Eco Defensive Driving
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- 20 years experience in Road Safety
- UK DSA Adi
- DIAmond Chief Examiner
- DIAmond Master Driver
- IVV Fleet Trainer
- IAM Fleet Trainer
ECO Defensive Driving

What is defensive driving?

‘To reduce your likelihood of a crash or incident’

Operating a vehicle defensively comes at a cost:

- Anticipation and Awareness
- Control
- Observation
- Space
- Time.
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The True Cost of Driving

• Incidents
• Environmental Impact
• Fuel Bills
• Maintenance Charges
• Vehicle Down time
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Why Now?
- Cost reduction is a natural reaction to the global economic crisis
- Achieving safety whilst having recordable data for SUSTAINABILITY objectives

Is this achievable in Qatar?
- YES. By setting challenges during training and recording future fuel & maintenance costs
- YES. Eco driving is a style of driving that is achieved through basic Defensive Driving techniques
# ECO Defensive Driving

## Is it Economical, Ecological or Safety Driving?

<table>
<thead>
<tr>
<th>Economical</th>
<th>Ecological</th>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Saving</td>
<td>Reduced carbon emissions</td>
<td>Reduced likelihood of an incident</td>
</tr>
<tr>
<td>Less wear &amp; tear on moving</td>
<td>Less road damage</td>
<td>All the elements of Defensive</td>
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<tr>
<td>mechanical parts</td>
<td></td>
<td>Driving programmes</td>
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<td>Cheaper service costs for</td>
<td></td>
<td></td>
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<tr>
<td>tyres and brake pads</td>
<td></td>
<td></td>
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<tr>
<td>Reduced down time</td>
<td></td>
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The Difference it Makes

- Average saving after following the basic techniques for ECO driving is around 8% to 15%
- A truck driver reducing their speed by 10 km/hr will produce a 22% reduction in fuel costs

Correct tyre pressures to vehicles and load can save 3% to 5%
Correct oils for Qatar temperatures improves fuel consumption by up to 3%
Engine tuning improved fuel consumption by 4%
Cleaned air filters by 10%
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The Basics

• Lose weight - what do you not need to carry for the journey
• Position the load
• Do you need a full tank - Land Cruiser ½ twice saves 2%
• Remove roof racks when not in use - drag produces up to 10% reduction in fuel efficiency
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The Basics

• Look well ahead & anticipate changes in the driving environment

• Drive smoothly, accelerate / decelerate gently

• Maintain a safe space

• When increasing speed, change gear early instead of using engine revs to make progress – keep between 2,000 to 3,000 RPM

• When decreasing speed use the brakes to slow & then select appropriate gear – skip gears – RPM can drop to 1,500 without labouring

Harsh braking and acceleration can increase fuel costs by 40%
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The Basics

• Reduce the air conditioning airflow (On full 20% increase on fuel consumption. On half 10%)
• Above 50km/hr open sun roofs or windows produce drags (per window open costs 1 km/ltr)
• Stay safe, stay legal. Consider cruise control whilst travelling on dual carriageways
  ✓ Driving at 115 kph instead of 125kph can reduce fuel consumption by 25%
  ✓ Stay within a speed range
• Reverse Park – besides being safer, reduces wear on vehicle as engine still hot
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The Basics

• Take the lane of least resistance
• Red traffic light timing, why speed up to slow down?
• Green lights, are they about to change?
• Speed humps - smooth on the approach
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Combating Speed

Challenge

Slow down early on approach to hazard, arrive at natural gaps in the traffic

<table>
<thead>
<tr>
<th>Result</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t stop</td>
<td>Less fuel</td>
</tr>
<tr>
<td>Smoother deceleration</td>
<td>Reduced general wear on the vehicle</td>
</tr>
<tr>
<td>Smoother acceleration</td>
<td></td>
</tr>
</tbody>
</table>
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ECO Site Driving

- Environment
- Road Damage
- Vehicle Damage
- Speed Restrictions
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Reducing Speed on site – Pedestrian Impact Rates

At 30 still travelling 15 kph
At 40 still travelling 40 kph
At 50 still travelling 50 kph
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On site - Understanding is Essential

STOP 11m

40 At 40 still travelling 22 kph
50 At 50 still travelling 35 kph
Pedestrian Fatality

- Hit at 20 kph it is unlikely to cause a fatality
- Hit at 30 kph 5% of pedestrians will die
- Hit at 40 kph 25% of pedestrians will die
- Hit at 50 kph 55% of pedestrians will die
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On site - Understanding is Essential

Hit at 30 kph 5% of pedestrians will die

Hit at 60 kph 85% of pedestrians will die
Any Questions?
Thank you