



Chassis Dyno Instructions

1. Lay the dyno frame out on the floor.
2. Level the unit using the leveling feet.
3. Remove the vent plug from the top of the dyno.
4. Fill the frame of the dyno with 4 gallons of ATF (automatic transmission fluid)
5. Re-install the vent plug.
6. Insert control panel into the dyno frame (right rear corner).
7. Loosen the pump hose fitting and spin the drive roller by hand to prime the pump.
8. Once the pump is primed re-tighten the fitting.
9. Plug the hoses from the control panel into the dyno frame.
10. Place the drive tires of your vehicle on the dyno rollers (it may be necessary to space the front of the vehicle off the ground to keep it from touching the dyno frame).
11. Strap the vehicle to the dyno front and back to prevent the vehicle from moving or coming off during testing.
12. Hook up the throttle linkage from the control panel to the engine of the vehicle.
13. Open the load valve on the control panel all the way up (counter clockwise) and then turn it ½ a turn clockwise.
14. Start the vehicle and warm the engine up.
15. Using the throttle lever, increase the engine RPM and turn the load valve clockwise until the engine RPM starts to decrease. You want the throttle at the wide-open position and regulate the engine RPM with the load valve.
16. When the desired RPM is achieved take a pressure reading.
17. Your goal is to achieve the maximum amount of PSI at a given RPM and load by tuning the engine.
18. Pull the throttle lever back and shut off the engine. It is not necessary to change the load valve settings.
19. Plug the information into the formula's provided.

HP = Horsepower
T = Torque
PSI = LBS per square inch
GPM = Gallons per minute
ERPM = Engine RPM

Formula's:

$$\text{HP} = (\text{PSI} \times \text{GPM}) / 1714$$

$$\text{T} = (\text{HP} \times 5252) / \text{RPM}$$

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$$\text{GPM} = \frac{\text{ERPM} / \text{Final Drive} \times \{\text{tire circumference} / \text{roller circumference}\}}{231}$$

Example:

$$800 \text{ PSI} \times \frac{(10,000 \text{ RPM} / 8.44 \times 2.78)}{231} / 1714$$

= 6.65 HP at the rear wheels