ESCO® Fiber Processing Weld-in Repair Link Installation

This document provides instruction for installing ESCO fiber processing weld-in repair links for long link chain.

Weld-in repair links come with pre-cut weld preps that are cut or machined into the link to simplify separating the insert from the link to simplify separating the sections, inserting into the chain strand and final welding of the link.

For welding instructions, reference ESCO Welding Procedures, literature number P6000GEN.

Step 1

Position the chain so it is fully supported from unintentional movement and without any tension between links. Remove the link to be replaced by using air arc or cutting torch. Refer to Figure 1.

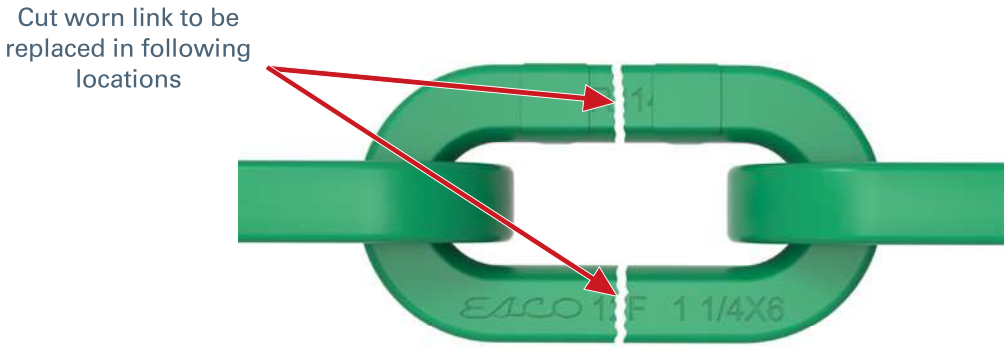

Figure 1

WARNING: *Chain must be fully supported from unintentional movement and without tension between the links.*

WARNING: *Do not attempt to cut chain links with a fiber cutting disk, grinding wheel or similar tool. Movement of the components can close the cutting slot onto the cutting tool which may result in loss of control of the tool or flying shrapnel from the damaged disk or wheel.*

Step 2

Position the replacement weld link into the chain segment where the old link was previously located (chain segment links not shown in Figure 2). Prior to welding, all weld prep surfaces need to be cleaned down to shiny base metal. Remove all carbon from burning, paint, grease, dirt and other foreign material. Use a magnet or square to align insert to be welded into place. Use 1/8 in or 5/32 in E7016/E7018 electrode to tack-weld the insert at each end of the weld joint as shown in Figure 2.

⚠ ***NOTICE-DAMAGE ALERT:*** *The ESCO® chain weld repair link must match the size of the chain segment being repaired.*

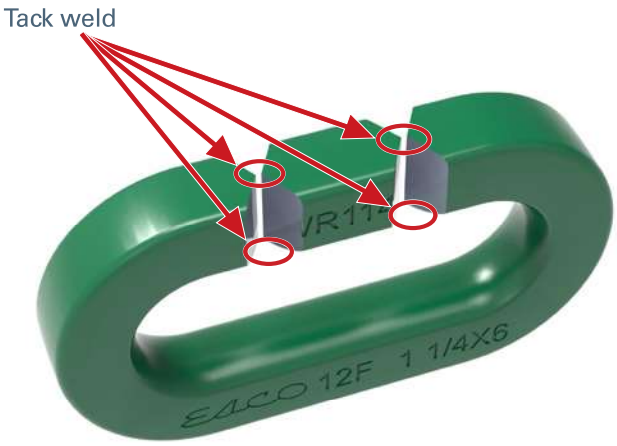

Figure 2

Step 3

Preheat link to 350° to 400°F. Using 1/8 in or 5/32 in E7016/E7018 electrode, apply two (2) initial passes of weld material in each side of the groove on one side of the repair link. Alternate welds in each groove to help control excessive heat. Complete weld to convex of parent metal. Refer to Figure 3.

Figure 3

Step 4

Flip chain to opposite side to be welded.

IMPORTANT: *Backgouge, grind or air arc root of weld 1/4 inch minimum opening in both grooves of the weld link to gain 100% weld penetration. Refer to Figure 4.*

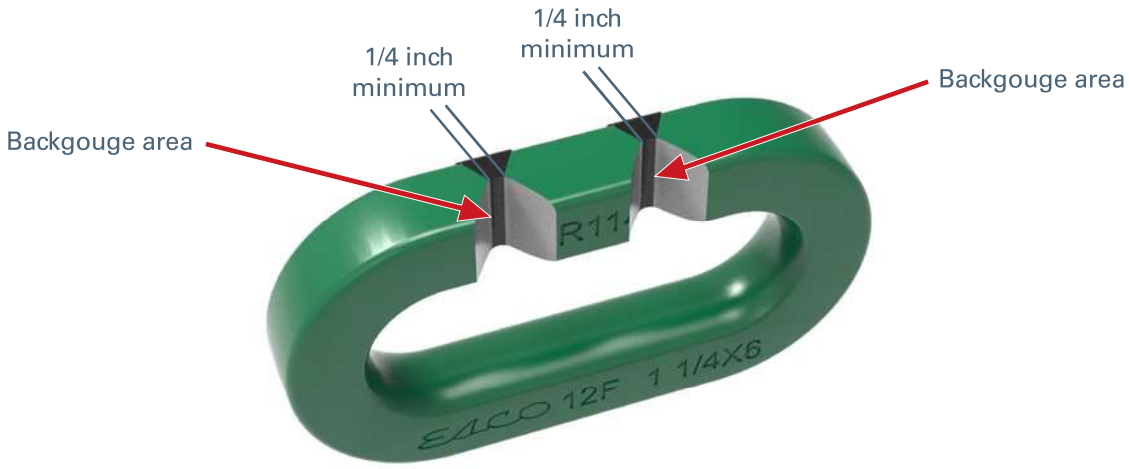

Figure 4

Step 5

Using 1/8 in or 5/32 in E7016/E7018 electrode, alternate welds in each groove to help control excessive heat. Complete weld to convex of parent metal. Refer to Figure 5.

Figure 5

⚠***NOTICE-DAMAGE ALERT:*** *Installation of chain repair link must be done in accordance with ESCO Welding Procedures, literature number P6000GEN.*

Step 6

Once welding is complete, finish grind the weld material smooth and flush with the parent metal of the repair link. Grind in direction as shown on Figure 6.

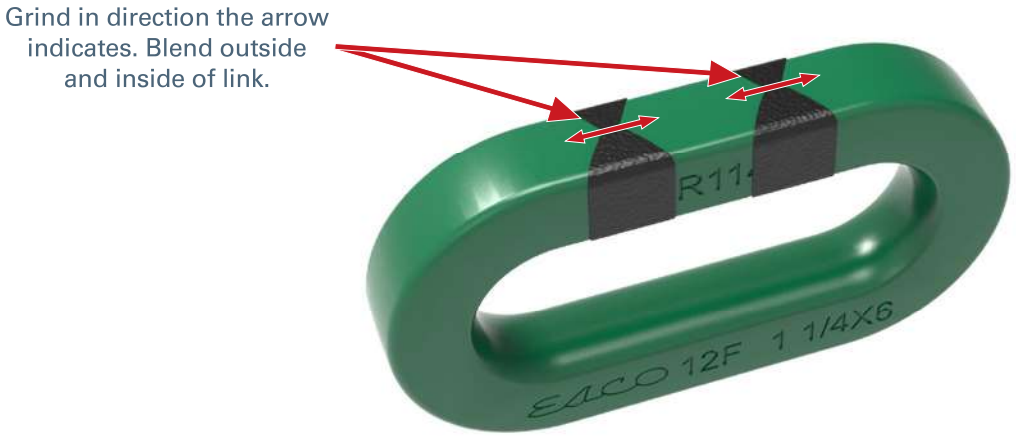

Figure 6

After the link has cooled from welding, inspect the entire weld for any porosity, undercutting or impurities that may affect performance. Repair as needed. Once the weld meets quality requirements, the chain may be put back into operation.

NOTICE-DAMAGE ALERT: *Not fully inspecting the weld for porosity, undercutting or impurities may result in failure of the repair link.*