

Source: Leece-Neville Heavy Duty Systems Division - Arcade, NY USA
 Date: July 7, 2017
 Bulletin No: TSB-1057
 Models: BLD2130GH, BLD2333GH, BLP2131GH, BLP2329GH, BLP2333GH,
 BLP2334GH, BLP2362GH, LBP2243GH
 Subject: Universal Alternator Wiring Instructions

On most heavy trucks you will find one, two or three wires going to the alternator. Below we will explain how to identify these wires and connect the alternator to your vehicle.

One wire: Alternators that have one positive wire connected to the alternator has the ground connected to it's case. Our alternators have an isolated ground terminal so a ground wire will need to be added from alternator ground to battery ground. A jumper wire is supplied to connect the alternator (S) terminal to the (B+) terminal. Refer to Fig 1 for proper wiring. If vehicle has an ignition wire, it does not need to be connected to the alternator. Insulate and secure to prevent shorting.

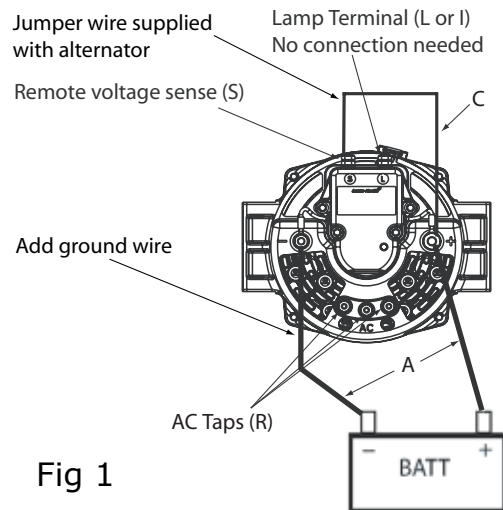


Fig 1

Two wire: Alternators that have two wires connected to them are self excite. The two wires connected to the alternators are the positive and negative cables. When connecting our alternators use Fig 2 to properly connect these alternators. A jumper wire is supplied to connect the alternator (S) terminal to the (B+) terminal.

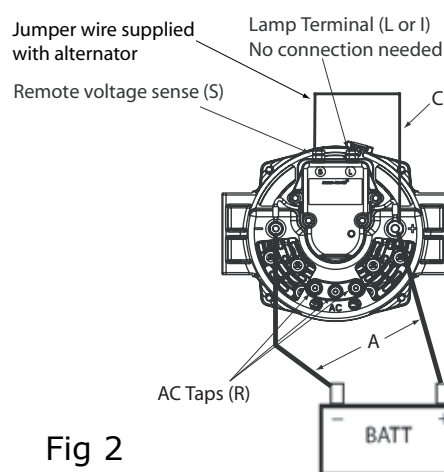


Fig 2

Important: The information contained in this bulletin is intended for use by trained, professional technicians who have the proper tools, equipment, and training to perform the required maintenance described above. This information is NOT intended for 'do-it-yourselfers', and you should not assume that this information applies to your equipment. If you have any questions regarding this information please visit our website at www.prestolite.com, or contact our technical service department at:

Date: July 7, 2017
Bulletin No: TSB-1057

Three wire: Alternators that have three wires connected to them could be ignition excite or self excite with remote voltage sense or lamp.

To determine which type of alternator you have follow the steps below.

Ignition excite alternators w/o lamp: The three wires are the positive, negative cables and a third smaller gauge wire connected to the alternator IGN or (I) terminal. Voltage will be present to the ignition terminal only when the vehicle key is in the run position. If your vehicle has an ignition wire, do not connect it to the alternator. Insulate and secure to prevent shorting. All that is needed is the main positive, negative cables and jumper wire connected to the alternator (S) and B+ terminals in order for it to operate. (Fig 2)

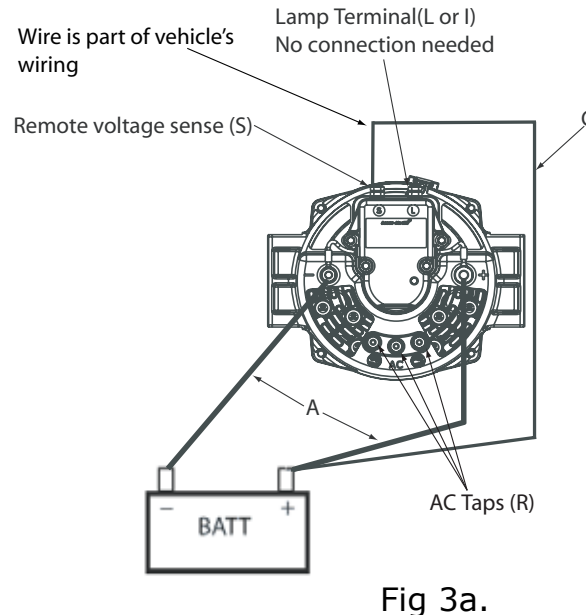
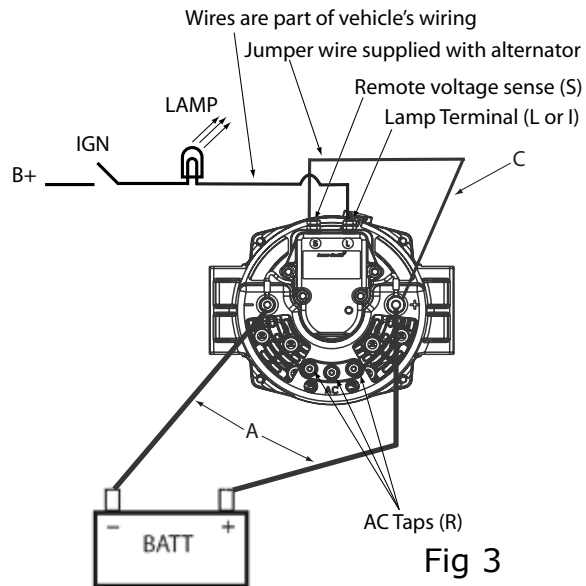
Note: Verify that vehicle does not have an indicator lamp on the dash. If vehicle has an indicator lamp refer to Self/ Ignition excite w lamp procedure.

Self/ Ignition excite w lamp: The three wires are the positive, negative cables and a third smaller gauge wire connected to the alternator IGN or (I) terminal. Verify that vehicle has a lamp on the dash before proceeding. Wire alternator per (Fig 3)

Note: This wiring is most commonly found on Volvo vehicles.

Remote voltage sense alternators: The three wires connected to the alternator are the positive, negative cables and a third smaller gauge wire connected to the alternator remote sense or (S) terminal. To determine if your vehicle has remote sense, voltage will always be present on this terminal at all times. If your vehicle falls into this classification please wire your alternator per (Fig. 3a).

Note: This wiring is most commonly found on Freightliner vehicles.



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Note for all wiring configurations: Alternator lamp terminals can be called (L) or (I).

It is very important to make sure a warning lamp is present before connecting to the alternators lamp terminal. If a lamp is not present in the circuit and B+ is connected directly to the alternators (L) terminal damage to the regulator will be the result.

Wire identification tips:

Remote voltage sense (S): Small gauge wire 16AWG or larger that has voltage present at all times. Usually is connected directly to battery positive.

Ignition excite (I): Small gauge wire 16AWG or larger that has voltage present only when the ignition switch is in the run mode. Check vehicle dash for an alternator warning lamp. If warning lamp is present then this wire can be connected to the alternators lamp terminal. If not, then insulate, secure and do not connect to the alternator.

Positive cable: Large gauge wire 4AWG or larger that has voltage present at all times. Usually red in color.

Negative cable: Large gauge wire 4AWG or larger connected to battery or chassis ground.

AC or Relay (R) cable: If none of the above test help identify a wire then it could get connected to the alternators AC terminal. Usually this wire operates a relay or tachometer and should be verified before being connected to the alternator.

To determine the proper wire sizes to use on your application please refer to TSB-1001

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