RECORD OF CONVERSATION

Michael J. Hodges
Air Safety Investigator
Central Regional Office
Office of Aviation Safety
National Transportation Safety Board

Date: 06/22/2021
Person Contacted: Dean Johnson (FAA Aviation Safety Inspector, Airworthiness – FAA Baton Rouge FSDO)
NTSB Case Number: CEN21LA268

Narrative:

The following is a synopsis of the information provided by Dean Johnson to the NTSB investigator-in-charge, via a telephone conversation.

- Dean spoke with the airframe and powerplant mechanic/inspection authorization who examined N365CP (Cessna 172S airplane with a Lycoming IO-360 series engine) right after the accident, Dayne Bounds from Glencoe Aviation (14 *Code of Federal Regulations* Part 145 Repair Station) in Gonzales, Louisiana. Dayne is the director of maintenance at Glencoe Aviation. Dayne reported that the area of failure on the rubber hose that failed in flight, was brittle.
- The rubber hose came apart and separated just prior to the metal hose crimp. The metal hose crimp itself did not fail.
- The rubber hose was from the original installation back in 2001, as the hose was at about 20 years of service on the airframe at the time of the accident.

***** NOTHING FOLLOWS *****

MAINTENANCE RECORD

TOTAL TIME SERVICE	DESCRIPTION OF THE WORK PERFORMED	AUTHORIZED CERTIFIC & NU

EPPS Aviation
770-458-9851

Aircraft Reg.:	N365CP	7/26/2001
Manufacture:	CESSNA	Work Order:
Model:	172S	D1210
Serial Number:	172S8838	Pg. 1 of 1
Hour Meter:	7.8	
Tach Time:	6.7	AFTT:

Installed Keith Products air conditioning system p/n: 172-01-00-1, s/n: 17201001-113 per STC SA09457SC & supplied drawings. Weight & balance & flight manual ammended as required. Refrence FAA form 337 dated 20, July, 01 for details.The aircraft, airframe, engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Adminstration and is approved for return to service. Pertinent details of the repair are on file at this repair station under Work Order No.D1210
Signed_[redacted] Hugh W. Cardon III Date: 7/26/2001 for Epps Air Service Inc. CRS ESMR688D

N365CP
Tach: 23.8

Cessna 172S
Total Time: 23.8

S/N: 172S
09/

Comply with Cessna AD 2001-06-17(d)(1) by checking idle mixture. N
adjustments were necessary.

[redacted]

KEITH PRODUCTS, Inc.

Maintenance Manual
with
Illustrated Parts Catalog

Air-conditioning System for Cessna 172
Document No. CR-172-15
STC No. SA09457SC

Section	Description
21-50-00	Air-conditioning System
21-50-01	Electrical
21-50-02	Plumbing
21-50-03	Compressor
21-50-04	Condenser
21-50-05	Evaporator
21-50-06	Illustrated Parts Catalog

Prepared by: B. STUCKS

Checked by: M. A. KRAUSE

Approved by: M. J. REED

Approved by: T. DOELL

RELEASE DATE

OCT 14 2009

Original Date: July 29, 2002

Revision: E

Revision Date: October 14, 2009

AIR-CONDITIONING SYSTEM

INSPECTION/CHECKS

1. GENERAL

General service procedures are provided to keep the air-conditioning system operating at peak efficiency. Procedures are provided for inspection intervals, refrigerant charge inspection, refrigerant leak inspection, and compressor oil level inspection.

CAUTION: Do not operate air-conditioning system with condenser air outlet blocked.

A. Tools and Equipment

Designation	Ref. No.	Qty	Remarks
Service Pressure Gage	Comm. Avail.	1	None
Electronic Leak Detector	Comm. Avail.	A/R	Type H-10G
Polyolester Oil	Comm. Avail.	A/R	Viscosity ISO 68

2. INSPECTION INTERVALS

A. General

Periodic inspections of the air-conditioning system will keep the system operating at peak efficiency. The inspections are simple visual inspections requiring a minimal amount of time.

B. Inspection Intervals

ITEM	INSPECT FOR	INTERVAL	ACTION
AIR-CONDITIONING SYSTEM COMPONENTS	DIRT, DAMAGE	EVERY 600 HOURS*	CLEAN OR REPLACE COMPONENTS AS NECESSARY
COMPRESSOR BELT	TENSION, WEAR	WITHIN 5 HOURS OF INSTALLING A NEW BELT, THEN EVERY 600 HOURS*	TENSION OR REPLACE AS NECESSARY
SIGHT GLASS	PROPER REFRIGERANT LEVEL	WHEN PROBLEM IS SUSPECTED*	DISCHARGE/CHARGE AS NECESSARY
EVAPORATOR AND CONDENSER COILS	DIRT	EVERY 600 HOURS*	CLEAN OR REPLACE AS NECESSARY

*Or every annual inspection, which ever comes first.

3. REFRIGERANT LEVEL INSPECTION
To be performed when improper refrigerant charge is suspected.

A. Select air-conditioning system switch to AIR COND position.
B. Set the fan speed switch to the HI position.
C. Run system for five (5) minutes minimum.
D. Check that the receiver/drier inlet and outlet fitting temperatures are the same. If the outlet is considerably colder, the receiver/drier screen may be clogged and may need replacement.
E. Check the sight glass for bubbles. No bubbles should be visible after 5 minutes of operation.
NOTE: The refrigerant bubbles are more difficult to see at ambient temperatures below 65ºF. Always re-check refrigerant level when ambient temperature is above 65ºF for proper level.
F. Add/Remove refrigerant as necessary.

4. REFRIGERANT SYSTEM LEAKAGE INSPECTION
To be performed when refrigerant leak is suspected.

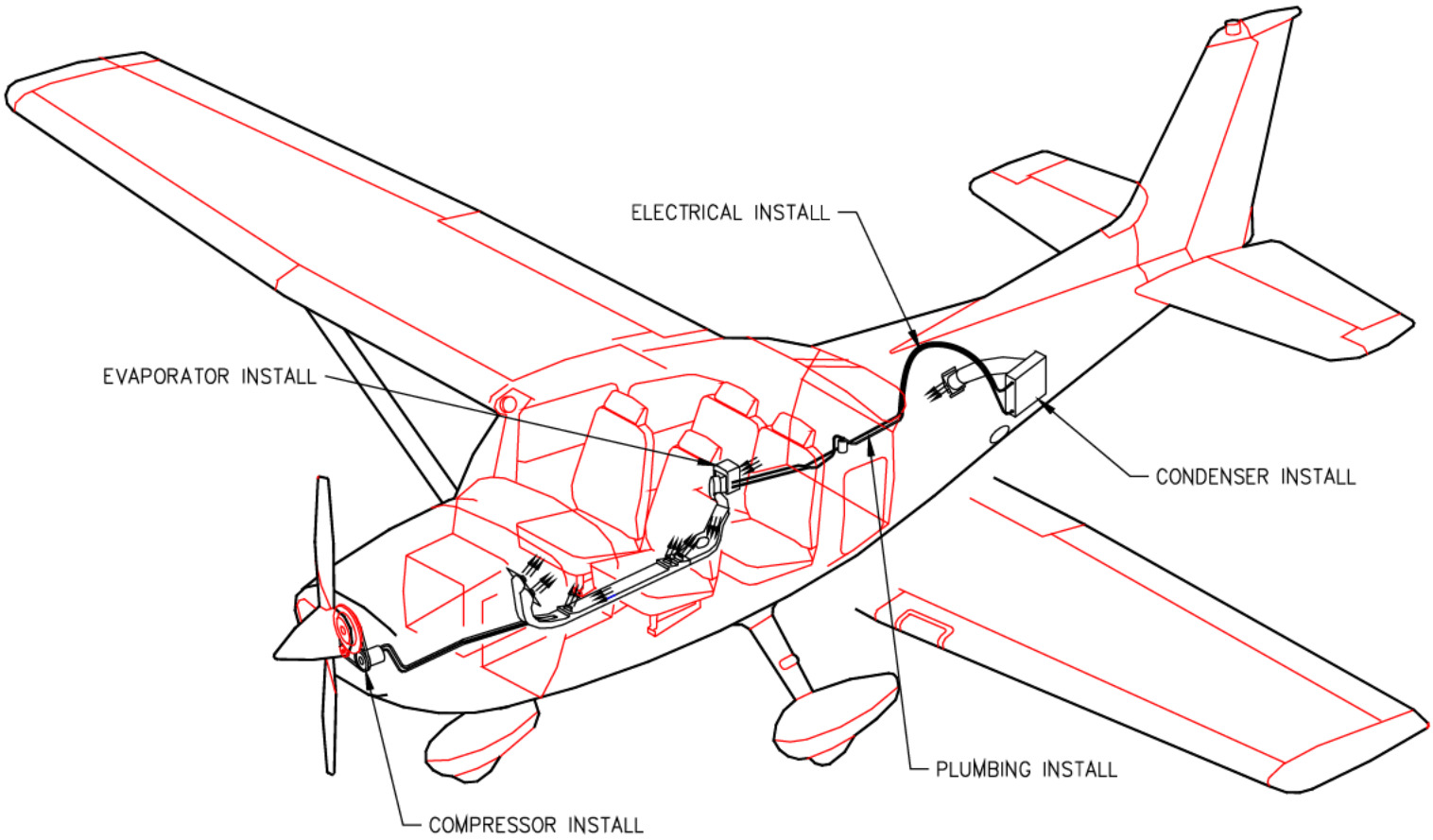
A. The system leakage check is to be performed in an area with an ambient temperature of 65ºF or above.
B. Install service pressure gage to low and high pressure R134a service valves.
C. On systems that have not been operated for 2 weeks or longer, operate the system for a minimum of 15 minutes. This will lubricate the compressor shaft seal and ensure a more accurate leakage check of the shaft seal.
D. With the system off, and using a type H-10G electronic leak detector or equivalent, check all connections, compressor shaft seal, and fabricated components for leakage. No leakage is acceptable.

5. COMPRESSOR OIL LEVEL CHECK

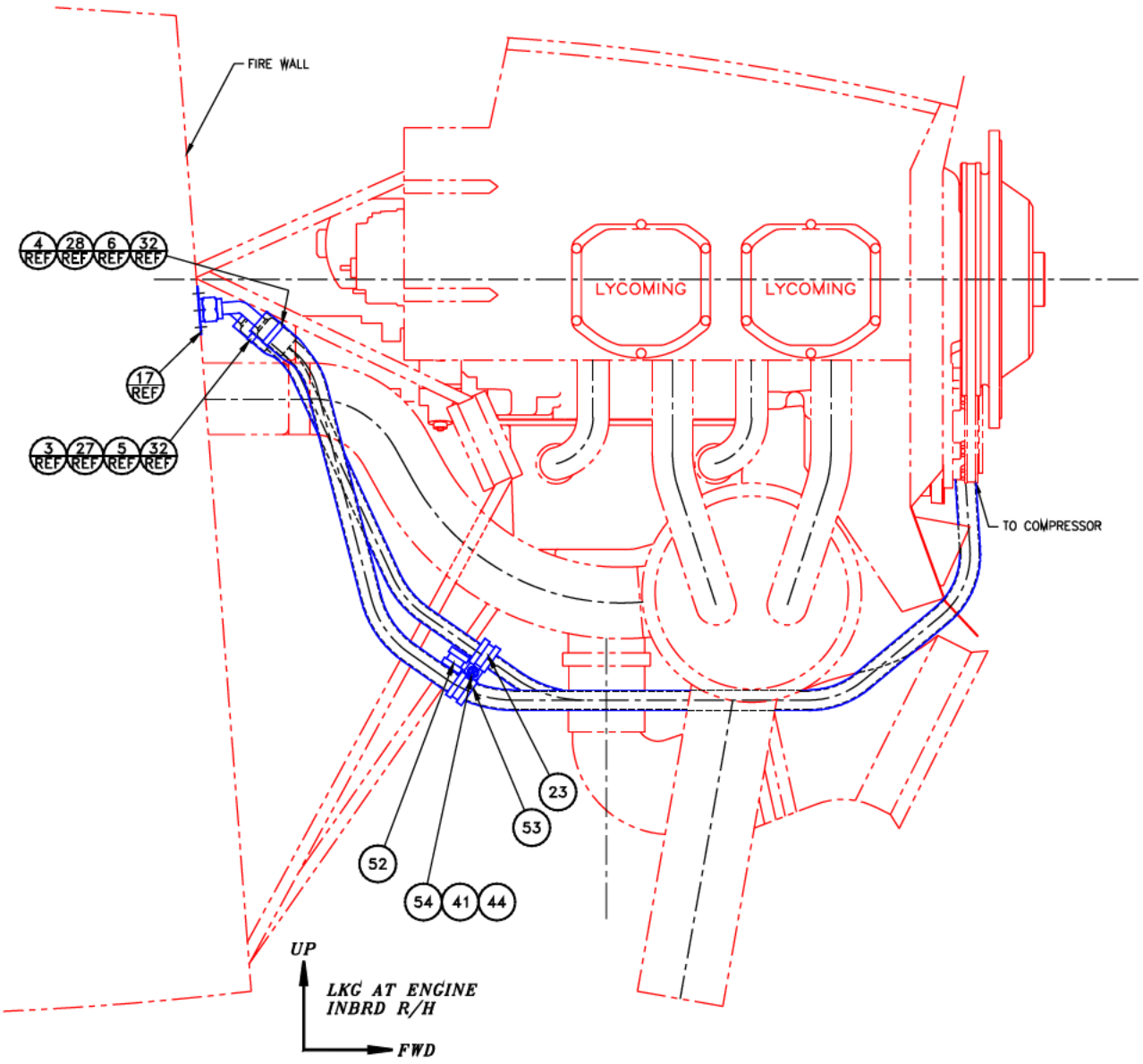
NOTE: It is not necessary to check the compressor oil level during routine maintenance. It only needs to be checked when a system component is replaced or when incorrect oil level is suspected. Only polyolester oil viscosity grade ISO 68 should be used.

1. Operate air-conditioning system for 10 minutes. This will collect as much oil as possible in the compressor.
2. Discharge air-conditioning system in accordance with the discharging instructions in this manual.
3. Remove either discharge or suction port hose fitting.
4. Remove oil drain plug and allow all oil to drain.
5. Add 5 ounces of oil to the compressor.
6. Clean oil drain area and install drain plug. Torque to 6 - 9 ft-lbs.
7. Install hose fitting.

8. Charge air-conditioning system in accordance with the charging instructions in this manual.



ILLUSTRATED PARTS CATALOG


FIRE WALL
4 REF
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6 REF
32 REF
17 REF
3 REF
27 REF
5 REF
32 REF
LYCOMING
LYCOMING
TO COMPRESSOR
23
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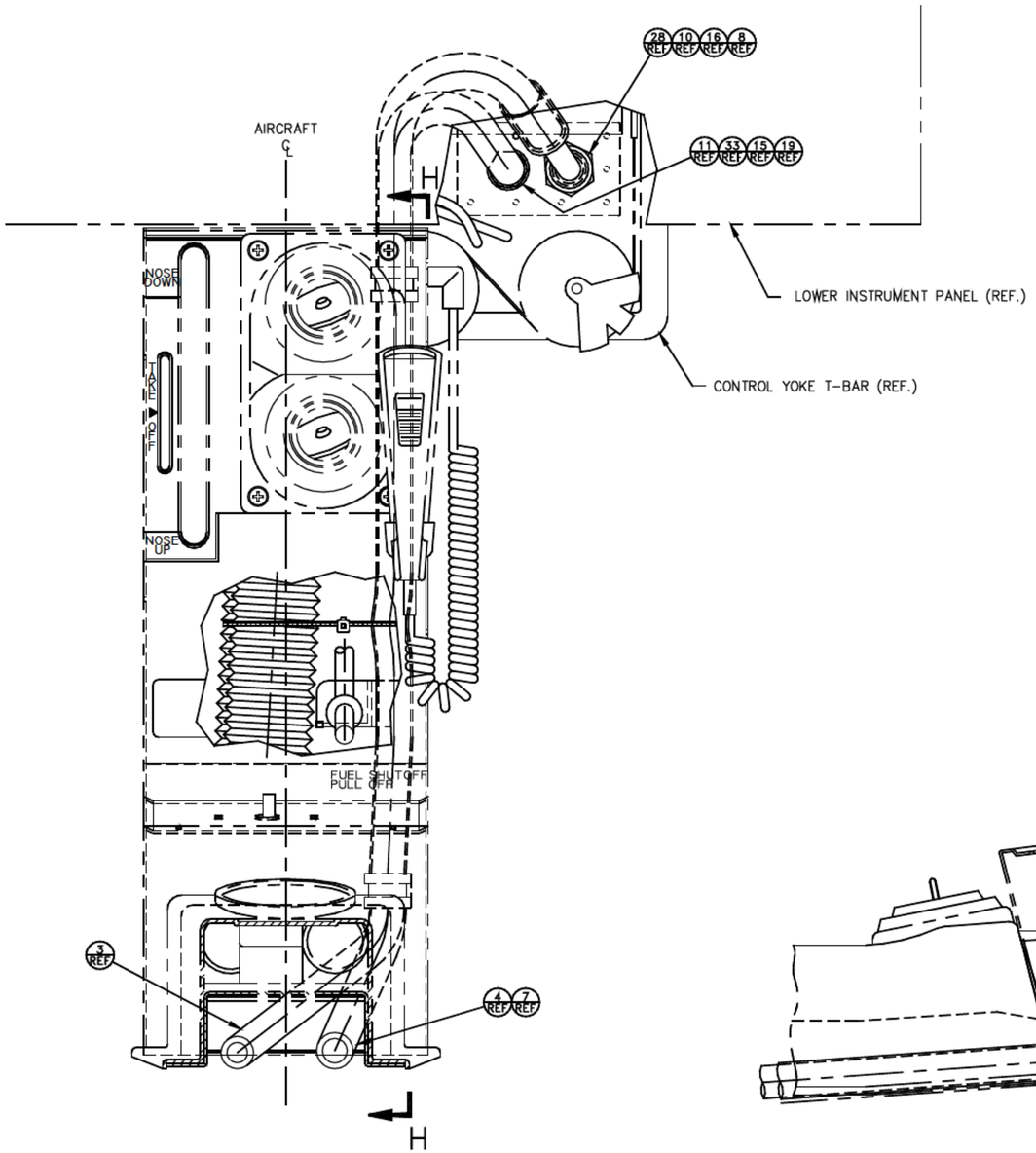
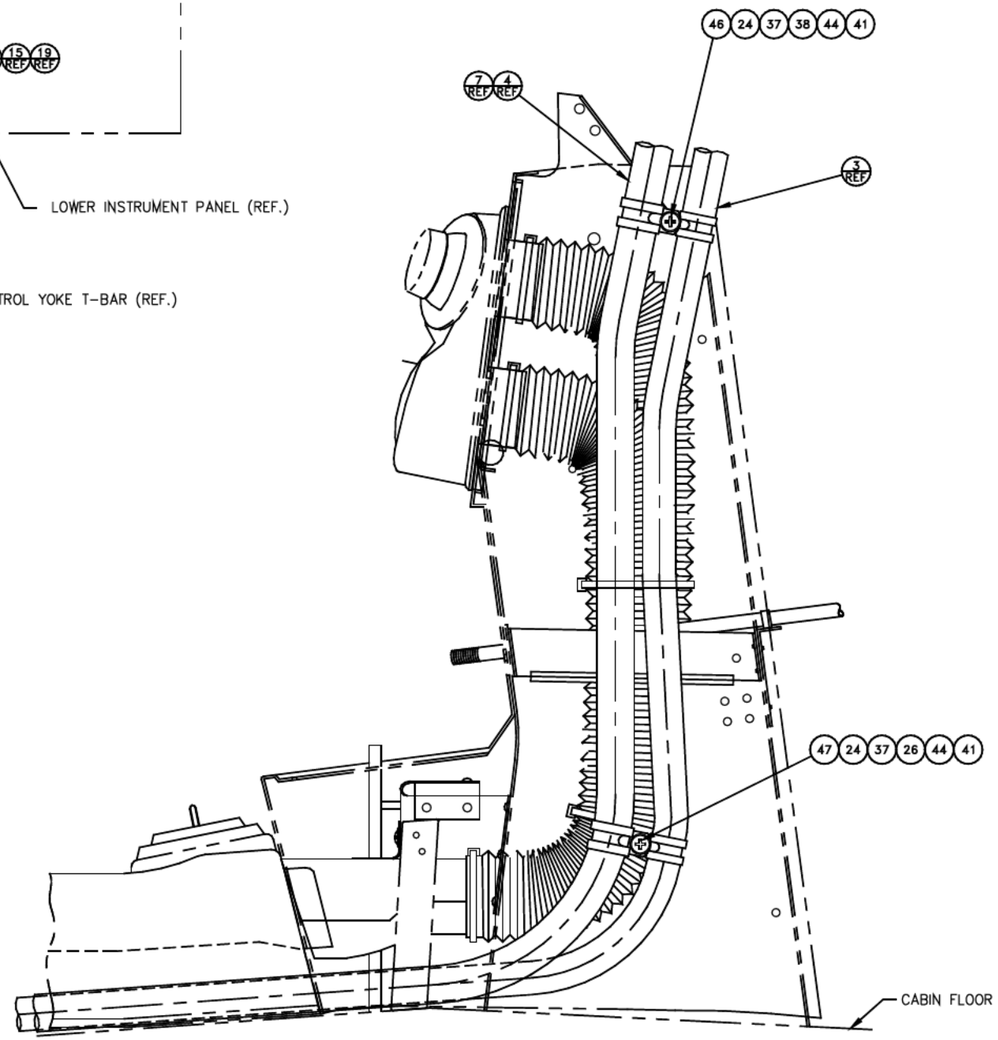
44
UP
LKG AT ENGINE
INBRD R/H
FWD

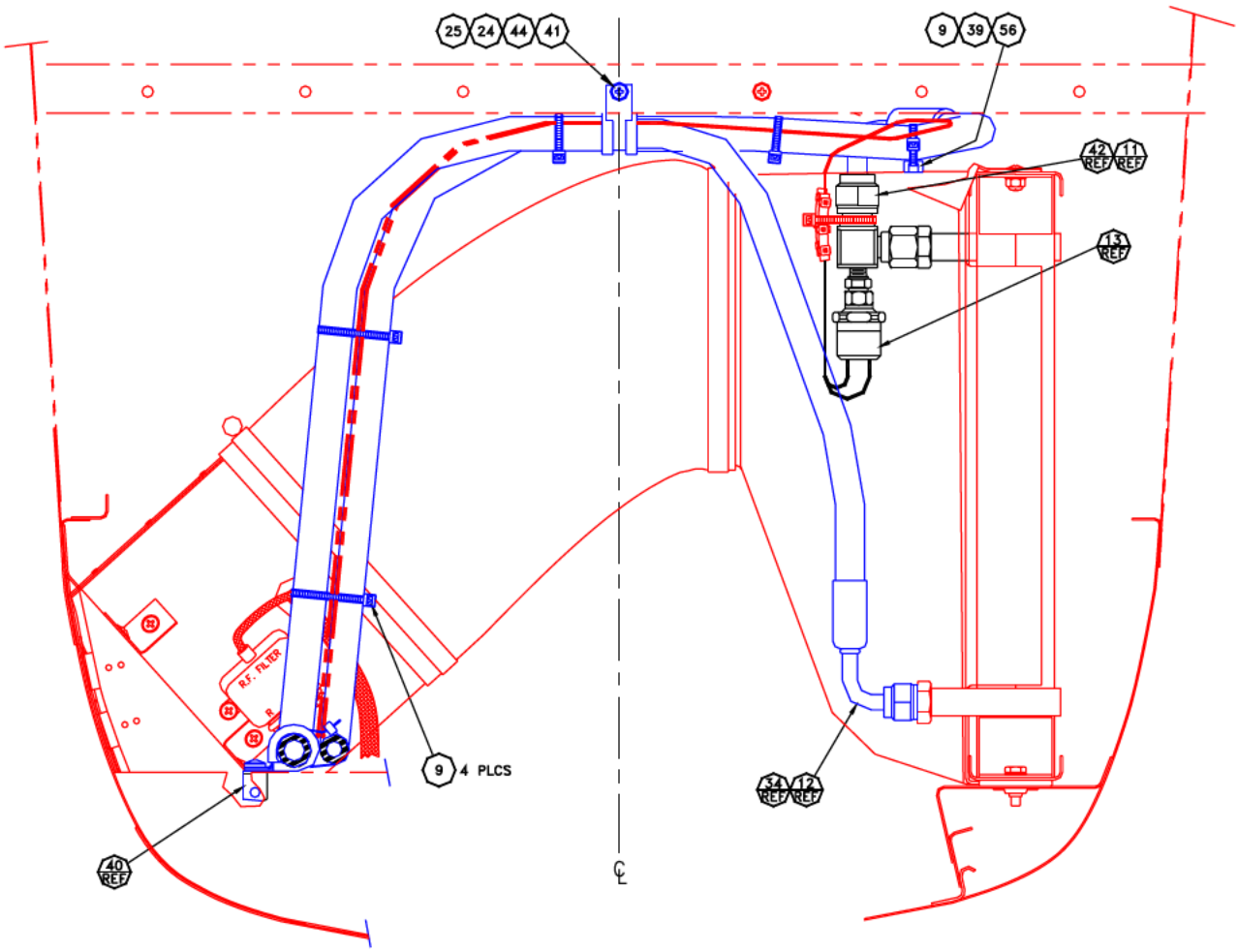
VIEW C–C



VIEW G–G



VIEW H–H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VIEW F–F

ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSEMBLY
1	172-0800-1	Plumbing Installation	
2	ES48149-1	Hose (IN)	80
3	ES48149-2	Hose (IN)	406
4	ES48149-3	Hose (IN)	262
5	ES02126-1	Fire Sleeve (IN)	65
6	ES02126-2	Fire Sleeve (IN)	65
7	ES06022-1	Insulation Tape (IN)	720
8	AN6289-10D	Nut	1
9	ES30015-6	Cable tie	20
10	ES49011-3	O-Ring	4
11	ES49011-2	O-Ring	5
12	ES49011-1	O-Ring	4
13	JBS2020-5	Pressure Switch Assembly	1
14	ES43030-2	Receiver Dryer	1
15	JBS6009-9	Fitting, Bulkhead O-Ring	1
16	JBS6009-3	Fitting, Bulkhead O-Ring	1
17	172-1800-2	Doubler	1
18	ES31101DS4-2	Rivet	10
19	AN6289-8D	Nut	1
20	ES40158-2	Splicer, Beadlock	1
21	ES40158-3	Splicer, Beadlock	1
22	ES49000-1	Sealant	1
23	MS21919WDG16	Hose Clamp	2
24	MS21919WDG11	Hose Clamp	8
25	AN525-10R8	Screw	1
26	NAS43DD3-13	Spacer	1
27	ES40150-2	Fitting	2
28	ES40150-3	Fitting	2
29	ES40159-1	Fitting	1
30	ES40159-2	Fitting	1
31	AN960-4L	Washer	1
32	ES30072-1	Band-It Clamp	4
33	ES40149-2	Fitting	1
34	ES40151-1	Fitting	3
35	JBS10-64	Placard	4
36	ES40150-1	Fitting	1
37	MS21919WDG14	Hose Clamp	5
38	NAS43DD3-25	Spacer	1
39	ES30013-2	Tie Block	1
40	MS9592-005	Bracket	2
41	MS20365-1032	Nut	9

ITEM	PART NUMBER	NOMENCLATURE	UNITS PER ASSEMBLY
42	ES40151-2	Fitting	1
43	MS21044N08	Nut	2
44	AN960-10	Washer	9
45	AN960-8	Washer	2
46	AN525-10R14	Screw	1
47	AN525-10R12	Screw	1
48	AN525-10R7	Screw	5
49	206-1357-8	Bracket	1
50	ES30042-6	Clamp, Aero-Seal	1
51	AN525-832R6	Screw	2
52	MS21919WDG12	Clamp	1
53	MS21919WDG20	Clamp	1
54	AN525-10R10	Screw	4
55	MS21266-1N	Grommet Strip (IN)	12
56	ES30013-1	Tie Block	1
57	ES40151-3	Fitting	1

wo: 101874

Propeller - page 1 of 1

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N365CP **McCauley, 1A170E/JHA7660, S/N: VA23029** **June 07, 2021**

aftime: 12513.0 SMOH: 662.5

1. Inspected propeller IAW Barr Air Patrol 100-hour inspection checklist.

With respect to the work performed, this propeller is approved for return to service. Details of work performed are on file with Barr Air Patrol, LLC under work order: 101874.

Jamie Butcher Airframe/Powerplant [redacted]

Entry: 1 of 3

wo: 101874

Airframe - page 1 of 1

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N365CP **CESSNA, 172S, S/N: 172S8838** **June 07, 2021**

aftime: 12513.0 AFTT: 12513.0

1. Inspected aircraft IAW Barr Air Patrol 100-hour inspection checklist.
2. Compass swing performed and new deviation card installed on compass.
3. C/W ELT Battery inspection and ops check good on mounted ELT IAW FAR 91.207(d). No defects found.
4. C/W SL59B Garter filter replacement, new filer installed P/N: ARB3-5-1.
5. Installed overhauled glideslope from Flight Electronics Inc. P/N: 013-00049-01 S/N: C21020. Op's check not good, horizontal line not locating ILS. Placarded and deferred.

With respect to the work performed, this airframe is approved for return to service. Details of work performed are on file with Barr Air Patrol, LLC under work order: 101874.

Jamie Butcher Airframe/Powerplant [redacted]

Entry: 2 of 3

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N365CP **Lycoming, IO-360-L2A, S/N: RL-29399-51A** **June 07, 2021**

aftime: 12513.0 SMOH: 100.4

1. Inspected engine IAW Barr Air Patrol 100-hour inspection checklist. Performed engine cylinder differential pressure check and boroscope: 1) 78/80, 2) 78/80, 3) 78/80, 4) 78/80. Removed oil filter and inspected filer media, no metal particles were found. Serviced engine with 8 qts or AS W100. Installed new oil filter P/N: CH48110-1.
2. C/W AD 01-06-17 Improper fuel flow. No defects found. This AD is not reoccurring.
3. C/W AD 2015-19-07/LYC SB 342G Inspect fuel injector fuel lines. No defects found. This AD and SB are reoccurring every 100 hours.
4. C/W CSB08-3C Throttle and mixture control levers. No defects found. This SB is not reoccurring.
5. Engine oil sample taken.
6. C/W LYC SB 183A Magneto Timing. No defects found. This SB is reoccurring every 100 hours.
7. C/W LYC SB 480F Oil and filter change. No defects found. This SB is reoccurring every 50 hours.
8. C/W RASL-006 Vacuum pump wear check - Lower. No defects found, pump within limits. This RASL is reoccurring every 100 hours.
9. C/W RASL-006 Vacuum pump wear check - Upper. No defects found, pump within limits. This RASL is reoccurring every 100 hours.
10. Removed and replaced #3 CHT probe with new P/N: 2852. Op's check good, no defects found.
11. Adjusted the idle and mixture screw for proper idle speed and RPM rise. Op's check good.
12. Tighten mixture cable clamp at fuel servo mounting bracket and checked mixture cable full range of operation. Op's check good no defects found.

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With respect to the work performed, this engine is approved for return to service. Details of work performed are on file with Barr Air Patrol, LLC under work order: 101874.

Jamie Butcher Airframe/Powerplant [redacted]

Entry: 3 of 3