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Pressman's Toolbox

Getting rid of tension headaches

By Frank Bourlon

Are you having trouble holding tension on a Goss Urbanite or Goss Community with a mechanical tension system?

Are you having a difficult time controlling print register on every web?

The problem may be the eccentric shaft and eccentric shaft sleeve (see Figure 1).



Fig. 1: Eccentric shaft and sleeve.

Photos: Frank Bourlon

Figure 2 shows the complete brake assembly of a Goss Community press and Figure 3 shows the eccentric shaft and sleeve in the frame with the brake shoe removed.

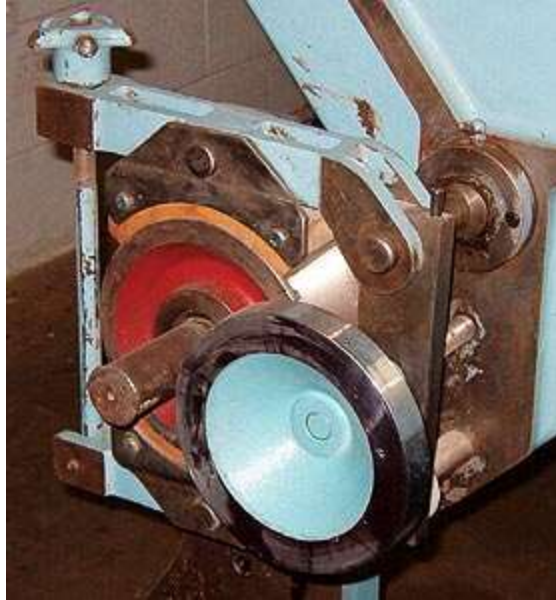


Fig. 2: Community brake assembly.

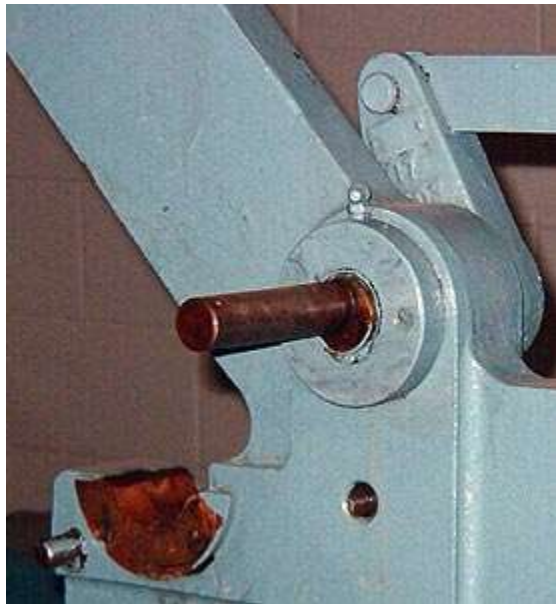


Fig. 3: Eccentric shaft and sleeve with shoe removed.

Examine the wear on the eccentric shaft in Figure 4. This wear is normally caused by lack of grease or deterioration over time.

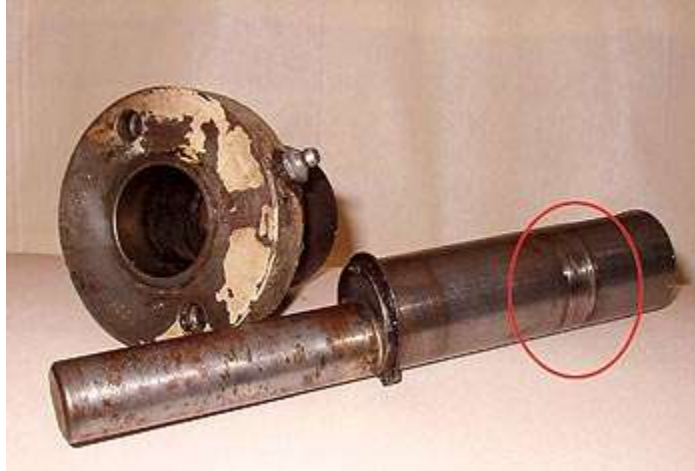


Fig. 4: Wear on eccentric shaft.

The eccentric sleeve is undercut in the middle so that the eccentric shaft is supported on both ends of the sleeve (one-half inch support on the drive side of the sleeve and three-quarter inch support on the operator side of the sleeve).

The reason for this variance is to enable less friction between the dancer and the brake shoe and also to hold grease for lubrication purposes.

Lateral movement

The excessive wear on the eccentric shaft and the eccentric sleeve causes a lateral movement of the eccentric shaft along with its designed rotational movement. The lateral movement causes the eccentric shaft to bind and then release, which causes the dancer to swing wildly, thus causing loss of web tension and poor print register control.

You can inspect the eccentric shaft for wear by grabbing the eccentric shaft and the eccentric shaft lever (which is on the opposite side of the frame) and trying to rock the assembly back and forth. The eccentric shaft and sleeve should be replaced if any movement in the lateral direction is noticed.

The wild swinging movement of the dancer can be reduced temporarily by loosening the eccentric shaft lever and repositioning it as close as possible to the frame. The temporary fix should only be used until the new eccentric shaft and sleeve can be acquired since the temporary fix could cause a slight loss of tension control.

The eccentric shaft can be removed by first removing the brake shoes. This is done by turning the sidelay hand wheel counter-clockwise until

the brake shoe assembly is off of the eccentric shaft. When the brake shoe is removed, the assembly will resemble Figure 3.

Remove pin

Next, the eccentric lever pin must be removed to allow easier access. At this point, the eccentric shaft can be removed from the eccentric lever by loosening the bolts that hold the eccentric shaft lever to the eccentric shaft, then driving the eccentric shaft from the drive side of the press (see Figure 5).



Fig. 5: Removing the shaft.

Once the shaft is removed, the sleeve can be detached by removing the two hex bolts from the eccentric sleeve and then driving the eccentric shaft from the unit frame in the same manner as removing the eccentric shaft.

To replace the components, reverse the removal process. It should take about an hour to complete the repair.

The process is simple and will dramatically improve the tension system, which will ultimately keep the print register working properly.

Frank Bourlon has more than 30 years' experience in the newspaper industry. He is the executive and training director for the Newspaper Production & Research Center. He can be reached at 405.524.7774.