

97-GP SERIES

CANCELLATION
March 1971

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Standards
for

AUTOMOTIVE VEHICLE SAFETY

Standards 97-GP-101 to 97-GP-301 inclusive, covering safety features for automotive vehicles, have been cancelled. They have been replaced by the Motor Vehicle Safety Regulations of the Ministry of Transport, which are available from Information Canada.

Publication 97-GP, Guide to Traffic Safety, has also been cancelled.

97-GP-105
24 May 1968
AMENDMENT NO. 1
16 August 1968

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

STANDARD

for

SERVICE BRAKE, EMERGENCY BRAKE, AND PARKING
BRAKE SYSTEMS - PASSENGER CARS

5. DETAIL REQUIREMENTS

- 5.2.1 Emergency Brake System Performance - In the sixth line change "not less than 646 feet" to read "not more than 646 feet."

6. NOTES

6.1 Interpretations

- 6.1.2 Change the last line to read "insufficient hydraulic brake fluid in that part of the brake system."

- 6.2 In the third line delete "and Motorcycles."



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STANDARD

FOR

SERVICE BRAKE, EMERGENCY BRAKE AND
PARKING BRAKE SYSTEMS - PASSENGER CARS

97-GP-105

24 MAY 1968

THIS STANDARD SPECIFIES REQUIREMENTS FOR HYDRAULIC SERVICE BRAKE, EMERGENCY
BRAKE AND PARKING BRAKE SYSTEMS INTENDED TO ENSURE ADEQUATE BRAKING
PERFORMANCE UNDER NORMAL AND EMERGENCY CONDITIONS.

DEPARTMENT OF DEFENCE PRODUCTION, OTTAWA, CANADA

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

STANDARD
for

SERVICE BRAKE, EMERGENCY BRAKE, AND PARKING
BRAKE SYSTEMS - PASSENGER CARS

1. PURPOSE AND SCOPE

1.1 This standard specifies requirements for hydraulic service brake, emergency brake, and parking brake systems intended to ensure adequate braking performance under normal and emergency conditions.

2. APPLICABLE PUBLICATIONS

2.1 The following publications are applicable to this standard:

2.1.1 Society of Automotive Engineers (SAE)

J843a - Brake System Road Test Code - Passenger Car, June 1966

J937 - Service Brake System Performance Requirements -
Passenger Car, June 1966.

3. APPLICABILITY

3.1 This standard applies to:

Passenger Cars.

4. DEFINITIONS

4.1 "Pressure Component" means any internal component of the brake master cylinder or master control unit, wheel brake cylinder, brake line, brake hose, or equivalent, except vacuum assist components.

4.2 "Service Brake" means the primary mechanism designed to stop a motor vehicle.

* See Par 6.2

4.3 "Emergency Brake" means a mechanism designed to stop a motor vehicle after a failure of the service brake system.

4.4 "Parking Brake" means a mechanism designed to prevent the movement of a stationary vehicle.

5. DETAIL REQUIREMENTS

5.1 Service Brake System - The performance ability of the fully operational service brake system for passenger cars shall be not less than that described in Section D of SAE J937 and tested in accordance with J843a.

5.2 Emergency Brake System - Rupture or leakage-type failure of any single pressure component of the service brake system, except structural failures of the brake master cylinder body or effectiveness indicator body, shall not result in complete loss of function of the vehicle brakes when force on the brake pedal is continued.

5.2.1 Emergency Brake System Performance - If failure of a pressure component, or insufficient hydraulic fluid in the system causes loss of pressure in any part of the brake system, the remaining portion of the brake system shall provide a stop of the vehicle loaded in accordance with SAE J843a from a speed of 60 mph, in not less than 646 feet, without pulling or swerving to the extent that would cause the vehicle to leave a level, 12-foot wide lane on a clean, dry, smooth, Portland cement concrete pavement (or other surface with equivalent coefficient of surface friction).

5.2.2 Emergency Brake System Effectiveness Indication - An electrically operated red light, mounted on the instrument panel in view of the driver, shall illuminate before or upon application of the brakes in the event of a hydraulic-type complete failure of a partial system. The indicator light shall have sufficient luminous intensity to be plainly visible in daylight and shall include a means for testing by the vehicle operator to ensure that the bulb is operable. No single failure in the internal components of the system effectiveness indicator, except the body of the device, shall permit the total loss of effectiveness of the braking system.

5.3 Parking Brake System - A parking brake system of a friction type with a solely mechanical means to retain engagement shall be provided that will hold the vehicle loaded in accordance with SAE J843a to the limit of traction of the braked wheels in both forward and reverse directions on clean, dry, smooth,

Portland cement concrete pavement (or other surface with equivalent coefficient of surface friction) of a 30-per cent grade.

6. NOTES

6.1 Interpretations

- 6.1.1 The definition of the term "emergency brake" in 4.3 does not refer to a system that would provide a means of bringing a vehicle to a stop after a total failure of the entire hydraulic service brake system, since par 5.2 of the standard provides that rupture or leakage-type failure of any single pressure component of the service brake system, except structural failures of the brake master cylinder body or effectiveness indicator body shall not result in complete loss of function of the vehicle brakes when force on the brake pedal is continued.
- 6.1.2 Par 5.2.1 applies to loss of pressure in a part of the brake system resulting from failure of a pressure component or insufficient hydraulic fluid in that part of the system.
- 6.1.3 The requirement of par 5.2.2 that an indicator light illuminate before or upon application of the brakes in the event of a hydraulic-type complete failure of a partial system may be met with a master cylinder reservoir level indicator light or system pressure indicator light. The indicator light need not illuminate during that application of brake pressure that contributed to the failure.
- 6.2 The requirements in this standard are identical with those in United States Federal Motor Vehicle Safety Standard No. 105, Service Brake, Emergency Brake, and Parking Brake Systems - Passenger Cars and Motorcycles, and changes in that standard will be duly incorporated in CGSB Standard 97-GP-105.
- 6.3 Certification to US Standard No. 105 applicable at date of manufacture will certify conformance to CGSB Standard 97-GP-105.
- 6.4 Publications listed in Section 2 are available from the Canadian Government Specifications Board.
- 6.5 Further related information may be found in the CGSB Guide to Traffic Safety, also available from the Canadian Government Specifications Board.

Correspondence regarding this standard should be addressed to the Canadian Government Specifications Board, c/o Department of Defence Production, Ottawa 4, Canada.