

## ***r.d. enterprises, ltd.***

290 Raub Road, Quakertown, PA 18951 USA

Phone 215-538-9323

Fax 215-538-0158

Internet [www.rdent.com](http://www.rdent.com)

Email [rdent@rdent.com](mailto:rdent@rdent.com)

# ***Elan Alternator Conversion Installation and Wiring Instructions***

Thank you for purchasing this kit for the installation of a high quality Japanese alternator into your British car! We are making every effort to ensure that this installation will go smoothly, and have everything work better than new. To this end we are going to describe the installation on a generator-equipped vehicle leaving the generator control box installed. We feel this is the easiest for the home mechanic, leaving the smallest room for error. We also have a terminal block to replace the control box if it is desired. Included in the kit is a length of wire for the alternator output that is a heavier gauge original. It is strongly suggested that you make use of this wire as the old wire is too small for the output of the alternator, and most likely is brittle and oil-damaged to boot. As described in this installation guide, the control box will remain on the firewall but will only serve as a junction. It will have no regulator effect. It is important to follow the instructions fully or damage to the vehicle and alternator will result. If after reading these instructions you do not feel confident of your wiring skills bring it to a professional. Mistakes can be expensive.

This guide is for the Lucas RB106 and RB340 type control boxes. Wiring is similar for both.

Tools required for this installation:

7/16", 1/2" and 9/16" wrenches for mechanical installation of alternator

10mm wrench for alternator output connection

6mm allen wrench

Wire cutters and strippers

Crimper for wire terminals. If you can, borrow a good quality set from a mechanic because the crimpers included in a homeowner tool kit are frequently inadequate. If you purchase a good ratcheting set for this project you will use them forever.

- **Disconnect the battery!**
- Remove the existing generator mounting bracket and adjuster.
- Make sure the battery is disconnected!
- Rewire per the attached instructions
- Install the new alternator and adjusting hardware.
- The mounting bolts for the generator to engine block are re-used to mount the alternator, as is the bolt mounting the adjuster to the engine block.
- It might be advisable to install the belt prior to bolting the adjuster into place since it may not travel enough to easily fit the belt afterward.
- The adjuster is operated by loosening the locknut, then turning the center section to tighten or loosen the belt.
- Tighten the belt to stock tension, and then firmly tighten the locknut. **Do not overtighten the belt!**

If you have interference between the adjuster and the timing chest or alternator body, try removing the adjuster and "walking" the hex adjuster body in one direction or the other. The adjuster fits and works best with the lock nut on the alternator end

A general note on terminating connections: When stripping wire do not damage the conductor. Cutting into the conductor itself will reduce its current carrying ability. Strip about 5/16" - 3/8" of the insulation off the wire. When inserting wire into the terminal for crimping make sure it is all the way in, with the wire insulation covered by the insulation of the terminal.

## Lucas RB106 Control Box Wiring

The terminals on an RB106 control box are labeled A1, A, F, D, E.  
In the stock configuration these terminals are connected as follows:

- A1** – To the ignition switch and various unfused and unswitched items with a brown/blue wire.
- A** – Terminal goes to the ammeter, through it to the solenoid and the battery.
- F** – Field output to the generator
- D** – Generator output
- E** – Earth or ground connection.

***These connections will now change as follows (see Figure 2)***

- E** – This terminal is disconnected. Cut this wire so that it will not be accidentally reconnected. If you are concerned about the ability to revert to a generator at some point in the future cut it very close to the connector.
- D** – Connected to the “L” terminal of the alternator. The alternator output is **not** connected to this terminal.
- F** – No connection.
- A** – Connected to the alternator output. The generator output wire is removed and replaced with the new heavier alternator output wire that is connected between the alternator output and the “A” terminal of the control box.
- A1** – connected to the “A” terminal. This may already be done on some vehicles.

## ⇒ Lucas RB340 Control Box Wiring

The terminals on the RB340 control box are connected as follows:

- E** – Earth or ground connection.
- D** – Generator output
- WL** – Warning light connection
- F** – Generator field connection
- B** – Connected to the amp gauge and through it to the solenoid and battery

***These connections will now change as follows (see Figure 1)***

- E, D and F** have no connection. The wires to them should be removed, cut or folded back to prevent accidental connection.
  - WL** – Connected to the “L” terminal on the alternator.
  - B** – Connected to the alternator output with the provided heavier wire.
- All wires not otherwise mentioned remain connected to the terminals as they were before.

---

### For a vehicle equipped with a Lucas alternator:

The new alternator is connected similarly to the existing alternator. There should be a heavy brown/white wire for the alternator output. The smaller brown/yellow wire is for the warning light.

**If your vehicle has had a previous alternator conversion** or has a non-standard wiring harness, you should consult with a professional to ensure that you do not damage your vehicle or alternator.

## Warnings and Warranty

This is a powerful electrical device, which if improperly installed can cause damage to your vehicle or injury to yourself. Always be cautious when working with electricity.

Be sure your connections are sound before operating the vehicle.

If you are unsure of anything call a professional.

The alternator itself is warranted for 12 months from the date of purchase. The brackets and adjusters are warranted for 3 years from the date of purchase. We will repair or replace the alternator at our discretion. We are not responsible for damage to the vehicle or any results from incorrect-wiring, defective or worn original wiring.



FIGURE 1

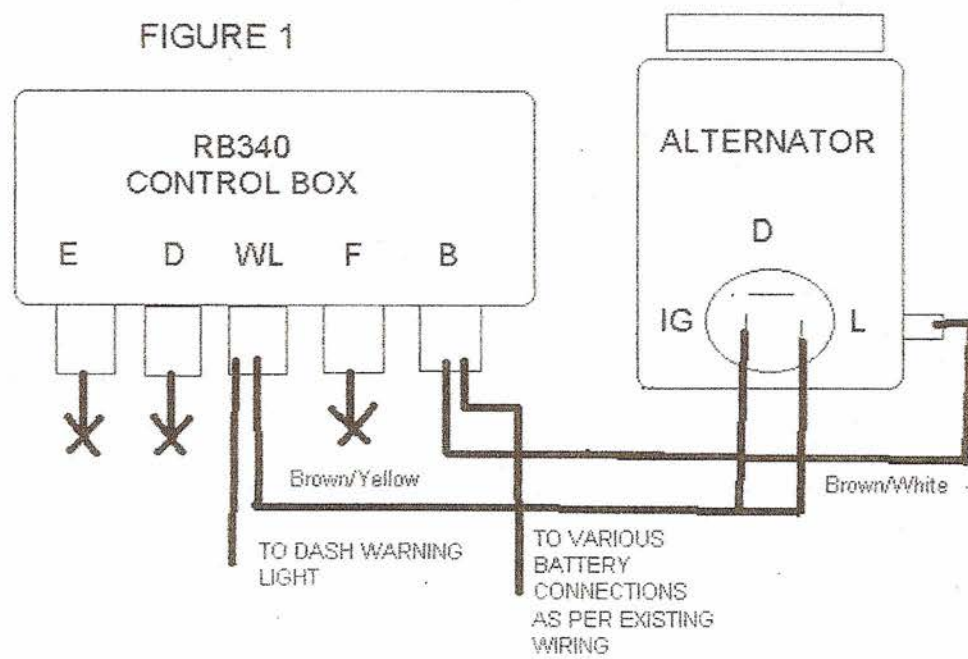


FIGURE 2

