SOCIETY OF AUTOMOTIVE ENGINEERS, INC. • TWO PENNSYLVANIA PLAZA • NEW YORK, NEW YORK 10001

LAND SEA AIR SPACE

TECHNICAL REPORT J680a

LOCATION AND OPERATION OF INSTRUMENTS AND CONTROLS IN MOTOR TRUCK CABS—SAE J680a

SAE Information Report

Report of Truck and Bus Technical Committee approved December 1954 and last revised by Truck and Bus Technical Committee and Transportation and Maintenance Technical Committee October 1970.

The location and operation of instruments and controls herein described are recommended for adoption by manufacturers of trucks and truck-tractors in new or revised designs in order to avoid confusion when drivers shift from one truck to another, to promote safety and convenience, and to simplify design, production, and servicing. This information report shall apply to all on-highway trucks and truck-tractors equipped with power brake systems and having a gvw rating of 26,000 lb or more. Of prime importance in this information report is the basic premise that all controls requiring operation while the vehicle is in motion be located so that the driver can manipulate them with his right hand and keep his left hand on the steering wheel. Controls operated only when the vehicle is not in motion, such as the ignition key, starter switch, and engine shutdown, may be located at the left side of the instrument panel and be manipulated with the driver's left hand.

Location of Instruments and Controls—Instruments, indicators, and controls necessary for the safe operation of a motor vehicle are divided into six basic groups and assigned to specific areas for the purpose of this information report. The six areas are numbered and their location is shown in Fig. 1. The exact placement of the various gages within a specified area is left to the discretion of the truck builder. It is the intent of this information report to define only the general areas for the location of instruments and controls. Fig. 1 does not represent the instrument panel of any particular vehicle and may be modified to reflect variations such as console type panels. All instruments and controls must be located out of the head impact area and must be within reach of a properly restrained driver.

Area 1—The instruments assigned to area 1 are designated as engine gages. They include such basic items as the tachometer, oil pressure gage, water temperature gage, and ammeter or voltmeter.

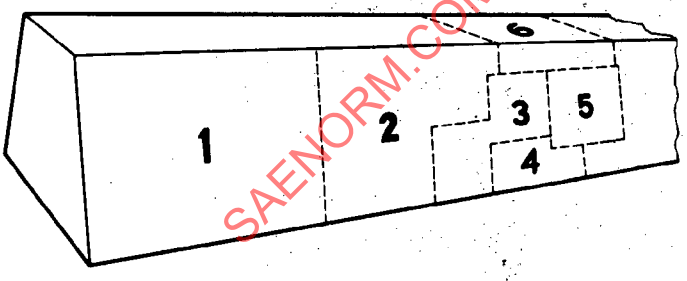

FIG. 1—LOCATION OF INSTRUMENT AND CONTROL GROUPS

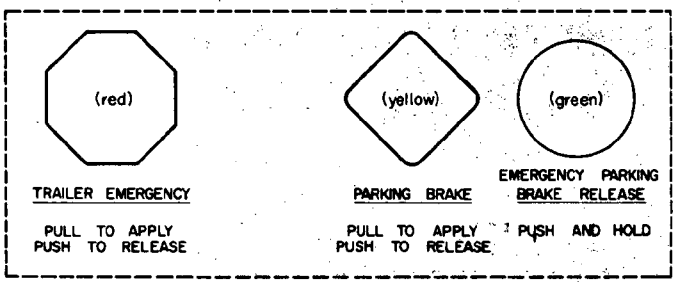

FIG. 2—PLACEMENT OF INDIVIDUAL CONTROLS IN EMERGENCY AND PARKING BRAKE CONTROL AREA

Area 2—The instruments assigned to area 2 are defined as operational gages and relate to the operation of the vehicle. Included in this area are the speedometer, the reservoir air pressure gage, application air pressure gage, and fuel tank level gage.

Area 3—Area 3 is generally to the right and/or below the operational gage area and provides space for lamp switches.

Area 4—The windshield wiper controls are assigned to area 4 and are located below or to the right of area 3. When two separate controls are utilized, they must be placed in a horizontal line so that the position of the control indicates the position of the wiper to be operated. If the vehicle is equipped with a separate hand control for a windshield washer, it should also be located in area 4. On vehicles equipped with above-the-windshield wiper units, area 4 may be optionally located in the header area within the reach of the driver's right hand.

Area 5—Power operated emergency and parking brake controls are located in area 5. The placement of the various controls included in this area is shown in Fig. 2. Depending on the air brake piping system employed on a particular vehicle, one or all of the controls indicated in Fig. 2 may be used on a truck or tractor. Fig. 3 shows an optional arrangement of the controls assigned to area 5, employing a vertical rather than a horizontal alignment.

The *tractor protection valve control* (trailer emergency control valve) is to be located at the left side or bottom of the emergency brake control area. It should be a push-pull type of control valve with an octagonal-shaped knob having no sharp corners and colored red. This valve should be identified with a suitable escutcheon plate or lettering on the knob reading: TRAILER EMERGENCY. PULL TO APPLY; PUSH TO RELEASE.

The *parking/emergency brake control valve* shall be of the push-pull type having a yellow colored knob of a basically diamond shape con-

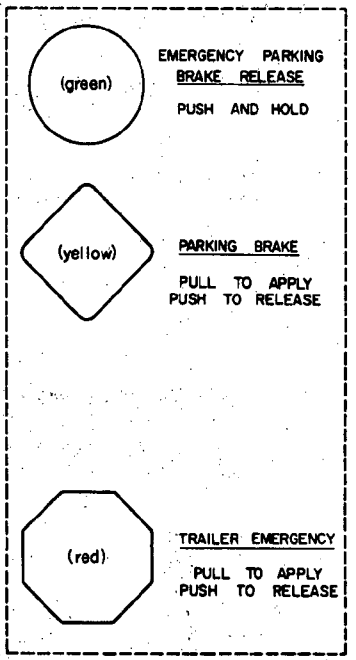

FIG. 3—OPTIONAL PLACEMENT OF INDIVIDUAL CONTROLS IN EMERGENCY AND PARKING BRAKE CONTROL AREA