- (d) A manufacturer may request modification of a light source for which information has previously been filed in Docket No. 93–11, and the submission shall be processed in the manner provided by paragraph 564.5(c). A request for modification shall contain the following:
- (1) All the information specified in appendix A or appendix B of this part that is relevant to the modification requested, * * \ast

Submitted for Replaceable Light

* * * * * * Appendix A—Information To Be

* * * * *

Sources

IX. All other information, dimensions or performance specifications necessary for interchangeability purposes not listed above. If a ballast is required for operation, a complete listing of the requirements and parameters between the light source and ballast, and ballast and the vehicle shall also be provided.

Appendix B—Information To Be Submitted for Long Life Replaceable Light Sources of Limited Definition

- I. Bulb Base Interchangeability Dimensions and Tolerance.
- A. Angular locations, diameters, key/ keyway sizes, and any other interchangeability dimensions for indexing the bulb base in the bulb holder.
- B. Diameter, width, depth, and surface finish of seal groove, surface, or other pertinent sealing features.
- C. Diameter of the bulb base at the interface of the base and its perpendicular reference surface.
- D. Dimensions of features related to retention of the bulb base in the bulb holder such as tabs, keys, keyways, surface, etc.
- II. Bulb Holder Interchangeability Dimensions and Tolerances.
- A. Mating angular locations, diameters, key/keyway sizes, any other interchangeability dimensions for indexing the bulb base in the bulb holder.
- B. Mating diameter, width, depth, and surface, or other pertinent sealing features.
- C. Mating diameter of the bulb holder at the interface of the bulb base aperture and its perpendicular reference surface.
- D. Mating dimensions of features related to retention of the bulb base in the bulb holder such as tabs, keys, keyways, surface, etc.
- III. Electrical Specifications for Each Light Source that Operates with a Ballast and Rated Life of the Light Source/Ballast Combination.
 - A. Maximum power (in watts).
 - B. Luminous Flux (in lumens)
- C. Rated average laboratory life of the light source/ballast combination (not less than 2,000 hours).
- IV. Applicable to light sources that operate with a source voltage other than 12.8 volts direct current, and when a proprietary ballast must be used with the light source.
- A. Manufacturer's part number for the ballast.

- B. Any other characteristics necessary for system operation.
- V. Bulb Markings/Designation—ANSI Number, ECE Identifier, Manufacturer's Part Number, Individual or in Any Combination.
- VI. All other identification, dimensions or performance specifications necessary for replaceability or systems operation not listed above.

In consideration of the foregoing, it is proposed that 49 CFR Part 571 be amended as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation would continue to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50.

- 2. Section 571.108 would be amended by:
- (a) Adding a definition in alphabetical order to section 54 and revising paragraph S7.7(i) to read as set forth below.
- (b) Adding new paragraph S7.7(l) to read as set forth below, and
- (c) Revising section S8 to read as set forth below:

§ 571.108 Motor Vehicle Safety Standard No. 108 Lamps, Reflective Devices, and Associated Equipment.

* * * * *

Filament means that part of the light source or light emitting element(s), such as a resistive element, the excited portion of a specific mixture of gases under pressure, or any part of other energy conversion sources, that generates radiant energy which can be seen.

* * * * * * \$7.7 * * * * * * * *

- (i) A replaceable light source shall be seasoned before measurement of luminous flux as follows:
- (1) For a light source with a resistive element type filament, the filament shall be seasoned before measurement of maximum power and luminous flux. Such measurement shall be made with the direct current test voltage regulated within one quarter of one percent. The test voltage shall be design voltage, 12.8v. The measurement of luminous flux shall be in accordance with the Illuminating Engineering Society of North America, LM-45; IES Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps (April 1980), shall be made with the black cap installed on Type HB1, Type HB2, Type HB4, and Type HB5, and on any other replaceable light source so designed,

- and shall be made with the electrical conductor and light source base shrouded with an opaque white colored cover, except for the portion normally located within the interior of the lamp housing. The measurement of luminous flux for the Types HB3 and HB4 shall be with the base covered with a white cover shown in Figures 19–1 and 20–1. The white covers are used to eliminate the likelihood of incorrect lumen measurement that will occur should the reflectance of the light source base and electrical connector be low.
- (2) For a light source using excited gas mixtures as a filament, measurement of maximum power and luminous flux shall be made following seasoning of the light source, including any ballast required for its operation, in accordance with section 4.0 of SAE J2009 FEB93. A test voltage of 12.8 volts DC shall be applied to the ballast input terminals. The measurement of luminous flux shall be in accordance with the Illuminating Engineering Society of North America, LM-45; IES Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps (April 1980), shall be made with the black cap installed if so designed, and shall be made with any electrical conductors and the light source base shrouded with an opaque white colored cover, except for the portion normally located within the interior of the lamp housing.
- (l) If a ballast is required for operation, each ballast shall bear the following permanent markings:
- (1) Name or logo of ballast manufacturer;
- (2) Ballast part number or unique identification;
- (3) Part number or other unique identification of the light source for which the ballast is designed;
- (4) Rated average laboratory life of the light source/ballast combination, if the information for the light source has been filed in appendix B of part 564 of this chapter;
- (5) A warning that ballast output voltage presents the potential for severe electrical shock that could lead to permanent injury or death;
- (6) Ballast output power in watts and output voltage in rms volts AC or DC;
 - (7) The date of manufacture; and,
- (8) The symbol 'DOT'.'
- S8 Tests and Procedures for Integral Beam and Replaceable Bulb Headlighting Systems. When tested in accordance with the following procedures, each integral beam headlamp shall meet the requirements