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What is Smarter Driving?

Smarter Driving or “eco-driving” is a way of driving that reduces fuel consumption, CO₂ emissions and accident rates. Smarter Driving is designed to get the most out of modern engines: a smart, smooth and safe driving style that leads to typical savings of about 15% in fuel consumption and CO₂.

And with fuel prices at record levels it’s no wonder that interest in Smarter Driving has also been rising sharply. After all, what other policy could be introduced immediately and with no financial or operational cost that would reduce fleet fuel bills by around 15%.

Smarter Driving also brings other benefits: It leads to fewer accidents as the techniques put a lot of emphasis on greater anticipation and in fostering a more relaxed driving style. And it reduces wear and tear on vehicle components including gears, clutches, tyres and brakes, which reduce maintenance costs.

Smarter Driving Techniques

2.1 Gears: Change up at low revs

When accelerating change up through the gears before 2000 rpm for diesel cars or 2500 rpm for a petrol car. This reduces engine friction and greatly increases efficiency. It is more efficient to change up at these low revs even if you compensate by putting your foot down a bit harder on the accelerator.

With **automatic** gear boxes accelerate gently as this encourages the gearbox to shift up at lower engine speeds. Avoid the ‘sports’ mode of automatic gearboxes as this leads to shifting at higher engine speed

2.2 Anticipate to minimise braking and accelerating

Read the road ahead as far as possible and anticipate other traffic to avoid unnecessary acceleration and braking. In urban driving the majority of fuel is used to accelerate the vehicle so this simple measure can make a huge difference to fuel consumption.

2.3 Decelerating

When decelerating - perhaps approaching traffic lights or a roundabout - step off the accelerator as soon as possible but remain in gear. Under these conditions a modern vehicle can detect that it’s moving under its own momentum and switches off the fuel supply to the engine.

2.4 Stick to speed limits

At high speeds fuel consumption increases dramatically because of greater air resistance. For example, at 85mph a car typically uses around 25% more fuel than at 70mph. 85mph is also more dangerous, more stressful and illegal!

2.5 Use air conditioning sparingly

Air conditioning (a/c) adds to fuel consumption because it puts both a mechanical and an electrical load on the engine. At full blast a/c adds around 25% to fuel consumption and in northern Europe, typical mixed use throughout the year adds around 5%.¹ You don't have to do without a/c completely but if you can use it sparingly that will save a lot of fuel.

However, at high speeds (above approx 60mph) an open window will affect fuel consumption even more than a/c, so in these situations the a/c is the lesser of two evils.

2.6 Tyre pressures

Under inflated tyres are not only dangerous but they also add to fuel consumption. Tyres under-inflated by 25% (say 24 PSI instead of 32 PSI) (1.70 BAR instead of 2.20BAR) will add about 2% to fuel consumption. So check your tyre pressures frequently and keep them at the manufacturer's recommended pressures.

2.7 Drive away immediately from cold

Modern engines don't need to be "warmed up" so idling an engine simply wastes fuel.

2.8 Remove roof-racks

At high speeds, roof-racks and roof boxes greatly increase air resistance and fuel consumption. For example, at 75mph: small roof bars will add around 7% to fuel consumption; a typical roof rack will add around 20%; and a large roof box around 40%.

2.9 Switch off

There's no fuel consumption penalty in re-starting a modern engine so whenever you turn an engine off you'll be saving fuel. The general rule is to turn your engine off if you think you'll be stationary for more than a minute or so.

¹ ADEME, 2003



2.10 Vehicle maintenance

As vehicles age their fuel consumption tends to increase by a few percent but this deterioration will be minimised with proper servicing and maintenance.

2.11 Avoid short journeys

Cold engines use more fuel and produce more emissions per mile, so cut-out short trips when you can.

Encouraging your staff to drive smarter

With such obvious and significant benefits, the question is how can you encourage your drivers to drive smarter?

First of all, **share the information** in this guide. Not only the techniques, but also the extent of the benefits. Drive home the message that driving style really does make a huge difference to any vehicle's fuel consumption and that even the best driver can learn from these new techniques that suit modern engines. A key myth to dispel is that Smarter Driving means driving slowly- there is much evidence to prove that this is not the case.

Encourage your drivers to **measure and record their fuel consumption** so they see for themselves how much Smarter Driving saves. If your vehicles have **trip computers** showing mpg then drivers should use them to record their MPG with different driving styles. For vehicles without trip computers the **Energy Saving Trust can supply you with its ingenious 'econometers'** that calculate mpg according to distance driven in miles and fuel consumed in litres. To receive a **FREE** econometer, call **0845 602 1425**.

You could use fuel cards to emphasise to drivers the importance of registering the correct mileage when refuelling. The mileage and fuel purchase data should be reconciled allowing you to make the most of the management information available from their fuel card provider. This will enable **fuel consumption comparisons to be made between drivers of similar vehicles on similar routes**. The best drivers can then be singled out for praise or reward, whilst the worst can be targeted with further information or training.

Analysis of the data available can also be used for the identification of fuel theft.

3.1 Training is the key...

By far the most effective way to teach Smarter Driving is by **in-car training** and the good news is that even very short duration lessons are effective. To prove this, the Energy Saving Trust ran a pilot in 2008/9 with 3000 drivers and smarter



driving lessons of less than one hour. The results were dramatic: After training drivers reduced their fuel consumption by an average of 15%.

Further Information

The Energy Saving Trust's **Smarter Driving Programme** has helped train more than 5000 drivers from 100 organisations and lessons cost just **£15 (+VAT)** per driver. The training takes less than an hour per driver and can improve your fuel consumption by around 15 percent, saving you money and carbon. For further details about the see www.energysavingtrust.org.uk/smarterdriving

For further information about Smarter Driving techniques and campaigns to promote Smarter Driving in the UK and elsewhere in Europe, visit www.ecodrive.org

Have you used our small fleet advice services?

If you read our *Small Fleets Advice* documents, you're most likely searching for ways to reduce your fleet's costs and carbon emissions. By signing up to the Energy Saving Trust's small fleet advice services you could take decisive action today!

Small fleet advice

Our **FREE** advice line can help you save money and reduce your fleet's carbon footprint. Call **0845 602 1425** to speak to one of our expert consultants, or email a question about your fleet to smallfleetadvice@est.org.uk.

Fleet briefings

FREE monthly emails – each month brings you a different transport-related topic that's designed to increase your knowledge of best practice fleet management.

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