



BULLET PROOF DIESEL®
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INSTALLATION MANUAL

BULLET PROOF BYPASS OIL
FILTRATION SYSTEM
2010 - 2018
RAM

NEAL TECHNOLOGIES, INC.

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These are the parts included in your kit. Please locate and identify each part prior to starting the installation process.

Part Number	Description	Quantity
6502074_BK	Bypass Oil Filter Adapter	1
6400084	Threaded Adapter, Oil Filter Bypass	1
6000120	Amsoil EABP100 Oil Filter	1
90100176	Cummins 6.7L Oil Fill Cap Assembly	1
90100177	Cummins 6.7L Bypass Filtration Hardware Pack (see below)	1

HARDWARE PACK CONTENTS

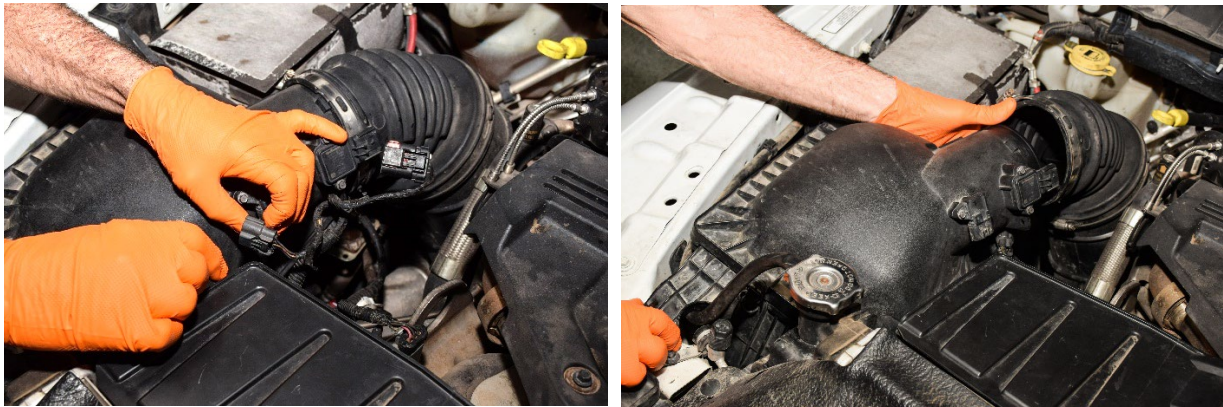
6400028	1/8" NPT to #4 JIC Adapter	3
6400055	1/8" Countersunk Hex Plug – Brass	2
6200009	1/8" NPT Brass Pipe Fitting 90° Elbow Adapter	1
90100004	39" #4 Straight, Straight Hose	1
90100005	58" #4 Straight, Straight Hose	1
6200010	M8 1.25 x 30mm Hex Head Bolt	3
6200100	M8 Washer Zinc Plated	6
6200017	M8 x 1.25 x 8mm Nylon Locknut	3
6200218	M6 x 1 x 16mm Flanged Hex Screw - Zinc	1
6400102	Small Black Hose	1
6502103	Cummins Bypass Oil Filter Bracket	1

Ram Bypass Oil Filtration System - Tool List

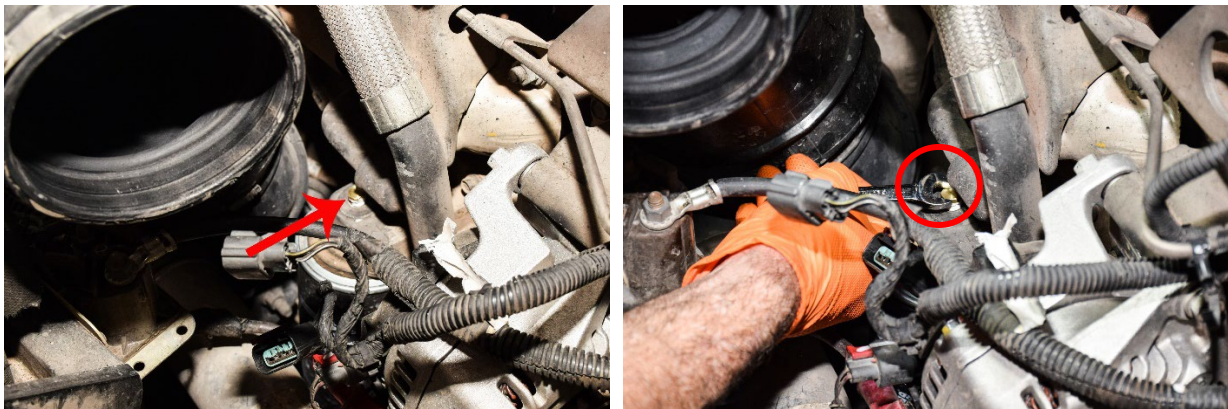
This is a complete list of the tools we used to install the RAM Bypass Oil Filtration System.

Flathead screwdriver	10mm socket
Small adjustable wrench	½" socket
10mm wrench	Thread tape
½" wrench	Red Thread Locker
9/16" wrench	3/16" Allen wrench or socket
3/8" drive ratchet	

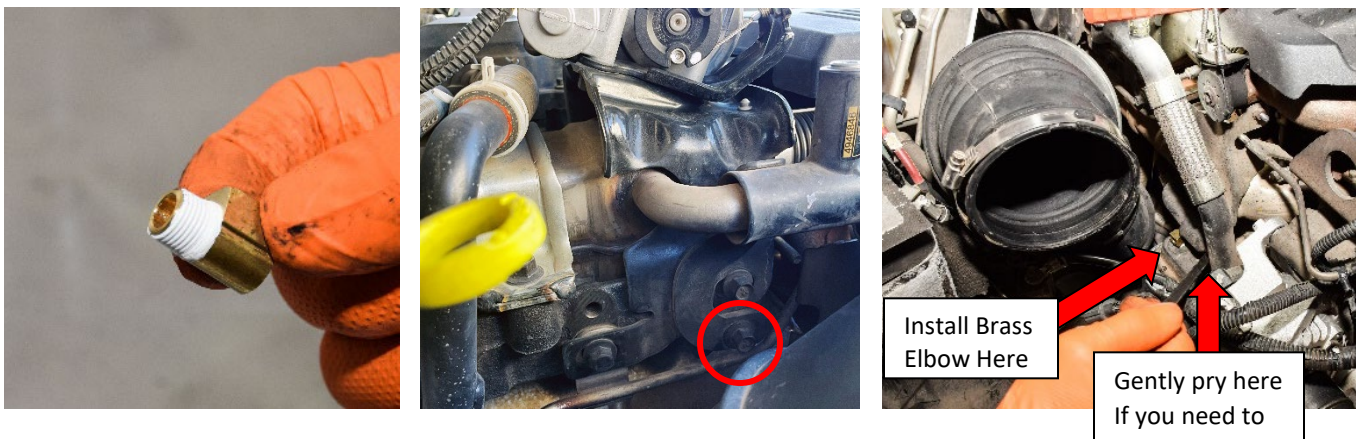
Step 1: Disconnect both sensors and remove air cleaner assembly



Step 2: Locate engine oil filter housing. Remove plug from top of oil filter housing and set aside.



Step 3: Wrap threads on brass elbow with thread tape and install elbow into the oil filter housing with the outlet pointed towards the right headlight. **You may need to loosen but not remove the lower bolt (pictured) for the coolant tube mounting bracket, then using a prybar gently pry the tube towards the front of the truck to give you enough clearance to install the brass elbow.



Step 4: Wrap threads on 1/8" fitting. Install fitting into brass elbow and tighten.



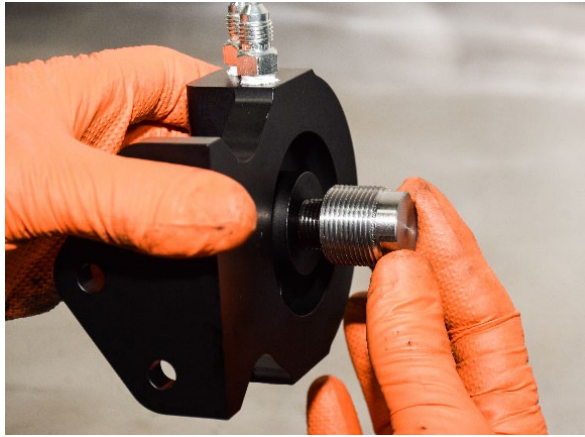
Step 5: Apply the thread sealing tape to both fittings and pipe plugs then install into the oil filter adapter.



Step 6: Put a couple drops of red thread locker onto the threaded port on the bypass oil filter adapter.



Step 7: Install the Amsoil Filter adapter onto the filter adapter then tighten with a 19mm wrench or adjustable wrench.



Step 8: Using the supplied hardware, attach the assembled filter adapter to the mounting bracket and tighten hardware.



Step 9: Attach the hoses to the filter adapter and tighten. The 39" hose connects to the "oil in" port and the 58" hose connects to the "oil out" port. *Be sure to use **two** wrenches.



Step 10: Locate and loosen the two frame bolts pictured in the right front wheel well.



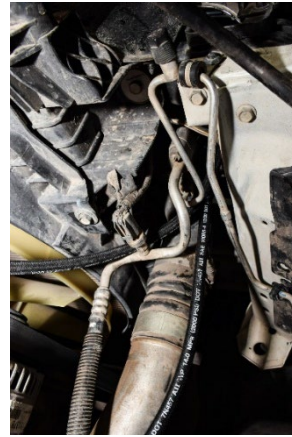
Step 11: Feed the oil lines up into the grill area and slip mounting bracket onto the loosened frame bolts.



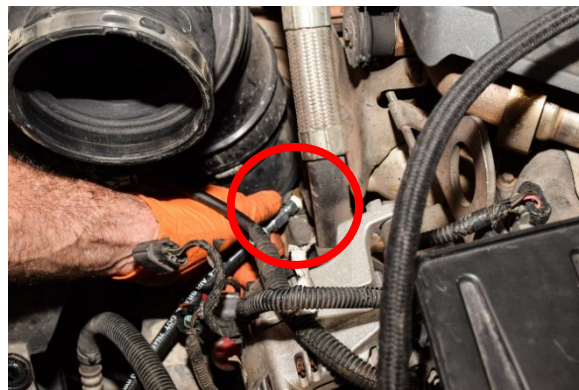
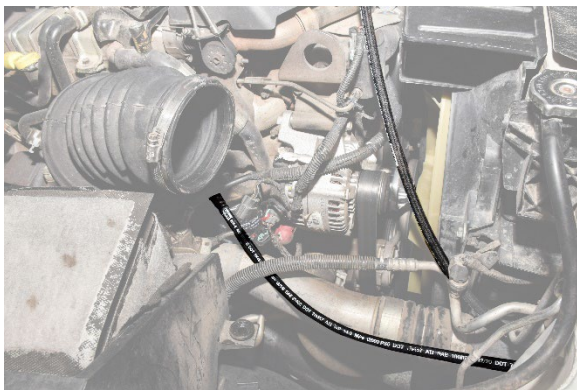
Step 12: Tighten the frame bolts onto the mounting bracket and install the oil filter.



Step 13: Pull both hoses up and out of Grill area then pass both hoses through the core support and over the top of the intercooler pipe.



Step 14: Route the 39" hose from the "Oil In" port of the bypass filter adapter along the intercooler pipe to the fitting that was installed on the engine oil filter housing. Attach the hose to the fitting and tighten.



Step 15: Install the provided piece of hose over the stud for the CAC boot clamp where the first hose runs past.



Step 16: Remove the radiator fan shroud screw pictured.

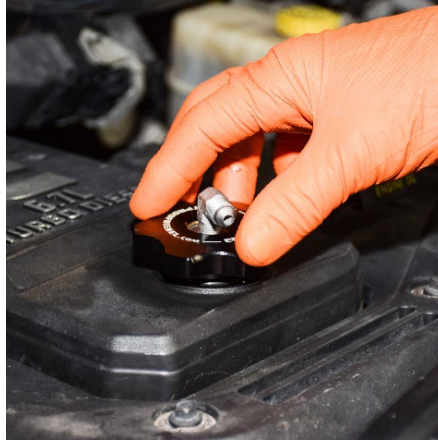
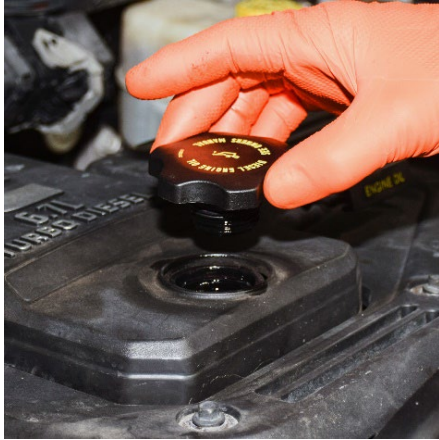


Step 17: Attach the rubber dipped loop clamps to the hose and then attach the clamps to the fan shroud. Reuse existing screw to mount lower clamp. Install upper clamp using supplied hardware as shown.

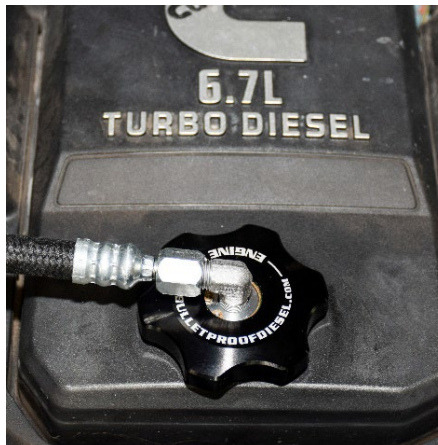
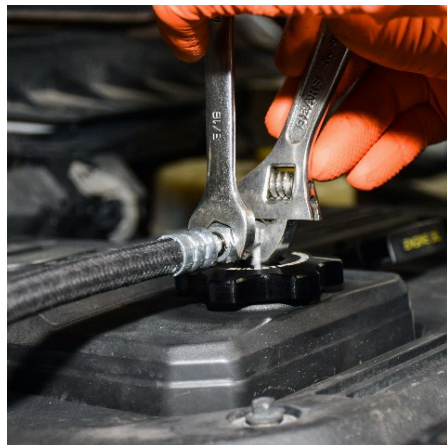


Step 17: Route the remaining section of the 58" hose towards the oil fill cap.

Step 18: Remove original oil fill cap and install the billet cap



Step 19: Attach the oil line to the fitting on the oil fill cap using two wrenches to ensure a snug fit.



Step 20: Start the engine and check all the hose connections for leaks. Tighten all the fittings, if necessary, then recheck.

Step 21: Check the oil level and top off as needed.