

CHAP	2	SP 100	SERVICING PROCEDURES				AP 101B-1000-5A3E (Section 1 (1st Edition))				TIME	ACT	
TRADE	FLT SYST		LIGHTNING										
SHEET	1	OF	6	SHEET/S	3	5	6	AL NO	12	DATE		EST	
TITLE	Tacan Ranging and Bearing Tests							SERVICING RECORD - RAF F.29888 AC NO DATE					
Safety and Servicing Notes are to be complied with throughout the work detailed on this Card.							(1)	(2)	(3)	(4)	(5)	ASSOCIATED PROCEDURE CARDS	
Special Tools and Equipment Test Set Type 7, 6C/2197.							MAN HOURS	TRADESMEN INIT	BRIEF DETAILS OF OR SUSPECTED DEFECT	F. 720B NO	N.C.O. INITIALS		
<p style="text-align: center;">FLT SYST</p> <p>1. <u>Preparation</u></p> <p>1.1 Tacan coupling unit. Disconnect radar input socket. (Connector 2.)</p> <p>1.2 Type 7 test set. (i) Connect to test sockets. (ii) Connect TACAN MOTORING CABLE to the TACAN coupling unit input plug.</p> <p>1.3 External power supplies (A.c. and d.c.). (i) Connect to aircraft. (ii) Set to 'ON'.</p> <p>1.4 Instrument master switch.) 1.5 Test set type 7 power switch.) Set to 'ON'.</p> <p>1.6 Test set type 7. Check a.c and d.c. power indicators.</p> <p>2. <u>Range Continuity Test</u></p> <p>2.1 Nav display mode switch. Set to 'DL'.</p> <p>2.2 Test set type 7. (a) Test selector Set to position 31. (b) Press to Motor range switch.) Slowly motor TACAN coupling unit range scale through 0-200 nm (c) ADJ motor speed control)</p>													
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SP NO	100	CONTINUED		Section (1st Edition) ¹				
SHEET	2	AL 12		AC NO DATE				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				SERVICING RECORD				
				(1)	(2)	(3)	(4)	(5)
<p style="text-align: center;">FLT SYST</p> <p>2. <u>Range Continuity Test (Contd)</u></p> <p>2.3 Nav display. Check response is smooth and continuous.</p> <p>NB If during Sub-items 3.1 to 5.6 the Accuracy limitations are exceeded item 6 is to be carried out.</p> <p>3. <u>Range Accuracy Test</u></p> <p>3.1 Tacan coupling unit. Motor the range scale to 0, 1,5 and 10nm, then in steps of 10 to 90 nm, 101 and 110 nm, then again in steps of 10 to 200 nm.</p> <p>3.2 Nav display. At each of the distances in Sub-items 3.1 the range counters are to be within 1.5 nm, and the roller blind indication is to be within 3 nm, of the range counter readings.</p> <p>4. <u>Bearing Accuracy Test</u></p> <p>4.1 Tacan coupling unit. Motor the range scale to 101 nm.</p> <p>4.2 Test set type 7. Slowly motor TACAN coupling unit bearing scale through 360 degrees.</p> <p> (a) Press to Motor bearing switch.)</p> <p> (b) ADJ motor speed control.)</p> <p>4.3 Nav display. Check for a smooth response and that the bearing datum corresponds to the TACAN coupling PLUS OR MINUS 5 degrees.</p> <p>4.4 Nav display mode switch. Set to TAC.</p>								
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SP NO	100	CONTINUED		AC NO DATE				
SHEET	3			SERVICING RECORD				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
NAV INSTRUMENTS								
4.	<u>Bearing Accuracy Test (Contd)</u>							
4.5	Off-set computer.	Set to '000' on both range and bearing counters.						
4.6	Tacan coupling unit.	(i) Motor the range potentiometer to 5 nm. (ii) Slowly rotate BEARING scale, (Type 7 test set) through 360 degrees						
4.7	Nav display.	Check bearing datum corresponds to the COUPLING unit bearing scale PLUS OR MINUS 20 degrees.						
5.	<u>Off-Set Accuracy Test</u>							
5.1	Tacan coupling unit.	(i) Motor range scale to 101 nm. (ii) Motor bearing scale to 135 degrees.						
5.2	Off-set computer.	Set counters to 101 nm and 45 degrees.						
5.3	Nav display.	Ensure range counters read 142.5 nm PLUS OR MINUS 3.5 nm and a bearing of 90 degrees PLUS OR MINUS 2 degrees.						
5.4	Tacan coupling.	Motor bearing to 45 degrees.						
5.5	Off-set computer.	Set bearing counters to 215 degrees.						
5.6	Nav display.	Ensure range counters indicate 17.5 nm. PLUS OR MINUS 2.5 nm. and a bearing of 130 degrees PLUS OR MINUS 10 degrees.						
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CHAP	2	NAV INST	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3 E Section 1 (1st Edition)				
SP NO	100	CONTINUED		AC NO DATE				
SHEET	4			SERVICING RECORD				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
NAV INSTRUMENTS								
NB	Item 6 is applicable only if the limitations in Sub-items 3.1 to 5.6 have been exceeded.							
6.	<u>Tacan Alignment</u>							
6.1	Nav display mode switch.	Set to 'DL'.						
6.2	Tacan coupling unit.	(i) Motor range scale to 101 nm. (ii) Motor bearing scale to 20 degrees						
6.3	Nav display	Adjust the DL CAL. POT to give a range counter reading of 101 nm on NAV DISPLAY.						
6.4	Nav display mode switch.	Set to TAC.						
6.5	Off-set computer.	Set counters to 001 nm and 090 degrees.						
6.6	Nav display amplifier.	(i) Adjust TAC CAL. POT to give a range counter reading of 102 nm, on NAV DISPLAY (ii) Adjust the TAC PHASE POT to give a minimum reading on scale E. (Test set type 7). (iii) Repeat operations (i) and (ii) until counters read 102 nm and a minimum indication on scale E.						
6.7	Tacan coupling unit.	(i) Motor range scale to 001 nm. (ii) Motor bearing scale to 090 degrees.						
6.8	Off-set computer.	Set range counter to 101 nm.						
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CHAP	2	NAV INST	SERVICING PROCEDURES LIGHTNING	AP101B-1000-5A3 E Section 1 (1st Edition)				
SP NO	100	CONTINUED		AC NO DATE				
SHEET	5			SERVICING RECORD				
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.			(1)	(2)	(3)	(4)	(5)	
NAV INSTRUMENTS								
6.	<u>Tacan Alignment</u>	(Contd)						
6.9	Nav display amplifier.	(i) Adjust the OFF-SET CAL. POT to give a range counter reading of 102 nm, on NAV DISPLAY. (ii) Adjust the OFF-SET PHASE POT to give a minimum reading on scale E. (iii) Repeat operations (i) and (ii) until counters on NAV DISPLAY read 102 nm with a minimum indication on scale E.						
6.10	Off-set computer.	Return range and bearing counters to '000'.						
6.11	Accuracy checks.	Repeat items 2.1 to 5.6 inclusive.						
7.	<u>Completion</u>							
7.1	Nav display mode switch.	(i) Set to 'COMP'. (ii) Ensure roller blind returns to compass presentation. (Black Sector).						
7.2	Instrument master switch.	Set to 'OFF'.						
7.3	External power supplies.	Switch 'OFF'.						
7.4	Test set type 7.	(i) Set test selector switch to 'OFF'. (ii) Set power switch to 'OFF'. (iii) Disconnect motoring and test point E and L cables from aircraft.						
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