

FIGURE 12-1 A supercharger on a Ford V-8.



FIGURE 12-2 A turbocharger on a Toyota engine.



FIGURE 12-3 The more air and fuel that can be packed in a cylinder, the greater the density of the air-fuel charge.

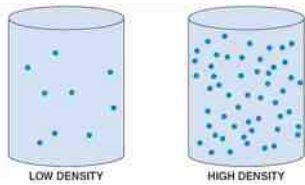
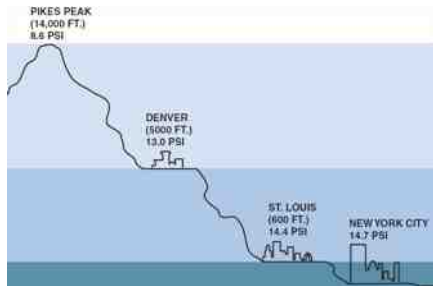
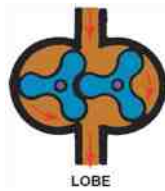


FIGURE 12-4 Atmospheric pressure decreases with increases in altitude.



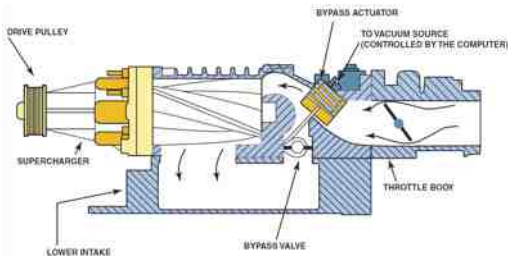
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FIGURE 12-5 A roots-type supercharger uses two lobes to force the air around the outside of the housing and forces it into the intake manifold.



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FIGURE 12-6 The bypass actuator opens the bypass valve to control boost pressure.



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FIGURE 12-7 A turbocharger uses some of the heat energy that would normally be wasted.

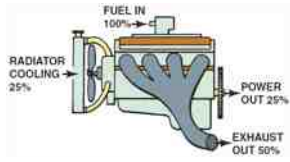


FIGURE 12-8 A turbine wheel is turned by the expanding exhaust gases.

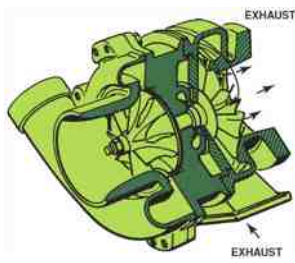


FIGURE 12-9 The exhaust drives the turbine wheel on the left, which is connected to the impeller wheel on the right through a shaft. The bushings that support the shaft are lubricated with engine oil under pressure.

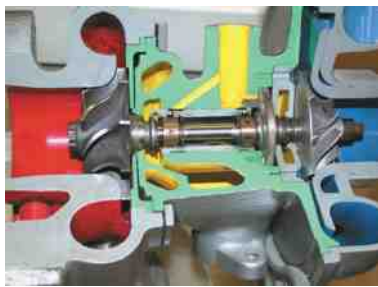


FIGURE 12-13 A dual turbocharger system installed on a small block Chevrolet V-8 engine.



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