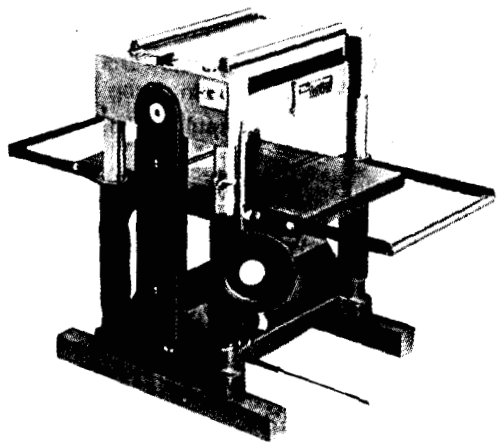
makita

Planer

400 mm (15-3/4") MODEL 2040

INSTRUCTION MANUAL



SPECIFICATIONS

Cutting width	Max. cutting depth	Feed rate	Table size (W x L)	No. of knives
396 mm (15-5/8")	1 mm (1/32") of stock width over 304 mm(11-3/4") 3 mm (1/8") of stock width under 150 mm (5-7/8")	9 m/min. (29.5 ft/min.)	396 mm x 600 mm (15-5/8" x 23-5/8")	2

Max. stock height	No load speed	Overall dimensions (W x L x H)	Net weight
12.7 mm – 195 mm (1/2" – 7-5/8")	6,500 R/min.	570 mm x 1,025 mm x 715 mm (22-1/2" x 40-3/8" x 28-1/8")	115 kg (254 lbs)

- Manufacturer reserves the right to change specifications without notice.
- Note: Specifications may differ from country to country.

For Your Own Safety Read Instruction Manual Before Operating Planer

GENERAL SAFETY PRECAUTIONS
(For All Tools)

1. KNOW YOUR POWER TOOL. Read the owner's manual carefully. Learn the tools applications and limitations, as well as the specific potential hazards peculiar to it.
2. KEEP GUARDS IN PLACE and in working order.
3. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
4. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
5. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
6. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
7. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
8. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
9. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
10. WEAR PROPER APPAREL. Wear no loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. DON'T OVERREACH. Keep proper footing and balance at all times.
14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. DISCONNECT TOOLS before servicing; when changing accessories such as blades, bits, cutters, and the like.

16. EXTENSION CORDS. Make sure your extension cord is in good conditio When using an extension cord, be sure to use one heavy enough to car the current your product will draw. An undersized cord will cause a drop i line voltage resulting in loss of power and overheating. Table 1 shows th correct size to use depending on cord length and nameplate ampere ratin If in doubt, use the next heavier gage. The smaller the gage number, th heavier the cord.

Minimum gage for cord*

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
		240 V	50 ft.	100 ft.	200 ft.	300 ft.
More Than	Not More Than		AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12		Not Recommende

*Only the applicable parts of the Table need to be included. For instance, a 120-volt product need no include the 240-volt heading.

17. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch in off position before plugging in.
18. USE RECOMMENDED ACCESSORIES. Consult the owner's manual f recommended accessories. *The use of improper accessories may cause ris* of injury to persons.
19. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped c if the cutting tool is accidentally contacted.
20. CHECK DAMAGED PARTS. Before further use of the tool, a guard or oth part that is damaged should be carefully checked to determine that it w operate properly and perform its intended function — check for alignmer of moving parts, binding of moving parts, breakage of parts, mounting, an any other conditions that may affect its operation. A guard or other part tha is damaged should be properly repaired or replaced.
21. DIRECTION OF FEED. Feed work into a blade or cutter against the directio of rotation of the blade or cutter only.
22. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don leave tool until it comes to a complete stop.
23. PROPER GROUNDING. This tool should be grounded while in use to protec the operator from electric shock.
24. EXTENSION CORDS: Use only three-wire extension cords which have thre *prong grounding-type plugs and three-pole receptacles which accept th* tool's plug. Replace or repair damaged or worn cord immediately.

OLTAGE WARNING: Before connecting the tool to a power source (receptacle, ıtlet, etc.) be sure the voltage supplied is the same as that specified on the ameplate of the tool. A power source with voltage greater than that specified ır the tool can result in SERIOUS INJURY to the user — as well as damage to ıe tool. If in doubt, DO NOT PLUG IN THE TOOL. Using a power source with oltage less than the nameplate rating is harmful to the motor.

iROUNDING INSTRUCTIONS

\LL GROUNDED, CORD-CONNECTED TOOLS: In the event of a malfunction or ıreakdown, grounding provides a path of least resistance for electric current to educe the risk of electric shock. This tool is equipped with an electric cord having ın equipment-grounding conductor and a grounding plug. The plug must be ılugged into a matching outlet that is properly installed and grounded in ac-ıordance with all local codes and ordinances.

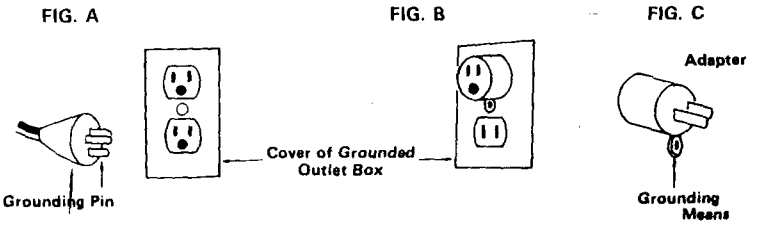
Do not modify the plug provided—if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure A. The tool has a grounding plug that looks like the plug illustrated in Figure A. A temporary adapter, which looks like the adapter illustrated in Figure B and C, may be used to connect this plug to a 2-pole receptacle as shown in Figure B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, etc. extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

GROUNDING METHODS



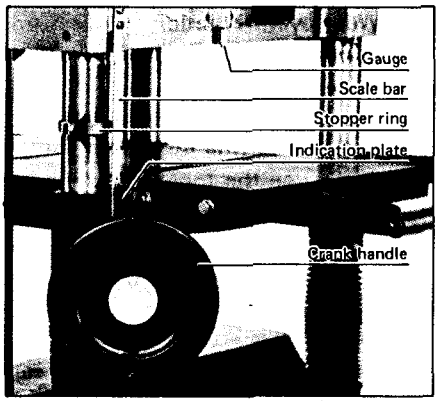
ADDITIONAL SAFETY RULES

1. Wear eye protection.
2. Never perform planing operation with drive guard removed.
3. Do not perform planing operations on material shorter than (a dimension equal to the cutter head length plus 2 inches), narrower than 3/4 inch, or wider than (the cutter capacity in inches) or thinner than 1/2 inch.
4. Don't use the tool in presence of flammable liquids or gases.
5. Handle the blades very carefully.
6. Check the blades carefully for cracks or damage before operation. Replace cracked or damaged blades immediately.
7. Be sure the planer blade installation bolts are securely tightened before operating.
8. Sharpen both blades evenly, or replace both blades or both cutterhead covers at the same time.
9. Remove nails and clean the workpiece before cutting. Nail, sand or other matter can cause blade damage.
10. Make sure the blade is not contacting workpiece before the switch is turned on.
11. Wait until the blades attain full speed before cutting.
12. Keep hands away from rotating parts.
13. Don't back the workpiece toward the infeed table.
14. Two or more pieces of narrow but similar thickness stock can be passed through the auto-planer side by side.
    However, allow some spacing between the stock to permit the feed rollers to grip the thinnest piece.
    Otherwise, a slightly thinner piece could be kicked back by the cutterhead.
15. Stop operation immediately if you notice anything abnormal.
16. Always switch off and wait for blades to come to a complete stop before adjusting any parts, cleaning out chips or approaching the blade.
17. Never stick your finger into the chip chute. Chute may jam when cutting damp wood. Turn off the planer and then clean out chips with a stick.
18. Don't touch blades right after operation, they may be extremely hot and could burn your skin.
19. Don't abuse cord. Never yank cord to disconnect from receptacle. Keep cord from heat, oil and sharp edges.

SAVE THESE INSTRUCTIONS.

Dimensional adjustment

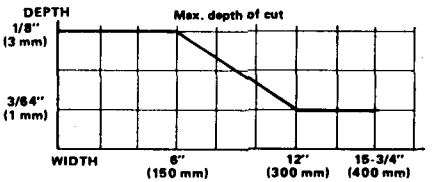
Release the thumb screw on the stopper ring and turn the crank handle to the clockwise, aligning the indicator plate until the scale bar graduation for the desired finished dimension is reached. Algin your workpiece with the top of the table. (One handle revolution makes for 3 mm (1/8") ascent or descent.)



* Gauge height shows the amount of cut Fig. 1

Depth of cut

The maximum depth of cut with a piece of wood less than 150 mm (6") wide is 3 mm (1/8") (1 mm (3/64") with a width of over 300 mm (12")).
Determine the depth of cut in terms of your stock width. Do not try to cut more than the specified amount in one pass. Make two passes rather than put an overload on the planer that might cause trouble.



Stock feed

Align the stock to be cut with the top of the table. If the stock is too thick to be cut, immediately lower the table by means of the crank handle so as to reduce the size of the cut.

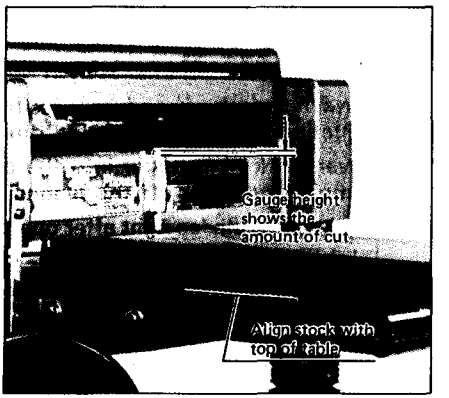


Fig. 2

Precautions when feeding

- Attempting to feed outsized stock will cause abnormal wear on the rubber rollers.
- Keep on the level so that cutter action and roller wear will be even.

Return

Returning cut stock back to the front side is very easy if you use the convenient return rollers on top.

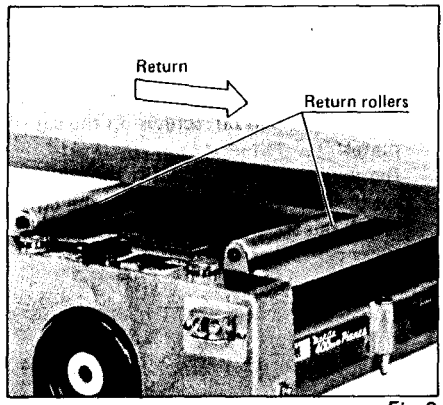


Fig. 3

Stopper regulating depth

Numerous workpieces can be planed to the same thickness very simply just by setting the stopper ring to the desired dimension. Do not crank the handle so hard that you force the stopper ring to move.

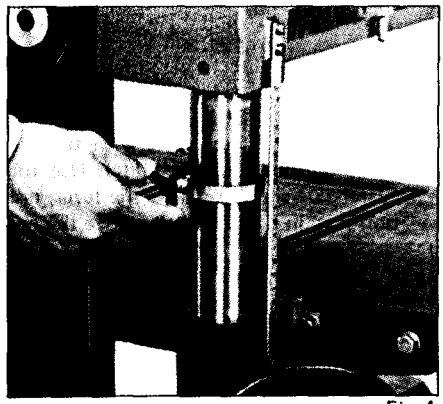


Fig. 4

Key safety switch

This machine can only be switched on after the key is inserted in the switch. The key can be removed with the switch in the "ON" condition, and the tool may be switched off without the key. When unattended, the machine should be both "OFF" and unplugged.

CHANGING CUTTER KNIVES

First, unplug the planer from the power source so as to prevent any mishap.

Removal

a. Loosen the pan hd. screws on the set plates with the (+) screwdriver, then swing the set plates.
Remove the chip guard, lift the lever and swing it a full 180 degrees; then use the knob on the belt guard side to align the cutter drum as shown in Fig. 6.
Next, release the lever to make the drum stationary.

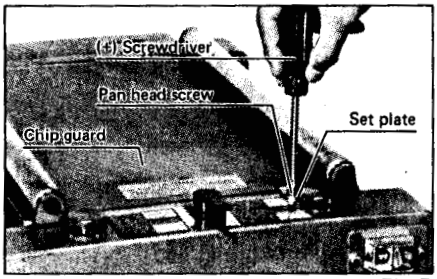


Fig. 5

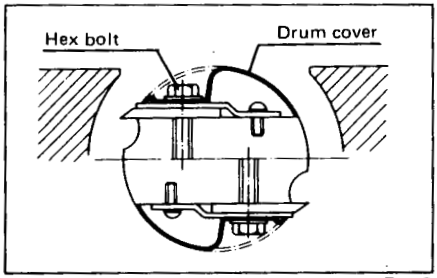


Fig. 6

b. Remove the 8 hex bolts with the socket wrench provided, then take off the drum cover (cutter retaining plate). Use the end of the socket wrench handle to push the cutter out slightly. Raise the lever, once more making the drum stationary at the position seen in Fig. 7; then remove the cutter knife.

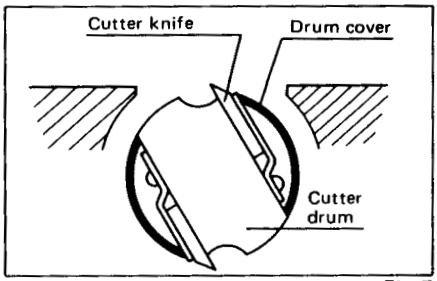


Fig. 7

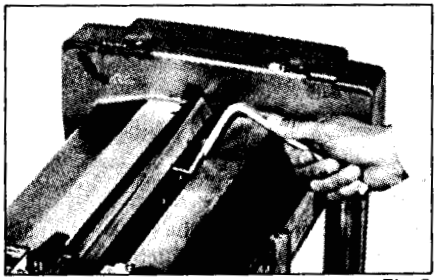


Fig. 8

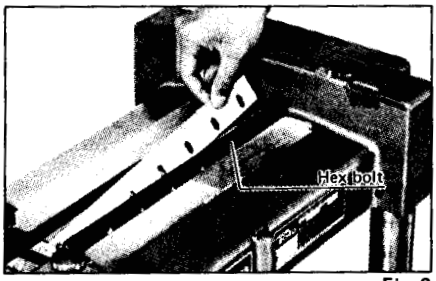


Fig. 9

CUTTER KNIFE INSTALLATION & HEIGHT ADJUSTMENT

a. At the position shown in Fig. 7, insert the knife so the holes are aligned with those on the drum. Set the wooden levellers on each end of the knife edge and press down on both ends until the main frame surface is contacted.
The levellers should be pressed down just above the hex bolt holes on either end.

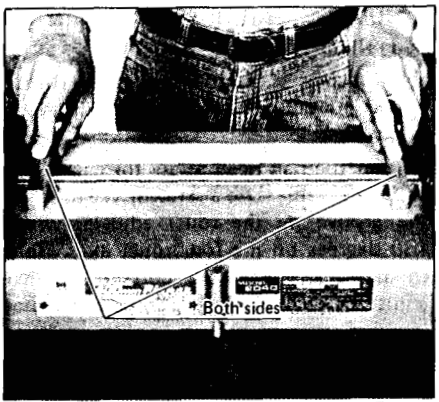


Fig. 10

b. Fix the cutter drum at the position shown in Fig. 6, attach the durm cover and fasten securely the hex bolts.
Tightening all bolts fully in order may cause the knife to move. At first, tighten bolts gradually and evenly before applying the final tightening torque.

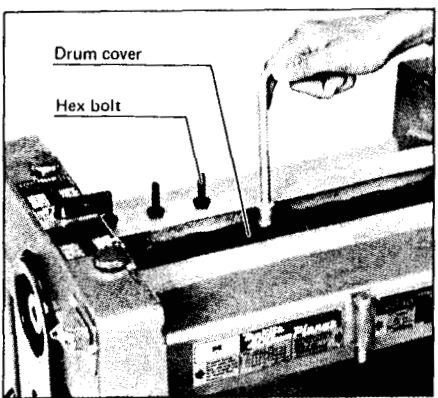


Fig. 11

c. Secure the lever at the position you found it at when the chip guard was raised, then set the lever on top (see right), pressing down very gently and turning the cutter drum in the arrow direction. The leveller should move the same amount when placed over either end of one and the same knife (i.e., approx. 5 – 6 mm (3/16" – 1/4")). After adjusting knife height on both knives, replace chip guard as before. Replace guards after completing adjustments. Auto-planer guard (chip cover) should be secured at original position.

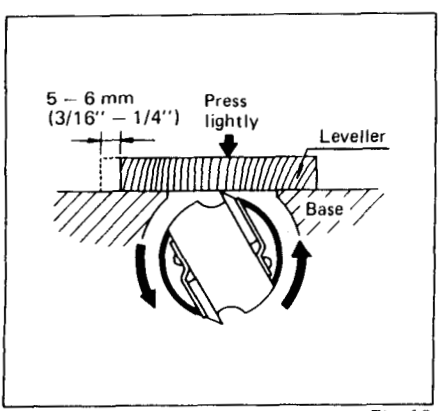


Fig. 12

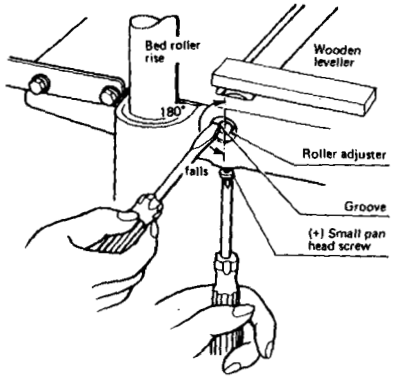
ADJUSTING VARIOUS COMPONENTS

Bed roller adjustment

(The planer is factory-adjusted. If you notice the adjustment is off, kindly do as follows.)

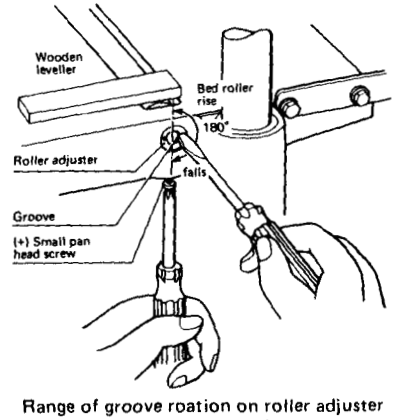
Loosen the pan head screw for each roller under the table. Use a screwdriver to rotate the groove on the roller adjuster within 180 degrees on the four roller axes. Refer to the figures for the correct range of adjustment of each roller adjuster. Rotating the groove in the ascending direction causes the bed roller to rise; turning the groove down causes the bed roller to lower.

NOTE:
The above adjustment procedure should be performed on both sides for even roller adjustment.



Range of groove rotation on roller adjuster to adjust height of bed roller (left).

Fig. 13



Range of groove roation on roller adjuster to adjust of bed roller (right).

Fig. 14

Caution

- Unless the two groove positions on the one roller face the same direction, the stock may be twisted to the left or right.
- If the rollers protrude too much, notching may result in the surface planed on the opposite end. The protrusion from the table surface should be 0.1 – 0.3mm (postcard thickness). Tighten the small screw when the adjustment has been made.

Extension roller adjustment

Gently loosen the hex bolts, set a rule or yardstick on the table surface and adjust so that roller arm is slightly higher than the table. Tighten the hex bolts securely so that the roller arm surface is at the 90° to the column.

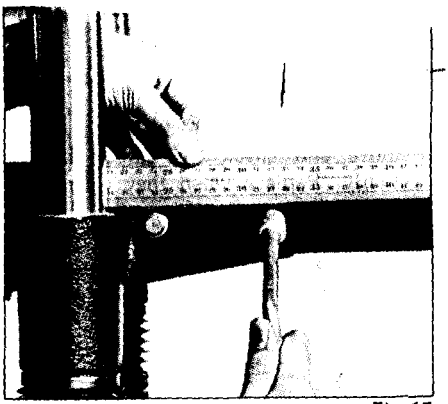


Fig. 15

Adjusting infeed/outfeed rollers

The infeed/outfeed rollers are factory adjusted. If the rollers require adjustment, please follow this procedure:

Place a straight and lever piece of wood on the outfeed table top. Turn the crank handle to raise the table and to bring the piece of wood into contact with the main frame. Then turn the crank handle a half-turn counterclockwise to lower the table slightly. Insert the piece of wood so that it reaches under the outfeed roller. Adjust the right and left height adjusting screws so that the outfeed roller contacts the piece of wood evenly.

Adjust the infeed roller in the same manner as the outfeed roller.

NOTE:

Turning the height adjusting screw one turn clockwise lowers the roller 3 mm (1/8").

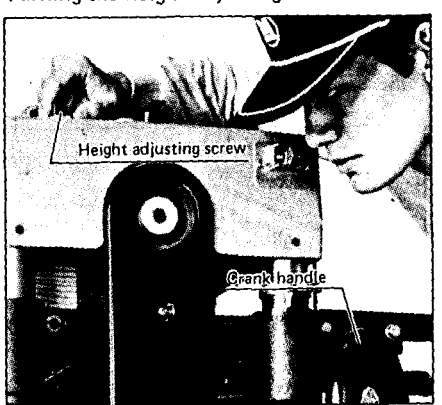
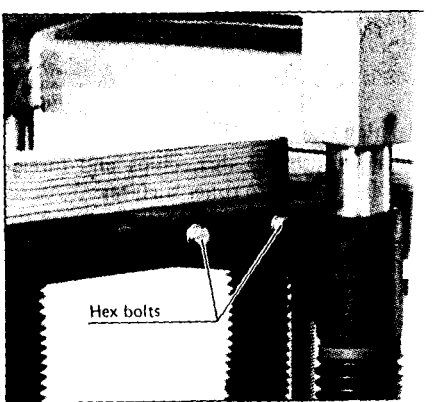


Fig. 16



Fig

MAINTENANCE

CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

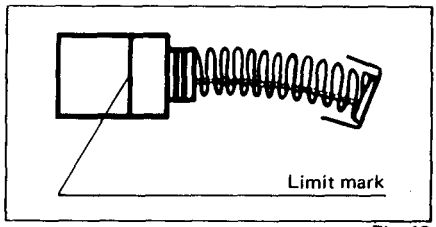


Fig. 18

Insert a minus screwdriver into the holes for carbon brush changeover on the base of the planer. Remove the brush holder cap and take out the worn carbon brush. Replace with new carbon brushes, then reinstall the brush holder caps and both holders.

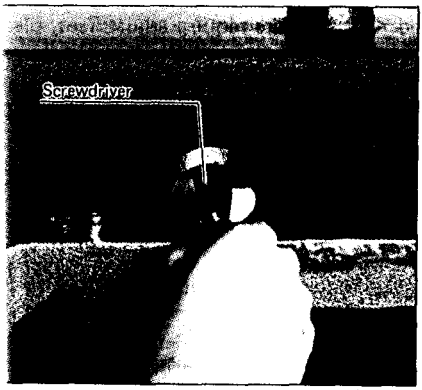


Fig. 19

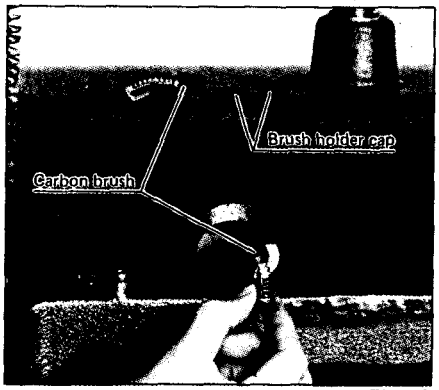


Fig. 20

Cleaning

Always brush off dirt, chips and foreign matter adhering to roller surfaces.

Take that water or oil does not enter the motor.

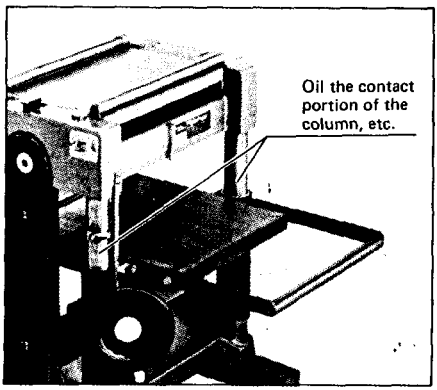


Fig. 21

Lubrication (Periodic)

Oil the chain (after removing the chain cover), the column moving parts (contact areas) and the crank handle.

The periodic lubrication should be performed with machine oil. (Oiling should be done with tool not operating.)

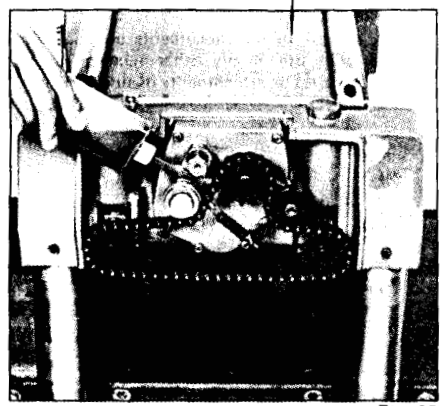


Fig. 22

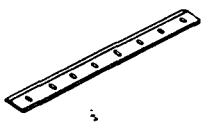
To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

ACCESSORIES

CAUTION:

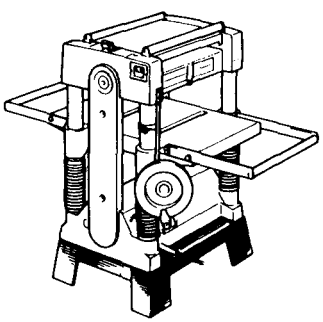
These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments hsould be used only in the proper and intended manner.

- **Replacement blades**
  400 mm (15-3/4")
  Part No. 731024-2



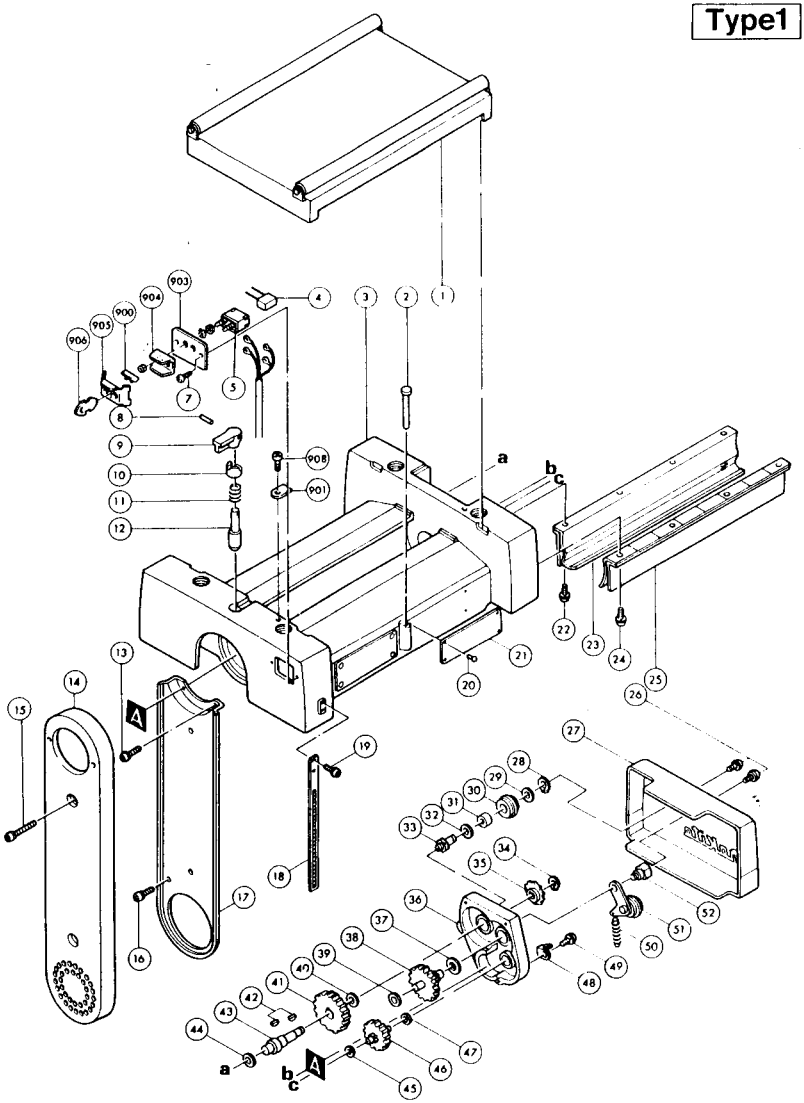
- **Sprocket set**
  (For Low Speed Feed)
  Part No. 191440-4

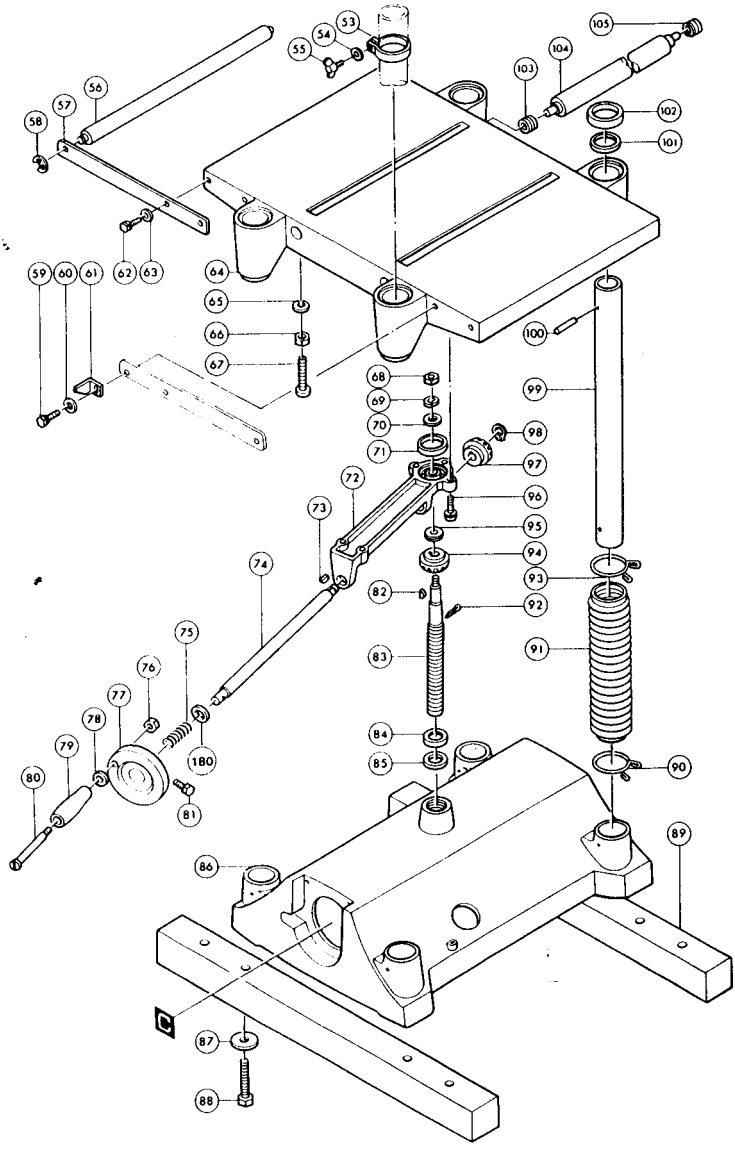
- **Planer stand**
  Part No. 122192-3A



400 mm (15-3/4")
PLANER
Model 2040

Type1

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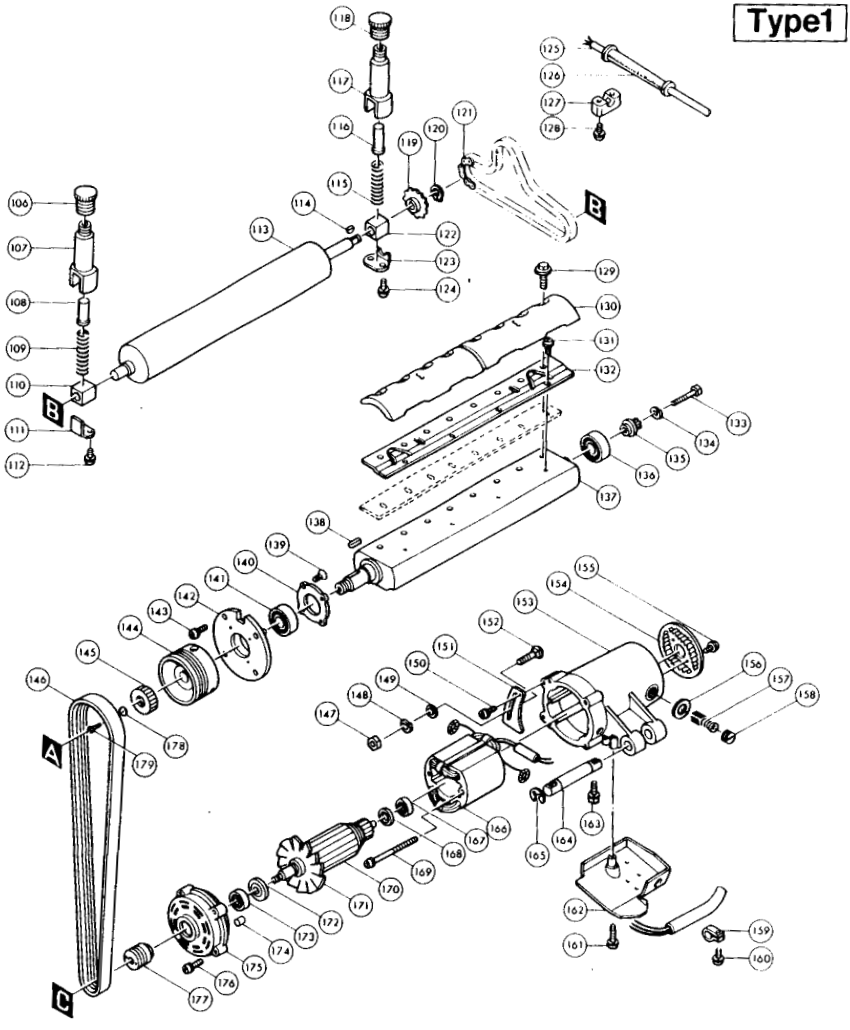

Note: The switch, noise suppressor and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION
MACHINE		
1	1	Chip Cover
2	1	Gauge
3	1	Main Frame
5	1	Switch
7	2	Pan Head Screw M5x12 (With Washer)
8	1	Spring Pin 4 - 18
9	1	Lever 50
10	1	Bush 10
11	1	Compression Spring 11
12	1	Lock Pin
13	2	Pan Head Screw M5x20 (With Washer)
14	1	Belt Cover
15	2	Pan Head Screw M5x35 (With Washer)
16	2	Pan Head Screw M5x10 (With Washer)
17	1	Belt Cover Stay
18	1	Scale Bar
19	2	Pan Head Screw M5x14 (With Washer)
20	4	Rivet 0 - 5
21	1	Name Plate
22	4	Pan Head Screw M5x14 (With Washer)
23	1	Pressure Plate
24	4	Pan Head Screw M5x14 (With Washer)
25	1	Chip Breaker
26	2	Pan Head Screw M5x10 (With Washer)
27	1	Chain Cover
28	1	Retaining Ring S - 12
29	1	Flat Washer 12
30	1	Tension Roller
31	1	Needle Bearing 1212
32	1	Flat Washer 12
33	1	Tension Core
34	1	Retaining Ring S - 12
35	1	Sprocket 15
36	1	Gear Housing
37	1	Flat Washer 12
38	1	Gear Complete 13 - 61
39	1	Flat Washer 12
40	1	Flat Washer 14
41	1	Helical Gear 69
42	2	Woodruff Key 4
43	1	Driving Shaft
44	1	Flat Washer 14
45	1	Flat Washer 10
46	1	Gear Complete 11 - 73
47	1	Flat Washer 10
48	1	Hook
49	1	Pan Head Screw M5x35 (With Washer)
50	1	Tension Spring 9
51	1	Tensioner
52	1	Chain Cover Core
53	1	Stop Ring 50
54	1	Ring 6
55	1	Wing Bolt M6x25
56	2	Extension Roller 25 - 395
57	4	Roller Arm
58	4	Stop Ring E - 9
59	4	Hex. Bolt M8x25 (With Washer)
60	4	Flat Washer 8
61	1	Indicator Plate
62	4	Hex. Bolt M8x25 (With Washer)
63	4	Flat Washer 8
64	1	Table
65	4	Spring Washer 6
66	4	Hex. Nut M6
67	4	Pan Head Screw M6x50
68	1	Hex. Nut M12
69	1	Spring Washer 12
70	1	Flat Washer 12
71	1	Ring 46
72	1	Handle Supporter
73	1	Woodruff Key 4
74	1	Handle Shaft

ITEM NO.	NO. USED	DESCRIPTION
MACHINE		
75	1	Compression Spring 19
76	1	Hex. Nut M10
77	1	Handle 175
78	1	Flat Washer 10
79	1	Grip 30
80	1	Bolt M10
81	1	Hex. Bolt M8x20
82	1	Woodruff Key 4
83	1	Screw M24
84	1	Cap 34
85	1	Felt Ring 34
86	1	Base
87	4	Flat Washer 11
88	4	Hex. Bolt M10x70
89	2	Stable Base
90	4	Snap Ring 55
91	4	Bellows
92	1	Split Pin 3 - 25
93	4	Snap Ring 55
94	1	Straight Bevel Gear 16
95	1	Thrust Needle Bearing 1528
96	5	Pan Head Screw M6x30 (With Washer)
97	1	Straight Bevel Gear 16
98	1	Retaining Ring S - 15
99	4	Column
100	8	Spring Pin 8 - 60
101	4	Felt Ring 60
102	4	Cap 60
103	2	Plane Bearing 10
104	2	Roller 32 - 353
105	2	Plane Bearing 10
106	2	Adjust Screw M27
107	2	Metal Holder
108	2	Pin 10
109	2	Compression Spring 14
110	2	Plane Bearing 17
111	2	Metal Cover L
112	4	Pan Head Screw M5x14 (With Washer)
113	2	Roller 65 - 400
114	2	Woodruff Key 4
115	2	Compression Spring 14
116	2	Pin 10
117	2	Metal Holder
118	2	Adjust Screw M27
119	2	Sprocket 15
120	2	Retaining Ring S - 12
121	1	Chain 35 - 64
122	2	Plane Bearing 17
123	2	Metal Cover S
124	4	Pan Head Screw M5x14 (With Washer)
125	1	Cord
126	1	Cord Guard
127	1	Strain Relief
128	2	Pan Head Screw M4x14 (With Washer)
129	16	Hex. Flange Head Bolt M8x30
130	4	Drum Cover 400
131	8	Pan Head Screw M5x12 (With Washer)
132	2	Blade Holder 400
133	1	Hex. Bolt M5x45
134	1	Spring Washer 5
135	1	Helical Gear 15
136	1	Ball Bearing 6204LLB
137	1	Drum
138	1	Key 5
139	4	Countersunk Head Screw M5x16 (With Washer)
140	1	Bearing Retainer 57
141	1	Ball Bearing 6204LLB
142	1	Bearing Cover
143	2	Pan Head Screw M5x20 (With Washer)
144	1	V-Pulley 9 - 83
145	1	Knob 40
146	1	Poly V-Belt 9 - 1143

ITEM NO.	NO. USED	DESCRIPTION
MACHINE		
147	1	Hex. Nut M8
148	1	Spring Washer 8
149	1	Flat Washer 8
150	2	Pan Head Screw M6x18 (With Washer)
151	1	Tension Plate
152	1	Cap Square Neck Bolt M8x35
153	1	Motor Housing
154	1	Rear Cover
155	2	Pan Head Screw M5x12 (With Washer)
156	2	Insulation Washer
157	2	Carbon Brush
158	2	*Brush Holder Cap*
159	1	Strain Relief
160	1	Pan Head Screw M5x10 (With Washer)
161	1	Pan Head Screw M5x30 (With Washer)
162	1	Protector
163	2	Hex. Bolt M8x30 (With Washer)
164	1	Hinge Pin
165	2	*Stop Ring E–15*
166	1	FIELD ASSEMBLY
167	1	Ball Bearing 6200LLB

ITEM NO.	NO. USED	DESCRIPTION
MACHINE		
168	1	Dust Seal 10
169	2	Pan Head Screw M5x95 (With Washer)
170	1	ARMATURE ASSEMBLY (With Item 167, 168 & 170 – 173)
171	1	Fan 92
172	1	Dust Seal 12
173	1	Ball Bearing 6201LLB
174	1	Rubber Pin 6
175	1	Bracket
176	4	Pan Head Screw M5x25 (With Washer)
177	1	V-Pulley 9–35
178	1	Flat Washer 7
179	1	Countersunk Head Screw M5x16 (With Washer)
180	1	Flat washer 18
900	1	Leaf Spring
901	2	Set Plate
903	1	Switch Plate
904	1	Switch Protector
905	1	Switch Cover
906	1	Key
908	2	Pan Head Screw M5x14 (With Washer)

Note: The switch and other part specifications may differ from country to country.

アメリカ

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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