SERVICE BULLETIN

Inspection and/or replacement of expansion tank assy. for ROTAX® 912, 914, 912 i, 915 i and 916 i (Series) Aircraft Engines

ATA System: 75-20-00 Expansion Tank

MANDATORY*

* This Service Bulletin could be subject to an EASA airworthiness directive (AD).

1) Planning information

To obtain satisfactory results, procedures specified in this publication must be accomplished with accepted methods in accordance with prevailing legal regulations.

BRP-Rotax GmbH & Co KG cannot accept any responsibility for the quality of work performed in accomplishing requirements of this publication.

1.1) Applicability

All engines which are not already cleared by accomplishment of the Service Bulletin SB-912-080 / SB-914-060 / SB-912 i-015 / SB-915 i-015 / SB-916 i-005 dated 19 December 2024 and all engines of Series 912, 914, 912 i, 915 i and 916 i are affected if at least one of following criteria applies:

Criterion A) Engine Serial number:

These engines have been originally delivered from the factory with affected expansion tank assy. part no. 922666 or 922668:

Engine type	Serial number
912 A	from S/N 4411669 up to S/N 4411684 inclusive from S/N 10000823 up to S/N 10003981 inclusive
912 F	from S/N 4413203 up to S/N 4413217 inclusive from S/N 10000829 up to S/N 10003984 inclusive
912 S	S/N 9140190 from S/N 9140217 up to S/N 9140494 inclusive from S/N 10000011 up to S/N 10004558 inclusive
912 iSc Sport	from S/N 7702230 up to S/N 7702271 inclusive from S/N 10000067 up to S/N 10004523 inclusive
914 F	S/N 4422634 from S/N 4422637 up to S/N 4422638 inclusive from S/N 4422640 up to S/N 4422789 inclusive from S/N 10000001 up to S/N 10004199 inclusive
915 iSc A	from S/N 9127588 up to S/N 9127618 inclusive from S/N 9152026 up to S/N 9152031 inclusive from S/N 10000238 up to S/N 10004426 inclusive
915 iSc C24	from S/N 9152026 up to S/N 9152031 inclusive from S/N 10000238 up to S/N 10002607 inclusive

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Engine type	Serial number
916 iSc A	from S/N 9148004 up to S/N 9148007 inclusive from S/N 10001984 up to S/N 10003827 inclusive
916 iSc C24	S/N 10002846

NOTE: On engines with S/N higher than those listed above, expansion tank inspection and/or replacement has already been completed during serial production

Criterion B) Spare parts:

Further all engines are affected which have been equipped with expansion tank assy. part no. 922668 or 922666 during engine repair, maintenance or general overhaul, delivered as spare parts from July 1st, 2022 up to December 31st, 2023 included.

NOTE: The expansion tank assy. may have been removed from the initial engine and used on another one. For relevant information, see the maintenance records and/or the logbook.

1.2) Concurrent ASB/SB/SI and SL

In addition to this Service Bulletin the following documents must be observed and complied with:

- SI-912 i-001,SI-912-016,SI-914-019,SI-915 i-001,SI-916 i-001 Selection of suitable operating fluids for Rotax Engine Type 916 i (Series), 915 i (Series), 912 i (Series), 912 and 914 (Series).
- In general all relevant Alert Service Bulletins (ASB), Service Bulletins (SB), Service Instructions (SI), Service Letters (SL), Service Instruction - Parts and Accessories (SI-PAC) with relevance to perform this maintenance, repair or overhaul task.

1.3) Reason

Due to a deviation in the manufacturing process, the individual components of the expansion tank assy. may not be sufficiently welded. Sealing of the assy. may be compromised and coolant leakage and subsequently an overheating of the engine may occur.

1.4) Subject

Inspection and/or replacement of expansion tank assy. for ROTAX® 912, 914, 912 i, 915 i and 916 i (Series) Aircraft Engines.

1.5) Compliance

- Uninstalled engines/spare parts prior to usage but no later than 31 December 2025.
- If coolant leakage is detected at the required pre-flight check, immediate action should be taken.
- At next scheduled maintenance event or at least within the next 25 hours of operation, carry out this inspection and/or replacement must be conducted according to the following instructions in section 3, but at the latest after 1 year (from the date of the initial issue of this Service Bulletin).

⚠WARNING Non-compliance with these instructions could result in engine damages, personal injuries or death.

1.6) Approval

The technical content of this document is approved under the authority of the DOA ref. EASA.21J.048.

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1.7) Labor time

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

Work performed	iRMT rating required	Labor credit
Inspect expansion tank assy. on aircraft	Maintenance Line	1.2 hr per inspection
Replacement of expansion tank assy. on aircraft	Maintenance Heavy	1.8 hr per replacement

To apply for labor credit, contact your ROTAX® Authorized Distributor or their independent Service Centers.

1.8) Mass data

Change of weight - - - none

Moment of inertia - - - unaffected

1.9) Electrical load data

No change.

1.10) Software modifications

No change.

1.11) References

In addition to this technical information refer to current issue of

- In general Illustrated Parts Catalog (IPC) and in particular:
  Chapter 75-20-00
- In general Operators Manual (OM)
- In general Installation Manual (IM) and in particular Chapter 75-00-00
- In general Maintenance Manual Line (MML) and in particular Chapter 05-20-00 & 12-10-00
- In general Maintenance Manual Heavy (MMH) and in particular Chapter 75-00-00

NOTE: The status of the Manuals can be determined by checking the table of amendments. The 1st column of this table shows the revision status. Compare this number to the one listed on the ROTAX® website: www.flyrotax.com. Updates and current revisions can be downloaded for free.

1.12) Other Publications affected

None

1.13) Interchangeability of parts

- Exchanged parts are un-serviceable and must be returned FCA (Free CArrier) to ROTAX® authorized distributors or their independent Service Centers.

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2) Material Information

2.1) Material

Price and availability will be provided on request by ROTAX® Authorized Distributors or their independent Service Centers.

2.2) Company support information

- Any possible support by BRP-Rotax will be provided on request by ROTAX® Authorized Distributors or their independent Service Centers
- This exchange program and cost sharing is valid until December 31st 2025. Up to this date limited reimbursement of costs can be applied for
- Shipping costs, downtime costs, loss of income, telephone costs etc. or costs of conversion to other engine versions or additional work, as for instance simultaneous engine overhauls are not covered in this scope and will not be borne or reimbursed by ROTAX®.

2.3) Material requirement per engine

Parts requirement:

Fig.1/ pos.	part no.	Qty/ engine	Description
1	922668	(1)	EXPANSION TANK ASSY.
2	922666	(1)	EXPANSION TANK ASSY.
-	-	AR	COOLANT (as specified in the latest Service Instruction SI-912-016, SI-914-019, SI-912 i-001, SI-915 i-001,SI-916 i-001)

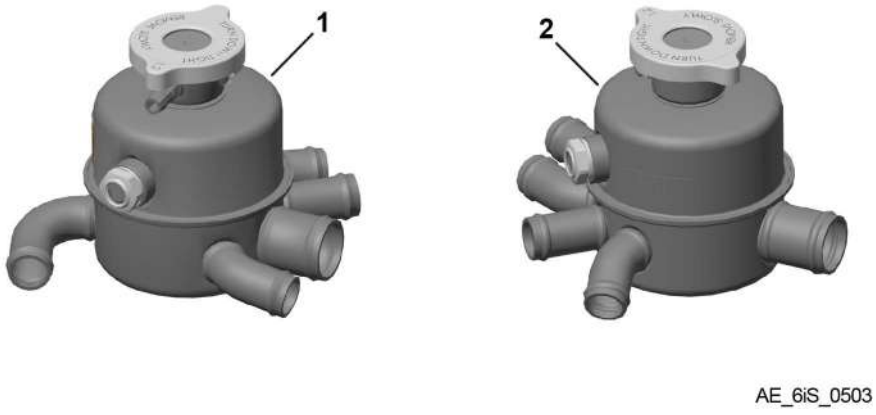

Fig. 1

2.4) Rework of parts

None.

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2.5) Special tooling/lubricants- /adhesives- /sealing compounds

Part no.	Description
877840	SPRING CLAMP PLIERS

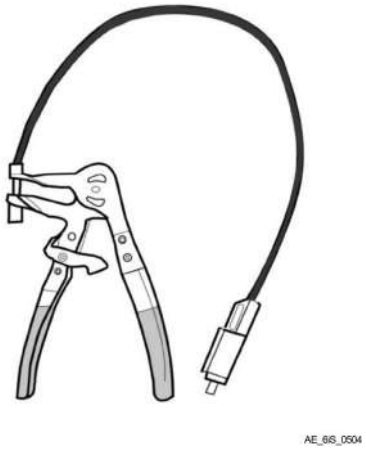

Fig. 2

3) Accomplishment/Instructions

- ROTAX® reserves the right to make any amendments to existing documents, which might become necessary due to this standardization, at the time of next revision or issue.

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

Accomplishment

All measures must be implemented and confirmed by at least one of the following persons or organizations:

- 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 Line / Heavy Maintenance) are entitled to carry out this work
- Persons with type-specific training

NOTE: Indicates supplementary information which may be needed to fully complete or understand an instruction.

All work has to be performed in accordance with the relevant ROTAX® Instructions for Continued Airworthiness (ICA) of the respective engine type.

General

Further material on general inspection, maintenance and repair can also be found in relevant Advisory Circular AC 43.13 from FAA.

Advisory Circular

The Advisory Circular (AC) contains maintenance methods, techniques and practices.

Procedure

Step	Procedure
1	Check the criteria given on page 1 and 2, section 1.1, if the aircraft engine or spare part is affected by this SB.
2	Check the engine logbook and maintenance documentation, if this SB has already been accomplished.

3.1) Illustrated Parts Catalog - related information

See current Illustrated Parts Catalog (IPC) for the respective engine type, Chapter 75-20-00.

3.2) Installation - related information

See current Installation Manual (IM) for the respective engine type, Chapter 75-00-00.

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3.3) Operation - related information

See current Operators Manual (OM) for the respective engine type.
See also Aircraft Flight Manual (AFM) / Pilot Operating Handbook (POH).

3.4) Maintenance (Line) - related information

3.4.1) Inspection of expansion tank assy. - as a spare part

Step	Procedure
1	Remove the radiator cap from the expansion tank.
2	Perform an internal visual inspection using a bore-scope or similar device.
3	If the visual inspection shows consistent welding, the expansion tank assy. is serviceable (See Fig. 5), continue with section 3.6). **NOTE:** Welding must be present and contiguous around every connection.
4	If the visual inspection shows any connection with inconsistent or missing welds, the expansion tank assy. is unserviceable and must be replaced (See Fig. 6).
5	Apply small amount of coolant to rubber surfaces inside radiator cap (provides lubrication to prevent binding). Tighten the radiator cap by hand.

3.4.2) Inspection of expansion tank assy. - on an uninstalled engine

Step	Procedure
1	If necessary, open the engine box and pull back the protective blue bag.
2	Remove the radiator cap from the expansion tank.
3	Perform an internal visual inspection using a bore-scope or similar device.
4	If the visual inspection shows consistent welding, the expansion tank assy. is serviceable (See Fig. 5). Continue with section 3.6). **NOTE:** Welding must be present and contiguous around every connection.
5	If the visual inspection shows any connection has inconsistent or missing weld, the expansion tank assy. is unservicable and must be replaced (See Fig. 6), continue with section 3.5.1).
6	Apply small amount of coolant to rubber surfaces inside radiator cap (provides lubrication to prevent binding). Tighten the radiator cap by hand.

3.4.3) Inspection of expansion tank assy. - on aircraft

⚠ WARNING **Danger of severe burns and scalds!**
Always allow the engine to cool down to ambient temperature before starting any work.

Step	Procedure
1	If necessary, clamp closed the hose to the coolant overflow bottle.
2	Remove the radiator cap from the expansion tank.
3	Drain coolant until bottom of the expansion tank assy. is clearly visible.
4	Perform an internal visual inspection of the expansion tank assy. using a bore-scope or similar optical device.
5	If the visual inspection shows consistent welding, the expansion tank assy. is serviceable (See Fig. 5), continue with step 7.
6	If any connection has inconsistent or missing welds, the expansion tank assy. is unserviceable and must be replaced (See Fig. 6), continue with section 3.5.2).
7	Refill coolant into the expansion tank. See Maintenance Manual Line Chapter 12-10-00 section Coolant check/replenish. See also SI-912 i-001,SI-912-016,SI-914-019, SI-915 i-001,SI-916 i-001, current issue. **NOTE**: If the engine is equipped with a thermostat valve, follow the manufacturer's instructions.
8	Apply small amount of coolant to rubber surfaces inside radiator cap (provides lubrication to prevent binding). Tighten the radiator cap by hand.
9	Perform an engine test run and check for leaks. Replenish with clean coolant as required. See Maintenance Manual Line Chapter 12-10-00 section Coolant check/ replenish.
10	Make an entry in the engine logbook stating the execution of this Service Bulletin and the inspection findings. Continue with section 3.6)

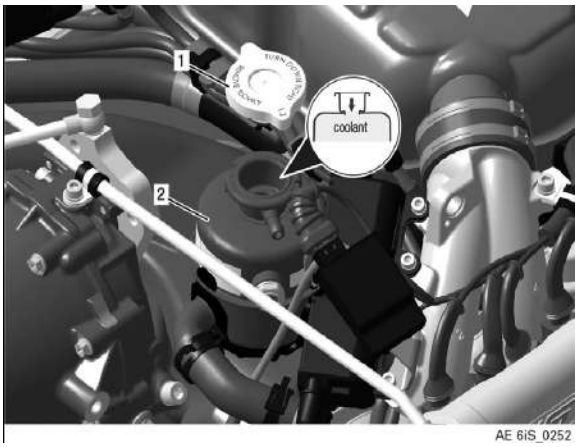

Fig. 3

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3.5) Maintenance (Heavy) - related information

3.5.1) Replacement of expansion tank assy. on an uninstalled engine

Step	Procedure
1	See current Maintenance Manual Heavy (MMH) for the respective engine type, Chapter 75-00-00 Expansion tank and form hoses removal/installation.
2	If engine is still within its original packaging the (blue) plastic bag must be carefully re-sealed after performing this replacement. The plastic bag contains a Volatile Corrosion Inhibitor (VCI) essential to maintain appropriate storage conditions.
3	Make an entry in the engine logbook stating the execution of this Service Bulletin and the inspection findings.

3.5.2) Replacement of expansion tank assy. on aircraft

⚠WARNING **Danger of severe burns and scalds!**
Always allow the engine to cool down to ambient temperature before starting any work.

Step	Procedure
1	Please see current Maintenance Manual Heavy (MMH) for the respective engine type, Chapter 75-00-00 Expansion tank and form hoses removal/installation
2	Refill coolant into the expansion tank. See Maintenance Manual Line Chapter 12-10-00 section Coolant check/replenish. See also SI-912 i-001,SI-912-016,SI-914-019, SI-915 i-001,SI-916 i-001, current issue. **NOTE:** If the engine is equipped with a thermostat valve, follow the manufacturer's instructions.
3	Apply small amount of coolant to rubber surfaces inside radiator cap (provides lubrication to prevent binding). Tighten the radiator cap by hand.
4	Perform an engine test run and check for leaks. Replenish with clean coolant as required. See Maintenance Manual Line Chapter 12-10-00 section Coolant check/replenish.
5	Make an entry in the engine logbook stating the execution of this Service Bulletin and the inspection findings.

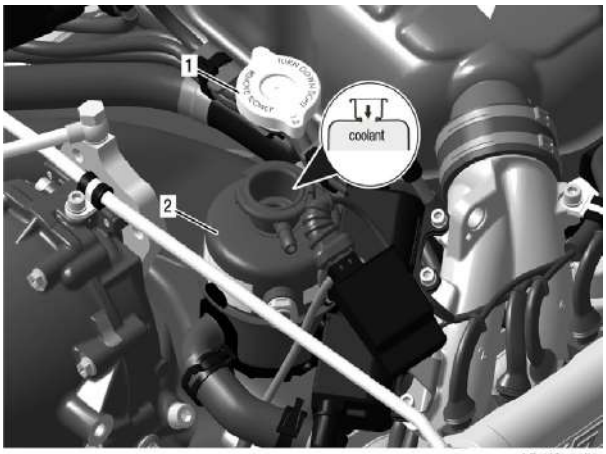

Fig. 4

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3.6) Finishing work

- Restore aircraft to original operating configuration.
- Connect negative terminal of aircraft battery.

3.7) Test run

Conduct test run and check for leakage at the expansion tank.

In case of uninstalled engines test run is accomplished with the mandatory test run after installation into aircraft.

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

3.8) Summary

These instructions (section 3) have to be followed in accordance with the deadlines specified in section 1.5.

The execution of the mandatory Service Bulletin must be confirmed in the logbook.

NOTE: Work on EASA certified parts might affect the EASA Form 1 and does require appropriate documentation by authorized persons. Repairs must be entered into the engine logbook and also do apply for the EASA Form 1.

| A revision bar outside of the page margin indicates a change to text or graphic.

Translation into other languages might be performed in the course of language localization but does not lie within ROTAX® scope of responsibility.

In any case the original text in English language and the metric units are authoritative.

3.9) Inquiries

Inquiries regarding this Service Bulletin should be sent to the ROTAX® Authorized Distributor of your area.

A list of all ROTAX® Authorized Distributors or their independent Service Centers is provided on https://dealerlocator.flyrotax.com.

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4) Appendix

Fig. 5: GOOD Welding – the weld seam is uninterrupted around the pipes circumference.

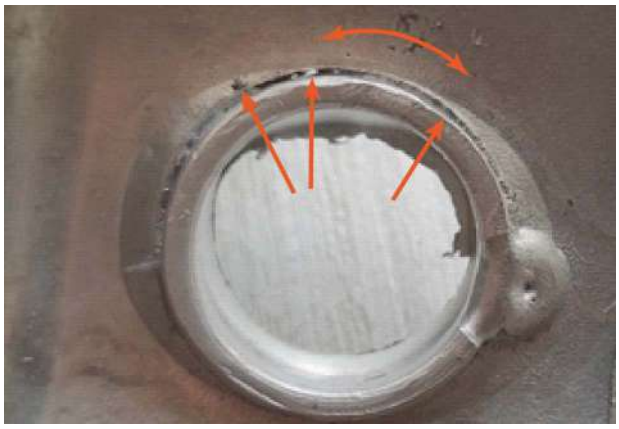

Fig. 6: BAD Welding – the weld seam is interrupted. The black coating from the outer shell might be visible.

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.

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