

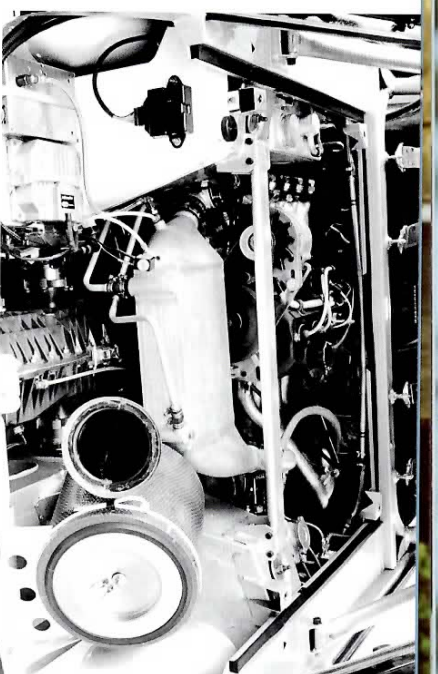
standard cars are also usually well down in power probably struggling at 145 bhp. Now that information is based on rolling roads figures achieved in the past, dyno and bench testing with advice from competent engine tuner / builders, and the fact that I have driven a couple of dozen different cars. I will discuss rolling roads and the reasons why you should not use them, later.

Think about it, a T2 built in 1983, 1984 or 1985 will not be as fresh now as it was when new and unless it has been rebuilt or had a new engine it will be tired. Turn up the boost and alter the C.O. and slap on a bigger intercooler and in theory get 185 bhp. Well it is not as simple as that is it, you need to consider the efficiency of the fuel system and pressures, the integrity of the hoses, actuator and turbocharger. A fresh 210 engine will often blow a standard turbocharger unless it has been modified.

The turbo conversion means a T4 larger compressor housing, a 360 thrust bearing and 10% clipping of the fan blades to start with, and it is not cheap. You can go on with other mods, as well including Sodium valves. You should also fit silicon intercooler hoses. If you run a tuned engine, the fact is that the modified distributor matching the Uprated Cam will not allow you to run as much boost as you can with a standard set - up (probably about 1 bar max) and you will have to retard ignition to prevent pinking. One way around this is to fit an

uprated or modified metering head (not a DIY but a specialist job) and to look at intercooler design and possibly different injectors. Never have injectors cleaned sonically as they can be easily damaged. The best intercooler and most reliable one available is from Renault Sport, but beware slapping too big a home - made unit on, as it could leave you with an imbalance in mixture and weak running, heat and the scourge of detonation again.

Forget mapping and electronic injection systems, as no one has achieved it yet here in the UK with any published results on efficiency and the cost will be £ thousands with a very few reference points, you could be spending a lot of money for little gain. Remember you may map the engine but it could still put a stress on standard engine components that may not have been designed for the job, (including the standard non-competition head gasket), unless parts have been modified or changed. It has been done in the States but then mapping parts are more easily available there and the costs is sensible. Nitro should also be consigned to the back of your mind as it is notorious as an engine destroyer unless you are thinking of going into "Drag Racing " and have a large budget. Water injection and Water Charge Cooling is not proven as a benefit yet over the Air To Air system as fitted on the standard cars, some experiments are being carried out and we will know the results soon.



A number of turbocharged cars get "Goosed" on rolling roads because the car is standing still at 5,000 rpm with a large fan trying to blow simulated fast air into the engine. Normally a car would be travelling in cool air at 90 + mph at those revs, so it is hardly surprising they overheat. So do not do it unless you want out. The correct way to prepare a

tuned car is to have it blue-printed with every part assembled weighed, balanced and carefully inspected for imperfections and replaced if not perfect with a new part. Every component should be as near as the manufacturer's specification, you would be amazed at the difference of an engine built like this over a standard re-build. The engine is so smooth and everything is just spot on. On the subject of tuning the next thing you should consider is your brakes, suspension and handling, as it is no good producing more horses if the car handles like a jelly and won't stop. That is another expensive story though. The two cheapest routes for tuning the standard car are:

- A) 185 BHP CONVERSION
- B) 200/210 BHP CONVERSION.

Forget the 240 or 300/350 options unless you have a lot of disposable wealth, you don't