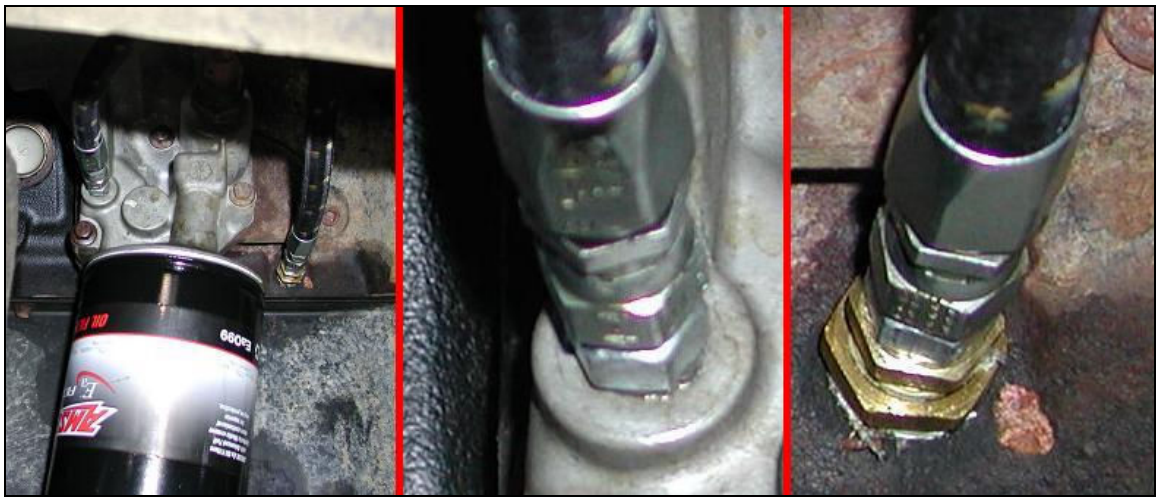
By-Pass Filter Installation

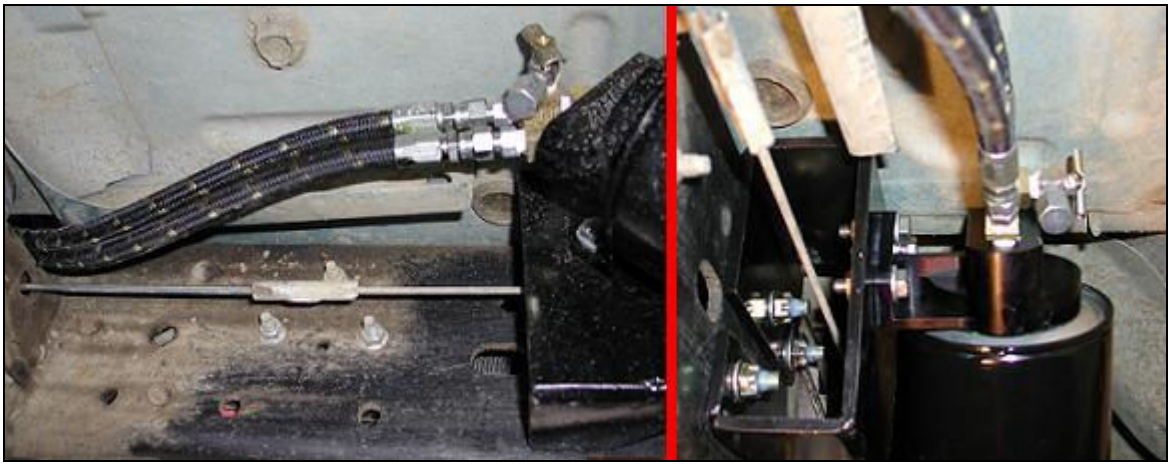
1999 Ford F-350 7.3L PowerStroke Diesel
AMSOIL BMK-11 By-Pass Filter System with EaBP-110 Filter

Installation submitted by T-1 Certified AMSOIL Dealer Robert Mintz
Bracket designed by T-1 Certified AMSOIL Dealer Gary Mintz

Components:
- BMK-11 AMSOIL By-Pass Filter Kit
- EaBP-110 AMSOIL By-Pass Oil Filter
- EaO-99 AMSOIL Full-Flow Oil Filter
- Custom fabricated steel brackets
- G1570-EA Oil Sample Valve (order separately for a contaminant free sampling from a petcock valve)
- Clear Plastic Hose (local store)

The filter pressure line comes off of the tap on the full flow filter housing. The return line goes back into the 3/8 tap in the block using a 3/8 X 1/4 bushing. The hoses are routed over the frame and down to the by-pass filter mounting.





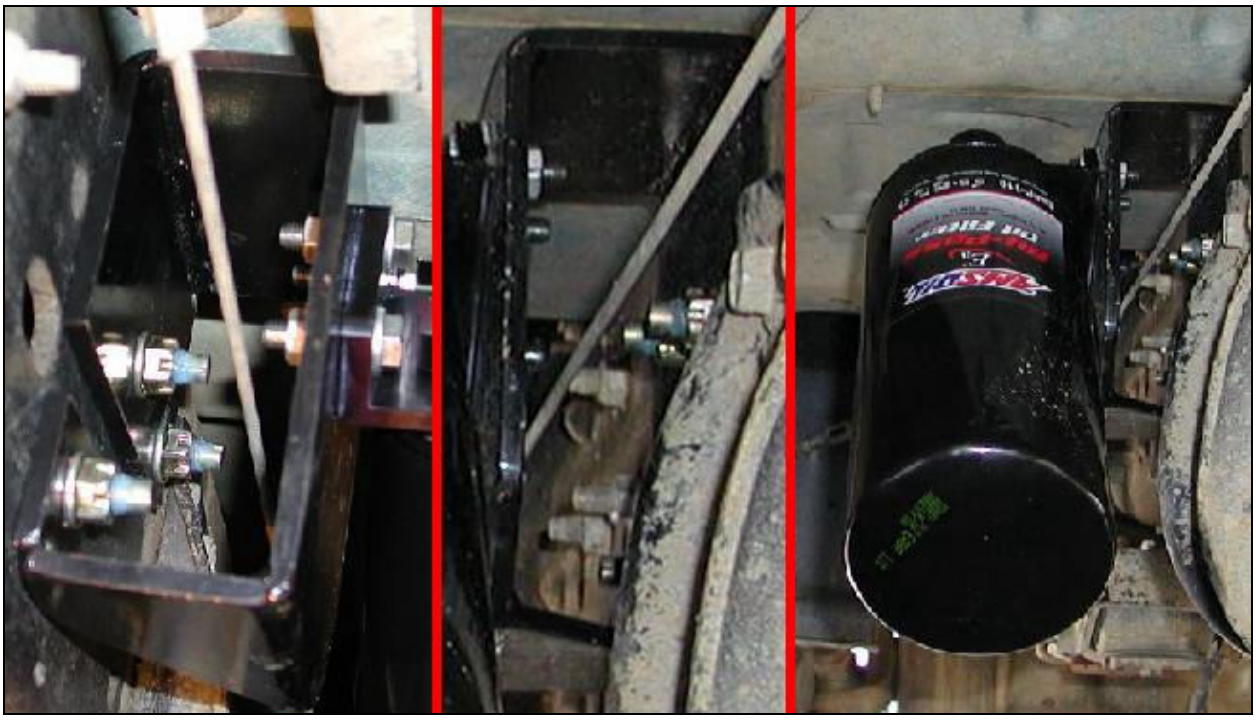
The cap you see was created by hand screwing a brass or steel 1/4" close nipple into a 3/8" - 1/4" pipe reducer. You will need to hold it in a vise to drill the close nipple out enough to fit over the spigot of the sample valve. I cleaned both with brake cleaner to remove all oil, then wiped with a tinning solder paste and heated till tinned. The nipple was cut off flush

with the reducer so it would be stronger and little shorter, then the cut end was placed on the spigot and sweat soldered with an extra drop of solder. You could purchase a G1570-EA Oil Sample Valve and have the same thing.

The hose's were later wrapped with a Clear Plastic hose to protect them where they pass between the body and frame.

To establish the length of hose set up both ends of the hose with fittings and starting at engine, push other end back to filter and allow plenty of length for engine torque rotation and cut to length. (i.e.. Cut a little long) Now take the other end of your hose and repeat the process. Remove both hose's from the truck and place both hose's inside a 1 1/4" thin walled plastic tube before putting the other hose fittings on. The 1 1/4" plastic tube will not accommodate the 2nd hose with the end on it. So it must be done this way so you don't have to try and remove the hose fitting. Then take the hose assembly to truck and install. Be sure you have marked which hose is the longest and know where it goes.

I used pre-existing holes in the frame to design the bracket. Items on the truck influenced the shape of the bracket and where it was mounted. A cardboard template was created and then transferred to the ¼" steel plates.



Start up procedures
1. Check that all fittings and hoses are securely attached, and that the hoses are routed properly.
2. Check engine oil level. Fill to full mark if necessary.
3. Set vehicle parking brake. With transmission in park/neutral start the engine and immediately check oil pressure. Note: Pressure may initially take a moment or two to rise. Caution: Carefully check for leaks at fittings, hoses and mount. If leaks are observed, STOP ENGINE IMMEDIATELY, repair leaks and continue.
4. After engine has warmed, shut off and re-check engine oil level. Fill as necessary.
5. Record vehicle mileage/operating hours and date of installation.

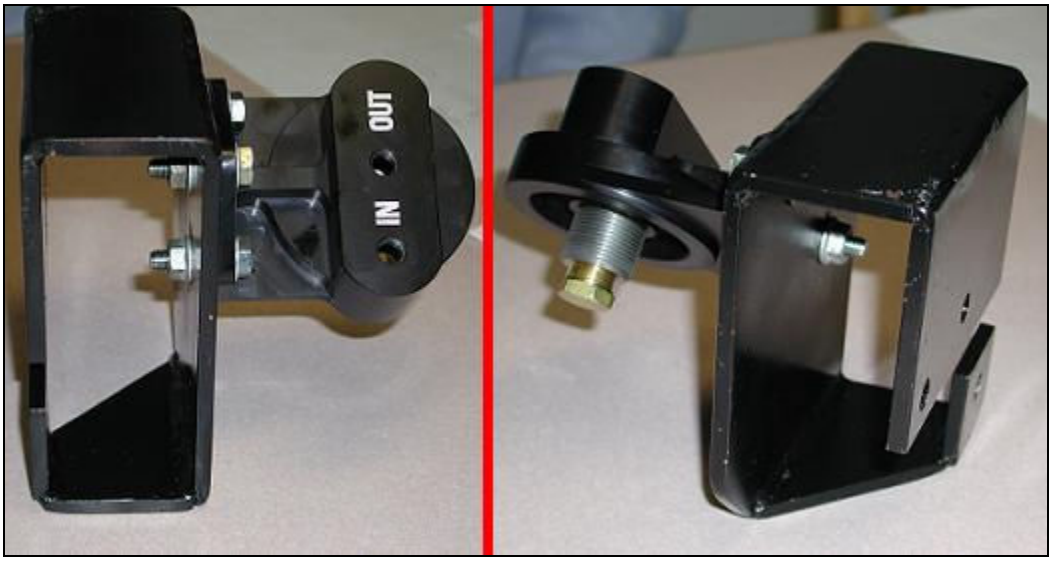
Periodic Maintenance
1. Periodic visual inspection of the fittings and hoses is recommended. Check for leaks, hose deterioration and cuts. Repair and/or replace as necessary.
2. Refer to Recommended Filter Change Interval chart for servicing intervals.
3. To change the filter element:

a. Ensure engine is off and use caution as the engine; oil and filter may be hot and could result in an injury.
b. Using a filter wrench, remove the filter element. Dispose of properly.
c. Clean the filter gasket contact area on the mount with a clean, lint-free rag.
d. Lubricate the new filter gasket with clean oil or grease.
e. Fill filter as full as possible with engine oil.
f. Screw on new filter, tighten per instructions on the filter.
g. Start engine and check for leaks.
h. Check engine oil level, fill as needed.
i. Record vehicle mileage/operating hours for future reference.

AMSOIL Oil Filter Change Recommendations

Vehicles with Gasoline or Diesel Fueled Engines
• EaBP By-pass Filters: Should be changed every other full flow filter change up to 60,000 miles, whichever comes first. When used with other brands of motor oil or full flow filters, the EaBP should be changed every other full flow filter change. AMSOIL recommends using oil analysis when extending oil drain intervals.

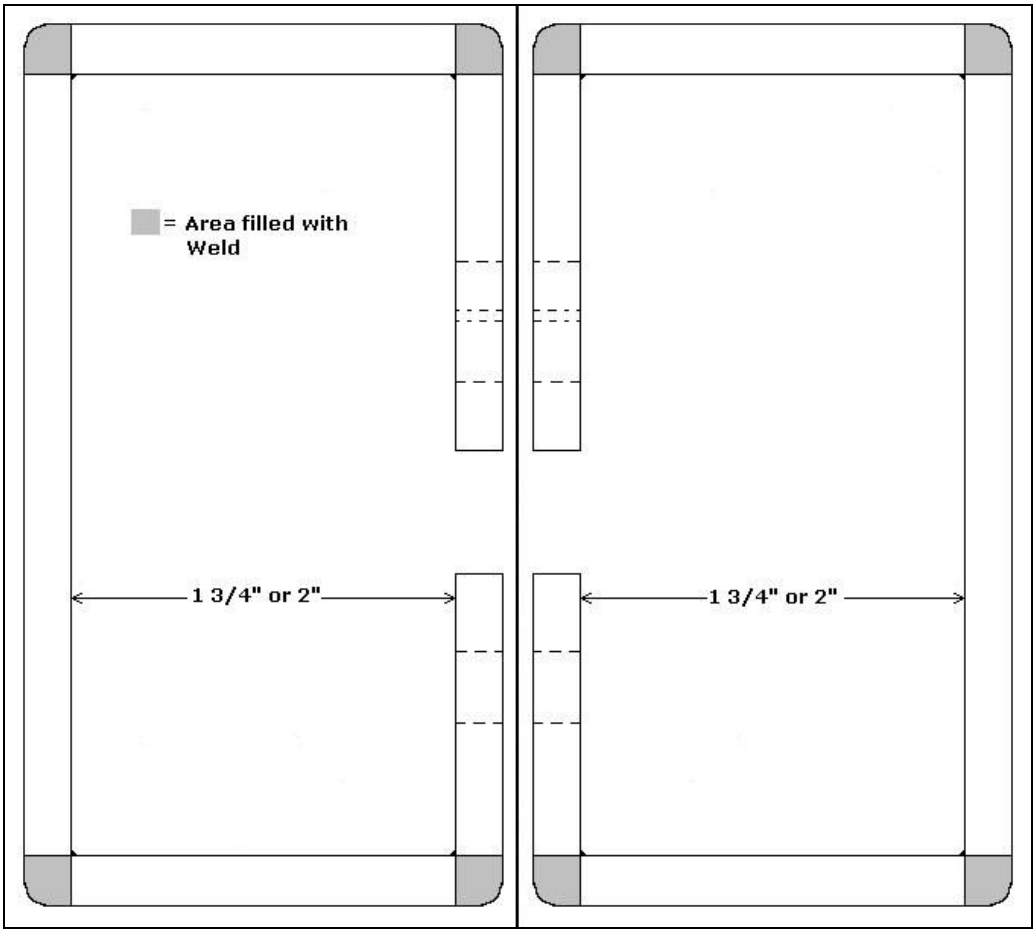
Here are template measurements for creating your own bracket.

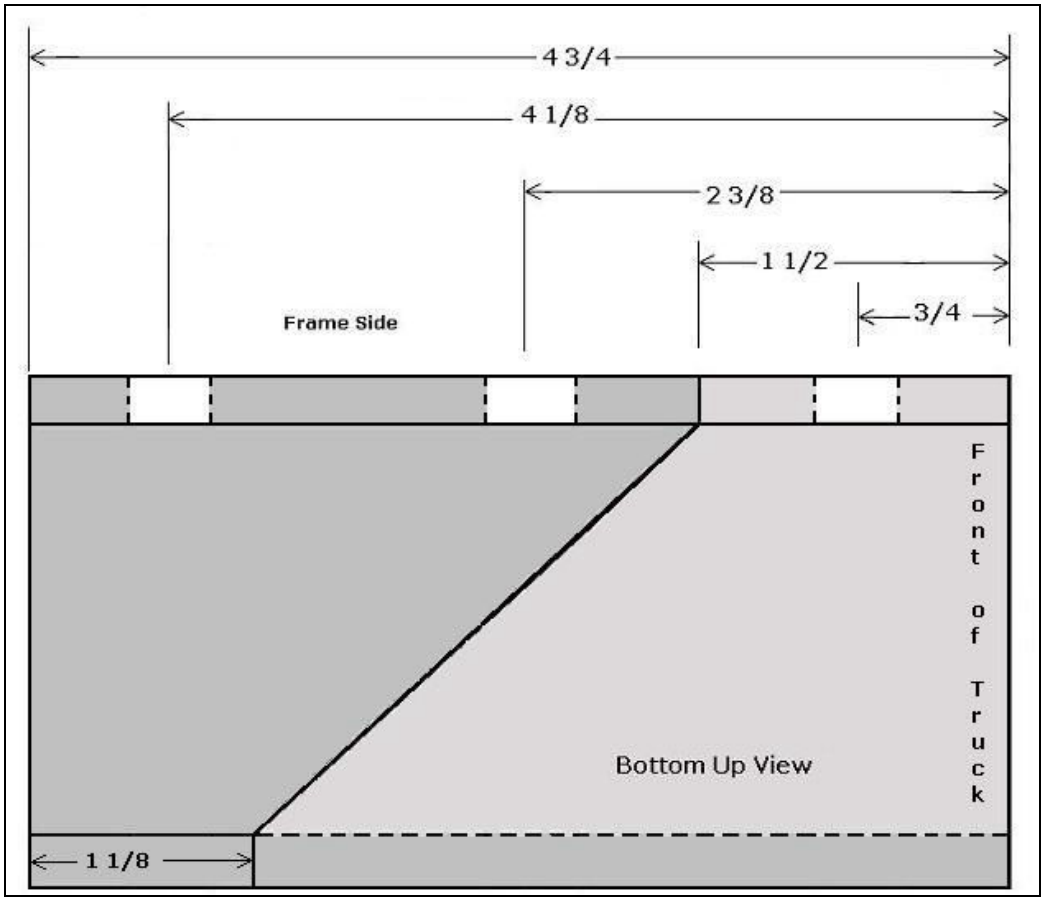


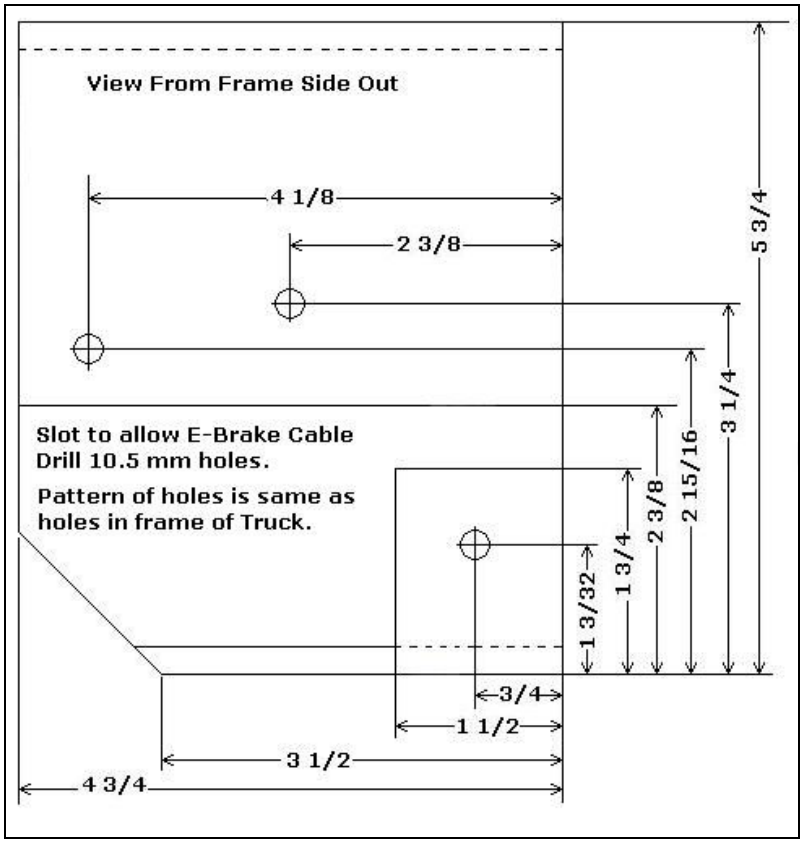
In these images you can see that the corners were created when the inside corners touched and were clamped in place on spacer blocks an then welded.

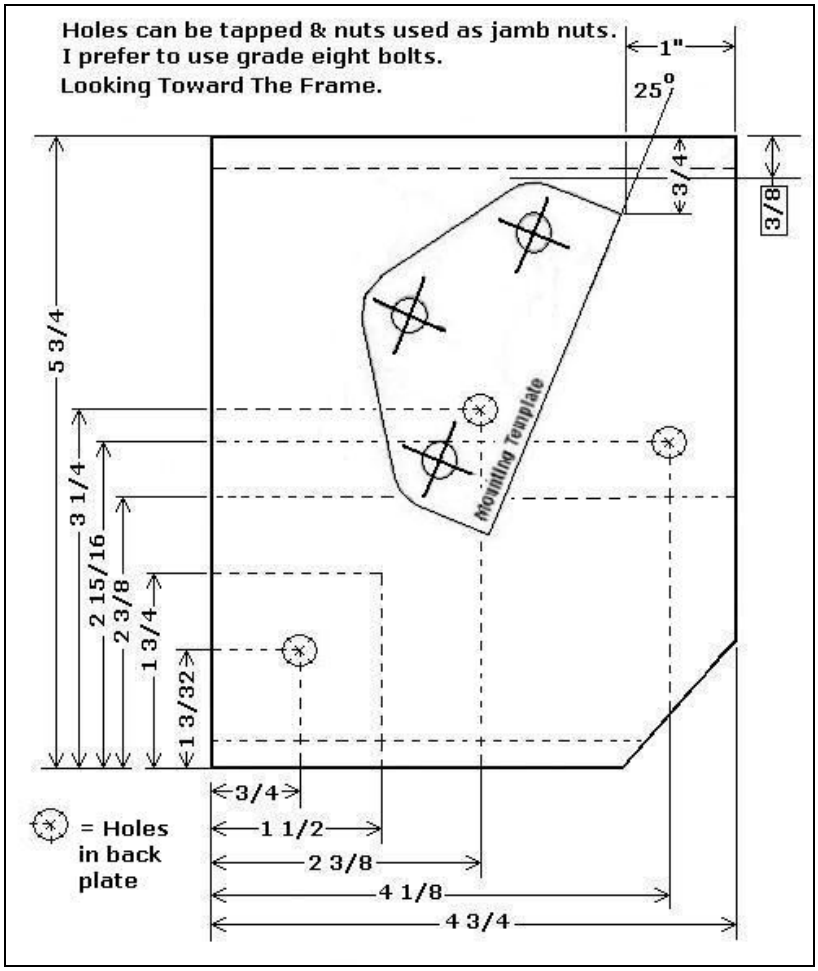
Hold 2” or 1 ¾” of space by clamping metal parts to a 2” or 1 ¾” blocks to help hold it square with open corners. Tack weld all the corner & every 2” remove one block, slide the other block to the middle clamp & weld outside space then the inside then to the outside, checking for square as you work. Welding from outside corners towards the middle. Draw the metal square with weld & water.

Please confirm all measurements on the spacing of holes with your truck.


= Area filled with Weld
1 3/4" or 2"
1 3/4" or 2"


4 3/4
4 1/8
2 3/8
1 1/2
3/4
Frame Side
Front of Truck
Bottom Up View
1 1/8





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.*