

Installation instruction for 6 and 12 volt regulator

This regulator is designed for use with a 2-brush generator only. Wrong wiring can irreversely damage the unit! Always consult a professional for installation!

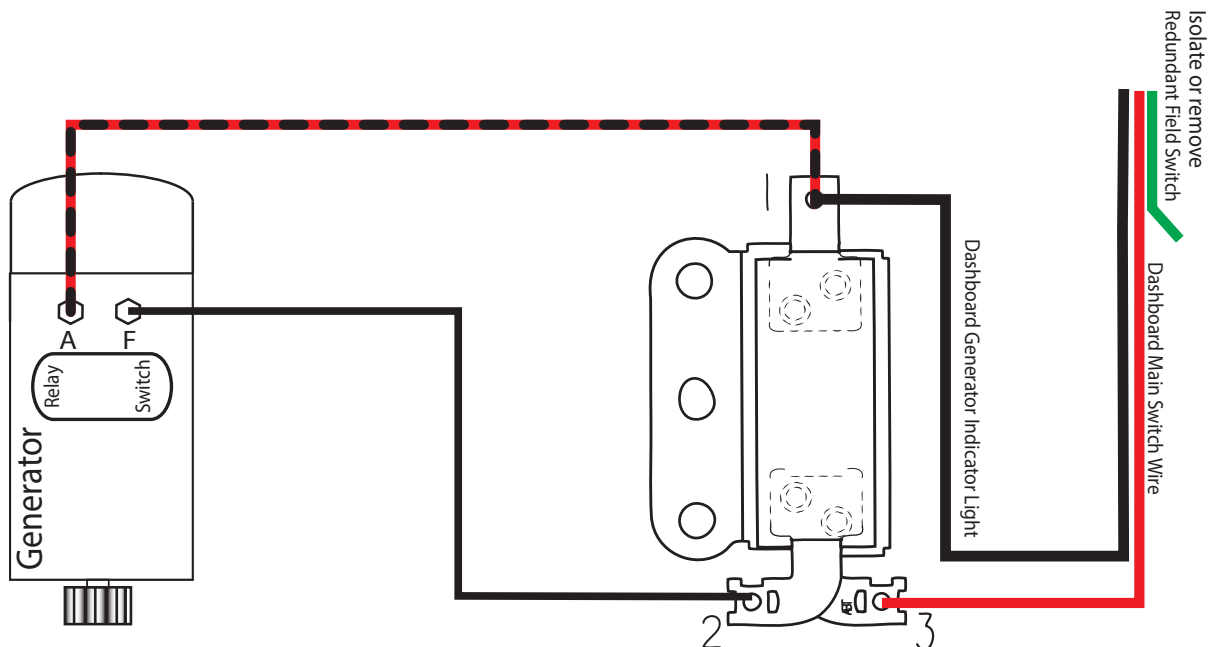
Compatible with Harley- Davidson models: WL, UL, EL, FL, Servicar and most models up to 1964.

Phase 1: Preparation

- 1: **Disconnect negative pole on battery**
- 2: Install 2 brush generator if you do not have one installed yet!
- 3: Remove old regulator (or cut-out relais if you are coming from a 3-brush generator)
- 4: Clean motor surface for optimal electric conductivity.

Phase 2: Installation

- 1: Install new regulator by in place of your old cut out relais, or find another suidable spot.
 - Make sure that there is sufficient air cooling (front of motorcycle)
 - Make sure that the unit is properly grounded, otherwise the electronics will not work
- 2: Attach wiring to each terminal on your regulator according to schematic.
 - Terminal 1:
 - Connect Red black wire to Armature (indicated as A or Relay) pin on generator
 - WARNING: On some replica generators A and F pins can be inverted!!!**
 - Connect Black wire to dashboard generator indicator light
 - Terminal 2:
 - Supplied black wire to Field pin (indicated as F or Switch) on generator
 - Terminal 3 (has marking "BAT") :
 - Connect the Red wire to dashboard main switch
- 3: Remove or securely isolate the now unnecessary green wire (only if you come from a 3 brush system).
- 4: Reconnect battery
- 5: Start your engine
 - Leave the cover off your regulator for now!
- 6: Observe your regulator:
 - **BRIGHT Green LED:** You are good to go!
 - **Red LED:** Something is wrong!. Do not rev engine! Go to "Troubleshooting"
 - **NO LED:** Something is wrong!. Do not rev engine! Go to "Troubleshooting"
 - Sometimes a very faint green led can be seen, this is still wrong, the LEDS should be **BRIGHT**
- 4: BRIGHT Green LED? Put on the cover (Driving without cover will overheat regulator!)
- 5: No green LED? Check the troubleshooting section.
- 6: Have a good ride!



GENERAL INFORMATION

Features:

- High Output Current
- Accurate voltage regulation under variable loads
 - 7,0 -7,1 Volt for EVR0610, 6 Volt regulator
 - 13,7- 13,9 Volt for EVR1210, 12 Volt Regulator
- Current overload protection
- Temperature compensated
- Solid state device
- Easy installation
- Identical look to original Cut-out relay
 - fits inside relay cover on older motorcycles
- **GREEN** or **RED** LED shows if generator is polarized correctly
- Each unit is individually tested for correct functionality!

CAUTION:

- Never electrically weld on motorcycle with regulator attached! It will fry the unit!
- Do not drive with wrongly wired unit or faulty generators, even with the overload protection regulator it will blow eventually!
- Make sure unit is mounted at properly grounded place!
- Make sure unit is located at sufficiently cooled location
 - Front of engine or frame is recommended
 - The Delco-Remy style covers aid in cooling. Available at your dealer.

TROUBLESHOOTING

Common Issues

Your regulator is not working, below are most common issues mentioned, see the right box for the solutions.

- Your dashboard generator indicator light does not turn off

- Your bulbs burn out fast

- **RED** LED does not change to **GREEN** LED

Solutions:

- Converted 6 volt system to 12 volt? Make sure EVERY component in the electric system can handle 12 volt (lights, generator, battery, sparkcoil, etc)

- Generally when this happens the wiring is incorrect. Check for faulty wiring, short circuits, proper grounding of regulator and wiring to generator (A and F pins are inverted on some aftermarket units!)

- In 99% of all related problems, the regulator is NOT the issue. Most commonly the wiring to the battery is bad, or the battery itself is bad. This disables the generator to put its power into the battery, giving it to all other electric components, and thus burning them out.

- This issue is most common with people that use a rebuilt or refurbished generator. Your generator is not polarized correctly. To polarize correctly:

- Turn off motorcycle completely

- Disconnect positive (+) terminal of battery from all wiring

- Disconnect Field (F or Switch) wire from the **regulator**

-Terminal 2 on the schematic

- Disconnect wire from Armature pin (A or Relay)

- Failing in doing this may fry your regulator!!!

- Take a cable long enough to reach from Armature Pin to the positive terminal on battery. Flash the Armature pin (A or Relay) **momentarily (0,5 seconds)**. Repeat 3- 5 times.

- This action polarizes the coils inside your generator. Now current should flow into the correct direction.

- Now reconnect everything according to schematics.

- Start your engine, your LED should be **GREEN**

If the problem persist, consult your dealer, an electric automotive expert or perhaps your local motorclub to isolate the problem

Other possible issues:

Most other issues can be caused by:

- Faulty Wiring. This is the most common issue when people experience problems with our regulators.

- Faulty Generator. Always have your generator tested if you have not seen it in working order!

- Faulty Battery. This is hard to measure, and hard to detect, but devastating for your regulator and generator. Your battery acts as an energy buffer. If this buffer is broken the electricity has no where to go and thus fries your electronics.

- Faulty Regulator. Each and every single regulator is tested after production. Even with the rigid quality control at V-Tronic, sometimes a unit unfortunately arrives broken. However, in 95% of warranty cases the regulator either functions perfectly (indicating wrong installation) or is fried because of driving with **RED** or **NO** LED burning on the regulator (Wrong polarisation or malfunctioning electric system).

More information:

- More information on www.v-tronic.com

- Detailed instructions

- Other V-Tronic solutions

- More information on: www.samwelsupplies.com

- Dealers for V-Tronic solutions

- Information on many reproduction parts for WL,WLA, BT and other.

- Dealer information for our reproduction parts