

DRAFT – FOR COMMENT BY THE OCE EDITORIAL GROUP
Outcomes from OCE Editorial Group Meeting
November 8 & 9, 2004
Tokyo, Japan

I. Issues for Plenary Group Consideration

1. Consider regional altitude requirements for NTE. Concern were expressed by some Editorial Group members that designing for “worst-case” altitudes which may be infrequently encountered within a region could sub-optimize engine performance and fuel economy, and increase engine hardware and software cost. Concern were also expressed that this issue could be exacerbated by any future CO2 standards. A choice of three altitude ranges suggested. Use of a particular range would be based on vehicle miles traveled criteria. Issues to be considered include: technical justification that regional approach needed (e.g. VMT distributions by altitude, explanations why concerns can’t be addressed via robust engine design and tailored software calibrations using AECDs, NTE deficiencies, and carve-outs); approach potentially inconsistent with principles of harmonization; regional engine designs could increase manufacturer costs; need to determine whether a cost/benefit analysis is required, need cost difference between single and multiple altitude engine designs, need to consider operation and sales between/across countries; need to consider labeling requirements.
2. Cost effectiveness. Consider using US EPA approach where NTE presents no increased hardware cost for engines which do not have defeat devices.
3. OCE GTR interaction with WHDC and WWH-OBDD GTRs. Determine whether some GTR sections must/should share common language and definitions.
4. Application Section. Need language that is consistent with other GTRs. Reviewed vehicle classifications in WP 29, Resolution 1, but still need guidance. Confirm GTR applies to both diesel and diesel-derived engines. Define heavy-duty engines and vehicles. Group Chairs should decide on appropriate vehicles classifications and definitions.
5. General requirements. Determine whether language from WHDC is required for OCE GTR. If so, determine whether language can be modified to eliminate reference to vibration.
6. Address the specificity required by type approval process. Examples are NTE compliance statement versus actual NTE data, NTE deficiency criteria, etc.

II. Potential Presentations & Deliverables for the January 2004 GRPE Plenary Meetings in Geneva

1. Second draft of OCE GTR with reorganized text. (Rick Gezelle, U.S. EPA)
2. Ambient operating conditions in Europe and Japan. (Lars Gustavsson, Volvo; Meinrad Singer, IVECO)
3. Ambient Operating Conditions in United States. (Rick Gezelle, U.S. EPA)
4. Definitions. Need to work through the running list. Re-define list after better understand common GTR definitions. (Editorial Committee)

III. Potential Presentations & Deliverables for the next meeting of the OCE Editorial Group

1. Adsorption coefficient for smoke testing using opacimeters. (Juergen Stein, Daimler Chrysler)
2. Present temperature and humidity correction factors for HC and CO emissions. (Juergen Stein, DaimlerChrysler)

IV. Draft GTR To-Do Items

Overview Section (Section A)

1. Reorganize GTR Section A into: introduction, background, why NTE is the solution, and why NTE is technologically and economically feasible

Smoke Requirements (Section 7.4)

2. Determine whether 5 in path smoke standard is fair for smaller engines.
3. Decide whether to waive smoke testing if PM standard below some threshold
4. Define transient and steady-state for purposes of smoke testing. Explain why distinction is needed (EPA).
5. Consider whether to refer to an adsorption coefficient for smoke testing using opacimeters (Juergen Stein).
6. Determine whether 2 percent full scale drift is too large given the NTE limit.
7. Discuss concern over false smoke opacity failures due to N₂O emissions from aftertreatment.

In-field Testing (Section 7.0)

8. Reference appropriate EPA regulations for field testing and equipment requirements. Monitor research work of joint European committee.

Regeneration Event Requirements (Section 7.2.1)

9. Present EU and Japan procedures for dealing with regeneration during emissions testing.
10. Define passive and active regeneration.

11. Consider dealing with the NTE regeneration issue by considering only type approval and certification testing where laboratory test cycles are used, deal with on-road NTE regeneration issue by eliminating section on NTE regeneration (7.2.1) and moving it to some future in-use testing GTR. Review how FTP and Euro tests handle regeneration during testing.

Emission correction factors (Section 7.3)

12. Explain how to apply correction factors.
13. Add PM, HC, and CO correction factors.

General conventions (All Sections)

14. Determine which conventions shall be referred to: ISO, EMA, ASTM.

NTE sampling event (Section 7.2) and emissions calculations (New Section 7.5)

15. Add NTE sampling event defined in EPA manufacturer in-use testing program as option.
16. Add section which explains how to calculate the NTE (decide whether to introduce EPA NTE event –see above.). Refer to EPA 1065.

Exclusions, carve-outs, 5% limited testing provision, and deficiencies

17. Explain why an NTE exclusion is needed if engine is not capable of operating in the exclusion area (Section 8.1).
18. Explore more specific criteria for NTE deficiencies (Section 9.0).
19. Add language that states deficiencies which result in noncompliance over the entirety of NTE operation will not be granted (Section 9.4).
20. Eliminate cooled EGR technology NTE exclusion and address as a deficiency (Section 10.1).
21. Eliminate aftertreatment exclusion and address as a deficiency (Section 10.2).
22. Provide guidance on how to implement 5% NTE carve-out demonstrations (Section 10.3).

Other Issues

23. Describe minimum data needed to support NTE compliance statement at time of type approval (Section 11.0).
24. Define petroleum-fueled diesel cycle engines in terms of spark or compression ignition (issue arose under Section 8.1).