



# SERVICE BULLETIN

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE

: SUBARU BLDG,

SHINJUKU, TOKYO, JAPAN

NO : FAS-046

DATE : February 15, 1971

1. SUBJECT : Extension of the time required to spin.
2. AIRCRAFT AFFECTED : FA-200 Series Serial Nos. 1 thru 126.
3. PRIORITY : Desirable.
4. REASON : To extend time which required to one spin by increasing elevator "up" side maximum angle from the current 25° to 30°.
5. DESCRIPTION : Rod Assy, Horn Bracket Assy and Bell Crank Assy in the elevator will be replaced with new ones and stopper at lower surface of control stick will be adjusted with adjustable screw.
6. ACCOMPLISHMENT : Optional.
7. APPROVAL : JCAB Approved.
8. PARTS REQUIRED : The following parts are required to perform the rework:

PART NO.	PART NAME	QTY
200-610004-101	HORN BRACKET	1
200-524152-101	ROD ASSY	1
200-524040-101	BELL CRANK	1
NAS428-4-16	BOLT-ADJUSTING	1

FAS - 046

PAGE 1 OF 4

8. PARTS REQUIRED : (cont.)

PART NO.	PART NAME	QTY
AN960-416L	WASHER	AR
AN960-416	WASHER	AR

9. SPECIAL TOOL : None required.

10. WEIGHT AND BALANCE: Negligible.

11. REFERENCE : None.

12. MANHOUR REQUIRED : 4 Manhours required.

13. DETAILED INSTRUCTIONS: Replace the bell crank, rod assy and horn bracket in zone of the connection of elevator control surface with new ones and alter adjusting screw of stopper in lower position of control stick.

- a. Remove the elevator in accordance with Service Manual para 8-5-1.
- b. Remove the horn bracket at center connection of elevator and install new horn bracket, 200-610004-101.
- c. Remove the rear fuselage left hand side access cover (14) as shown in service manual Fig. 3-5. And remove the bell crank in the connection zone of control surface using this opening hole. Remove the upper cable lower cable and rod assy by loosening attaching bolts, and then remove the bell crank by loosening the bolts and nuts.
- d. Pull out bell crank from opening and rod assy from elevator side.
- e. Install new bell crank, 200-610004-005 for original bell crank and secure with the bolts and nuts in the connection zone of control surface.
- f. Install new rod assy, 200-524152-005 for original rod assy and adjust the rod length to  $460 \pm 1.0\text{mm}$ . Install it to the bell crank.
- g. Install elevator in accordance with Service Manual para. 8-5-2.
- h. Install the upper and lower control cable temporarily to the bell crank.

- i. Stopper adjustment mechanism of the control stick are reconstructed as follow. (See Fig. 1)
  - (a) Remove the lower access cover (2)(7) in the cockpit as shown in Service Manual Fig. 3-5.
  - (b) Remove the adjusting screw, NAS428-4-11, of the up side stopper by loosening locknut from the stopper. And then remove the locknut of hexagon head side of adjusting screw and reinstall.
  - (c) Remove the adjusting screw, NAS428-4-11, of down side stopper from stopper, and replace new adjusting screw, NAS428-4-16, and reinstall it.
  
- j. The following procedures are required to adjust the elevator system:
  - (a) Insert lock pin to the both hole of the control wheel drive shaft and hole of instrument bearing and fix control stick and place control stick to neutral.
  - (b) Upper cable will be adjusted by turnbuckle in rear fuselage to provide control surface to neutral position.
  - (c) Tension force of the upper cable and the lower cable will be adjusted to  $43 \pm 5$  lbs ( $119.3 \pm 2.3$  kgs) and  $37 \pm 5$  lbs ( $116.8 \pm 2.3$  kgs) respectively. Install the clips after adjusting.
  - (d) For elevator angle adjustment of control surface, the stopper in lower section of control stick (See Fig. 2) serves for adjustment of elevator angle to up  $30^\circ$  and down  $15^\circ$ .
  - (e) After up elevator angle stopper will be adjusted to "up  $30^\circ$ " by setting of adjusting screw, prepare some washer, AN960-416 or AN960-416L, to fill the gap between the stopper and the under of hexagon head. Remove the adjusting screw.
  - (f) Insert some washer prepared in step (e) into the under of hexagon head of adjusting screw and install it to the stopper, and then tighten with locknut.
  
- k. Reinstall all access cover.

