

Save This Manual
For Future Reference

SEARS

**owners
manual**

**MODEL NO.
171.254230**

CAUTION:
READ ALL
INSTRUCTIONS
CAREFULLY



CRAFTSMAN

**BIS-KIT SYSTEM
PLATE/EDGE JOINER**

- **assembly**
- **operating**

NOT RECOMMENDED FOR USE WITH
MODEL No. 315-17445 ROUTER

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.

WARNING: FAILURE TO HEED ALL SAFETY AND OPERATING INSTRUCTIONS AND WARNINGS REGARDING USE OF THIS PRODUCT CAN RESULT IN SERIOUS BODILY INJURY.

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

- 1. KNOW YOUR POWER TOOL**
Read the owner's manual carefully. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.
- 2. GROUND ALL TOOLS (UNLESS DOUBLE INSULATED)**
If tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal.
- 3. KEEP GUARDS IN PLACE**
in working order, and in proper adjustment and alignment.
- 4. REMOVE ADJUSTING KEYS AND WRENCHES**
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- 5. KEEP WORK AREA CLEAN**
Cluttered areas and benches invite accidents. Floor must not be slippery due to wax or sawdust.
- 6. AVOID DANGEROUS ENVIRONMENT**
Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lighted. Provide adequate surrounding work space.
- 7. KEEP CHILDREN AWAY**
All visitors should be kept a safe distance from work area.
- 8. MAKE WORKSHOP KID-PROOF**
– with padlocks, master switches, or by removing starter keys.
- 9. DON'T FORCE TOOL**
It will do the job better and safer at the rate for which it was designed.
- 10. USE RIGHT TOOL**
Don't force tool or attachment to do a job it was not designed for.
- 11. WEAR RIGHT APPAREL**
Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches) to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.
- 12. USE SAFETY GOGGLES (Head Protection)**
Wear Safety goggles (must comply with ANS Z87.1) at all times. Also, use face or dust mask if cutting operation is dusty, and ear protectors (plugs or muffs) during extended periods of operation.
- 13. SECURE WORK**
Use clamps or a vise to hold work when practical. It's safer than using your hand, frees both hands to operate tool.
- 14. DON'T OVERREACH**
Keep proper footing and balance at all times.
- 15. MAINTAIN TOOLS WITH CARE**
Keeps tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 16. DISCONNECT TOOLS**
before servicing; when changing accessories such as blades, bits, cutters, etc.
- 17. AVOID ACCIDENTAL STARTING**
Make sure switch is in "OFF" position before plugging in.
- 18. USE RECOMMENDED ACCESSORIES**
Consult the owner's manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.
- 19. NEVER STAND ON TOOL**
Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

Do not store materials above or near the tool such that it is necessary to stand on the tool to reach them.
- 20. CHECK DAMAGED PARTS**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 21. DIRECTION OF FEED**
Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
- 22. NEVER LEAVE TOOL RUNNING UNATTENDED**
Turn power off. Don't leave tool until it comes to a complete stop.

ADDITIONAL SAFETY INSTRUCTIONS FOR YOUR BIS-KIT SYSTEM PLATE/EDGE JOINER

1. ALWAYS USE EYE PROTECTION

The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z87.1 before commencing power tool operation.

2. KEEP HANDS AWAY FROM THE CUTTER AND THE CUTTING AREA

Never place your hands in the area of the cutter for any reason when the router is plugged in to an electrical power supply.

3. KEEP ROUTER CLEAN

After every use, clean sawdust off the router (also blow out inside).

4. ALWAYS FEED AGAINST THE CUTTER ROTATION

5. DO NOT REACH UNDERNEATH WORKPIECE WHILE CUTTER IS ROTATING. THE CUTTER COASTS AFTER ROUTER IS TURNED OFF.

6. CHECK SLIDE MECHANISM OF BASE AND CARRIAGE AFTER EACH USE.

Do not operate unit if base does not return briskly to its normal position and the cutter is completely concealed inside carriage. Keep slide mechanism free of sawdust and the wood chips.

7. Never turn the router "ON" when the cutter is touching the workpiece.

8. WARNING: Always turn "OFF" the router switch and disconnect the power cord when installing the cutter and/or adjusting your router's depth of cut.

9. AVOID CUTTING NAILS AND KNOTS

Check and remove all nails from workpiece before cutting. Try to layout cuts between knots.

INTRODUCTION

For many years woodworkers have used dowels, and other techniques for assembling critical joints. These have been good systems, but often frustrating because alignment has to be perfect or the pieces just won't go together.

Your craftsman plate/edge joiner accessory when used with your router eliminates much of the layout and cutting operations associated with traditional joining systems such as dowels, dovetails, tongue-and-groove, spline, etc. used in most projects.

Biscuit joints are stronger, faster and also forgiving because minor corrections can be made before clamping. They are great for joining plywood and particle board.

UNPACKING AND CHECKING CONTENTS

In order to facilitate handling and minimize any damage that might occur during shipment, your new Bis-Kit System accessory is packaged un-assembled. Start by separating all the parts from packaging materials and check each one against the parts list on page 10 to be sure all parts are there.

ASSEMBLY – BIS-KIT SYSTEM

WARNING: You must read and understand all the instructions of your Plate/Edge Joiner as well as your Router owner's manual before attempting to assemble and to operate this product.

BASE AND CARRIAGE ASSEMBLY

1. Assemble base to carriage as shown in fig. 1.

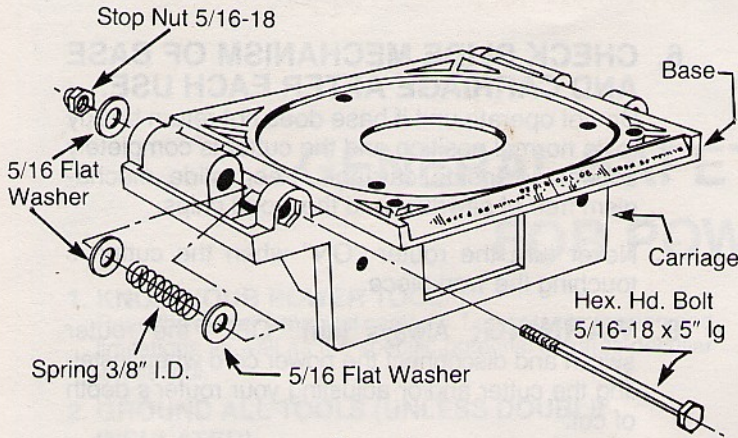


Figure 1

2. Install hex head bolt in carriage recess. Tighten the 5/6"-18 stop nut until it is just snug against the flat washer (over tightening of stop nut can result in a binding action between the base and carriage).
3. Install second bolt as above.
4. While holding the carriage, slide the base forward and release making sure that motion is free and the springs return the base to original position.

INDEXING ASSEMBLY

1. Invert assembly upside down as shown in fig. 2 (The tab with biscuit sizes '0', '10', '20' engraved on the flats will be protruding through the slot in the carriage).

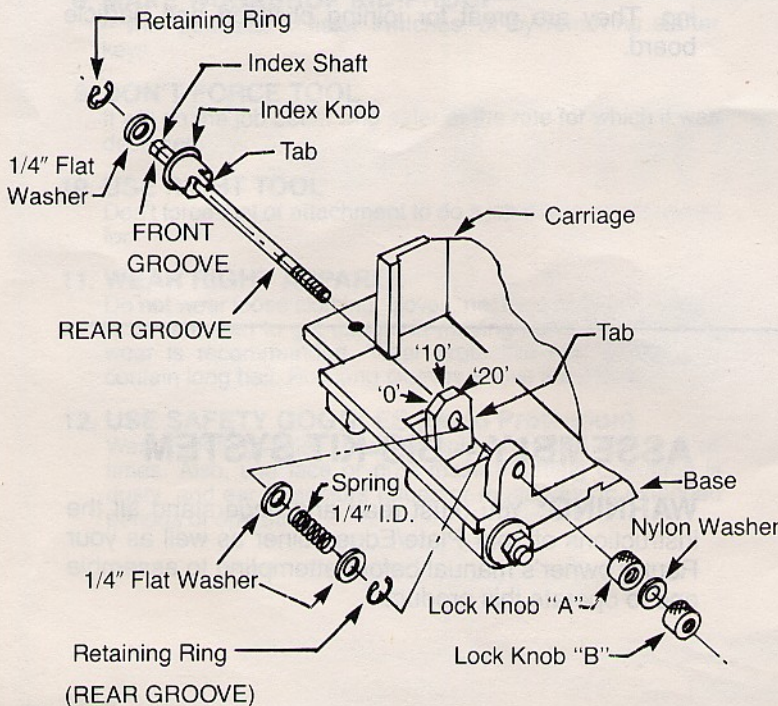


Figure 2

2. Install a retaining ring in groove near the front of index shaft and then assemble as shown in fig. #2.

3. Rotate index knob until tab on index knob is seated in the slot marked for #20 biscuit.
4. Adjust lock knob 'A' until gap between lock knob 'A' and the hub on carriage is approximately 3/4" as shown in fig. # 3. Hold lock knob 'A' and turn lock knob 'B' clockwise to lock against 'A'.

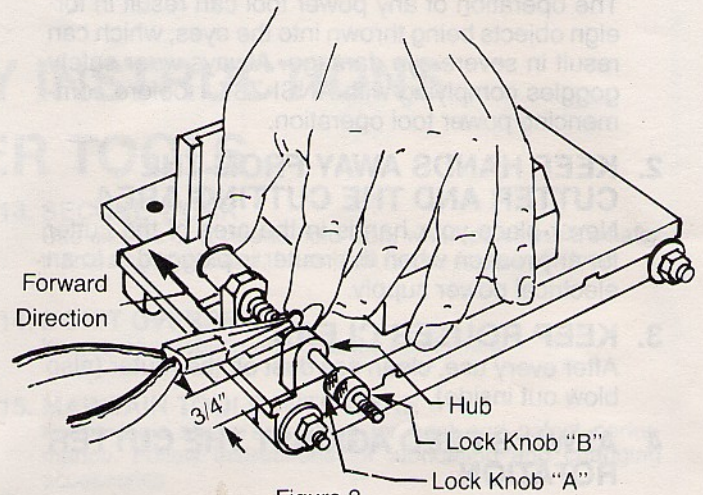


Figure 3

5. To change depth of slot required for biscuit sizes '0' and '10' simply pull index knob forward, rotate and release tab in the desired slot.

ARBOR AND CUTTER ASSEMBLY AND SECURING IN ROUTER CHUCK

WARNING: Unplug router from electrical source.

1. Assemble cutter to the arbor as shown in fig. #4. Make sure that surface of the cutter with directional arrow is on top.

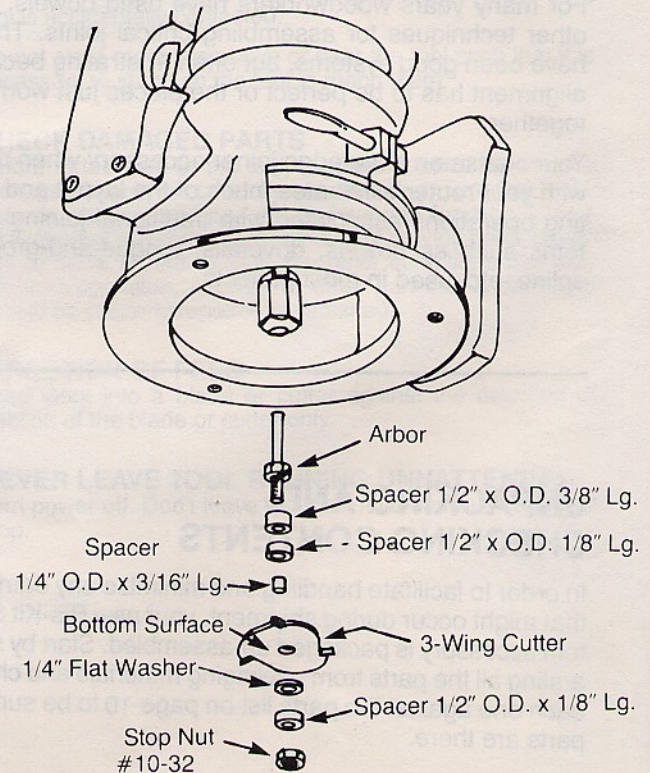


Figure 4

WARNING: Improper assembly can result in damage to the cutter and marring of workpiece.

2. Firmly secure the arbor of cutter in the router chuck (see router owner's manual).

WARNING: A minimum of 7/8" length of the arbor must be secured in the router chuck.

MOUNTING ROUTER TO BIS-KIT SYSTEM

WARNING: Always unplug router from electrical source before installing on Plate/Edge Joiner.

(The Plate/Edge Joiner will accept most Sears Routers with 6" dia. base and with 3 hole base plate).

1. Set router upside down on the worktable and remove the router base plate (black plate) from the router by removing 3 screws.
2. By using three #10-32 x 1/2" lg. flat hd. screws (supplied), assemble router to the base as shown in fig. 5 (it will be helpful if you orient the router such that the on-off switch is in your right hand during operation).

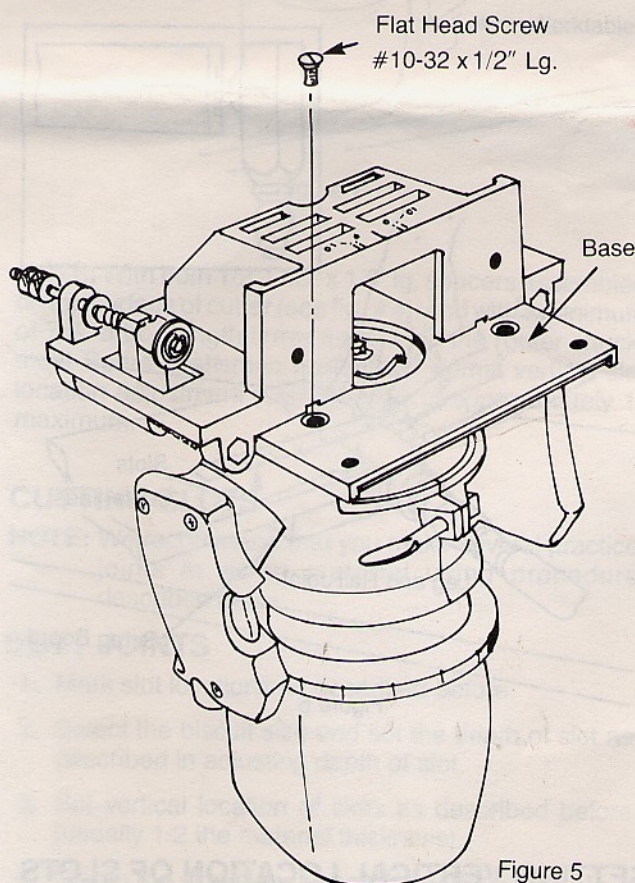


Figure 5

NOTE: Slide carriage backward to gain full access to the mounting holes in the base.

OPERATING INSTRUCTIONS

Your Sears Craftsman Bis-Kit Plate/Edge Joiner System is designed for making slots for Sears Craftsman and other standard #0, #10, and #20 biscuits used in making various types of strong, accurate wood glue joints.

SELECTING THE BISCUIT

Kiln-dried hardwood biscuits are approx. 5/32" thick and available in three sizes. A mix of 24 biscuits is furnished with your Plate/Edge Joiner.

Select the largest biscuit that will accommodate the type of joint being made.

RECOMMENDATIONS:

Choose biscuit size:

- #0 (5/8" x 1-13/16") for hidden spline, miters, butt joints etc. in small, intricate furniture construction.
- #10 (13/16" x 2-1/16") for edge joints, table tops, mirror and picture frames, in all furniture construction where a strong glue joint is required.
- #20 (15/16" x 2-5/16") for joining leg to rail assembly, table top to apron and other large furniture construction, where alignment and strength are critical.

ADJUSTING DEPTH OF SLOT

CAUTION: Disconnect router from the power source. To change the depth of slot required for the three biscuit sizes '0', '10', and '20', pull the index knob forward, rotate and release tab on the index knob in the desired slot (make sure the tab is seated firmly in the slot marked for desired size biscuit).

FINE ADJUSTMENT (DEPTH OF SLOT)

The "quick change" depth of slot adjustment will provide nominal depth needed to produce good joints. A fine adjustment means is provided allowing the operator to increase or reduce the depth as desired.

TO INCREASE DEPTH:

1. Hold lock knob 'A' (fig. #3) and turn lock knob 'B' counterclockwise to unlock.
2. Turn lock knob 'A' counterclockwise.
3. Hold lock knob 'A' at desired position and turn lock knob 'B' clockwise to lock against 'A'.

TO REDUCE DEPTH:

1. Hold lock knob 'A' and turn lock knob 'B' counterclockwise to unlock.
2. Turn lock knob 'A' clockwise.
3. Hold lock knob 'A' at desired position and turn lock knob 'B' clockwise to lock against 'A'.

MARKING SLOT LOCATIONS

The number of slots (biscuits) needed for a joint depends on the strength required for the particular application. Position the workpieces to be joined next to each other in the desired position. Using a square, mark the centerline of each slot required on both pieces as shown in fig. #6.

NOTE: Mark centerlines lightly so they can be sanded off easily for finishing.

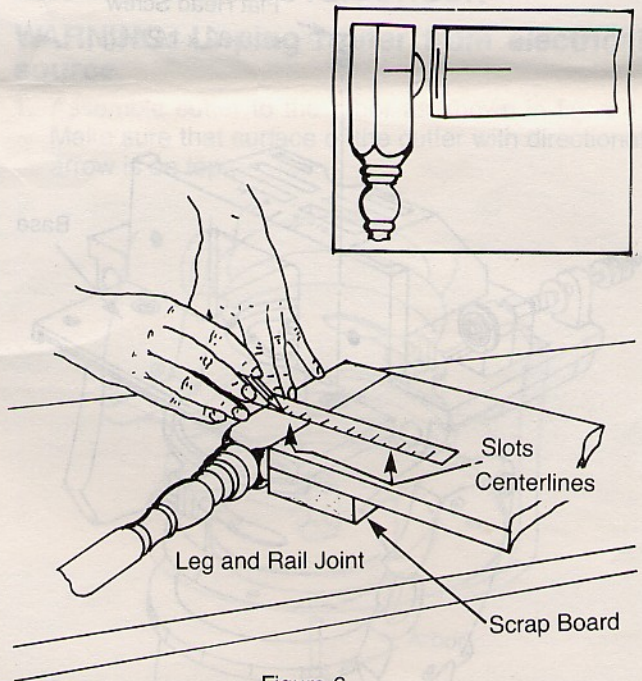
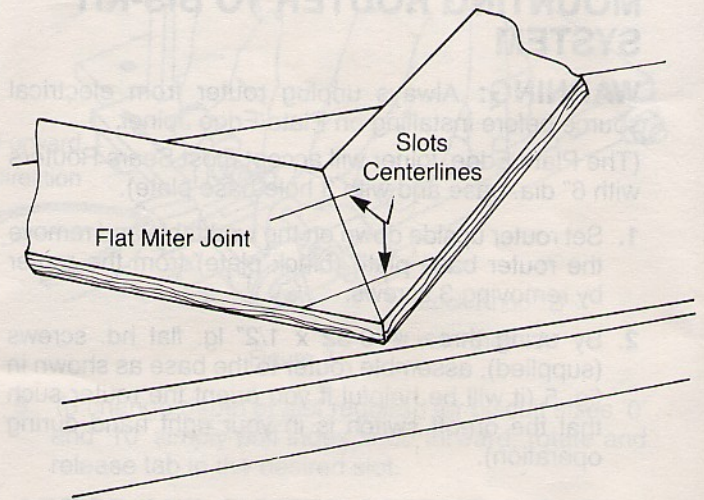
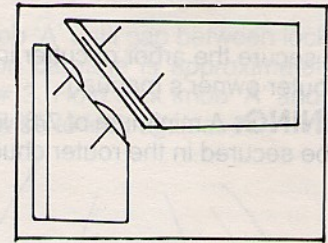
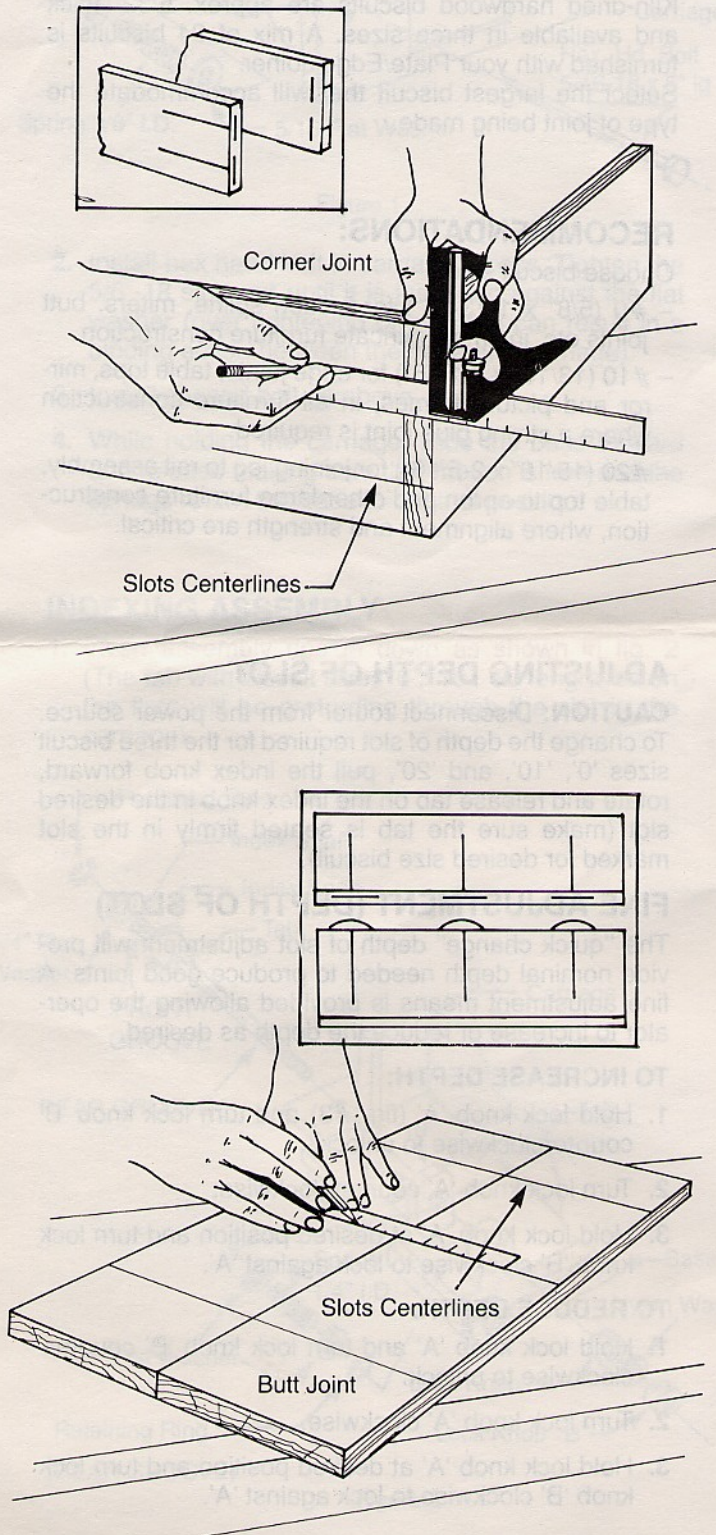


Figure 6

SETTING VERTICAL LOCATION OF SLOTS

WARNING: Unplug router from electrical source before making any height adjustments of the cutter or changing cutter.

1. Set the Plate/Edge Joiner upside down on the worktable as shown in fig. #7.

- Adjust router chuck height (see router owner's manual) until distance 'X' is equal to the desired vertical location of the slots (approximately 1/2 the material thickness).

NOTE: Slide carriage backward (fig. #7) to gain access to the cutter center.

- Firmly lock router base clamp.

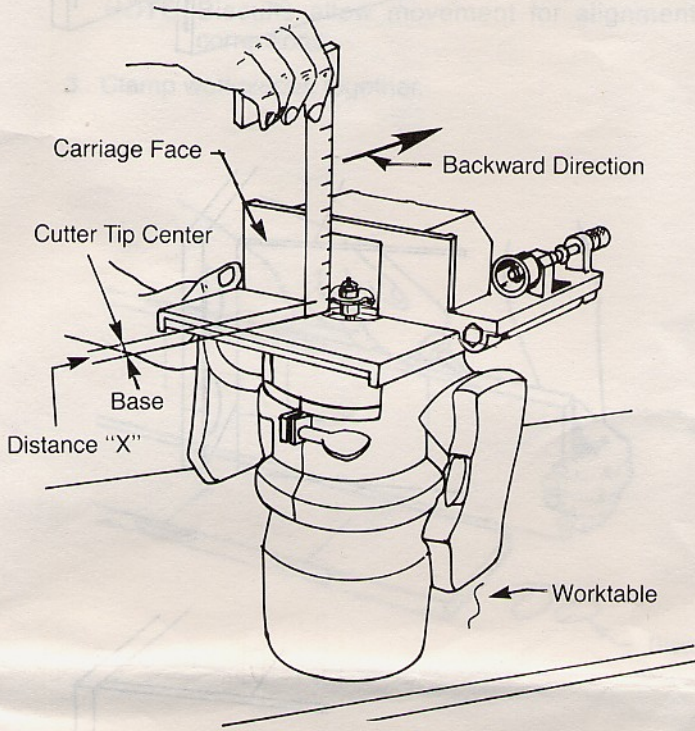


Figure 7

NOTE: With both 1/2" O.D. x 1/8" lg. spacers assembled on top surface of cutter (see fig. #4), and with a minimum of 7/8" arbor length firmly secured in the router chuck, most Sears Craftsman routers will permit vertical slot location adjustment (Distance 'X') of approximately 1" maximum.

CUTTING SLOTS

NOTE: We recommend that you make several practice joints in scrap material using procedure described below.

BUTT JOINTS

- Mark slot locations as described before.
- Select the biscuit size and set the depth of slot as described in adjusting depth of slot.
- Set vertical location of slots as described before (usually 1/2 the material thickness).
- Clamp the workpieces securely to the worktable.
- Position joiner to workpiece with bottom of base resting on workpiece, the carriage face in contact with the workpiece and the starting indexline corresponding to desired biscuit size (#20 in this case) aligned with the slot centerline. See fig. #8.

CAUTION: Do not apply any forward pressure at this point which would let cutter come in contact with the workpiece before the router is turned on.

- Hold the router firmly and the base flat on the workpiece, squeeze trigger to start the router. See fig. #8.
- At a slow and steady pace, push the base forward as far as the lock knobs allow while maintaining approximate alignment of starting indexline with the slot centerline. (Use of a guide block or hand support against the side of the base as shown in fig. #8 will help steady the forward motion).

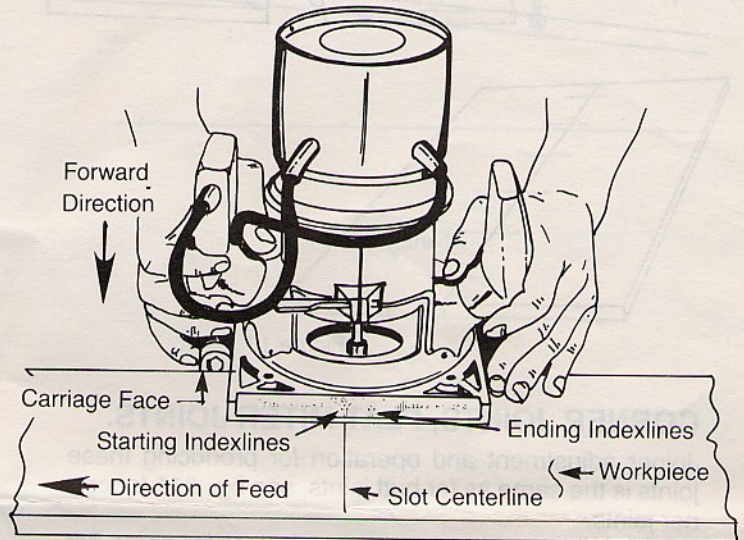


Figure 8

- While holding the base in the maximum forward position, slide the unit at a slow and steady pace in the direction shown by direction of feed arrow (against rotation of cutter) until the corresponding ending indexline (#20 in this case) is aligned with the slot centerline. See fig. #9.

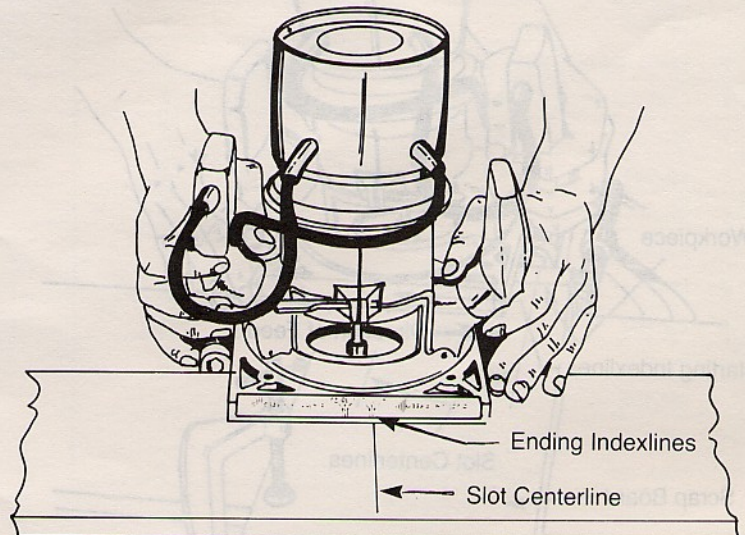


Figure 9

9. Release switch and let the router stop completely before retracting the base.
10. Repeat steps 5 through 9 for cutting all the slots needed for this joint. See fig. #10.

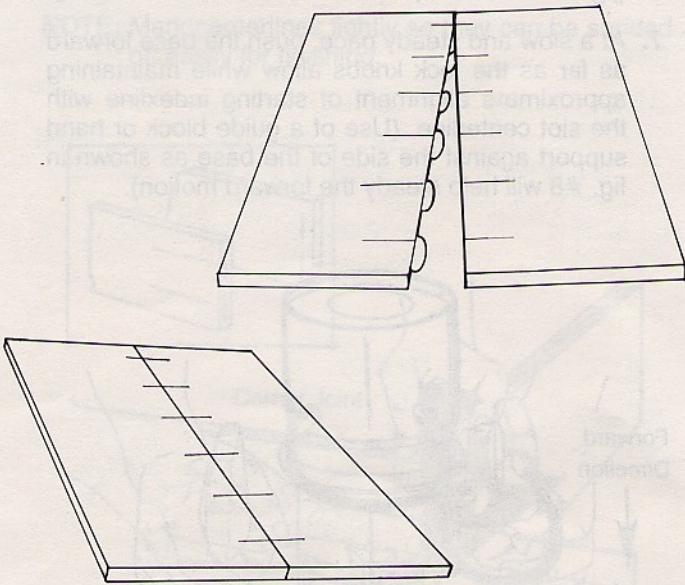


Figure 10

CORNER JOINTS, FLAT MITER JOINTS.

Joiner adjustment and operation for producing these joints is the same as for butt joints, see fig. #11 for corner joints.

NOTE: When cutting for corner joints or for some flat miter joints, secure a scrap board next to the workpiece to be cut and extend the slot centerlines.

This will provide support for the joiner base and visibility for alignment with indexlines. See fig. #11.

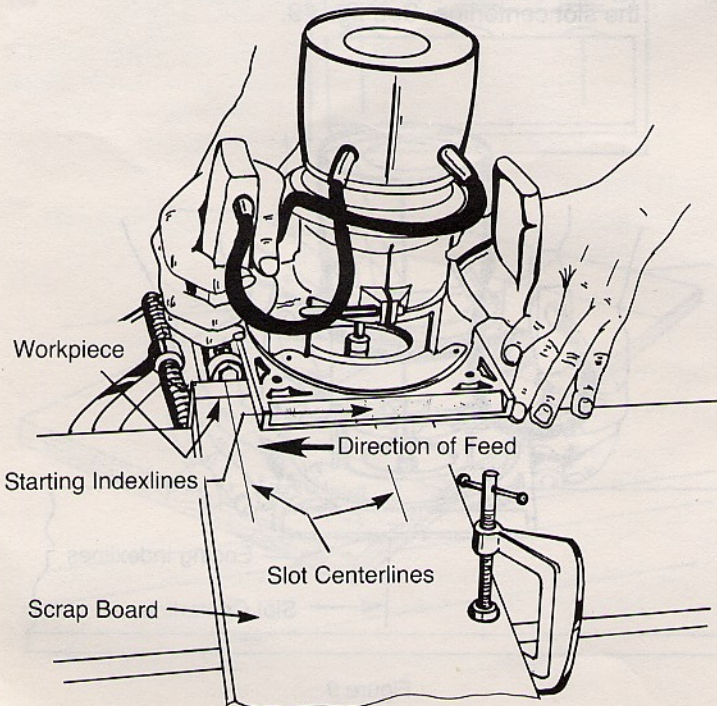
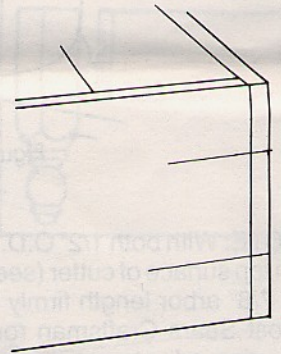
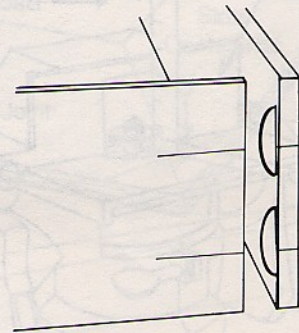
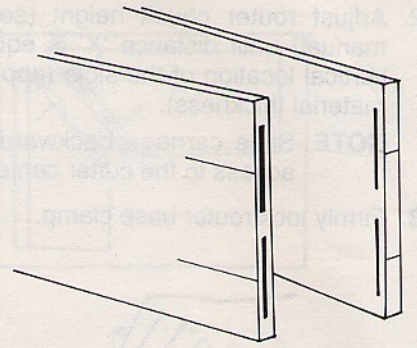


Figure 11



GLUING BISCUIT JOINTS

NOTE: It is recommended that all joints be assembled and alignments checked prior to gluing.

1. Apply water based glue to the slots and surfaces being joined. See fig. #14.
2. Insert biscuits in the slots and push the workpieces together.

NOTE: Biscuits allow movement for alignment corrections.

3. Clamp workpieces together.

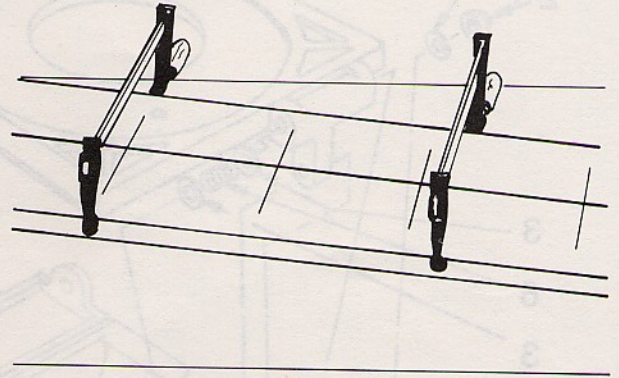
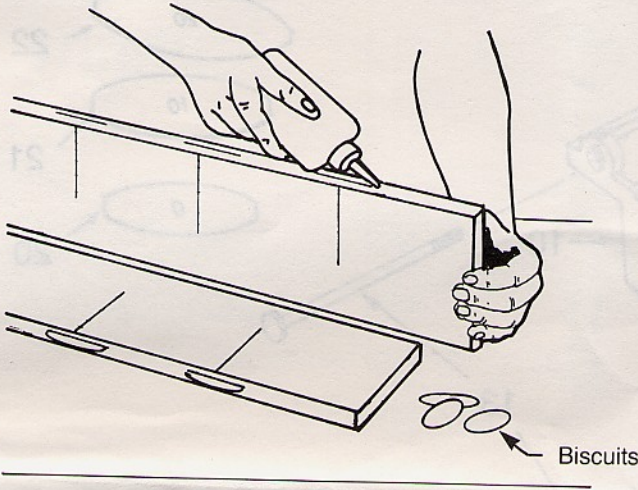
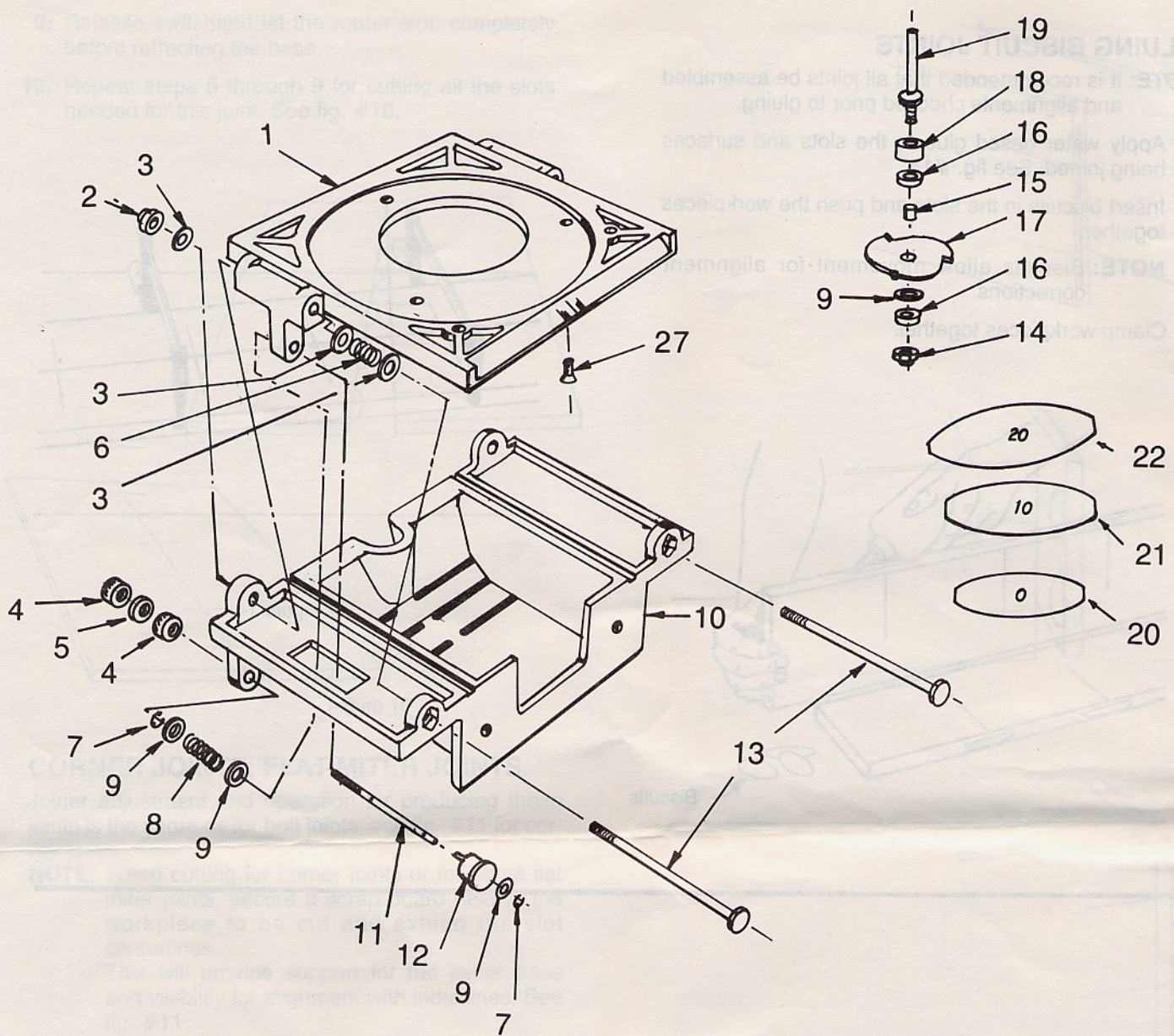


Figure 14

PARTS LIST FOR CRAFTSMAN BIS KIT SYSTEM MODEL NO. 121.26439

Qty	Part No.	Description	Qty	Part No.	Description
1	200-006	Base	1	14	200-D-123-2 4" D - 32" Sp. Hd.
2	200-D-123-4 4" D - 18" Sp. Hd.		13	200-002	Spacer
10	200-D-123-20 2" D Flat Washer		16	200-004	Spacer
4	200-700	Lock Washers	17	200-000	C.T. Clamp
2	200-702	1/2" Dia. Washers (1/2" O.D. x 1/4" H.)	18	200-004	Spacer
6	200-701	Spacers (3/8" I.D.)	19	200-001	Aligner
7	200-004	1/4" E. Ring	20	200-104	4" Dia. Cap
8	200-700	Spacers (1" I.D.)	21	200-700	4" Dia. Base
8	200-701	1/2" Flat Washer	22	200-700	4" Dia. Base
10	200-000	Clamps	23	200-001	4" D - 32" x 1/2" Flat Hd. Wash. Cap
11	200-000	Aligner			
12	200-001	Aligner			
13	200-002	Spacer			



PARTS LIST FOR CRAFTSMAN BIS KIT SYSTEM MODEL NO. 171.254230

Key No.	Part No.	Description	Quan.	Key No.	Part No.	Description	Quan.
1	29L-695	Base	1	*14	F29LD-123-2	#10 - 32 Stop Nut	1
2	F29LD-123-9	5/16 - 18 Stop Nut	2	15	29V-85-2	Spacer	1
*3	F29A-306-30	5/16 Flat Washer	6	16	29V-85-5	Spacer	2
4	29L-700	Lock Knob	2	17	29L-699	C.T. Cutter	1
5	29L-703	Nylon Washer (1/2 O.D. x 1/4 I.D.)	1	18	29V-85-4	Spacer	1
6	29L-701	Spring 3/8" I.D.	2	19	29V-85-1	Arbor	1
*7	F29A-250-4	1/4" "E" Ring	2	20	29L-704	#0 Biscuit	6
8	29L-702	Spring 1/4" I.D.	1	21	29L-705	#10 Biscuit	6
*9	29L-707	1/4" Flat Washer	4	22	29L-706	#20 Biscuit	12
10	29L-696	Carriage	1	*23	29A-298-17	#10 - 32 x 1/2" Lg. Flat Hd. Mach Screw	3
11	29L-698	Index Shaft	1				
12	29L-697	Index Knob	1				
*13	F29A-489-7	Fin. Hex. Hd. Bolt 5/16 - 18 x 5" Lg.	2				

*Hardware Item - may be purchased locally

Notes

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- operating

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MODEL NO. 171.254230

ALWAYS MENTION STOCK NUMBER
WHEN COMMUNICATING WITH US REGARDING YOUR
CRAFTSMAN MODEL NO. 171.254230

PARTS LIST FOR CRAFTSMAN BIS KIT SYSTEM MODEL NO. 171.254230

Part No.	Description	Quan.	Key No.	Part No.	Description	Quan.
754-101	Base	1	14	754D-123-2	#10 - 32 S&W Flat	1
754D-1-34	1/2" x 12" Hex Nut	1	15	201-55-2	Spacer	1
754-305-20	2" x 1/2" Hex Nut	1	16	201-55-5	Spacer	2
201-70	Lock Washer	2	17	201-55-6	S/T Washer	1
201-70	Spring Washer (1/2" x 1/2")	1	18	201-55-7	Spacer	1
201-70	Spring Washer (1/2" x 1/2")	2	19	201-55-1	Arrow	1
201-70	Spring Washer (1/2" x 1/2")	2	20	201-55-1	Arrow	1
201-70	Spring Washer (1/2" x 1/2")	2	21	201-55-1	Arrow	1
201-70	Spring Washer (1/2" x 1/2")	2	22	201-55-17	7/16" - 32 x 1/2" Lg. Flat Top Hex Screw	3