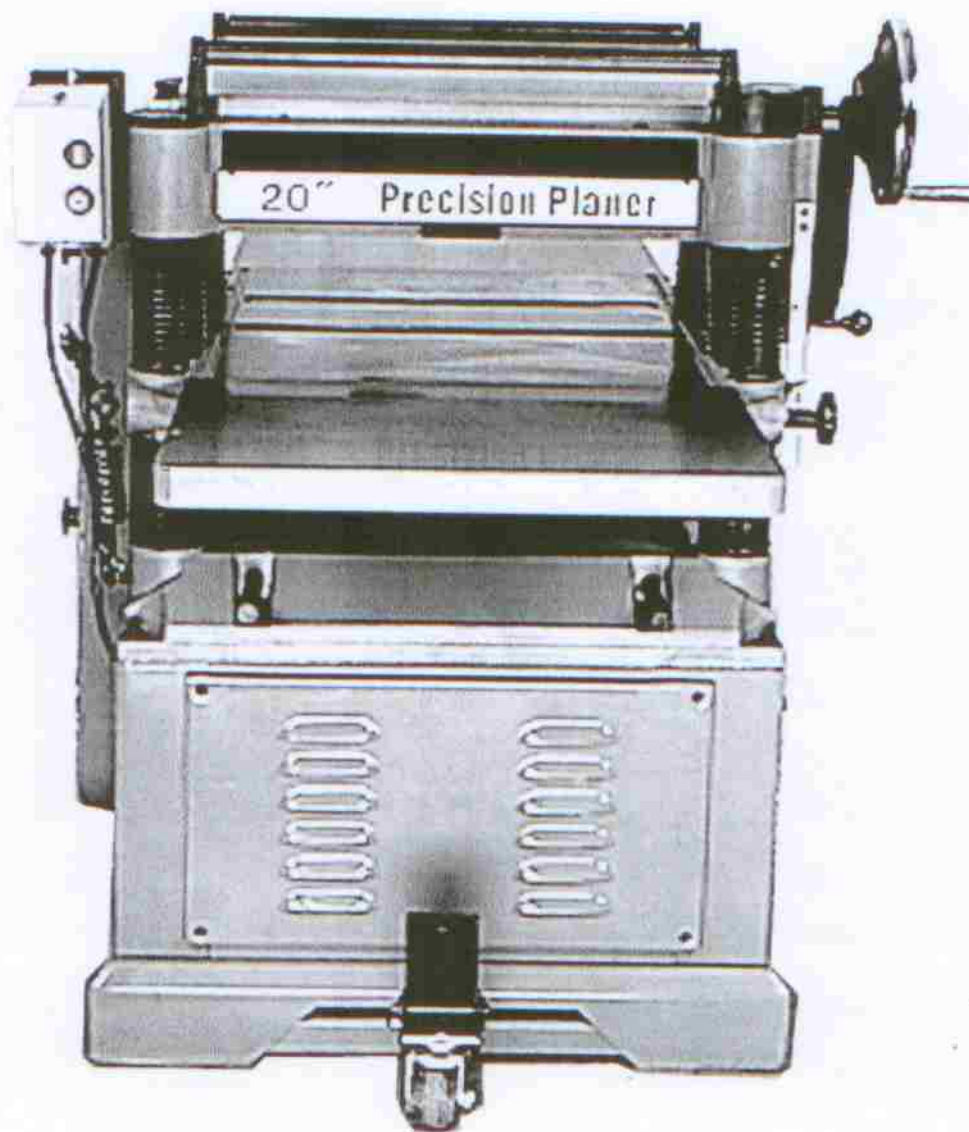


Auto-Feed Precision Planer

Instruction Manual



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MACHINE DATA OF THE 20" PRECISION PLANER

MOTOR 220V.415V 50-60HZ 3Hp/5Hp

Cutting Capacity:

Length of Unbutted Stock.....Minimum.....6.74"(171mm)
 Width of Stock.....Maximum.....20"(508mm)
 Thickness of Stock.....Maximum.....8"(204mm)
 Planing Depth.....Width of workpiece below.....8.3"(210mm)
 (Max).....0.23"(6mm)
 Width of workpiece 8.3"~20" (210mm~508mm)
 (Max) 0.12" (3mm)
 Feed Rates 16/20 FPM (4.96/6.33mmin)

Cutterhead:

Number of Knives.....4
 Diameter.....3.15"(80mm)
 Speed 5,000RPM
 Cuts Per Minute.....20,000

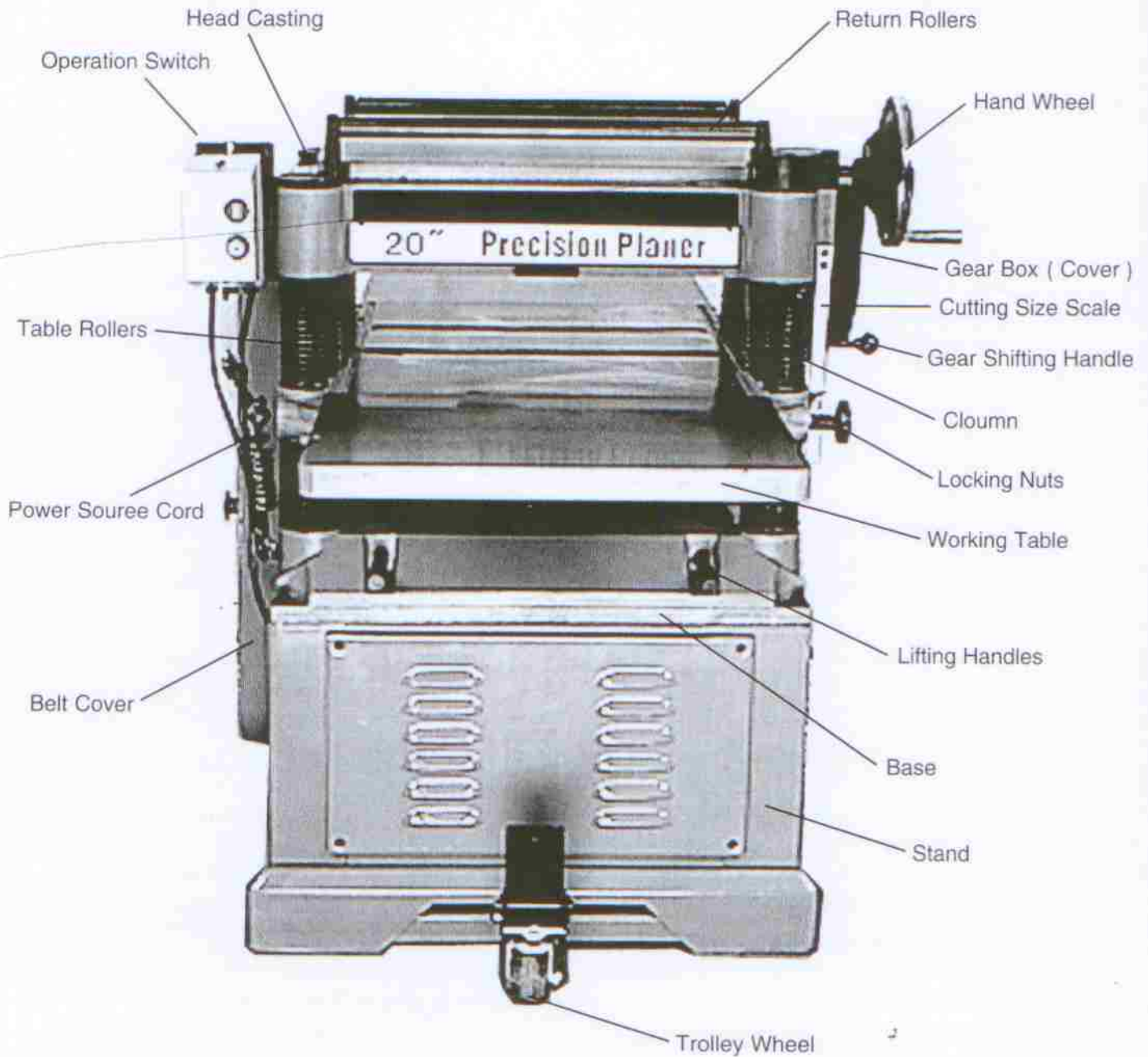
Feed Rolls:

Spiral in-feed.....2" Dia(50.08mm)
 Table Bed Rolls(Two).....Adjustable
 Table 25.7"x20.01" (653x510mm)

Overall Dimensions:

Length.....26"(660mm)
 Width.....36.6"(930mm)
 Height.....44.1"(1120mm)
 Net Weight.....771 Lbs(350kg)
 Gross Weight.....926 Lbs(420kg)
 Packing Size (LxWxH) 38.4"x29.5"x48.2"
 (975mmx750mmx1225mm)

20" PRECISION PLANER



GENERAL SAFETY INSTRUCTIONS

1.KEEP GUARDS IN PLACE.

Safety guards must be kept in place and in working order.

2.REMOVE ADJUSTING KEYS AND WRENCHES.

Before turning on machine,check to see that the keys,chucks and adjusting wrenches are removed from the tool.

3.REDUCE THE RISK OF UNINTENTIONAL STARTING.

Make sure switch is in the OFF position before plugging in the tool.

4.DO NOT FORCE TOOLS.

They will do a job better and safer at the rate for which they were designed.

5.USE RIGHT TOOL.

Do not force a tool or an attachment to do a job for which it was not designed.

6.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 tools.

7.MAINTAIN TOOLS WITH CARE.

Keep tools sharp and clean for the best and safest performance.Follow instructions for lubricating and changing accessories.

8.DISCONNECT TOOLS FROM POWER.

Before servicing,or when changing accessories such as bits,blades,cutters etc.,disconnect from power.

9.USE RECOMMENDED ACCESSORIES.

Consult the owner's manual for recommended accessories.The use of improper accessories may cause risk of injuries.

10.CHECK DAMAGED PARTS.

Check for alignment of moving parts, binding of

moving parts, breakage of parts, mounting, and any other conditions that may affect the tools operation. A guard or other part that is damaged should be properly repaired or replaced.

11.TURN POWER OFF. NEVER LEAVE TOOL RUNNING UNATTENDED.

Do not leave tool until it comes to a complete stop.

12.KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents.

13.DO NOT USE IN DANGEROUS ENVIRONMENT.

Do not use power tools in damp or wet locations,or expose them to rain.Keep work area well lighted.

14.KEEP CHILDREN AWAY.

All visitors should be kept at a safe distance from the work area.

15.MAKE WORKSHOP CHILD PROOF.

Use padlocks,master switches,and remove starter keys.

16.WEAR PROPER APPARREL.

Loose clothing,gloves,neckties,rings,bracelets or other jewelry may get caught in moving parts.Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

17.ALWAYS USE SAFETY GLASSES AND DUST MASKS.

Use face or dust mask if cutting operation is dusty. Every day eyeglasses only have impact resistant lenses,they ARE NOT safety glasses.

18.DO NOT OVERREACH.

Keep proper footing and balance at all times.

19.NEVER STAND ON TOOL.

Serious injuries could occur if a moving part is unintentionally contacted.

ADDITIONAL SAFETY RULES FOR AUTO-FEED PRECISION PLANER

- 1.If you are not thoroughly familiar with the operation of planers,obtain advice from your supervisor,instructor or other qualified person.
- 2.Keep cutterhead sharp and free of all rust and pitch.
- 3.Check material for loose knots ,nails and other defects.
- 4.Remove shavings only with the power off.
- 5.Keep hands away from the top surface of the board near the feed rolls.
- 6.Check that switch is in OFF position before plugging in power cord.
- 7.Before moving table upward or downward,loosen locking knobs.
After choosing the proper position,tighten locking knobs.
The locking knobs are on the right side of machine as shown in PG 6.
- 8.Be sure the knives of cutterhead are correct and all hex screws are secured tightly before use.
- 9.Keep hands away from the feed rolls and the cutterhead.
- 10.Do not operate machine while the gear cover is open.
- 11.Remove adjusting tools and loose articles from machine before operating.

UNPACKING AND CLEANUP

To ensure maximum performance from your planer, clean it properly; and install it accurately before use. As soon as you receive the planer, we recommend you follow these Procedures:

1. Inspect packing crate for damage in transit. Record damage and report it immediately to shipper.
2. Open crate and check that machine arrived in good condition. If not ,let your industrial distribution know immediately.
3. Before lifting machine, remove all bolts locking it to its shipping base.
4. Transport machine to location with a hand truck or dolly.
5. Remove the protective coating from the table, bed rolls, feed rolls, cutterhead and loose items packed with the machine, including lifting handles and motor pulley.
6. This coating may be removed with a soft cloth moistened with Kerosene.
NOTE: Do not use acetone, gasoline, or lacquer thinner for this purpose.
7. Do not use solvents on plastic parts; solvents dissolve or damage plastic.
8. Care must be taken when cleaning the cutterhead as the knives are in the cutterhead and knives are very sharp.

Lifting Handles

There are four lifting handles furnished. All lifting handles are of hidden type. Pull the handles out for use, push in when not in use. Two of the lifting handles (A) are as shown in Fig. 1



Fig.1

Lifting Planer

If any type of sling is used to lift machine, be sure to attach to lifting handles only. Be sure that machine is kept in level position while lifting, as shown in Fig. 2

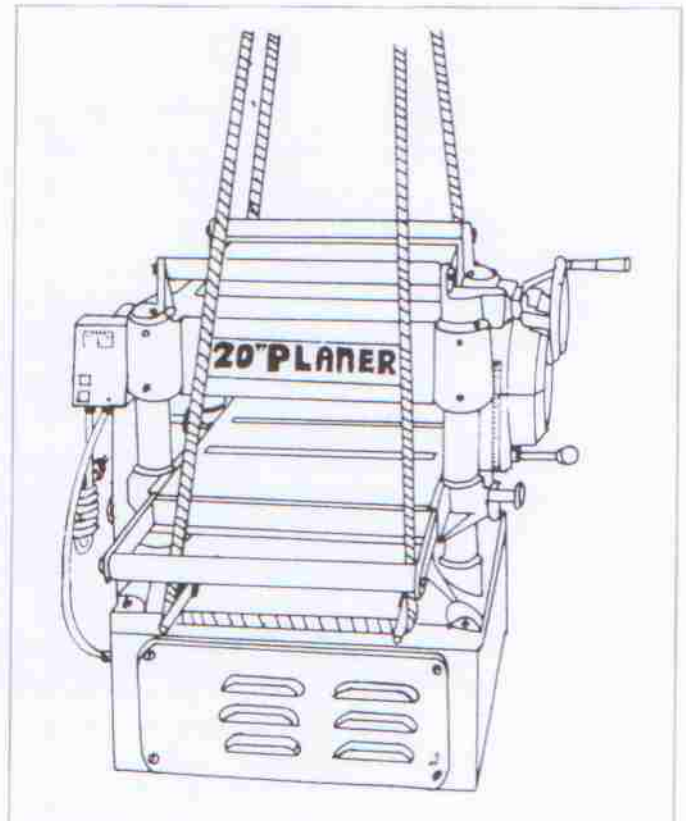


Fig.2

Lubrication Guide of 20" Auto-Feed Precision Planer

No.	Position	interval	Suitable Types of Oil	Fig No
1	Chain	Frequently	Grease	4
2	Gear Box	When operated more than 2,500 hours	HD-100, Mobil Gear 627, Shell Omala 100, ESSO Spartan EP-100	4
3	Rollers	Frequently	SAE-30	5
4	Worm Gear	Frequently	Grease	6
5	Lead Screw	Frequently	Grease	6
6	Column	Frequently	Clean and SAE-30	6
7	Chain	Frequently	Grease	7
8	Bushing	Frequently	SAE-30	8

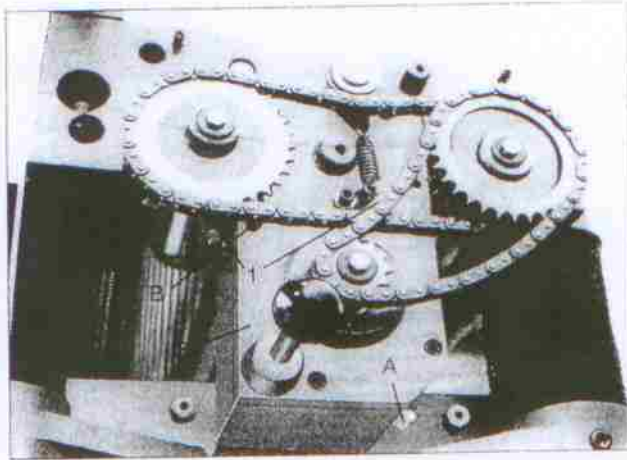


Fig 4

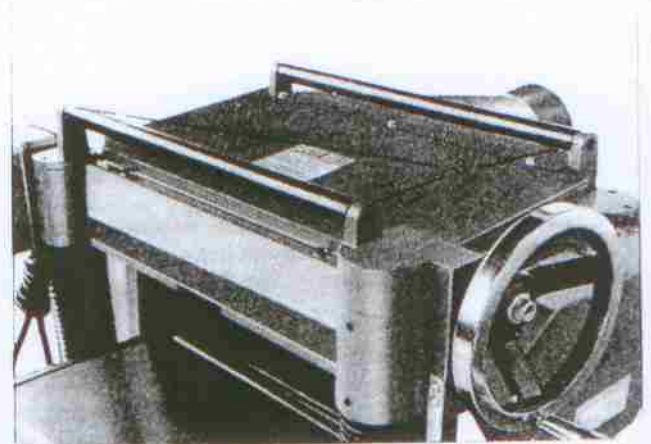


Fig 5

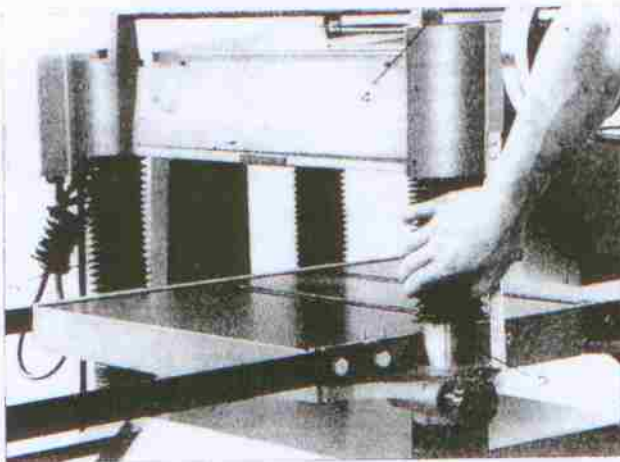


Fig 6

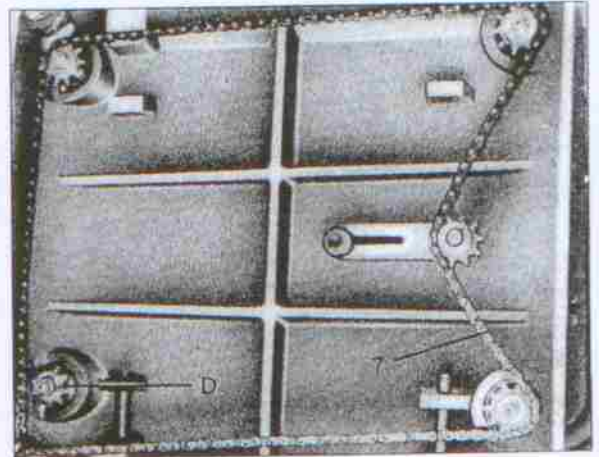


Fig 7

Lubrication Guide of Gear Box:

The gear box lubricant must be replaced every 2,500 hours.

Suitable lubricant is multipurpose gear box lubricant.

To Replace Lubricant:

1. Remove the drain plug(A) Fig 4 and filler Cap(B), Drain dirty oil thoroughly.
2. Tighten the drain plug(A)
3. Fill with clean lubricant through hole(B).
4. Tighten the filler cap(B)



Fig 8

Assembling And Aligning Motor, Motor pulley And Belt:

1. Assemble the motor pulley to the motor shaft with the key and tighten the screw in the motor shaft, as shown in Fig.9.

2. Assemble the motor to the motor mounting plate, as shown in Fig.10

NOTE: It is very important the motor must be mounted to motor plate by using the mounting hardware (A) Fig.10

3. Using a straight edge, align the motor and cutter-head pulleys as shown in Fig. 11, the motor plate (B) Fig. 10 can be moved for alignment by loosening the set screws (C) in the motor plate (B) as shown in Fig. 10

4. Assemble the belts to the two pulleys, as shown in Fig.11. And adjust for the proper belt tension by raising or lowering the motor plate, as shown in Fig.12, then tighten the nuts (C) Fig.12, correct tension is obtained when there is approx. 1/4" deflection of the center span of the pulleys by using light finger pressure.



Fig.9

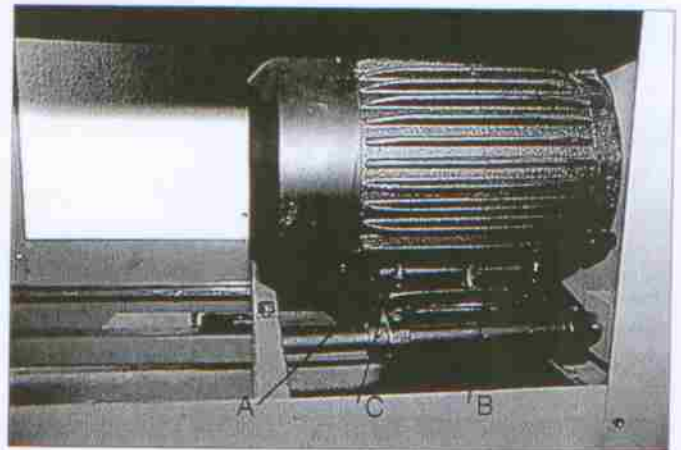


Fig.10

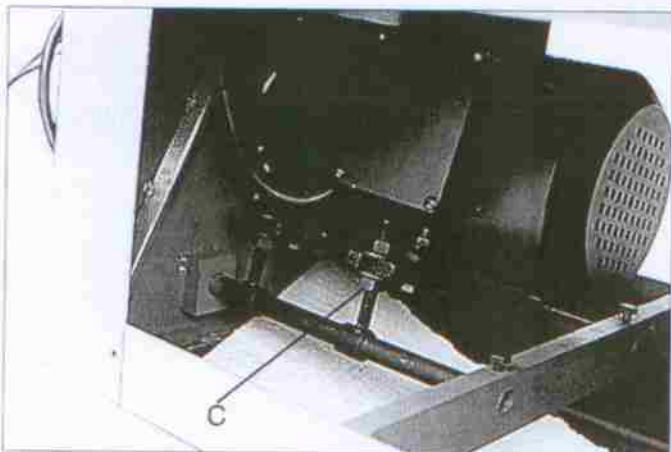


Fig.12

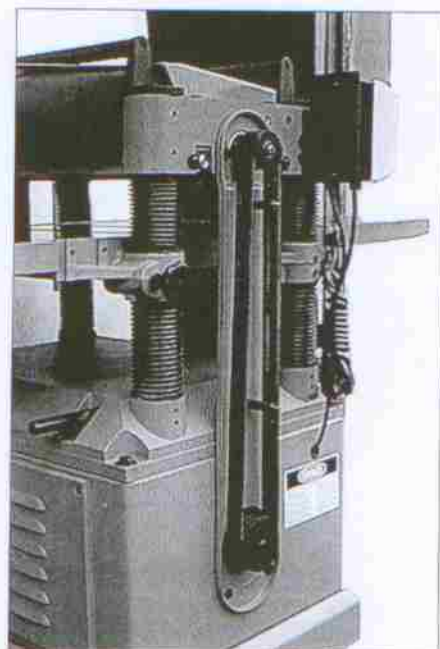


Fig.11

Adjusting Table Rollers

Your planer is supplied with two table rollers(A) Fig. 13,which aid in feeding the stock by reducing friction and turn as the stock is fed through the planer.It is not possible to give exact dimensions on the proper height setting of the table rollers because each type of wood behaves differently.

As a general rule,however,when planing rough stock, the table rollers should be set at high position,and when planing smooth stock the table rollers should be set at low position.

NOTE:The raising range between 0.003"-0.006" when raising the roller higher above table as shown in Fig.14.

The Table Rollers on your planer are set for average planing and are parallel to the table surface.If you desire to adjust the table rollers higher or lower, proceed as follows:

- 1.Disconnect machine from the power source.
- 2.Lay straight edge Fig.15 across both rollers,loosen the screws(B)Fig.15,and turn the eccentric shafts(C)to raise or lower the table rollers,when the proper height is obtained,tighten screws (B) as shown in Fig.15. Table rollers must be adjusted on the opposite end of table in the same manner.

NOTE:1.Be sure that the height of front and rear rollers are the same.
2.The table rollers must always be set parallel to the table.

Assembling Table Extension

The table extension can be mounted to the table for regular position using the Hex.Hd.screws (A) (unshown) and washers supplied as shown in Fig.16.

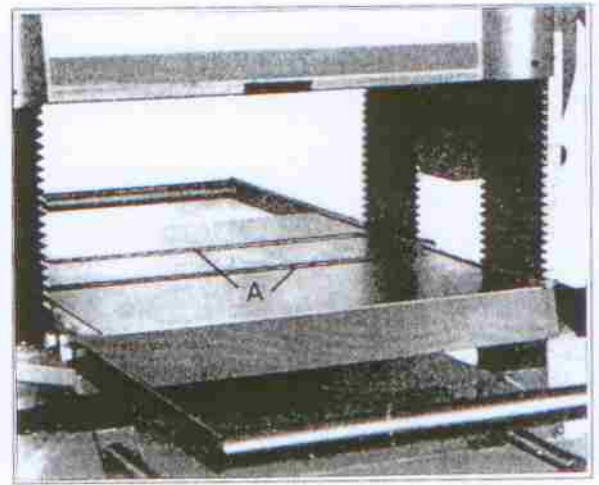


Fig.13

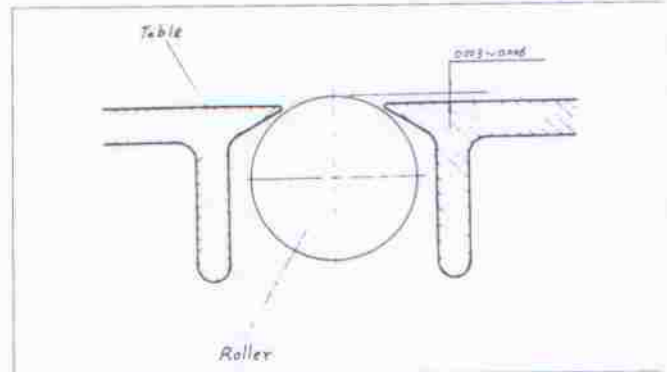


Fig.14

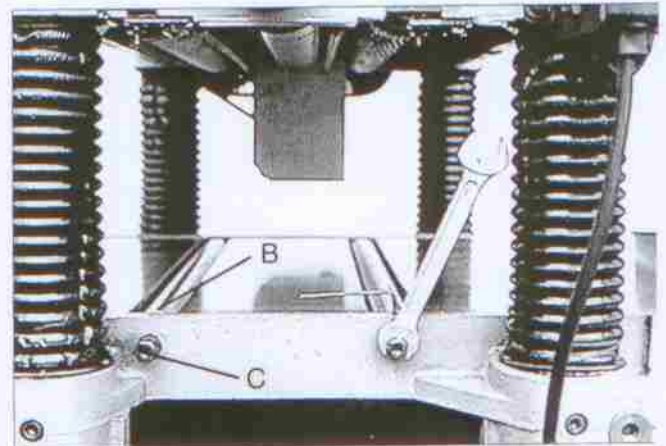


Fig.15

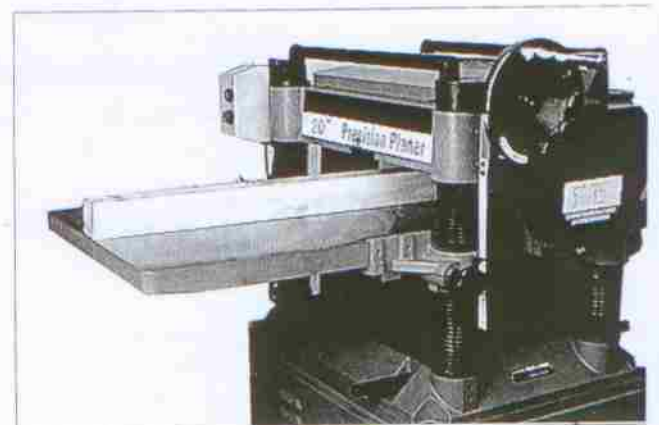


Fig.16

Adjusting Table Extension

Place a straight edge between the table extension and the table, as shown in Fig.16 to check the table extension and the table are at the same height.

To adjust the table extension, proceed as follows:

1. Loosen the screws and washer to move the table extension to the proper position, then tighten the screws.

2. Adjust front and rear table extension in the same manner.

Controlling The Depth of Cutting

The cutting depth scale is a combination inch/metric scale (A), Fig.18, cutting range from 0 to 8" (204mm). The distance of upward or downward movement is controlled by Handwheel (B) Fig.18, for one revolution is 0.059" (1.5mm). Before moving table upward or downward, loosen the lock nuts (C) as shown in Fig. 18. After choosing the proper position, tighten the lock nuts (C).

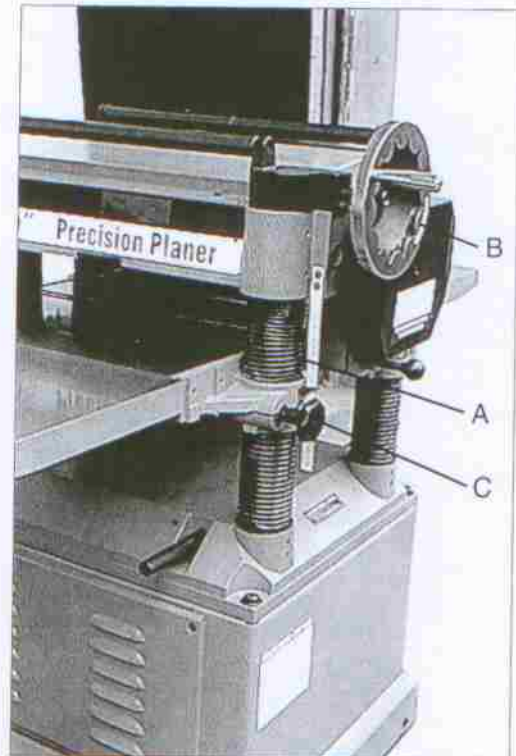


Fig.18

Adjustments

Although your planer was carefully adjusted at the factory, it should be checked before being put into operation. Any inaccuracies due to rough handling in transit can easily be corrected by following these directions.

In order to check the adjustments, you will need a straight edge, feeler gage and a homemade gage block made of hard-wood. This gage block can be made by following the dimensions shown in Fig.19.

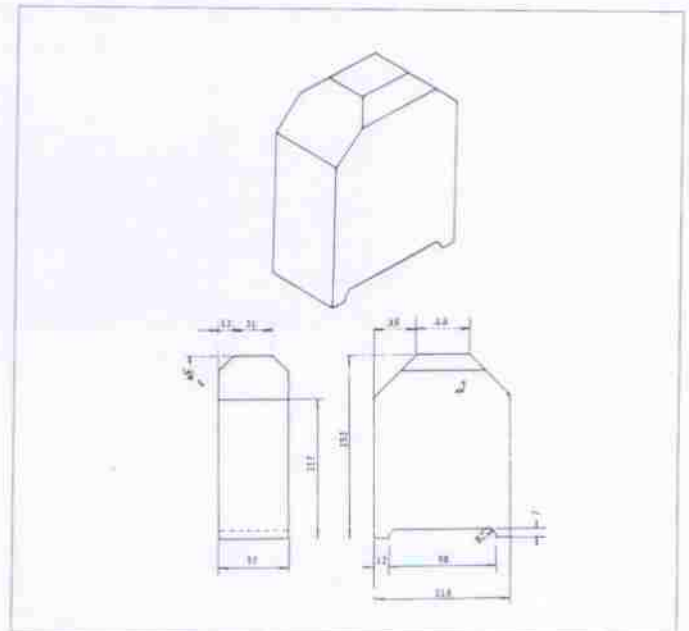


Fig.19



WARNING

WHEN CHECKING ADJUSTMENTS, ALWAYS MAKE SURE THE PLANER IS DISCONNECTED FROM THE POWER SOURCE.

Checking And Adjusting of Knives

When checking or adjusting the cutterhead knives, proceed as follows:

1. Disconnect the machine from the power source.
2. Remove the six screws (A), and remove the upper cover (B) as shown in Fig. 20.
3. To check and adjust knives use the knife gage (A) Fig. 21 and check all four knives. Knives should just contact the bottom of the center protrusion (B) of the knife gage, as shown in Fig. 22.
4. If an adjustment to one or more of the knives is necessary, slightly loosen the knife locking bars (C) Fig. 22 of all four knives by turning the 24 locking screws (D) Fig. 22 into the knife locking bars just enough to relieve stress in the cutterhead and not disturb the setting of the knives.

5. Using the knife gage adjust the knife, that must be reset by loosening all six locking screws (D) Fig. 22, by turning them into the knife locking bar. As the knife locking bar becomes loose, lifter springs (E) located under the knife will raise the knife until it comes into contact with the center protrusion (B) of the gage (A) Fig. 22. Then snug up the knife locking bar by lightly backing out the six locking screws (D) against the slot.

NOTE: At this time, only tighten the knife into the slot just enough to hold knife into position.

6. If additional knives must be reset, repeat STEP 5.

7. After all four knives are set with screws just snug, back out and tighten the six screws (D) Fig. 22 against the slot, starting with the end screws first, then the center screws until the knife is securely held in the cutterhead.

Tighten remaining three knives in the same manner.

NOTE: Double Check all Screws for Tightness

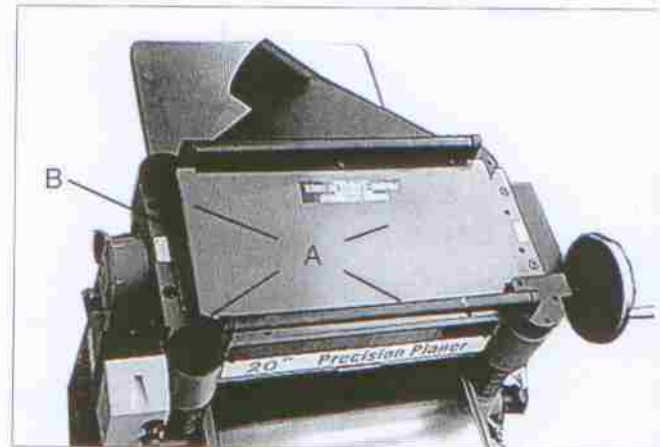


Fig. 20

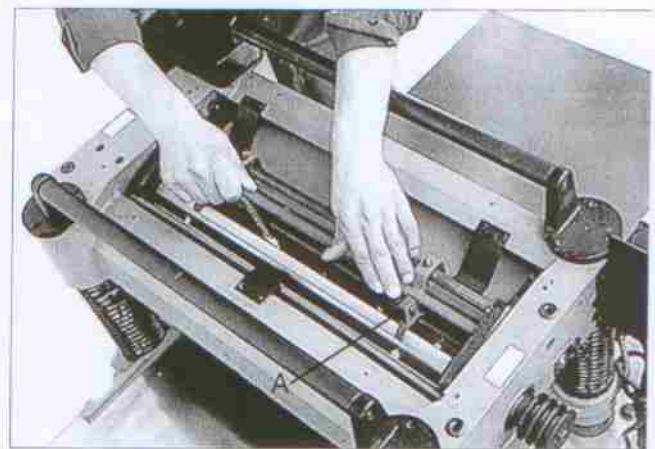


Fig. 21

Replacing And Resetting of Knives.

If the knives are removed for sharpening ,care must be exercised in replacing and resetting them,proceed as follows:

- 1.Disconnect the machine from the power source.
- 2.Remove six screws(A),and the upper cover(B) as shown in Fig.20.
- 3.To remove knife,loosen the knife locking bar(C) Fig. 22,by turning the six knife locking screws(D) into the knife locking bar(C) and remove the knife locking bar (C),knife(F)and springs(E) located the knives.Please take note,the inner two springs will pop out when removing the knife and knife locking bar.
- 4.Remove the remaining three knives in the same manner.
- 5.Thoroughly clean the knife slots ,knife locking bars, springs and locking screws.Check the locking screws, if the threads appear worn or stripped or if the heads are becoming rounded,replace them.
- 6 Inspect the cutting edge of the knives for nicks or wire edge.Hone the knives, slightly using a stone if the knives are to be sharpened,maintain a cutting angle of 35 degrees as shown in Fig.22
- 7 Insert springs(E),knives(F),and knife locking bar(C), into slot of the cutterhead,as shown in Fig.22.Back out locking screws(D)just enough to hold the knife in the cutterhead.
- 8.Place the knife gage(A) over the knife as shown in Fig.22
- 9.While holding down on the knife gage (A)Fig.22, loosen all six locking screws(D)by turning them into the locking bar(C)until cutting edge of knife(F) comes into contact with the protrusion (B) of gage(A).Then snug up the knife locking bar(C) by slightly backing out the six screws(D) against the slot.

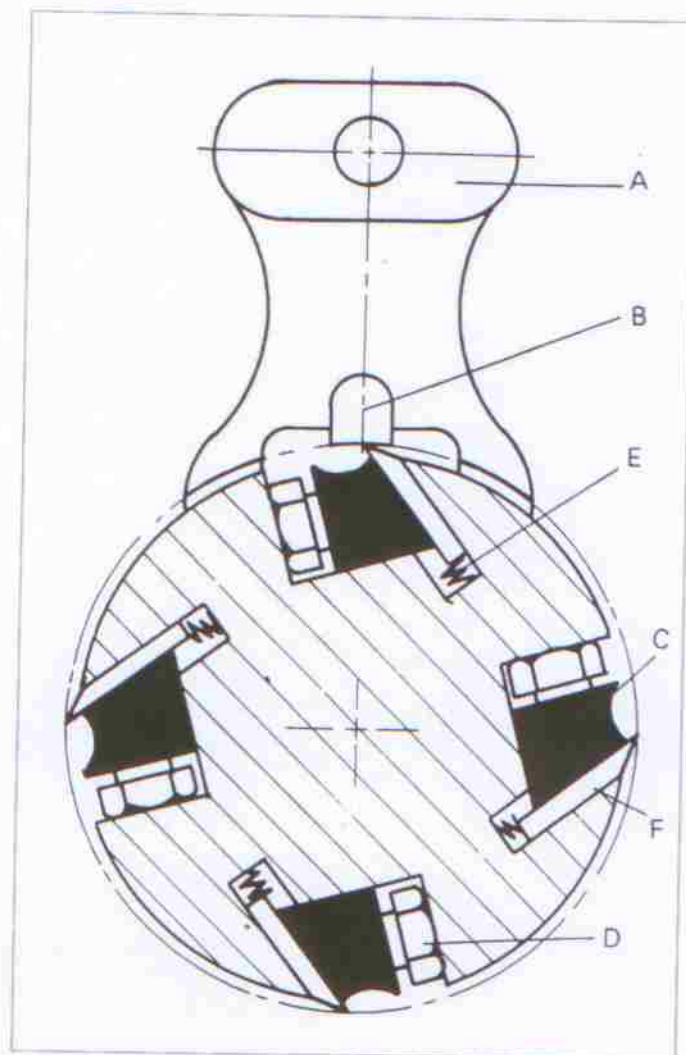


Fig.22

NOTE: AT THIS TIME,ONLY TIGHTEN THE KNIFE INTO THE SLOT JUST ENOUGH TO HOLD THE KNIFE IN POSITION.

10.Replace and reset the other three knives in the same manner.

11.After all four knives are set with the screws just snug,back out and tighten the six screws(D)Fig.22, against the slot starting with the end screws first and then the center screws until the knife is securely held in the cutterhead .Tighten the remaining three knives in the same manner.



WARNING

AFTER REPLACING AND CHECKING, PLEASE CHECK ONE MORE TIME CAREFULLY. BE SURE THAT THE DIRECTION OF KNIVES IS CORRECT AND ALL 24 LOCKING SCREWS ARE TIGHTENED SECURELY. IT IS VERY IMPORTANT.

Checking Working Table Parallel To Cutterhead

The working table is set parallel to the cutterhead at the factory and no further adjustment should be necessary. If your machine is planing a taper, first check to see if the knives are set properly in the cutterhead. Then check to see if the working table is set parallel to the cutterhead, proceed as follows:

1. Disconnect machine from the power source.
2. Place the gage block (A) Fig. 23 on the working table directly under front edge of head casting (B), make slight contact by gently raising table as shown in Fig. 23.
3. Move the gage block (A) to opposite end of the working table, as shown in Fig. 24.

IMPORTANT: DISTANCE FROM THE WORKING TABLE TO EDGE OF THE HEAD CASTING SHOULD BE THE SAME.

4. Adjust opposite end in the same manner.

Adjusting Working Table Parallel To Cutterhead

If the working table is not parallel to the cutterhead, perform the adjustment procedures as follows:

1. Disconnect the machine from power source.
2. Tilt planer on its side to expose underside of base as shown in Fig. 25.
3. Remove bolt (A) and loosen bolt (B) Fig. 25, which will allow you to move the idler sprocket assembly (C) far enough to release tension on chain, as shown in Fig. 26.
4. Remove chain from sprocket on corner of base that must be adjusted. In Fig. 26 chain has been removed from sprocket (D).
5. Turn sprocket (D) Fig. 26 by hand to bring that corner into adjustment with other three corners.

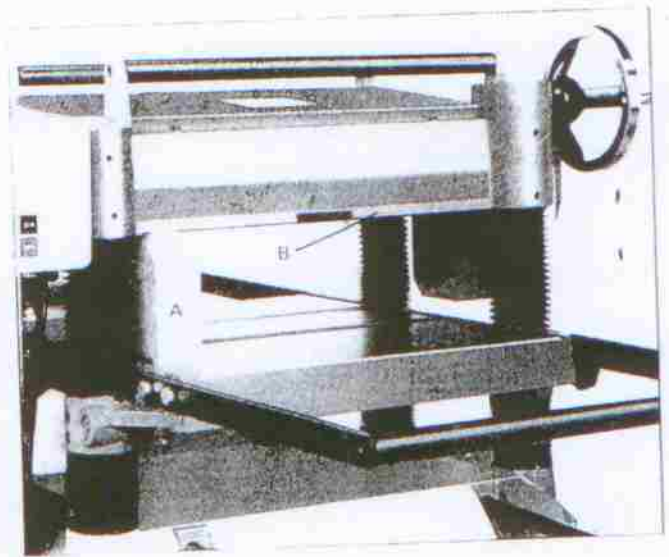


Fig 23

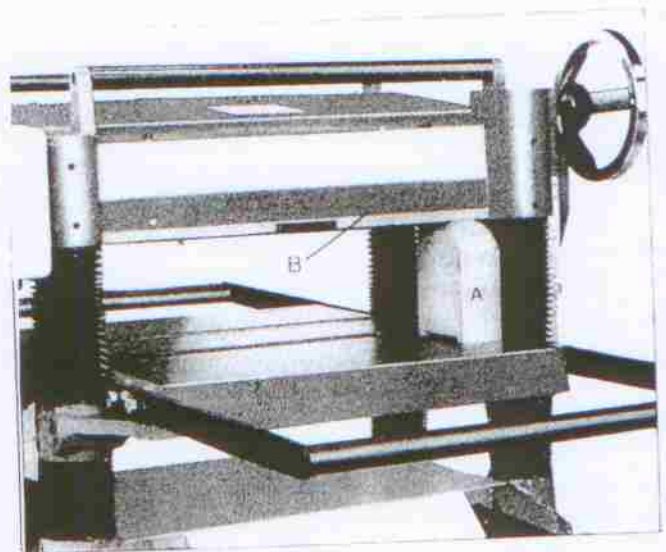


Fig 24

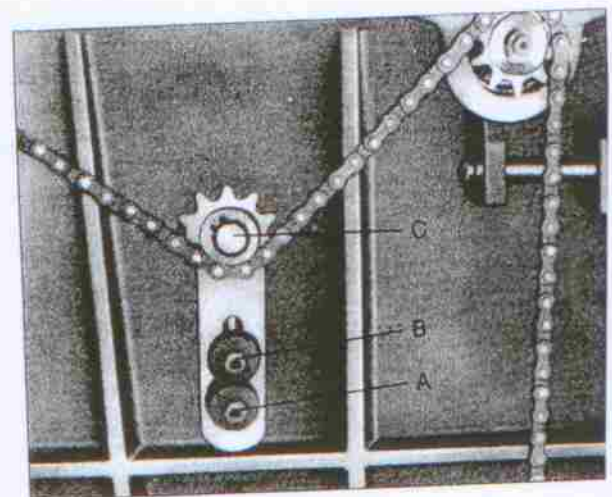


Fig 25

NOTE: A.Turning sprocket (D),Clockwise will increase the distance between the working table and headcasting, counter clockwise will decrease the distance.

B.This adjustment is very sensitive and it should not be necessary to turn the sprocket more than one or two teeth.

Know The Transmitting Rollers of Your Planer

- A.Infeed Roller
- B.Outfeed Roller
- C.Chip breaker
- D.Cutterhead
- E.Pressure Bar
- F.Anti-Kick back Fingers

The infeed roller(A) and outfeed roller(B) Fig.27 are those parts of your planer that feed the stock while it is being planed.The infeed roller and the outfeed roller are under spring tension and this tension must be sufficient to feed the stock uniformly through the planer without slipping but should not be too tight that it causes damage to the board.

The tension should be equal at both ends of each roller.

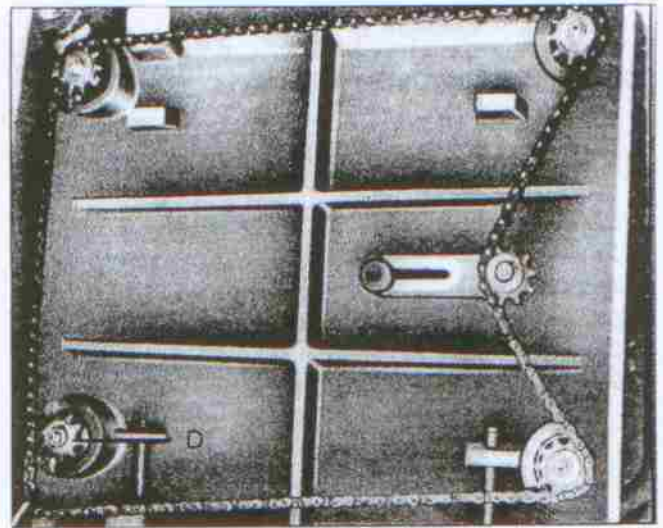


Fig. 26

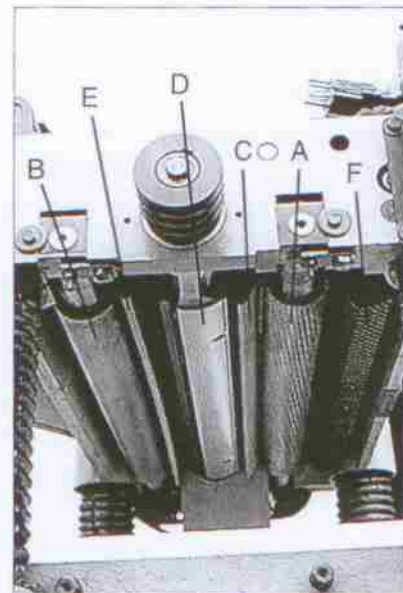


Fig.27

Adjusting Infeed And Outfeed Rollers Spring Tension

* To adjust the spring tension of the Infeed/Outfeed roller,turn the screw(G)/(H)Fig.28.and also the screw on the opposite end of the Infeed/Outfeed roller.

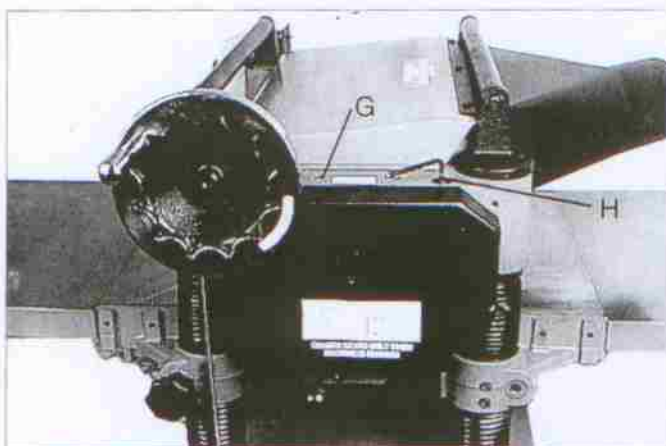


Fig.28

Anti-Kick Back Fingers

The anti-kickback fingers (F)Fig.29.are provided on your planer to prevent kickback.These fingers operate by gravity and it is necessary to inspect them occasionally to make sure they are free of gum and pitch so that they move independently and operate correctly.



Fig.29

Checking, Adjusting Height Of Infeed Roller, Chipbreaker, Pressure Bar And Outfeed Roller

The infeed roller, chipbreaker, pressure bar and outfeed roller are adjusted at the factory. The infeed roller and the chipbreaker to be set 0.004" (0.1mm) below the cutting circle, the pressure bar to be set 0.008" (0.2mm) below the cutting circle and the outfeed roller to be set 0.02" (0.5mm) below the cutting circle, as shown in Fig.30 If an adjustment to the infeed roller, chipbreaker, pressure bar or outfeed roller is necessary, use the manner of the example.

EX. To check and adjust the outfeed roller below the cutting circle 0.02" (0.5mm), proceed as follows:

1. Disconnect machine from the power source.
2. Make sure the knives are adjusted properly as previously explained under CHECKING AND ADJUSTING OF KNIVES.
3. Place the gage block on the table directly underneath the cutterhead, as shown in Fig.31. Using a 0.02" (0.5mm) feeler gage, placed on top of the gage block, raise the working table until the knife just touches the feeler gage when the knife is at its lowest point. Do not move the working table any further until the outfeed roller is adjusted.

4. Move the gage block under one end of the outfeed roller (B) as shown in Fig.32. The bottom of the outfeed roller should just touch the top of the gage block. If an adjustment to the outfeed roller is necessary, loosen the lock nut (K) Fig.32, and turn screw (L) Fig.3 until the outfeed roller just touches the gage block. Then tighten lock nut (K) as shown in Fig.3.

5. Check and adjust opposite end of the outfeed roller in the same manner.

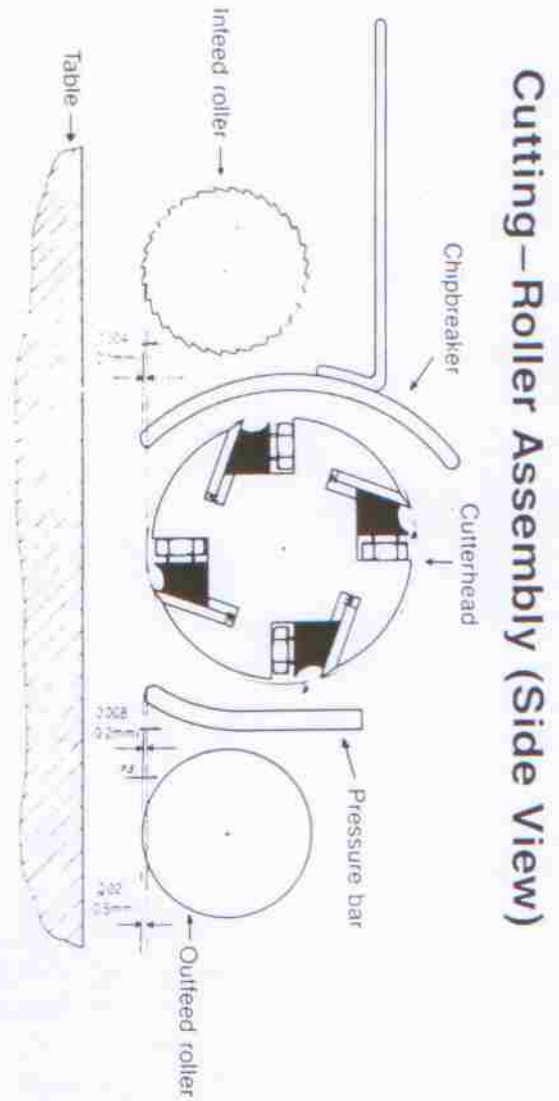


Fig. 30

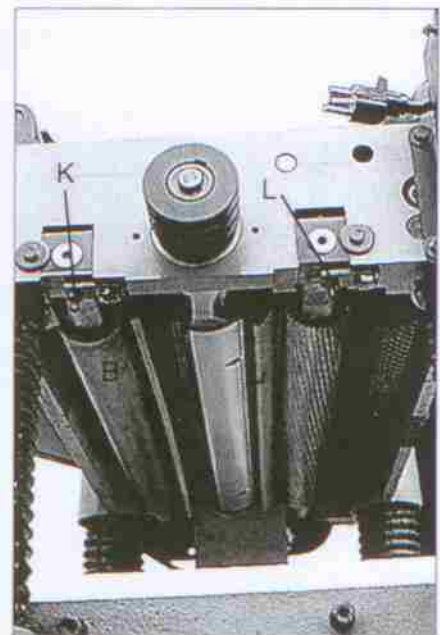


Fig.32

Feed Speed Control

Your machine is equipped with a spiral ,serrated infeed roller and a solid steel outfeed roller. When the feed rollers are engaged, they turn to feed the stock. The feed rollers slow automatically when the machine is under heavy load for best planing under all conditions. The feed rollers are driven by chains (D) Fig.33 and the sprockets (E), which takes power directly from the cutterhead through the oil bath gear box (F) Fig.33

There are two feed speeds in the gear box by using the shift lever (G) Fig.33 to pull out or push in, and the feed speed range as shown in Fig.34.

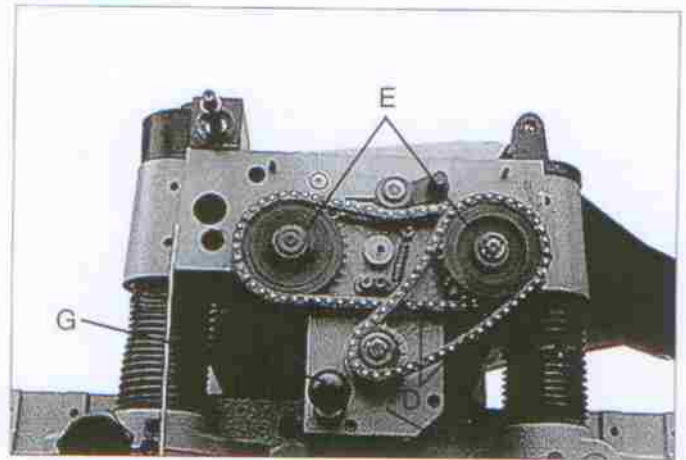


Fig.33

Feed Roll Speed Rate

Speed rate of feed roll is transmitted by shaft gears in gear box.

Shift gears handle shown as Fig.34. There are three kinds of operations of gear box by using shaft handle to pull or push. In the position A feed roll is operating on rate 20 FPM, shown as Fig.16. In the position B feed roll is operating on rate 0. In the position C feed roll is operating on rate 16 FPM.

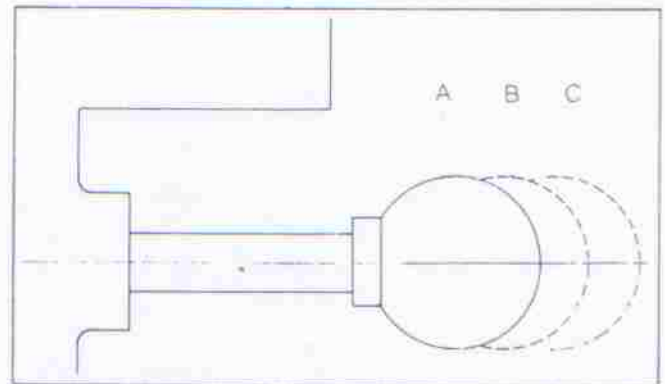


Fig. 34

Return Rollers

The two return rollers (A) Fig.35, on the top of the machine serve as convenient stock rest. When planed lumber is returned to the infeed side it saves time and motion, as shown in Fig 35.

Accessory Dust Collector Hood

Dust collector hood is standard accessory. Assembled to the rear of the planer using hex. hd screws and washers. It provides an efficient means of maintaining a clean and safe work area as shown in Fig 35. (B)



WARNING

IF, AFTER READING THIS MANUAL YOU ARE STILL UNSURE ON HOW TO SAFELY OPERATE THIS MACHINE DO NOT OPERATE UNTIL YOU HAVE RECEIVED FURTHER INSTRUCTIONS FROM A QUALIFIED PERSON.

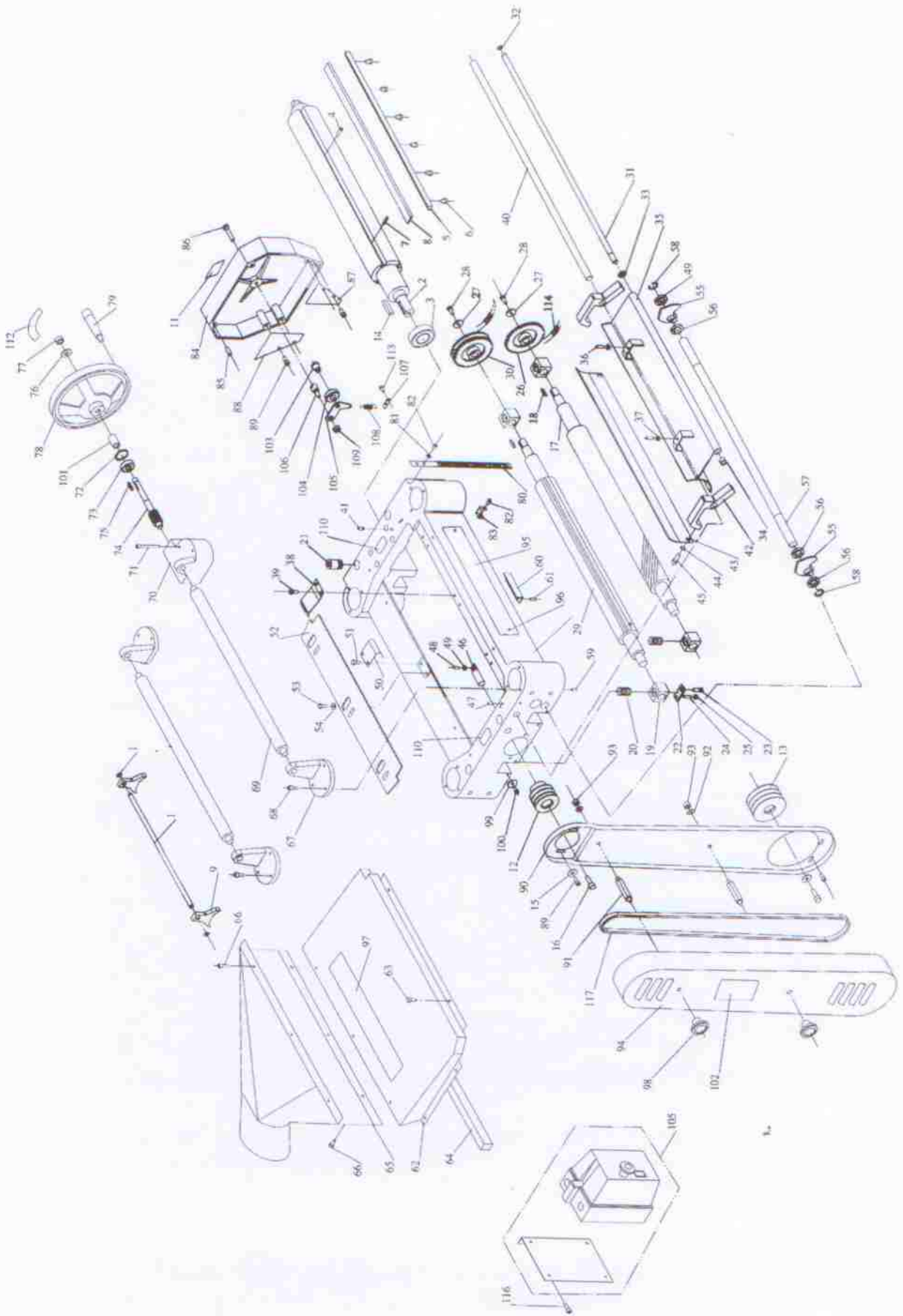


Fig.35

CUTTERHEAD

NO	Parts No.	Description	Q'ty	Remark
1	1001	Head Casting	1	
2	1002	Cutterhead	1	
3	6206Z	Bearing	1	30x62x16
4		Hex Hd.Scr.	8	M5x12
5	1003	Knife Locking Bar	4	
6	1004	Knife Setting Scr	24	
7	1005	Spring	8	
8	1006	Knives	4	
9	1007	Knife Gauge	2	
10	1008	Club of Knife Gauge	1	
11		Retaining Ring	4	8
12	1009	Cutterhead Pulley	1	
13	1010	Motor Pulley	1	
14		Key	1	C8x35
15	1011	Flat Washer	2	
16		Hex Hd.Bolt	2	M8x25
17	1012	Infeed Roller	1	
18		Key	2	C5x22
19	1013	Bush	4	
20	1014	Spring	4	
21	1015	Adjusting Scr	4	
22	1016	Plate	4	
23		Hex Hd.Scr.	4	M8x20
24		Hex Soc.Hd.Set.Scr.	4	M6x20
25		Hex Nut	4	M6
26	1017	Sprocket	1	
27	1018	Flat Washer	2	
28		Hex Hd.Bolt	2	M6x16
29	1019	Outfeed Roller	1	
30	1020	Sprocket	1	
31	1021	Locking Bolt	1	
32		Retaining Ring	1	12
33		Spring Washer	1	12
34		Hex Nut	1	M12
35	1022	Chip Breaker	1	
36		Hex Soc.Hd .Set Scr.	2	M6x20
37		Hex Nut	1	M6
38	1023	Plate Spring	3	
39	1023A	Hex Loctite Scr	6	
40	1024	Shaft	1	
41		Hex Soc.Hd.Set Scr.	1	M6x16
42	1025	Bracket	2	
43	1026	Pressure Plate	1	
44		Spring Washer	2	8
45		Hex Hd.Bolt	2	M8x20
46	1027	Adjusting Shaft	2	
47		Hex Soc Hd.Set Scr	2	M6x12
48		Hex Soc Hd.Set Scr	2	M6x20
49		Hex Nut	2	M6
50	1028	Plate Spring	1	
51	1028A	Hex Loctite Scr	1	
52	1029	Chip Deflector Plate	1	
53		Hex Hd.Bolt	3	M6x16
54		Flat Washer	3	6
55	1030	Anti-Kick Finger	56	
56	1031	Collar	57	
57	1032	Shaft	1	
58		Retaining Ring	2	
59		Hex Soc Hd Set Scr	1	M8x12

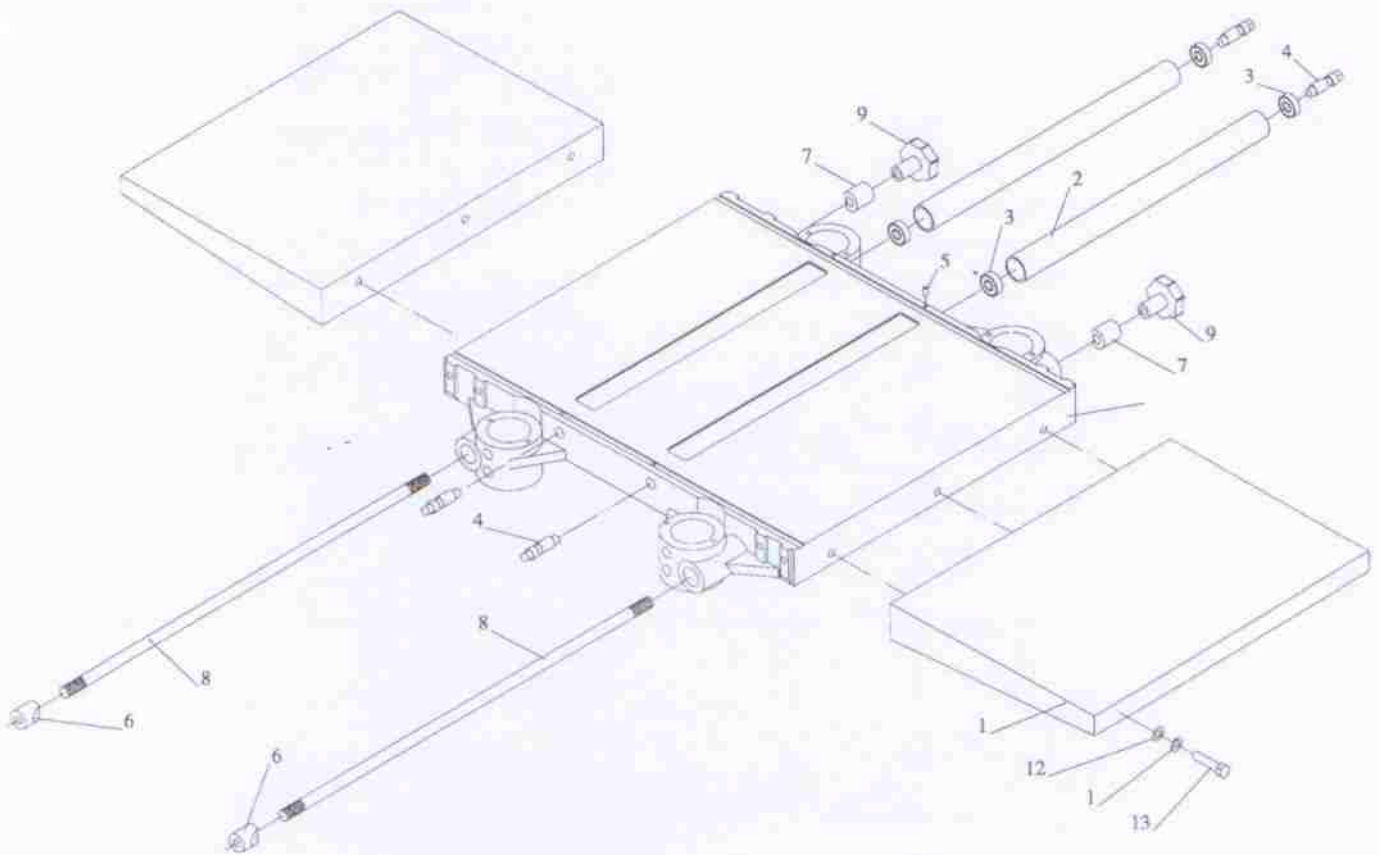
NO	Parts No.	Description	Q'ty	Remark
60	1033	Cut Limiter Plate	1	
61		Hex Hd Scr.	2	M5x12
62	1034	Upper Cover	1	
63	1034A	Hex Loctite Scr.	6	
64	1035	Gasket	1	
65	1036	Collector Tube	1	
66	1036A	Hex Loctite Scr.	6	
67	1037	Roller Stand	3	
68		Hex Soc.Hd.Scr.	9	M6x16
69	1038	Roller	2	
70	1039	Worm	1	
71		Hex Soc Hd Scr.	3	M6x55
72		Retaining Ring	1	32
73	6021	Bearing	1	12x32x10
74	1040	Worm Gear	1	
75		Key	1	4x20
76		Flat Washer	1	12
77		Hex Nut	1	M12
78	1041	Hand Wheel	1	
79	1042	Handle	1	
80	1043	Scale	1	
81		Flat Washer	3	6
82		Pan Hd.Scr.	3	M6x12
83	1044	Cut Limit Pointer	1	
84	1045	Gear Box Cover	1	
85		Spring Pin	2	6x20
86		Hex Soc Hd.Scr	1	M8x40
87	1046	Safety Hatch	1	
88	1047	Safety Hatch	1	
89	1047A	Hex Loctite Scr.	8	
90	1048	Belt Guard	1	
91	1049	Bolt	2	
92		Flat Washer	2	8
93		Hex Nut	2	M8
94	1050	Belt Cover	1	
95	1051	Nameplate	1	
96		Rivet	4	2x4
97	1052	Warning label	1	
98	1053	Nut	2	
99	1054	Flat Washer	4	
100		Hex Hd Scr.	4	M6x12
101	1055	Collar	1	
102	1056	Shaft	1	
103	1057	Shaft	1	
104	1058	Idle Pulley	1	
105	1059	Bracket	1	
106	1060	Shaft	1	
107	1061	Hanger	1	
108	1062	Spring	1	
109	1063	Collar	1	
110	1064	Oil Level Label	2	
111	1065	Speed Rate Label	1	
112	1066	Hand Wheel Label	1	
113		Hex Soc.Hd.Scr	2	M6x10
114		Chain	1	06B-1x67
115		Switch	1	
116		Hex Soc Locite Scr.	2	
117		V-Belt	3	Z1525



TABLE

NO	Parts No.	Description	Q'ty	Remark
1	2001	Middle Table	1	
2	2002	Roller	2	
3	6201Z	Bearing	4	12x32x10
4	2003	Eccentric Shaft	4	
5		Hex Soc.Set.Scr.	4	M6x12
6	2004	Lock Bar	2	
7	2005	Locksmith	2	

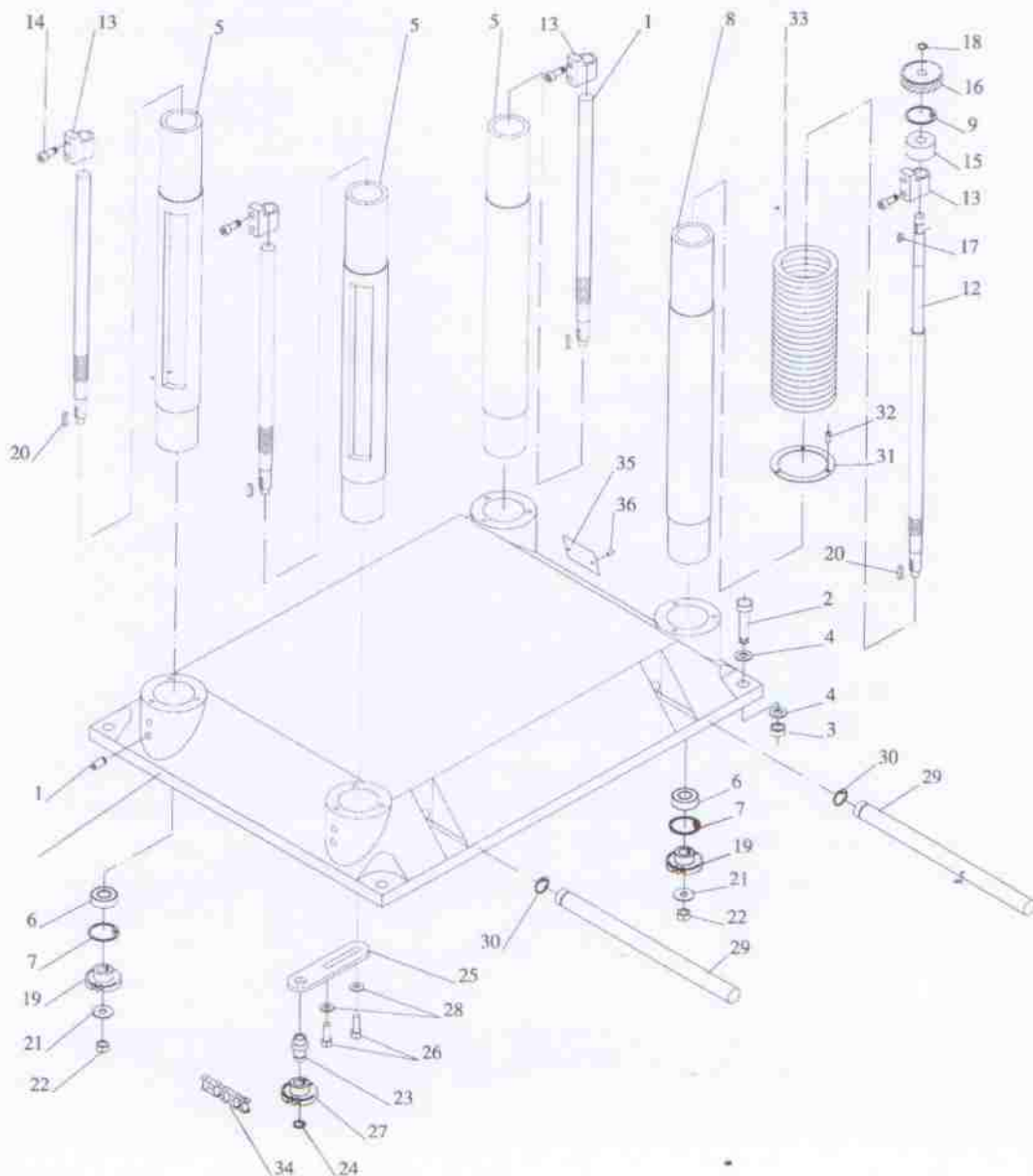
NO	Parts No.	Description	Q'ty	Remark
8	2006	Locking Bolt	2	
9	2007	Knob	2	
10	2008	Casting Extension Table	2	
11		Spring Washer	6	8
12		Flat Washer	6	8
13		Hex Hd Scr.	6	M8x35



COLUMN

NO	Parts No.	Description	Q'ty	Remark
1	3001	Base	1	
2		Hex Hd Scr.	4	M12x60
3		Hex Nut	4	M12
4		Flat Washer	8	12
5	3002	Column	3	
6		Bearing	4	15x35x11
7		Retaining Ring	4	35
8	3003	Column	1	
9		Retaining Ring	1	38
10	3003A	Set Scr	16	
11	3004	Lead Scr	3	
12	3005	Lead Scr	1	
13	3006	Nut	4	
14		Hex Soc Hd Scr.	8	M8x20
15	3007	Bush	1	
16	3008	Gear	1	
17		Key	1	4x12
18		Retaining Ring	1	2

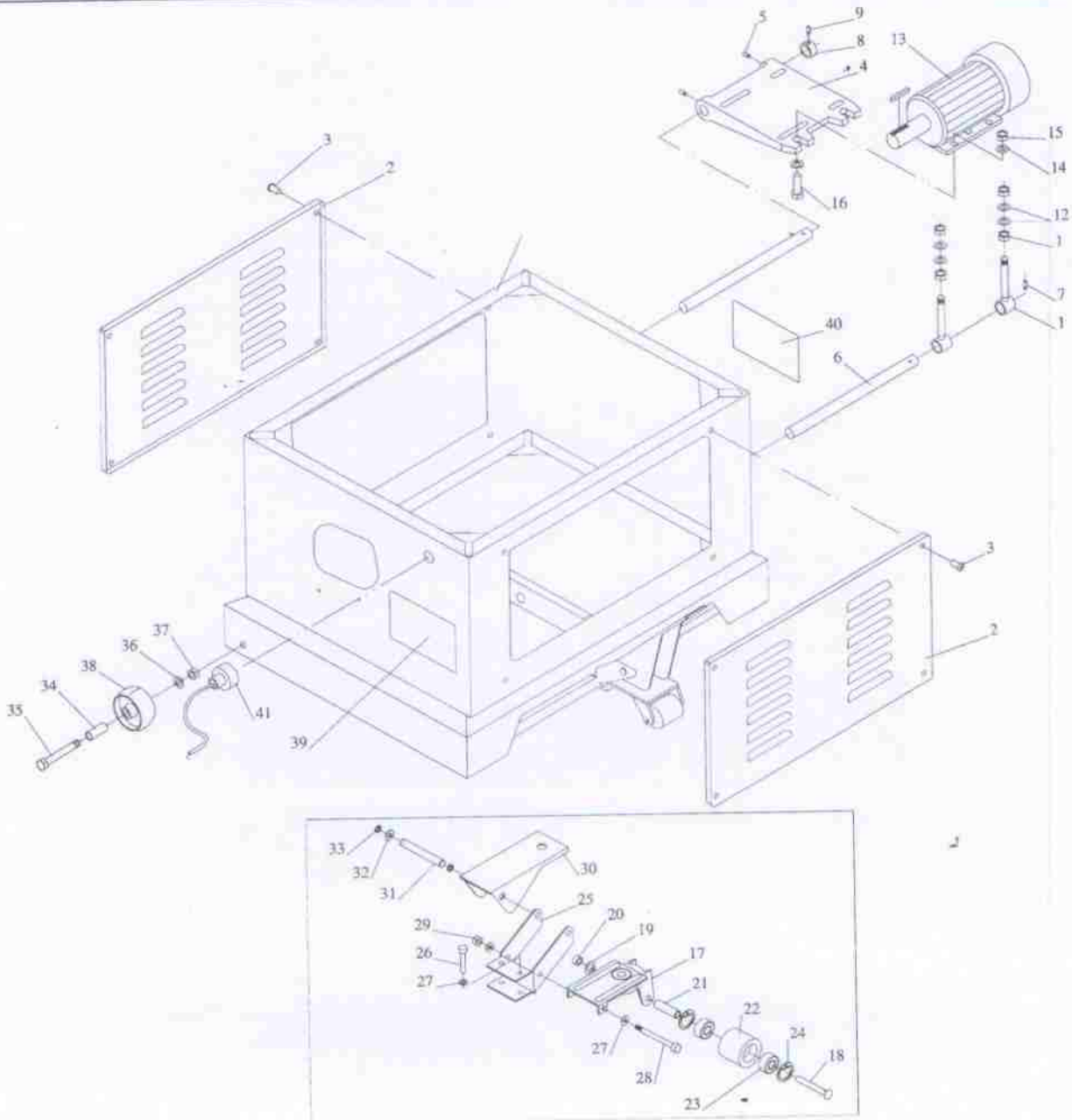
NO	Parts No.	Description	Q'ty	Remark
19	3010	Sprocket	4	
20		Key	4	C5x16
21		Flat Washer	4	10
22		Hex Nut	4	M10
23	3011	Shaft	1	
24		Retaining Ring	1	15
25	3012	Bracket	1	
26		Hex Hd Scr.	2	M8x25
27	3013	Sprocket	1	
28	3014	Flat Washer	2	
29	3015	Crane Post	4	
30		Retaining Ring	4	21
31	3016	Pipe Band	16	
32		Pan Hd Scr.	32	M5X10
33	3017	Expansion Band	8	
34		Chain	1	08A-1x66
35	1067	Nameplate	1	
36		Revit	2	2x4



BASE

NO	Parts No.	Description	Q'ty	Remark
1	4001	Enclosed Stand	1	
2	4002	Cover	1	
3		Cross-Head Sink Scr.	8	M6x20
4	4003	Motor Plate	1	
5		Hex Soc Hd Scr.	2	M6x12
6	4004	Plate Connecting Rod	2	
7		Hex Soc.Hd Scr	2	M8x12
8	4005	Collar	1	
9		Hex Soc Hd Scr.	1	M6x8
10	4006	Adjust Bolt	2	
11		Hex Nut	4	M12
12		Flat Washer	4	12
13	4007	Motor	1	
14	4007A	Washer	8	
15		Hex Nut	4	M8x12
16		Hex Hd Bolt	4	M8x45
17	4008	Trolley Universal Kit	1	
18	4009	Special Bolt	1	
19		Washer	1	10
20		Hex Nut	1	M10
21	4010-1	Sleeve	1	

NO	Parts No.	Description	Q'ty	Remark
22	4010-2	Trolley Wheel	1	
23	6202Z	Bearing	2	15X35X11
24		Retaining Ring	2	35
25	4011	Bracket	1	
26		Hex Hd Bolt	2	M8x50
27		Flat Washer	4	8
28		Hex Hd Bolt	1	M8x100
29		Hex Nut	1	M8
30	4012	Treadle	1	
31	4013	Shaft	1	
32		Flat Washer	2	12
33		Retaining Ring	2	9
34	4014	Sleeve	2	
35		Hex Hd Bolt	2	M8x65
36		Flat Washer	4	8
37		Hex Nut	2	M8
38	4015	Universal Pulley	2	
39	4016	Warning Label	1	
40	4017	Label	1	
41	4018	Relief Bushing	1	



Gear Box

NO	Parts No.	Description	Q'ty	Remark
1	5001	Gear Box	1	
2		Hex Soc Hd Scr.	4	M8x50
3	5002	Flange Cover	1	
4		Hex Soc.Hd.Scr.	3	M5x12
5		Oil Seal	1	SG25x40x10
6	5003	Gear	1	
7		Hex Soc Hd Scr	1	M6x20
8		Pan Hd Scr.	1	M6x8
9		Flat Washer	1	6
10	5004	Gear	1	
11	5005	Shaft	1	
12		Key	1	C5x14
13		Bearing	2	12x32x10
14	5006	Gear	1	
15	5007	Shaft	1	
16		Key	1	C5x10
17		Bearing	2	12x32x10
18	5008	Gear	1	
19	5009	Shaft	1	
20		Key	1	5x50
21	5010	Spring	1	

NO	Parts No.	Description	Q'ty	Remark
22		Ball	1	4
23		Bearing	1	12x32x10
24		Bearing	1	20x47x14
25		Oil Seal	1	SG20x35x7
26	5011	Sprocket	1	
27		Key	1	C5x16
28	5012	Flat Washer	1	
29		Hex Hd Scr.	1	M8x16
30	5013	Clutch	1	
31	5014	Handle	1	
32		Oil Ring	1	12x1.9
33	5015	Knob	1	
34		Pin	2	5x10
35	5016	Packing Piece	1	
36	5017	Gear Box Cover	1	
37		Hex Soc Hd Scr	5	M6x25
38	5018	Oil Plug	2	
39		Retaining Ring	1	20
40		Chain	1	06B-1x51
41		Bearing	1	20x47x14

