

**SERVICE INFORMATION LETTER**  
**Contains Useful Information Pertaining To Your Aircraft Engine**

**SIL10-6**  
 Technical Portions FAA  
 Approved

**SUBJECT: OIL COOLER AND VERNATHERM CONTROL VALVE FOR  
 CERTAIN ENGINES EXPERIENCING LOW OIL TEMPERATURES**

**PURPOSE:** To improve oil temperatures in cold climates and higher flight altitudes.

**MODELS AFFECTED:** IO-550-N, TSIO-550-C

**General**

TCM has received reports of some Cessna Corvalis 300, 350 and 400 aircraft encountering lower than normal oil temperature during operation.

Cessna Corvalis 300, 350 engines that exhibit low oil temperatures (below 160 degrees F in normal operation) are eligible for installation of a replacement vernatherm control valve which will provide improved operational characteristics in cold climates and higher flight altitudes.

Cessna Corvalis 400 engines that exhibit low oil temperatures (below 160 degrees F in normal operation) are eligible for installation of a replacement engine oil cooler and vernatherm control valve which provide improved operational characteristics in cold climates and higher flight altitudes.


Prior to the installation of a replacement engine oil cooler and/or vernatherm control valve into your Cessna Corvalis aircraft, reference Cessna Aircraft Service Documentation for installation instructions.

**Parts required for the Corvalis 300 and 350 IO-550-N installation are:**

- 1 ea 657496 Vernatherm control valve (new gasket furnished with valve)

**Removal and installation of the vernatherm control valve Corvalis 300, 350 (See Figure 1)**

1. Locate and remove the vernatherm control valve and gasket (14, 15)
2. Install the new vernatherm control valve and gasket utilizing current revision of SB96-7 for correct torque.
3. After installation, run engine for leak check, correct any leaks found during test run and reinstall cowling in accordance with Cessna maintenance instructions.
4. Conduct a test flight to confirm oil temperature in operation. This test flight should allow the engine to reach normal operating temperatures (approximately 30 minutes flight time) prior to notation of any oil temperatures. **Note:** If aircraft is equipped with oil cooler winterization door that restricts cooling air flow through the oil cooler, note temperatures both open and closed.

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5. After installation and testing are satisfactorily completed, make a logbook entry showing replacement of the engine oil cooler, vernatherm control valve and associated parts in accordance with this SIL and including any entry as instructed by Cessna. The logbook entry must include a complete listing of parts used in this installation.

**Parts required for the Corvalis 400 TSIO-550-C installation are:**

- 1 ea 654585 Oil Cooler Assembly
- 1 ea 657496 Vernatherm control valve (new gasket furnished with valve)
- 2 ea 649989 Oil Cooler Gasket
- 2 ea 649961 Gasket, Washer
- 1 ea 640342 Spacer

**Removal and Installation of the oil cooler and Vernatherm valve Corvalis 400 (See Figure 1)**

1. Remove cowling following Cessna maintenance instructions.
2. Remove baffling and induction system components as required.
3. Remove the flanged nuts (Figure 12-18 in TCM Maintenance Manual M-18 and Figure 1 following) (13) and lock washers (12) from the lower front crankcase studs. Discard the lock washers (12). Remove the oil cooler (3) from the crankcase studs.
4. Remove the nut (9) lock washer (8) and washer (7) from the lower rear studs. Discard the lock washer (8).
5. Remove the nut (11) washer (10) and gaskets (1) from the upper studs.
6. Remove the oil cooler (4) from the crankcase.
7. Remove the bracket (shadowed) from the crankcase studs.
8. Remove the gaskets (2), spacer (3), and baffle (6).
9. Discard the gaskets and spacer (2), (3).
10. Remove the reducer (16), elbow (17), tee (18), cap (19), fitting (20), and adapter (21).
11. Remove the vernatherm control valve (14) and gasket (15)
12. Install the replacement oil cooler, vernatherm control valve and gasket in reverse order of removal. Utilize current revision of SB96-7 for correct torque. Lube all fasteners with 50w oil prior to applying torque as described in the service bulletin.
13. After installation, run engine for leak check, correct any leaks found during test run and reinstall cowling in accordance with Cessna maintenance instructions.
14. Conduct a test flight to confirm oil temperature in operation. This test flight should allow the engine to reach normal operating temperatures (approximately 30 minutes flight time) prior to notation of any oil temperatures. **Note:** If aircraft is equipped with oil cooler winterization door that restricts cooling air flow through the oil cooler, note temperatures both open and closed.

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15. After installation and testing are satisfactorily completed, make a logbook entry showing replacement of the engine oil cooler, vernatherm control valve and associated parts in accordance with this SIL and including any entry as instructed by Cessna. The logbook entry must include a complete listing of parts used in this installation.

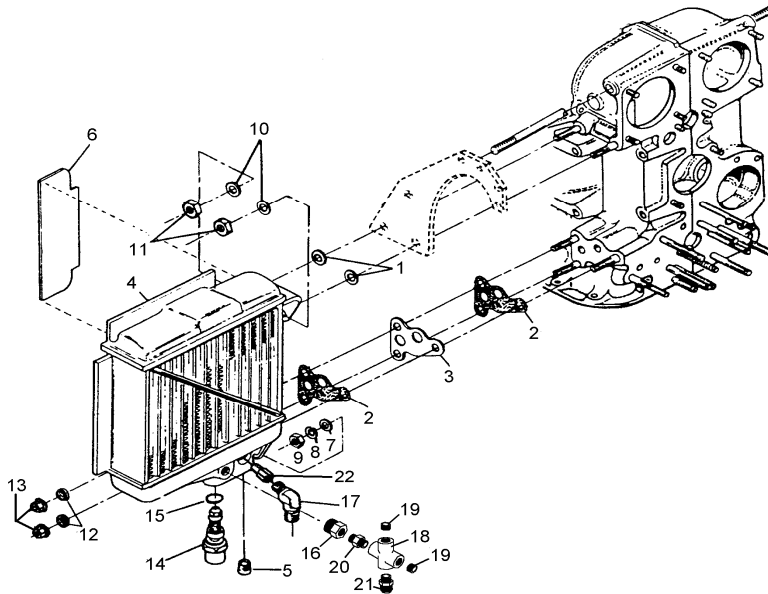


Figure 1 Oil Cooler and Associated Parts

- |                 |                |                |            |
|-----------------|----------------|----------------|------------|
| 1 Gasket-Washer | 7 Washer       | 13 Flanged Nut | 19 Cap     |
| 2 Gasket        | 8 Lock Washer  | 14 Vernatherm  | 20 Fitting |
| 3 Spacer        | 9 Nut          | 15 Gasket      | 21 Adapter |
| 4 Oil Cooler    | 10 Washer      | 16 Reducer     |            |
| 5 Plug          | 11 Nut         | 17 Elbow       |            |
| 6 Baffle        | 12 Lock Washer | 18 Tee         |            |

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