



# Activity 26

## John Deere Pressure Sensors

**At idle what is the voltage:**

MAP \_\_\_\_\_ UTP \_\_\_\_\_

**At 1500 RPM what is the voltage:**

MAP \_\_\_\_\_ UTP \_\_\_\_\_

**At full boost what is the voltage:**

MAP \_\_\_\_\_ UTP \_\_\_\_\_

### ***Step 3 questions***

1. If the Map sensor was faulty and the return voltage was 2.5V @ idle how would the engine management system respond?

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2. If the UTP sensor was faulty and the return voltage was 4.5V @ idle how would the engine management respond?

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3. During hard acceleration the MAP sensor signal voltage should?

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4. If the MAP sensor is faulty (reading high) will the fuel correction factor change?

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5. If there was an open in the 5VDC reference wire what would the sensor signal be?

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# Activity 26

## John Deere Pressure Sensors

### BARO Sensor

Student Name \_\_\_\_\_

Date \_\_\_\_\_

#### Tools and equipment:

1. Classroom materials
2. Tool Set
3. Lap Top Tool
4. Lab-scope

#### Step 1

#### Locate the Barometric Pressure sensor

A. BARO Sensor Signal      Wire color \_\_\_\_\_

#### Step 2.

- Connect the lap top to the diagnostic connector and view the MAP sensor data
- Back probe the BARO sensor signal wire with a lab-scope
- Turn the scope on
- Select the correct test leads
- Adjust the correct time base and voltage scale to view a 5VDC signal
- Record the following measurement KOER & KOEO as specified below

#### **BARO**

#### **MAP-Scope/Lap-top**

a. **0" of vacuum** (koeo)

Lab-scope \_\_\_\_\_

MAP PID (lap-top) \_\_\_\_\_

b. **Idle (15"of vacuum)**

Lab-scope \_\_\_\_\_

MAP PID (lap-top) \_\_\_\_\_

c. **2000 RPM**

Lab-scope \_\_\_\_\_

MAP PID (lap-top) \_\_\_\_\_

Notes:

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# Activity 26

## John Deere Pressure Sensors

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### Specifications:

below 1000 feet ----- 4.5 volts  
1000 to 2000 feet ---- 4.0 volts  
2000 to 3000 feet ---- 3.5 volts  
3000 to 4000 feet ---- 3.0 volts  
4000 to 5000 feet ---- 2.5 volts

5000 to 6000 feet ---- 2.0 volts  
6000 to 7000 feet ---- 1.5 volts  
7000 to 8000 feet ---- 1.0 volts

### Step 4 questions

6. If the barometric pressure sensor was faulty and the return voltage was 2.5V @ sea level how would the engine management system respond?

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7. If the barometric pressure sensor was faulty and the return voltage was 4.5V @ 5000 feet above sea level how would the engine management respond?

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8. During hard acceleration the BARO sensor signal voltage should?

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9. If the BARO sensor is faulty will the fuel correction factor change?

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10. If there was an open in the 5VDC reference wire what would the sensor signal be?

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# Activity 26

## John Deere Pressure Sensors

### Natural Gas Pressure

Student Name \_\_\_\_\_

Date \_\_\_\_\_

#### Tools and equipment:

1. Classroom materials
3. Lap Top Tool

2. Tool Set
4. Lab-scope

#### Step 1

#### Locate the Natural Gas Pressure Sensor

A. NGP Sensor Signal      Wire color \_\_\_\_\_

#### Step 2.

- Install a pressure gauge to the test port
- Turn on the pressure tester
- Back probe the pressure sensor signal wire
- Record the following voltage values in the space provided

#### KOEO what is the voltage/pressure:

NGP \_\_\_\_\_ Pressure reading \_\_\_\_\_

#### KOER what is the voltage:

NGP \_\_\_\_\_ Pressure reading \_\_\_\_\_

#### At full boost what is the voltage:

NGP \_\_\_\_\_ Pressure reading \_\_\_\_\_

# Activity 26

## John Deere Pressure Sensors

### Step 3 questions

11. If the NGP sensor was faulty and the return voltage was low how would the engine management system respond?

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12. If the NGP sensor was faulty and the return voltage was high how would the engine management respond?

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13. During hard acceleration the NGP sensor signal voltage should?

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Notes:

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