

DUNCAN INTELLIGENCE

Dedicated to "Perfecting the Craft" • Edited by Skip Laney • Fall '99

Are You Having Audio Clacker Problems?

The Audio Clacker indicating pitch change of your horizontal stabilizer is detected by the cylinder potentiometer assembly which is mounted on the AMK modified horizontal stabilizer actuators. This potentiometer has a tendency to accumulate internal debris. Because the potentiometer is sealed it can not be cleaned. To determine if you have a potentiometer problem, use an analog meter to check it. First, disconnect the lead connector P1030 coming off the stab actuator (the smaller 4 pin connector), then using the analog meter, monitor the resistance change (from pin A to pin B) while extending and retracting the stab actuator using the slower secondary motor. If you see any little jump on the meter, the stab actuator will need to be repaired.

For more info, contact Chris Gress in LNK at 800.228.4277, E-mail Chris at chris_gress@duncanaviation.com or contact Pete Kilmartin in BTL at 800.525.2376, E-mail Pete at pete_kilmartin@duncanaviation.com

Fix Your Fuel Drain Valve

When it is discovered that your fuel push to drain valve is leaking, most of the time the leak can be stopped by replacing the "O" rings.

To do this, have a plug with 7/16-20NF threads ready. Remove the push to drain valve and install the plug. Inspect the O-ring groove and seat for flaws. If the groove and seat look good, replace the internal small O-ring (MS29513-007) and then the external O-ring (MS29512-4) and reinstall the drain valve.

Are You Sealing Your Tailcone Access Cover?

The tailcone access cover, immediately below the rudder, must be fayed sealed when installed. The reason for this requirement is to prevent fuel from entering the tailcone should a leak occur along the underside of the fuselage. Learjet released AMK-80-7 to address fuel leakage in the tailcone and comply with AD80-19-09. Part of the modification was to seal the access cover.

To remain in compliance with AD80-19-09, each time the tailcone access cover is removed it must be resealed upon reinstallation. Additionally, if an antenna is installed in this location, the antenna must be sealed also (refer to the applicable maintenance or service manual for faying sealing procedures). Apply a parting agent to the aircraft structure to facilitate future removal of the access cover.

For more info, contact Bill Schroeder in LNK at 800.228.4277, E-mail Bill at bill_schroeder@duncanaviation.com or contact Pete Kilmartin in BTL at 800.525.2376, E-mail Pete at pete_kilmartin@duncanaviation.com

Always Preload Your Torque Wrench

Preloading a torque wrench is an important process in overall accuracy of these tools. It must be performed each time the torque wrench is used after periods of non-use or whenever torque direction is changed.

There are several reasons for preloading your torque wrench. First, it will set internal components so that when force is applied, torque begins immediately with no internal settling. Second, it distributes lubrication to moving internal parts. The final reason is the hysteresis characteristic of the steel, initial stress should be applied to the steel in order to moderate the hysteresis presence.

How to do it:

1. Set torque wrench between 50% & 100% of full scale.
2. Mount torque drive in a stationary fixture (i.e. socket welded to bench, vise).
3. Exercise the torque wrench 3-5 times in the direction you will be verifying.
4. Perform torque measurement.

Remember to store torque wrenches (Click-type) in the low setting. Otherwise calibration will be needed at shorter intervals.

Contact Duncan's Calibrations Lab for additional info at 800.228.4277.

For Lear technical info, we have the experts. Our Lear Team consists of tech reps and technicians with experience in airframe/engine, interior/exterior completions, avionics installations, component repair and parts.

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Stop by and see us at booth # 5064 during the NBAA in Atlanta.

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