Technical Report Preprint

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SOCIETY OF AUTOMOTIVE ENGINEERS, INC.,
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J943

Emblem for Identifying Slow-Moving Vehicles SAE J943

SAE Recommended Practice

Report of Tractor Technical Committee approved June 1966. Corresponds to ASAE R276.

1. PURPOSE AND SCOPE

1.1 This Recommended Practice defines the usage of, and includes specifications for, a unique identification of slow moving vehicles and has been developed to provide a unique method of identification day and night, against varied background.

1.2 It is not intended to replace tail lights or warning flags but is intended to supplement such devices.

2. DESCRIPTION

2.1 The emblem (Fig. 1) consists of a fluorescent yellow-orange triangle with a dark red reflective border. The yellow-orange fluorescent triangle is a highly visible color for daylight exposure. The reflective border defines the shape of the fluorescent color in daylight and creates a hollow red triangle in the path of motor vehicle headlights at night.

3. PHYSICAL PROPERTIES

3.1 Material - The reflective and fluorescent materials shall be tough, flexible films suitable for application on metal surfaces. The reflective material shall consist of spherical lens elements embedded within a transparent plastic having a smooth, flat outer surface. Both materials shall be suitable for storage at temperatures up to 100 F for 1 year and still meet specification requirements.

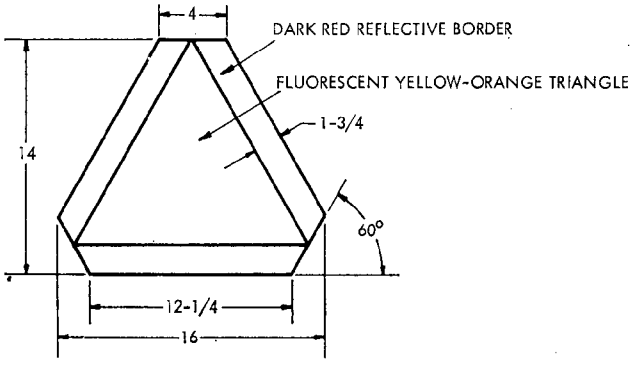

Fig. 1 - Emblem

3.2 Adhesive - The fluorescent film and reflective material shall have a backing of a pressure-sensitive adhesive or tack-free, heat-activated adhesive, as specified, to form a durable bond, and shall show no appreciable loss of adhesion during weathering exposures. The protective liner shall be easily removable during the storage period.

3.3 Durability - After the test periods shown in Table 1, the fluorescent film and reflective material shall show no appreciable discoloration, cracking, crazing, blistering or dimensional change. Durability test samples shall be exposed to the sun at an angle of 45 deg to horizontal and facing south.

3.4 Color and Reflectivity

3.4.1 The spectrophotometric color values of the yellow-orange fluorescent film shall have a dominant wave length of 590-610 millmicrons and a purity of 98% before test. After test, the dominant wave length of the fluores-

Table 1 - Durability Test Periods

Location	Minimum Test Period	
	Fluorescent	Reflective
Outside in Midwest	12 months	24 months
Outside in Miami, Florida	6 months	12 months
Weatherometer, Type G, ASTM E4-2	300 hours	500 hours

Table 2 - Minimum Brightness Values for Reflective Material*

Observation Angle, deg	Average Candlepower/Square Foot Entrance Angle, deg		
	0	15	30
0.2	10	7	5
0.5	5	4	2

*Measurement shall be conducted in accordance with photometric testing procedures for reflex-reflectors in SAE J594.