University of Victoria
EcoCAR Team

Presenting Team & Vehicle Technical Specifications
UVic EcoCAR 2009 Competition Presentation Team

- Mechanical - Kevin McCaugherty and Dan Prescott
- Control - Jeff Waldner and Leon Zhou
- Hardware in Loop - By Nathan Wren and Shaun Bowman
- Electrical - Shaun Bowman and Stefan Kaban
- Project Initiation Approval - Jeremy Wise and Nathan Wren
- Use of MATLAB Modeling Tools - Leon Zhou and Jeremy Wise
- Outreach Activities - Tiffany Jaster and Jeremy Wise
- Mentor and Advisors - Michael Abowd, Curran Crawford, and Zuomin Dong
UVic EcoCAR 2009 Competition Awards

- 2nd Place Overall
- 1st Place First Year Technical Reports
- 1st Place, MathWorks Modeling Award
- Best Electrical Systems Presentation
- 2nd Place, Hardware-in-Loop Evaluation
- 3rd Place, dSPACE Embedded Success Award
- Best Media Relations Program
UVic EcoCAR 2009 Competition Booth
A123 21kW-hr HV Battery Pack

GM 2.4 L EcoTec E85 Fuel

GM 2-Mode FWD Transmission

UQM PowerPhase 125kW Rear Traction Motor
# UVic Vehicle Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Competition</th>
<th>Team VTS</th>
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</thead>
<tbody>
<tr>
<td><strong>EcoCAR</strong></td>
<td>Production VUE</td>
<td>Competition Requirement</td>
</tr>
<tr>
<td>Accel 0-60</td>
<td>10.6 s</td>
<td>≤14 s</td>
</tr>
<tr>
<td>Accel 50-70</td>
<td>5.7 s</td>
<td>≤10 s</td>
</tr>
<tr>
<td>UF Weighted FE</td>
<td>8.3 L/100 km</td>
<td>7.4L/100 km</td>
</tr>
<tr>
<td>Towing Capacity</td>
<td>680 kg (1500 lb)</td>
<td>≥680 kg @ 3.5%, 20 min @ 72 km/h (45 mph)</td>
</tr>
<tr>
<td>Cargo Capacity</td>
<td>.83 m³</td>
<td>Height: 457 mm (18&quot;) Depth: 686 mm (27&quot;) Width: 762 mm (30&quot;)</td>
</tr>
<tr>
<td>Passenger Capacity</td>
<td>5</td>
<td>≥4</td>
</tr>
<tr>
<td>Braking 60 - 0</td>
<td>38 m - 43 m (123 -140 ft)</td>
<td>&lt; 51.8 m (170 ft)</td>
</tr>
<tr>
<td>Mass</td>
<td>1758 kg (3875 lb)</td>
<td>≤ 2268 kg (5000 lb)</td>
</tr>
<tr>
<td>Starting Time</td>
<td>≤ 2 s</td>
<td>≤ 15 s</td>
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<tr>
<td>Ground Clearance</td>
<td>198 mm (7.8 in)</td>
<td>≥178 mm (7 in)</td>
</tr>
<tr>
<td>Range</td>
<td>&gt; 580 km (360 mi)</td>
<td>≥ 320 km (200 mi)</td>
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UVic EcoCAR

- 2.4 Litre E85/Gas
- 285 hp
- 2.5 L/100Km Combined
- 0-100 Km: 7.5 sec.

Jaguar XJ 2008

- 4.2 Litre V8 Gas
- 300 hp
- 12.8 city/8.1 highway
- 0-100 Km: 6.4 sec.