

A new technical problem solving service from The Automotive Technician, under the guidance of AAAE leaders

PROBLEM SOLVER



Make : Mazda
Model : MX5
Year : 03/1993

Customer Complaint

Poor performance, poor idle and intermittent cutting out.

Problem Summary

After road testing, vehicle showed no faults or performance problems.

Diagnostic Sequence

1) General inspection of vehicle and engine components, wiring, spark plugs and air filter. All visually OK.

2) Connect aftermarket or factory scan tool and check for fault codes. Our scanner came up with one code :-

Code 3 G1 SGC signal This indicates a cam signal malfunction. In this vehicle the cam sensor is part of the Crank Angle Sensor (CAS).

Clear code.

3) Road test vehicle with dual trace scope connected to the two outputs of the CAS. Monitor outputs when problem presents itself. Recheck fault codes.

Fault Description

The car has a problem with the output signal from the cam sensor.

The crank angle sensor has the cam angle sensor built in. Later model MX5's have separate cam and crank angle sensors.

Fault Solution

1) Locate and inspect the wiring and connections at the



CAS at the rear of the head. 2) Remove faulty CAS, either by removing the coil pack, (hard on the back because of the bottom bolt), or try unbolting CAS and bring it out and down on the driver's side by walk/juggling along the drivers side of the engine and out. This may save you some time.

3) Genuine or after market CAS are available.

Aftermarket \$150, genuine \$835 approx retail.

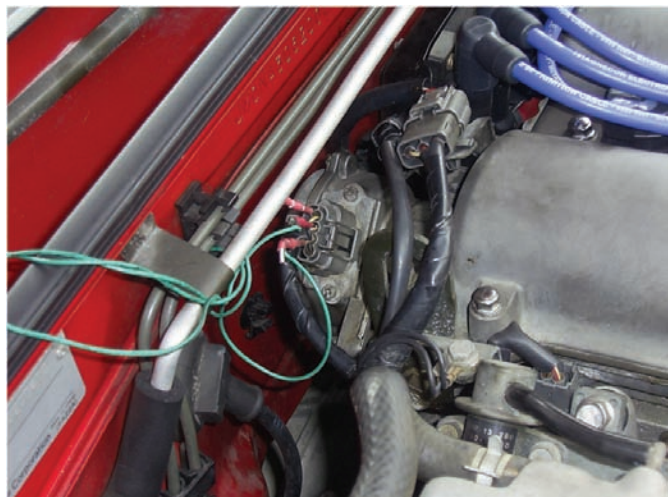
4) Replace the Sensor, then rescan vehicle and clear fault codes. Road test vehicle and then recheck for faults in system.

This type of sensor will create an off-on voltage signal. Problems with this type of sensor include loss of the 5 volt reference signal from the engine control unit.



Recommended Time

Labour time was 3.5 hours, taking into account research, location of parts and actual time spent fixing the problem.





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