



ENGINE RUN REPORT

ENGINE MODEL	IO550F13B
ENGINE SERIAL NUMBER	284691-R
AIRCRAFT MAKE & MODEL	Cessna 182P
AIRCRAFT SERIAL NUMBER	18260866
AIRCRAFT REGISTRATION	N9326G
FILE NUMBER	18-245

NAME	SIGNATURE	DATE
Phillip Grice		09/11/2020

18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 2 of 13

GENERAL INFORMATION

EXAMINATION		ACCIDENT DATA	
DATE	06/18/2019	NTSB ACCIDENT #	CEN19FA008
FACILITY	Continental Aerospace	NTSB INVESTIGATOR	Todd Fox
ADDRESS	[REDACTED] Mobile, Alabama 36615	FAA INVESTIGATOR	Not Reported
		ACCIDENT DATE	10/16/2018
		ACCIDENT LOCATION	Canoncito NM.

ENGINE INFORMATION

ENGINE POSITION	Single
TOTAL TIME	Not reported
TIME SOH	Not reported
TYPE & TIME SLI	Not reported
BUILD DATE	Not reported
IN SERVICE DATE	Not reported

Significant logbook information:

Logbooks were not returned with this exhibit

Report Summary:

Search Code(s):

15-12-68

The engine was removed from the shipping container and installed on the assembly stand. The oil sump was impact damaged but was able to be used for the test run. Number one rocker box cover was impact damaged. The oil cooler plate had a broken mount stud that was replaced for the engine run. All four mount legs were broken and replaced. The started adapter flange was fractured, a slave starter adapter was used for the test run. The crankshaft flange was bent and cracked. A replacement flange was welded on the end of the crankshaft for the test. The balance tube was impact damaged and replaced. The carburetor was impact damaged and the lower flange fractured. The air screen housing was impact damaged and replaced. The original fuel injection system was removed, and a carburetor was installed per an STC.

Disposition of engine following exam:

Engine returned to Air transport 06/24/2020 shipper AD01164

18-245ENGINE RUN REPORT**FILE NUMBER:**

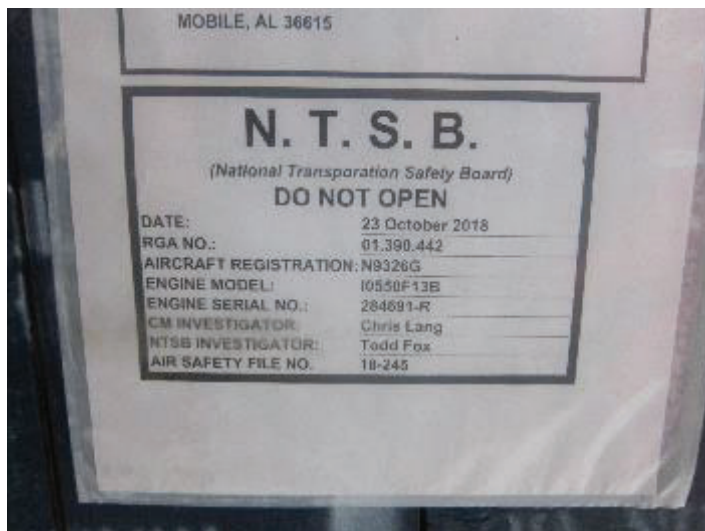
18-245

ENGINE S/N:

284691

PAGE 3 of 13**INSPECTION WITNESSES**

NAME	Phillip Grice	NAME	Randy Bryant
ADDRESS	Mobile Alabama	ADDRESS	Mobile Alabama
ORGANIZATION	Continental Motors	ORGANIZATION	Continental Motors
PHONE		PHONE	
NAME	Lisa Jersild	NAME	Mike Hodges
ADDRESS	Mobile Alabama	ADDRESS	Central Region
ORGANIZATION	Continental Motors	ORGANIZATION	NTSB
PHONE		PHONE	
NAME	Peter Basile	NAME	
ADDRESS	Wichita Ks	ADDRESS	
ORGANIZATION	Textron Aviation	ORGANIZATION	
PHONE		PHONE	

EXTERNAL INSPECTION OF ENGINE

18-245ENGINE RUN REPORT

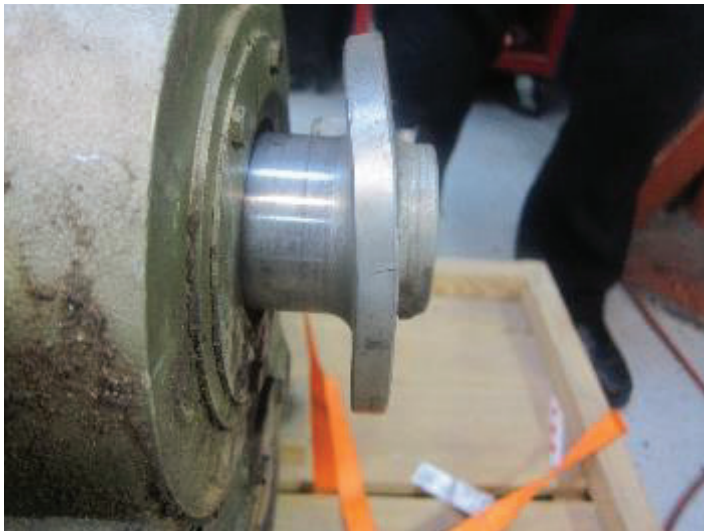
FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 4 of 13



18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 5 of 13



18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 6 of 13



18-245ENGINE RUN REPORT**FILE NUMBER:**

18-245

ENGINE S/N:

284691

PAGE 7 of 13**ENGINE PREPARATION PRIOR TO RUN**

There were a number of airframe related items removed in preparation for operation on the CMI test bed.

Items removed: Prop Governor, Vacuum pump, Starter adapter. #1 rocker cover, alternator, broken mount legs and cooling baffles

The following substitute or repaired parts were required for engine operation: Starter adapter, balance tube, mount legs, rocker box cover number one.

The magneto-to-engine timing was checked and with the following results:

Magneto-to-Engine Timing (Specified):	Left Magneto:	Right Magneto:
22°BTDC	Flange bent	Flange bent

A cylinder leakage test was performed prior to the test run in accordance with the latest revision of Continental Motors M-0 Maintenance Manual with the engine at room temperature with the following results (master orifice reading – 42 PSI):

Cylinder #1 - 71/80 PSI (exhaust valve)

Cylinder #2 - 21/80 PSI (rings)

Cylinder #3 - 05/80 PSI (exhaust valve)

Cylinder #4 - 08/80 PSI (rings)

Cylinder #5 - 50/80 PSI (rings)

Cylinder #6 - 64/80 PSI (rings)

(*) – Leakage Source

The engine was then prepared for operation by installing the appropriate thermocouples, pressure lines and test pads for monitoring purposes. The engine was then moved to CMI test cell number 43 and mounted for operation. The engine was fitted with a test club propeller for the IO550F engine model.

18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 8 of 13

DESCRIPTION OF RUN

The engine experienced a normal start on the first attempt without hesitation or stumbling in observed RPM. The engine RPM was advanced in steps for warm-up in preparation for full power operation. The engine throttle was advanced to 1200 RPM and held for three (3) minutes to stabilize. The engine throttle was advanced to 1600 RPM and held for three (3) minutes to stabilize. The engine throttle was advanced to 2100 RPM and held for five (5) minutes to stabilize. The engine throttle was advanced to 2450 RPM and held for three (3) minutes to stabilize. The engine throttle was advanced to fully open position and held for three (3) minutes to stabilize. The engine throttle was rapidly advanced from idle to full throttle three times where it performed normally without any hesitation, stumbling or interruption in power.

Throughout the test phase, the engine accelerated normally without any hesitation, stumbling or interruption in power and demonstrated the ability to produce rated horsepower.

Note: Run times were reduced due to welded crankshaft.



18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 9 of 13



18-245ENGINE RUN REPORT

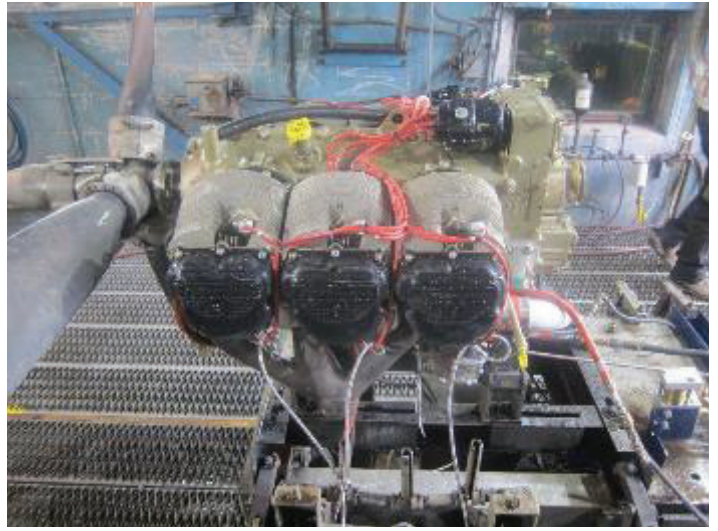
FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 10 of 13



18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 11 of 13



18-245ENGINE RUN REPORT

FILE NUMBER:

18-245

ENGINE S/N:

284691

PAGE 12 of 13



A cylinder leakage test was performed after the test run in accordance with the latest revision of Continental Motors M-0 Maintenance Manual with the engine hot with the following results (master orifice reading – 42 PSI):

Cylinder #1 - 70/80 PSI (rings)

Cylinder #3 - 71/80 PSI (rings)

Cylinder #5 - 70/80 PSI (rings)

(*) – Leakage Source

Cylinder #2 - 68/80 PSI (rings)

Cylinder #4 - 70/80 PSI (rings)

Cylinder #6 - 69/80 PSI (rings)

ENGINE RUN PARAMETERS

Time		RPM	MP / " Hg	Oil		Fuel				Cell °F	Cylinder Head Temperature °F					
Reading	Minutes			PSI	°F	Lbs/Hr	Nozzle PSI	Pump PSI	Fuel °F		# 1	# 2	# 3	# 4	# 5	# 6
1	3	1200	14.53	86	111	23.50	N/A	N/A	85	90	227	235	233	210	227	195
2	3	1600	18.4023.02	84	155	53.67	N/A	N/A	89	89	294	289	284	242	283	217
3	3	2100	26.53	86	184	105.1	N/A	N/A	90	90	259	333	350	286	370	247
4	3	2450	26.74	91	211	152.66	N/A	N/A	91	91	337	418	335	328	358	271
5	3	F/T 2630	26.74	92	193	148.26	N/A	N/A	92	92	330	379	341	307	346	259
6	3	Idle	15.50	84	176	13.90	N/A	N/A	91	91	225	232	238	216	225	179
Ambient Air Temperature °F		Ambient Air Pressure		Transfer Collar Δ P		Maximum Rated Power Engine Operational Parameters										
87.56		29.85		IN	OUT	RPM	" Hg MP	Fuel Flow Lbs/Hr	Metered PSI	Unmetered PSI						
				46	54	2700	N/A	N/A	N/A	N/A						

Notes: Operator – Lisa Jersild. Transfer collar pressure delta measured at full throttle power setting.

Engine Performance Test				
Test RPM	Left Magneto	Left Magneto	Right Magneto	Right Magneto
	RPM	RPM Drop	RPM	RPM Drop
2112	2088	24	2068	44