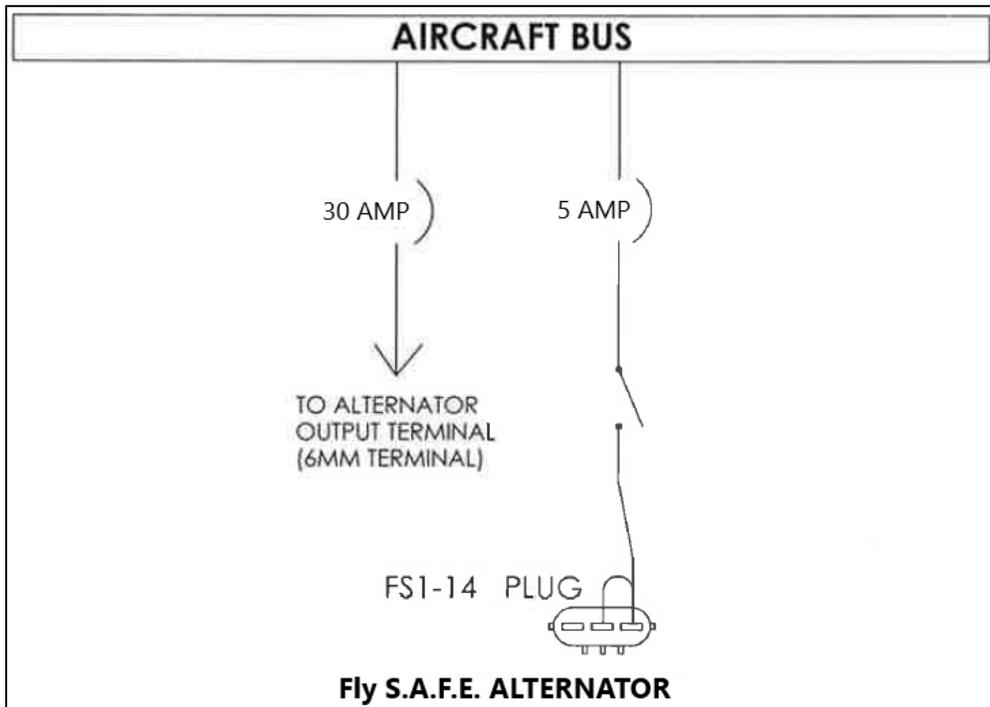


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	<b>TITLE</b> FS1-14 INSTALLATION INSTRUCTIONS		

2900 Selma Hwy  
Montgomery, AL 36108

**READ AND THOROUGHLY UNDERSTAND ALL OF THE INSTALLATION INSTRUCTIONS BEFORE BEGINNING INSTALLATION OF THIS KIT.**

1. Clear and clean the surface of the engine vacuum pad base where the alternator is to be mounted. Retain the 4 sets of washers and nuts.
2. Mount the alternator with attached drive coupling and supplied gasket # MS9134-01 to the engine.
3. Ensure the alternator drive coupling spline meshes with the AND 20000 drive spline without forcing or binding.
4. Ensure the alternator base mounts flush to the engine mount area.
5. Install 4 flat washers, the new lock washers and the nuts that were removed in step 1.
6. Hand tighten nuts evenly and check that the alternator fits flush against the pad without any force or binding.
7. Tighten the mounting nuts to the torque specified by the engine manufacturer.
8. Refer to the Wiring Diagram below and install output wire and torque to 50 IN LBS. Ensure that the output wire is of sufficient size to carry more than 30 amps and that it is connected to the aircraft bus through a 30-amp circuit protection device. Refer to AC43.13-1b for acceptable methods, techniques and practices if needed.
9. Wire the Enable/Field plug as shown below. The Enable wire **MUST** be wired to a 5-amp circuit breaker.
10. Check the security of all wiring and ensure that there is no interference with any control movement.
11. Start the engine and check for any oil leaks or abnormal sounds. Stop the engine immediately if any are noticed and correct the condition before proceeding.
12. With engine running at 1700 rpm, disable the primary alternator. With the use of a calibrated volt meter connected to the aircraft bus, check for bus voltage to be  $13.6 \pm 0.3$  volts. Turn on a landing light and verify that the voltage remains  $13.6 \pm 0.3$  volts.
13. Complete: Log Book Entries. Alternator weight = 6.0 LBS.



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## Maintenance Instructions

### Annual / 100 Hour Inspection:

1. Visually inspect for damage & clean the surface.
2. Check regulated voltage is within limits, 13.6±.3 volts.

### 500 Hour Intervals:

1. Repeat: Annual / 100 Hour Inspection.
2. Remove Field Brush assembly and inspect brushes for excess wear. Replace the brush assembly if brushes extend less than .250" from the edge of the brush holder.
3. Replace the shear coupling.

## Operating Instructions

The Fly S.A.F.E. system is fully automatic in operation and capable of delivering 30-amps at cruise engine RPM.

### Basics:

1. A fully charged battery reads approximately 12.8 volts.
2. The primary alternator charges at approximately 14.2 volts.
3. The Fly Safe alternator charges at approximately 13.6 volts.
4. In normal operation, the primary alternator carries the aircraft electrical load, and the Fly Safe is powered but not in use.

When the primary alternator is not powering the bus, the voltage drops to 13.6 volts, and the Fly Safe automatically takes over the aircraft electrical load.

### Cockpit Indications:

1. Primary alternator inoperative light (if installed) illuminated.
2. Bus voltage indicates 13.6 volts.
3. Ammeter should indicate no discharge. Discharge indicates that a load reduction is required or the Fly Safe is inoperative.
4. If bus voltage reads 12.8 volts or less, neither alternator is operating; land as soon as practical.

### Pilot Actions:

1. Ensure electrical loads do not exceed 30-amps at cruise speed.
2. Further reduce electrical loads for reduced power operations: descent, holding, approach, and landing (2000 RPM, 15A max load).
3. Monitor electrical loads and bus voltage.

### NATURE OF ISSUE OR CHANGE

Table 1: Record of Revisions

Revision	Approved	Change Description	Date
B	ECO-131157	1) UPDATE TEMPLATE; 2) REVISE ALL SECTIONS PER REDLINE	03/08/21

Legend: Ø Revised ⊕ Added ⊗ Deleted this revision