

Honeywell SERVICE INFORMATION LETTER

Engines, Systems & Services – Phoenix, Arizona

APPLICABLE:

**MAINTENANCE
& ENGINEERING**

**FLIGHT
OPERATIONS**

FOR ALL AIRFRAME MANUFACTURERS USING
GENERAL AVIATION, GENERAL PRODUCTS
AND/OR AUXILIARY POWER UNITS,
OWNER/OPERATORS, DISTRIBUTORS, SALES
AND SERVICE ORGANIZATIONS, AND FIELD
SERVICE REPRESENTATIVES.

Applicable To: Honeywell APU RE220GX

Subject: RE220GX APU Oil Level Sensor

Purpose: To provide information concerning Oil Level Sensor readings of “amber dashes” during startup and shutdown of the APU.

Background: The Oil Level Sensor of the RE220GX APU is a capacitive device which is installed on the APU to support the oil replenishment requirement. In this role, the sensor and the supporting logic in the FADEC, perform the following:

- Provides oil quantity information which is transmitted to the aircraft continuously as long as the FADEC has power and has completed pre-start BITE.
- Transmits fault information on the electrical functionality of the sensor.
- If the sensor is evaluated as failed, oil refill is prevented from occurring.
- Prevents oil refill from occurring within fifteen (15) minutes after the APU has been shutdown.
- Transmits information to the aircraft with regards to the validity of the oil quantity information. If the oil quantity is deemed to be invalid, a “data invalid” indication is sent to the aircraft.

Discussion: Honeywell has discovered an in-compatibility between the possible values the oil quantity sensor can produce and the BITE limit set in the FADEC software. When the sensor value is outside the range specified in the FADEC software a “data invalid” message will be transmitted via ARINC. A “data invalid” indication does not prevent oil refill. A “data invalid” message will result in an “amber dashes” display. The probability of this occurring is dependent upon oil sensor hardware variation, oil type variation and the variation of the temperature of the oil.

Honeywell requests that operators be cognizant of the following information concerning Oil Lever Sensor operation:

- Display of amber dashes signifies only that the sensor value is outside the range specified in the FADEC software.
- Amber dashes display has no effect on the operability of the APU.
- Oil quantity information displayed during startup and shutdown of the APU is invalid and should be ignored. Any value displayed during this mode of operation is non-actionable.
- The APU should be shutdown and returned to near ambient conditions before interrogating oil level quantity.

Honeywell is currently investigating possible resolutions for this condition. Further information on solution determination will be communicated when it becomes available.