Submitted by the expert from CI
Euro NCAP's Test Campaign on Heavy Quadricycles
L7e’s are seen as a convenient, economical means of Transport

- Road Legal
- No driver license needed
- Alternative to small city cars and motorcycles

- No stringent safety tests apply
<table>
<thead>
<tr>
<th>Make and Model</th>
<th>Max Speed</th>
<th>Engine</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renault Twizy</td>
<td>80 km/h</td>
<td>Electric</td>
<td>474 kg</td>
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<tr>
<td>ClubCar Villager 2+2 LSV</td>
<td>35 km/h</td>
<td>Electric</td>
<td>541 kg</td>
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<tr>
<td>Tazzari Zero</td>
<td>100 km/h</td>
<td>Electric</td>
<td>542 kg</td>
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<tr>
<td>Ligier I XO JS Line</td>
<td>70 km/h</td>
<td>Petrol</td>
<td>465 kg</td>
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<td></td>
<td>Frontal</td>
<td>Side</td>
<td>ESC</td>
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<tr>
<td><strong>Seatbelt</strong></td>
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<tr>
<td>Pretensioner</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Load Limiter</td>
<td>X</td>
<td>X</td>
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<td><strong>Airbag</strong></td>
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</tbody>
</table>
Frontal Impact
- FWDB
- 50 km/h
- HIII-50M dummy

Side Impact
- ECE R95 MDB
- 50 km/h
- ES-II dummy
Frontal Impact
(6 points of 16)
- Stable structure
- Driver well restraint
- High neck forces

Side Impact
(7 points of 16)
- No side protection system
- Stable structure
- Head exposed outside of bodyshell
Frontal Impact  
(4 points of 16)
- Generally stable structure, but deformed to the limit
- Battery intruded footwell area
- **Belt snapped during test**

Side Impact  
(8 points of 16)
- No side protection system
- Generally stable structure
- **Door on impact side opened during impact**
Frontal Impact
(2 points of 16)
- Structure collapsed
- Steering wheel intrusion >500mm
- High risk of fatal injury levels recorded

Side Impact
(9 points of 16)
- No protection at all
- Driver directly contacted the MDB
- Seat detached
Ligier IXO JS-line
Frontal Impact
(2 points of 16)

- Structure failed
- Fibreglass footwell area badly fractured
- D-loop detached from B-pillar
- High risk of fatal injury levels recorded

Side Impact
(8 points of 16)

- No side protection system
- Door detached during impact
- B-pillar snapped
- Seat detached
Summary

Safety levels of tested L7e’s significantly lower than that of cars

Restraint systems in Tazzari and Ligier failed dramatically

The stable but stiff Twizy showed dangerously high dummy readings
Thank you!

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