



MGB Alternator Conversion

Installation Instructions

For MGA & 1962 to 1967 MGB

PART# 130-078, 130-088, 130-098

440 Rutherford St. Goleta, CA 93117

1-800-642-8295 • FAX 805-692-2525 • www.MossMotors.com



Scan the code to watch Moss's Generator to
Alternator Conversion Video

Or search

“Moss TV generator to alternator conversion”
on YouTube.

Tools required:

- Small and medium flat blade screwdriver
- Phillips head screwdriver
- 11/32" wrench, 7/16" wrench, 1/2" wrench, 5/8" wrench
- 7/16" socket with extension, 1/2" socket, 5/8" socket, 22mm socket
- Center punch
- Hammer
- 1/4" drill bit, electric drill
- Deadblow hammer
- Air impact gun
- Pry bar
- Wire cutters
- Wire crimpers
- Multimeter

Note: The vehicle must be converted to negative ground before the alternator can be installed. These instructions will outline this polarity conversion as a part of the alternator conversion.

Vehicle Preparation: Positive Ground to Negative Ground Conversion

1. Remove the battery cover behind the seats using a screwdriver to release the dzus fasteners. Disconnect and remove the battery, or both batteries if still configured for a dual 6 volt set up, using a 1/2" wrench.
2. Disconnect the Yellow/Green and Yellow wires from the generator. If the generator uses ring type connectors use a 5/16" and 7/16" wrench.
3. For the installation of the Lucas alternator the ignition coil will have to be relocated to the engine bay side of the right fender well. Remove the coil from the generator using a 7/16" socket. Locate a new place for the coil and mark the hole locations. Using a center punch and hammer, make two dimples at the center of the marks to insure that the drill bit will not walk around when the holes are being started. Using an electric drill with 1/4" drill bit, locate the tip of the bit to the dimple and make two holes. **(Figure Coil Relocation A)** Install the coil at the new location using the same hardware from the previous bracket and the two 1/4-28 x 1 bolts provided. **(Figure Coil Relocation B)** Reverse the positions of the two wires on the ignition coil.

Note: If the vehicle uses an electronic ignition it will have to be replaced with a negative ground electronic ignition. We recommend Moss Motors # 222-405.

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Figure Coil Relocation A



Figure Coil Relocation B

The fuel pump can now be reinstalled. Note: The position of the two leads do not need to be reversed upon reinstallation because the pump itself is not polarity sensitive, just the diode. Figure 5.



Figure 5

4. If an ammeter or voltmeter has been fitted then the position of these wires will need to be reversed.
5. If the vehicle uses an original equipment fuel pump move on to the next step. If an S.U. replacement fuel pump has been installed and uses a positive ground diode then simply reverse the diode wires. This will require that the fuel pump be removed. Place an oil pan underneath the inlet and outlet ports on the fuel pump. Disconnect both the inlet and outlet lines from the fuel pump using a 5/8" wrench. Remove the fuel pump bracket mounting bolts using a 7/16" socket with extension. Maneuver the fuel pump and bracket assembly out of the vehicle and drain the rest of the fuel into the oil pan. Remove the blue S.U. Tape and the wider electrical tape underneath. Remove the nut, washer, and male connector to free the plastic shroud at the end of the fuel pump using an 11/32" wrench. The diode should be underneath this shroud. Note: If there is a small green circuit board underneath the shroud then the fuel pump is solid state and will have to be replaced. We recommend Moss Motors #377-225. Remove the diode wires using a small screwdriver and an 11/32" wrench. Note the position of the two sets of contact points. In order to switch the wires the eyelet connector should be cut using wire cutters to resemble the forked connector. Make sure the contact points are aligned when refitting the diode. Reassemble the fuel pump replacing the electrical tape if necessary. Make sure the contact points are aligned when refitting the diode.

6. Swap the connectors on the battery cables using a 7/16" wrench. Refit the battery, or batteries, making sure that the ground cable is attached to the negative post. For the dual six volt battery set up one negative post is connected to the ground cable and the positive post on the other battery is connected to the starter cable. The wire connecting the two batteries can simply be turned around.

Alternator Installation

Note: If the vehicle has been fitted with a Moss Motors Supercharger System (150-048) refer to the installation instructions regarding generator adjustment modifications along with this set of instructions.

1. Remove the battery cover behind the seats using a screwdriver to release the dzus fasteners. Disconnect the battery, or both batteries if still configured for a dual 6 volt set up, using a 1/2" wrench.
2. Disconnect the Yellow/Green and Yellow wires from the generator. If the generator uses ring type connectors use a 5/16" and 7/16" wrench.
3. Loosen and remove the nut and lock washer on the pillar block using a 5/8" socket to allow the generator to rotate down and remove the drive belt (Figure 4.) Remove the adjustment link from the generator using a 1/2" socket. Figure 3.



Figure 3

4. Remove the pivot bolts from the water pump ear and the rear mounting bracket using a 1/2" wrench and 1/2" socket.
5. Remove the rear bracket from the block using a 1/2" socket and replace with the new bracket supplied in the kit using the same hardware. Do not tighten down the bracket yet. Figure 5.



Figure 5



6. Fit the alternator with the fan and pulley supplied in the kit. For vehicles fitted with superchargers, use the 4-rib pulley from the generator. The inner diameter of the pulley may be slightly smaller than the alternator shaft. This is normal. If you find you cannot slide the pulley on to the shaft, evenly sand the I.D. of the pulley until it can be installed. Use a fine round file, barrel sander on the end of a drill, or rolled up sand paper if that is all you have. Make sure that the fan blades point toward the alternator. Wrap a shop rag around the fan and hold it firmly, but in a safe manner so that it can be released without damage to the hand or fingers.

Tighten the nut with two brief (1 sec. max.) trigger pulls on an air impact gun using a 22mm socket. Check that the fan is not loose and repeat the tightening of the nut if necessary. Attach the adjustment link from the generator to the alternator respective to its original position using the M8x1.25x20 bolt and lock washer provided. For vehicles fitted with superchargers, install the adjuster block provided without the lock washer. Do not tighten this bolt yet.

7. Fit the alternator to the engine by first sliding the long slot in the adjustment link over the threaded stud on the pillar block. Line up the front-most mounting ear with the water pump mounting ear and insert the original bolt with one of the flat washers provided. Line up the rear-most mounting ear with the new alternator bracket and insert the 5/16-24 bolt provided. Return the pillar block nut and lock washer to the pillar block. For vehicles fitted with superchargers, install the new adjuster base provided. Return the nut and washer to the front mounting bolt with the added flat washer between the water pump mounting ear face and the lock washer. Return the nut and lock washer from the original rear mounting bolt to the new mounting bolt. Leave the mounting bolts snugly tightened. Make sure that the alternator is at full droop. Figure 7.

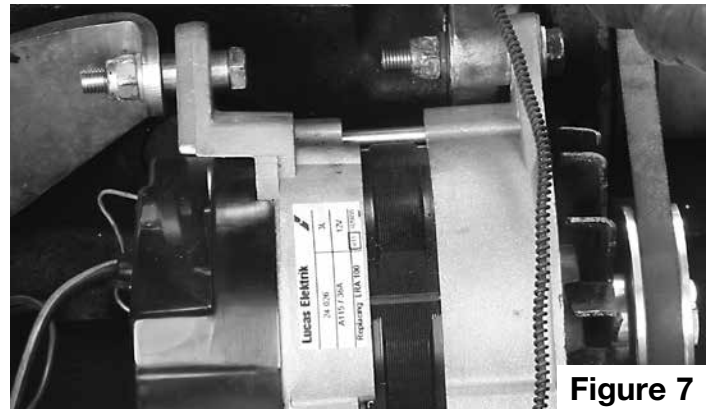


Figure 7

If the wires removed from the generator are fitted with ring type connectors then female spade connectors will have to be installed. To do so, remove the ring type connectors with wire cutters and strip approximately 1/4" of insulation off of each wire. Attach one of the two non-covered female spade connectors to the Yellow wire and a small red red connector to the Yellow/Green wire. Identifying the colors on these old wires can be difficult, so it may help to note that of the two wires that came off the generator only the Yellow/Green wire has two different color threads making up the outer insulation. Use a 1" section of the heat shrink provided to cover the larger spade connector.

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8. Fit the new belt by first locating the crank pulley with the bottom of the belt and then wrapping it around the water pump pulley and finally walking the belt onto the alternator pulley. Tighten the belt using a shop towel and a pry bar wedged in between the alternator and the block (Figure 8.) Tighten the pillar block nut to fix the adjustment link. Then tighten the bolt attaching the link to the alternator and the front mounting bolt. Next tighten the rear alternator mounting bolt and then the bracket mounting bolts. The order in which these bolts are tightened is crucial to the fitment of the new mounting bracket. Check that the belt deflects 3/16"-1/4" at the center of the belt between the water pump pulley and the alternator pulley and adjust as needed. Figure 8.



Figure 8

Depending on vehicle year, the letters on the voltage regulator may differ. The key below explains the different control box terminals. Use the key and the diagrams in the following steps to rewire for the alternator.
Note: The order of terminals on the voltage regulators in the diagrams are not vehicle specific.
Note the letters on your voltage regulator and label the wires as you disconnect them.

Terminal letter	Description for a stock generator equipped vehicle	Alternator conversion modification
E	"E" represents Earth (or ground).	This wire can be grounded to the chassis or covered and tied off in the loom. It is no longer needed.
F or WL	"F" represents Field.	"F" or "WL" should be connected to the "IND" (Indicator) spade on the alternator on one end. The other end should be connected directly to the charge light indicator wire.
	"WL" represents Warning Light and is connected internally to "D".	
D	"D" represents "Dynamo". On a vehicle with "D" & "WL" the terminals are connected internally. On vehicles with only a "D"; the warning light wire shares the external terminal with the dynamo wire.	The generator's "D" wire is now the alternator's "BAT" (Battery) wire and should be connected to all "A", "A1" or "B" wires. The self regulated alternator directly powers the battery, ignition switch, ammeter, fuse block, etc.
A, A1 or B	Terminal "A" feeds the ammeter. Terminal "A1" feeds the ignition switch. "B" terminals feed the battery, ignition switch, fuse block, etc. with power.	

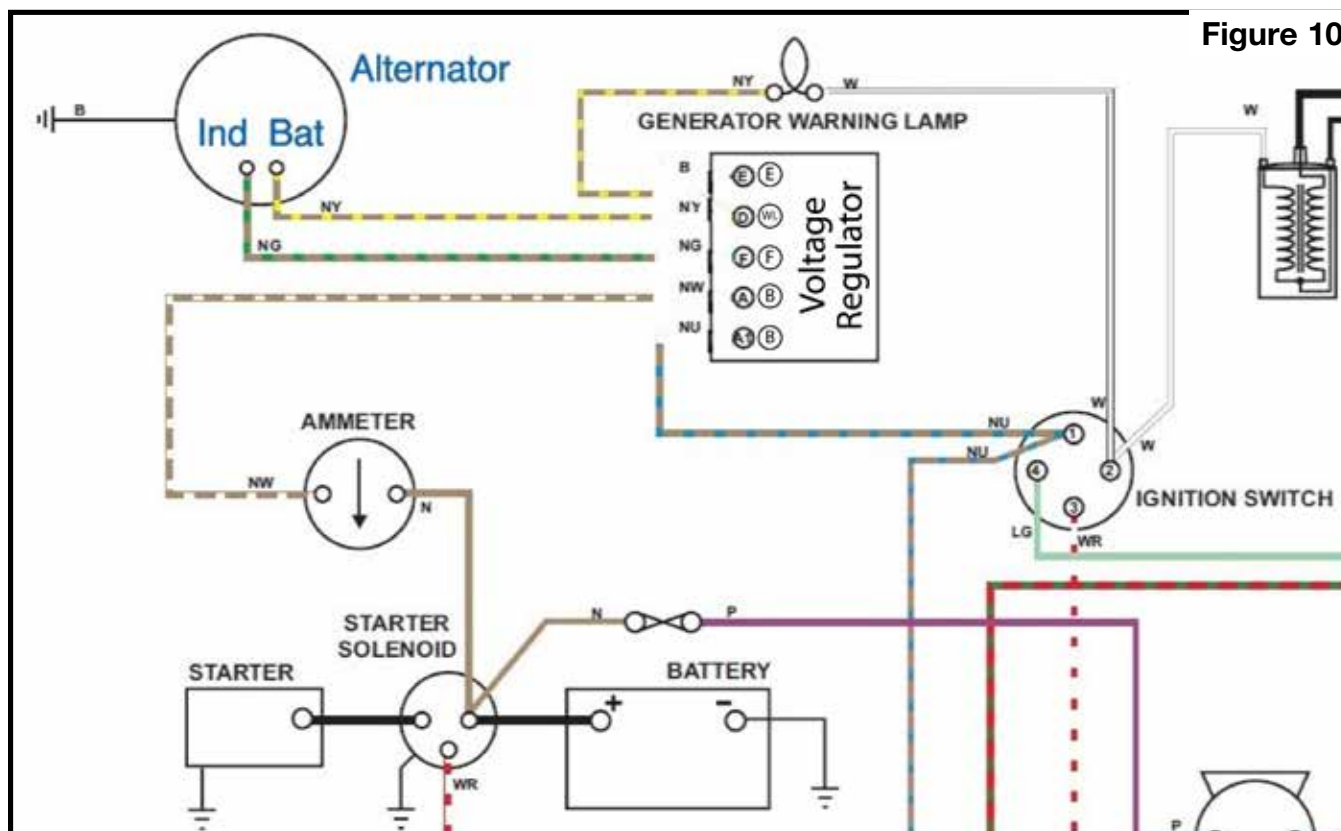


9. The alternator is internally regulated and no longer needs the external “generator control box” (voltage regulator). **Figure 9a** below shows a stock negative (-) ground vehicle’s wiring diagram with the generator still intact. Remove all the wires from the control box as show in **Figure 9b**.

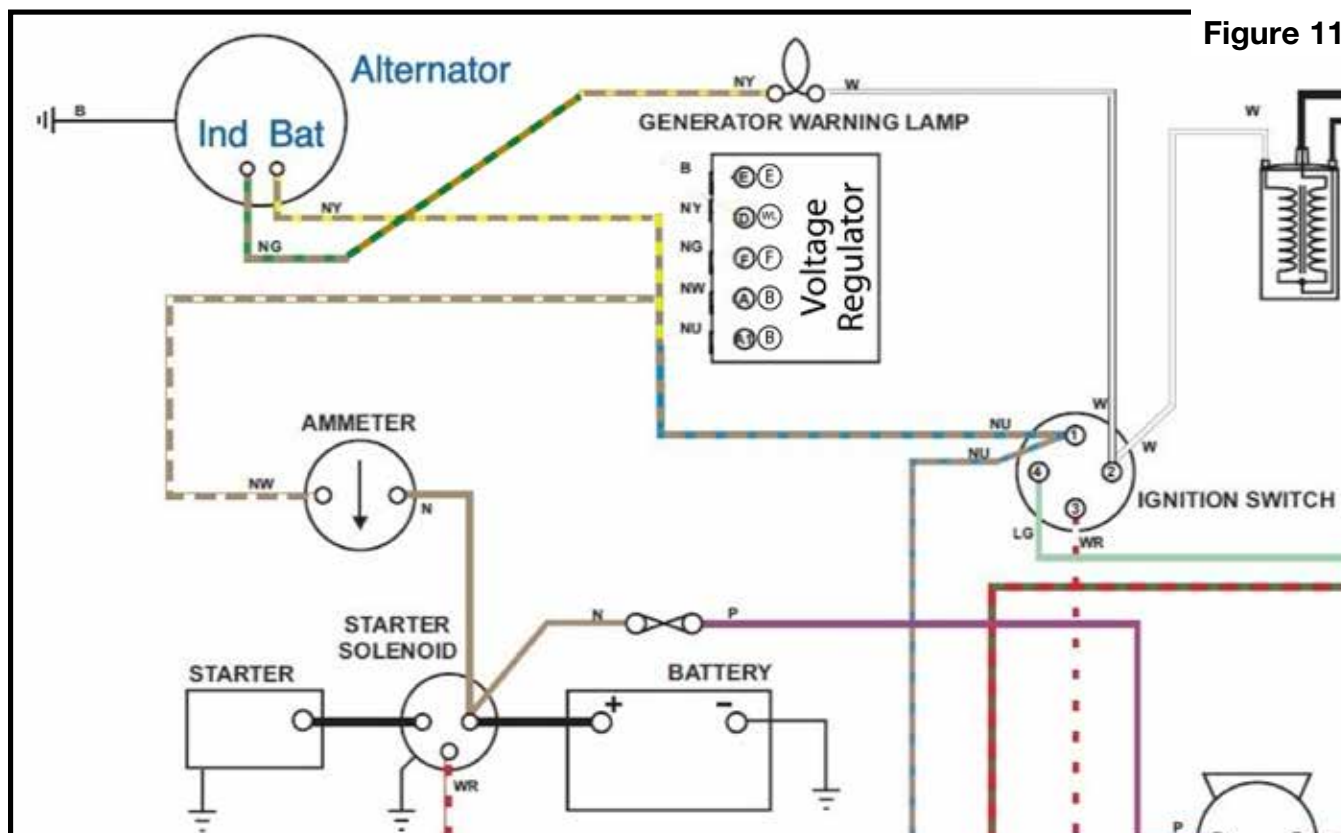


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10. Plug the wires into your alternator as shown. Figure 10.



11. Complete the wiring on your vehicle using the following diagram. Make sure to insulate the connections. You may remove the regulator (generator control box), it is no longer needed. Figure 11.



12. Install the positive cable on the positive (+) terminal of the battery. Install the negative (ground) battery cable to the negative (-) terminal of the battery.
13. Turn the key to the on position and do not start it. Check all of the modified areas and insure that there is no sparking or smoke. Now start the car bring to steady idle. Attach a voltmeter to the battery terminals and verify that the reading is greater than 13 volts. Rev the car up and verify that the voltage reading increases with RPM.
14. Enjoy your new Moss alternator conversion kit! See MossMotors.com for all your parts and accessories.

Contents of kit # 130-078

Note - Specifications and components are subject to change and revision without notice.

Item No.	Description	Quantity
130-102	ALTERNATOR,18ACR, 45AMP, NEW	1
130-115	BRACKET, ALTERNATOR	1
460-990	FAN BELT	1
051-127	BOLT,HEX FLANGE,M8 X 1.25 X 20	1
051-073	NUT, STANDARD, M8 X 1.25	1
771-644	BOLT, HEX, 5/16-24 X 1.75	1
051-074	WASHER, FLAT, M8	2
051-075	WASHER, LOCK, M8	3
052-321	BOLT, HEX, 1/4-28 X 1	2
161-580	CONNECTOR, LUCAR, 3/8 IN	2
052-169	HEAT SHRINK TUBING, 3/8IN. ID	2
051-387	SPADE CON, FEMALE, 22-18 GA	1
052-085	SPADE CON, 12GA, MALE	1
130-370	PULLEY, ALTERNATOR, 2.75 IN	1
771-919	T-TAP, 12 GAUGE WIRE	1
772-040	INSTRUCTIONS	1

Contents of kit # 130-098

Note - Specifications and components are subject to change and revision without notice.

Item No.	Description	Quantity
130-102	ALTERNATOR,18ACR, 45AMP, NEW	1
130-115	BRACKET, ALTERNATOR	1
052-234	BELT, K040595	1
052-090	ADJUSTER BLOCK, MGB	1
051-073	NUT, STANDARD, M8 X 1.25	1
771-644	BOLT, HEX, 5/16-24 X 1.75	1
051-074	WASHER, FLAT, M8	2
051-075	WASHER, LOCK, M8	3
161-580	CONNECTOR, LUCAR, 3/8 IN	1
052-169	HEAT SHRINK TUBING, 3/8IN. ID	2
052-085	SPADE CON, 12GA, MALE	1
771-919	T-TAP, 12 GAUGE WIRE	1
772-040	INSTRUCTIONS	1

Installation Instructions

Contents of kit # 130-088

Note - Specifications and components are subject to change and revision without notice.

Item No.	Description	Quantity
130-102	ALTERNATOR, 18ACR, 45AMP, NEW	1
130-115	BRACKET, ALTERNATOR	1
052-234	BELT, K040595	1
052-090	ADJUSTER BLOCK, MGB	1
051-073	NUT, STANDARD, M8 X 1.25	1
052-516	ADJUSTER BASE, 65-67 MGB	1
771-644	BOLT, HEX, 5/16-24 X 1.75	1
051-074	WASHER, FLAT, M8	2
051-075	WASHER, LOCK, M8	3
052-321	BOLT, HEX, 1/4-28 X 1	2
161-580	CONNECTOR, LUCAR, 3/8 IN	2
052-169	HEAT SHRINK TUBING, 3/8IN. ID	2
051-387	SPADE CON, FEMALE, 22-18 GA	1
052-085	SPADE CON, 12GA, MALE	1
771-919	T-TAP, 12 GAUGE WIRE	1
772-040	INSTRUCTIONS	1

Although every effort has been made to ensure the accuracy and clarity of this information, any suggestions that you may have that will improve the information (especially detailed installation notes and photos) are welcome. These instructions were developed and written by Moss Technical Support. If you have any questions or difficulties with your installation of this product, telephone 800-667-7872 between 7:00 a.m. and 4:00 p.m., Pacific Time for assistance.

Moss Motors, Ltd.

440 Rutherford Street, Goleta, California 93117
In the US & Canada Toll Free (800) 667-7872
LOCAL (805) 681-3400 FAX (805) 692-2510



Moss Europe Ltd.

Hampton Farm Industrial Estate
Hampton Road West, Hanworth Middlesex, TW13 6DB
In the UK: 020-8867-2020 FAX: 020-8867-2030