



1994 Dodge Caravan
 AMSOIL BMK-11 Remote By-Pass Filter System
 Installation submitted by T-1 Certified AMSOIL Dealer Gary Mintz

Components:

- BMK11 AMSOIL By-Pass Filter Kit
- EABP90 AMSOIL By-Pass Oil Filter
- EAO15 AMSOIL Full-Flow Oil Filter
- BP89 Oil Return Swivel Fitting
- Brass Pipe fitting, a Nipple 1.38 inches long and a hex plug (must be purchased)
- Stant Part # 10066 {3" Oil Filler Cap (1 3/16" x 1" Cam Twist)} (must be purchased)

Getting Started:

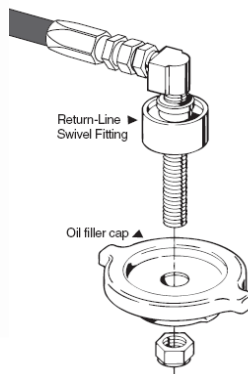
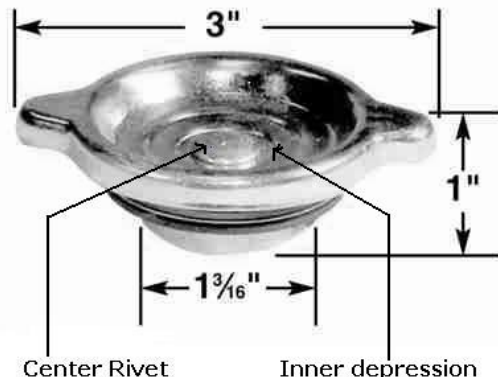
Check all parts against the parts list and inspect for damage. For the install described herein, you'll need the following:

Recommended tool list		
Adjustable wrench	Torque Wrench	Drill
7/16 wrench	Side Cutter	5/16 & 3/8 drill bit
1/2 wrench	Utility knife	Center punch
9/16 wrench	Adjustable filter wrench	Hammer
5/8 wrench	Drain oil pan	Vice
11/16 wrench	Dremel Tool w/grinding wheel	Hacksaw

By-Pass oil filter return-line fitting:

A swivel fitting can be installed directly on your oil filler cap for the oil return-line from the AMSOIL By-Pass Filter. The Return-Line Fitting is made of a sturdy brass-alloy and is constructed so that the top of the fixture can swivel. This makes it easy to take off your oil cap.

The Stant Oil Filler cap was modified to accept the BP89 Oil Return Swivel. This entailed removal of the center rivet with a dermal tool. The rivet is like a 1/8 square carriage bolt so use care while grinding than you can gently tap it out. Now tap the inner depression out flat so the sealing washer can be seated properly. Drill the square hole's out to 3/8 in the cap and the inner cam twist be very careful when doing the inner cam twist you don't want your drill to catch and damage it. Be sure to remove any burrs created when drilled. The BP89 Swivel will need to be shortened by 1/2 min and no more then 5/8 max so it will not be to far inside the valve cover. You can cut it off before or after it is up to you. If done before it is attached to the cap, thread clean up is easy. If after it requires a little more work to clean them up.



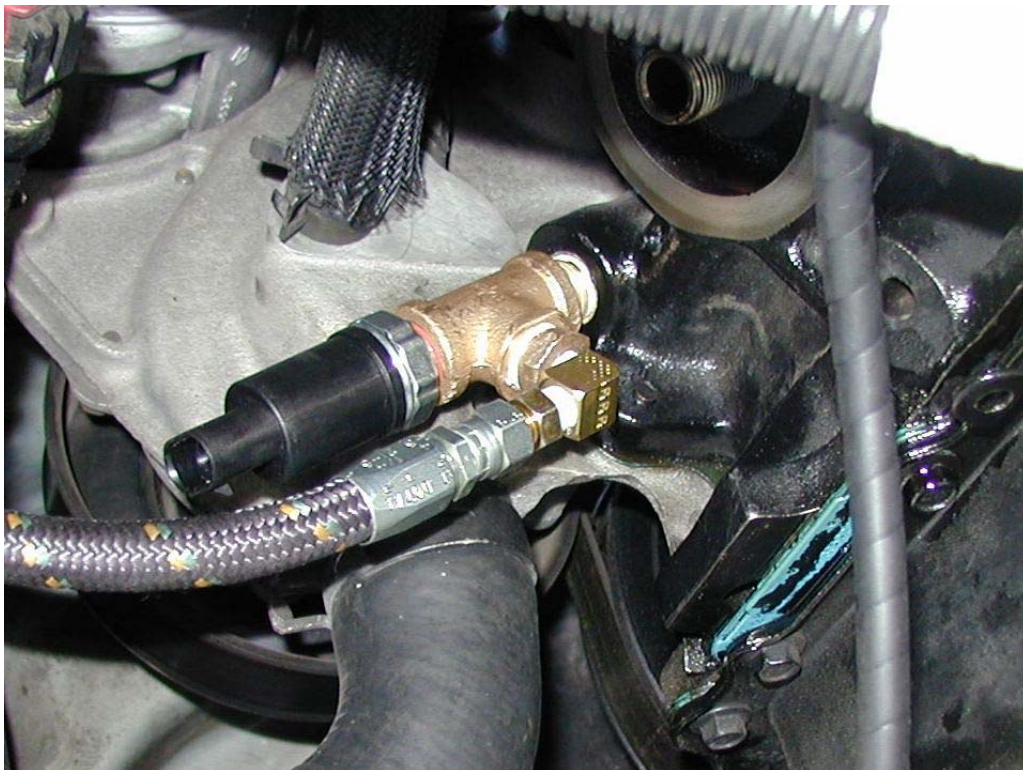
The standard BMK-11 parts wouldn't work do to the thread size of the oil pressure sending unit [ACDELCO Part # C1811 {#19022009} SWITCH, ENG OIL PRESS IND]



I had to purchase a Brass Pipe fitting and Nipple 1.38 inches long. Because of clearance issues it was required to remove about 1/2 of the shoulder length of the middle T (see pic)



Once installed on the engine I backed it off a 1/4 turn to install the size adapter and the 90 degree elbow, than tightened it again so the EaO15 filter would clear.





The best place to mount the BMK-11 by-pass unit is on the driver's side under the battery box.

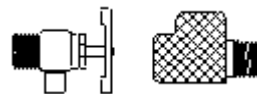


Because of the routing of the hose's, on the IN port you need to use the

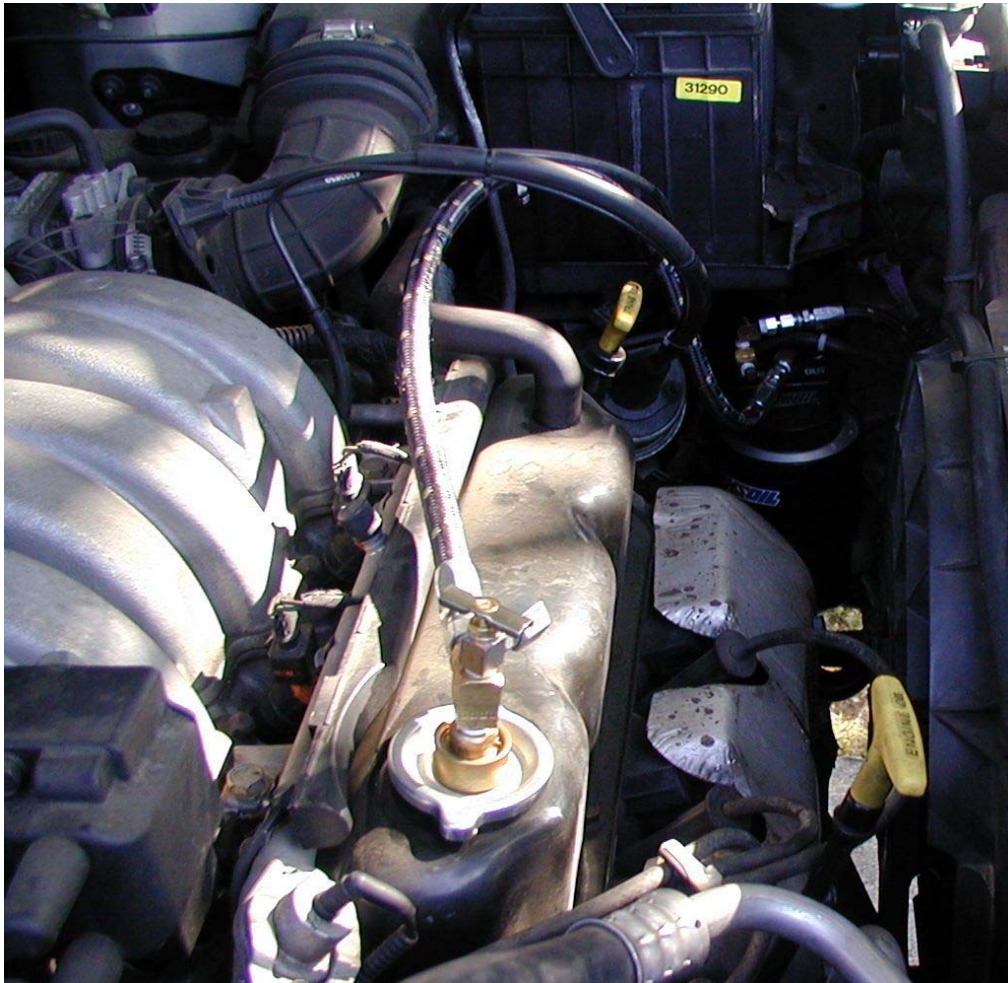
BP33 Street Tee and Hex plug

as well as the BP52 90° elbow, to clear the OUT port.

Note: In the picture that I had also opted to install a BP67



to allow for pulling oil samples if desired.



Start Up Procedure:

1. Check that all fitting connections and hoses are securely attached and properly tightened.
2. Check that the oil sampling Petcock valve is closed. [If used]
3. The additional oil necessary after adding this kit is approximately 1 - 2 quarts, including the oil to fill this kit and the oil to replace that lost when removing the existing oil filter. Since these filters are straight up & down you want to pre-fill with oil before starting the engine as noted above. Allowing the engine to run approximately 1/2 to 1 quart low just long enough to fill all the lines throughout the system will not hurt anything. Fill to the full mark on the dipstick.
4. Start the engine and watch the oil pressure [if you have a gauge]. Note that pressure may initially take a moment or two to rise.
5. Check for leaks at fittings, hoses and mounting block assembly. If leaks are observed, STOP THE ENGINE, repair leaks and continue.
Note: DO NOT attempt to repair any leaks while the engine is running.
6. After the engine warms up, shut off and re-check the engine oil level. Fill as necessary.
7. Record the vehicle mileage and date of installation.

Periodic Maintenance:

Periodic visual inspection of the fittings and hoses is recommended. Check for leaks, hose deterioration and cuts. Repair and/or replace as necessary. This was actually an easy install for this application because everything is relatively close together and all of the hoses are in view. When you open the hood to check the oil or otherwise, just look at things over...

Disclaimer: *These installation examples have been submitted by sources independent of AMSOIL INC. and may not comply with AMSOIL INC. installation instructions or application recommendations.*