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## Service Bulletin

December 20, 1991

MEB91-12

### TITLE

LANDING GEAR ACTUATORS AND CONTROL/INDICATING SYSTEMS FUNCTIONAL TEST

### EFFECTIVITY

MODEL	YEAR	SERIAL NUMBERS
402C	1979 thru 1985	402C0001 thru 402C1020
404	1977 thru 1981	404-0001 thru 404-0859
414A	1978 thru 1985	414A0001 thru 414A1212
421C	1976 thru 1985	421C0001 thru 421C1807

### PURPOSE

Additional maintenance procedures have been developed to assist maintenance personnel in inspecting and testing components of the hydraulic landing gear actuators, controls and indication systems.

### COMPLIANCE

Mandatory. Accomplish:

- A. Every 12 months.
- B. Anytime the landing gear emergency blowdown bottle has been discharged.
- C. Anytime a landing gear actuator is replaced.

### APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

**MAN-HOURS**

Approximately 0.5 man-hours when accomplished during a scheduled inspection.

**MATERIAL**

Not Applicable

**ACCOMPLISHMENT INSTRUCTIONS**

Landing Gear Actuator And Control/Indicating Systems Functional Test instructions are attached.

**CREDIT**

Not Applicable

**OWNER NOTIFICATION**

On January 3, 1992 the following Owner Advisory message will be sent to applicable owners of record in MEB91-12A.

Dear Cessna Owner,

Additional maintenance procedures have been developed to assist maintenance personnel in inspecting and testing components of the hydraulic landing gear actuators, controls and indication systems.

Compliance is mandatory; shall be accomplished every 12 months, anytime the landing gear emergency blowdown bottle has been discharged, and whenever a landing gear actuator is replaced.

Please contact a Cessna Multi-Engine Service Station for detailed information regarding the accomplishment of this Service Bulletin on your airplane.

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**TITLE** LANDING GEAR ACTUATOR AND CONTROL/INDICATING SYSTEMS FUNCTIONAL TEST**EFFECTIVITY****MODEL(S)****SERIAL NUMBERS**

402C	402C0001 thru 402C1020
404	404-0001 thru 404-0859
414A	414A0001 thru 414A1212
421C	421C0001 thru 421C1807

**DESCRIPTION**

The following procedures provide instructions to functional test the landing gear actuators to check the hydraulic pressure required to release the internal locks and check the landing gear control and indication circuit.

**APPROVAL**

FAA approval has been obtained on technical data in this publication that affects airplane type design.

**REFERENCE**

MEB91-12

**CHANGE IN WEIGHT AND BALANCE**

**MODEL** ..... 402C, 404, 414A, 421C

**WEIGHT CHANGE** ..... None

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To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted industry maintenance practices and prevailing government regulations. The Cessna Aircraft Company is not responsible for the quality of work performed in complying with the requirements herein.

The Cessna Aircraft Company, Aircraft Marketing Division Customer Services, P.O. Box 7704, Wichita, Kansas 67277, U.S.A. (316) 941-7550, Telex 4319022, Telefax (316) 942-9006

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# ATTACHMENT TO SERVICE BULLETIN

MEB91-12

## ACCOMPLISHMENT INSTRUCTIONS

1. Landing gear actuator functional test. (Refer to appropriate Service or Maintenance Manual)
  - A. Jack airplane until the tires clear the ground. Assure each actuator is down and locked.
  - B. Connect hydraulic service cart to the airplane and apply auxiliary electrical power.

**NOTE:** Have an observer in the cockpit to observe gear downlock and in transit lights and one at each gear to witness gear movement.
  - C. Very slowly increase hydraulic pressure to the gear system, monitoring hydraulic pressure at the cart. Observe and record the pressure at which each landing gear actuator unlocks. The landing gear internal lock is designed to release between 250 and 400 PSIG (with the exception of the 9910139-3 nose gear actuator, which is between 250 and 610 PSIG).

**NOTE:** The piston will move immediately upon release of the internal lock and the hydraulic pressure may fall to near zero. Also, the electrical switch will actuate simultaneously with the release of the internal lock.
  - D. Replace actuator if it does not meet the unlock pressure requirement, refer to the appropriate Parts Catalog for part number of actuator and Service or Maintenance Manual for removal and installation procedures, then repeat step 1.C.
2. Landing gear control and indication circuit test.
  - A. Check the landing gear control and indication circuit as follows:
    - (1) Retract the gear to the up and locked position.
    - (2) Shut off hydraulic pressure to the airplane.
    - (3) Position the gear handle in the down position. Apply hydraulic pressure until the uplocks release. Shut off hydraulic pressure to the airplane. Move two of the gears to the locked position while manually restraining one of the gears from going into the locked position. Check that the two gears indicate 'locked' on the panel.
    - (4) Slowly apply hydraulic pressure to the airplane. The gear that is not down and locked should move to the locked position. Failure of the gear to go to the locked position indicates a faulty control circuit. Check and repair the control circuit as required.
    - (5) After gear indicates downlock, manually attempt to retract (unlock) the gear. Gear shall remain locked. If gear does not remain locked, troubleshoot and accomplish required repairs.
    - (6) Repeat steps 2.A. (1) thru (5) until all three landing gears have been tested.
3. Following satisfactory completion of the above tests, disconnect hydraulic cart, remove auxiliary electrical power and remove airplane from jacks per appropriate Service or Maintenance Manual.
4. Make an entry in the airplane logbook stating this Service Bulletin has been complied with and method of compliance.