



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
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OFFICE OF
AIR AND RADIATION

August 6, 2014

CD-14-14 (ATV/UTV)

SUBJECT: Road Load Force Target Coefficients for Vehicles Over 870kg, Certified Under 40 CFR Part 1051

Dear Manufacturer:

This letter sets forth the Environmental Protection Agency (EPA) policy regarding manufacturer use of 40 CFR § 86.529-98 to determine the road load force target coefficients and coastdown calibration times for vehicles over 870kg that certify under 40 CFR Part 1051. Title 40 CFR Part 1051 applies to all-terrain vehicles (ATVs) and utility vehicles (UTVs) subject to the same requirements as ATVs.

For offroad vehicle weights above 870kg, EPA believes it is appropriate for manufacturers to extrapolate from the values given in Figure F98-9 of 40 CFR § 86.529-98 to determine road load force target coefficients and coastdown calibration times. An extrapolation of the exact values that may be used by manufacturers certifying vehicles over 870kg under 40 CFR Part 1051 is posted on our website at <http://epa.gov/otaq/recveh.htm#guidance>.

Background

40 CFR § 1051.501 specifies that manufacturers of off-highway motorcycles and ATVs must use the test procedures specified in 40 CFR part 86, subpart F to determine whether their vehicles meet the exhaust emission standards in 40 CFR §§ 1051.105 or 1051.107. That subpart contains a specific section, 40 CFR § 86.529-98 for determination of dynamometer road load force target coefficients. 40 CFR § 86.529-98 contains a look-up table (Figure F98-9) based on vehicle mass that tells the manufacturer what coastdown times and A and C coefficients to use for the range of vehicle mass from 95kg up to 870kg in 10kg increments. However, because the vehicles subject to 40 CFR Part 1051 include offroad vehicles with a gross vehicle weight up to 3750 pounds – or 1700kg – Figure F98-9 does not provide the full range of values for manufacturers to use for Part 1051 certification.

The original rulemaking to establish the 40 CFR Part 86 regulations for highway motorcycles was promulgated in 1977 and only included values up to 760kg. The weight range was extended for highway motorcycles by regulation amendment in 1998 to include today's values up to 870kg. In a letter on January 7, 2013, the Motorcycle Industry Council (MIC) requested that EPA accept off-road vehicle manufacturers' use of MIC's extrapolated values to cover the 880 to

1,000kg weight range for the A and C coefficient values, force and coastdown times, and tolerances. The request from MIC was based on a linear extrapolation of values represented in Figure F98-9.

EPA Analysis and Rationale

The Agency's analysis of Figure F98-9 and the linear extrapolation presented by MIC indicates that the linear extrapolation is appropriate for vehicles over 870kg. We believe a linear extrapolation is appropriate because the linear extrapolation is based on the linear curve used to determine road load force target coefficients based on loaded vehicle mass in Figure F98-9. In addition, EPA data suggests that vehicles within this extrapolated region will have road load force target coefficients consistent with a linear extrapolation of Figure F-98-9. We believe this policy is consistent with the language of 40 CFR § 1051.501 specifying that manufacturers use the test procedures specified in 40 CFR part 86, subpart F and is reasonably consistent with the apparent intent of Figure F98-9 in that subpart.

If you have any questions, please contact David Swain at 734-214-4377 or by e-mail at swain.david@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Byron J. Bunker".

Byron J. Bunker, Director
Compliance Division
Office of Transportation and Air Quality