

FILE IN VAULT

ANALYZED



QC
AVRO
C-105
7-0400-
Iss. 7

Sub



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JAN. 07 1993

Report no.: QCX - AVRO - CF105- R-7-0400-71-155-7

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

QC
Avro
C-105
7-0400-71
Iss. 7

AVRO AIRCRAFT LIMITED
INTER-DEPARTMENTAL MEMORANDUM

~~SECRET~~
UNCLASSIFIED

Ref: 8387/11/J
Date: 22 April, 1958
To: Mr. C.V. Lindow
From: E.F. Burnett
Subject: Weight & Balance Summary 8th Flight

ANALYZED

Herewith Weight and balance data for Arrow 1 # 25201 8th flight.

Classification cancelled / changed to: UNCLASSIFIED

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

Date: 5 Nov 1992

Signature: *E. Aubrey*
Unit / Rank / Appointment: USIS 3, Secretary CRAD HQ DRP

E.F. Burnett
E.F. Burnett
Weights Supervisor

EF/ag

cc: Messrs. J.C. Floyd
R.N. Lindley
F.P. Mitchell
D.N. Scard
G. Hake
J.V. Hatton
T. Roberts
J. Thorne
J. Lucas
A.J. Crust (7 copies for R.C.A.F.)
Central Files



53969

12496634

ARROW 1
Aircraft 25201
Date: 22 April, 1958

Report: 7-0400-71
Issue : 7
Sheet : 1

SECRET

WEIGHT & BALANCE SUMMARY FLIGHT #8

	<u>WEIGHT (lb)</u>	<u>H. ARM</u>	<u>% H.A.C.</u>	
1. Conditionat start up - OWE for #3				
flight plus fuel as indicated on	67380	545.97	30.38	U/C Down
pack fuel gauges	67380	544.51	29.97	U/C Up
2. Engine Run Up, Checks Taxi				
3. Weight at take off (estimated)	66380	546.06	30.40	U/C Down
	66380	544.54	29.98	U/C Up
4. Weight at Landing (estimated fuel	52500	547.55	30.81	U/C Down
distribution).	52500	545.68	30.29	U/C Up
5. Weight at landing (actual fuel	52420	548.99	31.21	U/C Down
distribution)	52520	547.12	30.69	U/C Up

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BEFORE FLIGHT

ARROW 1
AIRCRAFT 25201
FLIGHT 8

DATE: 22 April, 1958
REL. ONT: 7-0400-71-7
SHEET: 2

~~RESTRICTED TO PERSONNEL~~

SECRET

THE AIRCRAFT WAS NOT WEIGHED BEFORE FLIGHT

SCALE	KIT	CELL	LOAD	CORRECTION	WEIGHT
Wing Jacking Point - Port					
Wing Jacking Point - Std					
Nose Jacking Point					
TOTAL					

WT. (lbs) H. ARM (ins) % M.A.C.

Total Wt. Fwd Jacking Point
Total Wt. Aft Jacking Points
TOTAL as Weighed

U/C Down

Plus Pilot +
Plus Observer +
Less Elevator Uplocks -
Less Intake Blanks -
Less Tailcone Blanks -
Less U/C Down Locks -

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Gross Wt 67380 545.97 30.31 U/C Down

Gross Wt 67380 544.51 29.97 U/C Up

Less Fuel (see Chart 1 below) 18784 541.39

Operational Wt Empty (See sheet 2 of weighing for flight #3) 48596 547.74 30.87 U/C Down

Operational Wt Empty 48596 545.72 30.31 U/C Up

Before Flight After Flight
#1 Chart - Fuel Gauge Reading ~~before flight~~ #2 Chart - Fuel Gauge Readings ~~before taxi~~

Tanks	L.H. Deg.	R.H. Deg.	Total Deg.	Total lbs	H. ARM INS
1	-	242	242	1936	354.59
2	248	-	248	1984	435.23
3	141	140	281	2248	446.14
4	84	70	154	1232	502.57
5	154	118	272	2176	548.87
6	154	142	296	2368	589.11
7	282	272	554	4432	627.57
8	174	127	301	2408	675.52
Total				18784	541.39

Cockpit Gauges L.H. 10000
 R.H. 9000

Tanks	L.H. Deg.	R.H. Deg.	Total Deg.	Total lbs.	H. ARM INS
1	-	12	12	96	354.59
2	4	-	4	32	435.23
3	10	0	10	80	446.14
4	10	0	10	80	502.57
5	167	140	307	2456	548.87
6	12	20	32	256	589.11
7	32	18	50	400	627.57
8	50	3	53	424	675.52
Total				3824	561.89

Cockpit Gages L.H. 2600
 R.H. 1200

Date: 22 April, 1958
 Report: 7-0400-71-7
 Sheet: 3

WEIGHT AND BALANCE CLEARANCE FOR ARROW 1

SECRET

Serial No. <u>25201</u>	C.G. Limits <u>28" - 31"</u>	Crew <u>1</u>
Flight No. <u>8</u>	Gross Wt. <u>67380</u>	Fuel Load <u>18784</u> lb

CONDITION	WEIGHT lb	H. ARM. ins.	M.A.C. %	
<u>START UP</u>				
Gross Wt (from Sheet 2)	67380	545.97	30.38	U/C Down
Gross Wt (from Sheet 2)	67380	544.51	29.97	U/C Up
<u>TAKE-OFF</u>				
Gross Wt U/C Down (above)	67380	545.97		
Less Fuel - Start Up Taxi, Take-off	<u>1000</u>	<u>539.96</u>		
Gross Wt. = Take off	66380	546.06	30.40	U/C Down
Less Moment 97,969 lb/in				
Gross Wt. Take off	66380	544.54	29.98	U/C Up
<u>MID-FLIGHT</u>				
Operational Wt Empty U/C Up (from sheet)	<u>48596</u>	<u>545.72</u>		
Tanks				
1	1069	354.59		
2	1095	435.23		
3 x 2	1241	446.14		
4 x 2	680	502.47		
5 x 2	2176	548.87		
6 x 2	1307	589.11		
7 x 2	2447	627.57		
8 x 2	1330	675.52		
Total Fuel	<u>11345</u>	<u>542.03</u>		
Gross Wt. = Mid Flight	59941	545.02	30.11	U/C Up
<u>LANDING</u>				
Operational Wt. Empty = U/C Down (from sheet)	<u>48596</u>	<u>547.74</u>		
Tanks				
1	201	354.59		
2	206	435.23		
3 x 2	234	446.14		
4 x 2	128	502.47		
5 x 2	2176	548.87		
6 x 2	246	589.11		
7 x 2	461	627.57		
8 x 2	251	675.52		
Total Fuel	<u>3904</u>	<u>545.16</u>		
Gross Wt. = Landing	52500	547.55	30.81	U/C Down
Less Moment 97,969 lb/in				
Gross Wt Landing	52500	545.68	30.29	U/C Up

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Loading Conditions and C.G. Travel Approved _____

Envelope attained - based on Fuel Gauge readings after flight

Date: 22 April, 1958
Report: 7-0400-71-7
Sheet: 4

WEIGHT AND BALANCE CLEARANCE FOR AIRCRAFT

SECRET

Serial No. <u>25001</u>	C.G. Limits <u>28% - 31%</u>	Crew <u>1</u>
Flight No. <u>8</u>	Gross Wt. <u>67380</u>	Fuel Load <u>18784</u> lb
<u>CONDITION</u>	<u>WEIGHT</u> lb	<u>H. ARM</u> ins.
<u>TAKE-OFF</u>		
Gross Wt (from Sheet 2)	67380	545.97
Gross Wt (from Sheet 2)	67380	544.51
		30.38
		29.97
		U/C Down
		U/C Up
<u>TAKE-OFF</u>		
Gross Wt U/C Down (above)	67380	545.97
Less Fuel - Start Up Taxi, Take-off	-1000	539.96
Gross Wt. - Take off	66380	546.06
Less Moment 97,969 lb/in		30.40
Gross Wt. Take off	66380	544.51
		29.98
		U/C Down
		U/C Up
<u>MID-FLIGHT</u>		
Operational Wt Empty U/C Up (from sheet)		
Tanks		
1		354.59
2		435.23
3 x 2		446.14
4 x 2		502.47
5 x 2		548.87
6 x 2		589.11
7 x 2		627.57
8 x 2		675.52
Total Fuel		
Gross Wt. - Mid Flight		
		U/C Up
<u>LANDING</u>		
Operational Wt. Empty = U/C Down (from sheet)	48596	547.74
Tanks		
1	96	354.59
2	32	435.23
3 x 2	30	446.14
4 x 2	80	502.47
5 x 2	2456	548.87
6 x 2	256	589.11
7 x 2	400	627.57
8 x 2	424	675.52
Total Fuel	3824	564.89
Gross Wt. - Landing	52420	548.99
Less Moment 97,969 lb/in		31.21
Gross Wt Landing	52420	547.12
		30.69
		U/C Down
		U/C Up

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Loading Conditions and C.G. Travel Approved _____

