

ANSWER KEY TO CHALLENGE SHEET

GENERAL ENGINE DIAGNOSIS CHALLENGE 4

Customer's Concern: The engine makes a very loud noise when it is running. It sounds like a tractor.

Customer Vehicle: Chevrolet Malibu.

Possible Causes of This Challenge:

1. Exhaust leak.
2. Internal engine problem (lift or piston noise).
3. Exhaust vibrating against floor.
4. Clutch or torque converter failure.
5. Bearing failure in an engine-driven accessory (alternator, AC compressor, PS pump).

Safety First Practices to Follow:

1. Wear safety glasses at all times.
2. Use proper procedure when using a lift or a jack and jack stands.
3. Watch out for moving or hot parts when making under-hood inspection.
4. Follow all safety rules when using hand tools.

Tools and Equipment Required:

1. Vehicle service information.
2. Engine diagnostic machine or oscilloscope.
3. Hoist or jack and jack stands.
4. Appropriate scanner or test equipment.
5. Timing light.