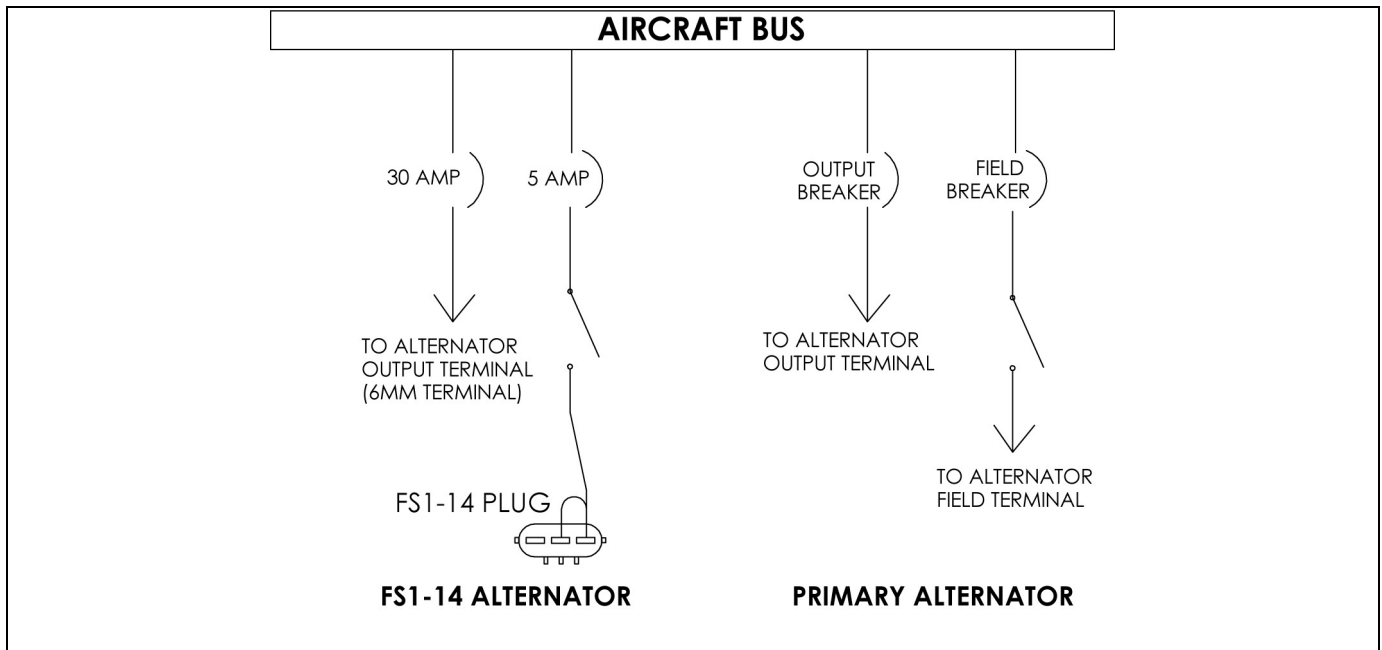


# FS1-14 INSTALLATION INSTRUCTIONS

## 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 FS1-14 is to be mounted. Retain the 4 sets of washers and nuts.
2. Mount the FS1-14 with attached gear assembly and supplied gasket # MS9134-01 to the engine.
3. Ensure that alternator drive gear meshes with the AND 20000 gear without forcing or binding.
4. Ensure the FS1-14 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 and install output (B+) wire and torque to 50 inch Lbs. **Ensure that the output wire is of sufficient size to carry more than 30-Amps and that it is connected to the aircraft buss through a 30-Amp circuit breaker. Refer to AC43.13-1B for acceptable methods, techniques and practices if needed.**
9. Wire the Enable/ Field plug as shown on the installation drawing. **THE ENABLE WIRE MUST BE WIRED TO A 5-AMP MAX 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 turn the primary alternator off. With the use of a calibrated Volt Meter connected to the aircraft bus, check for bus voltage of 13.6 +/- .3 volts, which should be coming from the FS14-EI30. Turn on Landing Light and observe that the voltage remains at 13.6 +/- .3 volts.
13. Complete: Log Book Entries. FS1-14 Weight = 6.0 LBS.



# Operating Instructions and Emergency Procedures

flyS.A.F.E (FS1-14)

The flyS.A.F.E. standby alternator is a high efficiency alternator with an extremely simple installation that requires no immediate action on the pilot's part in the event of a primary alternator failure.

Basics:

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

When the primary alternator fails and the bus voltage drops to 13.6 volts, flyS.A.F.E. automatically takes over all aircraft electrical requirements.

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 flyS.A.F.E. is also 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 30A at cruise rpm
2. Further reduce electrical loads for reduced power operations. Descent, holding, approach and landing, etc. (2000 rpm, 15A max load)
3. Monitor electrical loads and bus voltage

## Installation Instructions for Continued Airworthiness

### Annual Inspections:

1. Visually inspect for damage & clean the surface.
2. Check regulated voltage is within limits 13.6 +/- .3 Volts.

### 1000-Hour Intervals:

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