MAGNUSON SUPERCHARGERS

Hot Rod 2300 Truck/Camaro Drive Installation Instructions

WARNING!

Read the following statements before proceeding with any installation.

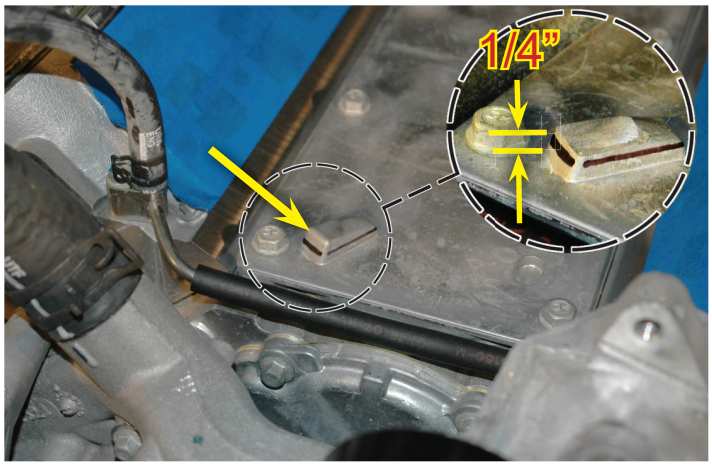
- All units have been 100% inspected and performance tested as-shipped. To maximize performance, this supercharger unit has extremely tight tolerances from the factory. Any modifications to these units, including disassembly, or mounting on non-standard engines can adversely impact these clearances and result in part failure. Magnuson Products, LLC. cannot be held responsible for part failure due to improper installation.

- **The supercharger bypass must be connected at all times.** Operating the unit without a bypass can result in supercharger failure.

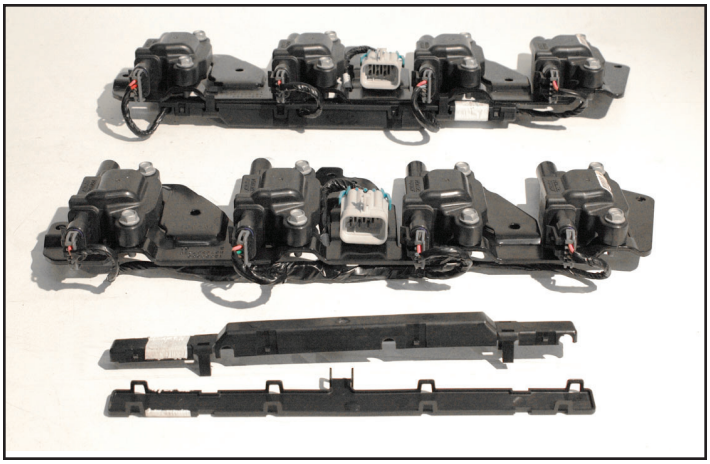
- Please note that engines modified in such a way that impacts intake manifold mounting (ie. decked heads and/or block) may result in supercharger failure. Engines that have been modified must ensure that the cylinder head angle matches the stock geometry. The interface between the cylinder heads and the intake manifold must not exceed 0.004” clearance at any point prior to application of torque to any mounting bolts. Mounting bolts should **NOT** bind during assembly to the engine. Follow the torque specifications listed at the back of this manual for installing the supercharger to the cylinder heads. **Ensure that the supercharger spins freely after you have torqued the intake manifold to the cylinder heads.**

1. If your crank pulley is not keyed you will need to pin it to prevent it from slipping.

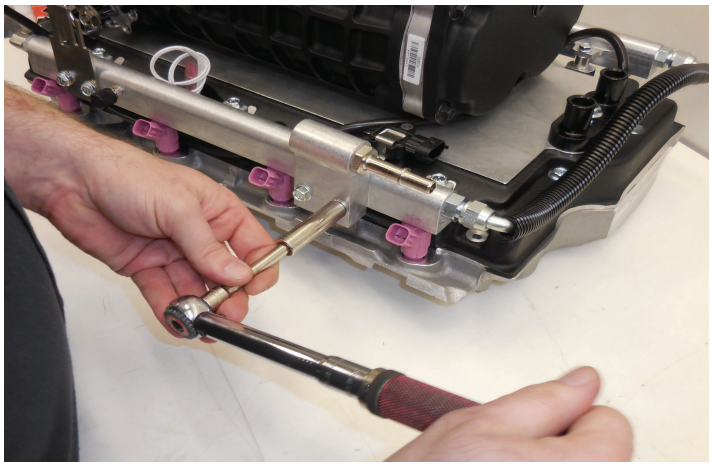
2. You may need to modify your valley cover or purchase one from Magnuson to allow clearance for the supercharger. On the valley cover shown you need to mark a line approximately ¼" up from the main surface of the valley cover around this tab as shown. Tape off all intake ports to ensure no grinding gets into them or any other openings of the engine. Vacuum debris completely to ensure no contamination remains. Use a die grinder or other suitable tool (even a file will work) to grind down the tab to the line as shown in the inset photo.



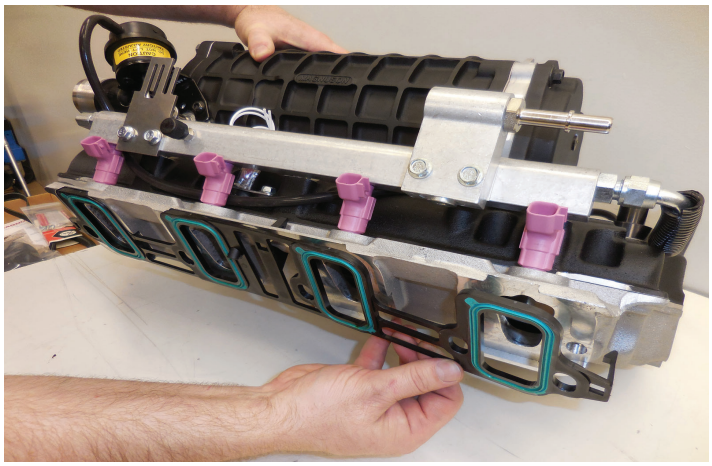
3. You may need to adjust the locations of your coil packs to allow enough clearance for the supercharger.



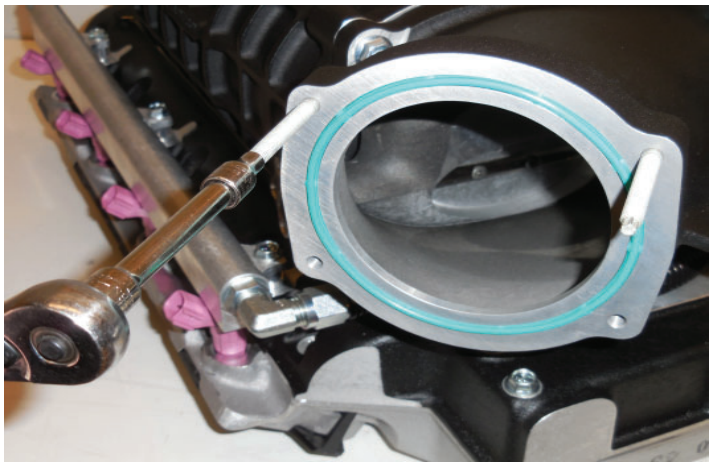
4. You will have to purchase the appropriate sized injectors for your engine and install them into the provided fuel rails. You will need to decide where to install a fuel manifold and the appropriate fuel balance crossover hose and fuel rail plugs.



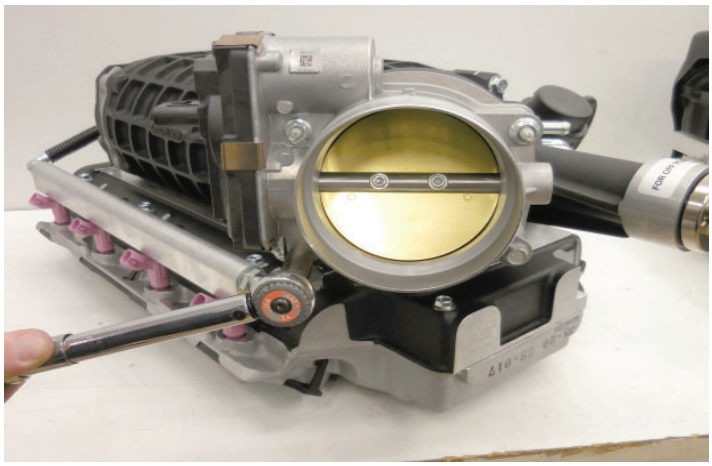
5. Install the appropriate OEM gaskets onto the new supercharger manifold to match your engine.



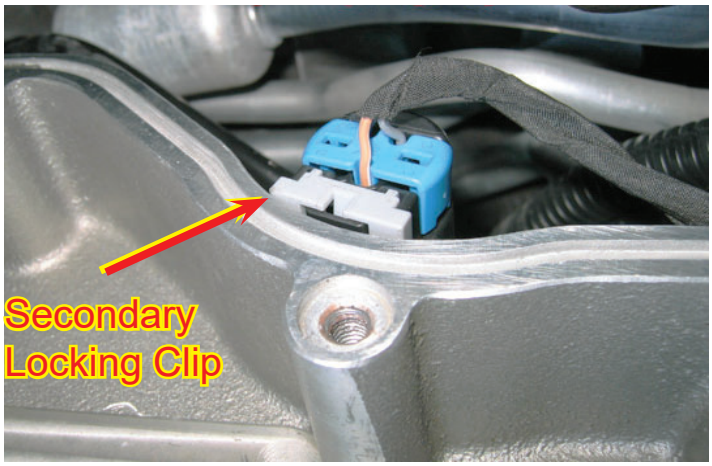
6. **The throttle body bolt pattern is 104mm X 70mm with a 90mm diameter bore which can accommodate many common LS and LT throttle bodies.** Install two OEM studs into the supercharger inlet flange using a E5 Torx socket. The studs can be purchased with nuts and bolts in the GM Bolt/Screw Kit, Throttle Body (GM PT#89017591). Then press the OEM throttle body gasket (GM PT#12589235) into the inlet groove as shown.



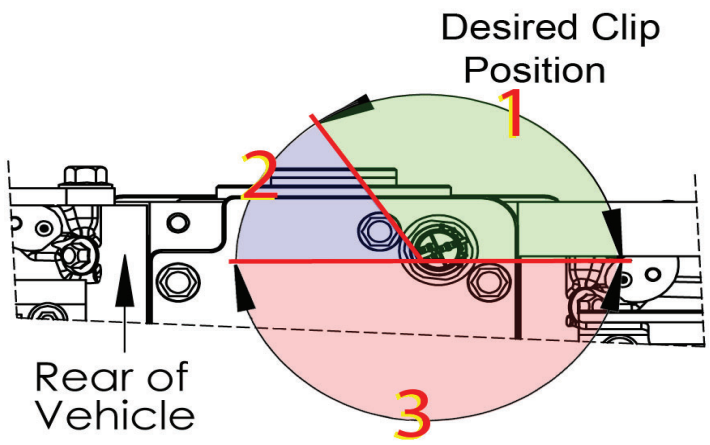
7. Install the throttle body using the OEM hardware and torque to 108 in-lbs. with a 10 mm socket wrench. Verify your torque wrench settings.



8. The secondary locking clip on your oil pressure sensor connector may cause interference with the supercharger assembly. If you have previously removed the sensor, you should wrap the sensors threads with Teflon tape or paste before reinstalling. Refer to the next step for further positioning information.



9. This illustration shows the top view of the oil pressure sensor installed on the engine. If the secondary locking clip is not in position #1, you will need to re-clock it (rotate). If the secondary locking clip lands in position #2, you may increase the installation torque to rotate into position #1. You should not exceed 24 ft-lbs.



10. If the secondary locking clip lands in position #3, you will need to remove the sensor and re-clock it using a copper washer as a shim. Before reinstalling, wrap the sensor's threads with Teflon tape or Teflon paste. Reinstall the sensor and shim into position #1 by torquing to 15 ft-lbs. minimum to 24 ft-lbs maximum.

11. You may need to remove the vent pipe shown for the supercharger installation, and reinstall the vent pipe afterwards.

12. Remove the tape from the intake ports. Remove any loose parts, or tools from the manifold valley. Spray silicone or some mild soap and water solution on cylinder head surface to lubricate. This makes the intake manifold slide around a little to help line up the holes. (Do not use anything that will damage the intake gaskets.)

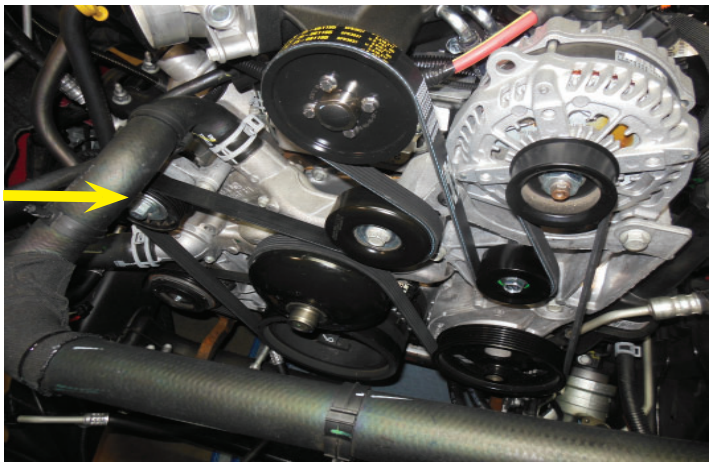
13. With the help of an assistant or two, carefully lower manifold assembly into place. Use care to not damage gaskets.

14. Ensure that the supercharger is sitting flat on the intake surfaces, and that no obstructions are present.

15. Torque all ten bolts gradually and evenly to a torque of 108 in-lbs. following the numerical order given on the torque diagram at the back of this manual. Note: Make sure your wrench is set to torque to in-lbs, not ft-lbs.

16. Install the appropriately sized pulley for your application following the torque diagram at the back of this manual. Torque to 108 in-lbs.

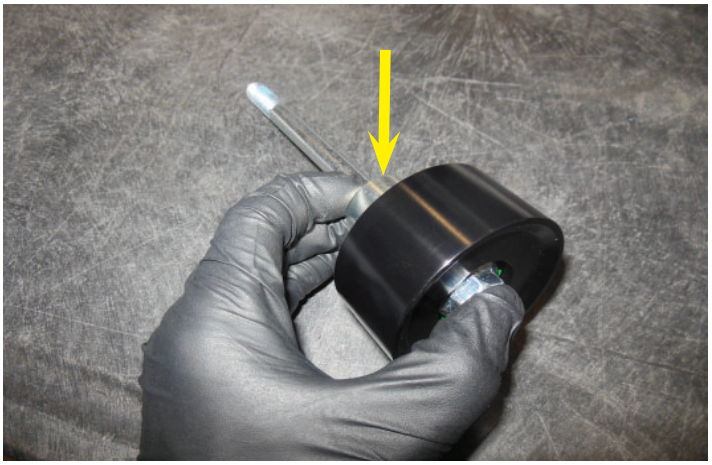
17. You will need to purchase a tensioner assembly for your belt. If you plan to run accessories from your drive belt the following instructions will show you one option from our 6.0L HD Truck installation manual. The OEM tensioner is shown at the arrow here.



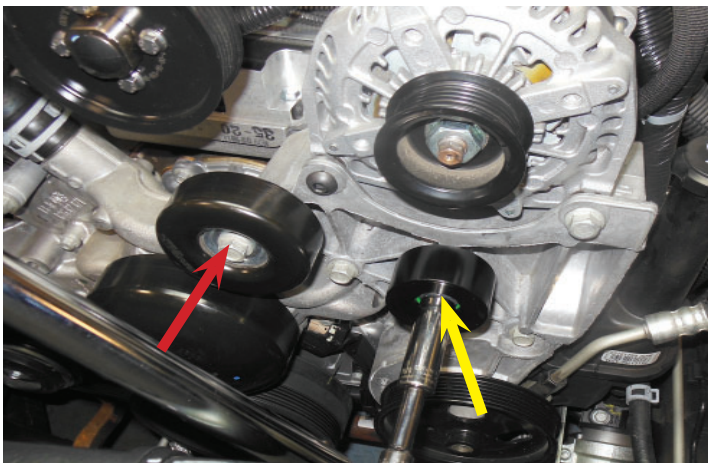
18. The following 8 steps were taken from our 6.0L HD GM Truck installation manual. Remove the OEM bolt shown with the arrow.

19. You will need to purchase the parts shown. Apply Loctite 242 to the threads on the bolt.

20. Slide the bolt through the pulley on the side without the snap ring as shown and slide the spacer with the smaller side inserted into the bearing where shown with the arrow.

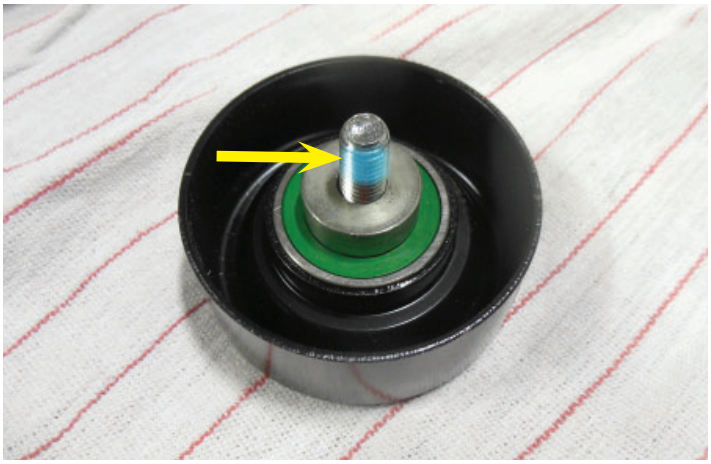


21. Install the idler assembly from the last step in the location where the OEM bolt was removed earlier (yellow arrow) and torque to 35 ft-lbs. Remove the OEM idler shown with the red arrow.

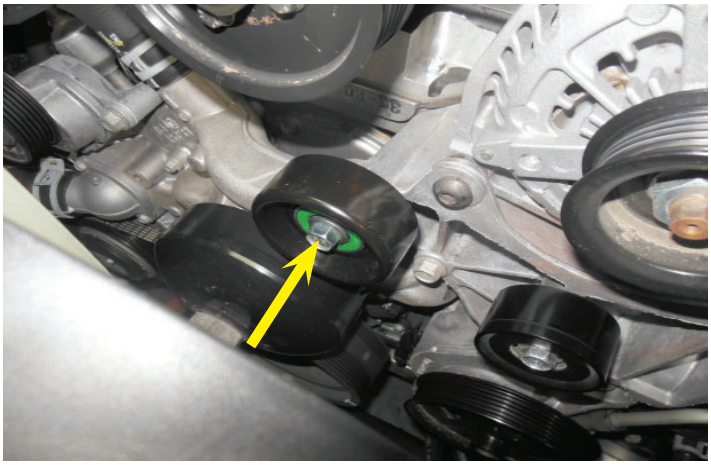


22. You will need to purchase the following parts.

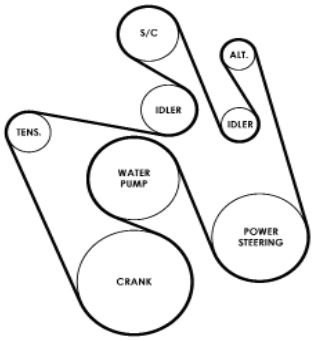
23. Assemble the provided parts in the order shown in the photo with the smaller stepped end of the spacer into the bearing. Apply Loctite 242 to the threads on the bolt.

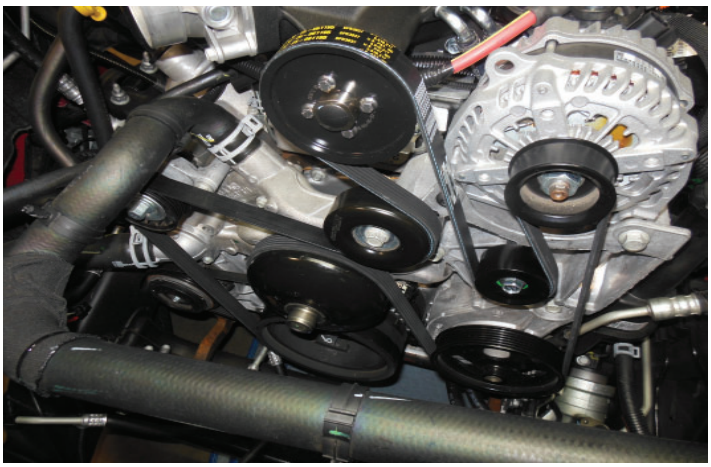


24. Install the provided idler pulley assembly from the last step in the location indicated with the arrow. Torque to 35 ft-lbs.

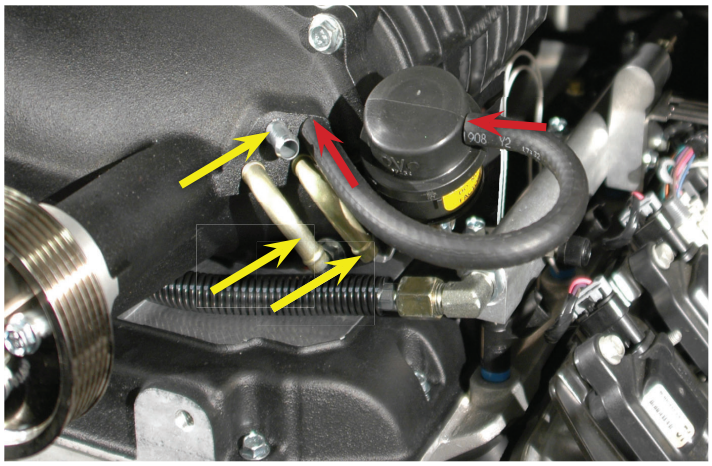


25. You will have to purchase the belt shown in this photo. Route the belt as shown here.

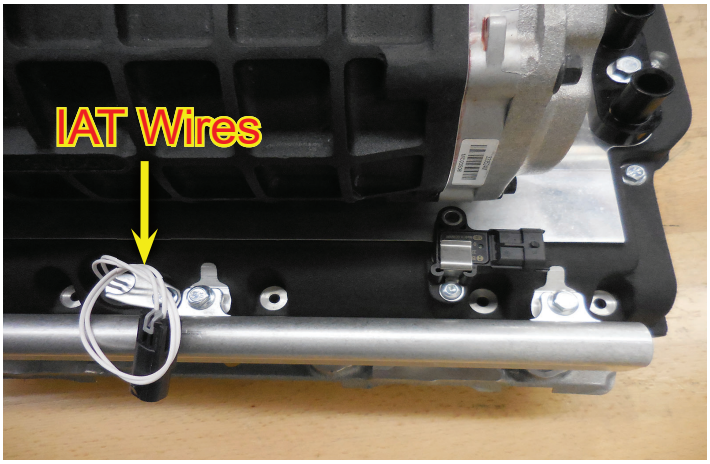




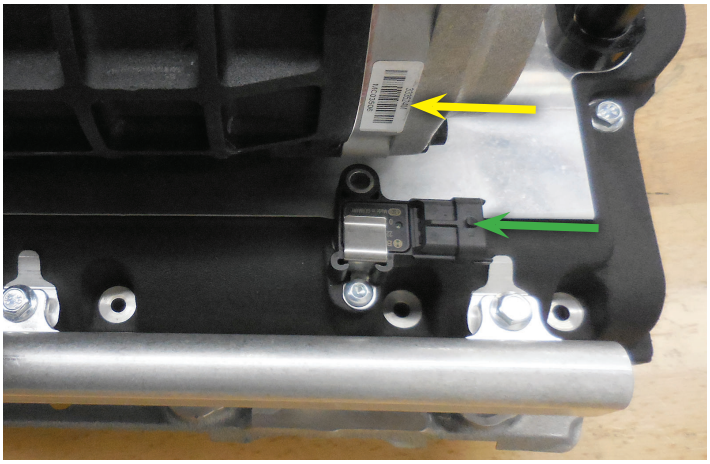
26. The 3/8” hose barbs (yellow arrows) shown here can provide vacuum for various connections like PCV, EVAP solenoid, or brake booster. Cap any unused hose barbs. The supercharger bypass actuator hose must always be connected as shown (red arrows).



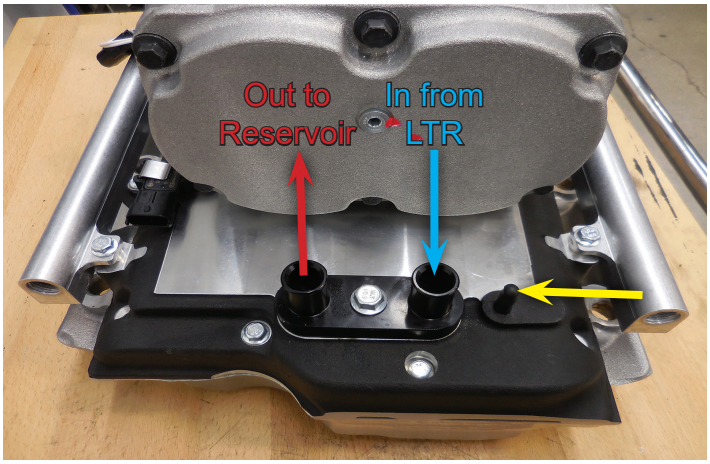
27. An IAT sensor is provided with the wires shown at the arrow location. You will have to plug these into the appropriate connections for your application.



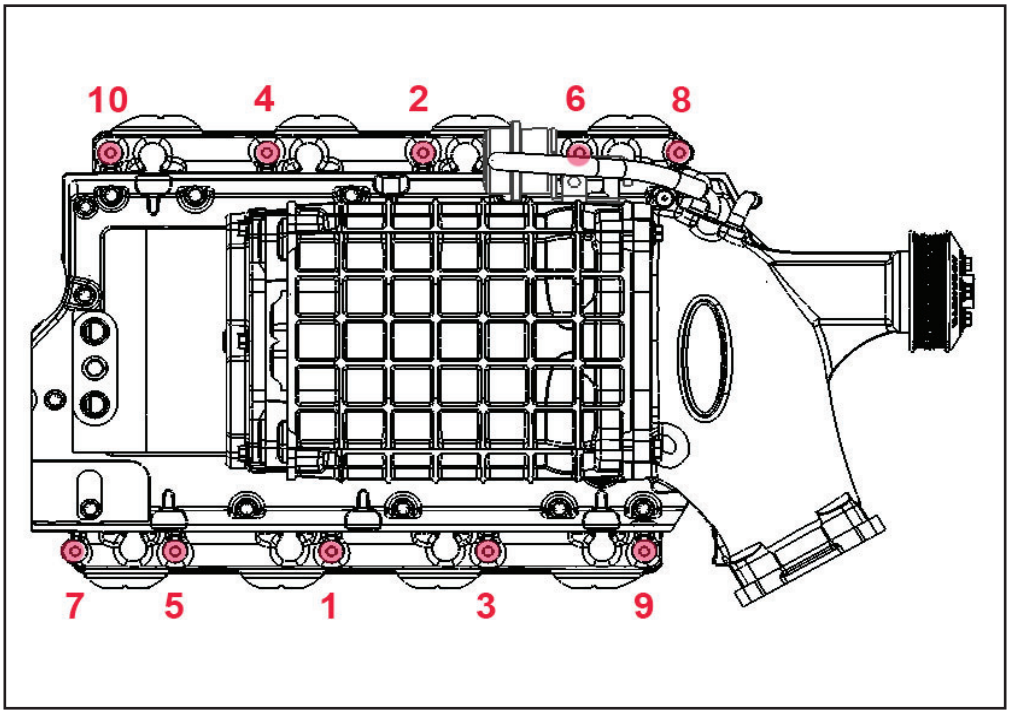
28. Plug in the MAP sensor at the green arrow location. The serial number for your supercharger can be found at the yellow arrow.



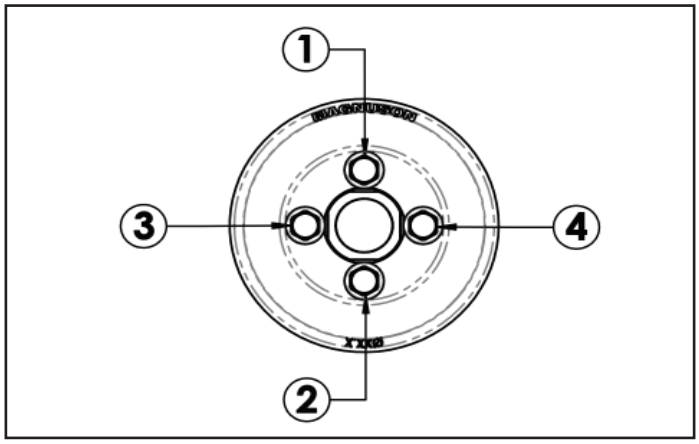
29. The charge air cooler connections are labeled here. The right side hose barb receives cool fluid from the Low Temperature Radiator (LTR). The left hose barb sends hot fluid to the reservoir. For further guidance on proper intercooler plumbing follow the “Hot Rod Universal Intercooler System” instructions (P/N 89-89-62-009) which can be found on our website.
Note: If you are running a boost gage you can use the hose barb at the yellow arrow.



Torque Specifications



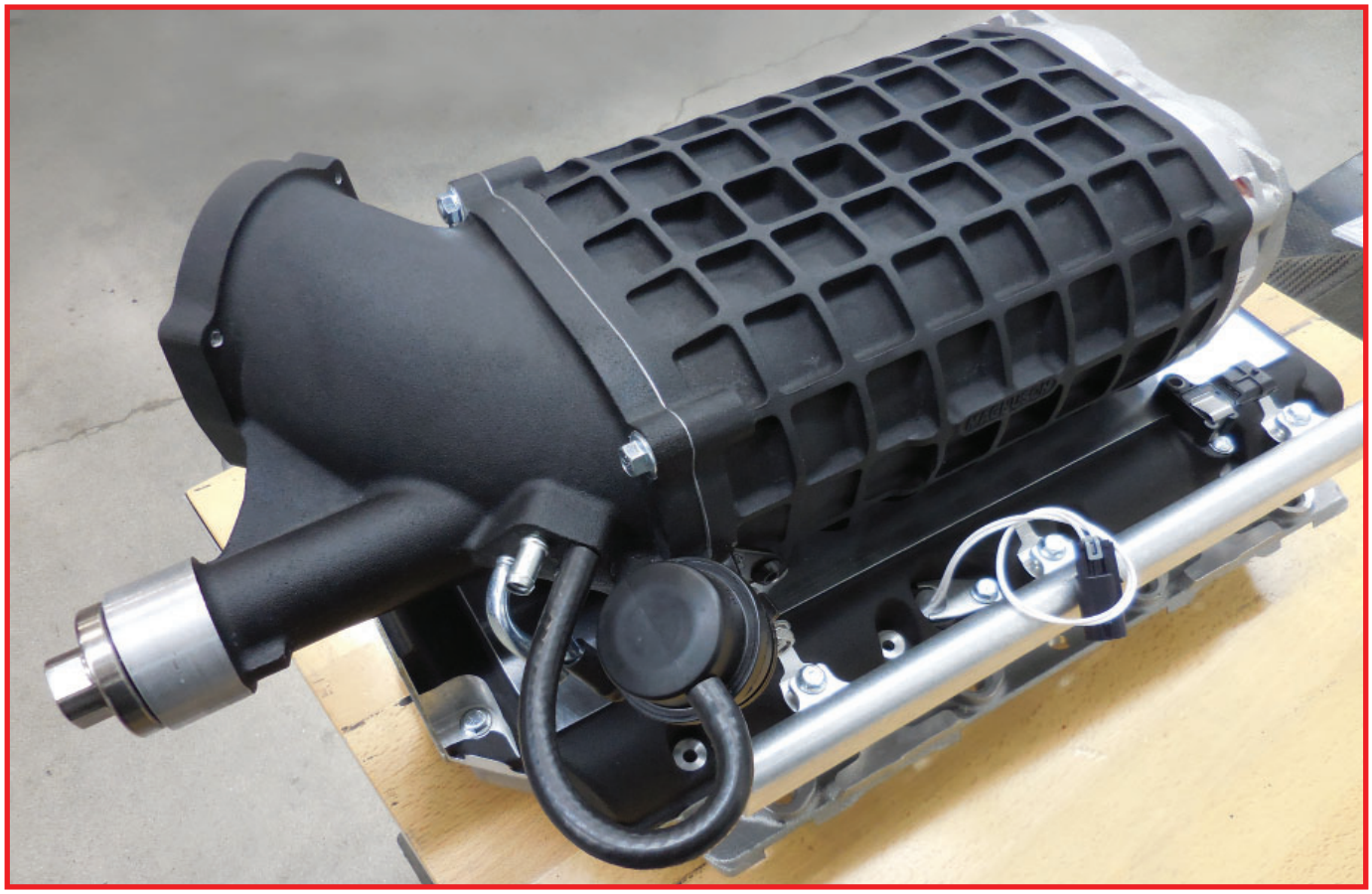
Supercharger Torque Order (108 in-lbs.)



Supercharger Pulley Torque Order (108 in-lbs.)

Notes

Notes



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