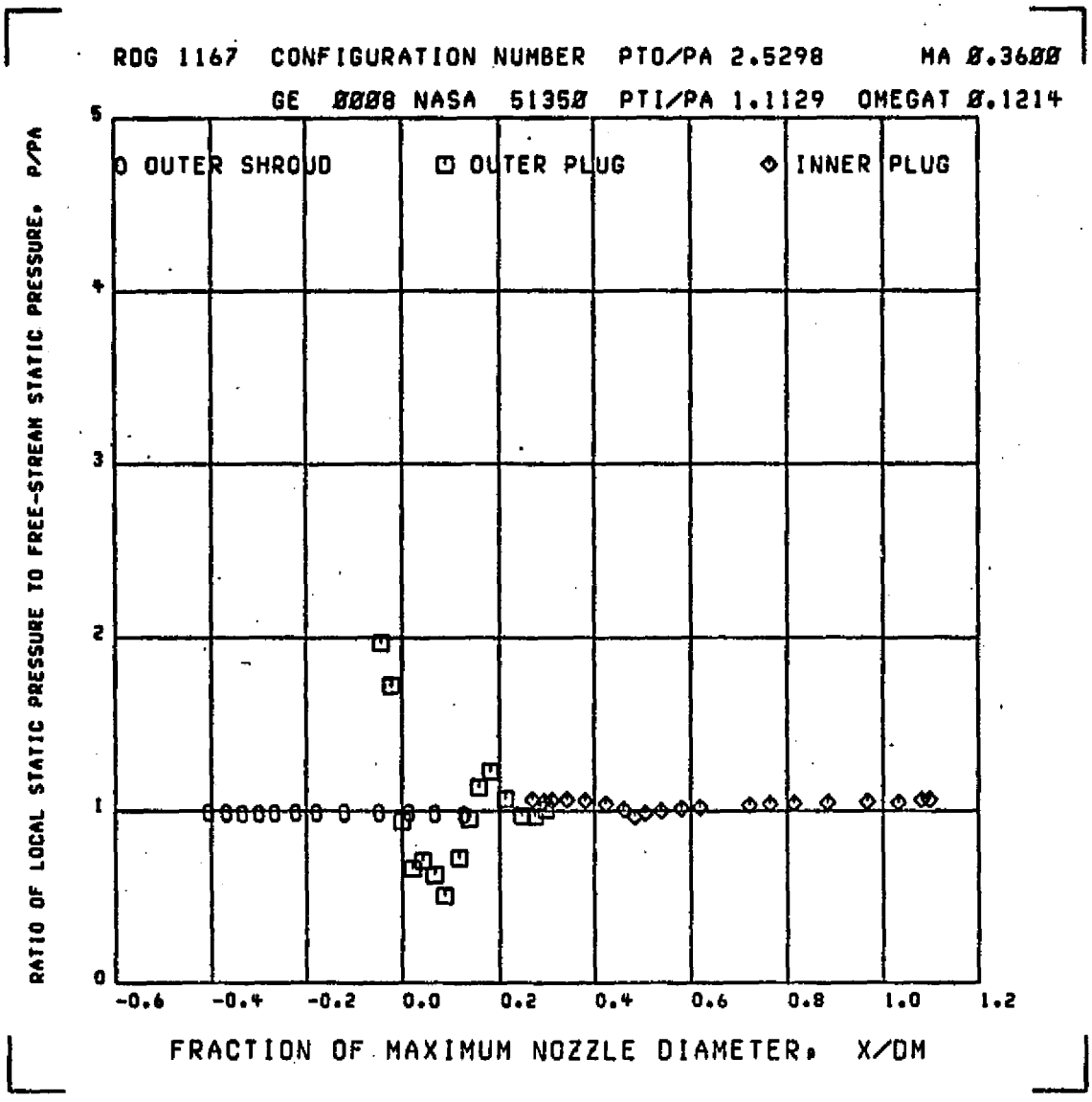
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1167 CONFIGURATION NUMBER PTO/PA 2.5298 MA Ø.36ØØ
GE ØØØØ NASA 51350 PTI/PA 1.1129 OMEGAT Ø.1214
O OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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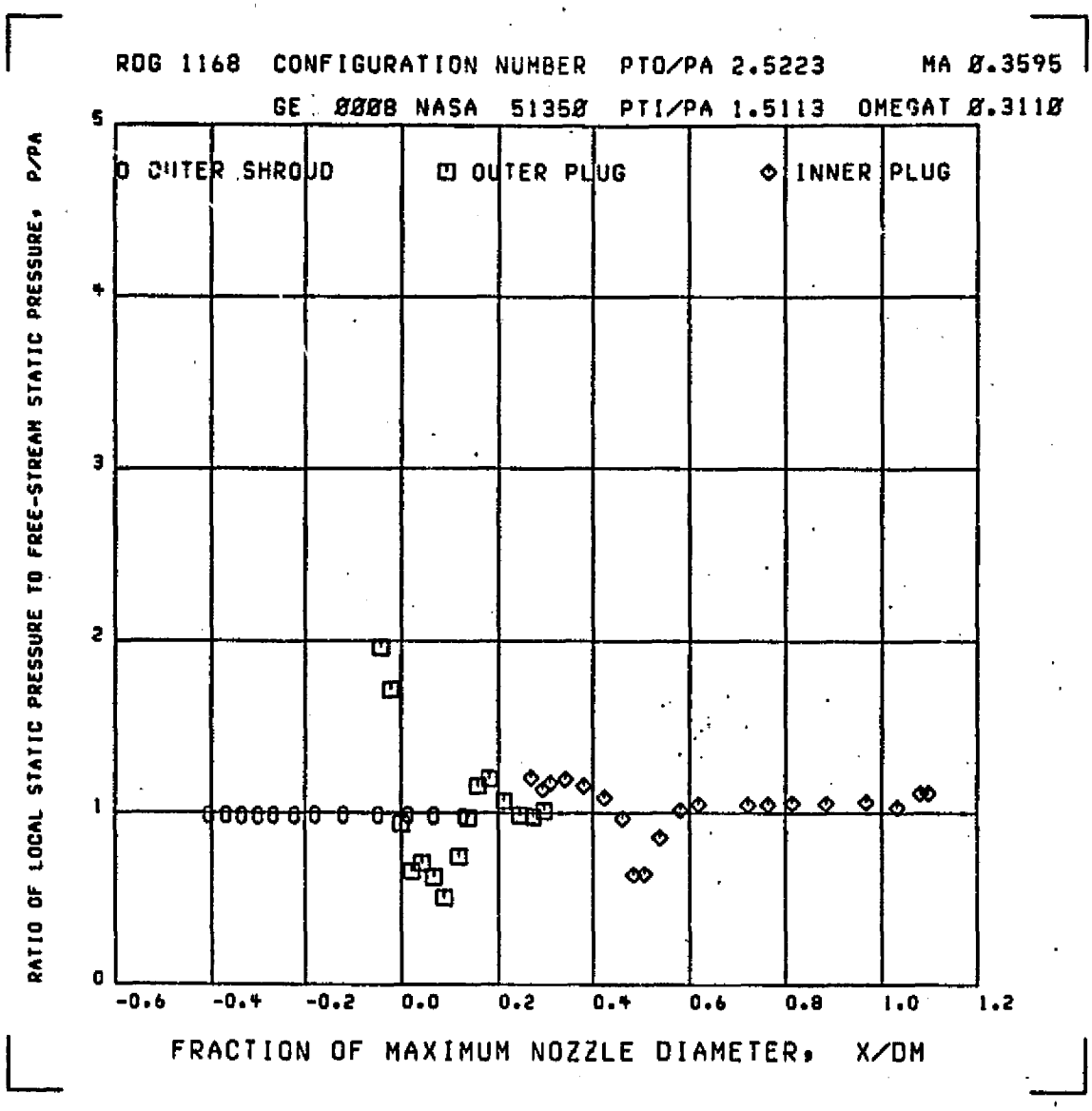
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM


ROG 1168 CONFIGURATION NUMBER PTO/PA 2.5223 MA Ø.3595
GE ØØØ8 NASA 5135Ø PTI/PA 1.5113 OMEGAT Ø.311Ø
OUTER SHROUD
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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
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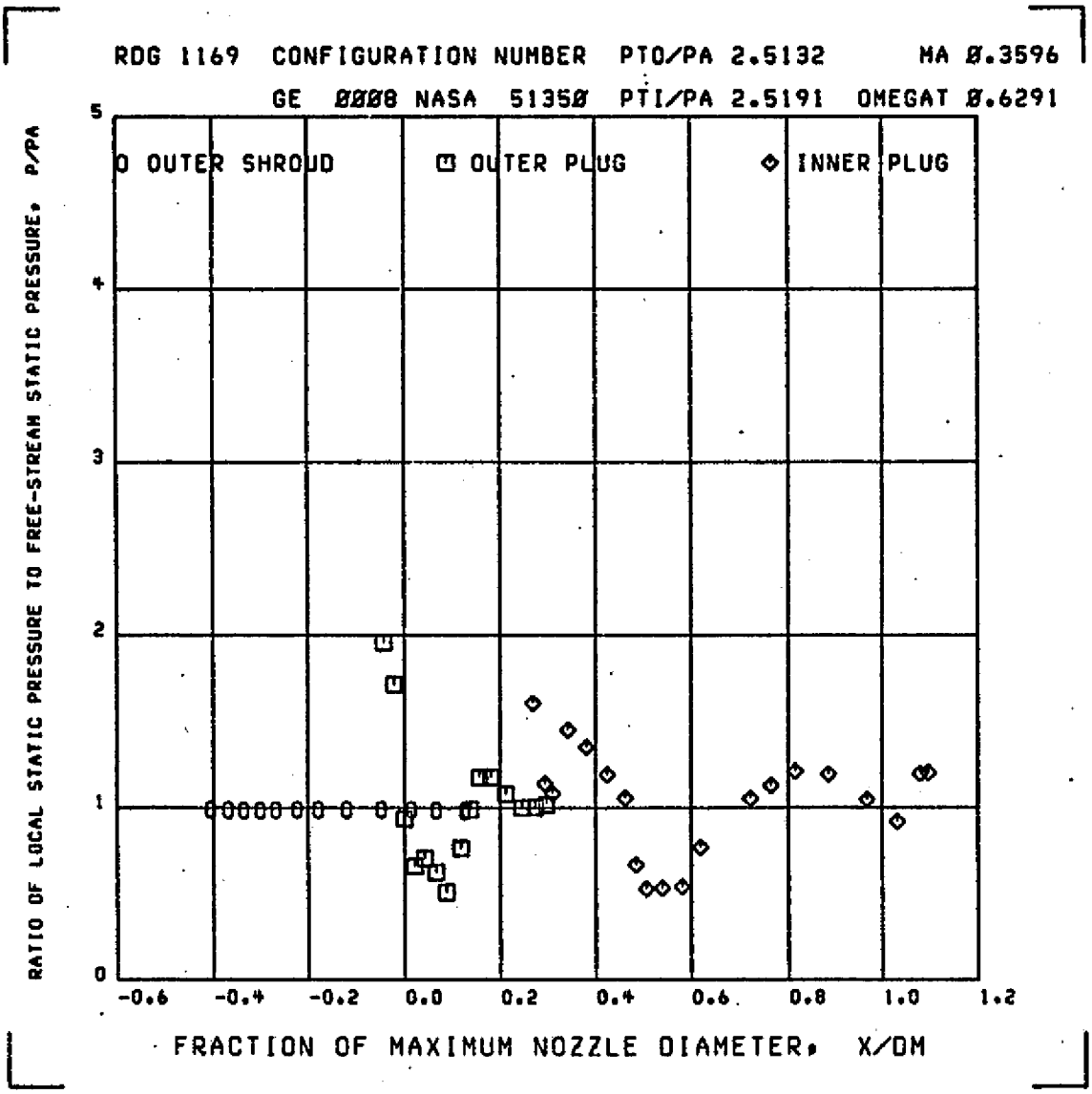
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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GE 0000 NASA 51350 PTI/PA 2.5191 OMEGAT 0.6291
O OUTER SHROUD
OUTER PLUG
INNER PLUG
RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
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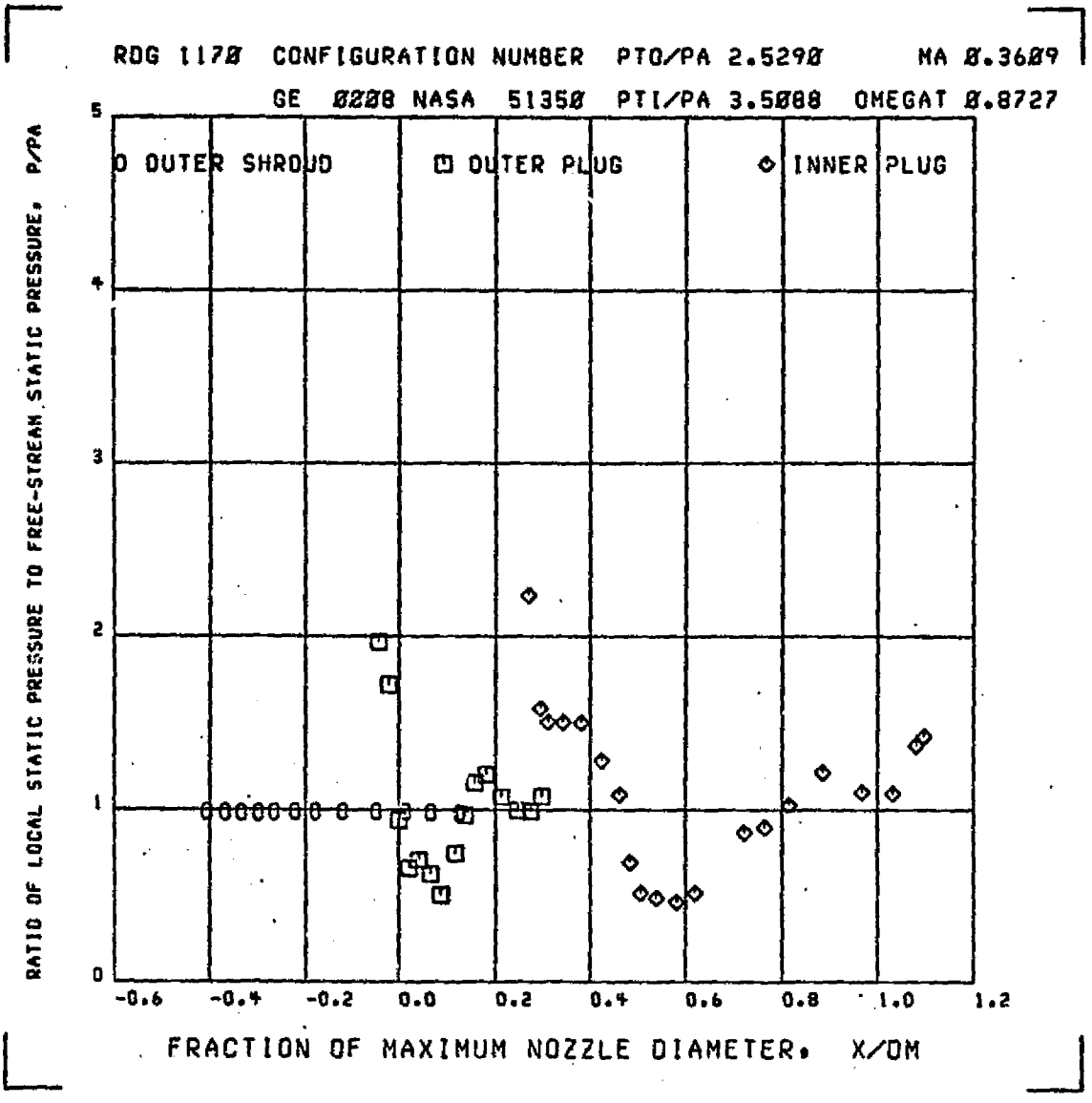
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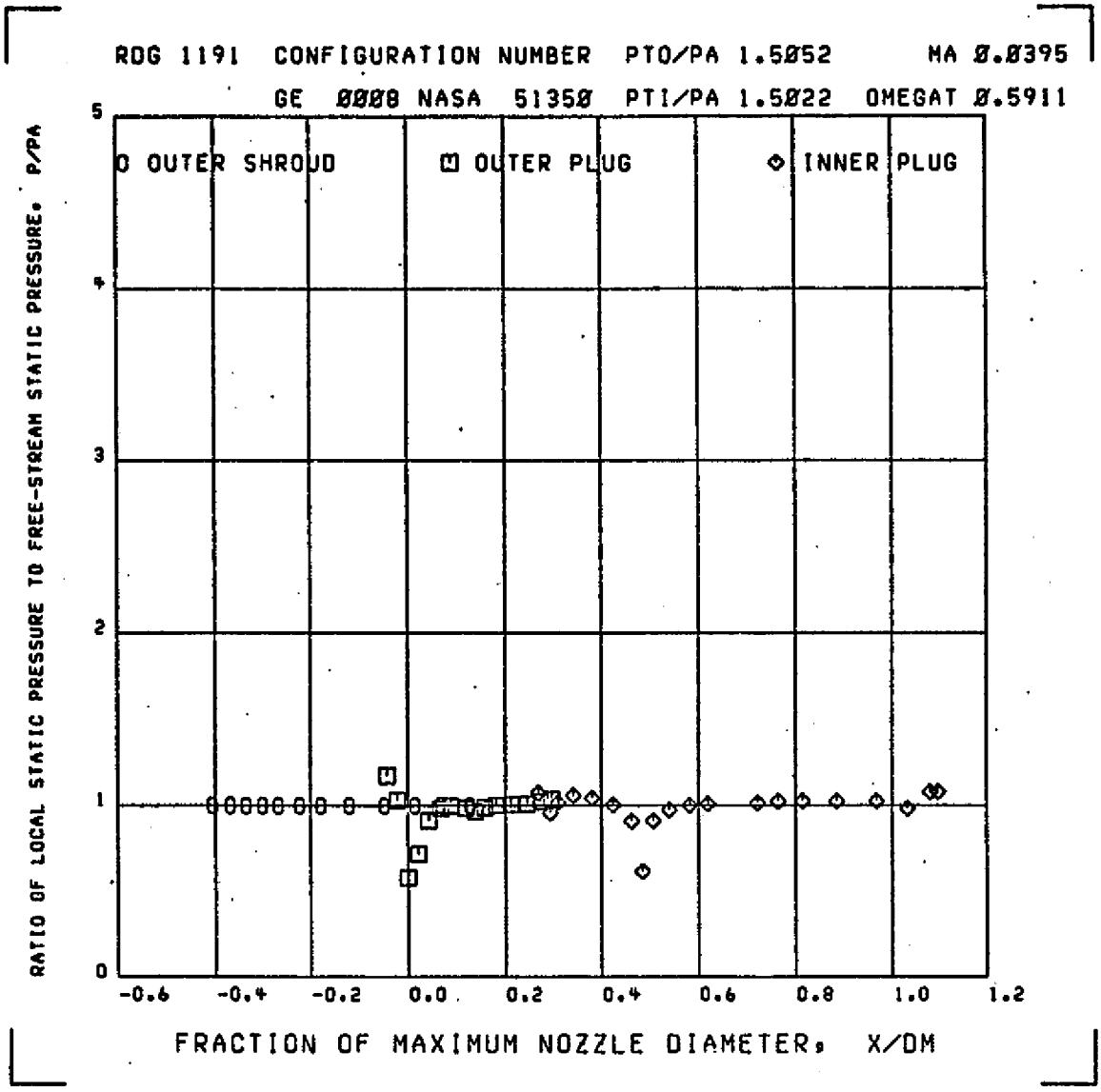

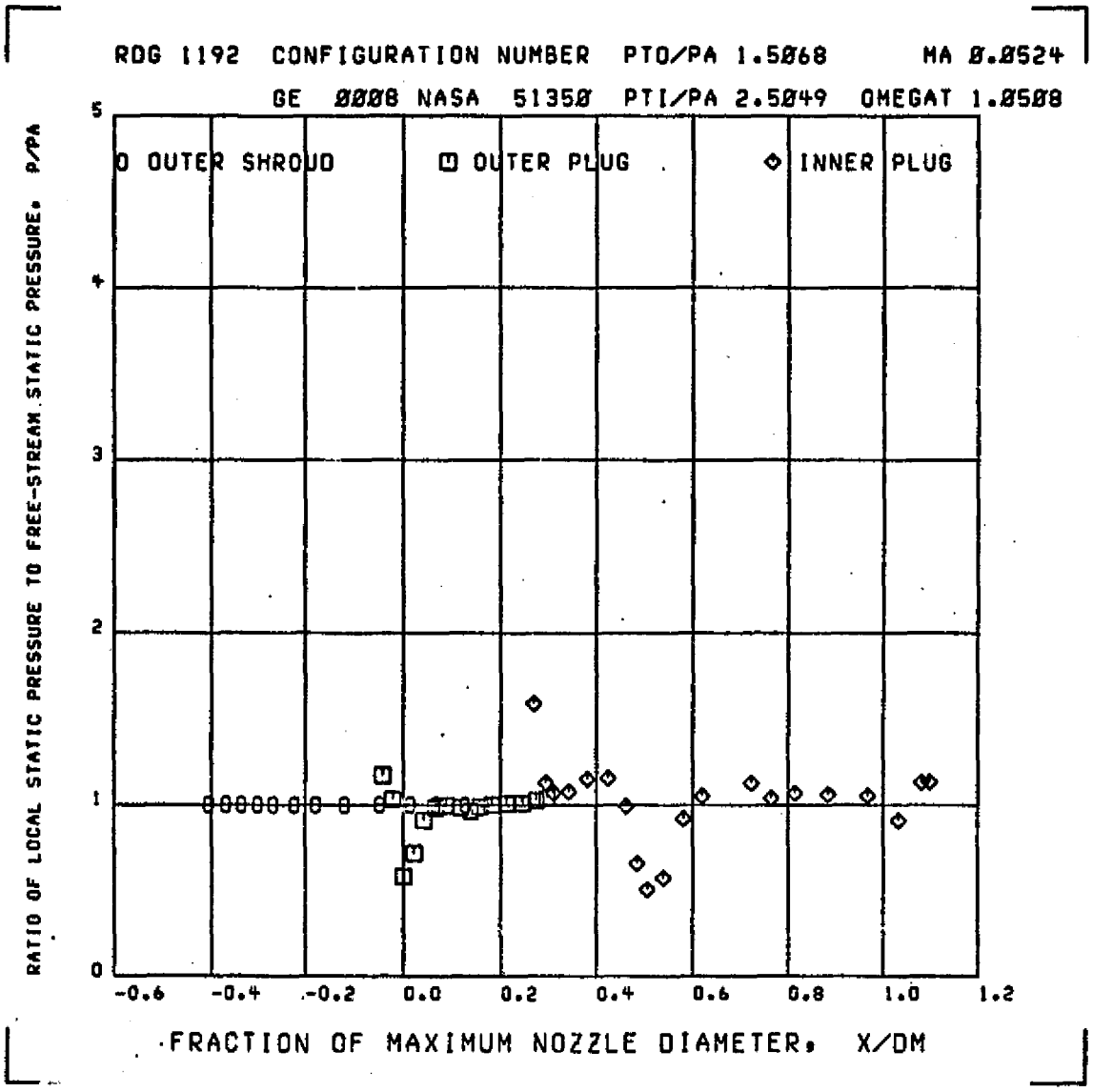
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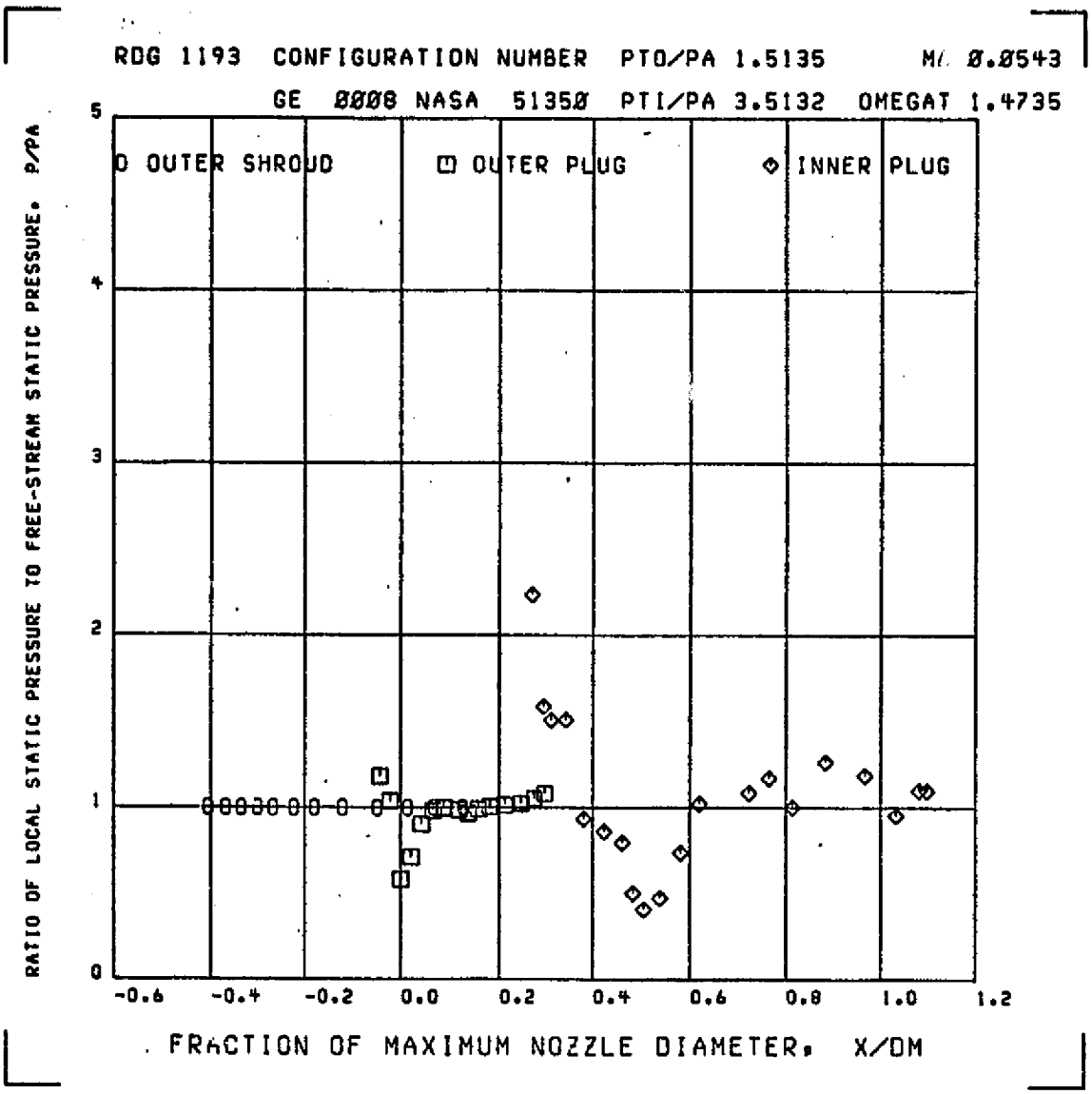
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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RATIO OF LOCAL STATIC PRESSURE TO FREE-STREAM STATIC PRESSURE, P/PA
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM
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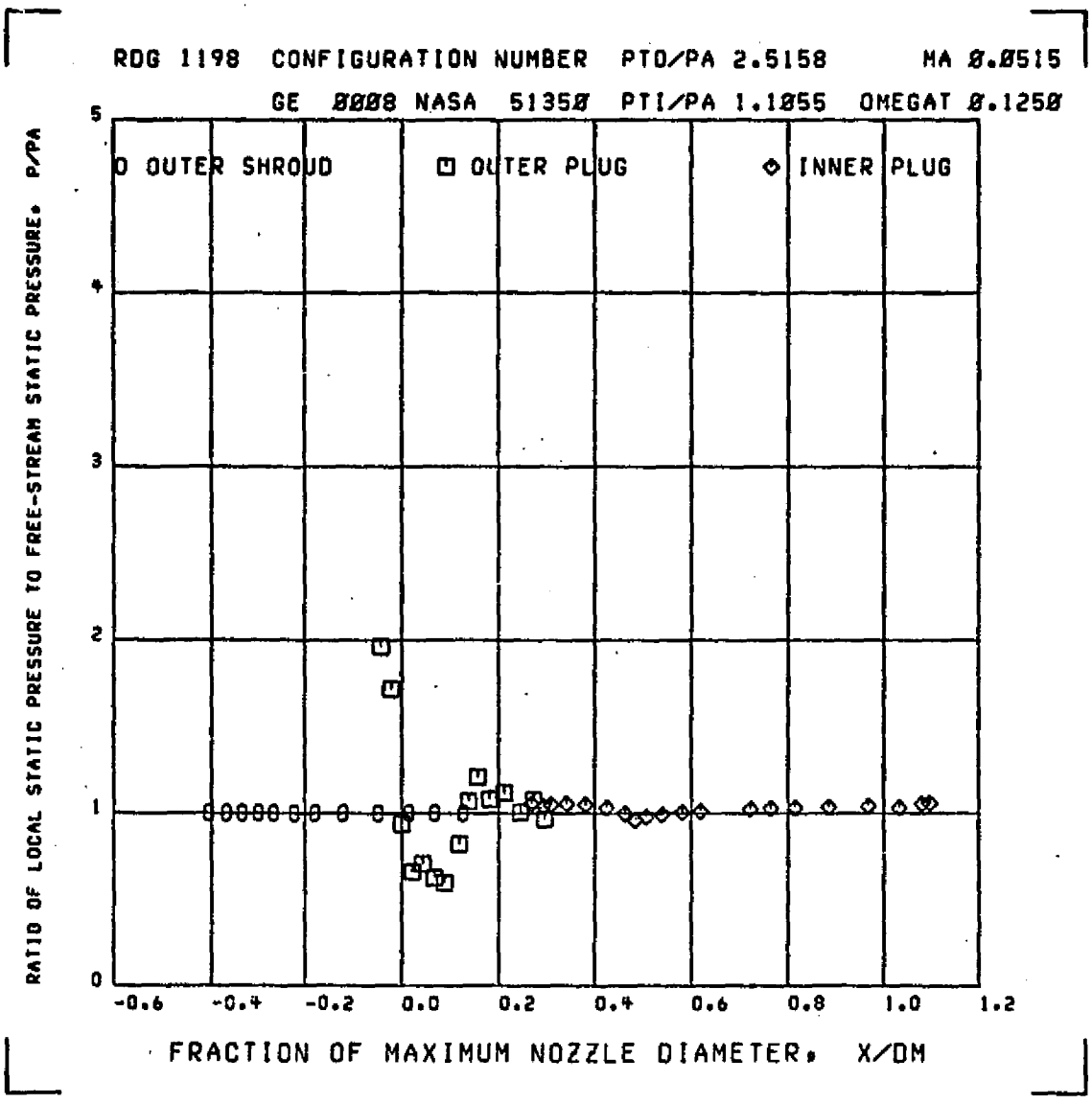
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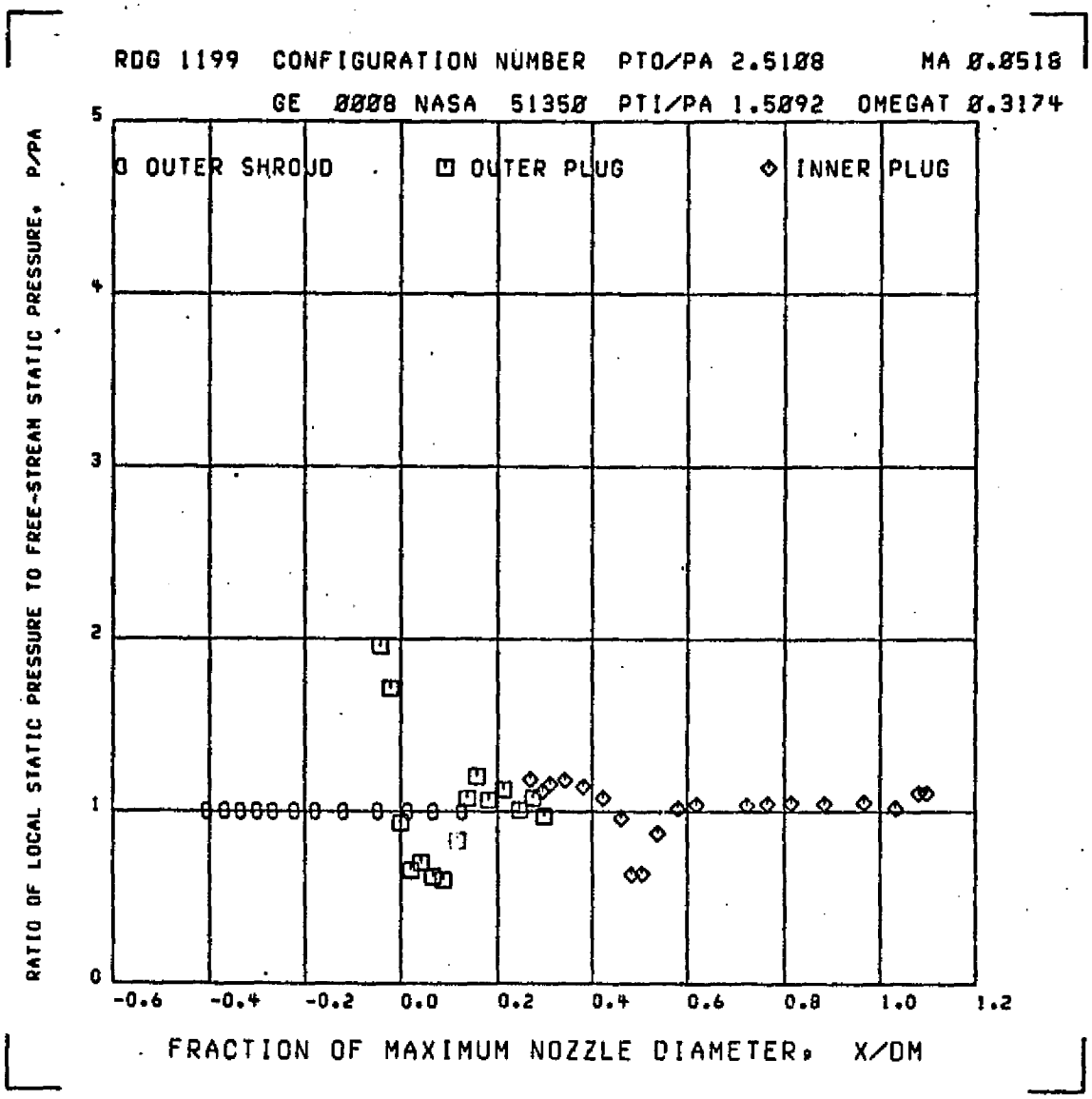
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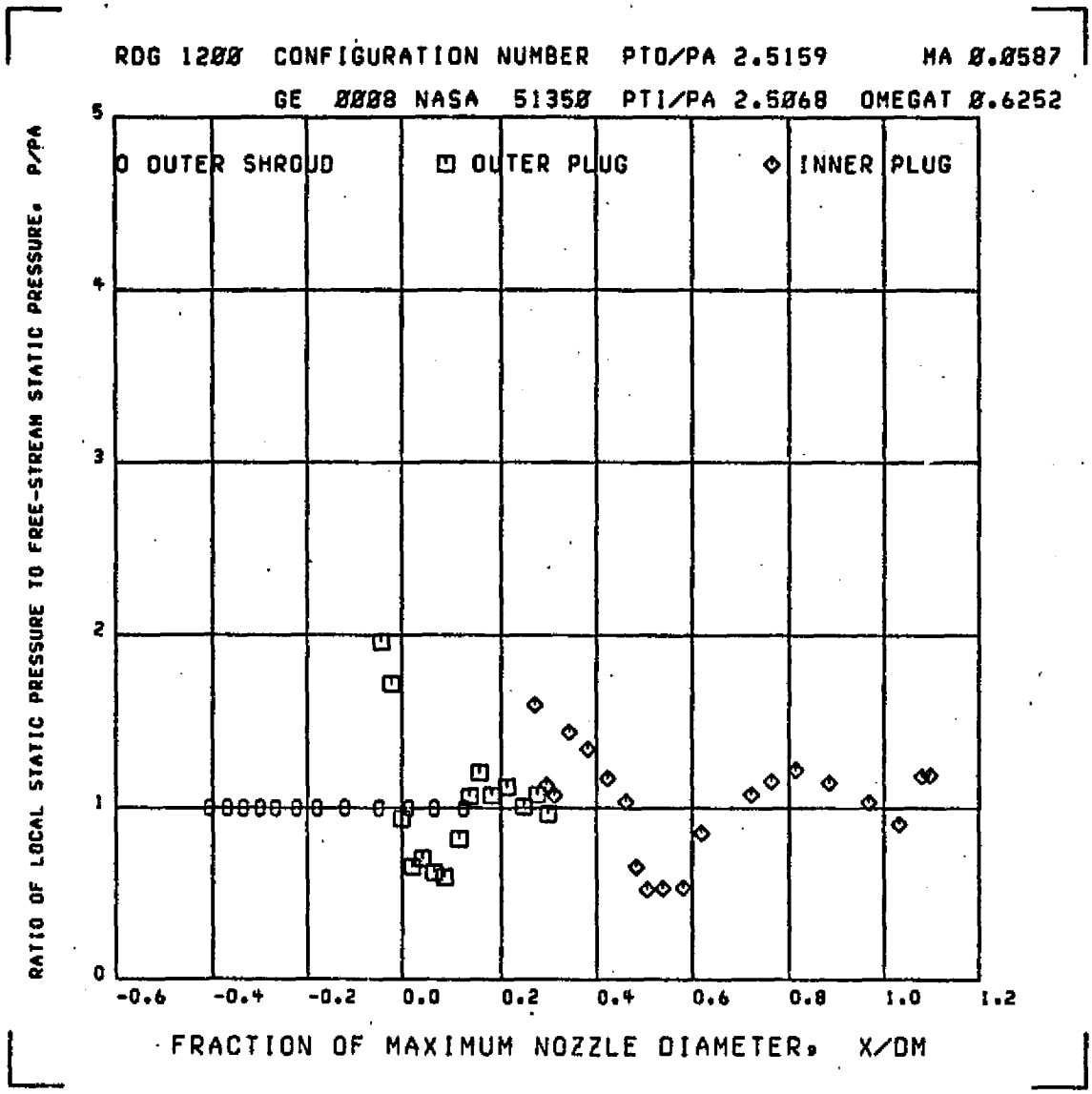
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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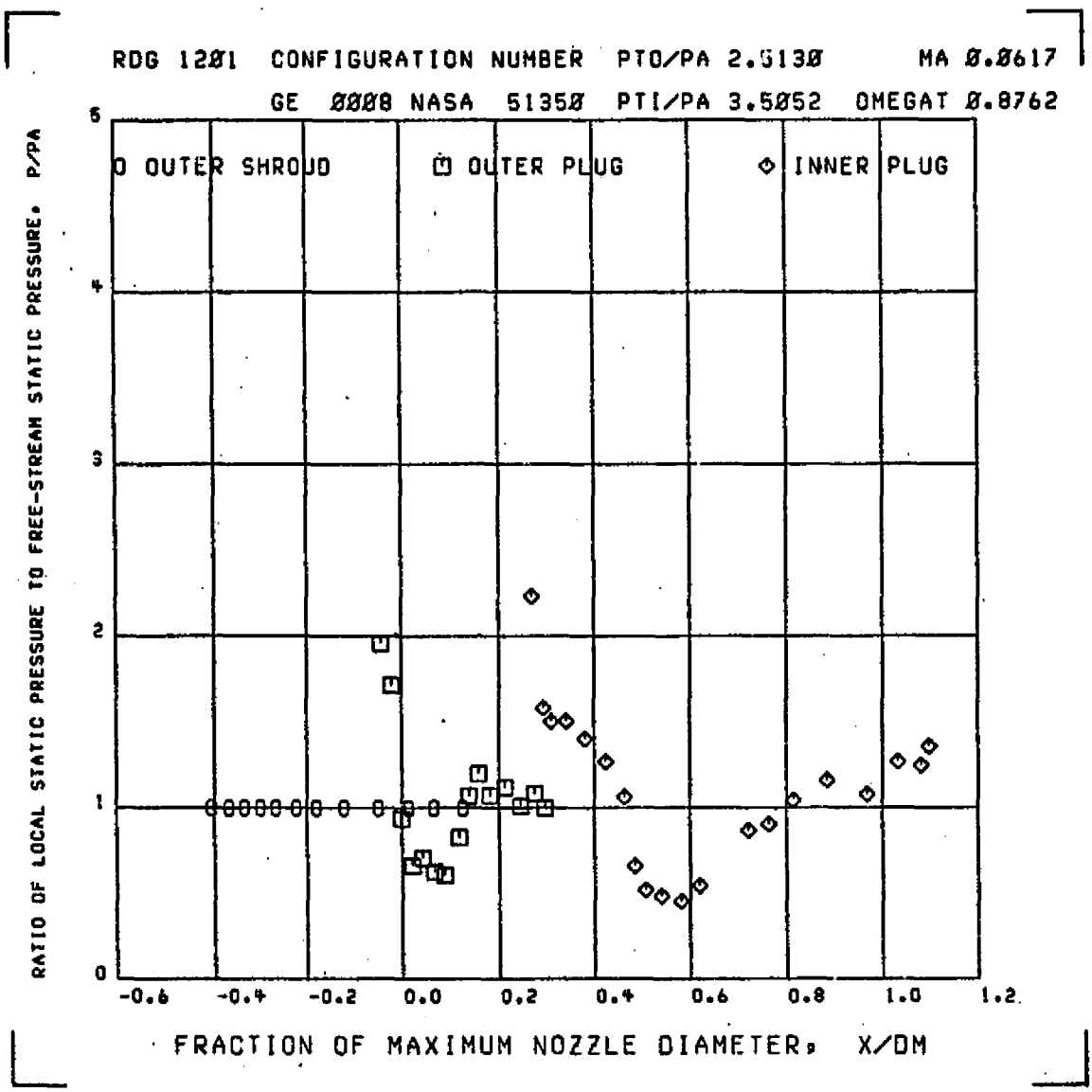
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM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1.2
FRACTION OF MAXIMUM NOZZLE DIAMETER, X/DM

15.0 CONCEPT SCREENING AND MODEL DESIGN REPORT.

CONCEPT SCREENING AND MODEL DESIGN REPORT

J.T. Blozy
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Advanced Engineering and Technology
Programs Department
Cincinnati, Ohio 45215

FOREWORD

This report is a Concept Screening and Model Design Technical Report prepared by the Advanced Engineering and Technology Programs Department, Aircraft Engine Group, of the General Electric Company, Evendale, Ohio under the sponsorship of the National Aeronautics and Space Administration, Lewis Research Center, Cleveland, Ohio. This work is in partial fulfillment of work being accomplished under Contract NAS3-19777. Mr. Orlando Gutierrez is NASA Technical Project Engineer for this program. Dr. Paul R. Knott of the General Electric Company is the Program Technical Manager. Other General Electric Personnel responsible for the work accomplished are Mr. Jack T. Blozy, Acoustic Engineer, and Mr. Paul S. Staid, Aerodynamic Performance Engineer.

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LIST OF ILLUSTRATIONS (Concluded)

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15.1 INTRODUCTION

This report contains the rationale used for the concept screening and detailed model hardware designs of a series of annular acoustic nozzles used for the acoustic and aerodynamic performance tests on Contract NAS3-19777. The overall objectives of the NASA-Lewis/General Electric contract effort are to provide sufficient acoustic and aerodynamic performance testing and the engineering data analysis to aid in the understanding and application of annular acoustic nozzles.

Discussed in the following sections is the rationale used in the concept screening (Section 15.2) and the presentation of the detailed design drawings of the selected acoustic and aerodynamic performance models (Sections 15.3 and 15.4).

15.2 CONCEPT SCREENING AND MODEL DESIGN

15.2.1 Objectives

The principle objective of this work effort was to select a series of annular plug nozzle configurations. This selection enables a parametric study to be performed of the flow and geometric variables of the nozzle's acoustic and aerodynamic performance characteristics. The model configuration selections were based upon 1) compatibility with existing acoustic baseline annular plug nozzle hardware, 2) compatibility with representative low- and high-flow exhaust nozzle suppressor concepts, 3) ability to have a wide variation of geometric and flow parameters, and 4) designs which are commensurate with practical aerodynamic nozzle performance characteristics. Upon selection and design of these configurations, fabrication of the nozzle hardware was performed.

15.2.2 Scope of Effort

This effort provided seven (7) acoustic nozzle configurations and eight (8) aero performance nozzle configurations from which acoustic and aero performance parametric tests were performed. Because of the constraints existing on facility compatibility for the acoustic and aero performance tests, separate acoustic and aerodynamic performance nozzle hardware was screened, designed and fabricated. Acoustic tests were performed in the General Electric Anechoic Jet Noise Facility, and the aerodynamic performance tests were performed in the NASA-Lewis Research Center 6' x 8' Wind Tunnel. The rationale used for screening the nozzles is discussed in Section 15.2.3 below. The detailed hardware design drawings for the acoustic and aerodynamic performance nozzles are contained in Sections 15.3 and 15.4.

15.2.3 Rationale for Configuration Selection

15.2.3.1 Select Configurations Compatible with Existing Nozzle Hardware

The bases for the selection of nozzle concepts was derived from results obtained on a recent NASA/GE Contract, Acoustic Tests of Duct-Burning Turbofan Jet Noise Simulation (NAS3-18008). One of the peripheral results of that program was that substantial acoustic advantage was obtained at flow conditions which simulated low flows in the inner stream of an annular, dual-flow, noncoplanar plug nozzle. In order to perform a test program at minimal costs and of sufficient variation in design features, new configurations were selected by designing two new outer flow shrouds and three new

inner flow plug pieces. All acoustic nozzle designs were made to be compatible with existing facility hardware. Additionally, the configuration designs were performed early in the program to meet stringent acoustic and aero performance test schedules.

No existing baseline nozzle was available for the separate aero performance nozzle designs. The design of the aero performance nozzles thus included a baseline annular, dual-flow, non-coplanar plug nozzle, as well as two other outer flow shrouds and three other plug pieces similar to the acoustic model designs but with an 80% reduction in scale. These models were designed for testing in the NASA 6' x 8' Wind Tunnel.

15.2.3.2 Select Configurations Compatible with Low-Flow and High-Flow Exhaust Nozzle

A major result expected from this program is that a resultant configuration can be identified for future simulated flight evaluation with practical exhaust nozzle designs. Two types of designs are being evaluated to provide this design information: 1) A low flow suppression concept (designs in which 2% to 6% of a simulated fan flow can be bled into the inner flow stream of the nozzle) and 2) A high flow suppression concept (designs in which simulated high pressure ratios and weight flows can be diverted from a simulated fan flow into the inner flow stream of the exhaust nozzle). Figures 1 and 2 show the nozzle configurations which span the geometric and physical parameters of interest.

Eight selected configurations are shown in Figures 1 and 2. Table 1 lists the appropriate geometric parameters. The first seven (7) configurations were tested during the acoustic portion of tests, while all eight (8) configurations were tested during the aero performance parametric tests.

15.2.3.3 Select Configurations Which Have a Wide Range of Parameter Variations

The following parameters were considered of key importance based on recent experience and acoustic and performance engineering judgement:

1. Outer Flow Radius Ratio Effects
2. Inner Flow Step Height
3. Inner Flow Stream Interaction with Outer Flow Stream
4. Amount of Inner Flow in Relation to Outer Flow

Figures 3 and 4 schematically illustrate the bases for how the first seven configurations, shown in Figures 1 and 2, will be combined in order to examine the above listed four key parameters in the acoustic series of tests. Figure 3a, which compares Configurations 2 and 4, will illustrate if the inner-flow path angle in relation to the outer-flow stream has any

effect on noise reduction. The change in inner-flow path angle is obtained through an inner plug geometry change as shown. Figure 3b, which compares Configurations 2, 5 and 6, illustrates the influence of outer-flow radius ratio effects on noise reduction while maintaining a fixed inner-flow design. Figure 3c, which compares Configurations 1, 2, 3, and 4, illustrates the influence of inner-flow step heights with a fixed outer-flow design on noise reduction. Figures 3d and 3e, which compare Configurations 1 and 4, and 2 and 3, illustrate the effects of step height at two separate step locations. Figures 3e and 3f illustrate how area ratio can be studied. Figure 4, which is Configuration 7, is a representative high area ratio AST nozzle design.

15.2.3.4 Select Configurations Commensurate with Practical Aerodynamic Performance Designs

The major aerodynamic configurational parameters that will be investigated are the inner plug geometry and the nozzle external area ratio, i.e., the area circumscribed by the outer flowpath diameter divided by the total nozzle throat area. The nozzle external area ratio is directly related to the radius ratio (nozzle throat inner diameter divided by outer diameter) such that variations in radius ratio for acoustic purposes will result in variations in external area ratio which will affect the nozzle performance and thus provide the desired acoustic/performance trade. The radius ratios selected for the program provide a range of area ratios representative of VCE nozzles for supersonic cruise aircraft.

The inner-plug configurations were selected to simulate two basic concepts of varying the inner-nozzle flow area. The inner-nozzle area must be opened for noise suppression points and closed off at other mission points for the low inner-flow nozzle design, for the high inner-flow nozzle designs, the inner nozzle area must be varied from that required when a design is in the high-flow mode to that required during normal operation. In both cases, the area variation may be accomplished by two methods: via flaps and seals on the plug crown or by translating the inner plug. The first method results in a somewhat flat plug crown in the open or suppressed mode, such as that simulated by Configurations 1, 4, and 8. The second method allows use of a smooth plug contour, illustrated that on Configurations 2, 3, 5, 6, and 7. (See Figures 1 and 2.)

15.3 DETAILED DESIGN DRAWINGS OF THE ACOUSTIC MODELS

15.3.1 Photographs

Photographs of the parts fabricated for use in the acoustic test program are included as Figures 5 and 6. Figure 5 shows the three inner-flow plug pieces fabricated, and Figure 6 shows the two new outer shrouds fabricated. These parts were used as adapter parts to an existing nozzle arrangement (Configuration 1 of Figure 1) which was designed and fabricated as part of NAS3-18008 Contract.

15.3.2 Design Drawings

The design drawings used in this program are shown in Figures 7 through 16. Figure 7 shows a detailed assembly drawing of Configuration 1, which was designed and fabricated under Contract NAS3-18008. Figures 8, 9, 10, and 11 are detailed drawings of the individual pieces which make up Configuration 1. Figures 12, 13, 14, 15, and 16 show the design drawings of the new parts made for this contract effort.

15.4 DETAILED DESIGN DRAWINGS OF THE AERODYNAMIC PERFORMANCE MODELS

15.4.1 Photographs

Photographs of models installed in the Lewis Research Center 8' x 6' Wind Tunnel are shown in Figures 17 and 18. Figure 17 shows the STA model used for dynamic calibrations. Figure 18 shows a typical installation of a dual flow annular nozzle.

15.4.2 Design Drawings

Drawings of model and adapter parts used in this program are shown in Figures 19 through 48. Figure 19 is an assembly drawing of the STA nozzle and the dual-flow annular configurations. Figures 20 through 32 are existing pieces from a previous program; all other parts were fabricated under the currrent contract.

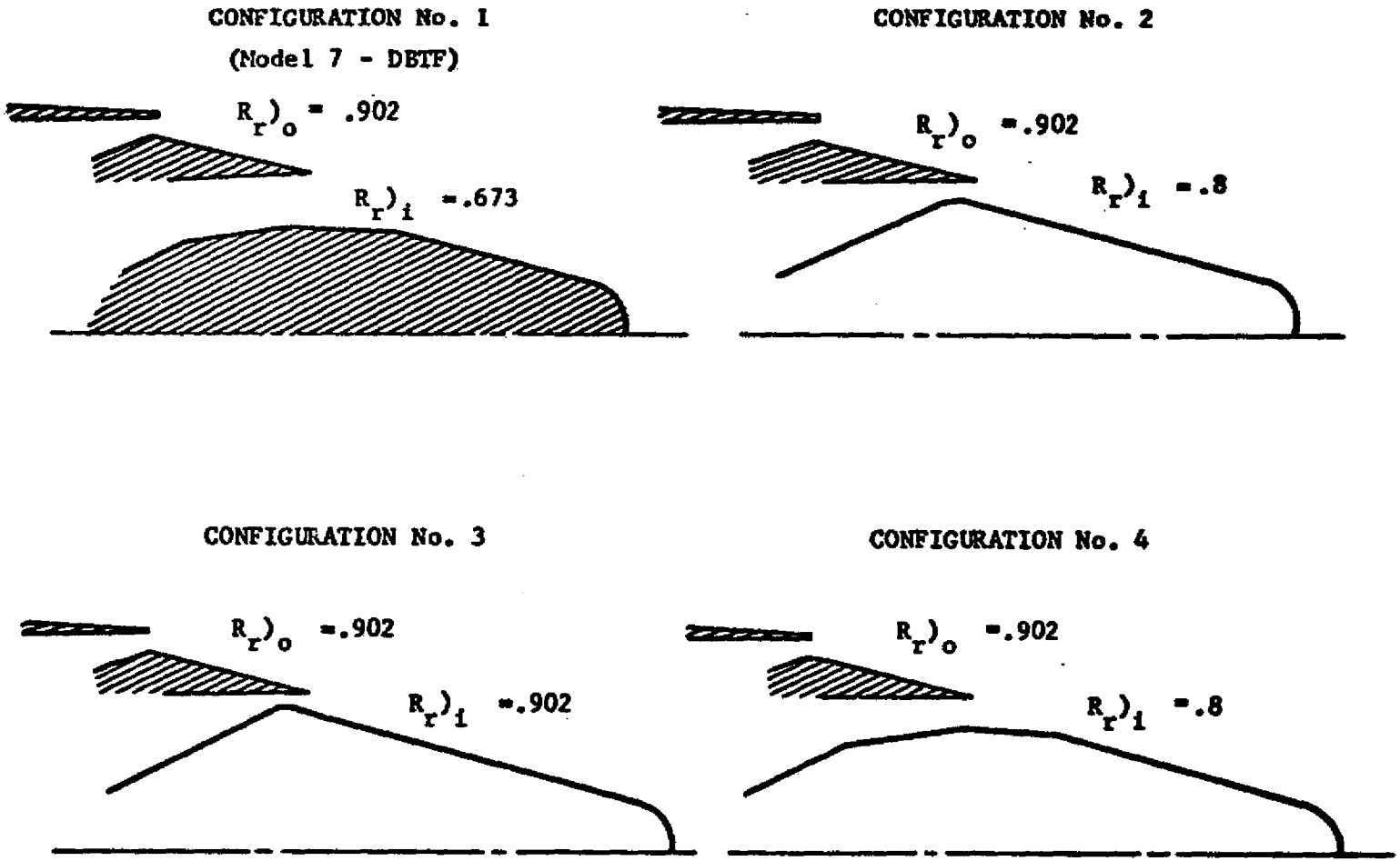


Figure 1. Acoustic and Aerodynamic Performance Nozzle Configurations 1, 2, 3, and 4.

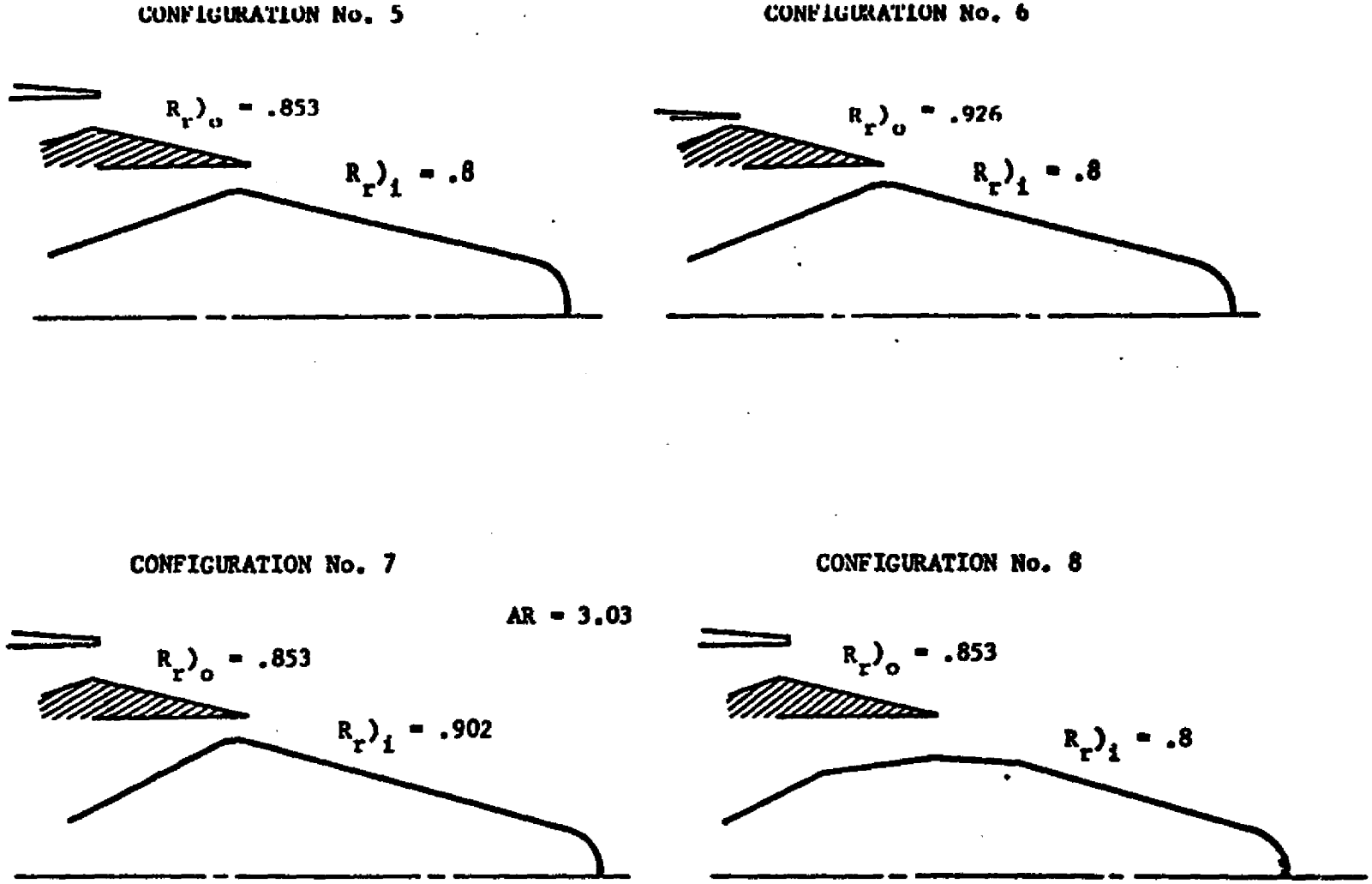


Figure 2. Acoustic Nozzle Configurations 5, 6, and 7; Aerodynamic Nozzle Configurations 5, 6, 7, and 8.

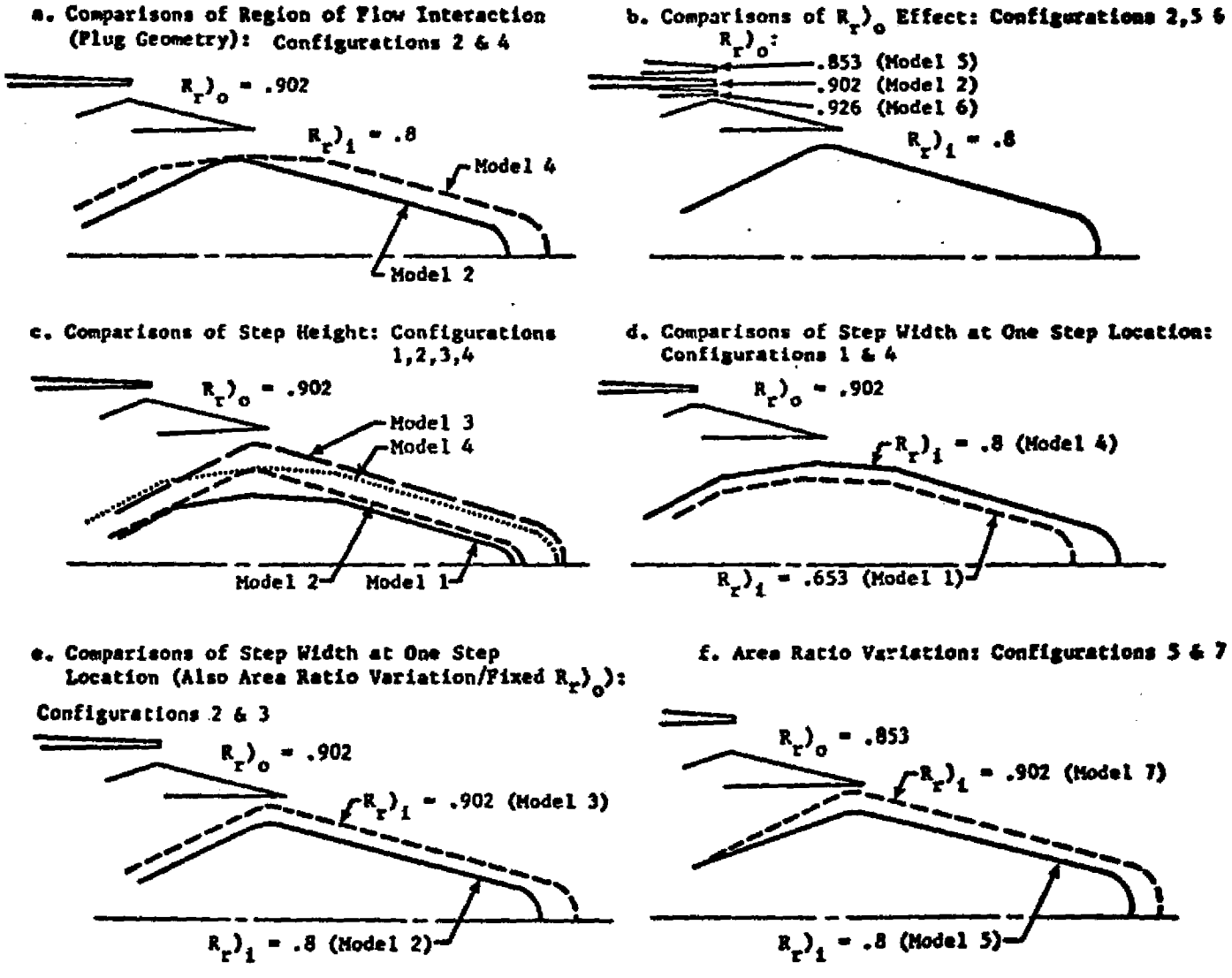


Figure 3. Bases of Parametric Tests - Illustrations of Variation and Combinations of Geometric Parameters.

CONFIGURATION No. 7

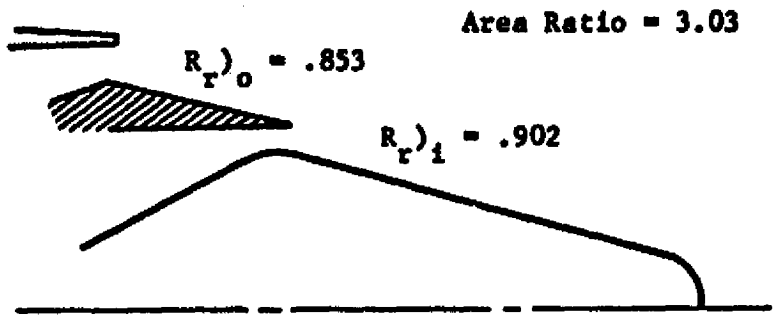


Figure 4. Bases of Parametric Tests Continued - Representative High Area Ratio AST/VCE Design.

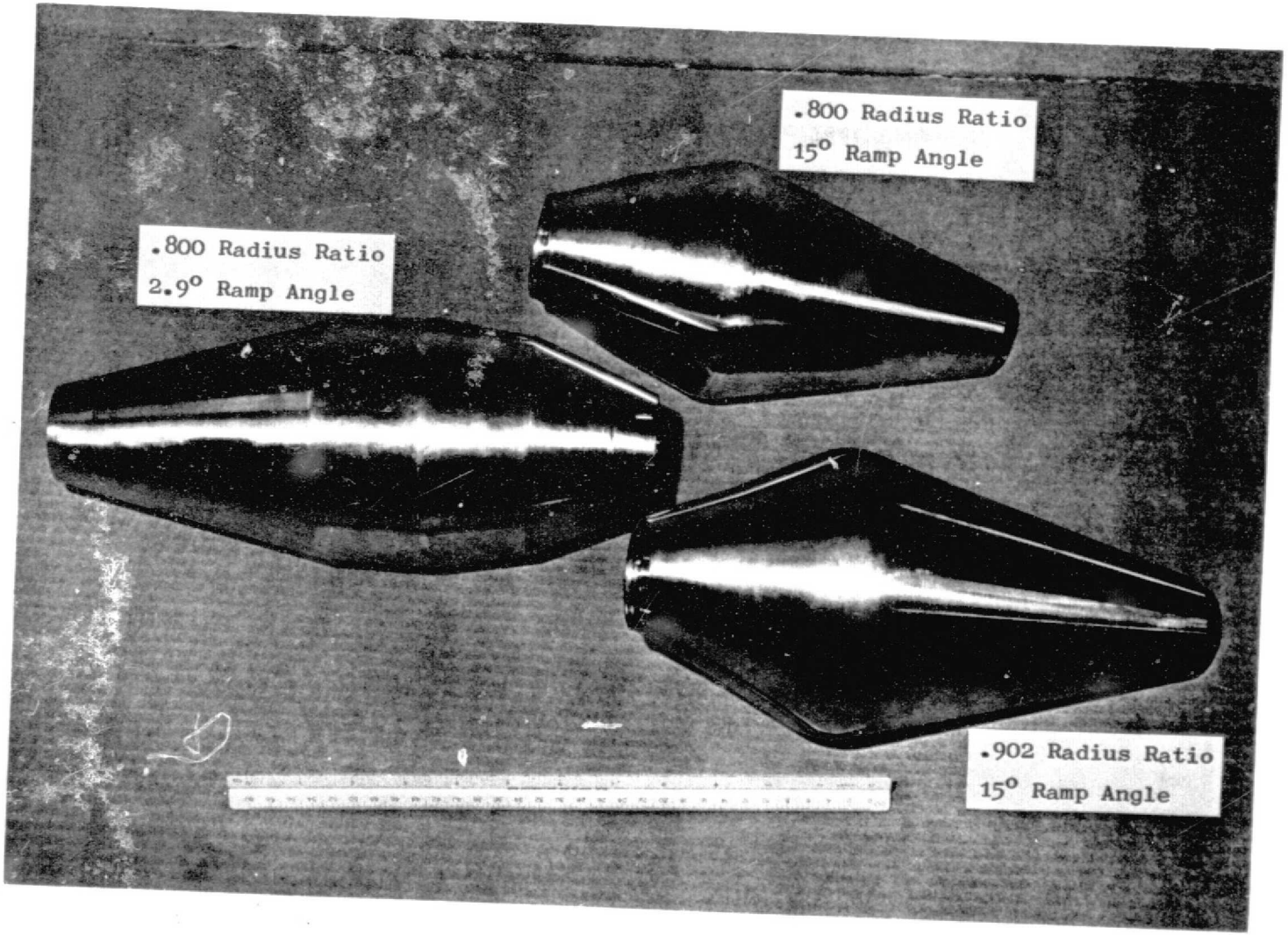


Figure 5. New Inner Flow Plugs for Use in Acoustic Test Program.

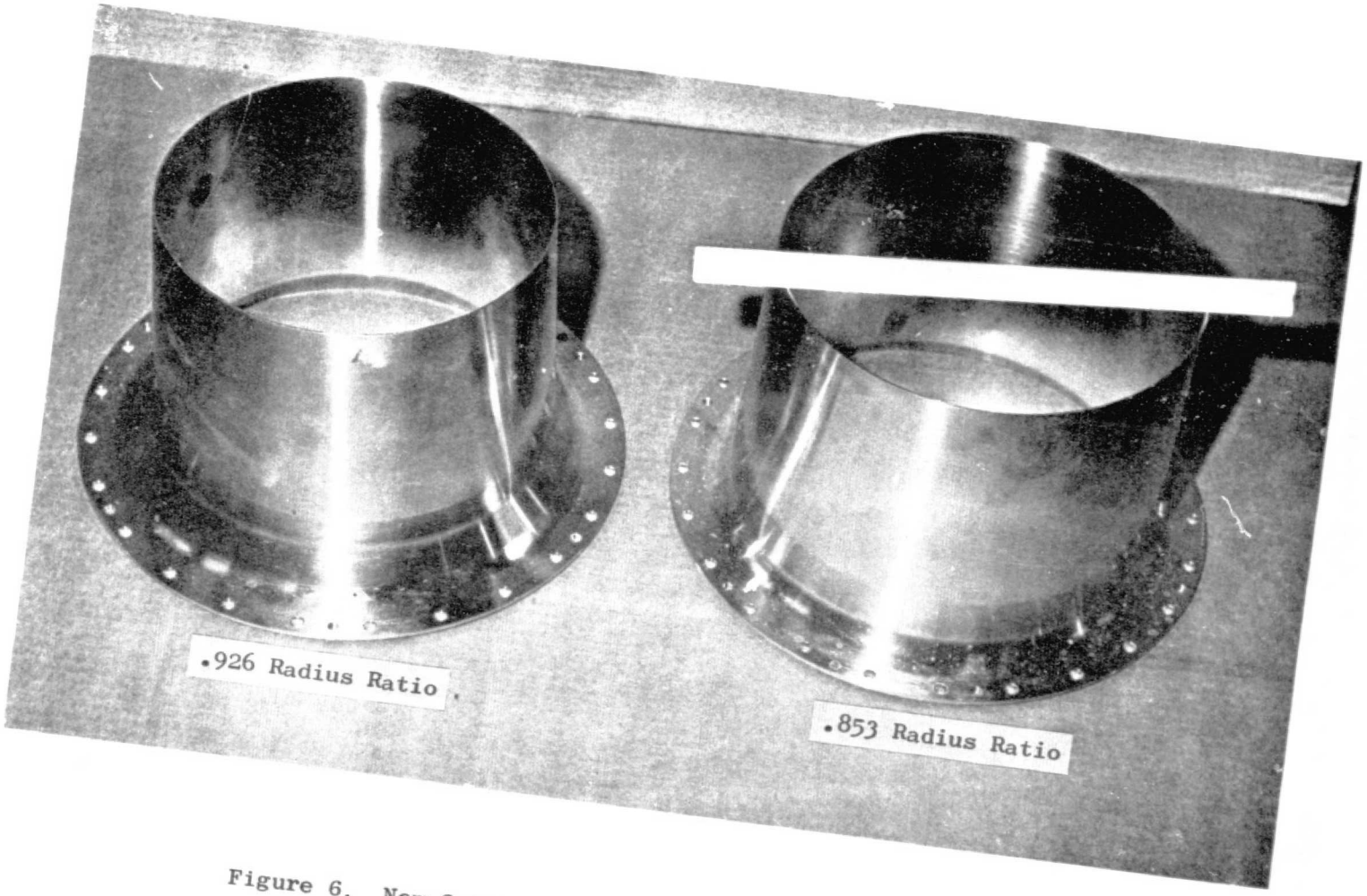
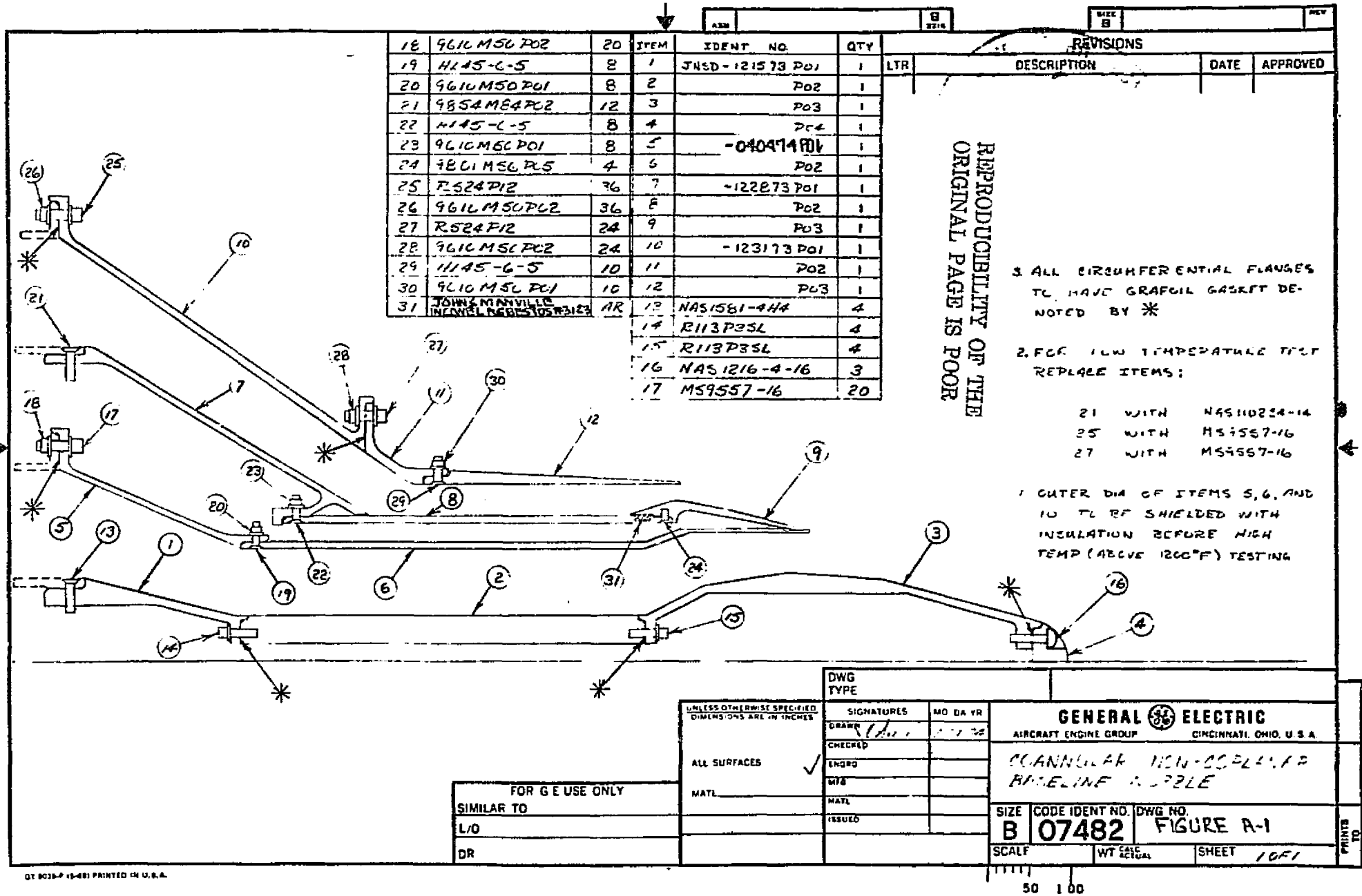


Figure 6. New Outer Shrouds for Acoustic Test Program.



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FOR G E USE ONLY
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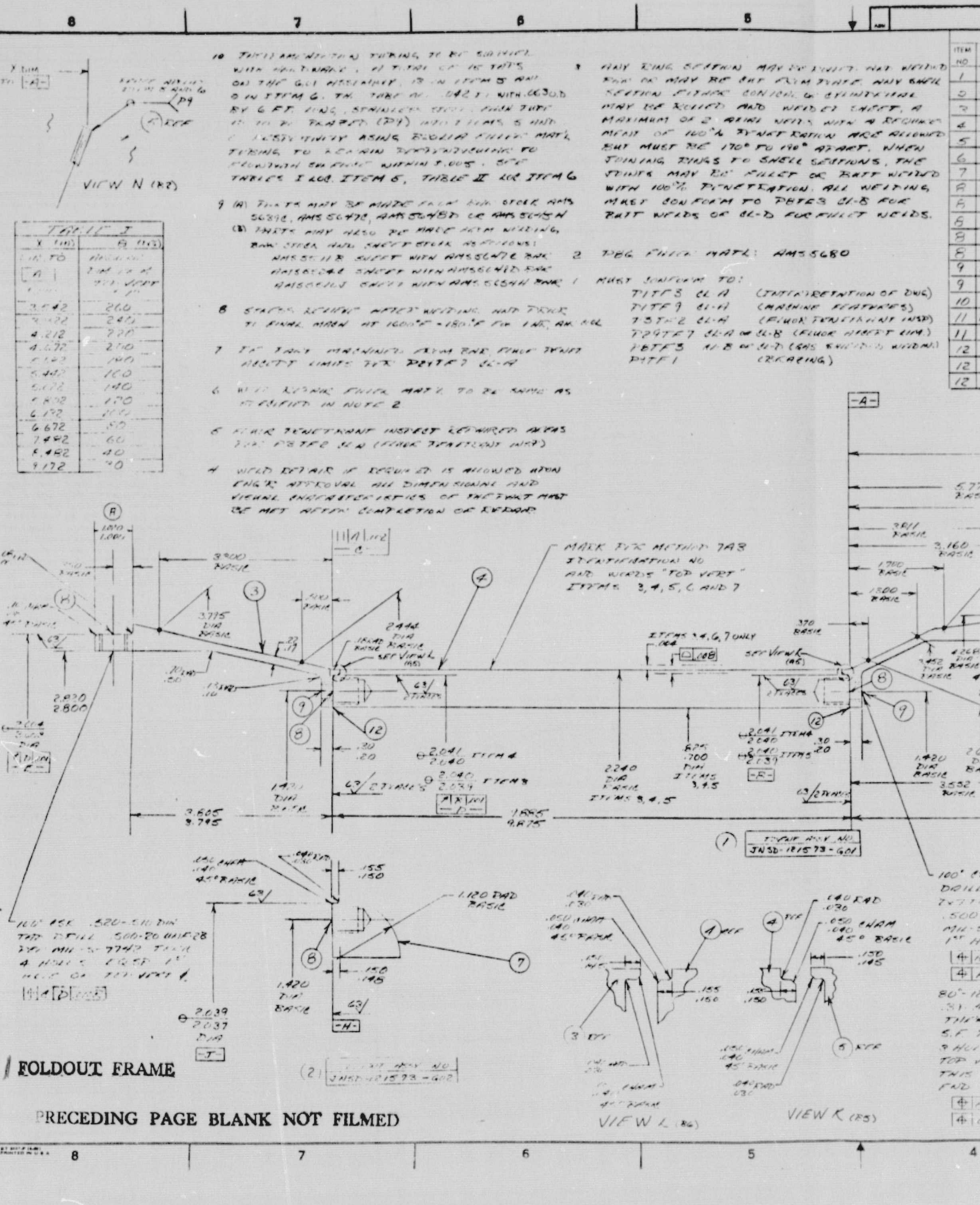
DWG TYPE

PRINTS TO

Figure 7. DBTF Baseline Coannular Noncoplanar Nozzle.



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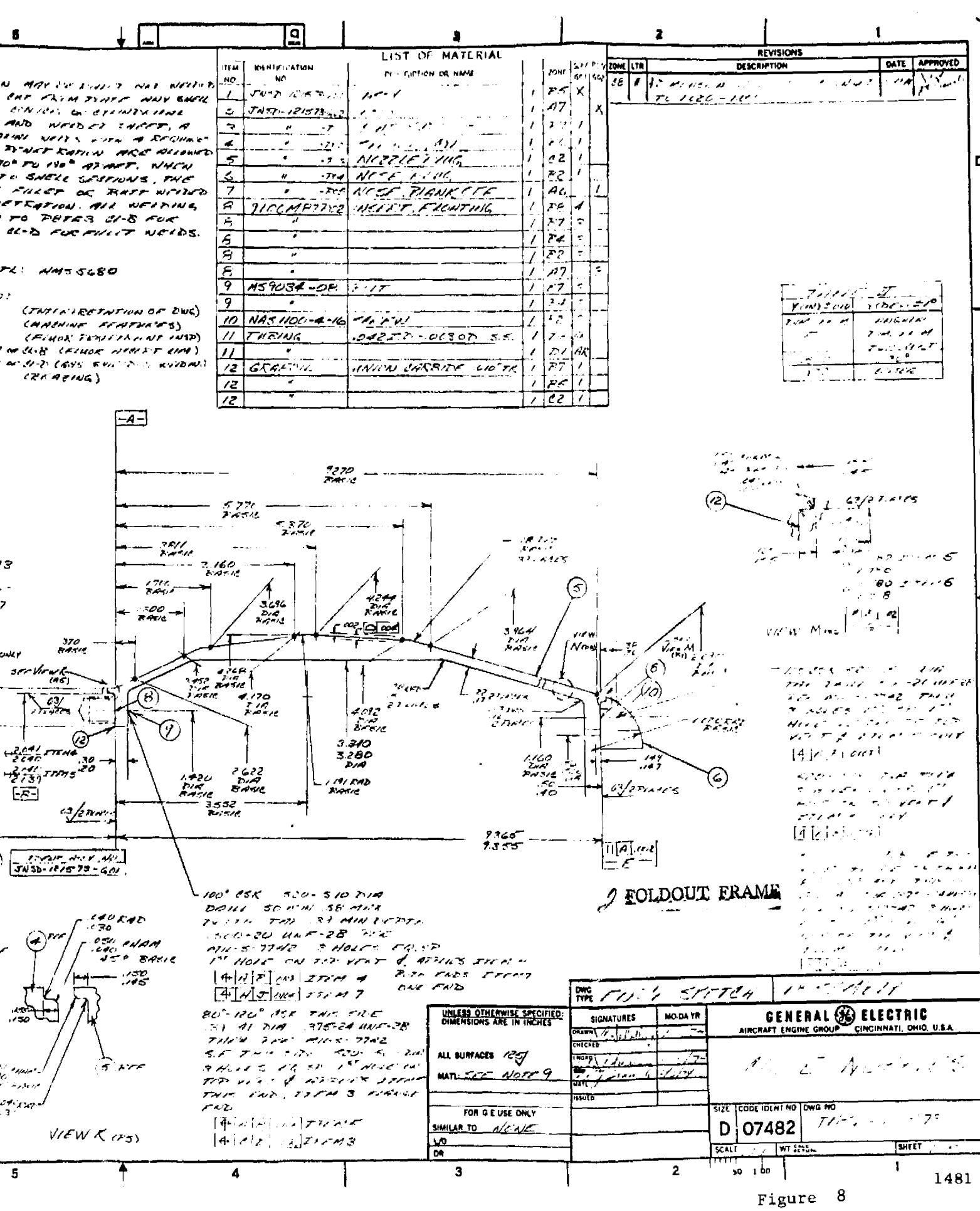
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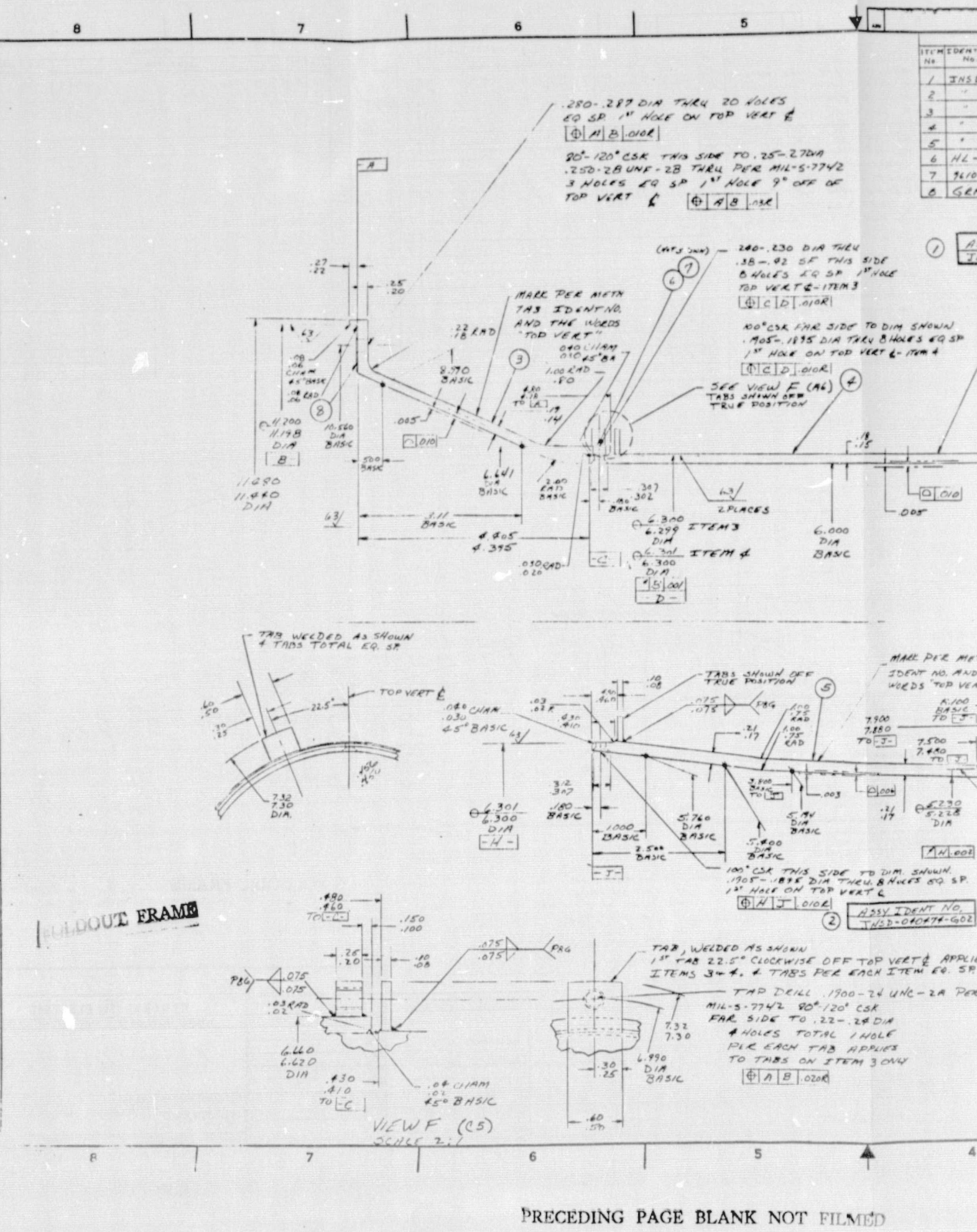
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.

Figure 8



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4	" " - P02	FLOWPATH ADAPTER	1	C5	1	
5	" " - P03	FLOWPATH ADAPTER	1	B5		1
6	HL-45-6-5	BOLT	1	D5	8	
7	9610M50 P01	NUT	1	D5	8	
8	GRAFOIL	UNION CARBIDE GASKET .015" TK	1	C7	1	

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
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9. (A) PARTS MAY BE MADE FROM BAR STOCK AMS 5643C, AMS5647C, AMS5649D OR AMS5645H
(B) PARTS MAY ALSO BE MADE FROM WELDING BAR STOCK AND SHEET STOCK AS FOLLOWS:
AMS5518 SHEET WITH AMS5647C BAR
AMS5524C " " AMS5649D "
AMS5518 J " " AMS5645H "

8. STRESS RELIEVE AFTER WELDING AND PRIOR TO FINAL MACH. AT 1400°F-1800°F FOR 1 HR. AIR COOL

7. IF PART MACHINED FROM BAR FLUOR PENETRANT REJECT LIMITS P3TF7 CL-A

6. WELD REPAIR FILLER MATL TO BE SAME AS SPECIFIED IN NOTE 2.

5. FLUOR PENETRANT INSPECT REPAIRED AREAS PER P3TF2 CL-A (FL. PENET. INSP.)

4. WELD REPAIR IS REQUIRED IS ALLOWED UPON ENGR APPROVAL. ALL DIMENSIONAL AND VISUAL CHARACTERISTICS OF THE PART MUST BE MET AFTER COMPLETION OF REPAIR.

3. ANY RING SECTION MAY BE ROLLED AND WELDED BAR OR MAY BE CUT FROM PLATE. ANY SHELL SECTION EITHER CONICAL OR CYLINDRICAL MAY BE ROLLED AND WELDED SHEET. A MAXIMUM OF 2 AXIAL WELDS WITH A REQUIREMENT OF 100% PENETRATION ARE ALLOWED BUT MUST BE 170° TO 190° APART. WHEN JOINING RINGS TO SHELL SECTIONS, THE JOINTS MAY BE FILLET OR BUTT WELDED WITH 100% PENETRATION. ALL WELDING MUST CONFORM TO P3TF3 CL-B FOR BUTT WELDS OR CL-D FOR FILLET WELDS.

2. PAG FILLER MATL: AMS 5680

1. MUST CONFORM TO:
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P3TF4 CL-A (MACHINE FEATURES)
P3TF2 CL-A (FLUOR PENETRANT INSP)
P29TF7 CL-A OR CL-B (FLUOR ACCEPT LIMITS)
P3TF8 CL-B OR CL-D (GAS SHIELDED WELDING)

(2) ASSY IDENT NO. JNSD-040474-G02

2 FOLDOUT FRAME

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	ENGRG		
	MFG		
	MATL		
	ISSUED		
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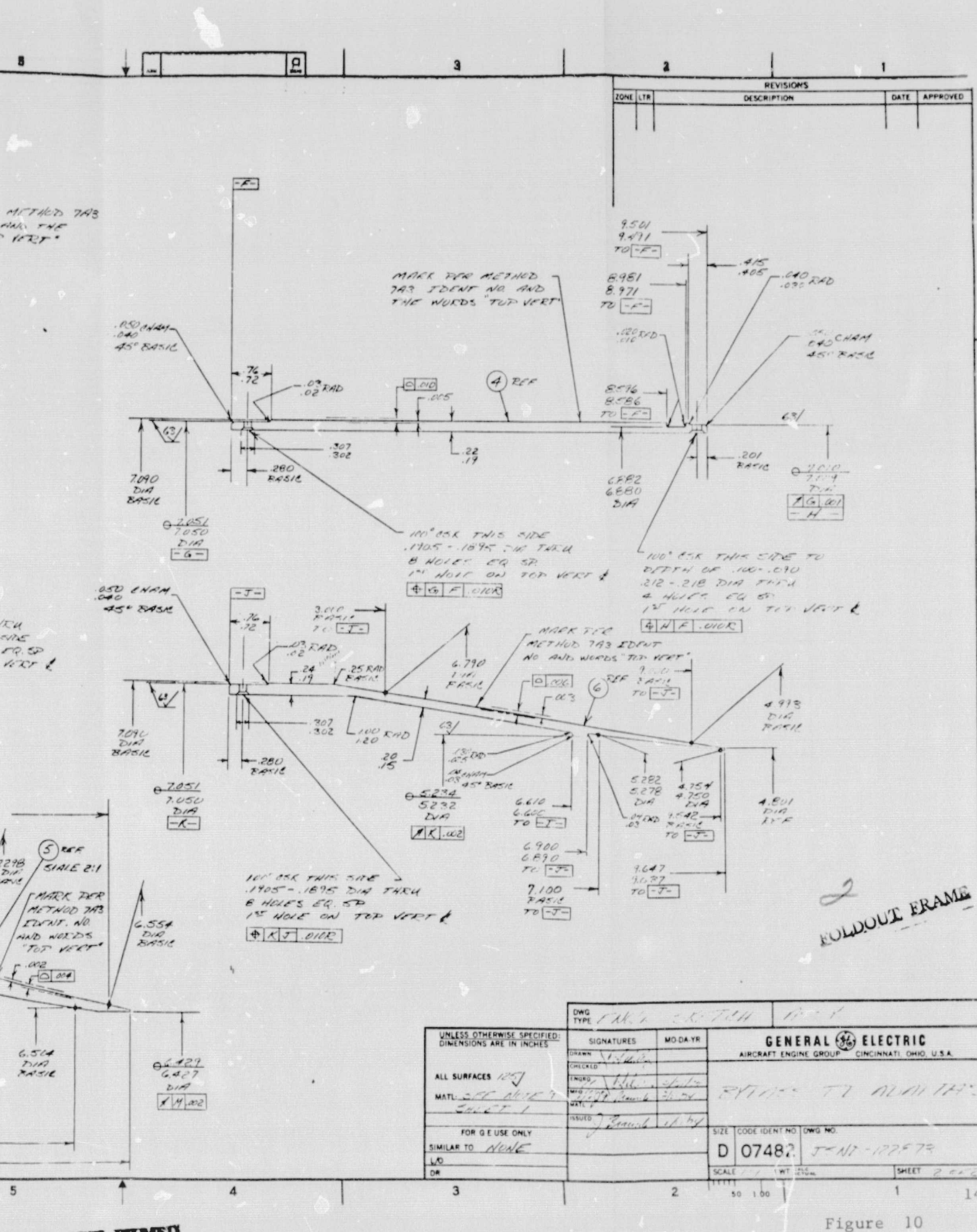
Figure 9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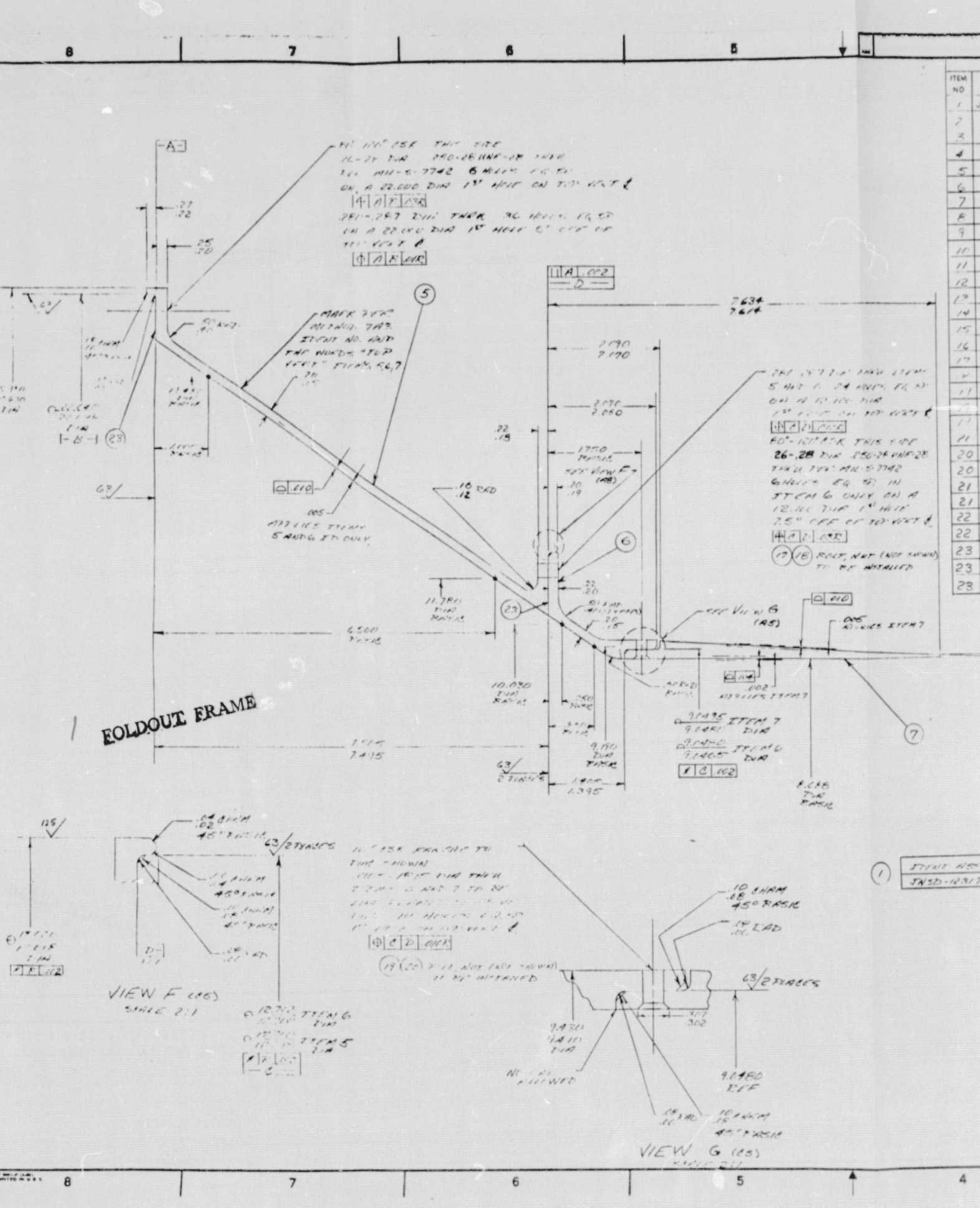
.280 BASIC
.22 .19
7.090 DIA BASIC
7.285 7.050 DIA -G-
6.882 6.880 DIA
.201 BASIC
7.010 7.004 DIA
100° CSK THIS SIDE .1905 - .1895 DIA THRU 8 HOLES EQ SP 1ST HOLE ON TOP VERT
100° CSK THIS SIDE TO DEPTH OF .100 - .090 .212 - .218 DIA THRU 4 HOLES EQ SP 1ST HOLE ON TOP VERT
-J-
3.010 REF TO -J-
.24 .19
.25 RAD REF
6.790 2.141 REF
MARK PER METHOD 7A3 IDENT NO AND WORDS "TOP VERT"
.06
.03
6 REF
9.000 REF TO -J-
4.993 DIA BASIC
.100 .120 RAD
.20 .15
7.051 7.050 DIA -K-
5.234 5.232 DIA
6.610 6.600 TO -J-
5.282 5.278 DIA
4.754 4.750 DIA
1.542 REF TO -J-
4.801 DIA REF
6.900 6.890 TO -J-
9.647 9.637 TO -J-
7.100 BASIC TO -J-
100° CSK THIS SIDE .1905 - .1895 DIA THRU 8 HOLES EQ SP 1ST HOLE ON TOP VERT
5 REF SCALE 2:1
MARK PER METHOD 7A3 IDENT. NO. AND WORDS "TOP VERT"
6.554 DIA BASIC
6.564 DIA BASIC
6.427 6.427 DIA
FOLDOUT FRAME 2
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES
ALL SURFACES 125
MATL: SEE NOTE 7 SHEET 1
FOR G E USE ONLY
SIMILAR TO NONE
LAD
DR
SIGNATURES MO-DA-YR
DRAWN
CHECKED
ENGRD
MFG APPR
MATL
ISSUED
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.
SIZE D CODE IDENT NO. 07482 DWG NO. 7EN1-1225F79
SCALE 1/1 WT LBS/DECIMAL SHEET 2 OF 6

Figure 10



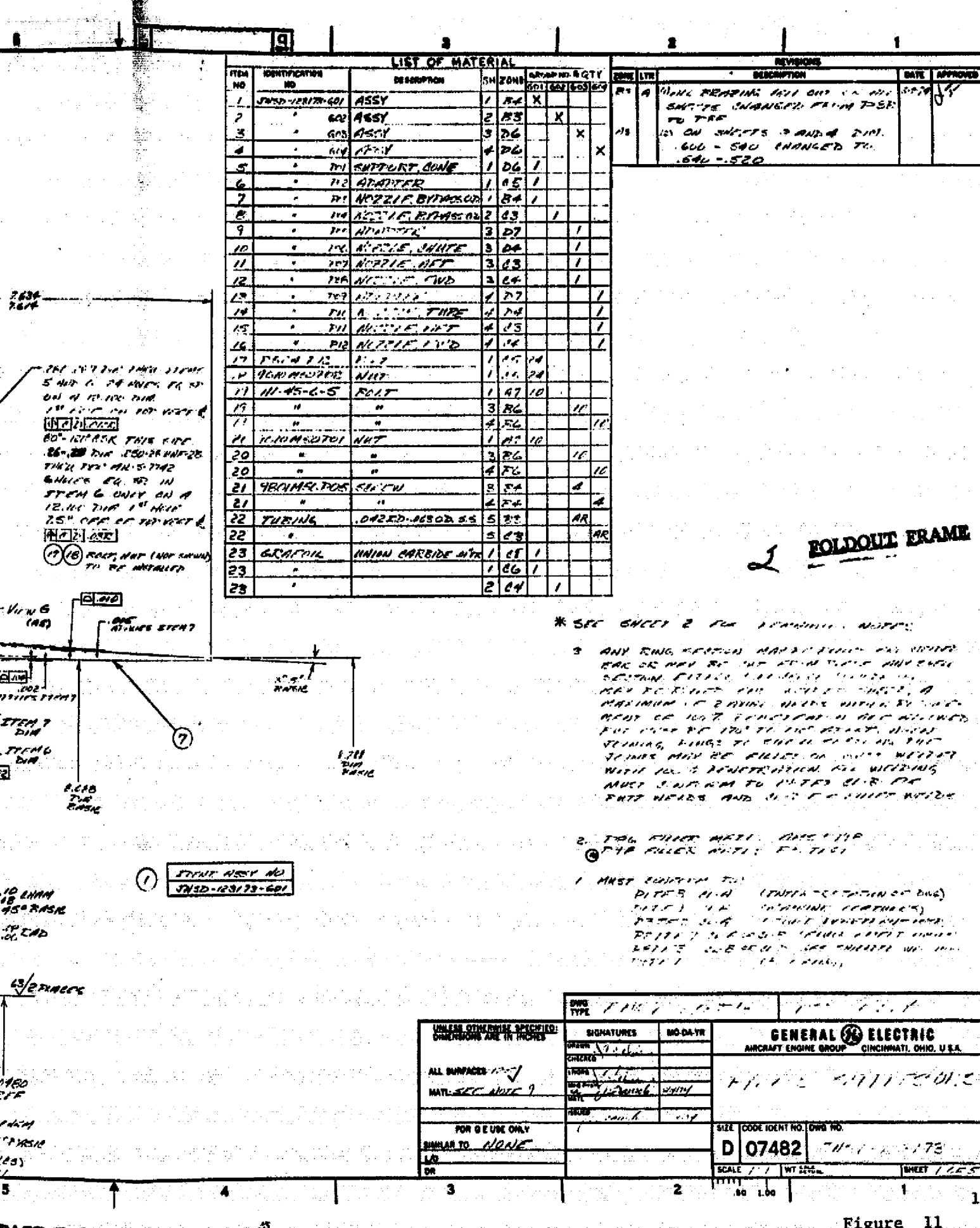


Figure 11

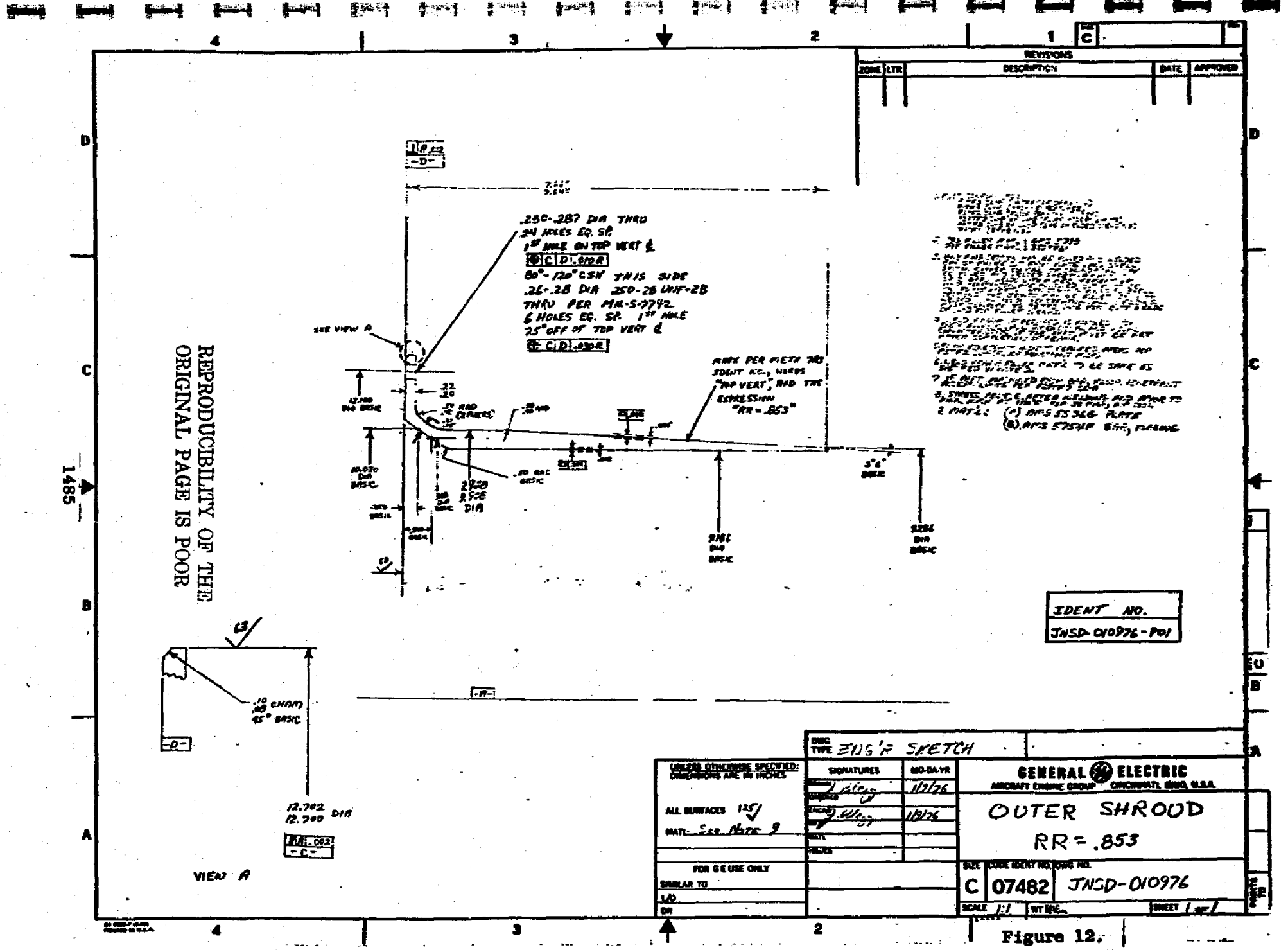


Figure 12.

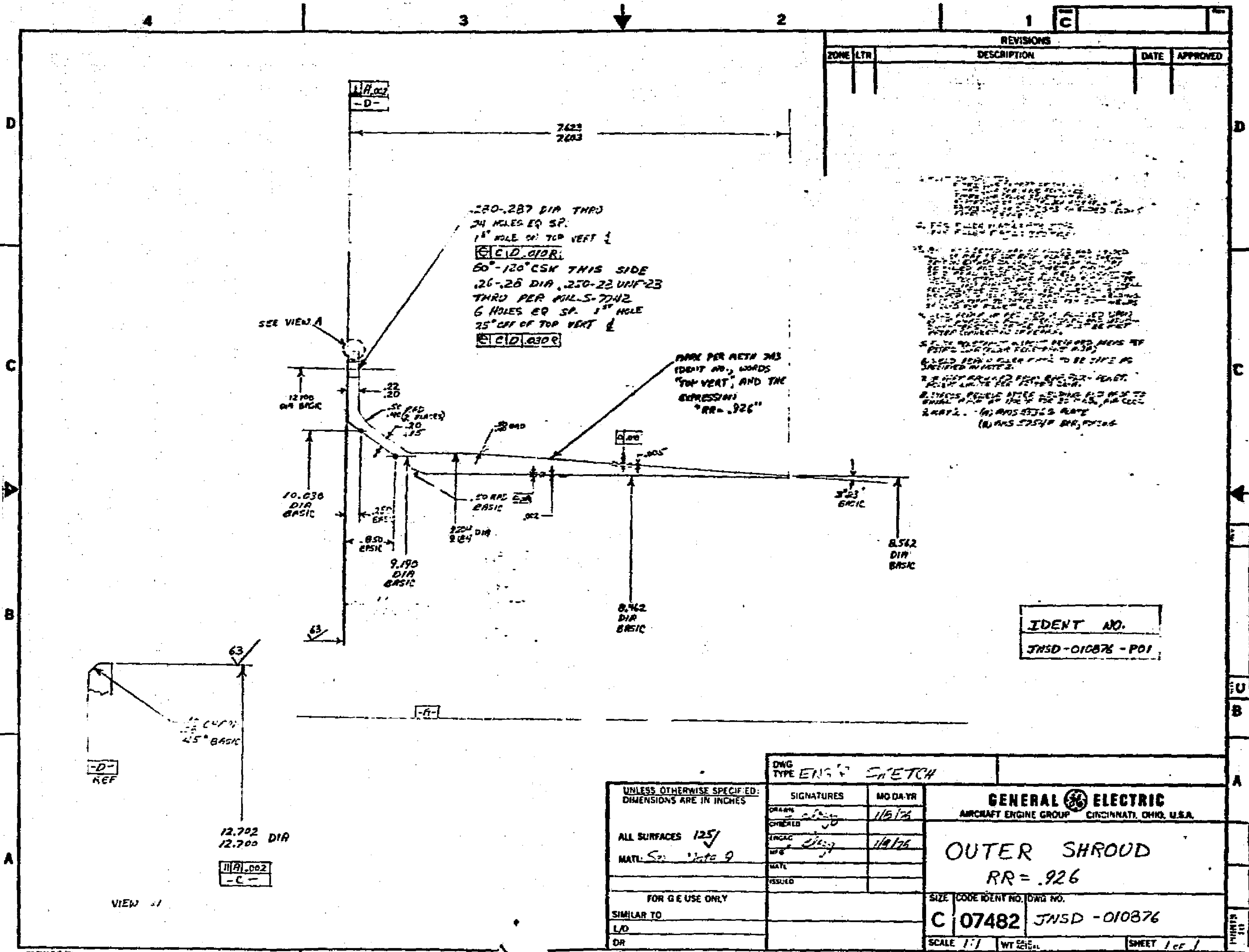

REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
.280-.287 DIA THRU
24 HOLES EQ SP.
60°-120° CSK THIS SIDE
.26-.28 DIA, .250-.28 UNF-2B
THRU PER MIL-S-7742
6 HOLES EQ SP.
SEE VIEW A
7.623
7.603
10.038 DIA BASIC
9.190 DIA BASIC
8.962 DIA BASIC
8.562 DIA BASIC
12.702
12.700 DIA
VIEW A
IDENT NO.
JNSD-010876-P01
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES
ALL SURFACES 125
SIGNATURES
MO DA YR
FOR G E USE ONLY
SIMILAR TO
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.
OUTER SHROUD
RR = .926
SIZE C
CODE IDENT NO. 07482
DWG NO. JNSD-010876
SCALE 1/1
SHEET 1 of 1

Figure 13.

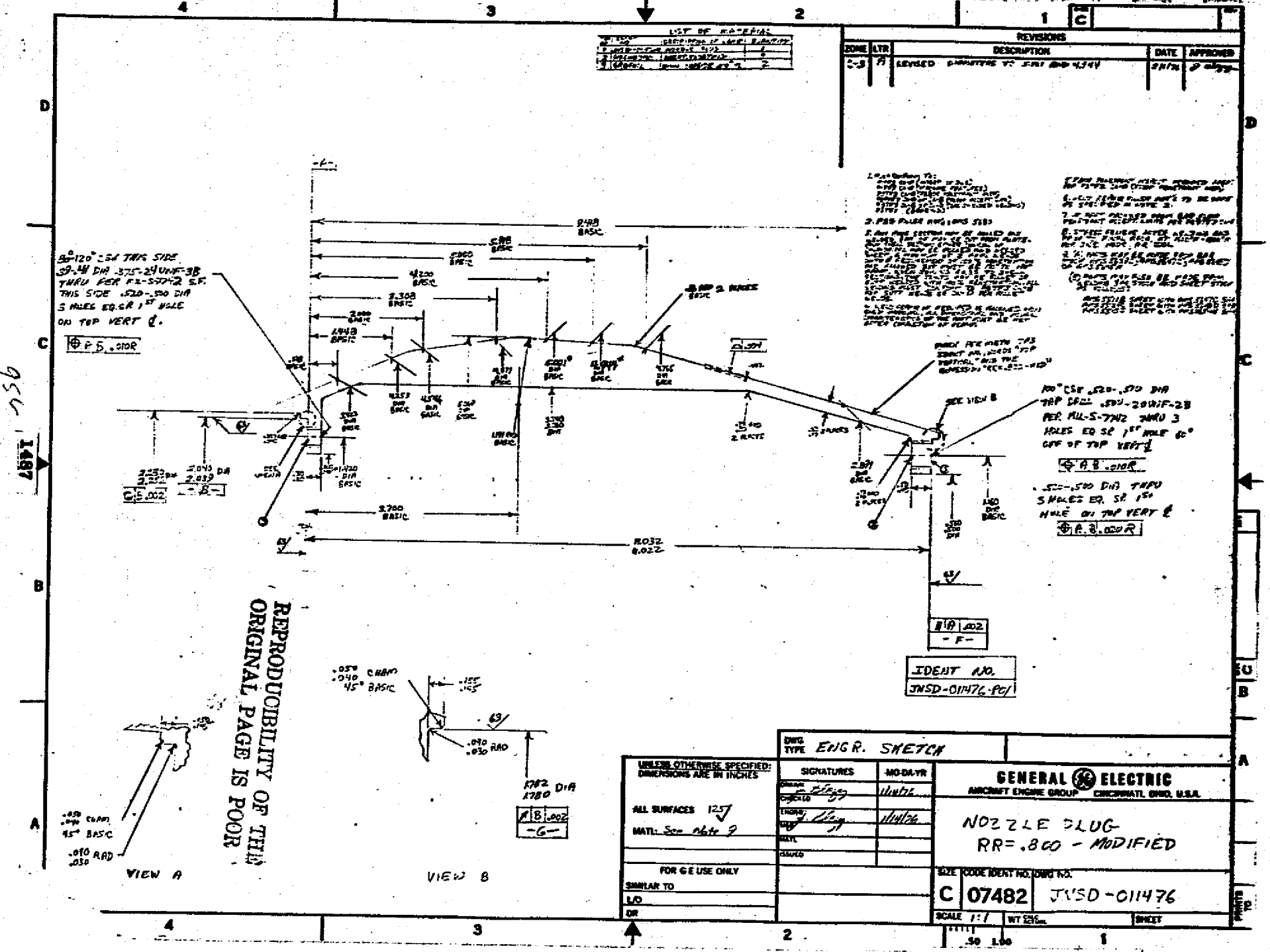

REVISIONS
DESCRIPTION
DATE
APPROVED
LIST OF MATERIAL
IDENT NO.
JNSD-011476-PC/
DWG TYPE ENG'R. SKETCH
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES
ALL SURFACES 125
MATL: See Note 9
FOR G E USE ONLY
SIMILAR TO
L/O
DR
SIGNATURES
MO-DA-YR
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.
NOZZLE PLUG
RR=.800 - MODIFIED
SIZE C
CODE IDENT NO. 07482
DWG NO. JNSD-011476
SCALE 1:1
SHEET
VIEW A
VIEW B
REPRODUCIBILITY OF THIS ORIGINAL PAGE IS POOR

Figure 14

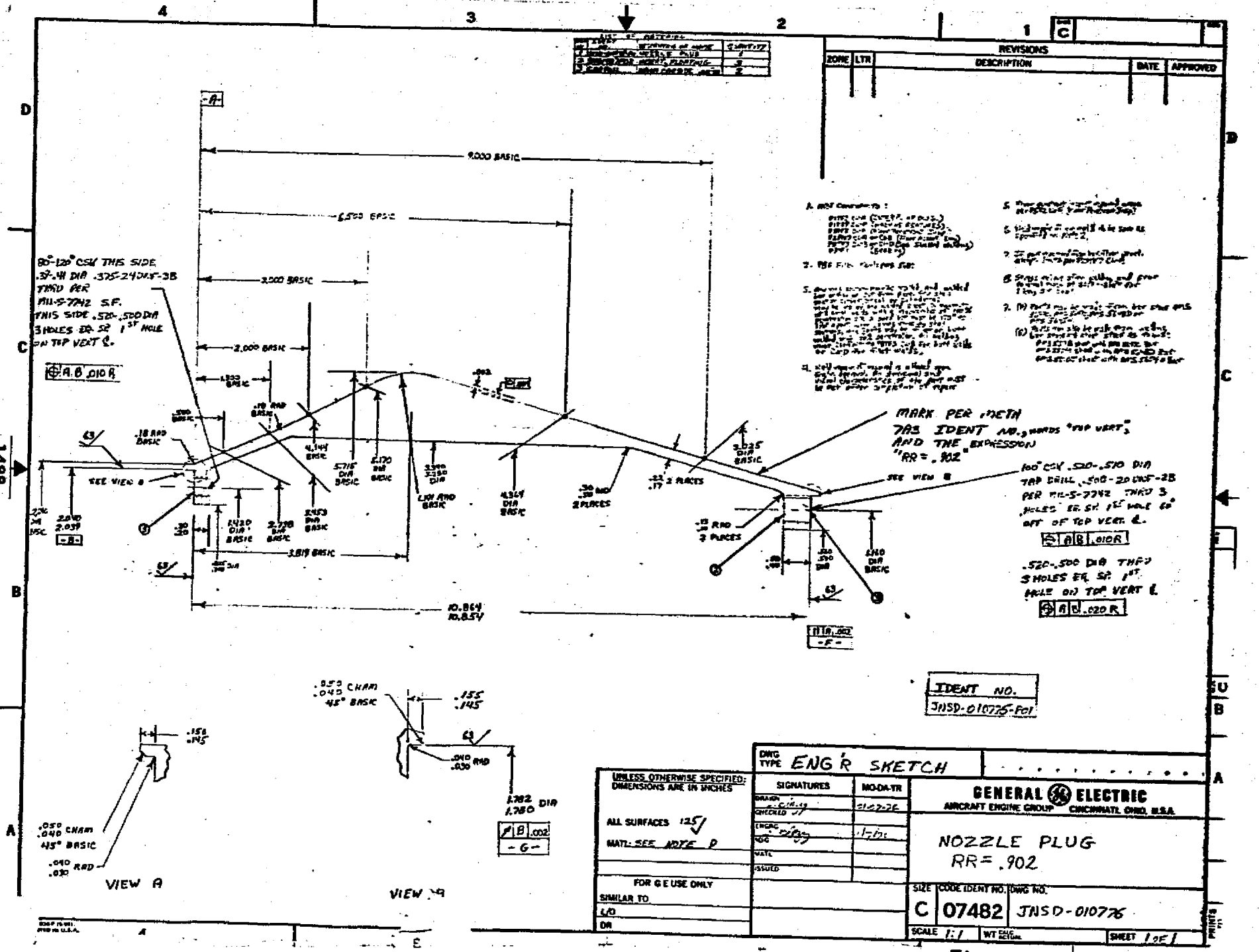

REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
9.000 BASIC
6.500 BASIC
3.500 BASIC
2.000 BASIC
80°-120° CSK THIS SIDE .37-.41 DIA .375-24UNF-3B THRD PER MIL-S-7742 S.F. THIS SIDE .520-.500 DIA 3 HOLES EQ SP 1ST HOLE ON TOP VERT ℄.
MARK PER METH 7A3 IDENT NO. 3 WORDS "TOP VERT" AND THE EXPRESSION "RR = .902"
100° CSK .520-.510 DIA TAP DRILL .500-20UNF-2B PER MIL-S-7742 THRD 3 HOLES EQ SP 1ST HOLE 60° OFF OF TOP VERT ℄.
.520-.500 DIA THRD 3 HOLES EQ SP 1ST HOLE ON TOP VERT ℄
SEE VIEW B
10.864 10.854
.050 CHAM .040 45° BASIC
.040 .030 RAD
VIEW A
VIEW B
IDENT NO. JNSD-010775-F01
DWG TYPE ENG'R SKETCH
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES
ALL SURFACES 125
MATL: SEE NOTE 9
FOR G E USE ONLY
SIMILAR TO
L/O
DR
SIGNATURES
DRAWN
CHECKED
ENGRG MGR
MATL
ISSUED
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.
NOZZLE PLUG
RR = .902
SIZE C
CODE IDENT NO. 07482
DWG NO. JNSD-010775
SCALE 1:1
SHEET 1 OF 1

Figure 15.

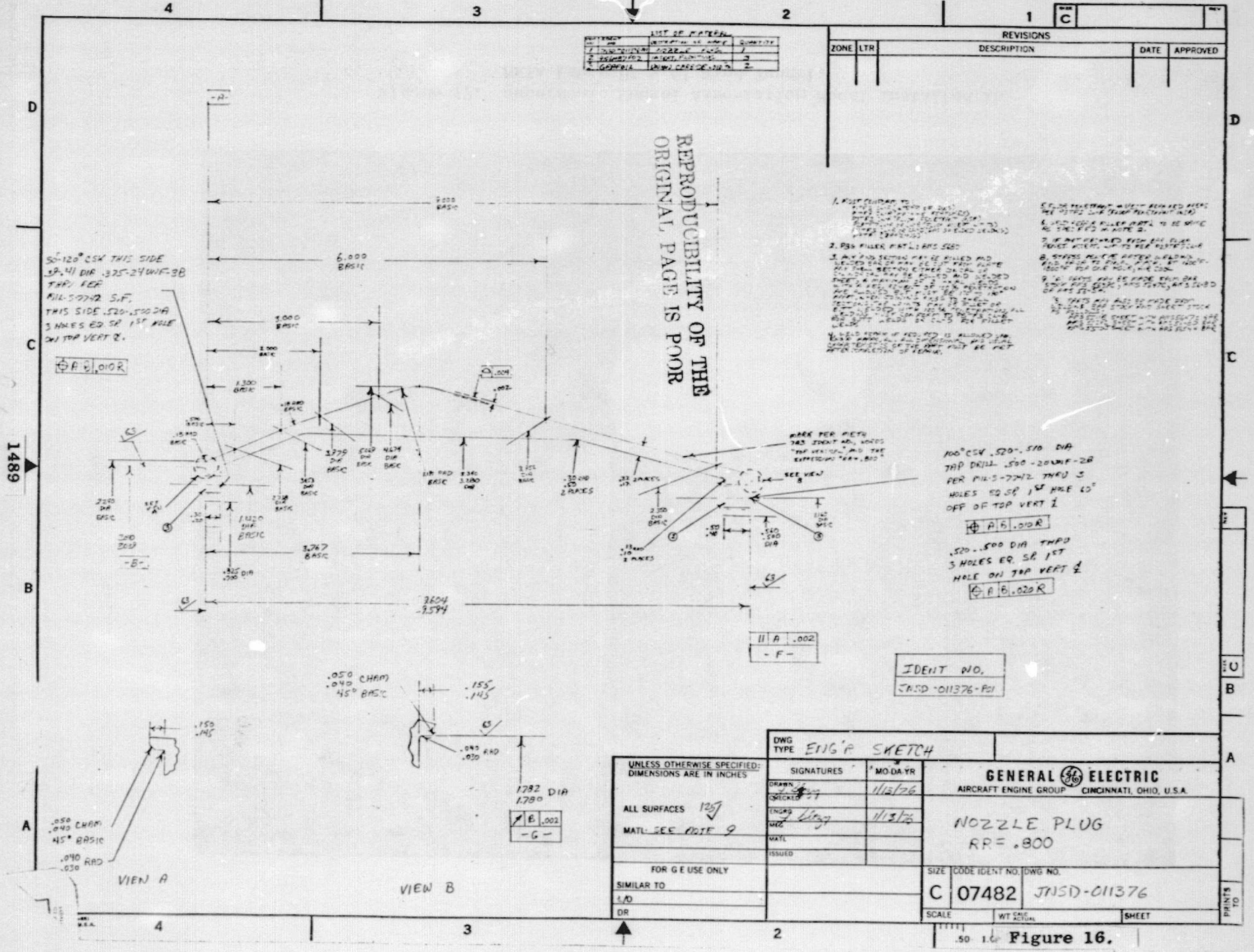

REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
LIST OF MATERIAL
REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR
50°-120° CSK THIS SIDE .39-.41 DIA .325-24 UNF-3B THD REF MIL-S-7742 SUF. THIS SIDE .520-.500 DIA 3 HOLES EQ SP 1ST HOLE ON TOP VERT 2.
⌖ A B .010 R
100° CSK .520-.510 DIA THD DRILL .500-20 UNF-2B PER MIL-S-7742 THRU 3 HOLES EQ SP 1ST HOLE 45° OFF OF TOP VERT 1
⌖ A B .010 R
.520-.500 DIA THRU 3 HOLES EQ. SP 1ST HOLE ON TOP VERT 1
⌖ A B .020 R
6.000 BASIC
3.604 3.594
11 A .002
- F -
IDENT NO. JNSD-011376-P01
.050 .040 CHAM 45° BASIC
.155 .145
.093 .030 RAD
1.782 DIA 1.780
/ B .002
- G -
.150 .145
.050 .040 CHAM 45° BASIC
.040 .030 RAD
VIEW A
VIEW B
DWG TYPE ENG'R SKETCH
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES
ALL SURFACES 125
MATL: SEE NOTE 9
FOR G E USE ONLY
SIMILAR TO
I/D
DR
SIGNATURES MO DA YR
DRAWN 11/13/76
CHECKED
ENGR 11/13/76
MFG
MATL
ISSUED
GENERAL ELECTRIC
AIRCRAFT ENGINE GROUP CINCINNATI, OHIO, U.S.A.
NOZZLE PLUG
RR = .800
SIZE C
CODE IDENT NO. 07482
DWG NO. JNSD-011376
SCALE
WT CALC ACTUAL
SHEET
PRINTS TO
1489

Figure 16.

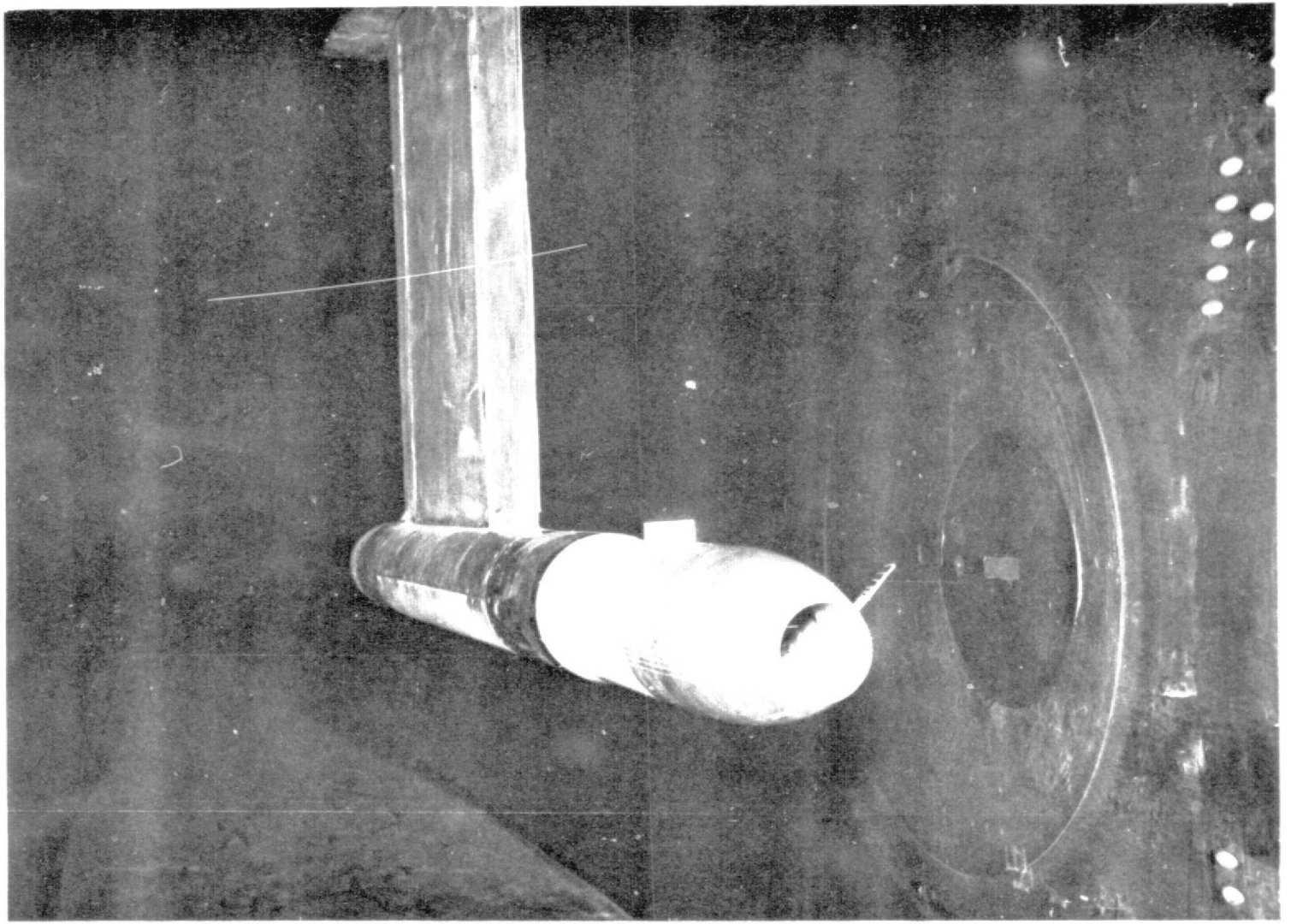
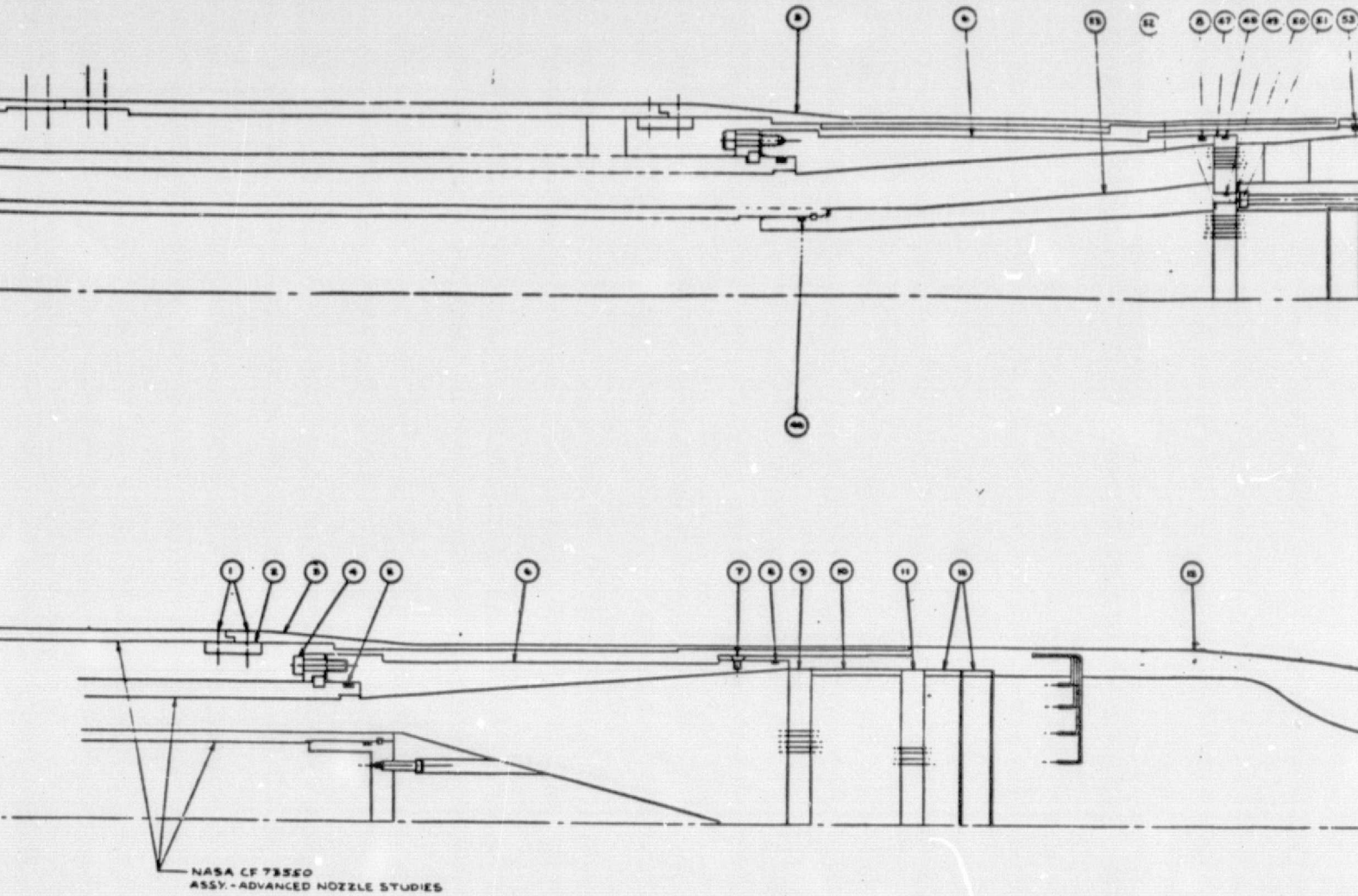


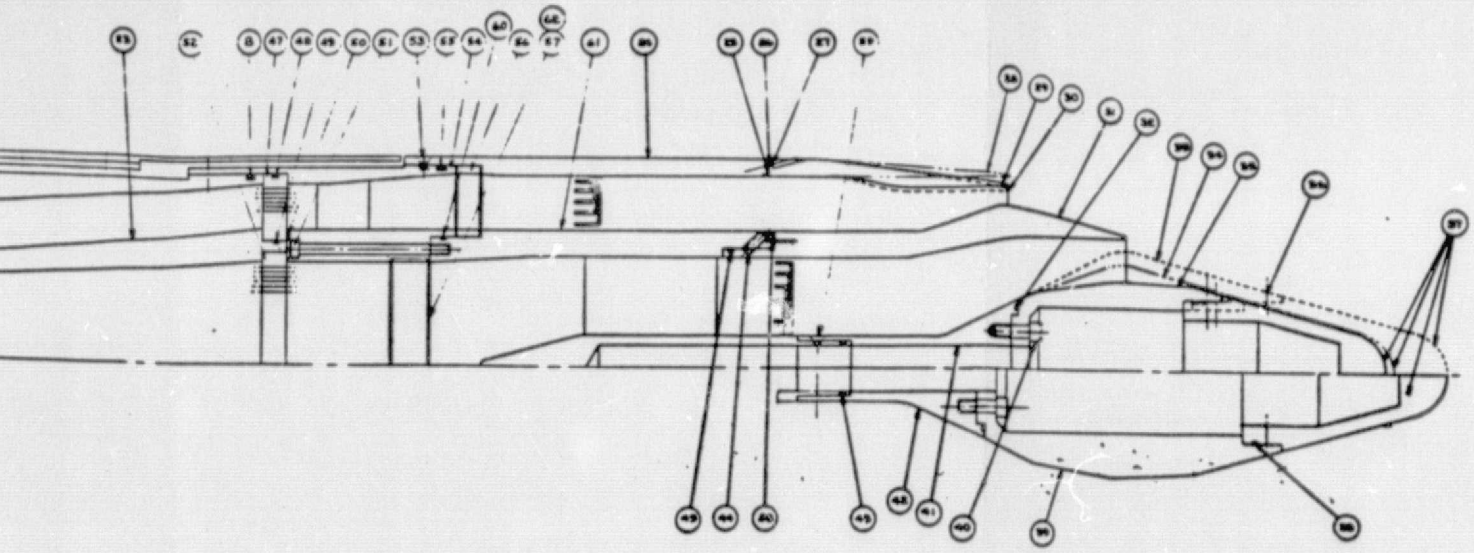
Figure 17. Supersonic Tunnel Association Model Installed in NASA Lewis 8' x 6' Wind Tunnel.

Figure 18. Typical Dual-Flow Model Installed in NASA-Lewis 8 x 6 Ft Wind Tunnel.

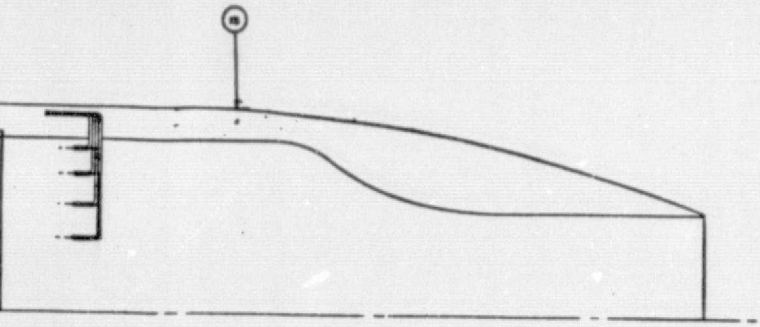


NASA CF 73550
ASSY. - ADVANCED NOZZLE STUDIES

FOLDOUT FRAME



DUAL FL



STA NOZZLE

1	62	1080-603	CORE SCREW FUSE WITH DEI
1	61	0913-602	PLUG SUPPORT WELDMENT
1	60		*048 O RING
4	59		*B-8UNC-2A FLT HD SOC CAP SCREW
1	58		*004 O RING
1	57	0913-604	SCREEN ASSEMBLY
1	56	0913-602	SCREEN ASSEMBLY
1	55		*004 O RING
1	54	0913-606	MAIN SUPPORT
18	53		*B-32UNF-2A FLT HD SOC CAP SCREW
1	52	0913-602	CHOKE PLATE
4	51		*10-32UNF-2A SOC HD CAP SCREW
1	50		*048 O RING
1	49		*047 O RING
1	48		*145 O RING
1	47	0913-603	CHOKE PLATE
1	46		*257 O RING
1	45		*047 O RING
8	44		*10-32UNF-2A FLT SOC SET SCREW
1	43		*021 O RING
1	42	1074-603	SHORT PLUG SUPPORT
1	41	1074-602	LONG PLUG SUPPORT
4	40		*6-32UNF-2A SOC HD CAP SCREW
1	39	1074-402	RR .80 BENT CORE PLUG
1	38		*038 O RING
1	37	1074-601	CORE PLUG TIP
4	36		*8-32UNF-2A FLAT HD SOC CAP SCREW
1	35	1074-404	RR .61 CORE PLUG
1	34	1074-401	RR .80 STRAIGHT CORE PLUG
1	33	1074-403	RR 902 CORE PLUG
1	32		*035 O RING
1	31	1074-001	PAN PLUG
1	30	1074-405	RR 926 S-PROD
1	29	1074-406	RR 902 S-PROD
1	28	1074-407	RR 858 S-PROD
12	27		*8-32UNF-2A SOC HD CAP SCREW
12	26		*003 O RING
1	25		040 DIA. PLUG - MTS D
1	24	0913-601	S-PROD EXTENSION
1	23		DUAL FLOW STEP ADAPTER
1	22	1076-003	BAFFLING PLATE
1	21	40.5076-003	DAISY NOZZLE
1	20	5401195A1	A-CORE DAISY NOZZLE
1	19		*012 O RING
6	18		*10-32UNF-2A SOC HD CAP SCREW
1	17	1076-002	INTERMEDIATE ADAPTER
1	16	1075-601	SCREEN ASSEMBLY
1	15	1080-602	CHOKE PLATE ASSEMBLY
1	14	1076-004	BAFFLING
1	13	0940-001 MOD	STA NOZZLE
1	12	0940-604	SCREEN ASSEMBLY
1	11	0940-601	CHOKE PLATE
1	10	0940-605	SPACER RING
1	9	0940-602	JET BREAKER
1	8		*148 O RING
12	7		*8-32UNF-2A FLAT HD SOC CAP SCR
1	6	1076-401	DUAL FLOW INTERMEDIATE ADAPTER
1	5		*158 O RING
6	4		*10-32UNF-2A SOC HD CAP SCREW
1	3	1076-001	DUAL FLOW BAFFLING
1	2	1076-60	SHORT PLUG
16	1		0-32 UNF-2A FLAT HD SOC CAP SCREW

			FLOW DYNE ENGINEERING CORP.
			MODEL ASSEMBLY
			GE ANNULAR PLUG NOZZLES
			NAS 3-19717
			1074-901

Figure 19

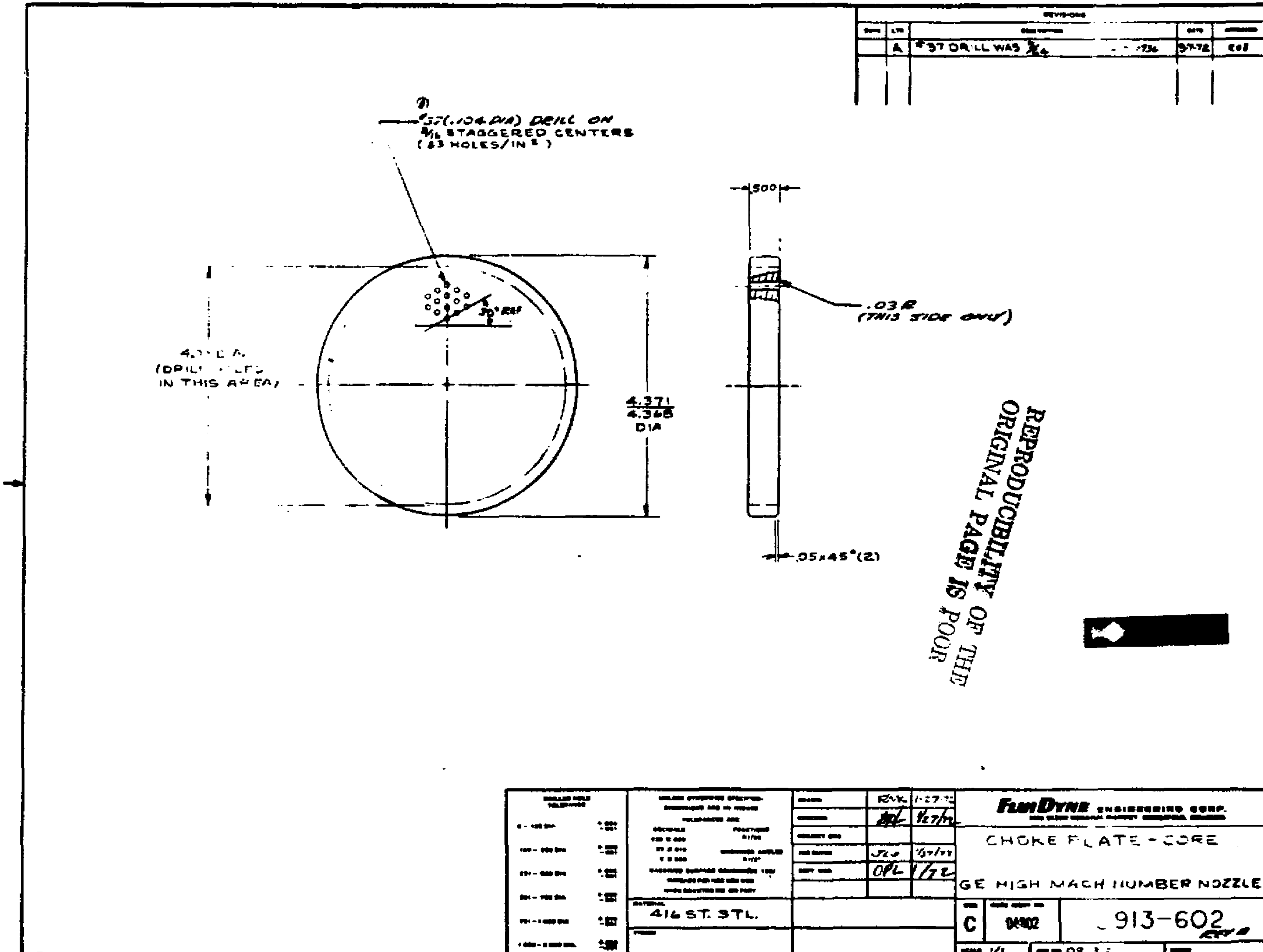
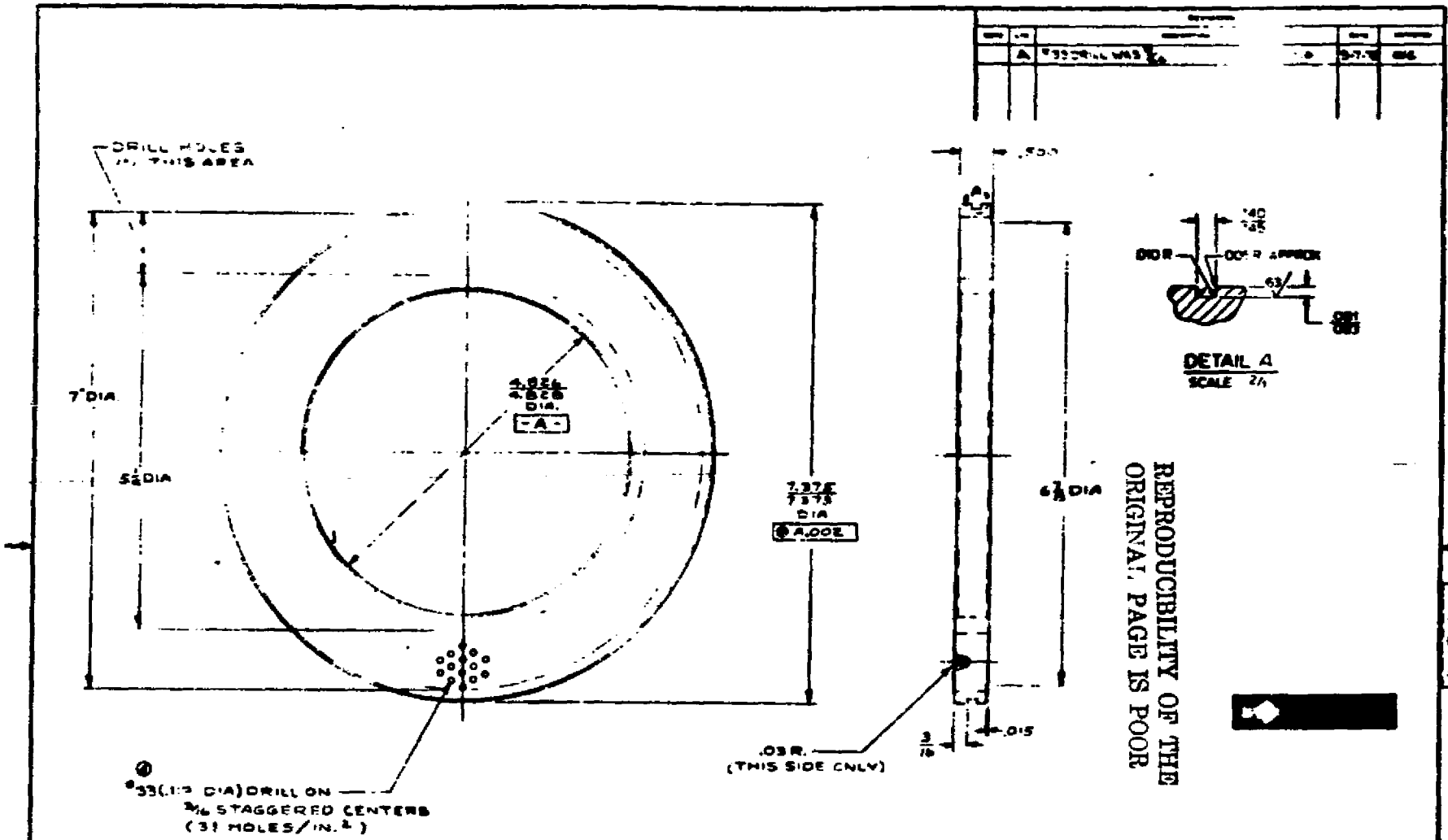
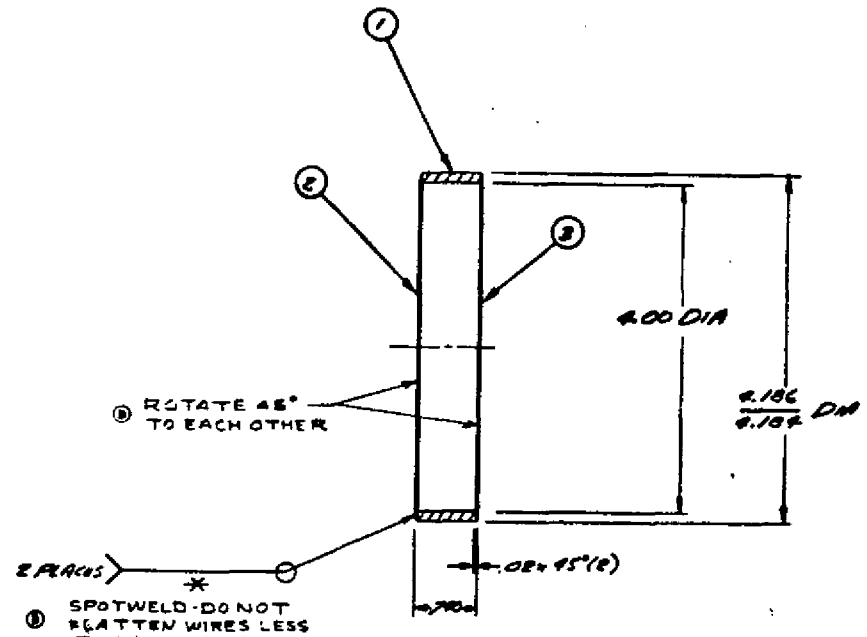


Figure 20



REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

Figure 21



REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	ITEM (2) WAS .028 DIA. WIRE ITEM (3) WAS .060 DIA. WIRE	6-11-73	
B	ITEMS (2) & (3) WAS "16 MESH ...		

LIST OF MATERIALS

QTY REQD	ITEM NO.	PART NUMBER	DESCRIPTION	SPECIFICATIONS
1	3		SCREEN	"8 MESH, .0?? DIA STL. STEEL WIRE
1	2		SCREEN	"8 MESH, .0?? DIA. STL. STEEL WIRE
1	1			4/6 STL STEEL

DRAWN	JLG	7/1/73
CHECKED	JLG	7/11/73
ENG APPR.	JLG	7/11/73
MFG APPR.	OPL	7/13/73

FLOWDYNE ENGINEERING CORP.

SCREEN ASSY-CORE

GE HIGH MACH NUMBER NOZZLE

SIZE	CAGE CODE NO.	DRAWING NO.
C	04802	0913-604 REV. B

SCALE 1/1 WEIGHT = 0.13 lb SHEET

Figure 22

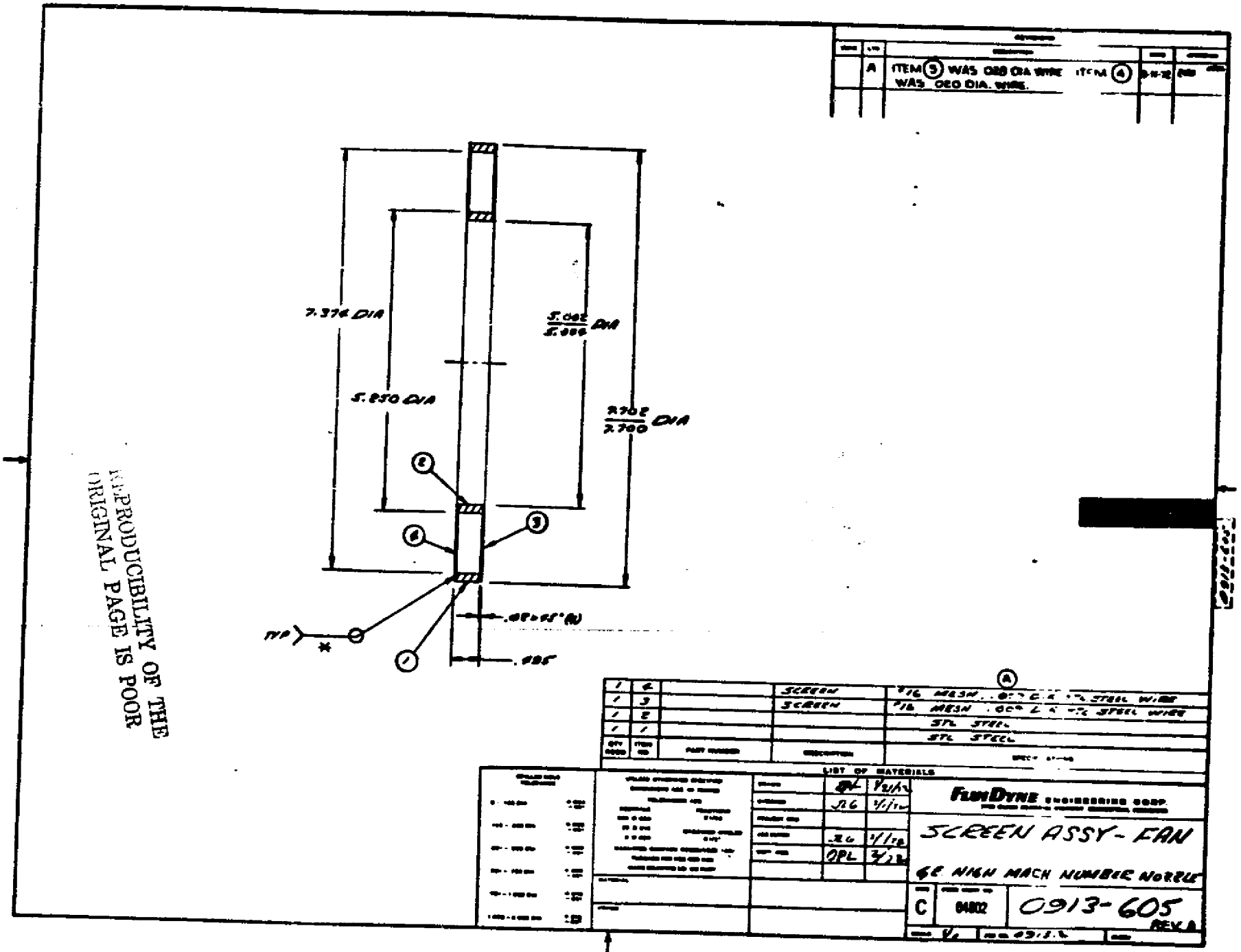
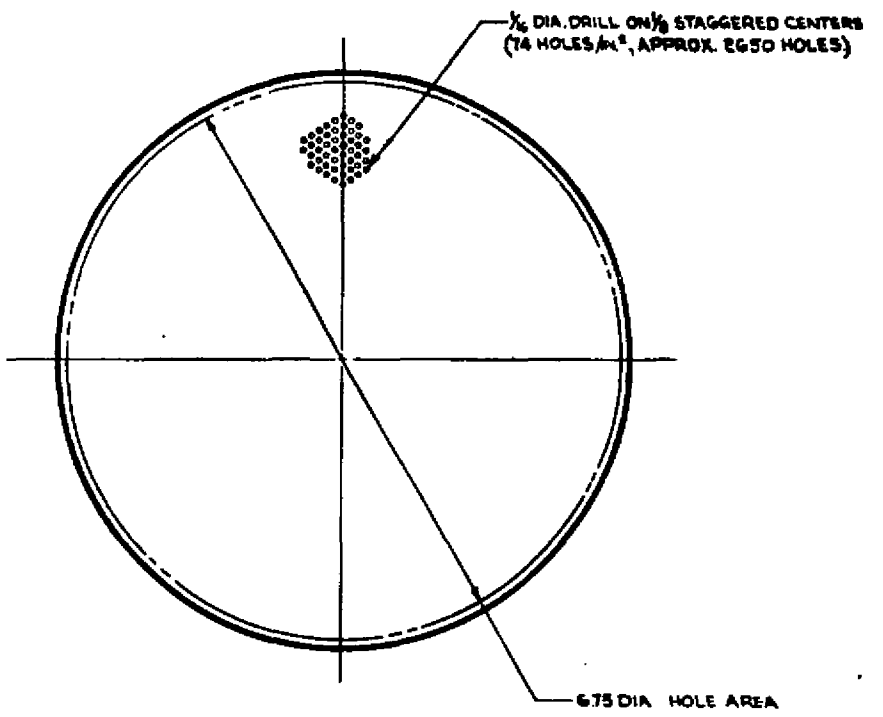
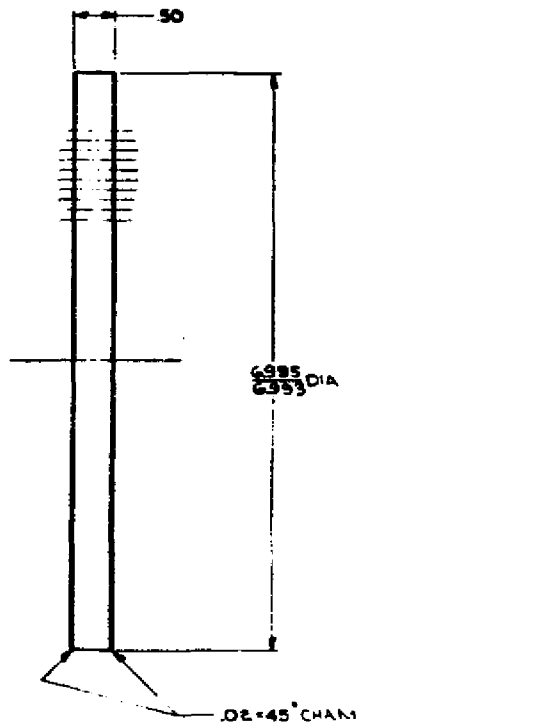


Figure 23





D.C.	9-29-72	FLUIDYNE ENGINEERING CORP.	
	10-4-72	CHOKE PLATE	
	10-4-72	GE/LEWIS SUPPRESSOR NOZZLE TESTS	
	10-72		
2024-T3 ALUM. ORG061-TG		C 04802	0940-601
		1/4 0940	

Figure 24

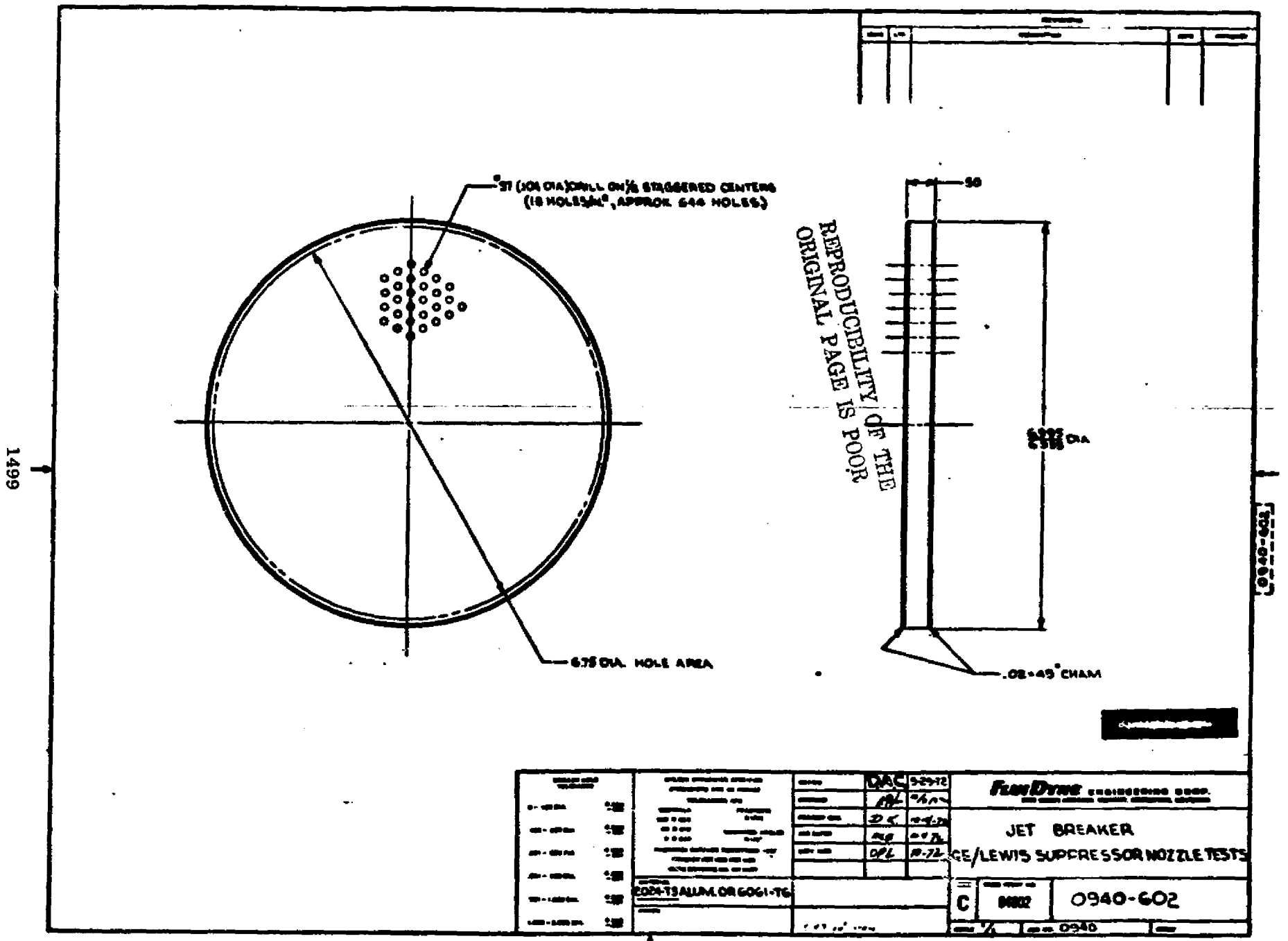

.031 (.201 DIA) DRILL ON 1/8 STAGGERED CENTERS
(18 HOLES/IN², APPROX. 644 HOLES)
.675 DIA. HOLE AREA
.50
.08×45° CHAM
REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR.
1499
2024-T3 ALUM. OR 6061-T6
JET BREAKER
GE/LEWIS SUPPRESSOR NOZZLE TESTS
0940-602
0940

Figure 25

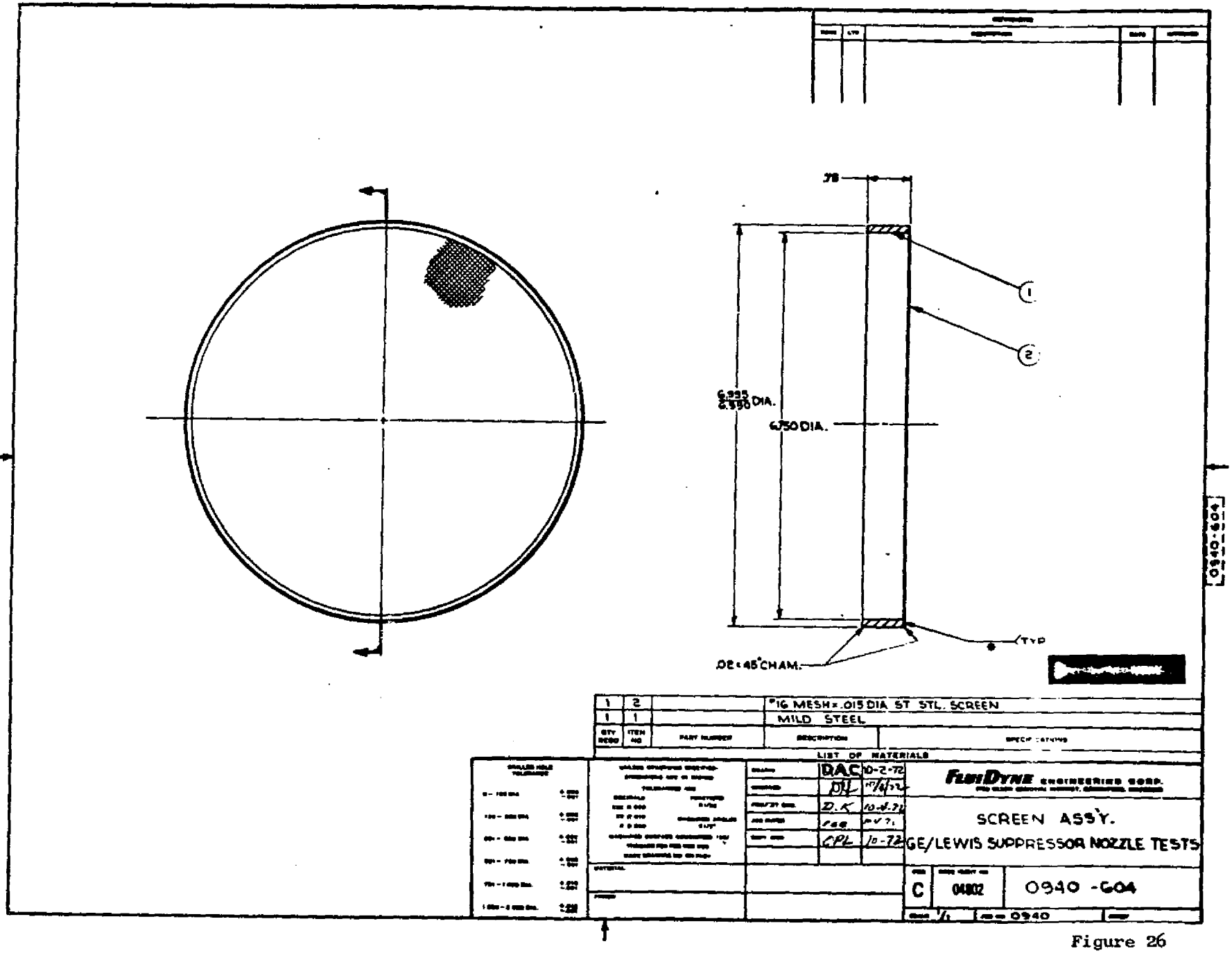
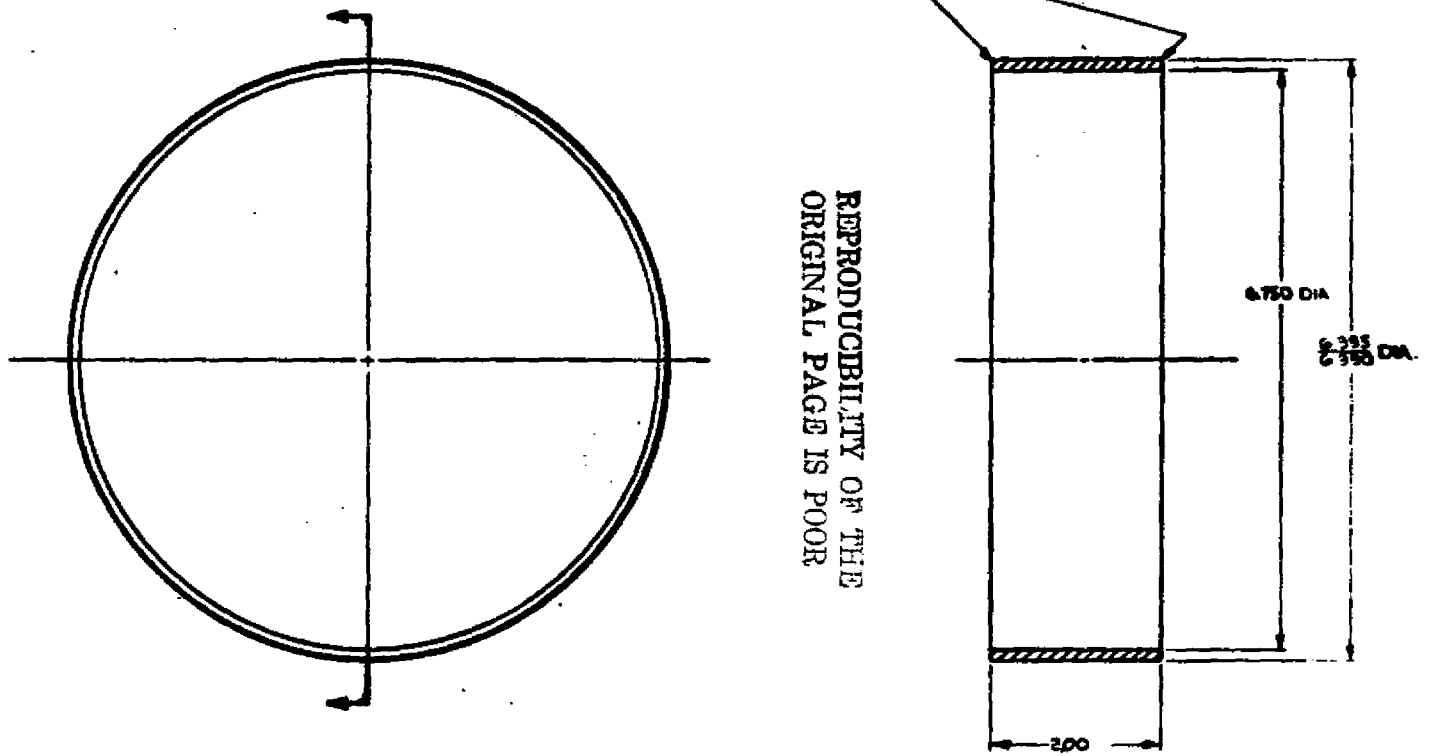

.78
6.995
6.990 DIA.
6.750 DIA.
1
2
.02 x 45° CHAM.
TYP
1500
0940-604
16 MESH x .015 DIA ST STL SCREEN
MILD STEEL
LIST OF MATERIALS
DAC 10-2-72
D.K 10-4-72
CPL 10-72
FLUIDYNE ENGINEERING CORP.
SCREEN ASS'Y.
GE/LEWIS SUPPRESSOR NOZZLE TESTS
C
04802
0940 -604

Figure 26



REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

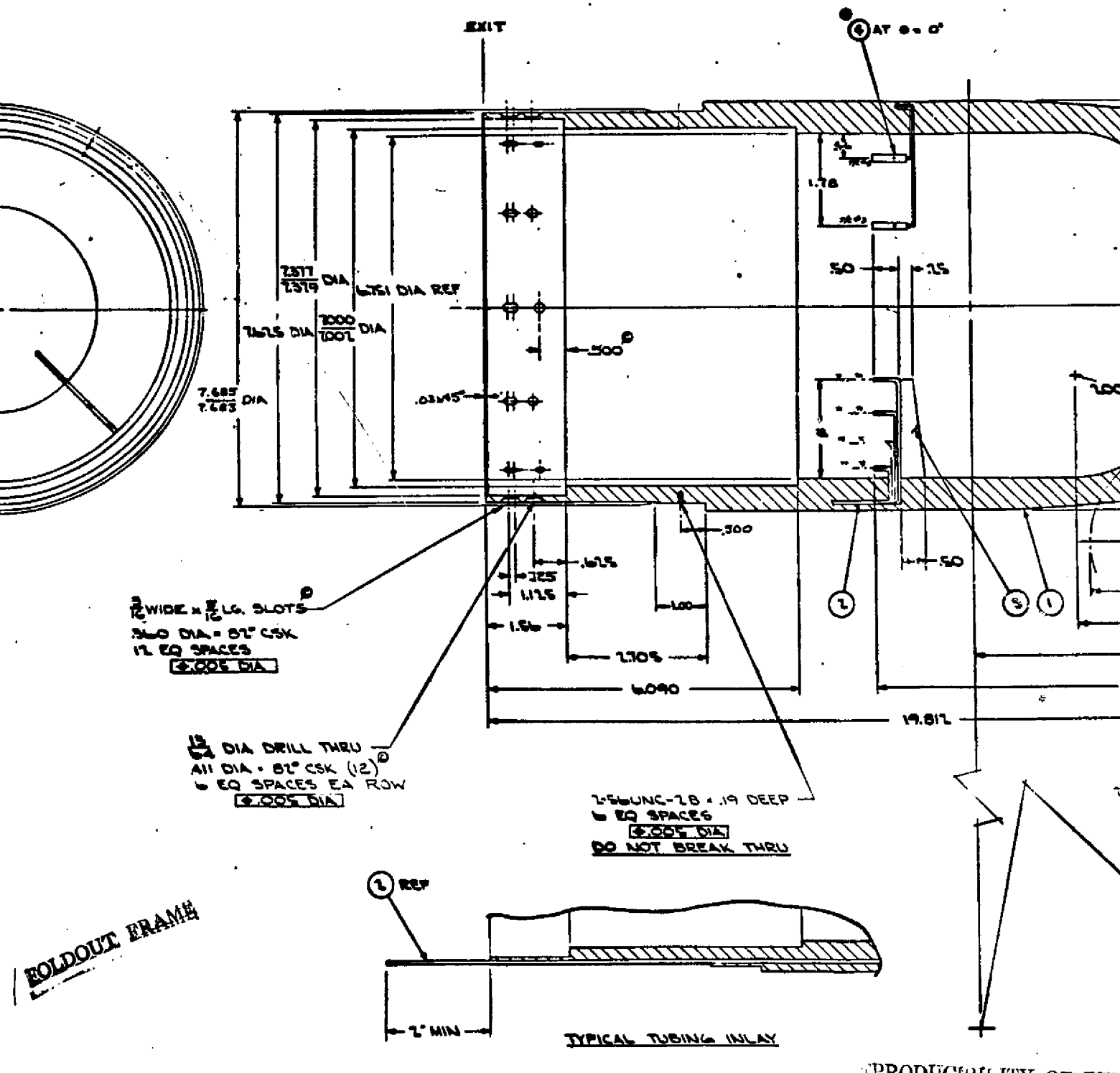
DRAWN	DAC	10-2-72	FLOW DYNE ENGINEERING CORP.
CHECKED	[illegible]	[illegible]	
ENGINEER APPR.	DAC	10-4-72	SPACER RING
MFG APPR.	[illegible]	[illegible]	GE/LEWIS SUPPRESSOR NOZZLE TESTS
QUALITY APPR.	[illegible]	10-72	
MATERIAL	MILD STEEL		SIZE C — FSCM NO. 01002 — 0940-605
FINISH			SCALE 1/1 — WEIGHT — SHEET 0940

Figure 27

EXTERNAL PRESSURE TAPS						
X	TAP #	⊕	TAP #	⊕	TAP #	⊕
11.932	1	0°	11	90°	21	180°
10.194	2		12		22	
8.160	3		13		23	
7.309	4		14		24	
5.154	5		15		25	
4.313	6		16		26	
1.881	7		17		27	
1.441	8		18		28	
.721	9		19		29	
.109	10	0°	20	90°	30	180°

P_t RAKES		
PROBE	⊕	Z
144	44°	2.19
145	45°	1.91
146	45°	.11
147	46°	.12
148	225°	2.19
149	225°	1.91
150	225°	.11
151	225°	.12

OUTER CONTOUR C		
X	R	X
0	1.039	5.2
.194	1.153	5.1
.394	1.350	5.1
1.194	1.514	5.1
1.394	1.598	7.1
2.194	1.835	7.1
3.194	1.977	8.1
3.394	2.111	8.1
4.194	2.336	9.1
4.394	2.455	10.1



FOLDOUT FRAME

OUTER CONTOUR COORDINATES			
X	R	X	R
0	2.039	5.294	3.590
.794	2.163	5.794	3.636
.794	2.330	6.294	3.713
1.294	2.514	6.794	3.780
1.794	2.679	7.294	3.839
2.294	2.833	7.794	3.888
2.794	2.977	8.294	3.926
3.294	3.111	8.794	3.960
3.794	3.235	9.294	3.987
4.294	3.350	9.794	3.996
4.294	3.455	10.794	4.000

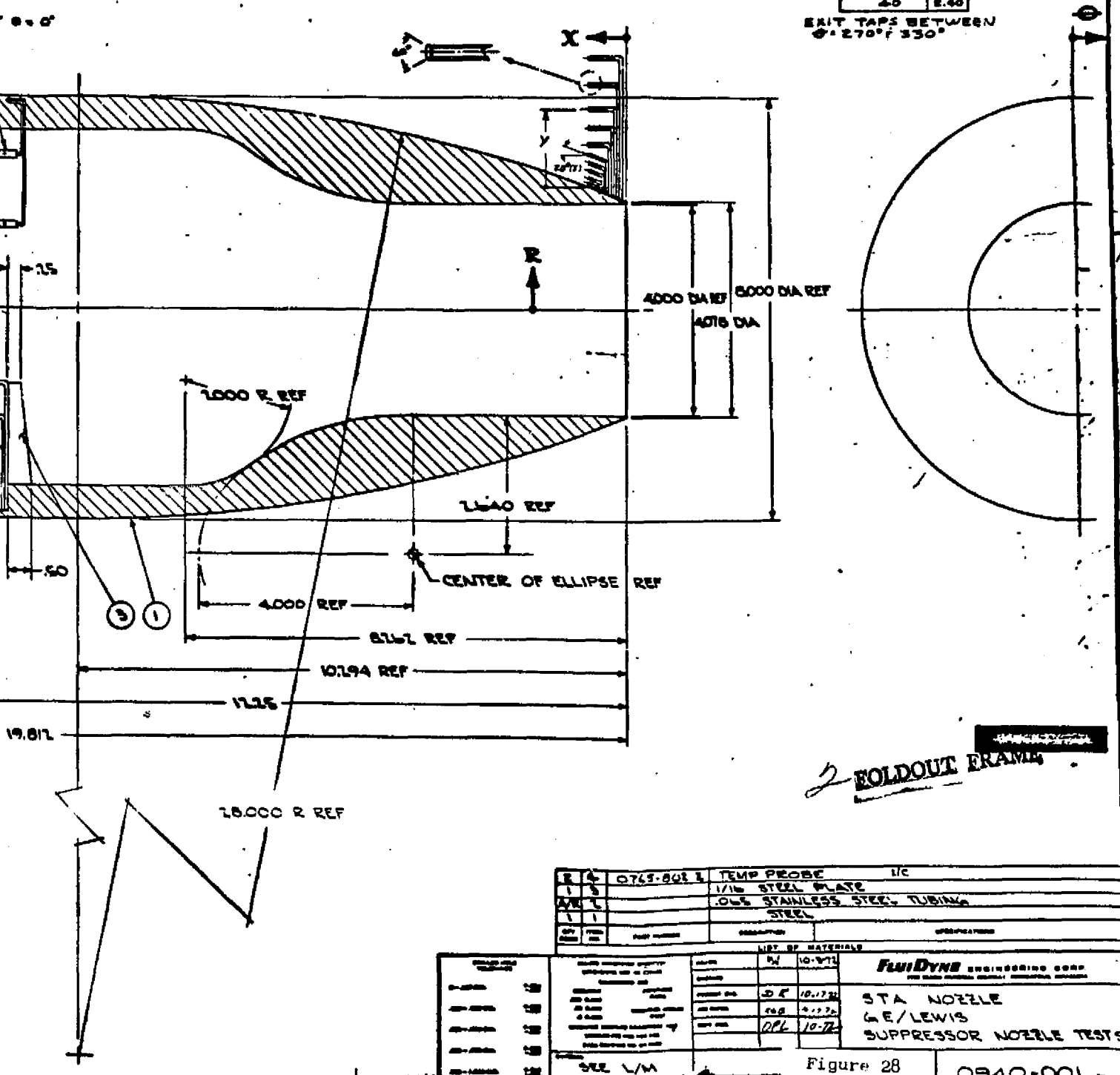
INNER CONTOUR COORDINATES			
X	R	X	R
0	1.000	6.150	2.457
4.000	1.000	6.500	2.519
4.150	1.005	6.750	2.713
4.300	1.021	7.000	2.894
4.750	1.047	7.350	3.101
5.000	1.084	7.500	3.174
5.150	1.151	7.750	3.305
5.500	1.195	8.000	3.358
5.750	1.246	8.142	3.375
6.000	1.354		

C	ADD 1/4 HOLES & SLOT 11/16 HOLES FOR STRAIN GAGES REVISE TABLE CODE AS BUILT		668
D	OUTER BOUNDARY RAKE ADDED		

OUTER BOUNDARY RAKE STATIC

TAP NO.	Y
31	.05
32	.15
33	.30
34	.45
35	.60
36	.80
37	1.10
38	1.45
39	1.90
40	2.40

EXIT TAPS BETWEEN Φ=270° & 330°



FOLDOUT FRAME 2

2	0765-801 L	TEMP PROBE	1/C
1		1/16 STEEL PLATE	
AR		.065 STAINLESS STEEL TUBING	
1		STEEL	

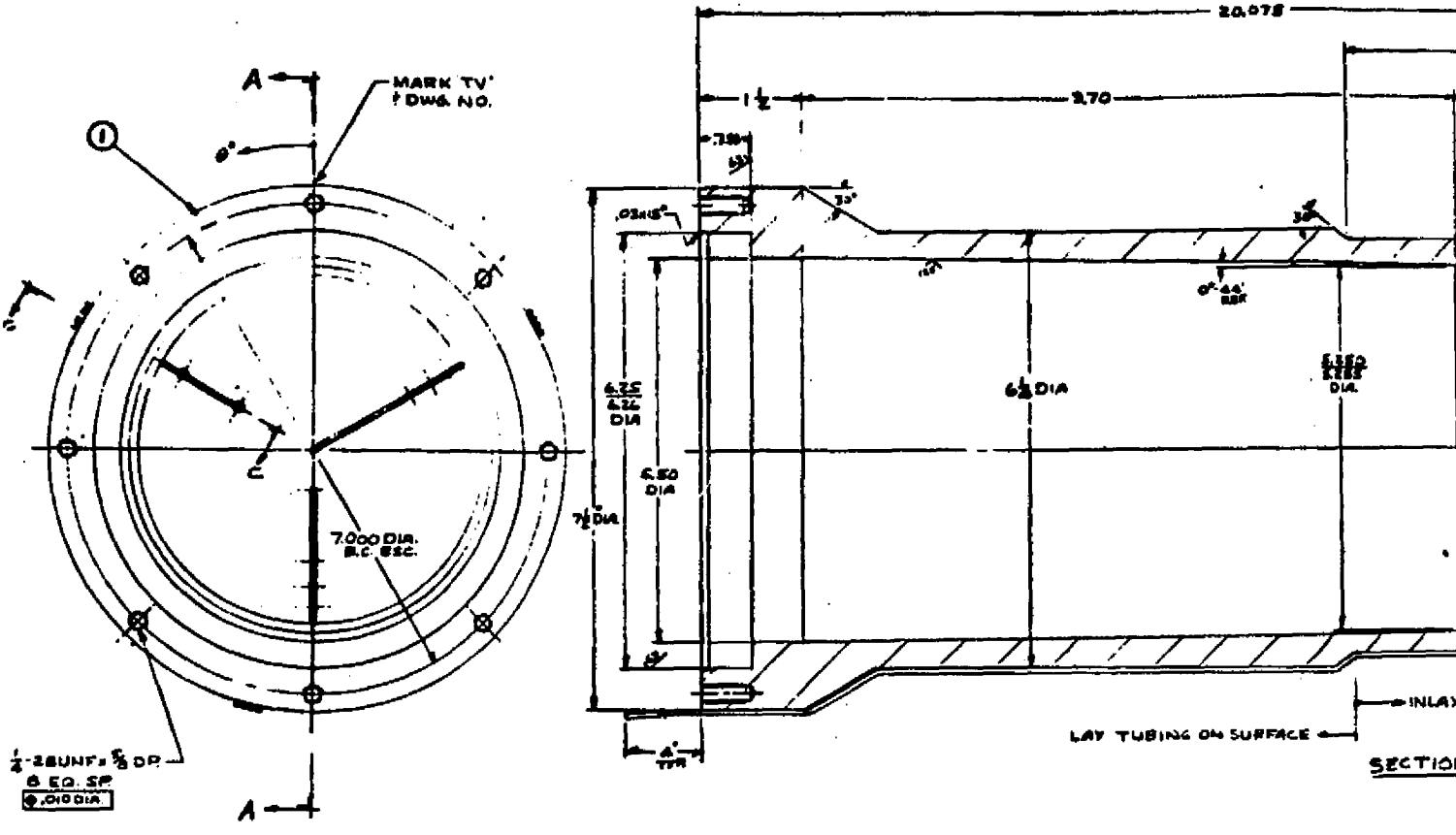
LIST OF MATERIALS

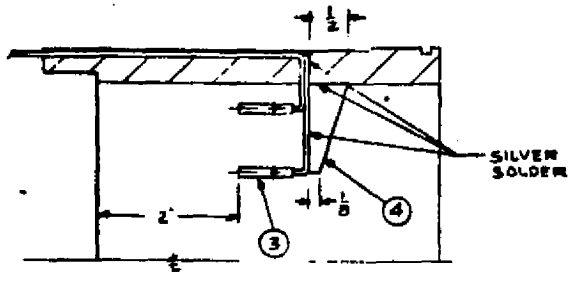
DRAWN	PW	10-9-72	FLUIDYNE ENGINEERING CORP
CHECKED			
ENGR APPR	DE	10-17-72	STA NOZZLE
MFG APPR	TAB	10-17-72	GE/LEWIS
QUAL APPR	DPL	10-17-72	SUPPRESSOR NOZZLE TESTS

SEE L/M

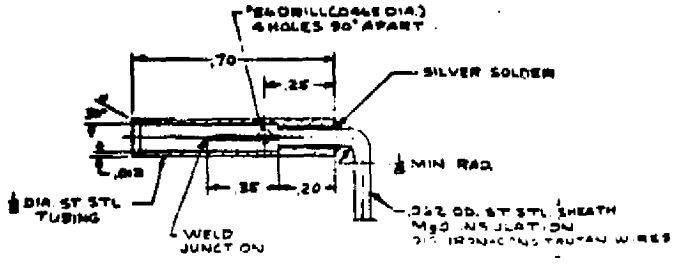
Figure 28

0940-001 REV D



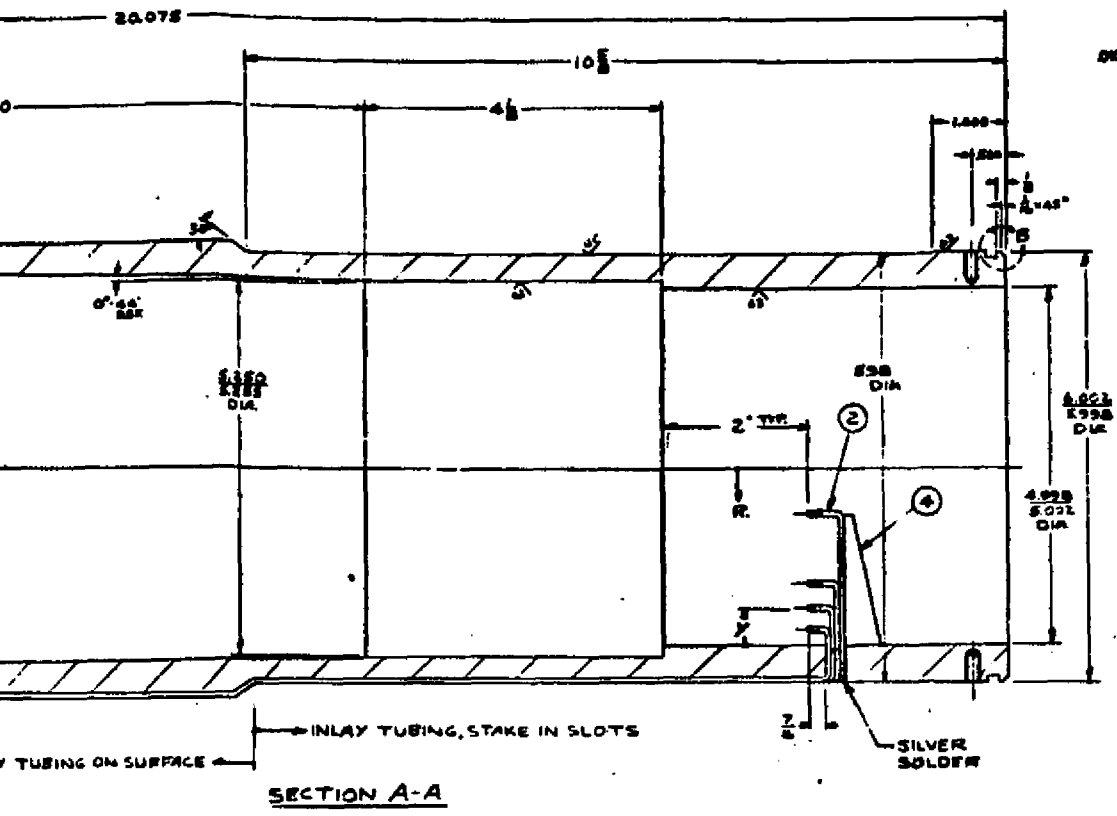


SECTION C-C

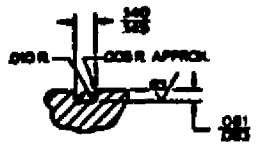


SCALE 4/1

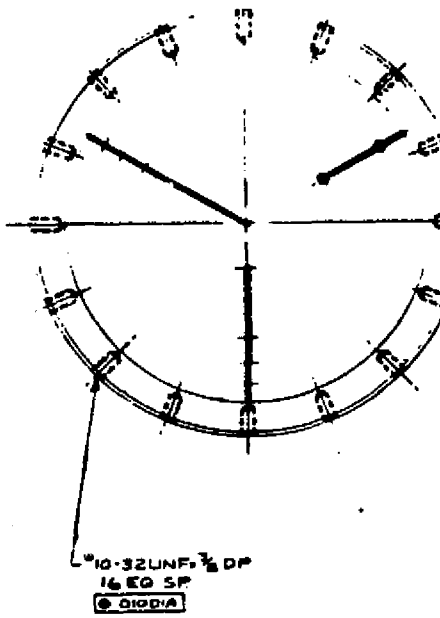
FOLDOUT FRAME



SECTION A-A

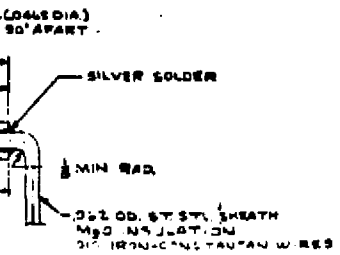


DETAIL B
SCALE 2/1



INSTRUMENTATION

TUBE	Y	R (REF)
P_b RAKE AT Θ=180°	1.88	.42
	.90	1.40
	.55	1.95
	.24	2.24
P_s RAKE AT Θ=300°	2.50	0
	.90	1.40
	.55	1.95
	.24	2.24
T_s RAKE AT Θ=60°	1.25	1.25
	.34	2.14



[redacted]

2

FOLDOUT FRAME

3	4		¼ THK STRUTS
2	3		SHIELDED THERMOCOUPLE I/C TYPE J
1	2		.062 OD x .009 WALL x LENGTH
1	1		MILD S

LIST OF MATERIALS

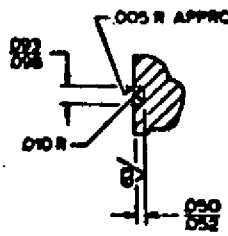
FLUIDYNE ENGINEERING

INTERMEDIATE ADAPTER

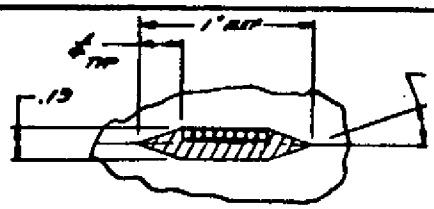
REFER TO GE DWG

Figure 29

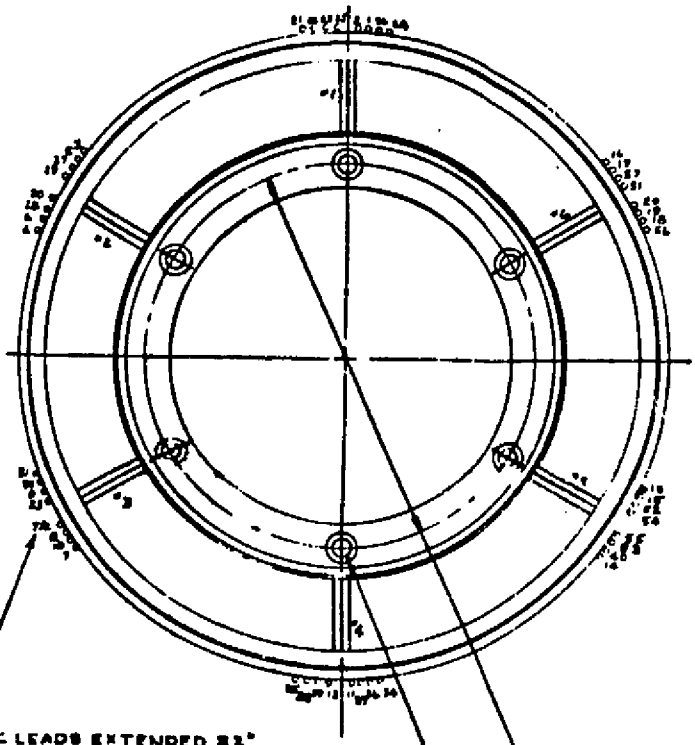
C75-002

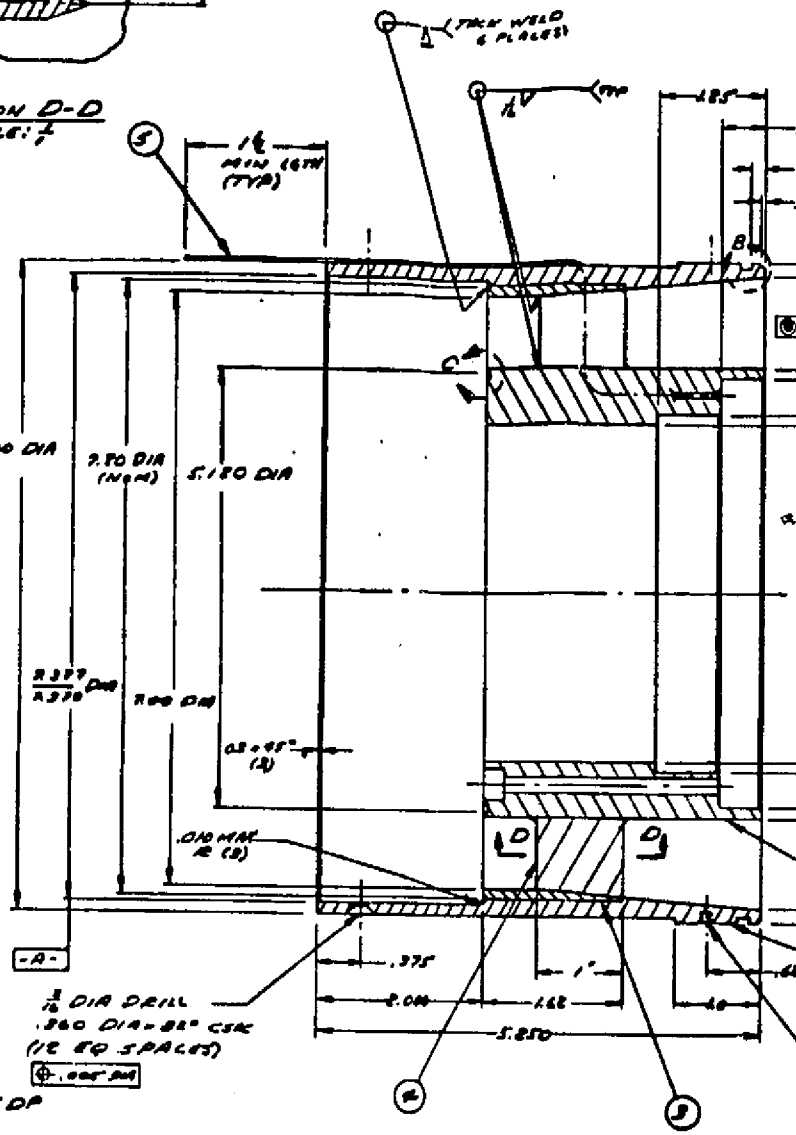


DETAIL C
SCALE: 4/1



SECTION D-D
SCALE: 4/1

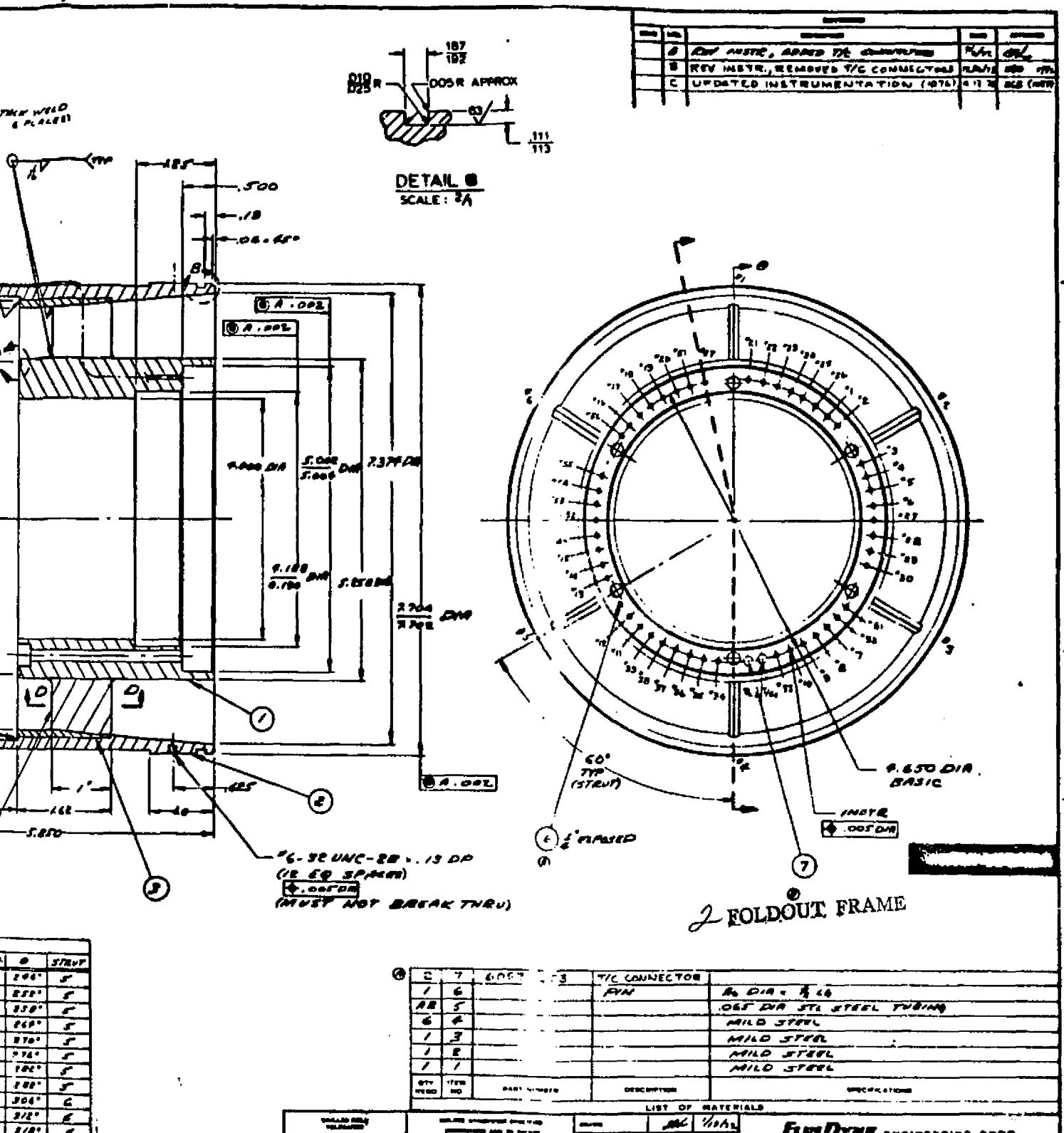




LEADS EXTENDED 82°

OLDOUT FRAME

INSTRUMENTATION								
TRIP NO	Ø	STRUT	TRIP NO	Ø	STRUT	TRIP NO	Ø	STRUT
21	6°	1	31	132°	3	13	246°	5
22	18°	1	32	138°	3	14	252°	5
23	18°	1	7	138°	3	15	258°	5
24	24°	1	8	144°	3	40	264°	5
25	30°	1	9	150°	3	52	270°	5
26	36°	1	10	156°	3	53	276°	5
1	42°	1	33	162°	3	54	282°	5
8	48°	1	T/C1	168°	3	55	288°	5
3	66°	2	T/C2	174°	3	56	306°	6
4	72°	2	34	180°	4	16	312°	6
5	78°	2	35	192°	4	17	318°	6
6	84°	2	36	198°	4	18	324°	6
27	90°	2	37	204°	4	19	330°	6
28	96°	2	38	210°	4	20	336°	6
29	102°	2	39	216°	4	61	342°	6
30	108°	2	11	222°	4	37	348°	6
			12	228°	4			
			Apollo	234°	—			



2	7	T/C CONNECTOR
1	6	
AR	5	
6	4	
1	3	
1	2	
1	1	
QTY REQD	ITEM NO	PART NUMBER / DESCRIPTION / SPECIFICATION

LIST OF MATERIALS

		DIA x .44
		.065 DIA STL STEEL TUBING
		MILD STEEL
		MILD STEEL
		MILD STEEL
		MILD STEEL

DRAWN	MC	1/10/72
ENGR	FAK	1/21/72
PROJECT ENGR		
APPD	JLG	1/31/72
MGR ENGR	OPL	1/31/72

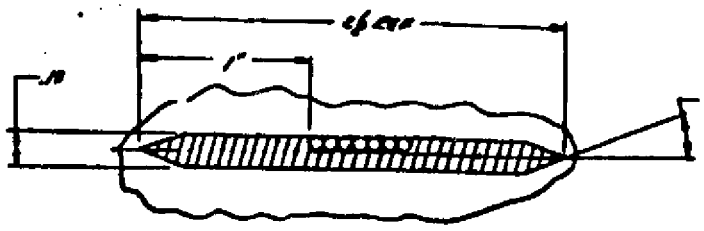
FLUIDYNE ENGINEERING CORP.

MAIN SUPPORT WELDMENT

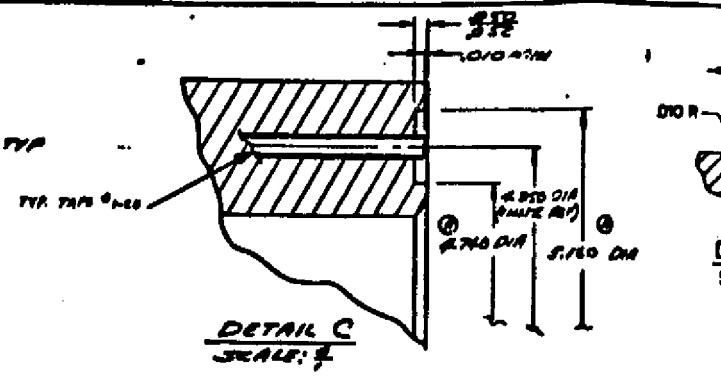
G.E. HIGH MACH NUMBER NOZZLE

D | 04802 | 0913-404 | Sht C

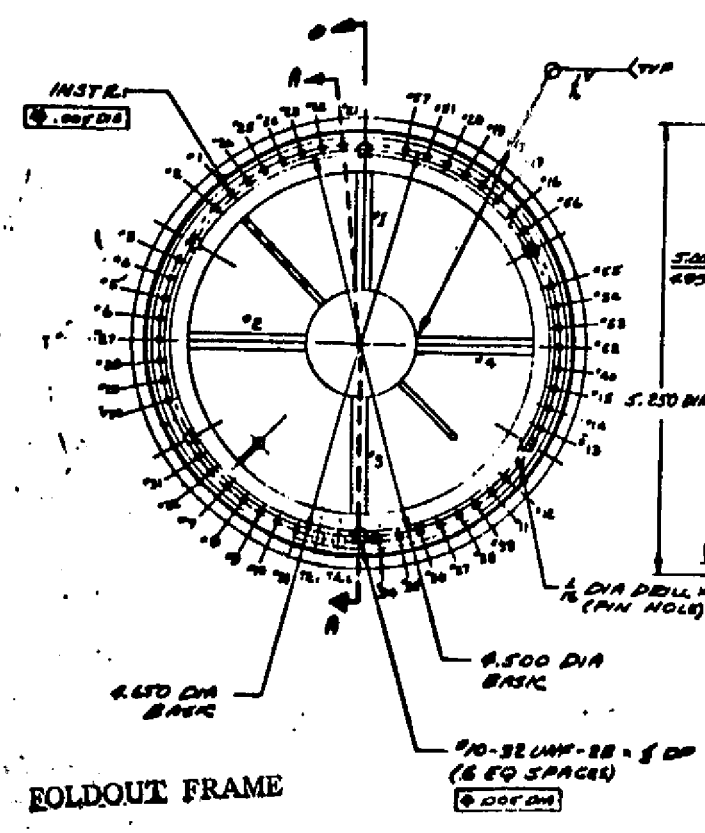
Figure 30



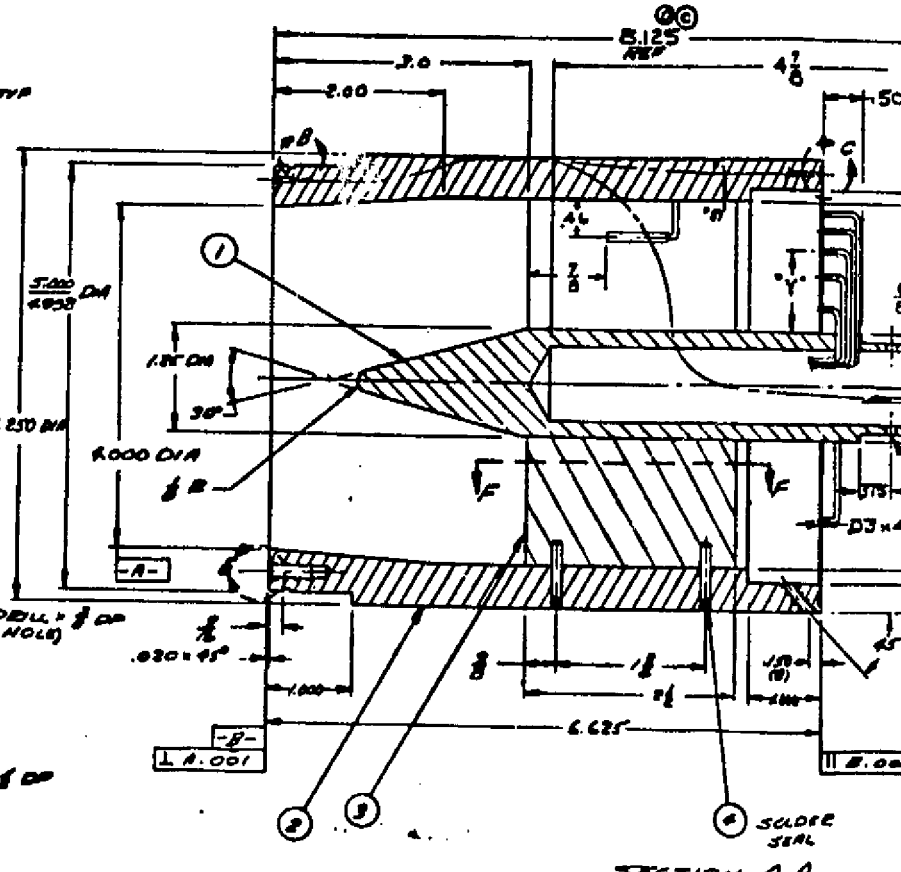
SECTION E-E
SCALE 1:1



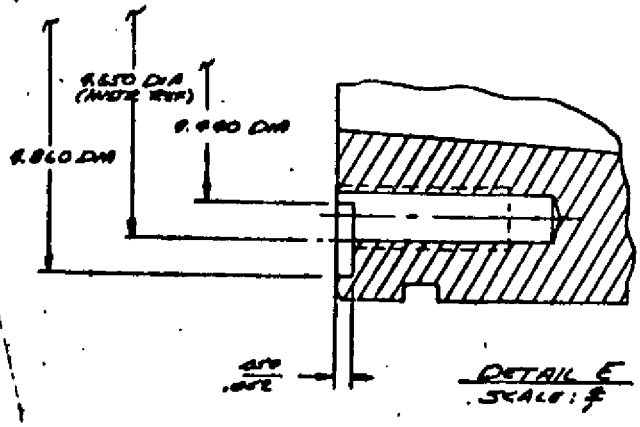
DETAIL C
SCALE: 1:1



FOLDOUT FRAME



SECTION A-A



DETAIL E
SCALE: 1:1

INSTRUMENTATION

21	6°	—	1	31	186°	—	2	13	346°	226°	—
22	12°	—	1	32	192°	—	2	14	352°	232°	—
23	18°	—	1	7	138°	180°	—	15	358°	238°	—
24	24°	—	1	8	144°	180°	—	40	364°	—	4
25	30°	—	1	9	150°	180°	—	52	370°	—	4
26	36°	—	1	10	156°	180°	—	53	376°	—	4
1	42°	10°	—	33	168°	—	3	54	382°	—	4
2	48°	20°	—	T/C1	168°	—	—	55	388°	—	4
3	54°	30°	—	T/C 2	174°	—	—	56	394°	—	4
4	60°	50°	—	34	180°	—	3	16	310°	190°	—
5	78°	60°	—	35	192°	—	3	17	316°	200°	—
6	84°	80°	—	36	198°	—	3	18	322°	214°	—
27	90°	—	2	37	204°	—	3	19	328°	220°	—
1	96°	—	2	38	210°	—	3	20	334°	226°	—
28	102°	—	2	39	216°	—	3	51	340°	—	1
30	108°	—	2	11	222°	180°	4	57	346°	—	1
				12	228°	240°	4				
				ANT	234°	—	4				

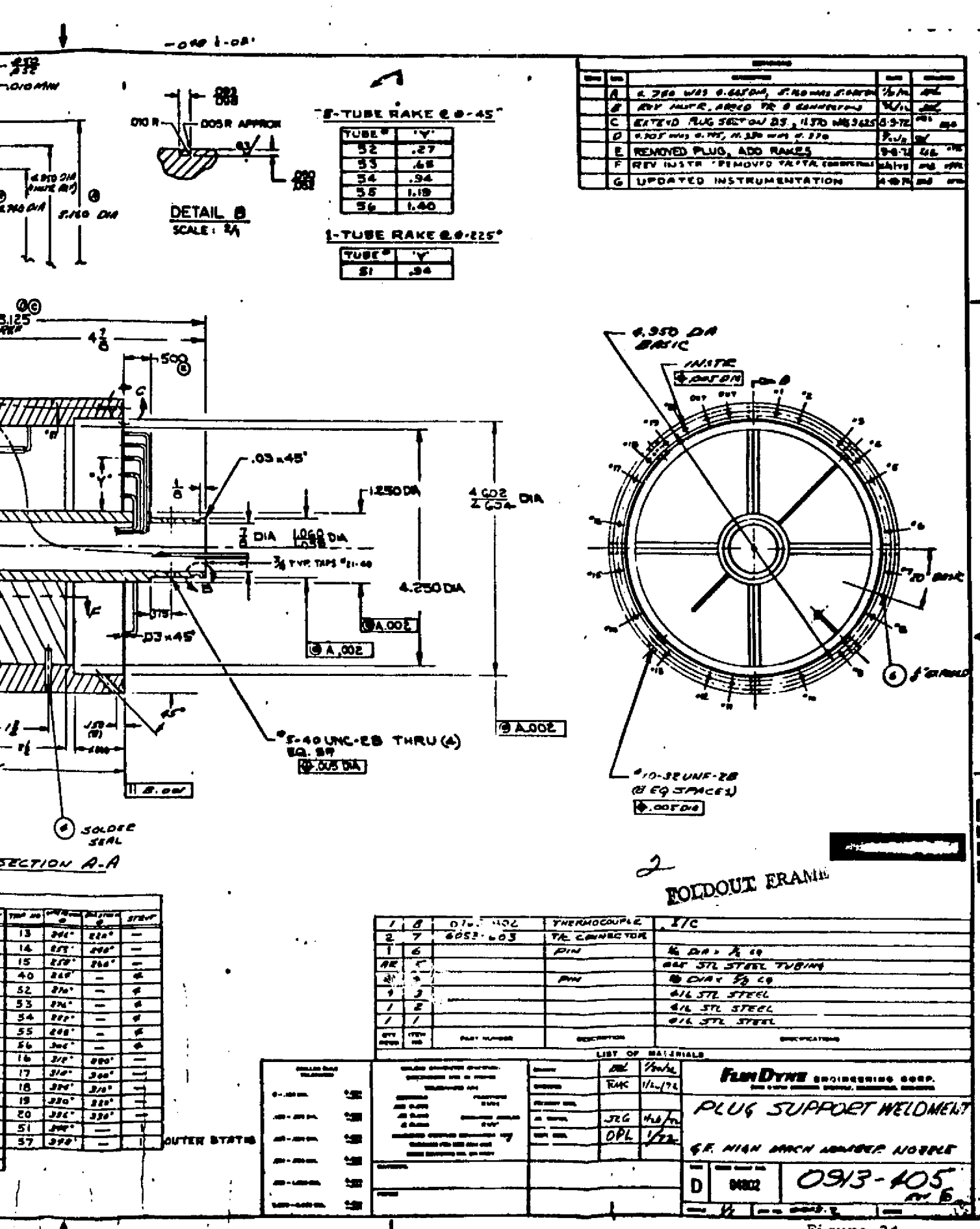
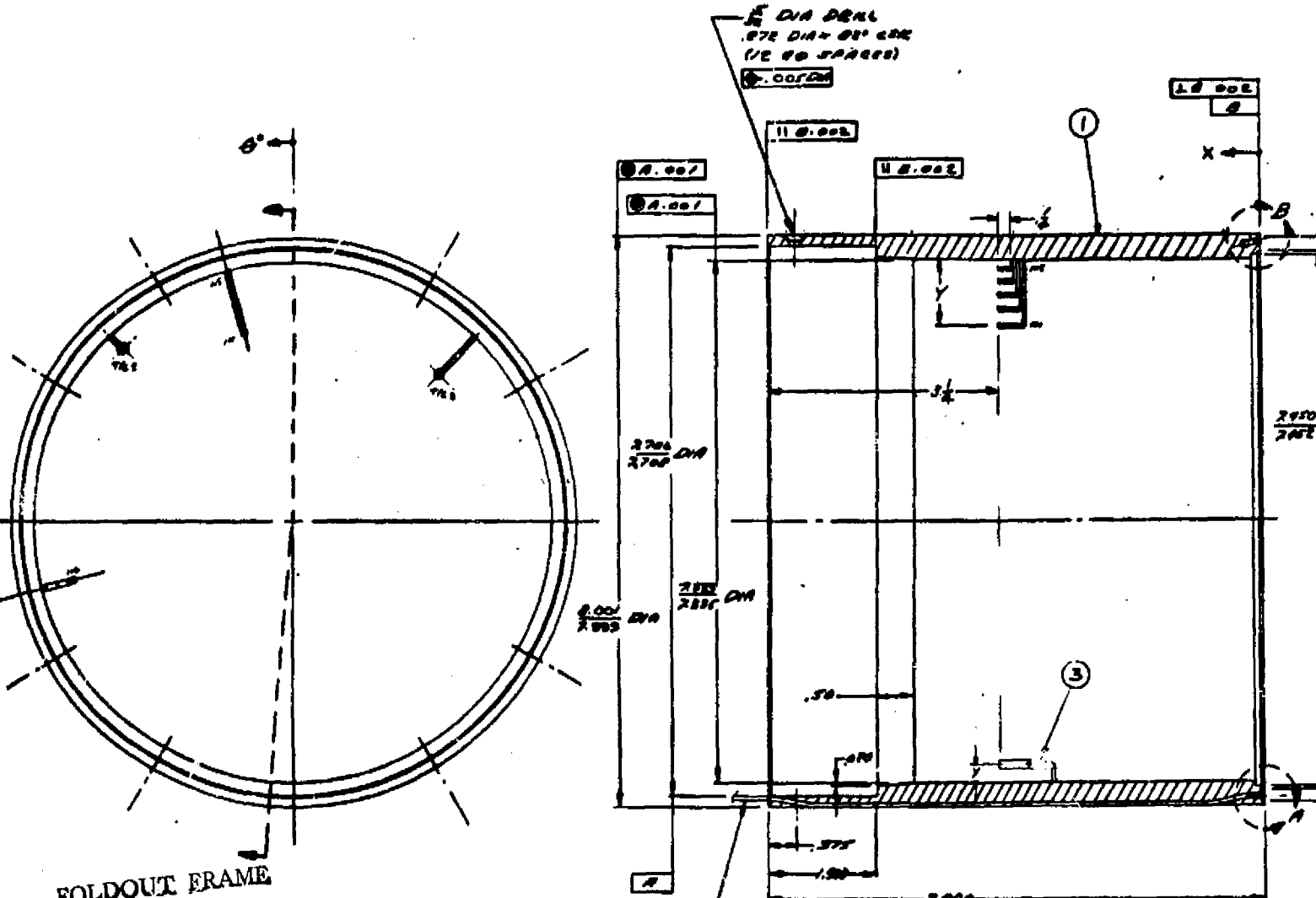


Figure 31

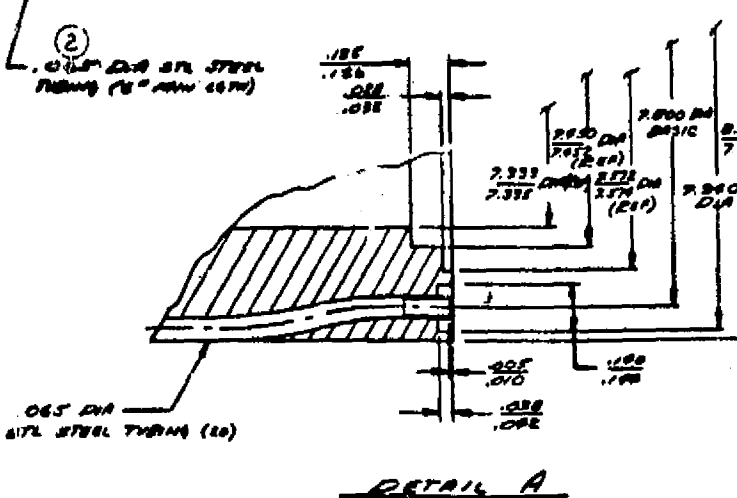


TUBING CONNECTORS "A" LOCATION		
5°	105°	245°
10°	110°	250°
15°	115°	255°
20°	125°	260°
25°	130°	265°
65°	155°	335°
70°	160°	340°
75°	165°	345°
80°	170°	350°
85°	175°	355°

Ⓐ

SPACE	HOLES	
THRU	Y	Θ
101	.82	15°
102	.68	15°
103	.98	15°
104	.88	15°
105	.09	15°
106	.66	105°

DRT	PRESS	THRU
THRU	X	Θ
66	.50	275°
67	2.00	280°
68	3.50	285°
69	5.00	290°
62	6.50	295°
61	8.00	305°



DETAIL A
SCALE: 2/1

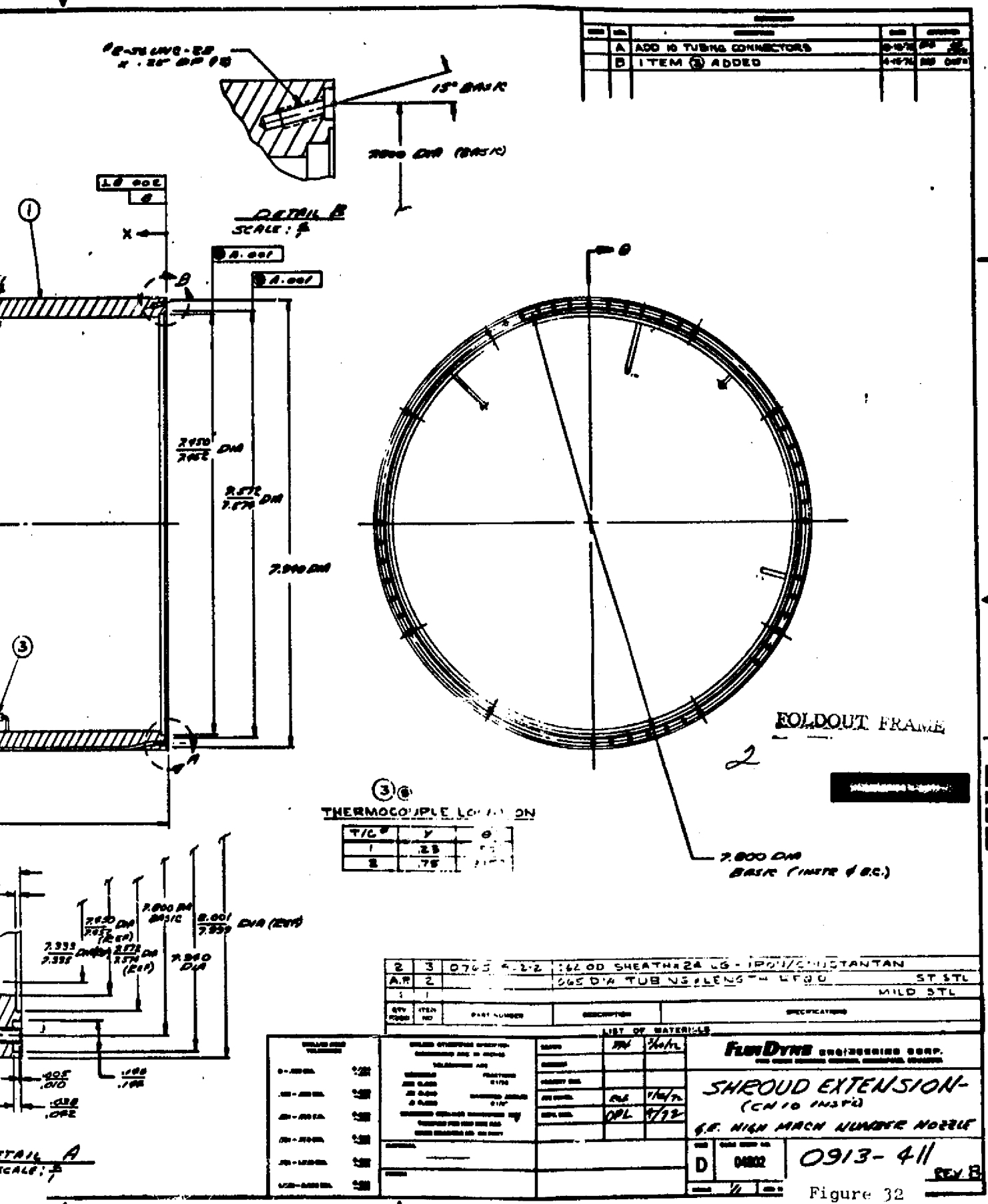
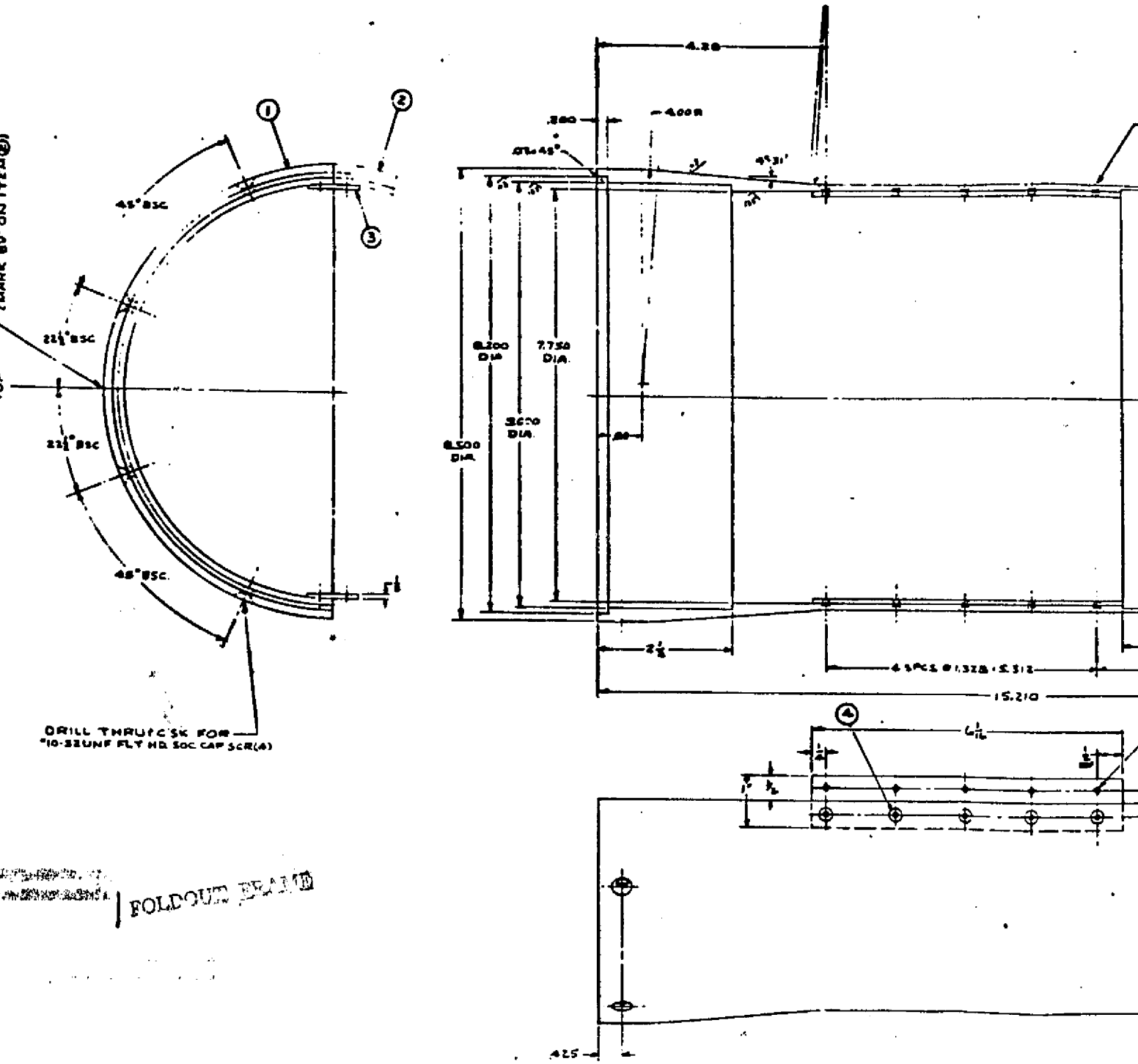
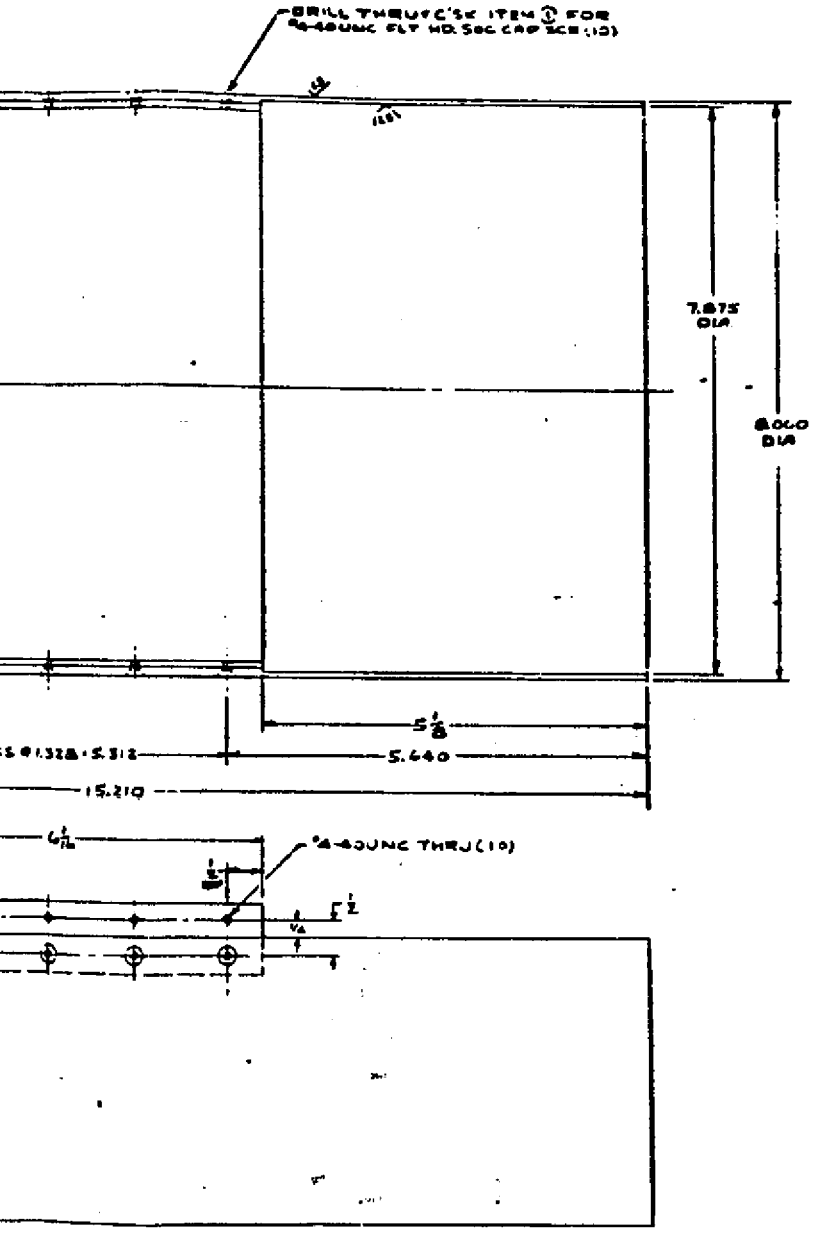


Figure 32



FOLDOUT FRAME



FOLDOUT FRAME

20	4		
2	3		
1	2	OPPOSITE AS SHOWN	
	1	AS SHOWN	

LIST OF MATERIALS

FLUIDYNE

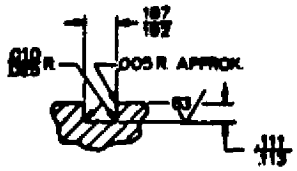
DUAL FLOW FAIRING

F ANNULAR PLUG NOZZLES
NAS3-19777

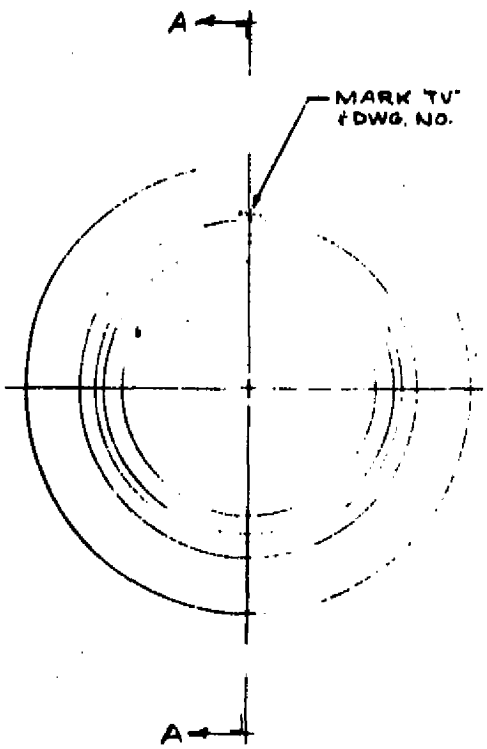
Figure 33

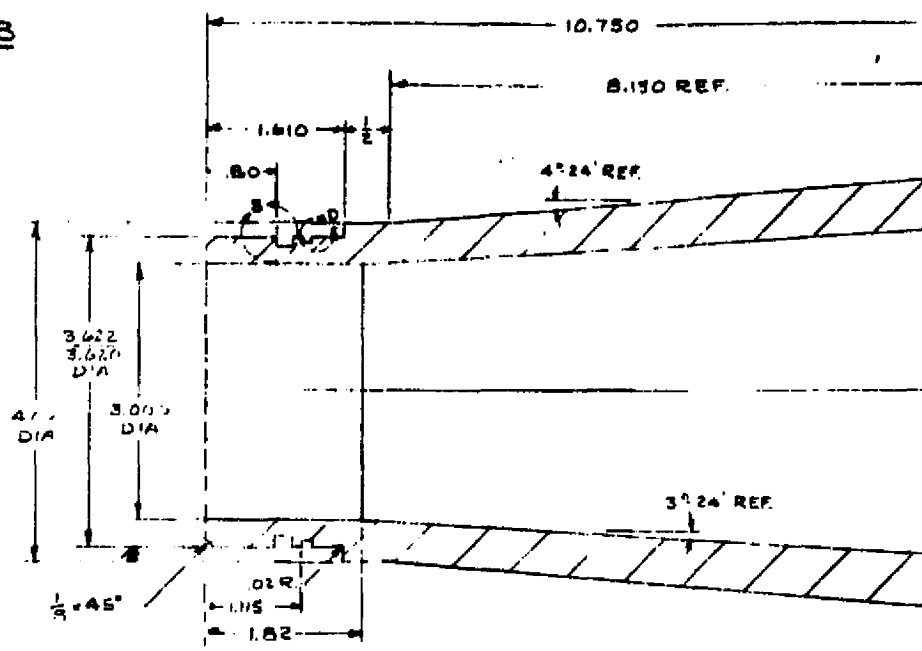
C76-001

LITY OF THE
GE IS POOR

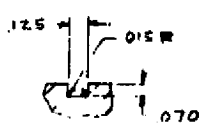


DETAIL B
SCALE: 2/1





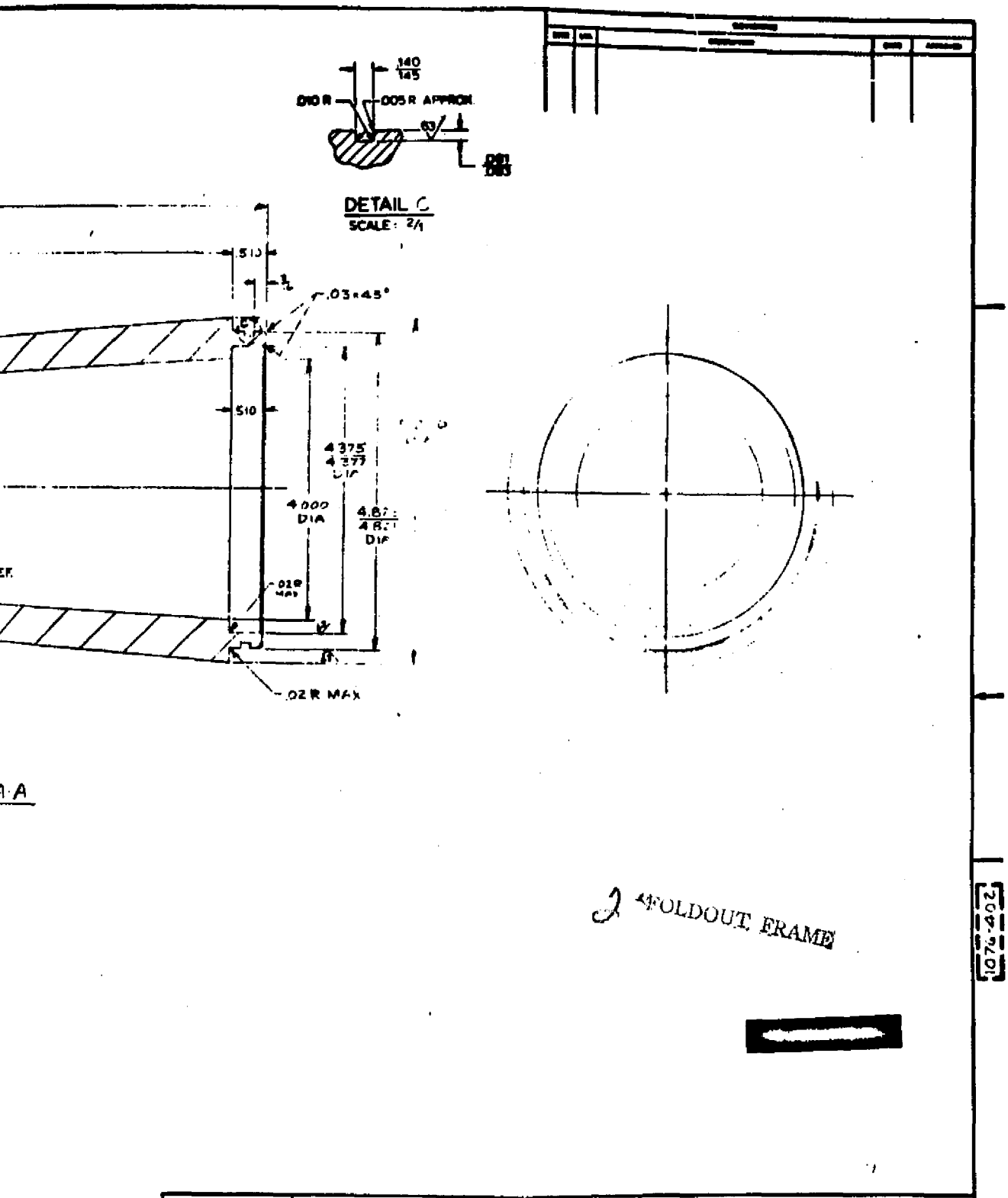
SECTION A-A



DETAIL D
SCALE 2/1

FOLDOUT FRAME

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR



FOLDOUT FRAME

				FLOWDYNE ENGINEERING CORP.
				DUAL FLOW INNER ADAPTER G.E. ANNULAR PLUG NOZZLES NAS3-19777
			D	04802 — 1076-402

Figure 34

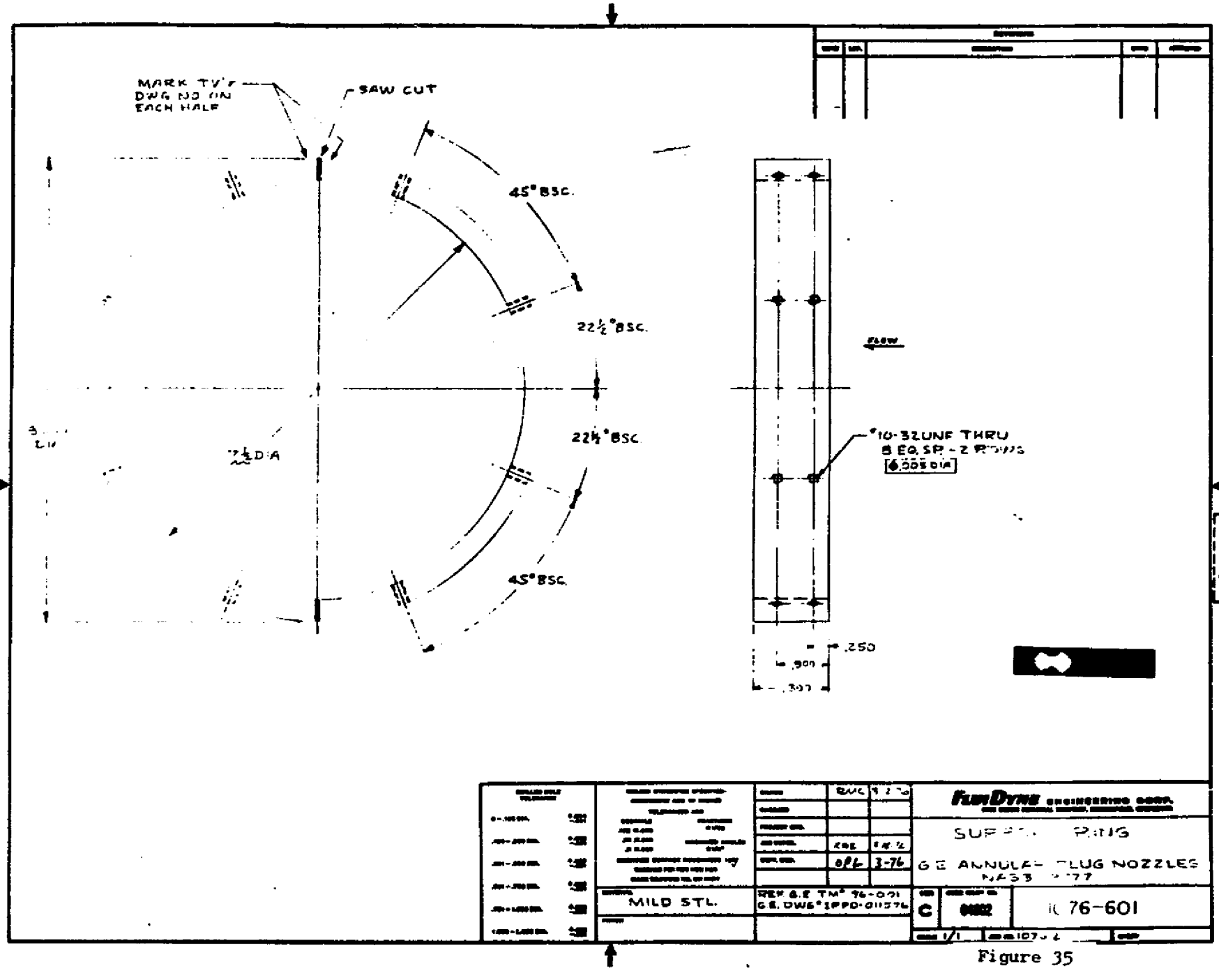

MARK TYP
DWG NO ON
EACH HALF
SAW CUT
45° BSC.
22½° BSC.
22½° BSC.
45° BSC.
DIA
10-32UNF THRU
EQ SP - 2 PLCS
.250
.900
.397
FLOW
MILD STL.
C
76-601

Figure 35

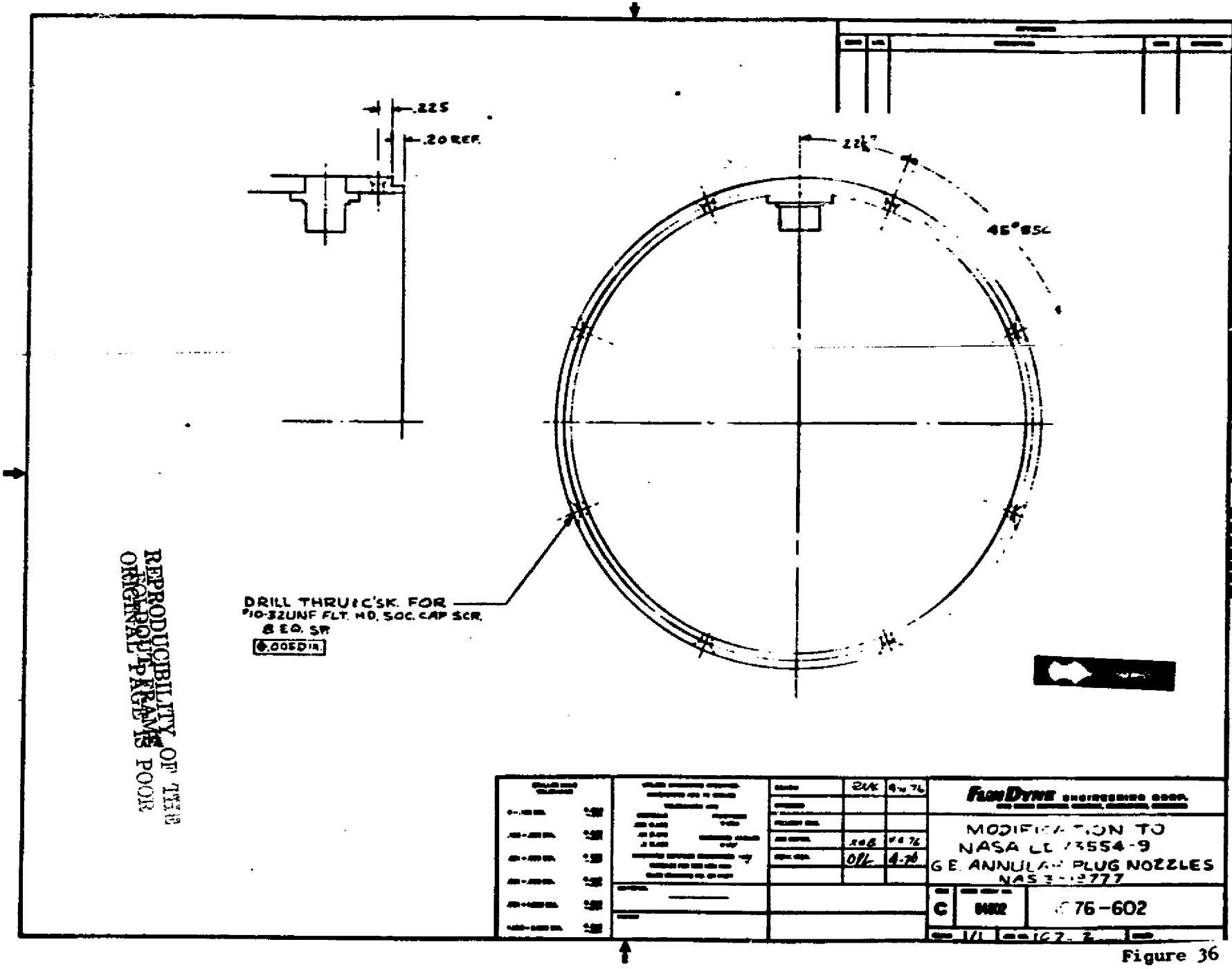


Figure 36

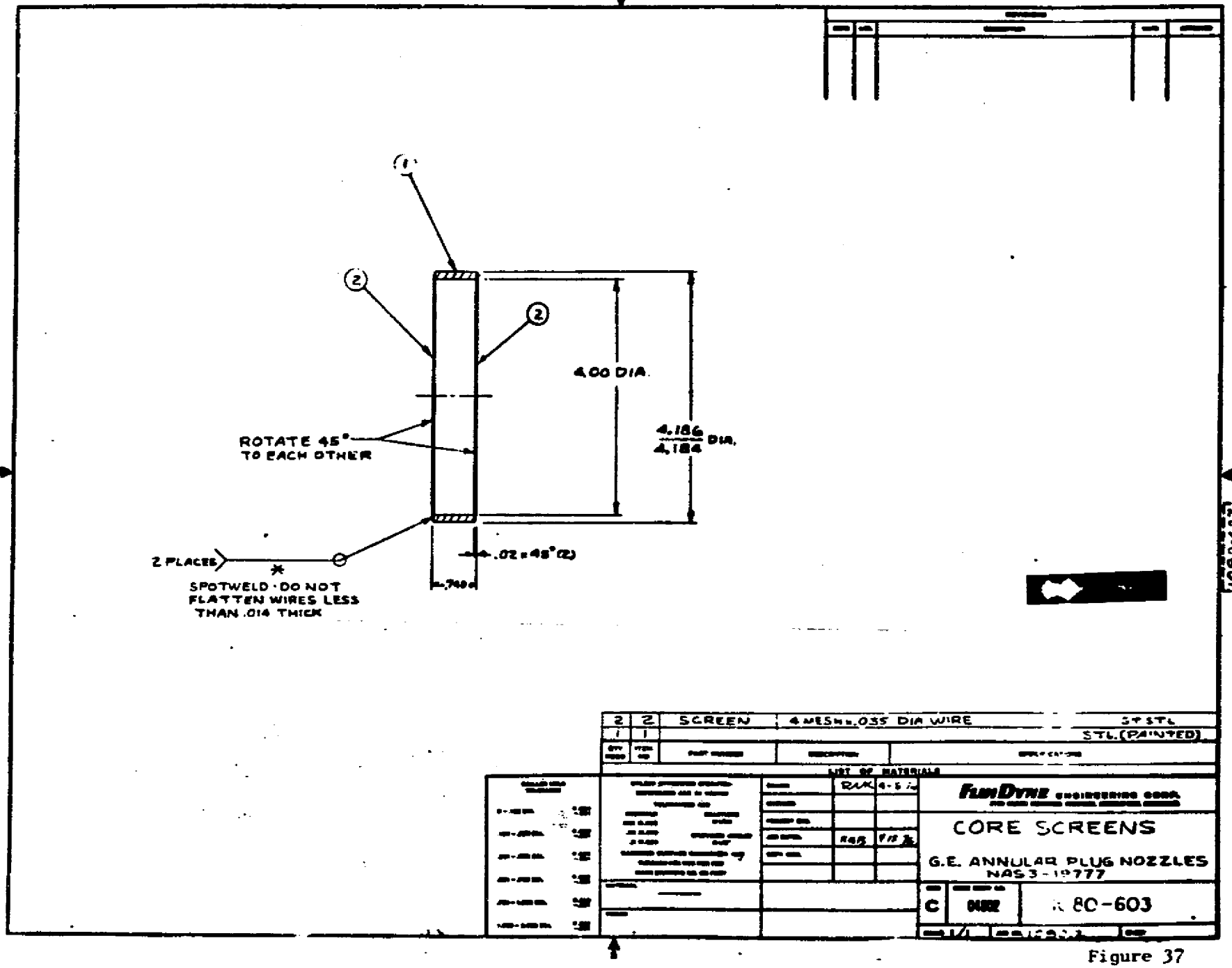

4.00 DIA.
4.186
4.184 DIA.
ROTATE 45°
TO EACH OTHER
2 PLACES
SPOTWELD · DO NOT
FLATTEN WIRES LESS
THAN .014 THICK
.02 x 45° (2)
2 2 SCREEN 4 MESH x .035 DIA WIRE SS STL
1 1 STL (PAINTED)
LIST OF MATERIALS
FLUIDYNE ENGINEERING CORP.
CORE SCREENS
G.E. ANNULAR PLUG NOZZLES
NAS3-19777
C
80-603

Figure 37

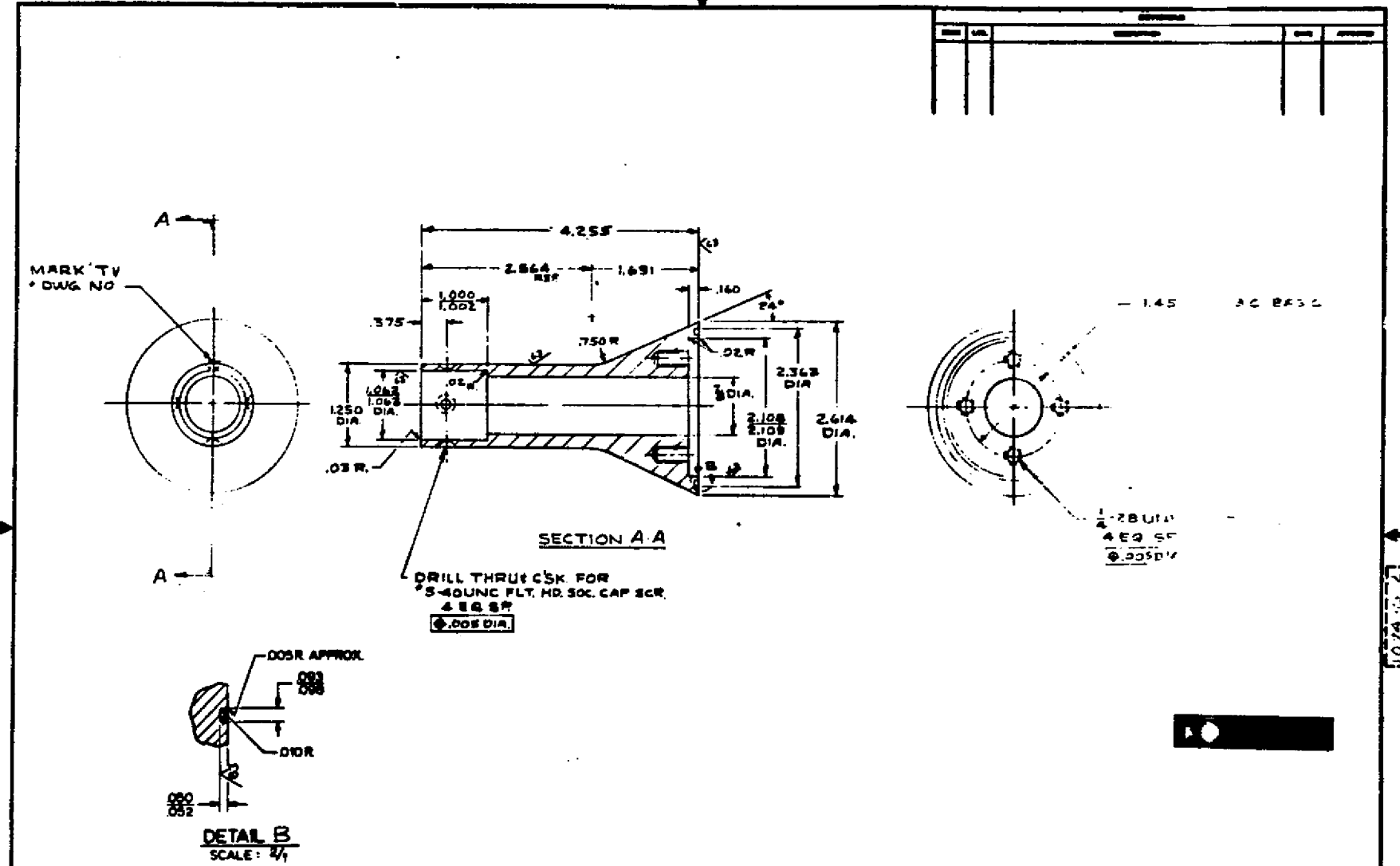

A
MARK 'TV
+ DWG NO
A
4.255
2.564
1.691
.160
24°
1.000
1.002
.375
.750 R
.02 R
2.363
DIA
1.250
DIA.
.03 R.
2.108
2.109
DIA.
2.614
DIA.
SECTION A-A
DRILL THRU C'SK. FOR
5-40UNC FLT. HD. SOC. CAP SCR
.005 DIA.
1.45
.010R APPROX.
.010R
DETAIL B
SCALE: 4/1
MILD STL.
REF: G.E. TM°76-58
FLOWDYNE
LONG
GE ANNULAR
NAS3-
C
04802
74-602

Figure 38

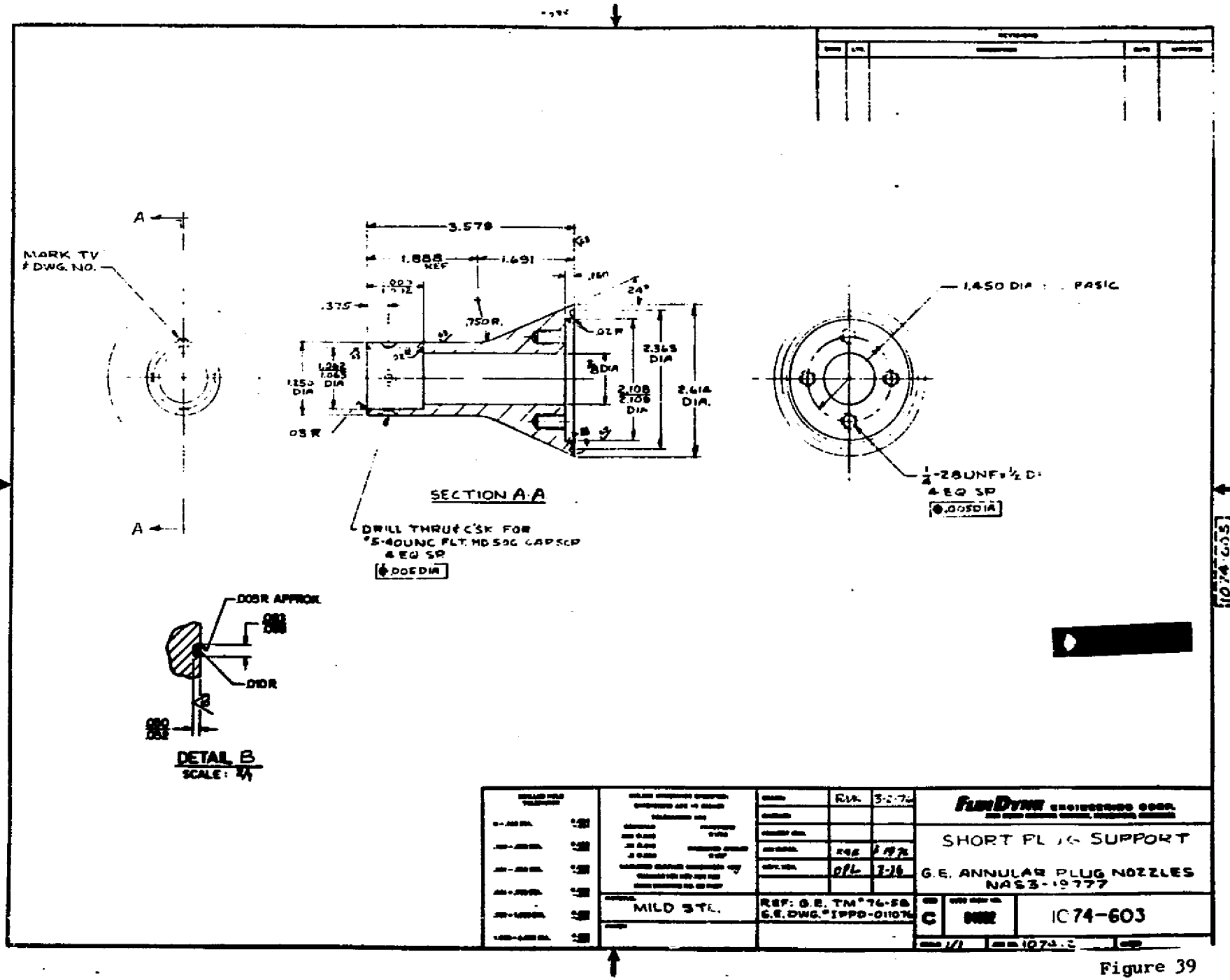
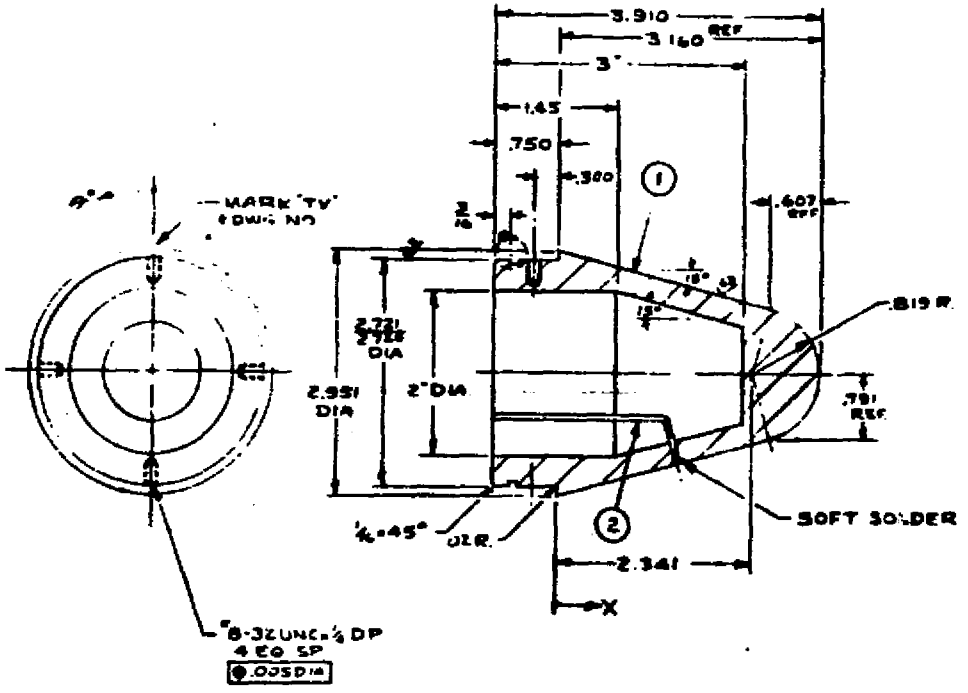
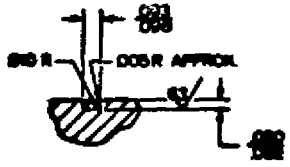

A
MARK TV
DWG. NO.
A
3.579
1.888
REF
1.691
.375
.750R.
24°
.02 R
2.365
DIA
2.108
2.106
DIA
2.414
DIA.
.08 R
1.450 DIA
BASIC
1/4-28UNF x 1/2 D
4 EQ SP
.005 DIA
SECTION A-A
DRILL THRU & C'SK FOR
#5-40UNC FLT HD SOC CAP SCR
4 EQ SP
.005 DIA
.005R APPROX
.010R
DETAIL B
SCALE: 4/1
MILD STL.
REF: G.E. TM #74-58
G.E. DWG. #PPD-01107
SHORT PLUG SUPPORT
G.E. ANNULAR PLUG NOZZLES
NAS3-19777
C
IC74-603

Figure 39





DETAIL B
SCALE: 4/1

OUTER TAP LOCATIONS

TAP#	X	θ°
42	.16	0°
43	.49	20°
44	.89	40°
45	1.45	60°
46	2.12	80°
47	2.64	100°
48	3.02	120°
49	3.16	—

B	2		.065 OD TUBE WALL-LENGTH REF
	1		

LIST OF MATERIALS

	CUM	33	
	FOR	10 %	
	OIL	3-%	

FLOWDYNE

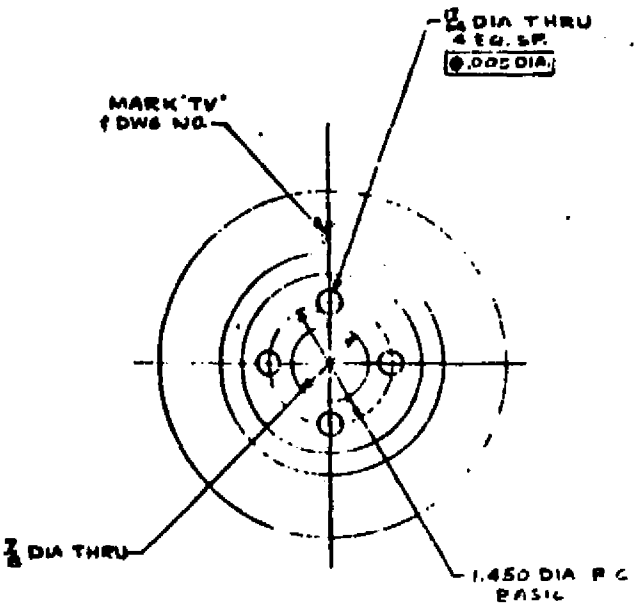
CORE PLUG TIP

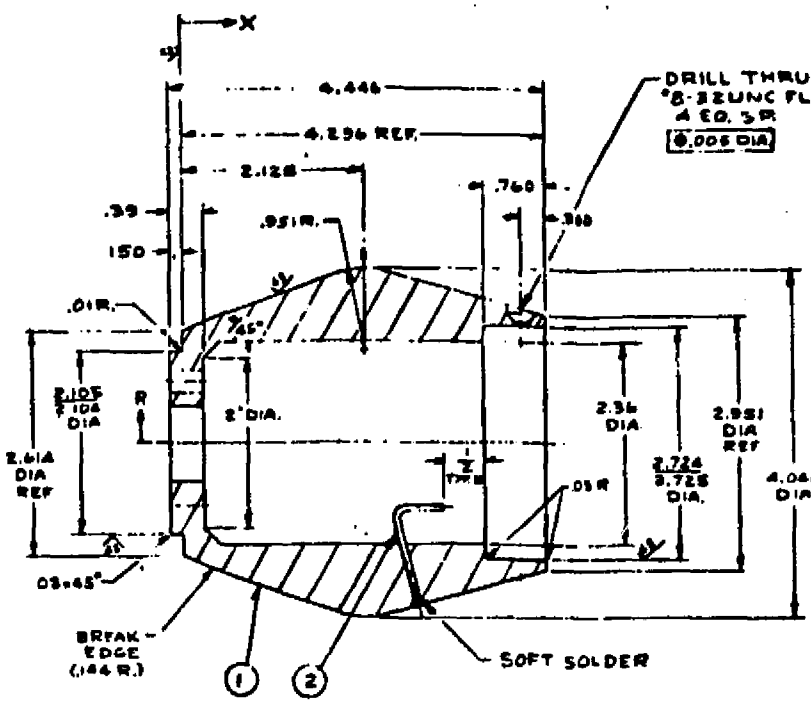
G.E. ANNULAR PLUG NOZZLE NAS3-

REF. G.E. TM*76-58
G.E. DWG *EPPD-G10776

C | 74-601

Figure 40





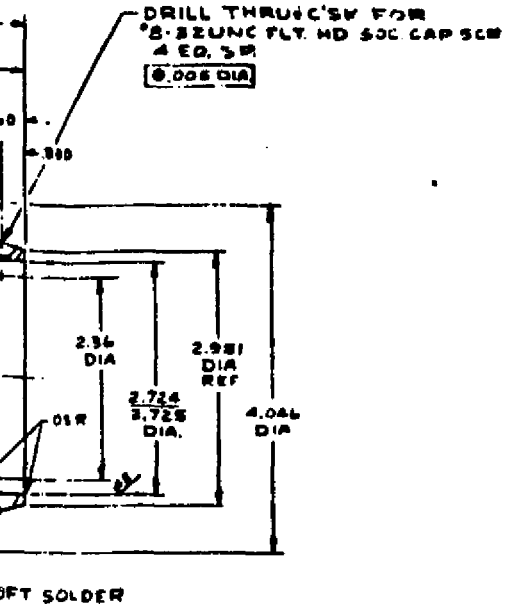
OUTER CONTOUR POINTS

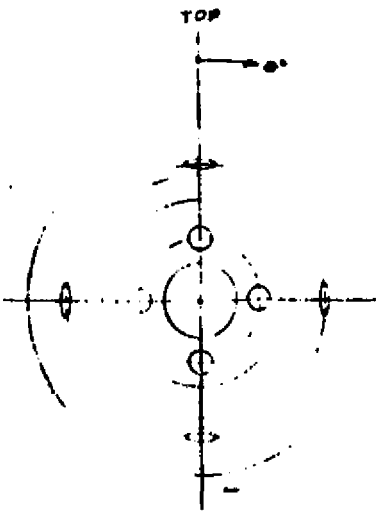
X	R	
0	1.307	STR LINE @ 24°
.318	1.449	STR LINE @ 15°11'
1.815	1.970	.951 R.
2.374	1.991	STR LINE @ 15°
4.296	1.4755	

OUTER TAP LOCATIONS

TAP #	X	θ°
28	1.956	0°
29	2.124	20°
30	2.344	40°
31	2.504	60°
32	2.724	80°
33	2.906	100°
34	3.296	120°
35	3.416	140°
36	3.916	160°
37	4.196	200°

FOLDOUT FRAME





FOLDOUT FRAME

2

1074-401

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10	2				304 ST STL.
QTY	ITEM NO.	PART NUMBER	DESCRIPTION	SPECIFICATION	

LIST OF MATERIALS

DRAWN	D.K.	3-5-76
CHECKED		
ENGR APPD.	A.G.	3-5-76
MFG APPD.	D.F.L.	3-7-76

REF G.E. TM # 76-58
G.E. DWG # 1PPD-011476

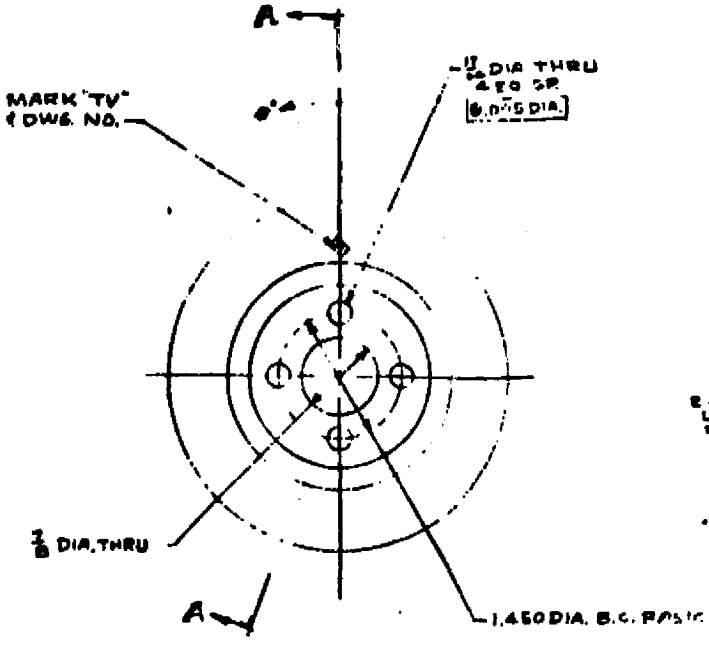
FLOW DYNE ENGINEERING CORP.

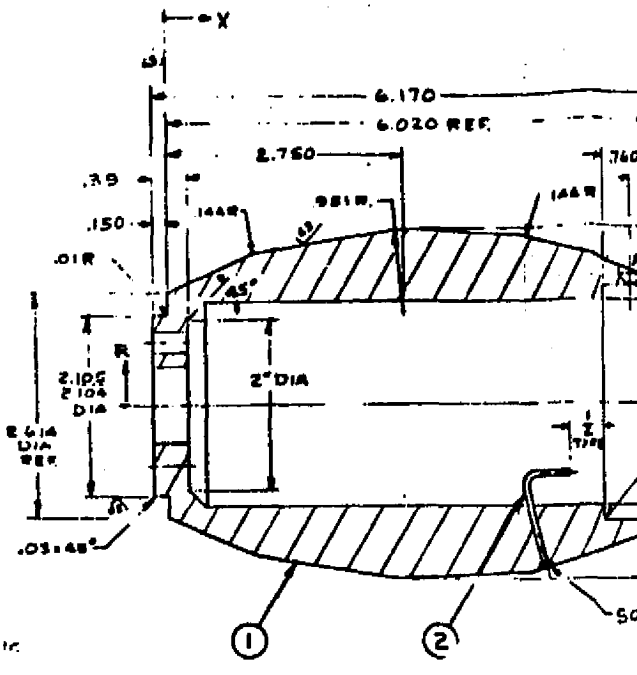
FF.50 STRAIGHT CORE PLUG
G.E. ANNULAR PLUG NOZZLES
NAS3-19777

SIZE	DWG. NO.	REV
D	04802	1074-401

SCALE 1/1 — 1074-2

Figure 41





SECTION A-A

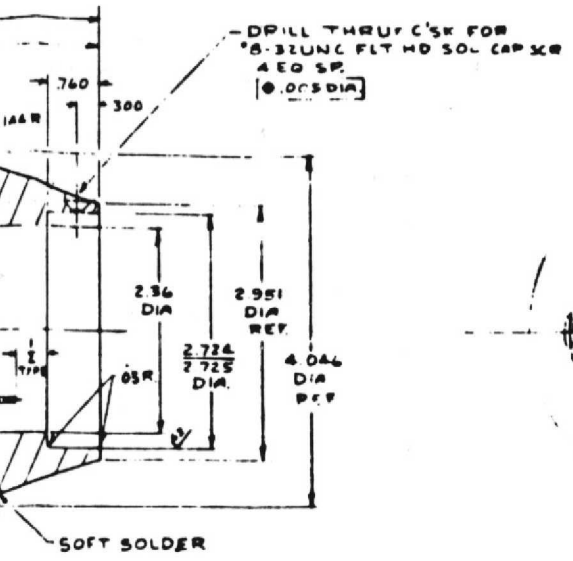
OUTER CONTOUR POINTS

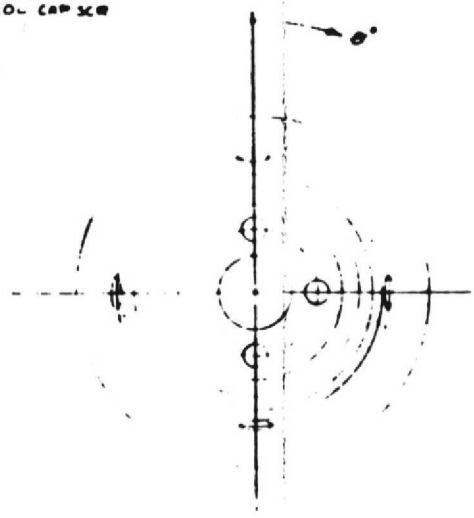
X	R	
0	1.327	STR. LINE @ 24°
.980	1.743	144R
1.016	1.784	STR LINE @ 9°13'
2.698	2.011	95 I R
2.796	2.022	STR LINE @ 2°-48'
4.230	1.952	144 R.
4.240	1.947	STR LINE @ 15°
6.020	1.4755	

OUTER TAP LOCATIONS

TAP #	X	@ °
28	2.550	0°
29	2.750	20°
30	2.880	40°
31	3.140	60°
32	3.450	80°
33	3.790	100°
34	4.100	120°
35	4.270	140°
36	4.450	160°
37	4.710	180°
38	5.040	200°
39	5.350	220°
40	5.661	240°
41	5.920	260°

FOLDOUT FRAME





[redacted]

LIST OF MATERIALS

304 ST STL

FLEXDYNE ENGINEERING CORP.

REPLACEMENT CORE PLUG

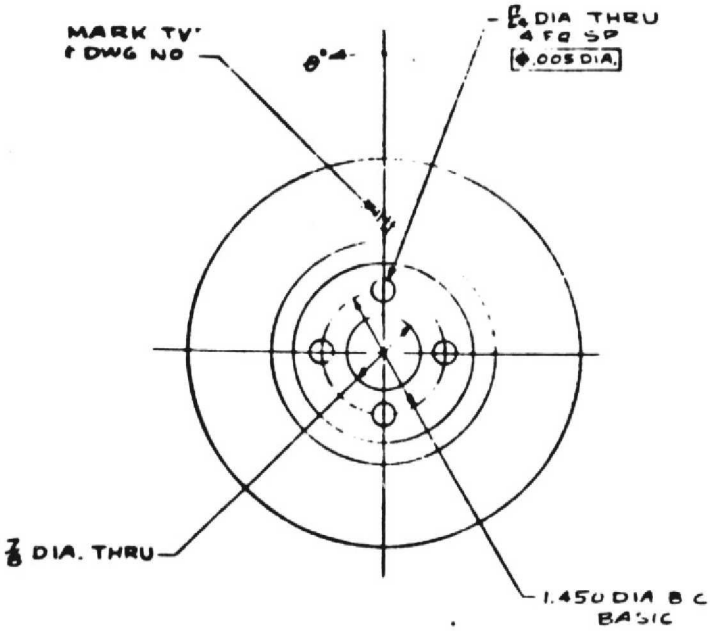
G.E ANNULAR PLUG NOZZLES
NAS3-19777

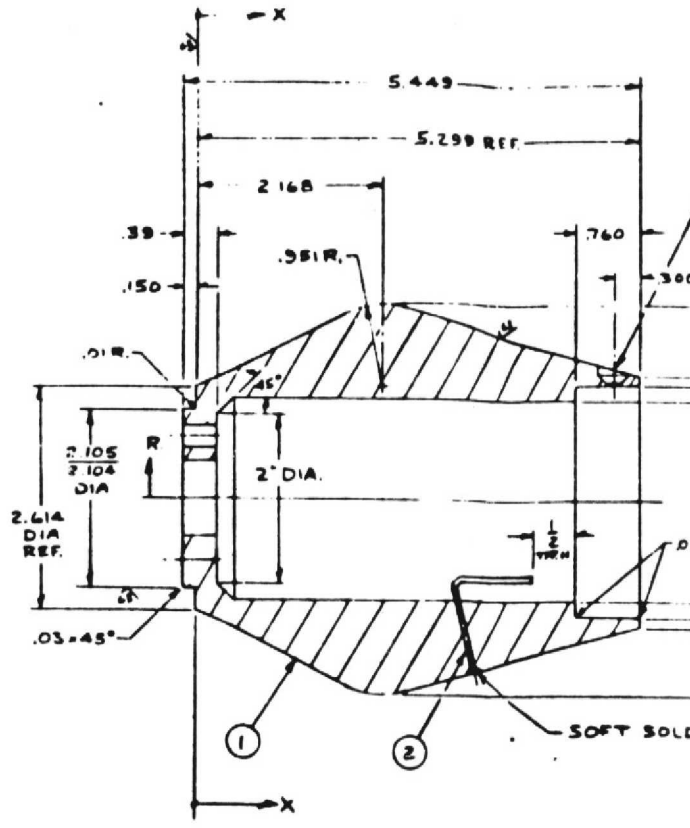
REF G.E. TM 76-58
G.E. DWG IPPD-0776

D 04802 1074-402

1/1

Figure 42





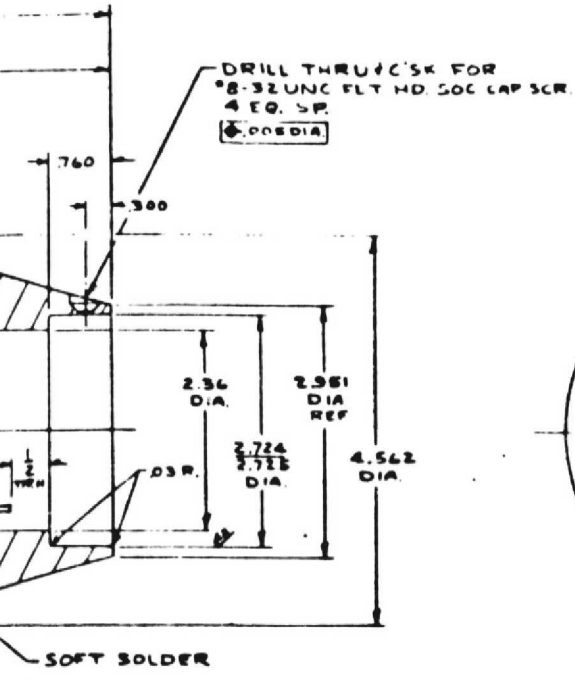
OUTER CONTOUR POINTS

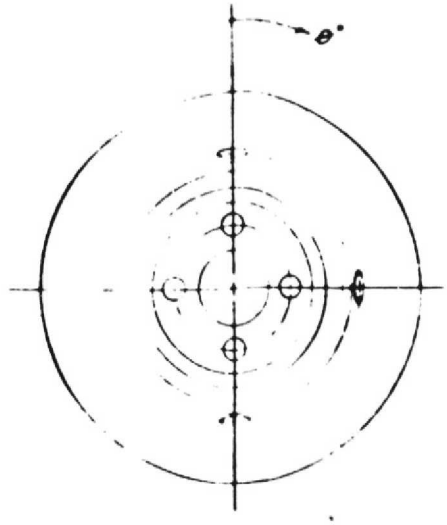
X	R	
0	1.307	STR LINE @ 24°
.307	1.444	STR LINE @ 27°-11'
1.738	2.176	.951 R.
2.414	2.249	STR LINE @ 13°
5.299	1.4765	

OUTER TAP LOCATIONS

TAP #	X	A°
29	1.969	0°
29	2.169	20°
30	2.359	40°
31	2.599	60°
32	2.919	80°
33	3.299	100°
34	3.619	120°
35	4.019	140°
36	4.449	160°
37	4.799	200°
38	5.199	220°

FOLDOUT FRAME





2

FOLDOUT FRAME

1074-43

11	2		304 ST STL
1	1		MILD STL

LIST OF MATERIALS

FLOW DYNE ENGINEERING CORP.

RF 902 CORE PLUG

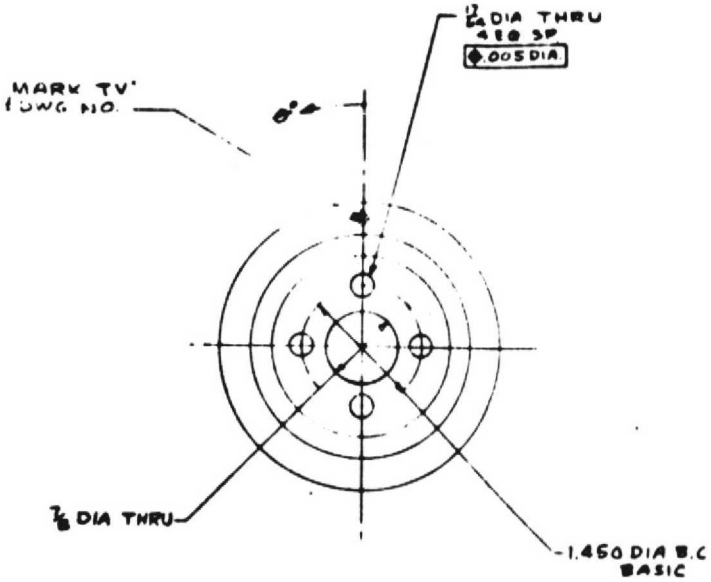
G E ANNULAR PLUG NOZZLES
NAS3-19777

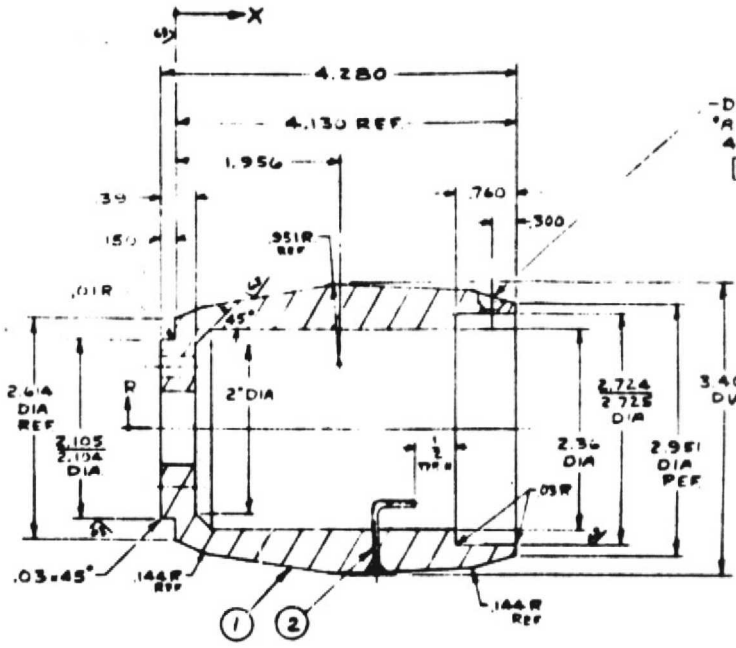
MILD STEEL

REF GE TM 74-58
GE DWG 1PPD-012074

D | 04802 | 1074-403

Figure 43





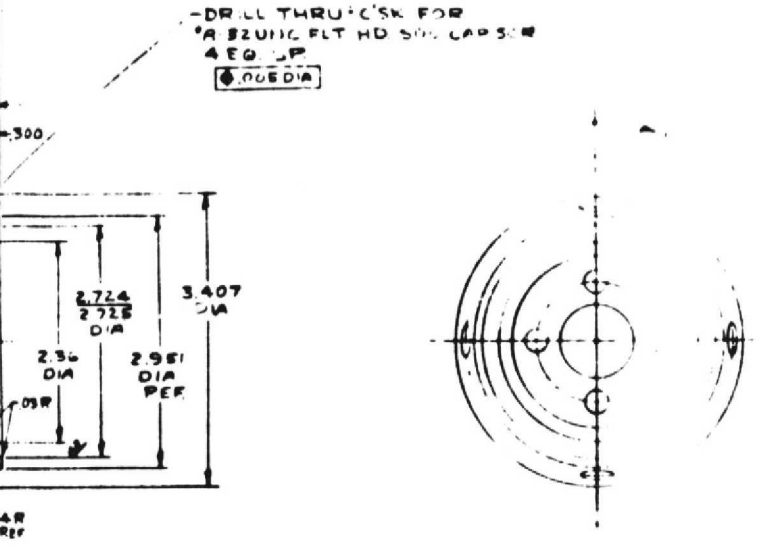
OUTER CONTOUR POINTS

X	R	
0	1.307	STR LINE @ 34°
.308	1.444	.144 R.
.344	1.455	STR LINE @ 8°12'
1.804	1.691	.951 R.
2.002	1.7085	STR LINE @ 2°49'
3.584	1.626	.144 R.
3.584	1.612	STR LINE @ 15°
4.130	1.4758	

OUTER CONTOUR TAPS

TAP	X	θ
29	1.710	0°
29	1.940	20°
30	2.140	40°
31	2.410	60°
32	2.680	80°
33	2.930	100°
34	3.170	120°
35	3.380	140°
36	3.610	160°
37	3.820	190°
38	4.030	210°

FOLDOUT FRAME



FOLDOUT FRAME

11	2				
QTY REQD	ITEM NO	PART NUMBER	DESCRIPTION	SPECIFICATIONS	

LIST OF MATERIALS

	DRAWN	RAS	1-4-76
	CHECKED		
	PROJECT ENG.		
	APPROVED	RAS	1-13-76
	QUALITY ASSUR.	DPL	1-16
MATERIAL: MILD	REF TM # 76-EB G E DWG # IPPD-010A76		

FLOW DYNE ENGINEERING CORP.

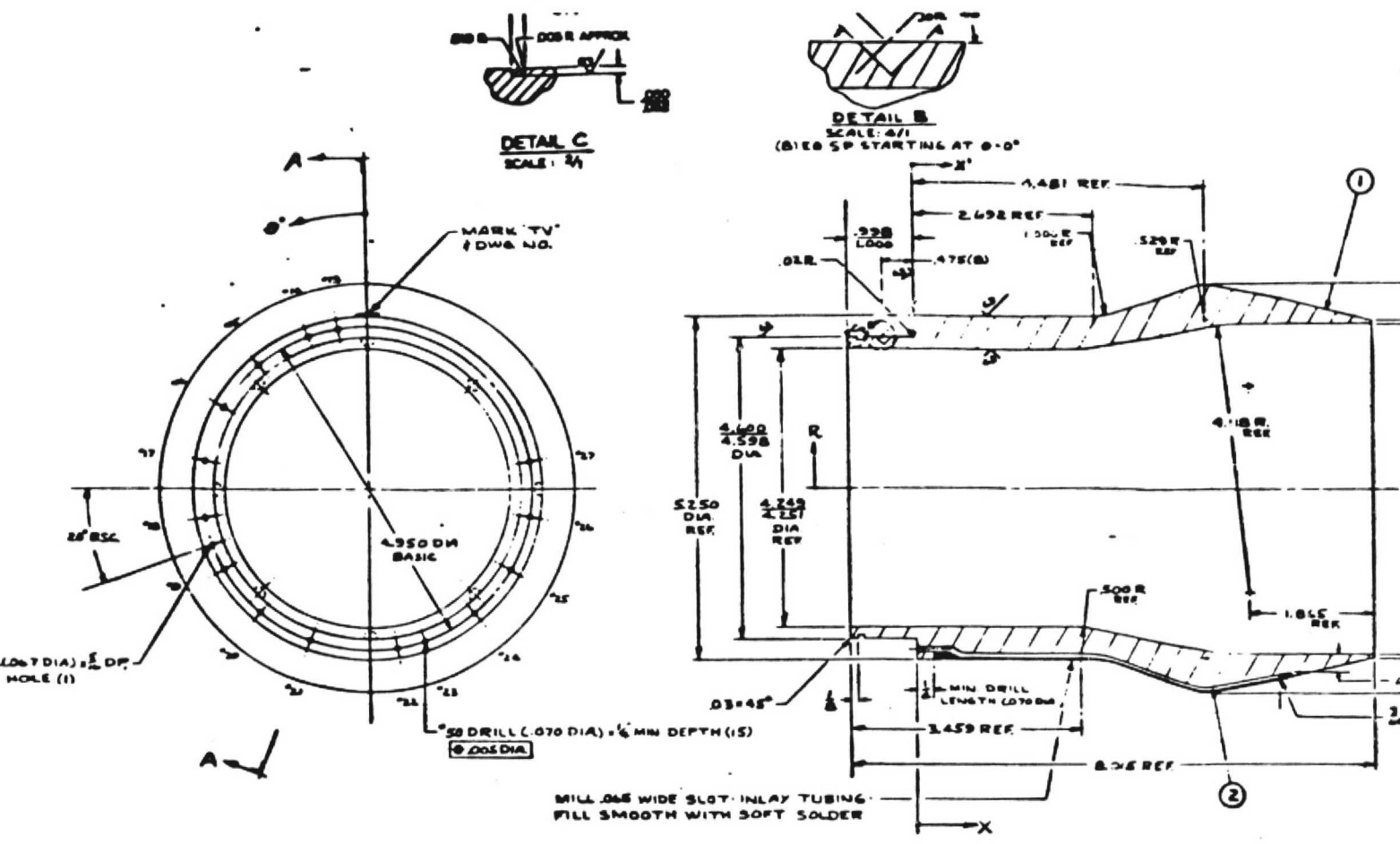
RP 67 CORE PLUG

G E ANNULAR PLUG NOZZLES
NAS 3-19777

SIZE	CODE IDENT NO	DRAWING NO
D	04832	1074-404

SCALE 1/1 | WEIGHT 1074.2 | SHEET

Figure 44



EB CONTOUR POINTS

X'	R_o	
0	2.625	
2.492	2.625	1.00 R STR LINE @ 18°-1'
3.001	2.674	
4.317	3.102	.529 R STR LINE @ 10°-61'
4.879	3.119	
5.491	2.947	1.44 R STR LINE @ 13° 38'
5.499	2.946	
7.015	2.578	

INNER CONTOUR POINTS

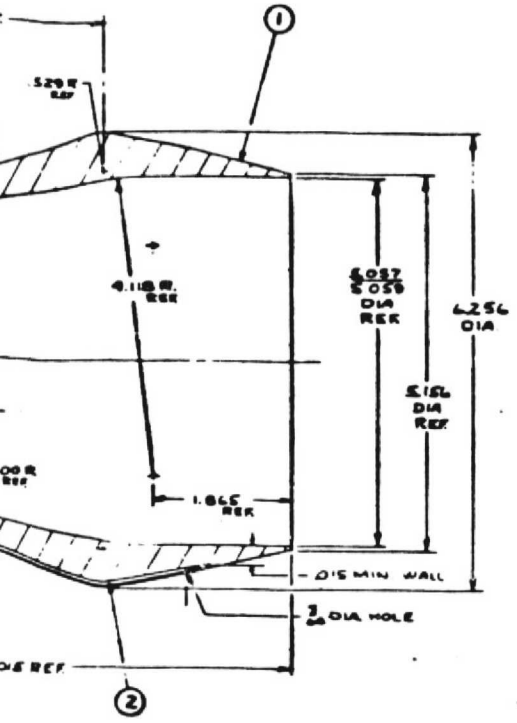
X	R_i	
0	2.125	
3.459	2.128	.500 R STR LINE @ 10° 4.118 R
3.544	2.133	
5.435	2.466	
6.150	2.569	
8.015	2.569	

OUTER TAP LOCATIONS

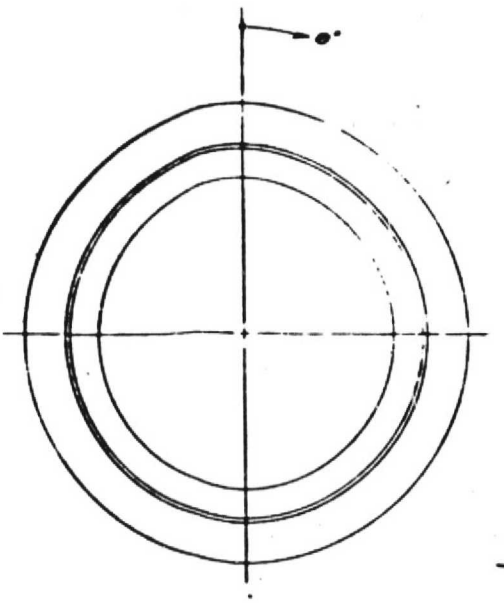
TAP #	X	Θ°
13	4.45	10°
14	4.515	20°
15	4.685	40°
16	4.645	60°
17	4.815	80°
18	5.035	130°
19	5.175	150°
20	5.415	170°
21	5.575	190°
22	5.735	210°
23	5.925	230°
24	[illegible]	[illegible]
25	[illegible]	[illegible]
26	[illegible]	[illegible]
27	6.885	350°

USE .035 [illegible] WALL TUBING AS REQD

BOLDOUT FRAME



SECTION A-A



FOLDOUT FRAME

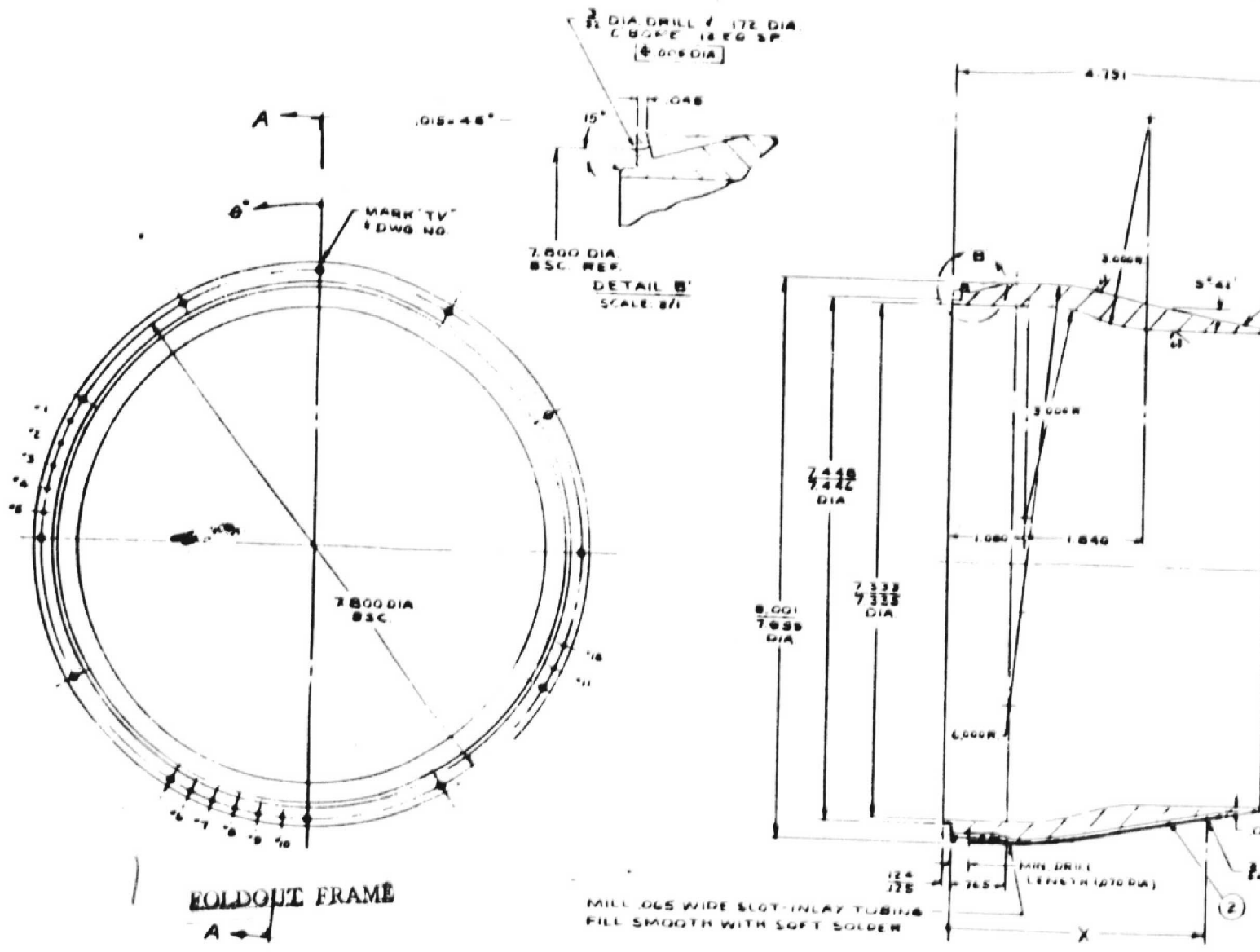
[redacted]

FLUIDYNE ENGINEERING CORP.

FAN PLUG

GE ANNULAR PLUG NOZZLES

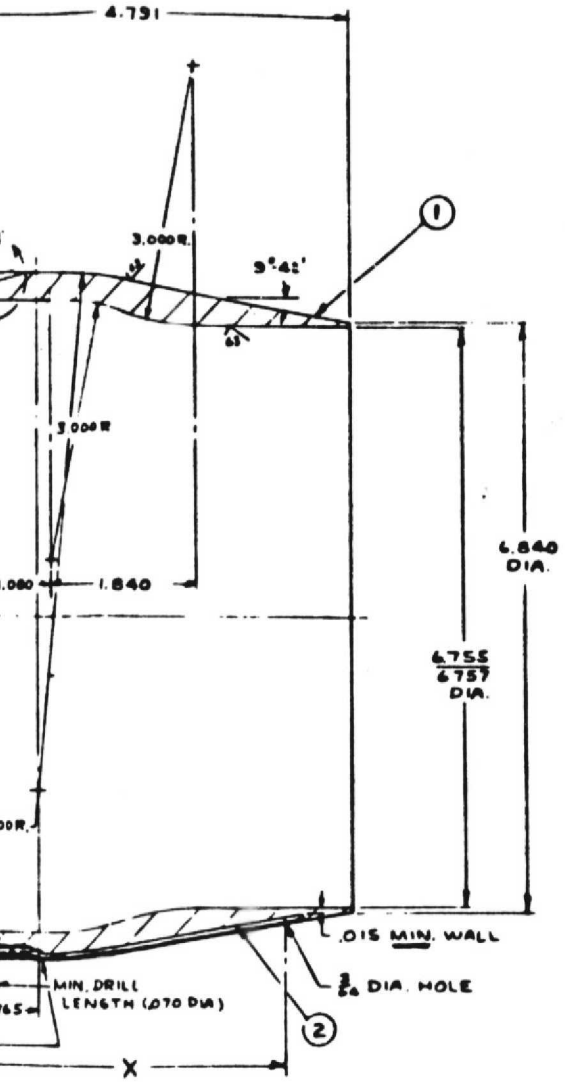
Figure 45



OUTER TAP LOCATIONS

TAP #	X	θ°
1	.450	65°
2	.615	70°
3	.955	75°
4	1.450	80°
5	1.635	85°
6	2.075	155°
7	2.605	160°
8	2.966	165°
9	3.458	170°
10	3.855	175°
11	4.216	245°
12	4.554	250°

USE .035 OD x .004 WALL TUBING AS REQ'D



SECTION A A

ATIONS

θ°
45°
70°
75°
80°
85°
155°
160°
165°
170°
175°
245°
250°

USE .035 OD. × .006 WALL TUBING AS REQ'D

FOLDOUT FRAME

[redacted]

1074-405

QTY REQD	ITEM NO	PART NUMBER	DESCRIPTION	SPECIFICATIONS
12	2			
1	1			

LIST OF MATERIALS

DRAWN	C.L.	1-9-76
CHECKED		
PROJECT ENG.		
APPROVED	ROS	1-9-76
DEPT. MGR.	DPL	1-9-76

REF G E TM* 76-88
G.E DWG* IPPD 010176

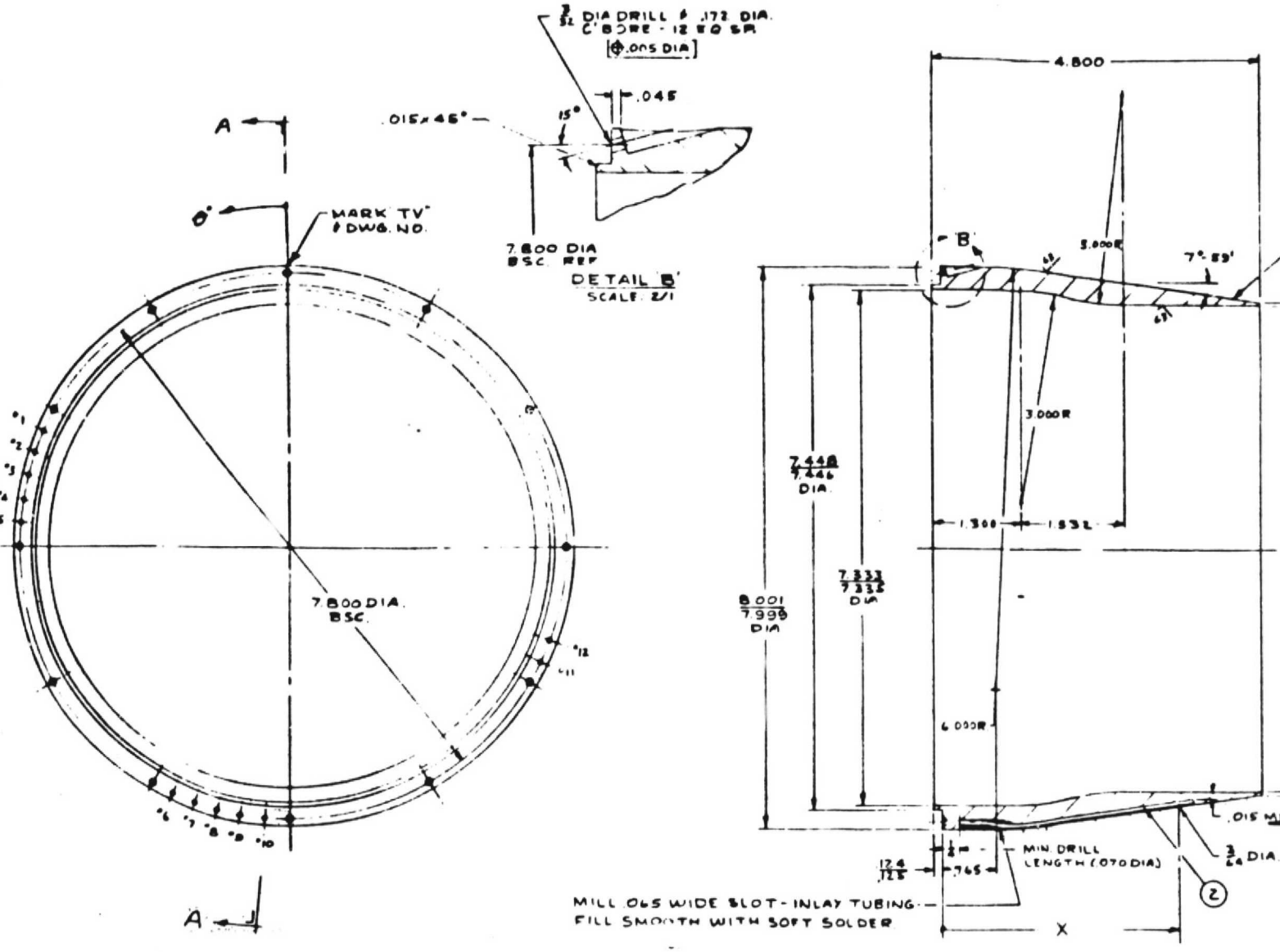
FLOW DYNE ENGINEERING CORP.

RR 926 SHROUD
G E ANNULAR PLUG NOZZLES
NAS3-19777

D | 04802 | 1074-405

SHEET 1/1

Figure 46



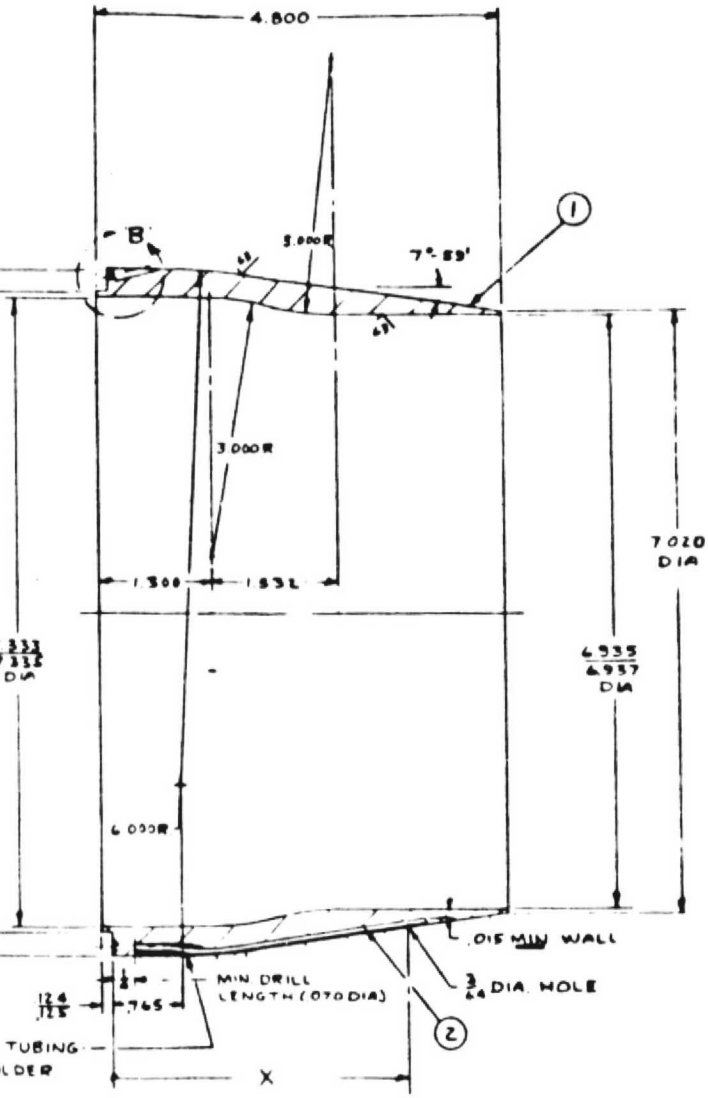
SECTION A-A

OUTER TAP LOCATIONS

TAP #	X	θ°
1	295	65°
2	535	70°
3	915	75°
4	1.195	80°
5	1.535	85°
6	1.895	155°
7	2.265	160°
8	2.785	165°
9	3.225	170°
10	3.765	175°
11	4.145	245°
12	4.585	250°

USE .035 OD x .006 WALL TUBING AS REQ'D

BOLDOUT FRAME



SECTION A-A

FOLDOUT FRAME

OUTER TAP LOCATIONS

TAP #	X	Φ°
1	295	65°
2	535	70°
3	915	75°
4	1.195	80°
5	1.535	85°
6	1.895	155°
7	2.265	160°
8	2.785	165°
9	3.226	170°
10	3.768	175°
11	4.168	245°
12	4.585	250°

USE .035 OD x .006 WALL TUBING AS REQ'D

LIST OF MATERIALS

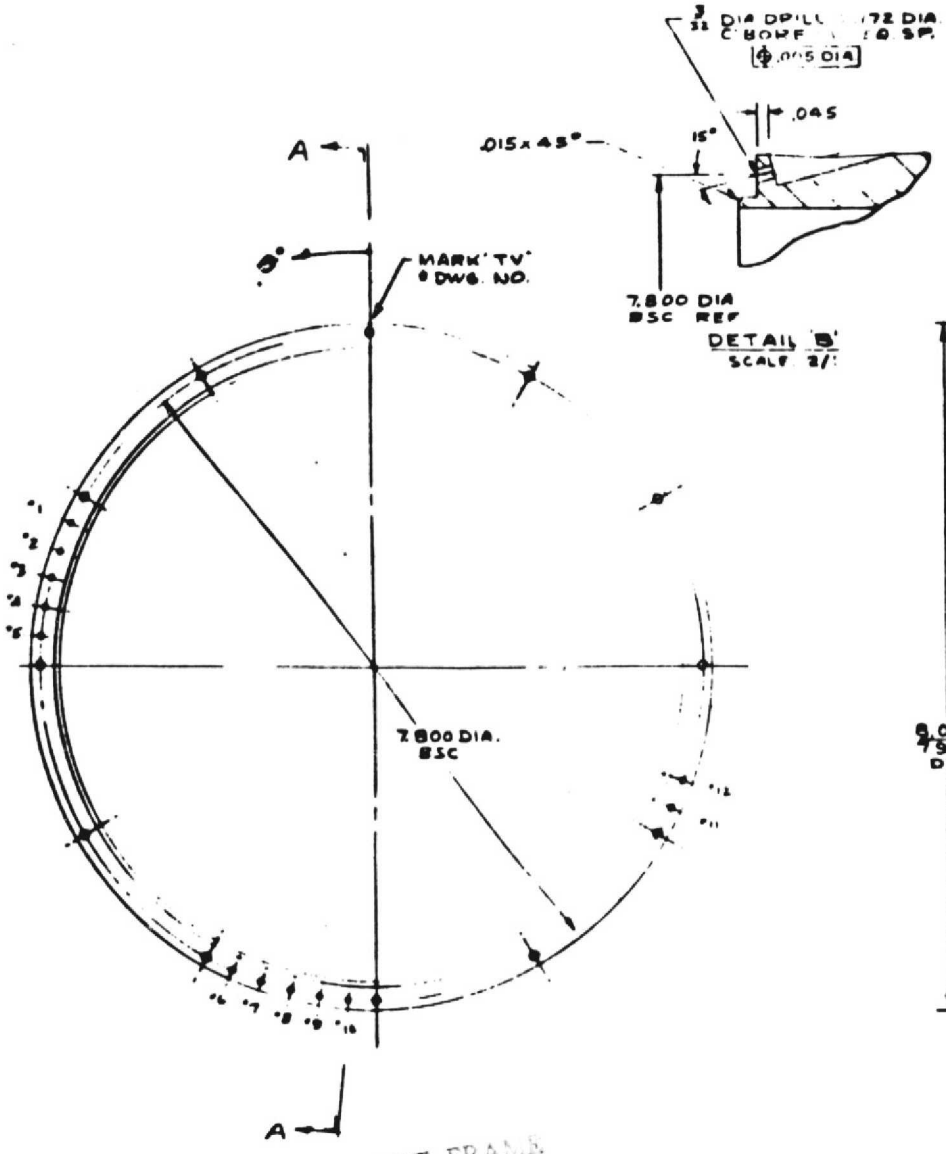
FLUIDYNE

RR 902 SHROUD

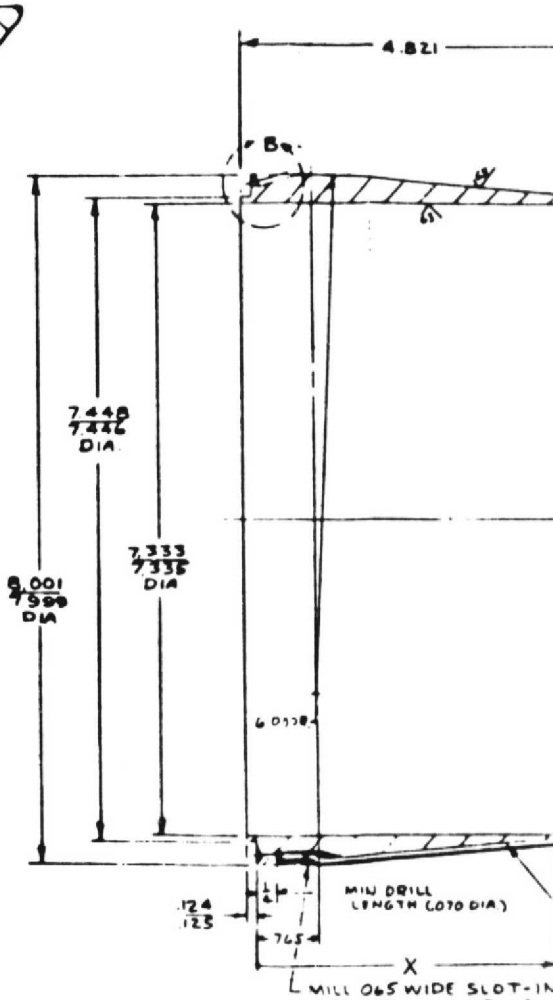
G E ANNULAR PLUG NOZZ
NAS 3-19777

D | 04802 | IC74-406

Figure 47



FOLDOUT FRAME

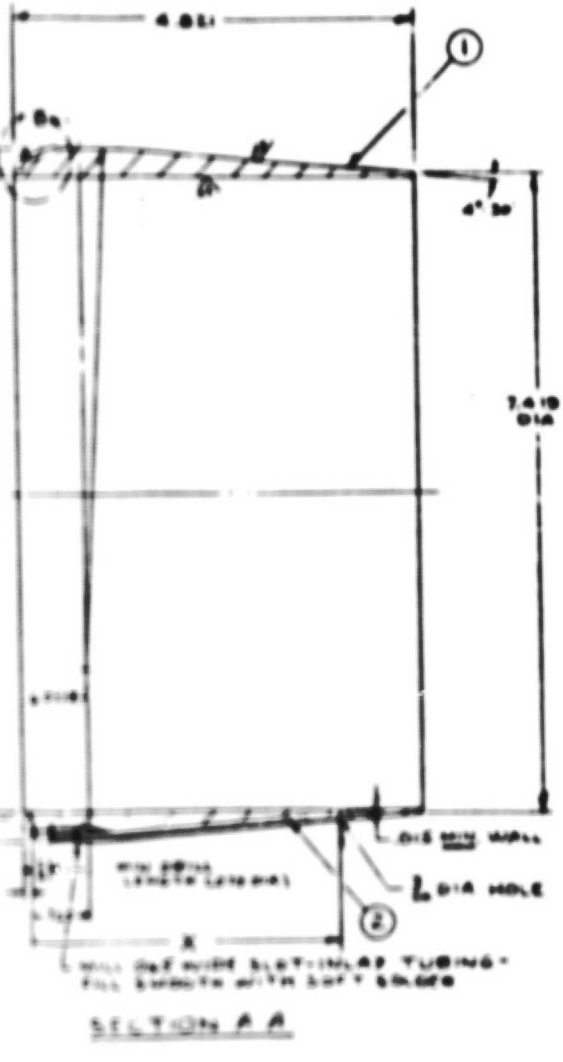


SECTION A A

OUTER TAP LOCATIONS

TAP #	X	Φ°
1	355	65°
2	655	70°
3	.955	75°
4	1.195	80°
5	1.465	85°
6	1.825	155°
7	2.175	160°
8	2.545	166°
9	3.226	170°
10	3.715	175°
11	4.135	245°
12	4.605	250°

} USE .035 OD x .004 TUBING AS REQ'D



SECTION A-A

FOLDOUT FRAME

FLOW DYNE ENGINEERING CORP.

RR 853 SHROUD

GE ANNULAR PLUG NOZZLES

NAS3-19777

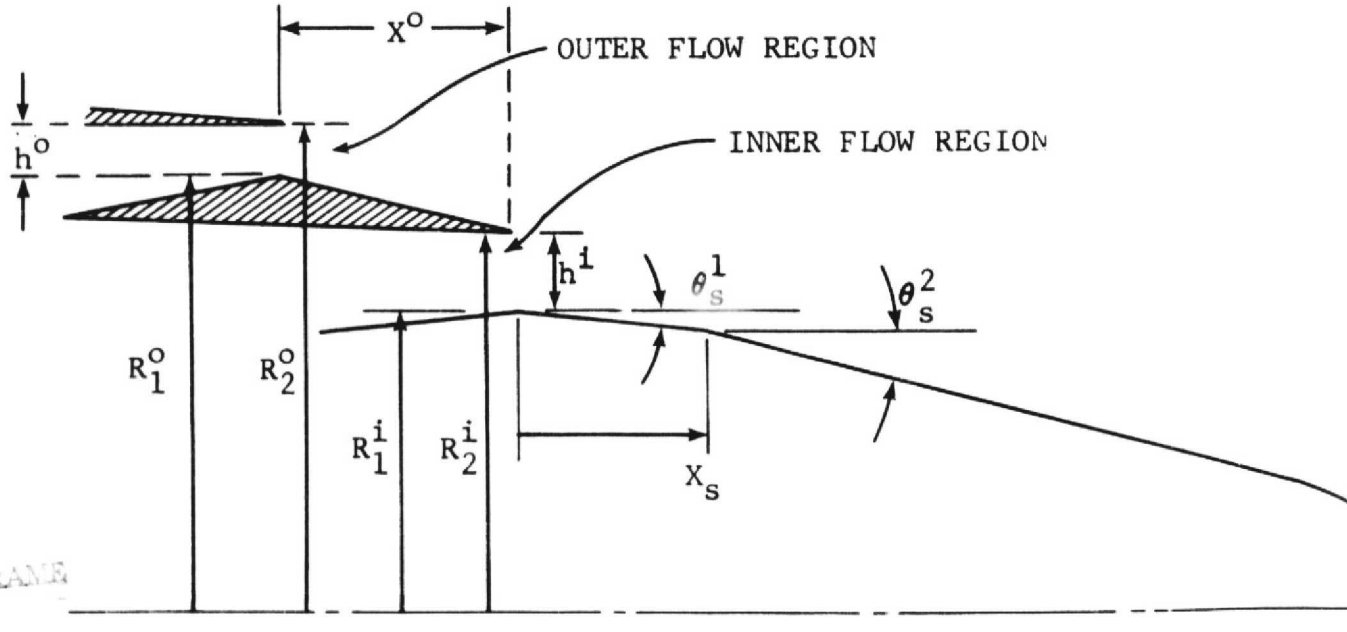
D | 1074-407

Figure 48

Table

SUMMARY OF CONFIGURATION GEOMETRIC

CONFIGURATION	h^o,in.	h^i,in.	$R^o{}_1$	$R^o{}_2$	$R^i{}_1$	$R^i{}_2$	$R_r)^o$	$R_r)^i$	A^o,in^2
1	.426	1.036	3.918	4.344	2.134	3.168	.902	.673	11.057
2	.426	.634	3.918	4.344	2.534	3.168	.902	.800	11.057
3	.426	.311	3.918	4.344	2.858	3.168	.902	.902	11.057
4	.426	.634	3.918	4.344	2.534	3.168	.902	.800	11.057
5	.675	.634	3.918	4.593	2.534	3.168	.853	.800	18.049
6	.313	.634	3.918	4.231	2.534	3.168	.926	.800	8.013
7	.675	.311	3.918	4.593	2.858	3.168	.853	.902	18.049
8	.675	.634	3.918	4.593	2.534	3.168	.853	.800	18.049



FOLDOUT FRAME

SCHEMATIC OF NOZZLE CONFIGURATIONS AND DEFINITION OF PARAMETERS

Table 1.

:OMETRIC PARAMETERS FOR ACOUSTIC MODELS.

^{o},in^2	A^i,in^2	A^o/A^i	$h^i/D_{eq}{}^o$	X^o	X^o/h^o	$(X/h)_s^i$	θ_s^1,°	θ_s^2,°	TYPE	
									Acoustic	Aero
1.057	17.248	.653	.28	3.089	7.25	18.75	2.9	15	X	X
1.057	11.350	.974	.17	3.089	7.25	0	15.0	15	X	X
1.057	5.878	1.881	.08	3.089	7.25	0	15.0	15	X	X
1.057	11.350	.974	.17	3.089	7.25	9.194	2.9	15	X	X
8.049	11.350	1.590	.13	3.063	4.54	0	15.0	15	X	X
8.013	11.350	.706	.20	3.100	9.90	0	15.0	15	X	X
8.049	5.878	3.070	.06	3.063	4.54	0	15.0	15	X	X
8.049	11.350	1.590	.13	3.063	4.54	9.194	2.9	15		X

where R_r = Radius Ratio (R_1/R_2)

h = Step Height, inches

A = Area, in^2

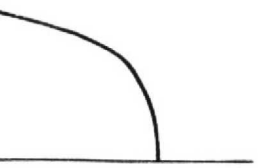
D_{eq} = Equivalent Circular Diameter Based on A, in.

θ_s = Ramp Angle of Inner Plug

Superscripts

o = Outer Flow Region

i = Inner Flow Region



AMETERS

FOLDOUT FRAME