

## Pre-Tuning Checks

Before attempting to install or tune your new carburetors you must make sure that all engine systems are in good repair. Mechanical or ignition problems will greatly complicate your tuning efforts and may make tuning the carburetors impossible. Use this checklist as a pre tuning guide:

- Compression Test - should be above 100 PSI as a minimum - should not vary between high and low cylinders by more than 10 PSI
- Valve Lash Adjustment
- Valve Timing - not easily checked. Worn timing chains can dramatically change valve timing, Most timing chains are good for only 30 to 50 thousand miles.
- Ignition Timing - critical! Get out the timing light and check it! If the timing mark moves erratically suspect a worn timing chain or mechanical problems inside the distributor. If you are installing new carburetors on a non running engine check static timing.
- Primary Ignition System - Points and Condenser should be new or in very good condition. Check the condition of the low tension lead from the contact points to the coil. Check dwell with a meter, erratic changes in dwell angle are a symptom of a badly worn distributor.
- Secondary Ignition System - Inspect cap and rotor for wear and carbon tracking, check spark plug wires using a Volt Ohm Meter (VOM or DVOM) resistance per foot of wire should be between 250 and 1500 ohms - depending on your wire type. All wire should have about the same resistance per foot. The ignition coil is also tested with the VOM. Placing the leads between the + and - terminals should give you a reading of 0.7 to 1.5 ohms for an external resistance coil and between 3 and 6 ohms for an internally resisted coil. Put one lead on the + terminal and inside the tower where the coil wire pushes in, being sure to contact the metal inside - your measurement should be 7.5K to 10.5K ohms.
- Spark Plugs and Spark - Clean and gap all plugs. Electrodes should be in good shape. To test for spark quality you may use a spark tester which can be purchased for any auto parts store. You may also simply lay a spark plug (with wire attached) on a clean grounded surface. Stand back (HIGH VOLTAGE!!!) and observe the plug while the engine is cranked. You should observe a crisp blue spark. A weak yellow spark indicates a problem in the secondary ignition system or wrong dwell angle. With all the plugs in place run the engine in a dark area, do you see any light coming from the wires? If so change them.
- Fuel Lines and Filters - CRITICAL! - Most of these cars are over 30 years old, many have sat for many years. Rust in the fuel tank and lines WILL find its way into carburetors. This is the number one problem reported by my customers. If you have not removed the fuel tank and either replaced it or had it professionally cleaned, then at least install a new fuel filter as close to the carburetors as possible. All fuel lines between the filter and carburetors - including between the carbs - should be NEW!
- Eliminate vacuum leaks - The second most common problem reported by my customers is a result of vacuum leaks. Check all joints, plugs, vacuum lines and

the distributor vacuum module for leaks. When installing new carburetors, completely clean all old gasket material from the surfaces, install new gaskets and properly torque all fasteners.