

## ALL MANIFOLD CONVERTERS

### Sequential Torque & Tightening of Manifold Converter Bolts

- Subject:** Sequential Torque & Tightening of Manifold Converter Bolts
- Model(s):** All engines with Manifold Catalytic Converters
- Year:** 1997 to present.
- Condition:** Unmetered air leaks or exhaust manifold gasket not sealing.
- Cause(s):** Improper tightening of the Manifold Converter Bolts
- Solution:** ALL Manifold bolts must be sequentially tightened and torqued to manufacturer's specs. These bolts should be tightened in four (4) stages in a spiraling pattern starting with the inner bolts working sequentially outward per the illustration below.

The first tightening should be to snug the bolts only and to check for proper new gasket alignment. The second tightening should be to 25% of the manufacturer specs. The third tightening should be to 75% and the last should be to 100%. All bolts should be checked and re-torqued after the first heat and cool down cycle.

