The engine must be operating when power-assisted brakes are checked.

(d) Brake hoses, master cylinder, tubes and tube assemblies. Hydraulic brake hoses shall not be mounted so as to contact the vehicle body or chassis. Hoses shall not be cracked, chafed, or flattened. Brake tubes shall not be flattened or restricted. Brake hoses and tubes shall be attached or supported to prevent damage by vibration or abrasion. Master cylinder shall not show signs of leakage. Hose or tube protective rings or devices shall not be considered part of the hose or tubing.

(1) Inspection procedure. Examine visually brake master cylinder, hoses and tubes, including front brake hoses, through all wheel positions from full left turn to full right turn for conditions indicated.

§ 570.56 Vacuum brake assist unit and vacuum brake system.

The following requirements apply to vehicles with vacuum brake assist units and vacuum brake systems.

(a) Vacuum brake assist unit integrity. The vacuum brake assist unit shall demonstrate integrity as indicated by a decrease in pedal height when the engine is started and a constant 50-pound force is maintained on the pedal.

(1) Inspection procedure. Stop the engine and apply service brake several times to destroy vacuum in system. Depress the brake pedal with 50 pounds of force and while maintaining that force, start the engine. If the brake pedal does not move slightly under force when the engine starts, there is a malfunction in the power assist unit.

(b) Low-vacuum indicator. If the vehicle has a low-vacuum indicator, the indicator activation level shall not be less than 8 inches of mercury.

(1) Inspection procedure. Run the engine to evacuate the system fully. Shut off the engine and slowly reduce the vacuum in the system by moderate brake applications until the vehicle vacuum gauge reads 8 inches of mercury. Observe the functioning of the low-vacuum indicator.

§ 570.57 Air brake system and air-over-hydraulic brake subsystem.

The following requirements apply to vehicles with air brake and air-over-hydraulic brake systems. Trailer(s) must be coupled to a truck or truck-tractor for the purpose of this inspection, except as noted.
§ 570.57

(a) Air brake system integrity. The air brake system shall demonstrate integrity by meeting the following requirements:

(1) With the vehicle in a stationary position, compressed air reserve shall be sufficient to permit one full service brake application, after the engine is stopped and with the system fully charged, without lowering reservoir pressure more than 20 percent below the initial reading.

(2) 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 maximum recommended number of revolutions per minute with the compressor governor in the cut-off 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 allowed for air pressure buildup shall not exceed 45 seconds.

(3) The warning device (visual or audible) connected to the brake system air pressure source shall be activated when air pressure is lowered to an activating level that is not less than 50 psi. For vehicles manufactured to conform to Federal Motor Vehicle Safety Standard No. 121, the low-pressure indicator shall be activated when air pressure is lowered to an activating level that is not less than 60 psi.

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

(5) 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. There may be an additional 1 psi drop per minute for each additional towed vehicle.

(6) 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. There may be an additional 1 psi drop per minute for each additional towed vehicle.

(7) 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 trailer(s) 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 the trailer(s), if applicable, and make a series of brake applications. Note the pressure at which the governor cuts in. Increased 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.

(b) Air brake system hoses, tubes and connections. Air system tubes, hoses and connections shall not be restricted, cracked or improperly supported, and the air hose shall not be abraded.

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

(c) Air-over-hydraulic brake subsystem integrity. The air-over-hydraulic brake subystem shall demonstrate integrity by meeting the following requirements:

(1) 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-off 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.
§ 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

d) Air-over-hydraulic brake subsystem
hoses, master cylinder, tubes and connec-
tions shall not be cracked or improp-
erly supported, the air and hydraulic
hoses shall not be abraded and the mas-
ter cylinder shall not show signs of
leakage.

(1) Inspection procedure. Stop the en-
gine and examine air and hydraulic
brake hoses, brake master cylinder, tub-
es and connections visually for con-
ditions specified.

[39 FR 26027, July 16, 1974, as amended at 40
FR 5160, Feb. 4, 1975; 41 FR 13924, Apr. 1, 1976]

§ 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 cur-
rent 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 con-
troller and the brakes. With the con-
troller in the “off” position, the amme-
ter 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 am-
meter reading. Gradually return the
controller to “full off” and observe re-
turn to zero amperes. Divide the max-
um ammeter reading by the number of
brakes and determine the brake am-
perage 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 rec-
ommendation.

(1) Inspection procedure. Examine vis-
ually for conditions specified.