

Idle to air mixture adjustment procedure 85-89

By using this procedure you can obtain the proper adjustment between the throttle positioning sensor, distributor timing and the throttle body accelerator cable. Adjusting these components will give you the smoothest possible idle and the correct factory settings for your car.

- 1) Use a jumper wire and cross the A and B connectors on the ALDL connector under the dash of the car. You may purchase an AB jumper plug at your local parts store, but a simple jumper wire is all you need!
- 2) Turn on the ignition switch without starting the car. You should hear the cooling fan begin to run and the check engine soon light should start to flash.
- 3) After about 45 seconds with the key on unplug the idle air control solenoid. (IAC)
The IAC is located on the passenger side (#70 below) of the throttle body and it has a weather pack type connector. Disconnecting the IAC will stop the IAC motor from moving out of the shutoff bypass air position. Remove the ALDL jumper wire at this point.
- 4) Unplug the tan and black distributor wire located on the driver side of the car beside the wiper motor. This is the wire that sends the distributor to standard timing when the car is in open loop.
- 5) Start the engine and adjust the timing to 6 degrees. When looking at the timing tab you will see a large V in the tab. This V is 0 degrees; count over three marks to the passenger side to obtain 6 degrees of timing. If the marks are not visible, 6 degrees is the first v toward the passenger side. The factory timing and settings for your car is located on a label located on the driver side of the fan shroud and it should be 6 degrees.
- 6) Remove the idle screw plug on the throttle body assembly and adjust the idle to 450 rpm's. The car may try to stumble and fall while doing this, but get it as close to 450 as possible.
- 7) Re-connect the IAC connector and the distributor wire.
- 8) Set the throttle positioning sensor voltage. (#20 below) To do this loosen the screws and set it to between .54 and .56 volts. Many times this is confused with 5.4 to 5.6 volts. This is not correct and you should make sure the voltage is within the range mentioned first. To know what the setting is on your sensor you will need to purchase a voltage ohms meter and test across the black and dark blue wires located in the connector. You must have the engine key in the on position to test the adjustment voltage and not running. We have a connector available (part number 22805) for testing which will keep you from piercing your wires available at this link, located at this link http://willcoxcorvette.com/product_info.php?cPath=1805&products_id=1949 to test your sensor or you can probe the wires with your ohms meter.
- 9) When you are finished setting the throttle sensor voltage you will need to erase the code 42 from your ECM that will set by having the distributor bypass wire unplugged. You do this either by clearing the code with your diagnostic tester, or remove the battery cable for 30 seconds.
- 10) You may now start the engine and after full warm up hold the idle between 1200 and 1500 rpms for around 2 minutes to clean off the O2 sensor. You should now have a car that will idle properly.
- 11) At this time it is always smart to re-adjust the tension on the accelerator cable at the throttle body injector. Slack in this cable will cause slow throttle response.

Sincerely,

Willcox Inc.

