**UNR WLTP 00 and 01 series - Square bracket summary**

The table below lists the areas on UNR WLTP where square brackets are included in the Working Documents (“GRPE-2020-3e” and “GRPE-2020-04e”), which will need to be addressed via an Informal Document for the 80th GRPE.

Updated 9th December 2019 **– version 2.**

Updated 2nd January 2020 – version 3

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| Green box = issue resolved |

| **Section** | **00 series** | **01 series** | **Update on status (2nd January 2020)** |
| --- | --- | --- | --- |
| 1 | Exclude OVC-FCHV from Scope of Level 1B | Exclude OVC-FCHV from Scope of Level 2 | Level 1A TBD  Wording to be agreed |
| 3.01 | Vehicle type definition for L1B | Vehicle type definition | JPN accept definition.  00 – delete level differentiator  01 - delete square brackets |
| 3.03. | Placeholder for Level 1B definition for engine displacement | Placeholder for definition for engine displacement | JPN to provide definition |
| 3.2.36. | "Coasting" means a functionality of either an automatic transmission or a clutch which decouples the engine from the drivetrain automatically when no propulsion or a slow reduction of speed is needed and during which the engine may be idling or switched off. | "Coasting" means a functionality of either an automatic transmission or a clutch which decouples the engine from the drivetrain automatically when no propulsion or a slow reduction of speed is needed and during which the engine may be idling or switched off. | Dependent on outcome of discussions on proposed amendment to Annex B6 Para 2.4.2. to include ‘coasting functionality’ |
| 3.3.20.1. | "Off-vehicle charging fuel cell hybrid electric vehicle" (OVC-FCHV) means a fuel cell hybrid electric vehicle that can be charged from an external source. | "Off-vehicle charging fuel cell hybrid electric vehicle" (OVC-FCHV) means a fuel cell hybrid electric vehicle that can be charged from an external source. | Keep definition because the term will be used in the L1 and L2 scopes |
| 3.7.1. | "*Rated engine power*" (Prated) means maximum net power of the engine or motor in kW as per the requirements of UN Regulation No. 85 [or for Level 1B only: TRIAS 99-014-01/99-015-01]. | "*Rated engine power*" (Prated) means maximum net power of the engine or motor in kW as per the requirements of UN Regulation No. 85 [or for Level 1B only: TRIAS 99-014-01/99-015-01]. | JPN do not require reference to TRIAS.  Text in square brackets deleted. |
| 3.7.2. | "Maximum speed" (vmax) means the maximum speed of a vehicle as declared by the manufacturer. [In the absence of a declaration, the maximum speed shall be declared by the manufacturer according to UN Regulation No. 68.] | "Maximum speed" (vmax) means the maximum speed of a vehicle as declared by the manufacturer. [In the absence of a declaration, the maximum speed shall be declared by the manufacturer according to UN Regulation No. 68.] | Updated as follows:  "Maximum speed" (vmax) means the maximum speed of a vehicle as declared by the manufacturer. In the absence of a declaration, the maximum speed shall be determined according to UN Regulation No. 68. |
| 3.10.y. | *"On-Board Diagnostic (OBD) system"* means in context of this regulation, a system on-board the vehicle diagnostic system for emission control which has the capability of detecting malfunction by means of fault codes stored in computer memory, and illumination of the Malfunction Indicator (MI) to notify the operator of the vehicle. | *"On-Board Diagnostic (OBD) system"* means in context of this regulation, a system on-board the vehicle diagnostic system for emission control which has the capability of detecting malfunction by means of fault codes stored in computer memory, and illumination of the Malfunction Indicator (MI) to notify the operator of the vehicle. | Definition needs to be finalised.  Reminder of previous proposal in “2019.07.18\_Definition of OBD for UNR WLTP DRAFT-Bosch.docx”:  "On-Board Diagnostic (OBD) system" means in context of this regulation (or this GTR), a system on-board the vehicle which has the capability of detecting malfunctions of the monitored emission control systems, identifying the likely area of a malfunction by means of fault codes stored in computer memory, and illumination of the Malfunction Indicator (MI) to notify the operator of the vehicle.” |
| 3.10.y. | "*Type 1 test*" means the means the applicable driving cycle used for emission approvals, as detailed in this Regulation. | "*Type 1 test*" means the means the applicable driving cycle used for emission approvals, as detailed in this Regulation. | Should we keep this definition in the OBD definitions? |
| 3.10.y. | "*Deficiency*" means, in respect of vehicle OBD systems, that up to two separate components or systems that are monitored contain temporary or permanent operating characteristics that impair the otherwise efficient OBD monitoring of those components or systems or do not meet all of the other detailed requirements for OBD. Vehicles may be type-approved, registered and sold with such deficiencies according to the requirements of paragraph 4. of Annex C5. | "*Deficiency*" means, in respect of vehicle OBD systems, that up to two separate components or systems that are monitored contain temporary or permanent operating characteristics that impair the otherwise efficient OBD monitoring of those components or systems or do not meet all of the other detailed requirements for OBD. Vehicles may be type-approved, registered and sold with such deficiencies according to the requirements of paragraph 4. of Annex C5. | Updated needed to take “non-definition” text out and include it elsewhere in the text. |
| 3.10.y. | Permanent in this context means that the default mode is not recoverable, i.e. the diagnostic or control strategy that caused the emission default mode cannot run in the next driving cycle and cannot confirm that the conditions that caused the emission default mode is not present anymore. All other emission default modes are considered to be not permanent. | Permanent in this context means that the default mode is not recoverable, i.e. the diagnostic or control strategy that caused the emission default mode cannot run in the next driving cycle and cannot confirm that the conditions that caused the emission default mode is not present anymore. All other emission default modes are considered to be not permanent. | New addition approved by EC and JPN |
| 3.10.y. | "*Limp-home routines*" means any default mode other than emission default mode. | "*Limp-home routines*" means any default mode other than emission default mode. | New addition approved by EC and JPN |
| 4.1.2. | In addition, the manufacturer shall submit the following information (as applicable):  … |  | “(as applicable)” added because some of the text that follows is only applicable to Level 1A (e.g. 4.1.2. (d) and (e)). |
| 5.4.3. | … [This letter should be chosen according to the Table A3/1 of Annex A3 to this Regulation.] | … [This letter should be chosen according to the Table A3/1 of Annex A3 to this Regulation.] | OK  Square brackets deleted. |
| 6.2.1. – 6.2.5. | Description of tests | Description of tests | Consistency needed |
| Table A | OBFCM for Flex-Fuel | OBFCM for Flex-Fuel | Need to specify which fuel/s  . |
| 6.2.6. | Unique identifier | Unique identifier | Square bracket removed.  Identifier for OBFCM family deleted. |
| 6.3.2.1.2. | [(f) ~~ATCT family, per reference fuel in the case of flex-fuel or bi-fuel vehicles~~;] L1Aonly. | [(f) ~~ATCT family, per reference fuel in the case of flex-fuel or bi-fuel vehicles~~;] | Still to be decided |
| 6.3.6. | Gas Fuelled Vehicles (GFV) Family | Gas Fuelled Vehicles (GFV) Family | EC support. JPN to check  JPN confirmed acceptance at TTF 10-Dec-19. |
| 6.3.6.1. | GFVs may be grouped into a family of vehicle types fuelled by LPG or NG/biomethane which are then identified by a parent vehicle. For vehicles which can also be fuelled by liquid fuels, this grouping only applies when the vehicle is operated in a gas fuelled mode. | GFVs may be grouped into a family of vehicle types fuelled by LPG or NG/biomethane which are then identified by a parent vehicle. For vehicles which can also be fuelled by liquid fuels, this grouping only applies when the vehicle is operated in a gas fuelled mode. | New sentence (highlighted) proposed by Bill C.  TBD |
| 6.3.9.1. | OBFCM family definition | OBFCM family definition | Paragraph deleted – not needed in UNR |
| Table 1B | Notes 2 and 3 “[engine displacement]” | Notes 2 and 3 “[engine displacement]” | Square brackets deleted |
| 6.7.5. | Durability family | Durability family | Further discussion needed |
| 6.8.2. | N/A | OBD threshold limits | Further discussion needed |
| Table 4B | Notes 2 and 3 “[engine displacement]” | Notes 2 and 3 “[engine displacement]” | Square brackets deleted |
| Table 4B | Gap in L1B table for NG/biomethane vehicles | Gap in ‘first 3 phases” table for NG/biomethane vehicles | JPN provided an update |
| 6.7. | Updates proposed/required for Type 5 test and Durability Family Definition | Updates proposed/required for Type 5 test and Durability Family Definition | TBD |
| 6.8. | “OBD threshold limits” | “OBD threshold limits” | Replaced throughout with “OBD thresholds” |
| 6.9.2. | Selective Catalytic Reduction (SCR) family definition | Selective Catalytic Reduction (SCR) family definition | EC support. JPN to check.  UTAC to provide an update – including an explanation |
| 7.4. | Extensions for tailpipe emissions (Type 1 test) | Extensions for tailpipe emissions (Type 1 test) | Updates proposed  TBD |
| 7.6. | Extensions for durability of pollution control devices (Type 5 test) | Extensions for durability of pollution control devices (Type 5 test) | TBD – along with Durability Family definition |
| 8.1.2. | OBD and OBFCM related requirements | OBD and OBFCM related requirements | Clarified by providing x-ref to Table A |
| 8.1.3. | CoP family definition | CoP family definition | Updates proposed for L1B and L2  TBD |
| 8.1.4.4. | The tests of vehicles for product verification [shall be evenly distributed] over the period of 12 months. | The tests of vehicles for product verification [shall be evenly distributed] over the period of 12 months. … | New text agreed by CoP TF:  The product verifications shall be evenly distributed over the period of 12 months or over the production period in the case that this is less than 12 months. ... |
| 8.1.6. | … with a minimum frequency of [one audit per 12 months]. | … with a minimum frequency of [one audit per 12 months]. | Agreed. Square brackets deleted |
| 8.1.8. | The responsible authority shall report the results of all audit checks and physical tests performed on verifying conformity of the manufacturers [and file it for a period of a minimum of 10 years]. … | The responsible authority shall report the results of all audit checks and physical tests performed on verifying conformity of the manufacturers [and file it for a period of a minimum of 10 years]. … | “a period of a minimum of 10 years” agreed. Text updated and square brackets removed. |
| 8.2.4.5. | Test cell correction – Level 1B only  JPN propose to remove “Level 1B only” | Test cell correction – not currently included in Level 2 – but that would change if it covers both L1A and L1B | TBD |
| 8.2.6. | … For the WLTC driven for vehicle warm up as described in paragraph 7.3.4. of Annex B4, in place of the 1 second allowance specified in paragraph 2.6.8.3.1.(i) a [5 second] allowance shall apply. | … For the WLTC driven for vehicle warm up as described in paragraph 7.3.4. of Annex B4, in place of the 1 second allowance specified in paragraph 2.6.8.3.1.(i) a [5 second] allowance shall apply. | Square brackets deleted  “5 second” agreed at CoP TF 19-Nov-2019  Paragraph now deleted – with the requirements being provided in para 2.6.8.3.3. of Annex B6 |
| 8.3. | Checking the conformity for a Type 4 test | Checking the conformity for a Type 4 test | New proposal provided by Bill C.  TBD |
| 11. | Special Provisions | Special Provisions | TBD |
| 12. | Transitional Provisions – para 12.1. and 12.2. (Level 1A only) | Transitional Provisions – para 12.1. | Transitional provisions for Type 4 test to be added to L1A – based on EU WLTP  Some changes proposed for the text for the other tests |
| Appendix 2  Para 3.3. | Level 1B  Proposal from Miyazaki-san with proposed amendments from Renault provided | Level 1B  Proposal from Miyazaki-san with proposed amendments from Renault provided | TBD  NB: need to align paragraph numbering between 00 and 01 if possible |
| Appendix 3.  Para 1. | Level 1B only  Proposal from Miyazaki-san updated during TTF meeting 10-Dec-19. | Proposal from Miyazaki-san updated during TTF meeting 10-Dec-19. | TBD |
| Appendix 3. Para 1.2. | The test vehicle shall be configured as vehicle H within the CoP family.  [If the CoP family has multiple interpolation families, the test vehicle shall be configured as vehicle H of the interpolation family with the highest expected production volume within the CoP family. At the request of the manufacturer, and with approval of the responsible authority a different test vehicle may be selected. ] | The test vehicle shall be configured as vehicle H within the CoP family.  [If the CoP family has multiple interpolation families, the test vehicle shall be configured as vehicle H of the interpolation family with the highest expected production volume within the CoP family. At the request of the manufacturer, and with approval of the responsible authority a different test vehicle may be selected. ] | Accepted. Square brackets deleted |
| Appendix 3. Para 1.5.1. | … [For the tests before the mileage accumulation, at the option of the manufacturer it is allowed to set the dynamometer directly after each test.] | … [For the tests before the mileage accumulation, at the option of the manufacturer it is allowed to set the dynamometer directly after each test.] | JPN propose deletion. Accepted. Text deleted. |
| Appendix 3. Para 1.6. | For Level 1A only  The signal of the acceleration control position shall be recorded during all tests at a sampling frequency of 10 Hz. It is allowed to use the OBD acceleration control position signal for this purpose. The responsible authority may request the manufacturer to evaluate this signal to ensure that the test result is performed correctly. | The signal of the acceleration control position shall be recorded during all tests at a sampling frequency of 10 Hz. It is allowed to use the OBD acceleration control position signal for this purpose. The responsible authority may request the manufacturer to evaluate this signal to ensure that the test result is performed correctly. | Amended in CoP TF 19-Dec-19. Highlighted text added.  Agreed. |
| Appendix 3. Para 1.9. | [Based on the deviation of the measurements from the fit, the slope CRI should be corrected downward with the standard deviation of the errors in the fit:    where:  MCO2,i-fit is the result of the applying the equation for each of the distances Di.  The slope CRI shall be corrected for the uncertainty in the fit by:  CRI 🡪 CRI - sfit] | [Based on the deviation of the measurements from the fit, the slope CRI should be corrected downward with the standard deviation of the errors in the fit:    where:  MCO2,i-fit is the result of the applying the equation for each of the distances Di.  The slope CRI shall be corrected for the uncertainty in the fit by:  CRI 🡪 CRI - sfit] | 19-11-2019: Scrutiny reservation, Annette and Olle to review and if necessary make a counter-proposal  TBD |
| Appendix 3. Para 1.11. | N/A | For the determination of the run-in factor for all applicable criteria emissions, the coefficients CRI,c and Cconst, c shall be calculated … | 19-11-2019: It was agreed to keep the run-in factors for pollutants, and that they should follow a linear scale rather than a logarithmic one. This latest change was already reflected in this text, so that needs no further change.  RG: square brackets therefore now deleted |
| Appendix 3. Para 1.11. | For Level 1A only  …  The manufacturer will provide statistical evidence to the responsible authority that the fit is sufficiently statistically justified and the uncertainty margin based on the variation in the data should be taken into account to avoid an overestimation of the run-in effect. | The manufacturer will provide statistical evidence to the responsible authority that the fit is sufficiently statistically justified and the uncertainty margin based on the variation in the data should be taken into account to avoid an overestimation of the run-in effect. | CoP TF 19-Dec-19  19-11-2019: No alternative criterion could be defined, instead this sentence was proposed and adopted to address the statistical uncertainty. |
| Appendix 3. Para 1.12. | N/A | The run-in factor RIC(j) for criteria emission component C of CoP test vehicle j shall be determined by … | Based on comments above the square brackets have also been deleted for paragraph 1.12. |
| Appendix 5  Para 3. | Additional text needed to cover access to OBD signals | Additional text needed to cover access to OBD signals | Text previously proposed for the OBD annex is to now be provided here.  TBD |
| Appendix 5 Para 4.2. | [on a vehicle representative of the OBFCM family] | [on a vehicle representative of the OBFCM family] | Text in square brackets deleted. OBFCM family will not be included in UNR |
| Appendix 5 Para 4.2.1. | [on the vehicle representative of the OBFCM family] | [on the vehicle representative of the OBFCM family] | Text in square brackets deleted. OBFCM family will not be included in UNR |
| Appendix 5 Para 4.2.2. | [an OBFCM family containing only vehicles] tested without using the interpolation method (vehicle H), and six tests for [all other OBFCM families] | [an OBFCM family containing only vehicles] tested without using the interpolation method (vehicle H), and six tests for [all other OBFCM families] | Text in square brackets deleted. OBFCM family will not be included in UNR |
| Appendix 5 Para 4.2.3. | [At the request of the manufacturer and approval of the approval authority, for the values stored according to the definitions described in paragraphs 2.3., 2.4. and 2.5. of this appendix, the manufacturer may take account of effects which contribute to CO2 emissions other than those from combustion of fuel injected into the engine during a Type 1 test. Examples of these effects are injection of SCR reagent, purging of an active charcoal canister, combustion of lubrication oil etc. The manufacturer shall provide the approval authority with an explanation of these adjustments, where applicable.] | [At the request of the manufacturer and approval of the approval authority, for the values stored according to the definitions described in paragraphs 2.3., 2.4. and 2.5. of this appendix, the manufacturer may take account of effects which contribute to CO2 emissions other than those from combustion of fuel injected into the engine during a Type 1 test. Examples of these effects are injection of SCR reagent, purging of an active charcoal canister, combustion of lubrication oil etc. The manufacturer shall provide the approval authority with an explanation of these adjustments, where applicable.] | Deletion of square brackets – to be confirmed |
| Annexes Part A | Multiple [ ] (x 36)  Whole of Annex A2 Appendix 1 (OBD Related Information) in [ ] | Multiple [ ] (x 36)  Whole of Annex A2 Appendix 1 (OBD Related Information) in [ ] | Updates ongoing.  Annex 2 Appendix 1 – deleted  If OVC-FCHV are included in L1A we will need to add sections throughout Annexes Part A |
| Annex B1  Para 3.2.1. | N/A | [A 3-phase Class 2 cycle shall consist of a low phase (Low2), a medium phase (Medium2) and a high phase (High2).] | Agreed. Square brackets deleted. |
| Annex B1  Para 3.3.1.1. | N/A | [A 3-phase Class 3a cycle shall consist of a low phase (Low3), a medium phase (Medium3a) and a high phase (High3a).] | Agreed. Square brackets deleted. |
| Annex B1  Para 3.3.2.1. | N/A | [A 3-phase Class 3b cycle shall consist of a low phase (Low3) phase, a medium phase (Medium3b) and a high phase (High3b).] | Agreed. Square brackets deleted. |
| Annex B1 | Updates from Gear Shift TF “cccccccc” added | Updates from Gear Shift TF “aaaaaaa”, “bbbbbbb” and “cccccccc” added | To be confirmed at 29th IWG |
| Annex B2 | Updates from Gear Shift TF “cccccccc” added | Updates from Gear Shift TF “aaaaaaa”, “bbbbbbb” and “cccccccc” added | To be confirmed at 29th IWG |
| Annex B3  Table A3/17 | N/A | FAME content. Min 4.5. Max 5.0. | OK. Square brackets deleted. |
| Annex B4 Para 4.2.1.1.2.1. | Minimum deltas | Minimum deltas | Update needed based on proposal from Ichikawa-san  TBD |
| Annex B4 Para 4.2.1.2.3.3. | In addition to the requirements of an interpolation family in paragraphs 2.3.1. and 2.3.2. of Annex B6, the difference in cycle energy demand between HR and LR of the road load family shall be at least 4 per cent and shall not exceed 35 per cent based on HR over a complete WLTC Class 3 cycle. | In addition to the requirements of an interpolation family in paragraphs 2.3.1. and 2.3.2. of Annex B6, the difference in cycle energy demand between HR and LR of the road load family shall be at least 4 per cent and shall not exceed 35 per cent based on HR over a complete WLTC Class 3 cycle. | JPN propose to replace with “Notwithstanding” as was the case in GTR15 Amnd 3.  It is unclear why it was changed for Amnd#4  For scrutiny |
| Annex B4 Para 4.5.5.1. |  |  | JPN comment “Delete. not At coefficient”  TBD |
| Annex B4 Para 4.5.5.2.3. |  |  | JPN comment “Delete. not at coefficient”  TBD |
| Annex B4 Para 6.5.2.1. | Preconditioning  Update proposed by Christoph L. | Preconditioning  Update proposed by Christoph L. | TBD |
| Annex B4 Para 6.5.2.3.2. | Update proposed by JPN | Update proposed by JPN | TBD |
| Annex B4 Para 6.5.2.3.3. | Update proposed by JPN | Update proposed by JPN | TBD |
| Annex B4 Para 6.7.1. | Update proposed by JPN | Update proposed by JPN | TBD |
| Annex B5 Para 2.2.6. | The base inertia of the dynamometer shall be stated by the dynamometer manufacturer and shall be confirmed to within [±1.0 per cent] … | The base inertia of the dynamometer shall be stated by the dynamometer manufacturer and shall be confirmed to within [±1.0 per cent] … | EU WLTP has +/- 0.5 per cent  TBD |
| Annex B5 Para 4.1.4.12. | Water (H2O) analysis (if applicable) | Water (H2O) analysis (if applicable) | Square brackets deleted. |
| ~~Annex B5 Para 4.1.4.13.~~ | ~~Hydrogen (H2) analysis (if applicable)~~ | ~~Hydrogen (H2) analysis (if applicable)~~ | Already included in GTR15 as 4.1.4.11. – so no need to add a new 4.1.4.13. |
| Annex B5 Para 6 | Level 1B only  “In the case that gases within the following tolerance of the stated value are not available in the Japan Calibration Service System (JCSS), a gas with a wider, but most tight, tolerance available in the JCSS may be used.” | N/A | JPN addition for L1B only |
| Annex B6 Para 1.2.3. and Tables A6/1 and A6/2 | Multiple updates proposed | Multiple updates proposed for L1A and L2 – need to align for L2 as applicable | TBD |
| Annex B6  Table A6/1 | OVC-FCHV rows | OVC-FCHV rows | To be confirmed by EC. Only for L1A if included. |
| Annex B6  Table A6/2 | OVC-FCHV new sub-table for CD test  OVC-FCHV added to NOVC-FCHV sub-table for CS test | OVC-FCHV new sub-table for CD test  OVC-FCHV added to NOVC-FCHV sub-table for CS test | To be confirmed by EC. Only for L1A if included.  OVC-FCHV deleted from 01 series |
| Annex B6 Para 2.4.2.1.1. | [If the vehicle is equipped with a coasting functionality, this functionality shall be deactivated during chassis dynamometer testing, except for tests where the coasting functionality is required.] | [If the vehicle is equipped with a coasting functionality, this functionality shall be deactivated during chassis dynamometer testing, except for tests where the coasting functionality is required.] | Under discussion.  TBD |
| Annex B6 Para 2.4.2.2. | … [If the vehicle is equipped with a coasting functionality, this functionality may be deactivated by the vehicle’s dynamometer operation mode.] | … [If the vehicle is equipped with a coasting functionality, this functionality may be deactivated by the vehicle’s dynamometer operation mode.] | Under discussion.  TBD. NB: repetition with 2.4.2.1.1. needs to be addressed |
| Annex B6 Para 2.4.2.2. | [and/or functionalities] | [and/or functionalities] | Under discussion.  TBD |
| Annex B6 Para 2.4.2.3. | [(with the exclusion of the coasting functionality)] | [(with the exclusion of the coasting functionality)] | Under discussion.  TBD |
| Figure A6/[xxx] | 2WD / 4WD dyno infographic needs a number | 2WD / 4WD dyno infographic needs a number | TBD |
| Annex B6 Para 2.6.6.2. and 2.6.6.3. | [If the vehicle has no predominant mode …  … Test results for both modes shall be recorded.] | [If the vehicle has no predominant mode …  … Test results for both modes shall be recorded.] | Square brackets deleted.  EC supports. JPN supports. |
| Annex 6 Para 2.6.8.3. | Updates proposed by JPN – including info related to CoP previously in para 8.2.6. of the main body of the regulation | Updates proposed by JPN – including info related to CoP previously in para 8.2.6. of the main body of the regulation | TBD |
| Annex B6  Appendix 2  Para 1 | In the case that NOVC-HEVs and OVC-HEVs [NOVC-FCHVs, OVC-FCHVs] are tested, Appendices 2 and 3 to Annex B8 shall apply | In the case that NOVC-HEVs and OVC-HEVs [NOVC-FCHVs, OVC-FCHVs] are tested, Appendices 2 and 3 to Annex B8 shall apply | To be confirmed by EC. Only for L1A if included.  References to OVC-FCHV deleted from 01 series  Reference to NOVC-FCHV TBD |
| Annex B6  Appendix 2  Para 3.4.2. | The correction shall be applied if is negative (corresponding to REESS discharging)  At the request of the manufacturer, the correction may be omitted and uncorrected values may be used if:  (a) is positive (corresponding to REESS charging);  (b) the manufacturer can prove to the responsible authority by measurement that there is no relation between and mass emission and and fuel consumption respectively.] | The correction shall be applied if is negative (corresponding to REESS discharging)  At the request of the manufacturer, the correction may be omitted and uncorrected values may be used if:  (a) is positive (corresponding to REESS charging);  (b) the manufacturer can prove to the responsible authority by measurement that there is no relation between and mass emission and and fuel consumption respectively.] | Square brackets deleted.  EC supports. JPN supports. |
| Annex B6a  Para 2.1. | [If the manufacturer can demonstrate that it is ensured that the worst case concept is maintained (e.g. tested vehicle has no insulation), the requirements to document the insulation materials may be waived.] | [If the manufacturer can demonstrate that it is ensured that the worst case concept is maintained (e.g. tested vehicle has no insulation), the requirements to document the insulation materials may be waived.] | Under consideration by Bill C and Elodie C  TBD |
| Annex B6b  Para 3.14. | [is CO2 mass emissions of period j (step 1 (for cycle phases) and step 2 (for total cycle)) of Table A7/1 in Annex B7, g/km;] Level 1A only | N/A | TBD |
| Annex B7  Table A7/1 | Multiple updates provided by JPN | Multiple updates provided by JPN | TBD |
| Annex B7 Para 3.2.3.2.2.3.2.1. | [The manufacturer shall submit the declared scope of applicable vehicles for the alternative method and the declared scope shall be documented to relevant test reports when evidence of equivalency is shown to the responsible authority. The responsible authority may request the confirmation of equivalency for the alternative method by selecting the vehicle from the scope declared by the manufacturer after equivalency was demonstrated. The result shall fulfil an accuracy for Δ(CD×Af) of ±0.015 m². This procedure shall be based on wind tunnel measurements fulfilling the criteria of this Regulation. If this procedure is not satisfied, the approval of the alternative method is regarded as invalidated.] | [The manufacturer shall submit the declared scope of applicable vehicles for the alternative method and the declared scope shall be documented to relevant test reports when evidence of equivalency is shown to the responsible authority. The responsible authority may request the confirmation of equivalency for the alternative method by selecting the vehicle from the scope declared by the manufacturer after equivalency was demonstrated. The result shall fulfil an accuracy for Δ(CD×Af) of ±0.015 m². This procedure shall be based on wind tunnel measurements fulfilling the criteria of this Regulation. If this procedure is not satisfied, the approval of the alternative method is regarded as invalidated.] | Square brackets deleted.  EC supports. JPN supports. |
| Annex B7 Paras 3.2.3.2.4., 3.2.3.2.5. and 3.2.3.2.6. | “Level 1A only” added  Level B requirements added (x2) | TBD | TBD |
| Annex B7 Para 6.2. | For Level 1B  The fuel efficiency values shall be calculated from the emissions of hydrocarbons, carbon monoxide, and carbon dioxide using the results of step 2 for criteria emissions and step 4a for CO2 of Table A7/1. | TBD | TBD |
| Annex B7 Para 6.14. | Calculation of fuel efficiency (FE) | Calculation of fuel efficiency (FE) | OK. Square brackets deleted. |
| Annex B7 Para 7.4.2. | Updates proposed by JPN | Updates proposed by JPN | TBD |
| Annex B7 Para 7.4.3. | Updates proposed by JPN | Updates proposed by JPN | TBD |
| Annex B8 | Multiple instances where OVC-FCHV is added to the list of other EV types or added in paras relating to NOVC-FCHV | Multiple instances where OVC-FCHV is added to the list of other EV types or added in paras relating to NOVC-FCHV | To be confirmed by EC. Only for L1A if included.  References to OVC-FCHV deleted from 01 series |
| Annex 8 | Multiple updates to Annex 8 proposed by JPN in document “*191212 - 00 series UNR WLTP Informal\_JPN CAL*” | Multiple updates to Annex 8 proposed by JPN in document “*191212 - 00 series UNR WLTP Informal\_JPN CAL*” | TBD |
| Annex B8  Table A8/3 | Query from UTAC. Response from Matthias N  Update needed? | Query from UTAC. Response from Matthias N  Update needed? | TBD |
| Annex B8  Table A8/7 | [FE calculation in this table shall be for the complete cycle only] | [For results after 4-phases all the calculations in this table shall be for the complete cycle]  [For the 3-phase WLTP all the calculations in this table shall be for the 3-phase cycle and also for individual phases;] [FE calculation in this table shall be for the complete cycle only] | TBD |
| Annex B8  Table A8/7 | Step 5 – Interpolation family result | Step 5 – Interpolation family result | TBD |
| Annex B8  Table A8/7 | Step 6 - Result of an individual vehicle | Step 6 - Result of an individual vehicle | TBD |
| Annex B8  Para 4.2.3. | … The utility factor-weighted fuel consumption for OVC-FCHVs from the charge-depleting and charge-sustaining Type 1 test shall be calculated using the following equation … | … The utility factor-weighted fuel consumption for OVC-FCHVs from the charge-depleting and charge-sustaining Type 1 test shall be calculated using the following equation … | TBD  References to OVC-FCHV deleted from 01 series |
| Annex B8  Para 4.2.3. | Equivalent all-electric range for OVC-FCHVs | Equivalent all-electric range for OVC-FCHVs | TBD  References to OVC-FCHV deleted from 01 series |
| Annex B8  Para 4.4.2.1.1. | is the weighted electric energy consumption for the applicable WLTP test cycle of DS1 and DS2 of the shortened Type 1 test procedure Type 1 test, Wh/km; | is the weighted electric energy consumption for the applicable WLTP test cycle of DS1 and DS2 of the shortened Type 1 test procedure Type 1 test, Wh/km; | “for the applicable WLTP test cycle **which is part of** DS1 and DS2 …”?  NB: 3 other potential updates along the same lines  TBD |
| Annex B8  Para 4.5.1. | Interpolation of individual vehicle values  New structure, additional text and additional figures | Interpolation of individual vehicle values  New structure, additional text and additional figures | Addition of Interpolation for PEVs to be removed.  Keep restructured paragraph numbers to allow for later introduction of PEV |
| Annex B8  Para 4.5.5.1.3. | Individual charge-sustaining fuel consumption for OVC-FCHVs and NOVC-FCHVs | Individual charge-sustaining fuel consumption for OVC-FCHVs and NOVC-FCHVs | TBD  References to OVC-FCHV deleted from 01 series |
| Annex B8  Para 4.5.5.1.4. | This paragraph is only applicable for Level 1B: Individual charge-sustaining fuel efficiency for OVC-FCHVs and NOVC-FCHVs | This paragraph is only applicable for the 3-phase WLTP:  Individual charge-sustaining fuel efficiency for OVC-FCHVs and NOVC-FCHVs | TBD  References to OVC-FCHV deleted from 01 series |
| Annex B8  Para 4.6.3. | Stepwise procedure for calculating the final test results of OVC-FCHVs | Stepwise procedure for calculating the final test results of OVC-FCHVs | TBD  References to OVC-FCHV deleted from 01 series |
| Annex B8  Table A8/Y | Calculation of final charge-depleting and charge-sustaining weighted values | Calculation of final charge-depleting and charge-sustaining weighted values | To be confirmed by EC. Only for L1A if included.  Table deleted from 01 series |
| Annex B8  Table A8/Y | [Note: Final test result if Interpolation family result is not accepted when this table is finalised] | [Note: Final test result if Interpolation family result is not accepted when this table is finalised] | TBD  Table deleted from 01 series |
| Annex B8  Appendices 1 - 6 | Multiple new references to OVC-FCHVs | Multiple new references to OVC-FCHVs | To be confirmed by EC. Only for L1A if included.  References to OVC-FCHV deleted from 01 series |
| Annex B8  Appendix 2  Para 2.1. | The CO2 mass emission correction coefficient KCO2, the fuel consumption correction coefficients Kfuel,FCHV, as well as, if required by the manufacturer, the phase-specific correction coefficients KCO2,p and Kfuel,FCHV,p shall be developed based on the applicable charge-sustaining Type 1 test cycles.  In the case that vehicle H was tested for the development of the correction coefficient for CO2 mass emission for NOVC-HEVs and OVC-HEVs, the coefficient may be applied within the interpolation family definition. | The CO2 mass emission correction coefficient KCO2, the fuel consumption correction coefficients Kfuel,FCHV, as well as, if required by the manufacturer, the phase-specific correction coefficients KCO2,p and Kfuel,FCHV,p shall be developed based on the applicable charge-sustaining Type 1 test cycles.  In the case that vehicle H was tested for the development of the correction coefficient for CO2 mass emission for NOVC-HEVs and OVC-HEVs, the coefficient may be applied within the interpolation family definition. | Proposed addition from JPN.  Justification:  *“in the case that IPM is not applied, V\_H coefficient can be used for other configurations if these configurations satisfy the IP family definition.”* |
| Annex B8  Appendix 6  Figures | Add OVC-FCHVs to flow charts | N/A | To be confirmed by EC. Only for L1A if included. |
| Annex C3 | Determination of evaporative emissions from vehicles with positive ignition engines | Determination of evaporative emissions from vehicles with positive ignition engines | Update needed  TBD |
| Annex C3 | Multiple updates to align with Informal Document that amends GTR19 Amnd 3 Working Document | Multiple updates to align with Informal Document that amends GTR19 Amnd 3 Working Document | Approved |
| Annex C3  Para 4.5.1. | The accuracy of the pressure recording system shall be within ±0.3 kPa and the pressure shall be capable of being resolved to ±0.025 kPa. | The accuracy of the pressure recording system shall be within ±0.3 kPa and the pressure shall be capable of being resolved to ±0.025 kPa. | Explanation/Justification? |
| Annex C3  Para 4.9. | New para 4.9. added – with an amendment ([, without introducing any leaks,]) then provided by Bill C | New para 4.9. added – with an amendment ([, without introducing any leaks,]) then provided by Bill C | Confirm |
| Annex C4  Appendix 3b  Table C4/App3b.1 | \*\* for vehicles having [engine displacement] …  Level 1B only | N/A | Square brackets to be deleted |
| Annex C4  Appendix 3b  Table C4/App3b.1 | Code of Federal Regulations (EPA）Title40 Chapter1 Part86 SubpartＡ Appendix Ⅳ | N/A | F Cuenot comment: Reference to national legislation usually not allowed in UNRs  TBD |
| Annex C4  Appendix 4  Para 2 | For OVC-HEVs:  It is allowed to charge the electrical energy/power storage device twice a day during mileage accumulation. … | For OVC-HEVs:  It is allowed to charge the electrical energy/power storage device twice a day during mileage accumulation. … | JPN do not support  TBD  Updated text proposed for para 2 and para 3  TBD |
| Annex C5 | “OBD threshold limits” | “OBD threshold limits” | Replaced throughout with “OBD thresholds” |
| Annex C5 Para 3.2.1.2. | A manufacturer may disable the OBD system at ambient engine starting temperatures below 266 K (-7 °C) or at elevations over 2,500 metres above sea level … | A manufacturer may disable the OBD system at ambient engine starting temperatures below 266 K (-7 °C) or at elevations over 2,500 metres above sea level … | JRC proposal to replace with 2,440 meters to align with para 7.5.1. of Appendix 1 to Annex C5  TBD |
| Annex C5 Para 3.3.3.2.1. and 3.3.3.2.2. | 3.3.3.2.1. Catalytic converter protection  For Level 1Bb and Level 2  The engine misfire which causes the catalytic converter damage because of the excessive heat, the engine misfire shall be monitored every 200 min-1.  3.3.3.2.2 Specific condition for misfire monitor  For Level 1B and Level 2  (a) When the engine misfire rate is less than 1%, the function monitor can be done if the detection rate is set to 1%.  (b) When the engine misfire rate for catalyst converter protection required in Paragraph 3.2.2.3. is less than 5%, the function monitor can be done if the detection rate is set to 5%. | 3.3.3.2.1. Catalytic converter protection  For Level 1Bb and Level 2  The engine misfire which causes the catalytic converter damage because of the excessive heat, the engine misfire shall be monitored every 200 min-1.  3.3.3.2.2 Specific condition for misfire monitor  For Level 1B and Level 2  (a) When the engine misfire rate is less than 1 %, the function monitor can be done if the detection rate is set to 1%.  (b) When the engine misfire rate for catalyst converter protection required in Paragraph 3.2.2.3. is less than 5%, the function monitor can be done if the detection rate is set to 5%. | JPN proposed new text – with JRC amendments.  TBD |
| Annex C5 Para 3.3.3.4. | JPN proposed addition:  …  Other emission related components or systems list;  (a) Exhaust gas recirculation system  (b) Fuel system  (c) Secondary air system  (d) Valve timing system | JPN proposed addition:  …  Other emission related components or systems list;  (a) Exhaust gas recirculation system  (b) Fuel system  (c) Secondary air system  (d) Valve timing system | Alex K comment:  This list contradicts somehow the purpose of 3.3.3.4. The purpose is to catch malfunctions of systems, not in the regulation (“Catch all”), because of new technology or other reasons..  The list can be interpreted as “comprehensive list..  TBD |
| Annex C5 Para 3.3.3.5. | JPN proposed addition:  …  Circuit monitor list  (a) Atmosphere pressure sensor  (b) Intake air pressure sensor  (c) Intake air temperature sensor  (d) Air flow sensor  (e) Engine coolant temperature sensor  (f) Throttle sensor  (g) Cylinder sensor  (h) Crank angle sensor | JPN proposed addition:  …  Circuit monitor list  (a) Atmosphere pressure sensor  (b) Intake air pressure sensor  (c) Intake air temperature sensor  (d) Air flow sensor  (e) Engine coolant temperature sensor  (f) Throttle sensor  (g) Cylinder sensor  (h) Crank angle sensor | Alex K comment:  We are concerned the proposed list of components added to the requirement may be mis-interpreted as being a list of mandatory MIL-On components.  TBD |
| Annex C5 Para 3.3.4. | JPN proposal:  Monitoring requirements for vehicles equipped with compression-ignition engines  Only for Level 1B  The requirement only adopts to paragraph 3.3.4.5. | N/A | Highlighted text to be updated  TBD |
| Annex C5 Para 3.3.4.5. | JPN proposal:  Circuit monitor list  (a) Atmosphere pressure sensor  (b) Intake air pressure sensor  (c) Intake air temperature sensor  (d) Air flow sensor  (e) Engine coolant temperature sensor  (f) Throttle sensor  (g) Cylinder sensor  (h) Crank angle sensor  (i) injection timing sensor  (j) injection amount adjustment sensor  (k) injection temperature sensor  (l) injection pressure sensor  (m) oil temperature sensor  (n) oil pressure sensor  (o) exhaust temperature sensor  (p) exhaust pressure sensor | JPN proposal:  Circuit monitor list  (a) Atmosphere pressure sensor  (b) Intake air pressure sensor  (c) Intake air temperature sensor  (d) Air flow sensor  (e) Engine coolant temperature sensor  (f) Throttle sensor  (g) Cylinder sensor  (h) Crank angle sensor  (i) injection timing sensor  (j) injection amount adjustment sensor  (k) injection temperature sensor  (l) injection pressure sensor  (m) oil temperature sensor  (n) oil pressure sensor  (o) exhaust temperature sensor  (p) exhaust pressure sensor | Alex K comment:  See above  TBD |
| Annex C5 Para 3.3.5. | Only for Level 1Aa and Level 2  Manufacturers may demonstrate to the Type Approval Authority that certain components or systems need not be monitored if, in the event of their total failure or removal, emissions do not exceed the OBD thresholds set out in Table 4A and Table 4B (as applicable) in paragraph 6.8.2. of this Regulation. | Only for Level 1Aa and Level 2  Manufacturers may demonstrate to the Type Approval Authority that certain components or systems need not be monitored if, in the event of their total failure or removal, emissions do not exceed the OBD thresholds set out in Table 4A and Table 4B (as applicable) in paragraph 6.8.2. of this Regulation. | JPN added highlighted text.  Alex K comment: *Testing-out would be applicable for level 1B, if a level 2 approval is used. Is a testing-out in general not planned for level 1B? How would that work if level 1B doesn’t allow testing-out?*  TBD |
| Annex C5 Para 3.5.1. | The OBD system shall incorporate a malfunction indicator readily perceivable to the vehicle operator. The MI shall not be used for any other purpose except to indicate emergency start-up, emission default modes, or limp-home routines to the driver.  … | The OBD system shall incorporate a malfunction indicator readily perceivable to the vehicle operator. The MI shall not be used for any other purpose except to indicate emergency start-up, emission default modes, or limp-home routines to the driver.  … | Highlighted text added.  Approved by EC and JPN. |
| Annex C5 Para 3.6.1. | The OBD system shall record pending and confirmed fault code(s) indicating the status of the emission control system. Separate status codes (readiness codes) shall be used to identify correctly functioning emission control systems and those emission control systems which need further vehicle operation to be fully evaluated. If the MI is activated due to deterioration or malfunction or permanent emission default modes of operation, a fault code shall be stored that identifies the type of malfunction. A fault code shall also be stored in the cases referred to in paragraphs 3.3.3.5. and 3.3.4.5. of this annex.  A readiness shall be set to "complete" when a monitor or a group of monitors addressed by this status have run since the last erasing by request of an external OBD scan-tool. Readiness shall be set to "not complete" by erasing the fault code memory of a monitor or group of monitors by request of an external scan- tool. | The OBD system shall record pending and confirmed fault code(s) indicating the status of the emission control system. Separate status codes (readiness codes) shall be used to identify correctly functioning emission control systems and those emission control systems which need further vehicle operation to be fully evaluated. If the MI is activated due to deterioration or malfunction or permanent emission default modes of operation, a fault code shall be stored that identifies the type of malfunction. A fault code shall also be stored in the cases referred to in paragraphs 3.3.3.5. and 3.3.4.5. of this annex.  A readiness shall be set to "complete" when a monitor or a group of monitors addressed by this status have run since the last erasing by request of an external OBD scan-tool. Readiness shall be set to "not complete" by erasing the fault code memory of a monitor or group of monitors by request of an external scan- tool. | Highlighted amendments made to first sub-para during Nov19 OBD TF.  Alex K comment: “*definition of pending necessary? Take over definition from GTR?*”  TBD  Second (new) highlighted sub-para proposed by JPN  Alex K comment: “*Readiness is not directly related to Fault code storage, so this place is misleading.*  *2. This definition contradicts the provisions of readiness in the referenced ISO or SAE standards.*  *…*”  TBD |
| Annex C5 Para 3.8.1. | The OBD system may erase a fault code and the distance travelled and freeze-frame information if the same fault is not re-registered in at least 40 engine warm-up cycles or 40 driving cycles with vehicle operation in which the following criteria (a)-(c) are satisfied:  (a) Cumulative time since engine start is greater than or equal to 600 seconds;  (b) Cumulative vehicle operation at or above 40 km/h occurs for greater than or equal to 300 seconds;  (c) Continuous vehicle operation at idle (i.e. accelerator pedal released by driver and vehicle speed less than or equal to 1.6 km/h) for greater than or equal to 30 seconds. | The OBD system may erase a fault code and the distance travelled and freeze-frame information if the same fault is not re-registered in at least 40 engine warm-up cycles or 40 driving cycles with vehicle operation in which the following criteria (a)-(c) are satisfied:  (a) Cumulative time since engine start is greater than or equal to 600 seconds;  (b) Cumulative vehicle operation at or above 40 km/h occurs for greater than or equal to 300 seconds;  (c) Continuous vehicle operation at idle (i.e. accelerator pedal released by driver and vehicle speed less than or equal to 1.6 km/h) for greater than or equal to 30 seconds. | OICA proposal to be included in Informal Document to amend OICA Working Document GRPE-2020-05  Accepted by JPN and EC |
| Annex C5 Para 4.1. | A manufacturer may request to the Type Approval Authority that an OBD system be accepted for type approval even though the system contains one or more deficiencies such that the specific requirements of this annex are not fully met. Type Approval Authority may approve up to two separate contains for deficiency.  When a manufacture adopts specific condition for misfire at Paragraph 3.3.3.2.2, it exclude from deficiency. | A manufacturer may request to the Type Approval Authority that an OBD system be accepted for type approval even though the system contains one or more deficiencies such that the specific requirements of this annex are not fully met. Type Approval Authority may approve up to two separate contains for deficiency.  When a manufacture adopts specific condition for misfire at Paragraph 3.3.3.2.2, it exclude from deficiency. | JPN proposal  Justification: Deficiency is up to two separate contains specific condition for misfire monitor exclude from deficiency.  TBD |
| Annex C5  Para 4.6. | [At the request of the manufacturer, a vehicle with an OBD system may be accepted for type-approval with regard to emissions, even though the system contains one or more deficiencies such that the specific requirements of this annex are not fully met, provided that the specific administrative provisions set out in section paragraph 3 of this annex are complied with.  The Type Approval Authority shall notify its decision in granting a deficiency request to all other Contracting Parties to the 1958 Agreement applying this Regulation.] | [At the request of the manufacturer, a vehicle with an OBD system may be accepted for type-approval with regard to emissions, even though the system contains one or more deficiencies such that the specific requirements of this annex are not fully met, provided that the specific administrative provisions set out in section paragraph 3 of this annex are complied with.  The Type Approval Authority shall notify its decision in granting a deficiency request to all other Contracting Parties to the 1958 Agreement applying this Regulation.] | TBD |
| Annex C5  Appendix 1  Para 2.1.3. | Driving the vehicle with a simulated malfunction over the Type 1 test cycle and measuring the emissions of the vehicle; | Driving the vehicle with a simulated malfunction over the Type 1 test cycle and measuring the emissions of the vehicle; | JPN comment  “Exemption drive trace index”  ???  TBD |
| Annex C5  Appendix 1  Para 6. | Figure AC5/XX Flow of demonstration test  Box 5 now reads “Erase fault code if fault code is present” | Figure AC5/XX Flow of demonstration test  Box 5 now reads “Erase fault code if fault code is present” | TBD  NB: need an editable version of the flow chart. |
| Annex C5  Appendix 1  Para 6.2.1. | 6.2. Vehicle preconditioning  6.2.1. Level 2  According to the engine type and after introduction of one of the failure modes given in paragraph 6.3. of this appendix, the vehicle shall be preconditioned by driving at least two consecutive 3 Phase of Type 1 tests.  Level 1A Only  According to the engine type and after introduction of one of the failure modes given in paragraph 6.3. of this appendix, the vehicle shall be preconditioned by driving at least two consecutive 4 Phase of Type 1 tests.  Level 1B Only  According to the engine type and after introduction of one of the failure modes given in paragraph 6.3. of this appendix, the vehicle shall be preconditioned by driving at least one or more consecutive 3 Phase of Type 1 tests. | 6.2. Vehicle preconditioning  6.2.1. Level 2  According to the engine type and after introduction of one of the failure modes given in paragraph 6.3. of this appendix, the vehicle shall be preconditioned by driving at least two consecutive 3 Phase of Type 1 tests. | Proposals from JPN  Alex K comments for Level 1B: “What about the 4th phase”. “Alternative cycles would apply for Japan by this clause also, see above testing-out. Does it include the 4th phase? IS Unified Cycle the US UDC (see comment Rob Gardner)? Why would that be excluded?”  JRC comment: “The alternative preconditioning methods must be at least WLTC 'equivalents'”  TBD |
| Annex C5  Appendix 1  Para 6.2.2. | [Level 1A and Level 2 Only  At the request of the manufacturer with approval by Type Approval Authority, alternative preconditioning methods may be used.] | [At the request of the manufacturer with approval by Type Approval Authority, alternative preconditioning methods may be used.] | L1A and L2 only.  Further discussion need?  TBD |
| Annex C5  Appendix 1  Para 6.4.1.1. | After vehicle preconditioning according to paragraph 6.2. of this appendix, the test vehicle is driven over a Type 1 test.  The MI shall be activated at the latest before the end of this test under any of the conditions given in paragraphs 6.4.1.2. to 6.4.1.5. of this appendix. The MI may also be activated during preconditioning. The Technical Service may substitute those failure modes with others in accordance with paragraph 3.3.3.4. of this annex**.** However, the total number of failures simulated shall not exceed four (4) for the purpose of type approval.  In the case of testing a bi-fuel gas vehicle, both fuel types shall be used within the maximum of four (4) simulated failures at the discretion of the Type Approval Authority. | After vehicle preconditioning according to paragraph 6.2. of this appendix, the test vehicle is driven over a Type 1 test.  The MI shall be activated at the latest before the end of this test under any of the conditions given in paragraphs 6.4.1.2. to 6.4.1.5. of this appendix. The MI may also be activated during preconditioning. The Technical Service may substitute those failure modes with others in accordance with paragraph 3.3.3.4. of this annex**.** However, the total number of failures simulated shall not exceed four (4) for the purpose of type approval.  In the case of testing a bi-fuel gas vehicle, both fuel types shall be used within the maximum of four (4) simulated failures at the discretion of the Type Approval Authority. | Yellow highlighted updates from OBD TF Nov-19  Agreed  NB: also make change to UNR83 06 and 07  Blue highlight based on JRC comment – change to 6.4.1.6.  TBD  NB: also make change to UNR83 06 and 07 – if change made here. |
| Annex C5  Appendix 1  Para 6.4.1.2. | Replacement of a catalyst with a deteriorated or defective catalyst or electronic simulation of a deteriorated or defective catalyst that results in emissions exceeding the NMHC OBD threshold or the NOx OBD threshold set out in Table 4A and Table 4B (as applicable) in paragraph 6.8.2. of this Regulation. | Replacement of a catalyst with a deteriorated or defective catalyst or electronic simulation of a deteriorated or defective catalyst that results in emissions exceeding the NMHC OBD threshold or the NOx OBD threshold set out in Table 4A and Table 4B (as applicable) in paragraph 6.8.2. of this Regulation. | Yellow highlighted updates from OBD TF Nov-19  Agreed |
| Annex C5  Appendix 1  Para 6.4.1.2. | After vehicle preconditioning according to paragraph 6.2. of this appendix, the test vehicle is driven over a Type 1 test.  The MI shall be activated at the latest before the end of this test under any of the conditions given in paragraphs 6.4.2.2. to 6.4.2.5 of this appendix. The MI may also be activated during preconditioning. The technical service may substitute those failure modes by others in accordance with paragraph 3.3.4.4. of this annex. However, the total number of failures simulated shall not exceed four (4) for the purposes of type approval. | After vehicle preconditioning according to paragraph 6.2. of this appendix, the test vehicle is driven over a Type 1 test.  The MI shall be activated at the latest before the end of this test under any of the conditions given in paragraphs 6.4.2.2. to 6.4.2.5 of this appendix. The MI may also be activated during preconditioning. The technical service may substitute those failure modes by others in accordance with paragraph 3.3.4.4. of this annex. However, the total number of failures simulated shall not exceed four (4) for the purposes of type approval. | Yellow highlighted updates from OBD TF Nov-19  Agreed  NB: also make change to UNR83 06 and 07 |
| Annex C5  Appendix 1  Para 6.5.1.1. | Updates to make consistent with terminology used in para 6.5.1.2. | Updates to make consistent with terminology used in para 6.5.1.2. | Agreed at OBD TF Nov-19 |
| Annex C5  Appendix 1  Para 6.5.1.2. | Updates to make consistent with terminology used in para 6.5.1.1. | Updates to make consistent with terminology used in para 6.5.1.1. |  |
| Annex C5  Appendix 1  Para 6.5.1.2. | … oxygen sensor, lambda sensor, and number of fault code. | … oxygen sensor, lambda sensor, and number of fault code. | Update to first sub-para proposed by JPN  TBD |
| Annex C5  Appendix 1  Para 6.5.1.2.1. | [For Level 1A and Level 2 only  On Board Fuel consumption monitoring  The information listed in paragraph 3. of Appendix 5 shall be made available as signals through the serial port connector referred to in paragraph 6.5.3.2 (c) .] | [For Level 1A and Level 2 only  On Board Fuel consumption monitoring  The information listed in paragraph 3. of Appendix 5 shall be made available as signals through the serial port connector referred to in paragraph 6.5.3.2 (c) .] | JPN to not support.  Requirement to be moved to Appendix 5 |
| Annex C5  Appendix 1  Paras 7.1.7., 7.8.8. and 7.1.9. | In-service conformity related text in ~~strikethrough~~ | In-service conformity related text in ~~strikethrough~~ | Deletion of strikethrough text accepted |
| Annex C5  Appendix 1  Para 7.3.2. | …  (g) Manufacturers may request to use special denominator conditions for certain components or systems if it can be demonstrated to the Type Approval Authority by submitting data and/or an engineering evaluation that other conditions are necessary to allow for reliable detection of malfunctions. The Type Approval Authority shall only approve such requests if the manufacturer provides data and/or an engineering evaluation that supports the necessity of a special denominator. | …  (g) Manufacturers may request to use special denominator conditions for certain components or systems if it can be demonstrated to the Type Approval Authority by submitting data and/or an engineering evaluation that other conditions are necessary to allow for reliable detection of malfunctions. The Type Approval Authority shall only approve such requests if the manufacturer provides data and/or an engineering evaluation that supports the necessity of a special denominator. | OICA proposal in Working Document GRPE-2020-05  Accepted by JPN and EC |