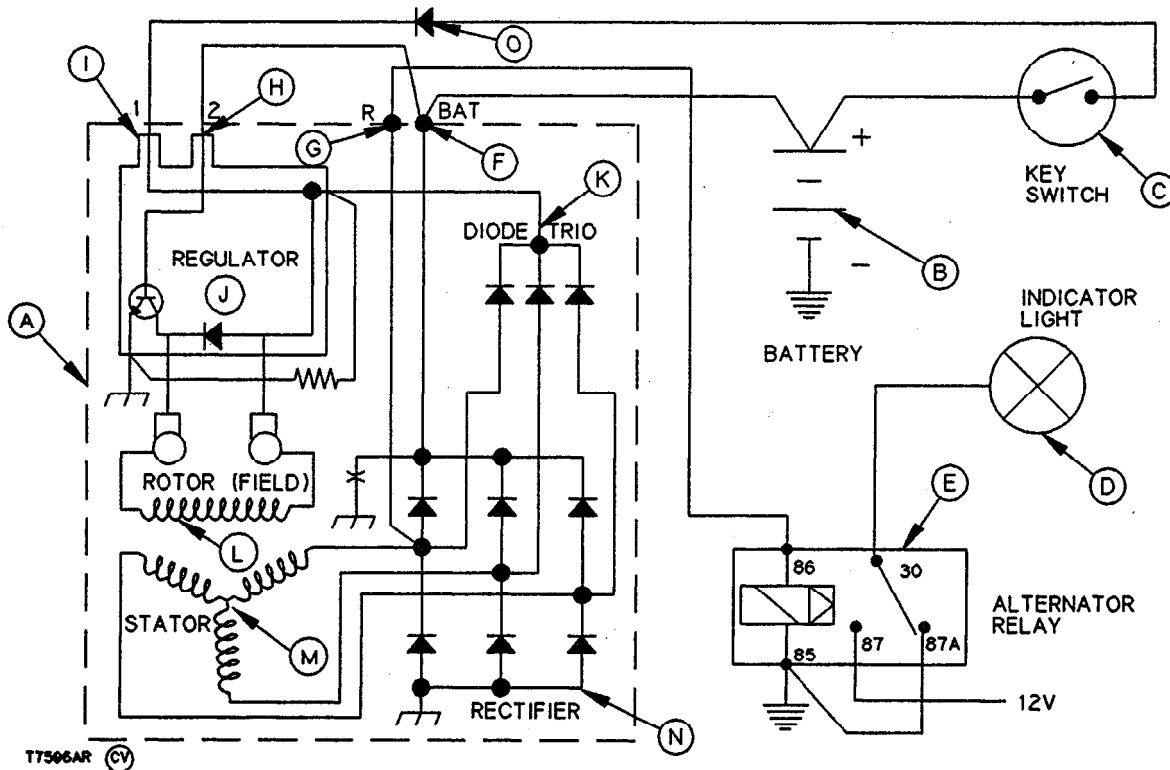


ALTERNATOR OPERATION—78 AMP DELCO REMY (SERIAL NO. 766922—)



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|-------------------|--------------------|-----------------|-------------|
| A—Alternator | E—Alternator Relay | I—Terminal 1 | M—Stator |
| B—Battery | F—BAT terminal | J—Regulator | N—Rectifier |
| C—Key Switch | G—R Terminal | K—Diode Trio | O—Diode |
| D—Indicator Light | H—Terminal 2 | L—Rotor (Field) | |

The alternator is a 12 volt system. The operating principles are as follows:

When key switch (C) is turned ON, voltage is applied to terminal 1 (I) of the alternator. The regulator (J) switches the rotor (L) ON or OFF.

Once the engine reaches alternator cut in RPM, alternating output current is produced in the stator (M) windings. This alternating current is changed to direct current by the rectifier (N) diodes. Voltage is available at BAT (F) terminal. The current is used to charge the battery (B) and supply electrical current to the machine electrical system. Once alternator is charging, field current is supplied by the diode trio. Diode (O) protects the diode trio from external loads.

The regulator (J) acts like a switch for the rotor (L). A wire runs from BAT terminal (F) to terminal 2 (H). If

the regulator (J) senses a low battery voltage, rotor is switched on. Field current increases and alternator output increases.

When high battery voltage is sensed by the regulator the rotor is switched off, reducing current output from stator. This on and off occurs many times a second. The voltage regulator is temperature compensated to provide a slightly higher voltage at low temperature to charge the battery.

When the alternator is operating, the R terminal voltage is approximately 7.8 volts AC. This voltage is supplied to the alternator relay, energizing the relay and removing the ground for the alternator indicator light (D) in the display module, turning off the alternator indicator light.

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