

## **RECOMMENDED SERVICE BULLETIN NO. RSB 40-089 REV. 1** **SUPERSEDES RSB 40-089 REV. 0**

### **I TECHNICAL DETAILS**

#### **I.1 Category**

Recommended.

#### **I.2 Airplanes Affected**

Type: DA 40

S/N: 40.1229 and prior

#### **I.3 Date of Effectivity**

09 September 2020

#### **I.4 Time of Compliance**

At owner's discretion.

#### **I.5 Subject**

Installation of an improved oil pressure switch.

#### **I.6 Reason**

The airplane hourmeter is activated by an oil pressure switch. There have been reports of the original oil pressure switches failing, causing the engine to lose oil pressure.

In this service bulletin, the existing oil pressure switch is replaced by a switch with a higher maximum pressure rating in order to increase switch service life.

#### **I.7 Concurrent Documents**

None.

#### **I.8 Approval**

The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 40-1070, which has been approved under authority of the Canadian Aviation Regulation, Part V, Subpart 21.

The technical content of this document has been approved by the Canadian Department of Transport.

#### **I.9 Accomplishment/Instructions**

Comply with WI-RSB 40-089, latest effective issue.

## **I.10 Mass (Weight) and CG**

The change in mass and CG is negligible.

## **II PLANNING INFORMATION**

### **II.1 Material and Availability**

See WI-RSB 40-089, latest effective issue.

### **II.2 Special Tools**

None.

### **II.3 Labour Effort**

Approximately 30 minutes to 1 hour will be required to accomplish this service bulletin.

### **II.4 Credit**

None.

### **II.5 Reference Documents**

DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

## **III REMARKS**

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular which is not especially described in this service bulletin, must be done in accordance with the referenced maintenance manual.
3. Completion of all work must be recorded in the logbook.
4. In case of doubt, contact Diamond Aircraft Industries Inc.

**EXECUTION REPORT TO  
SERVICE BULLETIN  
RSB 40-089 REV. 1**

AIRPLANE INFORMATION

Airplane Serial Number	_____
Airplane Registration	_____
Airplane Operator	_____
Hours of Operation of Airplane	_____
No. of Landings	_____
Hours of Operation of Engine	_____
Typical Operation of Airplane	_____
	(private, club, training, other)

\_\_\_\_\_  
Date, Name, Signature

Please e-mail the completed form to [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com).

## **WORK INSTRUCTION WI-RSB 40-089**

### **I GENERAL INFORMATION**

#### **I.1 Subject**

Installation of an improved oil pressure switch.

#### **I.2 Reference Documents**

DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

#### **I.3 Remarks**

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular which is not especially described in this work instruction, must be done in accordance with the referenced maintenance manual.
3. In case of doubt, contact Diamond Aircraft Industries Inc.

### **II DRAWINGS, SPECIAL TOOLS & MATERIALS**

#### **II.1 Drawings**

None.

#### **II.2 Special Tools**

None.

#### **II.3 Material**

Item	Part No.	Qty	Description
1	LER00100TBMNKAAA15	1	Oil pressure switch
2	BW1-A14-RB8-FB4-080	1	Grounding wire
3	-	As required	Loctite 545 or Loctite 567

### **III INSTRUCTIONS**

**WARNING: MAKE SURE THE ENGINE IS SAFE. IF THE ENGINE STARTS, THE PROPELLER CAN CAUSE INJURY OR DEATH.**

1. Make sure that the engine is safe:
  - A. Set the ignition switch to OFF.
  - B. Set the MASTER switch to OFF.
  - C. Set the throttle to IDLE.
  - D. Set the mixture to LEAN CUT-OFF.
2. Remove the engine top cowling. Refer to AMM Section 71-10.
3. Disconnect the airplane battery. Refer to AMM Section 24-31.

**WARNING: DO NOT GET OIL ON SKIN. OIL CAN CAUSE SKIN DISEASE.**

4. Remove the existing oil pressure switch (Figure 1):
  - A. Place a rag around the switch to absorb oil that may come out.
  - B. Disconnect the wire harness from the oil pressure switch.
  - C. Remove the switch and the thread adapter from the engine block. Take care to ensure foreign objects do not fall into the engine.
  - D. Wipe the area clean of oil.
  - E. Properly dispose of the rag.
5. Install the new oil pressure switch:
  - A. Coat the threads of the oil pressure switch with Loctite 545 or Loctite 567.
  - B. Thread the oil pressure switch into the engine block.

**NOTE:** the thread adapter is not required.

- C. Ensure that the oil pressure switch is secure.
- D. Connect the new grounding wire (item 2) from the oil pressure switch to the engine block. Refer to Figure 2. Use either terminal on the oil pressure switch.
- E. Connect the airplane wire harness wire to the oil pressure switch. Use the remaining terminal on the oil pressure switch.



Figure 1. Original oil pressure switch installation.



Figure 2. New oil pressure switch (item 1) with bonding wire (item 2). Wire harness from aircraft not shown.



**Diamond Aircraft Industries**  
**WORK INSTRUCTION**  
**Model DA 40**

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6. Connect the airplane battery. Refer to AMM Section 24-31.
7. Do an engine ground run-up. Refer to the AFM.
8. Verify proper operation of the hourmeter.
9. Shut down and secure the engine.
10. Look for oil leaks at and around the oil pressure switch.
11. Clean the working area, and check for foreign objects.
12. Check all altered, replaced, repaired parts for proper function.
13. Install the top engine cowling. Refer to AMM Section 71-10.
14. Make all necessary entries in the logbooks.
15. Submit the execution report to [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com).

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner, and send the name of the current owner to Diamond Aircraft at the address below.

Diamond Aircraft Industries Inc.  
1560 Crumlin Sideroad, London, Ontario, Canada  
N5V 1S2

Customer Support:  
Phone: (519) 457-4041, Fax: (519) 457-4045  
E-mail: [support-canada@diamondaircraft.com](mailto:support-canada@diamondaircraft.com)

Technical Publications:  
E-mail: [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com)