



## 4050 Automatic By-Pass Valve

**CAUTION:** Allow vehicle to cool before attempting installation. Failure to follow instructions could lead to poor product performance or personal injury.

### Installation Instructions:

1. First determine the best position for installing the by-pass valve in the oil lines between the oil cooler and the oil source. Since the by-pass valve is automatic it can be placed in a remote location.
2. If installing the by-pass valve in an existing oil cooler application, place a clean oil pan under work area. Hold the by-pass valve next to oil hoses where the by-pass valve is to be installed. Mark oil hoses where they are to be cut.
3. In order to make room for the by-pass valve in the oil lines it will be necessary to remove approximately 1-1/2" from each oil hose.
4. Place black worm-drive hose clamps (included in kit) over hose ends.
5. Lubricate the nipples of the by-pass valve with a drop or two of oil and insert the by-pass valve nipples into the oil lines.

**NOTE:** the orientation for installation is marked on the decal on the face of the by-pass valve.

6. Fasten worm-drive hose clamps securely.

**CAUTION:** over-tightening worm drive hose clamps can cut into rubber hose and cause seepage.

**NOTE:** The Jagg by-pass valve may be suspended by the oil lines in certain applications. In other applications it may be necessary secure the oil lines and/or by-pass valve to a solid mounting position with plastic zip ties.

7. Check oil according to vehicles service manual.
8. Start engine and let idle. Check oil hose connections for leakage.
9. After the engine has warmed up, feel the oil cooler. It should be warm to the touch because of hot engine oil flowing through it.

### **Additional information:**

The automatic by-pass valve works because the flowing oil will take the path of least resistance and travel across the open by-pass hole rather than go through the oil cooler (figure 1). As the oil temperature approaches 185°F the actuator begins to stroke. By 195°F the actuator is fully stroked, closing the by-pass hole and directing all the oil to the oil cooler (figure 2).

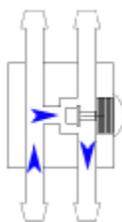


Figure 1.

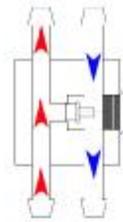


Figure 2.

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