

OPERATION, PARTS AND SAFETY MANUAL



SIGNODE®

PT-16/19/25

STRAPPING TOOL

IMPORTANT! DO NOT DESTROY

**It is the customer's responsibility to
have all operators and servicemen
read and understand this manual.**

Contact your local Signode representative
for additional copies of this manual.

READ ALL INSTRUCTIONS BEFORE OPERATING THIS SIGNODE PRODUCT

SIGNODE • 3620 WEST LAKE AVENUE • GLENVIEW, ILLINOIS 60025 U.S.A.

WARNING

READ THESE INSTRUCTIONS CAREFULLY.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SEVERE PERSONAL INJURY.

GENERAL SAFETY CONSIDERATIONS

1. STRAP BREAKAGE HAZARD.

Improper operation of the tool or sharp corners on the load can result in strap breakage during tensioning, which could result in the following:

- A sudden loss of balance causing you to fall.
- Both tool and strap flying violently towards your face.

Failure to place the strap properly around the load or an unstable or shifted load could result in a sudden loss of strap tension during tensioning. This could result in a sudden loss of balance causing you to fall.

Read the tool's operating instructions. If the load corners are sharp use edge protectors. Place the strap correctly around a properly positioned load.

- Positioning yourself in-line with the strap, during tensioning and sealing, can result in severe personal injury from flying strap or tool. When tensioning or sealing, position yourself to one side of the strap and keep all bystanders away.
- Using strap not recommended for this tensioner can result in strap breakage during tensioning. Use the correct Signode products for your application.

2. TRAINING.

This tool must not be used by persons not properly trained in its use. Be certain that you receive proper training from your employer. If you have any questions contact your Signode Representative.

3. EYE INJURY HAZARD.

Failure to wear safety glasses with side shields can result in severe eye injury or blindness. Always wear safety glasses with side shields which conform to ANSI Standard Z87.1 or EN 166.



4. FALL HAZARD.

Maintaining improper footing and/or balance when operating the tool can cause you to fall. Do not use the tool when you are in an awkward position.

5. CUT HAZARD.

Handling strap or sharp parts could result in cut hands or fingers. Wear protective gloves.



WARNING

6. TOOL CARE.

Take good care of the tool. Inspect and clean it daily, lubricate it weekly and adjust when necessary. Replace any worn or broken parts.

7. WORK AREA.

Keep work areas uncluttered and well lighted.

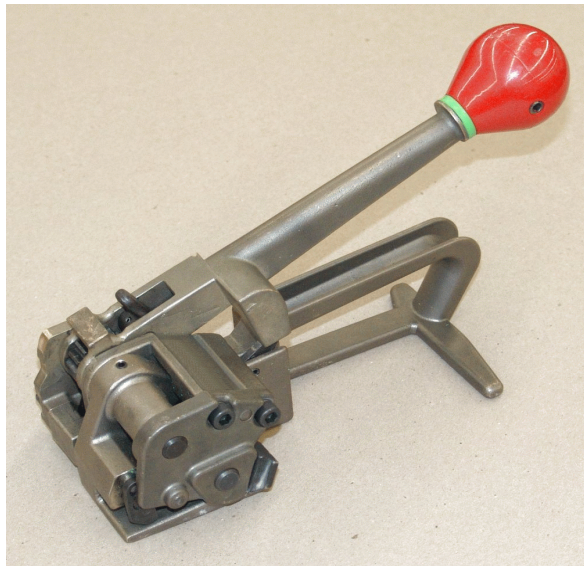
Several types of strap can be used with this tool. Use the correct Signode products for your application. If you need help contact your Signode Representative.

CUTTING TENSIONED STRAP

Use only cutters designed for cutting strap; never use claw hammers, crowbars, chisels, axes or similar tools. Such tools will cause the strap to fly apart with hazardous force. Before using any Signode product, read its Operation and Safety Manual.

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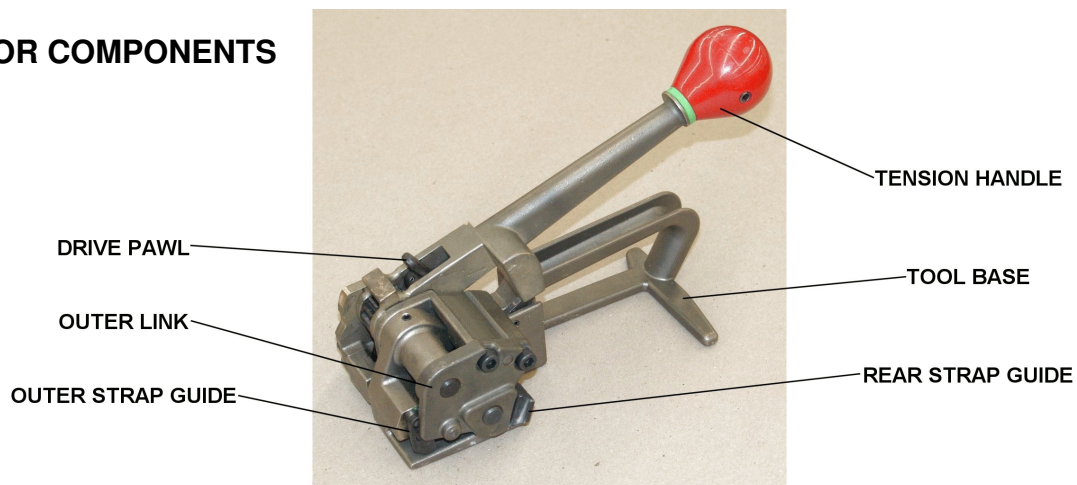
PT-16 Tensioner, Part Number 426355
PT-19 Tensioner, Part Number 426350
PT-25 Tensioner, Part Number 427445

SPECIFICATIONS

| MODEL | STRAP | | | RECOMMENDED SEALER (SEAL) |
|-------|---------------------|---------------|--------------------------------|---------------------------|
| | TYPE | WIDTH | THICKNESS | |
| PT-16 | High Strength Tenax | 16mm (.629") | 0.030" to 0.044" (0.76-1.11mm) | Signode BTS-16 |
| PT-19 | High Strength Tenax | 19mm (.748") | 0.045" to 0.055" (1.14-1.40mm) | Signode BTS-19 |
| PT-25 | High Strength Tenax | 25mm (1.000") | 0.045" to 0.055" (1.14-1.40mm) | Signode BTS-25 |

NOTE: PT-16 tools are factory configured for use with 16mm Tenax Strapping.
PT-19 tools are factory configured for use with 19mm Tenax Strapping.
PT-25 tools are factory configured for use with 25mm Tenax Strapping.

MAJOR COMPONENTS



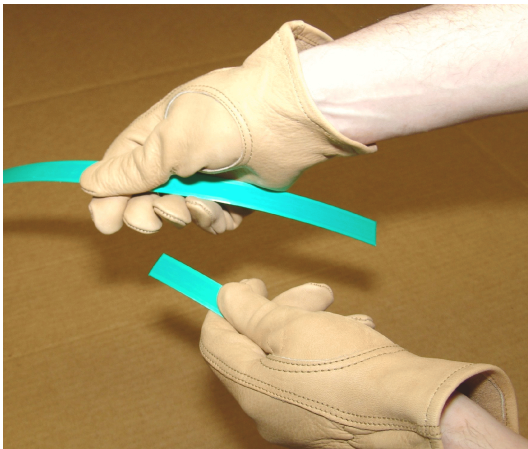
OPERATING INSTRUCTIONS

WARNING

**Wear safety glasses. Stand to one side of the strap when tensioning.
Make sure all bystanders are clear before proceeding.**

PLEASE NOTE: *Do not operate tool without strap, as damage to the tool may occur.*

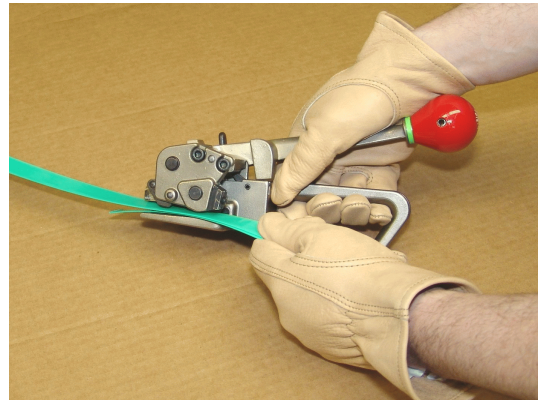
1. With the dispenser placed behind you, bring the strap over the top and around the package, place the straps together and remove any excess slack. Hold the straps together with your left hand.



2. Using your right hand, squeeze the base and tension handle together to raise the feedwheel and open the strap path.

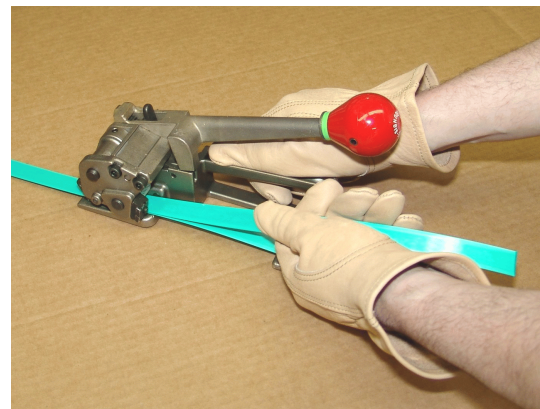


3. Using your left hand, insert the upper and lower straps into the tool at the same time.



Leave a tail of 3 or 4 inches in front of the tool of the lower strap. Release the tension handle and check to be sure the strap guides over lap the strapping.

4. Remove any excess strapping by holding the tool base with your right hand. With the left hand pull back the top strap straight through the tool,



Continued . . .

5. Operate the tension handle back and forth until the desired strap tension is reached.

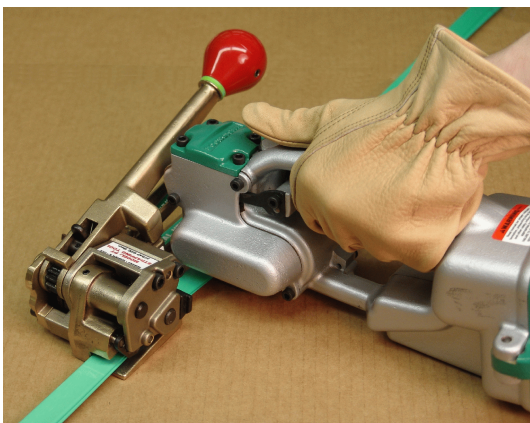


If the position of the tension handle needs to be adjusted or corrected, press the drive pawl to free the handle from the ratchet mechanism.

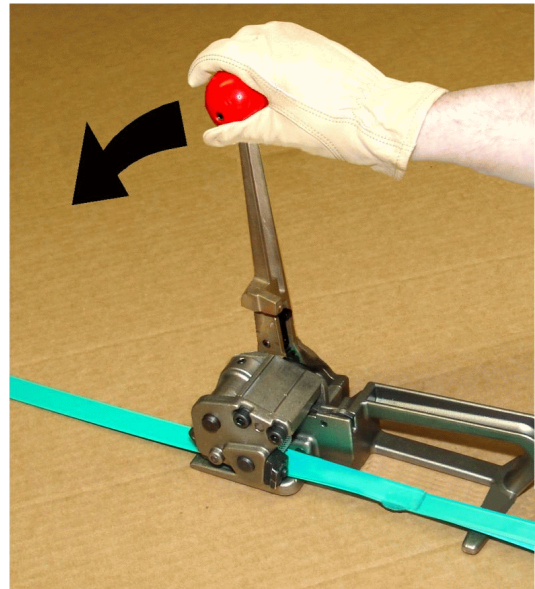


Note: After initial tension is applied it will be impossible to open the tool by squeezing the tension handle and the base together. Major force would be required and damage to the tool may occur. If necessary cut off the strapping and begin again.

6. Once the desired tension is reached, use the recommended Signode sealer to seal the strap together. (Review the operation instructions of the sealer for proper operation and final joint appearance)

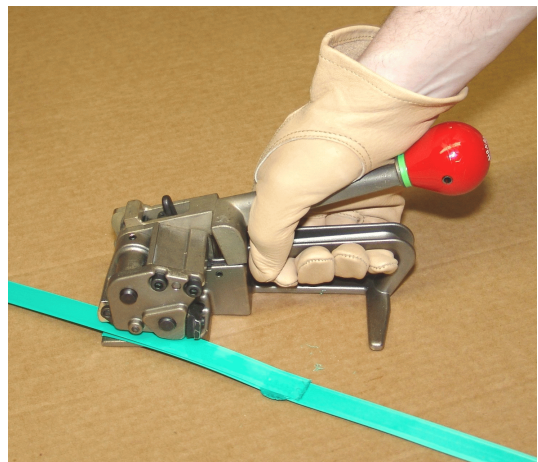


7. After the joint is completed, release and remove the tool by first pushing the tension handle as far forward as possible.



Continue to bring the handle back to the rest position.

8. Once again squeeze the tension handle and the base together to lift the feedwheel from the strap. Pivot the tool off the strap to complete the strapping cycle.



PART REPLACEMENT & ADJUSTMENTS

FEEDWHEEL REPLACEMENT

Over time and application conditions the feedwheel may become worn and may need to be replaced. Use the following instructions to replace the feedwheel.

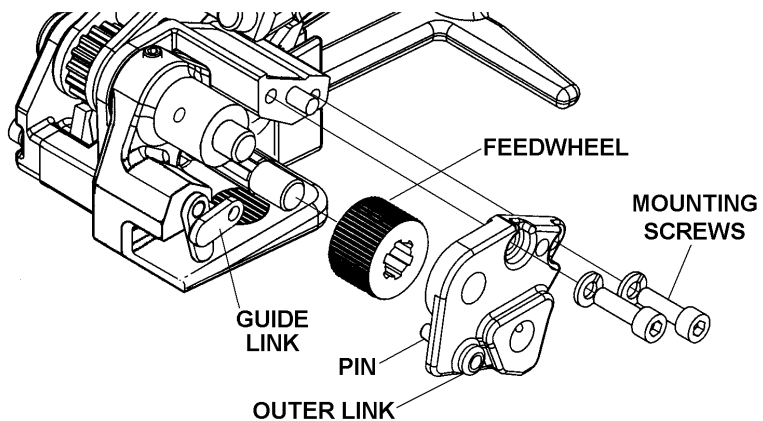
1. Remove the two mounting screws which secure the outer link to the tool.

2. Remove the outer link.

NOTE: The outer guide link connects to a pin in the outer link. Make sure the link is placed over the pin when reassembling the tool.

3. Squeeze the tension handle and base together to lift the feedwheel away from the gripper plug. Slide the feedwheel off the shaft.

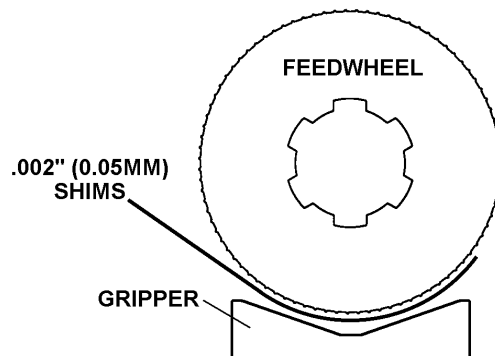
4. Replace feedwheel and reassemble tool. Check the feedwheel clearance if needed.



FEEDWHEEL CLEARANCE

The feedwheel to gripper plug clearance may require readjustment if the feedwheel or gripper plug has been replaced. The feedwheel clearance should also be inspected during routine tool maintenance procedures. Adjust the feedwheel clearance as follows:

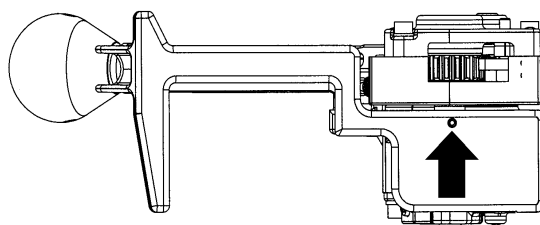
1. Squeeze the tension handle and base together to open the feedwheel gap. Place 2 layers of .002", 1/2" wide (.05 x 12mm) shim stock between the feedwheel and the tension gripper. Make sure the shims are placed along the outer edge of the gripper.
2. Release the tensioner handle to pinch the shims between the feedwheel and the gripper. Holding the shims with one hand, pull gently on the shims towards the rear of the tool. If properly adjusted the tool should lightly tug at the shims. Clearance between the feedwheel and gripper plug at this point should fall between .004" to .008" (.10mm to .20mm).



PART REPLACEMENT & ADJUSTMENTS, Continued

3. If the feedwheel needs to be adjusted, use a 2.5mm hex wrench to turn the adjustment screw which can be accessed through the bottom of the tool base.

Turn the adjustment screw clockwise for greater clearance and counter-clockwise for less clearance. Turn the adjustment screw only in small increments. After each adjustment, repeat the adjustment testing as described in step 2.



FEEDWHEEL ADJUSTMENT SCREW LOCATION

4. Once the proper clearance has been found the tool can be returned to service.

NOTE: Never turn out the adjustment screw more than 1/4 turn at a time without testing or completely remove the adjustment screw. These actions will severely damage both the feedwheel and tension gripper.

CHANGING STRAP SIZE

The following table illustrates the unique parts to a particular strap size for the PT tool. If the strap size of the tool is to be changed, this table must be used to coordinate all the respective parts which must be reconfigured or replaced.

Follow all specified parts removal, replacement & adjustment procedures found in this manual when changing any of the strap conversion parts.

! WARNING

Do not attempt to convert a tool's strap size without replacing/reconfiguring all of the specified parts for the conversion. Failure to replace/reconfigure all required parts may cause severe personal injury.

UNIQUE PARTS & CONFIGURATION TO PT STRAP SIZES

| KEY | QTY | DESCRIPTION | 5/8" (16mm) | 3/4" (19mm) | 1" (25mm) |
|-----|-----|-------------------|-----------------|-----------------|-----------------|
| 11 | 1 | Outer Link | 426329 | 426329 | 427444 |
| | 1 | Outer Link Assy * | 426071 | 426071 | 427446 |
| 18 | 1 | Rear Guide | 426043 - Note 3 | 426043 - Note 4 | NA |
| 38 | 1 | Nameplate | 426345 | 426346 | 436394 |
| 48 | 1 | Front Guide | 424121 - Note 1 | 424121 - Note 2 | 426316 - Note 5 |

* Outer Link Assemblies include dowel pins (Key 31).

CHANGING STRAP SIZE, Continued

NOTES:

1. Outer Guide must be reinstalled behind link as shown (See Figure 1).
2. Outer Guide must be reinstalled in front of link as shown (See Figure 1).
3. Rear Guide must be removed and reinstalled with numerals "16" facing outwards (See Figure 2).
4. Rear Guide must be removed and reinstalled with numerals "19" facing outwards (See Figure 3).
5. Front guide and link must be installed only as shown (See Figure 4).

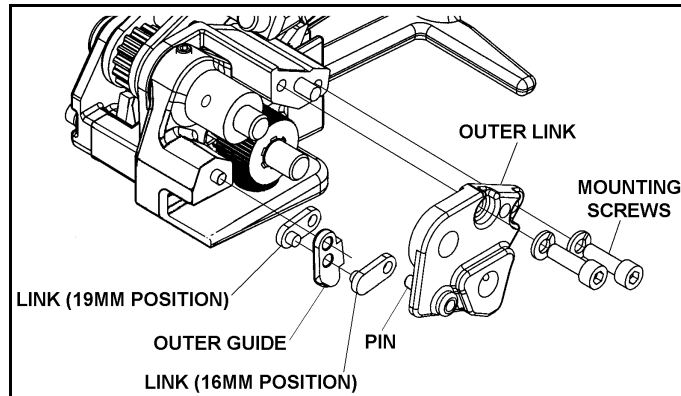


FIGURE 1
(CHAMFER SIDE OF OUTER GUIDE MUST FACE AWAY FROM FEEDWHEEL)

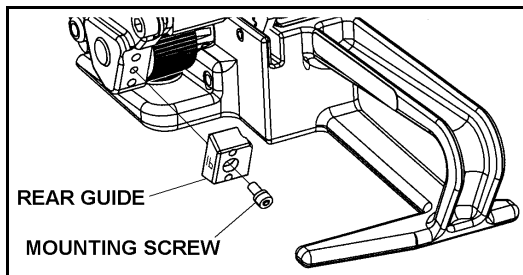


FIGURE 2
(16MM POSITION)

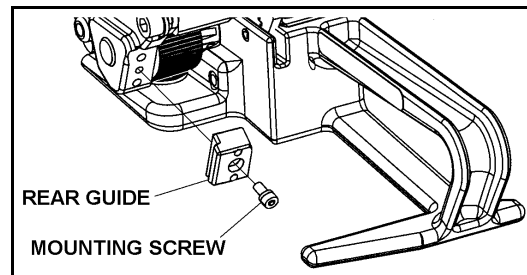


FIGURE 3
(19MM POSITION)

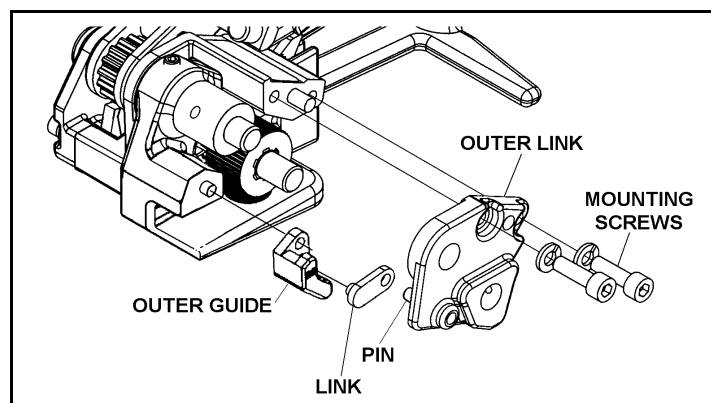


FIGURE 4
(25MM CONFIGURATION)

PARTS LIST

| KEY | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|---------------------------------------|
| 1 | 1 | 426327 | GEAR HOUSING |
| 2 | 1 | 426066 | LIFT ARM |
| 3 | 1 | 426331 | PAWL PIN |
| 4 | 1 | 426313 | SHORT RETAINING PAWL |
| 5 | 1 | 426312 | LONG RETAINING PAWL |
| 6 | 1 | 426325 | DU BUSHING |
| 7 | 2 | 306704 | THRUST WASHER |
| 8 | 1 | 426332 | FEEDWHEEL SHAFT |
| 9 | 1 | 171549 | TRUARC #5160-66 |
| 10 | 1 | 426334 | TENSION GEAR |
| 11 | 1 | 426329 | OUTER LINK (16,19) |
| | 1 | 427444 | OUTER LINK (25) |
| 12 | 1 | 426034 | TENSION GRIPPER |
| 13 | 1 | 426033 | FEED WHEEL |
| 14 | 1 | 010054 | KNOB |
| 15 | 1 | 017912 | PINION GEAR |
| 16 | 1 | 426335 | DRIVE PAWL |
| 17 | 1 | 424120 | LINK |
| 18 | 1 | 426043 | OUTER GUIDE -REAR (16,19) |
| 19 | 1 | 426326 | PIVOT PIN |
| 20 | 2 | 187415 | M5 LOCKWASHER, ZINC |
| 21 | 2 | 010077 | M6 LOCKWASHER |
| 22 | 3 | 162568 | M3 LOCKWASHER, ZINC |
| 23 | 2 | 010031 | M5 X 25 SHCS |
| 24 | 2 | 010037 | M6 X 20 SHCS |
| 25 | 1 | 259935 | M3 X 12 SHCS (16,19) |
| 26* | 2 | 262456 | M3 X 6 SHCS |
| 27 | 1 | 010057 | Ø1/4" X 1-3/4" ROLL PIN |
| 28 | 1 | 006045 | Ø1/8" X 3/8" ROLL PIN (16,19) |
| 29 | 1 | 005768 | Ø3/16" X 1/2" ROLL PIN |
| 30 | 1 | 426067 | Ø3/32" X 5/8" ROLL PIN |
| 31 | 2 | 423493 | Ø5 X 16 DOWEL PIN |
| 32 | 2 | 162391 | Ø5 X 24 DOWEL PIN |
| 33 | 1 | 274385 | Ø6 X 20 DOWEL PIN |
| 34** | 2 | 423969 | M5 X 10 SSS CUP |
| 35 | 1 | 001656 | STRAP GUIDE PIN |
| 36 | 1 | 422658 | QUAD RING |
| 37 | 4 | 426333 | PAWL |
| 38 | 1 | 426344 | NAMEPLATE (PT-16) |
| | 1 | 426346 | NAMEPLATE (PT-19) |
| | 1 | 436394 | NAMEPLATE (PT-25) |
| 39 | 1 | 426342 | INFORMATION SIGN |
| 40 | 1 | 286374 | 2 ICON INFO SIGN |
| 41 | 2 | 426062 | COMPRESSION SPRING, LEE #LC-029B-04MW |
| 42 | 1 | 426064 | COMPRESSION SPRING, LEE #LC-042F-06MW |
| 43 | 1 | 017920 | DRIVE PAWL SPRING |
| 44 | 1 | 426347 | HANDLE RING |
| 45 | 1 | 426348 | BASE |
| 46 | 1 | 426349 | BEARING PLATE |
| 47 | 1 | 426318 | TENSION HANDLE |
| 48 | 1 | 424121 | OUTER GUIDE - FRONT (16,19) |
| | 1 | 426316 | OUTER GUIDE - FRONT (25) |
| 49 | 1 | 426315 | INFO SIGN |
| 50 | 1 | 426352 | DRIVE PAWL PIN |

WARNING

Inspect all parts daily and replace them if they are worn or broken. Failure to do this can affect a product's operation and could result in serious personal injury.

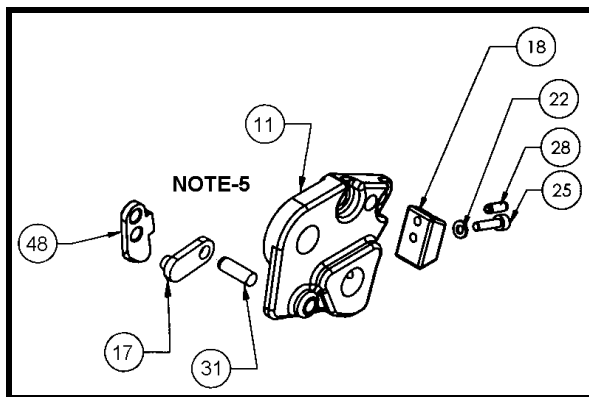
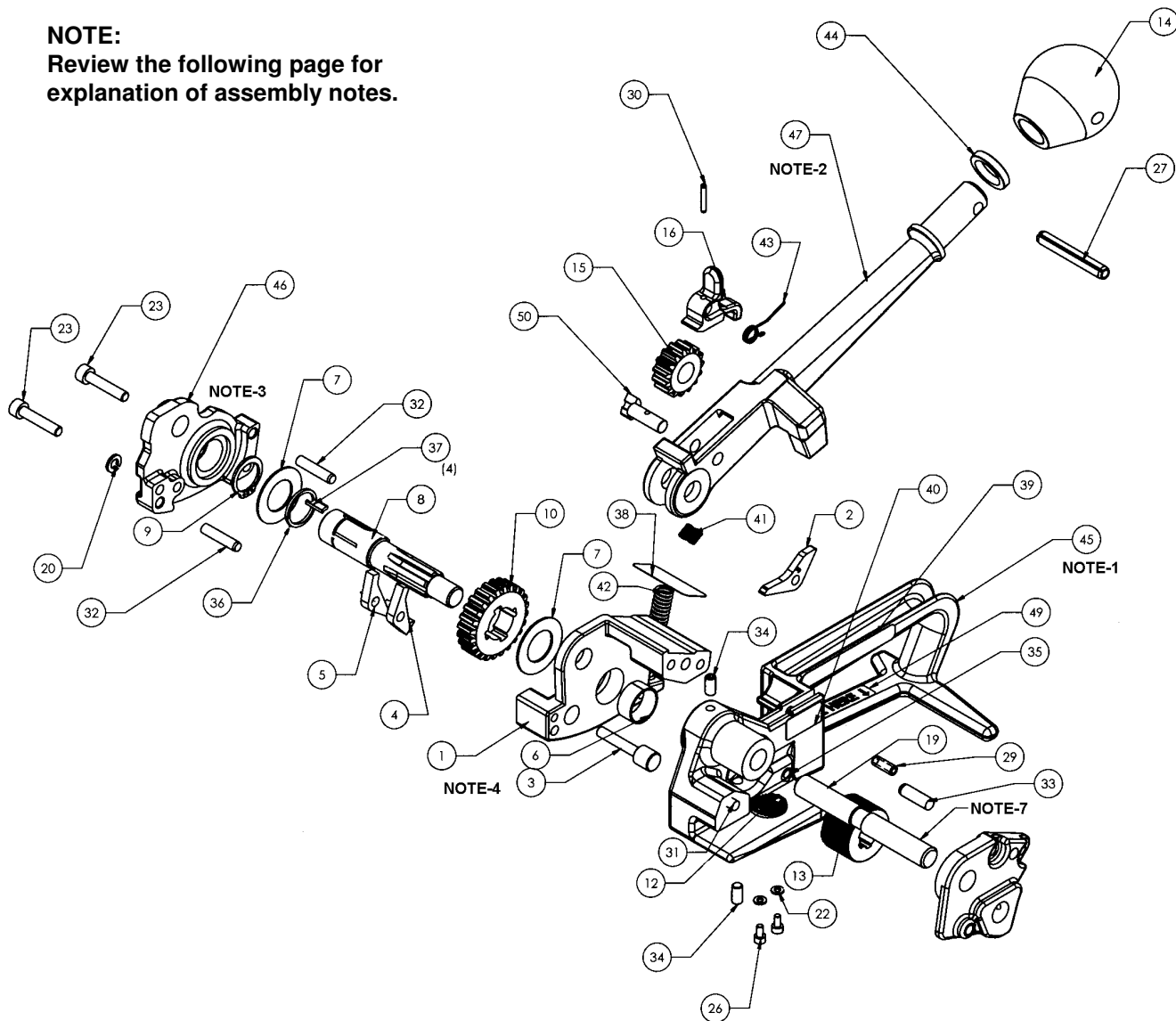
* Use Loctite #222 (Signode Part No. 422794) or equivalent.

** Use Loctite #242 (Signode Part No. 422795) or equivalent.

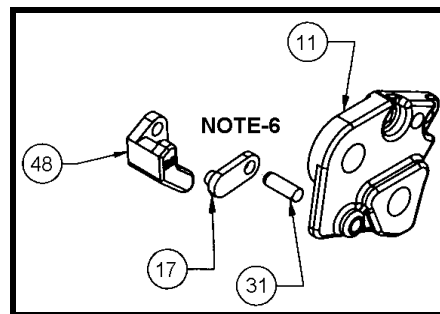
- When ordering parts please indicate tool model, part number and description.
- Recommended spare parts are underlined and should be stocked.
- Common hardware parts can be obtained at any local hardware supply.
- Lubricate all moving parts with Accrolube Teflon grease or equivalent.

NOTE:

Review the following page for explanation of assembly notes.



16MM & 19MM CONFIGURATION



25MM CONFIGURATION

ASSEMBLY NOTES

1. Key numbers 31, 35 and 45 can be purchased together as Base Sub-Assembly, Signode Part No. 426050.
2. Key numbers 14, 27, 44 and 47 can be purchased together as Tension Handle Sub-Assembly, Signode Part No. 426030.
3. Key numbers 32 (Qty 2) and 46 can be purchased together as Bearing Plate Sub-Assembly, Signode Part No. 426330.
4. Key numbers 1 and 6 can be purchased together as Gear Housing Sub-Assembly, Signode Part No. 426069.
5. Key numbers 11, 31 and 33 can be purchased together as Outer Link Sub-Assembly (for 16mm and 19mm strap), Signode Part No. 426071.
6. Key numbers 11, 31 and 33 can be purchased together as Outer Link Sub-Assembly (for 25mm strap), Signode Part No. 427446.
7. Short end of Pivot Pin (Key 19) must be installed towards the Outer Link (Key 11).

SIGNODE NEW TOOL WARRANTY

Signode Engineered Products Warrants that a new Signode strapping tool will operate per functional specifications for a period of sixty (60) days after the date of shipment to the owner's place of business. Normal wearing parts, as outlined in the Operation, Parts & Safety manual, are covered by a thirty (30) day warranty unless, in Signode's judgement, these parts have been subjected to abnormal or extreme usage. Signode's sole liability hereunder will be to repair or replace, without charge, F.O.B. Signode's Glenview, Illinois plant, any tool which proves to not operate per functional specifications within the stated period. Signode reserves the right to replace any tool which proves not to operate per functional specifications with a new or like-new tool of the same model if in Signode's judgement such replacement is appropriate. Any new replacement tool provided to an owner will carry a full sixty (60) day warranty. Any warranty repaired tool or like-new replacement tool will carry a warranty for the balance of the time remaining on the initial sixty (60) day warranty. This warranty will be extended to compensate for the time the tool is in Signode's possession for warranty repairs.

This warranty is void as to any tool which has been: (I) subjected to mis-use, misapplication, accident, damage, or repaired with other than genuine Signode replacement parts, (II) improperly maintained, or adjusted, or damaged in transit or handling; (III) used with improperly filtered, unlubricated air or improper strapping material, (IV) in Signode's opinion, altered or repaired in a way that affects or detracts from the performance of the tool.

SIGNODE MAKES NO WARRANTY, EXPRESSED OR IMPLIED, RELATING TO MERCHANTABILITY, FITNESS OR OTHERWISE EXCEPT AS STATED ABOVE AND SIGNODE'S LIABILITY AS ASSUMED ABOVE IS IN LIEU OF ALL OTHERS ARISING OUT OF OR IN CONNECTION WITH THE USE AND PERFORMANCE OF THE TOOL. IT IS EXPRESSLY UNDERSTOOD THAT SIGNODE SHALL IN NO EVENT BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES WHICH MAY ARISE FROM LOSS OF ANTICIPATED PROFITS OR PRODUCTION, SPOILAGE OF MATERIALS, INCREASED COSTS OF OPERATION OR OTHERWISE.

Considerable effort has been made to ensure that this product conforms to our high quality standards. However, should you experience any difficulties, please contact your Sales Representative providing samples and the manufacturing code specified on the tool.

Thank you for your help.

SIGNODE ENGINEERED PRODUCTS
Hand Tool Division
3620 W. Lake Avenue, Glenview, Illinois 60025

| PART # | DESCRIPTION | AREA OF USE |
|-------------------------|--------------------------------|---|
| LUBRICANTS | | |
| 177029 | GEAR HOUSING GREASE | CLUTCH DRIVES, INTERNAL GEARS, GEAR SETS |
| 422792 | WHITE LUBRIPLATE GR-132 GREASE | PNEUMATIC PARTS, AIR CYLINDERS, AIR VALVES, O-RINGS |
| 422793 | BLACK LUBRIPLATE 3000W GREASE | MOVING INTERNAL PARTS, JAWS, LINKS |
| 432322 | EP ACCROLUBE GREASE | HIGH FRICTION CONTACT PARTS |
| 008556 | LS-1236 AIR LINE OIL | AIR MOTORS, AIR VALVES |
| ADHESIVES | | |
| 422794 | LOCTITE #222, PURPLE | LOW STRENGTH, SCREWS 1/4" (6MM) OR SMALLER SIZES |
| 422795 | LOCTITE #242, BLUE | MEDIUM STRENGTH, SCREWS 5/16" (8MM) OR LARGER SIZES |
| 422796 | LOCTITE #271, RED | HIGH STRENGTH, SEMI-PERMANENT SCREW APPLICATION |
| 422797 | LOCTITE #609, GREEN | PERMANENT, CURVED SURFACE PART CONTACT |
| 274111 | LOCTITE #380, BLACK MAX | PERMANENT, FLAT SURFACE PART CONTACT |
| CLEANING BRUSHES | | |
| 023963 | SMALL BRUSH | FEEDWHEEL & GRIPPER TEETH |
| 269589 | LARGE BRUSH | FEEDWHEEL & GRIPPER TEETH |