
40 C.F.R. § 1037.570

Procedures to characterize torque converters.

GEM includes input values related to torque converters. This section describes a procedure for mapping a torque converter's capacity factors and torque ratios over a range of operating conditions. You may ask us to approve analytically derived input values based on this testing for additional untested configurations as described in § 1037.235(h).

(a) Prepare a torque converter for testing as follows:

(1) Select a torque converter with less than 500 hours of operation before the start of testing.

(2) If the torque converter has a locking feature, unlock it for all testing performed under this section. If the torque converter has a slipping lockup clutch, you may ask us to approve a different strategy based on data showing that it represents better in-use operation.

(3) Mount the torque converter with a transmission to the dynamometer in series or parallel arrangement or mount the torque converter without a transmission to represent a series configuration.

(4) Add transmission oil according to the torque converter manufacturer's instructions, with the following additional specifications:

(i) If the torque converter manufacturer specifies multiple transmission oils, select the one with the highest viscosity at operating temperature. You may use a lower-viscosity transmission oil if we approve that as critical emission-related maintenance under § 1037.125.

(ii) Fill the transmission oil to a level that represents in-use operation. If you are testing the torque converter without the transmission, keep output pressure and the flow rate of transmission oil into the torque converter within the torque converter manufacturer's limits.

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