

Date: December 1st, 1956
Aircraft: C-105 With J75
P5 Engines as
Interim Power Plant

Report # 7-0400-05
Sheet # 003-1 Issue 27
Prepared By: J. Struik
Checked By: K. Griffin

WEIGHT AND C.G. SUMMARY

REF No.	DESCRIPTION	WEIGHT lb.	H. ARM ins.	V. ARM ins.
	STRUCTURE	18,087.08	565.39	137.29
1000000	Wing	9,989.07	643.60	141.93
2000000	Fin and Rudder	999.96	754.27	201.96
3000000	Fuselage Structure Fwd. 255"	2,390.47	187.41	129.61
	255" to 485"	1,672.37	378.59	129.82
	Aft. 485"	3,035.21	646.37	110.90
4000000	UNDERCARRIAGE - Up Position	2,604.33	488.72	134.65
4010100	Main Undercarriage	1,951.62	539.57	141.00
4010200	Main U/C Doors and Fairings	294.36	539.29	136.01
4020100	Nose Wheel Undercarriage	333.81	170.80	99.70
4020200	Nose U/C Doors and Fairings	24.54	162.24	88.23
5000000	POWER PLANT & SERVICES	13,718.53	656.23	120.23
5010000	Engines J75	12,222.03	666.05	119.76
5020000	Acc. Gear Box and Oil Lines	237.06	603.73	104.00
5030000	Engine Controls	29.19	377.46	118.91
5040000	Engine Gear Box and Oil Lines	150.18	610.55	96.37
5050000	Engine De-Icing	70.37	562.80	115.09
5060000	Fire Extinguishing System	70.52	701.99	127.72
5070000	Engine Mountings & Brackets	189.19	633.40	127.82
5080000	Fuel System	749.99	542.97	135.70
6000000	FLYING CONTROL GROUP	1,677.82	688.36	139.58
6010000	Mechanical Flying Controls	904.40	689.05	147.08
6000000	Flying Controls Hydraulics	773.42	687.56	130.81
	EQUIPMENT - FIXED & REMOVABLE	7,747.86	315.57	110.60
7010000	Instruments	53.30	153.98	140.27
7010003	Probe	23.00	9.74	108.00
7020000	Cockpit Pressure Sealing	5.00	186.00	130.00
7030000	Oxygen System	43.44	227.72	142.18
7040000	Air-Conditioning System	712.69	327.16	133.26
7050000	Hydraulics Main System	588.36	501.22	117.38
7070000	Cabin Insulation	11.91	179.24	130.00
7080000	Brake Parachute	69.69	784.88	131.17
7090000	Electrical System	958.34	402.76	116.20
7100000	Low Pressure Pneumatics	39.01	478.47	127.28
7110000	Oil & Hydraulic Fluid Cooling	22.00	579.50	92.00
7120000	Intake De-Icing	85.84	206.52	118.79
7000000	Radio & Radar Fixed	671.35	230.67	108.98
7130000	Radome Anti-Icing	23.46	62.92	126.04
7160000	Canopy Actuation	54.41	222.04	154.40
7170000	Cabin Consoles	20.65	117.37	125.23
7180000	Radar Door Actuation	10.00	268.00	95.00
7190000	Surface Finish	100.00	591.52	140.20
8010100	Ejector Seats	186.00	201.10	136.25
8020000	Radar & Radio Removable	2,001.80	178.02	103.53
8050100	Sparrow Pack Structure	850.00	390.84	96.00
8050200	Sparrow Pack Mechanisms	625.32	376.67	99.22

continued.

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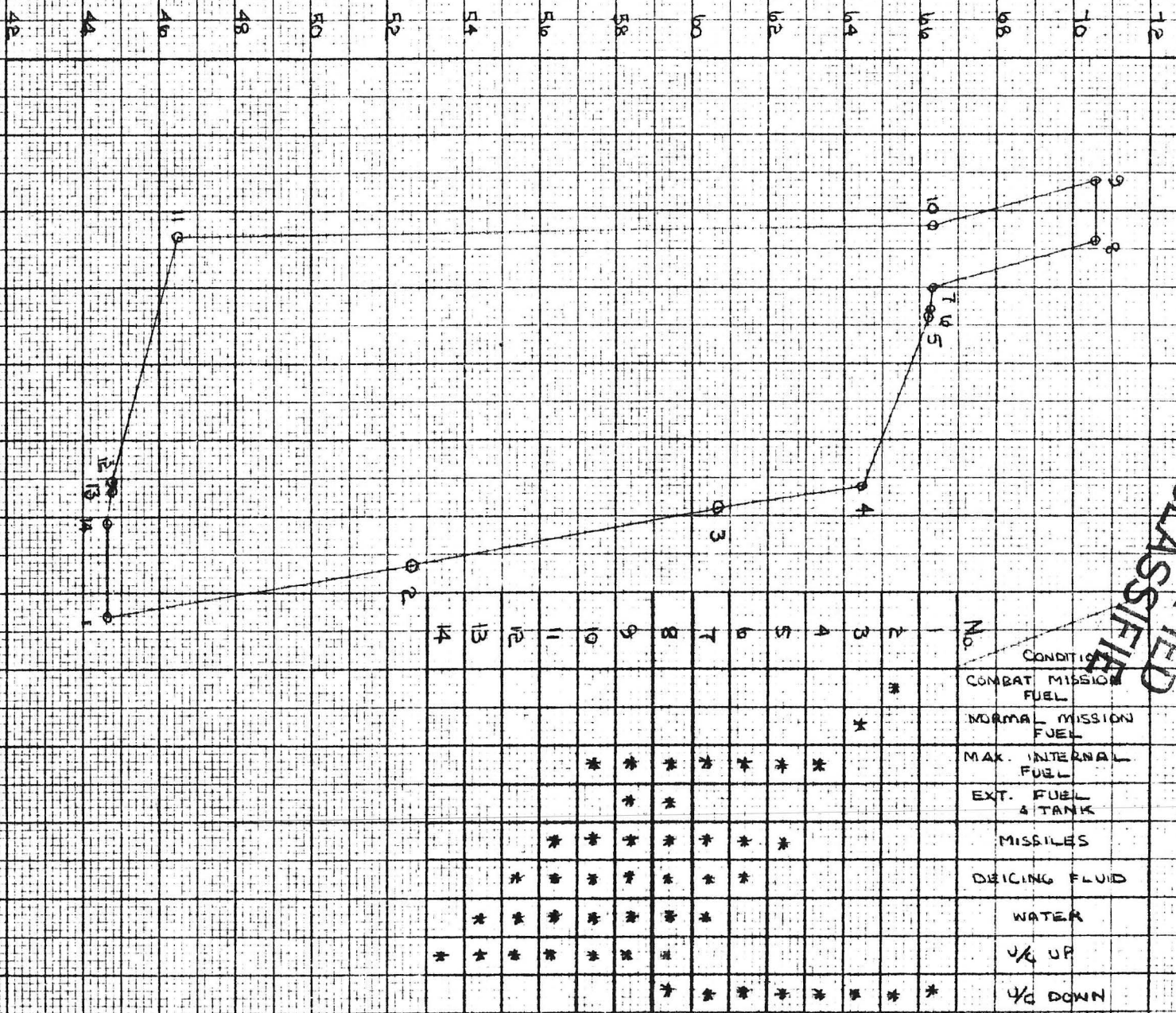
Report # 7-0400-05
Sheet # 003-2 Issue 27
Prepared By: J. Struik

WEIGHT AND C.G. SUMMARY

REF. No.	DESCRIPTION	WEIGHT lb.	H. ARM ins.	V. ARM ins.	C.G. POSITION % M.A.C.
	<u>Equipment (Fixed & Remov.) (Cont'd.)</u>				
8050300	Sparrow Pack Hydraulics	350.19	368.83	99.00	
8050400	Sparrow Pack Electronics	178.00	332.00	100.00	
8050500	Sparrow Pack Electrics	64.10	362.29	95.00	
	AIRCRAFT WEIGHT EMPTY	43,835.62	549.82	127.16	
9000000	USEFUL LOAD	18,717.18	515.79	136.87	
9010000	Crew	430.00	494.00	136.50	
9020000	Oil	130.39	609.19	117.17	
9050000	Alcohol For Radome De-Icing	22.00	93.00	138.00	
9060000	Engine Fire Extinguisher Fluid	25.00	730.00	129.00	
9070000	Residual Fuel	218.40	553.98	134.04	
9090000	Fuel For Combat Mission	16,025.00	539.18	142.35	
9030000	Missiles (Armament)	1,728.00	389.29	88.30	
9040000	Oxygen Charge	13.39	259.69	159.91	
9040006	Water for Air-Conditioning	125.00	268.00	132.00	
	Normal Combat Mission U/C Up	62,552.80	539.64	130.07	28.63
	U/C Down		541.20	127.50	29.06
	Half Combat Mission	8,012.00	540.80	139.55	
	Fuel 1,022 Gal. @ 7.8 lb/gal				
	Combat Weight (Half Combat U/C Up	54,539.80	539.95	127.85	28.72
	Mission Fuel) U/C Down		541.73	124.90	29.21
	Operational Weight Empty U/C Up	46,527.80	539.79	125.84	28.67
	U/C Down		541.88	122.38	29.25
	Operational Weight Empty U/C Up	44,799.80	545.60	127.29	30.27
	(Less Missiles) U/C Down		547.77	123.69	30.87
	Maximum Internal Fuel	19,843.00	538.88	144.32	
	2,544 gal. @ 7.8 lb/gal.				
	A.U.W. Max. Internal Fuel U/C Up	66,370.80	539.52	131.36	28.60
	U/C Down		540.99	128.93	29.00
	Max. External Fuel 500 gal.	4,226.00	522.34	60.64	
	@ 7.8 lb/gal. and Drop Tank				
	A.U.W. Maximum Internal and U/C Up	70,596.80	538.49	127.13	28.31
	External Fuel U/C Down		539.87	124.85	28.69

HEIGHT - THOUSANDS - LB.

HORIZONTAL C.G. POSITION - % M.A.C.



C105 PRODUCTION A/C HORIZONTAL C.G. ENVELOPE
FOR A/C FLIGHT CONDITIONS
AND Pratt & Whitney J75 Engines
& Fuel System

REPORT No. 7-0400-05-27
B-1 Kothmann
DATE: Dec 15, 1950

No.	Condition
1	COMBAT MISSION FUEL
2	NORMAL MISSION FUEL
3	MAX. INTERNAL FUEL
4	EXT. FUEL & TANK
5	MISSILES
6	DEICING FLUID
7	WATER
8	1/2 UP
9	1/2 DOWN

NEW CLASSIFIED