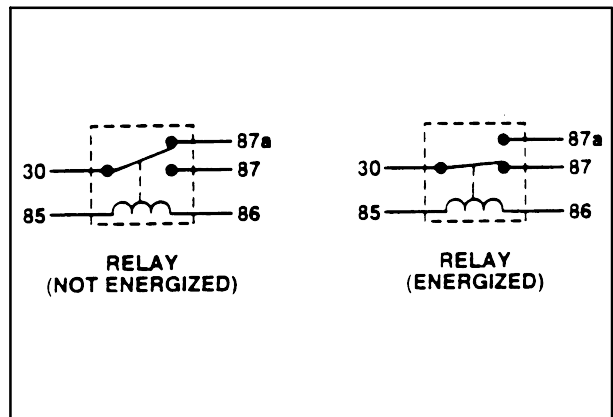


Relays are used on the TC series tractors to automatically complete (close) a circuit. The relays are located under the left side of the dash cover, behind the tractor's firewall. A relay contains two parts of a circuit. One part, the control circuit, uses current to energize a coil. The other part, the function circuit, is a switch. When energized, the coil of a relay becomes an electromagnet opening or closing a single circuit or directing current from one circuit to another, depending on the type of relay.

TC deluxe model tractors utilize ten relays and economy model tractors use six relays. There are four different relays used on the TC series tractors.

The function circuits are normally open when no current is being supplied to the coil. If a circuit with an SPST relay is energized with current on the TC series tractor, the switch becomes closed and the circuit is completed. The relay is then considered to be latched.



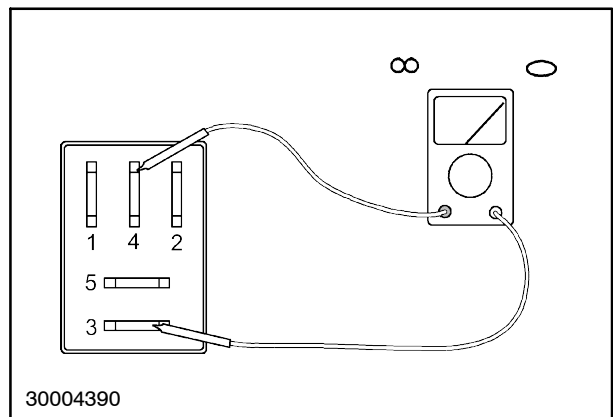
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TESTING-MICRO RELAYS

“HI”, “LOW”, CRUISE CONTROL, FUEL SHUTOFF, PTO SAFETY, AND GLOW PLUG LAMP RELAYS

Replacement

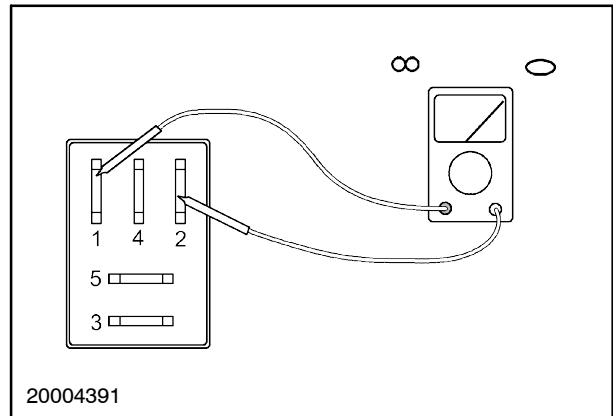
1. Remove the relay suspected of being faulty from the tractor to test.
2. Using an ohmmeter, touch one test probe to terminal 3 and the other test probe to terminal 4.
3. Observe the ohmmeter. There should be little or no resistance, indicating continuity. If there is no continuity, the relay is defective and needs replaced.



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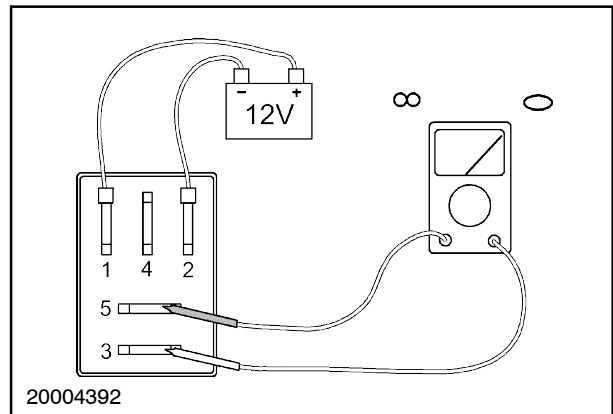
63

4. If the previous test showed continuity, touch one ohmmeter probe to terminal 1 and the remaining probe to terminal 2.
5. Observe the ohmmeter. The ohmmeter should read approximately 79.5 ohms. If the reading is not as specified, the relay is defective and needs replaced.



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6. If the results from the previous test were good, use a jumper lead to connect the positive (+) terminal of a 12-volt power source to terminal 1 of the relay. Use a jumper lead to connect the negative (-) terminal of a 12-volt power source to terminal 2 of the relay. The relay should now energize.
7. Using an ohmmeter touch a test probe to terminal 3 of the relay. Touch the other ohmmeter test probe to terminal 5.
8. Observe the ohmmeter. There should be little or no resistance, indicating continuity. If there is no continuity, the relay is defective and needs replaced.

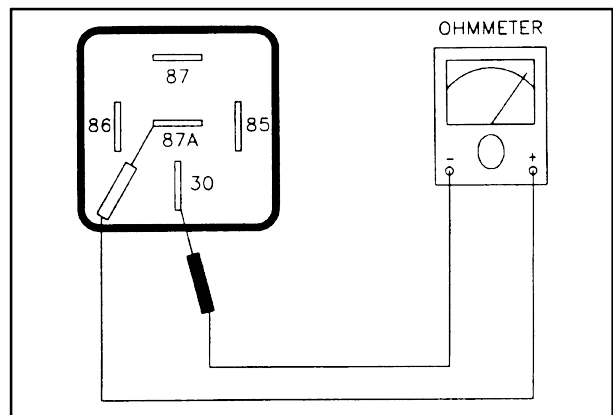


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HEADLIGHT AND NEUTRAL START RELAYS

Replacement

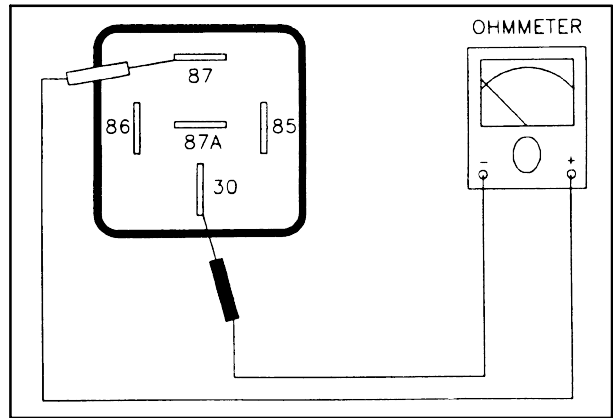
1. Remove the relay suspected of being faulty from the tractor to test.
2. Using an ohmmeter, touch one test probe to terminal 87A and the other test probe to terminal 30.
3. Observe the ohmmeter. There should be little or no resistance, indicating continuity. If there is no continuity, the relay is defective and needs replaced.



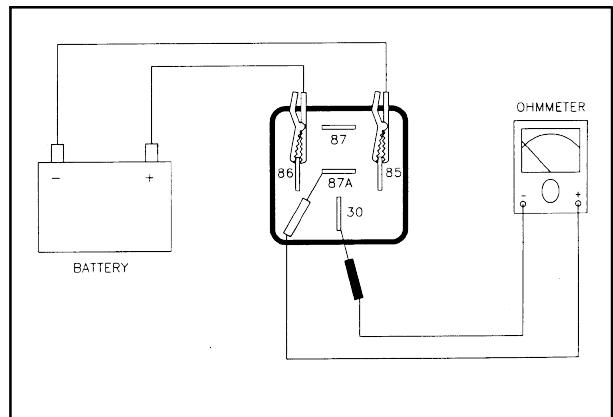
66

SECTION 55 - ELECTRICAL - CHAPTER 1

4. Repeat the previous test for terminal 30 and 87. There should be no continuity between these terminals. If tests indicate continuity, the relay is defective and needs replaced.
5. If the results from the previous test were good, use a jumper lead to connect the positive (+) terminal of a 12-volt power source to terminal 86 of the relay. Use a jumper lead to connect the negative (-) terminal of a 12-volt power source to terminal 85 of the relay. The relay should now energize.
6. Using an ohmmeter touch a test probe to terminal 30 of the relay. Touch the other ohmmeter test probe to terminal 87.
7. Observe the ohmmeter. There should be little or no resistance, indicating continuity. If there is no continuity, the relay is defective and needs replaced.
8. While the 12-volt power source is still connected, touch an ohmmeter test probe to terminal 30 and terminal 87A. There should be high resistance indicating no continuity between the terminals. If there is continuity, the relay is defective and needs replaced.



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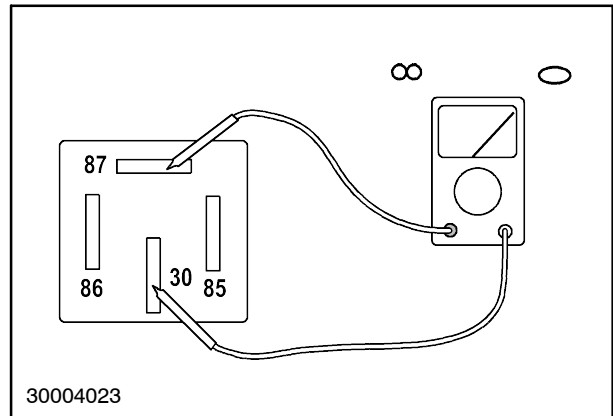


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GLOW PLUG POWER RELAY

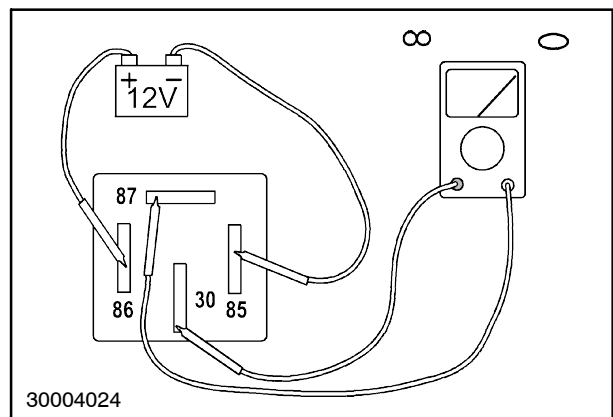
Replacement

1. Remove the glow plug power relay from the tractor.
2. Using an ohmmeter, touch one test probe to terminal 87 and the other test probe to terminal 30.
3. Observe the ohmmeter. There should be high resistance between these terminals, indicating no continuity. If tests indicate continuity, the relay is defective and needs replaced.



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4. If the results from the previous test were good, use a jumper lead to connect the positive (+) terminal of a 12-volt power source to terminal 86 of the relay. Use a jumper lead to connect the negative (-) terminal of a 12-volt power source to terminal 85 of the relay. The relay should now energize.
5. Using an ohmmeter touch a test probe to terminal 30 of the relay. Touch the other ohmmeter test probe to terminal 87.
6. Observe the ohmmeter. There should be little or no resistance, indicating continuity. If there is no continuity, the relay is defective and needs replaced.



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