# Gear Motor Retrofit Kit

This gear motor retrofit kit replaces the gear motor originally installed in the machine which is no longer available from the supplier. The motor manufacturer has replaced the motor it previously manufactured with a similar motor with slightly different dimensions and a slightly different envelope. The mounting pattern, drive shaft length and size and motor capabilities are unchanged, but the housing of the new motor is slightly shorter in height and approximately 0.354 inches (9 mm) larger in diameter than the previous motor. The diameter has increased from 4.96 inches to 5.315 inches (126 mm to 135 mm).

This QuickStart provides instructions for replacing an original equipment motor with a new replacement motor, adjusting the motor position to allow for the increase in size of the motor housing diameter. Procedures described in this QuickStart should only be performed by a trained technician familiar with the operation and service of the machine and should not be attempted by nonprofessionals.

| ⚠️ | **CAUTION:** Unless specifically stated otherwise, shut down the machine on which the gear motor will be replaced. Shut off power to it and any equipment connected to it. Be sure to follow your company's lockout/tagout rules and procedures for all equipment. |
|---|---|

| ⚠️ | **WARNING:** Failure to follow lockout/tagout practices can result in serious injury and/or equipment damage and may void the warranty. |
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**Note**:   Lockout mechanism(s), padlock(s), and identification tag(s) are the responsibility of your company in accordance with your company's lockout/tagout rules and procedures and are not provided by Eastey.

**These retrofit kits are applicable for the following machines:**

- SB-HD Side Belt Heavy Duty Industrial Case Taping System (Kit part number 5005817)
- VCTS & VCTS-XL Vertical Case Transport System Print Station (Kit part number 5005816)

**Items included in Kit 5005817 – Motor Retrofit, SB-HD Side-Belt Heavy Duty Industrial Case Taping System**

| Part Number | Description | Quantity |
|---|---|---|
| 5002086 | Side Belt Gear Motor | 1 |
| 5005818 | QuickStart Instructions – Motor Retrofit, SB-HD & VCTS / -XL Print Station (This QuickStart) | 1 |

**Items included in Kit 5005816 Kit – Motor Retrofit, Print Station for VCTS / VCTS-XL Vertical Case Transport System**

| Part Number | Description | Quantity |
|---|---|---|
| 5002086 | Side Belt Gear Motor | 1 |
| 5003027 | Fab-Rear Support Bracket | 1 |
| 5005818 | QuickStart Instructions – Motor Retrofit, SB-HD & VCTS / -XL Print Station (This QuickStart) | 1 |

Replacement of the side belt gear motor and belt assembly adjustment requires standard tools. No special tools are required.

**Items Needed to complete replacement of the gear motor and adjust belt assembly location as necessary:**

- ½ inch wrench (Quantity 2)
- $^7/_{16}$-inch wrench (Quantity 1)
- Medium size Phillips tip screwdriver (Quantity 1)

**Note:**   When removing side belt gear motor, retain all attaching hardware (bolts, washers, and nuts) for reuse when installing the replacement gear motor. Make note of washer locations to aid reinstalling them in the correct locations.

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# Motor Retrofit, SB-HD Side Belt Heavy Duty Case Taper

On the SB-HD Side Belt Heavy Duty Industrial Case Taper, the gear motors for the side belts are located below the roller transport frame at the exit end of the taper.



**SB-HD Side Belt Gear Motors**

Case Exit End

Case Infeed End

Side Belt Gear Motors
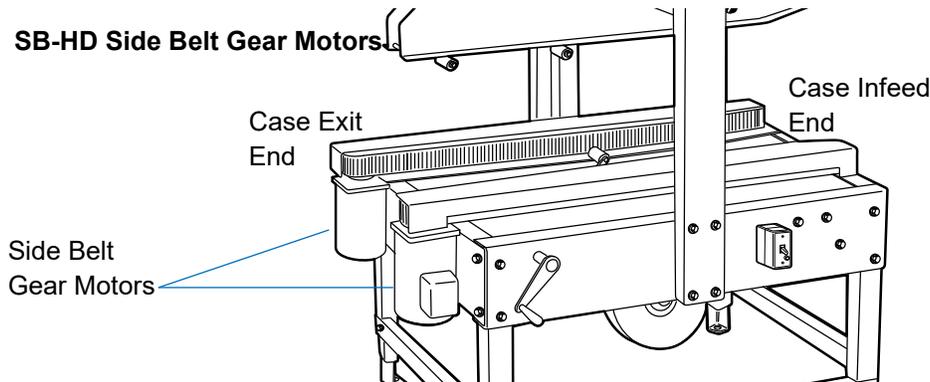
Following is a screen capture from the CAD model showing the gear motor and taper frame as viewed from the underside. Indicated at the right in red, is where the new larger diameter gear motor housing will interfere with the case taper end crossmember. Indicated in the red rectangle to the left are two slotted adjustment holes where bolt locations must be adjusted to provide adequate clearance for the new gear motor housing.



**Adjustment Slots**

**Frame End Crossmember**

**Side Belt Gear Motor**
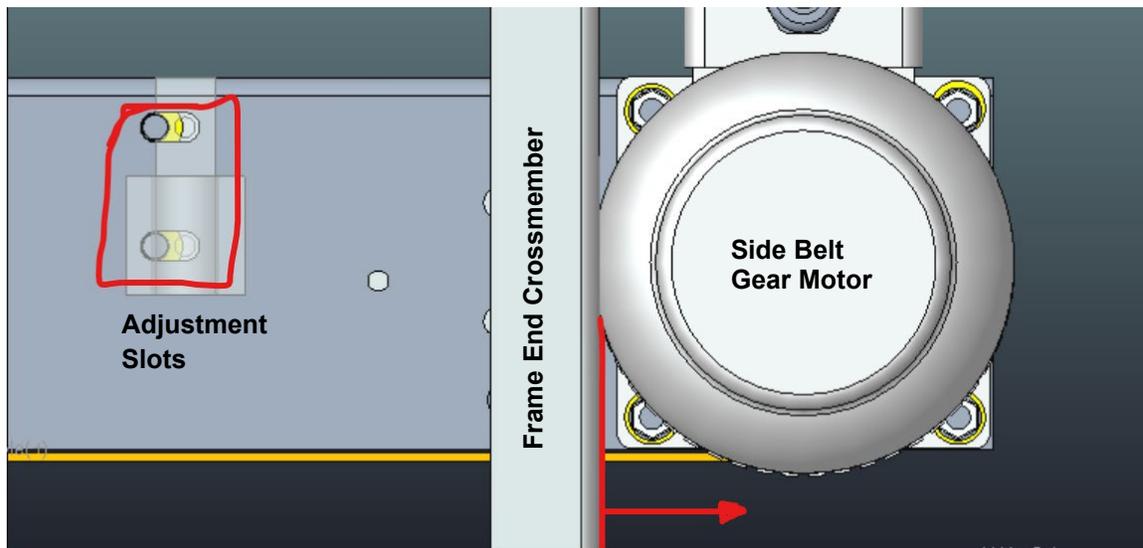
**Remove and Replace the Side Belt Gear Motor:**

1.  **Use two (2) half-inch wrenches to remove the gear motor to be replaced.**

    a.  Supporting the side belt gear motor so it does not drop, remove the four nuts and bolts pairs that fasten the motor to the mounting flange on the case taper. Make note of where washers are used and retain all hardware for reuse.

    b.  Carefully remove the side belt gear motor and set it aside.

2.  **Install the new gear motor, adjusting for motor clearance, and fasten in place using removed hardware.**

    a.  It will be necessary to adjust the position of the side belt assembly by loosening the screws located in the area indicated in the red rectangle area of the screen capture shown above. Remove the side belt cover using the Phillips head screwdriver to remove the Phillips head cap screws securing the belt cover. Use the $7/16$-inch wrench to remove the belt tension adjustment screw at the case infeed end of the side belt.

    The following CAD model screen capture shows the locations of the bolts and adjustment slots that allow for repositioning of the side belt assembly. Adjust the side belt assembly position as needed to provide clearance for the side belt gear motor.

**Side Belt Assembly Attaching / Adjustment Slots**
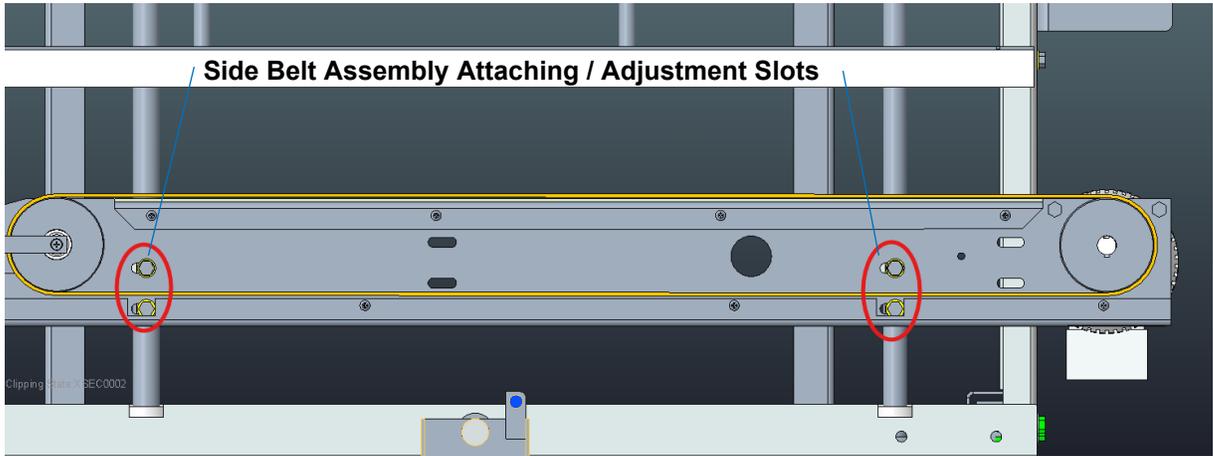
b. Reuse original hardware removed in Step 1 to secure the new replacement gear motor in place, loosening the bolts in the adjustment slots and adjusting the location of the side belt assembly as required. When the gear motor is secured in place, re-secure the bolts in the adjustment slots to secure the side belt assembly. Reattach the side belt assembly cover using the Phillips cap screws removed earlier, and reinstall the belt tensioning bolt at the case infeed end of the side belt. Refer to the SB-HD User Guide to adjust the belt tension and tracking after installation of the replacement motor and reinstallation of the side belt cover.

The following CAD model screen capture shows the replacement side belt gear motor installed with adequate motor housing clearance with the frame end crossmember.



Frame End Crossmember

Side Belt Gear Motor
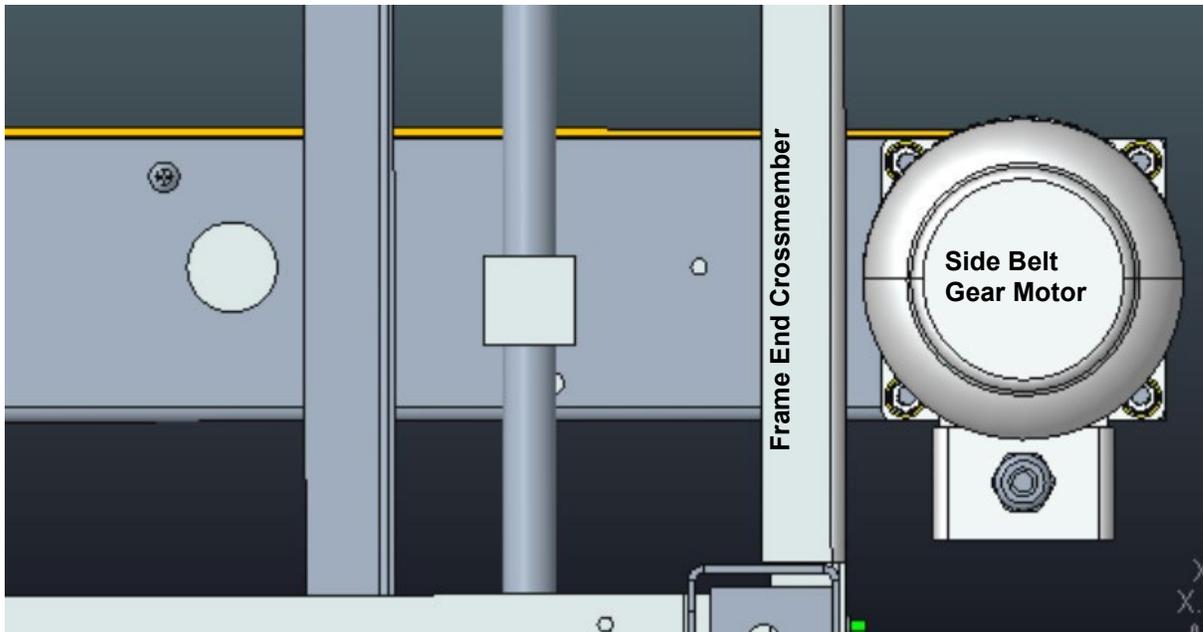
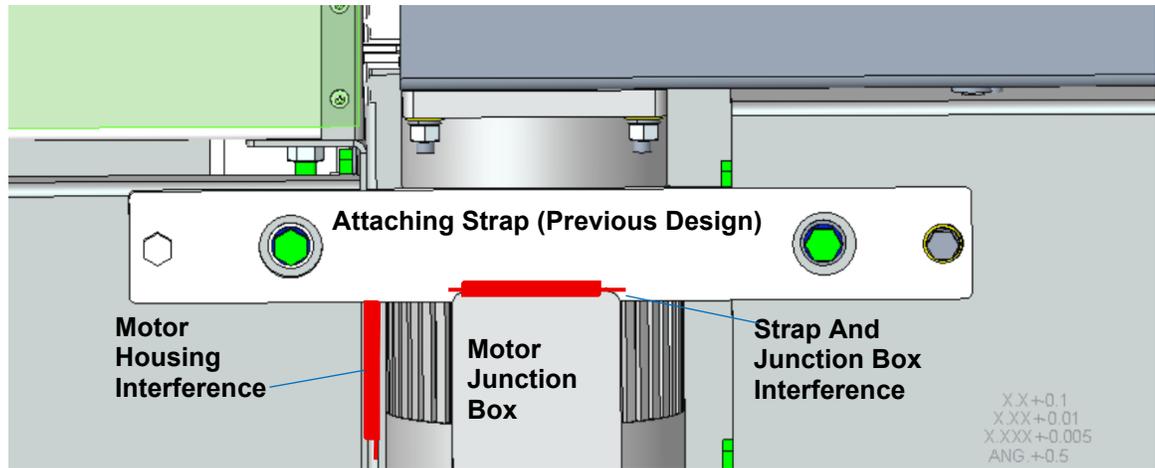# Motor Retrofit, Print Station for VCTS / VCTS-XL

On the VCTS or VCTS-XL Print Station, the gear motor for the side belt is located at the infeed end of the Print Station frame, which is the end toward the Infeed Hopper module.
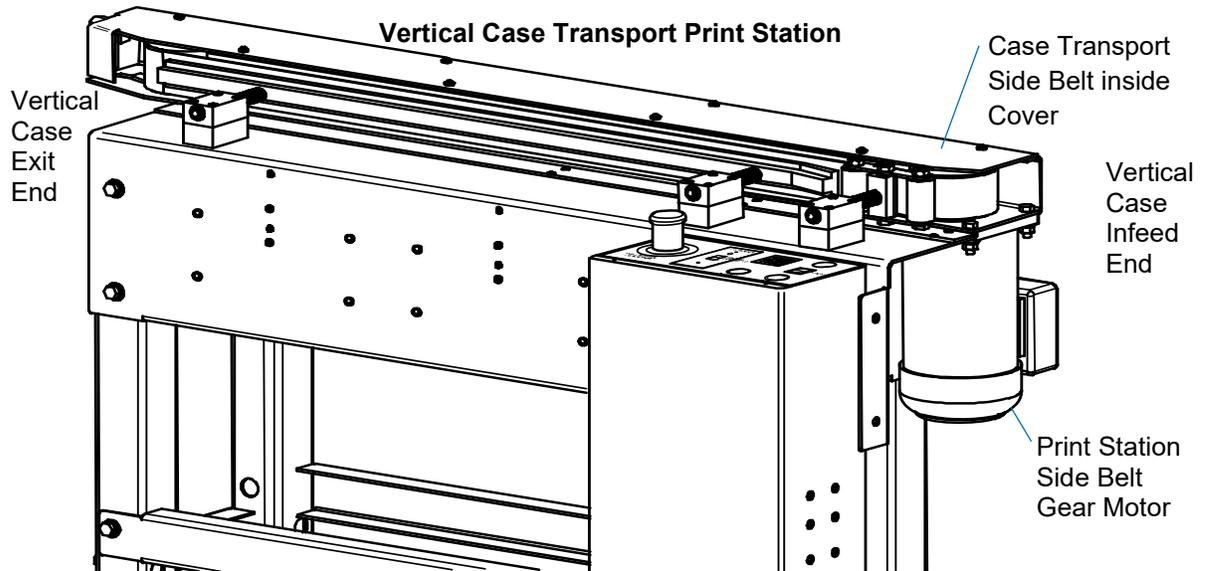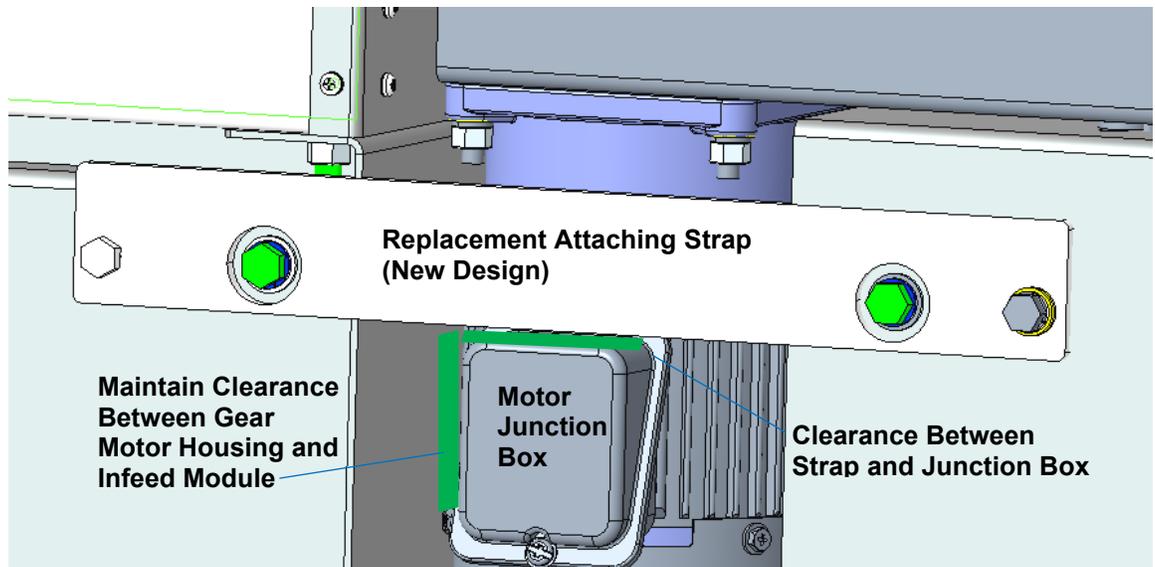


Following is a screen capture from the CAD model showing the gear motor and frames of the input hopper module and print station from the underside. Indicated at the left in red, is where the new larger diameter gear motor housing will interfere with the infeed hopper frame. Indicated in the red rectangle to the right are two slotted adjustment holes where bolt locations must be adjusted to provide adequate clearance for the new motor housing.
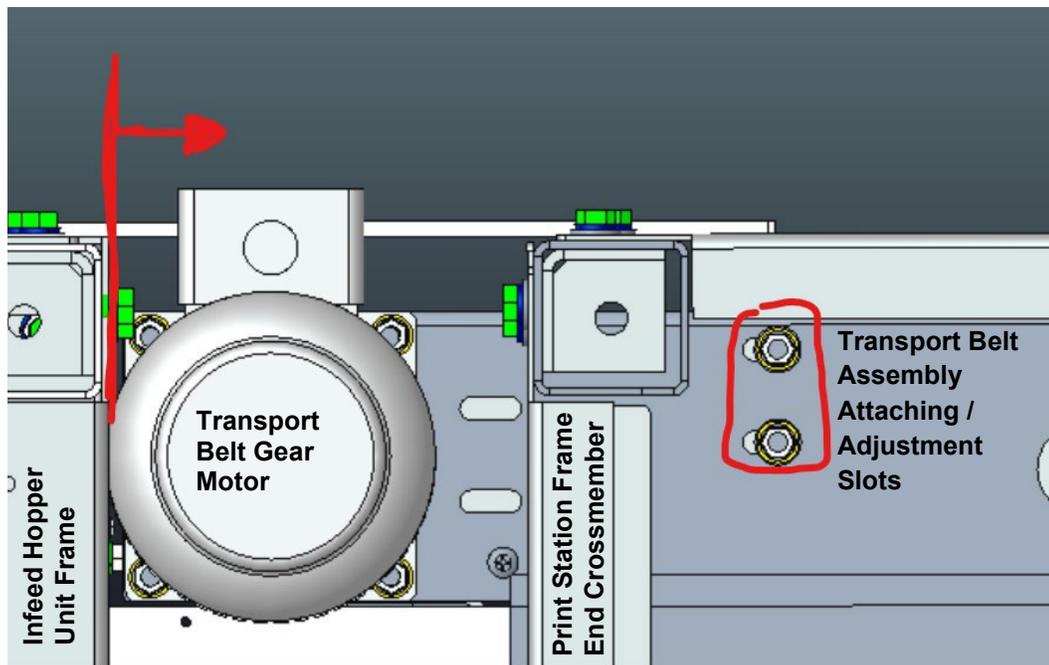


Note also that the design change of the new motor, because the junction box on the side of the motor is slightly higher than the previous design, places the motor junction box where it will interfere slightly with the attaching strap that connects the Print Station to the Infeed Hopper module, as shown in the following CAD screen capture.

**Attaching Strap (Previous Design)**

**Motor Housing Interference**

**Motor Junction Box**

**Strap And Junction Box Interference**

X.X +-0.1
X.XX +-0.01
X.XXX +-0.005
ANG. +-0.5

When replacing the gear motor, also replace the attaching strap that joins the Print Station to the Infeed Hopper module. The new connecting strap is not as tall as the original and provides clearance for the electrical box on the gear motor.

**Replacement Attaching Strap (New Design)**

**Maintain Clearance Between Gear Motor Housing and Infeed Module**

**Motor Junction Box**

**Clearance Between Strap and Junction Box**

**Remove and Replace the Side Belt Gear Motor:**

1. **Remove the attaching strap and use two (2) half-inch wrenches to remove the gear motor to be replaced.**

   a. Remove the attaching strap that joins the Print Station to the Infeed Hopper module, retaining the attaching hardware for reuse. Make note of locations of washers so they can be reinstalled in the same configuration.

   b. Supporting the side belt gear motor so it does not drop, remove the four nuts and bolts pairs that fasten the motor to the mounting flange on the Print Station. Make note of where washers are used and retain all hardware for reuse.

   c. Carefully remove the side belt gear motor and set it aside.

2. **Install the new gear motor, adjusting for motor clearance, and fasten in place using removed hardware.**

   a. It will be necessary to adjust the location of the side belt assembly by loosening the screws that secure the bottom of the belt enclosure to the print station. Remove the drive belt cover using the Phillips screwdriver to remove the Phillips head cap screws securing the belt cover. Use the $7/16$-inch wrench to remove the belt tension adjustment screw at the vertical case exit end of the belt cover assembly.

   The following CAD model screen capture shows the locations of the bolts and adjustment slots that allow for repositioning of the side belt assembly. Adjust the side belt assembly position as needed to provide clearance for the side belt gear motor.

**b.** Reuse original hardware removed in Step 1 above to secure the new replacement gear motor in place, loosening the bolts in the adjustment slots and adjusting the location of the side belt assembly as required. When the gear motor is secured in place, secure the bolts in the adjustment slots to secure the belt assembly. Reattach the belt assembly cover using the Phillips cap screws removed earlier, and reinstall the belt tensioning bolt at the vertical case exit end of the belt housing. Refer to the VCTS / VCTS-XL User Guide to adjust the belt tension and tracking after installation of the replacement motor and reinstallation of the side belt cover.

The following CAD model screen capture shows the replacement gear motor installed with adequate motor housing clearance. The following CAD model screen capture shows the locations of the bolts and adjustment slots that allow the position of the drive belt assembly to be adjusted as needed.

**Note**: Install the attaching strap in the orientation shown below so the fastening holes are closer to the bottom edge of the attaching strap than they are to the top edge. Note the orientation of the strap as shown below.
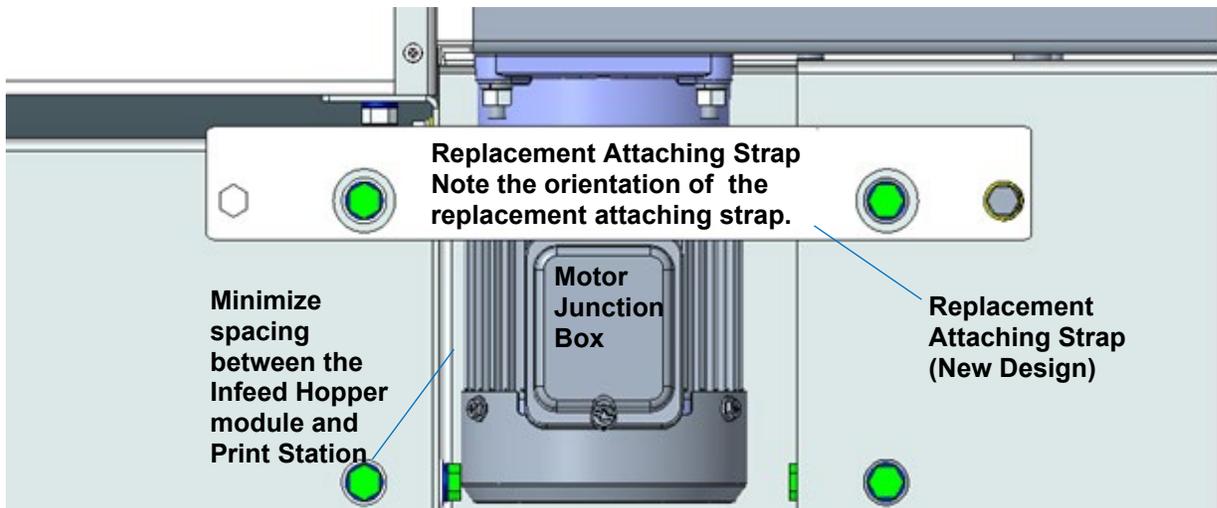


**c.** Refasten the Print Station to the Infeed Hopper module using the replacement attaching strap provided with the kit and using the attaching hardware removed earlier.

**Note:** Minimize the distance between the Infeed Hopper module and the Print Station to place the units as close to each other as possible to ensure smooth transport of cases from the Input Hopper module to the Print Station.