

23 STARTING AND CHARGING SYSTEMS


FIGURE 23.3 A visual inspection on this battery shows the electrolyte level was below the plates in all cells.



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FIGURE 23.4 (a) A voltage reading of 12.28 volts indicates that the battery is not fully charged and should be charged before testing.



(a)

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FIGURE 23.4 (b) A battery that measures 12.6 volts or higher after the surface charge has been removed is 100% charged.




(b)

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FIGURE 23.8 A typical industrial battery charger. Be sure that the ignition switch is in the off position before connecting any battery charger. Connect the cables of the charger to the battery before plugging the charger into the outlet. This helps prevent a voltage spike and spark that could occur if the charger happened to be accidentally left on. Always follow the battery charger manufacturer's instructions.



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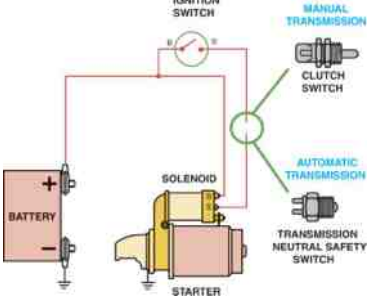
FIGURE 23.9 A typical solenoid-operated starter.



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FIGURE 23.10 To prevent the engine from cranking, an electrical switch is usually installed to open the circuit between the ignition switch and the starter solenoid.



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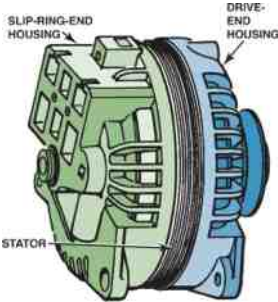
FIGURE 23.11 All battery cables and connections have to be clean and tight for the starter to be able to operate correctly.



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FIGURE 23.12 The end frame toward the drive belt is called the drive-end housing and the rear section is called the slip-ring-end housing.



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FIGURE 23.13 The digital multimeter should be set to read DC volts, with the red lead connected to the positive (+) battery terminal and the black meter lead connected to the negative (-) battery terminal.



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