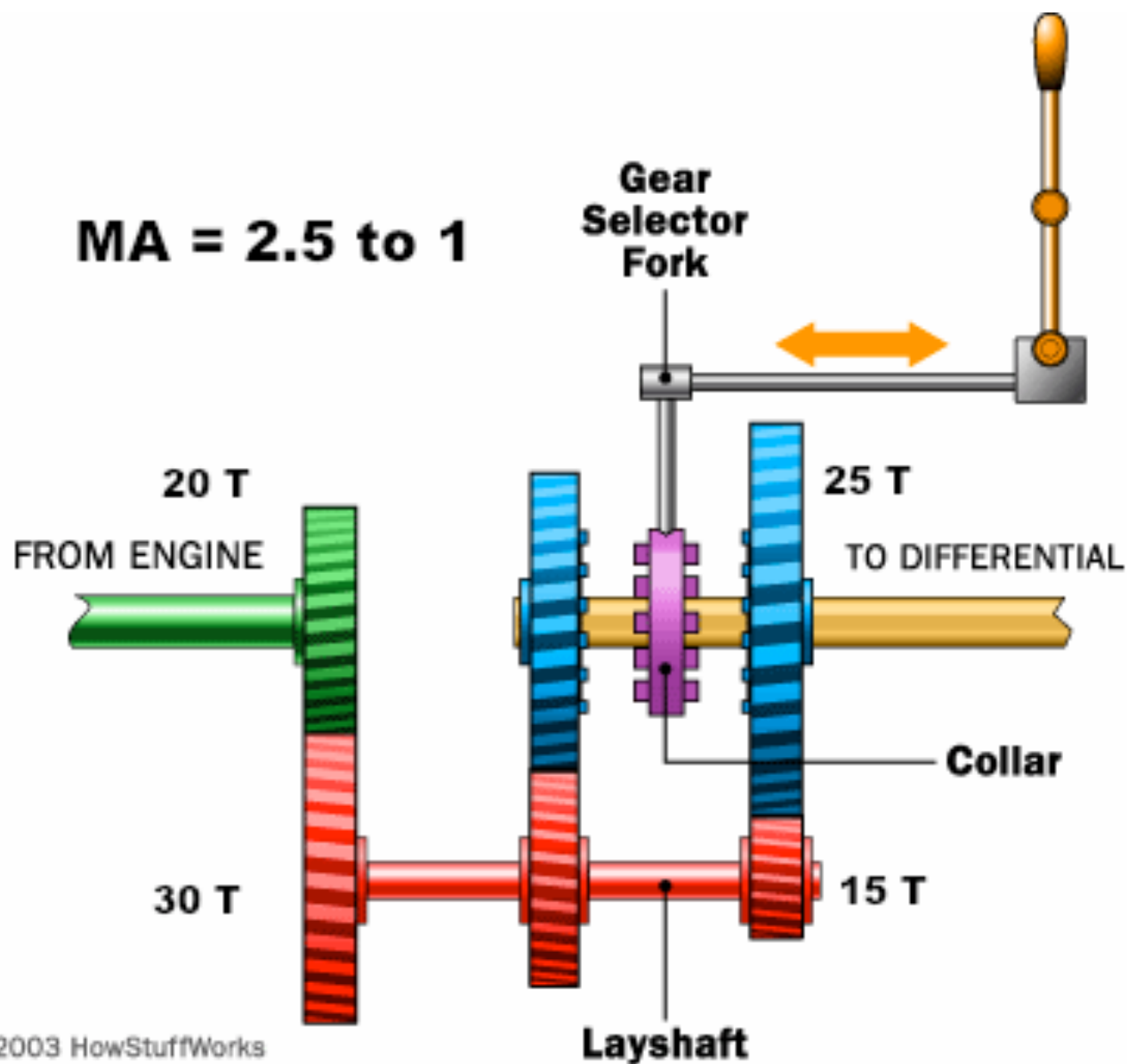
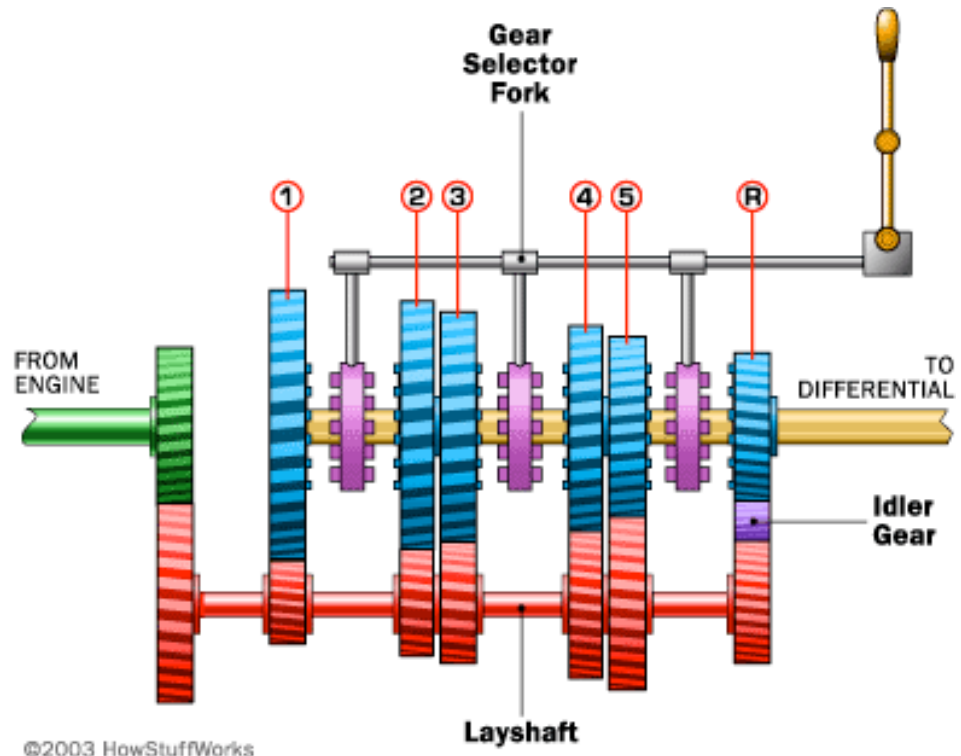
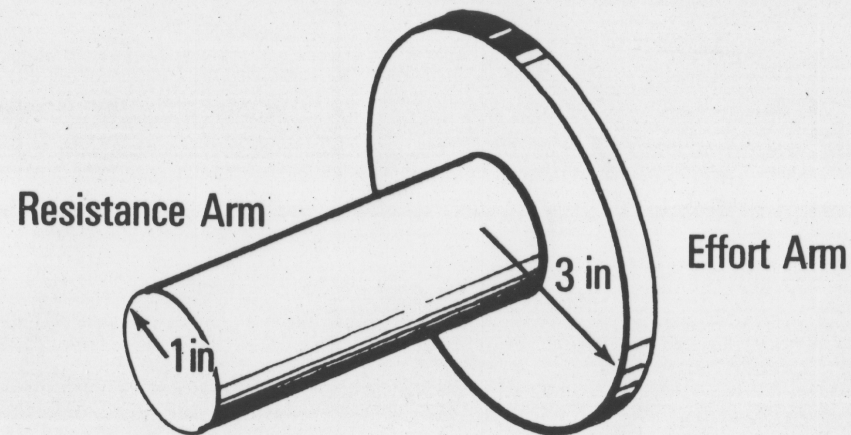


MA = 2.5 to 1

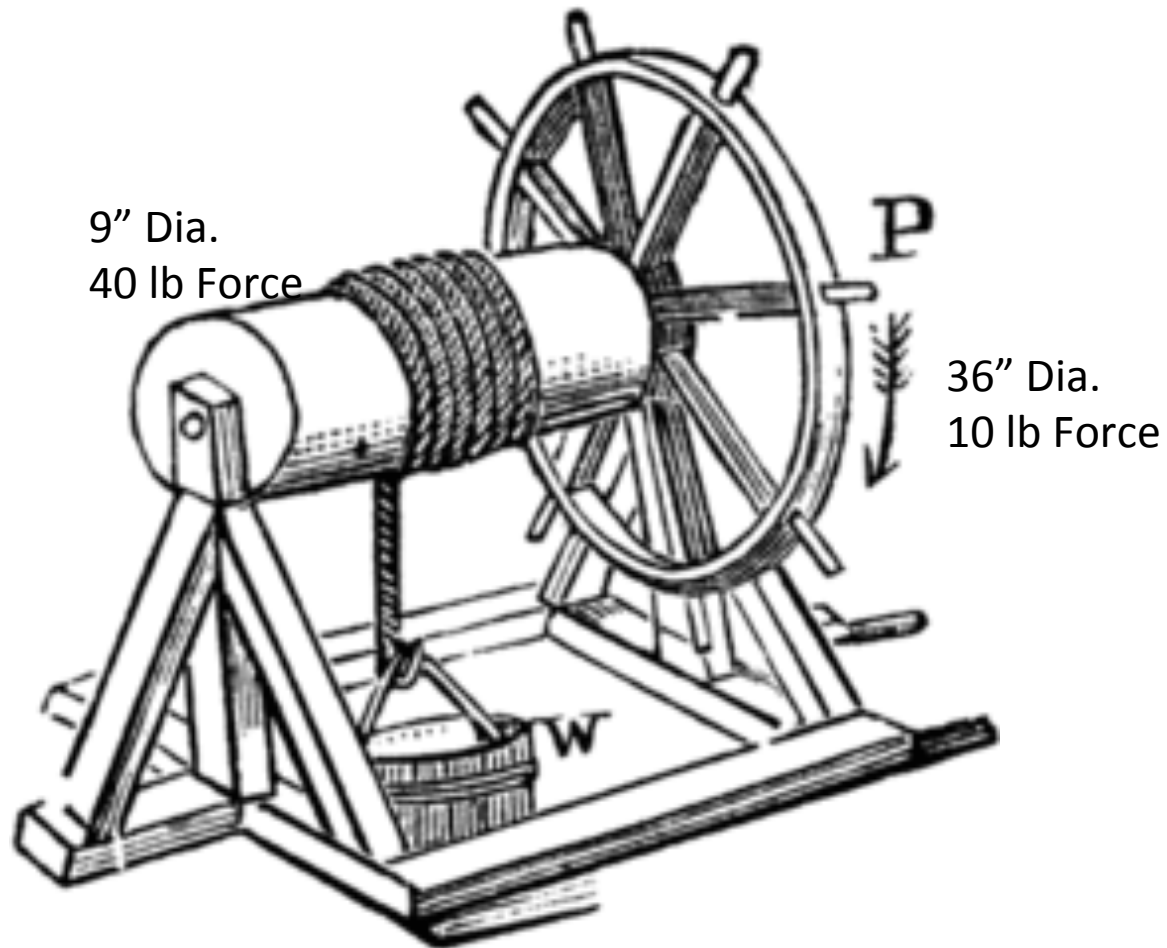




The Principle of the Wheel and Axle

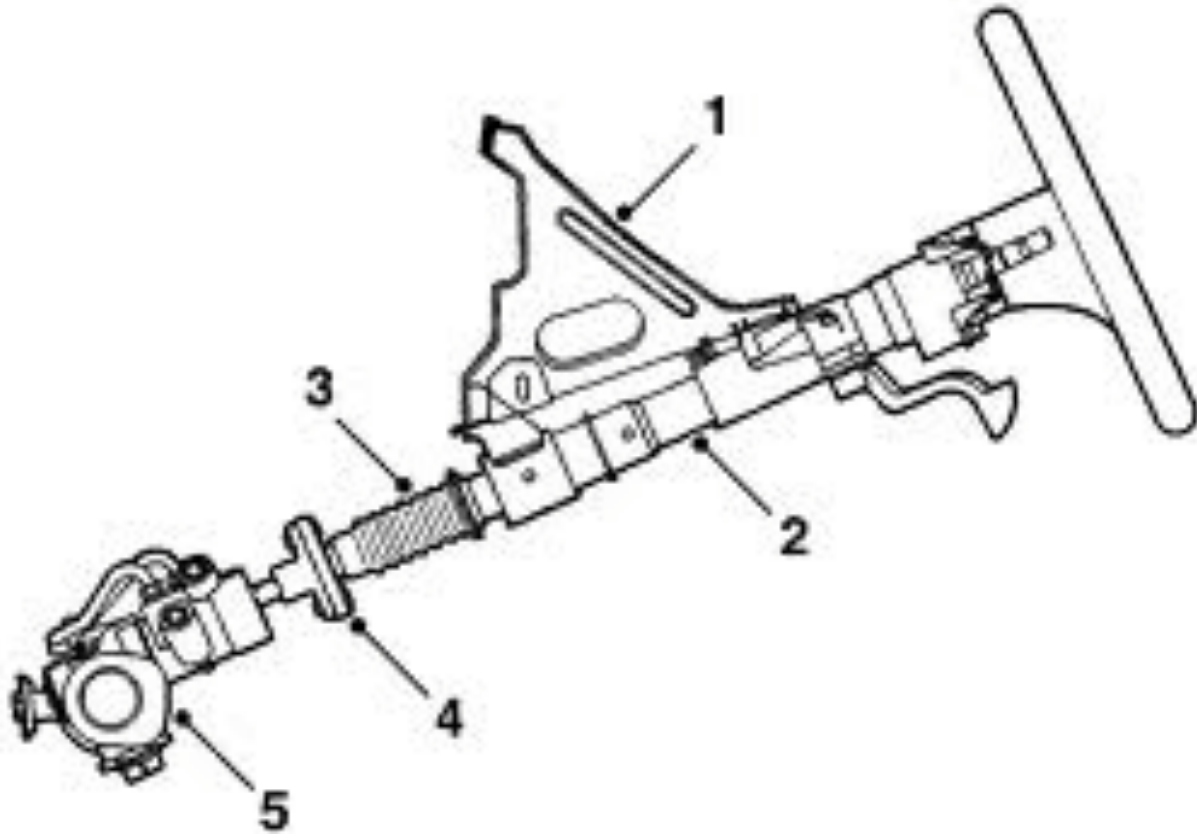


The Mechanical Advantage of the Wheel and Axle is the Ratio between the Two Lever Arms, 3 to 1

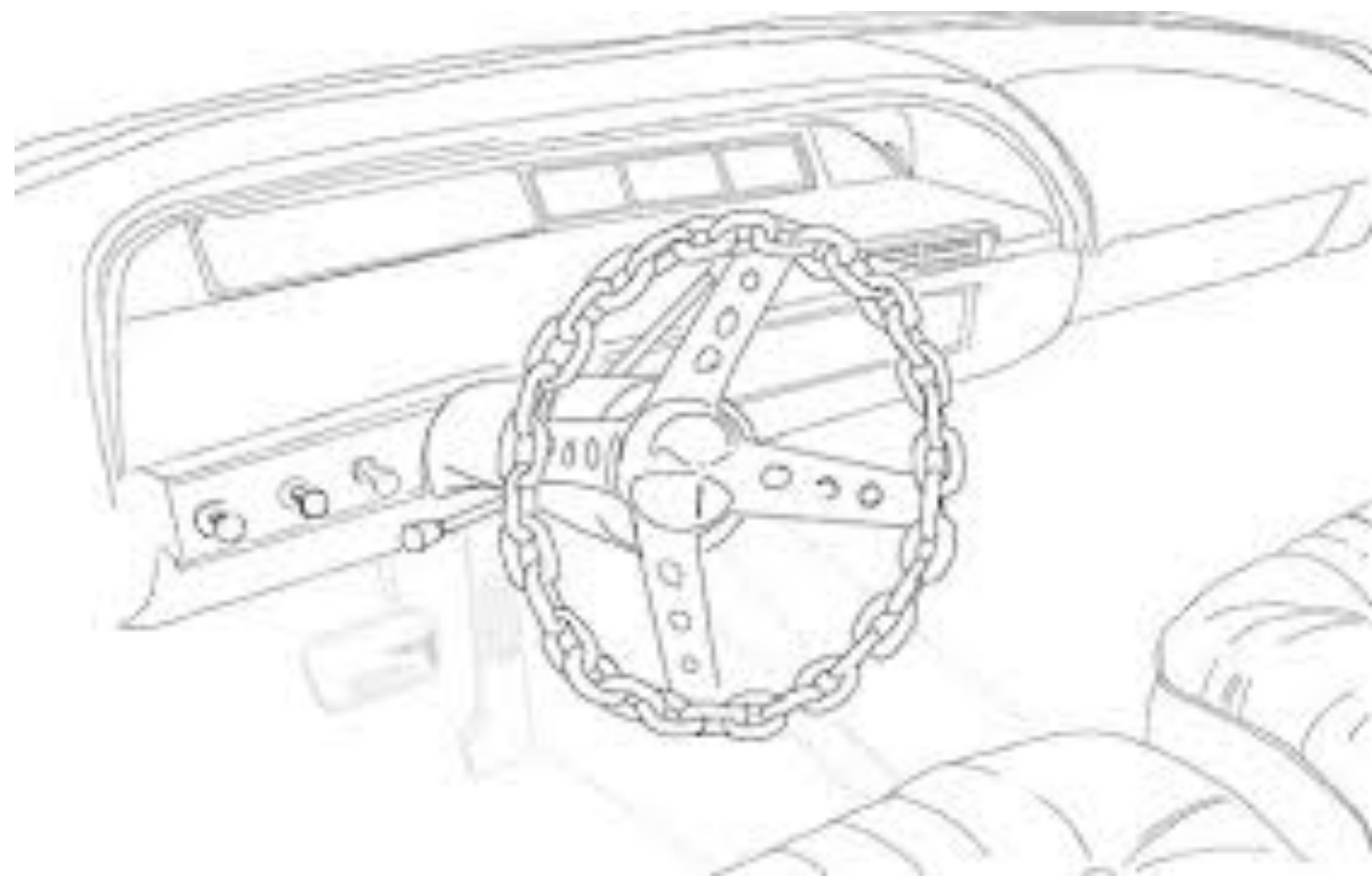


$$MA = 36'' / 9'' \text{ or } 40 \text{ lb} / 10 \text{ lb} = 4 \text{ to } 1$$

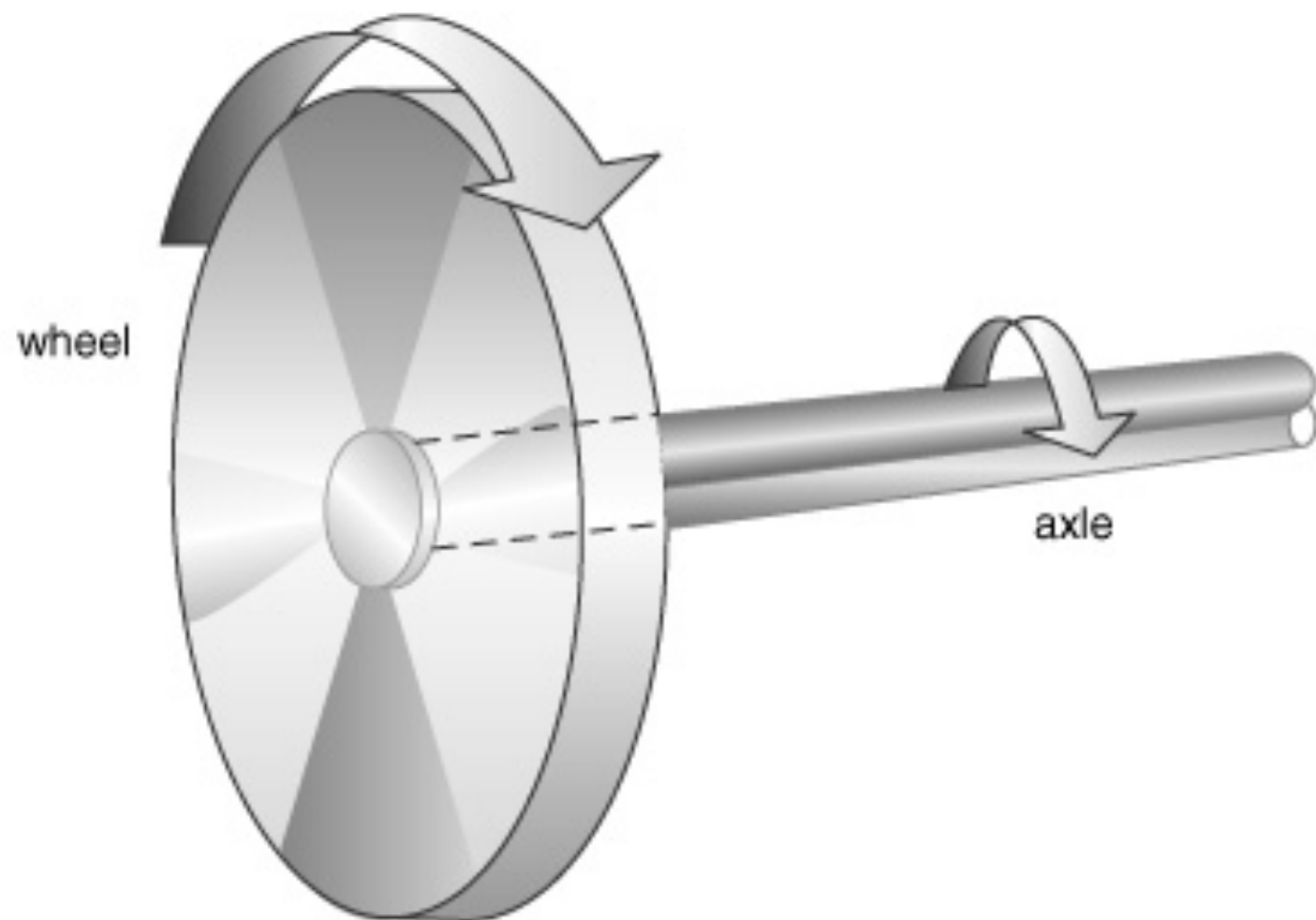
Steering Column



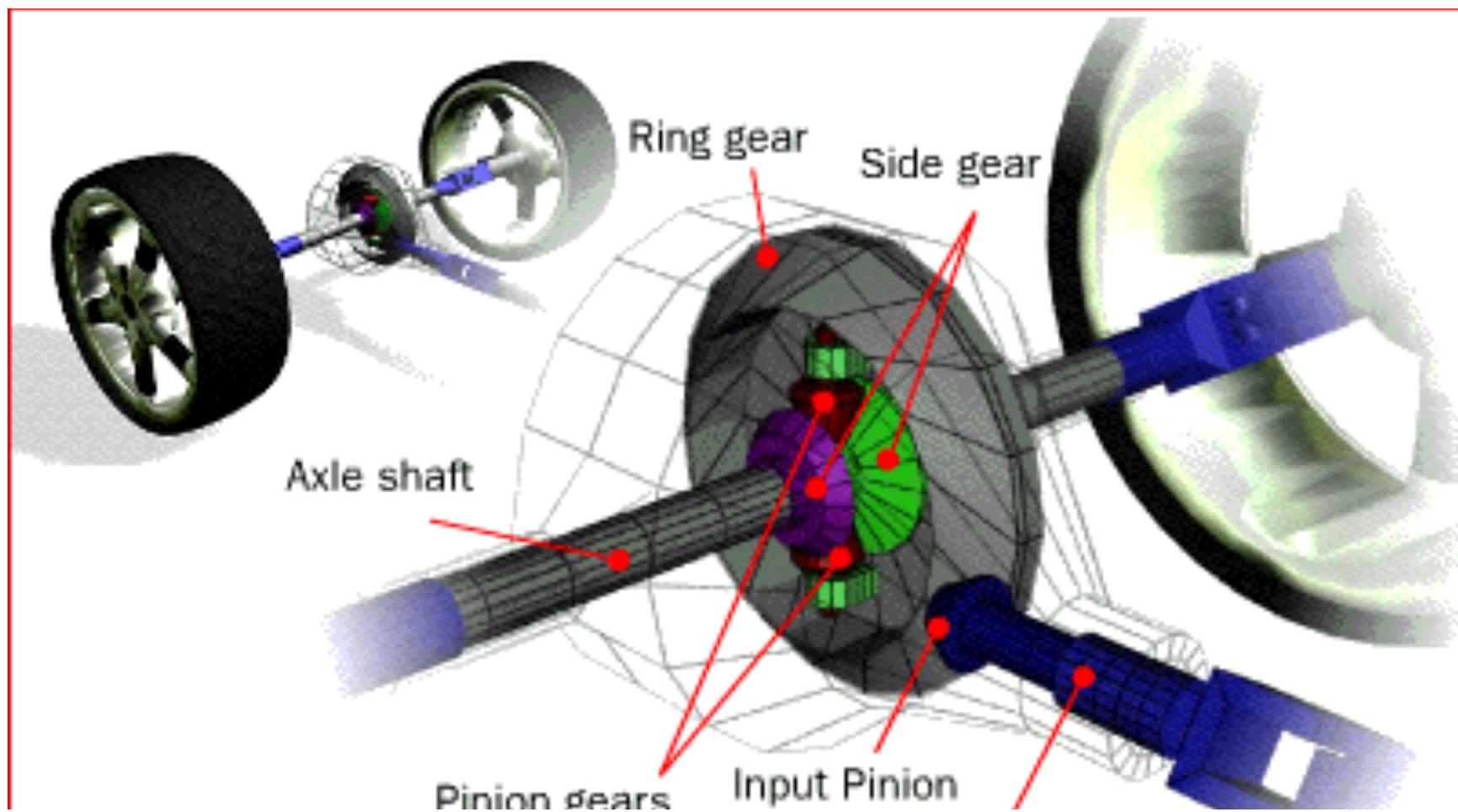






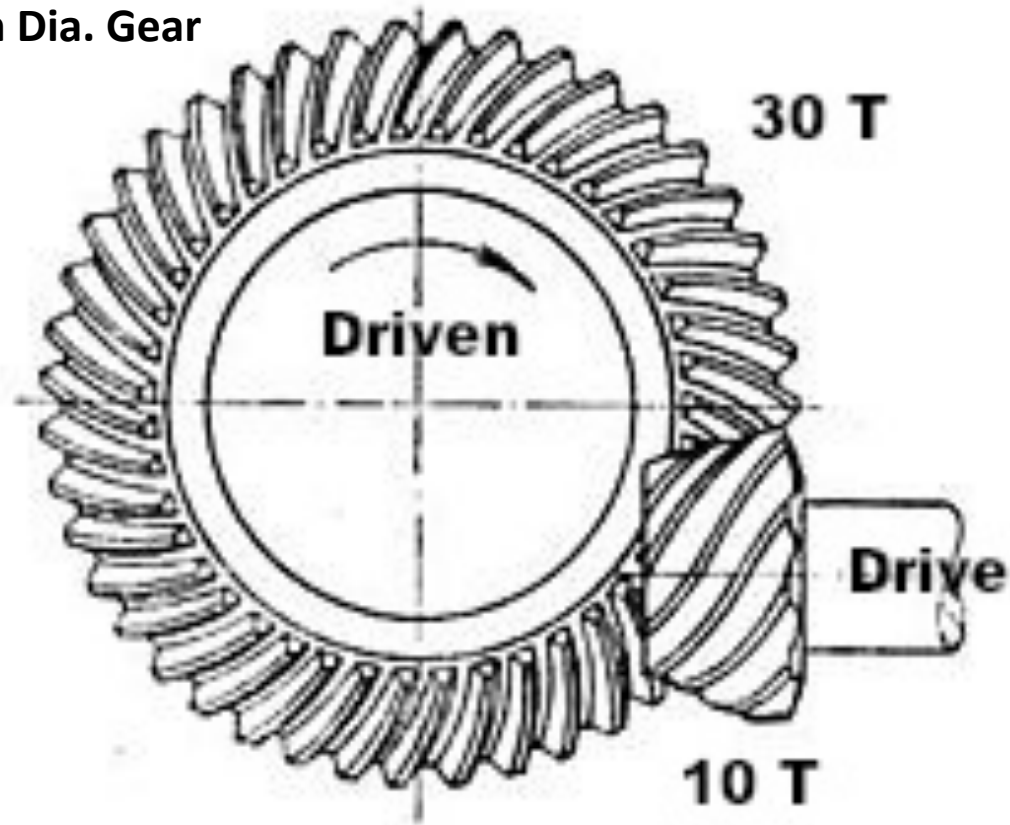


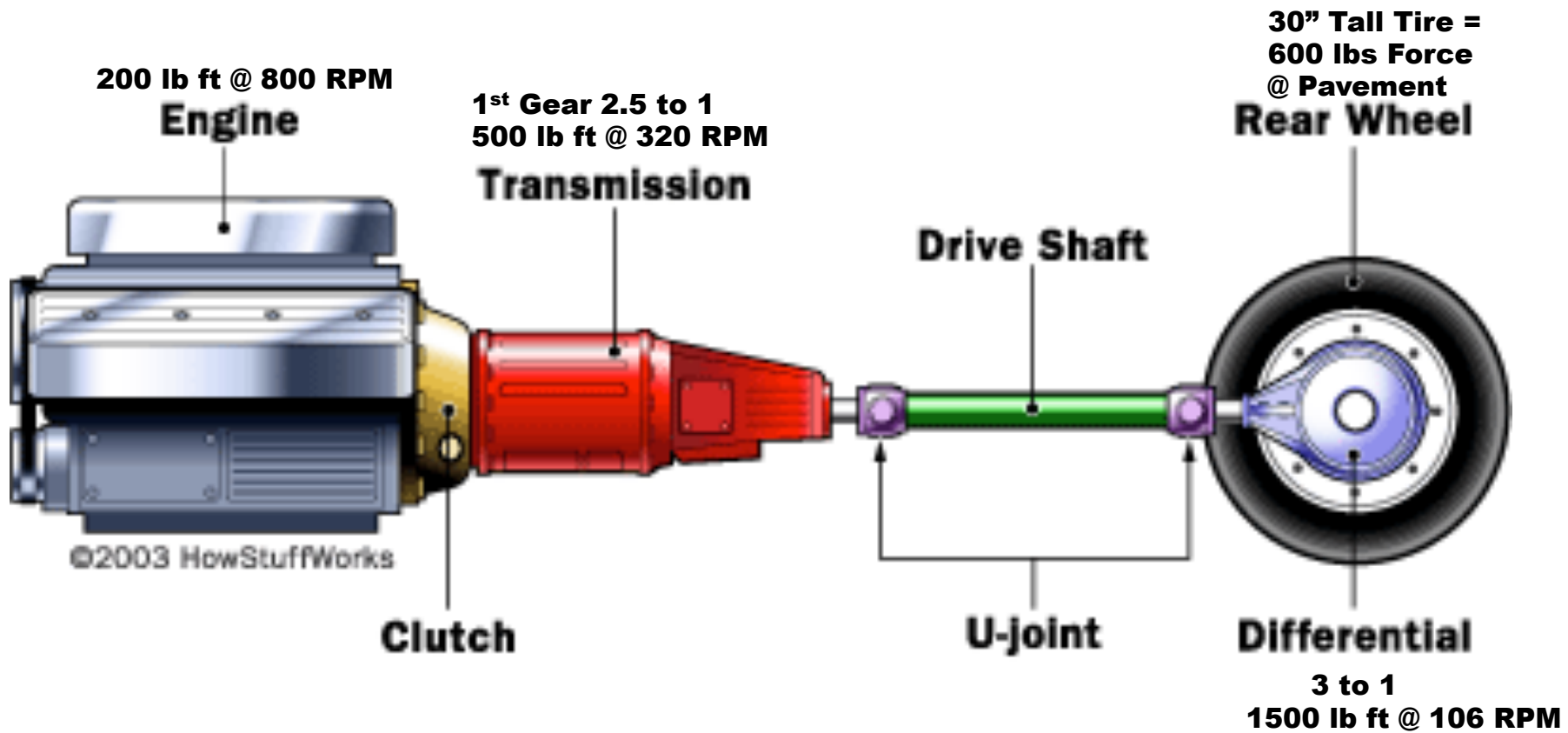
THE WHEEL AND AXLE IS A WHEEL CONNECTED TO A RIGID POLE.

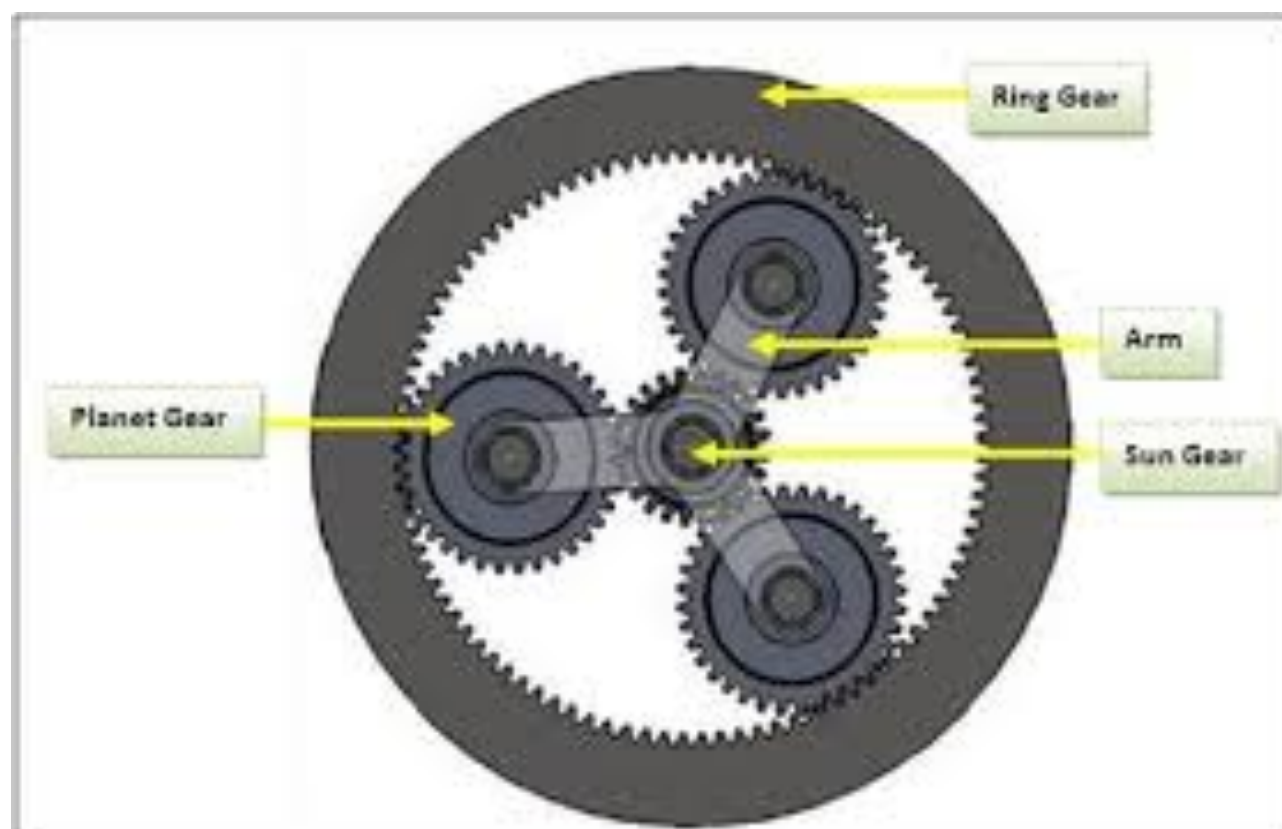


Ring & Pinion Gears

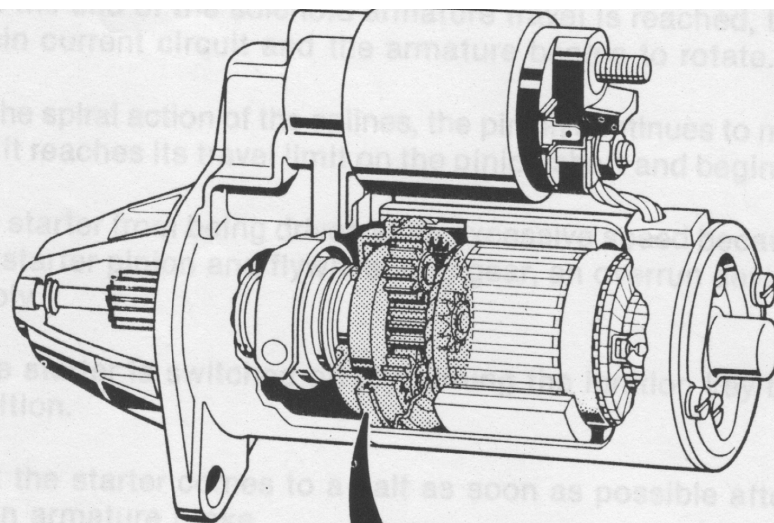
10 in Dia. Gear











ARMATURE SHAFT /
SUN GEAR

INTERNAL GEAR

PLANET
GEARS

A planetary gear set between the armature and the pinion ensures ample torque in the run-up phase. The gear set ratio is 1:4.36.

The armature shaft has teeth cut on it to act as the sun gear, which drives the three planet



WINCH MECHANISM

