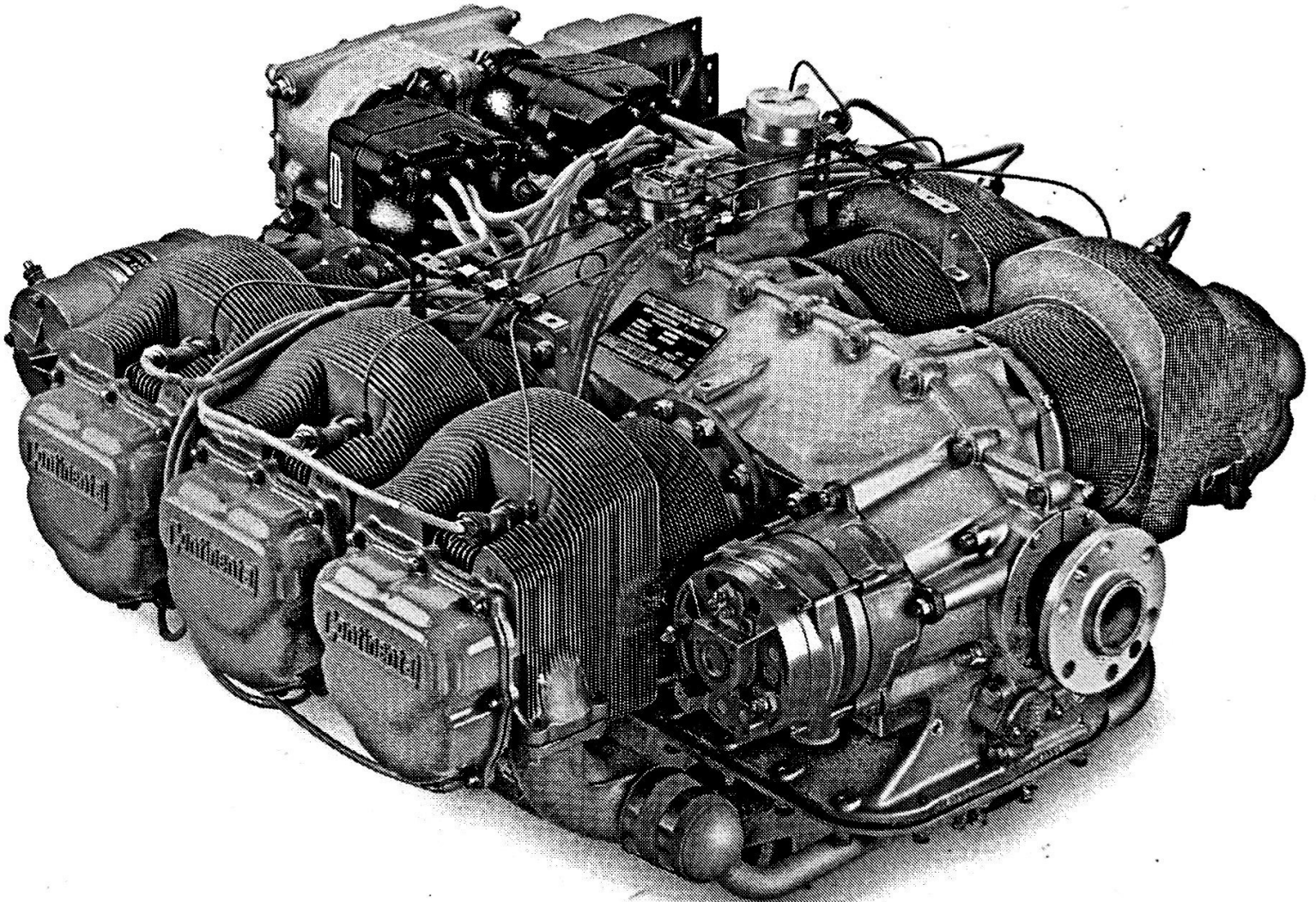


ENGINE LOG BOOK



Teledyne Continental Motors, Inc.

Service Information

Service Bulletins and Technical Publications are available on a direct mail basis from the factory. Orders must be prepaid. Send for order form or call 334-438-3411, publications department, for information.

Engine Returns

All returned engines are to be shipped with this log book Directly to:

**Teledyne Continental Motors
Abbeville Industrial Park
Suite 159
Abbeville, AL 36310**

**USE ONLY FUEL CONFORMING TO ASTM D910
USE OF AUTOMOTIVE GAS IS NOT APPROVED.**



Teledyne Continental Motors, Inc.

A Teledyne Technologies Company

Printed: 06/20/2006

This engine model I0360ES6, Serial No. 360222 was manufactured on 06/20/2006 by Teledyne Continental Motors in accordance with approved design data and the applicable requirements of Part 21 of the Federal Aviation Regulation. The approved design data for this engine incorporates all changes required by applicable Airworthiness Directives and Teledyne Continental Motors Service Bulletins.



TELEDYNE CONTINENTAL MOTORS

A TELEDYNE TECHNOLOGIES COMPANY

PRODUCTION CERTIFICATE NO. 505



OIL REPORT

LAB NUMBER: N60794
 REPORT DATE: 7/8/2021
 CODE: 80/16

UNIT ID: N653GS
 CLIENT ID: 36294
 PAYMENT: CC: AmEx (Bulk)

UNIT	MAKE/MODEL: Continental IO-360-ES	OIL TYPE & GRADE: Aeroshell 15W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 31 Hours
	ADDITIONAL INFO: Cirrus SR20, S/N 360222	

CLIENT	RANDY ELLS	PHONE: (317) 769-4487
	FIRST WING JET CENTER	FAX: (317) 769-3207
	11329 E STATE RD. 32	ALT PHONE:
	ZIONSVILLE, IN 46077	EMAIL: jcarroll@firstwing.com, rells@firstwing.com

COMMENTS
 RANDY: Silicon is lower this time, which suggests a harmless sealer washing out. If an air filtration issue was addressed, then that could also be why silicon tested lower this time -- either way, it's headed in a good direction so we'll look for another decrease in the future. Wear metals are looking good for a 31-hour OCI and the lead level (primarily from 100LL blow-by) speaks to good combustion. There isn't any moisture or fuel to address and the oil filter kept solids to a minimal 0.1%. Nice report, N653GS.

ELEMENTS IN PARTS PER MILLION	M/HR on Oil	31	UNIT / LOCATION AVERAGES	15	17			UNIVERSAL AVERAGES
	M/HR on Unit	481		416	369			
	Sample Date	6/4/2021		4/28/2020	3/22/2018			
	Make Up Oil Added							
ALUMINUM	6	4	7	2				5
CHROMIUM	4	9	7	4				7
IRON	31	49	46	22				49
COPPER	9	5	12	5				5
LEAD	2248	5820	2078	2562				5224
TIN	2	1	3	0				1
MOLYBDENUM	2	4	4	1				3
NICKEL	3	11	4	5				8
MANGANESE	1	1	2	0				1
SILVER	0	0	0	0				0
TITANIUM	0	0	0	0				0
POTASSIUM	1	1	1	0				1
BORON	1	1	0	0				1
SILICON	60	8	94	7				8
SODIUM	3	1	3	1				1
CALCIUM	140	8	108	0				30
MAGNESIUM	4	0	4	0				1
PHOSPHORUS	1092	99	318	1236				453
ZINC	41	6	60	11				7
BARIUM	0	0	0	0				0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	87.6	82-105	86.0	91.7
	cSt Viscosity @ 100°C	17.39	16.0-21.8	17.01	18.39
	Flashpoint in °F	475	>440	470	455
	Fuel %	<0.5	<1.0	<0.5	<0.5
	Antifreeze %	-	-	-	-
	Water %	0.0	0.0	0.0	0.0
	Insolubles %	0.1	<0.6	0.2	0.3
	TBN				
	TAN				
	ISO Code				

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



AOA

AVIATION OIL ANALYSIS

**YOUR AIRCRAFT.
OUR EXPERTISE.**

3319 W. Earl Drive, Phoenix, Arizona 85017
Phone: 800-445-7930 Fax: 602-252-4639
<http://webtrieve.alstribology.com> ****email: aoa@alstribology.com

Customer Name: MONTGOMERY AVIATION (IN)	Tail Number: N653GS	Comp Serial No: 360222
Address: 11329 East Street Road 32 Zionsville IN 46077 USA	Aircraft Make: Cirrus	Comp Name: Single Engine
Phone: 3177694487	Aircraft Model: SR 20	Comp Make: Continental
Fax: 3177694116	Serial No:	Comp Model: IO-360ES6
	UIN: 01DED58	

Sample No.	44150154251	44150128377	44150104453	44150080826	44150056174	44150029582
Date Sampled	20-Feb-17	30-Dec-15	01-Dec-14	04-Nov-13	08-Oct-12	01-Sep-11
Date Tested	03-Mar-17	11-Jan-16	05-Dec-14	11-Nov-13	17-Oct-12	12-Sep-11
Oil Brand	Shell	Shell	Shell	Shell	Shell	Shell
Oil Type	Aeroshell W	Aeroshell W	Aeroshell W	Aeroshell W	Aeroshell W	Aeroshell W
Oil Grade	SAE 15W50	SAE 15W50	SAE 15W50	SAE 15W50	SAE 15W50	SAE 15W50
Oil Hrs	17	16	34	32	12	21
Oil Added						
Hrs Since New		334	318	284	52	240
Rebuild Hrs					52	
Metals (ppm)						
Aluminium (Al)	3	4	3	2	3	5
Iron (Fe)	29.62	40.22	25.65	18.49	20.98	22.00
Copper (Cu)	5.33	7.19	6.72	6.88	6.02	9.96
Nickel (Ni)	7	9	7	4	4	6
Chromium (Cr)	6	9	6	4	4	8
Silver (Ag)	<1	<1	<1	<1	<1	<1
Contaminants (ppm)						
Silicon (Si)	9	7	6	5	8	4

LEGEND

Severe	Abnormal	Caution	Normal					

Sample No. **Diagnosis/Recommendations**

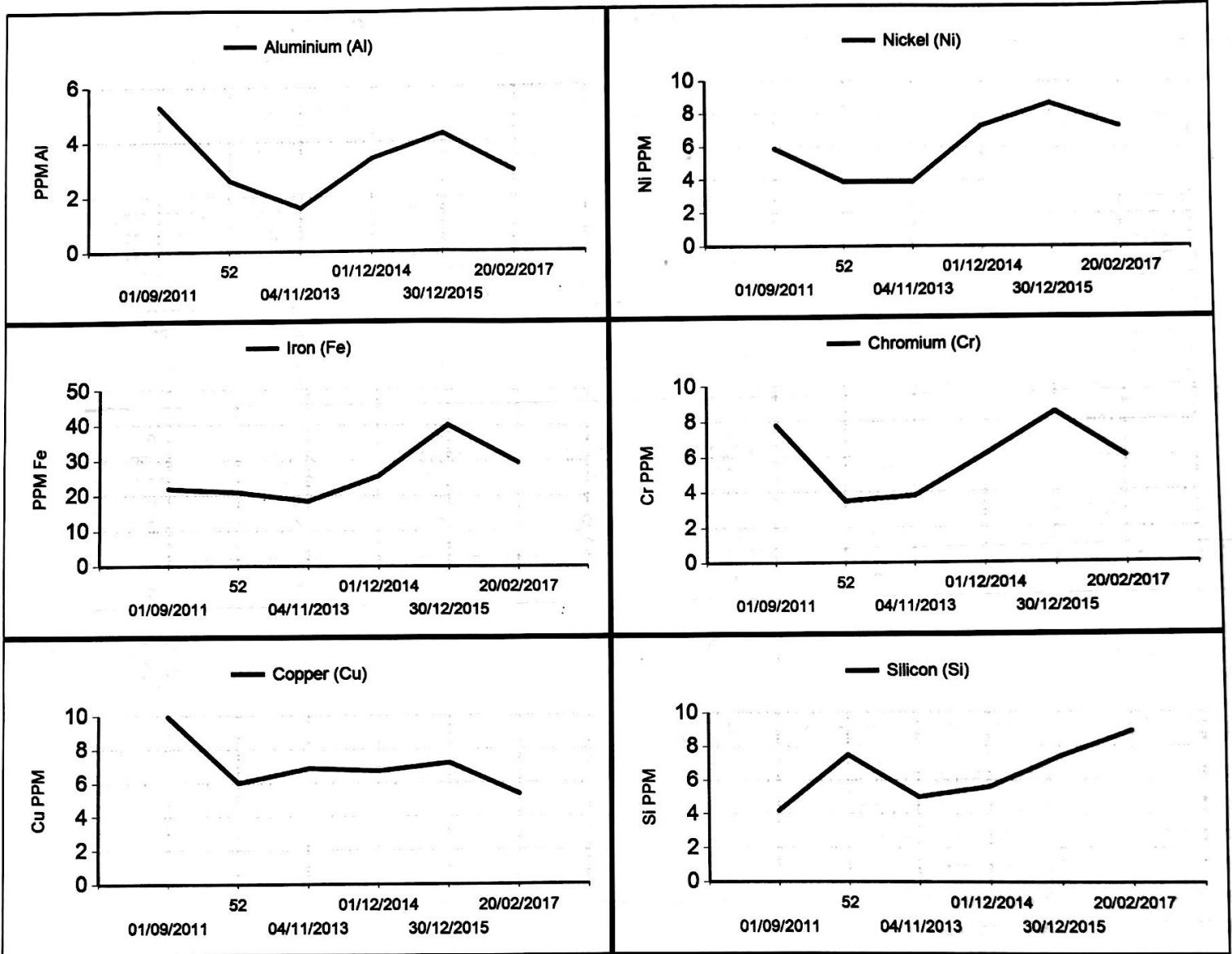
- 44150154251 All values appear normal.
- 44150128377 All values appear normal.
- 44150104453 All values appear normal.
- 44150080826 All values appear normal.
- 44150056174 No abnormal wear detected for new engine. Resample next oil change to check wear trend.
- 44150029582 All values appear normal.



AOA

AVIATION OIL ANALYSIS

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Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Laboratory group for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Montgomery Aviation (In)
 Attn: Jennifer Carroll
 11329 East Street Road 32
 Zionsville IN 46077
 USA

TEST METHODS:

Acid Number: ASTM D974/D664
 ICP: ASTM D5185
 Viscosity: ASTM D445 / D7279
 Water by Crackle: ASTM E203 Mod / In House

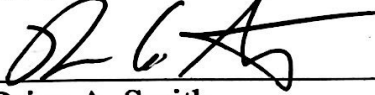
0037 v1.7

Date	Total Time		Time Since Last Overhaul		Engine Service and Maintenance Record Installations, Inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins
	Hrs.	Min.	Hrs.	Min.	

August 2, 2006 N653GS S/N 1698 31.1 Hobbs 23.3 Tach

Changed oil and filter serviced engine with Phillips 20W-50 TYPE M. Washed engine and lubed controls ground run and leak check OK. END.

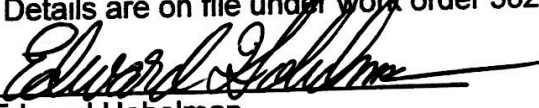
The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service. Detains are on file under work order 3653.


 Brian A. Smith
 Repair Station MYNR748K

 MONTGOMERY AVIATION, INC.
 11329 East State Road 32
 Zionsville, IN 46077
 317-769-4487
 Certified Repair Station No. MYNR748K

November 9, 2006 N653GS S/N 1698 Flight Time 48.4 Hobbs 60.7
 Changed oil and filter. Serviced with Aeroshell W80. Took oil sample. Opened filter no metal noted.

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service. Details are on file under work order 3820


 Edward Hobelman
 MYNR748K

 MONTGOMERY AVIATION, INC.
 11329 East State Road 32
 Zionsville, IN 46077
 317-769-4487
 Certified Repair Station No. MYNR748K

7-6-07 N-653GS Model IO-360-ES6 S/N 360222 Flight Hobbs 98.7
Changed oil and filter. Took sample cut filter no metal found. Serviced with
8QT Aeroshell W100. Run up leak check good. —END—

The maintenance operation(s) described above were inspected in accordance
with current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service. Details
are on file under work order 4169

Randall Carter
Randall Carter
CRS MYNR748K



MONTGOMERY
AVIATION, INC.

11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

Certified Repair Station No. MYNR748K

8-1-07 N-653GS Model IO-360ES6 S/N 360222 Flight Time 102.4
Annual inspection completed this date IAW SR-20 M.M. 05-20. Compressions
#1) 77/80 #2) 74/80 #3) 76/80 #4) 76/80 #5) 76/80 #6) 75/80. No oil change at
this time. Performed top care inspection all indications normal. C/W all service
items. Run up and leak check good. AD's through 2007-15. —END—

The maintenance operation(s) described above were inspected in accordance
with current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service. Details
are on file under work order 4204

Randall Carter
Randall Carter
CRS MYNR748K



MONTGOMERY
AVIATION, INC.

11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

Certified Repair Station No. MYNR748K

Hrs.

Min.

Hrs.

Min.

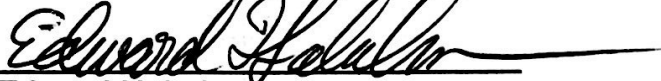
Modifications and Service Bulletins

Brought Fo

November 9, 2007 N653GS S/N 1698 Flight time 138.9
Changed oil and filter serviced with Aeroshell 15W50. Opened filter no metal found.
Leak check good.

The maintenance operation(s) described above were inspected in accordance
with current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service.

Details are on file under work order 4372



Edward Hobelman
MYNR748K



MONTGOMERY
AVIATION, INC.

11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

Certified Repair Station No. MYNR748K

July-16-08 N-653GS Model IO-360-ES6 S/N 360222 Hobbs 192.8
Flight time 154.8 Changed oil and filter cut filter no metal took oil sample
serviced with 8QT Aeroshell 15W50. Run up leak check good. ---END---

The maintenance operation(s) described above were inspected in accordance
with current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service. Details
are on file under work order 4732



Randall Carter
CRS MYNR748K



MONTGOMERY
AVIATION, INC.

11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

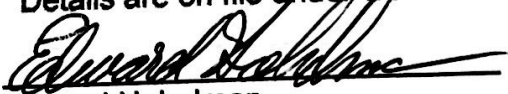
Certified Repair Station No. MYNR748K

August 11, 2008 N653GS S/N 1698 Flight Time 157.0

Annual Inspection Completed This Date. Inspected IAW Cirrus Inspection Report ATA 05-20. No Oil change at this time. No metal in filter last oil change at 154.8. Compression test 1) 75/80 2) 76/80 3) 77/80 4)74/80 5) 76/80 6) 74/80. New air filter element installed. Cleaned fuel nozzles.

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.

Details are on file under work order 4741



Edward Hobelman
MYNR748K



MONTGOMERY
AVIATION, INC.

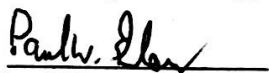
11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

Certified Repair Station No. MYNR748K

July 14, 2009 N653GS S/N 1698 FLT Time and E/TT 179.5

Completed annual inspection this date. Changed oil and filter, cut filter open and found no metal. Serviced engine with 8 qts Aeroshell 15W-50. Washed engine and lubed controls. Compression checks: #176/80 #2 78/80 #3 75/80 #4 76/80 #5 74/80 #6 76/80. Cleaned fuel screen. Cleaned, gapped and rotated spark plugs. AD's good thru 2009-12. Run-up and leak check good.-----END-----

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service. Details are on file under work order 5258.



Paul W. Enlow
Repair Station MYNR748K



MONTGOMERY
AVIATION, INC.

11329 East State Road 32
Zionsville, IN 46077
317 - 769 - 4487

Certified Repair Station No. MYNR748K


Forward 

August 2, 2010 N653GS S/N 360222 Flight Time 219.1
 Annual Inspection Completed This Date. Inspected IAW Cirrus Inspection Report
 ATA 05-20. Changed oil and filter, serviced with Aeroshell 15W50. opened filter no
 metal found. Compression test 1)77/80 2)77/80 3)77/80 4)75/80 5)76/80 6)74/80.
 Installed new air filter element. Run up leak checks good.
 ADs searched thru BW 2010-15.

See AD list for full details.

The maintenance operation(s) described above were inspected in accordance
 with current regulations and with respect to work performed, the aircraft and/or
 component was found airworthy and is approved for return to service.

Details are on file under work order 5800


 Ed Hobelman
 MYNR748K



MONTGOMERY
 AVIATION, INC.

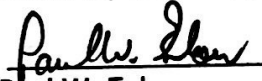
11329 East State Road 32
 Zionsville, IN 46077
 317-769-4487

Certified Repair Station No. MYNR748K

**September 8, 2011 N653GS M/N SR20 S/N 1698 FLT and ENG/TT 239.6 Hobbs
 298.0**

**Annual inspection completed this date I/A/W Cirrus SR20 Ch.5 Scheduled
 Maintenance Report. Changed oil and filter, took oil sample hot. Cut old oil filter open
 and found no metal. Serviced engine with 8qts. Aeroshell 15W-50. Washed engine
 and lubed controls. Cleaned fuel screen. Cleaned, gapped and rotated spark plugs.
 Compression checks--- #1 74/80 #2 77/80 #3 75/80 #4 76/80 #5 73/80 #6 75/80.
 AD's good thru2011-16. Run-up and operational check good.-----END-----**

The maintenance operation(s) described above were inspected in accordance with current
 regulations and with respect to work performed, the aircraft and/or component was found
 airworthy and is approved for return to service. Details are on file under work order **6389**.


 Paul W. Enlow
 Repair Station MYNR748K



MONTGOMERY
 AVIATION, INC.

11329 East State Road 32
 Zionsville, IN 46077
 317-769-4487

Certified Repair Station No. MYNR748K

October 16, 2012 N653GS S/N 360222 Flight Time 251.6 TTE 251.6
100hr/Annual Inspection Completed This Date. Inspected IAW Cirrus Inspection Report
ATA 05-20. Changed oil and filter, serviced with Aeroshell 15W50. Opened filter found
some rust particles, traced to oil filler cap and tube, removed and cleaned off rust by
bead blasting reinstalled on engine. Compression test 1) 75/80 2)76/80 3)77/80
4)75/80 5)74/80 6)74/80 MO 47/80. Installed new air filter element. Run up leak check
Good.

AD2008-11-18 Inspected heat exchanger per SB 2X-78-07R1 no defects found. Due
again by 351.6 flight meter.

ADs checked thru BW 2012-20

See AD list for full details.

The maintenance operation(s) described above were inspected in accordance with
current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service.

Details are on file under work order



Ed Hobelman
MYNR748K



**MONTGOMERY
AVIATION, INC.**

11329 East State Road 32
Zionsville, IN 46077
317-769-4487

Certified Repair Station No. MYNR748K

December 13, 2012 N653GS S/N 360222 Flight Time 252.5
Replaced oil filler tube and oil cap with new parts, IAW CM OH X30594 5/1/92.

The maintenance operation(s) described above were inspected in accordance with
current regulations and with respect to work performed, the aircraft and/or
component was found airworthy and is approved for return to service.

Details are on file under work order 7106



Ed Hobelman
MYNR748K



**MONTGOMERY
AVIATION, INC.**

11329 East State Road 32
Zionsville, IN 46077
317-769-4487

Certified Repair Station No. MYNR748K


Brought Forward →

November 8, 2013 N653GS M/N SR20 S/N 1698 Hobbs 355.0/ FLT and ENG/TT 283.8

Performed annual insp. IAW Cirrus AMM 05-20 inspection check list. Changed oil, added 8 qts. Aeroshell 15w-50. Replaced oil filter with new, P/N CH48108-1. Cut open old oil filter and inspected, no metal found. Lubricated controls and inspected fuel screen. Cleaned gapped and rotated spark plugs. Replaced 2 spark plugs with new, P/N URHM-38E. Adjusted propeller governer screw inward to maintain % pwr. At 100. Compression checks---#178/80 #2 75/80 #3 74/80 #4 74/80 #5 74/80 #6 73/80. AD's good thru 2013-22. Run up and operation check good.

-----END-----

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service. Details are on file under work order **7556**.


Michael Peter
Repair Station MYNR748K

 **MONTGOMERY AVIATION, INC.**
11329 East State Road 32
Zionsville, IN 46077
317-769-4487

Certified Repair Station No. MYNR748K

December 5, 2014 N653GS M/N IO-360-ES S/N 360222 FLT Time and ENG TSN 318.3 Hobbs Time 398.6

Annual inspection completed I/A/W Cirrus SR20 AMM Ch. 5 Pages 4-22. Drained oil, took AOA oil analysis hot at drain. Removed oil filter and cut open. Found no metal. Installed new oil filter and serviced engine with 8qts. Aeroshell 15W-50 oil. Cleaned fuel screen. Inspected oil screen. Cleaned, gapped and rotated spark plugs. Compression checks-- #1 70/80, #2 78/80, #3 74/80, # 76/80, #5 68/80, #6 74/80. Master Orifice 48 psi. Cleaned fuel injectors and reinstalled. Next due cleaning at 618.3 FLT Time. Run-up and operational checks good. No leaks found. Reviewed AD's thru 2014-12-2-----END-----

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service. Details are on file under work order **8057**.


Paul W. Enlow
Repair Station MYNR748K

 **MONTGOMERY AVIATION, INC.**
11329 East State Road 32
Zionsville, IN 46077
317-769-4487

Certified Repair Station No. MYNR748K

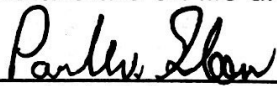
Forward

February 4, 2016 N653GS M/N IO-360-ES S/N 360222 FLT and ENG Total Time 334.8
Hobbs Time 420.3

Annual inspection completed IAW Cirrus SR20 CH 5 Scheduled Inspection Report. Changed oil and filter, cut filter open and found no metal. Took AOA sample hot at drain. Installed new oil filter and safetied. Serviced engine with 8qts Aeroshell 15W-50 oil. Washed engine and lubed controls. Cleaned fuel screen. Cleaned, gapped and rotated spark plugs. Compression checks- #1 72/80, #2 75/80, #3 72/80, #4 76/80, #5 74/80, #6 78/80. Master Orifice 47 psi. Installed between #2 and #4 cylinder inner baffle rod and spring. Installed new seals for #2 exhaust pushrod tube. All work done IRW Continental IO-360 maintenance manual. Reviewed AD's thru 1/6/2016. Run-up and operational checks good. No leak found.

The maintenance operation(s) described above were inspected in accordance with current regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.

Details are on file under work order **8498**.



Paul W. Enlow
1MYR828C



11329 East State Road 32
Zionsville, IN 46077
317-769-4487


Certified Repair Station No. 1MYR828C

Date: 03/02/2017 N653GS M/N: IO-360-ES S/N: 360222 Hobbs Time: 443.5 Flt
Time and Engine Total Time: 352.5

Performed Annual/100hour inspection IRW Cirrus SR20 CH5-20 scheduled inspection report. Performed engine compression check. Results are as follows: 1)76/80 2)76/80 3)78/80 4)77/80 5)75/80 6)78/80 master orifice: 43/80. Changed engine oil and filter. Took AOA Oil Sample hot at oil sump. Installed a new oil filter P/N CH48108-2. Inspected old filter and no visible metal was noted. Serviced engine with 7 qts of Aeroshell W15W-50 oil. Cleaned, gapped and rotated spark plugs. Installed new 6 each spark plugs P/N URHM38E. Cleaned all fuel screens. Washed engine with solvent and lubricated engine controls. Final run-up ops and leak check ok. AD's reviewed thru 03/02/17. -----END-----

The maintenance operation(s) described above were inspected in accordance with current FAA regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.

Details are on file at this agency under work order **8923**.


Chad Jachowske.
1MYR828C

11329 East State Road 32
Zionsville, IN 46077
317-769-4487

Certified Repair Station No. 1MYR828C

Brought I


Communications and Service Bulletins

April 13, 2018 N653GS M/N: IO-360-ES S/N: 360222 Hobbs Time: 466.7
Flight Time and Total Engine Time: 369.1

Complied with annual inspection I.A.W. Far 43 Appendix D referencing SR20 AMM Ch. 05-20 scheduled inspection report. Took Blackstone oil sample hot at sump drain. Drained engine oil. Removed, cut open and inspected filter element. No visible metal found. Installed new filter P/N: 48108-2. Serviced with 7 quarts of Aeroshell 15W-50 oil. Performed engine compression check as followed. #1) 78/80 #2) 77/80 #3) 76/80 #4) 78/80 #5) 72/80 #6) 76/80. Master orifice for the day was 45/80. Cleaned, tested, re-gapped and rotated plugs as required. Removed and replaced with new bottom #2 and bottom #6 cylinder spark plugs P/N: URHM38E, 2 each. Ops check for plugs ok. Cleaned fuel nozzles in ultrasonic cleaner as required. Leak check for nozzles ok upon re-installation ok. Washed engine with solvent and lubed controls as required. Post run-up, ops and leak checks ok. AD's reviewed through 04/13/2018.

The maintenance operation(s) described above were inspected in accordance with current FAA regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.

Details are on file at this agency under work order 18-9431.


John J. Edwards
1MYR828C



Certified Repair Station No. 1MYR828C

Date: 4/26/2019; Aircraft: N653GS; Type: SR20; S/N: 1698
Tach: 387.3 Hobbs: 491.3 ETT: 387.3

Engine

Completed annual on ENGINE. Drain engine oil sump. Removed cut and inspected oil filter. NO metal found. Installed new filter P/N aa48108-2. Refilled sump with 7 Qts. 15W50 Aero Shell. Compression check 1) 72/80 2) 76/80 3) 74/80 4) 77/80 5) 70/80 6) 73/80 MO 42/80. Cleaned gapped and rotated spark plugs. Applied loctite 262 to crankcase vent duct. Installed new seal for #1 cylinder fuel drain back fitting p/n 633958-2. Replaced #2 intake gasket. P/N 654227 Replaced Intake pushrod seals for #2, #3, and #5 cylinders. P/N 64160 Replaced exhaust pushrod seals for #2 and #5. OPS leak and run-up OK ADs checked through 4-5-2019.

The aircraft, engine, propeller, or appliance identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and was determined airworthy and approved for return to service. Pertinent details of the repair are on file at this repair station under W/O # 19-44331, dated 26 APR 2019.

Signed 

Tom Wood Aviation, Inc./Indianapolis Metropolitan Airport
9913 Willow View Rd, Fishers, IN 46038
FAA Certified Repair Station CRS #1TWR915M

CAMSHAFT

inspection & maintenance

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633958
636931
641533
642338
646416
646543A1A
646597A1A
546605
54487
54586
55269
59599
8106
8320-19

9/09/19 CAMSHAFT Order No 193112
CUST. NO. 10183 Terms COD - ck OK

G & N Aircraft
1701 E. Main St.
Griffith IN 46319

SHIP TO
G & N Aircraft
1701 E. Main St.
Griffith IN 46319

Contact: Dennis Wyman/Jim
Phone: (800) 348-6504
Qty: 1 P/N: 655545 S/N: M/N: IO-360-ES
Cust. P.O. No. 11998642
Arrived Via: UPS Ground Ship Via: UPS Ground
Instructions: Recondition and certify.

date of e

Author.

SERVICES & PARTS

qty.	code / description	qty.	code / description
1	306		

PRE-INSPECTION

Clean & visually inspect mech
 Continental Lycoming Other: _____

Run out - mains mech
 1 .0008 2 .0005
 3 .0009 4 .0002 5 TB

Main bearing diameter mech
 1 1.3724 2 1.3725
 3 1.3724 4 1.3725 5 TB



Aircraft Engine & Accessory Co., Inc.
2275 Crown Road Dallas TX 75229 USA
972.243.7404 aea@aea-precision.com
FAA REPAIR STATION UI1R533K

OUR RECOMMENDATIONS

INFORMATION IN THIS BOX DOES NOT REFLECT COMPLETED REPAIRS. READ ALL INFORMATION ON THIS PAGE FOR COMPLETE DETAILS.

CUSTOMER'S RESPONSE

customer's name: approved declined

date

by

PRE-INSPECTION (cont'd)

Governor/drive gear

Integral gear Slob dimension 6235
 Gear not present
 Gov. gear removed Ref. gear
 Drive gear removed W/O no.

Key slot condition mech
 OK TB

INSPECTIONS / REPAIRS

Base circle diameter -- intake lobes mech
 1 1.179 2 1.181 RT
 3 1.178 4 5
 6 7 8

Base circle diameter -- exhaust lobes mech
 1 1.178 2 1.179 RT
 3 1.180 4 1.179 5 1.178
 6 1.178 7 8

Maximum lift - all lobes mech
 Intake exhaust mech
 .3549 .3549 RT

Finish face angle - all lobes mech
 Intake exhaust mech
 .003 .003 RT

Mag. particle inspection mech INSPECTOR
RT LTB

REPAIRS (cont'd)

- TCM ONLY: Phosphate coat lobes and main bearing journals
- LYCOMING ONLY: Microfinish lobes, radius sharp ground edges mech
RS

Discrepancies

mech
N/A

FINAL REMARKS

ADs accomplished:
No. / Title / Method of accomplishment / Compliance next due

IMPORTANT NOTE TO INSTALLER: WHEN A RECONDITIONED CAMSHAFT IS INSTALLED, THE TAPPET BODIES USED WITH IT MUST MEET ORIGINAL DESIGN SPECIFICATIONS.

The camshaft identified above was repaired and inspected in accordance with Aircraft Engine & Accessory Co., Inc. Approved Camshaft Grinding Procedure, and in accordance with current regulations of the Federal Aviation Agency. Serviceability of this unit for a specific use is the responsibility of the installer. Details of repairs and inspections will remain on file at this Repair Station for the period required by regulation.

INSPECTOR'S SIGNATURE INSPECTION DATE

Dregbey SEP 12 2019

weight	1	2	3	4	5
value					

customer signature & date

invoice no.

requested here if order is picked up

G & N Aircraft, Inc.
 1701 E. Main Street • Griffith, IN 46319
 Phone: (219) 924-7110 • (800) 348-6504
 Fax: (219) 924-1059
 www.gnaircraft.com

WORK ORDER INVOICE

WORK ORDER: 024/73844

	1
	Pending
	10/22/19

PLEASE MAKE CHECKS PAYABLE TO: G & N AIRCRAFT, INC.

IA IO-360-ES CUSTOMER ENGINE

P/N: IO-360-ES

B 31
 I Tom Wood Aviation
 L 9913 Willow View Road
 Fishers IN 46038
 T
 O

S 31
 M Tom Wood Aviation
 I 9913 Willow View Road
 P
 Fishers IN 46038
 T
 O

JONESM

Cash/Cod	DELIVERED	73844	8/21/19	10/16/19	Dennis Wyman	James R. Yearsich			
Item Number	Item Description	Tx	QtyP	PrcP	Quantity	List/UOM	Discount	Sell/UOM	Extended
07 -----	G & N AIRCRAFT, INC. -----								
	IA CUSTOMER ENGINE IO-360-ES S/N 360222. CRACKED CASE REPAIR								7845.00
	Labor Totals								
	Parts Section:								
655269	Bushing		Each		4.00000	5.75000	13.2%	4.99	19.97
MS35756-8	Key **		Each		1.00000	1.38000	20.0%	1.10	1.10
501867	Washer Lock Tab		Each		24.00000	1.19172	NET	1.19	28.60
36025	Lock Tab **		Each		4.00000	2.82835	NET	2.82	11.31
631928	Hose **		Each		1.00000	3.99000	13.7%	3.44	3.44
641533	Seal **		Each		1.00000	40.51200	NET	40.51	40.51
AA48108-2	Filter		Each		1.00000	26.34000	20.0%	21.07	21.07
646605	Nut		Each		24.00000	1.98720	NET	1.98	47.69
O-PARTS	631687-S OPR Plunger SRVCBLE		Each		1.00000	35.86000	NET	35.86	35.86
O-PARTS	642580-S cyl.drain line SRVCBL		Each		1.00000	118.40000	NET	118.40	118.40
646416	Bumper-Rubber		Each		1.00000	5.67000	20.0%	4.53	4.54
O-PARTS	641531-S Tach Housing SRVCBLE		Each		1.00000	211.98000	NET	211.98	211.98
530917	Seal **		Each		1.00000	54.39000	13.3%	47.16	47.16
CAM-6R	6-Cylinder Camshaft-Regrind		Each		1.00000	350.00000	20.0%	280.00	280.00
533355	Gasket		Each		1.00000	3.96000	13.3%	3.43	3.43
2441	Nut		Each		8.00000	3.52000	5.2%	3.33	26.69
633958-2	Seal **		Each		6.00000	5.00000	14.1%	4.29	25.76
646543A1A	Kit Gasket Set		Each		1.00000	406.96800	NET	406.96	406.97
655959	Bolt Con		Each		12.00000	36.70800	NET	36.70	440.50
654487	Nut		Each		12.00000	11.08000	13.2%	9.61	115.34
654586	Cam Bolt **		Each		4.00000	9.81000	13.3%	8.50	34.03
646597A1A	Kit Bearing Set		Each		1.00000	1051.18000	17.2%	869.94	869.94
642338	Bearing		Each		12.00000	35.00400	NET	35.00	420.05
658106	Lifter		Each		12.00000	171.04800	NET	171.04	2052.58
636931	Nut **		Each		2.00000	70.26000	NET	70.26	140.52
629690	Piston Pins		Each		6.00000	87.37000	13.3%	75.78	454.68
658320-19	CRANKCASE ASM-STUD		Each		1.00000	12223.71600	NET	12223.71	12223.72
	LOT/SERIAL #: 360222								
CF630979-14--F	O'Ring		Each		1.00000	4.88000	20.0%	3.90	3.90

Continued on Next Page.

4
1

G & N Aircraft, Inc.
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 Phone: (219) 924-7110 • (800) 348-6504
 Fax: (219) 924-1059
 www.gnaircraft.com

WORK ORDER INVOICE

WORK ORDER: 024/73844

	2
	Pending
	10/22/19

PLEASE MAKE CHECKS PAYABLE TO: G & N AIRCRAFT, INC.

IA IO-360-ES CUSTOMER ENGINE

P/N: IO-360-ES

B 31
 I Tom Wood Aviation
 L 9913 Willow View Road
 L Fishers IN 46038
 T
 O

S 31
 H Tom Wood Aviation
 I 9913 Willow View Road
 P Fishers IN 46038
 T
 O

JONESM

Cash/Cod	DELIVERED	73844	8/21/19	10/16/19	Dennis Wyman	James R. Yearsich
----------	-----------	-------	---------	----------	--------------	-------------------

Item Number	Item Description	Tx	QtyP	PrcP	Quantity	List/UOM	Discount	Sell/UOM	Extended
AS3578-016	O Ring		Each		2.00000	2.35000	20.0%	1.88	3.76
CF630979-11--F	O'Ring		Each		1.00000	1.53096	NET	1.53	1.53
CF642644--F	Diaphragm		Each		1.00000	62.10000	20.0%	49.68	49.68
CF653746--F	Gasket		Each		1.00000	2.30000	20.0%	1.84	1.84
CF630979-12--F	O'Ring		Each		1.00000	2.60000	20.0%	2.08	2.08
CF646448-1--F	Belleville Washer		Each		8.00000	2.48000	20.0%	1.98	15.87
CF538600-3--F	Seal		Each		1.00000	2.87000	20.0%	2.29	2.30
627731	Lock		Each		8.00000	.52000	16.9%	.43	3.46
RG-632310	Valve Cover Gasket (4 Holes)		Each		12.00000	6.36000	20.0%	5.08	61.06
	Parts Totals								18231.32
	Operation 0007 Totals:					Flat Rated			26076.32
				G & N AIRCRAFT, INC.		Total:			26,076.32

Date: 10/31/2019; Aircraft: N653GS; Type: SR20; S/N: 1698
FLT Time: 401.1 Hobbs Time: 509.9

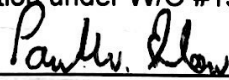
Record
specifications,

Brought

Cleaned and dried engine. Post runs have found a crack from alternator #1 bracket on RH forward case to rivet at data plate. Removed engine to be sent out for repair. Reinstalled repaired engine and mounted all accessories. Installed new propeller governor gasket p/n MS9144-01 and propeller o-ring p/n A1633-11. Serviced engine with 7qts Phillips 20W-50 X/C oil and one pint of Camguard. Run-up and operational checks good. Adjusted idle mixture for 30 rpm rise and set idle at 700 rpm's. No leaks found.

The aircraft, engine, propeller, or appliance identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and was determined airworthy and approved for return to service. Pertinent details of the repair are on file at this repair station under W/O #19-44440, dated October 31, 2019.

Signed



Tom Wood Aviation, Inc./Indianapolis Metropolitan Airport
9913 Willow View Rd, Fishers, IN 46038
FAA Certified Repair Station CRS #1TWR915M

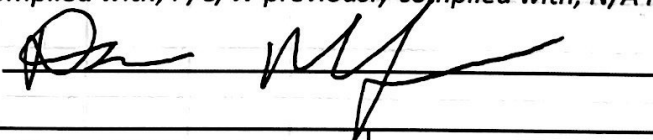
COMPLIANCE RECORD

S/N 360222

W/O 73844

C/W complied with, P/C/W previously complied with, N/A not applicable

Authorized Signature:



CRS MW2R020L

C/W correct torque on nut

N/A by P/N

N/A by P/N

C/W correct torque on nut

at next & every removal of crank

C/W by Inspection.

at next overhaul sudden stoppage insp
prop strike or whenever case is split

N/A by engine & crank S/N

C/W correct P/N lifters installed

*****END*****

Hrs.		Min.		Installations, Inspections, Airworthiness Directives, Special Inspections, Modifications and Service Bulletins
Flight Forward	→			

May 6, 2020
Engine Total Time: 416.1


N653GS

M/N: Continental IO-360-ES
Flight Time: 416.1

S/N: 360222
Hobbs: 531.6

Performed an annual inspection IAW FAR 43 Appendix D referencing Cirrus SR20 AMM inspection checklists as a guide. Performed engine compression check. Results are as follows: 1)78/80 2)75/80 3)76/80 4)77/80, 5)76/80, 6)75/80, master orifice: 45/80. Drained oil. Took Blackstone oil sample hot at sump. Removed, cut open, and inspected oil filter. No visible metal noted. Installed new oil filter P/N AA48108-2. Serviced engine with 7 quarts of Aeroshell 15W50 oil and 1 pint of Camguard. Washed engine with solvent and lubricated engine controls. Cleaned, gapped, and rotated spark plugs. Removed top and bottom spark plugs and replaced with new P/N URHM38E. Post-maintenance ops and leak checks ok. AD's reviewed through 05/06/2020.

The maintenance operation(s) described above were inspected in accordance with current FAA regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.
Details are on file at this agency under work order 20-10679.


John J. Edwards
CRS# 1MYR828C



11329 East State Road 32, Zionsville, IN 46077 | 317-769-4487 | CERTIFIED REPAIR STATION NO. 1MYR828C

June 15, 2021
Engine Total Time: 428.1


N653GS

M/N: Continental IO-360-ES
Flight Time: 428.1

S/N: 360222
Hobbs: 550.0

Performed an annual inspection IAW FAR 43 Appendix D referencing Cirrus SR20 AMM inspection checklists as a guide. Performed engine compression check. Results are as follows: 1) 76/80 2) 77/80 3) 76/80 4) 76/80, 5) 74/80, 6) 75/80, master orifice: 43/80. Drained oil. Took Blackstone oil sample hot at sump. Removed oil filter and cut open to inspect. No visible metal noted. Installed new oil filter P/N AA48108-2. Serviced engine with 7 quarts of Aeroshell 15W50 oil and 1 pint of Camguard. Post-maintenance ops and leak checks ok. AD's reviewed through 06/15/2021.

The maintenance operation(s) described above were inspected in accordance with current FAA regulations and with respect to work performed, the aircraft and/or component was found airworthy and is approved for return to service.
Details are on file at this agency under work order 21-11502.


John J. Edwards
CRS# 1MYR828C



11329 East State Road 32, Zionsville, IN 46077 | 317-769-4487 | CERTIFIED REPAIR STATION NO. 1MYR828C