rate is one engine per engine family. If we reduce your testing rate, we may limit our approval to any number of model years. In determining whether to approve your request, we may consider the number of engines that have failed the emission tests.

(f) We may ask you to make a reasonable number of production-line engines available for a reasonable time so we can test or inspect them for compliance with the requirements of this part.

§ 1054.305 How must I prepare and test my production-line engines?

This section describes how to prepare and test production-line engines. You must assemble the test engine in a way that represents the assembly procedures for other engines in the engine family. You must ask us to approve any deviations from your normal assembly procedures for other production engines in the engine family.

(a) Test procedures. Test your production-line engines using the applicable testing procedures in subpart F of this part to show you meet the emission standards in subpart B of this part.

(b) Modifying a test engine. Once an engine is selected for testing (see §1054.310), you may adjust, repair, prepare, or modify it or check its emissions only if one of the following is true:

(1) You document the need for doing so in your procedures for assembling and inspecting all your production engines and make the action routine for all the engines in the engine family.

(2) This subpart otherwise specifically allows your action.

(3) We approve your action in advance.

(c) Engine malfunction. If an engine malfunction prevents further emission testing, ask us to approve your decision to either repair the engine or delete it from the test sequence.

(d) Setting adjustable parameters. Before any test, we may require you to adjust any adjustable parameter to any setting within its physically adjustable range.

(1) [Reserved]

(2) We may specify adjustments within the physically adjustable range by considering their effect on emission levels. We may also consider how likely it is that someone will make such an adjustment with in-use equipment.

(3) We may specify an air-fuel ratio within the adjustable range specified in §1054.115(b).

(e) Stabilizing emission levels. Use good engineering judgment to operate your engines before testing such that deterioration factors can be applied appropriately. Determine the stabilization period as follows:

(1) For engine families with a useful life at or below 300 hours, operate the engine for the same number of hours before starting emission measurements that you used for the emission-data engine, within one hour. For example, if the emission-data engine operated for 8 hours before the low-hour emission test, operate the test engines for 7 to 9 hours before starting emission measurements.

(2) For engine families with a useful life above 300 hours, operate each engine for no more than the greater of two periods:

(i) 12 hours.

(ii) The number of hours you operated your emission-data engine for certifying the engine family (see 40 CFR part 1065, subpart E, or the applicable regulations governing how you should prepare your test engine).

(f) Damage during shipment. If shipping an engine to a remote facility for production-line testing makes necessary an adjustment or repair, you must wait until after the initial emission test to do this work. We may waive this requirement if the test would be impossible or unsafe or if it would permanently damage the engine. Report to us, in your written report under §1054.345, all adjustments or repairs you make on test engines before each test.

(g) Retesting after invalid tests. You may retest an engine if you determine an emission test is invalid under subpart F of this part. Explain in your written report reasons for invalidating any test and the emission results from all tests. If we determine that you improperly invalidated a test, we may require you to ask for our approval for future testing before substituting results of the new tests for invalid ones.