

OPERATORS MANUAL FOR MODELS 812B, 612,

& 820 PLANERS





READ THOROUGHLY BEFORE OPERATING



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SPECIFICATIONS

Planer Model 812B	612	820
Planing	3/16″	5/16″
Max. Width of Cut	12″	20-1/8"
Max. Thickness of Stock	6″	8″
Min. Thickness of Stock	3/16″	3/16
Shortest Piece of Stock	9″	10″
FeedSelf Feeding by (2) Powered Rubber Rollers		
Slow Speed (factory set) 12 FPM	11 FPM	11 FPM
Fast Speed 1 SPEED	32 FPM	32 FPM

Planer Model 812 B	612	820
Cuts/Inch With Cutterhead at Full Speed		
Slow Feed (factory set)	94	96
Fast Feed 1 SPEED	32	33
Mach. Size Assembled		
Machine Width	25″	32"
Machine Length (w/ext. tables)	42.50"	44.50"
Machine Height	39.25″	40.75"
Shipping Weight (w/std mtr)	311 lbs	500 lbs
Cutterhead Specifications		
Speed	4200 RPM	4250 RPM
Diameter	3.20″	3.20″
No. of Planer Knife Slots	3	3
Ball Bearings	1.5″	1.5″
Std. Motor Horsepower	5 HP	5 HP
Voltage	220 V	220 V
Phase	1 PH	1 PH
Speed	1725 RPM	1725 RPM
Mtr. Pulley Outside Diameter		
For 3450 RPM Motor 3.50"	3.25"	
For 1750 RPM Motor	7.75″	7.75"

FORWARD

The RBI planers are designed for both the professional and hobby shop enthusiast. They are designed for ease of operation, maintenance, and adjustment by the operator with his safety in mind. As with any piece of equipment the operator should become familiar with it. To do this, the operators manual should be thoroughly read and understood.

CAUTION: Safety doesn't just happen, it is planned!

Accidents don't just happen, they are caused!

Read and practice the safety precautions. Follow the instructions provided in the operator's manual.

SAFETY I

- 1. Read the operators manual carefully. Be familiar with the operation of the equipment. Know where the controls are and how to operate them.
- 2. Never allow children to operate equipment. Never allow anyone to operate the equipment without proper instruction.
- 3. Keep the work area clear of other persons.
- 4. Maintain a clean uncluttered work area.
- 5. Never make any adjustments while the machine is running.
- 6. Keep hands and feet away from rotating parts. Keep clear of infeed and discharge openings.
- 7. Disconnect the electrical supply before doing any adjustments on the machine (unplug the machine).
- 8. Exercise caution when working on the cutterhead, as the knives are extremely sharp.
- 9. Remove all tools and equipment before starting machine.
- 10. Wear proper clothing. Avoid loose fitted clothing, long sleeves, long hair, gloves, neck ties, jewelry, watches, rings, etc.
- 11. Wear safety goggles, ear protection (ear plugs or covers) and a mask in dusty operations.

- 12. Do not operate machine in a damp or wet area to avoid electrical shock.
- 13. Maintain all safety guards.
- 14. Do not operate the machine while under the influence of medication, alcohol or drugs.
- 15. Never leave the machine running unattended.
- 16. Don't overload the machine, follow the operators manual.
- 17. Keep the equipment in proper working order. Follow recommended maintenance procedures in operators manual.
- 18. Do not use lumber with loose knots, or splintered surfaces.

UNPACKING AND ASSEMBLY INSTRUCTIONS

All planers are test run, checked, and adjusted at the factory before shipment. Shipping may cause some misalignment. Report all shipping damage to the carrier, the manufacturer is not responsible for shipping damage.

There is very little assembly required on the RBI planers. The extension tables must be installed, and the magnetic starter (if applicable) will need to be mounted. If you purchased one less the motor that will need to be installed also.

NOTE: The planer should be set level, preferably set it on a level floor. If the floor is not level, leave the planer bolted to the shipping pallet and place shims under the pallet to level the planer.

1. Remove from shipping carton and check to see that all parts were received without damage.

NOTE: Damaged parts are to be reported directly to the transportation carrier, the manufacturer is not responsible for shipping damage.

Planer Carton Contents:

	Qty	•
A)	Planer Assembly 1	
B)	Extension Tables	
C)	Crank (Thickness Adjustment Crank)1	
D)	Wooden Knife Guard (612 and 820 only) 1	
E)	5/32 x 4.5 "T" Handle Allen Wrench (812B only) 1	
F)	Fast Feed Belt (612 and 820 only)1	
G)	Operators Manual	
H)	Molding Knife Patterns Catalog	
I)	Bolt Bag1	
Bo	t Bag Contents: 812B Planer	
A)	1/4 in. x 1/2 in. Hex Head Bolt 4	
B)	1/4 in. Flat Washers	
C)	1/4 in. Lock Washers	
D)	1/4 in 20 x 1/4 in. Set Screw	
Bol	Bag Contents: 612 & 820 Planers	
A)	3/8 in. x 1 in. Hex Head Bolt	
B)	3/8 in. Flat Washers	
C)	3/8 in. Lock Washers	
D)	1/4 in 20 x 1/4 in. Set Screw	

EXTENSION TABLE INSTALLATION AND ADJUSTMENT

Tools required are: 9/16" wrench, 7/16" wrench (812B only), 1/8 " Allen wrench, and a 3 ft. straight edge.

- 1. To install the extension tables first put (1) lock washer then (1) flat washer on each of the (4) bolts. Start the bolts into the threaded holes in the infeed and outfeed ends of the planer bed, leaving at least 1/4 in. between the planer bed and flat washer (see fig. A-1).
- 2. Slide the extension table down over the bolts, between the flat washers and the planer bed.
- 3. Snug the bolts (just enough to hold the extension table in place). Adjust the extension table even with the top of the planer bed by tapping it up or down (see fig. A-2). If it won't move, loosen the bolts until it will.



Fig. A-1

WARNING: Where the extension tables meet the planer bed, the infeed table must not be lower than the bed, and the outfeed table must not be higher than the bed, or the boards will catch and not feed through the planer.

- 4. Install (1) Allen Set screw in each of the small holes near the extension table mounting bolts (see fig. A-1).
- 5. The outer ends of the extension tables should be elevated 1/8 in. to 3/16 in. to reduce snipe. Lay a straight edge across the planer bed and extension table then screw the set screws in to elevate the end of the extension table. Measure the gap between the straight edge and the planer bed where the extension tables meet the planer bed (see fig. A-2).





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- 6. Tighten the extension table mounting bolts. This may change the adjustment of the elevation slightly. This step and the previous step may need to be done simultaneously to achieve the desired elevation.
- 7. Both extension tables need to be elevated, repeat steps 2 through 6 for the other extension table.
- 8. Check to see that all bolts and set screws are tight and all tools are removed from the machine before operating.

WARNING: Don't sit on the extension tables! It will bend them down and change the elevation of the table ends which will cause snipe.

MOTOR INSTALLATION |

Tools required are: 9/16" wrench, 3 ft. straight edge, and a standard screwdriver.

- 1. Remove the hood.
- 2. Set the motor in place on the motor mount bars.
- 3. To fasten the motor, install from the top (1) one of the 3/8"-16x1 1/4" hex head bolts in each corner of the motor's base. Secure by placing a flat washer, a lock washer, and a nut on each of the bolts. Leave these bolts loose for now.
- 4. Check to see if the motor pulley lines up with the cutterhead pulley, see fig. A-3 (if so proceed to next step). If the pulleys don't line up, loosen the bolts at each end of the motor mount bars and slide them to align the motor pulley with the cutterhead pulley. When the two pulleys are aligned retighten the bolts.
- 5. To install the belt loop it over one of the pulleys and walk it onto the other one.
- 6. Slide the motor toward one end of the slots to tighten the belt, and tighten the bolts that mount the motor to the machine.
- 7. Replace the hood.



Fig. A-3

MOTOR STARTER (SWITCH) INSTALLATION AND POWER REQUIREMENTS

- 1. On machines equipped with a magnetic starter remove the magnetic starter from its shipping box. Mount the magnetic starter on the left side of the machine using the (4) star washers and (4) 10-32 hex nuts provided. This requires a 3/8" wrench, and should not require opening the housing of the magnetic starter.
- 2. On the model 812B with the standard 3HP, single phase motor this machine requires a 230V, 20A electrical source and breaker. The plug installed on the machine requires a NEMA- 6-20R receptacle. On the model 612 or 820 with the standard 5HP, single phase motor this machine requires a 230V, 30A electrical source and breaker. The plug installed on the machine requires a NEMA- 6-30R receptacle.

CAUTION: If an extension cord is necessary, be sure it is no less than 10 gauge with (3) three conductors. All connections must make good contact. Operating the motor on less than recommended voltage level will damage the motor.

CAUTION: This machine must be grounded while in use to protect the operator from electrical shock. The standard motor supplied with this machine is prewired with a power supply cord that has a male plug. Install the proper grounded receptacle for this plug. Do not remove the grounding prong from the plug.

CAUTION: Be sure the receptacles to be used are properly grounded and of adequate current rating. Have a certified electrician check the wiring if you are not sure.

OPERATING INSTRUCTIONS

- 1. Make sure all loose parts, and tools have been removed from the machine.
- 2. With machine off, adjust the planer bed for the initial thickness of your board.
- 3. Place a board to be planed (minimum of 9" long on the 812B, and 10" on the 820") under the infeed roller.
- 4. Turn the crank handle to adjust the planer bed so the board just contacts the infeed roller.
- 5. Remove the board.
- 6. Turn the bed crank four turns up. This will allow the top of the board to contact the cutterhead knives for the initial pass.

CAUTION: Do not stand in front or behind machine while in operation.

- 7. Turn machine on.
- 8. Start the board into the infeed roller such that it will travel through the machine straight.
- 9. Turn bed crank to desired depth of cut and feed board through again. Repeat, until you have the desired board thickness.

DEPTH OF CUT INFO: 1/4 crank handle turn = 1/64 in. cut 1/2 crank handle turn = 1/32 in. cut 1 crank handle turn = 1/16 in. cut

UPON INITIAL STARTUP OR KNIFE REPLACEMENT, RUN MACHINE FIVE MINUTES, RETIGHTEN GIB BOLTS OR SCREWS. RECHECK AFTER EVERY 20 HOURS OF USE.

WARNING: Maximum cut depth per pass is 3/16" on the 812B or the 612, and 5/16" on the model 820 planer.

BED HEIGHT ADJUSTMENT

The crank is used on the crank screw to raise and lower the bed. Turning clock-wise raises the bed and counter-clock-wise lowers the bed. Each complete turn raises or lowers the bed 1/16 in. (1/2 turn raises or lowers the bed 1/32 in., 1/4 turn raises or lowers the bed 1/64 in, etc.). The max. cut per pass is 3/16 in. (3 full turns) for the 812B and the 612, 5/16 in. for the 820.

REMOVING AND REPLACING THE CUTTERHEAD

Tools Required: 3/4" wrench (612 & 820 only), 9/16" wrench, 1/2" wrench (812B only), 5/32" Allen wrench (612 & 820 only), 1/8" Allen wrench (812B only)

- 1. Disconnect the electrical source (unplug the machine).
- 2. Remove the hood.
- 3. Walk the cutterhead drive belt off.
- 4. Remove the two bolts from the bearing housing on the motor drive side.
- 5. Loosen the locking collar for the bearing on the reduction unit drive side. On the 812B simply loosen the two set screws in the bearing collar to release the bearing from the shaft. The 612 and 820 planers have eccentric lock collars (see fig. A-4) on the bearings. To loosen a bearing with the eccentric lock collar reverse the steps in fig. A-4. First loosen the set screw in the locking collar (the reverse of step 5 in fig. A-4). Use a hammer and punch, in the other hole (not the set screw hole) in the collar to dislodge the lock collar. Release the lock collar by turning it opposite the normal shaft rotation (the reverse of step 4 in fig A-4). Once the locking collar is broke loose, slide it back away from the bearing by hand (the reverse of step 3 in fig A-4).
- 6. Push down on the cutterhead drive pulley, and rotate the bearing housing 90 degree.
- 7. Lift up on the cutterhead drive pulley raising that end of the cutterhead. The bearing on the other end will rotate in its housing (see fig. A-5). This will release the tension on the belt for the reduction drive side.



Fig. A-4

Fig. A-5

- 8. Walk the belt on the reduction drive side off. If the feed rollers are on fast speed, that will be the reduction unit drive belt. If the feed rollers are on slow speed (as shipped from the factory) this will be the dual "V" pulley drive belt.
- 9. Slide the cutterhead out of the bearing on the reduction drive side (see fig. A-5).

NOTE: The bearing on the cutterhead drive side will stay on the cutterhead, and the bearing on the reduction unit drive side will stay in the planer's frame.

NOTE: You may want to purchase the optional cutterhead stand to avoid damage to the cutterhead knives while it is out of the planer.

To reinstall the cutterhead reverse the above procedure. If you want to install a sanding, moulding, or gang rip head simply replace the cutterhead with the optional head.

PLANER KNIFE REMOVAL

Tools Required: 9/16 in. wrench, 1/2 open end wrench (not required on the 812B), wooden knife guard (not required on the 812B), 5/32" T handle allen wrench (required on the 812B only.

WARNING: Cutterhead knives are extremely sharp. On the 612 or the 820 place the wooden knife guard over the planer knife before loosing or tightening gib bolts.

1. Disconnect electrical source.

WARNING: Never work on a machine that is plugged in.

- 2. Remove hood.
- 3. Mark (or number) the knives, gibs, and cutterhead so the knives and gibs may be returned to the same slot from which they were removed.
- 4. Turn one blade up and place the wooden knife guard over the knife (see fig. A-7). Wooden knife guard is not required on the 812B planer.
- 5. On the 812B use the 5/32" T handle allen wrench to loosen (by turning counter-clockwise) the set screws in the head which hold the gib in place. On the 612 and 820 loosen the gib by screwing each of the gib bolts into the gib about 6 turns of the wrench (see fig. A-5).
- 6. Remove the wooden knife guard, the gib, and the knife.

7. Roll the cutterhead and repeat steps 3 - 6 for the other two knives in the cutterhead.



PLANER KNIFE SHARPENING

Major: The beveled edge of the knife should be ground to an angle between 30 and 45 degree the full length of the knife to remove all nicks and notches.

Minor: A hone may be used on the flat side of the knife cutting edge, evenly the full length of the knife.

PLANER KNIFE REPLACEMENT AND SETTING

Tools Required: 9/16 in. wrench, 1/2 open end wrench (not required on the 812B), wooden knife guard (not required on the 812B), 5/32" T handle allen wrench (required on the 812B only).

1. Clean all gibs, knives, and slots with an oiled cloth.

NOTE: Return the knives and gibs to the same slot from which they were removed.

2. Turn the cutterhead so one knife slot is upward, but with knife jack screws slightly downhill so the knife will stay in place until the gib is installed.

NOTE: Make sure the jack screws are screwed in far enough to allow the knives to go down below maximum knife height adjustment, as determined by the knife gauge.

- 3. Lay the knife in the cutterhead slot on top of the jack screws, with the short side of the beveled edge on the same side as the jack screws (see fig. A-7).
- 4. Lay the gib in the slot with the bolt heads (dimples for the set screws on the 812B) away from the blade and jack screws (see fig. A-6).
- 5. Center the blade and gib in the cutterhead (make the ends even with the ends of the cutterhead).
- 6. Place the wooden blade guard over the blade. Wooden knife guard is not required on the 812B planer.
- 7. Tighten the gib bolts enough to hold the knife in place.
- 8. On the 812B use the 5/32" T handle allen wrench to tighten (by turning clockwise) the set screws in the head which hold the gib in place. Tighten just enough to hold the knife in place until it is set. On the 612 and 820 tighten the gib by screwing each of the gib bolts out enough to hold the knife in place.
- 9. Adjust the knife gauge by loosening the set screw on the side of the knife gauge. Position the knife gauge on the cutterhead so the legs and the plunger rest on the cutterhead (not over the knife, or gib slot). Adjust the plunger guide so the plunger is 1/8 in. below the top of the plunger guide, retighten the set screw (see fig. A-8).

NOTE: The patented knife gauge is an accessory and should be purchased.



- 10. Place the knife gauge over the knife with the bottom of the plunger on the knife edge (see fig. A-9).
- 11. Adjust the knife up by turning the adjusting jack screw counter-clock-wise until the knife gauge plunger is level with top of the plunger guide (see fig. A-9).
- 12. Check the full length of the knife for equal adjustment.
- 13. If uneven, check to see if the gib is too tight and binding knife movement.
- 14. When even, place the wooden blade guard over the knife (on the 612 and 820). Tighten the gibs, then recheck the full length of the knife for equal adjustment.
- 15. Follow the same procedure for each cutterhead slot.
- 16. Recheck all gibs for tightness before starting machine. Check to make sure all tools and equipment are removed from machine prior to starting it.
- 17. Replace the hood.

FEED ROLLER SPEED CHANGE

The Planer is set on the slow feed rate when shipped from the factory. The slow feed rate gives more cuts per inch, which leaves a smoother finish on the board. The only time that the fast feed rate is recommended is for sanding. When sanding the fast feed rate reduces the chance of burning the stock, and helps keep the sandpaper clean. The fast feed rate can also be used for planing or molding when the finish is not a concern.

For the fast feed rate the drive belts for the dual V' pulley, and the reduction unit are removed (see fig. A-13). Then the reduction unit is driven directly from the cutterhead by a longer belt.

Tools Required: 9/16" wrench, 1/2" wrench, 7/16" wrench

- 1. Disconnect the electrical source (unplug the machine).
- 2. Remove the hood.
- 3. With the 7/16" wrench, reach under the planer's base top (down where the motor is) and loosen the two nuts that hold the reduction unit, enough that the reduction unit can slide up and down.
- 4. Release the tension on the feed roller drive belt. To do so use the 9/16" wrench on the bolt in the right idler as a lever (push to the right) to release the tension on the feed roller drive belt. Remove the belt from one of the feed roller pulleys.
- 5. Remove the reduction unit drive belt. To do so use the 9/16" wrench on the bolt in the left idler as a lever (push to the left) to release the tension on the reduction unit drive belt. Remove the belt from the dual "V" pulley. Push the reduction unit down and remove the belt.

- 6. With the 1/2" wrench, reach under the planer bed and loosen the bolt in the stub shaft that the dual "V" pulley rides on. Remove the dual 'V' pulley drive belt. Retighten the bolt in the stub shaft.
- Place one end of the fast speed reduction drive belt speed on the reduction unit, and the other in the outer "V" of the cutterhead shaft. The left side of the belt will ride in the small "V" of the dual "V" pulley, this is normal (see fig A-10).
- 8. To tension this belt use the 9/16" wrench on the bolt in the left idler as a lever (push to the left) and slide the belt behind the idler.
- 9. Replace the feed roller drive belt on the feed roller pulley and retension the belt. To do so use the 9/16" wrench on the bolt in the right idler as a lever (push to the right) and slide the belt behind the idler.
- 10. Retighten the mounting bolts for the reduction unit.



Fig. A-10

LUBRICATION

- 1. Oil corner screw & crank screw with 2 4 drops at the bed contact and bottom wear washer, as required for ease of turning the crank handle (see fig. A-11).
- 2. Oil feed roller bronze bushings with 2 4 drops on the side of the bronze bushing where it touches the machine frame, and where the shaft goes through the bushing every 20 hours of operation (see fig A-12). Oil more often under severe use.



- 3. Oil bronze bushing for the dual "V" pulley 2 drops every 8 hours of operation.
- 4. Grease reduction unit every 40 hours of operation, not more than 10 pumps from a greasegun. Do not over grease as excess will cause belt slippage (see fig. A-13).
- 5. Grease regreasable bearing on cutterhead every 40 hours of operation, with 10 pumps from a greasegun (see fig. A-14)

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- 6. With the 1/2" wrench, reach under the planer bed and loosen the bolt in the stub shaft that the dual "V" pulley rides on. Remove the dual 'V' pulley drive belt. Retighten the bolt in the stub shaft.
- Place one end of the fast speed reduction drive belt speed on the reduction unit, and the other in the outer "V" of the cutterhead shaft. The left side of the belt will ride in the small "V" of the dual "V" pulley, this is normal (see fig A-10).
- 8. To tension this belt use the 9/16" wrench on the bolt in the left idler as a lever (push to the left) and slide the belt behind the idler.
- 9. Replace the feed roller drive belt on the feed roller pulley and retension the belt. To do so use the 9/16" wrench on the bolt in the right idler as a lever (push to the right) and slide the belt behind the idler.
- 10. Retighten the mounting bolts for the reduction unit.

LUBRICATION

- 1. Oil corner screw & crank screw with 2 4 drops at the bed contact and bottom wear washer, as required for ease of turning the crank handle (see fig. A-11).
- 2. Oil feed roller bronze bushings with 2 4 drops on the side of the bronze bushing where it touches the machine frame, and where the shaft goes through the bushing every 20 hours of operation (see fig A-12). Oil more often under severe use.

3. Oil bronze bushing for the dual "V" pulley 2 drops every 8 hours of operation.

CORNER SCREW OR CRANK SCREW

OIL HERE

BED

OIL HERE

Fig. A-11

2 - 4 drops of oil each place

- 4. Grease reduction unit every 40 hours of operation, not more than 10 pumps from a greasegun. Do not over grease as excess will cause belt slippage (see fig. A-13).
- 5. Grease regreasable bearing on cutterhead every 40 hours of operation, with 10 pumps from a greasegun (see fig. A-14)







Fig. A-13



- 6. Electric motor lubrication:
 - A) Sealed bearings No further lubrication required, bearings are lubricated for the life of the bearing.
 - B) For motors with grease plugs in end plates Relubricate while motor is warm and at standstill. Remove and clean all grease plugs, insert grease fitting into upper hole adding a small amount of grease with a grease gun. Run motor 5 minutes before replacing plug.
- CAUTION: Excessive amount of grease will overheat the bearings.

FEED ROLLER CLEANING

After extended periods of time or under moist wood condition, a build-up of wood resin can occur on the rollers. This can be removed by wiping with kerosene or mineral spirits, or denatured alcohol.

ADJUSTING THE CUTTERHEAD DRIVE BELT

CAUTION: Loose belts can cause vibration.

- 1. Loosen the four bolts that mount the motor to the machine.
- 2. Slide the motor toward one end of the slots to tighten the belt, and tighten the bolts that mount the motor to the machine.

ADJUSTING THE FEED ROLLER DRIVE BELTS I

Tools Required: 9/16" wrench, 1/2" wrench

The belt that drives the dual "V" pulley is the only feed roller drive belt that requires adjusting, the other two are spring tensioned and don't need adjusting.

- 1. Disconnect electrical source, and remove the hood.
- 2. With the 1/2" wrench, reach under the planer bed and loosen the bolt in the stub shaft which the dual "V" pulley rides on.
- 3. Adjust the tension on the belt from the cutterhead to the dual "V" pulley) by pushing down on the dual "V" pulley (see fig. A-15). The bolt in the stub shaft will slide down in the slot until the belt is tight. While keeping the belt tensioned, retighten the bolt in that stub shaft.

The belt that drives the reduction unit and the one that drives the feed rollers are spring tensioned and don't need adjusting.



ADJUSTING THE ROLLER CHAIN

Tools Required: 9/16 in. wrench.

- 1. Loosen the chain tightener.
- 2. Put the chain to the inside of the bracket and the pointed side of the bracket against the chain.
- 3. Slide the bracket in until the chain is not sloppy any more, and retighten the nut.

NOTE: The chain should not be taunt, overtighening the chain will cause it to wear out sooner.

ADJUSTING INFEED AND OUTFEED ROLLER TENSION

Tools Required: (2) 9/16 in. open end wrenches.

- 1. Disconnect the electrical source (unplug the machine).
- 2. Remove the hood.
- 3. Loosen jam nut, by holding the bottom nut with one wrench and loosen the jam nut with the other wrench (see fig. A-16).
- 4. To increase roller pressure screw the lower nut down (clockwise). To reduce roller pressure screw the lower nut up (counter-clock-wise)
- 5. Retighten the jam nut by holding the bottom nut with one wrench and tighten the jam nut down against the bottom nut with the other wrench.

Planer Model #	Infeed Reduction Side	Infeed Motor Side	Outfeed Reduction	Outfeed Motor Side
812B	3/4"	3/4"	3/4″	3/4″
612	1-1/8″	1-3/8″	1-1/4″	1-1/2″
820	1-1/4″	1-5/8″	1-3/8"	1-3/4″



FEED ROLLER REPLACEMENT

Note: See the PARTS BREAKDOWN for identification of parts.

- 1. Remove the hood.
- 2. Remove the feed roller drive belt.
- 3. Remove the feed roller pulleys from the ends of the feed rollers. To do so loosen the set screws in the pulley and pull it off.
- 4. Reduce the tension on the feed roller tension spring by raising the jam nuts on the threaded rods (see fig. A-16).
- 5. Remove the spring.
- 6. Grasp the bronze feed roller bushings on the ends of the feed rollers and lift until the bushings are free of the square slots in the planer sides.
- 7. Slide the feed roller through the round holes in the planer sides.
- 8. Remove the feed roller bushings from the ends of the feed rollers.
- 9. Reverse the procedure to install the feed rollers. See ADJUSTING INFEED AND OUTFEED ROLLER TEN-SION to set the feed roller tension.

CORNER AND CRANK SCREW REPLACEMENT

- 1. Lower the planer's bed to its lowest position.
- 2. Drive the roll pin out of the sprocket on the corner screw that is to be removed.
- 3. Remove the top bar on the side where the screw is to be removed.
- 4. Grasp the corner screw with a pair of pliers or vise grips and screw it out of the planer's bed. If the crank screw is to be removed, use the crank handle to screw it out.
- 5. Reverse the procedure to replace. Check the planer bed for level, and adjust if needed (see PLANER BED LEVELING).

PLANER BED LEVELING

Tools Required: needle nose pliers, knife setting gauge.

- 1. Disconnect the electrical source (unplug the machine).
- 2. Adjust the knife setting gauge by removing the plunger, and raising the plunger guide as high as it will go and still have the set screw hold it securely (see fig. A-8 for parts identification).
- 3. Adjust the planer bed to obtain approximately six inches between the planer bed and the base top.
- 4. Set the knife setting gauge on the planer bed and slide it over near the cutterhead (see fig A-17).

CAUTION: Don't adjust the planer bed with the knife setting gauge directly under the cutterhead.



Fig. A-17

- 5. Adjust the planer table so the knife setting gauge will just touch the cutterhead on one end when slid back and forth under the cutterhead (if the knife setting gauge will just barely touch the cutterhead on both ends the planer bed is level and doesn't need adjusting).
- 6. Remove the chain connector link (master link) and remove the chain from the corner screw sprockets.
- 7. Push down on each corner of the planer bed to check for movement. If any corner moves adjust that corner screw clock-wise until the corner screw sprockets rest evenly on the base top on all four corners.
- 8. Check the distance between the cutterhead (not the knives) and the planer bed on one side then the other. If one side is more than one-sixtyfourth lower than the other, turn the two corner screws on the lower side clock-wise by hand until the knife setting gauge will barely touch the cutterhead on both ends when slid under it (be sure and turn both of the corner screws on the lower side by the same amount).

NOTE: 1/4 turn of the corner screws clock-wise will rise the planer bed by 1/64 in.

9. When the planer bed is level replace the chain, being careful not to move the corner sprockets (turning the corner screw sprockets changes the level of the table).

NOTE: Oiling the corner screws where they go through the planer bed and at the top and bottom (see lubrication) will make the crank easier to turn.

15

TROUBLE-SHOOTING	
PROBLEM: Feed rollers push board out.	
POSSIBLE CAUSES	POSSIBLE SOLUTIONS Rewire motor to reverse rotation
PROBLEM: Feed rollers turn, but board does not feed.	
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Feed rollers worn or damaged	Replace
Build-up of resin on feed rollers	Clean feed rollers
PROBLEM: Feed rollers turn in a jumpy motion.	
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Cut too large	Reduce depth of cut
Main drive belt loose or slipping	Adjust or replace as required
PROBLEM: Feed rollers slip on board.	
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Build-up of resin of feed rollers	Clean feed rollers
Feed roller spring tension too low	Adjust feed roller tension springs
PROBLEM: Board is excessively hard to start into the plan	ner.
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Cut too large Food rollor spring tension too high	Reduce depth of cut
PROBLEM: Feed rollers don't turn.	
POSSIBLE CAUSES Belts loose off. or broken	Adjust or replace as required
	POSSIBLE CONTROLIC
POSSIBLE CAUSES Knives not set the same height	POSSIBLE SOLUTIONS Reset the planer knives
Machine set on fast feed rate	Set on slow feed rate
PROBLEM: Ridge or groove along the length of the board	1.
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Nick in the planer knives	Have knives resharpened or replace
PROBLEM: Large chunks torn out of the board.	
POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Cutting against the grain Planer knives dull	Turn board end for end

PROBLEM: Stripping or peeling of board.

POSSIBLE CAUSES Lumber green Planer knives dull

PROBLEM: Press marks in the wood.

POSSIBLE CAUSES Wood chips & resin on feed rollers Wood chips very large

PROBLEM: Cutterhead slows down.

POSSIBLE CAUSES Planer knives dull Cut too large Motor undersized Low current to the motor Cutterhead drive belt slipping

PROBLEM: Excess vibration.

POSSIBLE CAUSES Knives improperly adjusted Knives missing or damaged Buildup on cutterhead Drive belt damaged or loose Cutterhead bearings bad Motor, cutterhead or pulleys loose

PROBLEM: Motor won't start.

POSSIBLE CAUSES Breaker bad or thrown Thermal reset on motor thrown Check motor for clogged vents, clean using vacuum or air hose. POSSIBLE SOLUTIONS Allow lumber to dry Have knives resharpened or replace

POSSIBLE SOLUTIONS Clean feed rollers Reduce the depth of cut

POSSIBLE SOLUTIONS

Have knives resharpened or replace Reduce the depth of cut Replace motor with a larger motor Have electrician check wiring Adjust belt or replace as required

POSSIBLE SOLUTIONS Adjust knives Replace Clean cutterhead Adjust belt or replace as required Replace bearings Tighten or replace as required

8

POSSIBLE SOLUTIONS Reset breaker or replace Let motor cool, push reset button

PROBLEM: Excess snipe (deeper cut at the end of a board)

Snipe is a deeper cut at the end of a board, usually the first and last two or three inches. All planers, regardless of make, tend to create snipe. Ranging in depth from almost imperceptible to 1/8". This is caused when a board enters the planer infeed roller, but has not yet reached the outfeed roller. While it is in this position and held down by only one feed roller, the planer blades tend to lift up the board as they cut, pulling it up into the blades (see illustrations A-18 – A-22). The same thing occurs when the board leaves the infeed roller and is held only by the outfeed roller. Feed roller pressure is adjustable to allow for different conditions, so it's possible to minimize or practically eliminate snipe in most cases.



Fig. A-18

000

LIFTING ACTION OF CUTTERHEAD ON BOARD

Fig. A-19

SHOWING LEVEL OF BOARD INTO PLANER





PRESSURE RELEASED INFEED ROLLER

Fig. A-21



PARTS LIST MODEL 812B PLANER

To speed delivery and reduce errors when ordering parts always give the name, model number, and serial number of your machine. Use the part number and description as shown in the parts list. Do not use key numbers (the numbers in the circles on the parts breakdown drawing), always use the part number and description given in the parts list.

Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.
001	695-1006	BASE TOP	1	050	715-0166	1/4-20 X 1 CARRIAGE BOLT	4	GEARB	OX		
002	645-4137	SKIRT, L.H.SIDE, #612/812B	1	051	770-0059	1/4 X 1-1/8 ROLL PIN	3	095	645-0067	GEARBOX FACE PLATE	1
003	645-4136	SKIRT, R.H.SIDE, #612/812B	1	053	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	44	096	645-0145	GEARBOX INTERNAL ARM FD RL	
004	695-0053	MOTOR MOUNT SUPPORT	2	054	745-0177	1/4 FLAT WASHER	8			BRK	1
005	695-0054	MOTOR MOUNT BAR, #612/812B	2	055	750-0207	1/4 SPLIT LOCK WASHER	4	097	645-0146	GEARBOX REDUCTION DR IDLER	
007	695-2002	SIDE, #812B PLANER	2	059	795-0063	5/16-18 X 3/4 HEX HEAD BOLT	1			ARM	1
009	695-0004	TOP BAR, #812B PLANER	2	060	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	9	098	645-0068	GEARBOX INTERNAL GEAR	3
010	695-2017	TABLE, #812B PLANER	1	061	795-0058	5/16-24 X 3/4 SSS, CUP POINT	10	099	645-0096	GEARBOX INTERNAL GEAR SHAFT	3
011	695-1014	BED RAIL, LEFT SIDE, #812B	1	062	770-0081	5/16-18 HEX NUT	9	100	645-2090	GEARBOX DRIVE PINION	1
012	695-0015	BED RAIL, RIGHT SIDE	1	063	745-0150	5/16 FLAT WASHER	18	101	645-0095	GEARBOX INTERNAL GEAR SHEAVE	1
013	695-0016	EXTENSION TABLE ADJUSTMENT		064	770-0178	5/16 SPLIT LOCK WASHER	9	102	645-0089	GEARBOX BACK PLATE	1
		BAR	2	065	745-0720	5/16ID X 3/4OD X .01 NY.SPACER	4	103	645-2088	GEARBOX REDUCTION INPUT	
014	695-0001	EXTENSION TABLE WELDMENT	2	067	745-0047	3/8-16 X 4 FULL THREAD STUD	4			SHEAVE	1
015	645-1074	POINTER = PLANER(612-812-820)	1	069	770-0058	3/8-16 HEX NUT	12	104	745-0057	#5 WOODRUFF KEY	1
016	695-0027	CRANK SCREW, #812/812B	1	070	770-0073	3/8-16 HEX JAM NUT	16	105	745-0071	3/16 X 1-1/4 ROLL PIN	3
017	695-0026	CORNER SCREW, #812/812B	1	077	745-0164	1/21D RETAINER, PLANER HANDLE	1	106	745-0161	1/4-20 X 1/2 SKT ST SCR, FLT PT	2
018	695-0028	BED SCREW, #812/812B	2	078	740-0549	5/8ID X 1-1/8OD X 18 GA.WASHER	4	107	750-0203	5/16-18 X 2 HEX HEAD BOLT	3
019	665-0004	SPROCKET - THREADED	4	079	765-0057	5/8ID FEED ROLLER BUSHING	4	108	770-0081	5/16-18 HEX NUT	3
020	645-0045	CHAIN TIGHTENER	1	080	733-0018	3/4ID X 1-1/4OD X 18 GA WASHER	2	109	745-0150	5/16 FLAT WASHER	3
021	695-1019	PLANER HEAD, #812B	1	081	745-0113	COMPRESSION SPRING, #408/812B	2	110	770-0178	5/16 SPLIT LOCK WASHER	3
022	695-0057	GIB, RECTANGULAR STEEL, #812B	2	082	765-0019	COMPRESSION SPRING, #612/820	2	111	745-0094	5/16 X 1-1/16 SPACER FOR GRBOX	3
023	803-0001	12-1/2" PLANER BLADE, #612/812	2	083	795-1030	BEARING, 1"	2	112	745-0158	5/16ID X 1/2OD X 3/16 SPACER	2
024	795-0059	5/32 T-HANDLE ALLEN WRENCH	1	084	745-0058	FLANGETTE, (FOR 1" BEARING)	4	113	770-0058	3/8-16 HEX NUT	2
025	695-0020	PULLEY, 2-1/4OD, 1ID	1	085	745-0149	PLASTIC HANDLE GRIP	1	114	745-0073	3/8 ID FLANGED BRONZE BUSHING	1
026	640-2352	FEED ROLLER, KEYED, #612/812B	2	086	745-0162	V-BELT #1210-3/8 X 21	1	115	745-0160	1/2ID X 7/8OD X 14 GA. BUSHING	1
027	745-2091	FEED ROLLER PULLEY, KEYED W/2SS	2	087	795-0060	V-BELT #1320-3/8 X 32	1	116	740-0369	1/21D FLANGED BRONZE BUSHING	7
028	695-3022	SHOULDERED STUB SHAFT	1	090	745-0305	V-BELT #1540-3/8 X 54	1	117	745-0062	PULLEY, 2" IDLER	2
029	645-0153	DUAL V-PULLEY ASSEMBLY	1	093	795-0055	SERIAL TAG, #812B	1	118	750-0210	GREASE ZERK, 90 DEGREE	1
030	695-3009	HOOD TOP WELDMENT	1	094	703-0929	MANUAL, RBI PLANERS	1	119	745-0063	TENSION SPRING, IDLER ARM	1
031	695-1010	hood, lh end	1		703-0200	MANUAL, CUSTOM KNIFE					
032	695-1011	hood, rh end	1			CATALOG	1				
033	645-0279	CRANK WELDMENT	1		702-0008	DECAL, 7" PLANER SCALE	1	3HP M	OTOR PAC	CKAGE for 812B	1
035	770-0052	#4 X 1/4 ROUND HD DRIVE			702-0030	DECAL, CAUTION (1.75" X 2.5")	1	120	704-1008	MOTOR, 3HP/1PH, BALDOR, REV.	1
		SCREW	4		745-0203	DECAL, CAUTION, PLANER IN-FEED) 1	122	695-0052	PULLEY, 3-1/20D, 5/8ID	1
036	745-0410	#41 CHAIN MASTER CONNECT			702-0029	DECAL, COMMERCIAL MADE IN		125	745-0328	PLANER POWER CORD & SWITCH	1
		LINK	1			USA	2	132	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	1
037	745-0313	#41 ROLLER CHAIN	5		745-0205	DECAL, MADE IN USA-OCTAGON	1	133	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	4
042	745-0712	3/16 X 1 SQUARE KEY	2		702-0007	DECAL, PATENT #D268843	1	134	770-0081	5/16-18 HEX NUT	4
043	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	4		745-0202	DECAL, PLANER "UP"	1	135	745-0150	5/16 FLAT WASHER	4
044	725-0043	1/4-20 X 1/2 HEX HEAD BOLT	10		702-0002	DECAL, RBI MADE IN USA		136	770-0178	5/16 SPLIT LOCK WASHER	4
045	745-0099	1/4-20 X 5/8 CARRIAGE BOLT	38			(ROUND)	. 1	137	795-0051	3/8" ROMEX CLAMP(FOR 7/8"HOLE)	1
046	750-0206	1/4-20 X 3/4 HEX HEAD BOLT	2		745-0204	DECAL, CAUTION-KEEP HANDS		139	745-0681	TERMINAL, SPADE, YELLOW, 10-12AWC	51
047	735-0017	1/4-20 X 3/4 SKT HD CAP SCREW	6			CLEAR	2	140	745-0678	WIRE NUT, YELLOW, MAX. 3-#12	3
048	770-0182	1/4-28 X 3/4 FL HD SKT CP SCRW	6		645-0316	CRANK HANDLE ASSEMBLY	1	143	745-0702	V-BELT #6854-1/2 X 54 P.R.	1
049	745-0093	1/4 X 3/4 SQUARE KEY	1		645-0156	GEARBOX ASSEMBLY	1		745-0226	DECAL, WARNING	1



PARTS LIST MODEL 612 PLANER

To speed delivery and reduce errors when ordering parts always give the name, model number, and serial number of your machine. Use the part number and description as shown in the parts list. Do not use key numbers (the numbers in the circles on the parts breakdown drawing), always use the part number and description given in the parts list.

Qty.

	Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.
	001	645-3142	BASE TOP, #612	1	062	770-0081	5/16-18 HEX NUT	5	097	645-0146	GEARBOX REDUCTION DR IDLER	
	002	645-4137	SKIRT, L.H.SIDE, #612/812B	1	063	745-0150	5/16 FLAT WASHER	25			ARM	1
	003	645-4136	SKIRT, R.H.SIDE, #612/812B	1	064	770-0178	5/16 SPLIT LOCK WASHER	5	098	645-0068	GEARBOX INTERNAL GEAR	3
	004	645-0722	MOTOR MOUNT SUPPORT, #612	2	066	750-0212	3/8-16 X 3/4 HEX HEAD BOLT	4	099	645-0096	GEARBOX INTERNAL GEAR SHAFT	3
	005	695-0054	MOTOR MOUNT BAR, #612/812B	2	067	745-0047	3/8-16 X 4 FULL THREAD STUD	4	100	645-2090	GEARBOX DRIVE PINION	1
	006	645-0135	SIDE MOUNT BRACKET	2	068	770-0089	3/8 X 1 SQUARE KEY	1	101	645-0095	GEARBOX INTERNAL GEAR SHEAVE	1
	007	645-3122	PLANER SIDE, L.H., #612	1	069	770-0058	3/8-16 HEX NUT	16	102	645-0089	GEARBOX BACK PLATE	1
	008	645-4122	PLANER SIDE, R.H., #612	1	070	770-0073	3/8-16 HEX JAM NUT	16	103	645-2088	GEARBOX REDUCTION INPUT	
	009	645-0130	TOP BAR, #612	2	072	770-0071	3/8 SPLIT LOCK WASHER	4			SHEAVE	1
	010	655-2101	TABLE, #612	1	073	745-0415	1/2 X 3/4 SHOULDER BOLT	4	104	745-0057	#5 WOODRUFF KEY	1
	014	640-0005	#612 EXTENTION TABLE WELDMENT	2	074	745-0035	1/2-13 X 1 HEX HEAD BOLT	4	105	745-0071	3/16 X 1-1/4 ROLL PIN	3
	015	645-1074	POINTER = PLANER(612-812-820)	1	075	770-0069	1/2-13 HEX NUT	8	106	745-0161	1/4-20 X 1/2 SKT ST SCR, FLT PT	2
	016	665-1034	CRANK SCREW, #612/820	1	076	745-0011	1/2 SPLIT LOCKWASHER	4	107	750-0203	5/16-18 X 2 HEX HEAD BOLT	3
	017	665-1005	CORNER SCREW, #612/820	3	077	745-0164	1/21D RETAINER, PLANER HANDLE	1	108	770-0081	5/16-18 HEX NUT	3
	019	665-0004	SPROCKET - THREADED	4	078	740-0549	5/8ID X 1-1/8OD X 18 GA.WASHER	8	109	745-0150	5/16 FLAT WASHER	3
	020	645-0045	CHAIN TIGHTENER	1	079	765-0057	5/8ID FEED ROLLER BUSHING	4	110	770-0178	5/16 SPLIT LOCK WASHER	3
	021	640-3370	CUTTERHEAD, #612	1	082	765-0019	COMPRESSION SPRING, #612/820	4	111	745-0094	5/16 X 1-1/16 SPACER FOR GRBOX	3
	022	645-0690	GIB, SQUARE STEEL, 12-1/2", #612	3	083	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	2	112	745-0158	5/16ID X 1/20D X 3/16 SPACER	2
	023	803-0001	12-1/2" PLANER BLADE, #612/812	3	085	745-0149	PLASTIC HANDLE GRIP	1	113	770-0058	3/8-16 HEX NUT	2
27	024	645-0663	12" WOOD BLADE GUARD	1	086	745-0162	V-BELT #1210-3/8 X 21	1	114	745-0073	3/8 ID FLANGED BRONZE BUSHING	1
	025	645-0139	PULLEY, 2-3/40D, 1-1/2ID	1	088	745-0065	V-BELT #1340-3/8 X 34	1	115	745-0160	1/2ID X 7/8OD X 14 GA. BUSHING	1
	· 026	640-2352	FEED ROLLER, KEYED, #612/812B	2	089	745-0147	V-BELT #1420-3/8 X 42	1	116	740-0369	1/2ID FLANGED BRONZE BUSHING	7
	027	745-2091	FEED ROLLER PULLEY, KEYED W/2SS	2	091	745-0148	V-BELT #1550-3/8 X 55	1	117	745-0062	PULLEY, 2" IDLER	2
	028	695-3022	SHOULDERED STUB SHAFT	1	093	745-1023	SERIAL TAG, #612 PLANER	1	118	750-0210	CREASE ZERK, 90 DEGREE	1
	029	645-0153	DUAL V-PULLEY ASSEMBLY	1	094	703-0920	MANUAL, RBI PLANERS	1	119	745-0063	TENSION SPRING, IDLER ARM	1
	030	645-1238	HOOD TOP WELDMENT, #612	1		703-0200	MANUAL, CUSTOM KNIFE CATALOG	1				
	031	645-0009	hood end, l.s.	1		702-0008	DECAL, 7" PLANER SCALE	1	5HP N	NOTOR PAC	KAGE for 612	
	032	645-0008	hood end, r.s.	1		702-0030	DECAL, CAUTION (1.75" X 2.5")	1	121	704-0003	MOTOR, 5HP/1PH, 220V, 184 FRAME	1
	033	645-0279	CRANK WELDMENT	1		745-0203	DECAL, CAUTION, PLANER IN-FEED	1	123	745-0303	PULLEY, 7-3/40D (MOTOR PULLEY)	1
	035	770-0052	#4X1/4 ROUND HD DRIVE SCREW	4		745-0417	DECAL, CAUTION-WDBLOCK, TP BAR	1	124	745-0304	PULLEY REDUCER, 1-1/8 ID	1
	036	745-0410	#41 CHAIN MASTER CONNECT LIN	K 1		745-0418	DECAL, CAUTION-WOOD BLOCK	1	126	745-0700	WIRE, 10-3 AMERICAN WIRE GAUG	E 12
	037	745-0313	#41 ROLLER CHAIN	6		702-0029	DECAL, COMMERCIAL MADE IN USA	2	127	708-0008	PLUG 230V. 30/50 AMP (EAGLE)	1
	042	745-0712	3/16 X 1 SQUARE KEY	2		702-0027	DECAL, CUTTERHEAD BEARINGS	1	128	745-0692	MAGNETIC 3 PHASE SWITCH	1
	043	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	4		745-0205	DECAL, MADE IN USA-OCTAGON	1	129	705-0084	10-32 X 3/4 RD HD MACH SCREW	4
	045	7,45-0099	1/4-20 X 5/8 CARRIAGE BOLT	38		702-0007	DECAL, PATENT #D268843	1	130	745-0107	10-32 HEX NUT	8
	046	750-0206	1/4-20 X 3/4 HEX HEAD BOLT	2		745-0202	DECAL, PLANER "UP"	1	131	715-0191	3/16 INTERNAL LOCK WASHER	8
	048	770-0182	1/4-28 X 3/4 FL HD SKT CP SCRW	9		702-0002	DECAL, RBI MADE IN USA(ROUND)	1	133	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	4
	050	715-0166	1/4-20 X 1 CARRIAGE BOLT	4		702-0012	DECAL, CAUTION BLK/YELLOW 3X2	1	134	770-0081	5/16-18 HEX NUT	8
	051	770-0059	1/4 X 1-1/8 ROLL PIN	5		745-0204	DECAL, CAUTION-KEEP HANDS CLR	2	135	745-0150	5/16 FLAT WASHER	4
	053	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	40		645-0316	CRANK HANDLE ASSEMBLY	1.	136	770-0178	5/16 SPLIT LOCK WASHER	4
	054	745-0177	1/4 FLAT WASHER	4		645-0156	GEAR BOX ASSEMBLY,612,812B,820	1	138	745-0693	STRAIN RELIEF, 3/4" ROMEX	3
	056	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	1	GEARE	BOX			139	745-0681	TERMINAL, SPADE, YELLOW, 10-12AW	33
	057	745-0414	5/16-24 X 1/2 HH BOLT, GRADE 5	15	095	645-0067	GEARBOX FACE PLATE	1	141	745-0679	WIRE NUT, RED, MAX. 5-#12	3
	059	795-0063	5/16-18 X 3/4 HEX HEAD BOLT	1	096	645-0145	GEARBOX INTERNAL ARM FD RL		142	745-0723	V-BELT #6860-1/2 X 60 P.R.	1
	060	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	5			BRK	1		745-1226	DECAL, WARNING-POWER CORD	1



PARTS LIST MODEL 820 PLANER

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To speed delivery and reduce errors when ordering parts always give the name, model number, and serial number of your machine. Use the part number and description as shown in the parts list. Do not use key numbers (the numbers in the circles on the parts breakdown drawing), always use the part number and description given in the parts list.

Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.	Key #	Part #	Description	Qty.
001	608-1003	BASE TOP, #820/820CM	1	056	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	1	GEARBO	DX .		
002	645-5270	LEFT SKIRT, 820, F/M	1	057	745-0414	5/16-24 X 1/2 HH BOLT, GRADE 5	18	095	645-0067	GEARBOX FACE PLATE	1
003	645-1271	RIGHT SKIRT, #820, F/M	1	058	770-0092	5/16-18 X 5/8 SOC.HD.CAP SCREW	6	096	645-0145	GEARBX INTERNAL ARM FD RL BRK	1
004	608-1004	MOUNT SUPPORT, #820/820CM	2	059	795-0063	5/16-18 X 3/4 HEX HEAD BOLT	1	097	645-0146	GEARBOX RED. DR IDLER ARM	1
005	645-0281	MOTOR MOUNT BAR	2	060	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	5	098	645-0068	GEARBOX INTERNAL GEAR	3
006	664-0007	side mount bracket	2	062	770-0081	5/16-18 HEX NUT	5	099	645-0096	GEARBOX INTERNAL GEAR SHAFT	3
007	645-1268	L. H. SIDE - #820	1	063	745-0150	5/16 FLAT WASHER	25	100	645-2090	GEARBOX DRIVE PINION	1
008	645-1265	R. H. SIDE - #820	1	064	770-0178	5/16 SPLIT LOCK WASHER	5	101	645-0095	GEARBOX INTERNAL GEAR SHEAVE	1
009	645-0269	TOP BAR	2	066	750-0212	3/8-16 X 3/4 HEX HEAD BOLT	4	102	645-0089	GEARBOX BACK PLATE	1
010	645-0262	TABLE, #820	1	067	745-0047	3/8-16 X 4 FULL THREAD STUD	4	103	645-2088	GEARBOX RED. INPUT SHEAVE	1
011	645-0297	PLANER BED RAIL	2	068	770-0089	3/8 X 1 SQUARE KEY	1	104	745-0057	#5 WOODRUFF KEY	1
013	645-0300	ext. Table adj.	2	069	770-0058	3/8-16 HEX NUT	16	105	745-0071	3/16 X 1-1/4 ROLL PIN	3
014	645-0272	EXT. TABLE WELDMENT	2	070	770-0073	3/8-16 HEX JAM NUT	20	106	745-0161	1/4-20 X 1/2 SKT ST SCR, FLT PT	2
015	645-1074	POINTER = PLANER(612-812-820)	1	072	770-0071	3/8 SPLIT LOCK WASHER	16	107	750-0203	5/16-18 X 2 HEX HEAD BOLT	3
016	665-1034	CRANK SCREW, #612/820	1	073	745-0415	1/2 X 3/4 SHOULDER BOLT	4	108	770-0081	5/16-18 HEX NUT	3
017	665-1005	CORNER SCREW, #612/820	3	074	745-0035	1/2-13 X 1 HEX HEAD BOLT	4	109	745-0150	5/16 FLAT WASHER	3
019	665-0004	SPROCKET - THREADED	4	075	770-0069	1/2-13 HEX NUT	4	110	770-0178	5/16 SPLIT LOCK WASHER	3
020	645-0045	CHAIN TIGHTENER	1	076	745-0011	1/2 SPLIT LOCKWASHER	4	111	745-0094	5/16 X 1-1/16 SPACER FOR GRBOX	3
021	608-0013	#820 PLANER HEAD	1	077	745-0164	1/21D RETAINER, PLANER HANDLE	1	112	745-0158	5/16ID X 1/2OD X 3/16 SPACER	2
022	645-0691	GIB, STEEL, 10-1/4" (#820)	6	078	740-0549	5/8ID X 1-1/8OD X 18 GA.WASHER	. 8	113	770-0058	3/8-16 HEX NUT	2
023	803-0002	20-1/2" PLANER BLADE, #820	3	079	765-0057	5/8ID FEED ROLLER BUSHING	4	114	745-0073	3/8 ID FLANGED BRONZE BUSHING	1
024	645-0664	20" WOOD BLADE GUARD	1	082	765-0019	COMPRESSION SPRING, #612/820	4	115	745-0160	1/2ID X 7/8OD X 14 GA. BUSHING	1
025	645-0662	PULLEY, 3-1/8OD, 1-1/2ID	1	083	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	2	116	740-0369	1/2ID FLANGED BRONZE BUSHING	7
026	645-3263	N/M #820 FD ROLLER, KEYED	2	085	745-0149	PLASTIC HANDLE GRIP	1	117	745-0062	PULLEY, 2" IDLER	2
027	745-2091	FEED ROLLER PULLEY, KEYED W/2SS	2	086	745-0162	V-BELT #1210-3/8 X 21	1	118	750-0210	GREASE ZERK, 90 DEGREE	1
028	695-2022	SHOULDERED STUB SHAFT	1	088	745-0065	V-BELT #1340-3/8 X 34	1	119	745-0063	TENSION SPRING, IDLER ARM	2
029	645-0153	DUAL V-PULLEY ASSEMBLY	1	089	745-0147	V-BELT #1420-3/8 X 42	1	5HP M	OTOR PAC	KAGE for 820	
030	608-2001	HOOD TOP #820	1	092	745-0307	V-BELT #1560-3/8 X 56	1	121	704-0003	MOTOR, 5HP/1PH, 220V, 184 FRAME	1
031	608-0002	hood ends	2	093	706-0820	TAG820 SERIAL # TÅG 820	1	123	745-0303	PULLEY, 7-3/40D (MOTOR PULLEY)	1
033	645-0279	CRANK WELDMENT	1	094	703-0929	MANUAL, RBI PLANERS	1	124	745-0304	PULLEY REDUCER, 1-1/8 ID	1
035	770-0052	#4X1/4 ROUND HD DRIVE SCREW	4		702-0008	DECAL, 7" PLANER SCALE	1	126	745-0700	WIRE, 10-3 AMERICAN WIRE GAUGE	12
036	745-0410	#41 CHAIN MASTER CONNECT LIN	K 1		702-0030	DECAL, CAUTION (1.75" X 2.5")	1	127	708-0008	PLUG 230V, 30/50 AMP (EAGLE)	1
037	745-0313	#41 ROLLER CHAIN	7		745-0203	DECAL, CAUTION, PLANER IN-FEEL	D 1	128	745-0692	MAGNETIC 3 PHASE SWITCH	1
038	745-0106	10-32 X 1/2 RH MACHINE SCREW	3		745-0417	DECAL, CAUTION-WD BLOCK, TP BA	AR 1	129	705-0084	10-32 X 3/4 RD HD MACH SCREW	4
039	745-0107	10-32 HEX NUT	3		745-0418	DECAL, CAUTION-WOOD BLOCK	1	130	745-0107	10-32 HEX NUT	8
041	715-0191	3/16 INTERNAL LOCK WASHER	3		702-0029	DECAL, COMMERCIAL MADE IN US	5A 2	131	715-0191	3/16 INTERNAL LOCK WASHER	8
042	745-0712	3/16 X 1 SQUARE KEY	2		702-0027	DECAL, CUTTERHEAD BEARINGS	1	133	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	4
043	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	6		745-0205	DECAL, MADE IN USA-OCTAGON	1	134	770-0081	5/16-18 HEX NUT	8
045	745-0099	1/4-20 X 5/8 CARRIAGE BOLT	40		702-0007	DECAL, PATENT #D268843	1	135	745-0150	5/16 FLAT WASHER	4
046	750-0206	1/4-20 X 3/4 HEX HEAD BOLT	2		745-0202	DECAL, PLANER "UP"	1	136	770-0178	5/16 SPLIT LOCK WASHER	4
048	770-0182	1/4-28 X 3/4 FL HD SKT CP SCRW	9		702-0002	DECAL, RBI MADE IN USA(ROUNE)) 1	138	745-0693	STRAIN RELIEF, 3/4" ROMEX	3
050	715-0166	1/4-20 X 1 CARRIAGE BOLT	4		745-0204	DECAL, CAUTION-KEEP HANDS CLE	R 2	139	745-0681	TERMINAL, SPADE, YELLOW, 10-12AWC	33
051	770-0059	1/4 X 1-1/8 ROLL PIN	5		702-0015	DECAL, RBI MADE IN USA, 1.75 X 3	1	141	745-0679	WIRE NUT, RED, MAX. 5-#12	3
052	770-0091	10-32X3/4 SOC HEAD CAP SCREW	6		645-0316	CRANK HANDLE ASSEMBLY	1	144	745-0665	V-BELT #6863-1/2 X 63 P.R.	1
053	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	46		645-0156	GEAR BOX ASSEMBLY,612,812B,820) 1		745-1226	DECAL, WARNING-POWER CORD	1
054	745-0177	1/4 FLAT WASHER	4								



MOLDING ACCESSORIES

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MOLDING ACCESSORIES FOR THE RBI PLANER-MOLDERS

There is a wide range of molding accessories available for the rbi planers to make them versatile molders. The Bit Holder may be used with the Quick Change Molding Head and will accept any of the 1" wide numbered bits.

Wider knives may be mounted in the planers cutterhead or ran in the custom knife holders. There is a wide variety of custom knife holders, these include single slot knife holders to run a single knife or holders to run multiple knives of the same profile, there are versions for flat backed knives and ones for corrugated backed knives.

RBI has over 400 knives in stock (Custom Stock Knives), to cut crowns, coves, beds, half rounds, base shoe, panel moldings, battens, picture molding, base caps, quarter rounds, wainscot, chair rails, casing, base molding, etc. ask for our custom molding pattern knives catalog.

RBIndustries can also custom grind special knives to your pattern (Custom Special Knives), so you can create your own custom moldings, decorative picture frames, etc, call us for a free quote.

To guide the stock through the machine RBIndustries offers a Guide Board Assembly for each machine, which can be used with any of our molding setups.

When ordering Custom Knives please specify the following, to make sure we send the right spacers and counterbalance weights for your application. Model number of your planer. If the knife will be used in a Custom Knife Holder and which model knife holder. If the knife will be used in the planer cutterhead. When using the knife in the planer cutterhead also specify what style of gibs you have. The 812B has rectangular steel gibs, the current models of the 612 and 820 planers both have square steel gibs.

MOLDING HEAD ASSEMBLY

1. Disconnect the electrical source (unplug the machine).

2. Install the Guide Board Assembly (see GUIDE BOARD ASSEMBLY).

- 3. Remove the planers cutterhead, or the Quick Change Molding Head assembly from the planer (see REMOV-ING AND REPLACING THE CUTTERHEAD).
- 4. Install the Custom Knife Holder on the Quick Change Molding Head assembly (see fig. B-1).



- 5. Reinstall the Quick Change Molding Head assembly in the planer, see REMOVING AND REPLACING THE CUTTERHEAD.
- 6. To install the knife in the Custom Knife Holder, first place the gib in the slot, on the side with the groove at the bottom. Make sure the set screw heads in the gib are up, and the radius on the gib is next to where the knife will be. On corrugated backed knives, the knife has to be installed first, then the gib slid in from the end.
- 7. Place the knife in the slot next to the gib, with the leading edge next to the gib (see fig. B-2).
- 8. Tighten the set screws in the gib and make sure the gib doesn't pull the knife up in the slot.
- 9. See POSITIONING BOARD UNDER CUTTER BIT OR CUSTOM KNIFE.

For setting up multi-slot knife holders follow the procedure for the single slot knife holder, except step 6, step 7, and step 8 will need to be repeated for the other slot(s). Line the other knife(s) up side to side with the first knife by placing a board under the cutterhead, mark the location of first knife on the board, and adjust the other knife(s) to match the first one.

MOLDING HEAD ASSEMBLY PARTS LIST

900-9300 for the 812B

Key #	Part #	Description	Qty.
01	695-1034	ACCESSORY SHAFT, #812B	1
02	695-0020	PULLEY, 2-1/4OD, 1ID	1
03	645-3402	CUSTOM KNIFE HOLDER, 402-C	2
04	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	5
05	745-0093	1/4 X 3/4 SQUARE KEY	5
06	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	2
07	770-0081	5/16-18 HEX NUT	2
08	770-0178	5/16 SPLIT LOCK WASHER	2
09	745-0720	5/16ID X 3/4OD X .01 NY.SPACER	2
10	795-1030	BEARING, 1"	1
11	745-0058	FLANGETTE, (FOR 1" BEARING)	2

901-0900 for the 612

Key #	Part #	Description	Qty.
1	645-1600	ACCESSORY SHAFT, #612	1
2	645-0139	PULLEY, 2-3/4OD, 1-1/2ID	1
3	645-0040	CUSTOM KNIFE HOLDER, 602-C	2
4	770-0185	5/16-18 X 5/16 SOC.SS, CUP PT.	5
5	770-0089	3/8 X 1 SQUARE KEY	5
6	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1
900-01	00 for the	820	
200-01	ou for the	020	
Key #	Part #	Description	Qty.
Key #	Part # 608-0016	Description ACCESSORY SHAFT, #820	Qty. 1
Key # 1 2	Part # 608-0016 645-0662	Description ACCESSORY SHAFT, #820 PULLEY, 3-1/8OD, 1-1/2ID	Qty. 1 1
Key # 1 2 3	Part # 608-0016 645-0662 645-0040	Description ACCESSORY SHAFT, #820 PULLEY, 3-1/8OD, 1-1/2ID CUSTOM KNIFE HOLDER, 602-C	Qty. 1 1 2
Key # 1 2 3 4	Part # 608-0016 645-0662 645-0040 770-0185	Description ACCESSORY SHAFT, #820 PULLEY, 3-1/8OD, 1-1/2ID CUSTOM KNIFE HOLDER, 602-C 5/16-18 X 5/16 SOC.SS, CUP PT.	Qty. 1 1 2 5
Key # 1 2 3 4 5	Part # 608-0016 645-0662 645-0040 770-0185 770-0089	Description ACCESSORY SHAFT, #820 PULLEY, 3-1/8OD, 1-1/2ID CUSTOM KNIFE HOLDER, 602-C 5/16-18 X 5/16 SOC.SS,CUP PT. 3/8 X 1 SQUARE KEY	Qty. 1 1 2 5 5
Key # 1 2 3 4 5 6	Part # 608-0016 645-0662 645-0040 770-0185 770-0089 660-0003	Description ACCESSORY SHAFT, #820 PULLEY, 3-1/8OD, 1-1/2ID CUSTOM KNIFE HOLDER, 602-C 5/16-18 X 5/16 SOC.SS, CUP PT. 3/8 X 1 SQUARE KEY BEARING, COLLAR, HSNG., 1-1/2"	Qty. 1 2 5 5 1

MOLDING HEAD ASSEMBLY PARTS BREAKDOWN



Parts Breakdown Molding Head Assembly for the 812B



Parts Breakdown Molding Head Assembly for the 612 & 820

SETTING CUSTOM KNIVES IN THE PLANER CUTTERHEAD

- 1. Remove the planer knives from the cutterhead. See PLANER KNIFE REMOVAL.
- 2. Install the guide board assembly, see GUIDE BOARD ASSEMBLY.
- 3. Screw the jack screw all of the way in on all slots, see fig. B-3).
- 4. Clean slots, knives, gibs, counterweights, and spacers to remove wood chips, gums and protective coatings.
- 5. Center the Custom Knife in the cutterhead with the leading edge next to the gib (see fig. B-4). Center the spacers in the remaining space on each end of the Custom Knife (see fig B-3).





Fig. B-4

6. Retighten the gibs.

- 7A. For a single knife place the counterweights in each package in the other slot(s).
- 7B. For triple knives (one knife in each cutterhead slot), place one knife and the accompanying spacers in each of the other two slots. Line these two knives up side to side with the first knife by placing a board under the cutterhead, mark the location of first knife on the board, and adjust the other two knives to match the first one.
- 8. Position the board under the knife. See POSITIONING BOARD UNDER CUTTER BIT OR CUSTOM KNIFE.

CUSTOMER KNIFE HOLDERS

Custom Stock Knives (knives we keep in stock) or Custom Special Knives (knives ground to your design) may be used in the Custom Knife Holders.

Custom knives may be mounted in the planers cutterhead or ran in the custom knife holders. There is a wide variety of custom knife holders, these include single shot knife holders to run a single knife or holders to run multiple knives of the same profile, there are versions for flat backed knives and ones for corrugated backed knives, please see the chart below. **CUSTOM KNIFE HOLDERS**

Custom Stock Knives and Custom Special Knives must be used with the gib supplied with that particular knife due to balancing. Custom Knives must be ran in the manner that they were balanced for. For example knives balanced to run in the planer head can not be ran in the custom knife holder (unless rebalanced). Custom knives are packed in individual vanilla packages. This package shows the P.O. # and application information for that knife. The purchase order number is important on custom special knives, if you ever want that knife sharpened or another knife made we will need the original P.O. #. It is a good idea to return the knife to the vanilla

CUSIOM KNIFE HOLDERS

Holder Model #	Holder Part #	No. of Knives	Type of Knife	Machine Model #
402-C	903-0002	1	Flat	812B
802-C	901-0500	2	Flat	812B
602-C	901-2500	1	Flat	612 & 820
502-C	901-2501	2	Flat	612 & 820
702-C	901-2600	3	Flat	612 & 820
405-C	901-0501	1	Corr.	812B
805-C	901-0502	2	Corr.	812B
605-C	901-0503	1	Corr.	612 & 820
505-C	901-0504	2	Corr.	612 & 820
705-C	901-0505	3	Corr.	612 & 820

package for storage, this keeps the knife and gib together, and with the application information for that knife. CAUTION: The single slot Custom Knife Holder can not be ran without knife and gib installed, due to balancing. CAUTION: Custom Knives are not to overhang the ends of the Custom Knife Holder by more than 1/2 in, otherwise the knife will be prone to breaking. For longer knives (2) Custom Knife Holders may be run side by side.

CUSTOM KNIFE HOLDER PARTS BREAKDOWN







CUSTOM KNIFE HOLDER PARTS LIST

903-0002 Model 402C, 1 slot, for 812

Key #	Part #	Description	Qty.
1	645-3402	CUSTOM KNIFE HOLDER, 402-C	1
2	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	2
3	745-0093	1/4 X 3/4 SQUARE KEY	2

901-2500 Model 602C, 1 slot, for 612/820

Key #	Part #	Description	Qty.
1	645-0040	CUSTOM KNIFE HOLDER, 602-C	1
2	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	2
3	770-0089	3/8 X 1 SQUARE KEY	2

901-2600 Model 702C, 3 slot, for 612/820

Key #	Part #	Description	Qty.
1	645-0323	CUSTOM KNIFE HOLDER, 702-C	1
2	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	2
3	770-0089	3/8 X 1 SQUARE KEY	2

901-0500 Model 802C, 2 slot, for 812B

Key #	Part #	Description	Qty.
1	695-0035	CUSTOM KNIFE HOLDER, 802-C	1
2	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	2
3	745-0093	1/4 X 3/4 SQUARE KEY	2

901-2501 Model 502C, 2 slot, for 612/820

Key #	Part #	Description	Qty.
1	645-0667	CUSTOM KNIFE HOLDER, 502-C	1
2	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	2
3	770-0089	3/8 X 1 SQUARE KEY	2

2

NOTE: Parts lists for corrugated holders not shown.

BIT HOLDER

There are 13 different molding patterns available in the numbered molding bits (see fig B-5). The numbered bits are to be used in the Bit Holder. They can not be used in the planer cutterhead, or the Custom Knife Holders. Only the numbered bits can be used in the Bit Holder. More than one Bit Holder may be installed on the Quick Change Molding Head.

- 1. Disconnect the electric source (unplug the machine).
- 2. Install the guide board assembly, see GUIDE BOARD ASSEMBLY.
- 3. Remove the planers cutterhead, and replace it with the Quick Change Molding Head, see REMOVING AND REPLACING THE CUTTERHEAD. Be sure the Bit Holder(s) is/are installed on the shaft, with the

0 0 \cap 0 10 6 7 8 0 \cap O 12 11 13 0 Ο Ο

Bit Holder(s) is/are installed on the shaft, with the Fig. B-5 small diameter on the reduction drive side, before the Quick Change Molding Head is installed in the machine (see fig. B-6). The bits may be installed or changed with the Quick Change Molding Head installed in the machine.

4. Install the bits in the Bit Holder. Using the 1/8 in. Allen wrench unscrew the (3) set screws (that hold the bits in) five complete turns. Slide the bits into the slots with the leading edge set to cut with the shaft turning clock-wise when standing on the reduction drive side (see fig. B-7).



Fig. B-6



VIEW FROM REDUCTION DRIVE SIDE

- 5. Secure the bits in place by tightening the (3) set screws.
- 6. Check knife clearance by turning the shaft by hand, minimum clearance is 1/8 in.

Qty.

1

1

1

3

7. Position the board under the cutter bit. See POSITIONING BOARD UNDER CUTTER BIT OR CUSTOM KNIFE.

BIT HOLDER PARTS BREAKDOWN



BIT HOLDER PARTS LIST

903-0005 for the 812B

- Key #
 Part #
 Description

 1
 645-0406
 BIT HOLDER, #402 (#408/812)
 - 2 770-0083 1/4-20 X 1/4 SSS (CUP POINT)
 - 3 745-0093 1/4 X 3/4 SQUARE KEY
 - 4 745-0403 1/4-20 X 1/2 SKT ST SCR,CONE P

901-0024 for the 612 & 820

Key #	Part #	Description	Qty
1	645-0042	BIT HOLDER, #602 (#612/820)	1
2	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	1
3	770-0089	3/8 X 1 SQUARE KEY	1
4	745-0403	1/4-20 X 1/2 SKT ST SCR, CONE P	3

GUIDE BOARD ASSEMBLY

The following instructions are provided for installation of the guide board assembly. See the GUIDE BOARD ASSEMBLY PARTS BREAKDOWN for identification of parts.

- 1. Unpack the guide board assembly and make sure all of the parts were received, see GUIDE BOARD ASSEMBLY PARTS LIST.
- 2. Unplug the machine.
- 3. Lower the planer bed to its lowest possible position.
- 4. Slide the guide board base through the planer and position it over the bed and extension tables. Tilting the guide board base may be necessary to insert it through the planer.
- 5. Mount the (8) eight rail brackets to the sides of the planer extension tables with the 1/4-20x1/2 Hex Head Bolts and the whiz nuts. Put the long side of the rail bracket against the extension table, and adjust so the top is flush with the top of the guide board base.
- 6. Place the guide rails on the base and position the square mounting holes over the slots in the guide board base. Use the set of holes that positions the guide rails closest to the planer. The outside guide rails will be positioned over the rail brackets and not over the guide board base.
- 7. Secure the center guide rails using the 1/4-20x1 1/4 carriage bolts. Install the carriage bolts through the guide rails, guide board base, and extension tables. Install the flat washers and secure with the wing nuts.
- 8. Secure the outside guide rails to the rial brackets with the 1/4-20x1/2 Hex head bolts and whiz nut.
- 9. Next secure the assembly to the planer using the (4) 1/4-20x1 hex head bolts and whiz nuts. There are (4) four holes in the guide board base for this purpose.
- 10. Adjust the height of the outside guide rails by raising or lowering the extension table brackets.

The guide board assembly is now ready for operation. Adjust the position and spacing of the guide rails as needed. See POSITIONING BOARD UNDER BIT HOLDER OR CUSTOM KNIFE HOLDER.



GUIDE BOARD ASSEMBLY PARTS LIST

901-1700 For the 812B

Key #	Part #	Description	Qty.
01	695-2040	GUIDE BOARD BASE, #812B	1
02	695-0041	GUIDE RAILS, #812/812B	8
04	645-1332	SIDE RAIL BRACKETS	8
05	725-0043	1/4-20 X 1/2 HEX HEAD BOLT	16
06	715-0072	1/4-20 X 1 FLAT HEAD CAP SCREW	4
07	750-0211	1/4-20 X 1-1/4 CARRIAGE BOLT	8
08	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	20
09	745-0176	1/4-20 FORGED WING NUT	8
10	745-0177	1/4 FLAT WASHER	8

900-2300 For the 820

Key #	Part #	Description	Qty.
01	645-0325	GUIDE BOARD BASE, #820	1
02	645-1258	GUIDE RAILS, #612/820	8
03	645-1260	SIDE GUIDE RAILS, #612/820	4
04	645-1332	SIDE RAIL BRACKETS	8
05	725-0043	1/4-20 X 1/2 HEX HEAD BOLT	16
06	715-0072	1/4-20 X 1 FLAT HEAD CAP SCREW	4
07	750-0211	1/4-20 X 1-1/4 CARRIAGE BOLT	16
08	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	20
09	745-0176	1/4-20 FORGED WING NUT	16
10	745-0177	1/4 FLAT WASHER	16

901-2900 For the 612

Key #	Part #	Description	Qty.
01	645-1217	GUIDE BOARD BASE, #612	1
02	645-1258	GUIDE RAILS, #612/820	4
03	645-1260	SIDE GUIDE RAILS, #612/820	4
04	645-1332	SIDE RAIL BRACKETS	8
05	725-0043	1/4-20 X 1/2 HEX HEAD BOLT	16
06	715-0072	1/4-20 X 1 FLAT HEAD CAP SCREW	4
07	750-0211	1/4-20 X 1-1/4 CARRIAGE BOLT	8
08	745-0223	1/4-20 FLANGED LOCK/WHIZ NUT	20
09	745-0176	1/4-20 FORGED WING NUT	8
10	745-0177	1/4 FLAT WASHER	8

MAKING A GUIDE BOARD

If you elect not to purchase the Guide Board Assembly the following instructions are provided.

- 1. Table Preparation
 - A) Disconnect the electrical source (unplug the machine).
 - B) Place a board (1/2" plywood is fine) across the planer table and extension tables. This should be the same width as the planer table and extend to the ends of the extension tables.
 - C) Secure the board to the extension tables using bolts or "C" clamps.
- 2. Face Moulding Guides
 - A) Use 1" X 1" or wider boards that extend to the ends of the extension tables.
 - B) Center under the cutterhead and mark the feed roller locations on the boards.
 - C) Cut 1/4" deep arcs to allow clearance of the feed rollers (see fig. B-8).

X = 8'' for 812B & 612

D) Place the guides under the cutterhead and secure to the extension tables using bolts or "C" clamps.

X = 9'' for 820



- 3. Edge Moulding Guides
 - A) Use 1'' thick boards, 1/2'' narrower than the board to be edge moulded.
 - B) Center under the cutterhead and mark the location of the feed rollers on the edge of the board.
 - C) Cut 1/4" deep arcs to allow clearance of the feed rollers (see fig. B-9).
 - D) Place the guides on edge under the cutterhead and secure with bolts or clamps.

POSITIONING STOCK UNDER THE CUTTERBIT OR CUSTOM KNIFE

CAUTION: You must use a board (plywood will work) over the planer table, or use the Guide Board Assembly. This will prevent the knives from hitting the planer table, and allow the knives to cut into the guide board to clean up the sides of the molding.

- 1. Disconnect the electrical source (unplug the machine).
- 2. Remove the hood.
- 3. Adjust the guides on the guide board to the thickness of the stock to be molded and secure. Make sure the guides are at 90 degrees to the cutterhead.

NOTE: If your knife has parting legs, lower the planer table until the parting legs on the knife will just clear the guide board base. Turn the machine on and raise the table 1/8" (2 complete turns of the crank). Turn the machine off and then proceed with the following steps.

- 4. Lower the planer table until the stock to be molded will just barely slide under the infeed roller.
- 5. Position one knife straight down.
- 6. Slide the board to be moulded under the infeed roller until the leading end of the board is against the knife.
- 7. Raise the bed up until the desired depth of cut is reached on the stock to be moulded, This must be at least three full turns of the crank to produce ample feed roller pressure on the stock.

CAUTION: Without ample feed roller pressure on the stock kickback will occur.

- 8A. Slide the cutter bit or custom molding head along the shaft for proper alignment with the stock and tighten the set screws.
- 8B. If a Custom Knife is used in the planer head, it will be necessary to slide the guides on the guide board to align the stock with the Custom Knife.
- 9. Crank the table down until the board will slide from under the feed rollers. Count the number of turns of the crank that are required.
- 10. Remove the stock.
- 11. Crank the table up the same number of turns that it was cranked down in step #9.
- 12. Be sure all bolts, set screws, etc. are tight.
- 13. Replace the hood and connect the electrical source, make sure all tools, etc. are removed.
- 14. Turn the machine on and feed the stock to be molded into the machine.
- 15. Minor adjustments may be required.

SANDING ACCESSORIES

Sandpaper Installation	
Sanding	
Using the abrasive belt cleaner	
Sanding Head Parts Breakdown	
Sanding Head Parts List	

SANDPAPER INSTALLATION

Remove the planer head and install the sanding head, see REMOVING AND REPLACING THE CUTTERHEAD. Use fast feed rate for sanding, see FEED ROLLER SPEED CHANGE. The sandpaper can be installed with the sanding head in the machine or sitting on the cutterhead stand.

To install the velcro tape, follow the same procedure as sandpaper installation.

- 1. Remove old paper and the velcro tape (if the tape is bad). If the velcro tape is removed use mineral spirits to clean the old glue from the head.
- 2. Unwind three or four feet of sandpaper.

NOTE: If velcro tape is not already installed on your sanding head, you will need to install it before the sandpaper.

- 3. Wrap the sandpaper around the head one time and mark where it meets the end (see fig. C-1).
- 4. Remove from the head and mark on the diagonal using a straight line. Then cut on the line (see fig. C-2).



Fig. C-1

Fig. C-2

5. Apply the sandpaper to the head in a spiral. Start the cut edge at the drive end of the cutterhead, and turn the cutterhead one revolution (see fig. C-3). Then align with the edge of the sandpaper, and continue to turn the cutterhead (see fig. C-4). Be sure and get the sandpaper wrapped tightly.

NOTE: As you apply the velcro tape to the head, remove the paper from the back to expose the adhesive.



- 6. At the opposite end, trim the sandpaper even with the end of the sanding head.
- 7. To keep the ends from coming loose, wrap tape around both ends.
- 8. Replace the hood and connect the electrical source.

SANDING

Some woods, such as pine, which have large amounts of gums and resins will load up the sandpaper almost immediately and give poor results. These types of woods are not recommended for sanding.

Use the sanding head to finish predimensioned boards or to remove up to 1/16 in. of material. A lighter sanding pass will produce a smoother surface.

To remove loaded material from the sandpaper, use the abrasive belt cleaner, see USING THE ABRASIVE BELT CLEANER.

WITH THE MACHINE TURNED OFF

- 1. Place the board to be sanded (min. length 9") under the infeed roller.
- 2. Raise the planer table so the board just contacts the roller.
- 3. Remove the board.
- 4. Turn the planer crank up four turns. This will allow the board to be close to the sanding head.

TURN THE MACHINE ON

- 5. Start the board into the machine straight.
- 6. After the board is under the cutterhead, slowly raise the table until the board contacts the sanding head (1 3 turns).

WARNING: Trying to take off too much will tear up the sandpaper.

7. Feed the board through again, raising the table no more than 1/8 turn of the crank (.0075") for each pass. A lighter sanding pass will produce a smoother surface. As the sandpaper wears down, the finish will improve.

WARNING: Do not sand wood with nails or other metal objects in them, due to fire and dust explosion hazard.

USING THE ABRASIVE BELT CLEANER

- 1. Remove the hood.
- 2. Turn the machine on.
- 3. Hold the abrasive cleaner stick against the turning sanding head, and move it back and forth.
- 4. Turn the machine off.
- 5. Replace the hood.



SANDING HEAD PARTS LIST

900-9500 for the 812B

Key #	Part #	Description	Qty.
01	695-0037	812 SANDER HEAD	1
02	695-0036	812 SANDER HEAD PULLEY	1
03	770-0083	1/4-20 X 1/4 SSS (CUP POINT)	1
04	745-0093	1/4 X 3/4 SQUARE KEY	1
05	770-0179	5/16-18 X 3/4 CARRIAGE BOLT	2
06	770-0081	5/16-18 HEX NUT	2
07	770-0178	5/16 SPLIT LOCK WASHER	2
08	745-0720	5/16ID X 3/4OD X .01 NY.SPACER	2
09	795-1030	BEARING, 1"	1
10	745-0058	FLANGETTE, (FOR 1" BEARING)	2
11	745-0140	V-BELT #6842-1/2 X 42 P.R.	1
12	801-0800	SANDING HEAD CLEANER STICK	1
13	801-2000	VELCRO = 2''X 75'ROLL(ADHES.BKD)	6
14	801-2080	80 GRIT SANDPAPER = 3"X 150'RL.	4
15	801-2180	180 GRIT SANDPAPER = 3"X 150'RL.	4

900-6400 for the 820

Key #	Part #	Description	Qty.
1	645-0098	720 SANDING HEAD	1
2	745-0718	PULLEY, 5"OD (W/O REDUCER)	1
3	745-0719	PULLEY REDUCER FOR #745-0718	1
4	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1
5	745-0669	V-BELT #6866-1/2 X 66 P.R.	1
6	801-0800	SANDING HEAD CLEANER STICK	1
7	801-2000	VELCRO = 2"X 75'ROLL(ADHES.BKD)	10
8	801-2080	80 GRIT SANDPAPER = 3"X 150'RL.	7
9	801-2180	180 GRIT SANDPAPER = 3"X 150'RL	. 7

901-1210 for the 612

Key #	Part #	Description	Qty.
1	675-0122	#612 SANDING HEAD (S1202)	1
2	745-0718	PULLEY, 5"OD (W/O REDUCER)	1
3	745-0719	PULLEY REDUCER FOR #745-0718	1
4	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	, 1
5	745-0724	V-BELT #6864-1/2 X 64 P.R.	1
6	801-0800	SANDING HEAD CLEANER STICK	1
7	801-2000	VELCRO = 2"X 75'ROLL(ADHES.BKD)	6
8	801-2080	80 GRIT SANDPAPER = $3^{"}X$ 150'RL.	5
9	801-2180	180 GRIT SANDPAPER = 3"x 150'RL.	5

QUICK CHANGE GANG RIP INSTALLATION AND OPERATION

Gang rip accessories are not available for the model 812B planer. We have gang rip assemblies available for the model 612 and 820 planers.

NOTE: The maximum number of blades you can run an once depends upon the horsepower of your motor, thickness of the stock to be ripped, type of wood, etc. A general rule of thumb is do not use more than one blade per motor horsepower.

CAUTION: A guide board must be used to prevent damage to the saw blades and planer table when gang ripping. Do not run the sawblades through the guide board base and into the table. When ripping thin stock, use a thicker guide board base or put another piece of plywood under the guide board base so the blades may be ran farther into the guide board base without hitting the planer table.

NOTE: Lumber to be gang ripped needs to have one true side.

- 1. Remove planer head and replace with gang rip assembly, see REMOVING AND REPLACING THE CUT-TERHEAD. Make sure that the blade is installed on the shaft so that the teeth point toward the direction of travel, see QUICK CHANGE GANG RIP PARTS BREAKDOWN.
- 2. Install the guide board assembly, see GUIDE BOARD ASSEMBLY.
- 3A. If the lumber to be ripped has both sides true and is of uniform width, the guides on the guide board may be used to position the board under the blades. Adjust the guide board rails and guides to the desired position. Be sure the stock will not be bind as it passes through the machine.
- 3B. If the lumber to be ripped has only one true side, a feather board will need to be used in place of the guide on that side. The feather board may be bolted or clamped to the guide board assembly (see fig. D-1). Adjust the guide board rails or guides and the feather board to the desired position. Be sure the stock will not bind as it passes through the machine.

Note: The feather board is not available from RBIndustries, but can be easily made.



Fig. D-1

4. Loosen the hub set screws and position the saw blades as desired. When spacing the blades, always measure from the inside edges of the carbide tips. Remember the saw kerf is 1/8 in. wide.

QUICK CHANGE GANG RIP ASSEMBLY PARTS BREAKDOWN



QUICK CHANGE GANG RIP ASSEMBLY PARTS LIST

901-1300 for the 612

Key #	Part #	Description	Qty.
1	645-1600	ACCESSORY SHAFT, #612	1
2	645-0407	GANG RIP FACE PLATE	2
3	645-0408	GANG RIP MOUNTING PLATE	2
4	745-0409	5.5"CARBIDE SAW BLADE (1.5"ID)	2
5	645-0139	PULLEY, 2-3/4OD, 1-1/2ID	1
6	770-0091	10-32X3/4 SOC HEAD CAP SCREW	6
7	770-0185	5/16-18 X 5/16 SOC.SS, CUP PT.	3
8	770-0089	3/8 X 1 SQUARE KEY	3
9	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1

900-6500 for the 820

Key #	Part #	Description	Qty.
7	608-0016	ACCESSORY SHAFT, #820	1
2	645-0407	GANG RIP FACE PLATE	3
3	645-0408	GANG RIP MOUNTING PLATE	3
4	745-0412	6.5"CARBIDE SAW BLADE (1.5"ID)	3
5	645-0662	PULLEY, 3-1/8OD, 1-1/2ID	1
6	770-0091	10-32X3/4 SOC HEAD CAP SCREW	9
7	770-0185	5/16-18 X 5/16 SOC.SS,CUP PT.	4
8	770-0089	3/8 X 1 SQUARE KEY	4
9	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1

ARBOR STYLE GANG RIP ASSEMBLY

Gang rip accessories are not available for the model 812B planer. We have gang rip assemblies available for the model 612 and 820 planers.

The arbor style gang rip is installed an operated simular to the quick change gang rip. Observe the same cautions and notes as the quick change gang rip. The main difference is in setting the spacing on the blades. The arbor style gang rip assembly must be removed from the machine to reset the blade spacing.

1. Set the spacing of the blades on the gang rip assembly, this must be done with the assembly out of the machine.

- 2. Remove the locking nut on the reduction drive end, then remove the gang rip blades and the spacers.
- 3. Determine the combination of spacers to give the desired rip width and reassemble, remember to account for the saw kerf. Replace the locking nut and tighten it. Then arbor style gang rip can then be installed and ran similar to the quick change gang rip assembly.

ARBOR STYLE GANG RIP ASSEMBLY PARTS BREAKDOWN



ARBOR STYLE GANG RIP PARTS LIST

901-1500 for the 612

Key #	Part #	Description	Qty
01	645-0651	ARBOR GANG-RIP SHAFT, #612	1
02	645-0654	ARBOR NUT	2
03	645-0652	5.5"CARBIDE SAW BLADE(1.625ID)	2
04	645-0139	PULLEY, 2-3/4OD, 1-1/2ID	1
05	645-0655	ARBOR SPACER, 1/8"	2
06	645-0656	ARBOR SPACER, 1/4"	2
07	645-0657	ARBOR SPACER, 1/2"	2
08	645-0658	ARBOR SPACER, 5/8"	2
09	645-0659	ARBOR SPACER, 3/4"	2
10	645-0660	ARBOR SPACER, 7/8"	2
11	645-0661	ARBOR SPACER, 1"	3
12	770-0185	5/16-18 X 5/16 SOC.SS, CUP PT.	1
13	770-0089	3/8 X 1 SQUARE KEY	1
14	645-0653	612 ARBOR GANG RIP KEY	2
15	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1

900-6900 for the 820

Key #	Part #	Description	Qty.
01	645-1672	820 ARBOR GANG RIP SHAFT	1
02	645-0654	ARBOR NUT	2
03	645-0707	6.5"CARBIDE SAW BLADE(1.625ID)	3
04	645-0662	PULLEY, 3-1/80D, 1-1/2ID	1
05	645-0655	ARBOR SPACER, 1/8"	3
06	645-0656	ARBOR SPACER, 1/4"	3
07	645-0657	ARBOR SPACER, 1/2"	3
08	645-0658	ARBOR SPACER, 5/8"	3
09	645-0659	ARBOR SPACER, 3/4"	3
10	645-0660	ARBOR SPACER, 7/8"	4
11	645-0661	ARBOR SPACER, 1"	7
12	770-0185	5/16-18 X 5/16 SOC.SS, CUP PT.	1
13	770-0089	3/8 X 1 SQUARE KEY	1
14	645-0689	820 ARBOR GANG RIP KEY	1
15	660-0003	BEARING, COLLAR, HSNG., 1-1/2"	1

MISCELLANEOUS ACCESSORIES

The following accessories are available for your RBI planer-molder. For pricing and additional information, please consult the factory.

Part # Description

MOLDING KNIVES

RBI has over 400 knives in stock (Custom Stock Knives), to cut moldings in the standard WM-series. These include crowns, coves, beds, half rounds, base shoe, panel moldings, battens, picture molding, base caps, quarter rounds, wainscot, chair rails, casing, base molding, etc. ask for our custom molding pattern knives catalog.

We can also custom grind special knives to your pattern (Custom Special Knives), so you may match antique moldings or create your own custom moldings, decorative picture frames, etc, call us for a free quote.

901-0200 CUTTERHEAD STAND for 812B & 612

900-6700 CUTTERHEAD STAND for 820

Metal stand for holding the planer head, molding head, sanding head or the gang rip assembly. The stand will keep the heads from rolling around and damaging the knives while removed from the planer.

- 901-0800 DUST COLLECTOR ADAPTOR for 812
- 901-3100 DUST COLLECTOR ADAPTOR for 612
- 900-9100 DUST COLLECTOR ADAPTOR for 820
 - Steel adaptor covers the discharge opening of the planer to a 4" diameter pipe for easy attachment to a dust collector.
- 801-0800 ABRASIVE CLEANER STICK Increase the life of your sanding belts by removing loaded material from the sandpaper with this rubber abrasive cleaner stick.
- 969-0100 EXTENSION ROLLER STAND, MODEL 314 (1 ROLLER)
 969-0300 EXTENSION ROLLER STAND, MODEL 3314 (3 ROLLERS)
 Used to support long boards extending from the infeed or outfeed sides of the planer. Adjusts from 21" to 41" high so it may also be used with your table saw, jointer, or any time your project is longer than your workbench. The roller stand has a roller (or rollers) on ball bearings, and three legs for good stability.
- 901-0850 KNIFE SETTING GAUGE Patented steel gauge used to set the height of planer knives in the cutterhead. Facilitates accurate installation or adjustment of planer knives.
- 900-9750 JOINTER ATTACHMENT for the 612 only Large 10" wide capacity jointer attachment fits right on top of the 612 planer. Solid aluminum construction with cast tables for accuracy and dependable service.

ORDERING REPLACEMENT PARTS AND ACCESSORIES

To speed delivery and reduce errors when ordering parts always give the name, model number, and serial number of your machine. Use the part number and description as shown in the parts list. Do not use key numbers (the numbers in the circles on the parts breakdown drawing), always use the part number and description given in the parts list.

- 1. Give complete machine identification.
 - A. Machine Name
 - B. Model Number
 - C. Serial Number
- 2. Completely identify the part or problem.
 - A. Part Number
 - B. Part Name
- 3. State your contact information.
 - A. Your Name
 - B. Company (if applicable)
 - C. Street Address
 - D. Mailing Address
 - E. City, State and Zip code.
 - F. Telephone Number or Email Address

Send your order to:

Bushton Manufacturing PO Box 127 319 S. Main Bushton, KS 67427

Or call (620)-562-3557 for customer service.