

**Norfield**

INNOVATIVE DOOR SOLUTIONS

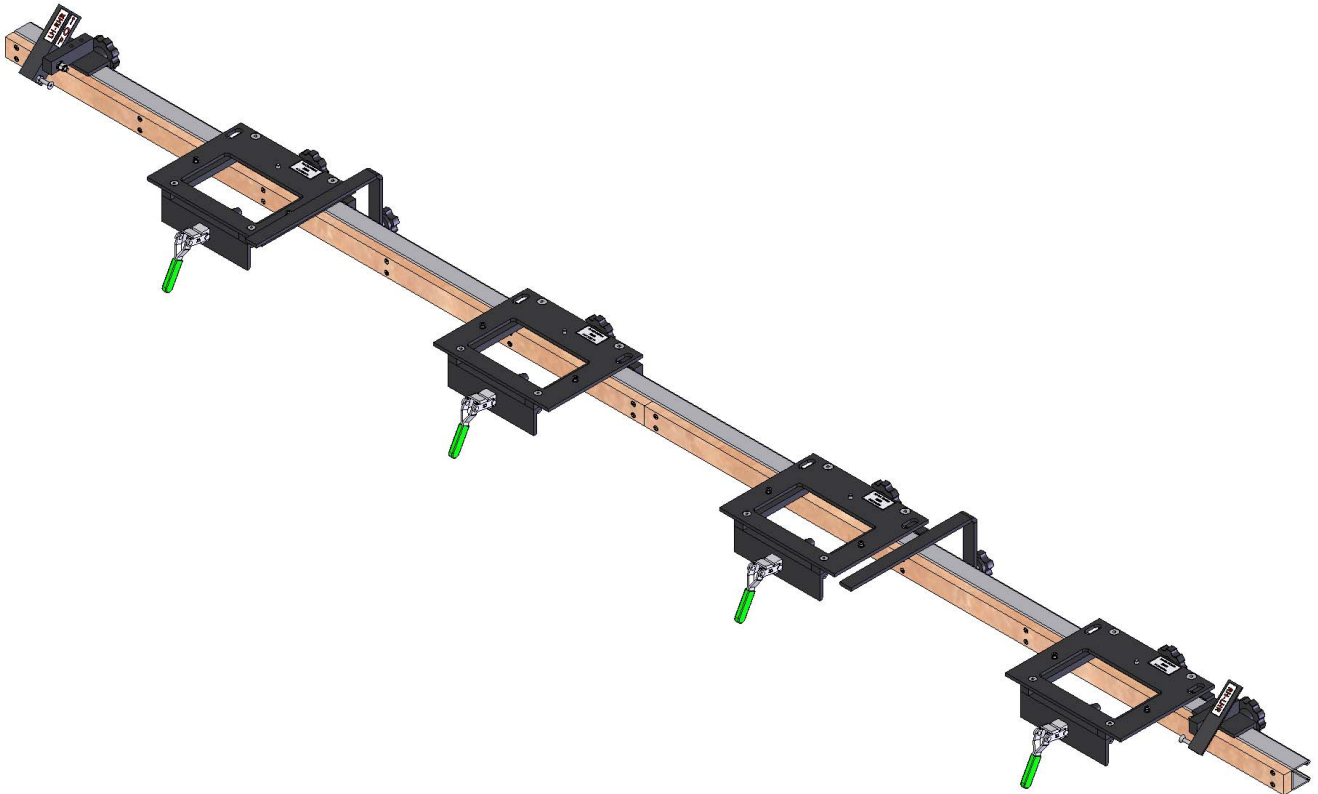
MACHINERY • TOOLS • SUPPLIES • SERVICE



# DOORTECH Norfield

## HS 3000 HINGE SYSTEM

*OWNERS MANUAL*



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Second Release: January, 2009

Norfield Industries

P.O. Box 459  
Chico, Ca. 95927

Technical Support: (530) 891-4214 - Parts: (800) 824-6242

Serial Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

***Norfield Industries*** is the name that represents Quality, Reliability, Support, Innovation and True Customer Service. We have been dedicated to providing quality products and excellent customer service for more than 45 years. ***Norfield Industries*** has earned a reputation in the pre-hanging industry for setting standards for reliable machinery, full technical support, machine parts, full line industrial woodworking tools and supplies and a team of customer care representatives to support you! Our factory-trained technical personnel are ready to assist you on the telephone or in your shop.

# INTRODUCTION

The DoorTech Hinge System 3000 (HS 3000) lets you mortise door hinges quickly and with dependable accuracy. The strong yet lightweight unit attaches easily to the door without marring. It may be used with the door either vertical (hinge edge up) or horizontal.

Changing setups is rapid, simple and positive. No measuring is required for setting backsets, mortise size, or even cutting depth in most cases. Backsets are determined by clearly labeled shims that just drop into the top of the template holders. Hinge spacing may be measured by hand with a tape measure, or set precisely with optional set-up bars.

The DoorTech depth control system automatically adjusts the depth of cut when you change templates: no router adjustment is required. The thickness of the individual templates correctly sets the depth of cut.

The Hinge System 3000 works on 1-3/8" and 1-3/4" doors and can be easily modified for use on 2-1/4" doors. Maximum door height with the standard mounting bar is 9'-0". Shoulders for 3 degree beveled edge doors and square edged doors are provided. An 11" bar and shoulders for use with a single template holder is also available.

***Please read the entire instructions before using the HS 3000. It is your responsibility to validate by trial that each template or setup bar that you use will provide the size, depth and location of mortise that you want.***

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## **SAFETY**

### **IMPORTANT SAFETY INSTRUCTIONS**

**WARNING:** When using electric tools, basic precautions should be followed to reduce the risk of fire, electric shock and personal injury.

**READ & FOLLOW ALL INSTRUCTIONS:** This tool was designed for specific applications. Norfield Industries strongly recommends that this tool NOT be modified and/or used for applications other than those for which it was designed.

If you have any questions about additional applications or uses, DO NOT attempt those uses or modifications until you have been advised by a qualified Norfield Representative. Any and all modifications to or misuses of the tool will void all warranties.

**1. Avoid Dangerous Environments:**

Do not expose equipment to rain or use in damp conditions.  
Do not use tools in the presence of flammable liquids or gases.

**2. Dress Properly:**

Do not wear loose clothing or jewelry. Loose clothing, drawstrings and jewelry can be caught in moving parts. Wear protective hair covering to contain long hair.

**3. ALWAYS Wear Safety Glasses:**

**4. Maintain Machine Tools Properly:**

Keep cutting tools sharp and clean for better and safer performance.  
Always use correct sized cutters.  
Inspect all electrical cords periodically and replace if damaged.

**5. Disconnect Electrical Supply Cords:**

Always disconnect tools electrically before servicing, cleaning, changing cutters or adding accessories.

**6. Stay Alert:**

Watch what you are doing. Use common sense. Do not operate equipment when you are tired or under the influence of medication, drugs or alcohol.

**SPECIFICATIONS**

**Electrical Requirement**

AC Line Voltage	Phase	Hertz	Amperage
115 VAC	1	60	20

**Specifications**

Shipping Weight	94 lbs. (Due to length, must ship by truck)
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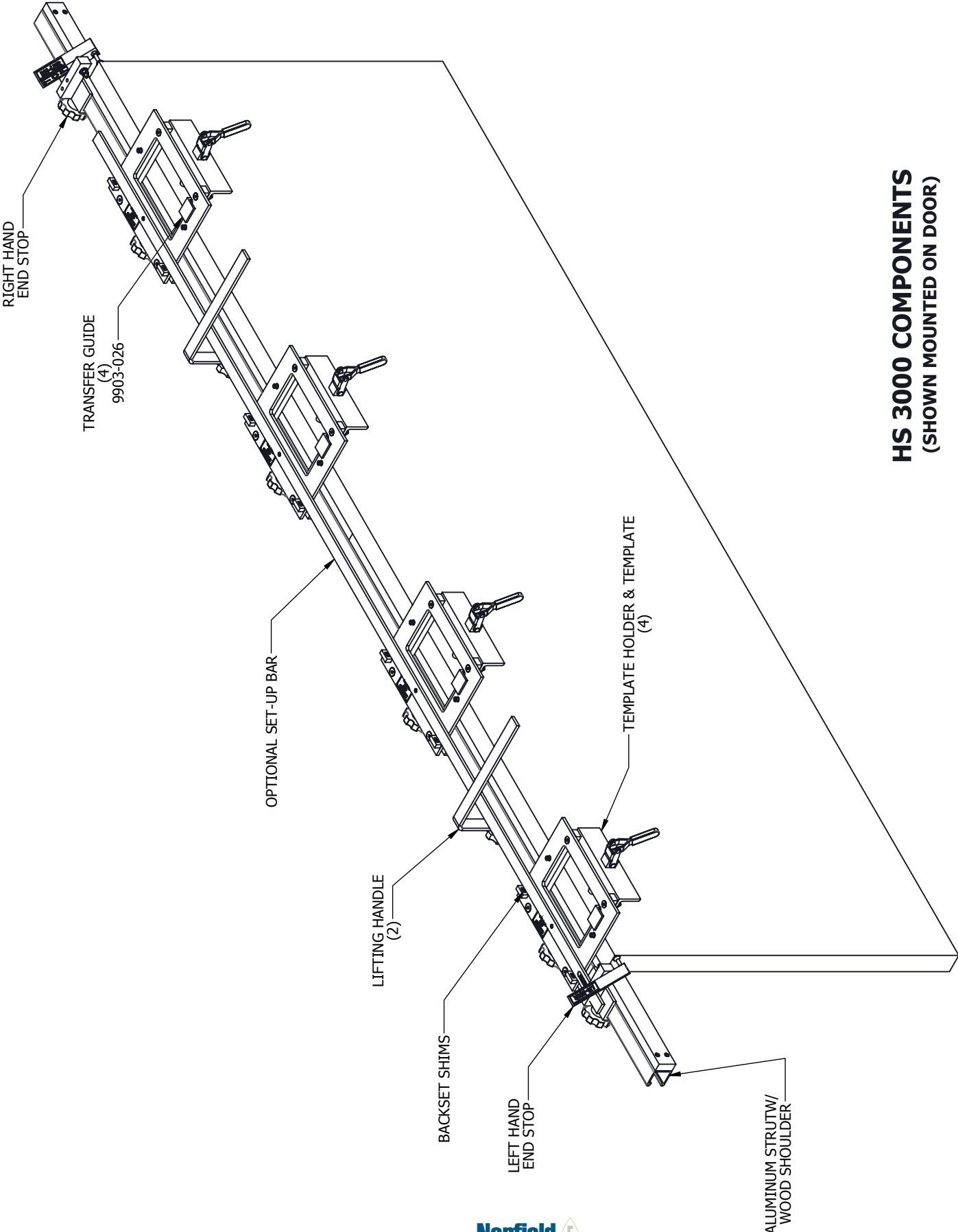
**System Requirements**

HS 3000	1/2" dia. Router Bit 13/16" Guide Bushing w/ Nut 1-1/2 HP Router Templates
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**Capabilities**

Door Thickness	1-3/8" to 2-1/4"
Maximum Door Height	9'-0"
Hinge Length	3-1/2" to 5"
Hinge Backset	5/32" to 3/8" @ 1/32" intervals using backset shims provided.

# LOCATION OF MAJOR COMPONENTS



## HS 3000 COMPONENTS (SHOWN MOUNTED ON DOOR)



## **SECTION 1: ASSEMBLY & SETUP**

### **1-1 SHIPPING DAMAGE AND SHORTAGES:**

Before and after the HS 3000 is unloaded from the truck, the crate should be inspected for any signs of damage. If suspected damage is found, it must be noted on the bill of lading and signed by the driver and the person receiving the shipment. After the machine has been uncrated, inspect it and all other contents of the crate for damage. In the event that damage has occurred in transit, notify the freight carrier and Norfield immediately. Inspect the complete shipment against the packing slip to make sure all items listed are accounted for. If any shortages are noticed, the freight carrier and Norfield should be notified immediately.

### **1-2 ELECTRICAL SUPPLY AND CONNECTIONS:**

The router motor used on the HS 3000 requires an electrical source of 115VAC @ 20 amps. If an extension cord is used, 14 gauge is recommended as a minimum. Take care to keep the power cord clear of the operator and material movement. It is recommended that an electrical disconnect be provided near the machine for disconnecting power when maintenance or adjustments are performed.

### **1-3 ASSEMBLY:**

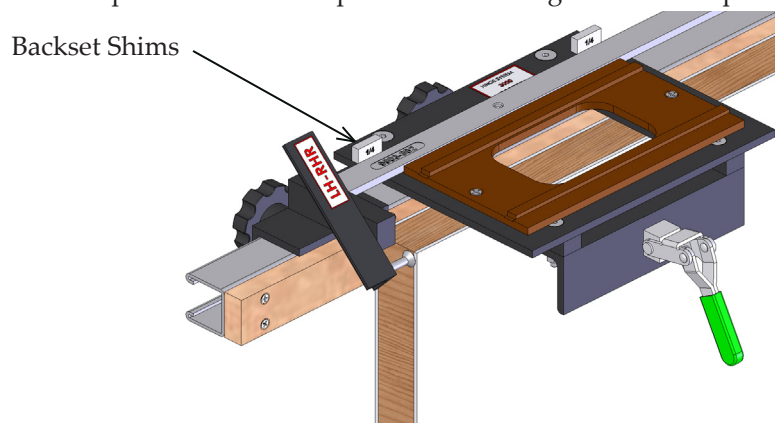
The *Hinge System 3000* consists of a 9'-6" aluminum strut on which 2 handles, 2 end stops and 4 template holders are mounted. Included are 5 sets of backset shims. Templates are available as listed in the current catalog.

The *HS 3000* comes with the beveled wood shoulders attached to the aluminum strut. If you will be using square edged doors, unscrew the beveled wood shoulders and screw on the square ones.

Slide the template holders, handles and end stops onto the aluminum strut. When using the beveled shoulders, the template holders must be placed on the side of the strut where the wood shoulder is widest. The strut is then positioned against the narrow face of the door with the clamps pressing against the wide face. Loosen the knobs so that the strut nuts will slide freely in the aluminum strut when assembling.

Select the appropriate set of backset shims. Loosen the knobs on the template holders and drop the shims through the slots so that they are clamped between the back piece of the template holder and the aluminum strut.

Select the desired template set. Note that the depth of cut as well as the hinge size are written on the labels. Screw the templates onto the template holders using the flat head phillips screws provided.



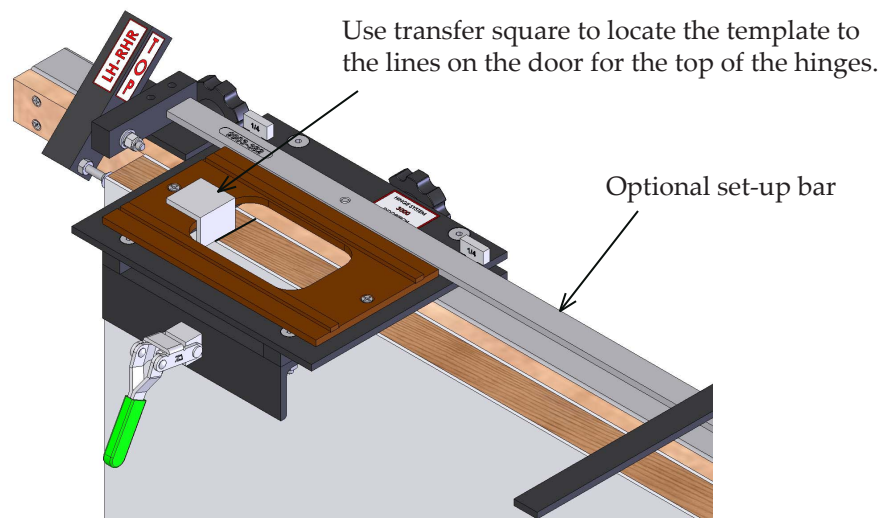
### I-4 DOOR HANDING:

The end stops handles are labeled LH-RHR for left hand and right hand reverse doors and RH-LHR for right hand and left hand reverse doors. End stops reference the TOP of the doors for which they are labeled. All hinge spacing measurements should be made from the top of the door.

For a right hand door, rotate the RH-LHR end stop handle so that the word "TOP" is visible. Rotate the LH-RHR end stop handles so that the word "TOP" is hidden. Open the toggle clamps on the template holders and rest the HS 3000 on the edge of the door. On a pre-beveled door, the bar should be on the narrow face of the door. Slide the unit along the door until the right hand end stop rests on the top edge of the door then secure the toggle clamps.

### I-5 HINGE SPACING:

Hinge spacing can be set up from pencil marks previously laid out on the door edge or by measuring on the HS 3000 itself. At the outset, you should lay out the spacings on the door to prevent errors. Measure on the door to the top edges of the hinges and square across. Use the transfer square to align the templates to these marks then tighten first the black knobs then the toggle clamps.



When measuring on the HS 3000 itself, it is most convenient to measure to the center line of each hinge which is scribed on each template holder. Measure from the near side of the end stop cross piece. End stops are accurately adjusted at the factory, but may be checked by locating a template holder in this way and then checking its location with the transfer square.

Set-up bars are available for the hinge spacings used by many common frame manufacturers. They set the spacings between hinges and to the top of the door precisely and positively. Holes in the setup bar fit over pins on the template holders and the end stops butt against the ends of the set-up bar. The set-up bars may be left in place during use if desired.

**SECTION 2 TROUBLESHOOTING**

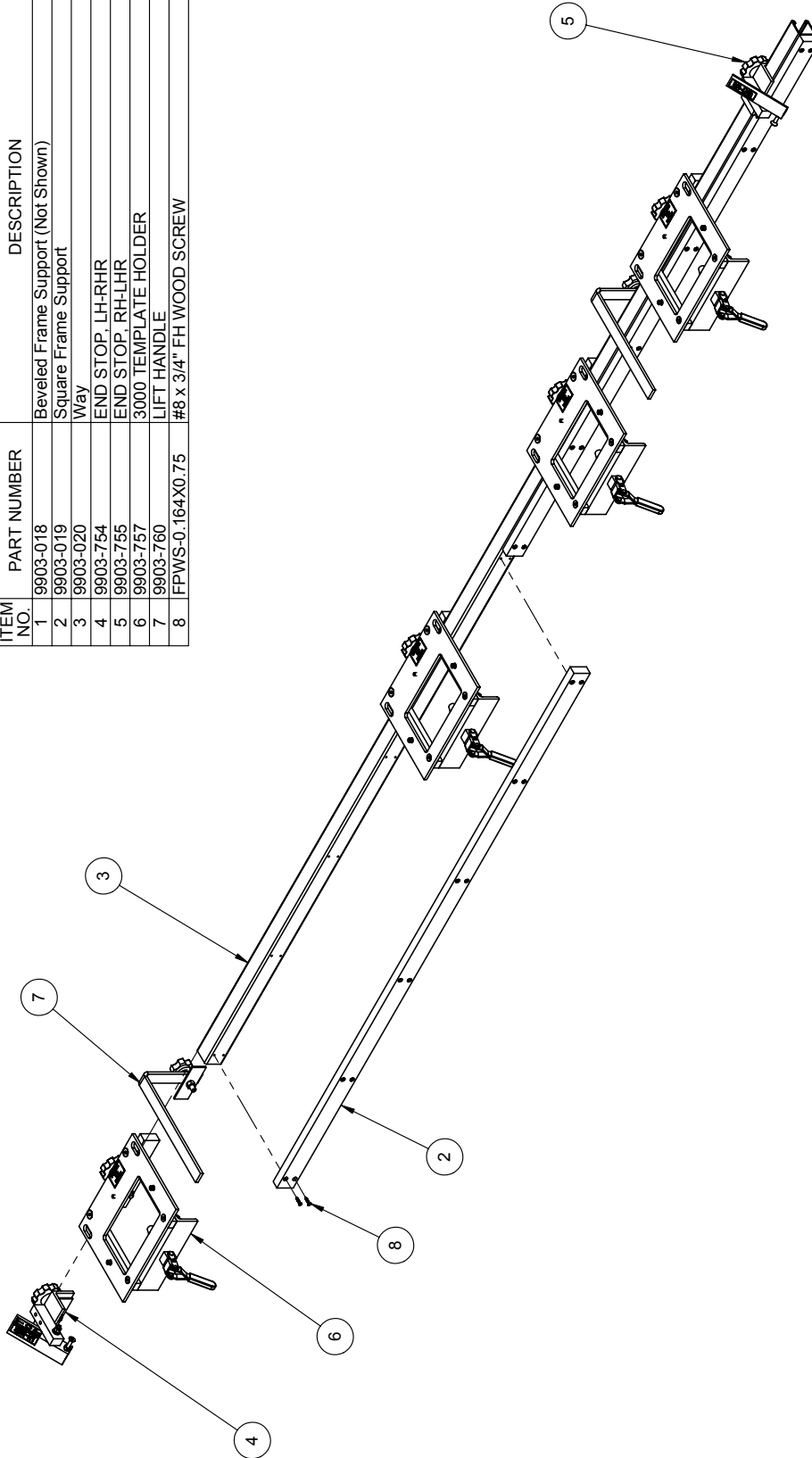
PROBLEM	POSSIBLE CAUSE	SOLUTION
Backset always or equally off.	Dust between template holder shoulder and U-bar, or behind the backset shim.	Loosen, clean and retighten.
Backset sometimes too small.	Dust between template holder and U-bar.	Loosen, clean and retighten.
	Failure to tighten clamps on the door.	Tighten all clamps before routing.
	Router bit off center in the guide bushing.	Find and maintain the router orientation that gives the correct backset.
Mortise too large.	Router guide bushing loose.	Tighten guide bushing.
	Guide bushing too small or bit too large.	Replace the guide bushing or bit.
	Template holder not clamped or not adjusted tight enough.	Tighten the toggle clamps and readjust if needed.
Mortise too small.	Bit made smaller by sharpening.	If bit is slightly off-center in the guide bushing, try repeated routing after rotating the router base. Otherwise, replace the bit.
Mortise too deep.	Incorrect template.	Be sure that the correct depth is printed on the template label.
	Bit not adjusted or slipped in collet.	Tighten the bit and readjust the cut depth.
Mortise too shallow.	Incorrect template.	Be sure that the correct depth is printed on the template label.
	Bit not adjusted or slipped in collet.	Tighten the bit and readjust the cut depth.
	Dust between base and jamb.	Release clamps and blow out dust.
	Dust between template and base.	Remove template and blow out dust.

**PARTS AND ASSEMBLY SCHEMATICS**

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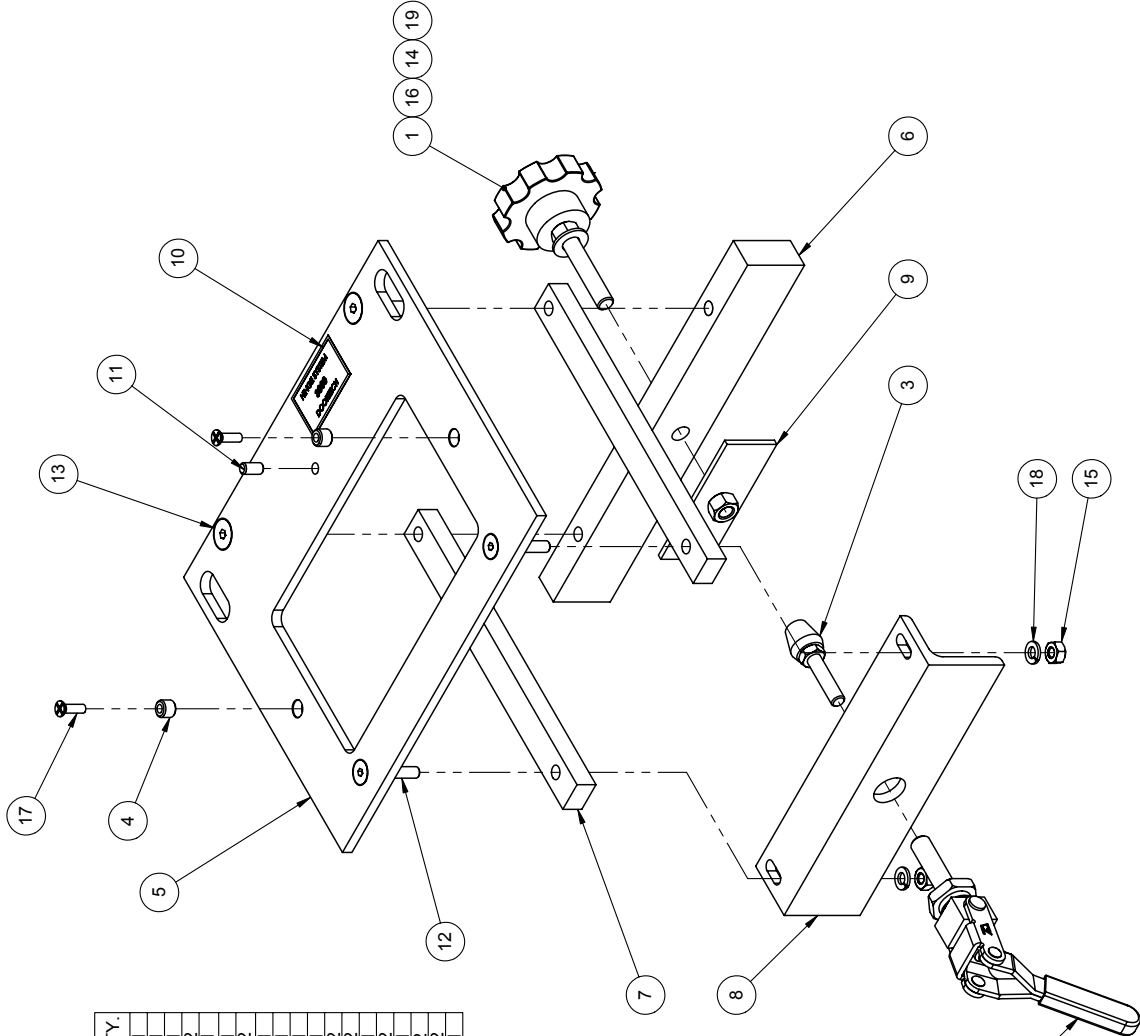
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Left Hand End Stop (HS 3000) .....	16

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	9903-018	Beveled Frame Support (Not Shown)	2
2	9903-019	Square Frame Support	2
3	9903-020	Way	1
4	9903-754	END STOP, LH-RHR	1
5	9903-755	END STOP, RH-LHR	1
6	9903-757	3000 TEMPLATE HOLDER	4
7	9903-760	LIFT HANDLE	2
8	FPWS-0.164X0.75	#8 x 3/4" FH WOOD SCREW	24



**MODEL HS 3000  
GENERAL ASSEMBLY**

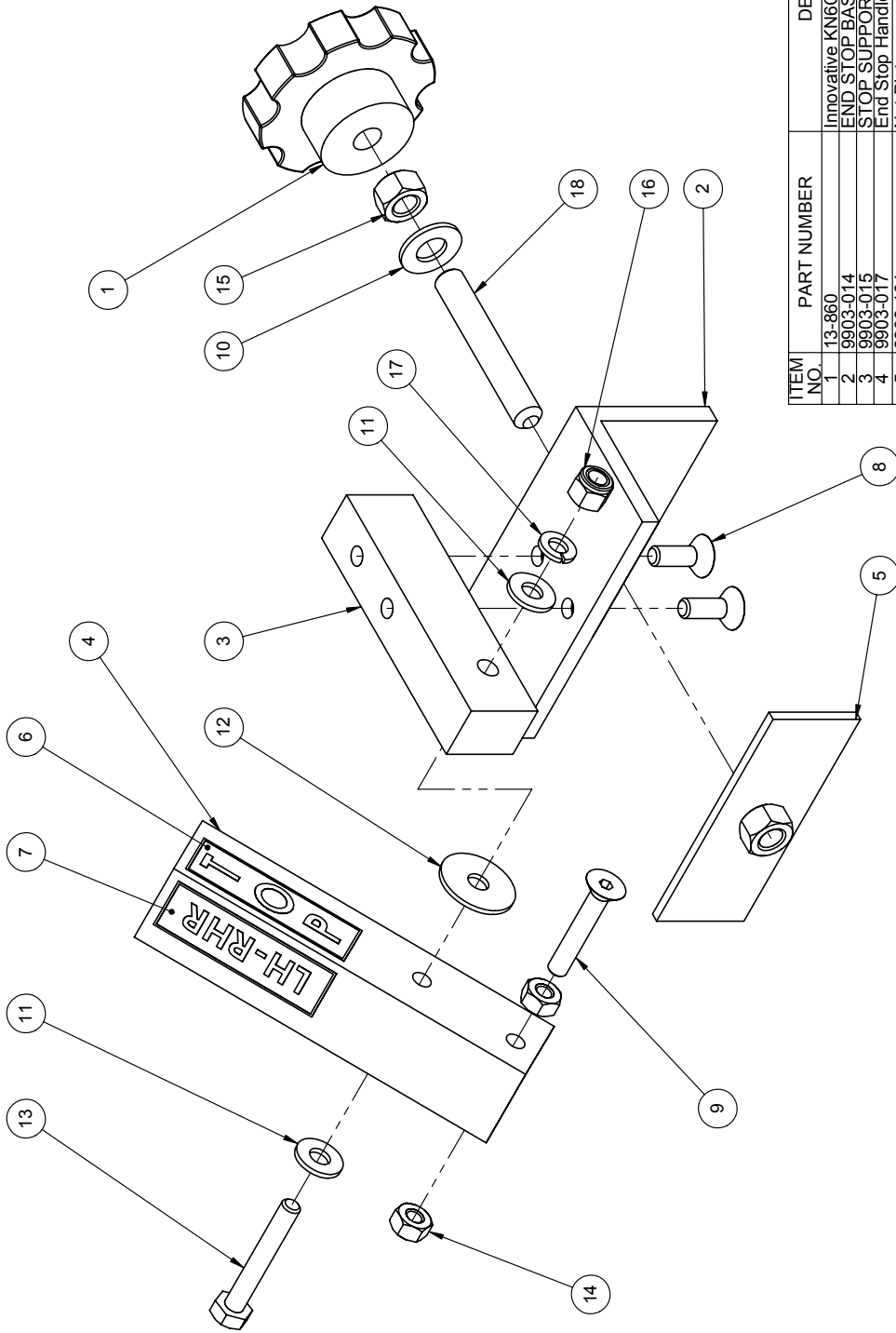
9903-901



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	13-860	Innovative KN6C-F6-B-21 Knob	1
2	13-868	Carr-Lane CL-250-TPC	1
3	13-869	Carr-Lane CL-518208-FC	1
4	13-870	Carr-Lane CL-1024-KS Insert	2
5	9903-010	Template Holder	1
6	9903-011	CLAMP BAR	1
7	9903-012	Template Holder Support	2
8	9903-013	CLAMP BRACKET	1
9	9903-101	Nut Plate	1
10	9908-490	LABEL, MODEL 3000	1
11	DP-0.250X0.500	1/4" X 1/2" DOWEL PIN	1
12	FHCS-0.25-20X1.50	1/4-20 X 1-1/2" FHCS	2
13	FHCS-3/12-18X1.50	5/16-18 X 1-1/2" FHCS	2
14	FW 0.375	3/8" Flat Washer	1
15	HN-0.250-20	1/4-20 HEX NUT	2
16	HN-0.375-16	3/8-16 HEX NUT	1
17	PFHS 0.19-24X.625	10-24 X 5/8" PHILLIPS FLAT HEAD SCREW	2
18	SLW-0.25	SPLIT LOCK WASHER-1/4"	2
19	SSCC-0.375-16X3.00	3/8-16 x 3" Set Screw	1

## MODEL HS 3000 TEMPLATE HOLDER

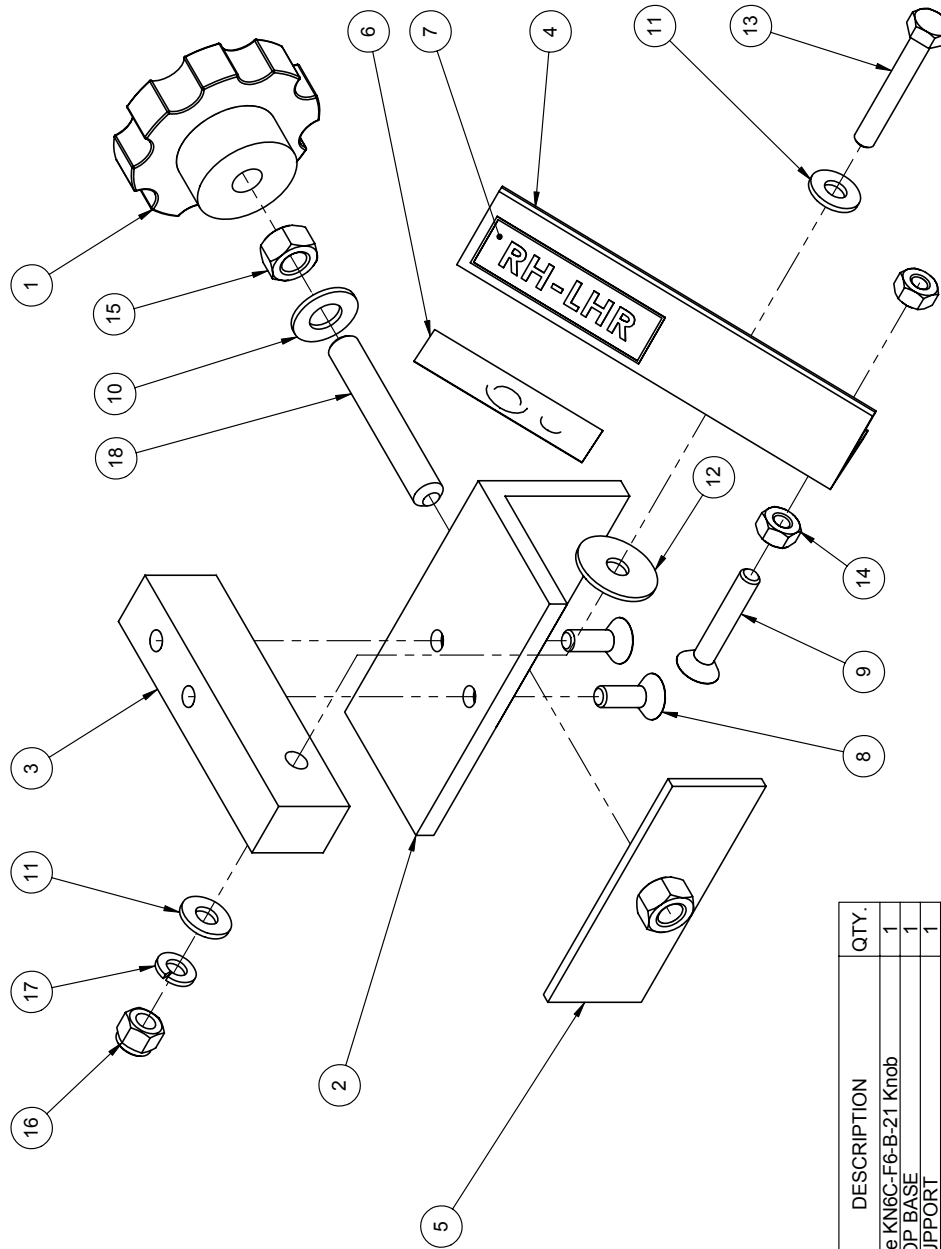
9903-757



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	13-860	Innovative KN6C-F6-B-21 Knob	1
2	9903-014	END_STOP BASE	1
3	9903-015	STOP SUPPORT	1
4	9903-017	End Stop Handle	1
5	9903-101	Nut Plate	1
6	9908-470	LABEL_TOP	1
7	9908-498	LABEL_LH-RHR	1
8	FH1/4-20X3/4	1/4-20 x 3/4" FHCS	2
9	FHCS-0.25-20X1.50	1/4-20 x 1-1/2" FHCS	2
10	FW 0.375	3/8" Flat Washer	1
11	FW-0.281X0.625X.065	1/4" Flat Washer	2
12	FWW 0.25	WIDE FLAT WASHER 1/4"	1
13	HH 0.250-20x1.75	1/4-20 x 1-3/4" HHCS	1
14	HN-0.250-20	1/4-20 HEX NUT	2
15	HN-0.375-16	3/8-16 HEX NUT	1
16	NYHN-0.250-20	1/4-20 NYLOC NUT	1
17	SLW-0.25	SPLIT LOCK WASHER-1/4"	1
18	SSCP-0.375-16X2.50	SET SCREW CP. 3/8-16 X 2-1/2"	1

**MODEL HS 3000  
LEFT HAND END STOP**

9903-754



## MODEL HS 3000 LEFT HAND END STOP

9903-755

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	13-860	Innovative KN6C-F6-B-21 Knob	1
2	9903-014	END STOP BASE	1
3	9903-015	STOP SUPPORT	1
4	9903-016	End Stop Handle	1
5	9903-101	Nut Plate	1
6	9908-470	LABEL_TOP	1
7	9908-497	LABEL_RH-LHR	1
8	FHCS-0.25-20X3/4	1/4-20 x 3/4" FHCS	2
9	FHCS-0.25-20X1.50	1/4-20 x 1-1/2" FHCS	1
10	FW 0.375	3/8" Flat Washer	1
11	FW-0.281X0.625X.065	1/4" FLAT WASHER	2
12	FWW 0.25	WIDE FLAT WASHER 1/4"	1
13	HH 0.250-20X1.75	1/4-20 x 1-3/4" HHCS	2
14	HN-0.250-20	1/4-20 HEX NUT	1
15	HN-0.375-16	3/8-16 HEX NUT	1
16	NYHN-0.250-20	1/4-20 NYLOC NUT	1
17	SLW-0.25	SPLIT LOCK WASHER-1/4"	1
18	SSCP-0.375-16X2.50	SET SCREW_CP, 3/8-16 X 2-1/2"	1



### **CONTACT & ORDER INFORMATION**

Norfield Industries is the name that represents Quality, Reliability, Support, innovation and True Customer Service. We are dedicated to providing world class customer care. Norfield has been providing quality care in the pre-hanging door industry for over 40 years and has earned a reputation for setting the standard for innovation, reliability, full technical support, machine parts and a full line of industrial woodworking tools and accessories. Our team of Customer Care Representatives is available to support you.

If you need to contact the Norfield Service department, please have the following information available:

- Serial Number of the machine.
- Model of the Machine.
- Date of purchase or date that the machine was installed.
- Voltage of the machine.
- A description of the problem and in what part of the machine the problem is occurring.

For warranty issues and service questions contact the Norfield Service Department at (800) 824-6242.

To order replacement components and consumables, such as drill and router bits, saw blades and other accessories, contact a Norfield Tools and Supply Customer Care Representative at (800) 824-6242.

### **PARTS REPLACEMENT POLICY**

The following will explain Norfield Industries' policy for handling warranty claims. Our "Limited Warranty" is stated below for your reference.

Our warranty covers the replacement of defective parts; however, the labor to replace the parts on the machine is not included.

Upon notification of a warranty claim, Norfield will either refer the customer to a regional repair facility or replacement parts will be shipped from the factory. Parts shipped from the factory will be invoiced to the customer's account until the warranty claim is verified. To obtain verification, the defective parts must be returned to Norfield within thirty (30) days from the date of the claim for inspection. **Before returning the defective parts, please contact Norfield to obtain a "Return Material Authorization Number".**

All parts manufactured by Norfield and found to be defective will be given appropriate credit. All parts not manufactured by Norfield are covered by their respective manufacturer's warranty and will be sent to the original manufacturer for credit. When, and if, credit is issued to Norfield, we will in turn issue credit to your account.

#### **LIMITED WARRANTY**

Norfield warrants any and all such parts manufactured by them against defects in material or workmanship for a period of one year from the date of purchase. Norfield's liability under this warranty shall be limited to replacing free of charge, F. O. B. Chico, California, any parts proved to be defective within the period of the warranty. Norfield will not be responsible for transportation charges or consequential damages.

Norfield will not in any case or under any circumstances be liable or responsible for any injuries to persons or property suffered as a result of the use or operation of the machine, or losses or costs resulting from any period of non-operation for any reason.

Parts which are claimed to be defective, but show tangible evidence of abuse or negligence will not be replaced on a no-charge basis.

Norfield reserves the right, at its own discretion without notice and without making similar changes in machinery previously manufactured, to make changes in material, design, finish and/or specifications.

Any changes, alterations or installation of additional equipment to this machine without first obtaining written consent from Norfield may void this warranty. Determination of the effect of any alteration on this warranty is left to the discretion of Norfield.

Norfield makes no written or implied warranty with respect to electrical equipment, including motors or other purchased components used in the manufacture of the machine. All such parts are covered by their respective manufacturer's warranty. We do endeavor, at all times, to purchase only those components manufactured by responsible manufacturers which we have found to be reputable in their handling of warranties.

Norfield expressly disclaims any warranty, expressed or implied, other than those which are expressly made in this limited warranty.

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## ***NOTES***