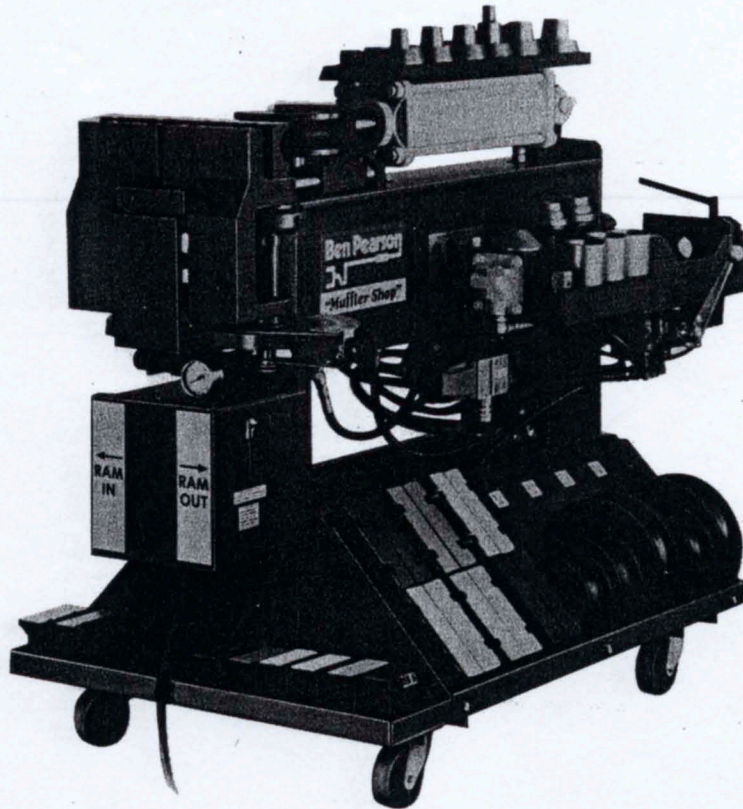
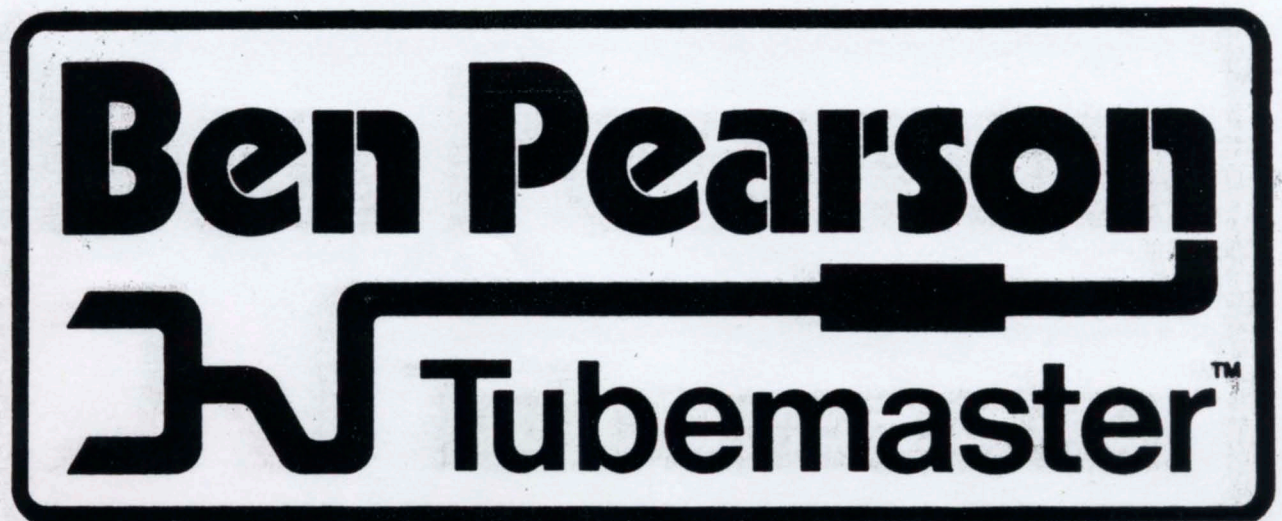


PARTS MANUAL

BEN PEARSON PIPE BENDERS



MB-97

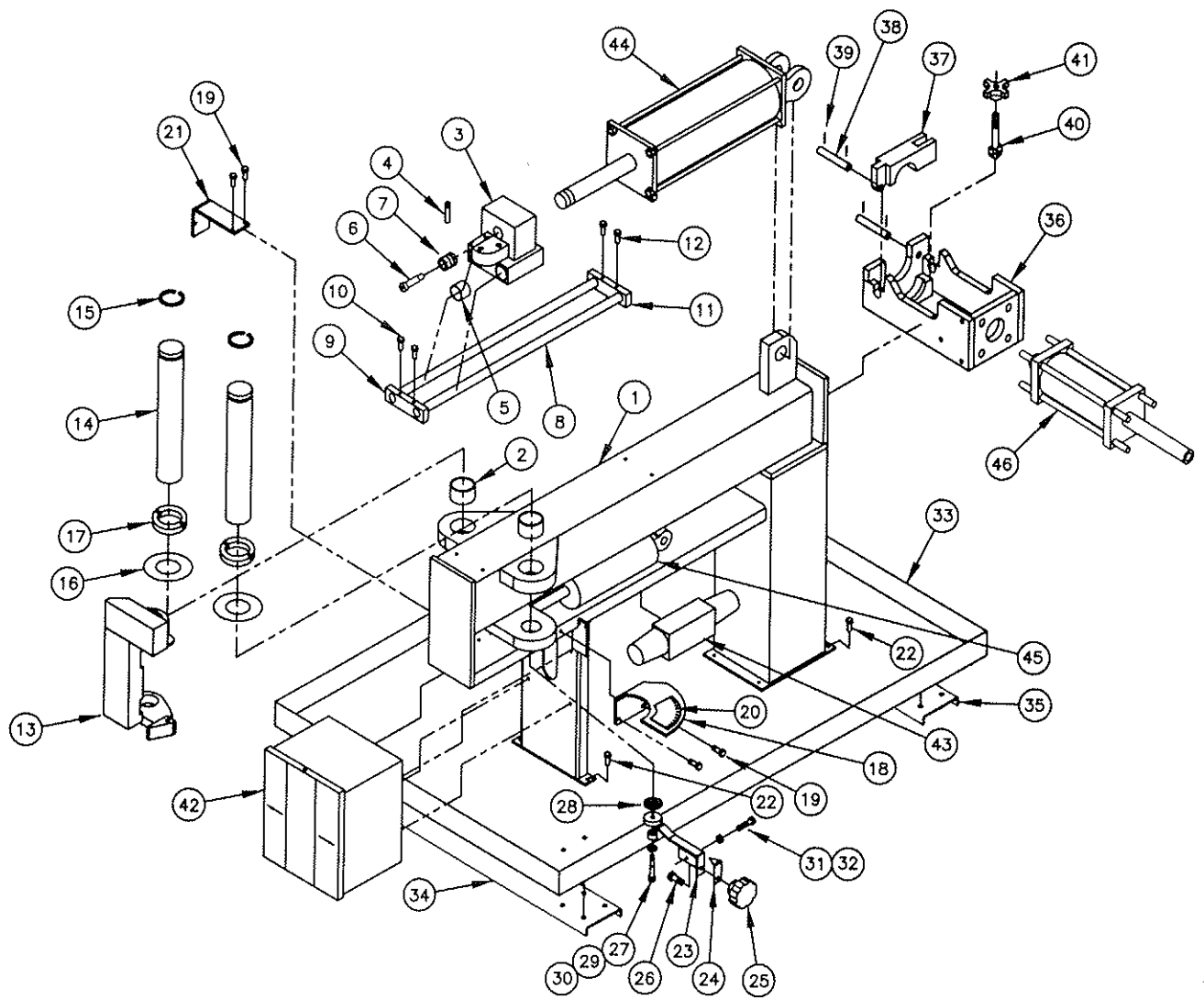


MB 97 PARTS MANUAL

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MB-97 PARTS



MB97 PARTS LIST			5/31/01
1	62764	MAIN FRAME	1
2	60747	BUSHING - PIVOT ARM SHAFT	4
#	62770	SUB PLATE BRACKET	1
#	61553	GREASE FITTING	4
#	100180	HEX SCR. 1/2 X 1-1/2	2
#	100178	HEX JAM NUT 1/2-13NC	2
3	60640	CARR STR	1
4	60642	CARR PIN	3
5	60691	BRONZE BUSHING (REPLACEMENT)	4
6	60407	SHOULDER SCREW	1
7	60406	SPRING	1
8	60754	WAY	2
9	60753	WAY RETAINER - FRONT	1
10	60990	SHCS 3/8 X 1-3/4	2
11	60989	WAY RETAINER.- REAR	1
12	100345	HFHSL 3/8 X 2-1/2	2
#	61042	.005 SHIM	4
#	61043	.010 SHIM	4
#	61873	.020 SHIM	4
#	60352	.030 SHIM	4
#	61497	PIVOT ARM CHAIN ASSY	1
#	60476	PIN	2
#	100175	COTTER PIN	4
13	62393	FAB PIVOT ARM LH	1
#	62398	FAB PIVOT ARM RH	1
14	61350	SHAFT	2
#	60750	KEY	2
15	60751	RETAINING RING	2
16	60749	THRUST WASHER	2
17	61710	CLAMP ASSY	2
18	62771	DIAL PLATE	1
19	100207	HEX SCREW 1/4-20NC X 3/4 GR5	2
#	100134	LOCKWASHER 1/4	2
20	60646	DIAL PLATE SCALE	1
#	100057	DRIVE SCREW	2
21	62772	VALVE BRACKET	1
#	100134	LOCKWASHER 1/4	2
22	100238	HFHSL 3/8 X 1	6
#	100239	HFHSL 3/8 NUT	6
23	62773	POINTER STR	1
24	62777	POINTER	1
25	60698	CONTROL KNOB	1
26	100196	HEX SCREW 5/16 X 1/2	1
27	100376	SHOULDER BOLT 5/16 X 18NC X 1/1/4"	1
28	61591	FRICTION WASHER	1
29	100047	WASHER SHOCK ABS	1

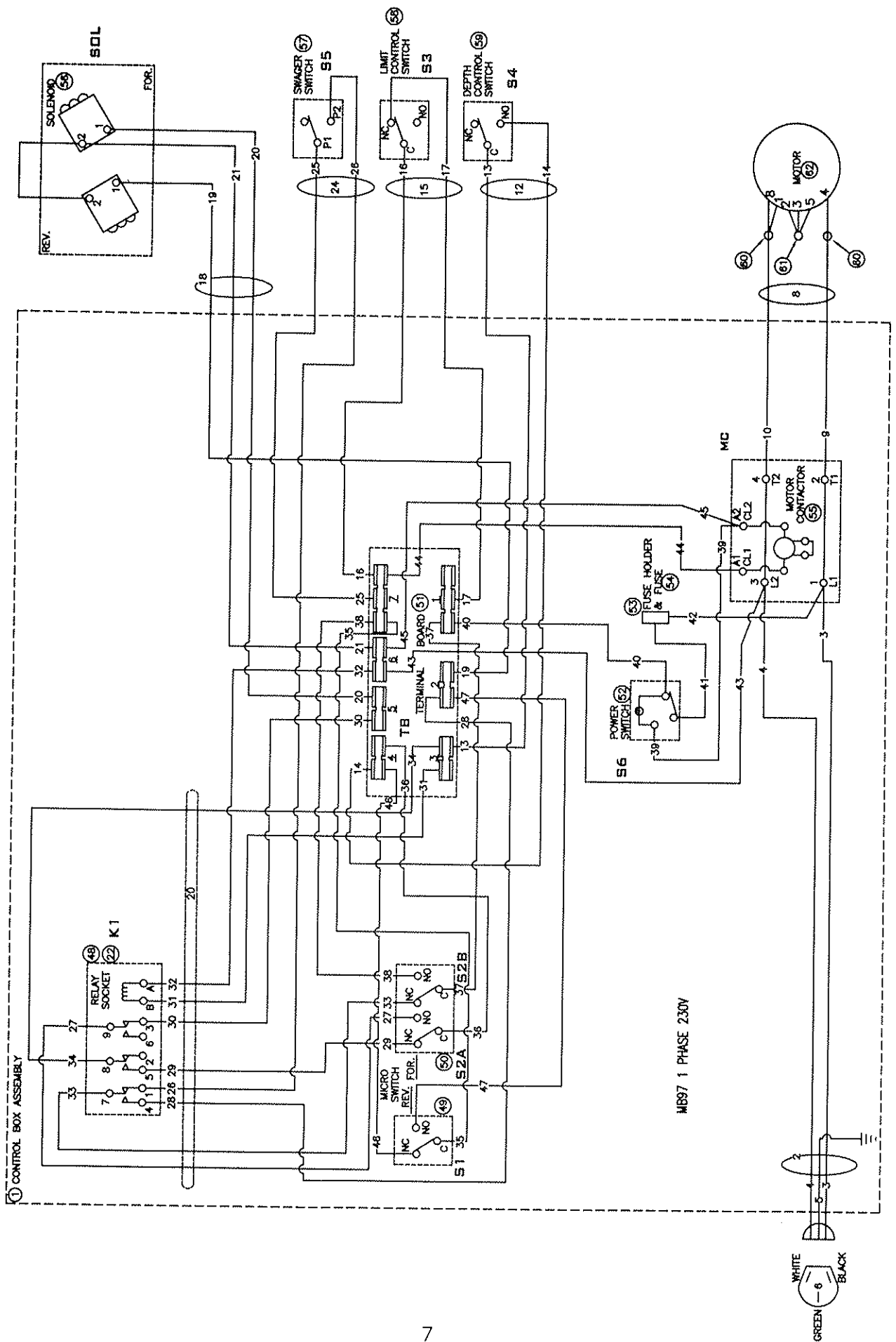
30	100048	RUBBER WASHER	1
31	100377	HEX SCREW 1/4 X 20NC X 1-1/4	1
32	100131	HEX NUT 1/4-20NC	1
#	60124	TUBEMASTER DECAL	1
#	62612	DECAL-HYD PRESSURE	1
#	60297	COLOR CODE DECAL	2
33	62485	BASE	1
34	60173	BOTTOM SUP-FRT	1
35	60618	BOTTOM SUP-REAR	1
#	60089	SWIVEL CASTERS - 4 DIA	4
#	100238	HEX FL HD SL SCREW 3/8-16NC X 1	16
#	100239	HEX FL HD SL NUT 3/8-16 NC	16
#	60616	DIE STOP - TRAY	2
#	100234	HEX FL HS SL SCREW 5/16-18 X 3/4	8
#	100237	HEX FL HS SL NUT 5/16-18NC	8
#	62157	TOP TOOL TRAY	1
#	62779	WISE ASSY	1
36	62787	BASE STR. - SOLID DIE VISE	1
37	61419	WISE STR. TOP	1
38	61443	PIN - HOOK PIVOT SOLID DIE	2
39	100189	COTTER PIN 3/32 X 1	4
#	100141	FLATWASHER 1/2" SAE	3
40	61760	CLAMP BOLT	1
41	61597	KNOB	1
#	61800	SWAGE VISE WARNING DECAL	1
#	80453	1/2 X 1-3/4 HHSCREW	2
#	100125	LOCKWASHER 1/2" MED	2
#	61247	CYL ADAPTER	1
#	62059	ARBOR BOLT	1
#	100266	HEX JAM NUT - THIN 7/8 X 14NF	1
#	62060	ADJ BOLT W/ADAPTER ASSY	1
#	62062	ADJ NUT	1
#	61780	DECAL ACME NUT	1
#	61397	SIGHT GA.	1
#	100108	10 X 3/8 RD HD SCR.	2
#	61779	SETTING DECAL	1
#	61800	CAUTION DECAL	1
#	60653	DECAL - CAUTION	1
#	61095	SWITCH BOX STR	1
#	100002	H SCREW 5/16-18NC X 3/4 GR 5	2
#	100159	LOCKWASHER 5/16 MED	2
#	60830	SWITCH BOX COVER	1
#	100091	RD HD SELF TAP SCREW #10-24NC X 1/2	2
42	62784	CONTROL BOX ASSY	1
43	61950	DIR. CONTROL VALVE	1
#	100312	SHCS 1/4 X 1-1/2	4
#	61101	STRAIN REL. BUSHING	1

#	61127	WIRE CONNECTOR BLUE	3
#	60423	SWAGER SWITCH	1
#	60263	RH MACH SCREW 6-32NC X 3/8	2
#	60269	LOCKWASHER 6-MED	2
#	61101	STRAIN REL BUSHING	1
#	61102	CONDUIT LOCK NUT	1
#	60419	SHUT OFF SWITCH	1
#	60420	AUX ACTUATOR	1
#	62785	GUARD STR	1
#	61101	STRAIN REL BUSHING	1
#	61102	CONDUIT LOCK NUT	1
#	62786	DOB SWITCH - MB79	1
#	100378	HEX SCREW #8 - 32NC X 1-1/2"	2
#	100171	LOCK WASHER #8	2
#	100104	HEX NUT #8 - 32	2
#	61101	STRAIN REL BUSHING	1
#	61102	CONDUIT LOCK NUT	1
#	61103	STRAIN REL. BUSHING	1
#	61104	CONDUIT LOCK NUT	1
#	61298	RELIEF VAVLE	1
#	100059	HEX SCR 1/4-20NC X 1-3/4	2
#	100134	LOCK WASHER 1/4"	2
#	100131	HEX NUT 1/4 -20NC	2
44	62447	MAIN CYLINDER	1
45	62444	BACK PRESSURE CYLINDER	1
46	62029	SWAGE CYLINDER	1
#	100155	FLATWASHER 5/8" SAE	4
#	100073	HEX NUT 5/8-18NF	4
#	61299	MANUAL CONTROL VALVE	1
#	60990	SHCS 3/8 X 1-3/4	3
#	61330	SUB PLATE	1
#	100239	HEX FL HD NUT 3/8	2
#	60361	HYDRAULIC OIL	6
#	62249	NAME PLATE	1
#	61376	230 V DECAL	1
#	62182	BENDER TRAINING FLM	1
#	83423	WARRANTY CARD	1
#	62504	MANUAL	1

NOT SHOWN

HYDRAULIC PARTS LIST – MB97

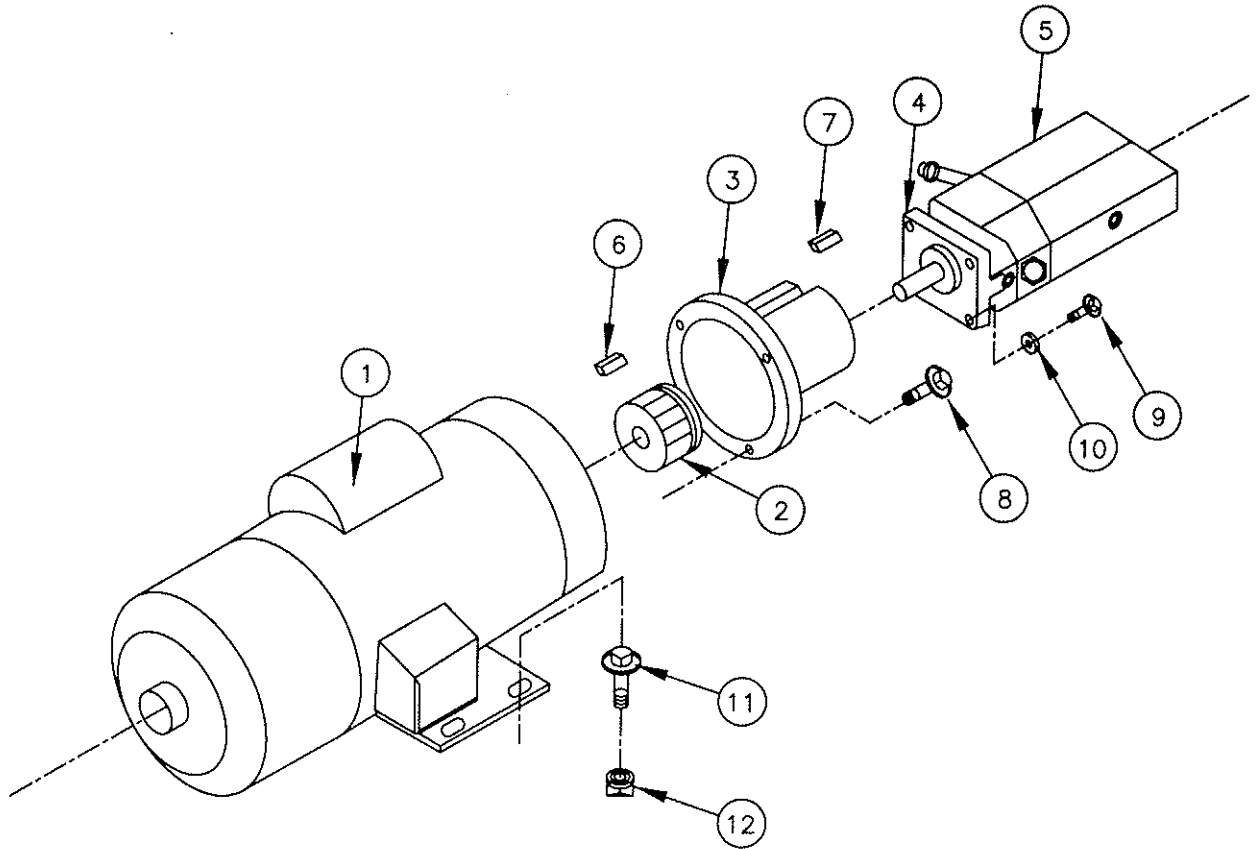
REF. NO.	PART NUMBER	PART NAME	DESCRIPTION	QTY
1	61512	MALE CONNECTOR	1/2 ORB X 7/16 JIC	1
2	60074	SUCTION HOSE	3/4 ID – 39 LONG	1
3	100123	HOSE CLAMP		2
4	100139	HOSE BARB	3/4 ID HOSE X 3/4 NPT	1
5	61331	SUCTION STRAINER	3/4 NPT FEMALE X 1-1/4NPT	1
6	60368	90 DEG. MALE ELBOW	9/16-18 ORB X 9/16-18 JIC	6
7	60053	90 DEG. MALE ELBOW	9/16 JIC X 1/2 NPT	2
8	61557	MALE CONNECTOR	7/16 JIC X 1/2 NPT	1
9	60061	MALE CONNECTOR	9/16 JIC X 1/2 NPT	1
10	61329	PIPE CROSS	1/2 NPT	2
11	100117	PIPE PLUG	1/2 NPT	2
12	61362	90 DEG. LONG ELBOW	9/16-18 ORB X 9/16 JIC	4
13	100026	PIPE PLUG (REPLACEMENTS)	9/16 ORB	
14	60544	MALE CONNECTOR	9/16 ORB X 9/16 JIC	4
15	61294	MALE RUN TEE	9/16 ORB X 9/16 JIC	1
16	61327	SWIVEL REDUCER	9/16 ORB X 3/4 JIC	1
17	61293	MALE RUN TEE	3/4 ORB X 3/4 JIC	2
18	61328	CHECK VALVE	3/4-16 ORB	1
19				
20	60085	PRESSURE GAUGE	1/4 NPT STEM	1
21	61298	RELIEF VALVE	1/4 NPT	1
22				
23	100037	MALE CONNECTOR	9/16 JIC X 1/4 NPT	1
24	62760	HOSE ASSEMBLY	3/8 ID – 46-3/4" LONG	1
26	61483	HOSE ASSEMBLY	3/8 ID – 21-3/4" LONG	2
27	62761	HOSE ASSEMBLY	3/8 ID – 37" LONG	1
28	62758	HOSE ASSEMBLY	3/8 ID – 42-1/2" LONG	1
29	62759	HOSE ASSEMBLY	3/8 ID – 14" LONG	1
30	62754	HOSE ASSEMBLY	3/8 ID – 25-1/2" LONG	1
31	61558	HOSE ASSEMBLY	1/4 ID – 23" LONG	1
32	62447	CYLINDER, MAIN	9/16-18 ORB PORTS	1
33	62444	CYLINDER, BACK PRESSURE	9/16-18 ORB PORTS	1
34	62029	CYLINDER, EXP. SWAGER	9/16-18 ORB PORTS	1
35	61299	VALVE (CROSS)	9/16-18 ORB PORTS	1
36	61330	SUB PLATE	9/16-18 ORB PORTS	1
37	60428	PUMP ASSEMBLY		1
38	62755	HOSE ASSEMBLY	3/8 ID – 13" LONG	1
39	61883	HOSE ASSEMBLY	3/8 ID – 18-1/2" LONG	1
40	62665	HOSE ASSEMBLY	3/8 ID – 18-34" LONG	1
41	62756	HOSE ASSEMBLY	3/8 ID – 12-1/2" LONG	1
42	62757	HOSE ASSEMBLY	3/8 ID – 21-1/4" LONG	1



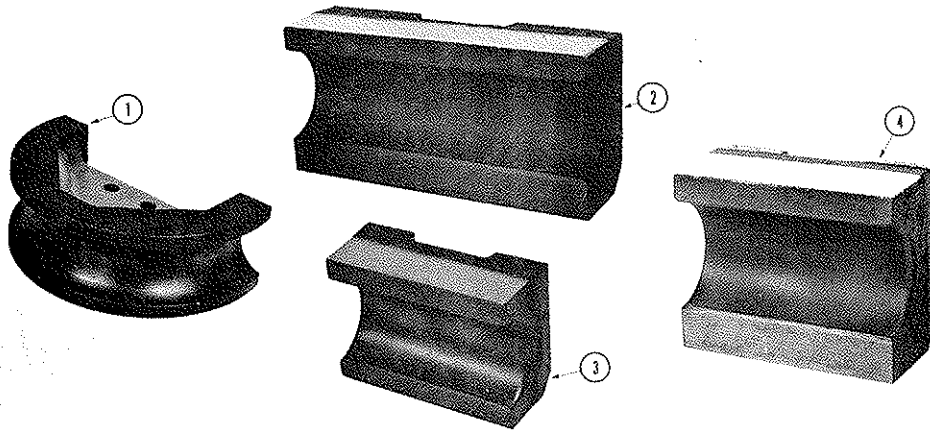
1 PHASE WIRING--MB97/230V CONTROL CIRCUIT

CODE	PART NAME	PART #	TERMINAL #	
1	CONTROL BOX ASSEMBLY INCLUDES:	61319		
2	POWER CORD ASSY	60316		
3	BLACK	10/3 SO 230" LONG		
4	WHITE	MC-L1 10 PLUG		
5	GREEN	MC-L2 10 PLUG		
6	PLUG #60320	GROUND		100195
8	CORD (MOTOR)	10/2 30" LONG	60907	
9	BLACK	MC-T1 MOTOR		
10	WHITE	MC-T2 MOTOR		
12	CORD ASSEMBLY - DEPTH OF BEND	18/2 SJO 24" LONG	XXXXX	
13	WHITE	S4-C TB-3		61505
14	BLACK	S4-NO TB-4		61505
15	CORD ASSEMBLY - LIMIT SWITCH	18/2 SJO 41" LONG	62790	
16	WHITE	S3-C TB-7		61505
17	BLACK	S3-NC TB-1		61505
18	CORD ASSEMBLY - DIR. CONTROL VALVE	18/4 SJO 46" LONG	62788	
19	WHITE	SOL-R1 TB-2		100071
20	BLACK	SOL-F1 TB-5		100071
21	RED	SOL-F2 TB-6		100071
22	SOCKET W/ WIRE ASSEMBLY		62791	
23	SOCKET	K1	61773	
24	CORD ASSEMBLY - SWAGER	18/2 SJO 80" LONG	62789	
25	BLACK	TB-7 S5-P1		100071
26	WHITE	K1-1 S5-P2		100071
27	WIRE ASSY 18 GA. ORANGE 12"	K1-9 S2A-NO	61776	60304
28	WIRE ASSY 18 GA. ORANGE 8"	K1-4 TB-2	61775	100071
29	WIRE ASSY 18 GA. ORANGE 12"	K1-5 S2A-NC	61776	60304
30	WIRE ASSY 18 GA. ORANGE 8"	K1-3 TB-5	61775	100071
31	WIRE ASSY 18 GA. ORANGE 8"	K1-B TB-3	61775	100071
32	WIRE ASSY 18 GA. ORANGE 8"	K1-A TB-6	61775	100071
33	WIRE ASSY 18 GA. ORANGE 12"	K1-7 S2B-NC	61776	60304
34	WIRE ASSY 18 GA. ORANGE 8"	K1-8 TB-3	61775	100071
35	WIRE ASSY 18 GA. ORANGE 8"	S1-C TB-7	60391	60304
36	WIRE ASSY 18 GA. ORANGE 12"	S2A-C TB-4	60388	60304
37	WIRE ASSY 18 GA. ORANGE 12"	S2B-C TB-1	60388	60304
38	WIRE ASSY 18 GA. ORANGE 12"	S2B-NO TB-7	60388	60304
39	WIRE ASSY 18 GA. ORANGE 8"	S6 MC-CL2	60643	100071
40	WIRE ASSY 18 GA. ORANGE 12"	S6 TB-1	60360	100071
41	WIRE ASSY 18 GA. ORANGE 8"	S6 FUSE	61367	100071
42	WIRE ASSY 18 GA. ORANGE 8"	MC-L1 FUSE	60643	100071
43	WIRE ASSY 18 GA. ORANGE 12"	MC-L2 TB-6	60396	100071
44	WIRE ASSY 18 GA. ORANGE 12"	MC-CL1 TB-7	60396	100071
45	WIRE ASSY 18 GA. ORANGE 12"	MC-CL2 TB-6	60396	100071
46	WIRE ASSY 18 GA. ORANGE 8"	S1-NC TB-4	60391	60304
47	WIRE ASSY 18 GA. ORANGE 8"	S1-NO TB-2	60391	60304
48	RELAY	K1	61770	
49	MICRO SWITCH - REVERSE CONT.	S1	60308	
50	MICRO SWITCH - FORWARD	S2A-S2B	60309	
51	TERMINAL BOARD STRUCTURE	TB	60397	
52	POWER SWITCH - FRONT W/ LIGHT	S6	61322	
53	FUSE HOLDER		61324	
54	FUSE (1 AMP)		61325	
55	MOTOR CONTACTOR - 4HP		61888	
56	CONTROL VALVE-SOLENOID (DIRECTIONAL)	SOL	61950	
57	SWAGER SWITCH	S5	60423	
58	LIMIT CONTROL SWITCH	S3	60440	
59	DEPTH CONTROL SWITCH	S4	62786	
60	WIRE NUT - GREY (2 REQUIRED)	MOTOR LEADS	60337	
61	WIRE NUT - BLUE	MOTOR	61127	
62	MOTOR 10 - 60 HZ - 1750 RPM 4HP		62244	

MOTOR AND PUMP

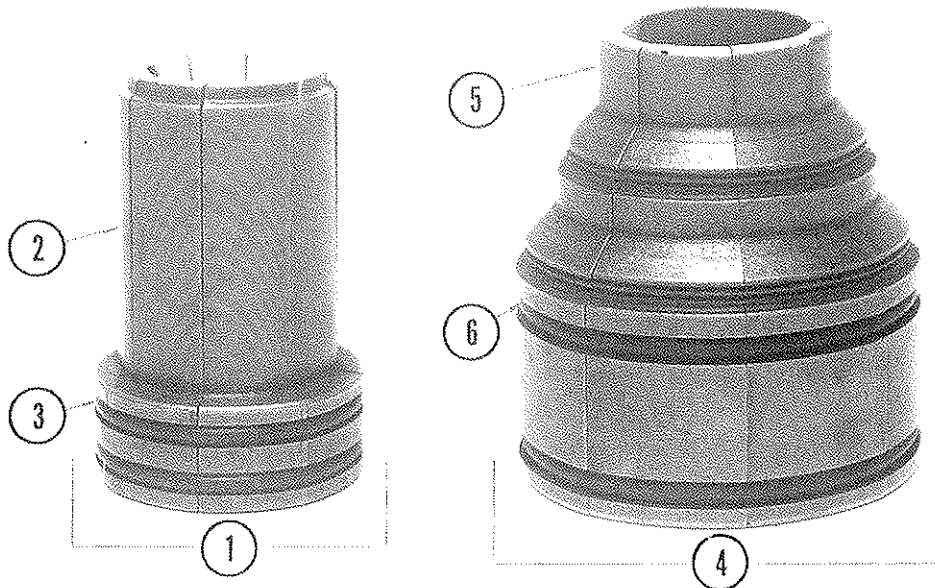


SYS	PART #	PART NAME	QT.
1	62244	MOTOR 1PH.-230V-4 HP-1750RPM BALDOR	1
2	60425	FLEXIBLE COUPLING ASSEMBLY	1
3	60426	ADAPTER	1
4	60427	GASKET	1
5	60428	PUMP - BARNES	1
6	-	KEY	1
7	-	KEY	1
8	100238	HFHSL SCREW - 3/8-16NC X 1 GR.5	4
9	100234	HFHSL SCREW - 5/16-18NC X 3/4 GR.5 -BARNES PUMP	4
9	100241	HEX SCREW - 5/16-18NC X 6-1/2 GR.5 - MTE PUMP	2
10	100159	LOCK WASHER - 5/16	2
11	100234	HFHSL SCREW 5/16-18NC X 3/4 GR.5	4
12	100237	HFHSL NUT 5/16-18NC	4

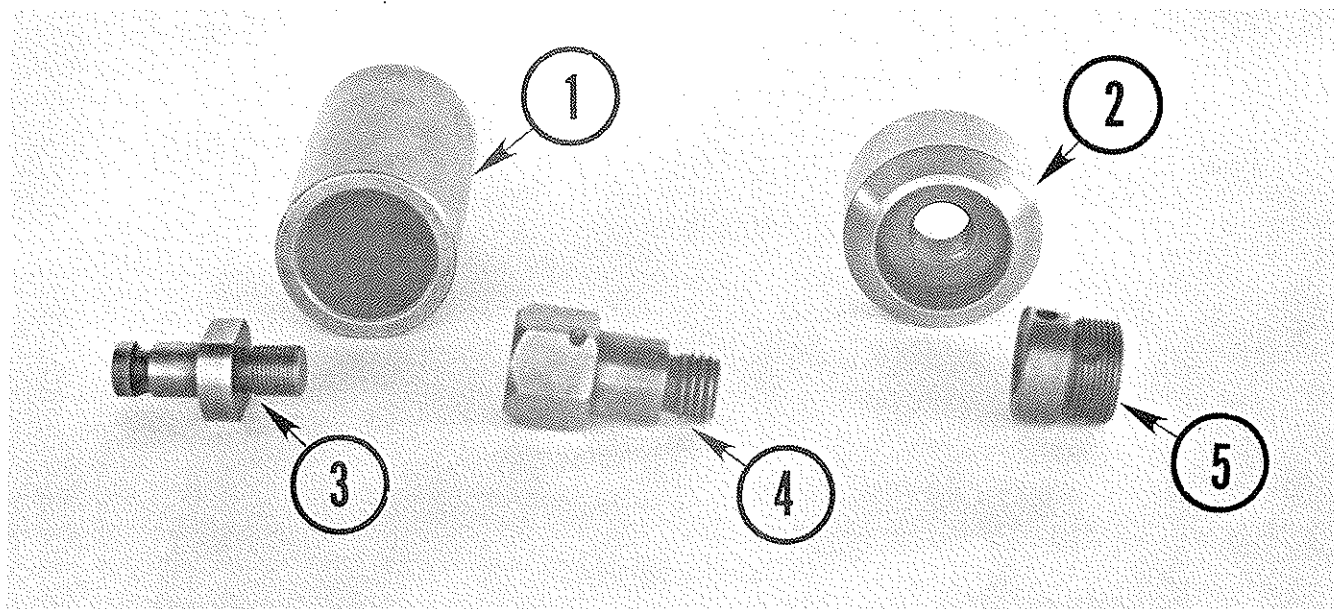


Code	Part Number	Part Name	QTY.
1	60876	Radius Die, 114-3	1
1	60877	Radius Die, 138-3	1
1	61260	Radius Die, 138-4	1
1	60221	Radius Die, 112-3	1
1	60222	Radius Die, 112-4	1
1	61044	Radius Die, 158-3	1
1	60878	Radius Die, 158-4	1
1	61083	Radius Die, 158-5	1
1	60225	Radius Die, 134-3	1
1	60226	Radius Die, 134-4	1
1	60227	Radius Die, 134-5	1
1	60230	Radius Die, 178-3	1
1	60231	Radius Die, 178-4	1
1	60232	Radius Die, 178-5	1
1	60235	Radius Die, 200-3	1
1	60236	Radius Die, 200-4	1
1	60237	Radius Die, 200-5	1
1	61084	Radius Die, 218-3	1
1	61085	Radius Die, 218-4	1
1	61062	Radius Die, 218-5	1
1	60240	Radius Die, 214-3	1
1	60241	Radius Die, 214-4	1
1	60242	Radius Die, 214-5	1
1	61114	Radius Die, 238-4	1
1	61115	Radius Die, 238-5	1
1	60245	Radius Die, 212-4	1
1	60246	Radius Die, 212-5	1
1	61121	Radius Die, 234-5	1
1	61020	Radius Die, 300-5	1

Code	Part Number	Part Name	QTY.
2	61107	Back Shoe, 114-1	2
2	61109	Back Shoe, 138-1	2
2	61000	Back Shoe, 112-1	2
2	61111	Back Shoe, 158-1	2
2	61001	Back Shoe, 134-1	2
2	61002	Back Shoe, 178-1	2
2	61003	Back Shoe, 200-1	2
2	61086	Back Shoe, 218-1	2
2	61004	Back Shoe, 214-1	2
2	61116	Back Shoe, 238-1	2
2	61005	Back Shoe, 212-1	2
2	61122	Back Shoe, 234-1	2
2	61006	Back Shoe, 300-1	2
3	61108	Half Shoe, 114-H	1
3	61110	Half Shoe, 138-H	1
3	61014	Half Shoe, 112-H	1
3	61112	Half Shoe, 158-H	1
3	61015	Half Shoe, 134-H	1
3	61016	Half Shoe, 178-H	1
3	61017	Half Shoe, 200-H	1
3	61087	Half Shoe, 218-H	1
3	61018	Half Shoe, 214-H	1
3	61117	Half Shoe, 238-H	1
3	61019	Half Shoe, 212-H	1
3	61123	Half Shoe, 234-H	1
4	61879	Three Quarter Shoe, 114-0	1
4	61880	Three Quarter Shoe, 138-0	1
4	61008	Three Quarter Shoe, 112-0	1
4	61045	Three Quarter Shoe, 158-0	1
4	61009	Three Quarter Shoe, 134-0	1
4	61010	Three Quarter Shoe, 178-0	1
4	61011	Three Quarter Shoe, 200-0	1
4	61783	Three Quarter Shoe, 218-0	1
4	61012	Three Quarter Shoe, 214-0	1
4	61784	Three Quarter Shoe, 238-0	1
4	61013	Three Quarter Shoe, 212-0	1
4	62011	Three Quarter Shoe, 234-0	1
4	62449	Three Quarter Shoe 300-0	1



CODE	PART NUMBER	PART NAME	QUANTITY		
			BP79		
*1	61046	Segmented Expander, 1-1/4 and 1-3/8	1		
2	61060	Segment (6)			
3	60364	O'Ring (2)			
1	61967	Segmented Expander, 1-1/2 and 1-5/8	1		
2	61968	Segment (8)			
3	60364	O'Ring (2)			
1	61548	Segmented Expander, 1-3/4 Thru 2	1		
2	61758	Segment (8)			
3	60364	O'Ring (2)			
1	61549	Segmented Expander, 2-1/8 Thru 2-1/2	1		
2	61777	Segment (8)			
3	60366	O'Ring (2)			
1	61550	Segmented Expander, 2-5/8 Thru 3	1		
2	61759	Segment (8)			
3	60258	O'Ring (2)			
4	61136	Segmented 45 Degree Flare, 1-1/2	1		
5	61551	Segment (6)			
6	60256	O'Ring (2)			
4	61542	Segmented 45 Degree Flare, 1-3/4 & 1-7/8 - 2-1/4 & 2-3/8	1		
5	61753	Segment (8)			
6	60256	O'Ring (2)			
4	61778	Segmented 45 Degree Flare, 2 and 2-1/2	1		
5	61781	Segment (8)			
6	60356	O'Ring (2)			
4	60447	Segmented 45 Degree Flare, 3	1		
5	60898	Segment (8)			
6	60363	O'Ring (2)			
#	60366	O'Ring (1)			
1	62452	Segmented Expander, 3-1/8 Thru 3-1/2	1		
2	62489	Segment (8)			
3	62490	O'Ring (2)			
3	62491	O'Ring (1)			
1	62453	Segmented Expander, 3-5/8 Thru 4	1		
2	62492	Segment (8)			
3	62493	O'Ring (2)			
3	62494	O'Ring (1)			
*		Requires Small Arbor #61261			
#		Not Shown			



Code	Part Number	Part Name	Quantity		
-	62160	1 5/8 Reducer Tool Assembly	1		
1		1 - 62161 Reducer Tool 1 5/8			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	62212	1 3/4 Reducer Tool Assembly	1		
1		1 - 62211 Reducer Tool 1 3/4			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	61254	1 7/8 Reducer Tool Assembly	1		
1		1 - 61255 Reducer Tool 1 7/8			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	61252	2 Reducer Tool Assembly	1		
1		1 - 61253 Reducer Tool 2			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	61250	2 1/4 Reducer Tool Assembly	1		
1		1 - 61251 Reducer Tool 2 1/4			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	62233	2 1/2 Reducer Tool Assembly	1		
1		1 - 62230 2 1/2 Reducer Tool			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	62232	2 3/4 Reducer Tool Assembly	1		
1		1 - 62228 Reducer Tool 2 3/4			
5		1 - 61248 Adapter Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	61258	1 1/2 & 2 Super Flange Tool Assembly Includes:	1		
2		1 - 61259 Super Flange Tool 1 1/2 & 2			
4		1 - 61256 Flange Extension Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
-	61792	1 3/4 & 2 1/4 Super Flange Tool Assembly	1		
2		1 - 61794 Super Flange Tool 1 3/4 & 2 1/4			
4		1 - 61256 Flange Extension Assembly Includes:			
		1 - 61311 Hardened Pin 1/4 x 7/8			
3	61247	Adapter (Use w/All Above Parts)	1		

