## §86.428-80

(c) Where the Administrator agrees to a lesser distance for service accumulation, he may modify the maintenance provisions of this subpart.

(d) All tests required by this subpart must be conducted at an accumulated distance within 250 kilometers (155 mi) of the nominal distance at each test point.

(e)(1) If a manufacturer conducts multiple tests at any test point at which the data are intended to be used in the calculation of the deterioration factor, the number of tests must be the same at each point and may not exceed three valid tests unless the manufacturer chooses to average the test results.

(2) If the manufacturer chooses to average the test results at a test point, he may conduct more tests than the minimum number of tests conducted at any other test point.

The results of the multiple tests shall be averaged to create a single value which is the test point value used in the deterioration factor calculation specified in §86.432–78.

- (3) When using this option to generate data for a particular test point, the manufacturer must include in the average all valid test data generated at that test point.
- (4) The manufacturer shall follow the same procedure for all exhaust pollutants.
- (5) The test results obtained from the emission tests performed before and after maintenance affecting emissions shall not be averaged.
- (f) The Administrator may require that any one or more of the test vehicles be submitted to him, at such places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.
- (g) Whenever the Administrator conducts a test on a test vehicle, the results of that test, unless subsequently

invalidated by the Administrator, shall comprise the data for the vehicle at that prescribed test point and the manufacturer's data for that prescribed test point shall not be used in determining compliance with emission standards.

 $[42\ FR\ 1126,\ Jan.\ 5,\ 1977,\ as\ amended\ at\ 49\ FR\ 48139,\ Dec.\ 10,\ 1984]$ 

## § 86.428-80 Maintenance, scheduled; test vehicles.

- (a) Periodic maintenance on the engine, emission control system, and fuel system of test vehicles shall be scheduled for performance at the same distance intervals that will be specified in the manufacturer's maintenance instructions furnished to the ultimate purchaser. Such maintenance shall be performed only under the following provisions.
- (b) Periodic major engine tune-ups to the manufacturer's specifications may be performed no more frequently than as follows nor may any tune-up be performed within 1000 km prior to the official test.

Displacement class	Minimum interval (kilometer)
 	3,000 3,000 4,000

- (c) A scheduled major engine tune-up shall be restricted to items listed below and shall be conducted in a manner consistent with service instructions and specifications provided by the manufacturer for use by customer service personnel. The following items may be inspected, replaced, cleaned, adjusted, and/or serviced as required: (1) Breaker points, timing, (2) idle speed and idle air/fuel mixture, (3) valve lash, (4) engine bolt torque, and (5) spark plugs.
- (d) The Administrator will specify the ignition timing, idle air fuel mixture and other fuel system adjustments to be used at each tune-up. The settings selected will be those the Administrator deems appropriate within the physically available range.
- (e) Periodic change of engine and transmission oil, and change or service of oil, air, and fuel filters will be allowed at the same distance intervals

that will be specified in the manufacturer's maintenance instructions.

- (f) Requests for authorization of periodic maintenance of emission control related components not specifically authorized to be maintained by this section, and for anticipated maintenance (see § 86.428), must be made prior to the beginning of distance accumulation. The Administrator will approve the performance of such maintenance if the manufacturer makes a satisfactory showing that the maintenance will be performed on vehicles in use and that the maintenance is reasonable and necessary.
- (1) The EGR system may be serviced a maximum of two times during the durability service accumulation if failure of the EGR system activates an audible and/or visual signal approved by the Administrator which alerts the vehicle operator to the need for EGR system maintenance, or if the need for periodic maintenance of the EGR system is overtly signalled to the vehicle operator by an appropriate means, e.g., an indicator light or significantly reduced driveability performance.
- (2) The catalytic converter may be serviced only once during the durability service accumulation if failure of the catalytic converter activates an audible and/or visual signal approved by the Administrator which alerts the vehicle operator to the need for catalytic converter maintenance, or if the need for periodic maintenance of the catalytic converter is overtly signalled to the vehicle operator by an appropriate means, e.g., an indicator light or significantly reduced driveability performance.
- (g) Certain engine components may require maintenance which, by its nature, cannot be scheduled for periodic intervals, but which the manufacturer believes will be necessary. For example, piston and cylinder replacement caused by piston seizure which results in the vehicle being inoperative; or in case of two-stroke engines, decarbonization, the need for which is signalled to the vehicle operator by significantly reduce driveability performance. Such maintenance is designated anticipated maintenance. Anticipated maintenance must be identified by the manufacturer and approved

as being appropriate by the Administrator prior to the start of service accumulation. The approximate distance at which the need for anticipated maintenance may arise must be specified in the application for certification.

(h) Complete emission tests (see subpart F) are required, unless waived by the Administrator, before and after any vehicle maintenance which may reasonably be expected to affect emissions.

## §86.429-78 Maintenance, unscheduled; test vehicles.

- (a) Any unscheduled engine, emission control system, or fuel system adjustment, repair, removal, disassembly, cleaning, or replacement on vehicles shall be performed only with the advance approval of the Administrator.
- (1) In the case of unscheduled maintenance, such approval will be given if the Administrator:
- (i) Has made a preliminary determination that part failure or system malfunction, or the repair of such failure or malfunction, does not render the vehicle unrepresentative of vehicles in use, and does not require direct access to the combustion chamber, except for spark plug, fuel injection component, or removable prechamber removal or replacement; and
- (ii) Has made a determination that the need for maintenance or repairs is indicated by an overt indication of malfunction such as persistent misfire, vehicle stall, overheating, fluid leakage, loss of oil pressure, or charge indicator warning.
- (2) Emission measurements may not be used as a means of determining the need for unscheduled maintenance under paragraph (a)(1)(i) of this section.
- (b) Repairs to vehicle components of test vehicles, other than the engine, emission control system, or fuel system, shall be performed only as a result of part failure, vehicle system malfunction, or with the advance approval of the Administrator.
- (c) The Administrator shall be given the opportunity to verify the extent of an overt indication of part failure and/ or vehicle malfunction (e.g., misfire, stall), or an activation of an audible