

Figure 6. 22 SI Electrical Terminals

External connections to the 22 SI Alternator are made to terminals as shown in Figure 6. The "BAT" terminal is a 5/16"-18 thread. Connections to terminals "1" and "2" on 3 wire systems are made by installing a special Packard connector with two blade terminal receptacles and latch feature, available in wiring package 1870921.

Other connections on the 22 SI series, include "R" (relay) and "I" (indicator light) terminals, and a threaded ground "GRD" hole connection in the alternator SRE housing.

A Relay terminal is located counterclockwise from the "BAT" terminal where an "R" is molded into the casting. This terminal may be used to operate a charge indicator, ADLO system, tachometer, or similar device by providing voltage pulses at about half of system voltage and at a frequency of 6 times the alternator rpm.

The Indicator Light terminal is located where there is an "I" molded into the casting, clockwise from the "BAT" terminal. The "I" terminal is connected internally to the field circuit. If an indicator light is connected in series with this terminal, the light will be on whenever there is a voltage difference between the "positive" side of the field

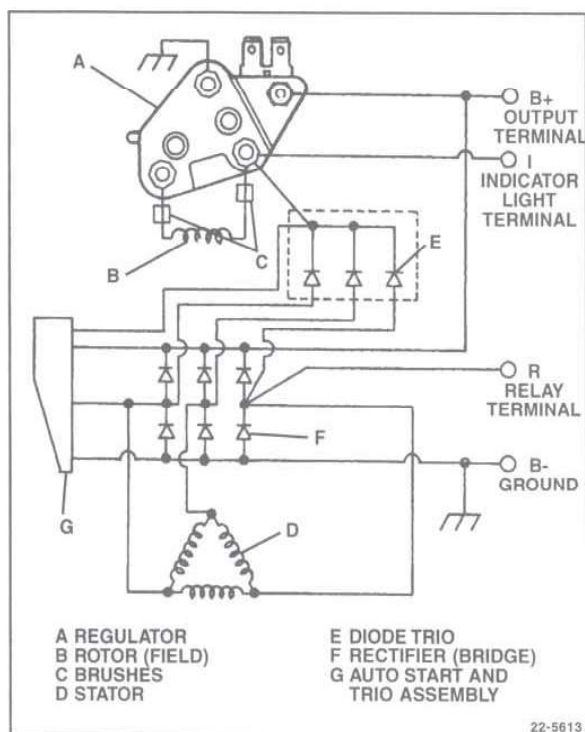


Figure 7. One-Wire Alternator Schematic

circuit and the system voltage at other side of the indicator light. During normal alternator operation, the light will be off since the diode trio output voltage equals the system voltage.

The "R" terminal is available in either a 10-24 threaded or pin type.

A 1/4"-20 threaded hole in the slip ring end (SRE) housing is provided to connect a ground ("GRD") lead if used; otherwise, the ground path is through the mounting hardware and brackets to the engine.

Some applications use a debris shield on the outside of the SRE housing of the alternator. Such shields are added by the engine manufacturer to reduce the amount of airborne debris that enters the alternator in severe environments. Debris shields should be cleaned periodically to ensure adequate air flow to cool the alternator.