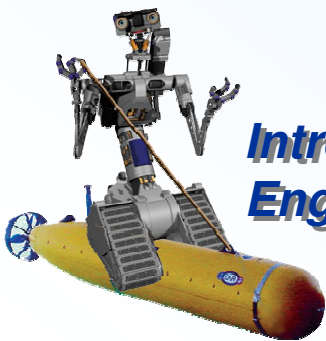


Dynamometers

- Measure the torque output of a motor at different speeds.



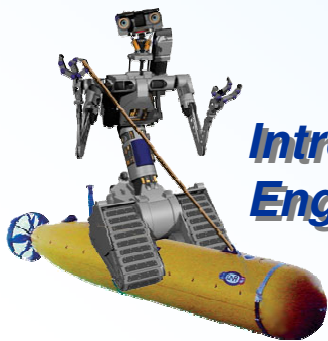
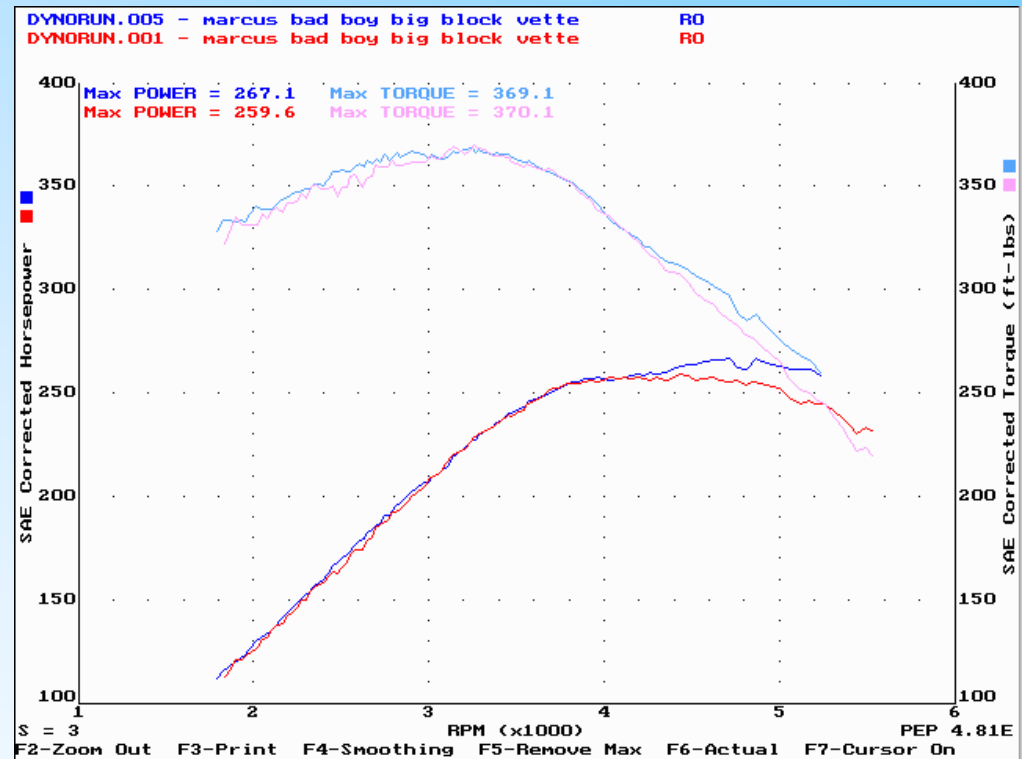
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Results from Dynamometer

- Torque-Speed Curve
- Power-Speed Curve
 - (Power = Torque*Speed)



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Your Task

- **Design a dynamometer for your motor out of LEGOs?**
 - Thought experiment: As you slow down the shaft, does the torque increase or decrease (remember when you held the shaft and felt heat?)
- **You will also measure the efficiency of the motor:**
 - $P_{\text{in-electrical}} * \eta = P_{\text{out-mechanical}}$
 - How can you measure electrical power?

