

CHAP	2	SP 101A	SERVICING PROCEDURES				AP. 101B-1000-5A3F Section / (1st Edition)				TIME EST	ACT	
TRADE	AIR RADAR		LIGHTNING				AL NO	13	DATE				
SHEET	1	OF	61	SHEET/S				3	5	6			
TITLE	AI MK 23D Installation - Test						SERVICING RECORD AC NO DATE						
Safety and Servicing Notes are to be complied with throughout the work detailed on this Card.						(1)	(2)	(3)	(4)	(5)			
<u>Special Tools and Equipment</u>						MAN HOURS	TRADESMAN INIT	BRIEF DETAILS OF DEFECT OR SUSPECTED DEFECT	F. 720B NO	N.C.O. INITIALS	ASSOCIATED PROCEDURE CARDS		
Test Set Type MRG Simulator, 6C/4199461. Screen RAM Nose Type 6414. Watches Stop. Waveguide Resonator Feed. Trolley Air Cooling Mk 3D. Meter Unit Monitoring Typ 16325. Tester Noise 6625-99-914-0553. Resonator CT307. Pitot Static Test Set Mk 3. Indicator CT300.													
AIR RADAR 1. <u>Preparation</u> 1.1 15kVA power unit.) 1.2 Cooling air trolley) 1.3 RAM nose screen.) 1.4 Tester noise S-band.) (a) RF output.) (b) Mains input.) Sub-item 1.5 is applicable only to Mk F3 and 6 aircraft. 1.5 Meter Unit Monitoring (MUM).) (a) Mounting clamp.) (b) Support bars.) (c) Meter unit.)											ASSOCIATED TRADES		
SMS/79/101A 3						Continued						SP NO	101A

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	2	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
1. <u>Preparation (Contd)</u>								
Sub-item 1.6 is applicable only to Mk T5 aircraft.								
1.6 MUM meter unit. Place on starboard seat.								
1.7 Radar test harness.								
(a) Suspension strap and clip. Set clip to appropriate notch for aircraft concerned and attach to port edge of cockpit ensuring rubber pad on junction box rests against aircraft skin.								
(b) Cableforms. (i) Disconnect hand controller and connect 6-way free socket to cableform 6-way plug.								
(ii) Connect cableform 6-way socket to controller plug.								
(iii) Connect remaining cableforms to appropriate test points.								
NAV INSTRUMENTS								
2. <u>Preparation</u>								
2.1 MRG simulator. (i) Connect in place of MRG.								
(ii) Set pitch, roll and azimuth controls to zero.								
AIR RADAR								
3. <u>Preparation</u>								
3.1 Tester noise S-band.								
(a) Tuning control. Set to frequency of external receiver.								
(b) Main On/Off switch.) Set to 'ON'.) Note: Indication lights								
(c) RF Osc On/Off switch.) will only illuminate) after 4 minutes radar run up.								
SMS/79/ 3A				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	3	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
3. <u>Preparation</u> (Contd).								
Sub-item 3.2 is applicable only to Mk T5 aircraft.								
3.2 Pupil/Instructor switch. Set to 'PUPIL'.								
3.3 Instrument master switch. Set to 'ON'.								
3.4 MRG On/Off switch. Set to 'ON'.								
3.5 MRG simulator relay 'F' light. (i) Depress. (ii) Release. (iii) Ensure lamp lit.								
3.6 LFS/CRT switch. Set to 'LFS'.								
3.7 Master armament selector switch. Set to 'GW'.								
3.8 Hand control unit. (HCU).								
(a) Ground test standby switch. Set to 'GROUND TEST'.								
(b) Tx On/Off switch. Switch 'ON'.								
(c) Vis-ident switch. Set to 'OFF'.								
(d) Additional facilities switch.) Set to 'NORMAL'.								
(e) PRF switch)								
3.9 Indicator visor. Ensure fitted.								
4. <u>Power Run Up</u>								
4.1 HCU main On/Off switch. Set to 'ON' and simultaneously start stopwatch.								
4.2 Indicator/s.								
(a) Azimuth Elevation and Attitude scale lamps. Ensure lit.								
(b) Polaroid dimmer. Ensure smooth operation								
SMS/79/4				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	4	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
4.3 NUM.								
(a) Test selector. Set to '4'.								
(b) Meter M1 (0-100).)								
(c) Meter M2 (50-0-50).) Check mechanical zeros.								
(d) Red cone switch.)								
(e) Test pulse switch.) Set to 'OFF'.								
(f) Aerial control. Set to 'NORMAL'.								
(g) Rate switch. Set to 'OFF'.								
(h) Range switch. Set to 'MAN'.								
(j) Aerial position selector.)								
(k) Test selector.) Set to '1'.								
(l) Elevation control. Set to '0'.								
(m) Range lock switch. Set to 'ON'.								
(n) Range track switch. Set to 'OFF'.								
(p) Azimuth control. Set to '0'.								
(q) Comp track switch. Set to 'OFF'.								
(r) Monitor lamp. Ensure lights after 4 minutes PLUS OR MINUS 20 seconds of switching on HCU main On/Off switch.								
NB Sub-item 4.8 is to be carried out within approximately 30 seconds of Sub-item 4.4 to 4.7 inclusive.								
4.4 HCU range selector button. Select 60/80 mm range.								
4.5 Indicator/s range scales. Ensure 60/80 and 10 mm scales illuminated.								
4.6 HCU range selector button. Select 40 nm range.								
SMS/79/ 4A				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
CP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	5	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
4. <u>Power Run Up</u> (Contd)								
4.7 Indicator/s.								
(a) Range scales. Ensure 40 and 10 nm scales illuminated.								
(b) Computer switch.				(i)	Ensure illuminated.			
				(ii)	Set to '1'.			
4.8 LFS.				(i)	Raise reflector.			
				(ii)	Ensure RH event marker is displayed.			
4.9 MUM monitor lamp.				Ensure extinguishes after 4 minutes 30 seconds PLUS OR MINUS 25 seconds of switching on HCU main On/Off switch.				
4.10 LFS.				Ensure RH marker has disappeared.				
4.11 MUM.								
(a) Meter M1.				Check indicating 90 PLUS OR MINUS 4.				
(b) Test selector.				Set to '2'. (Xtal current).				
(c) Meter M1.				(i)	Check needle sweeping at approx 1 Hz.			
				(ii)	Ensure sweep ceases after approx 1/2 minute and meter indicates between 20 and 80.			
				(iii)	Note indication.			
4.12 HCU Tx On/Off switch.				Set to 'OFF'.				
4.13 MUM meter M1.				Check indication has not altered by more than 10 per cent from that noted in Sub-item 4.11 (c) Operation (iii).				
5. <u>Transmitter Power Output and PRF Switching</u>								
5.1 LFS/CRT switch.				Set to 'CRT'.				
SMS/79/212/5				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	6	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
5. <u>Transmitter Power Output and PRF Switching (Contd)</u>								
5.2 MUM.								
(a) Test position Operate. switch.								
(b) Test selector. Set to '3' (Tx power)								
(c) Balance control. Adjust for zero indication on M1.								
5.3 HCU Tx On/Off switch. Set to 'ON'.								
5.4 MUM meter M1.								
(i) Check indicating not less than 16.								
(ii) Note reading.								
5.5 HCU.								
(a) PRF switch. (i) Set to 'LOW' and check MUM meter M1 falls by approx 25 per cent of the reading obtained at Sub-item 5.4 (ii).								
(ii) Reset to normal.								
(b) Tx On/Off switch. Switch 'OFF'.								
6. <u>Indicator Weapon Lamps</u>								
6.1 MUM P/S weapon switch. Set to 'P WEAPON'.								
6.2 Indicator port W lamp. Ensure lit.								
6.3 MUM P/S weapon switch. Set to 'S WEAPON'.								
6.4 Indicator starboard W lamp. Ensure lit.								
6.5 MUM P/E weapon switch. Release.								
7. <u>Search Phase</u>								
7.1 HCU.								
(a) Phase change trigger. Select search phase.								
(b) Scan selector. Select 1 bar scan.								
SMS/79/5A				Continued				

SMS 1/A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F					
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)					
SHEET	7	AL 13		AC NO..... DATE					
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2983B		(1)	(2)	(3)	(4)	(5)
AIR RADAR									
7. <u>Search Phase</u> (Contd)									
7.2 Indicator/s.									
(a) Markers.			(i)	Ensure acquisition, attitude and elevation markers are displayed.					
			(ii)	Check attitude marker is within 3 degrees of horizontal and positioned between 0 and 3 mm below zero pitch.					
			(iii)	Select 10 nm range and check markers do not move by more than 2 nm.					
(b) Scan width.			Check between 45 and 55 degrees either side of centre line.						
(c) Scan frequency.			Ensure approx 1 Hz.						
(d) Elevation marker.			(i)	Move HCU handle over full fore and aft travel and check elevation marker follows correctly. Leave marker set to approx 4 degrees up.					
			(ii)	Select 2 bar scan and check marker shows 2 bar scan pattern.					
			(iii)	Select 4 bar scan and check marker shows 4 bar scan pattern.					
(e) Receiver noise.			(i)	Select 1 bar scan.					
			(ii)	Check noise appears on display as control unit Gain control is moved towards maximum.					
SMS/79/412/4b			Continued						

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	8	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
7. <u>Search Phase</u> (Contd)								
7.2 Indicator/s. (Contd)								
(e) Receiver noise. (Contd)								
(iii) Reduce Gain control setting slowly and ensure noise amplitude diminishes.								
(iv) Adjust Gain control for optimum setting, ie noise peaks just visible.								
8. <u>Acquisition Phase</u>								
8.1 HCU phase change trigger. Select acquisition phase.								
8.2 Indicator.								
(a) Scan width. Check approx 10 degrees.								
(b) Scan frequency. Check time for 25 sweeps is between 8 and 12 seconds.								
(c) Acquisition marker.								
(i) Set to 5 nm.								
(ii) Ensure correct circular form approx 5 mm in diameter.								
(iii) Switch to 40 nm range and check marker is unchanged in shape and position at 5 nm.								
(iv) Using HCU range control check marker can be moved to top and bottom limits of display.								
Note: Adjustment of MUM Fine Range control may also be necessary.								
(v) Reset marker to 5 nm.								
SMS/79/ / 6A				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	9	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
8. <u>Acquisition Phase (Contd)</u>								
8.2 Indicator. (Contd)								
(c) Acquisition marker. (Contd)								
(vi) Operate HCU handle slowly and ensure marker and scan follows correctly.								
(vii) Centralize marker.								
9. <u>Test Phase</u>								
9.1 MUM								
(a) Test position Operate. switch.								
(b) Test selector. Set to '4'.								
9.2 Indicator/s.								
(a) Markers Check following markers are displayed: Steering dot. Time circle. Target marker. (A circle approx 5 mm in dia).								
(b) Timebase Ensure collapsed to a single line.								
(c) Time circle. (i) Check diameter is approx 80 degrees azimuth. (ii) Check gap is positioned between 4 and 5 o'clock and approx 15 degrees in width.								
10. <u>Adjustment of Graticule</u>								
10.1 HCU.								
(a) Range selection Select '10 nm'. button.								
(b) Vis-Ident Select to 'ON'. switch.								
(c) Phase change Select 'SEARCH' trigger. phase.								
SMS/79/212/7				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	10	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
10. <u>Adjustment of Graticule (Contd)</u>								
10.1 HCU. (Contd)								
(d) Additional facilities switch.			Select 'ON'.					
(e) Reject switch.			Reject inwards					
(f) Range control.			Adjust until Vis-Ident range indication has collapsed to a 'DOT'.					
10.2 Indicator.								
(i)			Ensure 'DOT' aligns with the intersection of inverted 'T'.					
Note:			If the graticule is not satisfactorily aligned carry out sub-item 10.3 and 10.4.					
10.3 Indicator.								
			Remove 'Visor' and 'Polarised Dimmer'.					
10.4 Polarised Dimmer.								
			Adjust graticule.					
10.5 Indicator.								
(i)			Refit 'Polarised Dimmer' and 'Visor'.					
(ii)			Ensure 'DOT' aligns with intersection of inverted 'T'.					
Note:			If the graticule is not satisfactorily aligned repeat sub-item 10.3 and 10.4.					
10.6 HCU.								
(a)			Vis-Ident switch. Select to 'OFF'.					
(b)			Additional facilities switch. Select to 'NORMAL'.					
SMS/79/21200 - 7A				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	11	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
10. <u>Adjustment of Graticule</u> (Contd)								
10.6 HCU. (Contd)								
(c) Phase change trigger.								
(i) Select 'Track' and 'Hold', check that reading on M1 can be varied by movement of the gain control								
(ii) Release trigger and check that reading on M1 is independent of gain control								
(d) Range selection button. Select 40 nm.								
10.7 MUM test position switch. Operate.								
11. <u>Overall Sensitivity</u>								
11.1 MUM.								
(a) Aerial control selector. Set to 'TEST'.								
(b) Rate switch. Set to '0'.								
(c) Test selector. Set to '6'.								
(d) Fine range control. Set to mid-position.								
11.2 HCU.								
(a) Range control. Set KRA marker to 1 nm.								
(b) Handle. Centralize then adjust in elevation to set indicator/s elevation marker to zero.								
(c) Tx On/Off switch. Set to 'ON'.								
11.3 MUM.								
(a) Fine range control. Adjust for an M1 indication of 7.5								
(b) Test selector. Set to '4'.								
11.4 Screen RAM nose.								
(a) Attenuator. Set to '0'.								
SMS/79/215/8				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	12	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
11. <u>Overall Sensitivity</u> (Contd)								
11.4 Screen RAM nose. (Contd)								
(b) Resonator. Tune for peak indication on associated meter, adjusting attenuator as necessary to maintain a suitable indication.								
11.5 MUM.								
(a) Azimuth control. Adjust for a minimum indication on M1 and zero indication on M2.								
(b) Aerial position selector. Set to '2'.								
11.6 HCU. Adjust in elevation for a minimum indication on M1.								
11.7 MUM.								
(a) Elevation control. (i) Adjust for zero indication on M2 and a minimum indication on M1.								
(ii) Repeat azimuth and elevation adjustments as necessary until when switching Aerial position selector from 1 to 2, M1 remains at minimum and M2 at zero.								
(b) Aerial position selector. Ensure set to '2'.								
(c) Test selector. Set to '6'.								
(d) Fine range control. Set full anti-clockwise.								
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CHAP . 2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3F Section 1 (1st Edition)				
SP NO 101A	CONTINUED		AC NO..... DATE				
SHEET 13	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)
AIR RADAR							
11. Overall Sensitivity (Contd)							
11.8 HCU range control. Adjust for an M1 indication of 10 PLUS OR MINUS 2.							
11.9 MUM.							
(a) Range switch. Set to 'AUTO'.							
(b) Test selector. Set to '5'.							
(c) Meter M1. Ensure indication is 20 PLUS OR MINUS 2.							
(d) Range set lamp. Ensure lamp is lit, adjusting range control if necessary and ensuring there is no perceptible change in M1 indication.							
(e) Test selector. Set to '4'.							
(f) Elevation control. Adjust as necessary for zero on M2 and minimum on M1.							
(g) Aerial position selector. Set to '1'.							
(h) Azimuth control. Adjust as necessary for zero on M2 and minimum on M1.							
11.10 Screen RAM nose.							
(a) Thermometer. Note temperature.							
(b) Resonator. (i) Adjust for peak indication on associated meter.							
(ii) Note frequency setting.							
(c) Attenuator chart. Using temperature and frequency noted at 11.10 (a) and (b) operation (ii), determine appropriate attenuator setting.							
(d) Attenuator. Set to figure obtained from attenuator chart.							
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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	14	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
11. <u>Overall Sensitivity</u> (Contd)								
11.11 MUM monitor Ensure lit. lamp.								
12. <u>Crossover Slopes</u>								
12.1 MUM.								
(a) Range switch. Set to 'MAN'.								
(b) Fine range control. Set fully clockwise and then rotate anti-clockwise until M1 indicates 22 PLUS OR MINUS 2.5.								
Note: Adjust HCU range control as necessary.								
(c) Aerial position selector. Set to '2'.								
(d) Elevation control. Check setting for minimum on M1 and zero on M2.								
(e) Aerial position selector. Set to '1'.								
(f) Azimuth control. Check setting for minimum on M1 and zero on M2.								
(g) Test selector. Set to '6'.								
(h) Fline range control. Adjust for an M1 indication of 5.								
Note: Adjust HCU range control if necessary.								
(j) Test selector. Set to '4'.								
(k) Aerial position selector. Set to the following positions and check indication:								
Note: 'M2 Read/Test switch: In this and subsequent items where a M2 adjustment of zero is required, select 'Read' only when the M2 indication is less than 10.								
SMS/79/ 9A				Continued				

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F																	
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)																	
SHEET	15	AP 13		AC NO..... DATE																	
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2988B																	
				(1)	(2)	(3)	(4)	(5)													
AIR RADAR																					
12. <u>Crossover Slopes</u> (Contd)																					
12.1 MUM. (Contd)																					
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">AE POSN</th> <th style="width:85%;">M2 INDICATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td rowspan="2">0 PLUS OR MINUS 0.5) If not check azimuth and elevation controls</td> </tr> <tr> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Plus 8 to plus 42.</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Minus 8 to minus 42.</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Positive indication of at least 3.</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Negative indication of at least 3.</td> </tr> </tbody> </table>									AE POSN	M2 INDICATION	1	0 PLUS OR MINUS 0.5) If not check azimuth and elevation controls	2	3	Plus 8 to plus 42.	4	Minus 8 to minus 42.	5	Positive indication of at least 3.	6	Negative indication of at least 3.
AE POSN	M2 INDICATION																				
1	0 PLUS OR MINUS 0.5) If not check azimuth and elevation controls																				
2																					
3	Plus 8 to plus 42.																				
4	Minus 8 to minus 42.																				
5	Positive indication of at least 3.																				
6	Negative indication of at least 3.																				
<p>(1) Rate switch. Set to 'OFF' and check M1 indication increases by not less than 8.</p>																					
13. <u>Short Range Vis-Ident Function</u>																					
13.1 MUM.																					
(a) Test selector. Set to '6'.																					
(b) Test pulse switch. Set to 'VAR'.																					
(c) Fine range control. Set fully 'CLOCKWISE'.																					
(d) Range track switch. Set to 'ON'.																					
(e) Test position switch. Operate.																					
NB: Reject out facility is inhibited when rate switch selection is 0, 1 or 2.																					
13.2 Screen RAM nose. Detune resonator.																					
13.3 HCU.																					
(a) Range selection. Select 10 nm.																					
(b) Reject switch. Operate to run range out or in until lock-on to test pulse occurs. Set to 'ON'.																					
(c) Vis-ident switch.																					
SMS/79/10				Continued																	

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	16	AP 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
13. <u>Short Range Vis-Ident Function (Contd)</u>								
13.4 Indicator/s.								
(a) Display.			Check Vis-Ident thermometer scale is displayed at right hand side.					
(b) Range unlocked lamp.			Ensure extinguished					
13.5 MUM.								
(a) Rate switch.			Set to '0'.					
(b) Fine range control.			Adjust test pulse range (slowly to maintain lock-on) until top of thermometer scale is coincident with 10 nm scale marking					
(c) Meter M1.			Check indicating 25 PLUS OR MINUS 2.					
(d) Fine Range control.			Reduce test pulse range slowly, ensuring thermometer scale length reduces steadily until changeover from thermometer scale to short range circle occurs at approx 900 yards.					
(e) Meter M1.			Check indicating 4.5 PLUS OR MINUS 0.5.					
(f) Fine range control.			Reduce test pulse range until short range circle is coincident with 500 yards calibration mark.					
(g) Test pulse switch.			Set to 1500 ft and ensure lock-on is maintained using HCU Reject In/Out switch as necessary.					
NB: Reject 'out' facility cannot be used unless rate switch is selected 'OFF'.								
(h) Meter M1.			Check indication is 2.5 PLUS OR MINUS 0.5.					
SMS/79/212/10A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	18	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
14. <u>Minimum Range Check</u> (Contd)								
14.3 MUM. (Contd)								
(b) Fine range) Carefully reduce								
control) range until range								
(c) Meter M1) circle is coincident								
500 yard mark,								
ensuring monitor								
lamp remains lit								
and GCV reading on								
M1 remains steady.								
14.4 HCU.								
(a) Range selector switch. Select 40 nm range								
and ensure that the								
Vis-Ident display								
is removed.								
(b) Tx switch.)								
(c) Vis-Ident switch.) Set to 'OFF'.								
ELECTRICAL								
15. <u>Preparation</u>								
15.1 Pitot/Static test set. Connect to aircraft.								
15.2 Pitot/Static pressures. Adjust Pitot/Static								
for an airspeed of								
175 PLUS OR MINUS								
20 kts. (Static at								
prevailing								
atmosphere).								
AIR RADAR								
16. <u>Radar Ranging</u>								
16.1 HCU range control. Set KRA marker to								
5 nm.								
16.2 MUM.								
(a) Aerial position selector. Set to '1'.								
(b) Test selector. Set to '9'.								
(c) Elevation control. Adjust for an M2								
indication of 5.								
SMS/79/212/LIA				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	19	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
16. <u>Radar Ranging</u> (Contd)								
16.2 MUM. (Contd)								
(d) Test selection. Set to '8'.								
(e) Azimuth Adjust for M2 control. indication of 5.								
16.3 LFS/CRT switch. Set to 'LFS'.								
16.4 MUM.								
(a) Range track switch. Set to 'ON'.								
(b) Meter M2. Check reading is zero PLUS OR MINUS 2.								
(c) Test selector. Set to '9'.								
(d) Meter M2. Check reading is zero PLUS OR MINUS 2.								
(e) Meter M1. Check reading is 8 PLUS OR MINUS 2.								
(f) Test selector. Set to '4' and NOTE: reading on M1.								
(g) Test pulse switch. Set to 'Variable' and adjust fine range to obtain a steady LFS 'in Range' indication.								
(h) Meter M1. Check reading has not changed from that noted in 16.4 (f) above.								
16.5 Indicator/s.								
(a) Display								
(i) Check steering dot has disappeared.								
(ii) Check KRA marker is sweeping between approx $\frac{1}{2}$ and 1 nm.								
(b) Range scales. Check 40 and 10 nm scales are illuminated.								
SMS/79/ 12				Continued				

SWS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	20	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
ELECTRICAL								
17. <u>Radar Ranging</u>								
17.1 Pitot/Static test set. Adjust static pressure to over 20000 Ft.								
AIR RADAR								
18. <u>Radar Ranging</u>								
18.1 MUM.								
(a) Meter M1. Check reading is same as noted in 16.4 (f).								
(b) Test selector. Set to '6' and check reading on M1 is 13 PLUS OR MINUS 2.								
18.2 Indicator/s. Check KRA marker is sweeping between 1 and 2 nm.								
ELECTRICAL								
19. <u>Radar Ranging</u>								
19.1 Pitot/Static test set. Return Static pressure to prevailing atmospheric.								
AIR RADAR								
20. <u>Guns Radar Ranging</u>								
20.1 Master armament selection switch. Set to 'GUNS'.								
20.2 MUM.								
(a) Meter M1. Check reading is 2 PLUS OR MINUS 1.								
(b) Test selector. Set to '4'.								
(c) Fine Range control. Adjust to obtain LFS 'In Range' indication.								
(d) Meter M1. Check reading does not vary when 'In Range' signal is displayed and that it is the same value as noted at 16.4 (f)								
SMS/79/* 12A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3F Section 1 (1st Edition)				
SP NO	101A	CONTINUED		AC NO..... DATE				
SHEET	21	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
20. <u>Guns Radar Ranging</u> (Contd)								
20.2 MUM. (Contd)								
(e) Test pulse switch.			Set to 1500 ft and check that there is no 'In Range' indication.					
(f) Test selector switch.			Set to '9' and check that the reading on M2 is MINUS 6 PLUS OR MINUS 2.					
20.3 LFS/CRT switch.			Set to 'CRT'.					
20.4 Master armament selector switch.			Set to GW.					
20.5 MUM test position switch.			Operate.					
21. <u>Sightline Rates</u>								
21.1 HCU range selector button.			Select 10 nm range.					
21.2 MUM.								
(a) Range track switch.			Set to 'OFF'.					
(b) Elevation control.			Adjust to zero indication on M2 with M2 'Read/Test' switch on 'READ'.					
(c) Test selector.			Set to '8'.					
(d) Azimuth control.			Adjust to zero indication on M2 with M2 'Read/Test' switch on 'READ'.					
21.3 HCU phase change. trigger.			Select Track and simultaneously start stop watch.					
21.4 MUM.								
(a) Meter M2.			Check, as stop watch indicates 10 seconds, that indication is between MINUS 10 and PLUS 10.					
(b) Test position switch.			Operate.					
SMS/79/			13					
			Continued					

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	22	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2983B					
			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
21. <u>Sightline Rates</u> (Contd)								
21.4 MUM. (Contd)								
(c) Test selector. Set to '9'.								
21.5 HCU phase change trigger. Select Track and simultaneously start stop watch.								
21.6 MUM.								
(a) Meter M2. Check, as stop watch indicates 10 seconds, that indication is between MINUS 10 and PLUS 10.								
(b) Test position switch. Operate.								
ELECTRICAL								
22. <u>Preparation</u>								
22.1 Pitot/Static test set. Connect.								
22.2 Pitot/Static pressures. Adjust Pitot/Static pressures for an airspeed of 175 PLUS OR MINUS 20 kts (Static at prevailing atmospheric.)								
AIR RADAR								
23. <u>Lock-on and Reject Function</u>								
23.1 MUM.								
(a) Aerial position selector. Set to '1'.								
(b) Rate switch. Set to 'OFF'.								
(c) Test pulse switch. Set to '8 nm'.								
(d) Comp track switch. Set to 'ON'.								
23.2 HCU.								
(a) Range control. Set target marker to '10 nm'.								
SMS/79/217/13A			Continued					

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3F Section 1 (1st Edition)				
SP NO	101A	CONTINUED		AC NO..... DATE				
SHEET	23	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
23. <u>Lock-on and Reject Function (Contd)</u>								
23.2 HCU. (Contd)								
(b) Handle. Adjust to elevation marker to 5 degrees up.								
23.3 MUM range track switch. Set to 'ON'.								
23.4 Indicator/s. Check time circle gap moves to 9 o'clock.								
23.5 MUM.								
(a) Test pulse switch. Wait a minimum of 6 seconds then set to 'OFF'. Check target marker immediately sweeps about last position for approx 5 seconds before drifting inwards.								
(b) Range track switch. Set to 'OFF' check target marker moves out to approx 10 nm.								
(c) Test pulse switch. Set to 8 nm.								
(d) Range track switch. Wait for M1 to settle then set to 'ON'.								
(e) Test pulse switch. Wait for target marker to lock on at approx 8 nm. then set immediately to 'OFF'. Check that target marker immediately sweeps inwards.								
(f) Range track switch. Set to 'OFF'.								
(g) Test pulse switch. Set to 8 nm.								
(h) Rate switch. Set to '1' Check KRA marker displayed.								
23.6 HCU.								
(a) Additional facilities switch. Set to 'ON'.								
SMS/79/ 14			Continued					

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	24	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
23. <u>Lock-on and Reject Function (Contd)</u>								
23.6 HCU. (Contd)								
(b) Reject switch.			Reject out. Check 'Warning and Fire' lamps on 'Release'. Set to 'OFF'					
(c) Additional facilities switch.								
23.7 MUM.								
(a) Range track switch.			Set to 'ON'. Check lock occurs at approx 8 nm and target marker is displayed.					
(b) Test pulse switch.			Wait a minimum of 10 seconds then set to 'OFF'. Check KRA marker displayed and remains steady for approx 5 seconds before drifting into sweep about 'Waiting Range' (5 - 6 nm). Set to '2'.					
23.8 Indicator computer switch.								
23.9 MUM.								
(a) Range track switch.			Set to 'OFF'.					
(b) Range lock switch.								
23.10 HCU range control.								
			Set marker between 3 and 4 nm.					
23.11 Indicator.								
			Check time circle gap is 4.30 o'clock.					
23.12 HCU.								
			Move handle forward until elevation angle is zero and check time circle gap remains at 4.30 o'clock.					
SMS/79/ 14A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3 F Section 1 (1st Edition)				
CP NO	101A	CONTINUED		AC NO..... DATE				
SHEET	25	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
23. <u>Lock-on and Reject Function</u> (Contd)								
23.13 Indicator. Check steering dot is positioned at 1.30 o'clock.								
23.14 HCU. (i) Move handle forward until elevation angle is 5 degrees down.								
(ii) Check on moving handle, steering dot moves to 6 o'clock and remains there for 4 seconds before returning to 1.30 o'clock.								
23.15 Indicator.								
(a) Display. Check time circle gap is between 9 and 10 o'clock.								
(b) Computer switch. Set to '1'.								
23.16 MUM.								
(a) Range track switch.) Set to 'ON'.								
(b) Range lock switch.)								
(c) Test pulse switch. Set to '8 nm'.								
(d) Rate switch. Set to 'OFF'.								
23.17 HCU reject switch.								
(i) Operate to achieve lock-on at 8 nm.								
(ii) Pull back to reject in and check target marker unlocks and moves inwards in range, allow strobe to run into approx 3nm.								
SMS/79/ 15			Continued					

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	26	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
23. <u>Lock-on and Reject Function (Contd)</u>								
23.17 HCU reject switch. (Contd)								
(iii) Push forward to reject out and check target marker moves outwards								
23.18 Gunsight caging button.								
(i) Press and check target marker moves outwards.								
(ii) Release as target marker reaches 8 nm and check lock-on occurs.								
23.19 HCU range selector. Select 40 nm range.								
23.20 Indicator target marker. Check lock-on is still present.								
23.21 HCU reject switch.								
(i) Reject out and ensure target marker moves outwards in range.								
(ii) Release and check target marker returns to approx 8 nm when lock-on occurs.								
23.22 MUM.								
(a) Range track switch.)								
(b) Test pulse switch.) Set to 'OFF'.								
24. <u>Computers (Low Altitude)</u>								
24.1 MUM rate switch. Set to '0'.								
24.2 HCU range control. Set to KRA marker to between 35 and 40 nm								
SMS/79/15A				Continued				

SMS 174

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	27	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
24. <u>Computers (Low Altitude) (Contd)</u>								
24.3 MUM.								
(a) Test selector. Set to '5'.								
(b) Phase balance. Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.								
(c) Test selector. Set to '8'.								
(d) Azimuth control. Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.								
(e) Rate switch. Set to '1' and check M2 indication is approx 1 positive.								
(f) Test selector. Set to '9'.								
24.4 HCU.								
(i) Adjust to centralize steering dot in elevation								
(ii) Move handle forward until steering dot moves down.								
24.5 Indicator.								
(a) Elevation angle marker. Ensure positioned 2 degrees PLUS OR MINUS 2 degrees down.								
(b) Computer switch.								
(i) Set to '2' and check steering dot is stationary.								
(ii) Set to '3' and check steering dot moves between 1.30 and 2 o'clock.								
SMS/79/21/16				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F												
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)												
SHEET	28	AL 13		AC NO..... DATE												
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B												
				(1)	(2)	(3)	(4)	(5)								
AIR RADAR																
24. <u>Computers (Low Altitude) (Contd)</u>																
24.6 HCU.																
(a) Handle.			(i)	Move backwards and check steering dot moves to 3 o'clock remaining there until elevation angle reaches 16 PLUS OR MINUS 2 degrees then begins to move upwards.												
			(ii)	Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read', using MUM elevation control for fine adjustment.												
(b) Range control.				Reduce range to 12 nm.												
24.7 MUM.																
(a) Test selector.				Set to '8'.												
(b) Azimuth control.				Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.												
24.8 Indicator.																
				Check steering dot deflection against computer switch setting is as follows:-												
				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">COMP SWITCH</th> <th style="width:70%;">DEFLECTION</th> </tr> </thead> <tbody> <tr> <td style="text-align:center;">3</td> <td>1.30 o'clock</td> </tr> <tr> <td style="text-align:center;">2</td> <td>1.30 o'clock</td> </tr> <tr> <td style="text-align:center;">1</td> <td>Centre</td> </tr> </tbody> </table>					COMP SWITCH	DEFLECTION	3	1.30 o'clock	2	1.30 o'clock	1	Centre
COMP SWITCH	DEFLECTION															
3	1.30 o'clock															
2	1.30 o'clock															
1	Centre															
SMS/79/2 16A				Continued												

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	29	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
24. <u>Computers (Low Altitude) (Contd)</u>								
24.8 Indicator. (Contd)								
Note: Deflection is to be at time circle diameter PLUS OR MINUS 5 nm.								
NB. Sub-item 24.9 to 24.22 inclusive are applicable only to Mk 5 aircraft.								
24.9 Pupil/Instructor Set to 'INSTRUCTOR' switch.								
NB. Sub-item 24.10 to 24.21 are to be carried out using aircraft Starboard controls.								
24.10 HCU. Select 40 nm.								
24.11 MUM rate switch. Set to '0'.								
24.12 HCU range control. Set KRA marker to between 35 and 40 nm.								
24.13 MUM.								
(a) Test selector. Set to '5'.								
(b) Phase balance. Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.								
(c) Test selector. Set to '8'.								
24.14 HCU. Adjust azimuth control for zero indication on M2 with M2 'Read/Test' switch on 'Read'.								
24.15 MUM.								
(a) Rate switch. Set to '1' and check M2 indication is approx 1 positive.								
(b) Test selector. Set to '9'.								
SMS/79/ / 17				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	30	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
24. <u>Computers (Low Altitude) (Contd)</u>								
24.16 HCU.								
			(i)	Adjust to centralize steering dot in elevation.				
			(ii)	Move forward until steering dot moves down.				
24.17 Indicator.								
(a) Elevation marker.			Ensure positioned 2 PLUS OR MINUS 2 degrees down.					
(b) Computer switch.			(i)	Set to '2' and check steering dot is stationary.				
			(ii)	Set to '3' and check steering dot moves to between 1.30 and 2 o'clock.				
24.18 HCU.								
(a) Handle.			(i)	Move backwards and check steering dot moves to 3 o'clock remaining there until elevation angle reaches 16 PLUS OR MINUS 2 degrees then begins to move upwards.				
			(ii)	Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.				
(b) Range control.			Reduce range to 12 nm					
24.19 MUM test selector.								
			Set to '8'.					
SMS/79/ 17A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F	
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)	
SHEET	33	AL 13		AC NO..... DATE	

Safety and Servicing Notes are to be complied with throughout the work detailed on this card. SERV RECORD - F. 2983B

	(1)	(2)	(3)	(4)	(5)														
<p>AIR RADAR</p> <p>24. <u>Computers (Low Altitude) (Contd)</u></p> <p>24.27 MUM. (Contd)</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 25%;">INDICATOR</th> <th colspan="2" style="width: 50%;">MUM</th> </tr> <tr> <th style="width: 25%;">LAMP LIT</th> <th style="width: 25%;">M1 INDICATION</th> </tr> </thead> <tbody> <tr> <td>1st T Circle contraction</td> <td>Warning and Fire</td> <td>18 PLUS OR MINUS 5</td> </tr> <tr> <td>2nd T Circle contraction</td> <td>Warning and Fire</td> <td>13 PLUS OR MINUS 4</td> </tr> <tr> <td>Breakaway</td> <td>Breakaway</td> <td>10 PLUS OR MINUS 3</td> </tr> </tbody> </table> <p style="margin-left: 40px;">(ii) Release Sweep switch.</p> <p>24.28 Indicator computer switch. Set to '2'.</p> <p>24.29 MUM.</p> <p style="margin-left: 20px;">(a) Meter M1. Wait for indication to settle before proceeding.</p> <p style="margin-left: 20px;">(b) Sweep switch (i) Hold to 'ON' and check M1 indicates 10 PLUS OR MINUS 3 when breakaway lamp lights.</p> <p style="margin-left: 40px;">(ii) Release.</p> <p style="margin-left: 20px;">(c) Test selector. Set to '11'.</p> <p style="margin-left: 20px;">(d) Meter M1. Check indicating not less than 90.</p> <p style="margin-left: 20px;">(e) Test selector. Set to '9'.</p>						INDICATOR	MUM		LAMP LIT	M1 INDICATION	1st T Circle contraction	Warning and Fire	18 PLUS OR MINUS 5	2nd T Circle contraction	Warning and Fire	13 PLUS OR MINUS 4	Breakaway	Breakaway	10 PLUS OR MINUS 3
INDICATOR	MUM																		
	LAMP LIT	M1 INDICATION																	
1st T Circle contraction	Warning and Fire	18 PLUS OR MINUS 5																	
2nd T Circle contraction	Warning and Fire	13 PLUS OR MINUS 4																	
Breakaway	Breakaway	10 PLUS OR MINUS 3																	
<div style="display: flex; justify-content: space-between;"> SMS/79/ 19 Continued </div>																			

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	34	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
24. <u>Computers (Low Altitude) (Contd)</u>								
24.30 Indicator computer switch. Set to '4'.								
24.31 MUM.								
(a) Rate switch. Set to '1'.								
(b) Sweep switch.								
(i) Hold 'ON'.								
(ii) Check range move in, time circle collapses and warning lamp lights when M1 indicates 33 PLUS OR MINUS 5.								
(iii) Check 2nd time circle collapses and fire lamp lights when M1 indicates 30 PLUS OR MINUS 5.								
(iv) Check breakaway cross and lamp appear when M1 indicates. 17 PLUS OR MINUS 4.								
(v) Release. Set to '11'.								
(c) Test selector.								
(d) Meter M1. Check indicating not less than 90.								
(e) Test selector. Set to '9'.								
ELECTRICAL								
25. <u>General</u>								
25.1 Pitot/Static pressures. Set for 30000 ft with an indicated airspeed (IAS) of 600 Kts.								
SMS/79/ 19A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	36	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
27. <u>Computer (Kinematic Ranging) (Contd)</u>								
NB During Sub-items 27.7 to 27.14 inclusive an elevation angle of 20 degrees is to be maintained when adjusting handle in azimuth.								
27.7 Indicator computer switch.			Set to '4' and ensure steering dot is positioned at 2.30 o'clock.					
27.8 HCU.			Move outboard and check steering dot remains stationary until display angle is 25 degrees left, then moves left, being fully left when display angle is between 40 and 45 degrees.					
27.9 MUM rate switch.			Set to '2'.					
27.10 Indicator.			Check steering dot is positioned between 9 and 10 o'clock.					
27.11 HCU.			Move inboard and check steering dot remains left until display angle is 25 degrees starboard, then moves right, being fully right when display angle is between 40 and 45 degrees.					
27.12 MUM rate switch.			Set to '1'.					
27.13 HCU.			Adjust to set time circle gap at 6 o'clock.					
27.14 Indicator.			Ensure display angle is between 15 and 25 degrees starboard.					
SMS/79/				Continued				

SMS 17A

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CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 ^F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	37	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2983B					
			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
28. <u>Computers (High Altitude)</u>								
28.1	HCU range control.		Set KRA marker to between 35 and 40mm					
28.2	Indicator computer switch.		Set to '1'.					
28.3	MUM.							
	(a) Aerial control.		Set to 'TEST'.					
	(b) Aerial position selector.		Set to '1'.					
	(c) Test selector.		Set to '8'.					
	(d) Azimuth control.		Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.					
	(e) Test selector.		Set to '9'.					
	(f) Elevation control.		Adjust for zero indication on M2 with M2 'Read/Test' switch on 'Read'.					
28.4	Pitot/Static pressures.		Ensure instrument indications are:- IAS = 600 PLUS OR MINUS 10 knots. Altitude = 30000 ft. PLUS OR MINUS 1000 ft.					
28.5	Indicator.		Check steering dot is positioned at centre.					
28.6	HCU.		Move forward and ensure steering dot moves down when elevation angle reaches 2 PLUS OR MINUS 2 degrees down.					
28.7	Indicator computer switch.		Set to '2' and check steering dot remains down.					
SMS/79/ 21			Continued					

SMS 17A

CHAF	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
BP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	38	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
28. <u>Computers (High Altitude) (Contd)</u>								
28.8 HCU.								
(a) Range control.			Set to Minimum and ensure steering dot moves to 1.30 o'clock.					
(b) Handle.			Adjust for an elevation angle of 5 degrees up.					
(c) Range control.			Wait for M1 to stabilize then adjust for an indication of 50.					
28.9 MUM.								
(a) Sweep switch.			(i) Hold to 'ON'. and ensure the following sequence occurs:					
MUM								
INDICATOR								
		LAMP LIT	M1 INDICATION					
1st T circle contraction		Warning	33 PLUS OR MINUS 5					
2nd T circle contraction		Fire	30 PLUS OR MINUS 5					
Breakaway cross		Breakaway	17 PLUS OR MINUS 4					
(ii) Release.								
(b) Red cone switch.			Set to 'ON'.					
(c) Test selector.			Set to '10'.					
(d) Rear lamp.			Ensure lit.					
(e) Meter M1.			Check indicating 54 PLUS OR MINUS 7.					
(f) Comp track switch.			Set to 'OFF'.					
SMS/79/ 21A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	39	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			SERV RECORD - F. 2953B					
			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
28. <u>Computers (High Altitude) (Contd)</u>								
28.8 HCU. (Contd)								
(g) Front lamp. Ensure lit.								
(h) Meter M1. Check indicating 80 PLUS OR MINUS 8.								
(j) Comp track switch. Set to 'ON'.								
(k) Test selector. Set to '11'.								
(l) Meter M1. Check indicating 30 PLUS OR MINUS 4.								
(m) Red cone switch. Set to 'OFF'.								
(n) Test selector. Set to '9'.								
(p) Rate switch. Set to '0'.								
29. <u>Roll Programme</u>								
29.1 Indicator Computer switch. Set to '4'.								
29.2 HCU.								
(a) Range control button. Select 10 nm.								
(b) Handle. Adjust in elevation for zero indication on M2 'Read/Test' switch on 'Read'.								
(c) Range control. Set fully forward and adjust, if necessary for an indication of at least 30 on M1.								
NAV INSTRUMENTS								
30. <u>General</u>								
30.1 MRG simulator. Adjust pitch control for 10 degrees nose down.								
AIR RADAR								
31. <u>Roll Programme</u>								
31.1 MUM meter M2. Check indication moves positive.								
SMS/79/			22	Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	40	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
31. <u>Roll Programme</u> (Contd)								
31.2 Indicator.								
(a) Artificial horizon bar. Check moves upwards.								
(b) Elevation marker. Check stationary.								
NAV INSTRUMENTS								
32. <u>General</u>								
32.1 MRG simulator. Reset pitch control to zero.								
AIR RADAR								
33. <u>Roll Programme</u>								
33.1 MUM.								
(a) Aerial position selector. Set to '7'.								
(b) Rate switch. Set to '1'.								
33.2 Indicator. Check steering dot is at approx 12 o'clock.								
NAV INSTRUMENTS								
34. <u>General</u>								
34.1 MRG simulator. Adjust roll control for 20 degrees starboard wing down.								
AIR RADAR								
35. <u>Roll Programme</u>								
35.1 MUM meter M2. Check indication reads positive.								
35.2 LFS/CRT switch. Set to 'LFS'.								
SMS/79/			22A	Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	41	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2083B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
32. <u>Roll Programme</u> (Contd)								
35.3 MUM meter M2 Ensure indicating zero PLUS OR MINUS 2.								
35.4 LFS/CRT switch. Set to 'CRT'.								
35.5 MUM test position switch. Operate.								
35.6 Indicator. Ensure artificial horizon and steering dot have moved anti-clockwise.								
35.7 MUM sweep switch. (i) Hold to 'ON' (ii) Check at 1st T circle contraction that steering dot moves to 1.30 o'clock. (iii) Check at break-away that steering dot is removed. (iv) Release.								
NAV INSTRUMENTS								
36. <u>General</u>								
36.1 MRG simulator. Reset roll control to zero.								
AIR RADAR								
37. <u>Additional Facilities Mode</u>								
37.1 MUM.								
(a) Test pulse switch.) Set to 'OFF'.								
(b) Range track switch.)								
(c) Range lock switch.) Set to 'ON'.								
(d) Comp track switch.)								
SMS/79/ 23				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
BP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	42	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2033B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
37. <u>Additional Facilities Mode (Contd)</u>								
37.1 MUM. (Contd)								
(e) Test selector.			Set to '7'.					
(f) Aerial position selector.			Set to '1'.					
(g) Aerial control.			Set to 'NORMAL'.					
(h) Range control.			Set to 'MANUAL'.					
(j) Rate switch.			Set to '1'.					
(k) Test position switch.			Operate.					
37.2 HCU.								
(a) Range switch.			Select 10 nm.					
(b) Range control.			Set target marker to 5 nm.					
(c) PRF switch.			Set to 'High'.					
(d) Phase change trigger.			Select 'SEARCH'.					
(e) Additional facilities switch.			Select 'ON'.					
37.3 Indicator.								
(a) Acquisition marker.			Check azimuth sweep is PLUS OR MINUS 25 degrees.					
(b) Elevation marker			Ensure single bar only scan for all positions of the HCU scan bar switch.					
37.4 HCU.								
(a) Azimuth control.			Centralize.					
(b) Reject level.			Reject inwards (Rear).					
37.5 Indicator.								
			Ensure that an enlarged time circle with no gap is present.					
SMS/79/ 23A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
EP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	43	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
37. <u>Additional Facilities Mode (Contd)</u>								
37.6 MUM.								
(a) Test selector.			Set to '8'.					
(b) Meter M1.			Check indicates 52 PLUS OR MINUS 2.					
37.7 HCU azimuth control.								
(i)			Adjust carefully to ensure M2 will read positive and negative deflections.					
(ii)			Adjust carefully to set M2 to zero with M2 'READ/TEST' switch on 'READ'.					
37.8 MUM.								
(a) Test selector.			Set to '9'.					
(b) Meter M2.			Using HCU elevation control set to zero with M2 'Read/Test' switch on 'Read'.					
37.9 Indication elevation marker.								
			Check between PLUS 1 and PLUS 5 degrees.					
37.10 MUM.								
(a) Meter M2.			(i) Check reading MINUS 48 PLUS OR MINUS 2 with HCU elevation control fully forward.					
			(ii) Check reading full scale deflection with backward movement of HCU elevation control.					
(b) Test selector.			Set to '10'.					
SMS/79/ 24				Continued				

SMS 174

CHAP	2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3 F Section 1 (1st Edition)				
SP NO	101A	CONTINUED		AC NO..... DATE				
SHEET	44	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
37. <u>Additional Facilities Mode (Contd):</u>								
37.11	Indication comp switch.	Set to '2'.						
37.12	MUM range control.	Set to sweep.						
37.13	HCU range control.	Set to minimum and wait for M1 to stabilize.						
37.14	MUM.							
	(a) Red cone switch.	Switch 'ON'.						
	(b) Rear lamp.	Ensure lit.						
	(c) Meter M1	Check indicating 58 PLUS OR MINUS 7.						
	(d) Test selector	Set to '11'.						
	(e) Meter M1.	Check indicating 30 PLUS OR MINUS 4.						
37.15	HCU reject lever.	Push forward.						
37.16	MUM launch warning lamp.	Ensure lit.						
37.17	HCU reject lever.	Release.						
37.18	MUM launch warning lamp.	Ensure extinguished.						
37.19	Gunsight caging button.	Press.						
37.20	MUM launch warning lamp.	Ensure lit.						
37.21	Gunsight caging button.	Release.						
37.22	MUM launch warning lamp.	Ensure extinguished.						
37.23	Indicator comp switch.	Set to '4'.						
37.24	MUM.							
	(a) Test selector.	Set to '10'.						
SMS/79/ 24A			Continued					

SMS 17A

CHAF	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	45	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2985B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
37. <u>Additional Facilities Mode (Contd)</u>								
37.24 MUM. (Contd)								
(b) Meter M1. Check reading								
80 PLUS OR MINUS 8.								
(c) Front lamp. Ensure lit.								
37.25 LFS/CRT switch. Select 'LFS'.								
37.26 HCU reject lever. Reject inwards.								
37.27 LFS in range lamp. Ensure lit.								
38. <u>Guns Pure Pursuit</u>								
38.1 LFS/CRT switch. Set to 'CRT'.								
38.2 MUM test position switch. Operate.								
38.3 Master armament selector switch. Set to 'GUNS'.								
38.4 Indicator. Check steering dot moves 1 cm up.								
38.5 Master armament selector switch. Set to 'GW'.								
38.6 HCU								
(a) Additional facilities switch.)								
) Set to 'Normal'.								
(b) PRF Switch)								
39. <u>External Receiver</u>								
39.1 HCU.								
(a) Phase change trigger. Select search phase.								
(b) Range selector button. Select 40 nm range.								
39.2 Ext Tx CU function switch. Set to 'ON' and ensure S-band noise spectrum appears at bottom of indicator display.								
SMS/79/ 25				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
CP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	46	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
39. <u>External Receiver</u>								
39.3 Noise tester Set to 'OFF'. RF Osc On/Off switch.								
39.4 Ext Rx CU. (i) Rotate fully anti-clockwise and check indicator is free from noise for first 3 to 6 nm except for approx 1 nm of S-band noise at foot of display (ii) Rotate fully clockwise and check noise level limits between 3 and 5 nm. (iii) Adjust for a mean noise level of approx 2 nm.								
39.5 Resonator CT 307. (i) Connect to indicator unit CT 300. (ii) Connect RF in- put to socket F on external receiver. (iii) Set to 2979 MHz using calibration charts.								
39.6 External receiver. Adjust local oscillator tuning dial to give maximum deflection on CT 300 meter.								
39.7 Resonator CT 307. Set to 2790 and 3090 MHz in turn and repeat Sub-item 34.6 for GCI frequencies of 2820 and 3120 MHz respectively.								
SMS/79/ 25A				Continued				

SMS 1/A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
CP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	47	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
39. <u>External Receiver</u> (Contd)								
39.8 External receiver. Reset to frequency in use.								
39.9 Tester noise S-band.								
(a) Set zero control. Adjust to zero RF Power Level on meter.								
(b) RF level control. Set fully anticlockwise.								
(c) Tuning control. Ensure set to frequency of external receiver.								
(d) RF Osc On/Off switch. Set to 'ON'.								
(e) RF level control. Adjust to set RF Level meter indication to Power Set mark.								
(f) Output level attenuator. Set to '60dB'.								
(g) RF level meter. Check still indicating Power Set.								
39.10 Indicator. Check amplitude of largest peak of S-band display exceeds 3 nm.								
39.11 HCU range selector button.								
(i) Select 10 nm range and check S-band display is removed.								
(ii) Select 40 nm range.								
40. <u>Computer (Azimuth)</u>								
40.1 Nav display unit.								
(a) Mode switch. Set to 'TAC'.								
(b) Heading selector knob. Push in and rotate two turns clockwise and ensure selected heading pointer moves 90 degrees clockwise.								
40.2 Ext Rx CU.								
(a) Function switch. Set to 'ALIGN' lifting knob to clear stop.								
SMS/79/ 26				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3F				
BP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	49	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
40. <u>Computer (Azimuth) (Contd)</u>								
40.5 Ext Rx CU.								
(a) Function switch.			Set to 'PROP NAV'.					
(b) Indicator lamp.			Ensure extinguished.					
40.6 Nav display unit heading selector.								
(i)			Push in and rotate to centralize home marker.					
(ii)			Note selected heading pointer indication.					
(iii)			Push in and rotate one turn clockwise.					
(iv)			Check selected heading pointer moves 40 degrees clockwise and home marker moves 10 degrees right.					
40.7 Ext Rx CU. function switch.								
			Set to 'ATTACK'.					
40.8 Indicator.								
			Check S-band display has been removed and acquisition marker has reappeared.					
40.9 Ext Rx CU. function switch.								
			Set to 'OFF'.					
40.10 Tester noise S-band.								
(a) RAF Osc)					
On/Off switch)					
(b) Main On/Off switch.) Set to 'OFF'.					
(c) Ext Rx CU.)					
SMS/79/				Continued				
27								

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3 F Section 1 (1st Edition)				
SP NO	101A	CONTINUED		AC NO..... DATE				
SHEET	50	AL 13		SERV RECORD - F. 2983B				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
AIR RADAR								
41.	<u>External Receiver Tuning Operational Readiness (GCI Frequency).</u>							
41.1	GCI frequency.	Obtain.						
41.2	AI 23C.	(i) Ensure fully run up. (ii) Select search phase. (iii) Select 40 nm range.						
41.3	External receiver CU.	Set to 'ON'.						
41.4	Resonator CT 307.	Set to 30 MHz below given GCI frequency using calibration charts.						
41.5	External receiver.	Adjust local oscillator tuning dial to give maximum deflection on CT 300 meter.						
41.6	External receiver CU.	Set to 'OFF'.						
42.	<u>Control Unit Recheck</u>							
42.1	Test harness.	Disconnect 6-way connections at HCU and aircraft.						
42.2	HCU.	Reconnect aircraft cable.						
42.3	MUM. (a) Rate switch) (b) Comp track) switch.)	Set to 'OFF'.						
42.4	Indicator computer switch.	Set to '1'.						
42.5	HCU.	(i) Move inboard and outboard and check acquisition marker follows.						
SMS/79/ 27A			Continued					

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	51	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
42. <u>Control Unit Recheck (Contd)</u>								
42.5 HCU. (Contd)								
<ul style="list-style-type: none"> (ii) Move backwards and forwards and check elevation marker follows. (iii) Park handle in fully aft, fully port position, ensuring clutch engages. 								
Item 43 is applicable only to Mk 5 aircraft.								
43. <u>Starboard HCU Check</u>								
43.1 Pupil/instructor switch. Set to 'INSTRUCTOR'.								
43.2 HCU.								
(a) Phase change. trigger. Select 'SEARCH'.								
(b) Range selector. Select 40 nm range.								
(c) Handle.								
<ul style="list-style-type: none"> (i) Move inboard and outboard and ensure acquisition marker follows. (ii) Move backwards and forwards and ensure elevation marker follows. (iii) Adjust to position elevation marker at PLUS 5 degrees and azimuth at zero degrees. 								
(d) Multi-bar scan switch. (i) Select 2 and 4 bar scan and ensure elevation marker shows appropriate scan pattern.								
SMS/79/ 88				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	52	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
43. <u>Starboard HCU Check (Contd)</u>								
43.2 HCU. (Contd)								
(d) Multi-bar (Contd)								
scan switch. (ii) Set to single bar scan.								
(e) Range selector. (i) Select 60/80 nm range and ensure 60/80 nm scale is illuminated.								
(ii) Select 10 nm range and ensure 10 nm scale is illuminated.								
(iii) Select 40 nm range and ensure 40 nm scale is illuminated.								
(f) Gain control. (i) Operate and ensure that noise level on indicator/s varies evenly from minimum to maximum.								
(ii) Reset to optimum noise peaks just visible.								
(g) Tx On/Off switch. Set to 'ON'.								
43.3 MUM.								
(a) Test selector. Set to '3'.								
(b) Meter M1. Check indicating not less than 16.								
(c) Range control. Set to 'MAN'.								
43.4 HCU.								
(a) Tx On/Off switch. Set to 'OFF'.								
(b) Phase change trigger. Select 'ACQUISITION'.								
SMS/79/				28A				
				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	53	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - P. 2983B				
				(1)	(2)	(3)	(4)	(5)
AIR RADAR								
43. <u>Starboard HCU Check (Contd)</u>								
43.4 HCU. (Contd)								
(c) Range control. Operate and ensure that acquisition marker can be moved between top and bottom limits of display.								
(d) Range selector. Select 10 nm range.								
(e) Vis-ident switch. Set to 'ON'.								
(f) Phase change trigger. (i) Select track and ensure vis-ident lamp flashes.								
(g) Vis-ident switch. (ii) Select 'SEARCH' Set to 'OFF'.								
(h) Handle. Park fully aft and fully starboard ensuring clutch engages.								
ELECTRICAL								
44. <u>Completion</u>								
44.1 Pitot/Static pressures. Restore to atmospheric.								
44.2 Pitot/Static test set. (i) Disconnect. (ii) Remove.								
NAV INSTRUMENTS								
45. <u>Completion</u>								
45.1 MRG ON/OFF switch.)								
45.2 Instrument master switch.) Ensure set to 'OFF'.								
45.3 MRG simulator. (i) Disconnect. (ii) Remove.								
45.4 Electronic unit. Refit aircraft connections.								
SMS/79/ 29				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES	AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING	Section 1 (1st Edition)				
SHEET	54	AL 13		AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERV RECORD - F. 2933B				
				(1)	(2)	(3)	(4)	(5)
NAV INSTRUMENTS								
45. <u>Completion</u> (Contd)								
45.5 Instrument master) switch.) Set to 'ON'.								
45.6 MRG ON/OFF switch)								
45.7 Altitude indicator. Ensure errects correctly and power failure flag clears.								
AIR RADAR								
46. Item 46 is applicable only if visual recorder is <u>NOT</u> to be tested.								
<u>Completion</u>								
46.1 HCU.								
(a) Main On/Off Set to 'OFF'. switch.								
(b) Ground test Set to 'STANDBY' standby position. switch.								
46.2 Master armament) selector.)								
switch.)								
46.3 MRG On/Off) Set to 'OFF'. switch.)								
46.4 Instrument) master switch.)								
46.5 LFS sighting Lower reflector. head.								
46.6 Radar test) harness)								
46.7 RAM Nose) (i) Disconnect. screen.) (ii) Remove.								
46.8 Tester noise) S-band.)								
46.9 Dummy plug. Refit to test socket.								
46.10 Cooling air) trolley.) (i) Switch 'OFF'.								
46.11 15 kVA power) (ii) Disconnect. unit.)								
46.12 MUM. Disconnect.								
SMS/79/ 29A				Continued				

SMS 17A

CHAP	2	AIR RADAR	SERVICING PROCEDURES		AP101B-1000-5A3 F				
SP NO	101A	CONTINUED	LIGHTNING		Section 1 (1st Edition)				
SHEET	55	AL 13			AC NO..... DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.					SERV RECORD - F. 2983B				
					(1)	(2)	(3)	(4)	(5)
<p style="text-align: center;">AIR RADAR</p> <p>46. <u>Completion</u> (Continued)</p> <p>46.13 MUM.</p> <p>(a) Meter unit. Remove.</p> <p>(b) Support bar. Retract and fit lid.</p> <p>(c) Mounting clamp. Remove.</p>									
<p style="text-align: center;"><u>MUM AERIAL POSITION AND TEST SELECTOR FUNCTIONS</u></p> <p>(a) <u>Test Selector Functions</u></p>									
TEST SELECTOR	METER M1		METER M2						
1	HT		No indication						
2	Crystal current		No indication						
3	Tx power		No indication						
4	GCV		Radar error (Ax or El as appropriate to Aerial Position selected).						
5	Range (0 - 3.75 nm)		Phase balance.						
6	Range (0 - 10 nm)		FS yaw						
7	Range (0 - 10 nm)		FS pitch						
8	Range (0 - 10 nm)		Az slaving signal						
9	Range (0 - 10 nm)		El slaving signal						
10	RT K factor		No indication						
11	RT altitude		No indication						
12	No indication		Steering error yaw.						
13	No indication		Steering error pitch.						
SMS/79/ 30					Continued				

SMS 17A

Test	Test Selector	Aerial Pos'n	Range Lock	Comp Track	Range Track	Test Pulse	Range Control	Rate Switch	Red Zone	Aerial Cont	Ram Screen
5	2	1	On	Off	Off	Off	Manual	Off	Off	Normal	
6	3	"	"	"	"	"	"	"	"	"	
7	"	"	"	"	"	"	"	"	"	"	
8	"	"	"	"	"	"	"	"	"	"	
9	"	"	"	"	"	"	"	"	"	"	
10	4	"	"	"	"	"	"	"	"	"	
11	"	"	"	"	"	"	"	"	"	"	
12	"	"	"	"	"	"	Auto	0	"	Test	Peak
13	"	"	"	"	"	"	Manual	Off	"	"	
14	6	"			ON	"	"	0	"	"	De-Tune
15	4	"	"	"	Off	"	"	0	"	"	Peak
16	"	"	"	"	"	"	"	"	"	"	
17	6	"	"	"	ON	VAR	"	"	"	"	
18	9	"	"	"	"	1500	"	"	"	"	
19	"	"	"	"	Off	"	"	"	"	"	
20	"	"	"	ON	"	Off	"	Off	"	"	
21	"	"	"	"	"	"	Sweep	1	"	"	
22	"	"	"	"	"	"	"	"	"	"	
23	9	1	On	On	Off	Off	Sweep	1	Off	Test	

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Test	Test Selector	Aerial Pos'n	Range Lock	Comp Track	Range Track	Test Pulse	Range Control	Rate Switch	Red Zone	Aerial Cont	Ram Screen
24	9	1	On	On	Off	Off	Sweep	1	Off	Normal	
25	"	"	"	"	"	"	"	0	"	Test	
26	"	"	"	"	"	"	"	"	"	"	
27	"	"	"	"	"	"	"	"	"	"	
28	"	"	"	"	"	"	"	"	"	"	
29	"	"	"	"	"	"	"	"	"	"	
30	"	"	"	"	"	"	"	1	"	"	
31	"	"	"	"	"	"	"	"	"	"	
32	"	"	"	"	"	"	"	"	"	"	
33	"	"	"	"	"	"	"	"	"	"	
34	10	"	"	"	"	"	"	"	On	Normal	
35	"	"	"	"	"	"	"	"	"	"	
36	"	"	"	"	"	"	"	"	"	"	
37	"	"	"	"	"	"	"	"	"	"	
38	"	"	"	"	"	"	"	"	"	"	
39	"	"	"	Off	"	"	"	Off	"	"	
40	3	"	"	"	"	"	Manual	"	"	"	
41	"	"	"	"	"	"	"	"	"	"	
42	"	"	"	"	"	"	"	"	"	"	

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Switch Pos'n At Beginning Of Test	Trans	Range	CRT LFS	Comp	Phase	Mas	Speed (knots)	Height (Feet)	Vis Ident	Add Facility	PRF
5	Off	40	LFS	1		GW	0	0	Off	Normal	Normal
6	"	"	CRT	"	Test	"	"	"	"	"	"
7	"	"	"	"	"	"	"	"	"	"	"
8	"	10	"	"	Search	"	"	"	"	"	"
9	"	40	"	"	Acq'n	"	"	"	"	"	"
10	"	"	"	"	Test	"	"	"	"	"	"
11	"	"	"	"	"	"	"	"	"	"	"
12	ON	"	"	"	"	"	"	"	"	"	"
13	"	"	"	"	"	"	"	"	"	"	"
14	"	10	"	"	"	"	"	"	ON	"	"
15	Off	40	"	"	"	"	"	"	Off	"	"
16	"	"	"	"	"	"	175	"	"	"	"
17	"	"	LFS	"	"	"	"	20000	"	"	"
18	"	"	CRT	"	"	"	"	"	"	"	"
19	"	10	"	"	"	"	"	"	"	"	"
20	"	40	"	"	"	"	"	"	"	"	"
21	"	"	"	"	"	"	"	"	"	"	"

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AIRCRAFT SWITCH POSITIONS AT START OF EACH TEST AP101B-1000-5A3F SECTION 1 Chapter 2 SP101A Sheet 60 of 61

Switch Pos'n At Beginning Of Test	Trans	Range	CRT LFS	Comp	Phase	Mas	Speed (knots)	Height (Feet)	Vis Ident	Add Facility	PRF
22	Off	40	CRT	1	Test	GW	600	30000	Off	Normal	Normal
23	"	"	"	"	"	"	"	"	"	"	"
24	"	"	"	4	"	"	"	"	"	"	"
25	"	"	"	2	"	"	"	"	"	"	"
26	"	10	"	4	"	"	"	"	"	"	"
27	"	"	"	"	"	"	"	"	"	"	"
28	"	"	"	"	"	"	"	"	"	"	"
29	"	"	"	"	"	"	"	"	"	"	"
30	"	"	"	"	"	"	"	"	"	"	"
31	"	"	"	"	"	"	"	"	"	"	"
32	"	"	"	"	"	"	"	"	"	"	"
33	"	"	"	"	"	"	"	"	"	"	"
34	"	"	LFS	"	Search	"	"	"	"	ON	"
35	"	"	CRT	"	Test	"	"	"	"	Normal	"
36	"	40	"	"	Search	"	"	"	"	"	"
37	"	"	"	"	"	"	"	"	"	"	"
38	"	"	"	"	"	"	"	"	"	"	"

SMS/79 B4



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LIGHTNING MK. 1
COVER PITOT HEAD
EB2-88-511

The image shows a close-up of a red aircraft fuselage. A grey fabric cover is draped over a section, with the text "LIGHTNING MK. 1", "COVER PITOT HEAD", and "EB2-88-511" printed on it. To the right, a rectangular metal plate is mounted on the red surface. The background shows the curved structure of the aircraft with several rivets.