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Dynamometer Tuning

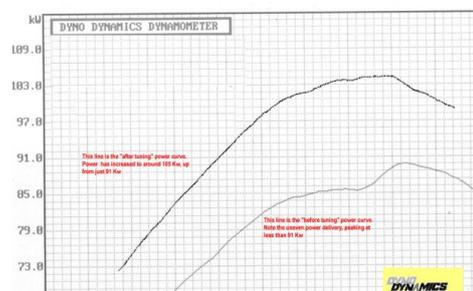
Even if a workshop uses one, not all dynamometers or their operators will have the combination of technology and skill to tune an engine to achieve your desired level of performance. Also, looking at the vehicle's rev counter is insufficient to measure performance. It is the power at the wheels that matters and this will vary right through the rev range. We will ensure your vehicle is operating at peak performance in all load conditions, because we can simulate most of the driver functions: e.g. light throttle, traffic or off road, hard acceleration, long up hill pulls, and towing, etc. All of these elements can be measured and adjusted.

- As a general rule any 4WD vehicle has losses of approximately 45% of power by the time it gets to the wheels. Remember - we drive the car - not the engine. A factory spec 100kw engine is likely to only produce 55kw on the road.
- We measure tractive effort in Newtons of Effort at the wheels. This is because your car has gears or a torque converter that modifies the tractive effort with every gear change, e.g. 1st gear low range may produce 20,000 newtons of effort on full power however 5th gear full power may not exceed 1,500 Newtons.

Data Acquisition

The dyno's computer system captures information and records it for analysis. Once recorded, this data can be retrieved for subsequent tuning. The data includes the following:

- Vehicle speed
- Ambient air temperature
- Power output
- Tractive effort
- Engine speed
- Induction air temp before and after intercooler
- Air/fuel ratio and 4 gas exhaust analysis
- Ignition oscilloscope readings



A graph provides a "before tune" and "after tune" performance. In most cases we run the vehicle in 3rd gear (manual transmission), 2nd gear (automatic) accelerating from 40 kph to peaking out

Security

A logon password ensures that only an authorised operator may produce validated performance graphs. Only such graphs carry the logo.



For further information, visit www.graemecooper.com.au where there are indicative performance graphs for each of the Land Rover engines, both petrol and Diesel, illustrating the potential performance improvements.

To arrange a Dyno tune for your vehicle, contact Ward on 02 9550 2689

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