**CDX Distance Learning**

**Exercise #19**

**DIN Wiring Diagram Diagnostics 1**

**Student Name:** Click or tap here to enter text.

Understanding the wiring diagram is key to any electrical system diagnosis. Use the figure below to answer the following questions.

A screenshot of a cell phone

Description automatically generated

1. When using wiring diagrams, the technician should be able to determine which pins they need to test to determine a system failure. In the wiring diagram, the face vent motor has a position error with a low voltage condition. Which pin is 5V reference for the sensing circuit on the face vent motor?
   1. Pin T7a/4
   2. Pin T7a/5
   3. Pin T7a/6
   4. Pin T7a/7
2. If all the HVAC motors are indicating a feedback, low-side signal circuit failure, with which pin off of the J255 should the technician start their diagnosis?
   1. Pin T22f/12
   2. Pin T22f/1
   3. Pin T26e/21
   4. Pin T26e/15
3. If the defrost motor is stuck in the open position and is indicating a DTC, how could the technician test to see if the ECM is trying to close the defrost vent?
   1. The technician could look to see if there is a signal coming out of the ECM at pin T26e/11.
   2. The technician could do an ohm’s resistance check across the motor at pins T7b/3 and T7b/4.
   3. There is no check. The technician assumes the ECM is trying to correct the condition, so they just replace the motor.
   4. The technician could strike the motor to see if they can get it to work and then replace the motor.
4. If the plastic floor vent in the HVAC box becomes damaged and stuck, what will the floor vent motor indicate?
   1. The floor motor will overcome any mechanical failure within the HVAC box.
   2. The HVAC module will indicate a mechanical failure of the HVAC box in a DTC.
   3. It will indicate a bad floor motor as everything electrical will be trying to work correctly.
   4. The HVAC module will adapt to a failed motor and adjust the others to compensate.
5. Using the wiring diagram legend to understand which components you are looking at is the first step in using wiring diagrams for diagnostics. Which component is indicated as V107?
   1. HVAC module
   2. Defrost motor
   3. Face vent motor
   4. Floor vent motor
6. If one of the position sensors shorts the power feed to ground within the sensor, what can happen to the signal of the other sensors?
   1. Since all the sensors use the same power feed, it could affect the output of the other sensors.
   2. Nothing, as each sensor is independent of every other sensor.
   3. The affected sensor will indicate the possibility of other issues within the sensor power-feed circuit.
   4. It will create an open within the power-feed circuit causing no feedback with no DTCs indicated.
7. Which of these labels indicate the ground circuit for all the signal feedback sensors?
   1. I36
   2. G136
   3. V108
   4. J36
8. When using a DIN diagram, how does the technician know where the location of the component is on the wiring diagram?
   1. The service information will indicate the position of the component based on a computer screen image of the system.
   2. Using the number scale on the bottom and the letter scale on the side, the technician can determine where the component is located on the schematic.
   3. The technician needs to just search for it throughout the whole set of wiring diagrams.
   4. The technician should just know which diagrams they should look at to find the required information.
9. When looking at a component, what does it indicate if the component has a solid line all the way around it without any indicators that other items are related?
   1. It means that this image of the component includes all the wiring that this component has.
   2. It means the OEM has provided only part of the information for this component.
   3. It doesn’t mean anything; it is just a way to illustrate this component.
   4. That it is an integral component of the vehicle’s communication system.
10. What type of symbol is on the wiring diagram where the wires connect?
    1. A dot that intersects both wires
    2. A space between two wires
    3. A pin at each module
    4. A u-shaped image