

# MAGNUSON

## SUPERCHARGERS

### TVS2650 Cog Belt Tensioning and Torque Specifications



**WARNING!**



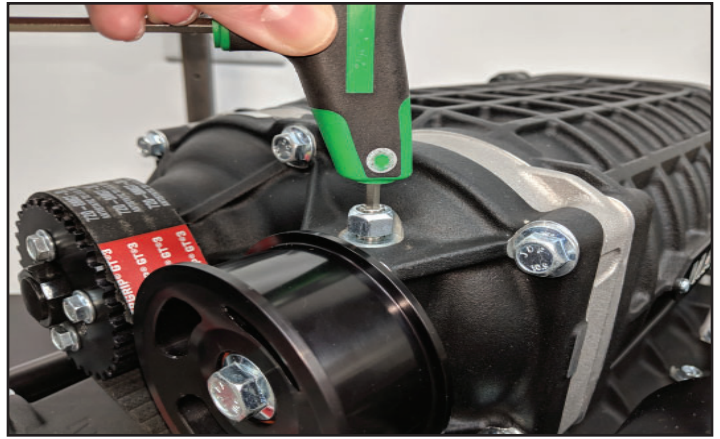
**Read the following statements before proceeding with any installation.**

- 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.**
- Pressure check your intercooler for leaks at 20 psi maximum every 20 quarter mile passes if you are not using corrosion inhibiting coolant.

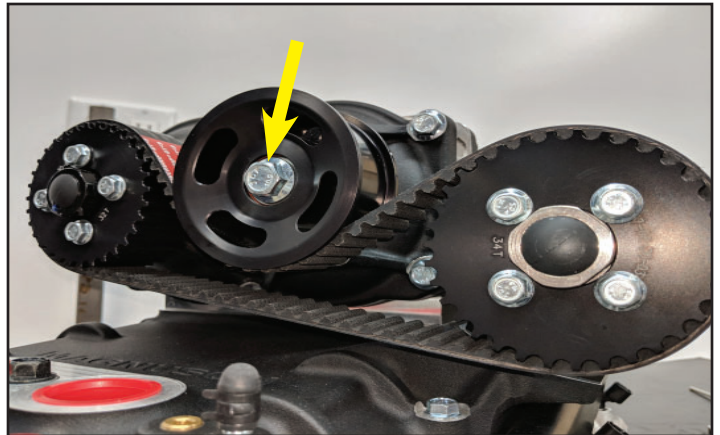
1. When replacing the cogged belt loosen the lock nut for the set screw. The lock nut has deformed threads, and it should **NOT** feel loose on the set screw.



2. Once the locknut is loosened you can back the set screw off.



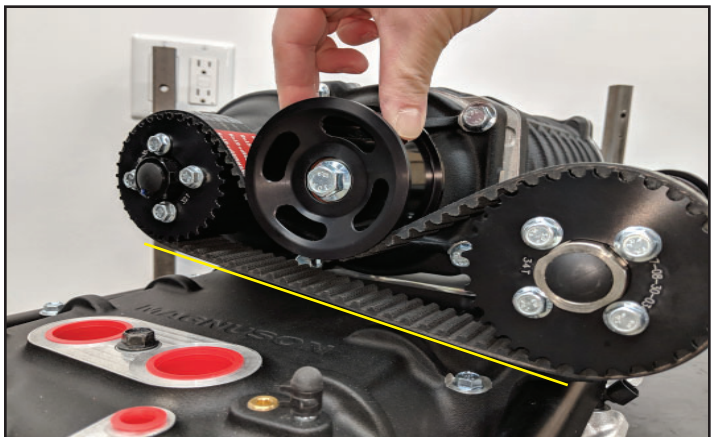
3. Remove the idler bolt shown with the arrow and apply Loctite 242 to the threads. After the idler is removed the sliding nut in the drive cover will fall below the belt. At this point you can easily remove the belt for replacement, or swap the cog pulleys between over and under-drive configurations.



4. When reinstalling the “Idler Slide Nut” ensure that the rounded end faces up as shown in this photo. Reinstall the idler pulley with the idler bolt at this time.



5. With the idler pulley bolt loosened and the new belt installed push down on the pulley until the lower span of the cogged belt just starts to create a straight line as shown with the yellow line. This should get you close to the correct belt tension. **Torque the idler bolt to 25 ft-lbs at this time.**



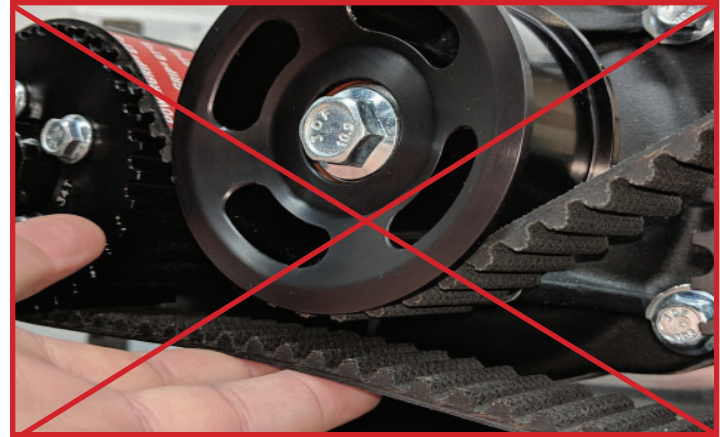
6. Press up on the lower belt span to ensure that it does not make contact with the upper belt. The upper and lower belt teeth should be about 4mm apart.



7. If the lower belt overlaps the upper one, as shown here, further adjustments will be needed.



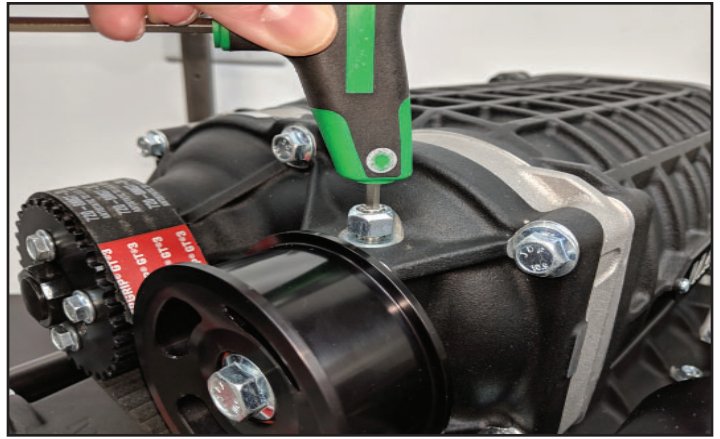
8. In this image the belt is too tight. Space between the upper and lower cog teeth is greater than 4mm.



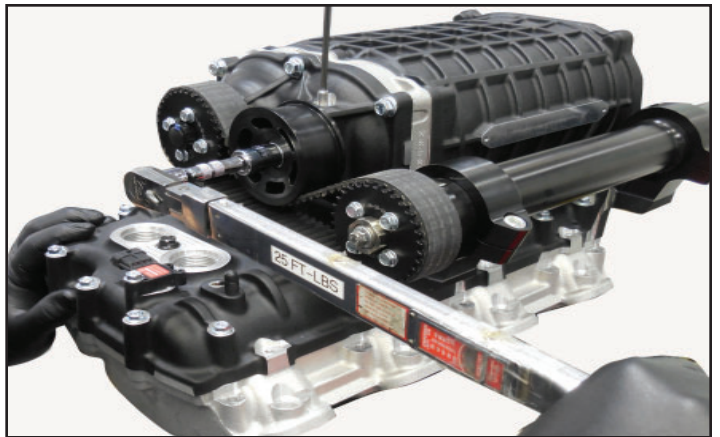
9. If you have removed the set screw and locknut you should pre-install the locknut with the rounded head on top and flush to the top of the set screw.



10. Tighten the set screw so it bottoms out against the Idler Slide Nut. If you need to adjust the belt tension you can loosen the idler nut and rotate the set screw 1/4 turn more or less to get the belt tension correct.



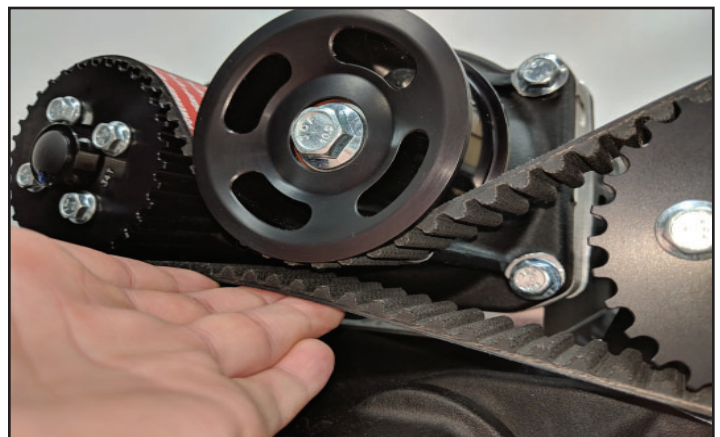
11. **Double check the torque for the idler bolt is at 25 ft-lbs once the belt tension is properly set.**



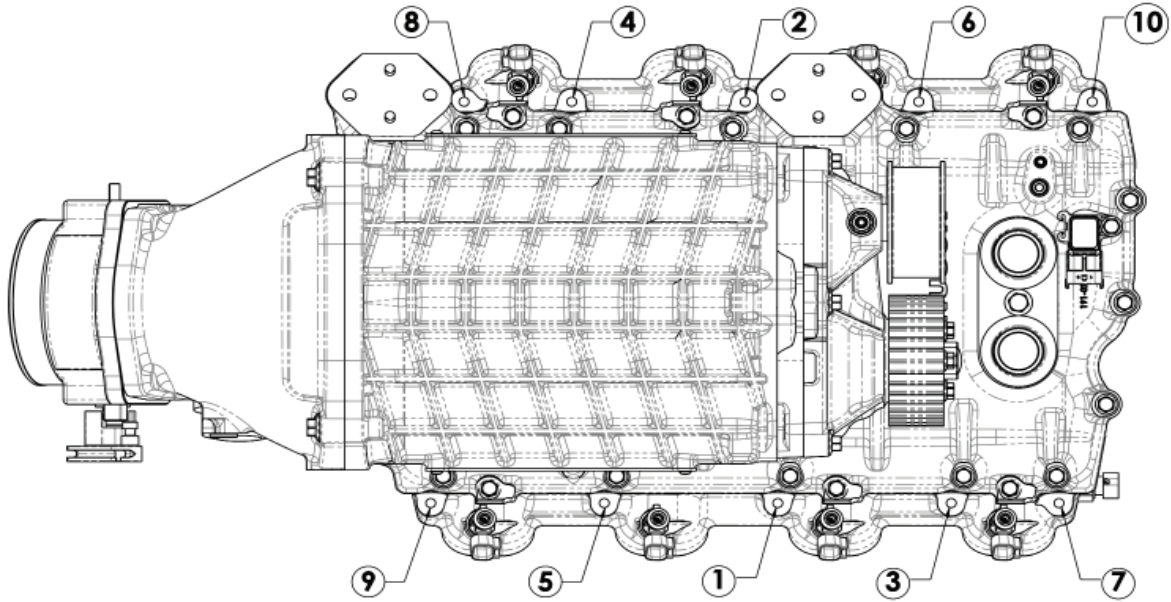
12. Once the idler bolt is torqued hold the set screw in place while you tighten the lock nut.



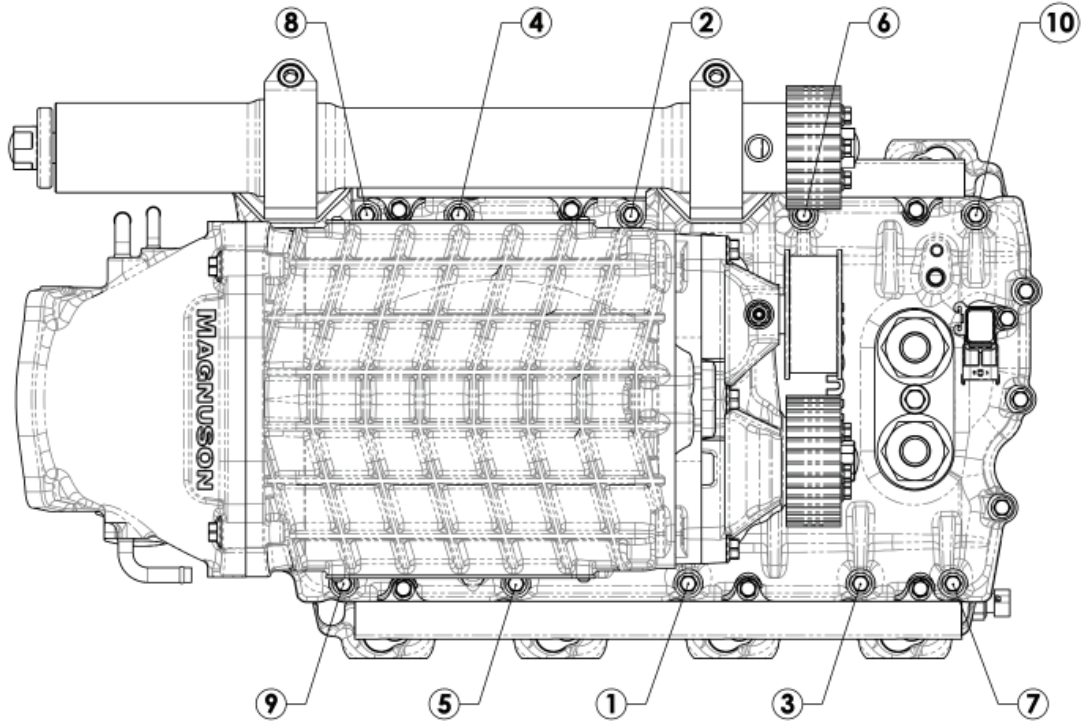
13. Check the tension on the belt once more. Again the upper and lower belt teeth should be about 4mm apart. If the belt tension is not correct repeat the earlier process until it is. **It is critical to make sure the tension is set correctly. Improper belt tension will lead to belt failure.**



# Torque Specifications

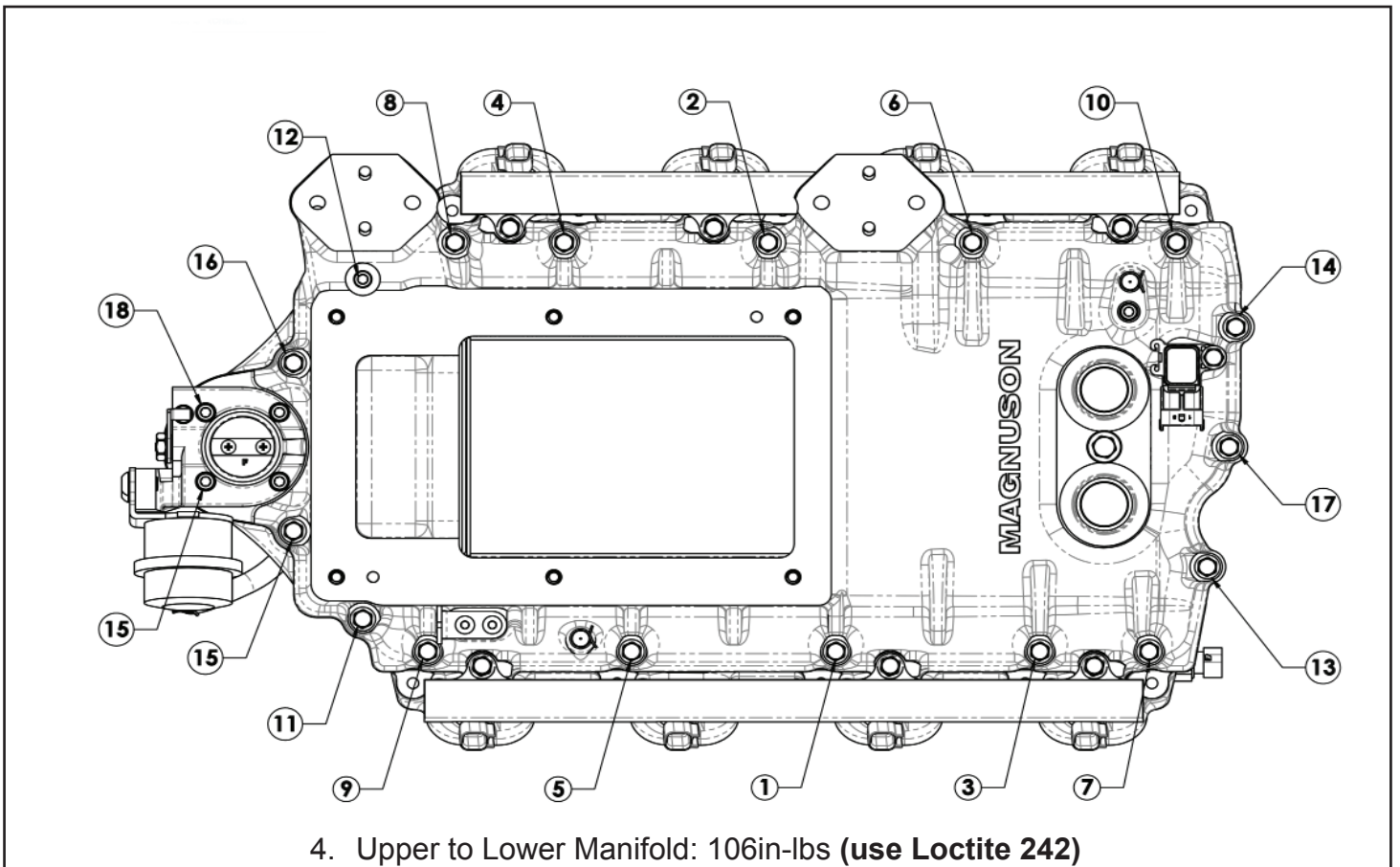
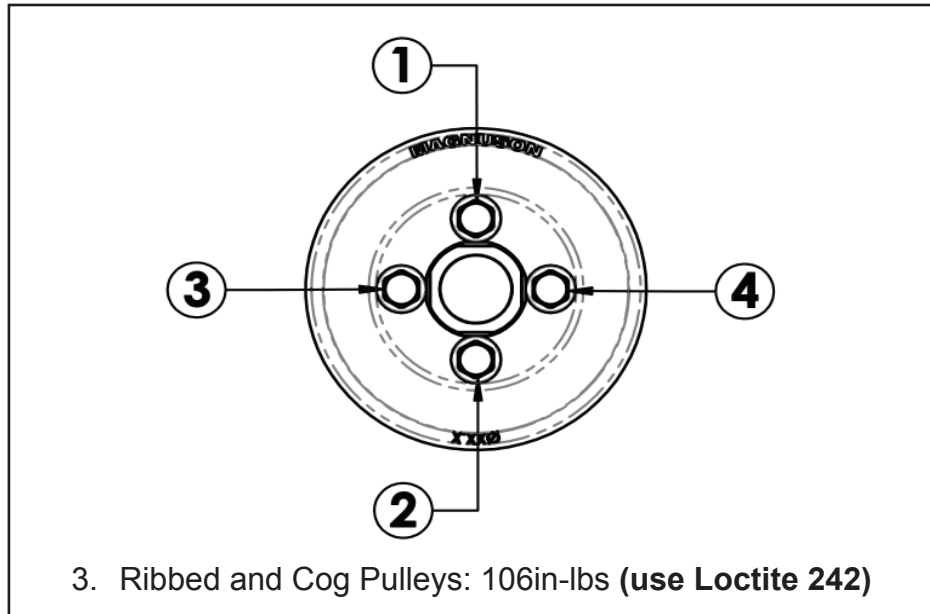


1. Supercharger to Cylinder Heads: 106in-lbs (**LS7/LSX**)

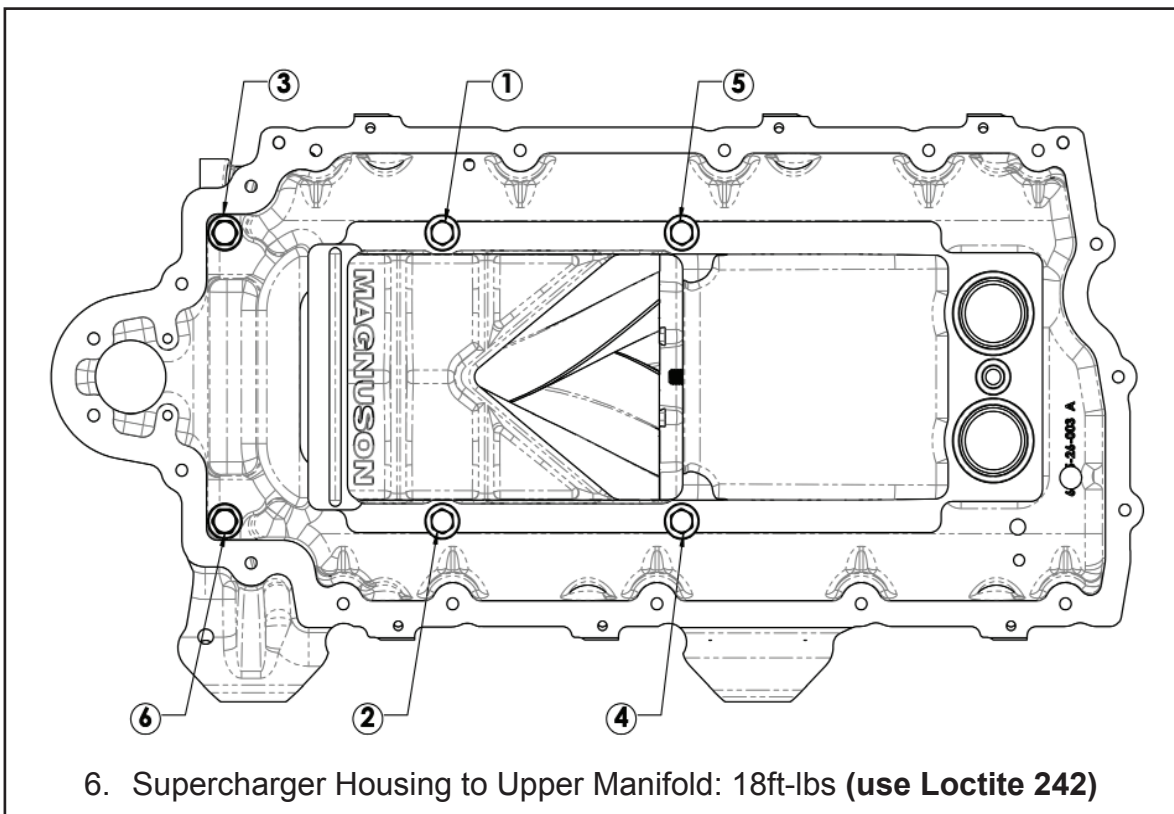
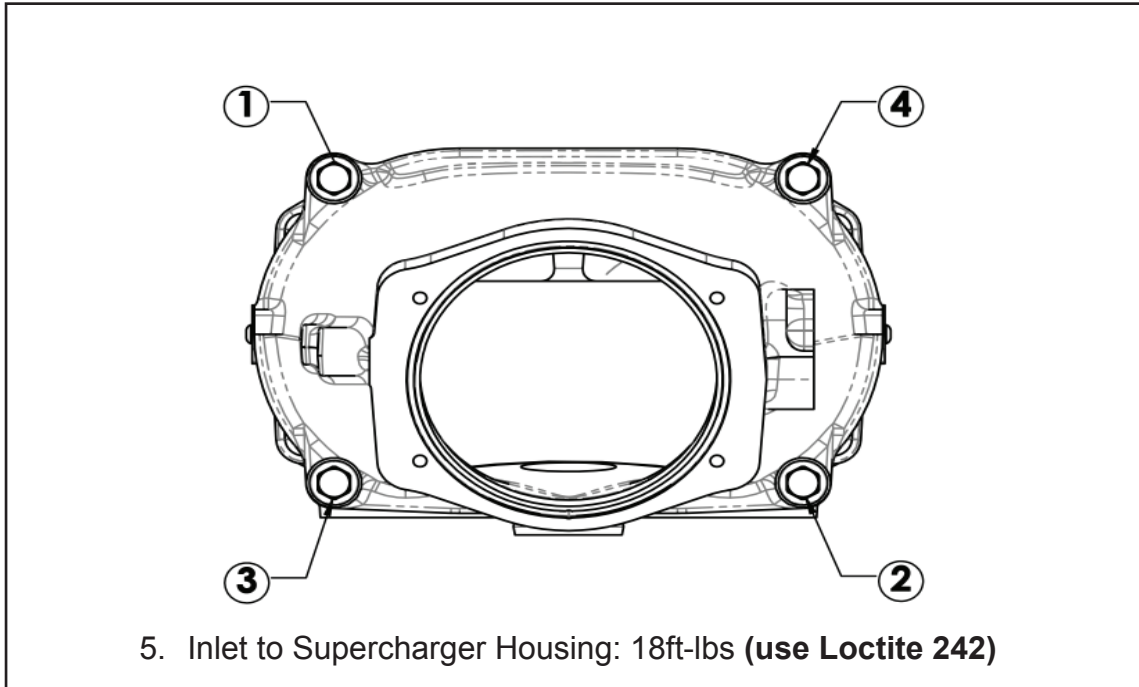


2. Supercharger to Cylinder Heads: 106in-lbs (**LS3/LSA**)

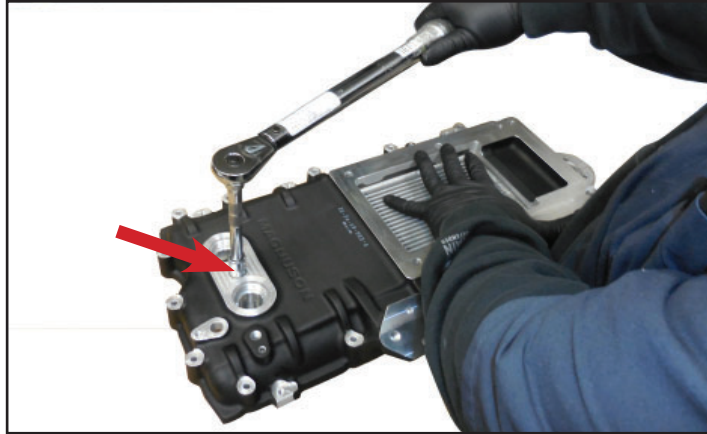
## Torque Specifications Continued



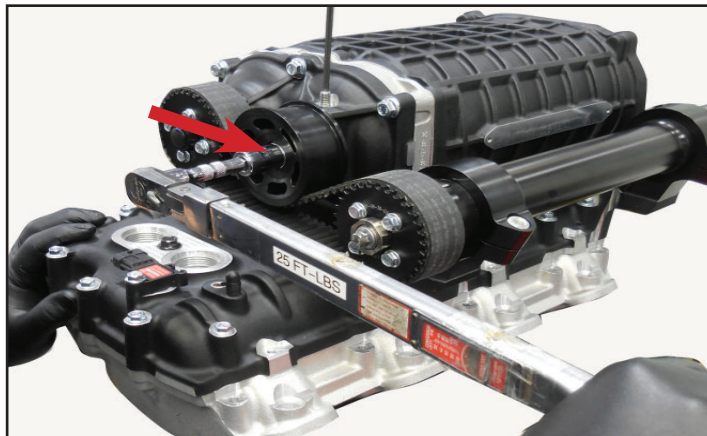
## Torque Specifications Continued



## Torque Specifications Continued



7. Intercooler to Upper Manifold: 18ft-lbs  
(Inspect Conical Washer – Found in Service kit 31-26-59-061)



8. Rear Cog Idler: 25ft-lbs (use Loctite 242)

**MAGNUSON**  
SUPERCHARGERS

MAGNUSON PRODUCTS LLC  
1990 Knoll Drive, Building A  
Ventura, CA, 93003  
[www.magnusonsuperchargers.com](http://www.magnusonsuperchargers.com)  
1.805.642.8833