

ASSEMBLY, OPERATING INSTRUCTIONS AND PARTS LIST FOR CRAFTSMAN JOINTER-PLANER 6-INCH

MODEL NUMBER 113.20621

This is the model number of your Jointer. It will be found on a plate located on the right side of the front table. Always mention this model number when communicating with us regarding your Jointer or when ordering parts.

Carefully read the instructions provided, observe the simple safety precautions and you will have many hours of satisfactory use from your new Craftsman tool.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSONS-SEARS LIMITED. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The PART NAME
3. The MODEL NUMBER 113.20621
4. The NAME of item -- JOINTER-PLANER

COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR YOUR CRAFTSMAN POWER TOOLS



SEARS, ROEBUCK AND CO. and SIMPSONS-SEARS LIMITED in Canada back up your investment with quick, expert mechanical service and genuine CRAFTSMAN replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

SEARS, ROEBUCK AND CO.-U. S. A.
IN CANADA, SIMPSONS - SEARS LIMITED



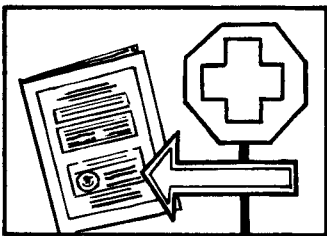
POWER TOOL SAFETY...AND YOU

3 MINUTES of required reading for the home Craftsman... whether this is your first purchase or you're an old hand at power tools.

YOU'VE JUST BOUGHT A QUALITY SEARS TOOL, designed to give you many years of top performance and trouble-free operation. It's also designed with

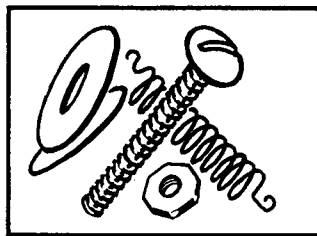
safety in mind, permitting you to use the tool without concern so long as certain basic rules are observed.

We'd like to call particular attention to some of the more **important rules** to follow for maximum enjoyment of your Sears power tools.



1. READ THE INSTRUCTION MANUAL...

completely • accurately. Pay special attention to safety precautions and use of safety features.



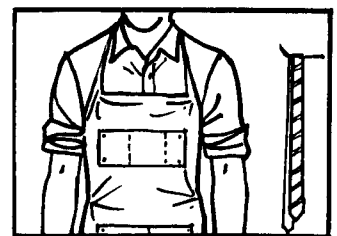
2. INSPECT THE POWER TOOL THOROUGHLY

Set up the machine according to instructions. Make certain all parts are included.



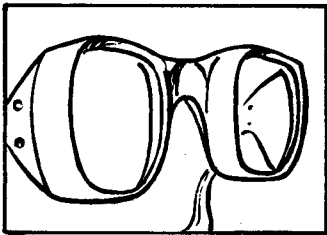
3. FOLLOW OPERATING INSTRUCTIONS CAREFULLY

They have been developed to insure correct procedure and prevent accidents.



4. DRESS PROPERLY FOR THE WORKSHOP

Get rid of loose clothing, roll up sleeves, remove your tie, wear a snug-fitting shop apron.



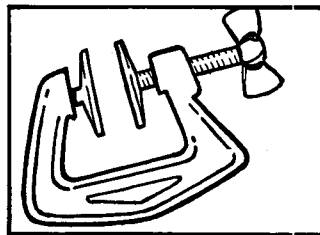
5. WEAR SAFETY GLASSES

Safety glasses or eye shields are recommended for all power tool operations.

6. USE PROPER ELECTRICAL CONNECTIONS

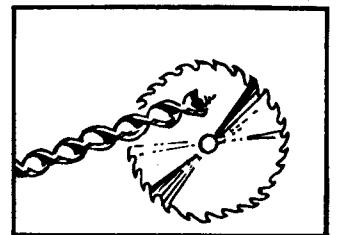
Make certain proper voltage (110 or 220) is used. USE A GROUND WIRE; AND A SUITABLE PLUG, IF REQUIRED. Check fusing requirements of the tool as outlined in the instruction manual.

Get in the habit of turning off the tool when not in use.



7. DOUBLE-CHECK HOLDING FIXTURES

Lock all clamps tightly. Spin parts by hand to check against misalignment or looseness before turning on tool.



8. KEEP CUTTING TOOLS SHARP

Make certain blades, drills, cutters, etc., are in top shape. Dull tools can cause rough cuts, excessive chipping... and accidents.



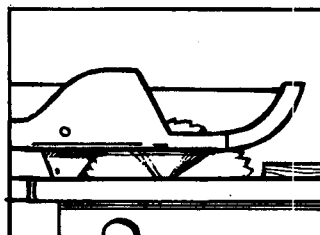
9. DON'T EXCEED THE LIMITS OF THE POWER TOOL

Abusing the power tool by doing work beyond its capacity reduces its life and increases the chance of injury to the operator. Watch especially the sizes of the work and feed rate.



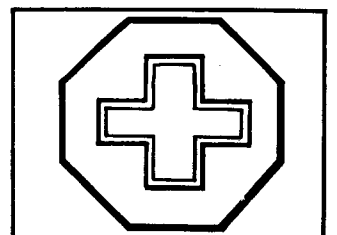
10. KEEP SPECTATORS AWAY

Curiosity and interest on the part of the family is fine, but avoid inspections when the power tool is running.



11. SAFETY GUARDS

Accessory safety guards are available for most tools. Use of these guards is highly recommended.



12. THINK SAFETY

Carefully plan each operation before turning on tool.

ASSEMBLING AND OPERATING INSTRUCTIONS FOR CRAFTSMAN 6-INCH JOINTER-PLANER MODEL No. 113.20621

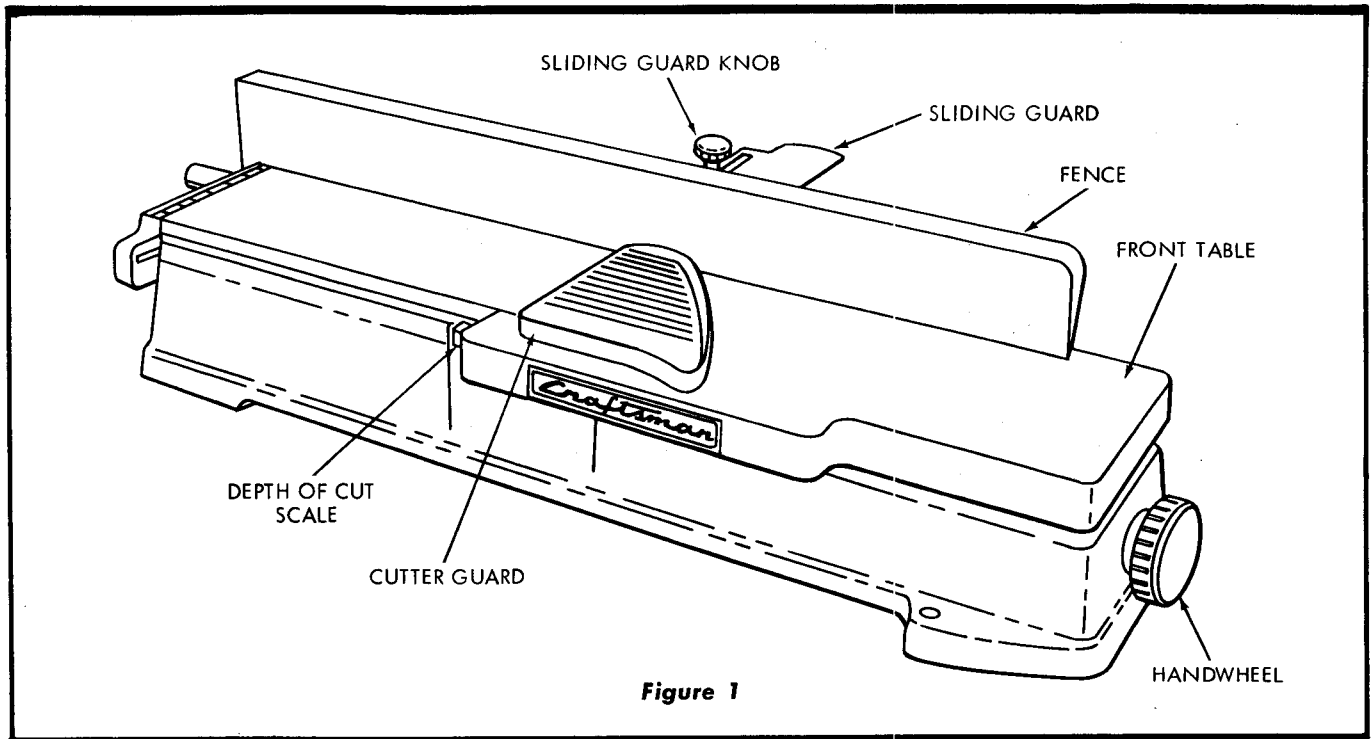


Figure 1

This Craftsman Jointer-Planer is designed for accuracy and versatility. Heavy iron castings used throughout provide the rugged stability required for precision jointing, as well as regular planing operations.

ASSEMBLY

This Jointer-Planer has been completely assembled, inspected and tested at the factory. To prevent damage and misalignment of parts during shipping, the cutter guard (See figure 1.) was removed and packed separately. Before operating the jointer-planer place the cutter guard in position as shown in figure 1.

INSTALLATION

1. Three 11/32-inch diameter holes are provided in the base of the jointer-planer for attaching it to a tool stand or substantial work bench.
2. Install the motor below the jointer-planer.

MOTOR

1. A 1/2-horsepower, 3450 rpm motor, equipped with a 2-1/2-inch diameter pulley is recommended for satisfactory operation of this jointer-planer.

NOTE: The jointer-planer should be operated at approximately 4400 rpm.

2. The 2-1/2-inch diameter pulley supplied fits a 5/8-inch diameter motor shaft. If your motor has a 1/2-inch diameter shaft, a bushing will be required.

CAUTION: Install the motor so the direction of rotation of the cutter head will be counterclockwise when viewed from the pulley side of the jointer-planer.

SPEED

The recommended motor equipped with a 2-1/2-inch Diameter Pulley will produce an arbor speed of approximately 4400 rpm.

BELT

The jointer-planer pulley is designed for a standard 1/2-inch V-belt.

The V-belt supplied will accommodate all standard bench and tool stand applications. If a special belt is required, use a standard 1/2-inch V-belt.

LUBRICATION

1. This jointer-planer is equipped with two precision type ball bearings which are fully enclosed in dust proof housings. The bearings were packed with grease at the factory and require no additional lubrication for the life of the bearing.
2. Other moving parts, such as the elevation screw and the upper and lower dovetail, may require an occasional application of light engine oil to insure smooth operation.

CONTROLS

(See figure 1.)

1. The position of the fence is maintained by the fence lock handle and sliding guard knob. Loosen both the handle and knob before positioning the fence at any point along the table.
2. The 90° and 45° indexing pins in the fence, position it at those two angles automatically. To tilt the fence, pull out the plunger on the 90° stop. When returning to 90° the plunger will automatically engage at the top of the table.
3. The sliding guard knob functions as a lock to secure the sliding guard which provides support for the fence after it has been positioned.
4. The hand-wheel is used to raise and lower the front table, thus regulating the depth of cut as indicated by the depth of cut pointer and scale.

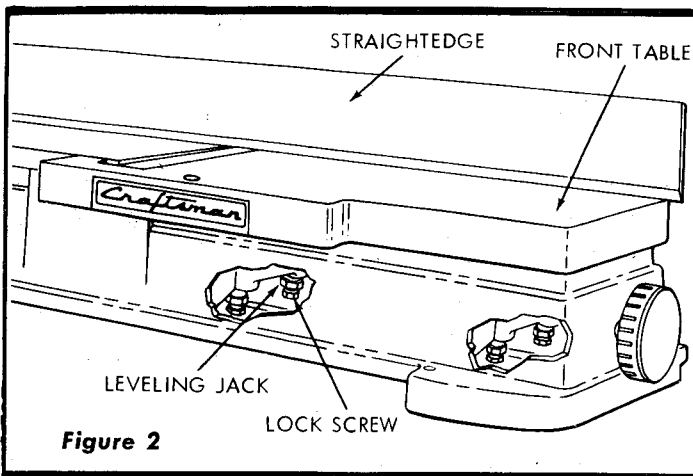


Figure 2

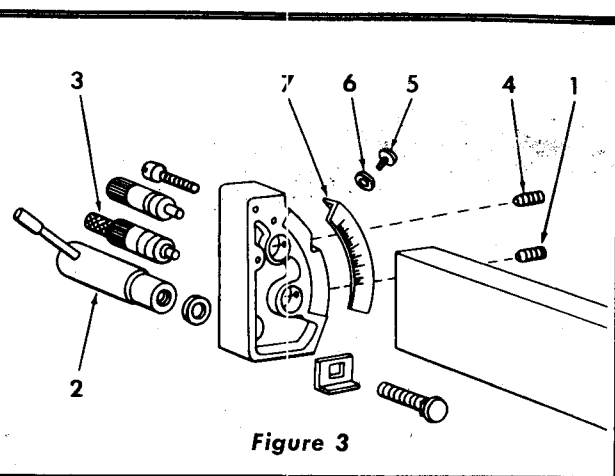


Figure 3

ADJUSTMENTS

If at any time the cut obtained should vary from that indicated on the depth of cut scale, perform the following adjustment:

1. Loosen the round-head pointer attaching screw and adjust the pointer until it indicates "0" when the front and rear tables are absolutely flush. Tighten the screw. The front table may be adjusted as follows:
 - a. Loosen the four lock screws several turns. (See figure 2.)
 - b. Place a straight-edge across both tables and adjust the two leveling jacks, nearest the cutter head, and one of the two leveling jacks at the front, until both the front and rear tables are in perfect alignment. (See figure 2.)
 - c. Bring the remaining jack screw into place snugly, being careful not to disrupt the alignment just established.
 - d. Tighten the four lock screws. The leveling jacks must be held securely while turning the lock screws. (See figure 2.)
 - e. Check once more with the straight-edge, making certain the tables have remained in alignment.
2. The fence indexing stops have not been pre-adjusted. In order for the fence to return automatically to 90° and 45° positions, with respect to the table, adjust each stop in the following manner:
 - a. Loosen, one turn only, the lower set screw on the right-hand side of the fence end. (See figure 3.)
 - b. Using a combination square resting on the rear table, near the cutter head, position the fence so the face of the fence is exactly 90° to the table top.
 - c. Holding the fence in this position, tighten the lock handle (2).
 - d. Turn the knurled knob (3) through which the plunger operates, until it contacts the top surface of the jointer.
 - e. Tighten the set screw (1).
 - f. Set the combination square at 45° and repeat the above operation to adjust the 45° stop. Loosen the top set screw (4) first. Use the combination square to check accuracy of adjustment.

parallel to the top surface of the fence slide bracket. To make this adjustment loosen the two screws (5) and move the fence scale in or out, and up or down, until the proper alignment has been attained. Tighten the two screws (5), making sure the lock washers (6) do not upset the adjustment when the screws are tightened.

3. Trial cuts should be made after any adjustment, making sure all controls are functioning in proper relation to one another.
4. After a few hours' operation tighten all pulley set screws securely.
5. Adjust width of cut scale. (See figure 4.)
 - a. Determine which of the three cutter blades protrude farthest out from end of cutter head on side opposite pulley.
 - b. Adjust fence until the working face of fence is exactly one inch from end of this blade.
 - c. Lock the fence in this position.
 - d. Using a piece of steel and hammer, tap necessary end of scale, until the one inch graduation mark is in line with face of fence.
 - e. The scale is now adjusted for accurate readings from 0 to 6 inches.

SHARPENING THE BLADES

(See figure 5.)

The three 6-1/8-inch high speed steel cutter knives will provide satisfactory cutting service for many hours of operation

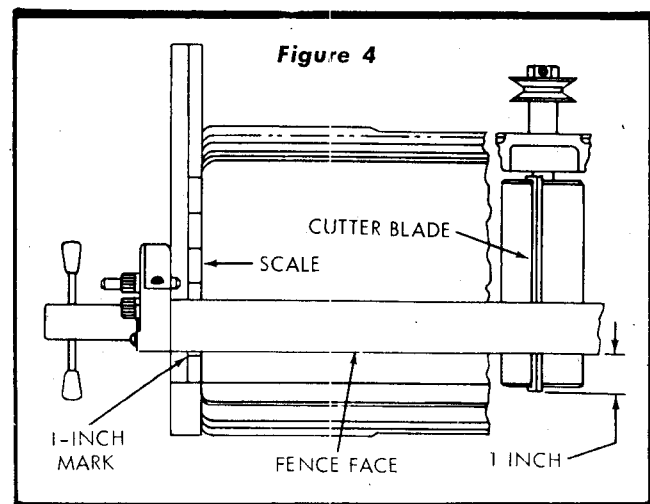


Figure 4

The fence scale (7) can be read most accurately if the face with the graduation marks is adjusted approximately 1/64" from fence slide bracket. The 90° graduation line must be

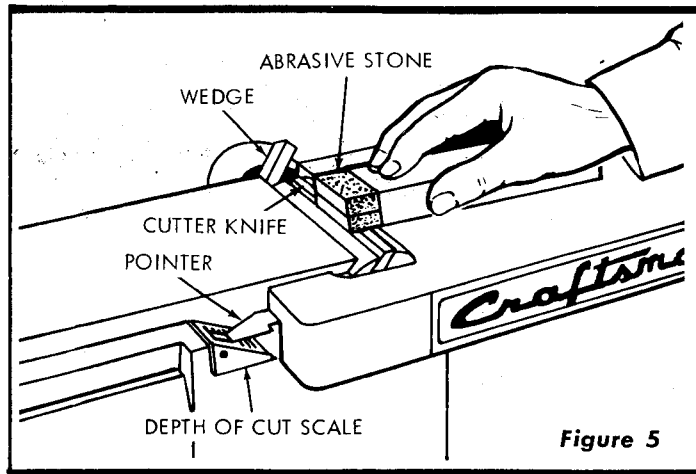


Figure 5

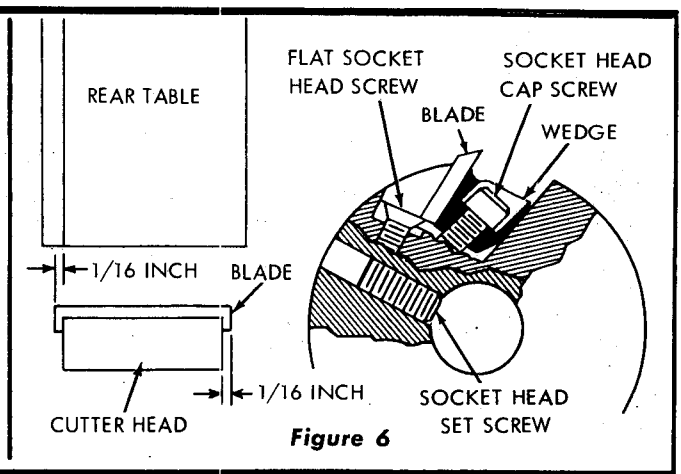


Figure 6

without regrinding, if they are honed occasionally with a fine abrasive stone to retouch the edge. This operation can be performed as shown in figure 5. It is not necessary to remove the cutter blades from the head.

CAUTION: Before honing, cover part of the stone with paper as shown, so the table surface will not be injured. For satisfactory results, the original bevel angle must be maintained on the knives.

Adjust the front table so the stone presses lightly against the full width of the knife bevel. Secure the cutter head in the desired position by inserting a wood wedge between the cutter head and table, as shown in figure 5. Place the paper covered portion of the stone on the front table, and by moving the stone back and forth, hone the full length of each knife in turn. The small burr on the flat side of the blades may be removed by a few light strokes with a fine abrasive stick or a piece of emery cloth.

CAUTION: To insure safe operation of the machine, blades should not be reinstalled which have been ground down to a width of less than 9/16-inch.

RESETTING THE BLADES

(See figure 6.)

If blades are removed for sharpening (grinding) or replacement, they should be installed with great care.

1. To remove blades:
 - a. Retract table to full down position.
 - b. Loosen wedge screws and tap end of wedge with a piece of steel or brass rod. This should loosen wedge enough for blade to be slipped out of the slot.
2. To install blades:
 - a. See that blade slot is clean and that wedge and all other parts are in correct positions. (See exploded view illustration in Parts List for location of all parts.)
 - b. Slide blade in place so that it projects 1/16-inch at right-hand side of cutter head. Make sure all three blades project 1/16-inch at right-hand side. Check with accurate straight-edge. (See figure 6.)

CAUTION: Do not run the jointer until all blades are adjusted and tight.
3. To adjust blades:
 - a. Set both tables at same level.

- b. With blade edges projecting slightly below the surface of tables, clamp them lightly in place with the the socket-head cap screws inserted through the wedge.
- c. With the straight-edge on the tables as shown in figure 2, position the blades by adjusting the height of the two flat, socket-head screws. (See figure 6.) Each knife edge should just touch the straight-edge lightly at either end of the blade, as the cutter head is turned by hand.
- d. When all three blades have been aligned in the above manner, tighten the six socket-head cap screws securely. Trial cuts should be made after reinstalling the blades to check the setting. This method must also be used when replacing an entire new cutter head assembly.

OPERATION

1. The cutter guard (figure 1) should be in operating position at all times except during rabbeting at which time the sliding guard covers the unused portion of the cutter head. For the rabbeting operation, the fence is shifted from its normal position at the right-hand edge of the table to the desired position on the left-hand side. The width of cut is determined by the distance from the end of the cutter knives to the fence. Depth of cut is determined by the position of the front table as previously described.
2. Face planing or surfacing is the most common function of the jointer, yet extreme care must be exercised during this operation. The depth of cut is determined by the width of the material; the wider the material, the less the cut. In most cases a 1/32-inch cut will produce the best surface. Deeper cuts should be made in successive stages until the full depth has been attained. The work should be advanced through the guard to the cutter head with a smooth slow feed. Both hands should be placed on top of the work piece, the left hand pressing the piece firmly against the rear table surface, the right hand exerting the feed pressure over the front table.
3. When cutting pieces over four feet in length, the most uniform cut will be maintained by supporting the piece at table height after it leaves the rear table surface. Warped stock should be cut on the concave side for best results. To avoid pitting or torn grain it is advisable, wherever possible, to determine which way the grain emerges on a piece of wood. The direction of feed should be governed accordingly; the grain should emerge on the lower surface of the wood and should point toward the front of the jointer.

4. Use a push block when surfacing thin stock (1/2-inch or less).
5. The function of the fence in the beveling operation has been described in the paragraph on controls.
6. A swinging guard is provided over the cutter head. For your safety, we recommend that this guard be kept in place during operation of the jointer.
7. To be sure you will make a depth of cut as planned, always lower the table beyond the depth wanted, then crank the table up to the correct depth.
8. An interesting booklet covering special operations which may be performed on your jointer is listed in the Sears catalog.

TROUBLE SHOOTING CHART

TROUBLE	PROBABLE CAUSE	REMEDY
Work piece strikes rear table after passing over cutter blades.	Blades improperly adjusted below surface of rear table.	Re-adjust blades .003 to .004 above rear table.
Ripple cut when planing.	1. One blade doing all the cutting. 2. Too slow a speed.	1. Re-adjust blades so all three are parallel and same distance from top of rear table. 2. Check motor (3450 rpm) and proper pulley size.
Taper — Cut.	Front table out of adjustment.	Re-adjust front table parallel to rear table, using leveling jacks.
Fence not holding on angular cuts.	Sliding guard knob left unlocked.	Lock securely before planing.
90° to 45° cuts inaccurate.	Stop pins not adjusted properly.	Use combination square on table and against fence face and re-adjust eccentric pins accurately.
Front table loose.	Dovetail spacer loose.	Tighten (snugly) cap screw on side of each dovetail. This will add tension and remove play.

PARTS LIST FOR CRAFTSMAN 6-INCH JOINTER-PLANER MODEL No. 113.20621

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN ON THIS LIST:

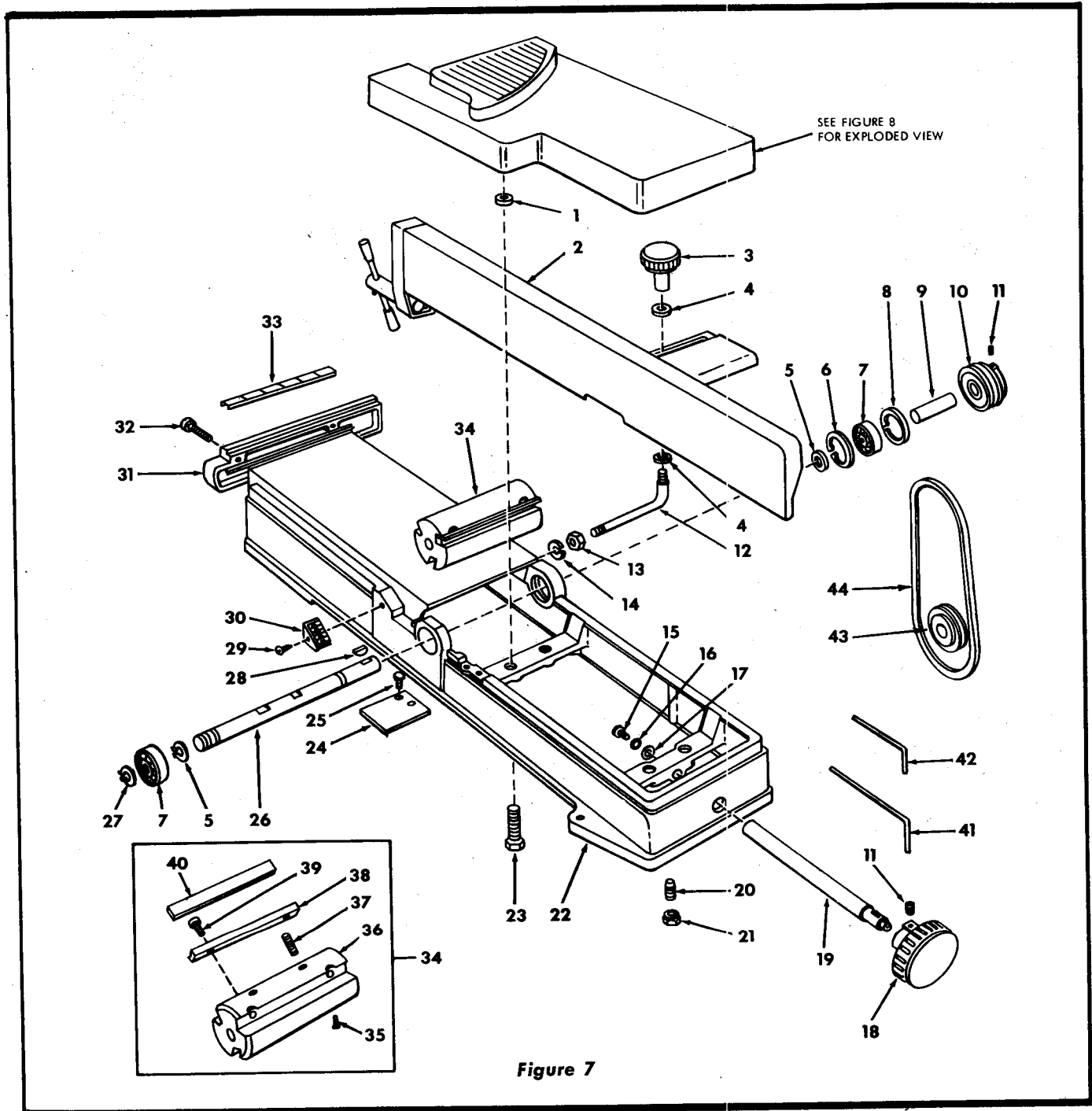
1. THE PART NUMBER
2. THE PART NAME
3. THE MODEL NUMBER — 113.20621
4. THE NAME OF ITEM — JOINTER-PLANER

Always order by Part Number — not by Key Number

PARTS LIST FOR FIGURE 7

Key No.	Part No.	Description	Key No.	Part No.	Description
1	18437	Washer	18	38530	Handwheel, with Set Screw
2	21013	Fence Assembly, Complete (See Fig. 9)	19	21639	Screw, Elevating
3	21416	Knob, Sliding Guard	20	102832	Screw, Set, 5/16-18 x 1, Full Dog Pt., Slotted Hd.
4	21622	Washer, Sliding Guard	21	118614	*Nut, Hex., 5/16-18
5	18447	Ring, Retaining	22	21540	Base with Scale and Drive Screw
6	18441	Ring, Retaining	23	18516	Stud, Leveling
7	18211	Bearing, Ball	24	21733	Pin, Support Guard
8	38879	Ring, Bowed Retaining	25	60078	*Screw, Mach., 5/16-18 x 1/2, Hex. Hd.
9	21637	Spacer	26	21636	Arbor
10	38160	Pulley with Set Screw, 2" Dia. x 1/2" V-Groove, 5/8" Bore, Keyed	27	38833	Ring, Bowed Retaining
11	115321	*Screw, Set, 5/16-18 x 5/16, Soc. Hd.	28	106751	Key, Woodruff, No. 606
12	21638	Rod, Sliding Guard	29	445100	*Screw, Drive
13	60094	*Nut, Hex. 1/2-13	30	21734	Scale, Depth of Cut
14	60114	*Washer, Split Lock, 1/2	31	21237	Bracket, Fence Slide
15	60107	*Screw, Cap, 1/4-20 x 1/2", Hex. Hd.	32	132271	Screw, Mach., 1/4-20 x 1, Fil. Hd. Slotted
16	115109	*Washer, Split Lock, 1/4	33	21739	Scale
17	60113	*Washer, Plain, 17/64 I.D. x 3/4" O.D. x .1046	34	21450	Head Assembly, Complete Cutter

PARTS LIST FOR CRAFTSMAN 6-INCH JOINTER-PLANER MODEL No. 113.20621



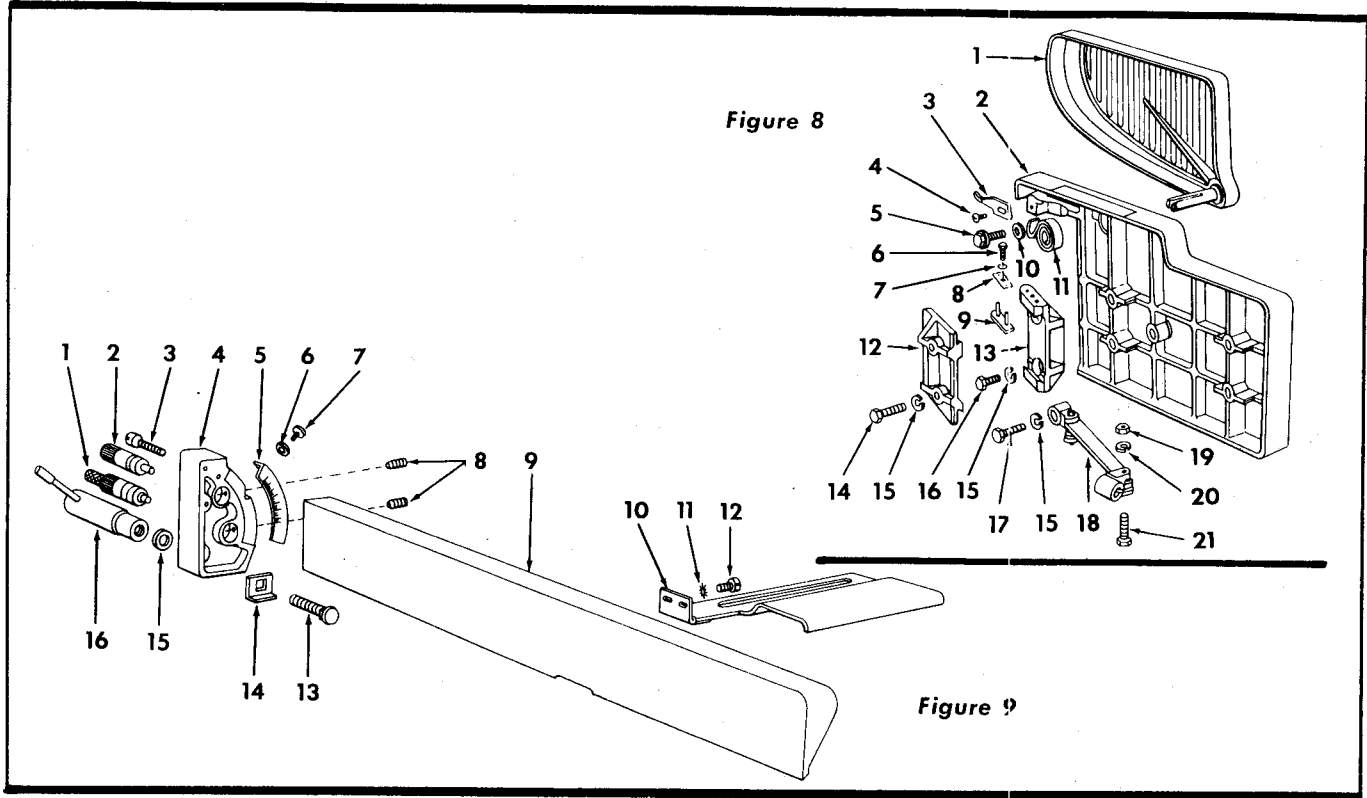
Key No.	Part No.	Description
35	60118	*Screw, Mach., No. 10-32 x 1/2, Flat Soc. Hd.
36	21633	Head, Cutter
37	60117	*Screw, Set, 5/16-24 x 7/8, Soc. Hd.
38	21632	Wedge, Cutter Blade
39	60116	*Screw, Cap, No. 10-32 x 3/4, Soc. Hd.

Key No.	Part No.	Description
40	18112	*Blades
41	37887	*Wrench, Hex., 1/8
42	60096	*Wrench, Hex., 5/32
43	30646	Pulley, 103-16
44	60115	Belt, "V" Type, 1/2
Not Shown	21979	Instruction Sheet and Parts List

* Standard Hardware items — May be Purchased Locally.

• Items are regular stock in Sears hardware departments and mail order houses. May also be ordered as repair parts by number provided.

PARTS LIST FOR CRAFTSMAN 6-INCH JOINTER-PLANER MODEL No. 113.20621



PARTS LIST FOR FIGURE 8

No. Key	No. Part	Description
1	21520	Guard
2	67001	Table (with Name and Mod. No. Plate)
3	21735	Pointer, Depth of Cut
4	132823	*Screw, Mach., No. 10-24 x 1/4, Rd. Hd., Slotted
5	60099	*Screw, No. 10-24 x 5/8, Spin Lock
6	60107	*Screw, Cap, 1/4-20 x 1/2, Hex. Hd.
7	60119	*Washer, Plain, 17/64 I.D. x 3/4 O.D. x 18 Ga.
8	21812	Plate, Tension
9	21422	Spacer, Dovetail
10	60104	*Washer, Plain, 13/64 I.D. x 3/8 O.D. x 1/32

Key No.	Part No.	Description
11	38779	Spring, Guard
12	21219	Dovetail, Male
13	21218	Dovetail, Female
14	60101	*Screw, Cap, 5/16-18 x 1-3/4, Hex. Hd.
15	116120	*Washer, Split Lock, 5/16
16	21635	Screw, Mach., Hex. Hd.
17	60038	*Screw, Cap, 5/16-18 x 1-1/4, Hex. Hd.
18	21204	Linkage Assembly
19	115120	*Nut, Hex., 1/4-20
20	115109	*Washer, Split Lock, 1/4
21	60098	*Screw, Cap, 1/4-20 x 1, Hex. Hd.

* Standard Hardware items — May be Purchased Locally.

PARTS LIST FOR FIGURE 9

Key No.	Part No.	Description
1	21440	Plunger Assembly
2	21430	Pin Assembly, Stop
3	132280	*Screw, Mach., 1/4-20 x 1-1/4, Fil. Hd. Slotted
4	21232	Plate, Fence End
5	21736	Scale, Fence Tilt
6	60104	*Washer, Plain, 13/64 I.D. x 3/8 O.D. x 1/32
7	60120	*Screw, Mach., No. 8-32 x 1/4, Bind Hd., Slotted
8	102812	*Screw, Set, 1/4-20 x 1/2, Full Dog Pt., Slotted

Key No.	Part No.	Description
9	21229	Body, Fence
10	114603	*Washer, Lock, Ext. Tooth
11	132823	*Screw, Mach., No. 10-24 x 1/4, Rd. Hd., Slotted
12	21340	Guard with Hinge, Support
13	120422	*Bolt, Carriage, 3/8-16 x 2 Round Head
14	21738	Retainer, Bolt
15	61021	*Washer, Plain, 25/64 I.D. x 1-1/8 O.D. x .1046
16	21530	Knob Assembly, Lock

* Standard Hardware items — May be Purchased Locally.