




---

---

---

---

---

---

---

---




---

---

---

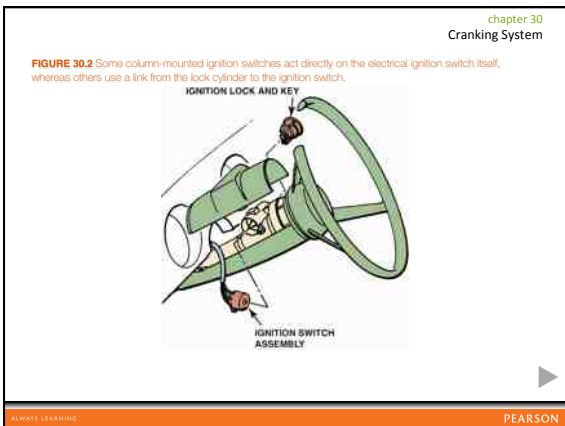
---

---

---

---

---




---

---

---

---

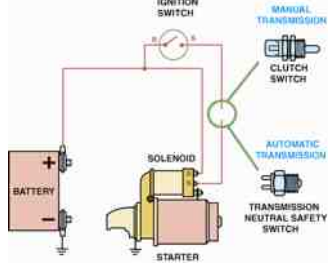
---

---

---

---

**FIGURE 30.3** To prevent the engine from cranking, an electrical switch is usually installed to open the circuit between the ignition switch and the starter solenoid.



---

---

---

---

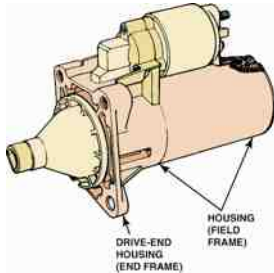
---

---

---

---

**FIGURE 30.4** A typical starter motor showing the drive-end housing.



---

---

---

---

---

---

---

---

**FIGURE 30.5** A theft deterrent indicator lamp of the dash. A flashing lamp usually indicates a fault in the system, and the engine may not start.



---

---

---

---

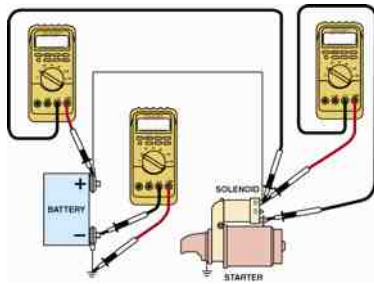
---

---

---

---

FIGURE 30.6 Voltmeter hookups for voltage drop testing of a solenoid-type cranking circuit.



ALWAYS LEARNING

PEARSON

---

---

---

---

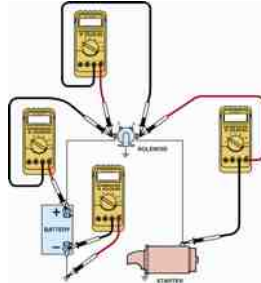
---

---

---

---

FIGURE 30.7 Voltmeter hookups for voltage drop testing of a Ford cranking circuit.



ALWAYS LEARNING

PEARSON

---

---

---

---

---

---

---

---

FIGURE 30.8 To test the voltage drop of the battery cable connection, place one voltmeter lead on the battery terminal and the other voltmeter lead on the cable end and crank the engine. The voltmeter will read the difference in voltage between the two leads, which should not exceed 0.20 volt (200 millivolts).



ALWAYS LEARNING

PEARSON

---

---

---

---

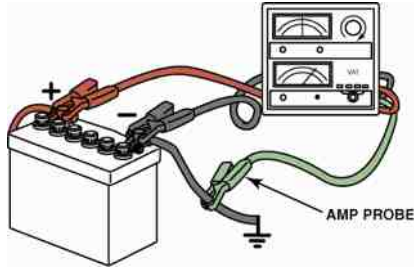
---

---

---

---

FIGURE 30.9 A starter amperage tester uses an amp probe around the positive or negative battery cables.



---

---

---

---

---

---

---

---

FIGURE 30.10 The starter is located under the intake manifold on this Cadillac North star engine.



---

---

---

---

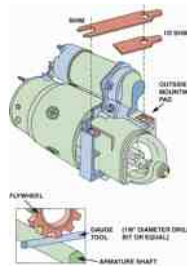
---

---

---

---

FIGURE 30.11 A shim (or half shim) may be needed to provide the proper clearance between the flywheel teeth of the engine and the pinion teeth of the starter.



---

---

---

---

---

---

---

---