

Dynamic load of catch at this pointy lets say 200kgF Lest assume all pulleys are 100% efficient to keep things simple

Load at pulley A (estimating 170deg so factor of 0.17) =34.86kgF Load at pulley B (estimating 80deg so factor of 1.53) = 306.42kgF

The vector on each pulley is nigh on perfect, very little lever, just a little on union B, so stem B is being 'Bent' to the left as we look at the picture



Assuming the load has finished its pendulum & settled, lets say 120kgF

Load at pulley A (estimating 120deg "the magic angle" a factor of 1) =140kgF Load at pulley B (estimating 80deg so factor of 1.53) = 183kgF

The vector on pulley A is now bending the stem to the right, probably the equivalent of a 1.5m lever, how much log can you move with a 1.5m lever compared to no lever at all?

All of these loads are relatively irrelevant, like Marc said lets keep it simple, every time I rig I see these lines if they're in line with the stem I'm getting max strength.

Now the real question is, can you use the VTO literature to work out the force at each union when taking the lever into account?