

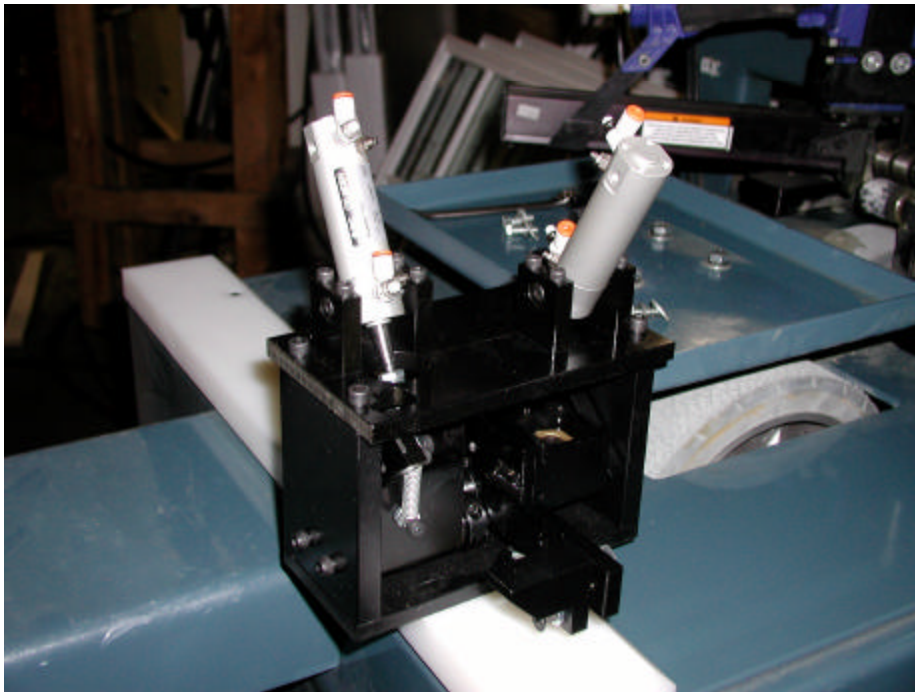
**450 QUICK CHANGE MATERIAL STOP  
SK-58U04-00  
DESCRIPTION**

17-529

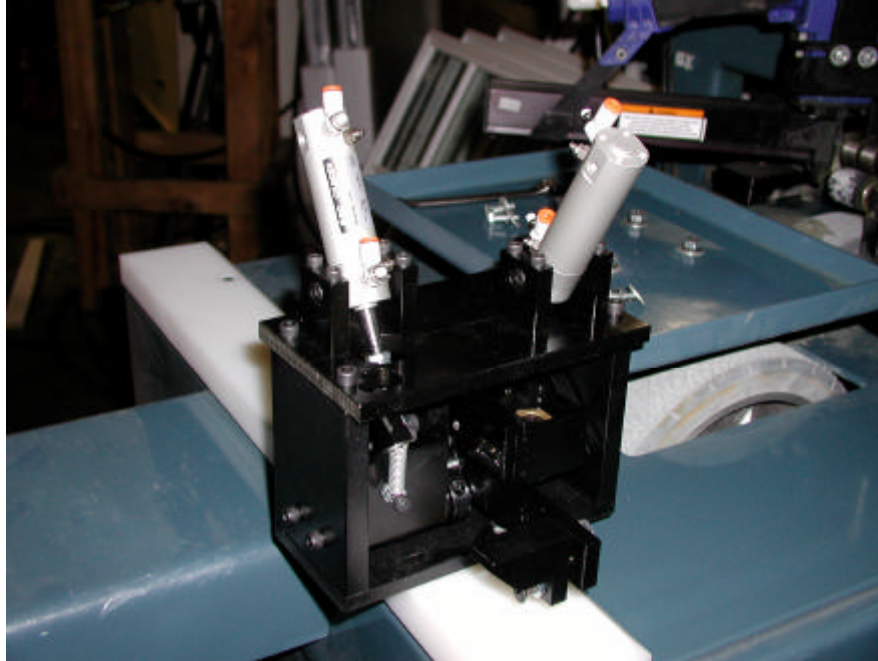
This upgrade is a module that replaces the existing material stop assembly and greatly improves the accuracy and reliability of the 450 Stop Stitcher. This kit does not require a Norfield technician to install. This kit comes complete with installation instructions and a one-year limited warranty on parts.

This kit is designed to improve how the 450 Stop Stitcher handles mitered stop material. The standard 450 configuration requires the operator to carefully and consistently place the mitered stop material into the machine and against the stop-block. Due to the weaker design of the current Stop Assembly the operator may push the stop material too hard, causing the stop-block to deflect upward allowing the material to be stapled out of position. The result is an incorrect spacing of the mitered stop material with respect to the end of the jamb.

This upgrade installs in the same location as the standard assembly and is a much stronger Material Stop Assembly that does not require operator finesse to correctly place the mitered stop material. Using a quick change Stop-Arm system this kit allows, quick changeover between leg and head jambs, and between mitered and square stop material. The upgrade also enables the operator to establish dedicated setups so the spacing between the stop and the end of the jamb, or the stop and the dado, is the same every time. *(This, of course, is contingent on having consistent material dimensions to work with.)* Dedicated setups also reduce the amount of setup labor and machine downtime required for changing from one material component to another. This reduces operating cost and increases the throughput capacity for the shop.



## **INSTALLATION INSTRUCTIONS 450 QUICK CHANGE MATERIAL STOP KIT**



### **PREFACE**

The information in these instructions refers to the installation and adjustment of the Quick change Material Stop Kit for the Norfield Model 450 Stop Stitcher. Since the purchase of this kit does not include installation by a field technician, it will be necessary to follow these instructions as closely as possible to insure proper operation.

In the unlikely event that you have a problem during this process, you may contact the Norfield Service Department, at (800) 824-6242, for technical assistance.

### **TOOL LIST**

To complete the installation and adjustment of your new Material Stop System, you will need a few hand tools. The following list of tools will be necessary.

- 1 Hex key wrench set from 1/8in. – 5/16in.
- 2 Open end wrench sizes, 1/4in., 3/8in., 7/16in., 1/2in.
- 3 Side cutters
- 4 Small flat blade screwdriver
- 5 Tape measure

**1. Disconnect the air and electricity.**

Use standard lockout tag-out procedures.

**2. Remove the original material stop assembly.**

Remove the 4 airlines and the 4 bolts that hold the stop assembly to the base plate. Lift the assembly out and set it aside.

NOTE: *There are no parts on this assembly that will be reused.*

**3. Turn the tool tray around.**

There are two way to install the tool tray. The tool tray needs to be installed so that the long side is toward the outfeed end of the machine. If this is not the case, unbolt the tool tray and turn it around.

**4. Install the new stop assembly.**

Set the new stop assembly into the same place that the old one came out of and bolt it down.

NOTE: There are two ways to install the new stop assemble, either way is correct.

**5. Replace the airlines.**

Remove the 1/4in. tubes for the old stop cylinders from the staple gun looms. Replace them with the 5/32in. tube that is included in the kit. One red tube and one blue tube on each side.

**6. Connect the airlines.**

Trim the new airlines and connect them to the stop cylinders. Under the frame, tee the new airlines into the airlines that go to the powerfeed lift cylinder airlines. When the powerfeed wheel is down the material stop, for the same side, should be down. When the powerfeed wheel is up the material stop, for the same side, should be up.

## Adjustment procedures, General

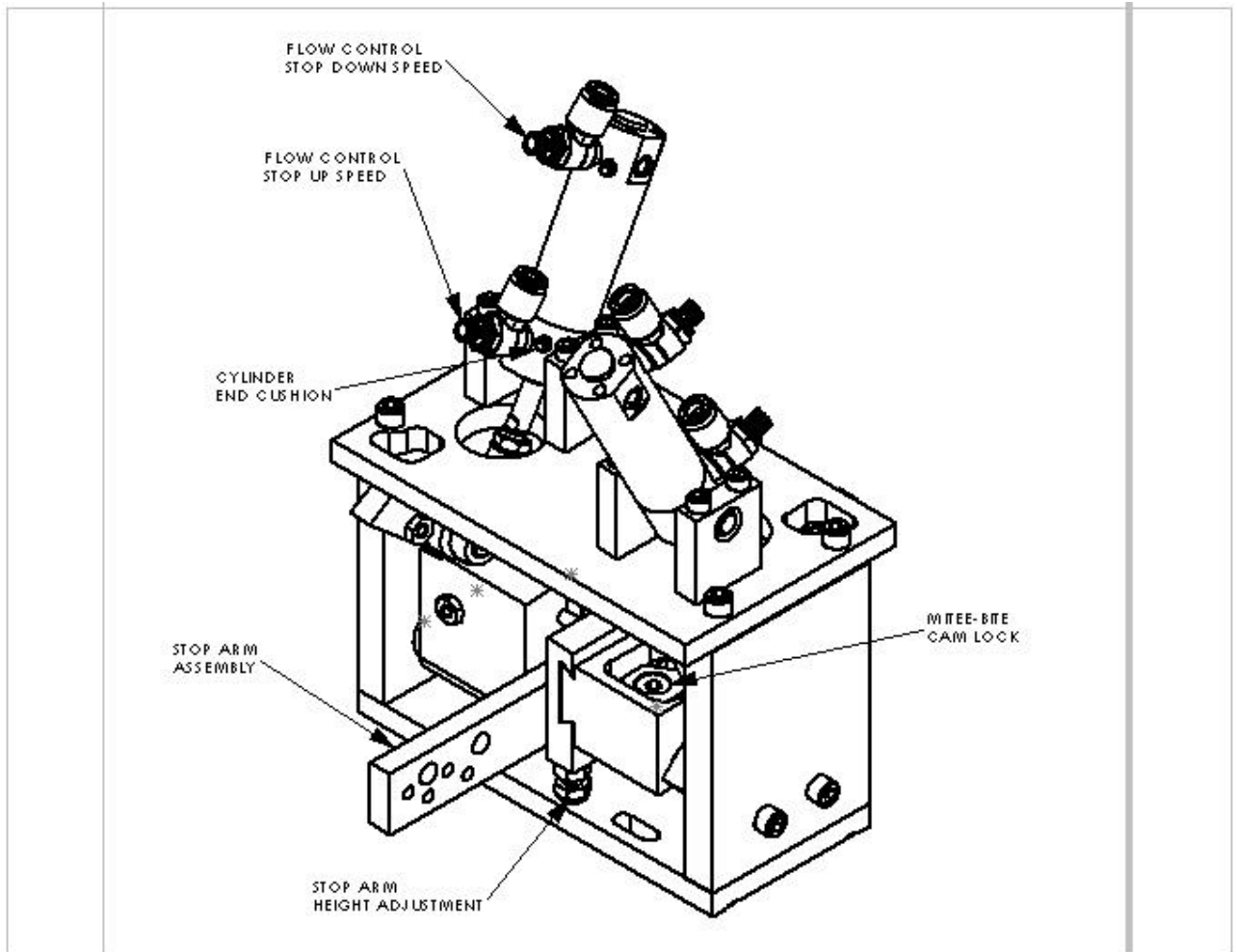


Fig. 1

There are four stop arm assemblies included in the kit. The following procedures require that a set of stop arm assemblies be installed.

You must turn off the air pressure before installing, removing, or adjusting the height of the stop arm assembly.

### 1. Install Stop Arm Assemblies:

To install a stop arm assembly, insert a 3/16in. hex wrench into the Mitee-bite cam lock and rotate it to a position where the plunger is retracted into the main stop block. Slide the stop arm assembly onto the main stop block as far as it will go and rotate the Mitee-bite clockwise until the stop arm is locked in place.

To remove a stop arm assembly, insert a 3/16in. hex wrench into the Mitee-bite cam lock and rotate it ¼ turn counterclockwise and slide the stop arm out.

### 2. Preset Stop Arm Height:

Adjust the stop arm height so that the stop arm is level with the base of the stop assembly. You may need to change the arm height when you set it for the specific customer requirements. However, this will be very close.

**3. Turn On The Air:**

The following adjustments will require that the air be on.

**4. Adjust flow controls:**

Adjust the flow controls so that the stop goes up very quickly and down very slowly (about 3-4 seconds).

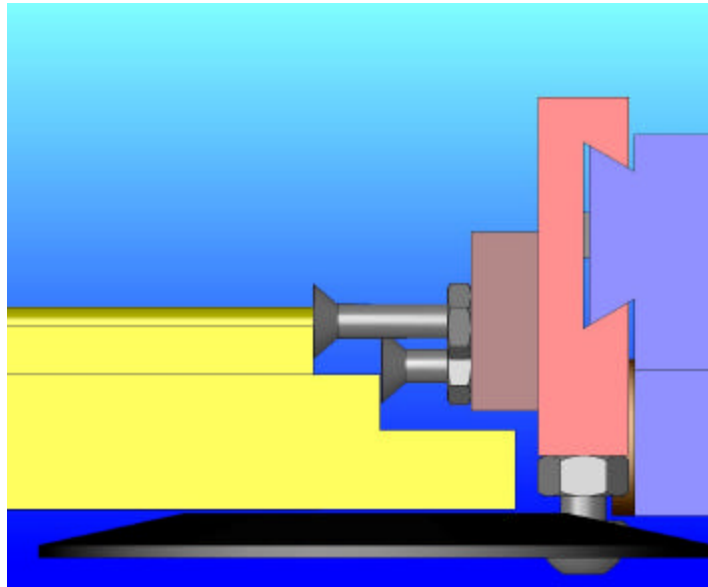
**5. Adjust cylinder end cushion:**

Loosen the lock nut on the cylinder end cushion and screw the stem all the way in until it bottoms out. Then open it about ½ a turn. The stop should go up very quickly and have a noticeable cushioning affect at the end of the stroke. It is not necessary to adjust the cushion at the other end of the cylinder, as the arm height adjustment will stop the cylinder before it reaches the cushion.

## Adjusting Stops for Specific Customer requirements

**NOTE:** *The following setup instructions are intended as a guide only. Actual customer requirements will vary.*

### Setup for bull nose stop on legs:

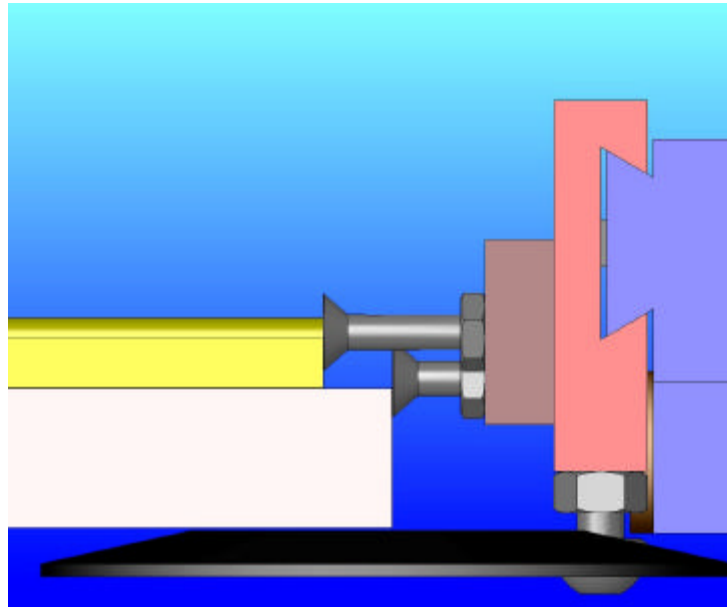


**Fig. 1**

Install a 10-24 x  $\frac{3}{4}$ in. FHCS, and nut, into the stop arm in the threaded hole closest to the bottom of the stop arm and closest to the center of the machine. Adjust it so the head extends  $\frac{1}{2}$ in. from the face of the arm. Install a 10-24 x  $1\frac{1}{4}$ in. FHCS, and nut, into the stop arm in the threaded hole that is closest to and a little above the last one you used. Adjust the longer bolt so that it extends past the short bolt by the same amount as the thickness of the stop. (See Fig. 1)

Adjust the stop arm height so that the short bolt clears the dado part of the jamb but solidly contacts the side of the dado. The long bolt should clear the jamb and solidly contacts the end of the stop.

**Setup for bull nose stop on heads:**

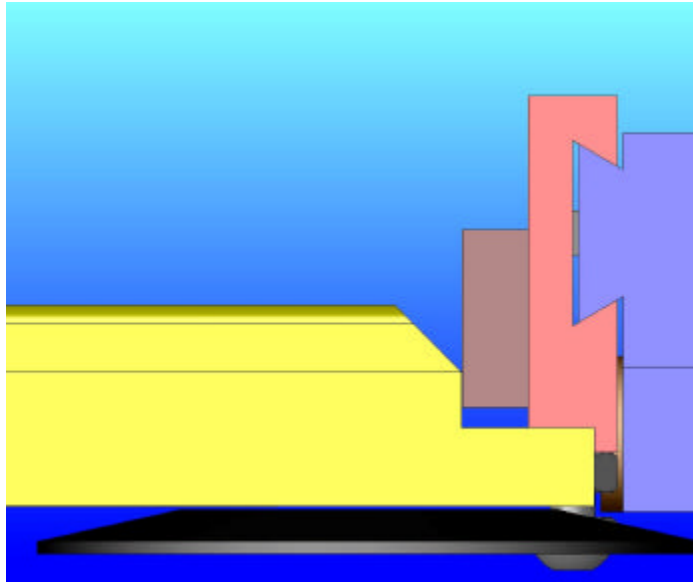


**Fig. 2**

Install a 10-24 x  $\frac{3}{4}$ in. FHCS, and nut, into the stop arm in the threaded hole closest to the bottom of the stop arm and closest to the center of the machine. Adjust it so the head extends  $\frac{1}{2}$ in. from the face of the arm. Install a 10-24 x  $1\frac{1}{4}$ in. FHCS, and nut, into the stop arm in the threaded hole that is closest to and a little above the last one you used. Adjust the longer bolt so that it extends past the short bolt by the same amount as the depth of the dado on the jamb. (See Fig. 2)

**NOTE:** *Adjust the stop arm height so that the short bolt solidly contacts the end of the head. The long bolt should clear the head and solidly contacts the end of the stop.*

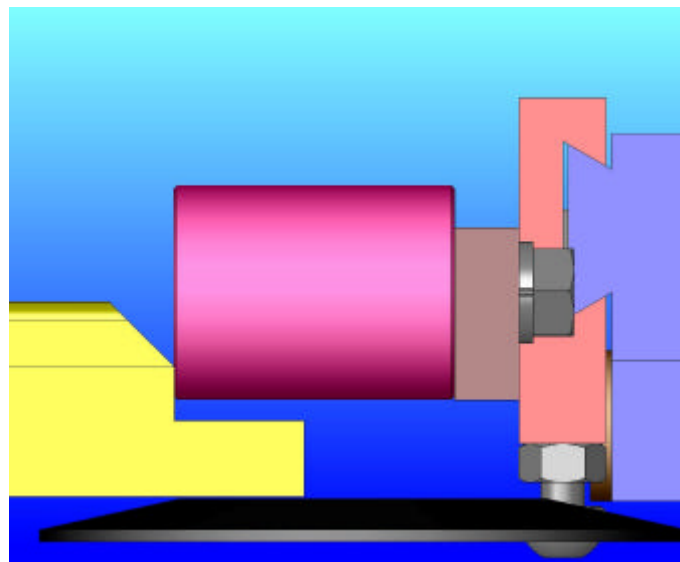
### Setup for mitered stop on legs:



**Fig. 3**

The simplest way to setup for mitered stop on legs is to use a bare stop arm. Adjust the arm height so that the arm clears the dado part of the jamb but solidly contacts the side of the dado. (See Fig. 3) The tip of the mitered stop will also contact the stop arm and be aligned with the side of the dado.

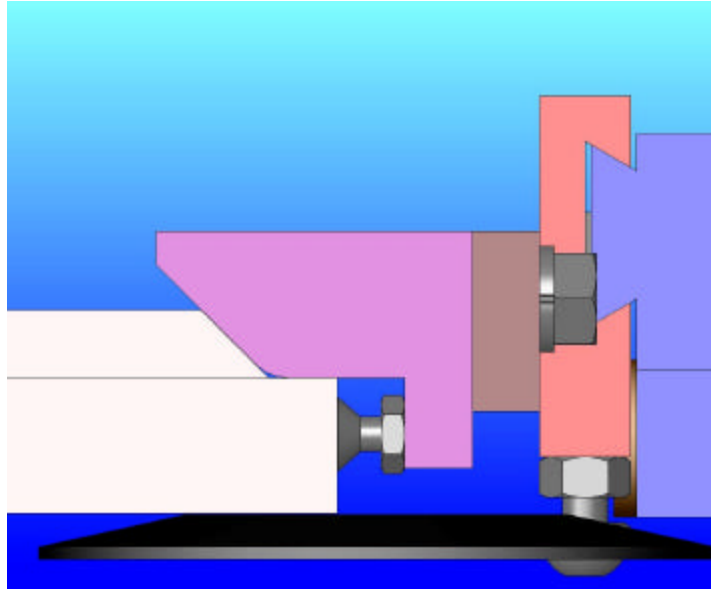
This method has two advantages: It allows for full contact with the tip of the stop. The larger the contact area the less damage will be done to the tip of the stop. It is also very simple. If you use fewer parts, there are fewer things to adjust, and fewer things to break. The disadvantage of the method is that the first staple may be too far away from the end of the jamb for some customers. If this is the case use the extended jamb stop (#5942-023). (See Fig 4) This will allow you to locate the jamb and stop closer to the staple gun causing the first staple to be closer to the end of the jamb.



**Fig. 4**



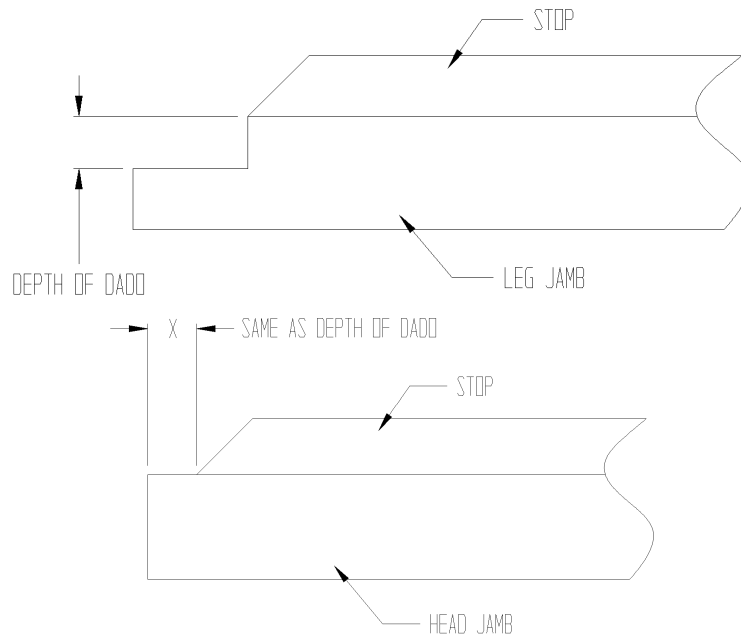
**Setup for mitered stop on heads:**



**Fig.5**

Adjust the jamb support disk so that it clears the bottom of the jamb by about 1/32in. Install the miter stop block on to the stop arm as shown in Fig. 5. Adjust the flat head bolt so that the stop is held at the appropriate distance from the end of the jamb. When applying mitered stop the head jambs the tip of the stop should be the same distance from the end of the jamb as the dado on the leg jamb is deep. (See Fig. 6)

Adjust the height of the stop arm so that when the jamb is inserted the miter stop block forces the end of the jamb down against the support disk. The jamb should then be pinched between the miter stop block and the support disk. This will hold the jamb and not allow it to move vertically when the stop is pushed up against the stop block.



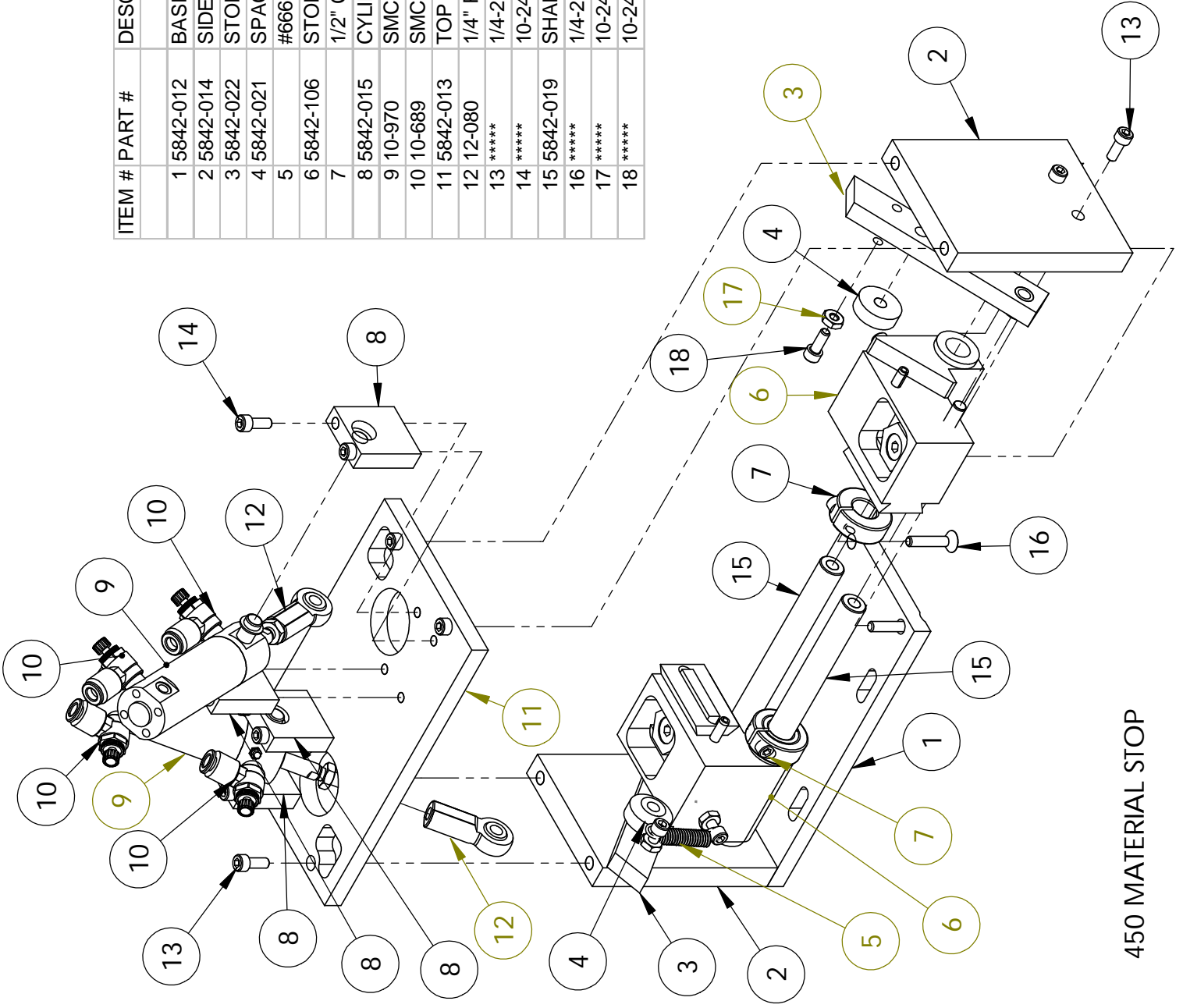
**Fig. 6**

Successfully applying mitered stop to head jambs not only requires that the machine be setup correctly, it also requires that the material be cut accurately. Below you will find two very common material variation problems that can adversely effect how well the head jamb fits into the rest of the assembly. Therefore Norfield recommends that you establish a process to regularly inspect your material.

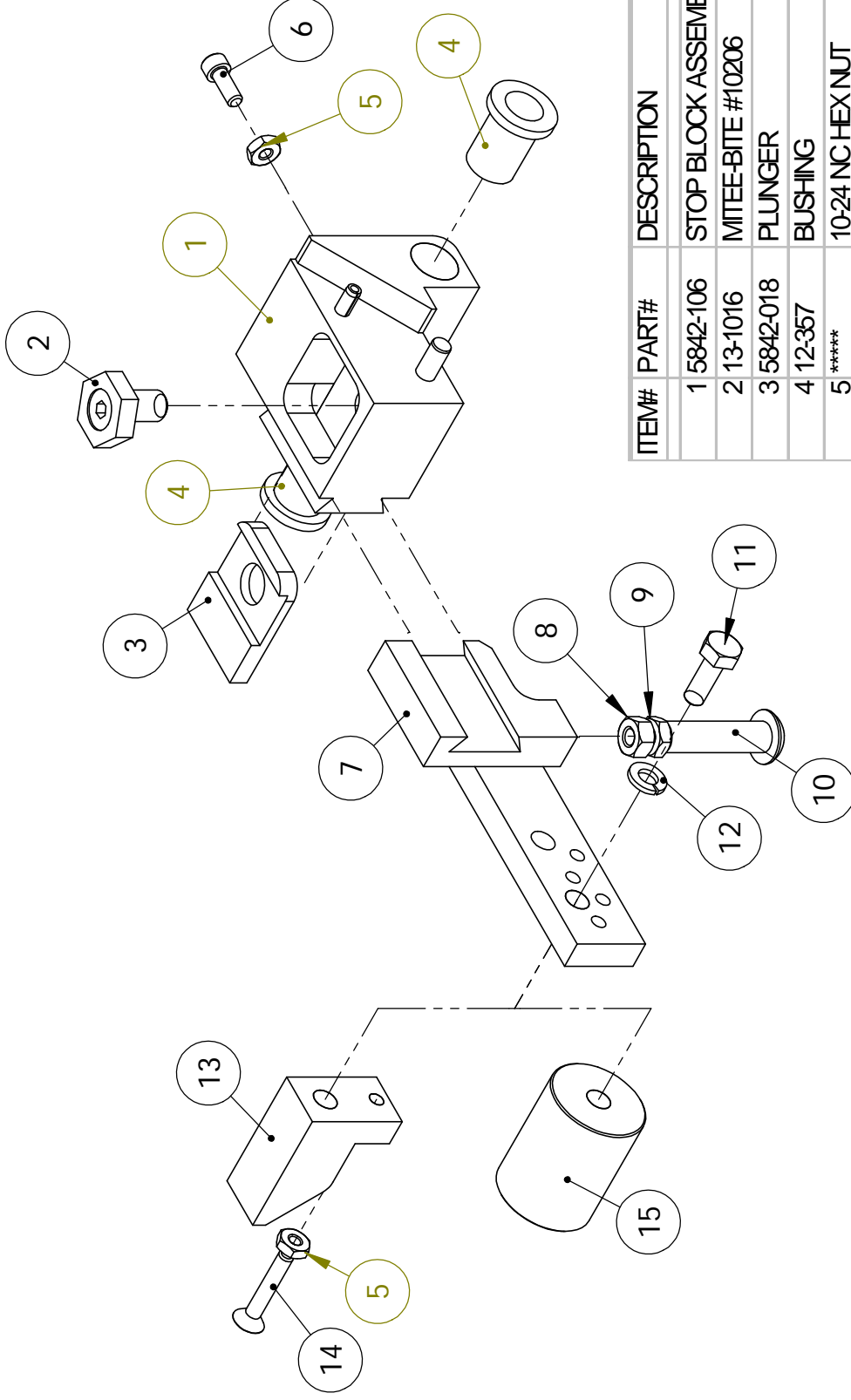
Material variations problems:

1. The length of the head and the stop must be very accurate. With wood working  $\pm 1/64$ in. in considered accurate. However: Because the 450 will only index to one end of the head and stop, if the head is  $1/64$ in. long and the stop is  $1/64$ in. short the distance from the end of the stop to the end of the head will be correct at one end and  $1/32$ in. longer at the other end. Therefore: the length of the parts must be “very accurate”.
2. The depth of the dado can vary greatly from one unit of jambs to the next. The distance from the end of the stop to the end of the head jamb must be the same as the depth of the dado on the leg jamb. If this dimension changes the length of the head and stop must be recalculated and the material stop on the 450 reset.

ITEM #	PART #	DESCRIPTION
1	5842-012	BASE PLATE
2	5842-014	SIDE PLATE
3	5842-022	STOP LATCH
4	5842-021	SPACER
5		#666 LANE SPRING
6	5842-106	STOP BLOCK ASSEMBLY
7		1/2" CLAMP COLLER
8	5842-015	CYLINDER MOUNT
9	10-970	SMC # NCGUA20-0100 CYLINDER
10	10-689	SMC # NAS1200F-U32-03 FLOW CONTROL
11	5842-013	TOP PLATE
12	12-080	1/4" ROD END #MSC CW-4
13	*****	1/4-20 NC X 3/4 SHCS
14	*****	10-24 NC X 1 3/4 SHCS
15	5842-019	SHAFT
16	*****	1/4-20 NC X 3/4 FHCS
17	*****	10-24 NC HEX NUT
18	*****	10-24 NC X 1/2 SHCS



450 MATERIAL STOP



ITEM#	PART#	DESCRIPTION
1	5842-106	STOP BLOCK ASSEMBLY
2	13-1016	MITEE-BITE #10206
3	5842-018	PLUNGER
4	12-357	BUSHING
5	*****	10-24 NC HEX NUT
6	*****	10-24 NC X 1/2" SHCS
7	5842-105	STOP ARM ASSEMBLY
8	*****	1/4-20 NC HEX NUT
9	*****	1/4-20 NC JAMB NUT
10	*****	1/4-20 NC X 3/4 BHCS
11	*****	5/16-18 NC X 3/4 HHCS
12	*****	5/16 LOCK WASHER
13	5842-020	MITER STOP BLOCK
14	*****	10-24 NC X 3/4 FHCS
15	5842-023	EXTENDED JAMB STOP

QUICK CHANGE STOP ARM