

PRODUCT SERVICE BULLETIN

Type S208, S209 and 299HS

Date of Manufacture: 1996 to May 2012

July 25, 2012

To: Customers Who Purchased Fisher® Type S208, S209 and 299HS regulators with an internal registered VSX/VSX2 slam-shut device with an Underpressure Shutoff (UPSO) setting.

Dear Customer;

Our records indicate that you have purchased a Fisher Type S208, S209 regulator shown in Figure 1 or Fisher Type 299HS regulator shown in Figure 2 with an internal registered VSX/VSX2 (VSX) slam-shut device and an underpressure shutoff (UPSO) setting. Please read the below product service bulletin and complete the required necessary actions.

Background

Internally registered VSX slam-shuts on S208, S209 and 299HS regulators may not trip at the UPSO setpoint under certain flowing conditions. This is caused by the VSX internal registration tube sensing a higher pressure than the actual downstream pressure at some flowing conditions. Internally registered VSX slam-shuts will always trip at the UPSO setpoint at complete loss of inlet pressure

To ensure the slam-shut will operate with internal registration under all flowing conditions, the UPSO setpoint and the regulator setpoint have to be within the limits shown in Table 1 for the S208/S209 or Table 2 for the 299HS. If an application requires UPSO or regulator setpoints outside these limits, an externally registered slam-shut using a control line connecting the VSX lower casing with the downstream piping is required.

***Note:** The 5 to 9 inches w.c., 8.5 to 18 inches w.c. and 14 to 30 inches w.c. spring ranges on the S208/S209 regulator and the 5 to 9 inches w.c., 7 to 20 inches w.c. and 16 to 40 inches w.c. spring ranges on the 299HS cannot be used with an internal registration VSX and UPSO setting to provide underpressure shutoff under flowing conditions. If protection against loss of inlet pressure is the only required function for the VSX then slam-shut internal registration may be used with these spring ranges.*

Required Actions

1. Locate all S208, S209 and 299HS regulators with an internally registered VSX shutoff device and an underpressure setpoint. An internally registered VSX will have a pipe plug located in the external control line port on the VSX and no screw (key 10) or gasket (key 11) installed in the registration port. See Figure 1 for the S208/S209 or Figure 2 for the 299HS.
2. For regulators in service where the VSX UPSO setting is only protecting against loss of inlet pressure, no further action is needed.
3. For regulators in service requiring UPSO protection in flowing conditions, evaluate the service conditions to determine if the UPSO setpoint and the regulator setpoint currently meet the requirements of Table 1 for the S208/S209 or Table 2 for the 299HS.
 - a. If the setpoints are within the table limitations, no further action is needed.
 - b. If the setpoints are not within the limitations but the service conditions allow them to be changed to meet the limitations, schedule and complete the required setpoint adjustments.
 - c. For applications where the setpoints can not comply, the VSX will need to be converted to an external control line version.
4. For regulators in your inventory or in the field that need to be converted to external registration, contact your Local Business Partner to exchange the regulators or order parts to make the conversion.

We apologize for this issue and any inconvenience. Your understanding and support is greatly appreciated.

S208, S209 and 299HS PRODUCT SERVICE BULLETIN

Table 1. S208/S209 VSX Slam-Shut Device Minimum UPSO Setpoints

S208/S209 REGULATOR MAIN SPRING RANGE	MAIN SPRING COLOR CODE	MINIMUM ALLOWED UNDERPRESSURE SETPOINT FOR INTERNALLY REGISTERED VSX SLAM-SHUT	MINIMUM ALLOWED UNDERPRESSURE SETPOINT FOR EXTERNALLY REGISTERED VSX SLAM-SHUT
5 to 9 Inches w.c. (12 to 22 mbar)	Black	Not Available	2 inches w.c. (5 mbar)
8.5 to 18 Inches w.c. (21 to 45 mbar)	Gray	Not Available	2 inches w.c. (5 mbar)
14 to 30 Inches w.c. (35 to 75 mbar)	Dark Green	Not Available	4 inches w.c. (10 mbar)
1 to 2 psig (0,07 to 0,14 bar)	Dark Blue	50% of regulator setpoint	4 inches w.c. (10 mbar)
1,5 to 3,25 psig (0,10 to 0,22 bar)	Orange	50% of regulator setpoint	4 inches w.c. (10 mbar)
2 to 5 psig (0,14 to 0,34 bar)	Yellow	50% of regulator setpoint	10 inches w.c. (25 mbar)
2 to 5,5 psig (0,14 to 0,38 bar)	Green Stripe	50% of regulator setpoint	10 inches w.c. (25 mbar)
4 to 10 psig (0,28 to 0,69 bar)	Unpainted	70% of regulator setpoint	1.5 psig (0,10 bar)

* If protection against loss of inlet pressure is the only required function for the VSX then an internally registered VSX may be used with the same minimum trip pressures as an externally registered VSX.

Table 2. 299HS VSX Slam-Shut Device Minimum UPSO Setpoints

299HS REGULATOR MAIN SPRING RANGE ¹	MAIN SPRING COLOR CODE	MINIMUM ALLOWED UNDERPRESSURE SETPOINT FOR INTERNALLY REGISTERED VSX SLAM-SHUT	MINIMUM ALLOWED UNDERPRESSURE SETPOINT FOR EXTERNALLY REGISTERED VSX SLAM-SHUT
5 to 9 Inches w.c. (12 to 22 mbar)	Yellow	Not Available	2 inches w.c. (5 mbar)
7 to 20 Inches w.c. (17 to 50 mbar)	Silver	Not Available	2 inches w.c. (5 mbar)
16 to 40 Inches w.c. (40 to 99 mbar)	Purple	Not Available	4 inches w.c. (10 mbar)
1 to 3.25 psig (0,069 to 0,22 bar)	Lt. Blue	70% of regulator setpoint	0.36 psig (25 mbar)
2.75 to 6 psig (0,19 to 0,41 bar)	Orange	70% of regulator setpoint	0.36 psig (25 mbar)
5 to 16 psig (0,35 to 1,2 bar)	Red	75% of regulator setpoint	1.5 psig (0,10 bar)

* Contact Local Fisher Business Partner for information regarding spring ranges not listed.

* If protection against loss of inlet pressure is the only required function for the VSX then an internally registered VSX may be used with the same minimum trip pressures as an externally registered VSX.

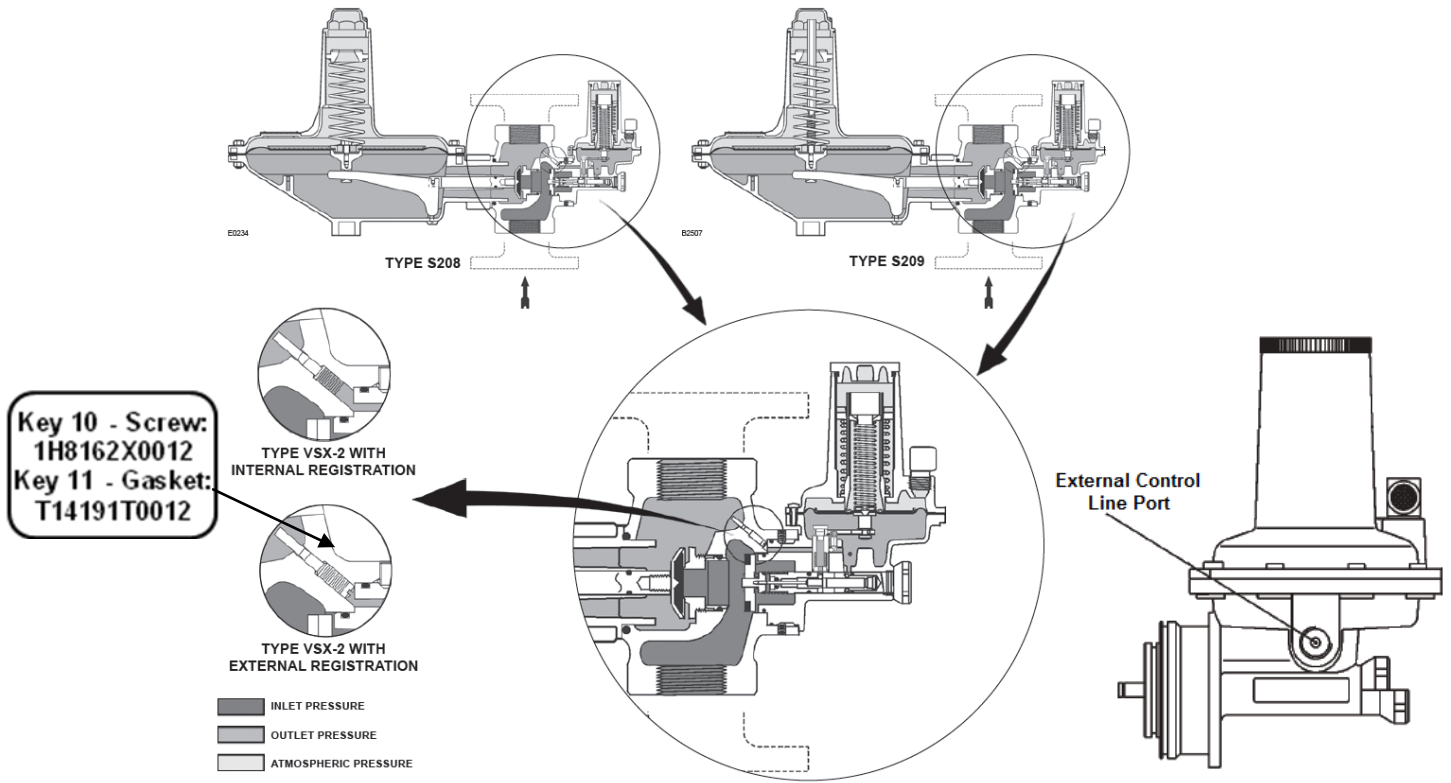


Figure 1: Fisher Type S208 and S209 Regulators

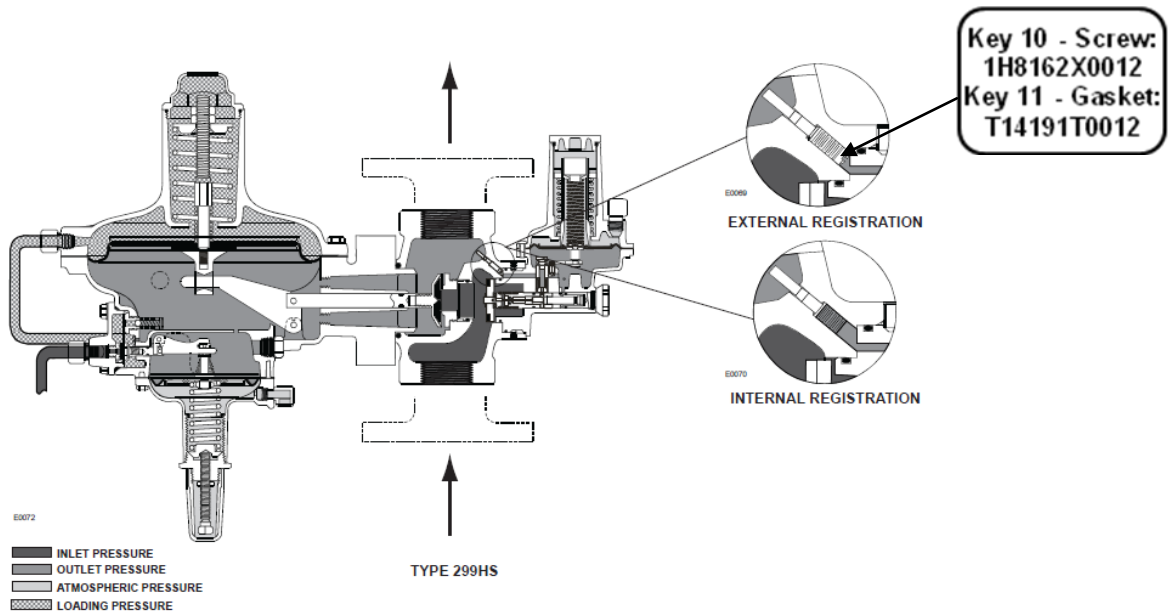


Figure 2: Fisher Type 299HS Regulator