Replacing Connecting Rod Instructions 8-14FT C Pattern Mills

First of all, pull mill out of the wind.Disconnect mill rod if desired,

1 Carefully unscrew the set screw at the back of the crank pin Washer and remove the latter,

2 Turn the wheel until the hole in the side of the crosshead is opposite the top pair of holes in the mastpipe and by means of *a* nail punch, knock out the small locking pin through bottom end of connecting rod and the crosshead pin Turn crank down to bottom of stroke until crosshead pin is in line with lower pair of holes in m8stpipe.
Tap out crosshead pin, taking weight of mill rod and other parts, which are then lowered gently down when the pin is right out.

3 Turn wheel until crank pin is between l o'clock and 2 o'clock, when you are looking at the crank end of the driving shaft, i.e., from the back of the mill, Pull the connecting rod backwards as far as it will go and then while continuing to pull more on the right-hand side of connecting rod than on the left,slowly move the crank pin between 1o'clockck and 2 o'clock. This will allow the connecting rod to come off the crank pin where there is just enough space between the end of the crank pin and governor spring to get itout

FITTING NEW CROSSHEAD PIN IN OLD CONNECTING ROD.

Remove the connecting rod from the mill by following the above instructions.
Thoroughly clean the oil groove in the wood bush, oil tube,oil well and crosshead pin hole,

Try the new crosshead pin in the connecting rod before putting the latter in the mill again
It is important that this pin should not be loose but · just *a* light tapping fit, If the small locking pin holes do not line up exactly they should be eased with a small round file,or perhaps by hand-drilling with a3/16" twist drill for the 8ft and 10ft. mills and a 1/ 4" twist drill for the 12ft and 14ft mills. Tap out the crosshead pin before placing connecting rod in the mill.

The end of crosshead pin is marked with a nick across the diameter which is in line with the axis of locking pin hole through it, to enable you to line up this small hole with locking pin hole through end of connecting rod.
It must be a tapping fit and not loose. If its loose a new connection rod or a larger pin must be obtained.
Move crank until locking pin holes can be seen through upper holes in mast pipe and crosshead. While your assistant holds a hammer head or a few lbs of metal against the end of about 1 3/8" bolt, the other end of which is pressed against the locking pin. Burr over the other end of the locking pin with a punch and hammer, reverse the procedure to burr the opposite end of pun to prevent it coming out.

Put wired end of the new syphon wick down into the oil tube, being sure that end of wire is below bottom of oil well (say about ¼" from crank pin) put loose end pf the wick on each sode of the oil well. The number of worsted strands and construction of wick are important so do not alter the new wick supplied do not twist it any tighter.
Pour some oil around the mast pipe to lubricate the crosshead, crosshead pin and swivel. Do not use old engine sump oil, only use new oil. Comet windmill oil for preference.

Push the crosshead up to its highest position to clean out the oil for the crosshead pin with a piece of wire. Lower crosshead until crosshead opposite the larger (i.e. lower) holes in the mastpipe. Clean them thoroughlyand put oil in them.
Clean top end of mastpipe bore and re oil. Clean crank pin and crank pin washer.

- Make sure that the sharp corner on the top of the back end of crank pin has been removed by a light touch with a smooth file to prevent it scoring the wood bush when the connecting rod is being pushed over the crank pin. Be careful that fillings do not fall down mastpipe. Oil the crank pin.

- See that the hinge pin (not the spilt pin) pf the oil lid is on the left side of the mill looking from back. If the connecting rod has the word “OUTSIDE” cast on the back, oil well, this side should face backwards i.e., towards the crank pin washer.
- Note that the locking pin holes through small end on connecting rod are horizontal when connecting rod is held vertical. Put small end of connecting rod down mastpipe towards right hand side (to clear chain roller) and when crank pin is in 2 o’clock position, twist top end of connecting rod in between end of crank pin through arc from 1 o’clock and 2 o’clock while pushing connection rod on with hand pressure only.

- On no account tap connecting rod with hammer as the wood bush would then be damaged. It will definitely go on by hand pressure and this only takes a couple of minutes if crank pin is in the right position.

- Replace the crank pin washer, spring lock washer and set screw, tightening the latter very carefully but firmly.

- Turn crank pin to bottom of stroke and then push up the crossed from below until crosshead pin holes line up with hole in end of connection rod.