EVE-69-YYe

Comment regarding to GTR22 phase 3

1.NOVC-HEV

prepared by JAPAN

69th EVE IWG

16th & 17th April 2024

Topics of GTR22 phase3 at EVE68

3	06:40 – 07:00	**UN GTR 22** – Discussion on prioritization of future topics - Part C family - Resolution of SOCE - NOVC-HEV	Drafting coordinator	

Status of Team JAPAN Discussions

1.Part C Family **:** will be proposed by OICA**.**
2.Resolution of SOCE for customer **:** will be proposed by OICA

3. NOVC-HEV **: There is no necessity**. (See P.3)

Good news is that;

JAMA confirmed that GTR22_Annex2 requirements are preciously written into SAE J1979DA

Voting to be completed by the end of February 2024, publication by the end of the year at latest

NOVC-HEV

There is no necessity that GTR22 will regulate NOVC HEV.

< Reasons >

1. The purpose of GTR22 is to support the penetration of the electric vehicle (mainly BEV) into market by eliminating substandard batteries from the market for customers. (not for CO2)
   NOVC-HEVs have been developed and deployed by many OEMs and have a lot of market experience (substandard batteries have already been eliminated).
2. NOVC-HEVs have F/B control within a range of SOC centered on 50-60% ,
   which varies depending on OEM settings, the impact on fuel consumption (CO2) is negligibly small even if capacity is significantly reduced.
   In addition, the use of batteries in extremely high/low SOC and high temperature environments, which accelerate degradation, is restricted by the control system, making the use of batteries less degradation. Know-how have been accumulated by OEMs.
3. Even if degradation progresses, fuel consumption will not deteriorate linearly with the level of degradation.
4. Severe degradation(malfunction) that may affect exhaust emissions (and fuel consumption) occur, deterioration/degradation might be detected by the OBD system.
5. There is no measurable and calculable indicator such as SOCE since EV distance for NOVC-HEVs is not part of performance parameter. It is considered difficult to calculate a uniform indicator for each HEV system that is linked to increased CO2 emissions after battery degradation.
6. If CO2 is to be confirmed in the market, it seems possible through confirmation of fuel consumption data by ISC or other means.

< reference >

In the US market, all models (al least LD) are required to provide the fuel consumption degradation at the time of approval @ https://dis.epa.gov/otaqpub/ (see P.4)

reference

Date: 10/17/2022 08:58:26 PM

Certification Summary Information Report

Test Group	PTYXJ02.0P33	Evaporative/Refueling Family	PTYXR0130J72

2023MY NOVC-HEV Prius

Unrounded Test Result	Verify Calculated CREE/OPT-CREE
0	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	0	--

Manufacturer Test Comments NMOG = HC-NM x 1.1012

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.05	--	--	--	0.00	--	0.0	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.07	--	--	--	0.00	--	0.1	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	≒CO2	--	--	--	0.002	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	METHANE	0.0033	--	--	--	0.0012		0.004	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30										
Fed	150,000 miles	Federal Tier 3 Bin 30										
Fed	150,000 miles	Federal Tier 3 Bin 30										
Fed	150,000 miles	Federal Tier 3 Bin 30										
Fed	150,000 miles	Federal Tier 3 Bin 30										
Fed	150,000 miles	Federal Tier 3 Bin 30										
CA	150,000 miles	California LEV-III SULEV30										
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CA	150,000 miles	California LEV-III SULEV30										
CA	150,000 miles	California LEV-III SULEV30										

2023MY OVC-HEV Prius

751-5750, GVW 0-6000)

Stand

Cert

Federal Tier 3 Bin 30

Federal fuel 2-day exhaust (w/can load)

Fuel Gasoline

Test Procedure

deterioration factor

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Adjustm Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--		0.02	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0.02	4.2
150,000 miles	CREE	--	--	--	--	--	--	8	999.9999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.0033	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.0004	0.010
150,000 miles	NMOG	--	1	1.10	--	--	--	0.0050	999.999
150,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0.0057	0.030
150,000 miles	NMOG+NOX-COMP	--	1	1.03	--	--	--	0.0057	0.040
150,000 miles	NOX	--	--	--	--	--	--	0.0007	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

≒CO2