STARTING SERIAL NUMBER 11075

PARTS LIST
FOR

Wellsaw®

MODEL 600
METAL CUTTING BAND SAW

Wellsaw®
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Rev 180621

INSTALLATION, OPERATION and MAINTENANCE of Model 600 WELLS METAL CUTTING BANDSAWS

The **Model 600 WELLS METAL CUTTING BAND SAW** was designed for efficient performance, and with proper care will give you many years of dependable service.
Each saw is completely assembled, checked thoroughly and subjected to a test run; no further adjustments should be necessary.
This manual has been prepared to assist you in the proper installation, operation and maintenance of your new Wells Metal Cutting Band Saw. If you should desire additional information or assistance, we suggest you contact your dealer's service representative.

Read this manual carefully. It was prepared to help you.

INSTALLATION

Upon receipt of machine, uncrate and check all parts. Report to your carrier any damage to machine and file Proof of Loss Claim with same.

- Be sure motor specifications correspond with your power line.
- Place machine so that each leg is carrying its share of the load.
- Each machine is shipped with one all-purpose blade installed and ready to use.

OPERATING INSTRUCTIONS & CUTTING TIPS

- **For longer blade life, start each cut carefully**
- **For new blades, reduce feeding pressure on first two cuts.**
- **Make sure all four legs are in solid contact with the floor.**
- **Keep blade guides as close to both Vise Jaws as possible.**

PLACING BLADE ON SAW

- Raise frame to extreme height.
- Remove idle wheel guard.
- Remove blade guard on high side of frame.
- Loosen blade take up screw and remove old blade.
- Uncoil new blade. Make certain that the blade teeth point in direction of blade travel, which is toward the motor. If not, turn the blade inside out to have proper tooth direction.
- Place new blade between the bearings of the roller guides on on the band wheels.
- Grasp blade on frame side and push toward guide bracket beam to hold it in position on wheels while turning hand wheel tension screw until blade is taut.
- Start motor and tighten blade to proper operating tension. If blade slips while cutting, increase the tension.

AUTOMATIC STOP

When the saw blade has completed the cut through the material, the saw frame drops on a trigger. This operates a rod which opens the contacts in the switch and automatically stops the motor.
It will be necessary to raise saw frame clear of the trigger before machine can he started.

FIXED VISE JAW

The two pins in the fixed vise jaw should be kept in place in order to insure square cuts. When cutting angles, these pins must be removed and the vise jaws turned to desired position and tightened with clamp bolts. These pins enable operators to quickly relocate fixed vise jaw for 90° cutting. **For final adjustment, the vise jaw should be squared with the blade.**

The sliding vise jaw should be loosened and pushed against fixed vise jaw, then tighten the cap screw, leaving vise screw parallel.

SLIDING VISE JAW

The sliding vise jaw is equipped with a ratchet and ratchet dog for quick action and with a hand wheel for tightening work in vise. **Excessive pressure is not required to hold material securely in the vise.**

MAXIMUM CAPACITY

To obtain maximum vise capacity remove vise jaw pins and move fixed vise jaw toward motor end to the last holes. Make sure stock in vise will not strike the ratchet arm.

DASH POT

Machines are equipped with a dash pot (frame check) for the purpose of stabilizing the downward travel of the saw frame, thereby protecting saw blade from damage. The action is hydraulic and controlled by flow of fluid being bypassed through an orifice in the piston on the downward stroke.
Fill to within 1 inch of the top of the bottom cylinder with Cities Services “Amplex 05” Hydraulic Oil or equivalent.

FRAME WEIGHT ADJUSTMENT

The position of the collar in relation to the spring on the dash pot acts as the frame weight adjustment. The proper frame weight is approximately 10# and is obtained by positioning the collar 4” down from the top edge of the upper cylinder to the top edge of the collar. For less frame weight, loosen collar and move downward toward tension spring. Reverse for more frame weight.
Too much frame weight will cause blade to cut crooked.

SWITCH

A **“STOP-START”** switch is installed across the line to protect the wiring and the motor. A heater coil breaks the circuit should an overload occurs. The operator should allow time for coil to cool before trying to restart. Automatic shut-off operates when saw frame contacts the switch trigger.

BELT

Pivoted mounting provides quick belt change. With the belt in pulley grooves for the desired speed, swing motor to put proper tension on the belt. Tighten thumb screw to hold motor in operating position.

SPEED SELECTION

Saws are equipped with step pulleys providing speed selection of 50, 90, 160 and 250 feet per minute.

- Use the fast speed to cut thin-wall metal, tubing, thin channels, aluminum, thin brass, or any metal that will not burn the teeth.
- Use the medium speeds on general cutting such as cold rolled, machine steels, heavy channels, etc.
- Use the slow speed for cutting nickel steels or any metals which require a slow speed on a lathe.
- Use beeswax when cutting brass. Brass should always be cut with a blade which has not previously cut other metal.
- If teeth wear off unusually fast, use slower speed. Always keep the blade at proper blade tension when cutting.

MAINTENANCE

BLADE BRUSHES

Brushes should be **cleaned frequently** in kerosene and reversed to take advantage of both rows of bristles.
For best results, replace worn, filled or sticky brushes with new ones. In bolting brushes to angles, be sure wire bristles are bent in same direction blade travels.

BLADE GUIDES

The blade guides are arranged to hold the blade in alignment both vertically and horizontally.

Before making any adjustments, always try a new blade to be sure that the old blade was not causing the difficulty.

To align the blade horizontally, be sure fixed vise is square with bed, then square blade with vise.
For the vertical alignment, raise frame until blade just clears bed, then place edge of square on bed with end against blade being careful not to contact tooth set. Use feeler gauge not to exceed .002”, adjusting blade so that feeler gauge will not enter at top or bottom between end of square and blade at both front and rear guides.

Adjust the side roller guides (100417-1) with the eccentric axle until both rollers contact blade. When this adjustment is made, the rollers should be adjusted so that the **path of the blade is straight** and blade is not forced to curve around the rollers. The top roller guide (100406-1) should be in contact with top edge of the blade at all times. When running idle, this contact pressure should be very light.

WHEEL PITCH ADJUSTMENT

Loosen Blade Before Making These Adjustments!

In case the blade runs too low, or off the idler wheel, adjust the idler wheel block. Loosen by one-half turn **the two cap screws** in the block at the hand wheel end and tighten by an equal amount **the two cap screws** in the opposite end of the block.
To make similar adjustment on drive wheel, loosen by one-half turn **the two cap screws** at the motor end of the wheel plate. Then make pitch adjustment; loosen by one-half turn, **the two hollow head set screws** at the opposite end of the plate and tighten **the two hex head cap screws** at the motor end of the wheel plate. After final adjustment, make certain that all hollow head cap screws and set screws are tight.

If there is too much pitch on the wheel, the blade will run too high. This will cause the blade to become distorted and the top edge and the wheel rim flange will show excessive wear.

To correct this condition, **loosen two cap screws** at the end of idler wheel block farthest from hand wheel, then tighten **two cap screws** at opposite end of idler wheel block. To reduce pitch on the drive wheel, loosen **two cap screws** in drive wheel plate at the end opposite the motor, then match pitch adjustment by tightening **two hollow head set screws** at the same end of the wheel plate. The **four cap screws** should then be tightened to hold motor plate in a rigid and fast position

LUBRICATION

The **correct** and **adequate lubrication** is a very **important** factor in determining the life and service to be obtained. It is imperative that all dust and dirt should be removed before lubricating.

Texaco Marfac grade “O” grease, or equivalent, is used in the gear case. Other parts to be geased are as follows:

- Keep **vise adjusting screw well lubricated** with a heavy oil or light grease.
- Keep **internal ring gear** and **pinion** well greased with a good quality fiber type grease (medium grade).
- Wheel ball bearings are lubricated by pressing out the bearings and repacking them with a good quality of ball bearing grease.
- Apply a few drops of machine oil to the frame pivot bar periodically
- For proper motor lubrication, follow motor manufacturers instructions as stated on the motor.

HELPFUL SUGGESTIONS

To select the proper blade, consideration must be given to the type of material, as well as size and shape of stock to be cut. The **Wellsaw Select-O-Chart** is a handy reference guide.

- Use correct blade speed and pressure for each type fo material.
- Always keep blade at proper tension.
- Lower saw frame carefully so that the blade will start cutting before full frame feed pressure is applied to the blade.
- Reduce feeding pressure for the first 2 or 3 cuts with a new blade.
- Keep adjustable blade guide as close as possible to the material.
- Keep blade brushes in contact with blade teeth at all times.

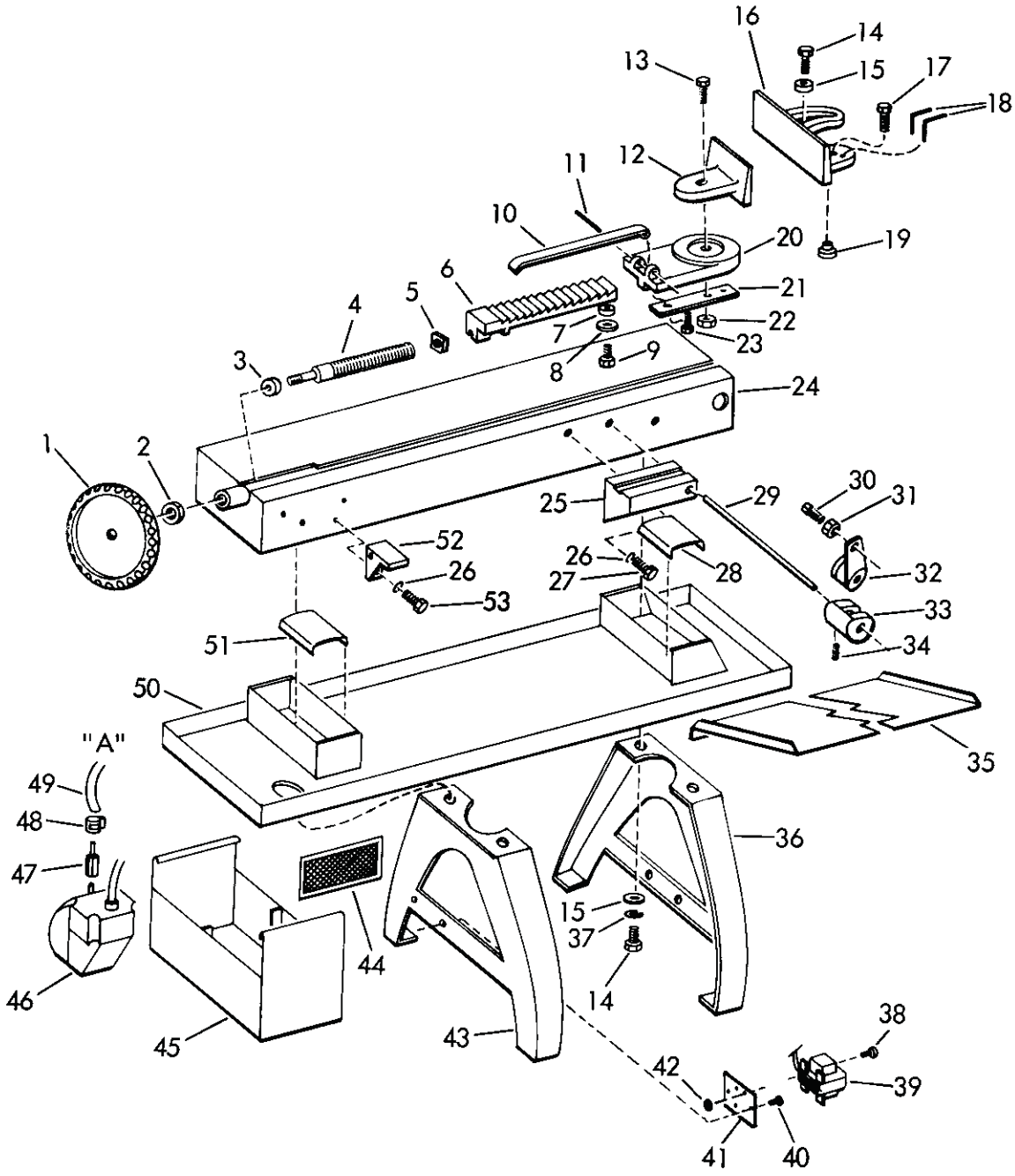
Trouble Shooting

For Greater Service and Efficiency
Careful Operation - Blade Consideration

DIFFICULTY	REASON	REMEDY
Cutting out of line	*Too heavy a feed or worn blade*	Reduce feed rate by adjusting frame weight or replace blade. Replace worn guide bearings when they begin to show excessive wear
	Guides in wrong position	Set as close to work as possible
	Guides out of alignment	Follow adjustment instructions
	Set worn on one side of blade	Keep brushes clean. Avoid teeth rubbing in cut by applying enough weight so that each tooth is cutting a good chip
	Starting cut on odd shape where blade does not contact flat surface	Retard feed until blade has a good start in the material
Stripping teeth	*Blade teeth too coarse*	Be sure that two or more blade teeth are in contact with material being cut
	Hard spots on material	Rotate stock, if possible. Do not put new blade in cut at same angle
Breaking	*Guides out of alignment*	Follow adjustment instructions.
	Blade twisting	Adjust guides as close to work as possible. Be sure material being cut is held firmly
	Lack of blade tension	Always keep blade tight
	Dash Pot malfunction	Check hydraulic fluid level and/or condition of cup leather
Excessive wear	*Blade speed too fast.*	Follow recommended cutting speeds
Blade running off wheel	*Lack of blade tension*	Always keep blade tight
	Improper wheel pitch adjustment	See instructions for wheel pitch adjustment

Always use a light feed on new blades!

BED AND COOLANT DETAILS



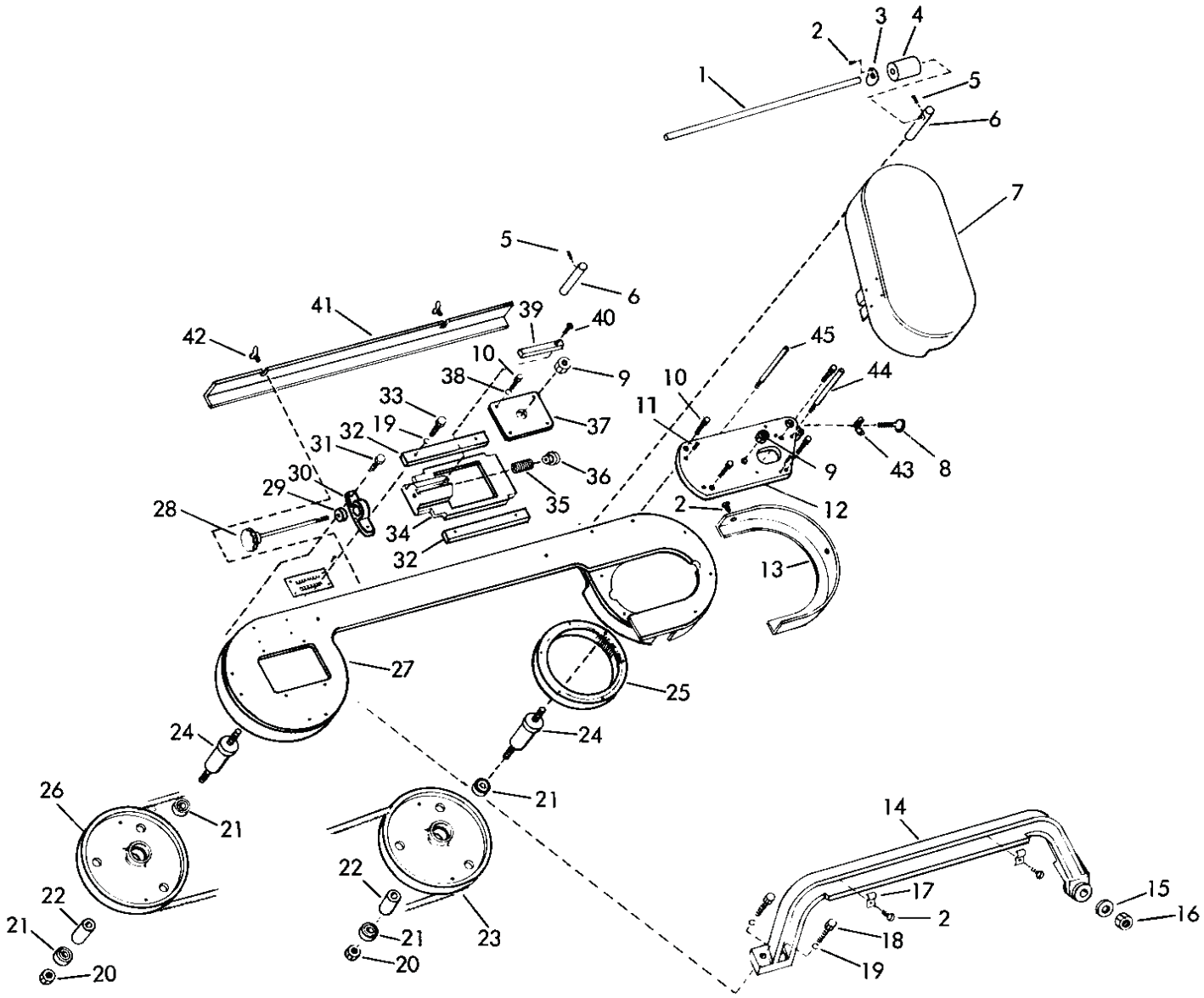
Always give model number, serial number and part number when ordering repair parts.

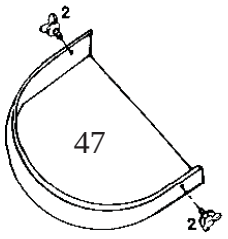
BED AND COOLANT DETAILS

PARTS LIST

REF #	PART NUMBER	DESCRIPTION
1	A-016	Hand Wheel
2	100019-008	Hex Jam Nut
3	100402	Thrust Collar
4	M-060	Vise Screw
5	M-061B	Vise Screw Nut
6	101773	Vise Ratchet
7	A-040	Ratchet Guide Spool
8	M-041	Spacer
9	100004-018	Cap Screw - 5/16-18 x 1 Hex Head
10	A-004	Vise Ratchet Dog
11	100053-002	Roll Pin - 3/8 x 2-1/2
12	105847	Movable Vise Jaw
13	100004-039	Cap Screw - 1/2-13 x 2-1/2 Hex Head
14	100004-037	Cap Screw - 1/2-13 x 1-1/2 Hex Head
15	100029-006	Flat Washer - 1/2
16	A-031	Stationary Vise Jaw
17	100004-038	Cap Screw - 1/2-13 x 2 Hex Head
18	M-065	Locating Pin
19	A-151	Clamp Nut
20	A-006	Vise Slide Block
21	A-045	Vise Slide Block Guide
22	100017-005	Hex Nut - 1/2-13
23	100004-013	Cap Screw - 5/16-18 x 5/8 Hex Head
24	101738	Bed
25	101750	Tip-Off Block
26	100025-002	Lock Washer - 5/16
27	100004-015	Cap Screw - 5/16-18 x 3/4 Hex Head
28	A-206	Leg Guard (Drive End)
29	A-062	Stop Bar
30	100033-017	Set Screw - 3/8-16 x 1-1/2
31	100017-003	Hex Nut - 3/8-16
32	A-013	Stop Arm
33	A-036	Stop Arm Housing
34	100042-007	Thumb Screw - 5/16 x 1-1/8
35	M-250	Splash Guard
36	101772	Leg - Drive End
37	100025-005	Lock Washer - 1/2
38	100000-018	Machine Screw #10-32 x 3/8 Round Head
39	100502-003	Transformer 230 Volt - 60/50 Cycle
	100502-004	Transformer 460 Volt - 60/50 Cycle
	100522-002	Transformer 575 Volt - 60/50 Cycle
	100655	Transformer 380 Volt - 50 Cycle
40	100000-027	Machine Screw 1/4-20 x 3/4 Round Head
41	101581	Transformer Mounting Plate - 230 Volt or 460 Volt
	101587	Transformer Mounting Plate - 575 Volt
	101681	Transformer Mounting Plate - 380 Volt
42	100015-008	Hex Nut - #10-32
43	A-015A	Leg - Idle End
44	101565-002	Screen
45	101669	Coolant Tank
46	100249-010	Coolant Pump
47	102617	Adapter
48	100219-001	Hose Clamp
49	100220-017	Coolant Hose - 100 Inches Long
50	105619	Chip Pan
51	A-202	Leg Guard (Idle End)
52	A-026	Frame Rest
53	100004-016	Cap Screw - 5/16-18 x 7/8 Hex Head
	101676	**Coolant System for field installation**

WHEEL AND FRAME DETAILS





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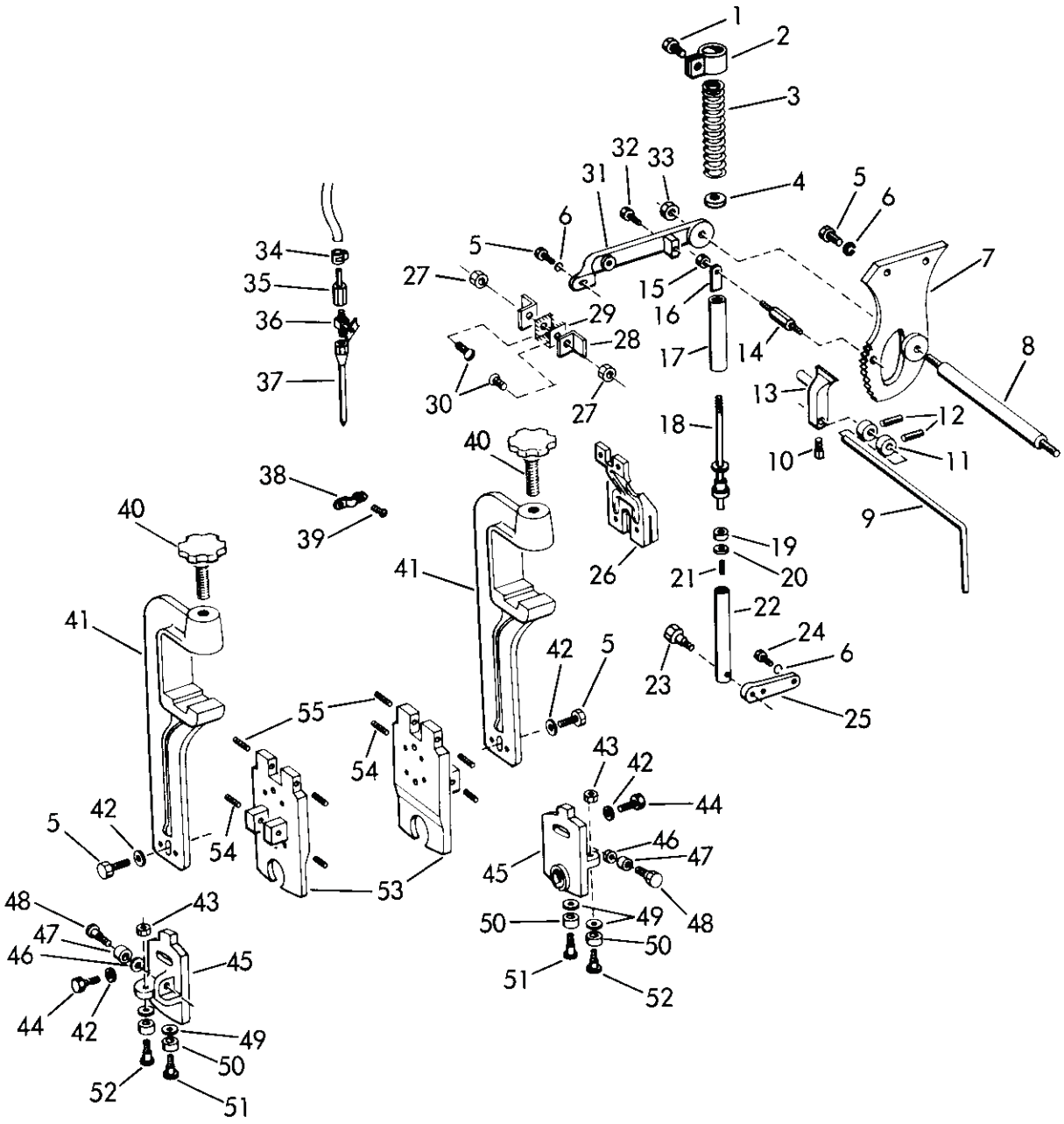
WHEEL AND FRAME DETAILS

PARTS LIST

REF NO.	PART NUMBER	DESCRIPTION
1	A-101	Sliding Weight Bar
2	100000-024	Machine Screw - 1/4-20 x 3/8 Round
3	M-857	Head Sliding Weight Spring
4	M-807	Sliding Weight
5	100034-001	Set Screw - 1/4-20 x 3/16
6	M-102	Sliding Weight Post
7	105531	Belt Guard
8	100042-005	Thumb Screw
9	100065-007	Hex Nut - 5/8-18
10	100004-019	Cap Screw - 5/16-18 x 1-1/8 Hex Head
11	100034-005	Set Screw - 5/16-18 x 3/4
12	103222	Wheel Plate
13	105616	Wheel Guard
14	101782	Guide Bracket Beam
15	100029-008	Flat Washer - 5/8
16	100020-005	Hex Nut - 5/18-11 Self Locking
17	101582	Tube Clamp
18	100004-019	Cap Screw - 5/16-18 x 1-1/8 Hex Head
19	100025-002	Lock Washer - 5/16
20	100019-016	Hex Jam Nut - 5/8-18
21	100414-003	Ball Bearing
22	M-172	Wheel Spacer
23	101785	Band Drive Wheel
24	105420	Wheel Axle
25	A-086	Internal Ring Gear
26	101786	Band Idler Wheel
27	103219	Frame
28	101167	Take-Up Screw
29	100410-001	Thrust Bearing
30	101162	Take-Up Support
31	100004-015	Cap Screw - 5/16-18 x 3/4 Hex Head
32	A-046	Wheel Slide Block Guide
33	100004-013	Cap Screw - 5/16-18 x 5/8 Hex Head
34	101171	Slide Block
35	101770	Tension Spring
36	101163	Spring Tension Nut
37	A-010	Wheel Adjusting Block
38	102360	Spacer
39	101403	Tension Gauge Block
40	100001-011	Machine Screw - #8-32 x 1/2 Flat Head
41	A-049	Blade Guard
42	100063	Thumb Screw - 1/4-20 x 1/2
43	100024-003	Wing Nut
44	102905-001	Stud - 5-3/16 Long
45	102905-002	Stud - 5-11/16 Long
47	103228	Idle wheel guard
	105425	Wheel Ass'y Comp. - Idler - Incl. Items 20, 21, 22, 24 and 26
	105424	Wheel Ass'y Comp. - Drive - Incl. Items 20 thru 25

BLADE GUIDES AND DASH POT DETAILS



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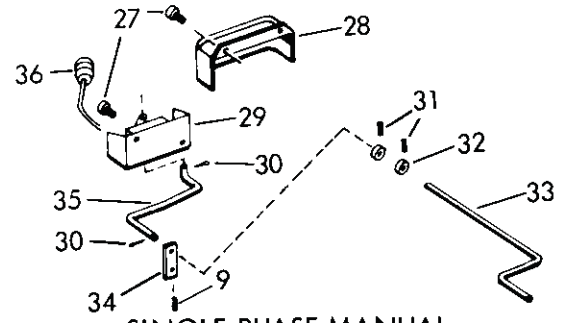
BLADE GUIDES AND DASH POT DETAILS

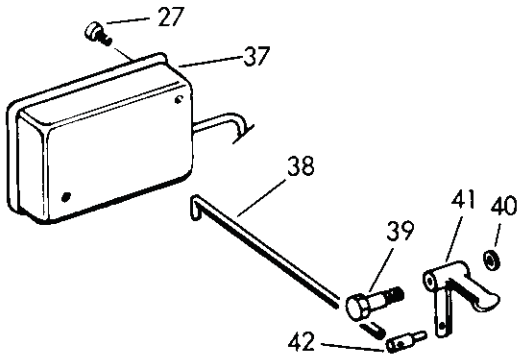
PARTS LIST

REF NO.	PART NUMBER	DESCRIPTION
1	100004-015	Cap Screw - 5/16-18 x 3/4 Hex Head
2	101776	Clamp
3	101775	Spring
4	101777	Washer
5	100004-018	Cap Screw - 5/16-18 x 1 Hex Head
6	100025-002	Lock Washer - 5/16
7	101783	Frame Ratchet
8	101784	Pivot Bar
9	M-105	Ratchet Rod Lever
10	100033-010	Set Screw - 5/16-18 x 1/2
11	M-107	Collar
12	100034-001	Set Screw - 1/4-20 x 3/16
13	A-081	Ratchet Dog
14	M-155	Dash Pot Upper Stud
15	100017-003	Hex Nut - 3/8-16
16	M-144	Piston Rod End
17	101524	Outside Tube
18	101527	Piston Rod
19	M-166	Cup Leather
20	100070	Cup Washer
21	M-148	Spring
22	101523	Inside Tube
23	M-147	Dash Pot Lower Stud
24	100004-016	Cap Screw - 5/16-18 x 7/8 Hex Head
25	A-027	Leg Bracket (Dash Pot)
26	M-198	Blade Brush Bracket
27	100017-001	Hex Nut - 1/4-20
28	M-425	Blade Brush Angle
29	M-426	Blade Brush
30	100073-003	Bolt - 1/4-20 x 1/2
31	A-023	Frame Ratchet Bracket
32	100004-023	Cap Screw - 5/16-18 x 2 Hex Head
33	100020-005	Hex Nut - 5/8-11 Self Locking
34	100219-001	Hose Clamp
35	102617	Adapter
36	100226	Needle Valve
37	101670	Coolant Nozzle
38	100246-001	Pipe Strap
39	100000-018	Machine Screw - 10-32 x 3/8 Round Head
40	105335-001	Hand Wheel & Screw
41	101781	Roller Guide Bracket
42	100029-002	Flat Washer - 1/4
43	101300	Eccentric Axle Nut
44	M-156	Cap Screw - 5/16-18 x 7/8 Thin Head
45	M-091	Roller Support
46	100030-004	Flat Washer - 5/16 S.A.E.
47	100406-001	Ball Bearing
48	101298	Roller Axle
49	100097-001	Flat Washer - 5/16
50	100417-001	Ball Bearing
51	B-043	Roller Axle
52	B-109	Eccentric Roller Axle
53	M-092	Roller Adjuster (includes set screws #54 & 55)
54	100034-005	Set Screw - 5/16-18 x 3/4
55	100034-006	Set Screw - 5/16-18 x 7/8
	101779	Roller Guide Ass'y - Drive End - Incl. Items 5 & 40 thru 55
	101797	Roller Guide Ass'y - Idle End - Incl. Items 5 & 40 thru 55
	101799	Roller Support Ass'y - Incl. Items 43 and 45 thru 52
	M-309	Blade Brush Ass'y - Incl. Items 26 thru 30
	M-301	Dash Pot Ass'y . - Incl. Items 16 thru 22
	101526	Piston Rod Ass'y - Incl. Items 18 thru 21

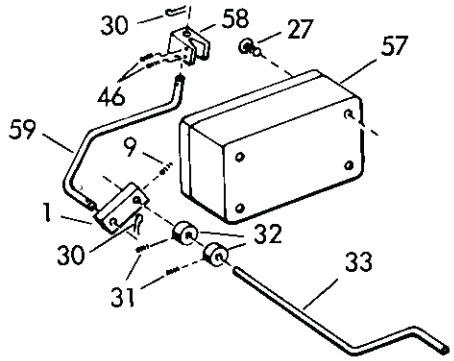
SWITCH, MOTOR AND GEAR CASE DETAILS



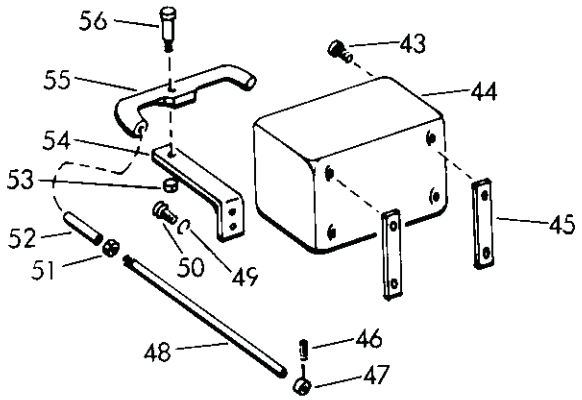
SINGLE PHASE MANUAL



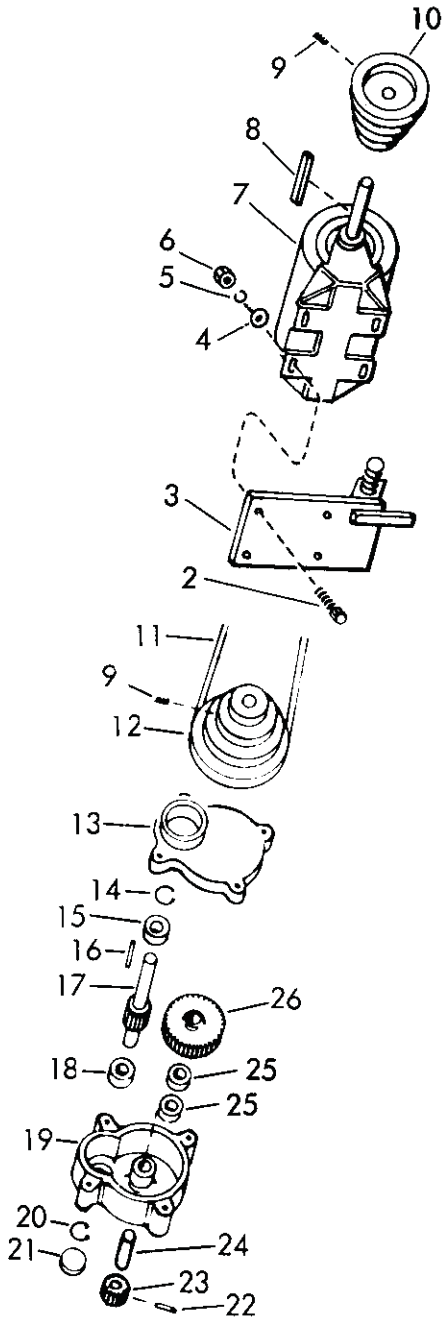
THREE PHASE MANUAL - CUTLER-HAMMER



THREE PHASE MANUAL - ALLEN-BRADLEY



SINGLE & THREE PHASE MAGNETIC



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SWITCH, MOTOR AND GEAR CASE DETAILS

REF NO.	PART NUMBER	DESCRIPTION
1	101734-001	Lever Arm
2	100004-016	Cap Screw - 5/16-18 x 7/8 Hex Head
3	105330	Motor Mount
4	100029-003	Flat Washer - 5/16
5	100025-002	Lock Washer - 5/16
6	100017-002	Hex Nut - 5/16-18
7		1/2 H.P. Motor - Give Complete Electrical Specs.
8	100056-013	Square Key - 3/16 x 3/16 x 1-3/8
9	100034-003	Set Screw - 5/16-18 x 3/8
10	101172-001	Motor Pulley - 4 Step
11	100066-005	"V" Belt
12	101156	Pulley - Driven - 4 Step
13	101291	Gear Case Cover
14	100068-002	Snap Ring
15	100414-003	Ball Bearing
16	100056-015	Square Key - 3/16 x 3/16 x 1-7/8
17	101187	Pulley Shaft and Pinion
18	100404-002	Ball Bearing
19	M-013	Gear Box
20	100068-001	Snap Ring
21	100072-001	Expansion Plug
22	100180-001	Coiled Spring Pin
23	101645-FP	Drive Pinion
24	101644 SERV	Drive Shaft
25	100404-001	Ball Bearing
26	101286	Driven Gear
27	100000-024	Machine Screw - 1/4-20 x 3/8 Round Head
28	101736	Switch Shield
29	101593	Switch - Single Phase - Give Electrical Specs.
30	100050-001	Cotter Pin - 1/16 x 1/2
31	100034-001	Set Screw - 1/4-20 x 3/16
32	M-107	Collar
33	101728	Switch Lever
34	101734	Lever Arm
35	101735	Switch Rod
36	100755-001	Cord and Plug - For 110V Coolant Only
37	101420	Switch - Three Phase - Give Electrical Specs.
38	101705	Switch Rod
39	M-034	Trigger Axle
40	100030-004	Flat Washer - 5/16 S.A.E.
41	M-029	Switch Trigger
42	101530	Switch Rod Post
43	100000-025	Machine Screw - 1/4-20 x 1/2 Round Head
44	100648	Magnetic Starter - Single Phase - Give Electrical Specs.
	100649	Magnetic Starter - Three Phase - Give Electrical Specs.
45	101727	Mounting Bracket
46	100034-009	Set Screw - #10-32 x 1/4
47	101627	Collar
48	101725	Switch Rod
49	100025-001	Lock Washer - 1/4
50	100004-005	Cap Screw - 1/4-20 x 5/8 Hex Head
51	100015-008	Hex Nut - #10-32
52	M-295	Coupler
53	100017-001	Hex Nut - 1/4-20
54	101630	Lever Bracket
55	101628	Switch Lever
56	101629	Stud
57	100670-004	Switch - Three Phase - Give Electrical Specs.
59	105346	Trigger Block
59	103227	Switch Rod
	155132	Gear Case Ass'y Comp. - Incl. Items 13 thru 26