

QC
Avro
C-105
7-0400-71
Iss. 5

AVRO AIRCRAFT LIMITED
INTER-DEPARTMENTAL MEMORANDUM

TL. 113-58/04
UNCLASSIFIED
SECRET

Ref: 8282/11/J
Date: 18 April, 1958
To: Mr. C.V. Lindow
From: E.F. Burnett
Subject: Arrow 1 - Weight & Balance 6th Flight

ANALYZED

Herewith Weight and Balance data for Arrow 1 # 25201
6th flight.

Classification cancelled / changed to: UNCLASSIFIED

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

UNCLASSIFIED
NON CLASSIFIED

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

EFB/ag

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



53968
12496552

ARROW 1
Aircraft 25201
Date April, 18, 1958

Report 7-0400-71
Issue 5
Sheet 1

SECRET

WEIGHT & BALANCE SUMMARY FLIGHT # 6

	<u>WT. (lbs)</u>	<u>H. ARM</u>	<u>% M.A.C.</u>	
1. Condition at startup - OWE for #3 flight plus fuel as indicated on instrument pack gauges.	67516	545.73	30.31	U/C Down
	67516	544.28	29.91	U/C Up
2. Engine run up, checks, taxi				
3. Weight at take off (estimated)	66516	545.82	30.34	U/C Down
	66516	544.35	29.93	U/C Up
4. Weight at landing (estimated fuel distribution)	54000	547.32	30.75	U/C Down
	54000	545.51	30.25	U/C Up
5. Weight at landing (actual fuel distribution)	53836	548.62	31.10	U/C Down
	53836	546.80	30.61	U/C Up

UNCLASSIFIED
NON CLASSIFIED

BEFORE FLIGHT

ARROW 1
AIRCRAFT 25201
FLIGHT 6

DATE: April 13, 1958
REPORT: 7-0400-71-5
SHEET: 2

~~XXXXXXXXXXXXXXXXXXXX~~

SECRET

THE AIRCRAFT WAS NOT WEIGHED BEFORE FLIGHT

COALD	KIT	CELL	LOAD	CORRECTION	WEIGHT
Wing Jacking Point - Port					
Wing Jacking Point - Stbd					
Nose Jacking Point					
TOTAL					

	<u>WT. (lbs)</u>	<u>H. ARM (ins)</u>	<u>% M.A.C.</u>
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 =

**UNCLASSIFIED
NON CLASSIFIED**

Gross Wt	<u>67516</u>	<u>545.73</u>	<u>30.31</u> U/C Down
----------	--------------	---------------	-----------------------

Gross Wt	<u>67516</u>	<u>544.28</u>	<u>29.91</u> U/C Up
----------	--------------	---------------	---------------------

Less Fuel (see Chart 1 below)	18920	540.58	
-------------------------------	-------	--------	--

Operational Wt Empty (See sheet 2 of weighing for	<u>48596</u>	<u>547.74</u>	<u>30.87</u> U/C Down
---	--------------	---------------	-----------------------

Operational Wt Empty flight 3)	<u>48596</u>	<u>545.72</u>	<u>30.31</u> U/C Up
--------------------------------	--------------	---------------	---------------------

Before flight		After flight	
#1 Chart - Fuel Gauge Reading when weighed	#2 Chart - Fuel-Gauge Readings before flight		

Tanks	L.H. Deg.	R.H. Deg.	Total Deg.	Total lbs	H. ARM INS
1	-	244	244	1952	354.59
2	253	-	253	2024	435.23
3	144	140	284	2272	446.14
4	84	70	154	1232	502.57
5	157	138	295	2360	548.87
6	148	134	282	2256	589.11
7	262	271	533	4424	627.57
8	173	127	300	2400	675.52
Total				18920	540.58

Tanks	L.H. Deg.	R.H. Deg.	Total Deg.	Total lbs.	H. ARM INS
1	-	22	22	176	354.59
2	44	-	44	352	435.23
3	16	0	16	128	446.14
4	22	4	26	208	502.47
5	167	140	307	2456	548.87
6	13	103	116	928	589.11
7	48	16	64	512	627.57
8	50	10	60	480	675.52
Total				5240	556.78

Coc Pit Gauges L.H. 10000
R.H. 8850

Date: April 18, 1958
 Report: 7-0400-71-5
 Sheet: 3

WEIGHT AND BALANCE CLEARANCE FOR AIRCRAFT

SECRET

Serial No. <u>25201</u>		C.G. Limits <u>205 - 31</u>		Crew <u>1</u>	
Flight No. <u>6</u>		Gross Wt. <u>67516</u>		Fuel Load <u>18920</u> lb	
<u>CONDITION</u>	<u>WEIGHT</u> lb	<u>H. AL.</u> ins.	<u>H.A.C.</u> %		
<u>START UP</u>					
Gross Wt (from Sheet 2)	67516	545.73	30.31	U/C Down	
Gross Wt (from Sheet 2)	67516	544.28	29.91	U/C Up	
<u>TAKE-OFF</u>					
Gross Wt U/C Down (above)	<u>67516</u>	<u>545.73</u>			
Less Fuel - Start Up Taxi, Take-off	<u>-1000</u>	<u>539.96</u>			
Gross Wt. - Take off	<u>66516</u>	<u>545.82</u>	30.34	U/C Down	
Less Moment 97,969 lb/in					
Gross Wt. Take off	66516	544.35	29.93	U/C Up	
<u>MID-FLIGHT</u>					
Operational Wt Empty U/C Up (from sheet)	<u>48596</u>	<u>545.72</u>			
Tanks					
1	1155	354.59			
2	1198	435.23			
3 x 2	1345	446.14			
4 x 2	729	502.47			
5 x 2	2360	548.87			
6 x 2	1335	589.11			
7 x 2	2619	627.57			
8 x 2	1421	675.52			
Total Fuel	<u>12162</u>	<u>541.25</u>			
Gross Wt. - Mid Flight	60758	544.83	30.06	U/C Up	
<u>LANDING</u>					
Operational Wt. Empty - U/C Down (from sheet 2)	<u>48596</u>	<u>547.74</u>			
Tanks					
1	359	354.59			
2	372	435.23			
3 x 2	418	446.14			
4 x 2	226	502.47			
5 x 2	2360	548.87			
6 x 2	415	589.11			
7 x 2	813	627.57			
8 x 2	441	675.52			
Total Fuel	<u>5404</u>	<u>543.52</u>			
Gross Wt. - Landing	<u>54000</u>	<u>547.32</u>	30.75	U/C Down	
Less Moment 97,969 lb/in					
Gross Wt Landing	54000	545.51	30.25	U/C Up	

UNCLASSIFIED
NON CLASSIFIED

Loading Conditions and C.G. Travel Approved _____

Date: April 18, 1958
 Report: 7-0400-71-5
 Sheet: 4

WEIGHT AND BALANCE CLEARANCE FOR AIRCRAFT

SECRET

Serial No. <u>25201</u>		C.G. Limits <u>28" - 31"</u>		Crew <u>1</u>	
Flight No. <u>6</u>		Gross Wt. <u>67516</u>		Fuel Load <u>11920</u> lb	
<u>CONDITION</u>	<u>WEIGHT</u> lb	<u>H. ARM</u> ins.	<u>P.A.C.</u> %		
<u>START UP</u>					
Gross Wt (from Sheet <u>3</u>)	67516	545.73	30.31	U/C Down	
Gross Wt (from Sheet <u>3</u>)	67516	544.23	29.91	U/C Up	
<u>TAKE-OFF</u>					
Gross Wt U/C Down (above)	67516	545.73			
Less Fuel - Start Up Taxi, Take-off	<u>-1000</u>	<u>539.96</u>			
Gross Wt. - Take off	<u>66516</u>	<u>545.82</u>	30.34	U/C Down	
Less Moment 97,969 lb/in					
Gross Wt. Take off	66516	544.35	29.93	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)	<u>48596</u>	<u>547.74</u>			
Tanks					
1	176	354.59			
2	352	435.23			
3 x 2	128	446.14			
4 x 2	208	502.47			
5 x 2	2456	548.87			
6 x 2	928	589.11			
7 x 2	512	627.57			
8 x 2	480	675.52			
Total Fuel	<u>5240</u>	<u>556.78</u>			
Gross Wt. - Landing	<u>53836</u>	<u>543.62</u>	31.10	U/C Down	
Less Moment 97,969 lb/in					
Gross Wt Landing	53836	546.80	30.61	U/C Up	

UNCLASSIFIED
 NON CLASSIFIED

Loading Conditions and C.G. Travel Approved _____