Table A7/1 shall be performed separately for results after 4 phases and for results after 3 phases.

Table A7/1

**Procedure for calculating final test results (FE applicable for the 3-phase WLTP only)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Step No.* | *Source* | *Input* | *Process* | *Output* |
| 1 | Annex B6 | Raw test results | Mass emissions  Paragraphs 3. to 3.2.2. inclusive of this annex. | Mi,p,1, g/km;  MCO2,p,1, g/km. |
| 2 | Output step 1 | Mi,p,1, g/km;  MCO2,p,1, g/km. | Calculation of combined cycle values:  where:  Mi/CO2,c,2 are the emission results over the total cycle;  dp are the driven distances of the cycle phases, p. | Mi,c,2, g/km;  MCO2,c,2, g/km. |
| 2b  This step is only applicable for results after 4 phases; | Output step 1  Output step 2 | MCO2,p,1, g/km;  MCO2,c,2, g/km. | Correction of CO2 results against the target speed and distance.  Annex B6b.  Note: As the distance is also corrected, from this calculation step onwards any reference to a driven distance shall be interpreted as a reference to the target distance. | MCO2,p,2b, g/km;  MCO2,c,2b, g/km. |
| 3 | For results after 4 phases  Output step 2b | MCO2,p,2b, g/km;  MCO2,c,2b, g/km. | RCB correction  Appendix 2 to Annex B6. | MCO2,p,3, g/km;  MCO2,c,3, g/km. |
| For results after 3 phases  Output step 1  Output step 2 | MCO2,p,1, g/km;  MCO2,c,2, g/km. | RCB correction  Appendix 2 to Annex B6. | MCO2,p,3, g/km;  MCO2,c,3, g/km. |
| 4a | Output step 2  Output step 3 | Mi,c,2, g/km;  MCO2,c,3, g/km. | Emissions test procedure for all vehicles equipped with periodically regenerating systems, Ki.  Annex B6, Appendix 1.  Mi,c,4a = Ki × Mi,c,2  or  Mi,c,4a = Ki + Mi,c,2  and  MCO2,c,4a = KCO2 × MCO2,c,3  or  MCO2,c,4a = KCO2 + MCO2,c,3  Additive offset or multiplicative factor to be used according to Ki determination.  If Ki is not applicable:  Mi,c,4a = Mi,c,2  MCO2,c,4a = MCO2,c,3 | Mi,c,4a, g/km;  MCO2,c,4a, g/km. |
| 4b | Output step 3  Output step 4a | MCO2,p,3, g/km;  MCO2,c,3, g/km;  MCO2,c,4a, g/km. | If Ki is applicable, align CO2 phase values to the combined cycle value:  for every cycle phase p;  where:  If Ki is not applicable:  MCO2,p,4 = MCO2,p,3 | MCO2,p,4, g/km. |
| 4c | Output step 4a | Mi,c,4a, g/km;  MCO2,c,4a, g/km. | In the case these values are used for the purpose of conformity of production, the criteria emission values and CO2 mass emission values shall be multiplied with the run-in factor determined according to paragraph 8.2.4 of this Regulation:  Mi,c,4c = RIC (j) × Mi,c,4a  MCO2,c,4c = RICO2 (j) x MCO2,c,4a  In the case these values are not used for the purpose of conformity of production:  Mi,c,4c = Mi,c,4a  MCO2,c,4c = MCO2,c,4a | Mi,c,4c;  MCO2,c,4c |
| Calculate fuel efficiency (FEc,4c\_temp)　according to paragraph 6. of Annex B6.  In the case this value is used for the purpose of conformity of production, the fuel efficiency value shall be multiplied with the run in factor determined according to paragraph 8.2.4 of this Regulation:  FEc,4c = RIFE (j) x FEc,4c\_temp  In the case these values are not used for the purpose of conformity of production:  FEc,4c = FEc,4c\_temp | FEc,4c, km/l; |
| 5  Result of a single test. | Output step 4b and 4c | MCO2,c,4c, g/km;  MCO2,p,4, g/km. | For results after 4 phases:  ATCT correction of MCO2,c,4c and MCO2,p,4 in accordance with paragraph 3.8.2. of Annex B6a.  For results after 3 phases:  MCO2,c,5 = MCO2,c,4c  MCO2,p,5 = MCO2,p,4 | MCO2,c,5, g/km;  MCO2,p,5, g/km. |
| Mi,c,4c, g/km;  FEc,4c, km/l; | Apply deterioration factors calculated in accordance with Annex C4 to the criteria emissions values Mi,c,4c.  In the case these values are used for the purpose of conformity of production, the further steps (6 to 10) are not required and the output of this step is the final result. | Mi,c,5, g/km;  FEc,5, km/l; |
| 6 | For results after 4 phases  Output step 5 | For every test:  Mi,c,5, g/km;  MCO2,c,5, g/km;  MCO2,p,5, g/km. | Averaging of tests and declared value.  Paragraphs 1.2. to 1.2.3. inclusive of Annex B6. | Mi,c,6, g/km;  MCO2,c,6, g/km;  MCO2,p,6, g/km.  MCO2,c,declared, g/km. |
| For results after 3 phases  Output step 5 | FEc,5, km/l; | Averaging of tests and declared value.  Paragraphs 1.2. to 1.2.3. inclusive of Annex B6.  The conversion from FEc,declared to MCO2,c,declared, shall be performed for the applicable cycle according to paragraph 6. of Annex B7. For that purpose, the criteria emission over the applicable cycle shall be used. | FEc,declared, km/l  FEc,6, km/l  MCO2,c,declared, g/km. |
| 7 | For results after 4 phases:  Output step 6 | MCO2,c,6, g/km;  MCO2,p,6, g/km.  MCO2,c,declared, g/km. | Alignment of phase values.  Paragraph 1.2.4. of Annex B6.  and:  MCO2,c,7 = MCO2,c,declared | MCO2,c,7, g/km;  MCO2,p,7, g/km. |
| For results after 3 phases:  Output step 5  Output step 6 | MCO2,c,5, g/km;  MCO2,p,5, g/km;  MCO2,c,declared, g/km. | Alignment of phase values.  Paragraph 1.2.4. of Annex B6. | MCO2,p,7, g/km. |
| 8  Result of a Type 1 test for a test vehicle. | For results after 4 phases :  Output steps 6  Output steps 7 | Mi,c,6, g/km;  MCO2,c,7, g/km;  MCO2,p,7, g/km. | Calculation of fuel consumption according to Paragraph 6 of this annex.  The calculation of fuel consumption shall be performed for the applicable cycle and its phases separately. For that purpose: (a) the applicable phase or cycle CO2 values shall be used;  (b) the criteria emission over the complete cycle shall be used.  and:  Mi,c,8 = Mi,c,6  MCO2,c,8 = MCO2,c,7  MCO2,p,8 = MCO2,p,7 | FCc,8, l/100 km;  FCp,8, l/100 km;  Mi,c,8, g/km;  MCO2,c,8, g/km;  MCO2,p,8, g/km. |
| For results after 3 phases :  Output steps 5  Output steps 7 | Mi,c,5, g/km;  MCO2,p,7, g/km. | Calculation of fuel consumption and conversion to fuel efficiency for phase value only according to Paragraph 6 of this annex.  The calculation of fuel consumption shall be performed for the phases separately. For that purpose: (a) the applicable phase CO2 values shall be used;  (b) the criteria emission over the complete cycle shall be used.  and:  Mi,c,8 = Mi,c,5  FEc,8 = FEc,6 | FCp,8, l/100 km;  FEp,8, km/l;  Mi,c,8, g/km;  FEc,8, km/l. |
| 9  Interpolation family result.  For results after 4 phases  Final criteria emission result | Output step 8 | For each of the test vehicles H and L:  Mi,c,8, g/km;  MCO2,c,8, g/km;  MCO2,p,8, g/km;  FCc,8, l/100 km;  FCp,8, l/100 km;  FEc,8, km/l.  FEp,8, km/l | For results after 4 phases;  If in addition to a test vehicle H a test vehicle L and, if applicable vehicle M was also tested, the resulting criteria emission value shall be the highest of the two or, if applicable, three values and referred to as Mi,c. .  In the case of the combined THC + NO x emissions, the highest value of the sum referring to either the VH or VL is to be used.  Otherwise, if no vehicle L was tested,  Mi,c = Mi,c,8  For CO2, FE and FC, the values derived in step 8 shall be used, and CO2 values shall be rounded according to paragraph 6.1.8. of this Regulation to two places of decimal, and FE and FC values shall be rounded according to paragraph 6.1.8. of this Regulation to three places of decimal. | Mi,c, g/km;  MCO2,c,H, g/km;  MCO2,p,H, g/km;  FCc,H, l/100 km;  FCp,H, l/100 km;  FEc,H, km/l; FEp,H, km/l;  and if a vehicle L was tested:  MCO2,c,L, g/km;  MCO2,p,L, g/km;  FCc,L, l/100 km;  FCp,L, l/100 km;  FEc,L, km/l. FEp,L, km/l. |
| 10  Result of an individual vehicle.  Final CO2, FE and FC result. | Output step 9 | MCO2,c,H, g/km;  MCO2,p,H, g/km;  FCc,H, l/100 km;  FCp,H, l/100 km;  FEc,H, km/l;  FEp,H, km/l;  and if a vehicle L was tested:  MCO2,c,L, g/km;  MCO2,p,L, g/km;  FCc,L, l/100 km;  FCp,L, l/100 km.  FEc,L, km/l;  FEp,L, km/l. | Fuel consumption, fuel efficiency and CO2 calculations for individual vehicles in an interpolation family.  Paragraph 3.2.3. of this annex.  Fuel consumption, fuel efficiency and CO2 calculations for individual vehicles in a road load matrix family  Paragraph 3.2.4. of this annex.  CO2 emissions shall be expressed in grams per kilometre (g/km) rounded to the nearest whole number;  FC values shall be rounded according to paragraph 6.1.8. of this Regulation to one place of decimal, expressed in (l/100 km) ;  FE values shall be rounded according to paragraph 6.1.8. of this Regulation to one place of decimal, expressed in (km/l). | MCO2,c,ind g/km;  MCO2,p,ind, g/km;  FCc,ind l/100 km;  FCp,ind, l/100 km  FEc,ind, km/l.  FEp,ind, km/l |