

## 1.0 General

### REPAIRING A DAMAGED BELT

If a section of the belt is damaged you can

1. Straighten the wires in the section, or
2. Replace the section with a belt splice, or
3. Replace the belt.

## 2.0 STRAIGHTENING THE BELT

1. If the damage is not too severe the belt often can be straightened. Move the damaged section to the entrance load or exit unload area.
2. Using a pair of long nose pliers gently bend the distorted wires to match the pattern of the undamaged portion of the belt.
3. Use a straight edge to verify that any dips in the damaged section have been removed.
4. Turn on the compressed gas supply to tension the belt. Start the furnace and operate the belt without heat to verify alignment.

## 3.0 SPLICING THE BELT

### 3.1 Determine the Portion of Belt to be Replaced

1. Mark off the section to be removed with a masking tape or permanent marking pen on either end of the damaged area of the belt.  
Note: compressed gas supply to furnace should be off.
2. Remove the weight bar from the UCD tank. Lift the weight bar out of the tank to relieve the belt.
3. Take all the slack out of the belt by grasping the belt on either side of its width and pulling evenly and firmly.
4. The damaged belt section should then be located at the entrance load or exit unload area so you can work splice it.



Figure 2.1 Cut Wire at Ball Joint



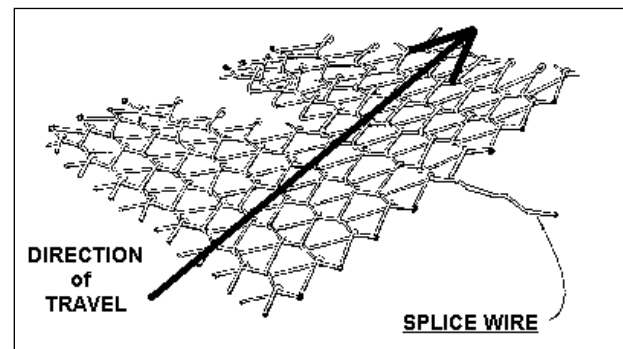
Figure 2.2 Second Cut at Opposite Side

**Procedure****3.2 Removal of the Bad Section of Belt**

1. Cut one of the cross-section wires travelling the width of the belt at the front of the damaged section. Make cut at ball joint on either side of the belt (see figures 2.1 and 2.2).
2. Remove the wire by pulling straight through the belt.
3. Remove a second cross-section wire on the other end of the damaged section in the same manner.
4. Measure the length of the section removed and prepare a new section of belt the same size by removing one of the cross-section wires.

**3.3 Install new section of the Transport Belt**

1. Splice as shown in the Belt Splice figure by inserting one of the cross-section wires through the belt mesh across the width of the belt. Insert a second wire at the other end of the splice.
2. Both wires should be even and parallel and aligned with the belt edges. The cross-section wires will stay in place without any finishing at either end.
3. Replace the weight bar in the UCD tank. Lower carefully into the tank to tension the belt.
4. Turn on the compressed gas supply to tension the belt. Start the furnace and operate the belt without heat to verify alignment.

**Belt Splice**

## 4.0 REPLACING THE BELT

### 4.1 Removal of the Transport Belt

1. Remove the weight bar from the lower exit section of the furnace. Lift the weight bar out of the belt drop guide (or UCD tank if so equipped) to relieve the belt.
2. At the exit, cut one of the cross-section wires travelling the width of the belt. Remove the wire by pulling straight through the belt.
3. At the entrance of the furnace, remove the belt by grasping the belt on either side of its width and pulling evenly and firmly until the top part of the belt is removed from the chamber. Roll the top portion of the belt.
4. Grasping the belt on either side of its width and pulling evenly and firmly to remove the bottom portion of the belt. Continue to roll the belt until it is free of the furnace.

### 4.2 Measuring and Marking the New Belt

1. Measure the length of the old belt by rolling it out, laying it flat and pulling it tight to get an accurate measurement. Measure the new belt by the same procedure, mark off with a masking tape or permanent marking pen where the excess belt material will be removed.



Figure 2.1 Cut Wire at Ball Joint

### 4.3 Cut the New Transport Belt

1. Cut one of the cross-section wires travelling the width of the belt at both sides at the marked off area of the excess belt material.
2. Remove the wire by pulling straight through the belt.



Figure 2.2 Second Cut at Opposite Side

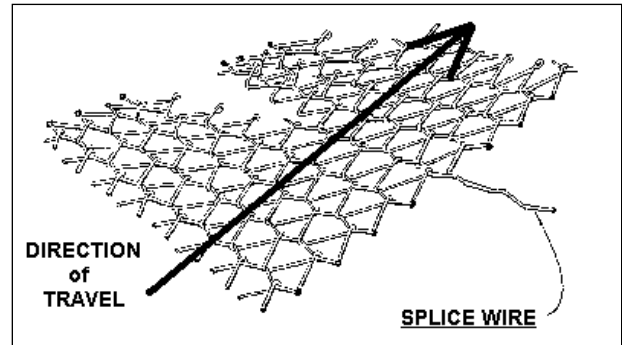
### 4.4 Install new Transport Belt

When installing the belt, it will be helpful to have an assistant available to help guide the belt into the furnace entrance.

1. Place a length of stiff wire or electrical pull tape to act as a pull wire through the length of the furnace chamber.
2. The belt should be rolled up and placed on the load area at the entrance of the furnace. Unroll the belt and attach it securely to the pull wire that was inserted in the furnace chamber.

**Procedure**

3. Pull the belt through the chamber from the exit end of the furnace, while an assistant guides the belt into the entrance.
4. Once the belt has been pulled completely through the chamber, remove and discard the pull wire.
5. Thread the edge of the belt at the exit end around the end roller and the pinch rollers, and on top of the guides to the front of the furnace.
6. Pull the end of the belt around the entrance roller in line and parallel with the other end of the belt.
7. Splice as shown in the Belt Splice figure by inserting one of the cross-section wires through the belt mesh across the width of the belt.
8. The splice wire should be even and parallel and aligned with the belt edges. The cross-section splice wire will stay in place without any finishing at either end.
9. Replace the weight bar in the belt drop guide (or UCD tank if so equipped). Lower the weight bar carefully to tension the belt.
10. Turn on the compressed gas supply to tension the belt. Start the furnace and operate the belt without heat to verify alignment.



**Belt Splice**