

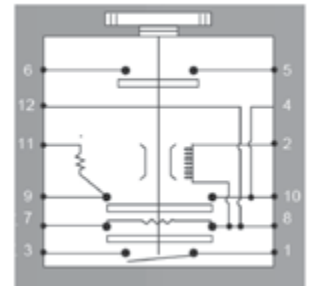
Alternators with Field Isolation

Vehicles carrying Dangerous or Flammable goods are required to be able to completely isolate the electrical system on the vehicle in the event of an accident or any other incident that could lead to a dangerous situation.

Disconnecting the battery will still allow the vehicle to keep running in some circumstances if the Alternator continues to charge. To prevent this the field circuit of the Alternator is interrupted through terminals that are accessible externally on the Alternator to allow the field circuit to be open circuited through a manual or automatic switch such as contacts 3 and 1 in LV5010 on the right. This effectively shuts the Alternator down.

The Field Isolation Circuit also acts to prevent damage to the Alternator if the Battery switch is open circuited, effectively causing the Alternator to keep charging in an "Open Circuit" mode i.e. no connection to the battery. This would cause a massive increase in voltage at the alternator B+ output terminal which in turn will damage the diodes and other components in the alternator. Battery switches that are used in this situation must have a secondary set of lighter duty contacts that close slightly after the main contacts and open slightly before ensuring that the alternator is not charging when disconnected from the battery. E61-75903 is a good example below.

In the picture below you will notice the 2 studs that come out of the Prestolite type Regulator, the Alternator field circuit must be completed through these 2 terminals for the Alternator to operate.



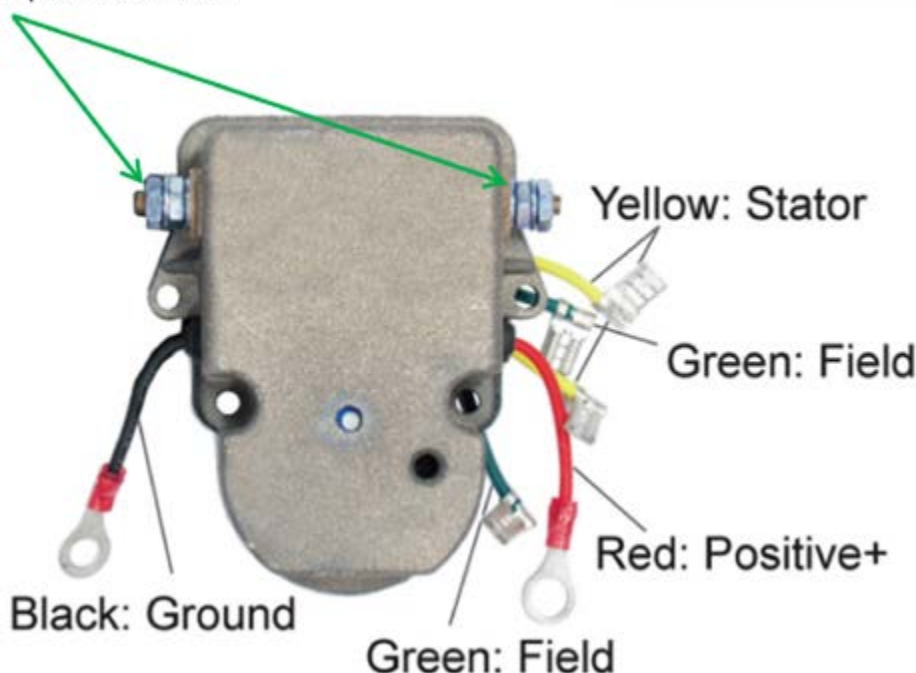
LV5010

Field interruption Terminals



E61-75903

Field interruption Terminals



Alternators with Field Isolation 2

JAS have rationalised our Heavy Duty Prestolite Commercial Alternator Range to make the following change. All Prestolite Alternators, **ANP2289GQ**, **ANP2287GQ** and **APN2310GQ** are now Field Isolating type units.

These Alternators all have field Isolation type regulators fitted, (see Tech Tip 71 for an explanation of field Isolation). All Alternators are supplied with the Field Isolation circuit bypassed and to be used as field isolated this bypass wire simply needs to be removed and the field isolation circuit completed through an external isolating circuit. See images attached.

