

***LYCOMING***

A Textron Company

**EXPERIMENTAL**

**ENGINE LOG**

**SSP-1872-1**

**LYCOMING**

A Textron Company

652 Oliver Street  
Williamsport, PA 17701 U.S.A.  
570/323-6181

# ENGINE LOG AND MAINTENANCE RECORD

RECORD OF LYCOMING

MAKE

MODEL

SERIAL

FROM \_\_\_\_\_ 20 \_\_\_\_\_ TO \_\_\_\_\_ 20 \_\_\_\_\_

DETAILING TIME FROM \_\_\_\_\_ TO \_\_\_\_\_  
HOURS HOURS

**SSP-1872-1**

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**October 1994**

# EXPERIMENTAL

## 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-390-EXP

SERIAL NO. EL-107-80E

DATE NOVEMBER 23, 2005

Jay A. Haines  
(AUTHORIZED REPRESENTATIVE)

**LYCOMING**

A Textron Company

**LYCOMING ENGINES**

652 Oliver Street

Williamsport, PA 17701 U.S.A.

Form No. 777-B (Rev. 3/03)

12/27/2006

Tach: 0.9

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new CH48110 filter. Replaced oil with Aeroshell 80 straight mineral oil. Inspected engine compartment. All work performed by David McManness/builder.

1/25/2007

Tach: 21.0

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new CH48110 filter. Replaced oil with Aeroshell 80 straight mineral oil. Inspected engine compartment. All work performed by David McManness/builder.

3/31/2007

Tach: 48.0

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new CH48110 filter. Replaced oil with Aeroshell 15-50 oil. Inspected engine compartment. All work performed by David McManness/builder..

5/6/2007

Tach: 101.0

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new CH48110 filter. Replaced oil with Aeroshell 15-50 oil. Inspected engine compartment. All work performed by David McManness/builder.

7-11-2007

N731DM

Tach: 144

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 15W-50. Inspected engine compartment. All work performed by David McManness/builder.

6/14/2007

Tach: 125

Serial No. \_\_\_\_\_

| Date | <p>Performed undercowl inspection. Compression: 78/80; 79/80; 78/80; 78/80 cold. Ben Watkins/Executive Air performed borescope inspection. All Okay. Cleaned injectors. Inspected all cables and wires. Retied as necessary. All work performed by David McManness/Builder</p> |  |                 |                                                                                                                                   | Signature | License Number |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|----------------|
|      |                                                                                                                                                                                                                                                                                |  |                 |                                                                                                                                   |           |                |
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|      |                                                                                                                                                                                                                                                                                |  |                 |                                                                                                                                   |           |                |
|      |                                                                                                                                                                                                                                                                                |  | Page Total      | <p>All Repair Data Must Bear the Endorsement of a Certificated Mechanic, and his Rating and Certificate Number MUST be Shown.</p> |           |                |
|      |                                                                                                                                                                                                                                                                                |  | Brought Forward |                                                                                                                                   |           |                |
|      |                                                                                                                                                                                                                                                                                |  | Total to Date   |                                                                                                                                   |           |                |

07-29-2007                      N731DM                      Tach: 189  
Drained oil/removed filter and cut open for inspection.  
No abnormal particles found. Installed new Champion  
CH48109 filter. Replaced oil with 8 qts of Aeroshell  
15W-50. Inspected engine compartment. All work  
performed by David McManness/builder.

08-29-2007                      N731DM                      Tach: 195  
Replace main tires with Goodyear 5.00 x 5 tires.  
Replace outer wheel bearings on both sides. Replace  
brake pads both sides. Inspected wheels and brake  
system. All work performed by David  
McManness/builder.

09-11-2007                      N731DM                      Tach: 237  
Drained oil/removed filter and cut open for inspection.  
No abnormal particles found. Installed new Champion  
CH48109 filter. Replaced oil with 8 qts of Aeroshell  
15W-50. Inspected engine compartment. All work  
performed by David McManness/builder.

11-16-2007                      N731DM                      Tach: 262  
Drained oil/removed filter and cut open for inspection.  
No abnormal particles found. Installed new Champion  
CH48109 filter. Replaced oil with 8 qts of Exxon 20W  
50. Inspected engine compartment. All work  
performed by David McManness/builder

06-02-2008                      N731DM                      Tach: 294  
Drained oil/removed filter and cut open for inspection.  
No abnormal particles found. Installed new Champion  
CH48109 filter. Replaced oil with 8 qts of Exxon 20W-  
50. Inspected engine compartment. All work  
performed by David McManness/builder

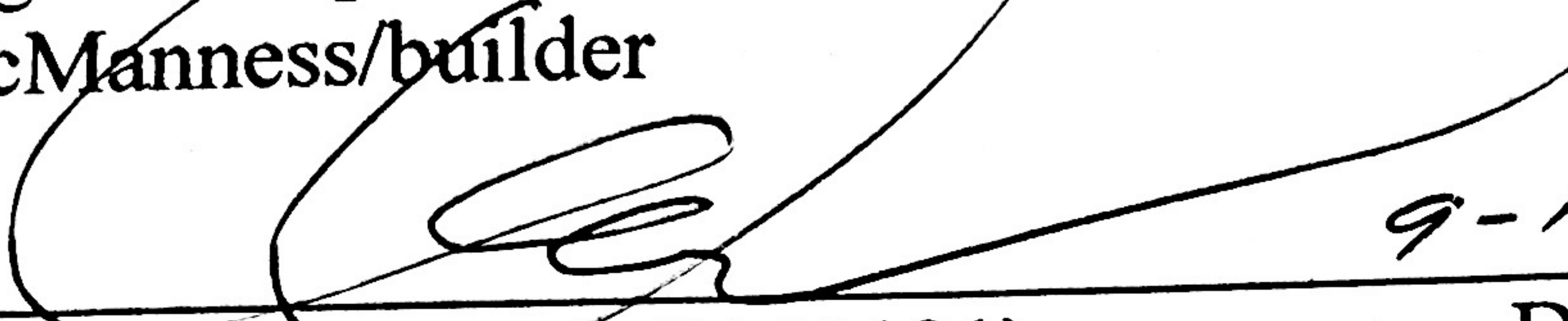


9/12/2009

N731DM

Tach: 478

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Collected sample for oil analysis. Installed new Champion CH48108 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Inspected engine compartment. All work performed by David McManness/builder

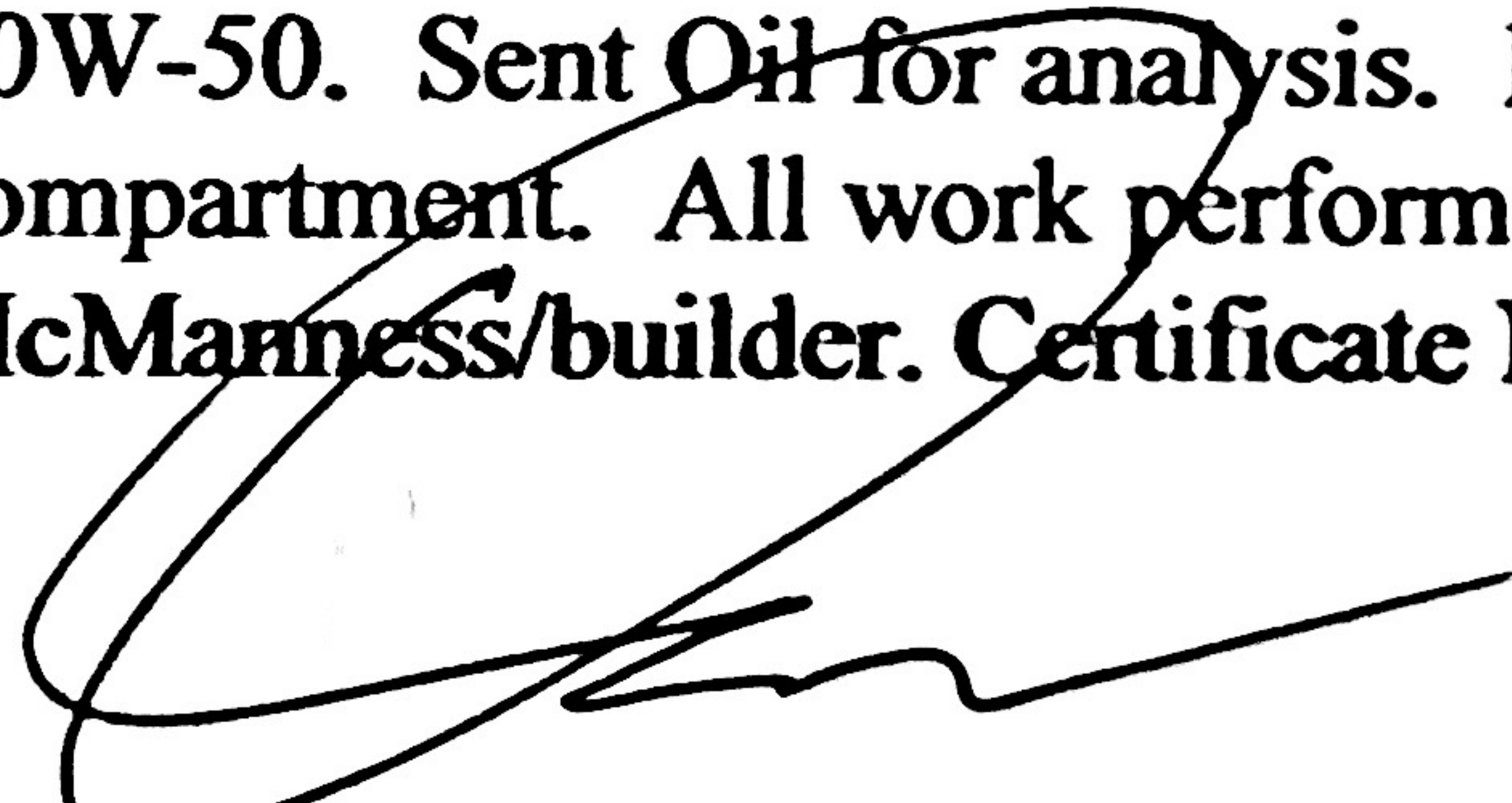
  
David McManness (3253131)9-12-09  
Date

11/25/09

N731DM

Tach: 528

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

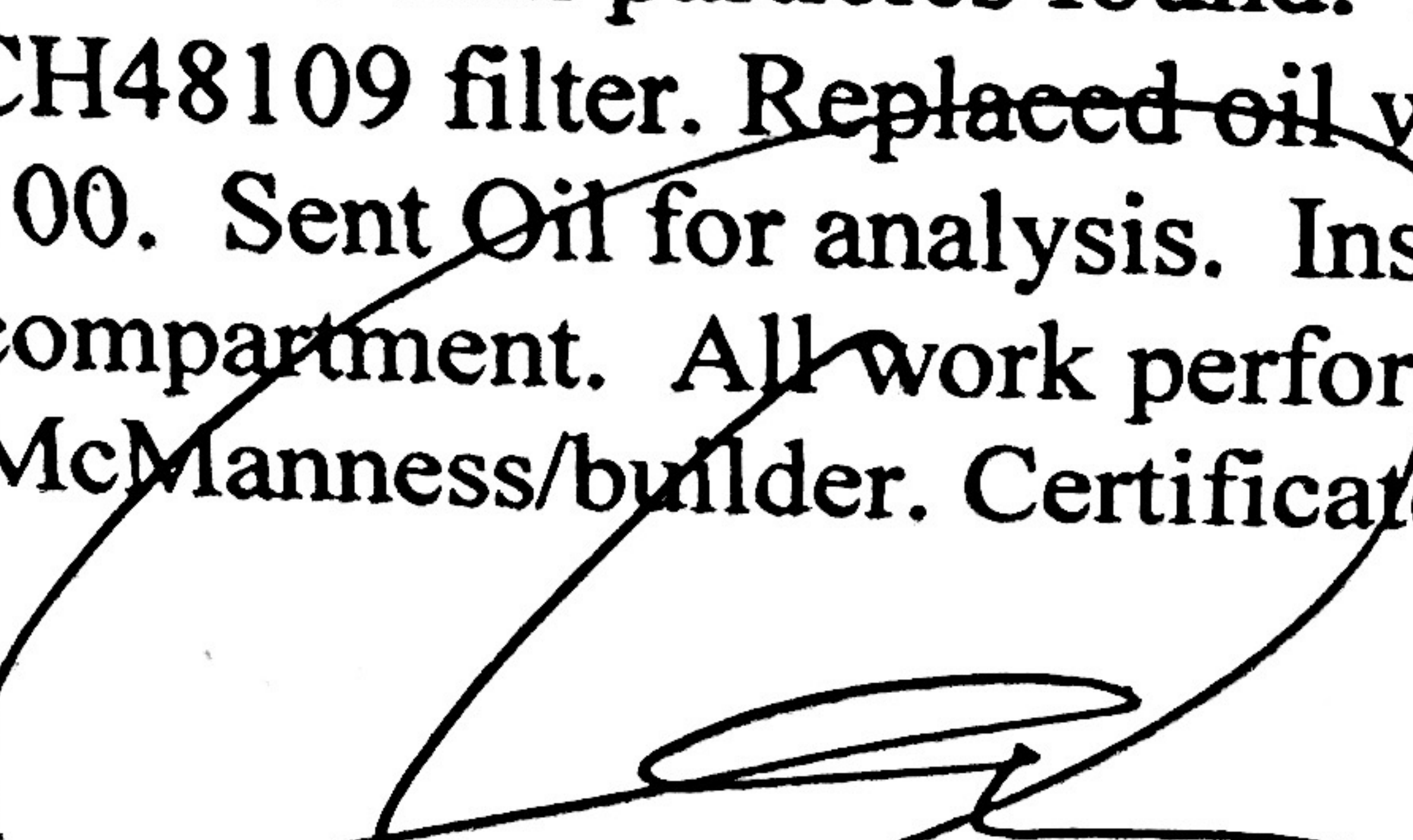
  
David McManness11-25-09  
Date

08/06/2010

N731DM

~~649~~ TT  
639

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell W 100. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

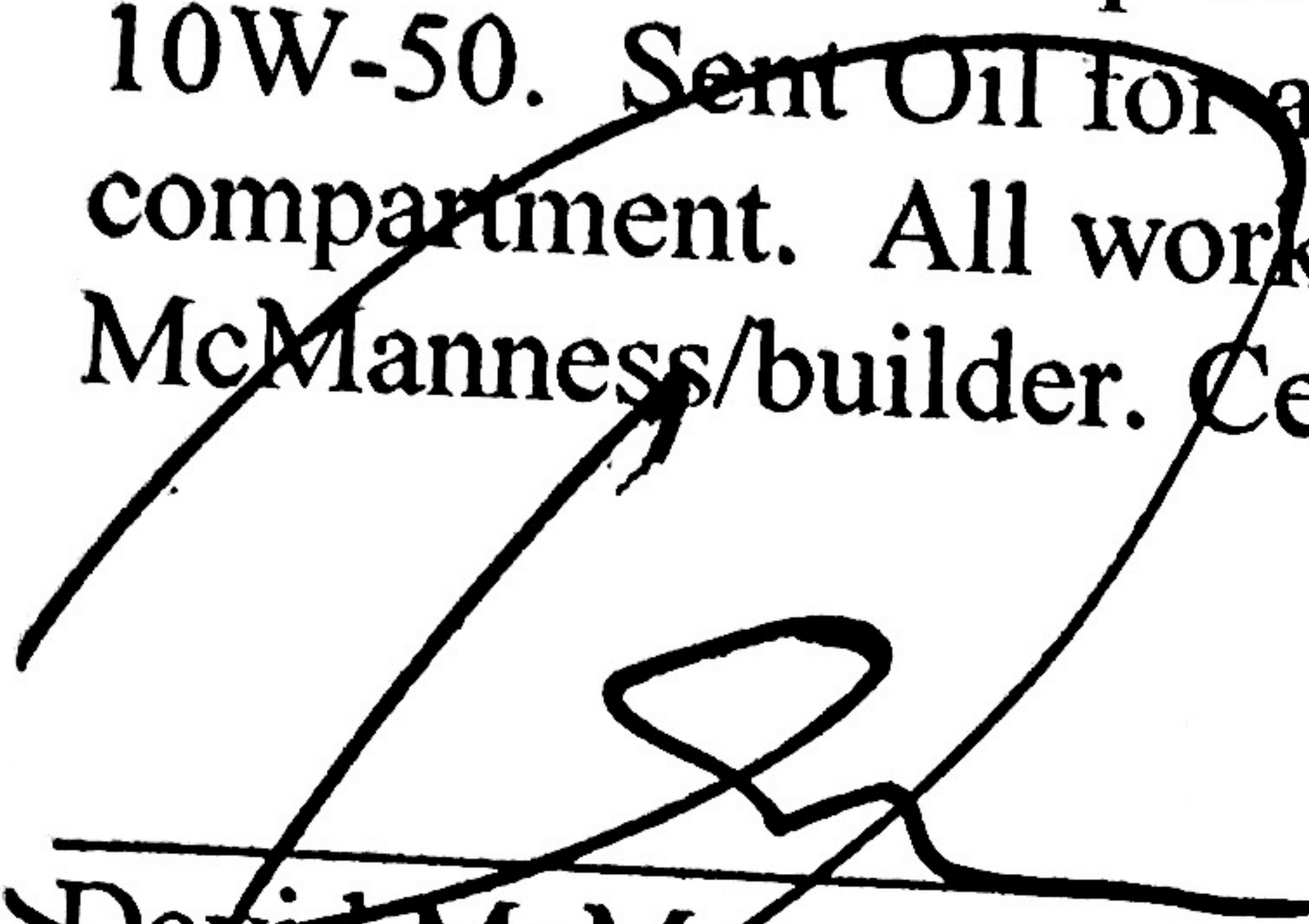
  
David McManness8-6-10  
Date

11/28/10

N731DM

688 TT

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

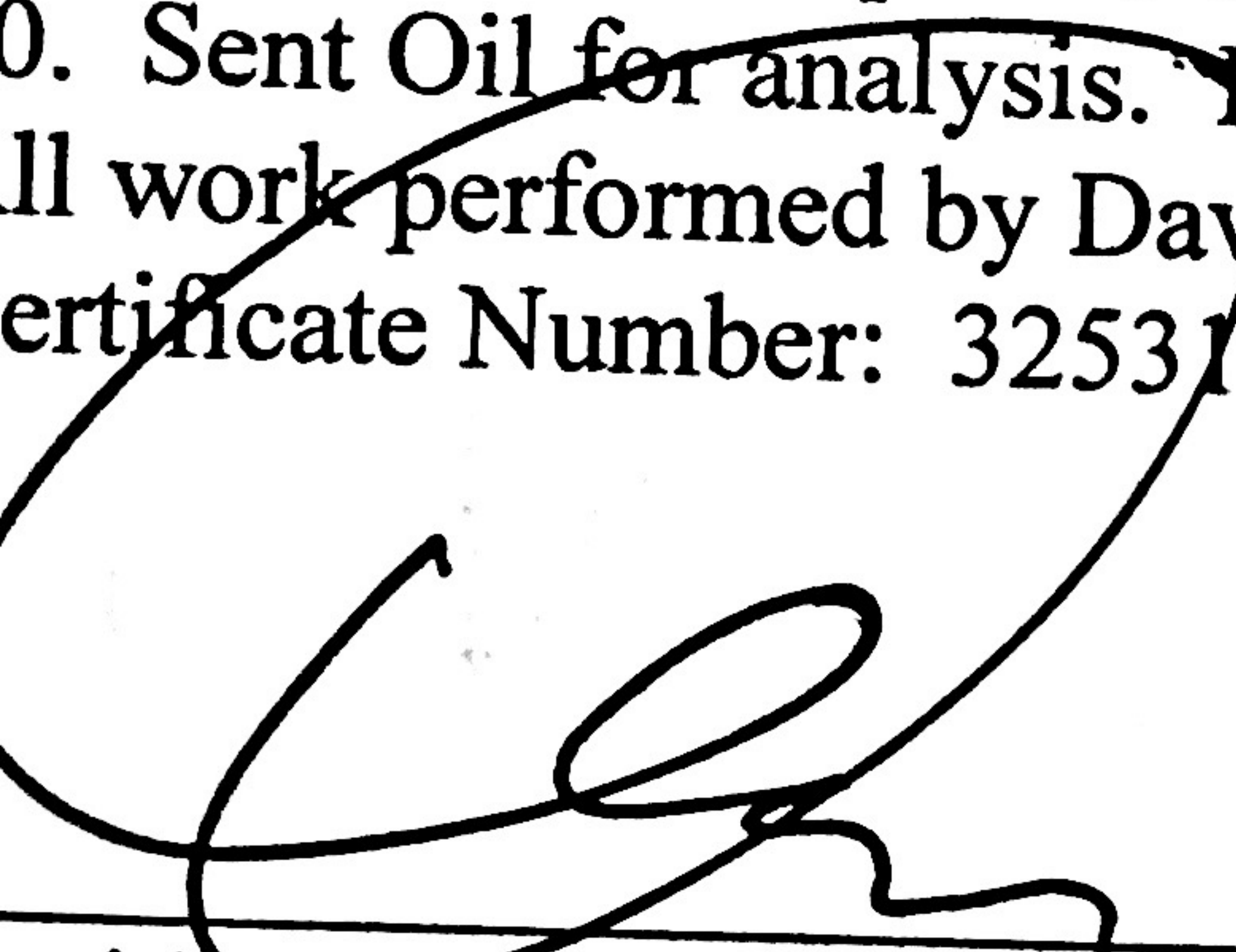
  
David McManness11-28-11  
Date

05/20/2011

N731DM

728 TT

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131.

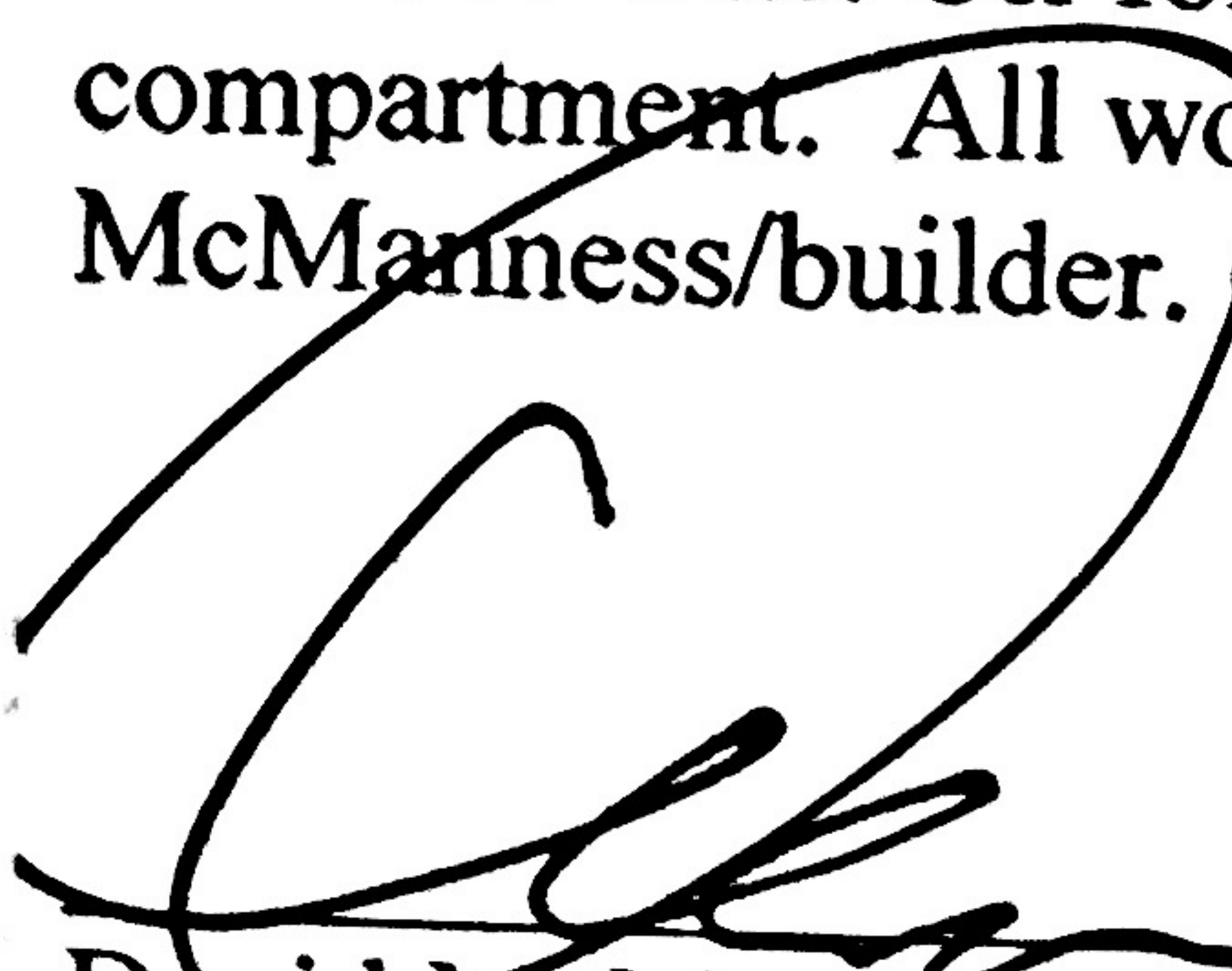
  
David McManness5-20-11  
Date

08/26/2011

N731DM

778 TT

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

  
David McManness8-26-11  
Date



06/14/12

N731DM

Tach: 899

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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David McManness

Date

08/09/12

N731DM

Tach: 941

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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David McManness

Date

4/3/13

N731DM

Tach: 991.9

Performed annual condition inspection: Inspected engine, compression readings 77, 77, 78, 78, installed new upper and lower sparkplugs; replaced upper plug wires; replaced all induction tube gaskets; reamed exhaust guides; installed new points in Slick Mag.

I certify that this aircraft was inspected per FAR 43, Appendix D and was determined to be in airworthy condition.

Builder Name: David M McManness 3253131

06/04/13

N731DM

Tach: 1036

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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David McManness

Date

06/04/13

09/02/13

N731DM

Tach: 1078

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 10W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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David McManness

Date

07/20/14

N731DM

Tach: 1163

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 15W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

09/18/14

N731DM

Tach: 1212

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Exxon 20W-50. Sent Oil for analysis. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

# ENGINE LOG

Serial No. \_\_\_\_\_

Date

**DATE: 1-28-15**

**MODEL: IO-390-EXP**

**TACH: 1243.0**

**SERIAL: EL-107-80E**

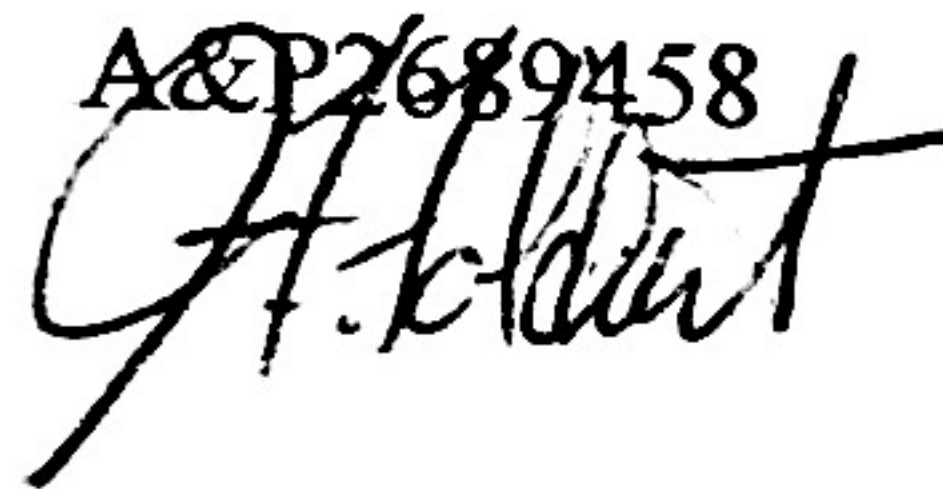
**N731DM**

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This engine was Repaired this date in accordance with Lycoming Parts Manual PC-206 and Overhaul Manual 60294-7. Crankshaft cleaned and inspected. Camshaft, Lifter Bodies and Hydraulic Units cleaned and inspected. Crankcase cleaned and inspected. Engine assembled with the following new parts; 2 each 18A26093STD Main Bearings; 4 each 18D26098STD Main Bearings; 8 each SL13212ASTD Rod Bearings; 8 each SL75061 Rod Bolts; 8 each SL12186 Rod Nuts; 1 each 62B26931 Fuel Pump; 8 each 14G22050 Compression Rings; 4 each 14H23148 Oil Control Rings; 1 each STD-2246 Crank Gear Bolt. Cylinders cleaned and inspected reworking guides and seats. Faced and lapped original valves. Honed and installed new rings onto pistons. Assembled complete with new safeties and installed onto engine. Serviced engine with 8 Quarts of Aeroshell 80 Mineral and ground operation normal with no leaks found. This engine is approved for return to service. For details concerning this Repair, please refer to **WO#4794** on file at this Repair / Overhaul Facility. Maintenance Release Tags supplied with this Logbook Entry. - - - - - END - - - - -

J. F. Folchert

A&P 2689458



FOR

Aircraft Cylinders & Engines, Inc.

625 Buss Avenue

Greeley, CO 80631

Total to Date

Certificate Number MUST be shown.

2/7/15

N731DM

Tach: 1243

Replaced engine after complete overhaul by ACE (see engine log). Replaced engine mounts, all oil and fuel lines and control cables. Inspected all electrical lines and replaced all adel clamps and spiral wrap. Torqued engine mounts to fuselage bolts. Broke in engine with Aero Shell 80 mineral oil. Switched to 100w after 15 hours. All work performed by David McManness/builder. Certificate Number: 3253131

2/9/15

N731DM

Tach: 1259

Break In – 100W  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100W. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

3/6/15

N731DM

Tach: 1279

Break In – 100W  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100W. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

3/26/15

N731DM

Tach: 1302

Break In – 100W  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100W. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

6/5/15 N731DM Tach: 1328  
ACE Cylinder rering Cyl 2 and 4 to fix excessive oil consumption. R&R rings and honed cylinders. New gasket kit. Oil and filter Change. New oil 100W. All work performed by ACE Cylinders and/or David McManness/Builder. Certificate Number: 3253131

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6/26/15 N731DM Tach: 1350  
Break In – 100W  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100W. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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6/27/15 N731DM Tach: 1368  
Break In - 100 Mineral  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100 Mineral oil per discussion with Lycoming at OSH. Inspected engine compartment.

Replaced lower spark plugs with Tempest thin wire plugs.  
All work performed by David McManness/builder.  
Certificate Number: 3253131

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10/10/15 N731DM Tach: 1416  
Break In – 100 Mineral  
Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100. Oil sample taken. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

3/7/16

N731DM

Tach: 1444

Replaced rings on all four cylinders. Cylinders honed. Rings fit to each cylinder. Work performed at Aircraft Cylinders and Engines. I performed disassembly and reassembly. Joe performed the cleaning, fitting, and reinstallation of the cylinders. This time we used LyCon rings instead of the Lycoming rings we had used on the past two re-ring jobs. New oil filter and Aeroshell 100 mineral oil.

I certify that this aircraft was inspected per FAR 43, Appendix D and was determined to be in airworthy condition.

Builder Name: David M McManness 3253131

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3/7/16

N731DM

Tach: 1444

Performed annual condition inspection: All systems, controls and hinge points inspected and lubed as required; replaced brake pads and rotors and main tires and tubes; C/W FAR 91.207(d), ELT per inspection; Performed Van's service bulletins 14-01-31 (horiz stab), 14-02-05 (elev spar), Replaced all upper spark plugs. Compression readings 78,78,76,74.

I certify that this aircraft was inspected per FAR 43, Appendix D and was determined to be in airworthy condition.

Builder Name: David M McManness 3253131

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3/11/16

N731DM

Tach: 1466

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 8 qts of Aeroshell 100W. Inspected engine compartment. All work performed by David McManness/builder. Certificate Number: 3253131

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6/9/16

N732DM

Tach: 1502

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion

**FACH. 1502**

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**Tach: 1495**

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**Tach: 1505**

**Tach: 1505**

[illegible]

4/8/19

N731DM

Tach: 1948

Drained oil/removed filter and cut open for inspection. Removed and replaced oil screen. No abnormal particles found in filter or screen. Installed new Champion CH48109 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Inspected engine compartment.

All work performed by David McManness/builder.  
Certificate Number: 3253131

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5/30/2019                      N731DM                      Tach:1992

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

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9/13/2019                      N731DM                      Tach:2020

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

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14/2020                      N731DM                      Tach:2058

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for

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9/02/2020                      N731DM                      Tach:2106

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48108 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for analysis. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

Number: 3253131

3/23/2021

N731DM

Tach:2147

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48108 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for analysis. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

4/19/2021

N731DM

Tach:2182

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48109 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for analysis. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

5/26/2021

N731DM

Tach: 2222

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48108 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for analysis. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

6/24/2022

N731DM

Tach: 2266

Drained oil/removed filter and cut open for inspection. No abnormal particles found. Installed new Champion CH48108 filter. Replaced oil with 7 qts of Aeroshell 15W-50. Sent sample for analysis. Inspected engine compartment.

All work performed by David McManness/builder. Certificate Number: 3253131

of

License  
Number

**Tach:2182**

**All work performed by David McManness/builder. Certificate Number: 3253131**

**Tach: 2209**

**All work performed by David McManness/builder. Certificate Number: 3253131**

**Tach: 2249**

**All work performed by David McManness/builder. Certificate Number: 3253131**

**Tach: 2266**

**All work performed by David McManness/builder. Certificate Number: 3253131**

**Tach: 2391.5**

**All work performed by David McManness/builder. Certificate Number: 3253131**

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# ENGINE LOG

**Serial No.**

[illegible]

