



Part 9

Engine Fault

In March, on my way to join up at Caltex Yabulu for the very successful Hinchinbrook High Tea Prowl, I got an amber “engine fault” error message on my dashboard. I immediately pulled into the side of the road to take stock, even though there had been no change to engine sound or performance, but couldn’t see/find anything obvious, and on re-starting the engine, everything was normal again. A temporary glitch? No such luck! After another couple of kms the message re-appeared. I stopped again, re-started, and finally arrived safely at Yabulu – but wasn’t going to risk a longer trip, so got a lift to Hinchinbrook and back. Later that day I got home safely, and the following morning ran a comprehensive scan for error codes to try to identify the underlying problem.



My initial thought was the battery. Underperforming batteries can have a disproportionate effect on the X100, and my battery had been replaced less than 3 years before. I ran a diagnostic with my TOPDON BT50 tester – all good. I even took the car to Battery World for them to test, as their equipment was likely more sophisticated than mine. The battery passed all tests

The initial scan came up with a staggering array of fault codes – too many to be useful, so I cleared the codes I could, leaving 3 remaining codes. I then took the car for a drive, came back and tested again. We’re now down to 5 codes, including “battery supply fault”, “brake switch faulty”, “CAN bus fault”, “SCM fault” and “CCM fault”.

As an aside, why did I continue to drive the car, albeit minimally, with an “engine fault” dashboard message? The message was amber, not red, so the system did not consider the problem urgent enough to go into limp mode; and the car drove quite normally even with the error message – so it was in my opinion a fair assumption that the fault was not likely to result in critical failure anytime soon.

The “CAN bus” fault became my primary focus. This type of error typically indicates a fault in communication between the various control modules in the car, of which there are many, and can initiate other fault codes (such as “battery supply fault”) simply through lack of good signals. I removed the Transmission and Engine Control Modules to run some contact cleaner over the plugs and sockets, only to find that the coolant fan under the ECM wasn’t working. These fans are generic so I bought one from a computer store. Now the area is adequately cooled – but the problem persists. I cleaned the contacts for other control modules I could easily access, but without any joy. As testing the connectors is beyond my abilities, it’s now time to bring in the professionals!



I spoke to my neighbour Matt (Mark Nixon Automotive) and the car was booked in for diagnosis. All module connectors were cleaned and tested. The fault persisted, albeit only now when engaging cruise control and the main suspect was the brake/cruise control switch. Brake lights work normally, but the cruise control system needs to know the brakes are not being used in order to activate, and to de-activate when the brake pedal is depressed – and it seems it’s not getting a consistent signal.

Luckily, I have a spare brake switch, bench-tested and fully functional – I just need to schedule the time to fit it (it’s a fiddly job). The good news is the “engine fault” message has not returned, even after about 1500kms. Remember not to engage cruise control, at least for now. Phew!

Alternator

While my car was off the road with its engine fault, I decided to investigate the alternator, which I had been unhappy with for some months. It appeared to be working adequately, but was noisy. When I bought the car, one of the first things I fitted was the plastic alternator cooling conduits, which were “missing”. I suspected the alternator had been running too hot for some time, and that appeared to be the case. I sourced a replacement alternator – and not a moment too soon! The day I chose to fit the new alternator, I started up the car – and it wasn’t charging!! I checked the external wiring as best I could, but everything appeared fine. The offending alternator soon came out. I had to replace the alternator plug on the wiring loom – I found



The old alternator was obviously not original. It's marked X308

👉 a new one here in Townsville for around \$8. The new alternator was duly fitted, is noiseless, and charging perfectly.

Serpentine belt

I had intended to replace the serpentine belt while changing the alternator – just as a precaution. Before I did anything though, I had a good look at the front of the engine, and came across these markings on the belt tensioner. I looked it up in my workshop manual, and, surprise surprise, the markings are actually a built-in belt stretch monitor. If the arrow on the left moves beyond the two upper marks towards the lone lower mark, the belt has stretched and should be replaced. In my case, the indicator arrow is right at the beginning of the field of travel, indicating no measurable stretch. I removed the belt to examine it – it’s in good smooth condition with no surface cracking. So – no need to change the belt. My new belt can remain in its sealed packaging for future use.



I have since been told that belt stretch indicators are by no means common in modern cars – so full marks to Jaguar in this case!!

Windscreen chip

When I bought my car, there was a slight windscreen chip at the top of the screen, above my line-of-sight of the road ahead. Not illegal, but once seen, cannot be unseen! Towards the end of March I was driving to Bunnings (where else?) when I thought I’d make a detour to O’Brien’s Auto Glass to see if they could repair the damage to make it less obvious, even though it hadn’t deteriorated during my ownership. I was no more than about 500 metres away from turning into O’Brien’s when I heard a resounding “CRACKBANG!” and quickly realised I had managed to get in the way of someone’s ejected stone, and had more than just a slight windscreen chip to deal with. I recounted the story to the man on the desk. Did I get sympathy? No! Just a belly laugh...



The good news is that I have full glass cover on all my cars, so there’s no excess to pay on any glass repair. The bad news is that the new chip is too large to repair properly. More good news, there’s one available in Sydney. More bad news, it was no longer available by the time I lodged my claim 2 hours later. My brand-new replacement windscreen is on order from UK, and due to arrive and be installed sometime in August. Thumbs up for Shannons and O’Brien’s.

Matters Outstanding

Reading back on previous articles, I realise there are several issues mentioned which have been left unresolved, such as door speakers, speaker cover panels, radio/bluetooth upgrade etc. I’ll try to resolve as many of these as possible in the next article.

Cheers for now, and Happy Motoring!

Nigel Miller