The air brake system compressor shall increase the air pressure in the reservoir(s) from the level developed after the test prescribed in §570.57(a)(1) to the initial pressure noted before the full brake application, with the engine running at the manufacturer’s recommended number of revolutions per minute and the compressor governor in the cut-out position, in not more than 30 seconds for vehicles manufactured prior to March 1, 1975. For vehicles manufactured on or after March 1, 1975, the time for air pressure build up shall not exceed 45 seconds.

(2) The warning device (visual or audible) connected to the brake system air pressure source shall be activated when the air pressure is lowered to not less than 50 psi.

(3) The governor cut-in pressure shall be not lower than 80 psi, and the cut-out pressure shall not be higher than 135 psi, unless other values are recommended by the vehicle manufacturer.

(4) Air brake pressure shall not drop more than 2 psi in 1 minute for single vehicles or more than 3 psi in 1 minute for combination vehicles, with the engine stopped and service brakes released. Allow a 1-psi drop per minute for each additional towed vehicle.

(5) With the reservoir(s) fully charged, air pressure shall not drop more than 3 psi in 1 minute for single vehicles or more than 4 psi in 1 minute for combination vehicles, with the engine stopped and service brakes fully applied. Allow a 1-psi pressure drop in 1 minute for each additional towed vehicle.

(6) The compressor drive belt shall not be badly worn or frayed and belt tension shall be sufficient to prevent slippage.

Inspection procedure. With the air system charged, open the drain cocks in the service and supply reservoir on the truck or truck-tractor. Note the pressure at which the visual or audible warning device connected to the low pressure indicator is activated. Close the drain cocks and, with the trailers uncoupled, check air pressure buildup at the manufacturer’s recommended engine speed. Observe the time required to raise the air pressure from 85 to 100 psi. Continue running the engine until the governor cuts out and note the pressure. Reduce engine speed to idle, couple trailers, and make a series of brake applications. Note the pressure at which the governor cuts in. Increase engine speed to fast idle and charge the system to its governed pressure. Stop the engine and record the pressure drop in psi per minute with brakes released and with brakes fully applied.

(d) Air-over-hydraulic brake subsystem hoses, master cylinder, tubes and connections. System tubes, hoses and connections shall not be cracked or improperly supported, the air and hydraulic hoses shall not be abraded and the master cylinder shall not show signs of leakage.

(1) Inspection procedure. Stop the engine and examine air and hydraulic brake hoses, brake master cylinder, tubes and connections visually for conditions specified.

§ 570.58 Electric brake system.

(a) Electric brake system integrity. The average brake amperage value shall be not more than 20 percent above, and not less than 30 percent below, the brake manufacturer’s maximum current rating. In progressing from zero to maximum, the ammeter indication shall show no fluctuation evidencing a short circuit or other interruption of current.

(1) Inspection procedure. Insert a low range (0 to 25 amperes for most 2- and 4-brake systems and 0 to 40 amperes for a 6-brake system) d.c. ammeter into the brake circuit between the controller and the brakes. With the controller in the “off” position, the ammeter should read zero. Gradually apply the controller to the “full on” position for a brief period (not to exceed 1 minute) and observe the maximum ammeter reading. Gradually return the controller to “full off” and observe return to zero amperes. Divide the maximum ammeter reading by the number of brakes and determine the brake amperage value.

(b) Electric brake wiring condition. Electric brake wiring shall not be frayed. Wiring clips or brackets shall not be broken or missing. Terminal
connections shall be clean. Conductor
wire gauge shall not be below the brake
manufacturer’s minimum re-
commendation.
(1) Inspection procedure. Examine vis-
ually for conditions specified.

§ 570.59 Service brake system.
(a) Service brake performance. Compli-
ance with any one of the following per-
formance criteria will satisfy the re-
quirements of this section. Verify that
tire inflation pressure is within the
limits recommended by the vehicle
manufacturer before conducting either
of the following tests.
(1) Roller-type or drive-on platform
tests. The force applied by the brake on
a front wheel or a rear wheel shall not
differ by more than 25 percent from the
force applied by the brake on the other
front wheel or the other rear wheel re-
spectively.
   (i) Inspection procedure. The vehicle
   shall be tested on a drive-on platform,
or a roller-type brake analyzer with
the capability of measuring equali-
zation. The test shall be conducted in
accordance with the test equipment
manufacturer’s specifications. Note the
brake force variance.
(2) Road test. The service brake sys-
stem shall stop single unit vehicles, ex-
cept truck-tractors, in a distance of
not more than 35 feet, or combination
vehicles and truck-tractors in a dis-
tance of not more than 40 feet, from a
speed of 20 mph, without leaving a 12-
foot-wide lane.
   (i) Inspection procedure. The road test
   shall be conducted on a level (not to
   exceed plus or minus 1 percent grade),
dry, smooth, hard-surfaced road that is
free from loose material, oil or grease.
The service brakes shall be applied at a
vehicle speed of 20 mph and the vehicle
shall be brought to a stop as specified.
Measure the distance required to stop.

Note: Inspect for paragraphs (b), (c) and (d)
of this section on vehicles equipped with
brake inspection ports or access open-
ings, and when removal of wheel is not required.
(b) Disc and drum condition. If the
drum is embossed with a maximum
safe diameter dimension or the rotor is
embossed with a minimum safe thick-
ness dimension, the drum or disc shall
be within the appropriate specifica-
tions. These dimensions will generally
be found on motor vehicles manufac-
tured since January 1, 1971, and may be
found on vehicles manufactured for
several years prior to that time. If the
drums and discs are not embossed, they
shall be within the manufacturer’s
specifications.
   (1) Inspection procedure. Examine vis-
ually for the condition indicated,
measuring as necessary.
   (c) Friction materials. On each brake,
the thickness of the lining or pad shall
not be less than one thirty-second of an
inch over the fastener, or one-sixteenth
of an inch over the brake shoe on bond-
ed linings or pads. Brake linings and
pads shall not have cracks or breaks
that extend to rivet holes except minor
cracks that do not impair attachment.
The wire in wire-backed lining shall
not be visible on the friction surface.
Drum brake linings shall be securely
attached to brake shoes. Disc brake
pads shall be securely attached to shoe
plates.
   (1) Inspection procedure. Examine vis-
ually for the conditions indicated, and
measure the height of the rubbing sur-
face of the lining over the fastener
heads. Measure bonded lining thickness
over the surface at the thinnest point
on the lining or pad.
(d) Structural and mechanical parts.
Backings plates, brake spiders and cal-
ipper assemblies shall not be deformed
or cracked. System parts shall not be
broken, misaligned, missing, binding,
or show evidence of severe wear. Auto-
matic adjusters and other parts shall
be assembled and installed correctly.
   (1) Inspection procedure. Examine vis-
ually for conditions indicated.

§ 570.60 Steering system.
(a) System play. Lash or free play in
the steering system shall not exceed
the values shown in Table 2.
(1) Inspection procedure. With the en-
gine on and the steering axle wheels in
the straight ahead position, turn the
steering wheel in one direction until
there is a perceptible movement of the
wheel. If a point on the steering wheel
rim moves more than the value shown
in Table 1 before perceptible return
movement of the wheel under observa-
tion, there is excessive lash or free play
in the steering system.