Idling test: HVAC mode, test facility, equipment, test procedure

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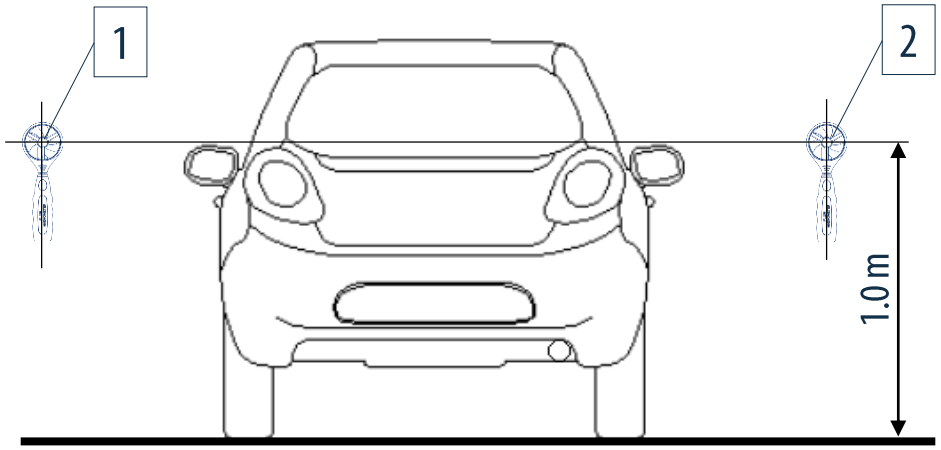
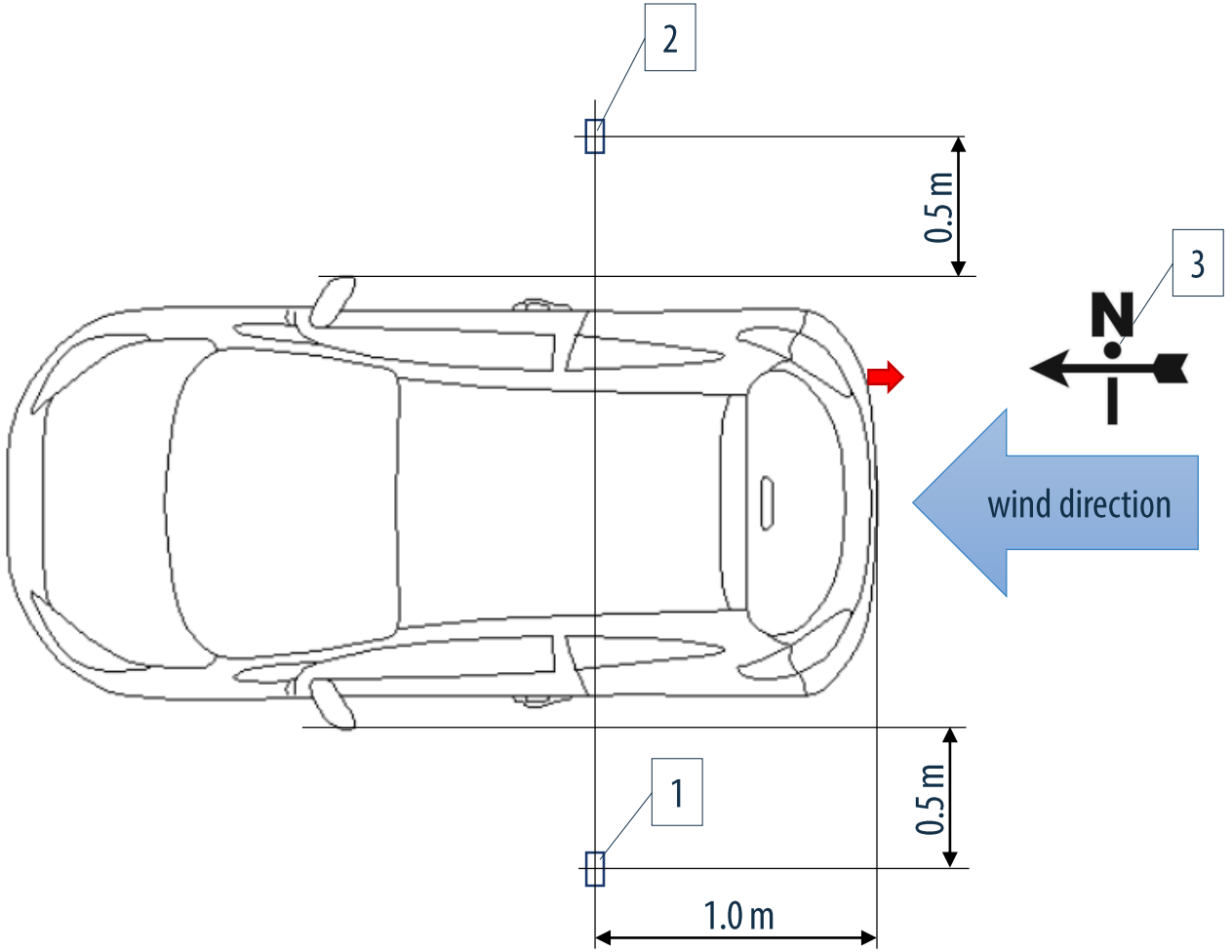
Test facility, test conditions, HVAC mode

Open area without any other sources of pollution





1,2 – anemometers; 3 - weather vane

Test conditions:

- ✓ wind velocity 1.0…3.0 m/s
- ✓ velocity difference between anemometers 1 and 2 not more than 0.2 m/s
- ✓ wind direction deviation not more than 15 deg.

HVAC mode: Recirculation ON; Ventilator speed - MAXIMAL

It is acceptable to use air blower to simulate air movement around tested vehicle

Test Procedure (draft)

1. Start the engine and warm-up during 15 minutes*.
2. Set the vehicle to open area rear side against the wind direction, switch-off the engine and install anemometers.
3. Measure the wind velocity and direction and ensure that they are in the acceptable range.
4. Ventilate the saloon during 3…5 minutes and measure background concentrations of pollutants.
5. Start the engine, set the HVAC mode and start the idling test**.
6. Make 5…7 measurements of pollutant concentrations during 10…15 minutes.
7. Measure the wind velocity and direction and ensure that they are in the acceptable range.
8. Stop the engine, open doors and ventilate the saloon during 5…7 minutes till concentrations of pollutants come back to background level.
9. Repeat p.p.5-8 two times.
10. Calculate average concentrations of pollutants among all measurements.

*Gas analyzers are already installed inside a vehicle and warmed-up

**During idling test no people are inside tested vehicle

Test equipment

1. Weather vane – 1
2. Anemometers – 2
3. Electronic timer – 1
4. Gas analyses (CO, NO, NO_2, CH_2O, . . .)

Thank you for your attention!

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