

Required equipment—split service system. Each motorcycle shall have a split service brake system with two independently actuated brake systems.

Mechanical service brake system. Failure of any component in a mechanical service brake system shall not result in a loss of braking ability in the service brake system on the vehicle.

Hydraulic service brake system. A failure in a hydraulic service brake system shall not result in a loss of braking ability in the other service brake system on the vehicle. Each motorcycle equipped with a hydraulic service brake system shall have the equipment specified in S5.1.2.1 and S5.1.2.2.

5.1.1 Master cylinder reservoirs. Each master cylinder shall have a separate reservoir for each brake circuit, each reservoir filler opening having a cover, seal, and cover removal device. Each reservoir shall have a minimum capacity equivalent to one and one-half times the total displacement resulting when all wheel cylinders or caliper pistons are moved from a fully retracted position to a fully applied position. The adjustment is a factor, the condition of adjustment shall be specified in this measurement.

5.1.2 Reservoir labeling. Each motorcycle shall have a brake fluid warning label that reads as follows, in letters at least three thirty-seconds of an inch high:

Warning: Clean filler cap before reapplying. Use only _____ fluid from a _____ container. (Inserting the recommended type of brake fluid as specified in 49 CFR 571.116, e.g., DOT 3.) The lettering shall be:—

Permanently affixed, engraved, or etched;

Located so as to be visible by direct view, either on or within 4 inches of the brake-fluid reservoir filler plug; and

Of a color that contrasts with the background, if it is not engraved or etched.

5.1.3 Split service brake system. In addition to the equipment required by S5.1.2, each motorcycle equipped with a split service brake system shall have a

failure indicator lamp as specified in S5.1.3.1.

S5.1.3.1 Failure indicator lamp.

(a) One or more electrically operated service brake system failure indicator lamps that is mounted in front of and in clear view of the driver, and that is activated—

(1) In the event of pressure failure in any part of the service brake system, other than a structural failure of either a brake master cylinder body in a split integral body type master cylinder system or a service brake system failure indicator body, before or upon application of not more than 20 pounds of pedal force upon the service brake.

(2) Without the application of pedal force, when the level of brake fluid in a master cylinder reservoir drops to less than the recommended safe level specified by the manufacturer or to less than one-half the fluid reservoir capacity, whichever is the greater.

(b) All failure indicator lamps shall be activated when the ignition switch is turned from the "off" to the "on" or to the "start" position.

(c) Except for the momentary activation required by S5.1.3.1(b), each indicator lamp, once activated, shall remain activated as long as the condition exists, whenever the ignition switch is in the "on" position. An indicator lamp activated when the ignition is turned to the "start" position shall be deactivated upon return of the switch to the "on" position unless a failure exists in the service brake system.

(d) Each indicator lamp shall have a red lens with the legend "Brake Failure" on or adjacent to it in letters not less than three thirty-seconds of an inch high that shall be legible to the driver in daylight when lighted.

S5.1.4 Parking brake. Each three-wheeled motorcycle shall be equipped with a parking brake of a friction type with a solely mechanical means to retain engagement.

S5.1.5 Other requirements. The brake system shall be installed so that the lining thickness of drum brake shoes may be visually inspected, either directly or by use of a mirror without removing the drums, and so that disc brake friction lining thickness may be visually inspected without removing the pads.

S5.2 Service brake system—first (preburnish) effectiveness.

S5.2.1 Service brake system. The service brakes shall be capable of stopping the motorcycle from 30 m.p.h. and 60 m.p.h. within stopping distances which do not exceed the stopping distances specified in Column I of Table I (S7.3.1).

S5.2.2 Partial service brake system. Each independently actuated service brake system on each motorcycle shall be capable of stopping the motorcycle from 30 m.p.h. and 60 m.p.h. within stopping distances which do not exceed the stopping distances specified in Column II of Table I (S7.3.2).

S5.3 Service brake system—second effectiveness. The service brakes shall be capable of stopping the motorcycle from 30 m.p.h., 60 m.p.h., 80 m.p.h., and the multiple of 5 m.p.h. that is 4 m.p.h. to 8 m.p.h. less than the speed attainable in 1 mile if this speed is 95 m.p.h. or greater, within stopping distances that do not exceed the stopping distances specified in Column III of Table I (S7.5).

S5.4 Service brake system—fade and recovery. These requirements do not apply to a motor-driven cycle whose speed attainable in 1 mile is 30 m.p.h. or less.

S5.4.1 Baseline check—minimum and maximum pedal forces. The pedal and lever forces used in establishing the fade baseline check average shall be within the limits specified in S6.10 (S7.6.1).

S5.4.2 Fade. Each motorcycle shall be capable of making 10 fade stops from 60 m.p.h. at not less than 15 f.p.s.p.s. for each stop (S7.6.2).

S5.4.3 Fade recovery. Each motorcycle shall be capable of making five recovery stops with a pedal force that does not exceed 90 pounds, and a hand lever force that does not exceed 55 pounds for any of the first four recovery stops and that for the fifth recovery stop is within plus 20 pounds and minus 10 pounds of the fade test baseline check average force (S7.6.3).

S5.5 Service brake system—final effectiveness. These requirements do not apply to a motor-driven cycle whose speed attainable in 1 mile is 30 mph or less.

S5.5.1 Service brake system. The service brakes shall be capable of stopping