

| | | |
|---------------------------|-----------------------------|--|
| Czech Sport Aircraft a.s. | SERVICE BULLETIN | Czech Sport Aircraft a.s. Na Záhonech 1177/212, 686 04 Kunovice Czech Republic office@czechsportaircraft.com |
| No. SB-SC-030 | | Rev.: - |
| Date: 2015-05-20 | | |
| Page: 1 of 6 | | Date: - |

| | |
|---------------------------|--|
| MODEL AFFECTED: | SportCruiser / PiperSport |
| SUBJECT: | Installation of the thermostatic valve is recommended by the Rotax producer in case of permanent operational low oil temperature. It is possible to use the thermostatic valve in the engine lubrication system for all Rotax 912 engine series. Installation of the thermostatic valve must be always discussed with aircraft producer. |
| AIRCRAFT AFFECTED: | All SportCruiser, PiperSport aircraft produced. |
| COMPLIANCE: | According to airplane owner decision – depends on service condition and actually reached operational oil temperature. |

DESCRIPTION:

This Service Bulletin contains instructions for mounting the thermostatic valve in the lubrication system of the Rotax 912 Engine.

APPROVAL:

The installation of the thermostatic valve in the lubrication system is EASA approved under PS-28 Type Certification.

AUTHORISATION TO PERFORM:

EASA Part M or Part 145 Maintenance organization

REASON:

Using the thermostatic valve is recommended by the Rotax engine producer in case of permanent operational low oil temperature.

MANPOWER:

Approximately 8 hours are required to complete this Service Bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

SPECIAL TOOLS:

Screwdriver to remove engine cowling and hose clamp assembly, wrench to knee assembly, cutting pliers to cut tightening strips, pliers to tighten tightening strips, vessel to decant oil from hoses, knife to cut hoses.

WEIGHT AND BALANCE:

Affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

SportCruiser / PiperSport Airplane Maintenance Manual, SC-AMM-1-0-00, Rev. latest revision.
AC 43.13-1B, Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair

PUBLICATIONS AFFECTED:

SportCruiser / PiperSport Airplane Maintenance Manual, SC-AMM-1-0-00, Rev. latest revision.

| | | |
|---------------------------|-----------------------------|--|
| Czech Sport Aircraft a.s. | SERVICE BULLETIN | Czech Sport Aircraft a.s. Na Záhonech 1177/212, 686 04 Kunovice Czech Republic office@czechsportaircraft.com |
| No. SB-SC-030 | | Rev.: - |
| Date: 2015-05-20 | | |
| Page: 2 of 6 | | Date: - |

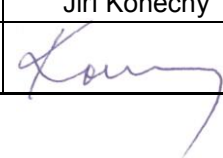
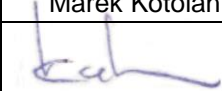
The following parts are required to comply with this Service Bulletin. Parts can be obtained from aircraft manufacturer or appropriate supplier of aircraft parts.

MATERIAL:

| Item | Name | Part Number | Nomenclature | Quantity | Note |
|------|---|-------------|--------------|----------|------|
| 1 | OIL THERMOSTATIC VALVE 85°C | | 3809D004 | 1 pcs. | |
| 2 | THERMOSTAT BRACKET | SE0135N | | 1 pcs. | |
| 3 | PYROJACKET 19 mm | | 66501003 | 3,5 m | |
| 4 | OIL HOSE CONTI TCH-OLNS1-12X3,5AEM | | 512K2402 | 3,5 m | |
| 5 | HOSE CLAMP NORMACLAMP S 20 mm | | 3330A021 | 10 pcs. | |
| 6 | THERMOFIT CGPT HOSE 25,4/12,7-4-FSP black | | 51202125 | 0,8 m | |

APPROVAL:

This SB was approved by:

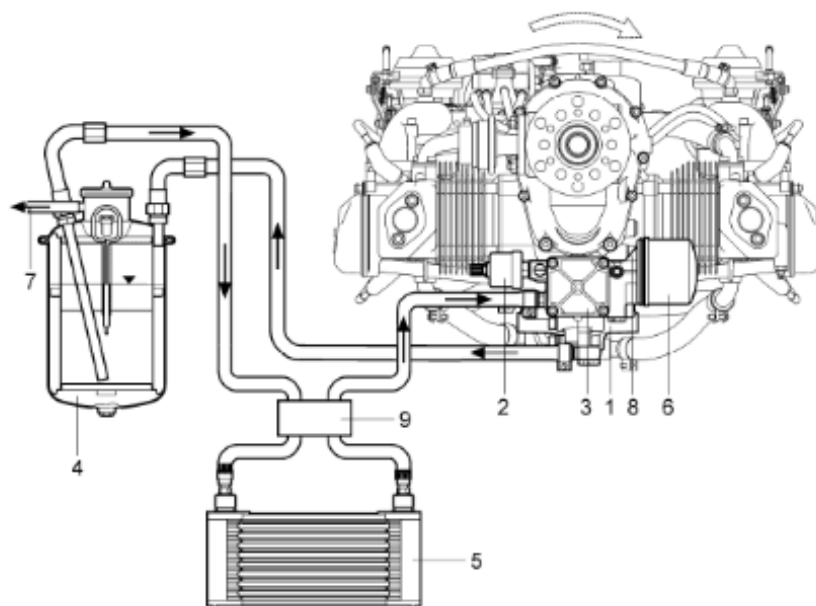
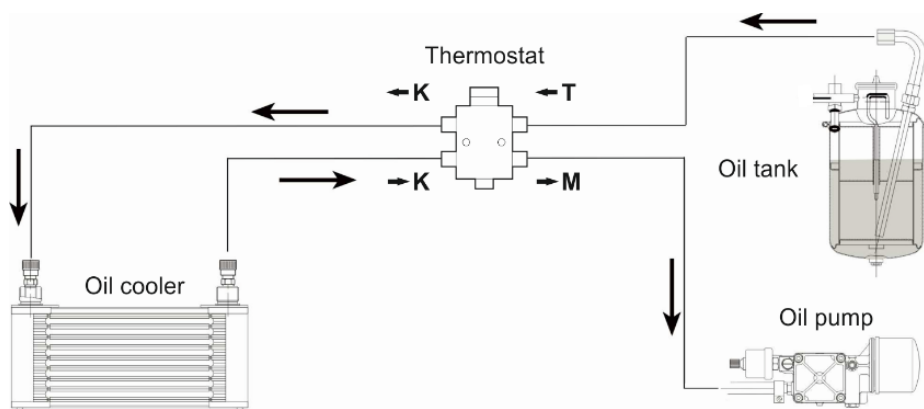
| | | |
|-------------------------------|---|--|
| Title | Head of the Design Organisation | Airworthiness Manager |
| Name | Jiří Konečný | Marek Kotolan |
| Hand written signature |  |  |

SERVICE BULLETIN

MOUNTING THE THERMOSTATIC VALVE IN THE ENGINE LUBRICATION SYSTEM

ACCOMPLISHMENT INSTRUCTIONS:

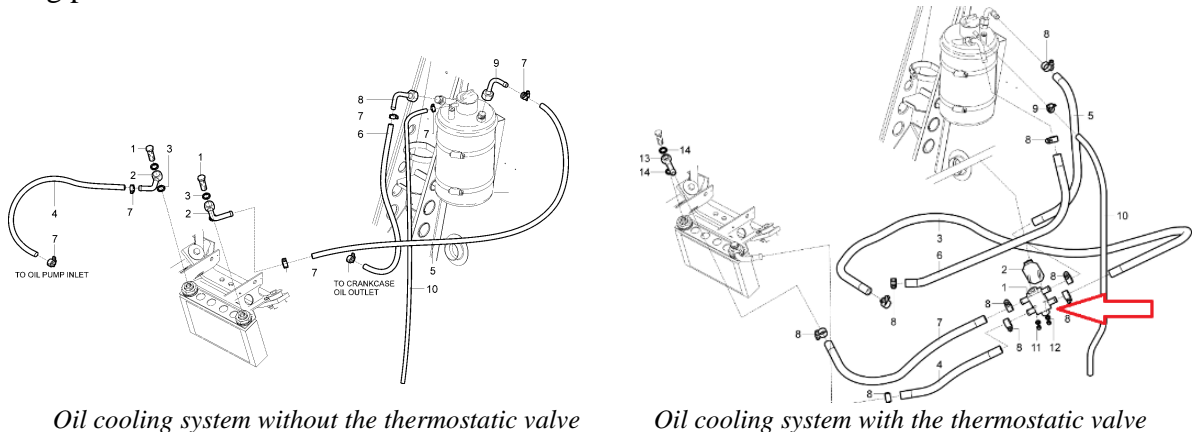
Basic scheme of the engine lubrication system with the thermostatic valve (thermostat), see the following pictures:



- 1 Pressure relief valve
- 2 Oil pressure sensor
- 3 Oil pump
- 4 Oil tank
- 5 Oil cooler

- 6 Oil filter
- 7 Oil tank venting
- 8 Oil temperature sensor
- 9 Thermostatic valve

Basic drawing of the engine lubrication system without and with the thermostatic valve is on the following pictures:



Oil cooling system without the thermostatic valve

Oil cooling system with the thermostatic valve

Basic recommendation:

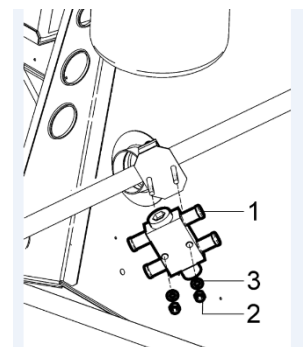
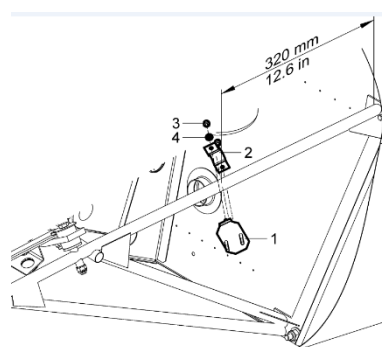
Measure the hose length before you cut the hose. The hose lengths shown below are recommended lengths only and may vary depending on individual cases. All oil hoses are covered by protective pyrojackets and the hoses ends are fitted with the Thermofit CGPT hoses for easy attachment to the sockets, see the pictures. Do not route the hoses so that they have sharp curvatures. All curvatures should be smooth with sufficient radii. Grease sockets before hose slip to ease it. Slip hose clamps on the hoses before slipping the hoses on the sockets.

Utilize the full slip-on length for all connections. Adjust the hoses to be in suitable position, they must be routed so that they cannot come in contact with the hot exhaust system. Do not tighten the hose clamps before positioning the hoses in their suitable position. Secure hoses with proper crew clamps or crimp connections. Check the hoses for flapping. Flapping is not acceptable. Fix the hoses to surrounding construction or to other hoses with tightening strips.

Note: Not all equipment and systems are present on the following pictures. They were removed for better understanding and clearness.

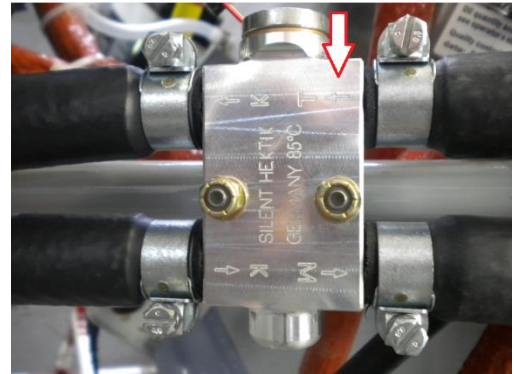
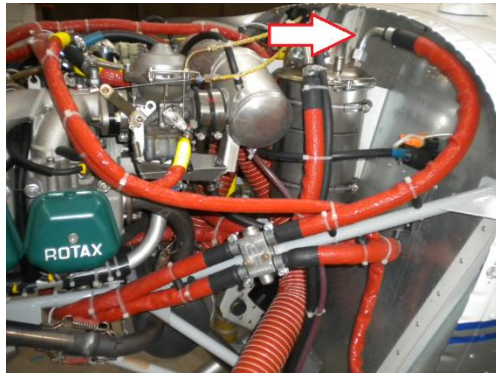
For mounting the thermostatic valve in the lubrication system carry out the following steps:

1. Move the aircraft to a suitable place to perform the work
2. Remove engine cowlings, disconnect positive battery terminal, (see the AMM).
3. Drain oil from the engine and then tighten the draining screw back, (see the AMM).
4. Disconnect and remove the hoses between the oil tank and the cooler, the cooler and the pump, the engine sump and the oil tank, see the previous pictures.
5. Fix the thermostat valve bracket to the engine mount steel tube to position in accordance with the next pictures. Attach the thermostatic valve on the bracket.

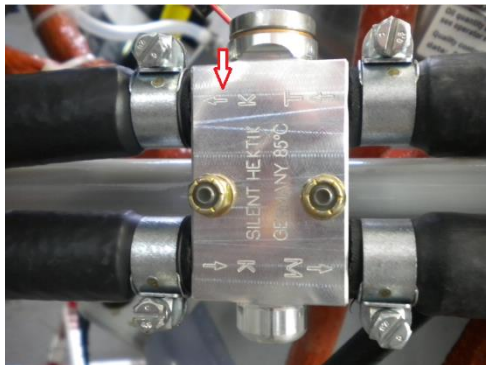


SERVICE BULLETIN

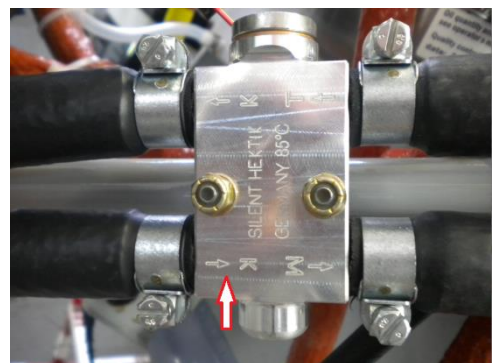
1. Use the hose (length about 540 mm is needed) and connect one end to the oil tank and the other one to the thermostatic valve Inlet "T", see the next pictures.



2. Use the hose (length about 560 mm is needed) and connect one end to the thermostatic valve outlet "K" and the other one to the cooler inlet, see the next pictures. (The banjo fitting of the cooler inlet has to be loosened to turned it to a proper position and then tightened again, new sealing rings may be needed)

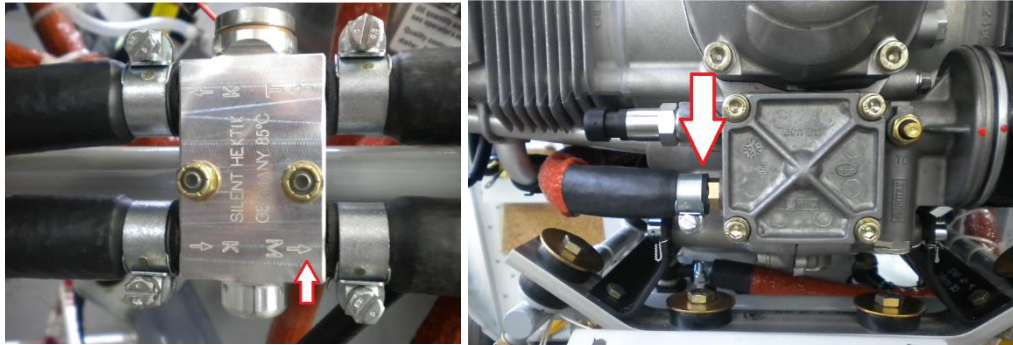


3. Use the hose (length about 320 mm is needed) and connect it between the cooler outlet and the thermostatic valve Inlet "K", see the next pictures.

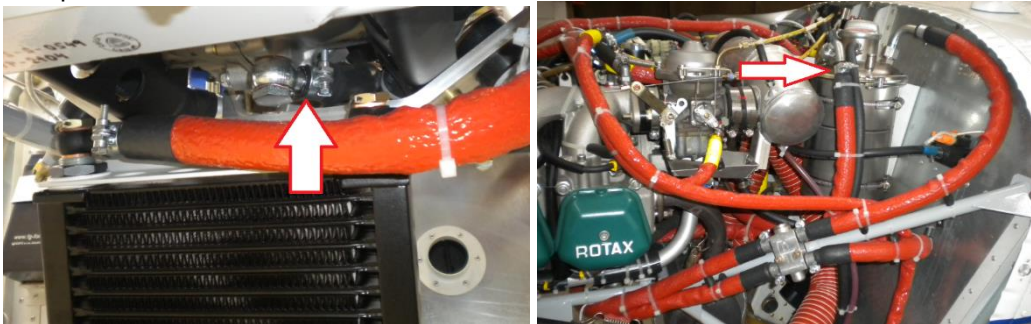


SERVICE BULLETIN

- Use the hose (length about 1200 mm is needed) and connect it between the thermostatic valve outlet "M" and the oil pump, see the next pictures.



- Use the hose (length about 700 mm is needed) and connect it between the engine sump and the oil tank, see the next pictures.



Note: Loosen of engine from engine mount may be necessary to carry out this step. If so, tightening the engine back and all related works must be done in accordance with the relevant AMM.

- Check again all connections.
- Fill the lubrication system with oil, (see the AMM).
- Weigh the aircraft and calculate new C.G. position.
- Restore the aircraft to the airworthy condition. Perform the engine run test and check the lubrication system, (see the AMM).
- Complete aircraft records to reflect compliance with this bulletin.