

Free Body Diagrams

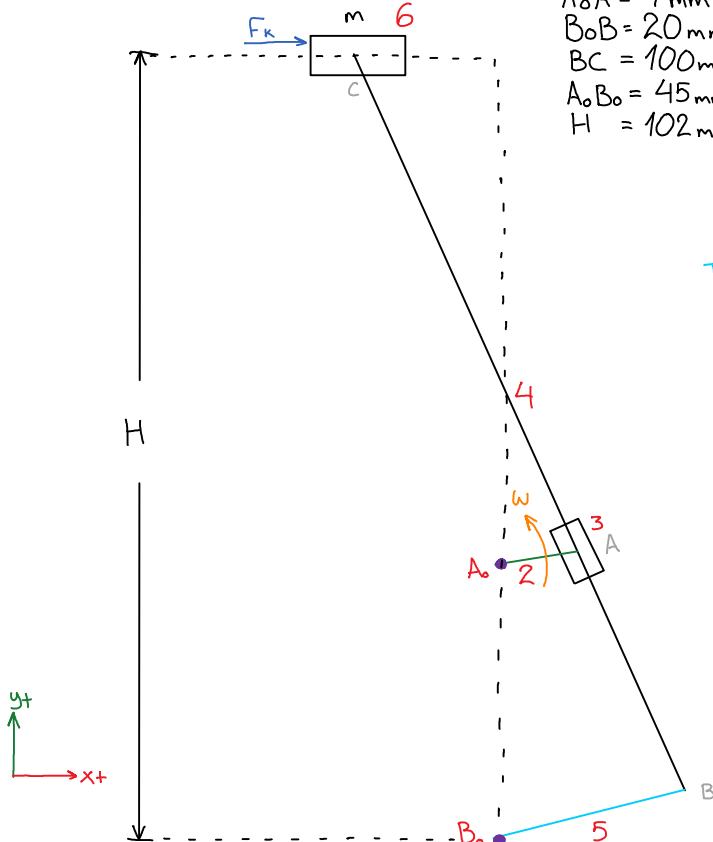
Saturday, March 25, 2017 2:22 PM

System - Quick Return Mechanism

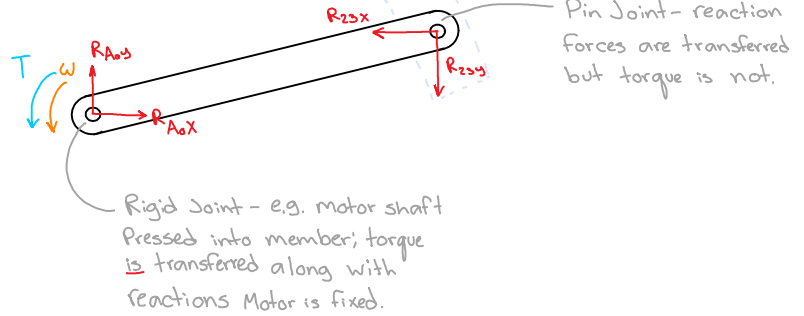
$A_oA = 7\text{ mm}$
 $B_oB = 20\text{ mm}$
 $BC = 100\text{ mm}$
 $A_oB_o = 45\text{ mm}$
 $H = 102\text{ mm}$

$\omega = 1\text{ RPM}$
 $m = .45\text{ kg}$
 $k = 175\text{ N/m}$
 $P = 1070\text{ Kg/m}^3 \rightarrow \text{Density of ABS for parts}$

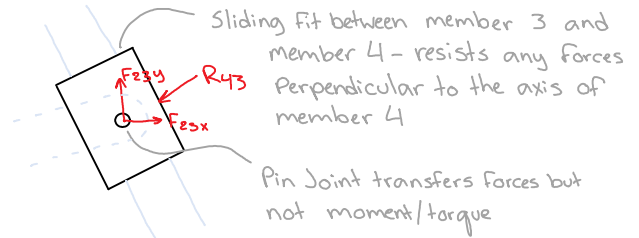
Assuming negligible friction



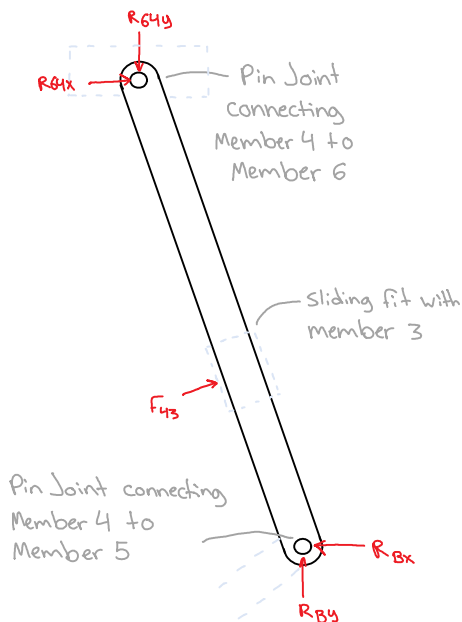
FBD - Member 2



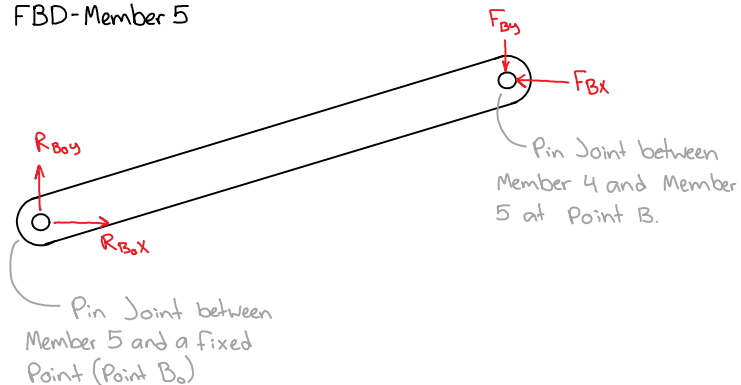
FBD - Member 3



FBD - Member 4



FBD - Member 5



FBD - Member 6

