36 Brakes and Antilock Braking Systems

FIGURE 36.1 Typical vehicle brake system showing all typical components.

FIGURE 36.2 Typical drum brake assembly.
FIGURE 36.3 Typical disc brake assembly.

FIGURE 36.4 Typical brake system components.

FIGURE 36.5 The red brake warning light will remain on after a bulb test if there is a fault with the hydraulic part of the brake system.
FIGURE 36.6 An amber ABS warning lamp.

FIGURE 36.7 Typical components of an antilock braking system (ABS) used on a rear-wheel-drive vehicle.

FIGURE 36.8 Tinnerman nuts are used at the assembly plant to prevent the brake drum from falling off until the wheels are installed.
FIGURE 36.9 Cracked brake lining must be replaced.

FIGURE 36.10 The first step in using a brake shoe clearance gauge is to adjust it to the drum inside diameter and tighten the lock screw.

FIGURE 36.11 Place the gauge over the shoes and adjust the brakes until they contact the inside of the gauge.
FIGURE 36.12 Typical pad wear sensor operation. It is very important that the disc brake pads are installed on the correct side of the vehicle to be assured that the wear sensor will make a noise when the pads are worn. If the pads with a sensor are installed on the opposite side of the vehicle, the sensor tab is turned so that the rotor touches it going the opposite direction. Usually the correct direction is where the rotor contacts the sensor before contacting the pads when the wheels are being rotated in the forward direction.

FIGURE 36.13 Most disc brake calipers have a brake inspection opening. For a thorough inspection, however, the caliper should be removed and the entire braking system thoroughly inspected.

FIGURE 36.14 Minimum thickness for various types of disc brake pads. If the pads are worn, the pad wear sensors often make a "chirping" or squealing sound when the vehicle is moving. Do not confuse that noise with a defective wheel bearing or other fault.