

Magneti-Marelli

Land Rover /Range Rover '95-'98

The purpose of this modification is to allow the MOBI-ARC's PWM regulator to control the alternator. Read through these pages before undertaking modification. People not mechanically inclined may choose to have a local alternator re-builder facilitate this modification.



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In its original configuration, this alternator uses diodes within the rectifier plate known as "avalanche" diodes. Avalanche diodes are fine for charging, but they are incompatible for welding due to their limited voltage breakdown rating. In order to use the MM alternator, a rectifier plate with standard diodes must be installed. We've manufactured bolt-in rectifier plates with standard diodes. The rectifier plates look identical, but electrically they differ.

Parts required for this modification are as follows:



Replacement Rectifier Plate, IXR543



Dummy Regulator, IX128



Heat transfer grease, 54013LN



Nylon Shoulder Washer
12SWS044 (1)



#10 Nylon Flat Washer (1)

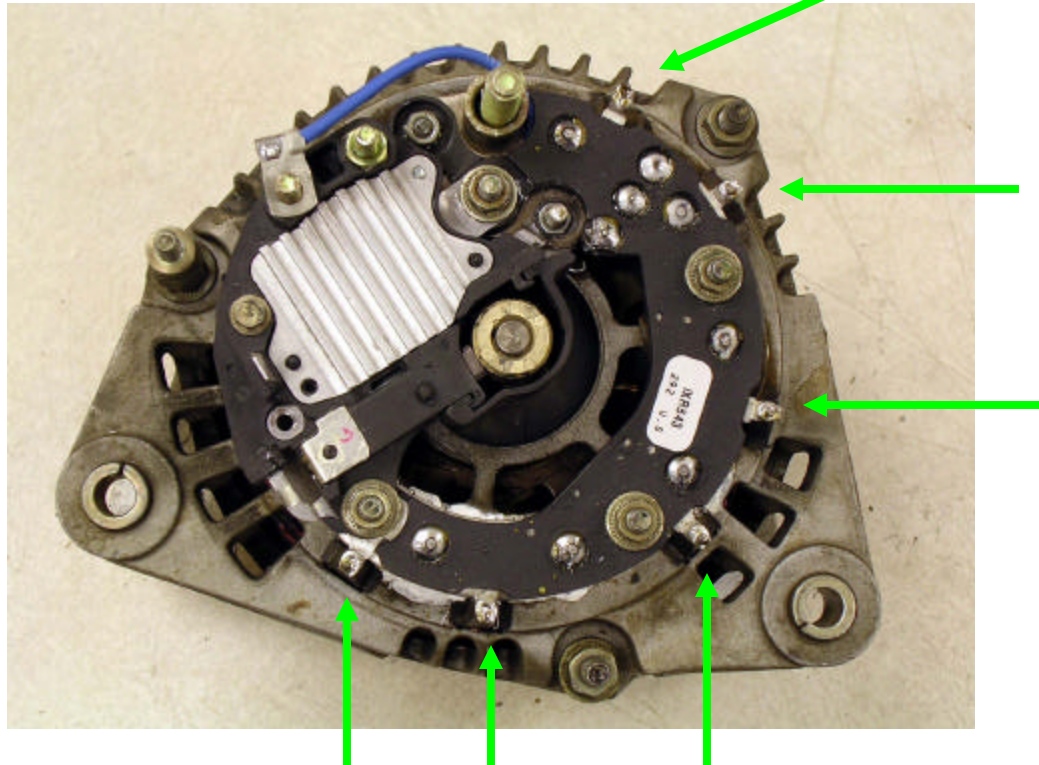


7mm thin wall socket (1)



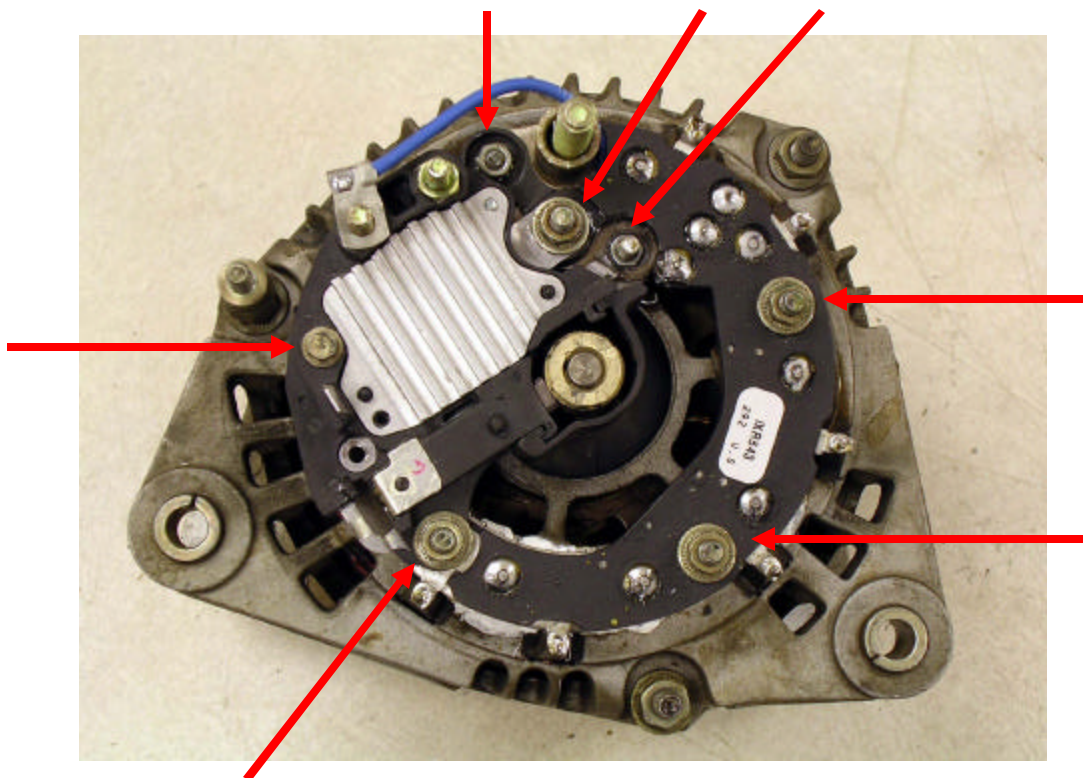
Shrink tube

Remove rectangular capacitor. Loosen nuts as required to remove plastic cover from rear of alternator. Plastic cover can get brittle so handle with care. When rear plastic cover is removed, it should look like this:



With a high-heat solder iron, unsolder the stator wires from the original avalanche diode rectifier as identified by the green arrows above.

With the stator wires detached from the rectifier plate, remove nuts and screws as detailed in the picture below:

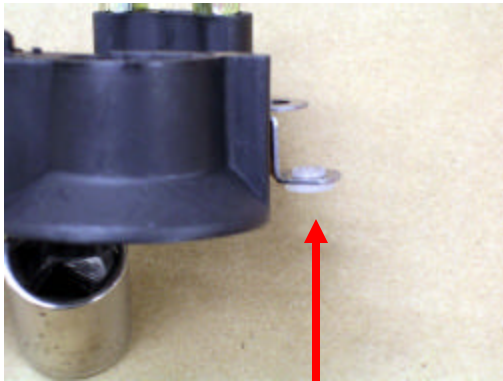


With hardware removed, original regulator and avalanche rectifier can be removed from alternator. Using the provided blister pack of heat transfer grease (54013LN), apply to replacement rectifier (IXR543).

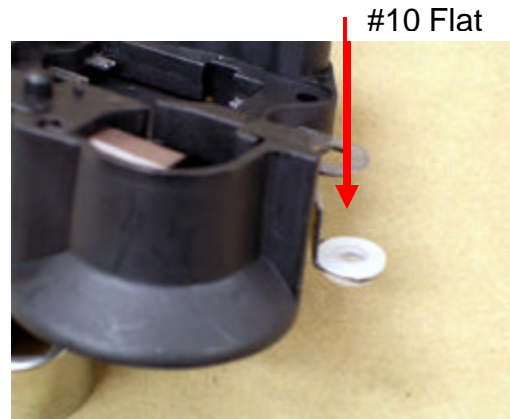
Take dummy regulator IX128:



Nylon shoulder washer 12SWS044 and #10 Nylon flat washer should already be mounted on the regulator:

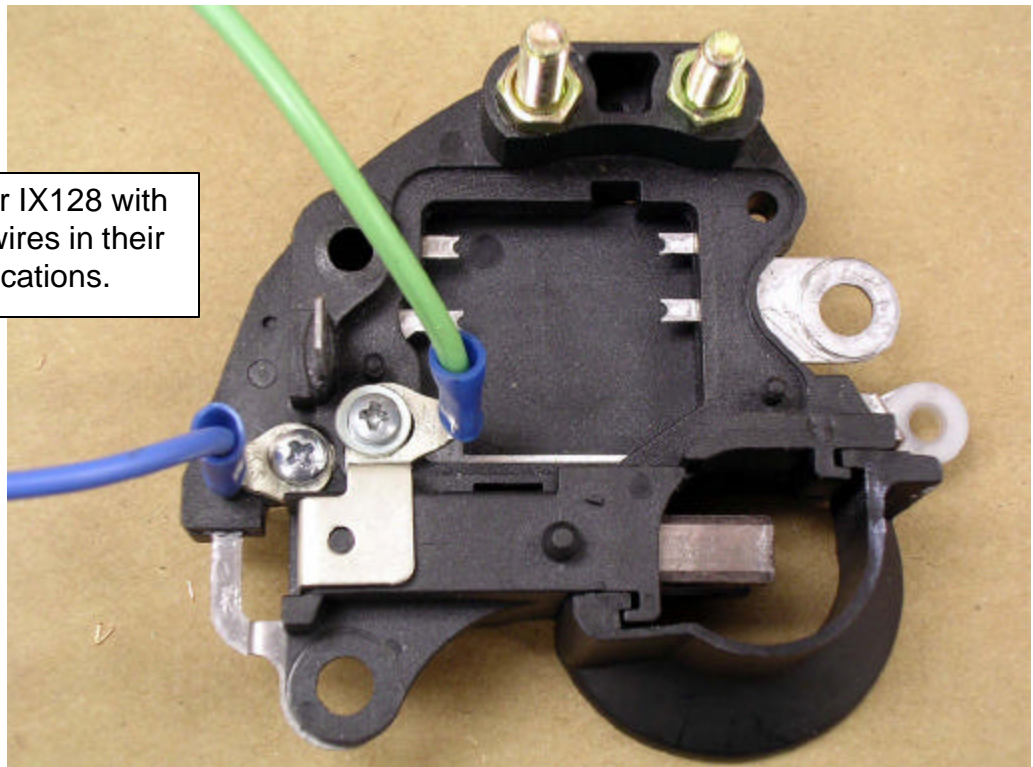


Shoulder Washer

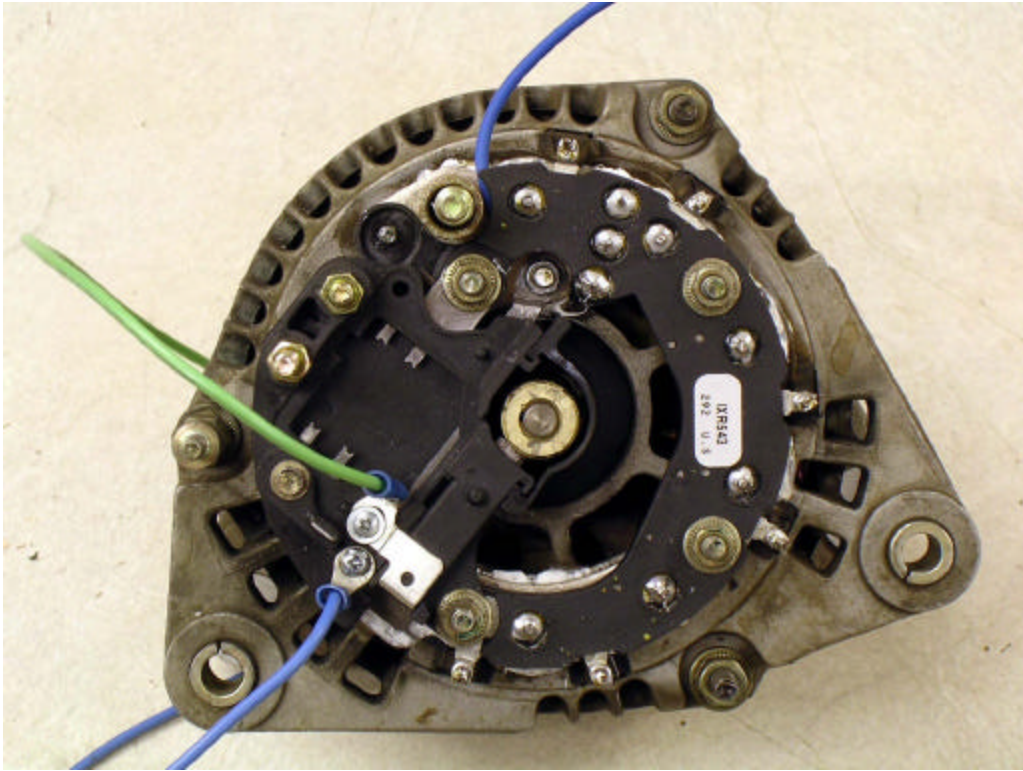


#10 Flat

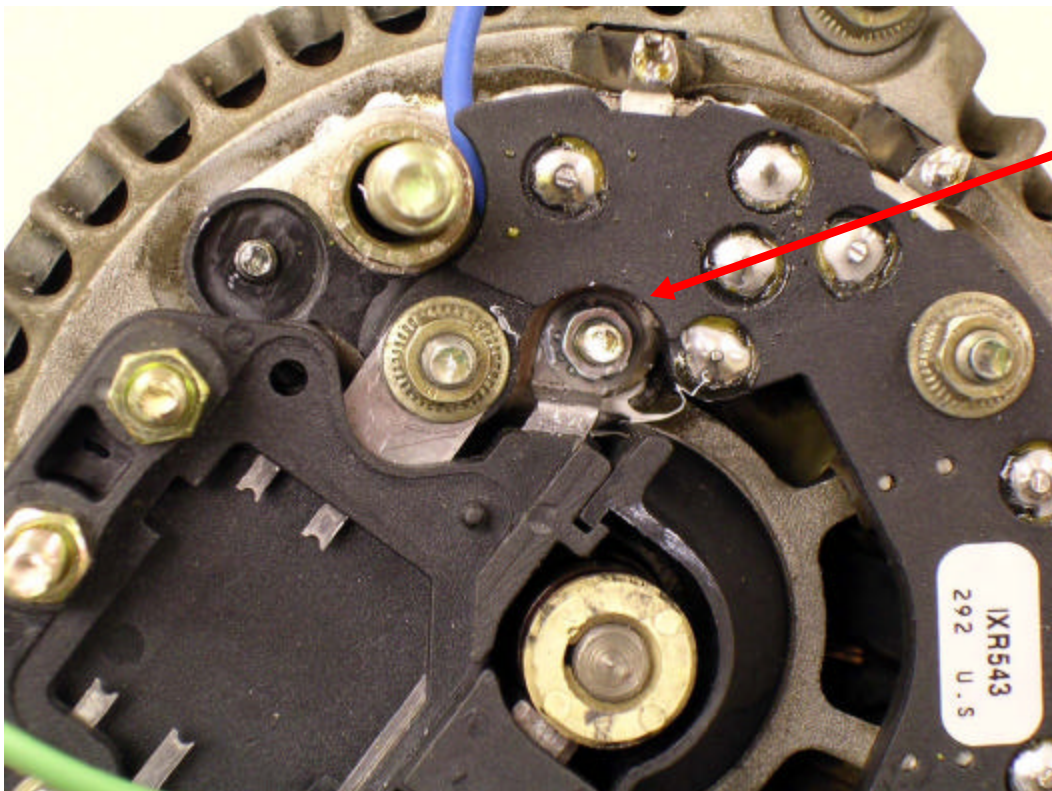
Dummy Regulator IX128 with Blue and Green wires in their appropriate locations.



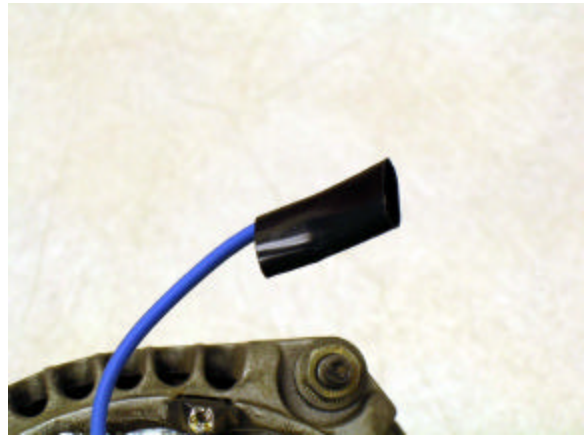
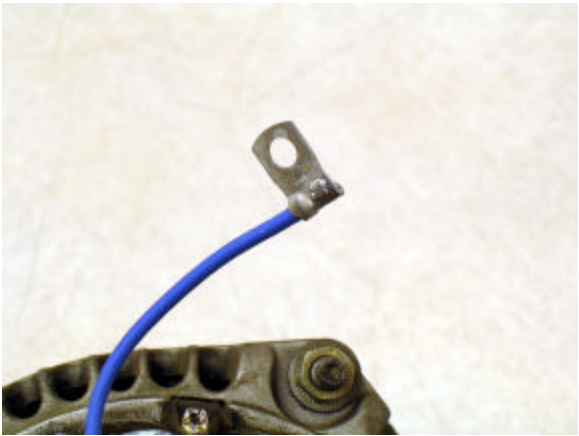
Replace new non-avalanche rectifier and dummy regulator. Restore hardware being sure not to pinch any wires.



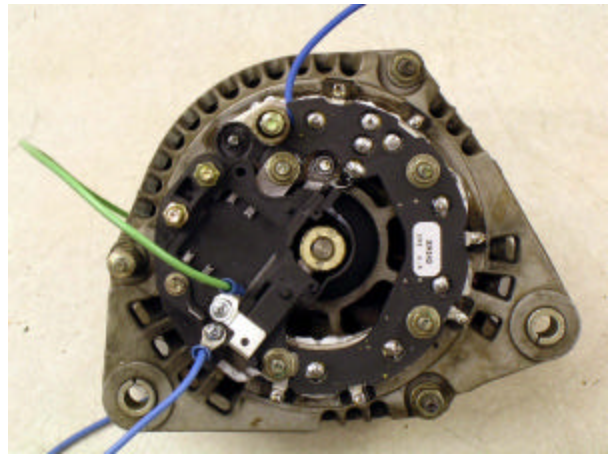
Be sure nylon shoulder washer/nylon washer sandwich is installed and insulating properly:



Add shrink-tube to the blue wire as detailed below. Should you decide to re-install the original regulator, you will need this wire so don't cut it off. Insulate it and tuck it away from moving parts.



Alternator should look like this prior to restoring the rear plastic cover and capacitor:



Install plastic cover and capacitor:

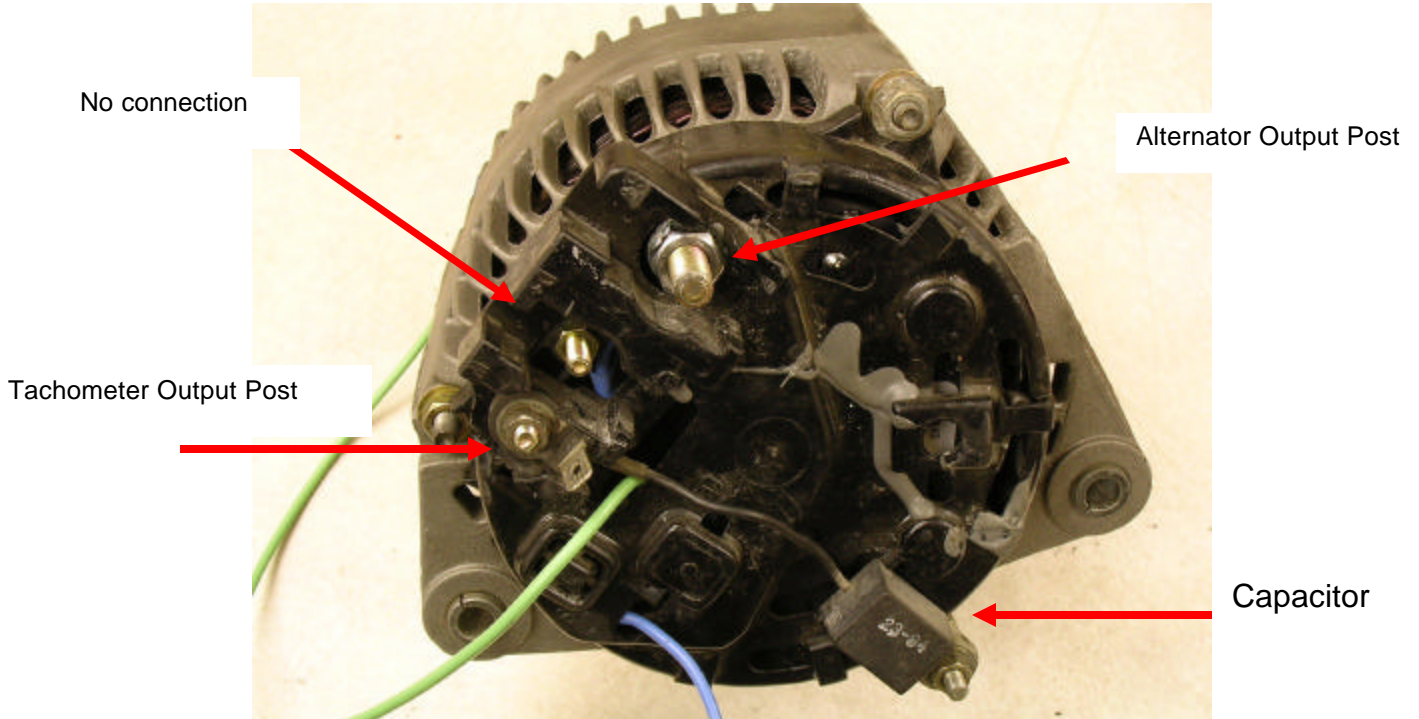


Diagram # 9010

MOBI-ARC

ORIGINAL ALTERNATOR OUTPUT CABLE NOT USED

