

SERVICE INSTRUCTION - PAC

Intercoolers for ROTAX® Aircraft Engines

ATA System: 73-10-00 Intake

1) Planning information

“PAC” Service Instruction Documents provide detailed information on non-certified ROTAX® Aircraft Engine Parts and Accessories. Referenced parts and accessories are provided without EASA certification or ASTM compliance. Certification / Compliance of referenced Parts and Accessories must be completed by the aircraft OEM.

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

Refer to the latest issue of the relevant Illustrated Parts Catalog.

NOTICE

The intercoolers are not a part of the Engine Type Design. These intercoolers has been tested and released by BRP-Rotax, but it is not certified. The correct function in conjunction with the entire system and the certification of the intercoolers is the responsibility of the aircraft manufacturer and must be carried out jointly with the aircraft.

1.2) Concurrent ASB/SB/SI and SL

None.

1.3) Reason

In the course of continuous development and standardization, intercoolers (part no. 888963, 888965 and 888967) have been introduced as an optional extra part.

In comparison to the standard delivery intercooler (part no. 888962), the optional intercoolers differ in the following ways. See Fig. 1 to Fig. 4.

- Modification in the dimensions of the intercooler
- Orientation of inlet and outlet fittings

1.4) Subject

Intercoolers for ROTAX® Aircraft Engines.

1.5) Compliance

NONE - For Information Only.

1.6) Approval

None.

1.7) Labor time and credit

Estimated labor hours:

Engine installed in the aircraft - - - labor time will depend on airframe installation and therefore no estimate is available from the engine manufacturer.

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1.8) Mass data

Change of weight:

part no. 888963 - 2.5 kg (5.51 lb)

part no. 888965 - 1.7 kg (3.75 lb)

part no. 888967 - 2.5 kg (5.51 lb)

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

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

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 that 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

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2) Material Information

2.1) Material- cost and availability

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.

2.3) Material requirement and credit per engine

Parts requirement:

Fig.no.	Part no.	Qty/ engine	Description	Application
2	888962	1	Intercooler (Standard - Opposed In/Out)	Air intake system
3	888963	(1)	Intercooler (Optional - Opposed In/Out, Large Core)	Air intake system
4	888965	(1)	Intercooler (Optional - Same side In/Out)	Air intake system
5	888967	(1)	Intercooler (Optional- Same side In/Out)	Air intake system
1	853381	AR*	Clamp 40-60	Intercooler Connection
*) or equivalent depending on the relevant hoses used by the aircraft manufacturer				

2.4) Material requirement per spare part

None.

2.5) Rework of parts

None.

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

None.

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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® - Airworthiness representatives
- ROTAX® - Authorized Distributors or their independent Service Centers
- 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: All work has to be performed in accordance with the relevant Maintenance Manual.

3.1) Installation - related information

It is recommended to use high quality silicone hoses that meet internal diameter requirements. Please check with supplier or hose manufacturer if any maintenance or exchange requests need to be considered.

NOTE: Bends and elbows must have smooth radiuses. Avoid sharp angles that could disrupt smooth airflow.

Intercooler dimension details are shown in [Fig. 2](#) through [Fig. 5](#).

NOTE: The intercooler must be installed vibration-free from the engine. To attach the intercooler within the airframe design for suitable fixation points are available and M6 screws must be used. See [Fig. 2](#) through [Fig. 4](#).

Intercooler connections	
Tube outer diameter	50 mm (1.97 in.)
Slip on length	34 mm (1.34 in.)

NOTICE

Make sure there is proper damping of the 4 fixation points and assure stress-free installation on these 4 fixation points.



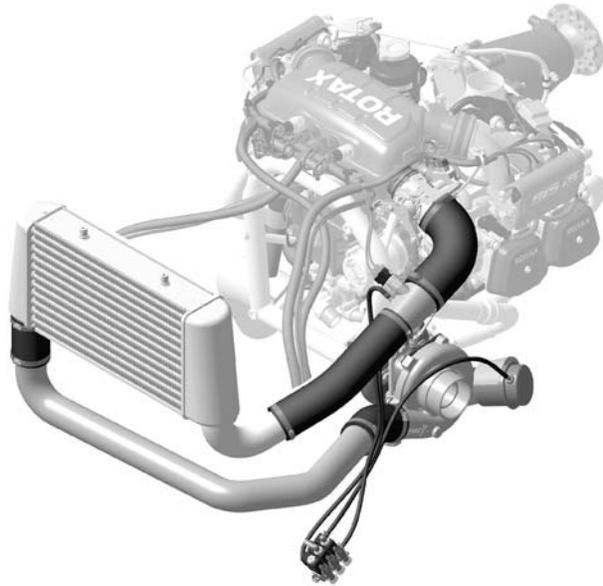
Refer to the current version of the respective engine Installation Manual (IM) for other air intake installation instructions.

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3.2) Operation - related information

Regarding proper operation of your intercoolers see the aircraft manufacturer's instruction for continued airworthiness.

Fig. 1. TYPICAL



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3.3) Maintenance (Line) - related information



See relevant Maintenance Manual (Line) for the respective engine type and its periodical maintenance information.

Points of inspection	Interval Operating hours		Chapter Reference
	*25 h	100 h	
* no periodic maintenance (requirement after the first 25 hours of operation)			
Inspect intercooler for obstruction, wear or damage. Inspect intercooler suspension and fasteners for secure fit, including damage from heat, deformation and cracks.	X	X	See relevant Maintenance Manual (Line) for the respective engine type and its periodical maintenance information.

NOTICE

Pay attention to the latest Maintenance Manual Line (MML) for the respective engine type, Chapter 05-20-00 section "Maintenance Schedule" for other points of inspection for the entire air intake system.

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3.4) Maintenance (Heavy) - related information

Safety information



Follow the general safety instructions during all work on the engine and the assemblies around it.

Regarding proper disassembly, assembly, cleaning etc. and further heavy maintenance tasks of the intercoolers see the aircraft manufacturers instruction for continued airworthiness.

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

3.5) Test run

Conduct test run and perform leakage check. See Chapter 12-20-00 of the latest Maintenance Manual Line for the respective engine type.

3.6) Summary

The execution of the Service Instruction - PAC must be confirmed in the logbook.

I 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.

3.7) Inquiries

Inquiries regarding this Service Instruction - PAC 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 www.FLYROTAX.com.

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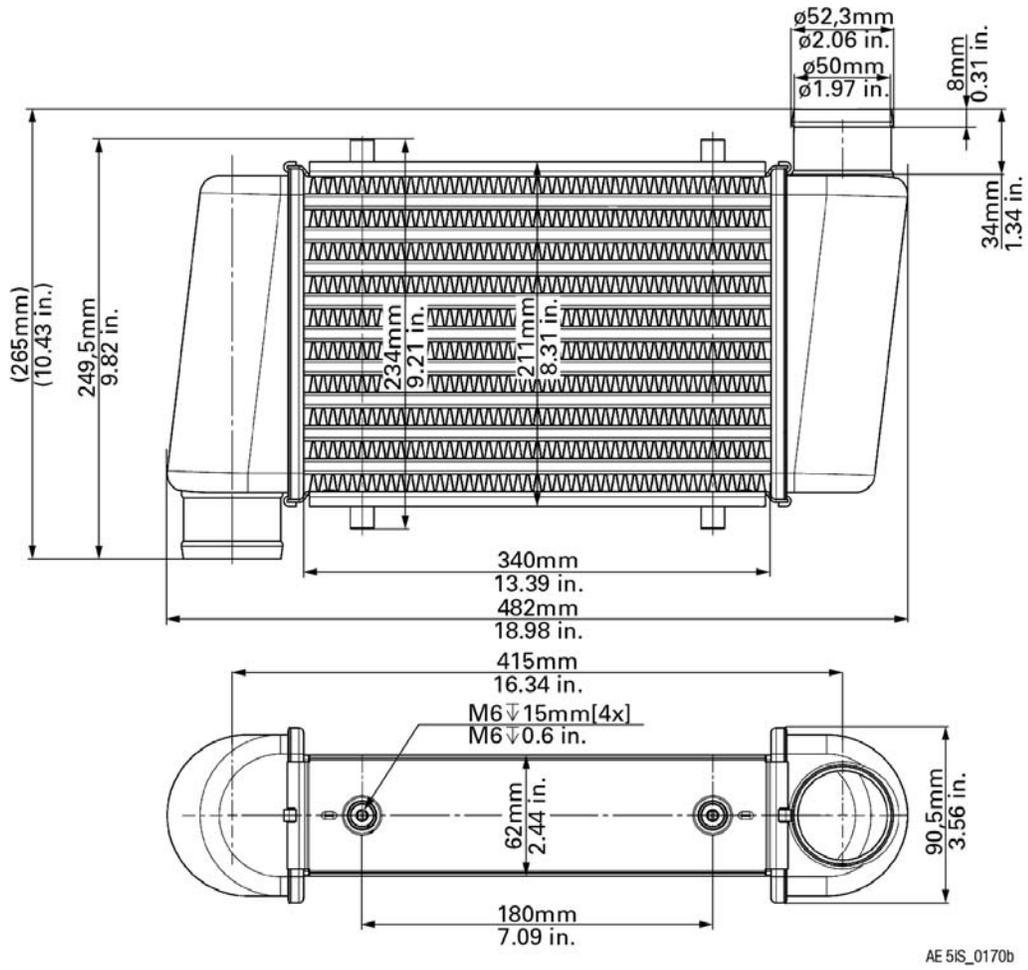
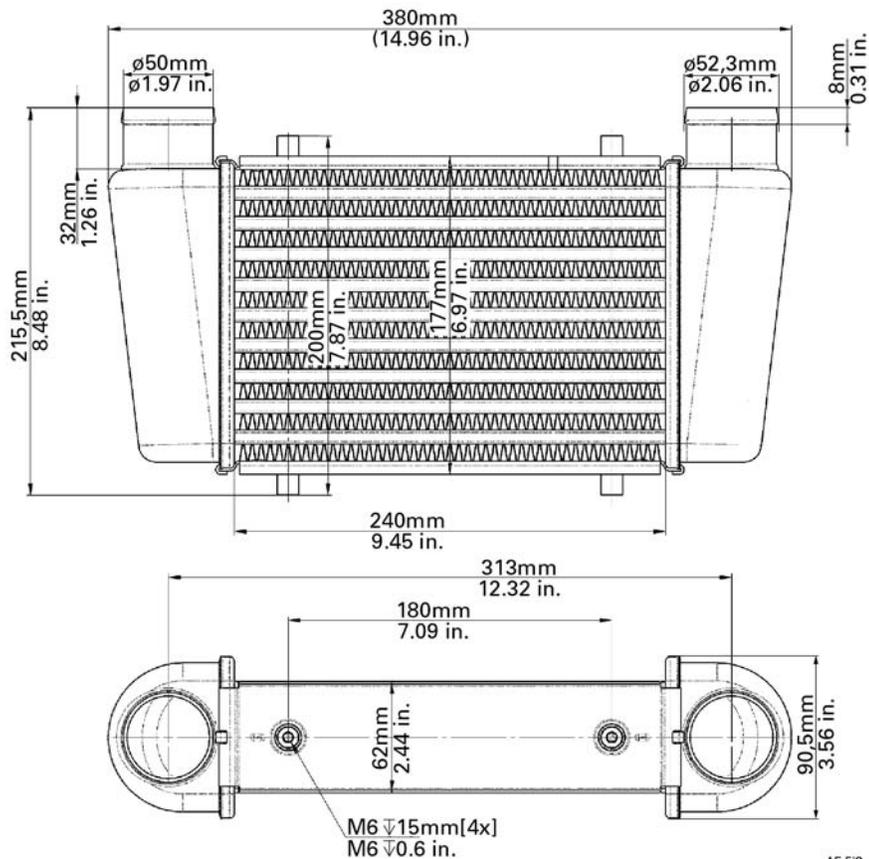


Fig. 3

Intercooler part no. 888963 (optional)

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Fig. 4

Intercooler part no. 888965 (optional)

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4.2) 915 i B Series (Intercooler options)

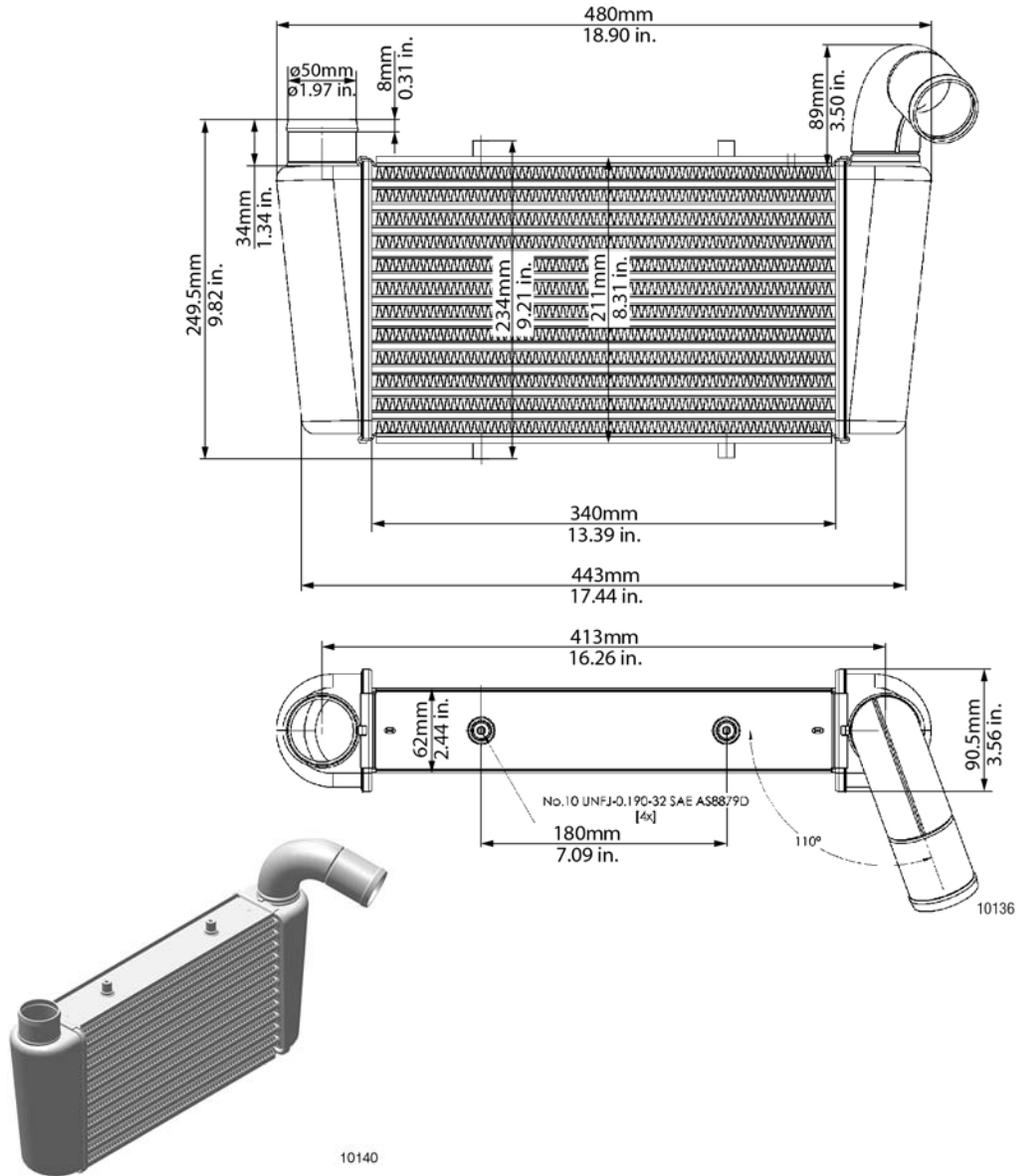


Fig. 5

Intercooler part no. 888967 (optional)

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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