

**HIGH VOLTAGE CORRECTION / X-90**

Premature light bulb failure on the X-90 can be caused by excessive voltage. This condition may be the result of insufficient grounding of the electrical system. If this problem exists, the following tests should be made to determine cause.

With the headlamp on and the switch in the low beam position, check A.C. voltage at the headlight as follows:

Connect an A.C. voltmeter to the white wire terminal in the back of the headlight with white wire still connected to terminal. Connect the other voltmeter terminal to ground. With the engine running at 4,000 R.P.M. the voltage across headlamp should not exceed 8 volts A.C.

If the reading exceeds 8 volts the following modifications should be made:

1. Headlight: Connect a length of wire from the headlamp ground (blue) wire to the gas tank front mounting bolt. Use a wire connector on one end and a 1/4" I.D. ring terminal on the other end of wire. Make sure wire terminal-to-frame contact area is free of paint. The wire should be of sufficient length so as not to pull with handlebars in a full turn. If headlamp is already grounded at tank front mounting, make sure paint is cleaned from terminal contact area.
2. Taillight: Remove one of the fender mounting bolts from the taillight and fender mounting bracket. Also, remove the frame lower bolt from the same bracket. Clean both contact areas of paint and install ground strap, part No. 70165-58, between the two bolts and reassemble. Tuck the wire in a neat arrangement around the bracket.
3. Engine: The engine is rubber mounted, therefore, it is advisable to add a ground wire from the lower right rear engine mount to the rear mounting screw of the rear brake stoplight switch. (Note - install the wire between the frame and lock-washer after the contact area has been cleaned of paint). Again, take a voltage reading as stated previously. If the reading is at 8 volts, or above, a resistor should be installed to reduce voltage as shown in the following diagrams.

HARLEY-DAVIDSON MOTOR CO., INC.

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