

**SUBJECT:**

Replacement of the main and auxiliary fuel pump check valves on the aircraft equipped with engine Rotax 914UL.

**AFFECTED:**

DY-672/2019	DY-676	DY-685	DY-687	DY-689
DY-692	DY-695	-	-	-

**COMPLIANCE:**

At the next periodic inspection.

**MASS DATA:**

Weight change: None  
Moment change: None

**REASON:**

Several occurrences of a fuel pump check valve failure were reported. The fuel pump check valve failure may lead into an irregular engine running or engine stoppage.

**ARRANGEMENTS:**

Replace the main and auxiliary fuel pump check valves ReCo 110-8 for check valves TEVESO 000599 as follows:

**REMOVAL OF THE FAULTY CHECK VALVES:**

1. Set the fuel selector in the cockpit to „OFF“ position.
2. Remove the upper engine cowling.
3. Disconnect the negative terminal from the battery.
4. Locate the fuel pump unit (in the upper part of the firewall), remove the bolts (1; Fig. 1) and washers (21) to release the housing from the firewall.
5. Remove the Pyrosil tape from the end of the fuel hose (6), remove the pressing clamp (5) and remove the fuel outlet hose (6). Remove the fuel inlet hose (11) by removing the banjo bolt (10) with sealing rings (9). Remove the fuel pump unit from the aircraft.

*Note: After removing of fuel inlet and outlet hoses the remaining fuel will leak out. Drain the leaking fuel into a suitable container and wipe the spilled fuel.*

6. Protect the fuel hoses ends by appropriate means to prevent dirt from getting into the hoses.
7. Remove the housing cover (3) by removing the bolts (2) and washers (19, 20).
8. Remove the hose adaptor (4) with ring seal (8).
9. Remove the nuts (8) and washers (7).
10. Remove the nuts (11; Fig. 2) with washers (18) on the back side of the housing, remove the fuel pump holders (12; Fig. 3).
11. Disconnect the wirings from main and auxiliary fuel pumps and remove the fuel pump assembly from the housing.
12. Remove the pressing clamps (13; Fig. 4) and remove the check valve ReCo 110-8 (14) of auxiliary fuel pump (15) together with hoses (16).

13. Remove the pressing clamps (13; Fig. 5) and remove the check valve ReCo 110-8 (14) of main fuel pump (15) together with hoses (16).

#### INSTALLATION OF NEW CHECK VALVES:

1. Prepare the new check valves TEVESO 000599 and new fuel hose. Cut the fuel hoses lengths according to the original installation. Minimum length of each fuel hose is 40 mm.
2. Slide the new pressing clamps (13; Fig. 5) onto the new fuel hoses (16) and connect the main fuel pump (17) bypass line with the new check valve TEVESO 000599 (14). Do not secure the pressing clamps!

*WARNING: Ensure the proper orientation of the check valve. The direction of the arrow printed on the check valve represents the fuel flow direction (see Fig. 6)!*

3. If the fuel flow direction through the check valve is correct (Fig. 6), secure the pressing clamps (13; Fig. 5).
4. Slide the new pressing clamps (13; Fig. 4) onto the new fuel hoses (16) and connect the auxiliary fuel pump (15) bypass line with the new check valve TEVESO 000599 (14). Do not secure the pressing clamps!

*WARNING: Ensure the proper orientation of the check valve. The direction of the arrow printed on the check valve represents the fuel flow direction (see Fig. 6)!*

5. If the fuel flow direction through the check valve is correct (Fig. 6), secure the pressing clamps (13; Fig. 4).
6. Connect the wirings to main and auxiliary fuel pumps.
7. Insert the fuel pump assembly into the housing, attach the fuel pumps by holders (12; Fig. 3) and the nuts (11; Fig. 2) with washers (18).
8. Install the washers (7) and nuts (8).
9. Install the hose adaptor (4) with a new sealing ring (9).
10. Install the fuel pump unit on the firewall and secure it with bolts (1; Fig. 1) and washers (21). Do not install the housing cover (3)!
11. Connect the fuel hose (6) to the hose adaptor (4) and secure it by the pressing clamp (5).
12. Connect the fuel hose (11) to the fuel pump input new sealing rings (9) and banjo bolt (10).
13. Connect the negative terminal to the battery.
14. Set the fuel selector in the cockpit to „LEFT“ or „RIGHT“ position. Switch ON the „MASTER SWITCH“ and both ignition circuits „MAGNETOS“ / „IGNITION“ (main fuel pump starts to run and pressurize the fuel system).

*WARNING: Ensure that nobody will be near the propeller or inside cockpit during the test!*

15. Inspect the fuel pump unit for fuel leaks.
16. Turn OFF both ignition circuits „MAGNETOS“ / „IGNITION“ and „MASTER SWITCH“.
17. Perform an engine ground test according to the POH, verify the fuel pressure is within normal operating range, monitor if the engine runs smoothly.
18. After the engine ground test, inspect the fuel pump unit for fuel leaks again.

*WARNING: The engine will be hot after the engine ground test! Do not touch the engine parts with bare hands! Perform visual inspection only.*

19. If no fuel leaks are found, wait until the engine cools down, check the tightening of all connections.
20. Pull the fire protection Pyrojacket on the pressing clamp (5) of fuel hose (6) and seal the end of the fire protection by the Pyrosil tape.
21. Install the fuel pump housing cover (3) and attach it by bolts (2) with washers (19, 20).
22. Install the upper engine cowling.
23. Record compliance with this Service bulletin into the aircraft documentation.

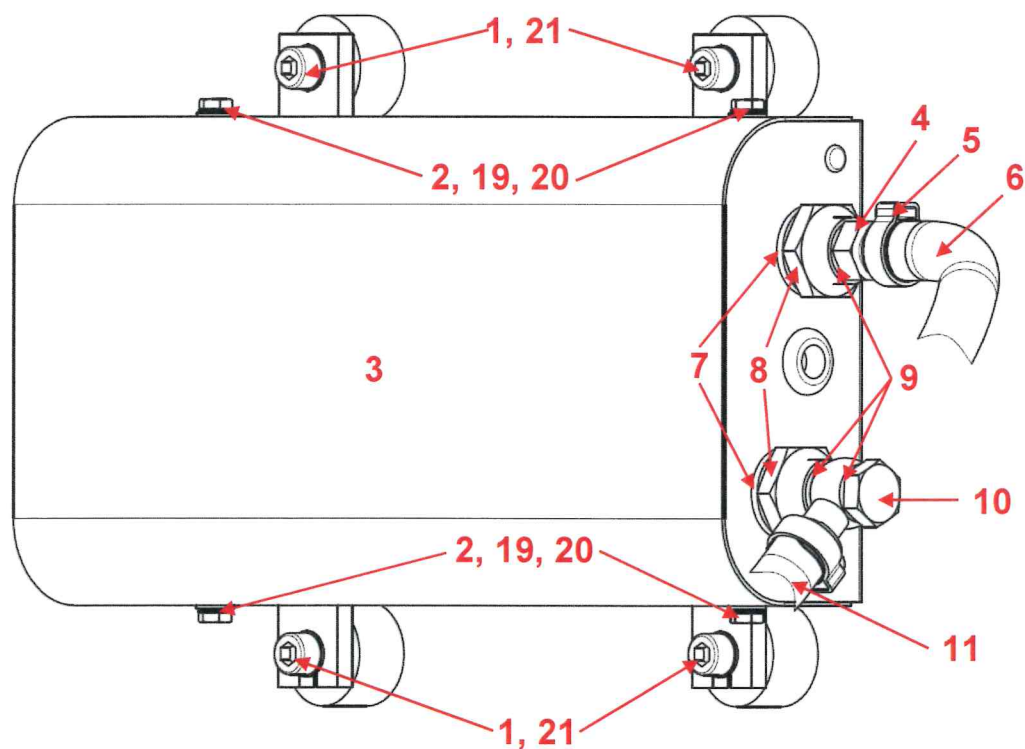


Fig. 1

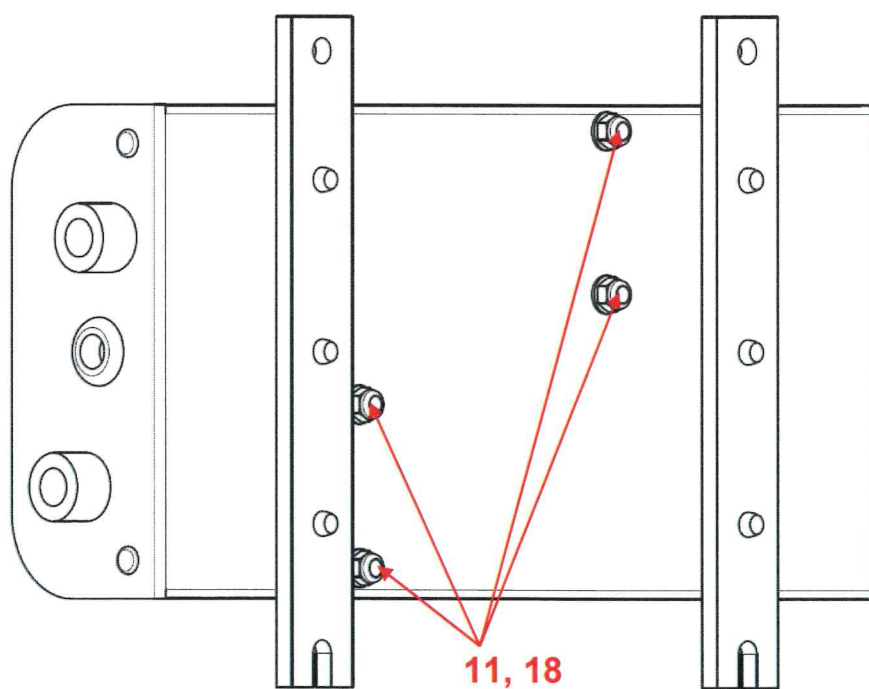


Fig. 2



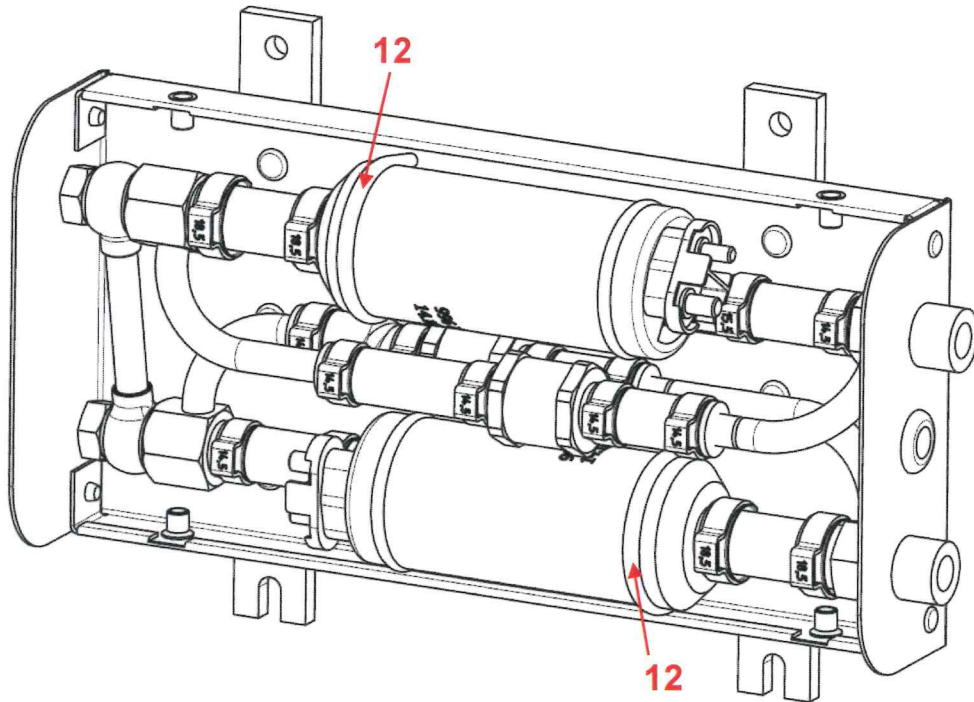


Fig. 3

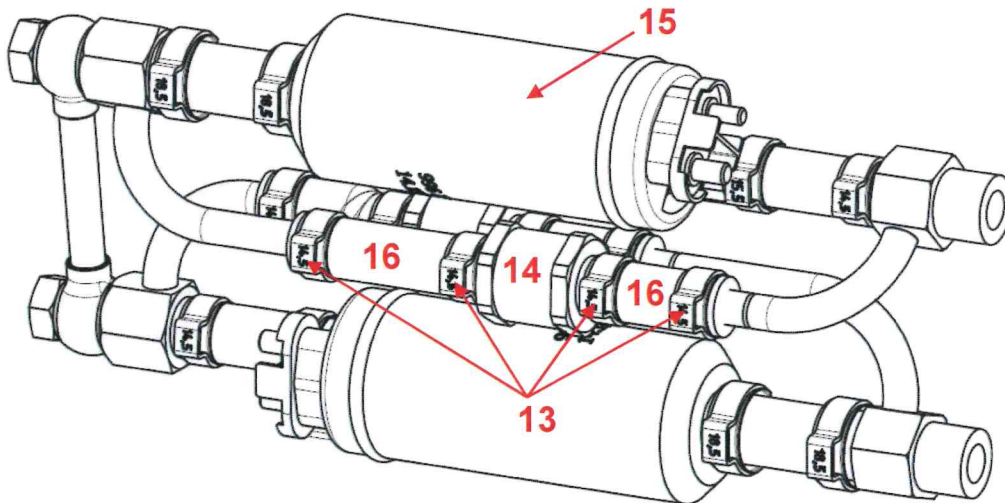


Fig. 4

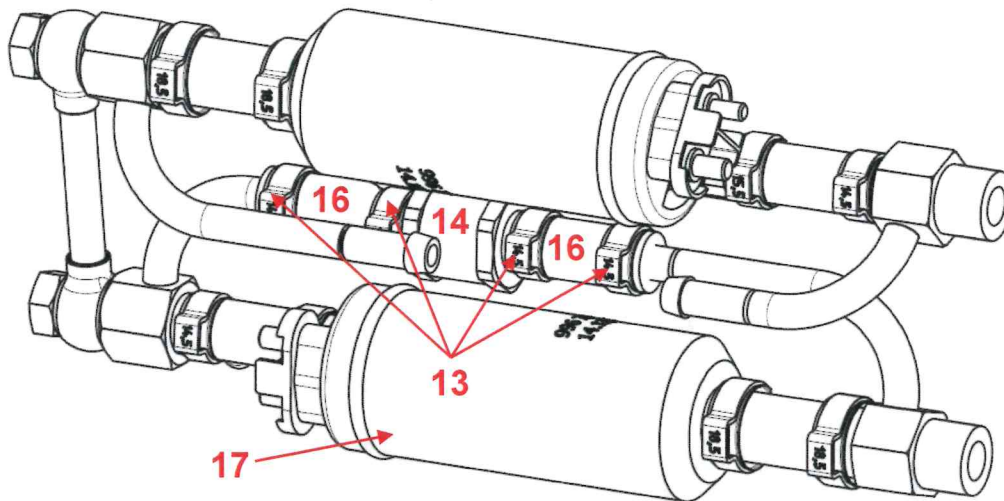


Fig. 5

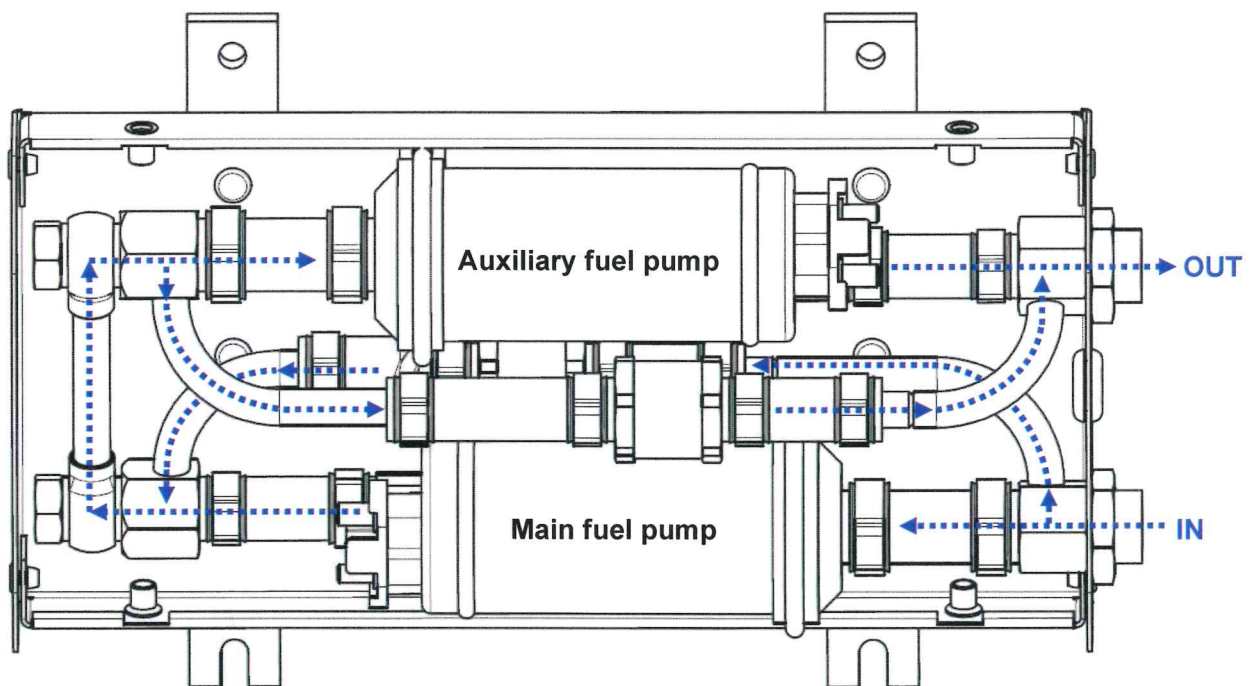


Fig. 6

**MATERIAL AND WORK TIME:****Material:**

Necessary material will be supplied on request by manufacturer Aerospool, spol. s r. o. For material purchase contact the manufacturer directly at [spareparts@aerospool.sk](mailto:spareparts@aerospool.sk).

Item	Part Name	Part Number	Quantity
-	ZBWT9-24A-2020 KIT1	ZBWT9-24A-2020-1	1 pc

Kit contains:

Item	Part Name	Part Number	Quantity
1	Check valve 000599	N4642-004	2 pcs
2	Fuel hose 7,3	N3910-201	0,27 m
3	Washer 16x22x1	N3252-009	2 pcs
4	Ring seal 10x14	N3320-002	3 pcs
5	Pressure clamp 15.5	N4343-009	9 pcs
6	Pyrosil tape	N3944-002	0,2 m

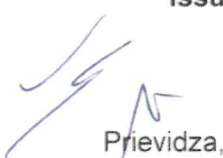

**Work time:** Approx. 1 hour

**DOCUMENTATION:**

Refer to the POH for engine ground test procedure.

**ANNEXES:**

None.

<b>Issued by:</b>  <b>AEROSPOOL</b> spol. s r.o. Approval SK.NPOA.002 871 03 PRIEVIDZA SLOVAK REPUBLIC Prievidza, 28.08.2020 Place, date, signature	<b>Maroš Jančula</b> Approved by: Document No 18617/2020/OSL <b>Bratislava, 16.09.2020</b>  Slovak Republic Transport Authority
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