

# **INSTALLATION INSTRUCTIONS**

Part # 4702

Offset Oil Filter Adapter with Viscosity Regulated By-pass

Please read these instructions completely before beginning installation.

| KIT CONTENTS |  |  |
|--------------|--|--|
| QTY.         | DESCRIPTION  |  |
| 1            | Jagg 4702 Offset Oil Filter Adapter Body                               |  |
| 1            | Jagg 4702 Offset Oil Filter Adapter Faceplate                          |  |
| 3            | 10-24 x 5/16" countersunk flat-head hex-drive screw for 4702 Faceplate |  |
| 1            | Jagg 4702 steel LOCNUT with 3/8" ratchet cutout                        |  |
| 1            | Large O-ring, square profile   |  |
| 1            | 1/8" NPT pipe plug   |  |
| 2            | adapter fittings - 1/8" NPT to 3/8" push-on hose barb                  |  |
| 2            | 7/8" black wormdrive hose clamps                                       |  |
| 1            | anti-rotation device   |  |
| 2            | 10-24 x 5/16" button-head hex-drive screw for anti-rotation device     |  |

| TOOLS REQUIRED                          |  |  |
|---|--|--|
| DESCRIPTION                             |  |  |
| strap wrench or oil filter removal tool |  |  |
| 3/8" ratchet & ratchet extension        |  |  |
| 7/8" deep well socket                   |  |  |
| 1/8" hex key tool                       |  |  |

#### **Operation Summary**

The Jagg #4702 offset oil filter adapter is used to access the oil supply for the installation of a Jagg oil cooler. The #4702 directs oil through the filter first for optimal flow characteristics. After filtration, the oil may either travel to the oil cooler or by-pass the oil cooler, according to the built-in Viscosity Regulated Flow (VRF) plug function. Cold, viscous oil will by-pass the oil cooler, speeding warmup to standard operating temperature.

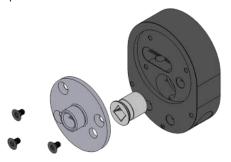
As the engine reaches operating temperature and oil reaches optimal viscosity range, the VRF plug will keep the #4702's by-pass hole closed, sending hot, filtered oil to the oil cooler, and delivering cool, clean oil to the engine.

Oil flow direction from adapter: oil feeds the oil cooler from the fitting on the left side and returns to the fitting on the right side, as viewed from front with oil filter adapter fittings at bottom.



## **Pre-installation steps**

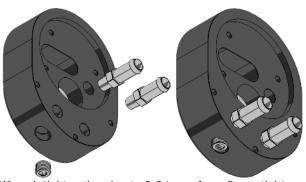
- Remove spin-on oil filter, and clean the filter mounting surface thoroughly.
- 2. Using a 7/8" deep well socket, remove the stock oil filter stem. If removing and upgrading a factory Harley-Davidson oil cooling system, uninstall the stock oil filter adapter by removing the flanged oil filter nipple that holds the adapter in place using a 7/16" hex key tool.
- 3. Disassemble the 4702 by removing the three countersunk flat-head hex-drive screws from the front face of the adapter using a 1/8" hex key tool. Then, remove the faceplate from the adapter and remove the LOCNUT from within.



## Installing NPT pipe plug & hose barb adapter fittings

- 4. Apply thread sealant to male pipe threads if not pre-applied. If PTFE tape is used, it should be wrapped 1-1/2 to 2 turns in clockwise direction when viewed from the pipe thread end. CAUTION: More than two turns of tape may cause distortion or cracking of the port.
- 5. Screw the NPT plug into the port to finger tight.

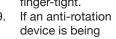
Warning: Installation should only be attempted by those with mechanical skills and experience working on vehicles. Standard safety precautions consistent with the tools and dangers of automotive work should be followed to protect from injury. Specifically, wear protective equipment, take care to stabilize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



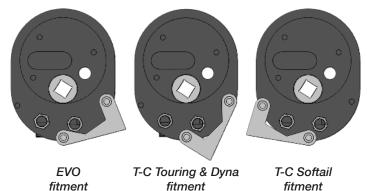
Wrench tighten the plug to 2-3 turns-from-finger-tight (T.F.F.T.).

# Installing 4702 to engine oil filter mount

- 7. Lubricate the large O-ring with a slight smear of oil and insert into O-ring groove on the rear of the 4702 body.
- 8. With the fittings-end of the adapter at the bottom and the O-ring sealing side facing toward the engine, place the 4702
  - body over the oil filter mount on the engine. Using a 3/8" ratchet extension inserted into the included LOCNUT, insert the LOCNUT through the center hole of the 4702 body and tighten to finger-tight.



used, locate part #4600AR-C Jagg anti-rotation device now. Installation of this device will ensure the 4702 offset oil filter adapter will not rotate during future oil filter removal.



- Place the anti-rotation device against the face of the front half of the adapter in the orientation shown above that matches your motorcycle model.
- Install the two #10-24 button-head hex-drive screws included with the anti-rotation device through the appropriate holes on the oil filter adapter as shown.
- 12. Rotate the entire adapter counter-clockwise until the anti-rotation device makes contact with the engine case.
- 13. Using a 3/8" ratchet extension, securely tighten the LOCNUT

so the 4702 will not rotate and the sealing O-ring is tight against the stock filter mount.

**NOTE**: On rubber-mounted engine models, allow adequate clearance to ensure that the adapter will not strike any object when the motor shakes.

# APPLICATION NOTE: Sportster models

- Some Sportster models may require rotating the mounting of the #4702 offset oil filter adapter 180 degrees, placing the hoses above the filter (see photo at right).
- In these installations, the anti-rotation device is not required.

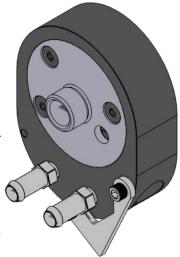


This mounting orientation may be required on some Sportster models

14. Insert the 4702 Faceplate in the 4702 body and secure it using the three included 10-24 x 5/16" countersunk flat-head hex-drive screws. If using a thread-locking compound, please choose a medium strength and use it on the screws at this step.

#### **SERVICE NOTE:**

Inspect adapter and screws for tightness at each oil filter change. To ensure proper seal, replace O-ring any time the 4702 is removed.



This completes the installation of the #4702 offset oil filter adapter. The following instructions are for installing oil lines between a Jagg oil filter adapter and a Jagg oil cooler (sold separately).

## Routing oil lines to oil cooler (sold separately)

- 15. Cut oil hose into two lengths.
- 16. Install 7/8" black hose clamps loosely onto hoses before installing hoses onto oil cooler nipples. A touch of oil on oil cooler nipples allows the hoses to push on easily.
- 17. Secure hose over the fittings with 7/8" black hose clamps so the hose cannot pull over the barb on the fitting. The flow orientation of the oil cooler is non-directional, so either hose fitting will allow proper flow as an inlet or an outlet.
- 18. Measure, cut, route, and attach the oil hoses to the oil filter adapter. Secure the hose over the fittings using the 7/8"

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black hose clamps onto the oil filter adapter inlet and outlet as detailed in the previous step.

**NOTE**: It may be necessary to rotate hose clamps to ensure hose clamps do not interfere with oil filter installation.

**CAUTION**: Take care to make gentle bends in oil hose routing from oil cooler to adapter. Sharp bends may collapse under heat load and cause restriction to oil flow.

19. Install oil filter onto the threaded stem of the oil filter adapter. Tighten per factory/service manual recommendations.

### **Final inspection**

- 20. Inspect the oil hoses to ensure there are no tight bends that may restrict oil flow and that they are not contacting any moving parts. If necessary secure the new hoses to the frame with plastic zip-ties.
- Refill the engine with the correct amount and type of oil.
   Check the oil level per factory/service manual recommendations.
- Start the engine and let it idle. Check all oil hose connections for any leakage. Tighten any hose clamps that may be leaking.

**NOTE**: Over-tightened hose clamps may cut into oil lines and cause oil leaks.

23. After installation completion and engine warm-up, shut the engine down and recheck the oil level. Correct the oil level if necessary, but do not over-fill.

| 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.   |  |  |
| SK4400                                    | Gasket service kit<br>for Jagg # 4702 offset oil filter adapter<br>Includes: Large O-rings (x2)   |  |  |
| 211-JSSN06 (silver)<br>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 jack- et. Includes 2x billet aluminum hose separators and 4x billet aluminum hose finishers with integrated wormdrive clamps. |  |  |
| 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

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