

**CHAPTER 165. SLOW—MOVING VEHICLE  
IDENTIFICATION EMBLEM**

Sec.	
165.1.	Purpose.
165.2.	Scope.
165.3.	Display requirements.
165.4.	Description.
165.5.	Performance requirements.
165.6.	Test procedures.
165.7.	Mounting.

**Authority**

The provisions of this Chapter 165 issued under the Vehicle Code, 75 Pa.C.S. § 4103, unless otherwise noted.

**Source**

The provisions of this Chapter 165 adopted August 26, 1977, effective August 27, 1977, 7 Pa.B. 2430, unless otherwise noted.

**Cross References**

This chapter cited in 67 Pa. Code § 203.104 (relating to slow-moving vehicle emblem).

**§ 165.1. Purpose.**

The purpose of this chapter is to establish specifications which define a unique identification emblem for use on slow-moving vehicles when operated or transported on public roads.

**§ 165.2. Scope.**

This chapter establishes emblem dimensional specifications, performance requirements, and related test procedures.

**§ 165.3. Display requirements.**

All farm machinery and implements of husbandry including all road construction and maintenance machinery designed to operate at 25 miles per hour or less, traveling on a public highway day or night shall display, on the rear of the vehicle, a slow-moving vehicle reflective emblem as specified in subsection (a) of the act. The emblem shall be positioned as near as practicable to the center of the machinery.

**§ 165.4. Description.**

The identification emblem, Figure 1, shall consist of a fluorescent yellow-orange triangle with a dark, red reflective border. The yellow-orange fluorescent triangle is for daylight identification. The reflective border defines the shape of

the fluorescent color in daylight and becomes a hollow red triangle in the path of motor vehicle headlights at night. The emblem may be permanently mounted or portable.

#### Source

The provisions of this § 165.4 amended July 21, 1978, effective July 22, 1978, 8 Pa.B. 2076.

### § 165.5. Performance requirements.

(a) *Visibility.* The emblem shall be entirely visible in daylight and at night from all distances between 600 feet and 100 feet (182.88 meters to 30.48 meters) from the rear when directly in front of lawful upper beam of headlamps.

(b) *Dimensional requirements.* The size shall be as shown in Figure 1.

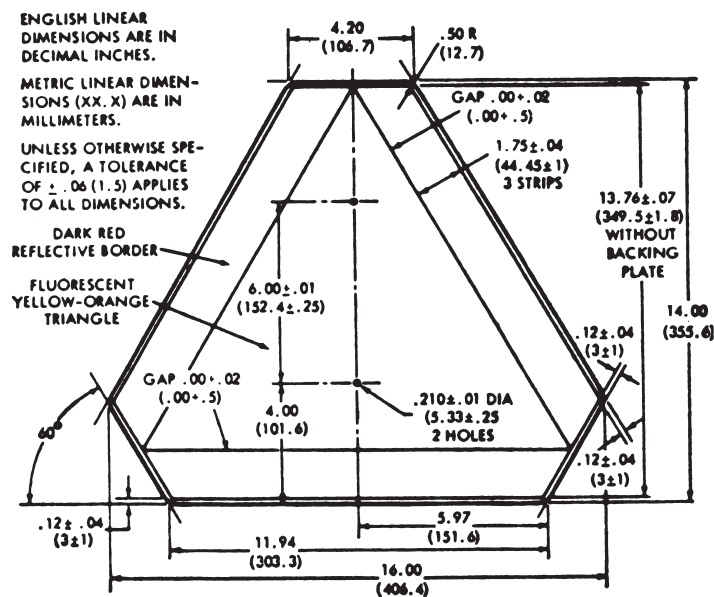


Figure 1—IDENTIFICATION EMBLEM

(c) *Color and reflectivity.* Requirements for color and reflectivity are as follows:

(1) The spectrophotometric color values of the yellow-orange fluorescent material shall have a dominant wave length of 590,610 millimicrons and a purity of 98% before test. After durability test, § 165.6(b) (relating to test procedures), the dominant wave length of the fluorescent material shall not change more than 10%.

(2) The reflective material shall have minimum intensity values at each of the angles listed in Table 1. After durability test, § 165.6(b), the minimum

reflective intensity values for the reflective material shall not change more than 20% from the values specified in Table 1.

**TABLE 1 — MINIMUM REFLECTIVE INTENSITY VALUES, R\***

<i>Divergence Angle, deg</i>	<i>Incidence Angle, deg</i>	<i>Reflective Intensity, R</i>
0.2	0	10
0.2	15	7
0.2	30	5
0.5	0	5
0.5	15	4
0.5	30	2

\*Measurements shall be conducted in accordance with photometric testing procedures for reflex-reflectors as specified in Society of Automotive Engineers Standard, SAE J594, Reflex Reflectors, and using 50, ±5 sq. in. (322.6, ±32.3 sq. centimeters) of reflective material. The maximum dimension of the test surface shall not be greater than 1.5 times the minimum dimension. The reflective intensity (R) is computed from the equation.

$$R = \frac{(L_r \quad (d^2))}{(L_s \quad (A))}$$

where

R = reflective intensity, candlepower per incident foot-candle per square foot

L<sub>r</sub> = illumination incident upon receiver at observation point, foot-candles

L<sub>s</sub> = illumination incident upon a plane perpendicular to the incident ray at the test specimen position, foot-candles

d = distance from test specimen to source of illumination (100 ft. as specified in SAE J594), feet

A = area of test surface, square feet

(d) *Durability.* Requirements for durability shall be as follows:

(1) The reflective and fluorescent materials shall be tough, flexible, and of sufficient thickness and strength to meet the requirements of this section and § 165.6. After the durability test, § 165.6(b), the fluorescent and reflective material shall show no appreciable discoloration, cracking, blistering, loss of durable bond or dimensional change.

(2) Backing material for portable identification emblems shall be equivalent to 0.040 inch (1.02 millimeter) minimum thickness aluminum, 22-gage (0.030 inch or 0.76 millimeter minimum thickness mill—galvanized or coated sheet steel with the surface clean and receptive to a durable bond. The backing material shall be free of burrs.

(3) These requirements shall be minimal and shall not preclude the use of materials having superior performance.

**Cross References**

This section cited in 67 Pa. Code § 165.6 (relating to test procedures).

**§ 165.6. Test procedures.**

(a) *References.* The emblem shall be tested in conformance with the following sections from SAE J575, “Tests for Motor Vehicle Lighting Devices and Components”:

- (1) Section B—Samples for Tests.
- (2) Section D—Laboratory Facilities.
- (3) Section E—Vibration Test.
- (4) Section H—Corrosion Test, pertains to face of emblem only.

(b) *Durability test.* Samples shall be exposed to the sun at an angle of 45° to horizontal and facing south as specified in American Society for Testing and Materials, ASTM D1014, “Conducting Exterior Exposure Tests of Paints on Steel.”

**TABLE 2—DURABILITY TEST PERIODS**

Location	Minimum Test Period, months	
	Fluorescent	Reflective
Outside in Midwest or Outside in Miami, Florida	12  6	24  12

(c) *Drop test.* Each portable emblem shall be dropped from a height of 5 feet (1.53 meters) to a smooth hard surface equivalent to rigid metal or concrete. Each portable emblem shall be submitted to three drop tests: corner drop, edge drop and flat drop. Failure will be considered to have occurred when the emblem no longer meets requirements in § 165.5 (relating to performance requirements).

**Source**

The provisions of this § 165.6 amended July 21, 1978, effective July 22, 1978, 8 Pa.B. 2076.

**Cross References**

This section cited in 67 Pa. Code § 165.5 (relating to performance requirements).

**§ 165.7. Mounting.**

(a) *General.* Both the permanently mounted emblem and the portable emblem shall be mounted point up, see Figure 1, in a plane perpendicular to the direction of travel plus or minus 10 degrees. The emblem shall be placed cen-

trally at the rear of the vehicle, unobscured and 2 to 6 feet (.61 to 1.83 meters) above the ground measured from the lower edge of the emblem. It may be permanently attached to equipment when practical. Portable emblems shall be mounted by using bracket sockets and identification emblem brackets specified in ASAE Standard ASAE S277, "Mounting Brackets and Socket for Agricultural and Industrial Equipment Warning Lamp and Slow-Moving Vehicle (SMV) Identification Emblem."

(b) *Other devices.* The emblem shall not replace such warning devices as tail lamps, reflectors, flashing lights or warning flags and is not to be used as a clearance marker for wide equipment.

**Source**

The provisions of this § 165.7 amended July 21, 1978, effective July 22, 1978, 8 Pa.B. 2076.

[Next page is 167-1.]

165-6

(240914) No. 281 Apr. 98

*Copyright © 1998 Commonwealth of Pennsylvania*