

Qcx  
AVRO  
CF105  
MISC-  
43

Prologue  
Tom Dugelby  
Productions

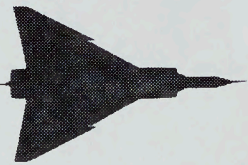
AVRO ARROW

GENERAL INFORMATION

NRC - CISTI  
J. H. PARKIN  
BRANCH

JUN 29 1995

ANNEXE  
J. H. PARKIN  
CNRC - ICIST



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TO THE PARTIAL LIBRARY  
WITH MY BEST WISHES.

Tommy Dugdale  
1995

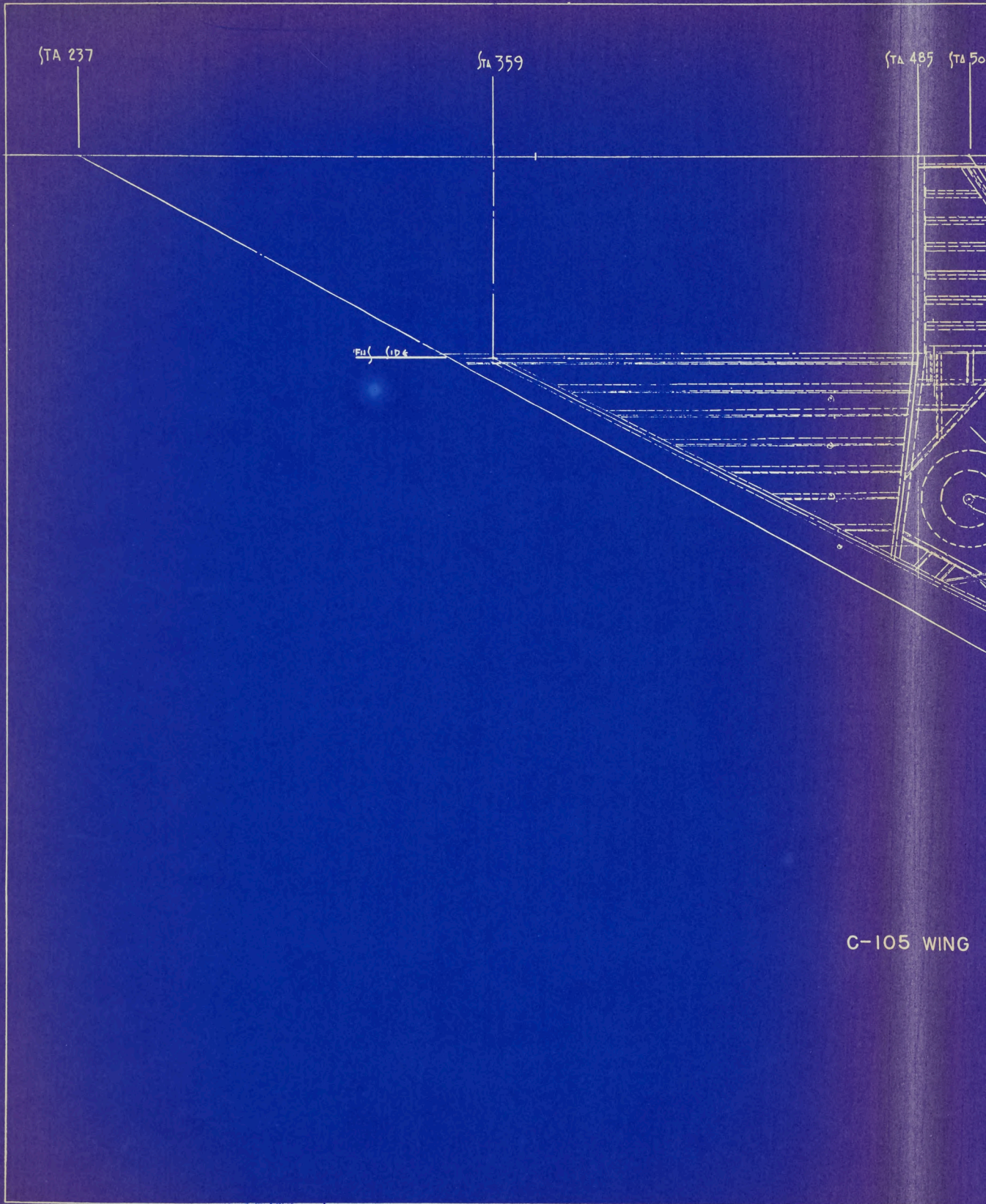
STA 237

STA 359

STA 485 STA 500

Fig. 1D4

C-105 WING



STA 485 STA 500

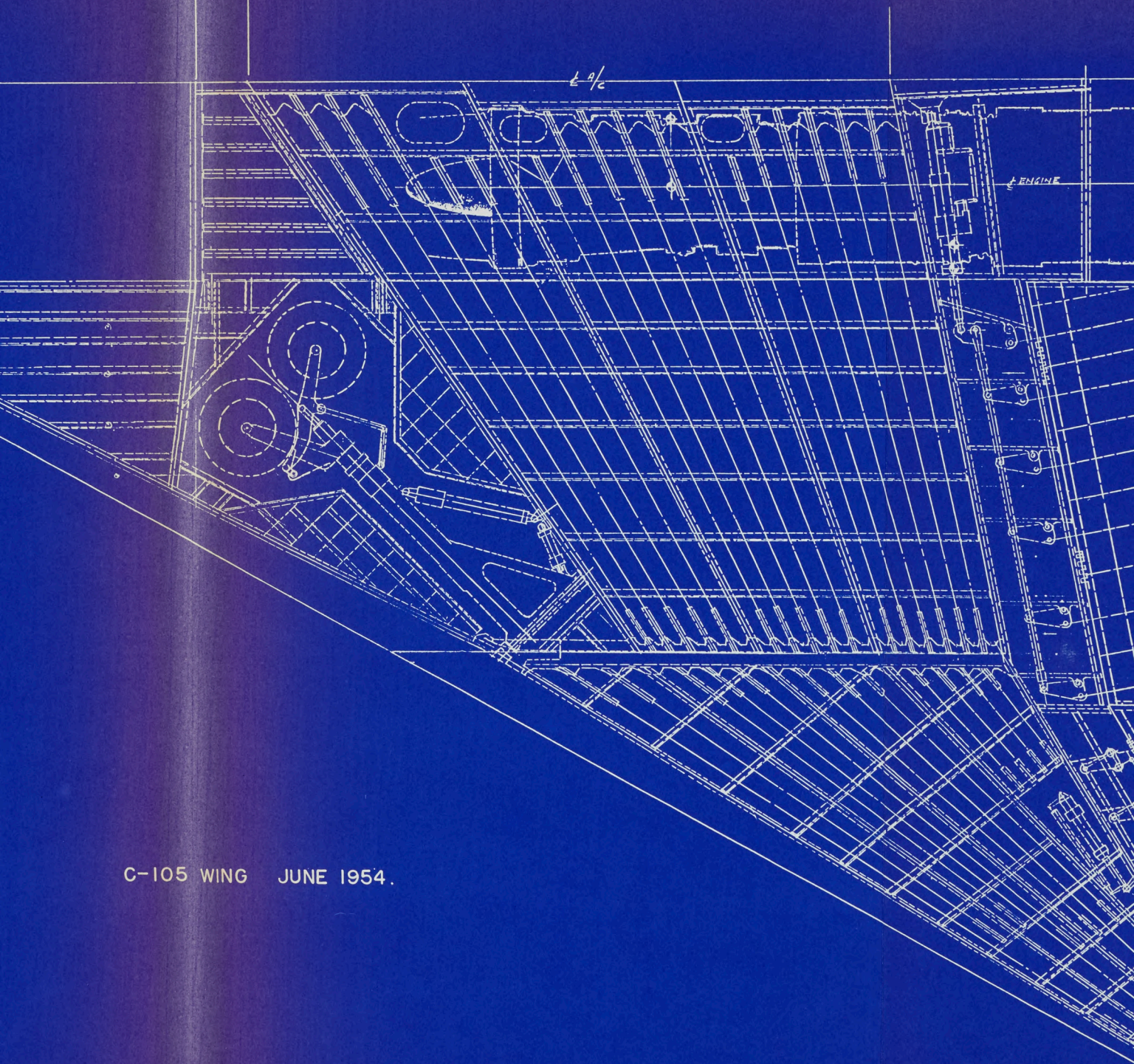
STA 686.217

1/2

ENGINE

ENGINE

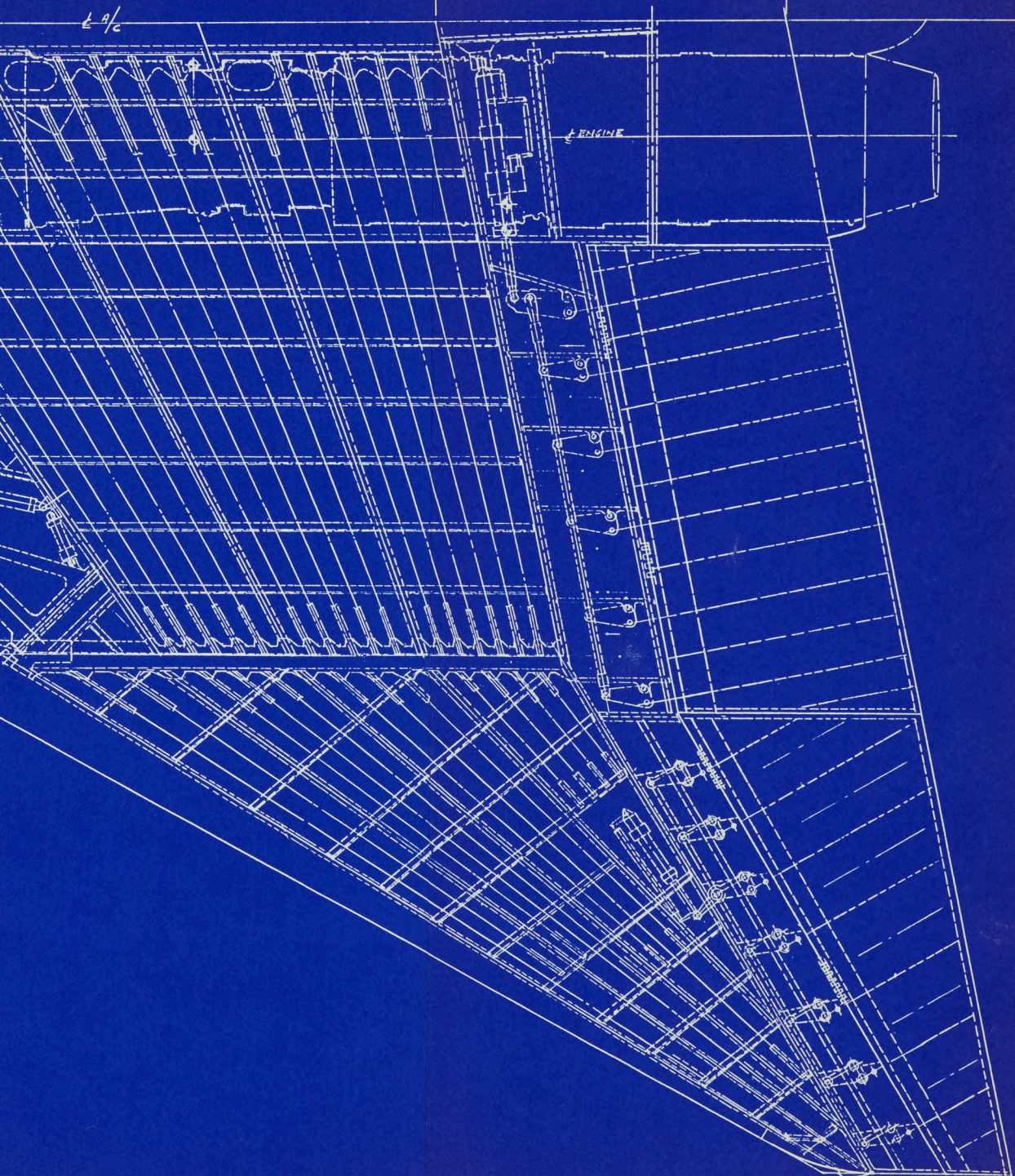
C-105 WING JUNE 1954.



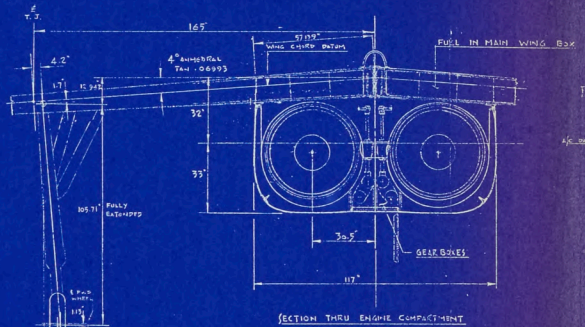
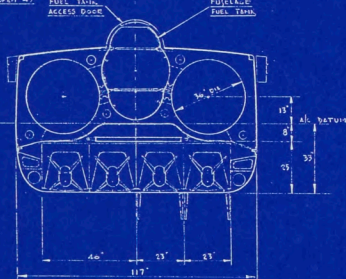
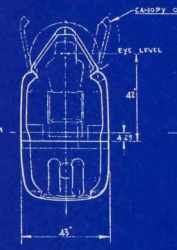
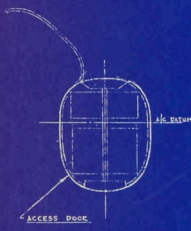
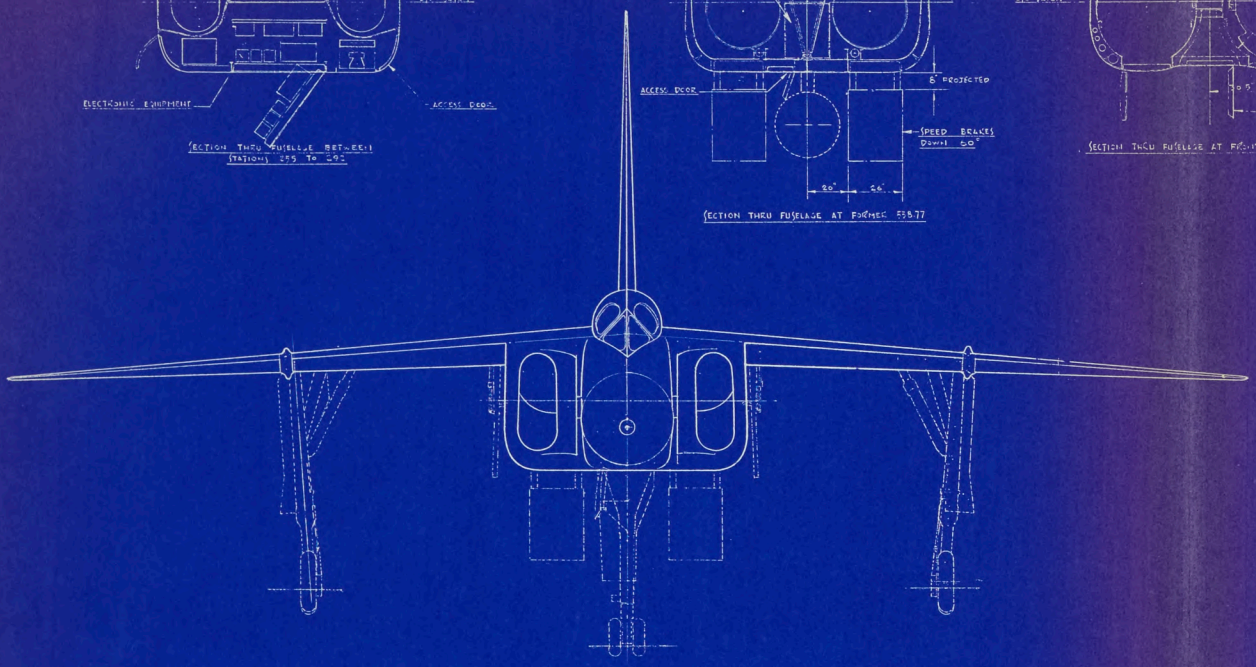
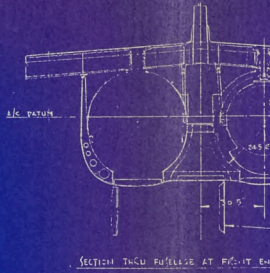
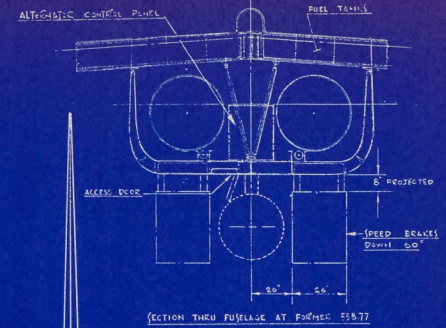
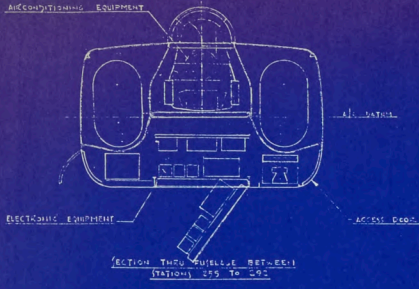
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СТА 777

1/2



L. BONJES

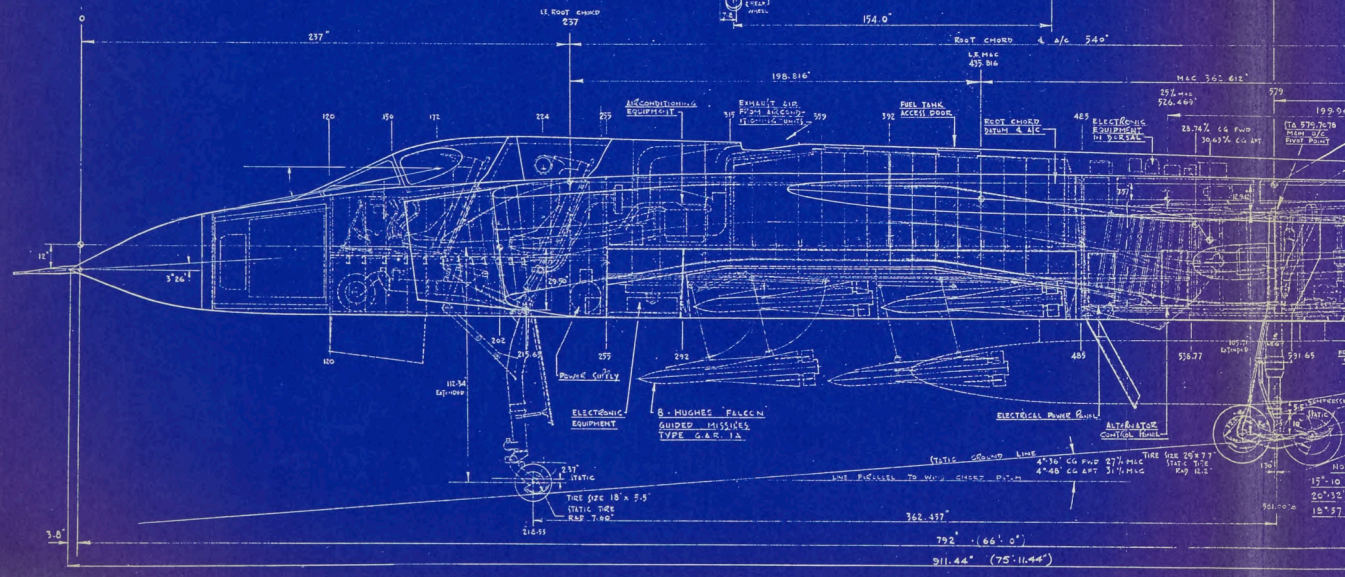


SECTION THRU RADAR GRATE STA 100

SECTION THRU COCKPIT

SECTION THRU SEAT AREA

SECTION THRU ENGINE COMPARTMENT



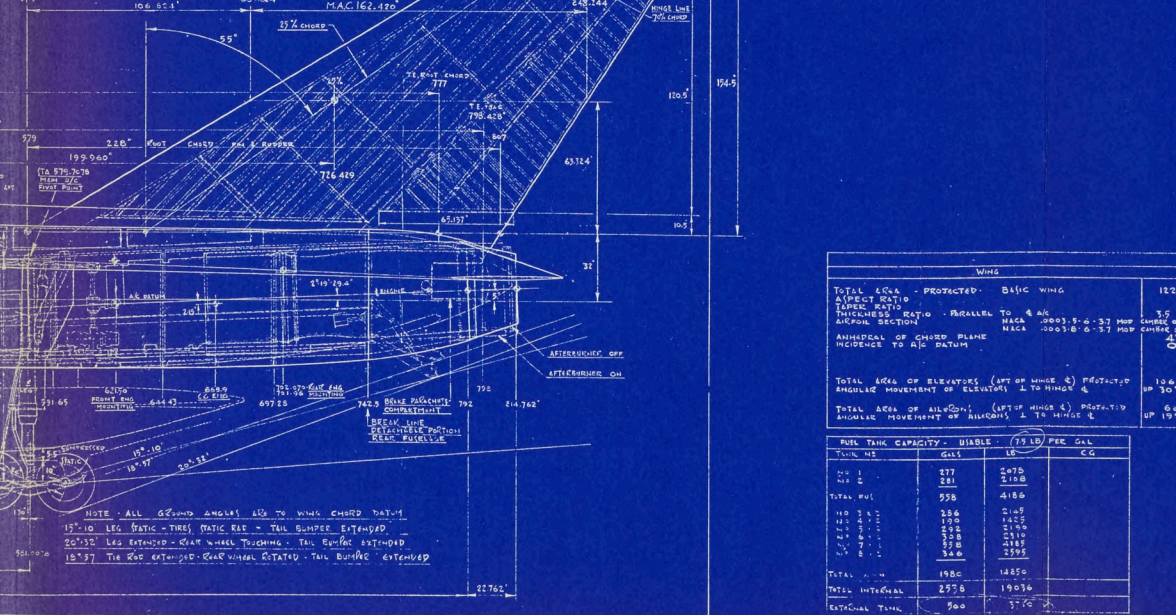
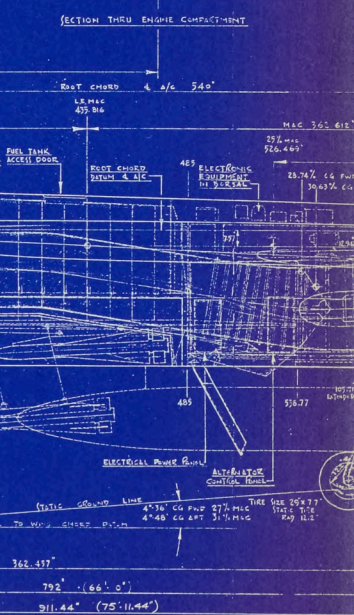
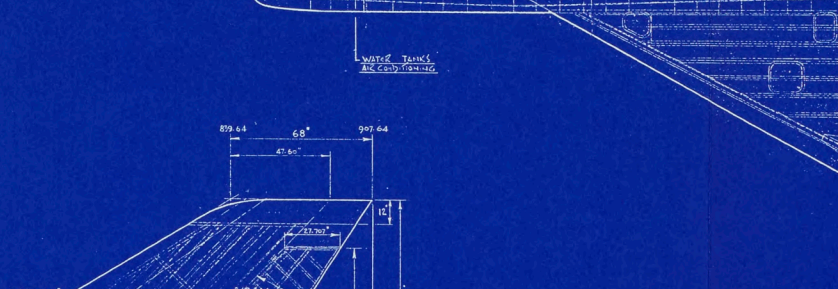
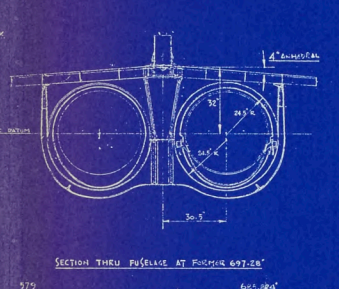
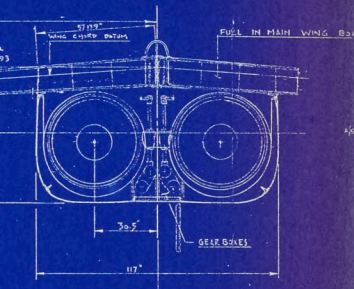
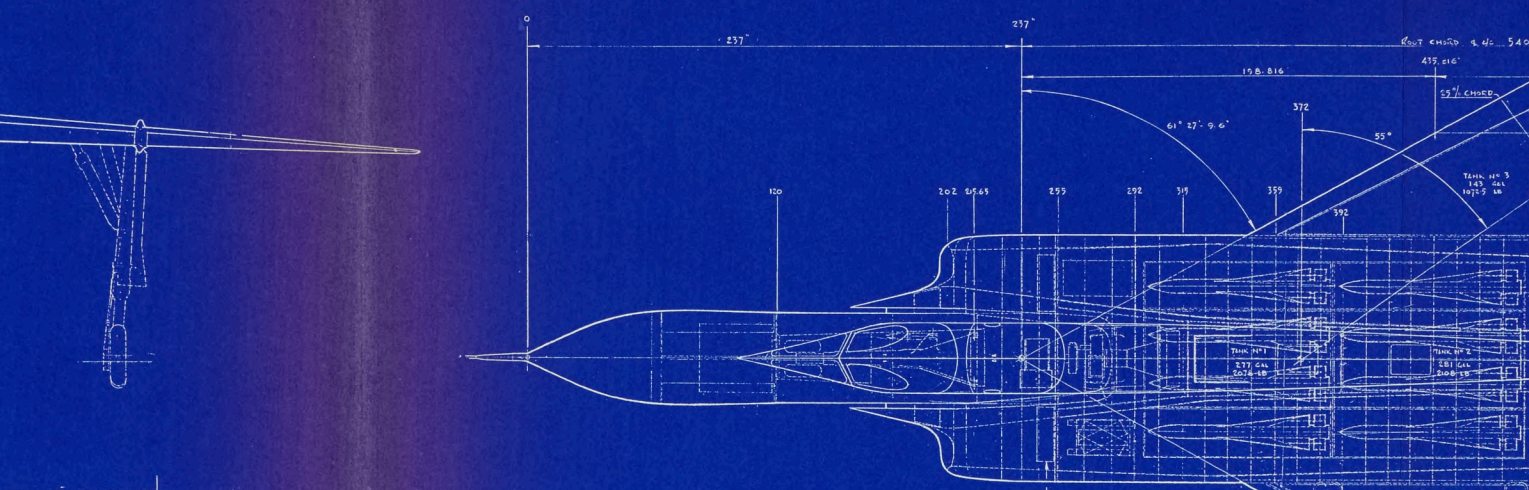
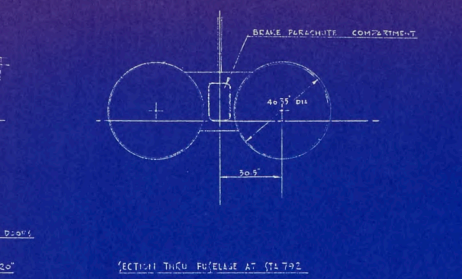
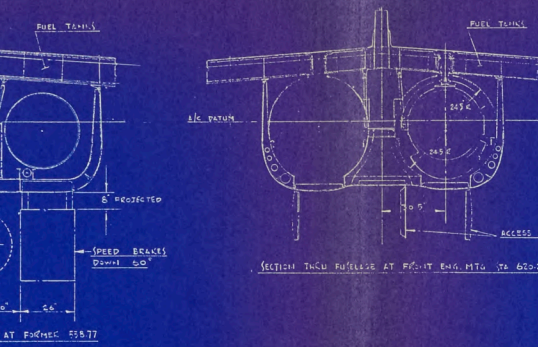
M.C. 365.815\"/>

199.94\"/>

7.6\"/>

19\"/>

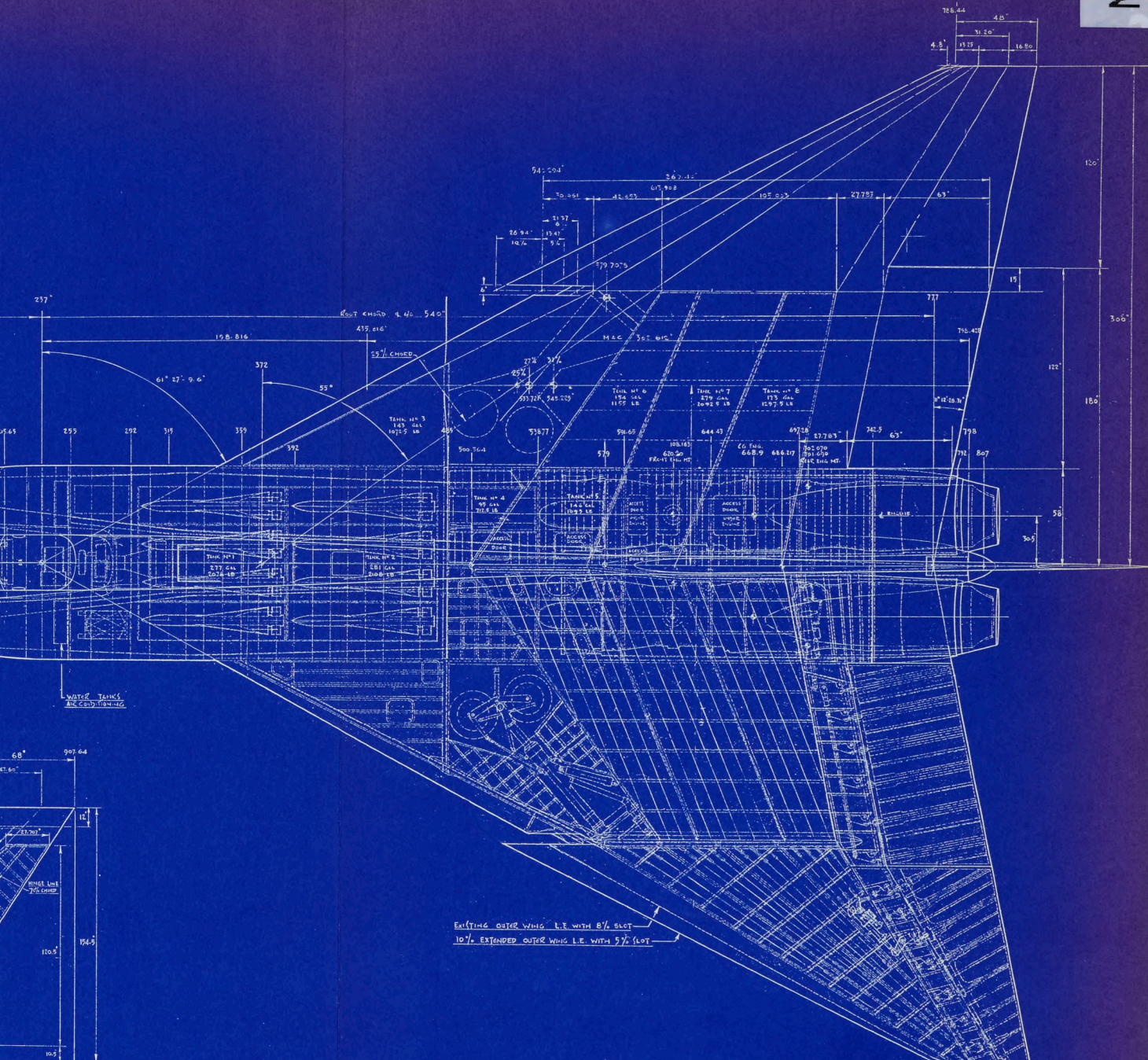
18\"/>



WING		
TOTAL AREA - PROTECTED	BASIC WING	1225
ASPECT RATIO		2
TAPER RATIO	RECALLER TO 4 AG	3.5
THICKNESS RATIO	MACA -0003.5-0-37 PROP	3.5
AIRCRAFT SECTION	MACA -0003.0-0-37 PROP	3.5
ANGLE OF CHORD PLANE	INCIDENCE TO A/C DATUM	10.6°
TOTAL AREA OF ELEVATORS (APT OF WING)	PROTECTED	106.0
ANGULAR MOVEMENT OF ELEVATOR	± TO HINGE	UP 30°
TOTAL AREA OF AILERONS (APT OF WING)	PROTECTED	60.0
ANGULAR MOVEMENT OF AILERON	± TO HINGE	UP 10°

FUEL TANK CAPACITY	USABLE	(75 LB PER GAL)
TANK NO	GAL	CG
NO 1	277	2108
NO 2	281	2108
TOTAL FUEL	558	4186
NO 1	236	2108
NO 2	190	2108
NO 3	222	2108
NO 4	308	2110
NO 5	378	2182
NO 6	346	2595
TOTAL FUEL	1986	14859
TOTAL INTERNAL	2558	19036
EXTERNAL TANK	500	3750

NOTE: ALL GEOMETRY ANGLES ARE TO WING CHORD DATUM  
 15°-10' LEG STATIC - TIRE MATIC RAE - TAIL BUMPER EXTENDED  
 20°-32' LEG EXTENDED - GEAR WHEEL TOUCHING - TAIL BUMPER EXTENDED  
 15°-53' TIE ROD EXTENDED - GEAR WHEEL RETIRED - TAIL BUMPER EXTENDED



AERODYNAMIC DATA			
WING		FIN & RUDDER	
TOTAL AREA - PROTECTED BASIC WING	1228.0'	TOTAL AREA (ROOT CHORD ON WING ROOT CHORD)	158.75'
ASPECT RATIO	2.0465	TOTAL AREA RUDDER (APT OF HINGE 4)	78.547'
TAPER RATIO	1.5378	APECT RATIO	1.044
THICKNESS RATIO - PARALLEL TO 4 AC	0.0015-0.37 MOD	TAPER RATIO	.254
AIRCRAFT SECTION	NACA 0003.6-6-37 MOD	THICKNESS RATIO (PARALLEL TO 4 C DATUM)	4.7%
ANGLE OF CHORD PLANE	2°	AIRCRAFT THICKNESS	NACA 0004.6-3.7 MOD
INCIDENCE TO 4 C DATUM	0°	ANGLE OF MOVEMENT OF RUDDER 1 TO HINGE 4	+ 30°
TOTAL AREA OF ELEVATORS (APT OF HINGE 6)	106.75'		
ANGLE OF MOVEMENT OF ELEVATORS 1 TO HINGE 6	30° DOWN CO		
TOTAL AREA OF ALLISON (LEFT HINGE 6) PROTECTIVE	0.005'		
ANGLE OF MOVEMENT OF ALLISON 1 TO HINGE 6	19° DOWN		

FUEL TANK CAPACITY - USABLE - (75 LB PER GALL)			
TANK NO.	GALLS	LB	CG
NO 1	277	2078	
NO 2	281	2108	
TOTAL FUEL	558	4186	
NO 3	256	2145	
NO 4	190	1425	
NO 5	332	2490	
NO 6	378	2835	
NO 7	328	2460	
NO 8	340	2550	
TOTAL FUEL	1980	14850	
TOTAL INTERNAL	2578	19036	
EXTERNAL TANK	900	6750	

INITIAL PROJECT DRAWING

— A.V. ROE CANADA LTD — PRELIMINARY

MALTON ONTARIO

K. E. ... NOV 15, 24

AERODYNAMIC THREE VIEW - CHORD 1/2" x 12"

2. SW 7-ET ENGINES

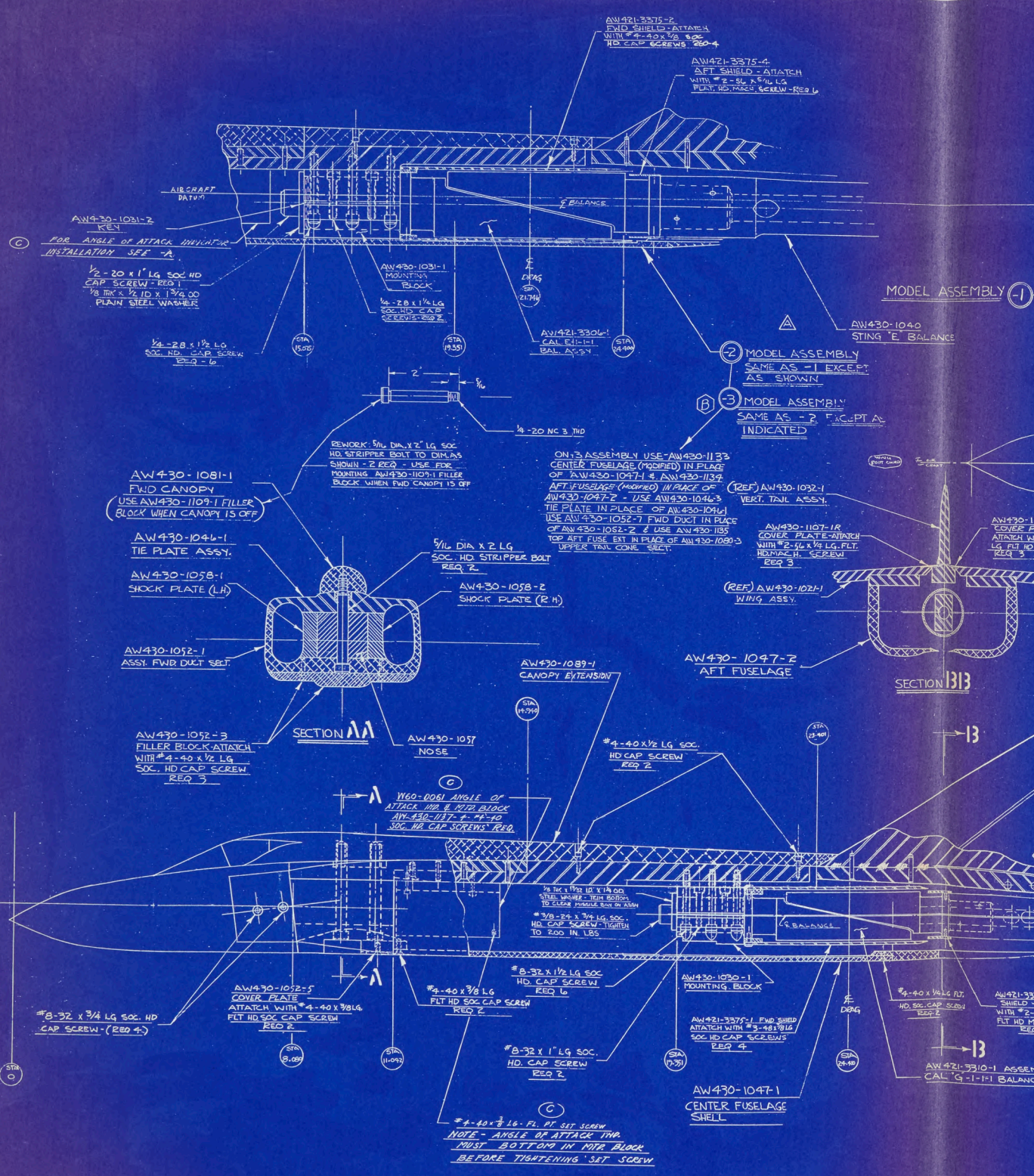
AVRO C-105

SCALE

CLOSURE

7-0100-6





(C) FOR ANGLE OF ATTACK INSTALLATION SEE 'A'

1/2 - 20 x 1" LG SOC HD CAP SCREW - REQ 1  
 1/8 THK x 1/2 ID x 1 3/4 OD PLAIN STEEL WASHER

AW430-1081-1  
 FWD CANOPY  
 USE AW430-1109-1 FILLER BLOCK WHEN CANOPY IS OFF

AW430-1046-1  
 TIE PLATE ASSY

AW430-1058-1  
 SHOCK PLATE (LH)

AW430-1052-1  
 ASSY. FWD DUCT SECT.

AW430-1052-3  
 FILLER BLOCK-ATTACH WITH #4-40 x 1/2 LG SOC. HD CAP SCREW REQ 3

REWORK 5/16 DIA. X 2" LG SOC HD STRIPPER BOLT TO DIM AS SHOWN - 2 REQ - USE FOR MOUNTING AW430-1109-1 FILLER BLOCK WHEN FWD CANOPY IS OFF

WEO-0081 ANGLE OF ATTACK MTR & MTR BLOCK AW-430-1137 & #4-40 SOC. HD CAP SCREWS REQ.

#4-40 x 3/8 16-FL SET SCREW  
 NOTE - ANGLE OF ATTACK THIS MUST BE BOTTOM IN MTR BLOCK BEFORE TIGHTENING SET SCREW

AW421-3375-2  
 FWD SHIELD-ATTACH WITH #4-40 X 1/2 LG SOC HD CAP SCREW - REQ 4

AW421-3375-4  
 AFT SHIELD-ATTACH WITH #2-SL X 5/16 LG FLT HD MAC SCREW - REQ 6

(2) MODEL ASSEMBLY SAME AS -1 EXCEPT AS SHOWN

(3) MODEL ASSEMBLY SAME AS -2 EXCEPT AS INDICATED

AW430-1107-1R  
 COVER PLATE-ATTACH WITH #2-40 X 1/4 LG. FLT. HD MAC SCREW REQ 3

(REF) AW430-1021-1  
 WING ASSY.

AW430-1047-2  
 AFT FUSELAGE

AW430-1089-1  
 CANOPY EXTENSION

#4-40 X 1/2 LG SOC. HD CAP SCREW REQ 2

AW430-1090-1  
 MOUNTING BLOCK

AW421-3375-1  
 FWD SHIELD ATTACH WITH #3-48 X 3/16 SOC HD CAP SCREW REQ 4

AW430-1047-1  
 CENTER FUSELAGE SHELL

MODEL ASSEMBLY -1

SECTION 1313

AW430-1107-1R  
 COVER PLATE-ATTACH WITH LG FLT HD MAC REQ 3

AW421-3375-1  
 SHIELD-ATTACH WITH #2-40 X 1/4 LG. FLT. HD MAC REQ 1

AW421-3310-1  
 ASSEMBLY CAL'G -1-1 FI BALANCE

471-2375-4  
T SHIELD - ATTACH  
#2-5/16 X 5/16 LG  
FIT HD MACH SCREW - REQ 1



AW430-1099-1R BASIC L.E.  
AW430-1099-2R EXTENDED L.E. (USED WHEN -1R BASIC L.E. IS OFF)

AW430-1101-1R - 5% NOTCH L.E. (RIGHT HAND)  
AW430-1101-4R - 8% NOTCH L.E. (RIGHT HAND) USED WHEN 5% NOTCH L.E. IS OFF

AW430-1101-2R T (TOP) & AW430-318 T (BOTTOM)

MODEL ASSEMBLY (1)

- (1) MODEL ASSEMBLY SAME AS -1 EXCEPT AS SHOWN
- (2) MODEL ASSEMBLY SAME AS -1 EXCEPT AS SHOWN
- (3) MODEL ASSEMBLY SAME AS -2 EXCEPT AS INDICATED

AW430-1040 STING 'E' BALANCE  
AW430-1092-1 VERT. TAIL ASSY.  
AW430-1107-1R COVER PLATE ATTACH WITH #2-5/16 X 5/16 LG. FLT. HD MACH. SCREW REQ 3  
AW430-1021-1 WING ASSEMBLY

#8-32 X 1/2 LG. FLT. HD SOC. CAP SCREWS (REQ 4)

#4-40 X 5/8 LG. SOC. HD. CAP SCREWS REQ 10 (5 FOR EACH SIDE)

AW430-1047-2 FT FUSELAGE

SECTION 1313

AW430-1092-2 FILLER BLOCK ASSY. (USED WHEN VERT. TAIL IS OFF)

AW430-1021-1 WING ASSEMBLY

AW430-1117-3 MIN. INSULATED (LEFT HIND WING)

AW430-1115-2 COVER PLATE

AW430-1101-2L - 7% COVER (TOP) & -3L - 7% COVER (BOTTOM)

+ ANGLES ARE TRAILING EDGE W/RT MEASURED NORMAL TO WING LINE

- AW430-1048 RUDDER
- 1 = 0°
  - 2 = -5°
  - 3 = +5°
  - 4 = +10°
  - 5 = +20°
  - 6 = +30°

AW430-1101-1L - 5% NOTCH L.E. (LEFT HAND)  
AW430-1101-4L - 8% NOTCH L.E. (LEFT HAND) USED WHEN 5% NOTCH L.E. IS OFF

AW430-1099-1L BASIC L.E.  
AW430-1099-2L EXTENDED L.E. (USED WHEN -1L BASIC L.E. EDGE IS OFF)

#4-40 X 1/4 LG. RT. HD SOC. CAP SCREWS (REQ 4)

AW430-1030-1 WING BLOCK

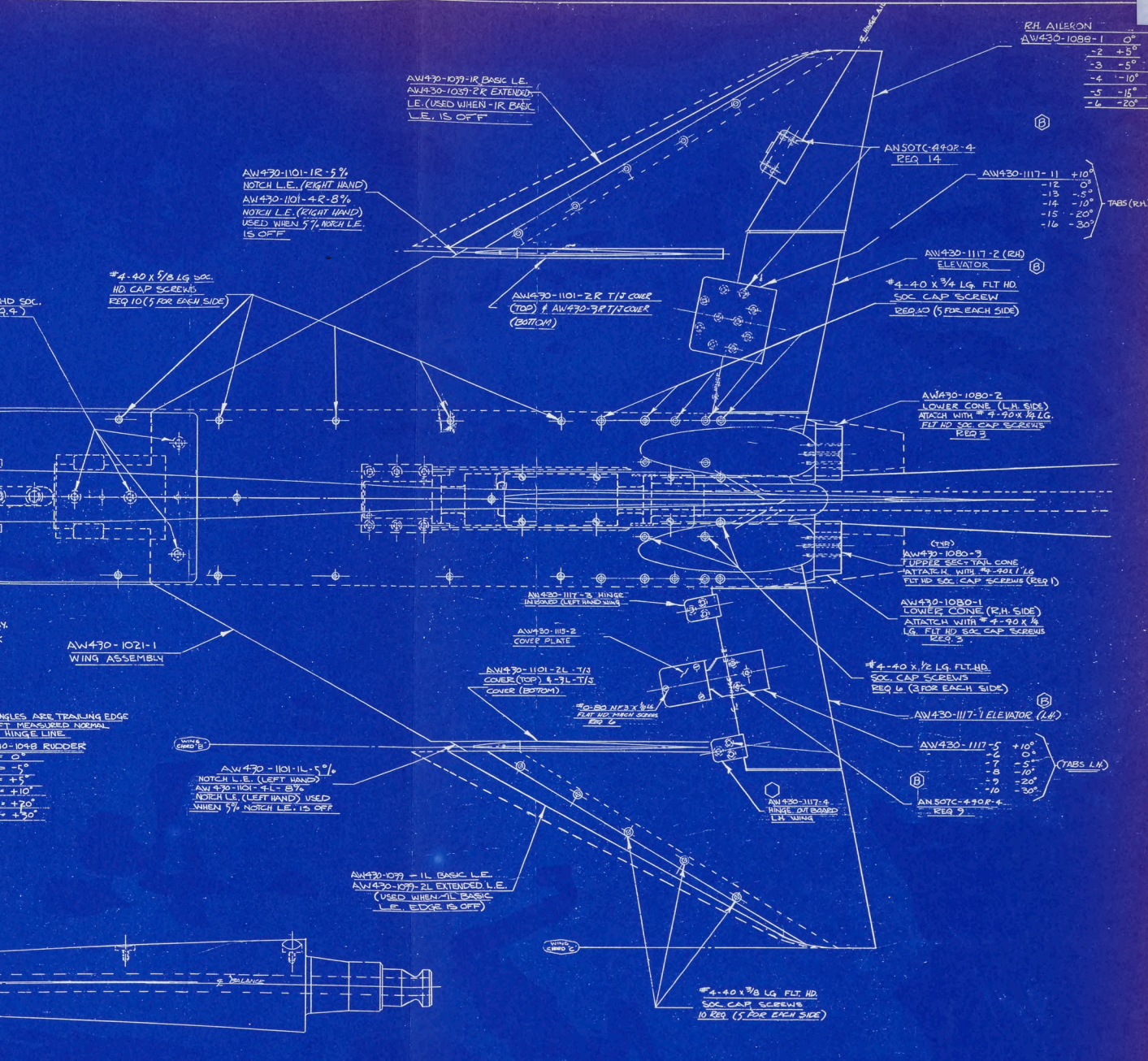
AW430-1047-1 FT FUSELAGE

AW430-1030-1 ASSEMBLY CAL 'G' - 1-1-1 BALANCE

AW430-1034 STING 'G' BALANCE

NOTE:

1. BALANCES ON BOTH -1 & -2 ASSEMBLIES ARE TO BE INSULATED AS PER RESPECTIVE CALIBRATION ASSEMBLIES WHEN ASSEMBLED WITH MODEL. REF. 5-1-11, AW430-1030-1, AW430-1030-2



RH AILERON

AW430-1088-1	0°
-2	4.5°
-3	5°
-4	10°
-5	15°
-6	20°

TABS (RH)

AW430-1117-1	+10°
-12	0°
-13	-5°
-14	-10°
-15	-20°
-16	-30°

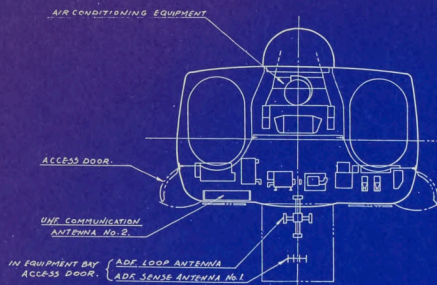
TABS (LH)

AW430-1117-5	+10°
-6	0°
-7	-5°
-8	-10°
-9	-20°
-10	-30°

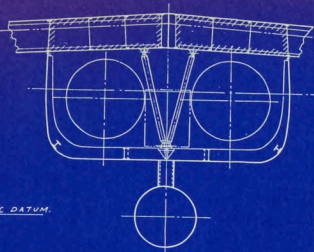
**NOTE:**  
 1. BALANCES ON BOTH -1 & -2 ASSEMBLIES ARE TO BE INSULATED AS PER RESPECTIVE CALIBRATION ASSEMBLIES WHEN ASSEMBLED WITH MODEL

REF. 5-1-11 AW430-1022-1  
 REF. 5-1-11 AW430-1022-2

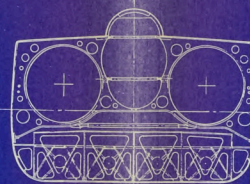
**AW430-1022**



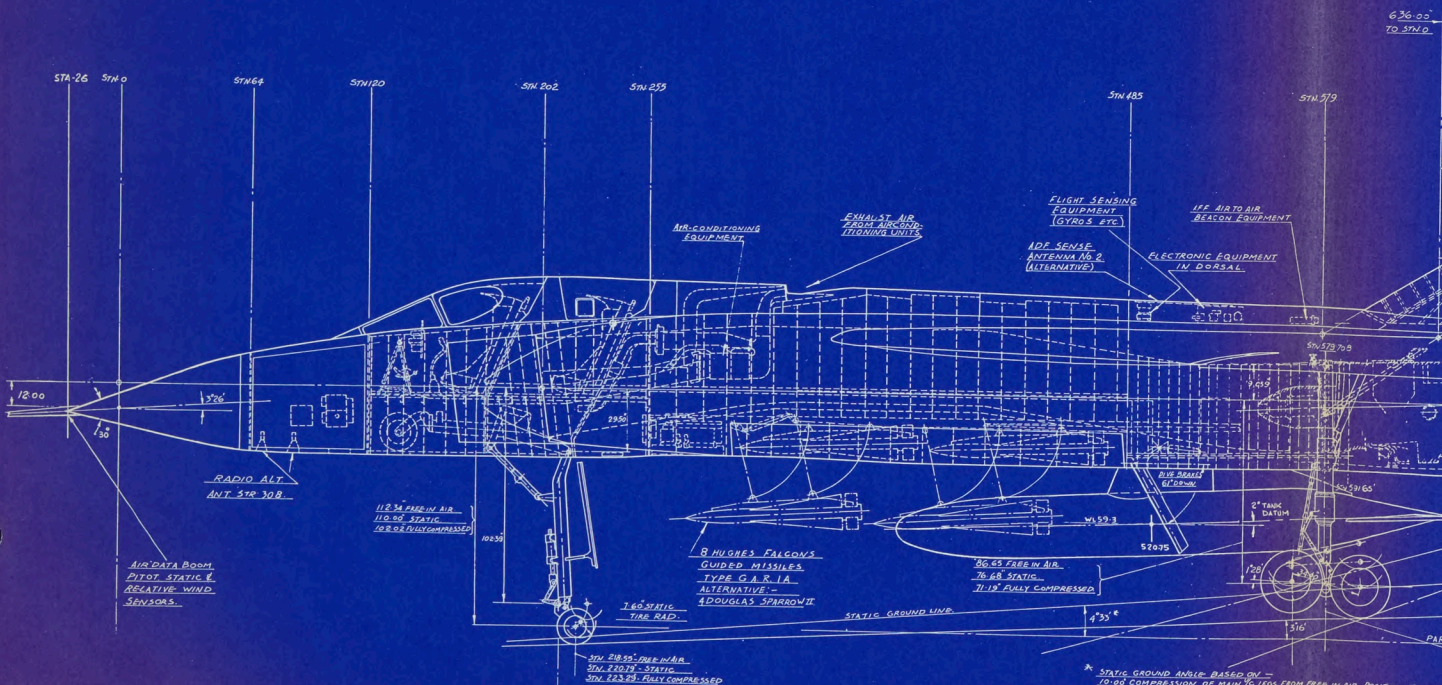
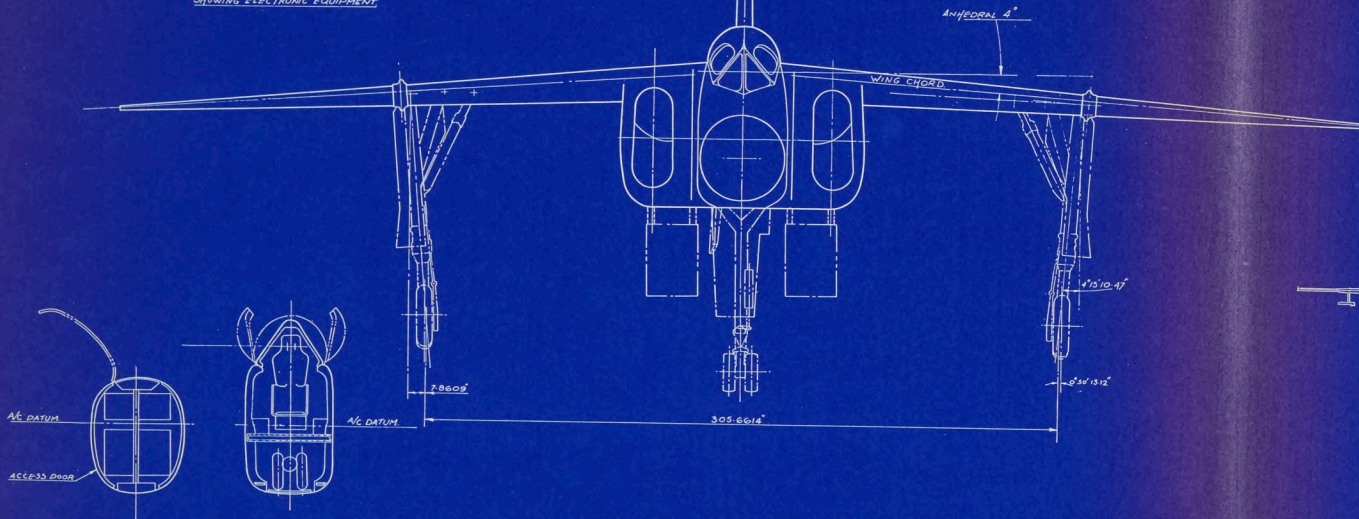
SECTION THRU FUSELAGE BETWEEN STATIONS 253 TO 292 SHOWING ELECTRONIC EQUIPMENT



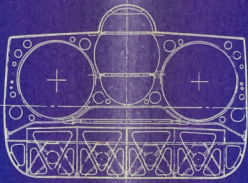
SECTION AT 538.77 VIEW LOOKING FWD



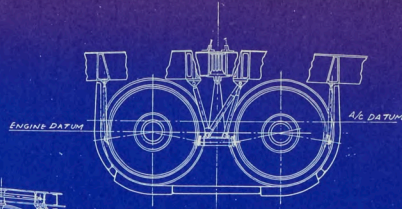
SECTION THRU ARRANGEMENT BAY



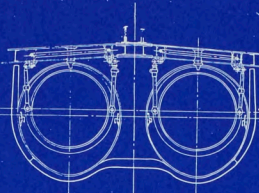
\* STATIC GROUND ABOVE BASES BY - 10.00 COMPRESSION OF MAIN WHEELS FROM FREE IN AIR POSITION. THE RADIO DEFLECTION OF THESE WHEELS CENTRED FROM FREE IN AIR POSITION OF HELICOPTER MISSILES TO RES. TIRE RAD. 1000.



SECTION THRU ARMAMENT BAY



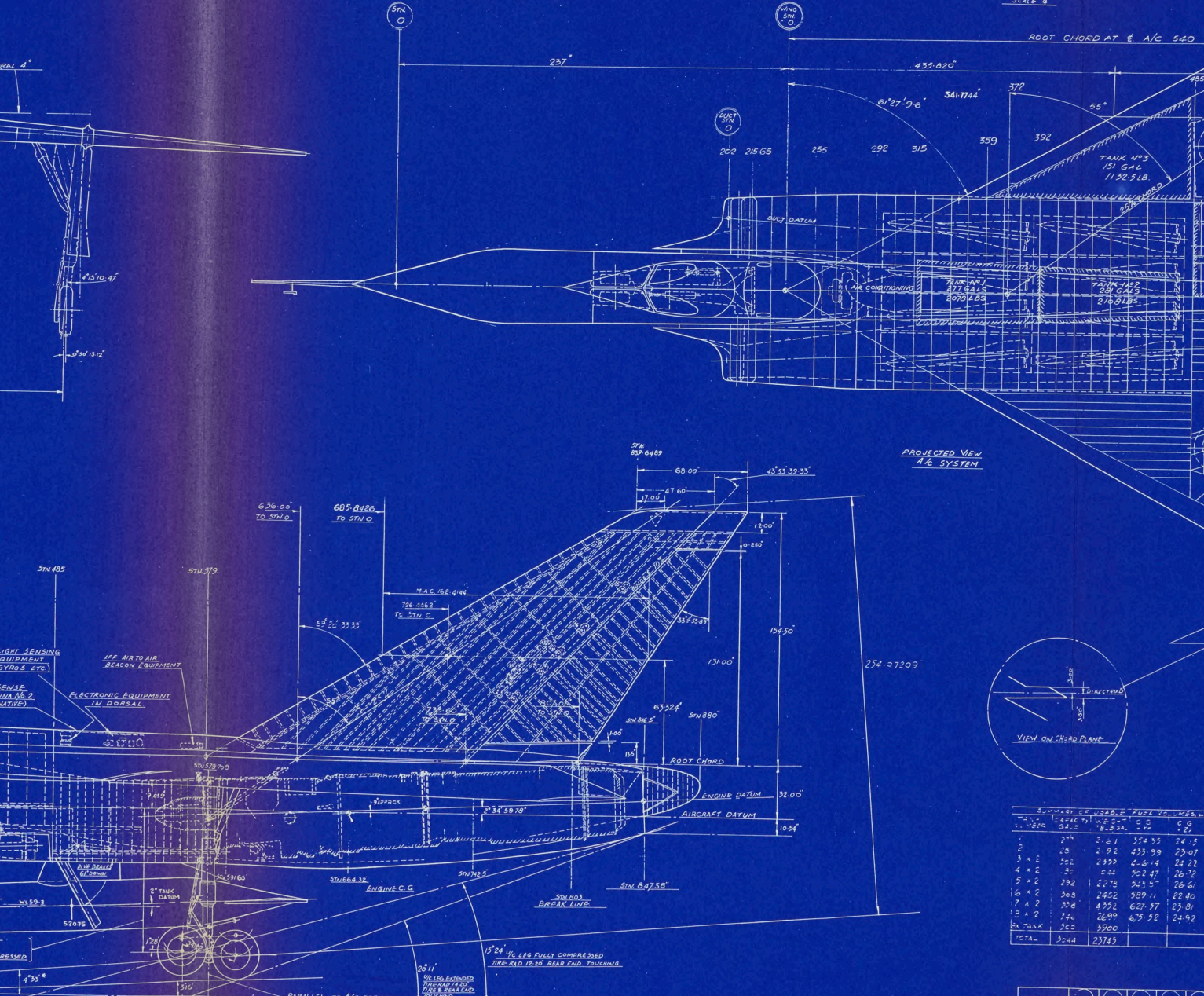
SECTION THRU FUS ENGINE MTG3  
VIEW LOOKING AFT.



SECTION THRU DUAL ENGINE MTG3  
VIEW LOOKING FWD.

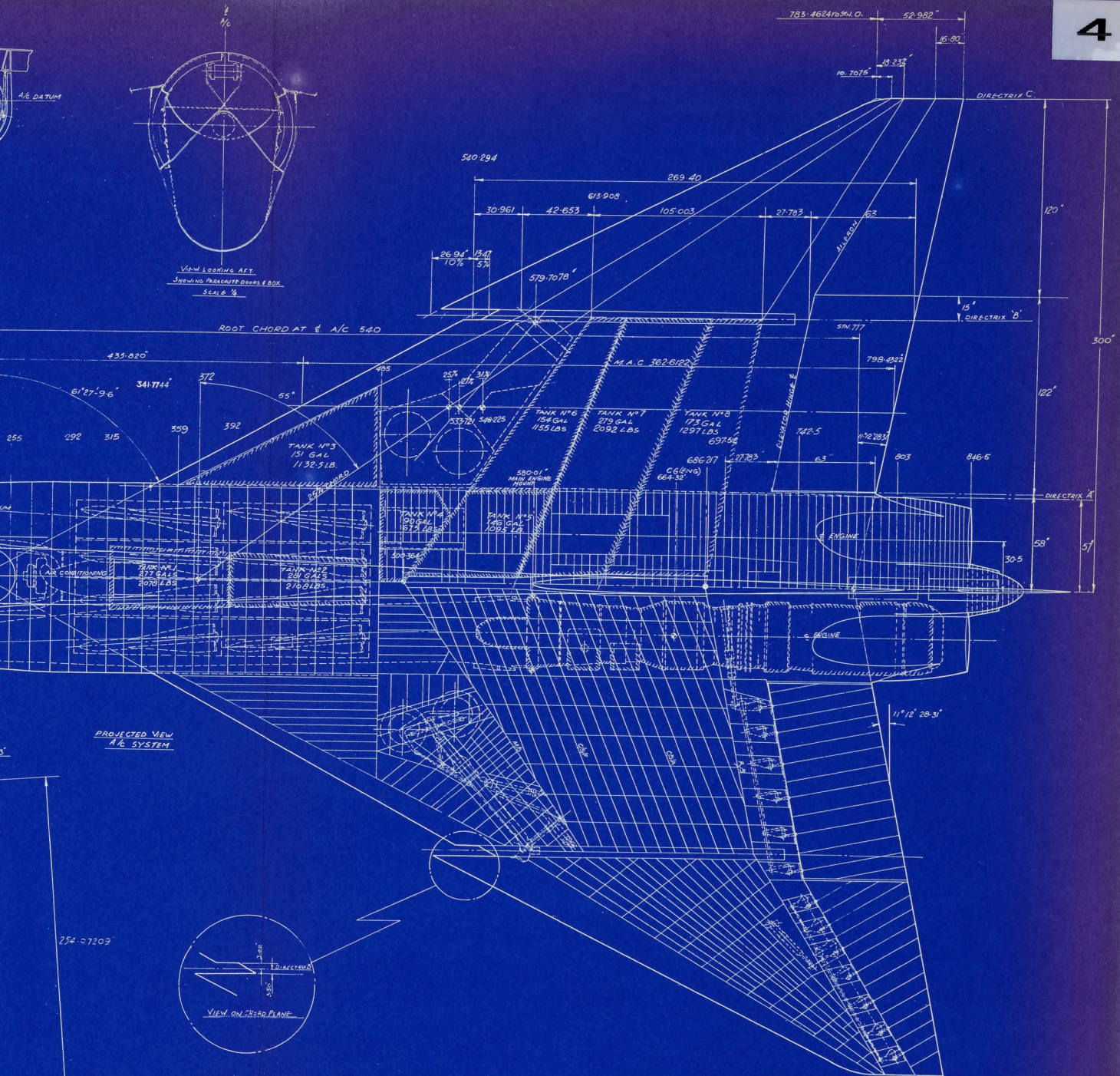


VIEW LOOKING AFT  
SHOWING PARACHUTE DOORS & BOX  
SCALE 1/4



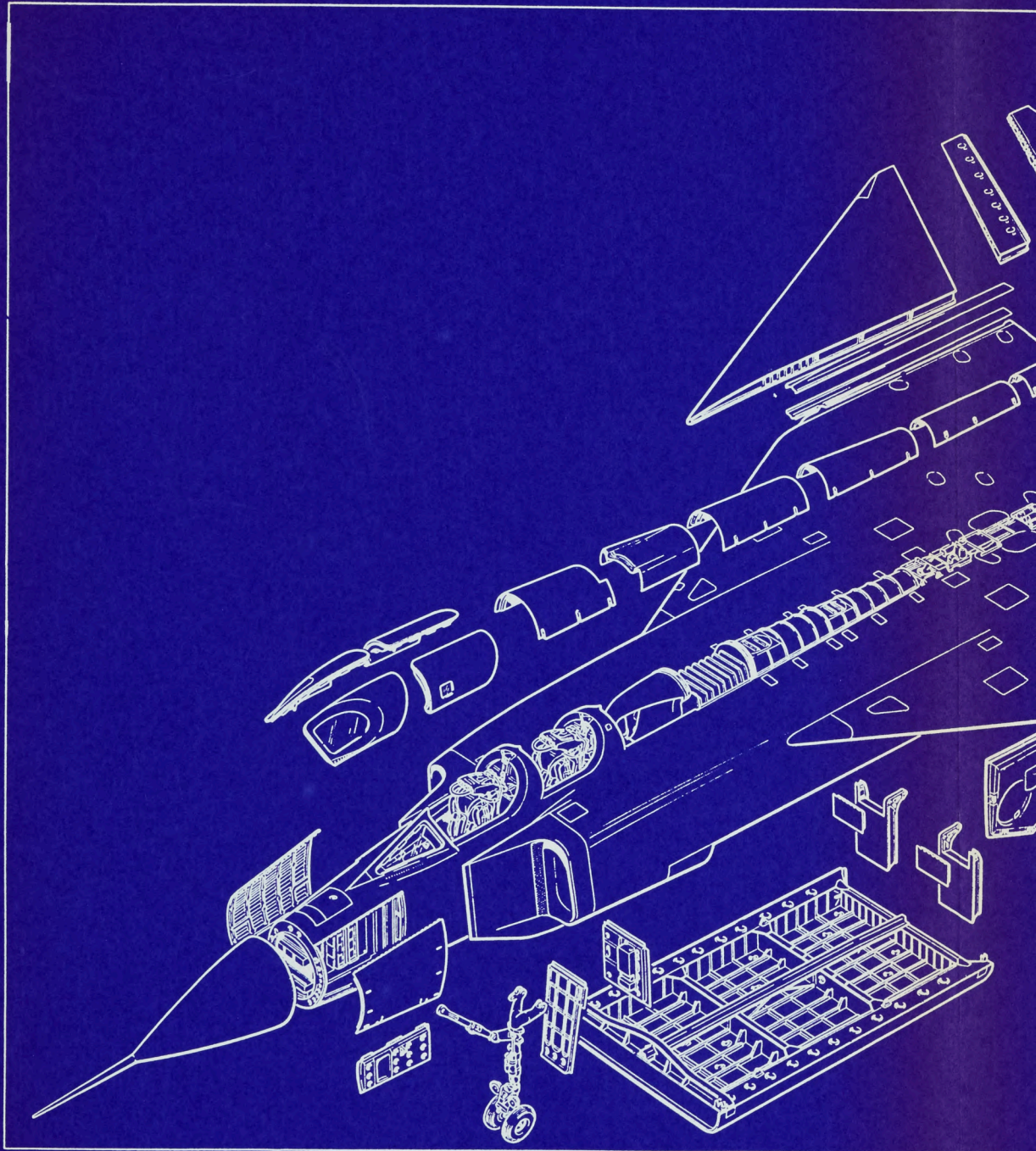
ITEM NO.	DESCRIPTION	QTY	WEIGHT	MOMENT
1	TANK #13	1	1132.5	27.5
2	TANK #12	1	2105.125	49.5
3	TANK #11	1	2070.125	48.0
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...
TOTAL		10	13500	315.0

ISSUE NO.	
MOD. NO.	
REV. NO.	
DRAWN BY	
DATE	
CHECKED	
START DATE APP	
DESIGN APP	
CONTRACT APP	

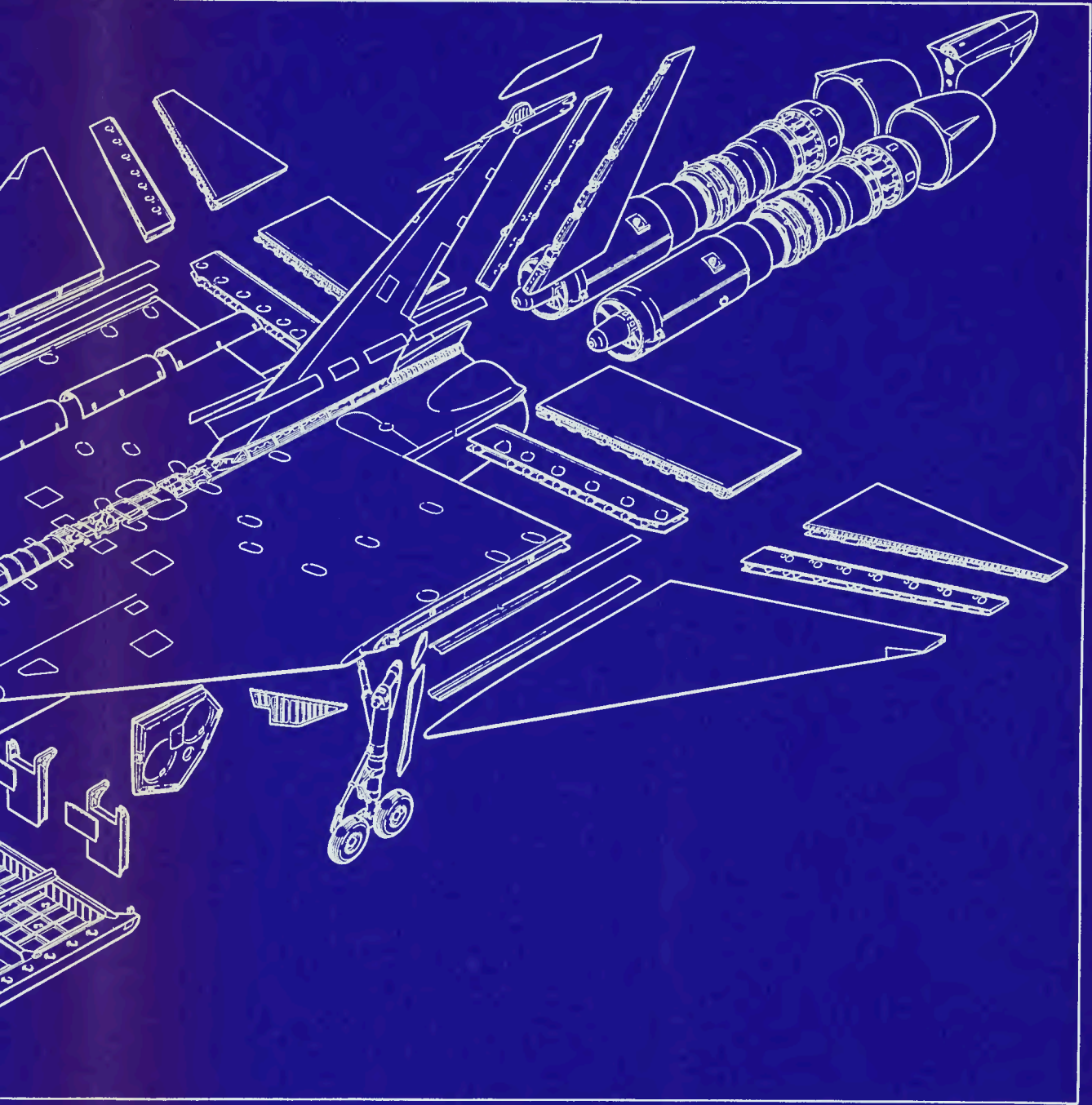


SUMMARY OF USEFUL FUEL VOLUMES, WEIGHTS & C.G.'S					WING		AERODYNAMIC DATA		FUSELAGE & RUDDER	
NO.	QUANTITY	WEIGHT	C.G.	C.G.	ASPECT RATIO	TAPER RATIO	TOTAL AREA (RECT. CHORD ON WING ROOT CHORD)	ASPECT RATIO	TAPER RATIO	TOTAL AREA (RECT. CHORD ON WING ROOT CHORD)
		LB.	IN.	IN.			sq. ft.			sq. ft.
1	234	2,011	352.55	24.13	7.34	12.13	158.7917	1.0439	2.982	158.7917
2	2	2.92	438.99	23.07	6.26	2.0408	1.0439	2.982	158.7917	
3	2	2355	4,414	24.22	79.00	53.15	2.982	158.7917	158.7917	
4	2	50	202.47	26.72	32.71	4.1	158.7917	158.7917	158.7917	
5	2	292	22.78	521.5	28.73	4.1	158.7917	158.7917	158.7917	
6	2	568	2402	389.11	22.40	101.07	158.7917	158.7917	158.7917	
7	2	358	4352	627.57	23.81	82.72	158.7917	158.7917	158.7917	
8	2	176	2699	675.52	24.92	76.72	158.7917	158.7917	158.7917	
EL. TANK	252	3500								
TOTAL	3544	23749								

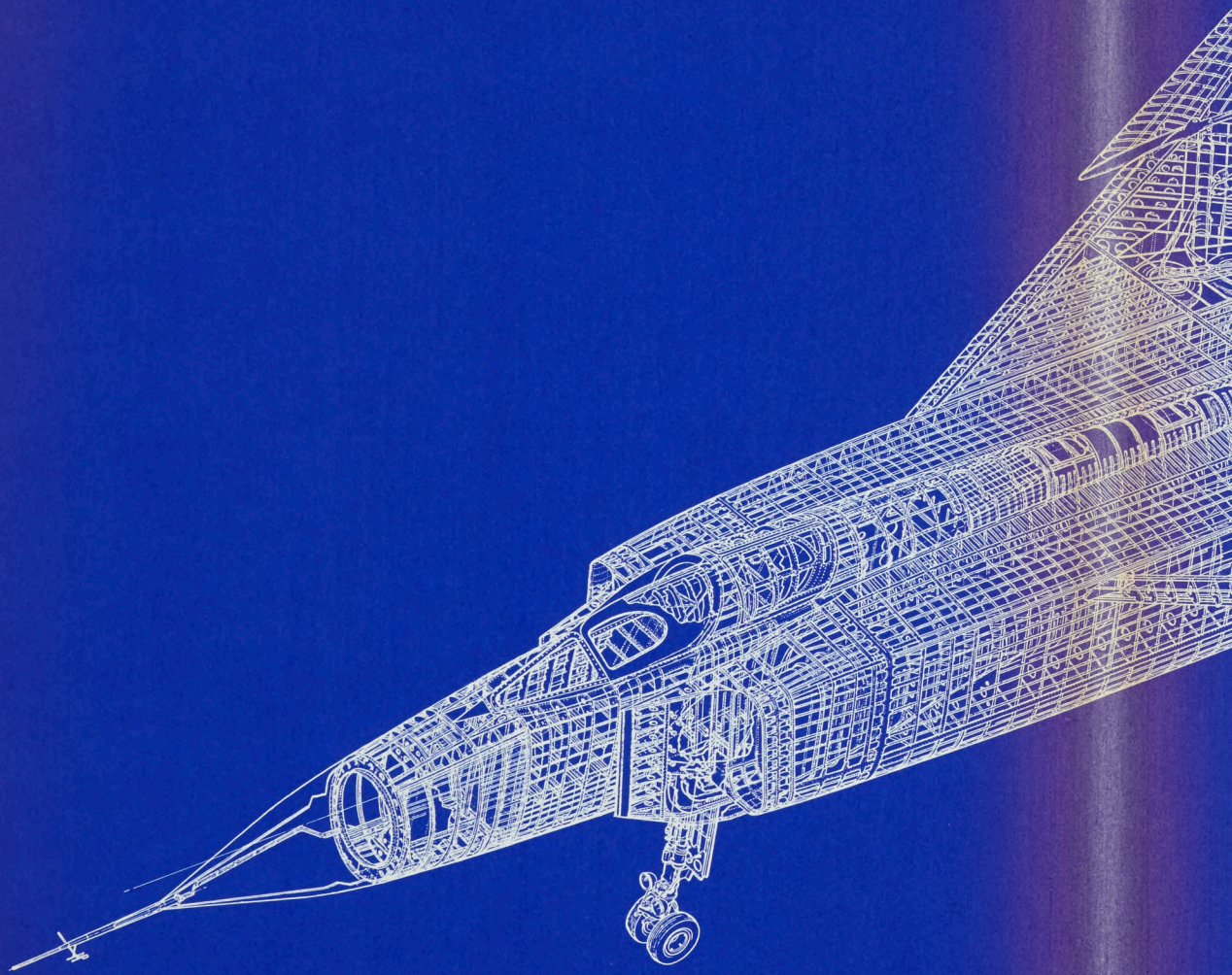
ISSUE NO.		REFERENCE DRAWINGS			AVRO AIRCRAFT LIMITED	SCALE	
MOD. NO.		DWG. NO.	DESCRIPTION		WALTON	ONTARIO	1/4 NOTED
DRWN. BY				CLASS	MISCELLANEOUS REF. DRAWING	TYPE	NEXT ASSEMBLY
DATE				DESCRIPTION	AERODYNAMIC THREE VIEW - 1/4 C108	FINISH TOWNS	DRAWING NO.
CHECKED				GROUP	AVRO CF-105	LIMITS UNLESS NOTED	
STRENGTH APP.							
DESIGN APP.							
CONTRACT APP.							

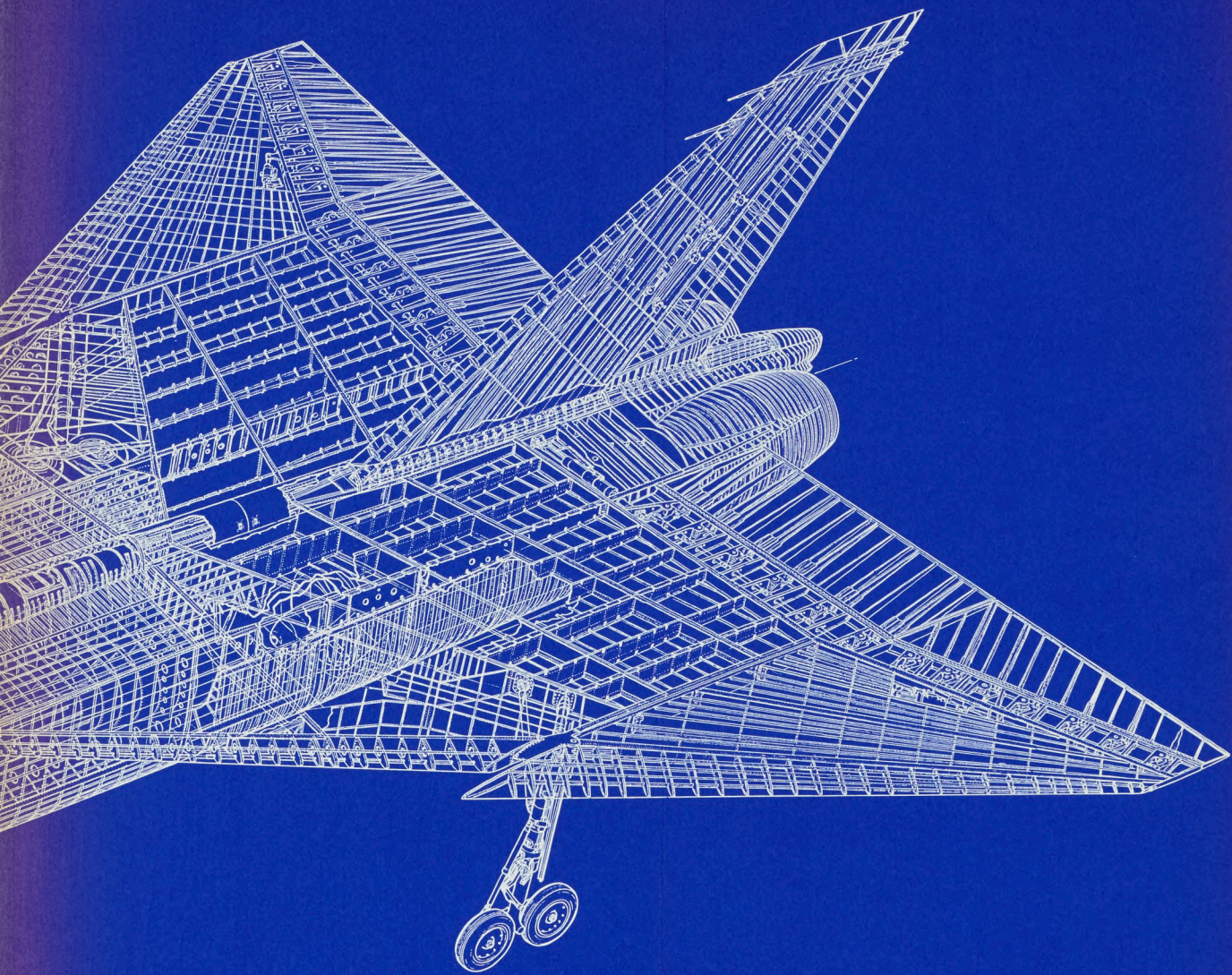


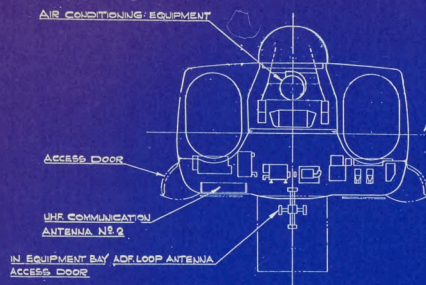
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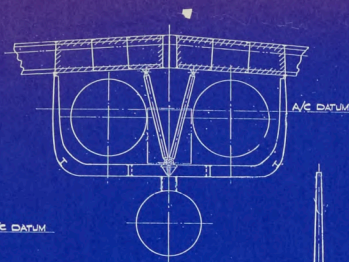




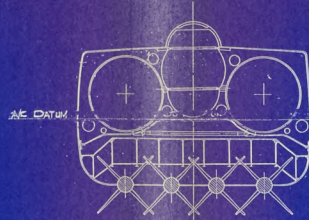




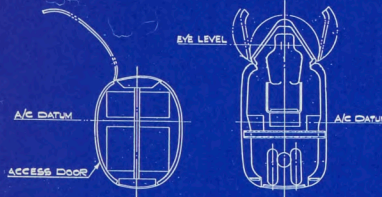
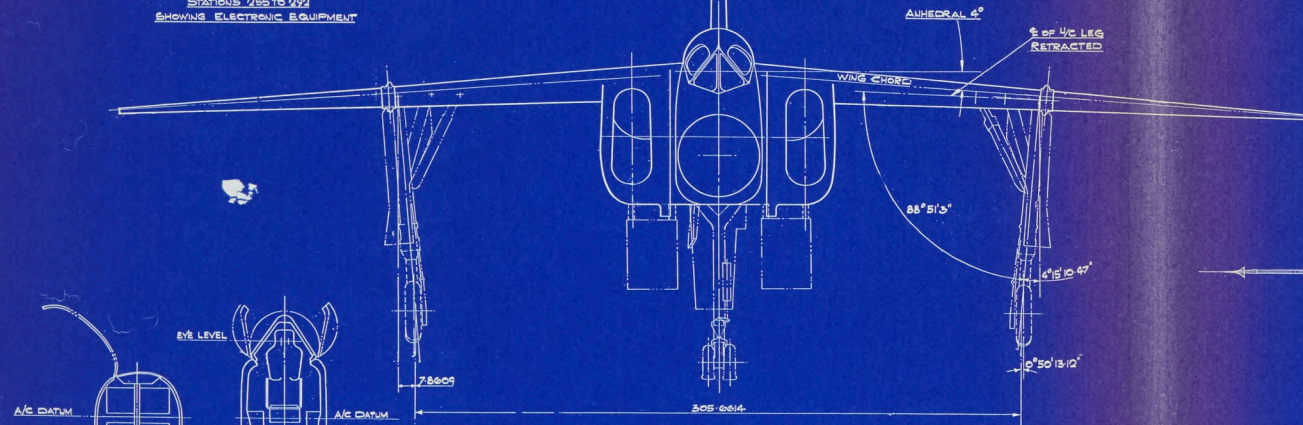
SECTION THRU FUSELAGE BETWEEN STATIONS 785 TO 922 SHOWING ELECTRONIC EQUIPMENT



SECTION AT 538.77  
VIEW LOOKING FWD

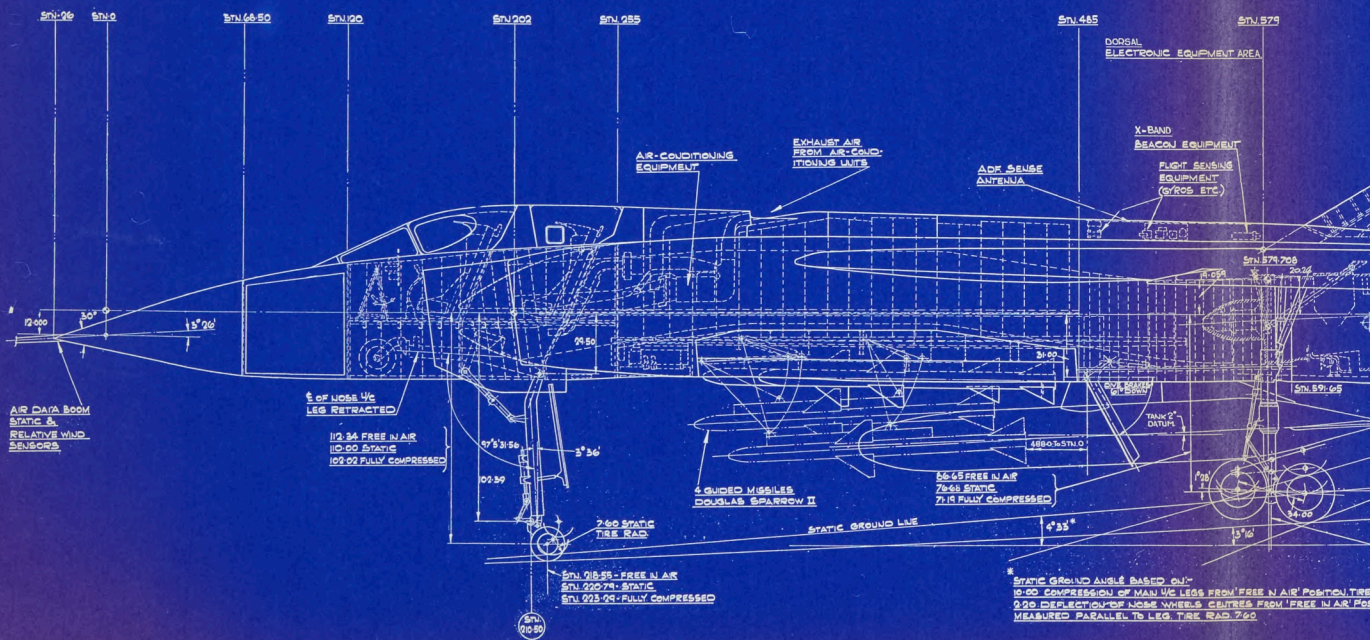


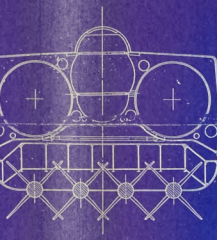
SECTION THRU ARMAMENT BAY  
VIEW LOOKING AFT



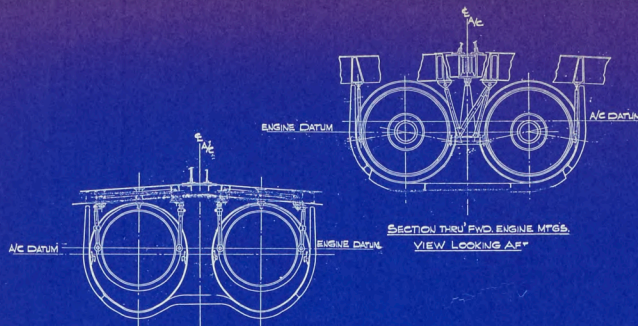
SECTION THRU RADAR NOSE  
STA-100

SECTION THRU COCKPIT



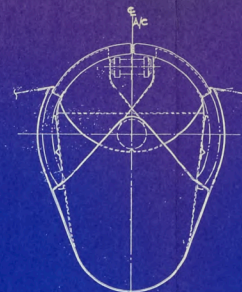


SECTION THRU ARMAMENT BAY  
VIEW LOOKING AFT

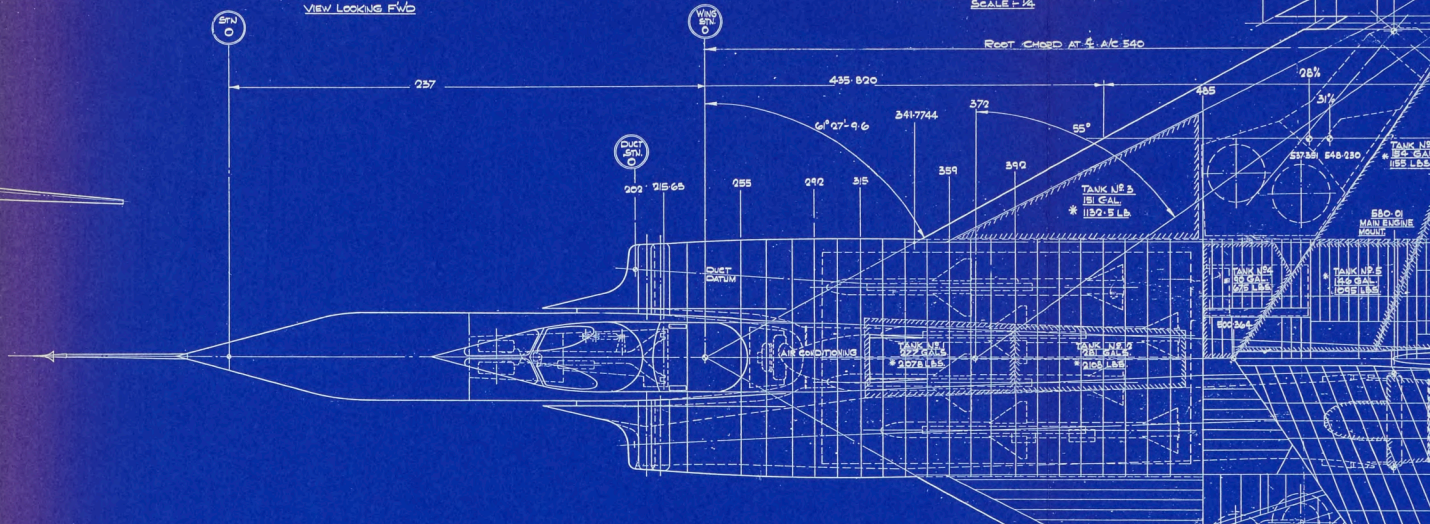


SECTION THRU FWD ENGINE MTGS  
VIEW LOOKING AFT

SECTION AT REAR ENGINE MTGS  
VIEW LOOKING FWD



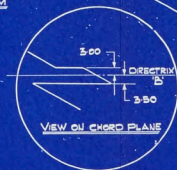
VIEW LOOKING AFT  
SHOWING PARACHUTE DOORS & BOX  
SCALE = 1/4



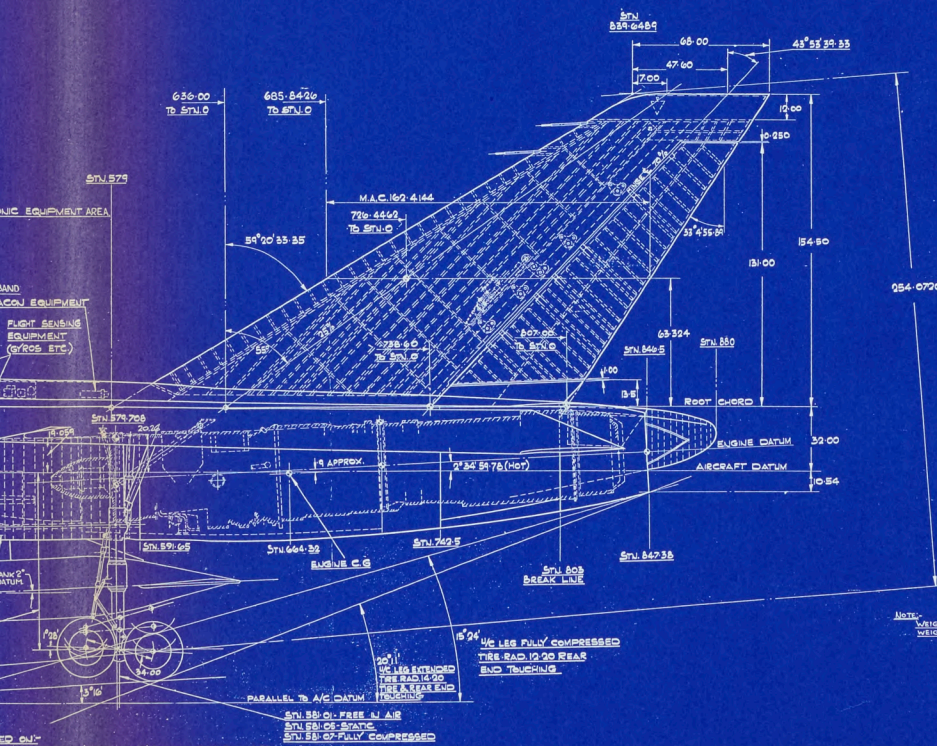
ROOT CHORD AT 4' A/C 540

LEG  
EC

PROJECTED VIEW  
'A/C SYSTEM'



VIEW ON CHORD PLANE



AERODYNAMIC DATA, C.G. RANGE 28% MAC (83'30") TO 31% MAC (94'23")							
CONDITION		A.W. (LB)	C.G. +/-	C.G. +/-	1/4		
MAX. INTERNAL FUEL		68,664	545:02 FWD	+12:12 TOP	2		
AIRCRAFT EMPTY		48,821	545:50 FWD	+7:16 TOP	3		
			547:50 AFT	+3:04 LOWER	3		

SUMMARY OF USABLE FUEL VOLUMES, WEIGHTS & C.G.'S									TOTAL AREA - PRO ASPECT RATIO TAPER RATIO THICKNESS RATIO AIRFOIL SECTION
TANK NUMBER	CAPACITY GAL.	WEIGHT LB.	C.G. +/-	C.G. +/-	C.G. +/-				
1	077	2164	354:35	24:13	73:4				
2	081	2192	438:49	23:07	6:36				
3 x 2	302	2355	448:14	24:22	79:00				
4 x 2	180	1809	505:49	28:76	38:71				
5 x 2	282	2273	548:37	30:41	18:75				
6 x 2	308	2420	538:11	30:40	101:07				
7 x 2	558	4352	627:57	23:81	82:70				
8 x 2	346	2649	678:52	34:02	76:74				
EX. TANK									
TOTAL	2544	19843							

\* NOTE - WEIGHTS OF FUEL QUOTED ON PROJECTED VIEW  
ARE BASED ON 70 LB/GAL FOR DESIGN PURPOSE ONLY



LEG  
EC  
LEG TIRE RAD 7.20

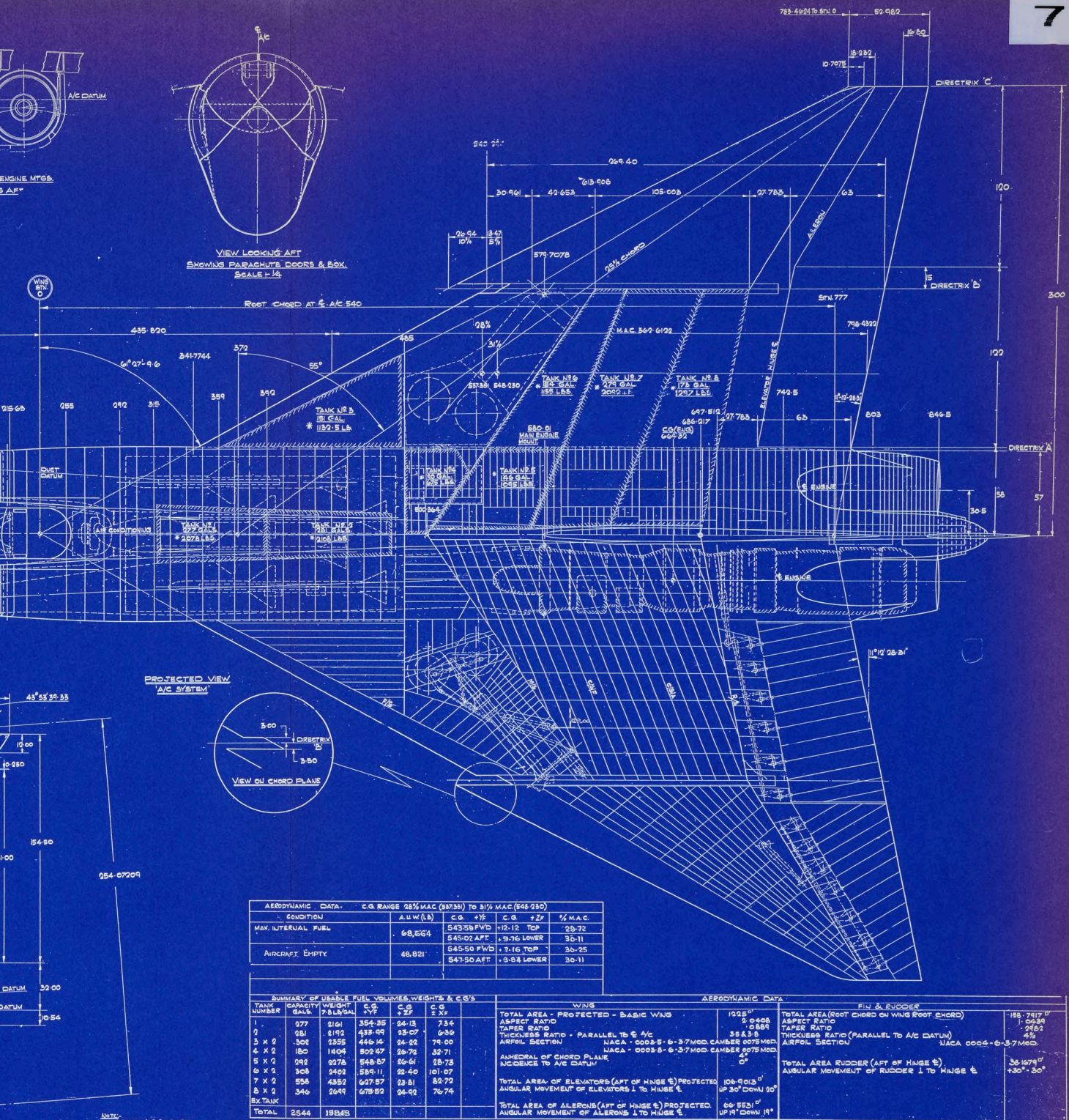
SNL 579  
SNL 574 205  
SNL 591 65  
SNL 664 25  
SNL 742 5  
SNL 842 38  
SNL 842 38

15° 4' UP LER FULLY COMPRESSED  
TIRE RAD 12.20 REAR  
AND TOUCHING

NOTE - WEIGHTS & C.G. AS FWD  
WEIGHT REPORT T.O. 200-44  
ISSUE II

SNL 831-0 - FREE IN AIR  
SNL 831-0 - STATIC  
SNL 831-0 - FULLY COMPRESSED

LEG TIRE RAD 7.20



AERODYNAMIC DATA		C.G. RANGE 23% MAC (837.33) TO 31 1/2% MAC (942.230)				
CONDITION	A.W.W. (Lb)	C.G. ± 1/2"	C.G. ± 2"	C.G. ± 3"	1/2" M.A.C.	
MAX. INTERNAL FUEL	68,664	543.58 FWD	12.12 TOP	25.72		
AIRCRAFT EMPTY	48,821	545.02 FWD	9.76 LOWER	30.11		
		547.50 AFT	3.84 LOWER	30.11		

SUMMARY OF USABLE FUEL VOLUMES, WEIGHTS & C.G.'S				WINGS			FIN & RUDDER										
TANK NUMBER	CAPACITY GALS	WEIGHT LBS	C.G. ± 1/2"	C.G. ± 2"	C.G. ± 3"	TOTAL AREA - PROJECTED - BASIC WING	ASPECT RATIO	TAPER RATIO	THICKNESS RATIO - PARALLEL TO C/A C	AIRFOIL SECTION	TOTAL AREA (ROOT CHORD ON WING ROOT CHORD)	ASPECT RATIO	TAPER RATIO	THICKNESS RATIO (PARALLEL TO A/C DATUM)	AIRFOIL SECTION	TOTAL AREA RUDDER (AFT OF HINGE E)	ANGULAR MOVEMENT OF RUDDER 1 TO HINGE E
1	977	354.25	24.13	73.4		1025.51	2.0428	15.889	38.838	NACA - 0008-S-6-37 MOD. CAMBER 0078 MOD.	188.7417	1.0239	2.682	4%		188.7417	130° 30'
2	981	433.99	25.07	63.6													
3 x 2	302	2355	446.16	24.22	74.00												
4 x 2	180	1464	502.67	26.72	32.71												
5 x 2	302	2422	518.87	26.61	23.73												
6 x 2	328	2422	519.11	22.40	101.07												
7 x 2	558	4332	627.87	22.81	82.72												
8 x 2	346	2644	675.82	24.92	76.74												
EX. TANK																	
TOTAL	2544	19845															

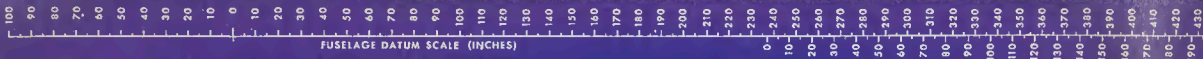
\* NOTE - WEIGHTS OF FUEL QUOTED ON PROJECTED VIEW ARE BASED ON 75 LBS/GAL FOR DESIGN PURPOSE ONLY

Notes: WEIGHT & C.G. IN 540 WEIGHT REPORT T-7-4300-14 ISSUE II.

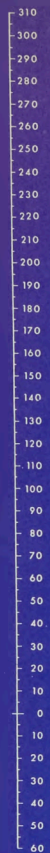
INTERIM A/C

REV.	DATE	DESCRIPTION	ISSUE NO.	REFERENCE DRAWINGS	CLASS	SCALE	TYPE
1					MISCELLANEOUS REF DRAWING	1/8" UNIFORM	ASSEMBLY
2					AERODYNAMIC THREE VIEW - A/C C105	FABR TO CON	DRAWING 1/2
3					AVRO ARROW MK I		

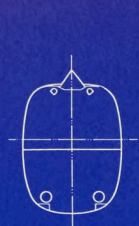
7-4300-10



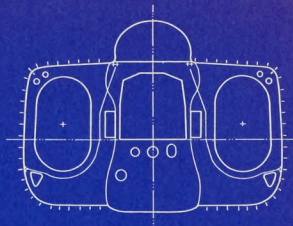
INCHES



DATA DRAWINGS			
WING DATA		FUSELAGE DATA	
INNER WING	7-4362-2	RADAR NOSE	7-4351-1
MAIN TORQUE BOX	7-4362-4	FRONT FUSELAGE	7-4352-1
FORWARD PORTION	7-4362-4	CENTRE FUSELAGE	7-4354-1
LEADING EDGE	7-4362-4	DUCT BAY	7-4356-1
INNER TRAILING EDGE	7-4362-7	ENGINE BAY	7-4358-1
OUTER TRAILING EDGE	7-4362-1	REAR FUSELAGE	7-4359-1
ELEVATOR	7-4382-1	INTAKE	7-4355-1
CENTRE BOX	7-4362-3	DUCT	7-4354-1
OUTER WING	7-4364-1	WINDSCREEN	7-4352-5
LEADING EDGE	7-4365-1	PILOTS CANOPY	7-4353-1
TRAILING EDGE	7-4364-2	NAVIGATORS CANOPY	7-4353-2
AILERON	7-4374-1	DIVE BRAKE	7-4372-1
FIN DATA		NOSE UNDERCARRIAGE	7-4391-1
FIN	7-4383-1	MAIN UNDERCARRIAGE	7-4392-1
FIN T.E.	7-4383-2		
RUDDER	7-4384-1	COMPLETE AIRCRAFT	7-4300-3



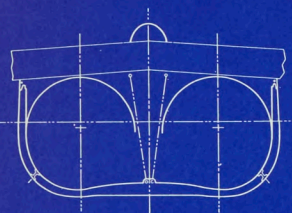
STA. 120



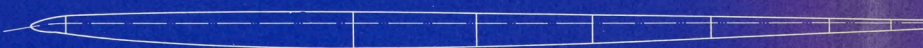
STA. 255



ST



STA. 591.65



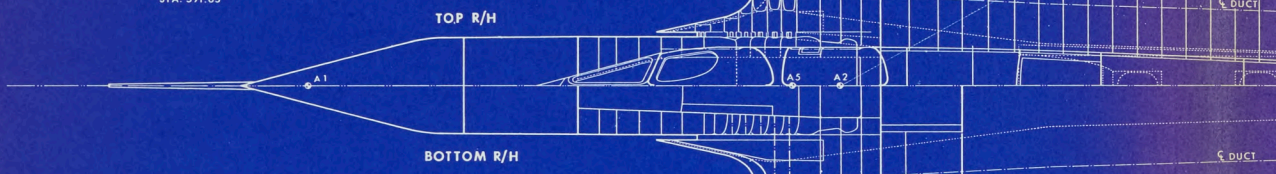
DIRECTRIX 'A'



DIRECTRIX 'B'



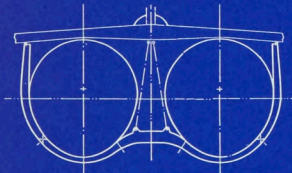
DIRECTRIX 'C'



TOP R/H

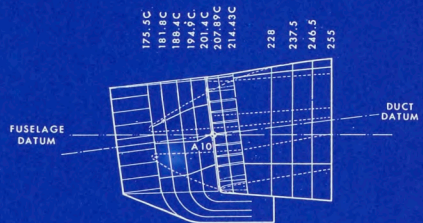


BOTTOM R/H



STA. 742.5

NOTE:  
ALL MEASUREMENTS  
TAKEN FROM ZERO  
POINT ON SCALES

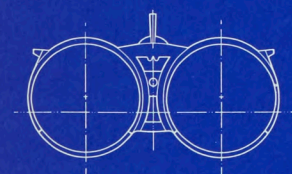


- 175.4C
- 181.1C
- 188.7C
- 194.2C
- 201.4C
- 207.89C
- 214.43C
- 228
- 237.5
- 246.5
- 255

FUSELAGE DATUM

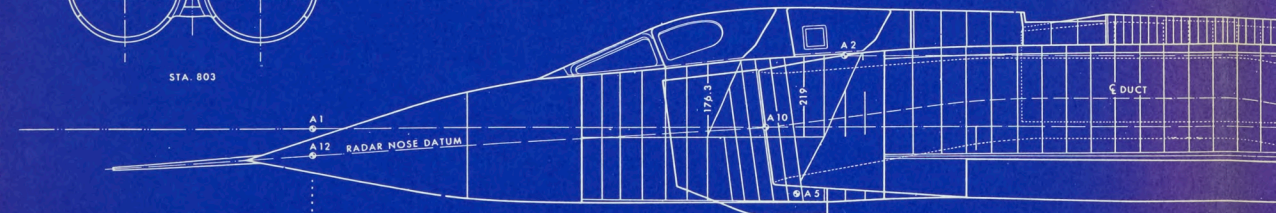
DUCT DATUM

- POINTS OF ORIGIN
- A1 FUSELAGE
  - A2 WING\*
  - A3 FIN
  - A4 MAIN U.C.
  - A5 NOSE U.C.
  - A6 DIVE BRAKE
  - A7 ELEVATOR
  - A8 AILERON
  - A9 RUDDER
  - A10 NACELLE
  - A11 OUTER W.
  - A12 RADOME



STA. 803

INTAKE AND RAMP



DORSAL FAIRING RINGS SHOWN IN



STA. 848.1

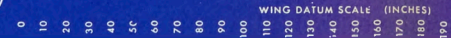
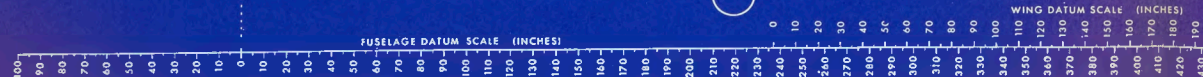
RADAR NOSE

FRONT FUSELAGE

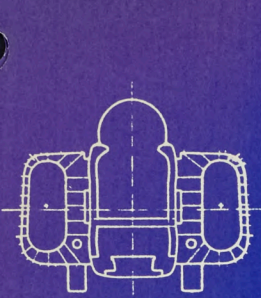
CENTRE FUSELAGE

INCHES

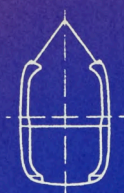
1180-105-1







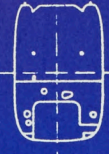
STA 214-23C  
7-1052-57  
7-1053-413/414



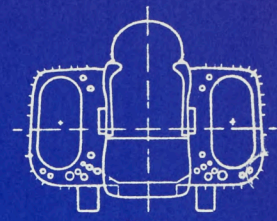
STA 157-33  
7-1052-31



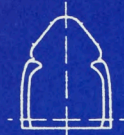
STA 88-5  
7-0151-13



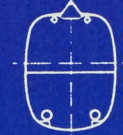
PHOTO'S BULKHEAD  
7-1052-15/16 & 37/38



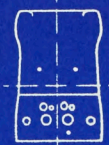
STA 228  
7-1052-47/48 7-1052-9  
7-1053-415/416



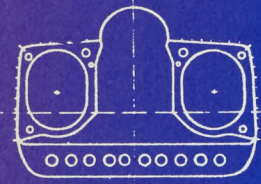
STA 176-30  
7-1052-41



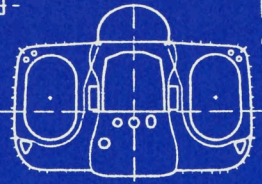
STA 120  
7-1052-21/22



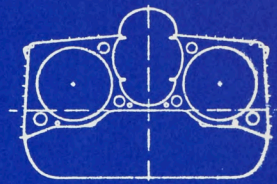
NAV'S BULKHEAD  
7-1052-63/64



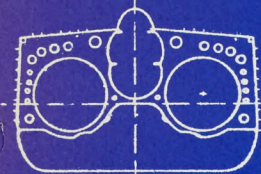
STA 392  
7-1054-13 7-1054-4479



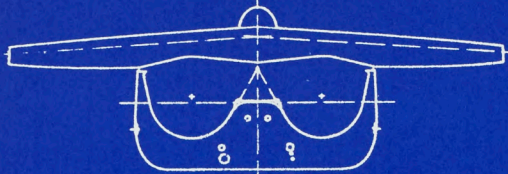
STA 296  
7-1052-77/78



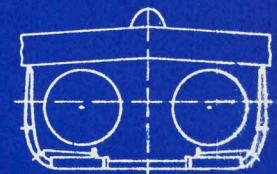
STA 359  
7-1054-79



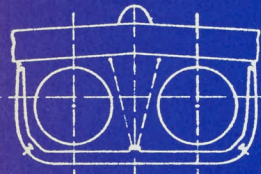
STA 409  
7-1054-31



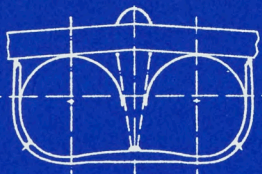
STA 485 AUXILIARY SPAR  
7-1054-33 7-1062-173/174



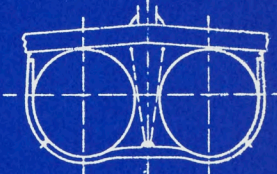
STA 319-30  
7-1050-201/202



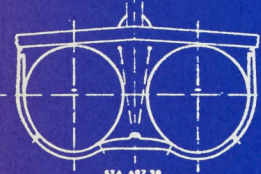
STA 358-77  
7-1050-233 7-1050-857/898



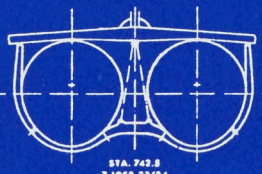
STA 371-65  
7-1050-277/298



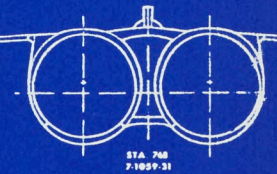
STA 444-43  
7-1050-443/444/445



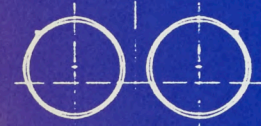
STA 489-26  
7-1050-1031/1052/1053



STA 742-8  
7-1050-22/24



STA 748  
7-1059-31



STA 819-73  
7-0159-99



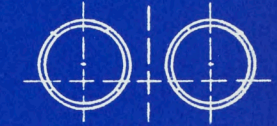
STA 848-1  
7-0157-13



STA 803  
7-0159-103



STA 870-5  
7-0159-103



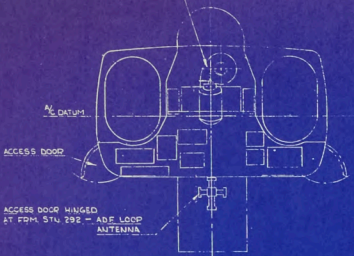
STA 834-75  
7-0159-103

1339-100-1

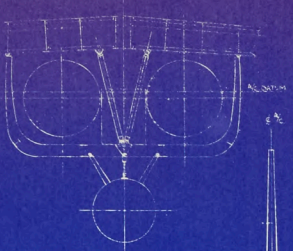
**CF-105 FUSELAGE FORMERS J-75 ENGINE**



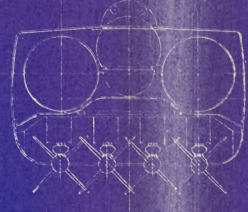
AIR CONDITIONING EQUIPMENT



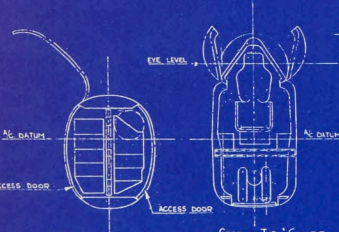
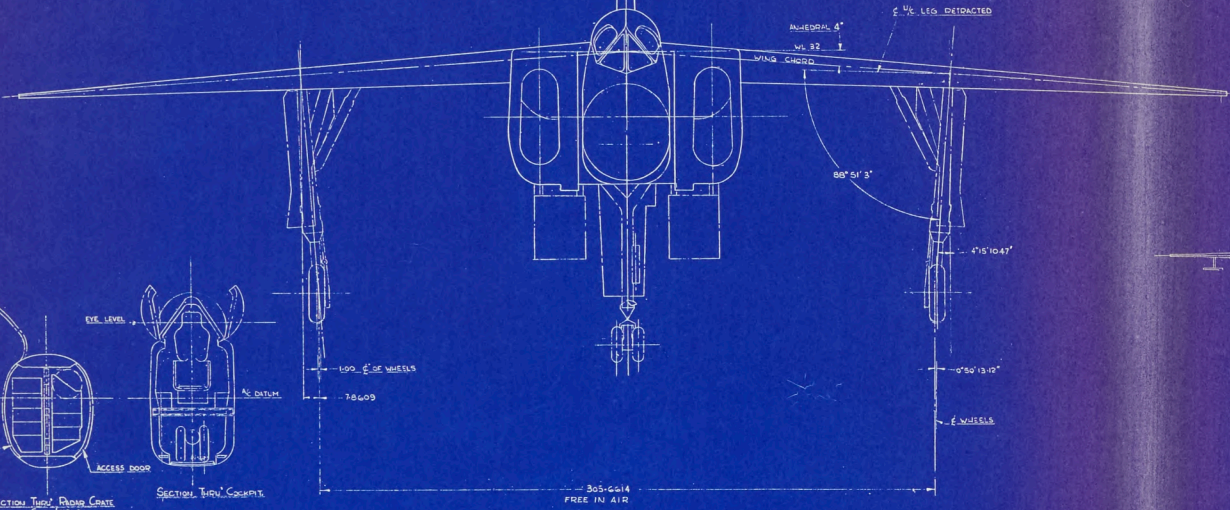
SECTION THROUGH FUSELAGE BETWEEN  
WINGS 355 TO 292 - SHOWING  
ELECTRONIC EQUIPMENT



SECTION IN STA. 571, 588, 77  
VIEW LOOKING FWD.



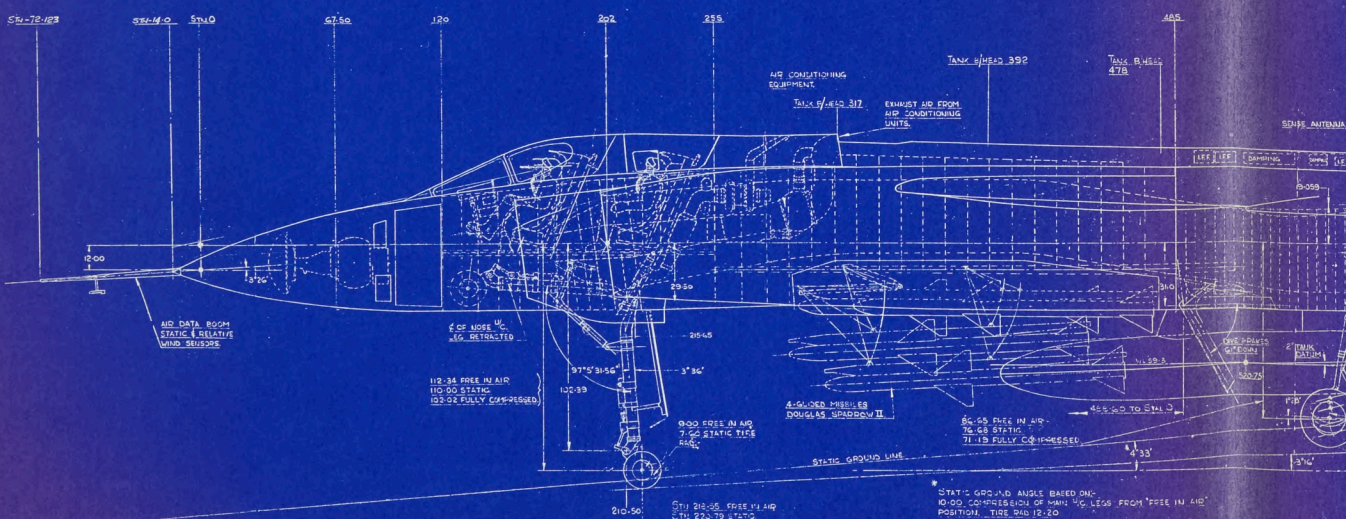
SECTION THRU ARMAMENT BAY  
VIEW LOOKING RT.



SECTION THRU PROPELLER  
STA. 1002.0

SECTION THRU GEARBOX

303-6414  
FREE IN AIR



TANK #1812 392

AIR CONDITIONING EQUIPMENT  
TANK #1812 317

EXHAUST AIR FROM AIR CONDITIONING UNITS

AIR DATA ROOM  
STATIC & RELATIVE WIND SENSORS

LEG. OF LEGS RETRACTED

112.36 FREE IN AIR  
112.50 STATIC  
103.02 FULLY COMPRESSED

900 FREE IN AIR  
700 STATIC  
500 FULLY COMPRESSED

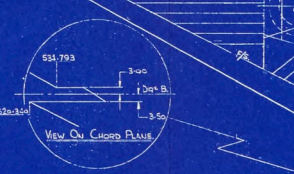
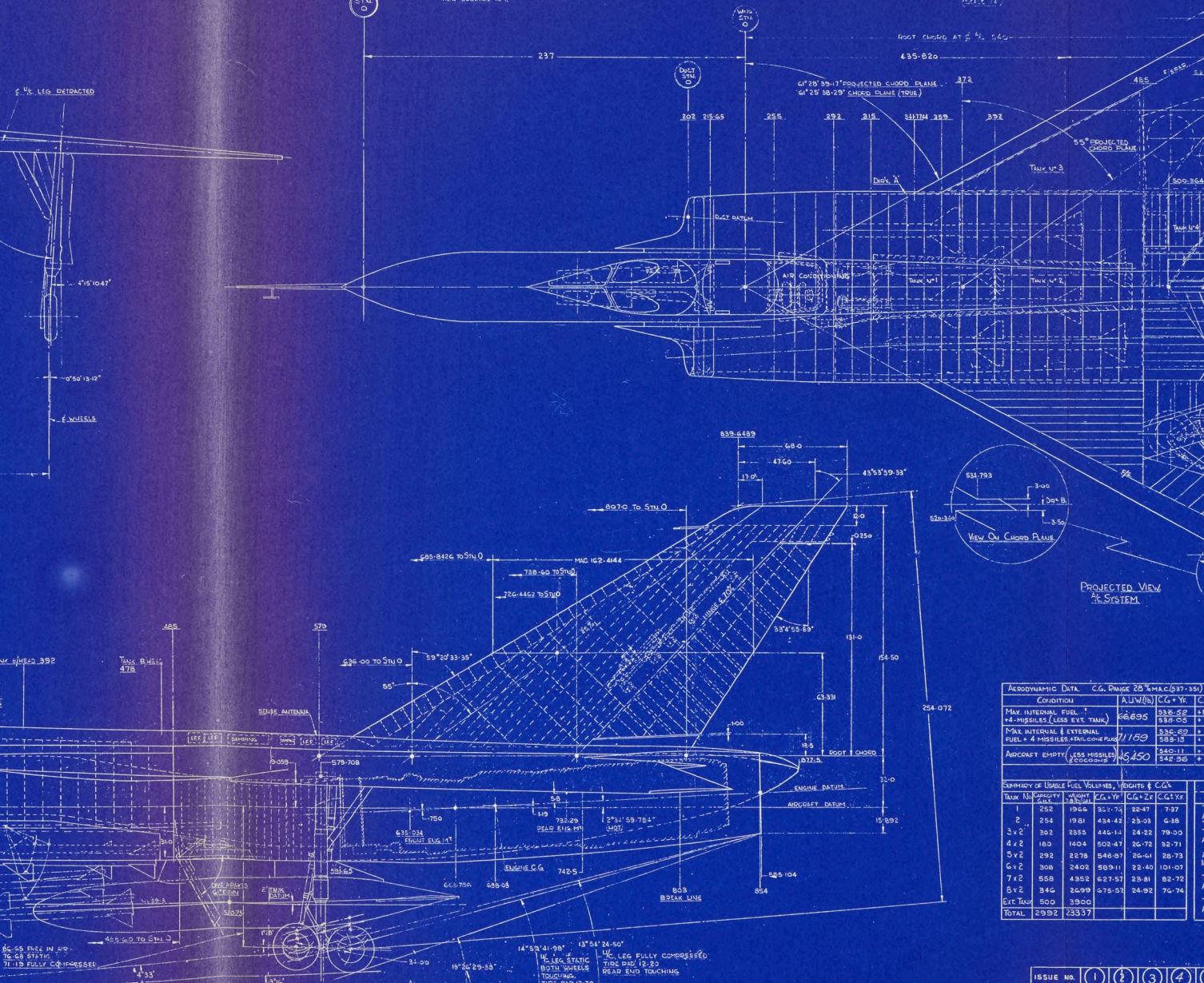
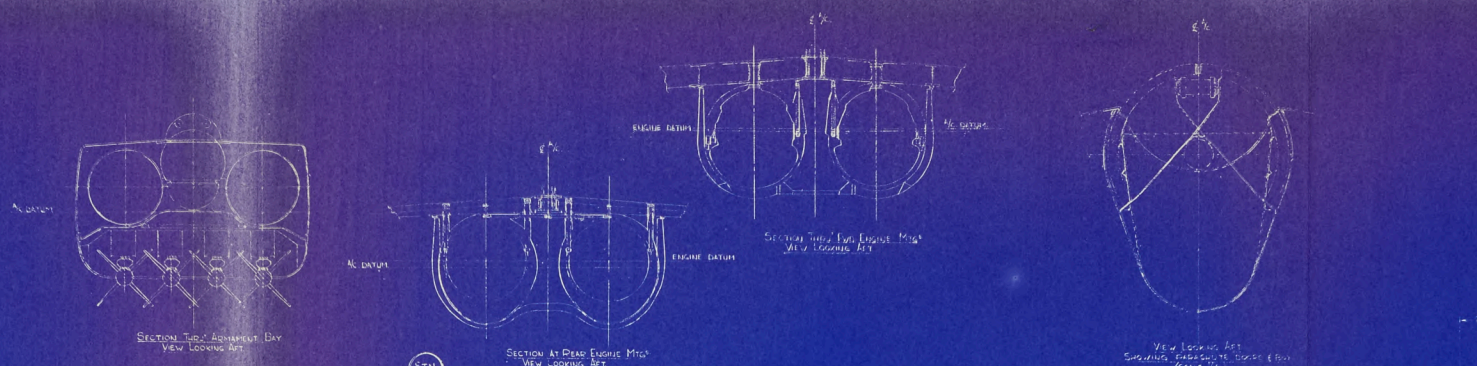
4-WHEEL PRESSURE DOUGLAS PRESSBERG II

85.58 FREE IN AIR  
76.68 STATIC  
71.18 FULLY COMPRESSED

STATIC GROUND LINE

571 218.25 FREE IN AIR  
571 212.79 STATIC  
571 223.12 FULLY COMPRESSED

\* STATIC GROUND ANGLE BASED ON:  
1000 COMPRESSOR OF MAIN LEGS FROM 'FREE IN AIR'  
POSITION, TIDE DIAL 12.20  
2.25 FEET SECTION OF NOSE WHEELS CENTER FROM 20.5 IN  
AIR PULL POINTS  
MEASURED PARALLEL TO LEG TIDE DIAL 7.40



AERODYNAMIC DATA		C.G. RANGE 25% MAC (97-35) TO 31%	
CONDITION	ALUW(lb)	C.G. + Yr	C.G. + Zr
MAX INTERNAL FUEL	338,500	338.50	111.05
4 MISSILES (LOS EXT. TANK)	338,500	338.50	79.00
MAX INTERNAL EXTERNAL FUEL + 4 MISSILES (AUG. LOOSE PLAN)	411,000	338.00	5.25
AIRCRAFT EMPTY (LESS MISSILES)	240,111	340.11	8.48
	342.36	7.26	

SIMILITUDE OF USABLE FUEL VOLUMES, HEIGHTS & CGs					
TANK NO.	HEIGHT	USABLE VOL.	CG + Yr	CG + Zr	CG + Xr
1	252	10648	351.50	23.47	7.37
2	254	1981	434.42	23.03	6.86
3	292	2355	446.11	24.22	79.00
4	180	1404	502.47	26.73	32.71
5	292	2278	546.87	26.64	28.73
6	300	2402	589.91	22.40	101.07
7	558	4352	627.57	23.81	82.72
8	346	2699	675.57	24.92	76.74
EXT. TANK	500	3900			
TOTAL	2992	23337			

ISSUE NO.	1	2	3	4	5
MOD. NO.	171-028	171-029	171-030	171-031	171-032
DESIGN NO.	171-030	171-031	171-032	171-033	171-034
DRAWN BY	E. G. HARRIS	C. HARRIS	D. HARRIS	E. HARRIS	F. HARRIS
DATE	1/15/57	1/15/57	1/15/57	1/15/57	1/15/57
CHECKED					
STRENGTH APP.					
DESIGN APP.					
CONTRACT APP.					

1/2 GROUND ANGLE BASED ON C-1  
 0 COMPRESSIBILITY OF MAIN 1/2 LEGS FROM FREE IN AIR  
 FROM TIRE 240 12-20  
 USE SECTION OF NOSE WHEELS DERIVED FROM 107'S IN  
 POSITION  
 SURF. DATA 11. TO LEG TIRE 240 12-20

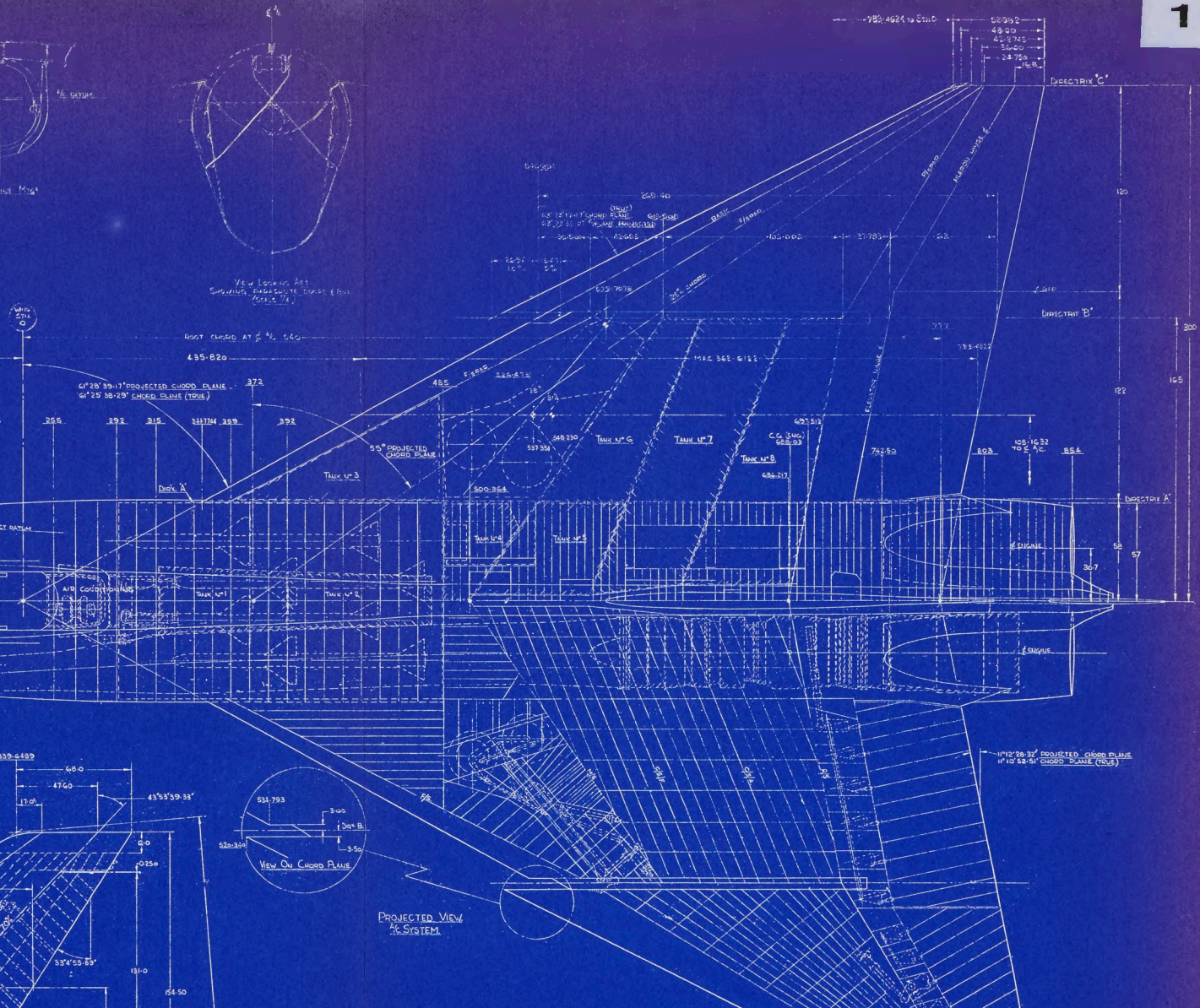
1/2 LEG STIFFENED  
 TIRE 240 12-20  
 TIRE 8 BEARS LOAD  
 TOUCHING

1/2 LEG FULLY COMPRESSED  
 TIRE 240 12-20  
 TIRE 8 BEARS LOAD  
 TOUCHING

1/2 LEG STIFFENED  
 TIRE 240 12-20  
 TIRE 8 BEARS LOAD  
 TOUCHING

STN 58 IN FRIE IN AIR  
 STN 58 L-05 STATIC  
 STN 58 L-07 FULLY COMPRESSED

14° 53' 41" 90° 13° 54' 24" 60°  
 15° 25' 25" 55°  
 PARALLEL TO A DATUM



**AERODYNAMIC DATA** C.G. POS. 25% MAC (937-331) TO 31% MAC (648-334)

CONDITION	A/W/B	C/G + Yc	C/G + Zc	% MAC
MAX. INTERNAL FUEL	538-59	111.80	87.77	UC UP
+4 MISSILES (LESS EXT. TANK)	539-05	9.42	26.19	MC DOWN
MAX. INTERNAL + EXTERNAL FUEL + 4 MISSILES + EXT. TANK	111.80	12.77	27.81	UC UP
FUEL + 4 MISSILES + EXT. TANK	589-15	1.50	23.21	UC DOWN
AIRCRAFT EMPTY (555 MISSILES)	540-11	8.49	29.76	UC UP
(555 MISSILES)	542-56	4.76	23.36	MC DOWN

Notes: Weight & C.G. as per Weight Report 3-0400-34  
18 JUL 55 Sept 1/58

**SUMMARY OF USABLE FUEL VOLUMES, WEIGHTS & C.G.**

TANK NO.	CAPACITY (GALLONS)	WEIGHT (LBS)	C.G. + Yc	C.G. + Zc	C/G + Yc	C/G + Zc
1	1966	351.74	22.47	7.37		
2	1981	354.42	23.31	6.88		
3 & 2	3385	446.14	24.22	79.30		
4 & 2	180	140.4	50.47	26.72	36.71	
5 & 2	2378	548.97	26.61	26.73		
6 & 2	308	240.2	59.11	22.40	101.07	
7 & 2	558	435.2	62.57	23.81	82.72	
8 & 2	346	269.9	67.57	24.92	76.74	
EXT. TANK	500	390.0				
TOTAL	2982	2333.7				

**AERODYNAMIC DATA**

WING		FIN & RUDDER	
TOTAL AREA - PROJECTED (AIRCRAFT SYSTEM) BASIC WING	1225°	TOTAL AREA (ROOT CHORD ON WING ROOT CHORD)	156.7817°
ASPECT RATIO	9.0408	ASPECT RATIO	1.0439
TAPER RATIO	0.889	TAPER RATIO	2.962
THICKNESS RATIO - PARALLEL TO $\frac{1}{2}$ C	3.5 & 3.8	THICKNESS RATIO (PARALLEL TO AC DATUM)	4%
AIRCRAF SECTION	NACA - 0008-5-6-3-7 MOD CAMBER 0075 MOD.	AIRCRAF SECTION	NACA 0004-G-3-7 MOD.
ANALFORM OF CHORD PLANE	NACA - 0008-5-6-3-7 MOD CAMBER 0075 MOD.		
INCIDENCE TO AC DATUM	4°	TOTAL AREA RUDDER (FT OF HINGE $\frac{1}{2}$ )	38-16.79°
TOTAL AREA OF ELEVATORS (FT OF HINGE $\frac{1}{2}$ ) PROJECTED (CHORD PLANE)	106-1153°	ANGULAR MOVEMENT OF RUDDER 1 TO HINGE $\frac{1}{2}$	130° - 30°
ANGULAR MOVEMENT OF ELEVATORS 1 TO HINGE $\frac{1}{2}$	UP 30° DOWN 20°		
TOTAL AREA OF ALERONS (FT OF HINGE $\frac{1}{2}$ ) PROJECTED (CHORD PLANE)	66-5531°		
ANGULAR MOVEMENT OF ALERONS 1 TO HINGE $\frac{1}{2}$	UP 10° DOWN 10°		

ISSUE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MOD. NO.	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068
REF. NO.	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068	171-068
DATE	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55	1/1/55
CHECKED																				
DESIGN APP.																				
CONTRACT APP.																				

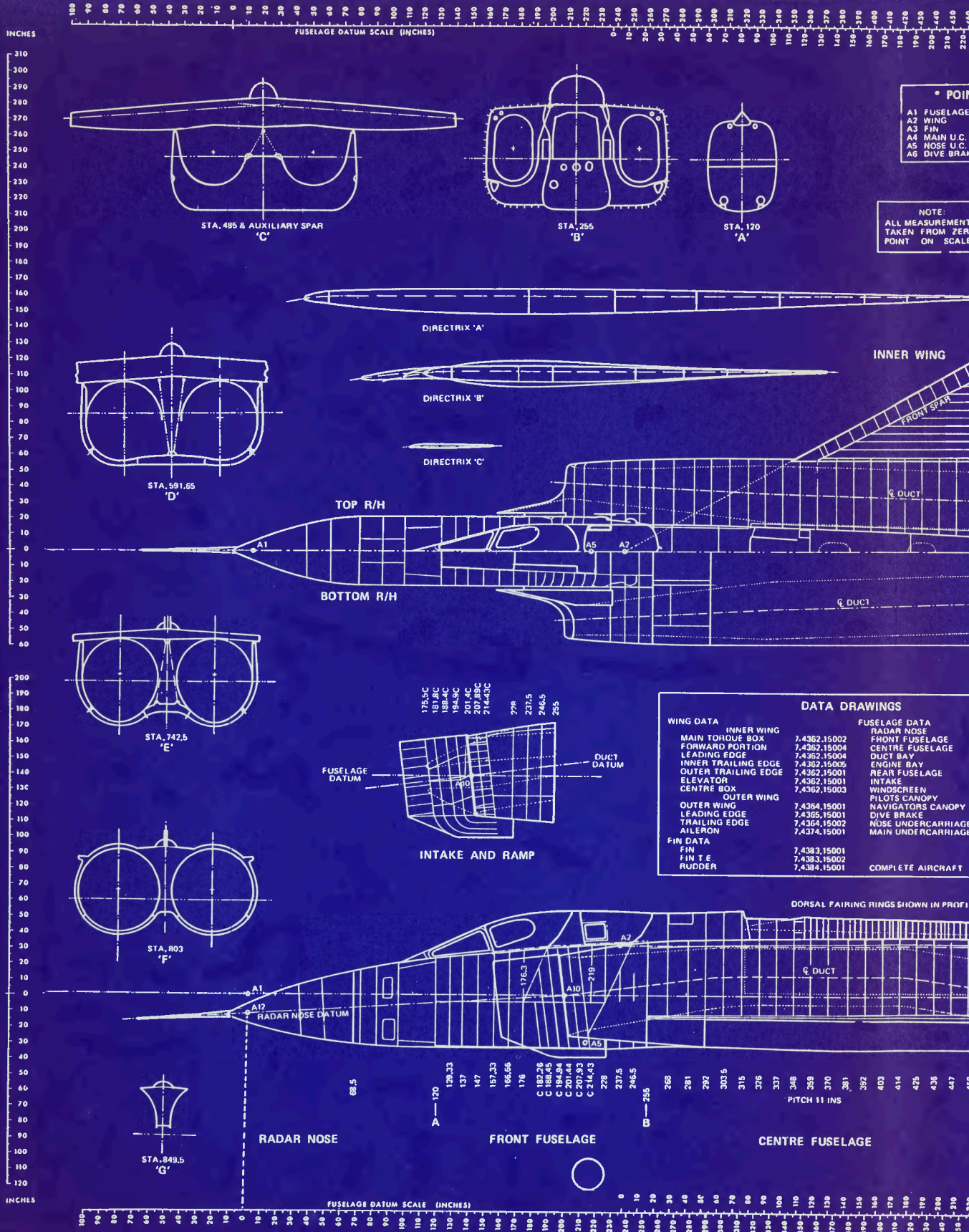
**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION
171-068	DATA BLOCK DATA BLOCK
171-068	DATA BLOCK DATA BLOCK
171-068	GA AIRCRAFT COMPLETE

**AVRO AIRCRAFT LIMITED**  
MALDEN ONTARIO

CLASS	MISCELLANEOUS REF. DRAWING	SCALE	1/4" = 1"
GROUP	AERODYNAMIC THREE VIEW - AC C.F.I.O.S. PLAN	NOTED	171-068
COMPONENT	AVRO ARROW MK2	TYPE	NEXT ASSEMBLY

7-4300-15010



- POINT
- A1 FUSELAGE
  - A2 WING
  - A3 FIN
  - A4 MAIN U.C.
  - A5 NOSE U.C.
  - AG DIVE BRAK

NOTE:  
ALL MEASUREMENTS  
TAKEN FROM ZERO  
POINT ON SCALES

DATA DRAWINGS		
WING DATA	INNER WING	FUSELAGE DATA
MAIN TORQUE BOX	7.4362.15002	RADAR NOSE
FORWARD PORTION	7.4362.15004	FRONT FUSELAGE
LEADING EDGE	7.4362.15004	CENTRE FUSELAGE
INNER TRAILING EDGE	7.4362.15005	DUCT BAY
OUTER TRAILING EDGE	7.4362.15001	ENGINE BAY
ELEVATOR	7.4362.15001	REAR FUSELAGE
CENTRE BOX	7.4362.15003	INTAKE
		WINDSCREEN
OUTER WING	7.4364.15001	PILOTS CANOPY
LEADING EDGE	7.4365.15001	NAVIGATORS CANOPY
TRAILING EDGE	7.4364.15002	DIVE BRAKE
AILERON	7.4374.15001	NOSE UNDERCARRIAGE
FIN DATA		MAIN UNDERCARRIAGE
FIN	7.4383.15001	
FIN T E	7.4383.15002	
RUDDER	7.4384.15001	

COMPLETE AIRCRAFT

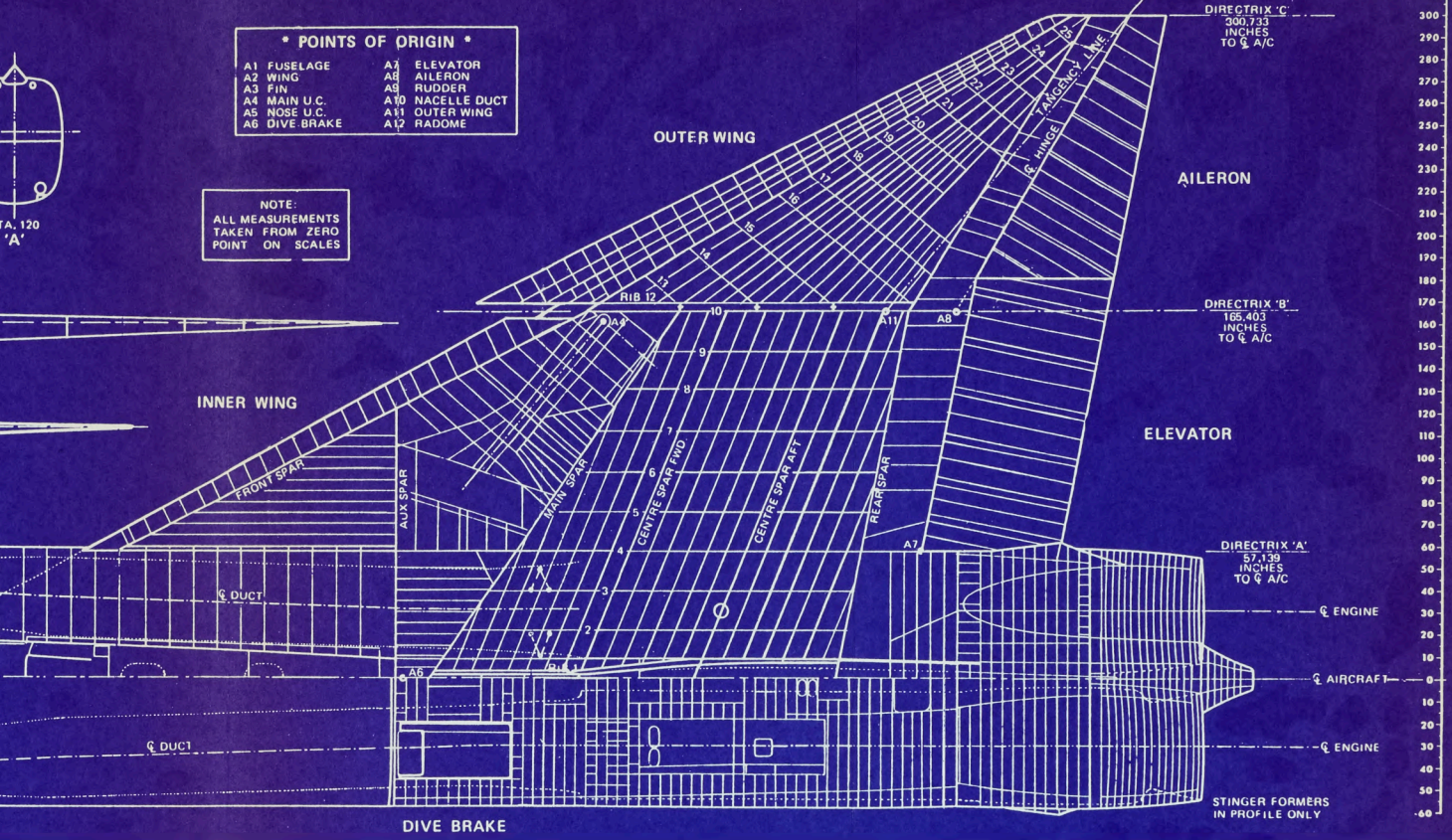
DORSAL FAIRING RINGS SHOWN IN PROFILE



**\* POINTS OF ORIGIN \***

A1 FUSELAGE	A7 ELEVATOR
A2 WING	A8 AILERON
A3 FIN	A9 RUDDER
A4 MAIN U.C.	A10 NACELLE DUCT
A5 NOSE U.C.	A11 OUTER WING
A6 DIVE BRAKE	A12 RADOME

NOTE:  
ALL MEASUREMENTS  
TAKEN FROM ZERO  
POINT ON SCALES

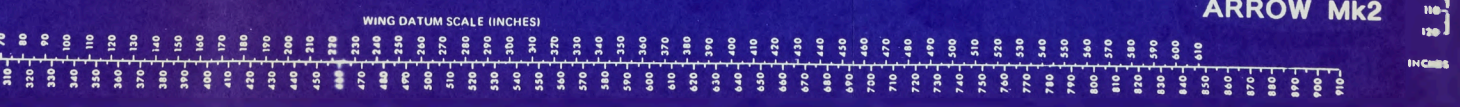
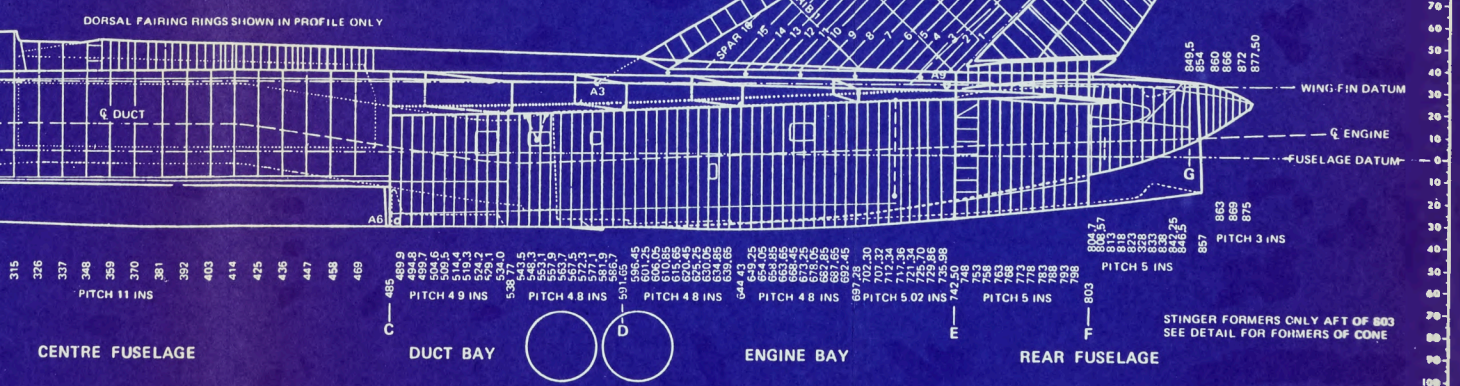


**DATA DRAWINGS**

INNER WING	FUSELAGE DATA	7.4351.15001
ENGINE BOX	RADAR NOSE	7.4352.15001
PORTION	FRONT FUSELAGE	7.4354.15001
EDGE	CENTRE FUSELAGE	7.4355.15001
TRAILING EDGE	DUCT BAY	7.4356.15001
TRAILING EDGE	ENGINE BAY	7.4358.15001
TRAILING EDGE	REAR FUSELAGE	7.4359.15001
TRAILING EDGE	INTAKE	7.4355.15001
TRAILING EDGE	WINDSCREEN	7.4352.15006
TRAILING EDGE	PILOTS CANOPY	7.4353.15001
TRAILING EDGE	NAVIGATORS CANOPY	7.4353.15002
TRAILING EDGE	DIVE BRAKE	7.4372.15001
TRAILING EDGE	NOSE UNDERCARRIAGE	7.4381.15001
TRAILING EDGE	MAIN UNDERCARRIAGE	7.4392.15001
TRAILING EDGE	COMPLETE AIRCRAFT	7.4300.15001

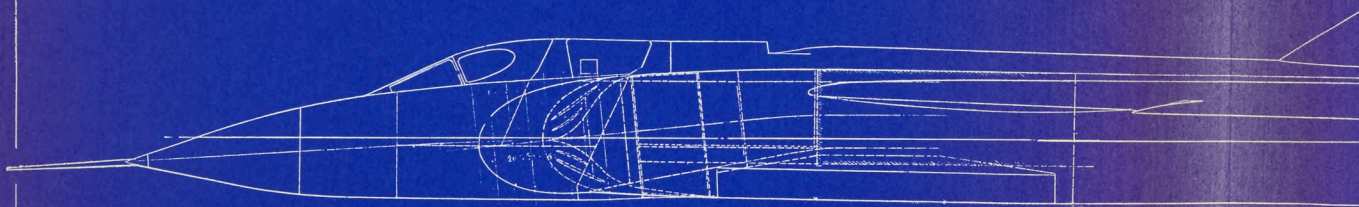
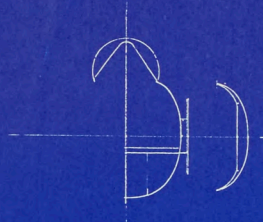
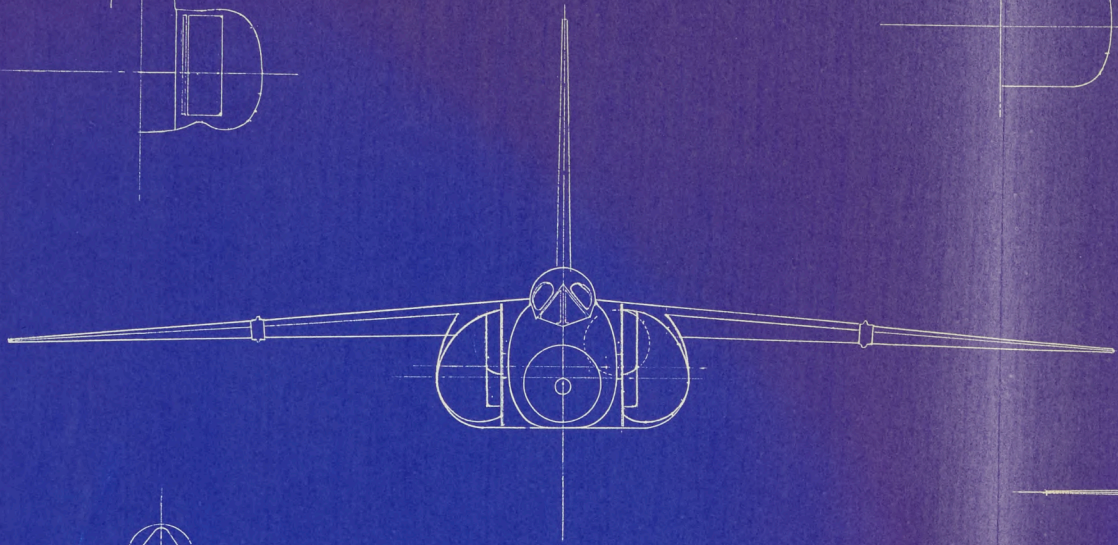
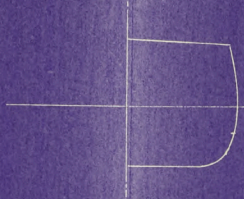
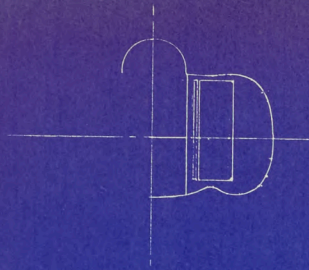


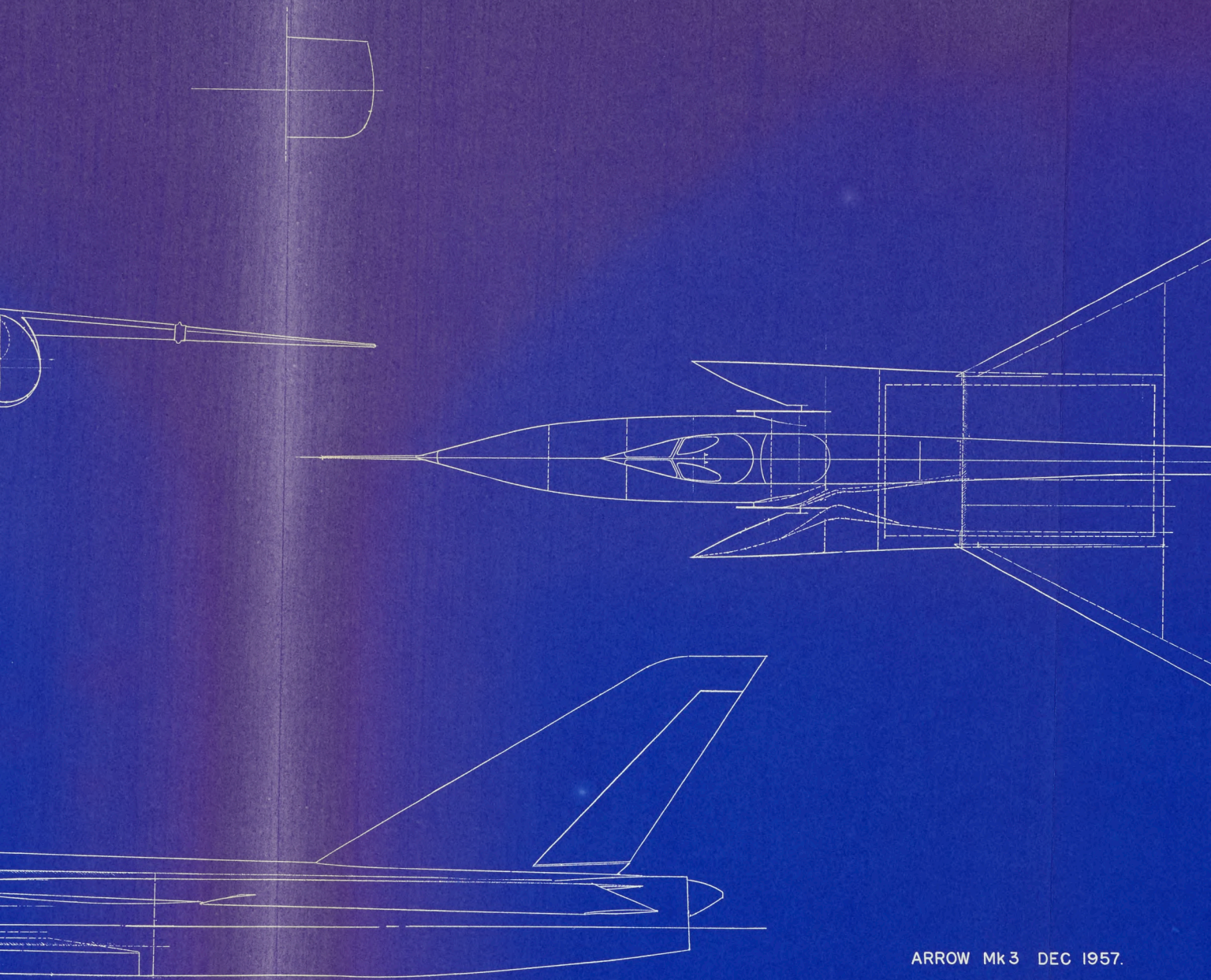
EXHAUST CONE



**ARROW Mk2**

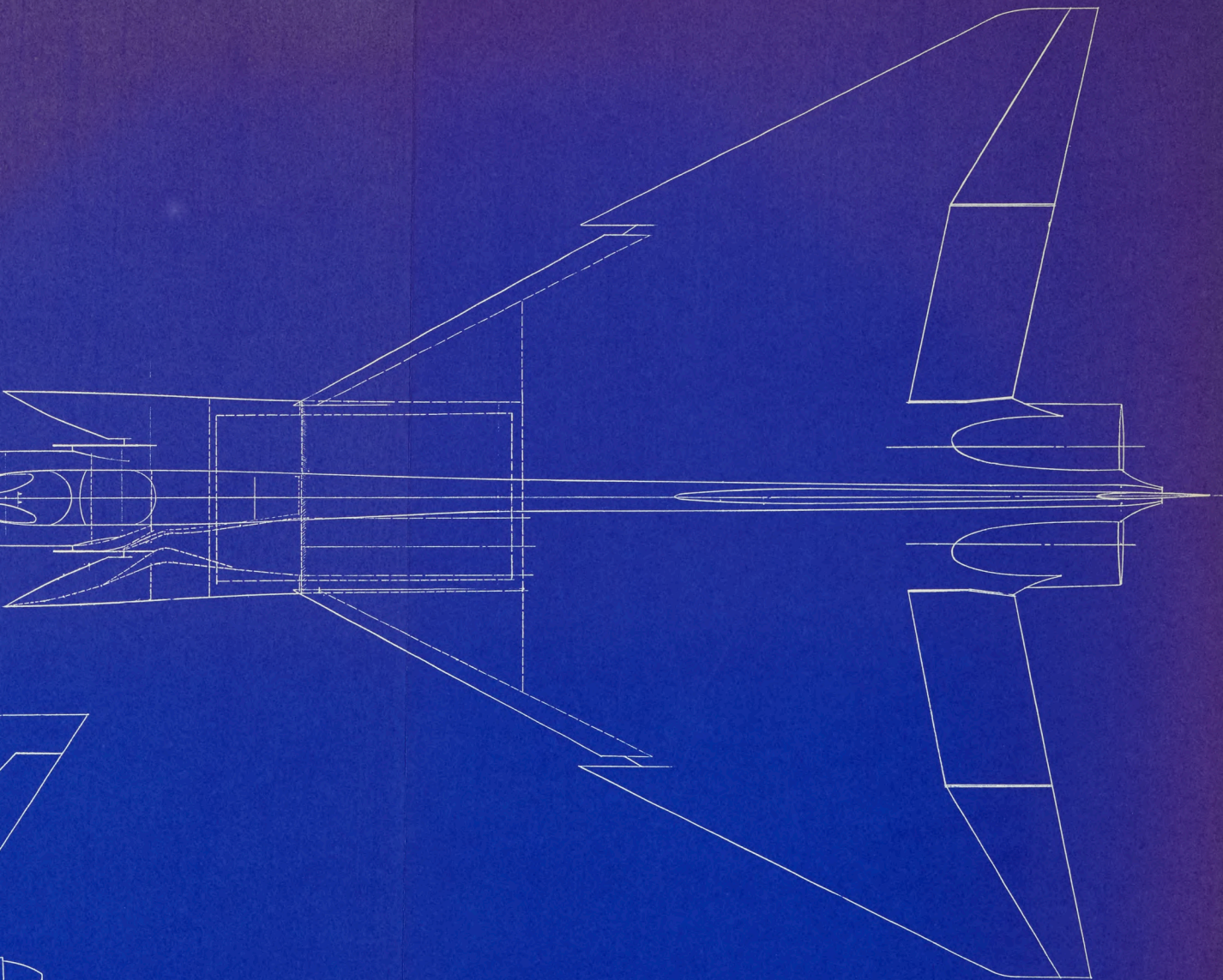
INCHES





ARROW Mk3 DEC 1957.

SK 21855



ARROW Mk3 DEC 1957.

SK 21855



DUFFING  
1910 1911 1912 1913  
MADE IN U.S.A.