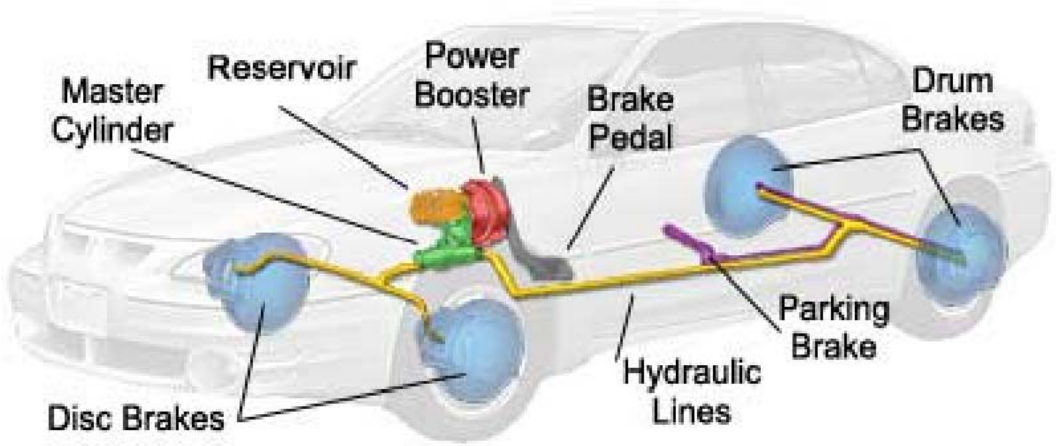
Traditional: 05-07
Themed: 11-07

Work done by brakes

(Understanding this may save your life!)

Brakes

- The jobs of brakes: Remove KE of a car
- Brakes do enough negative work, to turn car's KE into internal energy (by friction)
- The amount of work they do is: W = Fd, F is the frictional force



Braking – example/self-learning

- How much work do brakes do to stop a 1200 kg car going 30 mph (13.5 m/s)?(109,350 J)
- What is the car were going 60 mph (27 m/s)?

(437,400 J)

- If your brakes apply a total force of 5,000 N, what's the stopping distance in each case? How does speed affect stopping distance? (this is the physics knowledge you need to know to drive safely!) (22 m, 88 m)