

5.58 REMOVE & RE-INSTALL 914UL ENGINE

• PROCEDURE

Engine removal:

1. Disconnect the negative terminal from the aircraft battery.
2. Remove the spinner and the propeller.
3. Remove the engine cowl bottom and main body.
4. Disconnect the lower oil cooler hose and drain the oil, and then re-connect.
5. Disconnect the lower #2-cylinder coolant hose and drain the coolant.
6. Reconnect the lower #2-cylinder coolant hose.
7. Disconnect the radiator hoses from the water pump and the expansion tank.
8. Disconnect the supply and return fuel hoses from the fuel pressure regulator.
9. Remove the oil supply hose from the oil pump and the oil tank.
10. Remove the oil return hose from the sump and the thermostat.
11. Remove the turbo return hose from the oil pump and the oil tank.
12. Disconnect the coolant overflow hose from the expansion tank.
13. Disconnect the drain hoses from the airbox and carburetor drip trays.
14. Disconnect the throttle and choke levers from the carburetors.
15. Remove the throttle brackets from the carburetors.
16. Disconnect the engine wiring harness from the engine sensors.
17. Disconnect the CHT leads from the cylinder head temperature sensors.
18. Disconnect the OT lead from the oil temperature sensor.
19. Disconnect the OP lead from the oil pressure sensor.
20. Disconnect the engine ground lead.
21. Disconnect the alternator field wire connectors.
22. Remove the ignition "P" leads from both ignition module connectors.
23. Disconnect the manifold pressure sense hose from the airbox or compensating tube.
24. Disconnect the starter cable.
25. Disconnect the servo connectors and remove the servo from the root tube.
26. Disconnect the TCU connector and remove the TCU from the root tube.
27. Route the engine hoist sling between the intake manifold runners.
28. Connect the sling to an engine hoist.
29. Add tension to the hoist and remove the rubber engine mount assemblies.
30. Remove the engine from the aircraft with caution.
31. Disconnect the oil hose (12") attached to the RH bottom of the thermostat from the oil tank (OUT).
32. Remove the oil tank.

Engine installation:

1. Install the oil tank if not previously installed (ensure it is clean).
2. Connect the oil hose (12") from the RH bottom of the thermostat to the oil tank (OUT).
3. Connect the oil tank vent hose.
4. Attach the engine sling and hoist to the engine.
5. Position the engine against the engine mount.
6. Install the rubber engine mount assembly hardware.

7. Detach the engine hoist and sling from the engine.
8. Install the TCU and attach the connector.
9. Install the servo and attach the connector.
10. Connect the starter cable (#3).
11. Connect the manifold pressure sense hose to the airbox or compensating tube.
12. Attach the ignition "P" leads to both ignition module connectors. (#229/A/top & #230/B/bottom).
13. Connect the alternator filed wire connectors.
14. Connect the engine ground lead (#2) to the gearbox.
15. Connect the OP lead to the oil pressure sensor.
16. Connect the OT lead to the oil temperature sensor (#305).
17. Connect the CHT leads to the cylinder head temperature sensors (#254/LH/#3 cyl & #255/RH/#2 cyl).
18. Connect the engine wiring harness to the (5) engine sensors.
19. Attach the throttle brackets to the carburetors.
20. Connect the throttle and choke levers to the carburetors.
21. Connect the drain hoses to the airbox and carburetor drip trays.
22. Connect the coolant overflow hose to the expansion tank.
23. Install the oil return hose from the case drain to the "IN" fitting of the oil tank.
24. Install the oil supply hose from the oil pump to the top RH fitting of the thermostat.
25. Install the turbo return hose.
26. Connect the supply and return fuel hoses to the fuel pressure regulator.
27. Connect the radiator hoses to the water pump and the expansion tank.
28. Attach the negative terminal to the aircraft battery.
29. Add engine oil and coolant.
30. Install propeller and spinner.
31. Purge the engine oil system as per Rotax instructions.
32. Perform a proper engine run-up (purge turbo, check temps and pressures, carb balance).
33. Install the engine cowl main body and bottom.

• TOOLS

Phillips screwdriver, 10mm socket & ratchet, 7/16" socket & ratchet, 7/8" wrench, hose clamp tool, 5/16" nut driver, 1/4" nut driver, standard screwdriver, flush cut diagonal pliers, 14mm socket & ratchet, 9mm wrench, 3/8 wrench, 10mm wrench, connector removal tool, 3/8" socket & ratchet, engine hoist & sling, 17mm socket and ratchet, 17mm wrench, 1/2" socket & ratchet, torque wrench (175 in. lbs) pneumatic carburetor balancer, (2) 9mm wrenches, (2) 7/16 wrenches.

• MATERIALS

Description	PAI Part No.	Std. Part No.	Qty.
TBD			

• CERTIFICATION REQUIRED

A&P Mechanic or LS Repairman Maintenance (LSMR).