[redacted]

[redacted]

10

2

CLASSIFICATION CHANGE

To UNCLASSIFIED
By authority of GDS - EO 11652
Changed by L. Shirley Date 12/31/72
Classified Document Master Control Station, NASA
Scientific and Technical Information Facility Accession Number 14488

v

SID 62-1027

Copy #1

DATA REPORT FOR APOLLO MODEL (FS-1)
WIND TUNNEL TEST (AMES 2 x 2 - 396)
(U)
NAS 9-150

4.5.5.1

24 August 1962

Prepared by

Apollo Engineering
Aerodynamics Section

Approved by

D. J. Gildea
D. J. Gildea, Manager
Flight Technology

[redacted]

"TH[redacted]ON AFFECTING
THE NATION[redacted]D STATES WITHIN
THE MEANING [redacted]WS, TITLE 18, U.S.C.
SECTIONS 793 A[redacted]OR THE REVELA-
TION OF ITS CO[redacted] AN[redacted] AN UN-
AUTHORIZED PE[redacted]S PROHIBITED [redacted]Y LA[redacted]

DOWNGR[redacted]TERVALS
DECLASSIFI[redacted] YEARS
[redacted]200.10

NORTH AMERICAN AVIATION, INC.
SPACE and INFORMATION SYSTEMS DIVISION

[redacted]

FOREWORD

The test described herein was conducted under NASA Apollo Contract NAS 9-150.

This report was prepared by G. G. Davis of the Wind Tunnel Test Group, Space and Information Systems Division of North American Aviation, Inc.

ABSTRACT

This report presents test results of a 0.02-scale Apollo Force Model (FS-1) in the Ames Research Center 2 x 2 ft. Transonic Wind Tunnel at Mach numbers from .4 to 1.35.

The standard force and moment coefficients are presented in both tabular and plotted form for launch escape system and command module configurations tested. In addition, tunnel operating conditions, instrumentation, and configuration description are included.

This report presents basic wind tunnel test data only in order to make the test results available at the earliest possible date. Analyses and summary of results will be reported later under separate cover.

CONTENTS

Section		Page
I	INTRODUCTION	1
II	MODEL DESCRIPTION	2
	General	2
	Command Module	2
	Launch Escape System	2
III	INSTRUMENTATION	7
	Force Measurement	7
	Pressure Measurement	7
IV	OPERATING CONDITIONS	9
	Model Attitudes	9
	Flow Conditions	9
V	TEST PROGRAM	10
	Command Module Run Index	10
	Launch Escape System Run Index	11
	Data Reduction Constants	12
	Data Nomenclature	12
VI	RESULTS	14

APPENDIXES

Appendix		Page
A	Tabulated Data	A-1
B	Plotted Data	B-1

ILLUSTRATIONS

Figure		Page
1	Command Module	3
2	Launch Escape System	4
3	Launch Escape System, Escape Motors,	5
4	Launch Escape System, Tower Structure	6
5	Model Installation	8
6	Index to Tabulated Data	A-2

I. INTRODUCTION

Apollo force model, FS-1, was tested in the Ames Research Center 2 x 2 ft. Transonic Wind Tunnel during the period 17 July 1962 to 24 July 1962.

This test was to determine the aerodynamic characteristics of the launch escape system and the command module alone in the transonic range. These data will be correlated with data from the Ames 11 x 11 Wind Tunnel and the NAA Trisonic Wind Tunnel (TWT).

A total of 418 acceptable data points were taken at six Mach numbers ranging from 0.4 to 1.35 and Reynolds numbers from 0.92×10^6 based on the command module diameter and tunnel operating conditions.

II. MODEL DESCRIPTION

GENERAL

The model tested was a 0.02-scale model of two launch escape system configurations and of the command module alone.

Four command modules were utilized. They are identical except for the angle between the model axis of symmetry and the centerline of the balance cavity. The different balance cavity angles were used to obtain an angle of attack range of -2 to +28 for the launch escape system, and -2 to +184 degrees for the command module alone.

The model was designed and fabricated by North American Aviation. Refer to Table 1 for a listing of the configuration components tested and pertinent drawing numbers.

COMMAND MODULE

The command module configuration tested is shown in Fig. 1. The location of the reference center of gravity and tower attach points are shown.

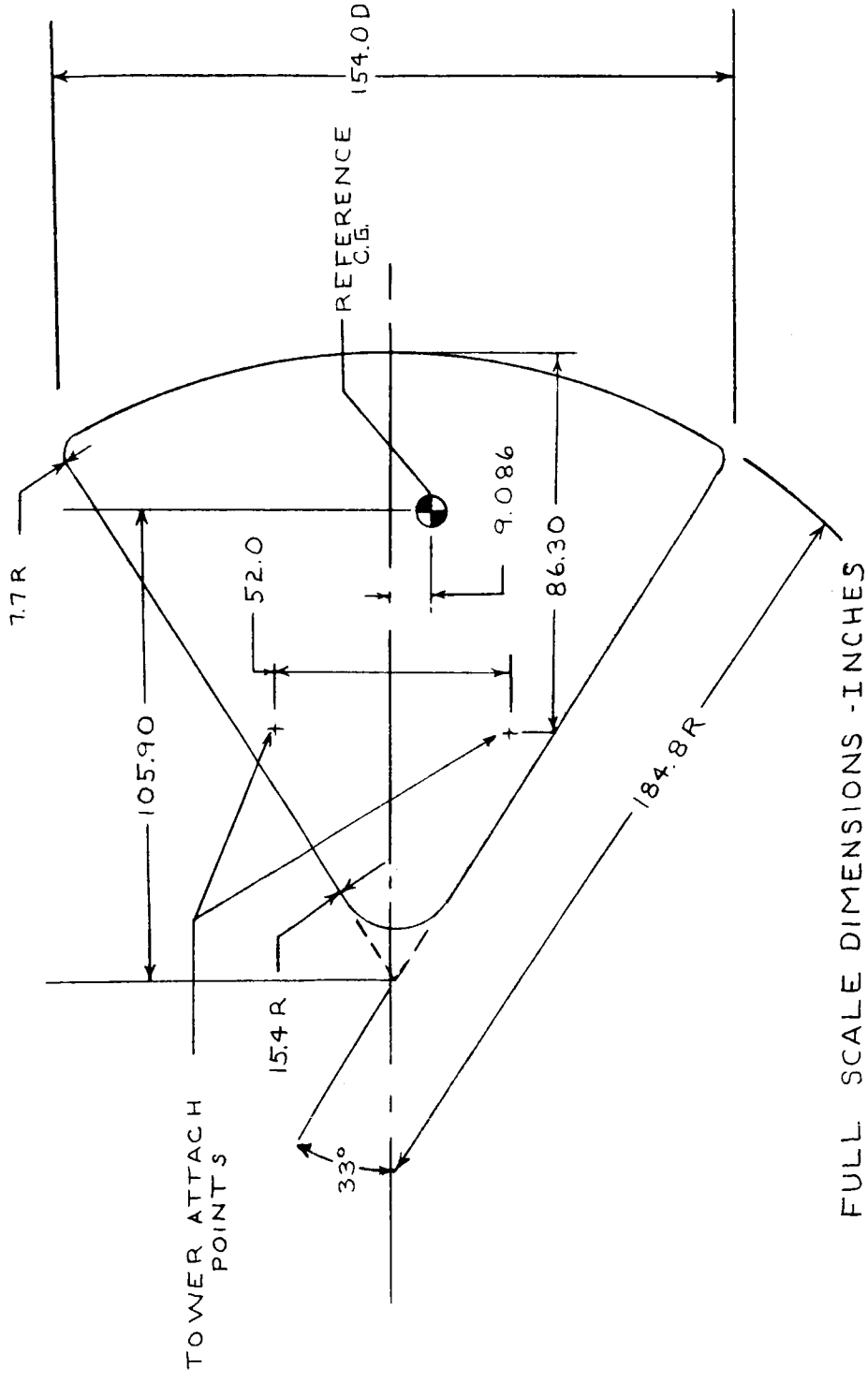
LAUNCH ESCAPE SYSTEM

The components that made up the launch escape system include the escape motors, E_{23} and E_{12}, and the tower structure, T_{11}. (See Figures 2, 3, and 4)

Table 1. Model Nomenclature

Symbol	Description	Drawing No.	Part Nos.
C	Command Module	NA7121-01071	-2, -3, -7, -10
E_{23}	Escape Motor	7121-01051	-14, -33, -34, -36, -44
E_{12}	"	7121-01051	-33, -34, -36
T_{11}	Tower Structure	7121-01051	-32

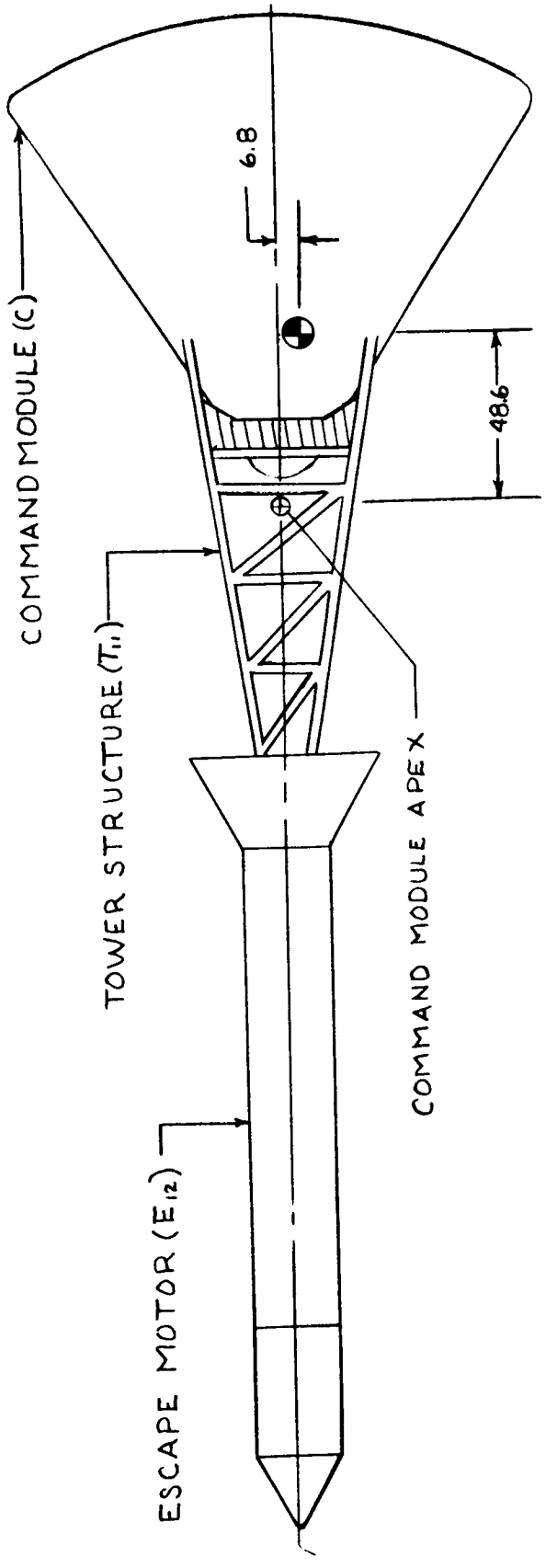
CON[redacted]



FULL SCALE DIMENSIONS - INCHES
NOT TO ANY SCALE

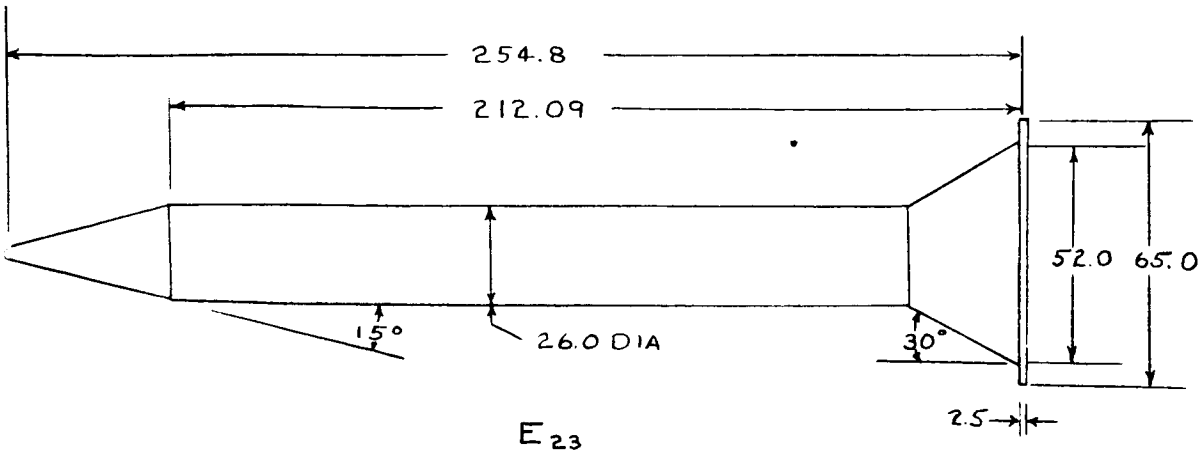
FIGURE 1 - COMMAND MODULE

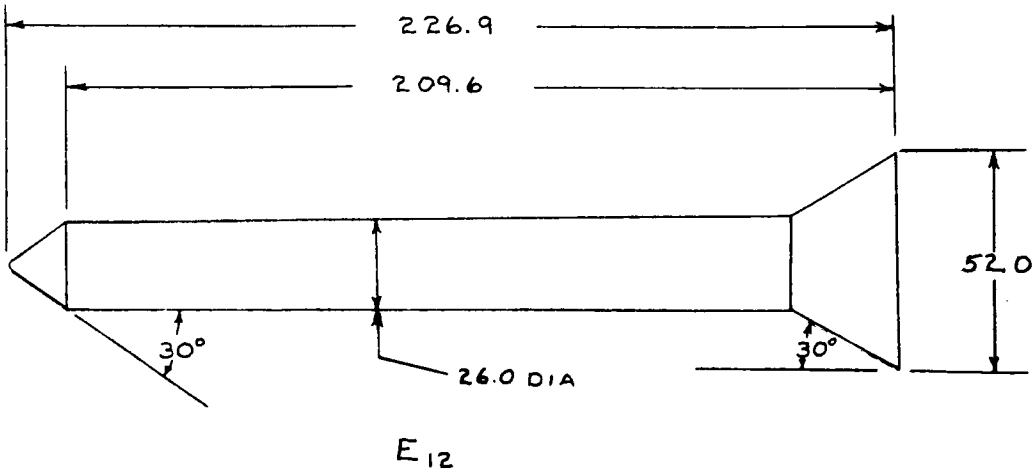
[redacted]



FULL SCALE DIMENSIONS - INCHES
NOT TO ANY SCALE

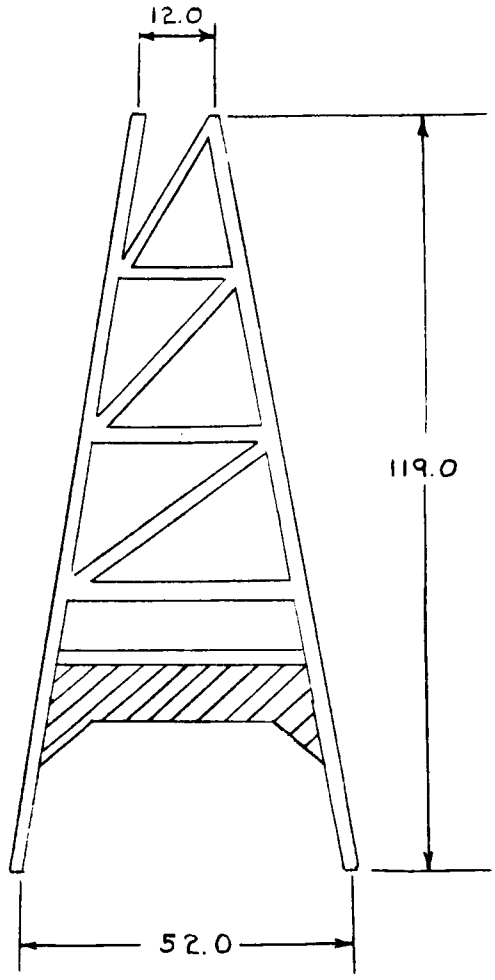
FIGURE 2 - LAUNCH ESCAPE SYSTEM ($E_{12}T_{11}C$)





FULL SCALE DIMENSIONS - INCHES
NOT TO ANY SCALE

FIGURE 3 - LAUNCH ESCAPE SYSTEM, ESCAPE MOTORS



T_{11}

FULL SCALE DIMENSIONS - INCHES

NOT TO ANY SCALE

FIGURE 4 - TOWER STRUCTURE

III. INSTRUMENTATION

FORCE MEASUREMENT

Force and moment data were measured with the Ames A1124D1 3/4" balance. The balance was mounted on the A-11124D9 double joint sting. Variation of angle of attack occured in the horizontal plane with the center of rotation on the test-section centerline. A sketch of the model installation is shown in Figure 5.

An eight channel automatic strain-gage recorder was employed to indicate and record the data. These data were then transferred to punch cards and reduced to coefficient form by automatic data processing equipment.

PRESSURE MEASUREMENT

Pressure measurements were taken at the end of the sting closest to the base of the model to assist in the correlation of data from one sting angle (θ) to data of another sting angle for the same angle of attack. No corrections were made to force and moment data presented in this report.

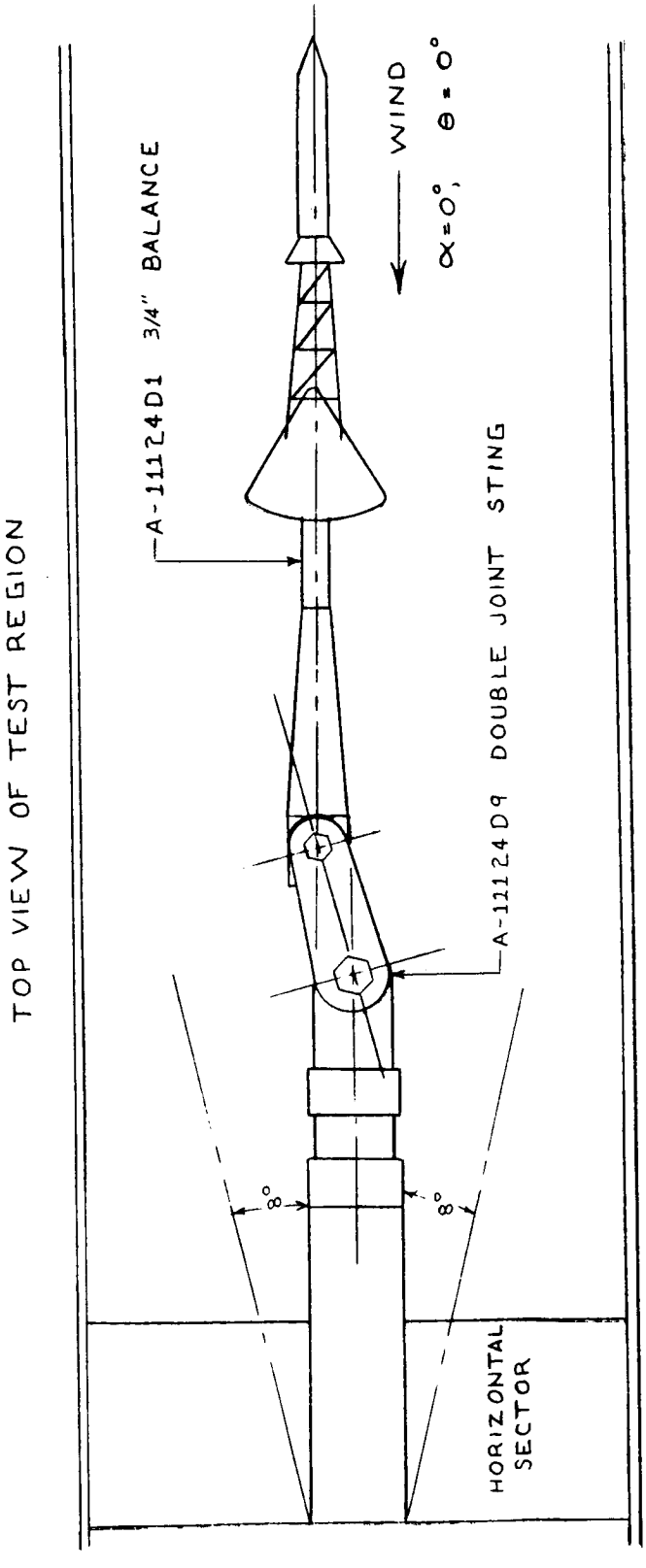


FIGURE 5 - MODEL INSTALLATION

IV. OPERATING CONDITIONS

MODEL ATTITUDES

The angle of attack range for the launch escape system was from -2 to +28 degrees and from -2 to 184 degrees for the command module alone. The complete range is given in Section V.

FLOW CONDITIONS

The following conditions indicated are for tunnel clear operation.

Mach Number	Reynolds No. x 10^{-6} Based on Command Module Diameter
0.4	1.078
0.7	"
0.9	"
1.1	"
1.2	"
1.35	.924

V. TEST PROGRAM

SUMMARY OF COMPLETED RUNS
COMMAND MODULE

Model Configuration	Mach Number						Θ	α Range
	.4	.7	.9	1.1	1.2	1.35		
C	22	23	24	25	26	27	0	-2 to 14
	28	29	30	31	32	33	0	-12 to 28
	58	59	60	61	62	63	60°	58 to 74
	64	65	66	67	68	69	60°	72 to 88
	(34,70)*	(35,71)*	(36,72)*	37	38	39	160°	132 to 148
	40	41	42	43	44	45	160°	148 to 164
	46	47	48	49	50	51	180°	168 to 184

* Runs 70, 71, 72 are reruns of Runs 34, 35, 36 with RN change only.

SUMMARY OF COMPLETED RUNS
LAUNCH ESCAPE SYSTEM

Model Configuration	Mach Number							Range
	.4	.7	.9	1.1	1.2	1.35		
E_{23} T_{11} C	4	5	6	7	8	9	0	-2 to 14
	10	11	12	13	14	15	0	12 to 28
E_{12} T_{11} C	16	17	18	19	20	21	0	-2 to 14

DATA REDUCTION CONSTANTS

The following data reduction constants were used for the FS-1 test:

Reference Area = S = 7.4506 in^2 = .0517 ft^2

Reference Center of Gravity Location:

Command Module Alone

$\bar{x}$ = 2.11 inches measured from the apex towards the heat shield, along the axis of symmetry.

$\bar{z}$ = 0.1817 inches below axis of symmetry.

Launch Escape System

$\bar{x}$ = 0.972 inches from the apex, towards the heat shield, measured along the axis of symmetry.

$\bar{z}$ = 0.136 inches below the axis of symmetry.

DATA NOMENCLATURE

General

M	Free-stream Mach number
α	Angle of attack of model axis of symmetry (zero for apex forward), degrees
q	Free-stream dynamic pressure, lbs/ft^2
S	Model reference area, in^2
d	Model reference diameter, in
P_∞	Free-stream static pressure, lb/ft^2
Pb	Balance cavity pressure, lb/ft^2
C_{Pb}	Balance cavity pressure coefficient, $Pb-P_\infty$ /q
θ	Angle between balance axis and model axis of symmetry, degrees
$\bar{x}$	Distance from apex to reference center of gravity, measured along the axis of symmetry, inches
$\bar{z}$	Perpendicular distance from axis of symmetry to the reference center of gravity, inches

Stability System of Axis with Origin at Center of Gravity

C_L Lift coefficient, Lift/qA

C_D Drag coefficient, Drag/qA

$C_{M_{c.g.}}$ Pitching-moment coefficient, Pitching moment/qAd

L/D Lift-to-Drag ratio CL/CD

Body System of Axes with Origin at Center of Gravity

C_A Axial-force coefficient, Axial force/qA

C_N Normal-force coefficient, Normal force/qA

Body System of Axes with Origin at Command Module Projected Cone Apex

C_{mA} Pitching-moment coefficient, Pitching moment/qAd

$X_{cp/d}$ Center-of-pressure location measured from the apex along axis of symmetry, $x/d + C_{m_{c.g.}} - \bar{z}/d\ (C_A/C_N)$

VI. RESULTS

Tabulated data from this test are presented in Appendix A, and plotted data are presented in Appendix B. The discontinuities apparent in the plots (see figures 13a-f, 14a-f) at M = .4 and M = .7 for the command module occur when the angle of attack changes from 69 to 70 degrees. At 69 degrees the flow is separated from the heat shield. At 70° the flow becomes attached to the heat shield resulting in a decrease in base pressure effecting the force the moment coefficients as shown in the figures.

NOTE: Where the data do not show a definite trend, or there is a lack of data or the data contain obvious errors, portions of the curves have been faired using previous data as a basis for the fairing.

APPENDIX A

CONF[redacted]

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13
CORR. NO.	M			C_L	C_D	$C_{m_{c.g.}}$	C_A	C_N	L/D	C_{P_b}	α	C_{M_A}	$\frac{X_{CP_A}}{d}$
DECIMAL	3			3	3	3	3	3	2	4	3	3	3

FIGURE 6 - TABULATED DATA FORMAT

[redacted]

TABULATED DATA NOMENCLATURE

Symbol	Definition
C_L	Lift coefficient
C_D	Drag coefficient
$C_{m_{c.g.}}$	Pitching moment coefficient about the center of gravity
C_A	Axial force coefficient
C_N	Normal force coefficient
L/D	Lift drag ratio
C_{P_b}	Base pressure coefficient
α	Angle of attack, degrees
C_{m_A}	Pitching moment coefficient about the apex
$X_{C_{P_A}}/D$	Center of pressure, measured from apex along axis of symmetry

TEST	RUN	Rx10-6
396	004	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility 02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6349	0393			-0096	0562	0051	0558	-0116	-0017	-3320	-0020	0063	-0543							
6350	0392			-0044	0537	0035	0536	-0054	-0008	-3157	-0010	0028	-0519							
6351	0395			0016	0532	0020	0532	0016	0003	-3133		-0009	-0563							
6352	0395			0071	0545	0007	0544	0081	0013	-3214	0010	-0043	-0531							
6353	0396			0127	0575	-0008	0570	0148	0022	-3410	0020	-0080	-0541							
6354	0398			0182	0633	-0023	0618	0226	0029	-3774	0041	-0122	-0540							
6355	0395			0219	0698	-0030	0671	0292	0031	-4084	0061	-0152	-0521							
6356	0395			0218	0732	-0025	0695	0319	0030	-4165	0081	-0156	-0489							
6357	0395			0200	0766	-0017	0719	0331	0026	-4200	0101	-0153	-0462							
6358	0393			0187	0764	-0011	0708	0342	0024	-4116	0121	-0150	-0439							
6359	0394			0183	0766	-0013	0698	0364	0024	-3999	0141	-0159	-0437							

SID62-1047
A-4

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	005	00.0[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6362	0700			-0092	0567	0054	0563	-0112	-0016	-3275	-0021	0064	-0571							
6363	0695			-0049	0543	0038	0542	-0058	-0009	-3150	-0010	0032	-0552							
6364	0696				0534	0025	0534			-3123		0001								
6365	0697			0064	0544	0006	0542	0073	0012	-3174	0010	-0041	-0562							
6366	0699			0107	0568	-0007	0564	0127	0019	-3316	0021	-0072	-0567							
6367	0697			0174	0643	-0031	0629	0220	0027	-3695	0041	-0128	-0582							
6368	0698			0208	0708	-0040	0682	0282	0029	-3962	0061	-0159	-0564							
6369	0698			0222	0749	-0038	0710	0325	0030	-3998	0081	-0172	-0529							
6370	0697			0209	0760	-0030	0711	0339	0027	-3914	0101	-0168	-0496							
6371	0699			0192	0783	-0019	0725	0352	0025	-3842	0121	-0162	-0460							
6372	0699			0185	0784	-0016	0715	0371	0024	-3744	0141	-0165	-0445							

S1D62-1027

A-5

4-C

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	006	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6373	0900			-0092	0616	0063	0612	-0114	-0015	-3332	-0021	0072	-0632							
6374	0898			-0052	0587	0046	0586	-0063	-0009	-3173	-0010	0040	-0635							
6375	0899			0012	0570	0021	0570	0012	0002	-3048		-0008	-0667							
6376	0898			0060	0583	0003	0582	0071	0010	-3168	0010	-0045	-0634							
6377	0897			0104	0615	-0012	0610	0126	0017	-3350	0021	-0079	-0627							
6378	0899			0165	0691	-0035	0678	0214	0024	-3754	0041	-0133	-0621							
6379	0898			0205	0762	-0050	0736	0285	0027	-3978	0062	-0172	-0604							
6380	0898			0214	0807	-0049	0768	0327	0027	-4013	0082	-0186	-0569							
6381	0900			0208	0834	-0039	0784	0352	0025	-3888	0102	-0185	-0526							
6383	0896			0198	0845	-0034	0784	0372	0023	-3780	0122	-0186	-0500							
6384	0898			0181	0856	-0023	0785	0386	0021	-3695	0142	-0180	-0466							

SID62-1027

A-6

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	007	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6385	1102			-0069	0867	0067	0864	-0100	-0008	-4194	-0021	0060	-0600							
6386	1100			-0038	0850	0052	0849	-0053	-0004	-4114	-0010	0031	-0585							
6387	1102			-0001	0843	0037	0843	-0001		-4076										
6388	1102			0039	0846	0022	0845	0054	0005	-4101	0010	-0032	-0593							
6389	1101			0078	0867	0006	0863	0109	0009	-4215	0021	-0067	-0615							
6390	1101			0134	0938	-0026	0925	0201	0014	-4548	0041	-0130	-0647							
6391	1103			0158	1008	-0040	0985	0265	0016	-4771	0062	-0167	-0630							
6392	1099			0160	1057	-0043	1024	0309	0015	-4868	0082	-0186	-0602							
6393	1098			0150	1078	-0035	1035	0339	0014	-4790	0102	-0188	-0555							
6394	1103			0128	1081	-0025	1030	0353	0012	-4560	0122	-0182	-0516							
6395	1097			0105	1095	-0013	1035	0371	0010	-4568	0142	-0176	-0474							

S1D62-1027

A-7

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	008	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6396	1199			-0050	0781	0049	0779	-0078	-0006	-3195	-0020	0039	-0500							
6397	1194			-0032	0778	0045	0777	-0046	-0004	-3201	-0010	0025	-0543							
6398	1200			0006	0733	0028	0733	0006	0001	-2936		-0006	-1000							
6399	1196			0048	0770	0013	0769	0062	0006	-3172	0010	-0041	-0661							
6400	1200			0060	0782	0012	0780	0088	0008	-3200	0021	-0050	-0568							
6401	1202			0107	0795	-0004	0786	0163	0013	-3211	0041	-0090	-0552							
6402	1201			0160	0855	-0030	0833	0250	0019	-3457	0062	-0146	-0584							
6403	1196			0181	0946	-0046	0911	0314	0019	-3778	0082	-0185	-0589							
6404	1198			0181	0987	-0047	0940	0353	0018	-3764	0102	-0200	-0567							
6405	1200			0162	1014	-0038	0957	0373	0016	-3730	0122	-0198	-0531							
6406	1199			0133	1041	-0021	0977	0385	0013	-3712	0142	-0186	-0483							

SID62-1027
A-8

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	009	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6407	1349			-0051	0863	0064	0861	-0082	-0006	-3986	-0021	0052	-0634							
6408	1350			-0031	0840	0054	0839	-0046	-0004	-3881	-0010	0031	-0674							
6409	1348			0007	0821	0032	0821	0007	0001	-3810		-0006	-0857							
6410	1348			0038	0847	0018	0846	0053	0004	-3913	0010	-0036	-0679							
6411	1350			0043	0873	0020	0871	0074	0005	-4021	0020	-0042	-0568							
6412	1347			0086	0889	0003	0880	0149	0010	-4023	0041	-0083	-0557							
6413	1349			0139	0931	-0021	0911	0238	0015	-4101	0061	-0136	-0571							
6414	1346			0167	0994	-0041	0960	0307	0017	-4303	0082	-0180	-0586							
6415	1348			0175	1035	-0048	0988	0355	0017	-4291	0102	-0204	-0575							
6416	1348			0167	1066	-0036	1007	0388	0016	-4195	0122	-0203	-0523							
6417	1346			0150	1097	-0016	1027	0415	0014	-4178	0142	-0192	-0463							

S-1D62-1027
A-9

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	010	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6418	0394			0184	0768	-0018	0713	0340	0024	-4220	0121	-0157	-0462							
6419	0395			0170	0773	-0014	0696	0378	0022	-4025	0161	-0164	-0434							
6420	0396			0161	0777	-0007	0674	0418	0021	-3998	0201	-0169	-0404							
6421	0393			0157	0782	0003	0650	0462	0020	-4093	0241	-0172	-0372							
6422	0394			0164	0779	0012	0610	0512	0021	-4219	0281	-0177	-0346							

SID62-1027
A-10

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	011	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6423	0701			0179	0785	-0021	0730	0341	0023	-3928	0121	-0161	-0472							
6424	0699			0164	0795	-0012	0718	0379	0021	-3801	0161	-0163	-0430							
6426	0699			0161	0802	-0007	0697	0428	0020	-3801	0202	-0173	-0404							
6427	0698			0171	0806	0002	0665	0486	0021	-3893	0242	-0181	-0372							
6428	0699			0183	0804	0013	0622	0542	0023	-4075	0282	-0186	-0343							

SID62-1027
A-11

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	012	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6429	0902			0179	0854	-0032	0797	0355	0021	-3941	0122	-0179	-0504							
6430	0898			0153	0868	-0014	0791	0389	0018	-3831	0162	-0172	-0442							
6431	0895			0149	0887	-0007	0781	0446	0017	-3847	0202	-0182	-0408							
6432	0896			0162	0888	0001	0743	0512	0018	-3943	0242	-0193	-0377							
6433	0900			0183	0881	0021	0689	0578	0021	-4059	0282	-0192	-0332							

SID62-1027
A 12

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	013	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6434	1101			0122	1084	-0026	1034	0348	0011	-4682	0122	-0182	-0523							
6435	1097			0082	1104	-0006	1037	0387	0007	-4645	0162	-0174	-0450							
6436	1101			0051	1107	0007	1021	0431	0005	-4623	0202	-0174	-0404							
6437	1101			0053	1091	0021	0972	0497	0005	-4576	0242	-0179	-0360							
6438	1101			0074	1088	0044	0923	0580	0007	-4669	0283	-0180	-0310							

SID62-1027
A-13

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	014	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6439	1199			0132	1036	-0037	0985	0348	0013	-3951	0122	-0190	-0546							
6440	1197			0088	1087	-0005	1019	0388	0008	-3879	0162	-0172	-0443							
6441	1199			0064	1101	0033	1011	0441	0006	-3897	0202	-0151	-0342							
6442	1197			0069	1102	0060	0977	0515	0006	-3894	0242	-0146	-0283							
6443	1203			0095	1099	0103	0923	0604	0009	-3881	0283	-0128	-0212							

SID 62-1027
A-14

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	015	00[redacted]

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6444	1350			0158	1030	-0035	0973	0373	0015	-3897	0122	-0196	-0525							
6445	1343			0119	1080	0006	1004	0416	0011	-3809	0162	-0170	-0409							
6446	1348			0101	1112	0044	1009	0479	0009	-3870	0202	-0152	-0317							
6447	1347			0114	1131	0074	0985	0568	0010	-3971	0242	-0149	-0262							
6448	1345			0127	1151	0105	0954	0657	0011	-3977	0283	-0145	-0221							

SID62-1027
A-15

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	016	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6449	0395			-0081	0594	0049	0591	-0102	-0014	-3649	-0020	0055	-0539							
6450	0394			-0044	0580	0039	0580	-0054	-0008	-3580	-0010	0030	-0556							
6451	0394			0001	0572	0024	0572	0001		-3568		-0002	-2000							
6452	0395			0049	0577	0014	0576	0059	0009	-3578	0010	-0030	-0508							
6453	0396			0087	0592	0006	0588	0108	0015	-3647	0020	-0054	-0500							
6454	0392			0121	0621	0003	0611	0165	0020	-3777	0040	-0076	-0461							
6455	0393			0123	0644	0006	0627	0190	0019	-3894	0060	-0082	-0432							
6456	0393			0121	0658	0003	0634	0212	0018	-3930	0080	-0092	-0434							
6457	0392			0126	0652	0005	0620	0237	0019	-3849	0101	-0097	-0409							
6458	0397			0121	0653	0008	0613	0255	0018	-3833	0121	-0100	-0392							
6459	0396			0118	0662	0006	0613	0275	0018	-3896	0141	-0108	-0393							

SID62-1027
A-16

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	017	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6460	0696			-0077	0625	0053	0622	-0099	-0012	-3493	-0020	0057	-0576							
6461	0701			-0045	0614	0042	0613	-0056	-0007	-3396	-0010	0033	-0589							
6462	0701			0001	0606	0026	0606	0001		-3361		-0001	-1000							
6463	0703			0041	0614	0013	0613	0052	0007	-3411	0010	-0031	-0596							
6464	0698			0072	0626	0005	0623	0095	0012	-3494	0020	-0053	-0558							
6465	0700			0113	0656	-0003	0647	0159	0017	-3629	0041	-0082	-0516							
6466	0699			0129	0678	-0002	0661	0200	0019	-3629	0061	-0094	-0470							
6467	0699			0124	0689	0002	0665	0219	0018	-3565	0081	-0097	-0443							
6468	0697			0124	0699	0002	0666	0245	0018	-3579	0101	-0105	-0429							
6469	0698			0128	0698	0003	0656	0271	0018	-3572	0121	-0112	-0413							
6470	0697			0133	0698	0002	0644	0300	0019	-3580	0141	-0121	-0403							

S1D62-1027
A-17

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	018	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6471	0898			-0065	0692	0055	0689	-0090	-0009	-3300	-0021	0053	-0589							
6472	0899			-0032	0681	0042	0680	-0044	-0005	-3232	-0010	0026	-0591							
6473	0901			0001	0680	0030	0680	0001		-3207										
6474	0901			0038	0686	0016	0685	0050	0006	-3235	0010	-0030	-0600							
6475	0904			0071	0701	0004	0698	0096	0010	-3344	0021	-0057	-0594							
6476	0898			0106	0729	-0005	0719	0158	0015	-3480	0041	-0087	-0551							
6477	0894			0124	0754	-0008	0736	0204	0016	-3498	0061	-0105	-0515							
6478	0901			0121	0774	-0002	0750	0229	0016	-3461	0081	-0107	-0467							
6479	0898			0118	0782	0001	0749	0254	0015	-3468	0101	-0112	-0441							
6480	0900			0122	0785	0002	0742	0285	0016	-3443	0121	-0121	-0425							
6481	0897			0127	0789	0003	0734	0316	0016	-3495	0141	-0129	-0408							

S1D62-1027
A-18

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	019	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6482	1103			-0053	0970	0066	0968	-0088	-0005	-4342	-0021	0051	-0580							
6483	1101			-0032	0951	0054	0950	-0049	-0003	-4235	-0010	0027	-0551							
6484	1101			0003	0942	0040	0942	0003		-4235		-0003	-1000							
6485	1100			0038	0952	0025	0951	0055	0004	-4286	0010	-0034	-0618							
6486	1102			0061	0971	0014	0968	0096	0006	-4383	0021	-0059	-0615							
6487	1098			0082	1009	0002	1000	0154	0008	-4589	0041	-0091	-0591							
6488	1099			0085	1040	0001	1025	0196	0008	-4654	0061	-0106	-0541							
6489	1100			0078	1043	0005	1021	0224	0007	-4472	0081	-0111	-0496							
6490	1098			0064	1046	0011	1018	0246	0006	-4417	0101	-0112	-0455							
6491	1096			0054	1040	0013	1006	0272	0005	-4387	0121	-0117	-0430							
6492	1099			0048	1040	0015	0997	0301	0005	-4333	0142	-0124	-0412							

SID 62-1027
A-19

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	R x10⁻⁶
396	020	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6493	1199			-0050	0863	0056	0860	-0081	-0006	-3266	-0021	0044	-0543							
6494	1191			-0017	0902	0046	0902	-0033	-0002	-3443	-0010	0017	-0515							
6495	1198			0007	0838	0034	0838	0007	0001	-3219		-0005	-0714							
6496	1207			0033	0807	0024	0806	0048	0004	-3074	0010	-0027	-0563							
6497	1192			0060	0916	0017	0913	0093	0007	-3553	0021	-0053	-0570							
6498	1203			0103	0901	-0005	0891	0167	0011	-3486	0041	-0097	-0581							
6499	1202			0111	0963	-0011	0946	0213	0011	-3709	0061	-0120	-0563							
6500	1200			0100	1008	-0008	0984	0242	0010	-3758	0081	-0128	-0529							
6501	1199			0084	1018	0002	0987	0262	0008	-3642	0102	-0124	-0473							
6502	1201			0070	1017	0009	0980	0282	0007	-3514	0122	-0123	-0436							
6503	1199			0056	1016	0017	0971	0303	0006	-3492	0142	-0122	-0403							

SID62-1027
A-20

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	021	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6504	1181			-0053	0912	0061	0909	-0085	-0006	-4048	-0020	0048	-0565							
6505	2307			-0033	1251	0067	1250	-0055	-0003	-5592	-0010	0029	-0527							
6506	1349			0002	0850	0037	0850	0002		-3798		-0001	-0500							
6507	1351			0032	0860	0025	0859	0048	0004	-3842	0010	-0028	-0583							
6508	1345			0061	0881	0013	0878	0092	0007	-3924	0021	-0055	-0598							
6509	1349			0104	0924	-0008	0914	0170	0011	-4067	0041	-0102	-0600							
6510	1347			0125	0981	-0022	0962	0229	0013	-4241	0061	-0137	-0598							
6511	1345			0133	1023	-0029	0994	0277	0013	-4356	0082	-0160	-0578							
6512	1344			0131	1043	-0025	1003	0313	0013	-4276	0102	-0168	-0537							
6513	1348			0118	1055	-0011	1006	0338	0011	-4138	0122	-0162	-0479							
6514	1347			0099	1062	0005	1005	0356	0009	-4070	0142	-0152	-0427							

SID62-1027
A-21

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	022	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6515	0396			0010	0629	0038	0629	-0012	0002	-3676	-0020	0009	-0750							
6516	0395			0011	0633	0037	0633		0002	-3681	-0010									
6517	0396			0007	0637	0037	0637	0007	0001	-3713		-0005	-0714							
6518	0396			0007	0635	0036	0635	0019	0001	-3667	0010	-0015	-0789							
6519	0396			0012	0629	0035	0628	0034	0002	-3667	0020	-0025	-0735							
6520	0397			0016	0627	0033	0624	0060	0003	-3653	0040	-0045	-0750							
6521	0397			0025	0626	0031	0620	0090	0004	-3697	0060	-0067	-0744							
6522	0393			0023	0624	0029	0614	0110	0004	-3733	0080	-0083	-0755							
6523	0392			0030	0627	0027	0612	0139	0005	-3830	0100	-0104	-0748							
6524	0398			0037	0626	0026	0605	0167	0006	-3961	0121	-0124	-0743							
6525	0396			0034	0625	0027	0598	0184	0005	-4038	0141	-0134	-0728							

SID62-1027
A-22

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	023	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6526	0700			0002	0667	0041	0667	-0022		-3253	-0020	0017	-0773							
6527	0698			0004	0667	0040	0667	-0008	0001	-3259	-0010	0006	-0750							
6528	0699			0002	0665	0039	0665	0002		-3239		-0002	-1000							
6529	0700			0007	0666	0038	0666	0019	0001	-3247	0010	-0014	-0737							
6530	0699			0006	0669	0038	0668	0029	0001	-3253	0020	-0021	-0724							
6531	0696			0008	0666	0036	0664	0054	0001	-3300	0040	-0040	-0741							
6532	0697			0012	0668	0035	0663	0082	0002	-3392	0060	-0060	-0732							
6533	0698			0016	0670	0034	0661	0109	0002	-3484	0081	-0080	-0734							
6534	0697			0023	0665	0033	0651	0139	0003	-3526	0101	-0101	-0727							
6535	0697			0032	0658	0031	0637	0169	0005	-3583	0121	-0122	-0722							
6536	0697			0040	0654	0031	0624	0198	0006	-3674	0141	-0142	-0717							

S1062-1027
A-23

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	024	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6537	0895			0002	0751	0046	0750	-0025		-2970	-0020	0019	-0760							
6538	0897			0002	0753	0045	0753	-0011		-2950	-0010	0008	-0727							
6539	0900			0001	0757	0045	0757	0001		-2933										
6540	0898			0001	0751	0043	0751	0014		-2934	0010	-0011	-0786							
6541	0900			-0001	0754	0042	0754	0025		-2945	0020	-0020	-0800							
6542	0898				0754	0040	0752	0053		-3050	0040	-0041	-0774							
6543	0901			0001	0756	0040	0752	0080		-3160	0060	-0059	-0738							
6544	0903			0004	0763	0039	0755	0111		-3238	0081	-0082	-0739							
6545	0901			0009	0757	0038	0743	0142	0001	-3327	0101	-0103	-0725							
6546	0895			0018	0744	0037	0724	0174	0002	-3377	0121	-0125	-0718							
6547	0902			0022	0738	0037	0711	0201	0003	-3394	0141	-0143	-0711							

SID62-1027
A-24

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	025	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6548	1098			0017	1028	0064	1028	-0019	0002	-3871	-0020	0016	-0842							
6549	1102			0011	1023	0062	1024	-0007	0001	-3782	-0010	0006	-0857							
6550	1098			0002	1020	0060	1020	0002		-3785		-0002	-1000							
6551	1099			-0007	1023	0058	1023	0011	-0001	-3793	0010	-0010	-0909							
6552	1099			-0015	1031	0057	1031	0021	-0001	-3848	0020	-0018	-0857							
6553	1096			-0028	1040	0055	1039	0045	-0003	-4075	0040	-0037	-0822							
6554	1098			-0037	1039	0054	1037	0073	-0004	-4189	0061	-0057	-0781							
6555	1100			-0045	1032	0055	1028	0100	-0004	-4223	0081	-0074	-0740							
6556	1102			-0050	1021	0054	1014	0130	-0005	-4220	0101	-0095	-0731							
6557	1100			-0057	1011	0054	1000	0156	-0006	-4203	0121	-0112	-0718							
6558	1099			-0059	1000	0054	0984	0187	-0006	-4241	0141	-0132	-0706							

SID62-1027
A-25

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	026	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6559	1202			0022	1056	0066	1056	-0015	0002	-3134	-0020	0014	-0933							
6560	1199			0013	1052	0064	1052	-0005	0001	-3110	-0010	0005	-1000							
6561	1200			0003	1051	0062	1051	0003		-3102		-0002	-0667							
6562	1198			-0007	1055	0059	1055	0012	-0001	-3118	0010	-0012	-1000							
6563	1201			-0016	1056	0058	1056	0021	-0001	-3144	0020	-0019	-0905							
6564	1201			-0030	1061	0057	1061	0045	-0003	-3267	0040	-0037	-0822							
6565	1195			-0040	1059	0056	1058	0072	-0004	-3409	0061	-0056	-0778							
6566	1198			-0050	1049	0057	1046	0097	-0005	-3382	0081	-0071	-0732							
6567	1201			-0057	1038	0056	1032	0126	-0005	-3325	0101	-0091	-0722							
6568	1202			-0065	1024	0056	1015	0151	-0006	-3299	0121	-0107	-0709							
6569	1201			-0069	1011	0055	0997	0179	-0007	-3281	0141	-0127	-0709							

S1062-1027
A-26

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	027	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6570	1347			0016	1029	0062	1029	-0021	0002	-2507	-0020	0016	-0762							
6571	1349			0009	1009	0060	1009	-0008	0001	-2294	-0010	0006	-0750							
6572	1351			0003	1009	0058	1009	0003		-2248		-0004	-1333							
6573	1349			-0002	1006	0057	1006	0016		-2256	0010	-0013	-0813							
6574	1347			-0010	1036	0057	1036	0027	-0001	-2491	0020	-0023	-0852							
6575	1349			-0024	1083	0058	1082	0052	-0002	-3074	0040	-0042	-0808							
6576	1349			-0032	1078	0057	1075	0082	-0003	-3177	0061	-0063	-0768							
6577	1349			-0039	1059	0058	1054	0110	-0004	-3112	0081	-0080	-0727							
6578	1347			-0042	1041	0056	1032	0141	-0004	-3031	0101	-0102	-0723							
6579	1345			-0047	1026	0056	1013	0169	-0005	-3015	0121	-0120	-0710							
6580	1343			-0049	1024	0055	1005	0202	-0005	-3190	0141	-0143	-0708							

S1D62-1027
A-27

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	028	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6581	0394			0029	0627	0028	0607	0160	0005	-3906	0120	-0117	-0731							
6582	0394			0043	0619	0027	0583	0212	0007	-4022	0161	-0153	-0722							
6583	0396			0056	0609	0025	0552	0261	0009	-4119	0201	-0186	-0713							
6584	0396			0074	0591	0024	0509	0309	0013	-4166	0241	-0218	-0706							
6585	0396			0103	0568	0022	0453	0358	0018	-4166	0281	-0250	-0698							

SID62-1027
A-28

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	R x10⁻⁶
396	029	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6586	0700			0016	0673	0033	0655	0156	0002	-3655	0121	-0113	-0724							
6587	0697			0034	0657	0032	0622	0215	0005	-3775	0161	-0152	-0707							
6588	0699			0058	0636	0030	0577	0274	0009	-3775	0201	-0192	-0701							
6589	0698			0085	0614	0029	0526	0329	0014	-3711	0242	-0227	-0690							
6590	0698			0120	0590	0024	0463	0384	0020	-3739	0282	-0266	-0693							

SID62-1027
A-29

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	030	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6591	0901			-0003	0768	0039	0752	0158		-3544	0121	-0114	-0722							
6592	0900			0014	0748	0037	0714	0221	0002	-3601	0161	-0157	-0710							
6593	0901			0032	0728	0036	0672	0281	0004	-3586	0202	-0196	-0698							
6594	0898			0060	0700	0032	0614	0342	0009	-3581	0242	-0239	-0699							
6595	0899			0092	0671	0029	0548	0399	0014	-3583	0282	-0277	-0694							

SID62-1027
A-30

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	031	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6596	1100			-0068	1015	0055	1007	0146	-0007	-4227	0121	-0105	-0719							
6598	1100			-0076	0994	0054	0976	0203	-0008	-4269	0161	-0143	-0704							
6599	1100			-0073	0961	0051	0928	0263	-0008	-4259	0202	-0184	-0700							
6600	1099			-0064	0922	0046	0867	0320	-0007	-4273	0242	-0224	-0700							
6601	1099			-0038	0873	0040	0786	0380	-0004	-4232	0282	-0267	-0703							

SID62-1027
A-31

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	032	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6602	1200			-0084	1047	0058	1041	0137	-0008	-3539	0121	-0097	-0708							
6603	1198			-0094	1020	0056	1006	0193	-0009	-3569	0161	-0136	-0705							
6604	1199			-0093	0982	0052	0953	0251	-0009	-3545	0202	-0176	-0701							
6605	1200			-0086	0939	0048	0891	0306	-0009	-3509	0242	-0214	-0699							
6606	1200			-0059	0890	0041	0812	0370	-0007	-3483	0283	-0260	-0703							

S1062-1027
A-32

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	033	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6607	1351			-0083	1064	0061	1057	0142	-0008	-3129	0121	-0099	-0697							
6608	1348			-0096	1038	0059	1024	0196	-0009	-3168	0161	-0136	-0694							
6609	1346			-0100	1003	0057	0977	0251	-0010	-3216	0202	-0173	-0689							
6610	1344			-0095	0965	0051	0919	0308	-0010	-3247	0242	-0214	-0695							
6611	1351			-0075	0919	0047	0846	0369	-0008	-3231	0282	-0256	-0694							

SID62-1027
A-33

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	034	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6612	0396			0492	0511	0036	-0708	0050	0096	-2890	1320	0044	0880							
6613	0397			0522	0586	0038	-0784	0031	0089	-3904	1360	0063	2032							
6614	0396			0534	0671	0034	-0857	0022	0080	-4762	1401	0070	3182							
6615	0395			0499	0746	0022	-0897	0034	0067	-5055	1441	0052	1529							
6616	0393			0492	0778	0015	-0920	0026	0063	-5083	1461	0052	2000							
6617	0396			0473	0806	0012	-0934	0025	0059	-5082	1481	0050	2000							

SID62-1027
A-34

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	035	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6618	0698			0475	0545	0040	-0718	0087	0087	-3592	1320	0023	0264							
6619	0701			0498	0624	0039	-0795	0074	0080	-4507	1361	0035	0473							
6620	0697			0489	0698	0032	-0849	0073	0070	-4758	1401	0032	0438							
6621	0699			0476	0769	0020	-0901	0066	0062	-4302	1441	0028	0424							
6622	0701			0462	0795	0015	-0918	0060	0058	-4971	1461	0028	0467							
6623	0700			0449	0824	0010	-0937	0055	0054	-4909	1481	0028	0509							

SID62-1027
A-35

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	R x10-6
396	036	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6624	0901			0509	0633	0040	-0802	0129	0080	-4404	1320	-0001	-0008							
6625	0897			0538	0697	0034	-0875	0096	0077	-4515	1361	0020	0208							
6626	0900			0535	0771	0026	-0935	0084	0069	-4644	1401	0024	0286							
6627	0899			0511	0838	0015	-0979	0077	0061	-4702	1441	0020	0260							
6628	0899			0502	0874	0009	-1005	0070	0057	-4708	1461	0020	0286							
6629	0900			0492	0911	0003	-1033	0063	0054	-4703	1481	0021	0333							

A-36

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	037	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6630	1096			0579	0891	0023	-1026	0274	0065	-6524	1320	-0104	-0380							
6631	1100			0627	0932	0018	-1106	0194	0067	-5908	1361	-0050	-0258							
6632	1098			0650	0972	0009	-1163	0123	0067	-5210	1401	-0007	-0057							
6633	1100			0640	1031	-0002	-1211	0085	0062	-4952	1442	0011	0129							
6634	1100			0617	1059	-0007	-1223	0077	0058	-4937	1462	0013	0169							
6635	1098			0589	1083	-0012	-1231	0070	0054	-4842	1482	0013	0186							

S1D62-1027
A-37

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	038	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6636	1200			0592	0926	0015	-1060	0291	0064	-5799	1320	-0122	-0419							
6637	1201			0645	0983	0012	-1156	0217	0066	-5559	1361	-0068	-0313							
6638	1197			0666	1022	0004	-1212	0143	0065	-4998	1401	-0022	-0154							
6639	1198			0661	1068	-0005	-1253	0089	0062	-4354	1442	0008	0090							
6640	1199			0644	1096	-0011	-1269	0075	0059	-4355	1462	0013	0173							
6641	1200			0617	1121	-0016	-1278	0065	0055	-4332	1482	0015	0231							

SID62-1027

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	039	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility 02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6642	1347			0598	0947	0005	-1078	0303	0063	-5044	1320	-0139	-0459							
6643	1345			0642	1025	0002	-1183	0249	0063	-5193	1361	-0099	-0398							
6644	1348			0671	1096	-0004	-1271	0187	0061	-5085	1401	-0057	-0305							
6645	1346			0674	1162	-0011	-1336	0134	0058	-4755	1442	-0024	-0179							
6646	1346			0663	1175	-0016	-1345	0103	0056	-4298	1462	-0007	-0068							
6647	1345			0646	1194	-0020	-1355	0079	0054	-4100	1482	0006	0076							

SLD 64-1047
A-39

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	040	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6648	0395			0475	0802	0008	-0932	0021	0059	-5180	1481	0049	2333							
6649	0391			0440	0850	0001	-0957	0009	0052	-4966	1521	0051	5667							
6650	0392			0407	0895	-0007	-0983	-0010	0046	-4653	1561	0058	-5800							
6651	0395			0353	0922	-0014	-0987	-0018	0038	-4209	1601	0057	-3167							
6652	0395			0291	0943	-0025	-0987	-0021	0031	-3985	1641	0048	-2286							

SID62-1027

A-40

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	041	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6653	0701			0443	0822	0010	-0932	0058	0054	-4905	1481	0025	0431							
6654	0700			0408	0868	0002	-0958	0045	0047	-4655	1521	0028	0622							
6655	0698			0377	0914	-0007	-0989	0025	0041	-4368	1561	0034	1360							
6656	0694			0331	0946	-0016	-1002	0010	0035	-4009	1601	0036	3600							
6657	0697			0263	0964	-0025	-0999	0011	0027	-3744	1641	0027	2455							

S1062-1027
A-41

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	042	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6658	0899			0478	0893	0004	-1011	0066	0053	-4618	1481	0019	0288							
6659	0900			0440	0948	-0004	-1044	0054	0046	-4494	1521	0021	0389							
6660	0898			0399	1001	-0013	-1077	0040	0040	-4333	1562	0023	0575							
6661	0897			0351	1038	-0023	-1095	0022	0034	-3994	1602	0027	1227							
6662	0895			0280	1049	-0031	-1085	0017	0027	-3641	1642	0021	1235							

SID62-1027
A-42

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	043	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6663	1098			0583	1082	-0010	-1227	0075	0054	-4861	1482	0011	0147							
6664	1099			0521	1131	-0018	-1244	0066	0046	-4718	1522	0010	0152							
6665	1097			0461	1175	-0027	-1261	0052	0039	-4628	1562	0012	0231							
6666	1100			0397	1218	-0035	-1280	0038	0033	-4512	1602	0015	0395							
6667	1101			0333	1249	-0044	-1293	0019	0027	-4177	1643	0019	1000							

SID62-1027

A-43

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	044	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6668	1200			0596	1097	-0013	-1247	0071	0054	-4041	1482	0012	0169							
6669	1197			0534	1143	-0021	-1260	0061	0047	-3897	1522	0012	0197							
6670	1201			0465	1178	-0030	-1265	0049	0039	-3699	1562	0011	0224							
6671	1199			0398	1215	-0037	-1278	0036	0033	-3577	1602	0014	0389							
6672	1198			0332	1246	-0046	-1290	0018	0027	-3377	1643	0018	1000							

SID62-1027
A-44

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	045	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6673	1179			0651	1237	-0017	-1394	0099	0053	-4528	1482	-0002	-0020							
6674	1351			0551	1189	-0024	-1309	0067	0046	-3781	1522	0007	0104							
6675	1345			0462	1183	-0029	-1269	0054	0039	-3097	1562	0009	0167							
6676	1346			0393	1210	-0036	-1272	0039	0033	-2814	1602	0012	0308							
6678	1181			0332	1271	-0046	-1313	0026	0026	-2522	1642	0014	0538							

SID62-1027
A-45

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	R x10⁻⁶
396	046	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6679	0394			0236	0979	-0030	-1006	-0027	0024	-4513	1680	0048	-1778							
6680	0396			0177	0988	-0041	-1003	-0038	0018	-4064	1720	0044	-1158							
6681	0395			0106	0981	-0049	-0986	-0038	0011	-3837	1760	0035	-0921							
6682	0395			0006	0977	-0060	-0977	-0006	0001	-3895	1800	0002	-0333							
6683	0394			-0093	0986	-0074	-0990	0024	-0009	-3843	1840	-0032	-1333							

SID62-1027
A-46

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	047	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6684	0698			0225	1018	-0033	-1042	-0008	0022	-4325	1680	0034	-4250							
6685	0698			0167	1023	-0041	-1036	-0023	0016	-3951	1720	0036	-1565							
6686	0698			0094	1018	-0050	-1022	-0023	0009	-3641	1760	0026	-1130							
6687	0696				1012	-0061	-1012			-3598	1800	-0001								
6688	0698			-0093	1024	-0072	-1028	0021	-0009	-3655	1840	-0026	-1238							

SID 62-1027
A-47

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	048	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6689	0896			0231	1103	-0039	-1127	0004	0021	-4209	1680	0025	6250							
6690	0901			0170	1114	-0048	-1126	-0014	0015	-3992	1720	0028	-2000							
6691	0896			0101	1111	-0055	-1115	-0024	0009	-3558	1760	0027	-1125							
6692	0900			0001	1089	-0065	-1089	-0001		-3297	1800									
6693	0899			-0099	1112	-0077	-1116	0021	-0009	-3539	1840	-0025	-1190							

SID62-1027
A-48

4-C

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	049	00.[illegible]

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6694	1099			0255	1284	-0052	-1309	0018	0020	-4443	1680	0013	0722							
6695	1096			0181	1299	-0059	-1311	0001	0014	-4363	1720	0018								
6696	1100			0112	1309	-0065	-1314	-0020	0009	-4144	1760	0026	-1300							
6697	1100			-0004	1287	-0076	-1287	0004		-3801	1800	-0003	-0750							
6698	1101			-0113	1305	-0089	-1310	0022	-0009	-4125	1840	-0027	-1227							

SID62-1027
A-49

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	050	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6699	1199			0252	1275	-0054	-1300	0019	0020	-3513	1680	0010	0526							
6700	1200			0176	1293	-0060	-1305	0006	0014	-3441	1720	0013	2167							
6701	1199			0108	1307	-0067	-1311	-0017	0008	-3355	1760	0022	-1294							
6702	1202			-0001	1293	-0078	-1293	0001		-3054	1800	-0002	-2000							
6703	1198			-0105	1305	-0089	-1309	0014	-0008	-3378	1840	-0021	-1500							

SID62-1027
A-50

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	051	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6704	1347			0249	1258	-0052	-1282	0018	0020	-2534	1680	0011	0611							
6705	1348			0181	1281	-0059	-1293	-0001	0014	-2602	1720	0018								
6706	1349			0114	1299	-0066	-1303	-0023	0009	-2443	1760	0027	-1174							
6707	1347			-0011	1248	-0076	-1248	0012	-0001	-1815	1800	-0010	-0833							
6708	1349			-0101	1279	-0087	-1283	0012	-0008	-2319	1840	-0019	-1583							

SID62-1027
A-51

[redacted]

PRELIMINARY DATA

TEST	RUN	R x10⁻⁶
396	058	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6740	0396			0217	0413		0035	0465	0052	-4019	0581	-0321	-0690							
6741	0396			0243	0391	-0006	-0032	0459	0062	-3681	0621	-0319	-0695							
6742	0394			0247	0377	-0012	-0072	0445	0065	-3088	0661	-0313	-0703							
6743	0395			0235	0364	-0015	-0082	0425	0065	-2971	0681	-0301	-0708							
6744	0394			0230	0357	-0018	-0087	0415	0064	-2877	0691	-0297	-0716							
6745	0396			-0098	0115	-0086	0133	0072	-0085	1282	0691	-0143	-1986							
6746	0395			-0093	0119	-0087	0128	0080	-0078	1287	0700	-0149	-1863							
6747	0395			-0079	0153	-0086	0118	0125	-0052	0857	0740	-0179	-1432							

SID62-1027
A-52

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	059	00.0 [redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6748	0696			0284	0523	-0005	0035	0594	0054	-3746	0581	-0414	-0697							
6749	0697			0218	0527	-0020	0053	0568	0041	-3538	0621	-0412	-0725							
6750	0697			0142	0524	-0026	0082	0536	0027	-3623	0661	-0398	-0743							
6751	0697			-0036	0522	-0022	0228	0470	-0007	-3880	0680	-0357	-0760							
6752	0699			-0149	0513	-0022	0315	0431	-0029	-4043	0700	-0336	-0780							
6753	0697			-0235	0485	-0034	0367	0395	-0048	-3609	0730	-0326	-0825							
6754	0699			-0254	0480	-0039	0381	0388	-0053	-3574	0735	-0327	-0843							
6755	0697			-0383	0432	-0069	0488	0309	-0089	-2326	0739	-0310	-1003							

S.I D 62-1027
A-53

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	060	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6756	0900			0151	0619	-0015	0199	0605	0024	-3531	0581	-0441	-0729							
6757	0900			0129	0619	-0018	0197	0601	0021	-3578	0601	-0441	-0734							
6758	0902			0074	0618	-0017	0224	0581	0012	-3698	0621	-0428	-0737							
6759	0899			-0066	0626	-0014	0334	0534	-0011	-4025	0640	-0400	-0749							
6760	0901			-0169	0632	-0012	0412	0508	-0027	-4510	0660	-0384	-0756							
6761	0898			-0220	0615	-0016	0417	0502	-0036	-4782	0700	-0385	-0767							
6762	0901			-0303	0597	-0028	0456	0490	-0051	-4923	0739	-0391	-0798							

SID62-1027

A-54

4-C

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	061	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6763	1101			-0013	0832	-0005	0452	0698	-0002	-4808	0580	-0510	-0731							
6764	1100			-0122	0830	-0009	0498	0675	-0015	-5236	0620	-0501	-0742							
6765	1098			-0225	0822	-0012	0540	0659	-0027	-5398	0659	-0495	-0751							
6766	1100			-0336	0807	-0022	0593	0643	-0042	-5113	0699	-0498	-0774							
6767	1100			-0370	0769	-0028	0569	0637	-0048	-4242	0739	-0498	-0782							

SID62-1027
A-55

[redacted]

PRELIMINARY DATA

TEST	RUN	R x10⁻⁶
396	062	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6768	1198			-0019	0792	-0006	0436	0661	-0002	-3518	0580	-0485	-0734							
6769	1201			-0120	0783	-0008	0474	0635	-0015	-3834	0620	-0471	-0742							
6770	1199			-0203	0766	-0012	0498	0616	-0027	-3890	0659	-0463	-0752							
6771	1198			-0290	0750	-0019	0530	0605	-0039	-3741	0699	-0465	-0769							
6772	1200			-0360	0734	-0025	0549	0605	-0049	-3281	0739	-0472	-0780							

SID62-1027
A-56

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	063	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6773	1347			-0082	0936	-0005	0566	0750	-0009	-4431	0580	-0552	-0736							
6774	1347			-0167	0918	-0007	0580	0731	-0018	-4615	0619	-0542	-0741							
6775	1345			-0259	0918	-0013	0611	0732	-0028	-4327	0659	-0551	-0753							
6776	1348			-0285	0878	-0018	0569	0727	-0032	-4584	0700	-0550	-0757							
6777	1348			-0319	0824	-0018	0534	0704	-0039	-4292	0740	-0532	-0756							

SID62-1027
A-57

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10⁻⁶
396	064	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6778	0397			-0078	0118	-0083	0111	0088	-0067	1250	0720	-0150	-1705							
6779	0396			-0058	0160	-0080	0094	0141	-0036	0622	0760	-0182	-1291							
6780	0396			-0090	0244	-0076	0131	0224	-0037	-0633	0800	-0237	-1058							
6781	0395			-0047	0268	-0066	0075	0262	-0018	-1132	0840	-0250	-0954							
6782	0396			0015	0287	-0057	-0006	0287	0005	-1197	0881	-0253	-0882							

SID62-1027
A-58

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	065	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6783	0701			-0274	0492	-0037	0413	0383	-0056	-3910	0719	-0324	-0846							
6784	0698			-0380	0376	-0086	0460	0272	-0101	-0990	0759	-0300	-1103							
6785	0698			-0300	0345	-0082	0356	0288	-0087	-0892	0800	-0300	-1042							
6786	0695			-0208	0340	-0069	0242	0316	-0061	-1109	0840	-0300	-0949							
6787	0697			-0148	0345	-0056	0159	0339	-0043	-1439	0880	-0298	-0879							

A-59

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	066	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6788	0899			-0240	0609	-0017	0417	0504	-0039	-4851	0720	-0387	-0768							
6789	0900			-0341	0586	-0035	0473	0485	-0058	-4882	0759	-0395	-0814							
6790	0899			-0424	0536	-0050	0511	0453	-0079	-2902	0799	-0391	-0863							
6791	0898			-0419	0493	-0048	0469	0446	-0085	-2940	0839	-0381	-0854							
6792	0898			-0329	0467	-0035	0345	0455	-0071	-2318	0880	-0367	-0807							

SID62-1027
A-50

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	067	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6793	1099			-0368	0793	-0022	0596	0640	-0046	-4859	0719	-0496	-0775							
6794	1098			-0378	0755	-0029	0550	0641	-0050	-4590	0759	-0501	-0782							
6795	1100			-0361	0730	-0026	0482	0656	-0049	-4918	0800	-0504	-0768							
6796	1097			-0307	0672	-0023	0375	0637	-0046	-4177	0840	-0482	-0757							
6797	1098			-0226	0649	-0014	0248	0641	-0035	-3570	0881	-0468	-0730							

SID62-1027
A-81

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	068	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6798	1196			-0362	0815	-0021	0597	0662	-0044	-3872	0719	-0510	-0770							
6799	1198			-0367	0764	-0025	0541	0653	-0048	-4207	0759	-0504	-0772							
6800	1201			-0352	0738	-0022	0475	0665	-0048	-4282	0800	-0506	-0761							
6801	1198			-0292	0689	-0020	0362	0655	-0042	-3744	0840	-0490	-0748							
6802	1196			-0216	0655	-0016	0238	0647	-0033	-2805	0881	-0473	-0731							

$1D62-1027
A-32

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	069	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6803	1347			-0309	0842	-0016	0554	0705	-0037	-4285	0720	-0532	-0755							
6804	1348			-0331	0791	-0017	0513	0687	-0042	-4016	0760	-0518	-0754							
6805	1346			-0305	0753	-0018	0431	0689	-0040	-3660	0800	-0515	-0747							
6806	1347			-0262	0713	-0015	0334	0682	-0037	-3192	0841	-0502	-0736							
6807	1346			-0199	0685	-0013	0222	0678	-0029	-2687	0881	-0491	-0724							

SID62-1027

A-53

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	070	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02X02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6808	0394			0519	0501	0032	-0721	0024	0104	-2804	1321	0058	2417							
6809	0395			0555	0574	0034	-0799	-0001	0097	-3633	1361	0082								
6810	0393			0576	0668	0031	-0881	-0013	0086	-4681	1401	0092	-7077							
6811	0395			0557	0745	0022	-0930	-0015	0075	-5232	1441	0087	-5800							
6812	0394			0549	0783	0019	-0956	-0019	0070	-5220	1461	0089	-4684							
6813	0396			0534	0818	0012	-0977	-0021	0065	-5249	1481	0084	-4000							

SID62-1027
A-[illegible]

~~CONFIDENTIAL~~

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	071	00.0

[redacted]

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6816	0698			0481	0549	0044	-0725	0085	0088	-3709	1321	0029	0341							
6817	0698			0522	0634	0041	-0819	0063	0082	-4525	1361	0046	0730							
6818	0698			0515	0711	0031	-0876	0060	0072	-4838	1402	0042	0700							
6819	0696			0490	0780	0019	-0920	0059	0063	-5105	1442	0033	0559							
6820	0698			0479	0812	0014	-0941	0054	0059	-5122	1462	0033	0611							
6821	0697			0464	0842	0009	-0960	0049	0055	-5054	1482	0032	0653							

S.D 62-1027
A-55

[redacted]

PRELIMINARY DATA

TEST	RUN	Rx10-6
396	072	00.0

~~CONFIDENTIAL~~

National Aeronautics and Space Administration
Ames Research Center
MOFFETT FIELD, CALIFORNIA

Facility
02x02

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6822	0898			0513	0635	0039	-0806	0127	0081	-4483	1321									
6823	0899			0543	0702	0034	-0883	0095	0077	-4515	1361	0021	0221							
6824	0898			0539	0775	0023	-0941	0082	0070	-4657	1402	0022	0268							
6825	0901			0520	0848	0013	-0992	0074	0061	-4737	1442	0021	0284							
6826	0899			0509	0885	0007	-1019	0069	0058	-4783	1462	0020	0290							
6827	0900			0491	0915	0002	-1036	0064	0054	-4724	1482	0019	0297							

SID62-1027
A-55

~~CONFIDENTIAL~~

PRELIMINARY DATA

APPENDIX B

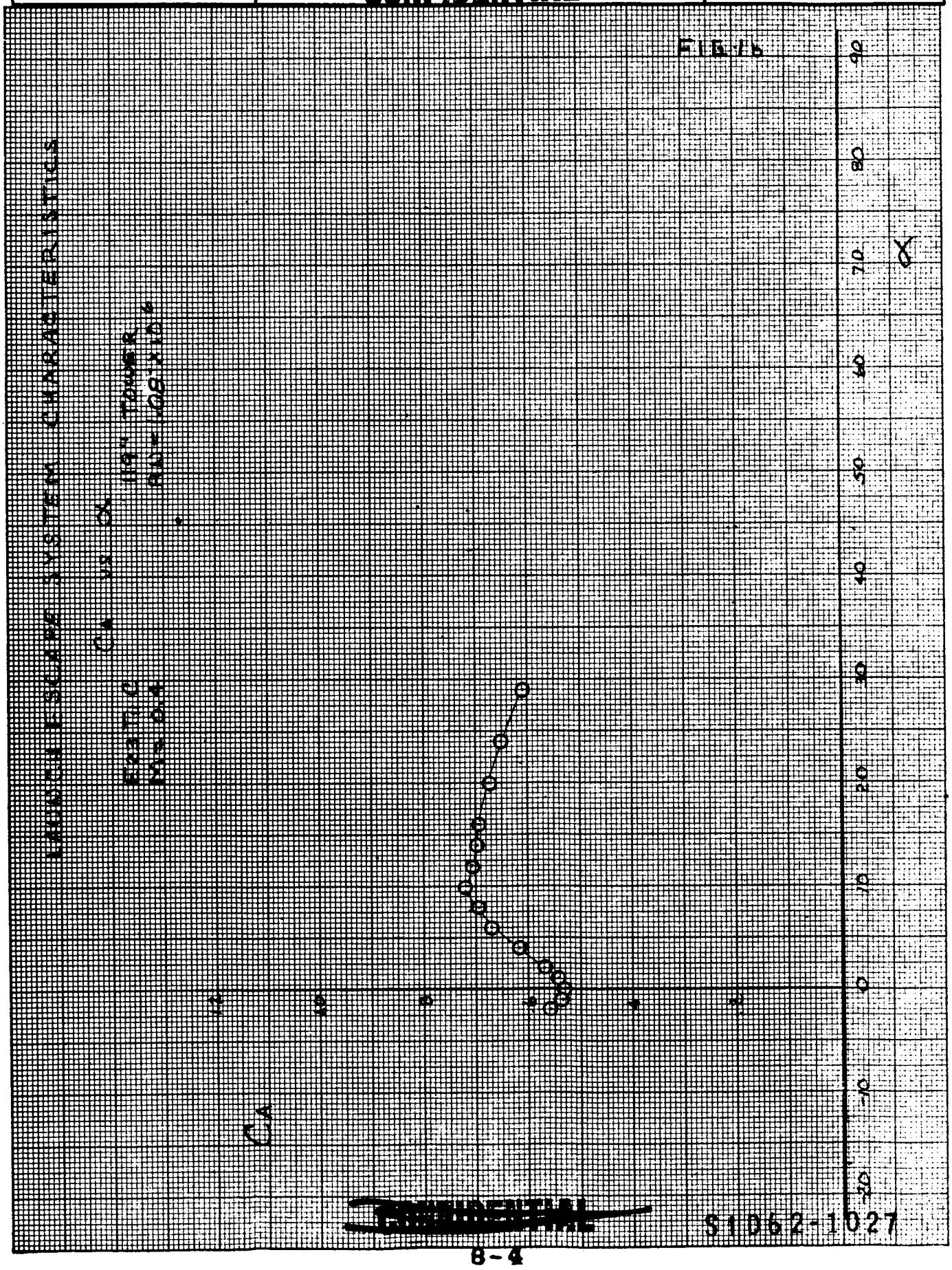
INDEX OF FIGURES

Description	Figure
Launch Escape System Characteristics $C_{M_{c.g.}}$, C_A, C_N, vs.	
Configuration: (E_{23} T_{11} C)	
M = 0.4	1 a-c
M = 0.7	2 a-c
M = 0.9	3 a-c
M = 1.1	4 a-c
M = 1.2	5 a-c
M = 1.35	6 a-c
Configuration: (E_{12} T_{11} C)	
M = 0.4	7 a-c
M = 0.7	8 a-c
M = 0.9	9 a-c
M = 1.10	10 a-c
M = 1.20	11 a-c
M = 1.35	12 a-c
Command Module (C) Characteristics $C_{M_{c.g.}}$, C_A, C_N, C_L, C_D, L/D vs.	
M = 0.4	13 a-f
M = 0.7	14 a-f
M = 0.9	15 a-f
M = 1.1	16 a-f
M = 1.2	17 a-f
M = 1.35	18 a-f

[redacted]

S1062-1027

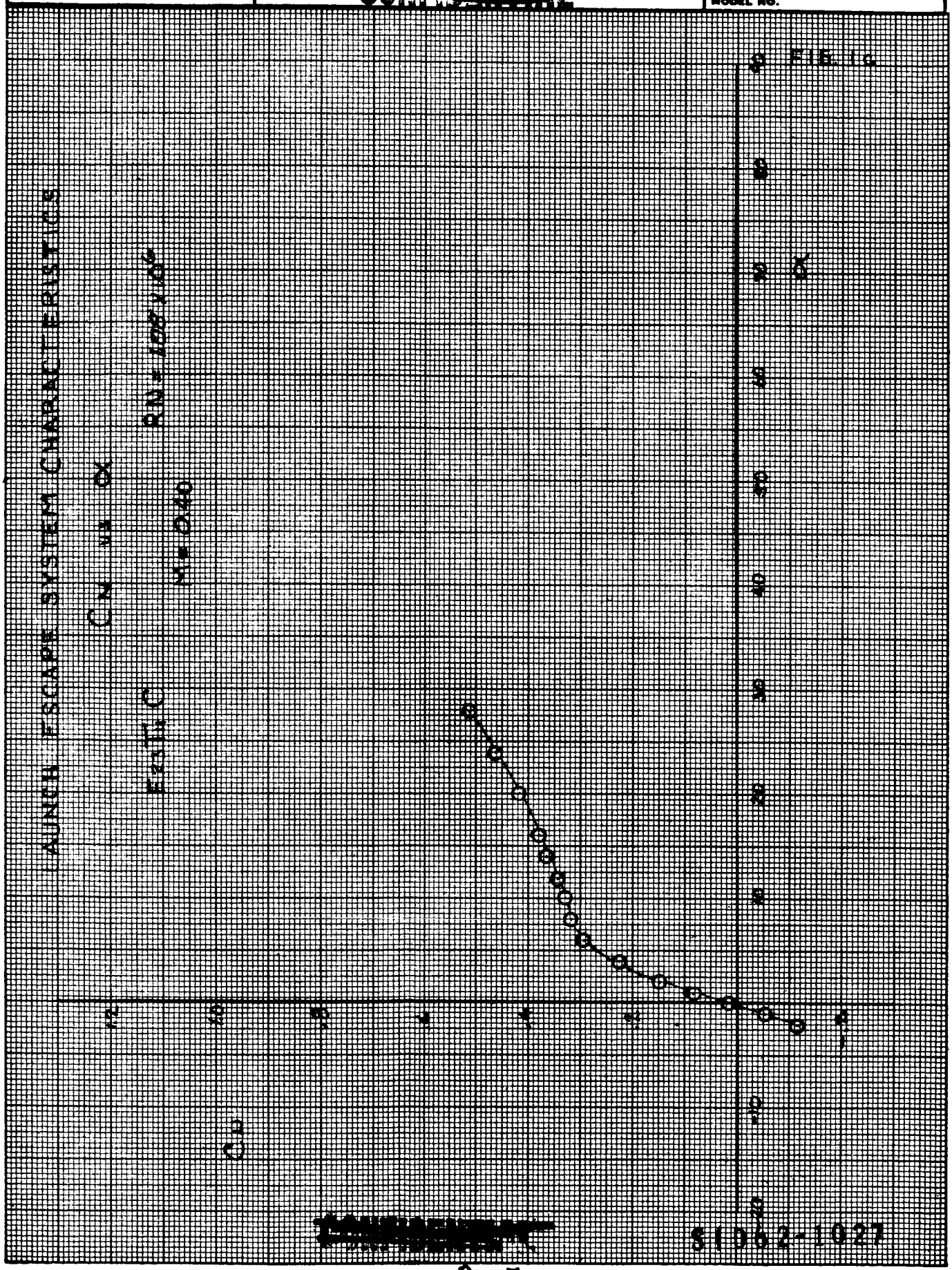
PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



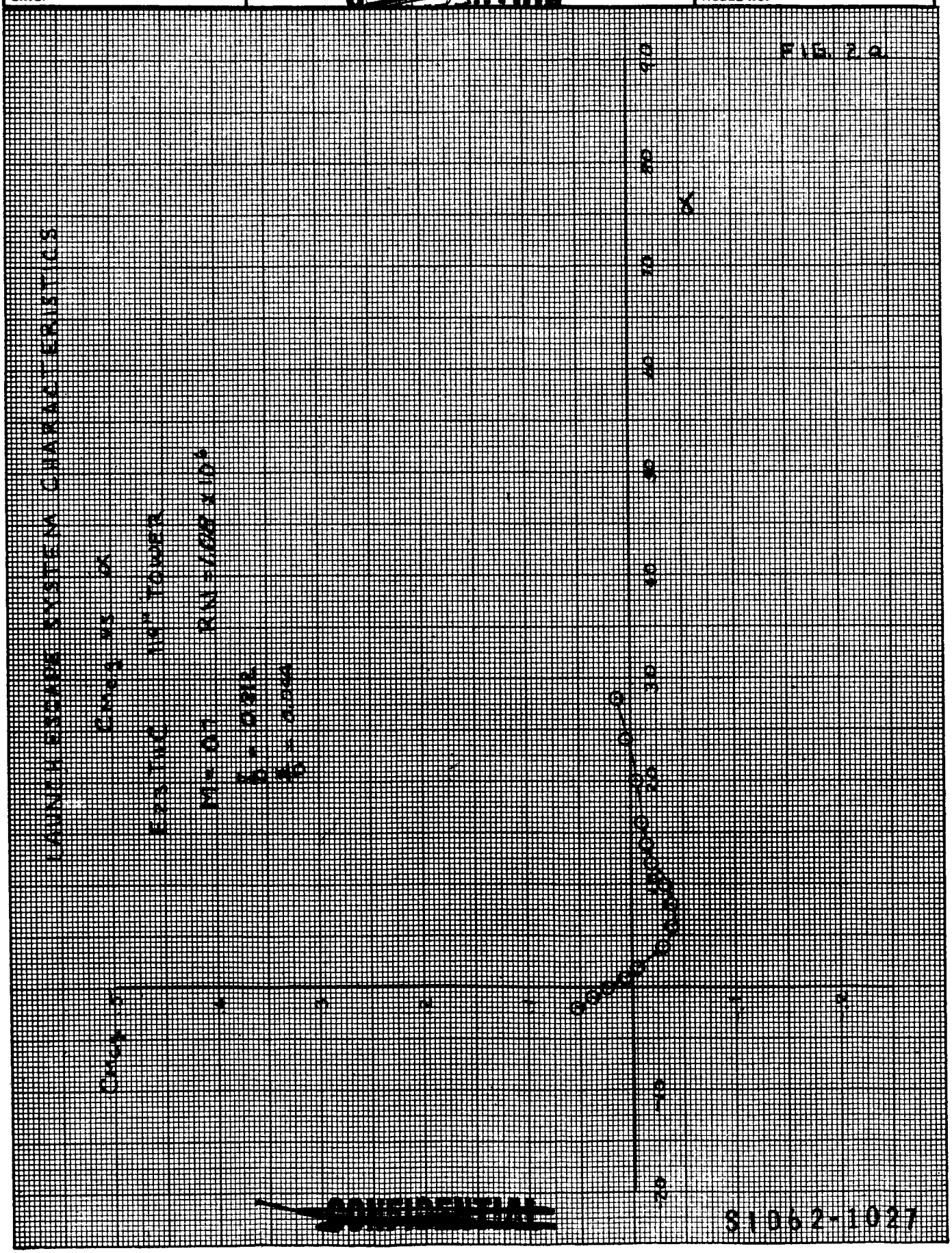
[redacted]

S1062-1027

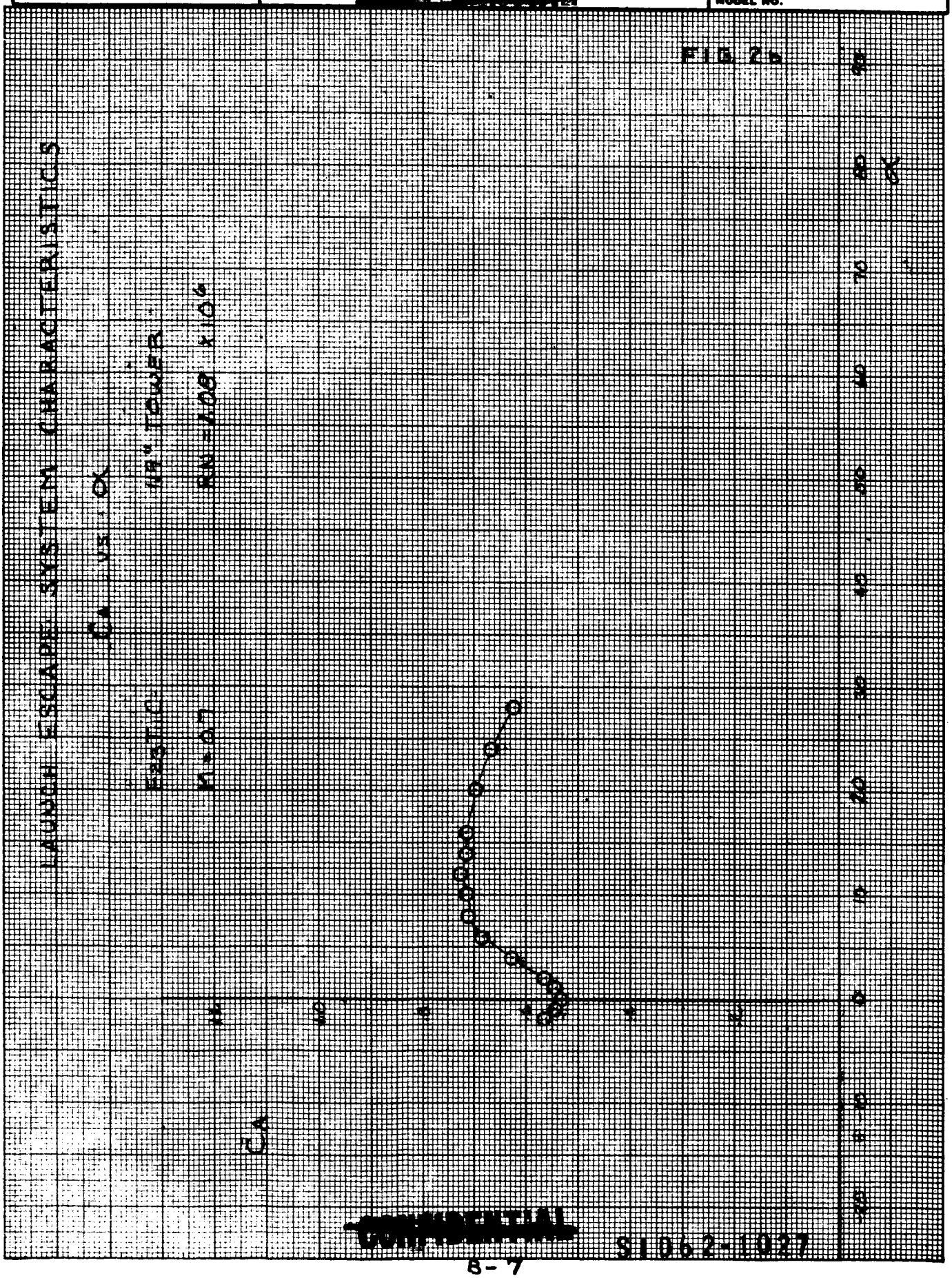
PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



PREPARED BY: JD	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

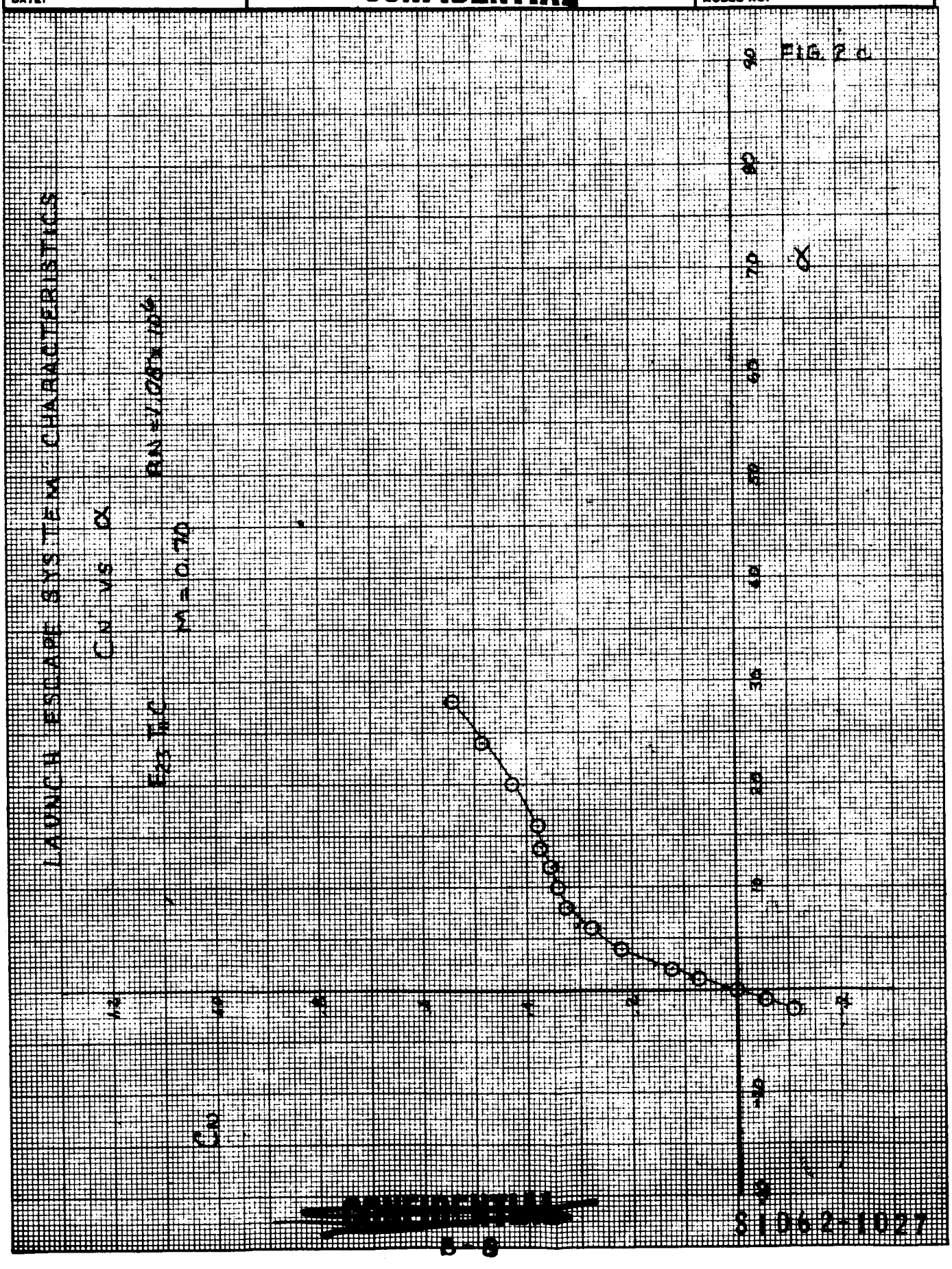
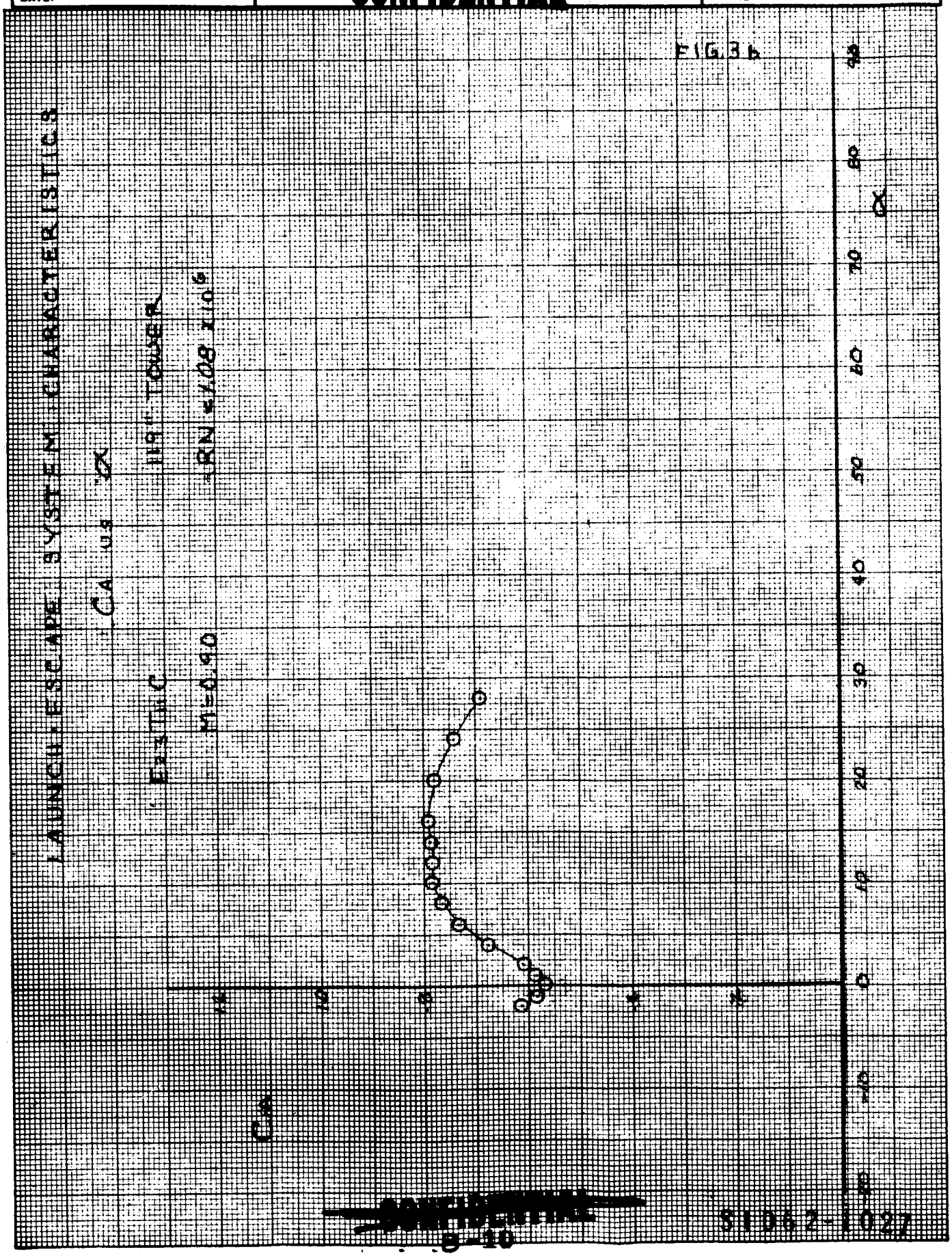


FIG. 2c

~~CONFIDENTIAL~~

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

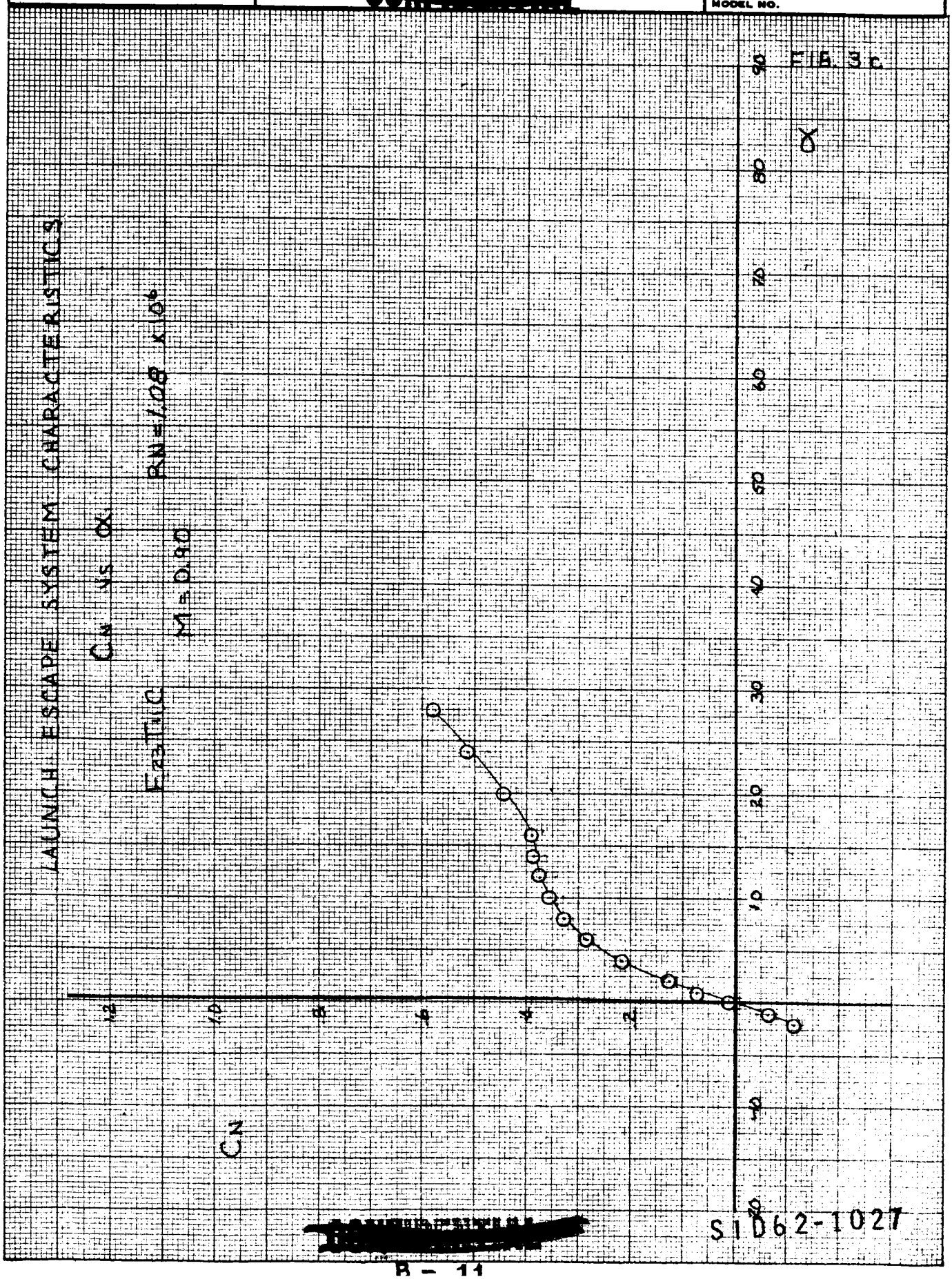
PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

81062-1027

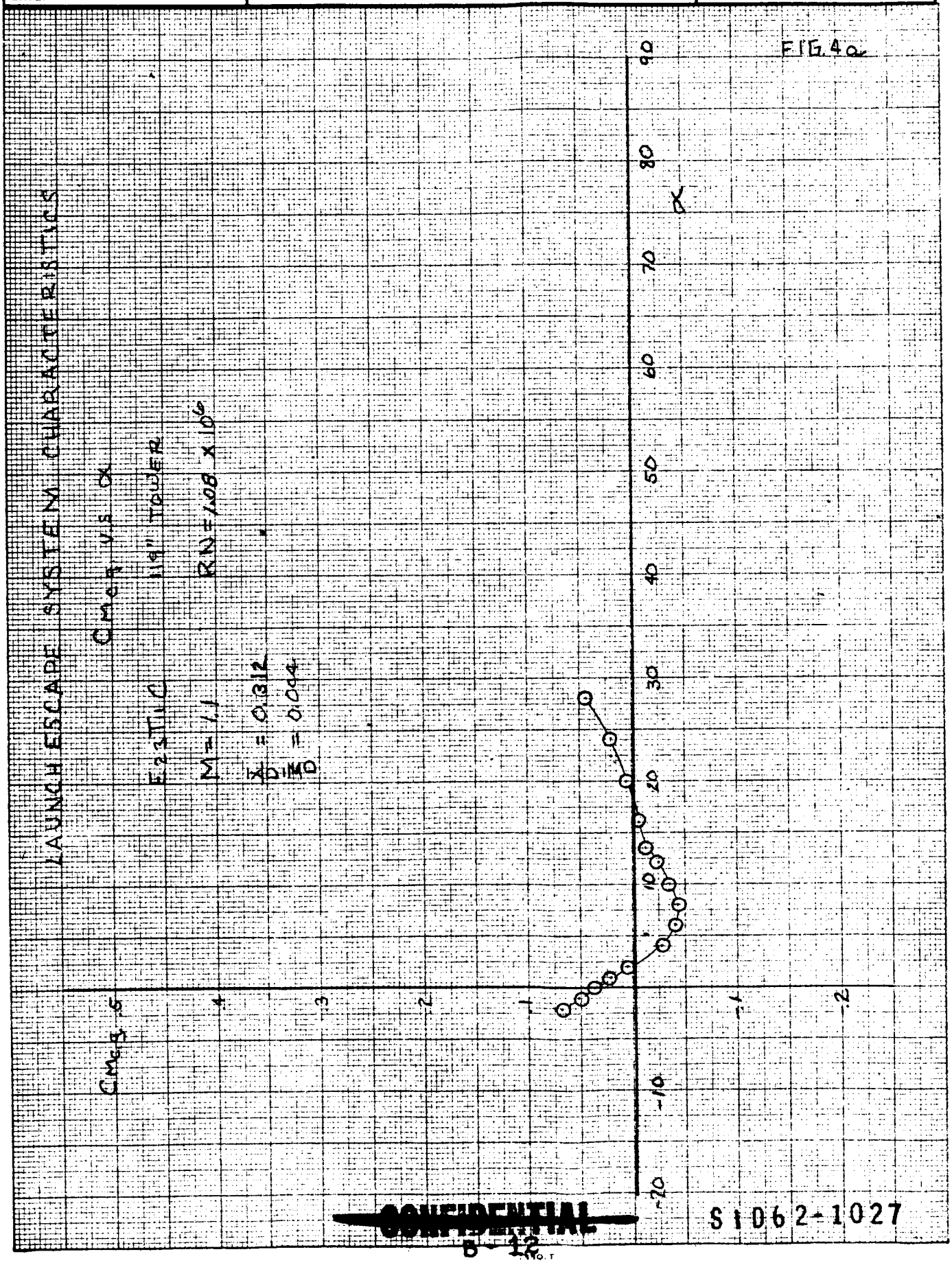
PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

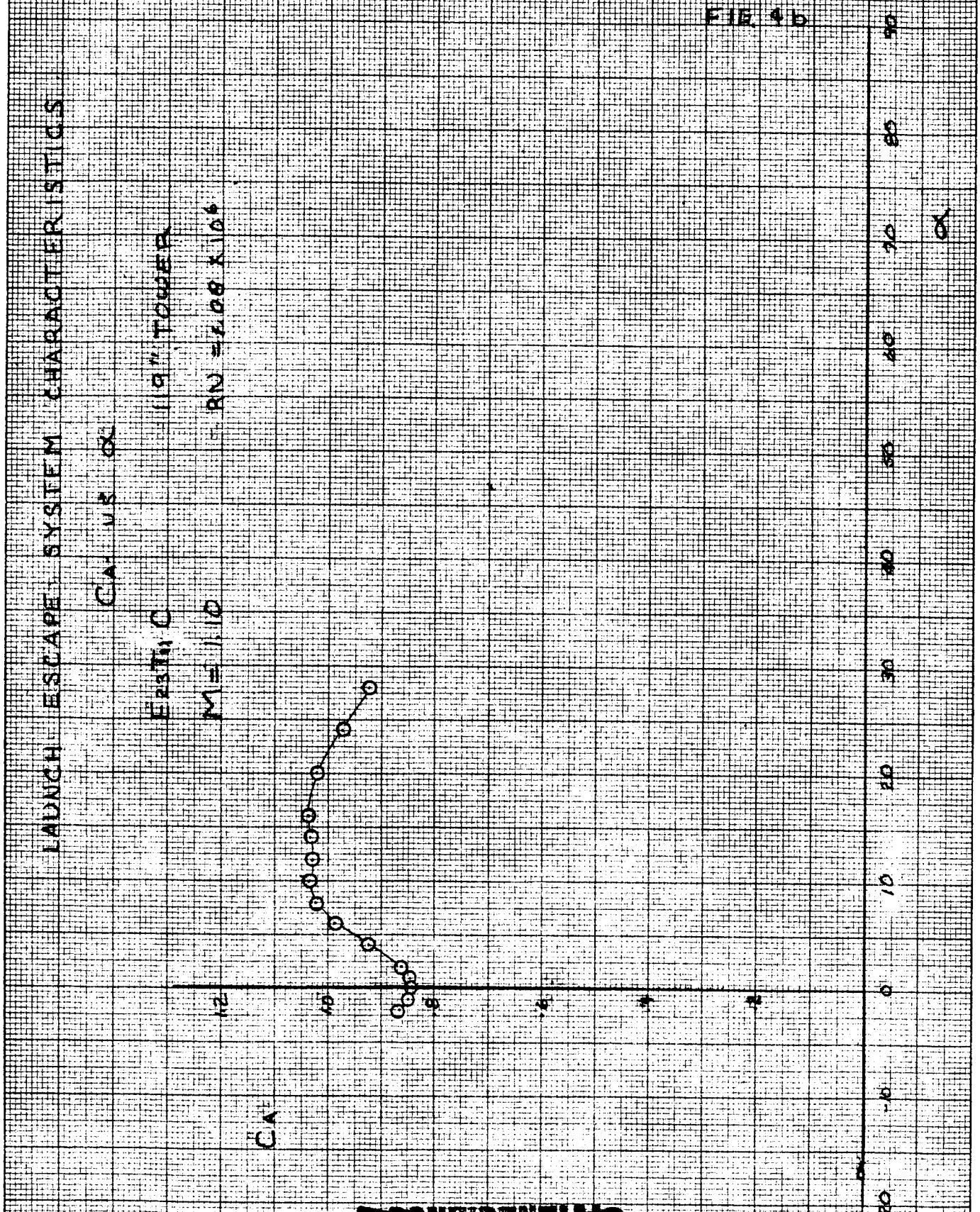


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

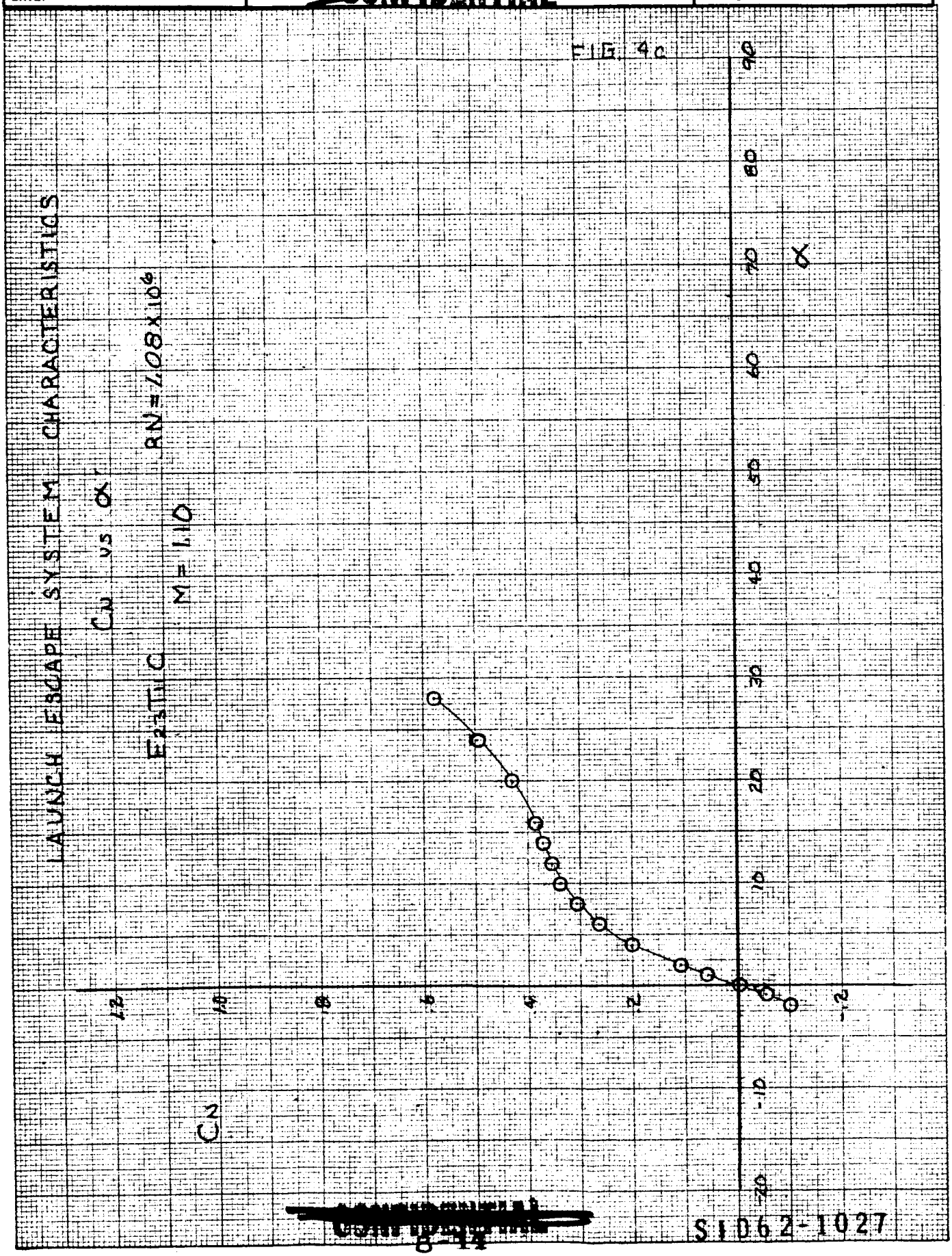
FIG. 4b



[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

S1062-1027

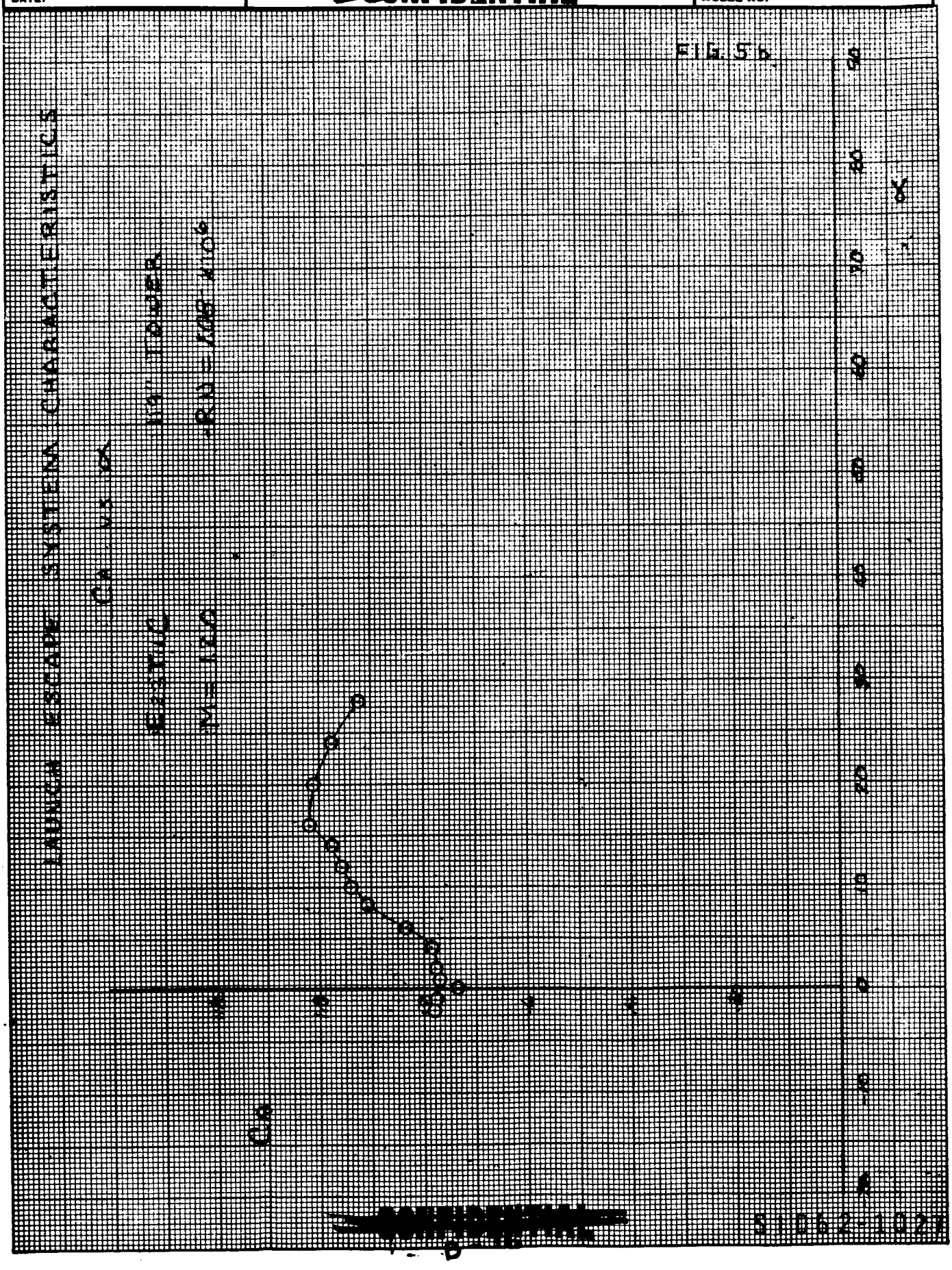
FIG. 5a

[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

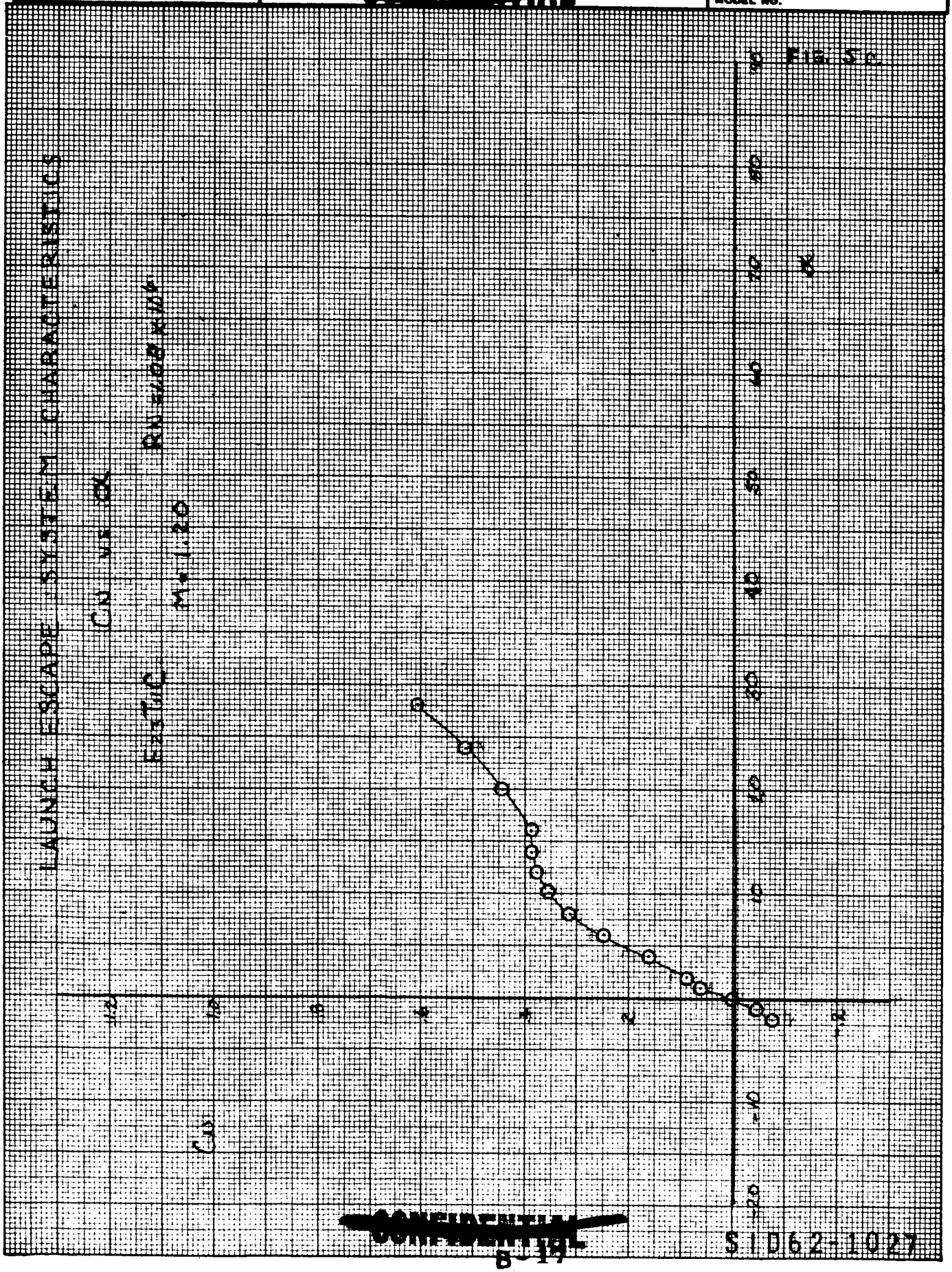
FIG. 56



~~CONFIDENTIAL~~

31062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

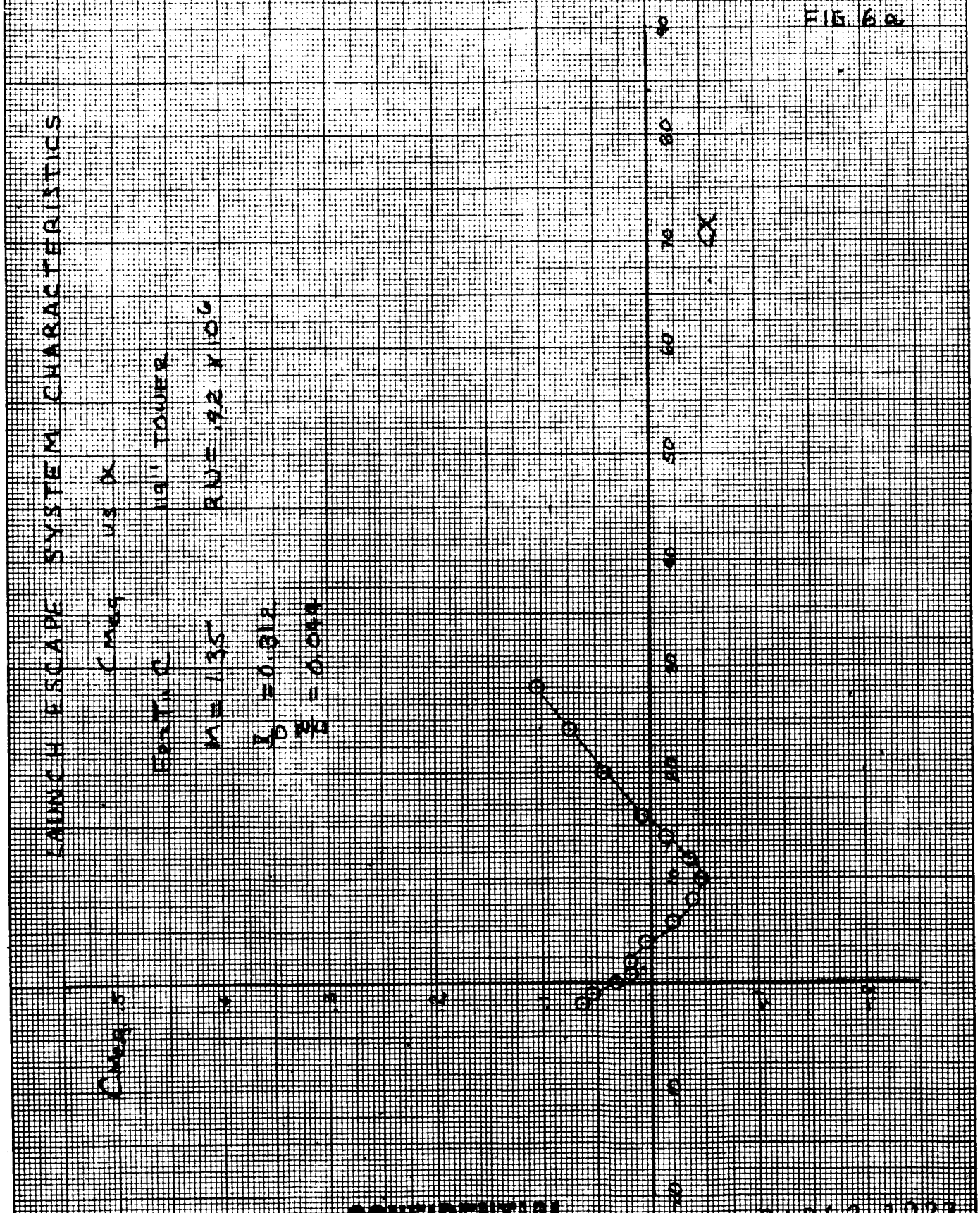


[redacted]

SID62-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

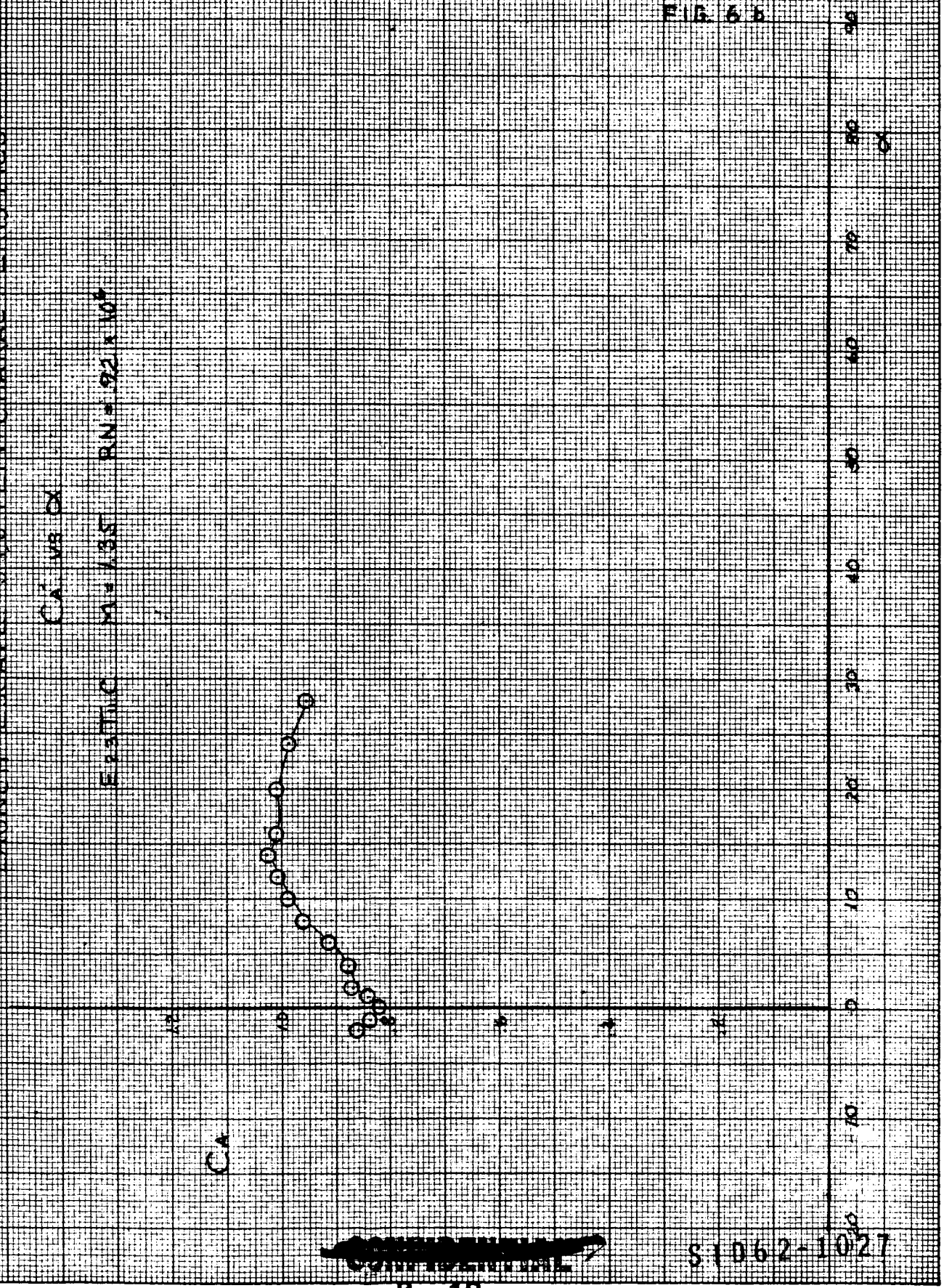
FIG. 6a



~~CONFIDENTIAL~~

S1062-1027

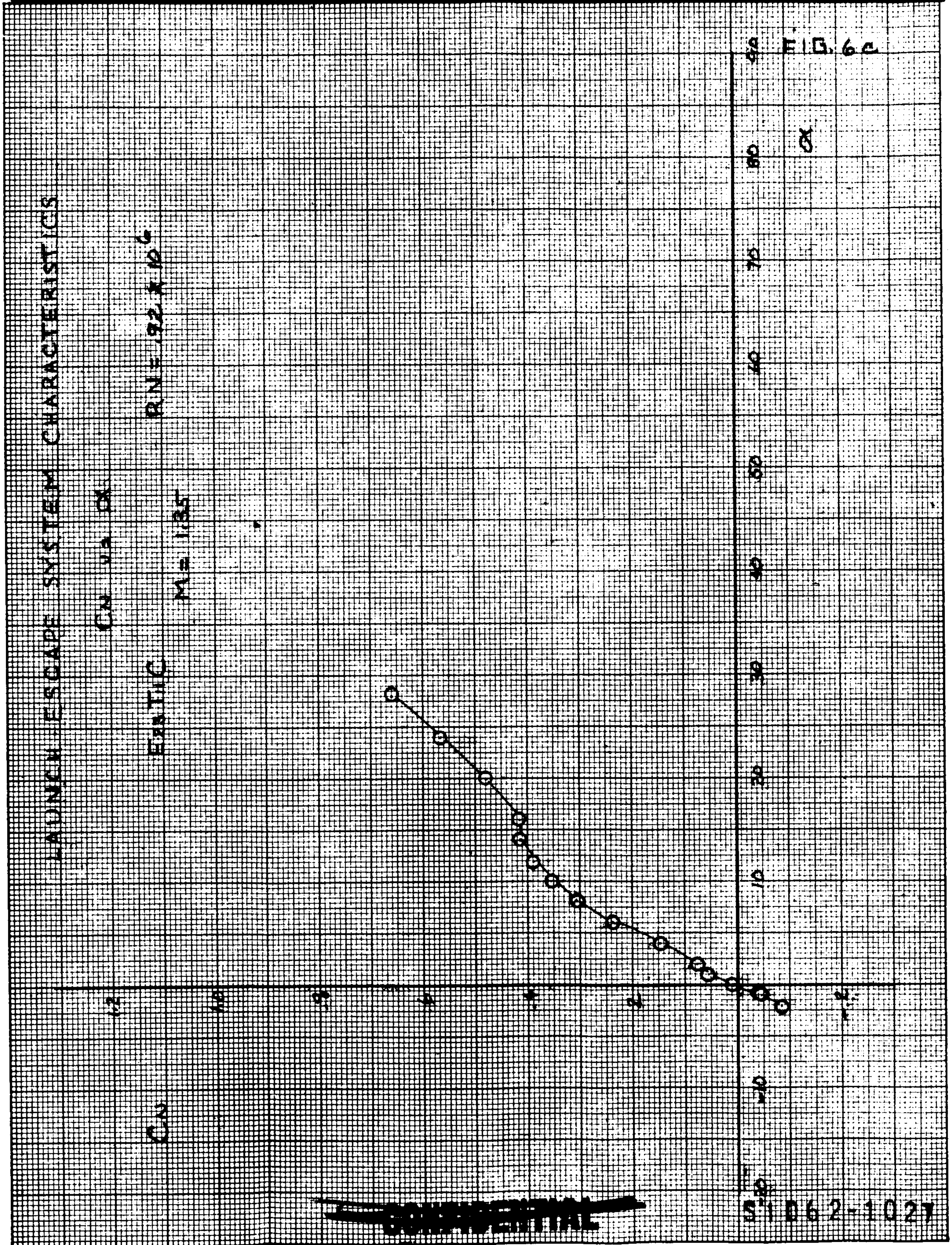
PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

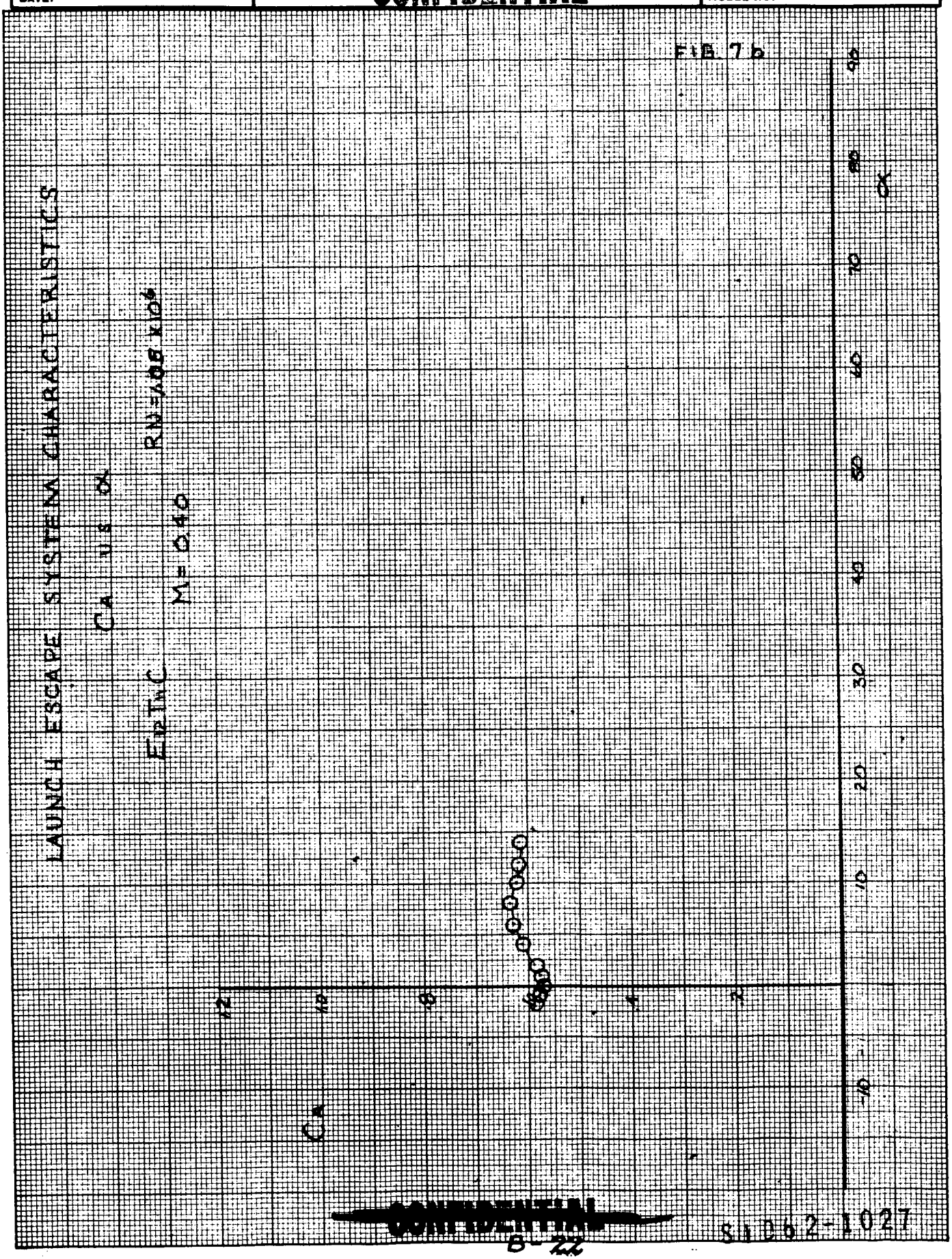


S1D62-1027

FIG. 7a

[redacted]

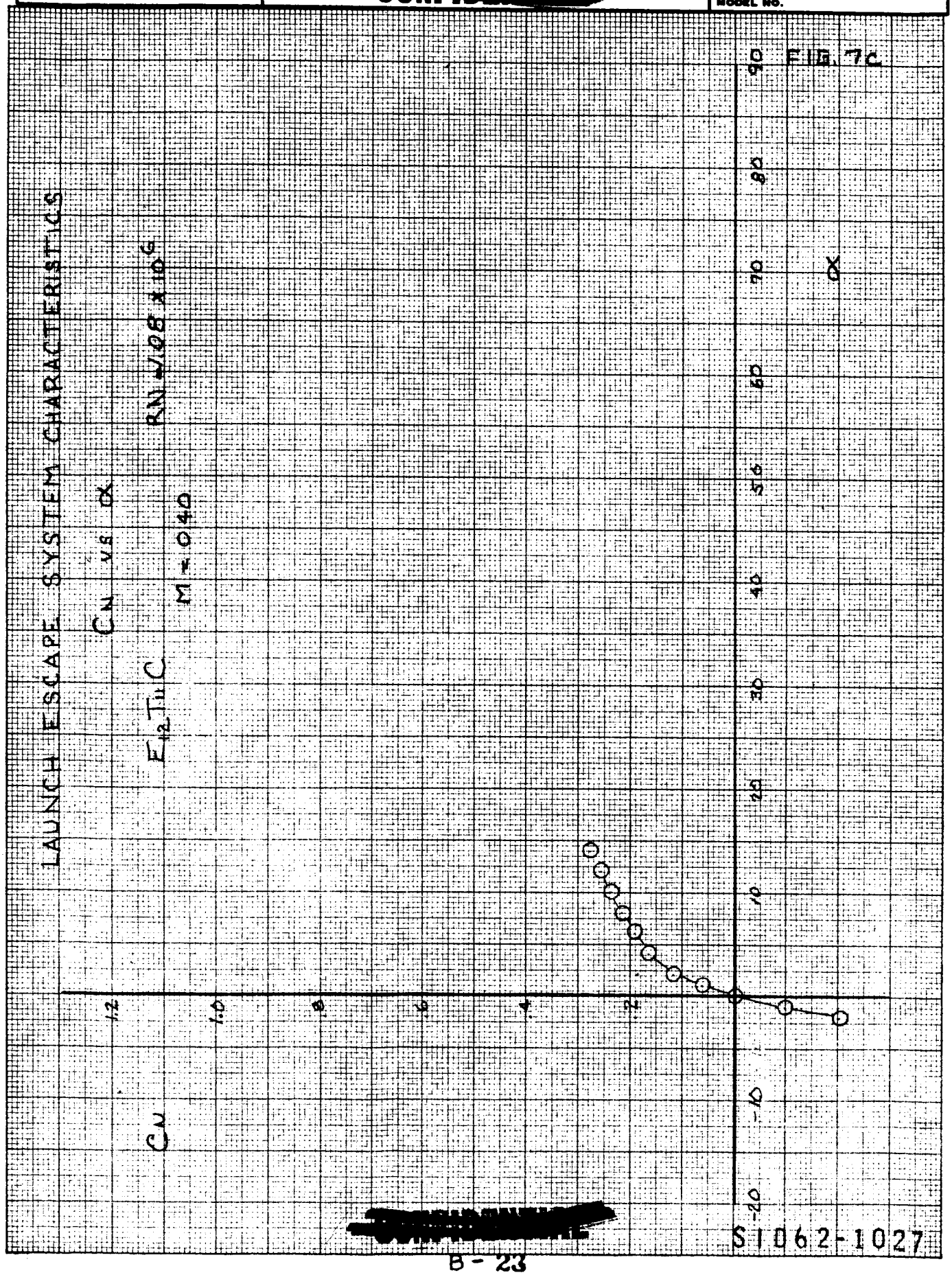
PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

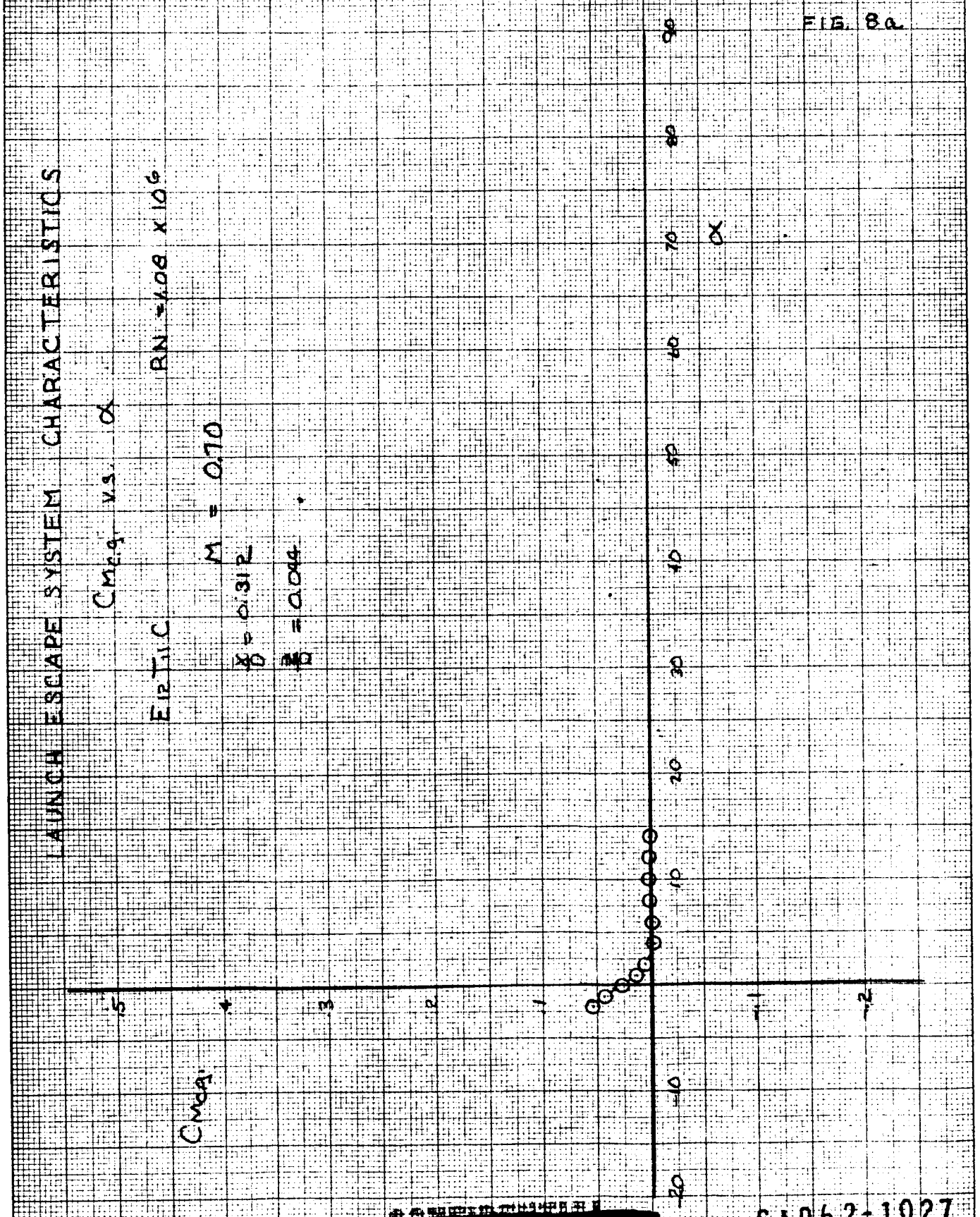


[redacted]

S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

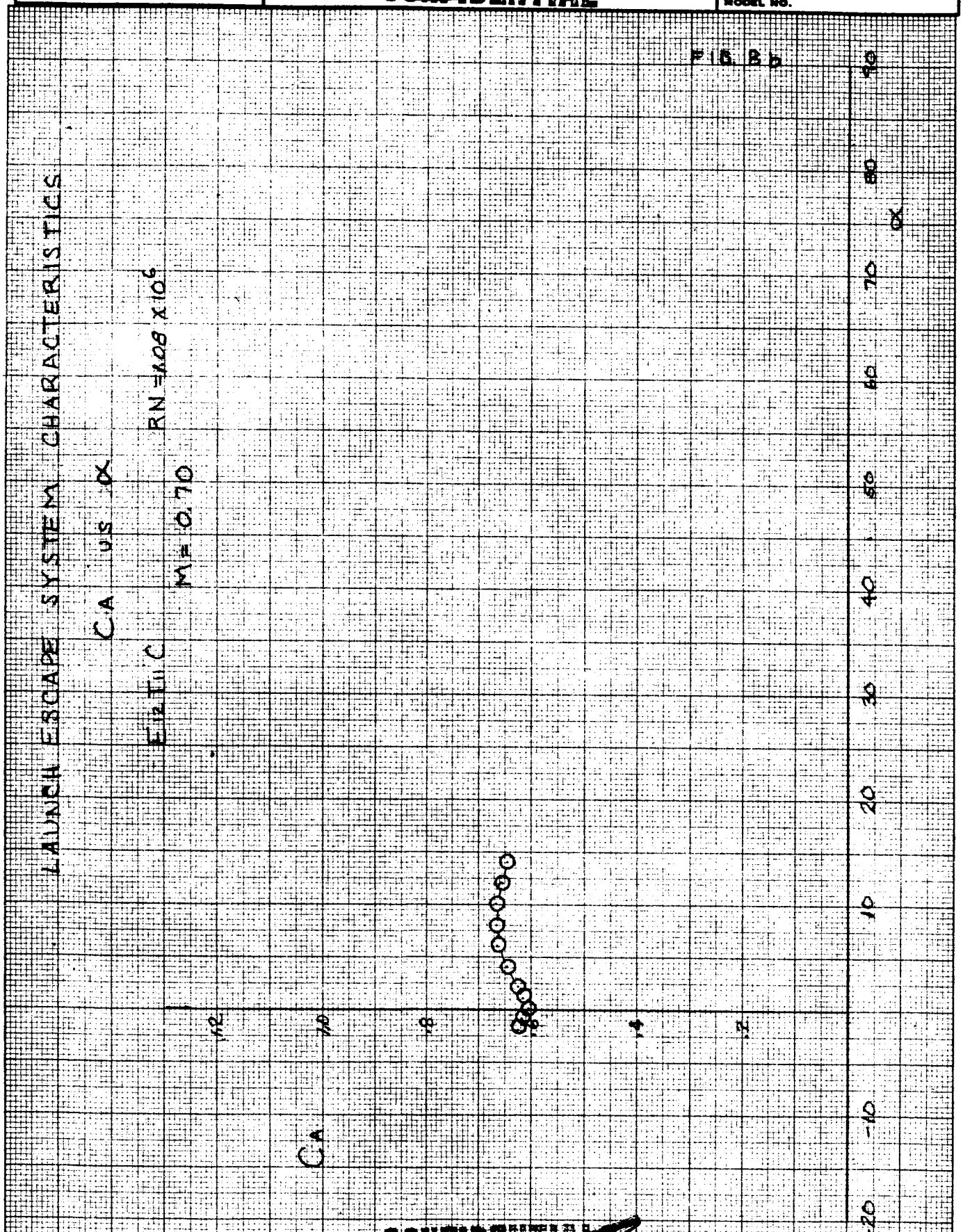
FIG. 8a



~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

S1062-1027

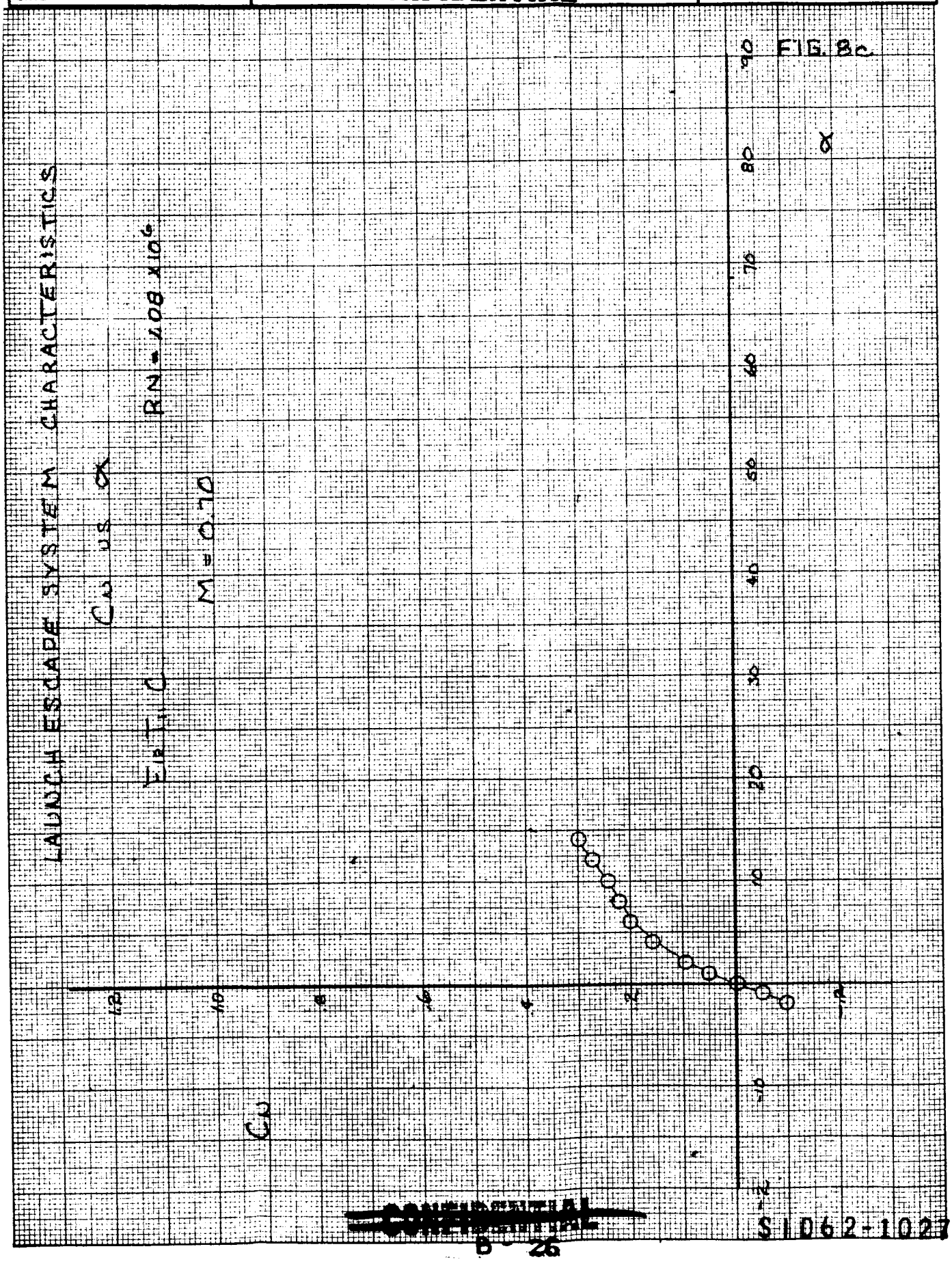
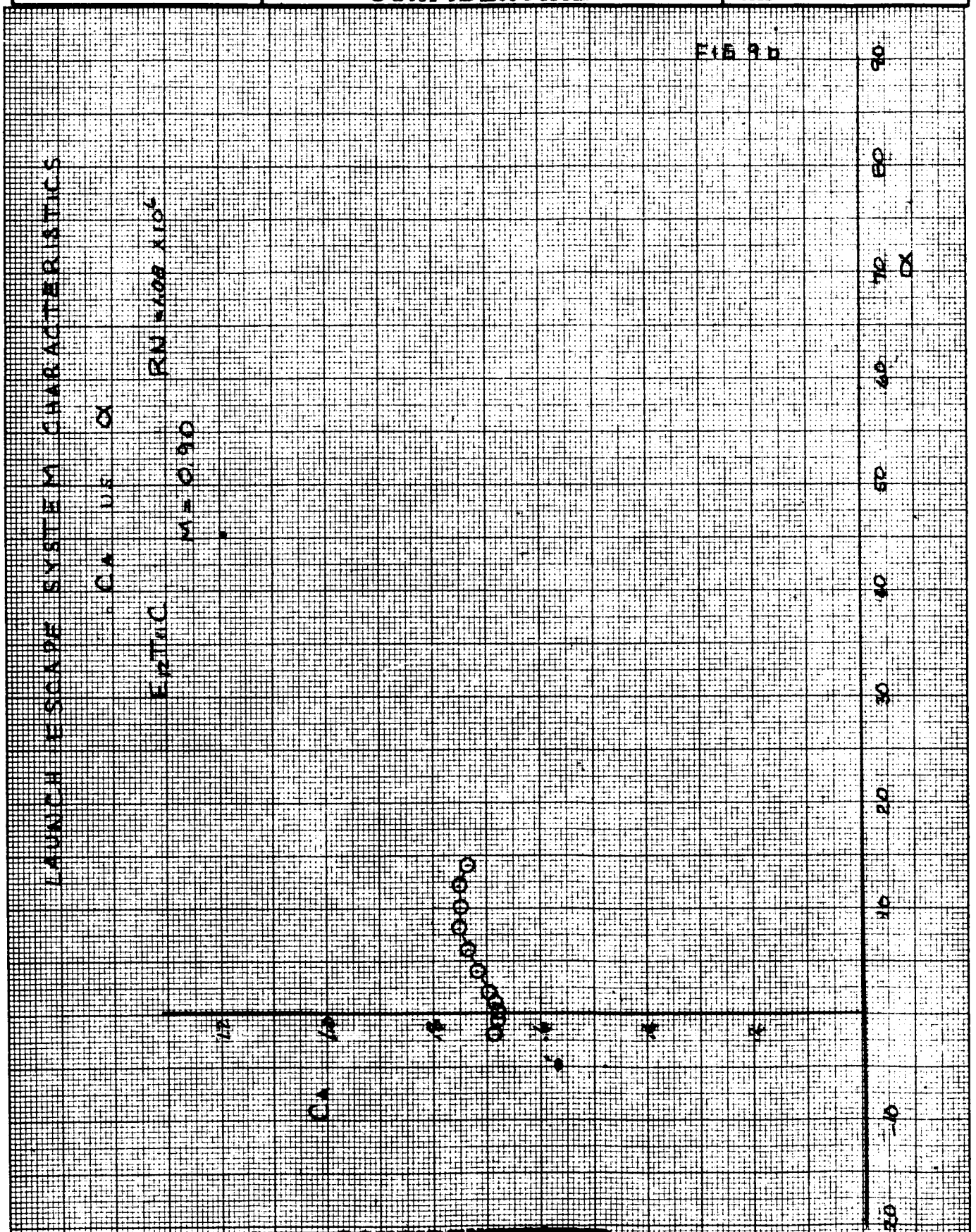


FIG. 8c
LAUNCH ESCAPE SYSTEM CHARACTERISTICS
C_N vs α
RN = 1.08 x 10^6
M = 0.70
E_R T, C
C_N
α
1.2
1.0
.8
.6
.4
.2
-.2
-.2
-.10
10
20
30
40
50
60
70
80
90

[redacted]

[redacted]

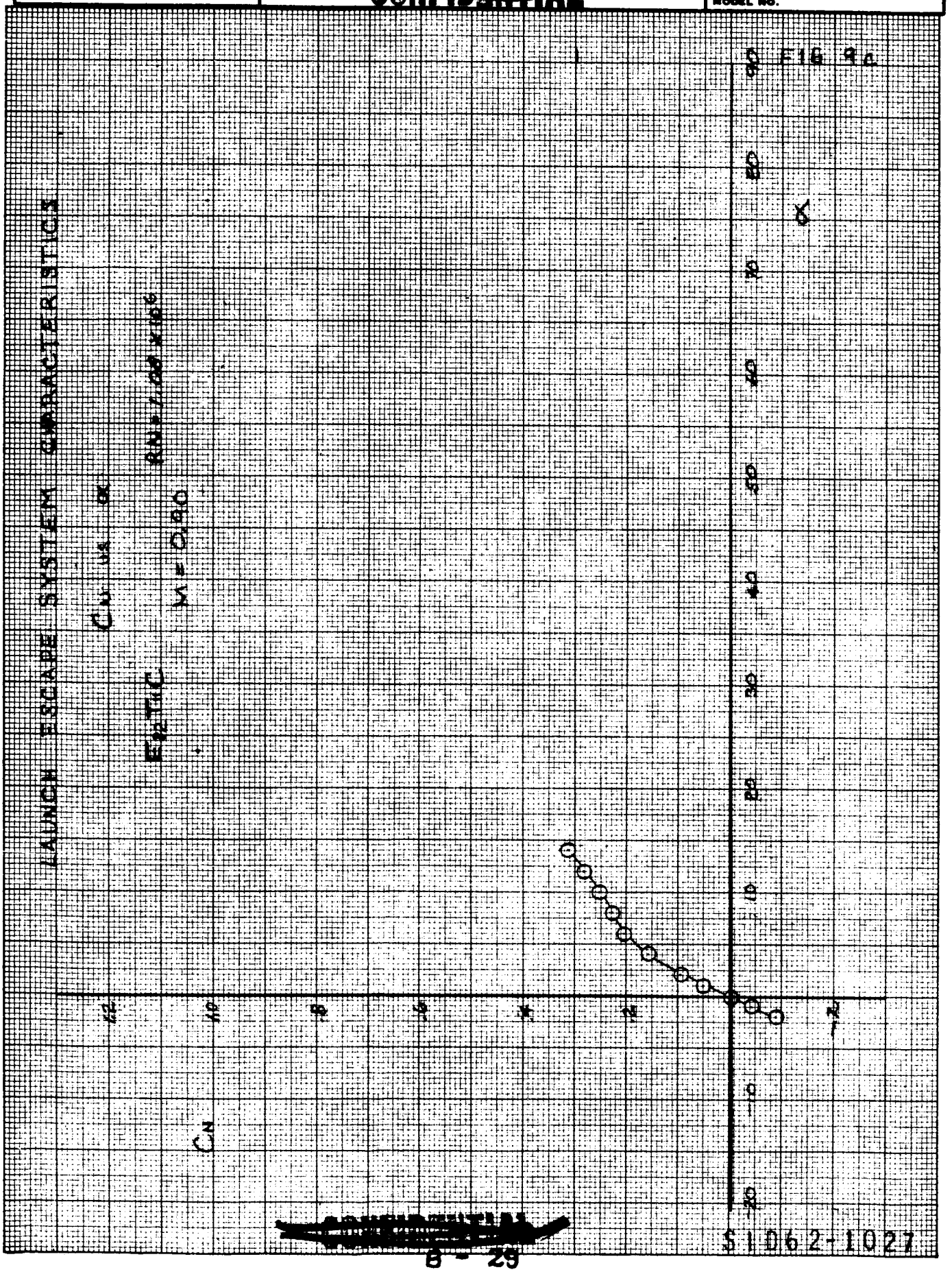
PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

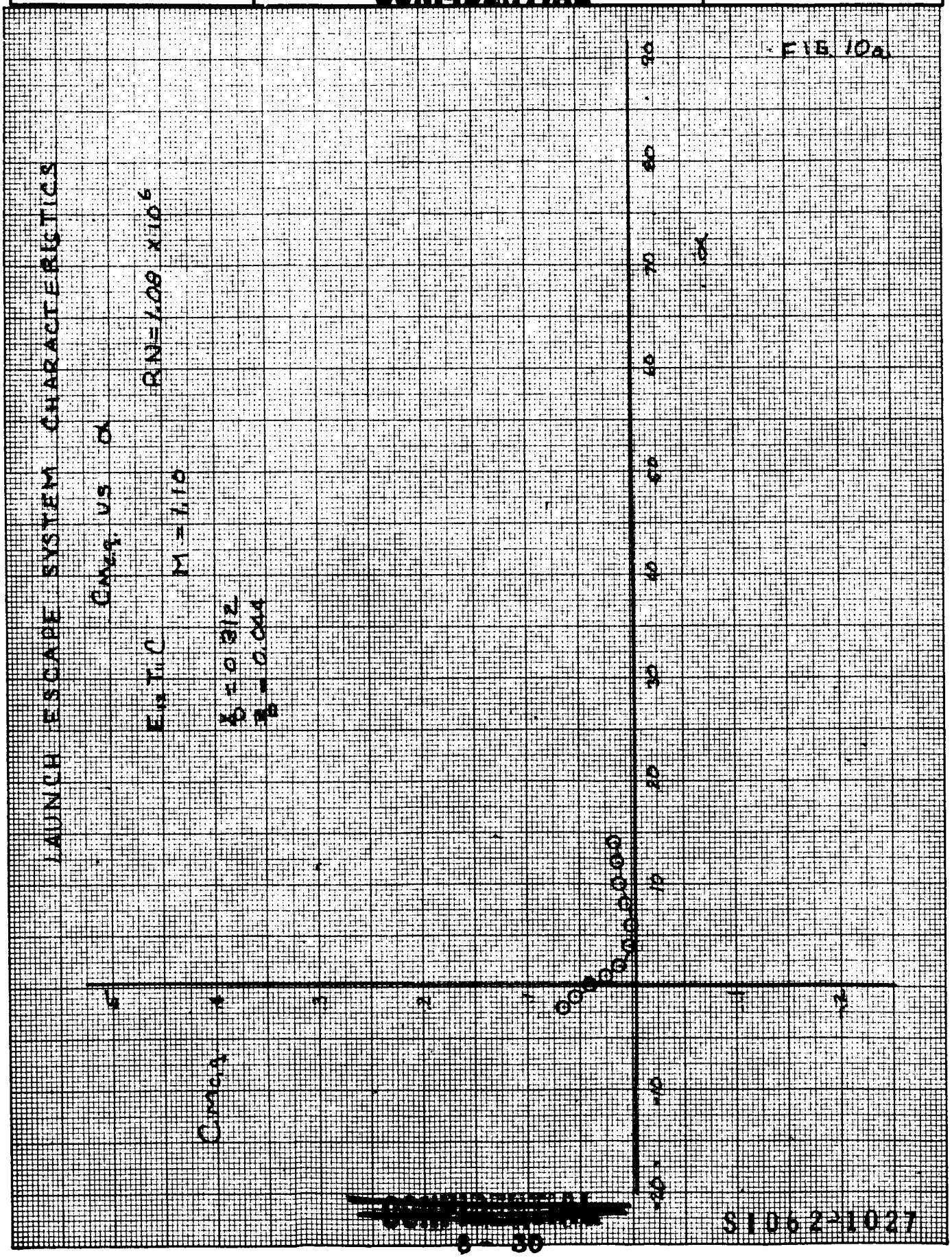
SID62-1027

[redacted]



[redacted]

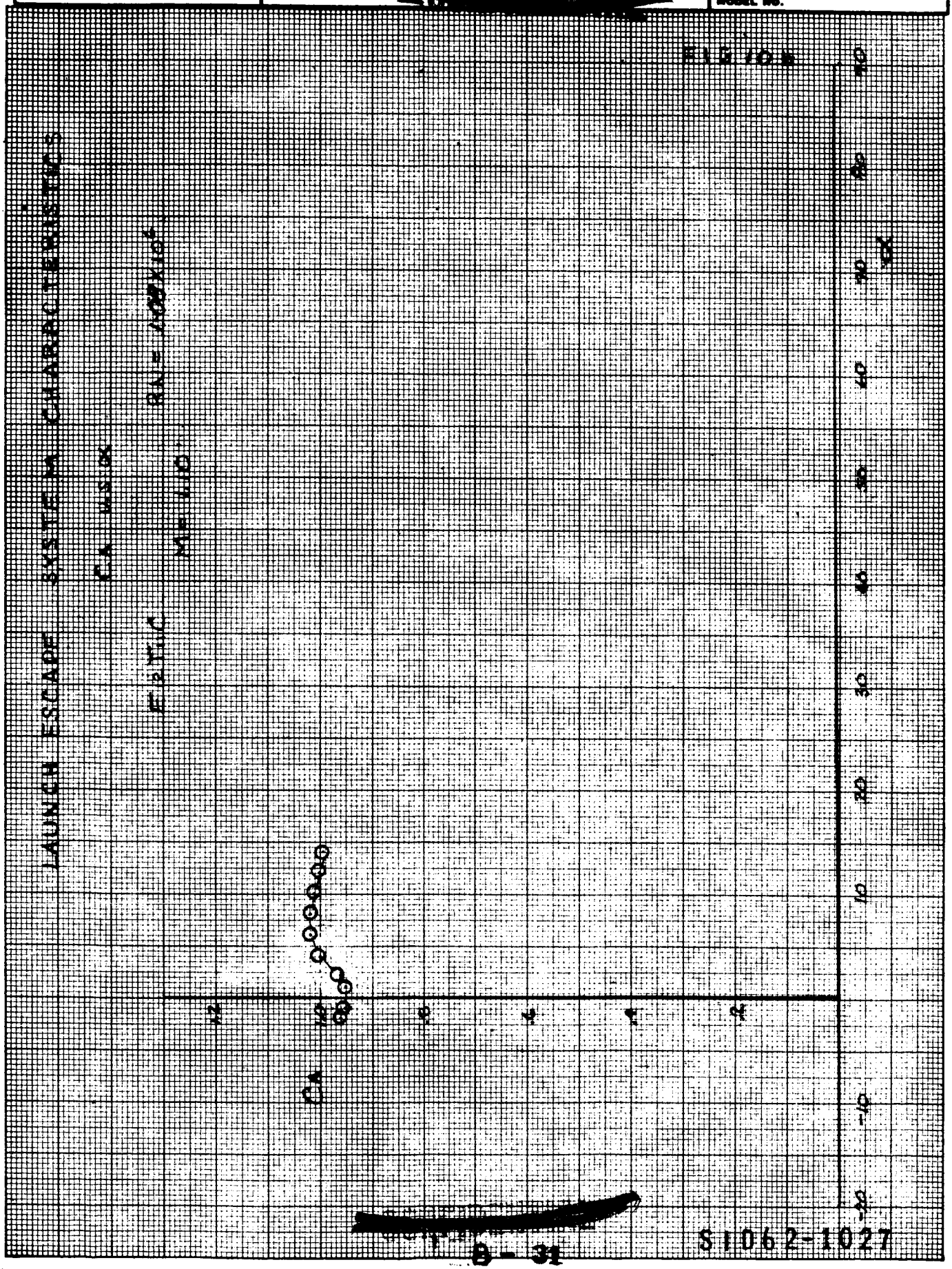
PREPARED BY: JD	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY: S		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

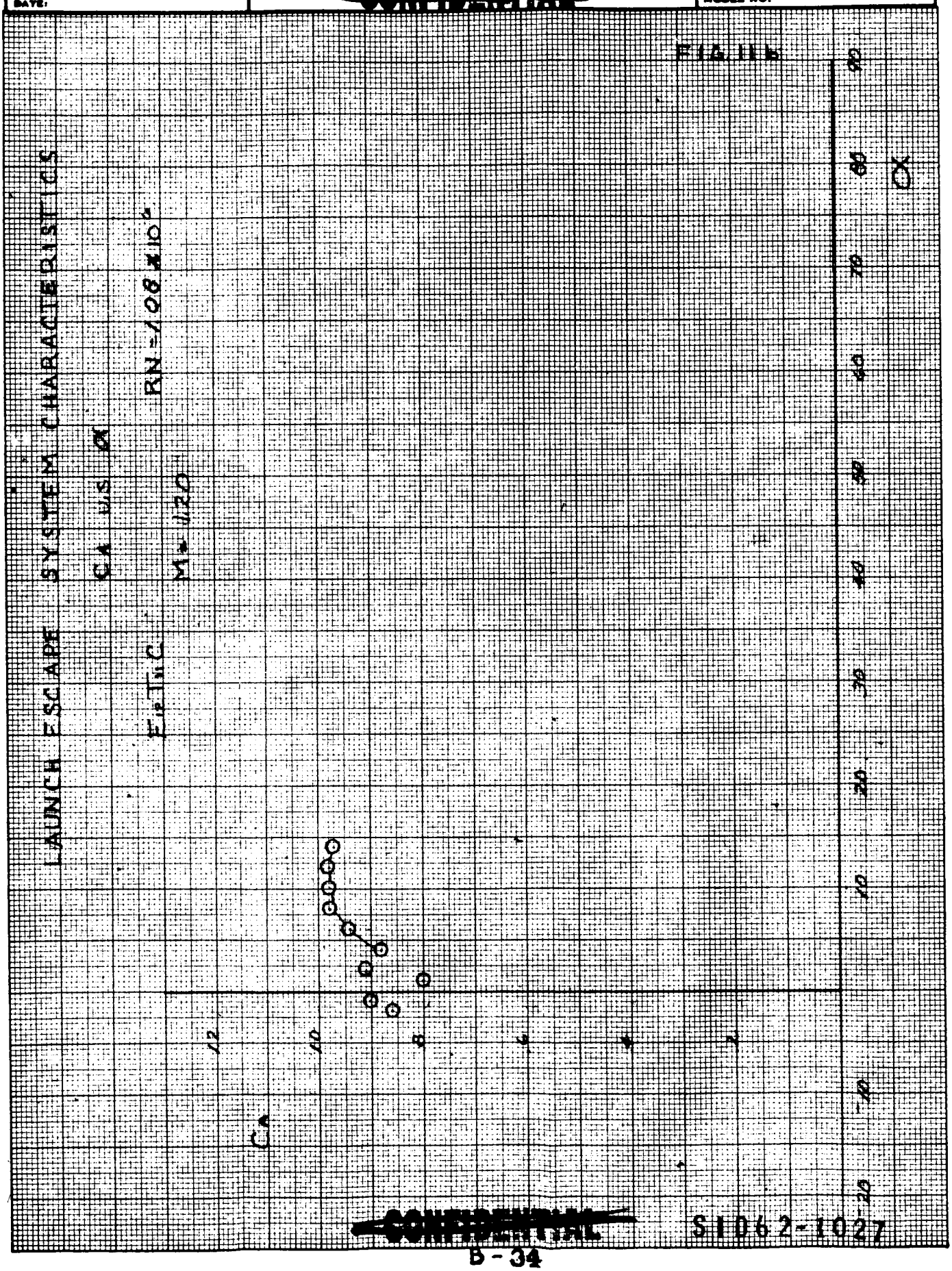
PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



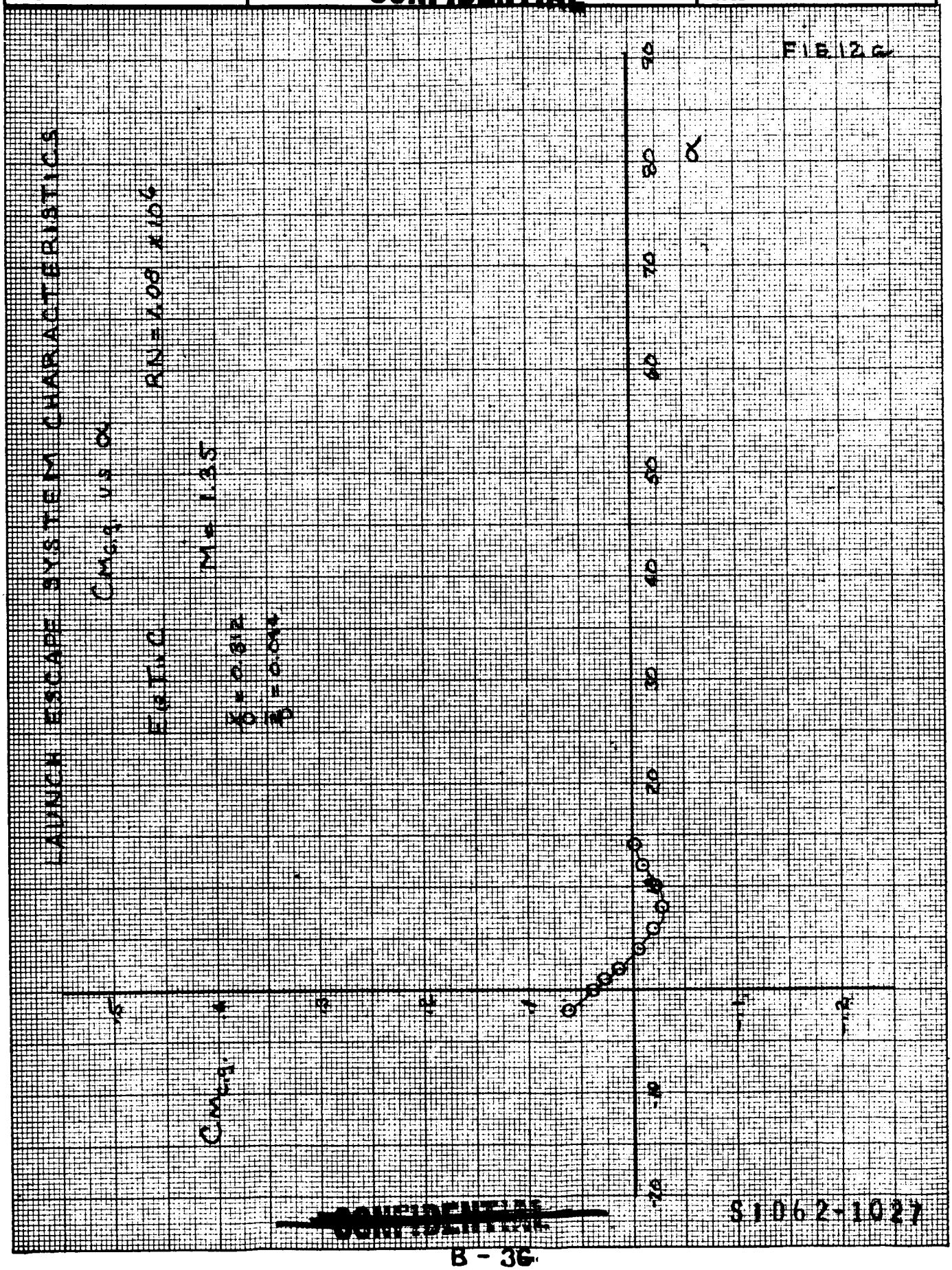
~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.

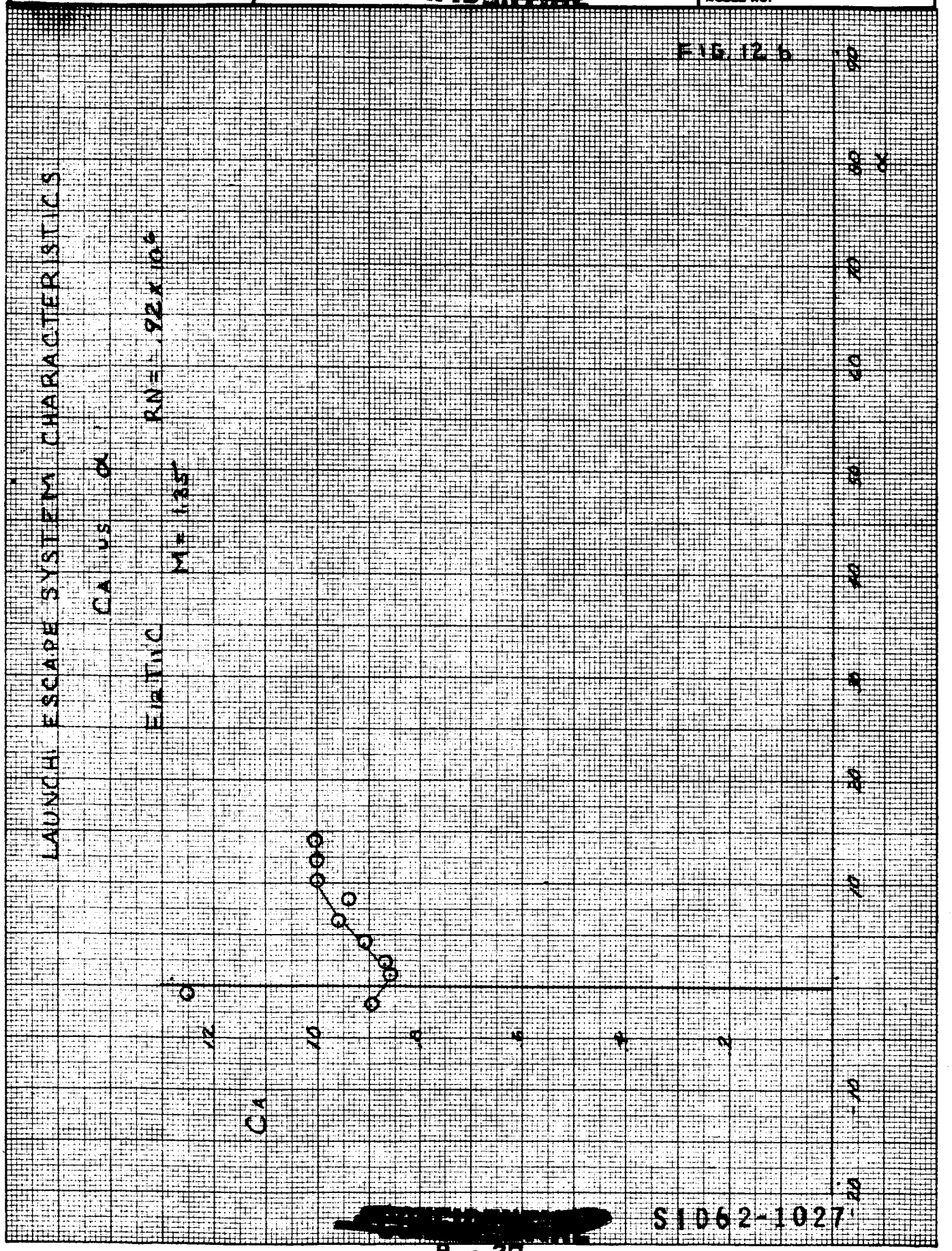
[redacted]

PREPARED BY: JD	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.



~~CONFIDENTIAL~~

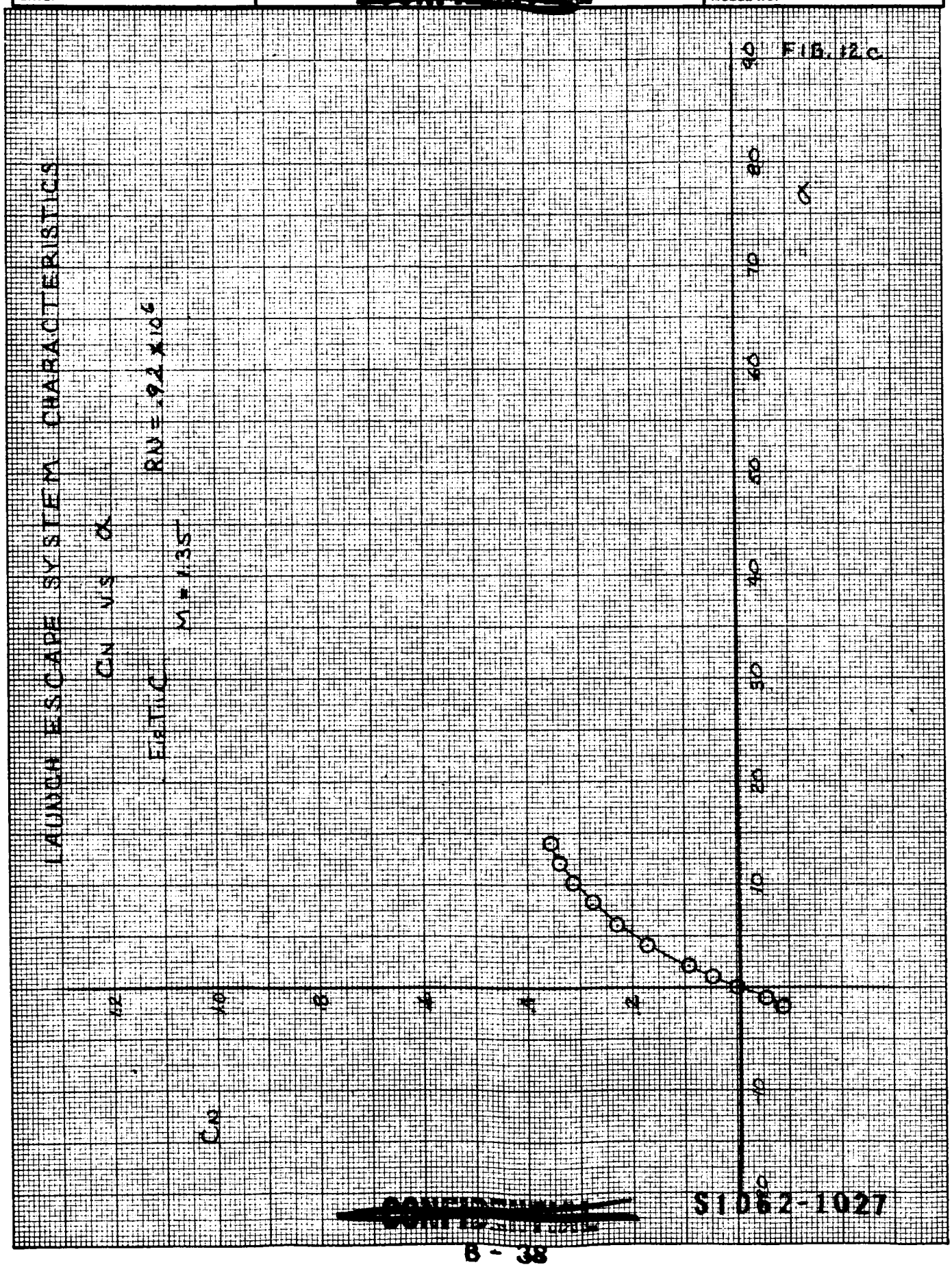
PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	[redacted]	MODEL NO.



[redacted]

S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

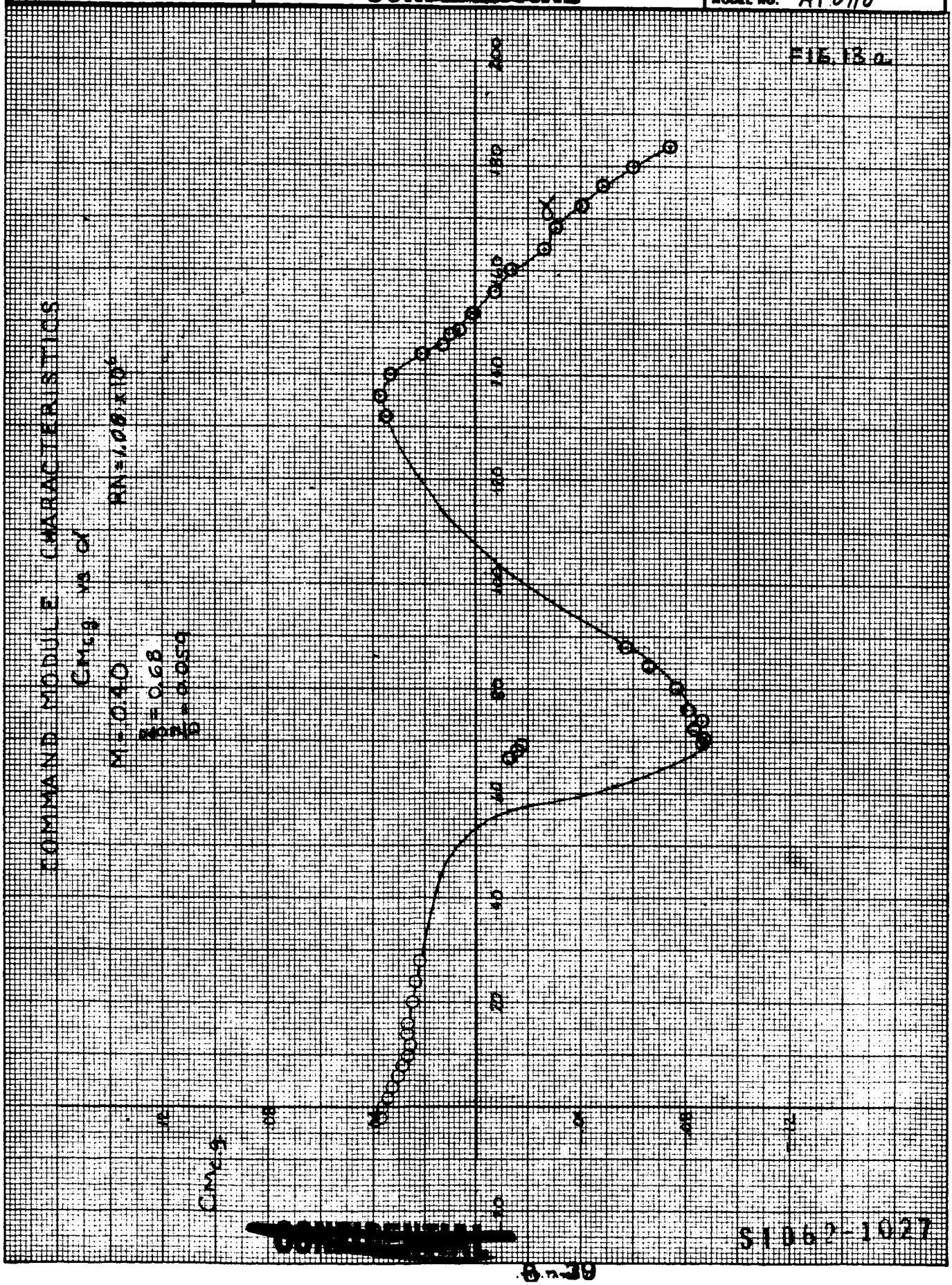


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	[redacted]	MODEL NO. AP0110

FIG. 13a

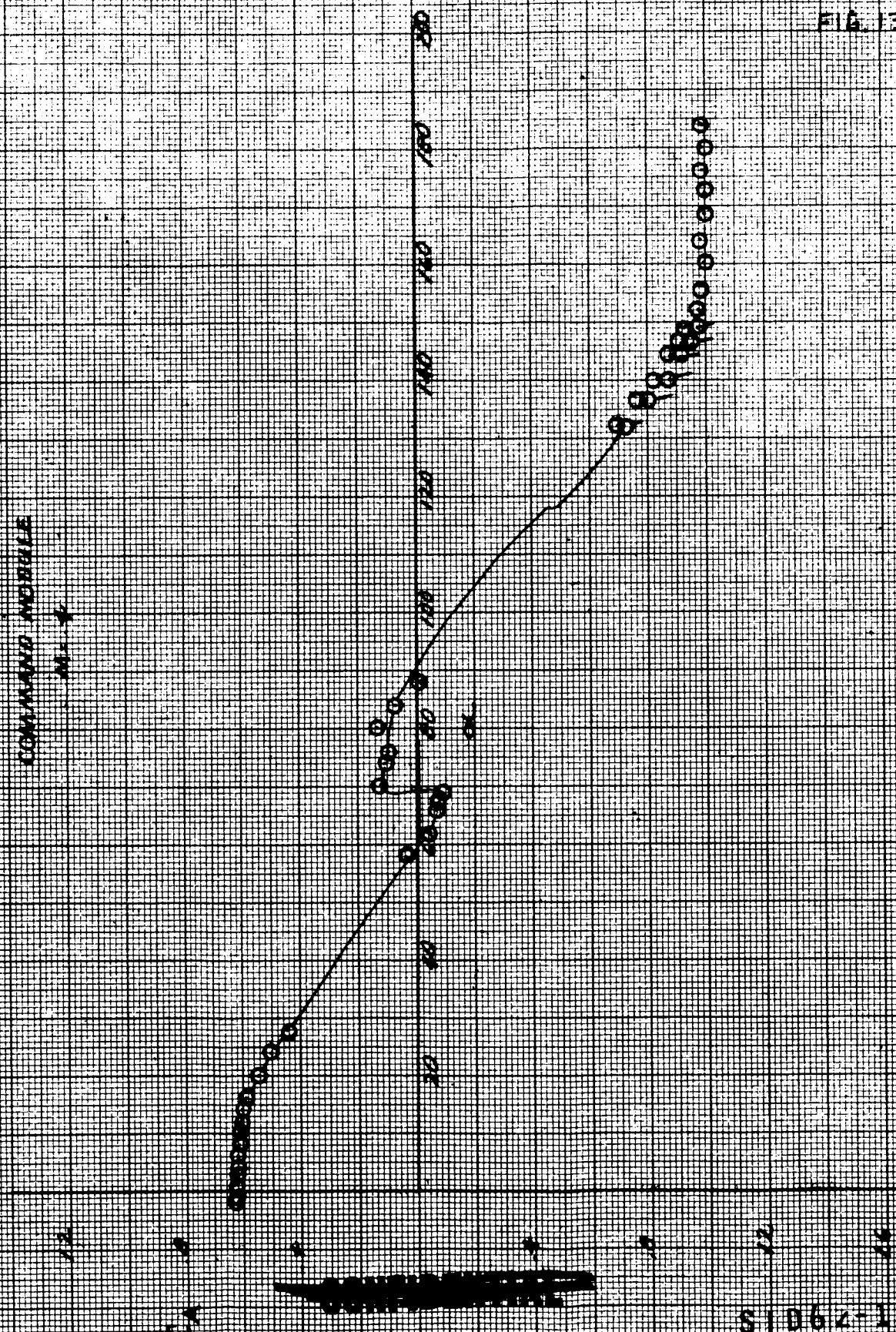


[redacted]

S1D62-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 13b

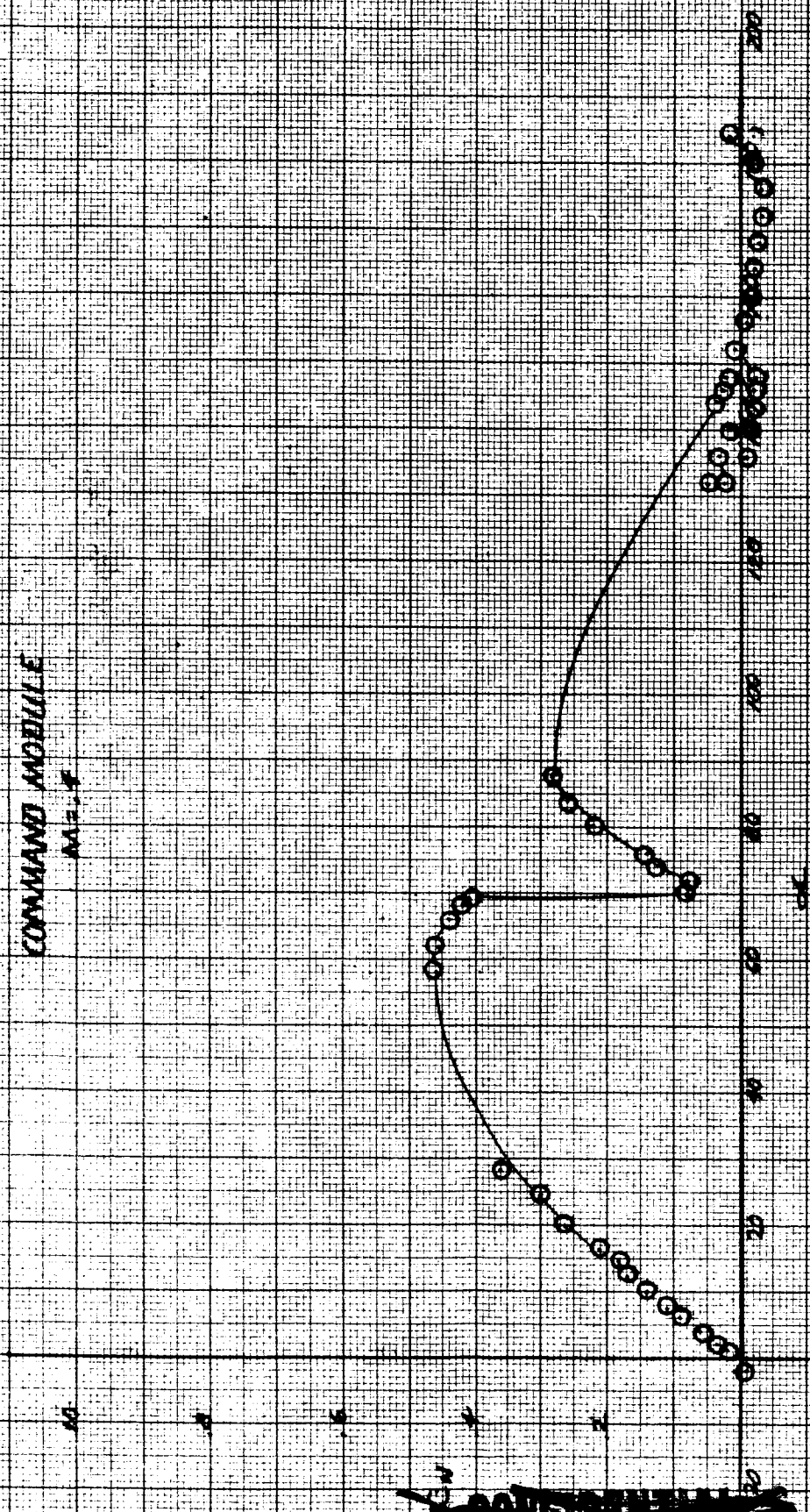


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: CT	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 386
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 13b



S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

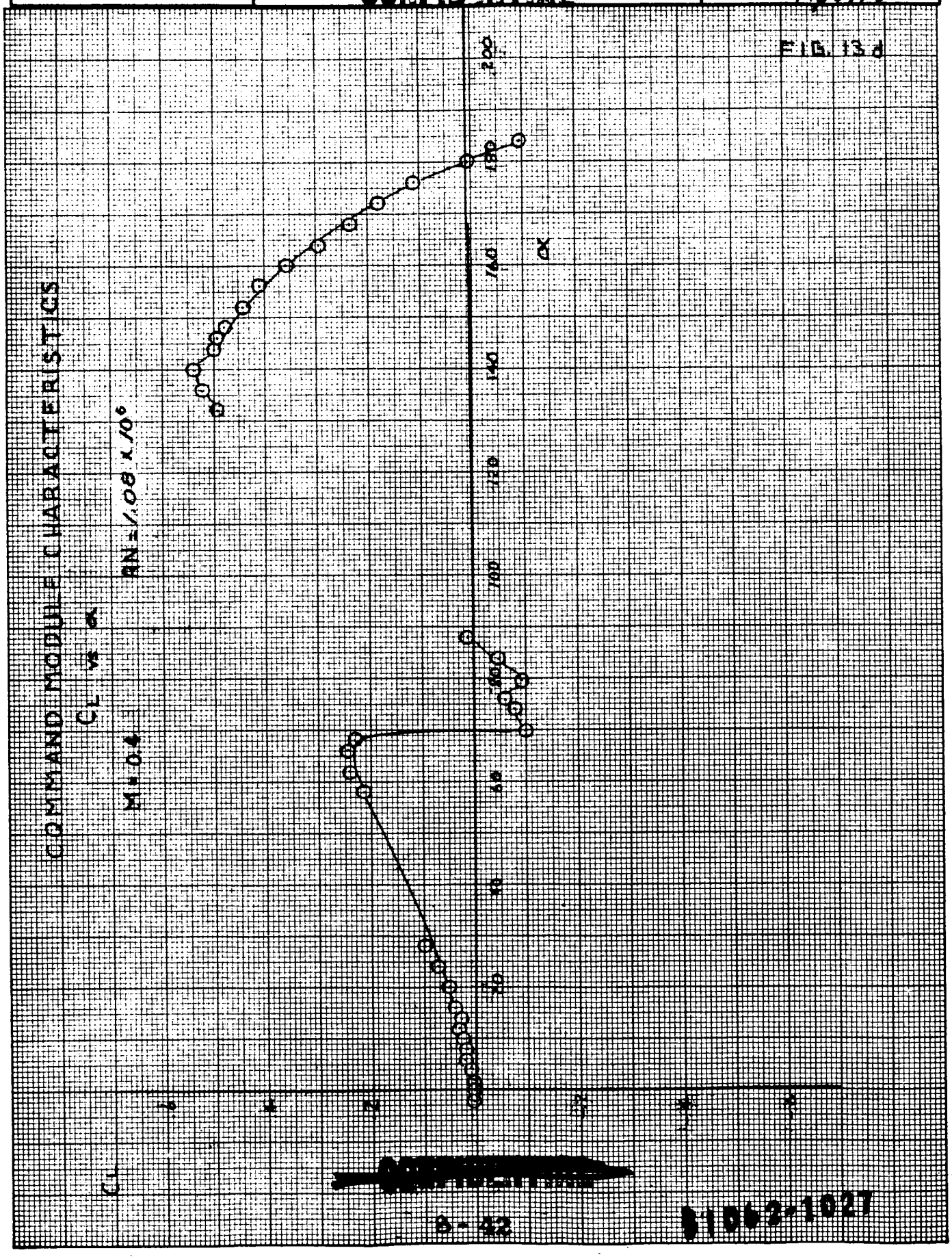
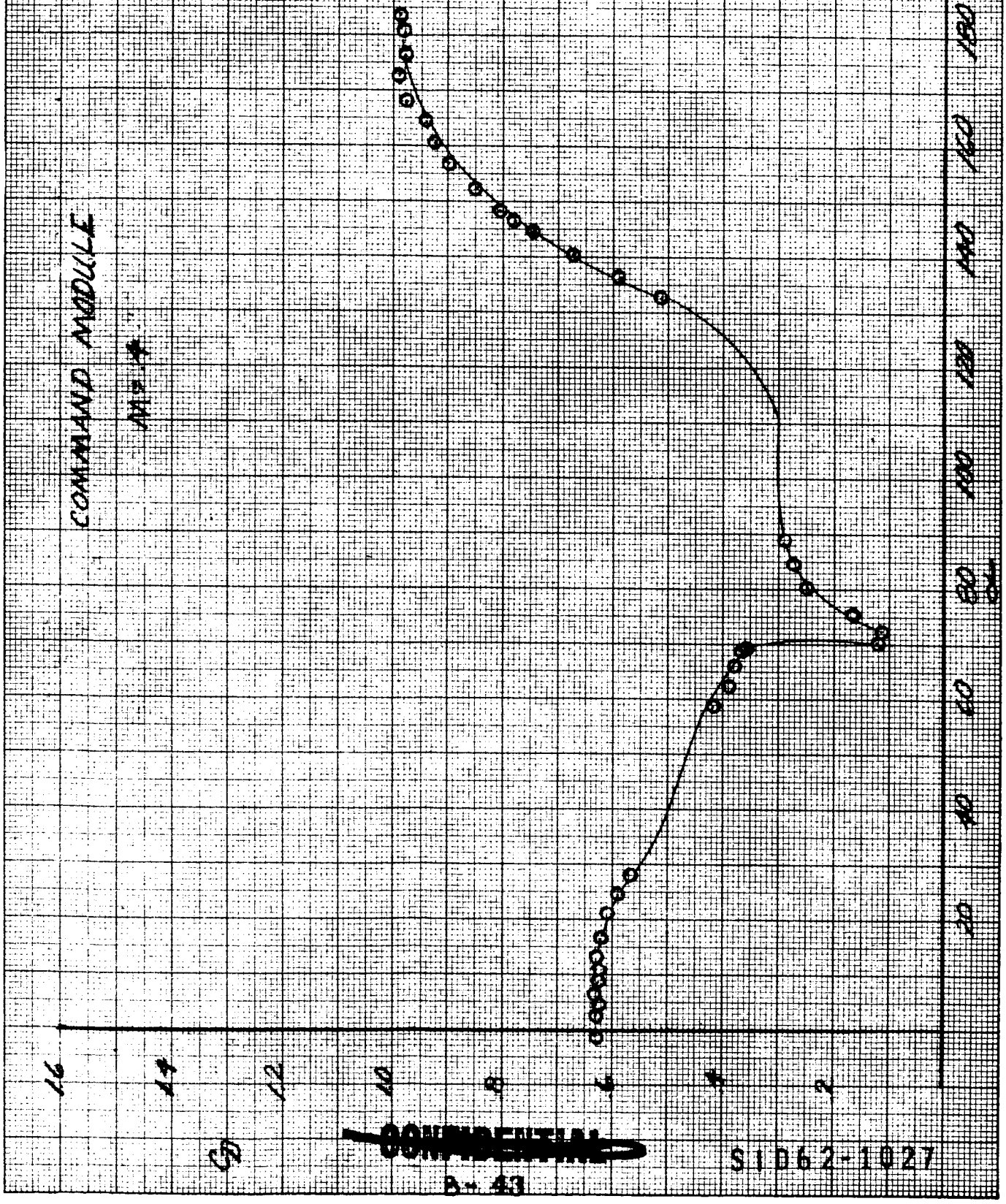


FIG. 13d

[redacted]

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 13e

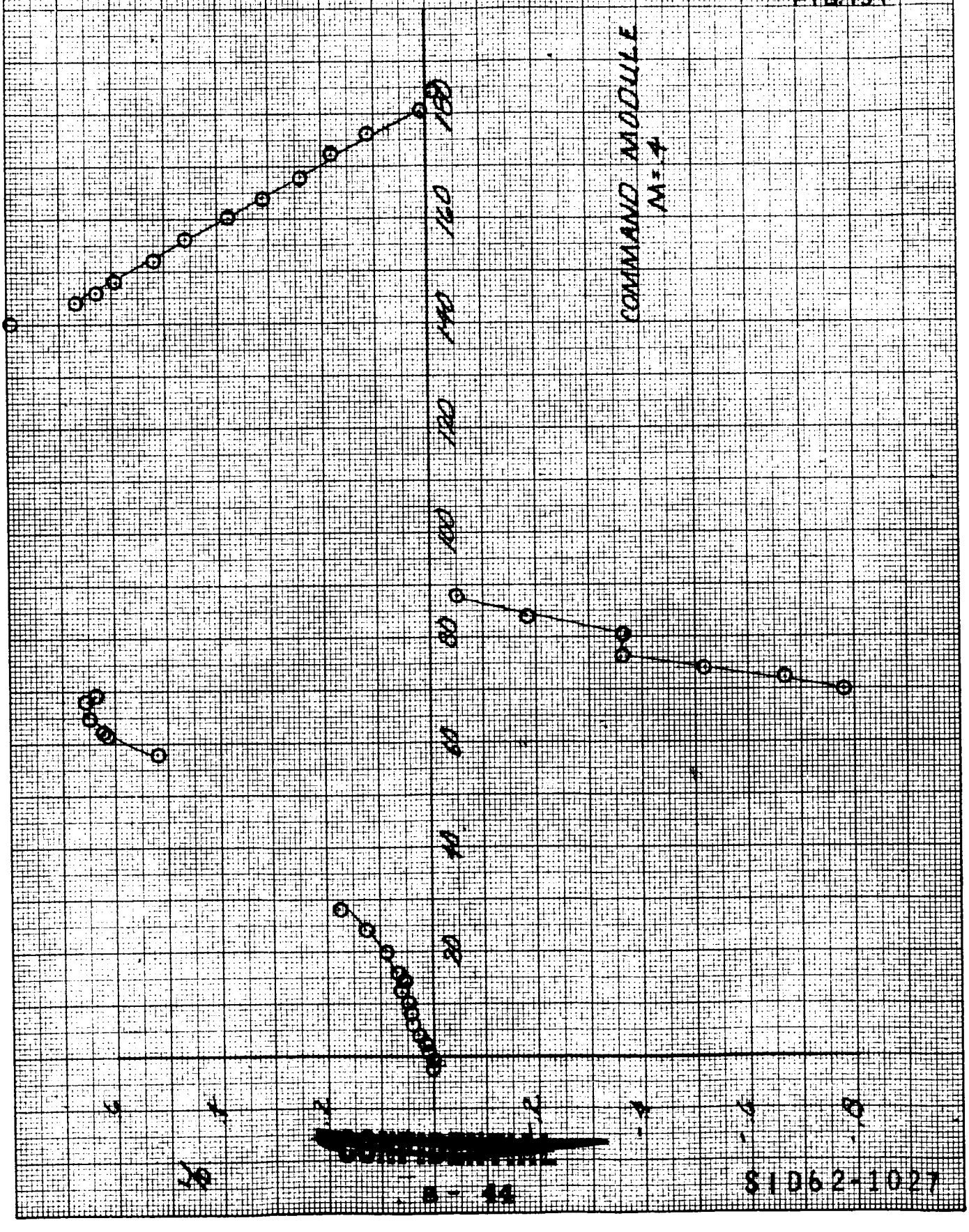


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2x2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 13 f

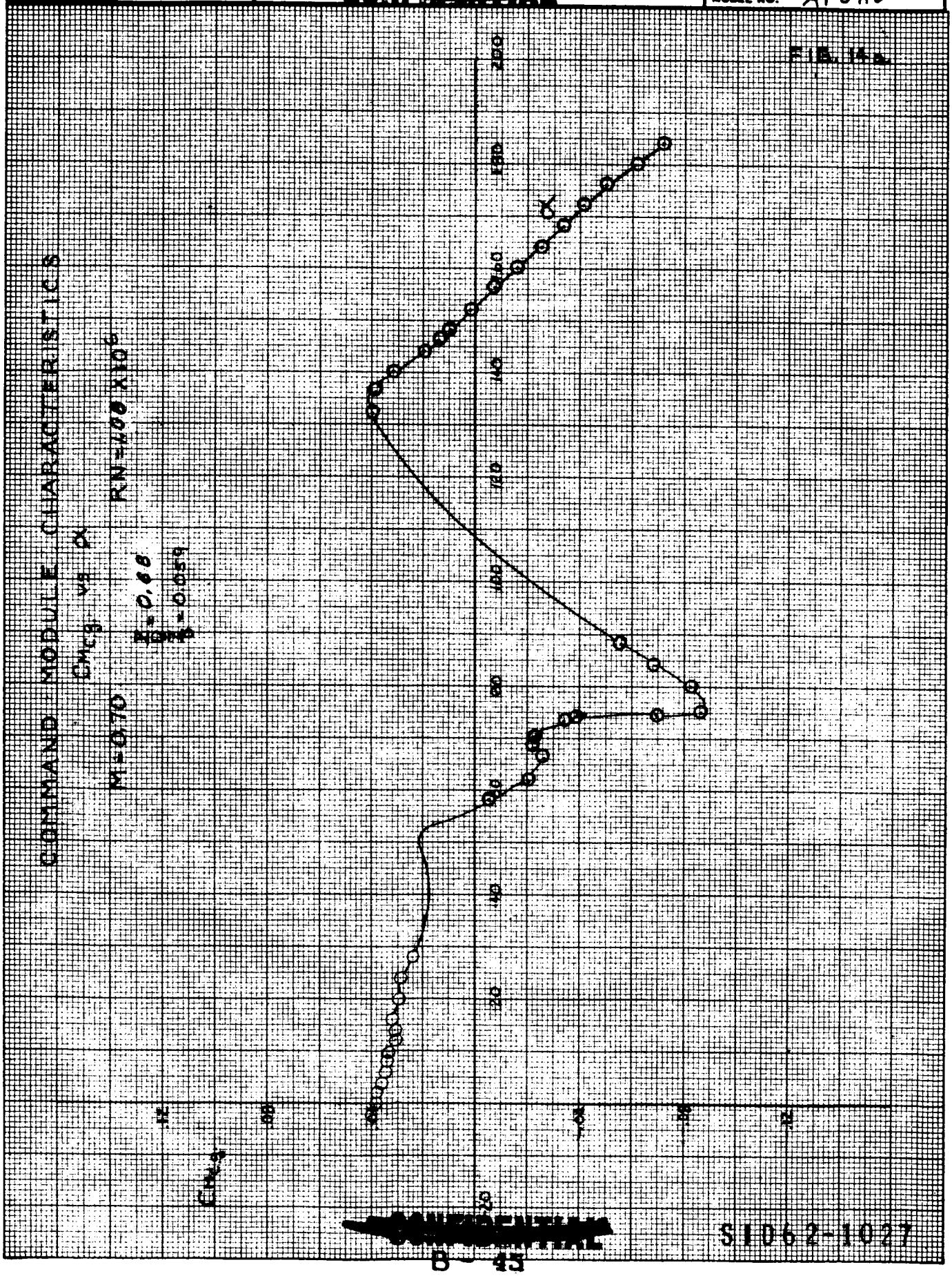


[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	[redacted]	MODEL NO. APO110

FIG. 14a

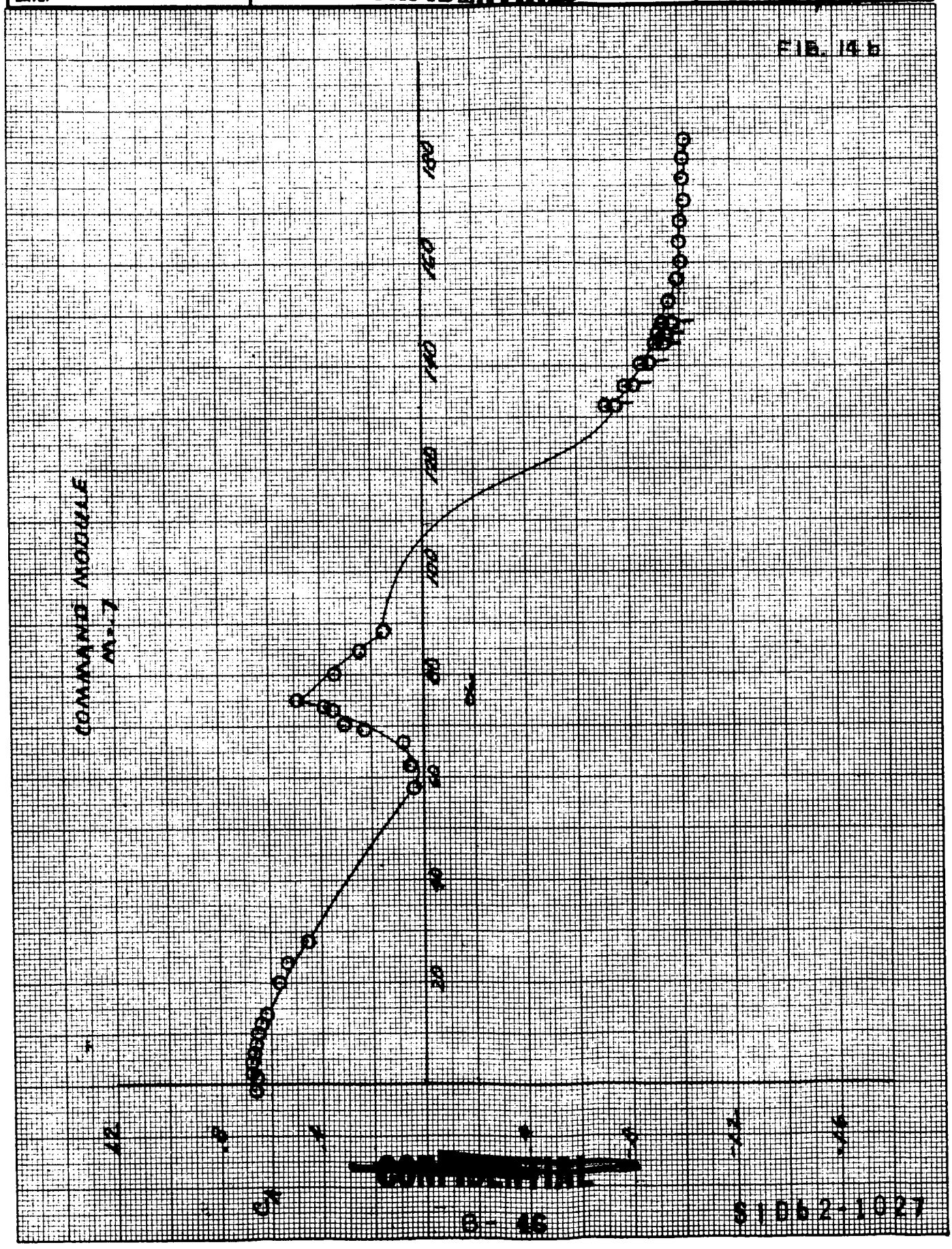


[redacted]

S1062-1027

PREPARED BY: CI	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2 x 2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 14 b

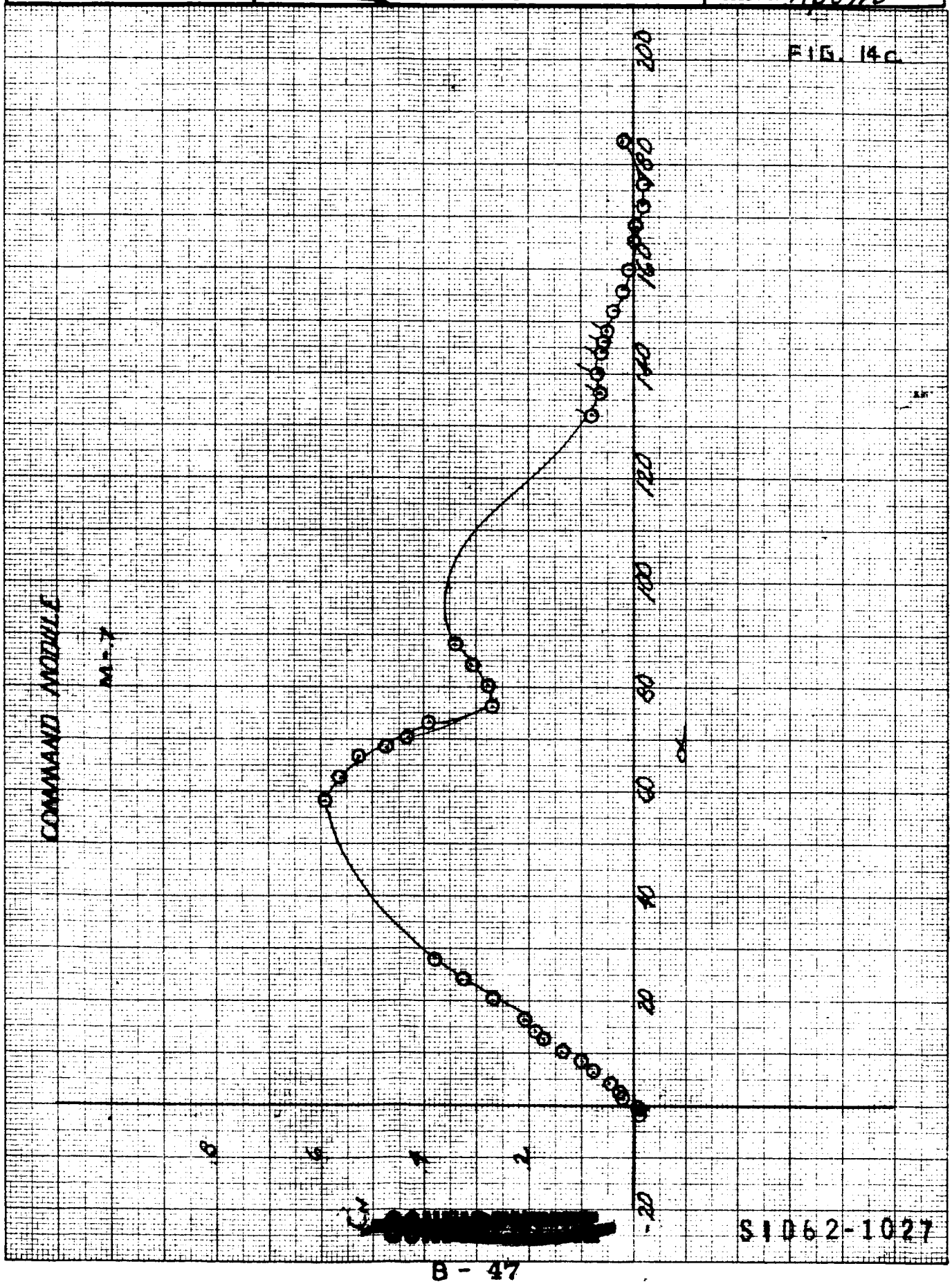


[redacted]

S1062-1027

PREPARED BY: CT	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2 X 2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 14c

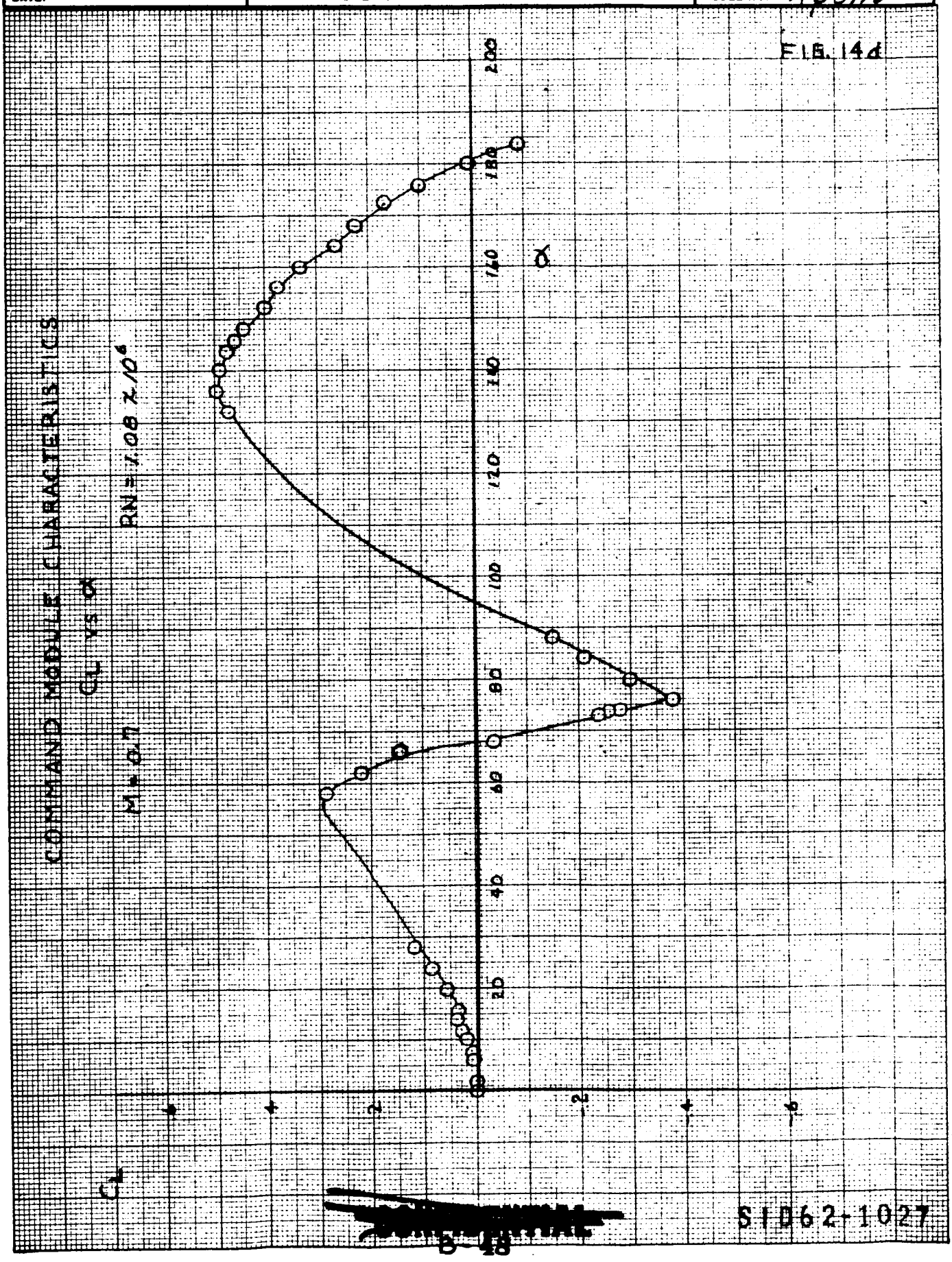


[redacted]

S1062-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2x2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 14d

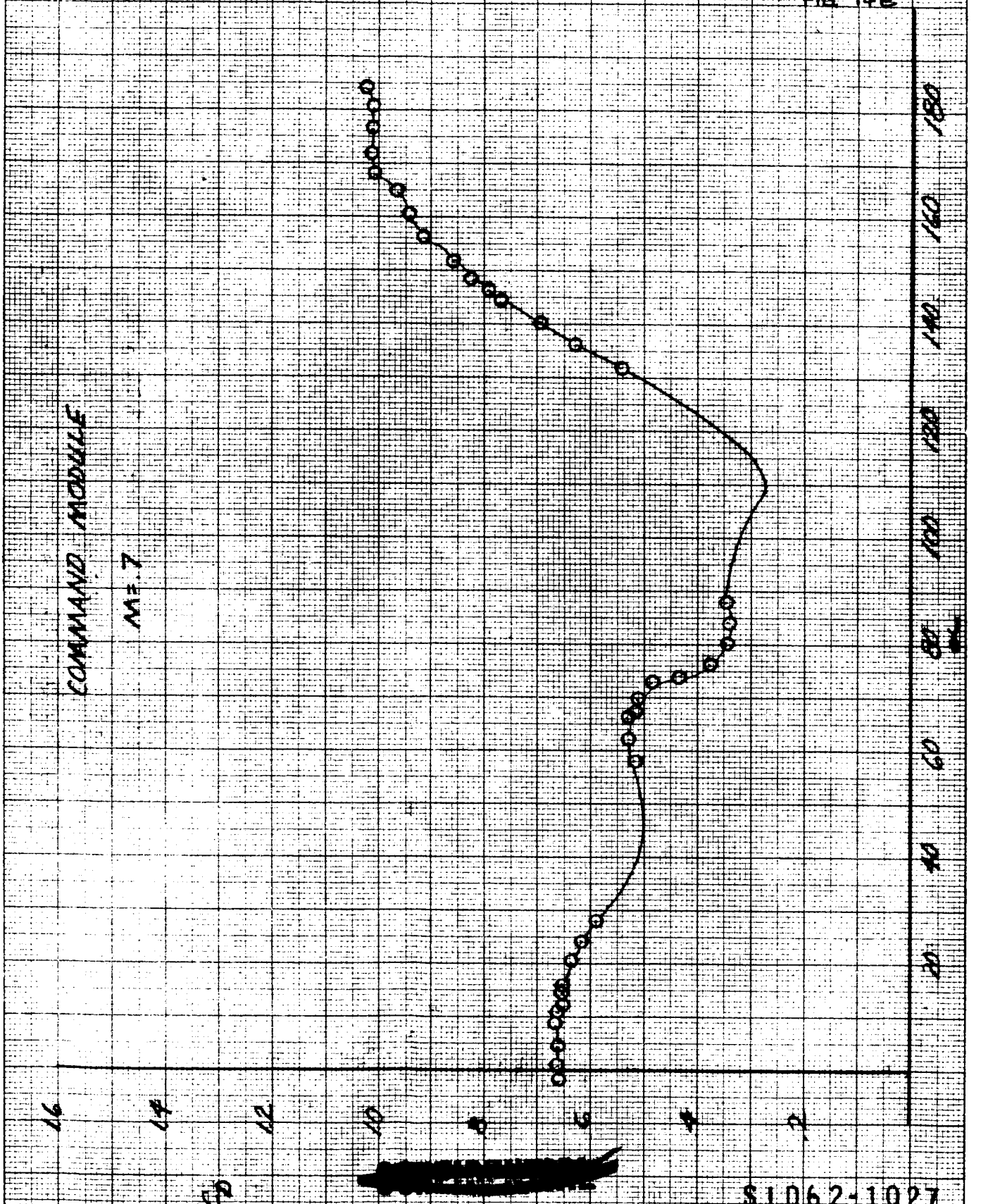


~~CONFIDENTIAL~~

SID62-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF Ames 2X2
CHECKED BY:		REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG 14e

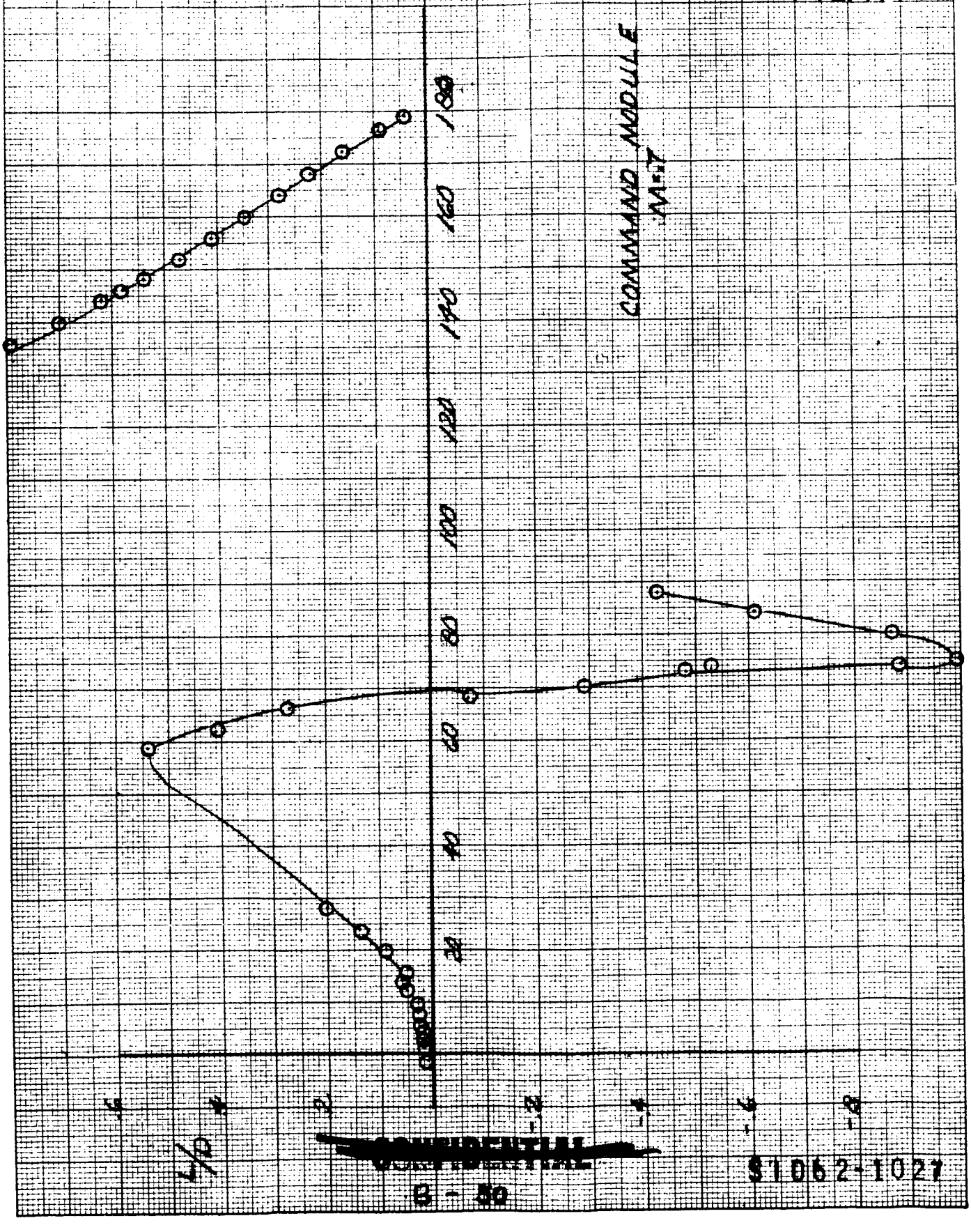


[redacted]

S1D62-1027

PREPARED BY: C-J	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 14 f

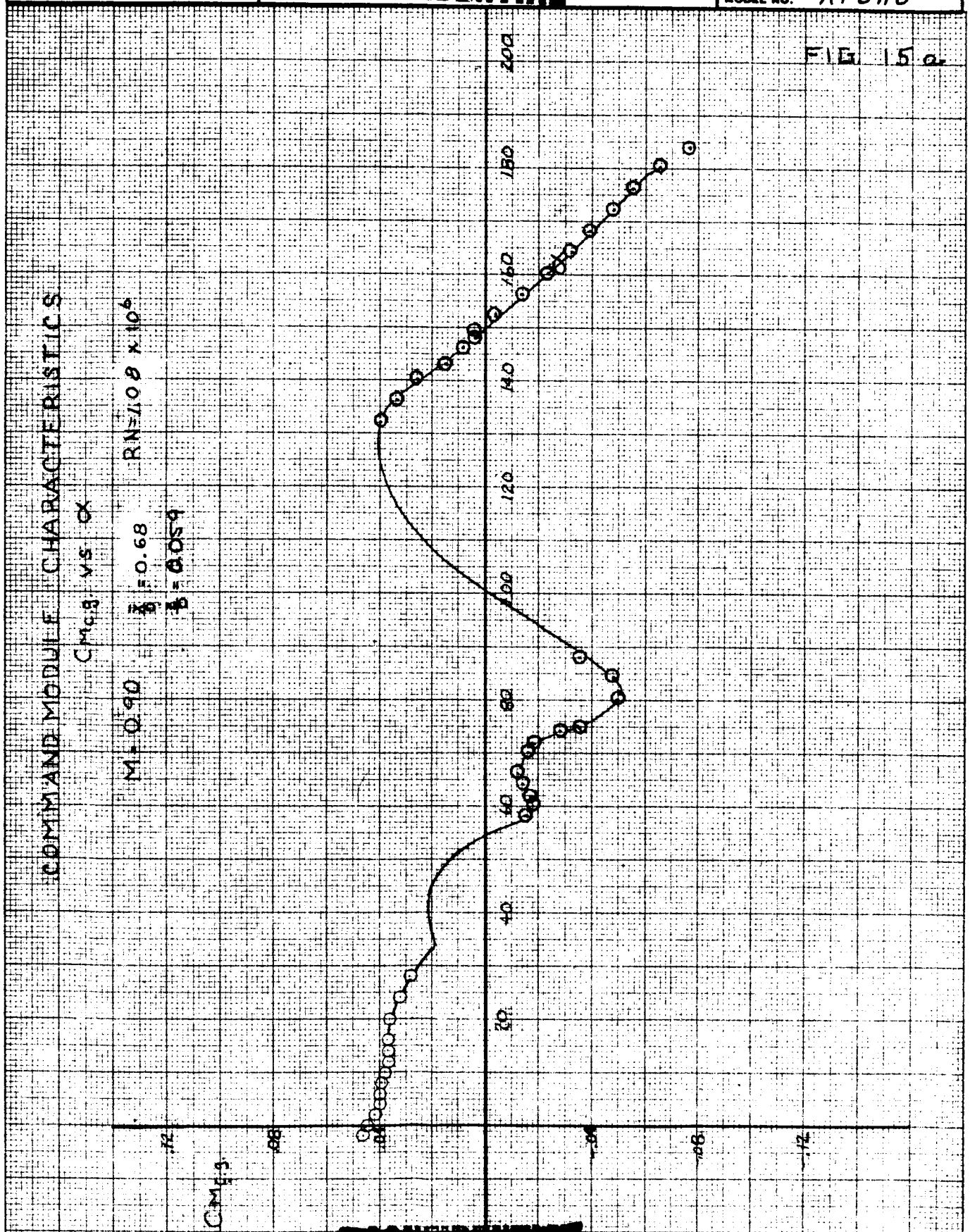


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. AP0110

FIG. 15a

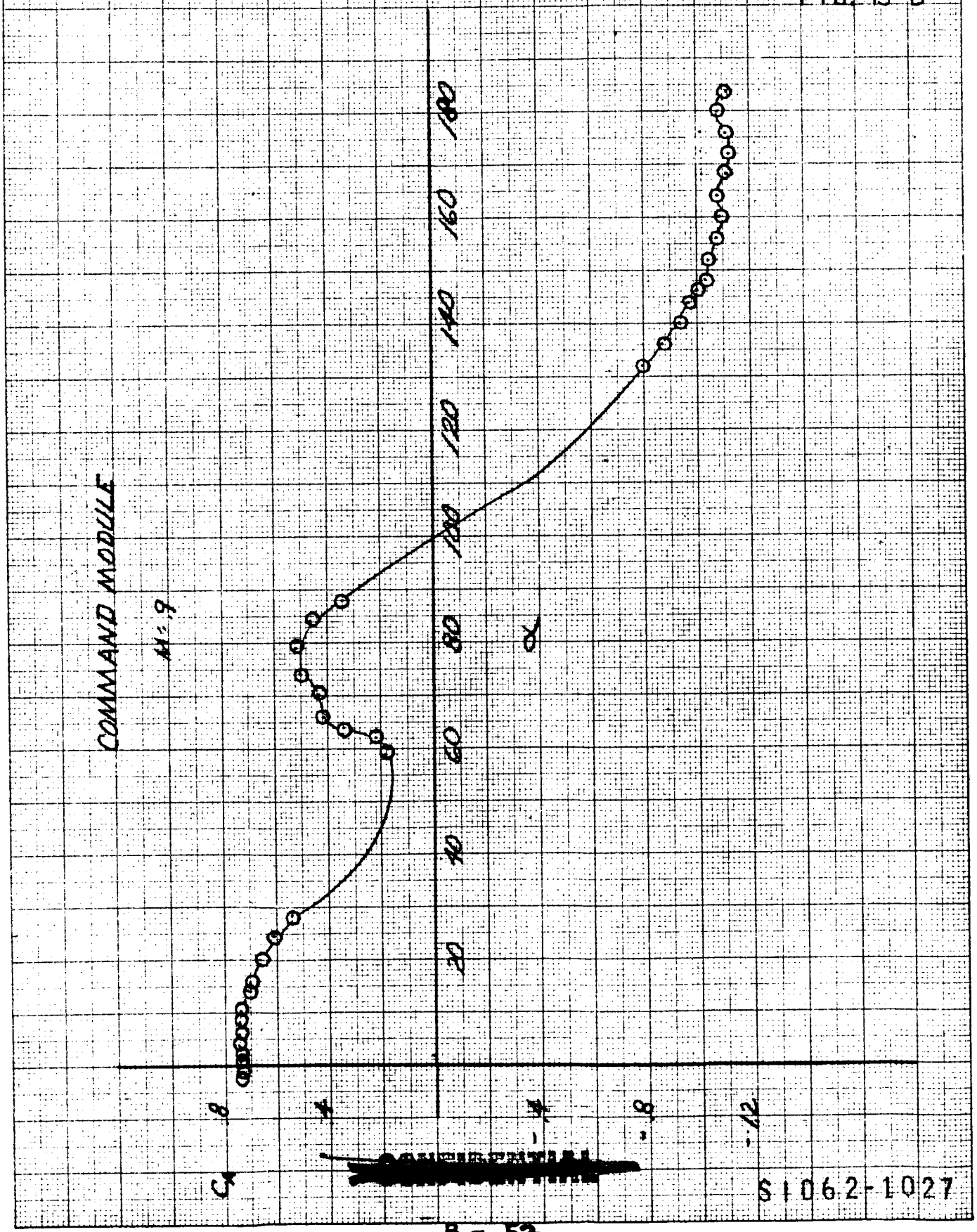


[redacted]

SID62-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO.
DATE:	~~CONFIDENTIAL~~	MODEL NO.

FIG. 15 b

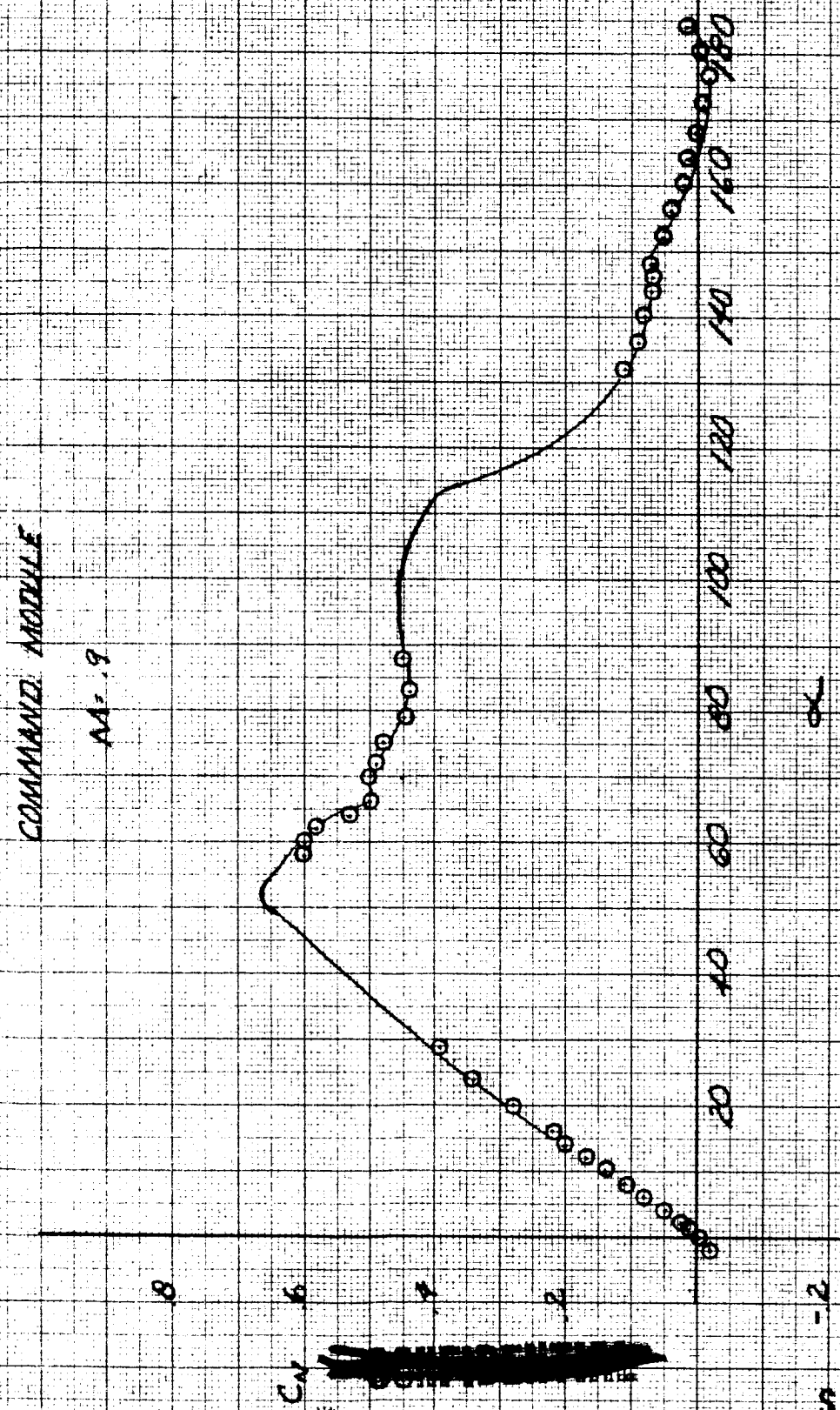


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2'x2' REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 15c

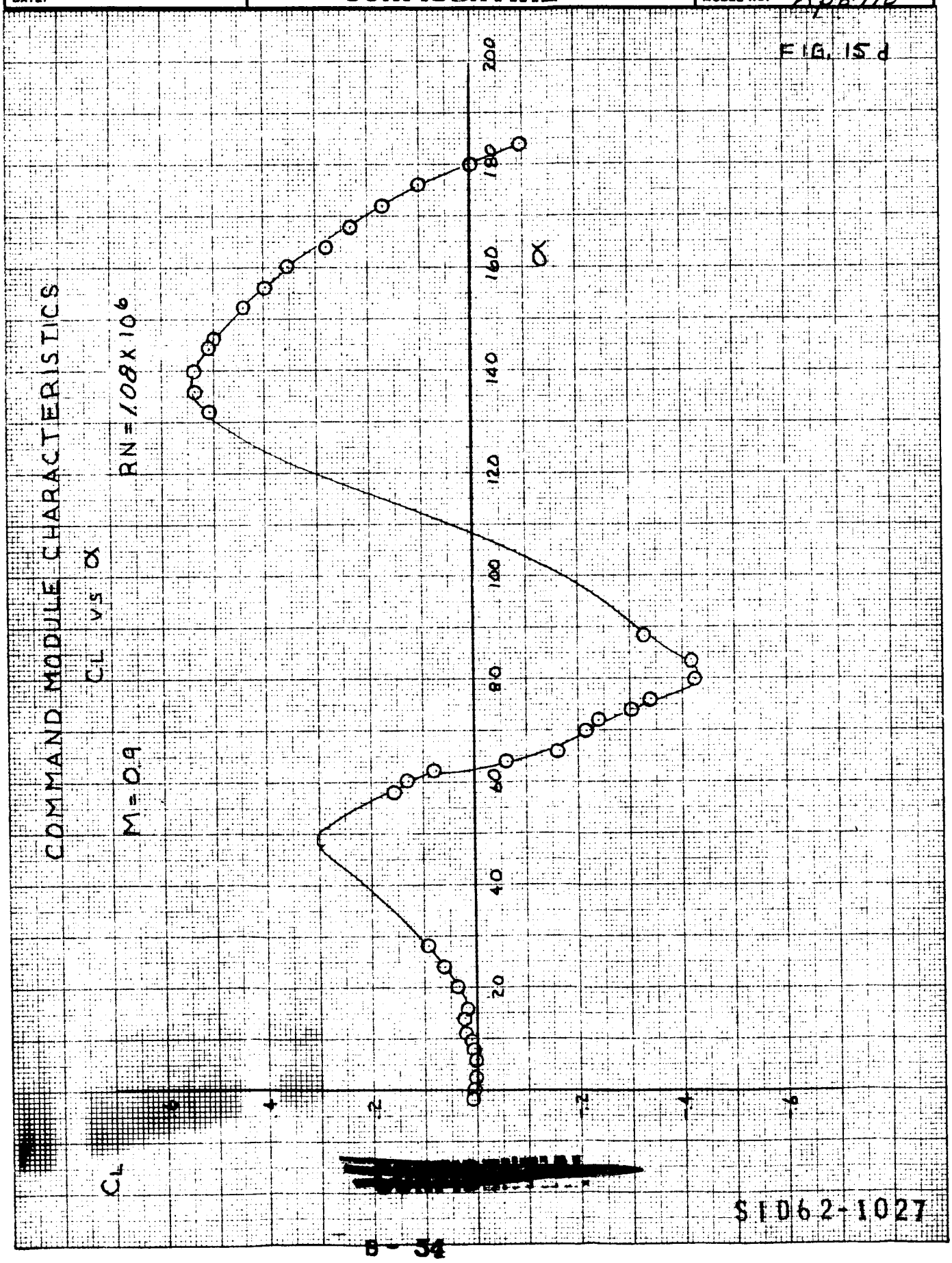


[redacted]

S1D62-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2 X 2 REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 15 d

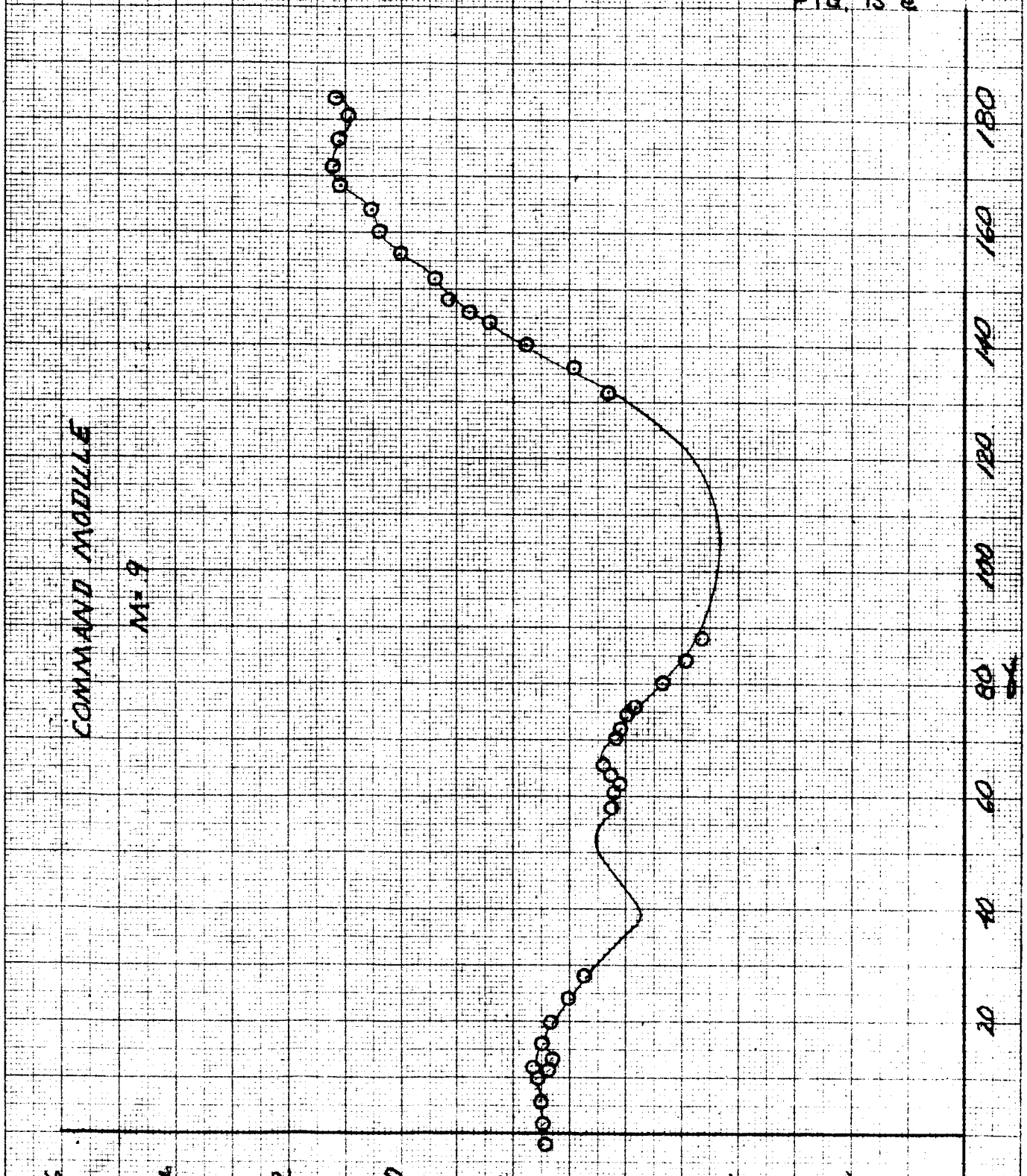


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2X2 REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 15 e

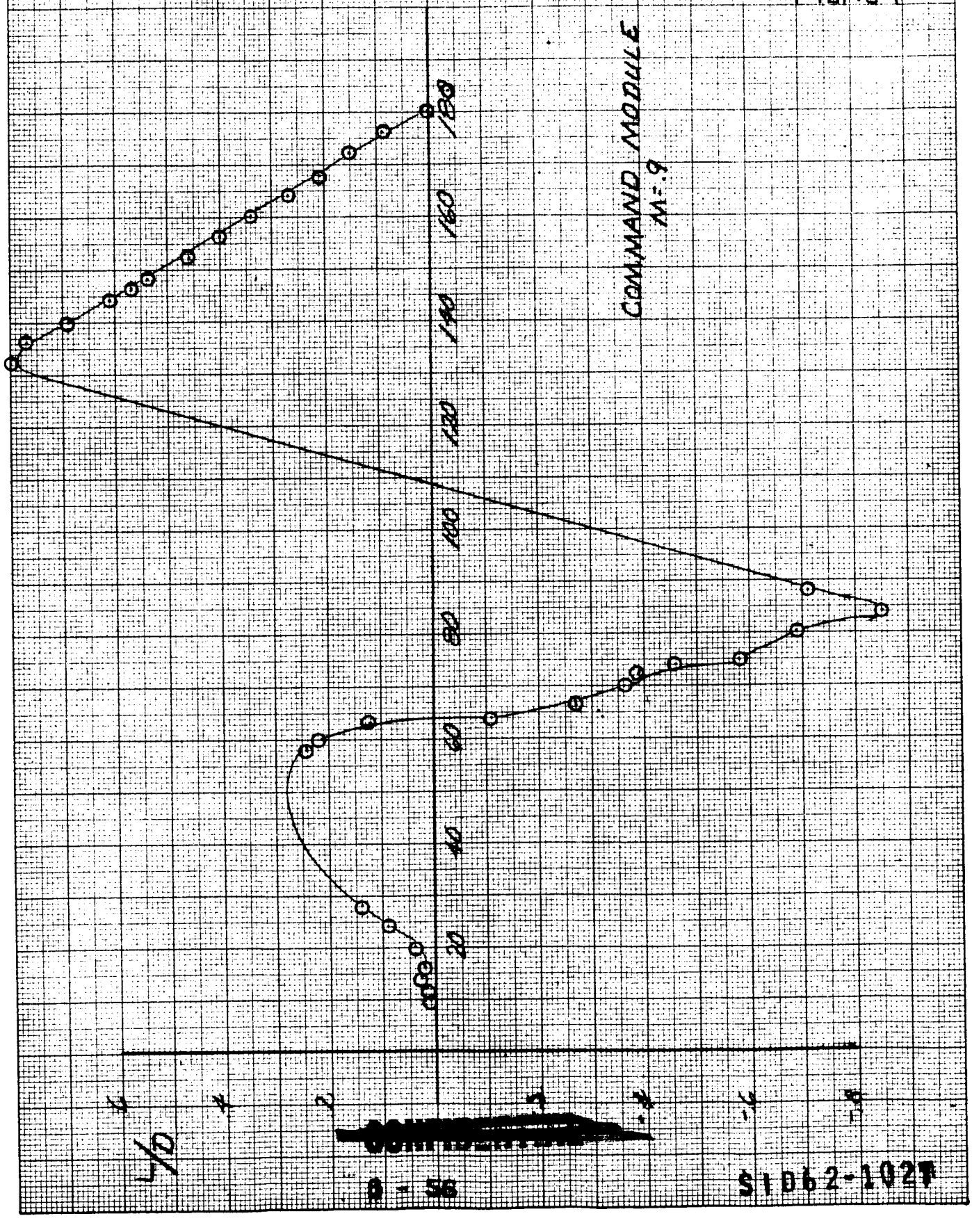


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2 X 2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

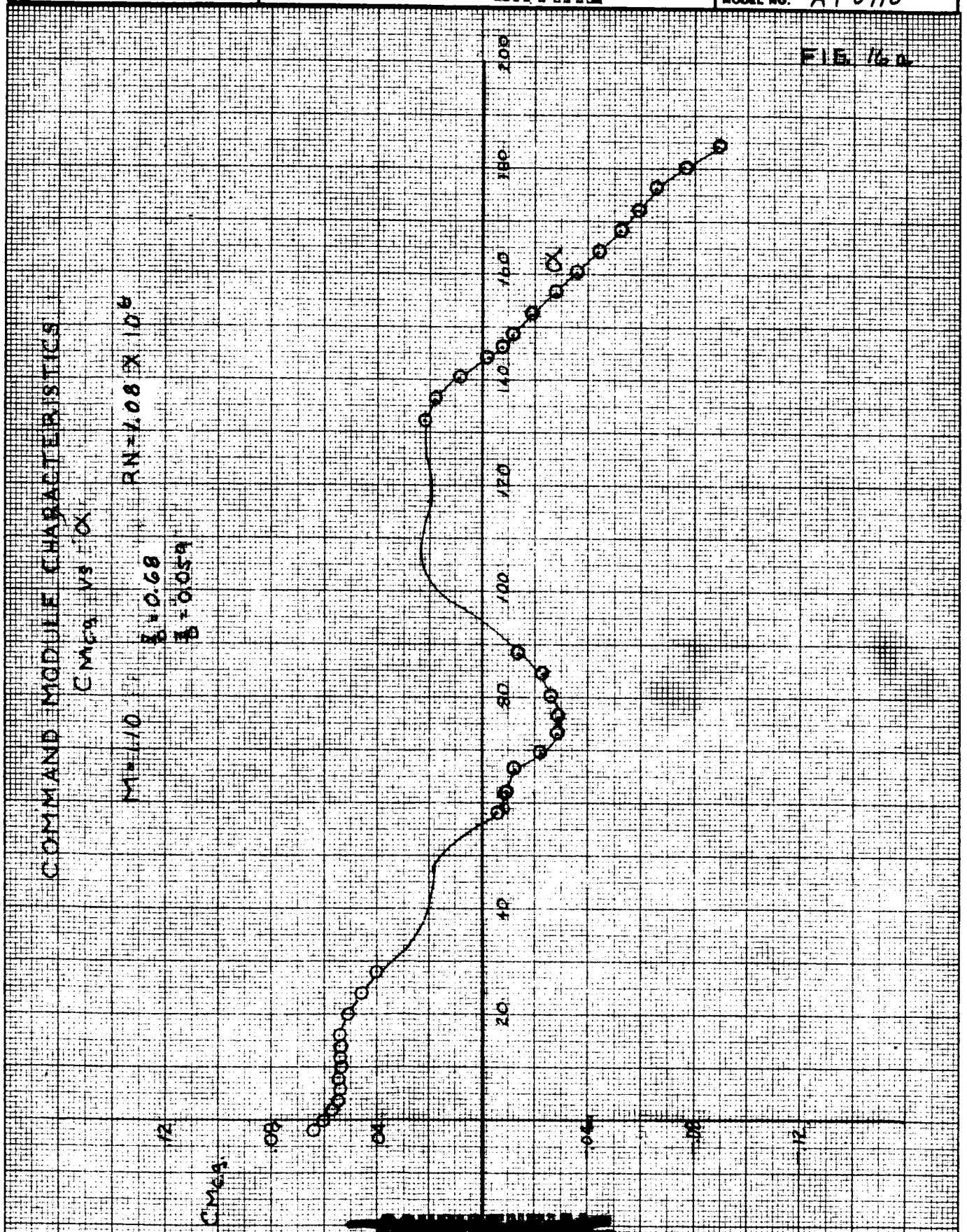
FIG. 15 f



[redacted]

S1D62-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	[redacted]	MODEL NO. AP0110

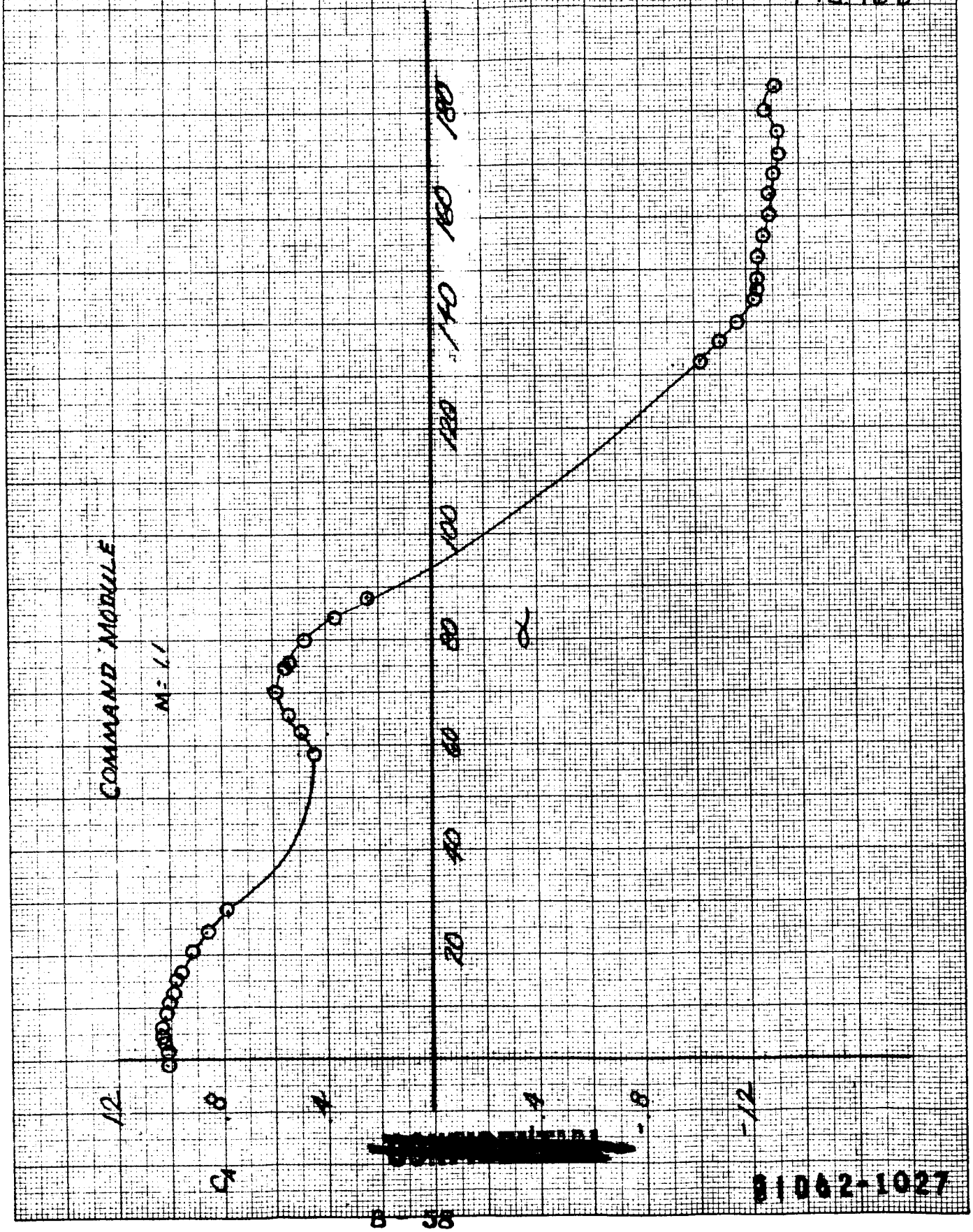


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2 X-2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 16b

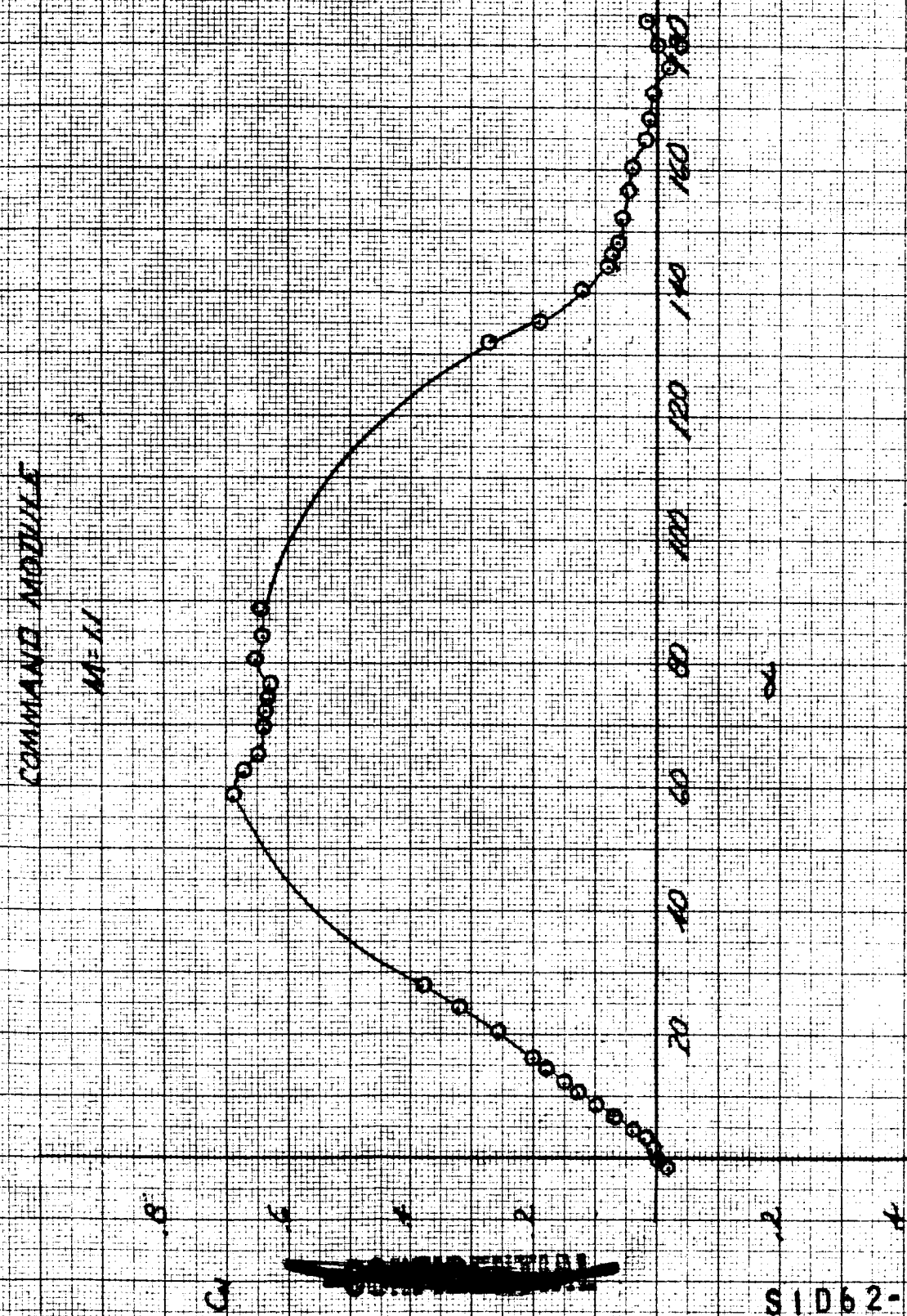


~~CONFIDENTIAL~~

81062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2'x2' Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 16c

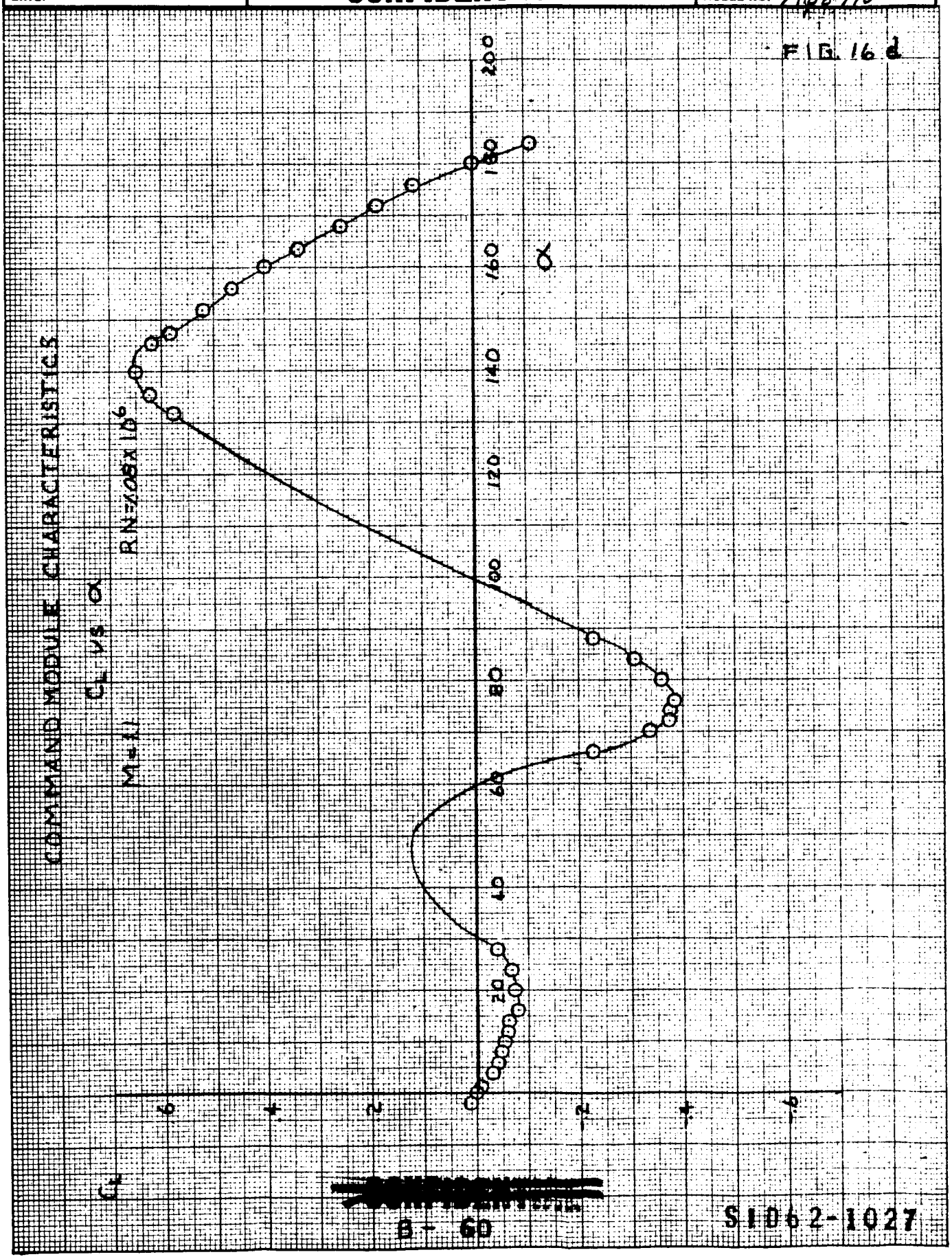


[redacted]

SID62-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apo 110

FIG. 16d

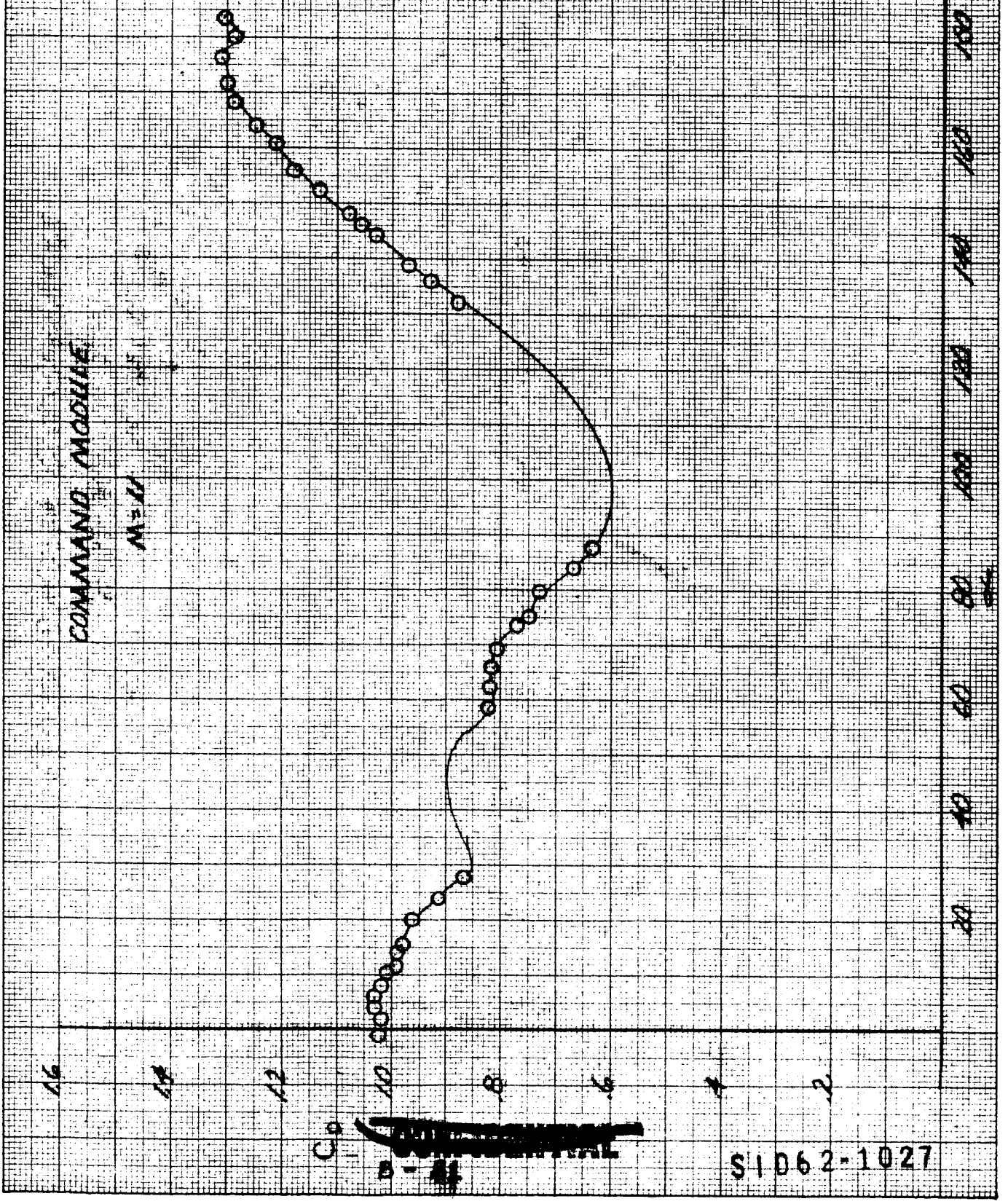


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF Ames 2x2
CHECKED BY:		REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apo 110

FIG. 16e



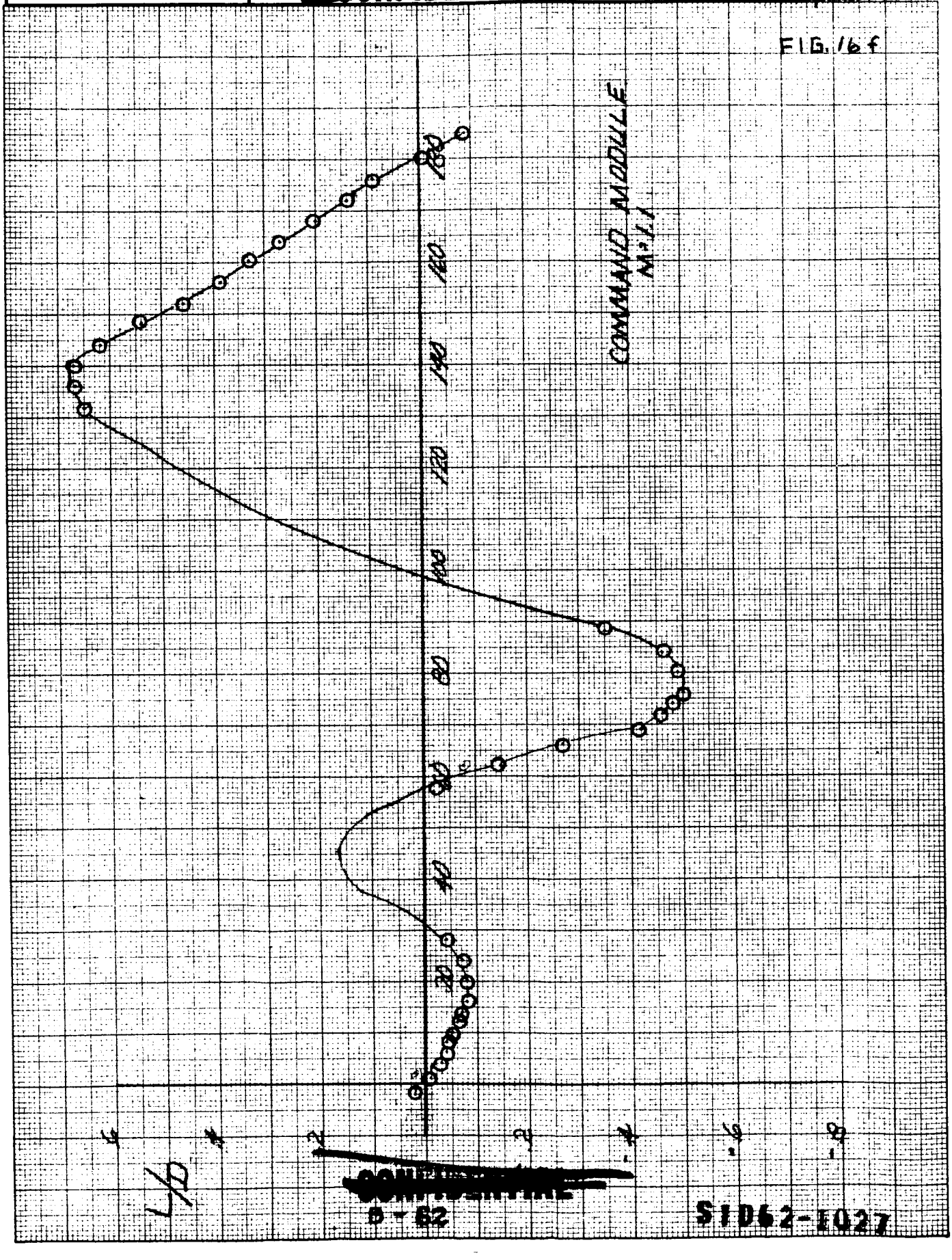
[redacted]

B-4

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. ... OF
CHECKED BY:		REPORT NO. Ames 2 X 2 Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

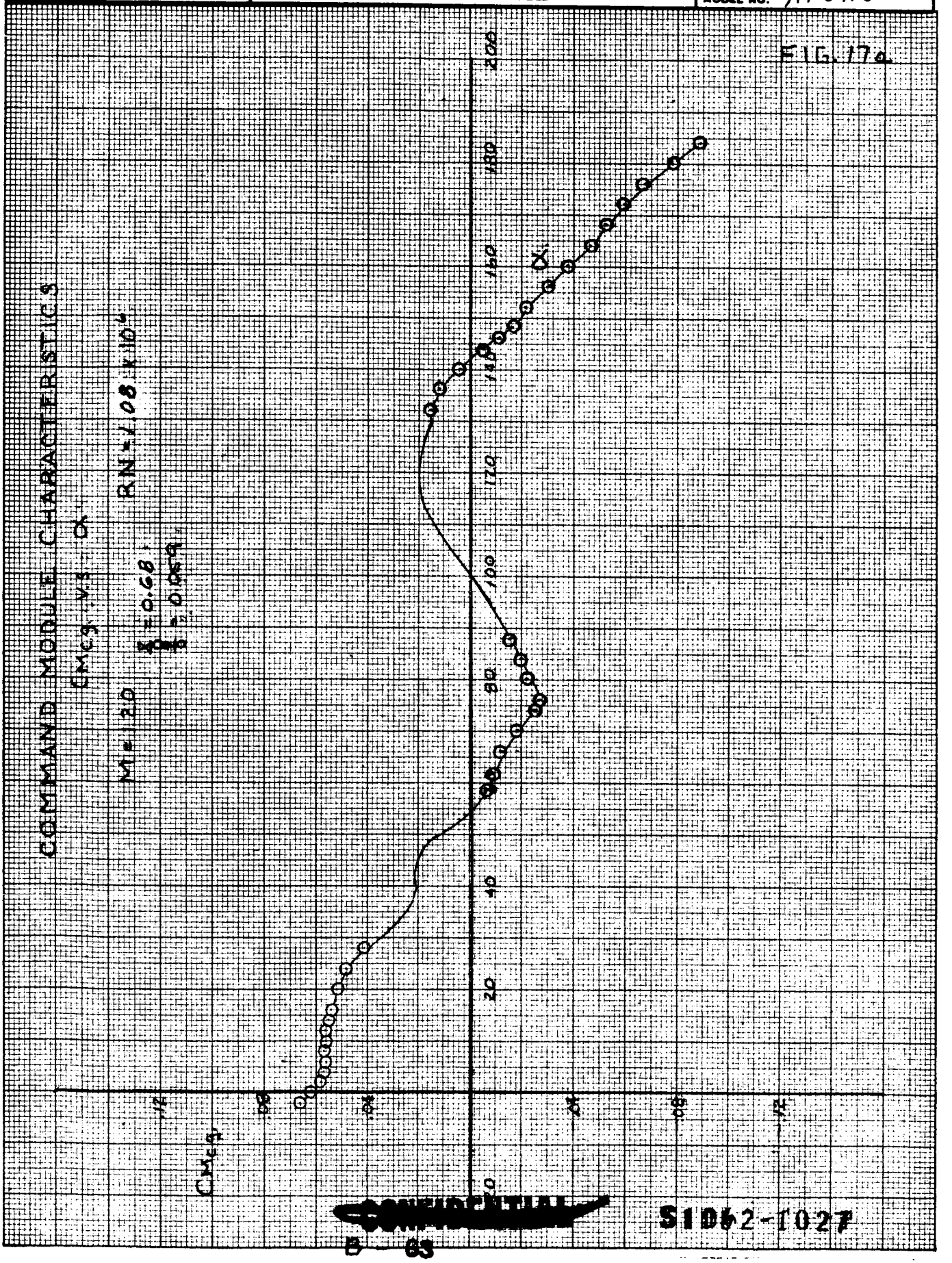
FIG. 16f



~~CONFIDENTIAL~~

SID62-1027

PREPARED BY: P	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	[redacted]	MODEL NO. APOLLO

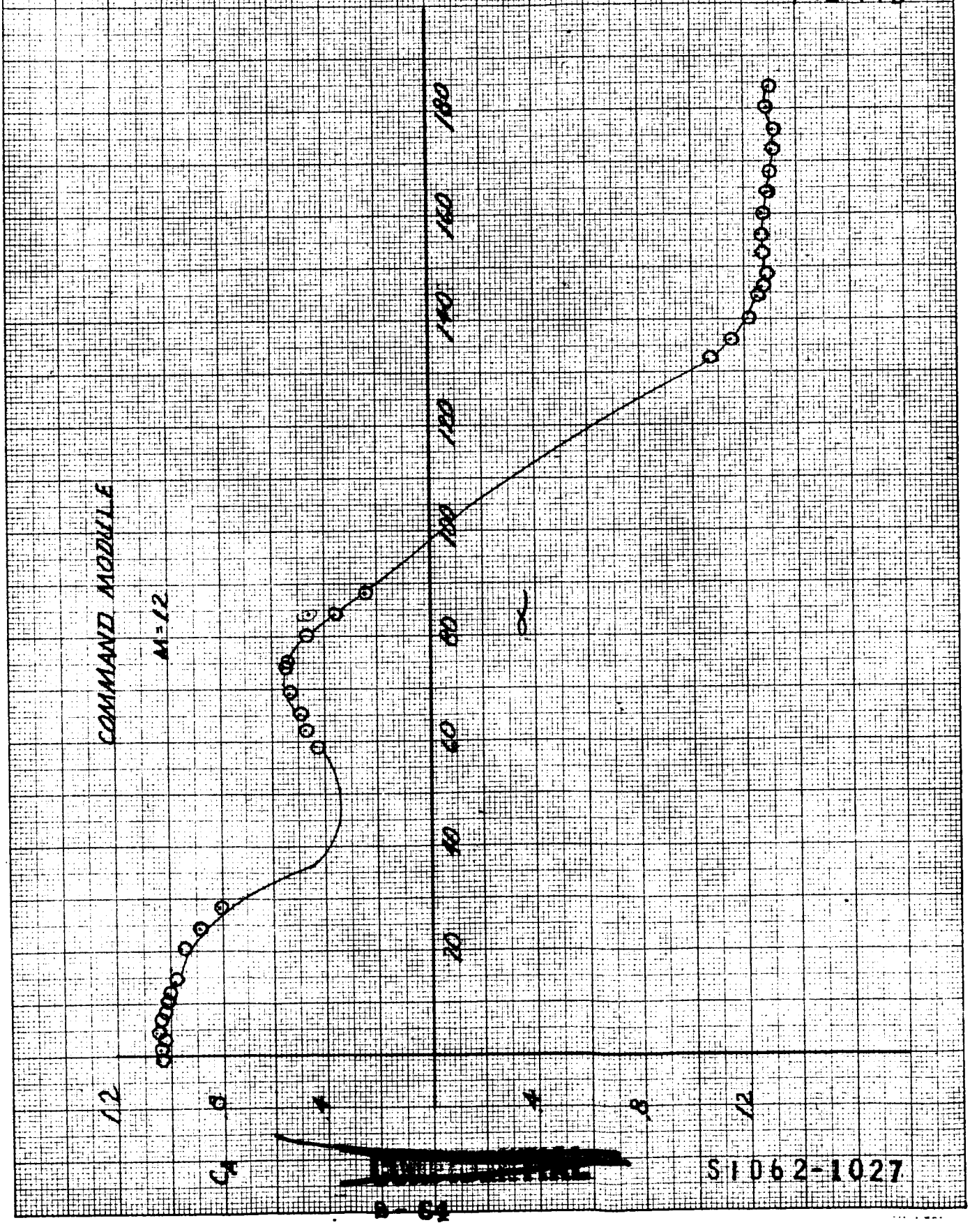


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2X2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 176

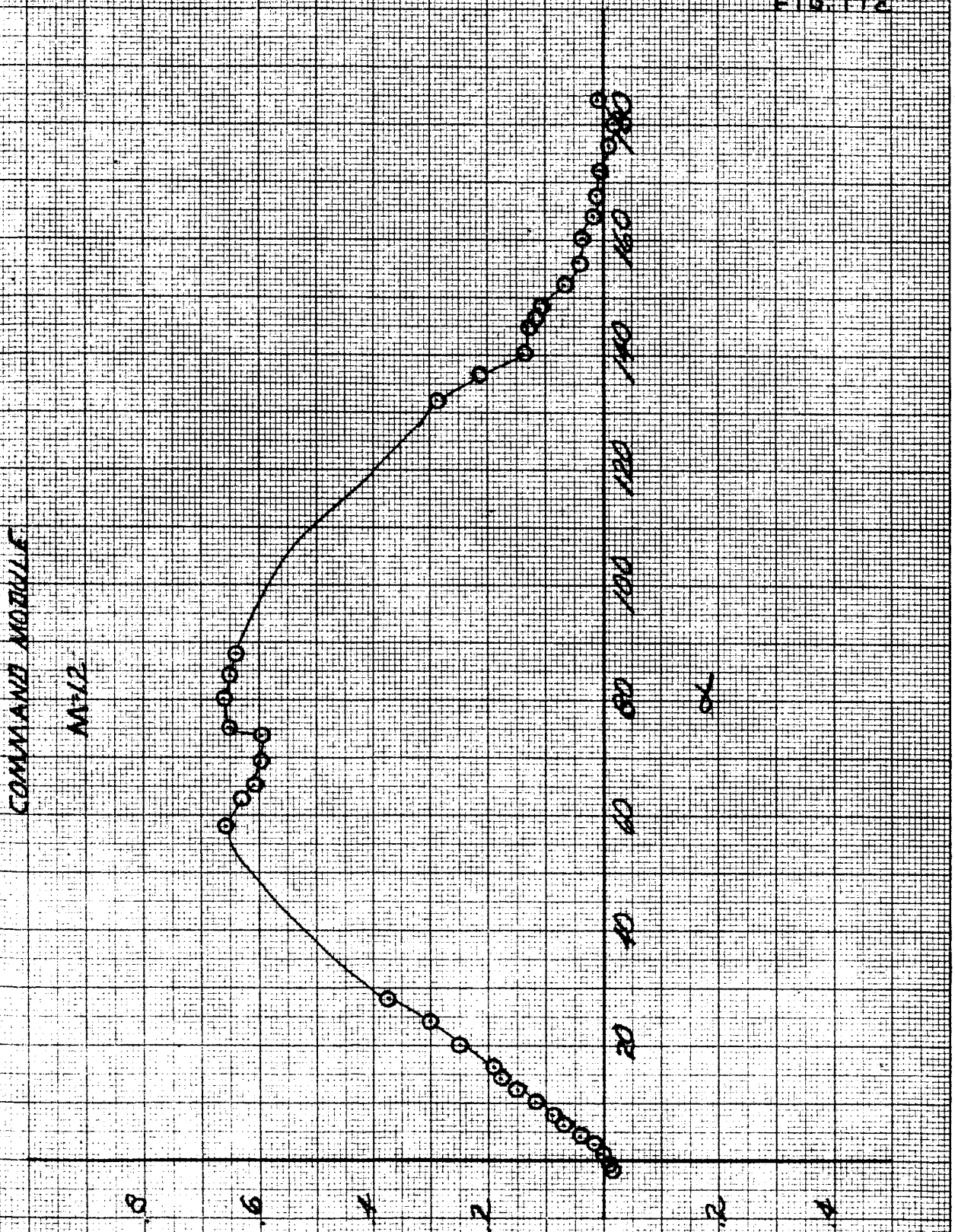


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2x2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 17c

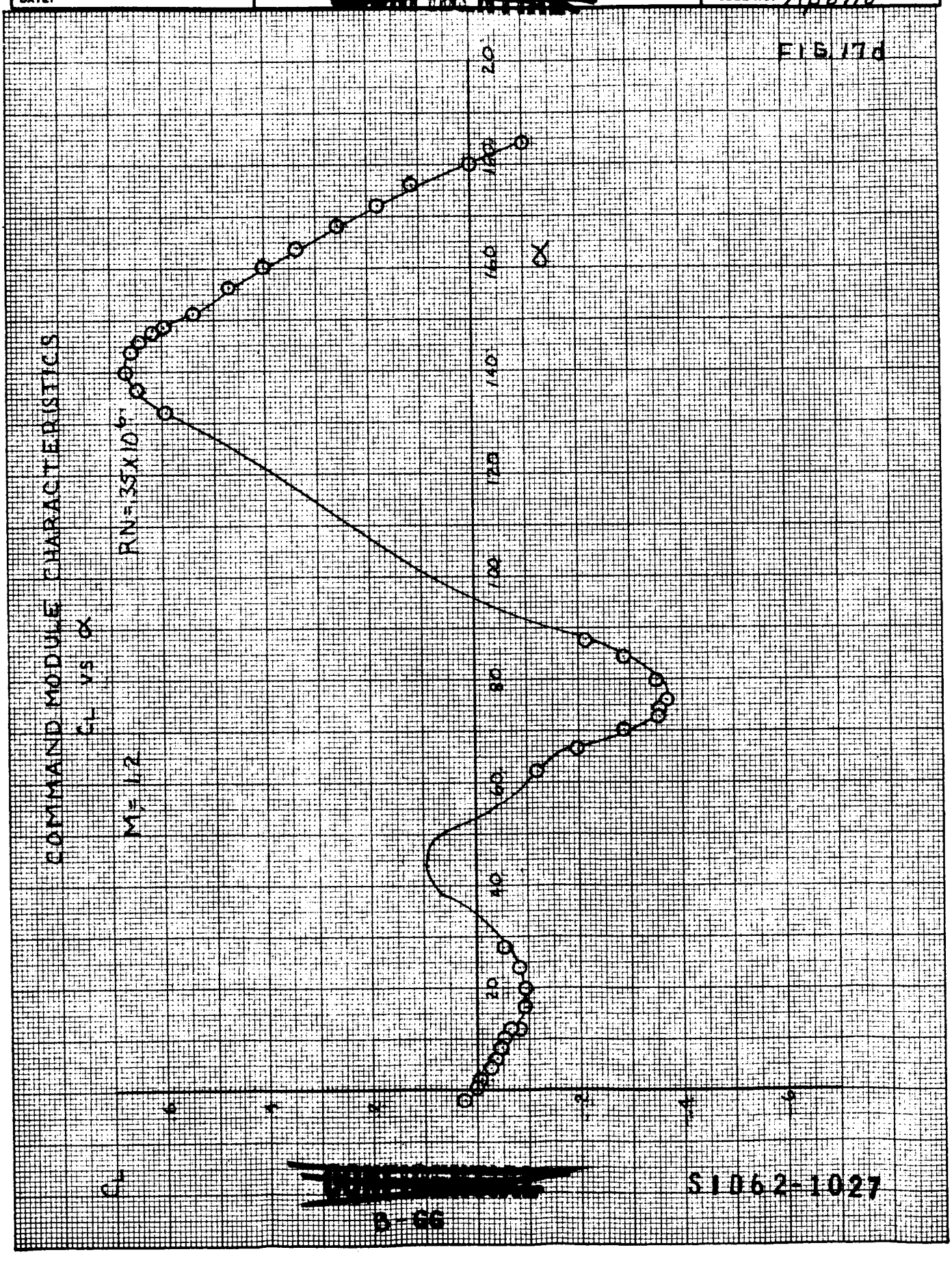


[redacted]

S1D62-1027

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2 x 2 Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG 17d

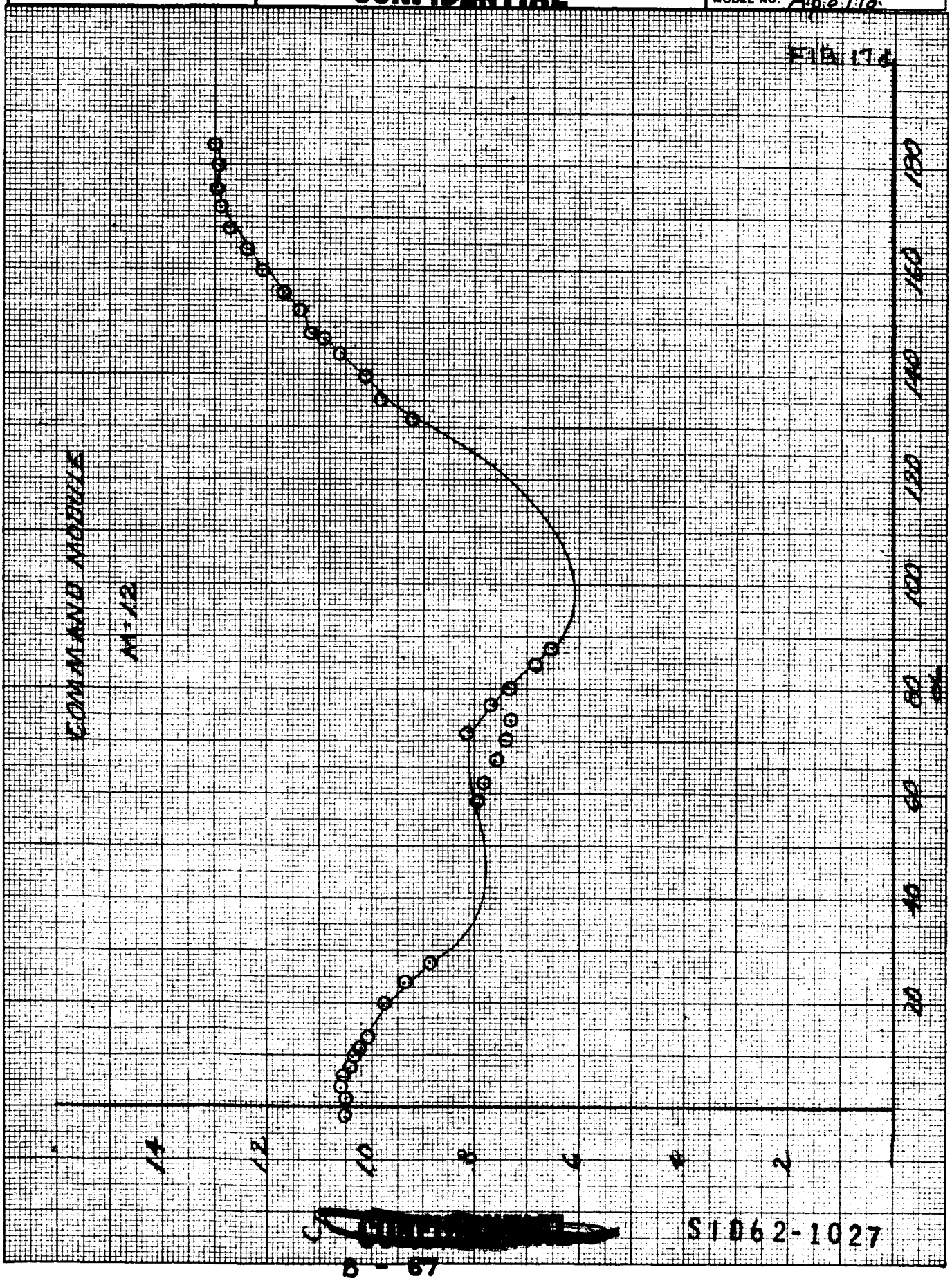


[redacted]

S1062-1027

PREPARED BY: CT	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames: 2 X 2 REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG 17d

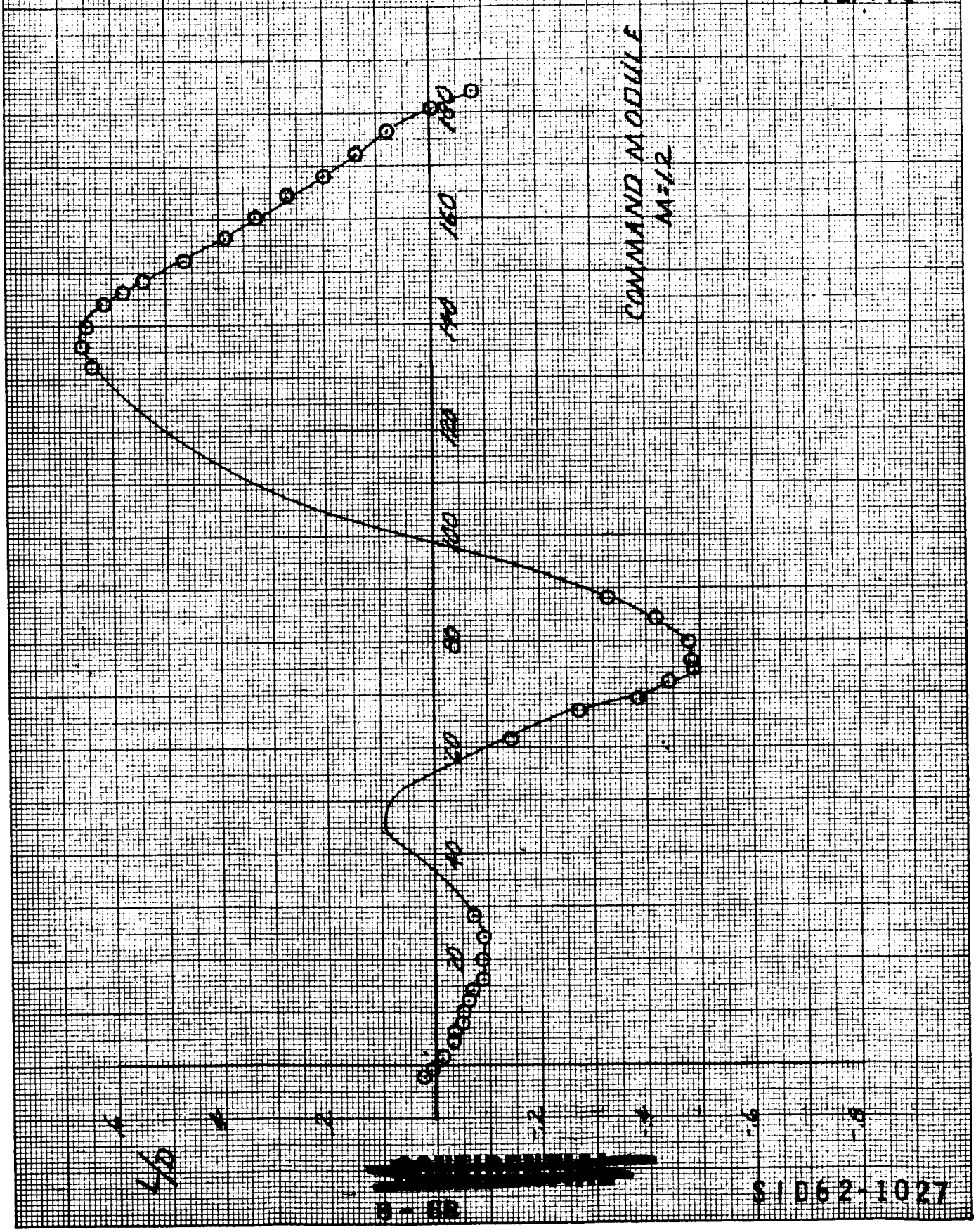


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2x2 REPORT NO. Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 17c

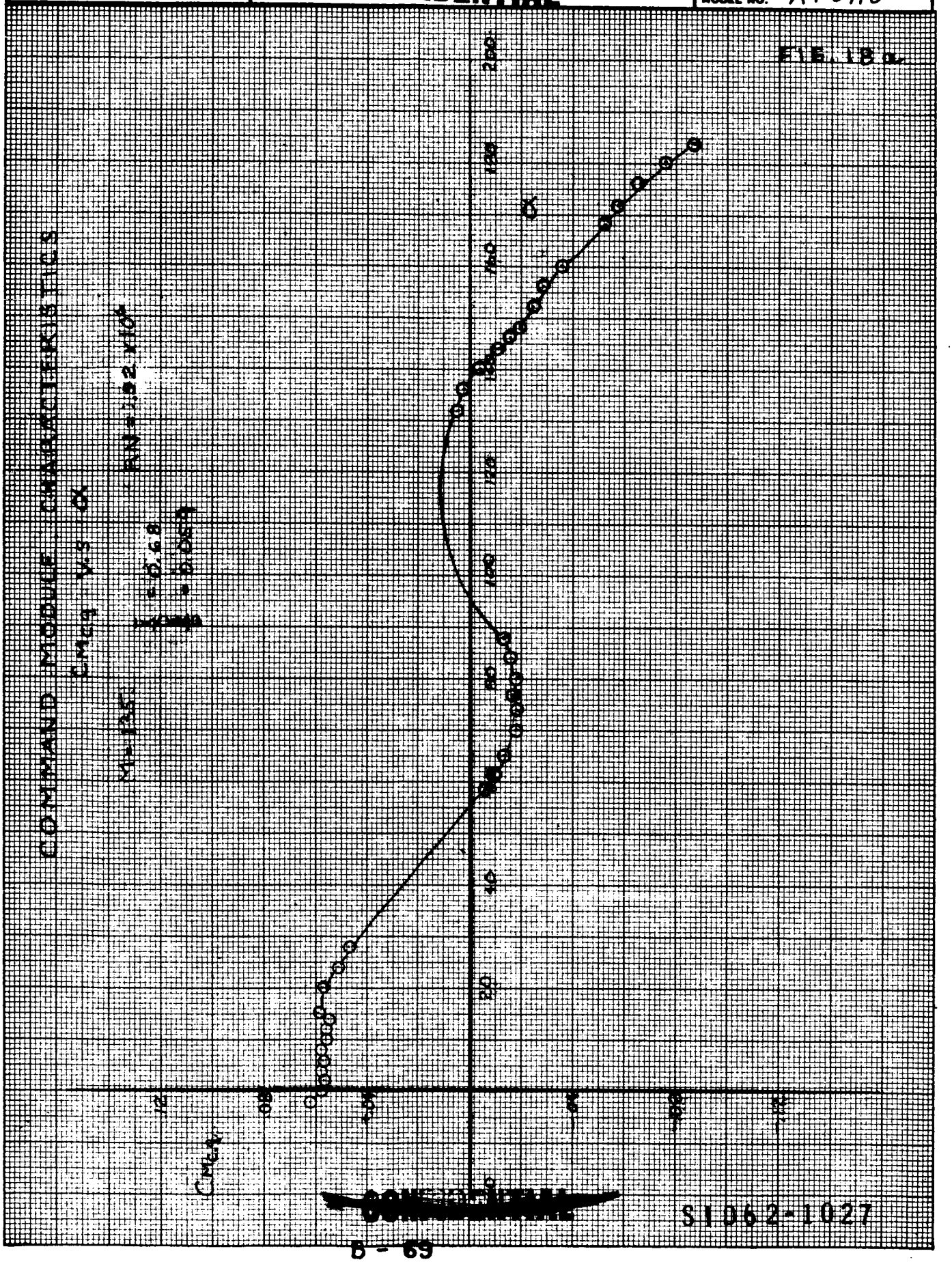


[redacted]

S1062-1027

PREPARED BY: D	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		AMES 2 X 2 REPORT NO. TEST 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. APOLLO

FIG. 18a

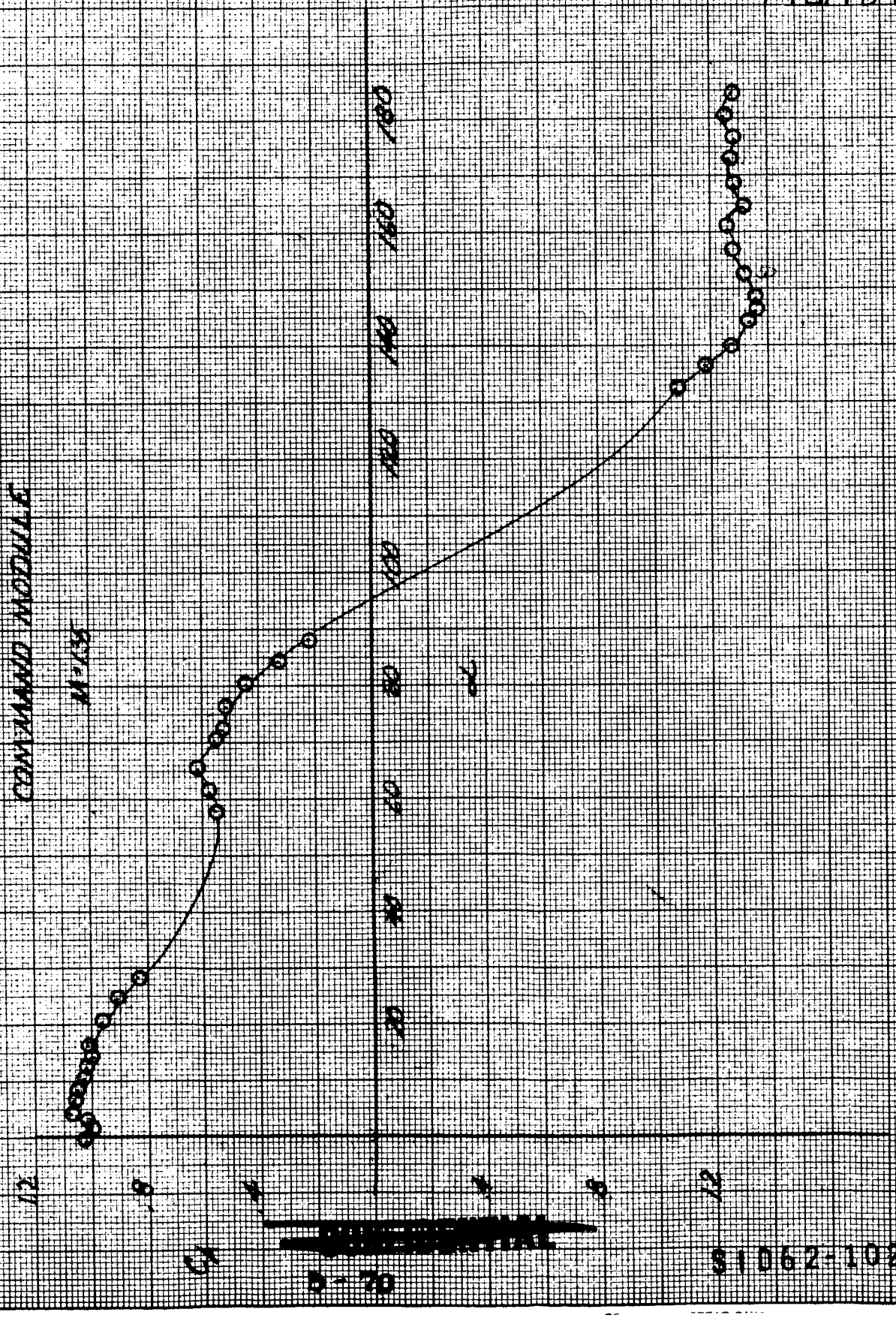


~~CONFIDENTIAL~~

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2 x 2 REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 18 b

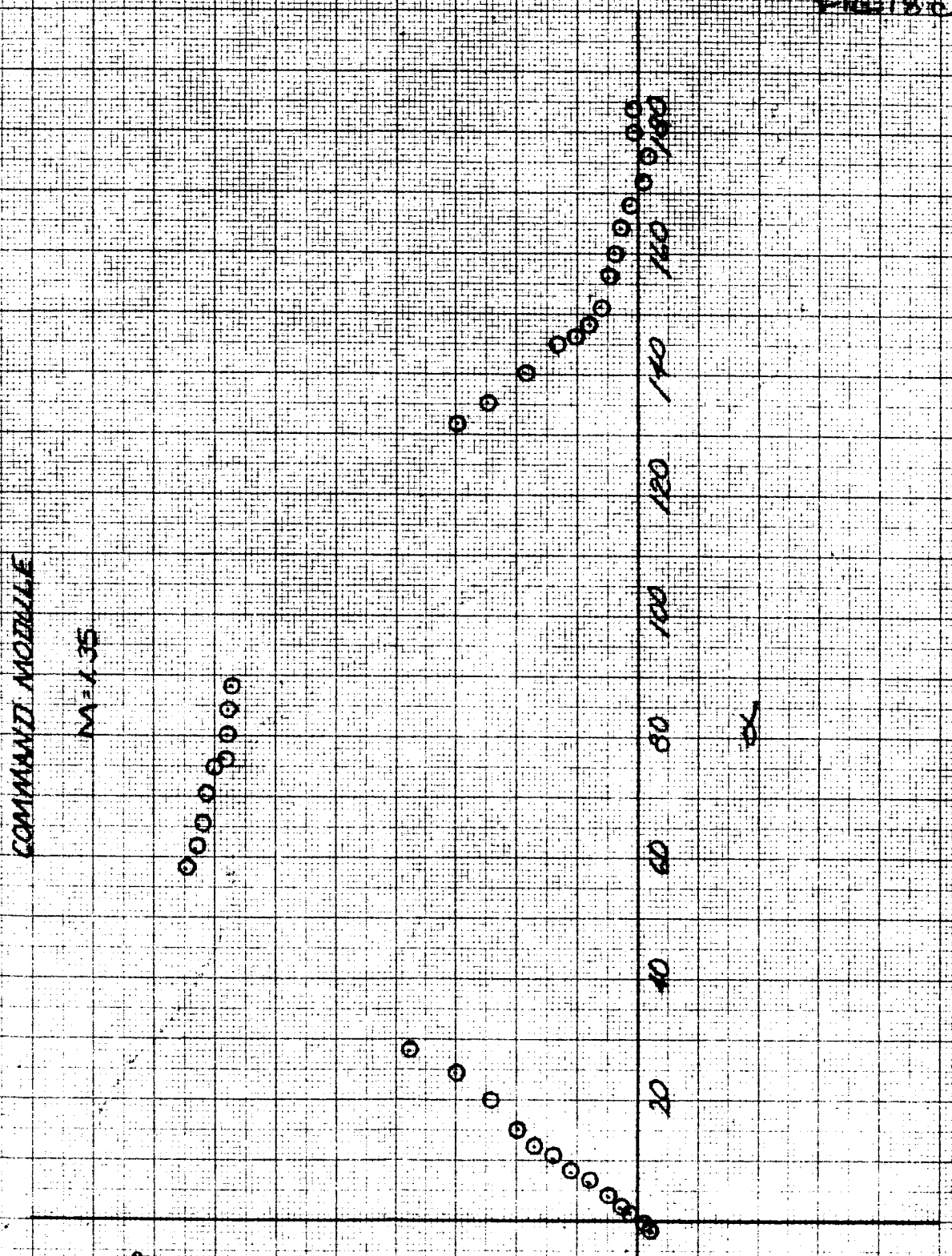


[redacted]

81062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		REPORT NO. Ames 2'x2' Test # 396
DATE:	[redacted]	MODEL NO. Apollo

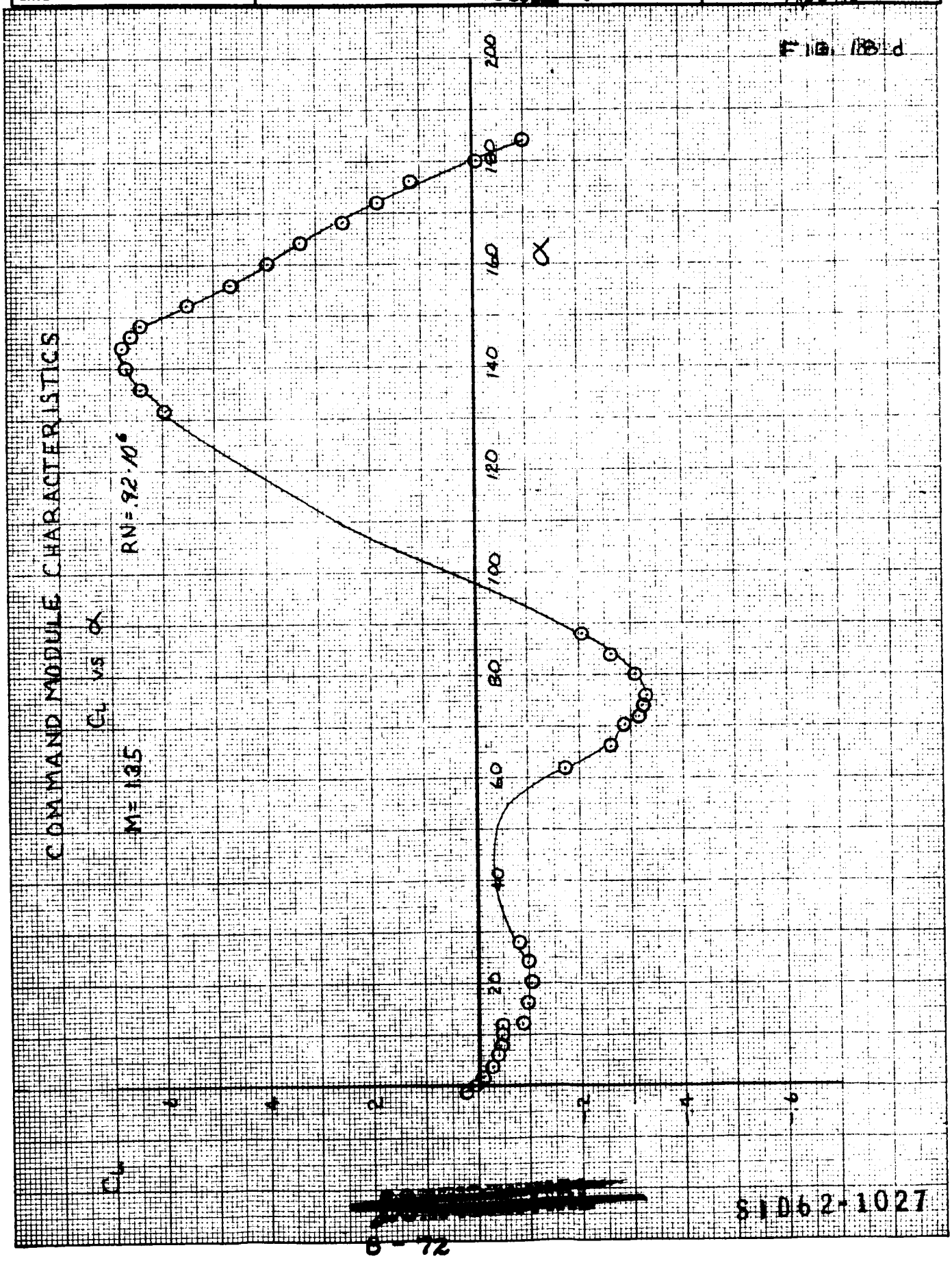
FIG. 18C



[redacted]

PREPARED BY:	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2 ft 2 REPORT NO. Test 396
DATE:	[redacted]	MODEL NO. Apollo

FIG. 18d

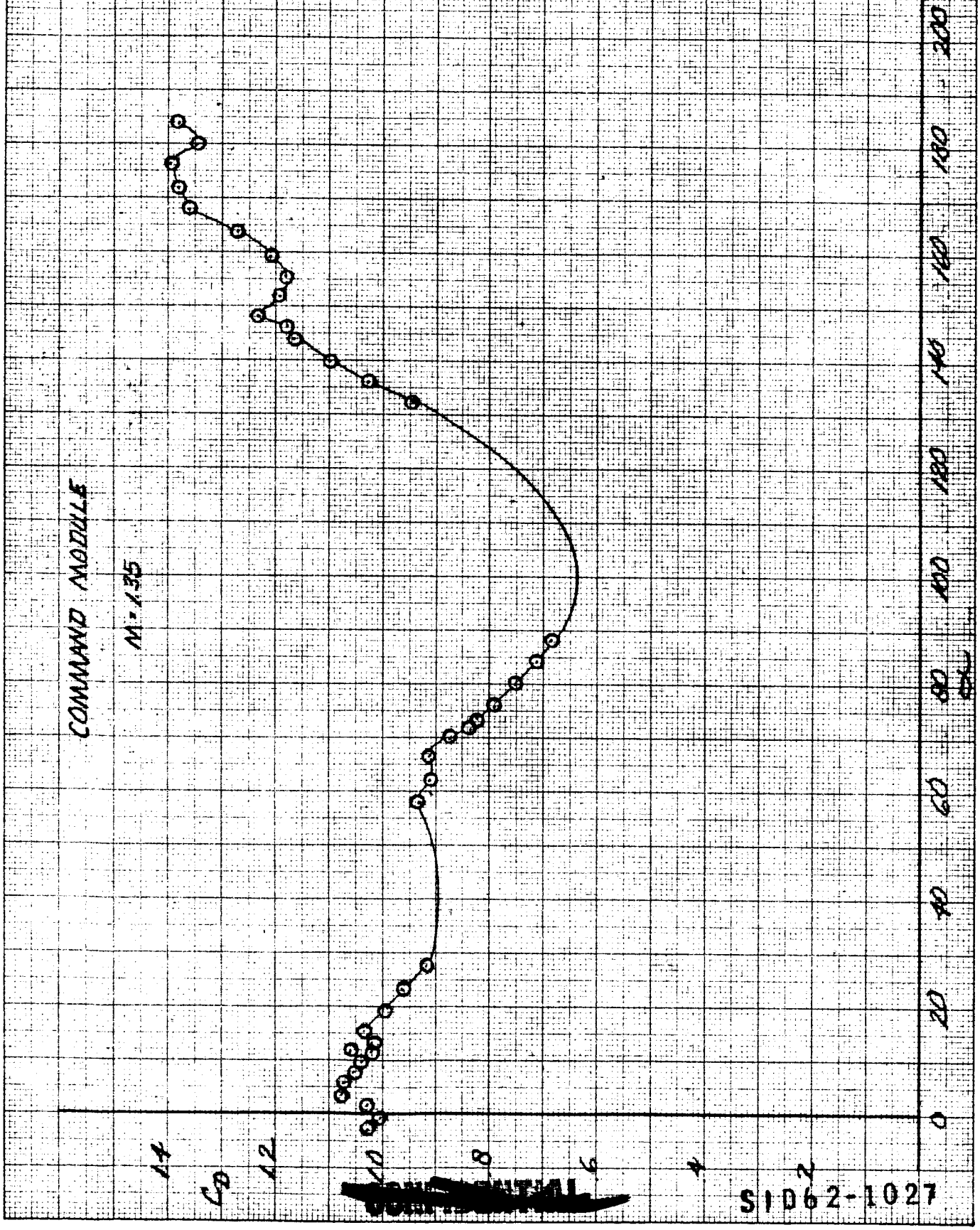


[redacted]

S1062-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2 x 2
DATE:	[redacted]	REPORT NO. Test 396
		MODEL NO. Apollo

FIG. 18e

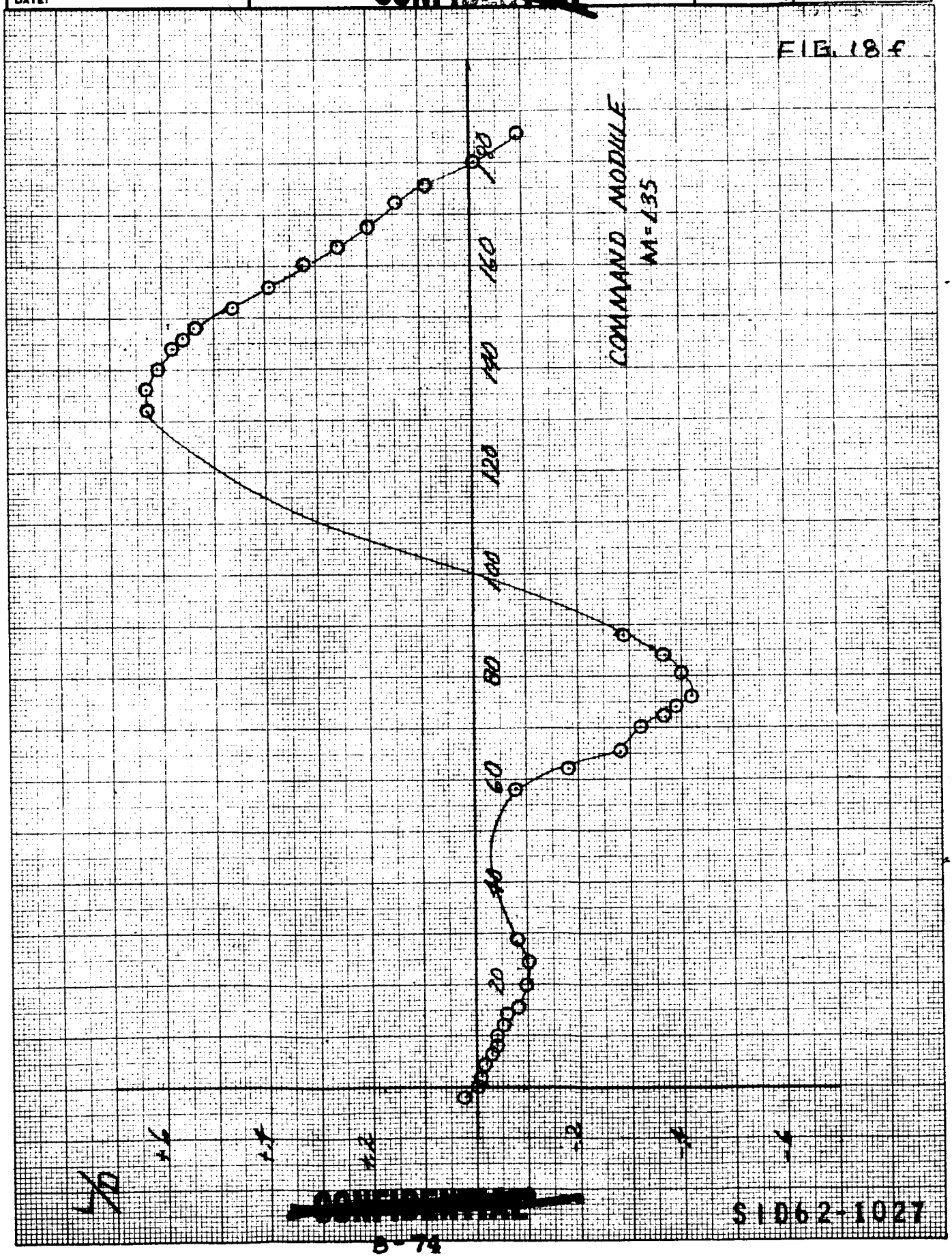


[redacted]

SID62-1027

PREPARED BY: CJ	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION	PAGE NO. OF
CHECKED BY:		Ames 2 x 2 REPORT NO. Test 396
DATE:	~~CONFIDENTIAL~~	MODEL NO. Apollo

FIG. 18 f



~~CONFIDENTIAL~~

S1062-1027