DRIVEONLINE Vol. 9 Jun'98

• Running In Your New Car

If you're someone who recently had the good fortune of acquiring a brand-new car, congratulations. Like anything new, there is usually a degree of euphoria to be experienced as well as a desire to 'pussyfoot' the new car so as not to 'harm' it. Well, being gentle is fine but being too gentle may not be such a good idea.

The best thing is to carry out a process called 'running-in', which can last anywhere from 500km to 5000km or more. The reason why a new car (its engine especially) needs to be run-in with care is that the manufacturing process of metal parts leaves them with some minute imperfections, and they are being mated to other parts in the finished product. But these aren't defects in any sense – a visible example would be the stuff that looks like 'hair' sticking out from new tyres. Running-in enables these parts to interface more smoothly by causing a certain degree of beneficial wear.

Better Manufacturing

Over the past decade, manufacturing processes have improved a lot and tolerances have become finer. So the running-in process isn't as crucial – but it's still important, mind – as before when you even had to use special oil which induced a higher wear rate.

The notion of treating a new engine with tender loving care lies in contrast to what you'd find if you visit an engine factory. The new engines, after being assembled but before being installed in the cars, are run at high revs in a computer-controlled cycle. It provides some running-in and also allows for the checking of integrity and operational quality. But to see it being done can be quite shocking!

On your part, running-in calls for thoughtful driving strategies, but these are not necessarily boring or tedious. The main thing to remember is not to allow your engine to load up, meaning you don't try driving the car up an incline in top gear and labour the engine. This kind of load is bad for the engine at any time, more so when it's brand-new. The effects can be long-lasting and might ruin the engine's ability to give its best for the rest of its life.

Use Gears Liberally

Make use of the gears as much as possible, shifting frequently. Any time you go up a slope, slot into a lower gear. Making more shifts than you'd normally do also has the beneficial effect of loosening the transmission for easier operation.

Even if your car has an automatic transmission, it's a good idea to manually disengage the overdrive on an incline or even slot into '2' manually. You won't hurt the engine by doing this and you will even do it a favour if you help it run up the incline with less effort. As with manual transmissions, frequent changes that you yourself can make are good.

Varying the engine speed is also an important point. This exercise is intended to get the engine used to both high- and low-revving conditions.

Many people mistakenly think that they must stick religiously to a certain speed during running-in but this isn't the case. For this reason, it's better that you don't use the cruise control (if fitted) during the running-in period.

Engine Speeds

But you should also pay attention to what RPMs you run up to. For the first 200km, you shouldn't go past 4000rpm. After that, you can gradually go higher and after perhaps 1500km, you can start to push the engine nearer its redline. But if you are going to rev up so high, do it briskly. Don't rev up to 4000rpm and hang around that engine speed for more than a few seconds.

When you get up to 3000km or more, you might like to try running up to the redline for brief spurts. Accelerate in second gear up to the redline and shift up right away. Don't hold it there longer than a shift action. Why do this? The high revs give the engine a 'taste' of these conditions and prepare it to cope with such treatment. If you stick to low revs all the time, there is a possibility that your engine will remain tight and unwilling to perform up to its potential when you want to drive hard and fast.

Oil Changes

Most manufacturers expect the engine oil to be changed within the first 1000 or 1500km. The reason for this is that a lot of wear occurs during this time as the snug-fitting parts get worn out a bit. Metal particles mix with the oil and they are not good for the engine's health. The oil filter should remove them, of course, but they're still there. So getting rid of the running-in oil is a good idea and even if not recommended, the oil filter should also be changed.

After this oil change, the next one can be at 5000km and then you can follow the manufacturer's recommended change intervals which can range from 5000-15000km. You can decide yourself too, depending on driving conditions (lots of low speed driving in stop-start conditions places greater demands on the engine

oil) and there is also the option of going by monthly intervals if your mileage is exceptionally low.

However, should you choose not to follow the manufacturer's recommendations, be aware of warranty issues. If any mechanical problems occur and you need to claim warranty repairs, your claim may be challenged on the ground that you didn't adhere to the specified intervals.

Braking Sense

Driving gently is one part of running-in, but it's not the only thing you can do. The brakes also need some running-in and so you have to be cautious about how hard you brake. Excessive pressure on new pads can cause them to glaze over and that's going to reduce braking power throughout their life. Avoid sudden braking, which is not desirable at any time anyway.

Tyres And Wheels

Tyres don't really need running-in but bear in mind that new tyres usually have a layer of silicon protectant that makes the surface more slippery. This layer gets worn out after about 50km but you must be careful during this period, especially if the road is wet. It's rare for the silicon layer to be on the tyres of showroom cars since it would be worn out as the cars are delivered to the dealers, but it would be present on most of the tyres you get from the shops.

Just as you should avoid hard braking to run-in the brake pads, you'd want to observe the same thing in order to preserve the roundness of the tyres. Excessively hard braking which locks up the wheels and causes a skid will result in flat-spotting of the tyres. What happens then is that you will start to experience some thumping noises accompanied by vibrations. You can't do anything about this as the tyre is 'gone' – the rubber was left on the road – so it's best not to allow it to happen in the first place.

The alignment of the wheels ought to be spot-on when you get the car. But because many

assembly plants don't actually use wheel alignment equipment as part of the final dynamic checking, there's always the possibility of the wheels not being aligned precisely. So spend a bit of money and visit a good tyre shop to have the alignment checked. If the wheels are misaligned, the tyres will wear out excessively as they are literally being dragged along.

Treat your new car with care and you'll be rewarded with long and reliable service in the years that follow.