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C-105 With J75 Report # 7-0400-05
Production Engines ISSUE 18

WEIGHT SUMMARY & C. G. POSITION

Mr. O. Michaelsen Sept. 1/55

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TO

DATE JAN 07 1993

Report no.: QCX - AVRO - CF105 - R-7-0400-05-Iss-18

has been ☐ downgraded to : _____

☒ de-classified

by (Name): Michel W. Drapeau

(Dept.): A/DND Coordinator, Access to Information

Date: Dec. 7, 1992

R. Anger
Signature

Classification cancelled / changed to: UNCLASSSIFIED

By authority of: DRDA 7/DARFT 5-8/DAS Eng 6-4-5

Date: 5 Nov 1992

Signature: B. Aubrey

Unit / Rank / Appointment: DSIS 3, Secretary CRAD HQ DRP

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Date: Sept., 1955
Aircraft: C-105 With J75 Engines as Interim Power Plant

Report # 7-0400-05
Sheet # 001-1 Issue 18
Prepared By K. Griffin
Checked By: E. Burnett

INTRODUCTION

This summary is a revised Weight and C.G. estimate of the C-105 Aircraft, based on the latest design information in being on Aug. 31st, 1955. All Weight and C.G. changes are relative to Issue 17.

GENERAL:

(a) As in Issue 17, Pratt and Whitney J75 Engines comprise the Interim Power Plant (6,175 lb. each)

(b) The weight of Radio and Radar carried in this issue is 2,908 lb. The system is described as "Integrated Electronic System for C-105 Aircraft with certain deviations". The breakdown into items is given in Weight Summary Issue 14.

(c) As in Issues 15, 16, and 17 the extended leading edge is recorded in this issue.

1. STRUCTURE	WEIGHT (lb)
(a) Wing:	
I/W Joints - Elevator Jack fittings changed to Steel from Al.	+ 32
I/W Structure M/S to R/S - Skin thickness reduced	- 50
Ribs - redesigned	- 18
Stringer posts - redesigned	- 71
Weight Change Decrease	- 107
Ref. 002-1	
(b) Fin and Rudder:	
No Weight Change	0
(c) Fuselage to Sta. 255":	
Intake Ramp - L/Edge Tip and Support - Mg. were Al.	- 17
Miscellaneous other changes	- 2
Navigator's Canopy - redesign of window; skinning now Al. was Mg., etc.	+ 6
Weight Change Decrease	- 13
Ref. 002-1	
(d) Fuselage Sta. 255" to 485":	
Miscellaneous Structural Changes	+ 4
Ref. 002-1	
Weight Change Increase	+ 4
(e) Fuselage Sta. 485" Aft.	
Rear Fuselage - complted redesign	0
Ref. 002-1	
TOTAL STRUCTURE WEIGHT DECREASE	- 116

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INTRODUCTION

	WEIGHT (lb)
2. LANDING GEAR	
(a) Main Undercarriage - Increase in Weight of Dowty parts Ref. 002-2	+ 70
TOTAL LANDING GEAR INCREASE	+ 70
3. POWER PLANT & SERVICES	
No Weight Change	0
4. FLYING CONTROLS	
No Weight Change	0
5. EQUIPMENT	
No Weight Change	0

SUMMARY

Weight Change - Aircraft Weight Empty

Structure	- 116 lb.
Landing Gear	+ 70 lb.
	- 46 lb.

Weight Change - Operational Load Less Fuel

Nil.

Weight Change - Operational Weight Empty - (Aircraft Less Fuel).

Issue 17	Issue 18		
43,731	43,685	=	- 46 lb.

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S E C R E T

Date: 1st, Sept. 1955
Aircraft: C-105 With J75 Engines
as Interim Power Plant

Report # 7-0400-05
Sheet # 002-1 Issue 18
Prepared By: K. Griffin
Checked By: E. Burnett

WEIGHT CHANGES TO 7-0400-05 ISSUE 17

WEIGHT CHANGES

Wing:

+ 31.70	I/W Joints - Elevator Jack fittings Steel were Al.	-	50.00
- 138.41	I/W Structure M/S to R/S - Skin thickness reduced	-	17.63
	detailed est. re-designed ribs	-	70.78
	detailed est. re-designed stringer posts	-	138.41
- 106.71			

Front Fuselage -(Fwd. Sta. 255")

- 19.41	Intake Ramp - L/E Tip and Support Casting Mg. was Al.	-	16.54
	Miscellaneous changes L/Edge	-	4.28
	Boundary layer duct - finger plates added	+	2.35
	Skins & Stringers 214 aft. - revised est.	-	0.94
		-	19.41
+ 6.14	Navigators Canopy - Window assy. Square was round	-	4.81
	Inner and Outer Skins Al. were Mg.	+	5.26
	Casting re-estimate to Prod. Dwgs.	-	2.56
	Doublers Al. were Mg.	+	3.25
	Hinge - previously underestimated	+	4.72
	Miscellaneous	+	0.28
		+	6.14
- 13.27			

Centre Fuselage (255" - 485")

+ 2.12	Formers C.F. - Top tie tubes .049" were .035"	+	1.56
+ 2.34	Structure below lower longeron - addition Doppler Mtg. Strct.	+	0.78
	Stiffeners on Panels	+	2.34
+ 4.46			

Aft. Fuselage (485" aft.)

0.00	Rear Fuselage - Redesign completely		
	T/Edge Extrusion - unnecessary	-	7.00
	Latches - none previously	+	18.00
	Torque Box - redesign	+	3.00
	Longerons & streaming Fittings - redesign	-	13.00
	Skins, fillets & doors - Al. & Steel were Al. & titanium	-	8.00
	Chute container & centre struct. redesign	+	14.00
	Tunnel - part steel & ½" insulation added	+	30.00
	Formers - redesigned entirely	-	54.00
	Stinger - was tatanium now "Inconel X"	+	1.00
	Miscellaneous Items	+	16.00
			0.00

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S E C R E T

Date: 1st, Sept. 1955
Aircraft: C-105 With J75 Engines as Interim Power Plant

Report # 7-0400-05
Sheet # 002-2 Issue 18
Prepared By: K. Griffin
Checked By: E. Burnett

WEIGHT CHANGES TO 7-0400-05 Issue 17

WEIGHT CHANGES

No estimate has been made for the deletion of the Gill Inflation Bag.

Undercarriage

+	0.02	Main U/C Doors - C.G. Changes to linkage
+	70.00	Main U/C - inc. in Dowty parts from 590 to 625 lb/assy.
+	70.02	
-	45.50	TOTAL WEIGHT CHANGE

S E C R E T

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Date: 1st. Sept. 1955
Aircraft: CF105 With J75 Engines as Interim Power Plant

Report # 7-0400-05
Sheet # 003-1 Issue 18
Prepared By: J. Murphy
Checked By: E. Burnett

WEIGHT AND C. G. SUMMARY

Ref. No.	Description	WEIGHT lb.	H. ARM ins.	V. ARM ins.
	STRUCTURE	16,792.19	566.33	138.88
1000000	Wing	9,529.38	642.15	142.58
2000000	Fin and Rudder	911.57	756.76	211.28
3000000	Fuselage Structure Fwd. 255"	2,142.09	184.05	129.83
	255" to 485"	1,501.32	371.63	132.24
	Aft. 485"	2,707.83	645.75	112.30
4000000	UNDERCARRIAGE - Up Position	2,843.97	485.08	134.10
4010100	Main Undercarriage	1,847.60	539.88	141.00
4010200	Main U/C Doors & Fairings	287.32	539.21	136.40
4010300	Main U/C Hydraulics	279.84	535.01	137.75
4020100	Nose Wheel Undercarriage	284.34	165.18	100.04
4020200	Nose U/C Doors & Fairings	25.92	163.71	89.22
4020300	Nose U/C Hydraulics	118.95	220.34	103.95
5000000	POWER PLANT & SERVICES (10,620.78)	13,970.78	653.53	119.06
5010000	Engines J75 (9,297.00)	12,647.00	662.35	117.82
5020000	Gear Box & Drive	150.00	606.00	94.66
5030000	Engine Controls	25.10	356.68	119.39
5040000	Pneumatic Starting System	70.00	610.00	94.75
5050000	Engine De-Icing	65.75	564.53	114.37
5060000	Fire Extinguishing System	90.00	610.65	129.00
5070000	Engine Mountings & Brackets	221.11	645.29	132.67
5080000	Fuel System	701.82	536.24	143.92
6000000	FLYING CONTROLS GROUP	1,738.26	652.07	140.52
6010000	Mechanical Flying Controls	773.43	679.76	145.88
6030000	Flying Controls Electronics	108.00	222.33	131.43
6000000	Flying Controls Hydraulics	856.83	681.24	136.83
	EQUIPMENT FIXED & REMOVABLE	6,526.75	303.70	114.72
7010000	Instruments	57.30	146.41	137.04
7010003	Probe	15.00	-18.00	108.00
7030000	Oxygen System	46.12	220.36	138.15
7040000	Air Conditioning System	624.95	326.22	134.63
7050000	Hydraulic Main System	215.66	591.04	117.41
7060000	Armament Provisions	31.34	327.65	104.45
7080000	Brake Parachute	68.03	794.01	126.23
7090000	Electrical System	779.19	402.81	121.36
7100000	Low Pressure Pneumatics	16.60	217.17	133.41
7110000	Oil & Hydraulic Fluid Cooling	119.80	567.91	104.22
7120000	Intake De-Icing	50.60	204.55	113.76
7000000	Radio & Radar Fixed, Power Supplies	921.10	220.05	111.00
7160000	Canopy Actuation	47.00	223.43	156.83
7170000	Cabin Consoles	20.85	177.01	125.38
7180000	Radar Door Actuation	10.00	268.00	95.00
7190000	Radome Anti-icing	16.80	66.35	124.40
7200000	Cabin Insulation	11.91	179.24	130.00
7210000	Cockpit Pressure Sealing	20.00	186.01	130.00

S E C R E T

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Date: 1st. Sept. 1955
Aircraft: C-105 With J75 Engines
as Interim Power Plant

Report # 7-0400-05
Sheet # 003-2 Issue 18
Prepared By: J. Murphy
Checked By: E. Burnett

WEIGHT & C.G. SUMMARY

Ref. No.	Description	WEIGHT lb.	H. ARM ins.	V. ARM ins.	C.G. POSITION % M.A.C.
	EQUIPMENT (Fixed & Remov. (Cont'd.)				
8010100	Ejector Seats	204.00	200.10	136.25	
8010200	Emergency Provision	16.95	166.01	130.65	
8020000	Radar Removable	1,259.70	141.75	114.53	
8000000	Radio Removable & I.F.F.	276.20	284.51	123.98	
8050100	Missile Pack Structure	676.17	385.26	95.61	
8050200	Missile Pack Mechanisms	410.48	373.88	102.86	
8050300	Missile Pack Hydraulics	293.00	336.29	101.00	
8050400	Missile Pack Electronics	318.00	389.15	101.22	
	AIRCRAFT WEIGHT EMPTY 38,521.95	41,871.95	552.53	128.24	
9000000	USEFUL LOAD	17,692.67	522.11	140.37	
9010000	Crew	430.00	194.00	136.50	
9020000	Oil	85.08	611.71	135.00	
9050000	Alcohol for Radome De-Icing	22.00	93.00	138.00	
9070000	Residual Fuel	219.80	536.70	135.07	
9090000	Fuel for Combat Mission	15,880.00	539.20	143.50	
9030000	Missiles (Armament)	1,042.40	399.12	95.60	
9040000	Oxygen Charge	13.39	259.69	159.91	
	Normal Combat Mission U/C Up.	59,564.62	543.49	131.85	29.69
	Normal Combat Mission U/C Down		545.06	129.69	30.13
	Half Combat Mission Fuel 1011 @ 7.85 lb/gal.	7,940.00	540.85	139.60	
	Combat Weight(Half Combat Mission Fuel) U/C Up	51,624.62	544.40	129.45	29.94
	Combat Weight(Half Combat Mission Fuel) U/C Down		546.21	126.97	30.44
	Operational Weight Empty U/C Up	43,684.62	545.05	127.61	30.12
	Operational Weight Empty U/C Down		547.19	124.67	30.71
	Operational Weight Empty (Less Missiles) U/C Up	42,642.22	548.62	128.39	31.11
	Operational Weight Empty (Less Missiles) U/C Down		550.81	125.38	31.71
	Maximum Internal Fuel 2,544 gal. @ 7.85 lb/gal.	19,970.00	538.88	144.33	
	Water (Air-Conditioning System)	125.00	268.00	95.00	
	A.U.W. Max. Internal Fuel U/C Up	63,779.62	542.58	132.78	29.44
	A.U.W. Max. Internal Fuel U/C Down		544.04	130.77	29.84
	Max. External Fuel, 500 gal. @ 7.85 lb/gal. & Drop Tank	4,235.00	528.90	62.00	
	A.U.W. Max. Internal & External Fuel U/C Up	68,014.62	541.73	128.37	29.21
	A.U.W. Max. Internal & External Fuel U/C Down		543.10	126.49	29.59

REPORT NO: 7-0400-05 ISSUE 18

BY: Kathleen Griffin

DATE: AUG 29TH 1955

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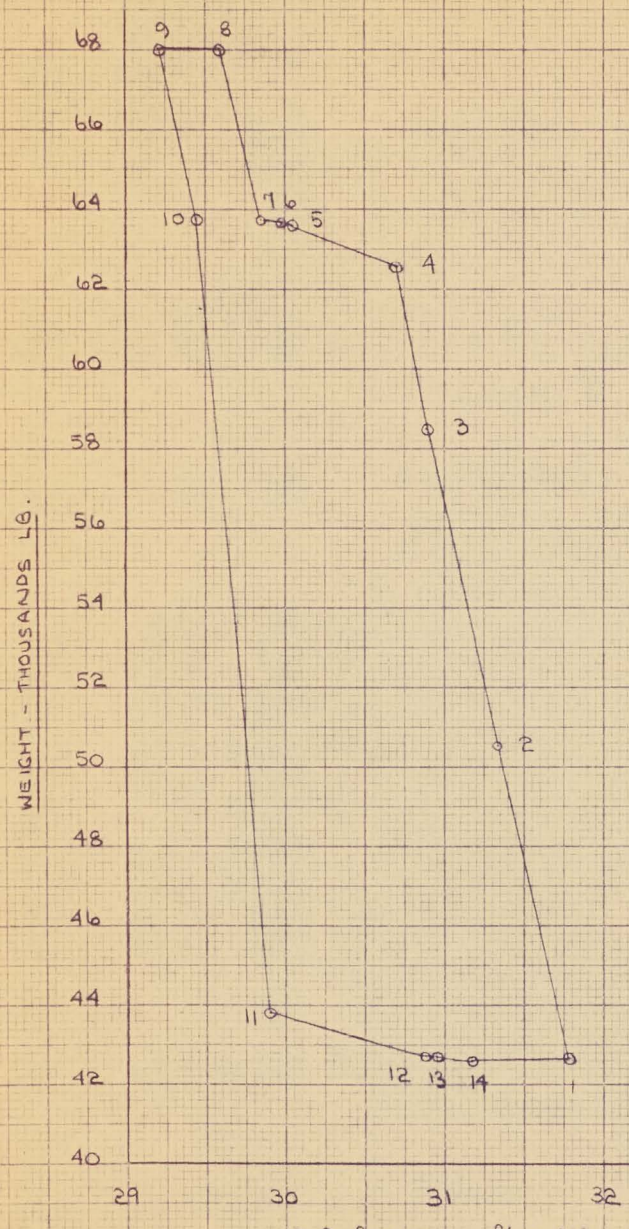
2105 A/C C.G. ENVELOPE FOR A/C FLIGHT CONDITIONS WITH J75 ENGINES (A25)



No. \ CONDITION	COMBAT MISSION FUEL	NORMAL MISSION FUEL	MAX INTERNAL FUEL	EXT FUEL TANKS	MISSILES	DEICING FLUID	WATER	U/C UP	U/C DOWN
1									*
2	*								*
3		*							*
4			*						*
5			*		*				*
6			*		*	*			*
7			*		*	*	*		*
8			*	*	*	*	*	*	
9			*	*	*	*	*	*	
10			*		*	*	*	*	
11					*	*	*	*	
12						*	*	*	
13							*	*	
14								*	

N.B. IN ORDER TO BRING POINT ① TO THE AFT LIMIT IE 31% MAC 280 LB BALLAST MUST BE ADDED AT STA 120 INS.

A. V. ROE CANADA LTD.
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WEIGHTS C. OF G. TABULATI

(AIRFRAME)

PROJECT C-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT _____

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H
	TOTAL WING GROUP	1000000			
	OUTER WING	1010000			
14	SKIN O W	101000164		798006	8
14	STRINGERS AND POSTS O W	101000264		125206	9
14	SPARS O W	101000364		367367	0
14	RIBS O W	101000464		133346	9
14	AILERON CONTROL BOX O W	101000664		496537	6
3	WING JOINTS O W	101000764		116506	4
				203693	
	AILERON	1020000			
17	AILERON STRUCTURE	102000174		333847	9
17	AILERON MARRY UP ITEMS	1020002		8867	8
				34270	
20	ELEVATOR STRUCTURE	10300008 2		435677	5
				43567	
	INNER WING	1040000			
12	MAIN U C STRUCTURE	104000162		234585	7
12	FRONT SPAR I W	104000262		180004	5
12	MAIN SPAR I W	104000362		158005	6
12	FWD CENTRE SPAR I W	104000462		562660	
12	AFT CENTRE SPAR I W	104000562		401465	
12	REAR SPAR I W	104000662		100007	0
12	I W STRUCTURE F S TO M S	104000762		891704	9
12	I W STRUCTURE M S TO R S	104000862		277439	6
12	STRUCTURE AFT OF REAR SPAR	104000962		279207	1
12	ELEVATOR CONTROL BOX I W	104001062		418537	2
16	WING FAIRINGS	104001 1		9270	6
12	WING JOINTS I W	104001 2 62		996286	5
				622178	
12	LEADING EDGE I W	105000063		292304	5
				29230	
14	LEADING EDGE O W	106000065		200006	5
				20000	

WEIGHTS C. OF G. TABULATION
(AIRFRAME)

REPORT NO. 7-0400-05 Issue 18

Sheet # 004-1

A.U.W. _____ LBS. COMPONENT _____ DATE Sept. 1/55 PAGE _____

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	1000000						
	1010000						
	101000164		79800	68900	13600	54982200	10852800
W	101000264		12520	69820	13700	8741464	1715240
	101000364		36736	70360	13601	2584745 0	4996463
	101000464		13334	69340	13740	9245796	1832092
W	101000664		49653	76962	13535	38213942	6720534
	101000764		11650	64460	13840	7509590	1612360
			203693			144540442	27729489
	1020000						
	102000174		33384	79190	13556	26436790	4525535
S	1020002		8867	8207	13079	692914	115880
			34270			27129704	4641415
	103000082		43567	75550	14260	32914869	6212654
			43567			32914869	6212654
	1040000						
	104000162		23458	57683	14216	13531278	3334789
	104000262		18000	45000	14400	8100000	2592000
	104000362		15800	56570	14280	8938060	2256240
	104000462		5626	60000	14600	3375600	821396
	104000562		4014	65400	14600	2625156	586044
	104000662		10000	70200	14500	7020000	1450000
M S	104000762		8917	49297	14470	4395813 5	1290289 9
R S	104000862		27743	96215	14524	172439436	40295240
SPAR	104000962		2792	71880	15000	20068896	4188000
W	104001062		4185	37257	14316	30375233	5991675
	1040011		9270	62080	14920	5754816	1383084
	104001262		9962	86501	14588	64777129	14533733
			622178			380963739	90335100
	105000063		2923	04557	14500	13322157	4238350
			29230			13322157	4238350
	106000065		2000	06531	01355 0	13062000	2710000
			20000			13062000	2710000

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WEIGHTS C. OF G. TABULATIO

(AIRFRAME)

PROJECT C-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT _____

DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H.
24 FIN	201000083		79620	74
			79620	
25 RUDDER	202000084		11537	81
			11537	

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WEIGHTS C. OF G. TABULATION
(AIRFRAME)

REPORT NO. 7-0400-05 Issue 18

Sheet # 004-2

A.U.W. _____ Lbs. COMPONENT _____ DATE Sept. 1/55 PAGE _____

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
201000083		79620	74851	21077	59596366	16781507
		79620			59596366	16781507
202000084		11537	81368	21481	9387426	2478263
		11537			9387426	2478263

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WEIGHTS C. OF G. TABULATIO
(AIRFRAME)

PROJECT 0-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT _____

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H.
	TOTAL FUSELAGE GROUP	3000000			
	FUSELAGE BASIC STRUCTURE	3010000			
3	RADOME	3010001	51	12000	4
3	RADAR NOSE ACCESS DOORS	3010002	51	5538	9
3	NOSE STRUCTURE FWD 120	3010003	51	9167	9
3	SKIN F F	3010004	52	6741	19
4	SKIN C F	3010005	54	13059	37
5	SKIN D B	3010006	56	8379	53
5	SKIN E B	3010007	58	12548	67
3	STRINGERS F F	3010008	52	1280	18
4	STRINGERS C F	3010009	54	5173	36
5	STRINGERS D B	3010010	56	500	50
3	FORMERS F F	3010011	52	7717	18
4	FORMERS C F	3010012	54	27010	37
5	FORMERS D B	3010013	56	9732	53
5	INTERMEDIATE FORMERS E B	3010014	58	16804	66
5	HEAVY FORMERS E B	3010015	58	16999	66
3	LONGERONS F F	3010016	52	5311	18
5	LONGERONS D B	3010017	56	326	58
5	LONGERONS E B	3010018	58	5696	65
5	TOP LONGERONS E B	3010019	58	4352	66
5	TOP WING LONGERONS D B	3010021	56	1890	53
3	LONGERONS 255 485 F F	3010022	52	53	25
3	LONGERONS 255 485 C F	3010023	54	16148	39
4	DUCT BAY LONGERONS C F	3010024	54	451	47
5	DUCT BAY LONGERONS D B	3010025	56	11012	52
4	STR BELOW BOTTOM LONGERON	3010026	54	3961	27
5	LONGITUDINAL BEAMS D B	3010027	56	5056	51
4	RADAR ACCESS DOOR	3010028	54	1913	27
5	MAIN FRAME AT STN 53877	3010029	56	5178	53
5	DIVE BRAKE ACCOM STRUCTURE	3010030	56	2840	50
3	COCKPIT DECKING	3010031	52	15409	18
4	DUCT C F	3010032	54	33512	37
5	DUCT D B	3010033	56	29290	54
3	CANOPY ARCH F F	3010034	52	5806	21
3	CANOPY ARCH C F	3010035	52	1598	26
5	ACCESS PANEL STIFFNERS	3010036	56	1948	53
3	NOSE U C SUPPORT STRUCTURE	3010037	52	3680	21
3	CREW BULKHEADS	3010038	52	10531	20
4	EQUIP BAY STRUCTURE	3010039	54	3683	28
3	WINDSCREEN R N	3010040	51	1515	11
3	WINDSCREEN F F	3010041	52	11524	14
6	REMOV TAIL CONE	3010042	59	65500	79
6	FAIRING UNDER RUDDER R F	3010043	59	1065	77
4	DORSAL FAIRING AIR OUTLET	3010044	54	2110	29
5	LIGHT HEAVY FORMERS E B	3010045	58	2200	66
5	ENGINE ACCESS DOOR E B	3010046	58	8477	62
4	SEAL IN MISSILE BAY	3010047	54	618	29
4	JOINT STRAPS AND MISC	3010048	54	1553	33
4	FLOOR C F	3010049	54	11498	37

WEIGHTS C. OF G. TABULATION
(AIRFRAME)

REPORT NO. 7-0400-05 Issue 18
Sheet # 004-3

A.U.W. _____ LBS. COMPONENT _____ DATE Sept. 1/55 PAGE _____

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	3000000						
URE	3010000						
	3010001	51	12000	4650	11070	5580000	13284000
RS	3010002	51	5538	9200	11400	509496	631332
O	3010003	51	9167	9250	11239	847948	1030279
	3010004	52	6741	19280	11535	1299665	777574
	3010005	54	13059	37050	14240	4838360	1859602
	3010006	56	8379	5381	11037	4508824	869656
	3010007	58	12548	6740	11078	8457477	1353427
	3010008	52	1280	1856	9118800	237683	151040
	3010009	54	5173	3658	2141	62	1892387	732600
	3010010	56	500	5058	2100	15	252910	50075
	3010011	52	7717	1826	7118	27	1409664	912690
	3010012	54	27010	3757	6132	96	10149278	3591250
	3010013	56	9732	5343	6102	11	520039	2	993735
E B	3010014	58	16804	6625	3103	97	11133154	1747112
	3010015	58	16999	6617	2105	43	11248578	1792205
	3010016	52	5311	1834	7	8622	974409	457914
	3010017	56	326	5885	8	9400	191877	30644
	3010018	58	5696	6589	3	9600	3753326	5	546816
	3010019	58	4352	6694	2	13915	2913316	605581
B	3010021	56	1890	5336	3	13415	1008561	253544
	3010022	52	53	2529	5	15250	13406	8083
	3010023	54	16148	3960	9	12590	6396061	2033033
F	3010024	54	451	4796	4	10700	216318	48257
B	3010025	56	11012	5251	8	9834	5783282	1082920
ERON	3010026	54	3961	2741	0	9195	1085710	364214
B	3010027	56	5056	5163	3	9103	2610564	460248
	3010028	54	1913	2748	5	9178	525788	175575
77	3010029	56	5178	5387	4	10454	2789596	541308
CTURE	3010030	56	2840	5052	4	9368	1434882	266051
	3010031	52	15409	1865	7	14850	2874857	2288237
	3010032	54	33512	3725	6	12919	12485231	4329415
	3010033	56	29290	5423	6	11804	15885724	3457392
	3010034	52	5806	2178	7	15992	1264953	928496
	3010035	52	1598	2609	5	16272	416998	260027
S	3010036	56	1948	5330	8	9662	1038440	188216
CTURE	3010037	52	3680	2118	8	9513	779718	350078
	3010038	52	10531	2093	2	12363	2204349	1301948
	3010039	54	3683	2838	9	13118	1045567	483136
	3010040	51	1515	1135	6	15014	172043	227462
	3010041	52	11524	1413	1	15014	1628456	1730213
	3010042	59	65500	7937	8	12500	51992590	8187500
R F	3010043	59	1065	7752	3	15600	825620	166140
TLET	3010044	54	2110	2929	6	16407	618146	346188
B	3010045	58	2200	6636	5	10700	1460030	235400
B	3010046	58	8477	6269	6	8865	5314740	751486
	3010047	54	618	2940	0	11151	101692	68913
	3010048	54	1553	3361	4	13118	522025	203723
	3010049	54	11498	3783	0	11430	4349693	1314221

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WEIGHTS C. OF G. TABULAT
(AIRFRAME)

PROJECT C-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
3	BULKHEAD AT STN 120	30100050	52	2564
3	BULKHEAD AT STN 255	30100051	52	9864
4	BULKHEAD AT STN 485 C F	30100052	54	207
4	BULKHEAD AT STN 485 D B	30100053	56	9606
5	ENGINE TUNNEL E B	30100054	58	38118
4	INTEGRAL FUS FUEL TANK	30100055	54	21154
3	COCKPIT FLOOR	30100056	52	5265
3	SLING AND JACK FITTINGS FF	30100057	52	214
4	SLING AND JACK FITTINGS CF	30100058	54	957
5	AFTBURNER COOLING DUCT D B	30100059	56	961
5	AFTBURNER COOLING DUCT E B	30100060	58	1174
4	DORSAL OVER FUEL TANK	30100061	54	5574
4	DORSAL HOT AIR DEFLECTOR	30100062	54	1551
3	SHEAR PANEL BELOW NAV ARCH	30100063	52	1708
				527268
9	DIVE BRAKES	30200000	72	11132
				11132
	AIR INTAKES	3030000		
3	FORWARD NACELLE	30301000	52	2162
				2162
3	LIP AND RAMP	30302000	55	60965
				60965
	PILOTS AND NAVIG CANOPIES	3040000		
3	PILOTS CANOPY	30401000	53	22071
				22071
3	NAVIGATORS CANOPY	30402000	53	11526
				11526

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	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	30100505	2	2564	12000	12672	307680	324910
	30100515	2	9864	25500	11913	2515320	1175098
C F	30100525	4	207	47835	10712	99018	22174
D B	30100535	6	9606	48500	10712	4658910	1028995
	30100545	8	38118	66784	12045	25456725	4591313
NK	30100555	4	21154	39329	14609	8319657	3090388
	30100565	2	5265	17705	11575	932168	609424
NGS FF	30100575	2	214	25338	8967	54223	19189
NGS CF	30100585	4	957	25721	15036	246150	143895
CT D B	30100595	6	961	57105	9288	548779	89258
CT E B	30100605	8	1174	62538	9325	734196	109476
NK	30100615	4	5574	41293	14207	2301672	791898
CTOR	30100625	4	1551	33622	16500	521477	255915
V ARCH	30100635	2	1708	25765	15330	440066	261836
			52726	8		24443776	4 64027125
	30200000	72	11132	50815	9081	5656726	1010897
			11132			5656726	1010897
	3030000						
	30301000	52	2162	23620	9250	510664	199985
			2162			510664	199985
	30302000	55	60965	21150	12184	12894098	7427976
			60965			12894098	7427976
NOPIES	3040000						
	30401000	53	22071	17556	15976	3874785	3526063
			22071			3874785	3526063
	30402000	53	11526	23448	16331	2702616	1882311
			11526			2702616	1882311

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	UNDERCARRIAGE UP POSITION	4000000		
	MAIN UNDERCARRIAGE GROUP	4010000		
35	MAIN UNDERCARRIAGE	4010100	92	1847605
				184760
12	MAIN U C DOORS FAIRINGS	4010200	92	287325
				28732
	MAIN U C HYDRAULICS	4010300		
57	MAIN U C HYDRAULICS F F	401030152		7781
57	MAIN U C HYDRAULICS C F	401030254		2943
57	MAIN U C HYDRAULICS I W	401030362		269125
				27984
	NOSE UNDERCARRIAGE GROUP	4020000		
36	NOSE WHEEL UNDERCARRIAGE	4020100	91	284341
				28434
3	NOSE U C DOOR AND FAIRING	4020200	91	25921
				2592
	NOSE U C HYDRAULICS	4020300		
57	NOSE U C HYDRAULICS F F	402030152		102762
57	NOSE U C HYDRAULICS C F	402030254		16193
				11895

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WEIGHTS C. OF G. TABULATIO
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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H. A
	FLYING CONTROLS GROUP	6000000			
	MECHANICAL CONTROLS	6010000			
56	MECHANICAL CONTROLS F F	6010001	52	7735	153
56	MECHANICAL CONTROLS C F	6010002	54	809	362
56	MECHANICAL CONTROLS D B	6010003	56	759	533
56	MECHANICAL CONTROLS FIN	6010004	83	8344	787
56	MECHANICAL CONTROLS I W	6010005	62	36744	719
56	MECHANICAL CONTROLS O W	6010006	64	22952	770
				77343	
	FLYING CONTROLS HYDRAULICS	6020000			
57	FLYING CONT HYDRAULICS D B	6020001	56	992	563
57	FLYING CONT HYDRAULICS E B	6020002	58	30040	644
				31032	
	AUTO PILOT AND TIE IN	6030000			
61	AUTO PILOT AND TIE IN R N	6030001	51	5700	99
61	AUTO PILOT AND TIE IN F F	6030002	52	2200	235
61	AUTO PILOT AND TIE IN C F	6030003	54	800	256
61	AUTO PILOT AND TIE IN D B	6030004	56	2100	529
				10800	
57	ELEVATOR HYDRAULICS	6050000	62	21743	701
				21743	
	AILERONS HYDRAULICS	6060000			
57	AILERON HYDRAULICS E B	6060001	58	886	693
57	AILERONS HYDRAULICS I W	6060002	62	3885	707
57	AILERONS HYDRAULICS O W	6060003	64	15229	740
				20000	
57	RUDDER HYDRAULICS	6070000	83	7608	765
				7608	
57	DIVE BRAKE HYDRAULICS	6080000	56	5300	517
				5300	

WEIGHTS C. OF G. TABULATION

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	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	60000000						
	60100000						
F	60100001	52	77	35153731	15567	1189102	894707
F	60100002	54	8	09362711	1830	293432	95705
B	60100003	56	7	59533501	2894	404927	97865
N	60100004	83	83	44787242	18858	6568731	1823832
W	60100005	62	367	44719731	43316	26445759	5260271
W	60100006	64	229	52770001	3552	17673040	3110455
			773	43		52574991	11282835
LICS	60200000						
D B	60200001	56	9	92563381	2500	558873	124000
E B	60200002	58	300	40644281	20011	19354171	3608104
			310	32		19913044	3732104
	60300000						
R N	60300001	51	57	00 99571	2634	567549	720138
F F	60300002	52	22	00235091	3036	517198	286792
C F	60300003	54	8	00256001	1400	204800	91200
D B	60300004	56	21	00529331	5300	1111593	321300
			108	00		2401140	1419430
	60500000	62	217	43701701	4584	15257063	3170999
			217	43		15257063	3170999
	60600000						
	60600001	58	8	86693641	3500	614565	119610
W	60600002	62	38	85707601	4600	2749026	567210
W	60600003	64	152	29740111	3591	11271135	2069773
			200	00		14634726	2756593
	60700000	83	76	08765552	0558	5824304	1564053
			76	08		5824304	1564053
	60800000	56	53	00517	29 9446	2741637	500638
			53	00		2741637	500638

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PROJECT C-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT _____

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H.
	JUNCTION BOXES	7090100			
60	JUNCTIOB BOXES R N	7090101	51	500	8
60	JUNCTION BOXES F F	7090102	52	3550	19
60	JUNCTION BOXES C F	7090103	54	1200	35
60	JUNCTION BOXES A I	7090104	55	300	59
60	JUNCTION BOXES E B	7090105	58	400	68
60	JUNCTION BOXES I W	7090106	62	300	57
				6250	
	ALTERNATOR SYSTEM	7090200			
60	ALTERNATOR SYSTEM F F	7090201	52	6886	15
60	ALTERNATOR SYSTEM C F	7090202	54	2394	37
60	ALTERNATOR SYSTEM D B	7090203	56	2649	850
60	ALTERNATOR SYSTEM ENGINE	7090204		940	054
				45178	
	GENERAL ELECTRICAL CIRCUIT	7090300			
60	GEN ELECT CIRCUITS R N	7090301	51	310	11
60	GEN ELECT CIRCUITS F F	7090302	52	1063	216
60	GEN ELECT CIRCUITS C F	7090303	54	675	434
60	GEN ELECT CIRCUITS D B	7090304	56	372	051
60	GEN ELECT CIRCUITS E B	7090305	58	576	64
60	GEN ELECT CIRCUITS R F	7090306	59	523	77
60	GEN ELECT CIRCUITS I W	7090307	62	347	654
60	GEN ELECT CIRCUITS O W	7090308	64	380	73
60	GEN ELECT CIRCUITS FIN	7090309	83	120	87
				2649	1
	L P PNEUMATICS	7100000			
58	L P PNEUMATICS F F	7100001	52	1522	21
58	L P PNEUMATICS C F	7100002	54	138	27
				1660	
	OIL AND HYD FLD COOLING	7110000			
57	OIL AND HYD FLD COOLING DB	7110001	56	968	655
57	OIL AND HYD FLD COOLING EB	7110002	58	229	461
				1198	0
65	INTAKE DEICING	7120000	52	506	020
				506	0
	RADIO AND RADAR FIXED	7140000			
61	RADIO AND RADAR FIXED R N	7140001	51	2250	0 9
61	RADIO AND RADAR FIXED F F	7140002	52	1701	020

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	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	7090100						
	709010151		500	8500	11000	42500	55000
	709010252		3550	19927	11825	707409	419788
	709010354		1200	35000	12667	420000	152004
	709010455		300	59100	12000	177300	36000
	709010558		400	68000	13000	272000	52000
	709010662		300	57000	13500	171000	40500
			6250			1790209	755292
	7090200						
	709020152		688	6156	09108	18	1074836	744927
	709020254		239	4377	85116	00	904573	277704
	709020356		2649	8505	70119	03	13400039	3154057
INE	7090204		9400	5480	00116	00	5151200	1090400
			45178				20530648	5267088
RCUIT	7090300						
N	709030151		3	10111	77110	00	34649	34100
F	709030252		1063	2164	88128	83	1753004	1369721
F	709030354		67	5434	19512	407	2309530	837969
B	709030456		372	0515	81124	86	1918813	464479
B	709030558		57	6647	08121	21	372718	69817
F	709030659		52	3777	68128	68	406727	67300
W	709030762		347	6542	21146	13	1884722	507948
W	709030864		38	0737	50125	00	280250	47500
N	709030983		12	0877	00292	00	105240	35040
			26491				9065653	3433874
	7100000						
	710000152		152	2212	36133	06	323212	202517
	710000254		13	8270	18137	31	37285	18949
			1660				360497	221466
NG	7110000						
NG DB	711000156		968	6556	54103	40	5390646	1001532
NG EB	711000258		229	4615	91107	69	1412898	247041
			11980				6803544	1248573
	712000052		506	0204	55113	76	1035023	575626
			5060				1035023	575626
	7140000						
R N	714000151		225	00	90001	04	44	2025000	2349900
F F	714000252		170	10	20042	11	04	3409144	1905800

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PROJECT C-105 PREPARED BY _____ A.U.W. _____ LBS. COMPONENT _____

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT	H.
	OPERATIONAL LOAD	9000000			
99	CREW MEMBERS	901000052		43000	19
				43000	
	ENGINE OIL	9020000			
120	ENGINE OIL USABLE	9020001		54146	1
75	ENGINE OIL TRAPPED	9020002		30946	1
				8508	
129	MISSILES CAR IA	903000054		104240	39
				104240	
	OXYGEN CHARGE	9040000			
128	OXYGEN CHARGE F F	904000152		72	20
128	OXYGEN CHARGE C F	904000254		1267	26
				1339	
125	ALCOHOL FOR RADOME DEICING	905000051		2200	9
				2200	
	RESIDUAL FUEL	9070000			
74	RESIDUAL FUEL C F	907000154		4710	39
74	RESIDUAL FUEL I W	907000262		17270	57
				21980	