ALABAMA LAW ENFORCEMENT AGENCY
ADMINISTRATIVE CODE

CHAPTER 760-X-1
PROMULGATED RULES

760-X-1-.09 Defining The Adequacy Of Brakes, And Prescribing The Performance Standards Thereof, Of Motor Vehicles Using The Highways Of The State Of Alabama.

(1) Brake Equipment Required - Every motor vehicle, trailer, and pole trailer, and any combination of such vehicles operating upon a highway within this state shall be equipped with brakes in compliance with the requirements of this section.

(a) Service Brakes-Adequacy - Every such motor vehicle and combination of vehicles shall be equipped with service brakes complying with the performance requirements of this rule and adequate to control the movement of and to stop and hold such vehicle under all conditions of loading, and on any grade incident to its operation.

(b) Service Brakes-Adequacy - Every such vehicle and combination of vehicles except motorcycles and motor driven cycles, shall be equipped with parking brakes adequate to hold the vehicle on any grade on which it is operated, under all conditions of loading on any surface free from snow, ice, or loose material. The parking brakes shall be capable of being applied in conformance with the foregoing requirements by the driver's muscular effort or by spring action or by equivalent means. Their operation may be assisted by the service brakes or other source of power provided that failure of the service brake actuation system or other power assisting mechanism will not prevent the parking brakes from being applied in conformance with the foregoing requirements. The parking brakes shall be so designed that when once applied they shall remain applied with the required effectiveness despite exhaustion of any source or energy or leakage of any kind. The same brake drums, brake shoes and lining assemblies, brake shoe anchors and mechanical brake shoe actuation mechanism normally associated with the wheel brake assemblies may be used for both the service brakes and the parking brakes. If the means of applying the parking brakes and the service brakes are connected in any way, they shall be so constructed that failure of any one part shall not leave the vehicle without operative brakes.

(c) Brakes on all Wheels - Every vehicle shall be equipped with brakes acting on all wheels except:

1. Trailers, Semi-Trailers, or Pole Trailers of a gross weight not exceeding 3,000 pounds, provided that:

(i) The total weight on and including the wheels of the trailer or trailers shall not exceed 40 percent of the gross weight of the towing vehicle when connected to the trailer or trailers, and

(ii) The combination of vehicles, consisting of the towing vehicle and its total towed load, is capable of complying with the performance requirements of this rule.

2. Any vehicle being towed in driveway or tow away operations provided the combination of vehicles is capable of complying with the performance requirements of this rule.

3. Trucks and truck-tractors having three or more axles need not have brakes on the front wheels, except that when such vehicles are equipped with at least two steerable axles, the wheels of one steerable axle need not have brakes. However, such trucks and truck-tractors must be capable of complying with the performance requirements of this rule.

4. The wheel of a sidecar attached to a motorcycle or to a motor-driven cycle or the front wheel of a motor-driven cycle need not be equipped with brakes, provided that such motorcycle or motor-driven cycle is capable of complying with the performance requirements of this rule.

(d) Automatic Trailer Brake Application Upon Breakaway. Every trailer, semi-trailer, and pole trailer equipped with air or vacuum actuated brakes and every trailer, semi-trailer, and pole trailer with a gross weight in excess of 3,000 pounds, manufactured or assembled after January 1, 1972, shall be equipped with brakes acting on all wheels and of such character as to be applied automatically and promptly, and remain applied for at least fifteen minutes, upon breakaway from the towing vehicle.

(e) Tractor Brakes Protected. Every motor vehicle manufactured or assembled after January 1, 1972, and used to tow a trailer, semi-trailer or pole trailer equipped with brakes, shall be equipped with means for providing that in case of breakaway of the towed vehicle, the towing vehicle will be capable of being stopped by the use of its service brakes.

(f) Trailer Air Reservoirs Safeguarded. Air brake systems installed on trailers manufactured or assembled after January 1, 1972, shall be so designed that the supply reservoir used

to provide air for the brakes shall be safeguarded against backflow of air from the reservoir through the supply line.

(g) Two Means of Emergency Brake Operation.

1. Air Brakes. After January 1, 1972, every towing vehicle manufactured or assembled after that date, when used to tow another vehicle equipped with air controlled brakes, in other than driveaway or towaway operations, shall be equipped with two means for emergency application of the trailer brakes. One of these means shall apply the brakes automatically in the event of a reduction of the towing vehicle air supply to a fixed pressure which shall be not lower than 20 pounds per square inch not higher than 45 pounds per square inch. The other means shall be a manually controlled device for applying and releasing the brakes, readily operable by a person seated in the driving seat, and its emergency position or method of operation shall be clearly indicated. In no instance may the manual means be so arranged as to permit its use to prevent operation of the automatic means. The automatic and the manual means required by this section may be, but are not required to be, separate.

2. Vacuum Brakes. After January 1, 1972, every towing vehicle manufactured or assembled after that date used to tow other vehicles equipped with vacuum brakes, in operations other than driveaway or towaway operations, shall have in addition to the single control device required by subsection (h), a second control device which can be used to operate the brakes on towed vehicles in emergencies. The second control shall be independent of brake air, hydraulic, and other pressure, and independent of other controls, unless the braking system be so arranged that failure of the pressure upon which the second control depends will cause the towed vehicle brakes to be applied automatically. The second control is not required to provide modulated braking.

(h) Single Control to Operate All Brakes. After January 1, 1972, every motor vehicle, trailer, semi-trailer and pole trailer, and every combination of such vehicles manufactured or assembled after that date, except motorcycles and motor-driven cycles, equipped with brakes shall have the braking system so arranged that one control device can be used to operate all service brakes. This requirement does not prohibit vehicles from being equipped with an additional control device to be used to operate brakes on the towed vehicles. This regulation does not apply to driveaway or towaway operations unless the brakes on the individual vehicles are designed to be operated by a single control on the towing vehicle.

(i) Reservoir Capacity and Check Valve.

1. Air Brakes. Every bus, truck or truck tractor with air operated brakes shall be equipped with a least one reservoir sufficient to insure that, when fully charged to the maximum pressure as regulated by the air compressor governor cutout setting, a full service brake application may be made without lowering such reservoir pressure by more than 20 percent. Each reservoir shall be provided with means for readily draining accumulated oil or

2. Vacuum Brakes. After January 1, 1972, every truck with three or more axles equipped with vacuum assistor type brakes and every truck-tractor and truck used for towing a vehicle equipped with a reserve capacity or a vacuum reservoir sufficient to insure that, with the reserve capacity or reservoir fully charged and with the engine stopped, a full service brake application may be made without depleting the vacuum supply by more than 40 percent.

3. Reservoir Safeguarded. All motor vehicles, trailers, semi-trailers and pole trailers, when equipped with air or vacuum reservoirs or reserve capacity as required by this section, shall have such reservoirs or reserve capacity so safeguarded by a check valve or equivalent device that in the event of failure or leakage in its connection to the source of compressed air or vacuum, the stored air or vacuum shall not be depleted by the leak or failure.

(j) Warning Devices

1. Air Brakes. Every bus, truck or truck-tractor using compressed air for the operation of its own brakes or the brakes on any towed vehicle shall be provided with a warning signal, other than a pressure gauge, readily audible or visible to the driver, which will operate at any time the air reservoir pressure of the vehicle is below 50 percent of the air compressor governor cutout pressure. In addition, each such vehicle shall be equipped with a pressure gauge visible to the driver, which indicates in pounds per square inch the pressure available for braking.

2. Vacuum Brakes. After January 1, 1972, every truck tractor and truck first put in use to be used for towing a vehicle equipped with vacuum operated brakes and every truck with three or more axles using vacuum in the operation of its brakes, except those in driveaway or towaway operations shall be equipped with a warning signal, other than a gauge indicating vacuum, readily

audible or visible to the driver, which will operate at any time the vacuum in the vehicle's supply reservoir or reserve capacity is less than eight inches of mercury.

3. Combination of Warning Devices. When a vehicle required to be equipped with a warning device is equipped with both air and vacuum power for the operation of its own brakes or the brakes on a towed vehicle, the warning devices may be, but are not required to be, combined into a single device which will serve both purposes. A gauge or gauges indicating pressure or vacuum shall not be deemed to be an adequate means of satisfying this requirement.

(2) Performance Ability of Brakes.

(a) Every motor vehicle and combination of vehicles, at all times and under all conditions of loading, upon application of the service brake, shall be capable of:

1. Developing a braking force that is not less than the percentage of its gross weight tabulated herein for its classification.

2. Decelerating to a stop from not more than twenty miles per hour at not less than the feet per second tabulated herein for its classification, and

3. Stopping from a speed of twenty miles per hour in not more than the distance tabulated herein for its classification, such distance to be measured from the point at which movement of the service brake pedal or control begins.

(b) Tests for deceleration and stopping distance shall be made on a substantially level (not to exceed plus or minus one percent grade), dry, smooth, hard surface that is free from loose material.

Classification of Vehicles	Braking Force As A Percentage of Gross Vehicle or Combination Weight	Deceleration in Feet Per Second Second	Brake System Application & Braking Distance in Feet from an Initial Speed of 20 M.P.H
1. Passenger vehicles with a seating capacity of 10 people or less including driver, not having a manufacturer's gross rating	52.8%	17	25
2. All motorcycles & motor-driven cycles	43.5%	14	30
3. Single unit vehicles with a manufacturer's gross weight rating of more than 10,000 pounds	43.4%	14	30
4. Single unit vehicles with a manufacturer's gross weight rating of more than 10,000 pounds	43.5%	14	40
5. Combination of a two-axle towing vehicle and a trailer with a gross trailer weight of 3,000 pounds or less	43.5%	14	40
6. Buses, regardless of the number of axles, not having a manufacturer's gross weight rating	43.5%	14	40
7. All combinations of vehicles in driveaway-towaway operations	43.5%	14	40

Classification of Vehicles	Braking Force As A Percentage of Gross Vehicle or Combination Weight	Deceleration in Feet Per Second Second	Brake System Application & Braking Distance in Feet from an Initial Speed of 20 M.P.H
8. All other vehicles and combinations of vehicles	43.5%	14	50

(3) Maintenance of Brakes

(a) All brakes shall be maintained in good working order and shall be so adjusted as to operate as equally as practicable with respect to the wheels on opposite sides of the vehicle.

Author:
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