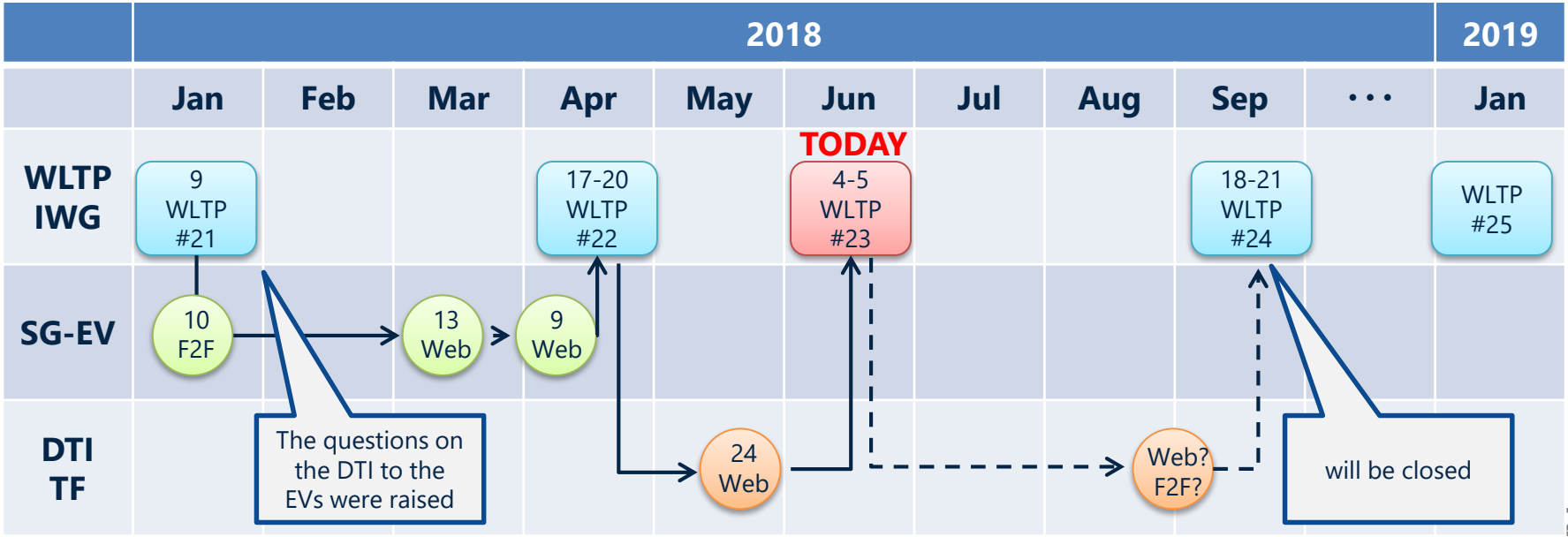
WLTP-23-04e Appendix 02

Status report of Drive Trace Index Task Force

Prepared by Japan

Status and Schedule

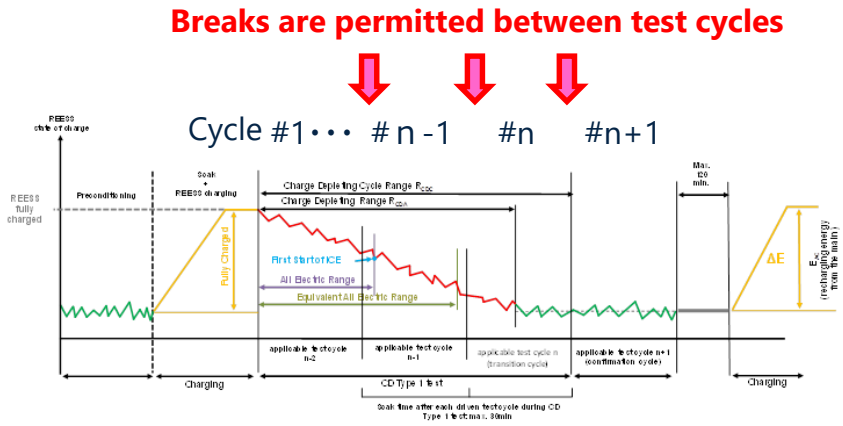
- TF members temporary agreed Japan's proposal on the DTI calculation for the EVs. We will continue discussion and try to get the final agreement until the WLTP-24.
  - PEV consecutive cycle test: cycle by cycle (and/or whole cycle?)
  - PEV shortened test: each dynamic segment (exclude constant speed segments?)
  - OVC-HEV CD test: cycle by cycle (and/or whole cycle?)
- Some items need to be confirmed.
  - Usage of OBD port during type approval test (EC and technical authority)
  - Influence of the constant speed segments (EC and JRC)
  - handling of the city cycle test
- There is no difference between ACEA's RMSSE calculation and Japan's calculation.
- The rounding issue will be taken care by Drafting coordinator (S. Dubuc).



Overview of WLTP-22

Japan's understanding

- In order to avoid the unexpected influence, Japan thinks it would be better to calculate the DTIs cycle by cycle.



Cycle #	Driving style	Distance [km]	RMSSE [km/h]	IWR [%]
#1	Normal	23.2	**0.40**	**0.30**
#2	Normal	23.2	**0.40**	**0.30**
#3	Normal	23.2	**0.40**	**0.30**
#4	Normal	23.2	**0.40**	**0.30**
#5	***Smooth***	23.2	***1.00***	***-6.00***
#6	***Smooth***	23.2	***1.00***	***-6.00***
Total		139.2	***0.60***	***-1.80***

*) Unexpected influence(advantage?) may be happened when the intentional smooth driving was taken at the remaining battery level is low.

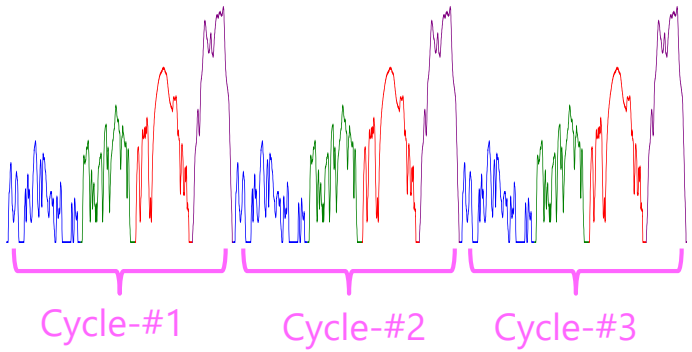
EU regulation (WLTP2)

- For PEVs, the calculation of the drive trace indices shall include all the WLTC cycles and phases completed before the occurrence of the break-off criterion, as specified in paragraph 3.2.4.5. of Sub-Annex 8.

There was a misunderstanding between EU and JPN

PEV consecutive cycle test

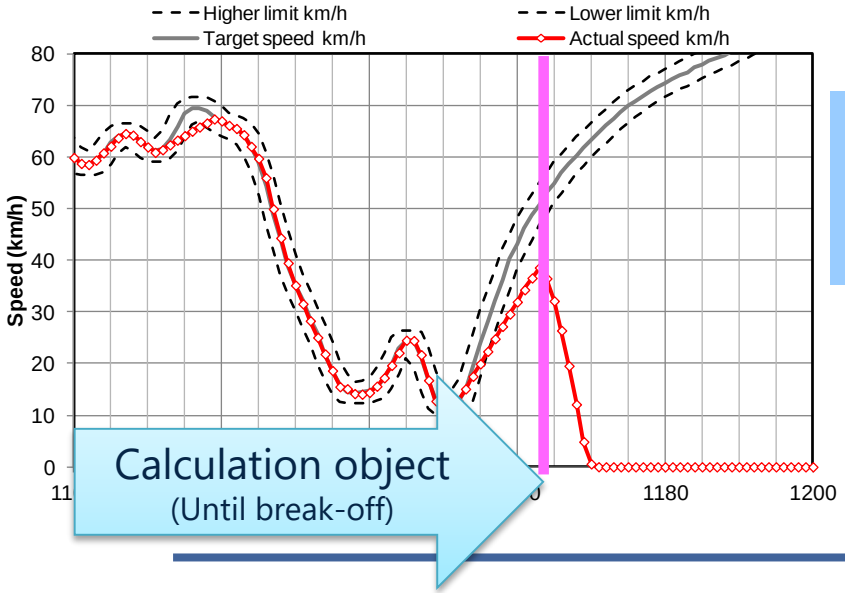
◆Calculation portion for consecutive cycle test



- Calculate DTIs in each cycle (and/or whole cycle)

Cycle #	IWR	RMSSE
1	x.xxx	x.xxx
2	x.xxx	x.xxx
3	x.xxx	x.xxx
Whole cycle	x.xxx	x.xxx

◆Calculation portion at the cycle reached break-off



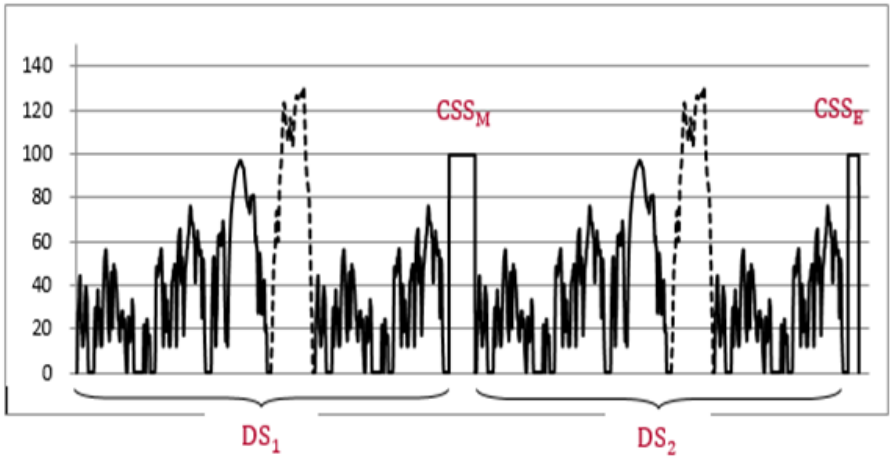
- Calculate until the break-off point. The rule of Annex 7-7.1. will be applied until this point.

Annex 7, 7.1.
In the case that the accelerator control is fully activated, the prescribed speed shall be used instead of the actual vehicle speed for drive trace index calculations during such periods of operation.

PEV shortened test

◆Calculation portion for shortened test

Shortened test procedure

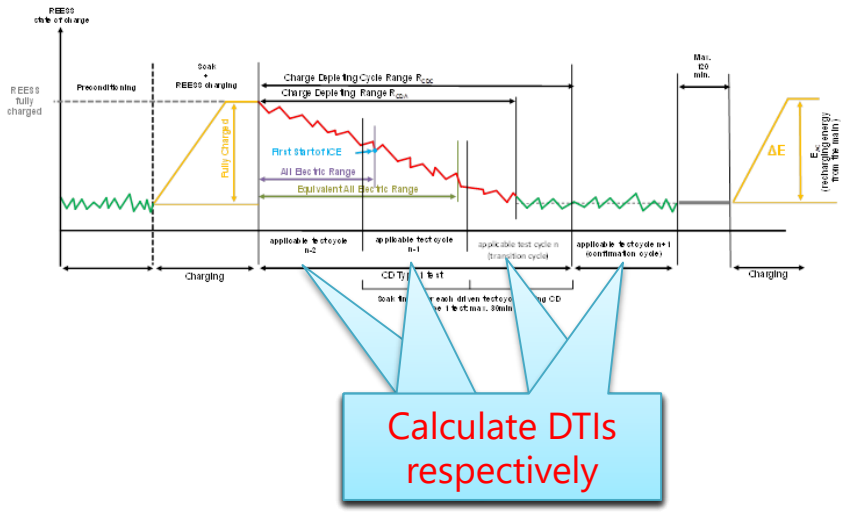


- For the shortened test, the drive trace index should be calculated during the two dynamic segments(DS_1 and DS_2) respectively.
- It is not necessary to calculate during the constant speed segments (CSS_M and CSS_E) because the driving style in CSS doesn't influence the test results.
- **The influence of CSS will be checked by EC and JRC**

Segment #	IWR	RMSSE
DS 1	x.xxx	x.xxx
DS 2	x.xxx	x.xxx

OVC-HEV Charge depleting test

◆Calculation portion

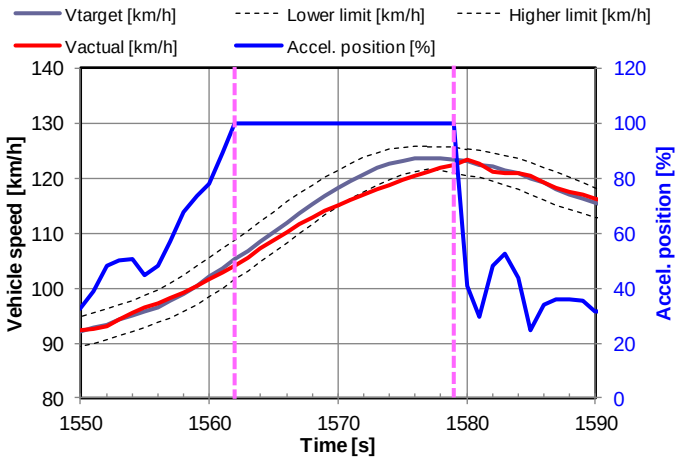


- Calculate DTIs in each cycle (and/or whole cycle)
- In Europe, the city cycle test need to be considered

Cycle #	IWR	RMSSE
1	x.xxx	x.xxx
2	x.xxx	x.xxx
•••		
n+1	x.xxx	x.xxx
Whole cycle	x.xxx	x.xxx

Detective of Wide Open Throttle

◆Accelerator control



- How to check/ensure the accelerator control is fully activated?
- Manufacturer shall provide the data/shall be responsible for the accuracy.
- **Is it allowed to use OBD port during type approval test? To be checked with Technical Authority.**