

## Chain Pitch Elongation

As the bearing parts wear, the chain elongates causing the chain to climb to the top of the sprockets and inhibit smooth articulation. This is shown in Figure 7. Conveyor chains should be replaced when chain elongation equals 3% to 4%.

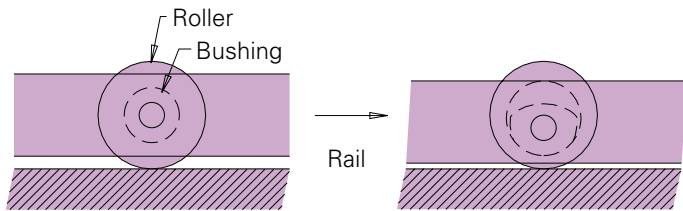
**Figure 7**



## Life of Roller Conveyor Chain and Sprockets

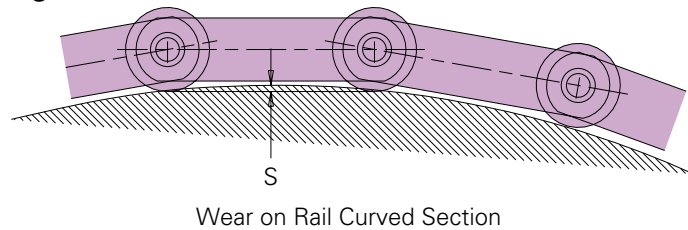
The chain has reached the end of its service life when, due to track wear, rollers do not project from sidebars. The under surface edge of the sidebar may actually touch the track in some cases, causing a significant change in friction and resulting in higher chain tension (Figure 8).

**Figure 8**



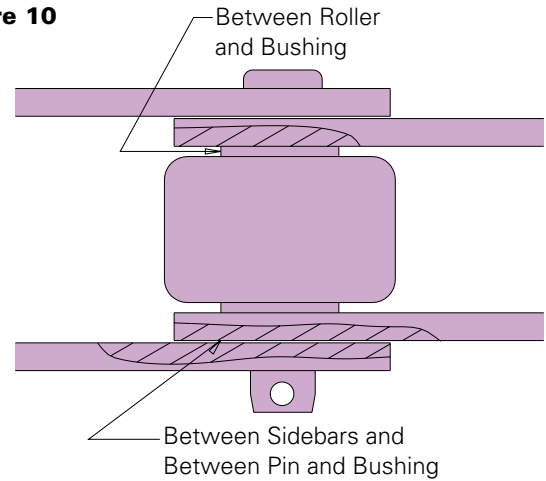
Wear must be inspected even more often with a curved section of rail than with horizontal sections. Decrease the allowed wear amount for a curved section by a dimension equivalent to "S" (Figure 9).

**Figure 9**



Chains should be replaced when the bushing wear, due to conveying abrasive materials, exceeds one-third of the wall thickness. Reciprocal friction between inner and outer sidebars and contact between the side surface of the roller and the inside surface of sidebars cause wear, as shown in Figure 10.

**Figure 10**

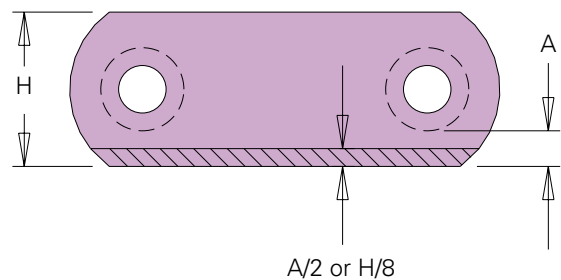


Replace chain when wear exceeds 1/3 of the original plate thickness.

When sidebar wear appears faster than wear of other component parts, misalignment of the conveyor is usually at fault. To ensure proper alignment, check the alignment of driving and driven sprockets, the alignment of shafts in horizontal and vertical planes, and the preciseness of leveling.

The service life of a chain that slides directly in the conveyed material or on a steel plate casing should end when the worn section equals  $A/2$  or  $H/8$ , as shown in Figure 11.

**Figure 11**



Never insert a new link in a chain that has been appreciably elongated by wear. Do not install new chain on badly worn sprockets.

Protect the chain during long periods of idleness. If the chain is to be stored, remove it from the sprockets, clean and re-oil it and cover it with heavy grease. Store the chain where it will be protected from moisture and mechanical injury. Before placing the conveyor in service again, thoroughly clean the chain and sprockets to remove the protective grease and then re-lubricate the chain.