



## Pre-Tuning Checklist

This tuning checklist is intended to help your tuning session go smoothly and prevent any additional charges that are common during the tuning process. One of the biggest mistakes is expecting the car to be fixed on the dyno. If your car has a miss or anything blatantly wrong, it is up to you to ensure you do not have mechanical issues prior to your dyno appointment. This list of common problems should help you achieve this. If, at any point, you are unsure if you are having a tuning issue or mechanical issue, please consult with us prior to your appointment for advice specific to your problem.

Make sure the car is 100% ready to be tuned and the bugs are worked out! – Don't stay up all night working on your car and expect things to go smoothly on the dyno.

- **Our main objective is to tune the car, not fix mechanical or electrical problems.** We may be able to fix or troubleshoot some minor problems during the tuning session, but this counts against your dyno time. A car that is not ready to be tuned can get very expensive to fix on the dyno. If your car is not in proper working order, you may be asked to bring it back once the repairs have been completed. You will then be subject to a restrap fee.
- For in-person dyno appointments, it is always best to drop your car off but you are more than welcome to wait in our customer lounge. No customers are permitted in the dyno room. **We do not recommend bringing your kids, girlfriend, boyfriend, or other non-car enthusiast friend.** Dyno tuning can take many hours and they will mostly likely be bored or driven crazy by the noise.
- Remove any items from the passenger seat/floor. We usually need some room to set up our laptops and other equipment. Also, we often need to access the ECU.
- If your car spills excessive fluids on the dyno/shop floor, you will be charged a clean-up fee.
- **Tires and Tire Pressure** – Make sure all of your tires are at a proper pressure and equal. 30-40psi usually works best on the dyno. Do not come with drag radials on your drive tires unless you have already talked to us about it. Hard compound street tires work best on our dyno. Make sure your wheels are properly torqued down.
- **Fuel filters** – Replace your fuel filter if it has 30,000+ miles on it.
- **Gas** – Come in with at least half a tank of gas, unless we are going to be doing tunes on 2 different fuels. Tune on the gas that you are going to run the car on. Do not put in octane booster if you are not going to run it all the time. Do not tune on one brand or octane of race gas and expect to be able to run fine with a different brand of race gas. If you are tuning on pump gas and have had any

race gas in the car recently, make sure to run through 2-3 entire tanks of pump gas to get any mixed in race gas out of the system. If your car has been in storage or sitting for awhile, make sure to drain the fuel and put in fresh gas.

- **Clutch** – Make absolutely sure that your clutch is not slipping and that it will hold the power that you want to make. We cannot tune a car with a slipping clutch. We have had to cut short many tuning appointments due to slipping clutches a couple hours into tuning. Also, make sure your clutch pedal is properly adjusted with a small amount of free play.
- **Check Engine Lights** – If you have any check engine codes, fix them before your tuning session or contact us about them. We can turn some off in software on some cars. Do not just assume it is an unimportant rear O2 sensor code. **We cannot tune cars with critical CELs running in limp mode.**
- **Misfires** – If your car has an ignition problem from a bad coil, bad wires, bad ground, bad igniter or some other problem and it is breaking up under load, then we will not be able to get a good tune. Some misfires are tune-related and can be fixed during your dyno session, but a tune will not fix physical problems with the ignition system.
- **Boost/Vacuum Leaks** – Check your car for boost leaks. This is very important on cars with a MAF setup. Any leaks will affect tuning and power output. Fixing a boost leak on a MAF car after it has already been tuned will result in it running leaner during boost, which is not a good thing. Any boost/vacuum leaks after the throttle plate will cause idling issues on a MAS/MAF or speed density setup.
- **Spark Plugs** – Run the correct heat range plugs and gap for your application. A boosted car will need a much tighter gap than an all-motor setup. If you do not know what plugs to run or what to gap them at give us a call or email us. **Any plug changes on the dyno will be billed separately from the dyno time.**
- **Fluids** – Make sure your oil is at the proper level. Do not overfill, and make sure your cooling system is full and bled. Fix any oil, coolant, or transmission fluid leaks. If your engine oil and filter have more than 3,000 miles on them, please replace both. **If you drop fluids on the dyno floor you may be subject to a clean-up fee.**
- **Cooling** – Your car needs to have a perfectly working cooling system with fans. **WE CANNOT TUNE A CAR THAT IS OVERHEATING.** You should have a thermostat. We recommend a 170\* thermostat for most applications.
- **Battery/Alternator** – Make sure your battery is not weak and that your alternator is producing the correct voltage. Battery voltage can greatly affect your fueling and ignition strength. A battery that requires a jump every time you start the car can cause problems during WOT tuning.
- **Exhaust** – Fix any exhaust leaks. Leaks near your O2 sensor can cause idle and fueling problems. Leaks before your turbo will increase lag and lower power output. If you have a tuning system or setup that requires us to put our wideband O2 sensor directly into your exhaust system, make sure

your stock O2 will come out or has an extra bung welded on and make sure the opening into the pipe is as big as the bung. A stock O2 sensor will often fit, while a wideband will not.

- **Factory Widebands / O2 sensors** – Many of the applications we cover use factory wideband sensors, and they are extremely important in the tuning process. Make sure all factory widebands or O2 sensors are in proper working condition with no check engine codes. On cars with long tube headers that use extensions, they often have a poor connection. If your install is new, be sure to drive the car for a day or two to make sure you have no leaks and your extensions are working properly. Any circuit codes present are usually due to a poor connection at the plug.

## **Mechanical/Engine Checklist**

- Engine is in good running order. Engine compression is good. Engine does not make excessive noise.
- Fans need to be working. Everything should be already wired up and ready to go.
- Oil is of good quality, is fresh and filled to proper level.
- Spark plugs are in good condition and proper heat range. •
- No leaks of any kind from engine, cooling system, transmission, axles/axle seals, etc.
- Pre and Post-turbo exhaust is leak free and properly installed.
- Boost control solenoid is installed and routed properly (Let us know if you need tips on aftermarket EBCS).
- Turbo is in good working order, does not show shaft play, and does not leak or consume oil.
- Air filter is clean and properly oiled.
- Intake manifold, intercooler, seals, and lines are sealed under vacuum and boost pressure.
- Vehicle is properly aligned.
- Wheels are in good condition and balanced. Tires do not rub.
- If you have a boost controller, it needs to be configured prior to the dyno appointment.
- If you have a nitrous controller or any other electronic devices that need to be configured, this needs to happen and be tested before the tuning appointment.

## **Fuel System**

- Fuel Pump is properly sized for modifications and is in good working order.
- Fuel lines, fittings and hoses are proper for fuel-type, are installed correctly and are free of leaks.
- Fuel pressure regulator is installed and functioning correctly.
- Fuel injectors are good-quality, do not leak, O-rings are sealed.
- Fuel is high quality, and fuel filter is clean and functioning properly.
- **WE MUST KNOW IN ADVANCE IF PLANNING ON TUNING RACE GAS!!!**

## **Driveline**

- Transmission is working properly; fluids are clean and filled to the proper level.
- Differentials are working properly; fluids are clean and filled to the proper level.

- Brakes are working properly; fluid is clean and filled to proper level.
- Wheel bearings are in good condition.
- Clutch is able to handle the torque/power your car will make, and is in good working order.

#### **ECU/Electrical**

- Engine management hardware is present & functional (MAKE SURE TO BRING YOUR ACCESSPORT!!!).
- Car does not have any open CEL's or codes (If so, please advise prior to coming in for your tune).
- Battery and alternator are in good working order.
- Vehicle is grounded correctly and is not experiencing any grounding or electrical issues.