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**Department of Infrastructure, Transport,  
Regional Development and Local Government**

WS-4-6

# Update: Recent Australian Pole Side Impact Tests with WorldSID 50<sup>th</sup>

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# Summary of Tests

- 6 full-scale vehicle to pole side impact tests
- 1 current generation large Australian passenger sedan
- 1 previous generation large Australian passenger sedan
- Head/thorax combination side airbags
- 32 km/h impact speed
- Perpendicular / 100mm Offset Perpendicular / 75° Oblique
- WorldSID seating procedure draft 5.2
- WorldSID 50<sup>th</sup> Ribeye struck side passenger
- WorldSID 50<sup>th</sup> IRTRACC non-struck side driver



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# Summary of Ribeye Response

- Peak thorax and abdomen rib deflections predominantly lateral in both oblique pole tests
  - Theoretical IRTRACC deflections and peak Y-axis displacement were very similar.
- Very little z-axis movement of the ribs
- Some forward x-axis movement of ribs recorded with perpendicular pole impact
  - Theoretical IRTRACC deflections were generally less than the peak Y-axis displacement.



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# Some general observations

- Data loss observed at high deflections (as predicted)
  - Always for shoulder
  - Once on Thorax 1 for centre LED
  - Some other instances late in impact
  - More frequent for front and rear LED
- Durability generally good – some minor damage
- Seating procedure was straightforward

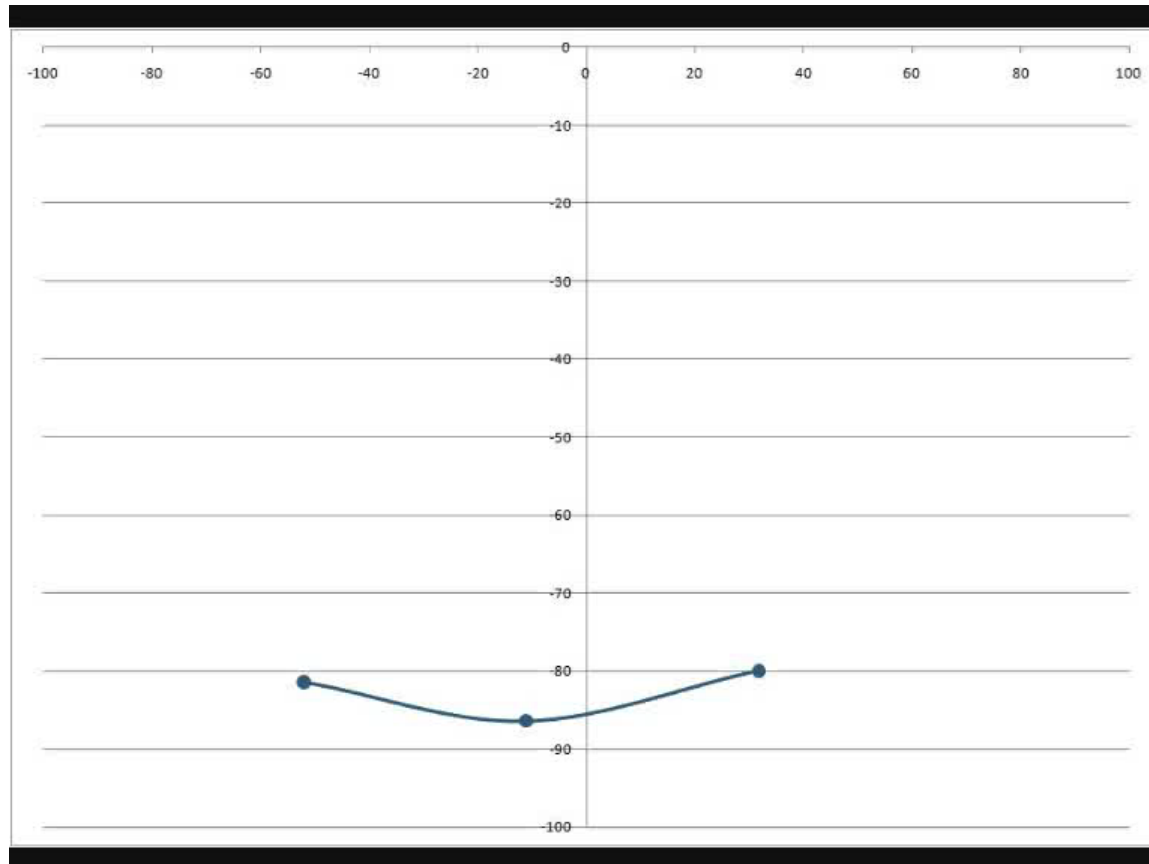


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# Example Ribeye Response

Thorax Rib 3

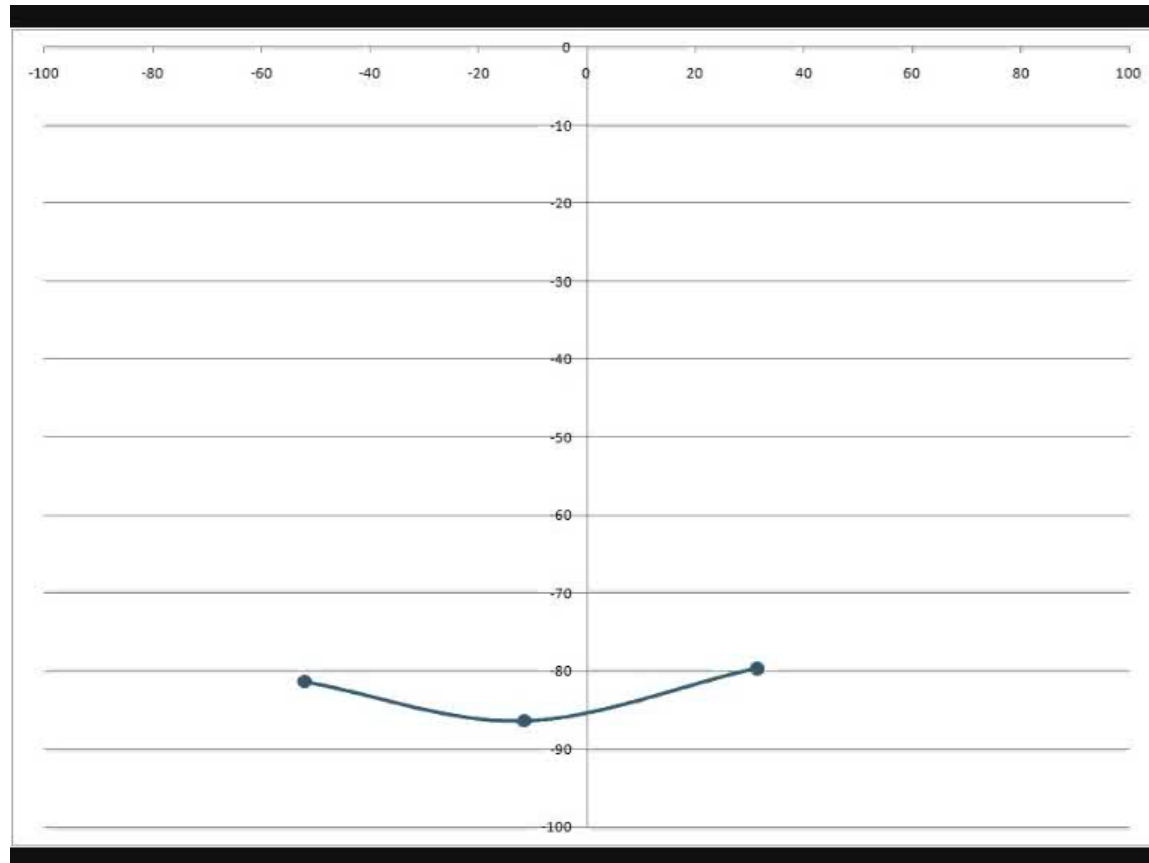


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# Example Ribeye Response

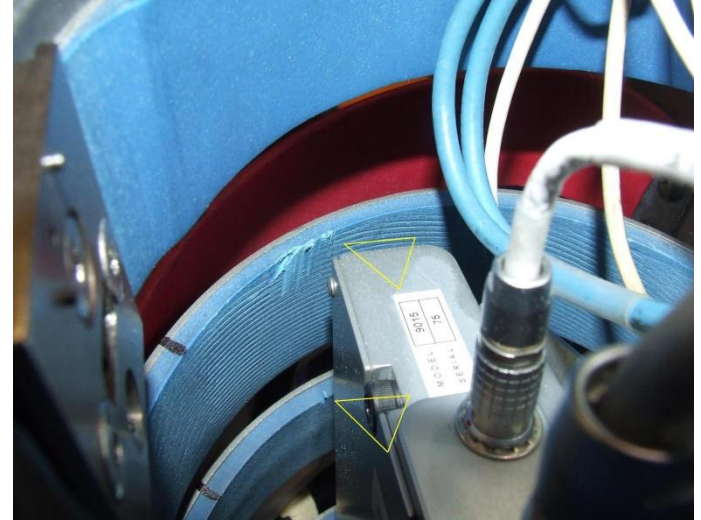
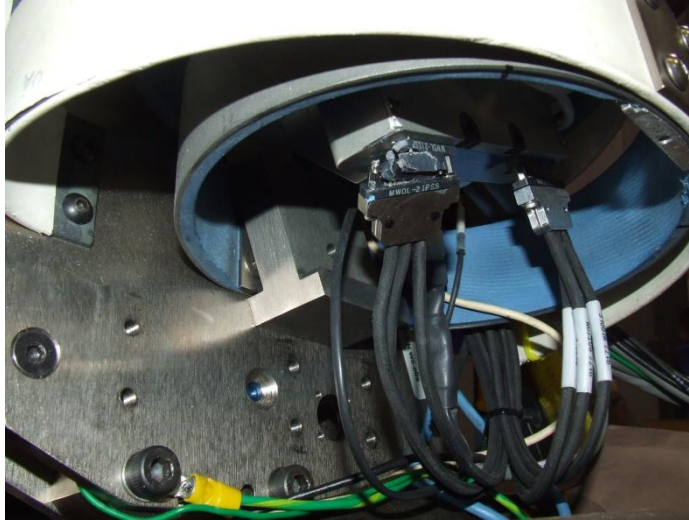
Thorax Rib 3



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# Durability



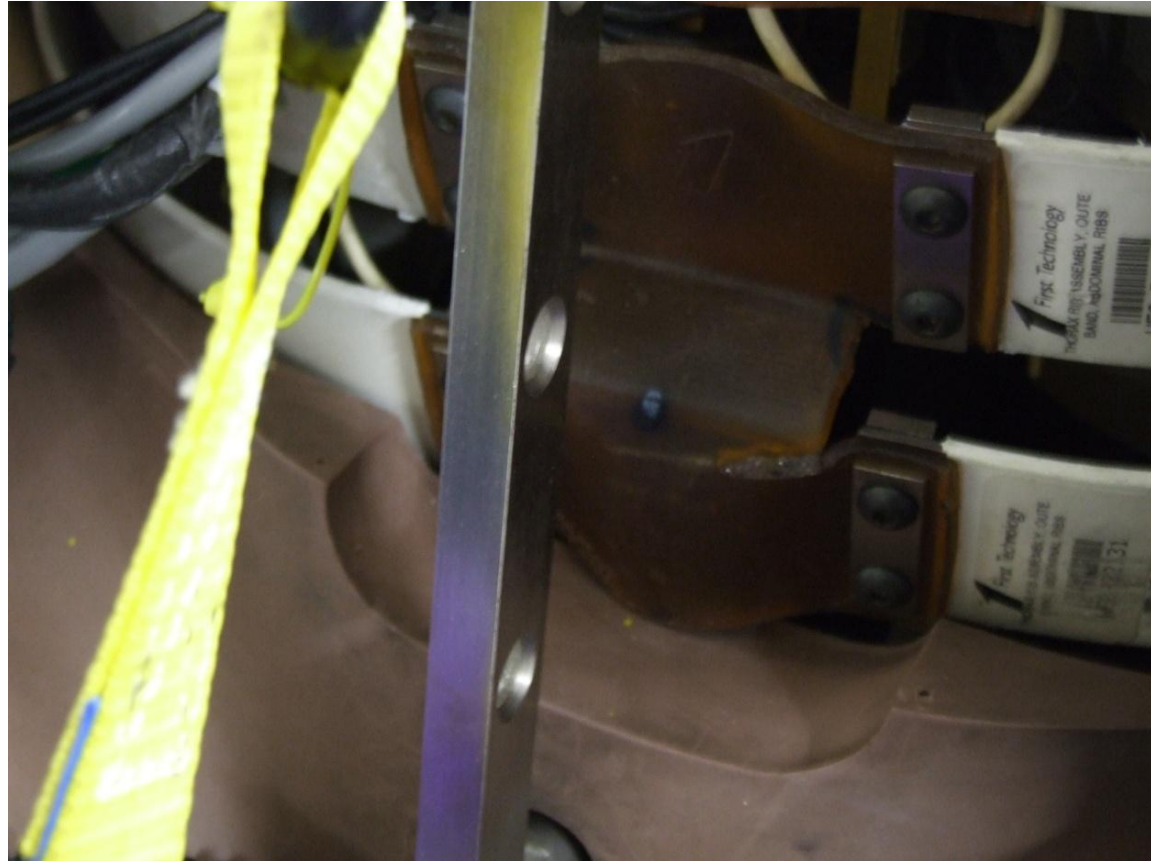
- Ribeye controller sensor cable connector damage. No internal damage to controller processor board. Field repair successfully performed by test facility.
- Interaction of non-struck side rib damping material with the ribeye controller.



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# Durability (cont)



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