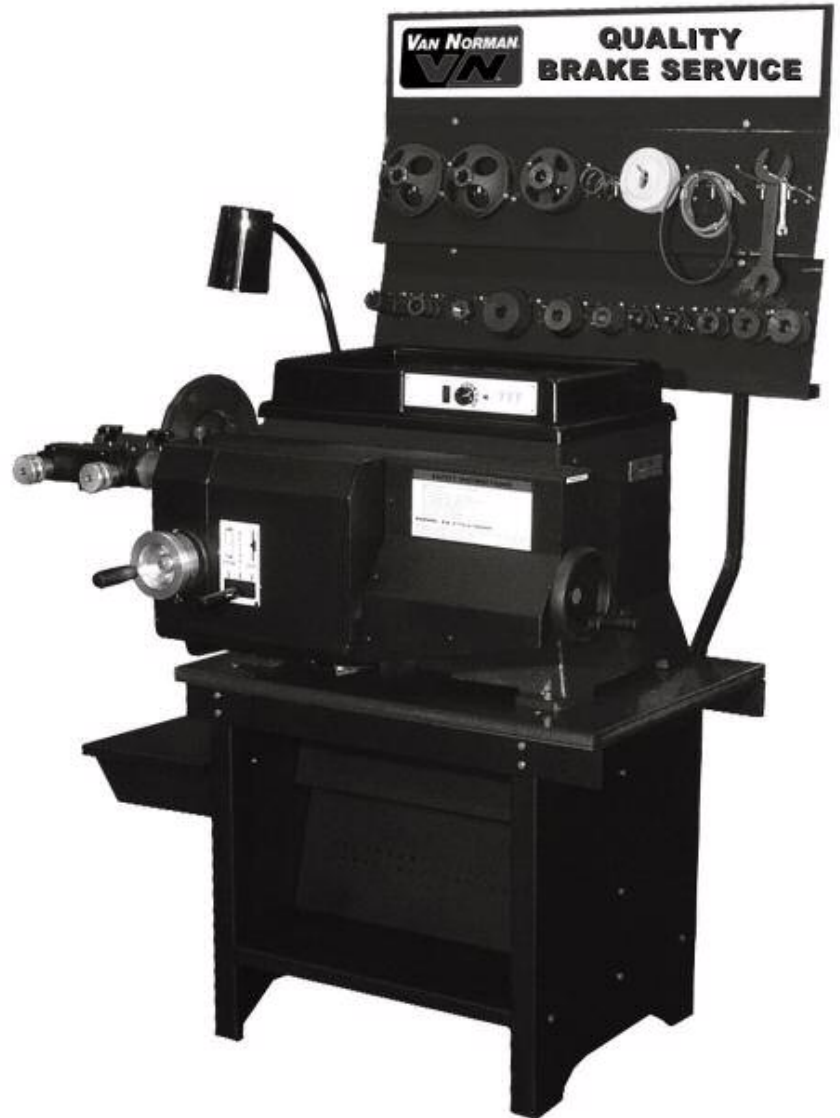




777
Heavy Duty
Combination
Brake Lathe



Instruction Manual and Parts List

Van Norman

500 57th St., Marion, IA 52302

888-855-1789

319-377-9101 (FAX)

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Equipment specifications, options, and accessories subject to change without notice.

RECEIVING SHIPMENT

Upon taking delivery of your machine, carefully inspect the assembly before removing the crating and packing materials.

If evidence of damage exists, contact the shipper and Van Norman immediately. Although Van Norman is not responsible for damage incurred during transit, you will be provided assistance in preparation and filing of any necessary claims.

CAREFULLY READ THIS MANUAL BEFORE ATTEMPTING TO SET-UP OR OPERATE THIS MACHINE.

IMPORTANT NOTE

Always have your serial number ready when communicating with Van Norman regarding parts or service.

Keep this manual in a safe place.

Date Received _____

Serial Number _____

SAFETY FIRST

This manual has been prepared for the owner and those responsible for the maintenance of this machine. Its purpose aside from proper maintenance and operations is to promote safety through the use of accepted practice. READ THE SAFETY AND OPERATING INSTRUCTIONS THOROUGHLY BEFORE OPERATING THE MACHINE.

In order to obtain maximum life and efficiency from your machine; follow all the instructions in the operating manuals carefully.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Van Norman's policy of continuous improvement, changes to these specifications may be made at any time without obligation.



SAFETY INSTRUCTIONS

1. Read, understand and follow the safety and operating instructions found in this manual. Know the limitations and hazards associated with operating the machine.
2. Eye Safety: Wear an approved safety face shield, goggles or safety glasses to protect eyes when operating the machine.
3. Grounding the Machine: Machines equipped with three prong grounding plugs are so equipped for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle in accordance with national electrical codes and local codes and ordinances. A grounding adapter may be used. If one is used, the green lead should be securely connected to a suitable electrical ground such as a ground wire system. Do not cut off the grounding prong or use an adapter with the grounding prong removed.
4. Work Area: Keep the floor around the machine clean and free of tools, tooling, stock scrap and other foreign material and oil, grease or coolant to minimize the danger of tripping or slipping. Van Norman recommends the use of anti-skid floor strips on the floor area where the operator normally stands and that each machine's work area be marked off. Make certain the work area is well lighted and ventilated. Provide for adequate workspace around the machine.
5. Guards: Keep all machine guards in place at all times when machine is in use.
6. Do Not Overreach: Maintain a balanced stance and keep your body under control at all times.
7. Hand Safety: NEVER wear gloves while operating this machine.
8. Machine Capacity: Do not attempt to use the machine beyond its stated capacity or operations. This type use will reduce the productive life of the machine and could cause the breakage of parts, which could result in personal injury.
9. Avoid Accidental Starting: Make certain the main switch is in the OFF position before connecting power to the machine.
10. Careless Acts: Give the work you are doing your undivided attention. Looking around, carrying on a conversation and horseplay are careless acts that can result in serious injury.
11. Job Completion: If the operation is complete, the machine should be emptied and the work area cleaned.
12. Disconnect All Power and Air to Machine before performing any service or maintenance.
13. Replacement Parts: Use only Van Norman replacement parts and accessories; otherwise, warranty will be null and void.
14. Misuse: Do not use the machine for other than its intended use. If used for other purposes, Van Norman disclaims any real or implied warranty and holds itself harmless for any injury or loss that may result from such use.

ILLUSTRATION OF MACHINE

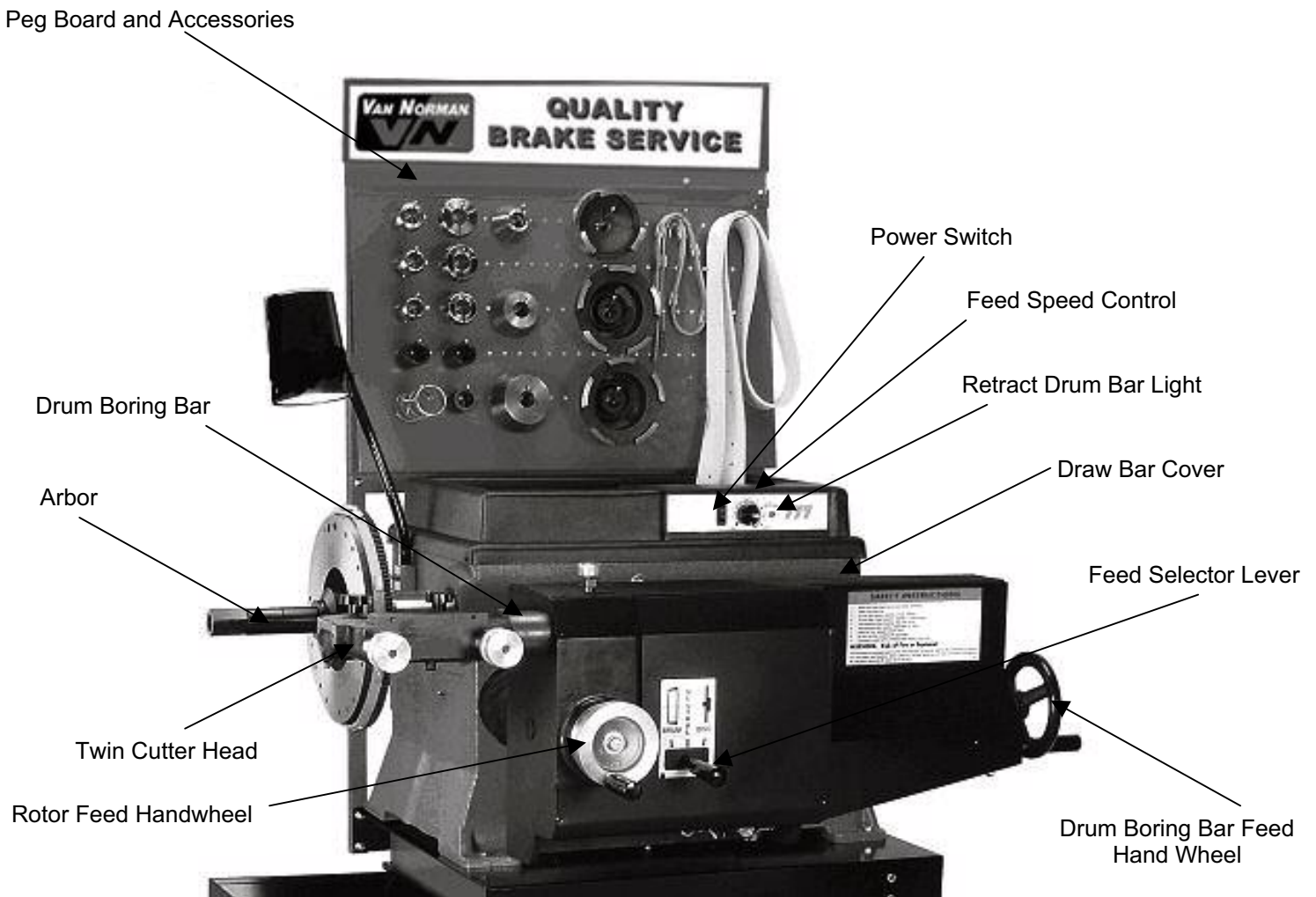


Figure 1

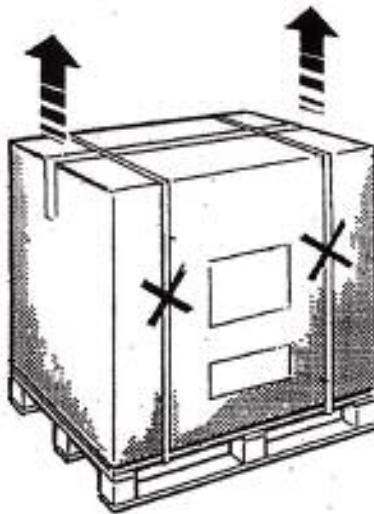
UNPACKING

Removing the Box:

After removing the straps, remove the cardboard cover and carefully inspect the machine for missing or damaged parts. If in doubt, contact your sales representative or Van Norman.

A box containing your accessories is packed within the box for the machine. Please open and inspect the accessories provided.

NOTE: Discard all non-biodegradable packaging at appropriate collection points. All packaging materials are potentially hazardous to children. Dispose of all materials in a safe method.



INSTALLATION

Installing the Brake Lathe

Unbolt the brake lathe from the pallet and place it on the assembled bench, using the lifting eye provided. Bolt the lathe to the bench using the hardware provided. After securing the lathe to the bench, remove the lifting eye from the lathe and store it for future use. Install the peg-board hooks and mount the accessories in a convenient location on the peg board.

Connecting Electrical Power: Plug the power cord into a standard grounded 115 volt, single phase receptacle protected by a 15 amp circuit breaker.

NOTE: Operation of other equipment on the same circuit as the brake lathe could result in circuit breaker tripping under normal operation.

Installing the Arbor:

1. Loosen the top screw in the draw bar cover and swing the cover down to expose the draw bar nut. (Refer to Figure 1)
2. Using a clean lint free cloth, wipe the arbor and the spindle taper to remove any debris, dust, or metal chips from the mating surfaces.
3. Hold the arbor in the spindle bore while hand tightening the draw bar nut.
4. Snug the draw bar nut with a wrench, slightly tighter than hand tight.

CAUTION: Do not over-tighten the draw bar nut. The arbor has a self-locking taper and could be very difficult to remove if over-tightened.

SPINDLE SPEED ADJUSTMENT

- Disconnect the power to the lathe.
- Release the belt tension by turning the hex nut located on the rear side of the lathe in a clockwise direction until the motor swings over center.
- The belt position nearest the door is used for turning most domestic passenger car and truck rotors and drums from six inch to twelve-inch diameters.
- If chatter cannot be controlled with rotor or drum bands, using a low spindle may be effective.
- The belt position nearest the door gives a spindle speed of approximately 188 RPM.
- The belt positioned in the middle of the pulley gives an approximate spindle speed of 117 RPM.
- The belt position farthest from the door opening gives a spindle speed of approximately 85 RPM.



ROTOR MOUNTING

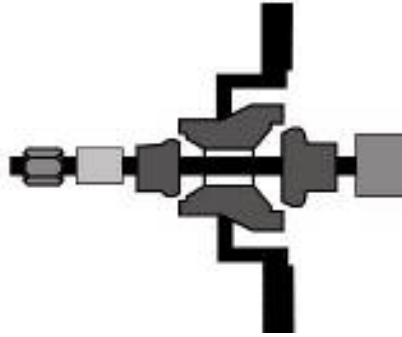
The spacers, cones, collets and adapters supplied with your lathe will allow you to recondition most rotors on today's automobiles. Some automobiles and trucks will require special optional adapters. You may contact your Van Norman distributor for information on these special adapters.

- A. 1" Arbor
- B. Arbor Nut
- C. Spacer
- D. Spring

- E. Clamping Cup (typical)
- F. Centering Cone
- G. Collet (typical)

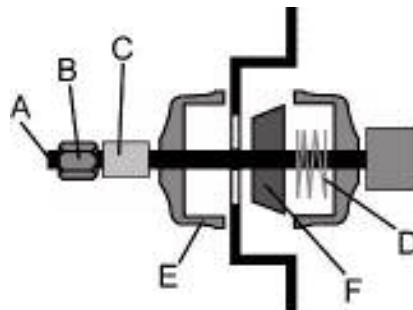
Hubbed Rotors

Collets fit in the bearing races and various spacers fill out the shaft so the arbor nut can be tightened.



Hubless Rotors

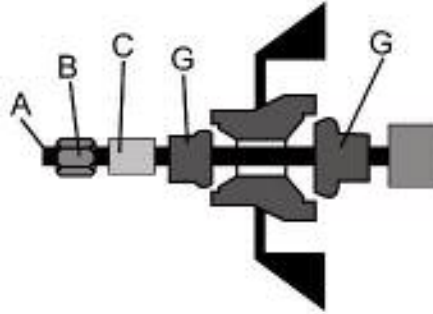
The largest clamping cup that will fit on the cleaned, machined surface of the rotor is mounted first with the spring and cone. The largest clamping cup that will fit on the flat surface is placed on the outside of the rotor. Spacers then fill the remainder of the arbor to allow tightening of the arbor nut.



DRUM MOUNTING

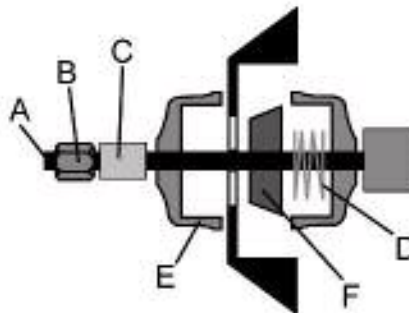
Hubbed Drums

Collets are placed in the bearing races and various spacers fill the remaining arbor to allow tightening of the arbor nut.



Hubless Drums

The largest clamping cup that will fit on the machined or flat surface of the drum is placed on the arbor first, followed by the spring, centering cone, and then the drum. The largest clamping cup that will fit on the flat part of the outside of the drum is installed next. Spacers fill the remainder of the arbor to allow tightening of the arbor nut.



DISC RESURFACING

Step 1

Using a micrometer, check the thickness of the rotor to determine serviceability. If the rotor thickness is less than the minimum thickness as specified by the manufacturer, or truing would result in a thickness less than the manufacturer's specifications, the rotor should be discarded and replaced with a serviceable rotor.

NOTE: The minimum thickness is cast into the inner area of the rotor.

Step 2

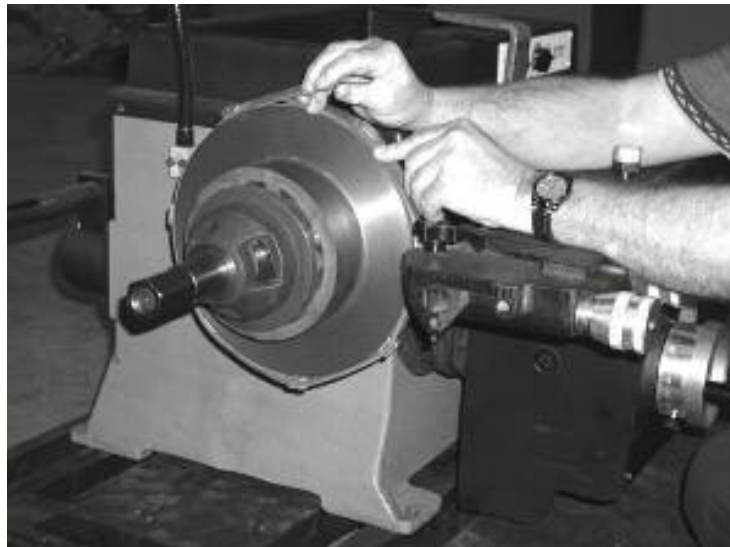
Mount the rotor on the arbor using proper adapters and spacers. Refer to the mounting diagrams on Page 8.

Step 3

Place a silencer band around the rotor to reduce "chatter".

Step 4

Rotate the twin cutter into cutting position, allowing the detent bolt to align into position, then tighten bolt. Roughly align the twin cutter on center. Position the twin cutter left or right to assure that the left and right cutter will be able to cut the full extent of both sides of the rotor.



CAUTION: Over-tightening of the detent bolt may cause damage to the detent bolt or the twin cutter.

DISC RESURFACING (continued)

Step 5

Set the feed speed control to the desired speed.

NOTE: For most cars and light trucks, it is not necessary to do a rough cut. If you plan to remove less than .030 of an inch from each side of the rotor, set the feed speed for the desired finish cut and adjust the depth of cut to assure truing without exceeding the minimum thickness limits.

Step 6

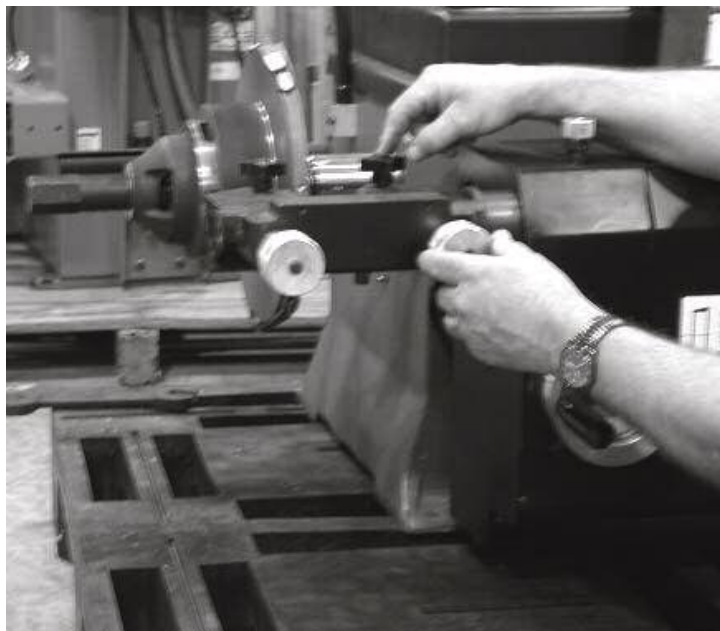
Position the power switch to the “On” position. The spindle and rotor will start to turn.

Step 7

Turn the tool bit controls (outside knurled portion of the micrometer dials) until the tool bits just contact the disc surface. Rotate the inside knurled part of the micrometer dials to zero. Move the tool bits away from the face of the disc. Then move the tool bits in toward the hub of the disc until they reach the point at which the rotor face begins.

Step 8

Determine the depth of cut needed to complete the rotor truing in a single pass up to .030 of an inch per side. Set the cutters and lock them with the black lock knobs located above the tool bit holders.



NOTE: To extend tool bit life, cut depth should not be less than .004 of an inch per side.

DISC RESURFACING (continued)

Step 9

Shift the feed selector handle to “DISC”. The disc feed will start if the drum boring bar is fully retracted. If the disc feed does not work and the “Retract drum bar” light is illuminated on the control panel, retract the drum boring bar until the light extinguishes and the disc feed will automatically start.



Step 10

After the cutters have cleared the outer edge of the rotor, place the feed selector handle to the neutral position. The feed will automatically stop. Turn the power switch to “Off”. Check the rotor to see if further truing is required. If not, remove the rotor from the arbor.

DRUM RESURFACING

Before attempting to mount or service drums, loosen twin cutter detent bolt and pivot cutter down. Re-tighten detent bolt.

Step 1

Measure the inside diameter of the drum to determine if the drum is serviceable in accordance with the manufacturer's specifications. Replace the drum if you determine that turning would result in exceeding the maximum allowed diameter.

Step 2

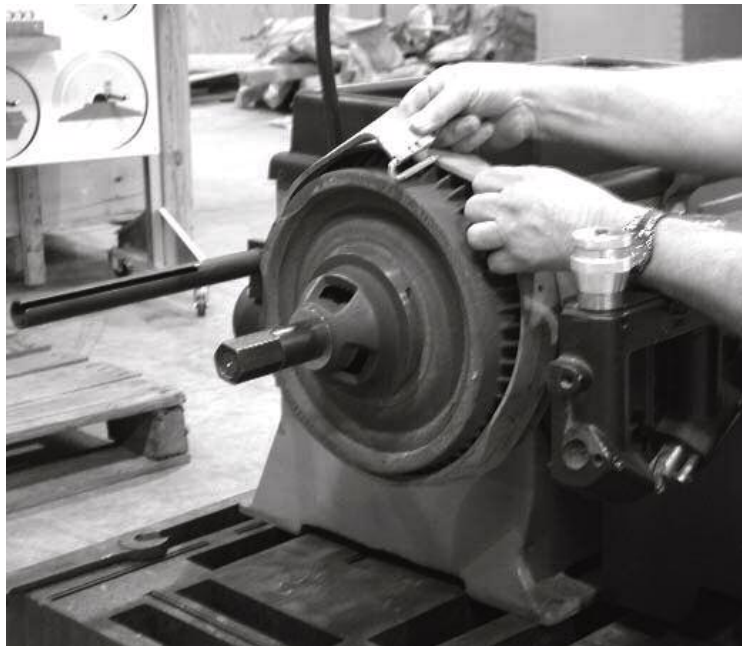
Mount the drum on the arbor using proper adapters and spacers as illustrated in the drum mounting instructions on Page 9.

Step 3

Wrap the drum silencer band around the drum and secure it by sliding the buckle finger under the layer of the band.

Step 4

Place the power switch in the "On" position. The spindle and drum will begin rotation. Set the feed control switch to a position that will result in the desired finish.



Step 5

NOTE: If less than .030 of an inch cut depth is required to true the drum, it is not necessary to do a rough cut. Set the feed speed for the desired finish and complete the cutting job as a single pass.

With the feed selector handle in the neutral position, manually feed the drum boring bar into the drum opening until the cutter is over the pad-worn area near the opening of the drum.

DRUM RESURFACING (continued)

NOTE: If the lip of the drum is high enough above the worn surface to require more than a .030 of an inch cut to complete the resurfacing, the lip should be removed with a rough cut.

Turn the rotor feed handwheel counter clockwise until the tip of the cutter touches the surface of the drum. Set the index sleeve to zero and tighten the lock screw. Slowly feed the boring bar into the drum until the cutter reaches the rear of the drum. Slowly adjust the cut depth until the desired cut depth is reached.

Position the feed lever to the "Drum" position. The drum boring bar will automatically start feeding. Let cutting continue until the boring bar clears the edge of the drum.

Step 6:

Return the feed selector handle to "Neutral" and turn the power switch to "Off".



SPECIAL HANDLING INSTRUCTIONS FOR HUBLESS ROTORS

To ensure proper operation of the Lathe, the arbor and all adapters must be clean and free of burrs and nicks. This is especially important when machining hubless rotors. Care must be exercised to assure that:

1. All contact surfaces on the arbor, the centering cone, and the clamping cups are clean.
2. The centering cone and clamping cups are free of nicks and burrs. If contact surfaces are not smooth and in proper relationship to each other, hone with a flat combination stone to correct the condition or replace the item with a serviceable one.
3. The arbor runout is no more than .001 of an inch. The arbor and spindle taper must be clean prior to installing the arbor. Draw the arbor snugly, but not tight into the spindle with the taper locking bar. If an arbor becomes bent it must be replaced.
4. The mounting surfaces of the rotor are clean and free of high spots. High spots may be eliminated by grinding, filing or sanding.
5. Typical mounting instructions are followed. Proper mounting is very important to assure a "new rotor finish".

OPERATING MAINTENANCE

Keep the machine and your working area clean. Do not use compressed air to remove debris from the machine. Foreign material may be propelled into the air and onto the operator or bystanders. Damage to the machine can also occur.

1. All machines surfaces should be cleaned with a light oil to prevent rusting.
2. To clean the drum boring bar, extend it fully and wipe it with a clean cloth. Inspect the surface of the boring bar for scratches, nicks and dings. If any are found remove them with fine sandpaper. Apply a thin coating of grease to the boring bar and retract the greased bar into the housing. Maintain a thin coat of grease on the boring bar at all times.
3. The plastic cover and painted surfaces can be cleaned with soap and water. However, do not allow water to accumulate inside or around the machine.
4. Grease the main support shaft periodically using a grease gun on the left side of the main housing. Over-servicing will result in an accumulation of grease under the cloth boot.

MAINTENANCE

Your Van Norman machine is designed as a minimum maintenance product. However some basic maintenance will assure that it will continue to operate in a satisfactory manner.

LUBRICATION

1. The Feed Nut requires lubrication every two months or 500 rotors, but if the feed screw becomes noisy, lubricate the fitting immediately with the recommended lubricant or equivalent. (Zerk fitting on feed nut on the rear of the machine)
2. The main support shaft requires lubrication every two months (Zerk fitting located on the left side of the casting below the spindle)
3. Lubricate the feed casting support shaft every six months (located below the feed control housing)

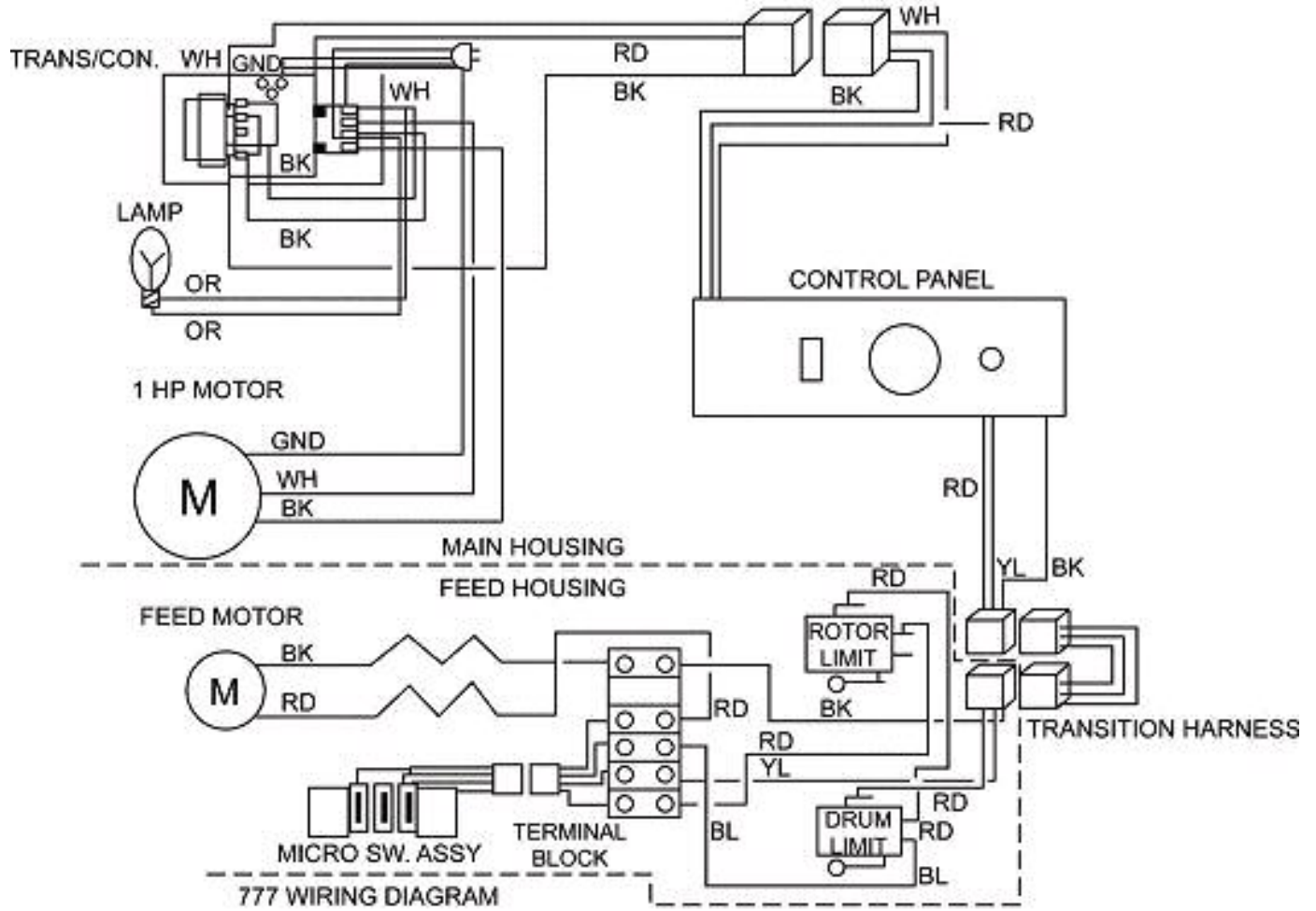
Use A Multi-purpose lubricant such as Texaco Marfax MPII or a suitable substitute.

CLEANING

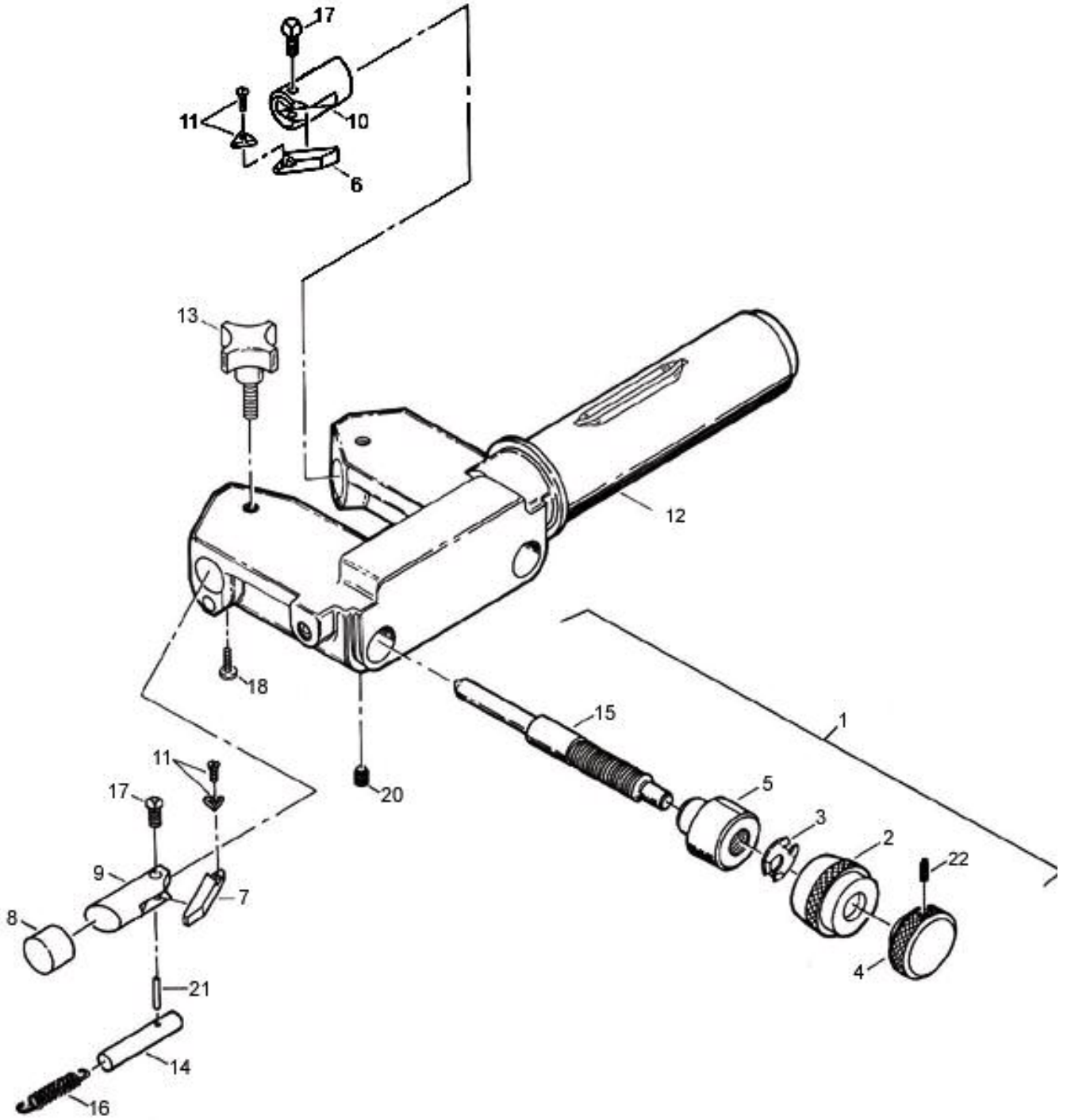
- Never use compressed air to remove metal chips from the machine. Always brush the chips away. A two-inch wide paintbrush works well.
- Use a mild soap or appropriate cleaner to clean painted surfaces. Never wash down the machine with water.

CAUTION: Unplug the machine to prevent any accidental operation or electrical shock during cleaning and or maintenance.

WIRING DIAGRAM



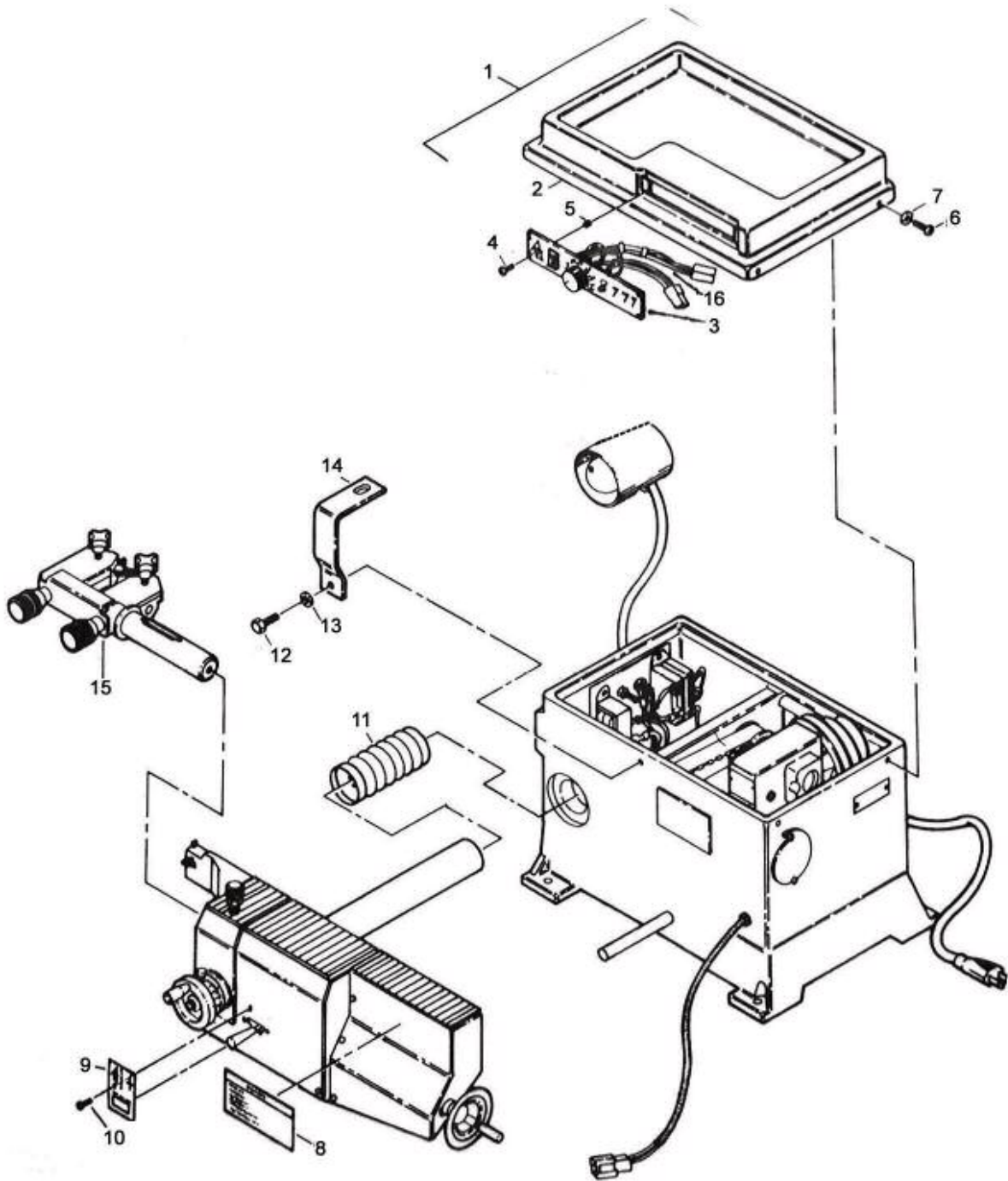
TWIN CUTTER ASSEMBLY (Part # 777-0050-30)



TWIN CUTTER ASSEMBLY (Part # 777-0050-30)

Item	Part #	Description	Qty
1	777-3650-13	Micrometer Assembly	1
2	777-3650-10	Micrometer Dial	2
3	777-2053-47	Finger Washer	2
4	777-2750-09	Micrometer Knob	2
5	777-2750-11	Dial Plug	2
6	777-2055-88	Right Tool Tip Holder	1
7	777-2055-86	Left Tool Tip Holder	1
8	777-2057-12	Cap Plug	2
9	777-2755-90	Tool Holder Left	1
10	777-2755-92	Tool Holder Right	1
11	777-0043-30	Tool Bit with Screw (4 pack)	1
12	777-3651-06	Twin Cutter Head	1
13	777-3651-60	Lock Knob Assembly	2
14	777-2751-34	Long Spring Holder	2
15	777-2750-38	Dial Rod	2
16	777-2053-40	Spring	2
17	000-0540-40	5/16 x 18 x 1/2 Sq. Hd SS	2
18	000-0163-09	10 x 32 x 3/4 Soc Hd CS	2
19	000-0482-91	10 x 32 x 1/4 Soc Cup Pt	2
20	000-0488-10	5/16 x 18 x 1/4" Soc Cup Pt	2
21	000-7204-48	3/16 x 1 3/8 Roll Pin	2
22	000-0471-00	8-32 x 1/4 Soc Hd SS	2

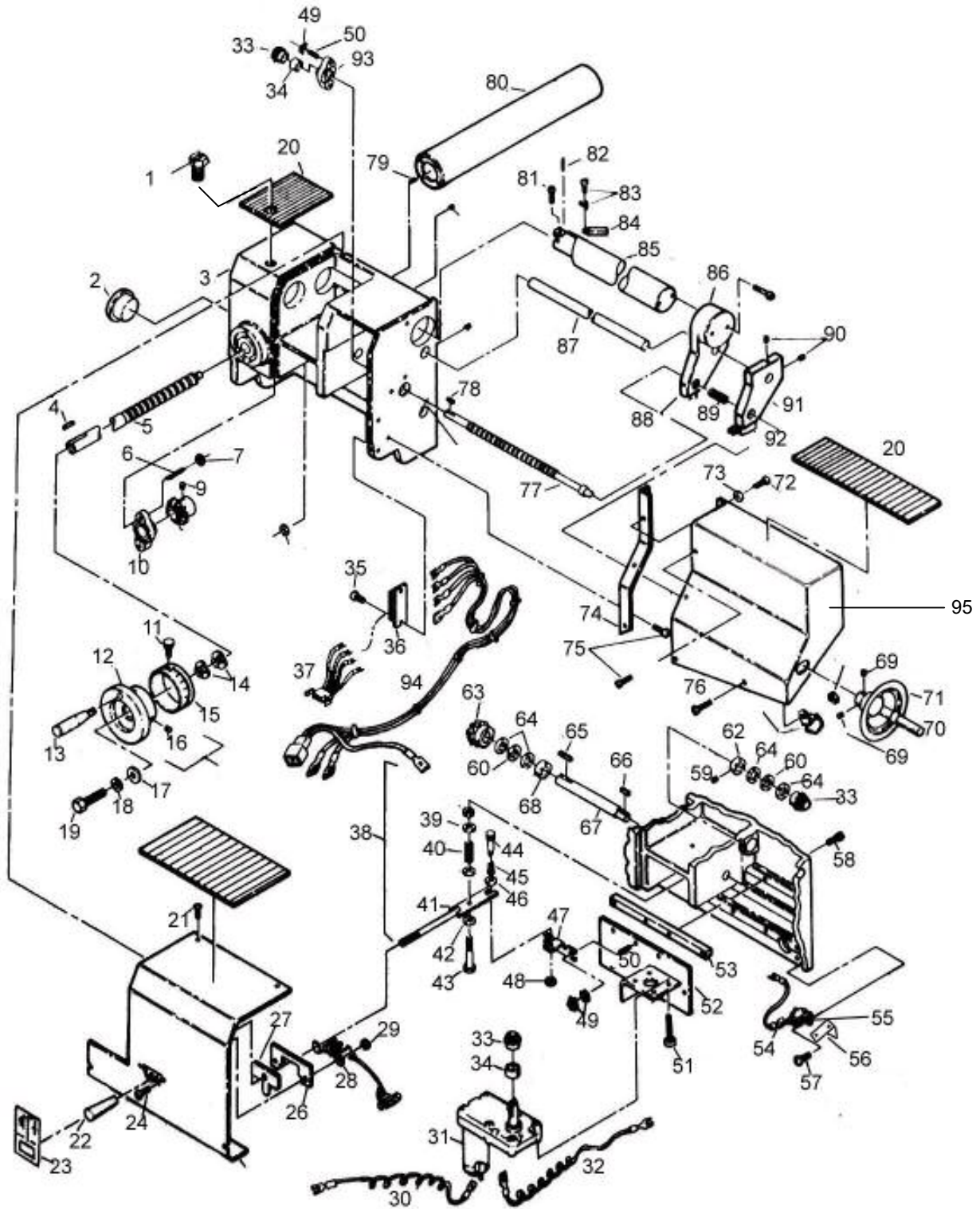
CONTROL PANEL/TOOL TRAY



CONTROL PANEL/TOOL TRAY

Item	Part #	Description	Qty
1	777-0058-16	Tool Tray with Control Panel Assembly	1
2	777-2051-01	Tool Tray - Top	1
3	777-2057-01	Control Panel - Complete	1
4	000-0340-47	4-40 x 3/8" Rd Hd MS	1
5	000-9734-40	EZ Lock Insert	1
6	000-0348-32	8-32 x 3/4" Pan Hd Screw	1
7	000-1154-80	#8 Lock Washer	1
8	777-2051-82	Caution Sticker	1
9	777-2057-43	Shift Decal	1
10	000-0345-18	8-32 x 5/8" Rd Hd MS	1
11	777-2053-36	Boot Assembly	1
12	000-0107-90	7/16-14 x 1 1/4" Hex Hd CS	1
13	000-1181-17	7/16" Lock Washer	1
14	777-2059-15	Lifting Hook	1
15	777-0050-30	Twin Cutter Assembly	1
16	777-2050-42	Wire Harness	1

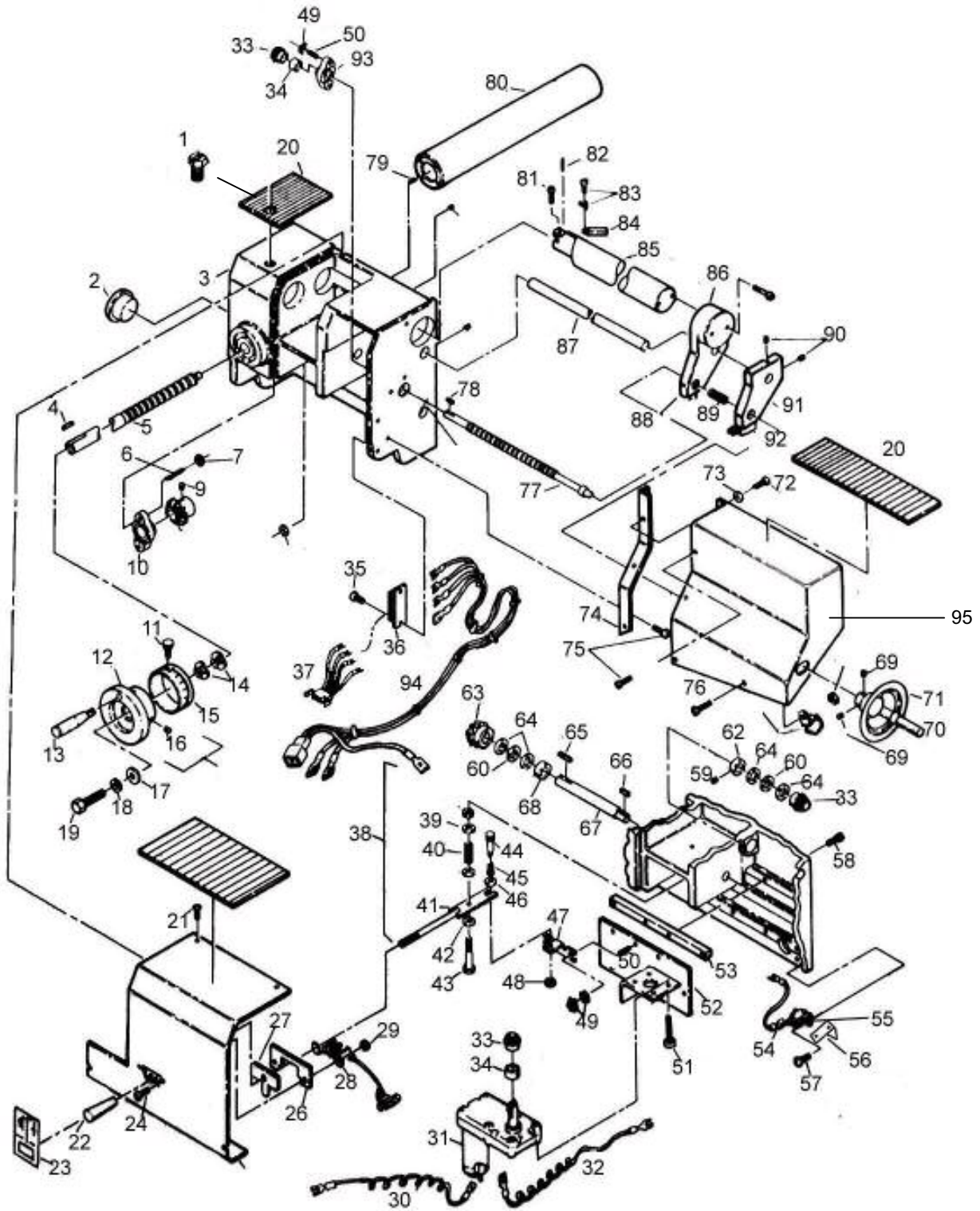
MAIN ASSEMBLY



MAIN ASSEMBLY

Item	Part #	Description
1	777-2751-12	Detent Lock Bolt
2	777-2057-12	Caplug
3	777-3751-02	Feed Housing
4	777-2051-38	Key
5	777-2752-08	Long Feed Screw
6	000-0165-43	¼-20 x 1 1/2 Soc Hd
7	000-1135-80	¼-20 Hex Flange Nut
8	000-0488-10	5/16-18 x ¼ Soc Cp Pt SS
9	777-2053-24	¾ Miter Gear
10	777-2053-30	¾ Flange Bearing
11	777-2057-44	Dial Sleeve Knob
12	777-3650-03	Handwheel
13	777-2050-06	Revolving Handle
14	777-2051-51	¾ Wave Washer W1004-011
15	777-3650-04	Index Sleeve
16	000-0488-10	5/16-18 x ¼ Soc Cp Pt SS
17	467-1520-45	7/16 Flat Washer
18	000-1181-17	7/16 Split Washer
19	000-0107-90	7/16-14 x 1 ¼
20	777-2059-33	Three Part Rubber Mat w/Perf
21	467-1581-20	8-32 x ½
22	777-2057-46	Tapered Plastic Handle
23	777-2057-43	Shift Decal
24	000-0340-50	4-40 x ¾ Rd Hd
25	777-2051-11	Casting Cover Feed Control
26	777-2059-31	Chip Cover Guide
27	777-2058-40	Chip Cover
28	777-2050-31	Micro Switch Assembly
29	000-1090-10	4 mm Nut
30	777-0050-32	Red Feed Motor Jumper Wire
31	777-2050-40	DC Feed Motor
32	777-0050-39	Black Feed Motor Jumper Wire
33	777-2053-26	½ Miter Gear
34	777-2757-04	Spacer .52 ID x .406 Length
35	000-0348-32	8-32 x ¾
36	777-2057-52	6 Pin Terminal Block
37	777-2050-37	4 Wire Connector
38	777-0052-32	Shift Lever Assy
39	000-1135-85	5/16 Hex Flange Nut
40	777-2053-45	Long Spring – Shift Lever
41	777-2752-30	Rod Lever Assembly – Blk Oxide
42	000-1150-37	5/16 Flat Washer
43	000-0104-55	5/16-18 x 3 ½
44	000-0598-85	5/16 Shoulder Bolt
45	777-2058-84	Short Spring-Shift Lever
46	000-1145-84	¼ Flat Washer
47	777-2052-26	Shift Lever Bracket
48	000-1135-80	¼-20 Flange Nut

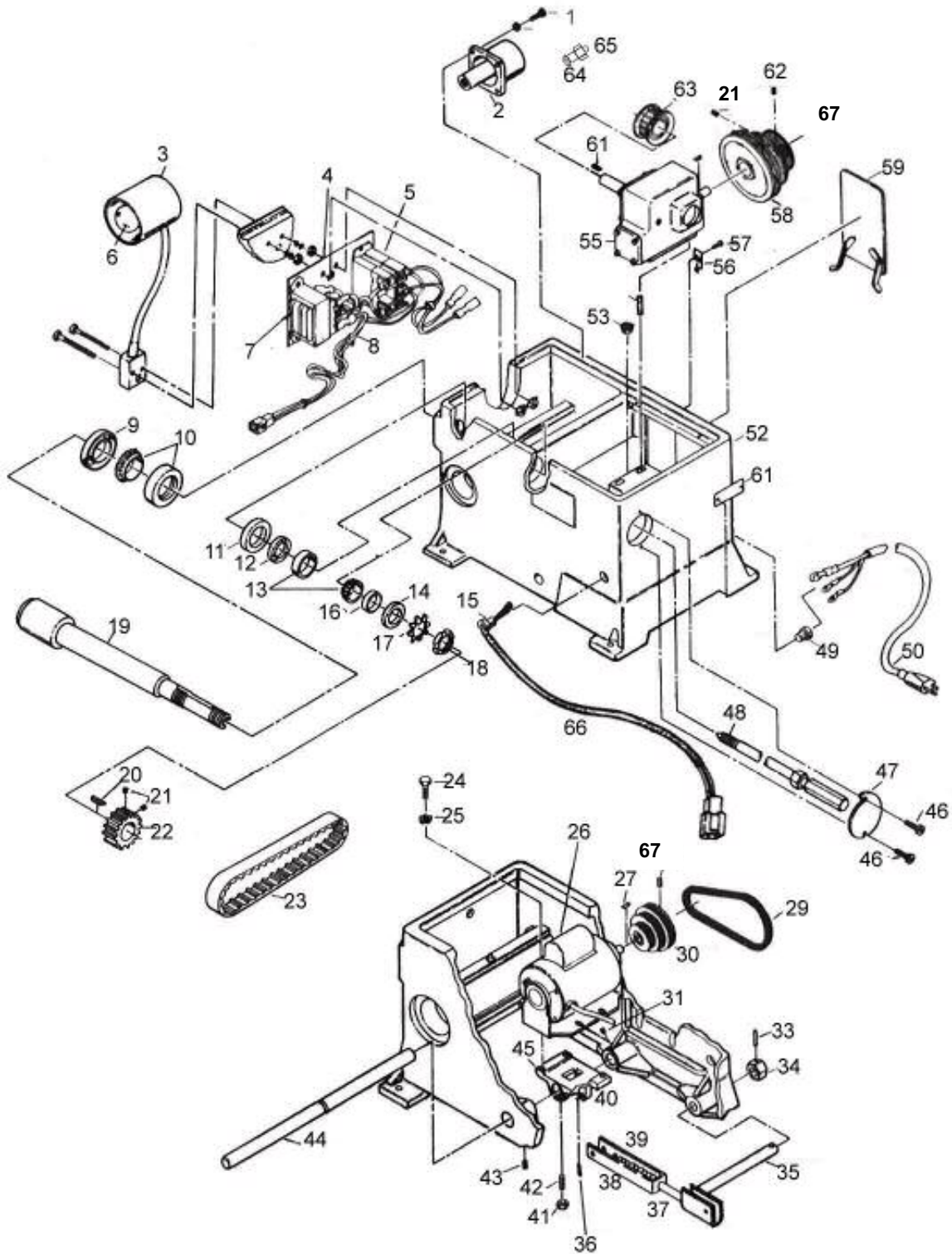
MAIN ASSEMBLY (continued)



MAIN ASSEMBLY (continued)

Item	Part #	Description
49	000-1135-80	¼-20 Flange Nut
50	000-0485-96	¼-20 x ¾ Soc Cup Pt
51	000-0163-09	10-32 x ¾ Soc Hd
52	777-2058-73	Feed Motor Mount Plate
53	777-2758-71	GIB
54	777-2050-35	Jumper Wire Assembly w/16AWG
55	777-2057-42	Microswitch
56	777-2058-75	Limit Switch Bracket
57	000-0340-50	4-20 x ¾ Rd Hd
58	000-0163-09	10-32 x ¾ Soc Hd
59	000-0488-10	5/16-18 x ¾ Soc Hd SS
60	777-2053-11	Needle Thrust Bearing
61	000-0488-10	5/16-18 x ¾ Soc Hd SS
62	777-2053-34	5/8 Set Collar
63	777-2053-25	5/8 Miter Gear
64	777-2053-10	Needle Thrust Washer
65	777-2051-40	Key ¼" Sq X 1" Long
66	777-2051-38	1/8 Sq x ¾ Lg Key
67	777-2752-00	Pinion Shaft
68	777-2053-34	5/8 Set Collar
69	000-0488-10	5/16-18 x ¼ Soc Cp Pt SS
70	777-2050-06	Revolving Handle
71	777-2050-05	Handwheel
72	453-1541-08	8-32 x ¼ Flat Hd
73	000-1154-08	#8 Finishing Washer
74	777-2059-13	Angle Support
75	000-0361-05	#10 Pan Hd
76	000-0348-32	8-32 x ¾ Slf Tp Screw
77	777-2752-11	Short Feed Screw
78	777-2051-38	1/8 Sq x ¾ Lg Key
79	000-0491-25	3/8-16 x 2 ½ Soc Hd SS
80	777-2752-02	Main Support Shaft
81	000-0540-40	5/16-18 x ½ Sqr Hd
82	000-7204-96	1/8 x ½ Roll Pin 12
83	777-0043-30	Inserts & Screws (4 Pack)
84	777-2055-84	Neg Rake Drum Tool Holder
85	777-2752-10	Boring Bar-See
86	777-3651-08	Large Feed Guide Machined
87	777-2752-09	Guide Shaft
88	777-2050-74	Switch Activator Tab
89	777-2053-48	Compression Spring
90	000-0488-10	5/16-18 x ¾ Soc Hd SS
91	777-3651-04	Small Feed Guide Machined
92	777-2057-42	Microswitch
93	777-2053-46	½ Flange Bearing
94	777-0059-67	Main Wiring Harness
95	7772059-12	Drum & Feed Screw Cover

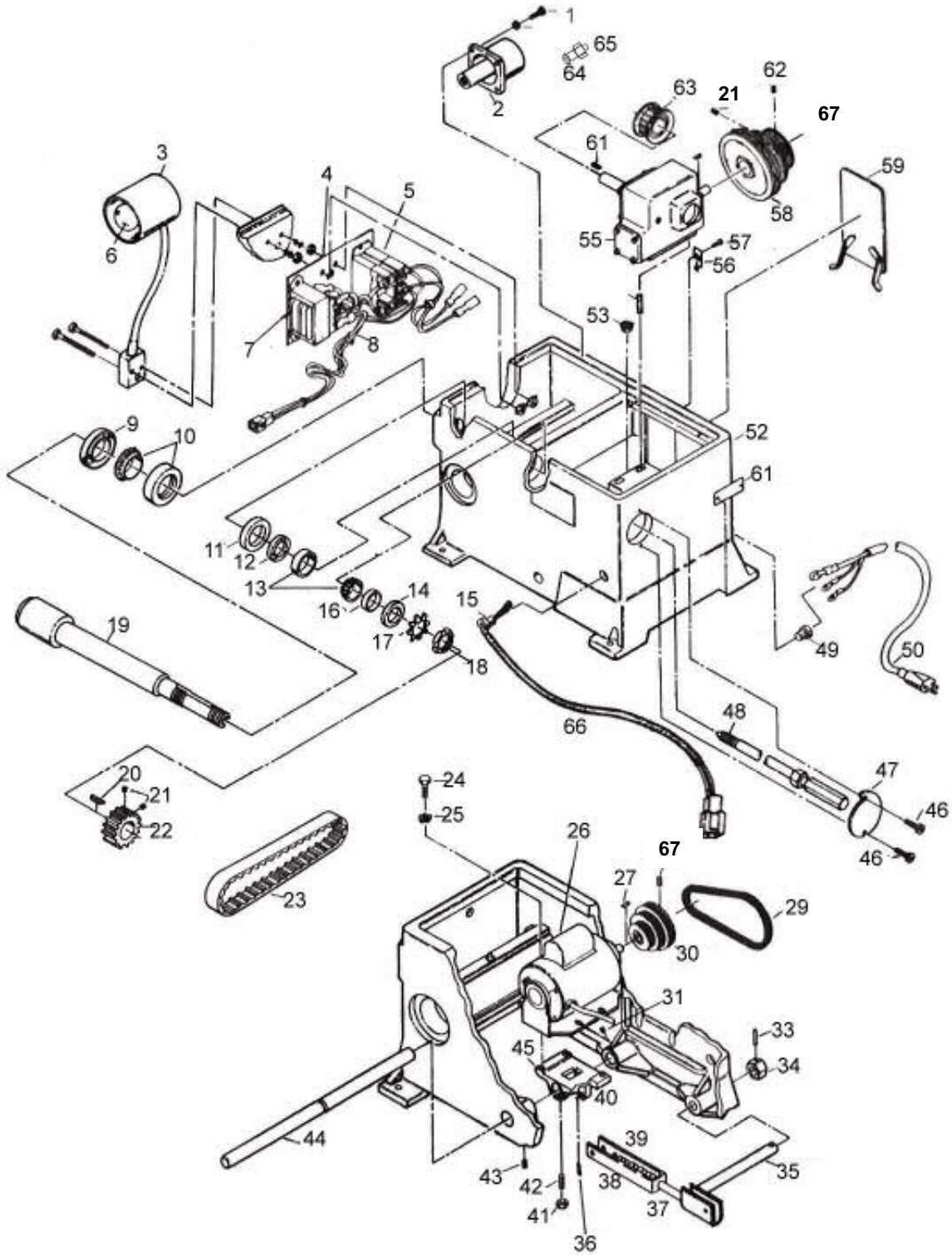
SPINDLE HOUSING



SPINDLE HOUSING

Item	Part #	Description
1	000-0168-02	5/16-18 x 1 Soc Hd CS
2	777-3651-05	Crossfeed Nut
3	777-2057-27	Lamp
4	777-2050-73	Contacto/Transformer Mount
5	777-2050-72	Contacto
6	804-1405-86	Light Bulb
7	777-2051-71	Transformer
8	777-2050-41	Contacto/Transformer Harness
9	777-2053-08	Lip Type Small Dia Seal
10	777-2053-02	Tapered Roller Bearing
11	777-2053-04	Seal
12	77-2053-05	Seal
13	777-2053-01	Tapered Roller Bearing
14	777-2053-03	Small Dia Oil Seal
15	777-2057-78	Strain Relief
16	777-2752-20	Pre-Load Tube
17	777-2057-83	Lock Washer
18	777-2053-07	Lock Nut
19	777-2752-01	Spindle Shaft
20	777-2051-40	¼ x 1 Key
21	000-0488-10	5/16-18 x ¼ Soc Cup Pt SS
22	777-2053-41	Timing Pulley – 1 ½ Bore
23	777-2053-43	Timing Belt
24	000-0116-73	5/16-18 x 1 Hex Hd CS
25	000-1135-85	5/16-8 Hex Nut
26	777-2059-85	1 HP 110/220V 1725 RPM
27	000-7301-30	3/16 x 1 Sq Key
28	000-0487-20	5-16-18 x 3/8 Soc Cup Pt SS
29	777-2053-44	Poly V Belt
30	777-2053-50	2.88 Polu V Pulley
31	000-0488-10	5/16-18 x ¼ Soc Cup Pt SS
32	777-2750-53	Tension Spring Assy
33	000-7204-48	3/16 x 1 3/8 Roll Pin
34	777-2750-60	Motor Tension Nut
35	777-2750-59	Locking Shaft Weldment
36	000-7205-18	1/8 x ¾ Roll Pin
37	777-2750-55	Tension Shaft
38	777-2750-56	Spring Holder
39	777-2050-57	Compression Spring
40	000-7103-60	5/16 x 1 ¼ Clevis Pin
41	000-1135-80	¼-20 Flanged Nut
42	000-0485-96	¼-20 x ¾ SSS
43	000-0487-20	5/16-18 x 3/8 Soc Cup Pt SS
44	777-2752-06	Feed Casting Support Shaft
45	777-3651-19	Motor Base
46	000-0348-32	8-32 x 3/8 Slf Tp SS
47	777-2751-62	Draw Bar Cover Print – Rev C
48	777-2753-65	Taper Locking Bar Assembly

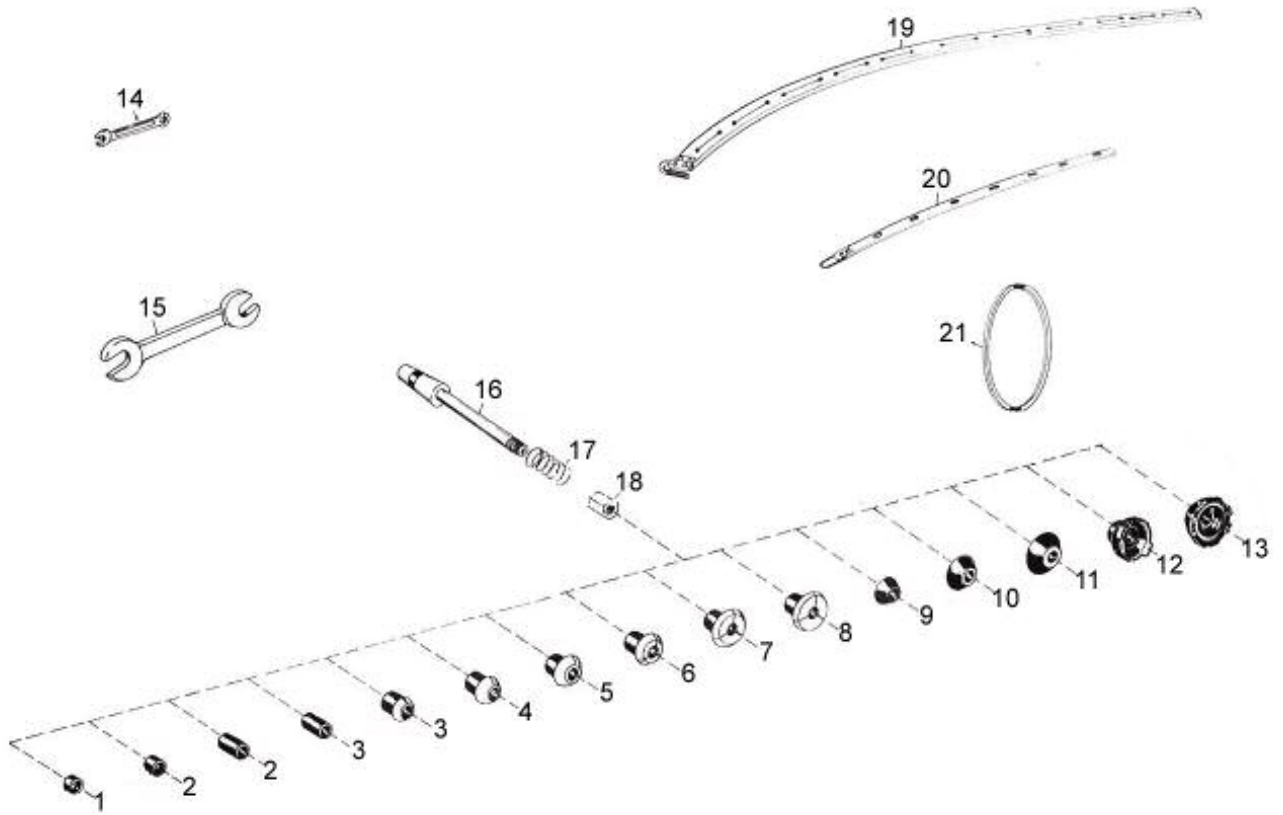
SPINDLE HOUSING (continued)



SPINDLE HOUSING (continued)

Item	Part #	Description
49	777-2057-78	Strain Relief
50	777-2058-86	Power Cord Assembly
51	777-2059-76	Electric & Serial Number Plate
52	777-3651-00	Main Housing Machined
53	000-1136-03	3/8-16 Flanged Nut
54	000-0491-25	3/8-16 x 2 1/2 Soc Cup Pt SS
55	777-2056-61	Worm Gear Reducer
56	777-2051-23	Door Latch
57	000-0348-32	8-32 x 3/8 Slf Tp SS
58	777-2053-51	6 Poly V Pulley
59	777-2051-22	Brake Lathe Door
60	777-2051-40	1/4 x 1 Sq Key
61	000-7301-30	3/16 x 1 Sq Key
62	000-0488-10	5/16-18 x 1/4 Soc Cup Pt SS
63	777-2053-42	Timing Pulley 1 Bore Alum
64	777-3651-10	Grease Nut
65	000-1918-09	Grease Zerk
66	777-2050-34	Transition Harness
67	000-0485-18	1/4-20 x 1/4 Soc Cup Pt SS

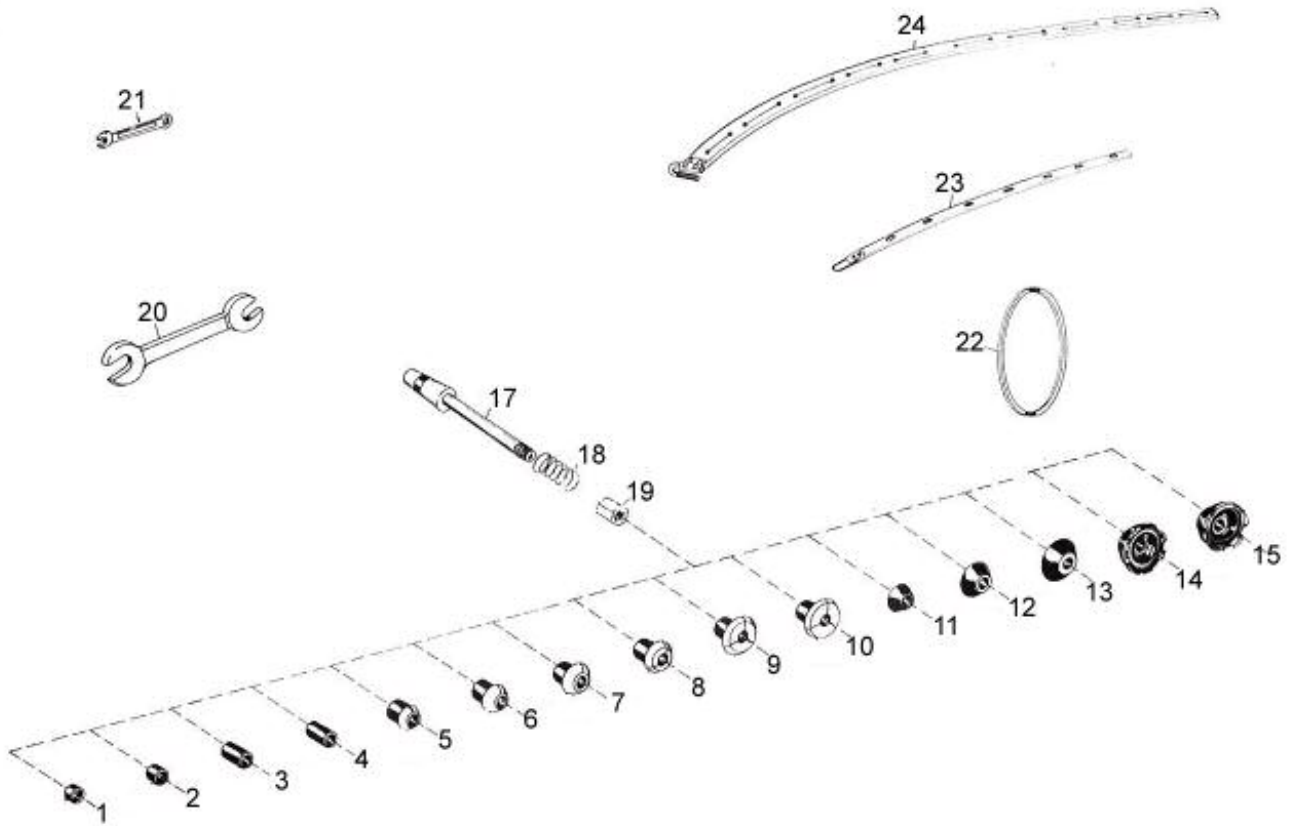
STANDARD ACCESSORIES



STANDARD ACCESSORIES

Item	Part #	Description	Req'd
1	777-2755-64	Spacer 1" x ½" Long	1
2	109-1032-09	Spacer 1" ID x 1" Long	2
3	109-1033-06	Spacer 1" x 2" Long	2
4	777-0503-14	Double End Collet	1
5	777-0503-24	Double End Collet	1
6	777-0503-34	Double End Collet	1
7	777-0503-44	Double End Collet	1
8	777-0503-54	Double End Collet	1
9	101-0236-05	Cone #1	1
10	101-0237-02	Cone #2	1
11	101-0243-00	Cone L	1
12	109-1012-06	Bell Clamp 4.68 OD	1
13	101-0235-40	Bell Clamp 5.81 OD	2
14	777-2054-35	Combination Wrench 8 MM	1
15	000-8700-21	1 ½ Arbor Wrench	1
16	777-2755-42	1" Arbor Shaft	1
17	777-2055-48	Spring 1.687 ID x 4 Long	1
18	102-1064-00	Arbor Nut 1-8 LH	1
19	777-2055-74	Drum Silencer Band BDT #80	1
20	108-1062-00	Band, Adj Vent Disc	1
21	108-1060-00	Solid Disc Dampener 6"-9"	1
N/S	777-2051-15	Wrench – Drum Lock	1
N/S	777-2057-44	Dial Sleeve Knob	1
N/S	777-2057-46	Tapered Plastic Handle	1

PREMIUM ACCESSORIES



PREMIUM ACCESSORIES

Item	Part #	Description	Req'd
1	777-2755-64	Spacer 1" x 1/2" Long	1
2	109-1032-09	Spacer 1" ID x 1" Long	2
3	109-1033-06	Spacer 1" x 2" Long	1
4	109-1033-06	Spacer 1" x 2" Long	1
5	777-2755-21	1.3 Collet	1
6	777-2755-22	1.5 Collet	1
7	777-2755-23	1.7 Collet	1
8	777-2755-24	2.0 Collet	1
9	777-2755-25	2.3 Collet	1
10	777-2755-26	2.5 Collet	1
11	101-0236-05	Cone #1	1
12	101-0237-02	Cone #2	1
13	101-0243-00	Cone L	1
14	109-1012-06	Bell Clamp 4.68" OD	1
15	101-0235-40	Bell Clamp 5.81" OD	2
17	777-2755-42	1" Arbor Shaft	1
18	777-2055-48	Spring 1.687 ID x 4 Long	1
19	102-1604-00	Arbor Nut 1-8 LH	1
20	000-8700-21	Arbor Wrench 1 - 1/2	1
21	777-2054-35	Combination Wrench 8 MM	1
22	108-1060-00	Solid Disc Dampener 6"-9"	1
23	108-1062-00	Band, Adj Vent Disc	1
24	777-2055-74	Drum Silencer Band BDT #80	1
N/S	777-2051-15	Wrench – Drum Lock	1
N/S	777-2057-44	Dial Sleeve Knob	1
N/S	777-2057-46	Tapered Plastic Handle	1
25	777-2751-15	Drum Lock Wrench 5/8"	1



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