

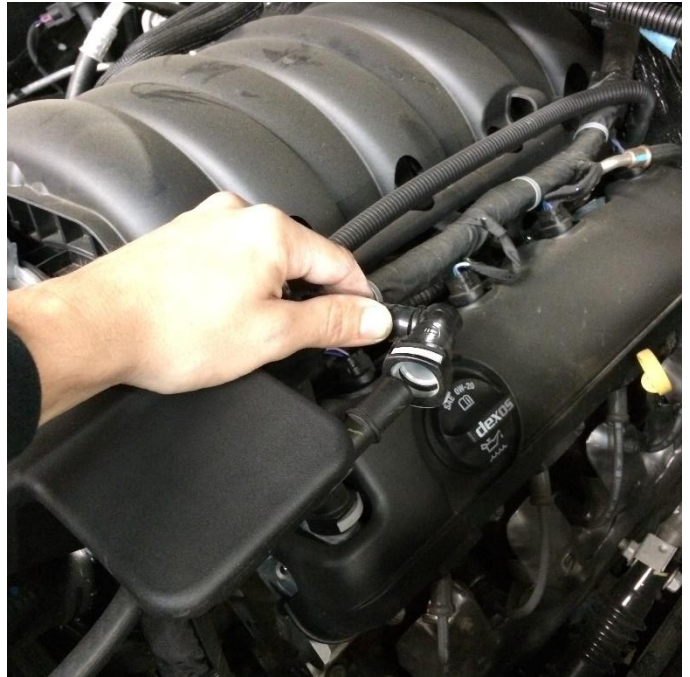


ENGINE DRIVEN COMPRESSOR --- GM 4.8, 5.3, 6.2 ENGINES

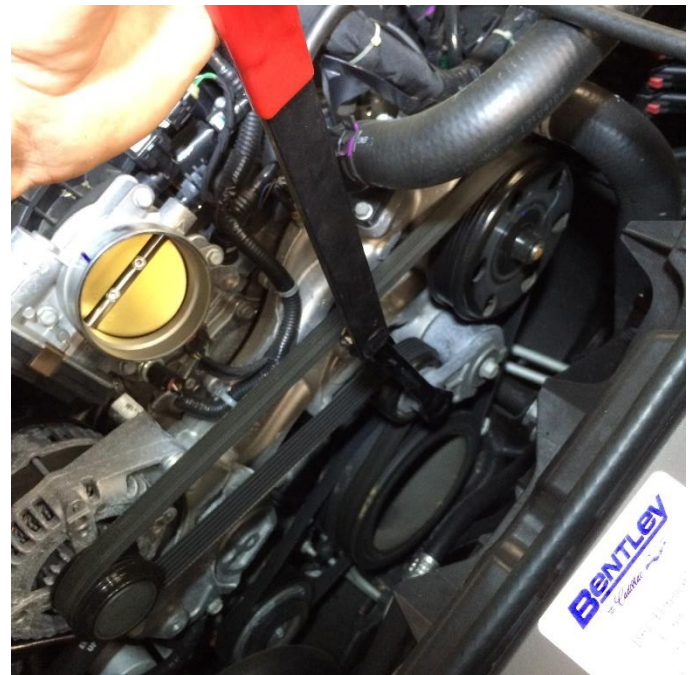
(2014+ GM Trucks)

NOTE: Determine your proper belt length on **Step 32** before beginning the installation.





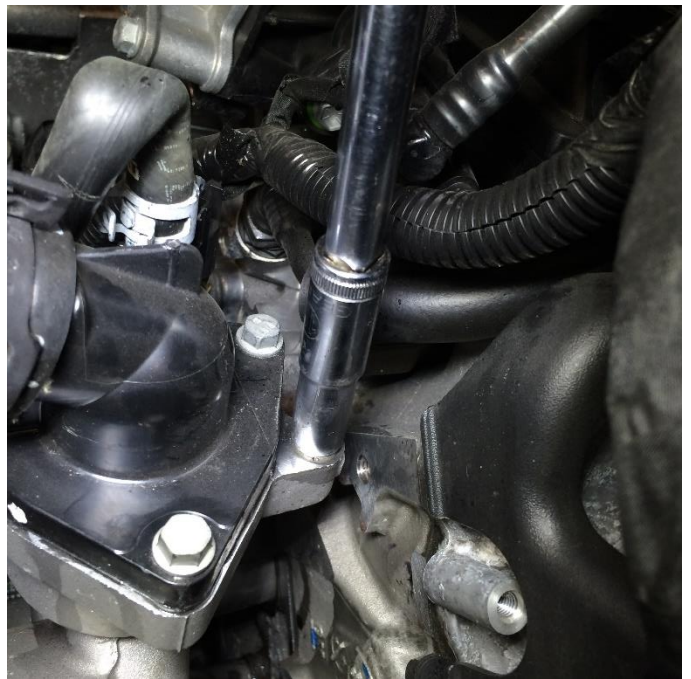
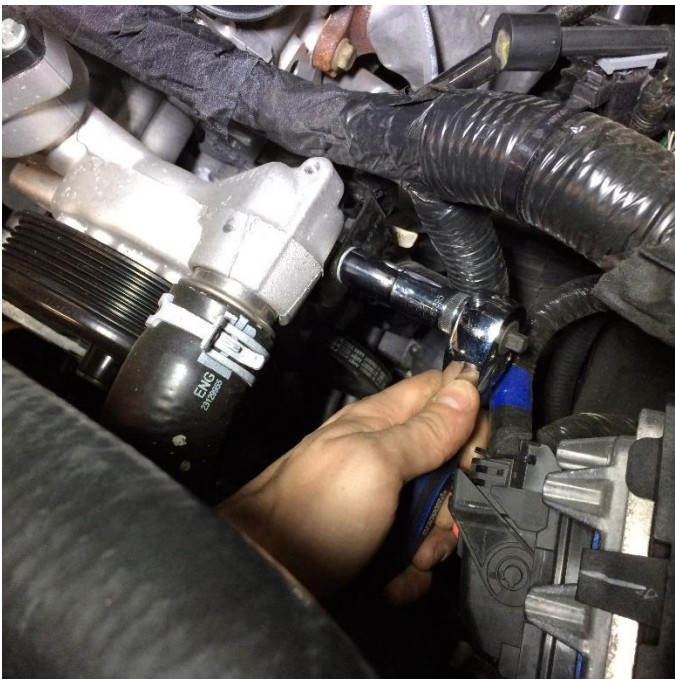
Remove the intake resonator by disconnecting the hose clamps at the throttle body and air box along with the vacuum connection at the driver side.



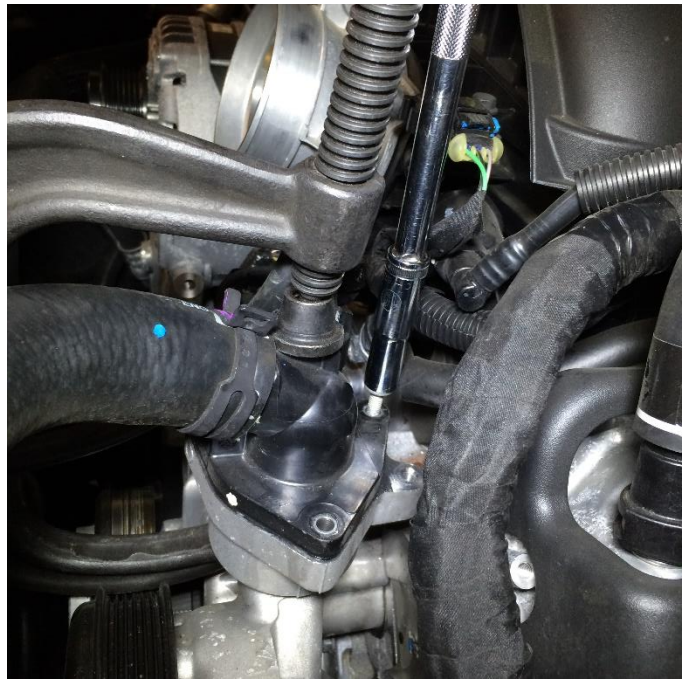
Start by making a witness mark across the tensioner pulley arm to indicate the factory belt tension. Then rotate the tensioner pulley to remove the belt.



Remove the bolts securing the wiring harness channel as shown. It will not be reused.



Remove the factory harness support as shown. Then remove the stud behind the thermostat housing.



Place a C-clamp on the thermostat housing to prevent the loss of coolant while removing the 2 bolts shown. Loosen both bolts slightly and confirm the C-clamp is secure and that there are no leaks before completely removing the bolts.

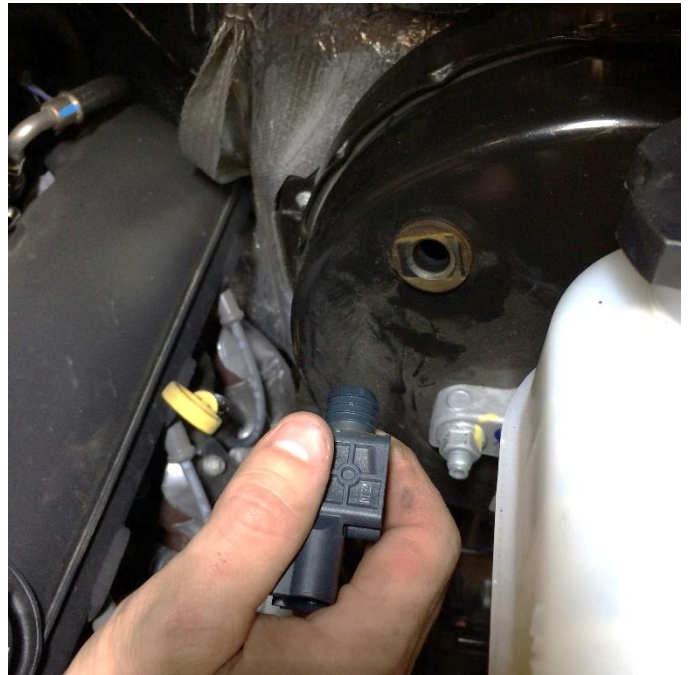
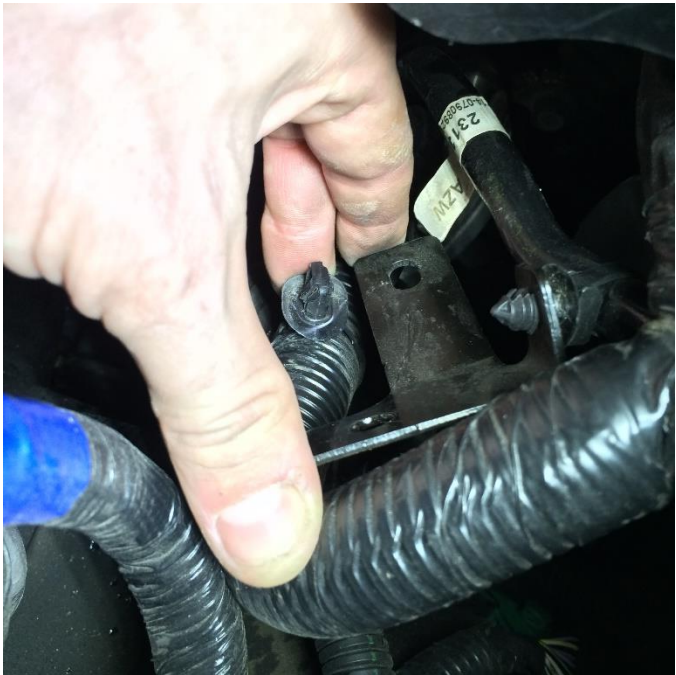


Loosely install the 2 supplied M6-1.0 x 35mm bolts through the bracket and into the thermostat housing. Then thread in the M8-1.25 x 25mm bolt through the bracket and into the head. These should be snug, but not tight.



Install the supplied M8-1.25 x 35mm bolt through the bracket and into the thermostat housing. All 6 bolts can be tightened at this time.

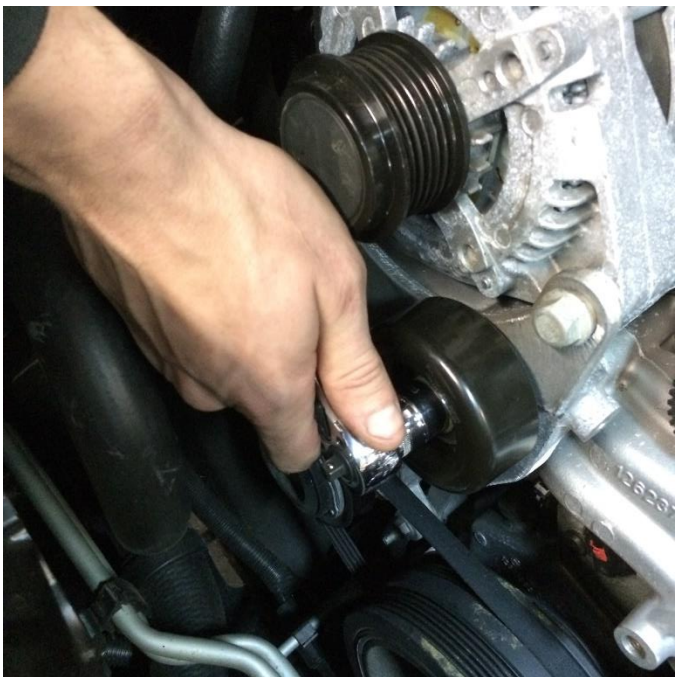
14 & 15



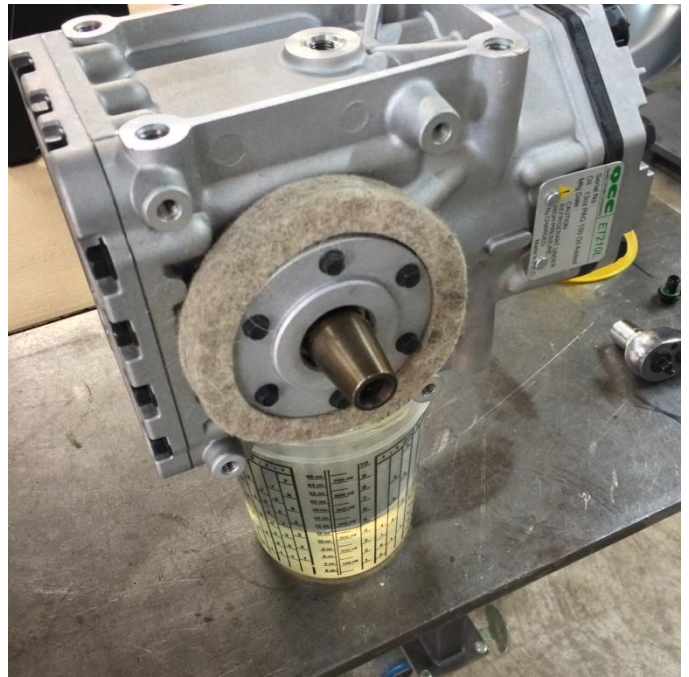
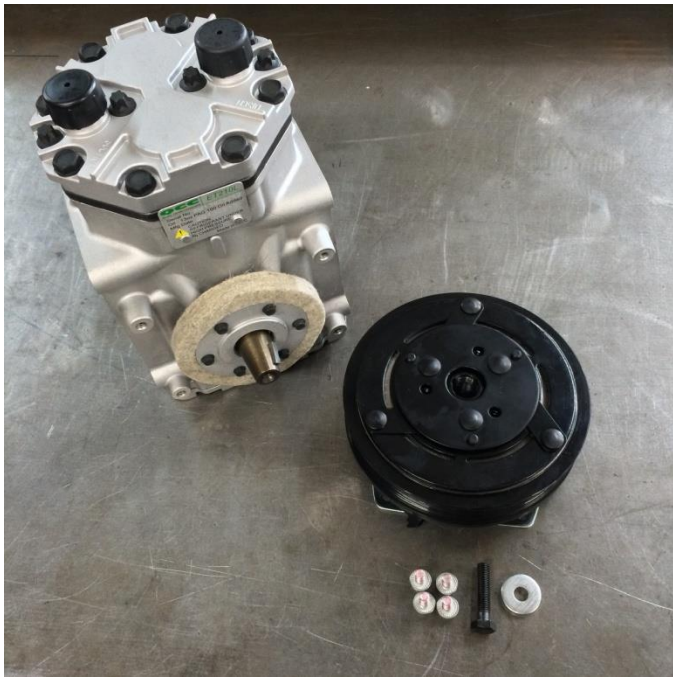
The bracket removed earlier can be disconnected from the wiring harness to allow the vacuum tube to be rerouted. The vacuum tube electrical plug can be disconnected, then it can be temporarily removed from the brake booster.



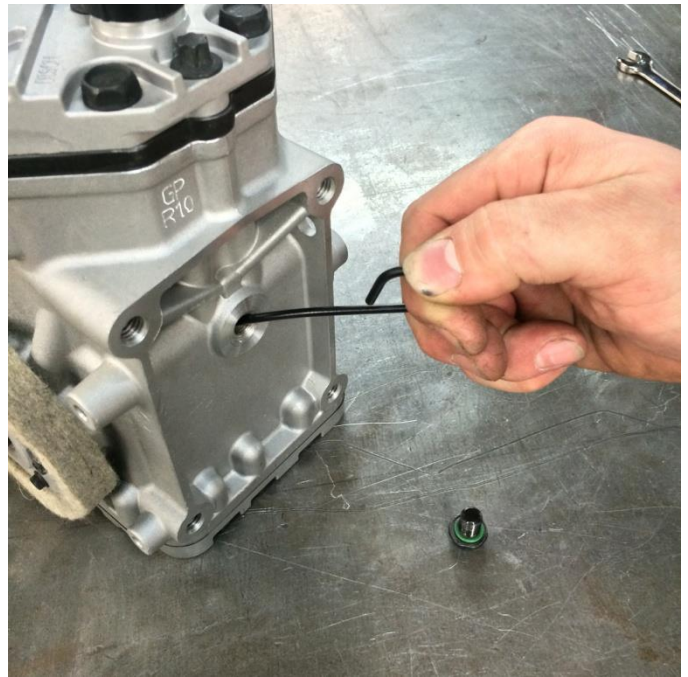
Reroute the vacuum tube so as to have more room from the exhaust manifold. Make sure that it does not rub any sharp corners of the bracket. Then plug it back into the booster and reinstall the electrical connector. Check to confirm the wires have room to the bracket and are not rubbing any sharp edges.



Insert the supplied M10-1.5 x 180mm bolt through the smooth idler pulley then through the 1.88" length stand-off and install where shown in **Image 18**. Insert the M10-1.5 x 50mm bolt through the grooved idler and the .30" length stand-off and install where shown in **Image 19**.



Standard and SLM compressors: Verify the new compressor has the half-moon shaped woodruff key installed in the crankshaft. **Standard Compressors only:** The compressors are shipped pre-filled with AC refrigerant oil, but it is recommended to run 12oz of SAE 30 non-detergent engine oil. Remove the screws from each side of the compressor fill ports and drain the oil.



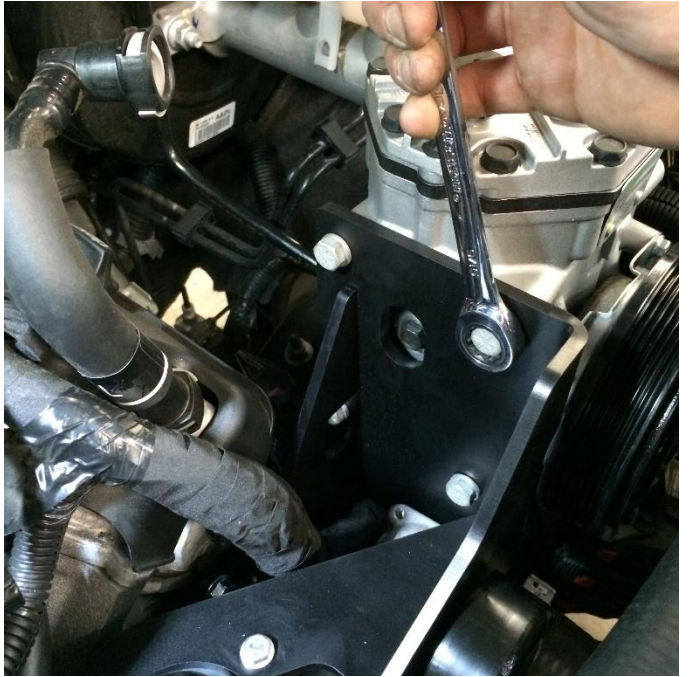
Standard compressors only: Put one bolt back in and fill with new oil (SAE 30 non-detergent) through the opposite port. It is recommended to use **Valvoline non-detergent SAE 30 (PN 822382)**. **SLM compressors:** These are prepackaged with the proper synthetic compressor oil and should only require an oil level check using the supplied dipstick, however you should always confirm before installation. It is recommended to add **Amsoil PCK or Royal Purple Synfilm Recip 100 (PN 01513)** as needed. Your oil level can be checked, and oil can be added using the side port. Refer to SLM compressor owner's manual for more information.

IMPORTANT:

Check the oil level with your compressor on a level surface with the supplied dipstick touching the bottom "floor" of the compressor. Each mark on the dipstick represents 1oz of oil (sometimes it may be necessary to rotate the shaft on the compressor if the position of the crank assembly obstructs the path of the dipstick). **You should keep a maximum of 12oz and minimum of 8oz of oil in the compressor at all times. Once the compressor is installed, the oil level should be checked frequently to monitor consumption. This amount will depend on usage, and type of compressor. It should NEVER drop below 8oz. For standard compressors, check every week until you find your average use. For SLM compressors, check every month until you find your average use.**



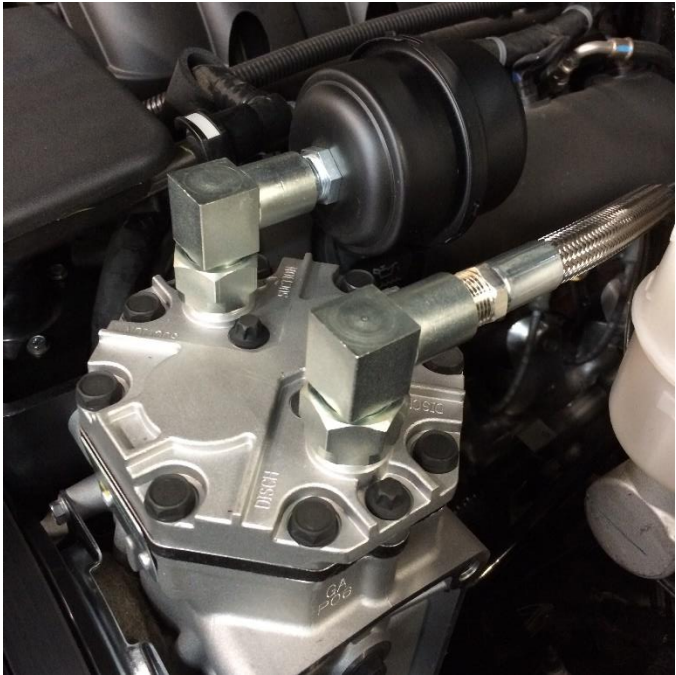
Install and tighten the 4 screws that attach the clutch. You can choose if you want the clutch wire oriented to the top or bottom. Install the 5/16 clutch retainer bolt and torque to **20-25ft lbs**. Never hammer the center bolt onto the snout. Let the screw pull it up until it seats.



Four 3/8 bolts and lock washers are provided for mounting the compressor to the bracket. They should be tight but be careful not to strip the aluminum compressor body.



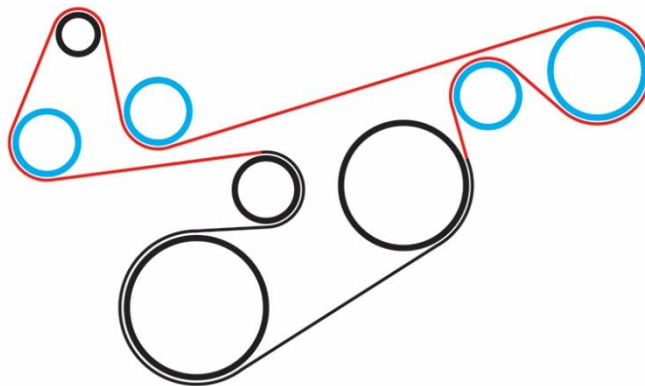
Standard compressors: Two 3/8 NPT head fittings are provided with the kit for direct connection to the intake filter and leader hose. Use a thread sealant such as Loctite 545 or Teflon tape to seal the connections to the filter and leader hose. Do not use sealant on the O-ring compressor threads. **SLM compressors:** Thread the provided 90-degree fittings into the head of the compressor using the provided nipples with Loctite 545 or Teflon on both sides of the nipples.



Standard compressors: Verify the O-rings are present in the bottom of each of the head fittings and install on the compressor. The filter/silencer will go on the port labeled "Suction". **SLM compressors:** Install the filter/silencer into the suction port side, labeled with an "S". Make sure to hold the 90 fitting with a wrench so as not to break the fitting or compressor head while tightening.

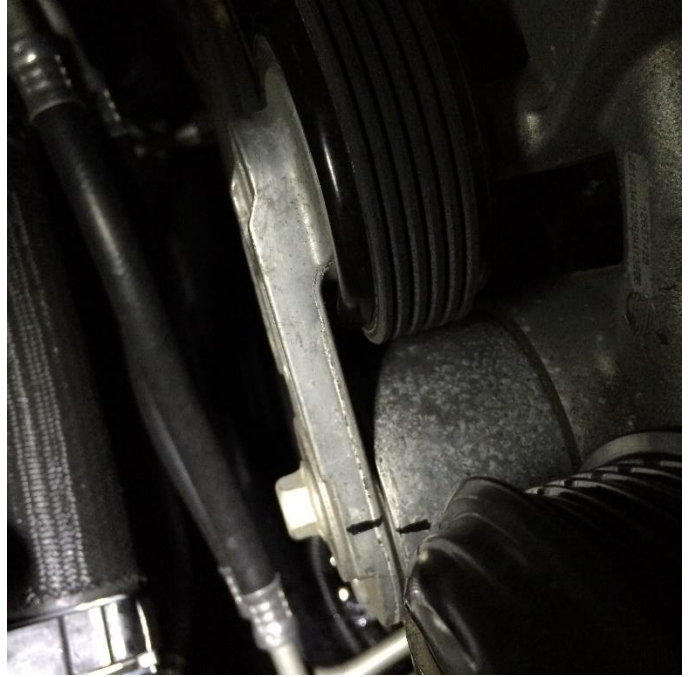
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Choose a new belt using the chart below. You can measure yours accurately with a tape measure or reference the existing part number if it is visible. Install the new belt per the routing diagram below. Take special note to ensure all hoses and harnesses have clearance to the system. **NOTE:** Continental Elite belts are preferred.



<u>Stock Length</u>	<u>New Length</u>	<u>Continental Part # (preferred)</u>	<u>Gates Part #</u>
72	111.85	4061112	K061115

*If your belt isn't listed, you can measure the outside length of your existing belt and add **39.85"** to the total to find your new belt length. Belts 1/8-inch shorter and 3/8-inch longer than the ideal number are acceptable.



After installing the belt, replace the intake resonator in reverse order of how it was removed. Now is a good time to start the engine and verify there are no problems with the serpentine drive, and that the compressor is not visually out of line. Check the witness mark made previously on the idler. It will be an indication if the belt is looser or tighter relative to the factory belt. Bear in mind that new belts will stretch slightly during their first few minutes of run-in. It is best to check after 3-5 minutes of run time. It's preferable for the marks to line up or be slightly tighter than the original belt. If they are significantly different, then the belt length can be changed to the next size longer or shorter as needed.

Additional Information and Recommendations

Since everyone has different goals for their system, we cannot make exact recommendations for other parts you wish to use along with the EDC. However, here are some parts that are used in most installations:

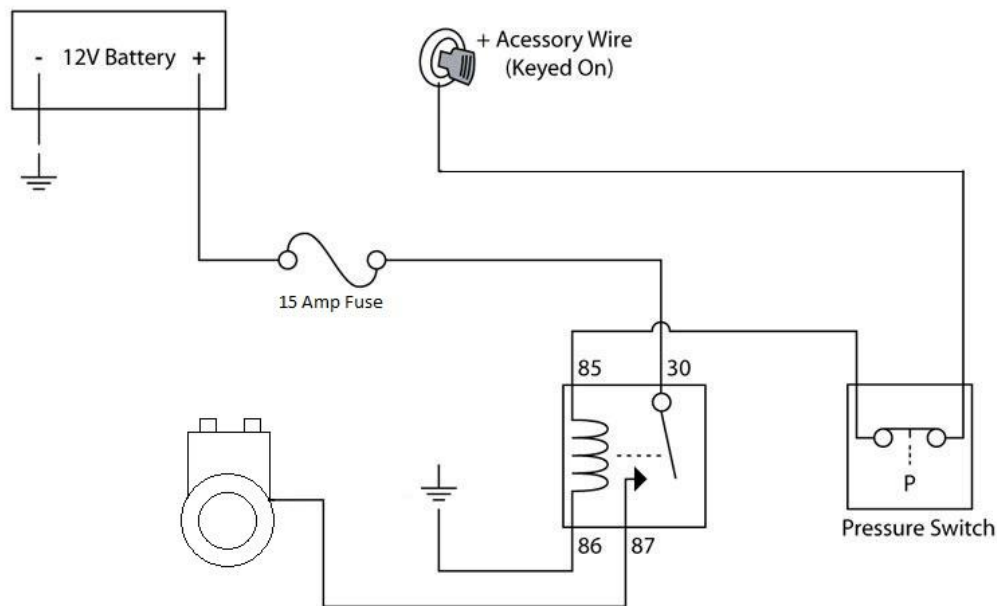
- Check valve – like the 3/8 SMC (SMCNAK4000-N03) or ½ SMC (SMCNAK4000-N04) should be used just before a moisture/oil/water trap and keeps tank pressure from leaking back through the compressor. We offer both sizes on our website [HERE](#).
- Moisture/oil/water trap – like the 3/8 SMC (SMCAF30-N03-2Z) or ½ SMC (SMCAF40-N04-2Z) should be used to catch residual oil and moisture before it enters the tank. Mount this as far away from the compressor as possible. Then mount a second unit on the outgoing port of the system before it enters a valve assembly (if using for air ride). We offer a 3/8 version on our website [HERE](#), and a ½ version [HERE](#).
- Blow-off safety valve – like the 225PSI version we have on our website [HERE](#). This will act as a safety backup in the event that the system becomes over pressurized.

Additional Information and Recommendations (continued)

- Pressure switch/relay - we typically use a pressure switch to trigger the compressor on and off. It is preferred to use the lowest range which will still get the job done so that it will build up less heat and extend compressor life. DO NOT exceed 200 psi or damage to the compressor can occur. We offer a 110-145PSI and 145-175PSI pressure switch on our website [HERE](#).
- Aluminum air tank – in a size suitable for your needs and space requirements. We typically use a 7–10-gallon tank which keeps up with most common air tools. We have 5–12-gallon tanks available on our website [HERE](#).
- **CHECK THE OIL OFTEN** until you become accustomed to the average consumption of the compressor. If the compressor is maintained properly, it should easily outlive your ownership of the vehicle. But, if the oil level is run regularly under 8oz, then just like any piston driven engine, internal failure will likely occur. Our commitment to the customer is that this bracket system fits well and works properly. IN NO WAY do we warranty the life of the pump itself. They have been used successfully as on-board air compressors on semis and autos for decades so if there are problems, it is very likely it was improperly maintained.

Wiring Diagram for EDC Systems Using a Pressure Switch

Below is an example of a wiring diagram that can be used if you're integrating a pressure switch into your onboard air setup. The pressure switch listed in the diagram is available on our website using the link above in our "Additional Information and Recommendations" section.



For any questions or suggestions please [CONTACT US](#)

