



## SERVICE BULLETIN FAA/DAS APPROVED

NUMBER CSB-99-01  
DATE 7/19/99

**CENTURY FLIGHT SYSTEMS CONSIDERS THIS SERVICE BULLETIN MANDATORY WITHIN 25 FLIGHT HOURS or UPON DETECTION OF A FAILED PREFLIGHT TEST SEQUENCE or UPON DETECTION OF AN OUT OF TRIM CONDITION WHEN AUTOPILOT IS DISCONNECTED, and EACH ADDITIONAL 100 FLIGHT HOURS THEREAFTER, WHEN A 1C812 or 1C822 PITCH SERVO IS INSTALLED IN A CENTURY 41 FLIGHT CONTROL SYSTEM.**

TO: All Century Dealers, Service Centers and Century 41 Owners

SUBJECT: Brush wear in the 1C812-( )-( ) and 1C822-( )-( ) torque sensing pitch servos.

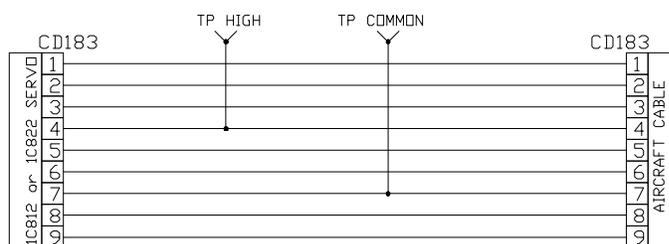
The 1C812 and 1C822 series torque sensing pitch servos use a brush block and slip-ring assembly in the detection of torque on the shaft of the servo. Mechanical wear after time causes deterioration of the assembly which can cause varying electrical resistance between the brushes and slip-rings. This can cause the trim output signal to vary with shaft position.

This variance of the trim signal can cause the Century 41 flight control system to not consistently pass the Preflight Test Sequence and or intermittently cause a pitch out of trim condition upon Autopilot disconnect.

The servo can be tested in the aircraft by field fabricating and inserting a breakout test cable (see below) between the aircraft harness connector designation CD183 and the 1C812 or 1C822 pigtail connector designation CD183 and performing the following procedure.

Connect a digital DC voltmeter set on a scale to accurately read + and - 500 mVDC positive lead to TP High and negative lead to TP Common. Apply power to the Autopilot system and ensure that the voltage to the Autopilot is greater than 11.8 volts for a 14 volt aircraft or 22.5 volts for a 28 volt aircraft. With the Autopilot disengaged observe the DVM and slowly move the elevator or stabilator controls through their full range of travel. The DC voltage indicated on the DVM should at no time throughout the range of the pitch control travel exceed + or - 350 mVDC.

Should the voltage exceed 350 mVDC the servo will have to be replaced. Availability of parts may be obtained through you're Century Flight Systems Authorized Avionics Shop.



**Signature on file**

W.C. Eubanks Vice President

**Signature on file**

William R. Watson DAS Staff Coordinator