Proposal for amendments to ECE/TRANS/WP.29/GRPE/2012/4

I. Proposal

Annex 4, Paragraph 9.4.4.1, amend to read:

“9.4.4.1. Filter specification

All filter types shall have a 0.3 μm DOP (di-octylphthalate) or PAO (poly-alpha-olefin) CS 68649-12-7 and CS 68037-01-4 collection efficiency of at least 99 per cent. The sample filter manufacturer’s measurements reflected in their product ratings may be used to show this requirement. The filter material shall be either:

(a) Fluorocarbon (PTFE) coated glass fibre, or
(b) Fluorocarbon (PTFE) membrane.”

Annex 4, Appendix 8 Figure 20, replace with:

“Figure 20
Schematic of Recommended Particle Sampling System – Full Flow Sampling

from engine exhaust

act. carbon

LEPA HEPA

Flow direction

Flow direction

excess air

filtered air

PND2

ET

PND3

PND

PNC

cyclone

”
II. Justification

During discussions in the WLTP DTP PM-PN subgroup it was noted that poly-alpha-olefin is now commonly used by PM sample filter manufacturers for testing filter efficiency in preference to di-octylphthalate as the latter is a potential carcinogen. References for the appropriate poly-alpha-olefins were provided by the PM sample filter suppliers for inclusion in the WLTP GTR.

WLTP DTP PM-PN subgroup discussions also identified an error in the particle number measurement diagram in Regulation 49, in that the sequence of dilution air filters was incorrect and at odds with the text of the Regulation.

This informal document proposes to insert two amendments into Regulation 49, as part of the 06 series of amendments, to address these issues. In line with the filter specification text in GTR 11 the reader is referred to the PM sample filter manufacturer’s published test data for determining compliance with the 99% filtration efficiency requirement.