

CONVERSION OF 3-BRUSH GENERATOR TO 2-BRUSH GENERATOR FOR GREATER OUTPUT

This bulletin outlines procedure and parts needed for converting older Big Twin and Servi-car models having a 3-brush generator, so that the electrical system can accommodate greater loads which occur when a high wattage headlamp or additional accessory lighting is used.

The conversion can be made on 1949-1957 Big Twins and 1956-1957 Servi-cars which used the model 32E or model 52 three-brush generator as standard equipment.

The conversion involves changing the 3-brush generator to a 2-brush generator, making changes in the generator field coil connections, and installing a current-voltage regulator to control the generator output.

PARTS REQUIRED

The following parts are used for regulator installation and can be ordered from the factory under part numbers listed.

<u>PART NO.</u> <u>FOR ALL MODELS</u>	<u>AMT.</u>	<u>NAME</u>
74511-58	1	Current and Voltage Regulator
74514-52	1	Current and Voltage Regulator Fittings
70196-50	1	Positive Wire Cable
6182	1	Washer

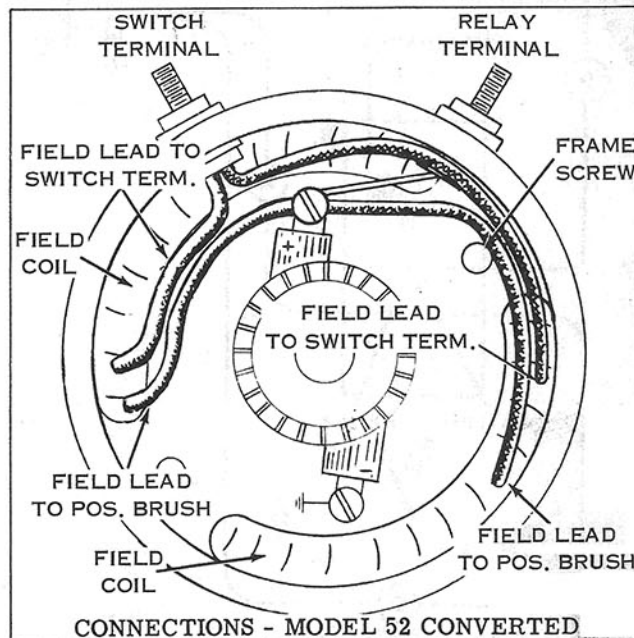
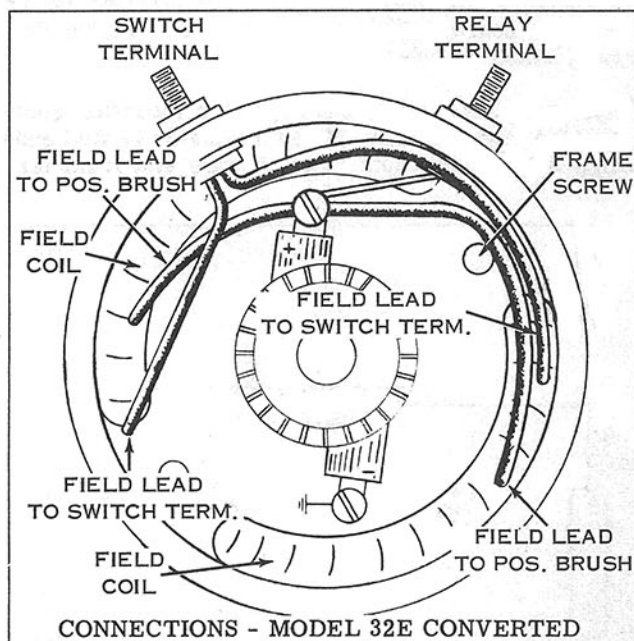
ADDITIONAL PARTS FOR 1949 TO EARLY 1951 MODELS

74527-48	2	Regulator Plate Mounting Studs
7035	2	Lockwashers
7675	2	Nuts

GENERATOR CONVERSION

Disconnect battery. Remove generator from motorcycle and disassemble commutator end of generator frame. Disconnect third brush, remove from its holder and discard it. Do not remove holder assembly since it is needed to maintain proper spacing between bearing housing and outer oil retainer plate.

Rewire the field coil leads as shown for each type generator in the diagrams below. Be sure to route field leads behind the frame screw as shown to keep them away from the commutator.



REGULATOR INSTALLATION AND WIRING CONNECTIONS

Regulator mounting bracket with parts for attaching regulator to motorcycle are included in carton of parts under Part No. 74514-52. Mount regulator to bracket at 3 points as shown in the diagram discarding rubber mount in slotted end of regulator base. Attach the fuse and wires of the 2-wire generator cable to the regulator as shown.

Remove spark coil from motorcycle. Discard mounting nuts. Install regulator-battery wire Part No. 70196-50, to the extreme upper left terminal on the terminal board behind spark coil. See wiring diagram, which follows.

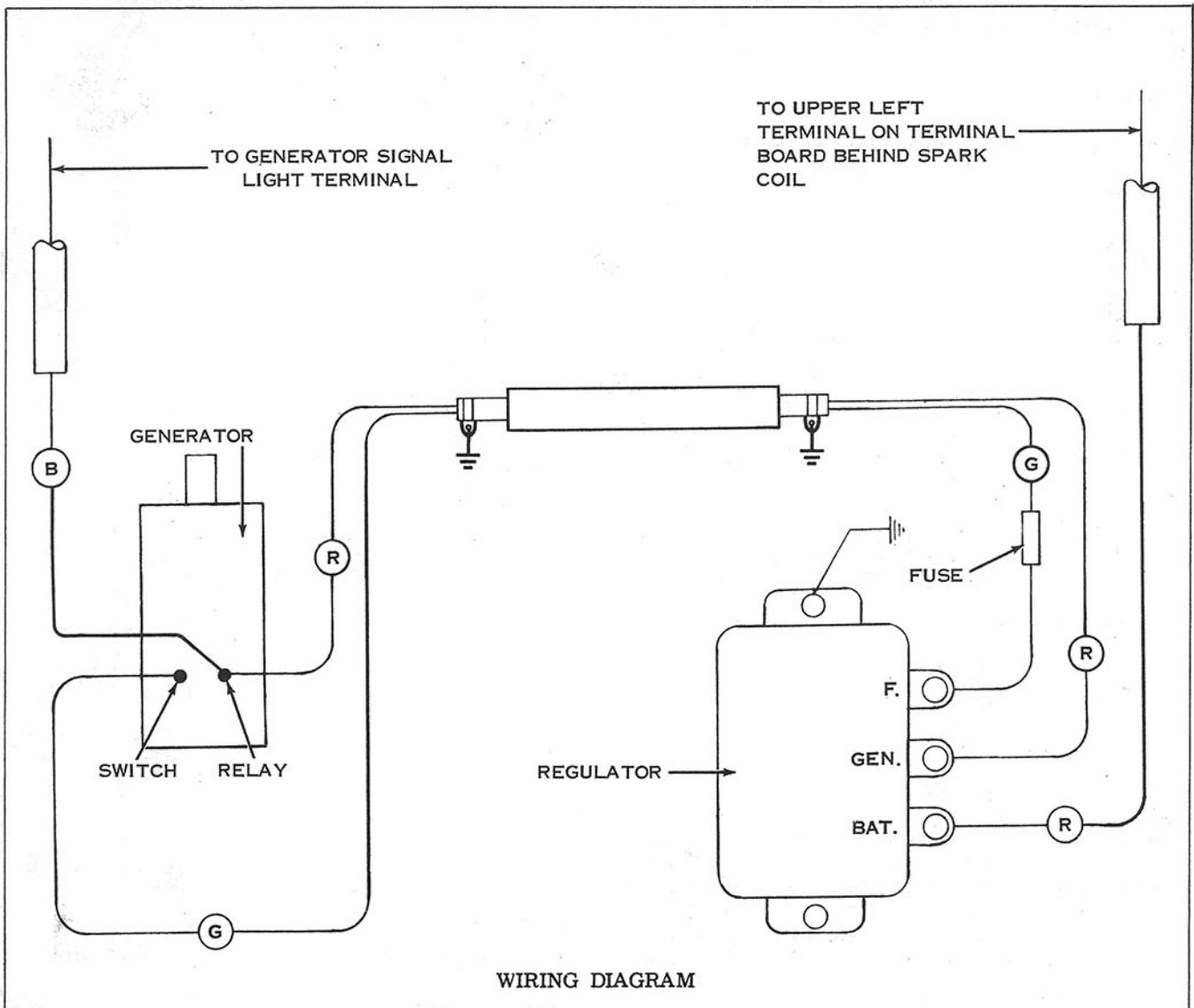
Replace spark coil using regulator mounting studs provided with fittings. Mount regulator to stud ends using self-locking nuts. Attach wire end from terminal board to regulator "BAT" terminal.

terminal board to regulator "BAT" terminal.

GENERATOR WIRING CONNECTIONS

Disconnect 3 wires from cutout relay and remove from engine crankcase. Disconnect green wire from relay terminal of generator and discard. Disconnect green wire from switch terminal of generator and tape up wire terminal, leaving this a loose wire. Also tape up terminal end of red wire which comes from conduit leading from instrument panel leaving this a loose wire. Connect black wire, also leading from this conduit, to the generator relay terminal.

Cable from regulator should be connected as follows: Ground clip is fastened to commutator end cover upper screw using small washer provided. Attach green wire to generator switch terminal and attach red wire to generator relay terminal (with black wire). Reconnect battery. See wiring diagram.



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The **Old Sportster and K-model Research Group (OSKRG)** is a group of individuals who have spent years researching the minute differences in the parts, fit, finish, and configuration of the Harley-Davidson 1952-1956 K-Models, and (early) 1957-1969 Sportster models.

The results of our research is published on our website
www.harleyKmodel.com