

## Bedford Closelt® V1



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## Safety

**Read this section before using the equipment. This section contains recommendations and practices applicable to the safe installation, operation, and maintenance of the product described in this document. Additional safety information, in the form of task-specific safety alert messages, appears as appropriate throughout this document.**

**Be sure the following safety instructions are read, understood, and become a part of daily practice when operating or maintaining the closure equipment.**

1. Do not attempt to operate the closure equipment until you understand its function.
2. Keep all foreign material away from the drive system.
3. Keep fingers out of the feed belts and closing roll area.
4. Disconnect the power cord before making any equipment adjustments or maintenance. All moving parts must be completely stopped.
5. After any adjustment, cycle the equipment by hand to ensure proper adjustment has been made. Immediately cycling under power may damage the unit and/or product.

### **Responsibilities of the Equipment Owner**

Equipment owners are responsible for managing safety information, ensuring that all instructions and regulatory requirements for use of the equipment are met, and for qualifying all potential users.



## 1.0 Specifications

### 1.1 Closure

- A. The Closelt® V1 Machine is capable of closing bags at a high rate of speed. The factors that restrict the max speed allowed to produce proper application are bag width, closure opening size, conveyor speed & flight spacing.
- B. The machine is available in right-hand or left-hand configurations. The parts section includes part numbers for both right-hand and left-hand equipment.
- C. The system will close a wide range of product sizes. The Closelt® is available in many opening sizes to accommodate a large variations in bag widths and film material thickness.

**Bedford Industries will gladly recommend the proper Closelt® shape for your bag size and application.**

- D. A suggested spare parts list is provided in the parts section and on a separate file provided with the digital manual. It is recommended that an adequate supply of these parts be kept on hand for repairs.
- E. Specify your single-phase voltage requirements. Bedford Industries will supply the proper electrical specifications with your order. Standard electrical specifications are:
  - 110 VAC, 15 Amp, 1 phase, 60 Hz.
  - 240 VAC, 15 Amp, 1 phase, 60 Hz.
- F. Contact Bedford Industries for any special voltage requirements

## 1.2 Machine Orientation

*Machines below are shown without reel payout & bag guards.*



Left Hand Machine



Right Hand Machine

## 2.0 Installation

### 2.1 Power Requirements

Closelt<sup>®</sup> Machine power requirements are listed in Specifications section, page 4.

*NOTE: The life of the motor, drive & PLC will be extended if the Closelt<sup>®</sup> machine is wired to continue running when the bagger is powered “on” rather than when the bagger starts/stops. Power surges created by starting and stopping may shorten the life of the electrical components.*

### 2.2 Mounting Machine

1. Start by inspecting the location when the machine is intended to mount. Confirm no moving parts from the conveyor, bagger or scale will contact the machine when in normal operation. Confirm the reel payout is accessible for material changes.
2. The machine may require some assembly of the reel payout, printer (optional) & track. Complete this assembly before completely mounting unit.
3. Locate the centerline of the process, feed belts, pneumatic transfer arm or wicket bag stand. Place unit so centerline of machine’s feed belts center on system centerline.
4. Determine desired location for Closelt<sup>®</sup> closure on product packaging. Position height of machine to achieve placement but also allowing enough bag neck that product can pass under unit freely.
5. If the machine is being mounted to an automatic bagger system the following will need to be completed/checked:

### 2.3 Timing between Bagger and Closure Machine

*Timing between the bagger and machine is critical. The bagger must release the bag just as the machine grabs & carries it through the closing cycle. If the bagger holds onto the bag too long, the bag neck can be damaged. If the bagger releases the bag too early, the bag will drop because it wasn’t completely inserted into the machine.*

- a) Set the bagger to release the bag as the Closelt<sup>®</sup> V1 feed belts grab the leading edge of the bag.
- b) Slowly cycle the system to verify the adjustment.
- c) Adjust the speed of the Closelt<sup>®</sup> V1 to match the speed of the bagger’s transfer mechanism.
- d) Adjust the speed of the conveyor to keep the bottom of the bag aligned with the rate of the top.
- e) If the release and grab are matched, a smooth transfer can be seen between the bagger and closing unit.
- f) If the Closelt<sup>®</sup> V1 is running faster than the bagger, the Closelt<sup>®</sup> V1 will pull the bag neck in before the bagger releases it.

*NOTE: Taking time to match bagger, conveyor and Closelt<sup>®</sup> V1 settings will result in smooth operation, undamaged and securely closed package.*

## 3.0 Operation

### 3.1 Mounting Standard Closure Roll

Reference Figure 3.1

1. Pull detent pin located on the front reel hub.
2. Grasp the reel hub to remove front reel assembly.
3. Mount roll of closures on the reel hub bearing.

*NOTE: Closures must always be mounted with the closure opening facing oncoming product.*

4. Replace the reel side plate, making sure the detent pin “snaps” into lock position.

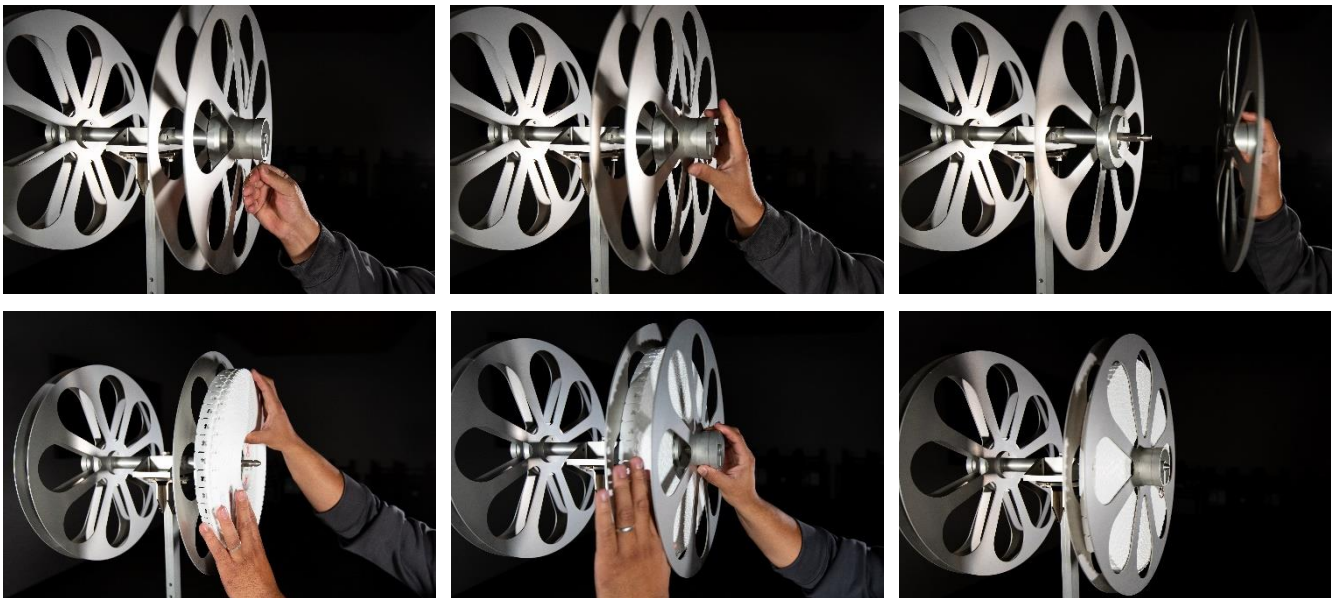


Figure 3.1 (Turret payout shown)

### 3.2 Feeding Closures into Track

Reference Figure 3.2 & Figure 3.3

1. Feed end of roll into the slot of the track guide.

*NOTE: Closure opening must face the oncoming product.*

2. Open the check pick and push the closures into the track until the end of the strip engages in the index pick. Then re-engage the check pick.
3. Press and release the manual cycle button to automatically advance the closures into ready position.
4. Continue to cycle using an empty bag inserted into the feed belts until there is a closure in the closing position visible through the feed belt gap.
5. Cycle an additional 2-3 times using the bag to insure the closures are disconnecting and applying correctly.

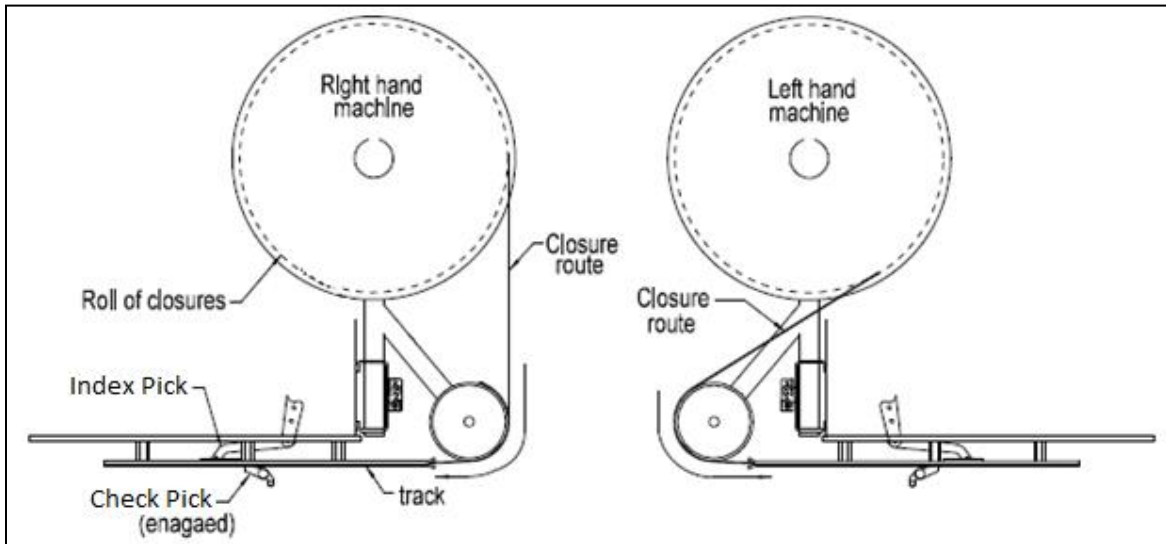


Figure 3.2

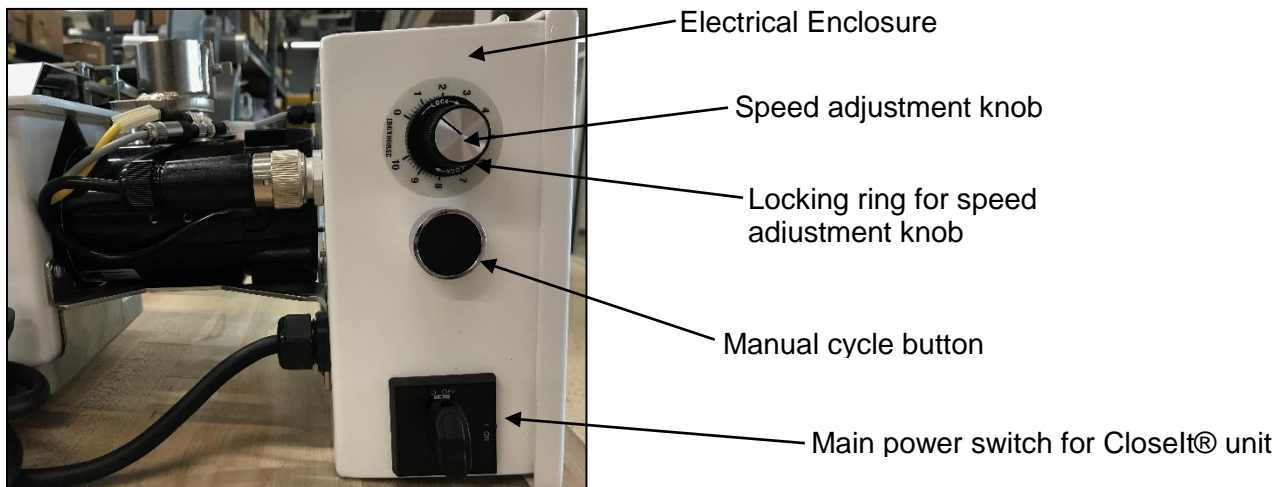


Figure 3.3





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## 4.0 Maintenance

*CAUTION: Power should be disconnected before performing any maintenance.*

Recommendation: Bedford Industries recommends using an anti-seizing, thread-locking compound when installing fasteners. Listed below is the compound used by Bedford during the assembly process:

CRC Food Grade Anti-Seize & Lubricating Compound. Meets NSF requirements with a H1 grade.

*NOTE: If customer has additional facility food safety plan or local law requirements, they will need to confirm oil used meets those requirements.*

### 4.1 Feed Belts

*NOTE: When replacing belts, check the pulleys for free rotation. Replace any bearings that do not turn freely.*

#### 1. Replace Lower Feed Belt (Drive Side)

*Reference Figure 4.1*

- a) Loosen the take-up pulley to release the belt tension.
- b) Remove the flat head mounting screws securing the lower pulley mounting plate (drive side) to the main frame.
- c) Remove the screw mounting the front pinch-point pulley.
- d) Remove the lower pulley mounting plate from the main frame.
- e) Use the front, pinch-point pulley (idle side) to loosen the pinch-point between the two belts and remove the used belt.
- f) Wrap the new belt around the front drive pulley
- g) Wrap the new belt around the other pulleys and remount the lower pulley mounting plate to the main frame.
- h) Adjust the idle side pinch point so the top belts mesh and tighten the pinch-point adjustment pulley.

*NOTE: Do not force the belts together. Tight belts are indicated by added vibration and/or irregular noise.*

- i) Replace the flat head mounting screws securing the lower pulley mounting plate (drive side) to the main frame.
- j) Replace the screw mounting the front pinch-point pulley.
- k) Adjust the tension of the new belt and tighten with the take-up pulley.

#### 2. Replace Lower Feed Belt (Idle Side)

*Reference Figure 4.1*

- a) Remove the bag deflector and the label deflector from the lower pulley mounting plate (idle side).
- b) Remove the flat head mounting screws securing the lower pulley mounting plate (idle side) to the

- main frame.
- c) Remove the screw mounting the front pinch-point pulley.
  - d) Disconnect the belt pivot plate extension spring and remove the pulley mounting plate from the main frame.
  - e) Locate and remove the three (3) lock nuts and nylon washers securing the belt pivot plate to the lower mounting plate.
  - f) Remove the belt pivot-plate assembly and replace the belt.
  - g) With the new belt installed, replace the belt pivot plate assembly and nylon washers. Secure with three (3) lock nuts. Be sure the belt pivot plate rotates freely on the pivot after the lock nuts are tightened. The lock nuts can be loosened slightly to allow the plate to pivot more freely.
  - h) Place the assembly onto the main frame.
  - i) Reconnect the belt pivot plate springs and remount with the flat head mounting screws.
  - j) Replace the screw mounting the front pinch-point pulley.
  - k) Adjust the idle side pinch point so the top belts mesh and tighten the pinch point adjustment pulley.

*NOTE: Do not force the belts together. Tight belts are indicated by added vibration and/or irregular noise.*

- l) Adjust tension on the new belt and tighten the take up pulley.

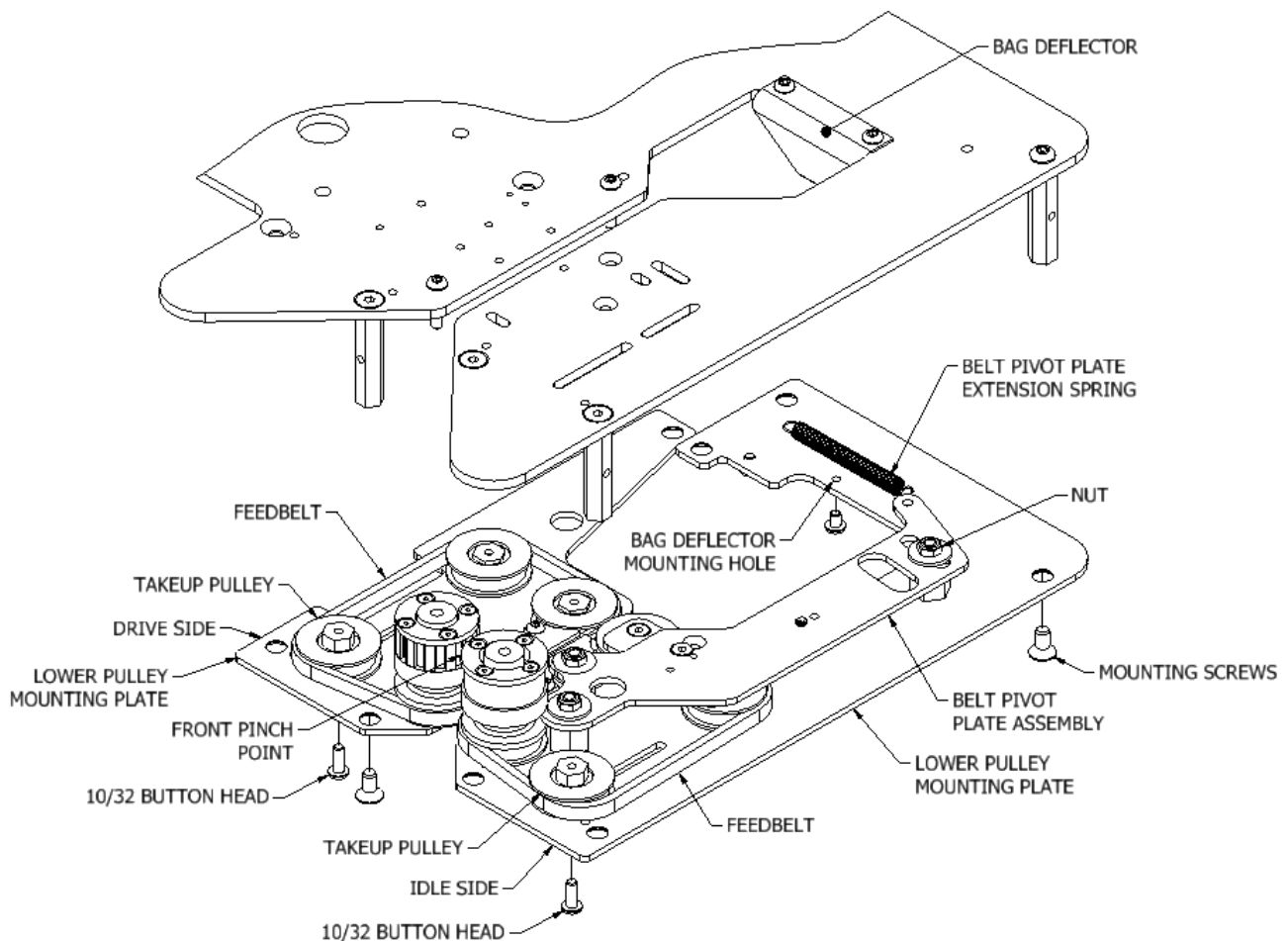


Figure 4.1

### 3. Replace Upper Feed Belt (Drive Side)

*Reference Figure 4.2*

- a) Remove the lower pulley mounting plate. (Drive Side)
- b) Loosen the take-up pulley to release the belt tension.
- c) Remove the flat head mounting screws securing the lower pulley mounting plate (Drive Side) to the main frame.
- d) Remove the screw mounting the front pinch-point pulley.
- e) Remove the lower pulley mounting plate from the main frame.
- f) Remove the closure track from the main frame.
- g) Disconnect the breakoff cam spring
- h) Remove the label deflector.
- i) Disconnect the breakoff link from the breakoff lever by removing the breakoff link mount.
- j) Unscrew the track mounting screws (3), and remove track assembly from main frame.
- k) Release drive belt tension by loosening the drive take up pulley.
- l) Loosen the front idler gear belt pulley, allowing the gear belt to slide off its front pulley.
- m) Slide the gear belt off the gear belt support rollers and the front pulley assembly.
- n) Install new gear belt.
- o) Use the drive gear belt take up pulley to lightly tension the gear belt. When properly adjusted, the gear belt will be just tight enough to take out and slack in the belt.

*NOTE: A properly adjusted belt will increase pulley bearing life.*

- p) Reassemble the closure track and the bottom plate to the main frame.
- q) Adjust the idle side pinch point so the top belts mesh and tighten the pinch point adjustment pulley.

*NOTE: Do not force the belts together. Tight belts are indicated by added vibration and/or irregular noise.*

### 4. Replace Upper Feed Belt (Idle Side)

*Reference Figure 4.2*

- a) Remove the lower pulley mounting plate (idle side)
- b) Disconnect the belt pivot plate tension spring.
- c) Rotate the breakoff lever by hand to break off the end closure.
- d) Locate and remove the three (3) lock nuts and nylon washers securing the upper belt pivot plate to the main frame and remove the plate.
- e) Loosen the front gear belt idler pulley, allowing the gear belt to slip off.
- f) Install new gear belt and remount the belt pivot plate.
- g) Adjust the idle side pinch point so the top belts mesh and tighten the pinch point adjustment pulley.

*NOTE: Do not force the belts together. Tight belts are indicated by added vibration and/or irregular noise.*

- h) Retighten the take up pulley to tighten the new gear belt.

***CAUTION: Do not overtighten the gear belt. If the gear belt is too tight the clutch assembly will experience excessive loading and wear.***

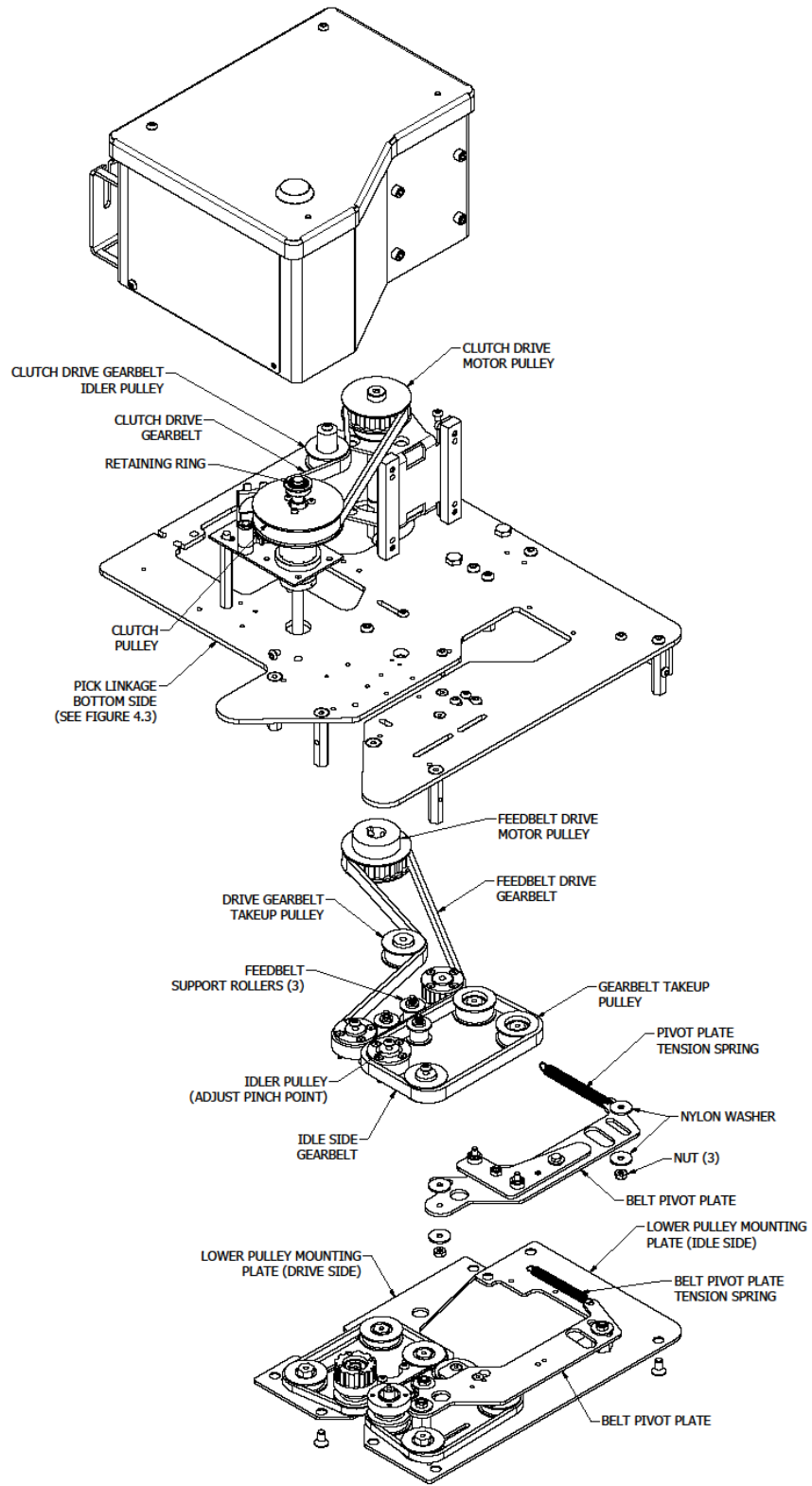


Figure 4.2

5. Replace Clutch Drive Gear Belt

Reference Figure 4.3

- a) Remove the top and front covers.
- b) Loosen the clutch drive takeup pulley.
- c) Disconnect the clutch operating linkage.
- d) Disconnect the breakoff cam spring.
- e) Remove the retaining ring from the top of the break off camshaft.
- f) Loosen the set screw on the clutch holding the camshaft in place.
- g) Remove the clutch mounting post by loosening the mounting post screw.
- h) Allow the clutch assembly to drop down from its normal operation position.
- i) Work the gear belt from around the clutch pulley and remove from machine.

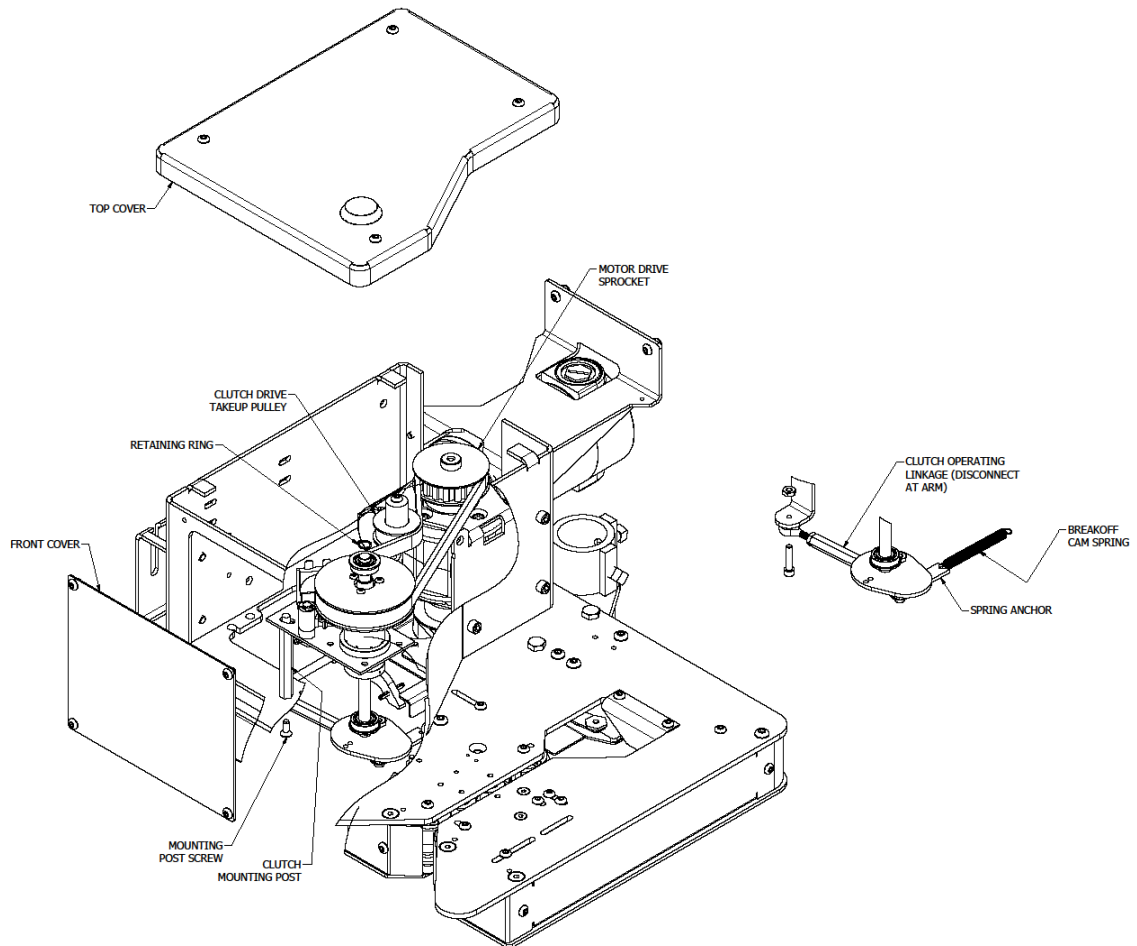


Figure 4.3

- j) Install the new gear belt into position.
- k) Lift clutch assembly back into operating position.
- l) Replace clutch mounting post and tighten mounting post screw.

- m) Confirm belt is positioned correctly on motor drive pulley and clutch pulley.
- n) Replace the camshaft into the top bearing, tighten setscrew and secure with retaining ring.

*NOTE: Confirm camshaft is positioned in the start position. Reference Figure 4.3 for orientation.*

- o) Replace the breakoff cam spring.
- p) Replace the clutch operating linkage.
- q) Adjust belt tension and tighten the clutch drive takeup pulley.

**CAUTION: Do not overtighten the gear belt. If the gear belt is too tight the clutch assembly will experience excessive loading and wear.**

## 4.2 Closure Track

### 1. Remove Closure Track Assembly from Main Frame

*Reference Figure 4.4*

- a) Remove the lower pulley mounting plate (drive side) from main frame.
- b) Loosen the take-up pulley to release the belt tension.
- c) Remove the flat-head mounting screws securing the lower pulley mounting plate (drive side) to the main frame.
- d) Remove the screw mounting the front pinch-point pulley.
- e) Remove the lower pulley mounting plate from the main frame.
- f) Disconnect the breakoff cam spring.
- g) Remove the label deflector
- h) Disconnect the breakoff link from the breakoff lever by removing the breakoff link mount.
- i) Unscrew the track mounting screws (3), and remove track assembly from main frame.

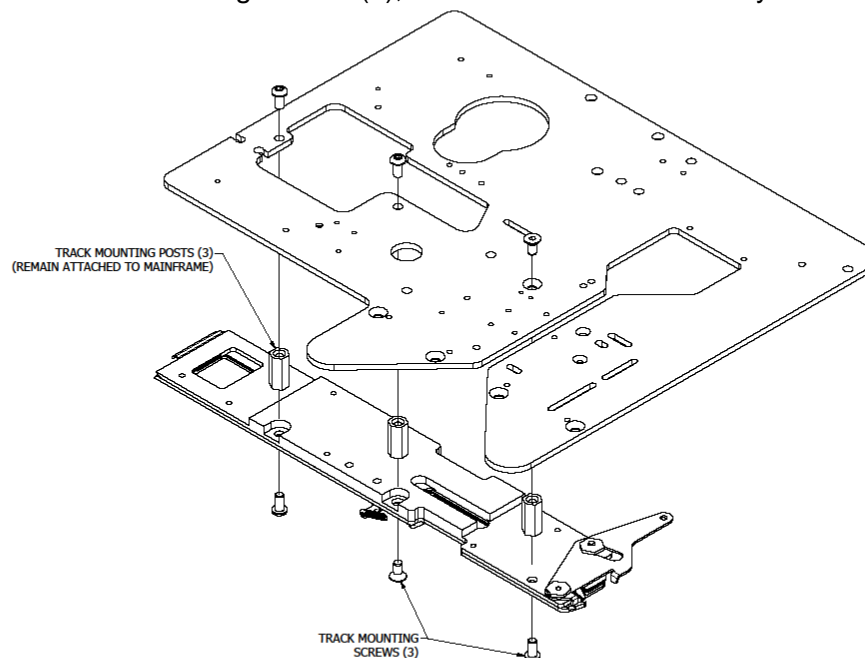


Figure 4.4

2. Disassemble Closure Track

*Reference Figure 4.5*

- a) Remove the closure track shim (if installed). Typically, the shim is installed when operating closures with flags.
- b) Disconnect the breakoff lever removing the breakoff links (2) from the track at the pivot side of the breakoff lever.
- c) Remove the screws connecting the cover to the base.
- d) Clean and inspect track parts. The groove in the track should be clean and smooth. Deformities in the track can cause drag on the closures, which can affect indexing and/or damage closure.

3. Assembling Closure Track

*Reference Figure 4.5*

- a) Install screws connecting the cover to the base.
- b) Attach breakoff lever replacing the breakoff links (2) to track at the pivot side of the breakoff lever.
- c) Install closure track shim (if needed). Typically, installed when running closures without flags.
- d) Insert a strip of closures through track to insure that the closures travel freely.
- e) Test the breakoff lever function on the end closure to insure breakoff lever cycles freely and engages closure correctly.

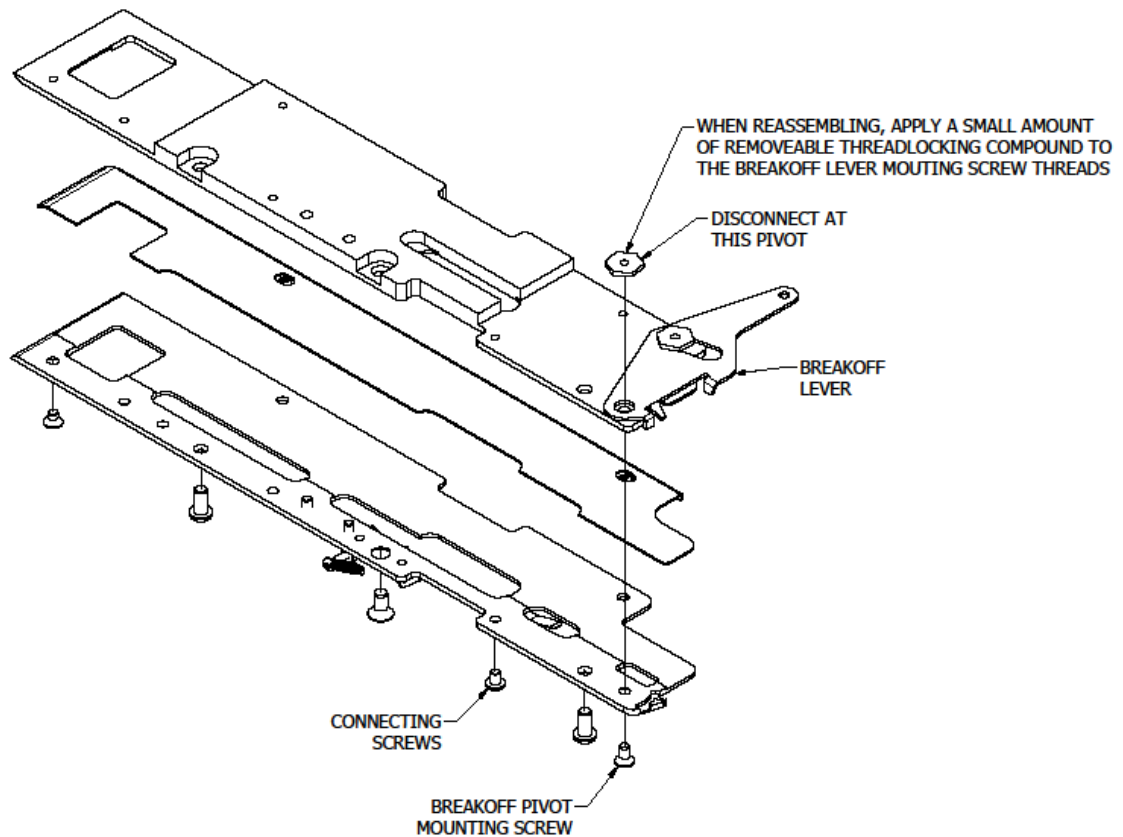


Figure 4.5





### 4.3 Motor Brushes

Motor brushes should be inspected every 250 hours. Certain environmental conditions such as dusty or wet conditions can shorten brush life. Brushes should be replaced if they are shorter than 3/8" length.

1. Removing/Installing Motor brushes
  - a) Use a large straight blade screwdriver to remove the brush cover on motor housing.
  - b) Remove the brush springs.
  - c) Inspect the springs and brushes for wear.
  - d) Replace brushes and/or springs if needed.

### 4.4 Lubrication Points

The following are recommended points of lubrication for the V1 closure system:

Use a lightweight food grade mineral oil (NSF registered, H1 grade) or similar. CRC and LPS brands offer a variety of products for facilities with food safety plans.

*NOTE: If customer has additional facility food safety plan or local law requirements, they will need to confirm oil used meets those requirements.*

Location Point	Weekly	Monthly
Pick Bearing	X	
Check Pick	X	
Breakoff Lever	X	
Belt Pivot Points		X

## 5.0 Adjustments

*CAUTION: Power should be disconnected before performing any adjustments.*

### 5.1 Breakoff Cam Position

Correct Position: The breakoff cam is correctly positioned when the pick connection rod assembly is full forward in its stroke with the closure unit in neutral. Tapered front of lobe forward, clutch set screw positioned straight out for servo latch hinge.

Position Adjustment

*Contact Bedford Industries for assistance in adjusting clutch neutral position.*

### 5.2 Breakoff Arm Unit

Correct Position: With the unit in neutral and the breakoff arm correctly positioned, there should be a slight gap of approx. 0.015" (0.4mm) between the breakoff bearing and the breakoff cam.

Position Adjustment

1. Confirm that the machine is in neutral position.
2. Loosen the cam bearing adjustment screws and rotate the bearing toward or away from the breakoff cam until the desired gap is achieved. 1/32 Gap. *Reference Figure 5.1.*
3. Retighten screws.

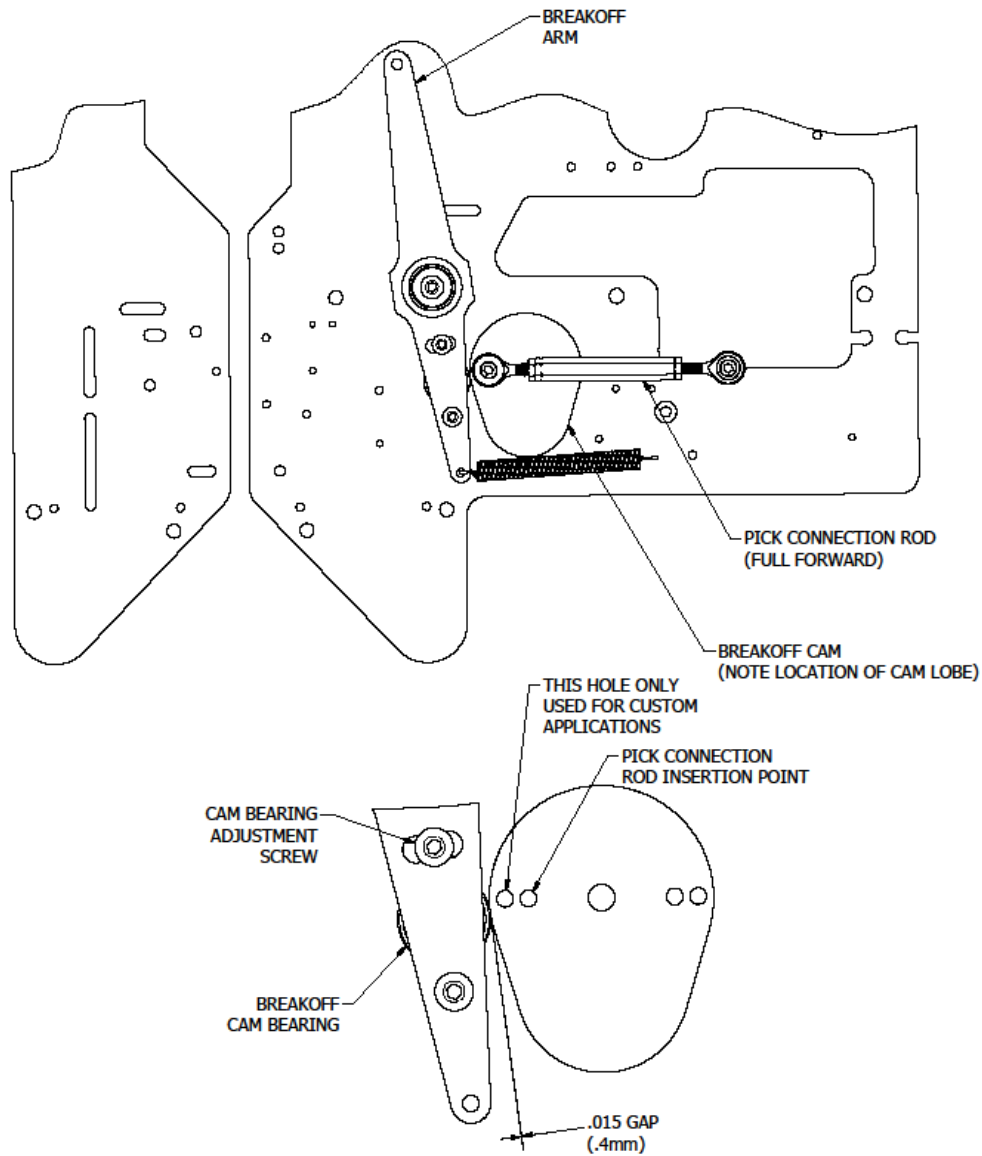


Figure 5.1

### 5.3 Closure Position

Correct Position: The check pick is properly adjusted when the closure is correctly centered in the feed belt slot when the unit is in neutral.

#### Position Adjustment

1. Confirm that the machine is in neutral position.
2. Remove the lower pulley mounting plate (idle side) to create a better view of the end of the track.
3. Remove the track shim to gain access to the pick stop mounting screws.
4. Loosen the pick stop mounting screws and slide the pick stop away from the index pick. *Figure 5.4.*
5. Cycle the closure strip through the track until the end closure is in the closing position. *Figure 5.3.*

6. Loosen the pick connecting rod locking nuts and rotate the rod to the desired direction. Rotating the connection rod changes position of the index pick, which directly changes the position of the closures in the track. Continue to adjust until the end closure in the strip is in the closing position shown in *Figure 5.3*.

*NOTE: The track covers about 1/3 the slope of the closure opening.*

7. Power the unit back “on” and cycle closure machine several times, checking the closure position.
8. When correct position is achieved, power the unit “off”. Retighten the connection rod locking nuts. Be sure that after tightening, the rod ends work freely and have not been placed in a position where “binding” can occur.
9. Slide the pick stop until it contacts the index pick and retighten the mounting screws.
10. Replace track shim and lower pulley mounting plate.

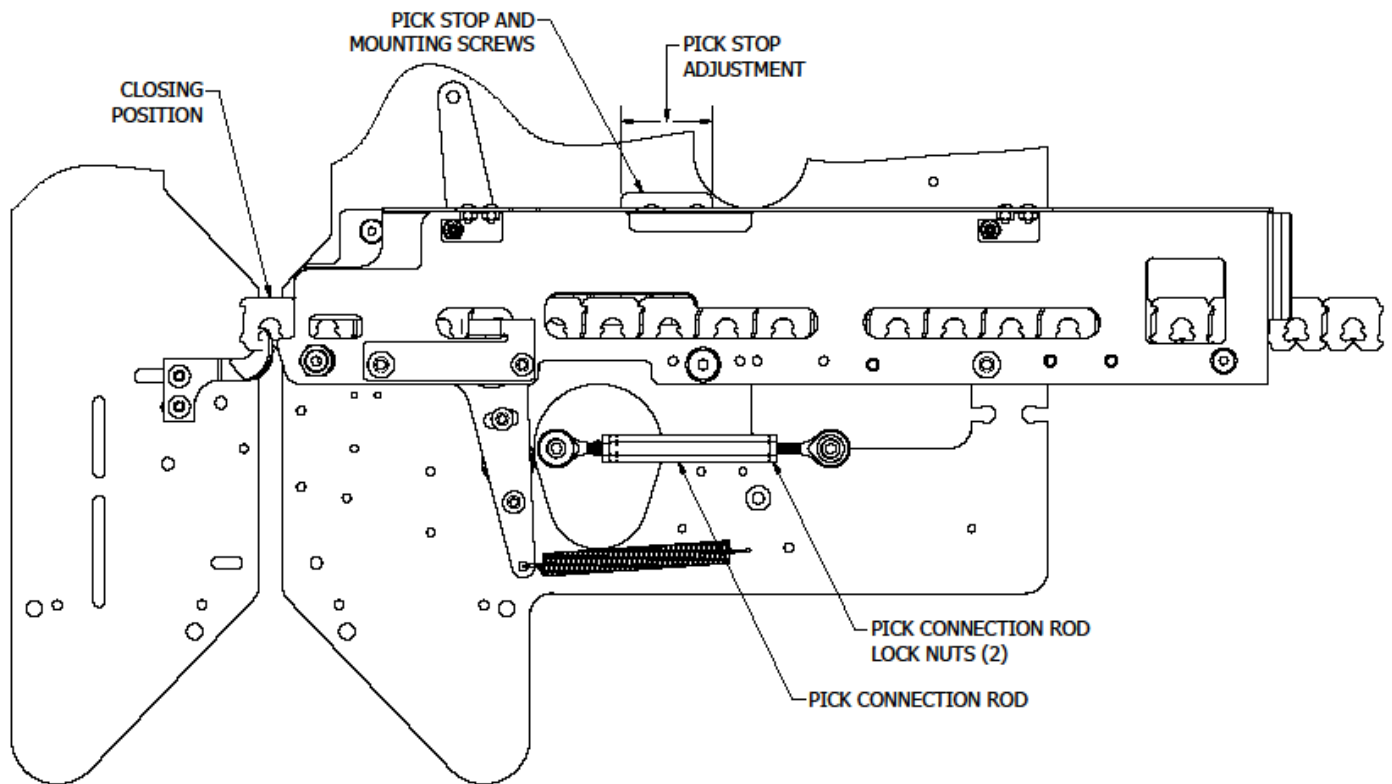


Figure 5.2

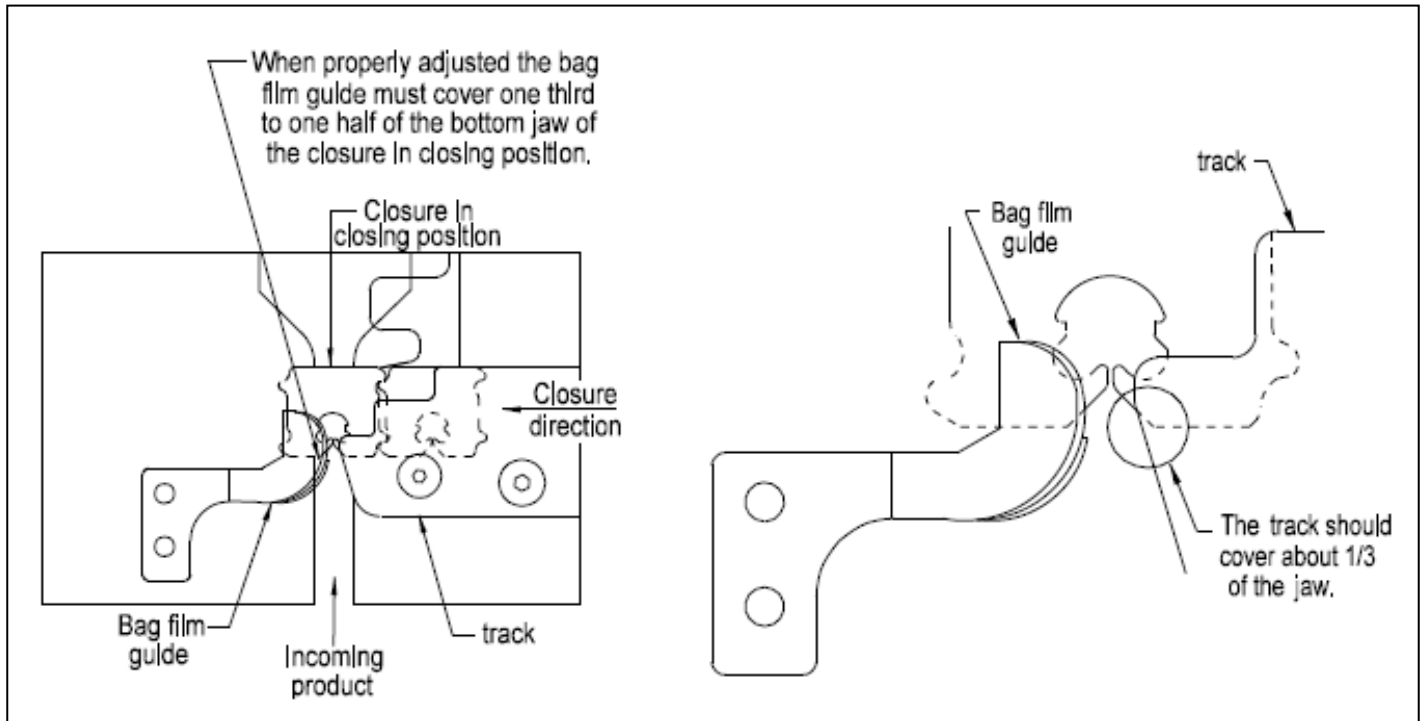


Figure 5.3

## 5.4 Index Pick

**Correct Position:** The index pick is properly adjusted when it engages the center of index opening of the closure.

### Position Adjustment

1. Loosen the set collars. (Figure 5.4)
2. Slide the pick shaft assembly accordingly. (Figure 5.4 & Figure 5.5)
3. Retighten the set collars, insuring that the wave washers between set collars and bearings are compressed or partially so.
4. Small adjustment can be made using the four 10/32 bolts holding pick assembly to frame on the outside of the frame.

## 5.5 Check Pick

**Correct Position:** The check pick is properly adjusted when it keeps the closures from backing up in the track as the index pick moves backwards through its stroke.

*NOTE: It is acceptable if the closure strip moves backwards slightly when the index pick moves.*

### Position Adjustment

1. Confirm that machine is in neutral.
2. Loosen the two (2) screws securing the check pick mount and slide the mount until the check pick is

in the desired location. The point of the check pick should be slightly back from the middle of the slot in-between clips. (Figure 5.5)

3. Tighten the two (2) screws securing the mount.
4. Cycle the machine several times to insure the adjustment is correct and stays in position.

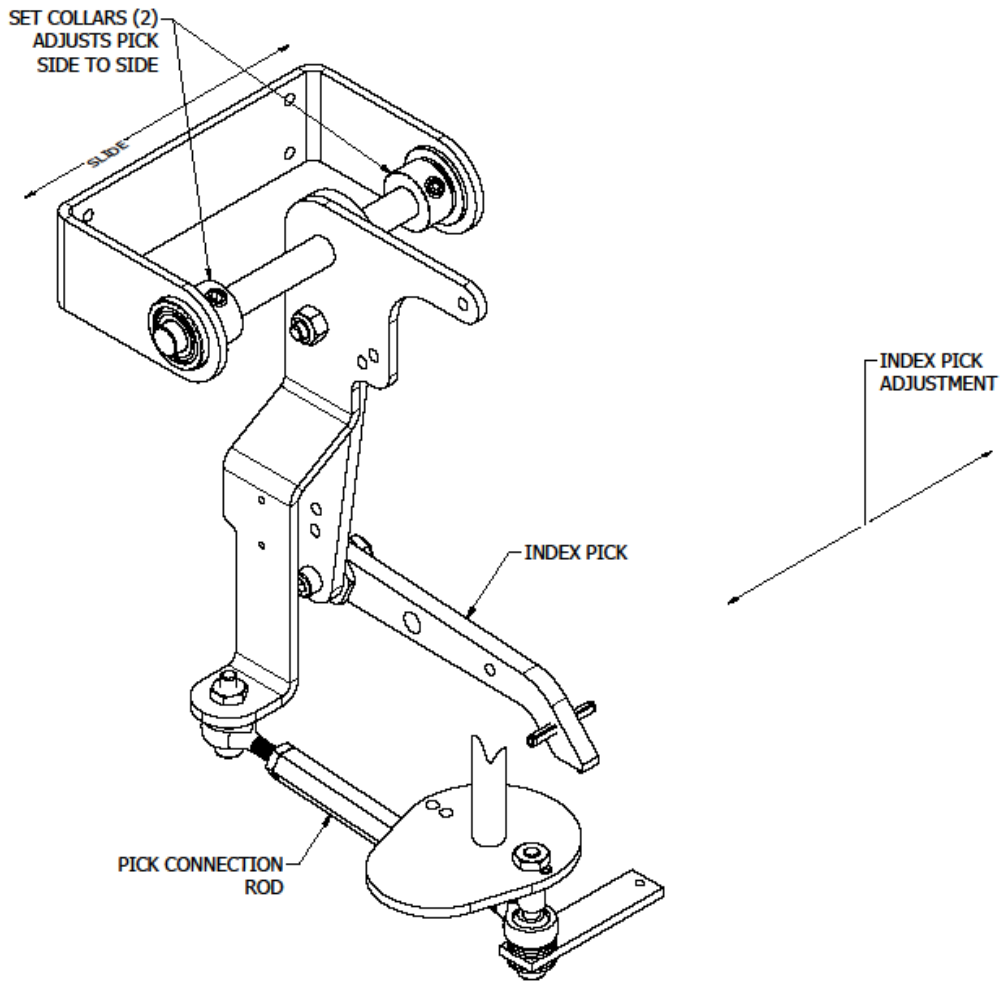


Figure 5.4

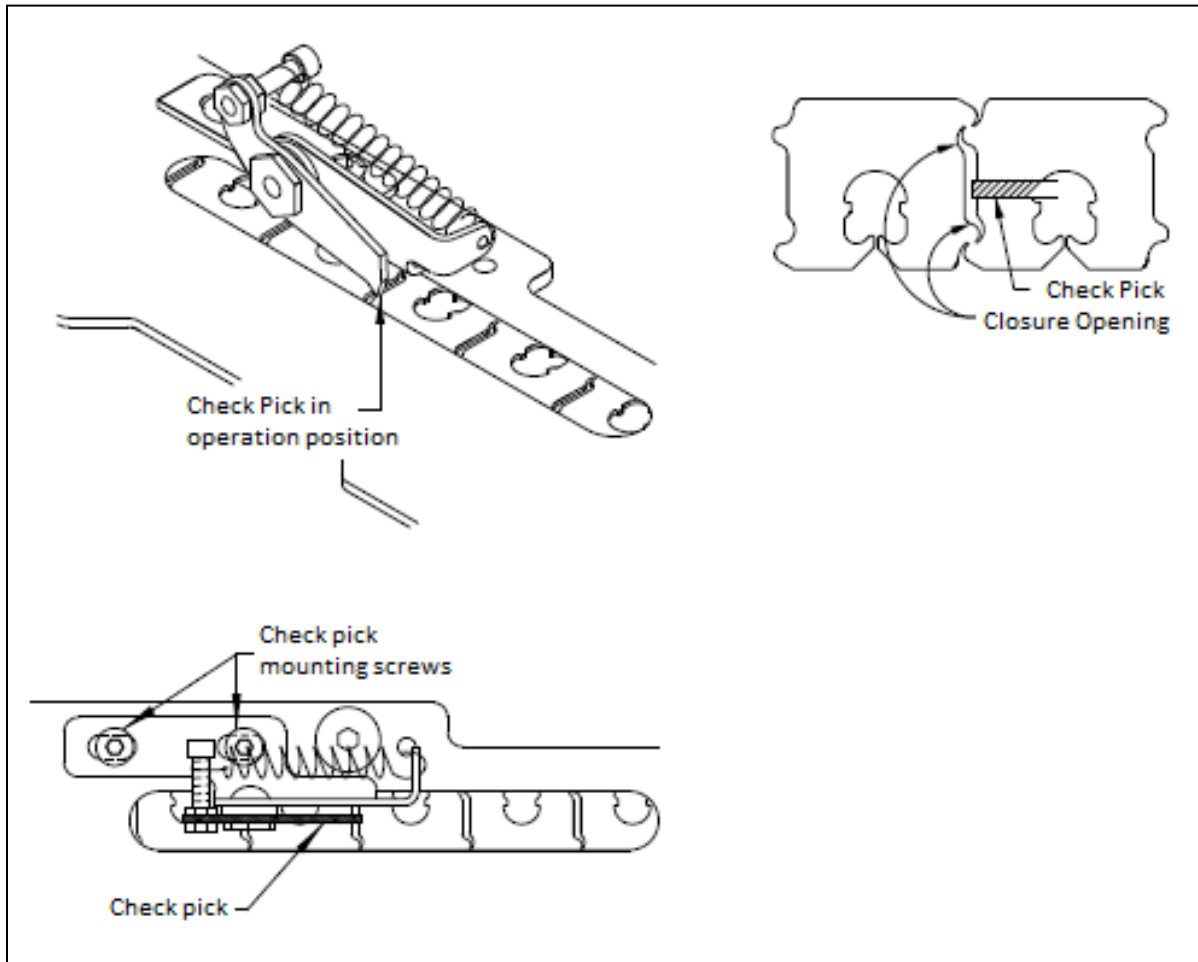


Figure 5.5

## 5.6 Bag Film Guide

**Correct Position:** The bag film guide is properly adjusted when it protects the bag film from contacting the edge of the closure opening and the film guide also cams the jaws of the closure open to assist in feeding bag film in to the closure.

### Position Adjustment

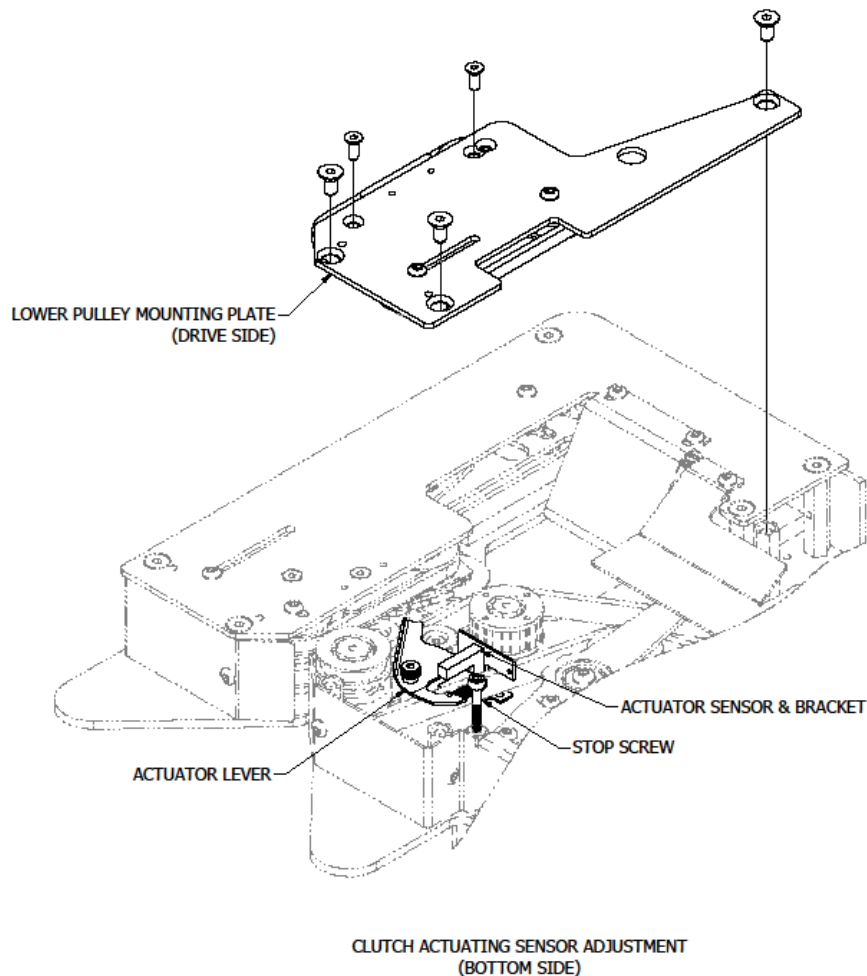
1. Confirm the machine is in neutral position.
2. Loosen the bag film guide mounting block screws (located on top of the main frame).
3. Position the bag film guide as shown in Figure 5.6.
4. Check for clearance between the front edge of the closure and the inside edge of the bag film guide. Set clearance to 0.015" (0.4mm). The film guide can be tapped lightly forward or back to make this adjustment.
5. Check of a closure cam "open" of 0.030" (0.8mm) maximum. If needed, the bag film guide can be bent to achieve the correct position.
6. If jamming occurs, move bag film guide away from track.

## 5.7 Clutch Actuating Sensor

**Correct Position:** The machine cycles when a bag travels past the actuator lever which triggers the bag sensor. The lever returns to its neutral position against the lever stop screw. The sensor should actuate the clutch solenoid after the bag timer delay in the program exhausts.

### Position Adjustment

1. Remove the lower pulley mounting plate (drive side) exposing the actuator lever, switch and stop screw.
2. Turn the machine on and set the speed control to zero. In this state with no parts or belts in motion, the actuator switch can be rotated by hand without injury.
3. Rotate the actuator lever from its neutral position against the stop through its arc until it contacts the sensor bracket. By doing this you can be sure the sensor has been activated.
4. Allow the return spring to slowly bring the lever back against the stop. Listen for a click from the clutch solenoid indicating the sensor actuated the solenoid.
5. Check the adjustment by rotating the actuator lever from its neutral position until the lever tip aligns with the center of the feed belts. This is the point when the bag neck release the lever. At this point the lever must be far enough past the sensor for it to return to “ready” position.





## 5.8 Speed Control

Adjust the speed of the machine to match the speed of the bagger's bag transfer mechanism. Over speed may damage bag, under speed may result in failure of gathering bag in closure opening.

Position Adjustment

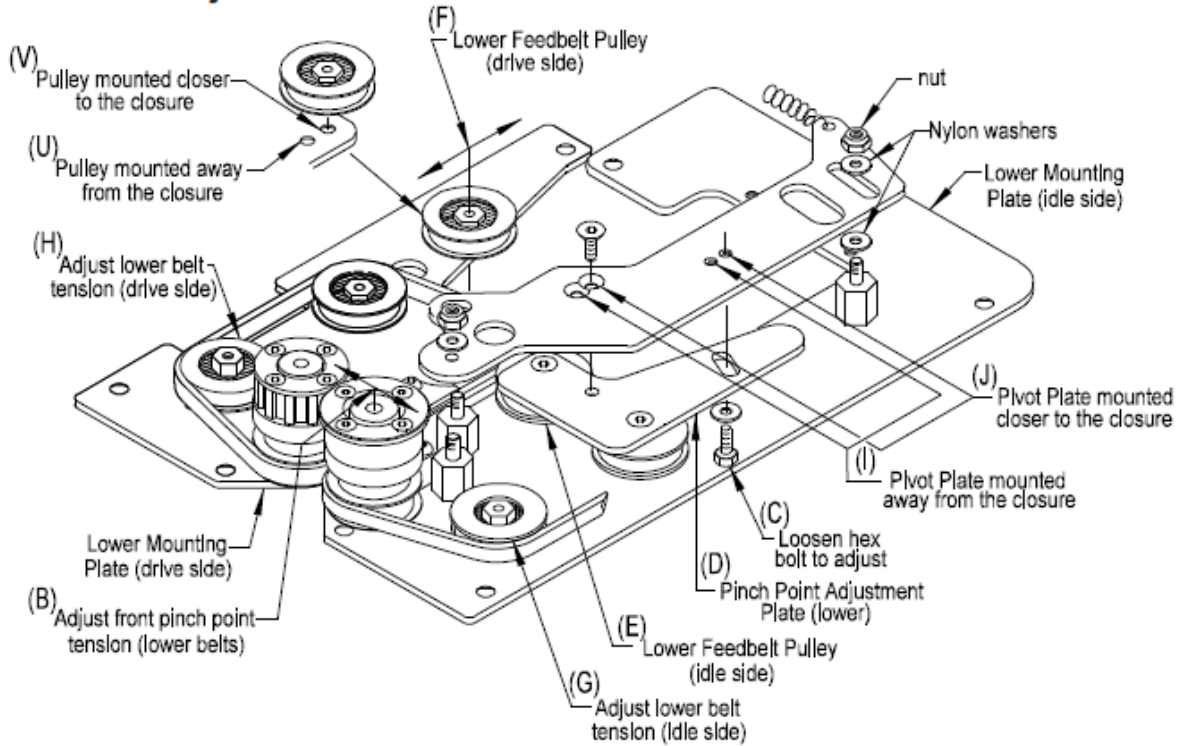
Reference Installation Section: *2.3 Timing between Bagger and Closure Machine*

## 5.9 Feed Belt Position

Correct Position: The position of the feed belts and pulleys to the closure opening affect the ability of the machine to completely close the bag without excessive marking or tearing of the bag film. Belt position in relation to the closure location can be changed to improve closing quality. The following adjustments deal with the position of the feedbelts to the closure. Test each adjustment as it is made.

*Reference Figure 5.6*

### Lower Belt Adjustments



### Upper Belt Adjustments

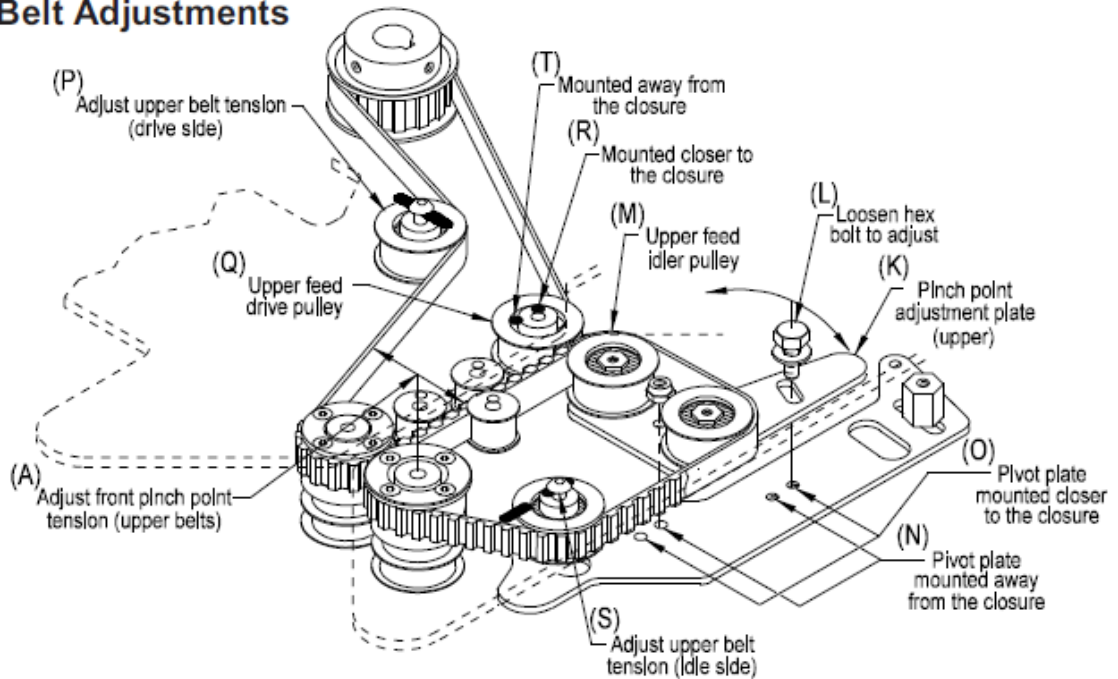


Figure 5.6

1. Bag not completely closed

- a) Check the belt contact at the front of the machine. The upper drive belts should mesh and contact lightly. Upper (A) and lower (B) belt contact are set by adjusting the front rollers. Belt tension is adjusted as points (G, H, P and S). Notice the slots for adjustment.
- b) Remove the side cover.
- c) Loosen the hex bolt (C).
- d) Rotate plate (D) outward toward the side of the machine frame and retighten the hex bolt. As the plate pivots, the pulley (E) and the lower belt move to cover more of the closure.
- e) Replace the side cover and test adjustment.
- f) Adjust the upper plate if needed. Loosen hex bolt (L).
- g) Rotate plate (K) outward toward the side of the machine frame and retighten the hex bolt. As the plate pivots the pulley (M) and the upper belt move to cover more of the closure.
- h) Replace the side cover and test adjustment.
- i) If a slight amount of material is left out of the closure, check the mounting location of plate (D) and pulley (F). If they are mounted in position (I and U) remove and remount them in position (J and V) allowing the drive belts to cover more of the closure. Plate (D) and pulley (f) must be moved together into the new mounting position. Test adjustment.
- j) If material is still left out of the closure opening, plate (K) and pulley (Q) of the top belts can be relocated to position (O and R) setting the upper belts farther over the closure. The track may have to be removed to get access to the upper belts. Plate (K) can be readjusted after if has been relocated to further improve the belt location to the closure.

*NOTE: If Steps a) through j) do not seem to correct the problem, refer to Section 6 Troubleshooting.*

2. Bag film tear above closure after closing

*Corrected with adjustment of top belt assemblies.*

- a) Remove the side cover around the feedbelts.
- b) Loosen the hex bolt (L) and rotate plate (K) into the machine frame. The pulley (M) and the belt move away from the closure. Retighten hex bolt (L).
- c) Replace side cover and test adjustment.
- d) If the tear remains, check the mounting locations of plate (K) and pulley (Q). If they are located at positions (O and R), relocate to positions (N and T). Plate (K) and pulley (Q) must be moved together into the new mounting position. The track may have to be removed allowing access to the upper belts.
- e) Relocate pulley (S) to the front mounting slot, and adjust the belt tension. The new position moves the pulleys and belts away from the closure.
- f) Plate (K) can be adjusted after it has been relocated to further improve the belt location to the closure.
- g) Replace the track and the side cover and test adjustment.

*NOTE: If a small tear remains, refer to Section 6 Troubleshooting.*

3. Bag film tear below closure after closing

*Corrected with adjustment of lower belt assemblies*

- a) Remove the side cover.
- b) Loosen the hex bolt (C) and rotate plate (D) into the machine frame. The pulley (E) and the belt moves away from the closure. Retighten hex bolt (C).
- c) Replace cover and test adjustment.
- d) If tear remains, check the mounting locations of plate (D) and pulley (F). If they are located at position (J and V), remount them to position (I and U). The new position moves the pulleys and lower belts away from the closure.
- e) Plate (D) can be adjusted after it has been relocated to further improve closing.

## 6.0 Troubleshooting

Problem	Possible Cause	Corrective Action
Feed belts do not turn	<p>Disconnected from power source</p> <p>Blown fuse in electrical enclosure</p> <p>Foreign material buildup around belts and pulleys</p>	<p>Check connection to power source</p> <p>Replace fuse. Refer to section 8.0 Wiring Diagram for fuse information.</p> <p>Remove buildup and complete section 4.4 Lubrication points</p>
Clutch does not cycle	<p>Actuator lever not returning to neutral position.</p> <p>Clutch actuating sensor is out of position.</p> <p>Issue within the electrical enclosure</p>	<p>Check that the actuator lever return spring is connected.</p> <p>Refer section 5.7 Clutch actuating sensor.</p> <p>Contact Bedford Industries for support or replacement controller unit.</p>
Closures do not advance in track	<p>Check pick not engaged or set correctly.</p> <p>Closures jammed in track near clip breaker.</p> <p>Index pick out of position in closure opening</p>	<p>Adjust to engage. Reference section 5.5 Check Pick.</p> <p>Clear jam. Jams can occur when cycling machine without a bag present.</p> <p>Adjust index pick. Reference section 5.4 Index Pick.</p>
Closure will not break off	<p>Clutch actuating sensor is not being tripped</p> <p>Breakoff lever incorrect position or broken.</p> <p>Closures slipping out of track</p> <p>Pick stop out of position</p> <p>Closures misfeed into track</p>	<p>Adjust clutch actuating sensor. Reference section 5.7 Clutch Actuating Sensor.</p> <p>Adjust or replace breakoff lever. Reference section 5.2 Breakoff Arm Unit.</p> <p>Confirm guide shim is correctly placed in track.</p> <p>Adjust the pick stop so it contacts the index pick. Reference section 5.4 Index Pick</p> <p>Re-install closures. Reference section 3.2 Feeding Closures into Track</p>
Multiple closures on bag	Closures slipping out of track	Confirm guide shim is correctly placed in track.

<p>Bag is not completely fed into the closure opening</p>	<p>Feed belt speed is incorrect.</p> <p>Closures slipping out of track</p> <p>Broken feed belts</p> <p>Belt pivot plates are not correctly positioned.</p> <p>Feed belt pinch point is not in correct position.</p> <p>Bag neck presentation is poor</p> <p>Bag is too wide or film is too thick for closure opening.</p> <p>Lower feed belts are too loose.</p>	<p>Increase speed. (Breakoff actuates before all the bag film enters closure opening.)</p> <p>Decrease speed. (Top of bag is being pulled way ahead of bottom of bag.)</p> <p>Reference section 5.9 Feed Belt Position, if speed change does not solve issue.</p> <p>Confirm guide shim is correctly placed in track.</p> <p>Check lower and upper feed belts. Replace if needed.</p> <p>Adjust belt pivot plates. Reference section 5.9 Feed Belt Position.</p> <p>Adjust feed belt pinch point. Reference section 5.9 Feed Belt Position</p> <p>Bagger/operator needs to hand bag to Closelt® V1 unit properly. Reference section 2.0 Installation.</p> <p>Contact Bedford Industries or Closelt® Clip supplier to confirm/change clip opening selection.</p> <p>Tighten the feed belts. Reference section 4.1 Feed Belts.</p>
<p>Damage to bag – small straight cuts in closure area</p>	<p>Film guide bent incorrectly or not camming closure</p> <p>Closure not correctly positioned.</p> <p>Pick stop not correctly positioned.</p>	<p>Adjust the film guide. Reference section 5.6 Bag Film Guide.</p> <p>Adjust the check pick. Reference section 5.5 Check Pick.</p> <p>Adjust the pick stop so it contacts the index pick. Reference section 5.3 Closure Position.</p>
<p>Damage to bag – major cuts and tears around closure area</p>	<p>Bag neck presentation is poor</p> <p>Bag closed too tight.</p> <p>Belt pivot plates pinching bag.</p>	<p>Bagger/operator needs to hand bag to Closelt® V1 unit properly. Reference section 2.0 Installation.</p> <p>Increase distance between bottom of closure application area and product.</p> <p>Adjust belt pivot plates. Reference section 5.9 Feed Belt Position.</p>

## 7.0 Parts and Breakout Views

Bedford Closelt® V1 machines are available in both right and left orientations as well as multiple configurations. The drawings listed below are grouped by machine orientations (LH and RH), then sub-grouped with in the orientation by configuration options. The configuration options that are not depended on which orientation are listed near the end.

When ordering parts, locate the machine nameplate (*example shown in Figure 7.1*) and provide the model, model number and serial number with your request for parts. This information will aid in providing quick and accurate service from Bedford Industries or any machine integrator that provides parts for both their system as well as Bedford Closelt® machinery.

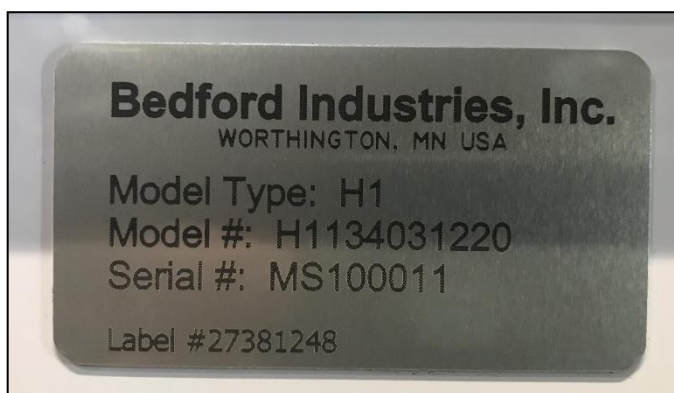


Figure 7.1



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## 7.1 Left-Hand Base Machine

Assembly Part Number: 52-20180031000

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031001	FRAME, CLOSEIT® V1
2	1	52-20180031002	MOUNT, CLOSEIT® V1
4	2	52-20180031065	PULLEY, MOTOR
5	1	52-20180031062	SHAFT, BREAKOFF CAM
6	1	52-20180031069	POST, CLUTCH MOUNT
7	5	52-20180031036	PULLEY, DRIVE GEARBELT
8	5	52-20180031042	Nut, Pulley Long
9	1	52-20180031067	SPACER, TAKEUP PULLEY
10	1	52-20180031066	PULLEY, CLUTCH
11	8	52-20180031035	POST, LOWER PLATE MOUNT
12	2	52-20180031046	SPACER, FEED PULLEY
13	2	52-20180031039	FLANGE, FEED DRIVE PULLEY
14	2	52-20180031040	PULLEY, UPPER FEED BELT
15	2	52-20180031038	PULLEY, LOWER FEED DRIVE
16	2	52-20180031047	AXLE, FEED PULLEY
17	3	52-20180031041	SPACER, FEED PULLEY
18	1	52-20180031044	FLANGE, FEED DRIVE PULLEY
19	8	52-20180031024	Nut, Pulley
20	3	52-20180031043	ROLLER, GEARBELT SUPPORT
21	3	52-20180031048	BOLT, SUPPORT ROLLER
22	1	52-20180031009	MOUNT, SENSOR
23	1	52-20180031033	PLATE, LOWER PULLEY MOUNT
24	7	52-27381067	SPACER, BOGIE PULLEY
25	6	52-20180031037	PULLEY, LOWER FEED BELT
26	2	52-20180031045	TRACK, LOWER FEED BELT
27	1	52-20180031056	PULLEY, IDLER GEARBELT
28	1	52-20180032049	PLATE, BELT PIVOT
29	1	52-20180031050	PLATE, PINCH POINT ADJUST
30	2	52-20180031051	SPACER
31	3	52-20180031055	POST, UPPER BELT PLATE
32	1	52-20180031052	DEFLECTOR, CLOSEIT® V1
33	1	52-20180031053	PLATE, LOWER PLATE MOUNT
34	3	52-20180031054	POST, LOWER BELT PLATE



35	1	52-20180031049	PLATE, BELT PIVOT
36	1	52-20180032050	PLATE, PINCH POINT ADJUST
37	1	52-20180031026	ARM, BREAKOFF WELDMENT
38	1	52-20180031025	BUSHING, BEARING
39	1	52-20180031029	SHAFT, BREAKOFF ARM
40	1	52-20180031030	PLATE, CAM PULLEY ADJUST
41	2	52-20180031031	MOUNT, BREAKOFF LINK
42	1	52-20180031032	LINK, BREAKOFF
43	1	52-27381108	PICK, CHECK
44	1	52-20180031015	SHAFT, PICK WELDMENT
45	1	52-20180031016	Rod, Connecting
46	1	52-20180031017	ANCHOR, CONN. ROD SPRG
47	1	52-20180031018	BEARING, PICK
48	1	52-20180031019	DISENGAGER, PICK
49	1	52-20180031020	MOUNT, PICK SHAFT
50	1	52-20180031021	ARM, PICK
51	1	52-20180031012	LEVER, ACTUATOR
52	1	52-20180031061	BOLT, ACTUATOR LEVER
53	1	52-20180031007	BLOCK, FILM GUIDE MOUNT
54	1	52-20180031011	GUIDE, FILM
55	1	52-20180031013	DEFLECTOR, BACK NECK STD
56	1	52-20180031003	BRACKET, MAST MOUNTING
57	1	52-20180031008	PICK, STOP
58	1	52-20180031010	COVER, FRONT
59	1	52-20180031005	COVER, IDLER SIDE STD
60	1	52-20180031006	COVER, DRIVE SIDE STD
61	1	52-20180031014	DEFLECTOR, LABEL STD
62	1	52-20180031141	Asm, GearMotor
73	1	52-20180031004	COVER TOP
74	1	52-20180031089	BRACKET, ELEC. BOX MOUNT
100	3	52-5162458HHSS	Hex Cap Screw
101	2	52-381634SSSS	Square Head Set Screw - Cup Point
105	3	52-10LWSS	Regular Helical Spring Lock Washers(Inch Series)
106	4	52-FS3KDD	Miniature, Stainless Steel Ball Bearing 3/8 ID
107	1	52-9657K277	Compression Spring, Zinc-Plated, Music-Wire, Closed & Flat End, 1/2" Long, 0.48" OD
108	1	52-91590A117	External Retaining Ring, 15-7 PH Stainless Steel, for 3/8" OD
109	4	52-142012CHSS	Hexagon Socket Head Cap Screw
110	19	52-S3PP	BEARING



111	1	52-1032112BHSS	BUTTON HEAD CAP SCREW 10-32 X 1-1/2
112	3	52-63238CHSS	Hexagon Socket Head Cap Screw
113	8	52-103212FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
114	4	52-142038SSSS	Hexagon Socket Set Screw - Cup Point
115	5	52-92161A030	18-8 Stainless Steel Triple-Wave Washer, 0.391" ID, 0.682" OD
116	1	52-59085-040	VANE SENSOR, HAMLIN
117	1	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005
118	1	52-44038FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
119	4	52-63234FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
120	8	52-6321FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
121	5	52-103278BHSS	Hexagon Socket Button Head Cap Screw
123	5	52-142812BHSS	Hexagon Socket Button Head Cap Screw
124	4	52-83258BHSS	Hexagon Socket Button Head Cap Screw
125	12	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
126	11	52-103212BHSS	Hexagon Socket Button Head Cap Screw
128	2	52-103238HHSS	18-8 Stainless Steel Hex Head Screws, 10-32 Thread Size, 3/8" Long
129	4	52-103258FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
130	8	52-1032LPLNSS	18-8 Stainless Steel Thin Nylon-Insert Locknut, 10-32 Thread Size
131	13	52-220-286-062	NYLON WASHER, .200 ID X .750 OD X .062 THICK
132	2	52-83218BHSS	Hexagon Socket Button Head Cap Screw
133	2	52-9654K236	Steel Extension Spring, Loop Ends, Zinc-Plated, Spring-Tempered, 3.75" Long, 3/8" OD
134	3	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
135	2	52-9654K714	Steel Extension Spring, 3" Long, 0.313" OD
136	23	52-103214BHSS	Hexagon Socket Button Head Cap Screw
138	10	52-1032NSS	Hex Machine Screw Nut
139	1	52-1032114CHSS	Hexagon Socket Head Cap Screw
140	1	52-142838BHSS	Hexagon Socket Button Head Cap Screw
141	2	52-6462K14	Set Screw Shaft Collar for 3/8" Diameter, 303 Stainless Steel
142	12	52-10FWSS	Plain Washer (Inch )Type A and B
143	3	52-103234CHSS	Hexagon Socket Head Cap Screw
144	4	52-1032LNSS	LOCK NUT 10-32 STAINLESS
145	1	52-1032316CHSS	Hexagon Socket Head Cap Screw
146	1	52-103258CHSS	Hexagon Socket Head Cap Screw
147	2	52-103278CHSS	Hexagon Socket Head Cap Screw
148	4	52-1032112CHSS	Hexagon Socket Head Cap Screw
149	2	52-1428NSS	Hex Machine Screw Nut
150	1	52-181SPSS	18-8 Stainless Steel Slotted Spring Pin, 1/8" Diameter, 1" Long
151	1	52-92320A460	Stainless Steel Unthreaded Spacer, 5/16" OD, 1/8" Long



152	1	52-92320A745	Stainless Steel Unthreaded Spacer, 5/16" OD, 5/32" Long
153	1	52-92320A769	Stainless Steel Unthreaded Spacer, 5/16" OD, 15/32" Long
154	1	52-60645K11R	Right Hand Ball Joint Rod End, 10-32 Thread
155	1	52-60645K11L	Left Hand Ball Joint Rod End, 10-32 Thread
156	6	52-103238BHSS	Hexagon Socket Button Head Cap Screw
157	1	52-103218SSSS	Type C - Hexagon Socket Set Screw - Cup Point
158	1	52-9044K375	302 Stainless Steel Ultra-Precision Extension Spring with Loop Ends, 2.876" Overall Length, 0.5" OD
159	1	52-9654K314	Steel Extension Spring 1.5" Long, 0.5" OD, 0.049" Wire Diameter
160	1	52-LE-014B-03-M	Music Wire Extension Spring, 1.0" OAL, 0.18" OD .014 Wire Diameter
161	1	52-1024138CHSS	Hexagon Socket Head Cap Screw
162	1	52-1024NSS	Hex Machine Screw Nut
163	5	52-102438BHSS	Hexagon Socket Button Head Cap Screw
164	4	52-142038BHSS	Hexagon Socket Button Head Cap Screw
168	1	52-03041-060103-000	CB-4-CW-3/8" bore-1 stop-24VDC
169	2	52-004124	FLAT BELT, LOWER FEED
170	1	52-004438	FLAT BELT, GEAR IDLE
171	1	52-300DL050	TIMING BELT, 300DL050
172	1	52-225L050	TIMING BELT 225L050
173	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw

Figure 7.2

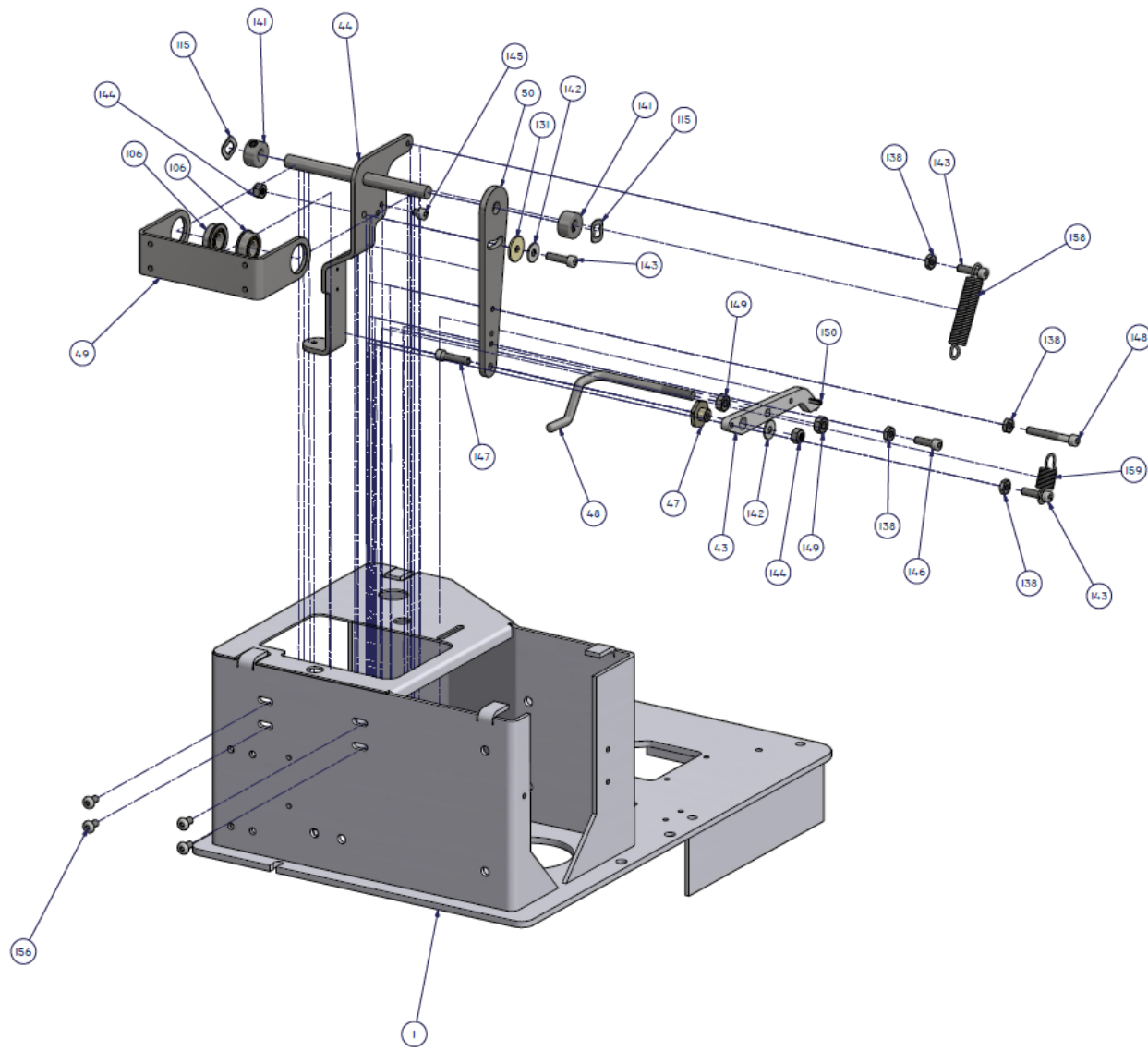


Figure 7.3 (Back corner view)

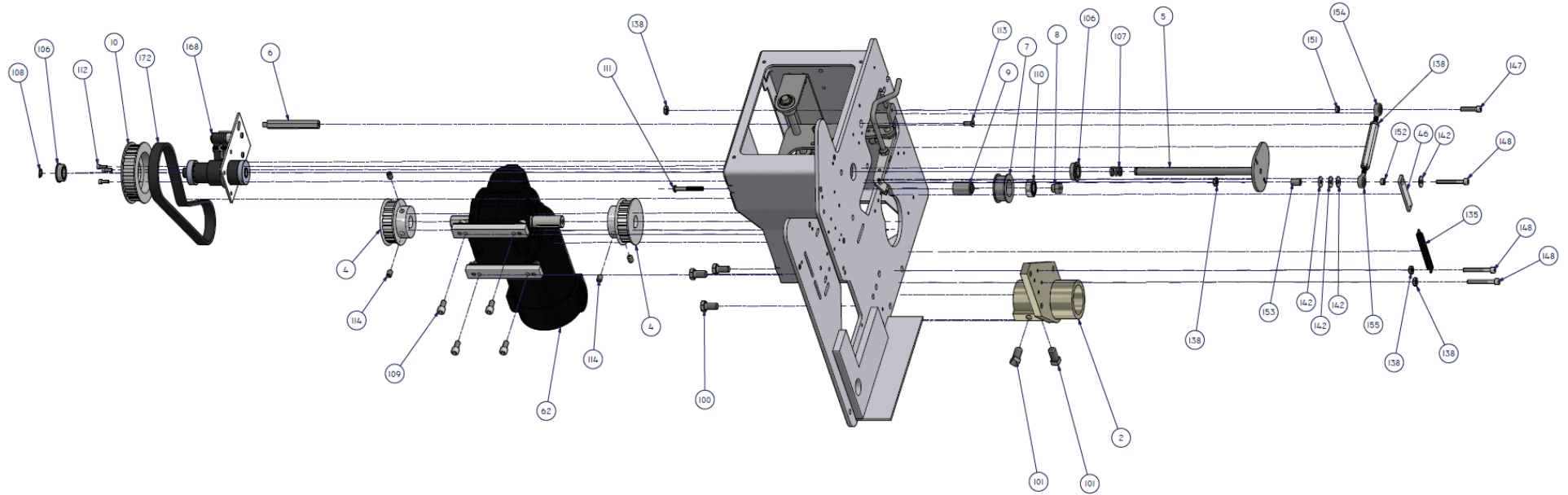


Figure 7.4 (Bottom side)

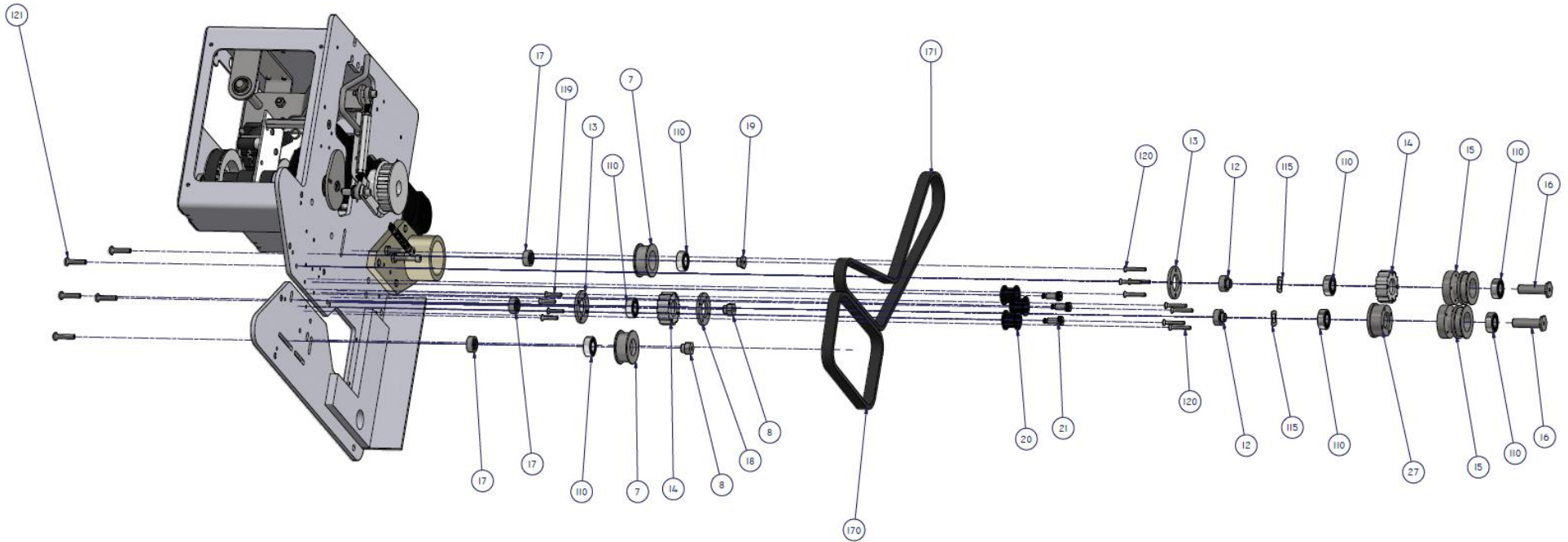


Figure 7.5 (Bottom side)

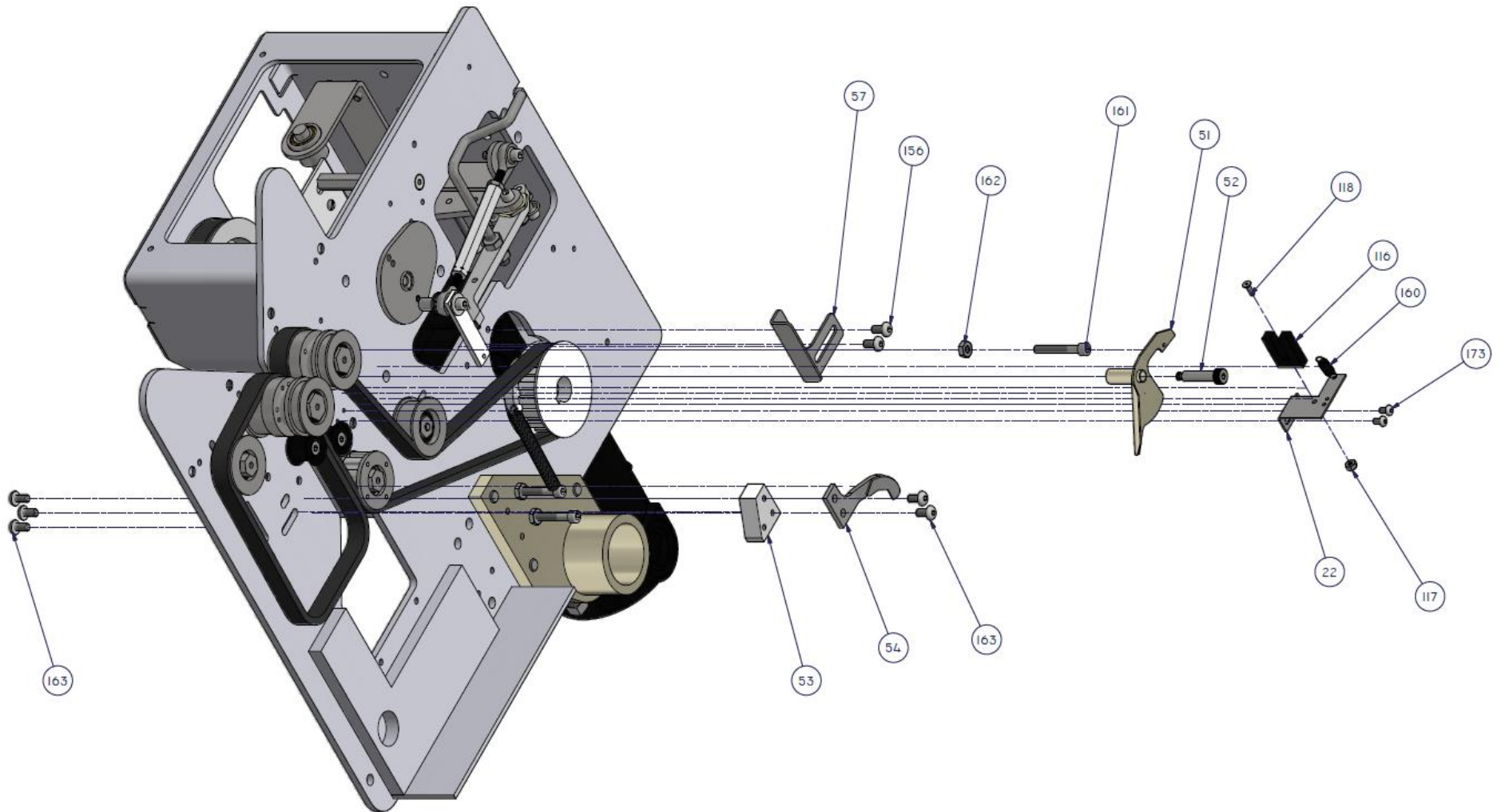


Figure 7.6 (Bottom side)



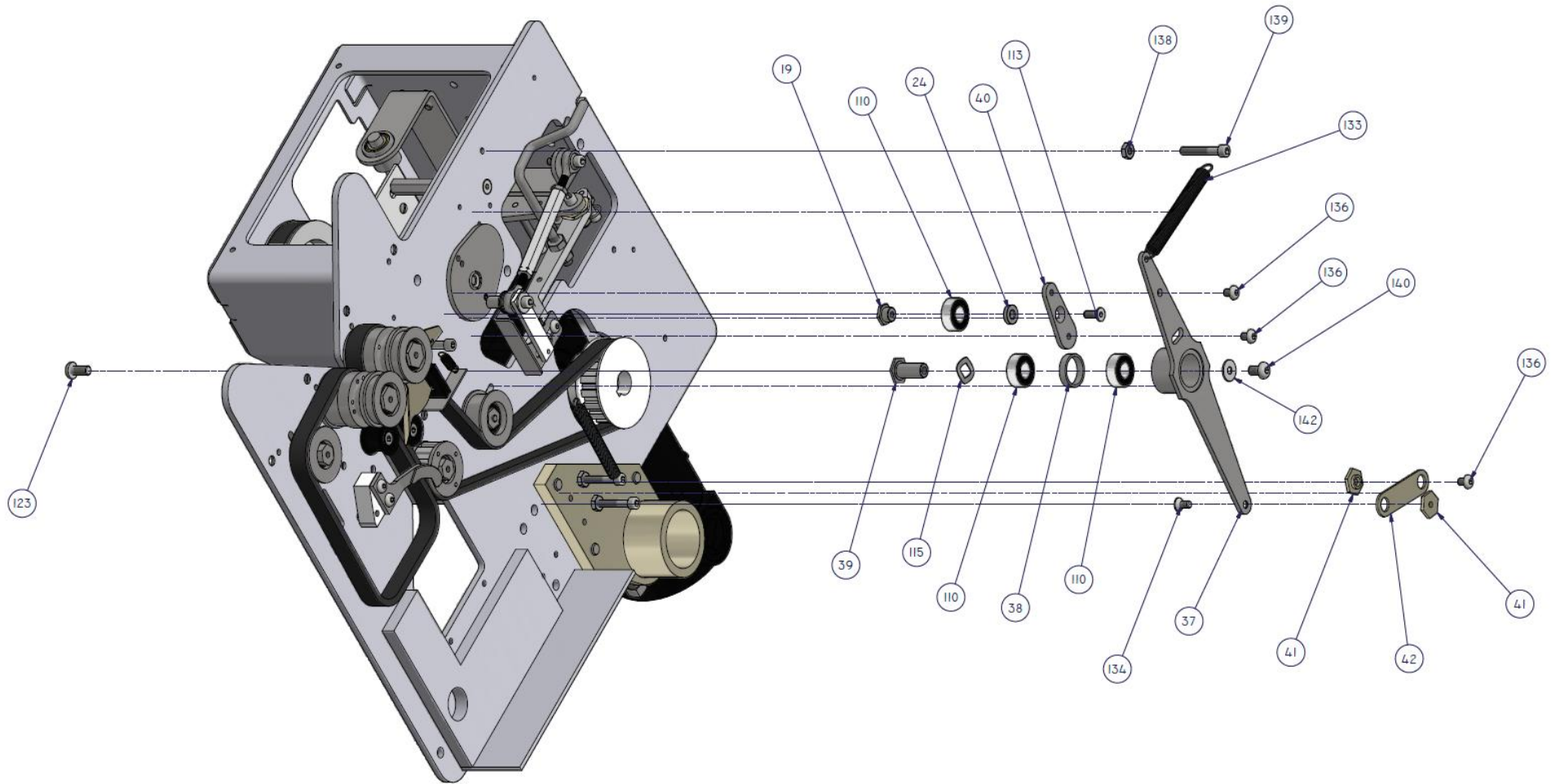


Figure 7.7 (Bottom side)

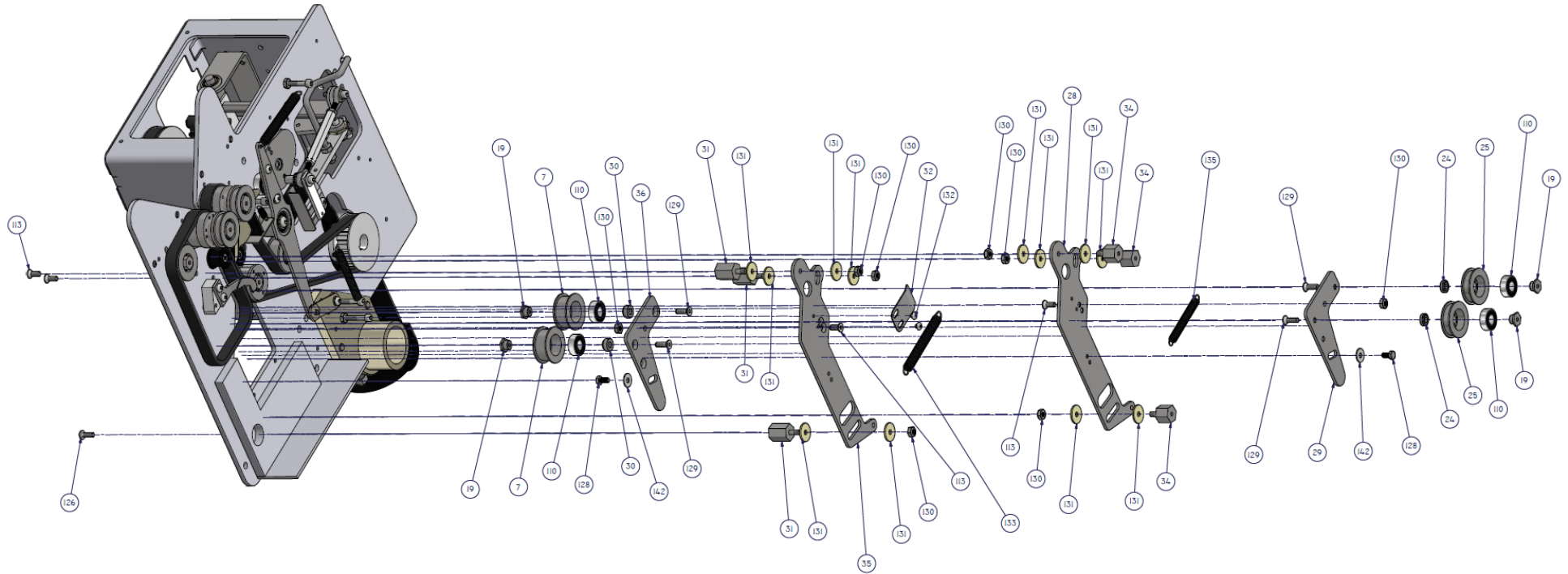


Figure 7.8 (Bottom side)

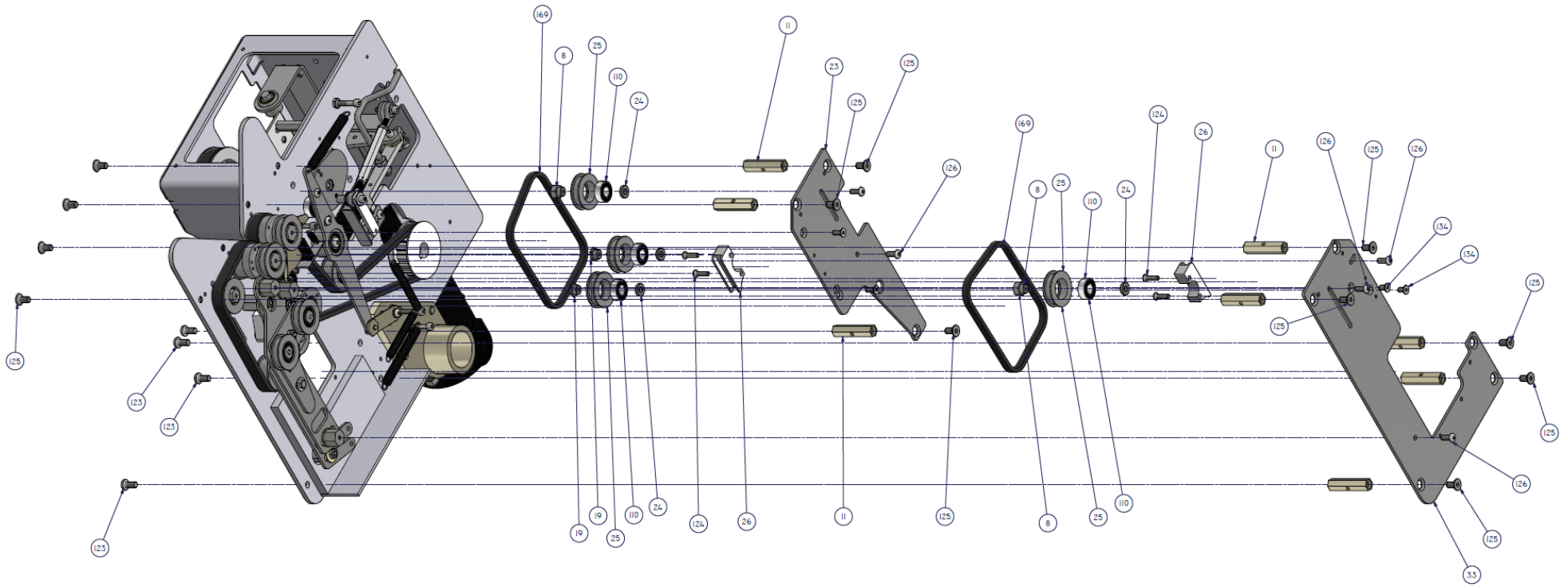


Figure 7.9 (Bottom side)

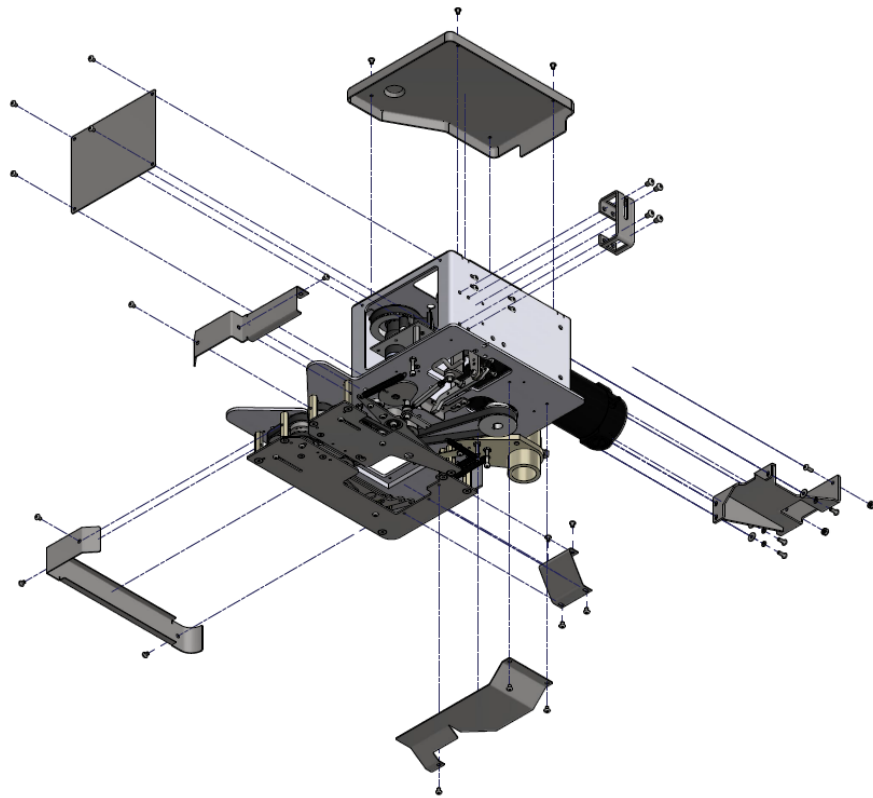


Figure 7.10 (Bottom side)

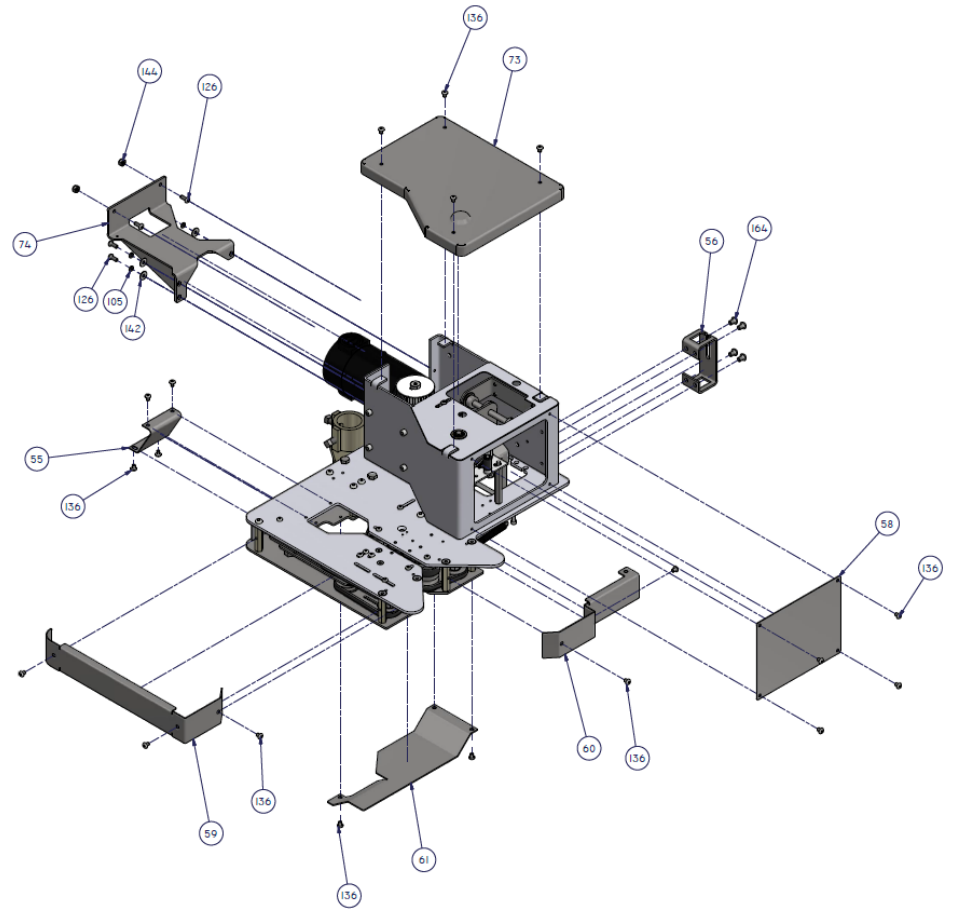


Figure 7.11 (Top side)

## 7.2 Left-Hand Track Assemblies

C100 Series Closet® Clip Track (0.030" & 0.045" clip thickness)  
 Assembly Part Number: 52-20180031121

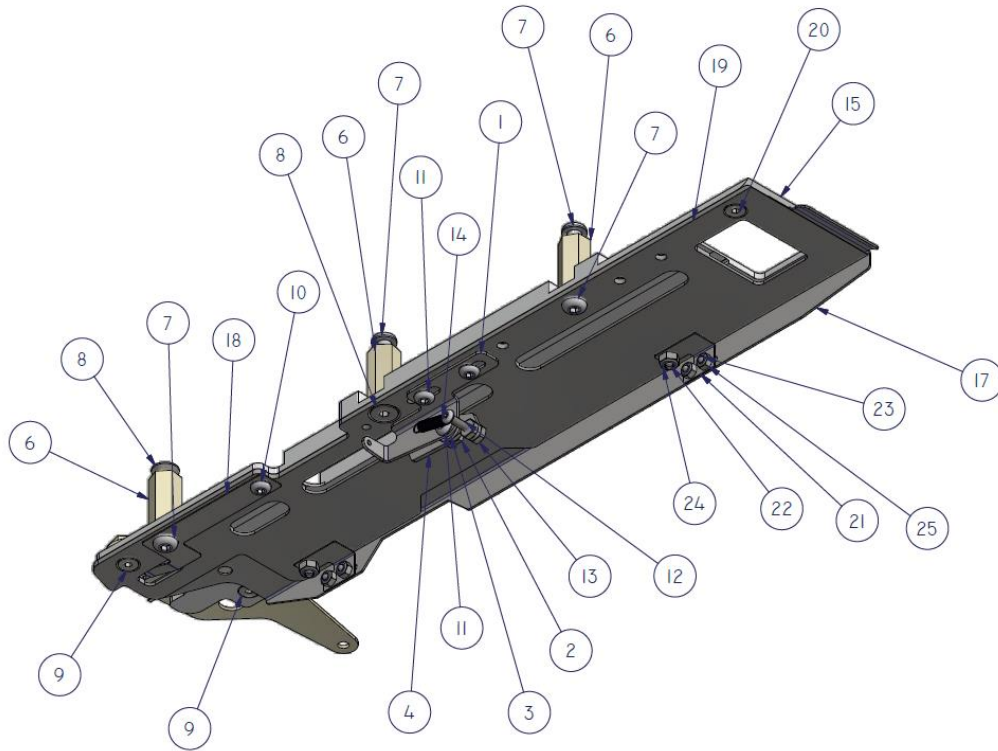


Figure 7.12 (Bottom side)

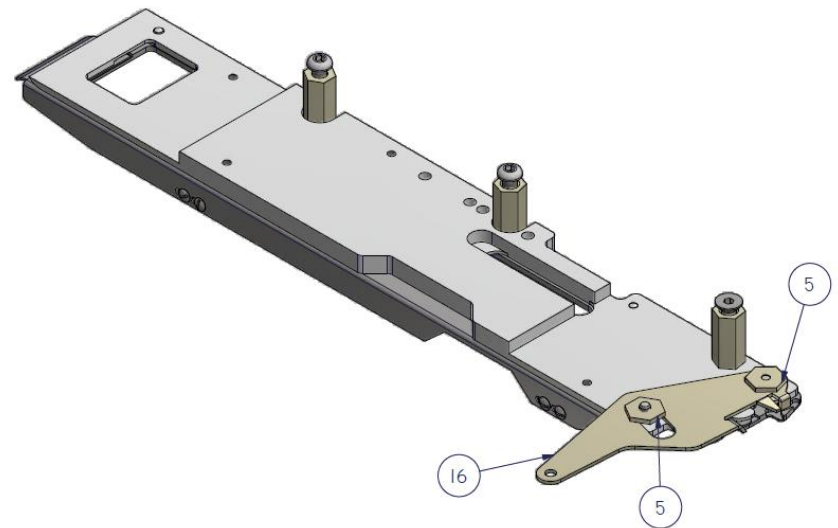


Figure 7.13 (Top side)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180031145	TRACK, C100 SERIES
16	1	52-20180031086	BREAKER, CLIP
17	1	52-20180031088	SHIM, GUIDE
18	1	52-20180031084	SPRING, ANTI-BACKUP
19	1	52-20180031080	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180031087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.14

C150 Series Closet® Clip Track (0.030" and 0.045" clip thickness)  
Assembly Part Number: 52-20180031122

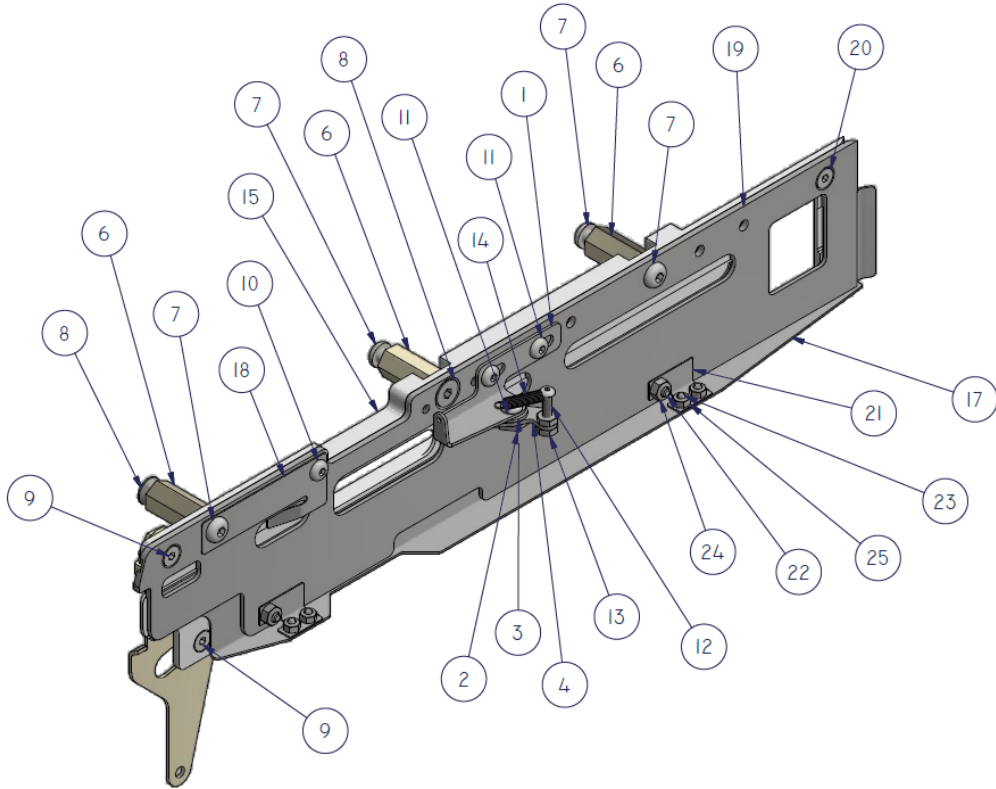


Figure 7.15 (Top side)

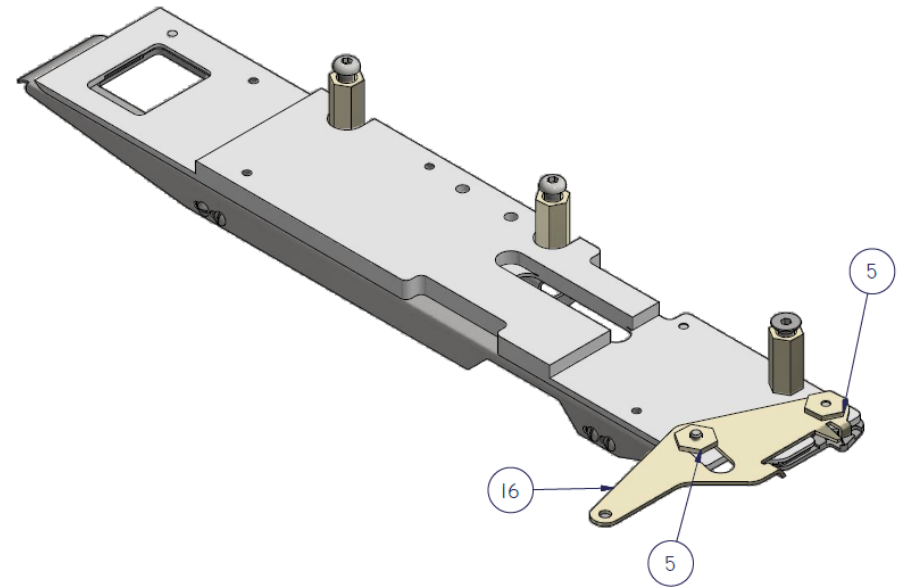


Figure 7.16 (Bottom side)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180031146	TRACK, C150 SERIES
16	1	52-20180031129	BREAKER, CLIP
17	1	52-20180031130	SHIM, GUIDE
18	1	52-20180031128	SPRING, ANTI-BACKUP
19	1	52-20180031127	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180031087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.17



C150 Series Closet® Clip HD Track (0.045" & 0.057" clip thickness)  
Assembly Part Number: 52-20180031153

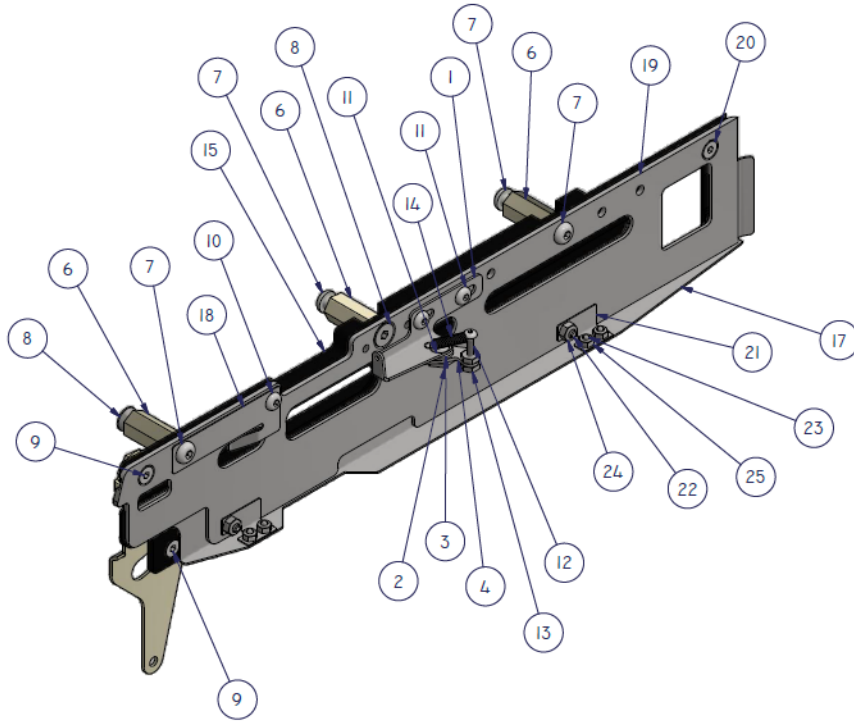


Figure 7.15 (Top side)

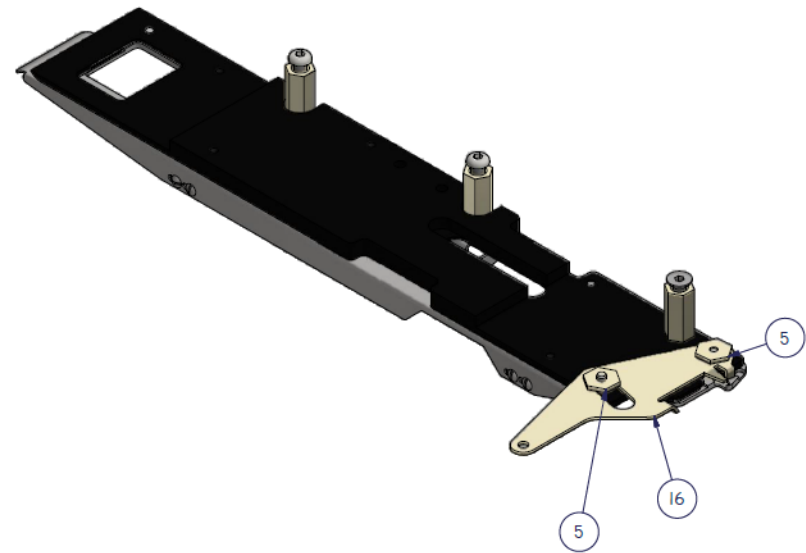


Figure 7.16 (Bottom side)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180031152	TRACK, C150 SERIES, .057 HD
16	1	52-20180031129	BREAKER, CLIP
17	1	52-20180031130	SHIM, GUIDE
18	1	52-20180031128	SPRING, ANTI-BACKUP
19	1	52-20180031127	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180031087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.17



### 7.3 Right-Hand Base Machine

Assembly Part Number: 52-20180032000

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032001	FRAME, CLOSEIT® V1
2	1	52-20180032002	MOUNT, CLOSEIT® V1
4	2	52-20180031065	PULLEY, MOTOR
5	1	52-20180031062	SHAFT, BREAKOFF CAM
6	1	52-20180031069	POST, CLUTCH MOUNT
7	5	52-20180031036	PULLEY, DRIVE GEARBELT
8	5	52-20180031042	Nut, Pulley Long
9	1	52-20180031067	SPACER, TAKEUP PULLEY
10	1	52-20180031066	PULLEY, CLUTCH
11	8	52-20180031035	POST, LOWER PLATE MOUNT
12	2	52-20180031046	SPACER, FEED PULLEY
13	2	52-20180031039	FLANGE, FEED DRIVE PULLEY
14	2	52-20180031040	PULLEY, UPPER FEED BELT
15	2	52-20180031038	PULLEY, LOWER FEED DRIVE
16	2	52-20180031047	AXLE, FEED PULLEY
17	3	52-20180031041	SPACER, FEED PULLEY
18	1	52-20180031044	FLANGE, FEED DRIVE PULLEY
19	8	52-20180031024	Nut, Pulley
20	3	52-20180031043	ROLLER, GEARBELT SUPPORT
21	3	52-20180031048	BOLT, SUPPORT ROLLER
22	1	52-20180032009	MOUNT, SENSOR
23	1	52-20180032033	PLATE, LOWER PULLEY MOUNT
24	7	52-27381067	SPACER, BOGIE PULLEY
25	6	52-20180031037	PULLEY, LOWER FEED BELT
26	2	52-20180031045	TRACK, LOWER FEED BELT
27	1	52-20180031056	PULLEY, IDLER GEARBELT
28	1	52-20180032049	PLATE, BELT PIVOT
29	1	52-20180031050	PLATE, PINCH POINT ADJUST
30	2	52-20180031051	SPACER
31	3	52-20180031055	POST, UPPER BELT PLATE
32	1	52-20180031052	DEFLECTOR, CLOSEIT® V1
33	1	52-20180032053	PLATE, LOWER PLATE MOUNT
34	3	52-20180031054	POST, LOWER BELT PLATE



35	1	52-20180031049	PLATE, BELT PIVOT
36	1	52-20180032050	PLATE, PINCH POINT ADJUST
37	1	52-20180031026	ARM, BREAKOFF WELDMENT
38	1	52-20180031025	BUSHING, BEARING
39	1	52-20180031029	SHAFT, BREAKOFF ARM
40	1	52-20180031030	PLATE, CAM PULLEY ADJUST
41	2	52-20180031031	MOUNT, BREAKOFF LINK
42	1	52-20180031032	LINK, BREAKOFF
43	1	52-27381108	PICK, CHECK
44	1	52-20180032015	SHAFT, PICK WELDMENT
45	1	52-20180031016	Rod, Connecting
46	1	52-20180031017	ANCHOR, CONN. ROD SPRG
47	1	52-20180031018	BEARING, PICK
48	1	52-20180032019	DISENGAGER, PICK
49	1	52-20180031020	MOUNT, PICK SHAFT
50	1	52-20180031021	ARM, PICK
51	1	52-20180032012	LEVER, ACTUATOR
52	1	52-20180031061	BOLT, ACTUATOR LEVER
53	1	52-20180031007	BLOCK, FILM GUIDE MOUNT
54	1	52-20180032011	GUIDE, FILM
55	1	52-20180031013	DEFLECTOR, BACK NECK STD
56	1	52-20180031003	BRACKET, MAST MOUNTING
57	1	52-20180032008	PICK, STOP
58	1	52-20180031010	COVER, FRONT
59	1	52-20180031005	COVER, IDLER SIDE STD
60	1	52-20180032006	COVER, DRIVE SIDE STD
61	1	52-20180032014	DEFLECTOR, LABEL STD
62	1	52-20180032141	ASM, GEARMOTOR
73	1	52-20180032004	COVER TOP
74	1	52-20180032089	BRACKET, ELEC. BOX MOUNT
100	3	52-5162458HHSS	Hex Cap Screw
101	2	52-381634SSSS	Square Head Set Screw - Cup Point
105	3	52-10LWSS	Regular Helical Spring Lock Washers(Inch Series)
106	4	52-FS3KDD	Miniature, Stainless Steel Ball Bearing 3/8 ID
107	1	52-9657K277	Compression Spring, Zinc-Plated, Music-Wire, Closed & Flat End, 1/2" Long, 0.48" OD
108	1	52-91590A117	External Retaining Ring, 15-7 PH Stainless Steel, for 3/8" OD
109	4	52-142012CHSS	Hexagon Socket Head Cap Screw
110	19	52-S3PP	BEARING



111	1	52-1032112BHSS	BUTTON HEAD CAP SCREW 10-32 X 1-1/2
112	3	52-63238BHSS	Hexagon Socket Button Head Cap Screw
113	8	52-103212FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
114	4	52-142038SSSS	Hexagon Socket Set Screw - Cup Point
115	5	52-92161A030	18-8 Stainless Steel Triple-Wave Washer, 0.391" ID, 0.682" OD
116	1	52-59085-040	VANE SENSOR, HAMLIN
117	1	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005
118	1	52-44038FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
119	4	52-63234FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
120	8	52-6321FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
121	5	52-103278BHSS	Hexagon Socket Button Head Cap Screw
123	5	52-142812BHSS	Hexagon Socket Button Head Cap Screw
124	4	52-83258BHSS	Hexagon Socket Button Head Cap Screw
125	12	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
126	11	52-103212BHSS	Hexagon Socket Button Head Cap Screw
128	2	52-103238HHSS	18-8 Stainless Steel Hex Head Screws, 10-32 Thread Size, 3/8" Long
129	4	52-103258FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
130	8	52-1032LPLNSS	18-8 Stainless Steel Thin Nylon-Insert Locknut, 10-32 Thread Size
131	13	52-220-286-062	NYLON WASHER, .200 ID X .750 OD X .062 THICK
132	2	52-83218BHSS	Hexagon Socket Button Head Cap Screw
133	2	52-9654K236	Steel Extension Spring, Loop Ends, Zinc-Plated, Spring-Tempered, 3.75" Long, 3/8" OD
134	3	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
135	2	52-9654K714	Steel Extension Spring, 3" Long, 0.313" OD
136	23	52-103214BHSS	Hexagon Socket Button Head Cap Screw
138	10	52-1032NSS	Hex Machine Screw Nut
139	1	52-1032114CHSS	Hexagon Socket Head Cap Screw
140	1	52-142838BHSS	Hexagon Socket Button Head Cap Screw
141	2	52-6462K14	Set Screw Shaft Collar for 3/8" Diameter, 303 Stainless Steel
142	12	52-10FWSS	Plain Washer (Inch )Type A and B
143	3	52-103234CHSS	Hexagon Socket Head Cap Screw
144	4	52-1032LNSS	LOCK NUT 10-32 STAINLESS
145	1	52-1032316CHSS	Hexagon Socket Head Cap Screw
146	1	52-103258CHSS	Hexagon Socket Head Cap Screw
147	2	52-103278CHSS	Hexagon Socket Head Cap Screw
148	4	52-1032112CHSS	Hexagon Socket Head Cap Screw
149	2	52-1428NSS	Hex Machine Screw Nut
150	1	52-181SPSS	18-8 Stainless Steel Slotted Spring Pin, 1/8" Diameter, 1" Long
151	1	52-92320A460	Stainless Steel Unthreaded Spacer, 5/16" OD, 1/8" Long



152	1	52-92320A745	Stainless Steel Unthreaded Spacer, 5/16" OD, 5/32" Long
153	1	52-92320A769	Stainless Steel Unthreaded Spacer, 5/16" OD, 15/32" Long
154	1	52-60645K11R	Right Hand Ball Joint Rod End, 10-32 Thread
155	1	52-60645K11L	Left Hand Ball Joint Rod End, 10-32 Thread
156	6	52-103238BHSS	Hexagon Socket Button Head Cap Screw
157	1	52-103218SSSS	Type C - Hexagon Socket Set Screw - Cup Point
158	1	52-9044K375	302 Stainless Steel Ultra-Precision Extension Spring with Loop Ends, 2.876" Overall Length, 0.5" OD
159	1	52-9654K314	Steel Extension Spring 1.5" Long, 0.5" OD, 0.049" Wire Diameter
160	1	52-LE-014B-03-M	Music Wire Extension Spring, 1.0" OAL, 0.18" OD .014 Wire Diameter
161	1	52-1024138CHSS	Hexagon Socket Head Cap Screw
162	1	52-1024NSS	Hex Machine Screw Nut
163	5	52-102438BHSS	Hexagon Socket Button Head Cap Screw
164	4	52-142038BHSS	Hexagon Socket Button Head Cap Screw
168	1	52-03042-060103-000	CB-4-CWC-3/8" bore-1 stop-24VDC
169	2	52-004124	FLAT BELT, LOWER FEED
170	1	52-004438	FLAT BELT, GEAR IDLE
171	1	52-300DL050	TIMING BELT, 300DL050
172	1	52-225L050	TIMING BELT 225L050
173	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw

Figure 7.18

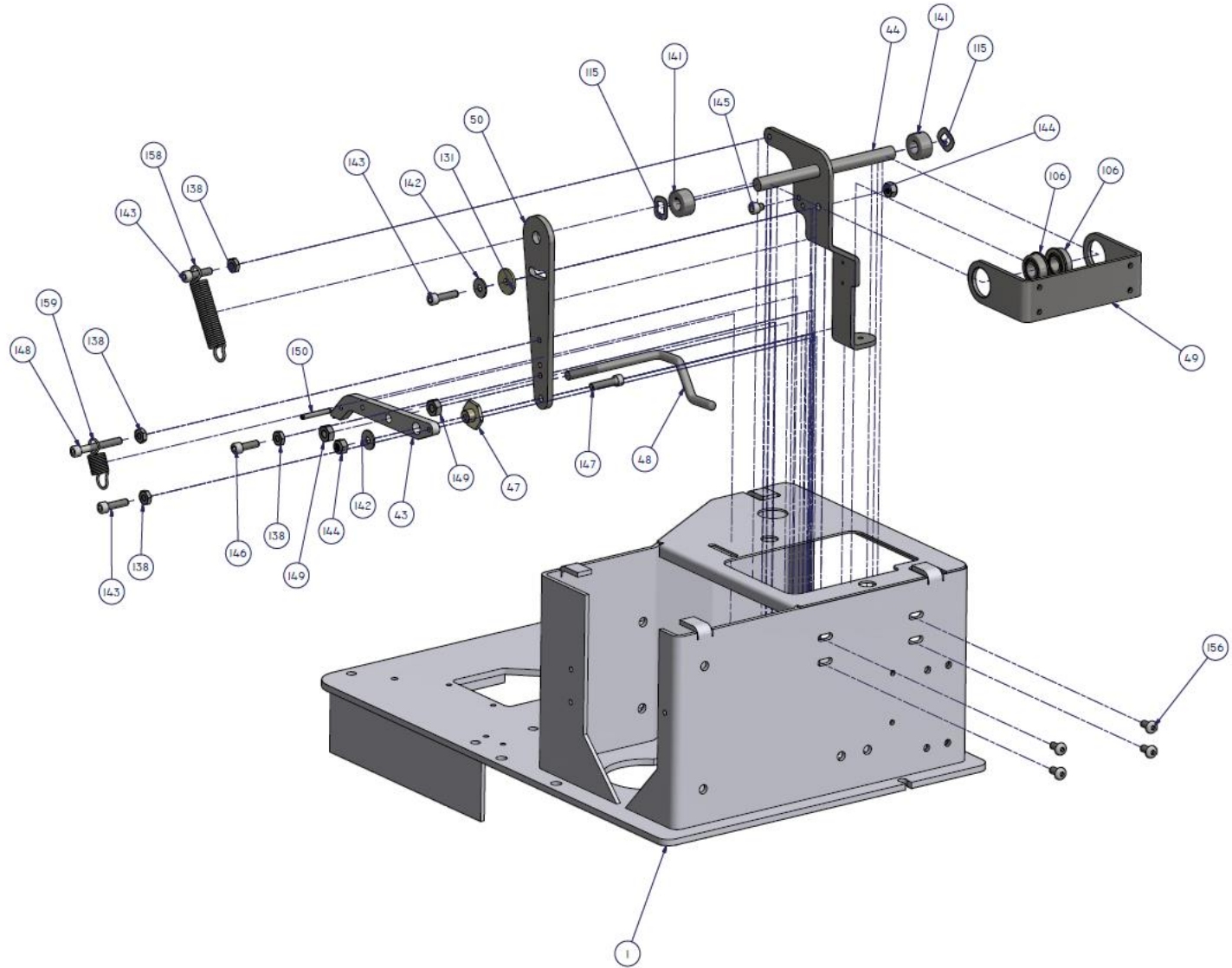


Figure 7.19

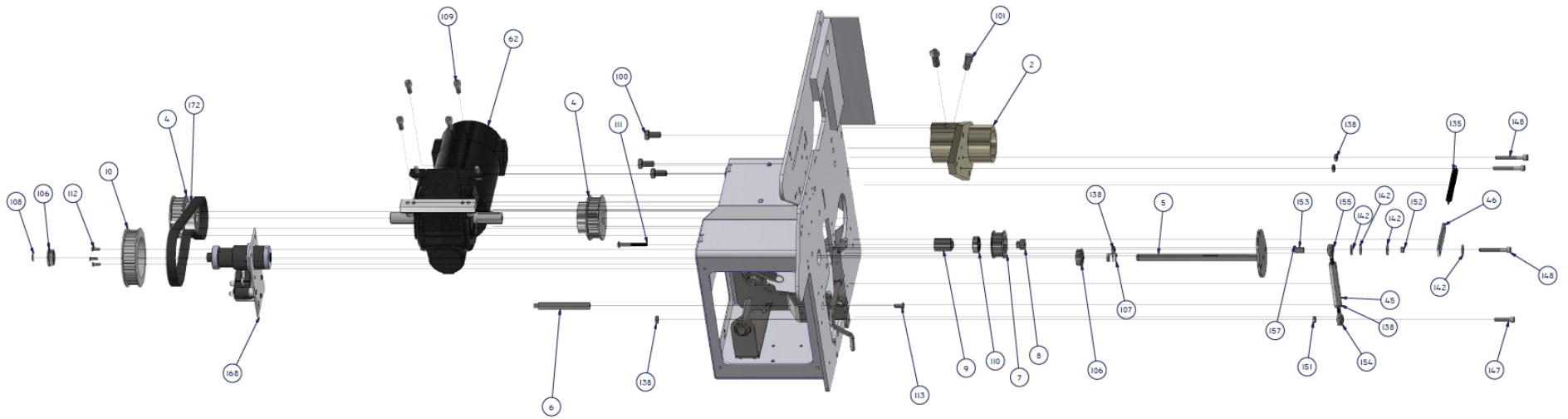


Figure 7.20



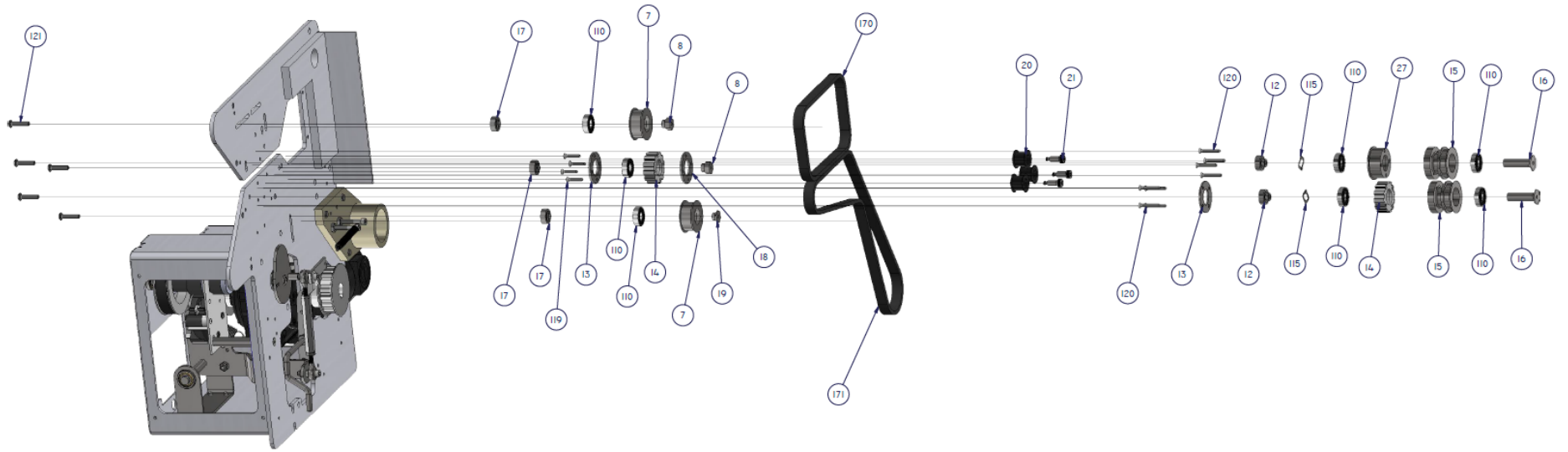


Figure 7.21

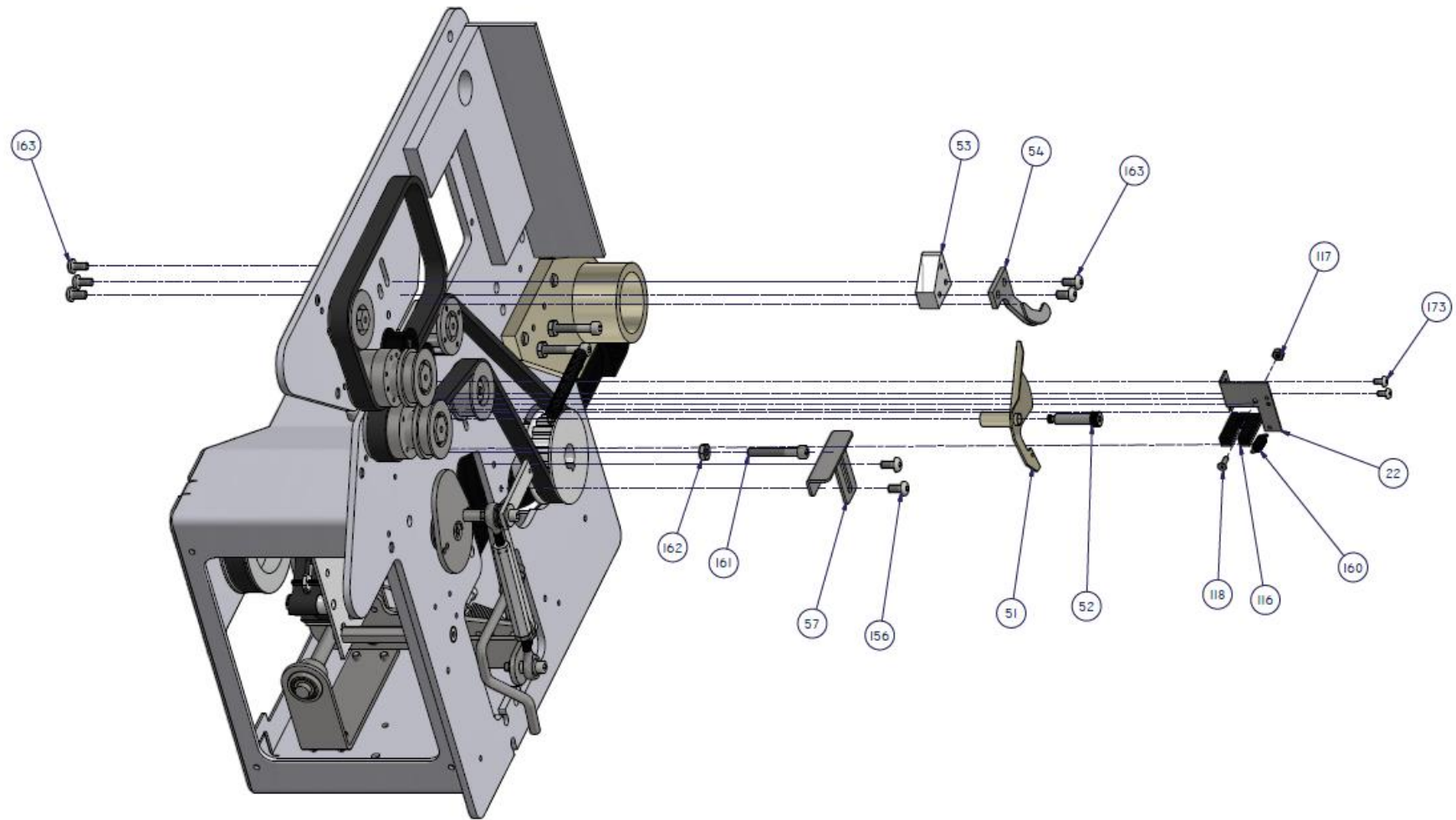


Figure 7.22

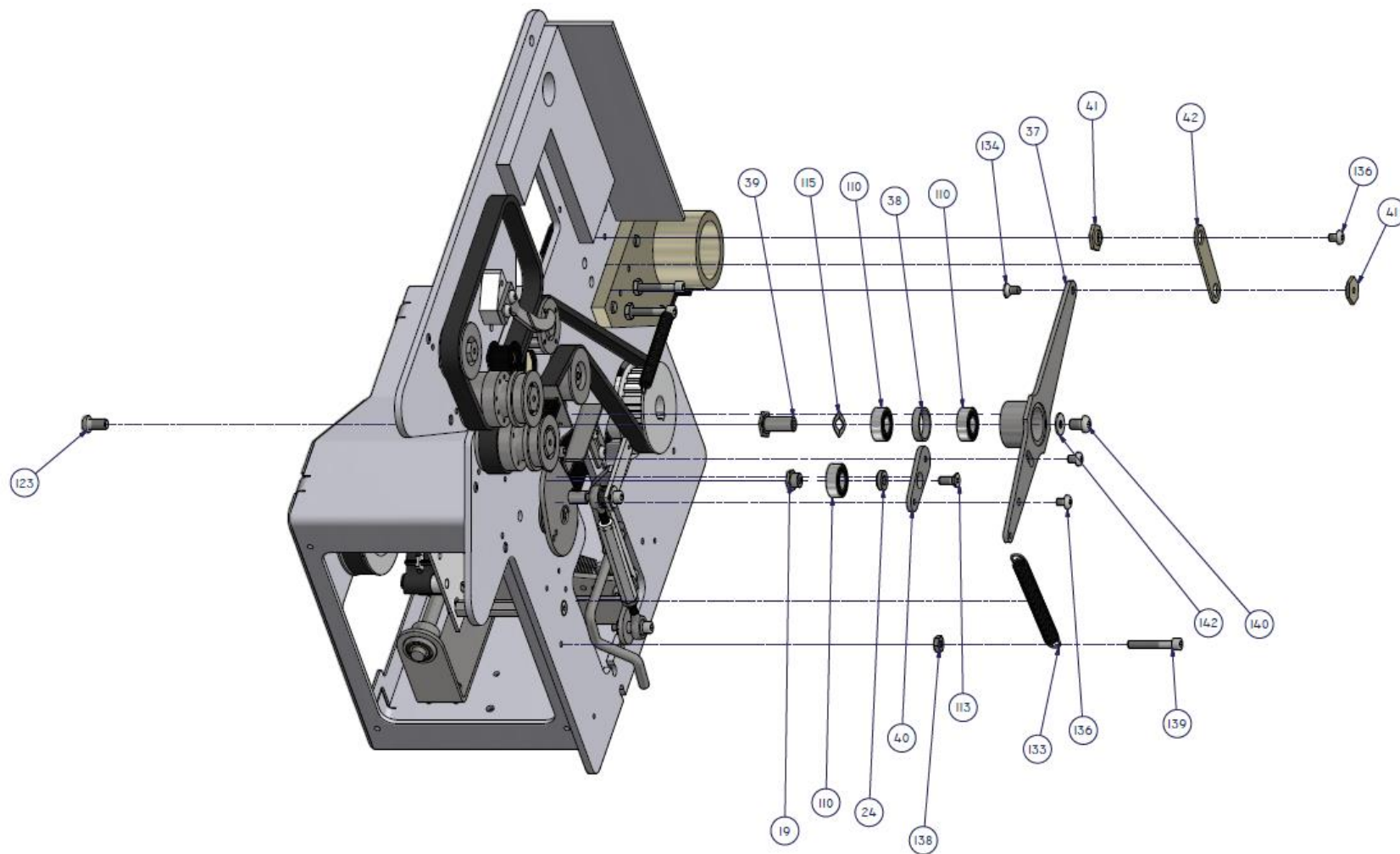


Figure 7.23

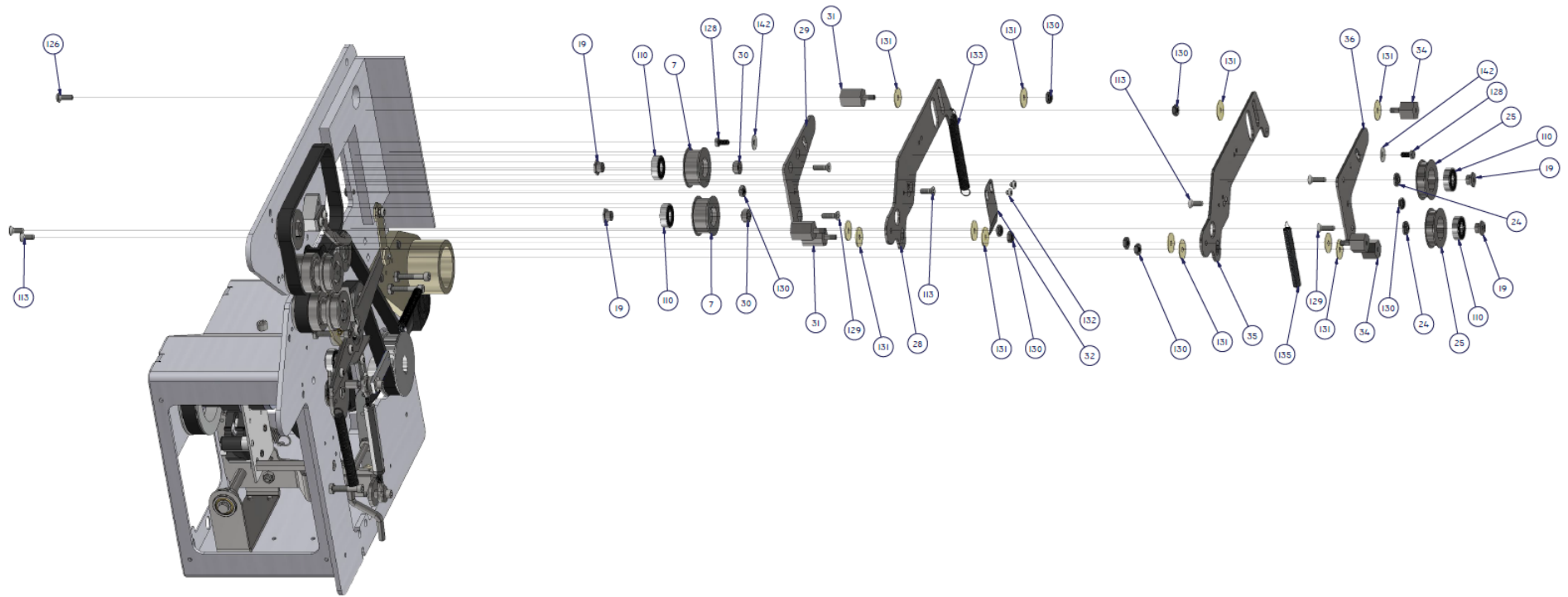


Figure 7.24

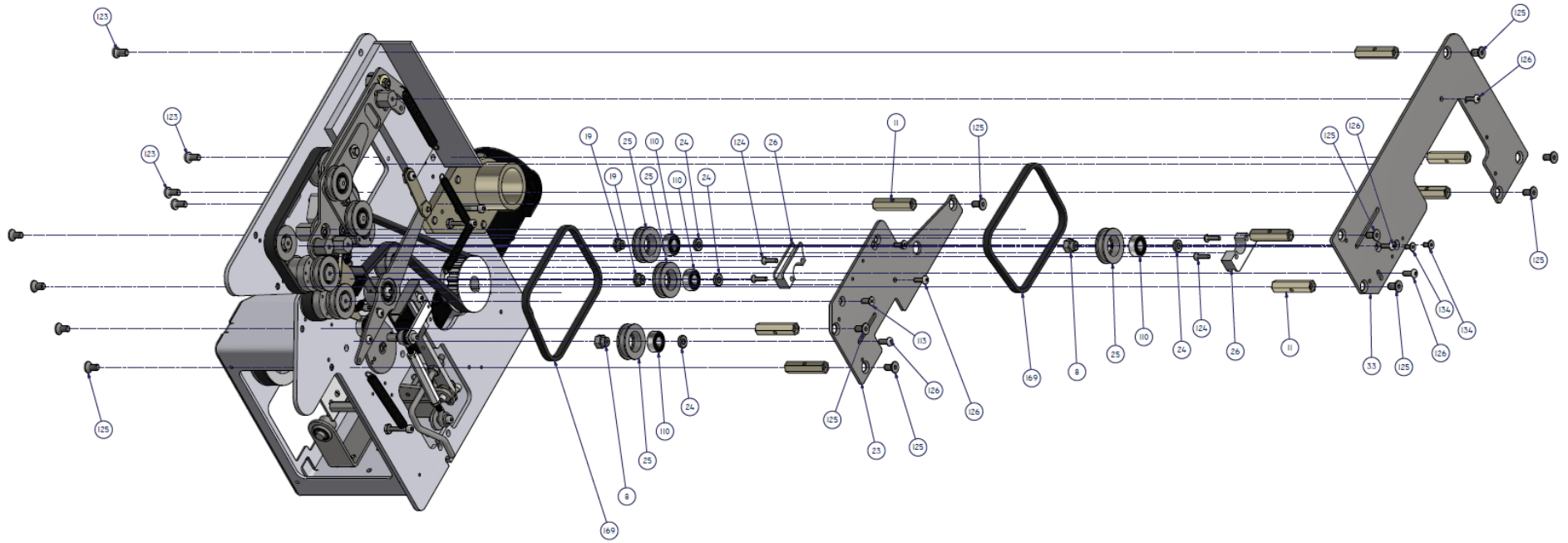


Figure 7.25

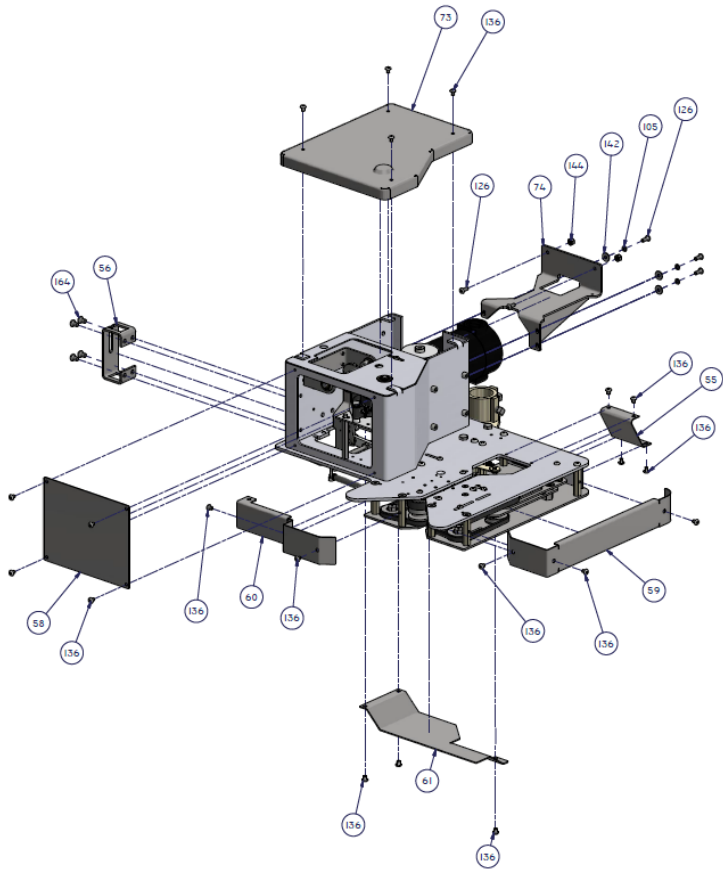


Figure 7.26 (Top side)

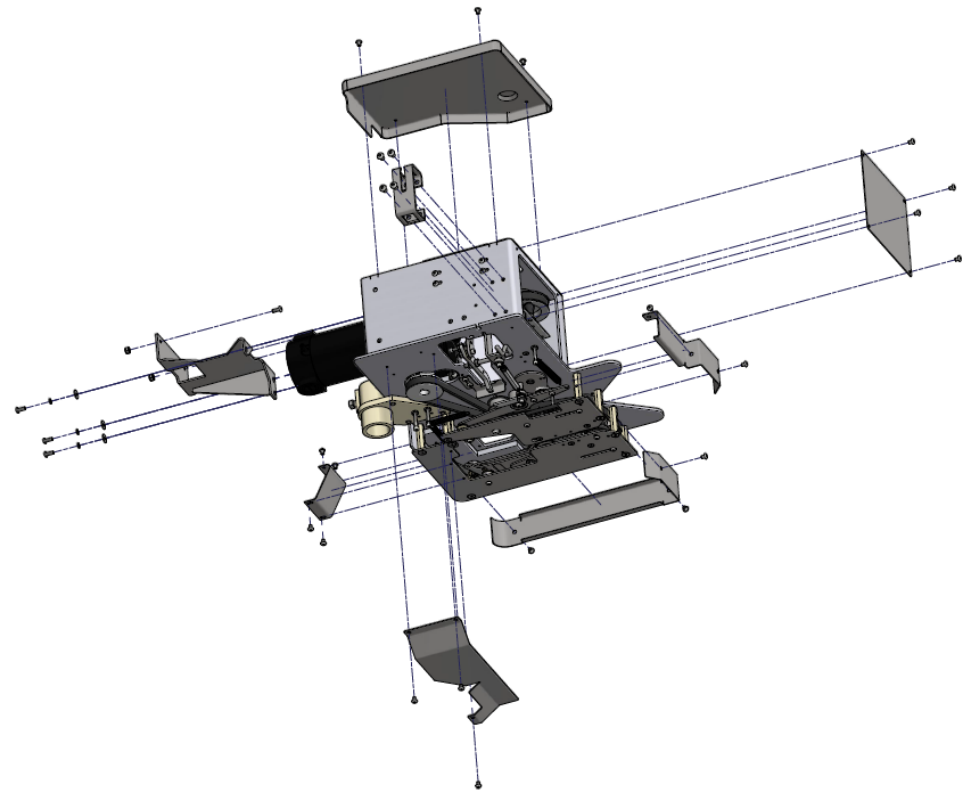


Figure 7.27 (Bottom side)

## 7.4 Right-Hand Track Assemblies

C100 Series Closet® Clip Track (0.030" & 0.045" clip thickness)  
 Assembly Part Number: 52-20180032121

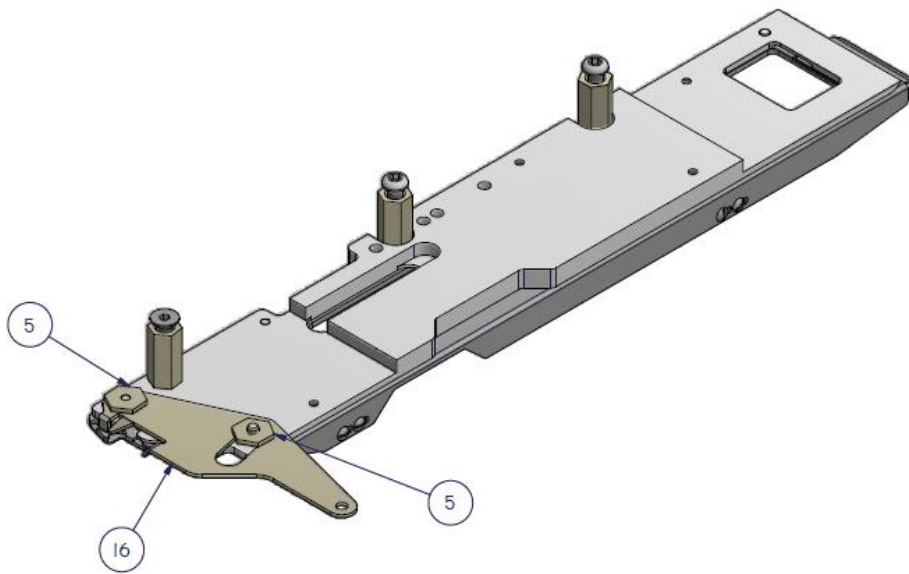


Figure 7.28 (Top side)

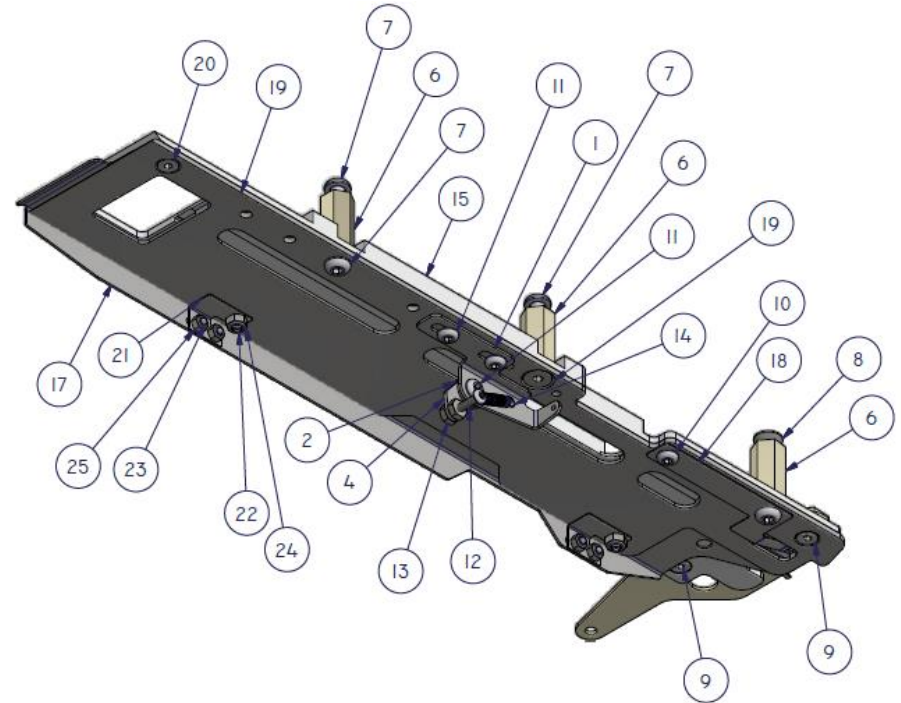


Figure 7.29 (Bottom side)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180032145	TRACK, C100 SERIES
16	1	52-20180032086	BREAKER, CLIP
17	1	52-20180032088	SHIM, GUIDE
18	1	52-20180032084	SPRING, ANTI-BACKUP
19	1	52-20180032080	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180032087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.30



C150 Series Closet® Clip Track (0.030" & 0.045" clip thickness)  
 Assembly Part Number: 52-20180032122

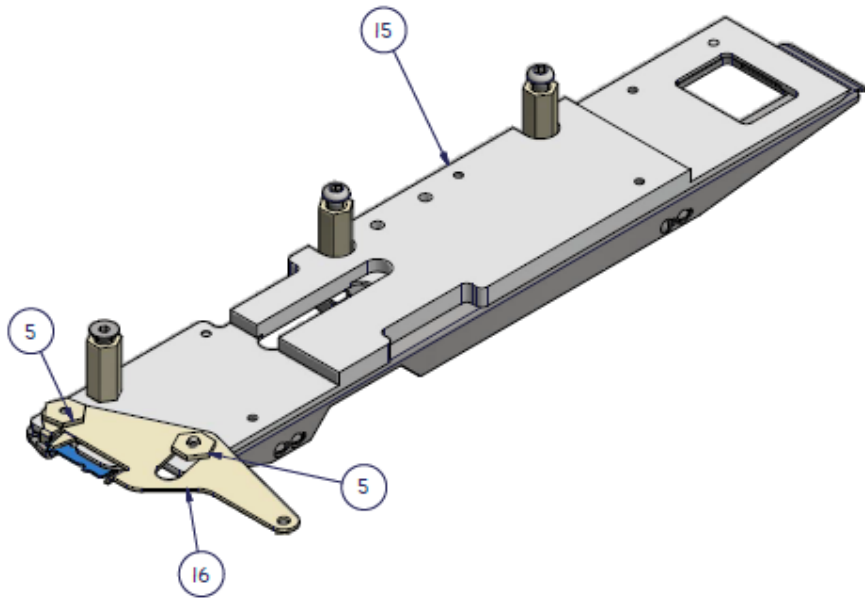


Figure 7.31 (Top side)

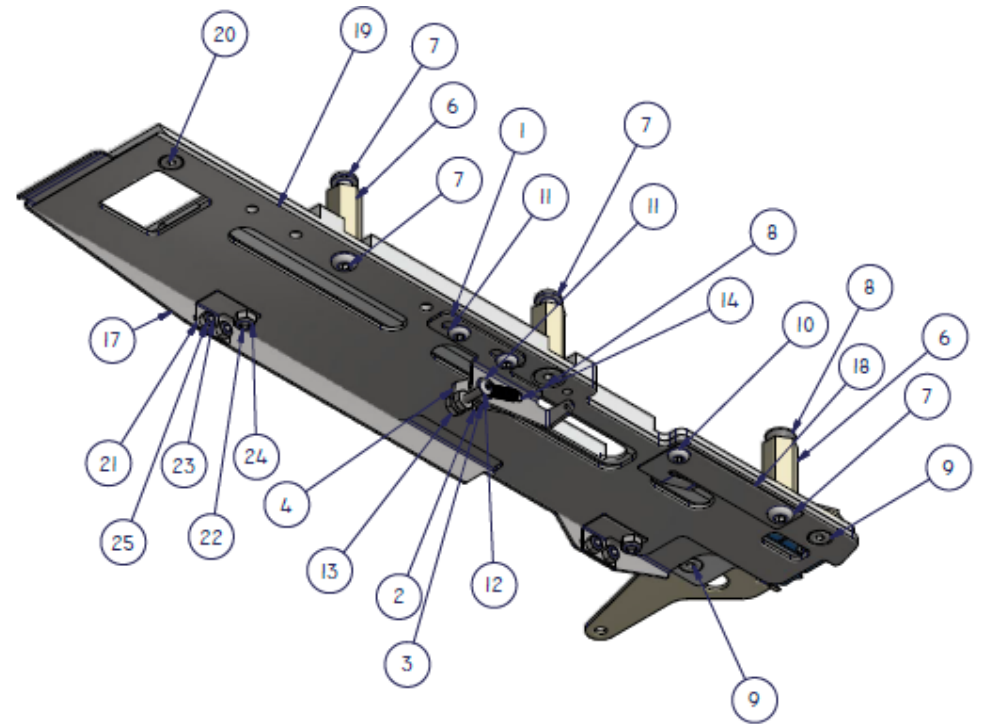


Figure 7.32 (Bottom side)



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180032145	TRACK, C150 SERIES
16	1	52-20180032129	BREAKER, CLIP
17	1	52-20180032130	SHIM, GUIDE
18	1	52-20180032128	SPRING, ANTI-BACKUP
19	1	52-20180032127	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180032087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.33

C150 Series Closet® Clip HD Track (0.045" & 0.057" clip thickness)  
Assembly Part Number: 52-20180032153

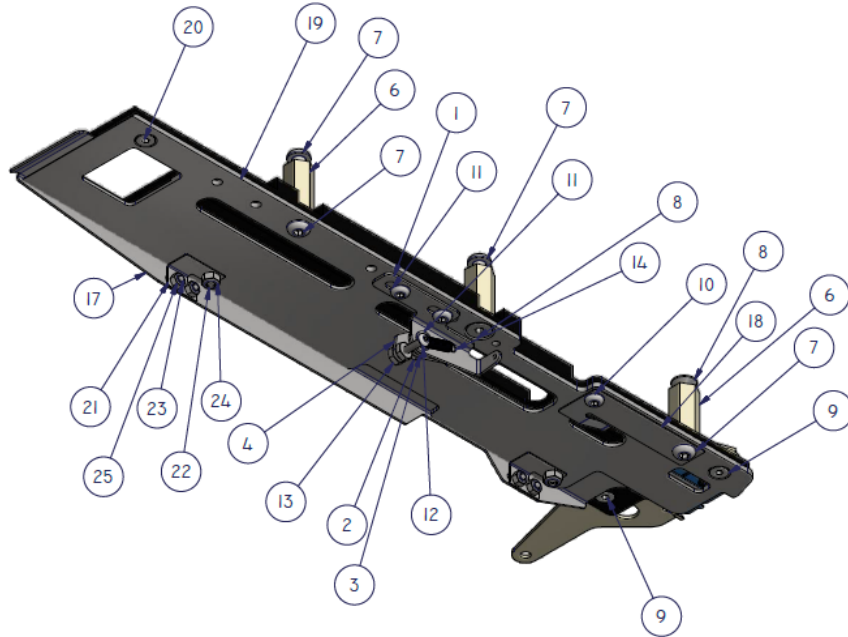


Figure 7.15 (Top side)

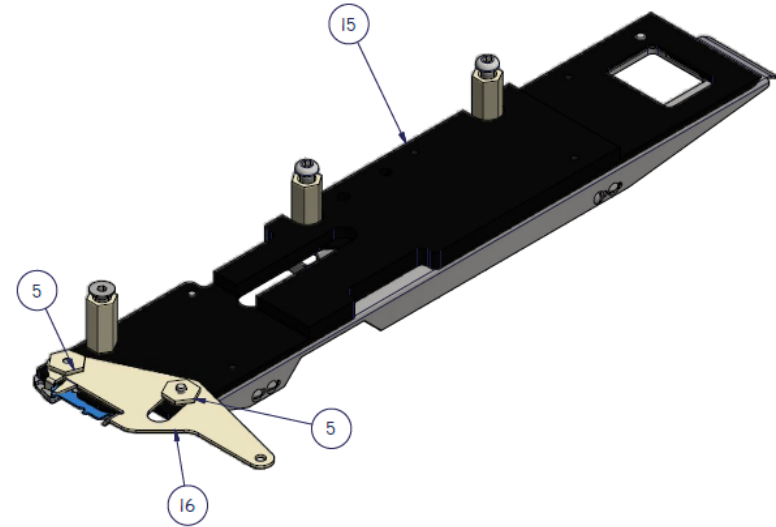


Figure 7.16 (Bottom side)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032085	MOUNT, CHECK
2	1	52-27381090	PIVOT, CHECK
3	1	52-27381089	WASHER, CHECK
4	1	52-27381088	CHECK, PICK
5	2	52-20180031079	MOUNT, BREAKOFF LINK
6	3	52-20180031078	POST, LOWER PLATE MOUNT
7	4	52-142812BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-142812FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
9	2	52-103238FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
10	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
11	3	52-103238BHSS	Hexagon Socket Button Head Cap Screw
12	1	52-63234BHSS	Hexagon Socket Button Head Cap Screw
13	2	52-632NSS	Hex Machine Screw Nut
14	1	52-94135K741	302 Stainless Steel Corrosion-Resistant Extension Spring with Loop Ends, 1" Long, 0.188" OD, 0.016" Wire Diameter
15	1	52-20180031152	TRACK, C150 SERIES, .057 HD
16	1	52-20180031129	BREAKER, CLIP
17	1	52-20180031130	SHIM, GUIDE
18	1	52-20180031128	SPRING, ANTI-BACKUP
19	1	52-20180031127	COVER, TRACK
20	1	52-103214FHSS	Hexagon Socket Flat Countersunk Head Cap Screw
21	2	52-20180031087	Spring, Shim Locking
22	2	52-63214BHSS	Hexagon Socket Button Head Cap Screw
23	4	52-44014MSSS	Slotted Truss Head Machine Screw
24	2	52-632LNSS	18-8 Stainless Steel Nylon-Insert Locknut, 6-32 Thread Size
25	4	52-440LNSS	LOCK NUT, STAINLESS STEEL 4-40, #91831A005

Figure 7.17



## 7.5 Reel Payout Assemblies

C100 Series Closett® Clip

Assembly Part Number: 52-20180031107

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-27381009	PLATE, REEL REAR
2	1	52-27381014	KNOB, REEL
3	1	52-27381008	PLATE, REEL FRONT
4	1	52-27381185	BEARING, REEL HUB
5	1	52-20180031109	SPACER, REEL MT STANDARD
6	1	52-27381186	ASM, HUB, REEL BEARING
7	1	52-27381013	PIN, REEL DETENT
9	3	52-102478CHSS	Hexagon Socket Head Cap Screw
10	3	52-102438CHSS	Hexagon Socket Head Cap Screw
11	1	52-8500A21	SS RETRACTABLE SPRING PLUNGER W PULL RING
12	1	52-84805A96	Ball-Nose Spring Plunger with Plastic Ball, Steel Body, 1/2"-13 Thread, 6-30 lb. Nose Force
13	2	52-14LWSS	Regular Helical Spring Lock Washers(Inch Series)
14	2	52-1420114HHSS	Hex Screw

Figure 7.34

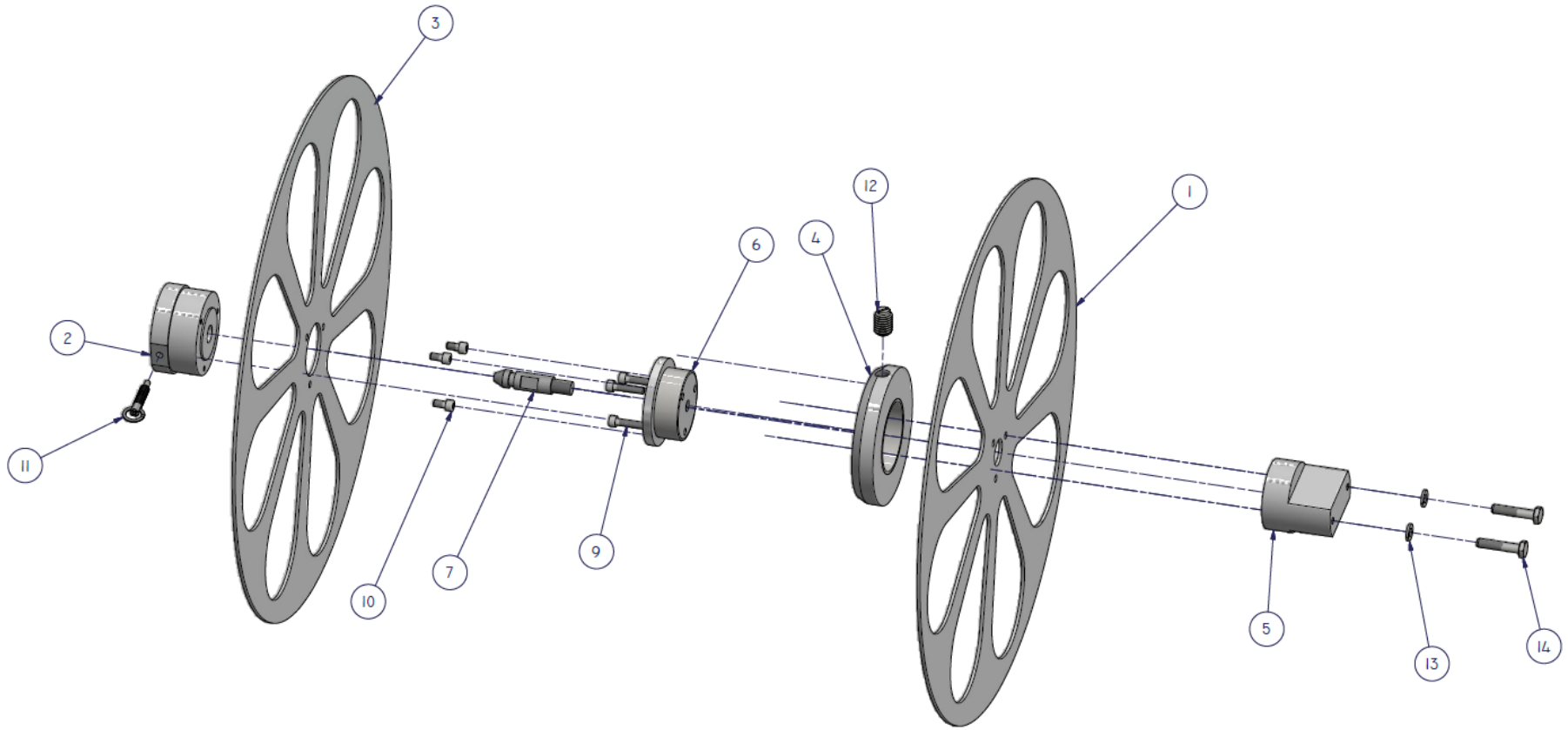


Figure 7.35



C150 Series Closelt® Clip

Assembly Part Number: 52-20180031120

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-27381009	PLATE, REEL REAR
2	1	52-27381014	KNOB, REEL
3	1	52-27381008	PLATE, REEL FRONT
4	1	52-27381256	BEARING, REEL HUB
5	1	52-20180031109	SPACER, REEL MT STANDARD
6	1	52-27381259	ASM, HUB, REEL BEARING
7	1	52-27381013	PIN, REEL DETENT
9	3	52-1024138CHSS	Hexagon Socket Head Cap Screw
10	3	52-102438CHSS	Hexagon Socket Head Cap Screw
11	1	52-8500A21	SS RETRACTABLE SPRING PLUNGER W PULL RING
12	1	52-84805A96	Ball-Nose Spring Plunger with Plastic Ball, Steel Body, 1/2"-13 Thread, 6-30 lb. Nose Force
13	2	52-14LWSS	Regular Helical Spring Lock Washers(Inch Series)
14	2	52-1420114HHSS	Hex Cap Screw

Figure 7.36

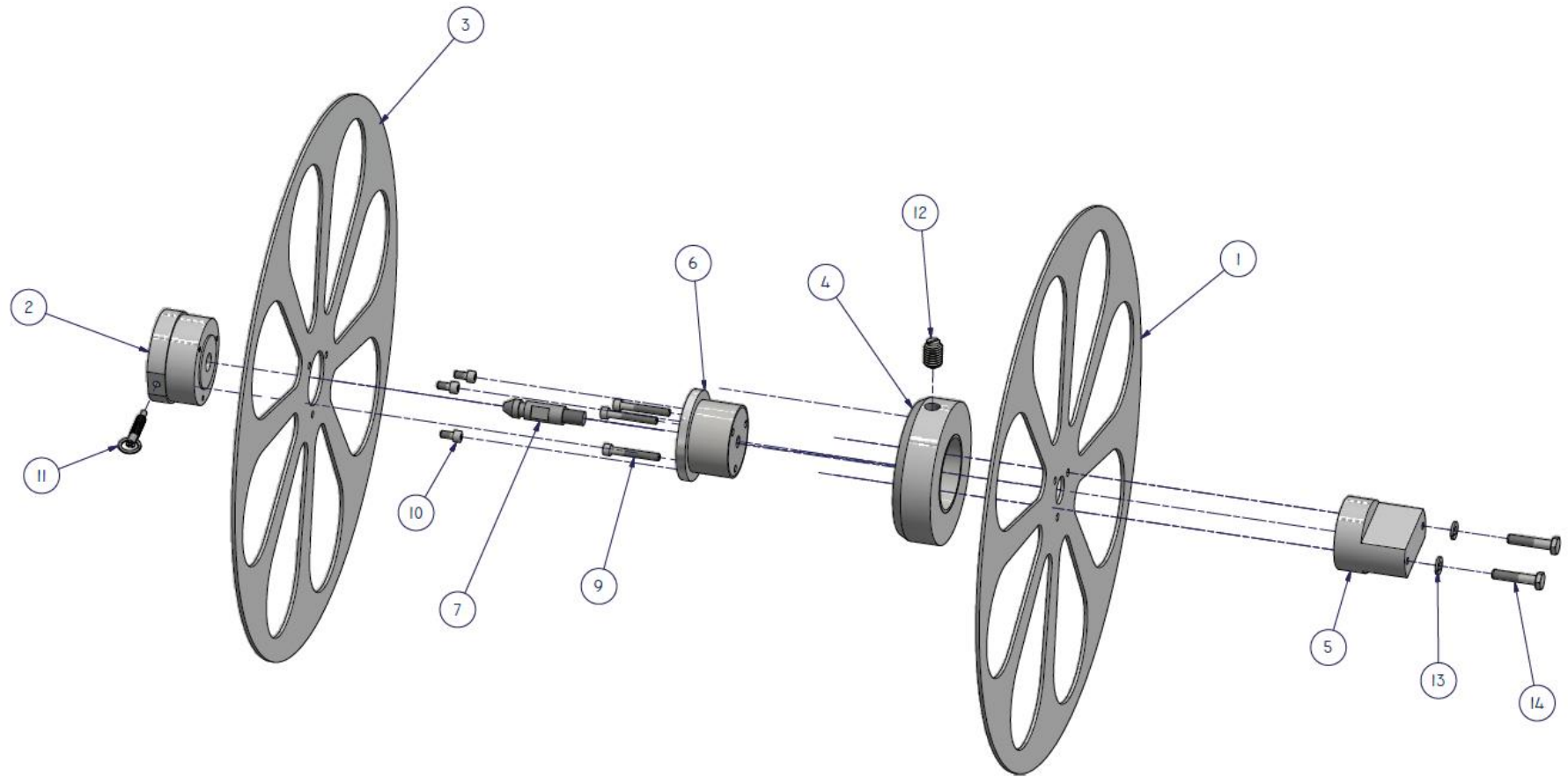


Figure 7.37



C100/C150 Series Closet<sup>®</sup> Clip Flag Reel  
*Assembly Part Number: 52-20180031169*

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031154	SPACER, LABEL REEL STD
2	1	52-27381369	ASM, REEL SHAFT P/T
3	1	52-27381376	ASM, REEL P/T
4	1	52-14LWSS	WASHER, SPRING LOCK
5	1	52-1420114HHSS	BOLT, HEX

Figure 7.38

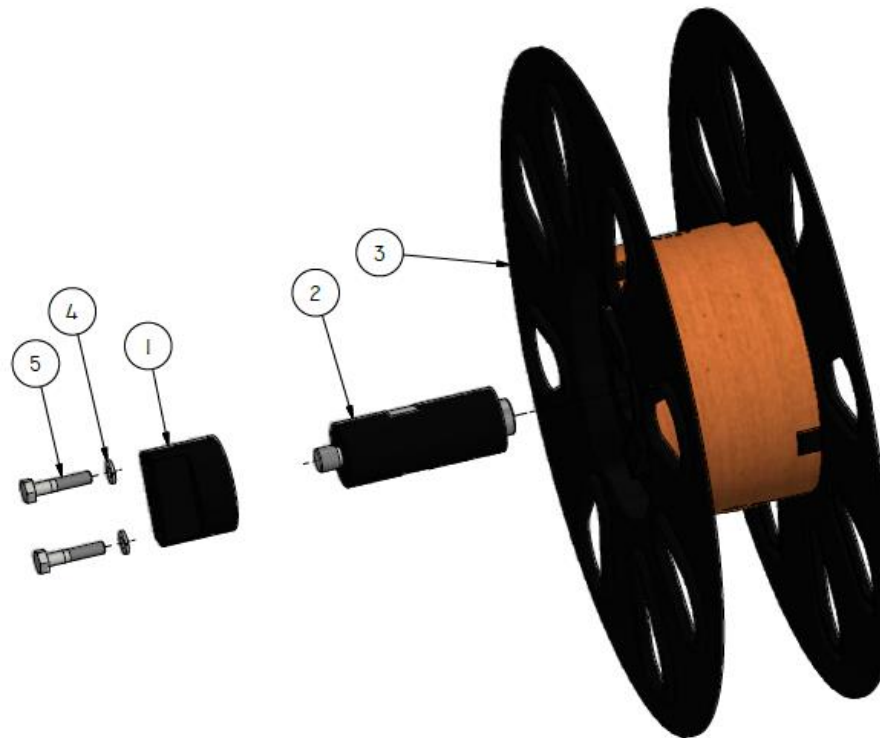


Figure 7.39

C100/C150 Series Closet® Clip Reels  
 Assembly Part Number: 52-20180031092

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031095	WELDMENT, BAR MAST ROLLER
2	1	52-20180031093	CLAMP, MAST
3	1	52-20180031094	PLATE, MAST CLAMP
4	1	52-20180031099	MAST, REEL
5	1	52-DK-74	KNOB, BLACK 5/16-18 X 1, PHENOLIC
6	2	52-5161838BHSS	Hexagon Socket Button Head Cap Screw
7	1	52-516FWSS	Plain Washer (Inch )Type A and B
8	1	52-142038SSSS	Type C - Hexagon Socket Set Screw - Cup Point

Figure 7.40

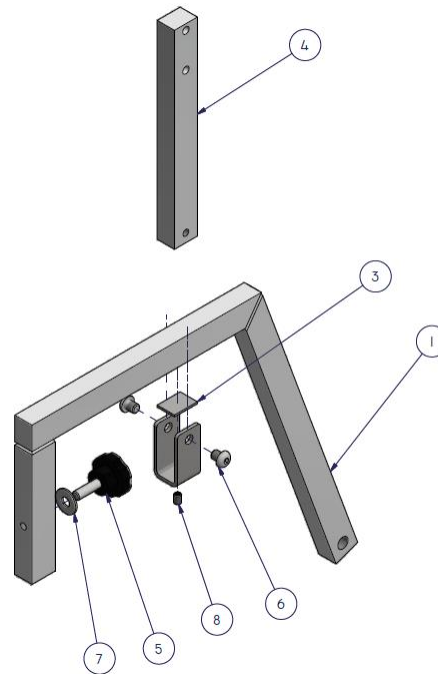


Figure 7.41

C100/C150 Series Closet<sup>®</sup> Clip Uncoiler  
 Assembly Part Number: 52-20180031101

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031105	SHAFT, ROLLER MOUNT
2	2	52-20180031103	ROLLER, CLIP GUIDE
3	1	52-14FWSS	Plain Washer (Inch )Type A and B
4	1	52-142038BHSS	Hexagon Socket Button Head Cap Screw

Figure 7.42

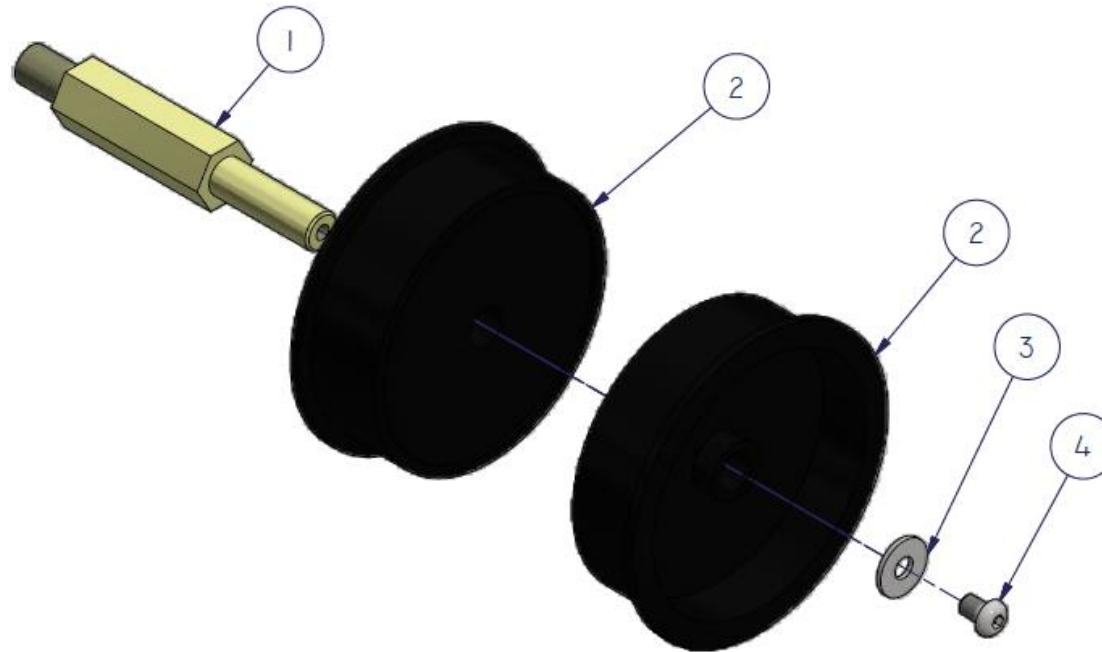


Figure 7.43

C100/C150 Series Closet® Flag Uncoiler  
 Assembly Part Number: 52-20180031102

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031106	SHAFT, ROLLER MOUNT, FLAG
2	2	52-20180031103	ROLLER, CLIP GUIDE
3	1	52-14FWSS	Plain Washer (Inch )Type A and B
4	1	52-142038BHSS	Hexagon Socket Button Head Cap Screw
5	1	52-20180031104	ROLLER, CENTER CLIP GUIDE

Figure 7.44

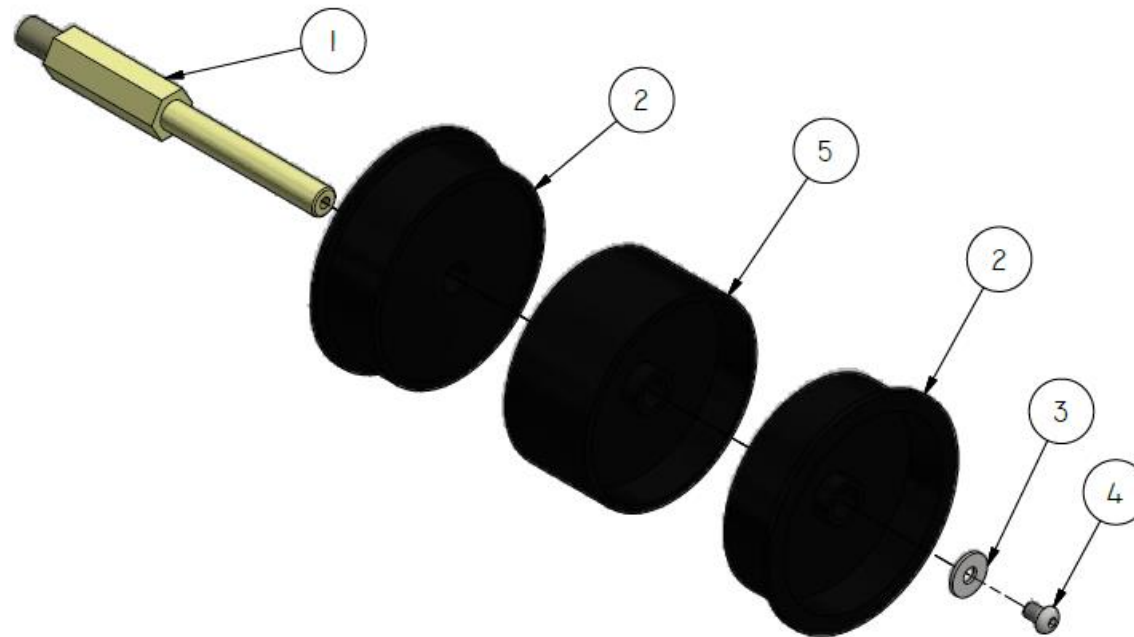


Figure 7.45

Closet® V1 Bag Guards

Assembly Part Number: 52-20180031147

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180031149	GUARD, RIGHT
2	1	52-20180031148	GUARD, LEFT
3	1	52-103214BHSS	Hexagon Socket Button Head Cap Screw
4	1	52-10FWSS	Washer, Plain No. 10

Figure 7.46

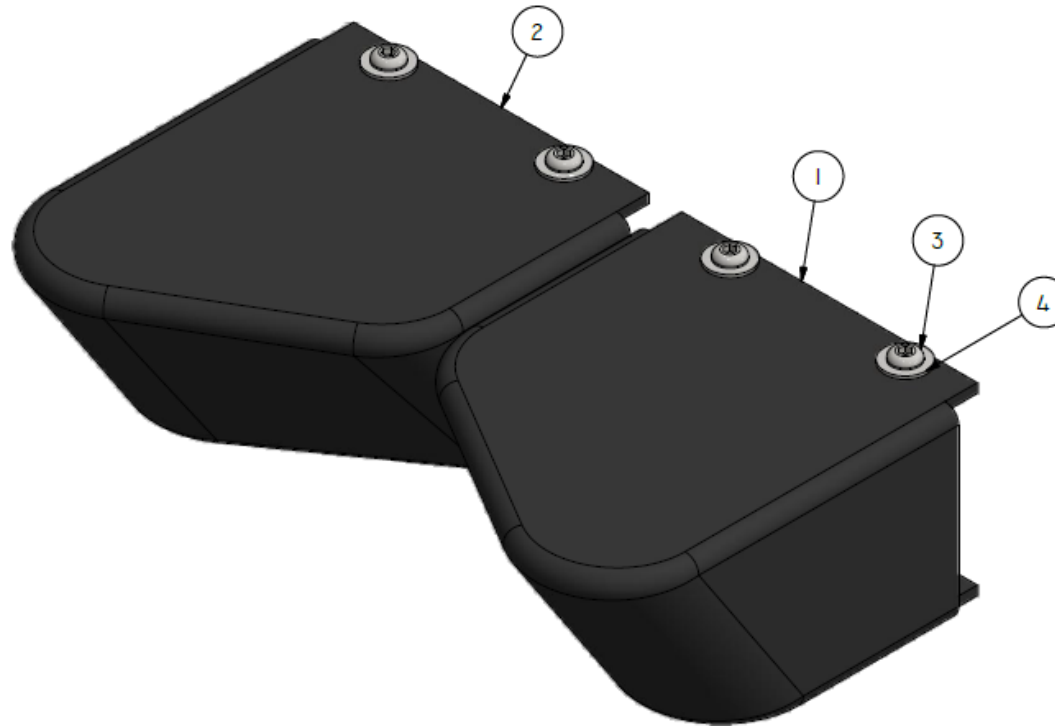


Figure 7.47



## 7.6 Electrical Enclosures

Electrical Enclosures Part Numbers

<b>Machine Orientation</b>	<b>Electrical Enclosure 110 VAC Rating</b>	<b>Electrical Enclosure 230 VAC Rating</b>
Right Hand	52-20180032137	52-20180031138
Left Hand	52-20180031137	52-20180032138
Electrical Drawing #	2738E002	2738E003

Figure 7.48



Part Number 52-20180032137 – Right Hand, 110 VAC Shown  
*(Internal components similar between LH & RH units)*

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032139	REWORK, CONTROL BOX
2	1	52-C0-01AC	CLICK AC power supply, 100-240 VAC nominal input, 24 VDC nominal output, 1.3A continuous
3	1	52-C0-01DD1-D	CLICK Standard PLC, 24 VDC required, serial ports, Discrete Input: 8-point, DC, Discrete Output: 6-point, sinking
4	1	52-GCX1100	Pushbutton, 22 mm, momentary, 1 N.O. contact(s), metal base, metal bezel, Operator: black, flush, 30 mm, round, plastic
5	1	52-GSD-240-5C	IronHorse GSD4 series DC general purpose drive
6	1	52-27381193	35mm Steel Din Rail 7.0" length
7	2	52-83214BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-103214BHSS	Hexagon Socket Button Head Cap Screw
9	1	52-OHBS1PH	SELECTOR HANDLE ON/OFF
10	1	52-OT40FT3	ABB SWITCH DISC 1SCA104902R1001
11	1	52-DRA-CN024D24	Solid State Relay
12	1	52-69915K57	Cord Grip, NPT Threads, for 0.39"-0.55" Cord OD, 1/2 Knockout Size
13	2	52-69915K47	CONNECTOR, CORD GRIP 69915K47
14	1	52-ZP-S1-3FR-0P3M	ZIPport bulkhead connector, 7/8in - 16 UN2 thread barrel 3-pin female to pigtail, 16 AWG, 0.9ft/0.3m cable length
15	2	52-DN-D10B-A	TERMINAL BLOCK, BLUE DOUBLE LEVEL
16	1	52-DN-DEC10	END COVER
17	1	52-DN-EB35MN	END BRACKET
18	1	52-DN-T10-A	TERMINEL BLOCK
19	1	52-EHM1DU	EDISON MODULAR FUSE HOLDER 1 POLE
20	3	52-DN-T10GRN-A	TERMINEL BLOCK GREEN
21	2	52-DN-EC1210MN	END COVER FOR DN-T10 TERMINAL
22	1	52-1FD91	POWER CORD
23	1	52-7000-40021-0240100	CORDSET CABLE
24	1	52-7000-08321-0000000	CONNECTOR, FIELD WIREABLE 8M BARREL
25	1	52-ZP-S1-3MP-FW	ZIPport FIELD WIRING CONNECTOR FEMALE
26	1	52-7000-08041-2100500	CORDSET CABLE, M8, 3 POLE
27	1	52-27381247	LABEL, 110VAC ELECTRICAL
28	1	52-95F7000	KNOB
29	1	52-26F310	KNOB LOCK
30	1	52-KTK-R-4	FUSE
31	1	52-P117-ND	BATTERY

32	7	52-DN24J4Y	DINnector terminal block jumper, push-in type
33	1	52-60064	FORK TERMINAL, GROUND
34		52-TFFN18BL	WIRE, 18 GA BLUE, UL Listed
35		52-THHN14GR	WIRE, 14 GA GREEN, UL Listed
36		52-THHN14WH	WIRE, 14 GA WHITE, UL Listed
37		52-THHN14BK	WIRE, 14 GA BLACK, UL Listed

Figure 7.49

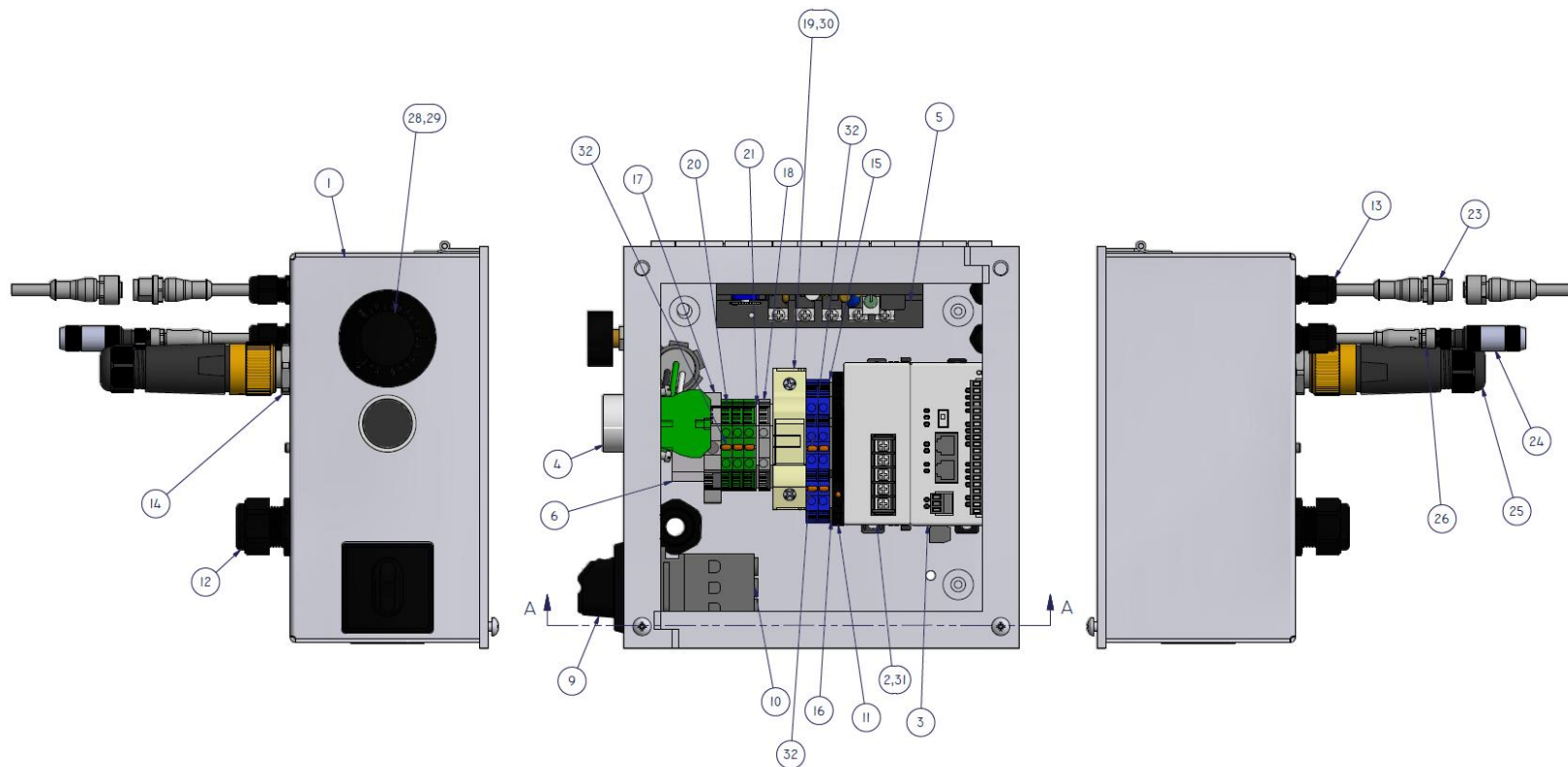


Figure 7.50





Part Number 52-20180032138 – Right Hand, 230 VAC Shown  
*(Internal components similar between LH & RH units)*

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-20180032139	REWORK, CONTROL BOX
2	1	52-C0-01AC	CLICK AC power supply, 100-240 VAC nominal input, 24 VDC nominal output, 1.3A continuous
3	1	52-C0-01DD1-D	CLICK Standard PLC, 24 VDC required, serial ports, Discrete Input: 8-point, DC, Discrete Output: 6-point, sinking
4	1	52-GCX1100	Pushbutton, 22 mm, momentary, 1 N.O. contact(s), metal base, metal bezel, Operator: black, flush, 30 mm, round, plastic
5	1	52-GSD-240-5C	IronHorse GSD4 series DC general purpose drive
6	1	52-27381193	35mm Steel Din Rail 7.0" length
7	2	52-83214BHSS	Hexagon Socket Button Head Cap Screw
8	2	52-103214BHSS	Hexagon Socket Button Head Cap Screw
9	1	52-OHBS1PH	SELECTOR HANDLE ON/OFF
10	1	52-OT40FT3	ABB SWITCH DISC 1SCA104902R1001
11	1	52-DRA-CN024D24	Solid State Relay
12	1	52-69915K57	Cord Grip, NPT Threads, for 0.39"-0.55" Cord OD, 1/2 Knockout Size
13	2	52-69915K47	CONNECTOR, CORD GRIP 69915K47
14	1	52-ZP-S1-3FR-0P3M	ZIPport bulkhead connector, 7/8in - 16 UN2 thread barrel 3-pin female to pigtail, 16 AWG, 0.9ft/0.3m cable length
15	2	52-DN-D10B-A	TERMINAL BLOCK, BLUE DOUBLE LEVEL
16	1	52-DN-DEC10	END COVER
17	1	52-DN-EB35MN	END BRACKET
19	1	52-EHM2DU	EDISON MODULAR FUSE HOLDER 2 POLE
20	3	52-DN-T10GRN-A	TERMINEL BLOCK GREEN
21	1	52-DN-EC1210MN	END COVER FOR DN-T10 TERMINAL
22	1	52-3AY40	POWER CORD
23	1	52-7000-40021-0240100	CORDSET CABLE
24	1	52-7000-08321-0000000	CONNECTOR, FIELD WIREABLE 8M BARREL
25	1	52-ZP-S1-3MP-FW	ZIPport FIELD WIRING CONNECTOR FEMALE
26	1	52-7000-08041-2100500	CORDSET CABLE, M8, 3 POLE
27	1	52-27381263	LABEL, 240VAC ELECTRICAL
28	1	52-95F7000	KNOB
29	1	52-26F310	KNOB LOCK
30	2	52-KTK-R-4	FUSE
31	1	52-P117-ND	BATTERY

32	7	52-DN24J4Y	DINnector terminal block jumper, push-in type
33	1	52-60064	FORK TERMINAL, GROUND
34		52-TFFN18BL	WIRE, 18 GA BLUE, UL Listed
35		52-THHN14GR	WIRE, 14 GA GREEN, UL Listed
36		52-THHN14WH	WIRE, 14 GA WHITE, UL Listed
37		52-THHN14BK	WIRE, 14 GA BLACK, UL Listed

Figure 7.51

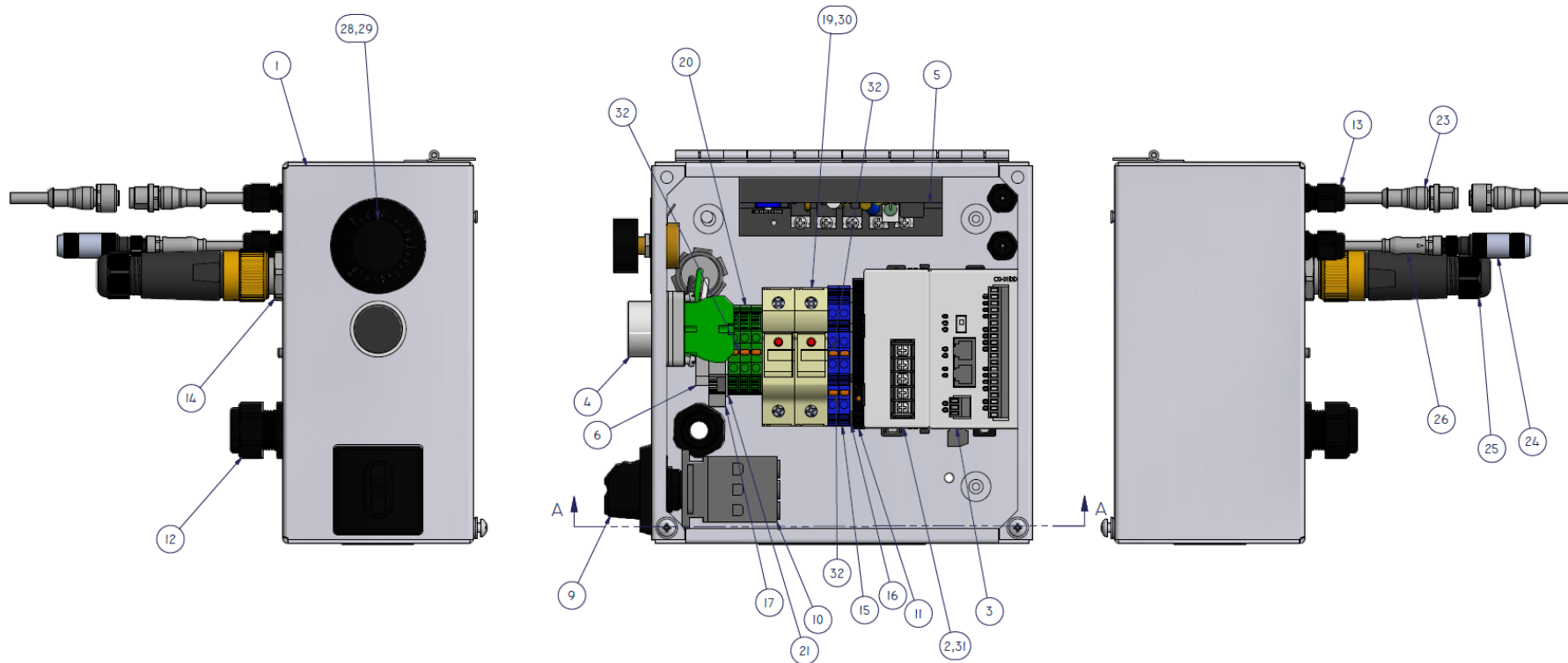


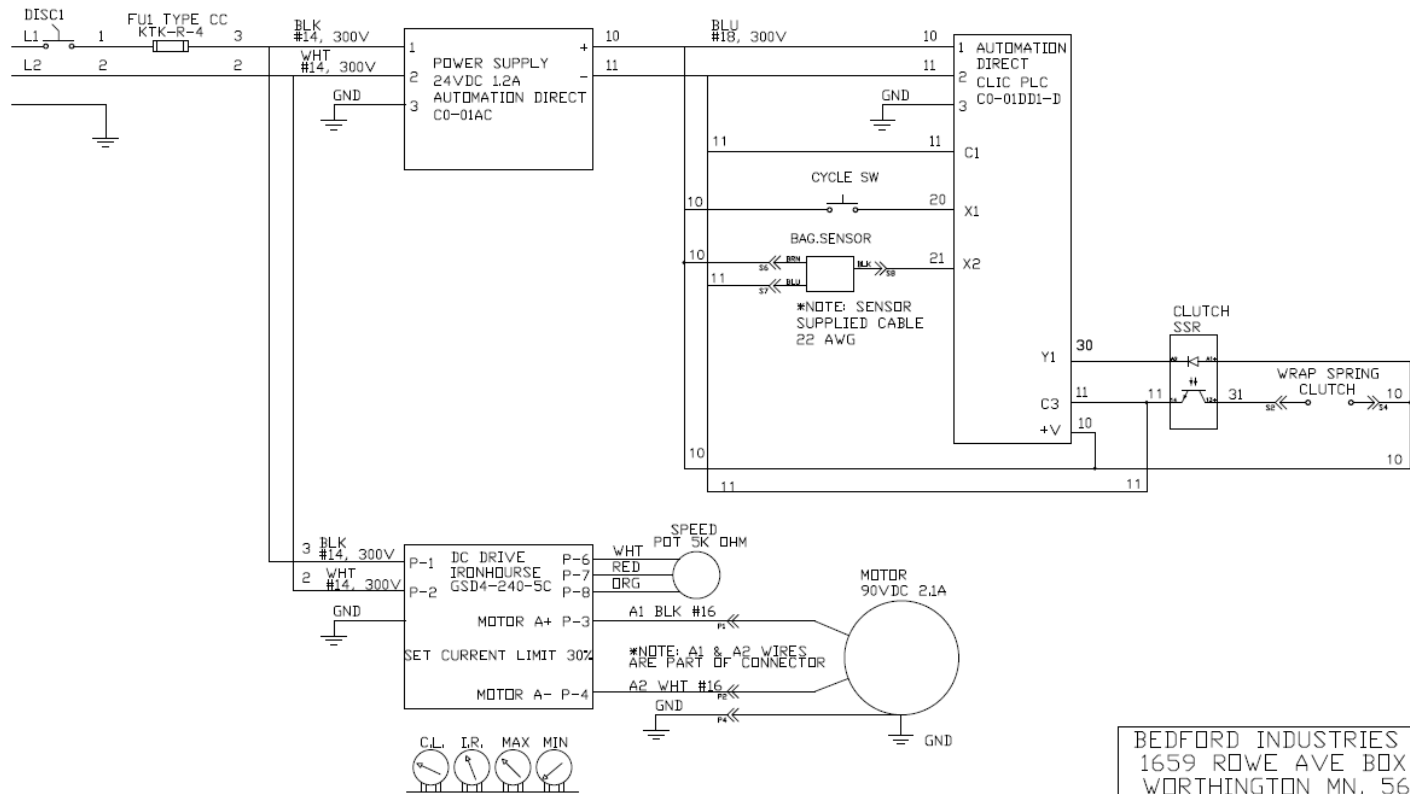
Figure 7.52

# 8.0 Wiring Diagram

## 8.1 Drawing Number: 2738E002

(Electrical Enclosure rated for 110 VAC)

110 VOLT AC, 15AMP, 1 PHASE, 60Hz  
 SCCR 10KA rms symetrical 110VAC MAXIMUM  
 FULL LOAD RATING 3.4 AMPS  
 LARGEST MOTOR FLA 2.1 AMPS  
 CORD CONNECTED  
 TYPE SD, 14 AWG



BEDFORD INDUSTRIES INC.  
 1659 ROWE AVE BOX 39  
 WORTHINGTON MN, 56187  
 CLOSEIT(R) CONTROL  
 PANEL SCHEMATIC

TOLERANCES UNLESS NOTED		INTERNAL	SIZE	DESIGN BY	DATE	DRAWING NO.	REV
DECIMAL	.XX, .XXX, .XXX, .XXX, .XXX, .XXX	SEE DWG.	D	ILB	01/08/18	2738E002	A
FRACTION	1/32	SURFACE TREATMENT		ILB	04/12/18		
DATE							
REVISIONS	NO. DATE	BY	REASON				





## 9.0 Spare Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	52-KTK-R-4	FUSE
2	2	52-S49200048	MOTOR BRUSH
3	1	52-S57400008	MOTOR SPRING
4	1	52-20180031043	ROLLER, GEARBELT SUPPORT
5	1	52-004438	GEAR BELT
6	1	52-300DL050	MAIN BELT
7	1	52-94135K741	SPRING
8	2	52-004124	LOWER DRIVE BELT
9	1	52-LE-014B-03-M	TRIGGER SPRING
10	1	52-9654K714	SPRING
11	1	52-9654K236	UPPER GATHERING SPRING
12	1	52-9044K375	SPRING
13	4	52-S3PP	BEARING
14	1	52-9654K314	SPRING