

NISSAN FIGARO - STARTING PROBLEMS

Just to clarify – starting problems in this context assumes that the engine turns over on the starter – it simply won't fire-up.

If the issue is failure of the engine to turn-over when the key is turned – it's a different issue and can result from a couple of problems which have been covered elsewhere:

- Battery problem – See “**BATTERY & ALTERNATOR PROBLEMS**” in the Owners Information Section
- “Won't start in P” problem – See **NISSAN FIGARO - COMMON PROBLEMS & NIGGLES Part1** in the Owners Information Section

First of all – what's the correct way to start a Figaro? I've heard it said many times that you should turn on the ignition – listen for the fuel pump making a whirring sound - then wait for the whirring to stop before attempting to start the car! The explanation is that you need to wait so that the fuel pump “can prime the system”. I wonder why the normally diligent Nissan omitted to mention this strange procedure in the driver's handbook? Quite simply – it's a load of nonsense! Chances are that if you follow this procedure – you're actually decreasing the probability of successfully starting the car!! Why is this?

The fuel pump is controlled by the ECU – the engine management system – the fuel pump only runs when the engine is running and stops as soon as the engine stops. This is a safety feature, so that if a fuel line was ruptured e.g. in a collision – the engine would stop – immediately followed by the fuel pump. This prevents the contents of the fuel tank being pumped on to the road!!!

It's obviously a good safety feature – but, if the engine must be running for the fuel pump to run – how on earth does the engine start in the first place without a fuel supply? The answer is that there's a timer controlled over-ride that allows the fuel pump to run for a few seconds whilst the engine is being started. The timer starts as soon as you turn on the

ignition, and the best chance of starting the car is whilst the fuel pump is running in its timed cycle. If you wait until the end of the timed cycle – only an initial dribble of petrol (from the pressurised fuel line) can get into the engine – thus severely reducing your chances of a successful start!

Therefore..... The correct way to start a Figaro is to insert the ignition key and turn the starter straight away!

Should I press the accelerator when turning the key to start the car? Not really – a Figaro should start just by turning the key and without touching the accelerator pedal. **However.....** Drivers tend to find methods that work best for them – so if you find that the car starts better by, say, pressing the accelerator slightly – then absolutely no problem!!

What should happen when I start my Figaro?..... Well – depending on the temperature and when the engine was last run – the car should start at a higher than normal idle speed. The colder the outside temperature – the higher the idle speed. On a frosty morning – the idle speed will initially be 1500RPM+. As the engine warms up – the idle speed will fall gradually over a few minutes until it idles at the normal hot idle speed of about 900RPM. If the car doesn't fast idle when cold, then in all probability – the fast idle valve (sometimes called, auxiliary air valve or idle compensation valve) is faulty. This is quite a common problem on the Figaro nowadays and can be a nuisance, particularly in winter - the engine needs to be coaxed to idle until it warms up. **A faulty cold idle valve will also affect starting** – it's necessary to catch the engine as it fires by using the accelerator.



**COLD IDLE
VALVE**

The cold idle valve is a sealed unit – it cannot be repaired and must be replaced when faulty. It works using a bimetallic spring that bends as it's heated. The bimetallic spring is heated by an electrical coil that surrounds it - power is supplied to the coil when the engine is running. The movement of the spring opens / closes a valve which supplies additional air to the engine.

What's the cause of bad starting?

Successful starting is all about getting the correct fuel mixture into the cylinders and igniting with a decent spark at the right time.

The condition of the battery is vital to successfully starting an engine - pretty obvious really! If the battery struggles to turn over the engine, then you're on a downward spiral - the battery voltage drops so that the spark plugs produce a weak / no spark – the plugs get soaked in petrol so getting them to spark is even more difficultthings just go from bad to worse.

So is a Figaro any more difficult to start than any other car. Not really, but it does have two features that can conspire against good starting. Firstly – it's an automatic so that the starter motor needs to rotate components of the gearbox making the task more difficult. Secondly

being a turbo engine – the low compression pressure at cranking speed results in the fuel mixture being more difficult to ignite than in a high compression ratio, non-turbo engine. It's vital therefore that a poor battery doesn't make life even more difficult!

So – if the battery is in good fettle – you just need the correct fuel mixture and a decent spark and all should be well! It's rare that the fuel system gives problems on the Figaro – it's highly reliable – so provided you do actually have fuel in the tank, the fuel system is very unlikely to be the cause of poor / no starting!

Battery problems aside – more than 80% of poor / no starting cases are due to issues with the ignition system. In particular – the HT leads, distributor cap and rotor arm on most Figaros are 18 years old – way beyond an expected lifetime. These items break down electrically so that the vital spark finds an easier path to earth than across the spark plug. It's sometimes possible to see stray electrical sparks when looking at the engine in the dark! Often problems with HT leads, distributor caps and rotor arms become far worse in cold or damp conditions! The recommendation is therefore to replace these components before problems begin!! As well as poor starting – these parts are often responsible for misfires, hesitation and rough running.

So, in summary, what can I do to ensure that my Figaro starts first and every time?

- Ensure that the battery is in good shape – see separate item on “Battery and Alternator Problems” in the Owners Information Section
- Get the car serviced regularly. In particular - change the fuel filter, air filter and spark plugs at the recommended intervals. As part of servicing – check and adjust vital settings. Spark plug gaps, ignition timing and to a lesser extent, tappet clearances, can all influence starting.
- Other than fuel filter changes – there's nothing else really to do in respect of the fuel system. We do, however, recommend the use of fuel injector cleaner at service time. Simply add to the fuel and it will help remove deposits of varnish to ensure correct fuel atomisation.

- If your Figaro doesn't fast idle when cold – it's likely that the cold idle valve has failed. This also makes the car more difficult to start. It's simply old age and although a new valve is expensive – it's well worth replacing.
- Most Figaros have their original HT leads, distributor cap and rotor arm. They're well past their expected life and well worth replacing.

What if my Figaro just won't start? We'll the worst thing you can do is keep trying to start it! It's a vicious circle – repeated attempts reduce the battery voltage and fuel is pumped into the engine so that it becomes flooded – both these things conspire against the engine starting. **So if you find yourself in this situation – what should you do?** The first thing is to avoid short bursts of the starter – it just compounds the problem. **Hold the accelerator to the floor and keep the starter turning – maybe by up to 10 seconds. This will help to clear out unburnt fuel and hopefully the engine will cough and splutter into life.**

My Figaro usually starts fine but if I leave it for a week or so – it's difficult to start!.....

Well, it could be a battery problem – the battery is losing its charge over time. Get the battery tested. There is however another issue....

When standing – oil will drain from around the pistons – the oil normally forms a seal between the piston rings and the cylinder walls. Without oil - the end result is that the initial compression pressure is reduced making starting more difficult. The problem is worse on high mileage / worn engines. The solution is to avoid short bursts of the starter – **keep the throttle to the floor and keep the starter motor turning for around 10 seconds.** The engine will usually cough into life with a short-lived plume of smoke from the exhaust!