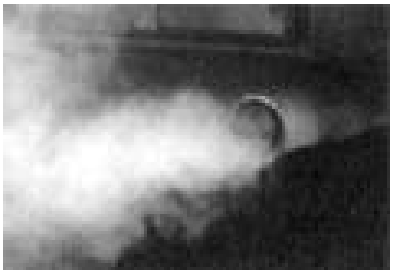
Diesels



Diesels often seem cheaper because the buyer is hypnotised by the apparently low cost of fuel instead of looking at the entire cost of ownership, including road taxes, increased servicing costs and the cost of an expensive engine rebuild that grows ever more likely with every passing kilometre.

There are a few things you should know about diesels:

1) Diesels cost more to buy. In almost every case, new vehicles with diesel engines cost significantly more than the petrol equivalent.

Recently, carbuyers have developed an unhealthy attraction to diesels for fuel economy reasons, especially European diesels. You should be aware that, however much you may save in fuel, European cars fitted with diesels have a shocking track record for reliability, and when they break, they break your bank account as well.

2) Diesels are generally noisier than petrol engines, although you may not notice this when you're inside the car, because diesel-powered cars are often well soundproofed.

3) Diesel engines generally cost much more to service & repair than petrol engines. Diesel engines need to be far stronger than petrol engines. This additional strength translates into additional expense at fix-up time.

4) Diesel is often a lot less per litre than petrol, but diesel-powered vehicles must pay road tax in many countries, which drastically raises the true cost of the fuel.

5) Diesels may not be much more economical for smaller vehicles. Various tests comparing the running costs of a petrol-powered small car versus a diesel-powered small car have concluded that the average driver would take several years at least, merely to get back the extra cost of the diesel engine.

Diesels aren't all bad: there are two groups that do well from owning diesels: owners of new commercial vehicles and owners of large offroad vehicles. Why?

New commercial vehicles are often covering huge distances and their owners are primarily concerned with keeping running costs as low as possible. Because a new vehicle is under warranty, fuel and servicing are likely to be the biggest costs that commercial owners face. Of these costs, fuel is by far the biggest. If they're doing big mileages, a well-serviced new diesel can be significantly cheaper to operate, both in terms of fuel costs alone and in terms of overall costs of ownership. Because the vehicle will probably be sold long before the engine needs rebuilding, new owners don't care about the cost of diesel engine repair. It's the next guy's problem. Lastly, because the warranty will require that the vehicle is regularly serviced, the engine is less likely to give trouble for its first owner.

It's the person who buys the ageing diesel vehicle off the commercial operator who may be a loser – it's far more likely to require expensive repairs & far less likely to have a decent guarantee.

Owners of large offroaders with proven engines such as those fitted to the early Nissan Patrols and Toyota Landcruisers are also likely winners.

There's a rough rule of thumb with automotive diesels that the larger the engine, the more likely it is to be reliable, and vice versa. Older Nissan Patrol and Toyota Landcruiser engines have been known to do 500,000km without major repairs. Also, there are many rural areas where you simply can't buy petrol because there are no petrol stations. Most farmers, by comparison, have easy access to diesel.

However, unless you're buying new or buying a vehicle with a proven service history, you don't know what the inside of the engine is like. One thing that everyone agrees on is that diesels are often hellishly expensive to fix when they do go wrong. So, there's a general rule that *if you don't know a diesel's history, you should avoid it altogether,* unless a diesel mechanic tells you otherwise.

The bad news

You probably think that modern diesels are better than earlier models but you may be wrong. Although many improvements have been made over the years, big, reliable, chugging diesels are rapidly going the way of the dinosaur. The ever-growing need for better fuel economy, less pollution and greater performance has meant that diesel engines have been pushed beyond their limits by over-eager vehicle manufacturers.

Traditional diesel engines were heavily built and rarely worked very hard. Because they rarely worked very hard, the engine lasted a long time.

By comparison, most modern diesels have turbochargers – giant air pumps – pushing pressurised air through them to make the engine work at least a quarter harder. As the engine works at least a quarter harder, so the engine parts and cooling system have to work at least a quarter harder. Some of this extra strain can be taken up with skilful engine designs and higher quality parts, but there's a limit to this.

The latest generation of diesel engines, termed *common-rail* diesels, are the most efficient diesel engines ever made, and when fitted to a car offer good levels of power and acceleration comparable to petrol engines.

However, many turbocharged common-rail diesel engines work harder than any other diesels in history. No matter how solidly they are made, we do not believe that they will last as long as their less-hardworking cousins of old.

France is the world centre for small diesel engines. Diesels account for most of the new cars sold in France and in Europe generally.

There is already plenty of evidence of problems with the new generation of European common rail diesel engines, even when relatively new. However, there are far worse problems down the track, after the vehicles leave warranty. European diesel engines (like their petrol siblings) are designed to be used in one vehicle for a fixed period of time and then disposed of. They are computer controlled and everything from the high tech fuel pumps to the exhaust system is designed to work together as one whole unit. Without the computer and the sensors in the exhaust pipe, the diesel will not run properly.

The European carmakers know this of course – in five or ten years' time when their diesel becomes uneconomic to fix or will no longer pass emissions checks, they'll be waiting around to sell you a whole new vehicle. The rest of the car will probably be junk.

Peugeot diesels use a silicon carbide honeycomb filter that absorbs pollution, then every 500km or so the filter system oxidizes the absorbed pollutants by injecting a small amount of fuel and a rare-earth-derived additive called *Eolys* to superheat the exhaust and burn off the soot left behind by burning diesel.

Very clever no doubt, and we believe Peugeot's claim that the system eliminates 95% of pollution. When new. However, given Peugeot's woeful reputation for reliability even with existing technology, hands up everyone who thinks this system will still be working reliably and economically in ten years' time? Thought not.

Compare this to the modern Japanese petrol engine: it's worth remembering that the basic Toyota Corolla petrol engine is not all that different to the models that they were making twenty years ago; it's just somewhat more complex and somewhat more efficient. It's proven, durable technology that is cheap to buy, cheap to service, cheap to fix, and if the car is too old to make engine repair economic, you can get a good, cheap petrol engine from just about any wrecker.

What about Japanese diesel engines? The older, smaller diesel engines by Mazda & Toyota were fairly dreadful. Nissan has always been a market leader, until recently, when some new high tech diesels started giving grief at a young age. Ditto Isuzu.

New European diesels require a very clean type of diesel fuel, but this new diesel fuel often wrecks the diesel pump on older Japanese models.

Outside of Europe, sales of diesel vehicles were expected to fall, but the opposite happened as fuel prices rose.

We'd advise you to avoid diesels altogether unless your needs can only really be met by having a diesel engine. If you *must* have a diesel, buy new or with caution, perhaps great caution, and for God's sake have it checked out by a diesel mechanic before you pay over any money

• If you want to know how a diesel engine works, see also our listing *diesel engines* in the dictionary. See also our article on alternative fuels: *The Emperor's New World*. •