

CHRYSLER SUPPORT 1 P/N 4121

ALL 1992 DODGE V-6 DAKOTA & 318 (ONLY) TRUCKS & VANS WITH MPFI

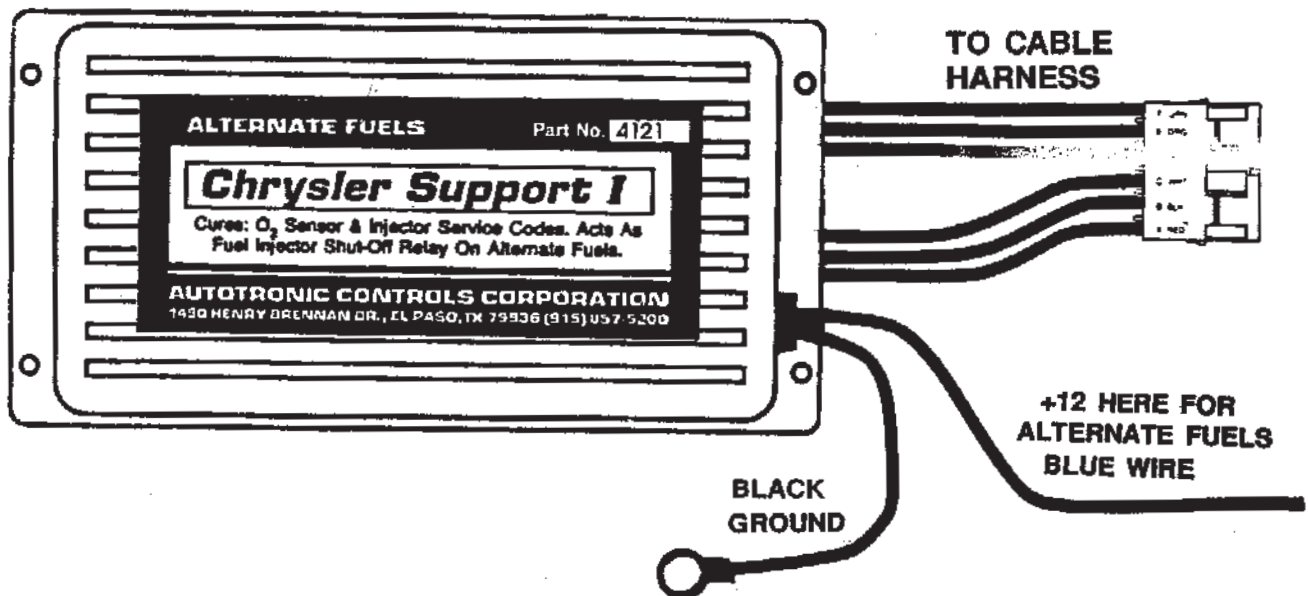
OVERVIEW

The "Chrysler Support 1" is designed as a direct plug-in for Chrysler MPFI, V8 and V6 truck engines. This unit will passify "Computer Failure Code #27" for Injector Fault and "Code #21" for O₂ fault. (On car and mini vans 3.0L, 3.3L, use P/N 4122.)

In the Alternate Fuel Mode the "Chrysler Support 1" serves three specific tasks: First, it will act as an injector shut off relay, stopping the flow of gasoline. Second, the box simulates the working injector, thus satisfying the computer and allowing the car to keep operating normally in Alternate Fuel Mode. Third, the box functions as an O₂ Fix, sending a RICH/LEAN signal to the computer only in the Alternate Fuels Mode to prevent an O₂ sensor fault code.

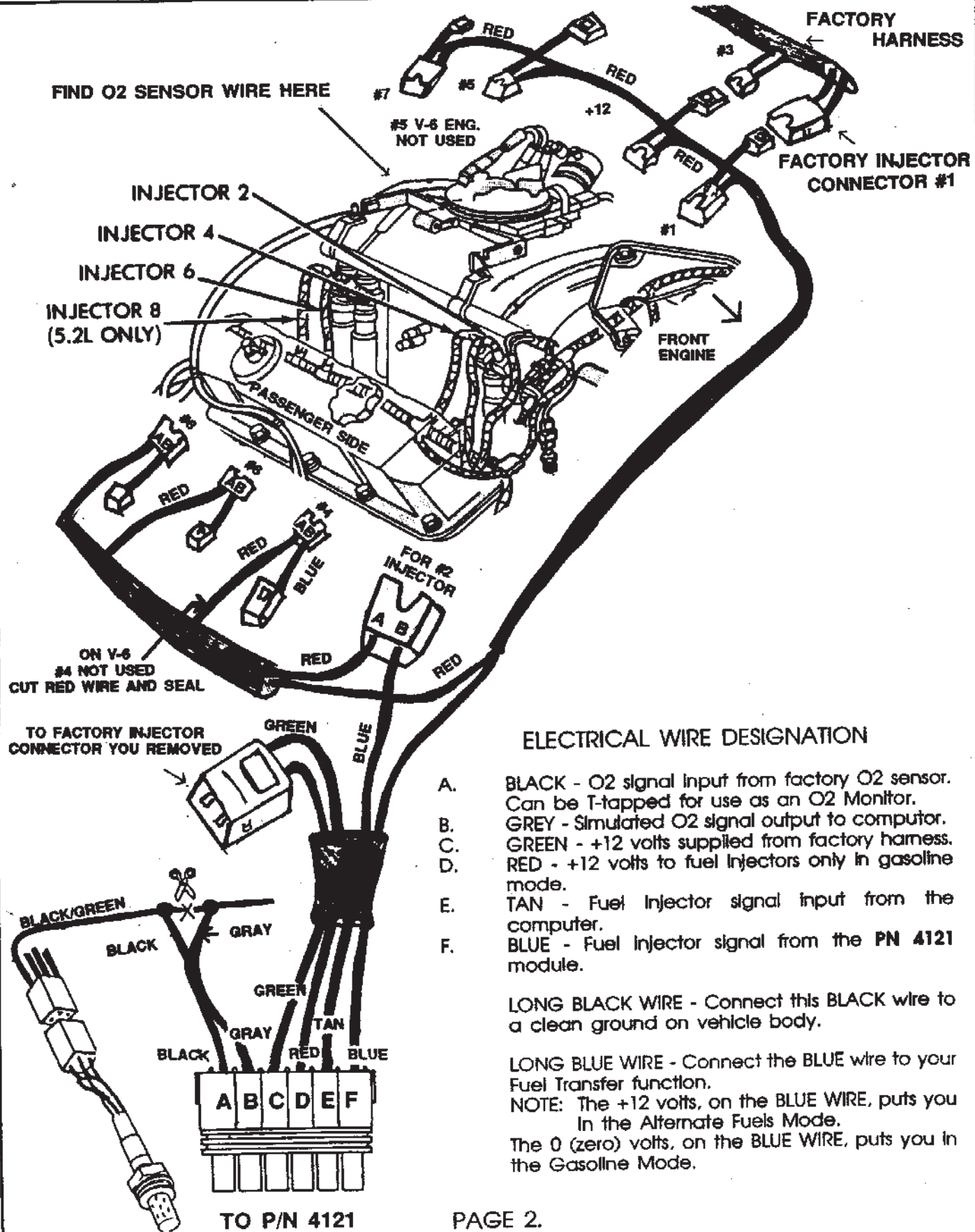
MOUNTING THE INJECTION SIMULATOR

First remove the battery cables for 15 minutes to reset the gasoline computer memory. Autotronic Controls suggests that the P/N 4121 be mounted on the passenger side fenderwell on trucks. Before permanently mounting the P/N 4121, make sure the Autotronic Control harness will reach all of the injectors and the O₂ sensor cable. Do not mount the P/N 4121 on the engine or near the exhaust manifold. Extreme temperatures at these locations could cause damage to the unit. The unit is factory sealed for underhood mounting! Please allow unit to breathe! Do not add silicone sealer to metal dust cover! Use the sheet metal screws provided in the parts kit.



PAGE 1.

AUTOTRONIC CONTROLS CORPORATION
1490 HENRY BRENNAN DR., EL PASO, TEXAS 79936 (915) 857-5200



FIND O2 SENSOR WIRE HERE

#5 V-6 ENG. NOT USED

FACTORY HARNESS

FACTORY INJECTOR CONNECTOR #1

INJECTOR 2

INJECTOR 4

INJECTOR 6

INJECTOR 8 (5.2L ONLY)

FRONT ENGINE

PASSENGER SIDE

FOR #2 INJECTOR

ON V-6 #4 NOT USED CUT RED WIRE AND SEAL

TO FACTORY INJECTOR CONNECTOR YOU REMOVED

ELECTRICAL WIRE DESIGNATION

- A. BLACK - O2 signal input from factory O2 sensor. Can be T-tapped for use as an O2 Monitor.
- B. GREY - Simulated O2 signal output to computer.
- C. GREEN - +12 volts supplied from factory harness.
- D. RED - +12 volts to fuel injectors only in gasoline mode.
- E. TAN - Fuel Injector signal input from the computer.
- F. BLUE - Fuel Injector signal from the PN 4121 module.

LONG BLACK WIRE - Connect this BLACK wire to a clean ground on vehicle body.

LONG BLUE WIRE - Connect the BLUE wire to your Fuel Transfer function.

NOTE: The +12 volts, on the BLUE WIRE, puts you in the Alternate Fuels Mode.

The 0 (zero) volts, on the BLUE WIRE, puts you in the Gasoline Mode.

TO P/N 4121

PAGE 2.

INSTALLATION PROCEDURE

1. Look at our engine harness and separate into 3 groups:

Group 1 - GREY (to computer) and BLACK (to O2 sensor) wires.

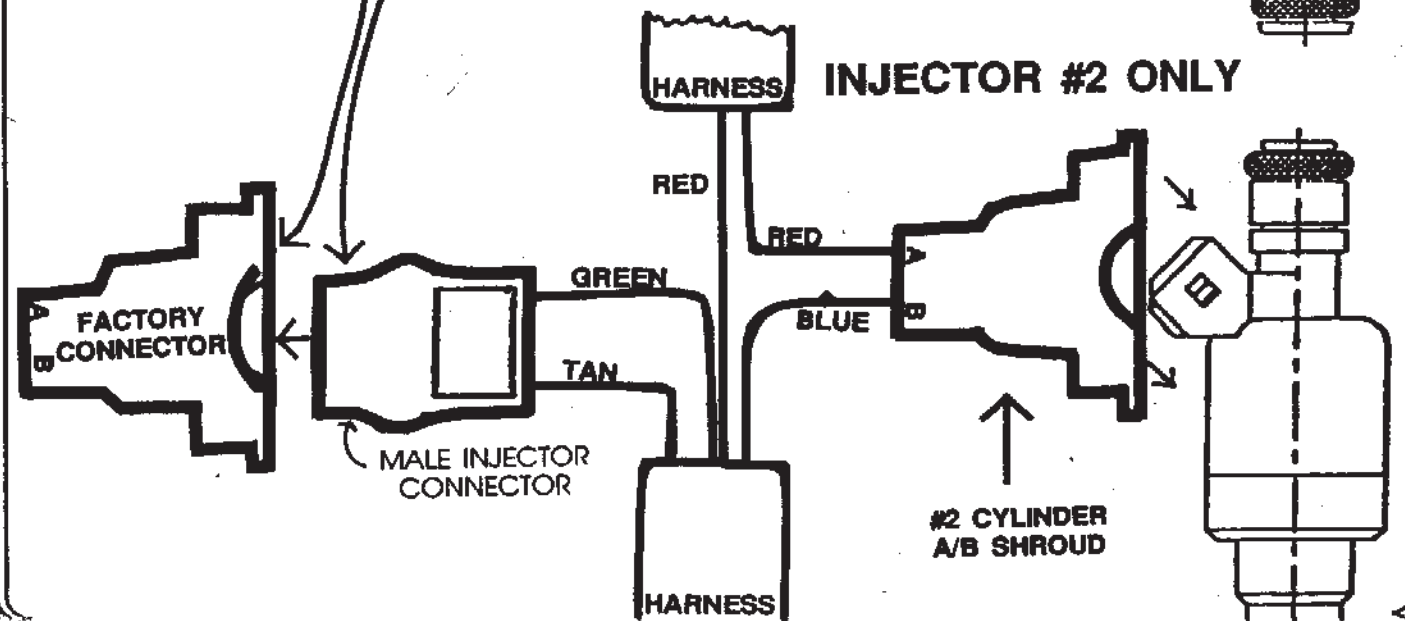
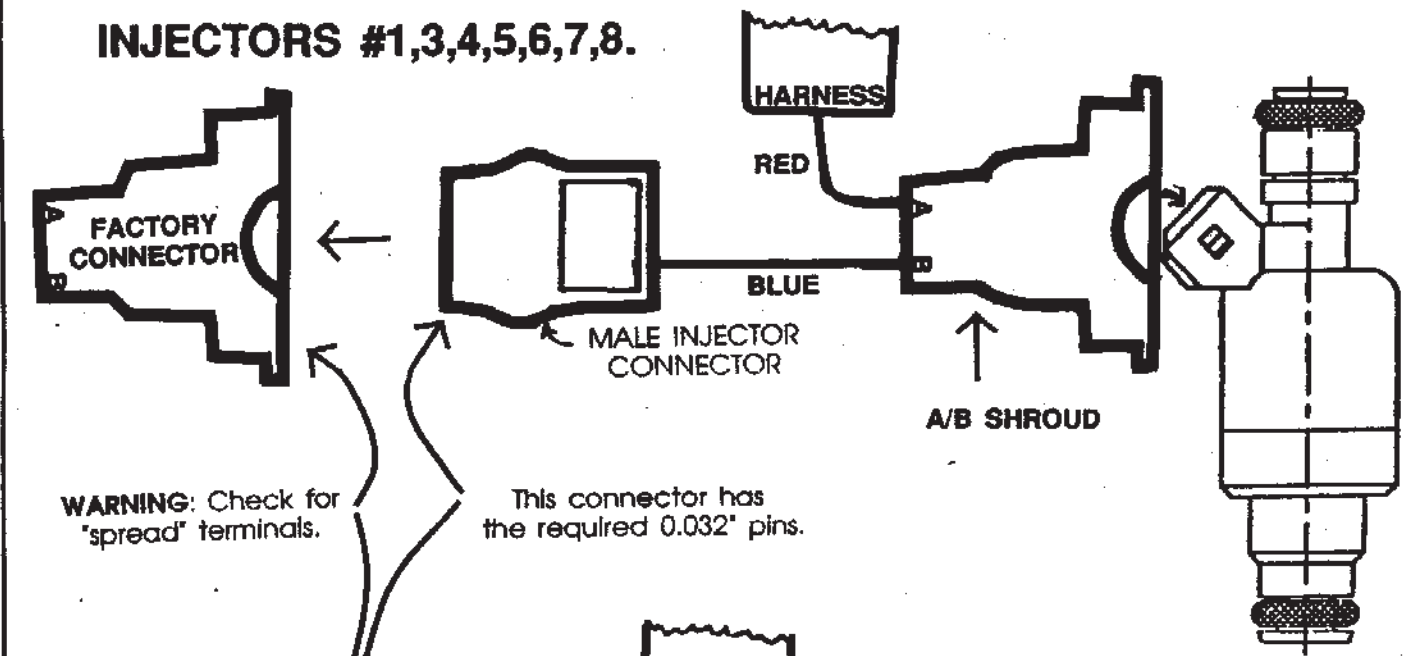
Group 2 - GREEN, TAN, BLUE, and RED.

Group 3 - LONG BLACK (ground) and LONG BLUE (fuel selector control) wires.

2. Find the O2 sensor signal wire (Factory O2 signal black wire) and cut the signal wire about 1 foot from the O2 sensor. Connect on vehicle harness side of connector. Connect the black wire to the O2 sensor side of wire. Connect the grey wire to the other cut wire going to the computer.

3. From Group 2 follow the 4 wires down the harness till the main harness first splits. Notice the GREEN and TAN wires protruding from the male injector connector.

INJECTORS #1,3,4,5,6,7,8.



4. On #2 Cylinder, detach the factory injector wires from the injector by pressing the release clip and pulling the factory connector off of the injector.

NOTE: To Remove injector Connector, use small allen wrench to pull out on Loc-Latch. Then rock or "tilt" connector and move to other side of injector & repeat until connector slides free.

NOTE: Autotronic Controls suggests that you use the #2 Cylinder for easy installation. This doesn't mean you have to use the #2 Cylinder to make it electrically correct.

NOTE: Autotronic Controls suggests that in the proceeding directions you work only 1 (one) injector at a time.

5. Connect the 2 special wires previously pulled off of the #2 Injector to the male connector with the GREEN and TAN wires protruding from it. Push until the male connector is locked in place.

6. Notice how the 6-pin Weather Pac Connector has only 4 wires coming from the Group 2 set. Follow the BLUE wire to where it first terminates in the #2 Cylinder A/B Shroud. Take this #2 Cylinder A/B Shroud and lock it on the #2 Injector.

NOTE: Take a minute to recognize that the rest of the connectors on the Autotronic Control harness are in pairs, with an A/B Shroud and a Male Connector with a single BLUE wire. The harness is shaped to reach all injectors.

NOTE: If your vehicle is a 6 cylinder, you will have 2 extra pairs of connectors.

7. Remove one connector at a time. Detach the factory injector wire from the injector. Pick up the set of A/B Shroud and Male Connectors. Attach the Male Connector to the factory wire just pulled off of the injector. Push until it "clicks".
8. Use the Female A/B connector from the same pair and clip over the injector.
9. Repeat steps 7 and 8 until all injectors are connected.
10. If your vehicle has a 6 cylinder engine, cut the extra RED wires off both pairs and properly terminate the RED wires by wrapping them with insulating tape or terminate by plugging the A/B connector into the male plug for a weather-sealed termination.
11. From Group 3 set, connect the BLACK wire to a clean body ground. Then, connect the LONG BLUE wire to your Fuel Selector Switch. (+12 volt is required for Alternate Fuels.)

PAGE 4.

DIAGNOSTIC

1. Test gasoline operation for smooth fuel delivery.

A. If vehicle idles rough or "check engine" Code 27 appears, inspect each injector connector (See Diagram Page 3, INJECTORS #1,3,4,5,6,7,8) as follows:

(a) Use a long screw driver as a "stethoscope" by touching each injector and listening for a steady clicking sound while wiggling the connector.

(b) If an "intermittent" or "quiet" injector is located, shut off engine and unplug connectors for inspection.

(c) Check the mating pins of each plug. Insure that the factory female pins are not spread, causing poor connection. NOTE: Try bending or adding a slight twist to our "flat blade" terminal to assure electrical connection.

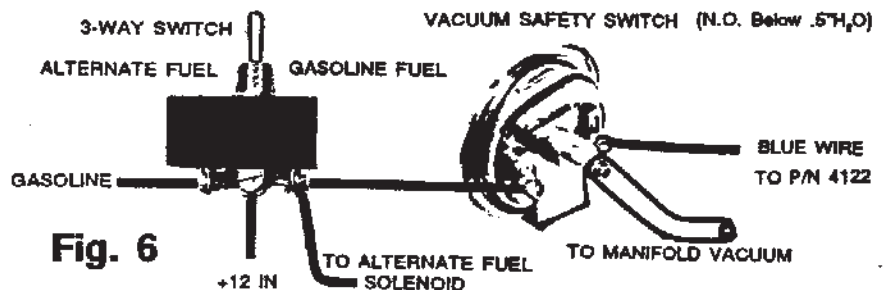
B. Double check the electrical connection on #2 injector (See Diagram Page 3) while on gasoline. A poor connection here will cause an Alternate Fuels "check engine" Code #27.

2. To assure proper installation, check the Alternate Fuels operation of PN 4121 by driving the vehicle.

NOTE: When checking Vehicle Diagnostics after installation, PN 4121 will store an Engine Code 21 for O₂ Fault. Code 21 is a soft computer code that will not set a "check engine" light on the dash, nor will it degrade vehicle performance. By intentionally setting a Code 21, the OEM Block Learn is limited, and the system recovers quickly when switched back to gasoline. This allows a smoother transition when switching between fuels. NOTE: OEM Block Learn ability is activated in Gasoline Mode with the first movement of the throttle.

OPTIONAL COLD START ASSIST: (FIG. 6) For quicker cold weather starts, plus injector flushing, a gasoline fuel "pulse" can be activated during engine start-up. The gasoline will automatically shut off after the engine is running and the vehicle will then be switched to the Alternate Fuel Mode.

NOTE: The fuel pump must be running for this to work. For easy conversion...leave fuel pump running on Alternate Fuels for FAST smooth transfers from one fuel to another. **WARNING:** Do Not allow gasoline fuel and fuel pump to run dry! Fuel pump damage may occur.



PAGE 5.

CHECK ENGINE LIGHT DIAGNOSTIC MODE: (1) Start engine (if possible). Move transmission shift lever through all positions, ending in Park. Turn A/C switch on, then off (if equipped). (2) Turn engine off. Without starting engine again, turn ignition on, off, on, off and on. Record 2-digit fault codes as displayed by the flashing CHECK ENGINE light. (3) For example, Code 23 is displayed as flash, flash, 4-second pause, flash, flash, flash. After a slightly longer pause, other codes stored are displayed in numerical order. (4) Once CHECK ENGINE light begins to flash fault codes, it cannot be stopped. If you lose count, it will be necessary to start over. Code 11 indicates start of fault code display, Code 55 indicates end of display.

Fault Code	DRBII Display	Description of Fault Code
11	No RPM Signal During Cranking	No distributor RPM signal detected during cranking.
14	MAP Voltage Too Low or High	MAP sensor input below or above acceptable voltage.
21	O ₂ Signal Fault	Either rich or lean condition is detected from the oxygen sensor input. PN 4121 will store an Engine Code 21 for O ₂ Fault that will not set a CHECK ENGINE light. By intentionally setting a Code 21, the OEM Block Learn is limited.
24	TPS Voltage High or Low	Throttle position sensor (TPS) input above or below acceptable voltage.
27	Control Circuit	Injector output driver does not respond properly to the control signal.
32	EGR Solenoid Circuit	An open or shorted condition detected in the EGR solenoid circuit.
33	A/C Clutch Relay Circuit	An open or shorted condition detected in the A/C clutch relay circuit.
51	O ₂ Signal Lean	O ₂ sensor signal stays lean or adaptive Rich limit.
52	O ₂ Signal Rich	O ₂ sensor signal stays rich or adaptive Lean limit.
55	NA	Completion of fault code display on the CHECK ENGINE lamp.

PAGE 6.

LIMITED WARRANTY

Autotronic Controls Corporation warrants this product to be free from defects in material and workmanship under normal use and if properly installed for a period of one year from date of purchase. If found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of Autotronic Controls Corporation. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Autotronic Controls Corporation be liable for special or consequential damages.

AUTOTRONIC CONTROLS CORPORATION

1490 HENRY BRENNAN DR., EL PASO, TEXAS 79936 (915) 857-5200