

CHAP	5	SP 507	SERVICING PROCEDURES	AP 101B-1000-5A3 E	
TRADE	FLT SYST		LIGHTNING	Section 1 (1st Edition)	
SHEET	1	OF 10	SHEET/S	3	5 6
TITLE			FCS Pilots Control Units Type E, F and G		
Safety and Servicing Notes are to be complied with throughout the work detailed on this Card.			SERVICING RECORD AC NO DATE		
Special Tools and Equipment			(1)	(2)	(3)
Test Set Type 8A.			MAN HOURS	TRADESMAN INIT	BRIEF DETAILS OF DEFECT OR SUSPECTED DEFECT
NB This Procedure is applicable only if a serviceable component is replaced in a known serviceable system. .					F. 720B NO
FLY SYST					N.C.O. INITIALS
1. Preparation					
1.1 Type 8A test set.			(i)	Connect to aircraft test sockets, J, F and L.	
			(ii)	Connect to FC 5 on FCC.	
			(iii)	Set M2 measure switch S3 to AP AIL'N.	
1.2 External power supplies. (A.c. and d.c.).			(i)	Connect to aircraft.	
			(ii)	Set to 'ON'.	
1.3 Instrument master switch. }			Set to 'ON'.		
1.4 MRG On/Off switch. }					
2. Testing					
2.1 PCU.					
(a) Master switch. }			Set to 'OFF'.		
(b) Stab switch. }					
2.2 FD/AP switch.			Set to 'OFF'.		
SMS/80/453/27			Continued		

ASSOCIATED PROCEDURE CARDS

ASSOCIATED TRADES

SP NO

507

CHAP	5	FLT SYST	SERVICING PROCEDURES		AP101B-1000-5A3 E	
SP NO	507	CONTINUED	LIGHTNING		Section 1	
SHEET	2	AL 12			(1st Edition)	
			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)
FLT SYST						
2.	<u>Testing</u> (Contd)					
2.3	PCU.					
	(a) Master switch.	(i) Set to 'ON' (ii) Allow 3 minutes to warm up.				
	(b) Supplies M1.	Ensure shows Black.				
	(c) Mode M1.	Ensure shows Off.				
2.4	FD bead.					
	Ensure in parking position.					
2.5	PCU attitude switch.					
	Select.					
2.6	FD/AP switch.					
	Set to 'AP'.					
2.7	FD bead.					
	Ensure in parking position.					
2.8	PCU					
	(a) Supplies M1.)	Ensure show Off.				
	(b) Mode M1.)					
	(c) Stab switch.	Set to 'STAB'.				
	(d) Mode M1.)	Ensure show Off.				
	(e) Supplies M1.)					
2.9	FD bead.					
	Ensure in parking position.					
2.10	PCU.					
	(a) Stab switch.)	Set to 'OFF'.				
	(b) Master switch.)					
2.11	FD/AP switch.					
	(i) Set to 'OFF'.					
	(ii) Set to 'AP'.					
2.12	PCU.					
	(a) Stab switch.	Set to 'STAB'.				
	(b) Master switch.	Set to 'ON'.				
	(c) Supplies M1.)	Ensure show Off.				
	(d) Mode M1.)					
2.13	FD bead.					
	Ensure in parking position.					
SMS/80/453/27A			Continued			

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CHAP	5	FLT SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E	
SP NO	507	CONTINUED			Section 1 (1st Edition)	
SHEET	3	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)
FLT SYST						
2. <u>Testing</u> (Contd)						
2.14 PCU.						
(a) Stab switch.)						
(b) Master switch.) Set to 'OFF'.						
2.15 FD/AP switch. (i) Set to 'OFF'.						
(ii) Set to 'AP'.						
2.16 PCU.						
(a) Master switch. Set to 'ON'.						
(b) Stab switch. Set to 'STAB'.						
(c) Supplies)						
M1.) Ensure show Off.						
(d) Mode M1.)						
2.17 FD bead. Ensure in parking position.						
2.18 PCU.						
(a) Master switch.)						
(b) Stab switch.) Set to 'OFF'.						
2.19 FD/AP switch. Set to 'OFF'.						
2.20 PCU stab switch. Set to 'STAB'.						
2.21 FD/AP switch. Set to 'AP'.						
2.22 PCU.						
(a) Master switch. Set to 'ON'.						
(b) Supplies)						
M1.) Ensure show Off.						
(c) Mode M1.)						
2.23 FD bead. Ensure in parking position.						
2.24 PCU.						
(a) Stab switch.)						
(b) Master switch.) Set to 'OFF'.						
2.25 FD/AP switch. Set to 'OFF'.						
2.26 PCU.						
(a) Stab switch. Set to 'STAB'.						
(b) Master switch. Set to 'ON'.						
SMS/80/453/28					Continued	

CHAP	5	FLT SYST	SERVICING PROCEDURES		AP101B-1000-5A3 E	
SP NO	507	CONTINUED	LIGHTNING		Section 1	
SHEET	4	AL 12			(1st Edition)	
			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 align="center">FLT SYST</p> <p>2. <u>Testing</u> (Contd)</p> <p>2.27 FD/AP switch. Set to 'AP'.</p> <p>2.28 PCU.</p> <p> (a) Supplies)</p> <p> M1.)</p> <p> (b) Mode M1.)</p> <p>2.29 FD bead. Ensure in parking position.</p> <p>2.30 PCU.</p> <p> (a) Stab switch.)</p> <p> (b) Master)</p> <p> switch.)</p> <p>2.31 FD/AP switch. Set to 'OFF'.</p> <p>2.32 PCU.</p> <p> (a) Master Set to 'ON'.</p> <p> switch.)</p> <p> (b) Stab switch. Set to 'STAB'.</p> <p>2.33 FD/AP switch. (i) Set to 'AP'.</p> <p>NB Operation (ii) is applicable only to PCU type G.</p> <p> (ii) Note meter M2 pointer, if any movement occurs adjust RV3 (BAC trim pot) until M2 pointer does not move when FD/AP switch is set to 'OFF' and 'AP' alternately.</p> <p>2.34 FD bead. Ensure at centre of presentation.</p> <p>2.35 AP trim indicator pointer. Ensure central</p>						
SMS/80/453/28A			Continued			

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CHAP	5	FLT SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E	
SP NO	507	CONTINUED			Section 1 (1st Edition)	
SHEET	5	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)
FLT SYST						
2. <u>Testing</u> (Contd)						
2.36 PCU.						
(a) Supplies Ensure shows Black.						
M1.						
(b) Mode M1. Ensure shows Auto.						
(c) Attitude Ensure cannot be						
switch. cancelled by depressing.						
2.37 FD/AP switch. Set to 'OFF'.						
2.38 FD bead. Ensure in parking						
position.						
2.39 PCU.						
(a) Glide switch. Ensure cannot be selected						
(b) Climb switch. Select.						
(c) Attitude Ensure cancels.						
switch.						
(d) Height Select.						
switch.						
(e) Climb switch. Ensure cancels.						
2.40 FD/AP switch. Set to 'AP'.						
2.41 PCU.						
(a) Heading (i) Select.						
switch. (ii) Cancel.						
(b) Track switch. Select.						
(c) Height switch. Ensure cancels.						
(d) Glide switch. Select.						
(e) Track switch. Ensure remains selected.						
2.42 FD/AP switch. Set to 'OFF'.						
2.43 PCU.						
(a) Glide switch. Ensure cancels.						
(b) Track switch. Ensure remains selected.						
(c) Heading Select.						
switch.						
(d) Height switch. Ensure automatically						
selected.						
(e) Track switch. Ensure cancels.						
(f) Attitude Select.						
switch.						
(g) Stab switch. Set to 'OFF'.						
SMS/80/453/29					Continued	

CHAP	5	FLT SYST	SERVICING PROCEDURES		AP101B-1000-5A3 E	
SP NO	507	CONTINUED	LIGHTNING		Section 1 (1st Edition)	
SHEET	6	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)	
FLT SYST						
2. <u>Testing</u> (Contd)						
2.44 Type 8A test set.						
(a) Roll rate gyro. Select.						
(b) M2 measure switch. Set to 'RG ROLL'.						
(c) Deflect increase switch. Set to 'MAX'.						
(d) Precess rate gyro switch. Operate.						
(e) Meter M2. Note indication.						
2.45 PCU stab switch. Set to 'STAB'.						
2.46 Type 8A test set.						
(a) Precess rate gyro switch. Operate.						
(b) Meter M2. Ensure indication decreases from that noted in Sub-item 2.44. Note: Reverse sense indication acceptable.						
2.47 PCU stab switch. Set to 'OFF'.						
2.48 Type 8A test set.						
(a) Yaw rate gyro. Select.						
(b) M2 measure switch. Set to 'RG YAW'.						
(c) Precess rate switch. Operate.						
(d) Meter M2. Note indication.						
2.49 PCU stab switch. Set to 'STAB'.						
2.50 Type 8A test set.						
(a) Precess rate gyro switch. Operate.						
(b) Meter M2. Ensure indication decreases from that noted in Sub-item 2.48.						
2.51 PCU stab switch. Set to 'OFF'.						
SMS/80 / 453 / 29 A					Continued	

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CHAP	5	FLT SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E				
SP NO	507	CONTINUED			Section (1st Edition) 1				
SHEET	7	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>Testing</u> (Contd)</p> <p>2.52 Type 8A test set.</p> <p> (a) Pitch rate Select.</p> <p> gyro.</p> <p> (b) M2 measure Set to 'RG PITCH'.</p> <p> switch.</p> <p> (c) Precess rate Operate.</p> <p> gyro switch.</p> <p> (d) Meter M2. Note indication.</p> <p>2.53 PCU stab switch. Set to 'STAB'.</p> <p>2.54 Type 8A test set.</p> <p> (a) Precess rate Operate.</p> <p> gyro switch.</p> <p> (b) Meter M2. Ensure indication</p> <p> decreases from that</p> <p> noted in Sub-item 2.52.</p> <p>2.55 FD/AP switch. Set to 'AP'.</p> <p>2.56 PCU mode M1. Ensure shows Auto.</p> <p>2.57 FD bead. Ensure moves to centre of</p> <p> presentation.</p> <p>2.58 PCU BAC. Move anti-clockwise.</p> <p>2.59 FD bead. Ensure moves to left.</p> <p>2.60 PCU BAC. Return to datum.</p> <p>2.61 FD bead. Ensure returns to centre.</p> <p>2.62 PCU VSC. Rotate fully up and</p> <p> leave in position.</p> <p>2.63 FD bead. Ensure moves up.</p> <p>2.64 AP trim indicator Ensure indicates nose</p> <p> pointer. down.</p> <p>2.65 FD/AP switch. Set to 'OFF'.</p> <p>2.66 Test socket 'J'.</p> <p> (a) Test lead. Remove.</p> <p> (b) Blanking Refit.</p> <p> plug.</p> <p>2.67 FD/AP switch. Set to 'AP'.</p> <p>2.68 PCU VSC. Operate but not to detent.</p>									
SMS/80/453/30					Continued				

CHAP	5	FLIP SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E	
SP NO	507	CONTINUED			Section 1	
SHEET	8	AL 12			(1st Edition)	
			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)
FLIP SYST						
2. <u>Testing</u> (Contd)						
2.69 FD bead. Ensure does not move.						
2.70 PCU VSC. (i) Return to detent. (ii) Rotate to up position.						
2.71 FD bead. Ensure moves up then returns to centre.						
2.72 Test socket 'J'. (a) Blanking plug. Remove. (b) Test lead J. Refit.						
2.73 Type 8A test set precess rate gyro switch. Operate.						
2.74 FD bead. Ensure does not move.						
2.75 FD/AP switch. Set to 'OFF'.						
2.76 PCU. (a) Height switch.) (b) Heading switch.) Select.						
2.77 Navigation display unit. (a) Compass system. Ensure synchronized. (b) Selected heading pointer. Align with lubber.						
2.78 FD/AP switch. Set to 'AP'.						
2.79 Navigation display unit selected heading. Increase by 90 degrees.						
2.80 FD bead. Ensure moves to right.						
2.81 Navigation display selected heading. Decrease to 10 degrees from lubber.						
2.82 PCU BAC. Rotate fully clockwise from lubber.						
SMS/80/ 453/30A			Continued			

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CHAP	5	FLT SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E	
SP NO	507	CONTINUED			Section 1 (1st Edition)	
SHEET	9	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)
<p style="text-align: center;">FLT SYST</p> <p>2. <u>Testing</u> (Contd)</p> <p>2.83 This Sub-item is applicable only to systems Pre Mod FCS 65. PCU BAC. Ensure returns to centre.</p> <p>2.84 This Sub-item is applicable only to systems Post Mod FCS 65. PCU BAC. (i) Ensure remains fully clockwise. (ii) Return to centre.</p> <p>2.85 Navigation display unit selected heading pointer. Align with lubber.</p> <p>2.86 PCU BAC. Rotate fully clockwise.</p> <p>2.87 FD bead. Ensure moves approximately 1/10 in. right.</p> <p>2.88 PCU BAC. Return to centre.</p> <p>2.89 FD/AP switch. Set to 'OFF'.</p> <p>2.90 PCU attitude switch. Select.</p> <p>2.91 FD/AP switch. Set to 'AP'.</p> <p>2.92 PCU BAC. Rotate fully clockwise.</p> <p>2.93 FD bead. Ensure moves approximately 1/4 in. right.</p> <p>2.94 PCU BAC. Return to centre.</p> <p>2.95 FD bead. Ensure returns to centre.</p> <p>2.96 FD/AP switch. Set to 'OFF'.</p> <p>2.97 PCU track switch. Select.</p> <p>2.98 FD/AP switch. Set to 'AP'.</p> <p>2.99 PCU glide switch. Select.</p> <p>2.100 FD bead. Ensure moves down.</p>						
SMS/80/453/31					Continued	

CHAP	5	FLT SYST	SERVICING PROCEDURES LIGHTNING		AP101B-1000-5A3 E			
SP NO	507	CONTINUED			Section 1			
SHEET	10	AL 12			(1st Edition)			
Safety and Servicing Notes are to be complied with throughout the work detailed on this card.				AC NO DATE				
<p style="text-align: center;">FLT SYST</p> <p>2. <u>Testing</u> (Contd)</p> <p>2.101 AP trim indicator pointer. Ensure indicates fully nose up.</p> <p>2.102 FD/AP switch. Set to 'OFF'.</p> <p>2.103 PCU climb switch. Select.</p> <p>2.104 AP trim indicator pointer. Ensure indicates fully nose down.</p> <p>2.105 FD/AP switch. Set to 'FD'.</p> <p>2.106 FD bead. Ensure moves vertically above centre.</p> <p>2.107 FD/AP switch. Set to 'OFF'.</p> <p>2.108 PCU.</p> <p> (a) Master switch.) Set to 'OFF'.</p> <p> (b) Stab switch.)</p> <p>3. <u>General</u></p> <p>3.1 Instrument master switch.)</p> <p>3.2 MRG On/Off switch.) Set to 'OFF'.</p> <p>3.3 External power supplies. (i) Set to 'OFF'.</p> <p> (ii) Disconnect and remove from aircraft.</p> <p>3.4 Type 8A test set. Disconnect and remove from aircraft.</p> <p>3.5 Aircraft test socket blanking plugs. Refit.</p>				(1)	(2)	(3)	(4)	(5)
<p>SMS/80/453/31A</p>				Continued				

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