

decides to go to the next stage without having to start all over again. Although it doesn't flow quite as well as custom turbo manifolds, Joe decided to have an adapter plate sandwiched between the Baleno and TRD manifold, just for ease. He also wanted the turbo set up to run acceptably (when not pushed hard) on factory ECU without depending on after market ECU. He got 3" thick gauge MS pipes (bends) for the dump pipe, 2.5" MS pipe for the exhaust, four sets of 2.5" and two sets of 3" flanges cut and surface finished. After the mock set up was done in the engine bay, the whole thing was TIG welded.

The build started sometime in 2008 and continued for about 10-12 days and finally the basic turbo setup was ready. Joe said he was very eager to get it on the road and my patience was running out. So he slapped on few rubber hoses to do a shoddy intake plumbing without an intercooler. It cranked up and revved just fine. Very soon, a boost sensor was installed in the RD ECU to enable boost compensation while tuning. The engine was completely stock and ran non-intercooled for about 6 months. The inlet air temperature would shoot up to around 80 degrees real quick, so he had to aggressively retard ignition with boost while also being liberal on fuel.

Finally he got the intercooler plumbing done and secured the intercooler on the right corner of the front bumper. That sorted out the inlet air temperature issue. The turbo is internally waste gated for 8psi. Pretty soon, Joe found his stock clutch was getting overwhelmed and had to upgrade to a Suzuki racing clutch. The injectors were quite close full duty cycle at the higher RPM/boost - so a brand new fuel pressure regulator was in order.

In its present state, it is a fun car to drive with quick spool & ample torque though it runs out of steam in the higher revs. Joe says it provides him with good fuel efficiency and has been reliable for well over a year now. It is very lively now (and even more on 12psi setting), very nice to drive without the traction issues and extra torque steer. Joe might decide to go for a phase two of the upgrade which would be upgrading the G16 internals and the turbocharger simultaneously. But right now he is happy with the way it drives and is enjoying the fruits of his labour.

