4.4 - Forces applied to Automative Technology (Read section to find answers)

Tires

- Why are race car tires wide and treadless?

- What is 'hydroplaning'? How does it happen?

    - Give 2 ways drivers can prevent it.

Brakes

- What is happening to the car when it skids even when brakes are forcefully applied?

- What does ABS stand for and how does it help prevent skidding?

- What is the worst thing a driver can do with ABS brakes? Explain.

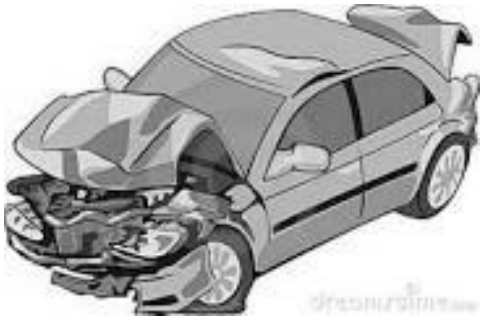
Traction Control & ESC

- Describe what 'traction control' is and how it helps keep drivers safer.

- ESC stands for _____? How does it work?

The statement below is a very powerful one. Having been a passenger for years and perhaps a driver for a little bet, elaborate on the 2 key words circled. What do they mean in the context of driving a car? Give specific examples.

Ultimately a defensive and aware driver is a safe driver. (The car can't do it all!)



<u>Crash Test Dummies</u> (not the rock band)

- Accelerometers measure the rate of _____

  and located in _____ & _____

- Compression sensors are in the _____

- Explain the logic for having the sensors where they are