



INSTALLATION

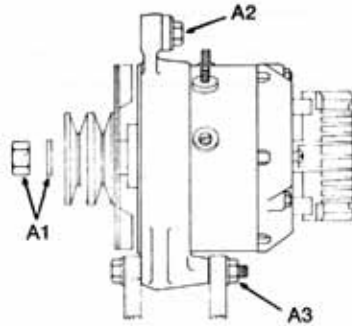


Figure A

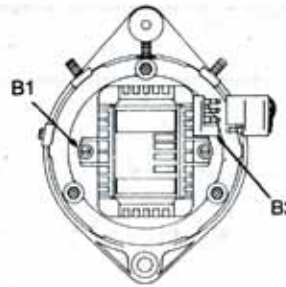


Figure B

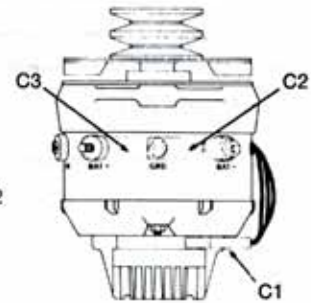


Figure C

Alternators intended for marine use must be installed in conformance with TITLE 33 CFR PART 183 SUBPART I - ELECTRICAL SYSTEMS.

1. MOUNT FAN AND PULLEY (Figure A).

Torque to 50 ft. lbs. using locknut and hardened washer (A1) supplied on alternator shaft.

2. MOUNT AND CONNECT REGULATOR (Figures B and C).

- Position regulator plug and secure regulator with screws (B1) provided in regulator package. Regulator plug must be securely held in place by regulator (B2).
- Connect alternator plug to regulator plug (C1).

3. POSITION GROUND LINK (Figure C).

Units are shipped with the ground link installed for negative ground as shown (C2). Reverse connections for positive ground as indicated by dotted line (C3).

4. INSTALL ALTERNATOR (Figure A).

- Attach belt adjusting bracket with bolt (A2) included in parts package.
- Insert mounting bolt and hand tighten nut (A3). Bolt should be new and SAE Grade 5 or better. Nut should be self locking or coated with "Loctite Lock and Seal" or equivalent.

5. SET BELT TENSION (Figure A).

- On engines where the belt drives only the alternator, use a belt tension gauge and set tension at 40 to 50 lbs. New belts should be set at 75 lbs. On engines where the belt also drives other accessories, consult manufacturer's specifications. If belt tension gauge is not available, set tension so that the fan cannot be turned by hand. **CAUTION: DO NOT SET TENSION TOO HIGH AS THIS WILL CAUSE PREMATURE BEARING FAILURE.**
- Tighten bolt (A2) on belt adjusting bracket. Torque to 17 ft. lbs.
- Tighten mounting bolt (A3). Torque to 35 ft. lbs.

WIRING

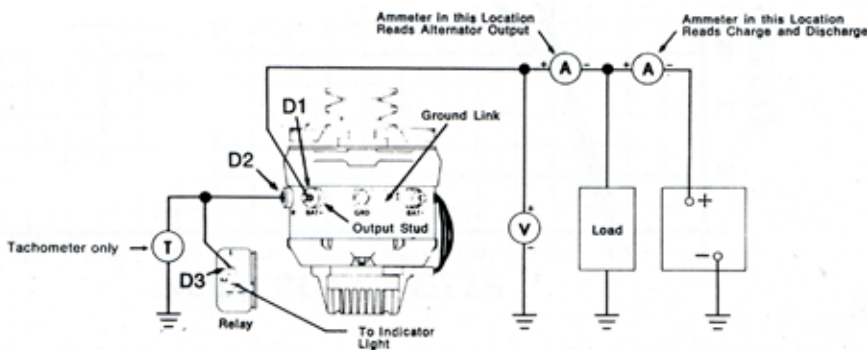


Figure D

CAUTION: Do not ground "REL" or "R" terminal to frame.

CAUTION: Connecting the alternator improperly can cause serious damage.

- For negative ground systems, connect existing battery wire to "BAT+" (D1) on alternator. For positive ground systems, connect battery wire to "BAT-" on alternator. Be sure ground link is positioned correctly (C2 or C3).
- On negative ground applications where a warning light is used, connect wire from "R" (D2) terminal on the alternator to the A2-250 relay (D3).

NOTE: For isolated ground applications, discard the ground link. Attach both the positive and negative leads directly to the alternator.

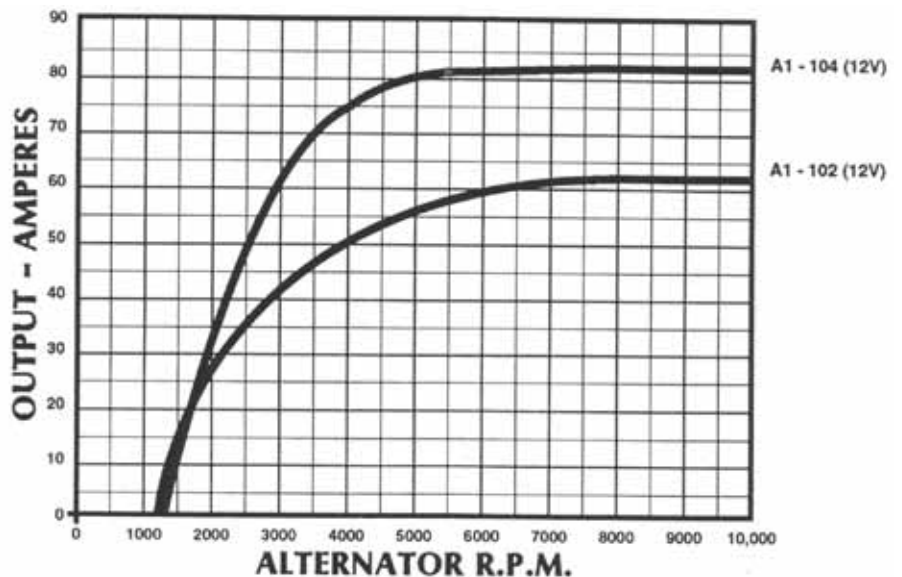
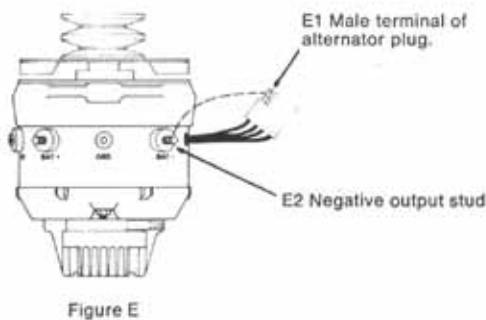
SYSTEM SPECIFICATIONS									
BRUSHLESS ALTERNATOR	EXTERNAL REGULATOR	MINIMUM WIRE SIZE (AWG)	VOLTS	AMPS	GROUND	MAXIMUM RPM	REGULATOR		WEIGHT (POUNDS)
							STEPS	VOLTAGE SETTINGS	
A1-102	A2-102	6	12	60	N OR P	10,000	2	13.8 / 14.5	18
A1-104	A2-102	4	12	80	N OR P	10,000	2	13.8 / 14.5	18

TROUBLE SHOOTING

If, after installation, the system does not meet specifications:

1. Review installation instructions step by step.
2. Check all wiring for clean and secure connections.
3. Excite field coil to re-establish magnetic field in rotor core. See instructions below for details.
4. If system still does not operate properly, connect ammeter and voltmeter to read alternator output. Set engine R.P.M. at 1500 to 2000. Read amps and voltage and compare to chart.

AMPS	VOLTS	
LOW OR 0	NORMAL 13.0 to 14.8	Charging system operating properly.
LOW OR 0	LOW Less than 13.0	1. Check belt tension. 2. Bypass regulator. See figure C below.
HIGH	HIGH More than 14.8	1. Check regulator connections and grounds. 2. If voltage is still high, replace regulator.
HIGH	LOW Less than 13.0	Discharged or defective battery. Charge or replace battery.



Re-establishing magnetic field.

There are several conditions which may cause the alternator to lose its magnetic field. To re-establish the magnetic field, perform the following procedure:

With engine running, disconnect plug between alternator and regulator and momentarily touch the male terminal (E1) from the alternator plug to the negative output stud (E2) on the alternator (Figure E). **Caution: Touching regulator terminal to the negative output stud must be rapid to avoid possible alternator damage.**

If no output is obtained - See Service Manual for specific alternator test.

FAN AND PULLEY INFORMATION

Use Fan & Pulley Assembly: A3-300, A3-301, A3-302, A3-303; or, Fan A3-101 with A3-403 Bushing and A3-202 or A3-203 Pulley. Any keyed alternator pulley with appropriate dimensions can be used with A3-403 Bushing and A3-101 Fan.