

How physical forces influence your energy consumption

Eco-driving is based on understanding the physical forces that influence vehicles' energy efficiency.

1. Inertia Force

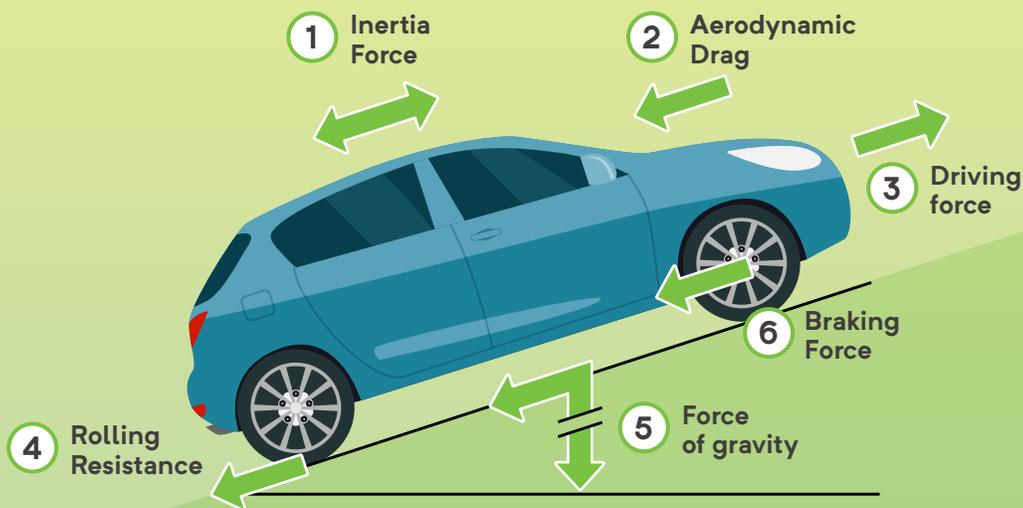
This force opposes changes in your vehicle's speed. It holds you back when you want to accelerate, and it pushes you forward when you want to slow down. To counter this force, anticipate traffic flow, maintain a steady speed and keep a sufficient distance from other vehicles.

2. Aerodynamic Drag

Aerodynamic drag is the resistance that the air exerts on your vehicle. This force is particularly significant when you drive above 70 km/h. To counter this resistance, reduce your speed and remove accessories, such as roof racks, when they are not in use.

3. Driving force

Driving force is controlled by the accelerator. To improve driving force, accelerate without hesitation. Drivers should also choose an engine that fits their actual needs when selecting a vehicle.



4. Rolling Resistance

This force opposes the free rolling of a vehicle. It is caused primarily by tire deformation and the contact surface. To reduce the impact of this force, regularly check your tire pressure and wheel alignment, and avoid carrying unnecessary loads.

5. Force of gravity

This force must be considered on slopes, because it holds the vehicle back when driving uphill and pushes it when driving downhill. What is "spent" going uphill can be recovered going downhill. To reduce the effect of the force of gravity, keep the engine under load when driving uphill, ease off the accelerator early before going downhill and let the vehicle regain speed without intervening.

6. Braking Force

Braking force helps absorb the excess energy generated by inertia force by converting it into heat. Abrupt and repeated braking indicates acceleration levels that are too high, a lack of anticipation, or following distances that are too short.

Get more tips on eco-driving

Offer eco-driving training to your drivers