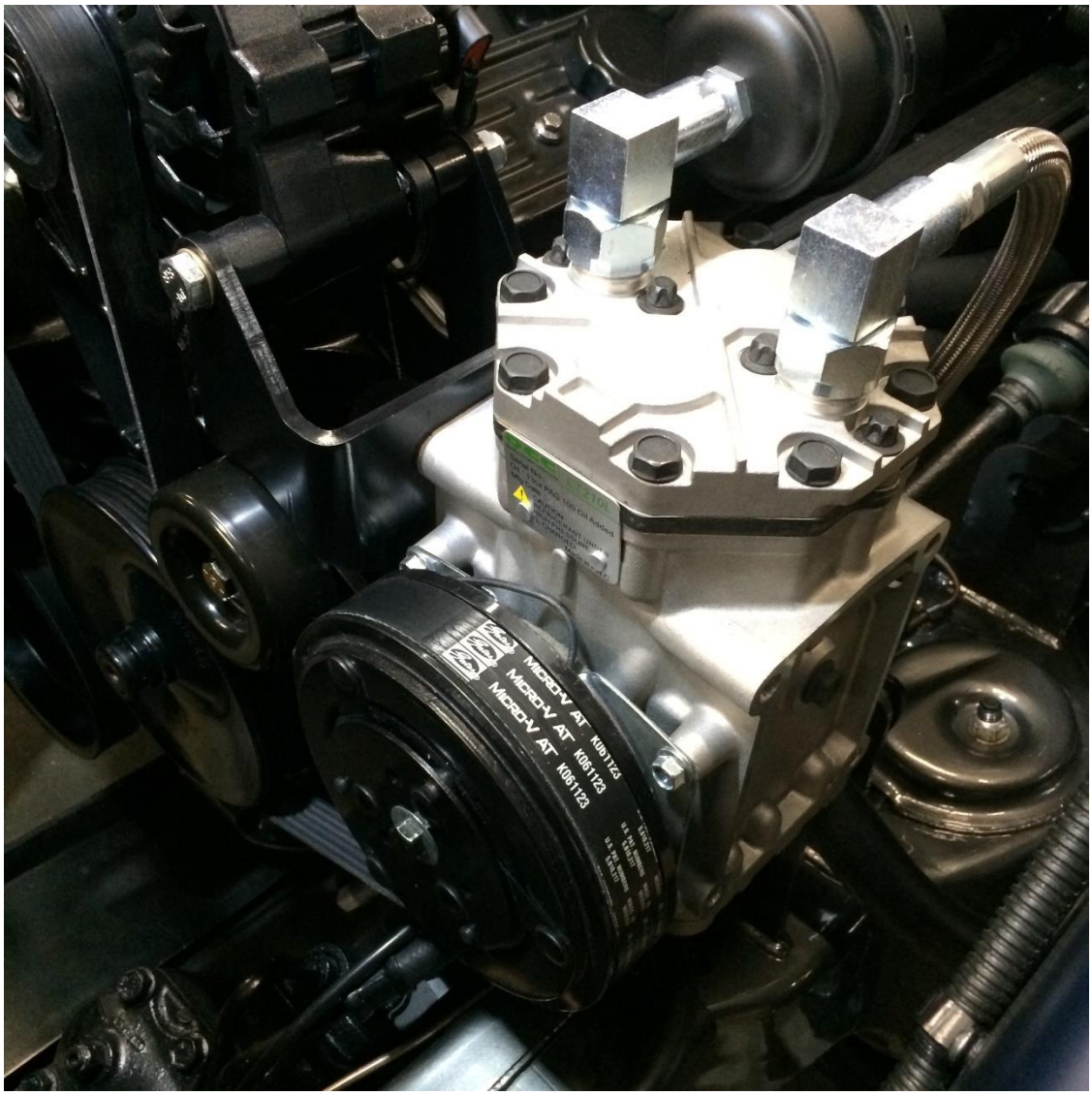
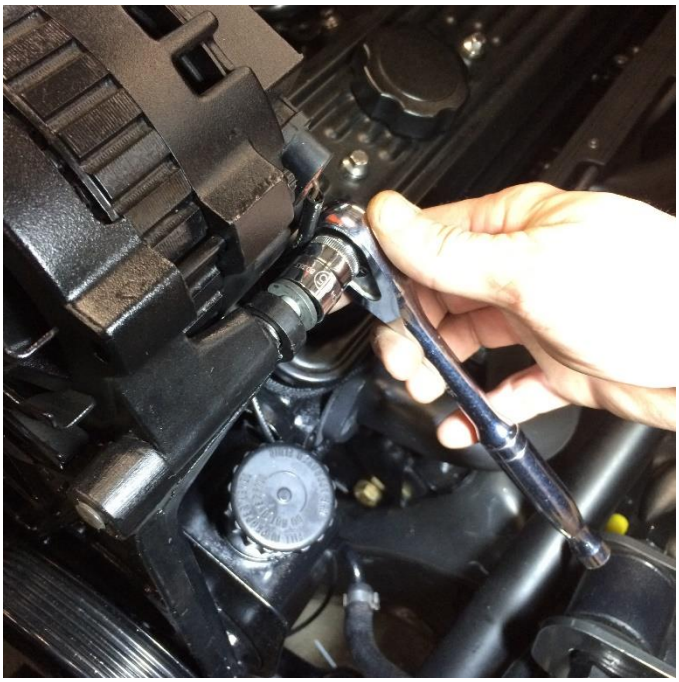
ENGINE DRIVEN COMPRESSOR --- GM 4.3, 5.0, 5.7 ENGINES

(90-95 GM fullsize trucks and S10s)

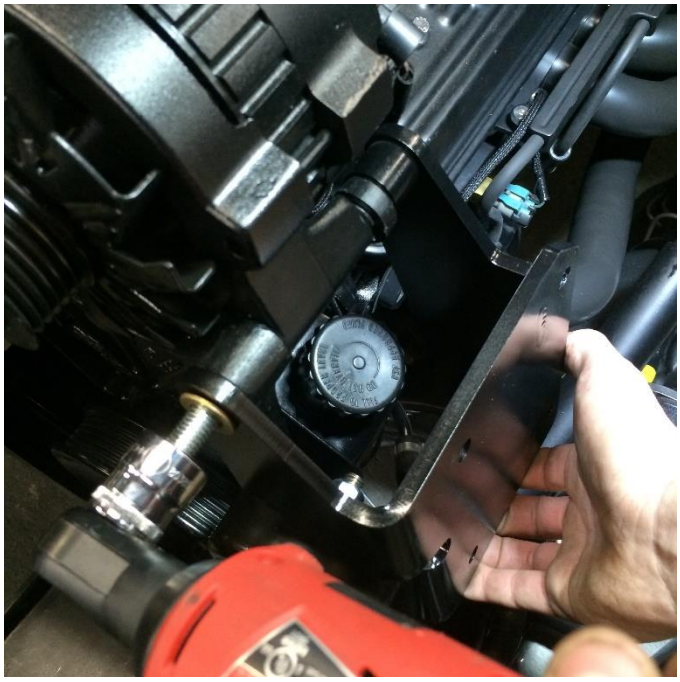
NOTE: Determine your proper belt length on **Step 14** before beginning the installation.





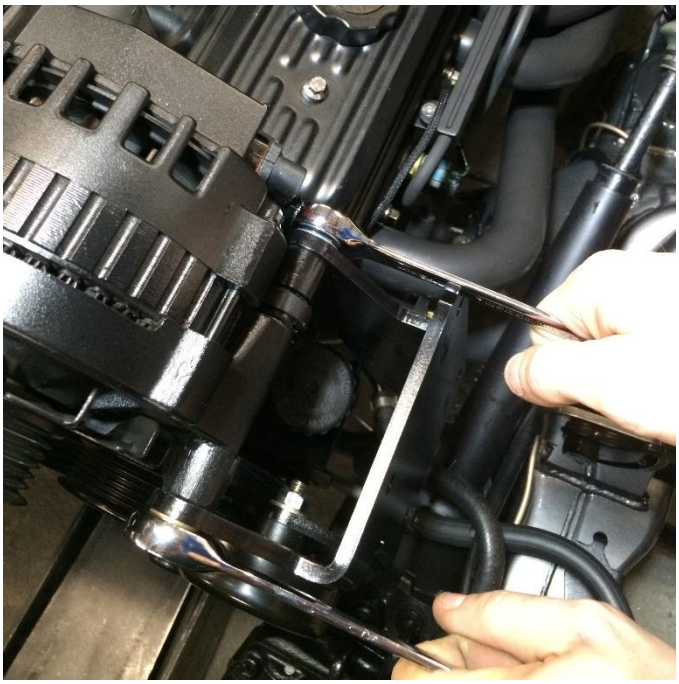
1 & 2

Rotate the idler pulley counter-clockwise to remove the belt. Then remove the factory alternator bolt.



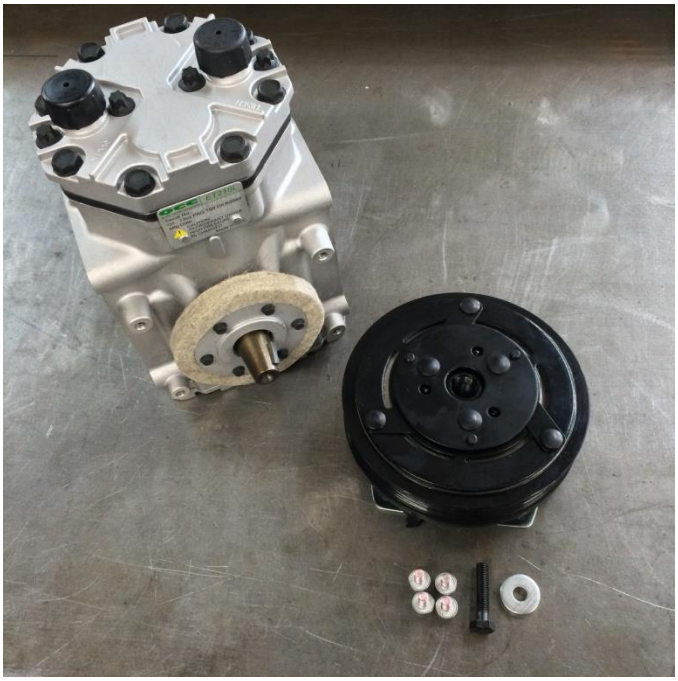
3 & 4

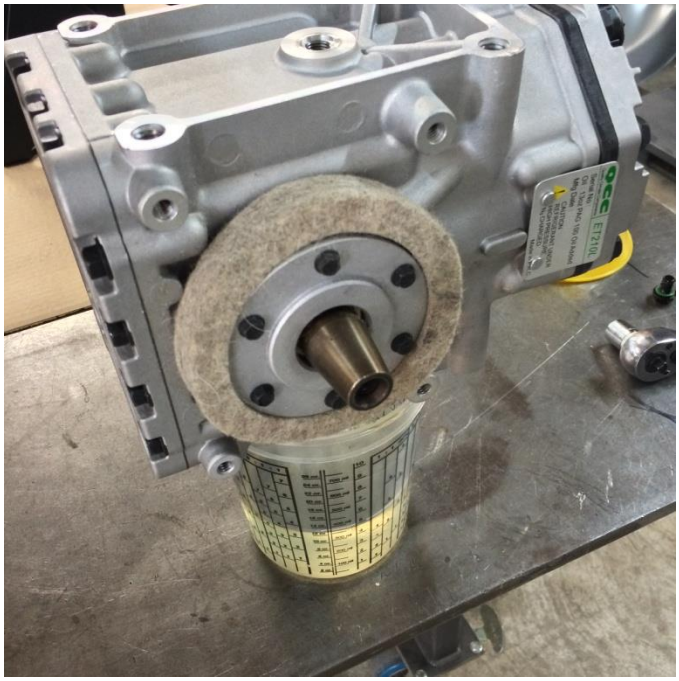
The new bracket can be installed using the supplied M10 bolt. Be careful to keep the bracket in line as it threads thru both ears of the bracket. Leave the nut off temporarily. If you have factory manifolds, the lower tab will be fastened over the stock manifold stud and alternator brace, and retained with the factory nut. If you have headers (as shown), the supplied spacer is to be used along with the 3.0” length 3/8 bolt and lock washer.



5

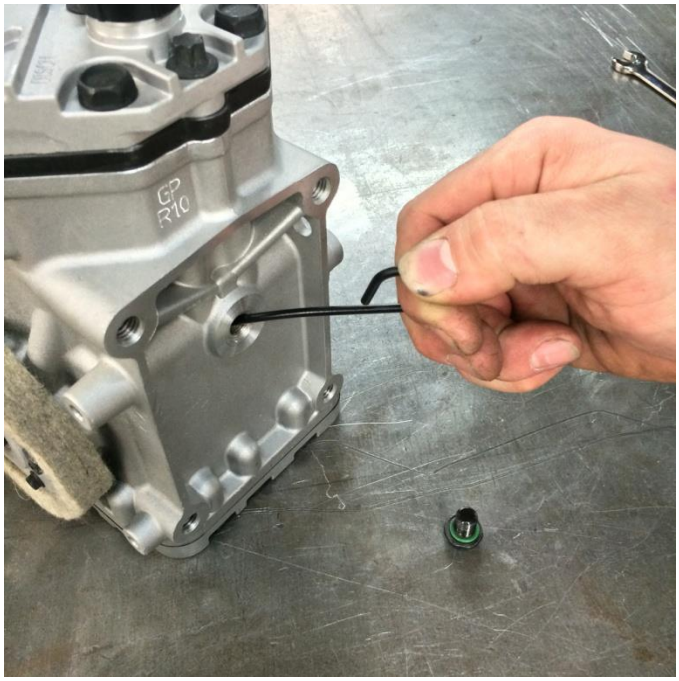
The M12 nut can be installed and the upper bolt tightened at this time. Tighten the bolt first until it bottoms out, then hold it with a wrench while tightening the nut





6 & 7

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 packaged pre-filled with AC refrigerant oil but it is recommended to run 12 oz. of SAE 30 non-detergent engine oil. Remove the screws from each side of the compressor fill ports and drain the oil.



8 & 9

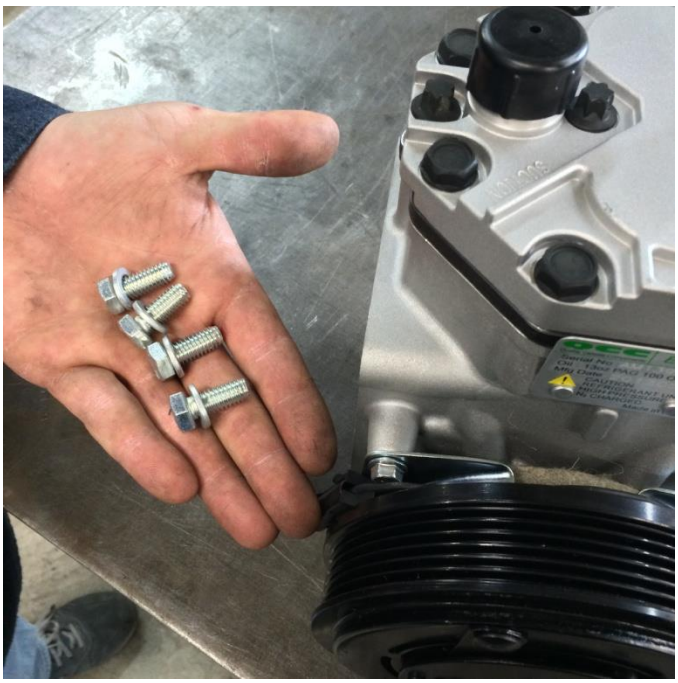
Standard compressors only: Put one plug back in and fill new oil thru the opposite port. It is recommended to use **Valvoline non-detergent SAE30** (PN 822382) **SLM compressors**: These are prepackaged with the proper synthetic compressor oil. It is recommended to add **Amsoil PCK** or **Royal Purple Synfilm Recip 100** (PN 01513) as used. **NOTE:** the side port on these compressors is not used. Instead, use the sight glass at the back of the compressor to determine proper fluid level. (If you have trouble seeing it in the vehicle, a mirror can be used.) Since the engine is on a slight angle, the oil should be at the TOP of the sight glass which will indicate 10-12 oz of oil internally. Oil can be added through the SUCTION port on top of these compressors (this is for SLM only!). Refer to SLM compressor owner's manual for more information.

IMPORTANT:

Check 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 1 oz. (Sometimes it's 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 12 oz. and minimum of 8 oz. 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 8 oz. For Standard compressors check every 2 weeks until you find your average use. For SLM compressors check every 2 months until you find your average use.**

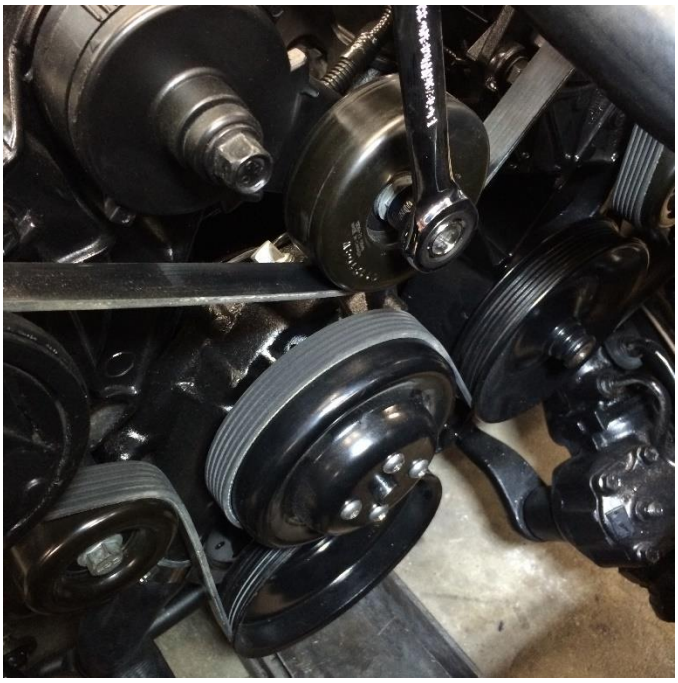
10 & 11

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 20-25 ft lbs. Never hammer the center bolt onto the snout. Let the screw pull it up until it seats.



12 & 13

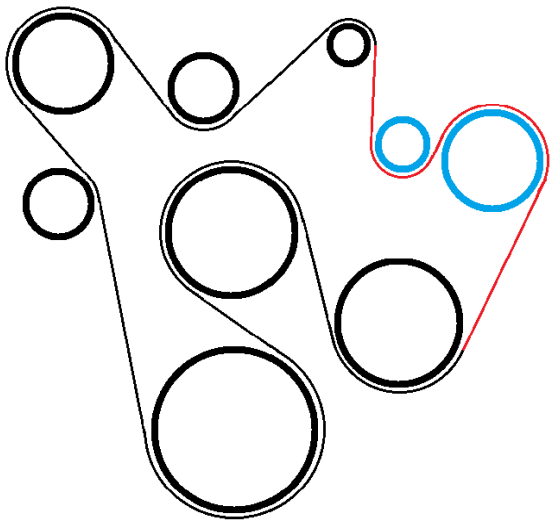
Four 3/8 bolts and lock washers are provided for mounting the compressor to the bracket. They should be tight but be careful not to strip the aluminum compressor body.

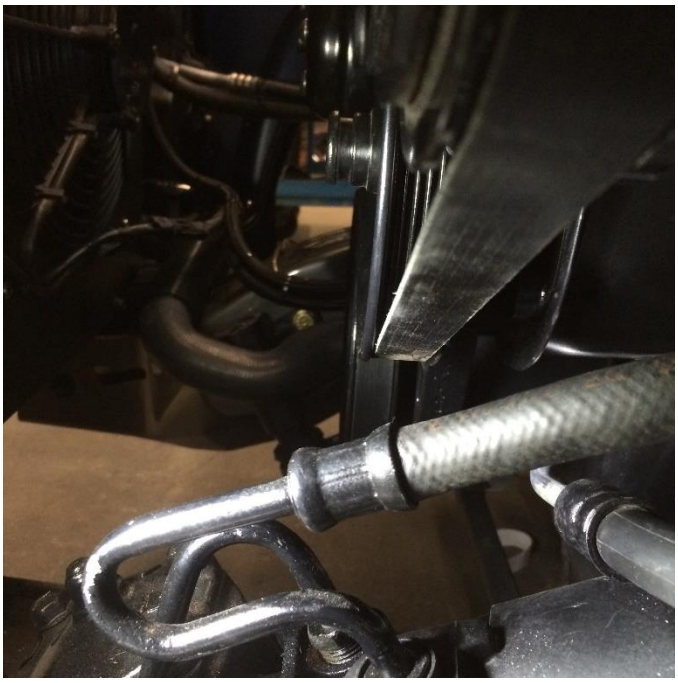


14

Your specific belt length will depend on your stock belt length, and is based off the chart below. Route the belt per the diagram below. The factory idler arm has 2 tension marks to indicate the high and low range of the factory belt. Ideally, you will want a new belt to fit of the tension marks. However, it can run at the lower mark without adverse effects. Please let us know if your application varies from the chart below. Email eric@littleshopmfg.com with your year/make/model and factory belt length/new belt length.

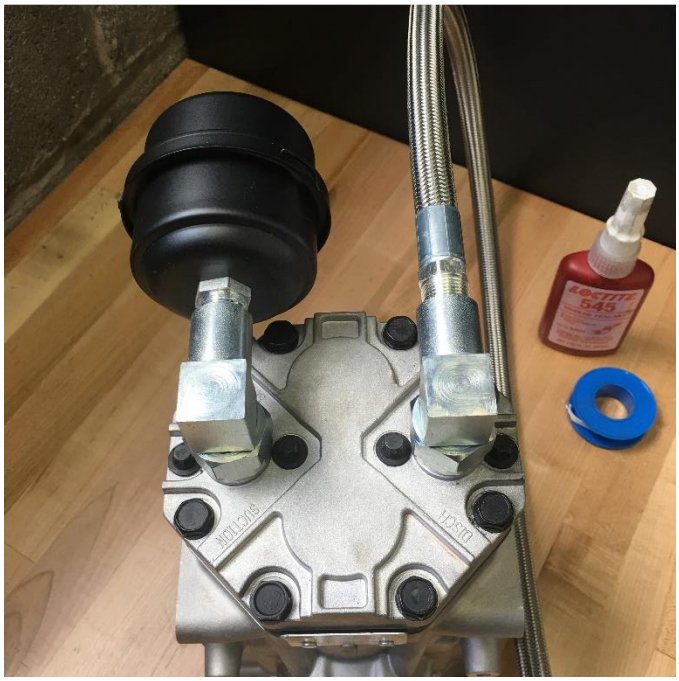
Stock Length	New Length	Continental Part Number (Preferred)	Gates Part Number
93.985	111.11	4061105	K061105
94.7	111.825	4061112	K061115
95.585	112.710	4061112	K061123
95.75	112.875	4061125	K061123
96.081	113.206	4061125	K061130
97.175	114.300	4061140	K061140
97.582	114.707	4061140	K061141
98.11	115.235	4061145	K061145
98.64	115.765		K061145
98.95	116.075		K061145





15

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 models of S10s and later models of C/K 1500s with ABS may require clearance be made around the compressor. Make room as necessary to clear the compressor.

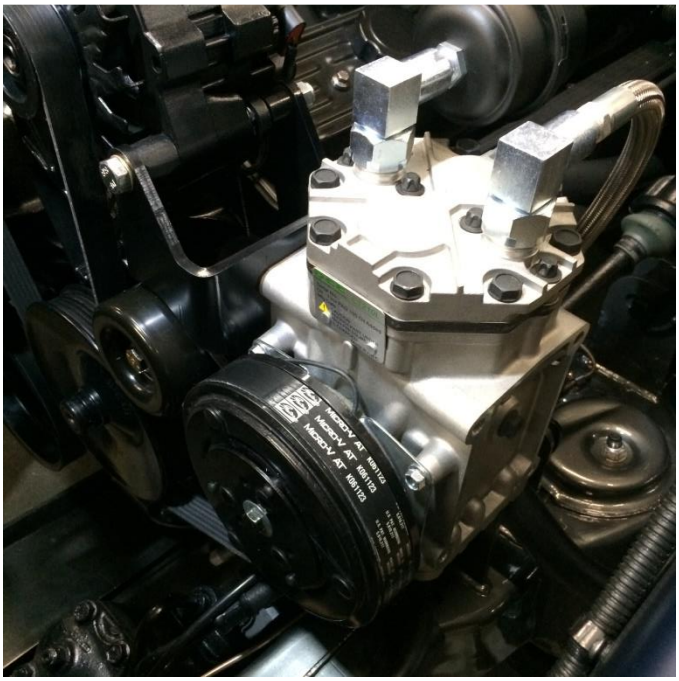


16 & 17

Standard compressors: Two head fittings are provided with the kit. They are threaded 3/8 NPT female 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. Verify the o-rings are present in the bottoms of each of the head fittings and install on the compressor. The filter/silencer will go on the port labeled “Suction”

18 & 19

SLM compressors: Both ports will get the included 3/8 NPT street elbows using PTFE tape or Loctite 545 sealant. The suction port (labeled with an "S" on top) will get an additional 3/8 adapter and then the included filter/silencer. On the discharge side, the leader hose can be threaded directly into the street elbow.



20

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. **Note:** The alternator mounts on these engines are not identical from truck to truck. If yours locates the bracket too far forward or backwards then it may be necessary to sand the alternator housing surface and add a shim under the opposite side in order to shift the compressor forwards or backwards. The single bolt hole at the exhaust would need to be modified the corresponding amount with a reamer.

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

- Oil/water trap – like 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 to do the most good. Then mount a second unit on the outgoing port of the system before it enters a valve assembly (if using for air ride).

- Check valve – like the 3/8 SMC (SMCNAK4000-N03) and the ½ SMC (SMCNAK4000-N04) should be used just before the trap and keeps tank pressure from leaking back through the compressor

- Pressure switch/relay – we usually use a pressure switch to trigger the compressor on and off. It's preferred to use the lowest range which will still get the job done, so that it will build up less heat and live longer. Do not exceed 200 psi.

- **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 8 oz. 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 it has problems, it's very likely it was improperly maintained.

*OWNERS MANUAL FOR YORK SLM COMPRESSOR

Thank you for your purchase and we appreciate your business! If you need any help at all, email orders@littleshopmfg.com