

**Final Report Number: NCAP-TRC-16-002**

**New Car Assessment Program (NCAP)  
Frontal Barrier Impact Test**

**FCA US LLC  
2016 Chrysler 300 4-Door Sedan  
NHTSA Number: M20160300**

**PREPARED BY:  
Transportation Research Center Inc.  
10820 State Route 347  
P. O. Box B-67  
East Liberty, OH 43319**



**Report Date: January 12, 2016**

**FINAL REPORT**

**Prepared For:  
U. S. DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration  
Office of Crashworthiness Standards  
1200 New Jersey Ave, SE Room W43-410  
Washington, DC 20590**

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Prepared By: Impact Laboratory Project Operations Group

Approved By: Melinda Lackey

Approval Date: January 12, 2016

FINAL REPORT ACCEPTANCE BY OCWS:

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Division Chief, New Car Assessment Program  
NHTSA, Office of Crashworthiness Standards

Date \_\_\_\_\_

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COTR, New Car Assessment Program  
NHTSA, Office of Crashworthiness Standards

Date \_\_\_\_\_

| 1. Report No.<br>NCAP-TRC-16-002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2. Government Accession No.                          | 3. Recipient's Catalog No. |                            |                                                                                                                                                                                                                                                                                                                           |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
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| 4. Title and Subtitle<br>Final Report of NEW CAR ASSESSMENT PROGRAM<br>Frontal Impact Testing of a 2016 Chrysler 300 4-Door Sedan,<br>NHTSA No. M20160300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                            |                            | 5. Report Date<br>January 12, 2016                                                                                                                                                                                                                                                                                        |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
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| 7. Author(s)<br>Melinda Lackey, Project Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                      |                            |                            | 8. Performing Organization Report No.<br>151123                                                                                                                                                                                                                                                                           |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 9. Performing Organization Name and Address<br>Transportation Research Center Inc.<br>10820 State Route 347<br>East Liberty, OH 43319-0367                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                      |                            |                            | 10. Work Unit No. (TRAIS)                                                                                                                                                                                                                                                                                                 |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
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| 12. Sponsoring Agency Name and Address<br>U. S. Department of Transportation<br>National Highway Traffic Safety Administration<br>Office of Crashworthiness Standards<br>1200 New Jersey Ave SE<br>Room W43-410, Washington, DC 20590                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |                            |                            | 13. Type of Report and Period Covered<br>Final Report<br>November 23, 2015 –<br>January 12, 2016                                                                                                                                                                                                                          |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                      |                            |                            | 14. Sponsoring Agency Code<br><br>NRM-110                                                                                                                                                                                                                                                                                 |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 15. Supplemental Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                            |                            |                                                                                                                                                                                                                                                                                                                           |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 16. Abstract<br><br>A 56.0 km/h NCAP Frontal Impact Test was conducted on a 2016 Chrysler 300 4-Door Sedan, in accordance with the specifications of the Office of Crashworthiness Standards Frontal NCAP Laboratory Test Procedure. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301 and foot well intrusion performance. This test was conducted at the Transportation Research Center Inc. in East Liberty, Ohio on November 23, 2015.<br><br>The impact velocity was 56.31 km/h, and the ambient temperature at the barrier face at the time of impact was 21° C. The target vehicle post-test maximum crush was 558 millimeters at crush zone 2 at left side. The test vehicle's performance is as follows:<br><br><table border="1"> <thead> <tr> <th></th> <th colspan="3">Driver ATD</th> <th colspan="3">Passenger ATD</th> </tr> <tr> <th>Measurement Description</th> <th>Units</th> <th>Threshold</th> <th>Result</th> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC<sub>15</sub>)</td> <td>NA</td> <td>700</td> <td>131</td> <td>NA</td> <td>700</td> <td>203</td> </tr> <tr> <td>Maximum Chest Compression</td> <td>mm</td> <td>63</td> <td>-30.7</td> <td>mm</td> <td>52</td> <td>-23.6</td> </tr> <tr> <td>3ms Chest Clip</td> <td>Gs</td> <td>60</td> <td>38.9</td> <td>Gs</td> <td>60</td> <td>41.6</td> </tr> <tr> <td>Nij</td> <td>NA</td> <td>1</td> <td>0.31</td> <td>NA</td> <td>1</td> <td>0.33</td> </tr> <tr> <td>Neck Tension</td> <td>Newtons</td> <td>4170</td> <td>1246.8</td> <td>Newtons</td> <td>2620</td> <td>637.4</td> </tr> <tr> <td>Neck Compression</td> <td>Newtons</td> <td>4000</td> <td>-42.9</td> <td>Newtons</td> <td>2520</td> <td>-501.6</td> </tr> <tr> <td>Left Femur Force</td> <td>Newtons</td> <td>10008</td> <td>-2746.7</td> <td>Newtons</td> <td>6805</td> <td>-2242.8</td> </tr> <tr> <td>Right Femur Force</td> <td>Newtons</td> <td>10008</td> <td>-2527.3</td> <td>Newtons</td> <td>6805</td> <td>-1844.0</td> </tr> </tbody> </table> |                                                      |                            |                            |                                                                                                                                                                                                                                                                                                                           |           |         |  | Driver ATD |  |  | Passenger ATD |  |  | Measurement Description | Units | Threshold | Result | Units | Threshold | Result | Head Injury Criteria (HIC <sub>15</sub> ) | NA | 700 | 131 | NA | 700 | 203 | Maximum Chest Compression | mm | 63 | -30.7 | mm | 52 | -23.6 | 3ms Chest Clip | Gs | 60 | 38.9 | Gs | 60 | 41.6 | Nij | NA | 1 | 0.31 | NA | 1 | 0.33 | Neck Tension | Newtons | 4170 | 1246.8 | Newtons | 2620 | 637.4 | Neck Compression | Newtons | 4000 | -42.9 | Newtons | 2520 | -501.6 | Left Femur Force | Newtons | 10008 | -2746.7 | Newtons | 6805 | -2242.8 | Right Femur Force | Newtons | 10008 | -2527.3 | Newtons | 6805 | -1844.0 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Driver ATD                                           |                            |                            | Passenger ATD                                                                                                                                                                                                                                                                                                             |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Measurement Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Units                                                | Threshold                  | Result                     | Units                                                                                                                                                                                                                                                                                                                     | Threshold | Result  |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Head Injury Criteria (HIC <sub>15</sub> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NA                                                   | 700                        | 131                        | NA                                                                                                                                                                                                                                                                                                                        | 700       | 203     |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Maximum Chest Compression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | mm                                                   | 63                         | -30.7                      | mm                                                                                                                                                                                                                                                                                                                        | 52        | -23.6   |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 3ms Chest Clip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Gs                                                   | 60                         | 38.9                       | Gs                                                                                                                                                                                                                                                                                                                        | 60        | 41.6    |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Nij                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NA                                                   | 1                          | 0.31                       | NA                                                                                                                                                                                                                                                                                                                        | 1         | 0.33    |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Neck Tension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Newtons                                              | 4170                       | 1246.8                     | Newtons                                                                                                                                                                                                                                                                                                                   | 2620      | 637.4   |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Neck Compression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Newtons                                              | 4000                       | -42.9                      | Newtons                                                                                                                                                                                                                                                                                                                   | 2520      | -501.6  |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Left Femur Force                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Newtons                                              | 10008                      | -2746.7                    | Newtons                                                                                                                                                                                                                                                                                                                   | 6805      | -2242.8 |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| Right Femur Force                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Newtons                                              | 10008                      | -2527.3                    | Newtons                                                                                                                                                                                                                                                                                                                   | 6805      | -1844.0 |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 17. Key Words<br>35 mph Frontal Barrier Impact Test<br>New Car Assessment Program (NCAP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                            |                            | 18. Distribution Statement<br>Copies of this report are available from:<br>National Highway Traffic Safety Administration<br>Technical Information Services Division, NPO-411<br>1200 New Jersey Ave, SE<br>Washington, DC 20590<br>e-mail: <a href="mailto:tis@nhtsa.dot.gov">tis@nhtsa.dot.gov</a><br>FAX: 202-493-2833 |           |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |
| 19. Security Classif. (of this report)<br>Unclassified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20. Security Classif. (of this page)<br>Unclassified |                            | 21. Number of Pages<br>168 |                                                                                                                                                                                                                                                                                                                           | 22. Price |         |  |            |  |  |               |  |  |                         |       |           |        |       |           |        |                                           |    |     |     |    |     |     |                           |    |    |       |    |    |       |                |    |    |      |    |    |      |     |    |   |      |    |   |      |              |         |      |        |         |      |       |                  |         |      |       |         |      |        |                  |         |       |         |         |      |         |                   |         |       |         |         |      |         |

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## **1: PURPOSE AND SUMMARY OF TEST**

### **PURPOSE**

This 56 km/h frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-12-D-00257. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for consumer information purposes.

This 56 km/h frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Front NCAP Laboratory Test Procedure dated October 2015.

### **SUMMARY**

A 2016 Chrysler 300 4-Door Sedan impacted the barrier wall at a velocity of 56.31 km/h. The test was performed at Transportation Research Center, Inc. on November 23, 2015. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

One real-time camera and 16 high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in this report.

One Part 572E 50<sup>th</sup> percentile male anthropomorphic test device (ATD), was placed in the driver seating position and one Part 572O 5<sup>th</sup> percentile female ATD was placed in the right-front passenger position according to dummy placement instructions specified in the Frontal NCAP Laboratory Test Procedure.

Both ATDs were fully instrumented with head, chest and pelvis tri-axial accelerometers, chest displacement potentiometers, upper neck load cells, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and the passenger's lap belts to measure dummy pelvic section loading.

The driver (position 1) ATD (Serial No. 037), and the right-front passenger (position 2) ATD (Serial No. 426) were calibrated previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C of this report.

The 100 channels of data were recorded on an on-board data acquisition system. The 288 barrier channels of data were recorded on an off-board high resolution barrier data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces.

There was 80.6 percent windshield retention and no intrusion into the protected zone of the windshield during the event. There was no Stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum static crush of the vehicle was 558 mm and both the driver and passenger side doors remained closed during the impact event and were operable after the impact.

The driver's visible contact points were as follows: front airbag, headrest, and knee airbag. The passenger's visible contact points were as follows: front airbag, headrest, side header, instrument panel, and glove box.

The occupant data is summarized below:

| <b>ATD Position</b>                   | <b>HIC<sub>15</sub></b> | <b>Nij</b> | <b>Neck<br/>Tension<br/>(N)</b> | <b>Neck<br/>Compression<br/>(N)</b> | <b>3 ms<br/>Chest<br/>Clip<br/>(Gs)</b> | <b>Chest<br/>Disp.<br/>(mm)</b> | <b>Left<br/>Femur<br/>(N)</b> | <b>Right<br/>Femur<br/>(N)</b> |
|---------------------------------------|-------------------------|------------|---------------------------------|-------------------------------------|-----------------------------------------|---------------------------------|-------------------------------|--------------------------------|
| Driver<br>(50 <sup>th</sup> Male)     | 131                     | 0.31       | 1246.8                          | -42.9                               | 38.9                                    | -30.7                           | -2746.7                       | -2527.3                        |
| Passenger<br>(5 <sup>th</sup> Female) | 203                     | 0.33       | 637.4                           | -501.6                              | 41.6                                    | -23.6                           | -2242.8                       | -1844.0                        |

## **2: OCCUPANT AND VEHICLE INFORMATION / DATA SHEETS**

## DATA SHEET NO. 1

### GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

#### TEST VEHICLE INFORMATION

|                             |                   |
|-----------------------------|-------------------|
| NHTSA No.                   | M20160300         |
| Model Year                  | 2016              |
| Make                        | Chrysler          |
| Model                       | 300 Limited       |
| Body Style                  | Sedan             |
| VIN                         | 2C3CCARG6GH117036 |
| Body Color                  | Red               |
| Odometer Reading (km/mi)    | 87 mi             |
| Engine Displacement (L)     | 3.6               |
| Type/No. Cylinders          | V6                |
| Engine Placement            | Longitudinal      |
| Transmission Type           | Automatic         |
| Transmission Speeds         | 8                 |
| Overdrive                   | Yes               |
| Final Drive                 | AWD               |
| Roof Rack                   | No                |
| Sunroof/T-Top               | No                |
| Running Boards              | No                |
| Tilt Steering Wheel         | No                |
| Power Seats                 | Yes               |
| Anti-Lock Brakes (ABS)      | Yes               |
| Automatic Door Locks (ADLs) | Yes               |

#### TEST VEHICLE OPTIONS

|                                 |     |
|---------------------------------|-----|
| Traction Control System (TCS)   | Yes |
| Power Steering                  | Yes |
| Power Window Auto-Reverse       | Yes |
| Driver Frontal Airbag           | Yes |
| Driver Curtain Airbag           | Yes |
| Driver Head/Torso Airbag        | No  |
| Driver Torso Airbag             | No  |
| Driver Torso/Pelvis Airbag      | Yes |
| Driver Pelvis Airbag            | No  |
| Driver Knee Airbag              | Yes |
| Front Pass. Frontal Airbag      | Yes |
| Front Pass. Curtain Airbag      | Yes |
| Front Pass. Head/Torso Airbag   | No  |
| Front Pass. Torso Airbag        | No  |
| Front Pass. Torso/Pelvis Airbag | Yes |
| Front Pass. Pelvis Airbag       | No  |
| Front Pass. Knee Airbag         | No  |
| Driver Pretensioner             | Yes |
| Driver Load Limiter             | Yes |
| Front Pass. Pretensioner        | Yes |
| Front Pass. Load Limiter        | Yes |
| Other:                          | N/A |

Does owner's manual provide instructions to turn off automatic door locks?

No

#### DATA FROM CERTIFICATION LABEL

|                     |            |                 |                      |
|---------------------|------------|-----------------|----------------------|
| Manufactured by     | FCA US LLC | GVWR (kg)       | 2427.0<br>(5350 lbs) |
| Date of Manufacture | 09/15      | GAWR Front (kg) | 1275.0<br>(2810 lbs) |
|                     |            | GAWR Rear (kg)  | 1275.0<br>(2810 lbs) |

#### VEHICLE SEATING AND WEIGHT CAPACITY

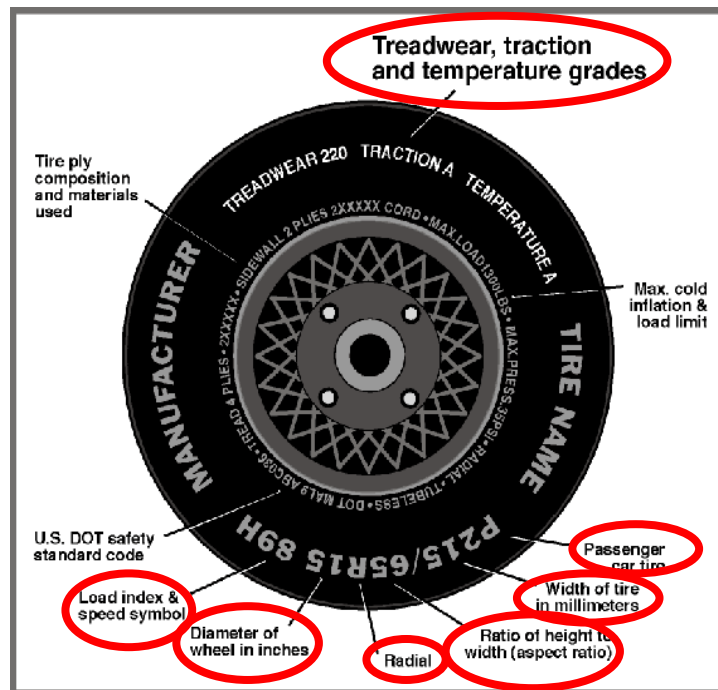
| Measured Parameter      | Front  | Rear  | Third | Total |
|-------------------------|--------|-------|-------|-------|
| Type of Seats           | Bucket | Bench | N/A   |       |
| Number of Occupants     | 2      | 3     | N/A   | 5     |
| Capacity Wt. (VCW) (kg) |        |       |       | 392   |
| Cargo Wt. (RCLW) (kg)   |        |       |       | 51.8  |

## DATA SHEET NO. 1 (CONTINUED)

### GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15



### DATA FROM TIRE PLACARD

| Measured Parameter          | Front                   | Rear                    |
|-----------------------------|-------------------------|-------------------------|
| Maximum Tire Pressure (kPa) | 300                     | 300                     |
| Cold / Test Pressure (kPa)  | 220                     | 220                     |
| Recommended Tire Size       | P235/55R19              | P235/55R19              |
| Tire Size on Vehicle        | P235/55R19              | P235/55R19              |
| Tire Manufacturer           | Hankook                 | Hankook                 |
| Tire Model                  | Optimo H725             | Optimo H725             |
| Treadwear                   | 600                     | 600                     |
| Traction Grade              | A                       | A                       |
| Temperature Grade           | A                       | A                       |
| Tire Plies Sidewall         | 2                       | 2                       |
| Tire Plies Body             | 5                       | 5                       |
| Load Index/Speed Symbol     | 101H                    | 101H                    |
| Tire Material               | Polyester, Nylon, Steel | Polyester, Nylon, Steel |
| DOT Safety Code Right       | 1GH4 PODFH 0915         | 1GH4 PODFH 0915         |
| DOT Safety Code Left        | 1GH4 PODFH 0915         | 1GH4 PODFH 0915         |

**DATA SHEET NO. 1 (CONTINUED)****GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

**TEST VEHICLE WEIGHTS**

|        | Units | As Delivered (UVW) (Axle) |       |        | As Tested (ATW) (Axle) |        |        |
|--------|-------|---------------------------|-------|--------|------------------------|--------|--------|
|        |       | Front                     | Rear  | Total  | Front                  | Rear   | Total  |
| Left   | kg    | 504.8                     | 447.6 |        | 544.4                  | 501.2  |        |
| Right  | kg    | 518.6                     | 447.0 |        | 543.0                  | 514.8  |        |
| Ratio  | %     | 53.4                      | 46.6  |        | 51.7                   | 48.3   |        |
| Totals | kg    | 1023.4                    | 894.6 | 1918.0 | 1087.4                 | 1016.0 | 2103.4 |

**TARGET TEST WEIGHT CALCULATION**

| Measured Parameter                  | Units | Value  |
|-------------------------------------|-------|--------|
| Total Delivered Weight (UVW)        | kg    | 1918.0 |
| Weight of 1 P572E ATD & 1 P572O ATD | kg    | 139.3  |
| Rated Cargo/Luggage Weight (RCLW)   | kg    | 51.8   |
| Vehicle Target Weight (TVTW)        | kg    | 2109.1 |

**TEST VEHICLE ATTITUDES AND CG**

|              | Units | LF  | RF  | LR  | RR  | CG (aft of front) |
|--------------|-------|-----|-----|-----|-----|-------------------|
| As Delivered | mm    | 802 | 794 | 814 | 812 | 1424              |
| As Tested    | mm    | 786 | 783 | 790 | 784 | 1475              |
| Post Test    | mm    | 857 | 886 | 792 | 785 |                   |

**GENERAL TEST VEHICLE DATA**

| Measurement Description                 | Units  | Value |
|-----------------------------------------|--------|-------|
| Test Vehicle Wheel Base                 | mm     | 3053  |
| Total Vehicle Length at Left Side       | mm     | 4153  |
| Total Vehicle Length at Centerline      | mm     | 5059  |
| Total Vehicle Length at Right Side      | mm     | 4963  |
| Weight of Ballast in Cargo Area         | kg     | 0.0   |
| Weight of Vehicle Components Removed    | kg     | 44.4  |
| Amount of Stoddard Solvent in Fuel Tank | liters | 65.1  |

**LIST OF COMPONENTS REMOVED TO MEET TEST WEIGHT:** Left and right outside mirrors, rear fascia, left and right tail lights, left and right rear door trim panels, rear speakers, package tray trim, rear center belt and retractor assembly, and deck lid.

**DATA SHEET NO. 1 (CONTINUED)****GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15

**TARGET VEHICLE STRUCTURAL MEASUREMENT**

|    | Elements                              | Pre-Test<br>(mm) |
|----|---------------------------------------|------------------|
| 1  | Total Length                          | 5059             |
| 2  | Total Width                           | 1888             |
| 3  | Bumper Top Height                     | 619              |
| 4  | Bumper Bottom Height                  | 418              |
| 5  | Longitudinal Member Top Height        | 537              |
| 6  | Distance Between Longitudinal Members | 784              |
| 7  | Longitudinal Member Width             | 74               |
| 8  | Engine Top Height                     | 916              |
| 9  | Engine Bottom Height                  | 198              |
| 10 | Engine and Gearbox Width              | 885              |
| 11 | Front Bumper-Engine Distance          | 612              |
| 12 | Front Shock Absorber Fixing Height    | 921              |
| 13 | Bonnet Leading Edge Height            | 890              |
| 14 | Front Shock Absorber Fixing Width     | 990              |
| 15 | Front Bumper – Front Axle Distance    | 910              |
| 16 | Front Axle – A-Pillar Distance        | 806              |
| 17 | A-Pillar – B-Pillar Distance          | 1058             |
| 18 | B-Pillar – Rear Axle Distance         | 1177             |
| 19 | B-Pillar – C-Pillar Distance          | 996              |
| 20 | Roof Sill Bottom Height               | 1372             |
| 21 | Roof Sill Top Height                  | 1468             |
| 22 | Floor Sill Bottom Height              | 291              |
| 23 | Floor Sill Top Height                 | 371              |

## DATA SHEET NO. 2

### SEAT ADJUSTMENT, FUEL SYSTEM AND STEERING WHEEL DATA

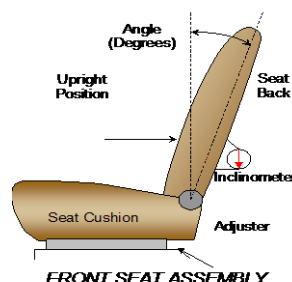
Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

#### NORMAL DESIGN RIDING POSITION

For adjustable driver and passenger seat back. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.

Inclinometer measurement at the top of the backrest at the seat centerline, according to Form 1 attachment.



|                            | Degree |
|----------------------------|--------|
| Driver Seat back angle:    | 15.7   |
| Passenger Seat back angle: | 9.4    |

#### SEAT FORE/AFT POSITIONS

Describe the method used of determining seat for/aft positions.

Driver: Mid position, Positioned according to Form 1

Passenger: Full forward, Positioned according to Form 1

|                | Total Fore/Aft Travel | Placed in Position No. |
|----------------|-----------------------|------------------------|
| Driver Seat    | 308                   | 156                    |
| Passenger Seat | 220                   | 0                      |

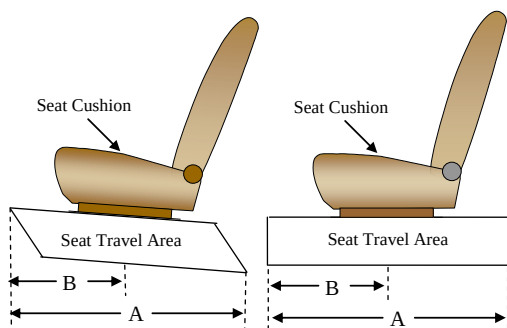
#### SEAT BELT UPPER ANCHORAGE

Describe the method of positioning seat belt upper anchorages.

Driver: Uppermost, Positioned according to Form 1

Passenger: Uppermost, Positioned according to Form 1.

|                | Total No. of Positions | Placed in Position No. |
|----------------|------------------------|------------------------|
| Driver Seat    | 4, numbered 0 to 3     | 0, Uppermost           |
| Passenger Seat | 4, numbered 0 to 3     | 0, Uppermost           |





## DATA SHEET NO. 2 (CONTINUED)

### SEAT ADJUSTMENT, FUEL SYSTEM AND STEERING WHEEL DATA

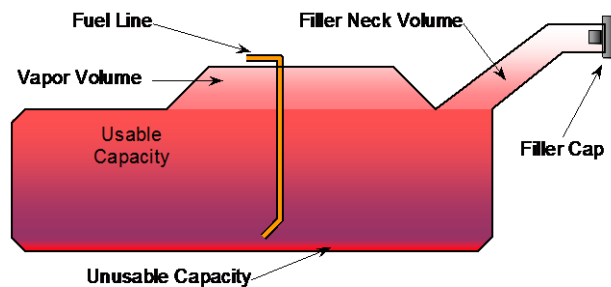
Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

#### FUEL TANK CAPACITY

|                                    | Liters |
|------------------------------------|--------|
| Usable Capacity of "Standard Tank" | 69.9   |
| Usable Capacity of "Optional Tank" | N/A    |
| 92%-94% of Usable Capacity         | 65.1   |
| Actual Amount of Solvent Used      | 65.1   |
| 1/3 of Usable Capacity             | 23.3   |

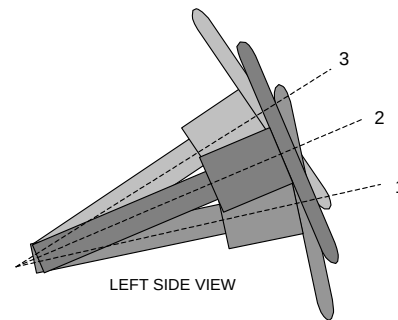
The vehicle is equipped with an electric fuel pump. If ignition key is at "ON" position and engine is not running, the fuel pump operates for 2 seconds. If the engine is running, then the fuel pump will run continuously.



VEHICLE FUEL TANK ASSEMBLY

#### STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. Steel square was placed across the rim of the steering wheel, an inclinometer was placed on the plate and the angle was measured. Telescope travel was measured full in and full out and set at the midpoint.



LEFT SIDE VIEW

STEERING COLUMN ASSEMBLY

#### STEERING COLUMN POSITIONS

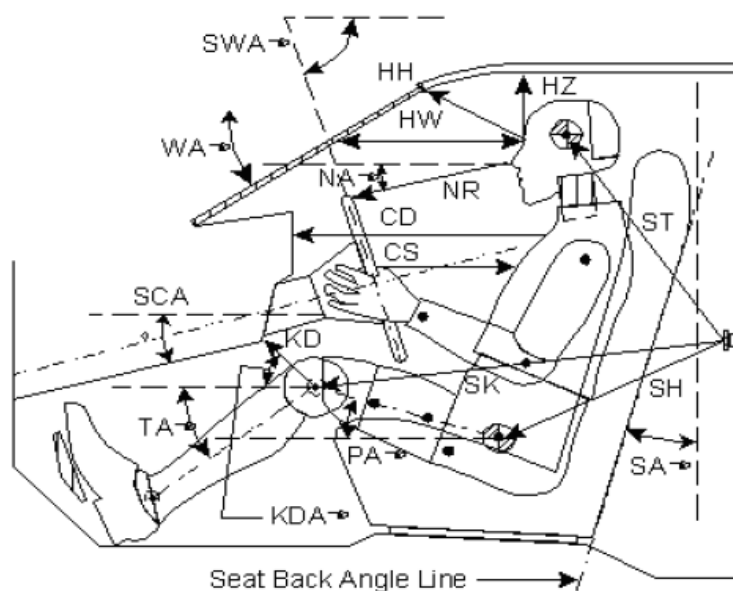
|                                   | Degrees | Fore/Aft Position (mm) |
|-----------------------------------|---------|------------------------|
| Lowermost Position No. 1          | 69.6    | 200                    |
| Geometric Center Position No. 2   | 67.5    | 200                    |
| Uppermost Position No. 3          | 65.3    | 200                    |
| Telescoping Steering Wheel Travel |         | 53                     |
| Test Position                     | 67.4    | 227                    |

## DATA SHEET NO. 3

### DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15



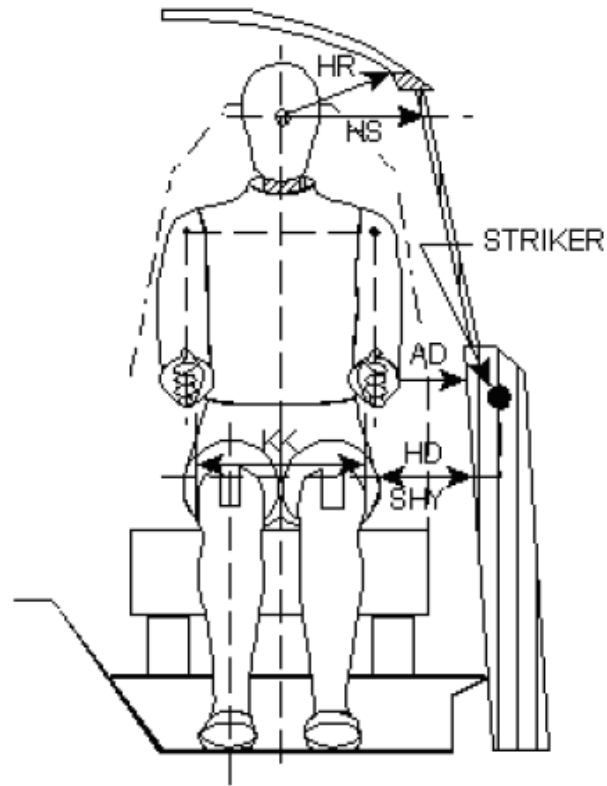
| Code | Measurement Description            | Driver      |           | Passenger   |           |
|------|------------------------------------|-------------|-----------|-------------|-----------|
|      |                                    | Length (mm) | Angle (°) | Length (mm) | Angle (°) |
| WA°  | Windshield Angle                   |             | 28.7      |             |           |
| SWA° | Steering Wheel Angle               |             | 67.4      |             |           |
| SCA° | Steering Column Angle              |             | 22.6      |             |           |
| SA°  | Seat Back Angle (on headrest post) |             | 15.7      |             | 9.4       |
| HZ   | Head to Roof (Z)                   | 220         |           | 230         |           |
| HH   | Head to Header                     | 458         |           | 324         |           |
| HW   | Head to Windshield                 | 443         |           | 714         |           |
| NR   | Nose to Rim                        | 389         | 6.5       |             |           |
| CD   | Chest to Dash                      | 538         |           | 379         |           |
| CS   | Chest to Steering Hub              | 305         |           |             |           |
| RA   | Rim to Abdomen                     | 178         |           |             |           |
| KDL  | Left Knee to Dash                  | 166         | 40.1      | 72          | 49.2      |
| KDR  | Right Knee to Dash                 | 155         | 40.1      | 72          | 49.2      |
| PA°  | Pelvic Angle                       |             | 24.3      |             | 21.0      |
| TA°  | Tibia Angle                        |             | 40.2      |             | 57.2      |
| SK   | Striker to Knee                    | 569         | 6.5       | 687         | 42.1      |
| ST   | Striker to Head                    | 484         | 83.2      | 488         | 65.5      |
| SH   | Striker to H-Point                 | 255         | 42.6      | 384         | 17.4      |

## DATA SHEET NO. 4

### DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15



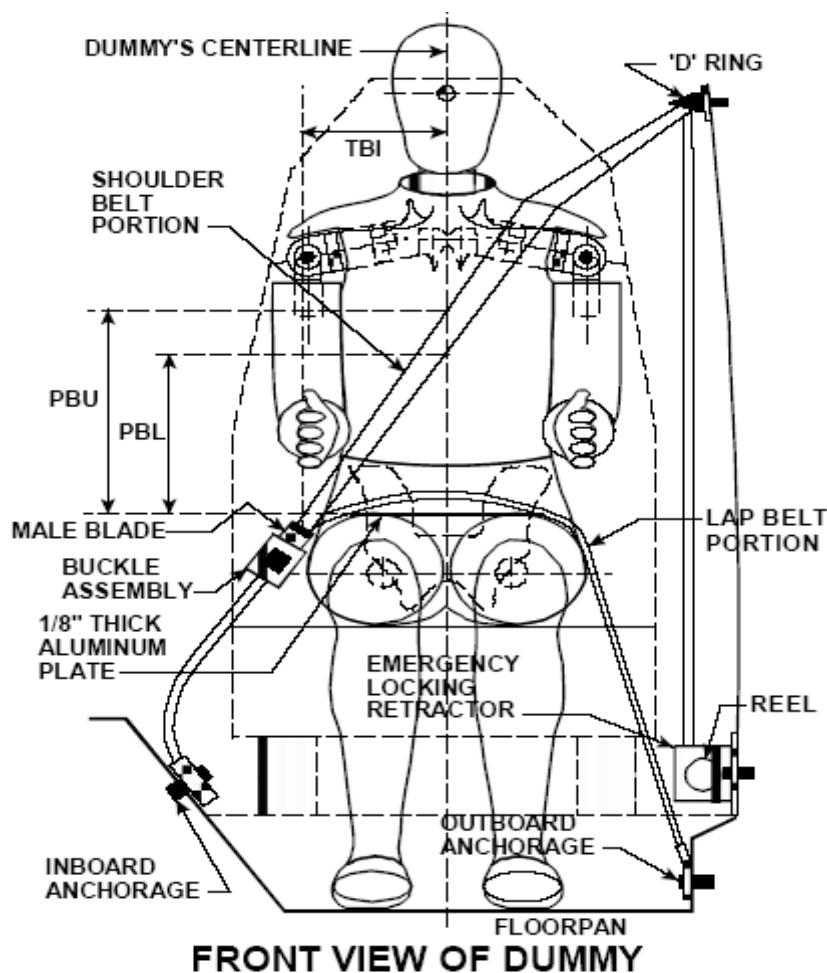
| Code | Measurement Description          | Driver | Passenger |
|------|----------------------------------|--------|-----------|
| AD   | Arm to Door                      | 161    | 193       |
| HD   | H-Point to Door                  | 163    | 192       |
| HR   | Head to Side Header              | 208    | 228       |
| HS   | Head to Side Window              | 364    | 347       |
| KK   | Knee to Knee                     | 310    | 160       |
| SHY  | Striker to H-Point (Y Direction) | 249    | 307       |
| AA   | Ankle to Ankle                   | 323    | 145       |

## DATA SHEET NO. 5

### SEAT BELT POSITIONING DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15



### SEAT BELT POSITIONING MEASUREMENTS

| Measurement Description                                  | Units | Driver | Passenger |
|----------------------------------------------------------|-------|--------|-----------|
| <b>PBU</b> – Top surface of reference to belt upper edge | mm    | 364    | 280       |
| <b>PBL</b> – Top surface of reference to belt lower edge | mm    | 281    | 192       |

### BELT LENGTH DATA

| Measurement Description                          | Units | Driver | Passenger |
|--------------------------------------------------|-------|--------|-----------|
| Shoulder belt length as measured on ATD          | mm    | 835    | 927       |
| Lap belt length as measured on ATD               | mm    | 584    | 600       |
| Remainder of belt on reel                        | mm    | 928    | 798       |
| Total belt length for continuous webbing systems | mm    | 2347   | 2325      |

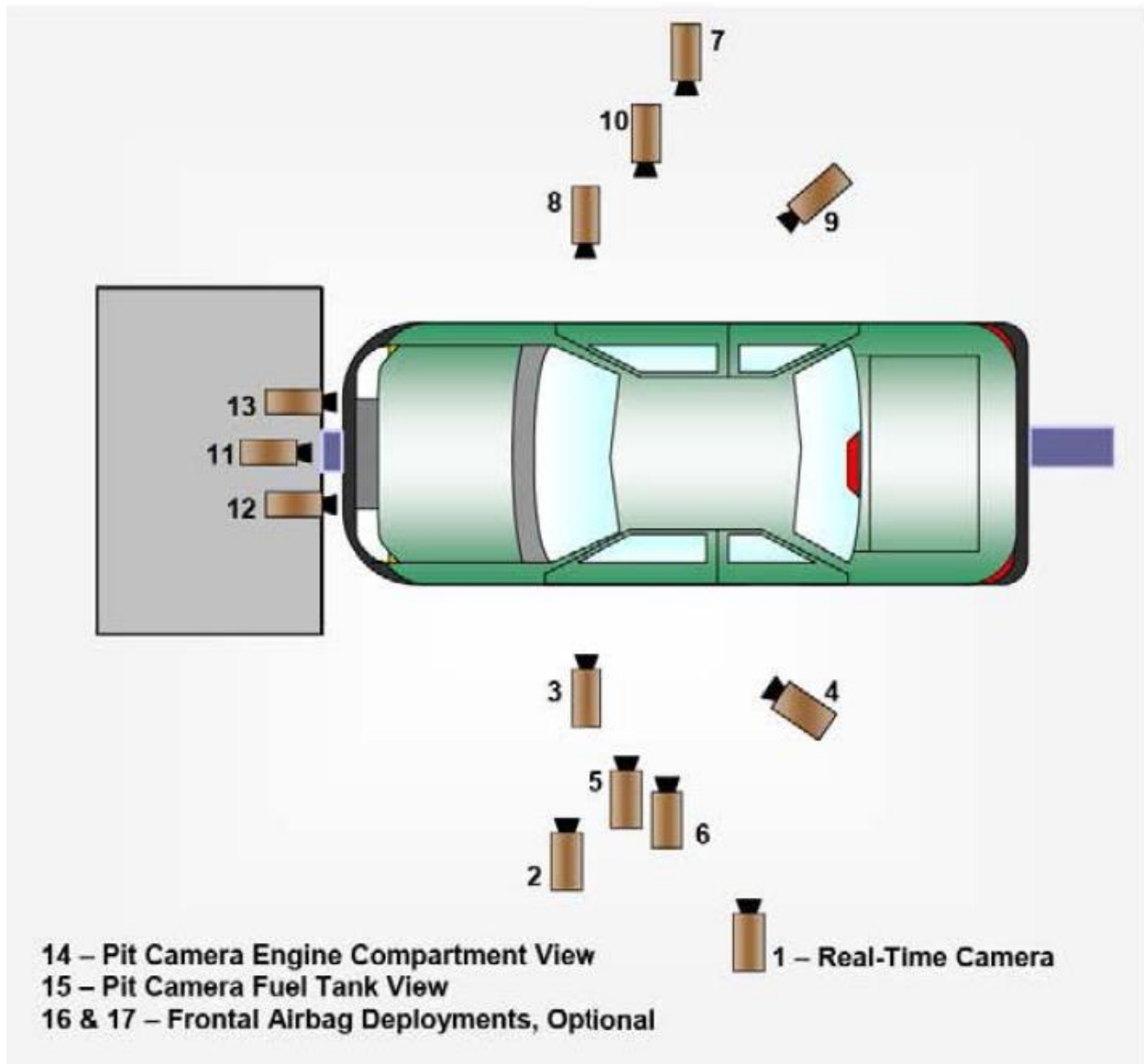
## DATA SHEET NO. 6

### HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15

### CAMERA POSITIONS FOR FRONTAL IMPACTS



**DATA SHEET NO. 6 (CONTINUED)****HIGH SPEED CAMERA LOCATIONS AND DATA**

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15

**CAMERA LOCATIONS**

| No. | Camera View                         | Location (mm) |       |       | Lens (mm) | Frame Speed (fps) |
|-----|-------------------------------------|---------------|-------|-------|-----------|-------------------|
|     |                                     | X             | Y     | Z     |           |                   |
| 1   | Real-Time Left Overall              | -758          | -5771 | -1530 | Zoom      | 30                |
| 2   | Driver Close-Up                     | -1607         | -6090 | -1459 | 50        | 1000              |
| 3   | Left Front Half                     | -1291         | -5202 | -1214 | 20        | 1000              |
| 4   | Left Angle                          | -3791         | -2811 | -2002 | 25        | 1000              |
| 5   | Steering Column - Top               | -1872         | -4988 | -2276 | 50        | 1000              |
| 6   | Steering Column – Bottom            | -1877         | -4488 | -1372 | 50        | 1000              |
| 7   | Right Overall                       | -1974         | 6459  | -1233 | 20        | 1000              |
| 8   | Passenger Close-Up                  | -1432         | 6289  | -1361 | 50        | 1000              |
| 9   | Right Front Half                    | -4088         | 2800  | -1980 | 25        | 1000              |
| 10  | Right Angle                         | -1305         | 5409  | -1059 | 28        | 1000              |
| 11  | Windshield                          | -89           | 0     | -2631 | 12.5      | 1000              |
| 12  | Driver Windshield                   | -167          | -297  | -2636 | 28        | 1000              |
| 13  | Passenger Windshield                | -102          | 383   | -2649 | 28        | 1000              |
| 14  | Pit Front                           | -746          | 0     | 3108  | 25        | 1000              |
| 15  | Pit Rear                            | -3194         | 0     | 3178  | 25        | 1000              |
| 16  | Onboard Driver Airbag (Optional)    | -3371         | 445   | -1226 | 12.5      | 1000              |
| 17  | Onboard Passenger Airbag (Optional) | -3371         | -362  | -1226 | 12.5      | 1000              |

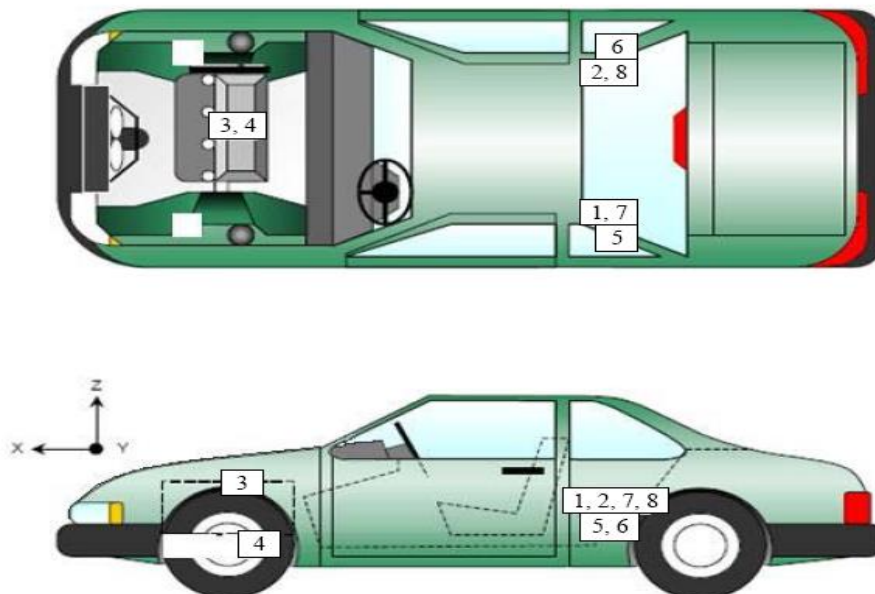
Reference Points: +X – forward of impact plane  
+Y – right of monorail center  
+Z – into ground

## DATA SHEET NO. 7

### VEHICLE ACCELEROMETER DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15



### VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

| No. | Camera View                                        | Location (mm) |      |      |
|-----|----------------------------------------------------|---------------|------|------|
|     |                                                    | X             | Y    | Z    |
| 1   | Left Rear Accelerometer – X Direction              | 1192          | -445 | -480 |
| 2   | Right Rear Accelerometer – X Direction             | 1190          | 445  | -480 |
| 3   | Engine Top X                                       | 3988          | 0    | -935 |
| 4   | Engine Bottom X                                    | 4285          | 0    | -198 |
| 5   | Left Rear Accelerometer – Z Direction              | 1192          | -445 | -480 |
| 6   | Right Rear Accelerometer – Z Direction             | 1190          | 445  | -480 |
| 7   | Left Rear Accelerometer – X Direction<br>Redundant | 1192          | -414 | -480 |
| 8   | Right Rear Accelerometer- X Direction<br>Redundant | 1190          | 407  | -480 |

Reference Points: X – Rear Surface of Vehicle (+ forward)  
 Y – Vehicle Centerline (+ to right)  
 Z – Ground Plane (+ down)

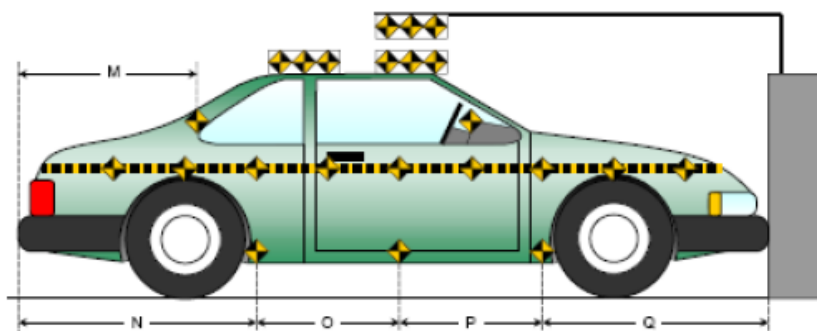
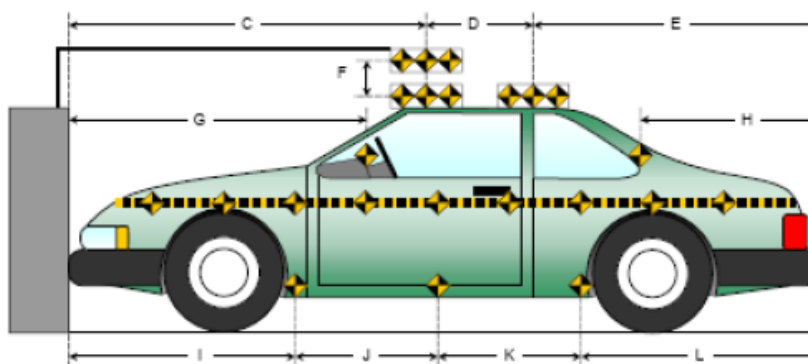
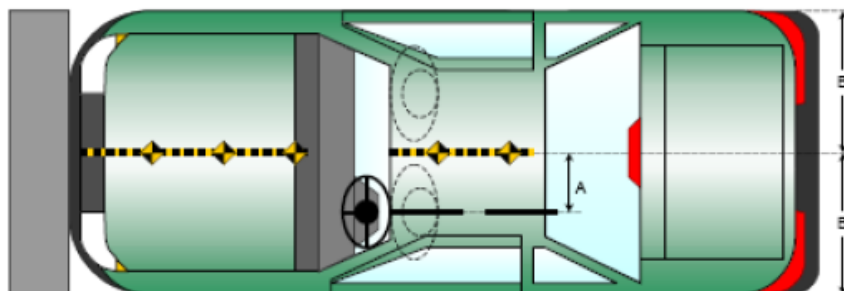
## DATA SHEET NO. 8

### PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

| Item | Value |
|------|-------|
| A    | 376   |
| B    | 944   |
| C    | 2725  |
| D    | 610   |
| E    | 1899  |
| F    | 261   |
| G    | 1986  |
| H    | 545   |
| I    | 1421  |
| J    | 1041  |
| K    | 1037  |
| L    | 1560  |
| M    | 549   |
| N    | 1561  |
| O    | 1037  |
| P    | 1042  |
| Q    | 1419  |



All units in millimeters



## DATA SHEET NO. 9

### LOAD CELL LOCATIONS ON FIXED BARRIER

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

|      |      |      |      |      |      |      |      |            |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------------|------|------|------|------|------|------|------|
|      |      |      |      |      |      |      |      | Centerline |      |      |      |      |      |      |      |
| A-16 | A-15 | A-14 | A-13 | A-12 | A-11 | A-10 | A-09 | A-08       | A-07 | A-06 | A-05 | A-04 | A-03 | A-02 | A-01 |
| B-16 | B-15 | B-14 | B-13 | B-12 | B-11 | B-10 | B-09 | B-08       | B-07 | B-06 | B-05 | B-04 | B-03 | B-02 | B-01 |
| C-16 | C-15 | C-14 | C-13 | C-12 | C-11 | C-10 | C-09 | C-08       | C-07 | C-06 | C-05 | C-04 | C-03 | C-02 | C-01 |
| D-16 | D-15 | D-14 | D-13 | D-12 | D-11 | D-10 | D-09 | D-08       | D-07 | D-06 | D-05 | D-04 | D-03 | D-02 | D-01 |
| E-16 | E-15 | E-14 | E-13 | E-12 | E-11 | E-10 | E-09 | E-08       | E-07 | E-06 | E-05 | E-04 | E-03 | E-02 | E-01 |
| F-16 | F-15 | F-14 | F-13 | F-12 | F-11 | F-10 | F-09 | F-08       | F-07 | F-06 | F-05 | F-04 | F-03 | F-02 | F-01 |
| G-16 | G-15 | G-14 | G-13 | G-12 | G-11 | G-10 | G-09 | G-08       | G-07 | G-06 | G-05 | G-04 | G-03 | G-02 | G-01 |
| H-16 | H-15 | H-14 | H-13 | H-12 | H-11 | H-10 | H-09 | H-08       | H-07 | H-06 | H-05 | H-04 | H-03 | H-02 | H-01 |
| I-16 | I-15 | I-14 | I-13 | I-12 | I-11 | I-10 | I-09 | I-08       | I-07 | I-06 | I-05 | I-04 | I-03 | I-02 | I-01 |
| J-16 | J-15 | J-14 | J-13 | J-12 | J-11 | J-10 | J-09 | J-08       | J-07 | J-06 | J-05 | J-04 | J-03 | J-02 | J-01 |
| K-16 | K-15 | K-14 | K-13 | K-12 | K-11 | K-10 | K-09 | K-08       | K-07 | K-06 | K-05 | K-04 | K-03 | K-02 | K-01 |

## DATA SHEET NO. 10

### TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15

### INSTRUMENTATION

| Instrumentation                  | Number of Channels Collected |
|----------------------------------|------------------------------|
| Driver Dummy Accelerometers      | 44                           |
| Passenger Dummy Accelerometers   | 44                           |
| Vehicle Structure Accelerometers | 8                            |
| <b>Total</b>                     | 100                          |

### CAMERA COVERAGE

| Type of Camera             | Number Used in this Test |
|----------------------------|--------------------------|
| High-Speed Vehicle Onboard | 2                        |
| High-Speed Offboard        | 14                       |
| Real-Time Panning          | 1                        |
| <b>Total</b>               | 17                       |

**DATA SHEET NO. 11****POST-TEST OBSERVATIONS**Test Vehicle: 2016 Chrysler 300 4-Door SedanNHTSA No.: M20160300Test Program: NCAP Frontal ImpactTest Date: 11/23/15**TEST DUMMY INFORMATION AND CONTACT LOCATIONS**

| Description             | Driver               | Passenger                                       |
|-------------------------|----------------------|-------------------------------------------------|
| Dummy Type / Serial No. | Hybrid III 50th/ 037 | Hybrid III 5th/ 426                             |
| Head Contact            | Airbag, Headrest     | Airbag, Headrest, Side Header, Instrument Panel |
| Upper Torso Contact     | None                 | None                                            |
| Lower Torso Contact     | None                 | None                                            |
| Left Knee Contact       | Knee Airbag          | Glove Box Door                                  |
| Right Knee Contact      | Knee Airbag          | Glove Box Door                                  |

**DOOR OPENING AND SEAT TRACK INFORMATION**

| Description           | Front                                  | Rear                                   |
|-----------------------|----------------------------------------|----------------------------------------|
| Locked/Unlocked Doors | Unlocked                               | Unlocked                               |
| Front Door Opening    | Remained closed & latched, operational | Remained closed & latched, operational |
| Rear Door Opening     | Remained closed & latched, operational | Remained closed & latched, operational |
| Seat Track Shift (mm) | None                                   | None                                   |
| Seat Back Failure     | None                                   | None                                   |

**POST-TEST STRUCTURAL OBSERVATIONS**

| Critical Areas of Performance | Observations and Conclusions |
|-------------------------------|------------------------------|
| Windshield Damage             | Broken                       |
| Window Damage                 | None                         |
| Other Notable Effects         | None                         |

**VEHICLE REBOUND FROM BARRIER**

| Measured Parameter | Units | Value |
|--------------------|-------|-------|
| Left Side          | mm    | 398   |
| Center             | mm    | 521   |
| Right Side         | mm    | 674   |
| Average            | mm    | 531   |

**SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION**

| Restraint Type         | Driver (Occupant 1) |          | Passenger (Occupant 2) |          |
|------------------------|---------------------|----------|------------------------|----------|
|                        | Installed           | Deployed | Installed              | Deployed |
| Front Airbag           | Yes                 | Yes      | Yes                    | Yes      |
| Side Curtain Airbag    | Yes                 | No       | Yes                    | No       |
| Torso/Pelvis Airbag    | Yes                 | No       | Yes                    | No       |
| Pelvis Airbag          | No                  | N/A      | No                     | N/A      |
| Knee Airbag            | Yes                 | Yes      | No                     | N/A      |
| Seat Belt Pretensioner | Yes                 | Yes      | Yes                    | Yes      |
| Seat Belt Load Limiter | Yes                 | Yes      | Yes                    | Yes      |
| Other                  | No                  | N/A      | No                     | N/A      |

## DATA SHEET NO. 12

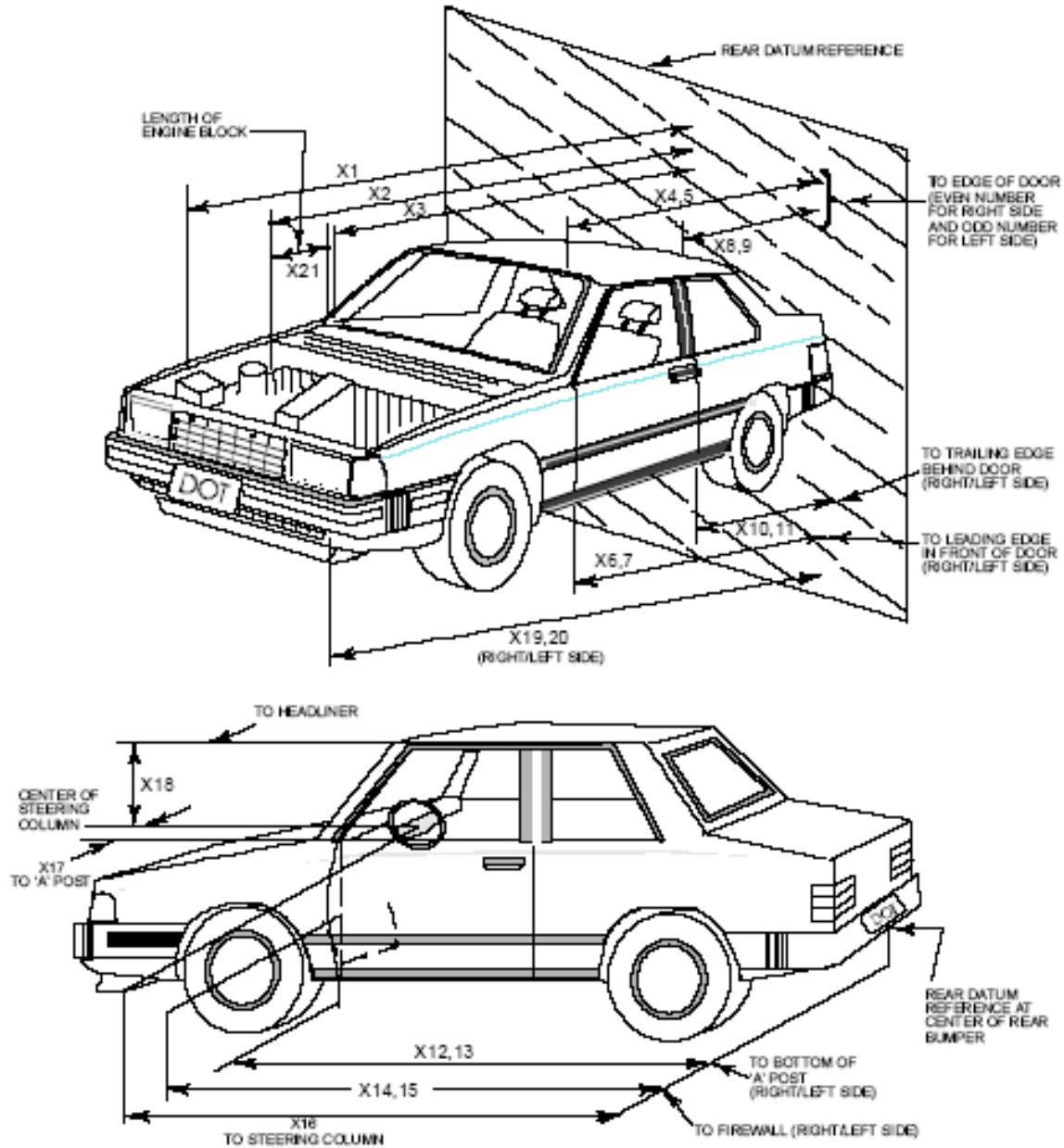
### VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan

NHTSA No.: M20160300

Test Program: NCAP Frontal Impact

Test Date: 11/23/15



**DATA SHEET NO. 12 (CONTINUED)**  
**VEHICLE PROFILE MEASUREMENTS**

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

| No. | Measurement Description                           | Pre-Test | Post-Test | Difference |
|-----|---------------------------------------------------|----------|-----------|------------|
| 1   | Total Length of Vehicle at Centerline             | 5059     | 3790      | 1269       |
| 2   | Rear Surface of Vehicle (RSOV) to Front of Engine | 4408     | 3490      | 918        |
| 3   | RSOV to Firewall                                  | 3924     | 3064      | 860        |
| 4   | RSOV to Upper Leading Edge of Right Door          | 2712     | 2705      | 7          |
| 5   | RSOV to Upper Leading Edge of Left Door           | 2710     | 2705      | 5          |
| 6   | RSOV to Lower Leading Edge of Right Door          | 2721     | 2705      | 16         |
| 7   | RSOV to Lower Leading Edge of Left Door           | 2723     | 2705      | 18         |
| 8   | RSOV to Upper Trailing Edge of Right Door         | 1587     | 2581      | -994       |
| 9   | RSOV to Upper Trailing Edge of Left Door          | 1583     | 1582      | 1          |
| 10  | RSOV to Lower Trailing Edge of Right Door         | 1618     | 1598      | 20         |
| 11  | RSOV to Lower Trailing Edge of Left Door          | 1618     | 1604      | 14         |
| 12  | RSOV to Bottom of "A" Post-of Right Side          | 2674     | 2668      | 6          |
| 13  | RSOV to Bottom of "A" Post-of Left Side           | 2673     | 2672      | 1          |
| 14  | RSOV to Firewall, Right Side                      | 3244     | 3120      | 124        |
| 15  | RSOV to Firewall, Left Side                       | 3254     | 3055      | 199        |
| 16  | RSOV to Steering Column                           | 2144     | 2223      | -79        |
| 17  | Center of Steering Column to "A" Post             | 392      | 305       | 87         |
| 18  | Center of Steering Column to Headliner            | 447      | 420       | 27         |
| 19  | RSOV to Right Side of Front Bumper                | 4163     | 3760      | 403        |
| 20  | RSOV to Left Side of Front Bumper                 | 4153     | 3740      | 413        |
| 21  | Length of Engine Block                            | 560      | 560       | 0          |
| RD  | RSOV to Right Side of Dash Panel                  | 2391     | 2360      | 31         |
| CD  | RSOV to Center of Dash Panel                      | 2425     | 2378      | 47         |
| LD  | RSOV to Left Side of Dash Panel                   | 2383     | 2360      | 23         |

All Dimensions in mm

## DATA SHEET NO. 13

### ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15

### VEHICLE INFORMATION

VIN: 2C3CCARG6GH117036  
Vehicle Size Category: Large Car

Wheelbase: 3053  
Test Weight (kg): 2103.4

### ACCELEROMETER DATA

Accelerometer Locations: As listed on Page 15 of this report.

Cal. Procedure/Interval: TRC procedure / 6 month interval

Integration Algorithm: Trapezoidal

Linearity: > 99%

Impact Velocity (km/h): 56.31

Velocity Change (km/h): 67.07

Time of Separation (ms): 115

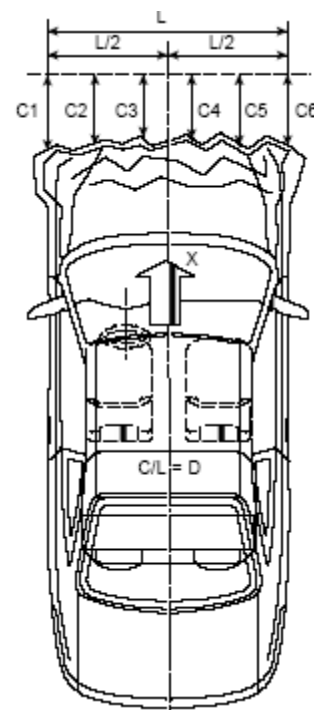
### CRUSH PROFILE

Collision Deformation Classification: 12FDEW2

Midpoint of Damage: Centerline

Damage Region Length (mm): 1524

Impact Mode: Frontal



| No. | Measurement Description    | Units | Pre-Test | Post-Test | Difference |
|-----|----------------------------|-------|----------|-----------|------------|
| C1  | Crush zone 1 at left side  | mm    | 4153     | 3740      | 413        |
| C2  | Crush zone 2 at left side  | mm    | 4268     | 3710      | 558        |
| C3  | Crush zone 3 at left side  | mm    | 4314     | 3780      | 534        |
| C4  | Crush zone 4 at right side | mm    | 4316     | 3785      | 531        |
| C5  | Crush zone 5 at right side | mm    | 4270     | 3770      | 500        |
| C6  | Crush zone 6 at right side | mm    | 4153     | 3760      | 403        |
| L   | C1 to C6                   | mm    | 1524     | 1524      | 0          |

## DATA SHEET NO. 14

### VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

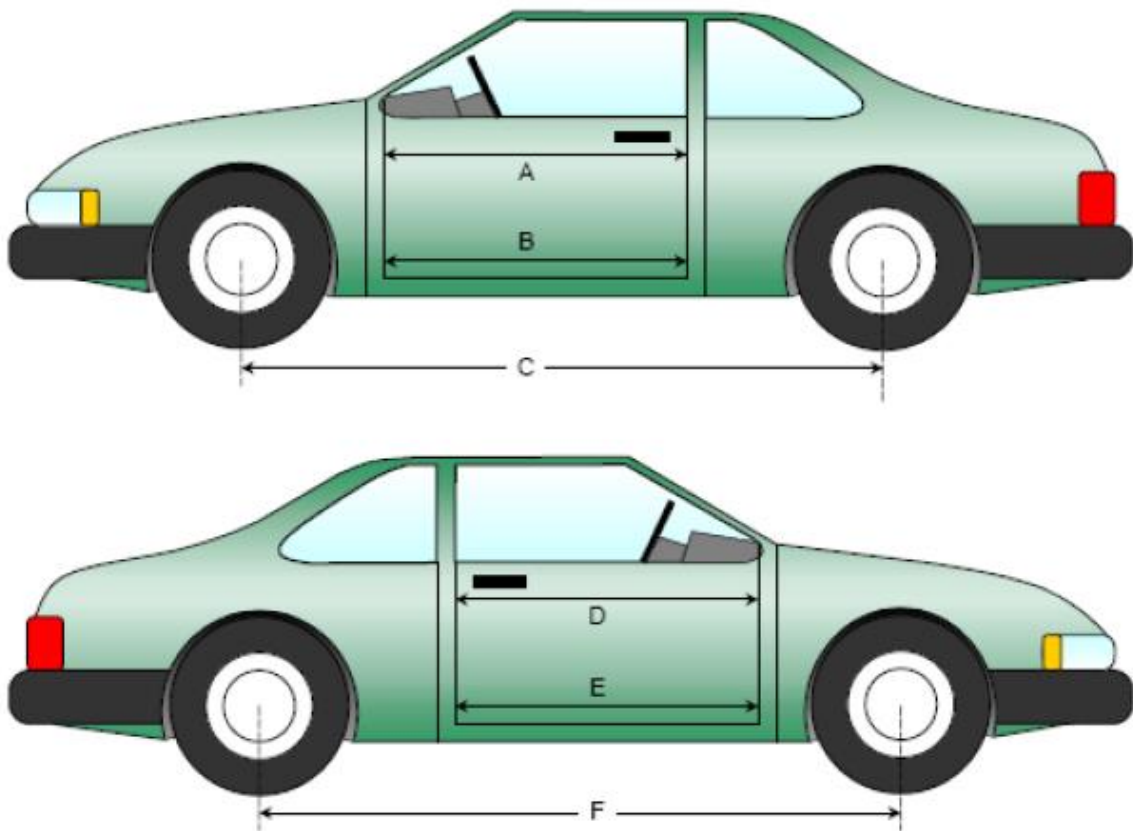
NHTSA No.: M20160300  
Test Date: 11/23/15

#### DOOR OPENING WIDTH

| No. | Description      | Units | Pre-Test | Post-Test | Difference |
|-----|------------------|-------|----------|-----------|------------|
| A   | Left Side Upper  | mm    | 1063     | 1047      | 16         |
| B   | Left Side Lower  | mm    | 960      | 951       | 9          |
| C   | Right Side Upper | mm    | 1060     | 1057      | 3          |
| D   | Right Side Lower | mm    | 959      | 946       | 13         |

#### WHEELBASE MEASUREMENTS

| No. | Description          | Units | Pre-Test | Post-Test | Difference |
|-----|----------------------|-------|----------|-----------|------------|
| C   | Left Side Wheelbase  | mm    | 3053     | 2915      | 138        |
| F   | Right Side Wheelbase | mm    | 3053     | 2905      | 148        |



## DATA SHEET NO. 14 (CONTINUED)

### VEHICLE INTRUSION MEASUREMENTS

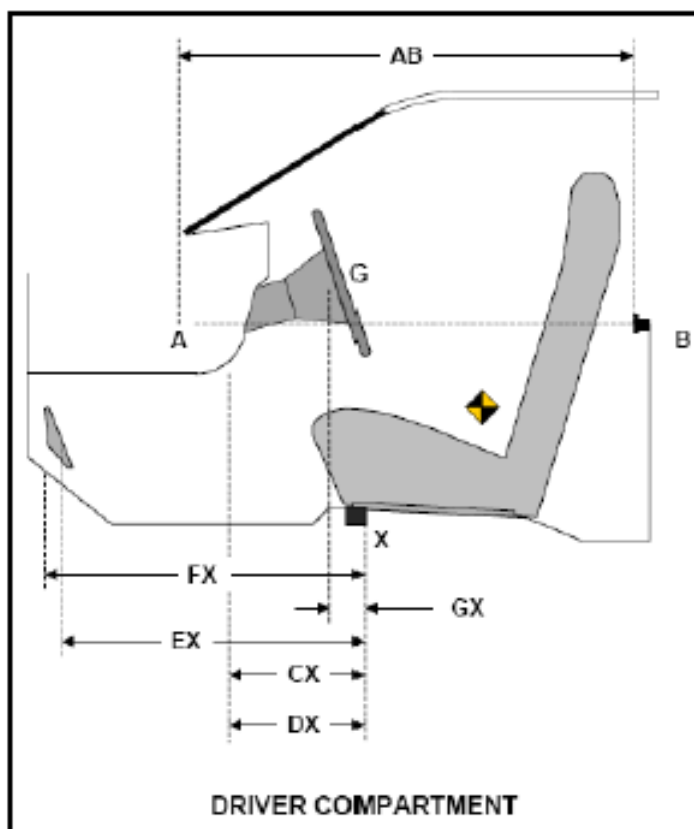
Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

#### DRIVER COMPARTMENT INTRUSION

| Item | Description                              | Units | Pre-Test | Post-Test | Difference |
|------|------------------------------------------|-------|----------|-----------|------------|
| AB   | Door Opening (Inside Window Jam)         | mm    | 834      | 834       | 0          |
| CX   | Left Knee Bolster to X                   | mm    | 264      | 253       | 11         |
| DX   | Right Knee Bolster to X                  | mm    | 235      | 211       | 24         |
| EX   | Brake Pedal to X                         | mm    | 538      | 486       | 52         |
| FX   | Foot Rest to X                           | mm    | 566      | 552       | 14         |
| GX   | Center of Steering Column Wheel Hub to X | mm    | 0        | 73        | -73        |

X = Front of Seat Track (Stationary)





## DATA SHEET NO. 15

### SUMMARY OF FMVSS 212, 219 (PARTIAL), AND 301 DATA

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
 Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
 Test Date: 11/23/15

Please provide windshield mounting details.

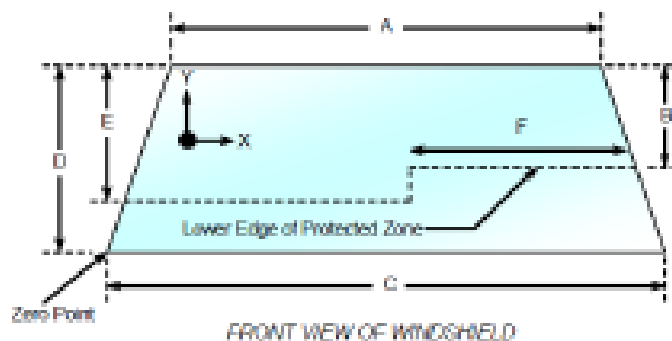
The standard requires that the post-test retention measurement be a minimum of 75% of the pre-test total periphery measurement for vehicle not equipped with occupant passive restraint and 50% for each side of the windshield for vehicle which are equipped with occupant passive restraints.

Temperature of windshield molding during test: 21° C

#### WINDSHIELD PERIPHERY MEASUREMENTS

| Measurement | Pre-Test (mm) | Post-Test (mm) | % Retention |
|-------------|---------------|----------------|-------------|
| Left Side   | 2233          | 1867.5         | 83.7        |
| Right Side  | 2233          | 1632.5         | 73.0        |
| Total       | 4466          | 3600           | 80.6        |

| Item | Units | Value |
|------|-------|-------|
| A    | mm    | 1246  |
| B    | mm    | 475   |
| C    | mm    | 1620  |
| D    | mm    | 800   |
| E    | mm    | 455   |
| F    | mm    | 492   |



#### AREAS OF PROTECTED ZONE FAILURES

A. Provide coordinates of the area that the protected zone was penetrated more than .25 inches by a vehicle component other than one that is normally in contact with the windshield.

| X  | Y  |
|----|----|
| NA | NA |
| NA | NA |
| NA | NA |
| NA | NA |

B. The inner surface of the windshield was penetrated by the hood support beneath the protected zone.

| X  | Y  |
|----|----|
| NA | NA |
| NA | NA |
| NA | NA |
| NA | NA |

**DATA SHEET NO. 15 (CONTINUED)**

**SUMMARY OF FMVSS 212, 219 (PARTIAL), AND 301 DATA**

Test Vehicle: 2016 Chrysler 300 4-Door Sedan

NHTSA No.: M20160300

Test Program: NCAP Frontal Impact

Test Date: 11/23/15

**FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA**

Temperature at Time of Impact: 20.6°C

Test Time: 16:28

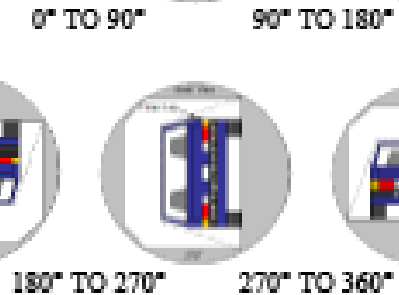
**Stoddard Solvent Spillage Measurements**

- A From impact until vehicle motion ceases: 0 oz.  
(maximum allowable – 1 oz.)
- B For the 5-minute period after motion ceases: 0 oz.  
(maximum allowable – 5 oz.)
- C For the following 25 minutes: 0 oz.  
(maximum allowable – 1 oz./minutes)
- D Spillage: None

## FMVSS 301 STATIC ROLLOVER RESULTS

NHTSA No.: M20160300  
Test Date: 11/23/15

- None



| Test Phase   | Rotation Time | Hold Time | Total Time |
|--------------|---------------|-----------|------------|
| 0° to 90°    | 90            | 330       | 420        |
| 90° to 180°  | 90            | 330       | 840        |
| 180° to 270° | 90            | 330       | 1260       |
| 270° to 360° | 90            | 330       | 1680       |

| Test Phase   | First 5 Minutes | Sixth Minute | Seventh Minute | Eighth Minute |
|--------------|-----------------|--------------|----------------|---------------|
| 0° to 90°    | 0               | 0            | 0              | N/A           |
| 90° to 180°  | 0               | 0            | 0              | N/A           |
| 180° to 270° | 0               | 0            | 0              | N/A           |
| 270° to 360° | 0               | 0            | 0              | N/A           |

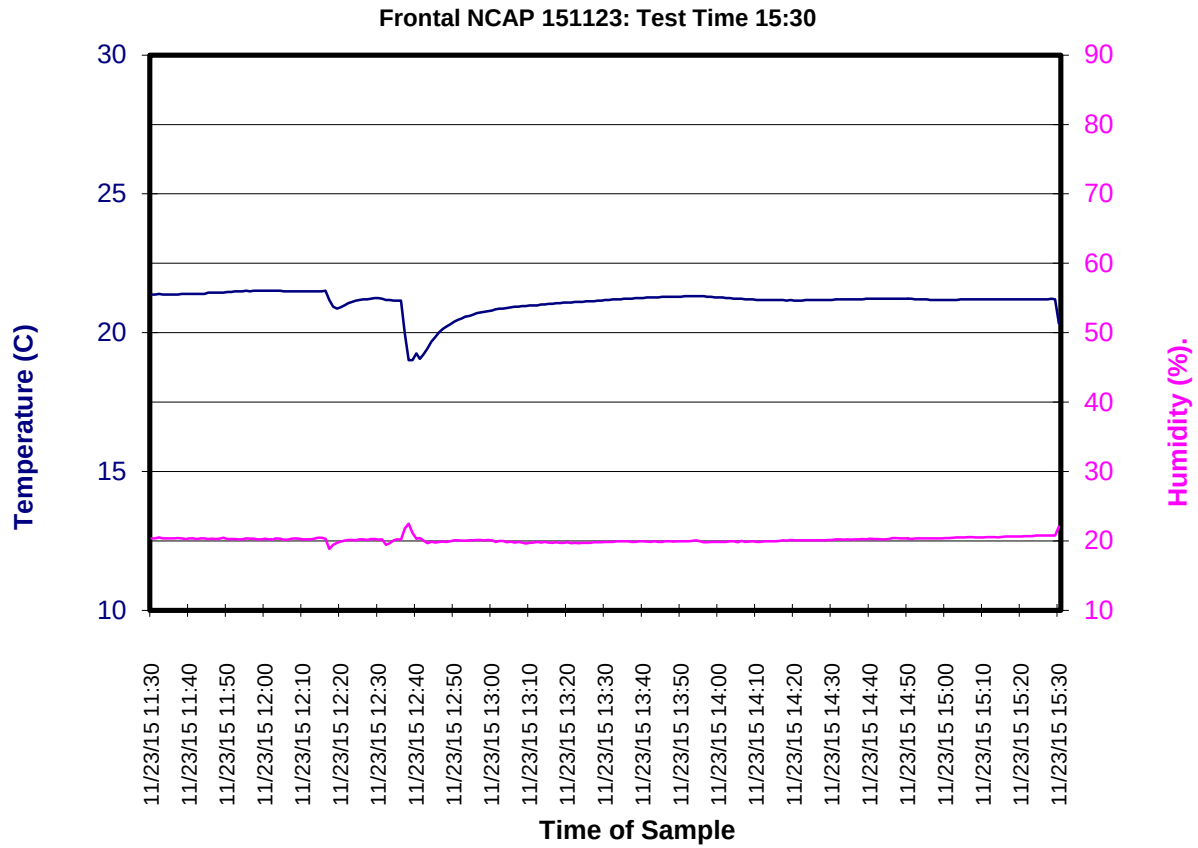
| Test Phase   | Spillage Location |
|--------------|-------------------|
| 0° to 90°    | None              |
| 90° to 180°  | None              |
| 180° to 270° | None              |
| 270° to 360° | None              |

## DATA SHEET NO. 17

### DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2016 Chrysler 300 4-Door Sedan  
Test Program: NCAP Frontal Impact

NHTSA No.: M20160300  
Test Date: 11/23/15



**APPENDIX A**  
**PHOTOGRAPHS**

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| <b>7</b>   | Left Rear 3-4 View, as Received                     | <b>A-8</b>  |
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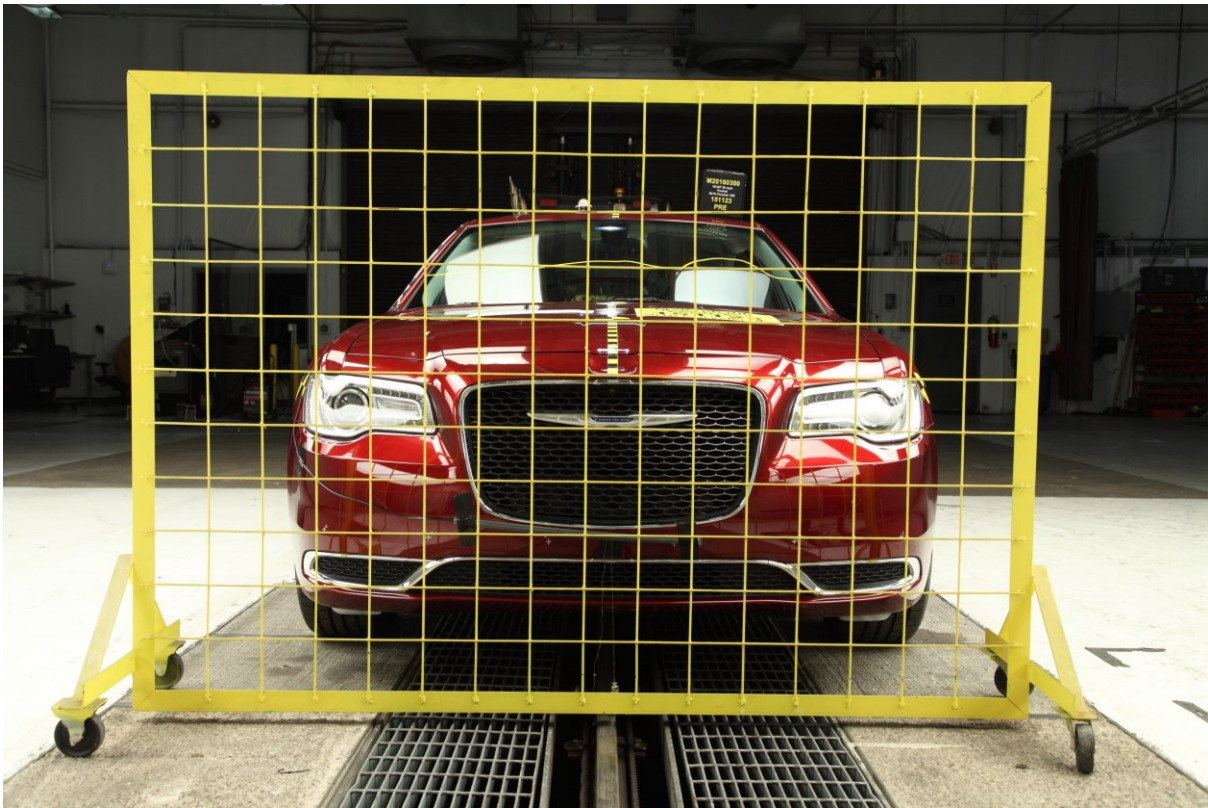
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| 72         | Post-Test Speed Trap Read-out                                  | A-41        |

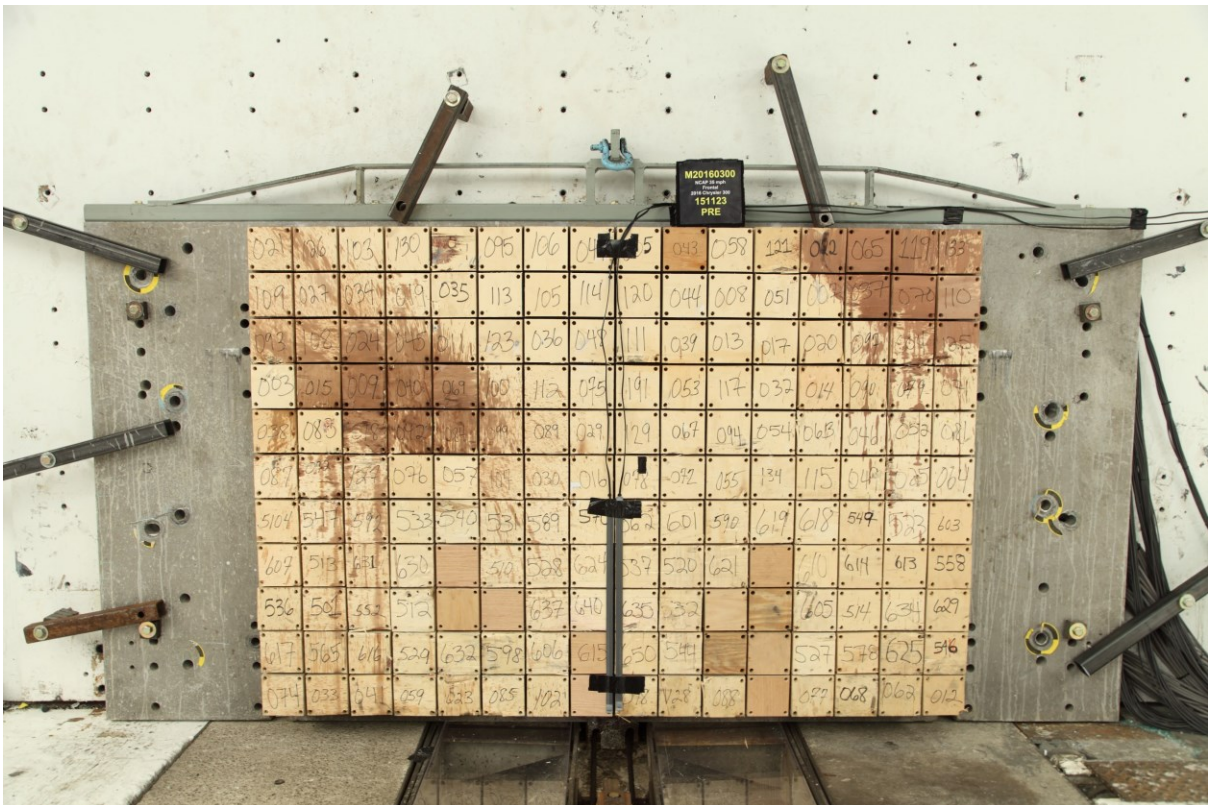
### **TABLE OF PHOTOGRAPHS (CONTINUED)**

| <b>No.</b> | <b>Description</b>                                  | <b>Page</b> |
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| <b>73</b>  | Vehicle at 0° on Static Rollover Device             | <b>A-42</b> |
| <b>74</b>  | Vehicle at 90° on Static Rollover Device            | <b>A-42</b> |
| <b>75</b>  | Vehicle at 180° on Static Rollover Device           | <b>A-43</b> |
| <b>76</b>  | Vehicle at 270° on Static Rollover Device           | <b>A-43</b> |
| <b>77</b>  | Vehicle at 360° on Static Rollover Device           | <b>A-44</b> |
| <b>78</b>  | 2016 Chrysler 300 4-Door Sedan Frontal Impact Event | <b>A-44</b> |
| <b>79</b>  | Monroney Label Photograph                           | <b>A-45</b> |



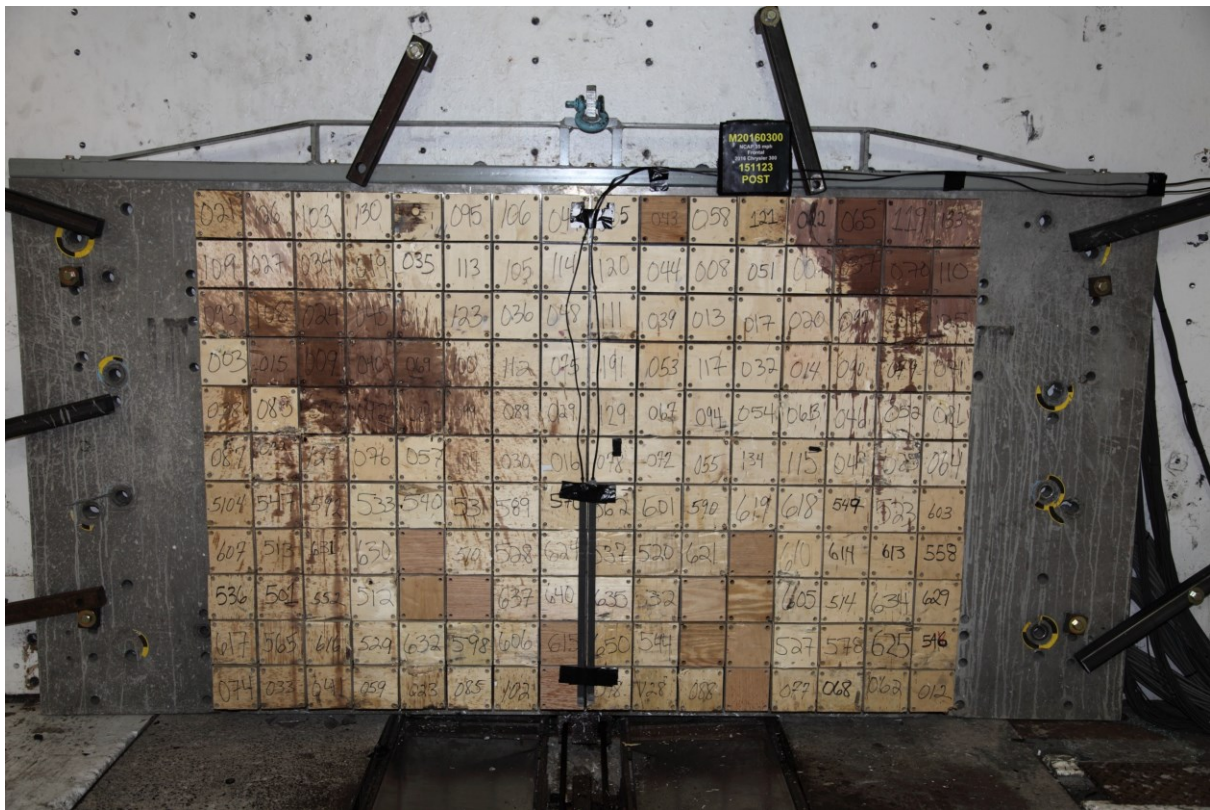


**001 Load Cell Location**



**002 Pre-Test Load Cell Wall**





**003 Post-Test Load Cell Wall**



**004 Manufacturer's Label**





**005 Tire Placard**



**006 2016 Chrysler 300 4-Door Sedan Frontal As Delivered**





**007 Left Rear 3-4 View, as Received**



**008 Pre-Test Front View of Test Vehicle**





**009 Post-Test Front View of Test Vehicle**



**010 Pre-Test Left View of Test Vehicle**





**011 Post-Test Left View of Test Vehicle**



**012 Pre-Test Right View of Test Vehicle**





**013 Post-Test Right View of Test Vehicle**



**014 Pre-Test Right Front 3-4 View**





**015 Post-Test Right Front 3-4 View**



**016 Pre-Test Left Rear 3-4 View**





**017 Post-Test Left Rear 3-4 View**



**018 Pre-Test Windshield View**





**019 Post-Test Windshield View**



**020 Pre-Test Engine Compartment View**





**021 Post-Test Engine Compartment View**



**022 Pre-Test Fuel Filler Cap View**



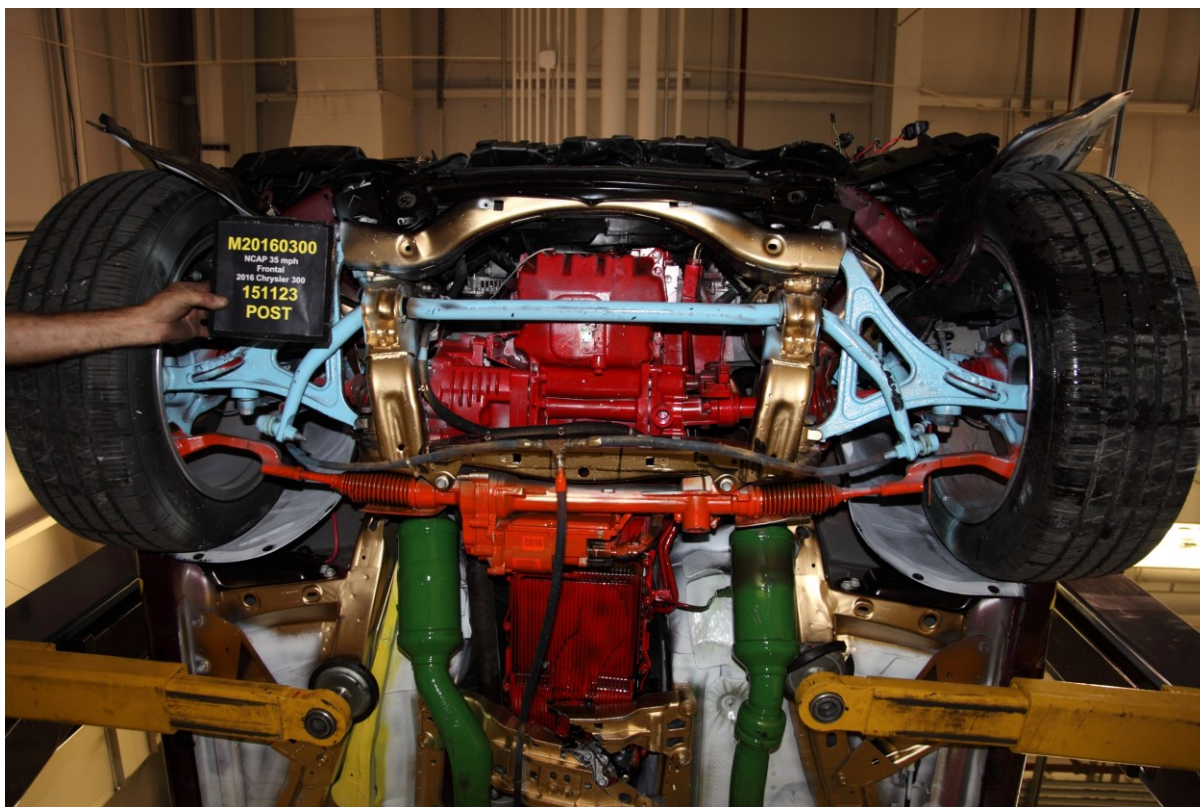


**023 Post-Test Fuel Filler Cap View**



**024 Pre-Test Front Underbody View**





**025 Post-Test Front Underbody View**

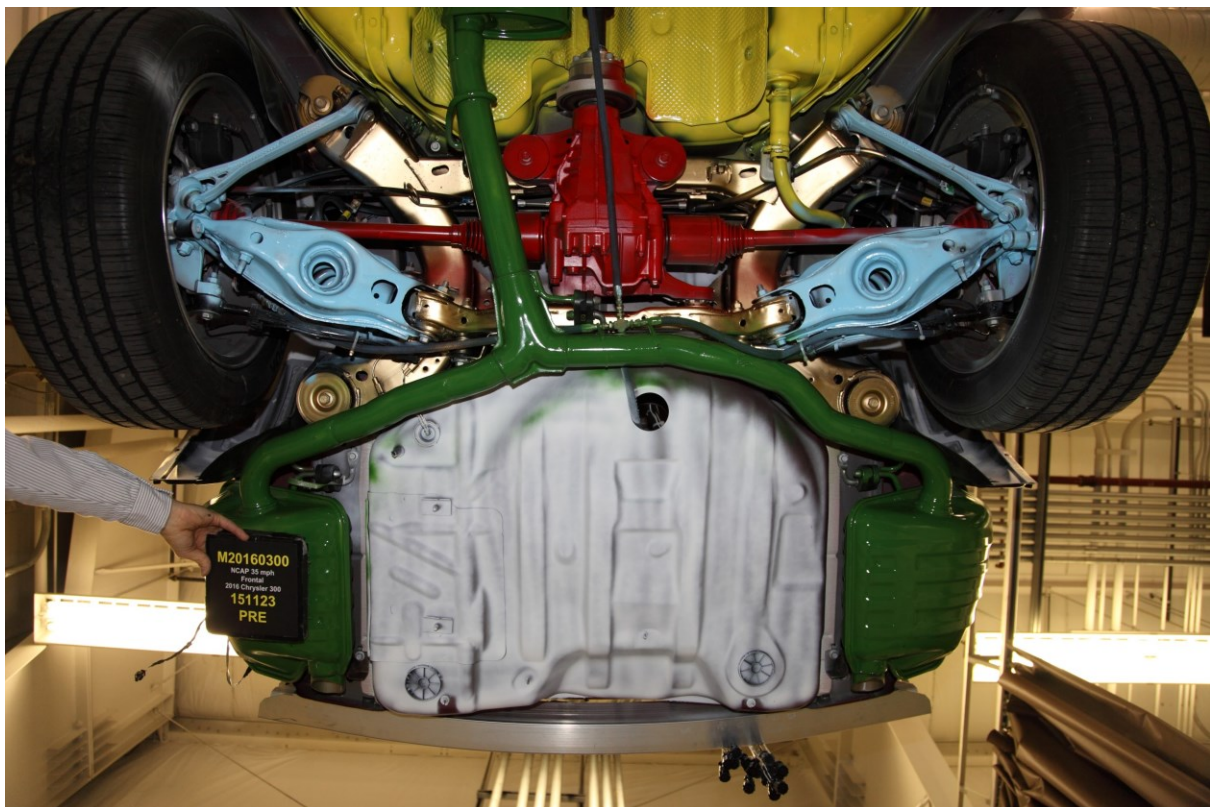


**025a Pre-Test Mid Underbody View**





**025b Post-Test Mid Underbody View**

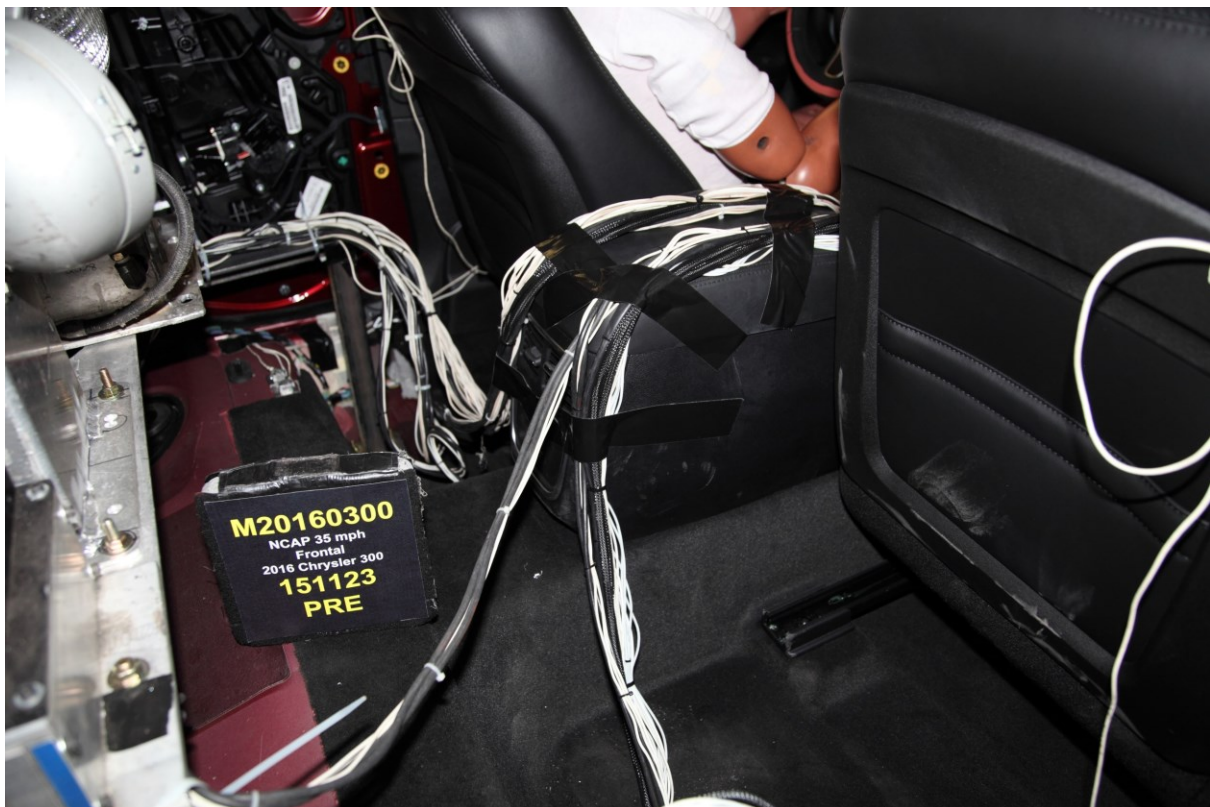


**026 Pre-Test Rear Underbody View**





**027 Post-Test Rear Underbody View**



**028 Pre-Test Dummy Cable Routing**



**029 Post-Test Dummy Cable Routing**



**030 Pre-Test Driver Dummy Front View**





**031 Post-Test Driver Dummy Front View**



**032 Pre-Test Driver Dummy Window View**



**033 Post-Test Driver Dummy Window View**



**034 Pre-Test Driver Dummy and Vehicle Interior View**





**035 Post-Test Driver Dummy and Vehicle Interior View**



**036 Pre-Test Driver's Seat Fore-Aft Markings**



**037 Post-Test Driver's Seat Fore-Aft Markings**

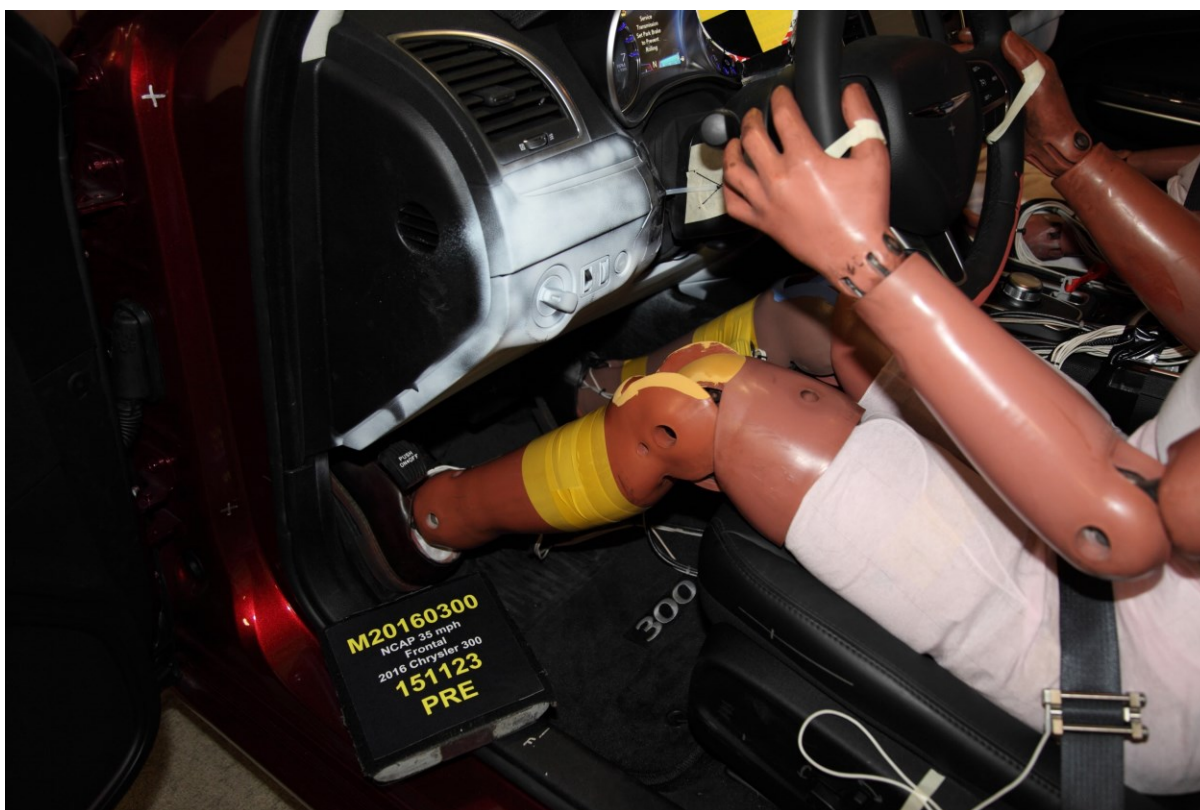


**038 Pre-Test View of Belt Anchorage for Driver Dummy**





**039 Post-Test View of Belt Anchorage for Driver Dummy**



**040 Pre-Test Driver Dummy Feet**



**041 Post-Test Driver Dummy Feet**



**042 Pre-Test Driver's Side Knee Bolster**





**043 Post-Test Driver's Side Knee Bolster**



**044 Pre-Test Driver's Side Floorpan**



**045 Post-Test Driver's Side Floorpan**



**046 Post-Test Driver Dummy Face**





**047 Post-Test Driver Dummy Contact With Airbag**

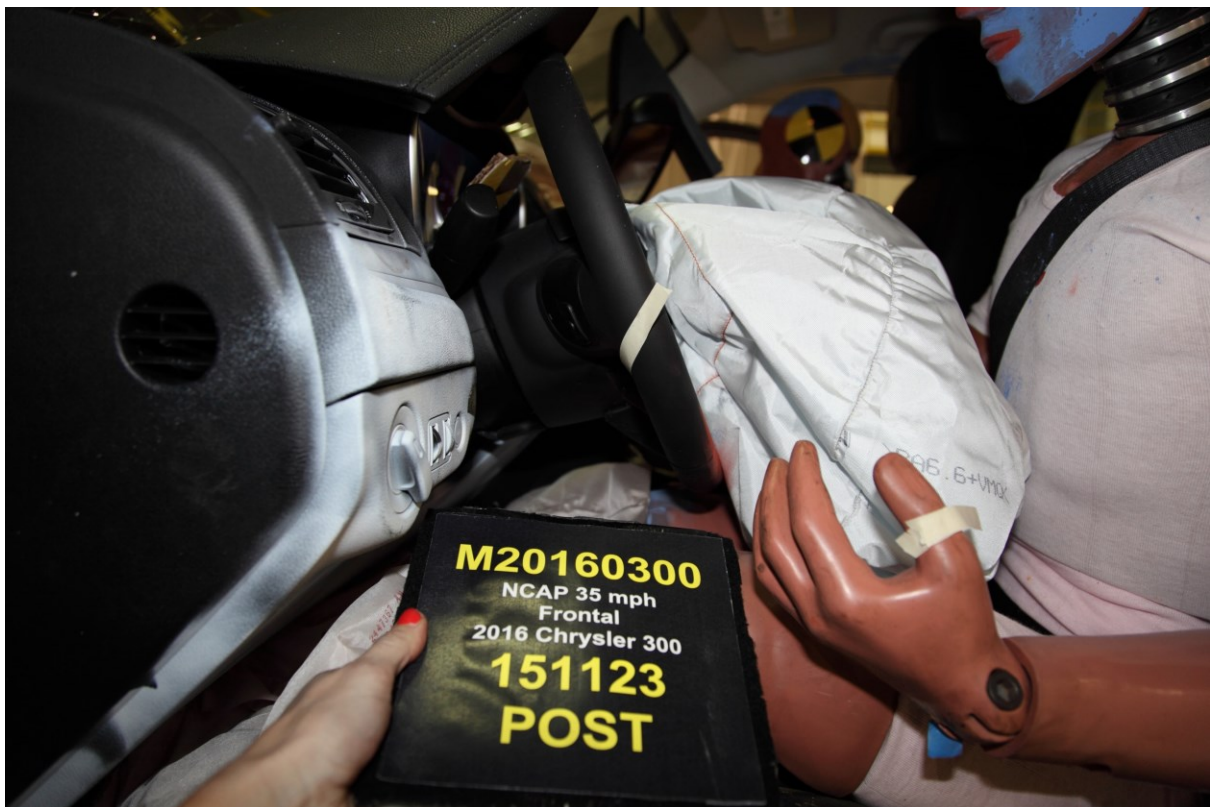


**048 Post-Test Driver Dummy Contact With Headrest**





049 Pre-Test View of the Steering Wheel



050 Post-Test View of the Steering Wheel



**051 Pre-Test Passenger Dummy Front View**



**052 Post-Test Passenger Dummy Front View**





053 Pre-Test Passenger Dummy Window View



054 Post-Test Passenger Dummy Window View





**055 Pre-Test Passenger Dummy and Vehicle Interior View**



**056 Post-Test Passenger Dummy and Vehicle Interior View**



**057 Pre-Test Passenger's Seat Fore-Aft Markings**



**058 Post-Test Passenger's Seat Fore-Aft Markings**





**059 Pre-Test View of Belt Anchorage for Passenger Dummy**



**060 Post-Test View of Belt Anchorage for Passenger Dummy**





**061 Pre-Test Passenger Dummy Feet**



**062 Post-Test Passenger Dummy Feet**



**063 Pre-Test Passenger's Side Knee Bolster**



**064 Post-Test Passenger's Side Knee Bolster**





**065 Pre-Test Passenger's Side Floorpan**



**066 Post-Test Passenger's Side Floorpan**





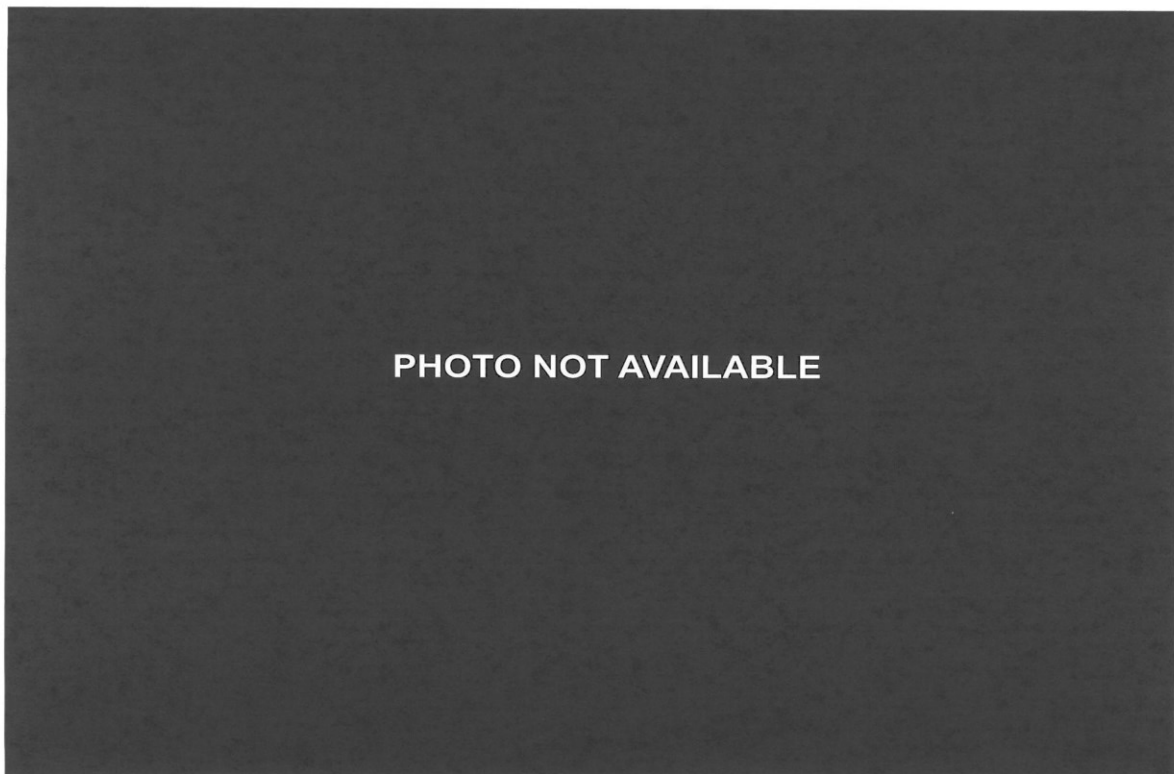
**067 Post-Test Passenger Dummy Face**



**068 Post-Test Passenger Dummy Contact With Airbag**

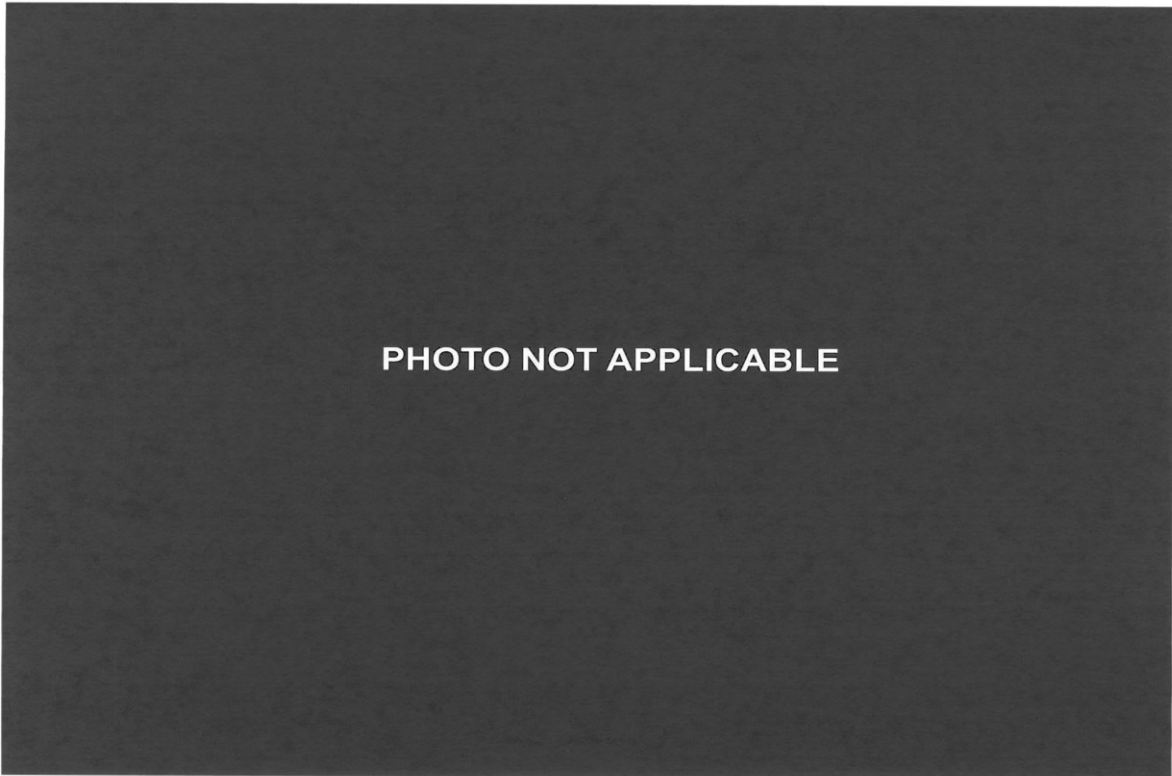


**069 Post Test Passenger Dummy Contact With Headrest**

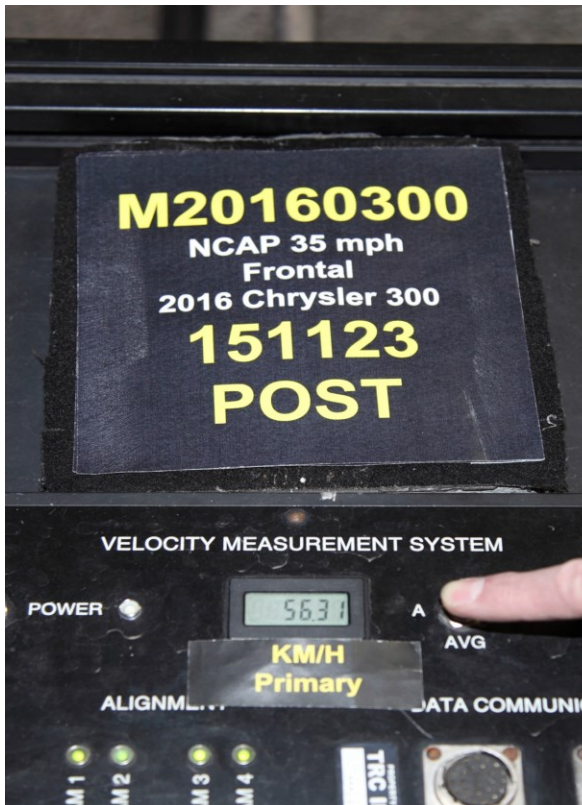


**070 Photograph of Ballast Installed in Vehicle**





071 Post-Test Stoddard Spillage Location View



072 Post-Test Speed Trap Readout





**073 Vehicle at 0° on Static Rollover Device**



**074 Vehicle at 90° on Static Rollover Device**





**075 Vehicle at 180° on Static Rollover Device**



**076 Vehicle at 270° on Static Rollover Device**





**077 Vehicle at 360° on Static Rollover Device**



**078 2016 Chrysler 300 4-Door Sedan Frontal Impact Event**



2016

300 LIMITED AWD

For more information visit: [www.chrysler.com](http://www.chrysler.com)  
or call 1-800-CHRYSLER

FCA US LLC

THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES.

**MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION**

Base Price: **\$34,395**

**CHRYSLER 300 LIMITED AWD**  
 Exterior Color: Velvet Red Pearl Coat Exterior Paint  
 Interior Color: Black Interior Color  
 Interior: Leather-Trimmed Bucket Seats  
 Engine: 3.6-Liter V6 24-Valve VVT Engine  
 Transmission: 8-Speed Automatic Transmission with E-Shift

**STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)**

**FUNCTIONAL/SAFETY FEATURES**  
 Advanced Multistage Front Airbags  
 Supplemental Side-Curtain Front and Rear Airbags  
 Supplemental Front Seat-Mounted Side Airbags  
 Driver Inflatable Knee-Bolster Airbag  
 Anti-Lock 4-Wheel Disc Performance Brakes  
 Active Transfer Case with Front Axle Disconnect  
 Electronic Stability Control  
 Electronic Roll Mitigation  
 Tire Pressure Monitoring Display  
 All-Speed Traction Control  
 Keyless Go™  
 ParkView™ Rear Back-Up  
 Security Alarm  
 Speed Control  
 Acoustic Windshield  
 Acoustic Front Door Glass

**INTERIOR FEATURES**  
 A/C Auto Temperature Control with Dual Zone Control  
 Uconnect® 8.4  
 Integrated Voice Command with Bluetooth®  
 Media Hub (SD, USB, Aux)  
 Dual Remote USB Port - Charge Only  
 8 Speakers  
 Leather-Wrapped Steering Wheel  
 Steering Wheel Mounted Audio Controls  
 Tilt / Telescope Steering Column  
 Leather Trim Seats  
 Heated Front Seats  
 Power Front Driver and Passenger Seats  
 Rear 60 / 40 Folding Seat  
 Driver / Passenger Power 4-Way Lumbar Adjust

**Rotary Shifter**  
 Power Front Windows w/ 1-Touch Up and Down Feature  
 Illuminated Front Cup Holders  
 Rear Seat Armrest with Storage Cup Holder  
 EXTERIOR FEATURES  
 19-inch x 7.5-inch Polished Aluminum Wheels  
 P235/55R19 BSW All Season Tires  
 Compact Spare Tire  
 Bi-Function Halogen Projector Headlamps  
 Automatic Headlamps  
 Dedicated Daytime Running Headlamps  
 Chrome LED Tail Lamps  
 Power Heated Exterior Mirrors w/ Manual Fold-Away  
 Dual Rear Exhaust with Bright Tips

**OPTIONAL EQUIPMENT (May Replace Standard Equipment)**  
 Customer Preferred Package 22F

**DESTINATION CHARGE** \$995

**TOTAL PRICE: \* \$35,390**

**WARRANTY COVERAGE**  
 5-year or 60,000-mile Powertrain Limited Warranty.  
 3-year or 36,000-mile Basic Limited Warranty.  
 Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

**5 YEAR / 60,000 MILE POWERTRAIN WARRANTY**

Assembly Plant/Port of Entry: BRAMPTON, ONTARIO, CANADA  
 VIN: 2C3CCAR66GH-117036 LAKEN 1638

SALES TAX: 6%  
 REGISTRATION: \$100  
 TITLE: \$100  
 TOTAL: \$35,390

**EPA DOT Fuel Economy and Environment**

**Fuel Economy**

**21** MPG  
 combined city/hwy

**18** MPG  
 city

**27** MPG  
 highway

**4.8** gallons per 100 miles

**Annual fuel Cost**  
**\$2,150**

**Fuel Economy & Greenhouse Gas Rating** (tailpipe only) **5**

**Smog Rating** (tailpipe only) **6**

**Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 29 MPG and costs \$9,000 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.00 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.**

**fuel economy.gov**  
 Calculate personalized estimates and compare vehicles

**GOVERNMENT 5-STAR SAFETY RATINGS**

**Overall Vehicle Score** Not Rated

**Frontal Crash** Driver Passenger Not Rated Not Rated

**Side Crash** Front seat Rear seat Not Rated Not Rated

**Rollover** ★★★

**Star ratings range from 1 (lowest) to 5 (highest) with 5 being the highest.**  
 Source: National Highway Traffic Safety Administration (NHTSA)  
[www.safercar.gov](http://www.safercar.gov) or 1-888-327-4236

**PARTS CONTENT INFORMATION**  
 FOR VEHICLES IN THIS CLASS:  
 U.S./CANADIAN PARTS CONTENT: 65 %  
 MAJOR SOURCES OF FOREIGN PARTS CONTENT:  
 MEXICO: 22 %  
 NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.  
 FOR THIS VEHICLE:  
 FINAL ASSEMBLY POINT:  
 BRAMPTON, ONTARIO, CANADA  
 COUNTRY OF ORIGIN:  
 ENGINE: MEXICO  
 TRANSMISSION: UNITED STATES

079 Monroney Label Photograph

**APPENDIX B**  
**VEHICLE AND DUMMY RESPONSE DATA PLOTS**

## TABLE OF DATA PLOTS

| <b>No.</b> | <b>List of Data Plots Provided in the Test Report</b>   | <b>Page</b> |
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| <b>2</b>   | Driver Head Y Acceleration vs. Time Primary             | <b>B-5</b>  |
| <b>3</b>   | Driver Head Z Acceleration vs. Time Primary             | <b>B-5</b>  |
| <b>4</b>   | Driver Head Resultant Acceleration vs. Time Primary     | <b>B-5</b>  |
| <b>5</b>   | Driver Chest X Deflection vs. Time                      | <b>B-6</b>  |
| <b>6</b>   | Driver Chest X Acceleration vs. Time Primary            | <b>B-7</b>  |
| <b>7</b>   | Driver Chest Y Acceleration vs. Time Primary            | <b>B-7</b>  |
| <b>8</b>   | Driver Chest Z Acceleration vs. Time Primary            | <b>B-7</b>  |
| <b>9</b>   | Driver Chest Resultant Acceleration vs. Time Primary    | <b>B-7</b>  |
| <b>10</b>  | Driver Upper Neck Force X vs. Time                      | <b>B-8</b>  |
| <b>11</b>  | Driver Upper Neck Force Z vs. Time                      | <b>B-8</b>  |
| <b>12</b>  | Driver Upper Neck Moment Y vs. Time                     | <b>B-8</b>  |
| <b>13</b>  | Driver Nij vs. Time                                     | <b>B-9</b>  |
| <b>14</b>  | Driver Left Femur Force vs. Time                        | <b>B-10</b> |
| <b>15</b>  | Driver Right Femur Force vs. Time                       | <b>B-10</b> |
| <b>16</b>  | Passenger Head X Acceleration vs. Time Primary          | <b>B-11</b> |
| <b>17</b>  | Passenger Head Y Acceleration vs. Time Primary          | <b>B-11</b> |
| <b>18</b>  | Passenger Head Z Acceleration vs. Time Primary          | <b>B-11</b> |
| <b>19</b>  | Passenger Head Resultant Acceleration vs. Time Primary  | <b>B-11</b> |
| <b>20</b>  | Passenger Chest X Deflection vs. Time                   | <b>B-12</b> |
| <b>21</b>  | Passenger Chest X Acceleration vs. Time Primary         | <b>B-13</b> |
| <b>22</b>  | Passenger Chest Y Acceleration vs. Time Primary         | <b>B-13</b> |
| <b>23</b>  | Passenger Chest Z Acceleration vs. Time Primary         | <b>B-13</b> |
| <b>24</b>  | Passenger Chest Resultant Acceleration vs. Time Primary | <b>B-13</b> |
| <b>25</b>  | Passenger Upper Neck Force X vs. Time                   | <b>B-14</b> |
| <b>26</b>  | Passenger Upper Neck Force Z vs. Time                   | <b>B-14</b> |
| <b>27</b>  | Passenger Upper Neck Moment Y vs. Time                  | <b>B-14</b> |
| <b>28</b>  | Passenger Nij vs. Time                                  | <b>B-15</b> |
| <b>29</b>  | Passenger Left Femur Force vs. Time                     | <b>B-16</b> |
| <b>30</b>  | Passenger Right Femur Force vs. Time                    | <b>B-16</b> |



The following additional dummy and vehicle response data can be found in the R & D section of the NHTSA website at: [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).

Driver Head Acceleration X Redundant  
Driver Head Acceleration Y Redundant  
Driver Head Acceleration Z Redundant  
Driver Upper Neck Force Y  
Driver Upper Neck Moment X  
Driver Upper Neck Moment Z  
Driver Chest X Acceleration Redundant  
Driver Chest Y Acceleration Redundant  
Driver Chest Z Acceleration Redundant  
Driver Pelvis X Acceleration  
Driver Pelvis Y Acceleration  
Driver Pelvis Z Acceleration  
Driver Left Femur Force Redundant  
Driver Right Femur Force Redundant  
Driver Left Upper Tibia Moment X  
Driver Left Upper Tibia Moment Y  
Driver Left Upper Tibia Force Z  
Driver Left Lower Tibia Moment X  
Driver Left Lower Tibia Moment Y  
Driver Left Lower Tibia Force Z  
Driver Right Upper Tibia Moment X  
Driver Right Upper Tibia Moment Y  
Driver Right Upper Tibia Force Z  
Driver Right Lower Tibia Moment X  
Driver Right Lower Tibia Moment Y  
Driver Right Lower Tibia Force Z  
Driver Left Foot Fore Z  
Driver Left Foot Aft X  
Driver Left Foot Aft Z  
Driver Right Foot Fore Z  
Driver Right Foot Aft X  
Driver Right Foot Aft Z  
Driver Shoulder Belt Force  
Driver Lap Belt Force  
Passenger Head Acceleration X Redundant  
Passenger Head Acceleration Y Redundant  
Passenger Head Acceleration Z Redundant  
Passenger Upper Neck Force Y

Passenger Upper Neck Moment X  
Passenger Upper Neck Moment Z  
Passenger Chest X Acceleration Redundant  
Passenger Chest Y Acceleration Redundant  
Passenger Chest Z Acceleration Redundant  
Passenger Pelvis X  
Passenger Pelvis Y  
Passenger Pelvis Z  
Passenger Left Femur Force Redundant  
Passenger Right Femur Force Redundant  
Passenger Left Upper Tibia Moment X  
Passenger Left Upper Tibia Moment Y  
Passenger Left Upper Tibia Force Z  
Passenger Left Lower Tibia Moment X  
Passenger Left Lower Tibia Moment Y  
Passenger Left Lower Tibia Force Z  
Passenger Right Upper Tibia Moment X  
Passenger Right Upper Tibia Moment Y  
Passenger Right Upper Tibia Force Z  
Passenger Right Lower Tibia Moment X  
Passenger Right Lower Tibia Moment Y  
Passenger Right Lower Tibia Force Z  
Passenger Left Foot Fore Z  
Passenger Left Foot Aft X  
Passenger Left Foot Aft Z  
Passenger Right Foot Fore Z  
Passenger Right Foot Aft X  
Passenger Right Foot Aft Z  
Passenger Shoulder Belt Force  
Passenger Lap Belt Force  
Left Rear Seat Crossmember X  
Left Rear Seat Crossmember Z  
Right Rear Seat Crossmember X  
Right Rear Seat Crossmember Z  
Left Rear Seat Crossmember X Redundant  
Right Rear Seat Crossmember X Redundant  
Vehicle Engine Top X  
Vehicle Engine Bottom X  
Load Cell Barrier Forces and Moments

# NHTSA

Test Lab: CTF

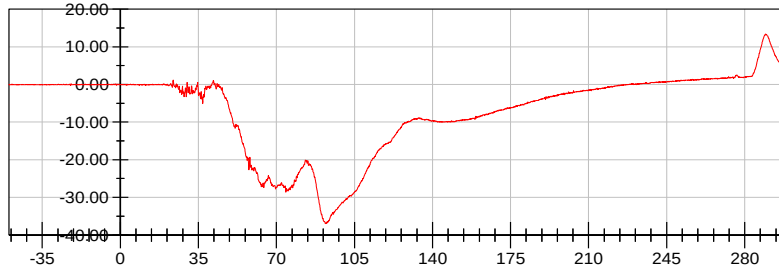
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Driver Head X Acceleration vs. Time Primary (g) vs. Time [ms]



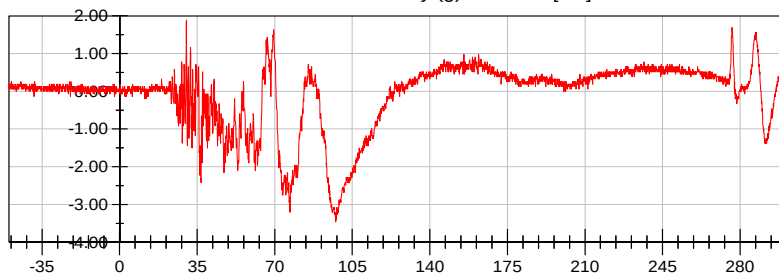
<Max>

13.42 g at 289.36 ms

<Min>

-36.97 g at 92.00 ms

Driver Head Y Acceleration vs. Time Primary (g) vs. Time [ms]



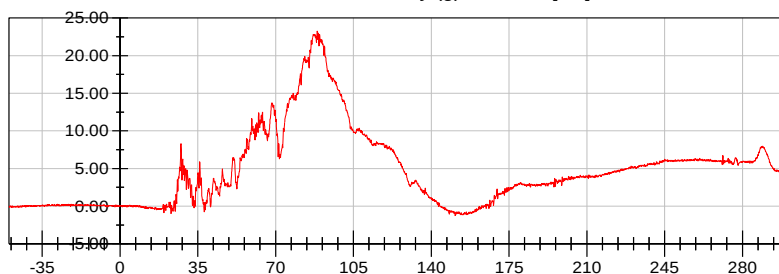
<Max>

1.89 g at 30.16 ms

<Min>

-3.47 g at 97.52 ms

Driver Head Z Acceleration vs. Time Primary (g) vs. Time [ms]



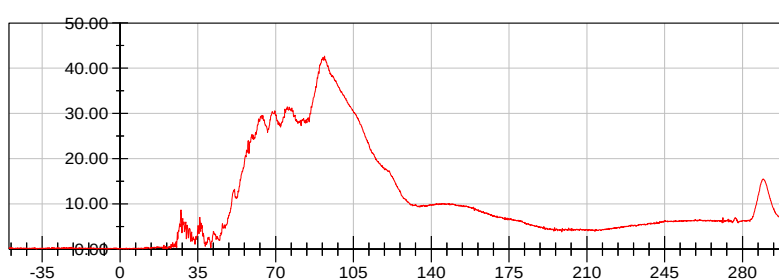
<Max>

23.28 g at 88.72 ms

<Min>

-1.26 g at 150.80 ms

Driver Head Resultant Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

42.67 g at 92.00 ms

<Min>

0.04 g at 1.76 ms





# NHTSA

Test Lab: CTF

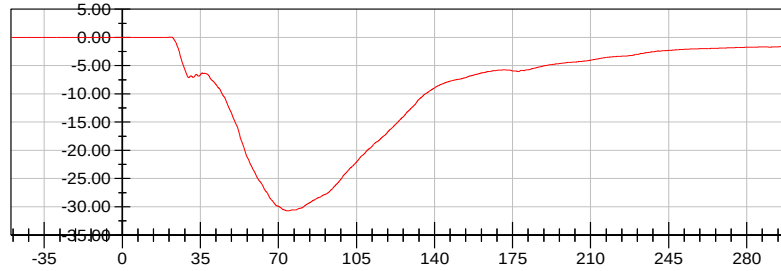
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Driver Chest X Deflection vs. Time (mm) vs. Time [ms]



<Max>

0.04 mm at 21.92 ms

<Min>

-30.71 mm at 73.76 ms

CFC\_600



# NHTSA

Test Lab: CTF

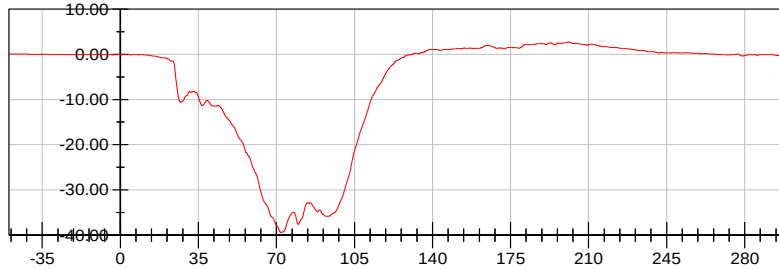
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Driver Chest X Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

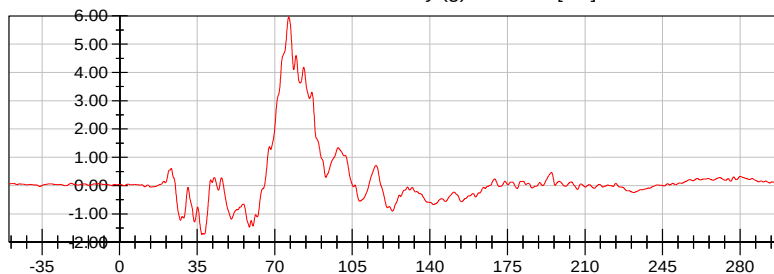
2.74 g at 200.88 ms

<Min>

-39.43 g at 71.92 ms

CFC\_180

Driver Chest Y Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

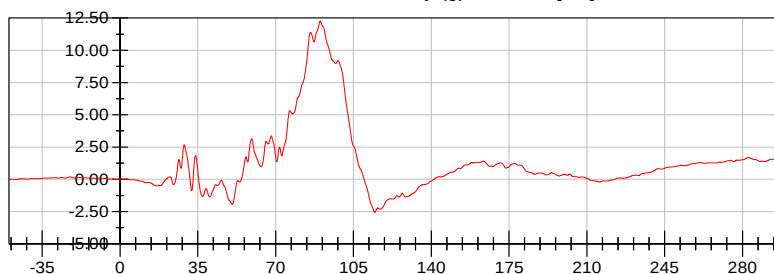
5.97 g at 76.32 ms

<Min>

-1.73 g at 37.12 ms

CFC\_180

Driver Chest Z Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

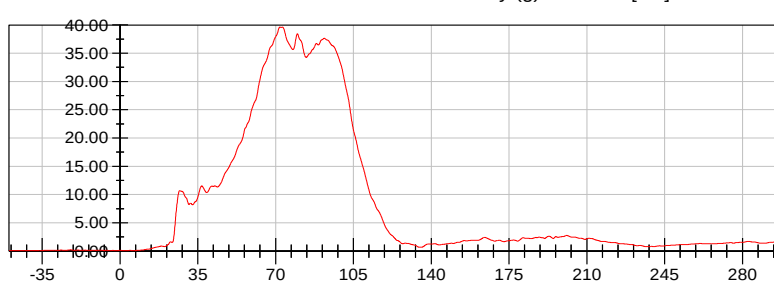
12.27 g at 90.08 ms

<Min>

-2.56 g at 114.64 ms

CFC\_180

Driver Chest Resultant Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

39.64 g at 71.92 ms

<Min>

0.05 g at -36.16 ms

CFC\_180



# NHTSA

Test Lab: CTF

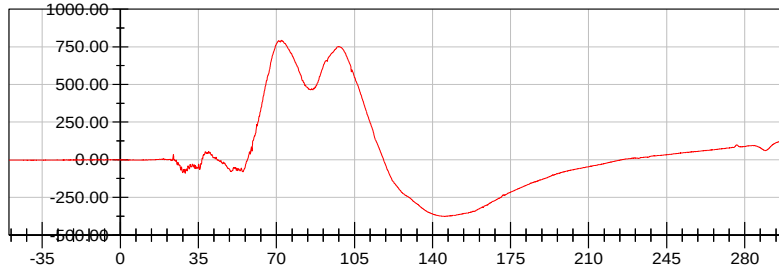
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Driver Upper Neck Force X vs. Time (N) vs. Time [ms]



<Max>

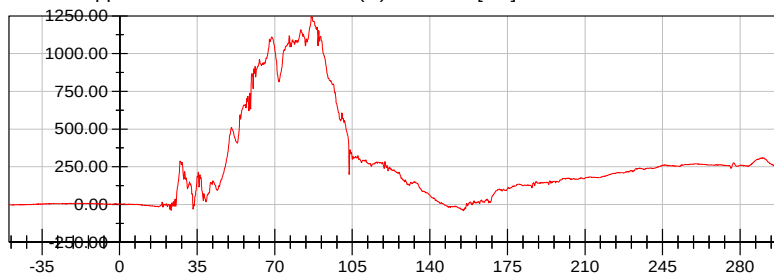
793.89 N at 72.16 ms

<Min>

-376.67 N at 145.44 ms

CFC\_1000

Driver Upper Neck Force Z vs. Time (N) vs. Time [ms]



<Max>

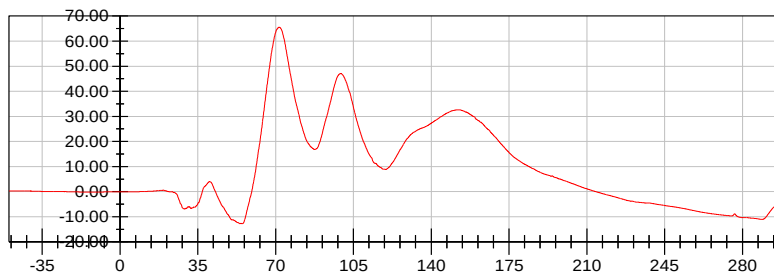
1,246.75 N at 86.48 ms

<Min>

-42.86 N at 155.20 ms

CFC\_1000

Driver Upper Neck Moment Y vs. Time (Nm) vs. Time [ms]



<Max>

65.56 Nm at 71.52 ms

<Min>

-12.78 Nm at 55.04 ms

CFC\_600







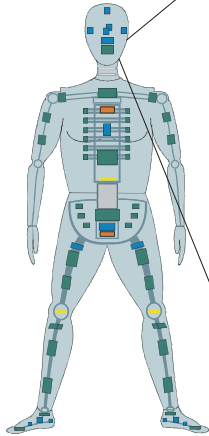
# 2016 Chrysler 300 NCAP 35 mph Frontal Impact Neck Injury Predictor (NIJ)

Date: 11/23/2015  
Time: 15:30

Customer: NHTSA

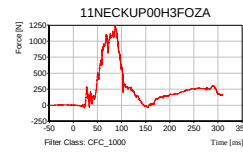
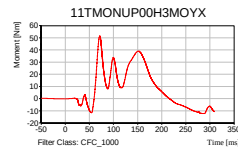
Test Number: M20160300

Test Orientation = Frontal  
Fzc(Tension) = 6806  
Fzc(Compression) = 6160  
Myc(Extension) = 135  
Myc(Flexion) = 310

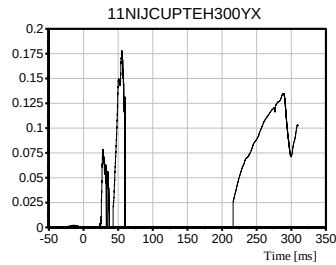


Dummy: HIII 50th Male  
Seating Position:  
Driver

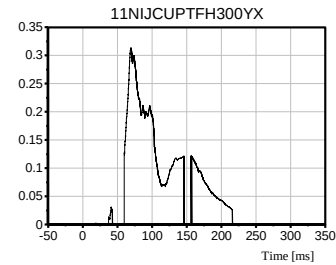
NIJ Source Code: (Fz/Fzc)+(Myl/Myc)



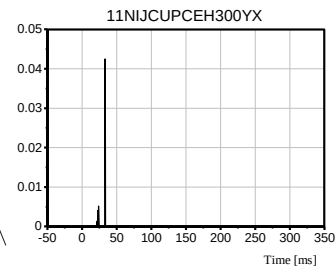
TRC Inc. Test Lab: CTF  
Test Number: 151123



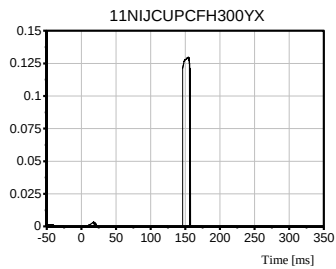
Max [NTE] 0.1779 at 55.60 ms



Max [NTF] 0.3137 at 69.44 ms



Max [NCE] 0.0425 at 33.28 ms



Max [NCF] 0.1297 at 154.08 ms

# NHTSA

Test Lab: CTF

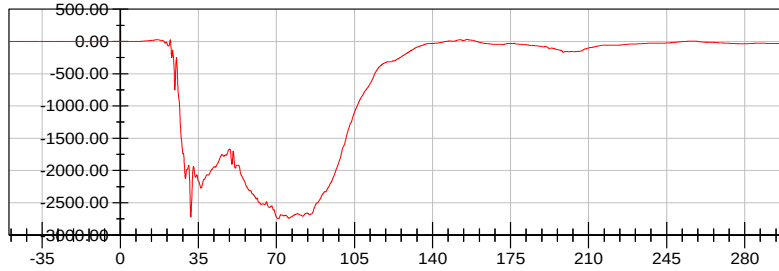
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Driver Left Femur Force vs. Time (N) vs. Time [ms]



<Max>

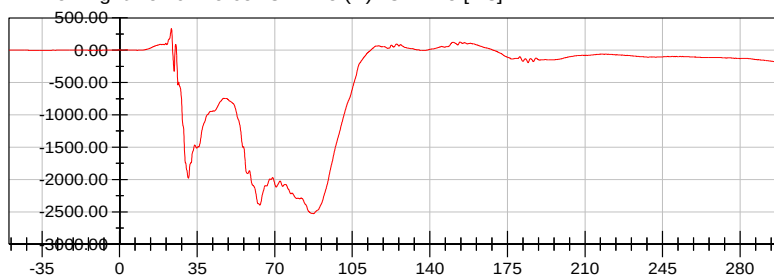
32.39 N at 155.28 ms

<Min>

-2,746.73 N at 70.88 ms

CFC\_600

Driver Right Femur Force vs. Time (N) vs. Time [ms]



<Max>

333.68 N at 23.36 ms

<Min>

-2,527.25 N at 87.36 ms

CFC\_600



# NHTSA

Test Lab: CTF

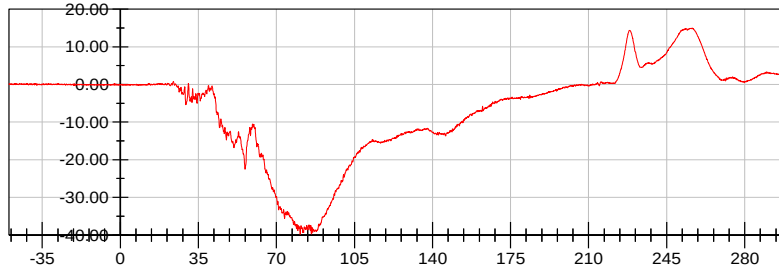
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Passenger Head X Acceleration vs. Time Primary (g) vs. Time [ms]



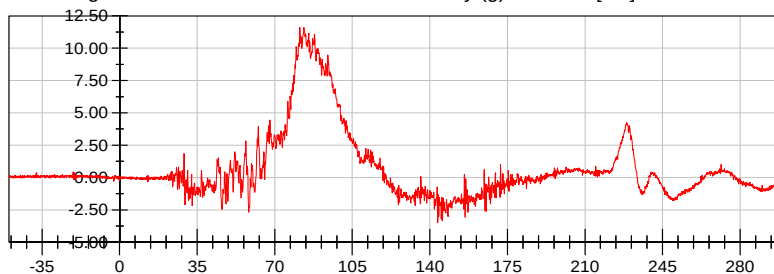
<Max>

15.02 g at 256.48 ms

<Min>

-39.83 g at 80.64 ms

Passenger Head Y Acceleration vs. Time Primary (g) vs. Time [ms]



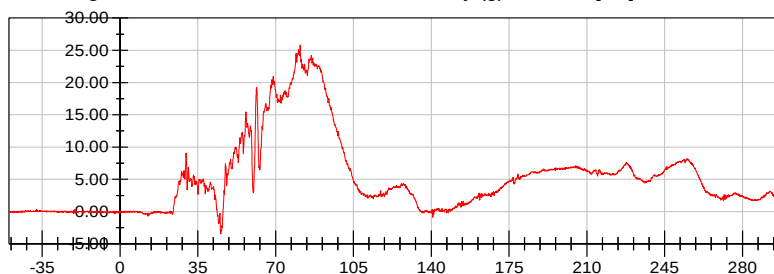
<Max>

11.61 g at 81.28 ms

<Min>

-3.47 g at 143.52 ms

Passenger Head Z Acceleration vs. Time Primary (g) vs. Time [ms]



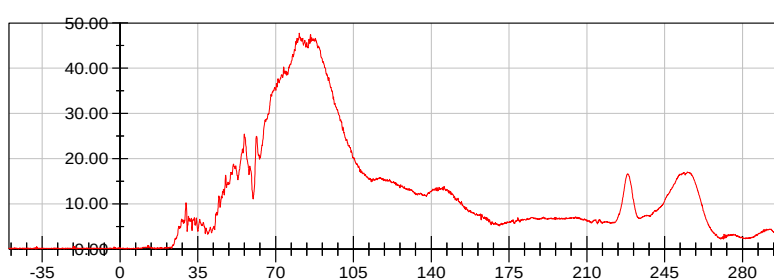
<Max>

25.82 g at 81.04 ms

<Min>

-3.46 g at 45.36 ms

Passenger Head Resultant Acceleration vs. Time Primary (g) vs. Time [ms]



<Max>

47.75 g at 80.64 ms

<Min>

0.04 g at -48.88 ms





# NHTSA

Test Lab: CTF

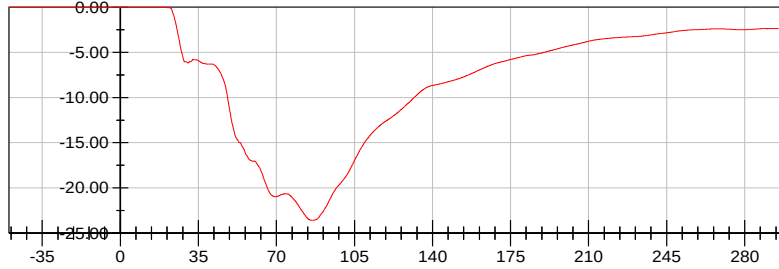
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Passenger Chest X Deflection vs. Time (mm) vs. Time [ms]



<Max>

0.00 mm at -30.88 ms

<Min>

-23.59 mm at 86.16 ms

CFC\_600



# NHTSA

Test Lab: CTF

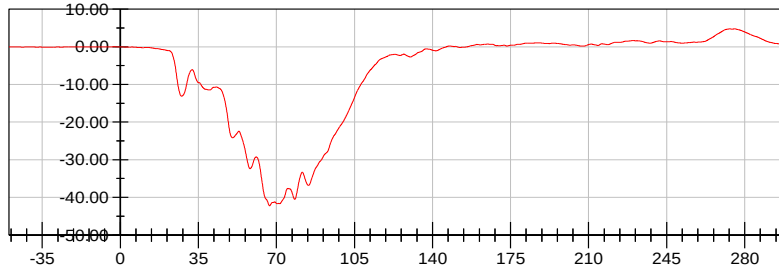
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

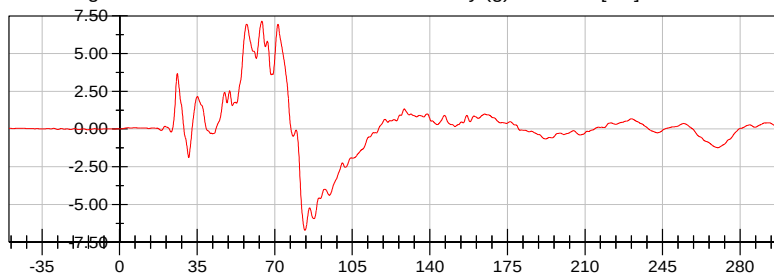
Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

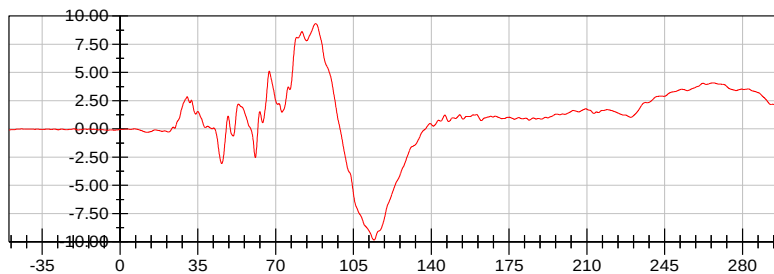
Passenger Chest X Acceleration vs. Time Primary (g) vs. Time [ms]



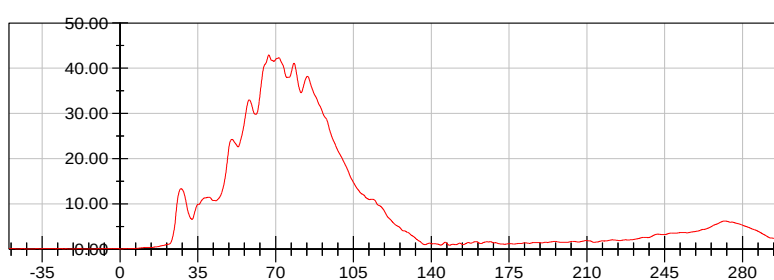
Passenger Chest Y Acceleration vs. Time Primary (g) vs. Time [ms]



Passenger Chest Z Acceleration vs. Time Primary (g) vs. Time [ms]



Passenger Chest Resultant Acceleration vs. Time Primary (g) vs. Time [ms]



# NHTSA

Test Lab: CTF

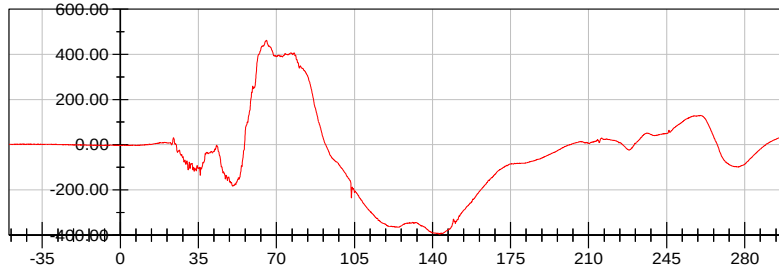
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Passenger Upper Neck Force X vs. Time (N) vs. Time [ms]



**<Max>**

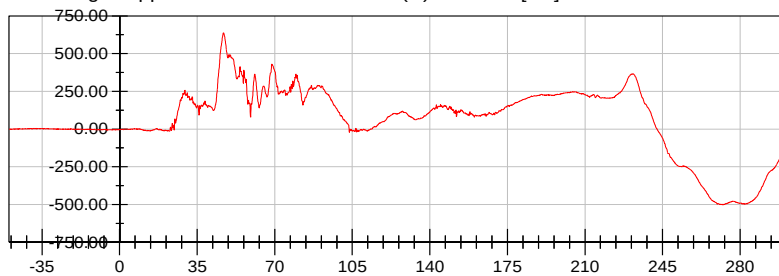
462.28 N at 65.52 ms

**<Min>**

-396.42 N at 143.28 ms

CFC\_1000

Passenger Upper Neck Force Z vs. Time (N) vs. Time [ms]



**<Max>**

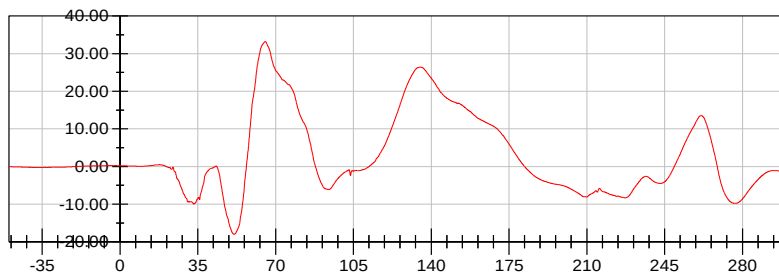
637.42 N at 46.88 ms

**<Min>**

-501.55 N at 271.92 ms

CFC\_1000

Passenger Upper Neck Moment Y vs. Time (Nm) vs. Time [ms]



**<Max>**

33.19 Nm at 65.36 ms

**<Min>**

-17.99 Nm at 51.28 ms

CFC\_600







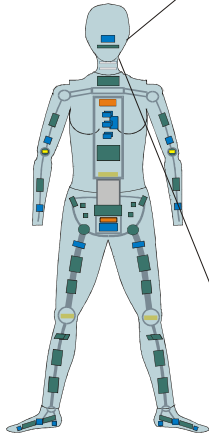
# 2016 Chrysler 300 NCAP 35 mph Frontal Impact Neck Injury Predictor (NIJ)

Date: 11/23/2015  
Time: 15:30

Customer: NHTSA

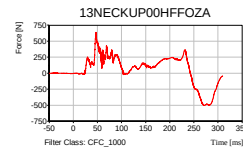
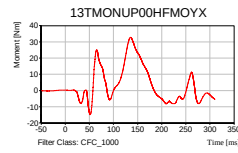
Test Number: M20160300

Test Orientation = Frontal  
Fzc(Tension) = 4287  
Fzc(Compression) = 3880  
Myc(Extension) = 67  
Myc(Flexion) = 155

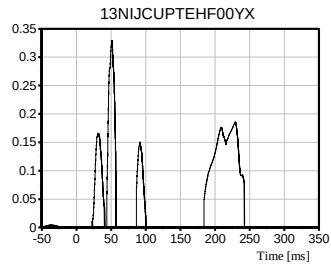


Dummy: HIII 5th Female  
Seating Position:  
Right Front Passenger

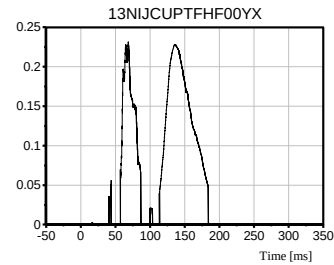
NIJ Source Code: (Fz/Fzc)+(Myl/Myc)



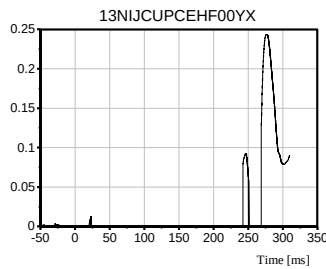
TRC Inc. Test Lab: CTF  
Test Number: 151123



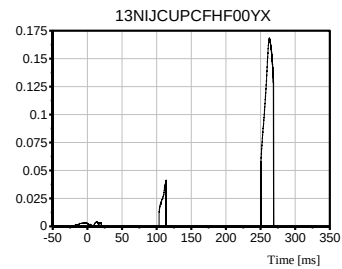
Max [NTE] 0.3294 at 51.20 ms



Max [NTF] 0.2314 at 68.72 ms



Max [NCE] 0.2435 at 276.08 ms



Max [NCF] 0.1686 at 262.80 ms

# NHTSA

Test Lab: CTF

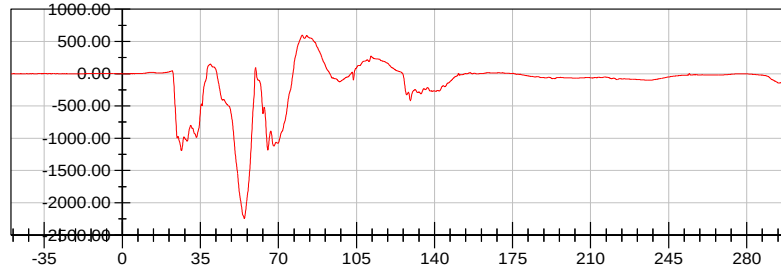
Test Number: 151123 (M20160300)

Test Date: 11/23/2015

Position #1 Hybrid III Mid-Sized Adult Male Dummy (037)

Position #2 Hybrid III Small Adult Female (426)

Passenger Left Femur Force vs. Time (N) vs. Time [ms]



**<Max>**

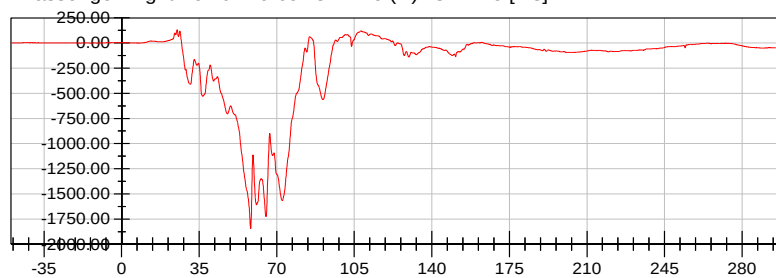
597.84 N at 80.64 ms

**<Min>**

-2,242.81 N at 54.72 ms

CFC\_600

Passenger Right Femur Force vs. Time (N) vs. Time [ms]



**<Max>**

132.92 N at 25.04 ms

**<Min>**

-1,843.99 N at 58.24 ms

CFC\_600



**APPENDIX C**  
**DUMMY CALIBRATION AND PERFORMANCE VERIFICATION**



**Pre-Test Calibration Sheets**

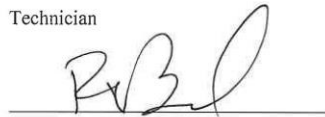
**Driver S/N 037**

**Transportation Research Center Inc.**  
**572E HIII 50th Male Dummy**  
**External Dimensions**  
**Serial No. 037**  
**Calibration No. 30**

| Symbol | Description                      | Specification  | Results | Pass |
|--------|----------------------------------|----------------|---------|------|
|        |                                  | mm             | mm      |      |
| A      | Total Sitting Height             | 878.8 - 889.0  | 884     | Yes  |
| B      | Shoulder Pivot Height            | 505.5 - 520.7  | 519     | Yes  |
| C      | H-Point Height                   | 83.8 - 88.9    | 86      | Yes  |
| D      | H-Point From Seatback            | 134.6 - 139.7  | 138     | Yes  |
| E      | Shoulder Pivot From Backline     | 83.8 - 94.0    | 93      | Yes  |
| F      | Thigh Clearance                  | 139.7 - 154.9  | 151     | Yes  |
| G      | Back Of Elbow To Wrist Pivot     | 289.6 - 304.8  | 297     | Yes  |
| H      | Skull Cap To Backline            | 40.6 - 45.7    | 45      | Yes  |
| I      | Shoulder-Elbow Length            | 330.2 - 345.4  | 340     | Yes  |
| J      | Elbow Rest Height                | 190.5 - 210.8  | 201     | Yes  |
| K      | Buttock Knee Length              | 579.1 - 604.5  | 599     | Yes  |
| L      | Popliteal Height                 | 429.3 - 454.7  | 440     | Yes  |
| M      | Knee Pivot Height                | 485.1 - 500.4  | 495     | Yes  |
| N      | Buttock Popliteal Length         | 452.1 - 477.5  | 470     | Yes  |
| O      | Chest Depth                      | 213.4 - 228.6  | 224     | Yes  |
| P      | Foot Length                      | 251.5 - 266.7  | 264     | Yes  |
| V      | Shoulder Breadth                 | 421.6 - 436.9  | 429     | Yes  |
| W      | Foot Breadth                     | 91.4 - 106.7   | 97      | Yes  |
| Y      | Chest Circumference              | 970.3 - 1000.8 | 990     | Yes  |
| Z      | Waist Circumference              | 835.7 - 866.1  | 865     | Yes  |
| AA     | Location For Chest Circumference | 429.3 - 434.3  | 430     | Yes  |
| BB     | Location For Waist Circumference | 226.1 - 231.1  | 230     | Yes  |

Comments:

Technician



Approved




Revised 8/10/12

## Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 037 Certification No. 30-1

Test Date: 10/30/2015

| Test Parameter                                        | Specification  | Test Results | Pass |
|-------------------------------------------------------|----------------|--------------|------|
| Temperature                                           | 18.9 - 25.5 °C | 21.5 °C      | Yes  |
| Relative Humidity                                     | 10 - 70 %      | 39 %         | Yes  |
| Peak Head Resultant Acceleration                      | 225 - 275 g    | 250.9 g      | Yes  |
| Peak Head Lateral Acceleration                        | (-15) - 15 g   | 7.6 g        | Yes  |
| Is Acceleration Curve Unimodal<br>within 10% of Peak? | Yes            | Yes          | Yes  |

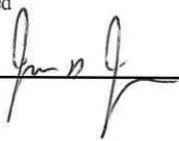
**Test meets specifications.**

**Comments:**

Technician



Approved



Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 10:23:34 612



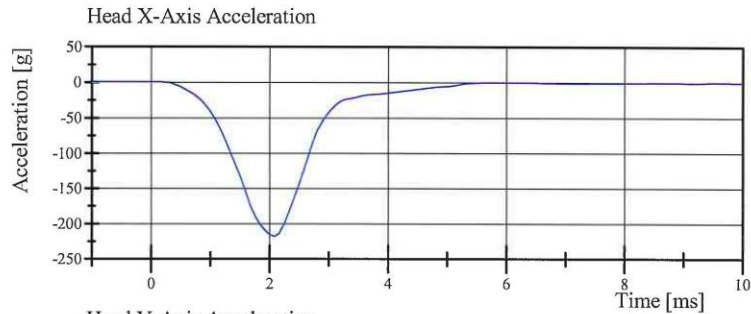


## Transportation Research Center Inc.

### Front Head Drop

HIII 50th Serial No. 037 Certification No. 30-1

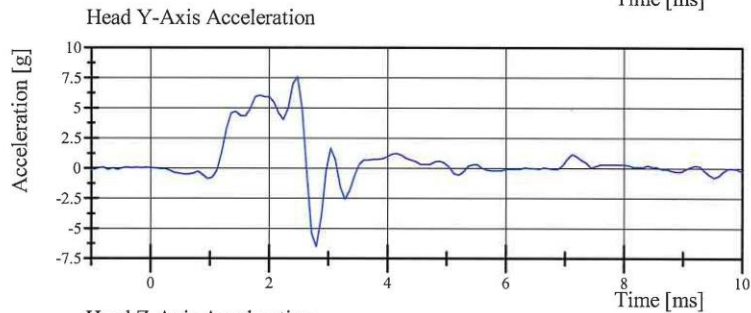
Test Date: 10/30/2015



Filter Class: CFC\_1000

Max: 0.2 g at 9.5 ms

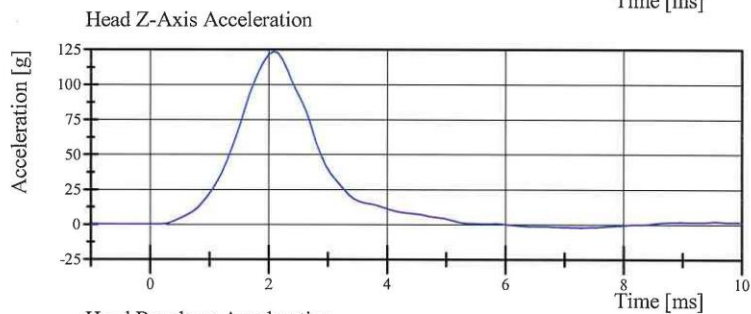
Min: -218.3 g at 2.1 ms



Filter Class: CFC\_1000

Max: 7.6 g at 2.5 ms

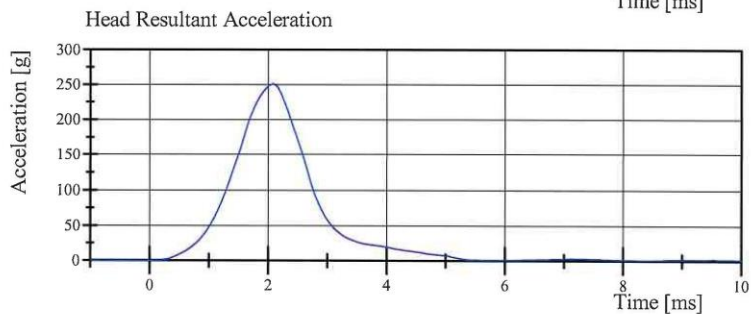
Min: -6.5 g at 2.8 ms



Filter Class: CFC\_1000

Max: 123.4 g at 2.1 ms

Min: -2.4 g at 7.3 ms



Filter Class: CFC\_1000

Max: 250.9 g at 2.1 ms

Min: 0.0 g at -0.5 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 10:23:42 612



## Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 037 Certification No. 30-1

Test Date: 10/30/2015

| Test Parameter                                      | Specification       | Test Results | Pass |
|-----------------------------------------------------|---------------------|--------------|------|
| Temperature                                         | 20.6 - 22.2 °C      | 21.8 °C      | Yes  |
| Relative Humidity                                   | 10 - 70 %           | 38 %         | Yes  |
| Pendulum Velocity                                   | 6.89 - 7.13 m/s     | 6.941 m/s    | Yes  |
| Pendulum Acceleration Decay Crossing -5g            | 34 - 42 ms          | 41.7 ms      | Yes  |
| Pendulum Acceleration at 10ms                       | (-22.5) - (-27.5) g | -23.64 g     | Yes  |
| Pendulum Acceleration at 20ms                       | (-17.6) - (-22.6) g | -20.53 g     | Yes  |
| Pendulum Acceleration at 30ms                       | (-12.5) - (-18.5) g | -14.34 g     | Yes  |
| Pendulum Acceleration > 30ms                        | >= (-29.0) g        | -14.34 g     | Yes  |
| Total Head D-Plane Rotation                         |                     |              |      |
| Peak                                                | (-64) - (-78) °     | -66.6 °      | Yes  |
| Time of Peak                                        | 57 - 64 ms          | 60.6 ms      | Yes  |
| Total Head D-Plane Rotation Decay to 0°             | 113 - 128 ms        | 121.8 ms     | Yes  |
| Total Neck Occipital Condyles Moment                |                     |              |      |
| Peak                                                | 88 - 108 N·m        | 100.2 N·m    | Yes  |
| Time of Peak                                        | 47 - 58 ms          | 54.4 ms      | Yes  |
| Total Neck Occipital Condyles Moment Decay to 0 N·m | 97 - 107 ms         | 101.9 ms     | Yes  |

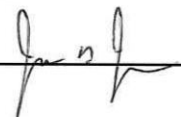
Test meets specifications.

Comments:

Technician



Approved



Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 10:45:01 2946

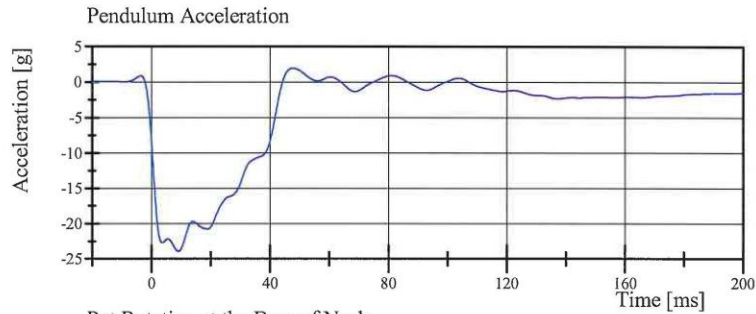


## Transportation Research Center Inc.

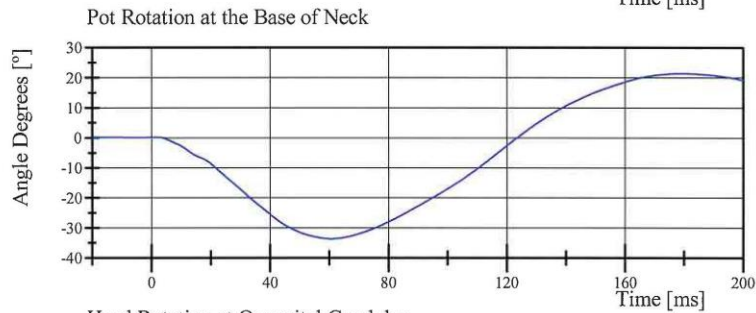
### Neck Flexion

HIII 50th Serial No. 037 Certification No. 30-1

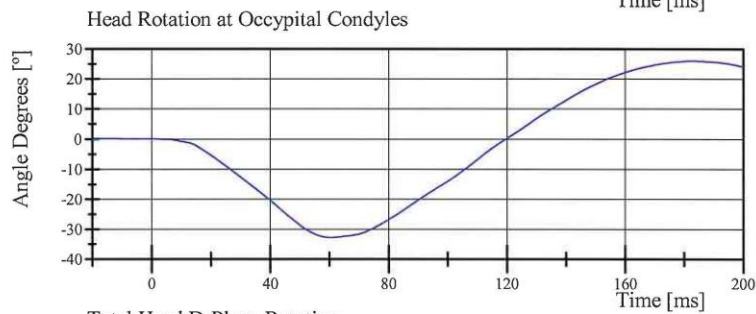
Test Date: 10/30/2015



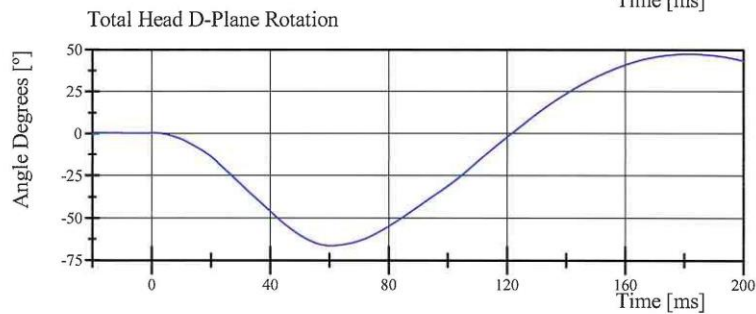
Filter Class: CFC\_60  
Max: 1.9 g at 47.7 ms  
Min: -24.0 g at 9.0 ms



Filter Class: CFC\_60  
Max: 21.4 ° at 178.9 ms  
Min: -33.7 ° at 60.6 ms



Filter Class: CFC\_60  
Max: 26.0 ° at 182.8 ms  
Min: -32.8 ° at 60.5 ms



Filter Class: CFC\_60  
Max: 47.4 ° at 181.7 ms  
Min: -66.6 ° at 60.6 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 10:45:08 2946

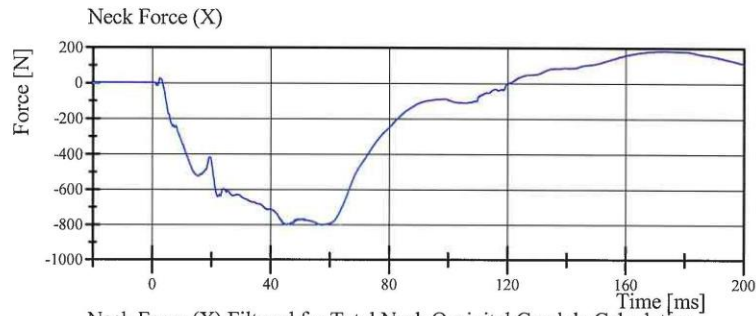


## Transportation Research Center Inc.

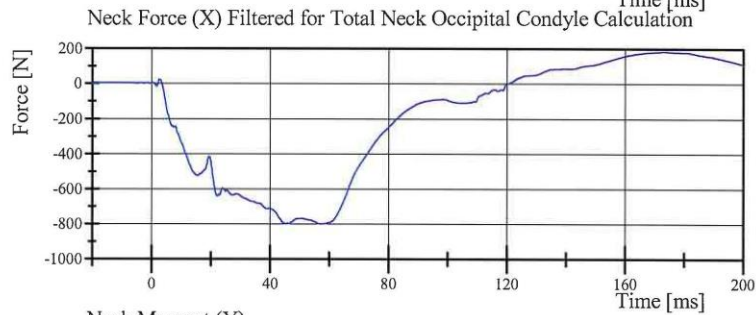
### Neck Flexion

HIII 50th Serial No. 037 Certification No. 30-1

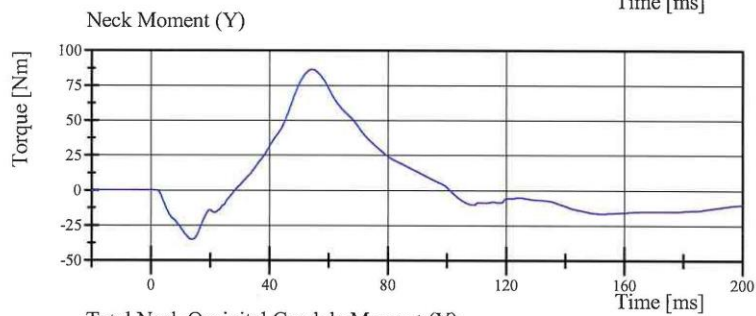
Test Date: 10/30/2015



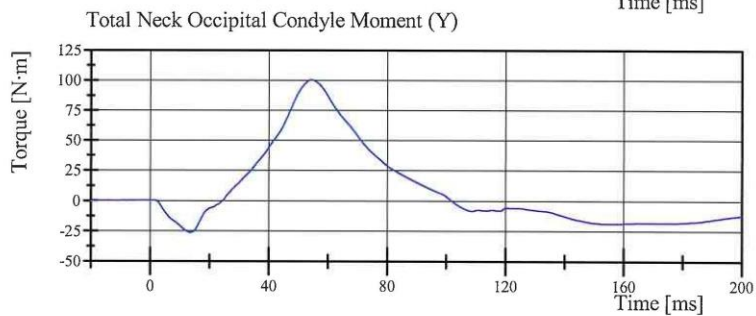
Filter Class: CFC\_1000  
Max: 184.2 N at 173.0 ms  
Min: -803.1 N at 57.0 ms



Filter Class: CFC\_600  
Max: 183.8 N at 172.8 ms  
Min: -802.7 N at 57.1 ms



Filter Class: CFC\_600  
Max: 86.3 Nm at 54.3 ms  
Min: -35.4 Nm at 13.8 ms



Filter Class: Without\_(Consta  
Max: 100.2 N·m at 54.4 ms  
Min: -26.6 N·m at 13.7 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 10:45:09 2946





## Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 037 Certification No. 30-3

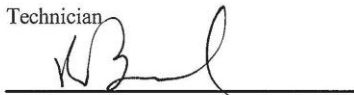
Test Date: 10/30/2015

| Test Parameter                                         | Specification         | Test Results | Pass |
|--------------------------------------------------------|-----------------------|--------------|------|
| Temperature                                            | 20.6 - 22.2 °C        | 21.8 °C      | Yes  |
| Relative Humidity                                      | 10 - 70 %             | 36 %         | Yes  |
| Pendulum Velocity                                      | (-5.95) - (-6.18) m/s | -5.995 m/s   | Yes  |
| Pendulum Acceleration Decay<br>Crossing 5g             | 38 - 46 ms            | 40.7 ms      | Yes  |
| Pendulum Acceleration at 10ms                          | 17.2 - 21.2 g         | 20.65 g      | Yes  |
| Pendulum Acceleration at 20ms                          | 14.0 - 19.0 g         | 16.75 g      | Yes  |
| Pendulum Acceleration at 30ms                          | 11.0 - 16.0 g         | 14.36 g      | Yes  |
| Pendulum Acceleration > 30ms                           | <= 22.0 g             | 14.36 g      | Yes  |
| Total Head D-Plane Rotation<br>Peak                    | 81 - 106 °            | 93.2 °       | Yes  |
| Time of Peak                                           | 72 - 82 ms            | 77.8 ms      | Yes  |
| Total Head D-Plane Rotation<br>Decay to 0°             | 147 - 174 ms          | 158.2 ms     | Yes  |
| Total Neck Occipital Condyles Moment<br>Peak           | (-53) - (-80) N·m     | -77.9 N·m    | Yes  |
| Time of Peak                                           | 65 - 79 ms            | 72.6 ms      | Yes  |
| Total Neck Occipital Condyles Moment<br>Decay to 0 N·m | 120 - 148 ms          | 145.4 ms     | Yes  |

Test meets specifications.

Comments:

Technician



Approved



Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 15:45:16 3014

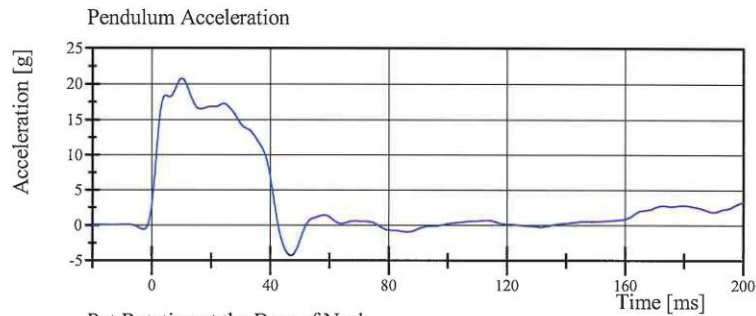


## Transportation Research Center Inc.

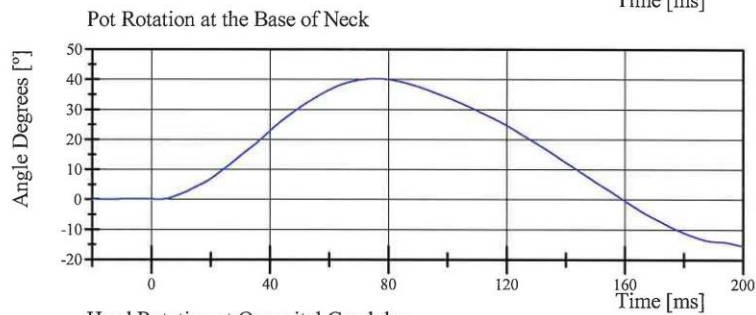
### Neck Extension

HIII 50th Serial No. 037 Certification No. 30-3

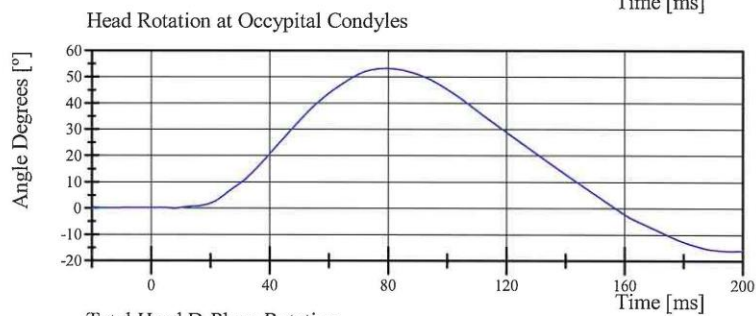
Test Date: 10/30/2015



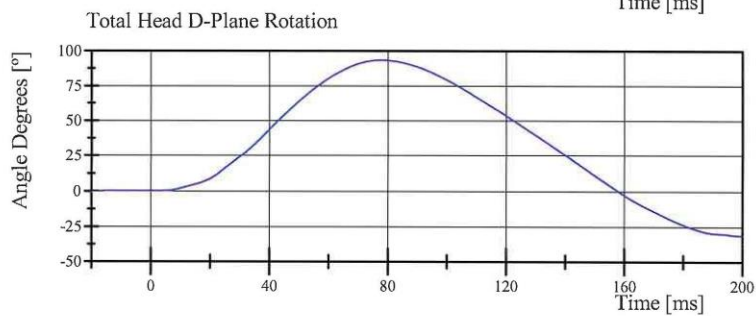
Filter Class: CFC\_60  
Max: 20.7 g at 10.2 ms  
Min: -4.3 g at 47.0 ms



Filter Class: CFC\_60  
Max: 40.2 ° at 76.0 ms  
Min: -15.3 ° at 200.0 ms



Filter Class: CFC\_60  
Max: 53.1 ° at 79.2 ms  
Min: -16.1 ° at 196.4 ms



Filter Class: CFC\_60  
Max: 93.2 ° at 77.8 ms  
Min: -31.3 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 15:45:25 3014

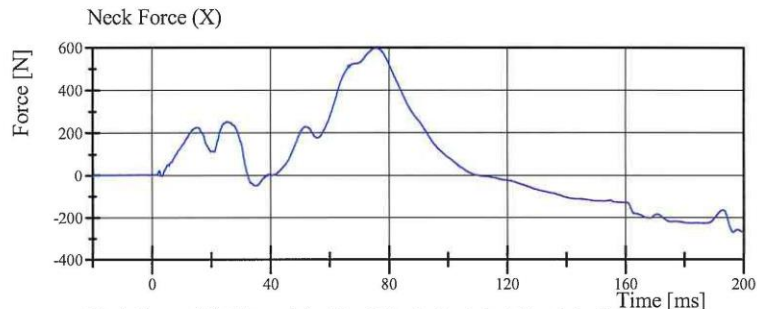


## Transportation Research Center Inc.

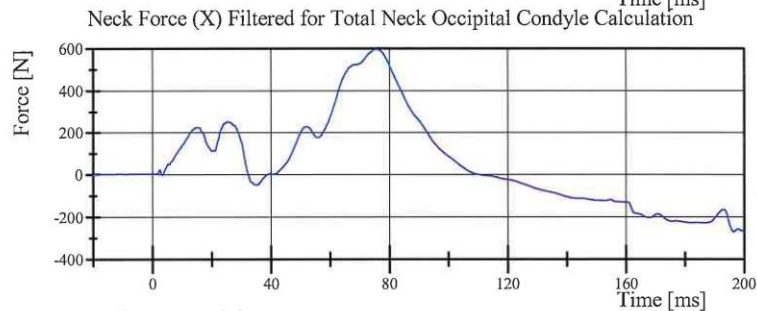
Neck Extension

HIII 50th Serial No. 037 Certification No. 30-3

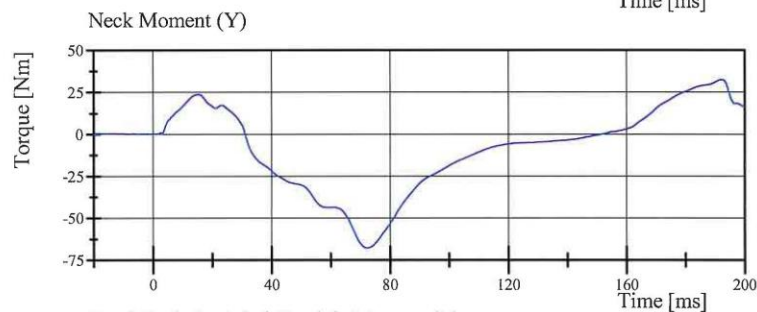
Test Date: 10/30/2015



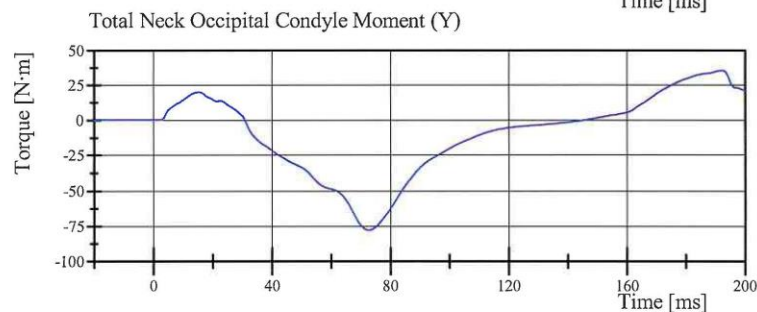
Filter Class: CFC\_1000  
Max: 596.3 N at 75.2 ms  
Min: -271.6 N at 200.0 ms



Filter Class: CFC\_600  
Max: 595.9 N at 75.3 ms  
Min: -271.7 N at 200.0 ms



Filter Class: CFC\_600  
Max: 32.6 Nm at 192.3 ms  
Min: -68.0 Nm at 72.2 ms



Filter Class: Without\_(Consta  
Max: 35.6 N·m at 192.1 ms  
Min: -77.9 N·m at 72.6 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 15:45:26 3014



## Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 037 Certification No. 30-1

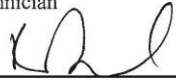
Test Date: 11/2/2015

| Test Parameter            | Specification         | Test Results | Pass |
|---------------------------|-----------------------|--------------|------|
| Temperature               | 20.6 - 22.2 °C        | 21.7 °C      | Yes  |
| Relative Humidity         | 10 - 70 %             | 38 %         | Yes  |
| Probe Velocity            | 6.59 - 6.83 m/s       | 6.722 m/s    | Yes  |
| Probe Force Peak          | (-5,160) - (-5,893) N | -5,534.8 N   | Yes  |
| Maximum Chest Compression | (-63.5) - (-72.6) mm  | -69.91 mm    | Yes  |
| Internal Hysteresis       | 65 - 85 %             | 72.8 %       | Yes  |

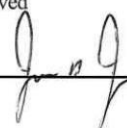
**Test meets specifications.**

**Comments:**

Technician



Approved



Specification Source: CFR49 Part 572 Subpart P  
with Polarity in accordance with J211

11.02.2015 08:08:25 412



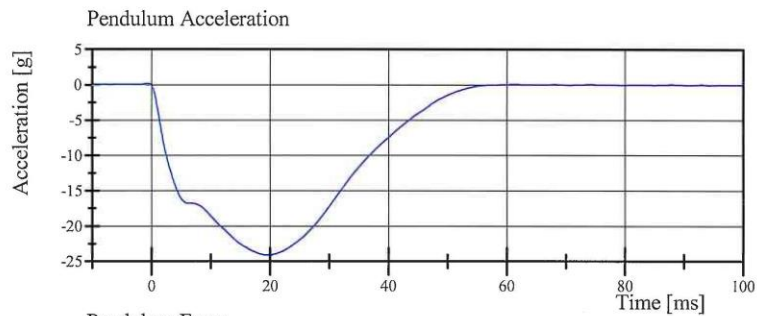


## Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 037 Certification No. 30-1

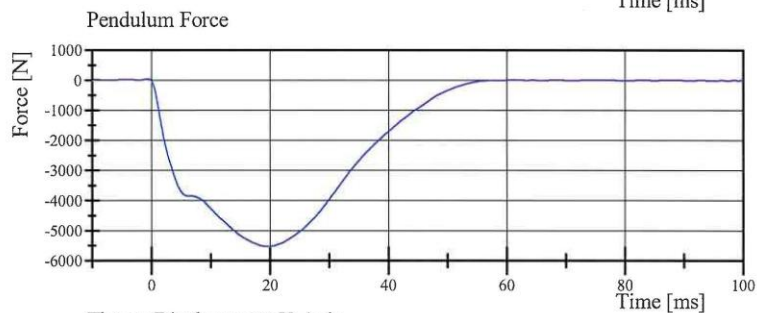
Test Date: 11/2/2015



Filter Class: CFC\_180

Max: 0.1 g at -0.6 ms

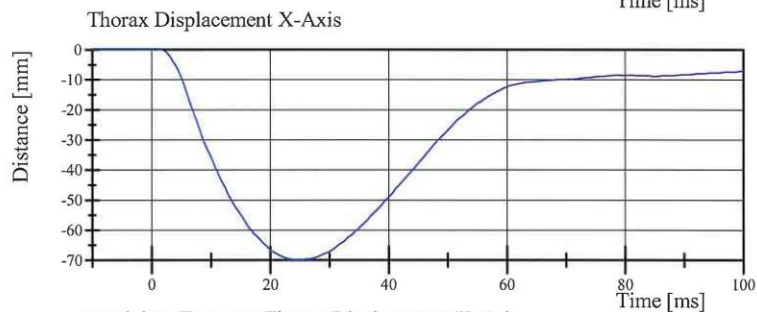
Min: -24.2 g at 19.8 ms



Filter Class: CFC\_180

Max: 25.1 N at -0.6 ms

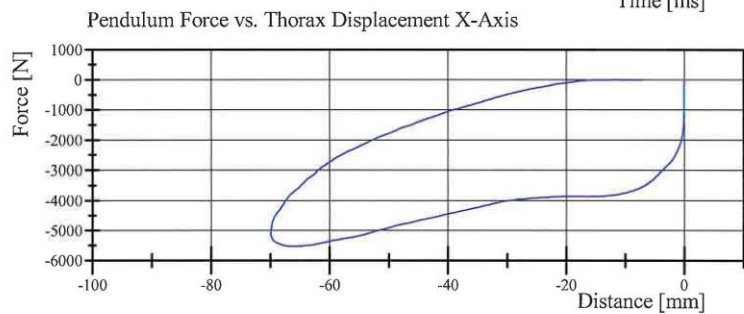
Min: -5,534.8 N at 19.8 ms



Filter Class: CFC\_600

Max: 0.0 mm at -5.0 ms

Min: -69.9 mm at 24.4 ms



Filter Class: CFC\_180

Max: 25.1 N at -0.0 mm

Min: -5,534.8 N at -66.3 mm

Specification Source: CFR49 Part 572 Subpart P  
with Polarity in accordance with J211

11.02.2015 08:08:34 412



## Transportation Research Center Inc.

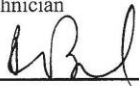
Left Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 30-1  
Test Date: 10/30/2015

| Test Parameter    | Specification             | Test Results | Pass |
|-------------------|---------------------------|--------------|------|
| Temperature       | 18.9 - 25.5 °C            | 21.7 °C      | Yes  |
| Relative Humidity | 10 - 70 %                 | 38 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s           | 2.082 m/s    | Yes  |
| Peak Femur Force  | (-4,715.2) - (-5,782.6) N | -5,597.01 N  | Yes  |

**Test meets specifications.**

**Comments:**

Technician



Approved



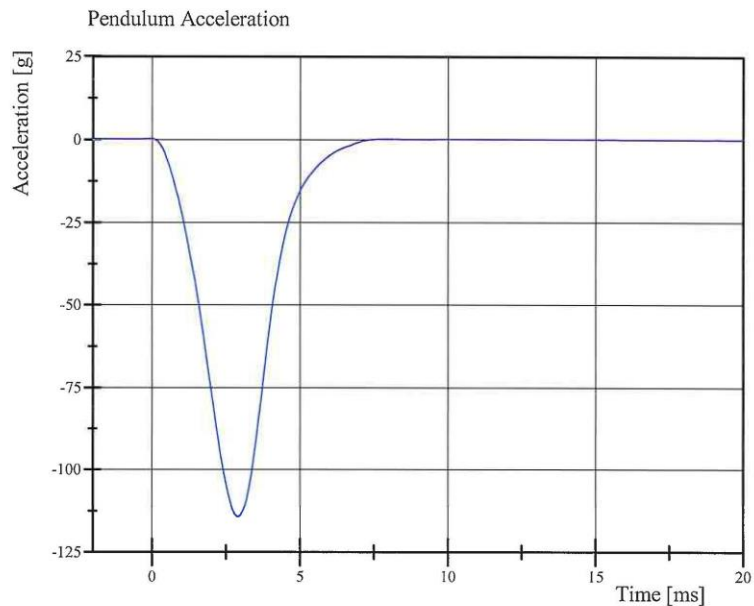
Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 11:35:28 1857

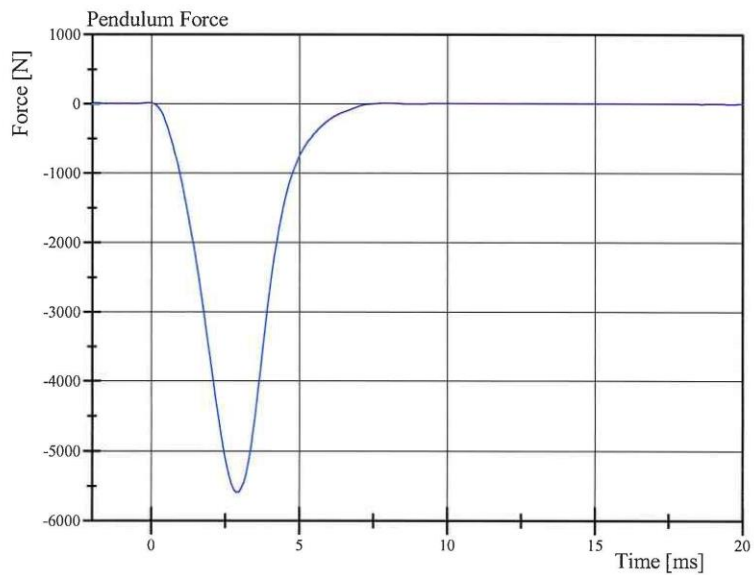


## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 30-1  
Test Date: 10/30/2015



Filter Class: CFC\_600  
Max: 0.1 g at -0.1 ms  
Min: -114.4 g at 2.9 ms



Filter Class: CFC\_600  
Max: 6.9 N at -0.1 ms  
Min: -5,597.0 N at 2.9 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 11:35:36 1857



## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 30-1  
Test Date: 10/30/2015

| Test Parameter    | Specification             | Test Results | Pass |
|-------------------|---------------------------|--------------|------|
| Temperature       | 18.9 - 25.5 °C            | 21.7 °C      | Yes  |
| Relative Humidity | 10 - 70 %                 | 37 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s           | 2.081 m/s    | Yes  |
| Peak Femur Force  | (-4,715.2) - (-5,782.6) N | -5,406.01 N  | Yes  |

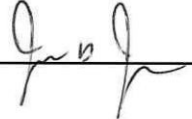
Test meets specifications.

Comments:

Technician



Approved



Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

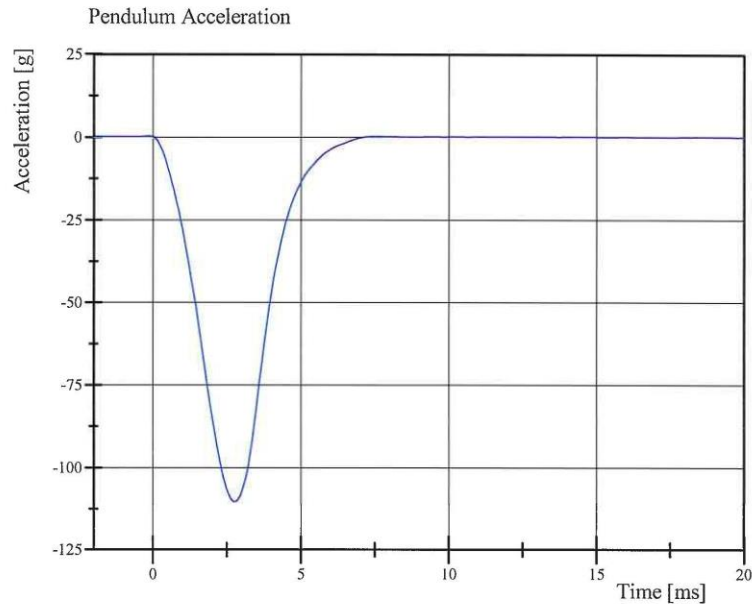
10.30.2015 12:41:32 1858



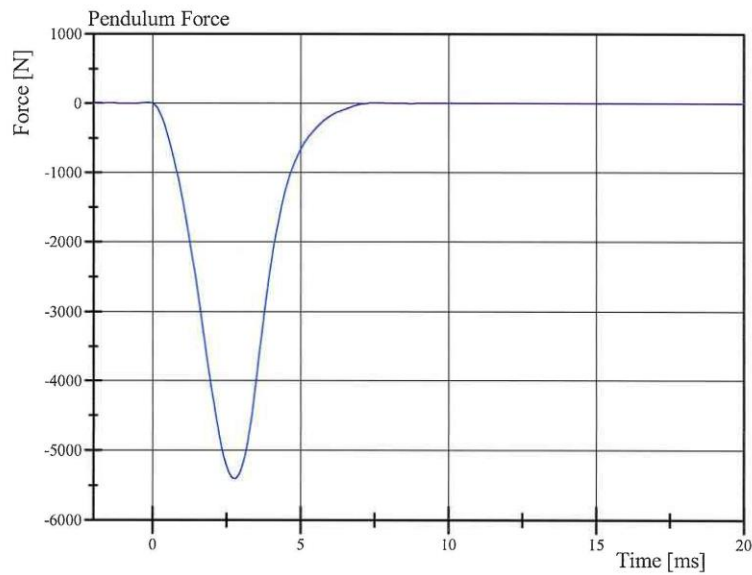


## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 30-1  
Test Date: 10/30/2015



Filter Class: CFC\_600  
Max: 0.2 g at -0.2 ms  
Min: -110.5 g at 2.8 ms



Filter Class: CFC\_600  
Max: 8.8 N at -0.2 ms  
Min: -5,406.0 N at 2.8 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

10.30.2015 12:41:39 1858



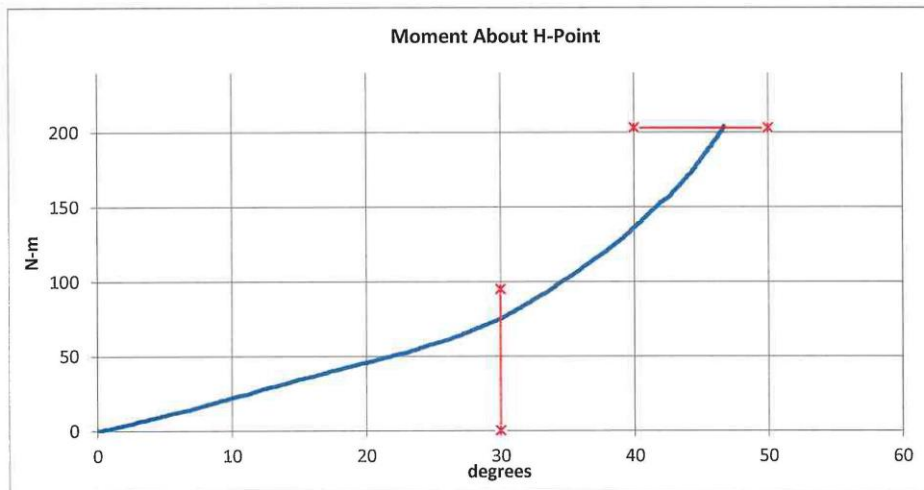
# Transportation Research Center Inc.

Hybrid III 50th Male Hip Range of Motion

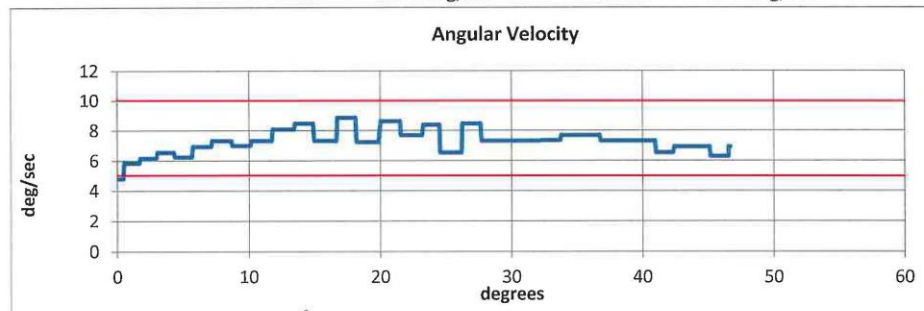


Serial Number: 37 Date: 30-Oct-2015  
 Test Number: 1 Time: 9:27  
 Comments: Left

| TEST PARAMETER   | SPECIFICATION | TEST RESULTS      |
|------------------|---------------|-------------------|
| Temperature      | 18.9 - 25.6   | 21.7 °C Pass      |
| Humidity         | 10 - 70       | 38 % Pass         |
| Moment at 30°    | 0 ≤ 94.9      | 75.35 N-m Pass    |
| Angle at 203 Nm  | 40 - 50       | 46.72 deg Pass    |
| Average Velocity | 5 - 10        | 7.25 deg/sec Pass |



Max: 8.84 deg/sec Min: 4.76 deg/sec



Technician

Approved

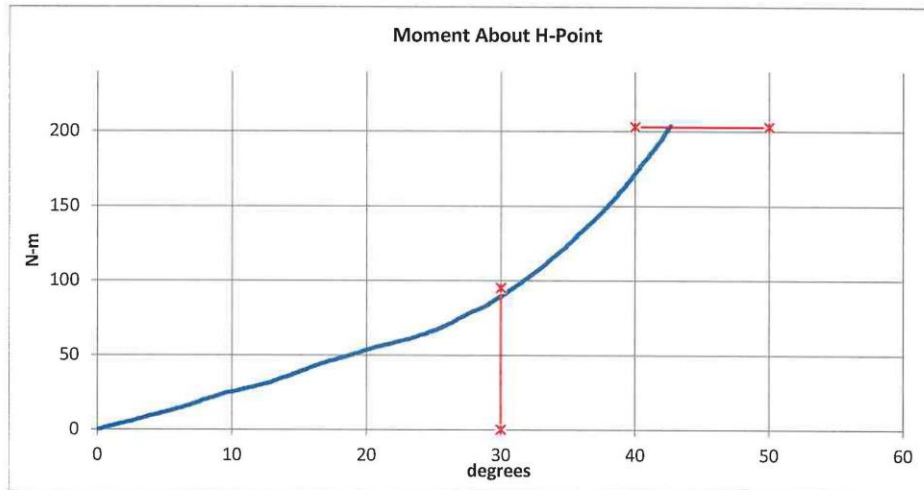
# Transportation Research Center Inc.

Hybrid III 50th Male Hip Range of Motion

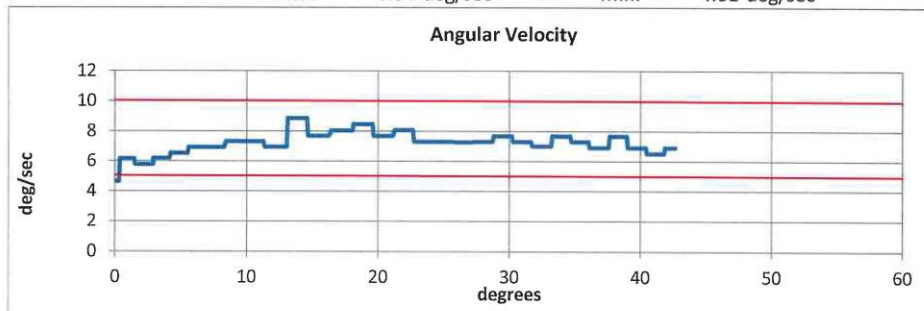


Serial Number: 37 Date: 30-Oct-2015  
 Test Number: 1 Time: 10:36  
 Comments: Right

| TEST PARAMETER   | SPECIFICATION | TEST RESULTS      |
|------------------|---------------|-------------------|
| Temperature      | 18.9 - 25.6   | 21.7 °C Pass      |
| Humidity         | 10 - 70       | 38 % Pass         |
| Moment at 30°    | 0 ≤ 94.9      | 89.7 N-m Pass     |
| Angle at 203 Nm  | 40 - 50       | 42.65 deg Pass    |
| Average Velocity | 5 - 10        | 7.21 deg/sec Pass |



Max: 8.84 deg/sec Min: 4.61 deg/sec



Technician

Approved

**Post-Test Calibration Sheets**

**Driver S/N 037**



**Transportation Research Center Inc.**  
**572E HIII 50th Male Dummy**  
**External Dimensions**  
**Serial No. 037**  
**Calibration No. 31**

| Symbol | Description                      | Specification  | Results | Pass |
|--------|----------------------------------|----------------|---------|------|
|        |                                  | mm             | mm      |      |
| A      | Total Sitting Height             | 878.8 - 889.0  | 884     | Yes  |
| B      | Shoulder Pivot Height            | 505.5 - 520.7  | 519     | Yes  |
| C      | H-Point Height                   | 83.8 - 88.9    | 86      | Yes  |
| D      | H-Point From Seatback            | 134.6 - 139.7  | 138     | Yes  |
| E      | Shoulder Pivot From Backline     | 83.8 - 94.0    | 93      | Yes  |
| F      | Thigh Clearance                  | 139.7 - 154.9  | 151     | Yes  |
| G      | Back Of Elbow To Wrist Pivot     | 289.6 - 304.8  | 297     | Yes  |
| H      | Skull Cap To Backline            | 40.6 - 45.7    | 45      | Yes  |
| I      | Shoulder-Elbow Length            | 330.2 - 345.4  | 340     | Yes  |
| J      | Elbow Rest Height                | 190.5 - 210.8  | 201     | Yes  |
| K      | Buttock Knee Length              | 579.1 - 604.5  | 599     | Yes  |
| L      | Popliteal Height                 | 429.3 - 454.7  | 440     | Yes  |
| M      | Knee Pivot Height                | 485.1 - 500.4  | 495     | Yes  |
| N      | Buttock Popliteal Length         | 452.1 - 477.5  | 470     | Yes  |
| O      | Chest Depth                      | 213.4 - 228.6  | 224     | Yes  |
| P      | Foot Length                      | 251.5 - 266.7  | 264     | Yes  |
| V      | Shoulder Breadth                 | 421.6 - 436.9  | 429     | Yes  |
| W      | Foot Breadth                     | 91.4 - 106.7   | 97      | Yes  |
| Y      | Chest Circumference              | 970.3 - 1000.8 | 990     | Yes  |
| Z      | Waist Circumference              | 835.7 - 866.1  | 865     | Yes  |
| AA     | Location For Chest Circumference | 429.3 - 434.3  | 430     | Yes  |
| BB     | Location For Waist Circumference | 226.1 - 231.1  | 230     | Yes  |

Comments:

Technician

Melissa Schunkel

Approved

[Signature]

Revised 8/10/12



## Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 037 Certification No. 31-1

Test Date: 11/24/2015

| Test Parameter                                        | Specification  | Test Results | Pass |
|-------------------------------------------------------|----------------|--------------|------|
| Temperature                                           | 18.9 - 25.5 °C | 21.2 °C      | Yes  |
| Relative Humidity                                     | 10 - 70 %      | 38 %         | Yes  |
| Peak Head Resultant Acceleration                      | 225 - 275 g    | 250.1 g      | Yes  |
| Peak Head Lateral Acceleration                        | (-15) - 15 g   | -5.4 g       | Yes  |
| Is Acceleration Curve Unimodal<br>within 10% of Peak? | Yes            | Yes          | Yes  |

Test meets specifications.

Comments:

Technician

Melissa Schirker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.24.2015 13:27:28 614

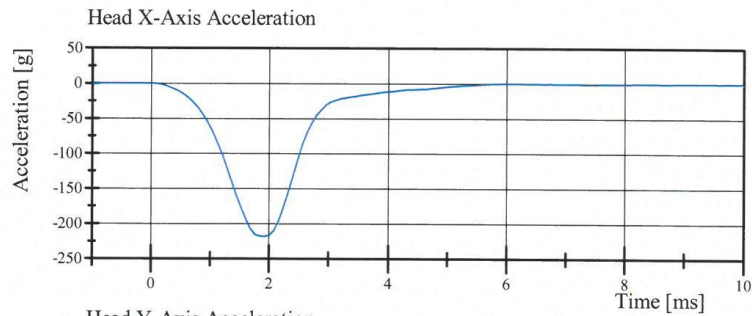


## Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 037 Certification No. 31-1

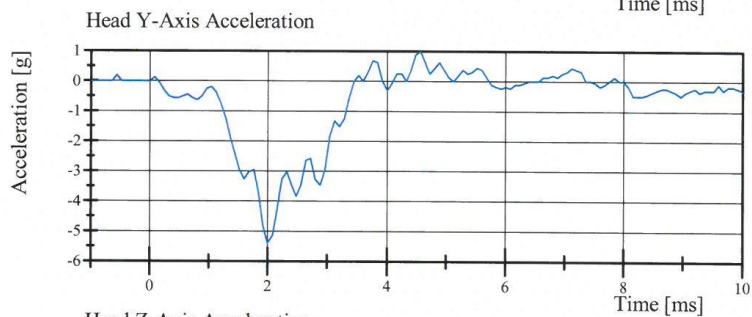
Test Date: 11/24/2015



Filter Class: CFC\_1000

Max: 0.1 g at -0.8 ms

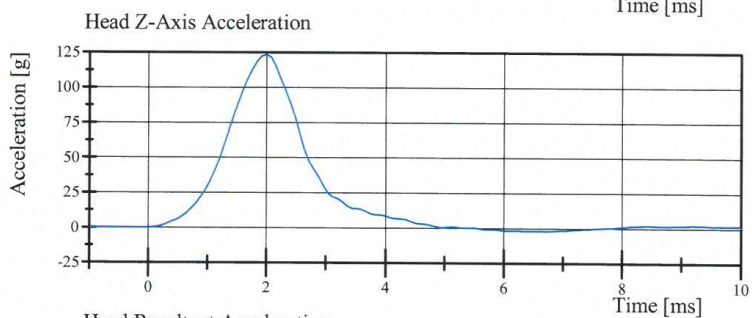
Min: -218.0 g at 1.9 ms



Filter Class: CFC\_1000

Max: 1.0 g at 4.6 ms

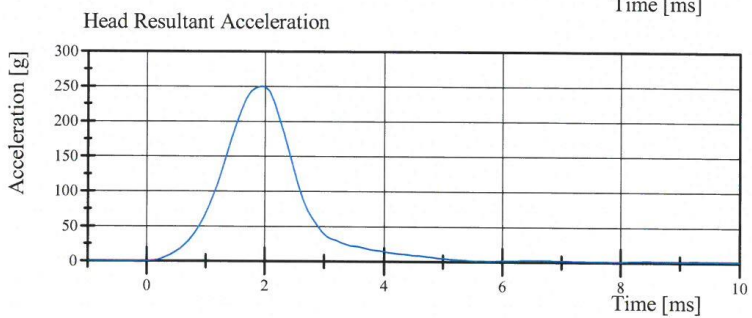
Min: -5.4 g at 2.0 ms



Filter Class: CFC\_1000

Max: 123.6 g at 2.0 ms

Min: -2.4 g at 6.7 ms



Filter Class: CFC\_1000

Max: 250.1 g at 1.9 ms

Min: 0.0 g at -0.4 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.24.2015 13:27:36 614



## Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 037 Certification No. 31-1

Test Date: 11/27/2015

| Test Parameter                                      | Specification       | Test Results | Pass |
|-----------------------------------------------------|---------------------|--------------|------|
| Temperature                                         | 20.6 - 22.2 °C      | 21.4 °C      | Yes  |
| Relative Humidity                                   | 10 - 70 %           | 45 %         | Yes  |
| Pendulum Velocity                                   | 6.89 - 7.13 m/s     | 6.948 m/s    | Yes  |
| Pendulum Acceleration Decay Crossing -5g            | 34 - 42 ms          | 34.3 ms      | Yes  |
| Pendulum Acceleration at 10ms                       | (-22.5) - (-27.5) g | -27.21 g     | Yes  |
| Pendulum Acceleration at 20ms                       | (-17.6) - (-22.6) g | -22.13 g     | Yes  |
| Pendulum Acceleration at 30ms                       | (-12.5) - (-18.5) g | -15.65 g     | Yes  |
| Pendulum Acceleration > 30ms                        | >= (-29.0) g        | -15.65 g     | Yes  |
| Total Head D-Plane Rotation                         |                     |              |      |
| Peak                                                | (-64) - (-78) °     | -73.3 °      | Yes  |
| Time of Peak                                        | 57 - 64 ms          | 58.2 ms      | Yes  |
| Total Head D-Plane Rotation Decay to 0°             | 113 - 128 ms        | 119.2 ms     | Yes  |
| Total Neck Occipital Condyles Moment                |                     |              |      |
| Peak                                                | 88 - 108 N·m        | 99.7 N·m     | Yes  |
| Time of Peak                                        | 47 - 58 ms          | 48.2 ms      | Yes  |
| Total Neck Occipital Condyles Moment Decay to 0 N·m | 97 - 107 ms         | 98.1 ms      | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 11:16:54 2948



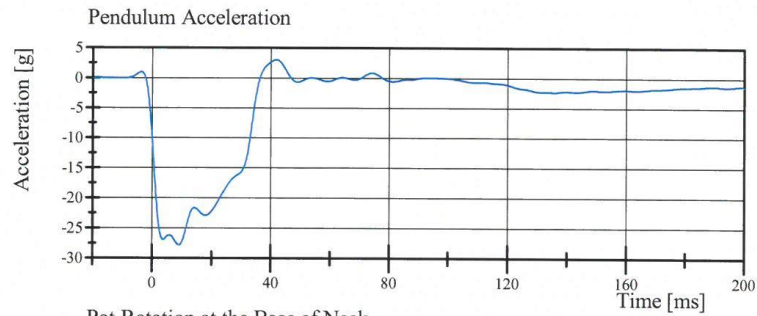


## Transportation Research Center Inc.

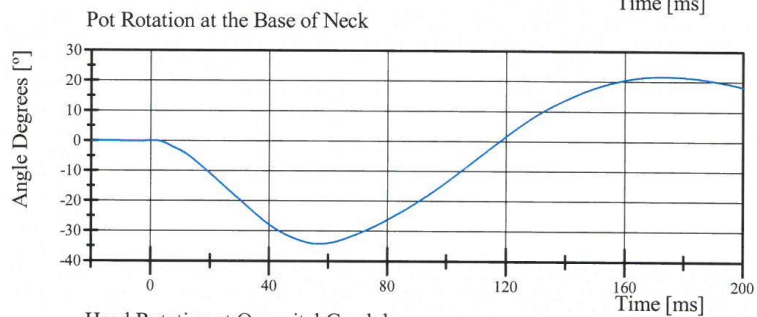
Neck Flexion

HIII 50th Serial No. 037 Certification No. 31-1

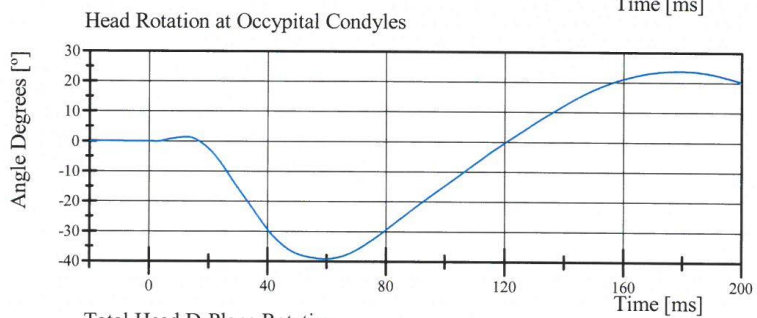
Test Date: 11/27/2015



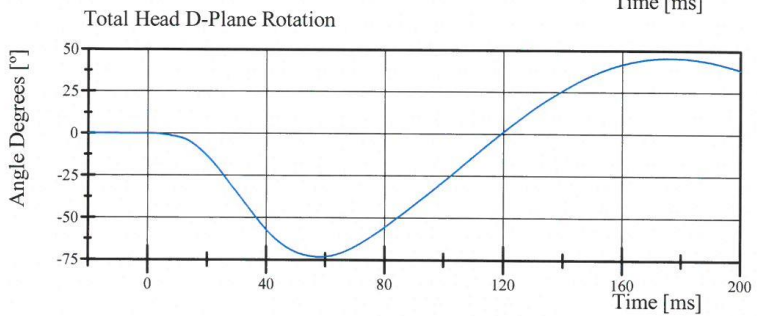
Filter Class: CFC\_60  
Max: 3.0 g at 41.8 ms  
Min: -27.8 g at 9.0 ms



Filter Class: CFC\_60  
Max: 21.7 ° at 172.9 ms  
Min: -34.3 ° at 56.6 ms



Filter Class: CFC\_60  
Max: 23.7 ° at 178.8 ms  
Min: -39.1 ° at 59.3 ms



Filter Class: CFC\_60  
Max: 45.2 ° at 176.2 ms  
Min: -73.3 ° at 58.2 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 11:17:03 2948

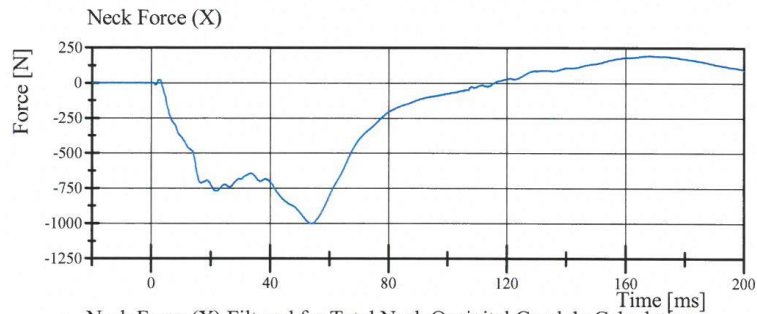


## Transportation Research Center Inc.

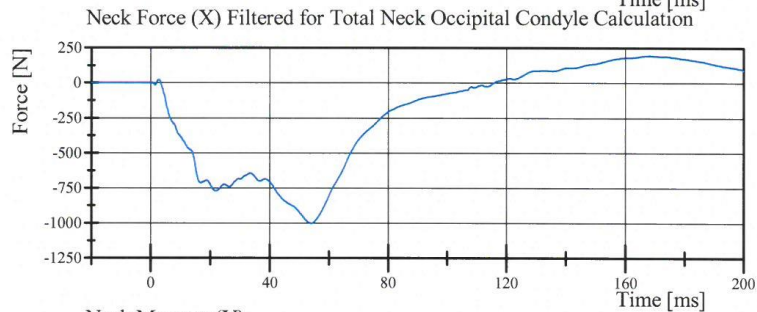
Neck Flexion

HIII 50th Serial No. 037 Certification No. 31-1

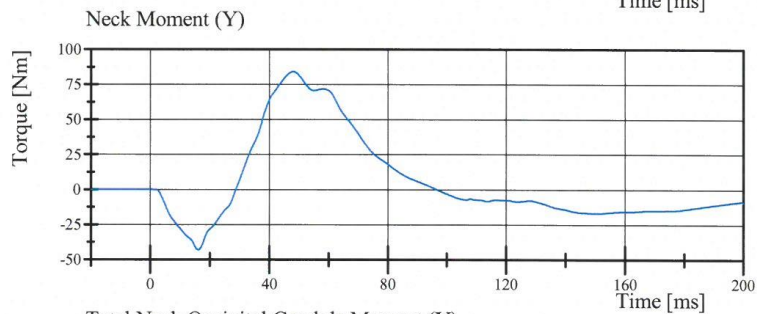
Test Date: 11/27/2015



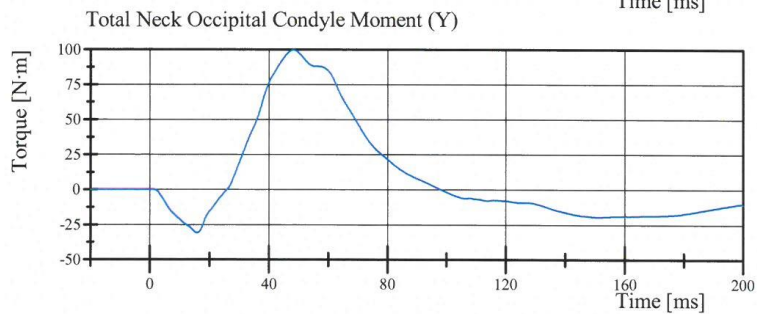
Filter Class: CFC\_1000  
Max: 193.0 N at 168.2 ms  
Min: -1,002.3 N at 54.0 ms



Filter Class: CFC\_600  
Max: 192.4 N at 168.2 ms  
Min: -1,002.0 N at 54.0 ms



Filter Class: CFC\_600  
Max: 84.1 Nm at 48.0 ms  
Min: -43.2 Nm at 16.1 ms



Filter Class: Without\_(Consta  
Max: 99.7 N·m at 48.2 ms  
Min: -30.9 N·m at 15.8 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 11:17:03 2948



## Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 037 Certification No. 31-3

Test Date: 11/27/2015

| Test Parameter                                      | Specification         | Test Results | Pass |
|-----------------------------------------------------|-----------------------|--------------|------|
| Temperature                                         | 20.6 - 22.2 °C        | 21.2 °C      | Yes  |
| Relative Humidity                                   | 10 - 70 %             | 47 %         | Yes  |
| Pendulum Velocity                                   | (-5.95) - (-6.18) m/s | -6.005 m/s   | Yes  |
| Pendulum Acceleration Decay Crossing 5g             | 38 - 46 ms            | 40.0 ms      | Yes  |
| Pendulum Acceleration at 10ms                       | 17.2 - 21.2 g         | 20.20 g      | Yes  |
| Pendulum Acceleration at 20ms                       | 14.0 - 19.0 g         | 16.24 g      | Yes  |
| Pendulum Acceleration at 30ms                       | 11.0 - 16.0 g         | 13.79 g      | Yes  |
| Pendulum Acceleration > 30ms                        | <= 22.0 g             | 13.79 g      | Yes  |
| Total Head D-Plane Rotation Peak                    | 81 - 106 °            | 98.5 °       | Yes  |
| Time of Peak                                        | 72 - 82 ms            | 76.0 ms      | Yes  |
| Total Head D-Plane Rotation Decay to 0°             | 147 - 174 ms          | 156.2 ms     | Yes  |
| Total Neck Occipital Condyles Moment Peak           | (-53) - (-80) N·m     | -76.1 N·m    | Yes  |
| Time of Peak                                        | 65 - 79 ms            | 71.0 ms      | Yes  |
| Total Neck Occipital Condyles Moment Decay to 0 N·m | 120 - 148 ms          | 144.2 ms     | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schunker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 14:00:10 3027

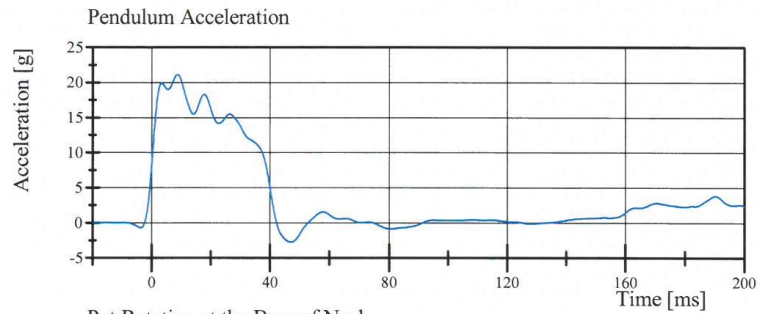


## Transportation Research Center Inc.

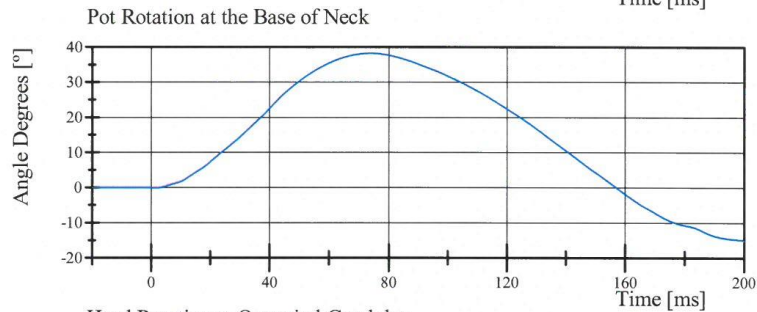
Neck Extension

HIII 50th Serial No. 037 Certification No. 31-3

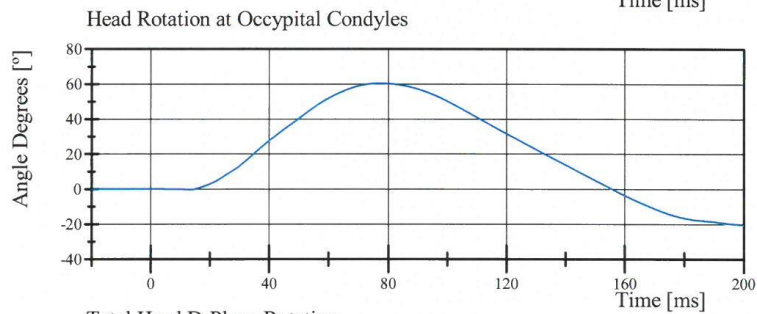
Test Date: 11/27/2015



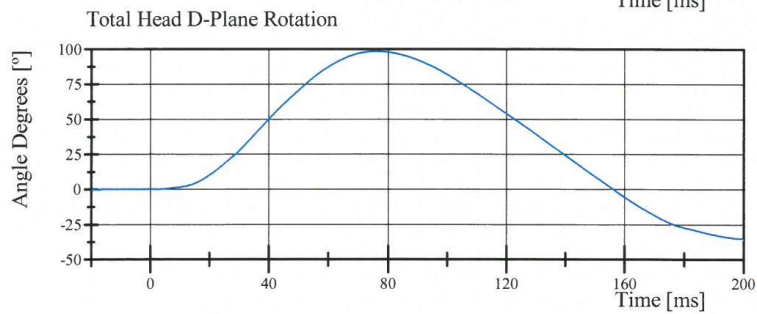
Filter Class: CFC\_60  
Max: 21.1 g at 8.7 ms  
Min: -2.7 g at 47.0 ms



Filter Class: CFC\_60  
Max: 38.2 ° at 73.9 ms  
Min: -15.1 ° at 200.0 ms



Filter Class: CFC\_60  
Max: 60.4 ° at 77.2 ms  
Min: -20.6 ° at 200.0 ms



Filter Class: CFC\_60  
Max: 98.5 ° at 76.0 ms  
Min: -35.7 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 14:00:17 3027



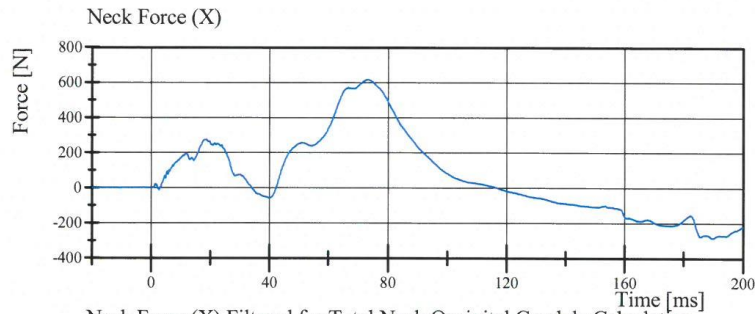


## Transportation Research Center Inc.

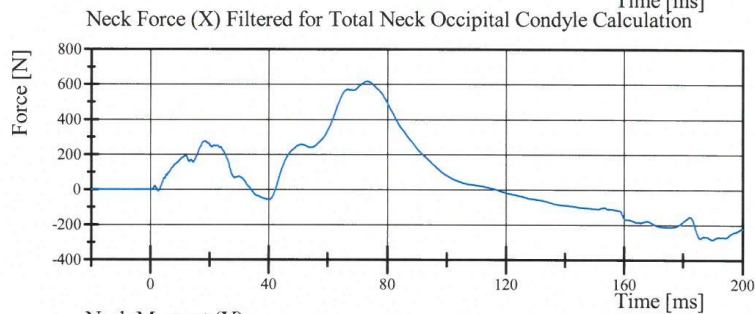
Neck Extension

HIII 50th Serial No. 037 Certification No. 31-3

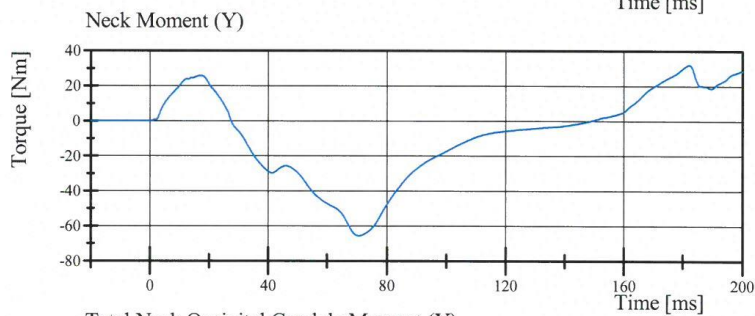
Test Date: 11/27/2015



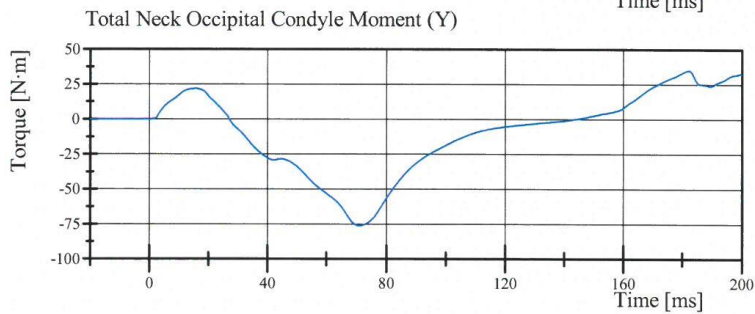
Filter Class: CFC\_1000  
Max: 616.0 N at 73.0 ms  
Min: -286.8 N at 189.7 ms



Filter Class: CFC\_600  
Max: 615.8 N at 73.1 ms  
Min: -286.8 N at 189.9 ms



Filter Class: CFC\_600  
Max: 31.9 Nm at 182.2 ms  
Min: -65.6 Nm at 70.6 ms



Filter Class: Without\_(Consta  
Max: 34.7 N·m at 182.2 ms  
Min: -76.1 N·m at 71.0 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.27.2015 14:00:18 3027



## Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 037 Certification No. 31-3

Test Date: 11/24/2015

| Test Parameter            | Specification         | Test Results | Pass |
|---------------------------|-----------------------|--------------|------|
| Temperature               | 20.6 - 22.2 °C        | 21.2 °C      | Yes  |
| Relative Humidity         | 10 - 70 %             | 38 %         | Yes  |
| Probe Velocity            | 6.59 - 6.83 m/s       | 6.682 m/s    | Yes  |
| Probe Force Peak          | (-5,160) - (-5,893) N | -5,766.8 N   | Yes  |
| Maximum Chest Compression | (-63.5) - (-72.6) mm  | -65.89 mm    | Yes  |
| Internal Hysteresis       | 65 - 85 %             | 74.2 %       | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schenker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart P  
with Polarity in accordance with J211

11.24.2015 10:54:24 379

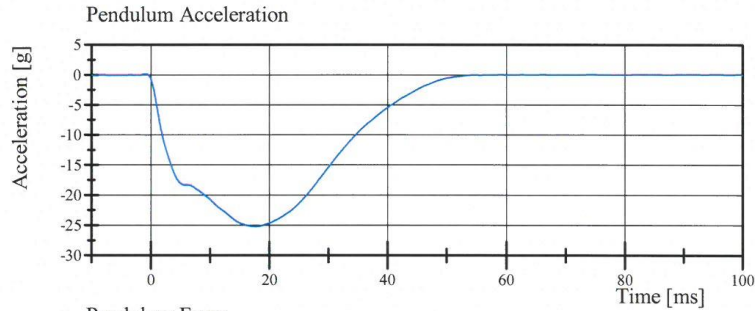


## Transportation Research Center Inc.

Front Thorax

HIH 50th Serial No. 037 Certification No. 31-3

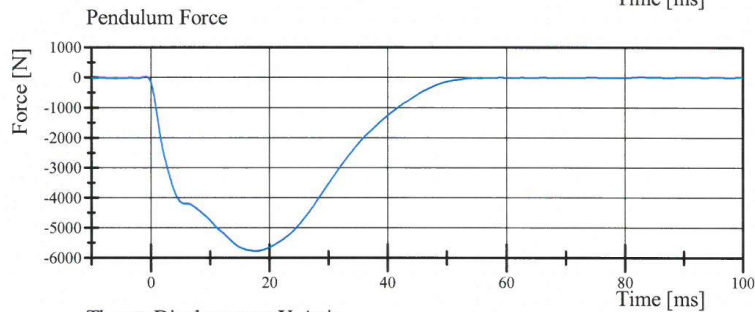
Test Date: 11/24/2015



Filter Class: CFC\_180

Max: 0.1 g at -0.9 ms

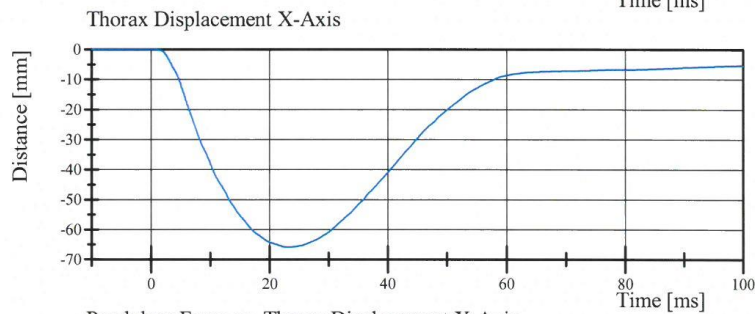
Min: -25.2 g at 17.8 ms



Filter Class: CFC\_180

Max: 33.6 N at -0.9 ms

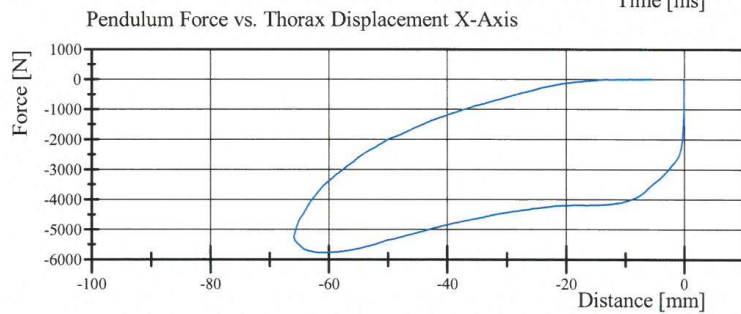
Min: -5,766.8 N at 17.8 ms



Filter Class: CFC\_600

Max: 0.0 mm at -9.8 ms

Min: -65.9 mm at 23.2 ms



Filter Class: CFC\_180

Max: 33.6 N at -0.0 mm

Min: -5,766.8 N at -61.5 mm

Specification Source: CFR49 Part 572 Subpart P  
with Polarity in accordance with J211

11.24.2015 10:54:46 379



## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 31-2  
Test Date: 11/24/2015

| Test Parameter    | Specification             | Test Results | Pass |
|-------------------|---------------------------|--------------|------|
| Temperature       | 18.9 - 25.5 °C            | 21.4 °C      | Yes  |
| Relative Humidity | 10 - 70 %                 | 39 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s           | 2.123 m/s    | Yes  |
| Peak Femur Force  | (-4,715.2) - (-5,782.6) N | -5,702.63 N  | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schenkel

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

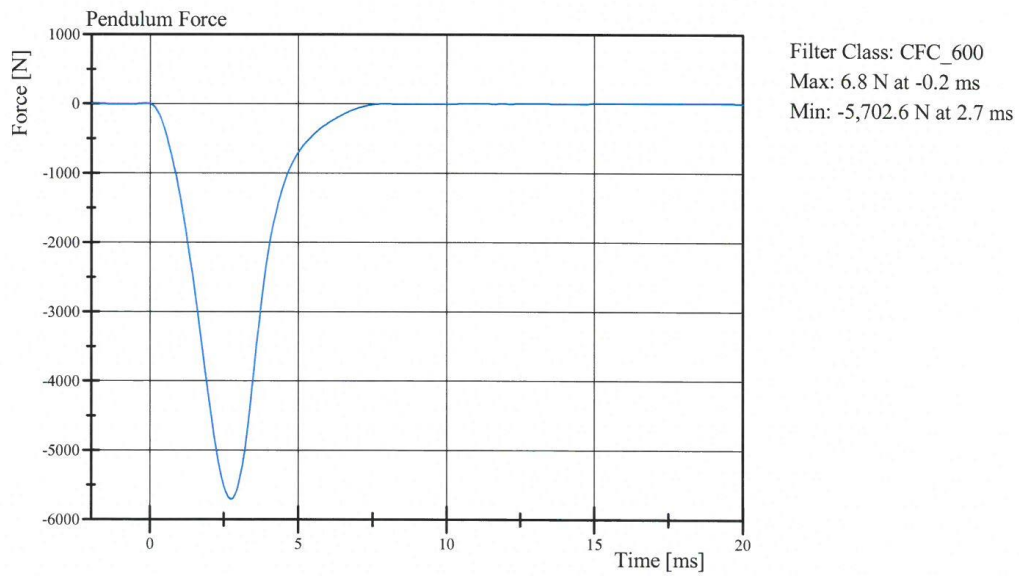
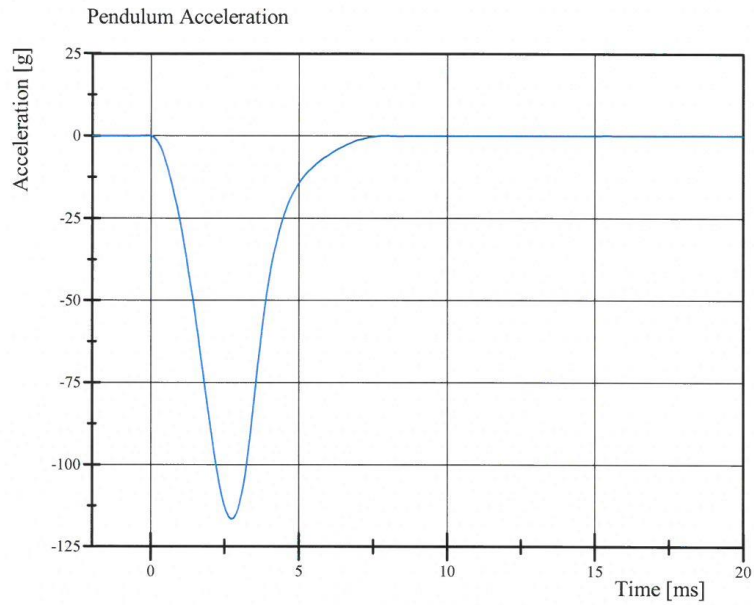
11.24.2015 12:27:20 1488





## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 31-2  
Test Date: 11/24/2015



Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.24.2015 12:27:27 1488



## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 31-1  
Test Date: 11/24/2015

| Test Parameter    | Specification             | Test Results | Pass |
|-------------------|---------------------------|--------------|------|
| Temperature       | 18.9 - 25.5 °C            | 21.2 °C      | Yes  |
| Relative Humidity | 10 - 70 %                 | 37 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s           | 2.119 m/s    | Yes  |
| Peak Femur Force  | (-4,715.2) - (-5,782.6) N | -5,603.00 N  | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinkel

Approved

[Signature]

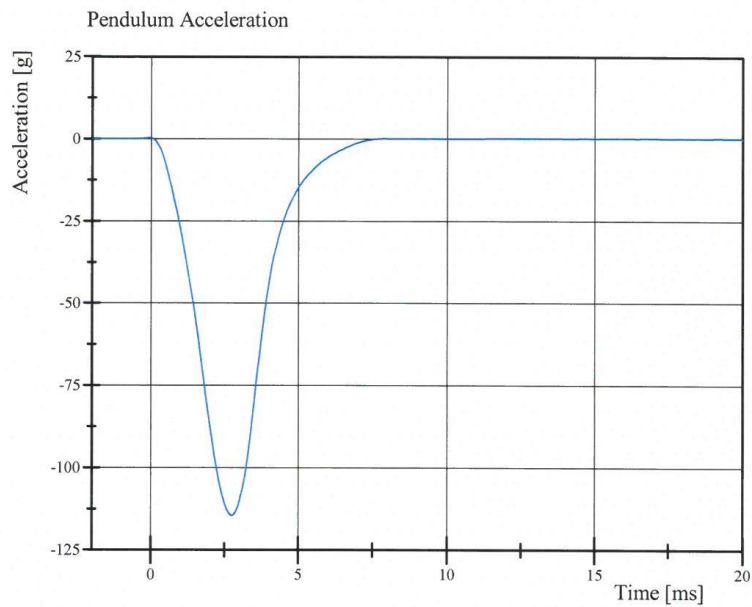
Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.24.2015 13:06:01 1489



## Transportation Research Center Inc.

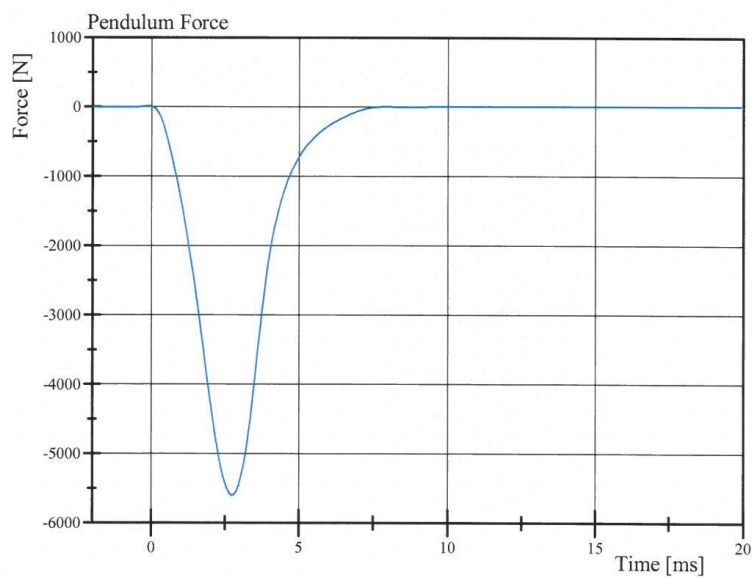
Right Knee Femur Response Test  
HIII 50th Serial No. 037 Certification No. 31-1  
Test Date: 11/24/2015



Filter Class: CFC\_600

Max: 0.2 g at -0.1 ms

Min: -114.5 g at 2.7 ms



Filter Class: CFC\_600

Max: 11.6 N at -0.1 ms

Min: -5,603.0 N at 2.7 ms

Specification Source: CFR49 Part 572 Subpart E  
with Polarity in accordance with J211

11.24.2015 13:06:09 1489



# Transportation Research Center Inc.

Hybrid III 50th Male Hip Range of Motion



Serial Number: 37

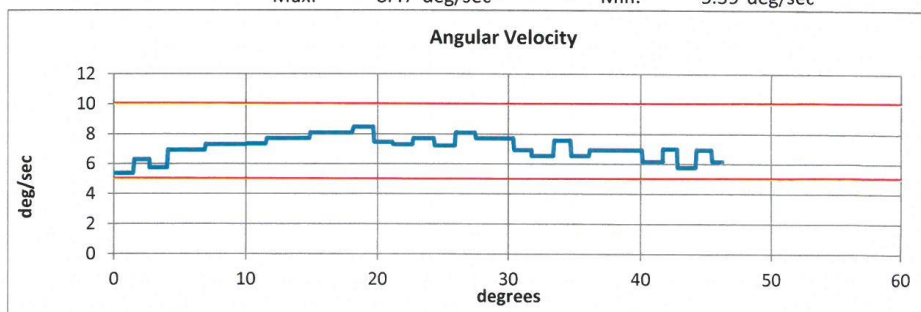
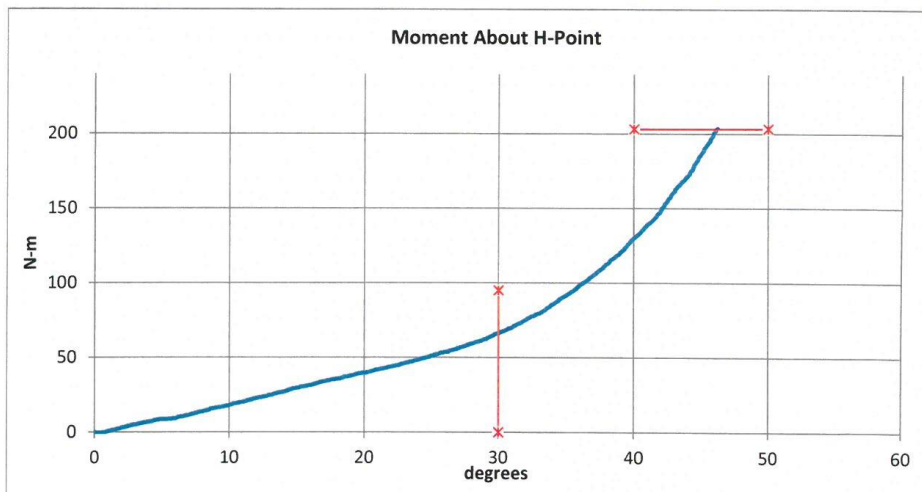
Date: 24-Nov-2015

Test Number: 1

Time: 13:02

Comments: Left

| TEST PARAMETER   | SPECIFICATION | TEST RESULTS     |
|------------------|---------------|------------------|
| Temperature      | 18.9 - 25.6   | 21.2 °C Pass     |
| Humidity         | 10 - 70       | 36 % Pass        |
| Moment at 30°    | 0 ≤ 94.9      | 66.38 N-m Pass   |
| Angle at 203 Nm  | 40 - 50       | 46.22 deg Pass   |
| Average Velocity | 5 - 10        | 7.1 deg/sec Pass |



Technician

Melissa Schunker

Approved

[Signature]



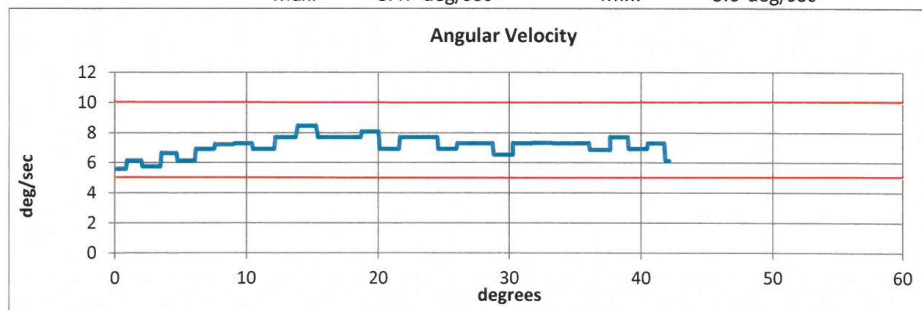
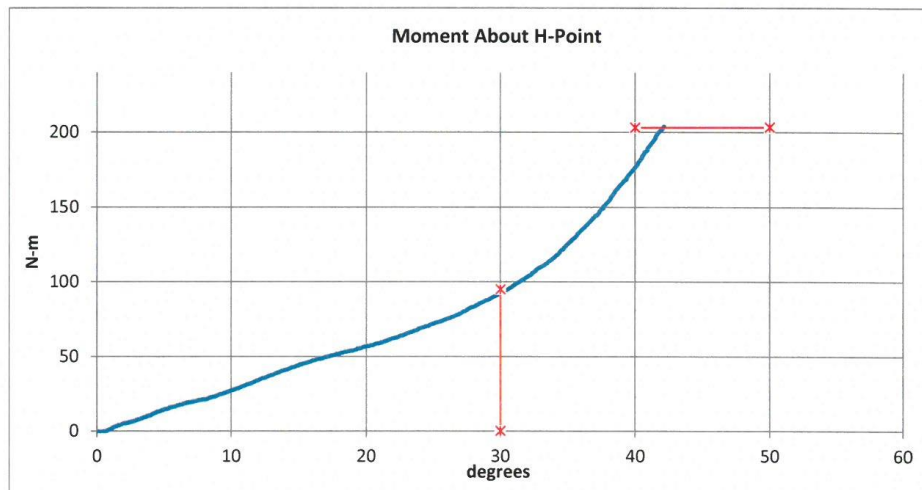
# Transportation Research Center Inc.

Hybrid III 50th Male Hip Range of Motion



Serial Number: 37 Date: 24-Nov-2015  
 Test Number: 1 Time: 13:33  
 Comments: Right

| TEST PARAMETER   | SPECIFICATION | TEST RESULTS      |
|------------------|---------------|-------------------|
| Temperature      | 18.9 - 25.6   | 21.2 °C Pass      |
| Humidity         | 10 - 70       | 36 % Pass         |
| Moment at 30°    | 0 ≤ 94.9      | 92.39 N-m Pass    |
| Angle at 203 Nm  | 40 - 50       | 42.14 deg Pass    |
| Average Velocity | 5 - 10        | 7.14 deg/sec Pass |



Technician  
Melissa Schenker

Approved  
[Signature]

**Pre-Test Calibration Sheets**

**Front Passenger S/N 426**

**Transportation Research Center Inc.**  
**5720 HIII 5th Dummy**  
**External Dimensions**  
**Serial No. 426 Calibration No. 32**

| Symbol | Description                                | Specification | Results | Pass |
|--------|--------------------------------------------|---------------|---------|------|
|        |                                            | mm            | mm      |      |
| A      | Total Sitting Height                       | 774.7 - 800.1 | 779     | Yes  |
| B      | Shoulder Pivot Height                      | 431.8 - 457.2 | 442     | Yes  |
| C      | Hip Pivot Height                           | 81.3 - 86.3   | 84      | Yes  |
| D      | Hip Pivot from Backline                    | 144.8 - 149.8 | 146     | Yes  |
| E      | Shoulder Pivot from Backline               | 68.6 - 83.8   | 78      | Yes  |
| F      | Thigh Clearance                            | 119.4 - 134.6 | 130     | Yes  |
| G      | Back of Elbow to Wrist Pivot               | 243.9 - 259.1 | 251     | Yes  |
| H      | Head Back to Backline                      | 43.2 - 48.2   | 45      | Yes  |
| I      | Shoulder to Elbow Length                   | 276.8 - 297.2 | 283     | Yes  |
| J      | Elbow Rest Height                          | 182.8 - 203.2 | 194     | Yes  |
| K      | Buttock Knee Length                        | 520.7 - 546.1 | 534     | Yes  |
| L      | Popliteal Height                           | 355.6 - 376.0 | 369     | Yes  |
| M      | Knee Pivot Height                          | 393.7 - 419.1 | 411     | Yes  |
| N      | Buttock Popliteal Length                   | 414.0 - 439.4 | 432     | Yes  |
| O      | Chest Depth without Jacket                 | 175.3 - 190.5 | 182     | Yes  |
| P      | Foot Length                                | 218.5 - 233.7 | 223     | Yes  |
| R      | Buttock to Knee Pivot Length               | 457.2 - 482.6 | 473     | Yes  |
| S      | Head Breadth                               | 137.1 - 147.3 | 140     | Yes  |
| T      | Head Depth                                 | 177.8 - 188.0 | 181     | Yes  |
| U      | Hip Breadth                                | 299.7 - 314.9 | 306     | Yes  |
| V      | Shoulder Breadth                           | 350.5 - 365.7 | 358     | Yes  |
| W      | Foot Breadth                               | 78.8 - 94.0   | 83      | Yes  |
| X      | Head Circumference                         | 528.3 - 548.7 | 539     | Yes  |
| Y      | Chest Circumference with Jacket            | 850.9 - 881.3 | 866     | Yes  |
| Z      | Waist Circumference                        | 759.5 - 789.9 | 774     | Yes  |
| AA     | Reference Location for Chest Circumference | 332.7 - 358.1 | 345     | Yes  |
| BB     | Reference Location for Waist Circumference | 160.0 - 170.2 | 165     | Yes  |

Technician

Melissa Schenker

Approved

[Signature]



Revised 8/10/12

## Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 426 Certification No. 32-1

Test Date: 10/30/2015

| Test Parameter                                        | Specification  | Test Results | Pass |
|-------------------------------------------------------|----------------|--------------|------|
| Temperature                                           | 18.9 - 25.5 °C | 21.7 °C      | Yes  |
| Relative Humidity                                     | 10 - 70 %      | 37 %         | Yes  |
| Peak Head Resultant Acceleration                      | 250 - 300 g    | 279.3 g      | Yes  |
| Peak Head Lateral Acceleration                        | (-15) - 15 g   | -12.9 g      | Yes  |
| Is Acceleration Curve Unimodal<br>within 10% of Peak? | Yes            | Yes          | Yes  |

Test meets specifications.

Comments:

Technician

Melissa Schinke

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 15:35:29 608



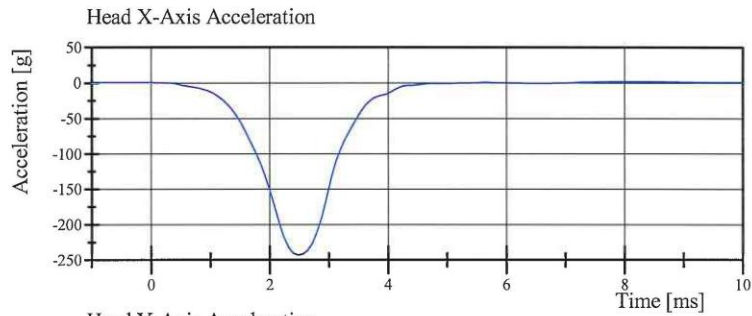


## Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 426 Certification No. 32-1

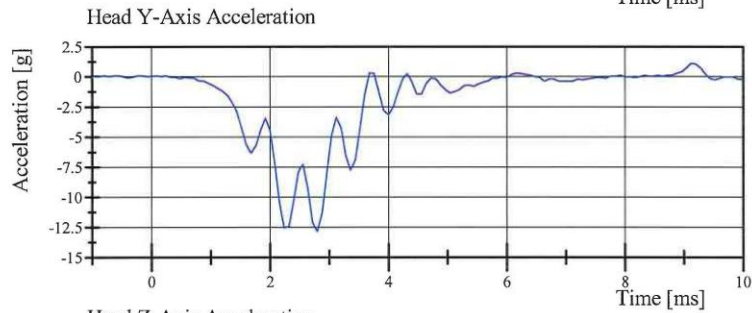
Test Date: 10/30/2015



Filter Class: CFC\_1000

Max: 1.8 g at 8.1 ms

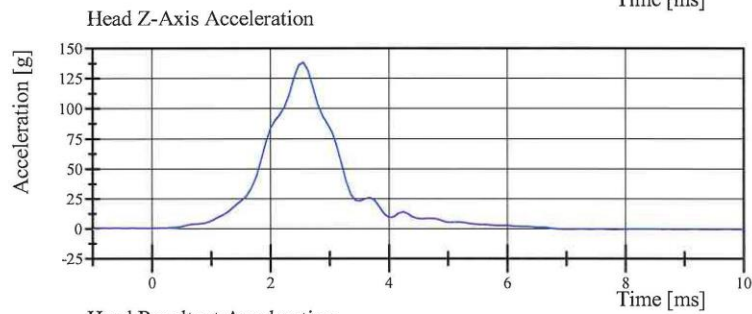
Min: -243.9 g at 2.5 ms



Filter Class: CFC\_1000

Max: 1.1 g at 9.1 ms

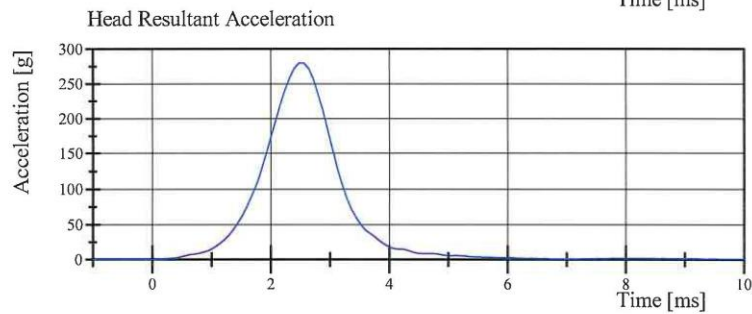
Min: -12.9 g at 2.8 ms



Filter Class: CFC\_1000

Max: 138.3 g at 2.6 ms

Min: -0.8 g at 7.8 ms



Filter Class: CFC\_1000

Max: 279.3 g at 2.5 ms

Min: 0.0 g at -1.0 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 15:35:36 608



## Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 426 Certification No. 32-4

Test Date: 11/2/2015

| Test Parameter                                                         | Specification       | Test Results | Pass |
|------------------------------------------------------------------------|---------------------|--------------|------|
| Temperature                                                            | 20.6 - 22.2 °C      | 21.9 °C      | Yes  |
| Relative Humidity                                                      | 10 - 70 %           | 42 %         | Yes  |
| Pendulum Velocity                                                      | 6.89 - 7.13 m/s     | 7.111 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 10ms                         | (-2.1) - (-2.5) m/s | -2.21 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 20ms                         | (-4.0) - (-5.0) m/s | -4.37 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 30ms                         | (-5.8) - (-7.0) m/s | -6.14 m/s    | Yes  |
| Total Head D-Plane Rotation                                            | (-77) - (-91) °     | -78.2 °      | Yes  |
| Total Neck Occipital Condyles Moment<br>Between -77° and -91° Rotation | 69 - 83 N·m         | 74.8 N·m     | Yes  |
| Total Neck Occipital Condyles Moment<br>Decay to 10 N·m                | 80 - 100 ms         | 87.6 ms      | Yes  |

Test meets specifications.

Comments:

Technician

Melissa Schinke

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 10:48:28 1708

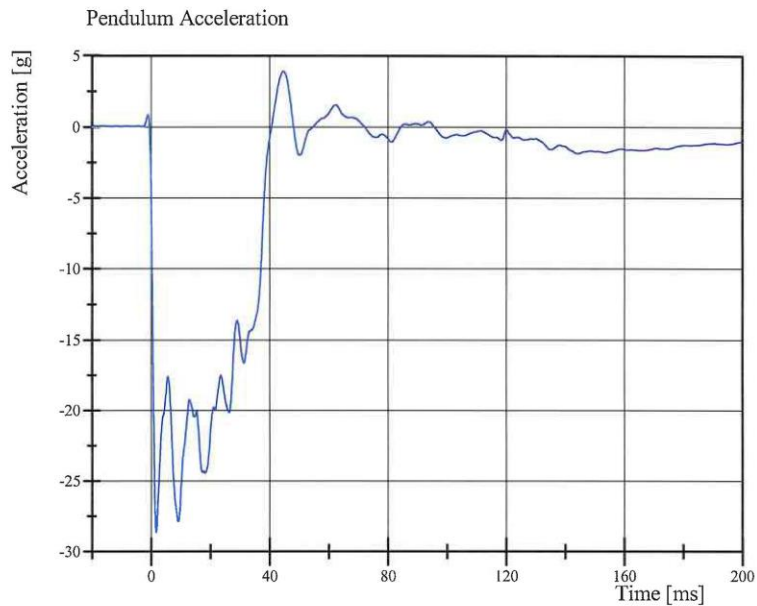


## Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 426 Certification No. 32-4

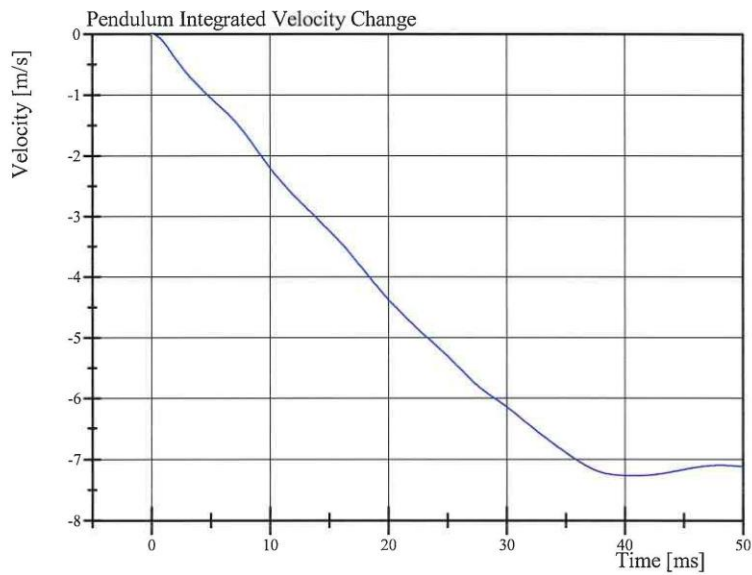
Test Date: 11/2/2015



Filter Class: CFC\_180

Max: 3.9 g at 44.7 ms

Min: -28.7 g at 1.7 ms



Filter Class: CFC\_180

Max: 0.0 m/s at 0.0 ms

Min: -7.3 m/s at 40.7 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 10:48:50 1708



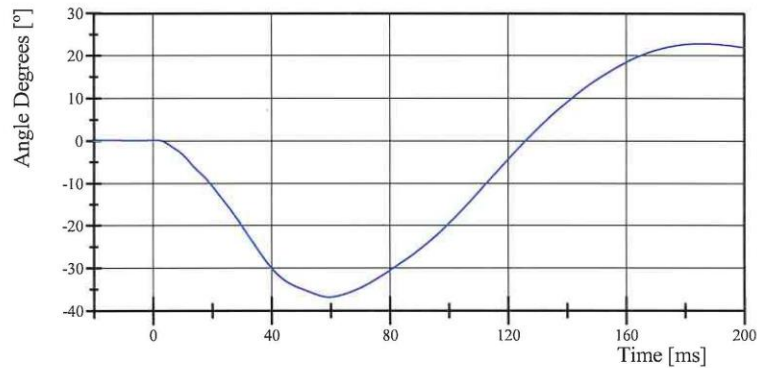
## Transportation Research Center Inc.

### Neck Flexion

HIII 5th Serial No. 426 Certification No. 32-4

Test Date: 11/2/2015

Pot Rotation at the Base of Neck

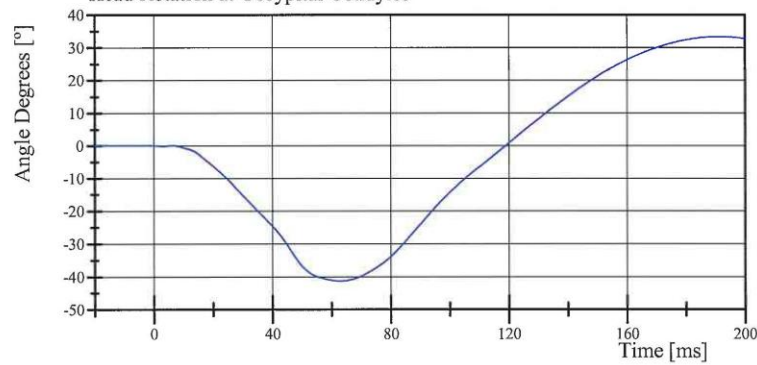


Filter Class: CFC\_60

Max: 22.9 ° at 185.7 ms

Min: -36.9 ° at 59.4 ms

Head Rotation at Occipital Condyles

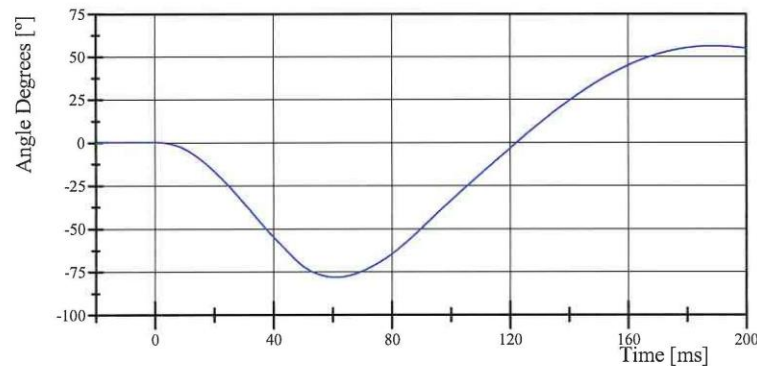


Filter Class: CFC\_60

Max: 33.3 ° at 191.3 ms

Min: -41.4 ° at 62.9 ms

Total Head D-Plane Rotation



Filter Class: CFC\_60

Max: 56.1 ° at 188.4 ms

Min: -78.2 ° at 61.1 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 10:48:50 1708



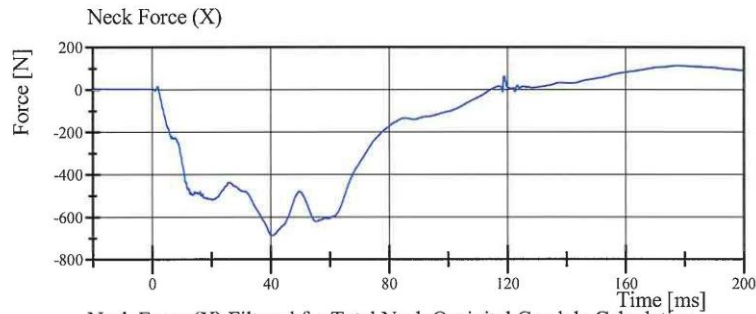


## Transportation Research Center Inc.

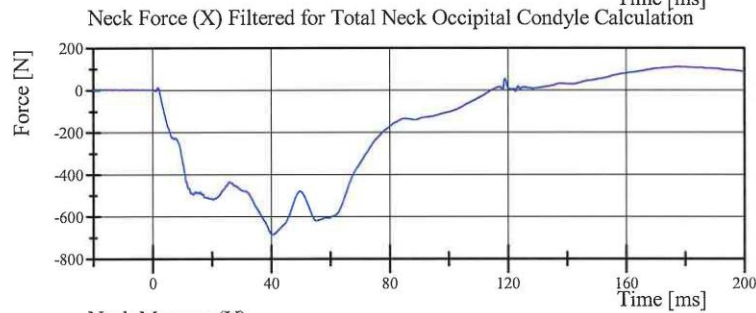
### Neck Flexion

HIII 5th Serial No. 426 Certification No. 32-4

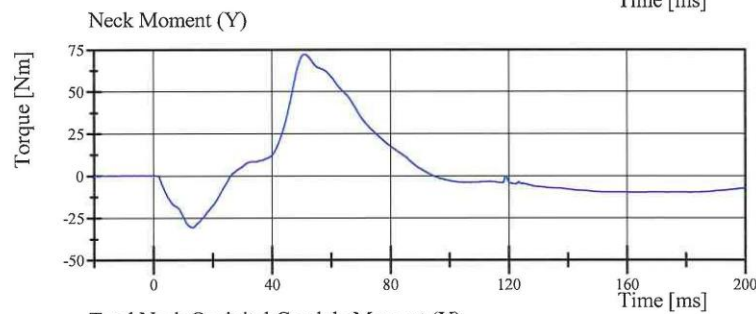
Test Date: 11/2/2015



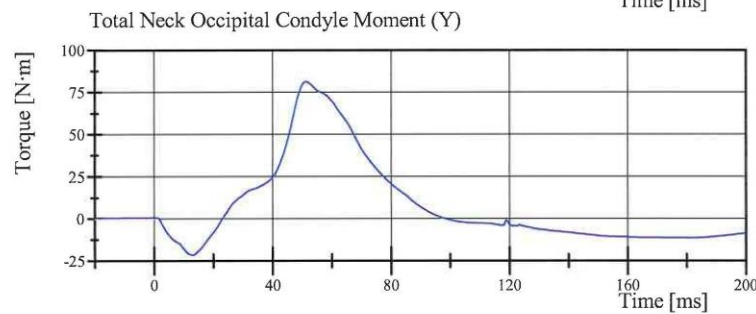
Filter Class: CFC\_1000  
Max: 112.6 N at 177.3 ms  
Min: -689.3 N at 40.4 ms



Filter Class: CFC\_600  
Max: 112.2 N at 177.6 ms  
Min: -688.4 N at 40.4 ms



Filter Class: CFC\_600  
Max: 72.1 Nm at 51.1 ms  
Min: -30.6 Nm at 13.0 ms



Filter Class: Without\_(Consta  
Max: 81.1 N·m at 51.3 ms  
Min: -21.9 N·m at 13.0 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 10:48:51 1708



## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 32-1

Test Date: 11/2/2015

| Test Parameter                                                        | Specification         | Test Results | Pass |
|-----------------------------------------------------------------------|-----------------------|--------------|------|
| Temperature                                                           | 20.6 - 22.2 °C        | 21.9 °C      | Yes  |
| Relative Humidity                                                     | 10 - 70 %             | 43 %         | Yes  |
| Pendulum Velocity                                                     | (-5.95) - (-6.19) m/s | -6.139 m/s   | Yes  |
| Pendulum Integrated Velocity<br>Change at 10ms                        | 1.5 - 1.9 m/s         | 1.87 m/s     | Yes  |
| Pendulum Integrated Velocity<br>Change at 20ms                        | 3.1 - 3.9 m/s         | 3.74 m/s     | Yes  |
| Pendulum Integrated Velocity<br>Change at 30ms                        | 4.6 - 5.6 m/s         | 5.47 m/s     | Yes  |
| Total Head D-Plane Rotation                                           | 99 - 114 °            | 104.8 °      | Yes  |
| Total Neck Occipital Condyles Moment<br>Between 99° and 114° Rotation | (-53) - (-65) N·m     | -59.9 N·m    | Yes  |
| Total Neck Occipital Condyles Moment<br>Decay to -10 N·m              | 94 - 114 ms           | 102.4 ms     | Yes  |

Test meets specifications.

Comments:

Technician

Melissa Schinzel

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 11:33:13 1823

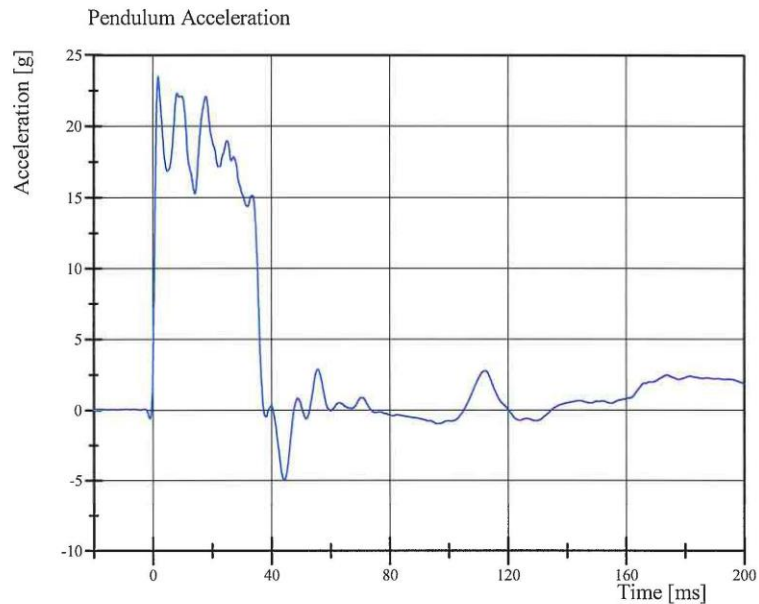


## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 32-1

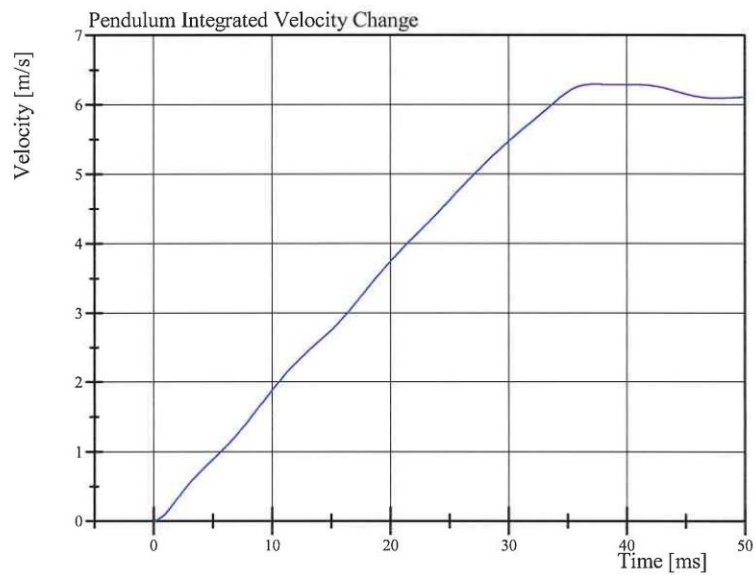
Test Date: 11/2/2015



Filter Class: CFC\_180

Max: 23.5 g at 1.8 ms

Min: -5.1 g at 44.4 ms



Filter Class: CFC\_180

Max: 6.3 m/s at 37.3 ms

Min: 0.0 m/s at 0.0 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 11:33:20 1823



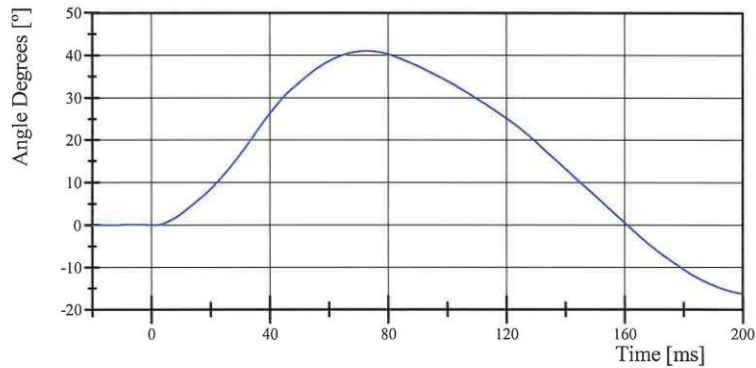
## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 32-1

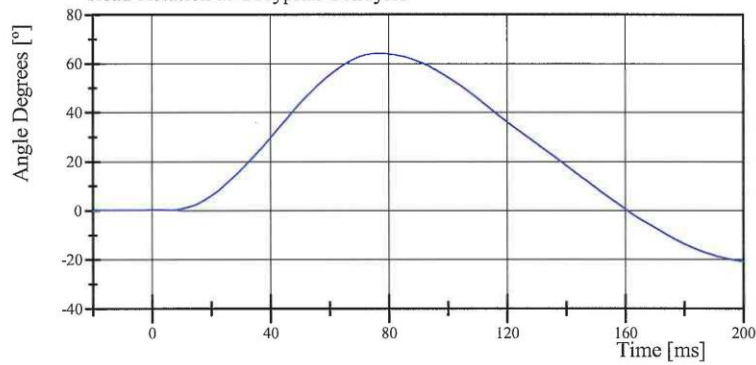
Test Date: 11/2/2015

Pot Rotation at the Base of Neck



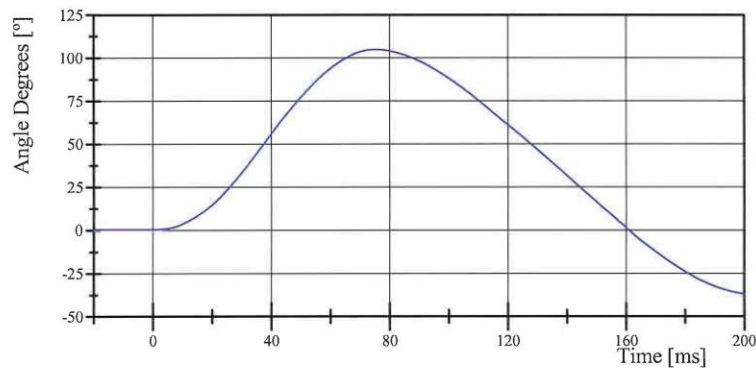
Filter Class: CFC\_60  
Max: 40.9 ° at 72.8 ms  
Min: -16.2 ° at 200.0 ms

Head Rotation at Occipital Condyles



Filter Class: CFC\_60  
Max: 64.0 ° at 76.7 ms  
Min: -20.8 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC\_60  
Max: 104.8 ° at 75.3 ms  
Min: -37.0 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 11:33:21 1823



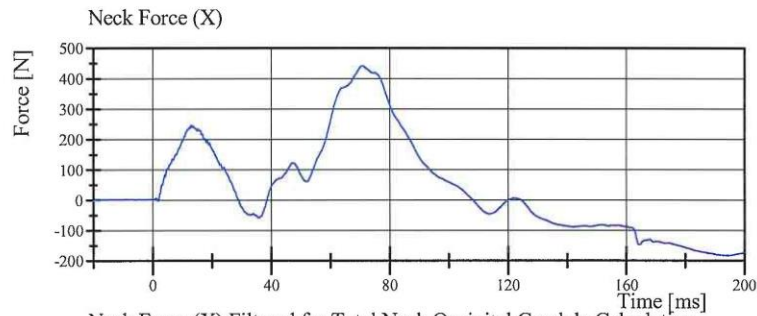


## Transportation Research Center Inc.

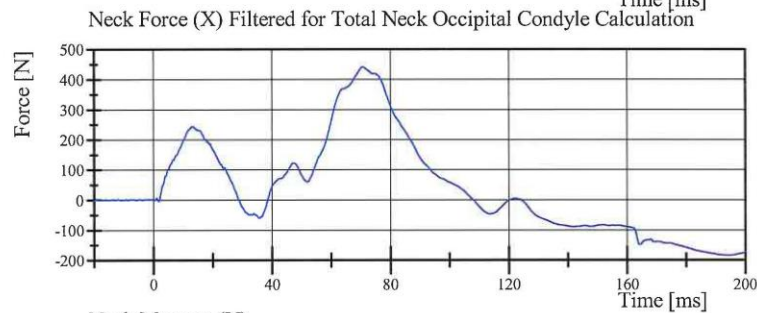
Neck Extension

HIII 5th Serial No. 426 Certification No. 32-1

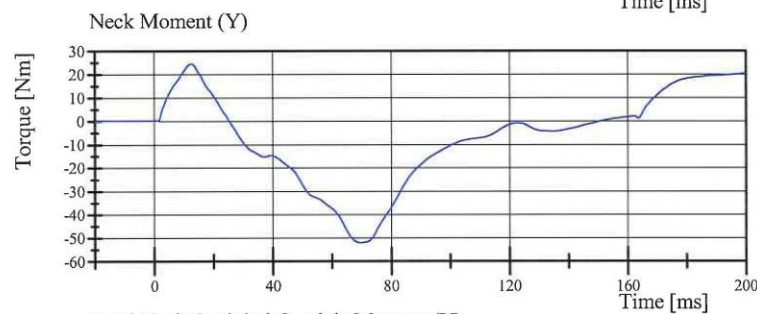
Test Date: 11/2/2015



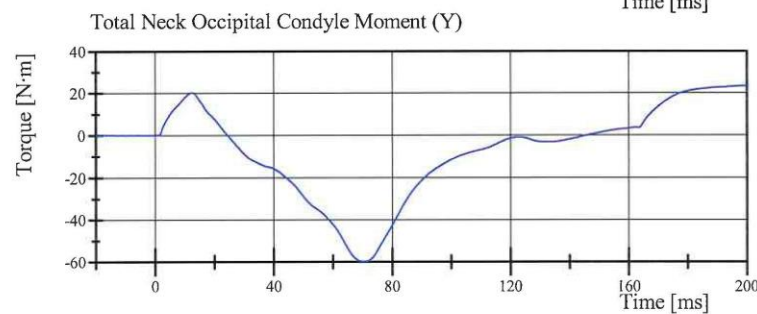
Filter Class: CFC\_1000  
Max: 441.2 N at 70.6 ms  
Min: -184.0 N at 193.7 ms



Filter Class: CFC\_600  
Max: 441.0 N at 70.7 ms  
Min: -183.6 N at 193.7 ms



Filter Class: CFC\_600  
Max: 24.3 Nm at 12.7 ms  
Min: -52.2 Nm at 69.5 ms



Filter Class: Without\_(Consta  
Max: 23.5 N·m at 199.5 ms  
Min: -59.9 N·m at 70.3 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.02.2015 11:33:22 1823



## Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 426 Certification No. 32-3

Test Date: 10/30/2015

| Test Parameter                                                   | Specification         | Test Results | Pass |
|------------------------------------------------------------------|-----------------------|--------------|------|
| Temperature                                                      | 20.6 - 22.2 °C        | 21.9 °C      | Yes  |
| Relative Humidity                                                | 10 - 70 %             | 37 %         | Yes  |
| Probe Velocity                                                   | 6.59 - 6.83 m/s       | 6.754 m/s    | Yes  |
| Probe Force Peak Between 50.0 mm<br>and 58.0 mm Chest Deflection | (-3,900) - (-4,400) N | -4,300.5 N   | Yes  |
| Probe Force Peak Between 18.0 mm<br>and 50.0 mm Chest Deflection | $\geq$ (-4,600) N     | -4,300.5 N   | Yes  |
| Maximum Chest Compression                                        | (-50) - (-58) mm      | -52.0 mm     | Yes  |
| Internal Hysteresis                                              | 69 - 85 %             | 71.2 %       | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 14:20:34 412

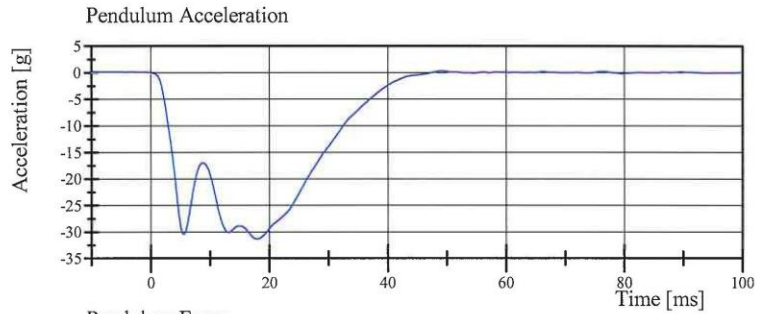


## Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 426 Certification No. 32-3

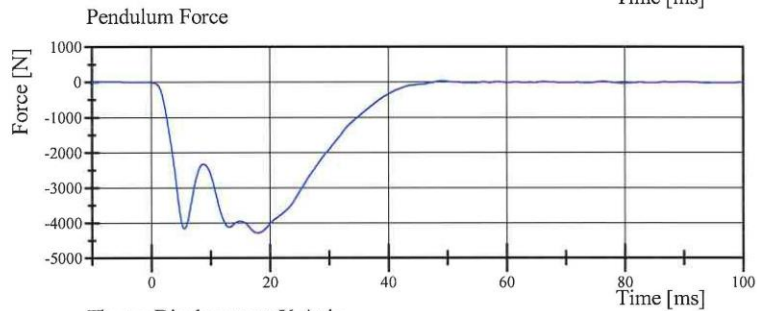
Test Date: 10/30/2015



Filter Class: CFC\_180

Max: 0.3 g at 49.1 ms

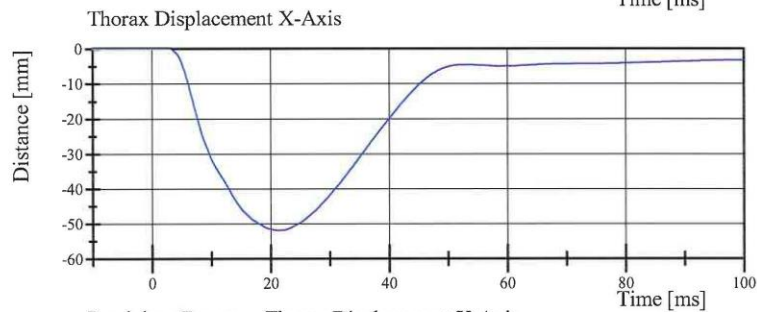
Min: -31.4 g at 17.8 ms



Filter Class: CFC\_180

Max: 36.1 N at 49.1 ms

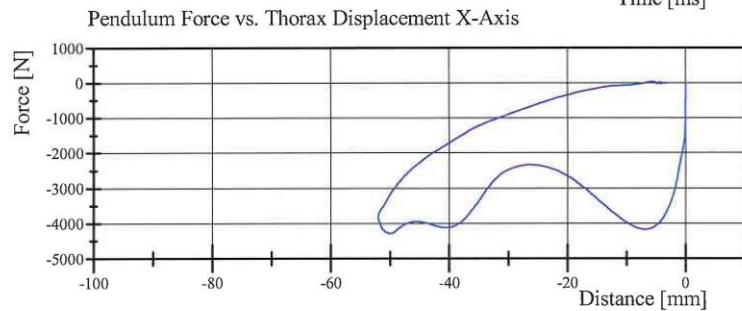
Min: -4,300.5 N at 17.8 ms



Filter Class: CFC\_600

Max: 0.0 mm at -5.1 ms

Min: -52.0 mm at 21.3 ms



Filter Class: CFC\_180

Max: 36.1 N at -5.7 mm

Min: -4,300.5 N at -49.9 mm

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 14:20:49 412



## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 32-1  
Test Date: 10/30/2015

| Test Parameter    | Specification         | Test Results | Pass |
|-------------------|-----------------------|--------------|------|
| Temperature       | 18.9 - 25.6 °C        | 21.9 °C      | Yes  |
| Relative Humidity | 10 - 70 %             | 39 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s       | 2.101 m/s    | Yes  |
| Peak Femur Force  | (-3,450) - (-4,060) N | -3,942.7 N   | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schunker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

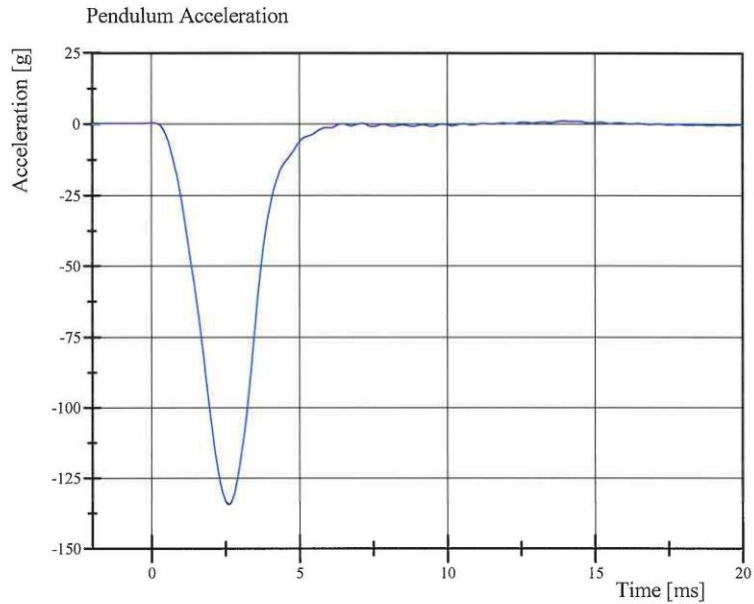
10.30.2015 14:58:06 1766



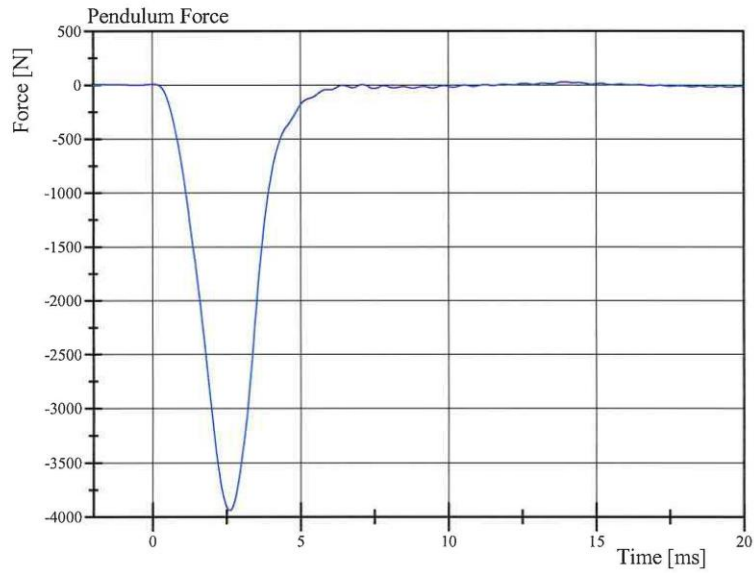


## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 32-1  
Test Date: 10/30/2015



Filter Class: CFC\_600  
Max: 1.0 g at 13.9 ms  
Min: -134.5 g at 2.6 ms



Filter Class: CFC\_600  
Max: 29.6 N at 13.9 ms  
Min: -3,942.7 N at 2.6 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 14:58:13 1766



## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 32-1  
Test Date: 10/30/2015

| Test Parameter    | Specification         | Test Results | Pass |
|-------------------|-----------------------|--------------|------|
| Temperature       | 18.9 - 25.6 °C        | 21.9 °C      | Yes  |
| Relative Humidity | 10 - 70 %             | 38 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s       | 2.086 m/s    | Yes  |
| Peak Femur Force  | (-3,450) - (-4,060) N | -3,745.3 N   | Yes  |

Test meets specifications.

Comments:

Technician

Melissa Schinzel

Approved

[Signature]

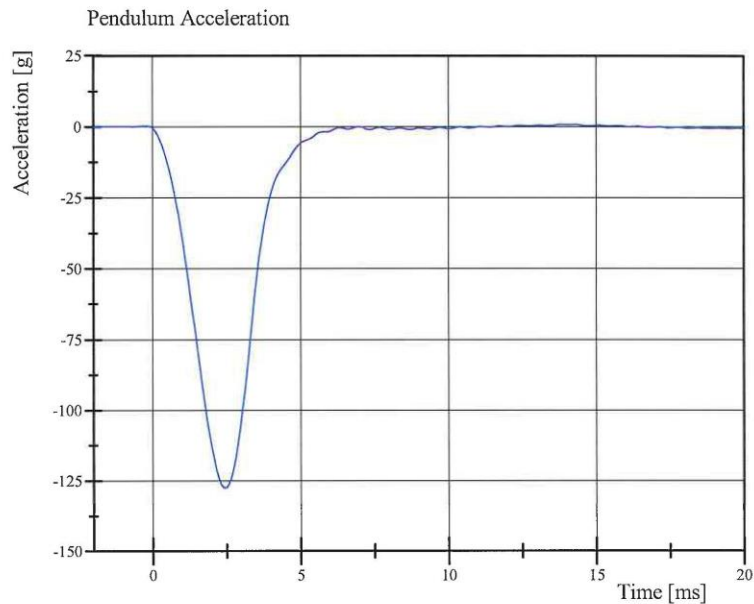
Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 15:04:46 1777

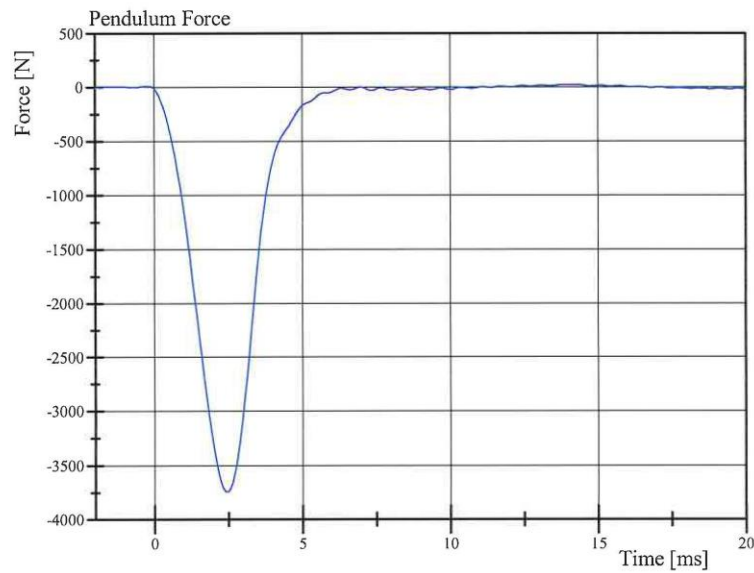


## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 32-1  
Test Date: 10/30/2015



Filter Class: CFC\_600  
Max: 0.8 g at 14.3 ms  
Min: -127.7 g at 2.5 ms



Filter Class: CFC\_600  
Max: 23.7 N at 14.3 ms  
Min: -3,745.3 N at 2.5 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

10.30.2015 15:04:53 1777



## Transportation Research Center Inc.

Hybrid III Small Female Torso Flexion



Serial Number: 426

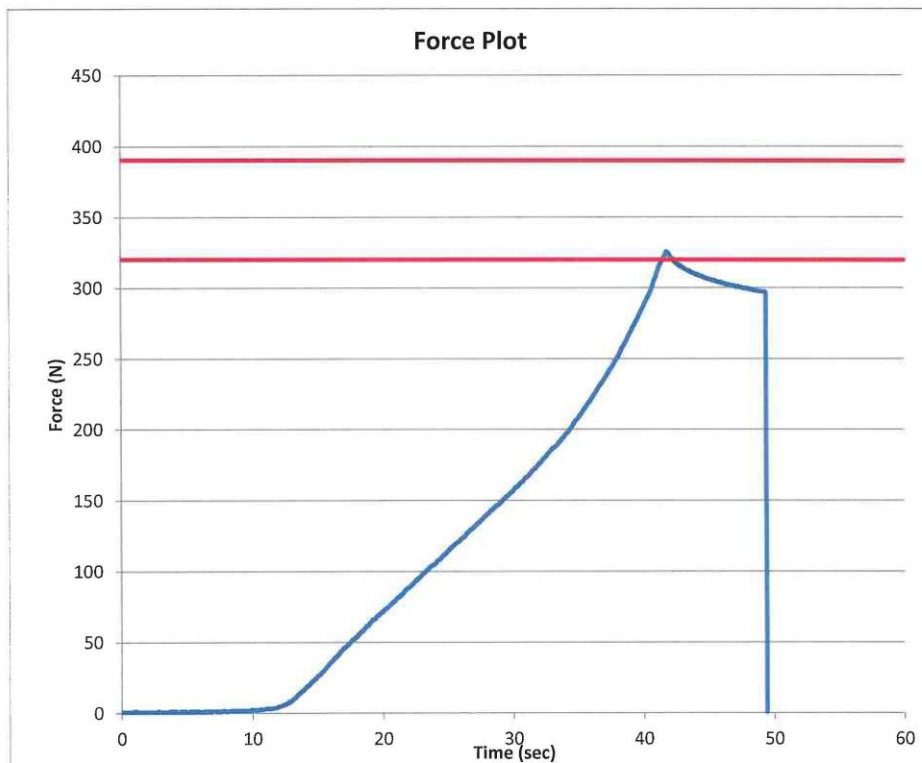
Date: 11/3/2015

Test Number: 1

Time: 8:34

Comments:

| TEST PARAMETER           | SPECIFICATION | TEST RESULTS      |
|--------------------------|---------------|-------------------|
| Temperature              | 18.9 - 25.6   | 21.8 °C Pass      |
| Humidity                 | 10 - 70       | 37 % Pass         |
| Average Angular Velocity | 0.5 - 1.5     | 0.93 deg/sec Pass |
| Initial Angle            | 0 - 20        | 17.37 deg Pass    |
| Peak Force at 45.21°     | 320 - 390     | 325.53 N Pass     |
| Final Angle              | -8 - 8        | 4.64 deg Pass     |



Technician

Melissa Schenker

Approved

[Signature]



**Post-Test Calibration Sheets**

**Front Passenger S/N 426**

**Transportation Research Center Inc.**  
**5720 HIII 5th Dummy**  
**External Dimensions**  
**Serial No. 426 Calibration No. 33**

| Symbol | Description                                | Specification | Results | Pass |
|--------|--------------------------------------------|---------------|---------|------|
|        |                                            | mm            | mm      |      |
| A      | Total Sitting Height                       | 774.7 - 800.1 | 779     | Yes  |
| B      | Shoulder Pivot Height                      | 431.8 - 457.2 | 442     | Yes  |
| C      | Hip Pivot Height                           | 81.3 - 86.3   | 84      | Yes  |
| D      | Hip Pivot from Backline                    | 144.8 - 149.8 | 146     | Yes  |
| E      | Shoulder Pivot from Backline               | 68.6 - 83.8   | 78      | Yes  |
| F      | Thigh Clearance                            | 119.4 - 134.6 | 130     | Yes  |
| G      | Back of Elbow to Wrist Pivot               | 243.9 - 259.1 | 251     | Yes  |
| H      | Head Back to Backline                      | 43.2 - 48.2   | 45      | Yes  |
| I      | Shoulder to Elbow Length                   | 276.8 - 297.2 | 283     | Yes  |
| J      | Elbow Rest Height                          | 182.8 - 203.2 | 194     | Yes  |
| K      | Buttock Knee Length                        | 520.7 - 546.1 | 534     | Yes  |
| L      | Popliteal Height                           | 355.6 - 376.0 | 369     | Yes  |
| M      | Knee Pivot Height                          | 393.7 - 419.1 | 411     | Yes  |
| N      | Buttock Popliteal Length                   | 414.0 - 439.4 | 432     | Yes  |
| O      | Chest Depth without Jacket                 | 175.3 - 190.5 | 182     | Yes  |
| P      | Foot Length                                | 218.5 - 233.7 | 223     | Yes  |
| R      | Buttock to Knee Pivot Length               | 457.2 - 482.6 | 473     | Yes  |
| S      | Head Breadth                               | 137.1 - 147.3 | 140     | Yes  |
| T      | Head Depth                                 | 177.8 - 188.0 | 181     | Yes  |
| U      | Hip Breadth                                | 299.7 - 314.9 | 306     | Yes  |
| V      | Shoulder Breadth                           | 350.5 - 365.7 | 358     | Yes  |
| W      | Foot Breadth                               | 78.8 - 94.0   | 83      | Yes  |
| X      | Head Circumference                         | 528.3 - 548.7 | 539     | Yes  |
| Y      | Chest Circumference with Jacket            | 850.9 - 881.3 | 866     | Yes  |
| Z      | Waist Circumference                        | 759.5 - 789.9 | 774     | Yes  |
| AA     | Reference Location for Chest Circumference | 332.7 - 358.1 | 345     | Yes  |
| BB     | Reference Location for Waist Circumference | 160.0 - 170.2 | 165     | Yes  |

Technician

Melissa Schinker

Approved

[Signature]

Revised 8/10/12



## Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 426 Certification No. 33-1

Test Date: 11/25/2015

| Test Parameter                                        | Specification  | Test Results | Pass |
|-------------------------------------------------------|----------------|--------------|------|
| Temperature                                           | 18.9 - 25.5 °C | 21.5 °C      | Yes  |
| Relative Humidity                                     | 10 - 70 %      | 37 %         | Yes  |
| Peak Head Resultant Acceleration                      | 250 - 300 g    | 281.8 g      | Yes  |
| Peak Head Lateral Acceleration                        | (-15) - 15 g   | -6.0 g       | Yes  |
| Is Acceleration Curve Unimodal<br>within 10% of Peak? | Yes            | Yes          | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 12:53:22 607

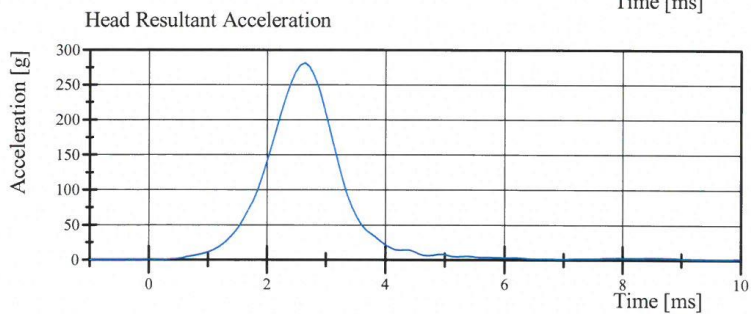
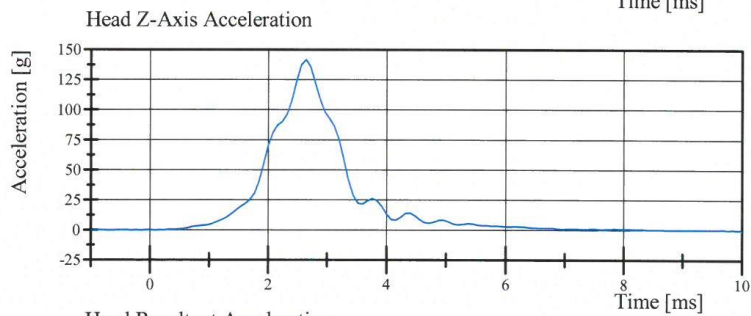
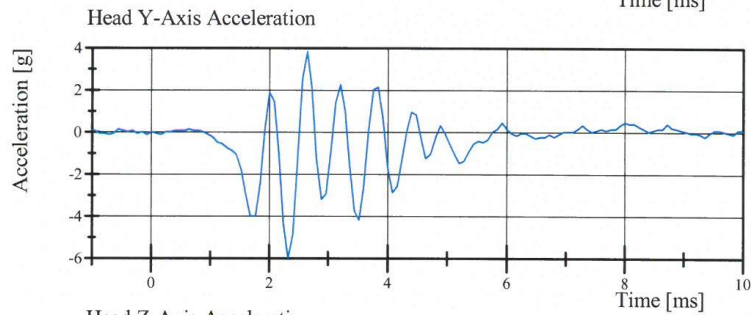
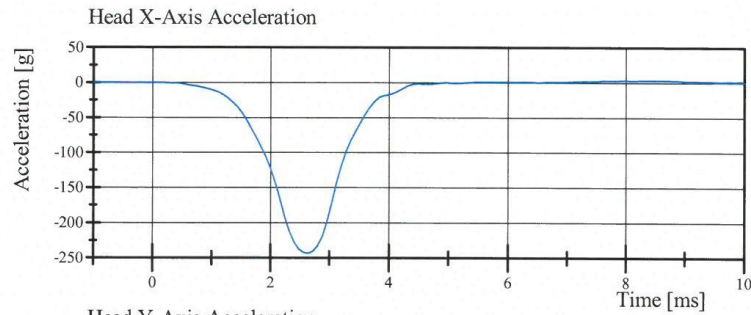


## Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 426 Certification No. 33-1

Test Date: 11/25/2015



Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 12:53:31 607





## Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 426 Certification No. 33-2

Test Date: 11/27/2015

| Test Parameter                                                         | Specification       | Test Results | Pass |
|------------------------------------------------------------------------|---------------------|--------------|------|
| Temperature                                                            | 20.6 - 22.2 °C      | 21.4 °C      | Yes  |
| Relative Humidity                                                      | 10 - 70 %           | 39 %         | Yes  |
| Pendulum Velocity                                                      | 6.89 - 7.13 m/s     | 7.111 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 10ms                         | (-2.1) - (-2.5) m/s | -2.35 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 20ms                         | (-4.0) - (-5.0) m/s | -4.83 m/s    | Yes  |
| Pendulum Integrated Velocity<br>Change at 30ms                         | (-5.8) - (-7.0) m/s | -7.00 m/s    | Yes  |
| Total Head D-Plane Rotation                                            | (-77) - (-91) °     | -77.8 °      | Yes  |
| Total Neck Occipital Condyles Moment<br>Between -77° and -91° Rotation | 69 - 83 N·m         | 76.5 N·m     | Yes  |
| Total Neck Occipital Condyles Moment<br>Decay to 10 N·m                | 80 - 100 ms         | 85.2 ms      | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 08:51:54 1693

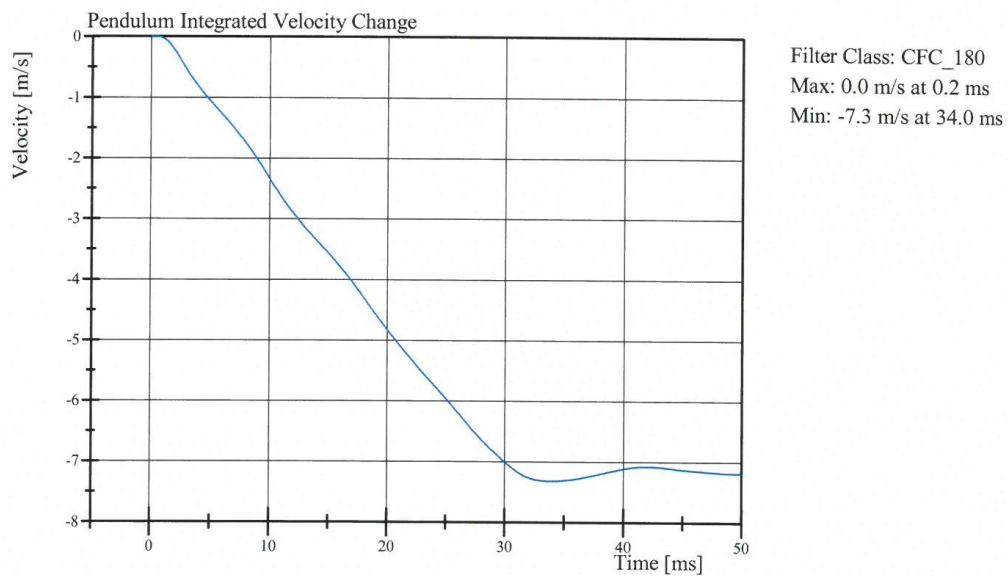
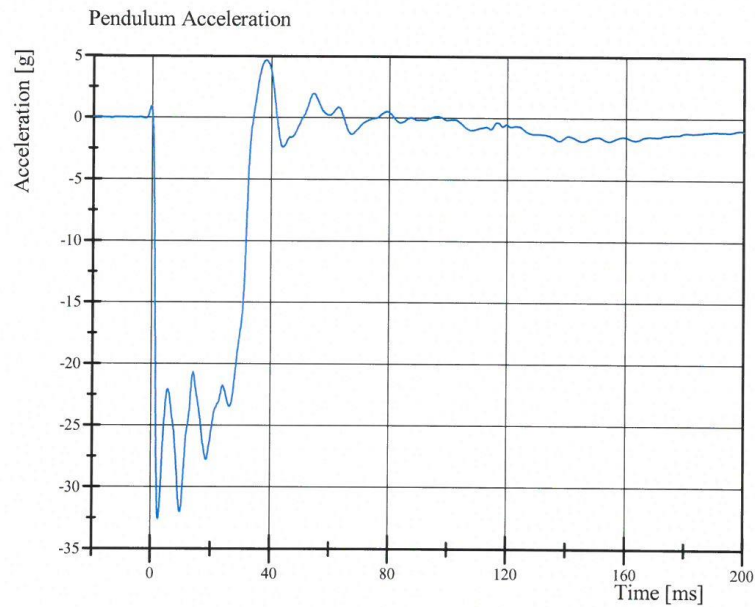


## Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 426 Certification No. 33-2

Test Date: 11/27/2015



Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 08:52:04 1693



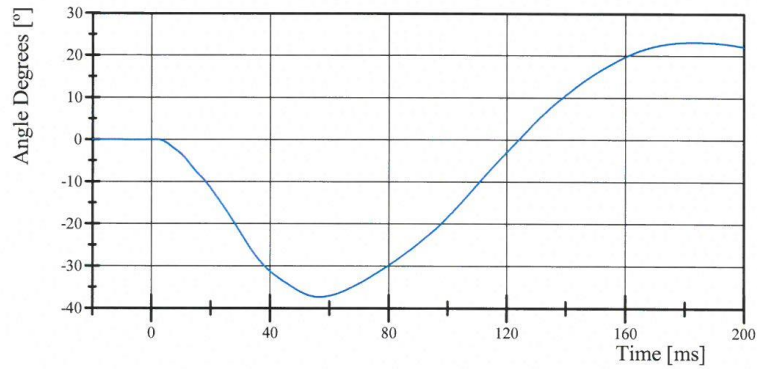
## Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 426 Certification No. 33-2

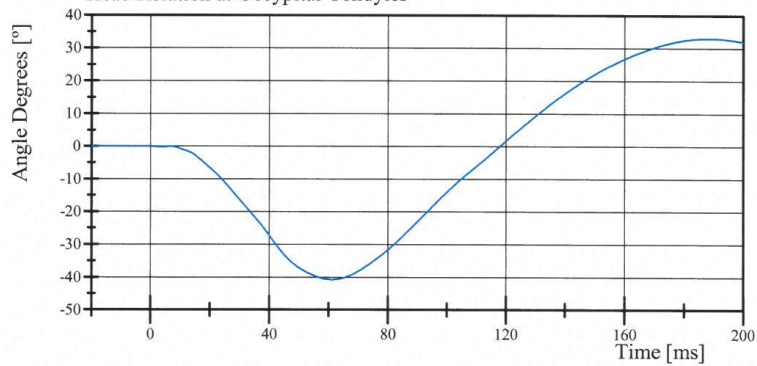
Test Date: 11/27/2015

Pot Rotation at the Base of Neck



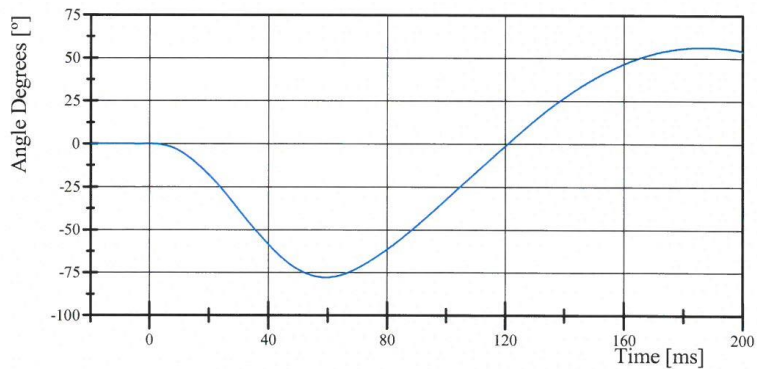
Filter Class: CFC\_60  
Max: 23.1 ° at 183.2 ms  
Min: -37.3 ° at 56.6 ms

Head Rotation at Occypital Condyles



Filter Class: CFC\_60  
Max: 32.9 ° at 188.6 ms  
Min: -40.7 ° at 61.1 ms

Total Head D-Plane Rotation



Filter Class: CFC\_60  
Max: 55.9 ° at 186.8 ms  
Min: -77.8 ° at 59.3 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 08:52:05 1693

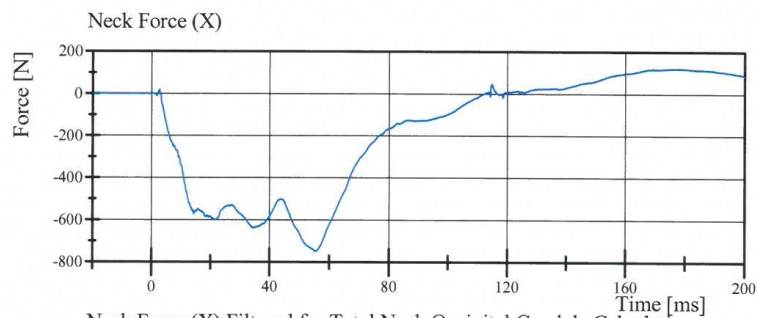


## Transportation Research Center Inc.

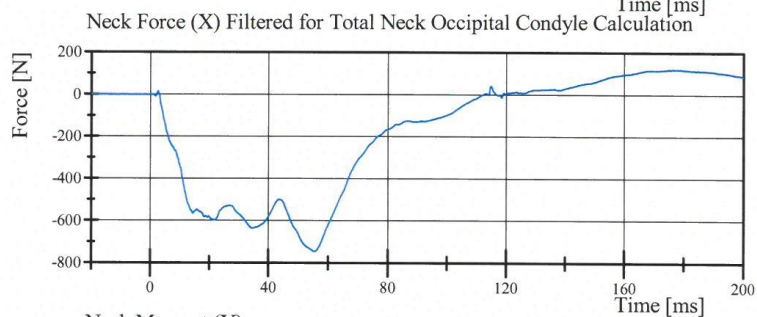
Neck Flexion

HIII 5th Serial No. 426 Certification No. 33-2

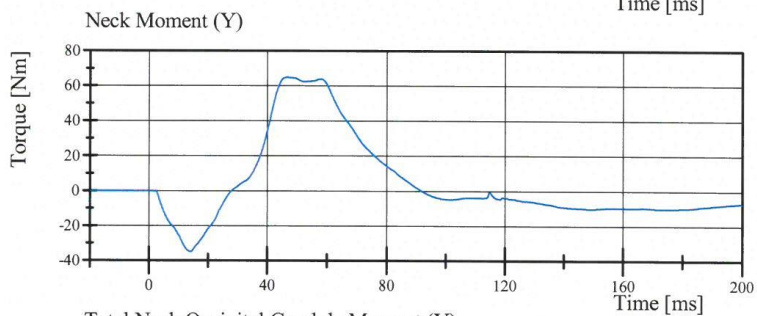
Test Date: 11/27/2015



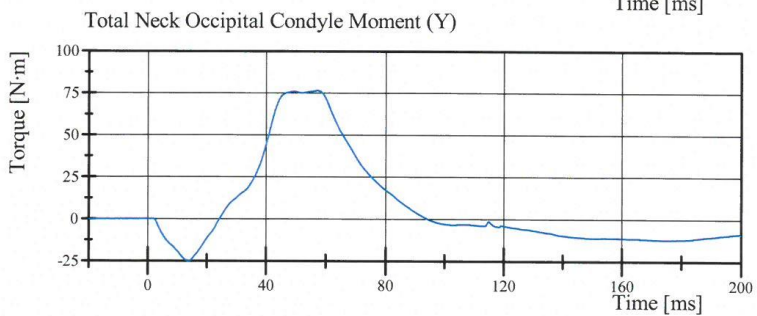
Filter Class: CFC\_1000  
Max: 120.1 N at 177.8 ms  
Min: -747.6 N at 55.5 ms



Filter Class: CFC\_600  
Max: 119.6 N at 177.9 ms  
Min: -747.0 N at 55.5 ms



Filter Class: CFC\_600  
Max: 64.9 Nm at 46.6 ms  
Min: -34.8 Nm at 14.3 ms



Filter Class: Without\_(Consta  
Max: 76.5 N·m at 57.0 ms  
Min: -25.0 N·m at 13.7 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 08:52:05 1693





## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 33-2

Test Date: 11/27/2015

| Test Parameter                                                        | Specification         | Test Results | Pass |
|-----------------------------------------------------------------------|-----------------------|--------------|------|
| Temperature                                                           | 20.6 - 22.2 °C        | 21.3 °C      | Yes  |
| Relative Humidity                                                     | 10 - 70 %             | 45 %         | Yes  |
| Pendulum Velocity                                                     | (-5.95) - (-6.19) m/s | -6.135 m/s   | Yes  |
| Pendulum Integrated Velocity<br>Change at 10ms                        | 1.5 - 1.9 m/s         | 1.87 m/s     | Yes  |
| Pendulum Integrated Velocity<br>Change at 20ms                        | 3.1 - 3.9 m/s         | 3.80 m/s     | Yes  |
| Pendulum Integrated Velocity<br>Change at 30ms                        | 4.6 - 5.6 m/s         | 5.60 m/s     | Yes  |
| Total Head D-Plane Rotation                                           | 99 - 114 °            | 106.0 °      | Yes  |
| Total Neck Occipital Condyles Moment<br>Between 99° and 114° Rotation | (-53) - (-65) N·m     | -63.3 N·m    | Yes  |
| Total Neck Occipital Condyles Moment<br>Decay to -10 N·m              | 94 - 114 ms           | 102.1 ms     | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinke

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 10:21:12 1813

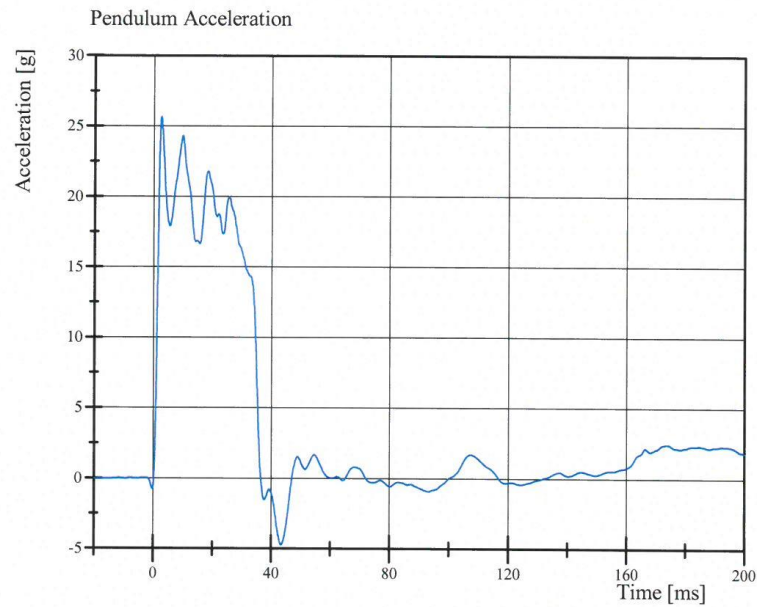


## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 33-2

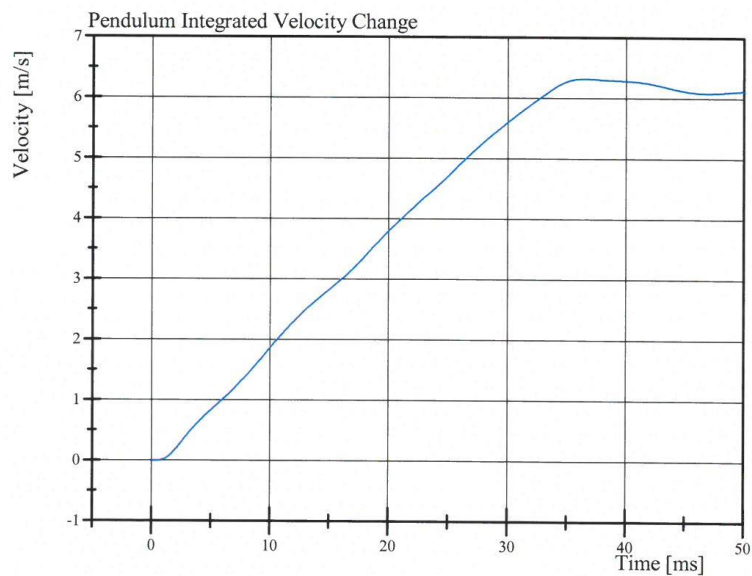
Test Date: 11/27/2015



Filter Class: CFC\_180

Max: 25.7 g at 2.5 ms

Min: -4.7 g at 43.4 ms



Filter Class: CFC\_180

Max: 6.3 m/s at 36.5 ms

Min: -0.0 m/s at 0.2 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 10:21:19 1813



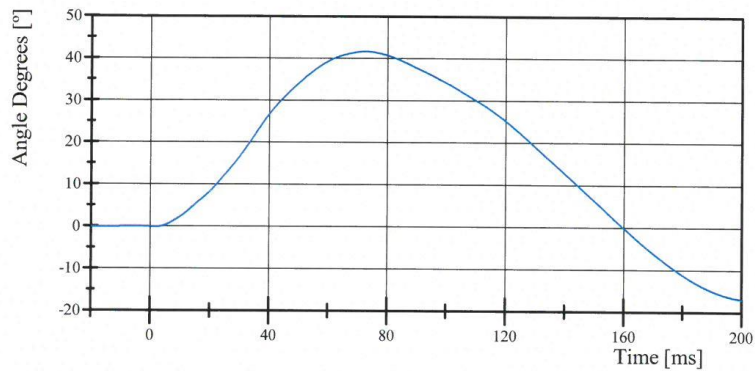
## Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 426 Certification No. 33-2

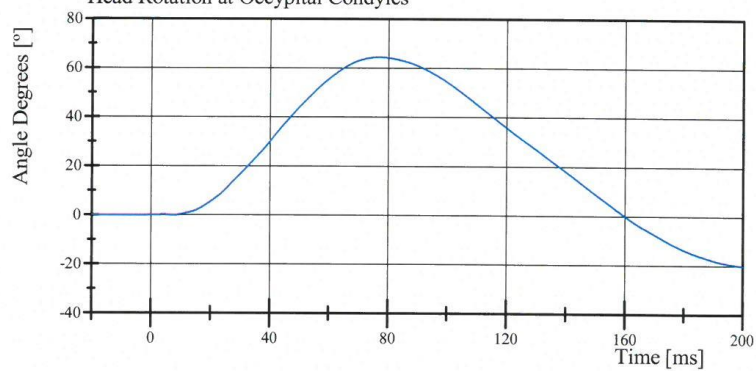
Test Date: 11/27/2015

Pot Rotation at the Base of Neck



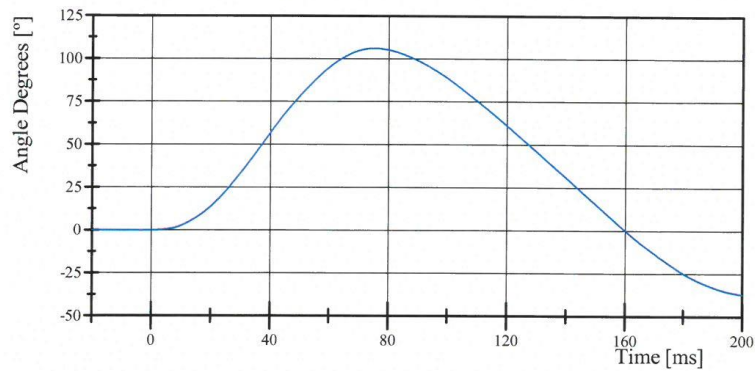
Filter Class: CFC\_60  
Max: 41.7 ° at 72.4 ms  
Min: -17.0 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC\_60  
Max: 64.5 ° at 76.7 ms  
Min: -20.2 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC\_60  
Max: 106.0 ° at 75.0 ms  
Min: -37.2 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 10:21:19 1813

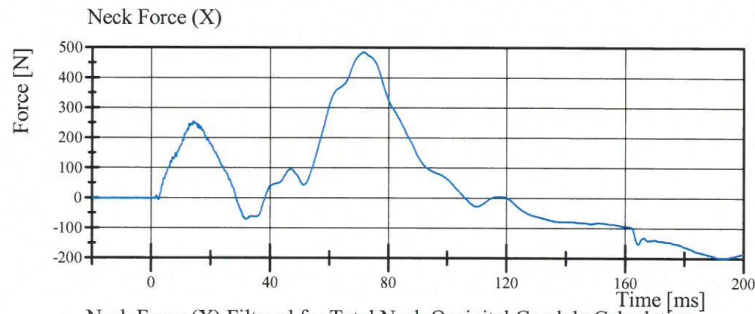


## Transportation Research Center Inc.

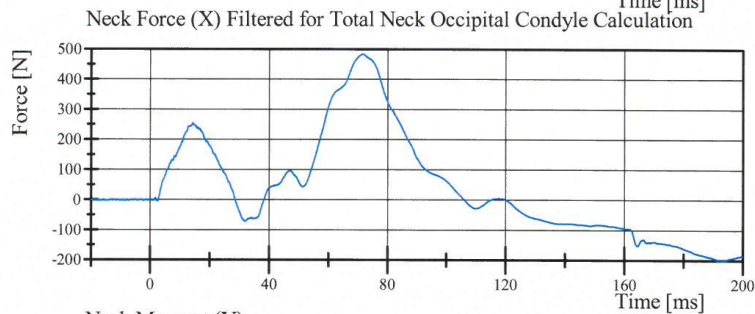
Neck Extension

HIII 5th Serial No. 426 Certification No. 33-2

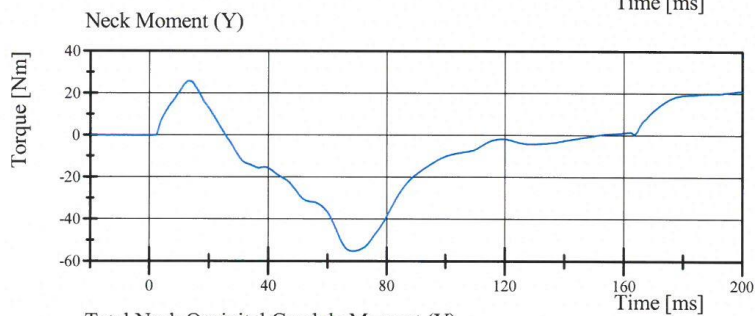
Test Date: 11/27/2015



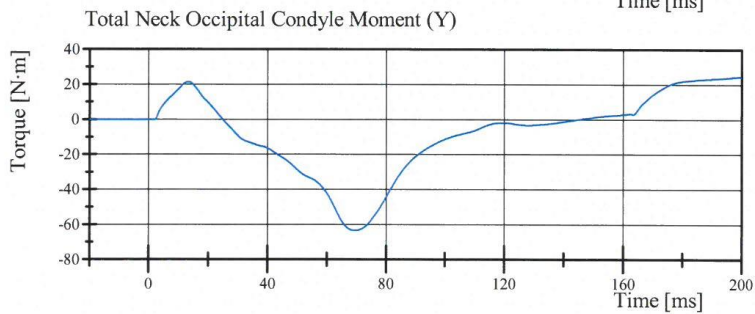
Filter Class: CFC\_1000  
Max: 485.1 N at 71.4 ms  
Min: -199.9 N at 192.5 ms



Filter Class: CFC\_600  
Max: 484.4 N at 71.5 ms  
Min: -199.4 N at 192.5 ms



Filter Class: CFC\_600  
Max: 25.8 Nm at 13.4 ms  
Min: -55.1 Nm at 68.7 ms



Filter Class: Without\_(Consta  
Max: 24.3 N·m at 199.9 ms  
Min: -63.3 N·m at 69.5 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.27.2015 10:21:20 1813





## Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 426 Certification No. 33-5

Test Date: 11/25/2015

| Test Parameter                                                   | Specification         | Test Results | Pass |
|------------------------------------------------------------------|-----------------------|--------------|------|
| Temperature                                                      | 20.6 - 22.2 °C        | 21.4 °C      | Yes  |
| Relative Humidity                                                | 10 - 70 %             | 37 %         | Yes  |
| Probe Velocity                                                   | 6.59 - 6.83 m/s       | 6.787 m/s    | Yes  |
| Probe Force Peak Between 50.0 mm<br>and 58.0 mm Chest Deflection | (-3,900) - (-4,400) N | -4,268.2 N   | Yes  |
| Probe Force Peak Between 18.0 mm<br>and 50.0 mm Chest Deflection | $\geq$ (-4,600) N     | -4,427.0 N   | Yes  |
| Maximum Chest Compression                                        | (-50) - (-58) mm      | -50.5 mm     | Yes  |
| Internal Hysteresis                                              | 69 - 85 %             | 73.7 %       | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schinker

Approved

[Signature]

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 11:25:56 396

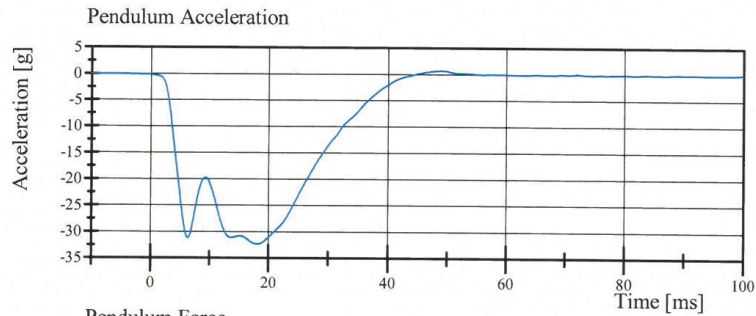


## Transportation Research Center Inc.

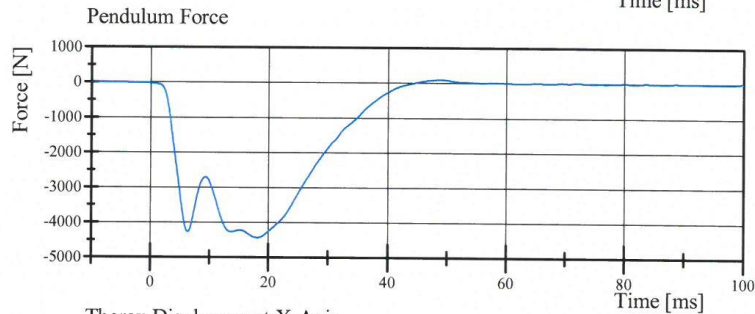
Front Thorax

HIII 5th Serial No. 426 Certification No. 33-5

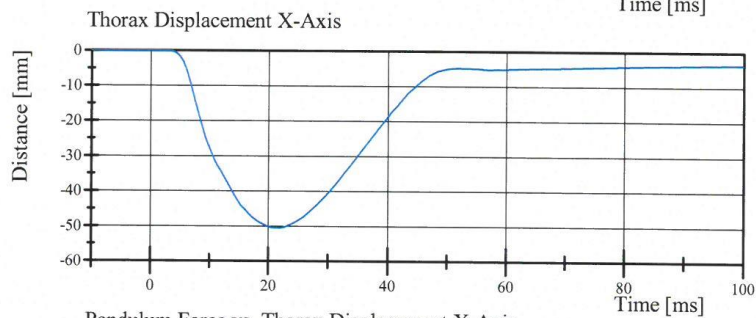
Test Date: 11/25/2015



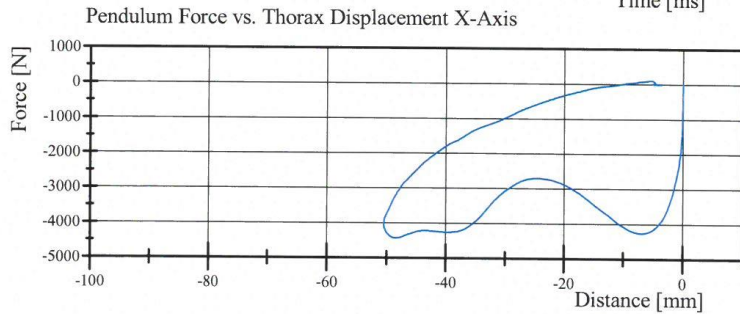
Filter Class: CFC\_180  
Max: 0.7 g at 48.8 ms  
Min: -32.3 g at 18.1 ms



Filter Class: CFC\_180  
Max: 98.8 N at 48.8 ms  
Min: -4,427.0 N at 18.1 ms



Filter Class: CFC\_600  
Max: 0.0 mm at -3.9 ms  
Min: -50.5 mm at 21.4 ms



Filter Class: CFC\_180  
Max: 98.8 N at -5.4 mm  
Min: -4,427.0 N at -48.5 mm

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 11:26:07 396



## Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 5th Serial No. 426 Certification No. 33-2

Test Date: 11/25/2015

| Test Parameter    | Specification         | Test Results | Pass |
|-------------------|-----------------------|--------------|------|
| Temperature       | 18.9 - 25.6 °C        | 21.4 °C      | Yes  |
| Relative Humidity | 10 - 70 %             | 37 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s       | 2.122 m/s    | Yes  |
| Peak Femur Force  | (-3,450) - (-4,060) N | -3,762.9 N   | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schimke

Approved

[Signature]

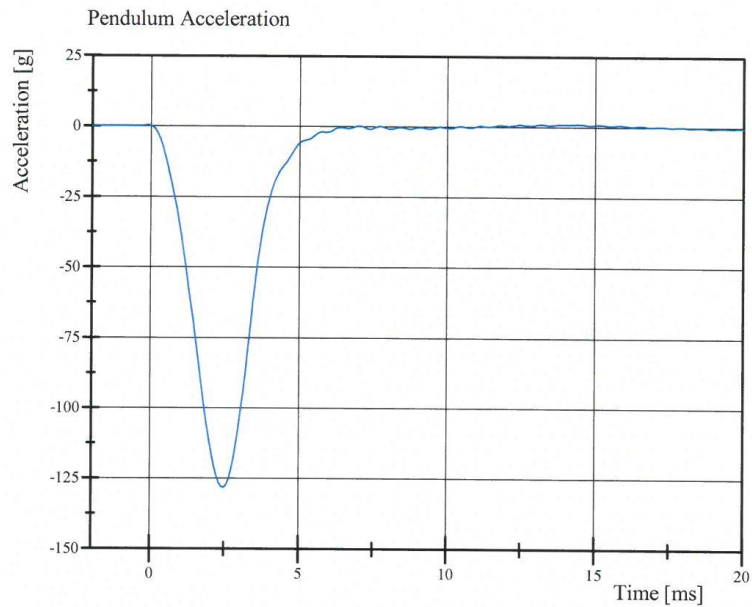
Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.201508:05:45 1728

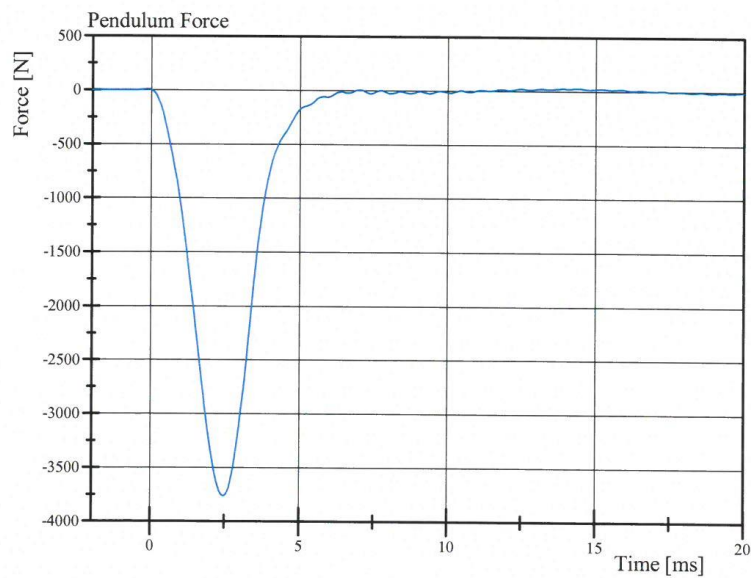


## Transportation Research Center Inc.

Left Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 33-2  
Test Date: 11/25/2015



Filter Class: CFC\_600  
Max: 0.9 g at 14.4 ms  
Min: -128.3 g at 2.5 ms



Filter Class: CFC\_600  
Max: 26.3 N at 14.4 ms  
Min: -3,762.9 N at 2.5 ms

Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 08:05:54 1728





## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 33-1  
Test Date: 11/25/2015

| Test Parameter    | Specification         | Test Results | Pass |
|-------------------|-----------------------|--------------|------|
| Temperature       | 18.9 - 25.6 °C        | 21.4 °C      | Yes  |
| Relative Humidity | 10 - 70 %             | 39 %         | Yes  |
| Probe Velocity    | 2.08 - 2.13 m/s       | 2.118 m/s    | Yes  |
| Peak Femur Force  | (-3,450) - (-4,060) N | -3,556.8 N   | Yes  |

**Test meets specifications.**

**Comments:**

Technician

Melissa Schenker

Approved

[Signature]

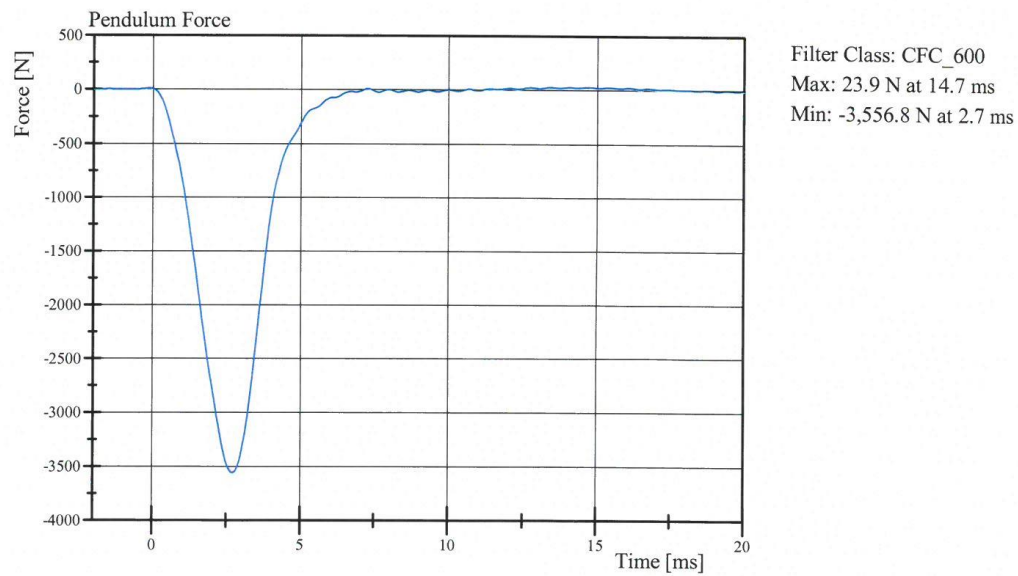
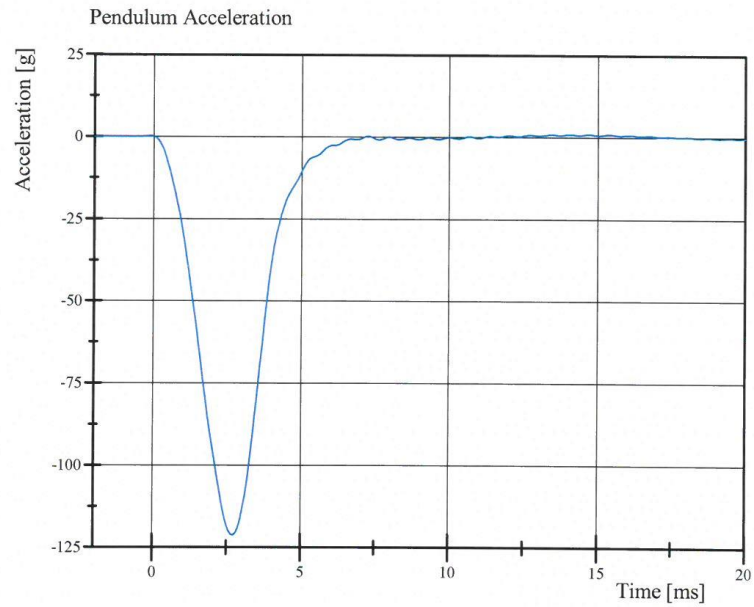
Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 08:13:26 1746



## Transportation Research Center Inc.

Right Knee Femur Response Test  
HIII 5th Serial No. 426 Certification No. 33-1  
Test Date: 11/25/2015



Specification Source: CFR49 Part 572 Subpart O  
with Polarity in accordance with J211

11.25.2015 08:13:33 1746



# Transportation Research Center Inc.

Hybrid III Small Female Torso Flexion



Serial Number: 426

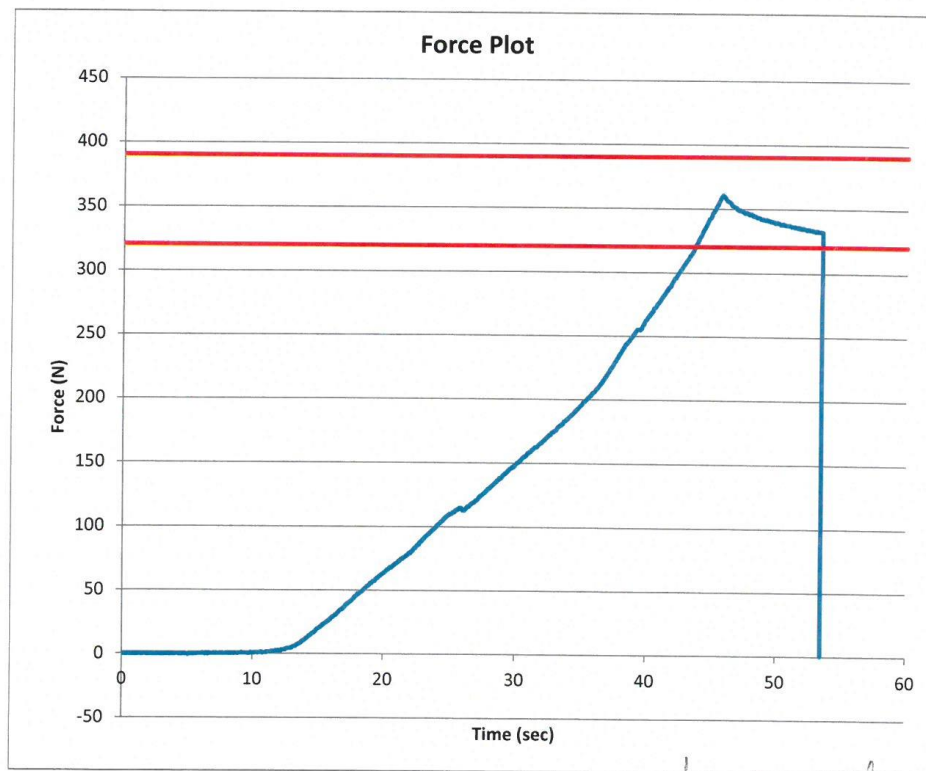
Date: 11/24/2015

Test Number: 1

Time: 14:35

Comments:

| TEST PARAMETER           | SPECIFICATION |        | TEST RESULTS |         |      |
|--------------------------|---------------|--------|--------------|---------|------|
| Temperature              | 18.9          | - 25.6 | 21.2         | °C      | Pass |
| Humidity                 | 10            | - 70   | 39           | %       | Pass |
| Average Angular Velocity | 0.5           | - 1.5  | 0.86         | deg/sec | Pass |
| Initial Angle            | 0             | - 20   | 16.65        | deg     | Pass |
| Peak Force at 45.11°     | 320           | - 390  | 360.33       | N       | Pass |
| Final Angle              | -8            | - 8    | 4.74         | deg     | Pass |



Technician

Melissa Schenker

Approved

[Signature]