

Tat's a fact

problem solving

HOLAS00110
Holden
Astra City
04/2000
1.8 16V Z18XE



Customer complaint

Oil warning light intermittently flashing on while driving and especially while idling.

Problem only occurred after vehicle had been serviced. Previous service centre checked and no fault found.

Problem summary

It was suspected that the oil pressure at the oil pressure switch was not correct, causing the oil light to intermittently illuminate.

Diagnostic sequence

Remove oil pressure switch and test engine oil pressure. Pressure was found to be lower than the manufacturer's specifications of 65 psi at idle. An inspection of the service history showed the vehicle to be well maintained and regularly serviced.

Fault description

No oil slugging in the top end was found and the oil light had not been flashing prior to the very recent service.

After a very thorough inspection of the oil filter cartridge and housings, it was found that the cartridge mounting base had turned slightly.

Once the oil cartridge base was removed from the engine block it was found that one of the location lugs had been broken.

Further investigations showed the mounting lug was broken



when the oil cartridge housing was removed during the vehicle service.

Our experience has been that the cartridge housings are sometimes over tightened and between servicing the housings are binding together.

On removal of housing, at the next service, the complete base can turn and break the location lug and therefore mis-align the oil galleries between the block and the filter.

Because the housing is tight, when the seal or bond is broken, the technician does not realise that the base has also turned.

Fault solution

We recommend the replacement of both the oil filter housing and the broken base.

Holden part number:
90543941 Housing-Engine oil filter with seal (cartridge type)

90543942 cover- oil filter (cartridge type)

Recommended time

Labour time was four hours. This takes into account research time, location of parts and actual time spent fixing the problem.

tips for Tat

ideas division

Throttle pedal position sensor.

What a clever little sensor!

With the advent of drive by wire, a very clever little sensor called the throttle pedal position sensor has emerged.

Most of these sensors are being fitted around the accelerator pedal assembly.

The sensor's main task is to tell the Engine Control Module (ECM) the position of the pedal by way of a voltage signal.

The pedal position sensor is different to its predecessor, the throttle position sensor, as it has two sensor outputs, not one.

The two built-in potentiometers transform the accelerator pedal position into an output voltage, and transmit this voltage back to the ECM.

The clever part about these sensors is that they also detect the opening and closing speed of the accelerator pedal and feed this information back to the ECM.

The ECM can determine the opening and closing speed by comparing the two sensor voltages to each other at any given time (see diagram).

With this information, the ECM can control the throttle control motor and injectors to ensure correct response to pedal movement.

In most cases the idle position of the accelerator pedal is determined by the ECM.

Recalibration is normally required after fitting a new throttle pedal position sensor.

