

Overview

It is important to properly secure Pason flow sensors to limit the chance that they could come loose or be blown off under abnormal circumstances. This document describes the approved method for installing a flow sensor. Attaching the flow sensor to the mud return flow line requires bolting the flow sensor down using bolts, washers, locknuts, and a gasket.

Required Hardware

Note:

Pason field technicians: the fasteners for installing the flow sensor are available in field technician kit TRINKITAB, or you can order the parts separately: HDW333 (bolt), HDW149 (flat washer), and HDW315 (locknut).

Field technicians should instruct assigned rig personnel on proper flow sensor installation and removal procedures. If the flow sensor is to be removed in the near future, a cover plate must be provided to seal the pipe (if not already attached to the sensor).

- (Qty. 6) 3/8", 1.25" long (grade 8) coarse thread bolts.
- (Qty. 12) Flat washers, both above and below the saddle.
- (Qty. 6) Locking nuts.
- (Qty. 1) Flow sensor gasket.

Installing the Flow Sensor

Important:

The initial installation of a flow sensor should be completed—or at least reviewed—by a Pason field technician. In the event that flow system equipment is dismantled, the flow sensor should be removed to prevent damage. If you plan to remove the sensor in the near future, ask your field technician for a cover plate to seal the pipe.

Never—under any circumstances—install or operate a flow sensor on a pressurized pipe or system.



1. If there is no saddle in place to mount the flow sensor, find an appropriate location and have a saddle welded. It should be mounted above the level of the mud in the shaker tanks—and not mounted within the substructure. Be sure to install the saddle where it can be safely accessed.
2. Before you install the flow sensor on the saddle, extend a tape measure into the hole in the return flow line. Measure the distance from the lip of the saddle to the bottom of the pipe and note the measurement.



The saddle:
an iron mount
welded onto the
flow return line

- Next, with the paddle part of the sensor completely down, measure the distance between the end of the paddle and the bottom of the base of the flow sensor.



- Compare the two measurements. The second measurement should not be more than a quarter inch from the first measurement. If necessary, adjust the paddle length for use in larger or smaller diameter pipes by loosening the two bolts that secure the paddle to the sensor, then slide it to the correct length and retighten.
- Now that you are ready to bolt it down, secure the flow sensor to the saddle using a minimum of six 3/8", 1.25" long (grade 8) coarse thread bolts, with flat washers both above and below the saddle, locking nuts, and a flow sensor gasket.

Calibrating the Flow System

Now that you have installed the flow sensor, it is necessary to calibrate it. The resources listed below, located on the PVT tab on [Pason Help](#), include information on how to calibrate the flow sensor.

- Calibrating the Flow System Quick Tips*
- Pit Volume Totalizer Installation Training Course*