Before attempting to check/adjust the timing, make sure the air gap is correct between the distributor rotor and signal generator.

Connect a tachometer according to the manufacturer’s directions and make sure the idle speed is correct. Adjust the idle if necessary.

The proper ignition timing setting for your vehicle is printed on the emissions label located on the underside of the hood. Some special tools will be required for this procedure.

Locate the timing plate on the front of the engine, near the crank pulley. The “0” mark is top dead center. To locate which mark the notch in the pulley must line up with for the timing to be correct, count back from the zero mark the number of degrees BTDC (Before Top Dead Center) noted on the emissions label.

Locate the timing notch on the pulley and mark it with a dab of paint or chalk (White-Out works great) so it will be visible under the strobe light. To locate the notch, it may be necessary to have an assistant bump the motor over with the starter to rotate the crankshaft. WARNING! Stay clear of all moving engine components during this step!

Allow the engine to reach normal operating temperature. Be sure the air conditioning is turned off. On some models, as indicated by the emissions tag on the hood, you must disconnect and plug the distributor vacuum advance hose (carbureted applications), or for EFI motors, plug in a jumper wire between terminals TE1 and E1 on the diagnostic port.

With the ignition switch off, connect the pick-up lead of the timing light to the number one spark plug wire. On 4 Cylinder engines, this is the wire closest to the front of the motor. On V6 motors, #1 is the front plug on the passenger side of the motor. Use either a jumper lead between the wire and plug or an inductive-type pickup. DO NOT pierce the wire or attempt to insert a wire between the boot and plug wire. Connect the timing light power according to the manufacturer’s directions.

Make sure the wiring for the timing light is clear of all moving engine components, then start the engine. Rev the engine a few times then return the engine to idle.

Point the flashing timing light at the timing marks. The marks you highlighted should appear stationary. If the marks on the crank pulley and the timing tab are aligned, then timing is correct. If the marks are not aligned, turn off the engine.

Loosen the distributor lock nut until the distributor can be rotated, but not too loose.

Start the engine and slowly rotate the distributor until the timing marks are aligned.

Shut off the engine and tighten the distributor lock nut. Try not to turn the distributor while tightening the nut.

Restart the engine and re-check the timing to make sure the marks are still aligned.

Disconnect the timing light, reconnect vacuum hose on distributor or remove jumper terminals, depending on which method you used.

Rev the engine a few times then allow the engine to idle. Re-check the idle speed. If it has changed from its correct setting, readjust it.

Drive the vehicle and listen for detonation, or “pinging.” Detonation will be most noticeable when the engine is hot and under load (climbing a hill, accelerating from a stop, towing). If you hear the engine pinging, the ignition is too far advanced. Reconnect the timing light and retard the distributor 1-2 degrees (clockwise) Road test the vehicle to ensure detonation is gone.

To keep detonation to a minimum, yet still allow you to operate the vehicle at the correct timing setting, use gasoline of the same octane at all times. Switching fuel brands and octane levels can be detrimental to performance and economy. Severe cases can lead to engine damage.