



Fig. 20

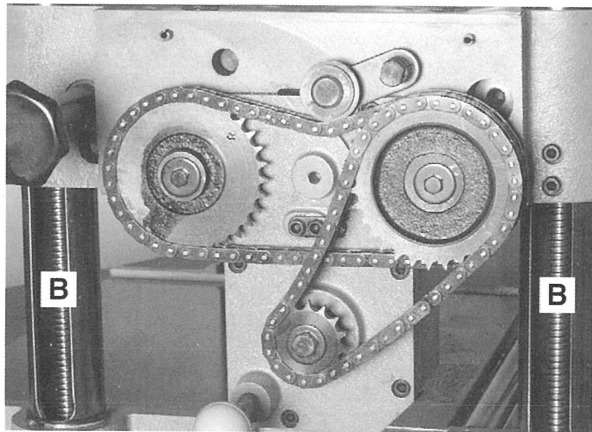


Fig. 21

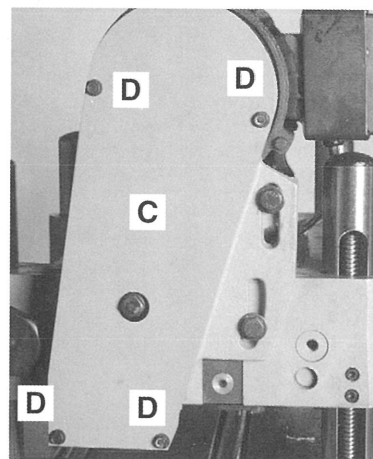


Fig. 22

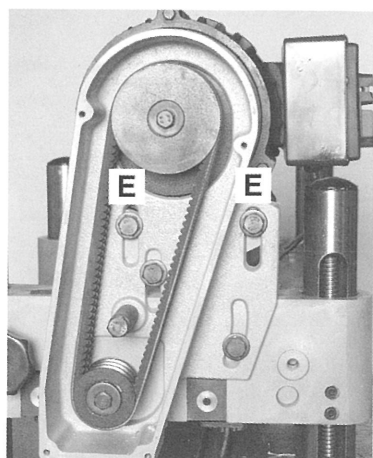


Fig. 23

LUBRICATION

The oil should be changed once a year in the gear box using extreme pressure oil.

The gear box drain plug is shown at left Fig. 20 (A). The oil fill and level plug is at the top of the gear box.

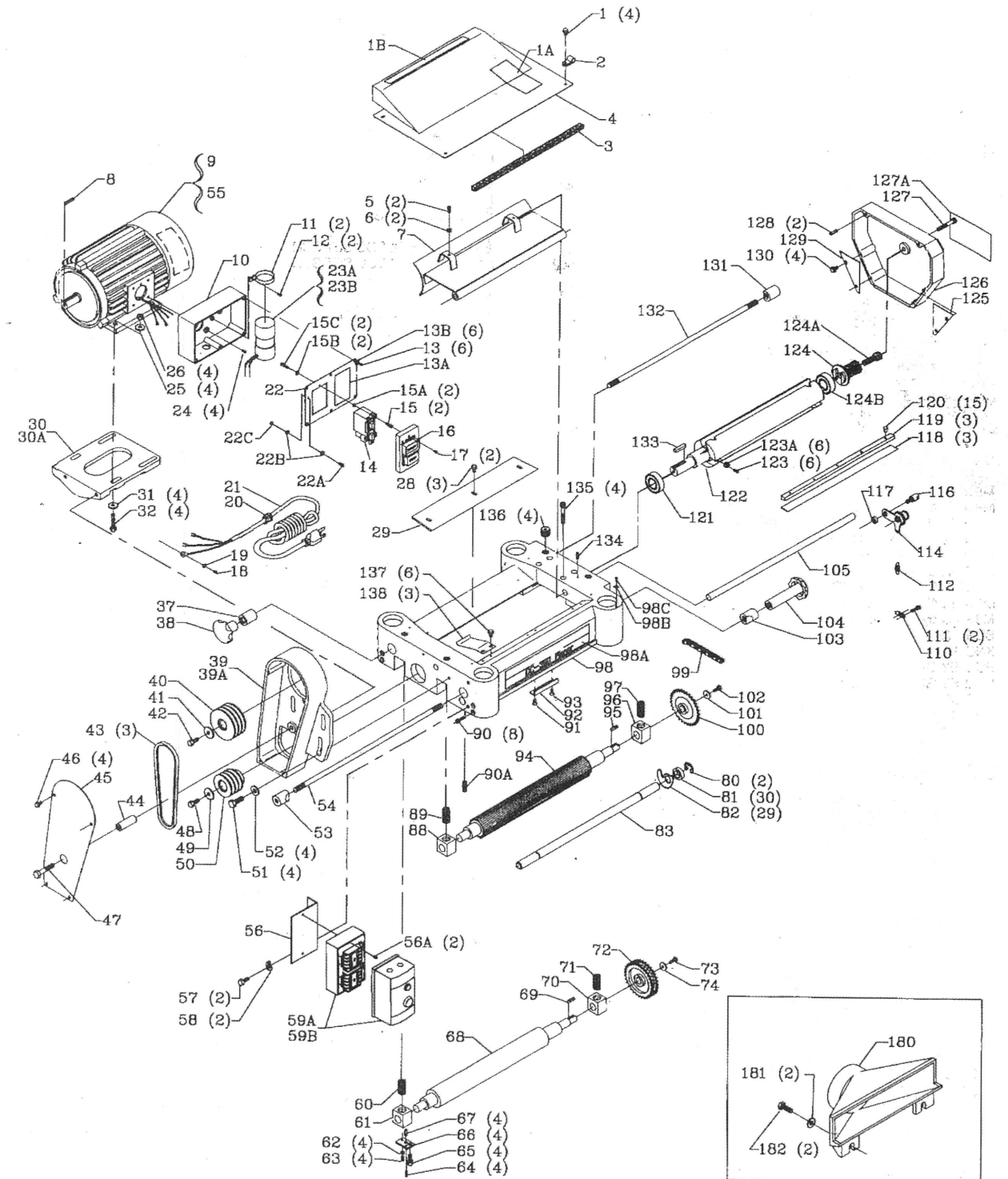
Note four raising screws Fig. 21 (B) in the outside columns of the machine should be lubricated using a grease. Periodically remove screw and side cover, clean chains and sprockets lubricate using a light machine oil.

ADJUSTING BELT TENSION

DISCONNECT POWER SOURCE FIRST!!!

Remove the pulley guard Fig. 22 (C) by taking out the 4 fixing screws Fig. 22 (D). Loosen the slotted screws Fig. 23 (E) and lever up the motor by placing a piece of wood under the motor plate. Retighten the slotted screws and replace the pulley cover.

CARBA-TEC 15" Planer



REPLACEMENT PARTS

REF. NO.	DESCRIPTION	REF. NO.	DESCRIPTION
1	M6 x 16MM HEX FLANGE SCR	62	M5 HEX NUT
1A	WARNING LABEL	63	M5 x 12MM HEX SOC SET SCR
1B	WARNING LABEL	64	M4 x 16MM SPRING PIN
2	CLAMP	65	M8 x 16MM HEX HD SCR
3	SEAL	66	PLATE
4	UPPER COVER	67	M5 x 20MM SPRING PIN
5	M6 x 18MM HEX SOC SET SCR	68	OUTFEED ROLLER
6	M6 HEX NUT	69	KEY
7	CHIP BREAKER	70	ROLLER BUSHING
8	KEY	71	SPRING
9	MOTOR ASSY (MODEL 22-680, 3HP, 1PH), INCL:	72	FEED SPROCKET
10	SWITCH BOX	73	M6 x 15MM HEX HD SCR
11	CLAMP	74	M6.4 FLAT WASHER
12	M4.2 x 10MM PAN HD SCR	80	EXT RET RING
13	M4.2 x 10MM PAN HD SCR	81	COLLAR
13A	FEATURE LABEL	82	ANT-KICKBACK FINGER
13B	3/16" EXT TOOTH WASHER	83	SHAFT
14	1 PH MANUAL SWITCH	88	ROLLER BUSHING
15	SPACER	89	SPRING
15A	# 06-32HEX NUT	90	M6 x 20MM HEX SOC SET SCR
15B	EXT TOOTH WASHER	90A	M8 x 12MM HEX SOC SET SCR
15C	# 06-32 x 5/16" PAN HD SCR	91	M6 x 8MM FLAT HD SCR
16	SWITCH COVER ASSY	92	LIMITER PLATE
17	# 06-32 x 1/4" ROUND HD SCR	93	M6 x 8MM FLAT HD SCR
18	M5 x 16MM PAN HD SCR	94	INFEED ROLLER
19	M5.3 EXT TOOTH WASHER	95	KEY
20	BUSHING	96	ROLLER BUSHING
21	POWER CORD	97	SPRING
22	SWITCH PLATE	98	HEAD CASTING
22A	# 10-24 x 3/8" PAN HD SCR	98A	NAMEPLATE
22B	3/16" EXT TOOTH WASHER	98B	POINTER
22C	# 10-24 HEX NUT	98C	RIVIT
23A	CAPACITOR (500 UF)	99	CHAIN
23B	CAPACITOR (20 UF, MODEL 22-680, 3HP, 1PH)	100	FEED SPROCKET
24	M5 x 20MM CHEESE HD SCR	101	M6.4 FLAT WASHER
25	M8.4 FLAT WASHER	102	M6 x 15MM HEX HD SCR
26	M8 HEX NUT	103	BUSHING
28	M6 x 12MM HEX FLANGE SCR	104	HANDLE
29	DEFLECTOR PLATE	105	SHAFT
30	MOTOR BRACKET (CMO)	110	HANGER
30A	MOTOR BRACKET (EMO)	111	M6 x 10MM HEX SOC HD SCR (SEE NOTE A)
31	M8.4 FLAT WASHER	112	SPRING
32	M8 x 45MM HEX HD SCR	114	IDLER PULLEY ASSY
37	BUSHING	116	PIVOT
38	KNOB	117	COLLAR
39	PULLEY GUARD (CMO)	118	KNIVES (SET OF THREE)
39A	PULLEY GUARD (EMO)	119	KNIFE LOCKING BAR
40	MOTOR PULLEY	120	SCR
41	M8.4 FLAT WASHER	121	BALL BEARING
42	M8 x 20MM HEX HD SCR	122	CUTTERHEAD
43	V-BELT (SET OF 3)	123	M5 x 16MM HEX SOC SET SCR
44	SPACER	123A	ADJUSTING NUT
45	PULLEY COVER	124	PINION
46	M6 x 12MM HEX FLANGE SCR	124A	M6 x 20MM HEX SOC HD SCR
47	M10 x 80MM HEX HD SCR	124B	BALL BEARING
48	M8 x 25MM HEX HD SCR	125	PLATE
49	M8.4 FLAT WASHER	126	COVER
50	CUTTERHEAD PULLEY	127	M8 x 45MM HEX SOC HD SCR
51	M10 x 30MM HEX HD SCR	127A	GEARBOX LABEL
52	M10.5 FLAT WASHER	128	M6 x 20MM SPRING PIN
53	BUSHING	129	PLATE
54	LOCK BOLT	130	M6 x 12MM HEX FLANGE SCR
55	MOTOR ASSY (MODEL 22-681, 3HP, 3PH)	131	BUSHING
56	BRACKET (3PH ONLY)	132	LOCKBOLT
56A	M4 x 10MM CHEESE HD SCR (3PH ONLY)	133	KEY
57	M6 x 16MM HEX HD SCR (3PH ONLY)	134	M6 x 18MM HEX SOC SET SCR
58	M6.1 LOCK WASHER (3PH ONLY)	135	M8 x 50MM HEX SOC HD CR
59A	MOTOR STARTER (3PH, 200/220V)	136	ADJ. SCR
59B	MOTOR STARTER (3PH, 440V)	137	M6 x 12MM HEX FLANGE SCR
**	CONNECTOR (QTY 2)	138	SPRING
**	MOTOR CORD		
60	SPRING		
61	ROLLER BUSHING		

** NOT SHOWN
EMO = EARLY MODELS ONLY
CMO = CURRENT MODELS ONLY

NOTE A: USE THREAD SEALANT WHEN REINSTALLING ITEM 111 FOR SERVICE.



Fig. 17



Fig. 18

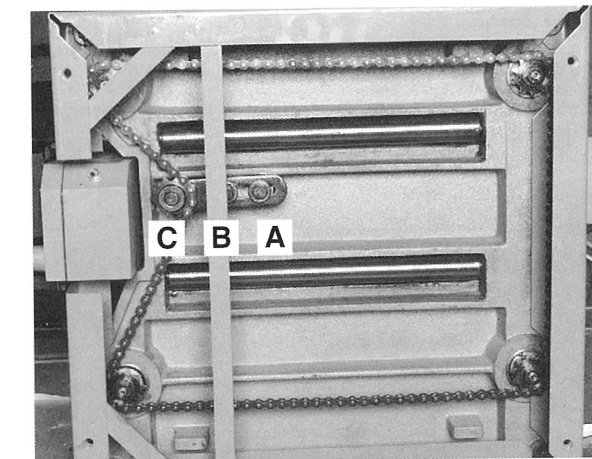


Fig. 19

ADJUSTING CUTTERHEAD PARALLEL TO TABLE

The cutterhead casting and blades have been set parallel in the factory. If your planer is not cutting parallel, this may be caused by the blades not being properly set.

If you can find no other reason for the out of parallel, check cutterhead casting is parallel by the following procedure using your wooden gauge block.

1. After machine is disconnected from power source, put gauge block on the table under the casting. Lower head so it just touches the gauge block Fig. 17.
2. Move block to the opposite end to check if it is the same distance from the casting to the block. Fig. 18.
3. Repeat process at rear of machine.
4. If the head casting is not parallel to the table, tilt machine on its side and loosen the bolt Fig. 19 (A) and loosen bolt Fig. 19 (B). You will need to adjust the idler sprocket assembly Fig. 19 (C) to release the tension on the chain.
5. Remove chain from sprocket on corner of headcasting that needs adjustment.
6. Turn sprocket gently by hand to bring that corner into line with the others. One or two teeth should be enough. Clockwise will decrease the table distance from the headcasting anticlockwise will increase it.
7. Replace chain without disturbing the new setting. Put idler sprocket assembly back into place and tighten bolts.



Fig. 13

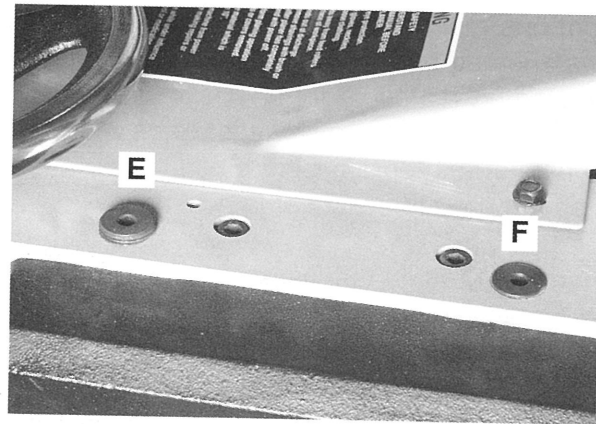


Fig. 14

ADJUSTING SPRING TENSION OF INFEEED AND OUTFEED ROLLERS.

Infeed and outfeed rollers are factory set and should not need adjustment. If they do however, the spring tension of the in and outfeed rollers must be sufficient to evenly feed the stock through the planer. It needs to be even along the length of the roller and not be so tight that it causes damage to the timber and jamming. If adjustment is needed, do this by turning the screws shown Fig. 14 (E) infeed rollers Fig. 14 (F) outfeed rollers at either end of each roller.

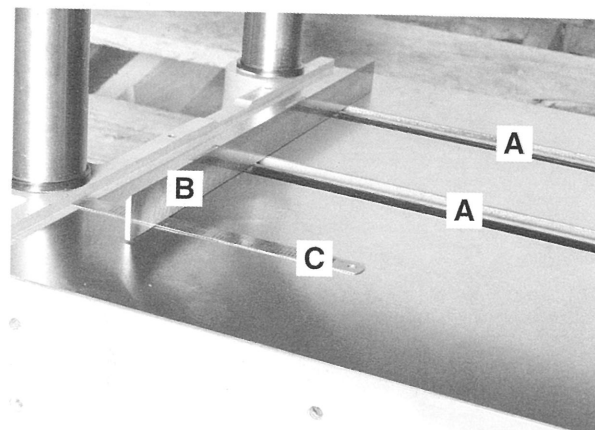


Fig. 15

ADJUSTING TABLE ROLLERS.

The table rollers Fig. 15 (A) & Fig. 16 (A) are located on the bed of the planer, and are designed to reduce friction as material passes over the table. They are presently set for general purpose planing and are parallel to the table. If you need to adjust them, higher is better for rough sawn stock, and lower, for finished stock, lay a straight edge Fig. 15 (B) across both rollers with a spacer Fig. 15 (C) the height you want the rollers set. The adjustment screws Fig. 16 (D) are eccentric so take care the rollers remain parallel to the table and each other. One side of the planer, the screws turn clockwise to raise or lower the rollers and on the other side they turn anticlockwise to do the same.

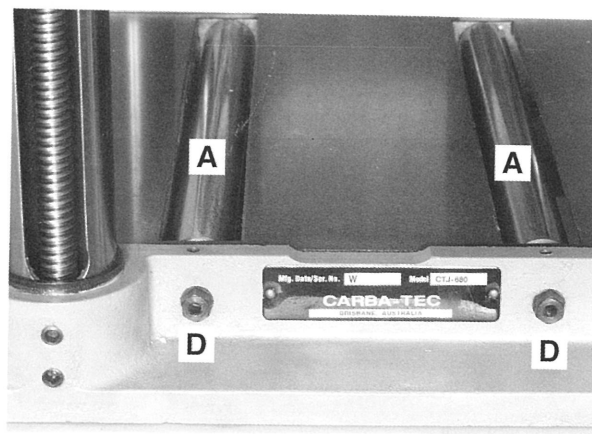
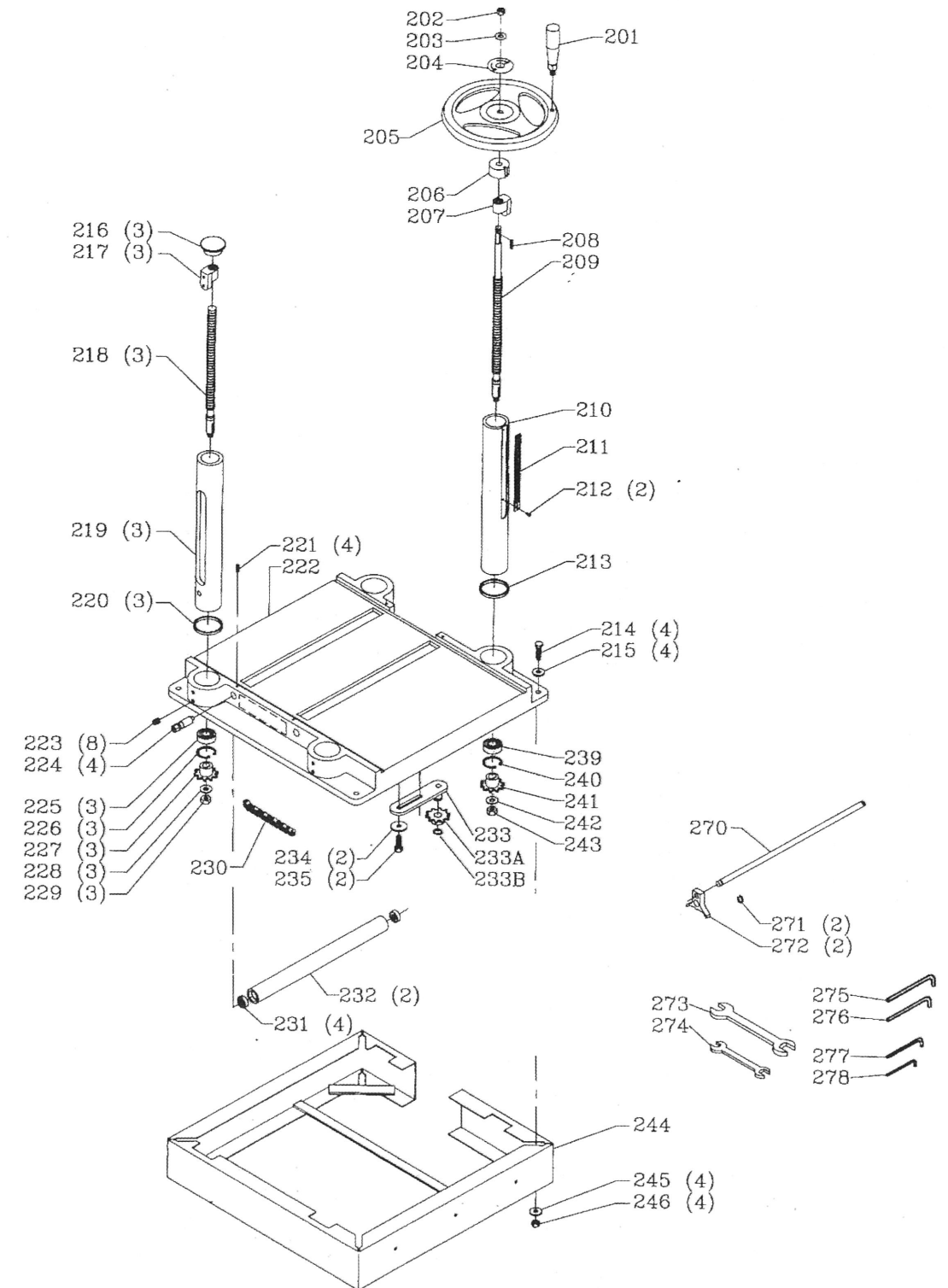


Fig. 16



REPLACEMENT PARTS

REF. NO.	DESCRIPTION
201	HANDLE
202	M10 HEX NUT
203	M10 FLAT WASHER
204	DIRECTIONAL PLATE
205	HANDWHEEL
206	BUSHING
207	NUT
208	KEY
209	ELEVATING SCR
210	COLUMN
211	SCALE
212	M3 x 6MM CHEESE HD SCR
213	COLUMN SPACER
214	M8 x 30MM HEX HD SCR
215	M8. 4 FLAT WASHER
216	COLUMN CAP
217	NUT
218	ELEVATING SCR
219	COLUMN
220	COLUMN SPACER
221	M6 x 16MM HEX SOC SET SCR
222	TABLE
223	M10 x 12MM HEX SOC SET SCR
224	ECCENTRIC STUD
225	BALL BEARING
226	INT RET RING
227	SPROCKET
228	M10 FLAT WASHER
229	M10 HEX NUT
230	CHAIN
231	BALL BEARING
232	BED ROLLER
233	SUPPORT ASSY, INCL:
233A	IDLER
233B	EXT RET RING
234	M8 FLAT WASHER
235	M8 x 20MM HEX HD SCR
239	BALL BEARING
240	INT RET RING
241	SPROCKET
242	M10 FLAT WASHER
243	M10 HEX NUT
244	BASE
245	M8. 4 FLAT WASHER
246	M8 HEX NUT
*	KNIFE GAGE ASSY, CONST OF :
270	BAR
271	EXT RET RING
272	KNIFE GAGE BLOCK
273	WRENCH 14MM x 17MM
274	WRENCH 10MM x 12MM
275	6MM HEX WRENCH
276	5MM HEX WRENCH
277	3MM HEX WRENCH
278	2.5MM HEX WRENCH

* NOT SHOWN ASSEMBLED

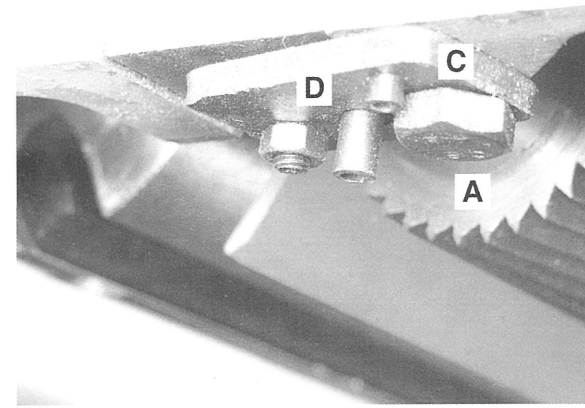


Fig. 9

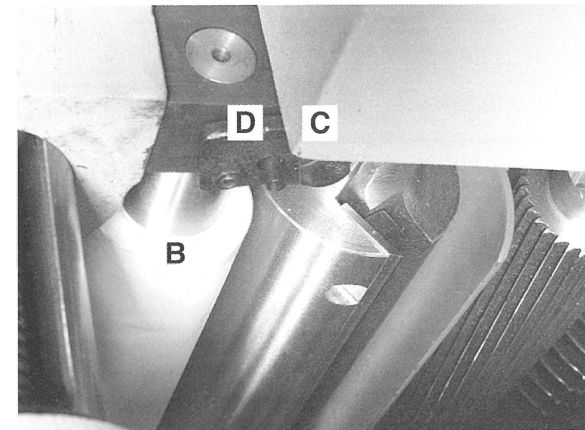


Fig. 10

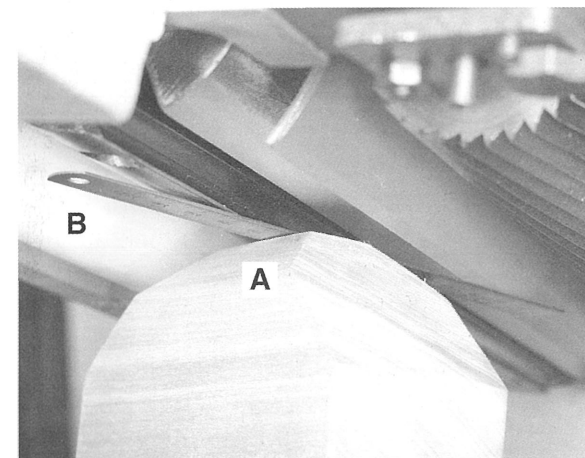


Fig. 11



Fig. 12

ADJUSTING HEIGHT OF INFEED AND OUTFEED ROLLERS

The infeed Fig. 9 (A) and outfeed Fig. 10 (B) rollers should be 1mm below the cutting circle of the cutter block. To check this use your wooden gauge block and a 1mm spacer, such as a steel rule. The process is the same for both the in and out feed rollers.

1. Position the wooden gauge block with the 1mm spacer on top, Fig. 11 (A) & (B) under the cutter head so the knives just brush the top of the spacer when at their lowest point in the cutting circle. Transfer the gauge block to underneath the feed rollers minus the spacer Fig. 12 & 13. The rollers should just touch the top of the gauge block.
2. If the rollers need to be adjusted, loosen the nuts Fig. 9 & 10 (C), and turn adjusting screws Fig. 9 & 10 (D) until the rollers make contact with the gauge block. Repeat process for the other end of the rollers.

NOTE: Do not forget to do both the infeed and outfeed rollers. Fig. 12 & 13.

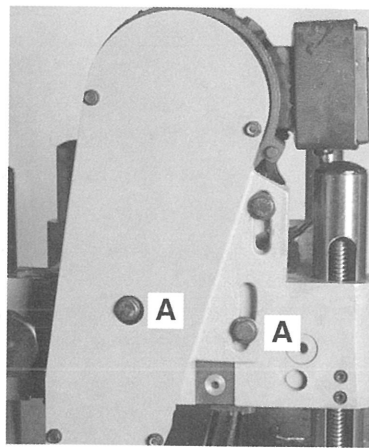


Fig. 5

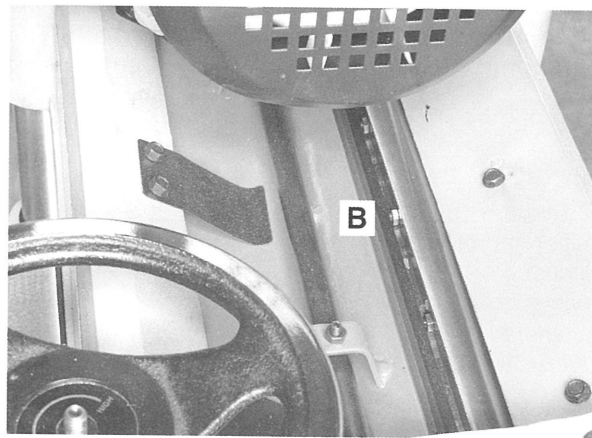


Fig. 6

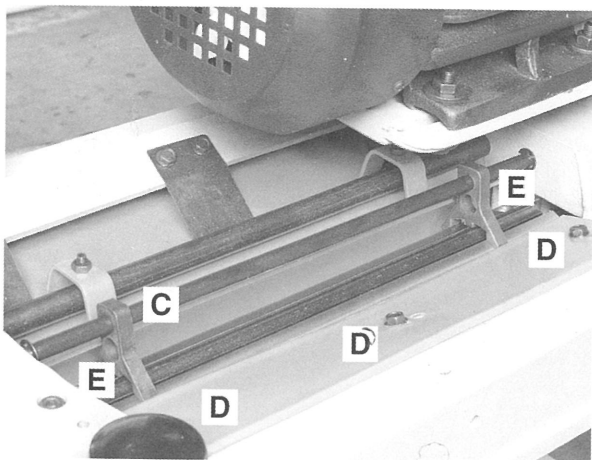


Fig. 7

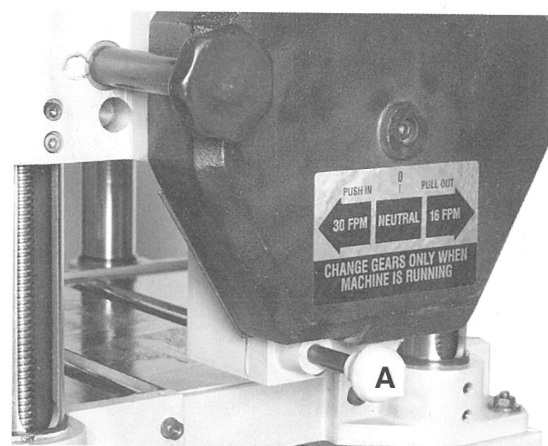


Fig. 8

REPLACING PLANER KNIVES

1. Remove top cover and dust chute.
2. Loosen 2 screws Fig. 5 (A) and pivot motor assembly forward.
3. Loosen the screws that hold knife locking bar in place Fig. 6 (B).
4. Remove all 3 knives, locking bars and screws from the cutterhead.
5. Clean the knife slots and bars, removing all traces of sawdust and resin.
6. Replace the locking bars and put all three new knives in position, tightening the locking bar screws just enough to prevent the knives from falling out.
7. To adjust the height of the knives, you will need the knife setting gauge Fig. 7 (C). Place it on top of the cutterhead.
8. To adjust the height of the blades, turn the allen key screws located at each end of the knife locking bars Fig. 7 (E) anticlockwise to lower and clockwise to raise them. The tip of the blades should just brush the bottom of the setting gauge, this should be even along the length of the blade. If there is no movement of the blade when the adjustment screws are moved, the screws holding the knife locking bars in place may be too tight to allow the blades to move.
9. All three blades must be the same height, if not, this will result in end snipe. (A dip at the end of the board.)
10. Tighten the locking bar screws evenly. Double check that all of them on all three blades are tight.
11. Replace top cover and dust chute and return motor to correct position.

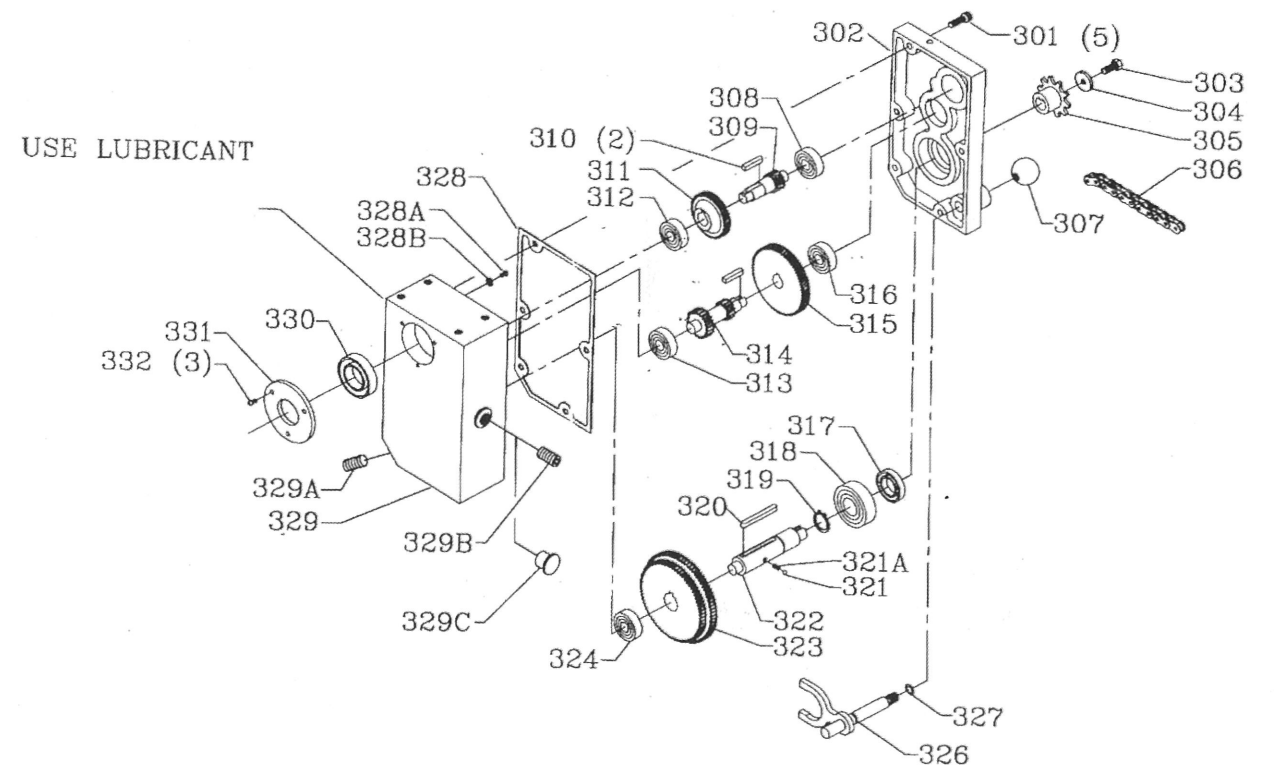
ADJUSTING HEIGHT OF CHIP DEFLECTOR

1. Access the inside of planer (see previous instructions).
2. Loosen off the three slotted screws Fig. 7 (D) that hold the nylon chip breaker in place.
3. Slide the chipbreaker down until it is about 0.5mm from the full arc of the blades in the cutter block. CHECK THAT THE CHIP BREAKER DOES NOT MAKE CONTACT WITH THE BLADES.
4. Tighten the screws and replace the top cover and dust chute.

FEED ROLLER SPEED CONTROL

Your planer has 2 feed roller speeds 16 fpm and 30 fpm. For general purpose planing on softer woods, the faster speed is suitable, but for hard timbers, the slower feed rate is more effective. A slower speed puts less strain on the motor. A slower feed rate will also give a better finish as there will be more cuts per inch.

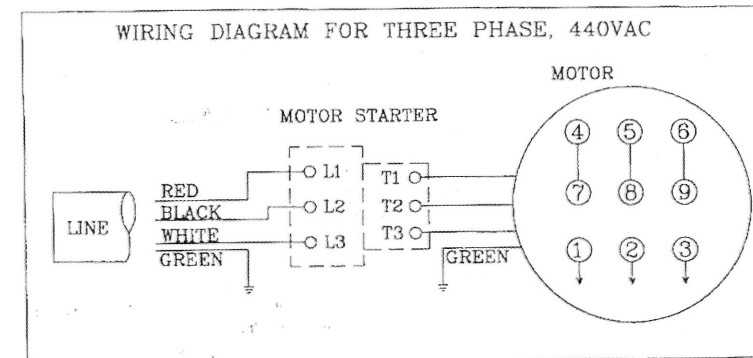
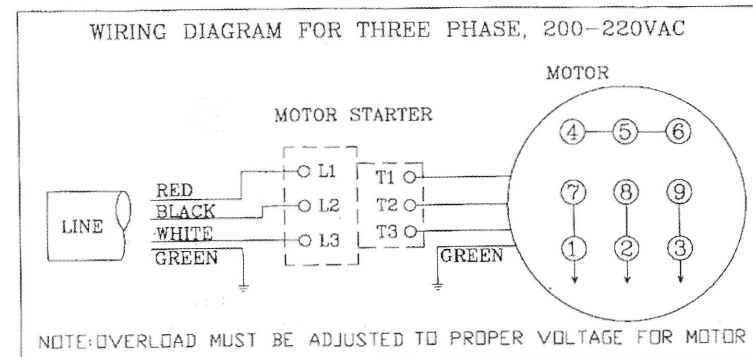
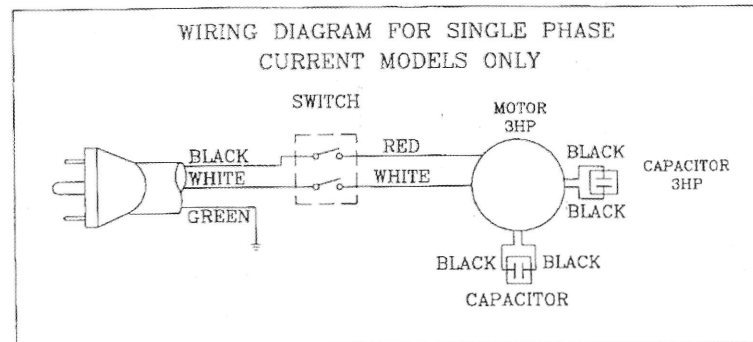
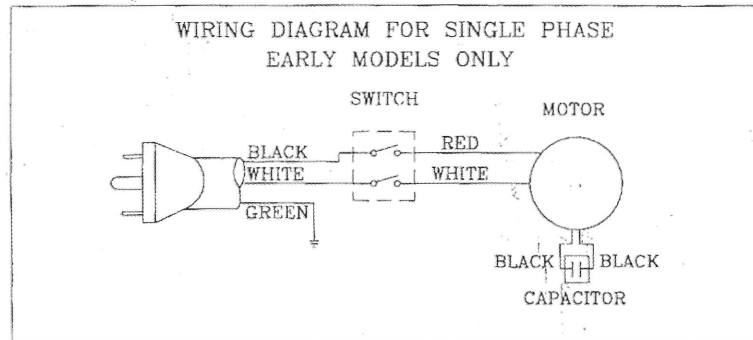
When changing the setting of the feed roller speed Fig. 8 (A) it is essential to have the machine running. Pull the speed control lever all the way out for the slow speed, 16fpm. The middle position is neutral, and pushing the lever all the way will give a feed roller speed of 30fpm.



REF. NO.	DESCRIPTION
301	M6 x 20MM HEX SOC HD SCR
302	COVER
303	M8 x 16MM HEX HD SCR
304	M8. 8 FLAT WASHER
305	SPROCKET
306	CHAIN
307	KNOB
308	BALL BEARING
309	PINION
310	KEY
311	GEAR
312	BALL BEARING
313	BALL BEARING
314	PINION
315	GEAR
316	BALL BEARING
317	OIL SEAL
318	BALL BEARING
319	EXT RET RING

REF. NO.	DESCRIPTION
320	KEY
321	SPRING
321A	BALL
322	SHAFT
323	GEAR
324	BALL BEARING
326	HANDLE ROD ASSY
327	O-RING
328	GASKET
328A	(DIN 84) M6 x 8MM CHEESE HD SCR
328B	M6. 4 FLAT WASHER
329	GEAR BOX HOUSING
329A	PLUG
329B	PLUG
329C	OIL LEVEL PLUG
330	OIL SEAL
331	OIL SEAL COVER
332	M5 x 12MM PAN HD SCR
**	LUBRICANT (APPROX 20 OZ)

REPLACEMENT PARTS



ALL ELECTRICAL WORK SHOULD BE UNDERTAKEN BY A LICENSED ELECTRICAL CONTRACTOR.

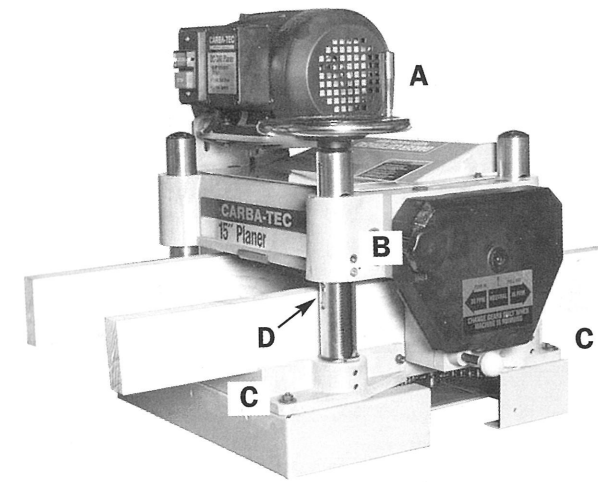


Fig. 1

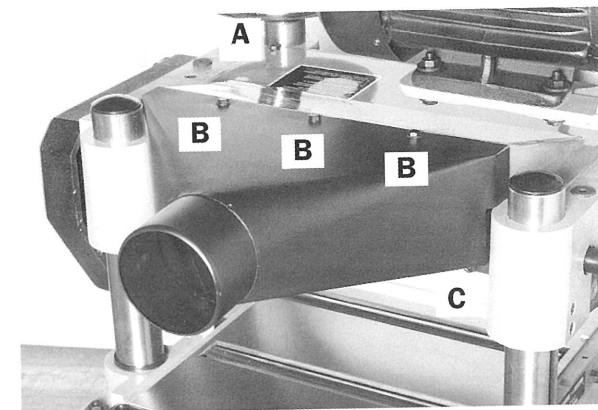


Fig. 2

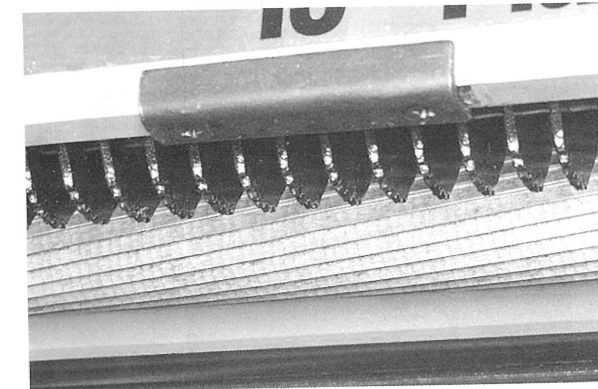


Fig. 3



Fig. 4

ASSEMBLY OF PLANER TO BASE

Your 15" planer comes in 2 packing boxes, one contains the assembled planer, the other, the assembled base, infeed and outfeed rollers plus dust chute.

The best way to lift the planer onto the base, is raising the cutterhead, by turning the handwheel clockwise, Fig. 1 (A) and placing 2 x 100 x 50mm boards on edge onto the table to the left and right of the machine. Then lower the cutterhead till it grips the boards preventing them from slipping sideways. The protruding ends become handles. You will require 1 fit, healthy person on each corner to lift the planer onto the base.

Align the 4 bolt holes at the corners, Fig. 1 (C) and with the front cover removed from the base, insert bolts from underneath with the heads facing down, through both the base and the planer, fit nuts and washers provided and tighten securely. Replace front cover of base

ASSEMBLING TOP COVER AND DUST CHUTE.

Fasten top cover at 4 corners with screws provided, Fig. 2 (A). The dust chute ramp must point to the back of the planer. Place dust chute over the ramp of the top cover and tighten the 3 hex head bolts on the top Fig. 2 (B) and 3 allen key bolts underneath. Fig. 2 (C)

DUST EXTRACTION CHUTE

This machine is designed to be used with a dust extractor, having a minimum of 600cfm. If using the machine without a dust extractor, the dust chute should be removed to prevent clogging of the 100mm outlet. When the dust chute is removed, the rotating cutterhead is easily accessible and precautions, such as a guard should be installed to prevent accidental hand contact.

ANTI-KICKBACK FINGERS (Fig. 3)

These fingers are designed to prevent timber from being thrown back at the operator. No setting up is required, however it is advisable to clean them occasionally to prevent a build up of resin. Remember to disconnect machine from power source before carrying out any maintenance work.

DEPTH OF CUT ADJUSTMENT

To adjust the depth of cut you need to raise or lower the head assembly which contains the cutterhead. Loosen the locking knobs, Fig. 1 (B) and turn the handwheel clockwise to raise the cutterhead and anticlockwise to lower it. When you have set the machine to the required depth of cut, tighten the locking knobs. The gauge Fig. 1 (D) will tell you what finished size that setting will give you.

The maximum depth of cut is 3/16" on stock narrower than 6". A limiter Fig. 4 (A) is positioned to allow no more than 1/8" to be taken off a board wider than 6".

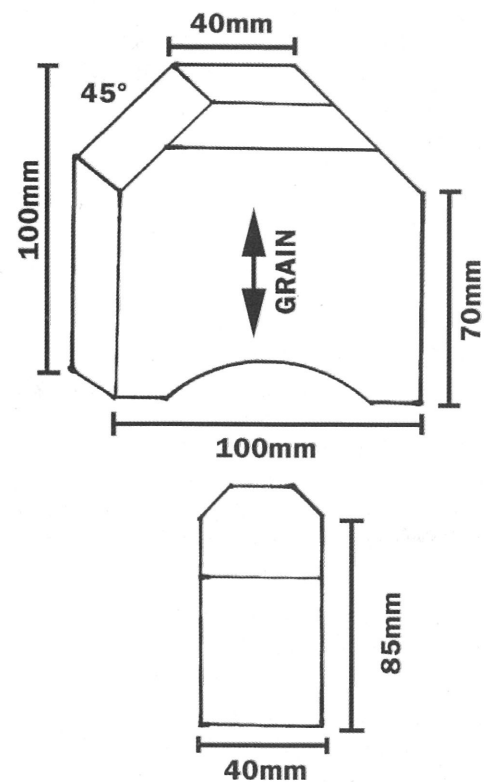
NOTE: Do not attempt to machine timber less than 6mm thick as the material may shatter.

SAFETY WARNING:

This list of do s and dont s is not exhaustive and is not a substitute for common sense and best practices.

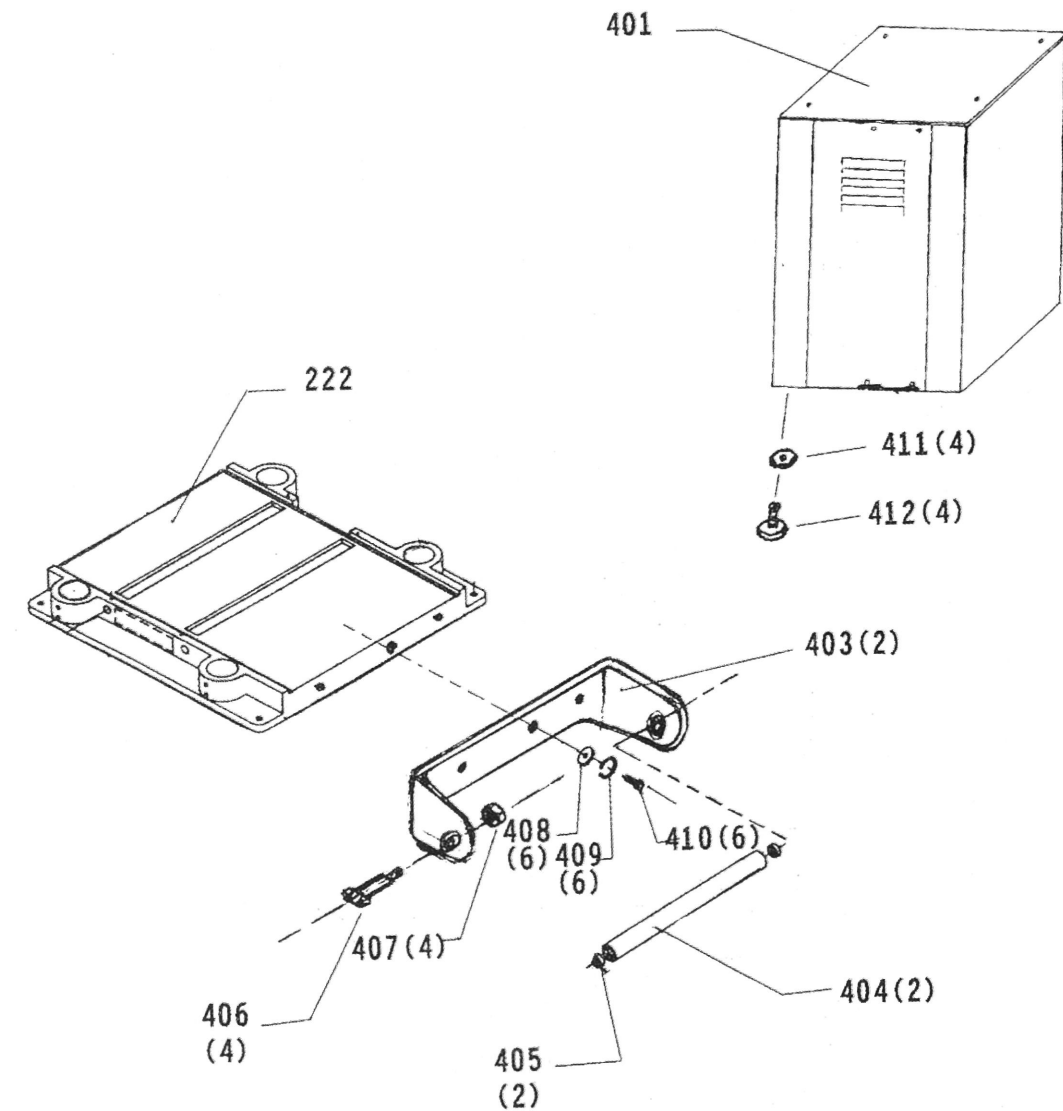
Woodworking machines are potentially dangerous, it is important to observe all safety instructions while operating this machine.

- Always wear eye and ear protection.
- Always unplug the machine from the power source before making any adjustments.
- Always use a licensed electrician for any installation or electrical repair work.
- Do not wear loose clothing, jewellery or other loose ornamentation.
- Long hair should be protected by netting or other means to prevent ingress into the machines working parts.
- Keep all safety guards in place and well maintained.
- Ensure all adjusting keys, spanners and tools are removed before machine is switched on.
- Keep children and unauthorised persons away from machine even when not in use.
- Do not use machine for any other purpose than that for which it was designed.
- Do not use excessive force, or exceed capacity of machine by attempting to take too large a cut.
- At no time should machine be unattended whilst in operation.
- When machining small sizes of timber, use a push block to avoid placing hands too close to turning cutterhead.
- Do not attempt to machine timber less than 6mm thick as the material may shatter.
- Do not put hands inside machine whilst it is running.
- Wood dust is a health hazard, ensure correct dust extraction is fitted.
- Cutter blades should be kept sharp at all times. Blunt blades are a major cause of accidents and machine failure. Damage to the machine caused by blunt blades is not covered by warranty.
- This machine should be used in an area with good lighting and ventilation.
- Keep the floor and adjacent areas around the machine dry and clean.
- Do not lean or climb on the machine as it may tip.
- Always maintain a balanced stance when operating this machine.
- Do not operate this machine whilst on medication or under the influence of alcohol or drugs.



CONSTRUCTING A WOODEN GAUGE BLOCK

To enable you to check the height of the feed rollers and parallel of the cutter block it is helpful to make a gauge block.



REF. NO.	DESCRIPTION
401	CABINET ASSY INCL:
222	TABLE
403	EXTENDED WORKING BRACKET
404	BED ROLLER
405	BALL BEARING
406	SPECIAL SCR
407	HEX NOT
408	FLAT WASHER
409	LOCK WASHER
410	M6 x 20 HEX SOC HD SCR
411	3/8 - 16 HEX NOT
412	PIASTIC COVERED PAD

AUTHORISED SERVICE AGENTS:

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Fax: (07) 3397 2785

CARBA-TEC (NSW) Pty. Ltd.
32 Percy Street
Auburn, NSW 2144
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Fax: (02) 9649 7044

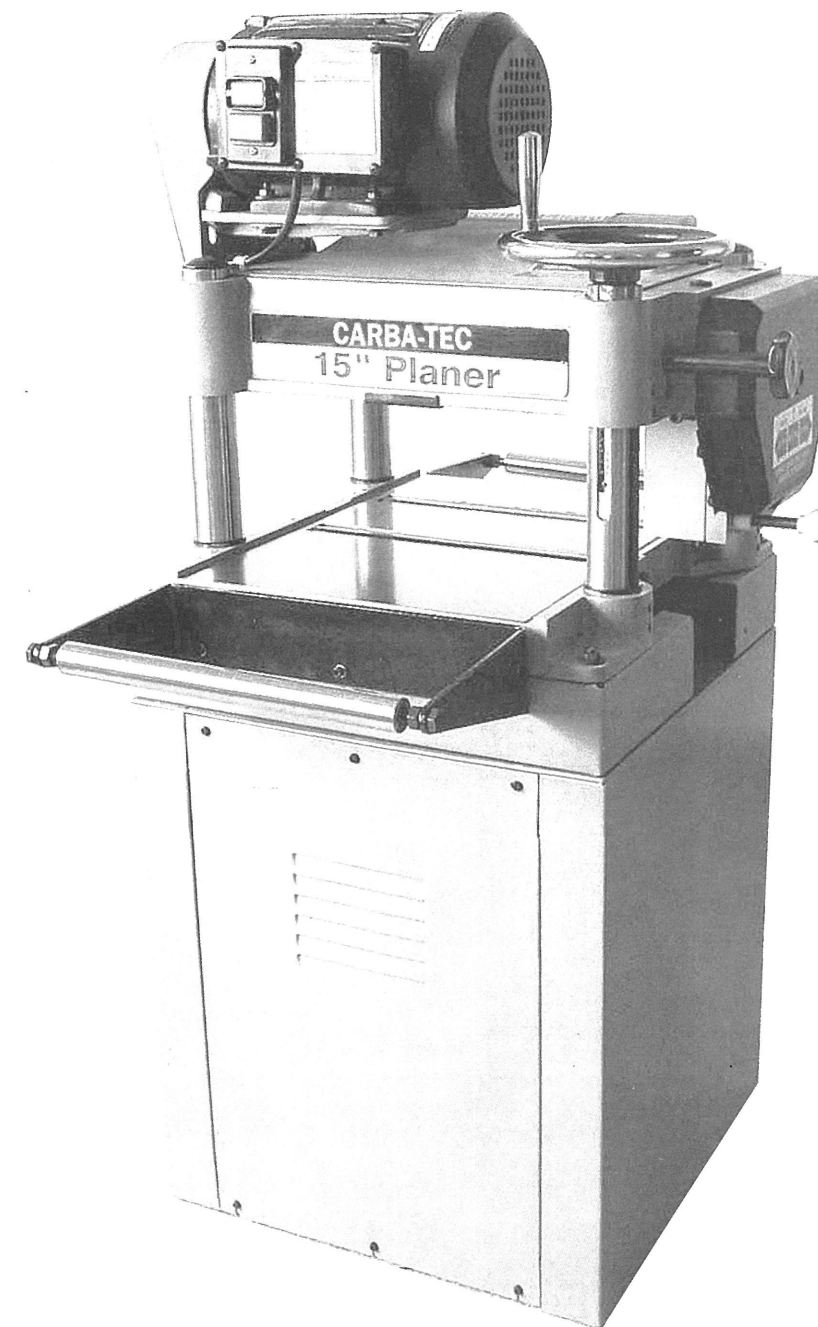
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Fyshwick, ACT 2609
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Fax: (02) 6280 0630

CARBA-TEC (WA)
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