

ALERT SERVICE BULLETIN

Inspection and/or replacement of fuel pump assy. for ROTAX® Engine Type 912 i and 915 i A (Series)

ATA System: 73-10-00 Fuel system

MANDATORY

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 the requirements of this publication.

1.1) Applicability

NOTE: Make sure to check the whole set of criteria mentioned in this section.

All versions of ROTAX® engine types 912 i and 915 i A Series and/or accessory/spare parts are affected, if at least one of the following criteria applies:

If they are delivered with genuine ROTAX® accessory fuel pump assy. part no. 889697 (UNF, packaged) or 889699 (METRIC, packaged), which includes part no. 889696 (UNF) and 889698 (METRIC) with serial numbers listed within Criterion A).

Criterion A) Fuel pump assy.:

Fuel pump assy.	Serial number
Part no. 889696	from S/N 180500 up to S/N 189999 inclusive
Part no. 889698	from S/N 180500 up to S/N 189999 inclusive

See Fig. 1 on information how to find the part no. and S/N on the fuel pump assy.

NOTE: Fuel pump assemblies with S/N lower or higher than the range listed above are not affected.

Criterion B) Engine serial number:

Engine type	Serial number
912 iSc Sport	S/N 7702131
915 iSc A	from S/N 9127313 up to S/N 9127316 inclusive

If they are delivered with genuine ROTAX® accessory fuel pump assy. part no. 889697 (UNF, packaged) or 889699 (METRIC, packaged), which includes part no. 889696 (UNF) and 889698 (METRIC) with serial numbers listed within Criterion A).

NOTE: Engines with S/N higher than the range listed above, have no or a new fuel pump assy. provided as a possible/optional accessory in the scope of engine supply during serial production. See Criterion C).

Criterion C) Spare parts:

Further all engines are affected, which are installed in combination with fuel pump assy. part no. 889697 (UNF, packaged) or 889699 (METRIC, packaged), which includes part no. 889696 (UNF) and 889698 (METRIC) with serial numbers listed within Criterion A) above during engine repair, maintenance or general overhaul or any other exchange action.

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General

NOTICE

Please also contact the aircraft manufacturer for possible further aircraft related information and requirements related to this accessory part.

1.2) Concurrent ASB/SB/SI and SL

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

Service Instructions - SI-912 i-019/SI-915 i-005, title "Introduction of revised fuel pump assy.", current issue.

1.3) Reason

Internal quality checks have shown that in isolated cases, there may be fuel leakage in the front end area of the power connector side. This may lead to a hazardous condition.

1.4) Subject

Inspection and/or replacement of fuel pump assy. ROTAX® Engine Type 912 i and 915 i A (Series).

1.5) Compliance

- Before next flight

NOTE: Any further operation (like e.g. ferry flight,...) is at the operator's and/or aircraft manufacturer's own discretion/risk.

- Before the initial installation of the spare/accessory part, but at the latest by 31. December 2019, the "Inspection and/or replacement of fuel pump assy." must be conducted according to the following instructions in Chapter 3 on engines listed in Chapter 1.
- Immediately, on undelivered engines/spare parts

This must be done in accordance with the following instructions in Chapter 3.

⚠ 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 DOA ref. EASA.21J.048.

1.7) Labor time and credit

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

Work performed	iRMT rating required	Labor credit
Inspection as per Chapter. 3.	iRMT Maintenance Line	2.7 hour
Inspection and replacement as per Chapter 3.	iRMT Maintenance Heavy	2.9 hour

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

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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

- Illustrated Parts Catalog (IPC)
- Installation Manual (IM)
- Maintenance Manual Heavy (MMH)
- Maintenance Manual Line (MML)

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

- All parts are interchangeable
- All parts found to be leaking cannot further be used and must be marked unserviceable. These parts 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
- Exchanged parts must be returned FCA (**F**ree **C**Arrier) to ROTAX® Authorized Distributors or their independent Service Centers
- This exchange program and cost sharing is valid until August 1, 2019. 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 and credit per engine

None.

2.4) Material requirement per spare part

parts requirement in case of replacement:

part no.	Description	Application
889697	Fuel pump assy. UNF packaged	
consists of:		
889696	Fuel pump assy. UNF	
889699	Fuel pump assy. METRIC packaged	
consists of:		
889698	Fuel pump assy. METRIC	

2.5) Rework of parts

None.

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

Description	Qty/engine	Part no.	Application
Talcum powder*	as required	n.a.	Fuel pump assy. leakage test

* or equivalent

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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® - 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

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



All work must be performed in accordance with the relevant Maintenance Manual.

Safety notice



Proceed with this work only in a 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.



Perform the following check outdoors and outside the hangar.

3.1) Inspection of fuel pumps for leakage

See Fig. 1 and Fig. 2.

Preparation

Preparation of the fuel pump assy. for leakage detection:

- Leak detection should be carried out with fuel pump assy. installed in aircraft
- NOTE: On twin engine aircraft check each engine separately.
- Ensure that fuel is replenished to the specified level



For the leak test, it is not necessary to start the engine. Connect the battery to a charging station/device (minimum 10 AMP charging) for the duration of leakage test.

Step	Procedure
1	Loosen 4 Allen screws M5x12 and remove the cover.
2	Visually inspect area (1) for signs of fuel weep/leakage. If no visual signs are observed, proceed to following steps. If fuel leakage is observed proceed to section 3.3 Replacement of fuel pump assy.

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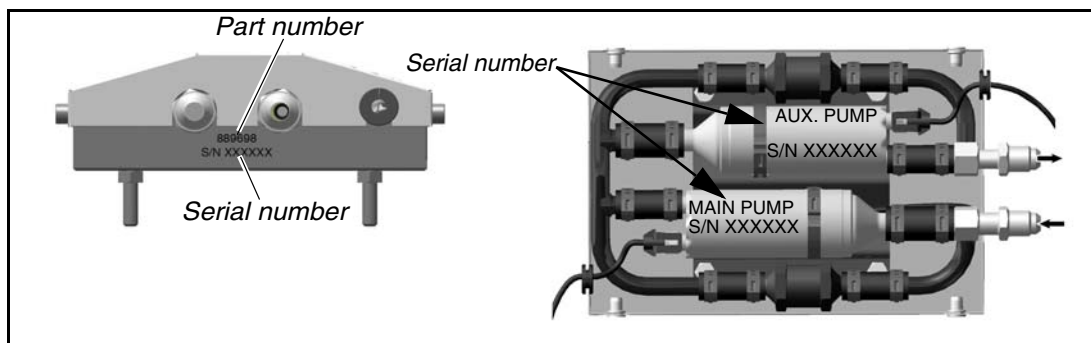
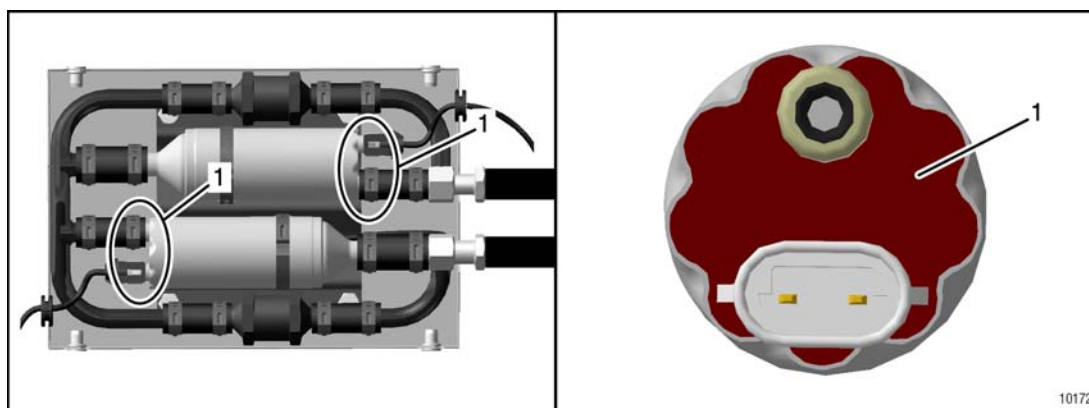


Fig. 1

See Fig. 2.

Step	Procedure
3	Clean the test area of the fuel pump assy.
4	Detailed leak detection in the area (1) of the fuel pumps (main, aux). Apply leak detection compound (e.g. hygroscopic powder like talcum or equivalent).

NOTE: Do not remove fuel pump electrical connectors for leakage test. The electrical connectors should not get leak detection compound beneath its seal.



1 Area required detailed leak detection

Fig. 2

Step	Procedure
5	Fuel valve OPEN (or LEFT / RIGHT) depending on your aircraft installation and instructions in the Pilot Operating Handbook.
6	Master Switch " ON ". NOTE: Do not start engine!
7	Accomplish aircraft specific startup. Activate pilot (engine instrument) display.

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NOTICE Ensure proper operation of fuel system regarding fuel pressure and fuel flow (establish situation like in flying conditions). Ensure a minimum of approx. 10 liter (2.4 US gal) of fuel.

Step	Procedure
8	Perform fuel pump check according to Pilot Operating Handbook checklist.
9	Keep both fuel pumps "ON" for 60 min. Turn "OFF" AUX pump and continue with MAIN pump "ON" for additional 60 min. Observe the whole test run and especially the fuel pumps, performing detailed visual inspection for fuel leakage throughout the 2 hour period. See Fig. 2 . NOTE: Leaking fuel will be absorbed by the leak detection compound, concentrating any fluid near its source.

NOTICE In case of fuel leakage during testing (e.g. talcum shows fuel leakage coloring/wet spot), turn both fuel pumps "OFF" and terminate inspection. Proceed to section 3.3 Replacement of fuel pump assy.

NOTICE In case of leakage or doubt contact your aircraft manufacturer and your nearest ROTAX® Authorized Distributor or their independent Service Center. The engine must not be taken into operation until the cause has been identified and eliminated.

Step	Procedure
10	If there is NO indication of any fuel leakage, no further action required for this fuel pumps assy. NOTE: If there is an indication of fuel leakage (e.g. Talcum shows fuel leakage coloring/wet spot) then see section 3.3)
11	Fix the cover with 4 Allen screws M5x12. See Fig. 1 . Tightening torque 6 Nm (53 in. lb).

3.2) Inspection of fuel pumps assy. in spare parts inventory/not installed in the aircraft

Step	Procedure
1	Perform the inspection according to section 3.1) in an aircraft or equivalent test set-up.

NOTICE Ensure proper operation of fuel system regarding fuel pressure and fuel flow (establish situation like in flying conditions). Ensure a minimum of approx. 10 liter (2.4 US gal) fuel.

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3.3) Replacement of affected fuel pumps assy. (only in case visual inspection is NOT passed OK)

WARNING

Proceed with this work only in a 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.

WARNING

During work on the fuel distribution system/fuel pump there is a risk of injury due to pressure and fuel! Before starting repair work on the fuel system, ensure that it is no longer pressurized!

ENVIRONMENTAL NOTE

All the operating fluids and cleaning agents can damage the environment if not disposed of properly. Dispose of operating fluids in an eco-friendly manner!

Preparation

- Drain fuel according to the relevant aircraft Maintenance Manual

Step	Procedure
1	Replace fuel pump assy. by a new one, which is not affected by this ASB as per S/N range in Chapter 1.

NOTICE

Replacement must be carried out according to the relevant aircraft Maintenance Manual.

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

3.4) Test run

Conduct test run.



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

3.5) Summary

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

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



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.

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3.6) Inquiries

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

A list of all ROTAX® Authorized Distributors and their independent Service Centers is provided on www.flyrotax.com.

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.