

Engineering Order Request

Aircraft:

Rockwell Commander 114
VH-DDY
Serial number 14280
IFR Certified

Owner: J.W.Dinsdale

Subject:

1. Panel indicator lamp Auxiliary (electric) Fuel Pump RUNNING
2. Panel indicator lamps Gear Motor UP and Gear Motor DOWN

Detail

- A. To fit indicator lamp to the aircraft panel to indicate when the auxiliary electric fuel pump is switched on and
- B. To fit two indicator lamps to the aircraft panel to indicate when the gear hydraulic motor is running the gear UP and when running the gear DOWN

Reason:

Safety issues.

Re A. These indicators have been recommended to assist the pilot to turn off the auxiliary electric fuel pump at the earliest possible time. Auxiliary fuel pump operation is recommended on take off, landing and when changing tanks. (see POH)

Re B. The aircraft has now operated for some 25 years. A common issue is the operation of the gear hydraulic system. The system is pressure operated by way of the gear hydraulic motor. There are numerous points in the system that wear during normal operation and give intermittent loss of pressure causing the gear hydraulic motor to activate momentarily in flight. Points at which this occurs is in the gear motor itself, emergency check valve, front nose hydraulics, main gear hydraulics etc. Intermittent operation of the gear hydraulic motor in flight can cause the motor to fail. The panel indicators assist the pilot to diagnose a problem in flight. (i.e. pull gear hydraulic circuit breaker)

Implementation

Fit panel indicator lamps as per drawings / sketches

Lamps are: Push to Test indicator lamp assembly type OAKGRIGSBY MS 25041-4 SC076-0516. Lens colour is Amber. Lamp type is 14v at 0.08 amps (typical GE 330)

Wire type is: Teflon to M22759/16

Lamp connectors are solder type and are to be sleeved

Panel Location

The auxiliary fuel pump indicator is to be located as shown or similar and labeled

FUEL PUMP

The gear hydraulic motor indicators are to be located as shown and are to be labeled

UP

GEAR

DOWN

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