

QC
Avro
C-105
Rept.
7-0400-34
Iss. 6

QCX
Avro
CF105
R7-0400-34
Iss-6

FILE IN VAULT

~~SECRET~~
C-105 MK 2 Report # 7-0400-34
Production A/C Issue 6
WEIGHT SUMMARY & C.G. POSITION ✓
N.A.E. ~~SECRET~~ UNCLASSIFIED April 1/57



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Report no.: QCX - AVRO - CF105 - R-7-0400-34-155.6

has been downgraded to : _____

de-classified

by (Name): Michel W. Drapeau

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

Date: Dec. 7, 1992

R. Auger
 Signature

confirmed as
 Classification ~~cancelled~~ / changed to: UNCLASSIFIED

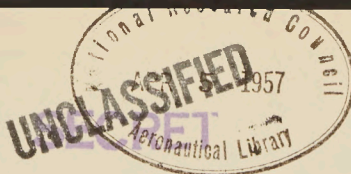
By authority of: DRDA 7/DARET 5-8/DAS Eng 6-4-5

Date: 5 Nov 1992

Signature: B. Aubrey

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

Date: April 1st, 1957
Aircraft C-105 MK 2



Report # 7-0400-34 Issue 6
Sheet # 1-1
Prepared By: K. Griffin
Checked By: E. Burnett

INTRODUCTION

The following is a Weight & C. G. Summary of the C-105 MK 2 Production Aircraft. Of necessity some of the figures quoted herein are only of a preliminary nature, especially some systems e.g. Air Conditioning and Fuel System which are being extensively redesigned and about which there is as yet very little information available.

Information has been based on the MK 1 Aircraft with relevant changes made sometimes to scheme drawings for MK 2 or to verbal information. Where no details are available, allowances have been retained as in the MK 1 Aircraft.

GENERAL

- a) Orenda PS 13 Engines comprise the Power Plant (4,500 lb each).
- b) A package containing 4 "semi-submerged" Sparrow II Missiles (432 lb each) is currently carried.
- c) The R.C.A. Radar Astra I System is installed - Weight & C.G. location being to the latest breakdown received from them, dated Jan. 11th, 1957. However, the Sparrow III auxiliaries and the Infra-red Tracker System included in the above breakdown have been deleted and some AVRO installed antennae added (Total Weight = 2,614.5 lb)

N.B. It should be noted that the first MK 2 Aircraft will probably not be as this summary designates, but will be a Flight Test version with Instrumentation replacing the Missile Package etc.

1. STRUCTURE:

a) Wing:

	<u>WEIGHT (lb)</u>
I/Wing complete - Actual Weights of spars, rib # 10 etc.	- 9
Miscellaneous other changes to MK 1 drawings	+ 6
Ailerons - Actual Weight of Mk 1 Ailerons not modified for "buzz damper" installation	- 13
Aileron Control Box - some actual weights some re-estimates	- 7
O/Wing - miscellaneous changes etc, actual weights of F/Spar and C/A/Spar	- 9
Weight Change Decrease Ref. 2-1	- 32

b) Fin & Rudder:

No weight change, although actual weight of MK 1 Rudder unmodified for "Buzz Dampers" is recorded.

c) Fuselage Fwd. Sta. 255"

Miscellaneous changes to re-issues of MK 1 production drawings of Formers, Bulkheads, Longerons etc	+ 12
Air Intakes - Redesigned Ramp now estimated to MK 1 production drawings many design changes since early scheme drawing estimate was made.	+ 26
Weight Change Increase Ref. 2-2	+ 38

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Date: April 1st, 1957
Aircraft: C-105 MK 2
Production A/C

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INTRODUCTION

WEIGHT CHANGES

WEIGHT (lb)

1. STRUCTURE (cont'd.)

d) Centre Fuselage Sta. 255"-485"

Equipment Bay Structure - redesigned for MK 2 A/C	+	11
Miscellaneous production drawing changes to MK 1 A/C	-	2
<u>Weight Change Increase</u>	+	9
<u>Ref. 2-2</u>		

e) Duct Bay Sta. 485"-591.65"

No Weight Change

f) Engine Bay Sta. 591.65"-742.5"

Heavy Formers - deletion of Engine Rail Mounting Brackets as carried in MK 1 A/C	-	23
Service Access Doors - redesigned Aft of Sta. 664.43	-	6
Structure at Engine Doors - redesign of false door structure	+	6
<u>Weight Change Decrease</u>	-	23
<u>Ref. 2-2</u>		

g) Rear Fuselage Aft Sta. 742.5"

No Weight Change

There is no definite scheme yet for the Tail Cone and Stinger structure. The weight currently recorded is as for the MK 1 in Titanium, allowances having been made for the increased length of the Tail Cones, but no other account taken of lines changing or design alterations.

TOTAL STRUCTURAL WEIGHT CHANGE

- 8

2. LANDING GEAR

No Weight Change

3. POWER PLANT & SERVICES

No Weight Change

4. FLYING CONTROLS

No Weight Change

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Date: April 1st, 1957
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INTRODUCTION

<u>5. EQUIPMENT GROUP</u>	<u>WEIGHT (lb)</u>
Radio & Radar Fixed - deletion of Radar Homer Antennae	- 10
Radio & Radar Removable - deletion of I.R. Tracker System & J2 Compass flux valve.	- 56
Electrics - Fire detection Wire added in Engine Bay	+ 7
Probe - re-estimated, this may be further redesigned	+ 4
Low Pressure Pneumatics - Piping changes etc.	+ 3
<u>TOTAL EQUIPMENT DECREASE</u>	<u>- 52</u>
<u>Ref. 2-3</u>	

6. OPERATIONAL LOAD

No Weight Change

SUMMARY

Weight Change - Aircraft Weight Empty

Structure	- 8 lb
Equipment	- 52 lb
	<u>- 60 lb</u>

Weight Change - Operational Weight Empty (A/C less Fuel)

<u>Issue 5</u>	<u>Issue 6</u>	
<u>44,185</u>	<u>44,125</u>	= <u>- 60 lb</u>

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Date: April 1st, 1957
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Production A/C

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Sheet # 2-1
Prepared By: K. Griffin
Checked By: E. Burnett

WEIGHT CHANGES TO I.B.M. TABULATED
DETAILS OF MARCH 1st, 1957.

WEIGHT CHANGE

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WEIGHT (lb)

Wing:

-	6.23	I/W Spars - Actual Weight of Main Spar	-	3.50
		Actual Weight of machinings of Rear Spar etc.	-	3.80
		F/Spar I/B End design change	+	1.25
		Miscellaneous items	-	0.18
			-	<u>6.23</u>
-	2.44	Rib # 10 - Actual Weight obtained		
+	5.70	Skins M/S to R/S - amendments to MK 1 drawings bracketry and hardware		
-	0.40	Dorsal Fairing I/W - MK 1 production drawing estimates		
-	12.66	Ailerons - Actual Weight obtained of MK 1 Aileron, un- modified for "buzz damper" installations		
+	1.60	Rib # 12 - Miscellaneous design changes to hardware etc.		
-	0.57	O/W Posts & Intercostals - completely checked and re-estimated.		
-	6.74	Aileron Control Box - Actual Weights of hinge spar and Ribs # 2,5,6A and 8	-	3.59
		Addition of nut plates to ribs	+	1.95
		Control box to O/W joint hardware was overestimated	-	4.53
		Miscellaneous changes	-	0.57
			-	<u>6.74</u>
-	10.35	O/W Spars - Actual Weight of Front Spar	-	3.38
		Actual Weight of Centre Spar Aft	-	6.38
		Miscellaneous changes to drawings	-	0.59
			-	<u>10.35</u>
-	<u>32.09</u>			

Fin & Rudder

0.00 Rudder - Actual Weight obtained of MK 1 Rudder un-
modified for buzz damper installations.

0.00

Fuselage Fwd. Sta. 255"

+	0.80	Canopy Arches - minor design changes based on MK 1 drawings		
+	0.55	Lower Longerons - minor design changes based on MK 1 drawings		
+	0.11	Bulkhead Sta. 255" - MK 1 production drawing changes		
+	1.92	Bulkhead Sta. 120" - MK 1 alterations for mounting radome - This will probably change further when MK 2 details become available.		
+	1.48	Pilot's & Navigator's Bulkheads - MK 1 production drawing changes		

continued.

Date: April 1st, 1957
Aircraft: C-105 MK 2
Production A/C

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WEIGHT CHANGES TO I.B.M. TABULATED
DETAILS OF MARCH 1st, 1957.

WEIGHT CHANGES

WEIGHT (lb)

Fuselage Fwd. Sta. 255" (Cont'd)

+	26.36	Intake Ramp - First estimate to production drawings of MK 1 redesigned Intake Ramp, MK 2 Intake Ramp will weigh approx. the same as MK 1 differences are only minor weightwise.	
+	6.89	Formers F.F. - Formers Sta. 188.4 and 194.9 strengthened, Stress requirement associated with redesigned ramp	+ 4.38
		Miscellaneous bracketry changes as MK 1	+ 2.51
			+ 6.89

+ 38.11

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Centre Fuselage Sta. 255" - 485"

+	0.89	Miscellaneous Items C.F. - Alterations to hardware etc. as MK 1	
-	2.92	Missile Pack Mounting Structure - re-estimate to current design.	
+	0.27	Armament Bay Roof - Addition of clips etc. for pack pick-ups.	
+	10.95	Equipment Bay Structure - Redesign Access Panel Redesign Mounting Tray	+ 0.36 + 10.59
			+ 10.95

+ 9.19

Engine Bay Sta. 591.65" - 742.5"

-	23.18	Heavy Formers E.B. - Deletion of Engine Rail brackets and mounting structure as carried for MK 1 A/C	
-	3.18	Service Access Doors - completely redesigned aft of Sta. 644.43 (2.62 lb included here that was previously with Light Formers I/B of Inner Longerons)	
-	18.34	Light Formers - Lower Formers 596.4 - 692.45 part of false door structure (see below) I/B of Inner Longerons Stas. 702, 707 and 712	- 15.72 - 2.62 - 18.34
-	5.56	Outer Skins - relocation of pressure vents, not part of false door structure.	
-	37.60	Engine Access Doors - surround structure removed (see below) report: now contains only Doors # 1 & 2.	
+	65.42	Structure at Engine Doors - 58.88 lb transferred to this new report from above items. Actual increase recorded here of + 6.54 lb to false door structure.	
-	22.44		

Date: April 1st, 1957
Aircraft: C-105 MK 2
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WEIGHT CHANGES TO I.B.M. TABULATED
DETAILS OF MARCH 1st, 1957

WEIGHT CHANGES

WEIGHT (lb)

Joints Fuselage

+ 0.41 Joint F.F. to C.F. - Straps .04 were .032 Al. due to skin dimpling difficulties (based on MK 1 drawings.

+ 0.41

Equipment Fixed and Removable.

- 10.00 Radio & Radar Fixed - deletion of 4 Radar homer antennae
- 55.00 Radio & Radar Removable - Deletion of I.R. Tracker system.
+ 7.18 Electrics E.B. Installation of Fire Detection Wiring in the Duct Bay and Engine Bay.
- 1.30 J2 Compass - delete flux valve.
+ 10.29 Low Pressure Pneumatics - piping for machmeter, altimeters rate of climb indicator and pitots added (see below) based on MK 1 drawings.

- 4.50 Probe - Low Pressure Pneumatics included above
Probe and sensor re-estimated to scheme drawings

- 8.00

+ 3.50

- 4.50

- 53.33

- 60.15 TOTAL WEIGHT CHANGES

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Date: April 1st, 1957
 Aircraft C-105 MK 2
 Production A/C

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 Sheet # 3-1
 Prepared By: K. Griffin

WEIGHT AND C.G. SUMMARY

<u>DESCRIPTION</u>	<u>WEIGHT</u> lb.	<u>H. ARM</u> ins.	<u>V. ARM</u> ins.
STRUCTURE	18,270.98	564.48	137.62
Wing	9,929.95	642.65	142.18
Fin & Rudder	1,020.70	754.06	209.27
Fuselage fwd. Sta. 255"	2,453.74	186.64	128.79
Sta. 255"-485"	1,681.78	379.07	129.47
Sta. 485"-591.65	949.54	533.12	103.76
Sta. 591.65"-742.5	1,490.70	661.10	109.12
Sta. 742.5 Aft.	691.99	795.69	128.15
Marry-Up	52.58	468.91	103.89
UNDERCARRIAGE - Retracted	2,554.33	487.53	134.52
Main Undercarriage	1,901.62	539.31	141.00
Main U/C Doors & Fairings	294.36	539.29	136.01
Nose Undercarriage	333.81	170.80	99.70
Nose U/C Door & Fairing	24.54	162.24	88.23
POWER PLANT & SERVICES	10,774.34	673.94	121.51
Engines & Accessories PS 13	9,090.12	690.98	121.17
Gear Box & Drives on Fuselage	281.84	601.70	102.49
Engine Controls	32.43	375.76	118.61
Gear Box, Starter & Drive on Engine	315.45	609.12	105.24
Engine Nose Bullet	70.00	587.17	116.00
Fire Extinguisher System	70.46	702.44	134.83
Engine Mountings	156.53	666.00	136.69
Fuel System	757.51	543.10	135.69
FLYING CONTROLS GROUP	1,793.94	686.84	140.05
Mechanical Flying Controls	942.92	688.24	148.66
Hydraulic Flying Controls	851.02	685.29	130.52
EQUIPMENT FIXED & REMOVABLE	7,895.45	326.76	111.78
Instruments	46.07	163.68	138.70
Probe	18.50	40.00	108.00
Cockpit Pressure Sealing	5.00	186.00	130.00
Oxygen System	43.44	227.71	142.18
Air Conditioning System	897.00	331.77	133.38
Hydraulic Main System	597.49	498.76	116.66
Cabin Insulation	11.91	179.24	130.00
Brake Parachute	62.38	769.41	143.24
Electrical System	1,224.03	428.64	112.65
Low Pressure Pneumatics	49.30	444.29	125.94
Surface Finish	100.00	591.52	140.20
Intake De-icing Boots	51.84	197.02	118.00
Radome Anti-icing	8.88	51.49	125.00
Canopy Actuation	62.05	222.11	154.47
Cabin Consoles	17.45	174.76	124.34
Radar Door Actuation	10.00	268.00	95.00
Ejector Seats	186.00	201.10	136.25
Radio & Radar removable	1,850.50	178.50	104.46
Radio & Radar fixed	621.00	234.04	116.15
Sparrow Pack Structure	850.00	390.84	96.00
Sparrow Pack Mechanisms	625.32	376.67	99.22

continued.

Date: April 1st, 1957
 Aircraft: C-105 MK 2
 Production Aircraft

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 Prepared By: K. Griffin

WEIGHT & C.G. SUMMARY

<u>DESCRIPTION</u>	<u>WEIGHT</u> <u>lb.</u>	<u>H. ARM</u> <u>ins.</u>	<u>V. ARM</u> <u>ins.</u>	<u>M.A.C.</u> <u>%</u>	
<u>Equipment (Fixed & Removable)(Cont'd.)</u>					
Sparrow Pack Hydraulics	350.19	368.83	99.00		
Sparrow Pack Electronics	143.00	332.00	100.00		
Sparrow Pack Electrics	64.10	362.29	95.00		
AIRCRAFT WEIGHT EMPTY	41,289.04	548.14	128.39		
USEFUL LOAD	18,615.76	516.37	136.67		
Crew	430.00	194.00	136.50		
Oil	138.97	636.92	110.57		
Alcohol	22.00	93.00	138.00		
Engine Fire Extinguisher Fluid	25.00	730.00	129.00		
Residual Fuel	218.40	553.98	134.04		
Missiles	1,728.00	389.29	88.30		
Oxygen Charge	13.39	259.69	159.91		
Water For Air Conditioning	260.00	268.00	132.00		
Fuel for Combat Mission	15,780.00	542.05	142.30		
Normal Combat Mission					
	U/C Up	59,904.80	538.27	130.96	28.25
	U/C Down		539.87	128.32	28.69
Half Combat Mission Fuel (1,011.5 gal. @ 7.8 lb/gal.)	7,890.00	543.20	139.55		
Combat Weight (Half Combat Mission Fuel)					
	U/C Up	52,014.80	537.87	128.83	28.14
	U/C Down		539.71	125.78	28.65
Operational Weight Empty					
	U/C Up	44,124.80	536.92	126.91	27.88
	U/C Down		539.09	123.32	28.48
Operational Weight Empty Less Missiles					
	U/C Up	42,396.80	542.94	128.48	29.54
	U/C Down		545.20	124.75	30.16
Max. Internal Fuel (2,492 gals. @ 7.8 lb/gal)	19,438.00	541.85	144.16		
A.U.W. Max. Internal Fuel					
	U/C Up	63,562.80	538.43	132.19	28.30
	U/C Down		539.93	129.69	28.71
Max. External Fuel (500 gal. @ 7.8 lb/gal. + Drop Tank)	4,226.00	522.34	60.64		
A.U.W. Max. Internal and External Fuel					
	U/C Up	67,788.80	537.43	127.73	28.02
	U/C Down		538.83	125.39	28.41

- N.B. 1) Aircraft Datum = 120" above arbitrarily chosen ground line.
 2) Revised fuel tank capacities in Centre Fuselage tanks for MK 2 Aircraft are now incorporated.

C105 MK2 PRODUCTION AIRCRAFT
HORIZONTAL C.G. ENVELOPE FOR
A/C FLIGHT CONDITIONS

BY: Kathleen Lyffur
 DATE: April 1st 1957
 SHEET: 4-1

USING FUEL SEQUENCING ORDER AS

SUPPLIED TO MINNEAPOLIS HONEYWELL (HQ AVRO SPEC. E503)

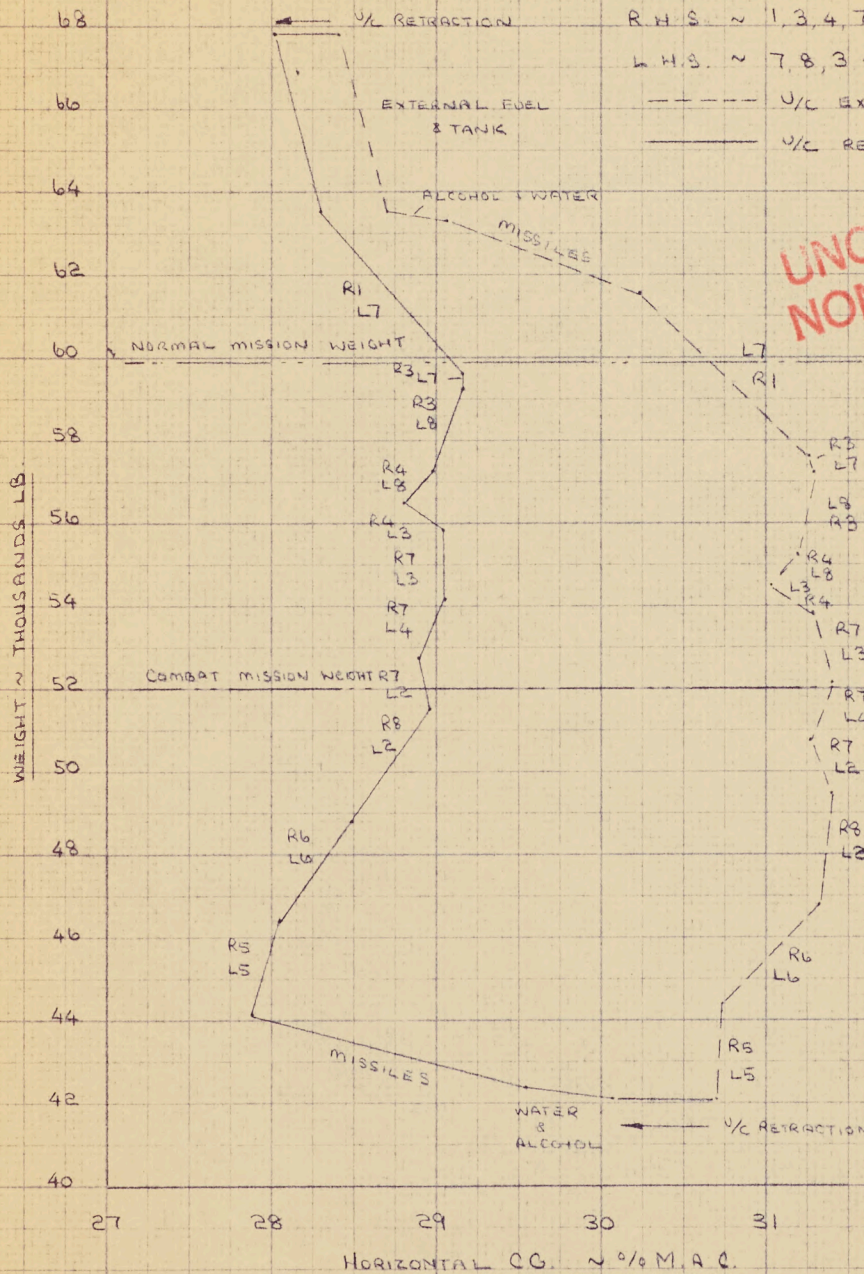
ALTERNATE SEQUENCING UNTIL NECESSITY OF DAMPING SYSTEM PROVEN

SEQUENCING ORDER

R.H.S. ~ 1, 3, 4, 7, 8, 6, 5 (NOTED RISK)

L.H.S. ~ 7, 8, 3, 4, 2, 6, 5 (NOTED LIFT)

----- 1/2 EXTENDED
 _____ 1/2 RETRACTED



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EUGENE DIETZGEN CO.

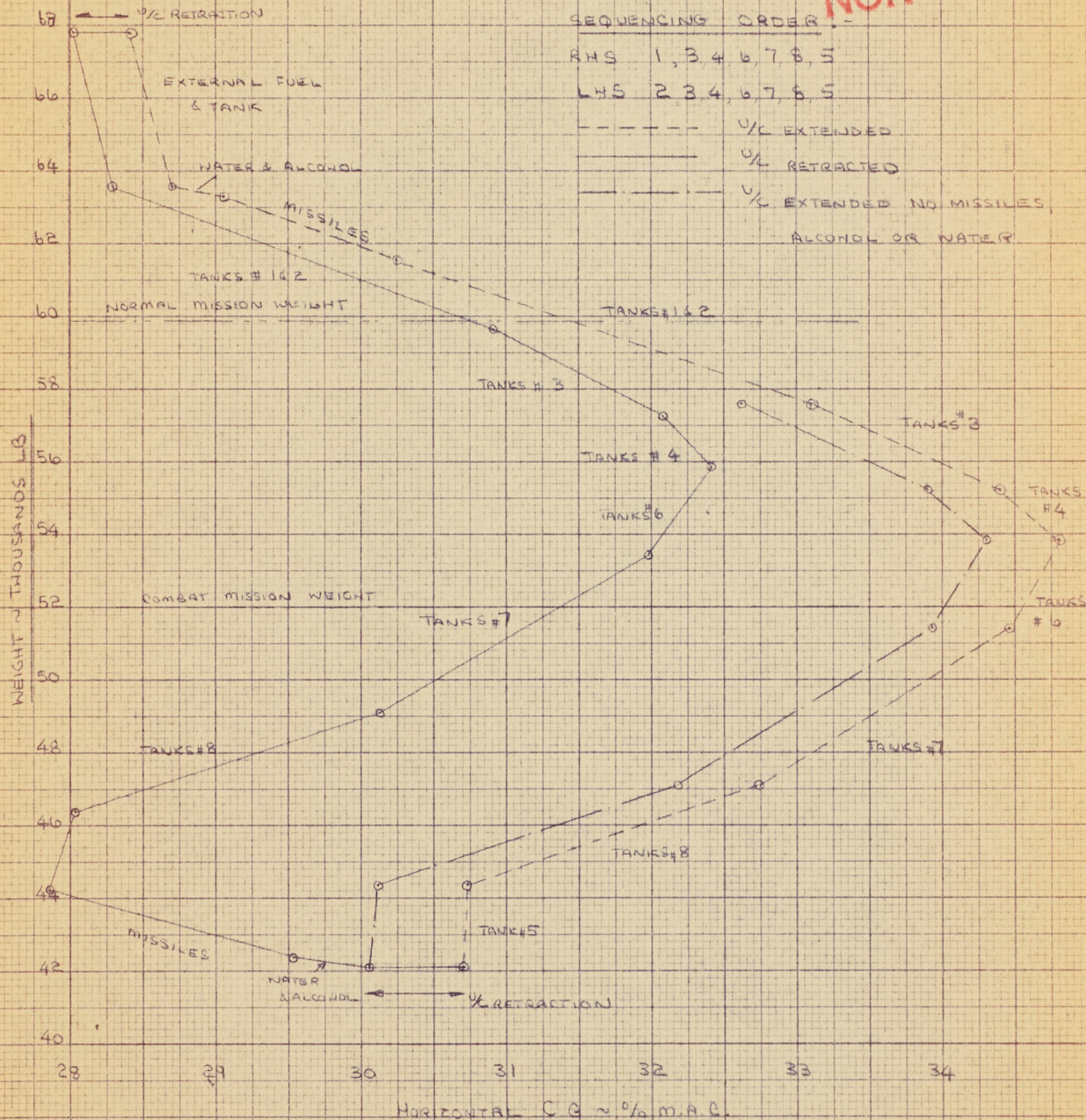
NO. 340R-20 DIETZGEN GRAPH PAPER
 20 X 20 PER INCH

C105 MK2 PRODUCTION AIRCRAFT
HORIZONTAL C.G. ENVELOPE FOR
1/2 FLIGHT CONDITIONS

BY: Karlson Gaffan
 DATE: April 15th 1937
 SHEET: 4-2

USING FUEL SEQUENCING ALTERNATE
AS SUPPLIED TO MINNEAPOLIS HOWELL (W/ AIRO SPEC #503)
TO ACHIEVE REQUIRED 24% MAC AT COMBAT.

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PROJECT C-105 MK 2

	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	TOTAL WING GROUP	1000000		
	OUTER WING	1010000		
14	OUTER WING SKINS	1010000164		928697
	POSTS AND INTERCOSTALS	1010000364		24367
	OUTER WING SPARS	1010000364		392587
14	OUTER WING RIBS	1010000464		134566
	AILERON CONTROL BOX	1010000664		379207
	RIB 12	1010000764		76266
14	O W AILERON JACK FITTING	1010000964		10467
14	AILERON JOINTS AND FAIRING	10100010		32937
				197924
	AILERON	1020000		
	AILERON STRUCTURE	1020000174		336007
				33600
20	ELEVATOR MARRY UP	1030000		15977
20	ELEVATOR	1030000082		449007
				46497
	INNER WING	1040000		
	MAIN U C STRUCTURE	1040000162		338235
	FRONT SPAR I W	1040000262		111104
	MAIN SPAR I W	1040000362		151065
	FWD CENTRE SPAR I W	1040000462		53646
	AFT CENTRE SPAR I W	1040000562		36666
	REAR SPAR I W	1040000662		76677
	I W STRUCTURE F S TO M S	1040000762	1	1041854
	I W STRUCTURE M S TO R S	1040000862		149797
12	STRUCTURE AFT OF REAR SPAR	1040000962		319847
12	ELEVATOR CONTROL BOX I W	1040001062		427177
16	TRANSPORT JOINT MARRY UP	10400011		70656
	CENTRE LINE JOINTS	1040001262		605566
	INNER WING SKINS	1040001362	2	185506
	STRUT PICK UP FITTINGS I W	1040001462		54225
	RIBS 1 TO 9 INNER WING	1040001662		525966
	DORSAL FAIRING	1040001762		954
	RIB 10	1040001862		108006
	FUSELAGE HINGE JOINT I W	1040001962		138126
16	TRANSPORT JOINT	1040002062		131006
	FUSELAGE HINGE JOINT	10400021		37405
	DORSAL FAIRINGS I W	10400023		56295
				661966

WIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	1000000						
	1010000						
	1010000164		92889	70647	13398	65623292	12631046
	1010000264		2436	73207	13410	1783323	326668
	1010000364		39258	70118	13636	27526924	5353221
	1010000464		13456	69506	13650	9352727	1836744
	1010000664		37920	77409	13508	29353493	5122234
	1010000764		7626	64873	13832	4947215	1054828
ING	1010000964		1046	72791	13670	761394	142988
RING	1010010		3293	78726	13224	2592447	435466
			197924			141940815	26903195
	1020000						
	1020000174		33600	79213	13556	26615568	4554816
			33600			26615568	4554816
	1030000						
	1030000082		1597	73810	14260	1178746	227732
			44900	75523	14260	33909827	6402740
			46497			35088573	6630472
	1040000						
	1040000162		33823	57782	13984	19543606	4729808
	1040000262		11110	48428	14260	5380351	1584286
	1040000362		15106	56570	14280	8545464	2157137
	1040000462		5364	60098	14415	3223657	773221
	1040000562		3666	65492	14450	2400937	529737
	1040000662		7667	70374	14420	5395575	1105581
S	1040000762		104185	49856	14395	51942474	14997431
S	1040000862		14979	50964	14572	9131798	2182740
SPAR	1040000962		31984	471884	15020	22991379	4803997
	104001062		42717	72500	14327	30969825	6120065
UP	1040011		7065	63621	13876	4494824	980339
	104001262		60556	65928	15000	39923350	9083400
	104001362		218550	62462	14463	136510701	31608687
I W	104001462		5422	56793	14330	3079318	776973
	104001662		52596	61202	14521	32189804	7637465
	104001762		9548	280	16150	45866	15343
	104001862		10800	63683	13835	6877764	1494180
W	104001962		13812	62104	13790	8577804	1904675
	104002062		13100	63071	13710	8262301	1796010
	1040021		3740	52796	14309	1974570	535157
	1040023		5629	57249	16026	3222546	902104
			661966			404683922	95718536

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WEIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-2

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
105000062		22138	46841	14483	10369661	3192964
		22138			10369661	3192964
106000065		30870	63013	13561	19452113	4186281
		30870			19452113	4186281

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WEIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-3

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
2010000	83	85170	74957	21170	63840877	18030489
2010002		4830	68538	15355	3310385	741647
		90000			67151262	18772136
2020000	84	12070	81324	21438	9815807	2587567
		12070			9815807	2587567

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MALTON, ONT.

C-105 MK 2

WEIGHT AND C. OF G BY FUNCTIONAL
COMPON

PROJECT

	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	TOTAL FUSELAGE GROUP	30000000		
	FUSELAGE BASIC STRUCTURE	30100000		
3	RADOME	3010000151		9840
3	RADAR NOSE STRUCTURE	3010000351		18000
3	SKIN F F	3010000452		80941
4	SKIN C F	3010000554		210481
5	SKIN D B	3010000656		58805
	SKIN E B	3010000758		164890
	FORMERS F F	3010001152		105311
4	FORMERS C F	3010001254		277863
5	FORMER D B	3010001356		74575
	LIGHT FORMERS E B	3010001458		103706
	HEAVY FORMERS E B	3010001558		186586
	LOWER LONGERONS F F	3010001652		68461
	INNER LONGERON E B	3010001758		71846
	LONGERON E B	3010001858		69056
5	TOP LONGERONS E B	3010001958		6380
3	LOWER SHEAR PANEL F F	3010002052		29582
5	TOP WING LONGERONS D B	3010002156		6875
3	LONGERONS C F	3010002252		532
3	LONGERONS C F	3010002354		138134
5	LONGERONS D B	3010002556		105695
4	ELECTRONICS BAY STRUCTURE	3010002654		45232
5	LONGITUDINAL BEAMS D B	3010002756		63425
4	RADAR ACCESS DOOR C F	3010002854		21082
5	MAIN FRAME AT STN 538 77	3010002956		59665
5	DIVE BRAKE ACCOM STRUCTURE	3010003056		36345
3	COCKPIT DECKING	3010003152		179821
4	DUCT C F	3010003254		332863
5	DUCT D B	3010003356		255005
	CANOPY ARCHES	3010003452		85352
5	ACCESS PANEL STIFFNERS	3010003656		38655
3	NOSE U C SUPPORT STRUCTURE	3010003752		28682
	CREW BULKHEADS	3010003852		122722
	EQUIPMENT BAY STRUCTURE	3010003954		71117
3	WINDSCREEN	3010004152		127541
	SERV ACCESS DOORS AND PNLS	3010004258		60876
4	DORSAL FAIRING AIR OUTLET	3010004454		20612
	INTERMEDIATE FORMERS E B	3010004558		48737
	ENGINE ACCESS DOORS E B	3010004658		119006
4	SEALING MISSILE BAY	3010004754		6973
	MISCELLANEOUS ITEMS C F	3010004854		3923
	ARMAMENT BAY ROOF	3010004954		132163
	BULKHEAD AT STA 120	3010005052		30601
	BULKHEAD AT STA 255	3010005152		104292
54	BULKHEAD STA 485	3010005254		123514
5	ENG TUNNEL E B	3010005458		550316
4	INTEGRAL FUS FUEL TANK	3010005554		203593
3	COCKPIT FLOOR	3010005652		57431
4	DORSAL OVER FUEL TANK	3010006154		50974

WGT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-4

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	3000000						
RE	3010000						
	3010000151		9840	4232	11045	416429	1086828
	3010000351		18000	9450	11400	1701000	2052000
	3010000452		8094	19000	12079	1537850	977674
	3010000554		21048	37610	14296	7916153	3009022
	3010000656		5880	53407	11155	3140332	655914
	3010000758		16489	66905	11036	11031965	1819726
	3010001152		10531	18330	12018	1930332	1265616
	3010001254		27786	37474	13307	10412526	3697483
	3010001356		7457	53710	11315	4005155	843760
	3010001458		10370	66593	11699	6905694	1213186
	3010001558		18658	65947	10967	12304391	2046223
	3010001652		6846	18430	9044	1261718	619152
	3010001758		7184	65234	9213	4686411	661862
	3010001858		6905	65809	9781	4544111	675378
	3010001958		638	66605	13911	424940	88752
	3010002052		2958	23417	8900	692675	263262
	3010002156		687	52417	13259	360105	91089
	3010002252		53	25295	15250	13406	8083
	3010002354		1381	341112	12289	5678801	1697480
	3010002556		10569	52362	9879	5534140	1044112
URE	3010002654		4523	27443	9164	1241247	414488
	3010002756		6342	52046	9125	3300757	578708
	3010002854		2108	27448	8976	578604	189214
77 TURE	3010002956		5966	53877	10389	3214302	619808
	3010003056		3634	50399	9299	1831500	337926
	3010003152		17982	19285	14750	3467829	2652345
	3010003254		3328	637256	12919	12401032	4300218
	3010003356		25500	53952	11850	13757760	3021750
	3010003452		8535	22798	16050	1945809	1369868
	3010003656		3865	53918	10294	2083931	397863
TURE	3010003752		2868	21364	9132	612720	261906
	3010003852		12272	20589	12284	2526682	1507492
E	3010003954		7111	28363	13518	2016893	961265
	3010004152		12754	13814	15014	1761838	1914886
PWLS LET	3010004258		6087	67073	9293	4082734	565665
	3010004454		2061	29195	16400	601709	338004
B	3010004558		4873	72976	11295	3556120	550405
B	3010004658		11900	64479	8931	7673001	1062789
	3010004754		697	32148	10900	224072	75973
F	3010004854		392	37000	12500	145040	49000
	3010004954		1321	638438	11427	5079966	1510192
	3010005052		3060	12000	12280	367200	375768
	3010005152		10429	25500	12027	2659395	1254296
	3010005254		1235	148500	10396	5990235	1284010
	3010005458		5503	165702	11799	36156468	6493108
	3010005554		2035	9339	14536	8009027	2959384
	3010005652		5743	17640	11575	1013065	664752
	3010006154		5097	41352	14205	2107711	724029

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SHEET 5-5

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
OR	301006254		1965	53441	16400	657116	322260
ARCH	301006352		2074	25702	15350	533059	318359
E	301006454		2365	29226	10254	691195	242507
	301006559		8794	77289	9904	6796795	870958
	301006659		11788	77028	12800	9080061	1508864
F	301006759		5155	76878	13672	3963061	704792
F	301006859		2606	78150	15380	2036068	400803
	301006959		9290	77920	13630	7238768	1266227
R F	301007059		2799	77170	12570	2159958	351834
	301007159		1950	82450	12900	16077750	2515500
R F	301007259		9267	83186	13463	7708847	1249470
B	301007358		912	66401	10278	605577	93735
B	301007556		213	52402	13330	111616	28393
B	301007656		760	654365	9005	4150214	684920
	301007756		505	455457	8790	2802797	444247
	3010078		855	25500	12000	218025	102600
F	3010079		952	22000	12000	209440	114240
	3010080		500	48500	9800	242500	49000
	3010081		250	858478	9150	1466628	229482
SO	3010082		443	74250	11500	328928	50945
B	301008356		853	67428	8825	575161	75277
COORS	301008558		654	264120	9259	4194730	605724
FORM	301008458		348	168518	11206	2385112	390081
			607	370		287138227	72871932
	302000072		11328	50799	9082	5754511	1028809
			11328			5754511	1028809
	3030000						
	303010055		75828	21086	11872	15989092	9002300
			75828			15989092	9002300
IES	3040000						
	304010053		23725	17543	15906	4162077	3773699
			23725			4162077	3773699
	304020053		13782	23258	16214	3205418	2234613
			13782			3205418	2234613

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SHEET 5-6

ITEM	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
ION	4000000						
UP	4010000						
	401010092		190162	53931	14100	102556268	26812842
			190162			102556268	26812842
S	401020062		29436	53929	13601	15874540	4003590
			29436			15874540	4003590
UP	4020000						
	402010091		33381	17080	9970	5701475	3328086
			33381			5701475	3328086
ING	402020052		2454	16224	8823	398137	216516
			2454			398137	216516

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	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	ENGINE GROUP	5000000		
41	PS 13 ENGINES	5010000		9075626
				907562
	PS 13 ENGINES SERV ACCESS	5010100		14506
				1450
	ACC GEAR BOX ON FUS D B	502000156		45245
	ACC GEAR BOX ON FUS E B	502000258		236606
				28184
	ENGINE CONTROLS	5030000		
	ENGINE CONTROLS F F	503000152		14581
	ENGINE CONTROLS C F	503000254		2643
	ENGINE CONTROLS D B	503000356		5084
	ENGINE CONTROLS E B	503000458		10136
				3243
	STARTER AND ENG GEAR BOXES	5040000		315456
				31545
66	ENGINE ANTI ICING	5050000		70005
				7000
	FIRE EXT SYSTEM	5060000		
	ENG FIRE EXT SYSTEM ENG	5060001		69007
	ENG FIRE EXT SYSTEM D B	506000256		1465
				7046
42	ENGINE MTGS AND BRACKETS	5070000		
42	ENGINE MTG	5070001		104536
42	ENGINE MTG ACCESSORIES	5070002		52006
				15653
	FUEL SYSTEM	5080000		

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SHEET 5-7

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	5000000						
	5010000		907562	69106	12120	627179796	109996514
			907562			627179796	109996514
CESS	5010100		1450	63819	10390	925376	150655
			1450			925376	150655
D	5020001	56	4524	57875	9607	2618265	434621
B	5020002	58	23660	60609	10372	14340089	2454015
			28184			16958354	2888636
	5030000						
	5030001	52	1458	16129	12476	235161	181900
	5030002	54	264	30813	11789	81346	31123
	5030003	56	508	49991	13459	253954	68372
	5030004	58	1013	63982	10194	648138	103265
			3243			1218599	384660
OXES	5040000		31545	60912	10524	19214690	3319796
			31545			19214690	3319796
	5050000		7000	58717	11600	4110190	812000
			7000			4110190	812000
G	5060000						
B	5060001		6900	70560	13477	4868640	929913
	5060002	56	146	55318	13749	80764	20074
			7046			4949404	949987
TS	5070000						
	5070001		1045	367600	14082	7066228	1471991
	5070002		5200	64589	12840	3358628	567680
			15653			10424856	2139671
	5080000						

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SHEET 5-8

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
508000154		1211440225	14187		4872857	1718613
508000256		1421053710	10984		7632191	1560826
508000358		463865804	12071		3042714	559853
508000462		4418757024	14443		25197195	6381928
5080005		60265704	9592		395538	57744
		75751			41140495	10278964

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DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
FLYING CONTROLS GROUP	6000000		
MECHANICAL CONTROLS	6010000		
MECHANICAL CONTROLS F F	6010001	52	86511
MECHANICAL CONTROLS C F	6010002	54	6853
MECHANICAL CONTROLS D B	6010003	55	3504
MECHANICAL CONTROLS FIN	6010005	83	126887
MECHANICAL CONTROLS I W	6010006	62	405847
MECHANICAL CONTROLS O W	6010007	64	301887
MECHANICAL CONTROLS C A	6010008		6467
			94292
FLYING CONTROLS HYDRAULICS	6020000		
FLYING CONT HYDRAULICS D B	6020001	56	25925
FLYING CONT HYDRAULICS E B	6020002	58	408976
FLYING CONT HYDRAULICS R F	6020003	59	487
			43537
FLYING CONT HYDRAULICS I W	6050000	62	240867
			24086
FLYING CONT HYDRAULICS O W	6060000	64	121817
			12181
FLYING CONT HYDRAULICS FIN	6070000	83	52987
			5298

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SHEET 5-9

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	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	6000000						
	6010000						
	6010001	52	8651	15807	11520	1367464	996595
	6010002	54	8853	33920	11526	300192	102005
	6010003	56	3504	8699	11880	170447	41580
	6010005	83	12688	78781	22176	9995733	2813691
	6010006	62	4088	47175	14375	29334679	5877075
	6010007	64	30188	77078	13561	23268307	4093795
	6010008		6467	0982	14338	458544	92623
			94292			64895366	14017364
	6020000						
	6020001	56	2592	57486	9594	1490037	248676
	6020002	58	4089	765522	11116	26796532	4546111
	6020003	59	4875	875	10824	36420	5196
			43537			28322989	4799983
	6050000						
	6050000	62	24086	70329	14731	16939443	3548109
			24086			16939443	3548109
	6060000						
	6060000	64	12181	174077	13576	9023319	1653693
			12181			9023319	1653693
	6070000						
	6070000	83	5298	76146	20867	4034215	1105534
			5298			4034215	1105534

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PROJECT C-105 MK 2

	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	FIXED EQUIPMENT GROUP	7000000		
	INSTRUMENTS	7010000		
69	INSTRUMENTS	7010001	52	4407
106	NAVIC TABLE AND STOWAGE	7010004	52	200
				4607
3	COCKPIT PRESSURE SEALING	7020000	52	500
				500
	OXYGEN SYSTEM	7030000		
63	OXYGEN SYSTEM F F	7030001	52	2279
63	OXYGEN SYSTEM C F	7030002	54	2065
				4344
	AIR CONDITIONING SYSTEM	7040000		
65	AIR CONDITIONING SYST F F	7040001	52	13193
65	AIR CONDITIONING SYST C F	7040002	54	63058
65	AIR CONDITIONING SYST D B	7040003	56	6763
65	AIR CONDITIONING SYST E B	7040004	58	6686
				89700
	HYDRAULICS MAIN SYSTEM	7050000		
	UTILITY HYDRAULICS F F	7050001	52	8415
	UTILITY HYDRAULICS C F	7050002	54	4162
	UTILITY HYDRAULICS D B	7050003	56	23316
	UTILITY HYDRAULICS E B	7050004	58	7240
	UTILITY HYDRAULICS I W	7050005	62	13311
	UTILITY HYDR NOSE U C	7050006	91	325
	UTILITY HYDR MAIN U C	7050007	92	2980
				59749
69	CABIN INSULATION	7070000	52	1191
				1191
	BRAKE PARACHUTE	7080000		
	BRAKE PARACHUTE F F	7080001	52	455
	BRAKE PARACHUTE R F	7080005	59	5659
	BRAKE PARACHUTE I W	7080006	62	124
				6238

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SHEET 5-10

	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
	7000000						
	7010000						
	7010001	52	4407	16112	13909	710056	612970
	7010004	52	2002	22000	13000	44000	26000
			4607			754056	638970
NG	7020000	52	500	18600	13000	93000	65000
			500			93000	65000
	7030000						
	7030001	52	2279	19625	12578	447254	286653
	7030002	54	2065	26242	16027	541897	330958
			4344			989151	617611
M F C D E	7040000						
F	7040001	52	1319	3223	6111	2950087	1576564
F	7040002	54	6305	8301	2013	18993070	8670475
B	7040003	56	6763	5318	3119	3596766	808179
B	7040004	58	6686	6311	1136	4219601	909296
			89700			29759524	11964514
	7050000						
	7050001	52	8415	2001	6108	1684346	913280
	7050002	54	4162	4338	4104	1805642	433680
	7050003	56	2331	6551	1981	12869966	2491548
	7050004	58	7240	6064	7108	4390843	785685
	7050005	62	1331	1553	6014	7368970	1894821
	7050006	91	325	1903	3952	61857	30943
	7050007	92	2980	5432	5141	1618885	420180
			59749			29800509	6970137
	7070000	52	1191	1792	4130	213475	154830
			1191			213475	154830
	7080000						
	7080001	52	455	1691	3138	76954	58554
	7080005	59	5659	8209	4144	4645699	816990
	7080006	62	1246	2022	1450	76907	17980
			6238			4799560	893524

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DESCRIPTION		REFERENCE NO.	COMP. NO.	WEIGHT
ELECTRICAL SYSTEM		7090000		
	ELECTRICAL WIRING	7091400		
60	ELECTRICAL WIRING R N	7091401	51	129
60	ELECTRICAL WIRING F F	7091402	52	29661
60	ELECTRICAL WIRING C F	7091403	54	23543
60	ELECTRICAL WIRING A I	7091404	55	12742
60	ELECTRICAL WIRING D B	7091405	56	90155
60	ELECTRICAL WIRING E B	7091406	58	645
60	ELECTRICAL WIRING I W	7091408	62	89095
60	ELECTRICAL WIRING FIN	7091409	83	3527
60	ELECTRICAL WIRING N U C	7091410	91	3301
60	ELECTRICAL WIRING ENG	7091411		20026
60	ELECTRICAL WIRING C A	7091412		137463
				41141
60	ELECTRICS F F	7091500	52	152481
				15248
60	ELECTRICS C F	7091600	54	87094
				8709
ELECTRICS E B		7091700	58	6706
ELECTRICS ENG		7091701		134325
ELECTRICS C A		7091702		7186
				14820
60	ELECTRICS FIN	7091800	83	838
				83
60	ELECTRICS I W	7091900	62	23366
60	ELECTRICS C A	7091901		112
60	ELECTRICS M U C	7091902	92	745
				2522
60	ELECTRICS A I	7092000	55	50902
				5090
ELECTRICS D B		7092100	56	317895
				31789
66	WINDSCREEN DEMISTING	7092200	52	25512
				2551

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SHEET 5-11

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
70900000						
					UNCLASSIFIED NON CLASSIFIE	
70914000						
709140151		129	9285	12000	11978	15480
709140252		2966	19977	11200	592518	332192
709140354		2354	39703	11000	934609	258940
709140455		1274	21984	12000	280076	152880
709140556		9015	52769	9921	4757125	894378
709140658		64	59500	9200	38080	5688
709140862		8909	54111	13900	4820749	1238351
709140983		352	79754	30000	280734	105600
709141091		330	18600	9800	61380	32340
7091411		2002	60603	10000	1214874	200200
7091412		13746	33473	11234	4601199	1544226
		41141			17593322	4780475
709150052		15248	15464	11095	2357951	1691766
		15248			2357951	1691766
709160054		8709	45415	10760	3955192	937088
		8709			3955192	937088
709170058		670	67944	11597	455225	77700
7091701		13432	57531	11489	7727564	1543202
7091702		718	61350	12000	440493	86160
		14820			8623282	1707062
709180083		83	89550	28840	74327	23937
		83			74327	23937
709190062		2336	62053	14500	1449558	338720
7091901		112	62946	13561	70500	15188
709190292		74	51600	13700	38184	10138
		2522			1558242	364046
709200055		5090	22059	13832	1122803	704049
		5090			1122803	704049
709210056		31789	51897	10270	16497537	3264730
		31789			16497537	3264730
709220052		2551	20102	10400	512802	265304
		2551			512802	265304

AVRO AIRCRAFT LTD.

MALTON, ONT.

WEIGHT AND C. OF G BY FUNCTIONAL COMPONENT

PROJECT C-105 MK 2

DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
ELECTRICS R F	7092300	59	136
			136
L P PNEUMATICS	7100000		
L P PNEUMATICS F F	7100001	52	1963
L P PNEUMATICS C F	7100002	54	368
L P PNEUMATICS D B	7100003	56	456
L P PNEUMATICS E B	7100004	58	1557
L P PNEUMATICS F IN	7100005	83	504
L P PNEUMATICS R N	7100006	51	62
			4930
INTAKE DEICING	7120000	55	5184
			5184
65 RADOME ANTI ICING	7130000	51	888
			888
RADIO AND RADAR FIXED	7140000		
RADIO AND RADAR FIXED R N	7140001	51	16500
RADIO AND RADAR FIXED F F	7140002	52	5000
RADIO AND RADAR FIXED C F	7140003	54	18000
RADIO AND RADAR FIXED D B	7140004	56	1800
RADIO AND RADAR FIXED F IN	7140005	83	3200
RADIO AND RADAR FIXED C A	7140006		17500
			62100
60 CANOPY ACTUATION	7160000	52	6205
			6205
3 CABIN CONSOLES	7170000	52	1745
			1745
60 RADAR DOOR ACTUATION	7180000	54	1000
			1000
62 SURFACE FINISH F F	7190001	52	363
62 SURFACE FINISH CANOPY	7190002	53	64

WGT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

REPORT NO. 7-0400-34 Iss 6

SHEET 5-12

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
7092300	59	136	80200	11360	109072	15450
		136			109072	15450
7100000						
7100001	152	1963	19752	12519	387732	245748
7100002	54	368	40463	12263	148904	45128
7100003	56	456	55084	10296	251183	46950
7100004	58	1557	65644	9739	1022077	151636
7100005	83	504	74257	24452	374255	123238
7100006	51	82	7540	9958	6183	8166
		4930			2190334	620866
7120000	55	5184	19702	11800	1021352	611712
		5184			1021352	611712
7130000	51	888	5149	12500	45723	111000
		888			45723	111000
7140000						
R N	7140001	16500	9755	10000	1609575	1650000
F F	7140002	5000	18160	12000	908000	600000
C F	7140003	18000	27059	10108	4870620	1819440
D B	7140004	1800	53000	10000	954000	180000
F IN	7140005	3200	76180	24600	2437760	787200
C A	7140006	17600	21329	12364	3753904	2176064
		62100			14533859	7212704
7160000	52	6205	22211	15447	1378193	958486
		6205			1378193	958486
7170000	52	1745	17476	12434	304956	216973
		1745			304956	216973
7180000	54	1000	26800	9500	268000	95000
		1000			268000	95000
7190000	152	363	18744	12200	68041	44286
	253	64	20218	15900	12940	10176

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WEIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-13

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
719000354		1400	371.97	124.55	520758	174370
719000455		408	227.98	120.20	93016	49042
719000556		377	538.28	112.00	202932	42224
719000658		443	667.01	112.00	295485	49616
719000759		648	803.62	131.75	520746	85374
719001383		639	746.63	208.37	477097	133148
719001484		202	812.79	214.31	164184	43891
719001174		353	791.90	135.56	279541	47853
719001282		566	755.23	142.60	427460	80712
719000862		315	1601.44	144.00	1895137	453744
719000964		1067	706.50	135.90	753836	145005
719001065		319	639.48	135.26	203994	43148
		10000			5915167	1401989

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AVRO AIRCRAFT LTD.
MALTON, ONT.

WEIGHT AND C. OF G BY FUNCTIONAL
COMPON

PROJECT C-105 MK 2

DESCRIPTION		REFERENCE NO.	COMP. NO.	WEIGHT
REMOVABLE EQUIPMENT GROUP		8000000		
69	EJECTOR SEATS	8010100	52	18600
				18600
RADAR REMOV GROUP		8020000		
	RADAR REMOVABLE	8020100		
	RADIO AND RADAR REM R N	8020101	51	98050
	RADIO AND RADAR REM F F	8020102	52	18900
	RADIO AND RADAR REM C F	8020103	54	59600
	RADIO AND RADAR REM D B	8020104	56	4150
	RADIO AND RADAR REM C A	8020106		4350
				185050
SPARROW PACK		8050000		
110	SPARROW PACK STRUCTURE	8050100	54	85000
				85000
110	SPARROW PACK MECHANISMS	8050200	54	62532
				62532
110	SPARROW PACK HYDRAULICS	8050300	54	35019
				35019
SPARROW PACK ELECTRONICS		8050400	94	14300
				14300
110	SPARROW PACK ELECTRICS	8050500	54	6410
				6410
110	SPARROW ELECTRICS	8050600	52	254
				254
110	SPARROW ELECTRICS	8050700	54	60
				60

WEIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-14

GROUP	REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT
0 UP	80000000						
	801010052		18600	20110	13625	3740460	2534250
			18600			3740460	2534250
	80200000						
	8020100						
	802010151		98050	9011	10100	8835286	9903050
N	802010252		18900	18714	12000	3536946	2268000
F	802010354		59600	26933	10147	16052068	6047612
F	802010456		4150	52824	10000	2192196	415000
B	8020106		4350	55522	16000	2415207	696000
A			185050			33031703	19329662
	80500000						
	805010054		85000	39084	9600	33221400	8160000
			85000			33221400	8160000
S	805020054		62532	37667	9922	23553928	6204425
			62532			23553928	6204425
S	805030054		35019	36883	9900	12916058	3466881
			35019			12916058	3466881
CS	805040094		14300	33200	10000	4747600	1430000
			14300			4747600	1430000
	805050054		6410	36229	9500	2322279	608950
			6410			2322279	608950
	805060052		254	18242	11255	46335	28588
			254			46335	28588
	805070054		60	27300	11255	16380	6753
			60			16380	6753

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MALTON, ONT.

WEIGHT AND C. OF G BY FUNCTIONAL
COMPO

PROJECT C-105 MK 2

	DESCRIPTION	REFERENCE NO.	COMP. NO.	WEIGHT
	OPERATIONAL LOAD	9000000		
99	CREW MEMBERS	9010000	52	43000
				43000
50	ENGINE OIL	9020000		
	ENGINE OIL DRAINABLE	9020001		92900
	ENGINE OIL TRAPPED ENG	9020002		17730
	ENGINE OIL TRAPPED D B	9020003	56	19250
	ENGINE OIL TRAPPED E B	9020004	58	9090
				13697
129	SPARROW MISSILES	9030000	54	172800
				172800
	OXYGEN CHARGE	9040000		
128	OXYGEN CHARGE F F	9040001	52	720
128	OXYGEN CHARGE C F	9040002	54	12670
				1339
125	ALCOHOL FOR RADOME DEICING	9050000	51	2200
				2200
132	ENGINE FIRE EXT FLUID	9060000		2500
				2500
	RESIDUAL FUEL	9070000		
74	RESIDUAL FUEL C F	9070001	54	4680
74	RESIDUAL FUEL I W	9070002	62	17160
				21840
67	WATER FOR AIR CONDITIONING	9100000	54	26000
				26000

HEIGHT AND C. OF G BY FUNCTIONAL GROUP COMPONENT

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SHEET 5-15

REFERENCE NO.	COMP. NO.	WEIGHT	H. ARM	V. ARM	H. MOMENT	V. MOMENT	
9000000							
					UNCLASSIFIED NON CLASSIFIED		
9010000	52	43000	19400	13650	8342000	5869500	
		43000			8342000	5869500	
9020000							
9020001		9290	65225	11390	6059403	1058131	
9020002		1773	63676	11640	1128975	206377	
9020003	56	1925	58084	9555	1118117	183934	
9020004	58	909	59928	9704	544746	88209	
		13897			8851241	1536651	
9030000	54	172800	38929	8830	67269312	15258240	
		172800			67269312	15258240	
9040000							
9040001	52	72	20493	13200	14755	9504	
9040002	54	1267	26280	16150	332968	204621	
		1339			347723	214125	
CING	9050000	51	2200	9300	13800	204600	303600
		2200			204600	303600	
9060000							
		2500	73000	12900	1825000	322500	
		2500			1825000	322500	
9070000							
9070001	54	4660	39424	12300	1845043	575640	
9070002	62	17160	59755	13705	10253958	2351778	
		21840			12099001	2927418	
NING	9100000	54	26000	26800	13200	6968000	3432000
		26000			6968000	3432000	

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