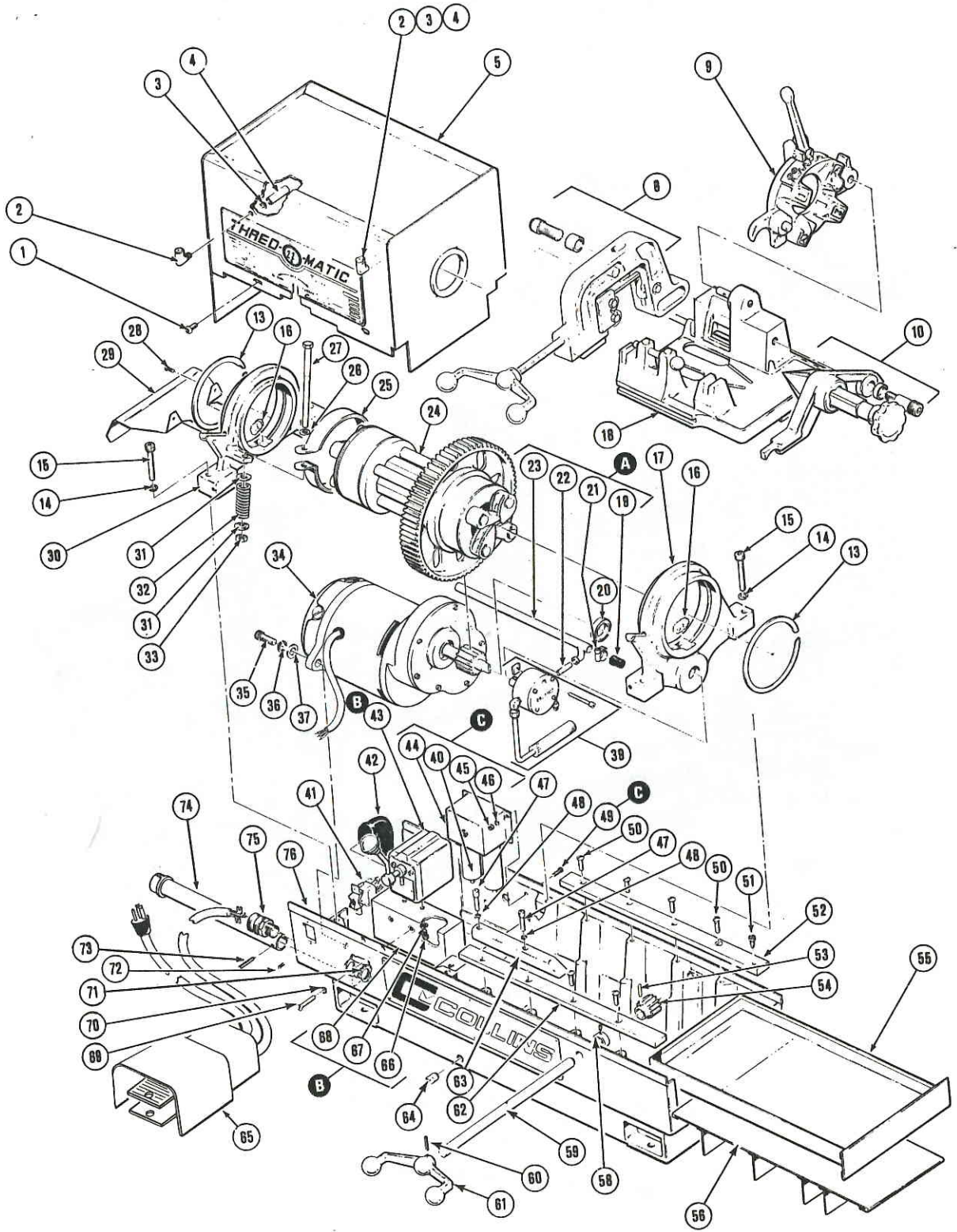


Right and Left 22-A Main Assembly



PARTS LIST

Right and Left 22-A Main Assembly

115V. 1 ϕ — Part #14037 230V. 1 ϕ — Part #13792

Item	Part No.	Description	Req'd
1.	G-103	Screw, Spindle Cover Att., 1/4"-20 x 1/2"	4
		Button Hd. Cap	
2.	12172	Oil Cup	2
3.	CB-110	Washer, Lock, Int. Tooth, 5/16"	2
4.	12173	Extension, Oil Cup	2
5.	1243-1	Cover, Spindle	1
8.	13770	Cutter Assembly (see detailed assembly)	1
9.	—	Die Head Assemblies (various types and sizes; see detailed assemblies)	1
10.	12127	Reamer Assembly, Cone, Adjustable (see detailed assembly)	1
13.	1212	Ring, Spindle Retaining	2
14.	C-113	Washer, Lock, Spindle Block Att., 1/2"	4
15.	F-511	Screw, Spindle Block Att., 1/4"-13 x 2 1/2" Soc. Hd. Cap	4
16.	12006	Wick, Oil Reservoir	2
17.	1226	Spindle Block, Front	1
18.	—	Carriage Assemblies (various types; see detailed assemblies)	1
19.	1564	Sleeve, Seal, Oil Tube (see sub-assembly "A")	1
20.	1018-1	Bearing, Motor Support, Front 203 SZZ	1
21.	1568	Clamp, Hose, Oil Tube Sleeve (see sub-assembly "A")	1
22.	12145	Nipple, 1/8" NPT x 2", Blk. Pipe (see sub-assembly "A")	1
23.	1562	Oil Line Housing (see sub-assembly "A")	1
24.	2100	Spindle Assembly, R&L	1
25.	12872	Brake Shoe and Lining Assembly	2
26.	D-103	Washer, Flat, 5/16"	1
27.	1258	Bolt, Brake Adjustment	1
28.	NF-503-F	Screw, Drip Shield Att., #10-24 x 1/2" Self-Tap	1
29.	1244	Shield, Motor Drip	1
30.	1225	Spindle Block, Rear	1
31.	1255	Washer, Spring Seat	2
32.	1254	Spring, Brake Band	1
33.	B-102	Nut, Brake Band Adj., 5/16"-18 Hex. Hd.	1
34.	1300	Motor and Gear Case Assembly, 110V. OR (see detailed assemblies)	1
	1300-1	Motor and Gear Case Assembly, 220V. (see detailed assemblies)	1
35.	F-206	Screw, Motor Att., 5/16"-18 x 1" Socket Hd. Cap	2
36.	C-110	Washer, Lock, Motor Att., 5/16"	2
37.	D-103	Washer, Flat, Motor Att., 5/16"	2
39.	12277	Oil Pump Assembly (see detailed assembly)	1
40.	—	(see Optional Accessories)	
41.	13340	Switch, Directional (w/Jumper Wire)	1
42.	1246	Cover, Directional Switch (vinyl)	1
43.	1221	Switch Assembly, For/Off/Rev (see sub-assembly "B")	1
44.	—	(see Optional Accessories)	
45.	—	(see Optional Accessories)	
46.	—	(see Optional Accessories)	
47.	F-108	Screw, Make-On Bar Att., 1/4"-20 x 1 1/4" Soc. Hd. Cap	2
48.	C-109-HC	Washer, Lock, Make-On Bar Att., 1/4" Hi-Collar	2

Item	Part No.	Description	Req'd
49.	—	(see Optional Accessories)	
50.	M-1107	Screw, Base Rail Att., 1/4"-20 x 3/4" Oval Hd. Mach.	6
51.	NE-702-F	Screw, Carriage Stop, 1/4"-20 x 1/2" Self-Tap, Hex. Hd.	1
52.	1229-R	Rail, Base, Rear	1
53.	U-715	Pin, Spring, Carriage Feed Gear, 3/16" x 1"	1
54.	1623	Gear, Carriage Feed	1
55.	1227	Tray, Chip	1
56.	1984	Baffle Plate, Oil Reservoir (standard equipment on mobile models only)	1
58.	2122	Collar, Feed Rod, Carriage (includes 1/4"-20 x 1/4" lg. Set Screw)	1
59.	1238	Rod, Carriage Feed	1
60.	P-906-A	Pin, Grooved, Handle Att., 1/4" x 1 1/4"	1
61.	1111	Handle, Feed Rod	1
62.	1229-F	Rail, Base, Front	1
63.	2061	Make-On Bar	1
64.	1020	Plug, Drain, Base 3/8"	1
65.	13840	Switch and Cord Assembly, Foot, 115V. OR	1
	13839	Switch and Cord Assembly, Foot, 230V.	1
66.	L-1100	Screw, Switch Att., 1/4"-20 x 1/4" Mach.	2
67.	C-109	Washer, Lock, Switch Att., 1/4"	2
68.	1345-1	Resistor Assembly, 110V. OR	} See Sub-Ass'y "B"
	1346-1	Resistor Assembly, 220V.	
69.	M-1107	Screw, Resistor Att., 1/4"-20" x 3/4" Oval Hd. Mach.	2
70.	CD-109	Washer, Lock, Counter Sunk, Resistor Att., 1/4" Ext. Tooth	2
71.	8769	Nut, Conduit, Strain Relief Bushing, 1/2"	1
72.	M-707	Screw, Directional Sw. Att., #6-32 x 1/2" Oval Hd. Mach.	2
73.	U-918	Pin, Spring, Extension Bar Retaining, 1/4" x 1 1/2"	1
74.	1030	Bar Assembly, Extension	1
75.	1376	Bushing, Strain Relief	1
76.	1241	Base	1

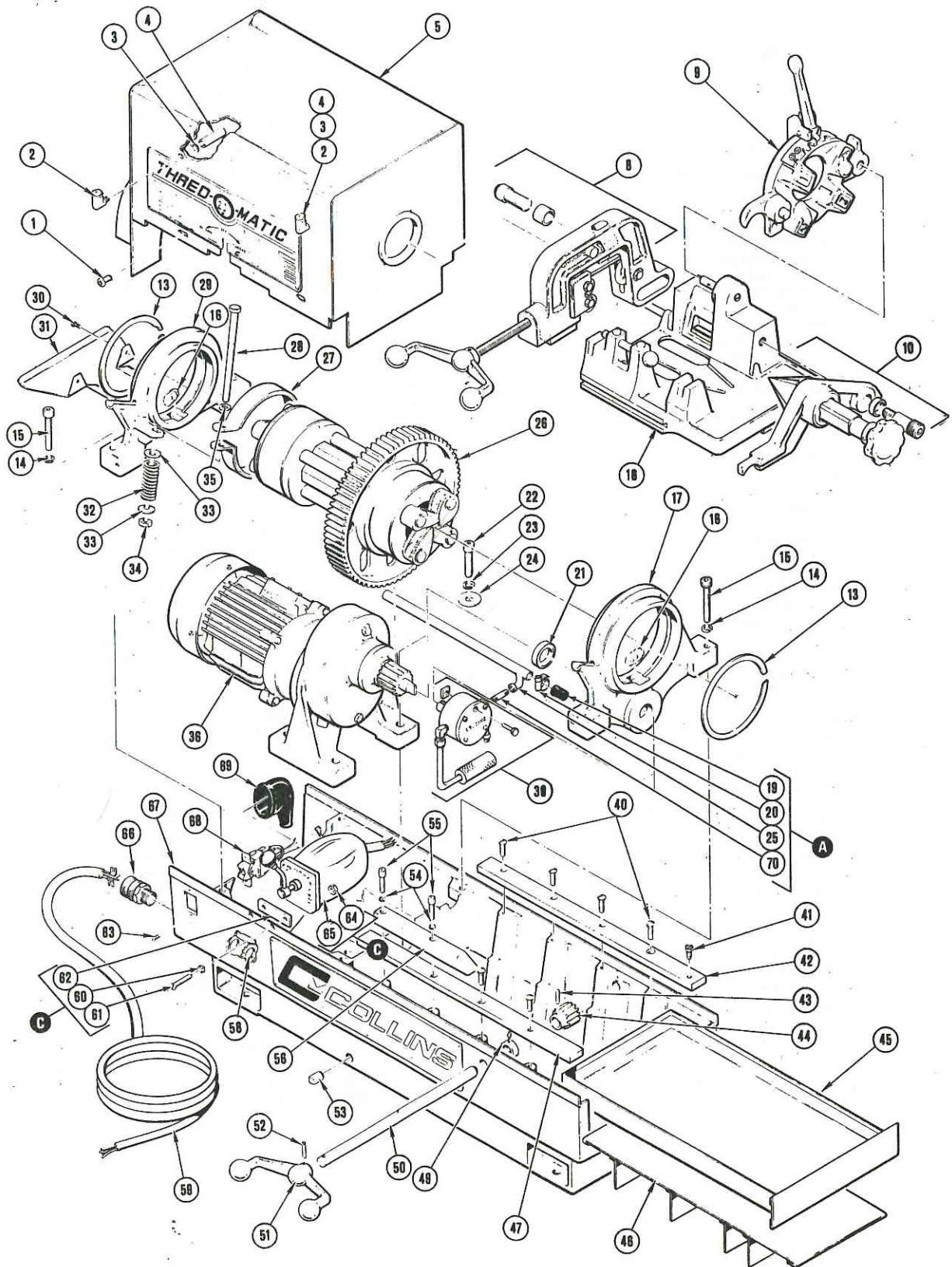
Sub-Assemblies

A	1557-1	Oil Line Housing Assembly	
B	12039	Switch & Resistor Assembly, 115V. OR	
	12038	Switch & Resistor Assembly, 230V.	
C	14154	Filter Assembly, Radio Interference Suppression per MIL-STD-826. See Optional Accessories, items #40, #44, #45, #45 and #49 listed below.	

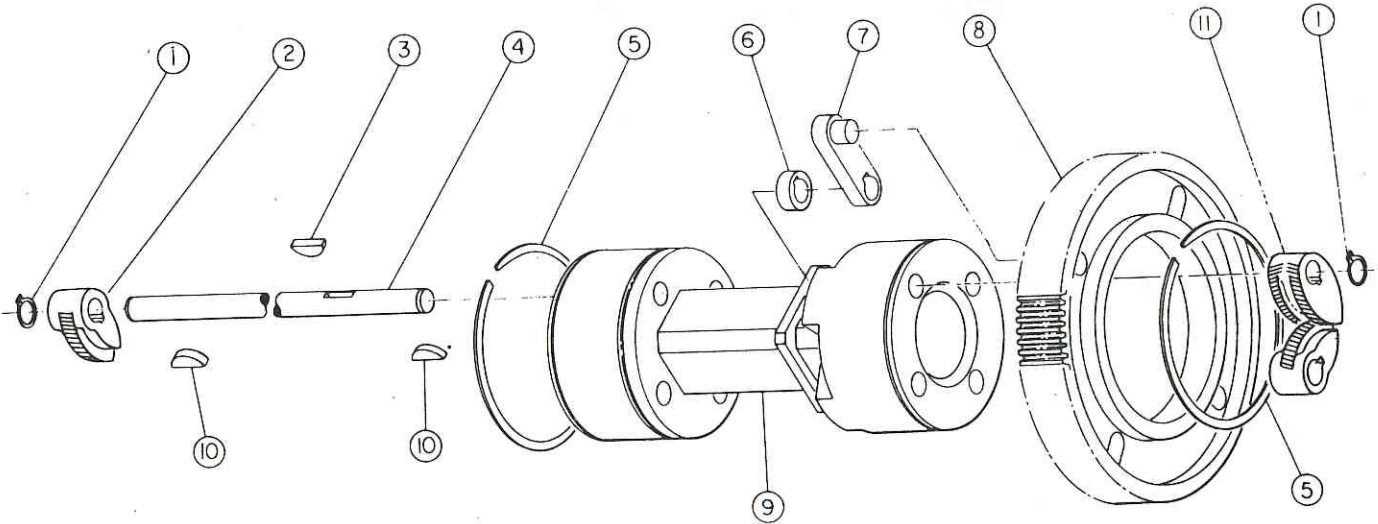
Optional Accessories Not Included in #14037 or #13792

40.	FA-7457	Filter, RF Interference	2
44.	1339	Enclosure, Interference Filter	} See Sub-Ass'y "C"
45.	B-132	Nut, Enclosure Att., #10-24 Hex.	
46.	CB-107	Washer, Lock, Enclosure Att., #10	
49.	K-908	Screw, Enclosure Att.	

Right and Left 22-A Main Assembly, 2-Speed

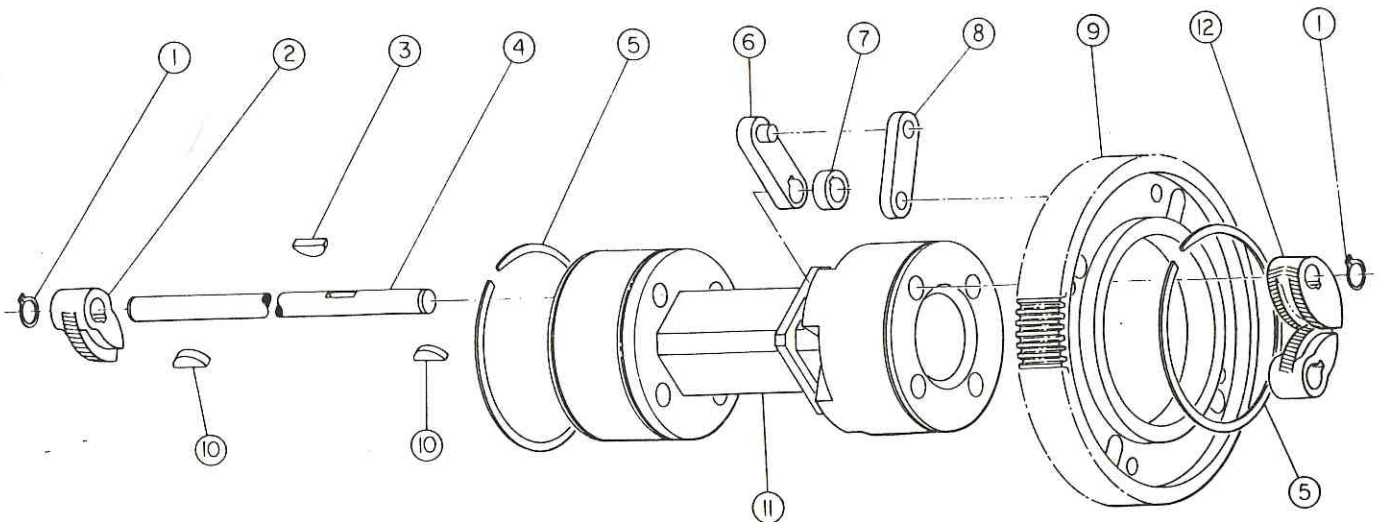


Standard 22-A Spindle Assembly #2090



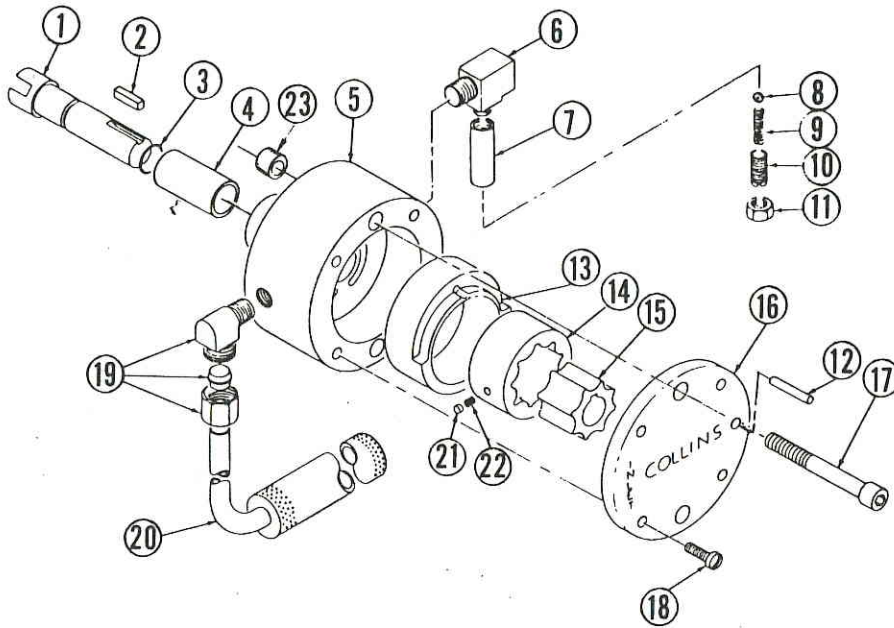
Item	Part No.	Description	Item	Part No.	Description
1.	1220	Jaw Retaining Ring (8)	7.	1230	Jaw Lever & Pin Assembly (4)
2.	12182	Single Jaw (4)	8.	1216	Spindle Gear, 104T
3.	1218	Jaw Lever Key (4)	9.	1211	Spindle
4.	1214	Jaw Shaft (4)	10.	1217	Jaw Shaft Key (8)
5.	1212	Spindle Retaining Ring (2)	11.	12181	Double Jaw (4)
6.	1213-4	Jaw Lever Spacer (4)		12180	Jaws, set of 4 narrow, 4 wide

Right and Left 22-A Spindle Assembly #2100



Item	Part No.	Description	Item	Part No.	Description
1.	1220	Jaw Retaining Ring (8)	8.	1236	Jaw Lever Link (4)
2.	12182	Single Jaw (4)	9.	1237-1	Spindle Gear Assembly
3.	1218	Jaw Lever Key (4)	10.	1217	Jaw Shaft Key (8)
4.	1234	Jaw Shaft (4)	11.	1211	Spindle
5.	1212	Spindle Retaining Ring (2)	12.	12181	Double Jaw (4)
6.	1230-1	Jaw Lever & Pin Assembly (4)		12180	Jaws, set of 4 narrow, 4 wide
7.	1213-4	Jaw Lever Spacer (4)			

Oil Pump Assemblies



Standard Oil Pump Assembly #12276

Note: Items 14 & 15 are sold as a set (No. 12293) only

Item	Part No.	Description
1.	12199	Shaft, Drive
2.	12290	Key, Square, Drive Shaft
3.	12291	Packing, Preformed
4.	12292	Bearing, Sleeve, Drive Shaft
5.	12196	Housing
6.	1542	Tee, Pressure Relief Valve
7.	12191	Body, Pressure Relief Valve
8.	1526	Ball, Pressure Relief Valve
9.	1527	Spring, Pressure Relief Valve
10.	1528	Screw, Pressure Relief Valve
11.	B-253	Nut, Hex. Jam, Pressure Relief Valve, 3/8"-24"
12.	—	Not in standard pump
13.	—	Not in standard pump
14.	12273	Gerotor, Outer
15.	12274	Gerotor, Inner
16.	12198	Cover, Oil Pump Housing
17.	F-112	Screw, Soc. Head Cap, self-locking, oil pump att., 1/4"-20x2 1/4"
18.	NG-405-D	Screw, self-tapping, cover att., #8-32 x 5/8" (4)
19.	4058	Elbow, Strainer (includes sleeve and nut)
20.	1550-1	Pipe and Strainer Assembly
21.	—	Not in standard pump
22.	—	Not in standard pump
23.	13455	Spacer, Oil Pump Mounting

Standard Oil Pump Assembly #12297

Same as above, less items 6, 7, 8, 9, 10, 11, 19 and 20.

Right & Left Oil Pump Assembly #12277

Note: Items 13, 14 & 15 are sold as a set (No. 12294) only

1.	12199	Shaft, Drive
2.	12290	Key, Square, Drive Shaft
3.	12291	Packing, preformed
4.	12292	Bearing, Sleeve, Drive Shaft
5.	12197	Housing
6.	1542	Tee, Pressure Relief Valve
7.	12191	Body, Pressure Relief Valve
8.	1526	Ball, Pressure Relief Valve
9.	1527	Spring, Pressure Relief Valve
10.	1528	Screw, Pressure Relief Valve
11.	B-253	Nut, Hex. Jam, Pressure Relief Valve, 3/8"-234"
12.	12804	Pin, Stop, Eccentric Ring
13.	12272	Ring, Eccentric, Reversing
14.	12273	Gerotor, Outer
15.	12274	Gerotor, Inner
16.	12198	Cover, Oil Pump Housing
17.	F-112	Screw, Soc. Head Cap, self-locking, oil pump att., 1/4"-20x2 1/4"
18.	NG-404-D	Screw, self-tapping, cover att., #8-32 x 1/2" (4)
19.	4058	Elbow, Strainer (includes sleeve and nut)
20.	1550-1	Pipe and Strainer Assembly
21.	12275	Plunger, Friction
22.	12280	Spring, Compression, Friction Plunger
23.	13455	Spacer, Oil Pump Mounting

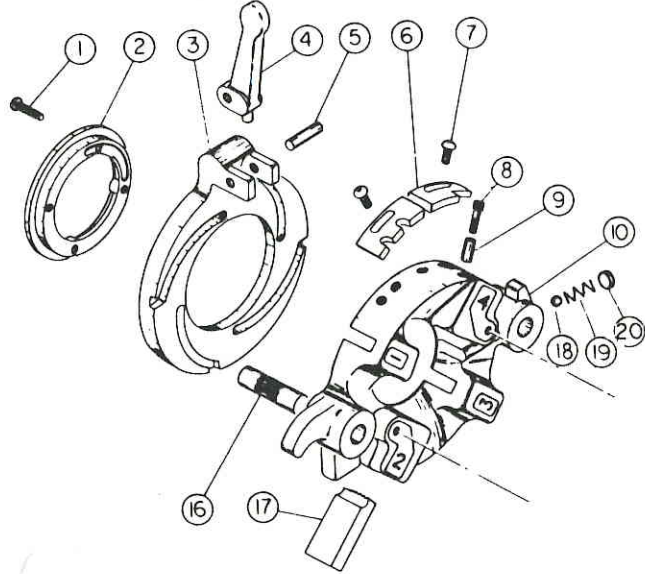
Right & Left Oil Pump Assembly #12298

Same as above, less items 6, 7, 8, 9, 10, 11, 19 and 20.

Snap-O-Matic Die Head Assemblies 1/8"-2"

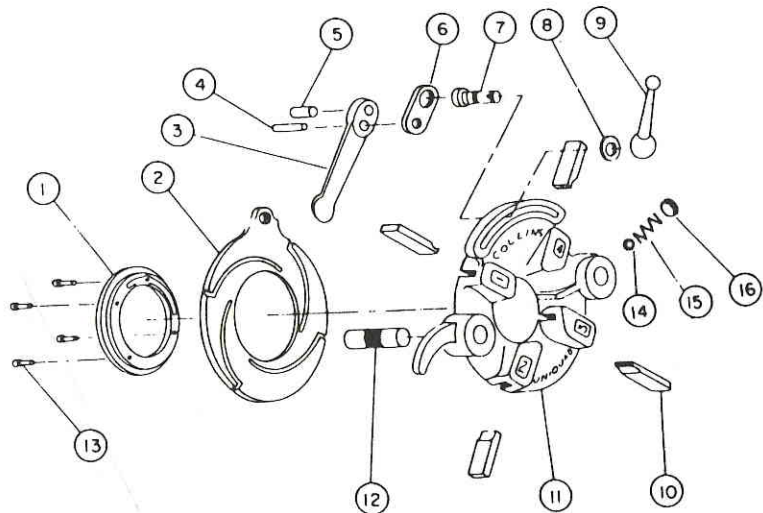
Dual Snap-O-Matic Die Heads: 1/8", 1/4", & 3/8"; 1/2" & 3/4"; 1" & 1 1/4"; 1 1/2" & 2"
 Quad Snap-O-Matic Die Head: 1"-2"

Item	Part No.	Description
1.	F-053	Die Head Soc. Hd. Cap Screw, #10-24 x 3/4" (4)
	C-107H	Lockwasher, Hi Collar, No. 10
2.	1433	1"-2" Retainer Plate
	1673	1/8"-3/4" Retainer Plate
3.	1632	1"-2" Scroll Plate
	1642	1/8"-3/4" Scroll Plate
4.	1633	Operating Lever
5.	O-406	Operating Lever Pivot Dowel Pin, 5/16" x 1 1/4"
6.	1634-1	1"-1 1/4"-1 1/2" Selector Plate
	1635-1	1" Selector Plate
	1635-2	1 1/4" Selector Plate
	1636-1	1 1/2" Selector Plate
	1636-2	2" Selector Plate
	1644-1	1/2" Selector Plate
	1644-2	3/4" Selector Plate
	1645	1/4" & 3/8" Selector Plate
	1646	1/8" Selector Plate
7.	G-103	Selector Plate Att. Button Hd. Cap Screw, 1/4"-20 x 1/2" (4)
8.	F-107	Scroll Plate Stop Soc. Hd. Cap. SCREW, 1/4"-20 x 1
9.	13113	Scroll Plate Stop
10.	1631	1"-2" Die Head Housing
	1641	1/8"-3/4" Die Head Housing
16.	1431-1	Die Head Pin
17.	—	Set of (4) Dies, specify size and type (ex., 1/2" NPT)(See Die Tables)
18.	B-1044-3	Ball
19.	12220	Spring
20.	12135	Expansion Plug

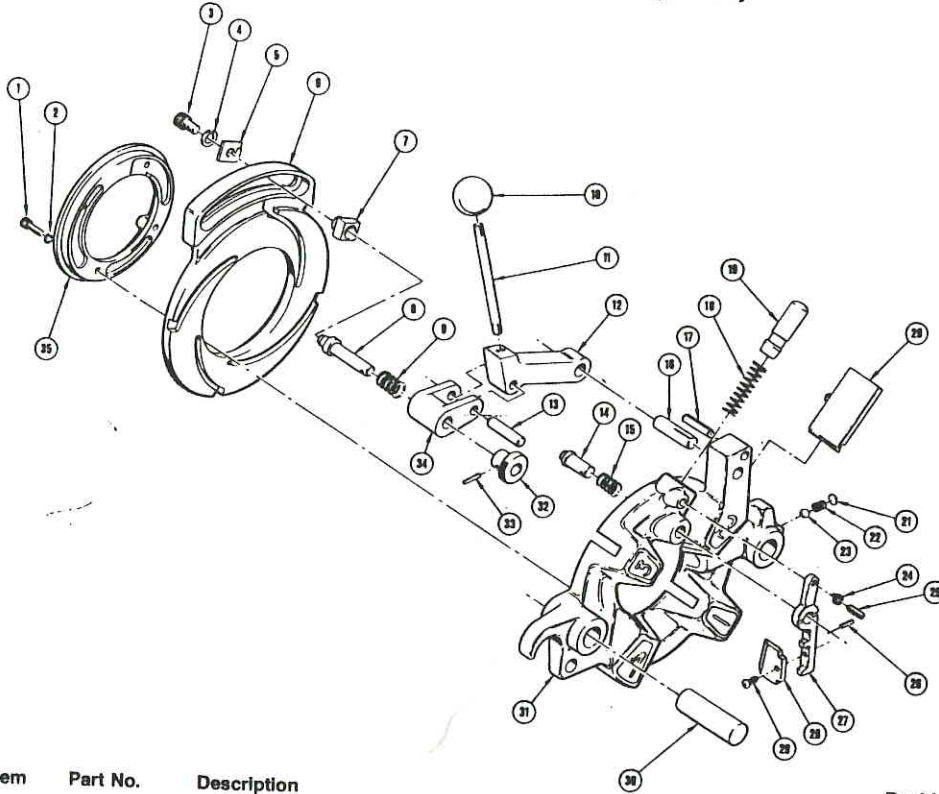


Uniquad Die Head Assembly 1/8"-2"

Item	Part No.	Description
1.	1433	Retainer Plate
2.	1432	Uniquad Scroll Plate
3.	1437	Operating Lever
4.	O-407	Operating Lever Stop Dowel Pin, 5/16" x 1 1/2"
5.	O-702	Operating Lever Pivot Dowel Pin, 1/2" x 1 1/8"
6.	2183	Uniquad Die Head Link
7.	2182	Uniquad Die Head Pivot Screw
8.	D-204	Pivot Screw Flat Washer, 3/8"
9.	1436	Scroll Plate Locking Lever
10.	—	Uniquad Dies, specify size and type (ex., 1/2" & 3/4" NPT)(See Die Tables)
11.	1431	Uniquad Die Head Housing
12.	1431-1	Die Head Pin
13.	F-053	Die Head Soc. Hd. Cap Screw, 10"-24" x 3/4" NPT
14.	B-1044-3	Ball
15.	12220	Spring
16.	12135	Expansion Plug



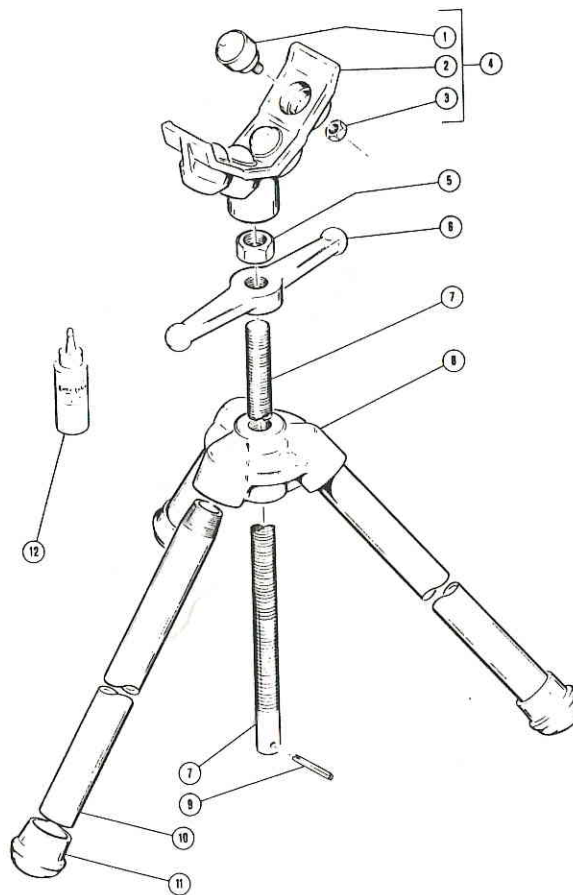
Automatic Die Head Assemblies, 1/2"-2" #12775 (NPT) #12774 (BSP)



Item	Part No.	Description	Req'd
1.	F-053	Screw, Soc. Hd. Cap, #10-24 x 3/4" long	4
2.	C-107	Lockwasher, #10	4
3.	F-1003	Screw, Soc. Hd. Cap, 1/4"-28 x 1/2" long	4
4.	C-109	Lockwasher, 1/4"	4
5.	12696	Washer, Selector Retaining	4
6.	12695	Scroll Plate	4
7.	12694	Selector, Size	1
8.	12667	Pin, Selector	4
9.	12669	Spring, Compression, Selector Pin	1
10.	12665	Knob, Operating Lever	1
11.	12666	Rod, Operating Lever	1
12.	12660	Lever, Operating Handle	1
13.	0-405	Pin, Dowel, 5/16" dia. x 1" long	1
14.	12664	Pin, Plunger Release	1
15.	12662	Spring, Compression, Trigger	1
16.	12566	Pin, Dowel, Grooved, 3/8" dia. x 1 1/2" long	1
17.	U-915	Pin, Spring, 1/4" dia. x 1" long	1
18.	12673	Spring, Compression, Plunger	1
19.	12674	Plunger, Die Head Opening	1
20.			1
21.	12135	Plug, Expansion, 3/8"	1
22.	12220	Spring, Compression	1
23.	13385	Ball, 5/16"	1
24.	B-133	Nut, Std. Hex, #10-32	1
25.	H-959-A	Setscrew, Cone Point, #10-32 x 3/4" long	1
26.	13209	Pin, Shear, Trigger	1
27.	12568	Trigger, Scroll Plate Release	4
28.	12693	Gauge, Thread Length, NPT (included in #12775 assy.)	1
	12554	Gauge, Thread Length, BSP (included in #12774 assy.)	1
29.	G-062	Screw, Butt. Hd. Cap, #10-32 x 3/8" long	1
30.	1431-1	Pin, Die Head Rest	1
31.	12561	Housing, Die Head	1
32.	12668	Knob, Selector Pin	1
33.	U-407	Pin, Spring, 1/8" dia. x 1/2" long	1
34.	12670	Link, Operating Lever	1
35.	13487	Retainer, Scroll Plate	1
	1988-3	Wrench, Allen, 3/16" (not shown)	1
	1988-16	Wrench, Allen, 3/32" (not shown)	1

*Set of (4) Dies not included in Assembly #12775. Specify size & type (ex., 1/2" NPT (See Die Tables)

Pipe Support Stand Ball Bearing Type #13894



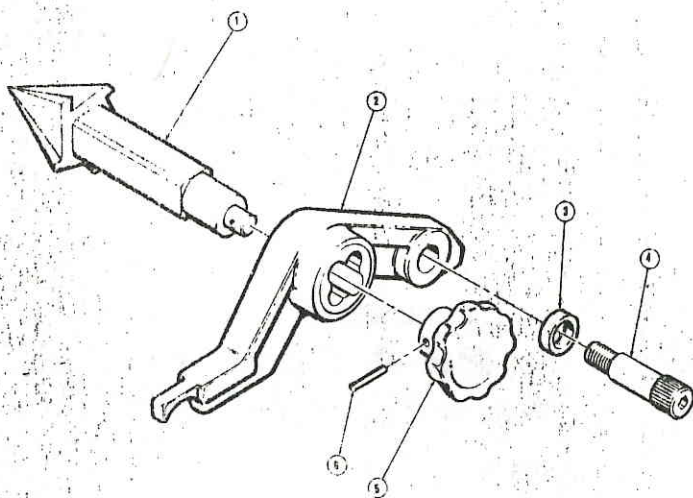
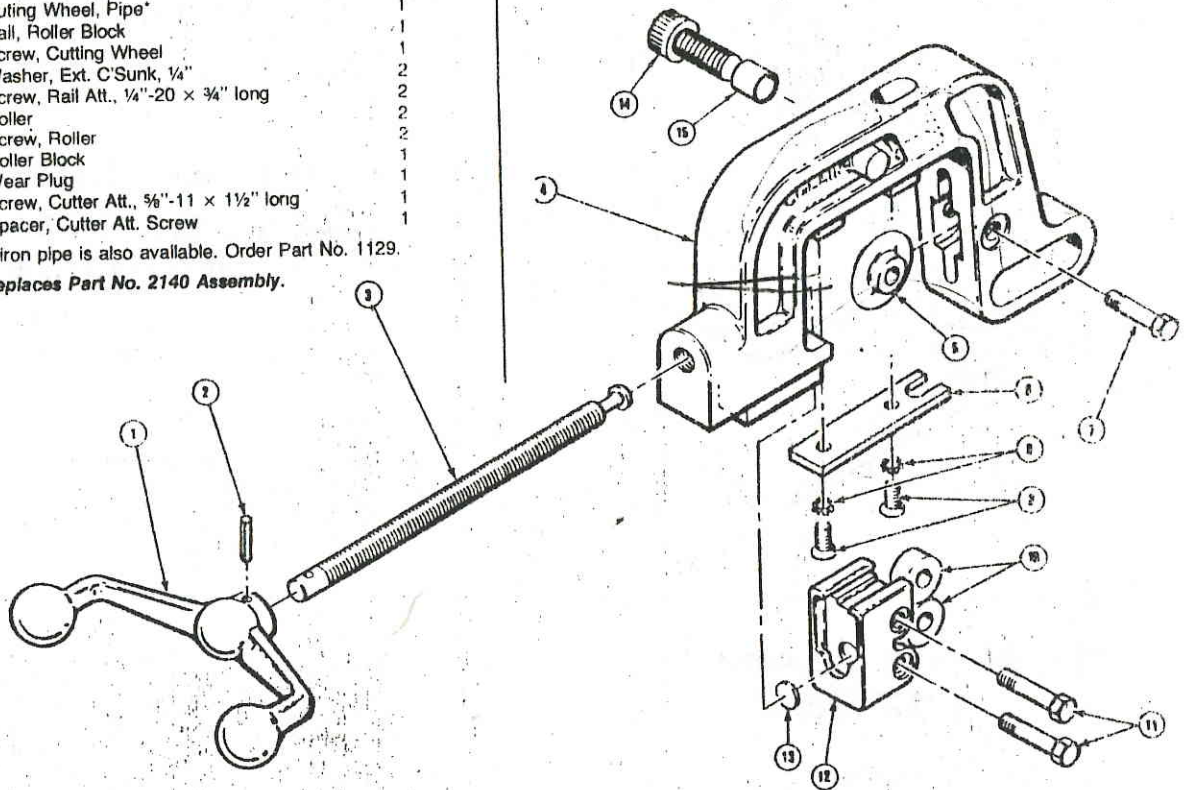
Item	Part No.	Description	Req'd
1.	13207	Caster Assembly, Ball Bearing	4
2.	13788	Support, Pipe Stand, Ball Bearing Type	1
3.	B-203	Nut, Caster Assembly Att. 3/8"-16" Hex. Hd.	4
4.	13897	Head Assembly, Pipe Support Stand Ball Bearing Type	1
5.	B-110	Nut, 1"-8 NC, Hex. Hd.	1
6.	10175	Handle, Elevating, Pipe Support	1
7.	10172	Rod, Threaded, Pipe Support	1
8.	10179	Hub, Leg, Pipe Support	1
9.	U-918	Pin, Spring, 1/4" x 1 1/2" lg.	1
10.	10178	Leg, Pipe Support	3
11.	10181	Cap, Rubber, Tripod Leg	3
12.	13896	Lubricating Oil, Roll-R-Lube (2 oz. bottle)	1

Cutter Assembly #13770

Item	Part No.	Description	Req'd
1.	1111	Handle	1
2.	P-9061A	Pin, Grooved, 1/4" x 1 3/8" long	1
3.	10073	Screw, Cutter	1
4.	13771	Body, Cutter	1
5.	1128	Cuting Wheel, Pipe*	1
6.	13772	Rail, Roller Block	1
7.	1124	Screw, Cutting Wheel	1
8.	CD-109	Washer, Ext. C'Sunk, 1/4"	2
9.	E-105	Screw, Rail Att., 1/4"-20 x 3/4" long	2
10.	10075	Roller	2
11.	10074	Screw, Roller	2
12.	10072	Roller Block	1
13.	10077	Wear Plug	1
14.	F-807	Screw, Cutter Att., 5/8"-11 x 1 1/2" long	1
15.	2139-1	Spacer, Cutter Att. Screw	1

*Cutting wheel for cast iron pipe is also available. Order Part No. 1129.

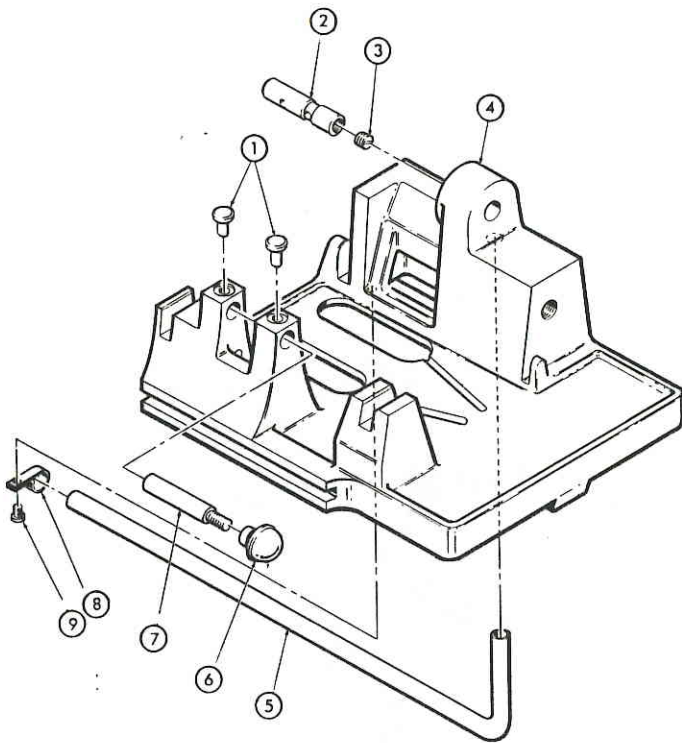
Note: This assembly replaces Part No. 2140 Assembly.



22-A Adjustable Cone Reamer Assembly #12127

Item	Part No.	Description	Req'd
1.	13212	Reamer, Cone, 5-Flute	1
2.	1657	Holder, Cone Reamer	1
3.	2133	Spacer, Reamer Att.	1
4.	I-604-SL	Screw, Shoulder, Reamer Att., 3/4" x 1 1/2" lg. w/Nylok	1
5.	1652	Knob, Cone Reamer	1
6.	P-707	Pin, Grooved, Knob Att., 3/16" x 1 1/4"	1

Standard 22-A Carriage Assembly #2130



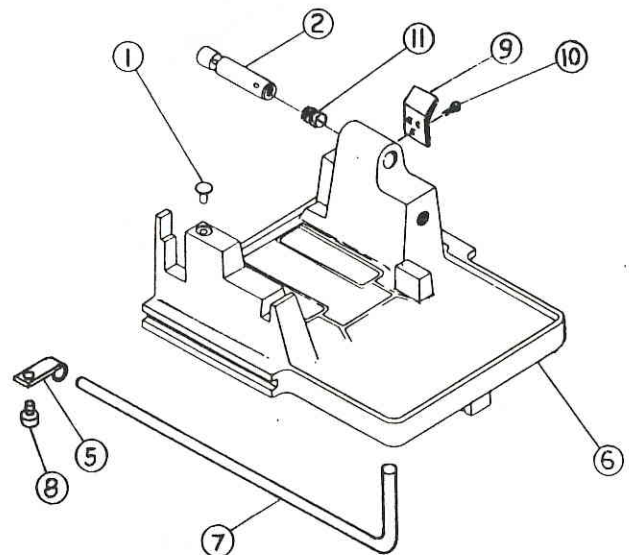
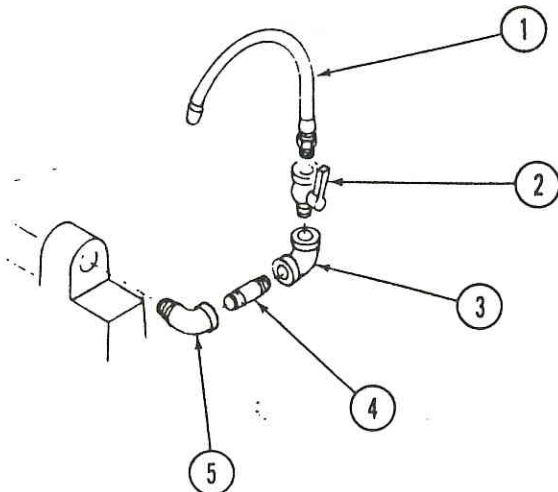
Item	Part No.	Description	Req'd
1.	1572	Pin, Die Hd. Stop, Carriage	2
2.	2132	Pin, Carriage	1
3.	13140	Plug, Pipe, 1/8"	1
4.	1571	Carriage, 22-A	1
5.	1565	Oil Tube	1
6.	—	Not on standard carriage	
7.	—	Not on standard carriage	
8.	1558	Clip, Oil Tube	1
9.	NF-503	Screw, Oil Tube Clip Att., #10-24 x 1/2" Self-Tap	1

Right and Left 22-A Carriage Assembly #12019

Item	Part No.	Description	Req'd
1.	1572	Pin, Die Hd. Stop, Carriage	2
2.	2132	Pin, Carriage	1
3.	13140	Plug, Pipe, 1/8"	1
4.	1571	Carriage, 22-A	1
5.	1565	Oil Tube	1
6.	12021	Knob, Plastic, Die Head Retainer	1
7.	1233	Pin, Locking, Die Head	1
8.	1558	Clip, Oil Tube	1
9.	NF-503	Screw, Oil Tube Clip Att., #10-24 x 1/2" Self-Tap	1

Oil Spout Assembly #12267

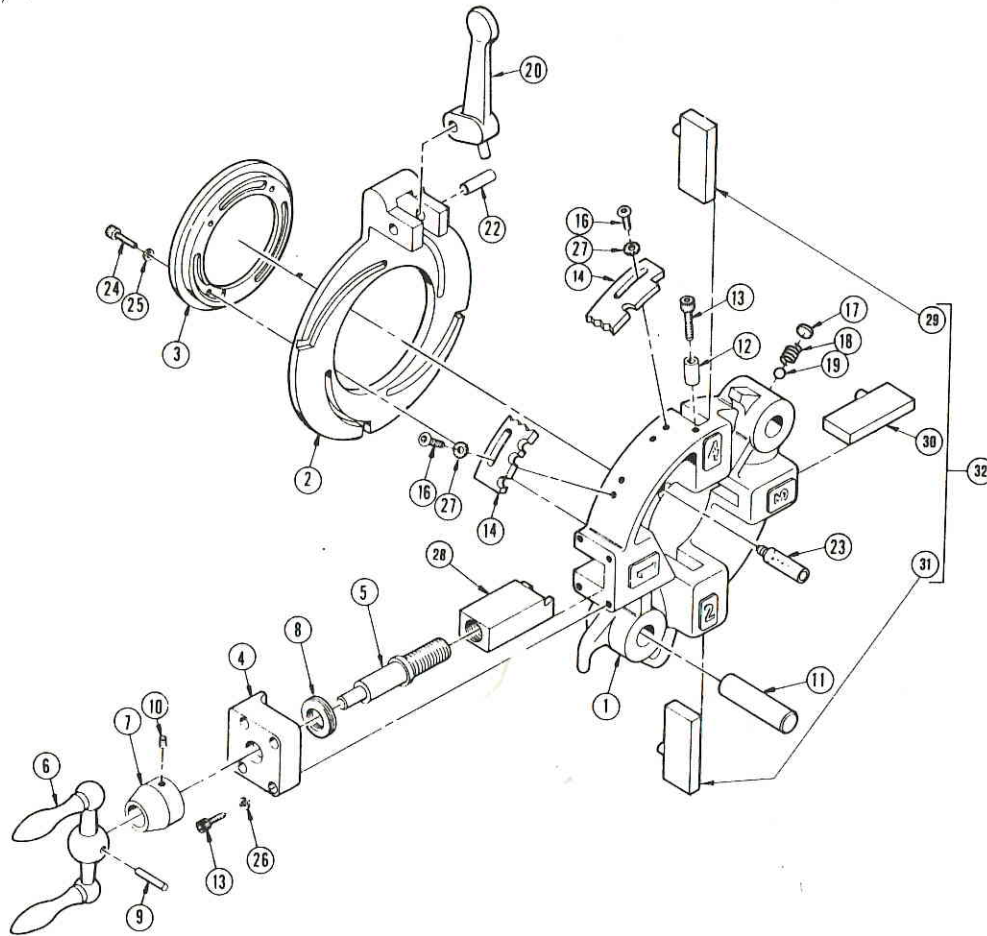
Item	Part No.	Description
1.	4657	Spout, Flex, Coolant
2.	4658	Valve, Coolant Spout
3.	12270	Elbow, Pipe, 1/8" x 1/8" x 90°
4.	12169	Nipple, Pipe, 1/8" x 1 1/2" long
5.	4556	Elbow, Street, Pipe, 1/8" x 1/8" x 90°



Special Purpose 22-A Carriage Assembly #13945

Item	Part No.	Description	Req'd
1.	1572	Carriage Stop Pin	1
2.	1608	Carriage Pin	1
5.	1558	Oil Line Clip	1
6.	1610-22-A	Carriage, Special	1
7.	1561	Oil Line	1
8.	NF-503	Screw, Oil Line Clip Att. #10-24 x 1/2" Self Tap	1
9.	1601	Die Head Stop	1
10.	G-103	Screw, Die Hd. Att., 1/4"-20 x But. Hd. Cap	3
11.	13140	Plug, Pipe, 1/8"-27 x 3/8"	1

22-A Grooving Head Assembly 3/4"-2", #12200-2



Item	Part No.	Description	Req'd
1.	12210	Housing, Grooving Head	1
2.	1632	Scroll Plate, SOM	1
3.	1433	Retainer, Scroll Plate	1
4.	12217	Bearing Block, Groover Housing	1
5.	12095	Screw, Feed, Grooving Tool	1
6.	12215	Handle, Feed Screw, Grooving Tool	1
7.	12097	Indicator, Groove Depth	1
8.	12096	Bearing, Thrust	1
9.	P-706-A	Pin, Grooved, Handle Att., 3/16" x 1"	1
0.	H-103-A	Set Screw, Groove Depth Indicator, 1/4"-20 x 5/16"	1
1.	1431-1	Pin, Die Head Rest	1
2.	13113	Spacer, Scroll Plate Stop	1
3.	F-107	Screw, Scroll Plate Stop and Bearing Block Att., 1/4"-20 x 1 Soc. Hd. Cap	5
1.	13386	Selector Plate, 3/4"-2"	1
3.	G-104	Screw, Selector Plate Att., 1/4"-20 x 5/8" But. Hd. Cap	4
7.	12135	Plug, Expansion, 3/8"	1
1.	12220	Spring, Compression, Die Head	1
1.	13385	Ball, Bearing, 5/16" dia.	1
1.	1633	Lever and Pin Assembly, Operating, Snap-O-Matic	1
0-406		Pin, Dowel, Operating Lever Pivot, 5/16" x 1 1/4" lg.	1
12216		Tube, Oil Dispensing	1
F-053		Screw, Ret. Plate Att., 10 -24" x 3/4" Soc. Hd. Cap	1

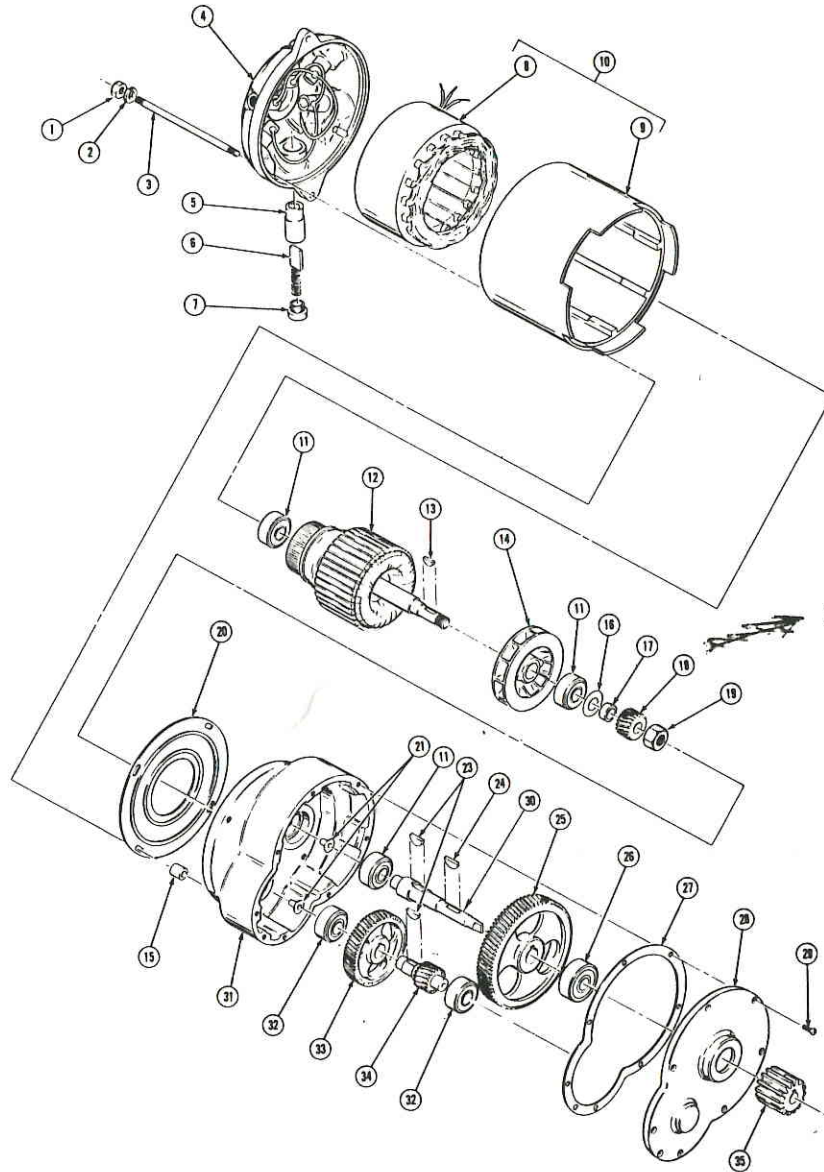
Item	Part No.	Description	Req'd
25.	C-107-HC	Washer, Spring Lock, No. 10 Hi-Collar	4
26.	C-109-HC	Washer, Spring Lock, 1/4" Hi-Collar	4
27.	CC-109-A	Washer, Lock, 1/4" Ext. Tooth	4
28.	—	See Optional Accessories below	
29.	13388	Die, Centering, Left Hand	1
30.	13389	Die, Centering, Straight	1
31.	13387	Die, Centering, Right Hand	1
32.	13390	Set of three centering dies	1

Optional Accessories Not Included in #12200-2

28.	12205	Grooving Tool, Victaulic, 1"-2" (Sch. 80 Max.)
	12206	Cut-Off Tool, 1"-2"
	12212	Beveling Tool, 37 1/2°, 1"-2"
	12269	Beveling Tool, 45°, 1"-2"
	12878	Grooving Tool, First Step, 1"-2"
	13088	Grooving & Cut-Off Tool, Type "ES," 2"
	13767	Beveling Tool, 45° J-Bevel, 1"-2" (Sch. 80 Max.)
	13310	Reaming-Chamfering Tool, 30° x 25°, 3/4"-1 1/2"
	13944	Reaming-Chamfering Tool, Michigan Pipe, 10° x 30°, 1"-2"
	13779	Reaming-Chamfering Tool, 10° x 37 1/2°, 1"-2"
	12219	Grooving Tool, Saran Pipe, 1"-2"
	13361	Grooving Tool, Titan Plastic Lined Pipe, 1"-2" (Sch. 40 Max.)

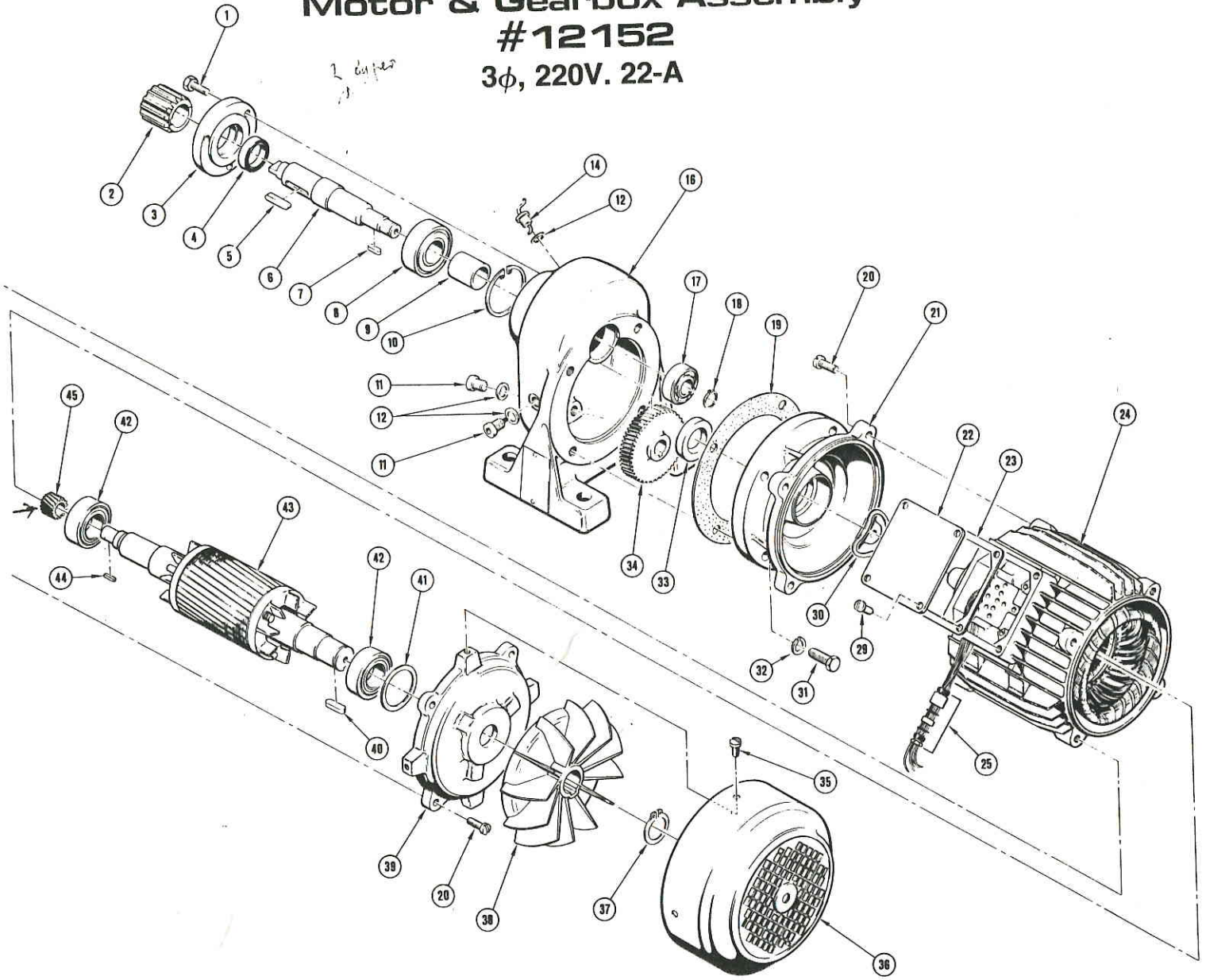
22-A Motor and Gearbox Assembly

115V. 1 ϕ — Part #1300 230V. 1 ϕ — Part #1300-1



Item	Part No.	Description	Req'd	Item	Part No.	Description	Req'd
1.	B-101	Nut, 1/4"-20 Hex. Hd.	4	16.	1332	Spacer, Slinger	2
2.	CB-202	Washer, Lock, 1/4"	4	17.	1333	Spacer, 20T. Helical Gear	1
3.	1361	Tie Rod, Motor	4	18.	1336	Gear, Helical, Armature, 20T	1
4.	1350-22	End Bell Assembly (includes Brush Holders, but Brushes and Caps not included)	1	19.	1334	Nut, Armature Shaft	1
5.	1352	Holder, Brush, Electrical Contact (included in item #4 1350-22)	6	20.	1323	Baffle, Stator	1
6.	1360-1	Brush, Elect. Contact (115V. and 230V.)	6	21.	1383-1	Plug, Gearbox, Plastic	2
7.	1355	Cap, Brush Holder	6	23.	1385	Key, Woodruff, 1/4" x 3/4"	1
8.	1321 1311	Stator, 115V. Single Phase or, Stator, 230V., Single Phase	1	24.	1217	Key, Woodruff, 1/4" x 1"	1
9.	1322	Housing, Stator (115V. and 230V.)	1	25.	1394	Gear, Helical, 96T.	1
10.	1320	Stator and Housing Assembly, 115V. Single Phase, or Stator and Housing Assembly, 230V. Single Phase	1	26.	1392-1	Bearing, 204 SZZ	1
11.	1315	Bearing, Gearbox, 203 SZZ	3	27.	1381-1	Gasket, Gearbox Housing	1
12.	1331 1327	Armature, 115V. Single Phase, or Armature, 230V. Single Phase	1	28.	1382	Cover, Gearbox Housing	1
13.	1338	Key, Woodruff, 20T. Helical Gear	1	29.	K-1106	Screw, Cover Att., 1/4"-20 x 5/8"	8
14.	1335	Fan, Armature	1			Fillister Head	1
15.	1325	Retainer, Stator Baffle, Neoprene	4	30.	1384	Shaft, Output, Gearbox	1
				31.	1381	Housing, Gearbox	2
				32.	1337	Bearing, 201 SFF 6201 2Z	1
				33.	1390	Gear, Helical, 60T.	1
				34.	1395	Gearshaft, Helical, 22T.	1
				35.	1386	Gear, Spur, Output Shaft, 15T.	1

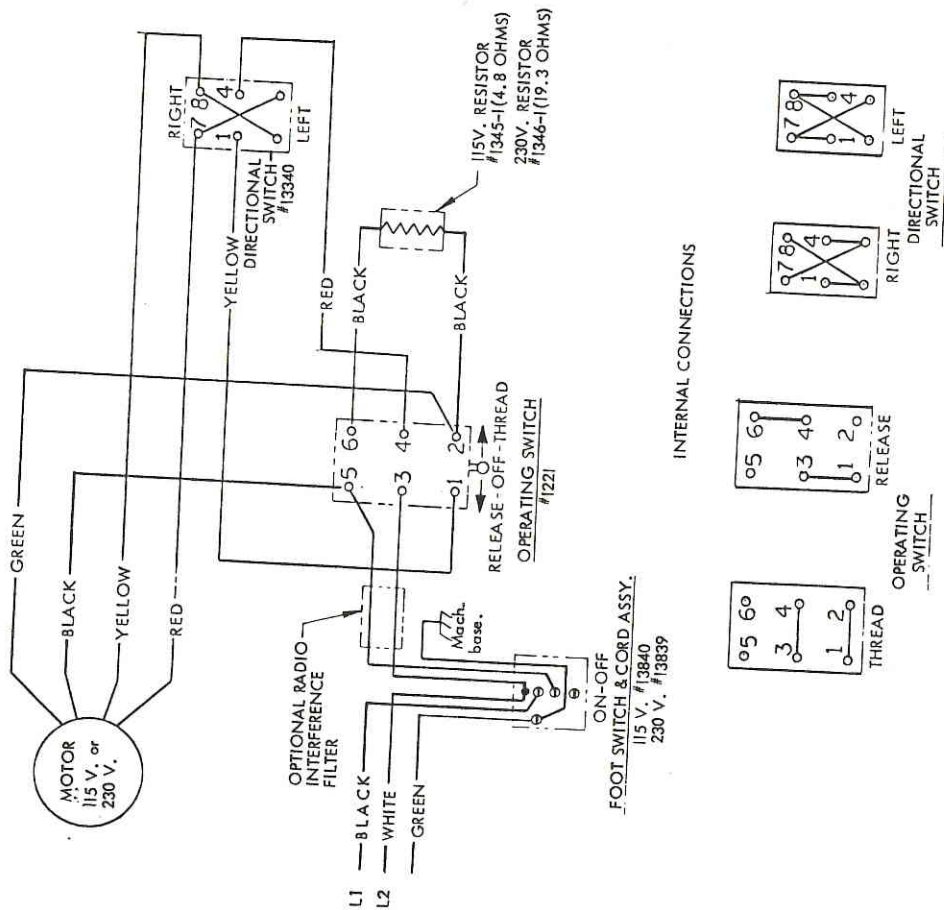
Motor & Gearbox Assembly #12152 3φ, 220V. 22-A



Item	Part No.	Description	Req'd	Item	Part No.	Description	Req'd
1.	14081	Screw, Bearing Cap Att., Hex Hd. Cap (M6 × 16)	3	23.	14098	Gasket, Cover, Terminal Box (KD90R) (included in item #24)	1
2.	1386	Gear, Spur, Output Shaft, 15T.	1	24.	14099	Housing & Stator Assembly, Motor, 3φ, 220V. (includes items: 22, 23, 25, 29)	1
3.	14082	Cap, Bearing	1	25.	14100	Bushing, Strain Relief, PG-9 (included in item #24)	1
4.	14083	Seal, Output Shaft (25 × 25 × 7B1SL)	1	29.	14101	Screw, Term. Box Cover Att. (5mg × 8 C.H.) (included in item #24)	4
5.	14084	Key, Square, 1/4" × 1/4" × 1-7/16" lg.	1	30.	14102	Washer, Wave (#6205)	1
6.	12867	Shaft, Output, Gearbox	1	31.	14103	Screw, Adapter Att., (M8 × 22)	4
7.	12825	Key, Square, (A5 × 5 × 14mm)	1	32.	14104	Washer, Lock, Adapter Att., (B8)	4
8.	14085	Bearing, Ball, Output Shaft (6304Z)	1	33.	14105	Seal, Motor Shaft (B20 × 35 × 7)	1
9.	14086	Spacer, Bearing	1	34.	14106	Gear, Helical 73T. (No. 0353)	1
10.	14087	Ring, Retaining, Internal (52 × 2mm)	1	35.	14107	Screw, Fan Cover Att., (5mg × 6R.H.)	4
11.	14088	Screw, Magnetic, Oil Drain	2	36.	14108	Cover, Motor Fan (H90R)	1
12.	14089	Washer, Magnetic Screw (C10 × 13.5mm)	2	37.	14109	Ring, Retaining, Motor Fan (24A)	1
14.	14090	Screw, Air Vent	1	38.	14110	Fan, Motor, External (V90R)	1
16.	14091	Housing, Gearbox	1	39.	14111	End Bell, Motor (V906 495)	1
17.	14092	Bearing, Ball, Output Shaft (6301)	1	40.	14112	Key, Square (6 × 6 × 18)	1
18.	14093	Ring, Retaining, External (12 × 1mm)	1	41.	14113	Spacer, Armature Bearing	1
19.	14094	Gasket, Gearbox	1	42.	14114	Bearing, Ball, Armature (6205-2Z)	2
20.	14095	Screw, Adapter Att., Hex. Hd. Cap (6 mg. × 25)	8	43.	14115	Armature Assembly, Motor 3φ, 220V.	1
21.	14096	Adapter, Gearbox to Motor, V1007(517)	1	44.	14116	Key, Square (3 × 3 × 12)	1
22.	14097	Cover, Terminal Box (V10499) (included in item #24)	1	45.	13951	Gear, Helical 16T.	1

Standard 22-A Wiring Diagram

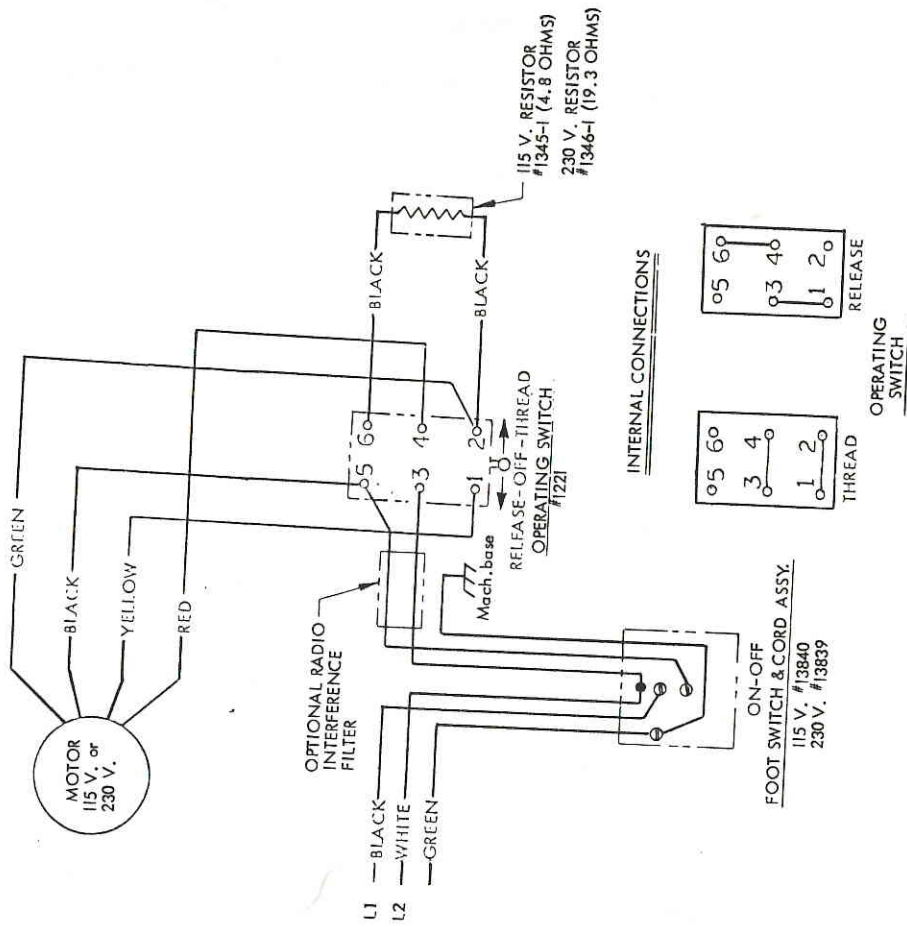
115V. or 230V. Single Phase



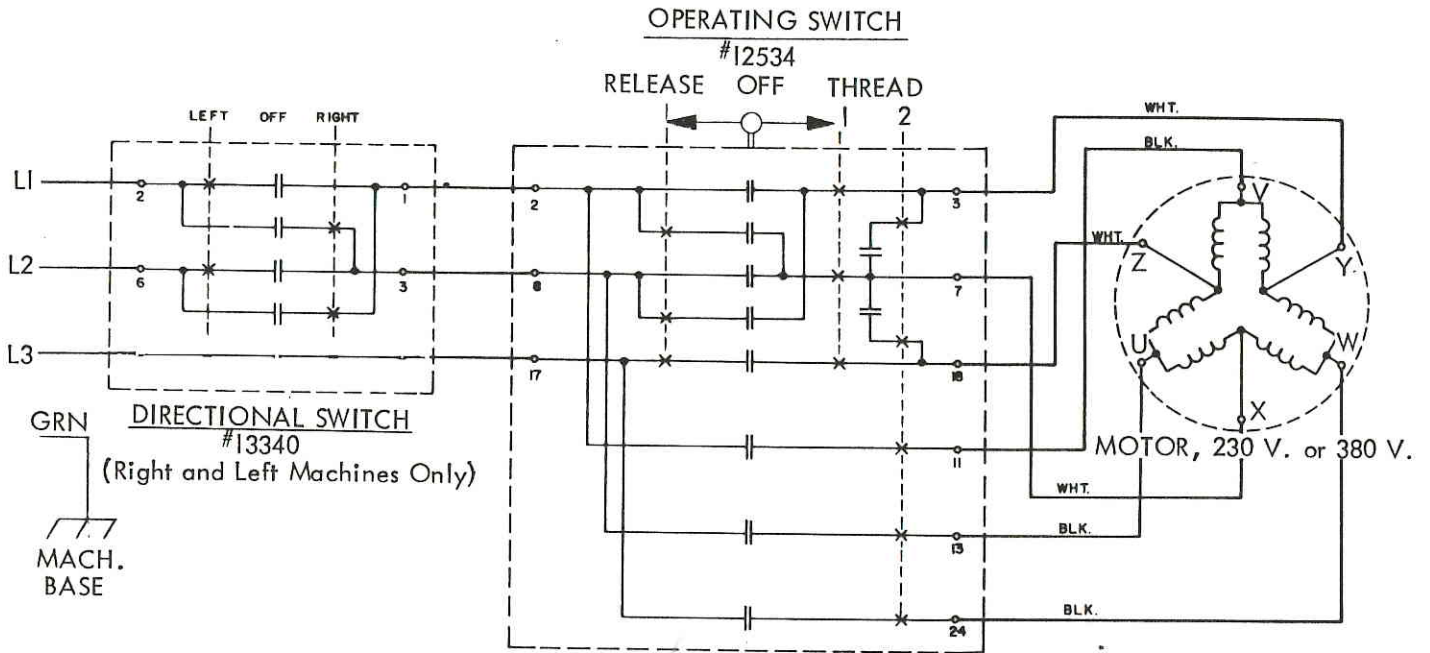
Right and Left 22-A Wiring Diagram

115V. or 230V. Single Phase

COLLINS THRED-O-MATIC 22-A



Standard or Right and Left Wiring Diagram 2 Speed Three Phase 230V. or 380V.



Wiring Diagram — End Bell Assembly

