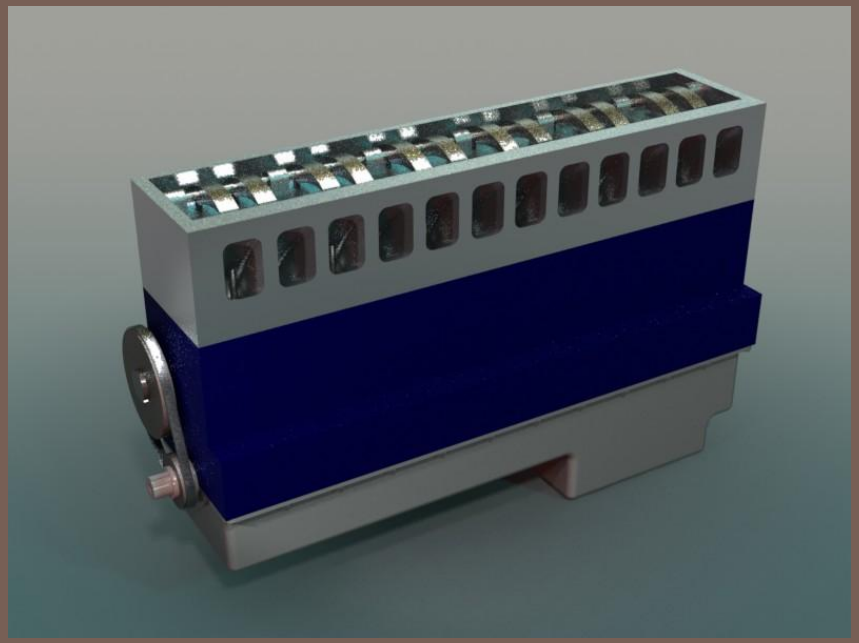


ENGINE DESIGN PROJECT

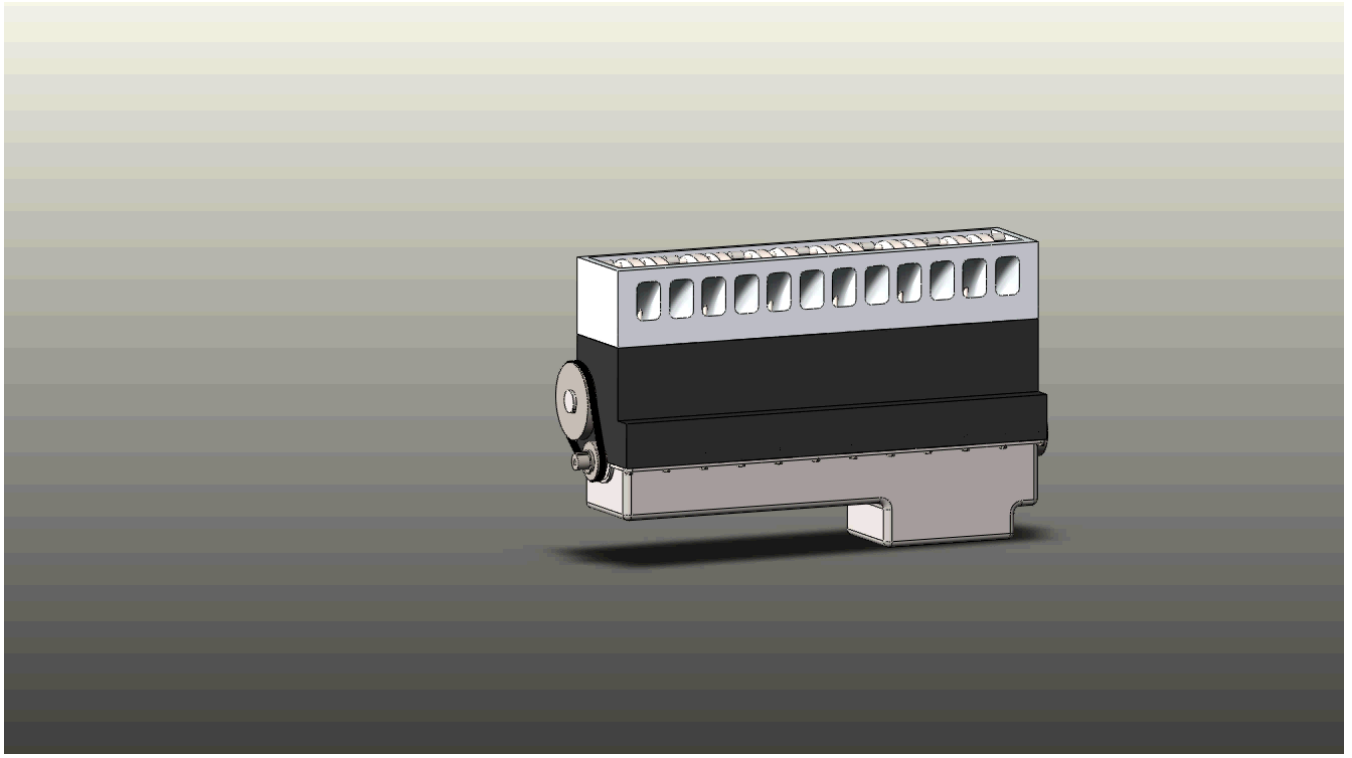
Richard Grist

IET265 Spring 2013

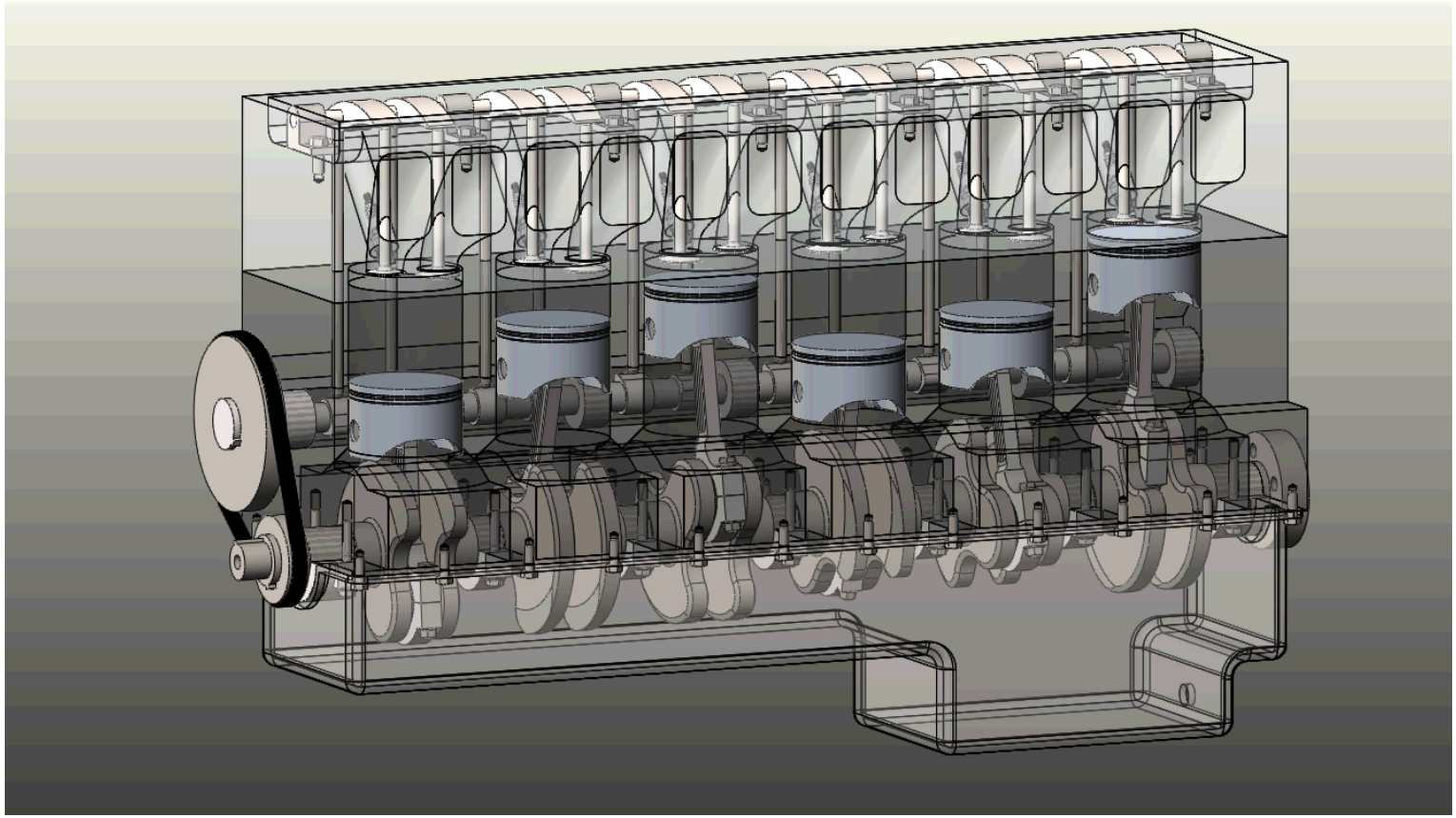
What is it Based Off Of?

- Loosely designed around the Jeep 6 Cylinder Engine
- Push Rod actuated lifters not OHC
- Used to propel a vehicle down the road and/or over obstacles

An In-Depth Look at the Model

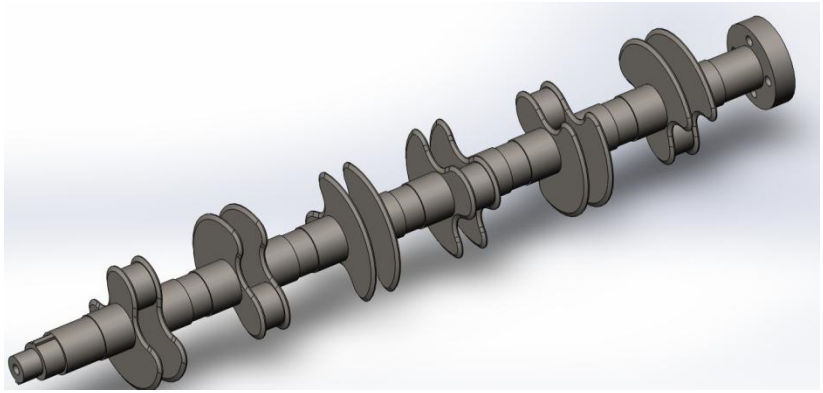


How All the Components Interact

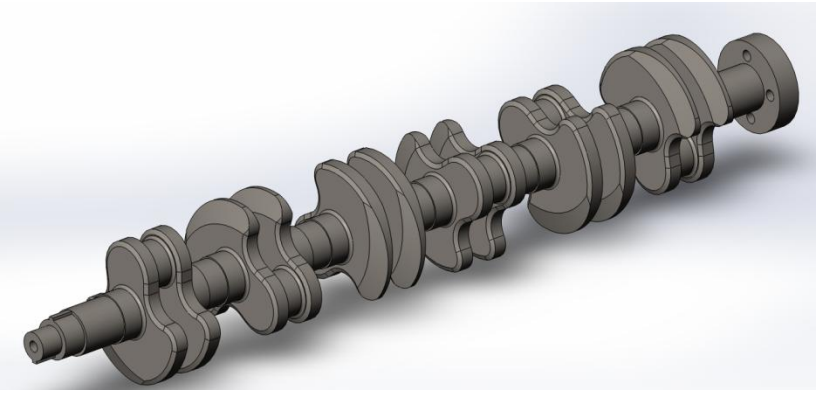


Which Design is Better?

Original Design

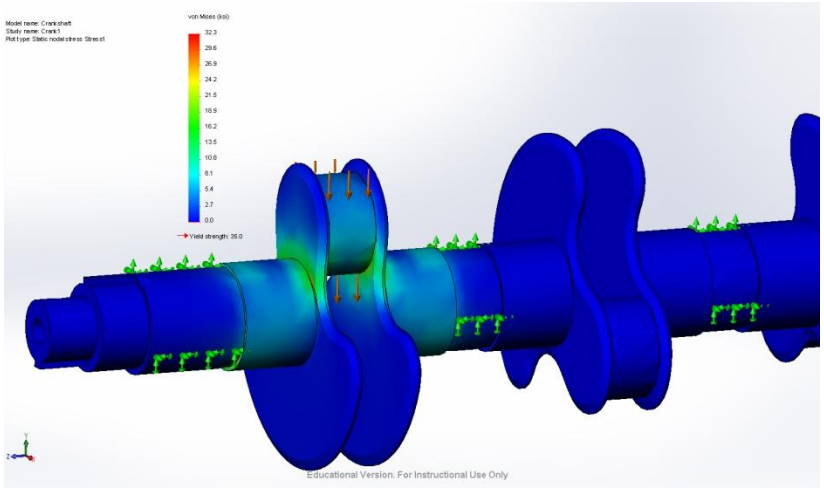


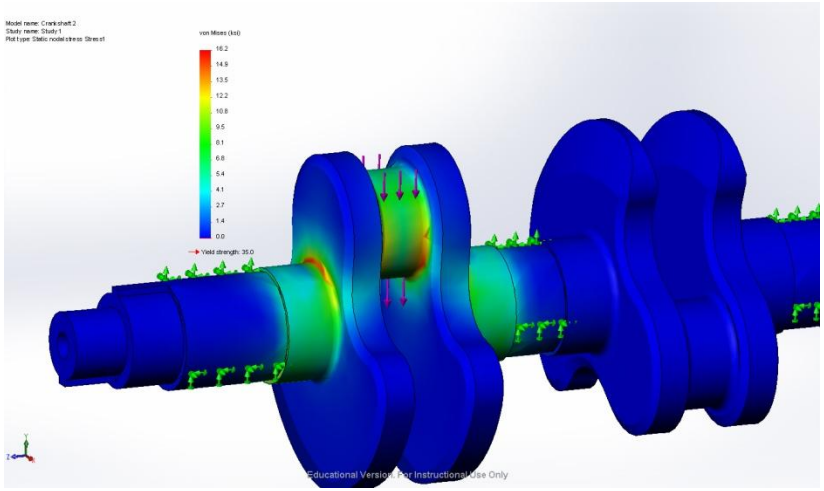
Modified Design



Stress Test – 14,551 lb-ft

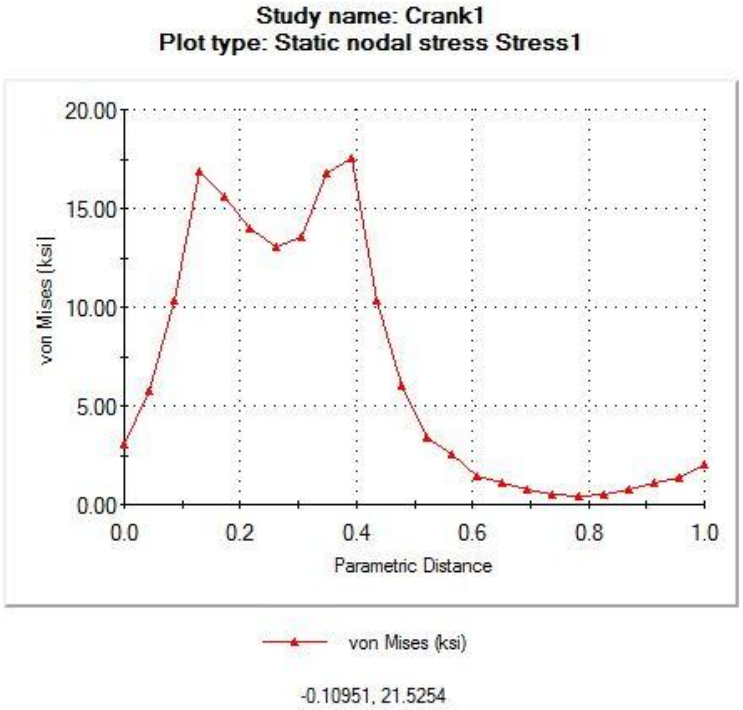
Regions of Highest Stress Are Found Along the Joining of the Shaft and Crank

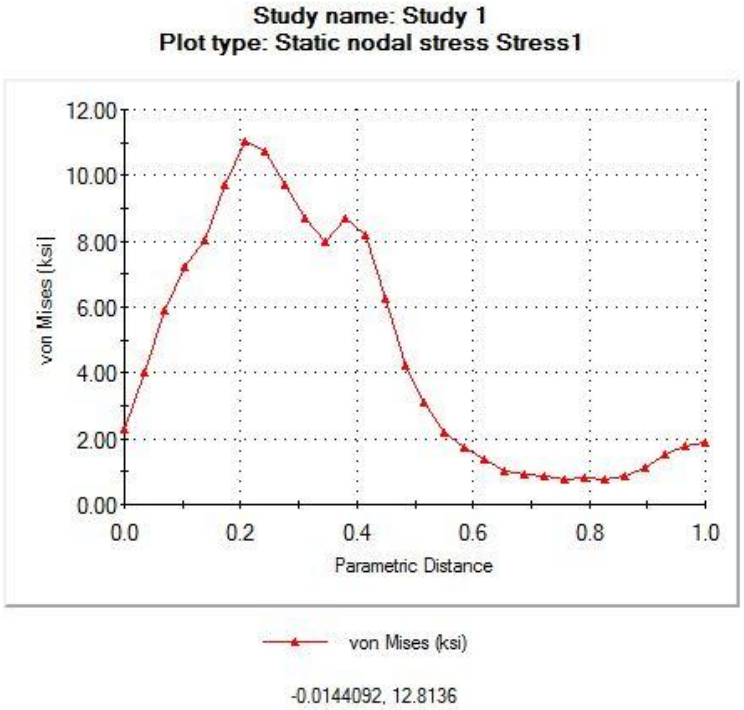




Note: Scales are different in each picture and therefore you cannot compare color directly From one to the other.

Stress Graphs





Conclusion

- Accurately shows how the components inside of an engine work together to create the 4-stroke cycle
- The model is a fairly simplified depiction of an actual internal combustion engine
- Persistent build errors appear due to some of the mates involved – easily fixable however