



## Challenger 50 Hour Inspection Report

Aircraft: ..... Registration: ..... Date: .....

Airframe Serial #: ..... Engine Type: ..... Engine Serial #: .....

T.T. Airframe: ..... T.T. Engine: ..... TSOH Engine: .....

1.1) Check journey log and snag book for crew entered defects and correct.....

### ENGINE:

2.1) Overhaul single ignition engines at 150 hours, dual ignition engines at 300 hours.....

2.2) Check timing, fan belt tension and adjust as necessary .....

2.3) Gap and replace spark plugs (ensure lightness of threaded plug tips and receptacles in caps)..

2.4) Check intake manifold(s) for cracks and carburetor for tightness.....

2.5) Check carburetor(s) main jet needles for wear at clips .....

2.6) Change fuel filter.....

2.7) Check fuel lines for leaks, wear and tightness.....

2.8) Check that carburetor(s) reach idle and full throttle positions.....

2.9) Check spark plug leads for condition and tightness.....

2.10) Clean and reoil air filter(s) and secure with lockwire.....

2.11) Check muffler and mount for cracks, springs and retainers for wear and lockwire .....

2.12) Lubricate exhaust ball joint(s) with Loctite anti-seize compound .....

2.12) Check all wiring for chafing, security, etc.....

2.13) Check engine mounts for integrity.....

2.14) Check starter cord for condition (recoil starters).....

2.15) Check and replace or regrease starter clutch bearing (ADS electric starters only), reinstall starter turning casing bolt counter clockwise only .....

### DRIVE SYSTEM:

3.1) If cog belt has 100 hours or 1 year in service, replace.....

3.2) Check belt(s) for wear and tension and lockwire tensioning bolt .....

3.3) Ensure lightness of top pulley nut (100 ft/lbs), lockwire or cotter pin.....

3.4) Check top pulley for excessive bearing play, replace bearings as necessary.....

3.5) Check marks on lower pulley bolt for signs of turning .....

3.6) Check propellor for condition, cleanliness, balance and mounting bolts for lockwire .....

3.7) Check belt(s) for alignment on top and bottom pulleys .....

### COCKPIT:

4.1) Check operation of all controls and adjust tightness of pivot points.....

4.2) Check rudder, aileron and throttle cables for condition, lubricate with WD 40.....

4.3) Check pushrods, stick(s) and cable safeties and lubricate pivot points.....

4.4) Check nosewheel shaft bearing, lubricate with grease and retighten.....

4.5) Check instruments, lines and wiring for integrity.....

4.6) Check seat and seat belt condition and attach points.....

4.7) Check windshield, (doors) for cleanliness, cracks.....

4.8) Drain and clean fuel tank.....

4.9) Check fuel tank and lines for chafing, kinking and integrity.....

4.10) Check fuel tank cap vent hole is unobstructed.....

4.11) Check strut attach brackets, nuts for tightness.....

4.12) Check fabric for condition and cleanliness.....

**WINGS:**

- 5.1) Check wing and aileron leading and trailing edges for dents, straightness.....
- 5.2) Check fabric (and dope) for condition and appearance.....
- 5.3) Check polytips and attach rivets for condition (Dacron wings).....
- 5.4) Check wing spar attach bolts for play, safeties.....
- 5.5) Check struts, jury struts for dents, straightness.....
- 5.6) Check strut attach brackets for cracks, play, safeties .....
- 5.7) Check aileron hinges for condition, ends pinched, lubricate with WD 40.....
- 5.8) Check aileron pushrods, bellcranks for condition, safeties.....
- 5.9) Check clearance sufficient between pushrods, gap cover (Stits wings).....

**EMPENNAGE GROUP:**

- 6.1) Check stabilizers, fin and dorsal attach points for play, safeties.....
- 6.2) Check strut attach brackets for cracks, play and safeties.....
- 6.3) Check stabilizers, elevators, rudder, fin, and dorsal frames for dents, integrity.....
- 6.4) Check stabilizer fin weldments for integrity.....
- 6.5) Check elevator, rudder hinges for integrity, play, safeties.....
- 6.6) Check rudder cables and attach points for wear, cleanliness, lubricate.....
- 6.7) Check elevator pushrods, bellcranks, horns for play, safeties.....
- 6.8) Check fabric, dope for condition and cleanliness.....
- 6.9) Check tailwheel for integrity.....

**LANDING GEAR:**

- 7.1) Check main gear legs for straightness, cracks.....
- 7.2) Check main gear weldments for integrity.....
- 7.3) Check main gear axle weldments for straightness, integrity.....
- 7.4) Check nose gear shaft, fork for straightness, integrity.....
- 7.5) Check all wheel bearings, wheels, tires for condition and integrity.....
- 7.6) Check tire pressures, free rotation of wheels, clearance from wheelpants.....
- 7.7) Check brakes, cables for wear, proper adjustment.....
- 7.8) Check wheelpants, attach brackets for cracks, and cleanliness.....

**GENERAL:**

- 8.1) Service bulletins, advisories complied with.....
- 8.2) Registration, stainless steel data plate on board.....
- 8.3) Journey log entries current, this inspection signed out.....

**IMPORTANT NOTES:** Always use AN type aircraft hardware only on your Challenger. Do not reuse nyloc nuts or cotter pins. Ensure that at least one thread protrudes through nyloc nuts for secure attachment. Do not overtighten fasteners. Use only castle nuts and cotter pins on rotating parts. Where locking type fasteners can not be used, use Loctite on the threads of fasteners. Use only stainless steel rivets for all structural applications.

**REMARKS:**

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I hereby certify that all requirements in this engineering and inspection report have been met, and I have determined the aircraft to be airworthy.

DATE: \_\_\_\_\_

SIGNATURE \_\_\_\_\_

LICENSE # \_\_\_\_\_