

Environmental Protection Agency

§ 610.64

engine dynamometer durability test procedures used by research organizations in government, the oil industry, engine manufacturing companies, and independent laboratories.

§ 610.62 Driveability tests.

Driveability assessment (at normal ambient temperatures) of the baseline configuration, of the adjusted configuration (if required by the Administrator), and of the fully retrofitted configuration may be conducted at zero device-miles for all vehicles included in the durability fleet, and at approximately zero device-miles at low ambient temperatures (0 °F–20 °F). Driveability evaluation procedures will be provided by the Administrator when necessary.

§ 610.63 Performance tests.

The effect of a device on a vehicle's performance will be determined by performing wide-open-throttle 0 to 60 mph acceleration tests (at normal ambient temperatures) on the baseline vehicle configuration, on the adjusted configuration (if required), and on the fully retrofitted configuration. Tests will be conducted on a dry, level, smooth-surfaced test track, with appropriate speed-time measuring equipment, on as many vehicles as determined to be necessary.

§ 610.64 Track test procedures.

(a) Cases may arise where it will be necessary to evaluate the fuel economy effects of a retrofit device on a test track, because the effect of the device cannot be adequately tested using the chassis dynamometer procedures. (An obvious example is a device that changes the aerodynamic drag of the test vehicle.) In such cases, testing will be performed on a dry, level, smooth-surfaced test track for such dimensions that the speeds required by the city and highway fuel economy tests may be safely achieved.

(1) Because aerodynamic drag is not a linear function of velocity, it will be necessary to limit testing to times when the wind velocity is less than 5 mph, with gusts less than 10 mph.

(2) Testing will also be limited to ambient temperatures between 60° and 90 °F, and to times when the ambient

temperature remains reasonably constant during individual tests. Temperature differences between tests of baseline and retrofit configurations will also be minimized.

(3) Exhaust emissions will not be measured during track testing.

(4) Fuel economy of a vehicle running on a track will be measured using either a volumetric or gravimetric procedure approved by the Administrator.

(5) Vehicle speed and distance will be measured with a "fifth wheel" type of device. Suitable apparatus will be used to generate a permanent record (strip chart recorder, etc.) of the vehicle speed versus time.

(b) *City fuel economy test.* Although essentially the same procedures will be used for track testing as for dynamometer testing, some modifications will be necessary to insure safe operation of the test vehicle and to adjust to the requirements of track testing.

(1) An assistant to the driver will be necessary to steer the vehicle, so that the driver will not be distracted from following the speed-time schedules used in the Federal test procedure.

(2) The test vehicle will be preconditioned within the same time constraints given in § 610.43(a)(1)(ii). Preconditioning may take place either on the track or on a dynamometer. The 12-hour soak after preconditioning will take place in an area where the ambient temperature will remain within the 60° to 90 °F range, indoors, if necessary.

(3) The vehicle will be transported to the test track without being started. If the distance from soak area to track is no greater than one-quarter mile, then the vehicle may be pushed or towed to the track. Otherwise the vehicle must be transported by truck or trailer.

(4) Fuel economy will be determined by either a gravimetric or volumetric method.

(c) *Highway fuel economy test.* The highway test will follow the city fuel economy test in the same manner as in dynamometer tests (§ 610.43(b)). Fuel economy will be measured by gravimetric or volumetric methods.

(d) *Steady state tests.* Steady state tests on the track will be run in the same manner as on the dynamometer