ROTAX®

SERVICE LETTER

Removal and installation labor allowances for ROTAX® Aircraft Engines

ATA System: 00-00-00 General

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

All versions of ROTAX® engine types:

Engine type	Serial number
916 i (Series)	all
915 i (Series)	all
912 i (Series)	all
914 (Series)	all
912 (Series)	all

1.2) Concurrent ASB/SB/SI and SL

In addition to this Service Letter the following documents must be observed:

- SL-912 i-003 Warranty conditions for ROTAX® Engine Types 912 (Series), 914 (Series), 912 i (Series), 915 i (Series) and 916 i (Series).
- SL-912 i-017 Conditions relating to the limited extended warranty under the ROTAX® Care program for ROTAX® Engine Types 912 i, 915 i and 916 i (Series).

1.3) Reason

Update and standardization of warranty labor allowances for ROTAX® authorized Distributors or their independent Service Centers.

1.4) Subject

Removal and installation labor allowances for ROTAX® Aircraft Engines.

1.5) Compliance

NONE - For Information Only.

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) References

In addition to this technical information refer to current issue of:

- Operators Manual (OM)

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.

2) Labor allowance

For the warranty coverage period (see section 1.2) BRP-Rotax will pay for certain labor costs incurred by, or coordinated through any ROTAX® authorized Aircraft Engine distributor/dealer associated with the repair or replacement of a Part or Engine covered under limited warranty for the respective product. Table 1 lists the maximum allowances.

Labor hour allowances include the disassembly and reassembly of all necessary components and / or assemblies. For example, the replacement of a piston includes time to disassemble and reassemble intake manifold, exhaust bend, cylinder head, and cylinder. When applying for labor allowance, select only the root level of the component / assembly replaced.

No labor allowance will be given for work on components, parts or systems not within ROTAX® scope of supply.

ATA Chapter	Operation:	912 (Series)	914 (Series)	912 i (Series)	915 i (Series)	916 i (Series)
00-00-00	Engine removal and installation	12	15	12	14	14
	Engine cowling removal and installation	0.2	0.2	0.2	0.2	0.2
24-20-00	Flywheel hub	0.4	0.4	0	0	0
	Magneto flywheel assy.	0	0	1.3	1.3	1.3
	Stator	3	3	3	3	3
	Trigger coil for the rev. counter signal	0.2	0.2	0	0	0
	Trigger coil kit	0.9	0.9	0	0	0
	Trigger coil for the rev. counter signal	0	0	0.2	0.2	0.2
24-30-00	External alternator	0.4	0.4	0.4	0.4	0.4
37-10-00	Vacuum pump drive	1.5	1.5	1.5	1.5	1.5
61-20-00	Governor drive	2.4	2.4	2.4	2.4	2.4
	Oil inlet flange at the propeller shaft	1.5	1.5	1.5	1.5	1.5
	Plug screw sealing at the generator cable	0	0	0.5	0.5	0.5
71-20-00	Engine suspension frame	0.8	0.8	0.8	0.8	0.8

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ATA Chapter	Operation:	912 (Series)	914 (Series)	912 i (Series)	915 i (Series)	916 i (Series)
72-10-00	Damping clutch assy	0	0	0	0.5	0.5
	Dog hub	0.7	0.7	0.7	0	0
	Eccenter at the fuel pump	1.8	1.8	0	0	0
	Gear box housing	1.5	1.5	1.5	1.5	1.5
	Gear set	2	2	2	2	2
	Gearbox ball bearing	1.8	1.8	1.8	1.8	1.8
	Gearbox disc springs	0.7	0.7	0.7	0	0
	Overload clutch	1.5	1.5	1.5	1.5	1.5
	Propeller / drive assy*	1.5	1.5	1.5	1.5	1.5
	Propeller gear box	0.7	0.7	0.7	0.7	0.7
	Propeller shaft	1.5	1.5	1.5	1.5	1.5
	Torsion shaft	0	0	0	0.5	0.5
	* Hours given are an average between fixed pitch, hydraulic variable pitch and electric variable pitch					
72-20-00	Camshaft	27	27	27	27	27
	Crankcase	27	27	27	27	27
	Crankshaft	27	27	27	27	27
	Cylinder (x1)	0.7	0.7	0.7	0.7	0.7
	Cylinder (x2)	1.8	1.5	1.5	1.5	1.5
	Cylinder (x3)	2.1	2.1	2.1	2.1	2.1
	Cylinder (x4)	2.8	2.8	2.8	2.8	2.8
	Cylinder head (x1)	0.8	0.8	0.8	0.8	0.8
	Cylinder head (x2)	1.5	1.5	1.5	1.5	1.5
	Cylinder head (x3)	2.3	2.3	2.3	2.3	2.3
	Cylinder head (x4)	3	3	3	3	3
	Free wheel gear for the electric starter	27	27	27	27	27
	Hydraulic valve Tappet on 1 cylinder	1.6	1.6	1.6	1.6	1.6
	Hydraulic valve Tappet on 2 cylinders	2.5	2.5	2.5	2.5	2.5
	Hydraulic valve Tappet on 3 cylinders	3.4	3.4	3.4	3.4	3.4
	Hydraulic valve Tappet on 4 cylinders	4.3	4.3	4.3	4.3	4.3
	Knock sensor	0	0	1.2	1.2	1.2
	Oil return tubes (each)	0.5	0.5	0.5	0.5	0.5
	Piston (each)	1	1	1	1	1
	Push-rods (per cylinder)	0.5	0.5	0.5	0.5	0.5
	Rocker arms on 1 cylinder	0.6	0.6	0.6	0.6	0.6
	Rocker arms on 2 cylinders	1.2	1.2	1.2	1.2	1.2
	Rocker arms on 3 cylinders	1.8	1.8	1.8	1.8	1.8
	Rocker arms on 4 cylinders	2.4	2.4	2.4	2.4	2.4
	Sprag clutch	3.3	3.3	3.3	3.3	3.3
	Valve cover (each)	0.4	0.4	0.4	0.4	0.4
	Valve spring retainers (per cylinder head)	0.6	0.6	0.6	0.6	0.6
	Valves (per cylinder head)	1.2	1.2	1.2	1.2	1.2

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ATA Chapter	Operation:	912 (Series)	914 (Series)	912 i (Series)	915 i (Series)	916 i (Series)
73-00-00	Carburetor Replacement (each)	0.6	0.9	0	0	0
	Carburetor Service (x1)	1.2	1.5	0	0	0
	Carburetor Service (x2)	2.5	3.1	0	0	0
73-10-00	3-way solenoid valve	0	0	0	0.2	0.2
	3-way solenoid valve (12V)	0	0.2	0	0	0
	Air filter	0.1	0.1	0.1	0.1	0.1
	Airbox assy.	0.8	0.8	0.8	0.8	0.8
	Airbox connecting socket (each)	0	0	0.2	0.2	0.2
	Airbox pressure sensor	0	0.2	0.2	0.2	0.2
	Ambient pressure sensor	0	0.1	0.1	0.1	0.1
	Carburetor flange (each)	0.3	0.3	0	0	0
	Fuel filter	0	0	0.2	0.2	0.2
	Fuel line	0.5	0.5	0.5	0.5	0.5
	Fuel pressure regulator	0	0.5	0.5	0.5	0.5
	Fuel pump	0.2	0.2	0	0	0
	Fuel pump assy.	0	0	0.2	0.2	0.2
	Fuel pump with hoses	0.5	0	0	0	0
	Fuel rail (each)	0	0	0.5	0.5	0.5
	Fuel rail covering (each)	0	0	0.1	0.1	0.1
	Heat shield at the air filter	0	0	0.1	0.1	0.1
	Heat shield at the fuel rail (each)	0	0	0.2	0.2	0.2
	Injectors (per cylinder)	0	0	0.2	0.2	0.2
	Intake manifold (x1)	0.8	0.8	0.8	0.8	0.8
	Intake manifold (x2)	1.5	1.5	1.5	1.5	1.5
	Intercooler	0	0	0	0.1	0.1
	Manifold isolating flange (each)	0	0	0.5	0.5	0.5
	Resistance thermometer at the airbox	0	0.1	0	0	0
	Throttle body socket assy	0	0	0.1	0.1	0.1
	Throttle valve position sensor	0	0.3	0.3	0.3	0.3
74-20-00	Double ignition coil (each)	0.2	0.2	0.2	0.2	0.2
	SMD-electronic module (x1)	0.5	0.5	0	0	0
	SMD-electronic module (x2)	0.7	0.7	0	0	0
	Spark plug connectors (per cylinder)	0.2	0.2	0.2	0.2	0.2
	Spark plugs (per cylinder)	0.1	0.1	0.1	0.1	0.1
75-20-00	Bent socket of cylinder head (x1)	0.8	0.8	0.8	0.8	0.8
	Bent socket of cylinder head (x2)	1.5	1.5	1.5	1.5	1.5
	Bent socket on water pump (x1)	0.5	0.5	0.5	0.5	0.5
	Bent socket on water pump (x2)	0.8	0.8	0.8	0.8	0.8
	Bent socket on water pump (x3)	1.1	1.1	1.1	1.1	1.1
	Bent socket on water pump (x4)	1.4	1.4	1.4	1.4	1.4
	Coolant hose (x1)	0.8	0.8	0.8	0.8	0.8

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ATA Chapter	Operation:	912 (Series)	914 (Series)	912 i (Series)	915 i (Series)	916 i (Series)
75-20-00	Coolant hose (x2)	1.5	1.5	1.5	1.5	1.5
	Coolant hose (x3)	2.3	2.3	2.3	2.3	2.3
	Coolant hose (x4)	3	3	3	3	3
	Cooling air baffle	0.8	0.8	0.8	0.8	0.8
	Expansion tank	0.5	0.5	0.5	0.5	0.5
	Oil seal at the water pump	2.5	2.5	2.5	2.5	2.5
	Overflow bottle with cap	0.1	0.1	0.1	0.1	0.1
	Radiator	0.4	0.4	0.4	0.4	0.4
	Rotary seal at the water pump	2.5	2.5	2.5	2.5	2.5
	Rubber plate at the expansion tank assy	0.3	0.3	0.3	0.3	0.3
	Temperature sensor CHT	0.1	0.1	0	0	0
	Temperature sensor CTS	0	0	0.1	0.1	0.1
	Water inlet elbow at the water pump	0.5	0.5	0.5	0.5	0.5
	Water pump housing	0.3	0.3	0.3	0.3	0.3
	Water pump impeller	0.8	0.8	0.8	0.8	0.8
	Water pump shaft	2	2	2	2	2
76-10-00	Engine Control Unit (Full Data download)	0	0	0.2	0.2	0.2
	Engine Control Unit (Replace)	0	0	0.2	0.2	0.2
	Fuse box	0	0	0.2	0.2	0.2
	Fuses in fusebox	0	0	0.3	0.3	0.3
	Rectifier regulator (each)	0	0	0.3	0.3	0.3
	Rectifier-regulator	0.5	0.5	0.5	0.5	0.5
	Servo motor	0	0.5	0	0	0
	Turbocharger Control Unit (Full Data download)	0	0.2	0	0	0
	Turbocharger Control Unit (Replace)	0	0.2	0	0	0
	Wiring harness at the Turbocharger Control Unit	0	0.2	0	0	0
76-50-00	Wiring harness	0	0	0.6	0.6	0.6
78-10-00	EGT thermocouple (each)	0.1	0.1	0.1	0.1	0.1
	Exhaust bend (x1)	0.3	0.3	0.3	0.3	0.3
	Exhaust bend (x2)	0.5	0.5	0.5	0.5	0.5
	Exhaust bend (x3)	0.8	0.8	0.8	0.8	0.8
	Exhaust bend (x4)	1	1	1	1	1
	Exhaust manifold	0	1.8	0	0	0
	Muffler	0.7	0.7	0.7	0.7	0.7
	Turbo bracket	0	2.4	0	4.4	4.4
	Turbocharger	0	2.4	0	4.4	4.4
	Turbocharger exhaust bracket	0	0.4	0	0	0
	Turbocharger manifold bracket	0	0.9	0	0	0
	Turbocharger oil pressure line	0	0.2	0	0.2	0.2

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ATA Chapter	Operation:	912 (Series)	914 (Series)	912 i (Series)	915 i (Series)	916 i (Series)
78-10-00	Turbocharger oil suction line	0	0.2	0	0.2	0.2
	Turbocharger oil sump	0	0.2	0	0.2	0.2
79-20-00	Magnetic plug	0	0	0.1	0.1	0.1
	Oil filter	0	0	0.2	0.2	0.2
	Oil pressure sensor	0.2	0.2	0.2	0.2	0.2
	Oil pump	0.6	0.6	0.6	0.6	0.6
	Oil radiator	0.5	0.5	0.5	0.5	0.5
	Oil tank assy.	0.5	0.5	0.5	0.5	0.5
	Oil temperature sensor	0.2	0.2	0.2	0.2	0.2
80-10-00	Electric starter (replace)	0.5	0.5	0.5	0.5	0.5
	Electric starter (Service)	0.7	0.7	0.7	0.7	0.7
	Starter relay	0.2	0.2	0.2	0.2	0.2

Table 1.

3) Troubleshooting costs

For the warranty coverage period (see section 1.2) BRP-Rotax will pay for certain troubleshooting costs incurred by, or coordinated through any ROTAX® authorized Aircraft Engine distributor/dealer associated with the repair or replacement of a Part or Engine covered under limited warranty for the respective product.

The troubleshooting shall not, in any case, exceed fifteen percent (15%) of the labor costs that BRP-Rotax has determined to be permissible for such repairs or replacements.

No Troubleshooting costs will be covered where the need for repair or replacement under warranty is identified in the course of overhaul, routine maintenance, or on the basis of an obvious nonconformity, or if the damage is not one covered by this limited warranty. No Troubleshooting costs will be reimbursed if the need for a repair covered by this limited warranty was identified by someone other than a person approved by BRP-Rotax or its authorized distributors/dealers.

4) Inquiries

Inquiries regarding this Service Letter 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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