

N731DM Annual Condition Inspection

Date Completed: 6-1-24 Total Time: 2491

- **Service Bulletins**
 - Review all Van's Service Bulletins and prepare for compliance
- **Inspect exterior of plane**
 - ✓ Check Lights – Nav, strobe, landing light.
 - ✓ Check Pitot heat
 - ✓ Overall visual inspection of exterior or plane
- **Main Landing Gear:**
 - ✓ Remove wheel pants
 - ✓ Inspect wheel pants and mounting hardware
 - ✓ Inspect main landing gear
 - ✓ Inspect brake lines and calipers
 - ✓ Remove wheels and tires
 - ✓ Install new brake linings - *checked organic*
 - ✓ Inspect brake rotor
 - ✓ Clean wheel and inspect bearings
 - ✓ Inflate tires to 50 psi
 - ✓ Replace wheel pants
- **Nose Wheel:**
 - ✓ Remove Wheel Pant
 - ✓ Inspect Nose Wheel fork and attachment, Nose Gear Leg, and Gear Leg Fairing
 - ✓ Remove Nose Wheel
 - ✓ Inspect bearings
 - ✓ Inflate nose tire to 40 psi
 - ✓ Check Breakout
 - ✓ Replace wheel Pant
- **Mid-to-Aft Fuselage:**
 - ✓ Remove baggage compartment bulkhead panels
 - ✓ Remove flap actuator cover panels
 - ✓ Remove aft tunnel cover
 - ✓ Inspect fuselage between F-705 and F-708
 - ✓ Lubricate elevator and autopilot pushrod ends and bell crank
 - ✓ Lubricate flap pushrod ends
 - ✓ Inspect autopilot servo, wiring, tubing, and antenna connections
 - ✓ Inspect/Test ELT Bat due ~~11/24/24~~ Audio Alert 7/2025 Control Panel 7/20/25
 - ✓ Reinstall all cover panels
- **Tailcone and Empennage:**
 - ✓ Remove empennage fairing and tail inspection panels
 - ✓ Inspect fuselage aft of F-708
 - ✓ Inspect longerons, VS and HS spars, doublers, rivets
 - ✓ Lubricate elevator pushrod end and center elevator hinge
 - ✓ Lubricate elevator hinge rod ends with
 - ✓ Lubricate rudder hinge rod ends with
 - ✓ Inspect rudder cable clevis ends and hardware

N731DM Annual Condition Inspection

- ✓ Inspect rudder stops
- ✓ Inspect exterior of tail surfaces for cracks
- ✓ Perform SB 14-01-31 - Horizontal Stab Cracking ✓ 5 24
- ✓ Perform SB 00036 - Outboard Elevator Hinge Bracket *inspect. SB 23 by S. J. S. ✓*
- ✓ Inspect elevator & rudder
- ✓ Inspect elevator & rudder counterweights for security
- ✓ Perform 14-02-05 - Elevator spar web cracking - ✓
- ✓ Inspect static ports
- ✓ Inspect Dynon / Garmin Magnetometers and wiring
- Right wing:
 - ✓ Remove right wing root fairing
 - ✓ Inspect fuel tank root rib for leaks
 - ✓ Inspect fuel and vent tubing and fittings
 - ✓ Inspect fuel quantity sender
 - ✓ Inspect TOP exterior wing surfaces for cracks
 - ✓ Inspect TOP aileron exterior for cracks
 - ✓ Inspect TOP flap exterior for cracks
 - ✓ Inspect fuel cap
 - ✓ Remove lower access panels
 - Remove wing tip (optional)
 - Inspect Glide Slope antenna and strobe/position light wires & connections
 - ✓ Actuate flap and Inspect through range of travel
 - ✓ Inspect fuel tank exterior for leaks
 - ✓ Inspect BOTTOM exterior wing surfaces for cracks
 - ✓ Inspect BOTTOM aileron exterior for cracks
 - ✓ Inspect BOTTOM flap exterior for cracks
 - ✓ Inspect flap hinge & check pins secure - lube
 - ✓ Inspect interior wing structure and interior of skins
 - ✓ Inspect condition of pushrods
 - ✓ Inspect aileron hinge brackets
 - ✓ Inspect aileron counterweight "pipe"
 - ✓ Inspect bellcrank & pushrod ends for play and wear
 - ✓ Inspect autopilot servo, linkages, and connector
 - ✓ Lubricate lower flap pushrod end bearing
 - ✓ Lubricate bellcrank & rod end bearings
 - ✓ Lubricate aileron hinges
 - ✓ Inspect fuel tank interior
 - ✓ Inspect fuel drain
 - ✓ Inspect front spar
 - ✓ Inspect wing root & rear spar attach point
 - ✓ Perform SB 16-03-28 - Aft Spar Cracking - *Inspect - Already Performed ✓*
 - Reinstall wing tip if removed
 - ✓ Reinstall lower access panels
 - ✓ Reinstall wing root fairing
- Left wing:

N731DM Annual Condition Inspection

- ✓ Remove left wing root fairing
- ✓ Inspect fuel tank root rib for leaks
- ✓ Inspect fuel and vent tubing and fittings
- ✓ Inspect fuel quantity sender
- ✓ Secure fuel quantity sender wire
- ✓ Inspect TOP exterior wing surfaces for cracks
- ✓ Inspect TOP aileron exterior for cracks
- ✓ Inspect TOP flap exterior for cracks
- ✓ Inspect fuel cap - lube
- ✓ Remove lower access panels
- Remove wing tip (optional)
- ✓ Inspect pitot tube, lights, and wiring
- Actuate flap and inspect through range of travel
- ✓ Inspect fuel tank exterior for leaks
- ✓ Inspect BOTTOM exterior wing surfaces for cracks
- ✓ Inspect BOTTOM aileron exterior for cracks
- ✓ Inspect BOTTOM flap exterior for cracks
- ✓ Inspect flap hinge & check pins secure - lube
- ✓ Inspect interior wing structure and interior of skins
- ✓ Inspect aileron hinge brackets
- ✓ Perform SB 16-03-28 - Aft Spar Cracking ✓ Inspect - Already done - both sides ✓
- Inspect condition of pushrods
- ✓ Inspect aileron counterweight "pipe"
- ✓ Inspect bellcrank & pushrod ends for play and wear
- ✓ Lubricate lower flap pushrod end bearing
- ✓ Lubricate bellcrank & rod end bearings
- ✓ Lubricate aileron hinges
- ✓ Inspect fuel tank interior
- ✓ Inspect fuel drain
- ✓ Inspect pitot tube
- ✓ Inspect front spar
- ✓ Inspect wing root & rear spar attach point
- Reinstall wing tip if removed
- ✓ Reinstall lower access panels
- ✓ Reinstall wing root fairing
- Cabin:
 - Remove Canopy – optional – O-ring #53
 - ✓ Remove seat cushions, seat backs, front trim pieces
 - ✓ Remove carpet
 - ✓ Remove spar cabin cover
 - ✓ Inspect elevator pushrod tunnel
 - ✓ Inspect flap actuator
 - ✓ Inspect spar and center section
 - ✓ Inspect rear spar beneath seat pans
 - ✓ Inspect antenna connections

N731DM Annual Condition Inspection

- ✓ Inspect control column, sticks, and pushrods
 - ✓ Lubricate all pushrod end bearings
 - ✓ Lubricate control column bearings
 - ✓ Inspect brake system for leaks
 - ✓ Inspect rudder pedal weldments, cables
 - ✓ Inspect wiring
 - Replace clock battery
 - ✓ Inspect fuel lines and connections
 - ✓ Inspect firewall and forward fuselage structure
 - Reinstall canopy
 - ✓ Inspect canopy for cracks
 - ✓ Inspect canopy latch
 - ✓ Inspect Oxygen Bottle Next Hydro due 3/2029
- New fire Extinguisher
old one broke*
- Fuselage:
 - ✓ Clean belly
 - ✓ Inspect exterior surfaces for cracks
 - ✓ Inspect external antennas
 - ✓ Inspect fuel vents
 - Engine:
 - ✓ Remove all cowls and the plenum
 - ✓ Inspect plenum inputs
 - Drain oil/filter
 - Remove and clean oil screen (split toward case – 135 past contact)
 - ✓ Open and clean gascolator and screen
 - ✓ Visually inspect all engine/firewall components
 - Remove and clean fuel injectors (Torque 60 in lb)
 - ✓ Remove bottom spark plugs
 - ✓ Perform differential compression test:
 - #1: 79
 - #2: 80
 - #3: 80
 - #4: 76
 - ✓ Borescope all cylinders
 - ✓ Remove top spark plugs
 - ✓ Inspect alternator belt for condition and tension (7-9 foot pounds - used)
 - ✓ Inspect starter ring gear teeth
 - ✓ Replace top spark plugs *15 ft lb - 22 ft lb - Reduce*
 - ✓ Inspect then reinstall bottom thin wire spark plugs
 - ✓ Remove filter air box
 - ✓ Clean and oil air filter with K&N air filter cleaner
 - ✓ Lubricate engine controls
 - ✓ Check brake fluid level, inspect reservoir
 - ✓ Reinstall air filter and air box
 - ✓ Check Lightspeed timing
 - ✓ Check Slick mag timing, 22° BTDC

N731DM Annual Condition Inspection

- ✓ Rebuild Slick mag every 500 hours (Next Due 2560 hrs)
- ✓ Inspect all spark plug wires (replace upper every 1000 hrs - Due 2900) *Due 3000 hrs*
- ✓ Inspect exhaust for cracks
- ✓ Inspect engine mount for cracks
- ✓ Inspect firewall
- ✓ Inspect oil cooler
- ✓ Inspect Scat tubing
- ✓ Inspect hoses and fittings
- Clean engine
- ✓ Torque intake bolts (70 ftlb)
- ✓ Torque exhaust bolts (140 ftlb)
- Replace nose gear attach bolt
- ✓ Inspect top and bottom cowling and attach hinges *Repair*
- Reinstall plenum and cowling
- **Propeller:**
 - ✓ Remove & Inspect spinner
 - ✓ Inspect spinner bulkheads for cracks
 - ✓ Inspect prop attach hardware and safety wire
 - ✓ Inspect and clean prop hub exterior
 - ✓ Check blade track (do prior to installing spark plugs)
 - ✓ Inspect propeller condition
 - ✓ File/smooth out nicks