

# Model 300 <sup>neptune</sup> External Calibrator Installation Instructions



**Model 300 Calibrator**



**2" Type MP with Model 300 External  
Calibrator and 800 Series Register**

## WARNINGS, CAUTIONS, AND NOTES

Throughout this manual you will see **WARNINGS**, **CAUTIONS** and **NOTES**. They are here for your benefit and warrant attention. By paying careful attention to them you can prevent personal injury and possible equipment damage.

Below are examples:

**WARNINGS:** **INFORM THE READER OF POSSIBLE BODILY INJURY IF PROCEDURES ARE NOT FOLLOWED EXACTLY.**

**CAUTION:** **Alert the reader to possible equipment damage if procedures are not followed correctly.**

**NOTES:** *Inform the reader of a general rule for a procedure or of exceptions to such a rule.*

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### Installing the Model 300 External Calibrator (Refer to Figure 1)

To install the Model 300 External Calibrator on the flowmeter, perform the following:

1. Remove the two clamp screws located on the lower front cover of the register.
2. Lift the register straight up.

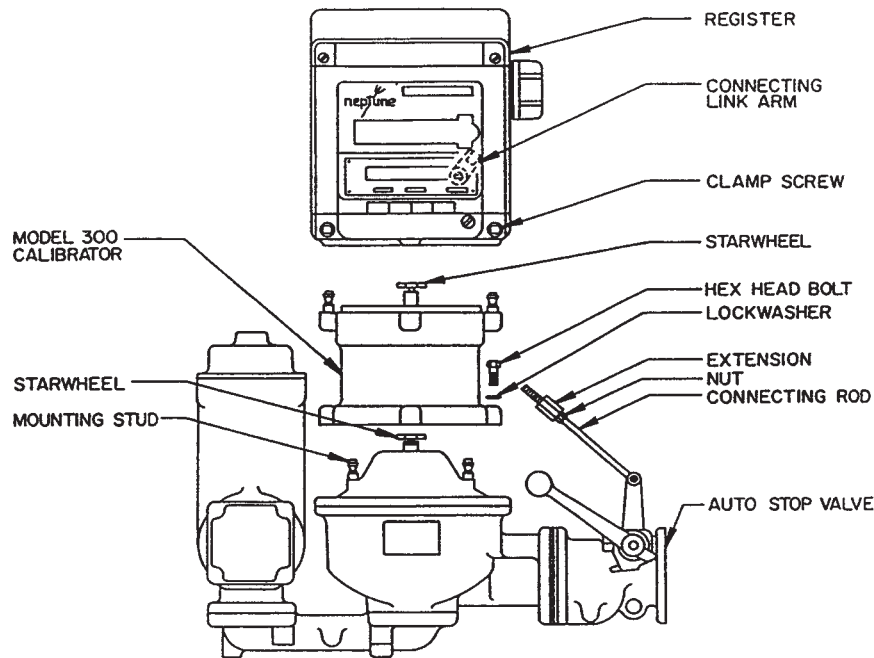


Figure 1: Diagram of Flowmeter, Model 300 Calibrator and 800 Series Register

**NOTE: On preset registers, it is necessary to disconnect the valve linkage.**

To disconnect the valve linkage, perform the following:

(Refer to Figure 1.1)

1. Remove the 2 cotter pins and the 2 washers (E) located at the end of the connecting rod (G).
2. Unscrew the outside register link locknut (P).
3. Remove the connecting rod (G).

3. Remove the two register mounting studs from the flowmeter.
4. Place the Model 300 Calibrator in the location where the register had been mounted. Make sure the driving fork on the bottom of the calibrator is engaged with the star wheel on the flowmeter.
5. Secure the calibrator to the flowmeter by using four hex head bolts and four lockwashers.

**NOTE: There is a hole in the hex head of one bolt. This is where a seal wire may be inserted.**

6. Place the register on the calibrator. Make sure the driving fork on the bottom of the register is engaged with the star wheel on the calibrator.
7. Tighten the register clamp screws located on the lower front cover of the register.

**NOTE: On preset registers, it is necessary to reconnect the valve linkage.**

To reconnect the valve linkage, perform the following: (Refer to Figure 1.1)

1. Install the nut and the extension to the connecting rod.
2. Attach the connecting rod to the connecting link arm on the register.
3. Adjust the valve linkage (refer to the appropriate operating and maintenance manual).

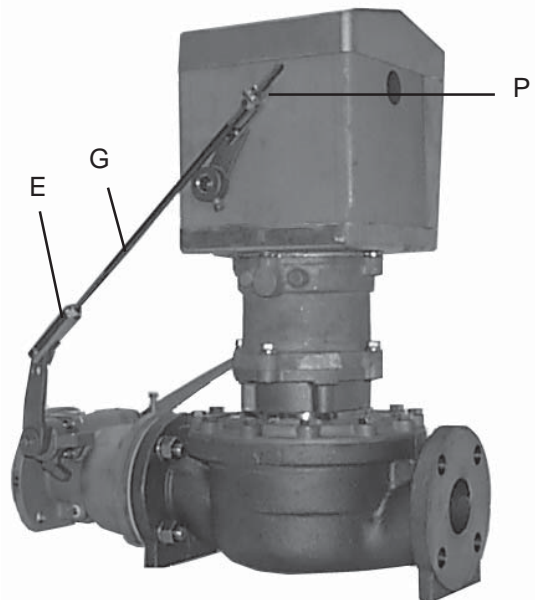


Figure 1.1: 2" MP with Auto-Stop Valve, Model 300 Calibrator and 800 Series Register

### Adjusting the Model 300 External Calibrator (Refer to Figure 2)

To adjust the Model 300 External Calibrator, perform the following:

1. Loosen the two screws located on the upper right front of the calibrator.
2. Remove the nameplate.
3. Using a flathead screwdriver, turn the adjusting screw **clockwise** to **increase** the register reading approximately 0.1% for each division or turn the adjusting screw **counterclockwise** to **decrease** the register reading approximately 0.1% for each division.

**NOTE: One complete revolution of the adjusting screw will change the register reading approximately 2% and will be shown by the percent indicator located on the right side.**

Because backlash is inherent in calibrators, the percent of change per division is approximate. After adjustments are made to the calibrator, the actual calibration of the flowmeter should be checked against a standard.

4. Place the nameplate on the cover and secure with the two screws and seal if required.

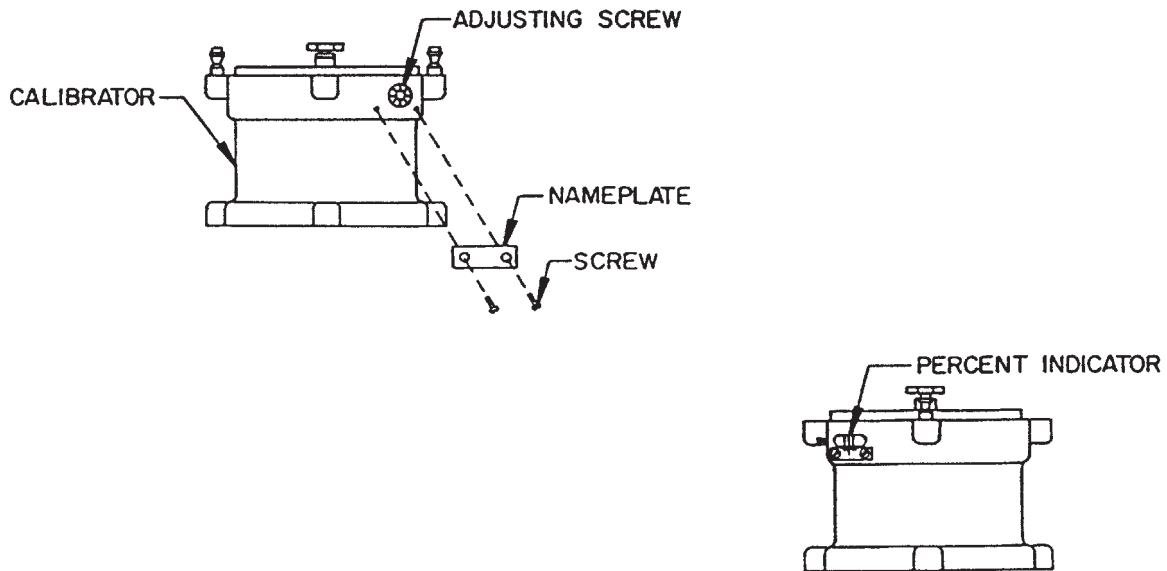


Figure 2: Adjusting the Calibrator

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