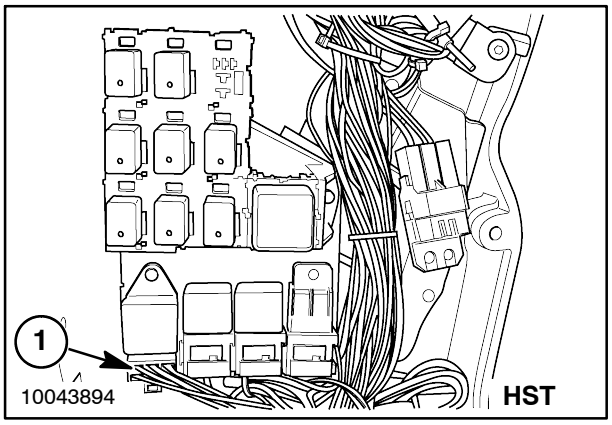
GLOW PLUG TIMER

The glow plug timer, 1, is an electronic timer that is located under the left side of the dash cover, behind the tractor's firewall. The timer controls how long the glow plugs and the indicator light on the instrument panel remain supplied with current when the key switch is turned form the "OFF" position to the "ACC/RUN" position. The glow plug timer delays the glow plugs and indicator light on deluxe model tractors for 4-5 seconds and for 10-11 seconds on the economy model tractors. The glow plug timer controls the glow plug and indicator light circuit by supplying or cutting the ground path to the glow plug power relay's coil circuit.



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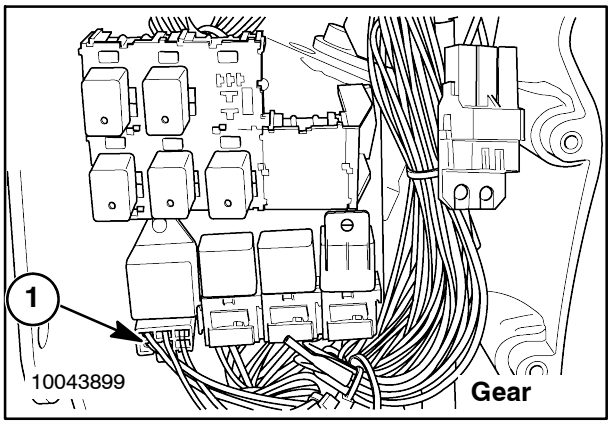

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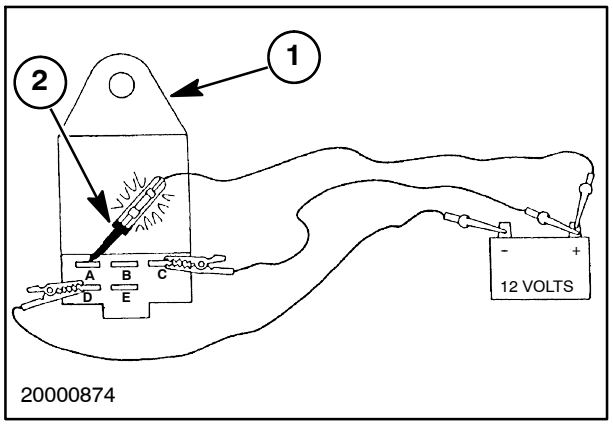
Testing

1. Disconnect the negative (-) battery cable from the battery.
2. Remove the bolt retaining the light timer to the tractor and disconnect the timer from the main wiring harness.

NOTE: *The terminals are not number or letter coded on the light timer.*

3. Connect a jumper wire from terminal “C” on the timer, 1, to the positive (+) terminal of a 12-volt power supply.
4. Connect a test light, 2, from terminal “A” of the timer, 1, to the positive (+) terminal of a 12-volt power supply.
5. Connect a jumper wire from terminal “D” of the timer, 1, to the negative (–) terminal of the 12-volt power supply. Observe the test light, 2.
6. The test light should illuminate for approximately 4 – 5 seconds for the deluxe models and 10-11 seconds for economy models, then turn off. If the test light fails to illuminate or does not turn off after the specified time, the timer is defective and needs replaced.
7. Connect the negative (–) battery cable to the battery.



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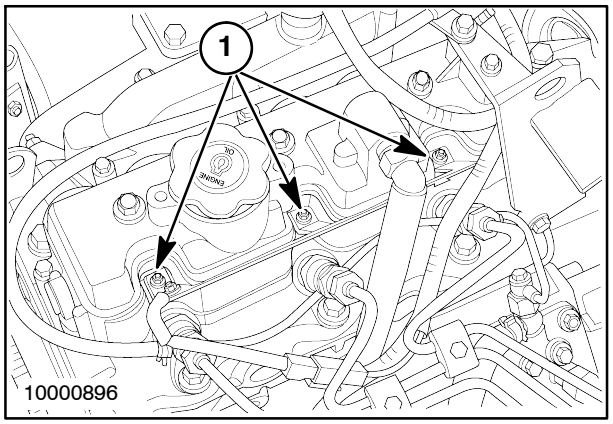
ENGINE GLOW PLUGS

The engine glow plugs, 1, are located on the right side of the engine cylinder head, below the fuel injectors. The glow plugs are used to preheat the air in the pre-combustion chamber. This aids in the starting of the engine when cold.



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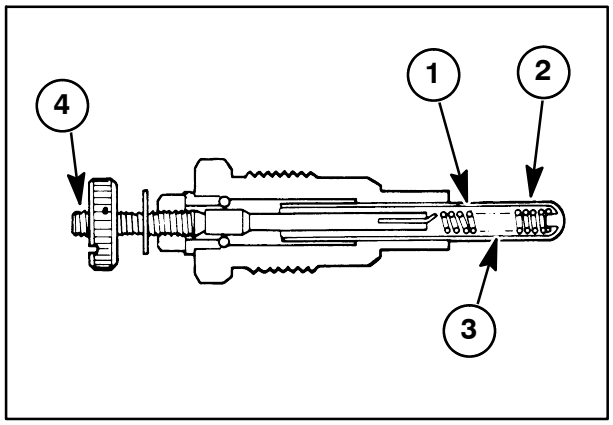
The glow plugs utilize a heating element that is contained in a stainless steel sheath, 1. The coiled heating wire, 2, is sintered into magnesium oxide powder, 3. The magnesium oxide powder is used to evenly transfer heat to the stainless steel sheath, which heats the air in the combustion chamber. The magnesium oxide powder is also used to insulate the heating wire from the outer sheath and glow plug body.

The glow plug heats when electrical current is passed from the glow plug electrode, 4, to one end of the heating wire, 2. Electrical resistance warms the heating wire when electrical current is flowing through the wire. The opposite end of the wire is connected to the sheath. The sheath and glow plug body, 5, are grounded by the engine block.

NOTE: *All deluxe TC tractors utilize a fast heating type glow plug (marked Y-701RS). All economy model tractors utilize a slower heating glow plug (marked Y-107 V glow plug).*

Removal

1. Disconnect the negative (–) battery cable from the battery.
2. Remove the electrode nuts, 1, the electrical connector, 2, and washers securing the electrode bus bar, 3, to the glow plugs.
3. Remove the glow plug(s) from the engine cylinder head.



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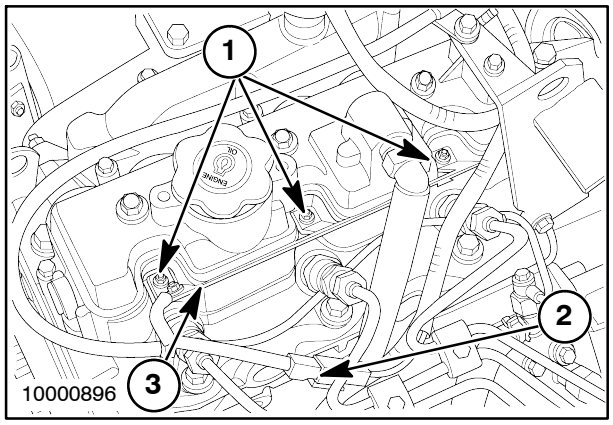

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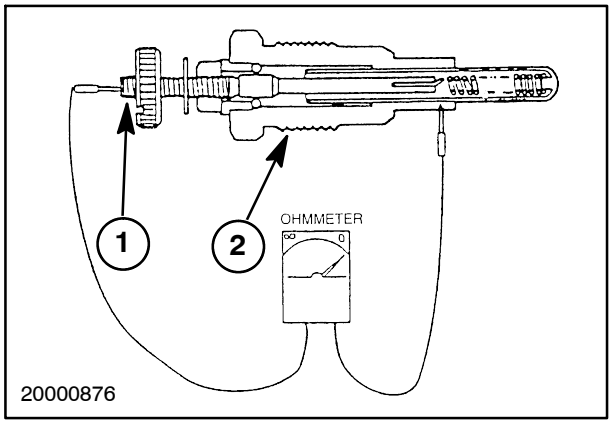
Testing

1. Remove carbon from the sheath end of the glow plug

NOTE: *Do not test resistance using the glow plug sheath.*

2. Using an ohmmeter, touch one test probe to the glow plug electrode, 1. Touch the other test probe to the glow plug body, 2.
3. Observe the ohmmeter reading, a resistance reading of 0.8 ohms maximum is normal for the TC deluxe model tractor glow plugs. A resistance reading of 1.0 ohms maximum is normal for TC economy model tractor glow plugs. If the resistance is too high, the glow plug is defective and needs replaced.



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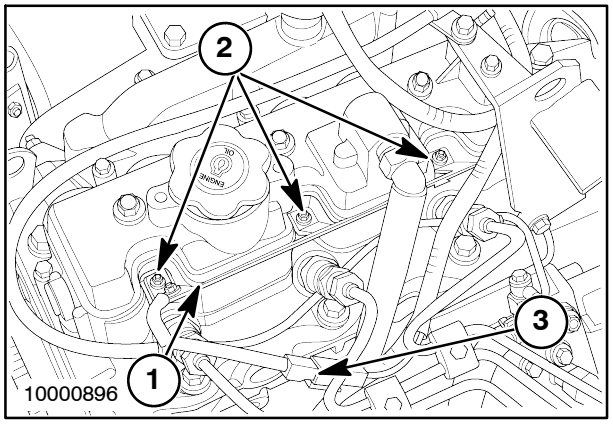
Installation

1. Thread the glow plugs into the engine cylinder head. Torque each glow plug to 10 – 15 N·m (11.0 – 14.5 ft. lb.).
2. Install the electrode bus, 1, and the washers onto the glow plugs. Secure with the three (3) nuts, 2.
3. Connect the electrical connector, 3, to the wire harness.
4. Connect the negative (-) battery cable to the battery.



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