

6 Fuel quantity gauges

6.1 Subject to subclause 6.1A, this clause applies to an aircraft if the aircraft's fuel quantity indicating system:

- (a) relies on float type devices to measure tank fuel levels; and
- (b) does not have a self-test function that can verify that the system is working within the manufacturer's stated tolerances.

6.1A This clause does not apply to an aircraft that is maintained in accordance with a maintenance program that adheres to MSG-2 or MSG-3 principles, as in force from time to time.

6.2 The accuracy of an aircraft-installed system for measuring fuel (the **system**) must be tested and determined.

6.3 For subclause 6.2, the determination must be made in accordance with the following test requirements:

- (a) subject to the tolerances mentioned in this subclause — the indicated quantity of fuel must equal the actual fuel in the fuel tank less the unusable quantity of fuel;
- (b) fuel quantity gauges must be checked for accuracy at all major graduations;
- (c) subject to paragraph (d) — scale errors at empty must not exceed + 0.5% or – 5% of the nominal fuel tank capacity;
- (d) for a system where it is impracticable to correct the empty reading — scale errors at empty must not exceed + 0.5% or – 8% of the nominal fuel tank capacity;
- (e) if either of the following apply:
 - (i) scale errors or the ungaugable quantity of fuel exceeds $\pm 5\%$ of the nominal fuel tank capacity; or
 - (ii) the gauge is calibrated in fractions of fuel tank capacity;
then, a placard must be displayed adjacent to the fuel quantity gauge showing:
 - (iii) the corrected readings at all major graduations; and
 - (iv) the ungaugable quantities of fuel;
- (f) fuel quantity gauges must be checked with the aircraft positioned to simulate level flight attitude;
- (g) for paragraph (f):
 - (i) electrically operated gauges must have normal system voltages applied; and
 - (ii) the fuel quantity at each calibration point must be made by:
 - (A) measurement of the fuel added to the fuel tank; or
 - (B) a dip or drip stick previously calibrated for the fuel tank;
- (h) during the test, the motion of any fuel quantity gauge must be smooth and continuous.

6.4 Determination of the accuracy of the system must be performed:

- (a) at intervals not exceeding every 48 months; and
- (b) if any system component or system interwiring is changed or modified — at the same time as the change or modification, and then after that at intervals not exceeding every 48 months.