



Fuel quantity test sets

The DE8491 fuel quantity test set can be used on any aircraft with capacitance probe technology.

The DE8491 is unique in being a microprocessor controlled fuel quantity test set. It takes measurements and calculates pass/fail limits automatically and so eliminates operator error. DE8491 was derived from the DE8490, currently in service with the UK MoD. It also allows users to download data to a PC for diagnostic purposes and trend analysis.

The DE8491 is operated via menu-driven software. It is remarkably simple to use and reduces test time by around 50% compared to manually driven testers.

Connection to the aircraft can be achieved via lead sets and a multipin connector, or by using co-axial cables.

Specifically designed as ruggedised, portable ground support equipment for use at operational level, the DE8491 fuel quantity test set is a simple, accurate and reliable maintenance tool, used by defence agencies around the world.

Benefits

- One test set for all aircraft
- Reduces the need to de-fuel the aircraft
- Takes measurements automatically
- Calculates pass/fail limits
- Results can be downloaded for trend analysis
- Greatly reduces test time
- Tests thermistor level sensors
- Measures fuel, LOx and water systems



Technical data

Software

- Factory installed to customer specification
- Additional aircraft software upgrades by request

Capacitance measurement range

- Measures AC and DC capacitance values of tank unit probes
 - AC: 0pF to 30,000pF
 - DC: 0pF to 1,500pF
- Automatic or manual mode

Accuracy

- AC
 - +/-0.1% of reading or +/-0.1pF, whichever is greater
- DC
 - +/-0.2% of reading or +/-0.2pF, whichever is greater

Capacitance simulation range

- Simulates capacitance values of the fuel system for calibration, validation and fault finding
- Tank unit simulation
 - 11pF to 10,000pF (accurate to 0.05% of measurement range of full scale)
- Compensator simulation
 - 11pF to 1000pF (accurate to 0.05% of measurement range of full scale)

Insulation resistance measurement

- Total range 0 to 20,000 Mohms (accurate to 5% of readings; 0 to 2,000 ohms and accurate to 10% of readings; 2,000 ohms to 20,000 Mohms.)

Distance to fault nominal 1pf/foot

- 0pF to 30,000pF (accurate to +/- 2% of reading, or 1.0pF, whichever is greater)

Voltage measurement range

- Voltage; 0 to 40 Volts (accurate to +/-1% of the full scale)

Specifications

Connections

- Measurement/Simulation inputs/outputs internally multiplexed to a multipin connector for aircraft-specific cables
- Measurement of insulation and bonding resistance using BNC
- Measurement of tank, or compensator using BNC
- Simulation of tank and compensator using BNC

Dimensions

- 330mm (h) x 430mm (w) x 330mm (d)
(13in [h] x 17in[w] x 13in [d])

Weight

- 14.5kgs (32.0 lbs)

Temperature range

- Operating: -40C to +55C
- Storage: -50C to +71C

Accessories

Supplied

- Power leads
- RS232 interface lead
- Operators manual
- AC/DC converter (PCP)
- Bonding lead

Power supply

- 18V to 32V DC
- Rechargeable battery pack

Calibration

- Power On Self Test (POST)
- Continuous self calibration using very accurate internal reference
- 1-year return period for full factory calibration

Qualified to

- MIL-PRF-28800F (Class 1 Equipment)
- MIL-STD-461E
- IEC 1010

Part No. DE8491

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