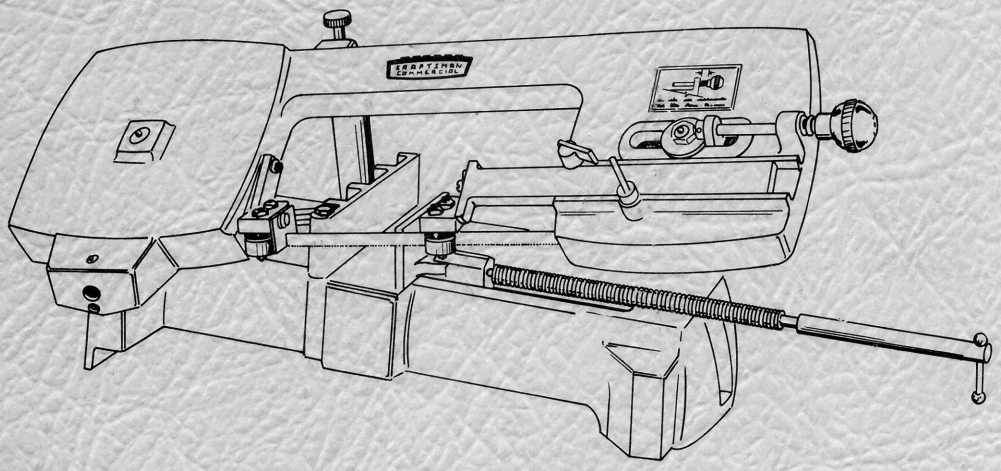
OPERATING INSTRUCTIONS

and

PARTS LIST

CRAFTSMAN®
COMMERCIAL



CONTINUOUS-BLADE POWER HACKSAW

MODEL NUMBER 101.22922

SEARS, ROEBUCK AND CO. — U.S.A.
SIMPSONS - SEARS LIMITED — CANADA

CV 103

OPERATION AND MAINTENANCE INSTRUCTIONS

WITH PARTS LIST FOR

CRAFTSMAN
CONTINUOUS-BLADE POWER HACKSAW

MODEL NUMBER 101.22922

The above Model Number will be found on a plate attached to the tool bed. Always mention this Model Number when communicating with us or when ordering repair parts or replacements for your equipment.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSONS-SEARS LIMITED. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER.
2. The PART NAME.
3. The MODEL NUMBER
4. The NAME of item – Continuous-Blade Power Hacksaw

COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR YOUR CRAFTSMAN POWER HACK SAW

PROTECTIVE Sears Care MAINTENANCE

SEARS, ROEBUCK AND CO. and SIMPSONS-SEARS LIMITED in Canada back up your investment with quick, expert mechanical service and genuine CRAFTSMAN replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

SEARS, ROEBUCK AND CO. - U.S.A.
IN CANADA, SIMPSONS - SEARS LIMITED

CV-103

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OPERATION AND MAINTENANCE INSTRUCTIONS

CONTINUOUS-BLADE POWER HACKSAW – MODEL NUMBER 101.22922

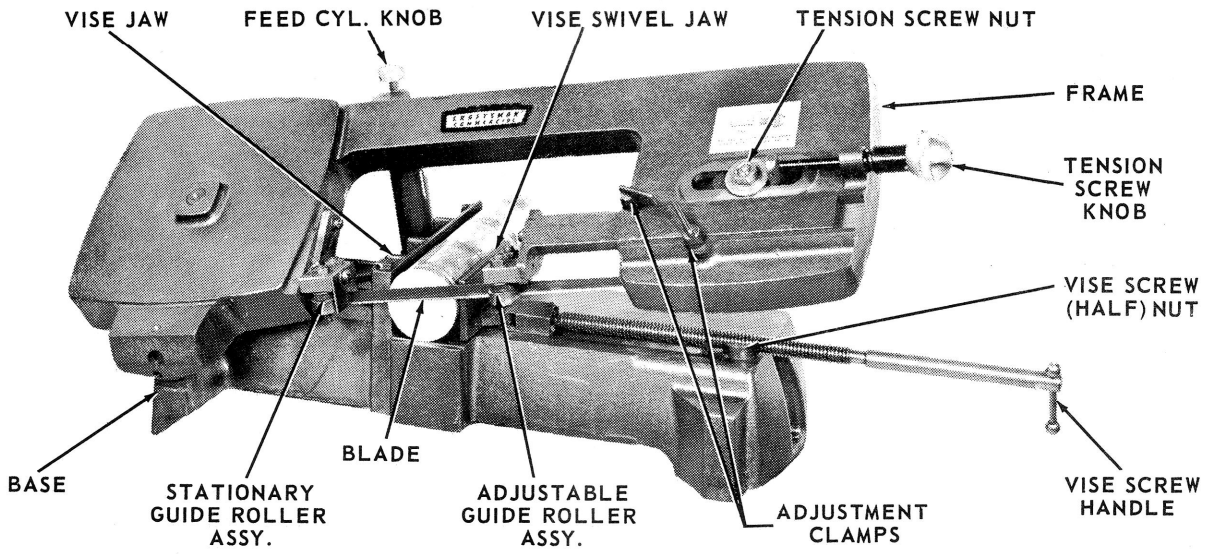


Figure 1

SETTING UP THE POWER HACKSAW

The power hacksaw is packaged completely assembled – a motor pulley and drive belt are separately wrapped.

Remove rust preventive from all surfaces by wiping with a cloth moistened with mineral spirits.

For stationary use, bolt the saw to a workbench in a position which will provide room for handling long stock. For portable use, bolt saw to a suitable board (1 to 2 inches thick) on which the motor can also be mounted. If necessary, shim under the feet to prevent twisting of the saw base when the bolts are tightened.

Design speed for the saw is 135 feet per minute. This speed is obtained only by using a 1725 rpm motor with the 1-1/2 inch OD motor pulley furnished with the saw. A 1/3 or 1/2 hp motor is recommended.

Slide the pulley on motor shaft and mount the motor in a position which will align the motor pulley with the saw drive pulley – so that the drive belt will run straight. Install the belt and adjust belt tension so that finger pressure at its mid point will depress the belt approximately 1/2 inch. Proper tension is important, if the belt is too loose, it will slip and wear out; if too tight, it will damage the motor and the saw bearings. The use of motor rails or a swivel mount is recommended for maintaining correct belt tension.

OPERATING PRINCIPLES

The saw is designed to cut through material which will fit under the blade, with saw frame elevated, when clamped between the vise jaws.

The vise jaw can be positioned straight (for a 90° cut), or at any angle to 45°. Loosening of a socket head capscrew permits setting the jaw at the desired position. The vise swivel jaw adjusts automatically to any position of the vise jaw and is mounted on a slider permitting it to be moved for opening or closing of the vise jaws. It can be moved freely when the vise screw engages a vise screw nut and the jaws can be tightened to hold any workpiece firmly.

Cutting is accomplished by the continuous blade traveling around a drive wheel and an idler wheel mounted in the saw frame. The blade is driven by the drive wheel which meshes with a bevel gear mounted on the same shaft as the saw drive pulley. Blade tension is maintained by a tension screw which moves the idler wheel in its slide at the top of the saw frame.

The blade is held in a vertical position at the front of of the frame and is supported at each side of the workpiece by two guide roller assemblies – one stationary and one adjustable. The adjustable guide roller assembly can be moved to accommodate various width workpieces.

Weight of the saw frame provides feed pressure for the cutting operation. This pressure is controlled by a feed cylinder linked between the frame and the saw base. The cylinder contains a valve which meters hydraulic fluid from one chamber to another. A knob on top of the cylinder controls the metering rate. When the knob is turned clockwise until the valve is closed, the frame will be held stationary at any position to which it has been elevated. As the knob is turned counterclockwise the amount of feed pressure is increased until, with the valve fully open, the whole weight of the frame is used. Markings on the knob indicate each quarter turn, as a guide for setting feed pressure.

OPERATING PROCEDURE

NOTE

The 14 tooth blade furnished with the saw is suitable for most jobs, including aluminum. A 10 tooth blade will cut heavy sections faster and a 24 tooth blade is preferable for cutting tubing. Refer to the parts list for ordering information on blades.

1. Elevate frame and close feed cylinder valve to hold frame stationary above work.

2. Adjust vise jaw for desired angle and tighten socket head screw that secures the jaw.

NOTE

A protractor can be used for setting close angles other than 45° and 90° (which are at the respective ends of the slot).

3. Raise the vise screw handle and open the vise jaws. Place work in vise and slide the vise swivel jaw against the workpiece. Lower the screw into the vise screw nut and tighten the screw to clamp work securely.

CAUTION

Be certain that the work to be cut is securely clamped in the vise. Loose work will cause blade breakage.

4. Slowly open the feed cylinder valve and lower the frame until blade **almost** touches workpiece.

CAUTION

If blade should rest upon the work before the motor is started blade teeth can be damaged. . . . .if blade is dropped onto work the blade might be broken.

5. Move the adjustable guide roller assembly as close as possible to the workpiece to provide maximum blade rigidity; but leave it at least 4 inches from the stationary roller assembly so it will clear the base of the saw.

IMPORTANT

The guide roller assemblies must hold the blade perpendicular to the work and guide the blade straight, without bending or allowing it to sag between the rollers. It is impossible to get satisfactory work or to avoid blade damage, unless these assemblies are kept correctly adjusted at all times. Refer to ADJUSTMENTS, page 3.

6. Check the blade tension. Refer to CHANGING BLADES.

NOTE

Do not use lubrication on the blade, lubricants will cause the blade to slip on the drive wheels.

7. Start the motor.

8. Open the feed cylinder valve to the proper setting for this operation. "Proper" setting depends upon the type of material, the type of cross-section (amount of material), and the straightness of cut desired. Soft materials (aluminum, brass, fiber) require less feed than hard material (steel or iron). Cross-sections having little material (thin-wall tubing) require less feed than solid cross-sections. Generally, reduced feed pressure will result in a straighter, more accurate cut. Experience is the best guide; the 1/4-turn markings provided will help duplicate settings found to be desirable. Never overfeed, as this causes blade breakage and poor quality cuts. Never underfeed, as this causes premature dulling of blade teeth. If in doubt watch the cutting action, proper feed is when the chips are curled, without being burned.

9. When the cut is finished, turn off the motor.

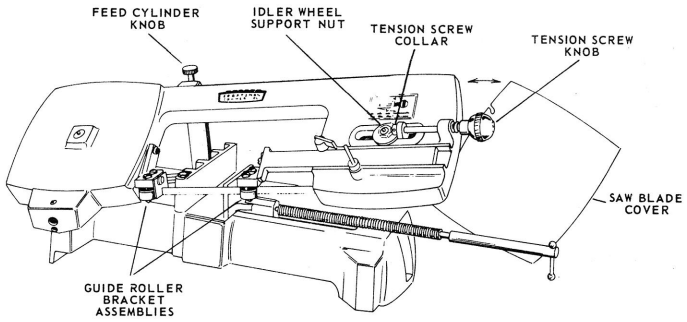


Figure 2

CHANGING BLADES (See Figure 2)

1. Elevate frame and close the feed cylinder valve to hold it stationary.

2. Wrap the feed cylinder stem with a cloth or provide similar means of protection so that the stem will not be scratched when changing saw blades.

3. Loosen the screw that holds the back edge of saw blade cover. Swing cover aside.

4. Loosen the idler wheel support nut just enough to allow movement of the idler wheel support when the tension screw knob is turned. Turn tension screw knob counterclockwise until blade is free.

5. Carefully remove the blade and install new blade, teeth at bottom.

6. Tighten blade by turning tension screw knob clockwise. Blade tension is properly adjusted when tension screw knob is 1/4 inch from boss on saw frame. Tighten idler wheel support nut securely.

7. Replace the saw blade cover and tighten its holding screw.

8. Re-adjust the guide roller assemblies, if necessary.

CUTTING PROBLEMS AND CAUSES

NOTE

Blade life will average between 5 and 10 hours of cutting, depending on material being cut.

BLADE BREAKAGE AND/OR TEETH RIPPING OUT:

1. Workpiece not clamped securely in saw vise.
2. Blade is too coarse. A minimum of two teeth should always be in contact with the work at the same time.
3. Wrong blade thickness. Many commercial blades are not of the correct thickness and will soon break under the strain of turning around the pulleys – use only blades which are designed for the use with the Craftsman saw.
4. Excessive blade tension.
5. Excessive feed rate.
6. Improper guide roller adjustment.
7. Guide roller assemblies not holding blade perpendicular.

PREMATURE BLADE DULLING:

1. Blade is too coarse.
2. Insufficient feed pressure.

BLADE RUNNING OFF PULLEYS:

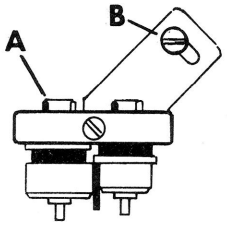
1. Insufficient blade tension.
2. Improper guide roller adjustment.
3. Guide roller assemblies not properly adjusted.
4. Adjustable guide roller assembly too far from workpiece.

UNEVEN CUTS:

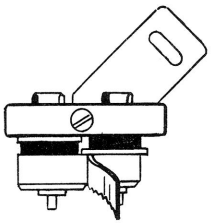
1. Workpiece not clamped securely in saw vise.
2. Improper guide roller adjustment.
3. Adjustable guide roller assembly too far from workpiece.
4. Insufficient blade tension.
5. Excessive feed rate.

ADJUSTMENTS

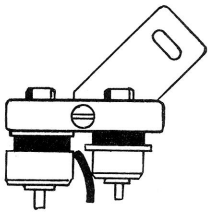
FEED CYLINDER: If oil level is low, an erratic feed rate will result. Remove the slot-head screw on top of feed cylinder head and refill with new SAE 20 oil to within 1/4 inch of top. Before adding oil, push the cylinder stem to its lowest position to expell all air. After filling replace the slot-head screw tightly.



Correct adjustment – no sag or bend.



If rollers are too close, blade will bend.



If rollers are too far, blade will sag.

Figure 3

GUIDE ROLLERS: Adjustment is made by loosening the nut (A, Figure 3) and moving the outside roller toward or away from the flanged roller. Rollers are correctly positioned when the blade barely touches both rollers and the blade remains straight as it passes between the rollers.

GUIDE ROLLER ASSEMBLIES: If either guide assembly holds the blade so that it is not perpendicular to its cut, loosen the screw (B, Figure 3) that holds the bracket and tap the bracket to straighten the assembly. Retighten the screw securely.

BEVEL GEARS: Should play develop between the wheel and bevel gear (58 and 73, Figure 4), loosen the set screw (57) on front of frame (2) and tighten the set screw (57) on the pivot shaft bracket (69).

LUBRICATION

Lubricate regularly by putting 3 to 4 drops of SAE 30 oil into each of the eight oil holes. The holes have fitted covers (5 and 54, Figure 4). Locations are:

In the tension screw nut
At the top of the drive wheel shaft.
At each end of the pivot shaft.
At the top of each guide roller shaft.

CRAFTSMAN CONTINUOUS-BLADE POWER HACKSAW — MODEL NO. 101.22922

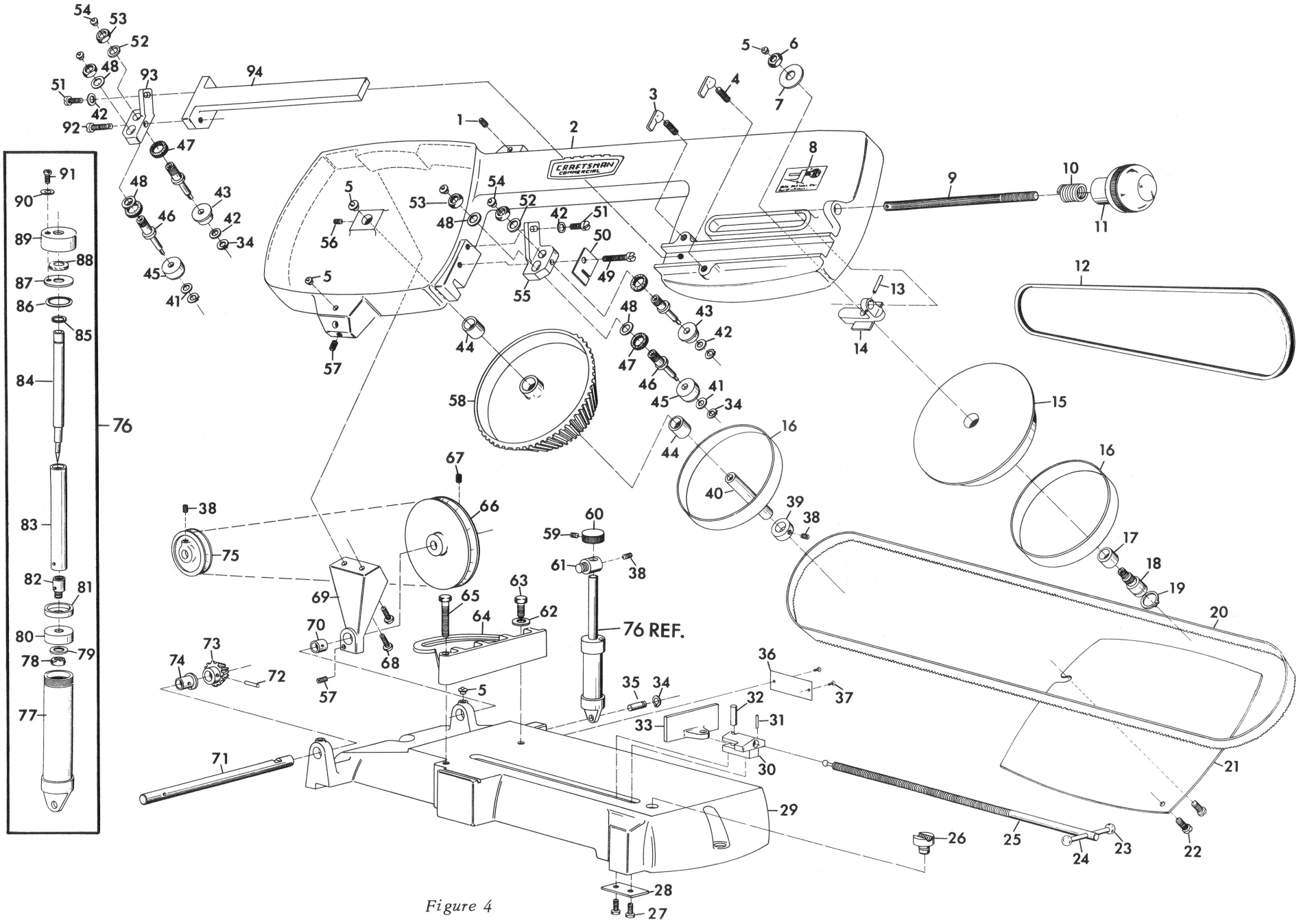


Figure 4

PARTS LIST FOR CRAFTSMAN CONTINUOUS-BLADE POWER HACKSAW MODEL NO. 101.22922

KEY NO.	PART NO.	DESCRIPTION
1	53-2105	Set Screw, Soc. Hd. – Special
2	GBF-501B	Frame
3	GBF-509	Adjustment Clamp (2 req.)
4	102708	*Set Screw, 1/4 - 20 x 5/8 Slot Hd.
5	63-2101	Oil Hole Cover, 5/16" (4 req.)
6	114496	*Nut, 1/2 - 20 Jam
7	GBF-519	Idler Wheel Washer
8	GBF-515	Blade Tension Label
9	GBF-507A	Tension Screw
10	GBF-531	Spring
11	GBF-506A	Tension Screw Knob
12	9-1537	V-Belt, 3/8 x 37"
13	455734	Roll Pin, 1/8 x 5/8
14	GBF-517A	Idler Wheel Support
15	GBF-513A	Idler Wheel
16	GBF-524	Friction Band (2 req.)
17	GBF-514	Idler Wheel Shaft Bushing
18	GBF-518	Idler Wheel Shaft
19	67-2102	Retaining Ring
20	22926	Saw Blade, 1/2 x 60" (.020 Thick, 10 Teeth per in.)
	22927	†Saw Blade, 1/2 x 60" (.020 Thick, 14 Teeth per in.)
	22929	Saw Blade, 1/2 x 60" (.020 Thick, 24 Tooth Wave Set)
21	GBF-581	Cover Plate
22	110500	*Screw, 10 - 24 x 1/2 Rd. Hd.
23	GBF-130A	Vise Screw Handle Ball (2 req.)
24	GBF-129A	Vise Screw Handle
25	GBF-542	Vise Screw
26	GBF-543A	Vise Screw Nut
27	106319	Cap Screw, 1/4 x 5/8 (2 req.)
28	GBF-546	Vise Slide Plate
29	GBF-502	Base
30	GBF-541	Vise Slide
31	455862	Roll Pin, 1/8 x 7/8
32	456713	Roll Pin, 3/8 x 1
33	GBF-538	Swivel Jaw
34	67-2104	Retaining Ring (5 req.)
35	GBF-576	Connecting Stud
36	536-024	Model Number Plate
37	145370	*Drive Screw, #2 x 1/4 P.K.
38	139323	*Set Screw, 1/4 x 1/4 Soc. Hd., Cone Pt. (3 req.)
39	GBF-523	Drive Wheel Collar
40	GBF-522	Drive Wheel Shaft
41	9414320	*Washer, 1/2 x 1/4 x 1/16 (2 req.)
42	59-2106	*Washer, 1/2 x 1/4 x 1/32 (4 req.)
43	GBF-553	Guide Roller – Upper (2 req.)
44	GBF-525	Drive Wheel Shaft Bushing (2 req.)
45	GBF-552	Guide Roller – Lower (2 req.)
46	GBF-551	Guide Roller Shaft (4 req.)
47	GBF-554	Guide Roller Dust Shield (4 req.)
48	59-2102	*Washer, 5/8 x 3/8 x 1/32 (4 req.)
49	114362	*Screw, 1/4 x 1 3/4 Fil. Hd. Mach.
50	GBF-544	Saw Blade Wiper
51	114354	*Screw, 1/4 x 5/8 Fil. Hd. Mach. (2 req.)
52	59-2104	*Washer, 5/8 x 3/8 x 1/16 (2 req.)
53	114494	*Nut, 3/8 - 24 Jam (4 req.)
54	63-2102	Oil Hole Cover, 3/16" (4 req.)
55	GBF-549A	Saw Guide Bracket - LH
56	102572	*Set Screw, 1/4 x 5/8 Soc. Hd., Cone Pt.
57	53-2114	Set Screw – Special (2 req.)
58	GBF-521A	Drive Wheel
59	140907	*Set Screw, 10 - 24 x 5/16 Soc. Hd., Cone Pt.
60	GBF-569	Feed Cylinder Knob
61	GBF-573	Feed Cylinder Pivot
62	9414322	*Washer, 7/8 x 3/8 x 1/16
63	138242	*Cap Screw, 3/8 x 1 Soc. Hd.
64	GBF-535	Vise Jaw
65	100140	*Cap Screw, 3/8 x 3
66	GBF-505	Drive Pulley
67	139411	*Set Screw, 3/8 x 5/16 Soc. Hd., Cone Pt.
68	216277	*Cap Screw, 1/4 x 1/2 Soc. Hd. (2 req.)
69	GBF-529	Pivot Shaft Bracket
70	GBF-528	Pivot Shaft Bushing
71	GBF-526	Pivot Shaft
72	455277	Roll Pin, 1/8 x 1 1/8
73	GBF-512	Bevel Gear
74	GBF-527	Flanged Bushing
75	GBF-583B	Motor Pulley
76	GBF-560	Feed Cylinder Assembly
77	GBF-570	End Cap Assembly
78	114502	*Nut, 5/16 - 18 Jam
79	9420759	*Washer, 7/8 x 5/16 x 5/64
80	GBF-578	Feed Cylinder Seal
81	GBF-568	Seal Support
82	GBF-564	Valve Seat
83	GBF-565	Feed Cylinder Stem
84	GBF-566	Feed Cylinder Valve
85	57-2102	"O" Ring, 3/8 x 1/4
86	GBF-575	Head Gasket
87	GBF-562	Seal Cover
88	57-2101	Quad-Ring, 11/16 x 1/2
89	GBF-574	Feed Cylinder Head
90	GBF-567	Plug Gasket
91	436567	*Screw, 10-24 x 1/4 Slot Hd. Pan
92	114360	*Screw, 1/4 x 1 3/8 Fil. Hd. Mach.
93	GBF-548A	Saw Guide Bracket - RH
94	GBF-547	Guide Bracket Support
95	CV-103	Parts List and Instructions

*Standard hardware items – may be procured locally.

†Furnished with tool.