



SERVICE BULLETIN

SB00025

Rev B

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Cub Crafters, Inc. Considers Compliance Mandatory

07/25/2013

EFFECTIVE DATE: **THIS SERVICE BULLETIN IS OBSOLETE effective 01/28/2015 and SUPERSEDED BY SAFETY ALERT 10.**
Originally released: 07/25/13

SUBJECT: OIL PRESSURE LINE INSPECTION

MODELS AFFECTED: "CC11-100 AND CC11-160 S/N 0001 THROUGH S/N 00280

COMPLIANCE TIME: ON OR BEFORE NEXT 100-HR / ANNUAL CONDITION INSPECTION

CONTINUED INSPECTION: EVERY 50 HOURS UNLESS UPGRADED TO FLEXIBLE HOSE. IF UPGRADED, INSPECT PER A/C MAINTENANCE MANUAL.

PURPOSE: To inspect the oil pressure line for leaks, and to provide the option to upgrade to a flexible hose.

WARRANTY: Installation is optional. Aircraft still under warranty will include up to one hour of labor if performed at a Cub Crafters Certified Service Center and parts will be covered at no cost.

PARTS LIST:

<u>PART</u>	<u>DESCRIPTION</u>	<u>-001</u>	<u>-003</u>	<u>-005</u>
AN823-3D	Elbow, 45°, Male NPT to Male Flare	1	-	-
AN837-3D	Fitting, 45° Bulkhead, Male Flare	-	1	1
AN910-1D	Coupler, Female NPT, Aluminum	1	-	-
AN924-3D	Nut, Bulkhead	-	1	1
HDW-50915K121	Nut, Compression Fitting, Fits 1/8" Od Tube	-	1	1
HDW-50915K611	Sleeve, Compression Fitting, Fits 1/8" Od Tube	-	1	1
*MS21919WDG21	Clamp, Cushioned #21	1	-	-
MS28741-3-0162A	Flexible Hose Assembly, 16 ¼" Length	1	1	-
MS28741-3-0202A	Flexible Hose Assembly, 20 ¼" Length	-	-	1
MS35489-11	Grommet, Synthetic Rubber	-	1	1
RM0567-001	Loctite 567, Pipe Sealant With Teflon	AR	AR	AR
SC50003-005	Adapter, Compression to Female Flare, Brass	-	1	1
SC50003-007	Adapter, Male Flare to Male NPT, Brass	1	1	1
SP50502-001	Elbow, 45° NPT (Street), Brass	1	1	-
Obtain Locally	Cable Ties	AR	AR	AR

*For aircraft with the Dynon Oil Pressure Sensor only. See optional step 5d.

CC11-160/CC11-100 with Digital Oil Gauge -001 PART LIST

CC11-160 with Analog Oil Gauge -003 PART LIST

CC11-100 with Analog Oil Gauge -005 PART LIST

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INSPECTION INSTRUCTIONS

1. Remove the cowling per Aircraft Maintenance Manual (AMM) SC10000AMM/SSC10000AMM Section 6.3.14 in order to access the oil pressure line which runs from the upper right (CC11-160) or lower right (CC11-100) rear of the engine to/through the upper right side of the firewall.
2. Verify there is no evidence of oil between the fire sleeve and the copper line at either end of the line near the clamps that would indicate a leak in the line.
3. Inspect the line for any visible leaks or cracks.

NOTE: Rough handling of the copper line can cause premature cracks/leaks.

4.
 - a. If leaks or cracks exist, follow the instructions below to upgrade the existing copper line forward of the firewall to a flexible braided hose.
 - b. If no leaks or cracks exist, make a log book entry per "Forms and Documentation" section at the end of this bulletin.

FLEXIBLE HOSE UPGRADE INSTRUCTIONS (OPTIONAL)

1. Remove cowling per Section 6.3.14 of the applicable AMM.
2. Remove any fasteners/ties securing the oil line to the engine.
3. Disconnect the oil pressure line from the engine fitting.
4. Remove the engine fitting and replace with:

CC11-160 Aircraft

SP50502-001 fitting (45° Street Elbow) and attach a restricted fitting adapter SC50003-007 (Male Flare to Male NPT).

CC11-100 Aircraft

Restricted fitting adapter SC50003-007 (Male Flare to Male NPT).

Clock the fittings to accommodate installation of the new flexible hose.

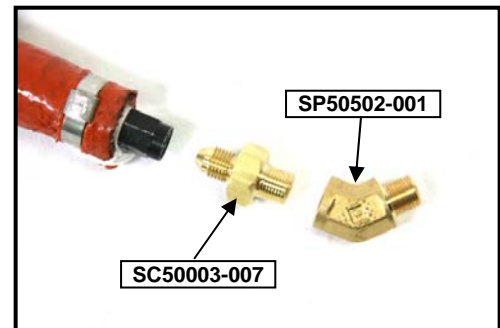


Figure 1 - Engine Fittings

NOTE: Apply RM0567-001 sealant as required for pipe thread (non-compression) fittings.

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5. FOR AIRCRAFT WITH DIGITAL OIL PRESSURE GAUGES (-001 PART LIST)

- a. Disconnect the copper line and compression fitting adapter from the pressure sensor mounted to the firewall. If necessary, the entire sensor can be removed by loosening the sensor clamp.

NOTE: Leave any existing Female to Female NPT (AN910-1D) Coupler attached to the sensor.

- b. Install the fitting adapter AN823-3D (45° Elbow, Male NPT to Male Flare) to the AN910-1D coupler on the sensor.

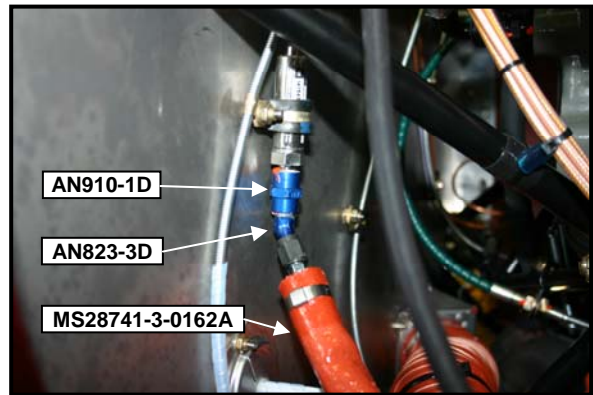


Figure 2 - Firewall Sensor Fittings



Figure 4 - CC11-100 Engine Fittings

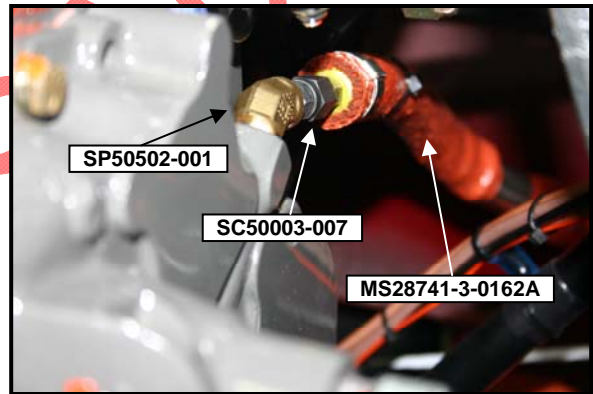


Figure 3 - CC11-160 Engine Fittings

- c. Install the flexible hose assembly (MS28741-3-0162A) between the AN823-3D fitting adapter and the SC50003-007 fitting adapter. Secure to the dipstick tube in a similar manner as the previous copper line.

- d. **For aircraft with the Dynon Oil Pressure Sensor only** (Dynon P/N100411-002 or CubCrafters P/N SP71301-004) the sensor needs to be grounded to the firewall:

- i. Remove the clamp (MS21919WDG24) which secures the sensor to the firewall.
- ii. Replace with the new cushioned clamp (MS21919WDG21) and remove the rubber cushion so that the clamp metal directly contacts the sensor.

- e. If previously removed, reinstall the sensor to the firewall opposite the removal.

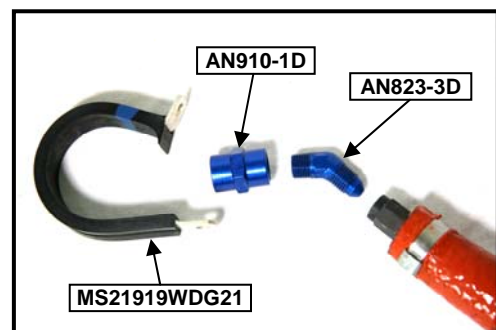


Figure 5 - Dynon Sensor Hardware

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FOR AIRCRAFT WITH ANALOG OIL PRESSURE GAUGES (-003/-005 PART LIST)

- a. Using a tubing cutter, cut off the copper oil line forward of the firewall. Leave enough of the copper tubing aft of the firewall to allow it to be reinstalled to a firewall bulkhead fitting.
- b. Slide the compression fitting sleeve (HDW-50915K611) and compression fitting nut (HDW-50915K121) over the copper tubing on the aft side of the firewall.

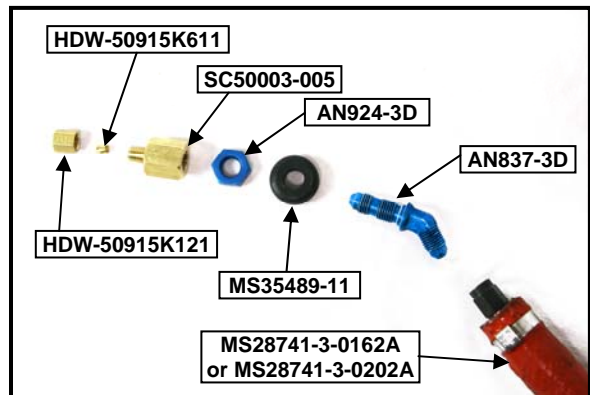


Figure 6 - Analog Gauge Firewall Fittings

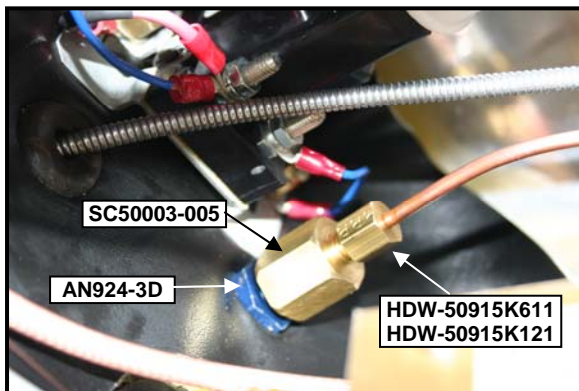


Figure 7 - Firewall Compression Fittings

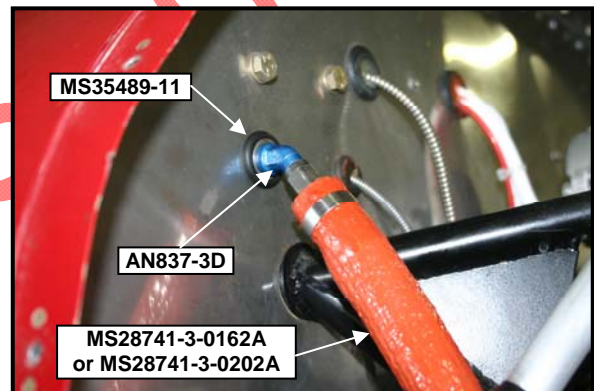


Figure 8 - Analog Gauge Firewall Hardware

- c. Install the fitting adapter SC50003-005 (Compression to Female Flare) marked with a "37" to the copper tubing using the compression nut and sleeve.
- d. Remove the synthetic rubber grommet (MS35489-2) from the firewall and replace it with a larger internal diameter MS35489-11.
- e. Install the 45° bulkhead fitting (AN837-3D) in the grommet with the 45° bend forward of the firewall. Attach the bulkhead nut (AN924-3D) aft of the firewall but don't tighten yet.
- f. Connect the fitting adapter to the bulkhead fitting and verify the connection is secure. Make sure to clock the fittings to accommodate installation of the new flexible hose.
- g. Tighten the bulkhead nut (AN924-3D).
- h. Install the flexible hose assembly between the bulkhead fitting and the engine fitting(s).

NOTE:

CC11-100 aircraft with analog gauges require MS28741-3-0202A (-005 part list)

CC11-160 aircraft with analog gauges require MS28741-3-0162A (-003 part list).



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- i. Secure hose to the dipstick tube in a similar manner as the previous copper line.
6. Verify all connections are secure.
7. Perform engine run-up and shut down in accordance with the applicable POH Section 4.3.2 and check for leaks.
8. Reinstall cowling per Section 6.3.14 of the applicable AMM.
9. Make a log book entry per "Forms and Documentation" section below.

WEIGHT AND BALANCE

This modification has a negligible effect on weight and balance.

FORMS AND DOCUMENTATION

Required Inspection Steps 1 - 4 require logbook entry "Inspected per SB00025. Inspection required every 50 hours." unless upgraded to flexible hose.

Optional Flexible Upgrade Steps 1 - 8 require one-time logbook entry "Oil pressure line replaced per SB00025".

MAJOR REPAIR OR ALTERATION

Installation of this service bulletin is a major alteration per ASTM F2483 Section 9. A Major Repair or Alteration (MRA) form is not required for installation in an SLSA aircraft per Section 6.5.2 of SC10000AMM / SSC10000AMM.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify Cub Crafters, Inc. of the address of the current owner to:

Cub Crafters, Inc.
1918 S. 16th Avenue
Yakima, WA 98903.
1-877-484-7865 or 1-509-248-9491
support@cubcrafters.com

Please include the aircraft registration number, serial number, current name, and address of the owner and/or operator.