

**Proposal for amendments to UN Global Technical Regulation
No. 4 (World-wide harmonized Heavy Duty Certification
procedure (WHDC)) amending
ECE/TRANS/WP.29/GRPE/2021/7**

I. Proposal

Paragraph 8.1.1., Equation (15) and (16), *amend to read:*

“8.1.1. Raw exhaust gas

~~$$k_{w,a} = \left(1 - \frac{1.2442 \times H_a + 111.19 \times w_{ALF} \times \frac{q_{mf,i}}{q_{mad,i}}}{773.4 + 1.2442 \times H_a + \frac{q_{mf,i} \times k_f \times 1,000}{q_{mad,i} \times k_{f,w} \times 1,000}} \right) \times 1.008 \quad (15)$$~~

~~$$k_{w,ar} = \left(1 - \frac{1.2442 \times H_a + 111.19 \times w_{ALF} \times \frac{q_{mf,i}}{q_{mad,i}}}{773.4 + 1.2442 \times H_a + \frac{q_{mf,i} \times k_f \times 1,000}{q_{mad,i} \times k_{f,w} \times 1,000}} \right) \times 1.008 \quad (15)$$~~

Or

~~$$k_{w,a} = \left(1 - \frac{1.2442 \times H_a + 111.19 \times w_{ALF} \times \frac{q_{mf,i}}{q_{mad,i}}}{773.4 + 1.2442 \times H_a + \frac{q_{mf,i} \times k_f \times 1,000}{q_{mad,i} \times k_{f,w} \times 1,000}} \right) / \left(1 - \frac{p_r}{p_b} \right) \quad (16)$$~~

~~$$k_{w,ar} = \left(1 - \frac{1.2442 \times H_a + 111.19 \times w_{ALF} \times \frac{q_{mf,i}}{q_{mad,i}}}{773.4 + 1.2442 \times H_a + \frac{q_{mf,i} \times k_f \times 1,000}{q_{mad,i} \times k_{f,w} \times 1,000}} \right) / \left(1 - \frac{p_r}{p_b} \right) \quad (16)$$~~

II. Justification

These are editorial corrections for the formula in the Working Document ECE/TRANS/WP.29/GRPE/2021/7.