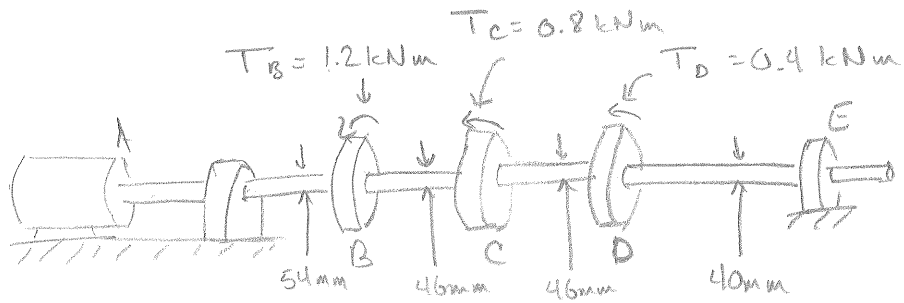
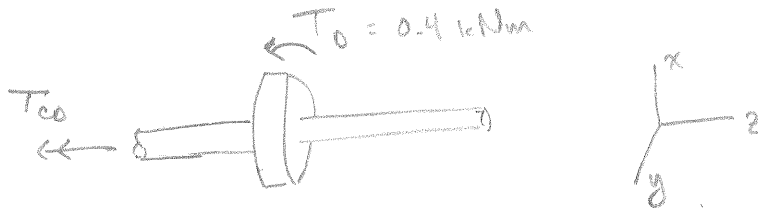


10.11c)



Motor at A applies 2.4 kNm of torque

FBD



$$\sum M_z = T_0 - T_{co} = 0$$

$$T_{co} = T_0 = 0.4 \text{ kNm}$$

$$\tau_{max} = \frac{T_{co} r_{co}}{J_{co}} = \frac{(0.4 \cdot 10^3 \text{ Nm})(23 \cdot 10^{-3} \text{ m})}{\frac{1}{2} \pi (23 \cdot 10^{-3} \text{ m})^4}$$

$$\boxed{\tau_{max} = 20.9 \text{ MPa}}$$