SERVICE BULLETIN

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE

: SUBARU BLDG,

SHINJUKU, TOKYO, JAPAN

NO : FAS-053A | A

DATE : March 15, 1971

1. SUBJECT : Method of Checking DC Generator and Alternator Belt Tension.

2. AIRCRAFT AFFECTED : All FA-200 Series Aircraft.

3. PRIORITY : Essential.

4. REASON : In order to provide proper tension for DC generator and alternator drive belt.

5. DESCRIPTION : A belt to be checked for proper tension at the time it is installed, again after 25 hours operation and each 100 hours thereafter in order to ensure proper belt tension.

6. ACCOMPLISHMENT : During periodic maintenance inspection of the engine and at any time the generator belt is replaced.

7. APPROVAL : JCAB Approval (NO-TOKYO-014) March 1, 1971.

8. PARTS REQUIRED : No parts required.

9. SPECIAL TOOL : Belt tension gage, Avco Lycoming tool number ST-131.

10. WEIGHT AND BALANCE: No change.

11. REFERENCE : LYCOMING SERVICE INSTRUCTION NO. 1129A.

12. MANHOUR REQUIRED : 1 manhour required.

13. DETAILED INSTRUCTIONS:

A. Torque Method:

a. Remove engine cowling in accordance with Service Manual, para. 4-3-1.

b. Untighten five attaching screws, and remove forward baffle from engine center section.

c. Apply a 24 mm (31/32 IN.) box and torque indicating wrench to the nut that attaches the pulley to the generator (or alternator) and turn it in a clockwise direction. Observe the torque shown on the wrench at the instant the pully slips.

d. If the torque indicated in step (3) exceeds the following specified value adjust the belt tension.

Belt Condition	Belt Size	Gen. Pulley Torque	Remarks(Effective A/C)
New	3/8	11 to 13 Ft.lbs	#12 and sub
	1/2	13 to 15 Ft.lbs	#1 thru 11
Used	3/8	7 to 9 Ft.lbs	#12 and sub
	1/2	9 to 11 Ft.lbs	#1 thru 11

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NOTE: The higher tension speciffied for a new belt is to compensate for the initial stretch that takes place as soon as it is operated. These higher tension value should not be applied to belts which have been used previously. Although the specified torque values for DC generators and alternators are the same, the tension for alternator be its should be slightly higher than the tension applied to DC generator belts. Also, Chrysler alternators do not have a nut on the shaft and therefore cannot be checked by this method.

e. Reinstall the forward baffle in position with five screws.

f. Reinstall the engine cowling.

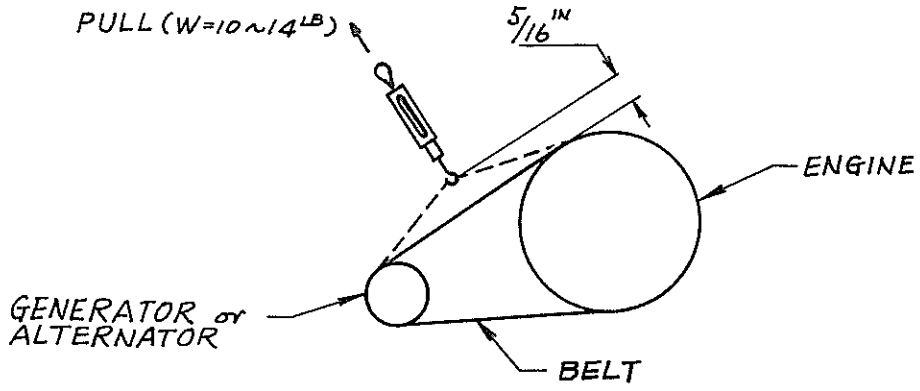
B. Deflection Method:

a. Attach the hook of a small spring scale to the belt at the approximate mid-point between the ring gear spport and the generator (or alternator).

b. Pull on the scale until a reading of 14 pounds (6.4 Kg) is obtained. 10 pounds (4.5 Kg) for used belts.

c. Measure the distance the belt has moved with the 10 to 14 pound (4.5 to 6.4 Kg) load applied. The distance (deflection) should be 5/16 inch. If less than 5/16 inch, the belt is too tight.

d. If the specified distance is not obtained, adjust the belt tension.



BELT CHECK BY DEFLECTION METHOD

C. Belt Tension Gage:

a. A belt tension gage that measures belt tension by indicating the amount of deflection of the belt under a preset spring load is available as Avco Lycoming tool number ST-131. This tool and its method of use is described in Service Letter No. L160.