



Turbo Bracing Guide

This is a specific guide to help with turbo support and bracing when fitting and setting up your turbo and manifold.

- **Extra bracing and support is recommended when using SINCO stainless edition turbo manifolds.**
- The main factors to consider when setting up your manifold are:
 1. Weight of turbo
 2. Extreme heat (when the turbo is under load for extended periods of time)
 3. Vibration (caused from solid engine mounts or engine revs)
 4. Exhaust weight (mainly poorly mounted exhausts)
- In race conditions it is a must that extra support is factored in when mounting the manifold.
- When running a low mount manifold we recommend bracing the turbo back to the block, we call it triangulating the turbo.
We have found the best way to do this is to pick up either the bolts that hold the turbine housing on or if these cannot be accessed then pick up the bolts on the oil drain. Weld a tab off the oil drain flange that bolts the base of the turbo. The ultimate way to do this is to use a rod-end, this allows the manifold/turbo to be supported but also can pivot when the manifold moves under heat expansion.



- When running top mount turbo manifolds it is not as critical to run a triangulation brace back to the block. This is because the manifold runners help support and take the weight of your turbo.

- Downpipe bracing back to the gearbox/engine block is another way to support turbo weight. We usually use 30x5 flat bar and pick up a gearbox bolt. We usually have this brace in x2 pieces so a section of the brace can be removed if the gearbox ever needs to come out(in RWD applications). This prevents the downpipe from having to be pulled off when removing the gearbox. In FWD or 4WD applications you can brace back to the engine block



- Exhaust flexies are another good way to take weight off the turbo/manifold, these allow the exhaust to move freely without putting unnecessary strain on manifolds/manifold studs and turbo's.