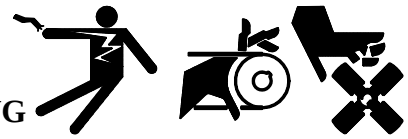
KOHLER® POWER SYSTEMS

TT–598

INSTRUCTIONS

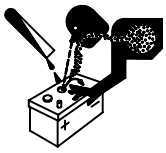
3/91

SCR Service Kit 255367
For 12–Volt Battery Charger
D–269214 and Earlier Models



⚠ WARNING

Accidental starting can cause death or serious personal injury. Turn Generator Master Switch to OFF position, disconnect power to battery charger, and remove battery cables (remove negative lead first and reconnect it last) to disable generator set before working on any equipment connected to generator. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.



⚠ WARNING

Sulfuric acid in batteries can cause permanent damage to eyes, burn skin, and eat holes in clothing. Always wear splash–proof safety goggles when working around the battery. If battery electrolyte is splashed in the eyes or on skin, immediately flush the affected area for 15 minutes with large quantities of clean water. In the case of eye contact, seek immediate medical aid. Never add acid to a battery once the battery has been placed in service. Doing so may result in hazardous spattering of electrolyte.

⚠ WARNING

Battery gases can cause an explosion. Do not smoke or permit flame or spark to occur near a battery at any time, particularly when it is being charged. Avoid contacting terminals with tools, etc. to prevent burns and to prevent sparks that could cause an explosion. Remove wristwatch, rings, and any other jewelry before handling battery. Never connect negative (–) battery cable to positive (+) connection terminal of starter solenoid. Do not test battery condition by shorting terminals together or sparks could ignite battery gases or fuel vapors. Any compartment containing batteries must be well ventilated to prevent accumulation of explosive gases. To avoid sparks, do not disturb battery charger connections while battery is being charged and always turn charger off before disconnecting battery connections. When disconnecting battery, remove negative lead first and reconnect it last.

INSTALLATION

1. Place generator set master switch to OFF position.

2. Remove AC power plug from outlet or turn off AC supply.

3. Disconnect battery clips, negative clip first.

4. If charger has a cranking disconnect relay, remove red lead from cranking control solenoid on engine.
5. Remove battery charger cover by removing eight screws, lock washers, and plain washers.

6. Remove heat sink bracket from chassis by removing four screws, lock washers, and nuts.

7. Cut small wires from SCR's to transformer.

NOTE

Cut wires at transformer solder connections. When properly done, yellow and brown leads will still be connected to transformer.

8. Cut blue and orange leads from SCRs.

9. Remove heat sink from bracket by removing four screws and grounding hardware. Grounding hardware will not be reused.

10. Cut suppressor lamp (neon light) wires at solder connections.

11. Cut old SCR leads flush to SCRs.

NOTE

For best heat dissipation, do not remove SCRs from heat sink.

12. Drill two 0.219 in. (6 mm) diameters holes, 2 in. (51 mm) apart using new SCR module as a template. See Figure 1. Remove burrs.

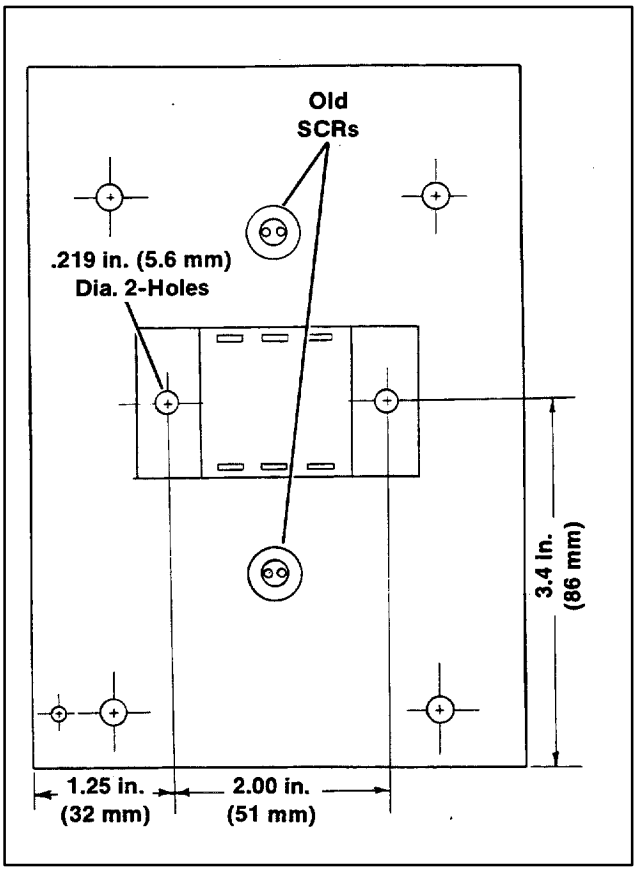


Figure 1. SCR Module Mounting

13. With mating surfaces clean and dry, apply a thin coating of thermal compound to SCR module base.

14. Mount SCR module to heat sink with two screws, plain washers, lock washers, and nuts. Place flat washers between screw head and SCR module base.

NOTE

Torque screws to 20–25 in. lbs. (2–3 Nm).

15. Mount heat sink bracket to chassis with four screws, lock washers, and nuts. Locate in the set of four pre–drilled holes farthest from the transformer. These holes are 2 in. (51 mm) from the original mounting holes. When mounting bottom screws, place lock washers, and nuts to the outside of chassis.

NOTE

Check that no wires are pinched under bracket.

16. Cut off eyelet terminal from loose end of lead connected to ammeter (–). Strip and crimp–on 1/4 in. piggyback terminal.

17. Strip blue and orange leads and crimp–on 1/4 in. fully insulated terminals.

18. Solder supplied yellow lead to transformer at point with existing yellow lead.

NOTE

If transformer has flexible leads, insulate connection with electrical tape.

19. Solder supplied brown lead to transformer at point with existing brown lead.

NOTE

If transformer has flexible leads, insulate connection with electrical tape.

20. Using a stubby flat–blade screwdriver, mount heat sink to bracket with four screws.

21. Wire new SCR module according to wiring diagram.

    Use Step 22A. for SCR module 258660 (newer version) with terminals AC1, AC2, G1, G2, (+), and (–). Use wiring diagram 2A.

    Use Step 22B for SCR module 241960 (early version) with terminals 1, 2, 3, 4, 5, and 6. Use wiring diagram 2B.

22A. Connecting SCR module 258660.

a. Connect black lead from ammeter (–) to SCR module terminal (–).

b. Connect blue lead to SCR module terminal terminal G2.

c. Connect yellow lead from transformer to SCR module terminal AC2.

d. Connect orange lead to SCR module terminal G1.

e. Connect brown lead from transformer to SCR module terminal AC1.

22B. Connecting SCR module 241960.

a. Connect black lead from ammeter (–) to SCR module terminal 4.

b. Connect supplied jumper wire to terminals 1 and 4 of SCR module.

c. Connect blue lead to SCR module terminal terminal 5.

d. Connect yellow lead from transformer to SCR module terminal 6.

e. Connect orange lead to SCR module terminal 2.

f. Connect brown lead from transformer to SCR module terminal 3.

23. Remove brown and yellow leads from circuit board terminals 3 and 6 respectively.

24. Cut off terminals from brown and yellow leads. Strip ends and connect suppressor lamp wires to brown and yellow leads. Crimp–on new 3/16 in. push–on terminals.

25. Connect brown lead to terminal 3 and yellow lead to terminal 6 of circuit board.

NOTE

Be certain suppressor lamp wires do not contact any other metal objects, including the charger cover when replaced.

26. Replace battery charger cover with eight screws, lock washers, and plain washers.

27. If charger has a cranking disconnect relay, connect red lead with eyelet terminal to

cranking control solenoid on engine.

28. Reconnect battery clips to battery terminals, negative clip last.

29. Reconnect AC power plug to outlet or turn on AC supply.

PARTS LISTING

Part Number	Description	Qty.
258660 (was 241660)	Module, SCR	1
287945	Compound, thermal	1
X–22–9	Washer, #10 lock	2
X–25–36	Washer, #10 plain	2
X–50–15	Screw, 10–24 x 1/2 in.	2
X–70–2	Nut, 10–24	2
X–431–19	Terminal, 3/16 in. push–on	2
X–431–23	Terminal, 1/4 in. piggyback	1
X–431–25	Terminal, 1/4 in. fully ins. push–on	2
–	Lead, brown	1
–	Lead, yellow	1
–	Lead, black (used with 241660 SCR module only)	1

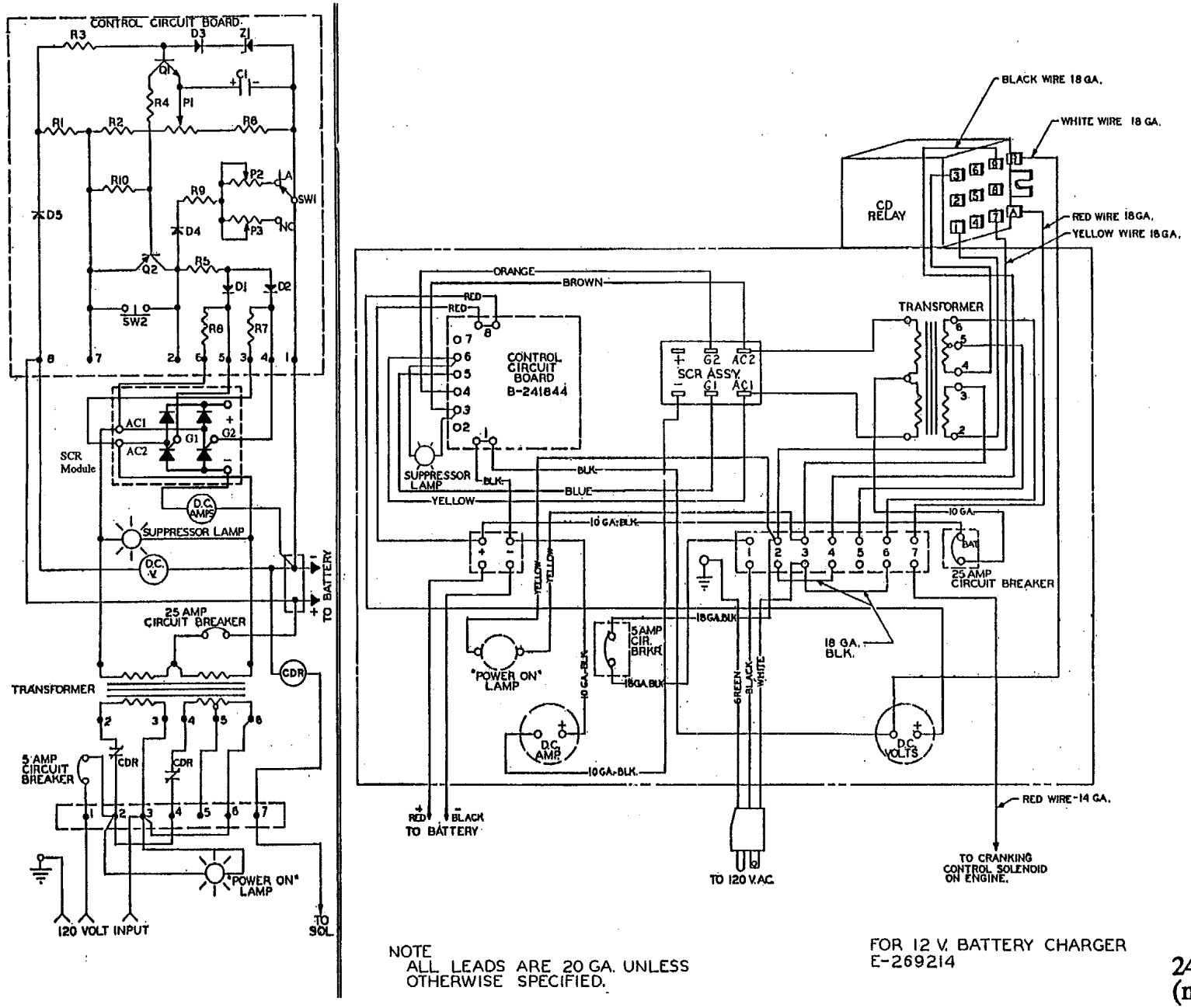


Figure 2A. Battery Charger Wiring Diagram using 258660 SCR Module

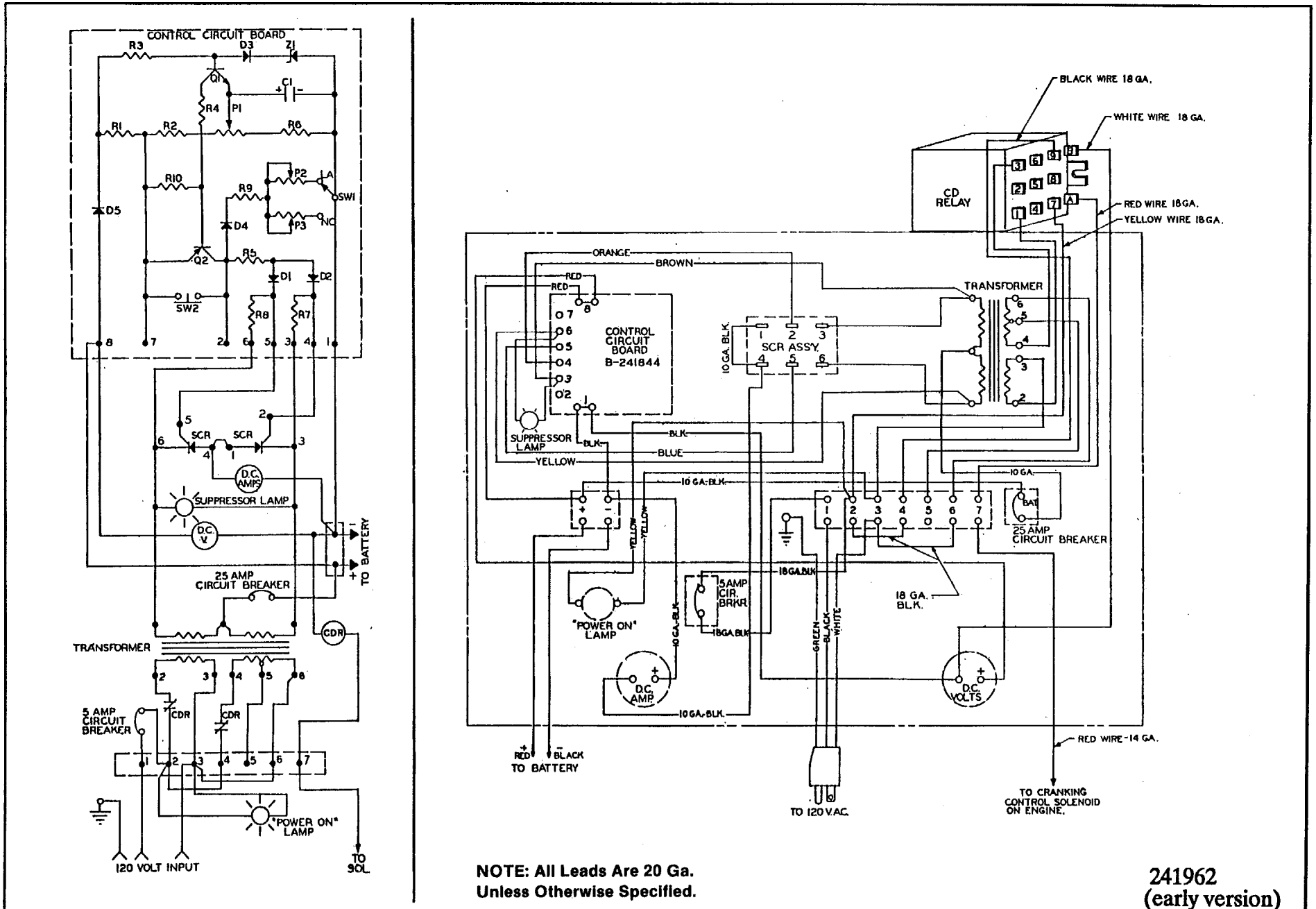


Figure 2B. Battery Charger Wiring Diagram using 241960 SCR Module