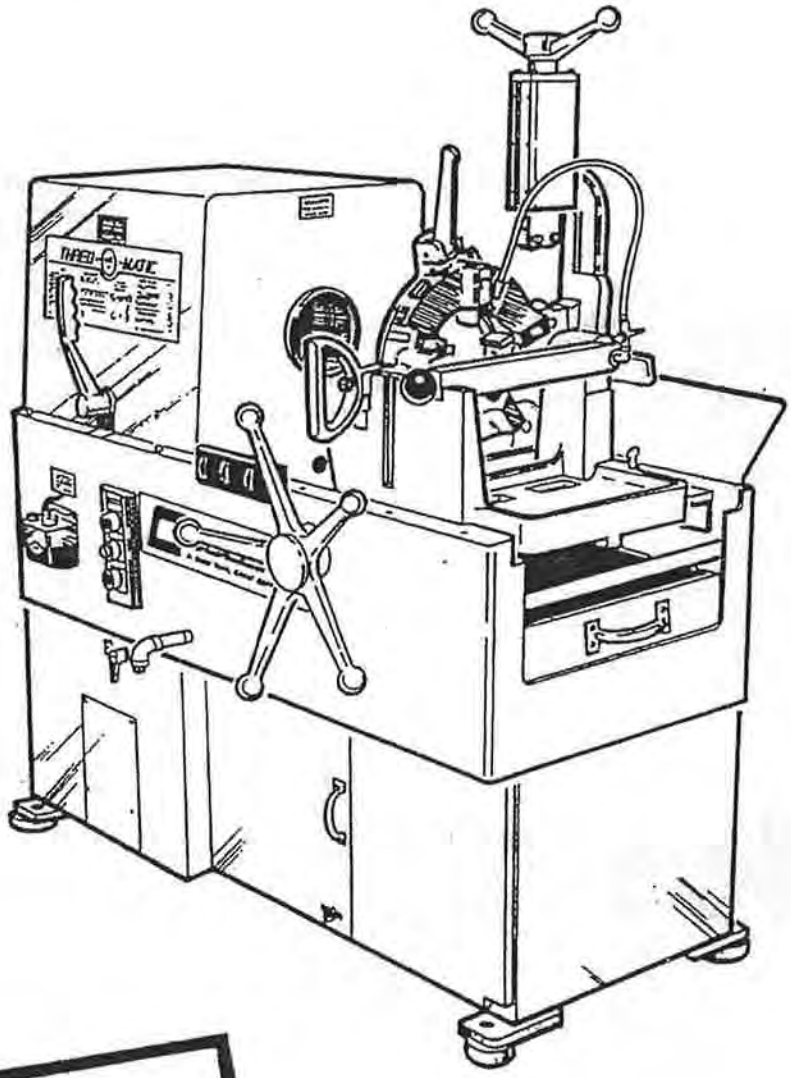
Manual: # 06940
Revision C, 09/02

Operator's Manual and Parts Catalog

THRED-O-MATIC ®

66-A



WARNING

Before operating this unit, read and understand the Operator's Manual. Become familiar with the potential hazards of this unit.

ROTHENBERGER

INDEX

OPERATOR SAFETY INSTRUCTIONS

WARNING: This metalworking machine is designed for threading, cutting, reaming, beveling and grooving pipe with accessories made or authorized by Rothenberger. Modifying machine in any way and/or using devices not made or authorized by Rothenberger can result in serious injury and void Rothenberger's warranty and liability.

REMEMBER:

* Operate machine from switch side only.
* Do not disconnect or block footswitch.
* Do not wear gloves, loose clothing or neckties.

1. **Read and understand the Instruction Manual.** Before operating or performing maintenance on this machine, read carefully the operator's manual. Become familiar with the machine's operations, applications and limitations. Be particularly aware of its specific hazards. Store the operator's manual in a clean area and always at a readily available location.
2. **Inspect the equipment.** Prior to starting the machine, check the movable parts for obstructions, such as rags, packing remnants, etc. Be certain that guards and machine parts are properly installed and secured.
3. **Prevent accidental startings.** Place switch in "OFF" position prior to plugging in machine.
4. **Ground the machine.** Be certain the machine is connected to an internally grounded electrical system.
5. **Keep work area clean.** Keep the work area adjacent to the machine clear of clutter for unobstructed movement of the operator. Remove all oil or coolant spills. Remove shavings from chip tray as required to maintain proper operating clearance.
6. **Use pipe supports.** It is mandatory to use floor mounted pipe stands for long, heavy work.
7. **Wear proper clothing.** Loose clothing can get easily tangled in moving parts. When operating machine, do not wear unbuttoned jackets, loose sleeve cuffs, gloves, neckties, long hair, etc. Safety glasses and shoes should be worn.
8. **Secure machine and work.** Make certain that the machine is bolted to a heavy work bench or proper stand.
9. **Always maintain machine.** Keep machine clean and cutting tools sharp for safe, dependable operation. Follow lubricating instructions. Report any unsafe condition for immediate correction.
10. **Keep alert.** Do not operate machine if ill or drowsy from medication or fatigue. Avoid horseplay around equipment and keep bystanders a safe distance from equipment.
11. **Operate on switch side only.** Machine should be operated on switch side only. Never reach across moving parts or material being worked on. Switch should always be accessible to operator.
12. **Operate in proper environment.** Machine should not be operated in damp locations. Wear hearing protection in noisy shop environments. Insure proper illumination in work area.
13. **Do not misuse machine.** Perform only the functions for which the machine is designed. Do not force machine.
14. **Disconnect power cord prior to servicing.** Repair should be attempted only by authorized personnel. Always disconnect power cord before making any adjustments or servicing the machine.
15. **Do not operate the machine with the spindle cover removed.**
16. **Keep fingers and hands** away from the chucking jaws.
17. **Keep visitors away.** All visitors should be kept a safe distance from work area.
18. **Use only recommended accessories.** Refer to Operator's Manual. Use of improper accessories may be hazardous.
19. **Caution: Do not allow familiarity gained from frequent use of your machine to become commonplace.** Always remember that a careless fraction of a second is sufficient to inflict severe injury.

SPECIFICATIONS

Motor: 220-440 V., 3 Phase, 60 Cycle 5 H.P., 1170 RPM, AVO-213 Frame or 220 V., 1 Phase, 60 Cycle 3 H.P., 1800 RPM, RVO-254 Frame.

THREADING RANGE:

Pipe or conduit: 2½"-6"
With adapter and small die head: 1"-6"
Bolt: 2½"-4"
With adapter and small die head: 1"-4"
Switch: 3 Station Pushbutton with Magnetic Starter and Overload Switch.
Weight: 1610 lbs. with 2 die heads less optional equipment.
Clearance required to service and operate:
Front and back: 3'
Left Side: 22' (Full length of pipe)
Right Side: 8.5'
Foundation: No special requirement.
Fusing required: Single Phase, 21 amp., Three Phase, 10 Amp.

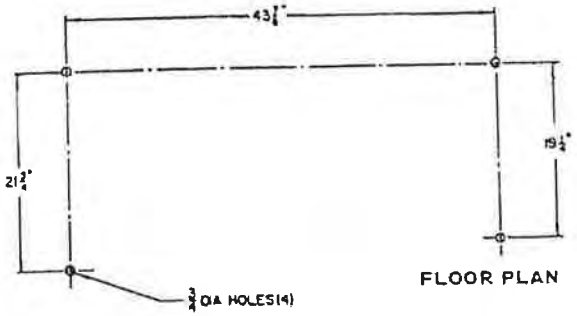
DIMENSIONS

Length ..... 48⅜"
Width ..... 29¾"
Height ..... 45¾"
Floor to center line of spindle ..... 36¾"

PREPARING FOR OPERATION

MOUNTING

While it is not essential to bolt the THRED-O-MATIC "66-A" to the floor, bolt holes are provided in the base for a solid and permanent installation. The mounting pads on the motor end of the "66-A" are made thicker to provide for proper oil drainage out of the pipe. Care should be taken in mounting machine to maintain the height differential.



POWER

Use proper electric current as shown on the name plate. Always connect the ground wire to the outlet box.

To prevent power loss, extension cord of sufficient capacity must be used:

POWER	CORD LENGTH	WIRE SIZE
220 V. Single Phase	Below 50'	10-3
	50'-100'	8-3
220 V. Three Phase	Below 50'	14-4
	50'-100'	10-4
440 V. Three Phase	Below 50'	14-4
	50'-100'	10-4

OVERLOAD SWITCH

On the THRED-O-MATIC "66-A" an automatic cut-off is actuated to protect the motor in event of under-or overloading of power. To reset, open door of machine and push reset button.

OIL PUMP

Pour five gallons of THRED-O-MATIC oil into the THRED-O-MATIC "66-A" sump. If THRED-O-MATIC oil is not available, use an equivalent dark, sulphur base thread cutting oil. Be sure level is above oil strainer.

Collins threading oil is a special oil designed to stand up under the high speed operation of this machine. Other oils will have a tendency to break down, thereby causing excessive die wear.

The cutting oil control value is located on the front panel just below the push button switch. Turn counter-clockwise to decrease and clockwise to increase oil flow.

OPERATING PROCEDURE

DOUBLE AUTOMATIC CHUCK

NOTE: Never, under any circumstances, shift gears while motor is running.

1. Press 'reverse" button to open jaws.
2. Put stock in machine.
3. Select proper speed according to instruction plate above shifting lever.
4. Press "forward" button to close jaws and start rotating stock.

For maximum power, machine is engineered for direct drive, without a clutch. Occasionally gears may not mesh when shifting. Simply touch the "reverse" button to move gears slightly, then shift gears.

THREAD CUTTING

1. Slip the proper size die head onto the carriage pin, and lower the head into the carriage groove. The THRED-O-MATIC "66-A" carriage is designed so that die head adapter can be mounted for use with 2" and smaller die heads.
2. On Mono, Dual, Uniquad and Scroll

heads, close operating handle; on Snap-O-Matic heads, select the correct size and engage the operating handle pin.

3. On die heads with reamers attached, be sure reamer is in die head with number side up.
4. Insert stock through the spindle from either the front or rear of the machine.
5. Select proper speed as shown on the instruction plate.
6. Actuate switch to "on" position to close jaws and rotate stock.
7. Manually feed die head onto the stock, using pressure, until a few threads have been cut, after which head automatically feeds itself.
8. Correct thread length is normally obtained when stock reaches the outside edge of chasers, at which time open die head with right hand. With left hand, move carriage away from stock. The machine is also equipped with a thread length scale.

REAMING

Die heads with reamers attached:

1. Be sure number side of reamer is up.
2. Reaming is accomplished while threading, in one operation.
3. If reaming only is desired, open die head and move carriage forward. Ream to desired depth.

Dual or Uniquad die heads:

1. Reaming is accomplished as a separate operation.
2. Open die head, move reamer forward. Ream to desired depth. It is best to ream the pipe before threading.

CUTTING

1. Select proper speed as shown on the instruction plate.
2. Be sure cutting assembly is centered and open.
3. Insert stock. Move carriage until cutter wheel is at the point where cut is desired. Turn cutter handle clockwise for cut-off.

NOTE: Never cut into threads, as this may cause damage to the cutting wheel.

GROOVING

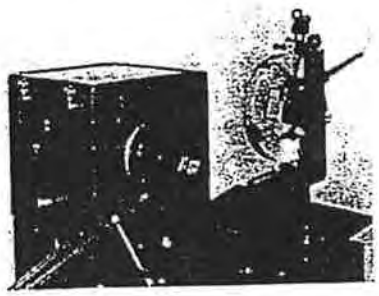
1. Install grooving head on carriage pin.
2. Turn grooving feed screw handle (11) counter-clockwise as far as it will go to get cutting tool completely clear of the pipe.
3. Shift transmission to the number 1 position and chuck material in machine to be grooved and cut.
4. Pass grooving head over material and place operating lever pin in the appropriate setting on the selector plate (19) to match the size of the material you are going to groove and cut. This will align pipe and grooving head.
5. Adjust centering bolt (24) for proper seat in carriage and tighten lock nut (23).
6. With machine running in the number 1 position, turn feed screw handle (11) clockwise to engage cutting tool (18) with pipe. Before proceeding to cut material, tighten screw on rear of carriage. This will keep carriage from creeping.
7. When using tool on standard wall pipe, the cutting tool will first part the material. After material has parted, while keeping the machine running, turn feed screw handle (11) one complete revolution until marks line up on indicator (13) and bearing block (21) which will give the proper depth of groove.
8. After the groove is finished, turn the feed screw handle (11) counter-clockwise to open position again.
9. Open operating lever and remove pipe.
10. Check frequently to be certain grooving tool has not become dull and needs sharpening; use groove depth scale or coupling for this purpose. Visually you may determine signs of a dull or improperly sharpened cutting tool if you notice excessive burr on pipe after cutting.

MAKE-ON SEE FIGURE 1

Insert the pipe either from the front or rear of machine and start the machine. Apply "Joint dope", and place fitting in position using a wrench or other holding device. Let the machine screw the fitting in place.

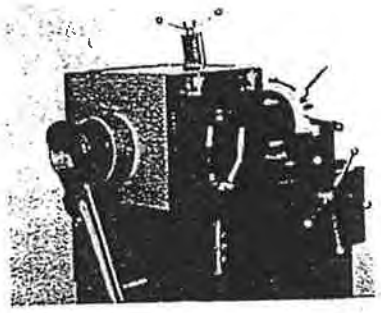
BREAKDOWN SEE FIGURE 2

Old tight fittings can be broken loose at the rear of the machine. The THRED-O-MATIC



MAKE-ON (Figure 1)

"66-A" has an extension bar on the rear for this purpose.



BREAKDOWN (Figure 2)

DIE HEAD ADJUSTMENT

REFER TO DRAWINGS

Your machine is equipped with die heads which have been adjusted to standard thread gauges at the factory. If a "deeper" (undersize) or "shallower" (oversize) thread is desired:

1. Mono, Dual and Uniquad heads — Loosen locking lever of locking nut and rotate scroll plate in the direction indicated on link or housing.
2. Snap-O-Matic heads — Loosen two screws and move selector plate in the direction indicated on the selector plate.

To change dies:

1. Mono, Dual and Uniquad heads — Loosen locking lever or locking nut, rotate scroll plate until cam slots line up with entry slots in die head.
   Snap-O-Matic heads — Remove scroll plate stop, rotate scroll plate until cam slots line up with entry slots in die head.
2. Check numbers of dies to be installed. A set consists of five (5) die segments numbered 1 to 5 for pipe size 2½" - 4". Dies for smaller pipe sizes contain four (4) die segments numbered 1 to 4.
3. Install dies in die head, matching the numbers on the die with the numbers on the die head. Rotate scroll plate to proper pipe size.

LUBRICATION AND MAINTENANCE

REFER TO MAIN ASSEMBLY

PUMP LUBRICATION

CUTTING OIL

To assure clean threads and long wear on chasers use Collins sulphur base cutting oil. Change every forty hours of operation. Three of the main causes of poor threads are either a poor grade of cutting oil, cutting oil that has lost its coolant qualities through over-use, or water in the sump.

CARRIAGE RAILS (35) AND GEAR (37)

Keep clean and oil frequently with machine oil.

OIL PRESSURE RELIEF VALVE (57)

Located next to the strainer in the sump. Should be cleaned periodically to avoid loss of oil pressure through die head. To readjust, turn set screw clockwise as far as it will go and then back one complete turn.

SPINDLE GEAR (5)

Remove spindle cover and check ring gear every six months to see if additional "Fil-Mo-Plate" spray lubricant needs to be applied.

TRANSMISSION (46)

Remove spindle cover and check transmission oil level every thirty days. Change oil after the first 100 hours of operating, use SAE 40 gear oil. Thereafter, drain and replace with 1½ quarts of oil every six months.

V-belts should be adjusted so that when fingers are placed across the two belts and squeezed, there should be at least ½-inch movement in the belts.

MOTOR (62)

Check single plase motors for brush wear every six months. If motor lacks power due to a dirty commutator, use a commutator cleaner

stick or fine emery cloth.

Lubrication is not required as all motors have sealed ball bearings.

DIES

Keep sharp and free of chips at all times. Sharpening service is provided at the factory for a nominal charge. As all sets of dies are matched, send in complete set for sharpening. When replacing dies in the die head, make sure the number of each die corresponds with the slot number on the die head.

JAWS

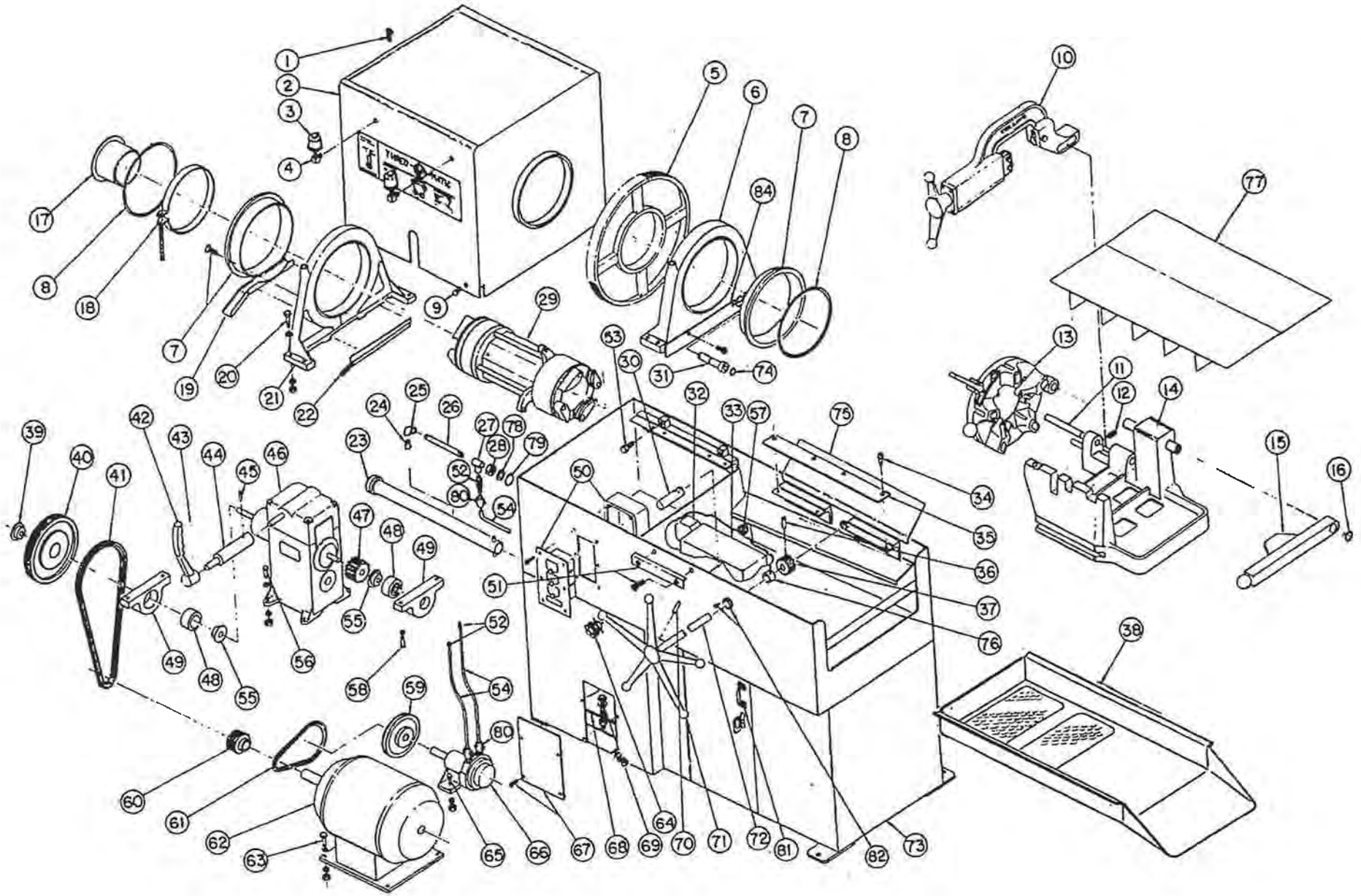
Keep clean with wire brush to avoid slippage. When replacing chuck jaws be sure the "R" markings on the jaws are toward the rear or motor end of the machine.

BRAKE BAND (18)

If slippage of stock should still occur after wire brushing jaws, then:

1. Stop machine.
2. Put shift lever in third speed.
3. Remove spindle cover.
4. Tighten brake adjustment bolt.
5. Start machine.
6. Push "stop button and spindle should coast ¼-½ revolution. If not, repeat steps 4, 5 and 6.
7. Replace spindle cover.

66-A MAIN ASSEMBLY



THRED-O-MATIC "66-A" MAIN ASSEMBLY

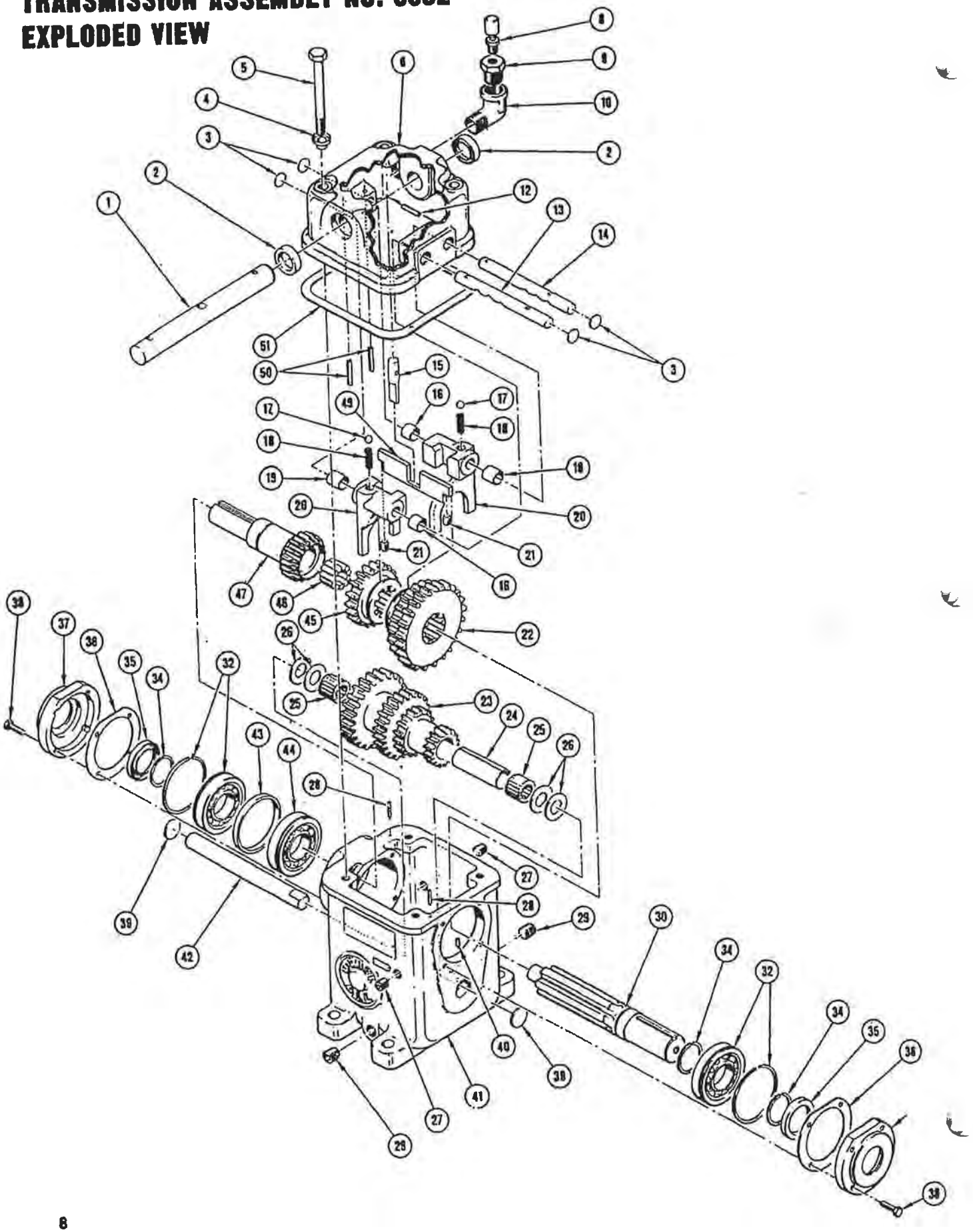
NOTE:
For Machines Measuring 34¼" from Floor to Top Edge at Carriage End of Base Use:

41.	4752	Transmission Drive Belt, Single Phase (2)
	4753	Transmission Drive Belt, Three Phase (2)
54.	15351-26	Oil Hose, Pump Outlet to Oil Tube Housing

1.	3404	Rear Jaw Housing Adapter Thumb Screw
2.	6760	Spindle Cover Assy.
	13734	Lubricating Oil Cup (2)
	13734	Oil Cup Elbow (2)
5.	6612	Spindle Gear
6.	6626	Spindle Block — Front
7.	6611	Spindle Bearing — Front
	6611	Spindle Bearing — Rear
	J-906	Spindle Bearing Att. Screw (8)
8.	YRS1075	Spindle Retaining Ring — Front
		Spindle Retaining Ring — Rear
9.	N-702-H	Spindle Cover Att. Screw (4)
10.	6840	Wheel Type Cutter Assy.*
		Knife Type Cutter Assy.*
11.	4654-2	Cutter Pivot Pin
12.	H-205	Cutter Pivot Pin Set Screw (2)
13.		Die Head Assy.*
14.	6780	Carriage Assy.*
15.	6820	Reamer Assy.*
16.	4215	Retaining Ring
17.	6661	Jaw Housing Adapter — Rear
18.	6740	Brake Band Assy.
19.	4207	Rear Oil Drip Shield — Rear Spindle Block
	N-503	Rear Oil Drip Sheild Att. Screw (2)
20.	A-408	Spindle Block Att. Screw (8)
	D-205	Spindle Block Att. Flat Washer (8)
	C-112	Spindle Block Att. Lock Washer (8)
	B-104	Spindle Block Att. Nut. (8)
21.	6627	Spindle Block — Rear
22.	4206	Front Oil Drip Shield — Rear Spindle Block
	N-503	Front Oil Drip Shield Att. Screw (2)
23.	4033	Breakdown Extension Bar Assy.
	1030-3	Breakdown Extension Bar Roll Pin
24.	4569	Pipe Reducing Bushing
25.	4044	Pipe Elbow
26.	4540-1	Oil Tube Housing
27.	6731	Pipe Tee
28.	B-260	Oil Tube Fitting Jam Nut
29.	6720	Spindle Assy.
30.	4550	Strainer Assy.
31.	4770	Telescopic Oil Tube Fitting
32.	4356	Junction Box
	N-702-H	Junction Box Att. Screw
	4357	Junction Box Cover
	13073	Single Phase Magnetic Switch, 220 V. 60 Cycle
	4321	Three Phase Magnetic Switch, 220 V. 60 Cycle
		Three Phase Magnetic Switch, 440 V. 60 Cycle
	E-103	Magnetic Switch Att. Screw (2)
	C-109	Magnetic Switch Att. Screw (2)
	C-109	Magnetic Switch Att. Lockwasher (2)
	B-101	Magnetic Switch Att. Nut (2)
34.	F-206	Rail Att. Screw (8)
	C-110	Rail Att. Lockwasher (8)
	B-102	Rail Att. Nut (8)
35.	4049	Rail (2)
36.	P-708	Carriage Pinion Pin
37.	4617	Carriage Pinion Gear
38.	15870	Chip Tray
39.	4755	Transmission Sheave Bushing
40.	6665	Transmission Sheave
41.		Transmission Drive Belt (single phase) (3), See Note
	4763	Transmission Drive Belt (three phase) (3), See Note
42.	4420	Shift Lever
43.	P-9061-A	Shift Lever Pin
44.	6622	Shift Lever Extension
45.	4421	Shift Lever Extension Pin
46.	6662	Transmission
47.	4411	21 T. Drive Gear
48.	4424	Transmission Bearing (2)
49.	4675	Transmission Pillow Block (2)
50.	4313	Push Button Control Switch
	K-961	Push Button Control Switch Att. Screw (6)
51	4680	Make-on Bar
	E-205	Make-on Bar Att. Screw (3)
52.	4513	Oil Hose Fitting (8)
53.	A-104	Spindle Adjusting Screw
54.	15351-13	Oil Hose, Strainer to Control Valve
	15351-21	Oil Hose, Pump Outlet to Oil Tube Housing, See Note
	15351-23	Oil Hose, Control Valve to Pump Intake
	15351-12	Oil Hose, Oil Tube Housing to Relief Valve
55.	4425	Transmission Bearing Bushing (2)
	H-153	Set Screw, Bushing
56.	A-407	Transmission Att. Bolt
	D-105	Transmission Att. Flat Washer
	C-112	Transmission Att. Lock Washer
	B-104	Transmission Att. Nut
57.	4630	Pressure Relief Valve Assembly
	4631	Pressure Relief Valve Body
	4632	Pressure Relief Valve Spring
	4633	Pressure Relief Valve Ball
	4638	Pressure Relief Valve Adj. Screw
58.	F-509	Pillow Block Att. Screw (4)
	C-113	Pillow Block Att. Lockwasher (4)
59.	6785	Oil Pump Sheave
60.	15704	Motor Sheave, Three Phase
		Motor Sheave, Single Phase
61.	6786	Oil Pump Drive Belt
62.	13051	Three Phase, 220-440 V. 60 Cycle, 5 H.P. 1800 RPM 213 Frame Motor
		Single Phase, 220 V. 60 Cycle, 3 H.P. 1800 RPM 254 Frame Motor
63.	A-308	Motor Anchor Bolt (4)
	D-104	Motor Anchor Flat Washer (4)
	C-111	Motor Anchor Lock Washer (4)
	B-103	Motor Anchor Nut (4)
64.	12046	Oil Control Valve Assy.
	12057	Oil Control Valve Assy Bracket (2)
	F-108	Oil Control Valve Assy Att. Screw (4)
	B-101	Oil Control Valve Assy Att. Nut (4)
65.	A-207	Oil Pump Anchor Bolt (4)
	D-103	Oil Pump Anchor Flat Washer (4)
	C-110	Oil Pump Anchor Lock Washer (4)
	B-102	Oil Pump Anchor Nut (4)
66.	15371	Oil Pump
67.	4240-1	Inspection Plate
	N-503	Inspection Plate Att. Screw (4)
68.	4330	Motor Mounting Plate
	4331	Motor Mounting Plate Shaft
	T-129	Motor Mounting Shaft Cotter Pit (2)
69.	B-107	Belt Adj. Nut (2)
	D-108	Belt Adj. Washer
70.	U-926	Carriage Handle Pin, ¼x3"
71.	4622	Carriage Feed Wheel
72.	17549	Carriage Feed Rod
73.	4145	Base Assy.
74.	4566	Oil Tube Fitting Inside "O" Ring
75.	4087	Oil Drip Shield
	N-503	Oil Drip Shield Att. Screw (4)
76.	4618	Carriage Feed Rod Collar
	H-202	Carriage Feed Rod Collar Set Screw
77.	4064	Oil Reservoir Baffle Plate (Std. Eqpt. on Mobile Models)
78.	4567	Oil Tube Fitting Washer
79.	4572	Oil Tube Fitting Outside "O" Ring
80.	4514	Oil Hose Clamp (8)
81.	4015	Base Door Handle
	K-956	Base Door Handle Att. Screw (4)
	B-133	Base Door Handle Att. Nut (4)
82.		Carriage Feed Rod Bearing (2)
	F-105	Carriage Feed Rod Bearing Att. Screw (6)
84.	6762	Splash Guard
	N-503	Splash Guard Att. Screw

*See Detailed Schematic

TRANSMISSION ASSEMBLY NO. 6662 - EXPLODED VIEW

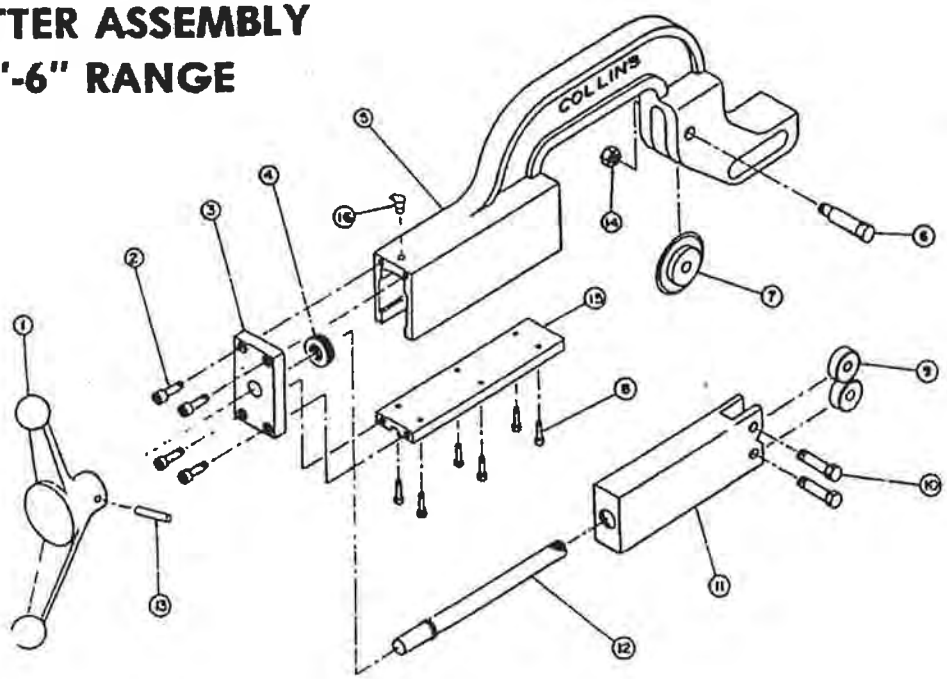


TRANSMISSION ASSEMBLY NO. 6662
- PARTS

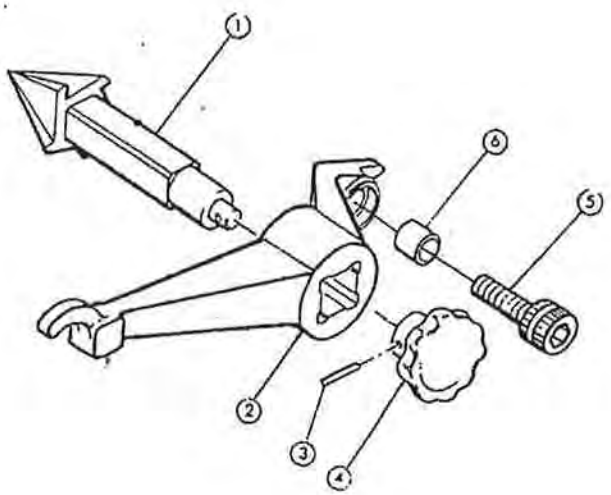
1.	13401	Shaft, Shifter
2.	13402	Seal, Oil (2)
3.	13403	Plug, Expansion (2)
4.	13404	Seal, Oil, Cover Bolt (4)
5.	A-317	Bolt, Cover Att., Hex. Hd., ⅜-16x4" Lg. (4)
6.	13405	Cover, Housing
8.	13407	Valve, Breather
9.	13408	Reducer, Pipe, ½" Male x ⅛" Female NPT
10.	13409	Elbow, Pipe, Street, ½" x 90°
12.	U-416	Pin, Spring, ⅛" x 1⅛" Lg.
13.	13410	Rod, Shifter, High
14.	13411	Rod, Shifter, Low
15.	13412	Finger, Shifter
16.	13413	Bushing, Shifter Fork (2)
17.	13414	Ball, Shifter Lock (2)
18.	13415	Spring, Shifter Lock (2)
19.	13416	Bushing, Shifter Fork (2)
20.	13417	Fork, Shifter (2)
21.	H-305-A	Setscrew, Guide Bar, ⅜-16x½" Lg. (2)
22.	13418	Gear, Low
23.	13419	Gear, Cluster
24.	13420	Spacer, Cluster Bearing
25.	13421	Bearing, Cluster Gear
26.	13422	Washer, Thrust (4)
27.	13423	Plug, Pipe, ⅛"-27 NPT (2)
28.	O-104	Pin, Dowel, ⅛"x¾" Lg. (2)
29.	13424	Plug, Pipe, ¼-18 NPT
30.	13425	Shaft, Spline
32.	13427	Bearing, Ball w/Ret. Ring
34.	13429	Ring, Retaining (3)
35.	13430	Seal, Oil (2)
36.	13431	Gasket, Retainer Plate (2)
37.	13432	Retainer Plate (2)
38.	A-205	Bolt, Retainer Plate Att., Hex. Hd, 5/16-18x1" Lg. (9)
39.	13433	Plug, Expansion (2)
40.	H-106-D	Setscrew, ¼-20x½" Lg.
41.	13434	Housing
42.	13435	Countershaft
43.	13436	Spacer, Bearing
44.	13437	Bearing, Ball
45.	13438	Gear, High
46.	13439	Bearing, Needle
47.	13440	Gearshaft, Pinion -16T.
49.	13441	Guide Bar
50.	U-916	Pin, Spring, ¼x1⅛" Lg. (2)
51.	13442	Gasket, Cover

WHEEL TYPE CUTTER ASSEMBLY
NO. 6840 2½"-6" RANGE

1.	4711	Handle, Cutter
2.	F-107	Screw, Front Plate Att., ¼"-20x1" Soc. Hd. Cap (4)
3.	4652	Front Plate
4.	4656	Bearing, Thrust
5.	6649	Body, Cutter
6.	4126	Screw, Cutter Wheel
7.	4121	Wheel, Cutter
8.	F-063	Screw, Bottom Plate., 10-32x¾" Soc. Hd. Cap (6)
9.	4117	Roller, Cutter (2)
10.	1124	Screw, Roller (2)
11.	4651	Roller Block
12.	4103	Screw Cutter
13.	P-9061-A	Pin, Handle Att., ¼"x1⅜" Grooved
14.	B-103	Nut, Cutter Wheel Att., ⅜-16 Hex
	C-111-M	Lock Washer, Cutter Wheel Att., ⅜"
15.	4653	Bottom Plate
16.	1023-22	Oil Cut

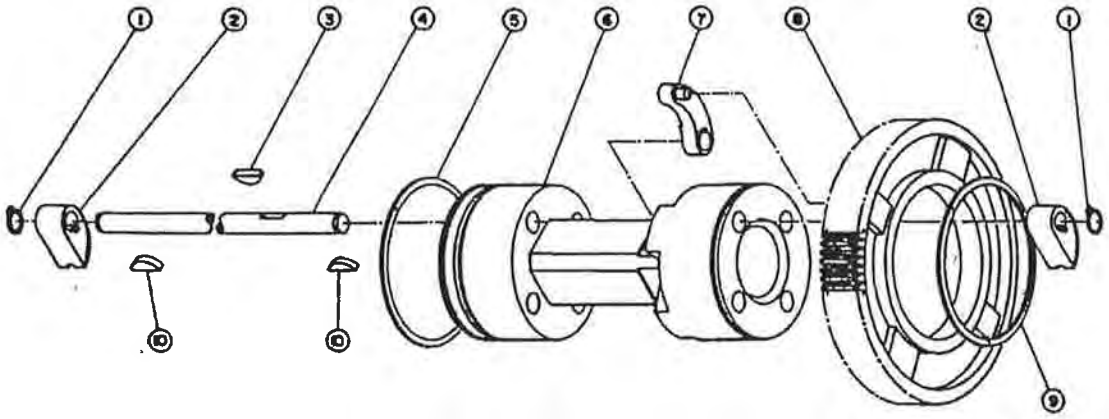


Adjustable Cone Reamer Assembly
#10060



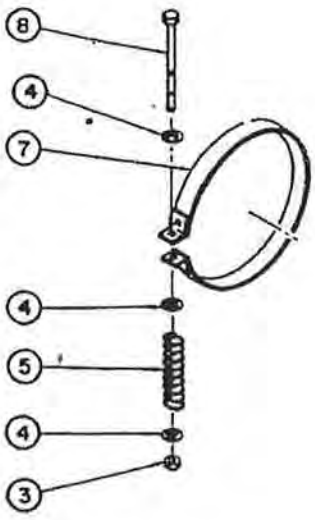
1.	13212	Reamer, Cone, 5-Flute
2.	10065	Holder, Cone Reamer
3.	P-707-A	Pin, Grooved, Knob Att., 3/16"x1¼" Lg.
4.	1652	Knob, Cone Reamer
5.	F-607-S	Screw, Reamer Att., ⅝-11x1½" Lg., Soc. Hd. Cap
6.	2139-1	Spacer, Reamer Att.

SPINDLE ASSEMBLY
NO. 6720



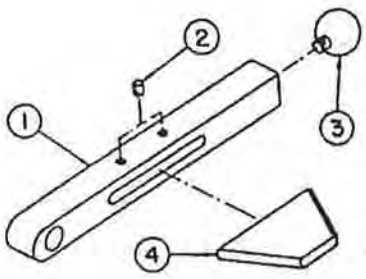
1.	Y-5100-100	Jaw Retaining Ring (6)
2.	6751	Jaw (6)
	12875	Jaw Set, R&L (6)
3.	W-810	Jaw Lever Key (4)
4.	4211	Jaw Shaft (4)
5.	YKSA-1075	Spindle Retaining Ring, Rear
6.	6625	Spindle
7.	4212	Jaw Lever and Pin Assembly (4)
8.	6612	Spindle Gear
9.	YKSA-1075	Spindle Retaining Ring, Front
10.	W-810	Jaw Key (6)

BRAKE-BAND ASSEMBLY
NO. 12582



3.	B-103	Adjustment Nut
4.	DA-104-W	Spring Flat Washer
5.	4263	Spring, Compression
7.	12583	Brake Shoe & Lining Assy.
8.	4261-1	Adjustment Bolt

BLADE REAMER ASSEMBLY
NO. 6820 2½"-6" RANGE



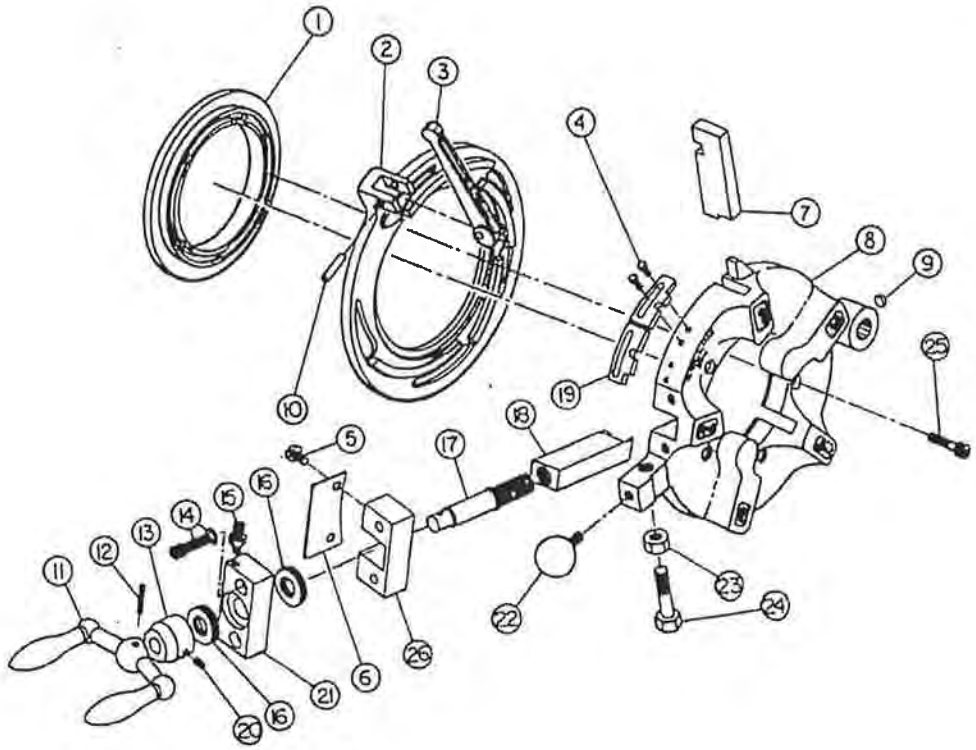
1.	6617-1	Holder Reamer
2.	H-305-D	Set Screw, Reamer Att., ⅜-16x½" (2)
3.	4943-1	Handle, Reamer
	H-506-D	Set Screw, Handle Att., ½-13x1¼"
4.	12237	Reamer, Inside, 2½"-4"
	12238	Reamer, Inside, 5"-6"

GROOVER HEAD ASSEMBLIES

NOTE: Centering dies are included in die head assembly.

Part No.
HEAD ASSEMBLIES

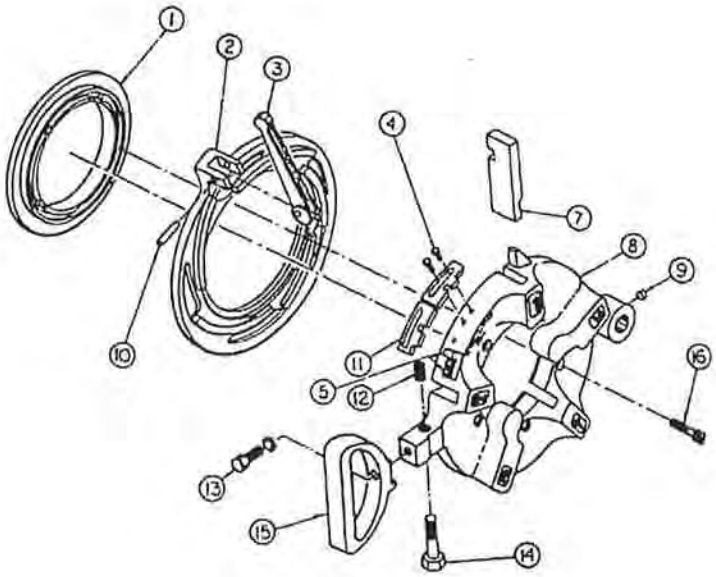
12124 2½"-3" Die head assembly for grooving & beveling, less tool bits
12125 3½"-4" Die head assembly for grooving & beveling, less tool bits
12107 5"-6" Die head assembly for grooving & beveling, less tool bits



1.	4905	Retainer, Scroll Plate, 2½"-4"
	6605	Retainer, Scroll Plate, 5"-6"
2.	12122	Scroll Plate, 2½"-4"
	12123	Scroll Plate, 5"-6"
3.	6602	Lever, Operating. Includes: O-406 Dowel Pin
4.	A-102	Screw, Hex Hd. Cap, ¼-20x½" (4)
5.	L-1100	Screw, Round Head Mach., ¼-20x¼" (2)
6.	12228	Cover, Die Slot Extension
7.	12101	Die, Centering, 2½"-3" (4)
	12104	Die, Centering, 3½"-4" (4)
	12102	Die, Centering, 5"-6" (4)
8.	14895	Housing, Groover 2½"-4"
	14897	Housing, Groover, 5"-6"
9.	12235	Plug, Expansion
10.	O-408	Dowel Pin, 5/16"x1¾"
11.	12215	Handle, Feed Screw
12.	P-706-A	Grooved Pin, 3/16"x1"
13.	12097	Indicator, Groove Depth
14.	F-209	Screw, Soc. Hd. Cap, 5/16-18x1¾" (2)
	C-110	Lock Washer, 5/16" (2)
15.	F-105	Screw, Soc. Hd. Cap, ¼-20x¾"
	B-101	Nut, Std. Hex., ¼-20
16.	12096	Bearing, Thrust (2)
17.	12227	Screw, Feed
18.	12319	Cut-Off Tool, 2½"-6"
	12229-40	Grooving Tool, Sch. 40 Pipe, 2½"-6"
	12229-80	Grooving Tool, Sch. 80 Pipe, 2½"-6"
	12213	Double Bevel Tool, 37½ degrees, 2½"-6"
	12268	Double Bevel Tool, 45 degrees, 2½"-6"
	12218	Saran Tool, 2½"-6"
19.	6609-1	Selector Plate, 2½"
	6609-2	Selector Plate, 3"
	6608-1	Selector Plate, 3½"
	6608-2	Selector Plate, 4"
	6601-1	Selector Plate, 6"
	6606-2	Selector Plate, 6"
20.	H-103-A	Set Screw, ¼-20 x 5/16"
21.	12094	Bearing Block
22.	4943-1	Handle, Die Head
	H-508-D	Set Screw, ½-13x1½"
23.	B-105	Nut, Hex., ½-13
24.	A-505-P	Screw, Hex. Hd. Cap, ½-13x1½"
25.	F-208	Screw, Soc. Hd. Cap, 5/16-18x1½" for 2½"-4" (5)
	F-210	Screw, Soc. Hd. Cap, 5/16-18x2" for 5"-6" (5)
26.	12226	Extension, Die Slot

SNAP-O-MATIC DIE HEAD ASSEMBLIES 2½"-6"

1.	4905	Retainer, Scroll Plate, 3½"-4"
	4906	Retainer, Scroll Plate, 2½"-3"
	6605	Retainer, Scroll Plate, 6"
	6638	Retainer, Scroll Plate, 5"
2.	6601	Scroll Plate, 2½"-4"
	6603	Scroll Plate, 5"-6"
3.	6602	Lever, Operating (Includes O-406 Dowel Pin)
4.	A-102	Screw, Hex Hd. Cap, Selector Plate Att., ¼-20x½" (4)
5.	6639	Stop, Scroll Plate
	F-103	Screw, Soc. Hd. Cap, Stop Att., ¼-20x½" (2)
7.		Dies, Set of (5). Specify size and type of Thread Desired (e.g. 2½" and 3" NPT)
8.	14808	Housing, Die Head, 6"
	14894	Housing, Die Head, 3½"-4"
	14898	Housing, Die Head, 2½"-3"
	17537	Housing, Die Head, 5"
9.	12235	Plug, Expansion
10.	O-408	Dowel Pin, Operating Lever, 5/16"x1¾" lg.
11.	6606-1	Selector Plate, 5"
	6606-2	Selector Plate, 6"
	6608-1	Selector Plate, 3½"
	6608-2	Selector Plate, 4"
	6609-1	Selector Plate, 2½"
	6609-2	Selector Plate, 3"
12.	H-503-D	Set Screw, Die Head Centering, ½-13x½" lg.
13.	A-504-P	Screw, Hex. Hd. Cap, Handle Att., ½-13x1¼" lg.
	C-113-M	Lock Washer, Handle Att., ½"
14.	A-505-P	Screw, Hex. Hd. Cap, Die Head Centering, ½-13x1½" lg.
15.	6950	Handle, Die Head
16.	F-208	Screw, Soc. Hd. Cap, Retainer Att., 5/16-18x1½" lg. (5) for 2½"-4" Housing
	F-210	Screw, Soc. Hd. Cap, Retainer Att., 5/16-18x2" lg. (5) for 5"-6" Housing

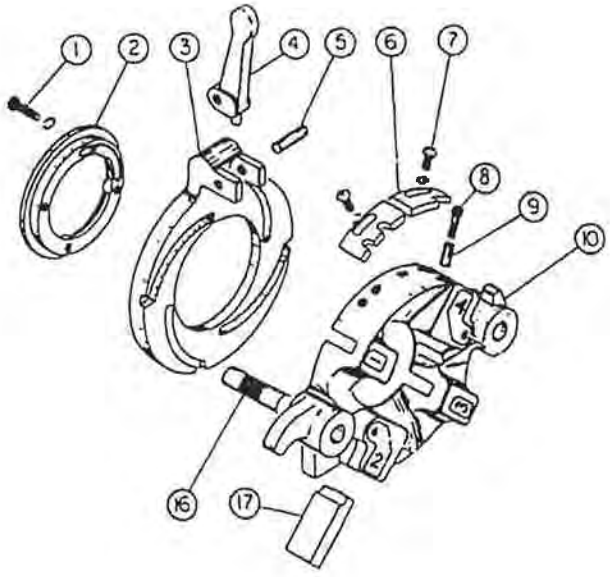


SNAP-O-MATIC DIE HEAD ASSEMBLIES 1/8" - 2"

DUAL SNAP-O-MATIC DIE HEADS: ⅛"; ¼" & ⅜"; ½" & ¾"; 1" & 1¼"; 1½" & 2"

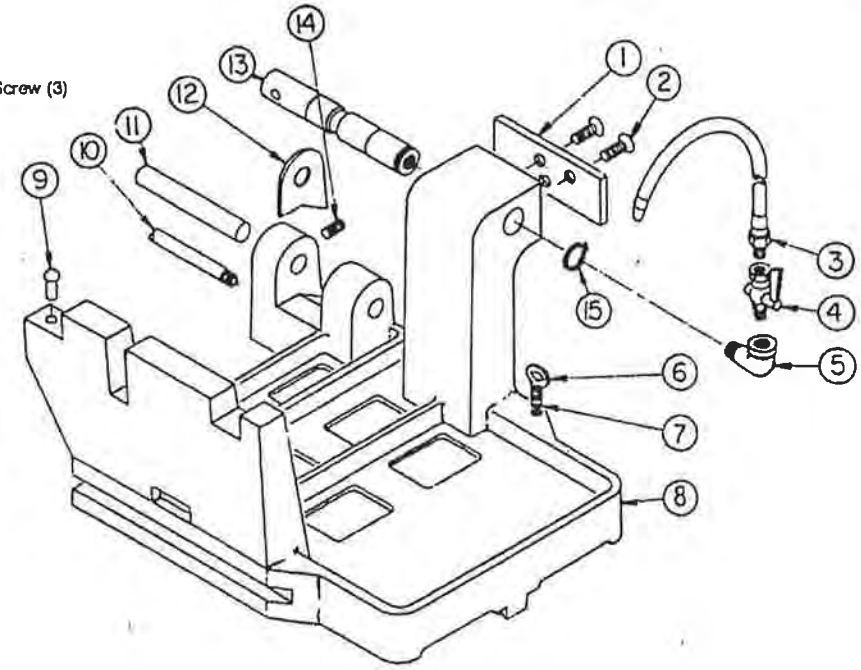
QUAD SNAP-O-MATIC DIE HEAD: 1" - 2"

1.	F-053	Die Head-Soc. Hd. Cap Screw, 10-24x¾" (4)
	C-107-HC	Lockwasher, Hi Collar, No. 10
2.	1433	1"-2" Retainer Plate
	1673	⅛"-¾" Retainer Plate
3.	1632	1"-2" Scroll Plate
	1642	⅛"-¾" Scroll Plate
4.	1633	Operating Lever
5.	O-406	Operating Lever Pivot Dowel Pin, 5/16"x1¼"
6.	1634-1	1"-1¼"-1½" Selector Plate
	1635-1	1" Selector Plate
	1635-2	1¼" Selector Plate
	1636-2	2" Selector Plate
	1644-1	½" Selector Plate
	1644-2	¾" Selector Plate
	1645	¼" & ⅜" Selector Plate
	1646	⅛" Selector Plate
7.	CC-109-AP	Washer, Tooth Lock, External, ¼"
	G-104-S	Selector Plate Att. Button Hd. Cap Screw, ¼-20x⅝" (4)
8	F-107	Scroll Plate Stop Soc. Hd. Cap Screw, ¼-20x1"
9	13113	Scroll Plate Spacer
10	1631	1"-2" Die Head Housing
	1641	⅛"-¾" Die Head Housing
16	1431-1	Die Head Pin
17		Set of (4) Dies. Specify Size and Type (e.g. ½" NPT)
18	13385	Ball
19	12220	Spring
20	12135	Expansion Plug



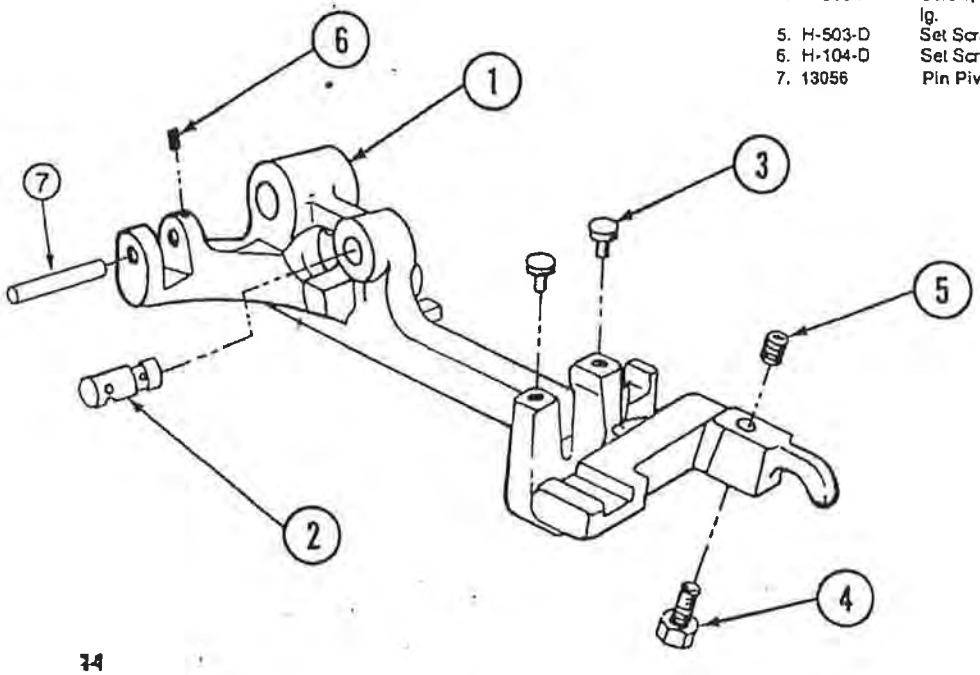
CARRIAGE ASSEMBLY
NO. 6780

1.	23101	Die Head and Reamer Stop
2.	E-206	Die Head and Reamer Stop Att. Screw (3)
3.	4657	Flexible Coolant Spout
4.	4658	Valve, Plug, ⅛x⅛
5.	4556	Elbow, Street, ¼x⅛x90°
6.	3404	Carriage Locking Thumbscrew
7.	6732	Wear Button
8.	6616-1	Carriage
9.	4655	Cutter Rest Pin
10.	4563	Cutting Oil Telescopic Tube
11.	4654-2	Cutter Pivot Pin
12.	4919	Cutter Wear Plate (2)
13.	4917	Carriage Pin
14.	H-205-D	Cutter Pivot Pin Set Screw (2)
15.	Y-5100-100	Reamer Retaining Ring

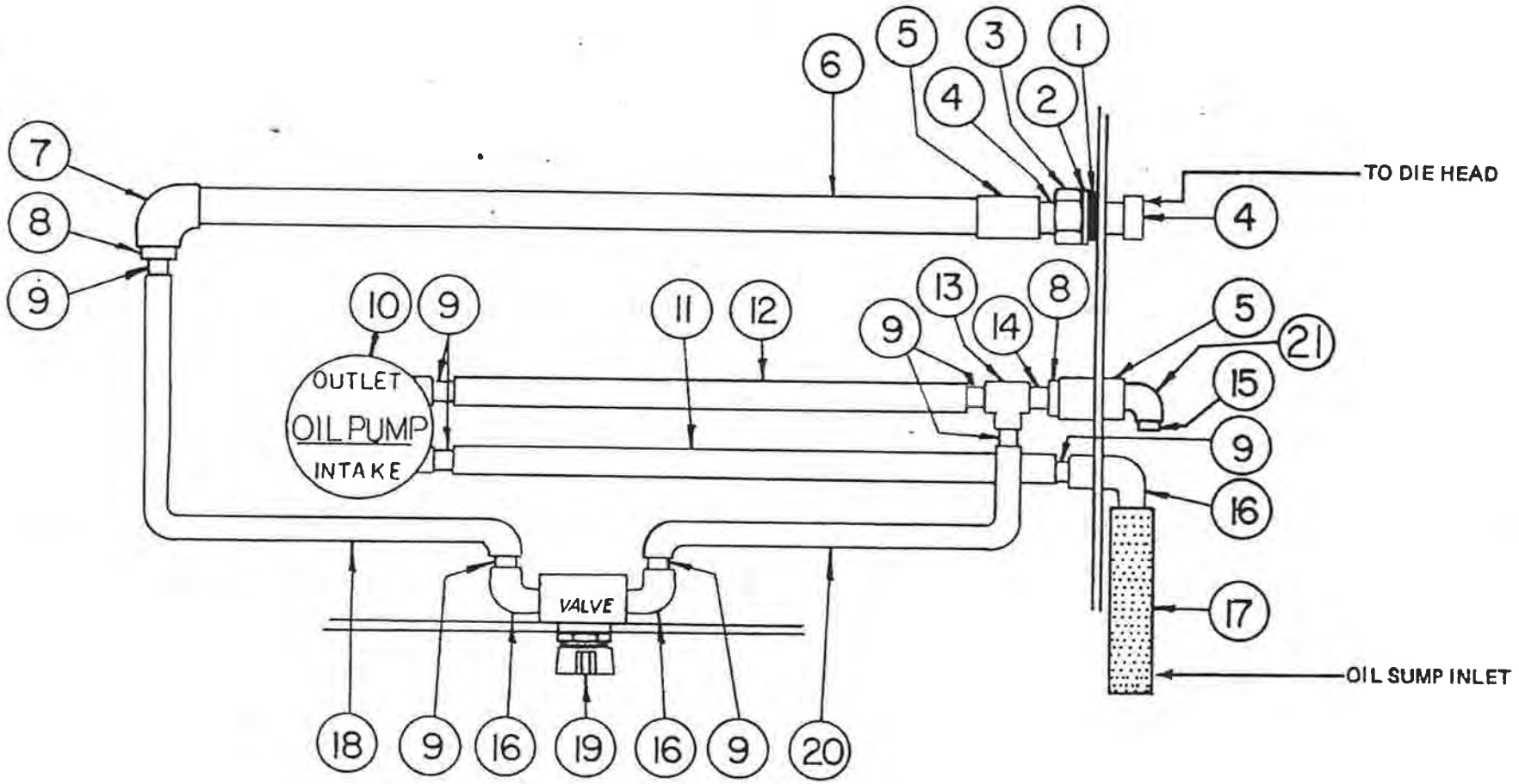


ADAPTER ASSEMBLY FOR 1"-2" DIE HEADS
NO. 6920

1.	6921	Adapter
2.	10053	Pin, Die Head
3.	1572	Pin, Headed, Die Head Stop
4.	A-505-P	Screw, Hex. Hd. Cap, Adapter Centering ½-13x1½" lg.
5.	H-503-D	Set Screw, Adapter Centering, ½-13x½" long
6.	H-104-D	Set Screw, Cutter Pin, ¼-20x¾" lg.
7.	13056	Pin Pivot Cutter



OIL LINE SCHEMATIC



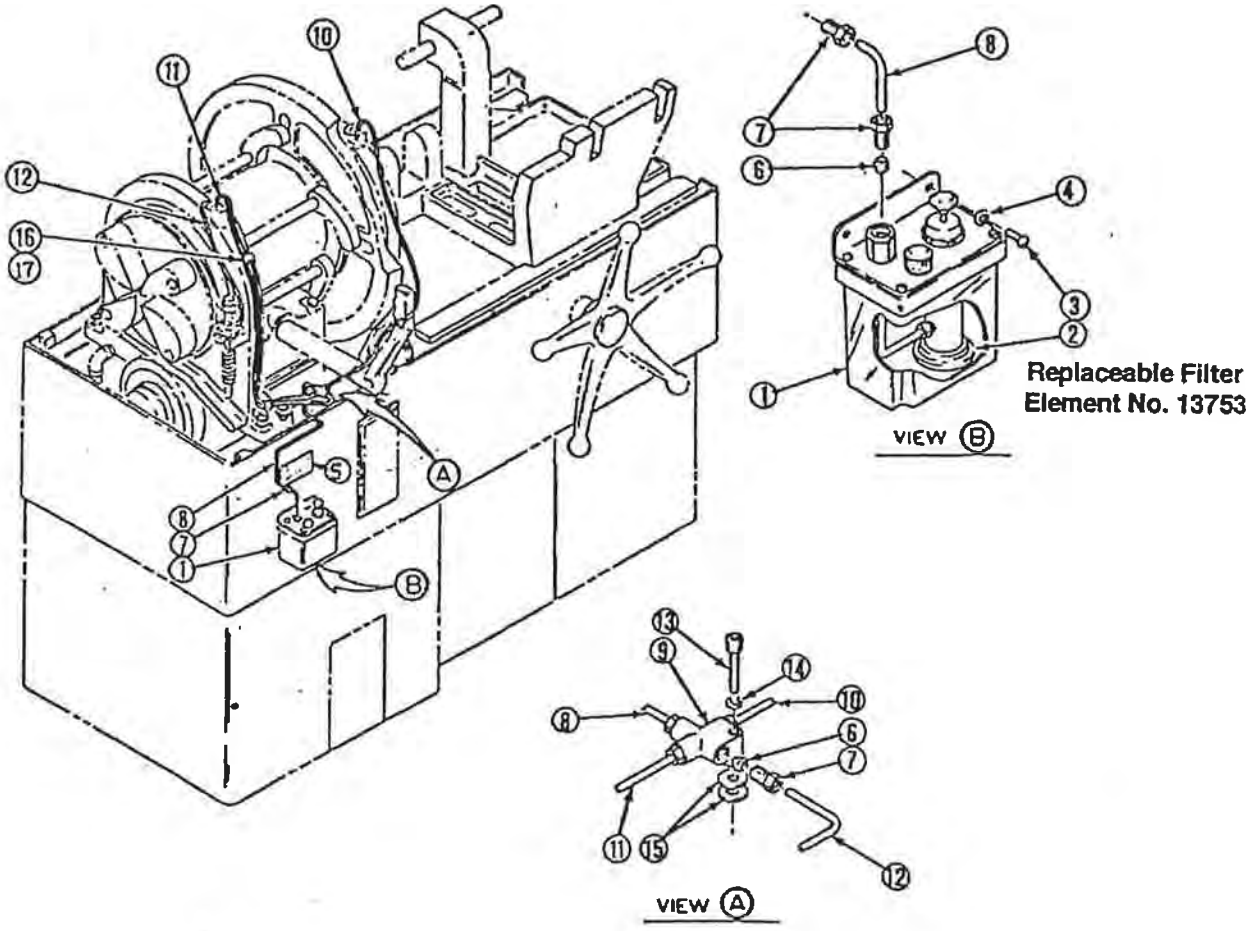
1.	4572	"O" Ring, Outside
2.	4567	Washer
3.	B-280	Nut, ⅞-14 Hex. Jam
4.	4770	Fitting, Oil Tube, Telescopic
	4566	"O" Ring Inside
5.	4542	Coupling, Pipe, ½"
6.	4540-1	Housing, Oil Tube
7.	4044	Elbow, Pipe, ½"
8.	4569	Reducer, Pipe, ½" to ⅜" (8)
9.	12233	Nipple, Pipe, Thd. one end, ⅜x2" (2)
10.	15371 15370	Oil Pump Assembly (Pump + Bracket)
11.	15351-19	Hose, Oil ⅜"x19"
13.	12234	Tee, Pipe, ⅜"
14.	12232	Nipple, Pipe, ⅜" x 1½"
15.	4630	Valve Assembly, Pressure Relief Includes:
		4631 Body, Pressure Relief Valve
		4632 Spring, Pressure Relief Valve
		4633 Ball, Pressure, Relief Valve
		4638 Screw, Adjusting, Pressure Relief Valve
16.	4024	St. Elbow, Pipe, ⅜" (3)
17.	4550	Strainer, Oil
18.	15351-27	Hose, Oil ⅜"x27"
19.	12236	Valve, Oil Control
20.	15351-16	Hose, Oil, ⅜"x16"
21.	12437	Elbow, Pipe, ½"
—	4514-10	Clamp, Oil Hose (8) (Not Shown)

LUBRICATOR ASSEMBLY

PART NO. 13734

OPERATING INSTRUCTIONS

1. Before operating machine lift and release plunger six times on lubricator.
2. Lubricate every two hours of operation (lift and release plunger once)
3. Keep reservoir of lubricator filled with SAE 30 oil.
4. Replace filter element (Part No. 13753) on lubricator pump once a year.

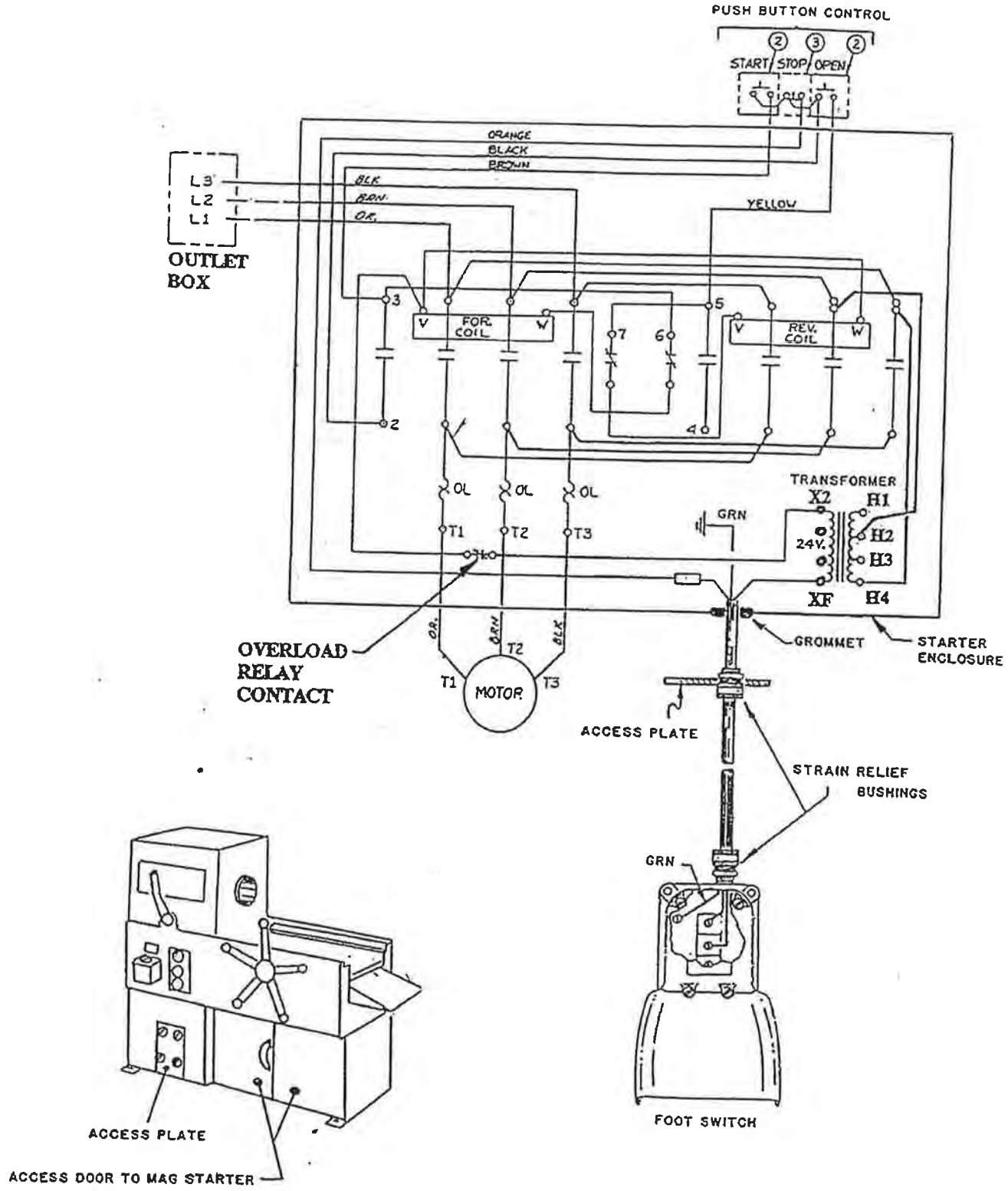


Replaceable Filter Element No. 13753

1.	13735	Lubricator
2.	13753	Filter Element (Included in #13735)
3.	G-104-S	Screw (2)
4.	CB-109-A	Lockwasher (2)
5.	13754	Plate, Instruction
6.	13736	Sleeve, compression (6)
7.	13737	Bushing, compression (6)
8.	13739-21	Tubing, 21" lg.
9.	13738	Junction
10.	13739-25	Tubing, 25" lg.
11.	13739-25	Tubing, 25" lg.
12.	13739-26	Tubing, 26" lg.
13.	F-107	Screw
14.	C-109-M	Lockwasher
15.	D-102	Flat washer (2)

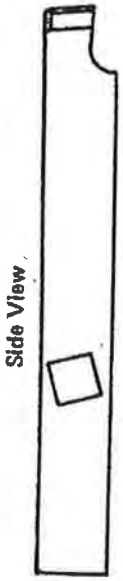
THRED-O-MATIC "66-A" WIRING DIAGRAMS

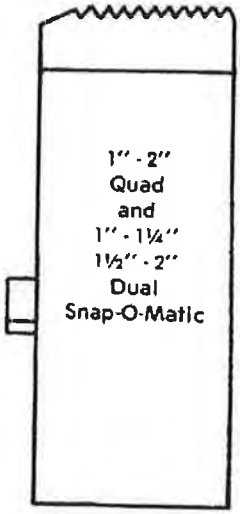
THREE PHASE



DIE SEGMENT INDEX

P = PIPE
C = CONDUIT

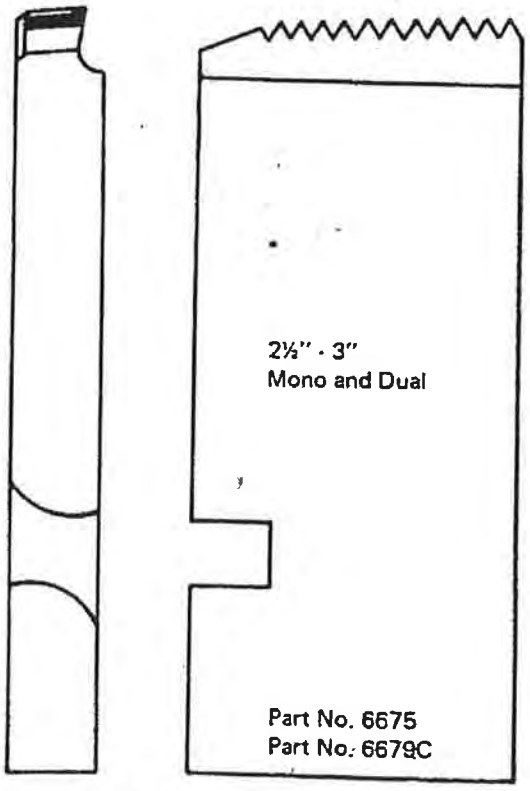


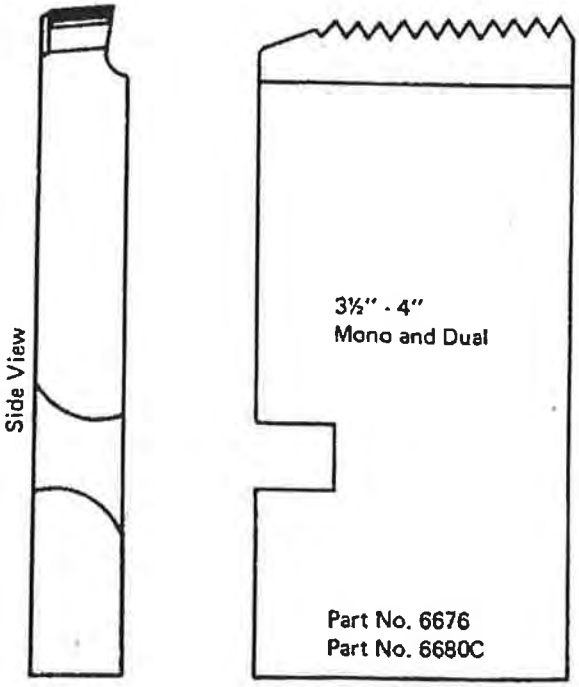


No. 2584

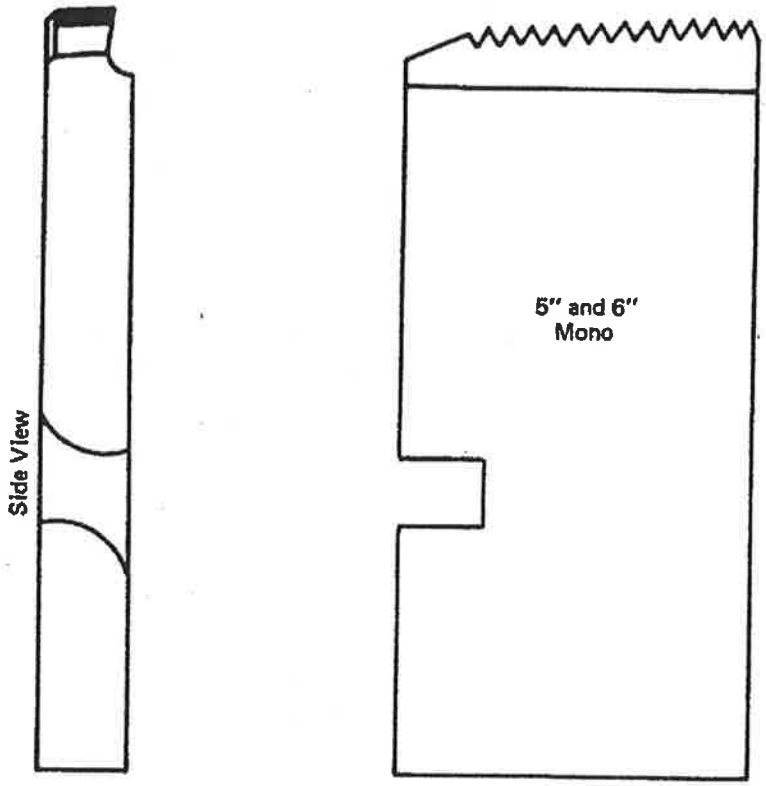
No. 2586C

Series "44-A" and "66-A" Snap-O-Matic (5 segments)





Series "66A"



Part No. 6677
Part No. 6681

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THREAD SIZES AND SPECIFICATIONS

DIMENSIONS				U.S. STANDARD									BRITISH STANDARD					METRIC		
NOMINAL SIZE								CONSTANT PITCH												
PIPE INSIDE DIA.	BOLT & TUBE OUTSIDE DIA.	MAJOR [1] DIAMETER OF THREAD	MAJOR [1] DIAMETER OF THREAD	PIPE, TAPERED N.P.T.	PIPE, PARALLEL (CONDUIT) N.P.S.	BOLT, NATIONAL COARSE U.N.C.	BOLT, NATIONAL FINE, U.N.F.	8 U.N.	12 U.N.	API CASING LONG THD.	API, TUBING NON-UPSET THD.	API, TUBING UPSET, REG. THD.	PIPE, TAPERED BSPT	PIPE, PARALLEL BSPP	CONDUIT BSC (BSEC)	BOLT, WHITWORTH BSW	BOLT, FINE BSF	COARSE ISO	FINE ISO	METRIC CONDUIT
		INCH	MILLIMETER	THREADS PER INCH									THREADS PER INCH					PITCH IN MM		
		.236	6.0															1.0		
	1/4	.250	6.35			20	28									20	26			
		.275	7.0															1.0		
	5/16	.312	7.94			18	24									18				
		.315	8.0															1.25	1.0	
		.354	9.0															1.25	1.0	
	3/8	.375	9.52			16	24									16	20			
1/8		.383	9.73										28	28						
		.394	10.0															1.5	1.0	
1/8		.404	10.27	27	27															
		.433	11.0															1.5	1.0	
	7/16	.437	11.11			14	20									14	18			
		.472	12.0															1.75	1.5	
	1/2	.500	12.7			13	20									12	16			
1/4		.518	13.16										19	19						
1/4		.534	13.57	18	18															
		.551	14.0															2.0	1.5	
	9/16	.562	14.29			12	18									12	16			
		.591	15.0																	
	5/8	.625	15.87			11	18									11	14			
		.630	16.0															2.0	1.5	1.5
3/8		.656	16.66										19	19						
		.669	17.0																	
3/8		.671	17.05	18	18															
		.709	18.0															2.5	1.5	
	3/4	.75	19.05			10	16								16	10	12			
		.787	20.0															2.5	1.5	1.5
1/2		.875	20.95										14	14						
1/2		.836	21.27	14	14															
		.866	22.0															2.5	1.5	
	7/8	.875	22.22			9	14									9	11			
		.945	24.0															3.0	2.0	
		.984	25.0																2.0 & 1.5	1.5
	1	1.0	25.4			8	12		12						16	8	10			
		1.024	26.0																	
3/4		1.041	26.44										14	14						
3/4		1.046	26.57	14	14															
		1.063	27.0															3.0	2.0	
		1.102	28.0																	
1 1/8		1.125	28.57			7	12	8								7	9			
		1.181	30.00															3.5	2.0	
	1-1/4	1.25	31.75			7	12	8							16	7	9			
		1.26	32.00																1.5	1.5
		1.299	33.00															3.5		
1		1.308	33.23	11.5	11.5															
1		1.309	33.25										11	11						
	1-3/8	1.375	34.92			6	12	8								6	8			
		1.378	35.0															4.0		
		1.417	36.0																	
		1.457	37.0																	
		1.496	38.0																	
	1-1/2	1.50	38.1			6	12	8							14	6	8			
		1.53	39.0															4.0		
		1.575	40.0																1.5	1.5
	1 5/8	1.625	41.27			5.5		8								5				
1 1/4		1.65	41.91										11	11						
1 1/4		1.653	41.99	11.5	11.5															
		1.653	42.0															4.5		
		1.732	44.0																	
	1 3/4	1.75	44.45			5		8	12							5	7			
		1.772	45.0															4.5		
	1 7/8	1.875	47.62			5		8	12							4.5				
1 1/2		1.882	47.82										11	11						
		1.89	48.0															5.0		
1-1/2		1.892	48.05	11.5	11.5															
		1.968	50.0																1.5	1.5
	2	2.0	50.8			4.5		8	12						14	4.5	7			
		2.047	52.0															5		
	2-1/4	2.25	57.15			4.5										4				
2		2.347	59.61										11	11						
2		2.366	60.09	11.5	11.5															
	2-3/8	2.369	60.17								10									
	2-1/2	2.50	63.5			4									14					
	2-21/32	2.633	66.88									8								
	2-3/4	2.75	69.85			4														
2-1/2		2.862	72.7	8	8															
	2-7/8	2.869	72.87								10									
2 1/2		2.96	75.18										11	11						
	3	3.0	76.2			4														
	3-7/32	3.196	81.18									8								
	3-1/4	3.25	82.55			4														
3		3.44	87.88										11	11						
3		3.466	88.61	8	8															
	3-1/2	3.494	88.75								10									
	3-1/2	3.5	88.9			4														
	3-3/4	3.75	95.25			4														
	3-53/64	3.81	96.77									6								
3-1/2		3.95	100.33										11	11						
3-1/2		3.968	101.34	8	8															
	4	4.0	101.6			4														
4		4.45	113.03										11	11						
4-1/2		4.475	113.66							8										
	4-1/2	4.485	113.97								8									
4		4.487	113.97	8	8															
	5	4.977	126.42									8								
5		5.45	138.43										11	11						
5		5.55	140.97	8																
6		6.45	163.8										11	11						
6		6.606	167.79	8																

1. On Tapered Threads Major Diameter is Measured at the Gauge Plane

LIFETIME WARRANTY

ROTHENBERGER USA, INC., warrants all our products against defects in materials or workmanship. This warranty covers replacement or repair of defective parts for the lifetime of the product (excluding motors and electrical parts, which are warranted for a period of one year from date of sale), provided that failure is not due to abuse, abnormal use, or by normal wear and tear. NO OTHER WARRANTY, EITHER WRITTEN OR ORAL, SHALL APPLY. Pipe and drain cleaning tools and cables are not covered by this warranty and are considered expendable materials.

Products must be returned, freight prepaid, to ROTHENBERGER USA, INC. If the warranty applies, the product will be repaired or replaced at no charge to the customer and returned freight prepaid. Only ROTHENBERGER USA, INC. can make warranty judgments and we retain the right to the final decision regarding warranty application. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS. IN NO EVENT DOES ROTHENBERGER'S USA, INC. LIABILITY EXTEND BEYOND REPAIR OR REPLACEMENT OF ITS PRODUCT WARRANTED ABOVE.

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