

Please read these instructions completely before beginning installation.

KIT CONTENTS	
QTY.	DESCRIPTION
1	Jagg 4050 Automatic By-pass Valve with 3/8" push-on barbed hose fittings
4	7/8" black worm-drive hose clamps

OPERATION SUMMARY

The Jagg Automatic By-pass Valve acts as an automatic oil thermostat to ensure rapid warm-up and consistent cooling.

- **Cold Start:** When the engine and oil are cold, the built-in thermostat is open, leaving the oil by-pass passage unobstructed. Oil can circulate both through the cooler and directly through the by-pass hole. Because oil always follows the path of least resistance, most flow returns directly to the engine, allowing for quick oil and engine warm-up.
- **Warm-up Phase:** As oil temperature increases and approaches approximately 185°F, the thermostat actuator begins to extend, gradually closing the by-pass hole and directing more oil through the cooler.
- **Normal Operating Temperature:** By about 195°F, the actuator is fully extended, closing the by-pass hole fully and forcing all oil to flow through the cooler before returning to the engine.

NOTE: The temperatures listed above apply at the By-pass Valve itself. Oil temperature can vary at different points in the system, so readings taken at other locations (such as the tank, return line, or engine case) may differ. This variation is normal and does not indicate an issue with the thermostat.

The Jagg Automatic By-pass Valve is designed to be installed in the oil hoses between the oil cooler and the oil source, e.g., between oil cooler and oil tank, or between oil cooler and oil filter adapter.

INSTALLATION

The following steps will drain oil from the engine.

1. Determine the best position for installing the By-pass

Warning: Installation should only be attempted by those with mechanical skills and experience working on vehicles. Standard safety precautions consistent with the tools and dangers of automotive work should be followed to protect from injury. Specifically, wear protective equipment, take care to stabilize the vehicle on a level surface, engage the parking brake, and allow vehicle to cool before attempting installation; failure to comply can result in injury and/or damage to equipment.



Valve in the oil lines between the oil cooler and the oil source. Since the By-pass Valve is automatic, it may be installed in a remote location if desired.

2. If installing the By-pass Valve in an existing oil cooler application, place a clean oil pan under the work area. Hold the By-pass Valve next to oil hoses where it 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 inches from each oil hose.
4. Place black worm-drive hose clamps (included) over hose ends.
5. Lubricate the barbed push-on hose fittings of the By-pass Valve with a drop or two of clean engine oil and install the oil hoses over the push-on hose fittings.

NOTE: The orientation for installation is marked on the face of the By-pass Valve.

6. Fasten worm-drive hose clamps securely, taking care not to over-tighten.

CAUTION: Over-tightening worm-drive hose clamps can cut into rubber hose and cause seepage or hose failure.

NOTE: The By-pass Valve may be suspended by the oil hoses in certain applications. In other applications, it may be necessary to secure the oil hos-

es and/or By-pass Valve to a solid mounting point using or similar fasteners. The installer should determine the most suitable mounting method for the specific application.

7. Installation of the By-pass Valve is complete.
8. Refill the engine with correct amount of oil and check the oil level according to manufacturer's instruction.
9. Start the engine and inspect the installation for any leaks while idling.

SERVICE & UPGRADE ITEMS AVAILABLE	
PART NO.	DESCRIPTION
11-RU77-34	Jagg HyperFlow Lifetime Oil Filters Originally designed for race vehicles, these cleanable/reusable filters employ a stainless steel woven element to offer greater flow and greater filtration than OEM filters.
211-JSSN06 (silver) 211-JLWN06 (black)	Performance Braided Hose Kits High performance 3/8"(-06) Nitrile rubber oil hose with braided jacket, available in bright silver stainless-steel or black lightweight-fiber braided jacket. Includes 2x billet aluminum hose separators and 4x billet aluminum hose finishers with integrated wormdrive clamps.
22-HF06-BK (black) 22-HF06-SI (silver)	Jagg hose finishers with integrated wormdrive hose clamps dress up the terminal ends of oil hose connections for a clean, finished look, resembling motorsports-style AN hose ends but with simpler installation! Machined from billet aluminum and anodized either bright silver or black.
22-HS06-BK (black) 22-HS06-SI (silver)	Jagg hose separators keep your oil lines separated, provide extra structure, and look trick! Pair with hose finishers for a complete, finished look. Machined from billet aluminum and anodized either bright silver or black, these items install in a snap.
08-0069	Oil Filter Strap Wrench Simply one of the easiest oil filter wrenches to use. Takes virtually no space in the toolbox or the saddlebag.
11-0064	Oil Filter Magnet Catch harmful metals in your oil.

See these items and more at:

www.jagg.com