

FUEL QUANTITY AMPLIFIER

1. **(a) Nomenclature:** FUEL QUANTITY AMPLIFIER
(b) Part No.: 360-938-002
(c) GIG No.:1460746
2. **Year of Procurement/ Source:** Pilatus Aircraft Ltd(AHQ/3101) Year 2020
3. **Fleet/ Sub System/ Wpn System:** PC-7 MK II
4. **Technical Applicability/ Broad Purpose:** To develop in-house ROH facility in the absence of MToT.
5. **Technical Specifications (attach as separate sheets):** PILATUS PC7 MK-II BTA IPC Chapter 24-30-02 Fig 02P Item 035
6. **Publication Details (attach as separate sheets):** IPC Chapter 24-30-02 Fig 02P Item 035
7. **Photograph of Equipment**



8. **Brief Description:**The fuel quantity detector system for each wing tank has three capacitance-type tank sensors and a fuel quantity amplifier. The anodized aluminum sensors, protected by polyurethane, are installed vertically and attached by spring clips to the nose ribs 12, 16 and 19. The sensors are connected in parallel and may be considered, electrically, one unit.

The fuel system indication comprises the following:

(a) Booster pump energized advisory caption (L and R FUEL P). These will be on when the pumps are operating.

(b) Fuel low pressure caution.

(c) Fuel flow rate (totalizer) indications.

(d) Fuel quality indication and the fuel flow level caution caption (L and R FUEL L), when fuel falls below approximately 35 liters). The fuel quantity in each tank is shown as a fraction of tank capacity on a dual scale, located on the EID in each cockpit.

Location. The fuel quantity amplifier for each wing tank is installed on a panel on the rear face of the firewall.

The Amplifier has the functions:

(a) Regulation circuit to keep the system accurate to $\pm 15\%$ input fluctuation.

(b) Generation of the 5 kHz signal for the fuel quantity sensors.

(c) Process the return signal from the quantity sensors and change to a DC signal to operate the quantity indicators through the EDCU.

(d) System calibration through the adjustment of 'empty' and 'full' potentiometers. The adjustments set screws mark EMPTY and FULL are accessible through holes in the top of the casing.

9. **Classification of Equipment-LRU/ Testers/ Ground Equipment/ Role Equipment (Electrical, Electronics, Mechanical, Software based etc.): LRU**

10. **Previous Repair History: Nil**

11. **Criticality (Priority I, II or III): Priority I**

12. **Requirement: Repair or Indigenisation or both?: Repair**

13. **Quantity Required (One time/ Annual): 2**

14. **Sample Availability: yes**

15. **Scale/ Deficiency: Nil**

- 16. If deficient- How deficiency is being plugged?: N/A**
- 17. SPOC details item/ fleet wise: SPE ISC, 5BRD,AF**
- 18. Draft QTS with major testing requirement (If already designed): Under progress**
- 19. Any Other Relevant Information:**