SHEET	1 OF 6 SHEET/S			3	5	6	AL NO	DATE

TITLE Flight Control System – Dither Setting Procedure

SERVICING RECORD
AC NO . . . . . DATE . . . . .

Safety and Servicing Notes are to be complied with throughout the work detailed on this Card.

Special Tools and Equipment

Nil.

	(1) MAN HOURS	(2) TRADESMAN INIT	(3) BRIEF DETAILS OF DEFECT OR SUSPECTED DEFECT	(4) F. 720B NO	(5) N.C.O. INITIALS

AIRFRAME

1. Preparation

1.1 Access panels.
(a) Port and starboard mainplane leading edge lower surface access panels) Remove.
(b) No.103P)
(c) No. 84S.)

1.2 Aircraft control surfaces. — Ensure unobstructed.

1.3 Hydraulic test rigs. — Connect to aircraft (No 1 Services System) (No 1 Controls System)

NAV INSTRUMENTS

2. Preparation

2.1 External power supply. — (i) Connect to aircraft.

AIRFRAME

3. Preparation

3.1 Hydraulic test rigs. — Set to 'ON'.

3.2 Aircraft control surfaces. — Trim to neutral.

NAV ISNTRUMENTS

4. Preparation

NB 1 Ensure that external A.C. and D.C. power supplies are set to 'OFF' before connecting or disconnection Test socket 'L'.

SMS 17

ASSOCIATED PROCEDURE CARDS

ASSOCIATED TRADES

SP NO 107C

AF

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.	SERVICING RECORD				
	(1)	(2)	(3)	(4)	(5)

NAV INSTRUMENTS

4. <u>Preparation</u> (Contd)

NB 2 Where cambered leading edges are fitted, it is necessary to adopt one of the following procedures in order to achieve compatibility:-

(a) Orientate the clamping bracket assembly of the port aileron dither pick-off unit (3C-2325-A-1) through 180 degrees.

(b) Apply the starboard aileron dither pick-off unit (3C-2326-A-1) to the ram of the port aileron actuator, and the port aileron dither pick-off unit (3C-2325-A-1) to the ram of the starboard aileron actuator.

4.1 Elliott dither pick-off units.
    (a) Port aileron.) (i) Fit to respective actuator output
    (b) Starboard   )
        aileron.   ) (ii) Adjust as
    (c) Rudder.   )   necessary to align datums.

4.2 Test point J.   Remove shorting plug.

4.3 Test set Type 8A or Type 11.   Connect to aircraft test points F and J.

4.4 Elliott dither pick-off unit.
    (a) Port aileron)
    (b) Starboard   ) Connect to appropriate
        aileron.   ) connectors on dither
    (c) Rudder.   ) test set.

4.5 Tailplane actuator dither test point. (Panel 103P).   Connect to appropriate connector on dither test set.

4.6 Elliott dither test set.
    (a) Input connector.   Connect to a.c. test point L.
    (b) On/off switch.   Set to 'ON'.

4.7 External AC and DC supplies.   Set to ON.

RM 52010/64A

Continued

SMS 17A

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

NAV INSTRUMENTS

NB   As the dither voltage is supplied by one common oscillator, adjustment in any one channel may reflect in the remaining channels; therefore, after any adjustment is carried out, the remaining channels are to be checked and the cycle of operations repeated until a satisfactory level of dither is achieved.

5.   Testing

5.1   FD/AP control column switch.   Ensure set to 'OFF'.

5.2   Instrument master switch.   Set to 'ON'.

5.3   Pilot's control unit.
       (a) Master switch.   )   Set to 'ON'.
       (b) Stab switch.   )
       (c) Supplies MI   Ensure shows Black.

5.4   Elliott dither test set channel selector.   Set to 'PORT' aileron.

5.5   Dither setting potentiometers. (Main equipment compartment port side – forward).   Adjust as necessary on appropriate potentiometer until total ram movement of actuator as shown on dither test set is not more than 0.001 in.

5.6   Control column.   Ensure by feel that vibrations are not being transmitted to column.
       Note:- If vibration is present, dither level in aileron channel is to be reduced.

5.7   Channel selector.   Set to 'STARBOARD' aileron.

RM 52010/65

Continued

SMS 17A

CHAP	3	NAV INST	SERVICING PROCEDURES	AP101B-1000-5A3 E
SP NO	107	C CONTINUED	LIGHTNING	Section 1 (1st Edition)
SHEET	3			AC NO . . . . . DATE . . . . .

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

SERVICING RECORD

			NAV INSTRUMENTS			(1)	(2)	(3)	(4)	(5)
5.8	Dither setting potentiometers.		Adjust as necessary an appropriate potentiometer until total ram movement of actuator as shown on dither test set is not more than 0.001 in.							
5.9	Control column.		Ensure by feel that vibrations are not being transmitted to column. Note:- If vibration is present, dither level in aileron channel is to be reduced.							
5.10	Channel selector.		Set to 'RUDDER'.							
5.11	Dither setting potentiometers.		Adjust as necessary on appropriate potentiometer until total ram movement of actuator as shown on dither test set is not more than 0.001 in.							
5.12	Rudder pedals.		Ensure by feel that vibrations are not being transmitted to pedals. Note:- If vibration is present dither level in rudder channel is to be reduced.							
5.13	Channel selector.		Set to 'TAILPLANE'.							
5.14	Dither setting potentiometers.		Adjust as necessary on appropriate potentiometer until total ram movement of actuator as shown on dither test set is not more than 0.001 in.							
5.15	Control column.		Ensure by feel that vibrations are not being transmitted to column. Note:- If vibration is present dither level in tailplane channel is to be reduced.							

RM 52010/65A

Continued

SMS 17A

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.	AC NO . . . . . DATE . . . . .

SERVICING RECORD

		(1)	(2)	(3)	(4)	(5)

NAV INSTRUMENTS

5. Testing (Contd)

5.16	Elliott dither test set.	Disconnect from test socket 'L'.
5.17	Test set Type 11 or 8A.	Connect to test socket 'L'.
5.18	Test set Type 11 or 8A.	
	(a) Deflection switch.	Set to 'MAX'.
	(b) Rate gyro switch.	Set to 'PITCH'.
	(c) Press to Deflect switch.	Depress and release several times to exercise tailplane actuator.
	(d) Rate gyro switch.	Set to 'YAW'.
	(e) Press to Deflect switch	Depress and release several times to exercise rudder actuator.
	(f) Rate gyro switch.	Set to 'ROLL'.
	(g) Press to Deflect switch.	Depress and release several times to exercise aileron actuator.
5.19	Test set Type 11 or 8A.	Disconnect from test socket 'L'.
5.20	Elliott dither test set.	Connect to test socket 'L'.
5.21	Channel selector.	Set to each channel in turn and check dither level is between 0.002 and 0.0002 in. (If outside limits repeat items 4.6 to 5.21).
5.22	Pilot's control unit.	
	(a) Stab switch.) (b) Master switch)	Set to 'OFF'.
5.23	Instrument Master switch.	Set to 'OFF'.
5.24	External a.c. and d.c. supplies.	Set to 'OFF'.

RM 52010/66

Continued

SMS 17A

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.	SERVICING RECORD				
	(1)	(2)	(3)	(4)	(5)

AIRFRAME

6. <u>Testing</u>

6.1	Hydraulic test rigs.	(i)	Set to 'OFF'.					
		(ii)	Restart after 30 minutes.					

NAV INSTRUMENTS

7. <u>Testing</u>

7.1	External a.c. and) d.c. supplies.)	Set to 'ON'.
7.2	Instrument master) switch.)	
7.3	Pilot's control unit.	
	(a) Master switch)	Set to 'ON'.
	(b) Stab switch.)	
7.4	Channel selector.	Set to each channel in turn and check dither level is between 0.002 and 0.0002 in.
7.5	Pilot's control unit.	
	(a) Master switch)	Set to 'OFF'.
	(b) Stab switch.)	
7.6	Instrument Master switch.	Set to 'OFF'.
7.7	External power supplies. (A.C and D.C)	(i) Set to 'OFF'. (ii) Disconnect.
7.8	Test Set Type 11 or 8A.	(i) Disconnect. (ii) Remove.
7.9	Elliott dither test set.	(i) Disconnect. (ii) Remove.
7.10	Test plugs and sockets.	(i) Refit shorting plug. (ii) Fit blanks.

SMS 17A

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.	AC NO . . . . . DATE . . . . .

	SERVICING RECORD				
	(1)	(2)	(3)	(4)	(5)

NAV INSTRUMENTS

8. <u>General</u>

8.1 Elliott dither pick-off units.
   (a) Port aileron.)
   (b) Starboard)   Remove from actuator
       aileron.)   ram.
   (c) Rudder.)

8.2 Tailplane   Disconnect from lead and
   actuator dither   refit blanking cap.
   test point.
   (Panel 103P).

AIRFRAME

9. <u>General</u>

9.1 Hydraulic test   (i)   Disconnect.
   rigs.   (ii)   Remove.

9.2 Access panels.
   (a) Port and)
       starboard)
       mainplane)
       leading edge)   Refit.
       lower)
       surfaces.)
   (b) Panel 103P.)
   (c) Panel 84S.)

RM 52010/67

AP101B–1000–5A3 E

SMS 17A