

# CHALWYN

DIESEL PROTECTION SYSTEMS

## **Automatic Fuel Shut Down Valve**

# **SELECTION, APPLICATION AND MAINTENANCE**

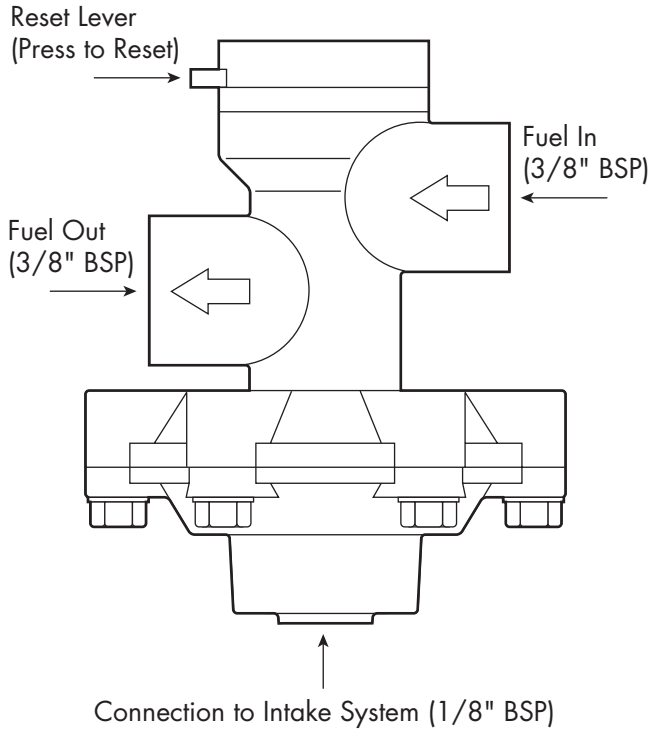
ELECTRONIC - HYDRAULIC - SYSTEMS

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**Valve Number  
FSX-100**

## DESCRIPTION

The Chalwyn FSX-100 fuel shutdown valve is designed to automatically close on engine overspeed when used in conjunction with an air intake closure valve. It incorporates a manual reset control for use after automatic closure as required by BS EN 1834:2000.



## APPLICATION

The FSX-100 is operated by a pressure signal from the engine air intake manifold. It is designed for use with Chalwyn 'D', 'Z' or 'X' air intake shutdown valves. On closure of the air intake valve, the sudden change in pressure in the engine intake will trip the fuel shut down valve which then latches in the closed condition. This will occur even in the situation where for any reason the air intake valve does not seal sufficiently well enough to fully stop the engine.

## INSTALLATION

Install the FSX-100 into the engine fuel line as close as possible to the injection pump.

*Note. Fuel system pressure at the point of installation should not exceed 14 bar.*

Connect the 1/8" bsp tapping at the base of the FSX-100 to a convenient point on the engine air intake manifold using small bore metallic tubing. This tube and its fittings must be able to withstand a 10 bar pressure test or, if flame tests on the engine indicate, a higher pressure (The FSX-100 is type tested to 20 bar).

## OPERATION

Check the FSX-100 reset latch is pressed in. Start engine and run up to speed. Trip the engine air intake shutdown valve, the FSX-100 should immediately latch in the closed (outward) position. Reset the FSX-100.

*Note: The FSX-100 only requires reset after closure due to the operation of the air intake shutdown valve. It should not close as a result of a normal engine fuel shut down.*

## MAINTENANCE

After initial running period, check the FSX-100 for any sign of fuel leakage from the connections, joints or vent.

*On a three monthly basis repeat above check. Also carry out the following:*

- Stop engine using air intake shut down valve.
- Check FSX-100 re-set lever has moved outwards to expose approximately 4 mm of the lever, but do not reset.
- Start engine. Engine should only run for a short period using any residual fuel trapped between the FSX-100 and fuel injectors.
- If above checks are not satisfactory remove valve from service and return to Chalwyn for investigation.

*At six monthly intervals:*

- Remove the 6 off M5 screws and washers retaining the diaphragm cover. Carefully remove the cover and spring but do not remove the centre nut retaining the diaphragm.
- Clean cover and orifice.
- Clean and inspect exposed area of diaphragm and retaining disc. (If diaphragm is damaged withdraw the valve from service and return to Chalwyn for investigation).
- Refit spring and cover. Carry out checks listed as "three monthly" before returning to service.

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