



Tier 5 Rulemaking Workshop II

Miscellaneous Amendments

October 30-31, 2023

Outline - Miscellaneous Amendments

- Correct typographical errors and other inconsistencies in the new engine regulation, test procedures, etc.
- Clarify conditional approval of certified on-road engines as off-road compliant engines
- Refine significant digit stipulations for Tier 5 particulate matter (PM) and oxides of nitrogen (NO_x) standards
- Incorporate revised language for previous-tier replacement engines
- Amend test procedures, as feasible, to foster greater alignment with those of United States Environmental Protection Agency (U.S. EPA), minimize redundant testing
- Exclude diesel marine propulsion engines < 37 kilowatt (kW)

Miscellaneous Amendments

(1 of 3)

- Correct typographical errors and other inconsistencies in the California off-road diesel new engine regulations [13 California Code of Regulations (CCR) 2420-2427] and the California Test Procedures [Incorporated 40 Code of Federal Regulations (CFR) 1039, 1065, and 1068]
- Revise 13 CCR 2423(k) to clarify conditional approval of certified on-road engines as off-road compliant engines

Miscellaneous Amendments

(2 of 3)

- Refine significant digit requirements to support 0.005 g/kW-hr PM standards and 0.040 g/kW-hr NO_x standards
- Incorporate revised language in 40 CFR 1068.240 of the California Test Procedures and in 13 CCR 2423(j)(1) that would allow manufacturers to replace Tier 4 final engines with newly manufactured Tier 4 final replacement engines that are no longer covered by an Executive Order, unless otherwise prohibited

g/kW-hr = grams per kilowatt-hour

Miscellaneous Amendments

(3 of 3)

- Correct 13 CCR 2420-2427 and the California Test Procedures to update the address of CARB's Southern California facility to its new location in Riverside, California
- Amend the California Test Procedures with the requirements of 40 CFR 1039, 1065, and 1068, adopted since 2012, to the extent feasible, to foster greater alignment with U.S. EPA and to minimize redundant testing for manufacturers

Diesel Marine Propulsion Engine Exclusion

- Clarify that diesel marine propulsion engines < 37 kW would not be subject to land-based requirements under Tier 5
 - These engines would be regulated by U.S. EPA under 40 CFR 1042 beginning in 2029



- Auxiliary diesel marine engines would still be covered by the land-based requirements in 13 CCR 2423, including Tier 5 as appropriate

Image sources: [Marine engine 1](#) and [Marine engine 2](#)

Request for Stakeholder Participation

- Staff requests that industry and other members of the public inform us of any additional clarifications, errors of omission/commission, or other inconsistencies found in the California off-road diesel new engine regulations 13 CCR 2420-2427 and the California Test Procedures [Incorporated 40 Code of Federal Regulations (CFR) 1039, 1065, and 1068]