

Modern Automotive Technology Chapter 45

Engine Performance and
Driveability

North Montco
Technical Career Center

Chapter 45

Engine Performance and Driveability

- List the most common cause of engine performance problems
- Describe symptoms of common problems
- Explain typical causes of engine performance problems
- Explain how to use a systematic approach to diagnosing engine performance problems
- Discuss safety procedures when working on a performance problem

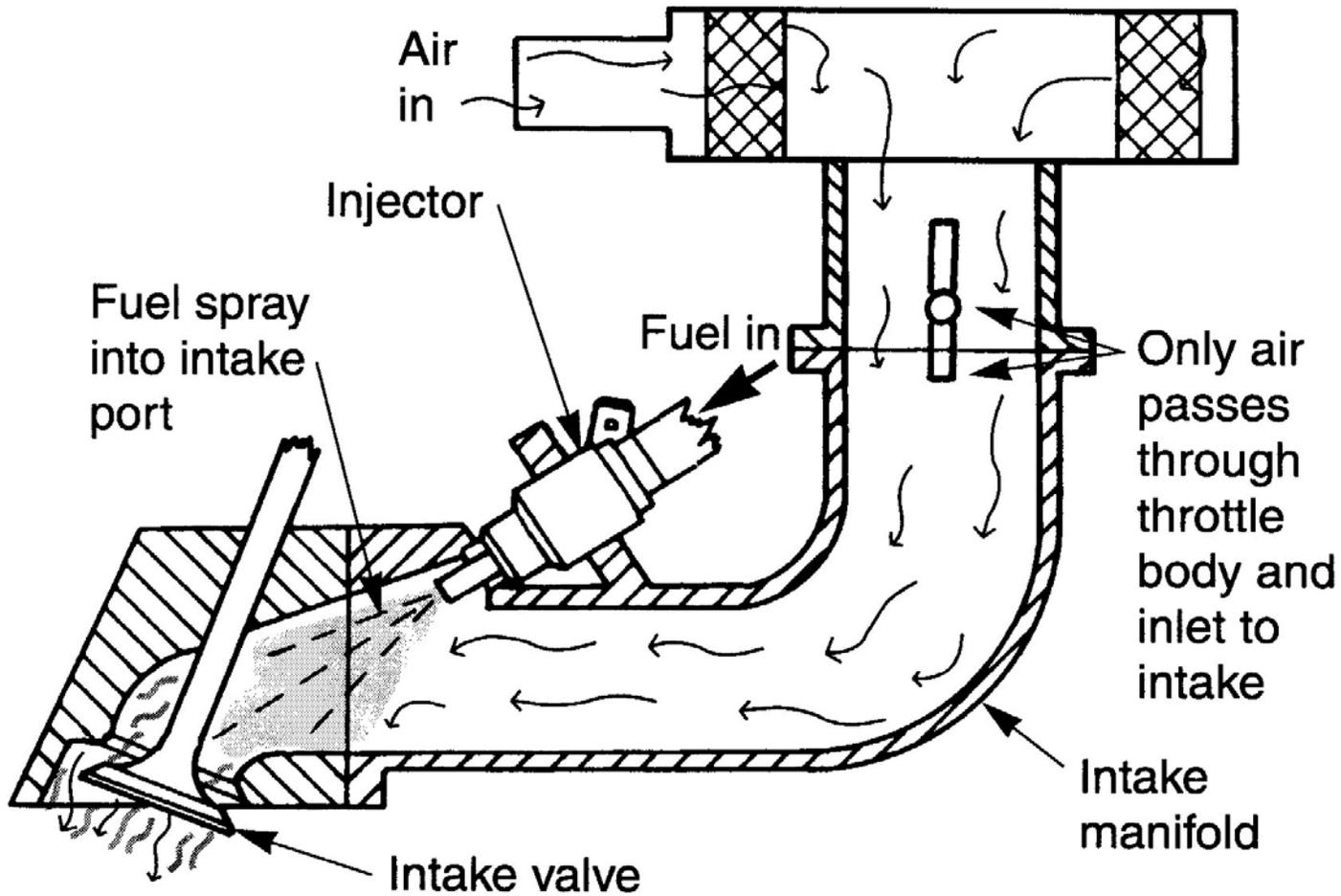
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1. A **SURGING** condition occurs where engine power fluctuates up and down.
2. **VAPOR LOCK** occurs when the fuel is overheated, forming air bubbles that upset air-fuel mixture.

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Multiport injection

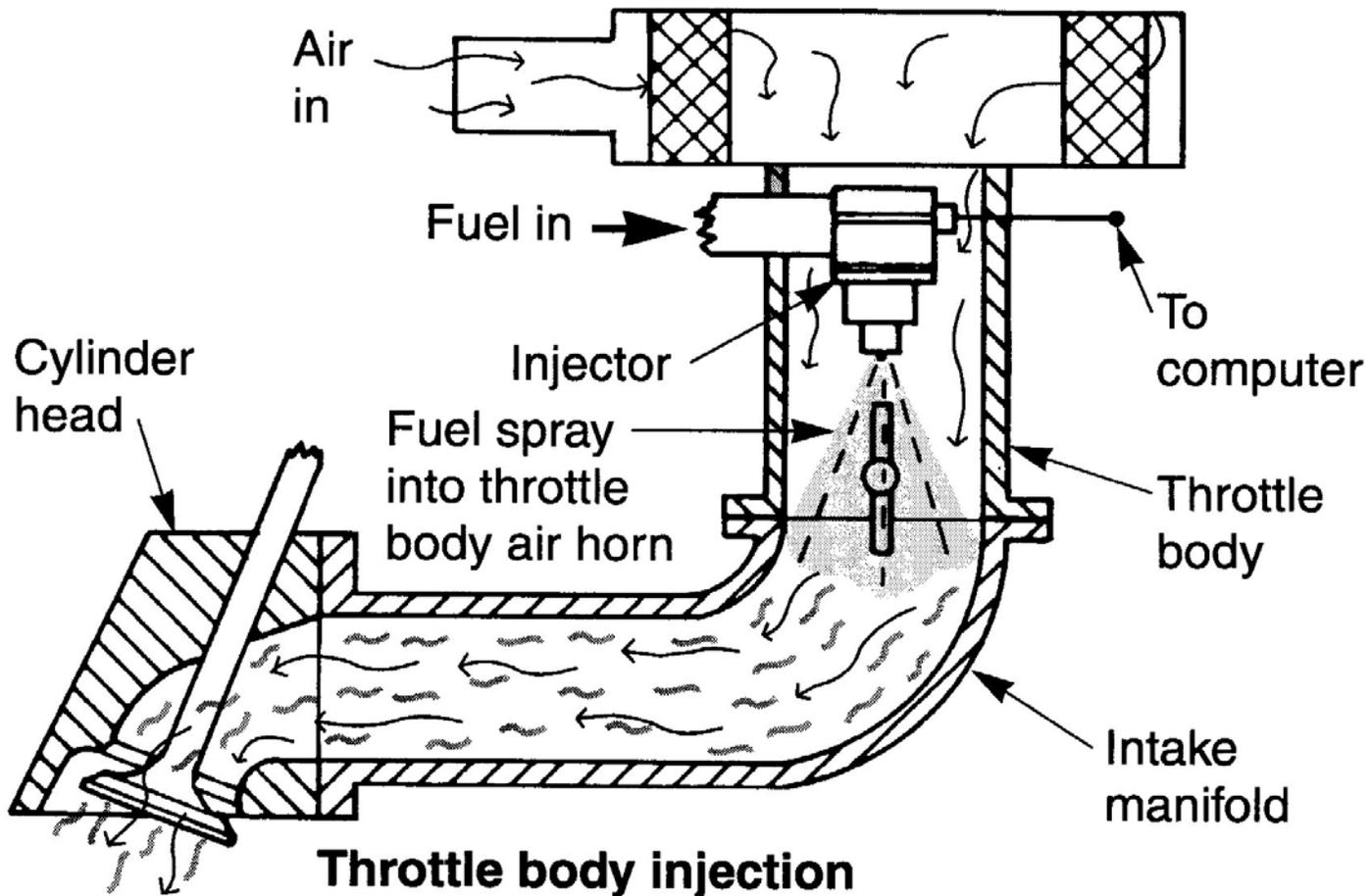
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3. **POOR FUEL ECONOMY** is a condition causing the vehicle to use too much gasoline.
4. When the engine **STALLS**, it stops running.

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5. A **VACUUM LEAK** is when outside air enters the engine intake manifold, bypassing the carburetor or throttle body.
6. A **BACKFIRING** condition is caused by the air-fuel mixture igniting in the intake manifold or exhaust system.

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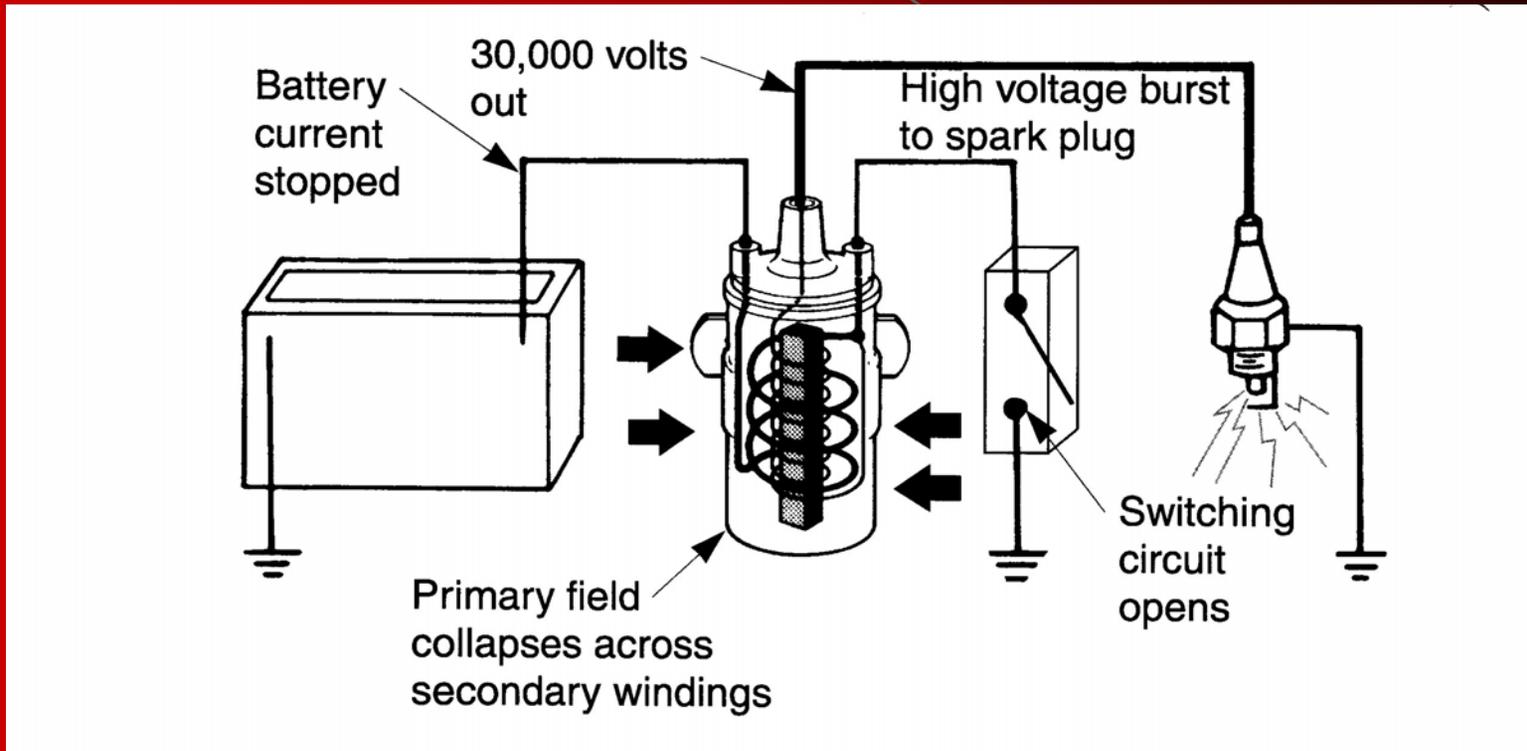
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7. **HESITATION** is when the engine does not accelerate normally when the gas pedal is pressed.

8. **MISFIRING** is a performance problem resulting from one or more cylinders failing to fire.

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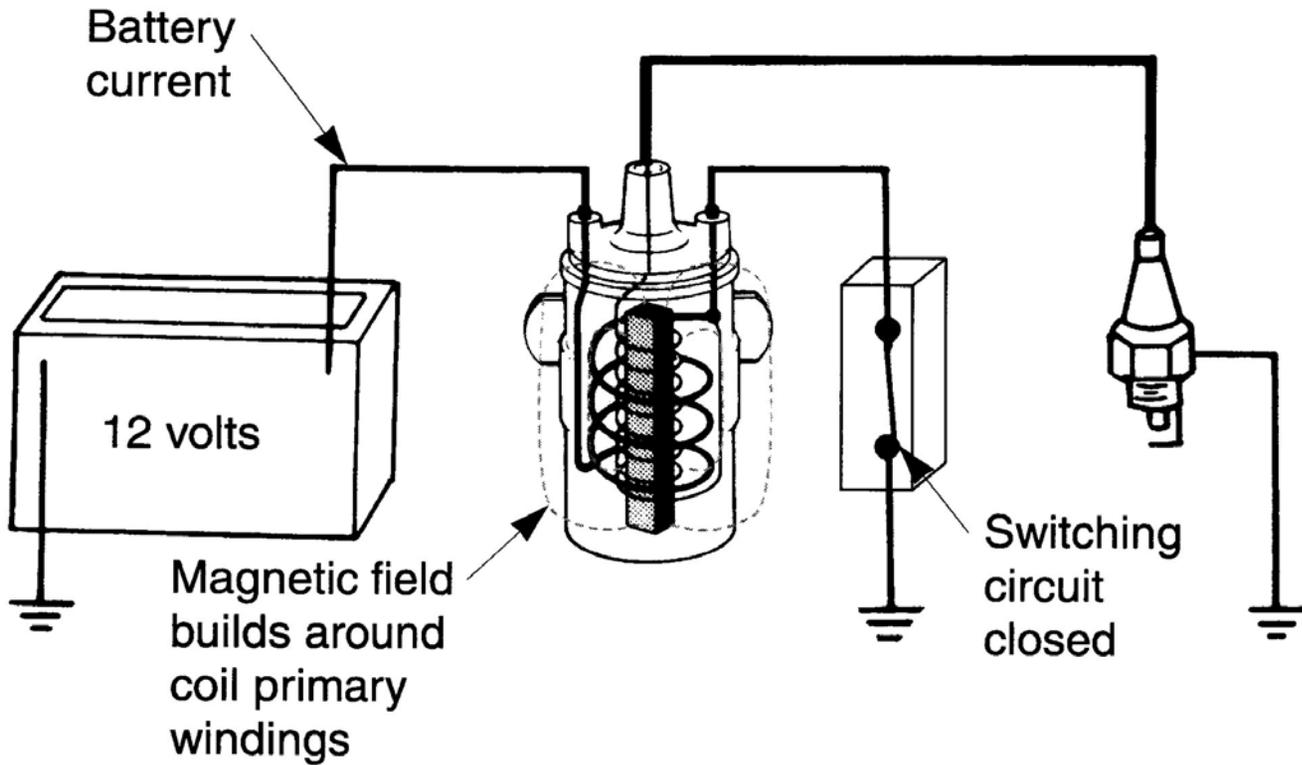
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Ignition System Operation – Coil Firing

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Ignition System Operation – Coil Saturating

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9. **DIESLING** occurs when the engine fails to shut off.

10. **PINGING** is a metallic tapping or light knocking sound, usually when the engine accelerates under load.

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