

Japan proposal EVAP

20 May 2014

Test condition

Annex B3.3. Sealed Housing for Evaporation Determination (SHED) test procedure

4.3.1.5. The fuel and vapour may be artificially heated to the starting temperatures of 288.7 K (15.5 ° C) and 294.2 K (21.0° C) \pm 1 K respectively.

Addition as followed.

•An initial vapor temperature up to 5° C above 21° C may be used. When the fuel temperature has been raised to 5.5° C below the vapor temperature by following the Tf function, the remainder of the vapor heating profile shall be followed.

Ref. 13 CCR § 1976(California Code Regulations title 13 Div.3 Chap.1 Art.2 § 1976) PART IV. 4. Test Procedure (iii)

Justification

Since the room temperature is defined as from 20 to 30°C, it is difficult to control steam temperature at 21 \pm 1° C at the start of the test.

If the vapor temperature is defined at 5° C above 21 \pm 1° C , test condition of vapor temperature becomes reasonable. However, vapor pressure and evaporative emission may increase in this case.

Definition of temp.

Annex B3.3.

4.3.1.5.

288.5

The fuel and vapour may be artificially heated to the starting temperatures of ~~288.7~~ K (15.5 ° C) and ~~294.2~~ K (21.0 ° C) \pm 1 K respectively.

294.0

4.3.1.6

As soon as the fuel temperature reaches 287.0 K (14.0 ° C):

- (1) Install the fuel filler cap(s);
- (2) Turn off the purge blowers, if not already off at that time;
- (3) Close and seal enclosure doors.

288.5

As soon as the fuel reaches a temperature of ~~288.7~~ K (15.5 ° C) \pm 1 K the test procedure shall continue as follows:

In the current gtr proposal, “273.2K = 0°C” and “273K=0°C “ are confused.

We propose to unify the phrase as the latter, “273K=0°C “ , in accordance with the gtr No.15 (WLTP).

Wltp-gtr

Annex5 Test equipment & calibrations

4.1.3.1.2. All heated parts shall be maintained at a temperature of 463 K ($190\text{ }^{\circ}\text{C}$) $\pm 10\text{ K}$ by the heating system.

4.1.4.4.1. The analyser shall be of the heated flame ionization type with detector, valves, pipework, etc., heated to 463 K ($190\text{ }^{\circ}\text{C}$) $\pm 10\text{ K}$. It shall be calibrated with propane gas expressed equivalent to carbon atoms (C1).

4.2.1.2.3. The sampled dilute exhaust gas shall be maintained at a temperature above 293 K ($20\text{ }^{\circ}\text{C}$) and below 325 K ($52\text{ }^{\circ}\text{C}$) within 20 cm upstream or

5.4.3.1. The response factor (R), for a particular hydrocarbon compound is the ratio of the FID C1 reading to the gas cylinder concentration, expressed as ppm C1.

The concentration of the test gas shall be at a level to give a response of approximately 80 per cent of full-scale deflection, for the operating range. The concentration shall be known to an accuracy of ± 2 per cent in reference to a gravimetric standard expressed in volume. In addition, the gas cylinder shall be pre-conditioned for 24 hours at a temperature between 293 K and 303 K (20 and $30\text{ }^{\circ}\text{C}$).

Definition of breakthrough

Annex B.3.4.

2.1.1.3.1	The test canister shall be loaded each time to 2000 ± 100 mg breakthrough detected by:
2.1.1.3.1.1	FID analyser reading (using a mini-SHED or similar) or 5000 ppm instantaneous reading on the FID occurring at the (clean air) vent port; or
2.1.1.3.1.2	Gravimetric test method using the difference in mass of the test canister charged to 2000 ± 100 mg breakthrough and the purged canister.



Delete Tolerance

2.1.1.3.1	The test canister shall be loaded each time to 2000 ± 100 mg breakthrough detected by:
2.1.1.3.1.1	FID analyser reading (using a mini-SHED or similar) or 5000 ppm instantaneous reading on the FID occurring at the (clean air) vent port; or

2.1.1.3.2. Gravimetric test method using the difference in mass of the test canister charged to 2000 ~~± 100~~ mg breakthrough and the purged canister. In this case the test equipment shall be capable of measuring the mass with a minimum accuracy in the range between 0 and +100 mg.

Proposal

The tolerance should be set as 0 and +100 mg under para. 2.1.3.2, and the tolerance under para. 2.1.1.3 is not necessary because this paragraph simply defines the breakthrough.

Family definition

Annex B3.7.

2.1.5. the fuel storage volume is within a range of +/- 10 %



We propose to delete the positive tolerance for the tank because family requirements shall be set under the disadvantageous conditions.