QCX AURO CF105 71 Maint 12-3



J. H. PARKIN BRANCH

JUN 8 1995

ANNEXE J. H. PARKIN CNRC - ICIST

MALEC



SECURITY CLASSIFICATION - CONFIDENTIAL

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By authority of		AVRS	

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MAINTENANCE INSTRUCTIONS Unit / Rank / Appointment ANCES

INSTRUMENTS - FUEL CONTENTS INDICATION

ARROW I

71/MAINT 12/3

11 Nov. 1957

Prepared:

For Maintenance and Reliability

Section

Approved:

or Telesign Dept.

Approved:

For Equipment Design

Authorized:

Project Designer

ENGINEERING DIVISION, AVRO AIRCRAFT JIMITED, MALTON, ONTARIO



TABLE OF CONTENTS

Chapter	Para.	Subject	Page
1		DESCRIPTION	1
	1.1	General Operation	1
2		GROUND SERVICING EQUIPMENT	2
	2.1 2.2 2.3	A-C Ground Power Unit Fuel Quantity Ground Test Unit Minneapolis-Honeywell-Variable	2
	2.4	Capacitor - HT 109 Indicator Calibration Test Link	2
3		FUNCTION TESTS	3
	3.1 3.2 3.3	Primary Test Tank Capacitance Unit Test Indicator Calibration Test	3 3 4
		ILLUSTRATIONS	
	FIGURE 1	Fuel Quantity Ground Test Unit	7
	FIGURE 2	Component Location Diagram	8
	FIGURE 3	Indicator Calibration Test Link	9
M.D.R.	11-E4 11-E3/9 11-E11/71 11-E11/72 11-E115/120 11-E116/121 11-E117/122 11-E131/136 11-E132/137 11-E133/138 11-E212 11-E213 11-E216 11-E217 11-E221/225 11-E220/224	COMPONENT DATA Panel Distribution Switch - Fuel Capacitance Test Indicator - Fuel Quantity - TL.H. Indicator - Fuel Quantity - R.H. Tank Capacitance Unit #3 L and R.H. aft Tank Capacitance Unit #3 L and R.H. centre Tank Capacitance Unit #3 L and R.H. fwd Tank Capacitance Unit #6 L and R.H. aft Tank Capacitance Unit #6 L and R.H. centre Tank Capacitance Unit #6 L and R.H. fwd Tank Capacitance Unit #1 aft Tank Capacitance Unit #1 fwd Tank Capacitance Unit #2 aft Tank Capacitance Unit #2 fwd Tank Capacitance Unit #4 L and R.H. aft Tank Capacitance Unit #4 L and R.H. fwd	
M.D.R. M.D.R. M.D.R.	11-E229/234 11-E230/235	Tank Capacitance Unit #5 L and R.H. fwd Tank Capacitance Unit #5 L and R.H. aft	



, Table of Contents (continued)

. Chapter	Para.	Subject	Page
M.D.R. M.D.R. M.D.R. M.D.R. M.D.R.	11-E238/244 11-E239/245 11-E240/246 11-E241/247 11-E250/256 11-251/257 11-252/258	Tank Capacitance Unit #7 L and R.H. Tank Capacitance Unit #8 L and R.H. Tank Capacitance Unit #8 L and R.H. Tank Capacitance Unit #8 L and R.H.	centre fwd centre aft outb'd inb'd centre



1. DESCRIPTION

1.1 General

- 1.1.1 The fuel quantity indication system comprises two independent, but electrically identical circuits, one for the R.H. and one for the L.H. fuel-sub-systems. Each circuit, consisting of a combined amplifier-indicator, eighteen tank capacitance units, and one combined tank unit and compensator (located in No. 5 tank aft) operates as a self-balancing capacitance bridge.
- 1.1.2 The system operation is based on the difference in the dielectric constants of air and fluid. The capacitance of the cylindrical tank capacitors varies with variations in fuel level and being parallel-connected, their capacitances are additive, thereby indicating the total fuel quantity in the tanks.
- 1.1.3 Contained within the indicator are a fixed value reference capacitor, a 400 c.p.s. 115 volt step-down transformer, a phase-sensitive amplifier, a two phase induction motor, and two manually variable adjustment potentiometers.
- 1.1.4 The compensator (Para 1.1.1) is parallel-connected to the reference capacitor and compensates for variations in fuel specific gravity and temperature.
- 1.1.5 A 28.5 V.D.C supply is fed into the indicator for energizing the transistor circuit section.

1.2 Operation

- 1.2.1 Any change in fuel level in the tanks will alter the total capacitance of the tank units, which in turn will unbalance the bridge circuit, thereby creating a potential difference across the centre tap of the bridge. The resultant current flow is amplified and fed to one phase of the two phase motor, (the remaining phase being fed direct from the 400 cps., 115 volt supply). Motor rotation then positions the indicator pointer to show total fuel quantity, by weight, in the L.H. or R.H. system of tanks and simultaneously drives the wiper arm of a potentiometer to re-balance the bridge.
- 1.2.2 The two potentiometers in the indicator (Para 1.1.3) are connected, one across each end portion of the transformer secondary winding, and are adjustable at the back of the indicator by means of two screws, one marked EMPTY and the other marked FULL. The wiper arm of the EMPTY adjustment potentiometer is connected to the tank units leg of the bridge, and that of the FULL adjustment



- 1.2.2 (continued)
 - potentiometer to the reference leg of the bridge.
- 1.2.3 A single-pole, double-throw switch, spring loaded to a centre-OFF position, is provided for a simple indicator operation check.
- 1.2.4 This switch is mounted on E3 electrics panel in the nose wheel well and is marked FUEL CAP. TEST LEFT-RIGHT.

 Selection of the switch to LEFT or RIGHT will ground the unbalanced or variable leg of the left or right fuel subsystem bridge circuit, causing the pointer to take up a position at the zero end of the scale. When the switch is released, the pointer will return to its original position.
- 1.2.5 Power for the system is derived from the $\underline{\text{Main D-C}}$ bus and the Primary A-C bus.

2. GROUND SERVICING EQUIPMENT

- 2.1 A-C Ground Power Unit.
- 2.2 Fuel Quantity Ground Test Unit
 - 2.2.1 This unit consists of a fuel contents indicator, a power unit, a fuel tank rotary selector switch and the necessary circuitry required to indicate the amount of fuel contained in any selected fuel tank of the aircraft. The quantity is gauged by measuring the total capacitance of the tank units.
 - 2.2.2 The amount of fuel measured will be indicated as a percentage of the total measurable capacity of the tank in pounds of fuel.
 - 2.2.3 This unit will facilitate after flight tests with respect to the fuel management system.

2.3 Minneapolis-Honeywell Variable Capacitor - HT 109

- 2.3.1 This variable capacitance tester provides a substitute capacitance for adjusting and testing fuel quantity gauge systems and centre of gravity control systems and also permits adjusting and testing certain individual components of these systems.
- 2.3.2 The tester consists of a metal case which contains a 3-wire variable capacitor, capacitance multipliers and special cables. It has a range of 100 to 1100 micro-micro-farads without multipliers and 100 to 6100 micro-micro-farads with multipliers.



2.4 Indicator Calibration Test Link

2.4.1 This link is necessary to facilitate an indicator calibration check in conjunction with the HT 109 tester. It consists of two connectors and their inter-connecting wiring and two single wires connected into one connector, and fitted with Dage tee connectors at their free end. For test purposes the link connects in series with the fuel quantity indication circuit at E4 panel, and the two wires along with the tee connectors provide a means of connecting the HT 109 tester in parallel with the unscreened or negative side of the L & RH fuel quantity indication circuits.

3. FUNCTION TESTS

3.1 Primary Test

- 3.1.1 Connect the A-C ground power unit to the aircraft.
- 3.1.2 Ensure that the circuit breakers FUEL CAP. L AND R, located on El circuit breaker panel, are closed.
- 3.1.3 Switch on the A-C ground power unit and select the MASTER ELECTRICS switch to the ON position.
- 3.1.4 Select and hold the FUEL CAP. test switch, located on E3 panel to LEFT. The pointer on the left FUEL QUANTITY indicator should move toward the zero end of the scale.

 Release the test switch and ensure that the pointer returns to its original position.
- 3.1.5 Check the right FUEL QUANTITY indicator by proceeding as in Para 3.1.4, substituting "right" for "left".
- 3.1.6 Select the MASTER ELECTRICS switch to OFF.
- 3.2 <u>Tank Capacitance Unit Test</u> (to be carried out with a measurable quantity of fuel in each tank)
 - 3.2.1 Disconnect electrical connectors E4/58, E1000/34, E1000/35 from panelE4 and connect to E4 the appropriate cables from the fuel contents ground test unit.
 - 3.2.2 Ensure that the L. PRESS. RATIO current limiter, located on E20 aft current limiter panel, is serviceable.
 - 3.2.3 Select the aircraft MASTER ELECTRICS switch to the ON position.
 - 3.2.4 Select the fuel quantity ground test unit POWER switch to the ON position. The test unit pilot light should illuminate. If the test color of a suital solution is



- 3.2.5 With the tank selector switch selected to #1 tank check that the test unit is functioning by pressing the unit TEST button and observing that the test unit indicator pointer moves toward zero. Release the button and the pointer should return to its original position.
- 3.2.6 Repeat the above test (para 3.2.5) selecting the tank selector switch to each of the remaining 13 selections in turn.
- 3.2.7 Select the MASTER ELECTRICS switch to OFF.
- 3.2.8 Have the aircraft completely defuelled.
- 3.2.9 Select the MASTER ELECTRICS switch to ON.
- 3.2.10 Select the test unit selector switch to each of the fourteen tank units in rotation and observe that a zero indication is shown for each tank.
- 3.2.11 Select the aircraft MASTER ELECTRICS switch to OFF, disconnect the test unit and re-connect the aircraft connectors to E4 panel (See Para 3.2.1).
- 3.2.12 Select the aircraft MASTER ELECTRICS switch to ON and observe that a zero reading is indicated on both the L.H. and R.H. FUEL QUANTITY indicators.
- 3.2.13 Select the aircraft MASTER ELECTRICS switch to OFF.
- 3.3 Indicator Calibration Test (To be carried out with fuel tanks empty)
 - 3.3.1 Set the EMPTY and FULL adjustment screws at the back of the FUEL QUANTITY L.H. and R.H. indicators to the approximate half-way position of their complete clockwise or anti-clockwise rotation, to ensure maximum empty and full adjustment potential.
 - 3.3.2 Ensure that the four circuit breakers L and R FUEL CAP., located on El circuit breaker panel, are set.
 - 3.3.3 Connect the A-C ground power unit to the aircraft and select the MASTER ELECTRICS switch to the ON position.
 - 3.3.4 By means of the EMPTY adjustment screw at the back of the indicator, adjust the pointer of the L.H. indicator to centre on the zero indication mark.
 - 3.3.5 Repeat Para. 3.3.4 for the R.H. indicator.
 - 3.3.6 Select the MASTER ELECTRICS switch to the OFF position.



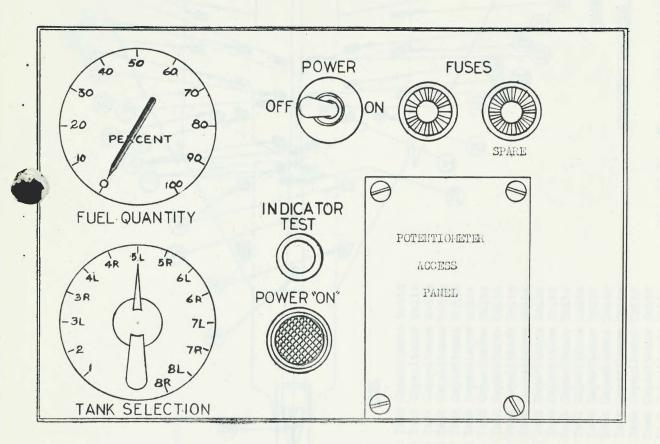
- 3.3.7 Connect the HT 109 tester into the fuel capacitance circuit at E4 panel as follows:
 - 3.3.7.1 Disconnect connector E4/58 from connector E4/16 and between these two connectors, connect the Indicator Calibration Test Link.
 - 3.3.7.2 Disconnect cable El000/35 and in its place connect the screened cable tee connector from the HT 109 tester.
 - 3.3.7.3 Connect cable El000/35 to the empty socket of the HT 109 screened cable tee connector.
 - 3.3.7.4 Connect the unscreened connector from the HT 109, to the cable idented R.H. SYSTEM at the indicator calibration test link.
- 3.3.8 Select the MASTER ELECTRICS switch to ON.
- 3.3.9 Set the HT 109 capacitance to 495 micro-micro-farads.
- 3.3.10 By means of the FULL adjustment screw, set the R.H. indicator pointer to centre on the 11,600 lbs. indication mark.
- 3.3.11 Select the MASTER ELECTRICS switch to OFF.
- 3.3.12 Disconnect the HT 109 screened cable tee connector and re-connect cable E1000/35 to the tee connector at E4 panel.
- 3.3.13 Disconnect the HT 109 unscreened cable connector from the R.H. SYSTEM cable and connect it to the L.H. SYSTEM cable at the indicator calibration test link.
- 3.3.14 Disconnect cable E1000/34 and, in its place, connect the HT 109 screened cable tee connector.
- 3.3.15 Connect cable E1000/34 to the empty socket of the HT 109 screened cable tee connector.
- 3.3.16 Select the MASTER ELECTRICS switch to ON.
- 3.3.17 Repeat the procedures outlined in Paras 3.3.9 and 3.3.10. Reading L.H. indicator for RH indicator.
- 3.3.18 Select the MASTER ELECTRICS switch to OFF.
- 3.3.19 Disconnect the HT 109 tester and the indicator calibration test link from the aircraft.
- 3.3.20 Re-connect cable E1000/34 to its appropriate tee connector at E4 panel.



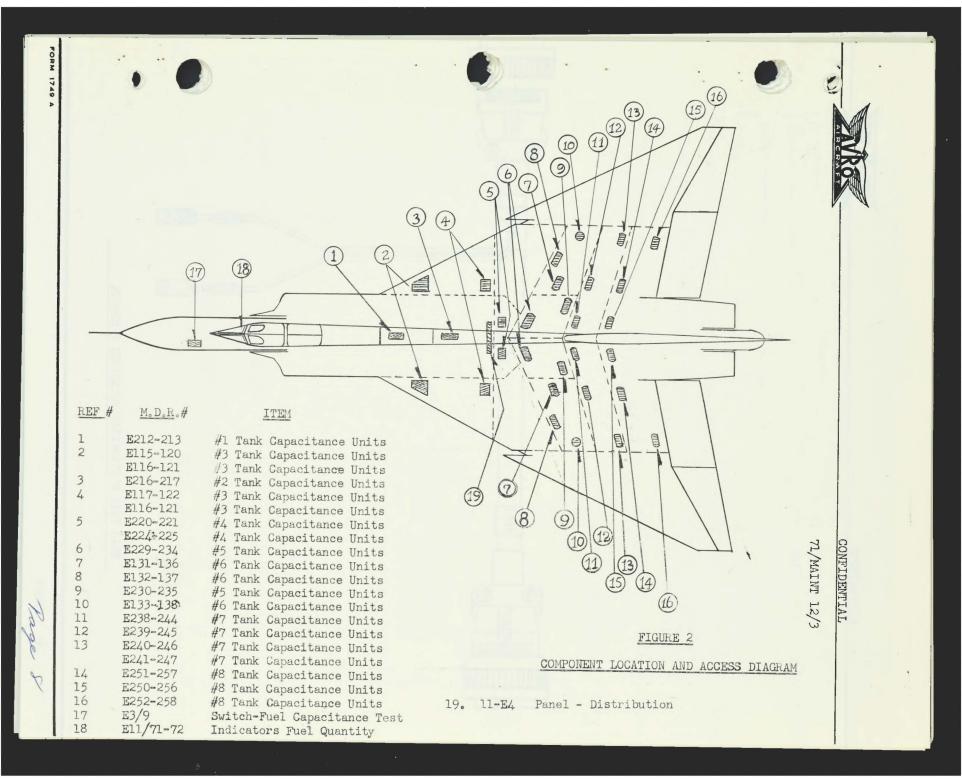
71/MAINT 13/2

- 3.3.21 Re-connect connector E4/58 to connector E4/16 at E4 panel.
- 3.3.22 Select the MASTER ELECTRICS switch to ON. Observe that both the L.H. and R.H. indicator pointers are at the centre of the zero scale mark.
- 3.3.23 Select the MASTER ELECTRICS switch to OFF.





FUEL QUANTITY GROUND TEST UNIT
FIGURE 1





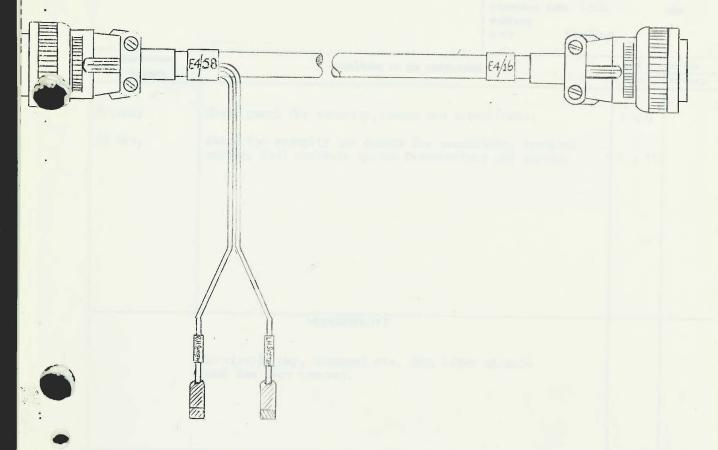


FIGURE 3 INDICATOR CALIBRATION TEST LINK

MAINTE	NANCE D	ATA RECORD	SYSTEM	REF.	
AVRO AIRCRA	FT LTD.	Engineering Div.	ELECTRICS	11-	E4
DISTRIBUTION: STAND S. Brown K. Knowlton	DARD +	A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Panel - Distribut	ion	
MANUFACTURER'S PA MANUFACTURER'S NA AVROCAN SPEC.Nil	ME Avro Aircra		AVRO PART NO. 7-1154-	-13	and and
LOCATION FORWA	rd Face of Bull		7-1100-	2 sht 20 2 sht 21 3 sht 7	
760			RELIABI	LITY	
			overhaul life 1500 wastage o.t.r. Pendin		HRS.
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	-	or security, damage and clea		1 x 5	

INSPECTI	ON	OPERATION	TO BE PERFORMED		MEN X N	MINUTES
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	G1 1 0	• • • • • • •	6	+d1	0 1	
25 Hrs.	check for strips,	or security and dam fuel contents syst	tem T-connectors	rs, terminal and wiring.	1 x 10	
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	13.7					
		ACCESSIBILIT	Y			
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		ile bay, bulkhead s s been removed.	sua. 40), alter m	Tabile		
	pack na	p peell removed.				
ISSUE	7	2	3	4		
DATE	Dec 15/55	Mar. 8/56	Jan 3/57	18 Nov. 57		
COMPILED	C.E. Wright	D. Collingwood	D. Collingwood	K.P. Lowe		
CHECKED	G. Emmerson	G. Emmerson	WO2 Wentworth	WO2 Wentworth		•

	1	LUBRICA	TION NII			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	1	ACCRES	
			TREQUENCY		ACCESS	
DETAILS						
DETAILS:				Terran		Patridos
					110710	
		GROUND SUPPOR	T EQUIPMENT		21 (18	
SPECIAL	TOOLS FOR AIRCRAF	T USE	SPECIAL 1	TOOLS FOR BEN	NCH USE	
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3. Ur	nclip 4 12-way t	cerminal string.				
7. D.	sconnect ruer c	ontents wires f	nnectors at brake rom T-connectors.	valves.		
6. Re	move 16 mounting	g bolts.				
			Remove and repla	ace	1 x 60	
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	19					
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	INTENANCE	DATA RECORD	SYSTEM ELECTRICS	REF. 1	2/0
AVRO	AIRCRAFT LTD.	Engineering Div.	ELECTRICO	11-1	12/2
	N: STANDARD +	A/C TYPE - Arrow 1	COMPONENT		
d D		25207	Switch - Fuel	Capacitan	ce
S. Brown		EFF. A/C - 2)201	Test		
K. Knowl			AVRO PART NO.		
	rer's part no. 8812K rer's name Cutler - H		AVAC PART NO.		
AVROCAN SP	PEC. E.	o. No.			
		x 5/8 th weight .08 lb.	REF. DWGS. 7=1100-7=4611-	-3 sht 7 -2 sht 11	
LOCATION	E3 panel - Nose Wh	eel Well	7 4011		
PUNCTION (To fooilitate a oui	ck check of the fuel	REF. M.D.R.		
quantity	indicators.	CK Check of the fact	11-E3	*	
			RELIAB	ILITY	
			OVERHAUL LIFE 1.4 WASTAGE Q.T.R.	500	HRS.
INSPECT	TION			MEN X M	UNUTES
PERIO		OPERATION TO BE PERFORM	ED	EST.	ACTUA
Primary	Check sw	itch for security.		1 x 1	
Electric	Function 71/MAINT	Check (See Maintenance Ins 12/3)	tructions Report	1 x 2	
		A COLONIA I TA			
		ACCESSIBILITY			
	With par	ACCESSIBILITY nel E3 removed.			
ISSUE	1				
DATE	1 5 Nov57				
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	WITH THE	GROUND SUPPORT		TO PERSONAL PROPERTY OF THE PERSONAL PROPERTY	
SPECIAL	TOOLS FOR AIRCRAFT	USE	SPECIAL TOOLS	FOR BENCH USE	
	NIL		NIL		
GROUI	ND TESTING EQUIPMEN	Т	GROUND HANDLE	NG EQUIPMENT	
A- C Ground Po	ower Unit		Maintenance Platform	4G/1596	
INTERCHANGEABL	EX	REMOVAL INS	STRUCTIONS		MINUTES
REPLACEABLE				EST.	ACTUAL
	electrical conne- securing nut and	d lockwashers.	Remove and replace	1 x 4	

. L.

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	INTENANCE	DATA RE	CORD	SYSTEM	REF. NO. 11-E11-71
AVR	O AIRCRAFT LTD.	Engir	neering Div.	INSTRUMENTS	12-13
DISTRIBUTIO	N: STANDARD +	A/C TYPE - A	Arrow l	COMPONENT	
S. Brown				Indicator - Fue	1 Quantity L.
K. Knowl	ton	EFF. A/C -	25201	man instructor is	
MANUFACTU	JRER'S PART NO. JG1	30A	***	AVRO PART NO.	•
MANUFACTU	JRER'S NAME Minnea	nolish-Honevwell		The state of	
		porabil morro, morr		7-1252-	14
AVROCAN SI	PEC. E323	E.O. NO.			
ENVELOPE S	size 6.0" x 2.0"	Dia. weigh	T LB.	REF. DWGS. 7-1100-1	3 sht. 7
	0.0 1 2.0	5146		7-1100-2	
		instrument panel	- front	7-1252-5	58
cockpit.					
FUNCTION	To indicate to	the pilot the amo	ount of fuel	REF. M.D.R.	
	g in the L.H. sy			E11/72	
				RELIABI	LITY
				OVERHAUL LIFE 500	est) HRS.
				WASTAGE	languard soul
				Q.T.R.Minn-Honeywel	L1 R-ED-871
INSPEC	TION				MEN × MINUTE
PERIO	OD	OPERATION	N TO BE PERFORME	D .	EST. ACTU
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Primary		ion check (See Ma	intenance Inst	ructions Report	7 0
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25 Hr.	Calib	ration Check (See	above Report)		1 x 15
Electric			1		
	2 21				
		ACCESSIBILI			
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DATE COMPILED	l 14 May. 56 D. Gollingwood	tructed. 2 20 Mar. 57 D. Collingwood	3 5 Nov. 57		
ISSUE DATE COMPILED CHECKED APPROVED	1 14 May. 56	tructed. 2 20 Mar. 57	3 5 Nov. 57		

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APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	1000
DETAILS:			L		
			(Inches)		
		GROUND SUPPORT			
SPECIAL T	TOOLS FOR AIRCRAFT	r use	SPECIAL T	rools for Bench use	
	NIL			NIL	
GROUNI	TESTING EQUIPMEN	VT.	GROUND F	HANDLING EQUIPMENT	
A-C Ground Powe Minn. Honeywell Capacitor - HT	er Unit l Variable		Cockpit access		
INTERCHANGEABLE	x			MEN >	MINUTES
REPLACEABLE		REMOVAL IN	STRUCTIONS	EST.	ACTUAL
Withdraw indica Disconnect 1 co			Remove and repla	lx 5	

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MAINTEI AVRO AIRCRAF		DATA RECORD Engineering Div.	INSTRUMENTS		Ell-72
DISTRIBUTION: STANDA S. Brown K. Knowl ton		A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Indicator - Fuel Quantity - R	12-	-12
MANUFACTURER'S PAR' MANUFACTURER'S NAMI	^E Minneapolis		AVRO PART NO. 7-1252-	14	ANTEN
cockpit FUNCTION To indicate to t	" x 2.0" Dia. lots main ins	weight LB. strument panel - front e amount of fuel remaining	REF. DWGS. 7-1100-7-1252-1	2 sht 3 58	
in the R.H. syst	em of tanks.		RELIABI	IL IT Y	
INSPECTION	(\$1021)	OPERATION TO BE PERFORME	overhaul life 500 wastage Q.T.R. Minn-Honeywe	ell R-ED-	HRS. 871
PERIOD				EST.	ACTUA
Primary Electrics	71/MAINT			1 x2	
25 Hr. Electrics		on check. (see above report)		1 x 15	
		ACCESSIBILITY			

ISSUE

DATE

COMPILED

CHECKED

APPROVED

1

D. Collingwood

W02 Wentworth

G. Emmerson

14 May. 56

2

20 Mar. 57
D. Collingwood

Sgt McEgan

R.F. Reid

3

5 Nov. 57

R.F. Reid

K. Lowe Sgt McEgan

	The second second	LUBRICA	TION NIL			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	A	CCESS	May a Co
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A Committee	(-170)-0	GROUND SUPPOR	T EQUIPMENT		Lő Pers	
SPECIAL	TOOLS FOR AIRCRAF	r use	SPECIAL TO	OLS FOR BENC	H USE	
	NIL			NIL		
GROU	ND TESTING EQUIPMEN	NT	GROUND HA	NDLING EQUIP	MENT	
A- C Ground P Minn. Honeywe Capacitor - H	ll Variable	¥0 63 5.0	Cockpit access st	and		
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O.

MAINTENANCE		FUEL SYSTEM	REF. NO. 16-42 11-E1120
AVRO AIRCRAFT LTD. BISTRIBUTION: STANDARD + A. Cornish S. Brown	A/C TYPE - ARROW 1 EFF. A/C - 25201	COMPONENT Tank Ur Capacita No.3 Tank	nit ance
MANUFACTURER® NAME Minn	20A-7 neapolis-Honeywell	AVRO PART NO. 7-1662-641	
ENVELOPE BIZE 7.20" x 2.29" LOCATION In No.3 fuel tar	x 1.28" WEIGHT 0,22 LB.	7-1662-31 8 7-1662-33	
	ank contents measurement fuel quantity gauging system.	REF. M.D.R. 11-E120	
	THE CONTRACTOR OF THE CONTRACT	OVERHAUL LIFE 1500 WASTAGE Q.T.R. Minn-Honeywell	HRS,
INSPECTION	OPERATION TO BE PERFORMED		MEN × MINUTES

. 6

	N	OPERATION TO BE PERFORMED			MINUTES		
PERIOD				EST.	ACTUA		
Refuel Airfram	e accurate	Ensure that the cockpit fuel quantity gauges indicate accurately the amount of fuel taken aboard the aircraft during refueling.					
25 hrs. Electri	cs gauging	Carry out a calibration check of the fuel quantity gauging system in accordance with maintenance instructions Report No. 71/MAINT 12/3					
Airfram & Elect		unit and electri	cal connector for security.	2 x 1			
		ACCESSIBIL I	TV				
Remove	forward access	ACCESSIBILI					
Remove	forward access			1 x 15			
	forward access		nk - 45 Screws.	1 x 15			
SUE	1	panel - No. 3 Ta	nk - 45 Screws. Remove and Replace	1 x 15			
esue Ate	forward access l May 3/56 P.A. Bell Sgt.	panel - No. 3 Ta 2 July 10/57 P. A. Bell Sgt.	nk - 45 Screws. Remove and Replace	1 x 15			
SSUE DATE	1 May 3/56	panel - No. 3 Ta 2 July 10/57	nk - 45 Screws. Remove and Replace 3 31 Oct. 57	1 x 15			

APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS
9000			- Sept. PR	
DETAILS:		*		

SPECIAL TOOLS FOR AERCRAFT USE	SPECIAL TOOLS FOR BENCH USE
NIL	NIL
GROUND TESTING BQUIPMENT	GROUND HANDLING EQUIPMENT
A.C. Ground Power Unit	Cockpit Access Stand
Refueler	Maintenance Platforms 4G/1596 and 4G/2614
Capacitance Test Equipment	4G/2614

INTERCHANGEABLE	x	REMOVAL INSTRUCTIONS		MEN × MINUTES	
REPLACEABLE			EST.	ACTUAL	
Airframe Electrics	1. 1. 2.	Defuel applicable A/C fuel system. Release tank unit from spring type mounting clips. Disconnect electrical connector.			
	NOTE	on installation of units, ensure that mounting clips are correctly seated on insulators.			
		Remove and Replace	1 x 3		
		(Defuel Time not included)			

		DATA RECORD	Fuel System	16-4: 11-E	NO. 116/E12
AVRO AIRCRA DISTRIBUTION: STANI A. Cornis S. Brown	ndard +	Engineering Div. A/C TYPE - ARROW 1 EFF. A/C - 25201	COMPONENT Tank unit Capacitanc No. 3 Tank-Ce	ce	110/
	ART NO. FG220A=8 MAME MINNEAPOLIS= 23 E.O.	-HONEYWEILL	AVRO PART NO. 7-1662-825		
•	.49" x 2.29" x 1	1.28" WEIGHT 0.55 LB.	REF. DWGS. 7-1662-31 & 32 7-1662-927 & 9		
	ovide fuel tank fuel quantity ga	contents measurement for auging system	REF. M.D.R. 11-E121		
			RELIABIL	ITY	
			overhaul life 1500 wastage q.t.r. Minn-Honeywell		н кз. 871
INSPECTION PERIOD		OPERATION TO BE PERFORMED	D	MEN × M	MINUTES
Refuel Airframe	accurately the during refuel	the cockpit fuel quantity gather amount of fuel taken about ling	ard the aircraft	1 x 1	

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Martici	INSPECTION OPERATION TO BE PERFORMED				
PERIO	D			EST.	ACTUAL
Refuel Airframe	e accurate		fuel quantity gauges indicate fuel taken aboard the aircraf	t lx1	
25 Hour Electrics	s system i		check of the fuel quantity gau n maintenance instructions Rep		
Electri & Airfran	Inspect	unit and electri	ical connector for security	2 x 1	
		A C C E SSIBIL I	(TY		
Remove :	forward access r	anel- No. 3. Tank	c.1.5 screws		
			Remove and Replace	1 x 15	
	aft inboard acce	ess panel-No. 3 Ta	Remove and Replace	1 x 15	
	aft inboard acce	ess panel-No. 3 Ta	Remove and Replace		
Remove	1	ess panel-No. 3 Ta	Remove and Replace		
Remove a	1 May 3/56	ess panel-No. 3 Ta 2 July 4/57	Remove and Replace ank-36 screws Remove and Replace 3 31 Oct. 57		
Remove a	1	ess panel-No. 3 Ta	Remove and Replace ank-36 screws Remove and Replace		

APPLICATION		LUBRICA	TION NIL				
APPLICATION MATERIAL SPECIFIC		SPECIFICATION	FREQUENCY		ACCESS		
		0 1.00					
	STATE OF	100	A TOMATO				
DETAILS:		21			*		
		GROUND SUPPOR	T EQUIPMENT				
SPECIAL	TOOLS FOR AIRCRAFT	r USE	SPECIAL T	OOLS FOR BENC	CH USE		
	NIL		N	IL			
GROU	ND TESTING EQUIPMEN	T	GROUND H	ANDLING EQUIP	MENT		
	.C. Ground Power Unit Cockpit Access Stand Maintenance Platforms 4G/						
Refueler Capacitance Te	est Equipment	I. Max.	Maintenance Plati				
Refueler Capacitance Te	est Equipment r supply-85 P.S.		Maintenance Plati	forms 4G/159	14	MINUTES	
Refueler Capacitance Te Pressurized ai	est Equipment r supply-85 P.S.		Maintenance Plati	forms 4G/159	14		
Refueler Capacitance Te Pressurized ai INTERCHANGEABLE REPLACEABLE	Defuel applicate Remove aft in the Release tank un Disconnect election withdraw tank un E on installate	REMOVAL IN cole A/C fuel sys to tank unit #7= nit #7=1662825 ctrical connector conit through aft cion of unit ens-	Maintenance Plati Mats-Wing NSTRUCTIONS tem 1662-637-Ref. M.D. from mounting cli r . in bd. access pa	forms 4G/159 4G/261 .R. #16-44 ips	MEN X		
Refueler Capacitance Te Pressurized ai INTERCHANGEABL REPLACEABLE AIRFRAME (1) ELECTRICS (1) (2) (3) (4)	Defuel applicate Remove aft in the Release tank un Disconnect election withdraw tank un E on installate	REMOVAL IN cole A/C fuel system to tank unit #7= nit #7=1662825 ctrical connector connector connector connector connector	Maintenance Plati Mats=Wing NSTRUCTIONS tem 1662-637-Ref. M.D. from mounting cli r . in bd. access paure that mounting ulators.	.R. #16-44 ips anel	MEN X EST.	MINUTES	
Refueler Capacitance Te Pressurized ai INTERCHANGEABL REPLACEABLE AIRFRAME (1) ELECTRICS (1) (2) (3) (4)	Defuel applicate Remove aft in the Release tank un Disconnect election withdraw tank un E on installate	REMOVAL IN cole A/C fuel sys to tank unit #7= nit #7=1662825 ctrical connector conit through aft cion of unit ens-	Maintenance Plati Mats-Wing NSTRUCTIONS tem 1662-637-Ref. M.D. from mounting cli r . in bd. access pa	.R. #16-44 ips anel	MEN X		

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MAINTENANCE AVRO AURO AURORAPT LTD.	DATA RECORD Engineering Div.	FUEL SYSTEM	REF. NO. 16-44 11-E117/;
A. Cornish S. Brown	A/C TYPE - AFFOW 1 EFF. A/C - 25201	COMPONENT Tank Unit Capacitance No.3 Tank A	E122 ft.
	=9 pclis=Honeywell p. No.	AVRO PART NO. 7-1662-637	
ENVELOPE SIZE 13.97" x 2.29" x LOCATION In No.3 tank - aft.	Linear Control of the		31 & 32 931 & 932
	nk contents measurement uel quantity gauging system.	REF. M.D.R.	
	Maria di Maria Promini Primi	OVERHAUL LIFE 1500 WASTAGE Q.T.R. MinnaHeneyws	HRS.
INSPECTION	OPERATION TO BE PERFORMED	1	MEN × MINUTES

	TION	OPERATION TO BE PERFORMED				
PERIO	an an			EST.	ACTUAL	
Refue Airfr	l Ensure	tely the amount of	fuel quantity gauges indicate fuel taken aboard during	1 × 1		
25 hr Elect:	Carry out calibration check of the fuel quantity gauging system in accordance with maintenance instructions Report No. 20/MAINT 12/3					
Elect	Inspec	et unit and electri	cal connector for security.	2 X 1		
				1		
•		ACCESSIBIL				
Remove	aft inboard ac	ACCESSIBILI		1 x 12		
	1	ccess panel - 36 sc	Tews.	1 x 12		
SSUE	aft inboard ac	2 July 10/57	rews. Remove and Replace	1 x 12		
SSUE	1	2 July 10/57	Remove and Replace	1 x 12		
Remove SSUE CATE CHECKED	1 Way 3/56	2 July 10/57	Remove and Replace 3 31 Oct. 57	1 x 12		

			LUBRI	CATION NIL	METHOR	
APPLICATION	M	ATERIAL	SPECIFICATIO	N FREQUENCY	ACCESS	
		alasii saasii			7 (7)	
DETAILS:						LA STOR
				ORT EQUIPMENT		
SPECIAL '	rools	FOR AIRCRAF	T USE	SPECIAL TOOLS FOR BI	ENCH USE	
NL			Maria Calculations Constitution and	NIL		
GROUN	D TEST	ENG EQUIPMEN	9T	GROUND HANDLING EQ	UPMENT	
A.C. Ground Refueler Capacitance Pressurized	Test	Equipment	psi max.	Cockpit Access Starld Mairtenance Platform 4G/ 4G/ Mats - Ting	1596 and 2614	
en terchangeable	X		REMOVA	LINSTRUCTIONS	MEN ×	MINUTE
REPLACEABLE					EST.	ACTU
Airframe Electrics	1. 2. 3. NOT	Release t Disconnec E: On ins	t electrical tallation of	spring type mounting clips.	1 x 3	
			(Defueling ti	me not included)		
			(Defueling ti	me not included)		
			(Defueling ti	me not included)		
			(Defueling ti	me not included)		
			(Defueling ti	me not included)		

MAINTE	NANCE D	ATA RECORD	FUEL SYSTEM	REF. NO. 16-49
AVRO AIRCRA	FT LTD.	Engineering Div.	FOEL SISIEM	11-E131/
A. Cornish S. Brown	DARD +	A/C TYPE - Arrow 1 EFF. A/C - 25201	Capac	Unit E136 itance c = Inboard
IANUFACTURER'S PA	RT NO. FG220A=1.	4 lis-Honeywell	AVRO PART NO. 7-1662-817	
VROCAN SPEC.	E-323 E.O. 1	NO.		
		1.28 werent 0.20 L		911 & 912
unction To profession for systems	the aircraft fu	k contents measurement el quantity gauging	REF. M.D.R.	
			RELIAB	LITY
			overhaul life 150 wastage o.t.r. Minn-Honeywe	
INSPECTION		OPERATION TO BE PERFOR	MED	MEN × MINUTES
PERIOD				EST. ACTUAL
Refuel Airframe 25 hour Electrics Airframe & Electrics	accuretly the during refue Carry out a gauging syst tions report	the cockpit fuel quantite amount of fuel taken a ling. calibration check of the em in accordance with may no. 71/MAINT 12/3 and electrical connectors	board the aircraft fuel quantity intenance intruc-	1 x 1 Pending 2 x 1
	•	ACCESSIBILITY		
	_			

2 July 16/57 P.A. Bell Sgt.

J. Brumfit R.F. Reid 31 Oct. 57 P.A. Bell Sgt J. Brumfit R.F. Reid

ISSUE

DATE COMPILED

CHECKED

APPROVED

May 31/56 P.A. Bell Sgt.

G. Emmerson
G. Emmerson

		LUBRICA	LINNOITA			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	A	CCESS	
Interest 1				**.		
DETAILS:						
		GROUND SUPPO	RT EQUIPMENT			······
SPECIAL T	OOLS FOR AIRCRAF	T USE	SPECIAL TO	OOLS FOR BENC	H USE	
NIL			NIL			
GROUND	TESTING EQUIPME	NT	GROUND H	ANDLING EQUIPM	ENT	
L-C Ground Powe Refueler Sapacitance Tes Pressurized Air	t Equipment	. max.	Cockpit Access S Maintenance Plat Mats - Wirg	Stand bform 4G/159 4G/261	6 and 4	
INTERCHANGEABLE	х	REMOVAL	INSTRUCTIONS		MEN X	MINUTES
REPLACEABLE					EST.	ACTUA
Airfra	me 1. Defuel	applicable A/C	fuel system.			
	2. Discon On installati	nect electrical	sure that mounting	ting clips.		
Electr	2. Discon On installati	nect electrical on of unit, ens rectly seated o	connector.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 x 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	
Electr	2. Discon On installati clips are cor	nect electrical on of unit, ens rectly seated o	sure that mounting on insulators.	ting clips.	1 × 4	

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	AIRCRAFT LTD.		CORD	FUEL SYSTEM		-50
	N: STANDARD +		ering Div.	COMPONENT		E132 /
А	. Cornish	EFF. A/C -	Arrow 1 25201	Tank Un Capacitance No.		
	RER'S PART NO. FG220	A-15		AVRO PART NO.		****
MANUFACTU	RER'S NAME Minneap	oolis - Honeywell		7-1662-81	5	
			0.00	REF. DWGS.		
ENVELOPE S	IZE 11.01" x 2.2	9° х 1.28° weight	U.20 LB.	7-1662-25		
LOCATION I	In No. 6 tank cer	tre L & R Hand		7-1662-92 7-1100-1	700720	
				1-1100 %		
FUNCTION	To provide fue:	tank contents me	easurement	PPP MDP		
for the	e aircraft fuel	quantity gauging s	system.	REF. M.D.R. 11-E137		
				RELIABII	LITY	
				OVERHAUL LIFE 150	0	HRS.
				Q.T.R. Minn-Honeywe	11 R-ED-	871
INSPECT	TON	ODERA TION	TO BE PERFORM	IPD.	MEN × MINUTES	
PERIO	D t	OPERATION	TO BE PERFORM	L	EST.	ACTUAL
Airfran 25 Hour Electri	during Carry	tely the amount of refueling out a calibration g system in accord ctions Report 71/1	check of the lance with Ma	aboard the aircraft fuel quantity intenance	1 x 1 Pendir	ng
Airfra	100	t unit and electr		or for security	2 x 1	
& Electr:	ics					
		ACCESSIBILIT	· Y			
	Remove	centre access pa	nel No. 6 tan Re	nk - 29 screws emove and Replace	1 x 10	
ISSUE	1	2	3			
ISSUE	1 May 3/56	2 17 July 57	3 31 Oct. 57			
			3 31 Oct. 57 P.A. Bell Se	şt		

		LUBRIC	ATION NIL		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
DETAILS:					
		GROUND SUPPO	RT EQUIPMENT		
SPECIAL	TOOLS FOR AIRCRAI	T USE	SPECIAL TOO	LS FOR BENCH USE	
NIL			NIL		
GROUI	ND TESTING EQUIPME	NT	GROUND HAN	NDLING EQUIPMENT	
Refueler A-C Ground Power Unit Capacitance Test equipment pressurized air supply-85 P.S.I. Max.			Cockpit Access stand Maintenance Platform 4G/1596 and 4G/2614 Mats-wing		
INTERCHANGEABL	EX			MEN X	MINUTES
REPLACEABLE		REMOVAL	INSTRUCTIONS	EST.	ACTUAL
lectrics (1)	release tank un Disconnect elec E on installat	trical connecto	type mounting clips. or. nsure that mounting c		
www.moray					
140.1			Remove and Replace	1 x 4	
NOI			Remove and Replace time not included)	1 x 4	

	INTENANCE		CORD	SYSTEM FUEL SYSTEM	REF. N 16=		
DISTRIBUTION A.	n: standard + Cornish Brown	A/C TYPE - AI EFF. A/C - 2	rrow l	Capacitance No	Unit -	E-138	
MANUFACTUI MANUFACTUI AVROCAN SP		20A-16 apolis - Honeywel	1	avro part no. 7-1662-81	.3		
		" x 1.28" WEIGHT		7-1662-29 7-1662-91 7-1100-1			
	ide fuel tank co t fuel quantity	ntents measuremen gauging system	t for the	REF. M.D.R. 11-E138			
				RELIABI	LITY		
			ê L	overhaul Life 1: wastage Q.T.R Minn-Honeywa		HRS.	
INSPECT		OPERATION	TO BE PERFORMED	MED MEN		N × MINUTES	
Refuel Airfram 25 Hour Electri Airfram & Electri	c accurate aircraft aircraft carry contact gauging instructions Inspect	that the cockpit tely the amount of it during refueling to the court a calibration of system in accordations report 71/M tunit and electrical	fuel taken about the france with main AINT 12/3	pard the	1 x 1 Pending 2 x 1		
	1				1 1		
	Remove outboard	ACCESSIBILIT		screws	1 x 17		
ISSUE	, 1	l access panel - N	o. 6 Tank - 50	screws	1 x 17		
DATE	1 May 3/56	access panel - N	3 31 Oct. 57		1 x 17		
	, 1	l access panel - N	o. 6 Tank - 50		1 x 17		

R.F. Reid

G. Emmerson

R.F. Reid

		LUBRICAT	LION NIT		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	47.6
	Tanas Longo		- 963 (189)		
DETAILS:	2007 THESE CONT.		The company of the co	AND AND ADDRESS OF THE PARTY NAMED IN COLUMN TWO IS NOT THE PARTY NAMED IN COLUMN TO THE PARTY NAMED IN	POLYGIA POLYGIA
	SECTION AND ASSESSED.	GROUND SUPPORT	T EQUIPMENT		
SPECIAL	TOOLS FOR AIRCRAFT	USE	SPECIAL TO	OLS FOR BENCH USE	****
	NIL		NI	L	actives
	D TESTING EQUIPMENT		GROUND HA	NDLING EQUIPMENT	
Refueler A-C Ground Powe Capacitance Ter Pressurized Air		I. Max.	Cockpit Access ^S ta Maintenance Platfo Mats - Wing		
INTERCHANGEABLE	c X	PENOVAL IN	STRUCTIONS	MEN X	MINUTES
REPLACEABLE		X E MO Y A E 11	131113113	EST.	ACTUA
Electrics (1)	Disconnect Electr	from spring to ical Connector of unit, ensured on insulators	ype mounting clips	Total Control Control	
			Y6100000000		

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MAINTENANCE DA	Engineering Div.	SYSTEM FUEL SYSTEM	16-38 11-E212
distribution: standard + A. Cornish S. Brown	A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Tank Unit - Capaci No. 1 Tank (Forwar	
MANUFACTURER'S PART NO. FG220A-28 MANUFACTURER'S NAME Minneapol AVROCAN SPEC. E323 E.O. NO.	is-Honeywell '	AVRO PART NO. 7-1654-139	
envelope size 37.35" x 2.29" x l LocationIn No. 1 Fuselage tank	7-1654-197 7-1654-1 7-1100-3 shts 6 & 7		
runctionTo provide fuel tank co the aircraft fuel quant		REF. M.D.R.	
		RELIABIL	ITY
		overhaul Life 1500 wastage q.t.r. Minn. H'well	
INSPECTION PERIOD	OPERATION TO BE PERFORM	ED	MEN × MINUTES EST. ACTUAL

INSPECTION		OPERATION TO BE PERFORMED	ME	MEN × MINUTES	
PERIOD		Of District To Da 1 District	ES	T. ACTUAL	
Refuel Airframe		at the cockpit fuel quantity gauge y the amount of fuel taken aboard fueling		.1	
25 Hrs. Electrics	gauging s	a calibration check of the fuel of ystem in accordance with Maintenant 71/Maint 12/3)	nce Instructions	ding	
Airframe and Electrics	Inspect v	nit and electrical connector for s	security 2 x	1	
	- 1026	ACCESSIBILITY			
		o.l Tank Access Panel rsal Fairing - 6 latches			
			nd Replace 1 x	2	
		Remove an	nd Replace 1 x	12	
ISSUE	1	2			
DATE	May 1/56	17 Sept 57			
COMPILED F	A. Bell Sgt	P.A. Bell Sgt			
	. Emmerson	J. Brumfit			
APPROVED C	. Emmerson	R.F. Reid			

		LUBRICA	TION NIL		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
1 100				TO MA	
DETAILS:	Lan Table				
	P&-252				
	×	GROUND SUPPOR	T EQUIPMENT		
SPECIAL	TOOLS FOR AIRCRAF	T USE	SPECIAL T	OOLS FOR BENCH USE	
NIL			NIL		
GROUN	D TESTING EQUIPME	NT	GROUND H	ANDLING EQUIPMENT	
Refueler Capacitan	d Power Unit ce Test Equipme ed Air Supply -		Cockpit Access Maintenance Pl Mats - Wing. Tank Protectiv	atforms 4G/1596 an 4G/2614	d
INTERCHANGEABLI	xx x	REMOVALI	NSTRUCTIONS	MEN ×	MINUTES
REPLACEABLE	1 1			EST.	ACTUA
2 Ventil 3 Remove 4 Instal 5 Remove 6 Remove Electrics 1 Discon	structural tie tank protective structural tie lockwire from nect Electrical	nove fuel vapours bar No. 9 me mat. bars No.3 and N capacitor clamps connector, and		from tank	
(Defuelin	g and Ventilati	ng time not incl	Remove and Replac .uded)	e 1 x 25	
					PL-4

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AVRO	AIRCRAFT L		TA RECOR Engineering Div		FUEL SYSTEM	16-3 11-E	39		
A	M: STANDARD A. Cornish B. Brown		A/C TYPE - Arrow EFF. A/C - 25201	1	COMPONENT Tank Unit - Capac No. 1 Tank (Aft)	itance			
MANUFACTU:	RER'S PART N	o. FG220A-29			AVRO PART NO.		DATAG		
MANUFACTUI		Minneapoli E323 E.o. No.	s-Honeywell		7-1654-141				
ENVELOPE S	IZE 40.2"	x 2,29" x 1,2	811 WEIGHT .53	LB.	REF. DWGS. 7-1654-19	17			
LOCATION I	In No. 1 f	uselage tank	- aft		7-1654-1 7-1100-3	shts 6 &	7		
			ntents measurements ity gauging systematics		REF. M.D.R.				
					RELIABIL	_IT Y			
					overhaul life 1500 wastage o.t.r. Minn. H'well		HRS. 871		
INSPECT PERIO			OPERATION TO BE	PERFORMED		MEN × M	ACTUAL		
Refuel Airframe 25 Hours Electric	e ac du s Ca	during refueling. Carry out a calibration check of the further system in accordance with maintenance in			accurately the amount of fuel taken aboard the aircraft		rd the aircraft	l x l	beth Carried
Airframe and Electric	e In	nspect unit an	d electrical conr			2 x l	in El		
	122								
		,	CCESSIBILITY				tento.		
2	Re	arough No. 1 T emove Dorsal F	ank Access Panel airing - 6 latche ess Panel - 36 bo	Remove	and Replace	1 x 2	100)		
ISSUE	Re	arough No. 1 T emove Dorsal F	ank Access Panel airing - 6 latche	Remove					
	Re Re	arough No. 1 T move Dorsal F emove Tank Acc	ank Access Panel airing - 6 latche ess Panel - 36 bo	Remove			(40)		
ISSUE DATE COMPILED CHECKED	Re Re	emove Dorsal F emove Tank Acc	ank Access Panel airing - 6 latche ess Panel - 36 bo 2 pt 57 Bell Sgt	Remove			(100)		

			LUBRIC	ATION NIL		
APPLICATION	MA	TERIAL	SPECIFICATION	FREQUENCY	ACCESS	
						HUMAN
DETAILS:				And Side		T-0308
			GROUND SUPPO	RT EQUIPMENT		
SPECIAL 7	rools F	OR AIRCRAFT	USE	SPECIAL TOOLS FOR	BENCH USE	
	NIL			NIL		
GROUNI	D TESTE	NG EQUIPMENT	GROUND HANDLING EG	UIPMENT		
A-C Ground Po Refueler Capacitance T Pressurized A	Cest E	quipment	P.S.I. Max	Cockpit Access Stand Maintenance Platform 4G Mats - Wing Tank Protective Mats.	/1596 and 4	.G/261/
INTERCHANGEABLE	XX		REMOVAL	INSTRUCTIONS		MINUTES
REPLACEABLE					EST.	ACTUA
Airframe	(1) (2) (3) (4) (5)	Ventilat Remove s Instal t	tructural tie ank protective ockwire from o	ove fuel vapours bar No. 9	e	
Electrics	(1)	Disconne from tan		lead and remove tank unit		
	NOTE		allation of un ly seated on :	nit ensure that clamps are insulators.		
				Remove and Replace	1 x 15	
(Defueling ar	nd Vent	tilating t	ime not includ	ded)		

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MAINTENANCE AVRO AIRCRAFT LTD.	DATA RECORD Engineering Div.	SYSTEM FUEL SYSTEM	REF. NO. 16-40 11-E216	
A. Cornish S. Brown A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Tank Unit - Capacitance No. 2 Tank (Forward)		
MANUFACTURER'S NAME Min	20A-30 neapolis-Honeywell	AVRO PART NO. 7-1654-137		
envelope size 38.03" x 2.29" x Location In No. 2 Fuselage T		REF. DWGS. 7-1654-198 7-1654-1 7-1100-1		
runction To provide fuel tan the aircraft fuel q	k contents measurement for uantity gauging system.	REF. M.D.R.		
		RELIABII	LITY	
		overhaul life 150 wastage Q.T.R.Minn, H [®] well		
INSPECTION	OPERATION TO BE PERFORME	D.	MEN × MINUTES	

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INSPECTION		OPERATION TO BE PERFORMED			MEN × MINUTES	
PERIOD					EST.	ACTUAL
Refuel Airframe		nat the cockpit fly the amount of efueling.			1 x 1	42404
25 Hours Electrics	gauging s	a calibration of a coords of the coords of t		l quantity nance instructions	Pending	
Airframe and Electrics	Inspect	unit and electric	cal connector for	r security	2 x l	
		ACCESSIBILI	тү			
	Remove Do	No. 2 Tank Access prsal Fairing - 6 ank Access Panel	latches Remove ar	nd Replace	1 x 2	
ISSUE	7	2				
DATE May	1/56	17 Sept 57			1	
	Bell Sgt	P.A. Bell Sgt				
	mmerson	J. Brumfit				

			LUBRIC	TATION NIL		
APPLICATION	M A	ATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
			*		(19)	Redied
776						
DETAILS:						
			GROUND SUPPO	ORT EQUIPMENT		
SPECIAL 7	rools F	OR AIRCRAF	r use	SPECIAL TOOLS F	OR BENCH USE	
	NIL			NIL		
GROUN	D TESTI	NG EQUIPMEN	IT	GROUND HANDLIN	G EQUIPMENT	
A-C Ground Po Refueler Capacitance T Pressurized	est E	quipment	P.S.I. Max	Cockpit Access Stand Maintenance Platform Mats - Wing Tank Protective Mats	4G/1596 and 4G	·/261
INTERCHANGEABLE	х		REMOVAL	INSTRUCTIONS	MEN × M	INUTE
REPLACEABLE					EST.	ACTU
Airframe	(1) (2) (3) (4) (5)	Ventilat Remove : Instal t	fuselage tie b tank protectiv lockwire from	ove fuel vapours ars No. 15 and No.17	ease	
Electrics	(1)	Disconne unit.	ect electrical	connector and remove tar	nk	
	NOTE	- On inst	tallation of u	nit, ensure that clamps a insulators	are	
				Remove and Replace	1 x 20	
(Defueling ar	nd Ven	tilating t	time not inclu	ded)		

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	TENANCE	DATA RECORD Engineering Div.	SYSTEM FUEL SYSTEM	REF. NO. 15-41 11-E217	
AC TYPE - Arrow 1 A. Cornish S. Brown BEFF. A/C - 25201			COMPONENT Tank Unit Capacitance No. 2 Tank (Aft)		
MANUFACTURER	's PART NO. FG2	20A-31	AVRO PART NO.	. Alexandria	
MANUFACTURER	's NAME Min	neapolis-Honeywell	7-1654-138		
AVROCAN SPEC.	E323	E.O. NO.			
PNUPIODE SIZE	1.0 68# x 2 29	" x 1,28" weight ,53 LB.	REF. DWGS. 7-1654	_198	
	No. 2 Fuselage		7-1654 7-1100	-1	
		ank contents measurem ent fuel quantity gauging system	REF. M.D.R.		
			RELIABIL	ITY	
			OVERHAUL LIFE 150 WASTAGE Q.T.R. Minn, H [®] , well	4101(0180)	
INSPECTION	ION OPERATION TO BE PERFORMED			MEN × MINUTES	
PERIOD				EST. ACTUA	
Refuel Airframe	accurate during re	t a calibration check of the fu	card the aircraft uel quantity gauging		
Airframe	during re Carry ou system in	ly the amount of fuel taken aborefueling	card the aircraft uel quantity gauging	12.6	
Airframe 25 Hours	during reducing reducing reducing reducing reducing reducing to the control of th	ly the amount of fuel taken aborefueling t a calibration check of the function accordance with Maintenance I	pard the aircraft uel quantity gauging Instructions Report		
Airframe 25 Hours Electrics Airframe	during reducing reducing reducing reducing reducing reducing to the control of th	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance laint 12/3	pard the aircraft uel quantity gauging Instructions Report	Pending	
Airframe 25 Hours Electrics Airframe	during reducing reducing reducing reducing reducing reducing to the control of th	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance laint 12/3	pard the aircraft nel quantity gauging Instructions Report for security.	Pending	
Airframe 25 Hours Electrics Airframe	accurate during reducing reduc	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance laint 12/3 unit and electrical connector function function for the function of th	pard the aircraft nel quantity gauging Instructions Report for security.	Pending	
Airframe 25 Hours Electrics Airframe	accurate during reducing reduc	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance aint 12/3 unit and electrical connector function and electrical connector functions. ACCESSIBILITY No. 2 Tank Access Panel. orsal Fairing - 6 latches. Remove ank access panel - 36 bolts. Remove	pard the aircraft del quantity gauging Instructions Report for security.	Pending	
Airframe 25 Hours Electrics Airframe and Electrics	Through Remove Ta	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance laint 12/3 unit and electrical connector function and electrical connector functions. ACCESSIBILITY No. 2 Tank Access Panel. orsal Fairing - 6 latches. Remove ank access panel - 36 bolts. Remove	card the aircraft del quantity gauging Instructions Report for security.	Pending 2 x 1	
Airframe 25 Hours Electrics Airframe and Electrics Date 1	Through Remove Ta	ly the amount of fuel taken abovefueling t a calibration check of the function accordance with Maintenance aint 12/3 unit and electrical connector function and electrical connector functions. ACCESSIBILITY No. 2 Tank Access Panel. orsal Fairing - 6 latches. Remove ank access panel - 36 bolts. Remove	card the aircraft del quantity gauging Instructions Report for security.	Pending 2 x 1	

R.F. Reid

APPROVED G. Emmerson

		LUBRIC	ATION NIL		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
DETAILS:					
			CH = 3		
		GROUND SUPPO	RT EQUIPMENT	The section	
SPECIAL T	rools for AIRCRA	FT USE	SPECIAL TOO	DLS FOR BENCH USE	
NIL			Λ	IIL	
GROUNI	D TESTING EQUIPME	ENT	GROUND HAI	NDLING EQUIPMENT	
	est Equipment ir Supply - 8	5 P.S.I. Max	Cockpit Access St Maintenance Platf Mats - Wing Tank Frotective M	orm 4G/1596 and L	G/261
INTERCHANGEABLE	xxx	REMOVAL	EMOVAL INSTRUCTIONS		MINUTE
REPLACEABLE	The standing to			EST.	ACTU
Airframe	(2) Ventilate (3) Remove fu (4) Instal ta (5) Remove fu		fuel vapours	ease tank	
Electrics	(1) Disconnec	ct electrical co	onnector and remove t	ank unit.	Lette
		stallation of un	it, ensure that clam	ps are	
			Remove and Replac	e 1 x 30	
(Defueling an	d Ventilating	time not include	led)	*	
	doelast				
	soulpsi.				

MA	INTENANCE	DATA RE	CORD	SYSTEM	REF. NO.
-	AIRCRAFT LTD.		neering Div.	Fuel System	16-46 11-E221/E2
	N: STANDARD +	A/C TYPE - A		COMPONENT Tank Uni	
A Compach			Capacitanc	e	
S. Brown BFF. A/C - 25201 N			No. 4 tank-outboa	rd	
MANUFACTU	IRER'S PART NO. FG220 IRER'S NAME MINNEAPO			AVRO PART NO. 7=1662-803	
	Marie Carlotte		()	REF. DWGS.	
LOCATIONI	n No. 4 tank. Cer	ntre aft. L & R.	hand	7-1662-417 & 418 7-1662-937 & 938 7-1100-1	
for the	To provide fuel t aircraft fuel qua	ank contents meantity gauging sy	surement	REF. M.D.R. E-225	
				RELIABILI	ITY
				overhaul life 1500 wastage q.t.r. Minn-Honeywel	
INSPECT	OPERATION TO BE PERFORMED			MEN × MINUTES	
PERIO	DD	Oz Maul 120	N TO BE FERT ON MAN	I a la	EST. ACTUA
Refuel Airframe 25 Hour Electric	accurated during record carry out gauging s	t a calibration of	fuel taken aboa check of the fue ance with mainte	ard the aircraft	1 x 1 Pending
Electrics & Inspect unit & electrical connector for security Airframe				security	2 x 1
-		ACCESSIBILI	TY		
Remove	inboard access p	oanel-No. 4 tank-	-38 screws Remove and R	eplace	1 x 12
ISSUE	1	2	3		
	May 1/56	July 5/57	31 Oct. 57		
DATE	1 M(S(A) 1 \ J(J)		1 2 2000		
DATE	P.A. Bell Sgt. G. Emmerson	P.A. Bell Sgt. J. Brumfit	P.A. Bell SGT J.Brumfit		

APPLICATION DETAILS:	MATERIAL	SPECIFICATION	FREQUENCY		CCESS	24-
DETAILS:			DE LES STERNIS			
DETAILS:	Harris I					
DETAILS:			100 lg D/A . 4 48			
PBIALLO:					Manage	-
	1000	GROUND SUPPO	RT EQUIPMENT			gaukvi
SPECIAL TO	OOLS FOR AIRCRAFT	USE	SPECIAL T	OOLS FOR BENC	H USE	
NIL						
GROUND	TESTING EQUIPMENT	г	GROUND H	ANDLING EQUIP	MENT	
A.C. Ground Powe Refueler Capacitance Test Pressurized Air	Equipment	I. Max.	Cockpit access st Maintenance Platf Mats-Wing		and	
INTERCHANGEABLE	Х	REMOVAL	INSTRUCTIONS		MEN X	MINUTES
REPLACEABLE					EST.	ACTUA
ELECTRICS (1) F	Disconnect elec	om spring type trical connect	e mounting clips tor nsure that mounting	clips are	102	
			Remove and Repl	ace	1 x 4	
		(Dafualina +i)	me not included)			
		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
					rojul, s	DESE.

AC.

MAINT	ENANCE	DATA RI	ECORD	SYSTEM	REF NO.
AVRO AIRO	CRAFT LTD.	Eng	ineering Div.	Fuel System	16-45 11-E220
DISTRIBUTION: ST		A/C TYPE -	ARROW 1	COMPONENT Tank unit	
A. Cornis	sh	EFF. A/C -	2522	Capacitano	
S. Brown		EFF. A/C	25201	No. 4 Tank-inboa	
MANUFACTURER'S	PART NO. FG220A-	-10		AVRO PART NO.	
				7-1662-805	
MANUFACTURER'S	NAME MINNEAPOI	LIS-HONEYWELL			
AVROCAN SPEC.	E323 E	C.O. NO.			
				REF. DWGS.	
ENVELOPE SIZE	18.13" x 2.29"	x 1,28" WEIGH	4TO.33(EST) LB		
LOCATION In I	No. 4 tank-inbo	and R & T has	a.A	7-1662-417 & 41	
TII I	10° t canvarior	Aldeli & D. Ilai		7-1100-1	,0
		,			
	covide fuel tar fuel quantity			REF. M.D.R. E224	
				RELIABIL	ITY
				OVERHAUL LIFE 1500	HRS.
				WASTAGE	
				Q.T.R. Minn-Honeywel	1 R-ED-871
INSPECTION OPERATION TO BE PERFORMED		MEN × MINUTES			
PERIOD		OPERATIO	N TO BE PERFORM	ED	EST. ACT
Refuel Airframe	accurately duting refu	the amount of meling	fuel taken ab	gauges indicate pard the aircraft	1 x 1
25 Hour Electrics	Sarry out a system in a No. 71 MAIR	accordance with	check of the formation maintenance :	uel quantity gauging instructions report	
Electrics					
&	Inspect un	nit and electri	ical connector	for security	2 x 1
Airframe					
		ACCESSIBIL	ITY		
Romores delle	and access	and Na Jahan	20		
remove inpo	pard access par	er-No.4 tank -	∍)8 screws		
			Remove and	d Replace	1 x 12
				Selfrik.	
					w 40
TOTAL	7	2	1		
ISSUE MAY	1 1/56	2 July 5/57	31 Oct. 57		
DATE May		2 July 5/57 P.A. Bell \$gt.	31 Oct. 57 P.A. Bell S	gt	

J. Brumfit R.F. Reid

J. Brumfit R.F. Reid

CHECKED

APPROVED

G. Emmerson

G.E.

		LUBRICA	TION NIL		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCES	SS
DETAILS:					
		GROUND SUPPOR	RT EQUIPMENT		
SPECIAL	TOOLS FOR AIRCR	AFT USE	SPECIAL TO	OOLS FOR BENCH US	E .
NIL			N	IL	
GROUND TESTING EQUIPMENT			GROUND HA	ANDLING EQUIPMENT	
A.C. Ground Po Refueler Capacitance te Pressurized ai	st equipment	.S.I. Max	Cockpit Access st Maintenance Plati Mats-Wing	cand forms 4G/1596 a 4G/2614	nd
INTERCHANGEABL	Х	REMOVAL	INSTRUCTIONS		EN × MINUTES
AIRFRAME (1) ELECTRICS (1) (2) NOTE	Release tank Disconnect e	lectrical connect	type mounting clip or t, ensure that moun		
			Remove and Re	eplace 1	x 4
		(Defueli	ng time not include	ed)	

MAINT	ENANCE I	DATA RECORD	SYSTEM	REF. NO. 16-47
AVRO AIRCR	AFT LTD.	Engineering Div.	Fuel System	11-E229/E23
DISTRIBUTION: STAN	IDARD +	A/C TYPE - ARROW '1	COMPONENT Tank unit	capacitance
A. Cornish		EFF. A/C - 25201	No. 5 tank-inboard.	
S. Brown		27.07		
AANUFACTURER'S P.	ART NO. FG220A-	12	AVRO PART NO.	
			7-1662-811	
ANUFACTURER'S N.	AME Minneapolis	-Honeywell		
VROCAN SPEC.E32	7 E.O). NO.		
			REF. DWGS.	
NVELOPE SIZE13.	$74^{11} \times 2.29^{11} \times$	1.28 WEIGHT .23 LE.	7-1662-917	
OCATION TO NO	5 Tank-inboar	bred G & T L	7-1662-191 7-1100-1	& 192
TII NO.) lauk-Tunosi	Der & u uand	(#TTOO -T	
	112			
		contents measurement for	REF. M.D.R.	
he aircrait i	uel quantity g	gauging system.	11-E234	
			RELIABILIT	ſΥ
			OVERHAUL LIFE 1500	HRS.
			WASTAGE	
			Q.T.R. Minn-Honeywell	L R-ED-871
INSPECTION		OPERATION TO BE PERFORME		MEN × MINUTES
PERIOD		UPERATION TO BE FERTORING	D	EST. ACTUAL
				EST. ACTUAL
	T that			EST. ACTUAL
Refuel Airframe		the cockpit fuel quantity go		EST. ACTUAL
Refuel		the amount of fuel taken about	ard the aircraft	1 x 1
Refuel Airframe	accurately t during refue	the amount of fuel taken about	ard the aircraft	
Refuel Airframe	accurately t during refue	the amount of fuel taken about eling calibration check of the fue	ard the aircraft el quantity gauging	1 x 1
Refuel Airframe	accurately t during refue	the amount of fuel taken about eling calibration check of the fue coordance with maintenance in	ard the aircraft el quantity gauging	
Refuel Airframe 25 Hour Electrics	accurately t during refue Carry out a system in ac	the amount of fuel taken about eling calibration check of the fue coordance with maintenance in	ard the aircraft el quantity gauging	1 x 1
Refuel Airframe 25 Hour Electrics Airframe	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken above eling calibration check of the fuel coordance with maintenance in 2/3	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken about eling calibration check of the fue coordance with maintenance in	el quantity gauging nstructions report	1 x 1
Refuel Airframe 25 Hour Electrics Airframe &	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken above eling calibration check of the fuel coordance with maintenance in 2/3	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics Airframe &	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken above eling calibration check of the fuel coordance with maintenance in 2/3	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics Airframe &	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken above eling calibration check of the fuel coordance with maintenance in 2/3	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics Airframe &	accurately t during refue Carry out a system in ac 71/Maint 12	the amount of fuel taken above eling calibration check of the fuel coordance with maintenance in 2/3	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics Airframe & Electrics	accurately t during refue Carry out a system in ac 71/Maint 12 Inspect unit	calibration check of the fuel cordance with maintenance in 2/3 & electrical connector for	el quantity gauging nstructions report	l x l
Refuel Airframe 25 Hour Electrics Airframe & Electrics	accurately t during refue Carry out a system in ac 71/Maint 12	calibration check of the fuel cordance with maintenance in 2/3 & electrical connector for	el quantity gauging nstructions report	l x l

ISSUE	1	2	3	
DATE	May 3/56	July 11/57	31 Oct. 57	
COMPILED		P.A. Bell SGT.	P.A. Bell Sgt	
CHECKED	G. Emmerson	J. Brumfit	J. Brumfit	
APPROVED	G.E	R.F. Reid	R.F. Reid	

Remove and Replace

1 x 10

	1	LUBRICA	ATION NIL			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCES	8	E
	- Friedrick C					
DETAILS:					35/15	A TON
		GROUND SUPPO	RT EQUIPMENT			
SPECIAL	TOOLS FOR AIRCRAFT	USE	SPECIAL TO	OOLS FOR BENCH US	E	
NIL			N	IL .		
GROUN	D TESTING EQUIPMENT	r	GROUND H	ANDLING EQUIPMENT		
A-C Ground Pou Refueler Capacitance Te Pressurized A		.I. Max.	Cockpit access sta Maintenance Platfo Mats-Wing.		ner Ca	
INTERCHANGEABLE REPLACEABLE	X	REMOVAL	INSTRUCTIONS		en × m	ACTUA
Electrics (1)	Defuel applicable Release Tank un Disconnect elec	it from spring	type mounting Clip	ps		
NOTE		on of unit ens ted on insulat	ure that mounting o	clips are		
			Remove and Repla	ace 1	x 5	
		(Defueling tim	e not included)			
				- 10/2014		

MAINTE	NANCE I	DATA RECORD	SYSTEM	REF. N	200
AVRO AIRCRA	FT LTD.	Engineering Div.	FUEL SYSTEM		230 /
DISTRIBUTION: STANE	DARD +	A/C TYPE - Arrow 1	COMPONENT Tank Un		E23
A. Corni S. Brown		EFF. A/C - 25201	Capacitance and No. 5 Tank = Out	compensa	ator
MANUFACTURER'S PA	RT NO. FG 250A	-3	AVRO PART NO.		
MANUFACTURER'S NA			7-1662-80	7	
AVROCAN SPEC. E32	23 E.o.	. NO.			
ENVELOPE SIZE 12	2.50" x 2.62"	x 1.94" WEIGHT .28 (est) LB.	REF. DWGS. 7-1662-91	5 & 916	
	NEED WOR AUGUS J		7-1662-26	5 & 266	
LOCATION In No.	, 5 Tank - out	board - R & L hand	7-1100-1		
for the aircr	raft fuel quan rates a compen	k contents measurement tity gauging system. This sator.which serves as a	REF. M.D.R. 11-E235		,
reference cor	ndenser to int	roduce fuel deviation	RELIABIL	ITY	
correction in	nto the fuel q	uantity determination.	OVERHAUL LIFE 1500		- 1524
			WASTAGE		HRS.
			Q.T.R. Minn-Honeywell	LI R-ED-8	71
INSPECTION		OPERATION TO BE PERFORME	and an article and article article and article article and article	MEN × M	
INSPECTION PERIOD		OPERATION TO BE PERFORME	D.	MEN × M	ACTUA
	accurately	t the cockpit fuel quantity the amount of fuel taken a uring refueling.	gauges indicate		
PERIOD	accurately aircraft d Carry out gauging sy	t the cockpit fuel quantity the amount of fuel taken a	gauges indicate aboard the	EST.	
Refuel 25 Hour	accurately aircraft d Carry out gauging sy Instructio	t the cockpit fuel quantity the amount of fuel taken a uring refueling. a calibration check of the stem in accordance with Mai	r gauges indicate aboard the fuel quantity antenance	1 x 1	
Refuel 25 Hour Electrics Airframe &	accurately aircraft d Carry out gauging sy Instructio	t the cockpit fuel quantity the amount of fuel taken a uring refueling. a calibration check of the stem in accordance with Mains report 71/MAINT 12/3	fuel quantity ntenance for security	l x l Pending	
Refuel 25 Hour Electrics Airframe &	accurately aircraft d Carry out gauging sy Instructio	t the cockpit fuel quantity the amount of fuel taken a uring refueling. a calibration check of the stem in accordance with Mains report 71/MAINT 12/3	fuel quantity ntenance for security	l x l Pending	
Refuel 25 Hour Electrics Airframe &	accurately aircraft d Carry out gauging sy Instructio	t the cockpit fuel quantity the amount of fuel taken a uring refueling. a calibration check of the stem in accordance with Mai ans report 71/MAINT 12/3 at and electrical connector ACCESSIBILITY Choard access panel - No. 5	fuel quantity ntenance for security	l x l Pending	
Refuel 25 Hour Electrics Airframe &	accurately aircraft d Carry out gauging sy Instructio	t the cockpit fuel quantity the amount of fuel taken a uring refueling. a calibration check of the stem in accordance with Mai ans report 71/MAINT 12/3 at and electrical connector ACCESSIBILITY Choard access panel - No. 5	r gauges indicate aboard the fuel quantity antenance r for security tank - 29 screws	l x l Pending 2 x l	

31 Oct. 57 P.A. Bell Sgt

J. Brumfit R.F. Reid

2 17 July 57

J. Brumfit R.F. Reid

P.A. Bell Sgt

ISSUE

DATE

COMPILED

CHECKED

APPROVED

1 May 3/56

P.A. Bell Sgt

G. Emmerson

G. Emmerson

		LUBRICAT	ION NIL			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	AC	CESS	
4.40000000	Con decast timed	;				
DETAILS:						
		GROUND SUPPORT	EQUIPMENT			
SPECIAL	TOOLS FOR AIRCRAFT	USE	SPECIAL TO	OOLS FOR BENCH	USE	
	NIL		NI	L		
GROUND TESTING EQUIPMENT			GROUND HA	ANDLING EQUIPMI	ENT	
Refueler A-C Ground Power Unit Capacitance Test Equipment Pressurized Air Supply-85 P.S.I. Max		I. Max	Cockpit access Maintenance Pla			
			Mats-Wing			
REPLACEABLE	z X	REMOVAL IN	STRUCTIONS		MEN X	ACTUA
Electrics (1)	mounting clips Disconnect elec on installatio	it and compensa- trical connector n of unit ensur- seated on insul-	tor from spring ty	ips) 1 x 3	

MAINTENANCE AVRO AIRCRAFT LTD.	DATA RECORD Engineering Div.	SYSTEM FUEL SYSTEM	REF. NO. 16-52 11-E238/E244
DISTRIBUTION: STANDARD + A. Cornish S. Brown	A/C TYPE - ARROW 1 EFF. A/C - 25201	COMPONENT Tank Uni Capacitan No. 7 Tank -	t nce
MANUFACTURER'S PART NO. FG220A- MANUFACTURER'S NAME Minneap AVROCAN SPEC. E=323 E.	polis-Honeywell	AVRO PART NO. 7-1662-611	
ENVELOPE SIZE 24.42 x 2.29 to LOCATION In No.7 tank - inbo	x 1.28 WEIGHTO.39 (est)LB.	REF. DWGS. 7-1662-23 & 24 7-1662-905 & 906 7-1100-1	
FUNCTION To provide fuel tan for the aircraft fu	nk contents measurement uel quantity gauging system.	REF. M.D.R.	
		OVERHAUL LIFE 1500 WASTAGE Q.T.R. Minn-Honeywell	HRS.
INSPECTION	ODERATION TO DE DEPENDANT	Time mining work	MEN × MINUTES

INSPEC	INSPECTION OPERATION TO BE PERFORMED				INUTES
PERIO	DD	0.25.0.1.0	TO BE TENTONIED	EST.	ACTUAL
Refuel Airframe	e accurate		fuel quantity gauges indicate f fuel taken aboard the aircraft	lxl	
25 hour Electric	cs gauging		check of the fuel quantity dance with maintenance instructions 3.	Pending	
Airframe Electric		unit and electr	ical connector for security.	2 x 1	
Remove	dorsal fairing		and the later of some		
		Rei	move and Replace	1 x 2	
Remove					
	inboard access pa	nel - No. 7 tani	k - 23 scress - 6 bolts.		
	inboard access pa		k - 23 scress - 6 bolts.	1 x 10	
	inboard access pa			1 x 10	
ISSUE	1	Ren 2	move and Replace	1 x 10	
ISSUE DATE		Rei		1 x 10	
ISSUE DATE COMPILED CHECKED	1 May 3/56	2 August 1/57	move and Replace 3 31 Oct. 57	1 x 10	

APPLICATION	MATERIAL		ATION NIL	
		SPECIFICATION	FREQUENCY	ACCESS
DETAILS:		GROUND SUPPO	RT EQUIPMENT	
SPECIAL	TOOLS FOR AIRCRAF			DLS FOR BENCH USE
NIL			NIL	
GROUN	ND TESTING EQUIPMEN	NT .	GROUND HAI	NDLING EQUIPMENT
	Power Unit, Test Equipment Air Supply - 85	o psi max.	Cockpit Access Sta Maintenance Platfo Mats - Wing	
INTERCHANGEABLE	x s	REMOVAL	INSTRUCTIONS	MEN × MINU
REPLACEABLE				EST. ACT
Electrics 1. Release 2. Disconr NOTE: On i	applicable A/C e tank unit from nect electrical installation of rectly seated on	spring type m connector. unit, ensure the insulators.	ounting clips. nat mounting clips an nove and Replace	re 1 x 5
	(Defu	eling time not	included)	

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AVRO AIRCRAFT LT DISTRIBUTION: STANDARD + A. Cornish S. Brown MANUFACTURER'S PART NO.		FUEL SYSTEM COMPONENT Tank Unit - Car	16-5 11-E	E239/
A. Cornish S. Brown				
MANUFACTURER'S PART NO.		No. 7 Tank - Cent		
	FG 220A-18	AVRO PART NO.	18.0	TATEC
MANUPACTURER'S NAME	Minneapolis - Honeywell	7-1662-827	P	
AVROCAN SPEC. E323	E.O. NO.			
ENVELOPE SIZE 9.07" x	2.29" x 1.28" WEIGHT 0.19 (est)B.	REF. DWG8. 7=1662=23 7=1662= 90		
LOCATION In No. 7	tank - centre forward - L & R hand	7-1100-1		
FUNCTION To provide for the aircraft for	fuel tank contents measurement uel quantity gauging system.	REF. M.D.R. 11-E245		
		RELIABIL	ITY	
		overhaul life 1500 wastage Q.T.R. Minn-Honeywe		HRS. 871
INSPECTION	OPERATION TO BE PERFORM	ED	MEN × M	INUTES

INSPECT	TION	OPERATION TO BE PERFORMED			MEN × M	MINUTES
PERIO	OD				EST.	ACTUAL
Refuel Airframe	accura	that cockpit fue tely the amount of refueling.	l quantity gauges of fuel taken aboa	indicate rd the aircraft	1 x 1	24.
25 Hours Electric		Pendin				
Airframe Electric		t unit and electr	cical connector for	r security	2 x 1	
		(balaisak don	eath garrishad)			
	Remove	centre access pa	anel - No. 7 Tank	- 29 screws		
			Remove	and replace	1 x 10	
ISSUE	1	2	3			
ISSUE	1 May 3/56	. ~	3 31 Oct. 57			
	May 3/56	29 July 57	31 Oct. 57			
DATE	che .	. ~	+			

		LUBRIC	ATION NIL		*		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	A CONTRACTOR	CCESS	A.	
	de eried dest						
DETAILS:		<u></u>					
		GROUND SUPPO	DY KOUDMENT				
SPECIAL	TOOLS FOR AIRCRAFT			OOLS FOR BENCH	i USE		
· · · · · · · · · · · · · · · · · · ·							
	NIL		N	VIL.			
NIL		MIL					
GROUND TESTING EQUIPMENT			GROUND HANDLING EQUIPMENT				
	A-C Ground Power Unit			Cockpit access Stand			
Refueler Capacitance	e Test Equipment		Maintenance Platform 4G/1596 and 4G/2614				
Pressurized	Air Supply - 85	p.s.i. Max	MATS - Wing				
INTERCHANGEABL	E X	REMOVAL	INSTRUCTIONS		MEN X		
REPLACEABLE					EST.	ACTU	
Electrics (l) Defuel applic (1) Release tank (2) Disconnect el	unit from spri	ng type mounting c	lips			
	installation of urectly seated on		at mounting clips a	are			
		F	demove and replace		1 x 4		
		(Defueling t	ime not included)				

:e

MAINTENANCE AVRO AIRCRAFT LTD.	DATA RECORD Engineering Div.	SYSTEM FUEL SYSTEM	REF. NO. 16-54 11-E240/E246
DISTRIBUTION: STANDARD + A. Cornish S. Brown	A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Tank Unit - Can No. 7 Tank - Centre	pacitance
	A-19 lis - Honeywell .o. no.	AVRO PART NO. 7-1662-605	
ENVELOPE SIZE 23.50" x 2.29" : LOCATION In No. 7 Tank - Ce		REF. DWGS.7-1662-23 (7-1662-903) 7-1100-1	
FUNCTION To provide fuel ta for the aircraft fuel quant	nk contents measurement ity gauging system.	REF. M.D.R.	·
		RELIABILI	TY
		overhaul life 1500 wastage o.t.r.Minn-Honeywell	н к s. R-ED-871
INSPECTION	OPERATION TO HE PERFORME	D	MEN × MINUTES

INSPECTIO	NSPECTION OPERATION TO BE PERFORMED				MEN X	MINUTES
PERIOD					EST.	ACTUAL
Refuel Airframe		y the amount of	uel quantity gau fuel taken aboar		l x l	
25 Hour Electrics	gauging s		heck of the fuel nce with Mainten	quantity ance Instructions	Pendin	φ.
Airframe &		nit and electric	al connector for	security	2 x 1	
		ACCESSIBILI	TY			
	Downers on		TY 1 - No. 7 Tank -	20 долеша		
	Remove de	ntre access pane	Remove and		1 × 10	
ISSUE	1	2	3			
DATE]	May 3/56	30 July 57	31 Oct. 57			
	P.A. Bell Sgt	P.A. Bell Sgt	P.A. Bell Sgt			
	G. Emmerson	J. Brumfit	J. Brumfit			
APPROVED	G. Emmerson	R.F. Reid	R.F. Reid			

		LUBRICATI	ON NIT		
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
DETAILS:					eriasyi Kanada
		GROUND SUPPORT	EQUIPMENT		
SPECIAL	TOOLS FOR AIRCRAFT	USE	SPECIAL TO	OOLS FOR BENCH USE	
NIL				NIL	
GROU	ND TESTING EQUIPMEN	т	GROUND HA	ANDLING EQUIPMENT	
Refueler Capacitance	d Power Unit e Test Equipment d Air supply -85	p.s.i. Max	Cockpit acces Maintenance F MATS - Wing	ss stand Platform 4G/1596 an 4G/2614	d
INTERCHANGEABL	E X	REMOVAL INS	TRUCTIONS	MEN X	MINUTES
REPLACEABLE	l) Defuel applic			EST.	ACTUA
NOTE: On i	(1) Release tank (2) Disconnect ending installation of unrectly seated on	lectric connector nit ensure that r insulators.			
		(Defueli	ng time not incl	luded)	

ga At 1 by 1 as	NANCE D	ATA RECORD		FUEL SYSTEM	16-55	
AVEO AMCRA		Engineering Div.		COMPONENT Tank uni		41/E2
DISTRIBUTION: STANI A. Cornish 3. Brown	DARD +	EFF. A/C -25201		Capacitance - No. 7 tank - outb		
	ART NO. FG220A-20			AVRO PART NO.		1.58
manufacturer's na	ME MINNEAPOLIS			7-1662-607		
ENVELOPE SIZE 8.2		28" WEIGHT 0.19 (es	t)LB.	7-1662-23 & 24 7-1662-907 & 908 7-1100-1		
	rovide fuel tan	ak contents measuremen aging system	t for	REF. M.D.R. 11-E247		
			-	RELIABIL	ITY	
				OVERHAUL LIFE 1500		HRS.
				Q.T.R [Minn=Honeywel]	L -R-ED-8	871
INSPECTION PERIOD		OPERATION TO BE PE	RFORMED	1	MEN × M	INUTES ACTUAL
Refuel Airframe		the cockpit fuel quant ne amount of fuel take ling			lxl	
25 Hour Electrics		calibration check of t em in accordance with L/Maint. 12/3			Pendin	3
Airframe & Electrics	Inspect unit	and electrical connec	tor for	security	2 x 1	
		ACCESSIBILITY		4 A A		
Remove outboar	d access panel	- No. 7 tank - 29 scr	ews	and a process		

3 31 Oct. 57 P.A. Bell Sgt

J. Brumfit

R.F.Reid

2

July 30/57 P.A. Bell Sgt.

J. Brumfit

R.F. Reid

ISSUE

DATE

CHECKED

APPROVED

May 3/56
P.A. Bell Sgt.

G. Emmerson

			PO NIL		- Allia	
APP LINA TERM	SCATTERIAL DESCRIPTIONS	A BUILDIN	PREQUENCY		deligion a	
			100			
DETABLE:				aller - a - i -		
		4,	₩			
	2 6311053	UPPORT	EQUIPMENT			
SPECIAL	TOOLS FOR AIRCRAFT URR			ols for Benc	CH UBB	
1	NIL		NIL			
GROU	ND TESTING EQUIPMENT		GROUND HA	ANDLING MOUN	MBNT	
A-C G Refue Capac	round Power Unit	Ma	ckpit Access Sta intenance Platf	nd	and	
INTERCHANGEABL		AVAL INS	TRUCTIONS		MEN X F	BNUTB
REPLACEABLE	, KEM	atar mo			EST.	ACTU
Elect	ame (1) Defuel applicable rics (1) Release tank unit (2) Disconnect electr NOTE on installatio clips are corr	from srical co on of un	pring type mount nnector	mounting ors Replace	1 x 6	

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MAINTE		DATA RECORD	SYSTEM FUEL SYSTEM	REF. 1 16-5	6
AVRO AIRCRAF DISTRIBUTION: STANDA A. Cornish S. Brown		Engineering Div. A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Tank Unit - Capacitance No. 8	11-E	25
MANUFACTURER'S PAR' MANUFACTURER'S NAM AVROCAN SPEC. E32	E Minneapol		AVRO PART NO. 7-1662-8.	21	
LOCATION In No. 8 tank - FUNCTION To provide fuel	inboard - R	ts measurement for the	REF. DWGS. 7-1662-27 7-1662-97 7-1100-2-7-1100-3	23/4 -SH.29	7
aircraft fuel qu	sancity gaug	Ing system,	RELIABIL	ITY	
			overhaul Life 1500 wastage o.t.r. Minn. Honeywe		HRS. -871
INSPECTION PERIOD		OPERATION TO BE PERFORME	ED.	MEN × M	ACTUA
Refuel Airframe 25 Hour Electrics Airframe & Electrics	accurate during r Carry ou Gauging . Instruct	hat the cockpit fuel quantity the amount of fuel taken efuelling. t a calibration check of the system in accordance with Maions Report 71/MAINT 12/3 unit and electrical connectors.	aboard the aircraft fuel quantity intenance	1 x 1 Pending 2 x 1	
		ACCESSIBILITY			
	Remove i	nboard access panel - No. 8	Tank - 29 screws		

5 Nov. 57 P.A. Bell Sgt J. Brumfit

R.F. Reid

ISSUE

DATE COMPILED

CHECKED

May . 3/56

APPROVED G. E mmerson

P. A. Bell Sgt G. Emmerson

		LUBRICAT	ION NIL	
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS
DETAILS:				
		GROUND SUPPORT	EQUIPMENT	
SPECIAL	TOOLS FOR AIRCRAF	r use	SPECIAL TOOLS	FOR BENCH USE
NIL			NI	IL .
GROUND TESTING EQUIPMENT			GROUND HAND	LING EQUIPMENT
A-C Ground Pow Refueler Capacitance Te	ver Unit		Cockpit access stan Maintenance Platfor Mats - Wing	nā
INTERCHANGEABL	EX	REMOVAL IN	STRUCTIONS	MEN × MINUTES
REPLACEABLE				EST. ACTUAL
Electrics 1. F 2. E	delease tank uni Disconnect elect	rical connector. unit ensure that	mounting clips are	
		Remove and	replace	1 x 8
	(Def	ueling time not i	ncluded)	

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MAINTEN		DATA RECORD	SYSTEM FUEL SYSTEM	REF. NO. 16-57 11-E251-25'
DISTRIBUTION: STANDA A. Cornish S. Brown		Engineering Div. A/C TYPE - Arrow 1 EFF. A/C - 25201	COMPONENT Tank uni Capacitance No. 8 Tank centre	
MANUFACTURER'S PART	т NO. FG120K-1	3	AVRO PART NO.	***
MANUFACTURER'S NAME AVROCAN SPEC. E32		s-Honeywell	7-1662-98	35
ENVELOPE SIZE 6.76 LOCATION In no. 8 tank ce	5" x 2.29" x		REF. DWGS. 7=1662=21 7=1662= 9 7=1100=2= 7=1100=3=	921 & 922 SH 29
aircraft fuel qu			RELIABILI	IT V
			overhaul life 1500 wastage o.t.r. Minn.=Honeywe	HRS.
INSPECTION PERIOD		OPERATION TO BE PERFORME	D d	MEN × MINUTES EST. ACTUAL
	accuratel during re Carry out gauging s	at the cockpit fuel quantity the amount of fuel taken fuelling. a calibration check of the ystem in accordance with Ma	y gauges indicate aboard the aircraft fuel quantity intenance Instructio	EST. ACTUAL 1 x 1 ns
Refuel Airframe	accuratel during re Carry out gauging s Report 71	at the cockpit fuel quantity the amount of fuel taken fuelling. a calibration check of the	y gauges indicate aboard the aircraft fuel quantity intenance Instructio	EST. ACTUAL
Refuel Airframe 25 Hour Electrics Airframe	accuratel during re Carry out gauging s Report 71	at the cockpit fuel quantity the amount of fuel taken fuelling. a calibration check of the ystem in accordance with Ma/MAINT 12/3	y gauges indicate aboard the aircraft fuel quantity intenance Instructio	est. ACTUAL 1 x 1 ns Pending
Refuel Airframe 25 Hour Electrics Airframe	accuratel during re Carry out gauging s Report 71 Inspect u	at the cockpit fuel quantity the amount of fuel taken fuelling. a calibration check of the ystem in accordance with Ma/MAINT 12/3 nit and electrical connecto	y gauges indicate aboard the aircraft fuel quantity intenance Instruction	est. ACTUAL 1 x 1 ns Pending

P.A. Bell Sgt J. Brumfit R.F.Reid

5 Nov. 57

ISSUE

DATE

COMPILED

CHECKED APPROVED

May 3/56

P.A. Bell Sgt G. Emmerson G. Emmerson

		LUBRICA	TION NIL			
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	A	CCESS	trademi o
DETAILS:						
DETAILS:						
		GROUND SUPPOR	T EQUIPMENT			
SPECIAL	TOOLS FOR AIRCRAF	r use	SPECIAL TO	OOLS FOR BENC	H USE	
NIL				NIL		
GROUN	D TESTING EQUIPMEN	T	GROUND HA	NDLING EQUIPM	ENT	
A-C Ground Pow Refueler Capacitance Te Pressurized Ai		o.s.i. Max.	Cockpit access st Maintenance Plati Mats ~ Wing	tand form 4G/1590 4G/2612	ó and	
INTERCHANGEABLE X REMOVAL INSTRUCTIONS						INUTES
REPLACEABLE					EST.	ACTUAL
2. NOTE: On i	Release tank u Disconnect ele	ctrical connect unit, ensure th	type mounting clip			
		Remo	ove and replace		1 x 6	
	(Defuelling time	not included)		1.5	

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MAINTENANCE DA	ATA RECORD Engineering Div.	SYSTEM FUEL SYSTEM	REF. NO. 16-58 11-E252-258	
DISTRIBUTION: STANDARD + A. Cornish S. Brown	A/C TYPE - APPOW 1 EFF. A/C - 25201	COMPONENT Tank Unit - Capacitance No. 8 Tank - Outboard		
MANUFACTURER'S PART NO. FG 220A=23 MANUFACTURER'S NAME Minneapolis AVROCAN SPEC. E323 E.O. NO.	Honeywell	AVRO PART NO. 7-1662-6	35	
envelope size 7.29 x 2.29 x 1.2 LOCATION In No. 8 tank - Outboard - L &		7-1100-2	21 & 22 201 & 902 2 - SH-29 3 -SH 6& 7	
FUNCTION To provide fuel tank contents aircraft fuel quantity gauging		REF. M.D.R.		
		RELIABIL	. IT Y	
		overhaul Life 1500 wastage o.t.R.Minn. Honeywe	HRS.	
INSPECTION	OPERATION TO BE PERFORMED)	MEN × MINUTES	
PERIOD			EST. ACTU	

INSPECTIO	INSPECTION OPERATION TO BE PERFORMED		MEN X N	N × MINUTES	
PERIOD				EST.	ACTUAL
Refuel Airframe	accura	that cockpit fuel tely the amount of refuelling.	quantity gauges indicate fuel taken aboard the air	craft x 1	
25 Hours Electrics	gaugin	out a calibration og system in accorda ctions Report 71/MA	heck of the fuel quantity nce with Maintenance INT 12/3	Pending	
Airframe & Electrics	& Inspec	t unit and electric	al connector for security	2 x 1	
	Remove	ACCESSIBILITY outboard access pa	nel - No. 8 tank - 29 sc	ews	
			Remove and replace	1 x 10	
ISSUE	1	2			
DATE	May 3/56	5 Nov57			
	P.A. Bell Sgt	P.A. Bell Sgt			
CHECKED	G. Emmerson	J. Brumfit			
	G. Emmerson	R.F. Reid			

	480 T	LUBRICAT	ION NIL		4.5
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	4
					Table 1
					y
	10 A		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18 Care 6	DATE Y
		ROUND SUPPORT			* L 13 9
SPECIAL	TOOLS FOR AIRCRAFT U	JSE	SPECIAL TOO	LS FOR BENCH USE	
	NIL		NIL		
GROU	ND TESTING EQUIPMENT		GROUND HAN	DLING EQUIPMENT	
A-C Ground Por Refueler Capacitance To Pressurized A		.i. Max	Cockpit access sta Maintenance Platfo Mats - Wing		
INTERCHANGEABL	EX	REMOVAL IN	STRUCTIONS	MEN X	MINUTES
REPLACEABLE		REMOTALIN	31 KOCTION3	EST.	ACTUA
NOTE: On i	Disconnect elect	rical connector it, ensure that itsulators.	ype mounting clips mounting clips are and replace		
	(De:	fuelling time n	ot included)		

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