

 CZECH SPORT AIRCRAFT	<h1>SERVICE BULLETIN</h1>	Czech Sport Aircraft a.s. Na Záhonech 212, 686 04 Kunovice Czech Republic office@czechsportaircraft.com
No. SB-CR-046		Rev.: -
Date: 2018-02-28		Date: -
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MODEL AFFECTED:	PS-28 Cruiser, SportCruiser / PiperSport – operating under EASA
SUBJECT:	Inspection and/or replacement of oil filter of ROTAX Engine Type 912 S2 / 912 ULS2
AIRCRAFT AFFECTED:	<ul style="list-style-type: none"> - All aircraft the engine of which has been equipped with an oil filter part no. 825016 (with a production date code from 10/17 up to 38/17) during the engine repair, maintenance or general overhaul within the period as of 08 June 2017 till 31 October 2017, inclusive and that have no green mark, see Fig.1. - All oil filters part no.825016 purchased and installed as a spare part during the period from 08 June 2017 till 31 October 2017, inclusive with a production date code from 10/17 up to 38/17.
COMPLIANCE:	<ul style="list-style-type: none"> - Immediately, on uninstalled engines / spare parts. - Before the initial installation into an aircraft and/or before the initial start-up thereafter. - Before next flight: In case of a leakage in the area of the oil filter, oil pressure below limits or any unusual engine behaviour. - If there is no leakage visible, carry out this replacement on installed engines listed in section Aircraft Affected above, according to the instructions in section Accomplishment Instructions during the next ROTAX® scheduled maintenance event or within the next 25 hours of operation, whatever occurs earlier, but in any case till 20 May 2018, at the latest.

DESCRIPTION:

This Service Bulletin contains instructions for inspection and/or replacement of oil filter of ROTAX Engine Type 912 S2 / 912 ULS2.

APPROVAL:

The corrective action is mandatory and is required by mandatory Service Bulletin ROTAX SB-912-071UL.

AUTHORISATION TO PERFORM:

EASA Part M or Part 145 Maintenance organization
 ROTAX® – Airworthiness representatives
 ROTAX® – Authorized Distributors or their independent Service Centres
 Persons approved by the respective Aviation Authority
 Persons with approved qualifications for the corresponding engine types. Only authorized persons (iRMT, Level Heavy Maintenance) are entitled to carry out this work.

NOTE: A list of all ROTAX® Authorized Distributors or their independent Service Centres is provided on www.FLYROTAX.com.
 All work has to be performed in accordance with the relevant Maintenance Manual.

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REASON:

Due to deviations in the manufacturing process of the oil filter gasket, cracks in the gasket may have occurred. In rare cases, these deficiencies might lead to oil leakage in the area of the oil filter gasket.

MANPOWER:

Max. 1 hour.

SPECIAL TOOLS:

Common tools for service / maintenance + see section **Special tooling / lubricants...** below.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

ROTAX SB-912 071UL, SB-912-071, latest revision.
PS-28 Cruiser Maintenance Manual CR-MM-1-0-00, Rev.20

PUBLICATIONS AFFECTED:

PS-28 Cruiser Maintenance Manual CR-MM-1-0-00, Rev.20

MATERIAL AND COST:

All costs to be covered by aircraft owner/operator, see also information in the ROTAX SB-912 071UL and the SB-912-071 bulletins for details.

Material requirement per engine

Parts requirement:

Fig. no.	part no.	Qty/ engine	Description	Application
1	825016*	1	Oil filter	Oil system

*) or relevant part as per supersedure history.

Material requirement per spare part

None.

Rework of parts

None.

Special tooling / lubricants- /adhesives- /sealing compound- / price and availability

According to information in the ROTAX SB-912 071UL and the SB-912-071 bulletins, price and availability will be supplied on request by ROTAX® Authorized Distributors or their independent Service Centres:

Description	Qty/engine	Part no.	Application
AEROSHELL SPORT PLUS 4 GEN 2	as required	297997	Oil filter
Oil filter wrench*	1	877620	Oil filter removal

*) or equivalent

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1 ACCOMPLISHMENT INSTRUCTIONS:

General:

Before starting the maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.

All work has to be performed in accordance with the Maintenance Manual CR-MM-1-0-00, latest revision.

These instructions (section **Accomplishment Instructions**) have to be followed in accordance with the deadlines specified in section **Compliance**.

Explanations:

Warning: Identifies an instruction which, if not followed, may cause minor or moderate injury.

1.1 Move the aircraft to a suitable place to perform the work.

1.2 Remove the upper and bottom engine cowling, see the CR-MM-1-0-00, the latest revision.

1.3 General:

As outlined above only oil filters part no. 825016 with production date code from 10/17 to 38/17 are affected, see the section **Aircraft Affected** above.

Step	Procedure
1	Check the engine logbook and maintenance documentation or shipping documents to see if this Service Bulletin has already been accomplished.
2	<p>Check whether the affected oil filter shows a green mark on the crown of oil filter (as illustrated in Fig. 1) (same area as production date code).</p> <ul style="list-style-type: none"> - green mark is present: this oil filter is OK as it has already been tested by the supplier and can be used even though the production date code is from 10/17 to 38/17. No further actions are required. - green mark NOT present: this oil filter is NOT OK, please follow the instructions in section Replacement of NOT OK oil filter ... <p>NOTE: If production date code is not easy to read, use a proper means of light (e.g. flashlight directed at a proper angle onto the oil filter crown etc.) for better visibility of the coding imprint.</p>

Note: If the aircraft is not affected by this Service Bulletin, enter the following text into the aircraft logbook: *"The SB-CR-046 applicability has been checked with the result: not applicable"*.

1.4 Replacement of NOT OK oil filter (installed on the respective engine)

– see also the CR-MM-1-0-00, latest revision.

See Fig.1.

Warning: Risk of scalds and burns!
Always allow the engine to cool down to ambient temperature before starting work.
Proceed with this work only in non-smoking area and not close to sparks or open flames.
Switch off ignition and secure engine against unintentional operation. Secure aircraft against unauthorized operation.
Disconnect negative terminal of aircraft battery.

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Step	Procedure
1	Remove the affected oil filter according to the Maintenance Manual Line.
2	Install the new oil filter according to the Maintenance Manual Line.

1.5 Restore the aircraft back to original operating configuration.

1.6 Connect negative terminal of the aircraft battery.

1.7 Test run

Warning: Danger of life threatening injuries caused by the propeller, rotating and stressed parts of the engine! Always observe the engine from a safe place while it is running. Check that the cockpit is occupied by a competent operator.

1.7.1 Preparation of the engine for test run:

- Ensure that all the operating fluids (engine oil, coolant, fuel) are replenish to the specified level.
- Make sure that no lose objects (e.g. tools) are left in the engine compartment.
- Inspect tight fit of the propeller.
- Anchor the aircraft suitably to the ground and fix wheel chocks. Ensure that the propeller zone is clear and safe before starting the engine.

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1.7.2 Test run procedure

Step	Procedure
1	Establish fuel supply (open fuel cock).
2	Activate choke.
3	Throttle lever to idle position.
4	Master switch "ON".
5	Ignition for both ignition circuits "ON".
6	Press starter switch for max. 10 sec. (followed by a cooling period of 2 min.).
7	After engine start, observe oil pressure. Oil pressure has to be built up within 10 sec.
8	Let engine run for approx. 2 min. at 2000 rpm. Then first use the throttle lever to bring the engine to approx. 2500 rpm and then run through warming up period, until the oil temperature reaches 50 °C (122 °F).
9	Check temperatures and oil pressure: At a steady oil temperature above 50 °C (122 °F) and oil pressure above 2 bar (29 psi) engine speed may be increased.
10	Ignition check as per the current Operators Manual.
11	Conduct a short full throttle run and check that the engine reaches the max. full power speed. Consult the pilot's operating handbook for maximum speed, as it depends on the propeller used.
12	After full-load run, conduct a short cooling run to prevent formation of vapour lock in cylinder heads. This is necessary to prevent steam locks in the cooling and fuel system after shut-down.
13	Shut engine down. NOTE: On switching off the engine switch off ignition and withdraw the ignition key.
14	Inspect rotary seal for leakage. NOTE: Due to the design of the rotary seal, the manufacturer tolerates a certain amount of leakage. If the leakage is in excess of the limit rotary seal must be renewed. Tolerated leakage: For this check the engine must be operated until all temperatures have stabilized for a period of 5 minutes. At that point shut down engine and ensure the ignition is switched off and engine secured against unintentional operation. Coolant must not drip through leakage bore, located at the base of the ignition housing, for a period of 1 minute after the engine has been stopped. In case this leakage test can not be passed, the rotary seal must be renewed.

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1.8 Engine oil and coolant

Warning: Risk of severe burns and scalds!

Never open the radiator cap when the cooling system is hot. For safety's sake, cover cap with a rag and open slowly. Sudden opening of the cap could provoke the escape of boiling coolant and result in scalding.

Replenish engine oil and coolant as required once engine has cooled down.

1.9 Oil filter

NOTE: If the oil filter has been replaced, re-tighten by hand after the trial run on a cold engine.

1.10 Check of leaks

Inspect the engine for oil, fuel or coolant leaks and repair as necessary. See the CR-MM-1-0-00, point 10.4.1, the latest revision.

1.11 Complete the aircraft records to reflect compliance with this Service Bulletin

1.12 Replacement of oil filters in spare parts inventory/not installed on the engine (the 3rd criterion in section *Aircraft Affected*)

See Fig 1.

Step	Procedure
1	Quarantine and/or remove affected filters from your inventory. Mark as unserviceable and return F.O.B. to your ROTAX [®] Authorized Distributor or their independent Service Centers.

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1.13 Supporting pictures:

The following drawing should convey additional information:

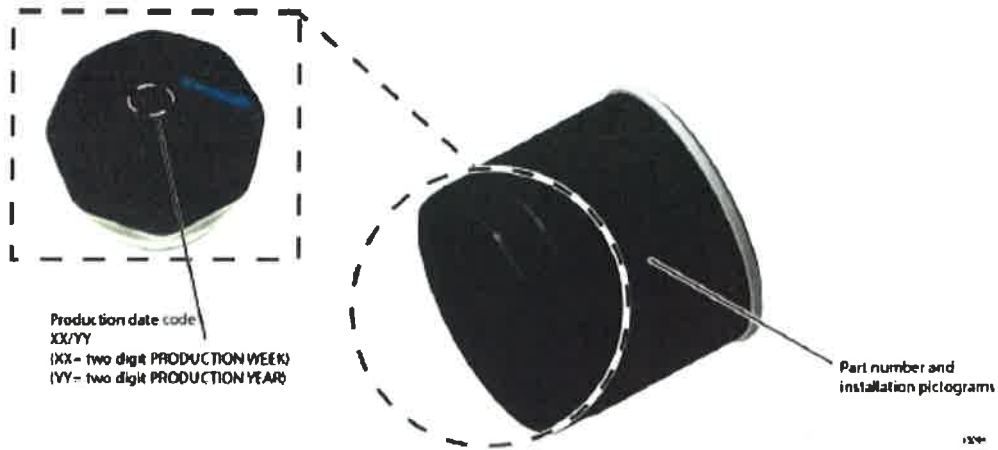


Fig. 1
 Oil filter

10290, 10291, 10292

NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function.
 Exploded views are **not technical drawings** and are for reference only. For specific detail, refer to the current documents of the respective engine type.

APPROVAL:

This SB has been approved by:

Title	Head of the Design Organisation	Airworthiness Manager
Name	Jiří Konečný	Miroslav Koukal
Signature	