



## Precision Routing System Assembly and Parts Manual



## **BUSHTON MANUFACTURING, LLC**

Makers of

## **HAWK WOODWORKING TOOLS**

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## **LIMITED WARRANTY**

We guarantee that all Hawk Products are free from defects in materials and workmanship for one full year from the date of purchase. This warranty is automatically started when we ship your new Hawk Product. The warranty is tied to the original owner and is not transferable. If given as a gift, tell us who it is to and what day the gift will be given so that the warranty can be properly registered. The warranty covers parts only labor and shipping charges still apply.

This warranty does not obligate us to bear the cost of shipping charges in connection with the repair or replacement of the defective parts, nor shall it apply to any machine upon which repairs or alterations have been made unless authorized by us. This warranty is void if damage is the result of misuse or abuse of the machine. This warranty is non-transferable. Tampering with any electrical control components voids this warranty.

When receiving a freight item from a common carrier, the customer must note on the receipt any damage to the carton. This is required for all insurance claims. If you do not note any damage to the shipping carton, you assume the cost of any damages caused by shipping that are not covered by insurance.

We shall in no event be liable for consequential damages or contingent liabilities arising out of the use of any machine, or out of the failure of any machine to operate properly. No express, implied or statutory warranty other than herein set forth is made or authorized to be made by us.

Warranty information will be based on information given at the time of purchase. This warranty is not transferable from one owner to another. Any repairs and or replacement parts must be done by Bushton Manufacturing, LLC. In order for parts to be honored by this warranty, the part must be official Hawk Woodworking Tools parts supplied by Bushton Manufacturing, LLC.

## **ORDERING INFORMATION**

To order you can contact customer service by mail, phone or e-mail as listed on top of this page.

You will need to provide the item number, description and quantity you want.

You can pay by check, MasterCard, VISA or Discover Card.

We do not have a set shipping and handling charges table at this time contact customer service for the amount of these charges for your order.

We will have a direct order shopping cart on our web page in the future.  
The web page is [www.hawkwoodworkingtools.com](http://www.hawkwoodworkingtools.com)

# Shipping Package

The RouterSHOP is now shipped in one box as seen bellow.



1. Remove 3 packing tubes and the center box.



quantity	part #	Description
1	965-0045	RouterSHOP Table Assembly
		Assembly and Parts Manual
		Operater Manual

2. Remove contents from center box.



quantity	part #	Description
1	693-0001	Left Fence
1	692-0004	Left Fence Bracket
1	693-0005	Right Fence
1	692-0007	Right Fence Bracket
1	965-0050	Collector Assembly
1	629-0100	Vacuum Hose
1	629-0105	Vacuum Adapter
1	965-0057	Miter Assembly
1		Accessories Bag
1		Hardware Bag

3. Check contents of accessories bag.



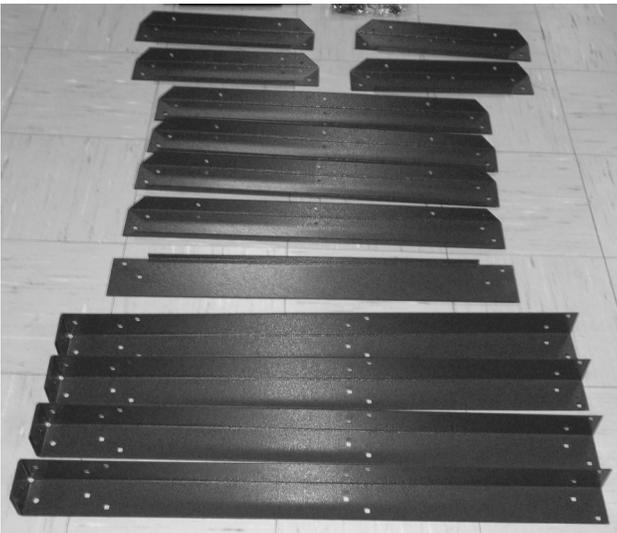
quantity	part #	Description
2	765-0215	Feather Board Assembly
1	865-0056	Router Bit Lub
1	865-0221	Push Stick
1	865-0972	Push Block
1	865-0980	Router Depth Gauge
1	965-0080	Router Alignment Tool
1		1/4" Spiral Router Bit length could vary

4. Check contents of hardware bag.



quantity	part #	Description
1	693-0001	Left Fence
1	692-0004	Left Fence Bracket
1	693-0005	Right Fence
1	692-0007	Right Fence Bracket
1	965-0050	Collector Assembly
1	629-0100	Vacuum Hose
1	629-0105	Vacuum Adapter
1	965-0057	Miter Assembly
1		Accessories Bag
1		Hardware Bag

5. Remove Stand box and check contents.



quantity	part #	Description
		715-0115 Handle Assembly
1	715-0208	1/4-20 Hex Nut
1	709-0133	1/4-20 x 2" Long Hex Head Bolt
1	715-0113	Crank Hand Knob
1	755-0105	1/4 Flat Washer

quantity	part #	Description
4	690-0090	RouterSHOP Leg
4	690-0110	RouterSHOP Front/Rear Brace
4	690-0140	RouterSHOP Side Brace
1	629-0105	RouterSHOP Frame Front

6. Caster set if order ships in it own box. See caster assembly instructions latter is this manual.

RouterSHOP all laid out of box.



# Assembly Instructions

## Step 1 - Installing Legs and Braces

- Remove the items packed with the RouterShop table. Carefully remove the table from the box by grasping the sides of the table. Use **CAUTION** since the table is hinged and fingers can be trapped.

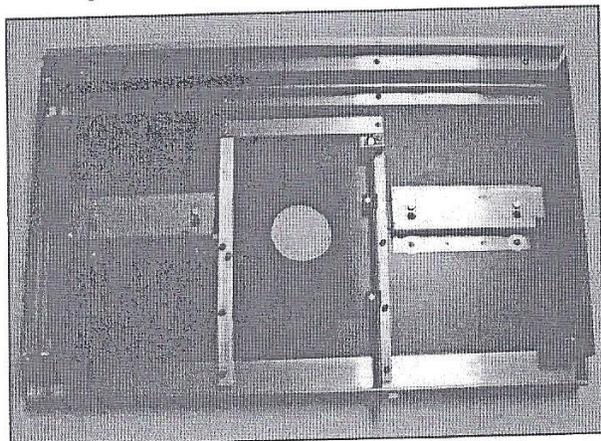


Figure 1. RouterShop top

- Place the RouterShop table on a flat surface with the bottom of the table facing up. If the table is to be assembled on concrete, use a portion of the cardboard packing material and place it between the concrete and tabletop to protect the table (Figure 1).
- Locate the front frame and the package containing the carriage bolts (packaged with the RouterShop table).
- Place the front frame in place (Figure 2).
- In the following leg and brace assembly, **hand tighten the nuts**. When the assembly is complete, all nuts can be tightened with a wrench.
- Attach the legs and the front frame using (10) 1/4-20 x 5/8" carriage bolts. The other (2) bolts are installed on the unit with and screws (figure 2a). Remove the two carriage bolts with the hand screws. Install the 10 bolts and hex nuts the hold the legs and front frame as shown in figure 2. Install the 2 bolts that you removed. Place the bolt thru the frame and leg, then the hex nut, then the nylon washer, then the tilt tale slide. Then the steel washer, and finally the hand screw as shown in figure 2b.

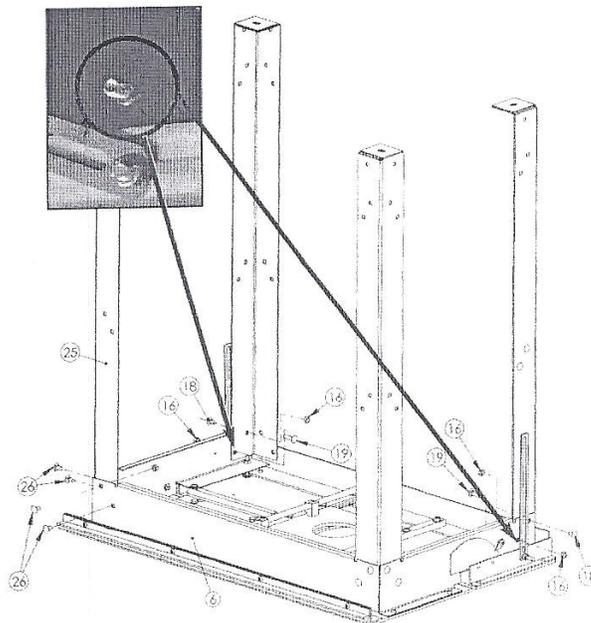


Figure 2. Table legs and front frame

- Locate the (8) leg braces (4) short and (4) long.
- Attach the **middle** leg braces to the legs using (16) 5/8" carriage bolts, inserting the bolts from the outside and attaching a hex nut on the inside (Figure 3).

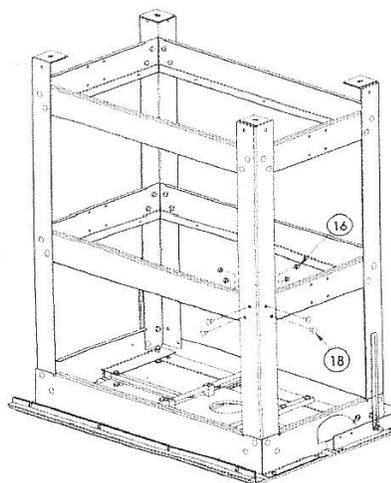


Figure 3. Middle leg braces



Figure 2a



Figure 2b

# Assembly Instructions



Figure 4. Bottom leg braces

- Attach the **bottom** leg braces to the legs using (16) 5/8" carriage bolts, inserting the bolts from the outside and attaching a hex nut on the inside (Figure 4). **If an optional caster set is to be installed, refer to caster mounting instructions, step 11 before mounting bottom leg braces.**
- **Tighten all of the nuts on the legs and braces using a 7/16" socket or box end wrench.**

## Step 2 - Installing the Cross Feed Handle Knob

Locate (1) black cross feed handle knob and attachment hardware consisting of (1) 1/4"-20 x 2" bolt, (1) 1/4" flat washer and (1) 1/4"-20 hex nut (packaged with the RouterShop table).

- Attach the knob to the cross feed crank handle. Tighten the nut to the cross feed handle using an open-end wrench. The knob should rotate freely (Figure 5).

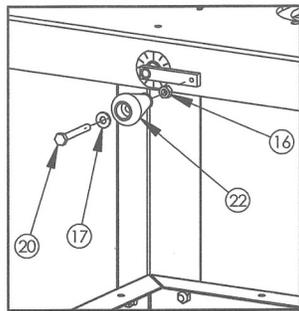


Figure 5.  
Feed handle knob

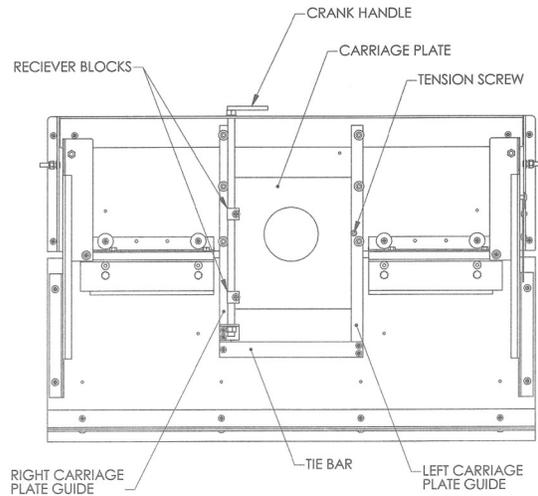


Figure 6. Router mounting

## Step 3 - Installing a Router

- Loosen the plastic plate tension screw on the left carriage plate guide (Figure 6).

- Install the router alignment tool (Figure 7) into the router 1/4" collet. Place the router face down on the carriage plate with the alignment tool inserted into the hole of the carriage plate.

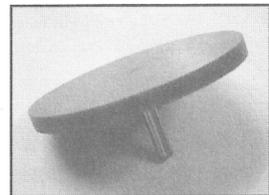


Figure 7. Alignment tool

- Position the router so that the depth adjustment of the router faces the cross feed crank handle (rear of the table) (Figure 6).
- Using one of the packing boxes, tilt and block up the rear of the RouterShop so that the cross feed crank can be turned without obstruction. Check the operation of the carriage plate by turning the cross feed crank clockwise and counter clockwise the full extent of its travel. Ensure there are no obstructions. It may be necessary to remove the handles of the router or rotate the router to provide obstruction free travel of the carriage plate. Once the router position is confirmed, remove

# Assembly Instructions

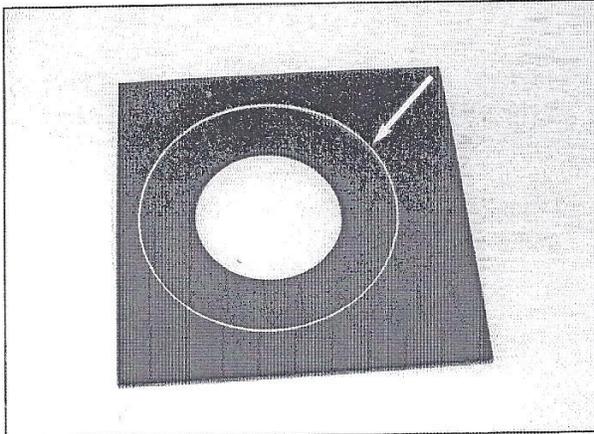


Figure 8. Marked router base

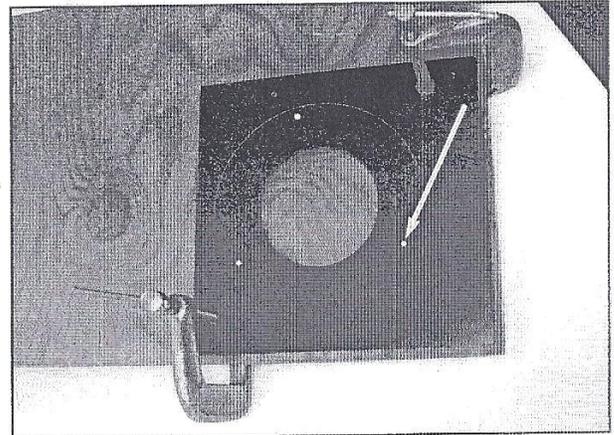


Figure 9. Preparation for drilling

the packing box and return the RouterShop to a flat position. With a scratch awl or ice pick carefully scribe a circle around the router base onto the carriage plate. Also, mark the orientation of the router base to the carriage plate so that the router can be returned to its exact position (Figure 8).

- Remove the (3) mounting screws from the tie bar using a Phillips head screwdriver (Figure 6).
- Remove the screw from each of the two receiver blocks attached to the carriage plate. DO NOT loosen the cross feed screws (Figure 6).
- Tilt the RouterShop allowing the hinged table to fold down slightly and slide the carriage plate out the end of the cross feed rails (where the tie bar was located).
- Remove the base plate from your router.
- Center the router base plate on the RouterShop carriage plate using the scribed circle and orientation mark previously made.
- Using two C-clamps, clamp the router base to the carriage plate. Mark the router base holes in preparation for drilling the carriage plate. Remove the router base from the carriage plate.
- Clamp a board to the unmarked side of the carriage plate (Figure 9). This board will protect the carriage plate when drilling the router base mounting holes. If the holes to be drilled will penetrate the scale on the carriage plate face, first remove the scale, and reattach after the router plate is mounted.
- Drill the router mounting holes in the carriage plate (Figure 9) with a bit the same size as the mounting holes in your router base. Counter sink the holes on the topside of the router carriage plate so that the router base mounting screws will mount slightly below the carriage plate surface.
- Install a 1/4" straight bit supplied in the Pro Accessory Package (or any standard 1/4" bit) into your router. Adjust the bit depth so that it does not extend past the router base.
- Attach your router to the carriage plate using the original screws from your router base. The carriage plate replaces the original router base plate. Use longer screws (not supplied) if necessary.
- Turn the RouterShop on its legs.

# Assembly Instructions

## Step 5 - Installing Fence Brackets

- Locate the (2) fence brackets. The right hand bracket is stamped with an R and the left is stamped with an L. From the front of the table insert the fences in the appropriate channels.

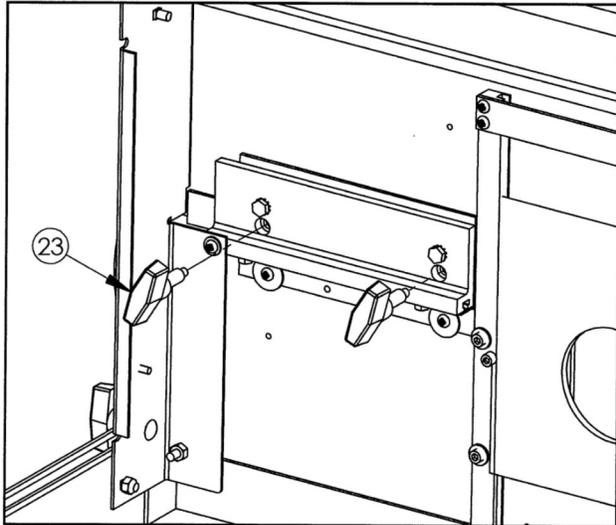


Figure 13. T-handle knobs

- Align the holes in the fence brackets with the holes on the table top. Secure the fence brackets to the top by inserting (4) T-handle knobs upward from the bottom of the table (Figure 13). Tighten the T-handle knobs while pushing the fence brackets forward towards the back ledge of the main table.

## Step 6 - Attach Fences

- Locate the (2) fences. The right hand fence is stamped with an R and the left is stamped with an L.
- Attach the fences using (4) #10-32 x 1/4" Phillips head screws to the front of the table fence brackets installed in step 5. Align the outside ends of the fences with the edge of the table and tighten screws (Figure 14).

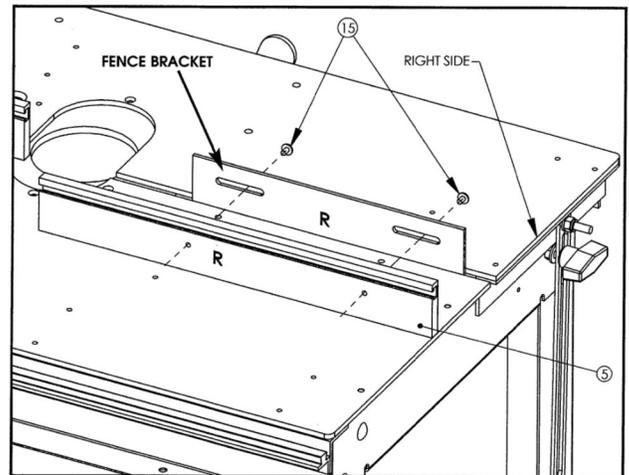


Figure 14. Fences

## Step 7 - Installing Chip Collector

- Locate the chip collector and hardware (shipped separately). From the back of the RouterShop, install the chip collector bracket to the table top using (2) #10-32 x 1/4" screws (Figure 15).

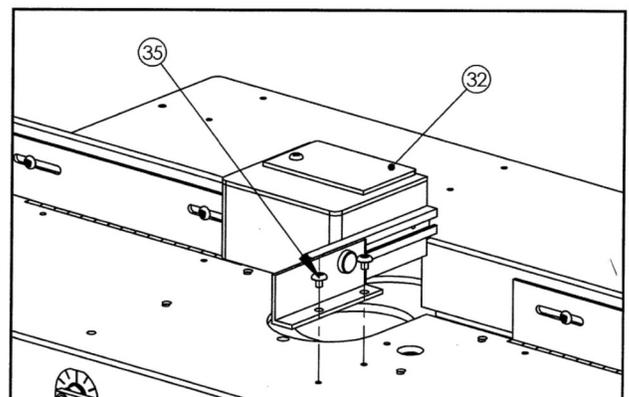


Figure 15. Chip collector

- Thread one end of the vacuum hose into the large hole on the side of the collector. Attach the other end of the hose to the vacuum adapter. This chip collector can be used with most standard shop vacuums.

# Assembly Instructions

## Step 8 - Installing Shelf (Optional)

- You may equip your RouterShop with optional shelves (not supplied).
- We recommend using 1/2" plywood for the shelf.
- Cut the material to 29-1/4" x 16-3/4" as shown in Figure 16.

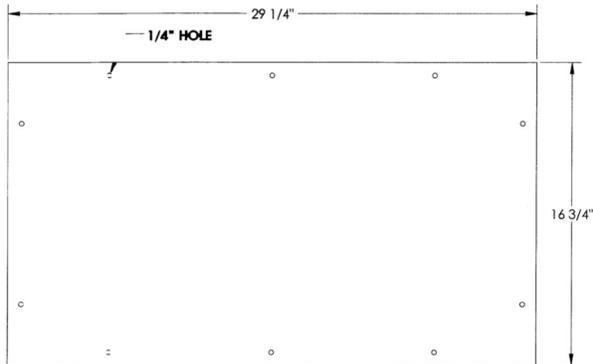


Figure 16. Shelf

- Place the plywood on the leg support braces and mark the mounting holes to be drilled from the bottom side of the bracket. Remove the shelf and drill holes.
- Use 1/4" bolts and nuts (not supplied) to secure the shelf to the center and bottom brackets of the RouterShop.

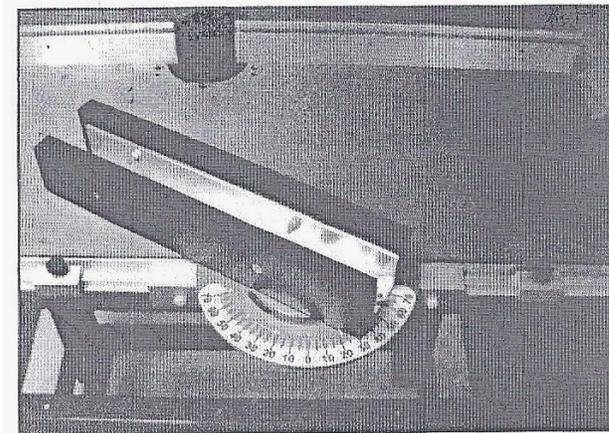


Figure 17. Miter gauge and stops

## Step 9 - Installing Miter Gauge

- Locate the miter gauge assembly shipped with the RouterShop. Loosen the plastic retaining screws on the front of the gauge. Slide the miter gauge bracket onto the front rail of the RouterShop with the miter gauge facing to the front.
- The unit is shipped with two miter gauge stops that can be attached to the front rail (Figure 17).

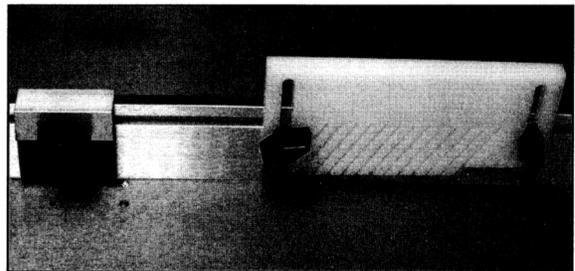


Figure 18. Feather board and stop

## Step 10 - Installing Fence Stop and Feather Boards

Feather boards and stops are shipped in a separate box. Feather boards and stops can be attached to the front of the fences using the channel located on the front of the fence as shown in Figure 18.

# Assembly Instructions

## Step 11 - Installing Casters (Optional)

- Locate the box with the casters and mounting hardware.
- Assemble the single locking caster (Figure 19).
- Attach the caster to the caster lower arm using (4) 5/16"-18 x 1/2" hex bolts and (4) 5/16"-18 hex nuts. Attach the caster assembly to the mounting bracket using (1) 5/16"-18 x 3-3/4" hex bolt and (1) 5/16"-18 locking hex nut, tightening enough for the mounting bracket to be secure, yet still move.

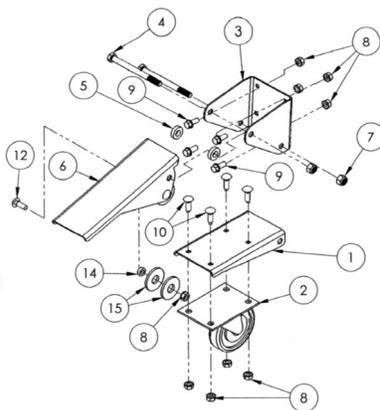


Figure 19. Locking caster

- Mount the assembly to either center bottom brace of the RouterShop using (4) 1/4"-20 x 1/2" hex bolts and nuts. Securely tighten the bolts (Figure 20).
- The (2) stationary casters mount in the same holes as the bottom side brace (Figure 21). Mount these wheels on the end opposite of the locking caster. The 5/16"-18 x 2" hex bolt is inserted through the caster bracket through the wheel and into the RouterShop leg. Use a 5/16" locking hex nut to secure the bolt, securely tightening the nut, yet allowing the wheel to turn freely.

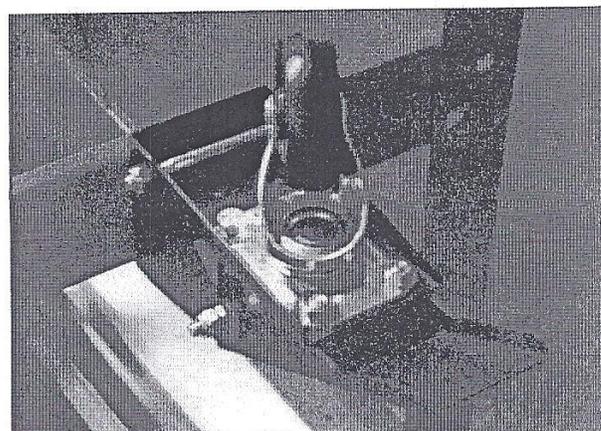


Figure 20. Locking caster

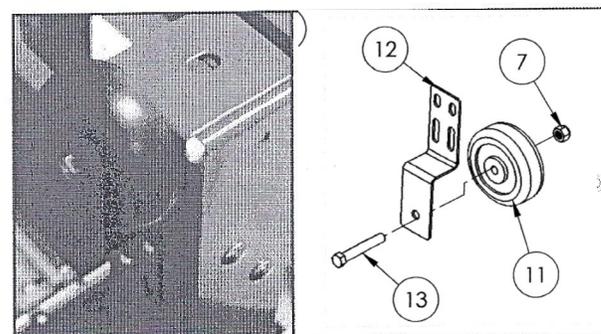


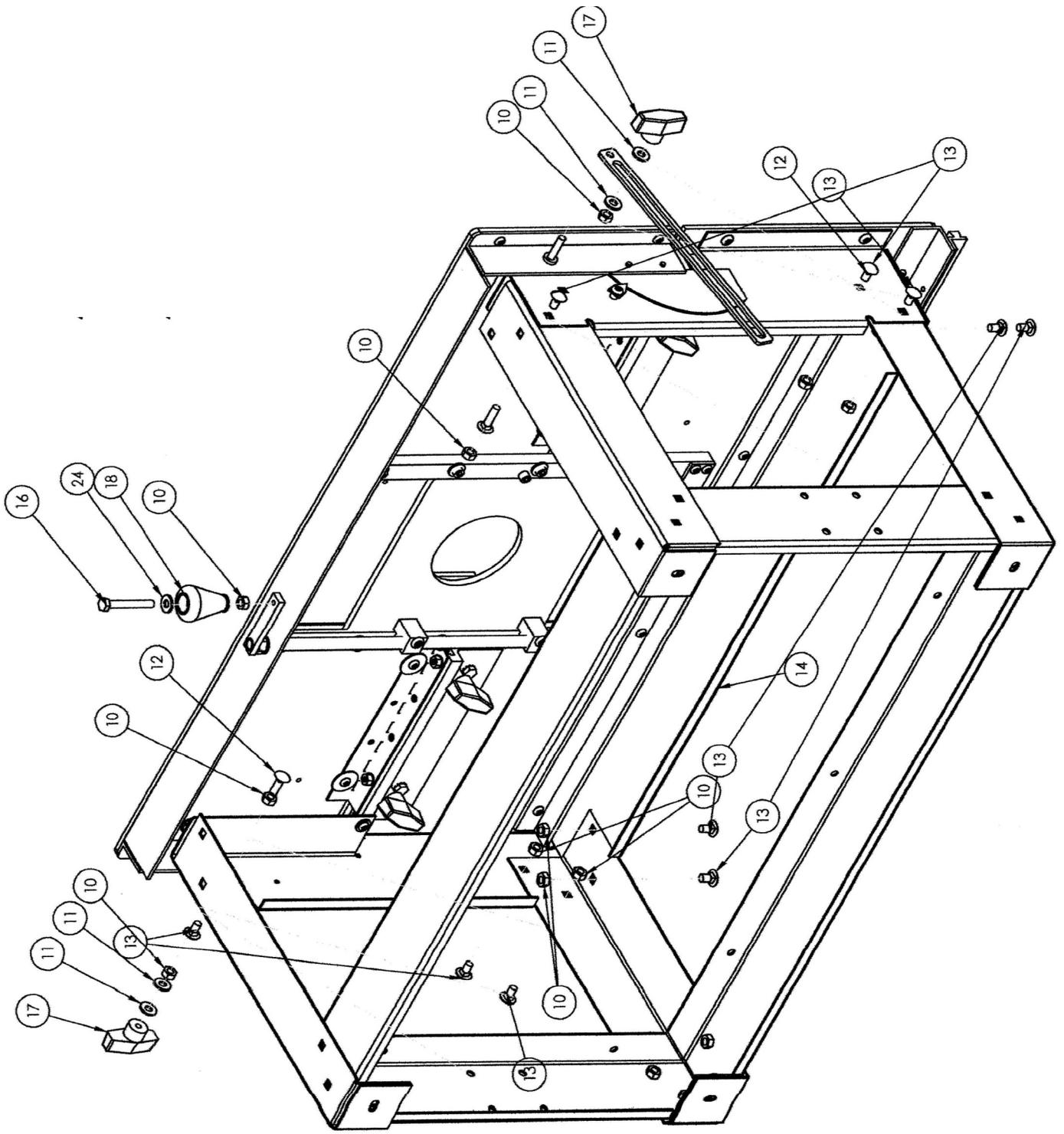
Figure 21. Stationary caster

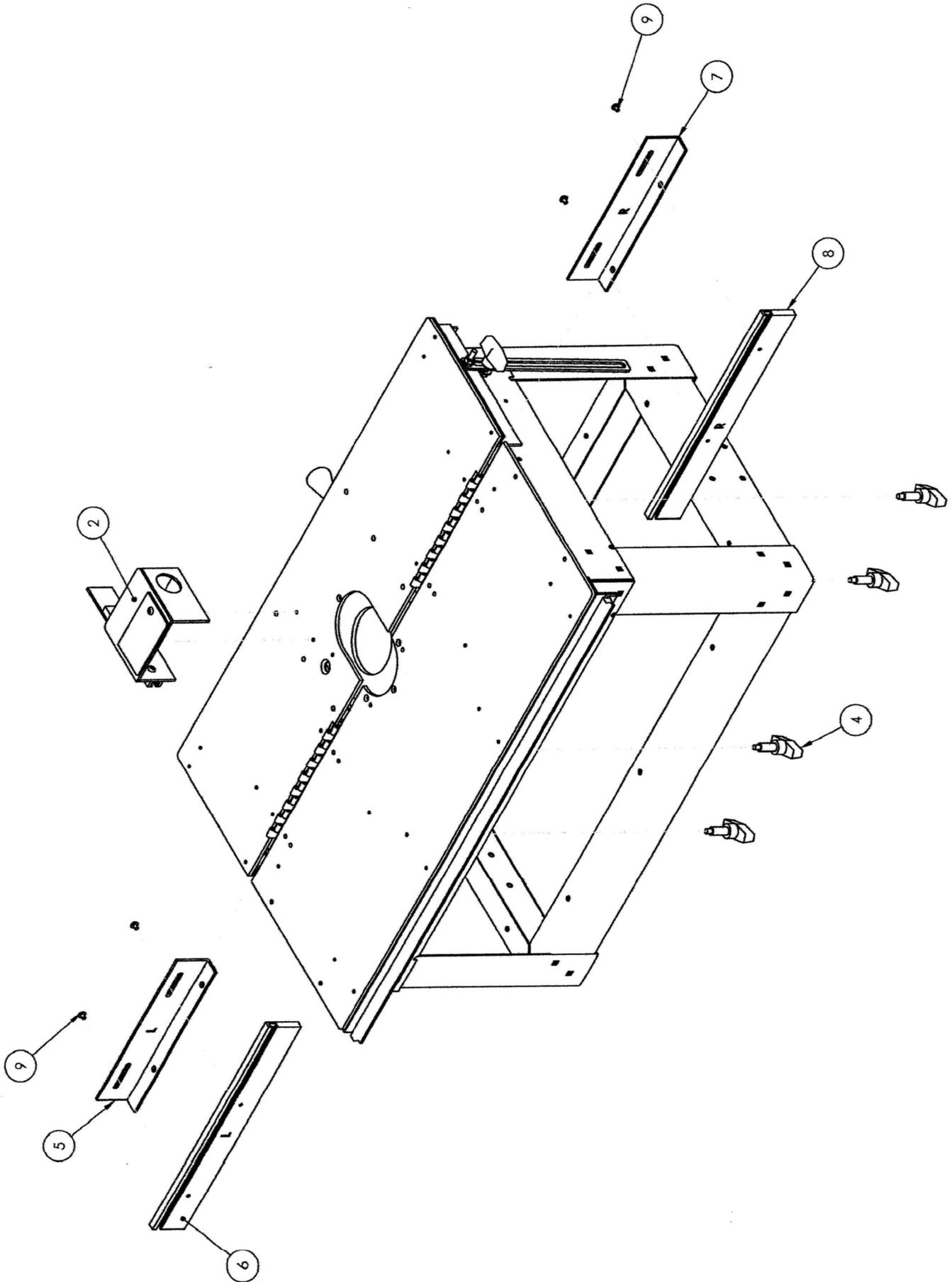
# Main Assembly Parts List

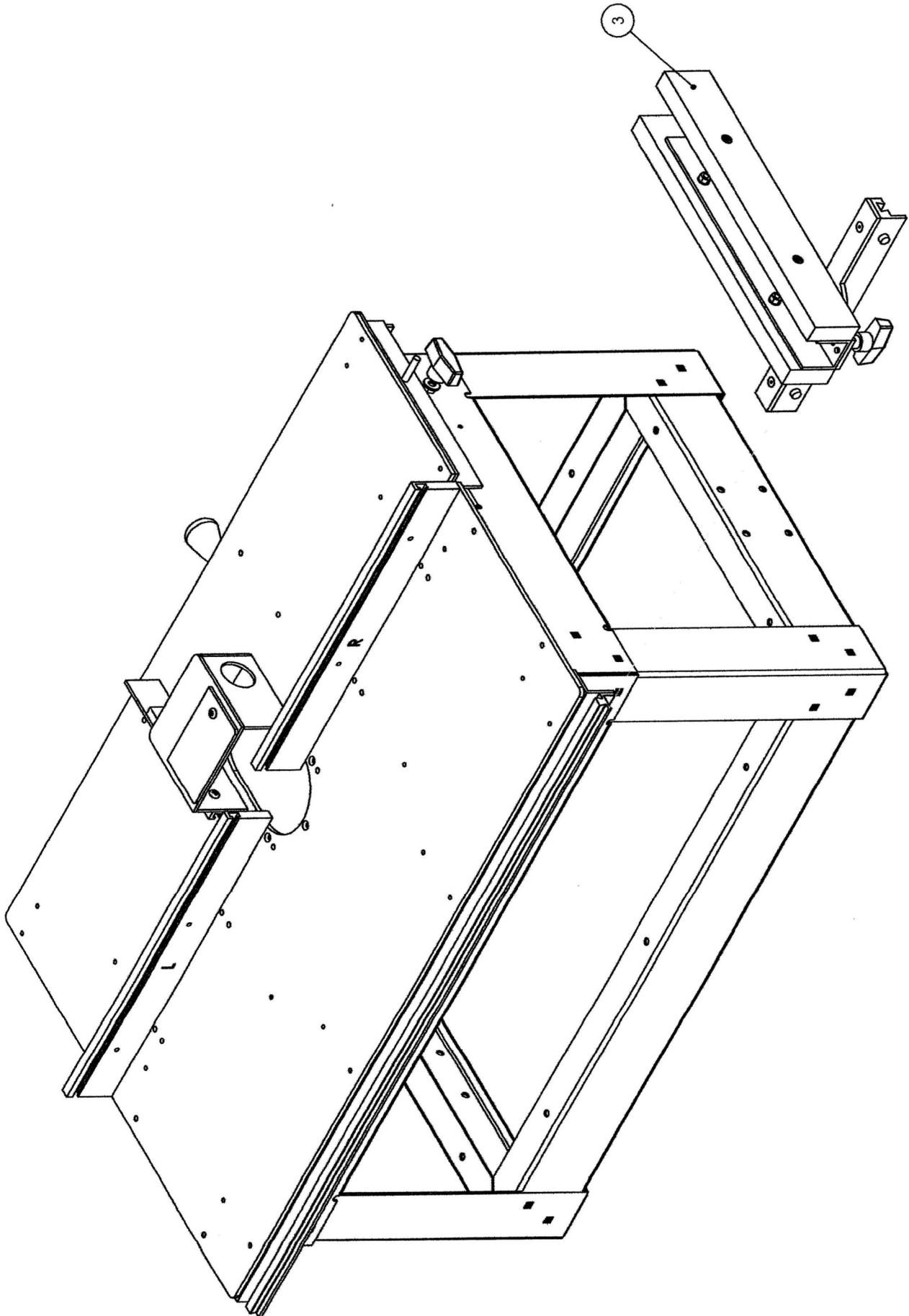
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	965-0045	TABLE SUB-ASSEMBLY
2	1	965-0050	CHIP COLLECTOR SUB-ASSY.
3	1	965-0055	MITRE ASSY.
4	4	965-0060	KNOB ASSY.
5	1	692-0004	TABLE FENCE BRACKET, LEFT
6	1	693-0001	TABLE FENCE, LEFT
7	1	692-0007	TABLE FENCE BRACKET, RIGHT
8	1	693-0005	TABLE FENCE, RIGHT
9	4	755-0075	#10-32 X .25" LG. TRUSS HEAD SCREW
10	15	750-0208	1/4"-20 NUT
11	4	745-0177	1/4" FLAT WASHTER
12	2	755-0100	1/4"-20 X 1" LG. CARRIAGE BOLT
13	10	755-0095	1/4"-20 X .5" LG. CARRIAGE BOLT
14	1	629-0105	FRAME, FRONT, RS-29
15	1	945-0005	34" LEG ASSEMBLY table legs shown 945-0000
16	1	709-0133	1/4"-20 X 2" LG. HEX BOLT
17	2	715-0111	KNOB, T-HANDLE, 1/4"-20 FEMALE THREAD
18	2	715-0113	CRANK HANDLE KNOB, 1/4" DIA. THRU
19	1	945-0005	34" LEG ASSEMBLY
20	5	755-0020	#8-32 x .375" LG. FLAT HEAD
21	1	765-0500	ZERO CLEARANCE INSERT TABLE 1
22	1	329-0100	VACUUM HOSE
23	1	965-0080	ROUTER CENTERING TOOL
24	1	755-0105	1/4" SAE FLAT WASHER
25	1	865-0221	PUSH BLOCK
26	1	865-0972	PUSH STICK
27	1	765-0505	ZERO CLEARANCE INSERT TABLE 2

## 945-0005 34" Leg Assembly

QTY.	PART NO.	DESCRIPTION
4	629-2145	RouterSHOP Leg
4	629-1110	RouterSHOP Front/Rear Brace
4	629-1140	RouterSHOP Side Brace
42	750-0208	1/4-20 Hex Nut
42	755-0095	1/4-20 x 5/8" Long Carriage Bolt

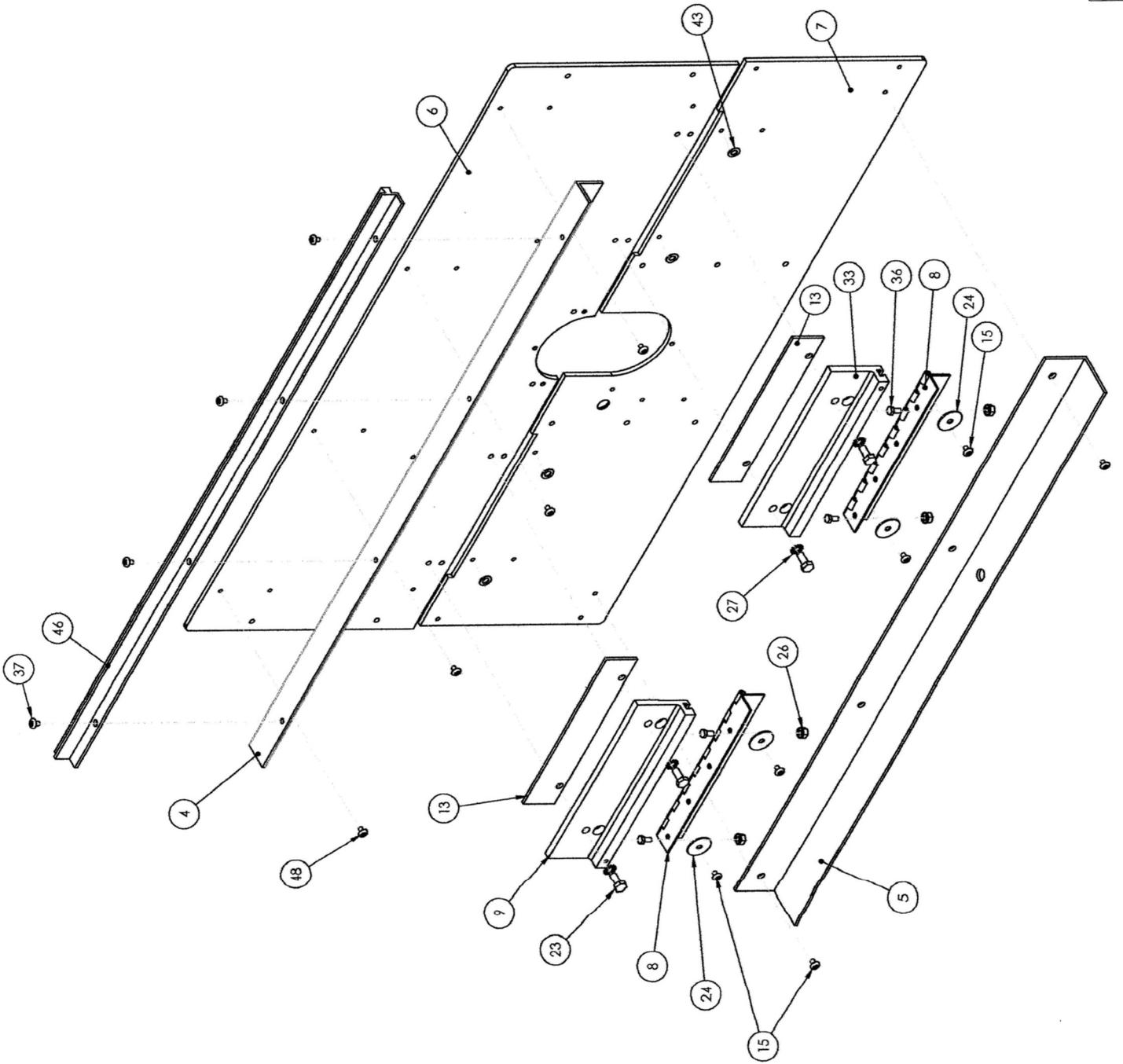


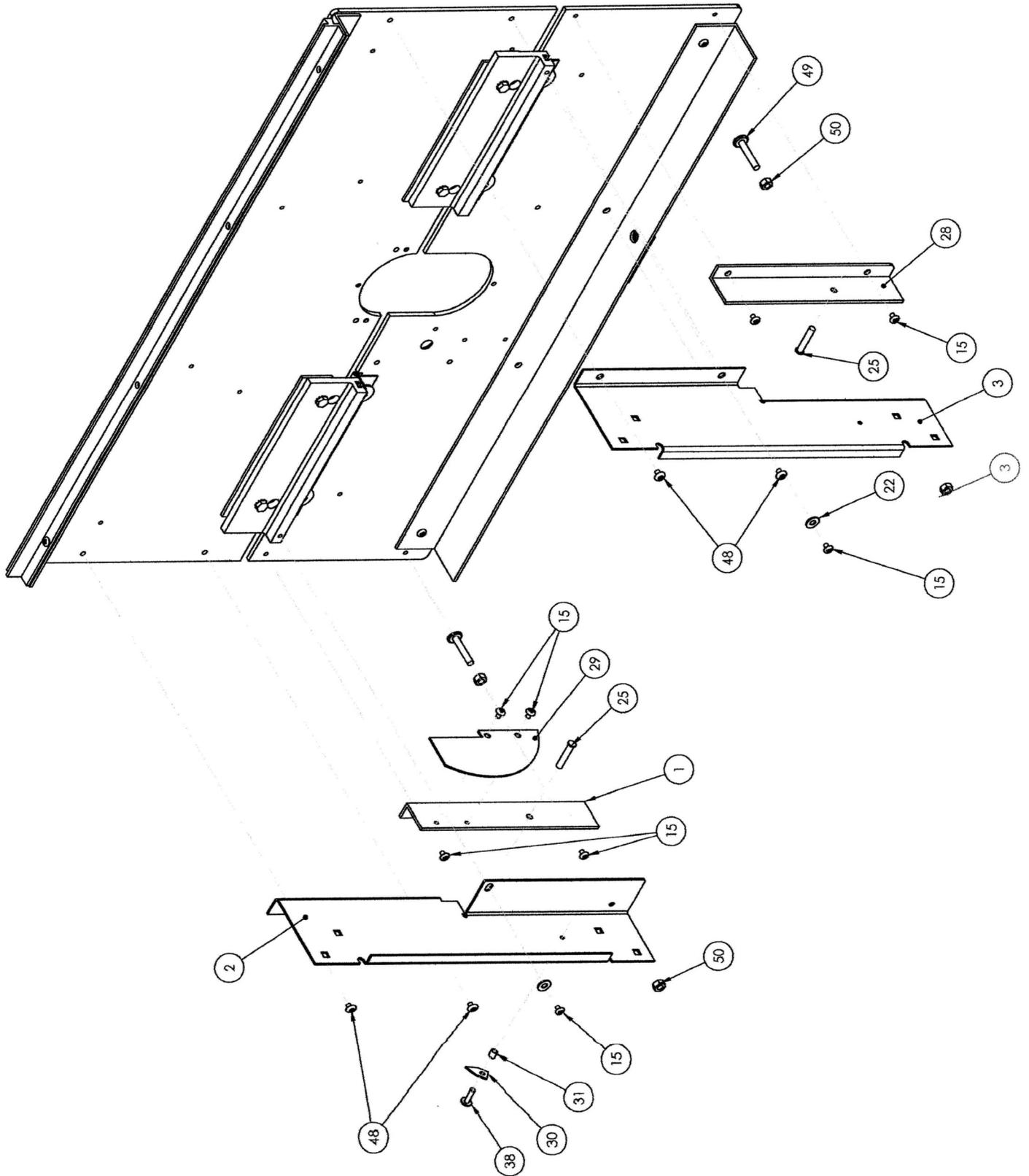


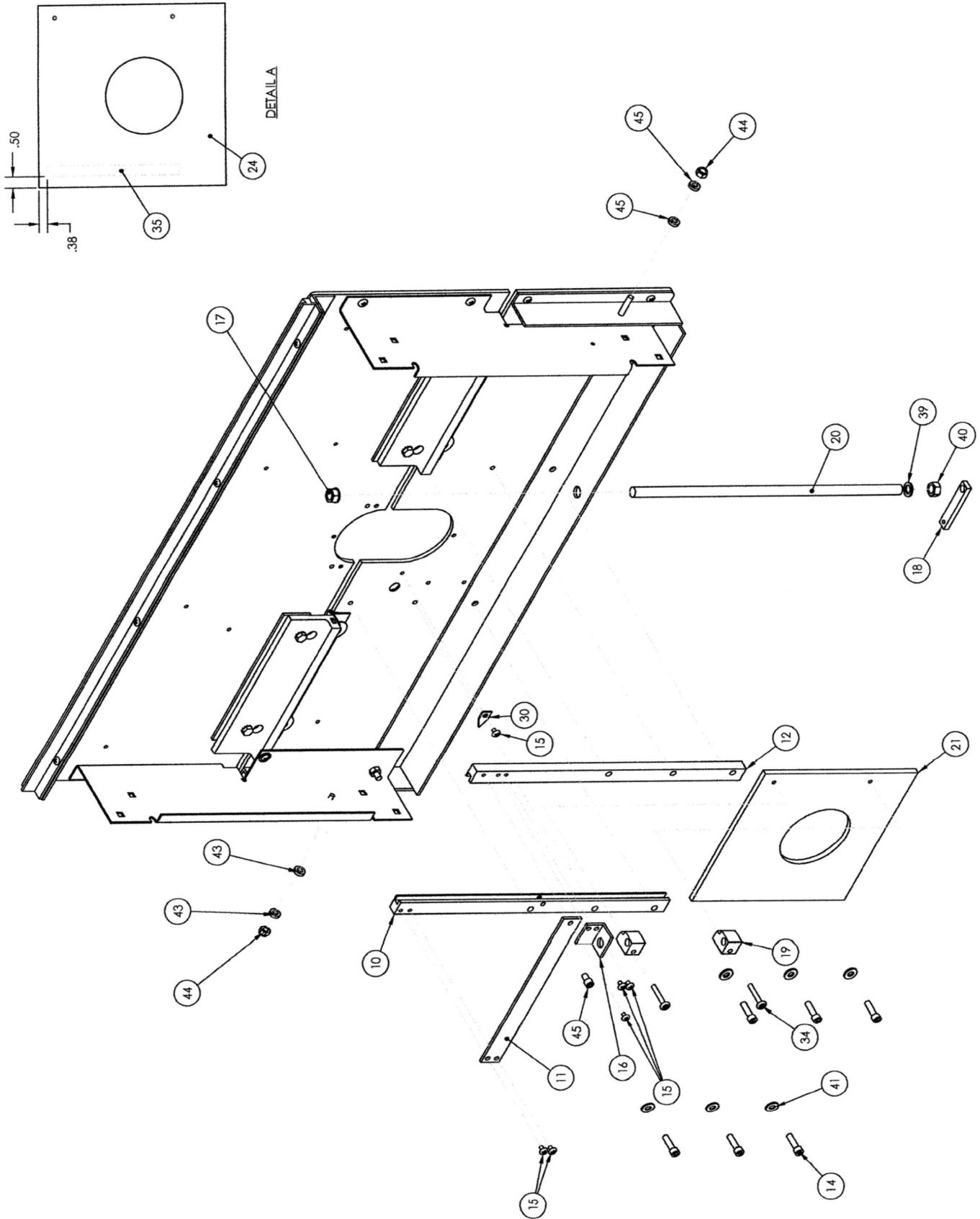


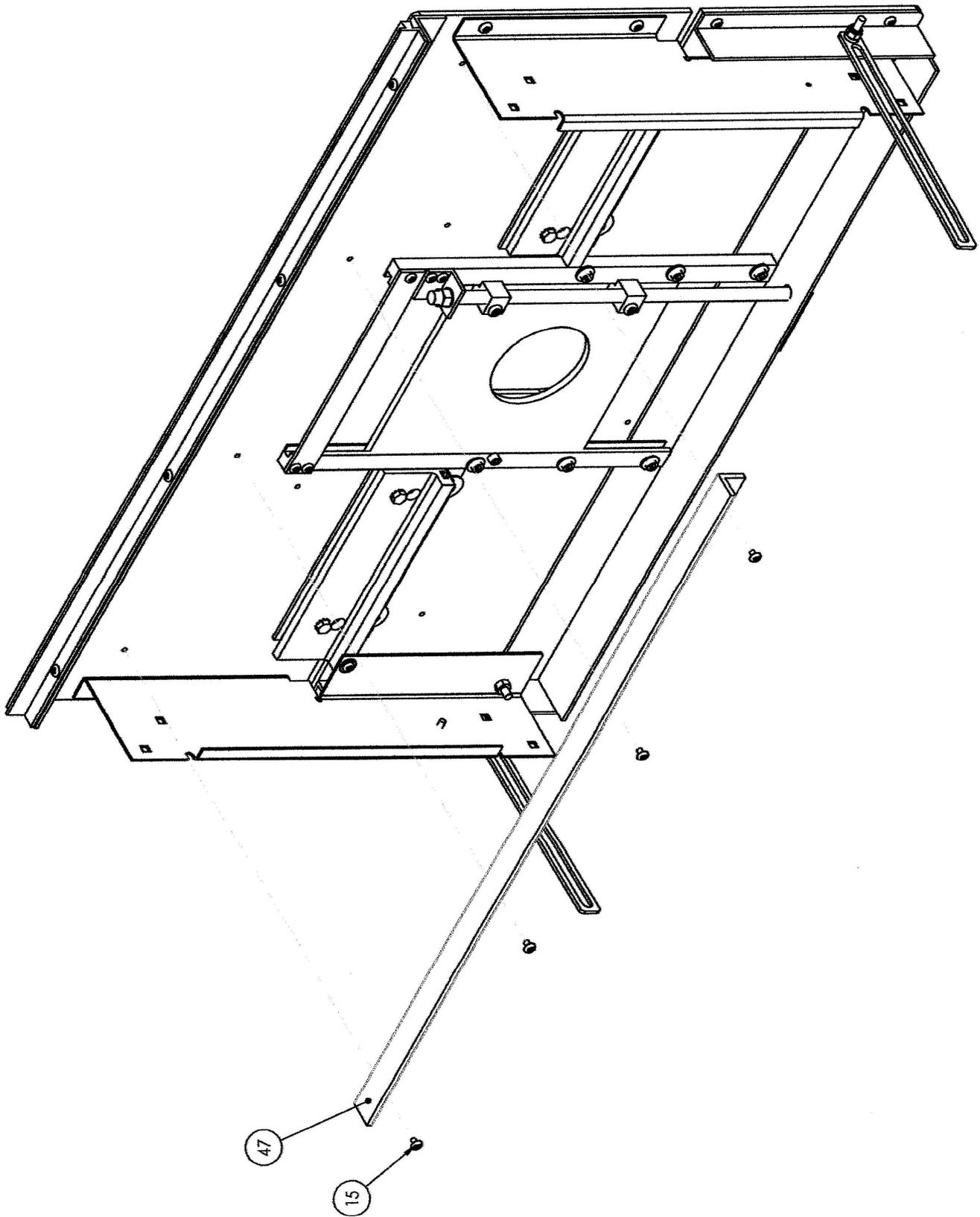
## Table Sub-Assembly Parts List

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	692-0001	S-29 Rr. TABLE SIDE RAIL, RIGHT
2	1	629-0085	FRAME SIDE, LEFT
3	1	629-0095	FRAME SIDE, RIGHT
4	1	629-0040	L-BRACKET S-29 MITRE
5	1	692-0002	Rr. TABLE - Rr. RAIL
6	1	665-0535	TABLE, FRONT, RS-29
7	1	665-0530	TABLE, REAR, RS-29
8	2	629-0120	HINGE, REVERSED
9	1	693-0004	HINGE BRACKET, LEFT
10	1	693-0003	CARRIAGE PLATE GUIDE, LEFT
11	1	691-0011	GUIDE PLATE BRACE
12	1	693-0002	CARRIAGE PLATE GUIDE, RIGHT
13	2	691-0012	SUBTABLE SPACER, RS-29
14	6	707-6010	1/4"-20 X 7/8" LG. SOCKET HEAD CAP SCREW
15	26	755-0025	#10-32 X 5/16" LG. TRUSS HEAD PHILLIPS SCREW
16	1	692-0005	L-BRACKET
17	1	770-0051	3/8"-16 LOCK NUT
18	1	629-0075	CRANK ARM
19	2	765-0515	THREADED RECIEVER BLOCK
20	1	626-0047	3/8"-16 THREADED ROD
21	1	765-0510	CARRIAGE PLATE
22	2	755-0045	3/16" FLAT WASHER
23	4	735-0001	1/4"-20 X 5/8" LG. HEX BOLT
24	4	755-0050	3/16" X 1" FENDER WASHER
25	2	715-0108	1/4"-20 X 3/4" SELF CLINCH STUD
26	4	755-0055	#10-32 LOCK NUT
27	4	755-0110	1/4" LOCK WASHER
28	1	692-0006	S-29 Rr. TABLE SIDE RAIL, LEFT
29	1	702-0041	DRILLED PROTRACTOR
30	2	629-0125	POINTER
31	1	715-0800	#10 X .250" SPACER
32	4	715-0801	1/4" I.D. X .115" LG. SPACER
33	1	693-0006	HINGE BRACKET, RIGHT
34	2	755-0090	#10-32 X 1 1/4 FLAT HEAD PHILLIPS SCREW
35	1	602-0041	DECAL, TAPE MEASURE
36	4	755-0160	#10-32 X 3/8" HEX BOLT
37	4	755-0075	#10-32 X 1/4 LG. TRUSS HEAD PHILLIPS SCREW
38	1	755-0085	#10-32 X 5/8 LG. TRUSS HEAD PHILLIPS SCREW
39	1	755-0135	3/8" FLAT WASHER
40	1	770-0058	3/8"-16 NUT
41	6	745-0177	1/4" FLAT WASHER
42	2	729-0060	SLIDE
43	8	755-0175	1/4" NYLON WASHER
44	2	755-0145	1/4"-20 JAM NUT
45	1	755-0170	1/4"-20 X .375 NYLON SOCKET HEAD CAP SCREW
46	1	629-0045	MALE DOVE TAIL, MITRE
47	1	692-0003	L-BRACKET
48	8	715-0106	1/4-20 X 1/4" LG. TRUSS HEAD PHILLIPS SCREW
49	2	705-0059	1/4-20", GLIDE
50	4	750-0208	1/4-20 HEX NUT

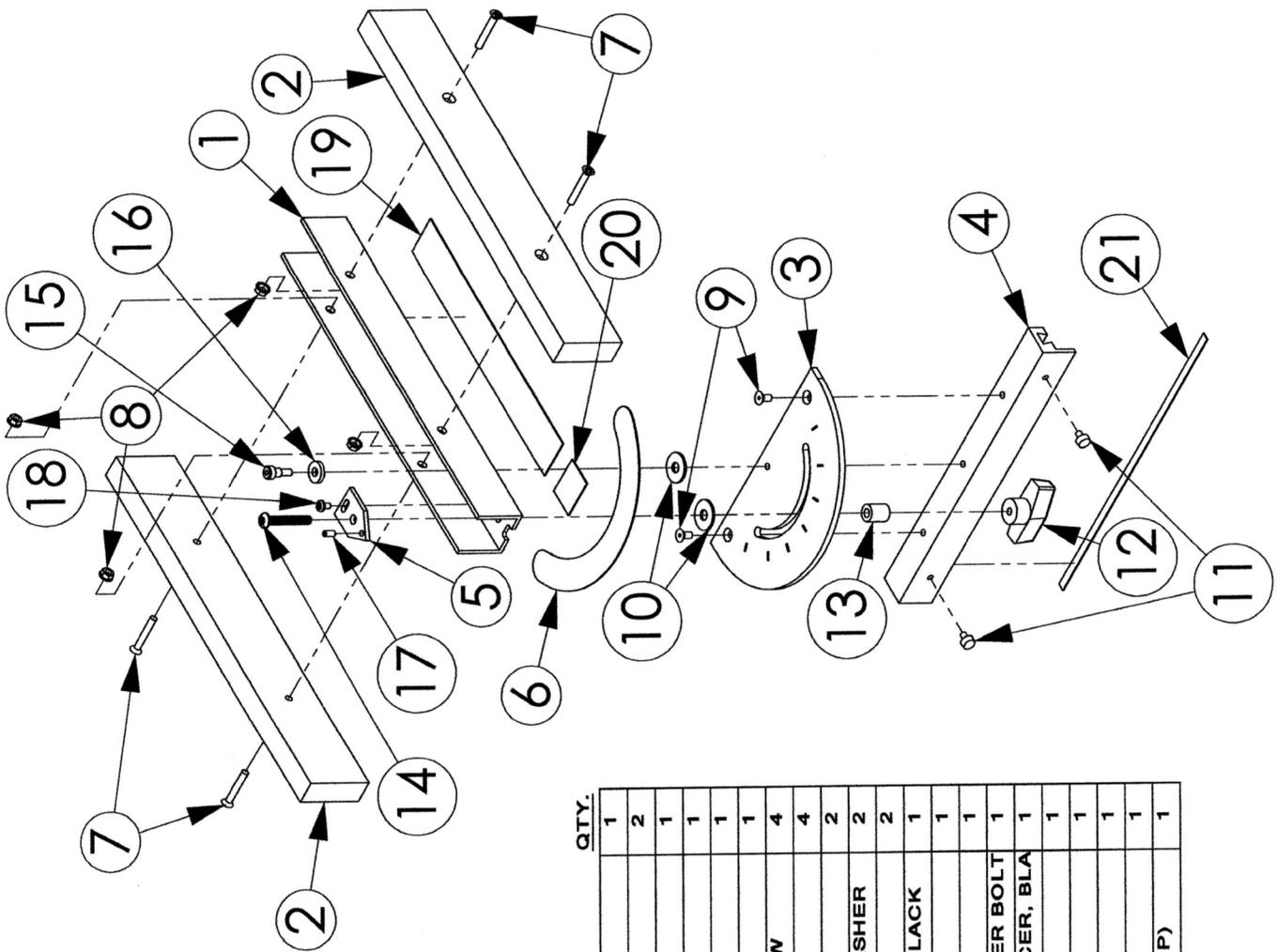






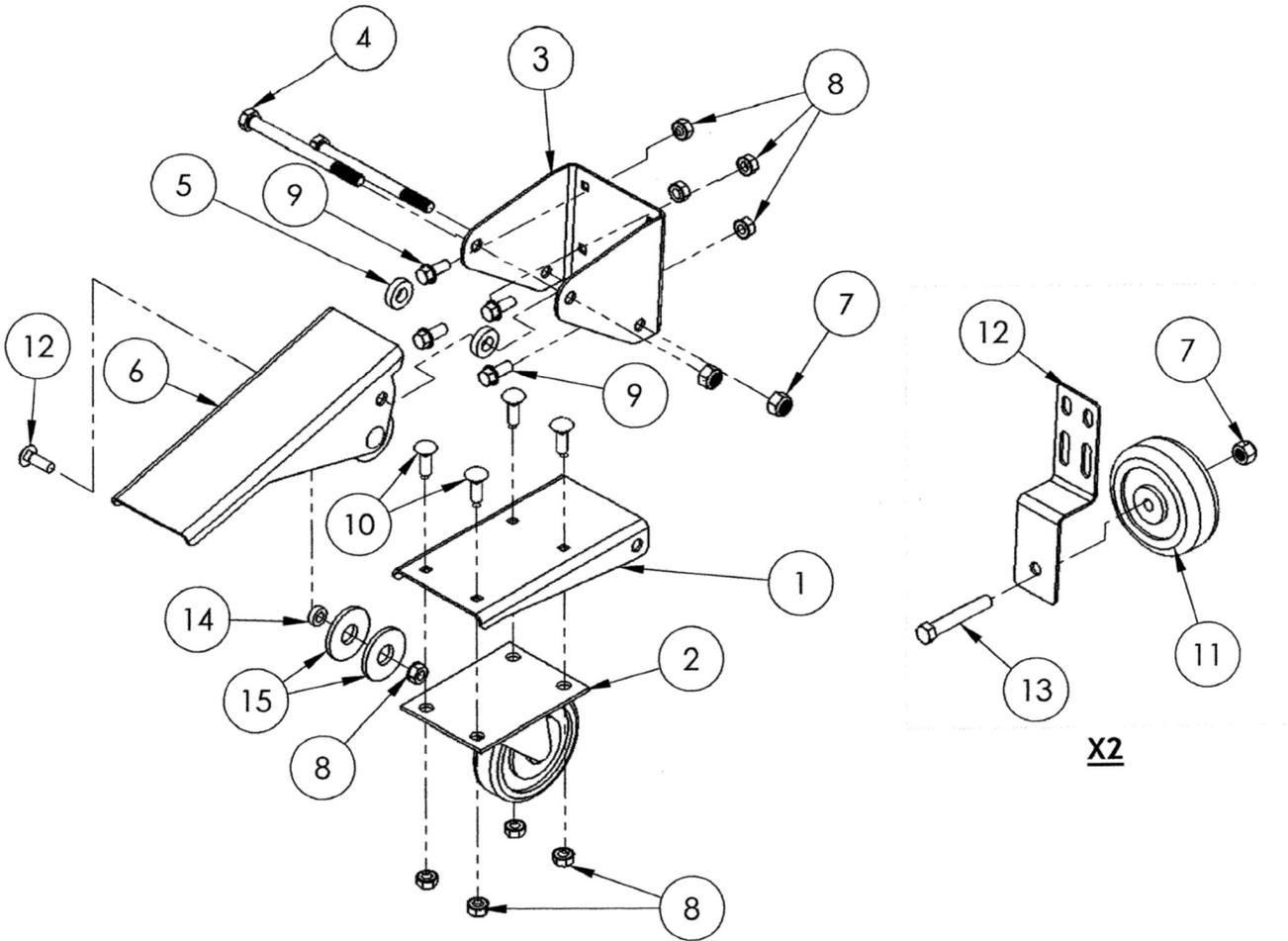


# MITER GUAGE ASSEMBLY | 965-0057



KEY NO.	PART NO.	DESCRIPTION	QTY.
1	629-0033	MITER BODY	1
2	629-0015	MDF MITER FENCE FACE	2
3	629-0445	SLIDING MITER	1
4	629-0013	FEMALE DOVETAIL TRACK, MITER	1
5	629-0188	MITER POINTER	1
6	702-0055	MITER GUAGE LABEL	1
7	755-0040	#10-32 X 1-1/4" LG. TAPERED HEAD SCREW	4
8	755-0055	#10-32 KEPS NUT	4
9	755-0030	#10-32 X 3/8" LG. TAPERED HEAD SCREW	2
10	715-0103	5/16" ID X 7/8" OD X 1/16" THK. NYLON WASHER	2
11	735-0003	#8-32 X 3/8" NYLON THUMB SCREW	2
12	705-1037	1/4-20 X 3/4" DEEP THREADED, T-KNOB, BLACK	1
13	715-0105	1/4" ID X 1/2" X 5/8" THK NYLON SPACER	1
14	705-0104	1/4-20 X 1-1/2" LG. BUTTON HEAD	1
15	715-0066	1/4" X 1/4" LG. (#10-24 X 3/8" LG.) SHOULDER BOLT	1
16	715-0801	1/4" ID X 5/8" OD X .115 THK. NYLON SPACER, BLA	1
17	715-0067	#8-32 BALL PLUNGER	1
18	755-0025	#8-32 X 1/4" LG. PHILLIPS TRUSS HEAD	1
19	690-1143	WEAR STRIP (1" WIDE X 9" LONG STRIP)	1
20	690-1144	WEAR STRIP (1" WIDE X 1" LONG STRIP)	1
21	690-1145	WEAR STRIP (1/4" WIDE X 10" LONG STRIP)	1

# ROUTERSHOP CASTER KIT | 940-9551



KEY NO.	PART NO.	DESCRIPTION	QTY.
1	765-0541	LOWER ARM, CASTER	1
2	765-0545	3" SWIVEL CASTER WHEEL	1
3	765-0543	MOUNTING BRACKET, CASTER	1
4	770-0183	HEX HEAD BOLT 5/16-18 X 3-3/4"	2
5	765-0547	3/8" ID X 3/4" OD X .200" THK NYLON BUSHING	2
6	765-0542	UPPER ARM, CASTER	1
7	715-0079	5/16-18 NYLON INS. LOCK NUT	4
8	745-0223	1/4-20 WHIZ NUT	10
9	715-0902	1/4-20 X 5/8" HEX HEAD WHIZ BOLT	4
10	745-0099	1/4-20 X 5/8" CARRIAGE BOLT	6
11	765-0546	3" OD X 5/16" ID AXLE CASTER WHEEL	2
12	765-0544	SMALL CASTER WHEEL BRACKET	2
13	750-0203	5/16-18 X 2" HEX HEAD BOLT	2
14	705-0118	1/4" ID, 1/2" OD, 3/16" LG. NYLON SPACER	2
15	750-0004	1-3/8" OD X 17/32" ID X 1/8" THK. NYLON WASH	4