N4389U

1964 Cessna

Model: 150D, S/N: 15060389

Engine: Continental O-200A, S/N: 4077-3-A

Prop: McCauley 1A100/MCM6950, S/N: 40907
(Static RPM limit: 2375-2475RPM)

Accessories:

Magnetos: Bendix/Kelly (LH) S4LN-21, P/N: 10-51360-37, S/N: E-04348 / A147298, “A” “F”
Bendix/Kelly (RH) S4LN-21, P/N: 10-51360-37, S/N: E-04346 / 24358, “A” “F”
Fuel Carb: Marvel MA-3SPA; P/N: 10-4115-1; S/N: AV-0-453; *Black,*"V"
Generator: Delco-Remy P/N: 1101898; S/N: 1884, 12V/35A
Starter: Delco-Remy P/N: 1109656; S/N: 32868
Vacuum: Rapco 215CC-9, S/N: 186386
Air/Oil Separator: Garwin G4024
Air filter: Challenger CP1150/CP0711
ELT: Narco ELT 10, S/N: 23165 (121.5Mhz); Battery: BP-1010
Airframe Battery: Concorde RG-25

Airworthiness Compliance Records
Compiled by: CopaAir Maintenance Services, Inc

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Date: March 26, 2024
To: Roman Blevins

Times:
Time Flown since Last Inspection (03/23): 44.51
Airframe Total Time: 4,160.6 (*Tach: 4160.6*)
Engine SMOH (12/95): 630.6
Propeller SMOH: (??/??): *No Record*

TBO: 1800Hrs / 12 Years ***(1,169.4 Remaining)***
TBO: 2000Hrs / 6 Years ***(Unknown Remaining)***

Critical Components:
Right Mag SMOH (06/16): 264.1
Left Mag SMOH (06/16): 264.1
Carb SMOH (04/73): 1661.7

500 Hour Inspection (06/16): 264.1 ***(235.9 Remaining)***
500 Hour Inspection (06/16): 264.1 ***(235.9 Remaining)***

Notable Recurring AD's:
AD#11-10-09; Every 100hrs/12mos the seat tracks, rollers and components must be inspected. ***Next due - Tach:4260.6 / March 2025***
AD#94-05-05; This AD requires NDT inspection of the rocker bosses anytime a cylinder is removed.

Recurring Events:
Transponder 2Yr Check (FAR 91.413): ***Expires 03/25*** *(Certain limitations apply for flying without this 2-yr check - see FAR 91.215 (b).)*
Pitot/Static 2Yr Check (FAR 91.411 - IFR): ***No Record***
Aircraft Registration Renewal: *Due every 3yrs (Listed as expiring **Feb 2030** on FAA site)*
ELT Battery: ***Expired Feb 2024***

Inspection Report Summary:
Powerplant: All engine cylinder compressions were acceptable (69/80+). Cylinder borescope inspections revealed some abnormal valve face burn pattern and pitting on the valve seats; cylinder walls had normal wear & pitting. Magneto timing was checked and found within limits; spark plug color & condition indicated normal operation. Engine screen inspection indicated no abnormal wear trend; carbon was the predominant particle present. Engine achieved 2360 RPM; engine power output is acceptable. Tach reads aprx 100RPM high at static RPM. Engine control rigging checked. Fuel system drains and screens inspected (water & debris found). All other normal inspection and lubrication was completed.

Airframe: Internal airframe inspections revealed several areas of active corrosion cells throughout the airframe; CorrosionX was applied during close-out. Control surface bellcranks and rod ends were inspected and lubricated and travels were checked. Landing gear components were inspected and all wheel bearings were inspected and greased. All other normal inspection, servicing and lubrication was carried out.

In case you were wondering…

Our goal is simple: we desire to earn your trust so you'll keep coming back time and time again. This means being honest, striving for excellence in our work, treating you fairly and doing our best to communicate clearly.

Repair costs for labor are estimates - all labor is billed by the hour unless otherwise stated.

Parts prices are subject to change. Shipping costs are not often included in this report. We do mark-up our FBO pricing which covers our risk in buying parts, costs associated with returns and so on. Additionally, often we receive free shipping with our orders which we pass on to you.

No payment for repairs is due in advance. Payment is due upon receipt of the invoice, which is typically sent upon the completion of work. Any invoices not paid upon receipt are subject to a minimum 3% fee for every 30 days of non-payment.

Courtesy Items:

►*Items we found and fixed at no charge during the course of the inspection.*

- ✓ Replaced fuel strainer gaskets that were badly cracked and hard (**see picture**).(P/N: FC26510)
- ✓ Replaced fuel cap gaskets that were badly cracked and hard (**see picture**).(P/N: FC26510)
- ✓ Replaced left wing fuel drain that was rusted and stuck (**see picture**). (P/N: CAV-170)
- ✓ Found nose strut over serviced with hydraulic fluid and empty of air and serviced correctly (**see picture**).
- ✓ Applied CorrosionX to airframe.
- ✓ Checked AD compliance, compiled report, and complied with several recurring AD's.

Airworthiness Items - Action Required:

►*Airworthiness items that affect the safety or certified status of the aircraft.*

Airframe Structure:

- The left and right wing forward spar doubler, P/N: 0523316 & 0523316-1, at the strut attach points have localized severe corrosion **(see 5 pictures).** This is a safety concern as this represents compromised structure and must be corrected.
  Repair:
  - Several options were explored for repair or replacement of the angle parts, including DER engineering assistance. Unfortunately, all options are beyond economical feasibility when compared with simply replacing the wings.

  Replacement
  - Remove both wings. *(Est. $750-$1,250±)*
  - Install serviceable wings and rig cables and wing wash-out. *(Est. $1,000-$1,500±)*
  - *Repair cost: Hourly (Est. $1,750-$2,750±), plus parts $3750±ea, plus wing pick-up or freight costs (Flying Colors Airparts)*

- The lower attachment point the right pilot brake pedal has ripped out of the underlying rib (**see 2 pictures, 3 videos**). This prevents actuation of the brake and is also a safety concern as this represents compromised structure and must be corrected.
  - Gain access to 0411349-2 bulkhead by removing brake cylinders and rudder pedal assembly. *(Est. $250-$375±)*
  - Repair bulkhead at attachment point(s) for anchor, P/N: 0713624-1, by installing a riveted reinforcement plate using AC43.13-1B for guidance. *(Est. $375-$500±)*
  - Reinstall rudder pedal assembly, connect and rig rudder cables, install master brake cylinders, bleed system and close out cabin. *(Est. $750-$1,000±)*
  - *Repair cost: Hourly (Est. $1,375-1,875±), plus materials: $50±*

Flight Controls:

- The flight control travels and tensions were checked. The rudder and elevator travels were out of spec for this model and must be corrected.
  - Reduce rudder travel to 16°L/R.
  - Adjust elevator travel to 25° Up/ 15° Dn.
  - *Repair cost: Hourly (Est. $375-$500±)*

Engine:

- The throttle cable is not properly secured at the engine mount and moves freely (**see picture & video**). This is a safety concern because an unsecured throttle cable could slip and doesn't allow for positive control. Additionally, the safety wire for the carb throttle arm does not currently comply with AD#72-06-05.
  - Replace throttle cable clamps as appropriate to ensure proper security and rigging.
  - Correct safety wire installation for carb throttle arm per AD#72-06-05.
  - *Repair cost: Hourly (Est. $250-$375±), plus hardware: $20±*

- The magnetos are not fully grounded in the "off" position due to a worn ignition switch. (**see picture**). This is a safety concern because an ungrounded magneto is a ground handling hazard.
  - Replace magneto switch with new switch, P/N: A-510-5.
  - *Repair cost: Hourly (Est. $125-$250±), plus parts: $177±*

- The right engine baffling has a large compound crack in between cylinder #3 & #1. (**see picture**). This is a safety concern because the baffling is nearly broken in half which could cause a substantial loss of cylinder cooling, should it fail completely.
  - Install a new baffling section, P/N: AF0450502-16.
  - *Repair cost: Hourly (Est. $125±), plus parts: $343±*

Emergency Beacon & Placards:

- The ELT battery expired at the end of February (**see picture**). You should be aware that this old-style 121.5Mhz ELT is no longer monitored by satellite and is being phased out. New 406Mhz ELT's are monitored by satellite, are registered to you with your personalized emergency contact info and include a new antenna, remote control, warning horn and a 5-year battery.
  - Install ACK E-04 406Mhz ELT installation kit.
  - Registration to be completed by owner.
  - *Repair cost: Hourly (Est. $625-$875±), plus parts: $814±*

  ~OR~
  - Replace ELT battery, P/N: BP-1010.
  - *Repair cost: Hourly (Est. $65±); plus parts: $70±*

- The fuel tank capacity and octane placards are missing (**see picture**). This and other placards, such as the flap handle placard, are required by the aircraft's type certificate, and must be installed.
    - Install fuel tank capacity and octane placard, per TCDS 3A19, Note 2 (K).
    - Install flap handle placard, per TCDS 3A19, Note 2, (B)(2).
    - *Repair cost: Hourly ($65±), plus materials: $25±*

To Do ALL Airworthiness Items:

Labor Costs:	***Parts Costs:***	***Total Costs:***
$4,130-$6,815±	**$8,185-$8,929±**	**$12,315-$15,744±**

Optional Recommended Items:

►*Optional items that are recommended in the interest of aircraft preventive maintenance.*

Structure & Fairings:

- The cowling was secured with a variety of screw types due to worn and failed nutplates (**see 2 pictures**). Installation of new nutplates will allow for uniform hardware that stays secured.
    - Replace lower cowling nutplates, as needed, to allow for uniform cowling hardware installation.
    - *Repair cost: Hourly ($250-$375±), plus materials: $30±*

- The top cowling has a curved angle stiffener that is cracked (**see picture**). Repair of this stiffener will preserve proper rigidity of the top cowl in the vicinity of the oil access door.
    - Repair cracked top cowl curved angle stiffener with riveted reinforcement, using AC43.13-1B as guidance.
    - *Repair cost: Hourly ($250-$375±), plus materials: $20±*

Propeller:

- The propeller has no overhaul history and has significant corrosion cells growing on the blades (**see picture**). If this is left too long, you may end up causing the prop to be scrapped due to excessive metal loss from corrosion.
    - Remove propeller for pick-up by Aviation Propeller Works. Perform refinish and paint and/or overhaul, including prop bolts non destructive testing and re-plating.
    - *Repair cost: Hourly ($125-$250±), plus sub-contract: $704± (Refinish) / $1,123± (Overhaul), plus bolt NDT: $119±*

Engine:

- The cylinders were inspected using an endoscope. The exhaust valves for all the cylinders, except for cylinder #4, showed signs of uneven burn and seating (**see 6 pictures**). This is an excellent time to act, particularly for cylinder #1 & #3. We can lap the valves in place which will increase cylinder compression, help the exhaust valves pass heat more evenly and possibly prevent valve and seat damage that would otherwise require costly cylinder removal.
    - Lap the exhaust valves for cylinders #1, #2 & #3.
    - Check valve to guide clearance and ream guides if necessary.
    - Install covers with new gaskets, P/N: RG530162.
    - *Repair cost:Hourly (Est. $750-$1,000±), plus materials: $60±*

- The engine baffling near cylinder #2 has a large 2" crack at the top of a support bracket (**see 2 pictures**).
    - Install a riveted reinforcement plate over the back of the cracked baffle near the cylinder #2 baffle support bracket.
    - *Repair cost:Hourly (Est. $250-$375±), plus material: $20±*

Fuel System:

- The fuel supply line that runs from the firewall to the carburetor has no firesleeve installed and is close to the exhaust (**see picture**). Without firesleeve, flexible lines in the engine compartment tend to age prematurely due to heat exposure. Additionally, should a fire or exhaust leak occur, firesleeve will help to protect this line.
    - Install firesleeve over the existing flexible carb inlet fuel line.
    - *Repair cost: Hourly ($125±), plus materials: $75±*

Landing Gear:

- The nose wheel shimmy dampener can be seen leaking fluid past the shaft seal and needs resealed and serviced (**see picture**).
    - Remove shimmy dampener and reseal.
    - *Repair cost:Hourly ($125-$250±), plus materials: $20±*

- The right main wheel brake pads are nearly worn down to the rivets and should be replaced (**see picture**).
    - Replace right main wheel brake pads, P/N: RA66-106.
    - *Repair cost:Hourly ($125-$250±), plus materials: $25±*

Instruments & Lights:

- The instrument panel shock mounts that hold the primary flight instruments are ripped **(see picture & video)**. Without these shock mounts, the instruments are sitting on the main panel and will have shortened service lives due to vibration.
    - Replace instrument panel shock mounts, P/N:J-6984-1.
    - *Repair cost: Hourly (Est. $375-$500±) plus parts: $28±*

- The ammeter is difficult to read due to its location and only appears to show a discharge even though the system was confirmed to be charging **(see picture)**.
    - Troubleshoot ammeter wiring to determine cause for lack of positive charge indication. Report findings to owner for further action.
    - *Repair cost: Hourly (Est. $250-$375±)*

- The instrument lighting switch is intermittent, likely due to worn rheostat contact points **(see picture)**. A new MaxDim solid state controller can be installed for positive, reliable control.
    - Replace instrument panel lighting rheostat with MaxDim controller, Model A. Installation covered under STC# SA01800SE.
    - *Repair cost: Hourly (Est. $375-500±), plus parts: $342±*

- The tail beacon light is heavy, noisy and outdated **(see picture)**. A new Whelen Orion 360 tail beacon is lighter with bright LED's for maximum visibility. We've installed several and can attest that they're high quality.
    - Replace rotating tail beacon with Whelen Orion 360, P/N: OR36R1W..
    - *Repair cost: Hourly (Est. $250-$375±), plus parts: $735±*

- The left wing landing light lens is badly crazed **(see picture)**.
    - Replace left wing landing light lens, P/N: 0523115-5.
    - *Repair cost: Hourly (Est. $250-$375±), plus parts: $103±*

Cabin:

- The cabin headliner is sagging **(see picture)**. This is simply due to age and the hanging loops dry-rotting.
    - Replace cabin headliner with off-white vinyl headliner kit.
    - Blast and epoxy primer headliner bows as necessary.
    - *Repair cost: Hourly (Est. $1,000-$1,250+/-) plus parts: $210±*

To Do ALL Optional Items:

Labor Costs:	***Parts Costs:***	***Total Costs:***
$4,500-$6,375±	**$2,491-$2,910±**	**$6,991-$9,285±**

Customer Squawks:

►*Items requested or noted by the owner or pilot before the inspection.*

- Left wing sump rusted & stuck - *See Courtesy Items List.*

Estimated repair costs are given for your convenience only.