Marshall Gas Controls

THE TYPE-1 (CGA 791) CONNECTION
HOW IT WORKS / WHAT IT DOES

TYPE-1 (CGA 791) CONNECTION

This fitting contains an excess-flow check-valve. There are two functions performed by the excess-flow check-valve that will be explained below. This check-valve is designed to close and allow only a small bypass flow (no more than ten cubic feet per hour) of gas any time there is a larger than expected flow through the system. An excess-flow condition can be due to a broken high-pressure gas supply line, and certain types of regulator failure. Also when the service valve is opened normally the excess-flow check-valve will close temporally until the system is fully pressurized.

FUNCTION #1:

Checks your system for large leaks.

This function is performed each time you turn your gas system on. When you open the cylinder valve, there will be a larger flow of gas from the cylinder valve into the TYPE-1 connector than the system is expected to see. The excess-flow check-valve sees this large flow as a major leak in the system, and shuts down. As stated above it does not shut down completely, there is a small bypass flow. Assuming there are no leaks in the system and there is nothing on, this small bypass flow will slowly charge up the down stream system pressure. Once all of the pressures all the way back to the excess-flow check valve have been satisfied, a small coil spring down stream of the excess-flow check-valve ball will push the excess-flow check-valve ball wide open. Once this happens your system is ready for use. If there is a leak in the system that is smaller than the bypass flow, then the time it takes to charge up the pressure in the down stream system will be extended. If the leak is larger than the bypass flow then the pressure in the down stream system will never charge up, and the excess-flow check-valve will stay in the shutdown position, and there will be restricted fuel supply downstream.

NOTE

On some recreational vehicle systems that have one cylinder mounted next to the regulator and the other cylinder mounted on the opposite side of the coach, or systems that have long high pressure lines, you may have to wait an additional minute or more.

FUNCTION #2:

Reduces gas flow in a failed system.

The excess-flow check-valve is sensitive to the amount of gas that is flowing through it. If the flow through the check valve is greater than it is designed for then the check-valve will close. This excess-flow can be due to a broken high-pressure gas supply line or certain types of regulator failure.

TYPE-1 (CGA 791)

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