

N231L TSIO-360-LB1B S/N 1032230

ENGINE LOG BOOK



Service Information

Consult the Continental Motors web site at continentalmotors.aero for engine related news or announcements. Continental Motors Internet Service contains useful information for Continental Motors engine owners, including electronic versions of the most current engine Instructions for Continued Airworthiness and service documents that may be pertinent to your engine model.

If Internet access is not available, contact our Customer Service Department at:
1-888-826-5465 Toll free in the United States or
1-251-436-8299 International

Engine Returns

Return engines for core credit with this log book to:

Continental Motors, Inc.
2039 Broad Street
Mobile, AL 36615 USA

Return engines for overhaul with this log book to:

Continental Motors, Inc.
Factory Service Center
8600 County Road 32
Fairhope, Alabama 36532 USA

**USE ONLY FUEL SPECIFIED IN OPERATOR'S
MANUAL OR TYPE CERTIFICATE DATA SHEET
USE OF AUTOMOTIVE FUEL IS PROHIBITED**



Continental Motors

FAA PRODUCTION CERTIFICATE NO. 508

Printed: 04/05/2016

Test Date: 04/05/2016

This engine model TSI0360LB1B, serial number 1032230 was rebuilt by Continental Motors Inc, in accordance with approved design data and the applicable requirements of 14 CFR, Part 21 and 43 of the Federal Aviation Regulation. The approved design data for this engine incorporates all changes required by applicable Airworthiness Directives and Continental Motors Service Bulletins.


CONTINENTAL MOTORS, INC.

Form 6012-04 (Rev Sept 2014)

AIR REPAIR

AIR REPAIR, INC. 29137 NEWMAM UNIT 8 • EASTON, MD 21601

Date

Date: 5/12/2016; Aircraft: N231L; Type: MOONEY M20K; S/N: 25-0055; Hobbs: 1136.20; Work Done At -
Airframe Time: ~~4430.29~~ 2839.2

INSTALLED FACTORY REMAN ENGINE.

SWAPPED ALL REQUIRED ACCESSORIES, HOSES, BAFFLING, ETC. ENGINE P/N R-TSIO-360LB1B, S/N 1032230 ON AIRCRAFT.

INSP ENGINE MOUNT AND FIREWALL FROM PROP STRIKE. NO DAMAGED NOTED. PERFORMED BORESCOPE AND FOUND #4 EXHAUST VALVE BROKEN AND #2 CYLINDER DAMAGED INTERNALLY. REM PROP AND SENT TO PROP SHOP FOR EVALUATION. DUE TO EXCESSIVE DAMAGE, PROP WAS DETERMINED B.E.R. INSTALLED NEW PROP P/N 2A34C216/90DHB-16E, S/N 150787 AND O/H PROP GOVERNOR P/N C29003-K/T20, S/N 960348.

The aircraft, aircraft engine, or appliance identified above was repaired and/or inspected in accordance with current maintenance rules of the Federal Aviation Regulations and is approved for return for service for the work performed. ELT has been inspected IAW FAR 91.207 Par (d) and meets the requirements of this inspection. Pertinent details of the repair are on file at this repair station under WORK ORDER NO.16-0073&16-0152ENG I certify that this Aircraft has had an ANNUAL INSPECTION and is airworthy at this time.

Signed

CRS#XR5R175Y

(Signature of authorized representative)

Henry Weber Aircraft Distributors, Inc. Maintenance Release

N231L

S/N: 1032230



Engine Logbook

Hobbs: 1143.3

Removed engine cowlings. Replaced missing piece of flexible baffle seal at left front corner of engine. Sealed all air gaps at baffles, hoses, ducts, and cables as needed. Adjusted fixed wastegate setting IAW Service Manual Chapter 71, Figure 71-4. Checked fuel system setup IAW TCM SID 97-3G. —END—

The component identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under

Order No: 16211

Certified Repair Station No: DY1R103K

Inspector:

Larry J. Snyder Larry J. Snyder

Date: May 26, 2016

500-B Airport Road, Lancaster Airport, Lititz, PA 17543

Engine Entry

Air 88 Inc. dba CROWNAIR
FAA Approved Repair Station #CWNR273K
3753 John J. Montgomery Dr.
San Diego, CA 92123

N231L
6-17-16

Mooney M20K
Hobbs: 1165.6 Hrs

S/N: 25-0055

Maintenance performed:

- Changed oil and filter. Serviced with 8 Qts of Aeroshell 15W-50 oil and installed new CH48108-1 oil filter, torqued and safetied. Run up and leak checks good.

I certify that with respect to the work performed this engine was repaired and inspected in accordance with current FAA regulations. Only those items specified in the work order have been inspected and found to be airworthy for return to service. Details of the repair are on file at this agency under Work Order No. PA-16-07678.

[Signature]
Authorized Representative

AIRCRAFT: MOONEY M20K
S/N 25-0055
REGISTRATION: N231L
HOBBS TIME: 1195.4

Date

1. DRAINED OIL AND SERVICED WITH 8 QTS AEROSHELL 15W50 OIL.
2. REMOVED AND REPLACED OIL FILTER (CH48108-1). NO METAL FOUND IN FILTER.
3. C/W ENGINE RUN. OPS CHECK AND LEAK CHECK GOOD.
4. AIRCRAFT IS APPROVED FOR RETURN TO SERVICE FOR WORK PERFORMED.

e Record

t removal and
ness Directives,

Carried forward

DATE: 9/14/2016
SIGNATURE

Ryan L. Eberhart
RYAN L. EBERHART
READING AIR SERVICE

AP3679868

AIRCRAFT: MOONEY M20K
S/N 25-0055
REGISTRATION: N231L
HOBBS TIME: 1236.3

1. DRAINED OIL AND SERVICED WITH 8 QTS AEROSHELL 15W50 OIL.
2. REMOVED AND REPLACED OIL FILTER (CH48108-1). NO METAL FOUND IN FILTER.
3. C/W ENGINE RUN. OPS CHECK AND LEAK CHECK GOOD.
4. AIRCRAFT IS APPROVED FOR RETURN TO SERVICE FOR WORK PERFORMED.

DATE: 11/8/2016
SIGNATURE

Ryan L. Eberhart
RYAN L. EBERHART
READING AIR SERVICE

AP3679868

AIRCRAFT: MOONEY M20K
S/N 25-0055
REGISTRATION: N231L
HOBBS TIME: 1272.3

1. DRAINED OIL AND SERVICED WITH 8 QTS AEROSHELL 15W50 OIL.
2. REMOVED AND REPLACED OIL FILTER (CH48108-1). NO METAL FOUND IN FILTER.
3. C/W ENGINE RUN. OPS CHECK AND LEAK CHECK GOOD.
4. AIRCRAFT IS APPROVED FOR RETURN TO SERVICE FOR WORK PERFORMED.

DATE: 2/27/17
SIGNATURE

Ryan L. Eberhart
RYAN L. EBERHART
READING AIR SERVICE

AP3679868

Henry Weber Aircraft Distributors, Inc. Maintenance Release

Engine Logbook

N231L
S/N: RTSIO-360-LB1B

Hobbs: 1292.3 TT: 156.1

Completed Annual Inspection this date. No engine related AD's due at this time.
Note: AD 84-26-02 Induction Air Filter Replacement is due at Hobbs 1636.2. Did not change oil or filter. Secured various items with clamps or cable ties as needed to prevent movement or chafing. Re-tensioned oil cooler shoe per overhaul manual. Inspected, reinstalled, torqued, and safetied both exhaust V-Band clamps. Replaced left cowl snubber on bottom cowl and oil service door hinge assy on top cowl. Cleaned induction air filter, serviced spark plugs, and lubed controls. —END—

Engine Compressions: #1 72 #2 75 #3 76 #4 73 #5 73 #6 70

I certify that this aircraft engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition. Pertinent details of the repair are on file at this repair station under

Order No: 16379

Certified Repair Station No: DY1R103K

Inspector:

Larry J. Snyder

Larry J. Snyder

Date: May 26, 2017

500-B Airport Road, Lancaster Airport, Lititz, PA 17543



Reading Air Service

ance Record

Date

Hou

Date: 8/1/17 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1304.0

1. Drained oil. Added 8qts Aeroshell 15W50.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good.
5. Aircraft is approved for return to service for work performed.

Signed:

Ryan L. Eberhart
Ryan L. Eberhart

AP3679868



Reading Air Service

Date: 10/31/2017 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1334.5

1. Drained oil. Added 8qts Aeroshell 15W50.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good.
5. Aircraft is approved for return to service for work performed.

Signed:

Ryan L. Eberhart
Ryan L. Eberhart

AP3679868



Reading Air Service

Date: 2/2/2018 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1362.9

1. Drained oil. Added 8qts Aeroshell 15W50.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good
5. Bleed brakes and serviced reservoir.

Signed: David Hladky

David Hladky

AP 185386293

ENGINE MODEL:
TSIO-360-LB1B
ENGINE S/N: 1032230
REG. NO: N231L
WORKORDER: 18045

LANCASTER AERO, LLC
Lancaster Aero, LLC.
311 Airport Drive
Box 7
Smoketown, PA 17576
Phone: 717-394-5805

DATE: 6/1/2018
A/C TSN: 3072.7
ENG TT: 235.8
TSMOH:
HOBBS: 1372

Engine Entries

- Cleaned, gapped, tested and rotated spark plugs and checked magneto timing.
- Compression test: #1 76/80 #2 74/80 #3 78/80 #4 76/80 #5 76/80 #6 66/80
- Changed oil and filter. Cut old filter open and inspected for contamination. No discrepancies noted.
- Serviced with Aeroshell 15W-50.
- Completed ground run, no discrepancies noted.

I certify that this engine has been inspected in accordance with an Annual Inspection and has been determined to be in Airworthy condition.

DATE: 6/1/2018

SIGNED:

Dallas Glick, IA 3571893

Work Order: 18045

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Reading Air Service

Date: 8/3/2018 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1406.0

1. Drained oil. Added 8qts Aeroshell W15W-50.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good

Carried forward Signed: Kevin Duffy - AP#3996853

Henry Weber Aircraft Distributors, Inc.
Maintenance Release

N231L
S/N: 1032230

Hobbs: 1433.3

Engine Logbook

Drained oil, removed filter. Cut open and inspected old filter. No abnormalities found. Replaced filter with new. Serviced engine with 8 quarts of AeroShell 15W-50 oil. Engine ground run. Op's and leak checked—okay.
—END—

The component identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under

Order No: 16617 Certified Repair Station No: DY1R103K

Inspector: Jeffrey L. Martin Date: October 23, 2018
500-B Airport Road, Lancaster Airport, Lititz, PA 17543



2 APRIL 2019 TSIO-360-LB(1B) S/N 1032230
Hobbs 1460.5 ETT 324.30

Engine Repair TSIO-360-LB (1B) Engine S/N 1032230. Crankshaft P/N 649877 S/N N15LA147 C/W Ultrasonic Inspection C/W. Installed Camshaft 655545 & Lifters P/N 658106. Magneto's Inspected and reinstalled Bendix S6LSC-25PP/N BL-500556-103 S/N D16CA157R & S6LSC-25P P/N BL-500556-103 S/N D16CA159R. Engine Test Cell Run and found Satisfactory. Itemized Parts List and Release Certificates are Included. Mdl. TSIO-360-LB (1B) S/N 1032230 Engine has been repaired in Accordance with Factory Overhaul Manual X30583 8/11. All parts have been inspected & have been determined Airworthy for return to Service. Pertinent details of the repair are on file at this agency under work order No. 027492 Completed Date 2 Apr 2019. Signed for Columbia Aircraft Services, Inc. Bloomsburg, Pa 17815 FAA R.S. JM2R930K

Maintenance Record

Engine part removal and ons, Airworthiness Directives, Service Bulletins



Reading Air Service
119c Air Museum Drive
Reading, PA 19605
610-288-2496
Reading Regional Airport

Date: 5/3/19 N231L A/C: Mooney M20K AC S/N: 25-0055 Hobbs:1464.6

1. Removed TCM TSIO-360-LB(1B) S/N: 1032230 from N231L.
2. Sent engine to Columbia Aircraft Services Inc. for IRAN inspection. Details under their W.O.# 027492.
3. Installed engine on to aircraft IAW Mooney M20K MM, Chap. 71-00-30.
4. Installed all accessories/baffling/hoses/etc.
5. Installed propeller.
6. Serviced engine with 8qts Aeroshell 100 Mineral Oil.
7. C/W engine run-ups. Adjusted fuel injection system IAW Mooney M20K MM, Chap. 71-00-40, 71-00-50 and TCM SID97-3G. All checks good.
8. This aircraft is approved for return to service for the work performed.

SIGNATURE Ryan I. Fierhart A&P3679868

Ryan I. Fierhart

Henry Weber Aircraft Distributors, Inc.
Maintenance Release

N231L
S/N: 1032230

Hobbs: 1491.6 TT: 355.4

Engine Logbook

Completed Annual Inspection this date. No engine related AD's due at this time. Note: AD 84-26-02 "Paper Air Filter" is N/A due to non-paper filter installed. Drained oil and replaced filter—old filter inspection okay. Serviced engine with 8 quarts of AeroShell 100W oil plus CamGuard oil additive. Inspected and torque checked exhaust system V-Band clamps. Cleaned induction air filter, serviced spark plugs, and lubed engine controls. Checked and adjusted engine fuel system setup IAW Mooney M20K Maintenance Manual Chapter 71-00-40, 71-00-50, and Continental SID 97-3G. —END—

Engine Compressions: #1 74 #2 72 #3 76 #4 72 #5 76 #6 75

I certify that this aircraft engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition. Pertinent details of the repair are on file at this repair station under

Order No: 16731 Certified Repair Station No: DY1R103K

Inspector: Jeffrey L. Martin Date: August 7, 2019
500-B Airport Road, Lancaster Airport, Lititz, PA 17543



Reading Air Service

Date: 12/18/2019 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1516.0

1. Drained oil. Added 8qts Aeroshell 15W50.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good.

David Hladky AP 185386293



Reading Air Service

Date: 4/23/2020 N231L A/C: Mooney M20K S/N: 25-0055 Hobbs:1545.8

1. Drained oil. Added 7qts Aeroshell W100.
2. Replaced filter with new CH48108-1.
3. Cut opened old filter. No metal found.
4. C/W engine run up and leak check. All checks good.

David Hladky AP 185386293

Record

oval and Directives,

Henry Weber Aircraft Distributors, Inc. Maintenance Release		N231L S/N: 1032230		Hobbs: 1577.3 TT: 441.1	
Date	Ho	Engine Logbook			
Completed Annual Inspection this date. No engine related AD's due at this time. Changed oil and filter, and took oil sample—old filter inspection okay. Serviced engine with 8 quarts of AeroShell 100W oil and CamGuard oil additive. Installed Reiff hot sump oil heat pads IAW installation instructions (this is a minor alteration with no weight or balance changes) - system ops checks okay. Inspected, re-torqued, and safetied exhaust V-Band clamps. Replaced air inlet duct left side exhaust shroud. Cleaned, primed, and repainted left front lower engine baffling and front engine mount tubing. Cleaned air filter, serviced spark plugs, and lubed engine controls. —END—					
Engine Compressions: #1 77 #2 74 #3 74 #4 72 #5 75 #6 76					
I certify that this aircraft engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition. Pertinent details of the repair are on file at this repair station under					
Order No: 16895 Certified Repair Station No: DY1R103K					
Inspector: Larry J. Snyder Date: September 14, 2020					
500-B Airport Road, Lancaster Airport, Lititz, PA 17543					
ENGINE MODEL: TSIO-360-LB1B ENGINE S/N: 1032230 REG. NO: N231L WORK ORDER: 21050					
Lancaster Aero, LLC. 311 Airport Drive Box 7 Smoketown, PA 17576 Phone: 717-394-5805					
DATE: 3/26/2021 A/C TSN: ENG TT-235.8 TSMOH: HOBBS: 1606.7					
Engine Entries Changed oil and filter, inspect filter. No contamination noted. Serviced with Aeroshell 100 to capacity					
DATE: 3/26/2021 SIGNED: Kendall Horst, A&P: 3282382 Work Order: 21050 Printed by EBis 3 (datcomedia.com)					

Henry Weber Aircraft Distributors, Inc. Maintenance Release		N231L S/N: 1032230		Hobbs: 1640.8 TT: 504.6	
Date	Ho	Engine Logbook			
Completed Annual Inspection this date. No engine related AD's due at this time. Drained and sampled oil. Replaced oil filter—old filter inspection okay. Serviced engine with 7 quarts of AeroShell 80W oil and CamGuard oil additive. Inspected and retorqued exhaust system V-band clamps. Replaced baffle seal on air inlet duct. Cleaned air filter. Repositioned and secured cabin heat duct away from engine mount. Serviced spark plugs and lubed engine controls. —END—					
Engine Compressions: #1 75 #2 74 #3 70 #4 70 #5 74 #6 77					
I certify that this aircraft engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition. Pertinent details of the repair are on file at this repair station under					
Order No: 17044 Certified Repair Station No: DY1R103K					
Inspector: Jeffrey L. Martin Date: October 21, 2021					
500-B Airport Road, Lancaster Airport, Lititz, PA 17543					
Henry Weber Aircraft Distributors, Inc. Maintenance Release					
N231L S/N: 1032230		Hobbs: 1670.0			
Engine Logbook					
Drained oil, removed filter. Cut open and inspected old filter. No abnormalities found. Replaced filter with new. Serviced engine with 7 quarts of AeroShell W100 oil and CamGuard oil additive. Engine ground run. Op's and leak checked—okay. —END—					
The component identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under					
Order No: 17118 Certified Repair Station No: DY1R103K					
Inspector: Jeffrey L. Martin Date: March 16, 2022					
500-B Airport Road, Lancaster Airport, Lititz, PA 17543					
SARASOTA AVIONICS & MAINTENANCE					
N231L HOBBS: 1696.5 CONTINENTAL TSIO360-LB SN1032230 8/9/2022 Completed oil change. Cut filter no metal noted. Serviced with CH48108-1 oil filter and owner supplied Aeroshell W100 7 qrts with pint of Camguard. Ran for leak check. This engine is approved for return to service in respect to the work performed.					
Daniel Gualandri A&P3734411					



Venice Municipal Airport (VNC)
120 West Airport Ave
Venice, FL 34285

HOBBS	1700.1
TTAF	3403.1
TTE	563.9
SMOH	563.9
TTP	563.9
SPOH	563.9

N231L Date 11-9-22

Researched log books to calculate total times. Hobbs replaced 12-7-79 at 98.9 hrs. New Hobbs installed with 0.3. Replaced again 12-18-79 at 2.3 with 0.0 so total time was 100.9. Replaced again 2-10-92 at 1602.1 with 0.0 meter, so total time was 1703.0. Current TTAF is Hobbs plus 1703.0. TTAF compared to log entries for engine and prop installations and those times updated.

No oil change. Replaced oil filter with new, cut open for inspection. Took oil sample for AvLabs. Compression 1-78, 2-71, 3-77, 4-57, 5-77, 6-70. Checked magneto timing. Cleaned and gapped spark plugs. Cleaned fuel injector nozzles, replaced o-rings with new 630979-9's. Pressure checked exhaust system. Installed new Donaldson air filter. Checked fuel system in accordance with SM chapter 71-00-50 and SID97-3G. Removed turbo check valve Adel clamps. Rotated return check valve so HINGE is located at top. Replaced large Adel clamp with new. Checked AD's to current bi-weekly, all applicable are in compliance at this time, see AD listing. I certify this engine has been inspected in accordance with an annual inspection and is airworthy at this time.

IA2809540



N231L	Hobbs: 1724.6	DATE: 5-19-2023
Mooney M20K	s/n: 25-0055	

- Ran engine on ground and brought to operating temperature. Drained engine oil.
- Removed oil filter and cut open to inspect for metal contamination (none found).
- Installed and safety wired new oil filter p/n AA48108-2.
- Serviced engine with 7 qts Phillips X/C 20W-50.
- Ran engine on ground for operational and leak check.
- Engine returned to service with respect to the work performed.

Francisco L. Migenis A&P 3639889



N231L	Hobbs: 1724.6	DATE: 5-19-2023
Mooney M20K	s/n: 25-0055	

- Removed ship's battery.
- Installed new Concorde battery p/n: RG-35AXC s/n: 41303081.
- Aircraft returned to service with respect to the work performed.

Francisco L. Migenis A&P 3639889

wo: N231L 12-12-23



Engine - page 1 of 1

Sarasota Avionics - 140 Airport Ave E - Venice, FL 34285 - 941-800-2135

N231L

HOBBS: 1733.9

CONT MOTOR, TSIO-360-LB1B, S/N: 1032230

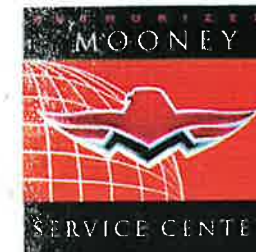
TTSN: 597.7

SMOH: 597.7

January 09, 2024

1. Replaced all spark plugs with new URHM38E. Checked magneto timing.
2. Changed oil and filter. Took oil sample for AvLabs. Checked sump suction screen. Cut oil filter open for inspection.
3. Serviced engine with Phillips 20w-50 x/c engine oil.
Compression 1-74, 2-67, 3-69, 4-65, 5-70, 6-66
Checked AD's to current bi-weekly. All applicable are in compliance at this time. I certify this engine has been inspected in accordance with an annual inspection and is airworthy at this time.

Dave Green A/P, IA 2809540



Venice Municipal Airport (VNC)
120 West Airport Ave
Venice, FL 34285

N231L Date 8-16-24 HOBBS 1067.5

Drained oil, changed filter. Serviced with Phillips XC 20W50. Test ran for leak and ops check. R&R cowling to facilitate maintenance.

AP2809540



Venice Municipal Airport (VNC)
120 West Airport Ave
Venice, FL 34285

HOBBS	1769.1
TTAF	3472.1
TTE	632.9
SMOH	632.9
TTP	632.9
SPOH	632.9

N231L Date 5-1-25

Test ran engine for leak and operational check. Drained oil, changed filter. Cut open for inspection. Serviced engine with Phillips XC 20W50. Cleaned spark plugs. Checked magneto timing. Removed heater shrouds and pressure checked entire exhaust system. Inspected engine air filter. Compression 1-62, 2-74, 3-69, 4-60, 5-64, 6-64. R&R propeller for overhaul, see propeller log. Checked AD's to current bi-weekly, all applicable are in compliance at this time, see AD listing. I certify this engine has been inspected in accordance with an annual inspection and is airworthy at this time.

IA2809540

Ice Record

part removal and
thickness Directives,
ins