



# Dual Remote Filtration System Mounting Kit (6.7L FORD DIESELS) Installation and Servicing Instructions

## IMPORTANT NOTICE

- Read **ALL** instructions completely.
- Considerable mechanical aptitude is required to complete installation. Improper installation can result in serious system and/or equipment damage. If you are uncomfortable with the instructions or have questions, **do not attempt installation**. Consult a mechanic or contact AMSOIL Technical Services at (715) 399-TECH for assistance.
- **WARNING:** Extreme care should be taken to avoid bodily harm during installation. Before beginning, ensure engine is cool to avoid burns. Never work in the engine compartment with the engine running.

## A. Before You Begin

1. Confirm all items on the Parts List are included in the Kit.
2. Ensure you have the required tools for the job.

### Recommended tool list

|                   |                          |                |
|-------------------|--------------------------|----------------|
| Adjustable wrench | 5/16" Allen wrench       | Drill          |
| 7/16" wrench (2)  | Torque wrench            | 1/4" drill bit |
| 13/16" wrench     | Side cutter              | Center punch   |
| 7/8" wrench (2)   | Adjustable filter wrench | Hammer         |
| 15/16" wrench     | Drain oil pan            | Vice           |
| 1" wrench         | 1 1/16" wrench           |                |

## B. Filter Selection

AMSOIL Full-Flow Oil Filters and AMSOIL By-Pass Filters of different sizes may be used with this mount. Select a full-flow filter that is equivalent or larger than the one originally installed on your vehicle. The larger the filter used, the greater the filtration capacity. The by-pass filter should be the largest for which space is available. Use the dimension information below as well as the data in diagram A to assist in selecting filters.

### AMSOIL filters

| Full-flow | DIA.  | Height | By-Pass  | DIA.  | Height                      |
|-----------|-------|--------|----------|-------|-----------------------------|
| EaO26     | 3.66" | 7.04"  | EaBP-110 | 4.29" | 10.44"                      |
| EaO15*    | 3.66" | 5.19"  | EaBP-100 | 4.29" | 7.25"                       |
| EaO42     | 3.66" | 3.92"  | EaBP-90* | 4.29" | 5.78"                       |
| EaO34     | 3.02" | 4.73"  |          |       |                             |
| Ea15K51   | 2.92" | 3.38"  |          |       | *Most commonly used filters |

1. Survey the engine compartment for possible mounting locations. The mount should be located in the same area as the existing full-flow filter. Make sure the mounting structure is adequate to carry the weight of the filtration system.
2. When the location has been determined, use the mounting template provided to locate and mark mounting holes. This can be easily done with a center punch and hammer.
3. With a 1/4" drill bit, drill the previously marked mounting holes and attach the top mount bracket (BP194). Use the 4 - 1" long, 1/4" bolts, nuts, small washer and fender washers provided. Note assembly diagram D for details. Using two 7/16" wrenches or socket, tighten to 8 foot pounds.
4. Apply thread sealant onto the two o-ring adapter fittings (BP289) as noted in diagram E. Install fittings in mount end adjacent to the arrows. Using a 1" wrench tighten to 30 foot pounds. If desired, optional 90° angle fitting (BK21) or 45° fitting (BK22) may be installed at this time. See diagram D. **Do not** use thread sealant on either end of the angle fittings, tighten to 525-575 inch pounds or from finger tight rotate an additional 60° or 1/6 of a turn. Keep in mind the direction you wish to have the hoses intersect the mount.
5. Apply thread sealant as noted in diagram E to the Allen head o-ring plug (BP191). Using a 5/16" Allen head wrench, install plug in remaining mount port and tighten to 30 foot pounds. **Note:** If optional oil sampling valve (BK13) is used, refer to diagram D and install in place of the Allen head o-ring plug. Apply thread sealant to the external threads on all components in the BK13 kit.

6. Attach the filter mount (BK309) to the mounting brackets using 4 - 1 1/2" long, 1/4" bolts, nuts and washers provided. **Warning:** The bolts **must** be installed so that the nuts are on the side opposite of the filter nipples. Failure to do this will result in the bolts hitting the oil filters. Using two 7/16" wrenches or socket, tighten to 8 foot pounds.

## C. Oil Supply

1. Using an oil drain pan to capture lost oil, remove the existing engine full-flow filter. Clean the gasket seating area on the engine with a lint-free cloth.
2. Temporarily assemble the filter adapter kit by sliding the o-ring (BP346) onto the adapter nut (BP408), and then slide the adapter nut into the large center hole of the spin-on adapter (BP402). This can be made easier by applying a small amount of oil on the o-ring.
3. Thread the filter adapter kit onto the engine and determine the direction at which you prefer the hoses intersect the adapter. Remove the assembly from the engine.
4. Apply thread sealant, as noted in diagram E to the o-ring fitting adapter (BP289) and the 90° fitting (BP331). The sealant should be placed on the o-ring side thread only.
5. If you wish to have the hoses intersect the spin-on adapter perpendicular to its top, install the o-ring fitting (BP289) in the adapter nut and the 90° fitting (BP331) on the side of the spin-on adapter, labeled A. Reverse the fitting position if you wish to have the hoses intersect the spin-on adapter parallel to the top of the spin-on adapter.
6. Using a 1" wrench, tighten o-ring fitting (BP289) to 30 foot-pounds. Thread the 90° fitting (BP331) three full turns and position in desired location. Tighten locking nut on fitting 30 foot-pounds.
7. Apply a thin coating of oil on the spin-on adapter gasket and the adapter nut o-ring.
8. Reassemble adapter and make sure fittings are correctly positioned and tighten adapter nut to 35 - 40 foot pounds.

## D. Oil Feed and Return Lines

- **NOTE:** The hose and hose fittings supplied with this kit are matched to provide maximum performance and life expectancy. Interchanging with other types or brands is not recommended and should be avoided. Should additional hose be required, it may be obtained from AMSOIL by ordering part number BP350 by the foot.
- **DO NOT** install oil hoses near hot exhaust parts or near sharp metal components that could cause abrasive wear.
- **DO NOT** create sharp bends in oil hoses when installing.

1. **Oil supply hose.** Measure the amount of hose (BP350) needed to run from the side port on the spin-on adapter (labeled A) to the port with arrow pointing **IN** on the filter mount, also labeled A. Additional length will be required to accommodate engine movement during operation. Make sure the hose does not contact any hot or moving surfaces or sharp edges. Ensure a minimum bend radius of 2 1/4" is maintained at all corners. Also, bends in hose should not begin at hose fittings. See diagrams C and H for additional detail. **Note:** Ensure hose has significant additional length to accommodate movement of engine. **Note** the need for optional 90° fitting.
2. Using a fine tooth hacksaw or utility knife, squarely cut the hose to the proper length.
3. Install hose fittings (BP360) on both ends of the cut hose. Follow the instructions noted in diagram G. Tools required are one 1" wrench and one 1 1/16" wrench or vise. **Note:** Do not use any form of thread sealant anywhere on the hose fittings (BP360).
4. Route the hose assembly as noted in D.1. and connect the hose fittings. Optional 90° fitting (BK21) or 45° fittings (BK22) may be installed at this time between the hose fitting and mount or spin-on adapter.
5. Using two 1" wrenches, tighten the hose fitting swivel nuts to 525 - 575 inch pounds or from finger tight, rotate an additional 60° or 1/6 of a turn. **Note:** Do not use any form of thread sealant anywhere on the hose fittings.
6. **Oil return hose.** Repeat steps D.1. through D.5. Connect hose at the center port on the spin-on adapter, labeled B and the port with the arrow pointing **Out**, on the filter mount, labeled B.

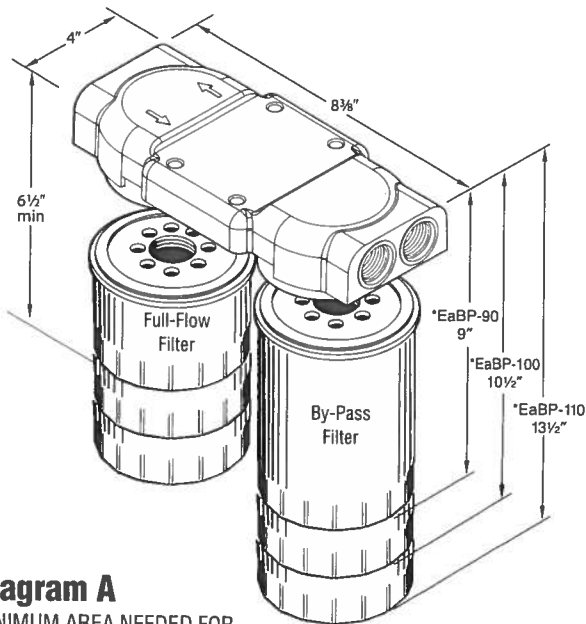
- Use plastic ties (BP46) to secure hose in position and away from potential damage. Trim ties with side cutter. **Note:** Over tightening the plastic ties may cause the hose to collapse and restrict oil flow.
- Fill the selected Full-flow and By-pass filters with the same motor oil being used in the vehicle. Lubricate the filter gaskets with oil and spin filters onto mount. Tighten per instructions on the filter can.

### E. Startup Procedures

- Check that all fittings and hoses are securely attached, and that the hoses are routed properly.
- Check engine oil level. Fill to full mark if necessary.
- With the equipment secured start the engine and immediately check oil pressure. **Note:** Pressure may initially take a moment or two to rise. Installing the Dual Remote By-Pass System may result in a slight vibration sound in some applications. No harm to the engine will occur. Please contact AMSOIL Technical Services for more information.  
**Caution:** Carefully check for leaks at fittings, hoses and mount. If leaks are observed, **STOP ENGINE IMMEDIATELY**, repair leaks and continue.
- After engine has warmed, shut off and re-check engine oil level. Top off as necessary.
- Record equipment/operating hours and date of installation.

### F. Periodic Maintenance

- During the warranty period, annually inspect fittings and hoses. Check for leaks, hose deterioration and cuts. Repair and/or replace as necessary.
- Refer to AMSOIL Oil Filter Change Recommendations chart for servicing intervals.
- To change the filter elements:
  - Ensure engine is off and use caution as the engine, oil and filter may be hot and could result in injury.
  - Using a filter wrench, remove the filter elements. Dispose of properly.
  - Clean the filter gasket contact areas on the mount with a clean, lint-free rag.
  - Lubricate the new filter gaskets with clean oil or grease.
  - Fill filters as full as possible with engine oil.
  - Screw on new filters, tighten per instructions on the filter can.
  - Start engine and check for leaks.
  - Check engine oil level, fill as needed.
- Record equipment/operating hours for future reference.

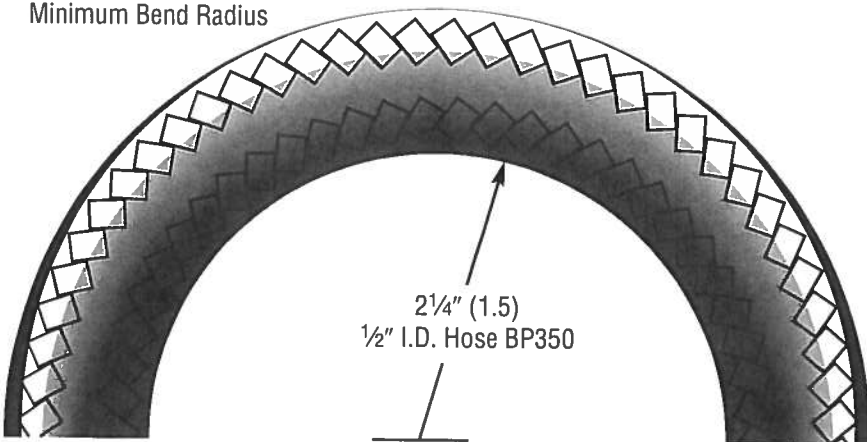


**Diagram A**

MINIMUM AREA NEEDED FOR  
DUAL MOUNT AND SPIN-ON OIL FILTER ELEMENTS  
\* Mount and element heights plus 1-inch removal clearance

**Diagram C**

Minimum Bend Radius



### Parts List

#### Dual Mount By-pass Filter System (BMK28) for 6.7L Ford Diesels

| Item | Description                          | Qty. | Part No. |
|------|--------------------------------------|------|----------|
| 1.   | Filter Mount Assembly                | 1    | BK309    |
| 2.   | Allen Head Plug                      | 2    | BP191    |
| 3.   | 1/4" 20 x 1" Hex Head Bolt           | 4    | BP23     |
| 4.   | 1/4" I.D. Washer                     | 6    | BP21     |
| 5.   | 1/4" Self Locking Nuts               | 8    | BP22     |
| 6.   | 90 degree fitting 7/8"-14 x 5/8" JIC | 1    | BP331    |
| 7.   | "O" ring fitting 7/8"-14 x 5/8" JIC  | 3    | BP289    |
| 8.   | Hose Fitting                         | 4    | BP360    |
| 9.   | 1/2" I.D. hose                       | 12'  | BP350    |
| 10.  | Spin-On Adapter                      | 1    | BP402    |
| 11.  | Adapter Retaining Nut 1"-16          | 1    | BP408    |
| 12.  | Gasket 2 1/2" ID                     | 1    | BP196    |
| 13.  | Mounting Bracket Top                 | 1    | BP194    |
| 14.  | Mounting Bracket Bottom              | 1    | BP195    |
| 15.  | 1/4"-20 x 1 1/2" Hex Head Bolt       | 4    | BP185    |
| 16.  | 1/4" ID Fender Washer                | 4    | BP18     |
| 17.  | Adapter Nut O-ring                   | 1    | BP346    |
|      | Full-Flow Filter                     | 1    | EaO26    |
|      | By-Pass Filter                       | 1    | EaBP100  |
|      | Plastic Tie                          | 2    | BP46     |
|      | Thread Sealant                       | 1    | BP198    |
|      | Instruction Sheet                    | 1    | BP28     |

### Optional Parts

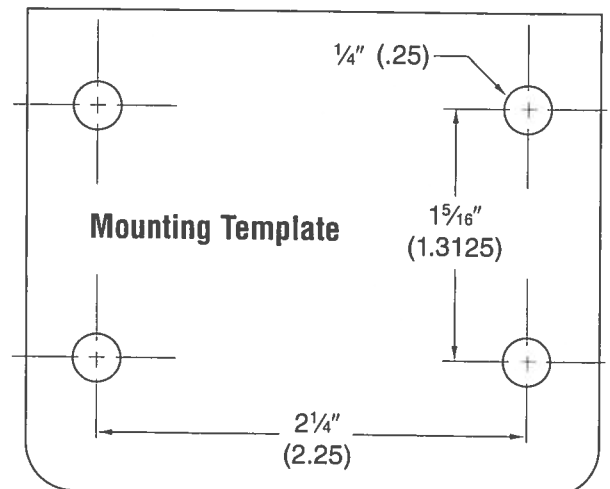
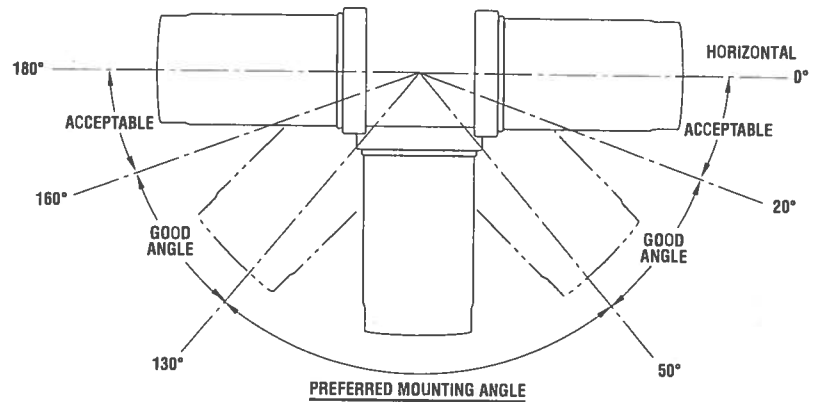
(Not Included)\*

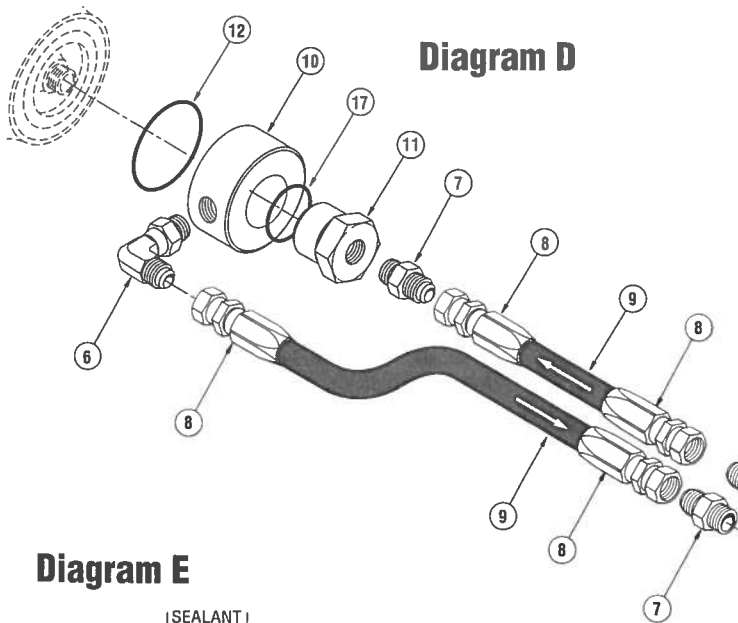
| Description                          | Qty. | Part No. |
|--------------------------------------|------|----------|
| Oil Sampling Kit                     | 1    | BK13     |
| Deluxe oil sampling valve 1/4" NPT   | 1    | G1570    |
| (Must also order fitting BP209)      |      |          |
| 90 degree fitting 7/8"-14 x 5/8" JIC | 1    | BK21     |
| 45 degree fitting 7/8"-14 x 5/8" JIC | 1    | BK22     |

\*Not required, but available to ease installation. Contact your AMSOIL Dealer to order.

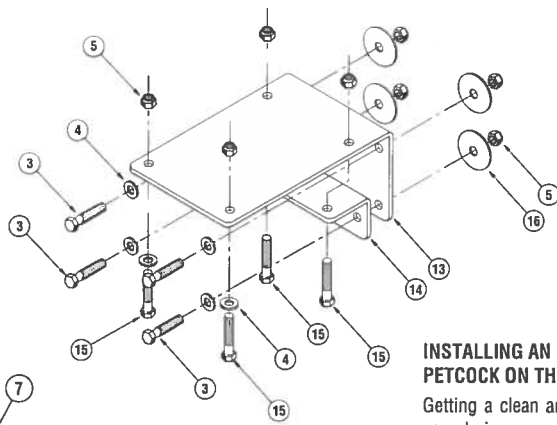
### Mounting Angle Diagram B

(Recommendations are the same right to left and front to back)  
Mounting angle above horizontal is not recommended

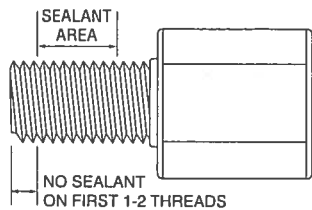




**Diagram D**



**Diagram E**



**Note:** If Teflon tape is used, wrap no more than 1½ to 2 turns in a clockwise direction when viewed from the thread end.

AMSOIL  
Full-Flow Filter  
EaO-26

AMSOIL  
By-Pass Filter  
EaBP100

**INSTALLING AN OIL SAMPLING PETCOCK ON THE SPIN-ON BY-PASS:**  
Getting a clean and uncontaminated oil sample is easy and simple when an oil sampling pet-cock is installed into the Spin-On By-Pass Oil Filter system. Order Kit BK13.

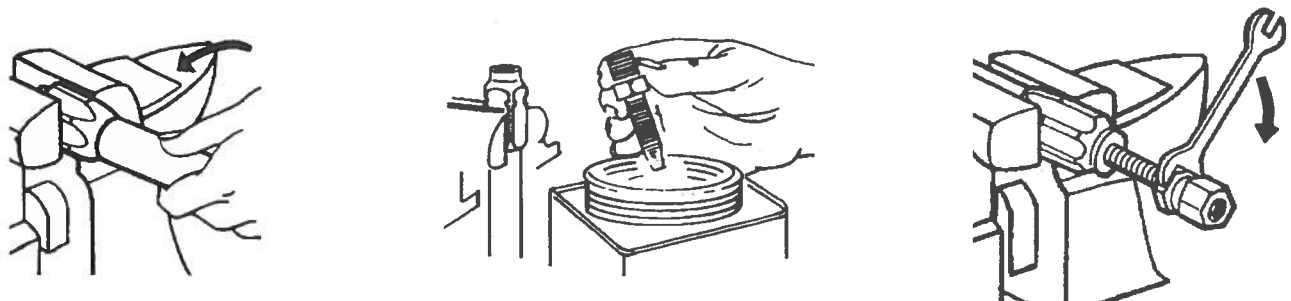
**Oil Analysis:**  
For oil analysis, order KIT06 Oil Analysis Sampling Kits.

optional  
BK13 Sampling  
Kit

**Diagram F Thread adapters (sold separately)**

| If your equipment uses this AMSOIL Filter | This is the thread used on that equipment | This is the adapter kit you should use | If your equipment uses this AMSOIL Filter | This is the thread used on that equipment | This is the adapter kit you should use |
|---|---|--|---|---|--|
| Ea15K13                                   | 20mm x 1.5mm                              | BK298                                  | Ea15K50                                   | 22mm x 1.5mm                              | BK299                                  |
| EaO15                                     | ¾" - 16                                   | BK295                                  | EaO52                                     | 1 13/16" - 16                             | BK302                                  |
| Ea15K20                                   | 20mm x 1.5mm                              | BK298                                  | EaO64                                     | 1 13/16" - 16                             | BK296                                  |
| EaO22                                     | 1 13/16" - 16                             | BK296                                  | EaO80                                     | 1" - 16                                   | BK300                                  |
| EaO23                                     | 18mm x 1.5mm                              | BK297                                  | EaO99                                     | 1 1/2" - 16                               | BK301                                  |
| EaO24                                     | 1 13/16" - 16                             | BK296                                  |   |   |  |
| EaO25                                     | 1 13/16" - 16                             | BK296                                  | <b>Adapters</b>                           |   |  |
| EaO26                                     | ¾" - 16                                   | BK295                                  | ¾" - 16                                   |   | BK295                                  |
| Ea15K29                                   | 18mm x 1.5mm                              | BK297                                  | 1 13/16" - 16                             |   | BK296                                  |
| EaO34                                     | ¾" - 16                                   | BK295                                  | 18mm x 1.5mm                              |   | BK297                                  |
| EaO42                                     | ¾" - 16                                   | BK295                                  | 20mm x 1.5mm                              |   | BK298                                  |
|   |   |  | 22mm x 1.5mm                              |   | BK299                                  |
|   |   |  | 1" - 16 (Power Stroke 6.7 L)              |   | BK300                                  |
|   |   |  | 1 1/2" - 16 (Power Stroke 7.3 L)          |   | BK301                                  |
|   |   |  | 1 13/16" - 16 (Duramax 6.6 L)             |   | BK302                                  |

**Diagram G**



1. Place socket in vice and screw in hose counter-clockwise until hose bottoms. Back hose out ½ turn.

2. Oil inside of hose and the tapered nipple thread areas liberally with oil. Do not oil hose cover. Apply anti-seize to all thread areas.

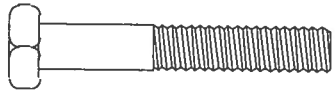
3. Screw nipple assembly into socket using wrench on nipple hex until nipple hex shoulders against socket.

# BMK28 PARTS IDENTIFICATION SHEET

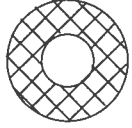
(4) **BP46**  
PLASTIC TIE



(4) **BP185**  
1/4" X 1 1/2"  
BOLT



(6) **BP21**  
1/4" I.D. WASHER



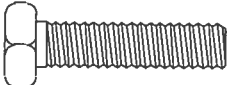
(4) **BP186**  
1/4" FENDER  
WASHER



(8) **BP22**  
1/4" NUT



(4) **BP23**  
1/4" X 1" BOLT



(4) **BP360**  
HOSE FITTING



(1) **BP402**  
FILTER ADAPTER  
NOT TO SCALE



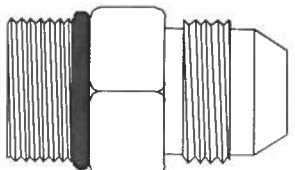
(8) **BP350**  
1/2" I.D. HOSE  
AMSOIL BP350



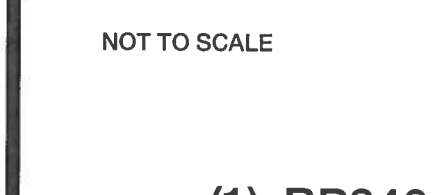
(2) **BP191**  
ALLEN HEAD  
PLUG



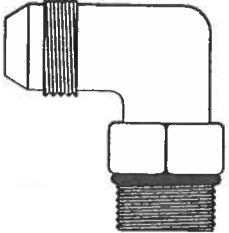
(3) **BP289**  
"O" RING  
FITTING  
ADAPTER



(1) **BP194**  
MOUNTING  
BRACKET  
TOP  
NOT TO SCALE



(1) **BP331**  
90° Fitting



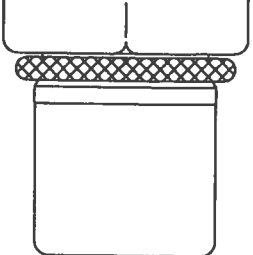
(1) **BP195**  
MOUNTING  
BRACKET  
BOTTOM  
NOT TO SCALE




(1) **BP346**  
Adapter Nut "O" Ring



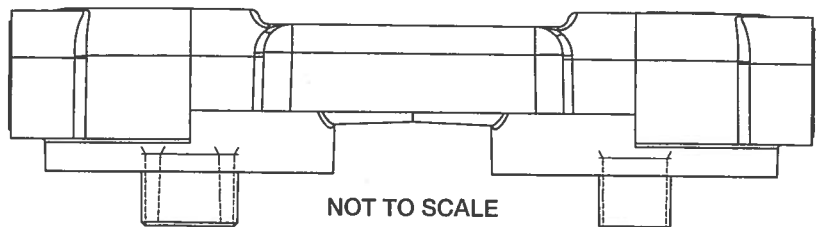
(1) **BP408** 1" - 16 Thread  
Adapter retaining nut



(1) **BP196**  
SMALL "O" RING  
2 1/2" I.D.



(1) **BK309**  
FILTER MOUNT  
ASSEMBLY



# AMSOIL Limited Warranty – By-Pass Filter Systems

(for the 50 United States, the District of Columbia and Canada)

## WHAT THIS WARRANTY COVERS:

AMSOIL INC. of Superior, Wisconsin (“AMSOIL” or “AMSOIL INC.”) hereby warrants all parts and components (except filters) of each AMSOIL By-Pass Filter System (“By-Pass System”) to be free from defect in material and workmanship when properly installed and maintained for a period of five (5) years from the date of original purchase from AMSOIL INC. (i.e., by AMSOIL Dealer for re-sale or directly by customer).

## LIMITATIONS OF LIABILITY AND GENERAL DISCLAIMER:

- This warranty applies only to By-Pass Systems (exclusive of filters) packaged by AMSOIL or an authorized AMSOIL packager and sold by AMSOIL or an authorized AMSOIL Dealer.
- This warranty is not transferrable (i.e., it applies only to the By-Pass System in the vehicle in which it was originally installed).
- Periodic maintenance is required with not less than annual inspections of the fittings and hoses, to check for loose connections, leaks, hose deterioration and cuts. Refer to AMSOIL’s written guidelines for maintenance requirements and filter change guidelines.
- The liability of AMSOIL shall be limited to:
  1. Replacement of the By-Pass System or defective component of the By-Pass System or issuance of a credit to the customer’s account for the price paid by the customer for the By-Pass System.
  2. Reimbursement to the customer for the reasonable cost, including labor and materials, to repair the engine or equipment components to the extent the damage was solely attributable to a defect in the By-Pass System.

**AMSOIL’S LIABILITY AND THE BUYER’S EXCLUSIVE AND SOLE REMEDY FOR ANY DAMAGES ARISING OUT OF THE MANUFACTURE, SALE, DELIVERY, INSTALLATION, TECHNICAL DIRECTIONS OR RECOMMENDATIONS OF ANY AMSOIL BY-PASS FILTER SYSTEM, WHETHER IN CONTRACT, TORT, WARRANTY OR OTHERWISE, SHALL NOT EXCEED THE VALUE OF THE COMPONENT DAMAGED AS A DIRECT RESULT OF THE BY-PASS SYSTEM. IN NO CASE SHALL AMSOIL BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGE OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, BUSINESS INTERRUPTION, LODGING, TOWING OR COST OF REPLACEMENT EQUIPMENT. THE REMEDIES TO THE PURCHASER HEREIN ARE EXCLUSIVE. AMSOIL EXPRESSLY DISCLAIMS, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## WHAT THIS WARRANTY DOES NOT COVER:

- By-Pass Systems that have been improperly installed, abused, damaged, or used in mechanically deficient equipment. Examples of mechanically deficient equipment include flawed or defective equipment due to abnormal operation, negligence, abuse, previous damage, or improper modification, including use of components other than those from AMSOIL or AMSOIL aftermarket partners.
- By-Pass Systems used in any manned aircraft or aviation application.
- By-Pass Systems that have been used in vehicles for the purposes of racing.
- By-Pass Systems used in modified engines.
- Failure due to an OEM defect or a pre-existing condition that is unrelated to the use of the By-Pass System.
- Repair or replacement of equipment because of normal wear.
- Failure of equipment when the wrong filters are used or the correct filters are used beyond the service life recommended in writing by AMSOIL INC. or the engine or equipment manufacturer. The customer or user is solely responsible for determining a product’s merchantability or fitness (“suitability”) for a particular purpose and assumes all risks and liabilities when used other than in strict accordance with either the written recommendations of AMSOIL or the OEM for warranty coverage.
- Any allegedly defective By-Pass System which is not returned in its original, undamaged condition.
- Damages if the customer does not send or make the parts requested available for inspection by AMSOIL or its insurer.

## WHAT YOU MUST DO TO MAKE A CLAIM:

- You must first file a warranty claim with the Original Equipment Manufacturer (OEM) if the warranty is still in effect.
- You must provide a written copy of the OEM warranty denial if denial is based on use of an AMSOIL filter.
- You must notify AMSOIL INC. at (715) 399-8324 within 30 days of failure or alleged defect. In the alternative, you may mail a claim notice, along with the OEM denial to AMSOIL INC., ATTN: Technical Services, One AMSOIL Center, Superior, WI 54880, postmarked within 30 days of failure or alleged defect.
- You must allow the AMSOIL Technical Services Department to examine the By-Pass System and filters and, if required, the engine or equipment to determine the extent of damage and whether it was caused by a defective By-Pass System.
- You must additionally mail, at your expense, the following to AMSOIL INC., ATTN: Technical Services, One AMSOIL Center, Superior, WI 54880:
  1. The By-Pass System and filters in their original, undamaged condition.
  2. Documentation including make, model and year of equipment, total accumulated miles and/or hours and duty cycle or service environment.
  3. Your equipment or vehicle maintenance history documentation including but not limited to: date and miles or hours at the time of installation of the By-Pass System and installation and/or change of filters; periodic maintenance and inspection of the By-Pass System; and general equipment repairs made.
  4. Proof of purchase for the By-Pass System (if available).

## AFTER A CLAIM IS FILED:

- You must cooperate with our investigation of your claim and provide the information we request.
- If your claim is paid by AMSOIL or its insurer, an attempt may be made to recover amounts paid from the OEM. If this occurs, you may be asked to provide further information pertaining to the failure and must cooperate with AMSOIL or its insurer in the recovery process.

## STATE LAWS AFFECTING THIS WARRANTY:

This warranty shall be governed, interpreted and construed by, and in accordance with, the laws of the State of Wisconsin in the United States of America.

**SOME STATES DO NOT ALLOW EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.**

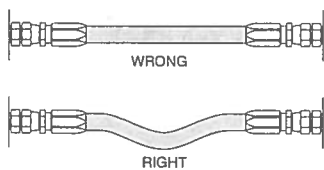
**AMSOIL INC. IS THE SOLE AUTHOR OF THIS POLICY AND MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, UNLESS A SEPARATE, SPECIFIC WARRANTY HAS BEEN WRITTEN.**

## **Contacts:**

AMSOIL INC.  
925 Tower Avenue  
Superior, Wisconsin 54880  
715-392-8324 Fax: 715-392-3097

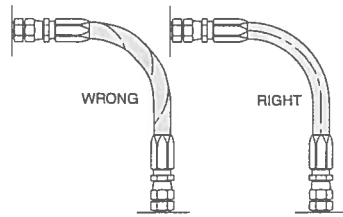
Revised January 2, 2012  
Supersedes all previous revisions.  
Document # AMSOIL By-Pass System Warranty

## Diagram H Hose routing examples



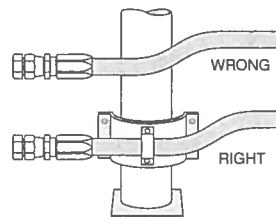
### 1. Provide for length change

In straight hose installations allow enough slack in the hose line to provide for changes in length that occur when pressure is applied. This change in length can be from +2% to -4%.



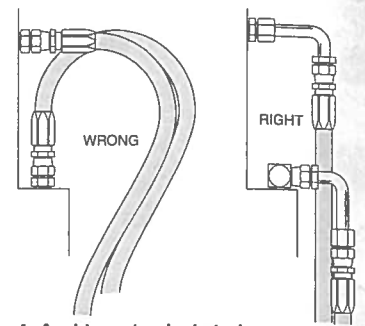
### 2. Avoid twisting and orient properly

Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause hose failure or loosening of connections.



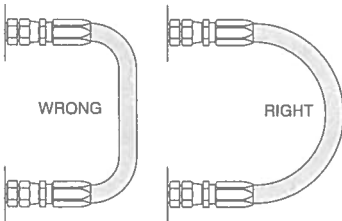
### 3. Protect from hazardous environment

Keep hose away from hot parts. High ambient temperature will shorten hose life. If you cannot route it away from the heat source, insulate it.



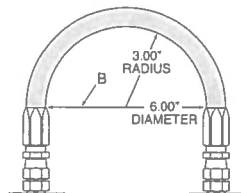
### 4. Avoid mechanical strain

Use elbows and adapters in the installation to relieve strain on the assembly, and to provide easier and neater installations that are accessible for inspection and maintenance.



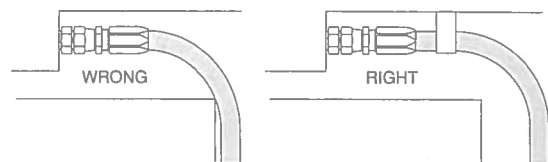
### 5. Use proper bend radius

Keep the bend radius of the hose as large as possible to avoid collapsing of the hose and restriction of flow. Follow catalog specs on minimum bend radii.



### 6. Use proper bend radius (cont.)

Maximum bend radius is measured on the inside bend of the hose. To determine minimum bend, divide the total distance between ends (B length) by 2. For example  $B = 6$ , minimum bend radius = 3.

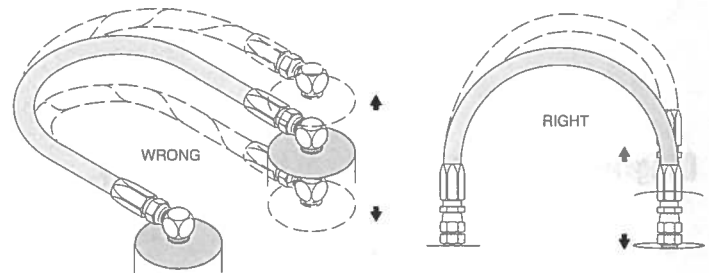


### 7. Secure for protection

Install hose runs to avoid rubbing or abrasion. Use clamps to support long runs of hose or to keep hose away from moving parts. It is important that the clamps do not allow the hose to move. This movement will cause abrasion and premature hose failure.

### 8. Avoid improper hose movement

Make sure relative motion of the machine components produces bending rather than twisting of the hose. Hose should be routed so that the flex is in the same plane as the equipment movement.



## AMSOIL Oil Filter Change Recommendations

### Vehicles with Gasoline or Diesel Engines

- **EaO and Donaldson Endurance ELF 7349:** Up to 25,000 miles (15,000 miles for severe service) or one-year service life, whichever comes first, when used in conjunction with AMSOIL synthetic motor oil. Always change oil filter at time of oil change.
- **Ea By-Pass Filters:** Should be changed every other full-flow filter change up to 60,000 miles. When used with other brands of motor oil or full-flow filters, the EaBP filter should be changed every other full-flow filter change. AMSOIL recommends using oil analysis when extending oil drain intervals.
- **Ea15K:** Up to 15,000 miles (normal and severe service) or one-year service life, whichever comes first, when used in conjunction with AMSOIL Synthetic Motor Oil. Always change oil filter at time of oil change.

### Stationary Engines

- **EaO and Donaldson Endurance:** Up to two times longer than OEM\* recommendations. Always change oil filter at time of oil change.
- **WIX and Donaldson "P" Series:** OEM\* Recommendations.

\*Original equipment manufacturer.

To order by-pass oil filter parts or oil sample kits, consult your AMSOIL Dealer or the AMSOIL Wholesale Price List.