TERREPOWER
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LMS: Starter System Diagnostics – Most Likely Repair Quiz

1. What is the first step when diagnosing a no-crank condition?
A. Replace the starter
B. Check the battery voltage
C. Inspect the alternator
D. Replace the ignition switch
Correct Answer: B. Check the battery voltage
Explanation: Always verify battery condition first since low voltage is a common cause of no-start issues.

2. What is the ideal open circuit voltage (OCV) for a fully charged battery?
A. 10.5V
B. 11.8V
C. 12.6V
D. 13.5V
Correct Answer: C. 12.6V
Explanation: A fully charged battery should read approximately 12.6V or higher.

3. Why is voltage drop testing preferred over resistance (ohms) testing in starter circuits?
A. It is faster
B. It measures current flow directly
C. It detects resistance under load
D. It works without tools
Correct Answer: C. It detects resistance under load
Explanation: Voltage drop testing reveals real-world resistance when the circuit is operating.

4. What is the maximum acceptable total voltage drop in a starter circuit?
A. 0.1V
B. 0.5V
C. 1.0V
D. 2.0V
Correct Answer: B. 0.5V
Explanation: Total voltage drop should not exceed about half a volt.

5. What does a repetitive clicking sound usually indicate?
A. Engine is seized
B. Starter is too powerful
C. Low battery voltage or insufficient current
D. Transmission issue
Correct Answer: C. Low battery voltage or insufficient current
Explanation: Clicking typically means the solenoid is engaging but not enough power reaches the starter.

6. What is measured during an amp draw test?
A. Voltage supply
B. Current used by the starter
C. Resistance in the wires
D. Fuel pressure
Correct Answer: B. Current used by the starter
Explanation: Amp draw shows how much current the starter is pulling during operation.

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7. What can high starter amp draw indicate?
A. Weak battery
B. Loose wiring
C. Mechanical resistance (e.g., engine hard to turn)
D. Low voltage
Correct Answer: C. Mechanical resistance
Explanation: High current draw often indicates the engine is difficult to rotate.

8. What can low amp draw during cranking indicate?
A. Engine seizure
B. Strong battery
C. Electrical supply problem
D. Proper operation
Correct Answer: C. Electrical supply problem
Explanation: Low current usually means insufficient power reaching the starter.

9. What happens if a starter is too far from the flywheel?
A. No sound at all
B. High-pitched whining during cranking
C. Engine stalls immediately
D. Increased fuel consumption
Correct Answer: B. High-pitched whining during cranking
Explanation: The starter gear isn't engaging the flywheel properly.

10. Why is proper torque and clean installation important for a starter?
A. It improves fuel economy
B. It reduces tire wear
C. It ensures proper alignment and electrical grounding
D. It changes engine timing
Correct Answer: C. It ensures proper alignment and grounding
Explanation: Proper installation ensures reliable engagement and electrical performance.