

12 JAN 1961  
30th December, 1960.

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Class C

- (A) Servicing Instruction/Hunter/66  
Flying Controls, Aileron and Elevator Booster Units:  
Revised Adjustment.
- (B) Hunter Mk.4 aircraft and Mks. 7 and 8 pre mod H.811 and H.812.
- (C) It has been found from service experience that the setting of the micro-switch mounted on the hydro-booster release units can be revised to obtain a more satisfactory operation of the release unit.
- (D)1 Within 28 Days of receipt of this Instruction and at each subsequent Minor Servicing or when either an aileron or elevator booster, or a release unit micro-switch is changed, or being replaced after removal, proceed as follows:-
- (a) Render aircraft electrically 'safe' and remove the access panels as necessary to gain access to the appropriate unit (elevator and aileron booster assemblies).
  - (b) Disconnect and blank off hydraulic pipe to the banjo attachment on the release unit.
  - (c) Connect release unit to rig, as shown in attached sketch and check for correct operation of micro-switch in accordance with the test instructions given below:-

TEST METHOD WITH PYE SWITCHES

- (1) Connect hydraulic and electrical rigs. Ensure that the ram slot and mating parts of the pawl, the microswitch button and its mating face are clean and grease-free.

Note

It is important that their relative positions allow the pawl to seat squarely in the ram slot.

- (2) Apply a steadily-increasing pressure and check that by the time 650 lb sq./inch is reached, the pawl is fully engaged, i.e. the ram cannot move in the release unit.
- (3) Increase pressure to 2800 lb/sq. inch and after a few seconds reduce to 650 lb./sq. inch. At this pressure check that the pawl is fully engaged and is in contact with bottom of slot.
- (4) Release pressure and insert the 0.055 inch slip gauge between the pawl and the bottom of the ram slot. Apply a pressure of 550 to 650 lb./sq. inch so that the slip-gauge is clamped by the pawl. Position micro-switch tappet to indicate engagement, i.e. lamp 1 should be alight; lamp 3 should be out. Re-adjust tappet until disengagement is indicated, i.e. lamp 3 should be alight; lamp 1 should be out. Lock adjustment.

- (5) Release pressure and replace the 0.055 inch slip gauge by the 0.060 inch gauge. Apply 550 to 650 lb./sq. inch so that the slip gauge is clamped, and check that the switch does not operate, i.e. lamp 1 remains cut and lamp 3 alight.
- (6) Release pressure and replace the 0.060 inch slip gauge by the 0.050 inch gauge. Apply 550 to 650 lb. sq. inch so that slip gauge is clamped, and check that switch operates, i.e. lamp 1 is alight and lamp 3 remains out.
- (7) Release pressure slowly and check that at 150 lb./sq. inch the pawl is clear of the ram slot (disregard the "lead-in" to the slot).
- (8) Switch off and disconnect hydro-booster.
- (9) Re-lubricate the ram and pawl slot with grease XG.275.

TEST METHOD WITH DOWNMIC SWITCHES F.230401

- (10) Connect hydraulic and electrical rigs. Ensure that the ram slot and mating parts of the pawl, the micro-switch button and its mating face are clean and grease-free.

N.B.

It is important that their relative positions allow the pawl to seat squarely in the ram slot.

- (11) Apply a steadily increasing pressure and check that by the time 650 lb. sq./inch is reached the pawl is fully engaged; i.e. the ram cannot move in the release unit.
- (12) Increase pressure to 2800 lb./sq. inch and, after a few seconds, reduce to 650 lb./sq. inch. At this pressure check that the pawl is fully engaged and that the gap between it and the bottom of the ram slot is within the limit of 0.012 inch.
- (13) Release pressure and insert the 0.055 inch slip gauge between the pawl and the bottom of the ram slot. Apply a pressure of 550 to 650 lb./sq. inch so that the slip-gauge is clamped by the pawl. Move in the micro-switch by turning the knurled knob until lamps 1 and 2 just light. Move out the micro-switch until disengagement is indicated, i.e. lamps 3 and 4 should be alight and lamps 1 and 2 out. (If more than  $\frac{1}{4}$  turn of the knob is needed on moving out, the switch should be inspected for excessive differential). Lock micro-switch.
- (14) Release pressure and replace the 0.055 inch slip gauge by the 0.060 inch gauge. Apply 550 to 650 lb./sq. inch so that the slip gauge is clamped. Depress the micro-switch plunger by hand until lamps 1 and 2 are alight. Release plunger slowly and check that lamps 3 and 4 are alight and lamps 1 and 2 are out when the plunger is resting on the end of the release unit piston rod. Ensure by moving the plunger sideways that it is fully out.
- (15) Release pressure and replace the 0.060 inch slip gauge by the 0.050 inch gauge. Apply 550 to 650 lb. sq. inch so that the slip gauge is clamped. Depress the micro-switch plunger by hand until lamps 1 and 2 are alight. Release plunger and check that lamps 1 and 2 remain alight and lamps 3 and 4 are out.

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- (16) Release pressure slowly and check that at 150 lb./sq. inch the pawl is clear of the ram slot (disregard the "lead-in" to the slot).
- (17) Apply pressure slowly and check that by the time 500 lb./sq. is reached the micro-switch indicates engagement, i.e. lamps 1 and 2 are alight.
- (18) Release pressure and disconnect rig and electrics.
- (19) Re-lubricate the ram and pawl slot with grease XG.275.
- (d) Reconnect all pipes. Bleed and test hydraulic system with power rig in accordance with A.P.4347, Vol.1 series, Section 5, C.
- (e) Restore aircraft to normal.

Estimated man hours: 4.

- (E) Record on appropriate forms, and enter in the Supplementary Record Sheet of the Servicing Schedule.
- (F) Nil.
- (G) A.P.4347, Volume 1 and Servicing schedules will be amended to cover this Instruction.

*A. R. Butler*  
A. R. Butler  
R.D.A/Defects

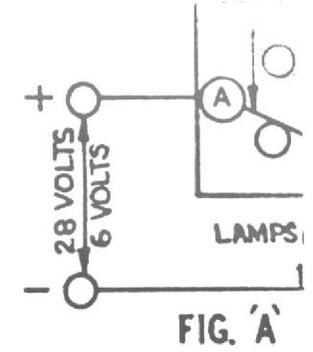
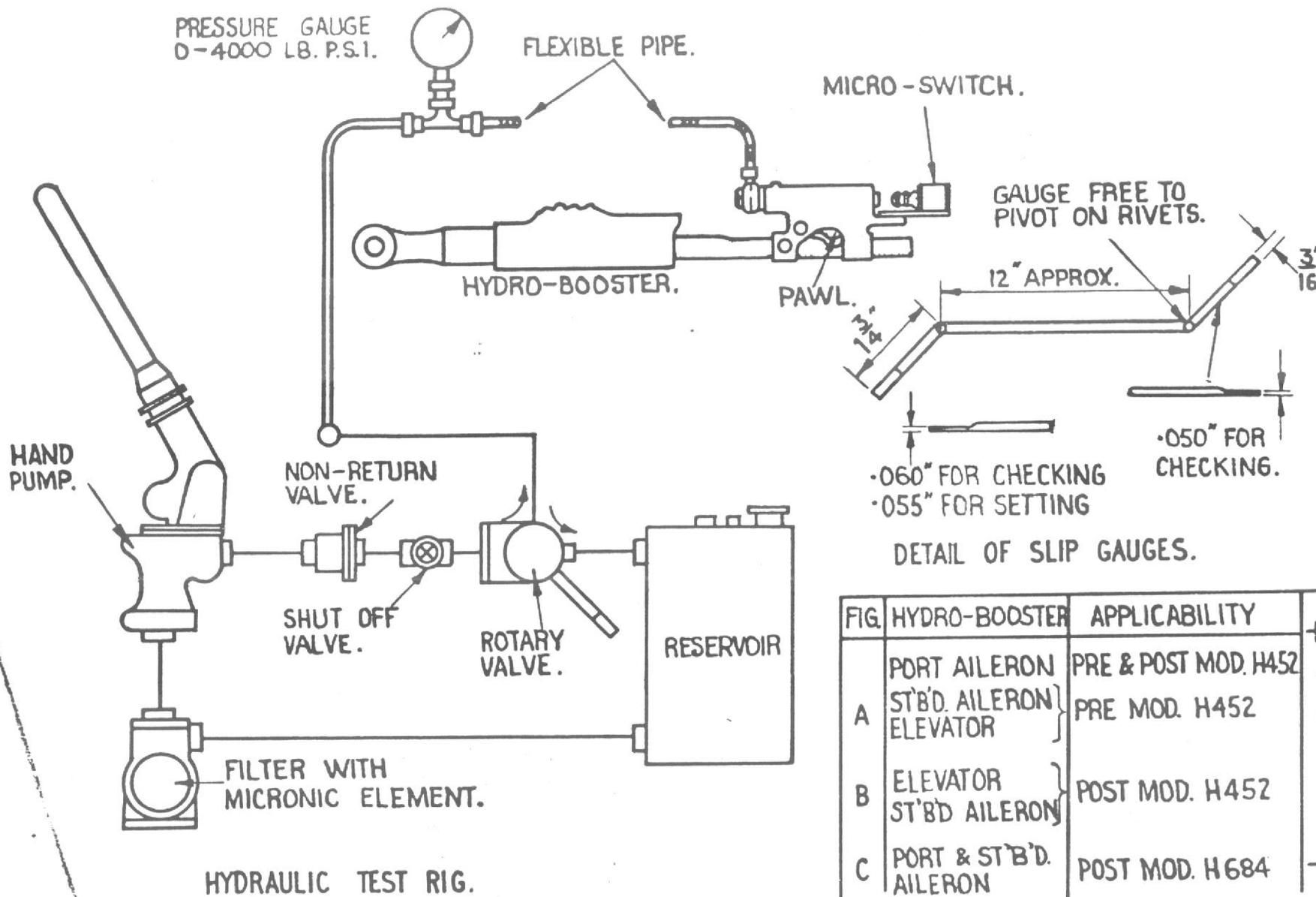


FIG. 'A'

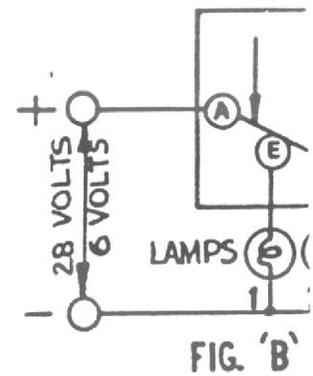


FIG. 'B'

DETAIL OF SLIP GAUGES.

FIG.	HYDRO-BOOSTER	APPLICABILITY
A	PORT AILERON	PRE & POST MOD. H452
	ST'B'D. AILERON	
	ELEVATOR	
B	ELEVATOR	POST MOD. H452
	ST'B'D AILERON	
C	PORT & ST'B'D. AILERON	POST MOD. H684

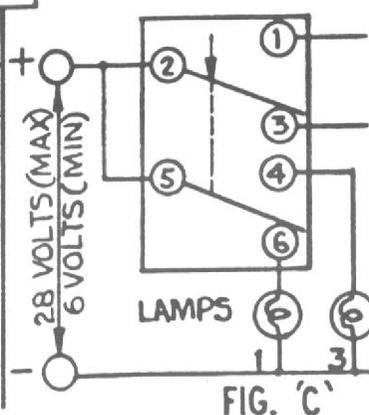


FIG. 'C'

TEST WIRING DIAGRAM FOR MICRO-SWITCHES.

ING CONTROLS — AILERON AND ELEVATOR  
 TER UNITS — REVISED ADJUSTMENT.

S. I. / HUNTER. / 66

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