

Automatic Fuel Shut Down Valve

Model FSX-200

Overview

Designed to automatically close on engine overspeed when used in conjunction with an air intake closure valve, the FSX-200 also incorporates a manual shut down push button.

Selection

This valve is only suitable for applications where it is to be used in conjunction with a Chalwyn D, Z, or X air intake shut down valve. The FSX-200 is operated by the rapid change in engine air intake pressure caused by air intake valve closure. It will trip even when, for any reason, the air intake valve does not seal well enough to fully stop the engine. The FSX-200 also incorporates a manual fuel stop button.

It is possible to order a Chalwyn D, Z, or X valve with a tapped hole to allow simple installation of the adaptor within the fitting kit selected to match the valve type. Contact Chalwyn customer service for assistance.



IMPORTANT NOTE: Chalwyn Automatic Fuel Shut Down valves are designed to be fitted in addition to the standard engine fuel stop and not to replace it.



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Note: Reset only required after an engine shut down using the air intake shut down valve or after direct manual shut down of the FSX-200.

Installation

Install the Chalwyn Engine Fuel Shutdown valve as close as possible to the engine injection pump. Support the valve using the bracket/mounting holes provided.

Note: Fuel system pressure at the point of installation not to exceed 14 bar.

Additional Installation Details for the FSX-200:

- 1. IMPORTANT: If this installation is to be carried out on a flame-protected engine with an air intake flame trap fitted, ensure the connection into the intake system lies between the intake shut down valve and the intake flametrap. If the connection can be made only on the engine side of the flametrap, ensure that the fittings and pipework are in compliance with flameproof requirements.
- 2. If a Chalwyn fitting kit for the FSX-200 has been purchased, use the small bore copper tube and compression fittings to connect the fitting at the base of the FSX-200 with the fitting installed in the D, X, or Z series air intake closure valve. Ensure this connecting pipework is leak free and clamped to avoid excessive vibration.

Note: 'X' Series (butterfly valves) have two possible positions for the fuel shut down adaptor FKX-001. Select the position on the engine side of the valve. Fit blanking plug FKX-002 into the unused position. Ensure adaptor and blanking plug are securely tightened.

3. If the Chalwyn fitting kit has not been purchased, use small diameter (about 1/8" or 3mm bore) metallic pipe and fittings to connect the 1/8" bsp tapping of the FSX-200 to the engine air intake system at a suitable point between the intake shut down valve and the intake ports to the engine cylinder head. Ensure this connection is leak free and that the pipe is suitably clamped to avoid excessive vibration.



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Operation

To bleed the engine fuel system or prior to first start, ensure that the fuel shut down valve has been reset (see diagram, page 2).

FSX-200. First start. Once engine is running, trip the air intake shut down valve. The engine should immediately stop and the stop button on the FSX-200 should automatically retract to the stop position. Once the engine has stopped the FSX-200 may be reset by pulling out the stop button or, alternatively, if left for a few minutes to permit any differential fuel pressure across the fuel valve to fully decay, the FSX-200 will generally automatically reset itself. Note. If the stop button on the FSX-200 is manually operated to stop the engine there may be a delay in action whilst any residual fuel between the FSX-200 and engine is used.

Note: Chalwyn Fuel Shut Down valves do not require to be reset following a normal engine shut down using the standard engine fuel stop.

Maintenance

Weekly	Check valve for any sign of fuel leakage from connections, joints or vent. Rectify any leaks.
Every 3 Months	Stop engine using air intake shut down valve. Engine should stop within a few seconds and the stop button on the FSX-200 should retract to the stop position. Reset the stop button by pulling out. Stop engine using the stop button on the FSX-200. Engine should stop within a maximum of a minute or so (subject to the quantity of useable fuel in the pipe-work between the FSX-200 and engine fuel injection pump). Ensure FSX-200 is reset.
Every 6 Months	 Remove the 6 off M5 screws and washers retaining the diaphragm cover. Carefully remove the cover 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 cover. Carry out checks listed as "three monthly" before returning to service.
General	If the fuel shut down valve fails to operate satisfactorily during above checks, remove valve from service and return it to Chalwyn for investigation.



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Notes

Trusted Industry Experts

We are the leading provider of air intake shutoff valves and systems with manufacturing facilities in Canada, England, and the United States to serve our global markets.

Please contact our customer service department to discuss your requirements.

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