Proposal of Additional Test Campaign for Minimum Assessment rev.1

IWG WGWT
15 December 2021

JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER
Although JASIC understands capacity constraints, following assessment items are crucial to improve precision.

- Minimum assessment items

<table>
<thead>
<tr>
<th>Assessment items</th>
<th>Expected Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day to day variation</td>
<td>All test centers</td>
</tr>
<tr>
<td>Validation of coefficients</td>
<td></td>
</tr>
<tr>
<td>Effect of water depth/road surface roughness</td>
<td>Test center which performed water depth evaluation of analytical plan</td>
</tr>
</tbody>
</table>

**JASIC proposes MINIMUM assessment plans**
2. MINIMUM Test Plan

1) Assess day to day variation of Molded SRTTworn and equations of calculations

- Candidate tyres:
  - Candidate 1(lowest $\mu$peak), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13: 3PMSF
  - Candidate 14(lowest $\mu$peak), 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26: Normal

- Participants: All test centers

- Test sequence:
  
  Day 1
  Molded SRTTw – Buffed SRTTw – Candidate 1 – Candidate 2 – Molded SRTTw – SRTTn – Candidate 3 – Candidate 4 – Molded SRTTw
  
  Day 2
  Molded SRTTw – Buffed SRTTw – Candidate 1 – Candidate 5 – Molded SRTTw – SRTTn – Candidate 6 – Candidate 7 – Molded SRTTw
  
  Day 3
  Molded SRTTw – Buffed SRTTw – Candidate 1 – Candidate 8 – Molded SRTTw – SRTTn – Candidate 9 – Candidate 10 – Molded SRTTw
  
  Day 4
  Molded SRTTw – Buffed SRTTw – Candidate 1 – Candidate 11 – Molded SRTTw – SRTTn – Candidate 12 – Candidate 13 – Molded SRTTw
  
  Day 5
  Molded SRTTw – Buffed SRTTw – Candidate 14 – Candidate 15 – Molded SRTTw – SRTTn – Candidate 16 – Candidate 17 – Molded SRTTw
  
  Day 6
  Molded SRTTw – Buffed SRTTw – Candidate 14 – Candidate 18 – Molded SRTTw – SRTTn – Candidate 19 – Candidate 20 – Molded SRTTw
  
  Day 7
  Molded SRTTw – Buffed SRTTw – Candidate 14 – Candidate 21 – Molded SRTTw – SRTTn – Candidate 22 – Candidate 23 – Molded SRTTw
  
  Day 8
  Molded SRTTw – Buffed SRTTw – Candidate 14 – Candidate 24 – Molded SRTTw – SRTTn – Candidate 25 – Candidate 26 – Molded SRTTw
2. MINIMUM Test Plan

2) Water depth / road surface roughness

- Participants: Test center which performed water depth evaluation of analytical plan

- Test sequence:
  Day 1  Water depth 0.5mm
  Molded SRTTw – Buffed SRTTw – Candidate A – Candidate B – Molded SRTTw – SRTTn-Candidate C – Molded SRTTw

  Day 2  Water depth 1.0mm
  Molded SRTTw – Buffed SRTTw – Candidate A – Candidate B – Molded SRTTw – SRTTn-Candidate C – Molded SRTTw

  Day 3  Water depth 1.5mm
  Molded SRTTw – Buffed SRTTw – Candidate A – Candidate B – Molded SRTTw – SRTTn-Candidate C – Molded SRTTw

  Day 4  Water depth 2.0mm
  Molded SRTTw – Buffed SRTTw – Candidate A – Candidate B – Molded SRTTw – SRTTn-Candidate C – Molded SRTTw
JASIC recommends to produce Molded SRTT worn: **107 tyres**

Although the test volume will be reduced, the same quantity of Molded SRTTworn as Buffed SRTTworn at the first test campaign will be necessary.

Because all sequences will specify Molded SRTTworn as a reference.

In addition, spare Molded SRTTworn should be kept in enough quantity, especially for the vehicle method because wear rate of SRTTworn is fast.

<table>
<thead>
<tr>
<th></th>
<th>Trailer method</th>
<th>Vehicle method</th>
<th>Sub total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participated test center</td>
<td>9</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Number of 1st test campaign</td>
<td>18</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>Necessary quantity for additional test campaign</td>
<td>18</td>
<td>60</td>
<td>78</td>
</tr>
<tr>
<td>Spare (1set/lab)</td>
<td>9</td>
<td>20</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>107</strong></td>
</tr>
</tbody>
</table>
Given that:

• JASIC understands that the limited volume (30 – 40 unit) of Molded SRTTrown will be available by end of March (1\textsuperscript{st} lot).

• Improvement of precision is crucial. 107 unit of Molded SRTTrown are necessary.

• Additional 70+ tyres of molded SRTTrown should be available by May (2\textsuperscript{nd} lot), within according to the common sense as tyre manufactures.

\textbf{JASIC proposes the timeline of Step 2 assessments assuming that total 100+ molded SRTTrown could be available by May.}
Option 1: Work on the trailer method first

**Timeline**

- **Mold SRTT*Tworn delivery**: Mar. 2022 (1\textsuperscript{st} lot), May 2022 (2\textsuperscript{nd} lot)
- **Additional test campaigns**: Apr. 2022*- Sep. 2022
  - *1\textsuperscript{st} lot of Molded SRTT*Tworn will be used preferentially for testing the trailer method

Submitting working document for Trailer Method : Jun. 2022
Submitting informal document for Vehicle Method : Nov. 2022

<table>
<thead>
<tr>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q</td>
<td>2Q</td>
</tr>
<tr>
<td><strong>Molded SRTT*Tworn Preparation</strong></td>
<td><strong>May 2\textsuperscript{nd} lot SRTT*Tworn delivered</strong></td>
</tr>
<tr>
<td>End Mar. 1\textsuperscript{st} lot SRTT*Tworn delivered</td>
<td><strong>Validation Analysis</strong></td>
</tr>
<tr>
<td><strong>Test campaigns Trailer Method</strong></td>
<td><strong>Jun. Working doc</strong></td>
</tr>
<tr>
<td><strong>Test campaigns Vehicle test</strong></td>
<td><strong>Validation Analysis</strong></td>
</tr>
</tbody>
</table>
Option 2: Extend the timeline

Timeline

Mold SRTTworn delivery: Mar. 2022 (1\(^{st}\) lot), May 2022 (2\(^{nd}\) lot)
Additional testing: Apr. 2022* - Sep. 2022
* 1\(^{st}\) lot of Molded SRTTworn will be used preferentially for testing the 3PMSF tyres

Submission of working document: End of Oct 2022