the tank capacity. It must be impossible to fill the expansion space inadvertently with the airplane in the normal ground attitude.

(c) Augmentation system drains must be designed and located in accordance with §25.1455 if—

1. The augmentation system fluid is subject to freezing; and
2. The fluid may be drained in flight or during ground operation.

(d) The augmentation liquid tank capacity available for the use of each engine must be large enough to allow operation of the airplane under the approved procedures for the use of liquid-augmented power. The computation of liquid consumption must be based on the maximum approved rate appropriate for the desired engine output and must include the effect of temperature on engine performance as well as any other factors that might vary the amount of liquid required.

(e) This section does not apply to fuel injection systems.


§ 25.952 Fuel system analysis and test.

(a) Proper fuel system functioning under all probable operating conditions must be shown by analysis and those tests found necessary by the Administrator. Tests, if required, must be made using the airplane fuel system or a test article that reproduces the operating characteristics of the portion of the fuel system to be tested.

(b) The likely failure of any heat exchanger using fuel as one of its fluids may not result in a hazardous condition.

[Amdt. 25–40, 42 FR 15043, Mar. 17, 1977]

§ 25.953 Fuel system independence.

Each fuel system must meet the requirements of §25.903(b) by—

(a) Allowing the supply of fuel to each engine through a system independent of each part of the system supplying fuel to any other engine; or

(b) Any other acceptable method.

§ 25.954 Fuel system lightning protection.

The fuel system must be designed and arranged to prevent the ignition of fuel vapor within the system by—

(a) Direct lightning strikes to areas having a high probability of stroke attachment;

(b) Swept lightning strokes to areas where swept strokes are highly probable; and

(c) Corona and streamering at fuel vent outlets.

[Amdt. 25–14, 32 FR 11629, Aug. 11, 1967]

§ 25.955 Fuel flow.

(a) Each fuel system must provide at least 100 percent of the fuel flow required under each intended operating condition and maneuver. Compliance must be shown as follows: