



CRUISER
AIRCRAFT

No.: SB-CR-104

DATE: 2023-08-02

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SERVICE BULLETIN

Czech Aircraft Group s.r.o.
Na Záhonech 212
686 04 Kunovice
Czech Republic
info@cruiseraircraft.cz

REV.: -

DATE: -

MODEL AFFECTED:	PS-28 Cruiser / PS-28N Cruiser SportCruiser / PiperSport operating under EASA rules
SUBJECT:	Accomplishment of ROTAX Bulletin SB-912-078UL / SB-912-078. Exchange of propeller shaft on ROTAX Engine Type 912S and 912ULS
AIRCRAFT AFFECTED:	All aircrafts with 912 S and 912 ULS engines.
COMPLIANCE:	<ul style="list-style-type: none">- Before next flight check the magnetic plug according to the latest Maintenance Manual Line (MML). If the magnetic plug indicates a good condition of the gearbox, it is allowed to repeat this inspection every 10 hours up to 50 hours of engine TSN. At latest, at 50 hours of engine TSN carry out this exchange of the propeller shaft on the engines listed in Appendix 01, according to the Accomplishment instructions.- Exchange the propeller shaft on engines prior to initial installation. Return affected spare parts to authorized service partner.- On engines, gearbox assy. and propeller shaft, prior to delivery.

DESCRIPTION:

This Service Bulletin contain instructions how to exchange of stator assy. for ROTAX 912 Aircraft Engines.

AUTHORISATION TO PERFORM:

- ROTAX - Airworthiness representatives
- ROTAX - Authorized Distributors or their independent Service Centers
- Persons approved by the respective Aviation Authorities
- Persons with approved qualifications for the corresponding engine types. Only authorized persons (iRMT, Level Heavy Maintenance) are entitled to carry out this work
- Persons with type-specific training

APPLICABILITY:

Engines 912 S and 912 ULS have been originally delivered from factory with the affected propeller shaft part no. 937047. See Appendix 01.
Spare propeller shaft has been delivered as a spare part or as a part of a gearbox assy. are also affected. See Appendix 01.

REASON:

Due to a deviation in the machining process of the propeller shaft, the affected batch shows abnormalities on the surface. This could lead to increased wear of the propeller shaft bearings and subsequent serious engine problems.

MANPOWER:

2,5 hours

PUBLICATIONS AFFECTED:

N/A



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WEIGHT AND BALANCE:

N/A

ELECTRICAL LOAD DATA:

N/A

REFERENCES:

SB-912-078UL / SB-914-059UL / SB-912 i-014iS

SB-912-078 / SB-914-059 / SB-912 i-014

POH - Pilot's Operating Handbook (use appropriate POH for specific aircraft S/N)

CR-MM-1-0-00 PS-28 Cruiser Maintenance Manual

Other Rotax publications:

- in general Illustrated Parts Catalog (IPC) and in particular: Ch. 72-10-00 and 73-10-00
- in general Installation Manual (IM) and in particular: Ch. 61-00-00 and 73-00-00
- in general Maintenance Manual Line (MML) and in particular: Ch. 12-20-00
- in general Maintenance Manual Heavy (MMH) and in particular: Ch. 72-00-00 and 73-00-00

MATERIAL AND COSTS:

A labor credit will be provided for work performed by a technician with current applicable iRMT rating.



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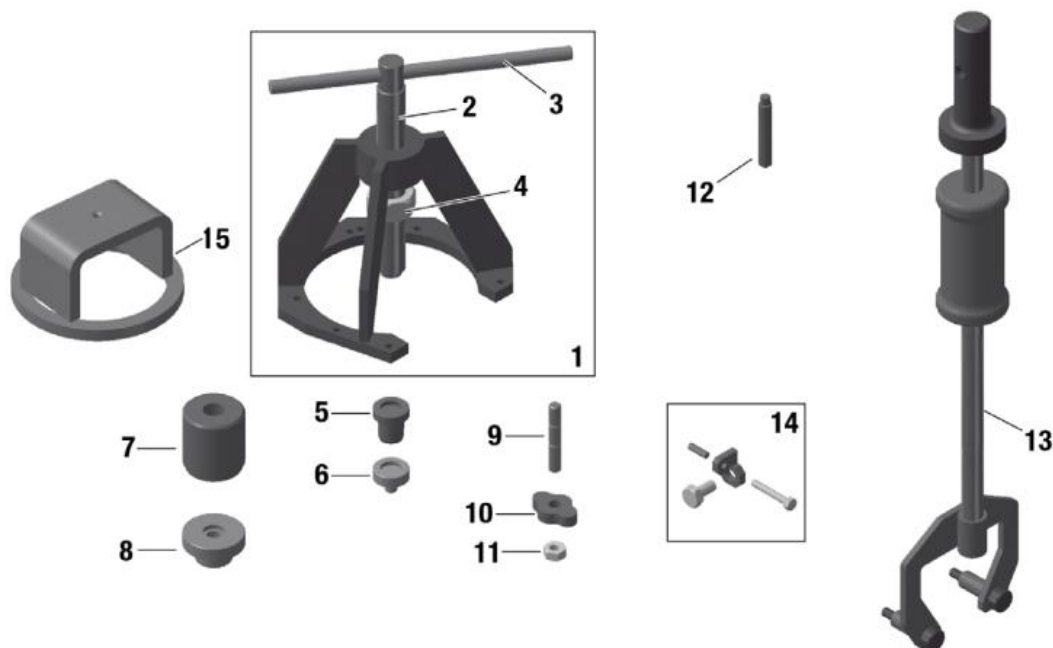
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SPECIAL TOOLS:

PART No.	QUANTITY	DESCRIPTION	APPLICATION
877615	1	Extractor assy.	Roller bearing 25x25x15, oil seal 30x52x7
877580	1	Pull-in spindle M24x1.5	Extractor assy.
276155	1	Bolt 12x250	Extractor assy.
842585	1	Hex. screw M24x1.5-19 mm	Extractor assy.
877605	1	Press-out mushroom	Prop shaft (Version 2)
877594	1	Press-in jig	Oil seal 30x52x7 (Version 2)
877590	1	Press-in mushroom	Roller bearing 25x52x15
941180	1	Stud M10x45/20	Roller bearing 25x52x15, oil seal 30x52x7
877561	1	Pull-out plate	Roller bearing 25x52x15, oil seal 30x52x7
242092	1	Hex. nut M10	Roller bearing 25x52x15, oil seal 30x52x7
240880	1	Thread bolt M8x50	Crankshaft locking screw
877540	1	Pushing jig assy.	Gearbox
877660	1	Puller assy.	Gearbox
876885	1	Mounting yoke	To compress dog gear
897651	As required	Loctite 243 blue	Hex. screw M7x16
297434	As required	Loctite anti seize 8151	Propeller shaft at ball bearing
899791	As required	Loctite 5910	Flange sealan

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|----------------------------|----------------------|
| 1 Extractor assy. | 9 Stud M10x45/20 |
| 2 Pull-in spindle M24x 1.5 | 10 Pull-out plate |
| 3 Bolt 12x250 | 11 Hex. nut M10 |
| 4 Hex. screw M24x1.5 | 12 Thread bolt M8x50 |
| 5 Press-out mushroom | 13 Puller assy. |
| 6 Press-out mushroom | 14 Pushing jig assy. |
| 7 Press-in jig | 15 Mounting yoke |
| 8 Press-out mushroom | |

Fig. 1: Special tools

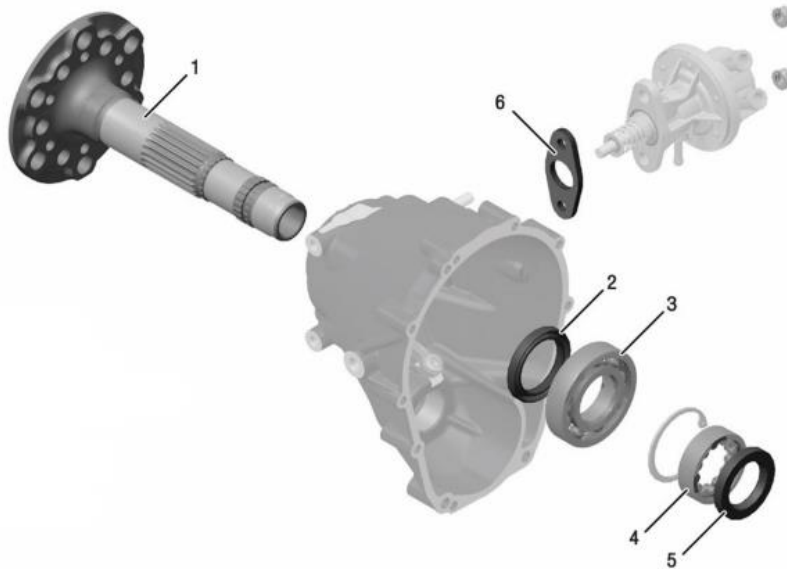
MATERIAL:

PART No.	QUANTITY	DESCRIPTION	APPLICATION
937047	1	Propeller shaft	Version 2
832587	1	Ball bearing 35-72-17	Gearbox side
950470	1	Oil seal 40x55x7	Gearbox side
232246	1	Roller bearing	Crankcase side
950200	1	Oil seal 30x52x7	Crankcase side
950228	1	Isolating flange	Fuel pump (912 Series)

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ACCOMPLISHMENT INSTRUCTIONS:

NOTE: During the implementation of this SB follow AC43-13 and CR-MM-1-0-00.



- 1 Propeller shaft
- 2 Oil seal 40x55x7
- 3 Ball bearing 35-72-17
- 4 Roller bearing
- 5 Oil seal 30x52x7
- 6 Isolating flange

Fig. 2: Propeller shaft

- 1) Check the criteria given on page 1, if the aircraft engine is affected by this SB.
- 2) Check the engine logbook and maintenance documentation, if this SB has already been accomplished.
- 3) Move the aircraft to a place suitable to perform the work.
- 4) Following instructions in the current Maintenance Manual Heavy (MMH) and Maintenance Manual Line (MML), perform the following tasks:
 - Remove gearbox assy. from the engine.
 - Disassemble gearbox and press out affected propeller shaft.
 - Reassemble the gearbox using a new propeller shaft, oil seal and ball bearing.
 - Remove crankcase side propeller shaft roller bearing and oil seal and replace with new.
 - Attach gearbox assy. to crankcase.
 - In the case of an engine installed in an aircraft, perform an engine test run.

NOTE: Only authorized personal (iRMT, Level Heavy Maintenance) are entitled to carry out this work.

- 5) Perform engine run test (see CR-MM-1-0-00, Chapter 10).
- 6) Make an entry in the engine logbook stating the corrective actions performed.

NOTE: See Chapter 12-20-00 of the latest Maintenance Manual Line (MML) for the respective engine type.



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NOTE: If engine is still within its original packaging the (blue) plastic bag must be carefully re-sealed after performing this inspection. The plastic bag contains a Volatile Corrosion Inhibitor (VCI) essential to maintain appropriate storage conditions.

- 7) Update aircraft records to reflect compliance with this Service Bulletin.
- 8) All used parts are unserviceable and must be returned FCA (Free Carrier) to ROTAX authorized distributors or their independent Service Centers.

APPENDIX 01:

ENGINE TYPE	S/N
912 S	10000403
912 S	10000405
912 S	10000406
912 S	10000408
912 S	10000409
912 S	from 10000411 to 10000414 inclusive
912 S	from 10000472 to 10000475 inclusive
912 S	10000789
912 S	10000790
912 S	10000792
912 S	10000793
912 S	10000832
912 ULS	from 10000421 to 10000445 inclusive
912 ULS	from 10000833 to 10000867 inclusive
912 ULS	from 10000898 to 10000914 inclusive
912 ULS	from 10000931 to 10000978 inclusive
912 ULS	from 10001008 to 10001021 inclusive
912 ULS	from 10001037 to 10001065 inclusive

APPENDIX 02:

PROPELLER SHAFT PART No.	S/N
937047	222444
937047	222459
937047	222465
937047	222472
937047	222480
937047	222485
937047	222492
937047	222496
937047	222517
937047	222548
937047	222588

PROPELLER SHAFT PART No.	S/N
937047	222596
937047	222615
937047	222622
937047	222626
937047	222632
937047	222641
937047	222644
937047	222665
937047	222700
937047	222715



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APPROVAL:

This Service Bulletin has been approved by:

TITLE:	Head of Design Organisation	Airworthiness Manager
NAME:	David Bilík	Jan Pejchar
HAND WRITTEN SIGNATURE:		



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