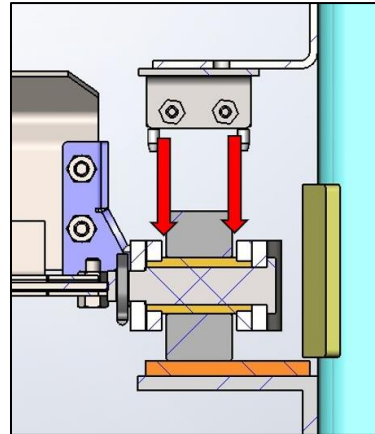


### *Lubrication*

Proper lubrication is probably the most critical area for equipment maintenance and can drastically affect component life. Conveyor chains should always be lubricated with oil. This can be done either manually or with an automated system.

The chain component that requires lubrication is the roller/bushing interface. Always ensure the lubrication is directed to this area.



### *Conveyor Slat/Chain Hardware*

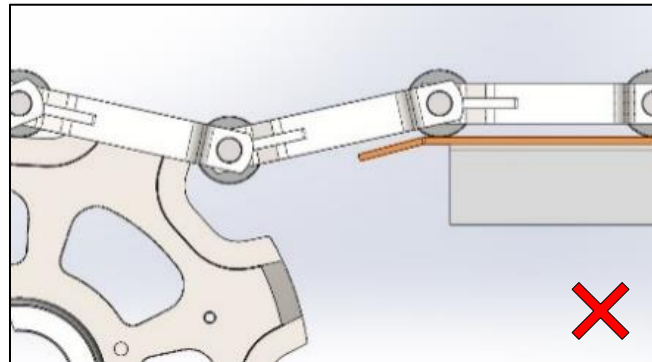
The hardware connecting the slats to the chain should be snug, but not overtightened. This gives the conveyor a small amount of “play”. There can be a significant amount of thermal expansion in a dryer. This “play” helps the conveyor to self-center and track through the dryer without pulling to one side.

The conveyor hardware should be inspected periodically to ensure no nuts or bolts are loose or missing. Lock nuts (ex. top lock, flex lock) should always be used to keep them from loosening during operation.

### *Chain Tension (Take-Up Spring Adjustment)*

The chains should be tensioned with enough force to keep the belt from going slack. This is done by adjusting the compressed length of the take-up springs. Equal spring force should always be applied to both sides of the conveyor. Also be careful to not overtighten the conveyor, which can reduce chain life.

Tension should be checked periodically, but especially during the first few weeks of operation. It is best to check the spring tension when the dryer is at operating temperature.



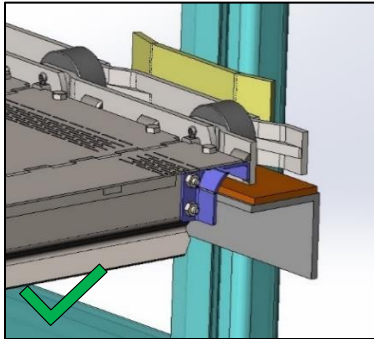
### **Chain too loose**

Excessive slack in chain

### Belt Tracking

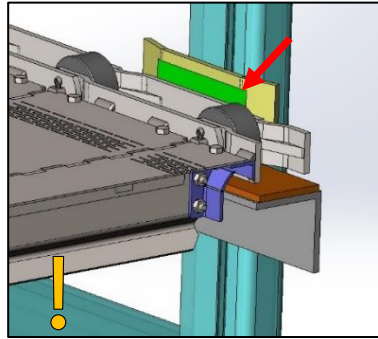
Proper belt tracking is achieved when the conveyor moves in a straight, level path and does not interfere with anything.

Over the lifetime of a dryer, the frame can become warped or damaged, which can cause tracking and interference issues. Chain guides and hold downs may need to be treated as sacrificial parts to prevent frame damage. Monitor the guides for wear and replace them before they are completely worn through and begin causing frame damage.



**New chain guide (unworn)**

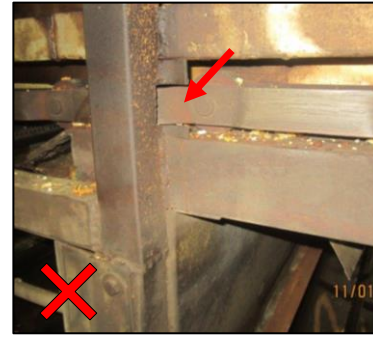
New guide is fully intact



**Somewhat worn chain guide**

Guide is partially worn thru

Action: monitor and replace before guide is worn thru



**Completely worn chain guide**

Chain has worn thru guide into frame

Action: replace guide and repair frame

### Sprocket Wear

Sprocket teeth will wear over time. Severely worn sprockets should be replaced as they could prevent the chain from meshing with and releasing from the sprockets properly. In general, if any wear can be visually noticed on a sprocket tooth profile, then it should be replaced.



**New sprocket (unworn)**

Tooth profile is smooth



**Somewhat worn sprocket**

Tooth profile is shiny indicating wear

Profile may not be visibly deformed, but you can feel a slight lip

Action: monitor for issues



**Severely worn sprocket**

Tooth profile is visibly deformed

Severe lips could prevent chain rollers from properly seating/releasing

Action: replace sprockets

### *Chain/Rail Wear*

The chain and rails will also wear over time. Some wear on these items is allowable, but severe wear requires them to be replaced. Chain and rail wear are generally easily noticed as a shiny area.



**Chain wear – side links**



**Chain wear – rollers**



**Rail wear**

### *Slats/Side Guide Wear*

Always monitor for damaged slats and side guides. These indicate there is an interference or excessive load somewhere that needs to be corrected. Below are pictures of common damage.



**Bent traveling side product guides (TSPGs)**

Caused by interference and/or loose TSPG



**Bowed (cupped) slats**

Often caused by running too deep of product (overloaded slats)



**Bent girts**

Caused by interference somewhere in the dryer



**Hinge Knuckle Tear**

Often caused by excessive tension or interference