

A4.0 Appendix

CGR-30P

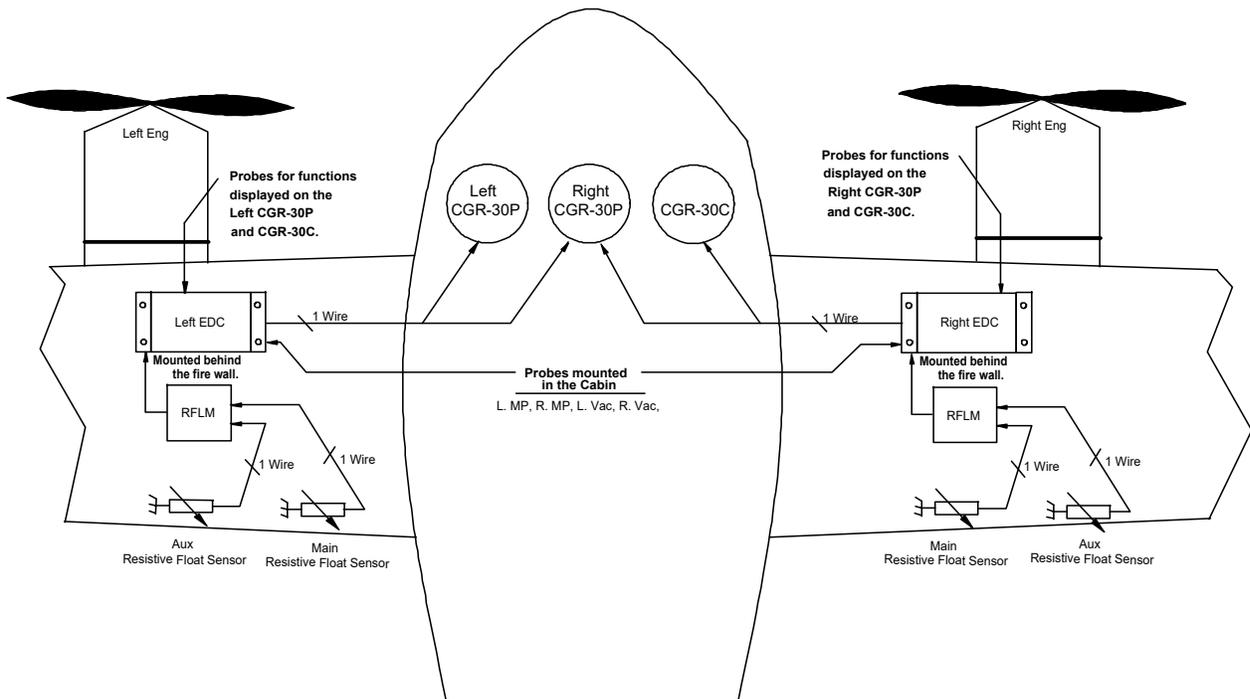
Twin Engine Installation Instructions

1.0 Installation Overview:

The twin engine system consists of two CGR-30Ps, one for the right engine and one for the left engine. The diagram below also shows the CGR-30C. The CGR-30C is not required to be installed, but considering the number of functions to be monitored in a twin engine system and the limited number of functions each CGR-30P is capable of displaying, the CGR-30C will most likely be ordered with each twin engine package.

Two EDCs will also be provided. The EDCs convert the analog signals from the probes and transducers to a single wire digital data string sent to the CGR-30P head. This keeps the wire count through the wing root to a minimum. One EDC will be mounted just behind the firewall on both the left and right engines. This allows the significant number of probe wires and cables to be as short as possible. The engine EDCs will monitor such functions as EGTs, CHTs, RPM, Fuel Flow, Oil P, Oil T, etc. If the CGR-30Ps are displaying their maximum number of functions, any additional functions can be displayed on the CGR-30C.

The cabin provides the pressure lines for manifold pressure and vacuum. Mount the MP and Vac pressure transducers in the cabin and run the transducer signal wires to the appropriate EDCs. This allows some of the more sensitive transducers to be mounted in the cabin environment. Also, in some cases other function can more easily be monitored from the cabin.



1.1 Installation Instructions:

The installer should start the installation by reviewing the EDC Wiring Work Sheets. There are three sets of worksheets, one set for each EDC and one set for the CGR-30. Each EDC set will have three sheets, one for each of the 37-pin D-Sub connectors on the EDC (Top, Middle and Bottom). The work sheets are packaged with each of the three EDC wire harnesses. The work sheets provide a list of the probes and transducers included in the kit. Also, it provides the hookup data.

Install the system by performing all the steps at the beginning of this manual. Additional information for twin engine installations is provided below:

- A. The Left and Right EDCs will be installed on the back side of the engine's firewall or in the wing.
Note: The EDCs should NOT be installed on the hot side of the engine compartment.**
- B. Install the two CGR-30P displays in the instrument panel on the same horizontal or vertical plane and within 2 inches of each other.**
- C. Install the Caution and Warning Mounting Plates as follows:
 - 1) If the two CGR-30Ps are mounted side-by-side, install the Mounting Plates horizontally, side-by-side with the left Plate annunciating the left instrument or mount the Plates vertically, top-to-bottom with the top Plate annunciating the left instrument.**
 - 2) If the two CGR-30Ps are mounted top-to-bottom, install the Mounting Plates vertically, top-to-bottom with the top Plate annunciating the top instrument or mount the Plates horizontally, side-by-side with the left Plate annunciating the top instrument.****
- D. The power lead for the Left CGR-30P, Left EDC and Left Caution and Warning Lights should be on one 5 to 10-amp breaker, the power lead for the Right CGR-30P, Right EDC and Right Caution and Warning Lights should be on another 5 to 10-amp breaker and the power lead for the CGR-30C, should be on yet another 5 to 10-amp breaker. These breakers should be on the Master Bus.**