



"TAKE YOUR CESSNA HOME
FOR SERVICE AT THE SIGN
OF THE CESSNA SHIELD"

multi-engine **SERVICE LETTER**

MARKETING DIVISION • CESSNA AIRCRAFT COMPANY
WICHITA, KANSAS 67201 • CABLE ADDRESS / CESSCO WICHITA

February 13, 1978

ME77-34
(Supplement #1)

SUBJECT: TRIM CONTROL SYSTEM

AIRCRAFT APPLICABILITY: All Serials of the following Multiengine Aircraft

336, 337, T337, P337, 310, 320, 340, 401, 402, 411,
404, 414, 421

The original issuance of Service Letter ME77-34 dated December 23, 1977 provided detailed information for conducting a general inspection of the aileron, elevator and rudder trim systems on the applicable aircraft as noted above.

The attached inspection procedures have been revised to correct trim tab deflection information for a certain group of 337 and T337.

Areas of change are marked (■) in the left hand margin.

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(Owner Notification System - No. 2)

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THERE ARE MORE CESSNAS FLYING THAN ANY OTHER MAKE



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December 23, 1977

ME77-34

SUBJECT: TRIM CONTROL SYSTEM INSPECTION

AIRCRAFT APPLICABILITY: All Serials of the following Multi-Engine Aircraft:

336, 337, T337, P337, 310, 320, 340, 401, 402, 411, 404, 414, 421

IMPORTANT

To assist Service personnel in maintaining trim control systems on all Cessna Multi-Engine aircraft, the attached inspection procedure has been developed.

This procedure provides detailed information for conducting a general inspection of the aileron, elevator and rudder trim systems and PLACES PARTICULAR EMPHASIS ON THE MOUNTING AND SECURITY OF THE TRIM TAB ACTUATOR AND ASSOCIATED LINKAGE.

Because of the importance of trim control systems, a careful inspection (using the attached procedures) is to be made on all Multi-Engine aircraft AT THE NEXT 100 HOURS OR ANNUAL INSPECTION, WHICHEVER COMES FIRST.

This inspection can be accomplished quite easily when done as part of a regular aircraft inspection and will insure that this important system is in good operating condition.

This detailed trim system inspection procedure will be incorporated into the respective aircraft service manuals and will specify compliance at each 100 hour inspection on Cessna Multi-Engine aircraft.

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NOTE

The following inspection should be accomplished at the next 100 hours or annual inspection whichever occurs first, and is to be repeated every 100 hours thereafter.

These instructions are general in nature, for a specific installation, refer to the applicable airplane service manual.

Before starting this inspection, turn all electrical power off and remove necessary access panels.

INSPECTIONS:

1. TRIM TAB ACTUATORS USING SNAP RINGS FOR RETENTION

- a. Inspect the actuator mounting clamps and mounting structure for evidence of damage, cracks and security of installation. Inspect the clamps for proper fit on the actuator, clamps must be firmly seated on the actuator. Inspect snap ring for complete and proper engagement in snap ring groove of actuator. On all airplanes except 336 and 337 series, check that snap ring is properly seated in the positioning slot of the mounting bracket. On 336 and 337 series airplanes, check that snap rings are properly located between the spacers and actuator mounting clamp. Check that mounting clamp bolts or screws (as applicable) are torqued 20 to 25 inch-pounds and apply white lacquer torque putty to bolt for future inspections. Inspect guard block for condition and attachment.

NOTE

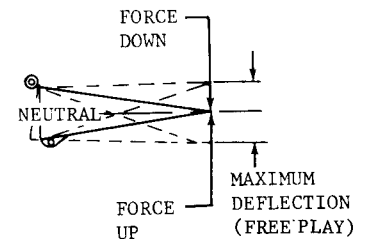
Some installations use two snap rings. The second snap ring should be seated against the end of the mounting bracket.

2. TRIM TAB ACTUATORS - FLANGE MOUNTED

- a. Inspect the trim tab actuator mounting flange and actuator mounting structure for evidence of damage, cracks and security of installation. Inspect that mounting screws and nuts are torqued 20 to 25 inch-pounds and apply white lacquer torque putty to screws and nuts for future inspections. Inspect guard block or guard pin, as applicable, for condition and attachment.

3. TRIM TAB DEFLECTION (FREE PLAY) CHECK (See Detail at right)

- a. With the primary control surface and its respective tab in neutral position, restrain the primary control surface and manually deflect the tab at the trailing edge at the point where the actuator push-pull rod is located. Using one pound of force, deflect the tab one direction and measure the deflection from neutral using the control surface as a reference; then measure the deflection from neutral in the opposite direction. The sum of the two deflections must not exceed amounts specified below. If the sum of the two deflections exceed amount specified below, replace AN bolts with NAS464 bolts of equivalent diameter and grip length in the push rod and recheck; if unacceptable, replace bearings in rod end and recheck; if unacceptable, replace trim tab horn bearing and recheck; if still unacceptable, overhaul or replace the trim tab actuator and insure all areas are properly saftied.



- (1) Aileron trim tab maximum deflection 0.050 (all airplanes except 336 and 337 series) measured at outboard end of tab.
- (2) Rudder trim tab maximum deflection 0.070 (310, T310, 320, 340) measured at upper end of tab.
Rudder trim tab maximum deflection 0.200 (401, 402, 404, 411, 414, 421) measured at upper end of tab.
- (3) (a) Elevator trim tab maximum deflection 0.070 (all airplanes except 336 and 337 series) measured at outboard end of tab.
- (b) Elevator trim tab maximum deflection 0.110 measured at left end of trim tab on the following serials of the 336, 337, T337 and P337 airplanes: 336-0001 thru 336-0195; 337-0979 and on; P337-0001 and On.
- (c) Elevator trim tab maximum deflection 0.200 measured at left end of trim tab on the following serials of the 337 and T337 airplanes: 337-0001 thru 337-0978.

4. TRIM TAB INSPECTION

- a. Inspect the trim tab hinge for evidence of damage. Inspect hinge pin for proper installation and safety. Inspect push rod and actuator rod end bearing for evidence of binding and damage. Inspect push rod attach bolt at the actuator and trim tab horn for proper safetying of nut with cotter pin.

5. TRIM TAB CONTROL SYSTEM INSPECTION

- a. Inspect trim tab control system for operation and trim tab for freedom of movement. Check trim tab travel and adjust if required (refer to applicable airplane service manual for setting) and insure all areas are properly saftied. Inspect cables for fraying, chafing, condition and turnbuckles for proper safety. Inspect chains for condition, proper safety and alignment on sprockets.

THESE ILLUSTRATIONS ARE NOT FOR A PARTICULAR AIRPLANE.
THEY ILLUSTRATE DIFFERENT CONFIGURATIONS OF TRIM TAB
ACTUATOR MOUNTINGS.

