INSIGHTS™

Increase Uptime

TECHNICAL SOLUTIONS FOR BELT CONVEYOR PRODUCTIVITY

Simplified Insertion and Removal of Wire Hook Connecting Pins

Why is a connecting pin important?

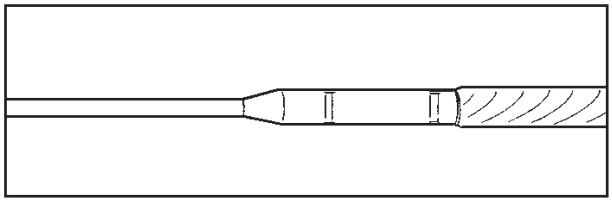
The connecting pin is critical to the integrity of the splice. It is a vital link that, when combined with properly selected and installed hooks, complete the perfect splice. Unfortunately, the selection of a connecting pin is often an afterthought, and can make inserting and removing a connecting pin troublesome. Many users substitute various materials such as welding rod, baling wire, etc. Incorrect material usage may result in pin breakage, premature wear of fastener loops, and unscheduled downtime.

Inserting your connecting pin

First and foremost, choose a connecting pin that is designed to provide long pin life and minimal wear to fastener loops. Once you choose the pin that best fits your application,consider how you will be inserting the pin.

Inserting connecting pins into a wide belt can be difficult and time consuming, especially with a flexible connecting pin. A "leader" is a rigid, smaller-diameter pin that is attached to the connecting pin to help guide the larger diameter connecting pin through the splice. Depending on the connecting pin that has been chosen, the leader is formed in one of two methods.

Swaged Leader assemblies use a Nylon Plus pin or one of the flexible cables – Nylon Covered Stainless Cable, Bare Stainless Cable, or DuraLink™. In this process, a small diameter music wire is swaged onto the connecting pin, forming a leader.

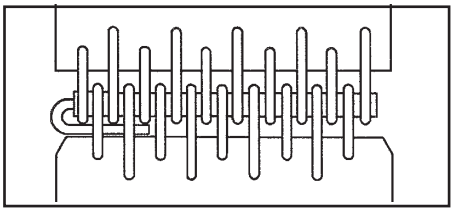


Swaged Leader Assembly

With a Stripped Leader, a portion of the nylon coating of the Nylosteel, Nylostainless, or DuraStainless™ pins can be stripped off, exposing the solid core. This stripped portion forms a leader. Both leaders can be fed through the width of the splice, allowing the connecting pin to be pulled through with ease. The leader is then cut off and discarded.

Removing your connecting pin

To lock your pin into the splice, simply strip ½" of the nylon coating and form a "J" on the end of the pin. This process secures the pin, preventing it from migrating out of the splice. In addition, the "J" end does not allow the pin to spin freely within the splice and focuses the wear on only one side of the pin.



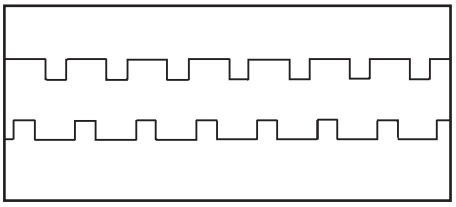
"J" End Pin

To remove, you can simply pull the pin until the "J" end is out of the splice, rotate the pin 90-degrees until the smooth side of the pin is against the fastener loops, and then pull the pin out.

Replacing your pin

It is also important to know when to replace the pin. Inspection of connecting pins and replacement when necessary is critical to achieving a long splice life. When grooves worn by the fastener loops exceed 25 percent of the pin diameter, the pin should be replaced. Excessive pin wear can also cause unwanted wear in the loop area of the fasteners, so those should also be inspected closely.

In addition, the pin should be replaced if there is damage to the actual pin or if a portion of the pin is missing. Also, the use of multiple pins in a splice is not recommended. It can result in a weakened/shortened splice life and unwanted pin migration.



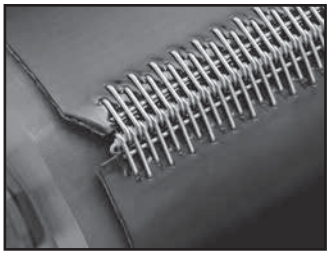
Connecting pin ready for replacement

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Connecting Pins

Selecting your connecting pin

When choosing the correct connecting pin for your application, there are many different facets to consider, including: pin wear, hook wear, rigidity, magnetism, flexibility, and composition of the pin.



Clipper® connecting pins are ideal for use with Clipper® wire hooks.

Connecting Pin Characteristics

Connecting Pin Types	Abbreviation	Pin Wear Factor	Hook Wear Factor	Rigidity	Magnetic	Flexibility	Composition
Nylosteel	NY	Good	Good	Good	Yes	Good	Nylon & music wire
Nylostainless	NYS	Good	Good	Good	Slightly	Good	Nylon & 300SS spring wire
Nylon-Covered Stainless Cable	NCS	Good	Good	Average	Slightly	Good	Nylon & 300SS cable
Music Wire	MW	Good	Poor	Excellent	Yes	Poor	High-carbon spring-tempered steel
Cold-Rolled Steel	Smooth - SM Notched - N	Average	Fair	Excellent	Yes	Fair to Poor	Mild cold-rolled steel
Stainless Steel	Smooth - SMS Notched - NS	Average	Fair	Excellent	Slightly	Fair to Poor	302 or 300 stainless steel
Duralink™	DL	Excellent	Excellent	Average	Slightly	Good	Wear-resistant nylon & 300SS cable
Bare Stainless Cable	SMSC	Average	Fair	Average	Slightly	Good	300SS cable
DuraStainless™	DSS	Excellent	Excellent	Good	Slightly	Good	Wear resistant nylon & 300SS spring wire
Nylon Plus	NP	Good	Excellent	Fair	No	Excellent	Nylon

* Flexco Nylon-Covered Stainless Cable, Duralink, Bare Stainless Cable, and Nylon Plus connecting pins are available as swaged leader assemblies. Nylosteel, Nylostainless, and DuraStainless connecting pins can be stripped to form a leader.

Connecting pins from Flexco

Flexco offers connecting pins in a variety of materials, including:

Nylosteel: Used frequently with galvanized hooks.

Nylostainless: Frequently used with stainless hooks for food handling applications. Coating is FDA approved.

Nylon-Covered Stainless Cable: Its flexibility makes it excellent for troughing and crowned pulley applications. Coating is FDA approved.

Music Wire: Ideal for applications requiring frequent removal of connecting pin and high temperature applications.

Cold-Rolled Steel: Used in high temperature applications. Available notched or smooth. Notched reduces pin migration. Solid steel pin, no coating.

Stainless Steel: Used in food processing and high-temperature applications. Available notched or smooth. Notched reduces pin migration. Solid stainless pin, no coating.

Duralink™: Excellent for highly abrasive and abusive applications, and to achieve extended pin life.

Bare Stainless Cable: Used in high-temperature applications where a flexible pin is desired.

DuraStainless™: Excellent for highly abrasive and abusive applications, and to achieve extended pin life.

Nylon Plus: Versatile white/clear solid nylon material for most applications requiring a non-magnetic or non-metallic pin.

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