Japan Positions on Battery Durability GTR @EVE51

8 & 9 July. 2021

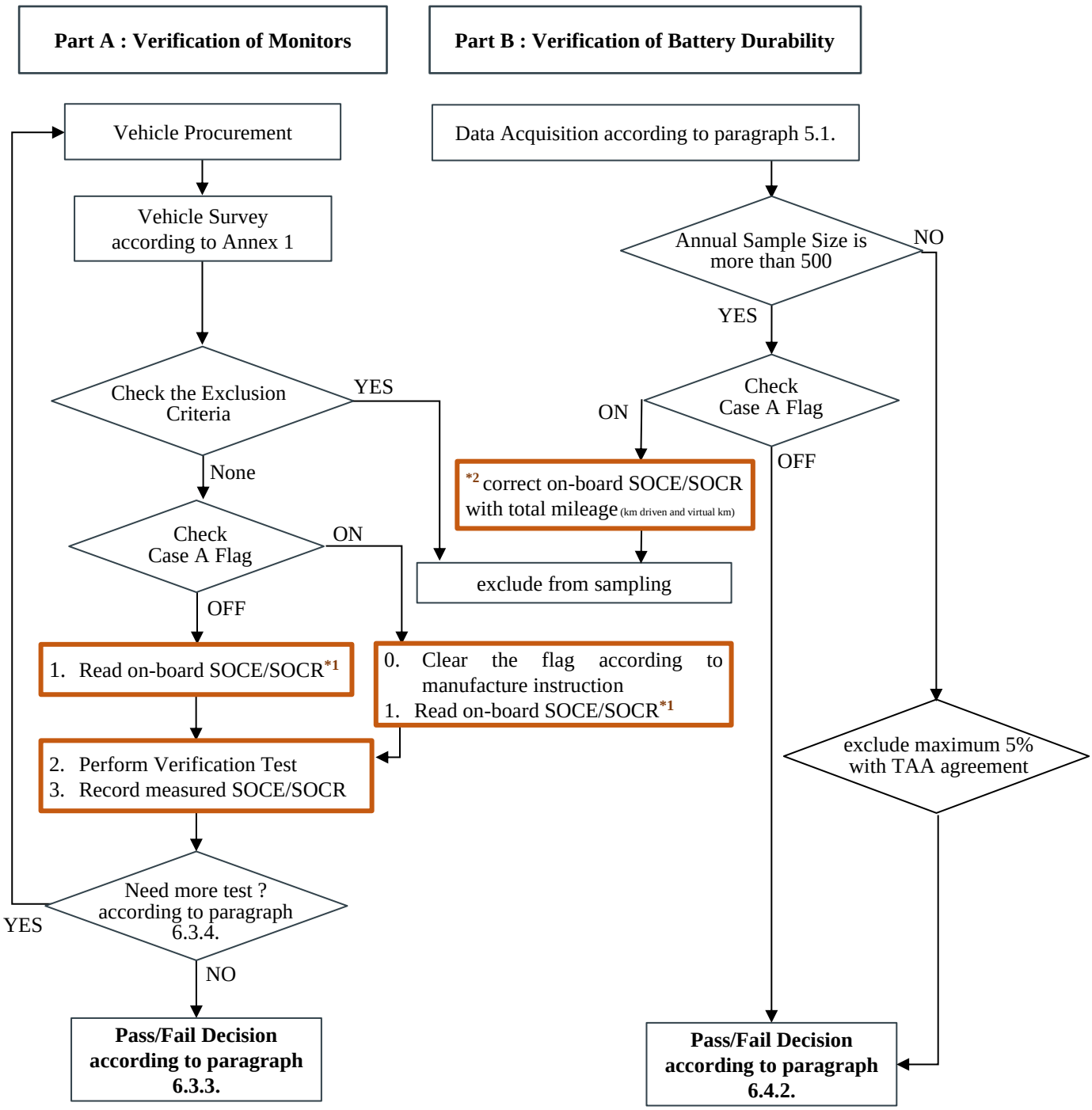
Japan Positions on Open Issues

Updated from EVE#50th meeting

Open issues	Brief description	Japan Positions	notes
Case A flag	Ensure the accuracy of SOCE/SOCR	under Part A : support original flow under Part B : exclude Case A flag ON vehicle from sample but require additional information data (explain in point 1)	(refer slide3) No change but make the process more clear
Case B flag	Identify the abnormal usage	OK to remove with applying the virtual mileage concept No change	hard to define the "abnormal"
Virtual mileage	Consider V2X usage	Supports USEPA proposal with slight modification. Clear definition of "V2X" is necessary(plan to provide the concrete text during 51st IWG meeting) (refer slide4)	slight modification : the denominator may not be unique electric consumption of each specific configuration
UBE calculation	GTR shall provide the clear process to determine the performance parameter No change	WLTP : hope to provide concrete calculation process during 51st IWG meeting Follow the recommendation by break out group	
		CFR : US intends to provide the calculation formula in the Phase 1 ?	

Japan Proposal on Part A and Part B process

Updated !!!



*1 : on-board SOCE/SOCR before verification test shall be used for $SOC_{read,i}$ (Part A verification) considering the consistency between Part A and Part B

*2 : the additional information (on-board SOCE/SOCR and total mileage) is a kind of "deterrent effect" to prevent the misuse from going into the market

Virtual Mileage

Add "At the option of the manufacturer, "

Up to manufacture to apply virtual mileage with any combination of V2G/V2H/V2L

For vehicles designed with V2X usage, the equivalent virtual km calculated following the equation below will be reported by each vehicle.

$$Virtual\ km = \left(\frac{\text{total discharge energy in V2X mode } [Wh]}{\text{worst case certified energy consumption of PART B family } [\text{Wh/km}]}\right)$$

OK as a first step,
but plan to re-visit when technically justified evidence is available

V2X Definition

Support the latest text

3.x "V2X" means the use of the traction batteries to cover external power demand, such as V2G(Vehicle-to-Grid) for system stabilization by discharging electricity from traction batteries, V2H (Vehicle-to-Home) for utilizing traction batteries as emergency power sources in times of power failure, and V2L (Vehicle-to-Load, only connected loads and home appliances are supplied) for use in times of power failure and/or outdoor activity in normal times.