Mazda System Checker

You probably spend a lot of money on test equipment anymore. Talking to those little black boxes can be a very expensive long distance call.

Wouldn't it be nice to run up to the local Radio Shack store and spend about $15 for enough parts to make a simple little fuel feedback tester?

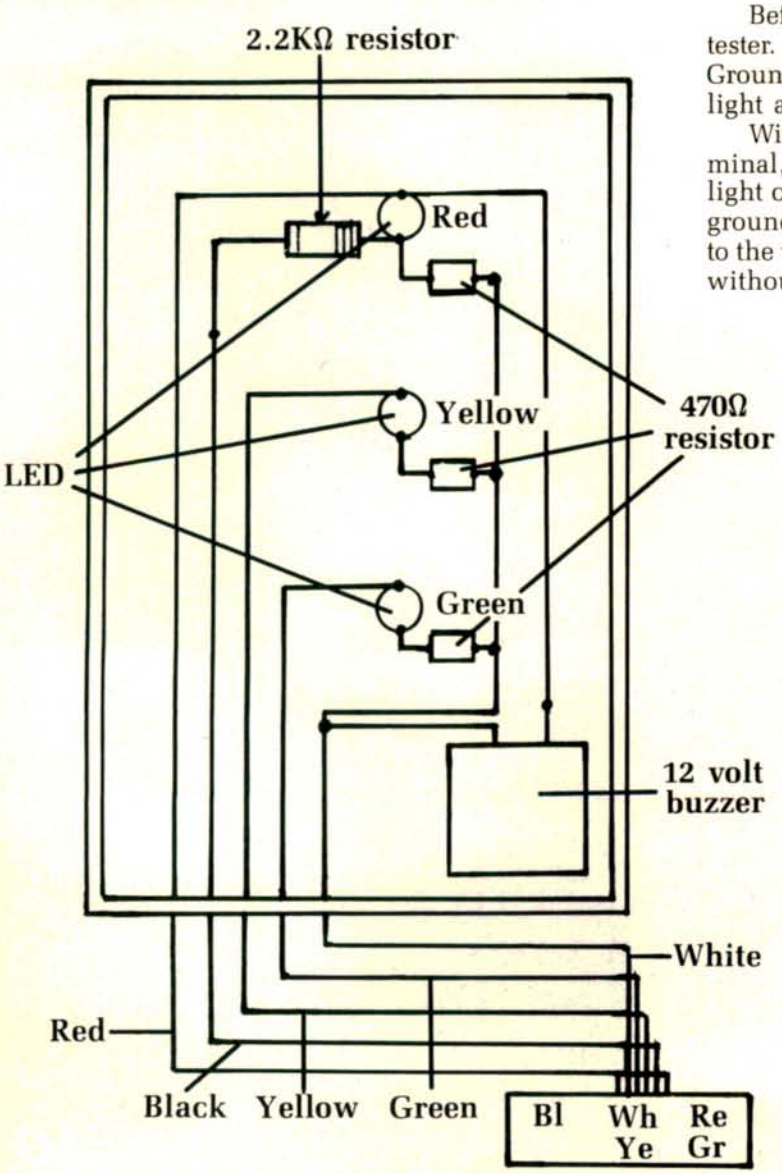
You got it. We include a diagram, a parts list, and even a photo of the finished product for a Mazda fuel feedback system checker. Using three LED's, a small buzzer, some wire and a few resistors, this magic box will allow you to check several vital functions in certain 1983-84 Mazda vehicles.

If it sounds too good to be true, take heart. Even with my fumble fingers, this whole job took less than an hour to complete. Go ahead, make me look bad.

CHECKING THE FINISHED PRODUCT

Before hooking this tester to the car, let's test the tester. Apply 12 volts to the white wire terminal. Ground the red wire terminal. The red lamp should light and the buzzer should sound.

With the voltage still applied to the white wire terminal, ground the yellow wire terminal. The yellow light comes on, but not the buzzer this time. Finally, ground the green wire with the voltage still applied to the white wire, and the green light should come on without the buzzer.



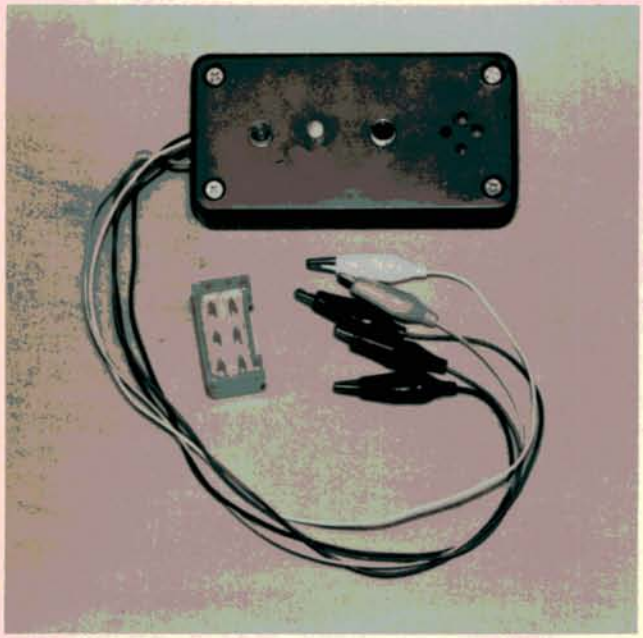
Long lead on LED is positive.

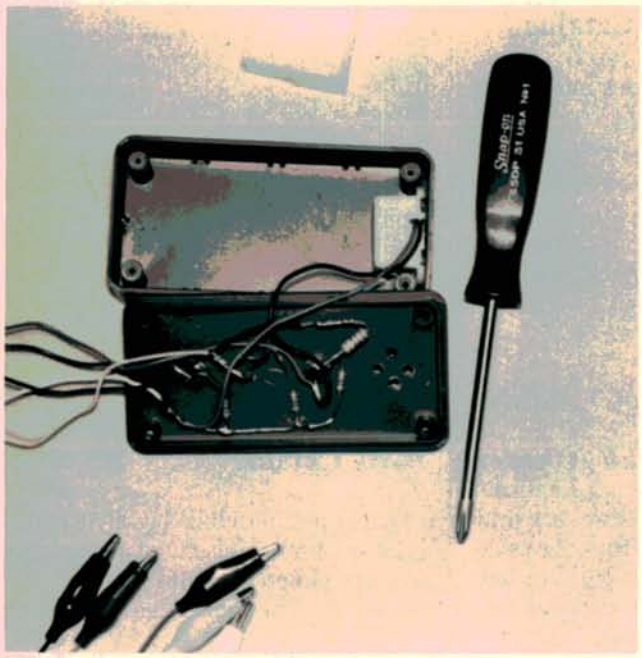
MAZDA SYSTEM CHECKER
Radio Shack Part Numbers
LED (2 per package) 276-068
LED (2 per package) 276-069
LED (2 per package) 276-073
1 package 470Ω resistors 271-1317
1 package 2.2KΩ resistors 271-1325
1-12 volt buzzer 273-055
1 project box 270-021

Connectors available from Jimco, Inc.
Write in No. 204

HOW TO USE THE TESTER

You can pay your money and take your choice when it comes to hooking the tester to the car. Our photo shows individual alligator clips at each wire end. Even though we color-keyed them to the wire colors, we suspect that hooking up each wire individually would be a real pain.





You'll notice we also show a molded plastic connector. This little jewel allows you to hook up all the wires at once. You can either scavenge one at the junk yard or purchase one from Jimco, Inc. (P/N 210-800045). Jimco also has those spade connectors that lock into the molded connector (P/N 220-SIM250).

The 626 and GLC models each have a service connector inside the car. On the 626 it's located on the interior center firewall (you may have to pull the carpet back in this area to reach it). The GLC's is behind the right front kick panel.

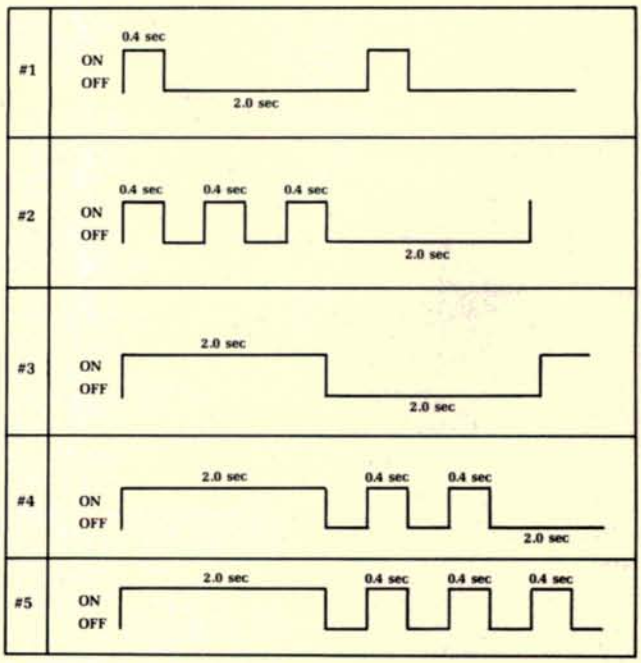
Pull the hand brake and warm the engine to normal operating temperature. With the engine running at idle, plug in the tester. The tester should flash and buzz initially as a self-test.

SHORTS AND LONGS

With the engine fully warm, the green light should flash on and off to indicate proper O_2 sensor activity. It should flash at least 8 times in 10 seconds at 2500 RPM. If the green light stays off, or refuses to come on at all, you've got a problem with the O_2 sensor circuit.

The cars in question will use a combination of a flashing red light and sounding buzzer to signal fault codes. They will flash and sound at intervals. We include a chart to help you decipher what the codes mean. In fault number 1, for example, the red light and buzzer are on for 0.4 second and off for 2.0 seconds, then on for 0.4 second and off for 2.0 seconds, and so on.

Remember, the sequences we list are for *inputs* to the control unit.



#1 Faulty input from the ignition coil. (Tach signal)
#2 Faulty input from the water temperature sensor.
#3 Faulty input from the O_2 sensor or faulty output to the air/fuel solenoid.
#4 Faulty input from the vacuum sensor. (626)
#5 Faulty input from the EGR position sensor. (626)