

INTERSTATE COMMERCE COMMISSION

THE
POWER BRAKE LAW
OF 1958

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INTERSTATE COMMERCE COMMISSION

THE
POWER BRAKE LAW
OF 1958

INTERSTATE COMMERCE COMMISSION

POWER OR TRAIN BRAKES SAFETY

APPLIANCE ACT OF 1958

AND

RULES, STANDARDS, AND INSTRUCTIONS

FOR

INSTALLATION, INSPECTION,

MAINTENANCE, AND REPAIR

OF

POWER OR TRAIN BRAKES

EFFECTIVE AUGUST 9, 1958

Public Law 85-375

85th Congress, S. 1386

April 11, 1958

AN ACT

To authorize the Interstate Commerce Commission to prescribe rules, standards, and instructions for the installation, inspection, maintenance, and repair of power or train brakes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) this Act may be cited as the "Power or Train Brakes Safety Appliance Act of 1958".

(b) Section 2 of the Safety Appliance Act of March 2, 1903 (32 Stat. 943, Chapter 976, sec. 2; 45 U.S.C. 9), is amended (1) by changing the semicolon at the end of the third clause thereof to a period, (2) by striking the remaining language of the section, and (3) by adding at the end of that section the following new language: "One hundred and twenty days after the date of enactment of the Power or Train Brakes Safety Appliance Act of 1958, the Interstate Commerce Commission shall adopt and put into effect the rules, standards, and instructions of the Association of American Railroads, adopted in 1925 and revised in 1933, 1934, 1941, and 1953, with such revisions as may have been adopted prior to the enactment of such Act, for the installation, inspection, maintenance, and repair of all power or train brakes for common carriers engaged in interstate commerce by railroad. Such rules, standards, and instructions shall thereafter remain the rules, standards, and instructions for the installation, inspection, maintenance, and repair of all power

or train brakes unless changed, after hearing, by order of the Interstate Commerce Commission: *Provided, however,* That such rules or standards or instructions or changes therein shall be promulgated solely for the purpose of achieving safety. The provisions and requirements of this section shall apply to all trains, locomotives, tenders, cars, and similar vehicles used, hauled, or permitted to be used or hauled, by any railroad engaged in interstate commerce. In the execution of this section, the Interstate Commerce Commission may utilize the services of the Association of American Railroads, and may avail itself of the advice and assistance of any department, commission, or board of the United States Government, and of State governments, but no official or employee of the United States shall receive any additional compensation for such service except as now permitted by law. Failure to comply with any rule, regulation, or requirement promulgated by the Interstate Commerce Commission pursuant to the provisions of this section shall be subject to the like penalty as failure to comply with any requirement of this section."

Approved April 11, 1958.

TITLE 49—TRANSPORTATION

Chapter I—Interstate Commerce Commission

Subchapter A—General Rules and Regulations

[Docket No. 32406]

PART 132—POWER BRAKES AND DRAWBARS (RAILROAD)

INSPECTION, TESTING AND MAINTENANCE OF AIR BRAKE EQUIPMENT

At a session of the Interstate Commerce Commission, Division 3, held at its office in Washington, D.C., on the 1st day of May A.D. 1958.

It appearing, that on April 11, 1958, the Congress of the United States enacted into law the Power or Train Brakes Safety Appliance Act of 1958, under the provisions of which the Interstate Commerce Commission is directed to adopt and put into effect 120 days after such enactment, the rules, standards, and instructions of the Association of American Railroads, adopted in 1925, and revised in 1933, 1934, 1941, and 1953, with such revisions as had been adopted prior to the enactment of such Act, for the installation, inspection, maintenance, and repair of all power or train brakes for common carrier engaged in interstate commerce by railroad;

It is ordered, That the said rules, standards, and instructions of the said Association of American Railroads, as hereinafter set forth in their codified form, be, and they are hereby, adopted and prescribed to become effective on August 9, 1958, and that all common carriers engaged in interstate commerce by railroad, observe and comply with such rules, standards, and instructions;

It is further ordered, That 49 CFR Part 132, Power Brakes and Drawbars (Railroad) be, and it is hereby, amended by

adding thereto a center head and §§ 132.10 to 132.17, inclusive, reading as follows:

RULES FOR INSPECTION, TESTING AND MAINTENANCE OF AIR
BRAKE EQUIPMENT

Sec.

- 132.10 General rules, locomotives.
132.11 Train air brake system tests.
132.12 Initial terminal road train air brake tests.
132.13 Road train and intermediate terminal train air brake tests.
132.14 Inbound brake equipment inspection.
132.15 Double heading and helper service.
132.16 Running tests.
132.17 Freight and passenger train car brakes—testing and repairing brakes on cars while on shop or repair tracks—periodical repairs.

AUTHORITY: §§ 132.10 to 132.17 issued under sec. 2, 32 Stat. 943, as amended, Pub. Law 85-375, 45 U.S.C. 9.

§ 132.10 *General rules; locomotives.* (a) Air brake and hand brake equipment on locomotives including tender must be inspected and maintained in accordance with the requirements of the Locomotive Inspection and United States Safety Appliance Acts and related orders and regulations of the Interstate Commerce Commission.

(b) It must be known that air brake equipment on locomotives is in a safe and suitable condition for service.

(c) Compressor or compressors must be tested for capacity by orifice test as often as conditions require but not less frequently than required by law and orders of the I.C.C.

(d) Main reservoirs shall be subjected to tests periodically as required by law and orders of the I.C.C.

(e) Air gauges must be tested periodically as required by law and orders of the I.C.C., and whenever any irregularity is reported. They shall be compared with an accurate dead-

weight tester, or test gauge. Gauges found inaccurate or defective must be repaired or replaced.

(f) (1) All operating portions of air brake equipment together with dirt collectors and filters must be cleaned, repaired and tested as often as conditions require to maintain them in a safe and suitable condition for service, and not less frequently than required by law and orders of the I.C.C.

(2) On locomotives so equipped, hand brakes, parts, and connections must be inspected, and necessary repairs made as often as the service requires, with date being suitably stencilled or tagged.

(g) The date of testing or cleaning of air brake equipment and the initials of the shop or station at which the work was done shall be placed on a card displayed under transparent covering in the cab of each locomotive unit.

(h) (1) Minimum brake cylinder piston travel must be sufficient to provide proper brake shoe clearance when brakes are released.

(2) Maximum brake cylinder piston travel when locomotive is standing must not exceed the following:

Steam locomotives:	Inches
Cam type of driving wheel brake.....	3½
Other types of driving wheel brakes.....	6
Engine truck brake.....	8
Engine trailer truck brake.....	8
Tender brake (truck mounted and tender bed mounted)...	8
Tender brake (body mounted).....	9
Locomotives other than steam:	
Driving wheel brake.....	6
Swivel type truck brake with brakes on more than one truck operated by one brake cylinder.....	7
Swivel type truck brake equipped with one brake cylinder...	8
Swivel type truck brake equipped with two or more brake cylinders.....	6

(i) (1) Foundation brake rigging, and safety supports, where used, must be maintained in a safe and suitable condition for service. Levers, rods, brake beams, hangers and pins must be of ample strength and must not bind or foul in any way that will affect proper operation of brakes. All pins must be properly applied and secured in place with suitable locking devices. Brake shoes must be properly applied and kept approximately in line with treads of wheels or other braking surfaces.

(2) No part of the foundation brake rigging and safety supports shall be closer to the rails than specified by law and orders of the I.C.C.

(j) (1) Main reservoir leakage: Leakage from main air reservoir and related piping shall not exceed an average of 3 pounds per minute in a test of three minutes' duration, made after the pressure has been reduced 40 percent below maximum pressure.

(2) Brake pipe leakage: Brake pipe leakage must not exceed 5 pounds per minute after a reduction of 10 pounds has been made from brake pipe air pressure of not less than 70 pounds.

(3) Brake cylinder leakage: With a full service application of brakes, and with communication to the brake cylinders closed, brakes must remain applied not less than five minutes.

(4) The main reservoir system of each unit shall be equipped with at least one safety valve, the capacity of which shall be sufficient to prevent an accumulation of pressure of more than 10 pounds per square inch above the maximum setting of the compressor governor fixed by the chief mechanical officer of the carrier operating the locomotive.

(5) A suitable governor shall be provided that will stop

and start the air compressor within 5 pounds above or below the pressures fixed.

(6) Compressor governor when used in connection with the automatic air brake system shall be so adjusted that the compressor will start when the main reservoir pressure is not less than 15 pounds above the maximum brake-pipe pressure fixed by the rules of the carrier and will not stop the compressor until the reservoir pressure has increased not less than 10 pounds.

(k) The communicating signal system on locomotives when used in passenger service must be tested and known to be in a safe and suitable condition for service before each trip.

(l) Enginemen when taking charge of locomotives must know that the brakes are in operative condition.

(m) In freezing weather drain cocks on air compressors of steam locomotives must be left open while compressors are shut off.

(n) Air pressure regulating devices must be adjusted for the following pressures:

LOCOMOTIVES	Pounds
(1) Minimum brake pipe air pressure:	
Road Service.....	70
Switch Service.....	60
(2) Minimum differential between brake pipe and main reservoir air pressures, with brake valve in running position	15
(3) Safety valve for straight air brake.....	30-55
(4) Safety valve for LT, ET, No. 8-EL, No. 14 E1, No. 6-DS, No. 6-BL and No. 6-SL equipment.....	30-68
(5) Safety valve for HSC and No. 24-RL equipment.....	30-75
(6) Reducing valve for independent or straight air brake...	30-50
(7) Self-lapping portion for electro-pneumatic brake (minimum full application pressure).....	50

LOCOMOTIVES—continued	Pounds
(8) Self-lapping portion for independent air brake (full application pressure)-----	30-50
(9) Reducing valve for air signal-----	40-60
(10) Reducing valve for high-speed brake (minimum)-----	50
CARS	
(11) Reducing valve for high-speed brake-----	58-62
(12) Safety valve for PS, LN, UC, AML, AMU and AB-1-B air brakes-----	58-62
(13) Safety valve for HSC air brake-----	58-77
(14) Governor valve for water raising system-----	60
(15) Reducing valve for water raising system-----	20-30

§ 132.11 *Train air brake system tests.* (a) Supervisors are jointly responsible with inspectors, enginemen and trainmen for condition of air brake and air signal equipment on motive power and cars to the extent that it is possible to detect defective equipment by required air tests.

(b) Communicating signal system on passenger equipment trains must be tested and known to be in a suitable condition for service before leaving terminal.

(c) Each train must have the air brakes in effective operating condition, and at no time shall the number and location of operative air brakes be less than permitted by Federal requirements. When piston travel is in excess of 10 inches, the air brakes cannot be considered in effective operating condition.

(d) Condensation must be blown from the pipe from which air is taken before connecting yard line or motive power to train.

§ 132.12 *Initial terminal road train air brake tests.* All trains must be given inspection and test as specified by paragraphs (a) to (h) of this section at points: (1) Where a train is originally made up (Initial Terminal); (2) Where

train consist is changed other than by adding or removing a solid block of cars and train brake system remains charged; (3) Where train is received in interchange.

Each carrier shall establish designated intermediate inspection points within a limit of not to exceed 500 miles where additional inspection will be made to determine that (1) Brake pipe leakage does not exceed 5 pounds per minute; (2) Brakes apply on each car from a 20-pound service brake pipe reduction; (3) That brake rigging is properly secured and does not bind or foul.

(a) Train air brake system must be charged to required air pressure, angle cocks and cutout cocks must be properly positioned, air hose must be properly coupled and must be in condition for service. An examination must be made for leaks and necessary repairs made to reduce leakage to a minimum. Retaining valves and retaining valve pipes must be inspected and known to be in condition for service. If train is to be operated in electro-pneumatic brake operation, brake circuit cables must be properly connected.

(b) (1) After the air brake system on a freight train is charged to within 15 pounds of the setting of the feed valve on the locomotive, but to not less than 60 pounds, as indicated by an accurate gauge at rear end of train, and on a passenger train when charged to not less than 70 pounds, and upon receiving the signal to apply brakes for test, a 15-pound brake pipe service reduction must be made in automatic brake operation, the brake valve lapped, and the number of pounds of brake pipe leakage per minute noted as indicated by brake pipe gauge, after which brake pipe reduction must be increased to full service. Inspection of the train brakes must be made to determine that angle cocks are properly positioned, that the brakes are applied on each car, that piston travel is correct, that brake rigging does

not bind or foul, and that all parts of the brake equipment are properly secured. When this inspection has been completed, the release signal must be given and brakes released and each brake inspected to see that all have released.

(2) When a passenger train is to be operated in electro-pneumatic brake operation and after completion of test of brakes as prescribed by subparagraph (1) of this paragraph the brake system must be recharged to not less than 90 pounds air pressure, and upon receiving the signal to apply brakes for test, a minimum 20-pound electro-pneumatic brake application must be made as indicated by the brake cylinder gauge. Inspection of the train brakes must then be made to determine if brakes are applied on each car. When this inspection has been completed, the release signal must be given and brakes released and each brake inspected to see that all have released.

(3) When the locomotive used to haul the train is provided with means for maintaining brake pipe pressure at a constant level during service application of the train brakes, this feature must be cut out during train air brake tests.

(c) Brake pipe leakage must not exceed 5 pounds per minute.

(d) (1) At initial terminal piston travel of body mounted brake cylinders which is less than 7 inches or more than 9 inches must be adjusted to nominally 7 inches.

(2) Minimum brake cylinder piston travel of truck mounted brake cylinders must be sufficient to provide proper brake shoe clearance when brakes are released. Maximum piston travel must not exceed 6 inches.

(3) Piston travel of brake cylinders on freight cars equipped with other than standard single capacity brake, must be adjusted as indicated on badge plate or stenciling on car located in a conspicuous place near brake cylinder.

(e) When test of air brakes has been completed the engineman and conductor must be advised that train is in proper condition to proceed.

(f) During standing test, brakes must not be applied or released until proper signal is given.

(g) (1) When train air brake system is tested from a yard test plant, an engineer's brake valve or a suitable test device must be used to provide increase and reduction of brake pipe air pressure or electro-pneumatic brake application and released at the same or a slower rate as with engineer's brake valve and yard test plant must be connected to the end which will be nearest to the hauling road locomotive.

(2) When yard test plant is used, the train air brake system must be charged and tested as prescribed by paragraphs (a) to (e) of this section inclusive, and when practicable should be kept charged until road motive power is coupled to train, after which, an automatic brake application and release test of air brakes on rear car must be made. If train is to be operated in electro-pneumatic brake operation, this test must also be made in electro-pneumatic brake operation before proceeding.

(3) If after testing the brakes as prescribed in subparagraph (2) of this paragraph the train is not kept charged until road motive power is attached, the brakes must be tested as prescribed by paragraph (b) (1) of this section and if train is to be operated in electro-pneumatic brake operation as prescribed by paragraph (b) (2) of this section.

(h) Before adjusting piston travel or working on brake rigging, cutout cock in brake pipe branch must be closed and air reservoirs must be drained. When cutout cocks are provided in brake cylinder pipes, these cutout cocks only may be closed and air reservoirs need not be drained.

§ 132.13 *Road train and intermediate terminal train air brake tests.* (a) Passenger trains: Before motive power is detached or angle cocks are closed on a passenger train operated in either automatic or electro-pneumatic brake operation, except when closing angle cocks for cutting off one or more cars from the rear end of train, automatic air brake must be applied. After recoupling, brake system must be recharged to required air pressure and before proceeding and upon receipt of proper request or signal, application and release tests of brakes on rear car must be made from locomotive in automatic brake operation. If train is to be operated in electro-pneumatic brake operation, this test must also be made in electro-pneumatic brake operation before proceeding. Inspector or trainman must determine if brakes on rear car of train properly apply and release.

(b) Freight trains: Before motive power is detached or angle cocks are closed on a freight train, brakes must be applied with not less than a 20-pound brake pipe reduction. After recoupling and angle cocks are opened, it must be known that brake pipe air pressure is being properly restored as indicated by the caboose gauge and that brakes on rear car are released. In the absence of a caboose gauge, air brake test must be made as prescribed by that portion of paragraph (a) of this section pertaining to automatic brake operation.

(c) (1) At a point other than initial terminal where locomotive or caboose is changed, or where one or more consecutive cars are cut off from rear end or head end of train with consist otherwise remaining intact, after train brake system is charged to within 15 pounds of feed valve setting on locomotive but not less than 60 pounds as indicated at rear of freight train, and on a passenger train to at least 70 pounds,

a 20-pound brake pipe reduction must be made and it must be determined that brakes on rear car apply and release properly.

(2) Before proceeding it must be known that brake pipe pressure as indicated at rear of freight train is being restored.

(3) On trains operating with electro-pneumatic brakes, with brake system charged to not less than 70 pounds, test must be made to determine that rear brakes apply and release properly from a minimum 20 pounds electro-pneumatic brake application as indicated by brake cylinder gauge.

[Former 42(b) eliminated account consolidated with § 132.13 (c) (1) as indicated above.]

(d) (1) At a point other than a terminal where one or more cars are added to a train, and after the train brake system is charged to not less than 60 pounds as indicated by a gauge at the rear of freight train and on a passenger train to not less than 70 pounds, tests of air brakes must be made to determine that brake pipe leakage does not exceed five (5) pounds per minute as indicated by the brake pipe gauge after a 15-pound brake pipe reduction. After the leakage test is completed, brake pipe reduction must be increased to full service, and it must be known that the brakes on each of these cars and on the rear car of train apply and release. Cars added to train which have not been inspected in accordance with § 132.12 (a) to (h) must be so inspected and tested at next terminal where facilities are available for such attention.

(2) (i) At a terminal where a solid block of cars which has been previously charged and tested as prescribed by § 132.12 (a) to (h) is added to a train, test must be made to determine that brakes on the rear car of train apply and release.

(ii) When cars which have not been previously charged and tested as prescribed by § 132.12 (a) to (h) are added to a train, such cars may either be given inspection and tests in accordance with § 132.12 (a) to (h), or tested as prescribed by subparagraph (1) of this paragraph prior to departure in which case these cars must be inspected and tested in accordance with § 132.12 (a) to (h) at next terminal.

(3) Before proceeding it must be known that the brake pipe pressure at the rear of freight train is being restored.

(e)(1) Transfer train and yard train movements not exceeding 20 miles, must have the air brake hose coupled between all cars, and after the brake system is charged to not less than 60 pounds, a 15-pound service brake pipe reduction must be made to determine that the brakes are applied on each car before releasing and proceeding.

(2) Transfer train and yard train movements exceeding 20 miles must have brake inspection in accordance with § 132.12 (a) to (h).

(f) The automatic air brake must not be depended upon to hold a locomotive, cars or train, when standing on a grade, whether locomotive is attached or detached from cars or train. When required, a sufficient number of hand brakes must be applied to hold train, before air brakes are released. When ready to start, hand brakes must not be released until it is known that the air brake system is properly charged.

§ 132.14 *Inbound brake equipment inspection.* (a) At points where inspectors are employed to make a general inspection of trains upon arrival at terminals, visual inspection must be made of retaining valves and retaining valve pipes, release valves and rods, brake rigging, safety supports, hand brakes, hose and position of angle cocks and make neces-

sary repairs or mark for repair tracks any cars to which yard repairs cannot be promptly made.

(b) Freight trains arriving at terminals where facilities are available and at which special instructions provide for immediate brake inspection and repairs, shall be left with air brakes applied by a service brake pipe reduction of 20 pounds so that inspectors can obtain a proper check of the piston travel. Trainmen will not close any angle cock or cut the locomotive off until the 20-pound service reduction has been made. Inspection of the brakes and needed repairs should be made as soon thereafter as practicable.

§ 132.15 *Double heading and helper service.* (a) When more than one locomotive is attached to a train, the engine-man of the leading locomotive shall operate the brakes. On all other motive power units in the train the brake pipe cut-out cock to the brake valve must be closed, the maximum main reservoir pressure maintained and brake valve handles kept in the prescribed position. In case it becomes necessary for the leading locomotive to give up control of the train short of the destination of the train, a test of the brakes must be made to see that the brakes are operative from the automatic brake valve of the locomotive taking control of the train.

(b) The electro-pneumatic brake valve on all motive power units other than that which is handling the train must be cut out, handle of brake valve kept in the prescribed position, and air compressors kept running if practicable.

§ 132.16 *Running tests.* When motive power, engine crew or train crew has been changed, angle cocks have been closed except for cutting off one or more cars from the rear end of train or electro-pneumatic brake circuit cables between power units and/or cars have been disconnected, run-

ning test of train air brakes on passenger train must be made, as soon as speed of train permits, by use of automatic brake if operating in automatic brake operation or by use of electro-pneumatic brake if operating in electro-pneumatic brake operation. Steam or power must not be shut off unless required and running test must be made by applying train air brakes with sufficient force to ascertain whether or not brakes are operating properly. If air brakes do not properly operate, train must be stopped, cause of failure ascertained and corrected and running test repeated.

§ 132.17 *Freight and passenger train car brakes*—(a) *Testing and repairing brakes on cars while on shop or repair tracks.* (1) When a freight car having brake equipment due for periodic attention is on shop or repair tracks where facilities are available for making air brake repairs, brake equipment must be given attention in accordance with the requirements of the currently effective AAR Code of Rules¹ for cars in interchange.

(2) (i) When a freight car having brake equipment not due for periodic attention as indicated by standard stenciling is on shop or repair tracks, brake equipment must be tested by use of single car testing device as prescribed by currently effective AAR Code of Tests,¹ providing such car has not been so tested within the previous 90 days as indicated by stenciling. Piston travel must be adjusted to nominally 7 inches on cars having standard single capacity brake. Piston travel of brake cylinders on freight cars equipped with other than standard single capacity brake, must be adjusted as indicated on badge plate or stenciling on car located in a conspicuous place near brake cylinder. After piston travel

¹ Available at Association of American Railroads.

has been adjusted and with brakes released, sufficient brake shoe clearance must be provided.

(ii) When a car equipped for use in passenger train service not due for periodical air brake repairs, as indicated by stenciled or recorded cleaning dates, is on shop or repair tracks, brake equipment must be tested by use of single car testing device as prescribed by currently effective AAR Code of Tests.¹ Piston travel of brake cylinders must be adjusted if required, to the standard travel for that type of brake cylinder. After piston travel has been adjusted and with brakes released, sufficient brake shoe clearance must be provided.

(iii) Before a car is released from a shop or repair track, it must be known that brake pipe is securely clamped, angle cocks in proper position with suitable clearance, valves, reservoirs and cylinders tight on supports and supports securely attached to car.

(3) (i) If triple valve, control valves or brake cylinders on a freight car do not meet requirements during single car test as specified by the currently effective AAR Code of Tests,¹ brake equipment must be given attention specified by currently effective AAR approved Code of Rules¹ for cars in interchange.

(ii) If, on passenger equipment cars, triple valves, control valves, brake cylinders, slack adjusters, high speed reducing valves, relay valves, quick service valves, vent valves, brake application valves or conductor's valves do not meet requirements during single car test as prescribed by subparagraph (2) (ii) of this paragraph, and if speed governor control, magnet valves, or wheel slide control does not operate properly when tested by a suitable test device, de-

¹ Available at Association of American Railroads.

fective part or parts must be repaired or replaced and new cleaning date must be stenciled or recorded as required.

(4) When cars are on shop or repair tracks hand brakes and connections must be inspected, tested and necessary repairs made to insure they are in a suitable condition for safe and effective operation.

(b) *Periodical repairs.* Brake equipment on cars must be cleaned, repaired, lubricated and tested as often as required to maintain it in a safe and suitable condition for service but not less frequently than as required by currently effective AAR Code of Rules¹ for cars in interchange.

And it is further ordered, That a copy of this order be served on each common carrier engaged in interstate commerce by railroad and notice of such order shall be given to the general public by depositing a copy thereof in the Office of the Secretary of the Commission at Washington, D.C., and by filing with the Director of the Division of the Federal Register.

By the Commission, Division 3.

[SEAL]

HAROLD D. MCCOY,

Secretary.

¹ Available at Association of American Railroads.

