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(4) A statement of recommended maintenance, degree of knowledge required for that maintenance, and the tools and equipment required to perform the maintenance.

(5) All data regarding exhaust emissions regulated by EPA under §202 of the Clean Air Act and fuel economy test data on the device or product available to the applicant.

(6) All information available to the applicant concerning whether the device in its operation, function, or malfunction may cause an automobile using that device to emit into the ambient air any substance other than pollutants regulated by EPA under section 202 of the Clean Air Act (*i.e.*, hydrocarbons, carbon monoxide, and oxides of nitrogen), or natural gaseous atmospheric constituents (such as carbon dioxide, or water vapor) in a quantity differing from that emitted in the operation of the automobile without the device.

(7) All information available to the applicant concerning whether and under what conditions the device in its operation, function or malfunction may result in damage to an automobile or endanger its occupants or persons or property in close proximity to the automobile.

(c) Shipment to the EPA’s Motor Vehicle Emission Laboratory, or other test site designated by the Administrator, of the devices being evaluated in the quantity specified by the Administrator.

(d) Complete copies of the application and of any amendments thereto shall be submitted in such multiple copies as the Administrator may require.

§ 610.17 Application format.

(a) Device manufactures who apply for evaluation of a fuel economy retrofit device should use the standard application format, in order to allow the Administrator to compile relevant data on specific devices and to allow timely response to applications. Application formats are available from and submissions shall be made to:

Director, Emission Control Technology Division, Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan

48105. Attn: Fuel Economy Retrofit Device Evaluation.

(b) Four weeks should be allowed for analysis of the application and preparation of a response. As indicated in other sections of this part, this response will include the evaluation of the device according to the criteria discussed in subpart B of this part. The results of the Administrator’s evaluation will be made public.

Subpart B—Evaluation Criteria for the Preliminary Analysis

§ 610.20 General.

The Administrator will employ the following criteria for evaluating the accuracy of fuel economy representations made with respect to retrofit devices:

- (a) Device functional category;
- (b) Device integrity;
- (c) Operator interaction effects;
- (d) Validity of test data;
- (e) Evaluation of test data;

as these concepts are explained in §§ 610.21 through 610.25 respectively.

§ 610.21 Device functional category and vehicle system effects.

(a) The devices evaluated in this program are organized into categories for purposes of definition and establishment of evaluation criteria and test procedures, and to indicate which vehicle functional characteristics (other than fuel economy) may be adversely affected by installation or use of the device.

(b) A device’s category will be based on:

- (1) Engineering principles governing operation of the device;
- (2) Interaction between the device and specific vehicle/engine operating characteristics; and
- (3) Constraints with respect to vehicle applicability of the device.

(c) The device categories and the vehicle functional characteristics which may be adversely affected are noted for each device category in Table I. The notation for each characteristic is as follows:

Exhaust emissions.....	1
Driveability.....	2
Durability	3

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TABLE 1

Device categories	Characteristics adversely affected
Fuel-Air System	
Carburetors and fuel injection systems	All.
Air-fuel ratio modifiers (e.g., air bleeds) ...	All.
Atomization devices (acoustic and mechanical).	All.
Vapor Injectors	All.
Choke controls	1, 2, and 4.
Air filters	1, 2, and 4.
Fuel-air distribution systems (intake manifolds).	1, 2, and 4.
Fuel pressure regulators	All.
Ignition System	
Spark plugs	All.
Spark timing control systems	All.
Spark duration control systems	1, 4.
Spark energy sources	1, 4.
Emission Control Systems	
Exhaust gas recirculation (EGR) systems	All.
After-treatment devices	1, 2, and 4.
Drivetrain	
Tires	1.
Overdrive units	All.
Torque converter lockups	1, 2, and 4.
Exhaust System	
Headers	1.
Tuned exhaust systems	1.
Accessories	
Cooling fan or cooling fan couplings	1.
Cold start aids (e.g., engine heaters)	1.
Lubrication	
Oil filters	3.
Vehicle Body	
Aerodynamic drag reduction devices	1.
Miscellaneous	
Modification to valve timing	All.
Retrofit prechambers	All.
Fuel additives	All.
Other miscellaneous	Potentially all.

(d) In the absence of sufficient information from the device manufacturer on this topic or if the Administrator's preliminary analysis indicates that testing is necessary to determine the nature or extent of possible adverse effects of device installation and use on vehicle operation and performance, the Administrator will require such tests to be conducted prior to the publication of a complete evaluation of the device.

[44 FR 17946, Mar. 23, 1979, as amended at 49 FR 18489, May 1, 1984]

§ 610.22 Device integrity.

The integrity of a device will be evaluated with respect to:

(a) The extent to which device manufacture is standardized by means of drawings, specifications, and other fabrication and quality assurance controls;

(b) The degree of sensitivity of device effectiveness to deterioration under exposure to normal operating conditions.

(c) The susceptibility of the device to deterioration of effectiveness under abnormal operating conditions;

(d) The effect upon its surroundings of device malfunction which may be reasonably anticipated to occur in actual use; and

(e) The extent to which test data support (b), (c) and (d).

§ 610.23 Operator interaction effects.

The device will also be evaluated with respect to:

(a) The degree of sensitivity of device effectiveness to variances in installation, operation and maintenance;

(b) The adequacy of manufacturer-furnished instructions for minimizing variances in installation, operation and maintenance;

(c) The extent to which device installation or use, or the effects of such installation or use, relate to Federal emission control regulations;

(d) Effects on the performance, safety, or occupant comfort of the retrofitted vehicle, and on that of other vehicles; and

(e) The relationship between total cost of ownership of the device (purchase price plus maintenance costs) and the cost savings realizable from its fuel economy effects.

§ 610.24 Validity of test data.

The Administrator will make a determination as to the validity of manufacturer-furnished test data on the basis of:

(a) The correlation between the test procedures used by the manufacturer or testing agent and the procedures prescribed in subpart D;

(b) The choice of test vehicle(s) as representative of the manufacturer's claim for operation and/or principles of operation;