Status report / Activity Plan of Evap Task Force

18th April, 2017
Mayumi “Sophie” Morimoto (JASIC)
With the strong suggestion from EC and ACEA, TF continue discussion on the Sealed fuel tank system test procedures and other re-opened issues from approved EVAP gtr.

TF plan to submit draft gtr text as Informal document during its 75th GRPE in June 2017.
Discussion points of Sealed Tank System Test Procedure

**Non Sealed Tank System Test procedure**

- **Fuel drain and refill**
  - 15% refill
- **Pre-conditioning**
- **Soak**
  - 23 +/- 3 °C
- **Canister loading**
  - 2g breakthrough
- **Test drive**
  - WLTC purge cycle
- **Hot Soak**
  - Min 23 °C / Max 31 °C for 60 min
- **Soak**
  - 23 +/- 3 °C
- **1st and 2nd day Diurnal**
  - Start 20 °C to Max 35 °C 24 hrs for 2 days

**Sealed Tank System Test Procedure**

- **Drain and refill**
  - 15% refill
- **Tank pressure relief**
  - by opening fuel lid and/or cap
- **Canister loading**
  - 2g breakthrough
- **Canister purge**
  - 85% fuel consumed equivalent
- **Soak inside SHED**
  - temperature, duration,
- **Canister loading**
  - loading by opening the fuel lid
  - overflow vapor
- **Fuel drain and refill**
  - 40% refill to be consisted with non-sealed system
- **Battery fully charge**
  - OVC-HEV only

**Relief Pressure Requirement for Sealed Tank System**

- "A series of procedure" OR "Separate procedure for puff loss loading volume"

2g breakthrough to be replaced by puff loss loading.
### Sealed Tank System Test Procedure

#### Selection of test vehicle

<table>
<thead>
<tr>
<th>Test Drive</th>
<th>WLTC purge cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soak</td>
<td>23 +/- 3 °C</td>
</tr>
<tr>
<td>Canister loading</td>
<td>2g breakthrough</td>
</tr>
<tr>
<td>Pre-conditioning</td>
<td></td>
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<td>Tank pressure relief</td>
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<td>Soak inside SHED</td>
<td>temperature, duration, etc.</td>
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<tr>
<td>Canister loading</td>
<td>2g breakthrough</td>
</tr>
<tr>
<td>Canister purge</td>
<td>85% fuel consumed equivalent</td>
</tr>
<tr>
<td>Canister loading</td>
<td>overflow vapor limit</td>
</tr>
<tr>
<td>Fuel drain and refill</td>
<td>40% refill to be consistent with non-sealed system</td>
</tr>
<tr>
<td>Battery fully charge</td>
<td>OVC-HEV only</td>
</tr>
</tbody>
</table>

“A series of procedure” OR “Separate procedure for puff loss loading volume”

2g breakthrough to be replaced by puff loss loading.
## Main Proposals & Comments from TF members

<table>
<thead>
<tr>
<th>Discussion points</th>
<th>EC Proposals</th>
<th>JAPAN Positions</th>
<th>(Ref) Comments from other Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E:</strong> Limit for overflow puff loss emissions after the tank depressurization</td>
<td>Add up the result with HSL/2DBLs/2PFs and those should be lower than 2g</td>
<td>Overflow puff loss emission shall be less than 0.5 g or negligible</td>
<td>ACEA: Overflow puff loss emission shall be less than 0.5 g</td>
</tr>
<tr>
<td><strong>F:</strong> Requirement of tank pressure before refueling</td>
<td>Refueling cannot be done until the pressure drops below ambient pressure + 2.5kPa</td>
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<td>VW: This requirement should only applied for type approval test.</td>
</tr>
<tr>
<td><strong>G:</strong> Definition of sealed fuel tank system (Re-opened issue)</td>
<td>Keep as current EVAP gtr</td>
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<td>BMW: Change it to allow the system which can vent on the first day of DBL but no venting while subsequent DBLs</td>
</tr>
<tr>
<td><strong>H:</strong> Selection of test vehicle within EVAP family (Re-opened issue)</td>
<td>TBD</td>
<td>Keep as current EVAP gtr</td>
<td>BMW: Write the text on which vehicle is the worst-case ACEA: the worst-case should be Vehicle H with highest cycle energy that refer it on the gtr#15 text</td>
</tr>
</tbody>
</table>

Refer to appendix for latest text of draft gtr
No fuel vapor flow into the canister during parking because the control valve kept closed.

Fuel vapor into the puff loss canister only before refueling.

(The relief pressure valve opens when the refueling event starts, then closes after tank pressure goes down.)
Thank you very much for your attention!