

ENGINE S/N
L-33609-S1E

AIRCRAFT TECHNICAL LOGS

Section 3. ENGINE

LYCOMING

A Textron Company

652 Oliver Street
Williamsport, PA 17701 U.S.A.

WARRANTY
RECORD

ENGINE SERIAL NUMBER

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DETACH AND RETAIN THIS PORTION FOR YOUR RECORD

The United States of America
Department of Transportation
Federal Aviation Administration
Washington, D.C.

No. E 407340

Export Certificate of Airworthiness

This certifies that the product identified below and more particularly described in Specification (s)¹ of the Federal Aviation Administration, Numbered **1E10** has been examined and as of the date of this certificate, is considered airworthy in accordance with a comprehensive and detailed airworthiness code of the United States Government, and is in compliance with those special requirements of the importing country filed with the United States Government, except as noted below. This certificate in no way attests to compliance with any agreements or contracts between the vendor and purchaser, nor does it constitute authority to operate an aircraft.

Product: **Aircraft Engine**

Manufacturer: **Lycoming Engines**

Model: **IO-360-M1A**

Serial No.: **L-33609-51E**

New Newly Overhauled

Used Aircraft

Country to which exported: **Canada**

Exceptions: **None**



F.H. Hill, Jr.

Signature of Authorized Representative

ODARF830878NE

District Office or Designee Number

June 11, 2007

Date

¹ For complete aircraft, list applicable specification or Type Certificate Data Sheet numbers for the aircraft, engine, and propeller. Applicable specifications or Type Certificate Data Sheet, if not attached to this export certificate, will have been forwarded to the appropriate governmental office of the importing country.

ENGINE LOG

- 1. Make LYCOMING
- 2. Model IO-360-M1A
- 3. Specification 1E10
- 4. Manufacturer's Serial Number L-33609-51E
- 5. Date of Manufacture _____
- 6. Aircraft Inspection Cycle _____

NEW RECIPROCATING ENGINE CERTIFICATE

This is to certify that the engine as described hereinafter has been manufactured run-in and tested as prescribed by **LYCOMING** specifications and Federal Aviation Regulations. No further run-in is required. All applicable Federal Aviation Airworthiness Directives and Lycoming Service Bulletins have been complied with at time of Manufacture.

MODEL IO-360-M1A SERIAL NO. L-33609-51E
DATE JUN 11 2007 _____
(AUTHORIZED REPRESENTATIVE)

LYCOMING
A Textron Company

LYCOMING ENGINES
652 Oliver Street
Williamsport, PA 17701 U.S.A.

MAINTENANCE RECORD

REPAIRS, ADJUSTMENTS, MODIFICATIONS

ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.

SIGNATURE

LICENCE NUMBER

40.836

[Handwritten Signature]

DA
Q 42

[Handwritten Signature]

DA
Q 42



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
PHONE: (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. CW 25 Hour Inspection.
2. Drained Oil, Removed Oil Filter, Cut Open and Inspected Found Satisfactory. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
3. Installed New # 1 Intake Gasket, P/N: 71973.
4. Installed and Secured Loose Winter Baffle Receptacle.

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL M.M.

Date: 3-28-08 AFTT: 25.7 Tach: 25.7 Eng TSN: 25.7 W/O No: 40-05625

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams *[Signature]* for,

Winner Aviation Corporation Certified Repair Station W6NR985J

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
PHONE: (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE
Lycoming IO-360-M1A <> S/N: L-33609-51A
N645WT <> Diamond DA40XL <> S/N: 40.836

C/W Annual inspection in accordance with Diamond inspection guide and accomplished the following:

1. Drained Oil, Removed Oil Filter, and Inspected Filter. Oil Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
2. C/W Compression Check; #1 75; #2 75; #3 78; #4 75; All Over 80 PSI.
3. Installed New Exhaust Muffler Leather Strap, P/N: 05-6000.
4. AD 2008-08-14, Precision Fuel Servo Valve, Superseded to AD 2009-02-03.
5. AD 2008-19-05, ECI Engine Components, N/A, No ECI Cylinders or Parts Installed.
6. C/W AD 2008-14-07, Fuel Injector Fuel Line Inspection, per SB 342E. Due Every 100 Hours.
7. C/W AD 2009-02-03, Precision Fuel Servo Valve, per SB PRS-107R4. Installed New Gasket, P/N: 2577258. Terminates Recurring AD.
8. All ADS checked through 2009-15.

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL and Lycoming M.M.

Date: 8-6-09 AFTT: 139.3 Eng TSN: 139.3 W/O No: 40-06181

I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in Airworthy condition and is approved for return to service. Signed: Jeffrey D. Williams for
Winner Aviation Corporation, W6NR985J



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ENGINE
Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Drained Oil, Removed Oil Filter, Cut Open and Inspected Found Satisfactory. SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL and Lycoming M.M.

Date: 11-6-09 AFTT: 195.9 Tach: 195.9 Eng TSN: 195.9 W/O No: 40-06268

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams Jeffrey D. Williams for,
Winner Aviation Corporation Certified Repair Station W6NR985J



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ENGINE
Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Installed New Starter (Sky Tec), P/N: 148-24LS, S/N: F4L-390902. Removed P/N: 148-24LS, S/N: F4L-180701

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL and Lycoming M.M.

Date: 2-18-10 AFTT: 211.2 Tach: 211.2 Eng TSN: 211.2 W/O No: 40-06377

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams Jeffrey D. Williams for,
Winner Aviation Corporation, CRS# W6NR985J



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
 PHONE: (330) 856-5000 • FAX: (330) 856-4582 • CRSW6NR985J

ENGINE

**Lycoming IO-360-M1A <> S/N: L-33609-51E
 N645WT <> Diamond DA40XL <> S/N: 40.836**

1. Drained Oil, Removed Oil Filter, Cut Open and Inspected Found Satisfactory. SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL and Lycoming M.M.

Date: 7-27-10 AFTT: 246.4 Tach: 246.4 Eng TSN: 246.4 W/O No: 40-06537

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams *Jeffrey D. Williams* for,

WINNER AVIATION CORPORATION, CRS # W6NR985J



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
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ENGINE

**Lycoming IO-360-M1A <> S/N: L-33609-51A
 N645WT <> Diamond DA40XL <> S/N: 40.836**

C/W Annual inspection in accordance with Diamond inspection guide and accomplished the following:

1. C/W Engine Compression Check: #1 75; #2 75; #3 75; #4 75; All Over 80 PSI.
2. C/W 100 / 200 Hour Inspection Items.
3. C/W Power Flow Exhaust System Instructions for Continued Airworthiness I.A.W. Report # PFS-15250-00. Due Every Annual Inspection.
4. Installed All New Spark Plugs, P/N: REM38E (8 Each).
5. **AD 2009-13-10, Ontic Prop Governor.** N/A, Ontic Governor Not Installed.
6. **AD 2009-26-12, ECI Engine Components.** N/A, No Cylinders Replaced Since New.
7. **C/W AD 2008-14-07, Fuel Injector Fuel Line Inspection,** per SB 342E. Due Every 100 Hours.
8. All ADS checked through 2010-17.

All work performed I.A.W. Diamond DA40XL and Lycoming M.M. Operational and leak checks satisfactory.

Date: 9-9-10 AFTT: 259.2 Tach: 259.2 Eng TSN: 259.2 W/O No: 40-06577

I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in Airworthy condition and is approved for return to service

Signed: Jeffrey D. Williams *Jeffrey D. Williams* for,

WINNER AVIATION CORPORATION, CRS # W6NR985J

ENGINE SERVICE AND

| DATE | TIME RUN | | TIME SINCE OVERHAUL | |
|-----------------|----------|------|---------------------|------|
| | HRS. | MIN. | HRS. | MIN. |
| BROUGHT FORWARD | ➔ | | | |

NOTE: USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE INSTALLATIONS, INSPECTIONS,



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
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ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Drained Oil, Removed Oil Filter, Cut Open and Inspected Found Satisfactory. SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
2. Removed all 4 (EA) fuel injectors. Cleaned as required and reinstalled to engine.

Above systems ground operational and leak checked satisfactory I.A.W Diamond DA40XL and Lycoming M.M.

Date: 1-14-2011 AFTT: 298.2 Tach: 298.2 Eng TSN: 298.2 W/O No: 40-06698

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Michael Price  for,

Winner Aviation Corporation Certified Repair Station W6NR985J



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
 PHONE: (330) 856-5000 • FAX: (330) 856-4582 • CRSW6NR985J

ENGINE

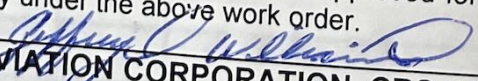
Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Drained Oil, Removed Oil Filter and Inspected. Oil SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
2. Removed, Cleaned, Gapped, Inspected, Rotated and Installed All 8 Spark Plugs.
3. Adjusted Magneto Timing to 25* BTDC.

All Work Performed I.A.W Lycoming and Diamond DA40XL M.M. Operation and Leak Check Satisfactory.

Date: Aug. 16, 2011 AFTT: 348.8 Tach: 348.8 Eng TSN: 348.8 W/O No: 40-06924

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams  for,

WINNER AVIATION CORPORATION, CRS # W6NR985J

MAINTENANCE RECORD



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
PHONE (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51A
N645WT <> Diamond DA40XL <> S/N: 40.836

C/W Annual inspection in accordance with Diamond inspection guide and accomplished the following:

1. C/W Engine Compression Check: #1 75; #2 75; #3 75; #4 75; All Over 80 PSI.
2. C/W 100 / 200 Hour Inspection Items.
3. C/W Power Flow Exhaust System Instructions for Continued Airworthiness I.A.W. Report # PFS-15250-00. Due Every Annual Inspection.
4. C/W AD 2008-14-07, Fuel Injector Fuel Line Inspection, per Lycoming SB 342E. Due Every 100 Hours.
5. AD 2011-15-10, Superior & Lycoming Fuel Servo. N/A, Fuel Servo was Never O/H, Serviced or Diaphragm Replaced Since New.

All work performed I.A.W. Lycoming and Diamond DA40XL M.M. Operational and leak checks satisfactory.

Date: Sept. 16, 2011 AFTT: 361.1 Tach: 361.1 Eng TSN: 361.1 W/O No: 40-06946

I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in Airworthy condition and is approved for return to service.

Signed: Jeffrey D. Williams  for,

WINNER AVIATION CORPORATION, CRS # W6NR985J



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
PHONE (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Drained Oil, Removed Oil Filter and Inspected. Oil SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
2. C/W 500 Hour Left Magneto Inspection. Removed Magneto and Sent Out for Inspection. Installed Inspected by (Professional Aircraft Accessories, Inc.) Magneto, P/N: 4347, S/N: 07051371.
3. C/W 500 Hour Right Magneto Inspection. Removed Magneto and Sent Out for Inspection. Installed Inspected by (Professional Aircraft Accessories, Inc.) Magneto, P/N: 4370, S/N: 07051579.
4. Installed New Slick Start Booster, P/N: SS1001, S/N: 08177-016 I.A.W. Slick SL 2-96.
5. Removed, Cleaned, Gapped, Inspected, Rotated and Installed All 8 Spark Plugs.
6. Adjusted Idle Mixture as Required.

All Work Performed I.A.W Lycoming and Diamond DA40XL M.M. Operation and Leak Check Satisfactory.

Date: May 8, 2012 AFTT: 388.1 Tach: 388.1 Eng TSN: 388.1 W/O No: 40-07218

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams  for,

WINNER AVIATION CORPORATION, CRS # W6NR985J

ENGINE SERVICE AND



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
PHONE (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51A
N645WT <> Diamond DA40XL <> S/N: 40.836

C/W Annual inspection in accordance with Diamond inspection guide and accomplished the following:

1. Drained Engine Oil, Removed Oil Filter - Cut Open and Inspected. Oil SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced with 8 Quarts of Phillips 20W-50 Oil.
2. C/W Engine Compression Check: #1 76 ; #2 76 ; #3 75 ; #4 76 ; All Over 80 PSI.
3. C/W 100 / 200 Hour Inspection Items.
4. C/W Power Flow Exhaust System Instructions for Continued Airworthiness I.A.W. Report # PFS-15250-00. Due Every Annual Inspection.
5. C/W AD 2011-26-04, Fuel Injector Fuel Line Inspection per Lycoming SB 342F. Due Every 100 Hours.
6. AD 2012-19-01, Lycoming Crankshaft. N/A, Engine Model and S/N Not Listed in SB MSB569A.
7. AD 2012-03-06C, AVSTAR Fuel Servo. N/A, Fuel Servo was Not Repaired, Overhauled or Replaced in Time Specified in SB AFS-SB6 R2.

All work performed I.A.W. Lycoming and Diamond DA40XL M.M. Operational and leak checks satisfactory.

Date: Oct. 15, 2012 AFTT: 431.9 Tach: 431.9 Eng TSN: 431.9 W/O No: 40-07402

I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in Airworthy condition and is approved for return to service.

Signed: Jeffrey D. Williams

WINNER AVIATION CORPORATION, CRS # W6NR985J

for,

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|--|--|--|--|--|--|
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YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
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ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51E
N645WT <> Diamond DA40XL <> S/N: 40.836

1. Drained Oil, Removed Oil Filter - Cut Open and Inspected. Oil SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced Engine with 8 Qts of Phillips 20W-50 Oil.
2. Installed Rebuilt Starter, P/N: 149-24LS, S/N: F4L-060504. All Work Performed I.A.W. Sky Tec Installation Instructions and Diamond DA40XL M.M.

All Work Performed I.A.W Lycoming and Diamond DA40XL M.M. Operation and Leak Check Satisfactory.

Date: April 15, 2013 AFTT: 476.4 Tach: 476.4 Eng TSN: 476.4 W/O No: 40-07629

The maintenance operations described above were inspected I.A.W. current Federal Aviation Regulations, and with respect to the work performed the aircraft and or component is approved for return to service for discrepant items above. Details are on file at this agency under the above work order.

Signed: Jeffrey D. Williams

WINNER AVIATION CORPORATION, CRS # W6NR985J

for,

67218
pt. 702
11. Serial Search



YOUNGSTOWN-WARREN REGIONAL AIRPORT • VIENNA, OH 44473
 PHONE (330) 856-5000 • FAX: (330) 856-4582 • CRS W6NR985J

ENGINE

Lycoming IO-360-M1A <> S/N: L-33609-51A
 N645WT <> Diamond DA40XL <> S/N: 40.836

C/W Annual inspection in accordance with Diamond inspection guide and accomplished the following:

1. Drained Engine Oil, Removed Oil Filter - Cut Open and Inspected. Oil SOAP Sample Taken and Sent to Aviation Labs. Installed New Oil Filter, P/N: CH48110-1. Serviced with 8 Quarts of Phillips 20W-50 Oil.
2. C/W Engine Compression Check: #1 75 ; #2 75 ; #3 72 ; #4 75 ; All Over 80 PSI.
3. C/W 100 / 200 Hour Inspection Items.
4. C/W Power Flow Exhaust System Instructions for Continued Airworthiness I.A.W. Report # PFS-15250-00. Due Every Annual Inspection.
5. Installed New Spark Plug, P/N: REM38E (8 Each).
6. C/W AD 2011-26-04, Fuel Injector Fuel Line Inspection per Lycoming SB 342F. Due Every 100 Hours.

All work performed I.A.W. Lycoming and Diamond DA40XL M.M. Operational and leak checks satisfactory.

Date: Oct. 18, 2013 AFTT: 523.8 Tach: 523.8 Eng TSN: 523.8 W/O No: 40-07862

I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in Airworthy condition and is approved for return to service.

Signed: Jeffrey D. Williams  for,

WINNER AVIATION CORPORATION, CRS # W6NR985J



Repair Station #: W6NR985J

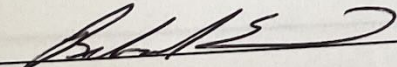
July 16, 2014

| | | |
|--------------------------------|--------------------------------|------------------|
| Registration #: N645WT | Total AC Time: 587.2 | Total AC Cycles: |
| Manufacturer: Diamond Aircraft | Aircraft Serial Number: 40.836 | |
| Part/Model number: DA40XL | Date: 07/16/2014 | |
| Work Order No: PST5138 | | |

Squawk 1.1 DRAINED OIL, AND TOOK SOAP SAMPLE. REMOVED FILTER, CUT OPEN, AND INSPECTED. INSTALLED A NEW FILTER AND 8 QUARTS PHILLIPS 20W50. ALL WORK DONE IAW DIAMOND DA40-180 MM, CHAPTER 12.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST5138.


 Signature

MAINTENANCE RECORD

REPAIRS, ADJUSTMENTS, MODIFICATIONS

ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.

SIGNATURE

North Coast Air Care Inc. 1600 Triplett Blvd Akron, Ohio 44306 (330) 734 0282

06-04-2015 723.6 Tach (airframe) N645WT

Complied with the following this date; Change oil and filter. Drained oil. Cleaned oil suction screen and reinstalled using new crush gasket p/n MS35769-21 as required. Visually inspected engine, accessories for condition; and drive belt tension; no defects noted at this time. Removed and replaced oil filter with new CH48110-1 and split old filter for inspection; no debris noted at this time. Serviced engine with 6 qts using Phillips 20W-50 oil as required. Washed down engine as required. Visually inspected exhaust for security and cracks, leaks, studs and attaching nuts; noted #3 exhaust riser to be cracked. Visually inspected prop for, nicks on blades and looseness in hubs; no defects noted at this time. Checked exterior and interior lights; no defects noted at this time. Visually inspected airframe for obvious damage; loose or missing hardware and cowling for missing fasteners; no defects noted at this time. Cleaned and lubricated flap rollers. Visually inspected flight controls for obvious damage and for looseness; no defects noted at this time. Checked external heats and stall warning horn; for operation. Checked tires for wear and damage; no defects noted at this time. Serviced tires with shop air as needed. Visually inspected brakes linings and disks for wear and checked for caliper leaks; no defects noted at this time. Checked doors for proper closing and latching. Ran for operational and leak check; no defects noted at this time.

#3 cylinder exhaust riser is cracked. Removed tailpipe as required. Inspected tail pipe, ball joint and tailpipe hangar per PFS-15102 page 9 paragraph 5.2 tail pipe; upon inspection of the tailpipe is was noted at the insert was extremely distorted and hangar to be torn and starting to dry rot. Removed exhaust system has required. Removed heat shroud as required. Visually inspected all pipes and shroud per PFS-15102 page 9 paragraph 5.2 tail pipe; no defects noted at this time. Installed new #3 exhaust riser p/n 13550 s/n 15-0376-01 using high temp anti seize p/n Anti-seize s/n 15-0277 in heat exchanger per PFS-15102 page 5 paragraph 4.1 steps 4.1.1, 4.1.2 and 4.1.3 Reinstalled exhaust system using new header gasket packs p/n 10310 s/n 15-0448 per PFS-15102 page 5 paragraph 4.1 steps 4.1.4, 4.1.5 and 4.1.6. Removed and replaced tail pipe insert with new insert p/n PFS-8016 s/n 15-0436 per Power Flow installation instructions Rev. IR. Reinstalled tail pipe using new hangar p/n 211 s/n 14-0901 and new spring kit p/n 10360 s/n 15-0462 per PFS-15102 page 6 paragraph 4.3 step 4.3.1. Ran for operational and leak check; no defects noted at this time.END-----

Ken Gohlke AP 2758310
Ken Gohlke AP 2758310

For North Coast Air Care Inc.

North Coast Air Care Inc. 1600 Triplett Blvd Akron, Ohio 44306 (330) 734 0282

06-04-2015 723.6 Tach (engine) N645WT

Complied with the following this date; Change oil and filter. Drained oil. Cleaned oil suction screen and reinstalled using new crush gasket p/n MS35769-21 as required. Visually inspected engine, accessories for condition; and drive belt tension; no defects noted at this time. Removed and replaced oil filter with new CH48110-1 and split old filter for inspection; no debris noted at this time. Serviced engine with 6 qts using Phillips 20W-50 oil as required. Washed down engine as required. Visually inspected exhaust for security and cracks, leaks, studs and attaching nuts; noted #3 exhaust riser to be cracked. Visually inspected prop for, nicks on blades and looseness in hubs; no defects noted at this time. Ran for operational and leak check; no defects noted at this time.

#3 cylinder exhaust riser is cracked. Removed tailpipe as required. Inspected tail pipe, ball joint and tailpipe hangar per PFS-15102 page 9 paragraph 5.2 tail pipe; upon inspection of the tailpipe is was noted at the insert was extremely distorted and hangar to be torn and starting to dry rot. Removed exhaust system has required. Removed heat shroud as required. Visually inspected remaing pipes and shroud per PFS-15102 page 9 paragraph 5.2; no defects noted at this time. Installed new #3 exhaust riser p/n 13550 s/n 15-0376-01 using high temp anti seize p/n Anti-seize s/n 15-0277 in heat exchanger per PFS-15102 page 5 paragraph 4.1 steps 4.1.1, 4.1.2 and 4.1.3 Reinstalled exhaust system using new header gasket packs p/n 10310 s/n 15-0448 per PFS-15102 page 5 paragraph 4.1 steps 4.1.4, 4.1.5 and 4.1.6. Removed and replaced tail pipe insert with new insert p/n PFS-8016 s/n 15-0436 per Power Flow installation instructions Rev. IR. Reinstalled tail pipe using new hangar p/n 211 s/n 14-0901 and new spring kit p/n 10360 s/n 15-0462 per PFS-15102 page 6 paragraph 4.3 step 4.3.1. Ran for operational and leak check; no defects noted at this time.END-----

Ken Gohlke AP 2758310
Ken Gohlke AP 2758310

For North Coast Air Care Inc.

ENGINE SERVICE AND

| DATE | TIME RUN | | TIME SINCE OVERHAUL | |
|-----------------|----------|------|---------------------|------|
| | HRS. | MIN. | HRS. | MIN. |
| BROUGHT FORWARD | → | | | |

NOTE: INSTALLATIONS, INSPECTIONS, USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE



Repair Station #: W6NR985J

July 10, 2015

Manufacturer: Lycoming
Part/Model number:
Work Order No: PST5782

TSN/TSO: 753.70 / N/A
Serial Number: L-33609-51A
Date: 07/10/2015

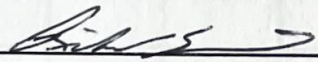
CSN/CSO: N/A / N/A

Squawk

1.1 #2 AND #1 EXHAUST RISER NEED REMOVED - UNABLE TO REMOVE #1 AND #2 EXHAUST RISERS FROM MUFFLER ASSY, SENT MUFFLER ASSY WITH RISERS TO POWER FLOW SYSTEMS, INC. FOR REMOVAL AND INSPECTION, RECEIVED REPAIRED ASSEMBLY P/N 41303 AND INSTALLED EXHAUST IAW POWER FLOW SYSTEMS KIT NUMBER DFS-15012, REV E INSTALLATION INSTRUCTIONS.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST5782.



 Signature

| | | | | |
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Repair Station #: W6NR985J

December 02, 2015

Manufacturer: Lycoming
Part/Model number:
Work Order No: PST6060

TSN/TSO: 777.60 / N/A CSN/CSO: N/A / N/A
Serial Number: L-33609-51A
Date: 12/02/2015

Squawk

- 1.1 CW ANNUAL INSPECTION USING INSPECTION FORM OUTLINED IN DA40-180 MM, CH 5 AS A GUIDELINE
AD'S CHECKED THROUGH 2015-24
- 1.2 CW OIL CHANGE - DRAINED ENGINE OIL, OBTAINED SOAP SAMPLE, REMOVED FILTER AND CUT OPEN TO CHECK FOR CONTAMINANTS, INSTALLED NEW FILTER P/N CH48110-1, SERVICED ENGINE WITH EIGHT QUARTS OF PHILLIPS 20W50, ALL WORK ACCOMPLISHED IAW DA40-180 MM, CH 12.
- 1.3 CW ANNUAL EXHAUST SYSTEM ICA INSPECTION IAW POWER FLOW SYSTEMS ICA INSTRUCTIONS, NO DEFECTS FOUND AT THIS DATE AND TIME.
- 1.4 REMOVED FOUR INJECTORS, CLEANED AS REQUIRED, REINSTALLED INJECTORS, ALL WORK ACCOMPLISHED IAW LYCOMING DIRECT DRIVE MODELS OVERHAUL MANUAL.
- 1.5 CW AD2015-19-07 FUEL INJECTOR LINES PER SB342G INSTRUCTIONS, NO DEFECTS FOUND AT THIS TIME. NEXT DUE IN 100 HOURS
- 1.6 INSTALLED TWO NEW SPARK PLUGS P/N REM38E, WORK IAW LYCOMING DIRECT DRIVE MODEL OVERHAUL MANUAL.
- 1.7 ADJUSTED LH AND RH MAGNETO TIMING AS NEEDED IAW LYCOMING DIRECT DRIVE MODEL OVERHAUL MANUAL.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST6060.

Signature



Repair Station #: W6NR985J

February 07, 2017

Manufacturer: Lycoming
Part/Model number: IO-360-M1A
Work Order No: PST6725

TSN/TSO: 830.60 / 0.00 CSN/CSO: N/A / N/A
Serial Number: L-33609-51A
Date: 02/07/2017

Squawk

- 1.1 CW ANNUAL INSPECTION USING INSPECTION FORM OUTLINED IN DA40-180 MM, CH 5 AS A GUIDELINE, CW COMPRESSION CHECK WITH SATISFACTORY RESULTS AS FOLLOWS: #1 - 76/80 #2 - 75/80 #3 - 77/80 #4 - 74/80
AD'S CHECKED THRU 2017-02.
- 1.2 CW POWER FLOW SYSTEMS ICA PER INSTRUCTIONS, ALL FOUND TO BE IN SERVICEABLE CONDITION AT THIS TIME.
- 1.3 DRAINED ENGINE OIL, REMOVED FILTER, CUT OPEN AND INSPECTED, INSTALLED A NEW FILTER P/N CH48110-1 AND SERVICED WITH EIGHT QUARTS OF PHILLIPS 20W50, ALSO TOOK SOAP SAMPLE, ALL WORK ACCOMPLISHED IAW DA40-180 MM, CH 12. RESULTS RETURNED NORMAL.
- 1.4 CW AD2015-19-07, FUEL INJECTION LINE INSPECTION, PER SB342G INSTRUCTIONS, NO DEFECTS NOTED AT THIS TIME.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST6725.

Signature

For Winner Aviation Repair Station #W6NR985J



Repair Station #: W6NR985J

March 14, 2018

Manufacturer: Lycoming
Part/Model number: IO-360-M1A
Work Order No: PST7300

TSN/TSO: 858.70 / N/A
Serial Number: L-33609-51A
Date: 03/14/2018

CSN/CSO: N/A / N/A

Squawk

- 1.1 CW ANNUAL INSPECTION USING FORM OUTLINED IN DA40-180 MM, CH 5 AS A GUIDELINE. AD'S CHECKED THRU 2018-05.
- 1.2 CW ANNUAL EXHAUST SYSTEM INSPECTION IAW POWER FLOW SYSTEMS ICA INSTRUCTIONS, NO DEFECTS NOTED.
- 1.3 DRAINED ENGINE OIL, OBTAINED OIL SAMPLE, REMOVED FILTER, CUT OPEN AND INSPECTED FOR CONTAMINANTS, INSTALLED NEW FILTER P/N CH48110-1, SERVICED ENGINE WITH EIGHT QUARTS OF PHILLIPS 20W50, IAW DA40-180 MM, CH 12. SAMPLE SENT FOR ANALYSIS, RESULTS RETURNED NORMAL.
- 1.4 CW AD2015-19-07, FUEL INJECTOR LINES INSPECTION, PER SB342G INSTRUCTIONS, NO DEFECTS NOTED.
- 1.5 REMOVED BOTTOM FOUR SPARK PLUGS, INSTALLED FOUR NEW PLUGS P/N REM38E, IAW LYCOMING DIRECT DRIVE MODEL OVERHAUL MANUAL.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST7300.

Signature

For Winner Aviation Repair Station #W6NR985J



Repair Station #: W6NR985J

June 07, 2019

Manufacturer: Lycoming
Part/Model number: IO-360-M1A
Work Order No: PST7811

TSN/TSO: 885.80 / N/A
Serial Number: L-33609-51A
Date: 06/07/2019

CSN/CSO: N/A / N/A

Squawk

- 1.1 CW ANNUAL INSPECTION USING INSPECTION FORM OUTLINED IN DIAMOND DA40-180 MM, CH 5 AS A GUIDELINE. CW COMPRESSION CHECKS WITH SATISFACTORY RESULTS AS FOLLOWS #1 - 75/80 #2 - 76/80 #3 - 75/80 #4 - 74/80. AD'S CHECKED THRU 2019-11
- 1.2 DRAINED ENGINE OIL AND TOOK SAMPLE, REMOVED OIL FILTER, CUT OPEN AND INSPECTED FOR CONTAMINANTS, INSTALLED NEW FILTER P/N CH48110-1 AND SERVICED WITH EIGHT QUARTS OF PHILLIPS XC 20W50, ALL WORK ACCOMPLISHED IAW DA40-180 MM, CH 12. RESULTS RETURNED NORMAL.
- 1.3 REMOVED BROKEN EGT PROBE FROM #1 CYLINDER AND INSTALLED A NEW PROBE P/N A002BG-WIP IAW DA40-180 MM, CH 77.

All Work Performed I.A.W. Diamond Aircraft DA40XL Appropriate Data.

These items identified above were repaired and/or inspected in accordance with current Federal Aviation Regulations and the repairs are approved for return to service. Pertinent details of these repairs are on file at the repair station under Work Order Number PST7811.

Signature

For Winner Aviation Repair Station #W6NR985J

CARRIED FORWARD

/1, MODS



Date: 11 October, 2007 S/N: 40.836 Reg: N258DS
Engine S/N: L-33609-51E Eng TTSN: 5.9 HRS

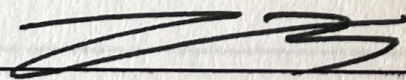
The following S/B and S/I have been carried out as applicable:

- DAI SI 40-005/Lycoming SB 342E/AWD 93-02-05 Fuel Line(stainless steel tube assy.) and support clamp Inspection and Installation New – Due every 100 hours.
- SI 40-009(FAA AD 2002-26-01) – Externally mounted fuel injection lines – C/W
- DAI SI 40-010- Repair of certain injection servos – N/A due to S/N of unit.
- MSB 40-009 Improvement of ground-connection to Alternator – N/A by A/C S/N.
- MSB 40-012 Replacement of Mixture Control Cable N/A as already Incorp. During mfg.
- Precision Airmotive Fuel Servo SB PRS-105 – N/A due to S/N of unit.
- Textron Lycoming MSB 565 – Replacement of Diaphragm-Type Fuel Pumps P/N LW-15473 with date code of 3201 – N/A as date code does not match installed on this A/C
- Textron Lycoming MSB 548A/DAI SI 40-023 – Diaphragm-Type Fuel Pump – with a date code of 0700 through 0401- N/A as date code does not match installed on A/C
- Textron Lycoming MSB 574A – Cylinder Stud Hole Cross-Threaded – N/A by eng S/N
- Textron Lycoming AD 2002-12-07-Prevent Complete loss of engine oil-N/A due to M/N

Bi-weekly AWD check carried out to current revision 2007- 21

The maintenance described above has been performed in accordance with the applicable standards of airworthiness.

DIAMOND AIRCRAFT INDUSTRIES INC. D.O.T. APPROVAL #161-93

Signature 

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