AIR PRESSURE SENSOR TEST—445

Reason:

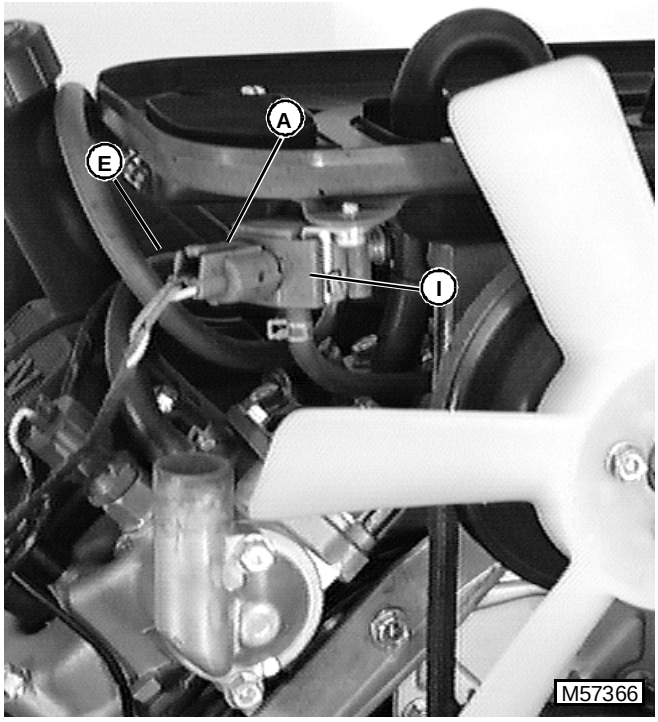
To verify air pressure sensor continuity and operation.

Equipment:

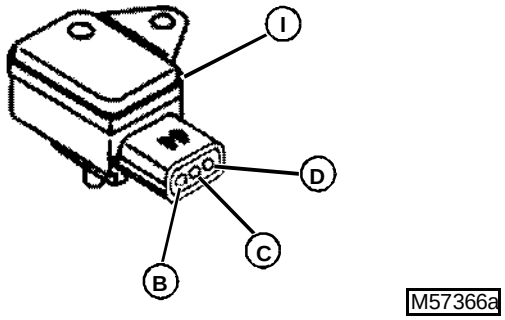
- Ohmmeter
- Voltmeter

Procedure:

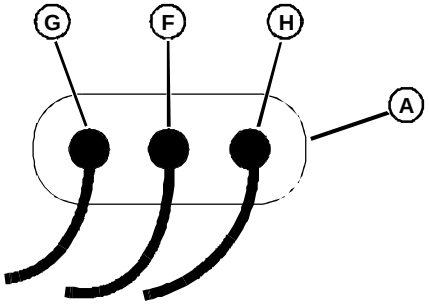
1. Turn key switch to off position.



2. Disconnect air pressure sensor connector (A).



3. Measure resistance between left (B), center (C), and right (D) terminals on (I) connector.
4. Connect air pressure sensor connector.
5. Disconnect air pressure sensor hose (E).
6. Turn key switch to on position.



7. Connect voltmeter negative lead to air pressure sensor (A) black wire terminal (F). Connect meter positive lead to red/blu wire terminal (G). Measure input voltage. Voltage should be about 5 volts.
8. Connect meter positive lead to wht/brn wire terminal (H). Measure output voltage. Voltage should be something less than 5 volts depending on air pressure.
9. Apply slight air pressure to sensor hose. Voltage should increase. Apply slight vacuum to hose and voltage should decrease.

Specifications:

Terminal resistance (Approximation):

Left (B) and center (C) . . . . . 2986—3034 ohms
Left (B) and right (D) . . . . . 773—787 ohms
Center (C) and right (D) . . . . . 3774—3798 ohms
Input voltage (G). . . . . about 5 volts
Output voltage (H) . . . . . 0.5—4.9 volts depending on air pressure

Results:

- If resistance does not meet specifications, check output voltage before replacing the air pressure sensor. The tested resistance values may vary from the specifications due to type of meter used or temperature.
- If the output voltage does not increase or decrease, replace the air pressure sensor.

AIR TEMPERATURE SENSOR TEST—445

Reason:

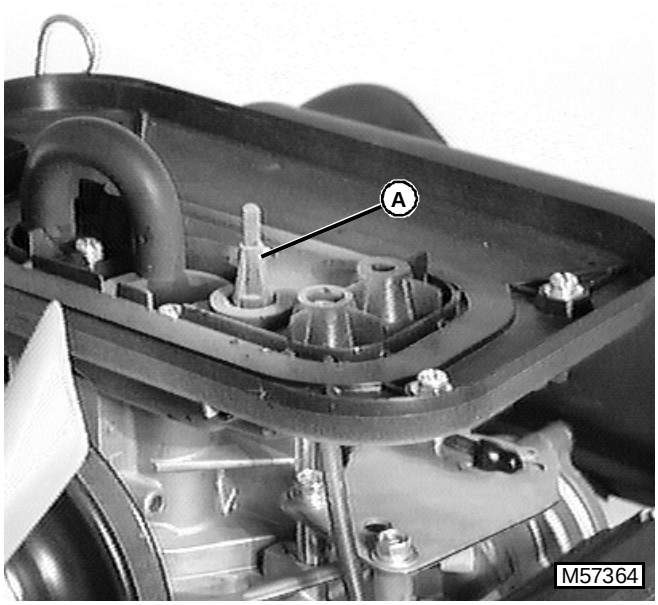
To verify air temperature sensor continuity.

Equipment:

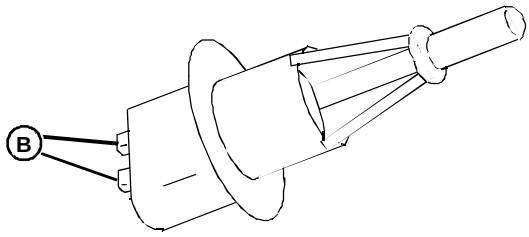
- Ohmmeter

Procedure:

1. Turn key switch to off position.



2. Disconnect air temperature sensor connector (A).



3. Measure resistance across air temperature sensor terminals (B).

Specifications:

Resistance at 20°C (68°F) . . . . . .2.21—2.69 k-ohms
Resistance at 0-30°C (32-86°F) . .5.88—1.65 k-ohms

Results:

- If resistance does not meet specifications, replace the air temperature sensor. The tested resistance values may vary from the specifications due to type of meter used or temperature.

BATTERY TEST

⚠ CAUTION

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into the eyes.
Avoid the hazard by:

1. **Filling batteries in a well-ventilated area.**
2. **Wearing eye protection and rubber gloves.**
3. **Avoiding breathing fumes when electrolyte is added.**
4. **Avoid spilling or dripping electrolyte.**
5. **Use proper jumpstart procedure.**

If you spill acid on yourself:

1. **Flush your skin with water.**
2. **Apply baking soda or lime to help neutralize the acid.**
3. **Flush your eyes with water for 10—15 minutes. Get medical attention immediately.**

If acid is swallowed:

1. **Drink large amounts of water or milk.**
2. **Then drink milk of magnesia, beaten eggs, or vegetable oil.**
3. **Get medical attention immediately.**

Reason:

To check condition of battery and determine battery voltage.

Equipment:

- Hydrometer
- Voltmeter or JTO5685 Battery Tester

Procedure:

1. Park machine on level surface.
2. Turn key switch off.
3. Engage parking brake.
4. Clean cable ends, battery terminals and top of battery.
5. Remove battery to workbench.
6. Inspect battery terminals and case for breakage or cracks.
7. Check electrolyte level in each battery cell. Add clean, soft water as needed. If water was added, charge battery for **20 minutes at 10 amps**.