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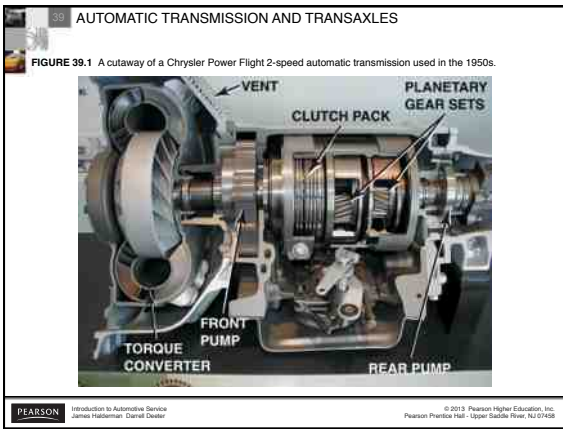
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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.3** A torque converter is made from three parts. The impeller is located at the transmission end, attached to the housing, and is driven by the engine. The turbine is located at the engine side and is driven by the fluid flow from the impeller and drives the input shaft of the transmission. The stator redirects the flow to improve efficiency and multiply torque.

**TURBINE ROTATES THE DRIVE LINE**

**IMPELLER DRIVEN BY THE ENGINE**

**STATOR REDIRECTS THE OIL FLOW**

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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.4** Two fans can be used to show how fluid, or air in the case of fans instead of automatic transmission fluid, can be used to transfer energy. If one fan is operating, the blades of a second fan will be rotated by the flow of air past the fan that is unplugged, causing the blades to rotate.

**POWERED**

**NONPOWERED**

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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.5** A torque converter is bolted to the flexplate, which is attached and rotates with the engine crankshaft (TCC).

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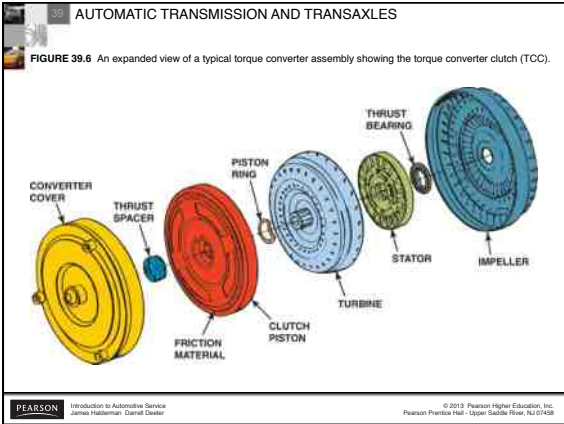
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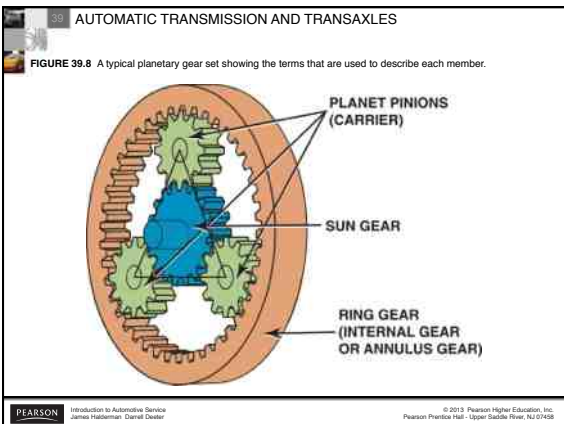
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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.9** A typical automatic transmission dipstick (fluid level indicator). Many use a clip to keep it from being forced upward due to pressure changes inside the automatic transmission. A firm seal also helps keep water from getting into the fluid, which can cause severe damage to the clutches and bands.



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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.10** The "add" mark on most automatic transmission dipsticks indicates the level is down 0.5 quart (0.5 liter). Always follow the instructions stamped or printed on the dipstick.



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**39** AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.11** Sometimes the location of a transmission fluid leak is easy to see, but with others it can be difficult to find the exact location. Look closely at places where O-rings seals or gaskets are used, as these are the most common areas where fluid leaks occur.



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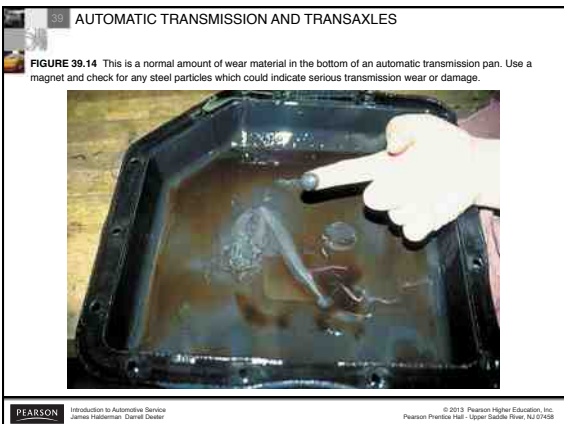
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39 AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.15** Always check that the filter is secured by a clip or other fastener to keep it from dropping out of location.



**FILTER RETAINING CLIP**

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39 AUTOMATIC TRANSMISSION AND TRANSAXLES

**FIGURE 39.16** In this case, the cork-rubber gasket is glued to the pan and is ready to be installed. The retaining bolts need to be tightened in sequence, but be aware that overtightening will cause a leak. Also, some manufacturers recommend using only an RTV sealer, but never use an RTV sealer and a gasket together.



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