



## TECHNOLOGY FOR EFFICIENCY

### FORD ECOmode

*How we drive our cars can have a huge impact on fuel consumption so Ford has developed technology that helps motorists get more from a tank-full by fine-tuning their driving style. This eco-friendly feature really does pay dividends at the pumps and it's fun to use as well...*

Ford cars and commercial vehicles are engineered to deliver impressive fuel economy in all driving conditions but ultimately driving style will determine just how much or little fuel a vehicle consumes.

Overzealous use of the right foot will result in more frequent trips to the pumps. But keeping speed down, driving smoothly, and changing gear early will help to minimize fuel consumption and reduce harmful CO2 emissions.

To try and encourage motorists to drive more efficiently, Ford now offers an EcoMode feature on several of its products. Launched on Focus ECONetic and now available on new Mondeo, (S-MAX and Galaxy introduction later this year), this driver-friendly device analyses how the vehicle is being driven and gives the driver tips on how to make each litre last longer.

Ford engineer and EcoMode expert Thomas Schick explains: "The idea behind EcoMode was to make people more aware of how their driving style can influence fuel use. Economical driving isn't rocket science. If I drive my car carefully I can achieve 40mpg but if I really put my foot down it can drop to 20mpg. It mainly depends on how much power I use. It's the same as riding a bike. Doing 30kph instead of 20kph or using the wrong gear doesn't work well. You have to work a lot harder, you sweat more. But you don't have to teach someone that, they can feel it.

"Customers though expect a car to be fuel efficient independent of the way they drive. They feel that the laws of physics no longer apply – of course they do!"

### **HOW IT WORKS**

EcoMode is a software based feature which uses algorithms developed from a data base of 'eco-driving' techniques to help motorists achieve maximum real world fuel economy.

The system is incorporated in the car's instrument cluster within the trip computer menu. It monitors parameters such as vehicle speed, engine rpm, engine torque and engine temperatures, the clutch position, accelerator position and gear lever position. It even calculates the percentage of cold-engine short trips made.

When EcoMode is accessed, three flower icons with five petals show up in the instrument cluster. The first flower represents gear shifting behaviour, the second flower represents

driver anticipation or how smoothly the vehicle is being driven, and the third and final flower represents speed. If you drive economically, you are rewarded with illuminated petals on the flowers. The more efficiently you drive, the more petals you light up.

“In addition to the petal, the system will flash messages up such as early shifting saves fuel, or smooth driving saves fuel,” adds Schick. “This helps the driver to adjust his or her driving style accordingly if they have lost petals.

“Using the highest drivable gear appropriate will improve economy so will adjusting your speed and distance to other vehicles to avoid unnecessary braking and acceleration. Higher speeds also use more fuel as do short trips. For this reason the system monitors the engine temperature to see how long it takes for the car’s engine to warm up properly. The system will then advise the driver what percentage of their driving is done on short trips.”

EcoMode scores driving performance on a cumulative basis but the system can be zeroed by resetting the average fuel consumption trip. When this happens, drivers start with 2 petals in each index. Motorists who score more than 75% efficiency will be rewarded with an advanced ECO Driver graphic in the cluster. Hit 95% and they’ll be crowned ECO Champion.

## **POTENTIAL SAVINGS**

So far customer feedback has been very positive and the press reaction to EcoMode has been excellent. So just how much difference can EcoMode make to fuel consumption?

“The potential is significant,” adds Schick. “Ford now offers ECO drive training in certain European markets and some participants have shown improvements of up to 40%. Statistically though we assume that most people can achieve at least 5% improvements. The driver has more potential to affect fuel consumption than any technology so coaching the driver really makes sense. Achieving fuel consumption savings of 20% through new technology is a major challenge. Taking the full advantage of that potential requires the right mindset behind the wheel.

“EcoMode is not a game but it can be very rewarding to achieve a high score. If people want to use it to improve their driving style they can. If people believe they are driving well anyway, they always have a reference.”