

ELECTRICAL POWER - GENERAL

1. Scope

- A. This chapter gives information about the electrical units and components which generate, control, and supply electrical power for the airplane systems. This includes such items as generators, relays, batteries, and power outlets.
- B. The system is equipped with an external power receptacle for ground operation of the electrical equipment and battery conservation when starting the engine.

2. Tools, Equipment and Materials

NOTE: Equivalent substitutes may be used for the following items:

NAME	NUMBER	MANUFACTURER	USE
Digital Voltmeter	Model 87	John Fluke Mfg. Co. 6920 Seaway Blvd. Everett, WA 98206	General electrical use.
Variable Power Supply		Available Commercially	Supply external power.
GCU Test Box	9870008-1	Fabricate Locally	Used during electrical power system functional check.
Alignment Screwdriver	5000 GC	GC Electronics 1801 Morgan Street Rockford, IL 61102	Used to adjust generator control unit.
Battery Charger	RF80H	Christie Electric Corp. 20665 Manhattan Place Torrance, CA 90501	Charge battery.
Hydrometer (1.100 to 1.310 specific gravity range)		Available Commercially	Test specific gravity of electrolyte.
Small syringe		Available Commercially	Service battery.
Nonmetallic Brush (Acid Resistant)		Available Commercially	Cleaning battery cells.
GO/NO-GO Gage	TBP 2132	Teledyne Battery Products 840 West Brockton Redlands, CA 92373	Used to test connector.
Adhesive	41-30	Mid-West Industrial Chemical Co. 1509 Sublette St. Louis, MO 63110	Used to secure battery vent drain tubes to battery case elbows.
Rubber Gloves, Rubber Apron, and Protective Goggles		Available Commercially	Clean battery.
Cleaning Cloth		Available Commercially	Clean battery.
Battery Charger/Analyzer	PCA-131-50/60	Penn Central Corp. Marathon Battery Co. 8301 Imperial Drive Waco, TX 76714	Charge ni-cad battery.
Torque Wrench 0 to 150 inch-pounds		Available Commercially	Torque components.
Fill Cap Vent Plug Wrench (Nylon)	16515	Marathon Battery Co.	Servicing battery.

S1694-9-54.00 Inch Tubing	FIT-105-3/4	Alpha Wire Corp. 711 Lidgerwood Ave. Elizabeth, NJ 07207	Protective wire sheath used on GCU Test Box.
Feed-Thru	Lapp-SL13	Lapp Inc. 30 Plymouth Road Fairfield, NJ 07006	Wire feed-thru used on GCU test box.
Pin Jack	105-0803-001	E.F. Johnson Company 299 10th Ave. Southwest Waseca, MN 56093	Used in GCU test box.
Switch	30-1	Grayhill Inc. P.O. Box 373 La Grange, IL 60525	Used in GCU test box.
S392-3 Switch	8824K8	Cutler-Hammer Inc. Aerospace Switch Plant Manatee, FL	Used in GCU test box.
Placard Box	9870008-4 9870008-2	Cessna Aircraft Company Newark Electronics 500 N. Pulaski Road Chicago, IL 60624	Placard used for GCU test box. GCU test box shell.
Lamp Holder	920-401X-330RN	Newark Electronics	Lamp holder used in GCU test box.
Lamp	327	Newark Electronics	Lamp used in GCU test box.
Sealer Ablative RTV	Q3-6077 Substitute material PN: U000117	Dow Corning 3901 S Saginaw Rd. P. O. Box 997 Midland, MI 48640	To seal standby electrical system relay cover.
Anti-Static Adjustment Tool	758ie8608	Techni-Tool 1547 N. Trooper Rd. P. O. Box 1117 Worcester, PA 19490-1117	To adjust the Alternator Control Unit output voltage of the standby electrical system.
Power Outlet Tester	VEC008 LCD Voltage Meter (Power Outlet Tester) or a Digital Multi-Meter	Direct Depot 109 Wyndham Way Wilmington, NC 28411	To test for the correct voltage of the 12VDC power outlet system.

3. Definition

- A. The chapter is divided into sections to aid maintenance personnel in locating information. Consulting the Table of Contents will further assist in locating a particular subject. Brief definitions of the sections incorporated in this chapter are as follows:
- (1) The section on DC generation covers that portion of the system used to generate, regulate, control and indicate DC electrical power. Included are such items as the DC generator system, battery system and DC indicating systems.
 - (2) The section on external power covers that portion of the system which connects external electrical power to the airplane electrical system.
 - (3) The section on load distribution covers that portion of the system which provides connection of DC power to the using systems.