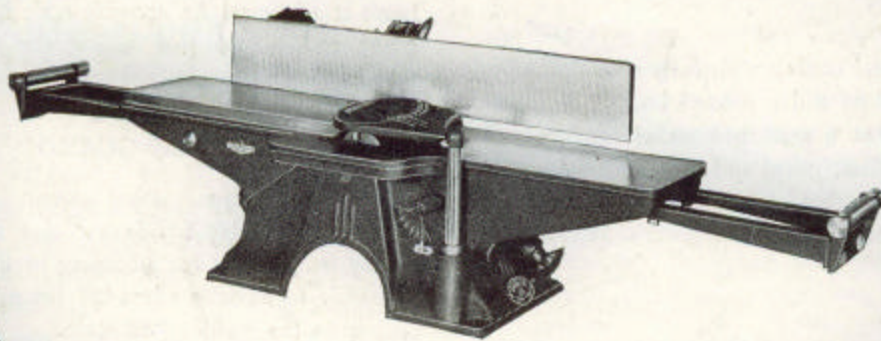


Beaver Power Tools

SERVICE MANUAL

6" JOINTER-PLANER



JP-3800



Designed and Manufactured by

The CALLANDER FOUNDRY & Mfg. Co. Ltd.

Beaver



HELPFUL HINTS ON THE SET-UP AND OPERATION OF YOUR BEAVER

6" JOINTER-PLANER

GENERAL

Essentially the BEAVER 6" Jointer-Planer is comprised of a cutterhead, front and rear tables, a base, a fence assembly and a front blade guard.

THE BASE

Is a heavy, semi-steel casting with fully machined ways on which the tables slide and a ground bottom to ensure level set-up. It also has a machined socket fitted with a return spring for the front guard and support rod and two bored holes for the cutterhead trunnions. A large easy-to-read scale is conveniently located to register depths of cut.

THE TABLES

Are of rigid construction with machined ways to fit the base. The tops are ground in assembly to ensure a level surface throughout. The rear table has a machined cut-out to permit rabbeting to a $\frac{5}{8}$ " depth and has two bored holes to take the fence support rods. Both tables are drilled and tapped to receive extension rollers if desired.

THE CUTTERHEAD AND PULLEY

Are machined integral with three slots to receive the cutting knives. This method of manufacture permits accurate balancing to eliminate vibration in operation. The ends are bored to receive Timken roller bearings, which in turn are supported by two heavy trunnions.

THE FENCE ASSEMBLY

Is composed of a rigid semi-steel support casting riding on two 1" ground bars and a link arrangement between a cast cylinder and the fence proper. A handle attached to the cylinder rotates to actuate the fence for

angle setting. A cam-clamping handle actuates a full-length clamping bar to lock the fence rigidly at any desired angle. The entire assembly slides smooth on the bars and here again a single clamp handle locks the fence at any position on the bars. A rear blade guard is attached to the fence and completely covers the cutterhead behind the fence at all times. An accurate scale is incorporated in the guard and is used for setting the fence for width of rabbet cuts.

THE FRONT BLADE GUARD

Is an aluminum casting mounted on a steel support rod. This assembly fits in a socket in the base and can readily be removed for rabbeting by lifting straight up. It is readily replaceable when the fence is at or near the 6" setting on the width-of-cut scale.

PACKING LIST

The crate in which your Jointer-Planer is received contains the following items: Complete Jointer-Planer assembled, consisting of base, front and rear tables, fence assembly cutterhead complete with knives and chip breakers, belt and front blade guard.

SETTING-UP

The BEAVER Jointer-Planer should be set up on a rigid bench and bolted in position through the four holes provided in the base. The motor can be mounted either below or behind as desired. If the Jointer-Planer is to be driven from the back it will be necessary to remove the fence and bring the belt out the opening in the back of the pulley housing with the top half over the fence support rods. The motor should be mounted in such a way that the upper half of the belt will be parallel with the back table top and about $\frac{1}{8}$ " below it.

Further information regarding setting-up and checking of machine is detailed on your "Handy Reference for Periodic Alignment Check-up" sheet.

POWER REQUIRED

The BEAVER Jointer-Planer is designed for use with a $\frac{1}{3}$ H.P., $\frac{1}{2}$ H.P. or heavier motor. Using an 8" diameter V-motor pulley, a 60 cycle 1725 R.P.M. motor will drive the cutterhead at 4800 R.P.M. and a 25 cycle 1425 R.P.M. motor will drive it at 3965 R.P.M.

MAINTENANCE

Your BEAVER Jointer-Planer is equipped with sealed life-long taper bearings, and the cutterhead is packed with grease at the factory and should require no further attention. A few drops of light machine oil occasionally applied to fence barrel in two holes located on top at both ends of barrel will insure a free and easy operation of the fence-tilting mechanism. Frequent cleaning of the entire machine is advisable to prevent collection of sawdust particles. This may be done with brush, air hose or clean cloths.

HINTS ON OPERATING YOUR JOINTER-PLANER

The most common operation on a jointer-planer is that of jointing an edge. With the fence set square to the table and the front table set to depth of cut required the work is fed across the knives, with the left hand maintaining work pressure against the back table and the fence and the right hand feeding the work and holding work against the fence. The right hand exerts no downward pressure. The best-dressed side of the work should be against the fence in this operation. When edge jointing a wide piece of stock it is advisable to fasten an auxiliary fence to the existing one, making a larger fence-bearing surface.

When jointing an end, the same general procedure is used but the depth of cut should be very fine to prevent tearing the grain at the end of the cut.

RABBETING

When rabbeting, the guard must be removed. This is accomplished simply by lifting the guard and the support rod out of the socket in base. The fence is set to width of rabbet and the front table dropped to depth of rabbet required and the work fed through in a manner similar to that in jointing. If a deep rabbet is required it is sometimes advisable to make it in more than one cut.

BEVELLING

To set the fence to any required angle for bevelling it is only necessary to release the cam lock handle which

clamps the fence links and rotate the fence tube by means of a handle, which in turn actuates the links to tilt the fence proper until the required angle is indicated on the degree scale. Remember to lock in position again with the cam lock.

TAPER JOINTING

Furniture legs, etc., can be very successfully tapered with the BEAVER 6" Jointer-Planer. When the work length does not exceed the length of the front table it is only necessary to set the rear table to necessary depth and feed the work through against the fence. Care must be taken to see that the front end of the work contacts the rear table at the start of the cut. When long tapers are to be cut, it is necessary to use an extension on the front table.

SETTING, GRINDING AND HONING THE BLADES

The cutterhead of the BEAVER Jointer-Planer has three machined slots for the knives or blades and the chip breakers. Proper alignment of the blades and the maintenance of keen cutting edges are essential to good jointing.

SETTING

Using a straight edge along the rear table top, insert the blades in slots until the cutting edges are level with table top at the height of their rotary swing, when the depth scale registers zero. All three blades must be parallel to table top and parallel to each other. The rabbeting ends of blades must also protrude the same distance, $\frac{1}{32}$ " to $\frac{1}{16}$ " past the rabbeting cutout on rear table. Do not tighten the blades completely in place in one operation. Locate the first blade and snug into place, repeating for the second and third blades and then tighten in place progressively.

GRINDING

The keen edges on the blades can be maintained for some time with regular honing. When it becomes necessary to regrind them, it may best be accomplished by grooving a hardwood block to take the blade and sliding the block back and forth on a guide rail set on the grinder table. Very light cuts should be taken on the grinder to prevent burning the blades and all blades should be ground with the same number of passes across the grinding wheel.

HONING

The simplest method of honing the blades is by leaving them set up in the machine, and, taking a fine carborundum stone wrapped in paper to prevent table marking, slide the stone back and forth across the table in contact with the knives. Here again each knife should receive the same number of strokes.

ACCESSORIES

Recommended for long work are the Jointer-Planer extensions. Provisions for attaching extension to both front and rear tables have been incorporated in your Jointer-Planer. Extensions consist of table-mounting bracket and plated rollers, which add an additional 9" to each table end.

HOW TO ORDER REPAIR PARTS FROM YOUR DEALER

To have your order filled promptly and correctly please furnish all the following information:

1. Model and serial number shown on name plate.
2. Part number and name and description. (See list repair parts.)

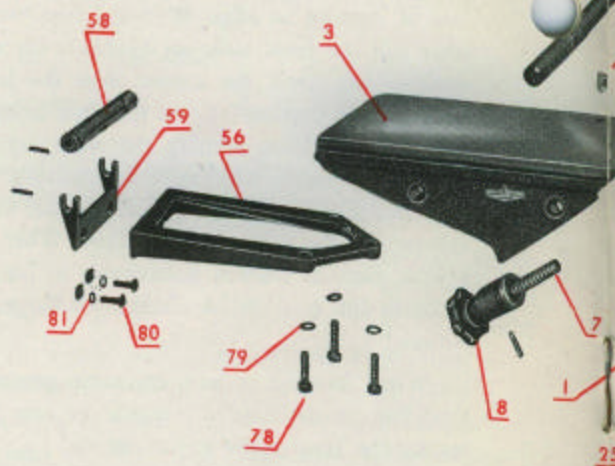
You pay shipping charges from factory based on size and total weight of order. One of the following shipping methods will be used.

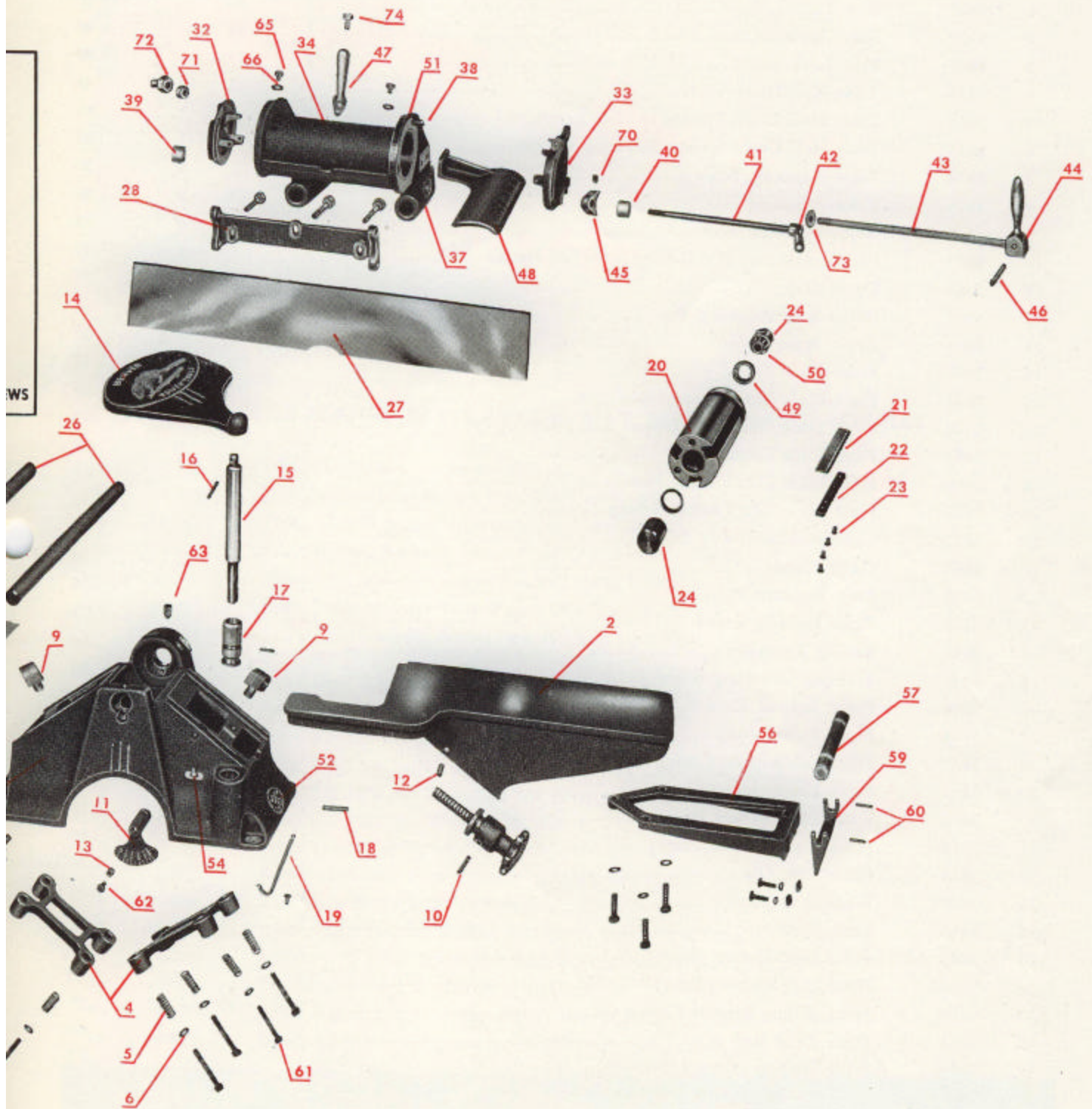
1. **Parcel Post** — for small packages add postage to remittance.
2. **Express** — for fast service on larger items.
3. **Freight** — cheapest way on larger items.

All nuts, bolts, screws, washers, etc., are standard in size and may be obtained from local sources.

IMPORTANT — The parts shown and listed may include accessories not necessarily a part of this tool. All prices are subject to change without notice and are subject to an additional charge to cover any applicable sales tax, use, occupation, or other tax affecting our purchase or sale of merchandise.

29	FENCE LINKS (INNER)
30	FENCE LINKS (OUTER BACK)
31	FENCE LINKS (OUTER FRONT)
35	FENCE LINK SPACERS (SHORT)
36	FENCE LINK SPACERS (LONG)
53	V-BELT F.H.P. V 50"
55	SPANNER WRENCH
67	FENCE LINK RETAINING SCREWS
68	FENCE DEAD STOP SCREWS
69	FENCE DEAD STOP LOCK NUTS
75	REAR BLADE GUARD RETAIN. SCREWS
76	REAR BLADE GUARD LOCK WASHERS
77	ANGLE GAUGE & TRADE MARK RETAIN. S





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**JOINTER-PLANER PARTS TO BE PURCHASED FROM THE CALLANDER FOUNDRY & MFG.
CO. LTD.**

Key Number	Part Number	DESCRIPTION	Quan.	Shipping Wt.		Price Each
				Lbs.	Oz.	
1	3801	Base	1	35		19.80
2	3802	Front Table	1	25		9.90
3	3803	Rear Table	1	23		11.00
4	3826	Table Hold-Down Grids	2	1	12	.45
5	3834	Table Hold-Down Springs	8		1	.05
6	3833	Table Hold-Down Springs Retaining Washer	8		1	.05
7	3824	Table Adjusting Screw	2		8	.55
8	3825	Table Adjusting Handles	2	1	8	1.30
9	3829	Adjusting Screw Boss	2		6	.75
10	3862	Pin for Assembly of Adjusting Screw and Handle	2		1	.05
11	3863	Depth Scale	1		4	.75
12	3865	Depth Scale Actuating Pin	1		1	.05
13	3866	Depth Scale Spacer	1		1	.05
14	3847	Front Blade Guard	1	1	6	1.90
15	3846	Front Blade Guard Support Rod	1	1	4	.80
16	3870	Front Blade Guard and Support Rod Assembly Pin	1		1	.05
17	3867	Front Blade Guard Sleeve	1		8	.90
18	3868	Front Blade Guard Sleeve Positioning Pin	1		1	.05
19	3828	Front Blade Guard Return Spring	1		1	.05
20	3837	Cutterhead and Pulley Integral	1	7	10	5.95
21	3838	Cutter Knives	3		12 (set)	5.70
22	3839	Chip Breakers	3		12	.65
23	3840	Knife Holding Screws	12		1	.05
24	3841	Bearing Trunnions	2		12	.90
25	3842	Trunnion Adjusting Screw	2		2	.20
26	3869	Fence Support Rods	2	4	8	1.55
27	3804	Fence Face Casting	1	15		6.80
28	3807	Fence Face Support Casting	1	1	6	2.75
29	3812	Fence Links (Inner)	2		1	.10
30	3813	Fence Links (Outer Back)	1		1	.10
31	3814	Fence Links (Outer Front)	1		1	.10
32	3808	Fence Disc (Back)	1	2		1.20
33	3809	Fence Disc (Front)	1	2		2.10
34	3810	Fence Tube	1	3	6	2.30
35	3806	Fence Link Spacers (Short)	6		1	.05
36	3806A	Fence Link Spacers (Long)	2		1	.05
37	3805	Fence Sliding Support Casting	1	10		8.25
38	3851	Fence Dead Stop	1		1	.10
39	3815	Fence Position Clamp (Threaded)	1		6	.55
40	3816	Fence Position Clamp (Plain)	1		6	.45
41	3817	Fence Position Clamp Bar	1		6	.15
42	3818	Fence Position Clamp Handle	1		6	.25
43	3819	Fence Tilt Lock Bar	1		8	.20
44	3820	Fence Tilt Lock Handle	1		8	.15

Key Number	Part Number	DESCRIPTION	Quan.	Shipping Wt.		Price Each
				Lbs.	Oz.	
45	3856	Fence Tilt Lock Bar Retainer	1	1		.45
46	3827	Fence Tilt Handle Assembly Pin	1	1		.05
47	3811	Fence Tilt Handle	1	3		1.10
48	3858	Rear Blade Guard	1	12		.90
49	3835	Bearing Cup	2	6		.75
50	3836	Bearing Cone	2	12		1.55
51	3844	Angle Gauge Plate	1	1		.15
52	3852	Beaver Trade Mark Plate	1	1		.15
53	3855	V-Belt F.H.P. V No. 1500	1	1		1.10
54	3853	Indicator Stampings	3	1		.05
55	3882	Spanner Wrench 1/4"	1	4		.30
56	3871	Extension Support Bracket	2	4		2.00
57	3872	Extension Roller (Front)	1	1	12	1.20
58	3875	Extension Roller (Back)	1	1	12	1.20
59	3876	Extension Roller Support	2	1	10	1.05
60	3873	Extension Roller Retaining Pin	2	1		.05

JOINTER-PLANER PARTS WHICH MAY BE PURCHASED LOCALLY

61	10-015	Table Hold-Down Screws Hex. Head Cap 5/16-18X2 1/4	8	2		.05
62	10-003	Depth Scale Retaining Bolt Hex. Hd. Cap 1/4-20X3/8	1	2		.05
63	16-407	Trunnion Lock Screws 5/16-18X3/8 Sock. Set Cup Pt.	2	1		.10
64	16-407	Fence Support Bar Lock Screws 5/16-18X3/8 Sock. Set Cup Pt.	2	1		.10
65	10-408	Fence Tube Retaining Screws Rd. Hd. Mach. 10-24X1/2	6	1		.05
66	14-004	Fence Tube Assembly Lock Washers Std. Lock 3/16	6	1		.05
67	10-011	Fence Link Retaining Screws Hex. Hd. Cap 1/4-20X1/2	11	1		.05
		Fence Face to Support Assembly Screws				
68	16-009	Fence Dead Stop Screws Sq. Hd. Set 10-24X3/4	2	1		.10
69	12-206	Fence Dead Stop Lock Nuts Std. Jam No. 10-24	2	1		.05
70	16-414	Fence Tilt L'k Bar Ret. Set Sc'w Sock. Set—Cone Pt. 10-24X3/8 ..	1	1		.10
71	12-202	Fence Tilt Lock Bar Nuts Std. Jam 3/8-16	1	2		.05
72	12-602	Fence Tilt Lock Bar Acorn Nut Std. Acorn	1	2		.05
73	14-205	Fence Tilt Lock Bar Washers Std. Flat 3/8	1	1		.05
74	10-1800	Fence Tilt Handle Retain. Screws Dual Hd. Mach. 10-24X1/2	2	1		.05
75	10-002	Rear Blade Guard Retain. Screws Hex. Hd. Cap 1/4-20X3/8	2	2		.05
76	14-001	Rear Blade Guard Lock Washers Std. Lock 1/4	2	1		.05
77	16-1000	Angle Gauge and Trade Mark Ret. Screws Drive No. 2X3/16	4	1		.05
78	10-019	Extension to Table Screws Hex. Hd. Cap 3/8-16X1 1/4	6	2		.05
79	14-003	Extension to Table Washers Std. 3/8 Lock	6	1		.05
80	10-1200	Roller Sup. to Extension Sup. Screws Hex. Hd. Cap 5/16-18X1	4	2		.05
81	14-002	Roller Support to Extension Support Washers Std. Lock 5/16	4	1		.05



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