

## **Nissan Figaro - Fuel Consumption**

**First of all – what sort of fuel consumption should you achieve in a Figaro?.....** A realistic overall figure is 32 – 35 *MPG* – but there are, of course, many factors that will influence consumption. There are lots exaggerated claims made about the Figaro – I've seen 50+ *MPG* quoted and, quite simply, you'll not get anywhere close in everyday mixed driving!

On the face of it, 32 – 35 *MPG* doesn't seem too good for a 1 litre, small car does it? But remember – it's engine power not capacity that influences consumption – the power output of the Figaro at 75BHP is very significantly more than a 1 litre Micra K10 at around 50 BHP. The low geared automatic gearbox will also have a significant impact on economy compared to a car with manual transmission.

***Driving practices can have a significant effect on fuel economy. Some of the more pertinent factors are listed below:***

- Cars have a specific speed range whereby fuel economy is at its peak under steady driving conditions. For the Figaro this economy range is around 40 – 55 MPH. Above this range fuel consumption rises sharply as speed increases. Fuel consumption will increase by a massive 20% at 70MPH compared to 60MPH!!
- Stop / start driving and rapid acceleration have a negative impact on fuel economy!
- Use of the aircon system increases consumption by around 10%. However, switching off the aircon and driving with the windows open at speed probably wastes as much fuel!
- Driving with the roof down increases consumption by 5 – 10%
- Carrying a load or passengers increases fuel consumption. Not a huge problem with a Figaro

***Routine checks and the correct maintenance schedule are very important to maximise fuel economy.....***

- Check tyre pressures regularly. Under inflated tyres are not only a hazard – they cause increased fuel consumption.
- Service the car regularly – in particular, dirty air filters, fuel filters and worn spark plugs waste fuel and cause other problems. Engine settings – in particular – ignition timing and tappet clearances can have a marked effect on performance and economy. The correct settings can be found in the Specifications and Settings section of the Owners Information Section.
- Use a good quality, semi-synthetic engine oil and change at the prescribed interval in order to reduce internal friction.
- There are numerous products and devices on the market claimed to improve fuel economy – I’ve yet to see anything that’s been demonstrated to improve fuel consumption to any significant degree!! The only exception I’d make is fuel injector cleaner. Added to the fuel tank as part of scheduled servicing – injector cleaner helps remove deposits from fuel injectors. This in turn ensures proper atomisation of fuel, and hence optimises fuel economy. Petrol does contain additives such as detergents so there’s little value in using injector cleaners on a routine basis!!
- If your Figure suffers from flat spots, hesitation, misfires etc – get the problem sorted – such issues can have an effect on fuel economy.

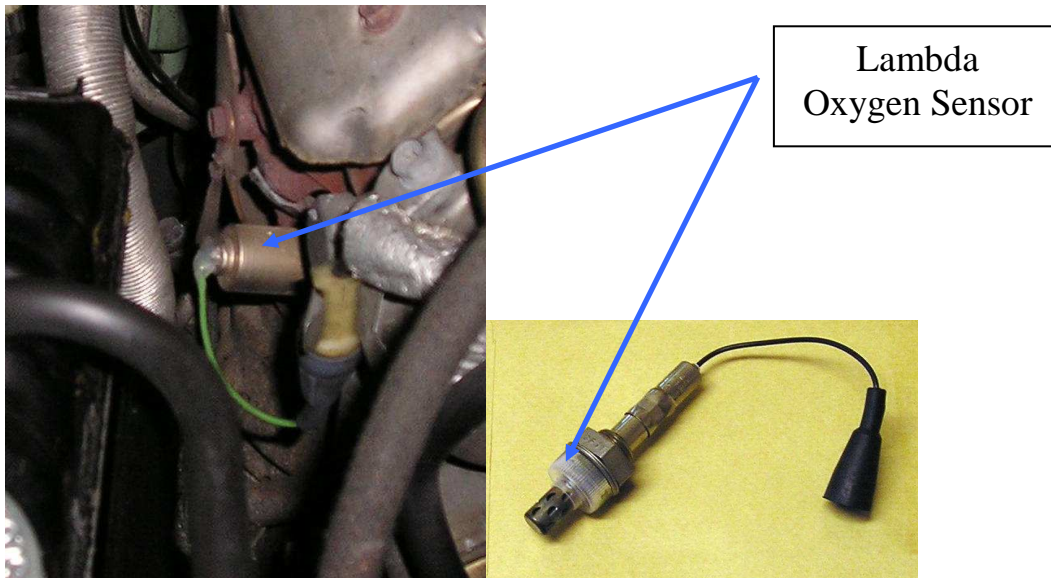
***So..... You’re happy with your driving style and your Figure is regularly and properly serviced - but .....fuel economy is still poor..... What next?***

In our experience – there are a few issues which occur on a regular basis which result in poor fuel economy on the Figure – over and above issues covered so far.....

***Life expired Lambda oxygen sensor.*** This sensor measures the amount of oxygen in the exhaust system - the signal from the sensor allows the engine control system to fine tune the fuel system to optimise economy and performance. Changes to the fuel control are made about once per second! The system comes into play at idling and steady speed driving – not when the car is accelerating.

Manufacturers quote the effective life of a Lambda sensor as about 30000miles. Most Figures have their original 18 year old sensors. As sensors become life expired - they become unresponsive and may even fail altogether!

A life expired Lambda sensor can increase fuel consumption by more than 10% so this is one replacement that can pay for itself in no time at all!



***Engine running cold.*** Optimum fuel economy occurs when the engine reaches normal working temperature. If the engine temperature barely comes off the bottom stop of the gauge then fuel economy will suffer. Often it's little more than a coolant thermostat that's stuck open and needs replacing!

***Failed engine temperature sensor.*** This sensor measures the engine coolant temperature – it's not the same sensor that indicates coolant temperature on the dashboard. Essentially the sensor indicates to the ECU that the engine is cold so the ECU enriches the fuel mixture to allow the

engine to run more smoothly as it warms up. Problems can occur with a faulty sensor (or even a disconnected sensor) such that the ECU “thinks” that the engine is cold and therefore continues to enrich the mixture! This problem is often picked up if an exhaust gas analysis is carried out.



Coolant  
Temperature  
Probe (ECU)

***Seized turbo.*** It should be pretty obvious that something significant is amiss but many owners have bought Figaros with seized turbos, and without a yardstick to compare – thought all was well! In reality, a Figaro with a seized turbo will run smoothly but will be seriously underpowered. Because the engine is running inefficiently – it will drink fuel!

***Blocked Catalytic Converter.*** Certainly not a common problem on the Figaro, and there will have been a significant prior event - so such a failure doesn't occur out of the blue! Essentially the ceramic matrix of the converter fuses or debris accumulates on the top face. This presents a restriction to exhaust gases and both performance and fuel economy suffer.

***But ..... My Figaro returns decent MPG – is there anything that I can do to improve fuel economy further?***

There are minor things such as performance air filters that will improve performance very marginally but there may be undesirable side effects! However without major modifications and without spending a king's ransom – there's one thing that can be done.....

The catalytic converter on the Figaro is an early type and presents quite a restriction to the flow of exhaust gases. Removing the catalyst (often termed de-cattng) removes the restriction and performance / economy improve as a consequence. Furthermore removing the restriction reduces the backpressure on the turbocharger - a positive step forward.

Because of the age of the Figaro – the catalytic converter isn't needed to meet legislation or MOT test requirements. Catalytic converters do of course reduce emissions of undesirable compounds to the atmosphere. However after 18 years – this early generation catalytic converter on the Figaro will be doing very little in terms of emissions control so it's removal is generally justified.

De-cattng the Figaro is straightforward since the catalyst matrix is contained in a metal canister on the exit of the turbo. Essentially the canister is removed, opened up and the ceramic honeycomb removed. The empty canister is then replaced so there's no external visual change. The photograph below shows the catalyst canister unbolted – the ceramic matrix can clearly be seen.

