

A new technical problem solving service from AAAE leaders (See Page 8) introduces a simple to follow format which will eventually run into many thousands of real life, tested workshop solutions to everyday problems. If you like what you see, or have any suggestions for improvement, Jeff Smit of AAAE would like to hear about it. Lodge all suggestions at secretary@aaae.com.au

Here are samples of two recent problems.

PROBLEM

1

Vehicle

Make : Honda
Model : Civic
Year : 04/2000

Customer Complaint

Airbag light staying on (SRS light).

Problem Summary

SRS light illuminated about one week prior and has been on whenever vehicle has been driven.

Diagnostic Sequence

1) General inspection of vehicle and SRS components, wiring, airbag(s), seat belt tensioners and wiring all visually OK.

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

- 1 PAB (passenger air bag) open in inflation circuit
- 2 Increased resistance in

PAB.

Both of these codes imply a fault in the passenger airbag system. On further investigation it was noticed that the vehicle was not fitted with a passenger airbag, only a driver's side airbag system.

Fault Description

The car has a problem with the resistance shown to the computer in the passenger side airbag circuit. As with most airbag systems, the SRS control unit can accommodate multiple airbags. In this case only a driver's airbag is fitted. Therefore a resistor must be fitted to simulate an airbag on the passenger side.

Fault solution

- 1) Locate and inspect the wiring and connections at the SRS ECM. The ECM is



located behind the centre console mounted to the floor. (see pic)

2) Trace wiring to locate dummy resistor. Located near ECM in a yellow connector (see pic). The resistor is blue.

3) Source new resistor from Honda.

Part no.
H32146-SV4-013
Description.
Dummy Resistor
List price
\$24.67 as at May 2006
(see pic)

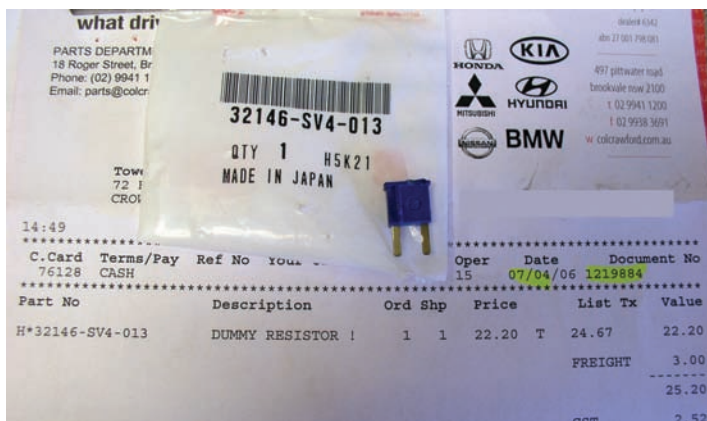
4) Replace the resistor, then

rescan vehicle and clear fault codes. Road test vehicle and then recheck for faults in SRS ECM.

All safety restraint systems, wiring and connections are identified by being yellow in colour. Always consult owners or workshop manuals before disconnecting any plugs or modules.

Recommended Time

Labour time was 2.5 hours, taking into account research, location of parts and actual time spent fixing the problem.



PROBLEM

2

Vehicle

Make : Toyota
Model : Corolla
Year : 02/1998

Customer Complaint

Engine overheating in traffic, especially in city driving.

Problem Summary

After road testing found that both engine and A/C thermo fans not operating when engine hot or when A/C switched on.

Diagnostic Sequence

- 1) General inspection of vehicle thermo fan wiring and testing all in car and under bonnet fuses.
- 2) No power supply to fan fuse, 30 amp, in main under bonnet fuse box. (see pic)
- 3) Power to this fan fuse comes from Main Engine Relay. (see pic)

Fault Description

The main relay switching contacts damaged causing poor connection when relay is energised.

As this vehicle is getting older the thermo fans are



drawing a little more current, especially on start up. This added current draw causes damage to the relay contacts. In our case, a large voltage drop developed causing intermittent faults. A current draw test on both fans is highly recommended.

Fault solution

- 1) Confirm power supply problem to fan fuse, 30 amp, in engine bay fuse box.
- 2) Remove and test power supply, via fuseable links, and switching voltage to main engine relay.
- 3) Test current draw across both fan motors. Should be approx 15 amps. Start up current can be as high as 25 amps.
- 4) Source new main engine relay from Toyota



Part no.
9098704002
Eng Relay Main
List price \$35.25
at May 2006 (see pic)

- 5) Fit new relay and retest power supply to fan fuse when engine running. Recheck both fans operating when A/C on if applicable.

Recommended Time

Labour time was 2.5 hours, taking into account research, location of parts and actual time spent fixing the problem and testing both fan current draws.

WELCOME TO NEW MEMBERS VASA

Troy Jones
 Pro Cool Auto Air & Electrical
 ABERGLASSLYN NSW

Brian Lane
 Brian Lane Automotive
 CURRAJONG QLD

Ryan Northcott
 1st Choice Auto Electrics
 WORONGARY QLD

Denso says what we've all been thinking

DENSO, Australia's largest supplier of air conditioning products, has come out with the first official warning of system failure if a hydrocarbon refrigerant is used in a vehicle.

Not only does DENSO not support the use of hydrocarbons as a replacement refrigerant because of risk of explosion, but it questions the durability of an A/C system if the flammable refrigerant is used.

"Hydrocarbons charge amount

is typically 1/3 of normal refrigerant levels resulting in a reduced amount of oil returned to the compressor. Hence the durability of the compressor can be adversely affected by a lack of oil returned," says DENSO service manager Robert Burns.

"We support the latest Government legislation as it equips the service industry with clear guidelines for refrigerant usage enforced with education and an individual handling licence.

"This Legislation however has inadvertently increased the use of lower cost hydrocarbons as a replacement for the genuine HFC-134a refrigerant," added Robert.

"Hydrocarbons are flammable and in the event of a leak, it places the safety of both the occupants and service technician at risk of an explosion. As a result, licensed Service Dealers may refuse to service your system," said the DENSO warning.