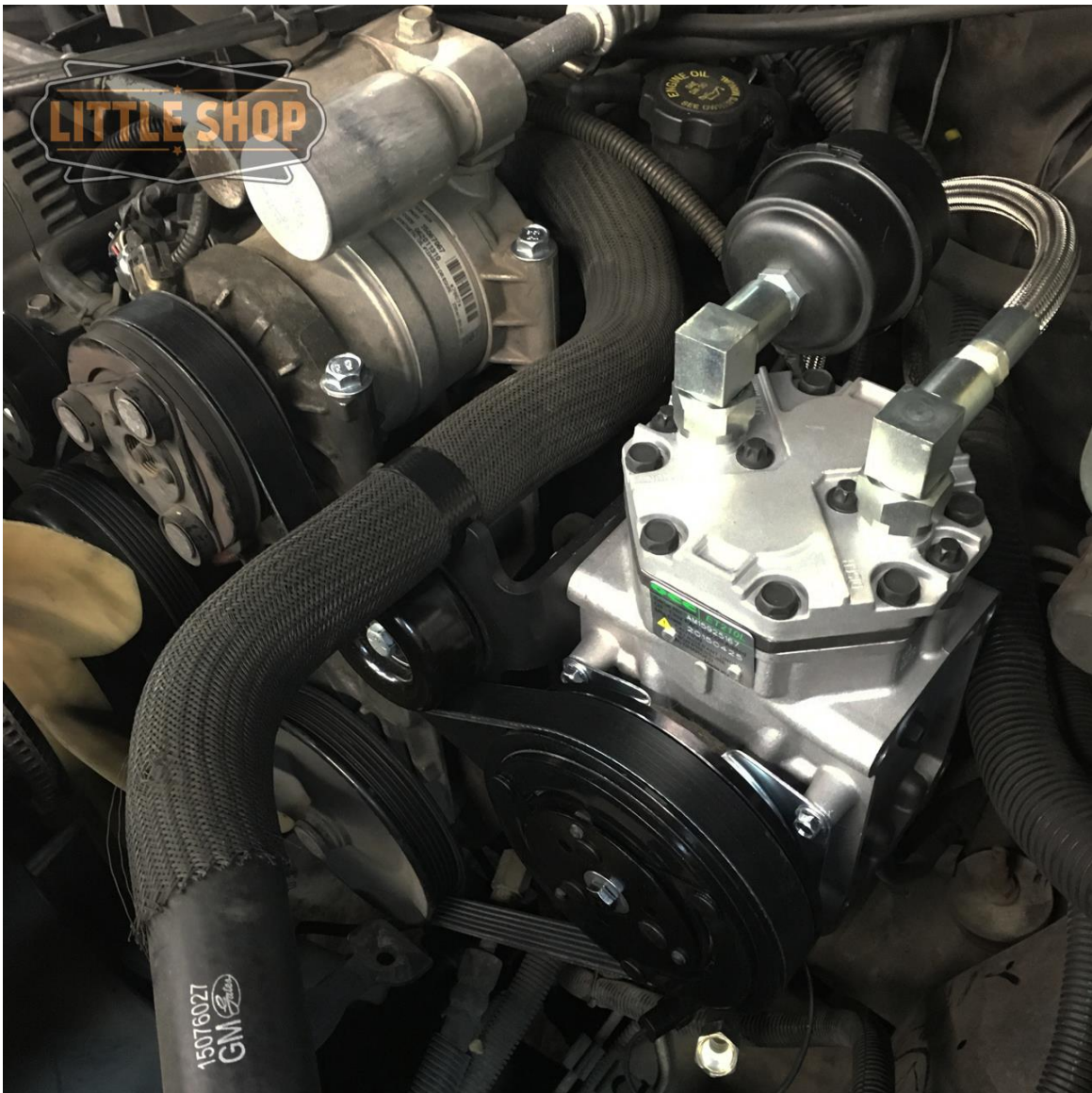


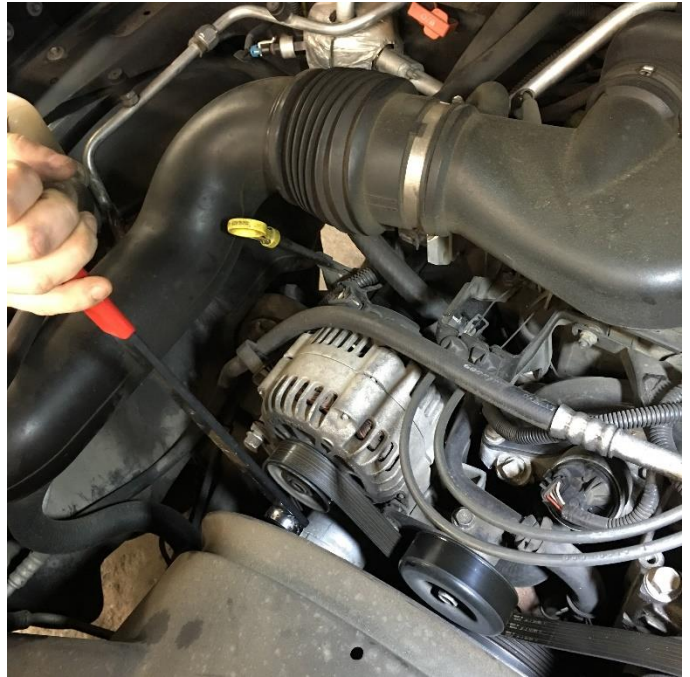
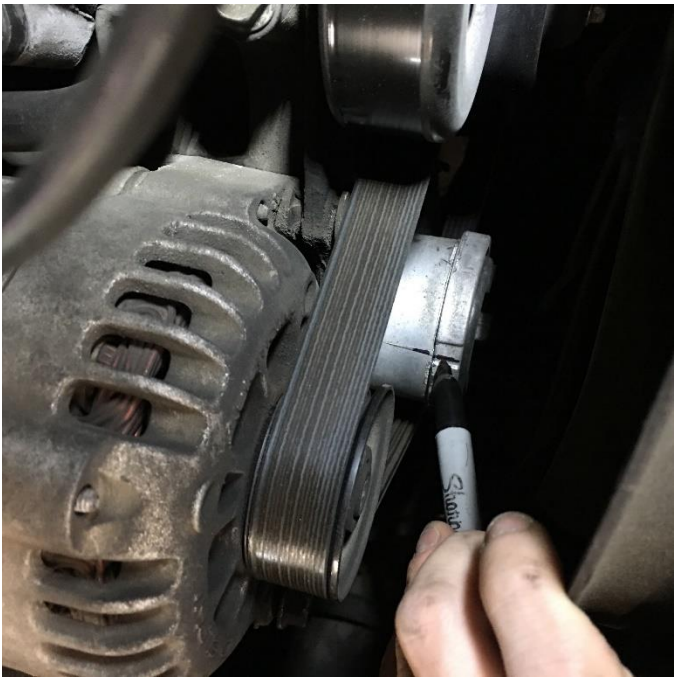


## ENGINE DRIVEN COMPRESSOR --- GM 4.3, 5.0, 5.7 ENGINES

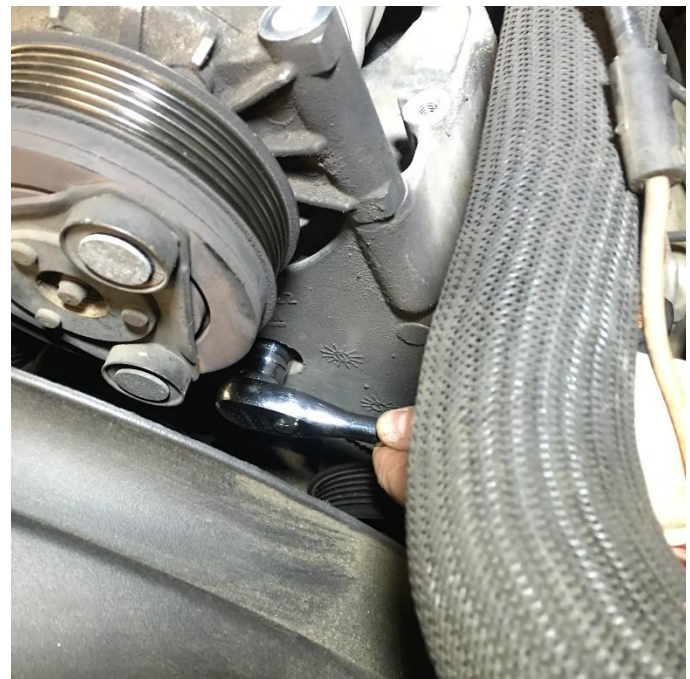
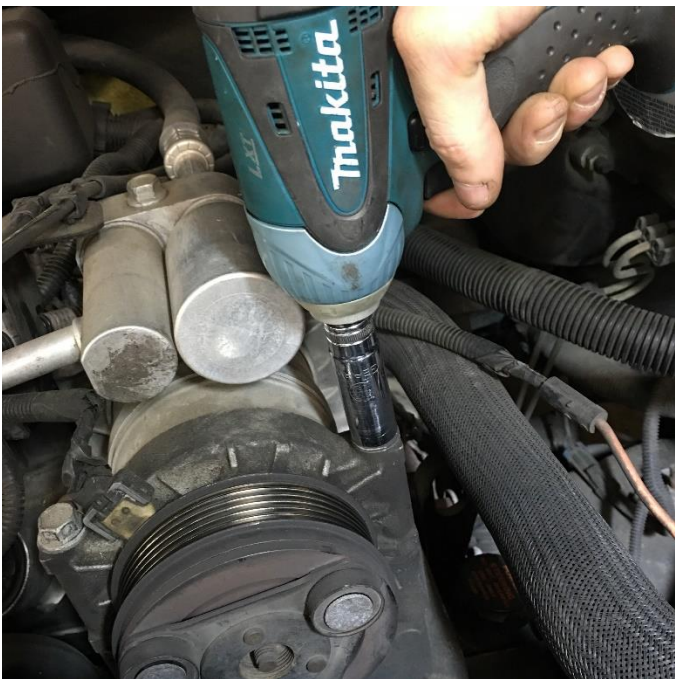
(96-07 GM Full-size trucks and S10s)

**NOTE:** Determine your proper belt length on **Step 19** before beginning the installation.

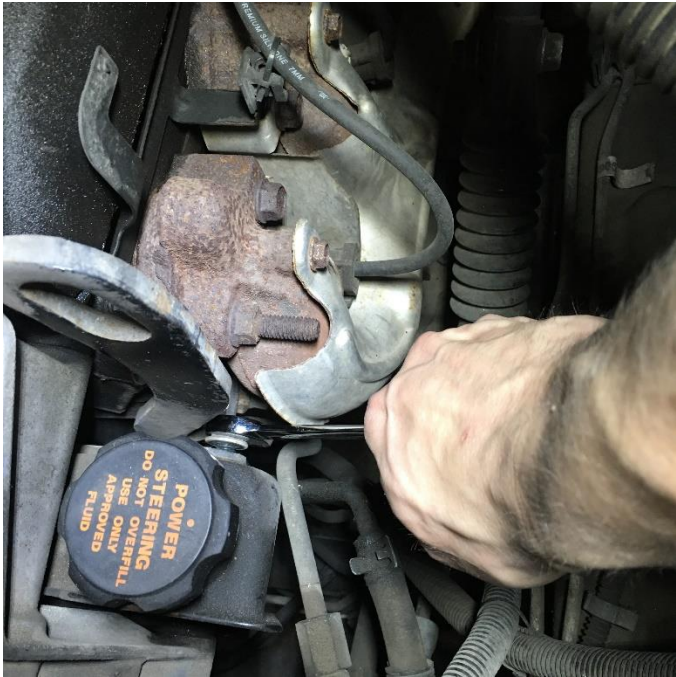




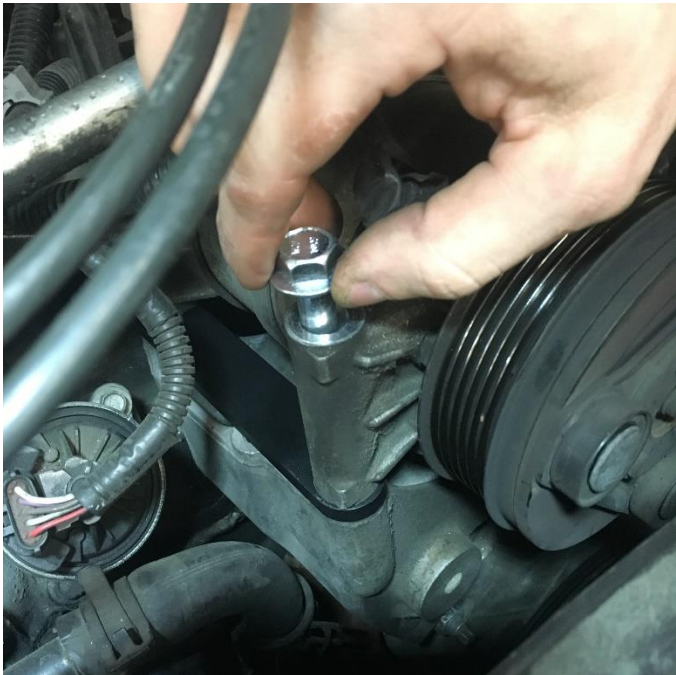
Start by making a witness mark across the idler pulley arm to indicate the factory belt tension. Next, rotate the idler pulley to remove the belt. Then remove the factory alternator bolt. You may wish to remove the upper fan shroud at this time to make the installation easier, but it is not required.



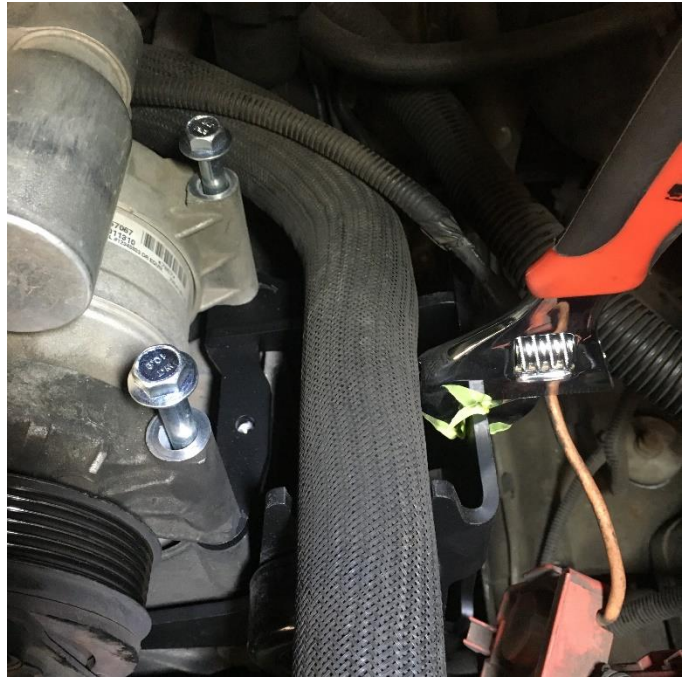
Remove the 4 bolts holding the AC compressor but leave the compressor in place. Then remove the front accessory bracket bolt as shown.



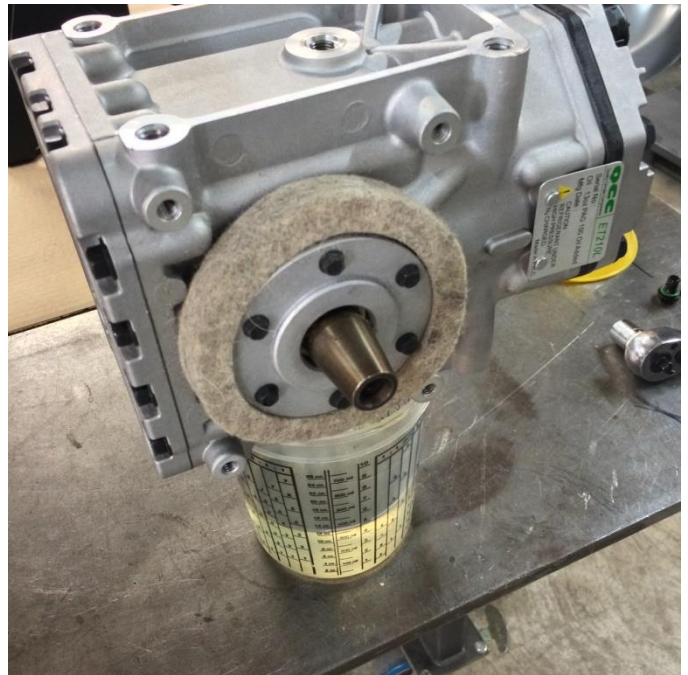
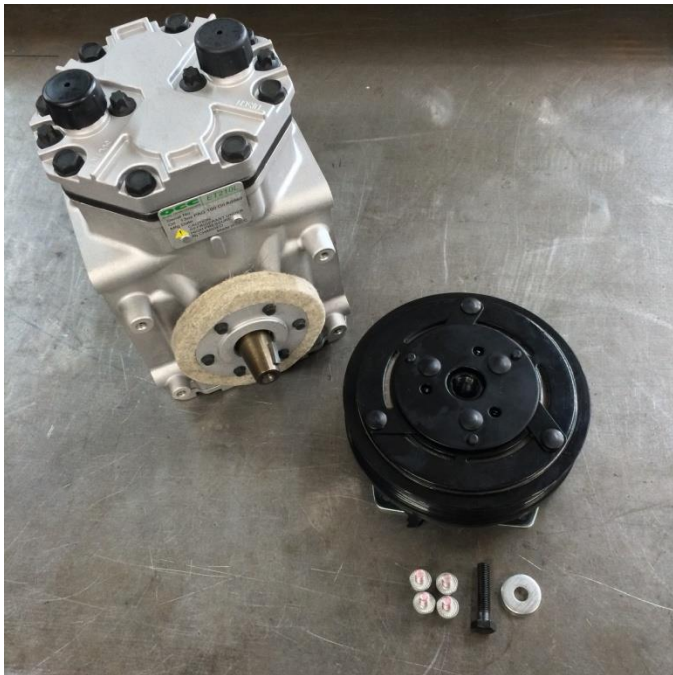
Remove the factory power steering bracket as shown and apply medium strength thread locker to the nut (such as Loctite 243).



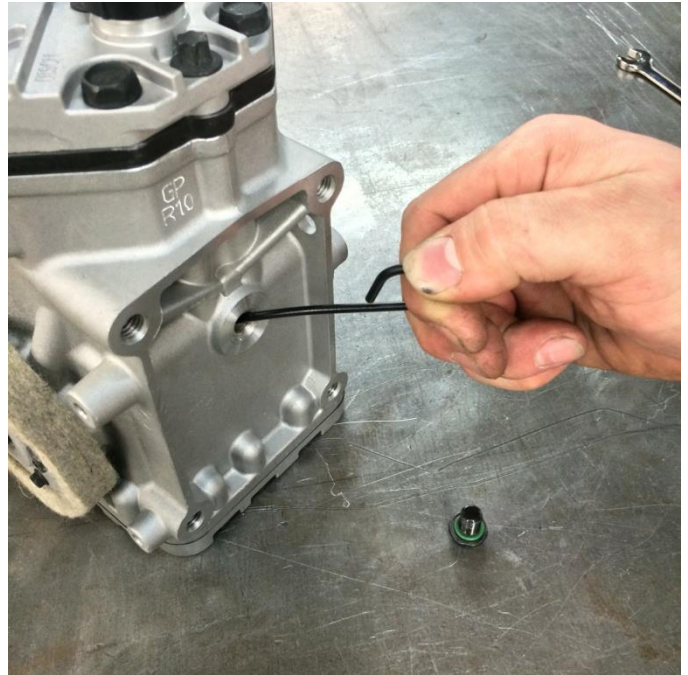
Insert the supplied compressor spacer and start the M10x1.5x100mm bolts on that side, but do not tighten. Start installing the compressor bracket by slipping the slotted opening over the power steering stud as shown.



Start the 3/8-16 x 5.0 bolt and washer through the bracket and into the head, but do not tighten. Then start the remaining M10x1.5x100mm through the AC compressor and the bracket. You may need to use an adjustable wrench to apply pressure in or out until the bolts register into their threads. After all bolts are started, confirm that the slotted foot of the bracket is seated on the power steering stud and tighten all bolts including the power steering stud nut.



**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 bolts from each side of the compressor fill ports and drain the oil.



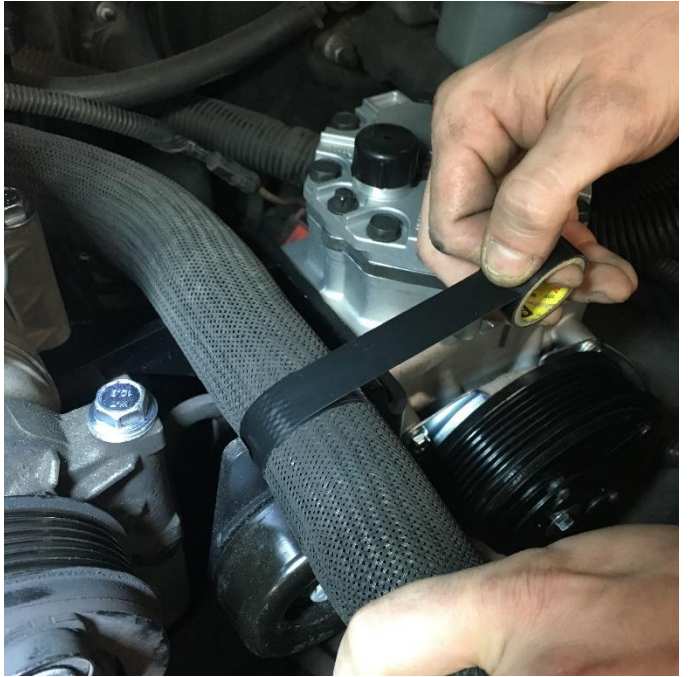
**Standard compressors only:** Put one bolt back in and fill with new oil (SAE 30 non-detergent) through the opposite port. It is recommended to use **Valvoline non-detergent SAE 30 (PN 822382)**. **SLM compressors:** These are prepackaged with the proper synthetic compressor oil and should only require 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:**

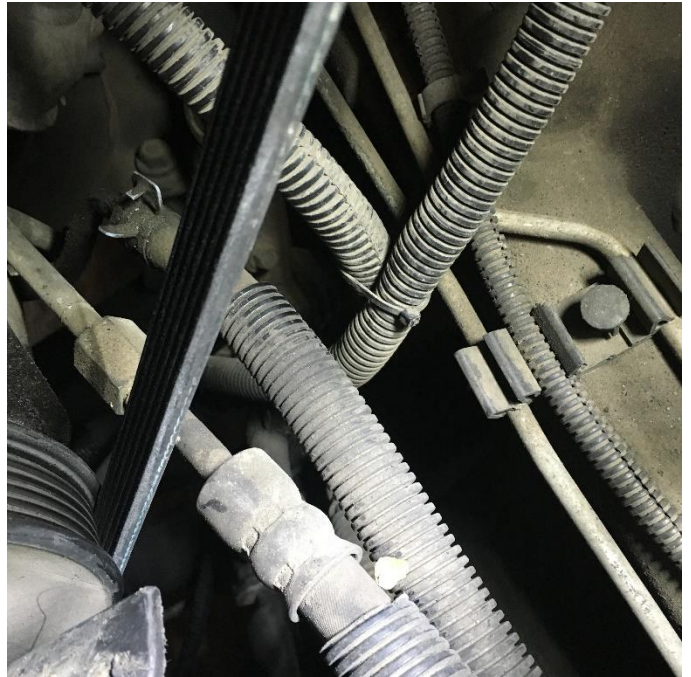
Check the oil level with your compressor on a level surface with the supplied dipstick touching the bottom "floor" of the compressor. Each mark on the dipstick represents 1oz of oil (sometimes it may be necessary to rotate the shaft on the compressor if the position of the crank assembly obstructs the 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.**



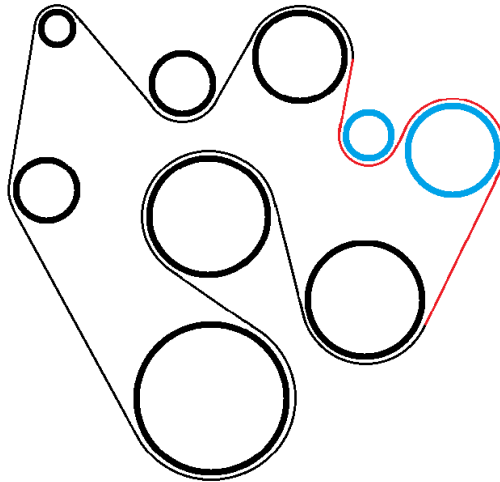
Install and tighten the 4 screws that attach the clutch. You can choose if you want the clutch wire oriented to the top or bottom. Install the 5/16 clutch retainer bolt and torque to **20-25ft lbs**. Never hammer the center bolt onto the snout. Let the screw pull it up until it seats.



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. After the compressor is mounted, it is advised to wrap a few runs of electrical tape over the area where the upper radiator hose will sit (not applicable to all models). Some models carry a throttle cable bracket, which may be mounted back through the EDC bracket and into the original threaded hole.



Choose a belt based on your factory length using the chart below. Continental Elite series belts are preferred. 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 the power steering hoses have clearance to the system. They can be bent gently by hand to make clearance, if necessary. **NOTE:** Some S10's and later model CK1500's with ABS may require clearance be made around the compressor. Make room as necessary to clear the compressor.

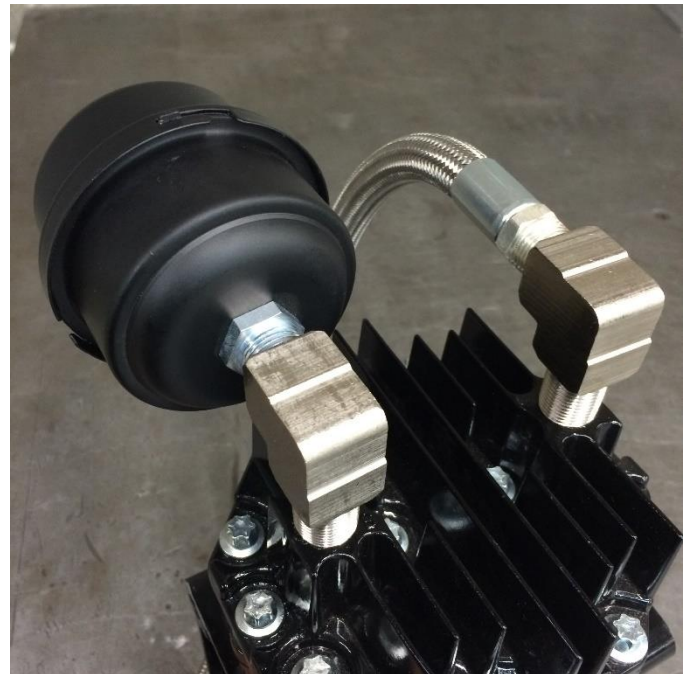


<u>Stock Length</u>	<u>New Length</u>	<u>Continental Part # (preferred)</u>	<u>Gates Part #</u>
87.35	102.26	4061017	K061016
87.59	102.50	4061020	K061020
88.01	102.92	4061025	K061025
95.59	110.50	4061098	K061099
95.75	110.66	4061105	K061105
96.58	111.49	4061110	K061110
97.18	112.09	4061115	K061120

If your belt is not listed, you can measure the outside length of your existing belt and add **14.9"** to the total to find the new belt length. Belts 1/8-inch shorter and 3/8-inch longer than the ideal number are acceptable.

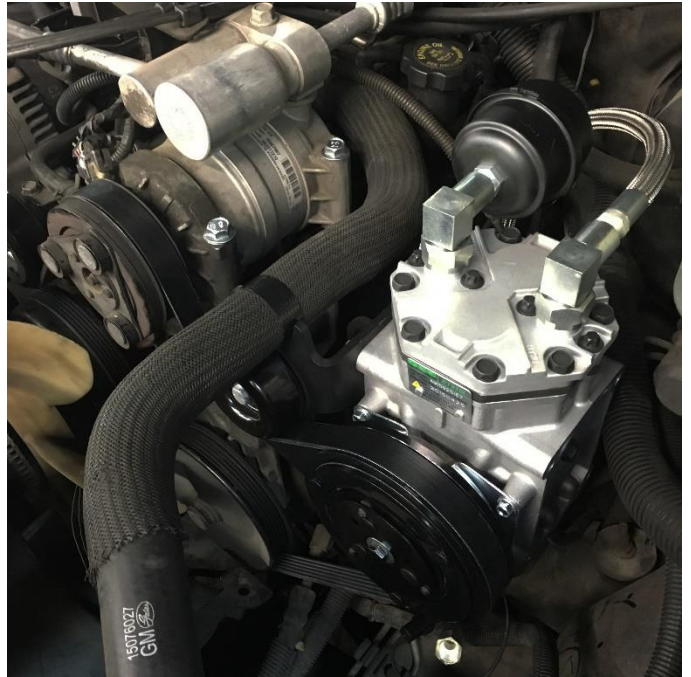


**Standard compressors:** Two 3/8 NPT head fittings are provided with the kit for direct connection to the intake filter and leader hose. Use a thread sealant such as Loctite 545 or Teflon tape to seal the connections to the filter and leader hose. Do not use sealant on the O-ring compressor threads.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





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 is 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:

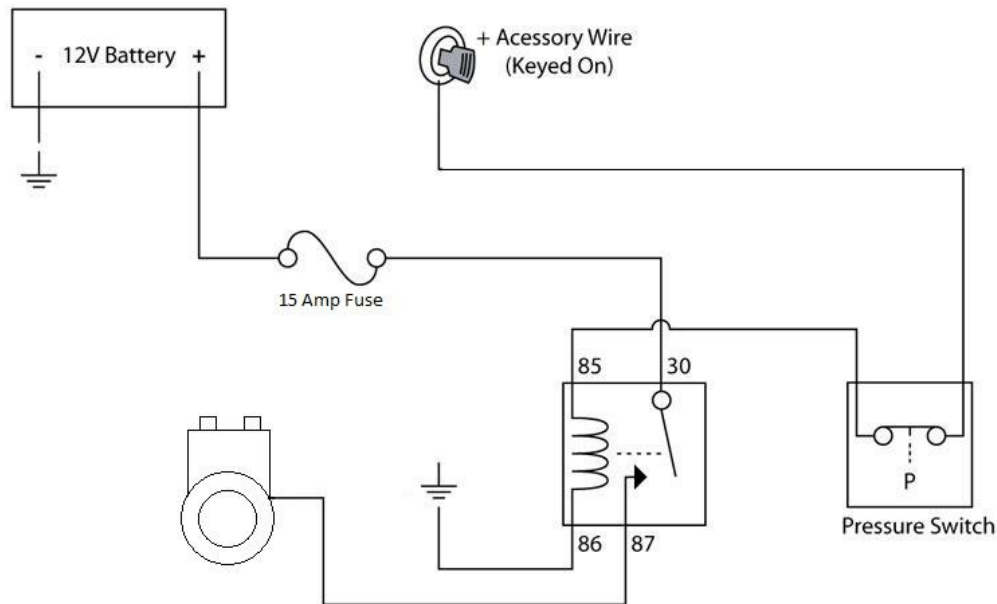
- Check valve – like the 3/8 SMC (SMCNAK4000-N03) or ½ SMC (SMCNAK4000-N04) should be used just before a moisture/oil/water trap and keeps tank pressure from leaking back through the compressor. We offer both sizes on our website [HERE](#).
- Moisture/oil/water trap – like the 3/8 SMC (SMCAF30-N03-2Z) 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.



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

