



# D-Max and Mux DPF/DPD Issues



## By Clinton Brett

The Isuzu D-Max and Mux are now one of Australia's most popular cars and popular for DPF/DPD faults.

Last year Isuzu eventually got to the bottom of the major cause of the DPF differential pressure sensor failure.

The wrong material was used on the hoses which feed the exhaust pressure to the sensor. The hoses were not adequate to cope with the heat, causing the glycerin to seep from the rubber into the highly sensitive pressure sensor, resulting in complete failure of the sensor.

**Haynes Online Repair Manual**

ISUZU DMAX

Step-by-step maintenance & repair

### ISUZU DMAX

This makes sense to me (pardon the pun) as I had been driving around for 12 months in my own car (Musso UTE) with test hoses connected for the DPF diagnostics training courses and my DPF sensor failed. My rubber hoses were standard fuel grade hose, not suitable for high exhaust temperatures.

That's a bonus tip to what I am about to share with you.

Valve clearance is the greatest overlooked contributor to DPF related faults and symptoms.

Don't base your customers' additional service procedures on what the manufacturer recommends. They do not know what each customer does with their vehicles but as a regular independent

or OEM dealership workshop service provider, you need to be aware that some driving conditions will contribute to premature failures.

Simply because the vehicle is not meeting the appropriate diesel engine conditions- Constant haulage of heavy loads, minimal idle periods and less stop start cold operation.

The following symptoms can be evident when valve clearance proves to be the cause of the listed fault codes below- Excessive crankcase ventilation, excessive smoke, poor fuel economy, running rough, misfire. Engine light on, engine derated and DPF/DPD fault codes present may include-

**P2002 DPD Efficiency below threshold**

**P2456 differential pressure sensor learnt position**

**P1471 Isuzu Code Regeneration Insufficient**

**P242F – Diesel particulate filter restriction caused by ash accumulation**

**P2453–Diesel particulate filter differential pressure sensor circuit range/performance**

**Failure/Issue:** Valve clearance adjustment is overdue

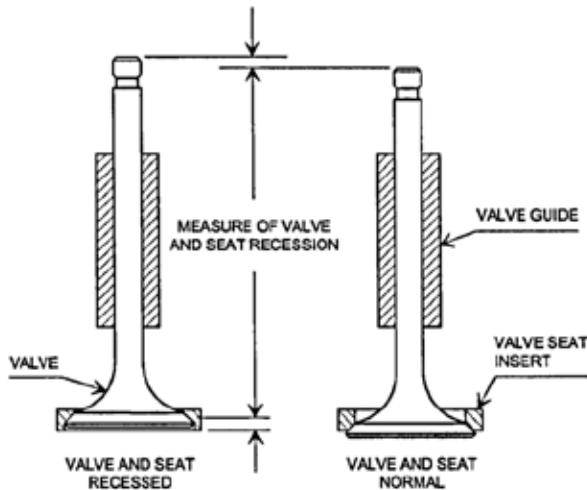


### VALVE CLEARANCES

**Diagnosis and/or early detection of the fault:** The OEM recommends checking the valve clearances by performing an audible test. Diesel engines are a highly audible engine with rattles and knocks like that of noisy valve rockers, therefore we do not advise doing this type of test.

Often with tight valves (inadequate clearance), there is reduced audible note from the engine. This type of wear is also referred to as valve recession. Valve recession is said to have occurred if wear of the valve and seat inserts has caused the valve to 'sink' or recede altering the closed position of the valve relative to the cylinder head as shown below.

It occurs gradually over many hours. Sometimes the material loss will be greater from the seat insert and other times the material loss will be greater from the valve. The nature of the material loss is not clearly understood, although it has been suggested that it may occur by the following mechanisms- metal abrasion, fretting is adhesion mechanisms or high temperature corrosion.



Valve recession can contribute to excessive crankcase ventilation which in turn can create premature oil seal leaks, high quantity of oil vapor from the breather into the intake system, contributing to DPF issues, engine over revving and complete engine failure.

**Solution:** Increase the intervals for valve clearance checks and adjustments. Advise performing a physical check using feeler gauges at 20,000 to 30,000km intervals. These Isuzu engines use a screw adjustment.

Specifications provided by Haynes Pro for the 4JJ1-TC and 4JJ3-TCX

Valve clearance- Cold engine

Exhaust 0.15(mm)

Inlet 0.15(mm)

### Diesel Help driver profiles

I have created a driver profile list for diesel owners as some of your customers only use their diesel vehicle to drop kids to school and go shopping and this is not really what a diesel is designed for. So, here is a tip for you all to pass onto your customers.

To reduce the increased wear of valve trains, I would advise reducing extended idle periods and increasing the load of the engine.

### Why?

The diesel is a thermal combustion engine designed to operate with increased combustion temperatures. When a diesel engine operates at idle and without load, the combustion temperatures are reduced, resulting in a chemical reaction of the oxygen mixing with the diesel fuel. This reaction is hydrochloric acid, which can corrode metal components whilst parked stationary and not operating.

For more about our services, visit [www.dieselhelp.com.au](http://www.dieselhelp.com.au)

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## Is your workshop invisible online?

### Here's why that's costing you more than you think.

By Melanie Cahani, Marketing Strategist, 3 Little Birds

Let me ask you something. When did you last need a tradie you hadn't used before?

Chances are, you didn't ask around the neighbourhood. You pulled out your phone.

Your customers are doing exactly the same thing after they've hit a pothole and are unsure if their tyre is damaged or they're well overdue for a service. And if your workshop isn't showing up when they search, someone else's is.

I've spent 15 years working across the automotive aftermarket and workshop sector, and the pattern I keep seeing is the same one, brilliant operators running tight, trusted businesses who are essentially invisible to anyone who doesn't already know them. That word-of-mouth reputation you've spent years building? It only travels so far.

Here's what's shifting, and it's shifting fast.

The 25 to 45 year old vehicle owner who is your growing customer base, doesn't decide where to book a service based on a sign out front or a mate's recommendation alone. They Google. They check your reviews. They scroll your socials. If what they find is a bare Google Business listing

with three reviews from 2019 and no website worth visiting, they keep scrolling.

Meanwhile, the workshop down the road that's been running a few hundred dollars a month in Meta ads and posting consistently on Instagram has built a local audience that trusts them before they've even walked through the door.

That's the competitive reality right now and it's only going to intensify.

I'm not suggesting you need to become a content creator or spend hours online every week, nobody has time for that when running a workshop. What I am saying is that the basics matter enormously and most workshops are leaving them undone. A fully optimised Google Business profile. A steady trickle of genuine customer reviews. The occasional post that shows your team, your work, your expertise. A simple paid ad targeting local drivers when they're actively looking. These aren't big investments. But the absence of them is quietly costing you enquiries every week.

The tyre and workshop businesses that will consolidate their local market share over the next few years won't necessarily be the best operators in the area. They'll be the ones who made themselves easy



to find and easy to trust at exactly the moment a customer needed them.

You've done the hard work of building a great business. Don't let a competitor with a decent digital presence take the customer who should've been yours.

The good news? You don't have to do it all at once, and you don't have to do it alone. But you do have to start.

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