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LAND ROVER PARTS

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# Fitting Instructions for Series IIA Alternator Conversion

Part Nr. RNK951

Fits:

Series IIA

## Kit contents includes

- Alternator pulley
- Alternator mounting bracket
- Alternator adjusting bracket
- Alternator plug
- All necessary hardware

Does not include Alternator fan - NLA

Does not include Alternator

## Suggested Tools:

- 1/2" Wrench
- 1/2" Socket
- 7/8" Socket
- 1 11/16" Socket
- Pnuematic Impact Wrench  
or Adjustable Wrench to fit
- Bracket Bar
- Pry Bar
- Soldering Iron, solder
- Wire Stripper
- Anti-Seize

Optional

- Heat Shrink  
Tubing

READ ALL INSTRUCTIONS COMPLETELY BEFORE BEGINNING!



Various Sockets, Torque Wrench,  
Extension, Wrench



Pneumatic  
Impact  
Wrench



Wire Stripper



Soldering Iron, Solder & Flux



Heat Shrink Tubing



Safety Glasses



Breaker Bar

Large Pry Bar

## Fitting Instructions for Series IIA Alternator Conversion

### Directions:

**Step 1.** Remove the bonnet. This always makes working in the engine compartment much less claustrophobic. Removing the spare tire and disconnecting the bonnet prop rod will allow the bonnet to fold all the way back to the windscreen and save pulling it off of its hinges.

**Step 2. DISCONNECT THE BATTERY** whenever you are working on an electrical system, to avoid accidental shorting and/or chance of fire.

**Step 3.** Now you are ready to remove the generator. Unplug the wire leads from the rear of the unit and tuck them out of the way; you will need to use them later. Using a 1/2" wrench, remove the top bolt to the adjusting arm. Tip the generator towards the engine and remove front pivot bolt and rear stud. The rear stud runs all the way through the 2 1/2" casting on the side of the engine block and may require some penetrating spray or some heat to persuade it.

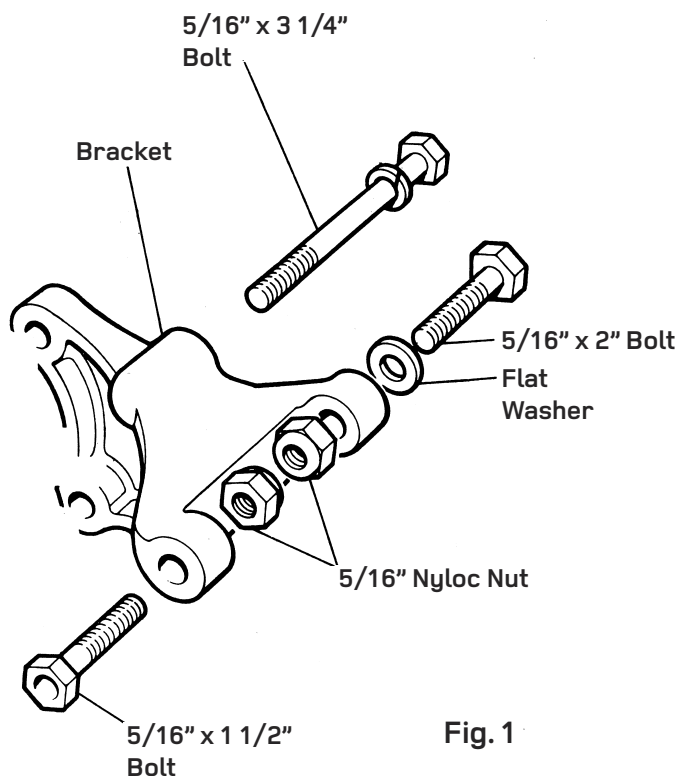
**Step 4.** Once the generator is removed, the generator brackets need to be removed. You will need to slide the front pulley forward to allow removal of the bolts holding the bracket. When sliding the front pulley on the crank, it is important that the keyway is at the top of the crank so as not to lose it into the engine. To insure this, bring the engine around so #1 cylinder is at TDC. Bend the locker back on the crank pulley bolt (starting dog) and remove bolt.\* Carefully slide crank pulley forward. (vehicles with military style double pulleys will need to undo the shroud on the radiator to allow enough room to slide the pulley forward.) \*Removal of the front pulley nut is best done with a pneumatic impact, with a 1 11/16" socket. If this is unavailable, you can use a pair of channel lock pliers (or thin pipe wrench) on the back or the front pulley, and a large adjustable wrench on the pulley nut.

**Step 5.** Remove the bolts securing the generator bracket to the block. There are four of them. Remove the two-piece bracket. Remove the nut securing adjustment bracket and remove the bracket. Fit the alternator adjuster bracket to the upper front cover bolt that was securing the generator bracket. This is below the bolt that was used for the generator adjustment bracket. Replace lower bolt (18 ft/lbs torque). Slide front pulley back into place and tighten pulley bolt (150 ft/lbs torque) and secure lock tab.

**Step 6.** Now the alternator bracket is ready to install. Put grease or "never seize" on the longest of the 3 bolts,

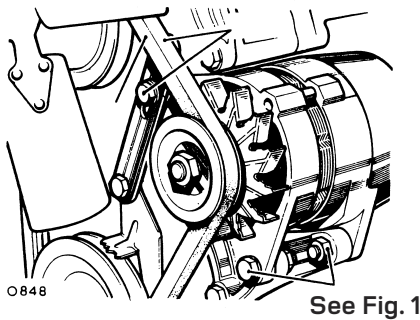
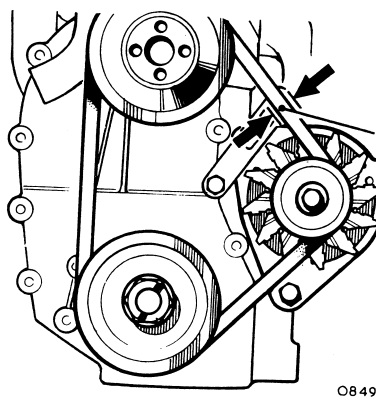
which come with the kit and slide it through the hole in the block that the generator pivot stud was taken out of. Place the alternator bracket in place and finger tighten the bolt through the block into the back of the bracket. Refit bolts used to secure generator bracket through front of alternator bracket and into block. Tighten all 3 bolts (18 ft/lbs).

**Step 7.** Fit the alternator fan, pulley and locker to the alternator shaft and secure nut (36 ft/lbs).



**Fig. 1**

**Step 8.** Offer the alternator up to the newly installed bracket. The tabs on the alternator go on the outside of the brackets. Fit the pivot bolts in place, the shorter one in the front and the longer one with the washer, in the rear (see fig.1). The bolts fit from the outside of the brackets only. Secure the adjustment arm to the upper tab of the alternator (see fig. 2). Fit the fan belt around all three pulleys. Using a pry bar between the alternator and the block, tighten the alternator against the fan belt. The alternator is tight enough when the belt can be pushed 1/4" between the alternator and the water pump pulleys, securing hardware (18 ft/lbs)(see fig. 3). Tighten all.


**Fig. 2**

**Fig. 3**

**Step 9.** Take a break; actual installation of alternator is complete. Next comes the rewiring.

**Step 10.** Using the existing wiring for the generator, connect the large wire to one of the two large terminals on the rear of the alternator and the small wire to the small terminal on the alternator. This can either be done directly or by wiring the alternator plug to the end of the generator wiring.

**Step 11.** Disconnect the small wires from the “F” and “D” terminals of the voltage regulator. Connect these two wires together. This is best done by snipping off the connector ends, stripping the end of the wires and twisting them together. It should then be either wrapped in tape or shrink wrap.

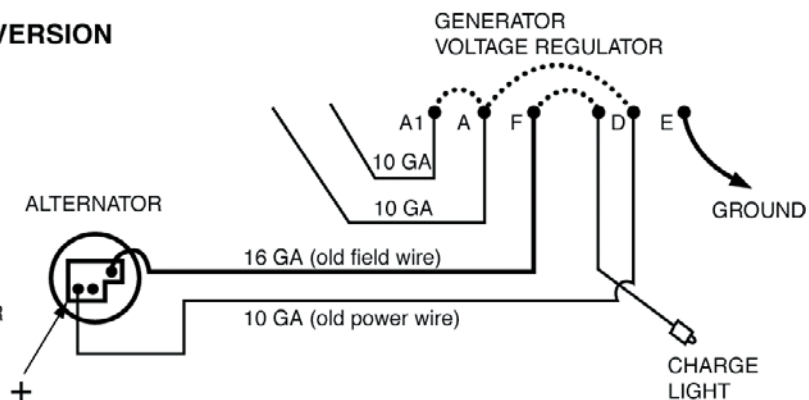
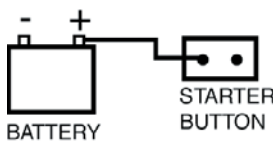
**Step 12.** Disconnect the large wires from the “D” terminal and the “A” and “A1” terminals (labeled “B” on 6 cylinder & Military regulators) and connect these wires together as described in step 10.

**Step 13.** Reconnect your battery and turn your ignition on. Your red charge light should come on. If it doesn't, recheck the connection of the small wire at the alternator and the connection of the two small wires made in step 10.

**Step 14.** Make sure all tools and helping hands are clear of the engine. Start the Rover. The charge light should go out and any amp gauge or volt meter installed in the vehicle should show a charging state. If not, recheck the large connection at the alternator, the connection made in step 11 and the connection at the battery. If there is still a problem, call Rovers North. If all is well, refit the bonnet and spare tire, clean up and you are done!

### ALTERNATOR CONVERSION 1968 & BEFORE

..... = wires together



### ALTERNATOR CONVERSION 1969-1971

..... = wires together

