



Facet Electric Fuel Pumps

Classification:	Mandatory
Applicability:	All Rotax 912 and 912S Powered Europa's
Compliance:	Before next Flight

Introduction

It has been discovered that the originally supplied Facet electric fuel pump, designated 40105 (identification number stamped on mounting bracket), will not deliver an adequate amount of fuel to the engine, when at maximum demand, in the event of mechanical fuel pump failure. A more powerful pump, designated 40106, is required as a replacement.

Action

Pump replacement

Isolate the aircraft battery. Either drain the fuel system, by disconnecting a hose in the engine compartment and using the electric pump or, to avoid draining the fuel tank, carefully clamp the fuel hose either side of the electric pump to prevent fuel escaping into the fuselage. Disconnect the electrical connections and remove the fuel hoses from the pump.

Remove the pump from the fuselage and verify that the specification number is 40105 which is stamped on one of the pump's mounting lugs. Remove the screwed in hose fittings FPA 904A and install them into the new 40106 pump. Install the new pump in the reverse order of the old pump's removal. Release the clamps or refill the fuel tank and check for leaks. Run the fuel pump and check again for leaks. Carry out a fuel flow check as described below :-

Fuel Flow Check

Test equipment, as depicted in the diagram, is required. This equipment is available for rent from Europa Aircraft, but would not be too expensive to put together. The fuel flow check of the electric pump is carried out with the engine stationery.

Disconnect the fuel line from the carburettor which is adjacent to the return line tee and install the test kit as shown in the diagram. Arrange a suitable container for the discharge from the control valve, which will need to be able to measure a quantity of approximately 2 litres.



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With the aircraft fuel selector valve on MAIN, switch on the electric pump.

-Open the stop valve and adjust the setting of the control valve such that the pressure on the gauge is 0.15 bar (2.2psi).

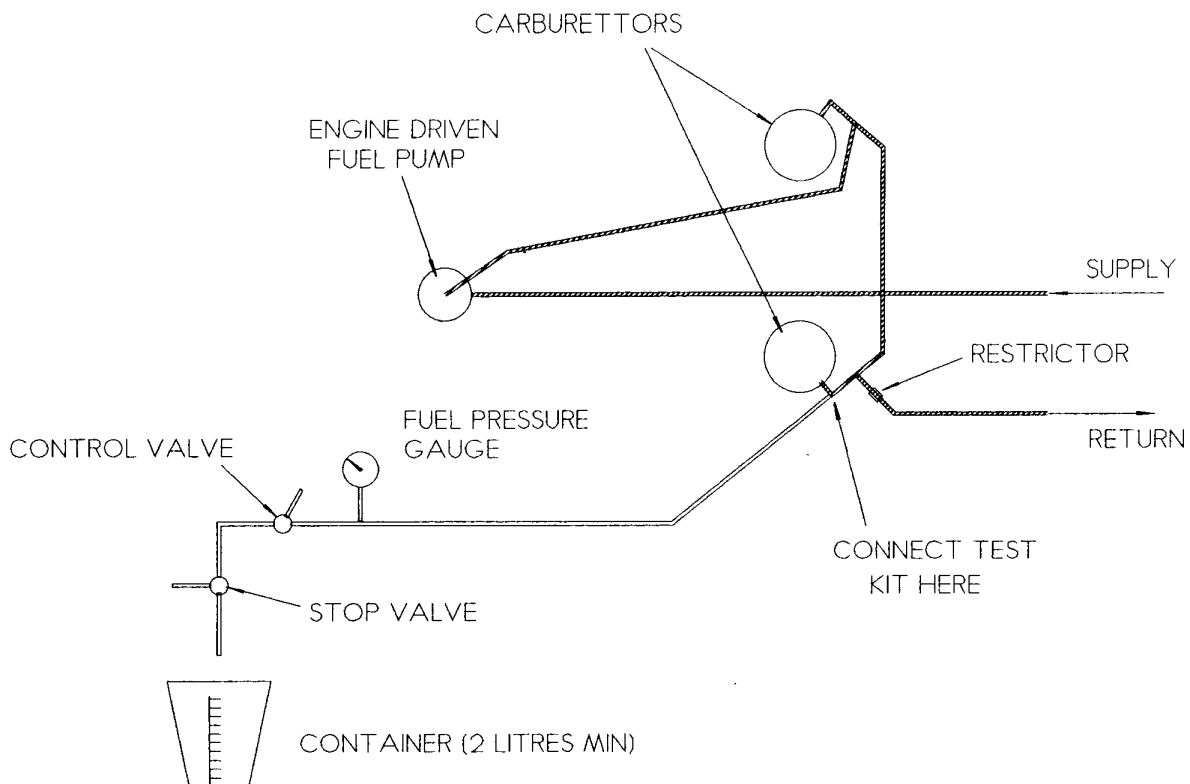
-Close the stop valve.

- Now empty the container, then open the stop the valve and measure the time taken to deliver 2 litres of fuel.

The JAR-VLA requirement is for a flow rate of 125% of full power fuel consumption.

To achieve this the pump must deliver the 2 litres in not more than 4 minutes (912) or 2 litres in not more than 3 minutes 35 seconds (912S).

Annotate your log book and record the fuel flow results.



Arrangement of test equipment for fuel flow check.