

Issues

INFORMATION BULLETIN No. RTC-074b R1

**TECHNICAL CONTENT OF THIS DOCUMENT IS APPROVED
UNDER THE AUTHORITY OF THE DOA REF. EASA.21J.057.**

- 1. CONCERNING:** All SportStar RTC aircraft equipped with ROTAX 912 ULS engines.
- 2. REASON:** The aircraft manufacturer allows the aircraft to be equipped with the Rotax 912 S engine.
- 3. REQUIRED ACTIONS:**
 1. Remove ROTAX 912 ULS engine from the aircraft.
 2. Install ROTAX 912 S engine on the aircraft.
 3. Record the replacement in the Aircraft Logbook.
- 4. LATEST DAY OF ACTION:** As required.
- 5. CARRIED OUT BY:** Organizations authorized for maintenance/repairs of this type of airplane in accordance with Part M, Part ML, Part CAO, Part 145.
- 6. COSTS COVERED BY:** Airplane owner/operator.
- 7. NECESSARY MATERIAL:** In accordance with the text of bulletin.
- 8. WORK PROCEDURE:** In accordance with the text of bulletin.
- 9. APPENDICES:** None.

Valid from: December 11th, 2024.

1. Work procedure

1.1 Necessary tools

Maintenance type: Heavy
 Personnel qualification: Organizations authorized for maintenance/repairs of this type of airplane in accordance with Part M, Part ML, Part CAO, Part 145.

Recommended tools and material:

Item	Designation / Size	Quantity	Note
Workshop crane	-	1 pc	Load capacity min. 250 kg
Suspension straps	-	3 pcs	Load capacity min. 250 kg
Torque wrench	5 – 50 Nm	1 pc	
Adjustable pliers	-	1 pc	
Hex key	No. 5	1 pc	
Flat screwdriver	-	1 pc	
Nippers	-	1 pc	
Cobra pliers	-	1 pc	
Marking spike		1 pc	

1.2 Necessary material (in accordance with RTC-074b)

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Item	Designation / Size	Quantity	Note / Nomenclature
Engine	ROTAX 912 S2	1 pc.	765599
Fuel hose SUPER-FLEX FL 7		4 m	056299
Hose T-connection		2 pcs.	051158
Clamp		1 pc.	S6 76-01 21
Hose clamp Cobra		18 pcs.	074506
Flange of the fuel pressure sensor		2 pcs.	S6 15-01 21
Cube		1 pc.	S6 76-02 21
Gasket	10x14	2 pcs.	053899
Banjo bolt	M8x1x17	3 pcs	766330
Gasket ring	8 x 13	10 pcs	766331
Hose nipple	¾	1 pc	766332
Insulation clamp	15.9 (0.625")	1 pc	060263



Item	Designation / Size	Quantity	Note / Nomenclature
Bolt	M6 x 20	3 pcs.	011820
Bolt	M5 x 16	1 pc.	007375
Bolt	M10-35	3 pcs.	S6 66-01 21
Plug		4 pcs.	SG6 04-03 21
Washer DIN 7980	10,2	3 pcs.	037209
Bolt	M8-85	4 pcs.	S6 71-00 21
Silent block		8 pcs.	768149
Cable tie	3,6 x 142	30 pcs.	060333
Cable tie	2,5x99	10 pcs.	060332
Stainless lockwire	ø 0,81 mm (0.032")	6 m (0,024 kg)	118898
Propeller nut Woodcomp Klassic*	M8	6 pcs.	285136
Propeller nut DUC SWIRL 3 L*	Self-locking M8	6 pcs.	285149

*Order according to the installed propeller type.

1.3 Work procedure

WARNING

BEFORE STARTING THE WORK, COOL DOWN THE ENGINE TO THE AMBIENT TEMPERATURE. NON-COMPLIANCE WITH THE PROCEDURE MAY RESULT IN BURNS AND SCALDS.

SWITCH OFF THE IGNITION AND TAKE OUT THE KEY!

CAUTION

BEFORE THE ENGINE REMOVAL SUPPORT THE REAR PART OF THE AIRPLANE FUSELAGE BY MEANS OF A SUITABLY DIMENSIONED SUPPORT (SECTION 07-10).

NOTE

By installation of suitable covers, blind plugs, etc., protect the uncovered holes arisen as a result of removal or disconnection, so that water, impurities, or foreign objects cannot enter them.

Observe the procedures relating to engine removal, as specified by the engine manufacturer.

1) ROTAX 912 ULS engine removal from the airplane

- a) Switch the electrical network off.
- b) Switch the fuel cock control to the **OFF** position.
- c) Remove the upper part of the engine cowling (see Airplane Maintenance Manual for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-10, para 2 A (1)).
- d) Disconnect the battery (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 24-30, para 2 G (3)).
- e) Disconnect the inlet air hoses of the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, para 2 A (2)).
- f) Disconnect the flap control of the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, para 2 A (2)).
- g) Remove the lower part of the engine cowling (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-10, para 2 A (1)).
- h) Remove the relevant propeller (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 61-10, para 2 (1)).
- i) Disconnect the throttle control (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 76-10, para 2 B (1)) and choke control (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 76-10, para 2 C (1)) on the engine side.
- j) Drain the coolant (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 12-10).
- k) Drain the oil (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 12-10).
- l) Disconnect the wires of electrical installation of the engine.:
 - battery wires
 - wires from starter and starting relay
 - ignition wires
 - wires from the generator and auxiliary generator (see Installation Manual For Rotax Engine Type 912 Series, Chapter 24-00-00).
- m) Remove the exhaust system (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 78-20, para 2 A (1)).

- n) Disconnect and plug the fuel inlet hoses (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 28-20, Fig. 28-1).
- o) Disconnect and plug the oil system hoses (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 79-20).
- p) Disconnect the hoses of the engine cooling system, including the liquid cooler (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 75-00, Fig. 75-1).
- q) Suspend the engine (10, Fig. 1) on the workshop crane (8).
- r) Remove the engine from the airplane:
 - 1. Release the bolts (1).
 - 2. Remove the bolts (1) for suspending the engine mount (11) on the firewall.
 - 3. Take out the bolts (1) along with washers (2) and parts of upper and lower silent blocks, washers, and cups.
- s) Plug the holes on the engine arisen as a result of removal.
- t) Put the engine in a suitable stand.
- u) Remove the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, Fig 71-7).
- v) Remove the engine mount from the engine (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-20, para 2 A (1), Fig. 71-4).

2) **ROTAX 912 S** engine installation on the airplane

CAUTION

THE THREADS OF BOLTS AND NUTS TIGHTENED BY TORQUE WRENCH MUST NOT BE LUBRICATED!

NOTE

When installing the engine on the airplane, observe the procedures prescribed by the engine manufacturer.

NOTE

The tightening torque of the bolts in the joint of the engine and the engine mount hinges is 40Nm.

- a) Install the engine mount on the engine (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-20, para 2 A, Fig. 71-4).
- b) Install the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, Fig. 71-7).
- c) Suspend the engine with the engine mount on the workshop crane (Fig. 1).

d) Install the silent blocks:

1. Insert both parts of the silent block (4) into the eye of the upper attachment (detail A, Fig. 1) and install the insert (5).
2. Slide the washers (2) and (7) on the bolt (1) and insert it into the hole in the insert (5).
3. Slide the cup (3) and the washer (6) on the protruding shank of the bolt (1).
4. Insert both parts of the silent block (4) into the eye of the lower attachment (detail B, Fig. 1) and install the insert (5).
5. Slide the washer (2) and the cup (3) on the bolt (1) and insert it into the hole in the insert (5).
6. Slide the cup (3) and the washer (6) on the protruding shank of the bolt (1).

e) Position the engine with the installed engine mount to the attachment points on the firewall.

f) Install the engine on the airplane:

1. Install the **new** bolts (1) for suspending the engine mount (11) to the attachments on the firewall (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-20).
2. Tighten the bolts using a torque of 23 Nm.
3. Secure the bolts with lockwire (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 20-20).

g) As needed, gradually remove the blind plugs placed in the holes of the engine cooling, oil and fuel installation.

h) Install the throttle control (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 76-10) and the choke control (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 76-10, para 2 C (1)) on the engine side.

i) Install the liquid cooler (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 75-00, Fig. 75-1).

j) Connect the hoses of the engine cooling system (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 75-00, Fig 75-1).

k) Connect the fuel inlet hoses (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 28-20). The difference in connection and use of parts for the ROTAX 912 S engine installation is shown in the Illustrated Parts Catalogue in Chapter 28; installation number PN S6 00-76 01 and Installation Manual For Rotax Engine Series, Chapter 73-00-00).

l) Connect the oil system hoses (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 79-20, Fig. 79-1).

m) Install the exhaust system (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 78-20, para 2 A (2)).

- n) Connect the wires of electrical installation of the engine.:
- battery wires
 - wires from starter and starting relay
 - ignition wires
 - wires from the generator and auxiliary generator (see Installation Manual For Rotax Engine Type 912 Series, Chapter 24-00-00).

CAUTION

FOR EACH INSTALLATION OF A NEW OR EXISTING PROPELLER, USE **NEW** NUTS FOR THE BOLTS CONNECTING THE PROPELLER AND THE ENGINE FLANGE! INFORM THE MANUFACTURER IF YOU WANT THESE NUTS TO BE PART OF THE DELIVERY OF THE NECESSARY MATERIAL AND SPECIFY THE TYPE OF THE INSTALLED PROPELLER.

- o) Install the relevant propeller (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 61-10, para 2 (2)).
- p) As needed, but at the latest before the engine start, replenish the operation liquids of the engine (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 12-10).
- q) Mount the lower cowling of the engine (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-10, para 2 A (2)).
- r) Connect the hoses to the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, para 2 A (3)).
- s) Connect the flap control of the airbox (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-60, para 2 A (3)).
- t) Connect the battery (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 24-30, para 2 G (4)), switch the electrical network on.
- u) Do the engine test; check the tightness of the fuel system, oil system and the engine cooling system.
- v) Install the upper cowling of the engine (see AMM for SportStar RTC (Doc. No. ERTC021-10-AS), Section 71-10, para 2 A (1)).

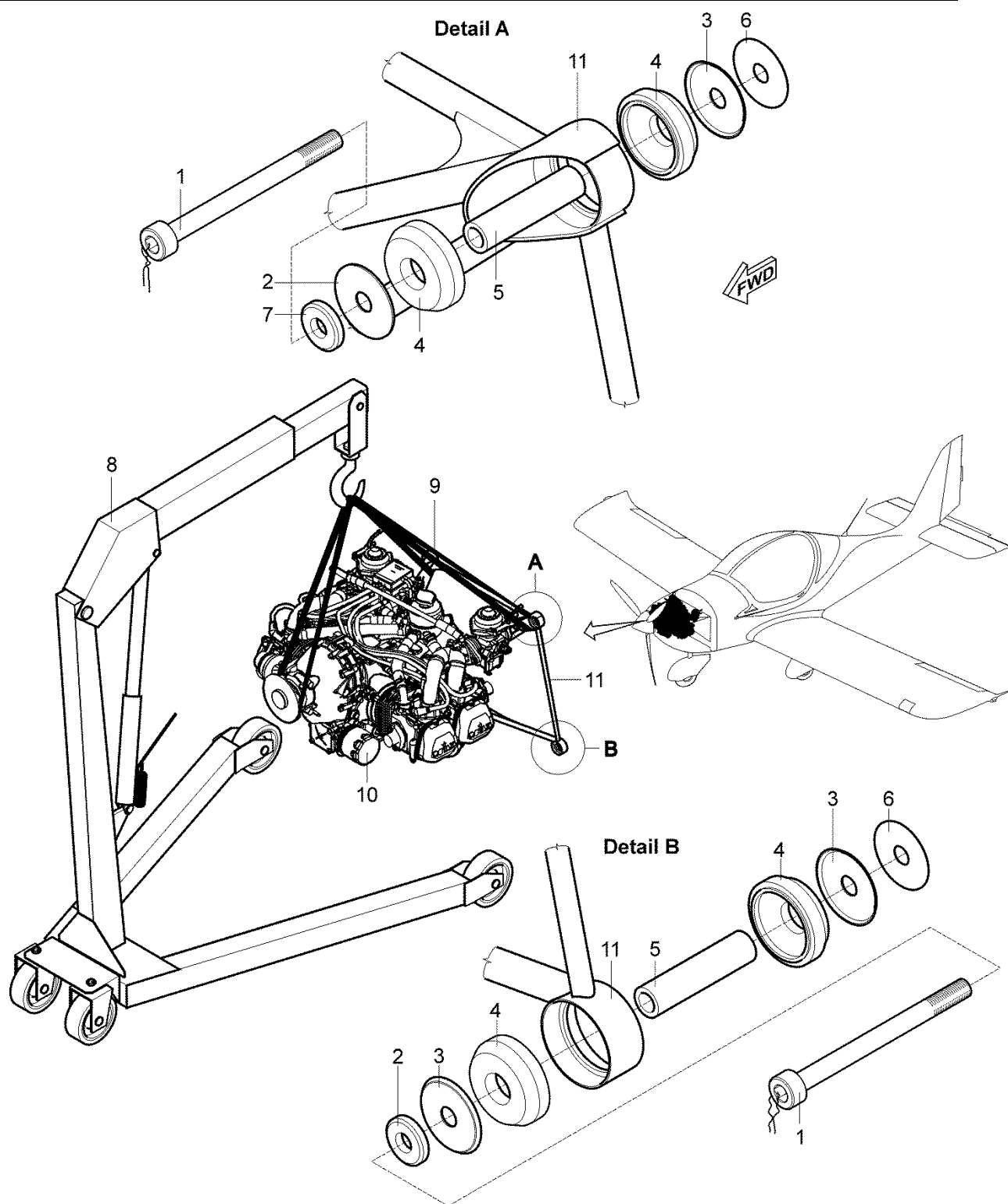


Fig. 1 Engine – removal/installation (page 1 of 2)



Legend to Fig. 1

1	Bolt (4 pieces)	7	Washer (2 pieces)
2	Washer (2 + 2 pieces)	8	Crane
3	Cup (2 + 2 pieces)	9	Straps
4	Silent block (8 pieces)	10	Engine
5	Insert (4 pieces)	11	Engine mount
6	Washer (4 pieces)		

*Fig. 1 Engine – removal/installation (page 2 of 2)***2. Influence on airplane documentation****2.1 Accompanying technical documentation**

Insert the Supplement No. 11 - Rotax 912 S Engine installed into SportStar RTC airplane into the Pilot's Operating Handbook.

2.2 Operation technical documents

After the bulletin implementation, the authorized person will carry out the record in the Airplane Logbook: „**The ROTAX 912 S engine installation was performed in accordance with the Information Bulletin No. RTC-074b R1**“and they will add the date and signature.

3. Influence on weight and balancing

Weigh the airplane, calculate the centre of gravity, and enter the new values in Table 6.2. Weight and Balance Record in Pilot's Operating Handbook, Chapter 6. Update the weight placard on the left side of the cockpit.