

DUNCAN INTELLIGENCE

Dedicated to "Perfecting the Craft" • Edited by Ron Grose • Fall '99

Helpful Hints About Your Falcon 900

During a recent 2 C inspection on an F-900, Duncan technicians discovered the rudder paddle arms were damaged due to long-term rubbing of the paddle arm against the stainless steel mountings of the paddle brushes. This area should be inspected for adequate clearance.

While recently troubleshooting an F-900 with an inoperative manual pressurization system and a slow-to-pressurize water system, Duncan technicians discovered a broken line coming from the aft service compartment pressurization test port to the tee connection for the potable water system charging air supply. Another F-900 operator also checked his aircraft and found the same fitting to be loose and leaking. Both aircraft had black soot stains around their fittings indicating that they had leaked for some time.

Also there have recently been two F-900's that had the emergency lighting indicator light (5LW) at the cockpit overhead switch, intermittently stay on when the emergency lights are selected to the armed position. The problem was found to be the overhead switch, (2LW). Contacts 1C and 3C were high in resistance when the armed position was selected. The amperage through the contacts was enough to operate the emergency battery packs correctly but was not high enough to operate the relay that controls the indicator light (2LW). This problem is easy to misdiagnose because the contacts control both the battery packs and the indicator light relay, making it easy to assume the contacts are good due to the fact that the packs are working correctly.

For info, contact Ron Grose in LNK at 800.228.4277, E-mail Ron at ron_grose@duncanaviation.com or contact Kevin Bornhorst in BTL at 800.525.2376, E-mail Kevin at kevin_bornhorst@duncanaviation.com

Hydraulic Supply System Pressure Relief Valve Change

Falcon 50, 200 & 900 operators note this change regarding the hydraulic supply system pressure relief valve PN A24518/A24518001:

In the past, Falcon required an NDT inspection on this valve every 1,200 hours, because it was susceptible to cracking; however, they recently reduced the NDT requirement to 600 hours. There is a solution for this new requirement. Operators should consider compliance with amendment "A" for this valve. This replaces the originally designed body with a newly designed replacement, eliminating NDT requirements.

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

Always Preload Your Torque Wench

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.

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AVIATION



For Falcon technical info, we have the experts. Our Falcon 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.