

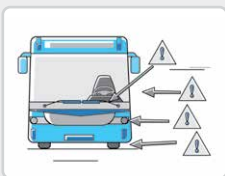


# Eco-driving safely for buses and coaches

## Protect the environment and save money

IRU has developed this advice on safe eco-driving to help drivers adjust their driving behaviour to different situations. Eco-driving can reduce fuel consumption, greenhouse gas emissions and accident rates.

### Before the journey



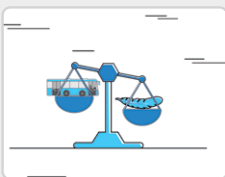
#### Maintain your vehicle

Maintain engine oil levels and clean air filters to keep vehicles running efficiently. Use the fuel recommended by the manufacturer to keep the vehicle engine performing efficiently. Always consult the vehicle owner's manual for maintenance guidance.



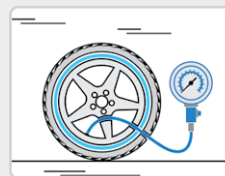
#### Consolidate trips and use on-board devices

Plan your trips ahead. This will enable you to bypass congested routes leading to less idling. An on-board computer may help to save time and recommend the right routes.



#### Travel light

Remove unnecessary weight from the vehicle.



#### Check your tyres

Keeping tyres inflated to at least the pressure recommended by the manufacturer can reduce fuel consumption by up to 4% (10-15% over-inflation saves fuel, but increases braking distances). Under-inflated tyres wear more rapidly and increase fuel consumption owing to greater rolling resistance.

Maximum cold tyre pressures can be found in the vehicle owner's manual or on the tyre pressure label.

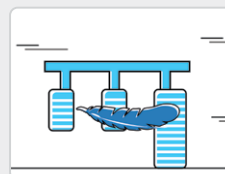
Axles should be correctly aligned according to the vehicle owner's manual.

### During the journey



#### Drive at a steady speed

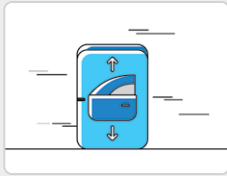
Try to maintain a steady speed by using the highest gear possible and avoiding unnecessary acceleration and braking. The engine power to keep a steady speed is lower if you do not continuously brake and accelerate. Anticipate the traffic flow by looking ahead as far as possible. Using cruise control on motorways helps smooth driving. Reduce speed in strong headwinds or heavy rain.



#### Accelerate and brake smoothly

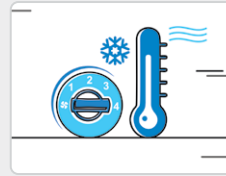
Avoid fast starts and hard braking as they waste fuel and wear out some vehicle components more quickly, such as brakes and tyres. Maintain a safe distance between vehicles and anticipate traffic conditions to allow for more time to brake and accelerate gradually. Accelerate smoothly from a standstill and brake softly to save fuel.

## During the journey



### Close windows at high speeds

Do not drive faster than 60km/h with the windows open. Driving with the windows open at high speeds increases aerodynamic drag on the vehicle and increases fuel consumption. Remove anything that makes the vehicle less streamlined.



### Minimise use of heating and air conditioning

Use heating and air conditioning selectively to reduce the load on the engine. Decreasing use of the air conditioner can reduce fuel consumption by 10-15%. Park your vehicle in the shade.



### Decelerate smoothly

Every time you use the brakes, you waste energy. Use the retarder and engine braking to reduce speed when approaching a traffic light. Apply the brakes to bring the vehicle to a standstill when you are close to the traffic lights. This will reduce wear on the brakes, lower exhaust emissions, and make the ride comfortable for your passengers.



### No idling

Modern engines do not need a warm up. Gently drive away immediately after starting the vehicle. Prolonged idling increases emissions and wastes fuel. Information on waiting periods after first engine start and engine stop can be found in the vehicle owner's manual. Keep out of congested areas and find an alternative motorway solution rather than going through the city centre. This might take a few minutes longer, but will reduce fuel consumption, and wear on the brake linings, clutch plates and gearbox, all while minimising driver fatigue and the risk of accidents.



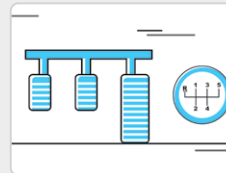
### Watch your speed

Drive at the maximum legal speed to save fuel and improve the flow of traffic, try not to overtake other vehicles at unnecessarily high speeds. Aim for a constant speed.



### Check engine lights

Modern vehicles have sophisticated on-board diagnostics (OBD) systems that continually monitor the operation of your vehicle. When the OBD alert light comes on, your emissions may be higher and your fuel economy lower. Replacing a faulty sensor could result in a fuel economy improvement of as much as 40%. When the OBD light comes on, see your vehicle's maintenance expert for more information.



### Drive off from standstill – but always try to avoid stopping

When the traffic lights turn green, accelerate quickly, but try not to press the acceleration pedal more than halfway. Sharp acceleration consumes a lot of fuel. Shift up the gears as soon as possible. Diesel engines vary; almost all of them need to shift before 1,500 rpm and some at even lower rpms. In a modern vehicle, use the minimum number of gear changes from standstill to cruising speed.

This checklist is provided to you by the **IRU Academy**, the training arm of the **International Road Transport Union (IRU)**.

See our training programmes on [www.iru.org/academy](http://www.iru.org/academy)