

Indian comments on major outstanding issues on **EPPR-12-05e**

6th Sept 2015

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1. Explanation of Scope

Background

- Indian had proposed change in scope to (Item 2 of Section B1) as:
“Two- [and three-]wheeled vehicles [of category 3-1, 3-3 and 3-2, 3-4, 3-5 as defined in S.R. 1, concerning the common definitions of vehicle categories, masses and dimensions document TRANS/WP29/1045e, as amended by ECE/TRANS/WP29/1045/Amend.1,]equipped with a PI engine in accordance with table B.1.-1” (Sl.No. 2 of EPPR-11-07)
- The reasons for this were:
 - Clarity on vehicles to which this GTR will be applicable.
 - To cover 3 wheelers since:
 - the changes required can be covered.
 - Harmonization of Type IV test for 3W can also be achieved
- However:
 - EU had reservations of being bound by the current SR1.
 - Japan had reservation on including 3w since priority is to prepare documents first for 2W.

- India appreciates the concerns of EC and certain flexibility is required in applying this GTR (from the proposal from EU proposal for amending SR1.)
- India has attempted to take care of EC concern by building flexibility of choice to the Contracting Parties in deciding the applicability of evaporative emission class A, B or C in proposed by amending clauses 2.4.3, as (Sl. No.2 of EPPR-11-07)

“2.4.3 For any type of Category 3-3 vehicle the Contracting Party may decide to apply one test procedure only from the three listed evaporative emission requirement classes of a vehicle laid down in point 2.3.”

- India believes this to be a compromise solution, that will address the concerns expressed by EC, till the amendment of SR1 is finalized.

Japan Reservation on inclusion of 3-2 & 3-5

- India accepts the Japan position that priority should be given to 3-3 first.
- While in some of the other GTR's (e.g. for Types I, IV, V, VIII etc) it would not be possible to incorporate 3 wheelers.
- But for Type IV test, it is possible to do so without much effort.

In view of the above, Indian proposal for Scope may be accepted

2. Family definition

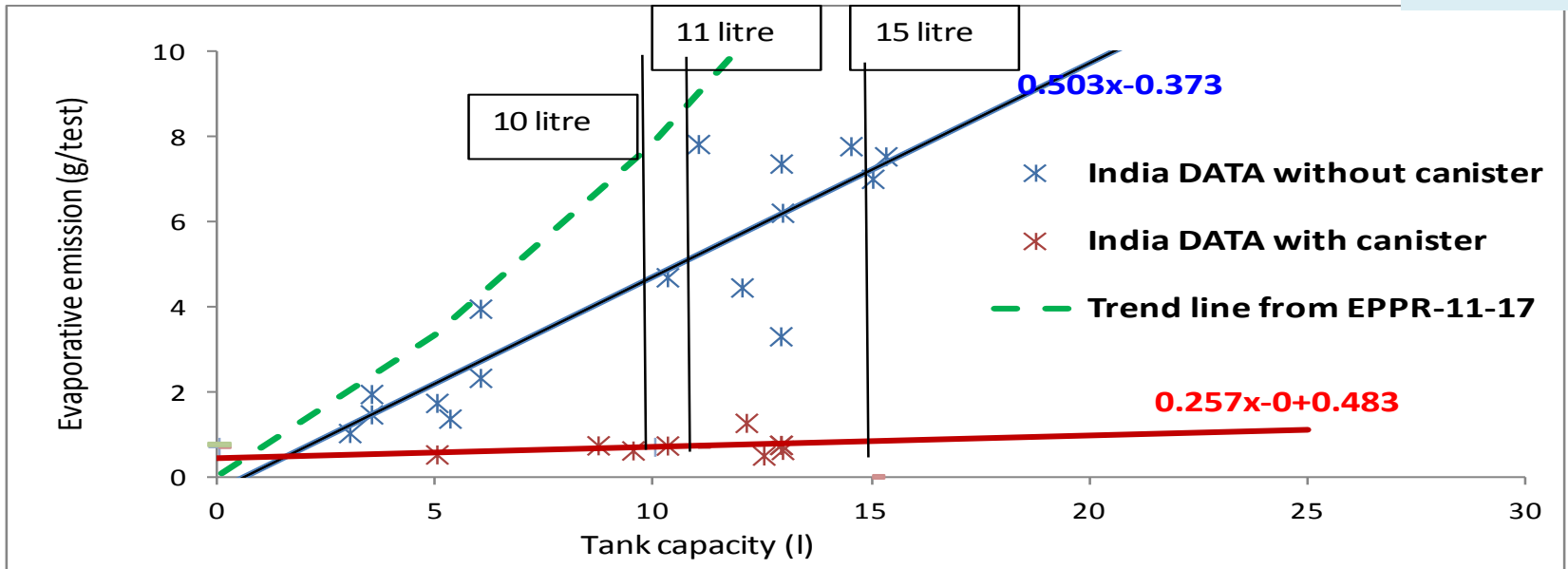
Fuel tank capacity

Background

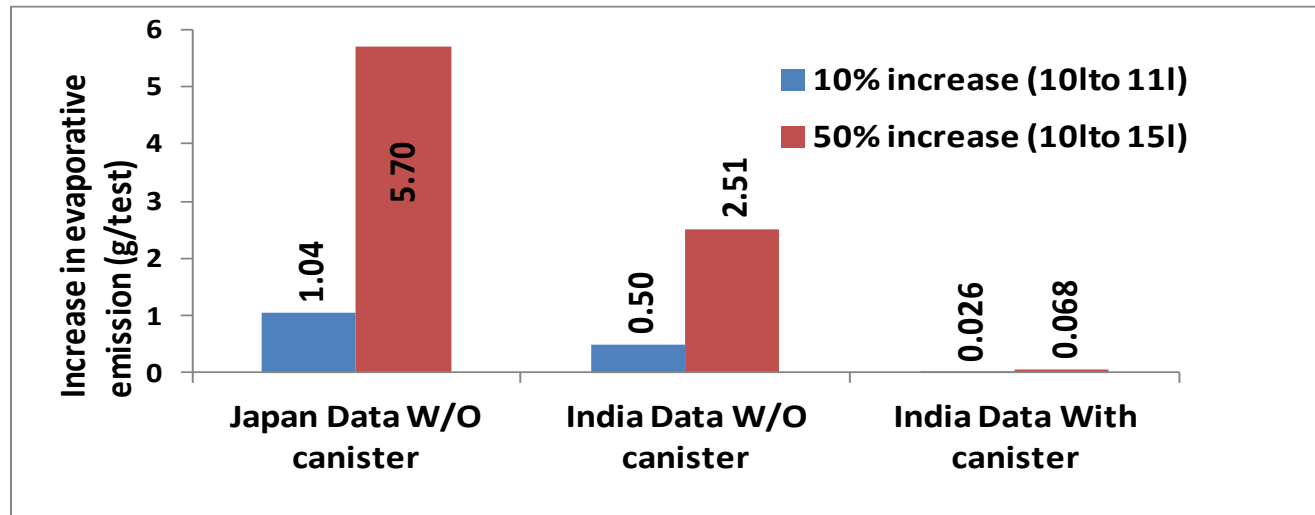
- India had proposed the family definition for fuel tank capacity to be +10%/-50%. (Item 2.2.6 of table 3.6.1 of EPPR 11-07)
- Japan had provided data that an increase in fuel tank capacity would affect the Evaporative emission considerably. (EPPR-11-07)
- However this study is based on evaporative emission from two wheelers without canister
- The following is the analysis using data generated in India:
 - With canister
 - Without canister
 - Test procedure as per CARB

Comparison of India and Japan data

Fuel tank volume



The increase in Evapo emission for increase in fuel tank capacity from 10 l to 11l (10% increase) and 10 l to 15l (50% increase) is shown below:



Observations

- Without Canister, the increase in the evaporative emission is significantly high in both Indian and Japanese data
- But, increase is marginal on the data with canister, at 10% increase of fuel tank capacity
- There is a possibility of a two wheeler say less than ~4l capacity, complying with evapo emission requirements without a canister.
 - In such cases +10% need not be permitted.

Learnings from EPPR-07-18-Rev1e

Fuel tank
volume

- Japanese expert had presented EPPR 07-18 Rev1 in the 7 EPPR.
- This report contained study on 4 vehicles and 3 fuels and had found no difference in evaporative emission. (fuel tank capacity varying from **5l to 14l**).
- The report concludes (Page 5) that:
 - Evaporative emissions of all vehicles are quite lower than test limit (2,000 mg/test), because all vehicle are equipped with carbon canister.
 - Fuel types do not affect evaporative emissions.
 - Correlation with vehicle types (displacement, **fuel tank capacity** and carbon canister size, etc.) are not clearly observed.
- This report also states that (Page 8)
 - **Carbon canister drastically reduces evaporative emissions**, and effect of fuel type on evaporative emission does not observed.

Indian proposal

- India therefore proposes that
- *“the fuel storage capacity declared by the manufacturer is within a range of*
 - *+10 /- 50 % of the nominal volume, if fitted with an evaporative control system and*
 - *+0/-50% if **not** fitted with an evaporative control system.”*

3. Linkage durability test

- India had suggested deletion of durability requirements for linkages, valves etc. for time being. (Sl. No. 39 of EPPR-11-07)
- Till now, no reference SAE document where the details of test procedure are described has been located.
- India would like to reiterate that without a clearly defined test procedure, it will not be appropriate to include these requirements in GTR.
- Hence, this requirement may be kept for future work, and suggested to relocate in Section A so that it can be revisited once the information is available.

4. Others

4. Others

1. Section A:

- Based on the final decisions on various issues in Section B, consequential changes are essential in Section A.
- India is looking forward to the proposal from EC by end September.
- India will propose necessary changes if any.

2. Definition of useful life: (3.12 of Section B.1)

Since this GTR is related to only evaporative emission, the definition may be reworded as:

‘Useful life’ means the relevant period of distance and/or time over which compliance with ~~the relevant gaseous and particulate~~ **evaporative hydrocarbon** emission limits has to be assured.

Thanks for your attention