

#6 UTL - BED, PAN & LEGS

Front sump cover	A-59022	Shim	A-98530
Bed	L-97288	Rear shim	A-101651
Pan	L-105471	Front shim	A-101652
Right leg	L-101716	Front splash guard (spl)	A-98355
Left leg	L-101717	Tee fitting	B-97147
Stop rod brkt.	A-102652	Pan plate	A-95886
Hyd. motor brkt.	A-98960	Strainer	A-95887
Front sump gasket	A-59027	Gasket (2)	B-95896
Pump & motor	B-102804	Gasket (2)	A-95897
Oil level gage	B-85939	Bedway (2)	A-95971
Filler-breather can	B-88671	Rack	A-95972
Filter	B-91330	Feed lever stud	B-95019
Sump cover	A-96154	Handle	B-95020
Sump cover gasket	B-92238	Stop rod screw	B-36694
Filler block	A-96153	Stop rod plunger	B-102654
Block gasket	B-96155	Screw plug	B-32063
Pump bracket	A-105473	Oil change plate	B-101133
Stop rod	A-102686	Spring	B-50305
Side splash guard	A-96162	Gits oiler 502-G	
Rear splash guard	A-97290	Strainer knob	#788

Construction Drawings: L-96069, L-95898, L-95899

HEAD

BEARING CLOSER	(2)	A-86066
BEARING CLOSER		A-86067
SPACER		B-86074
SPACER	(2)	B-86079
SPACER		B-86082
SHAFT		A-86083
SPACER		B-86131
SPACER		B-86203
59T GEAR		A-86817
49T GEAR		A-86820
27T GEAR		A-86821
PINION SHAFT		A-86831
61T CLUTCH GEAR		A-86931
71T CLUTCH GEAR		A-86932
71T CLUTCH GEAR		A-86933
95T CLUTCH GEAR		A-86934
SPACER SHIM	(6)	B-88024
SPACER SHIM	(7)	B-88152
99T GEAR (STD. SPD)		A-86828
93T GEAR (SPL HIGH SPEED)		A-86124
MRC BEARING		B-91176
MRC BEARING	(2)	B-91177
MRC BEARING		B-91178
MRC BEARING	(2)	B-91179
MRC BEARING	(2)	B-91180
MRC BEARING	(2)	B-91181
MRC BEARING		B-91182
MRC BEARING		B-91183
FAWICK AS-450 CLUTCH HUB	(2)	A-86937
FAWICK AS-600 CLUTCH HUB	(2)	A-86938
AS-450 CLUTCH WITH B&O HUB A-86937	(2)	B-91184
AS-600 CLUTCH WITH B&O HUB A-86938	(2)	B-91185
FORMSPRAG HTH-450 CLUTCH WITH HUB COMPLETE	(2)	B-102139
HTH-600 CLUTCH WITH HUB COMPLETE	(2)	B-102140
HOUSING		L-108448
HOUSING COVER		A-96061
NAMEPLATE		A-85059
#6 LEGEND PLATE		A-95988
GASKET		A-96063

HEAD, HOUSING PIPING

BA-2000-6 90 DEG (FLODAR)		
BA-3000-6 T (FLODAR)		
3300X4 COUPLING (WEATHERHEAD)	(2)	
3325X4 NIPPLE (WEATHERHEAD)	(2)	
3350X4 45 DEG (WEATHERHEAD)	(2)	
V-812 SPRAY HEAD (SPRACO)	(2)	B-85944
STEEL TUBING	(8)	
BULKHEAD COUPLING W-21204		

CONSTRUCTION DWGS L-90558, L-108456, A-97313

HEAD

Bearing closer	(2)	A-86066	FORMSPRAG--HTH-450 clutch with	(2)	B-102139
Bearing closer		A-86067	hub complete		
Spacer		B-86074			
Spacer	(2)	B-86079	HTH-600 clutch with	(2)	B-102140
Spacer		B-86082	hub complete		
Shaft		A-86083			
Spacer		B-86131	Housing		L-96060
Spacer		B-86203	Housing cover		A-96061
59T. Gear		A-86817	Name plate		A-85059
49T. Gear		A-86820	#6 legend plate		A-95988
27T. Gear		A-86821	Gasket		A-96063
Pinion shaft		A-86831			
61T. clutch gear		A-86931			
71T. clutch gear		A-86932			
71T. clutch gear		A-86933			
95T. clutch gear		A-86934			
Spacer shim	(6)	B-88024			
Spacer shim	(7)	B-88152			
99T. gear (std. spd)		A-86828			
93T. gear (spl high spd)		A-86124			
MRC bearing	(2)	B-91176			
MRC bearing		B-91177			
MRC bearing	(2)	B-91178			
MRC bearing	(2)	B-91179			
MRC bearing	(2)	B-91180			
MRC bearing	(2)	B-91181			
MRC bearing		B-91182			
MRC bearing		B-91183			

HEAD, HOUSING PIPING

BA-2000-6 90 deg. (FLODAR)	(2)
BA-3000-6 T (FLODAR)	(2)
3300x4 coupling (WTHRHD)	(2)
3325x4 nipple (WTHRHD)	(2)
3350x4 45 deg. (WTHRHD)	(2)
V-812 spray head (SPRACO)	(8)
Steel tubing	(2)
Bulkhead cplg. W-21204	

B-85944

FAWICK--AS-450 clutch hub	(2)	A-86937
AS-600 clutch hub	(2)	A-86938
AS-450 clutch with B&O	(2)	B-91184
hub A-86937		
AS-600 clutch with B&O	(2)	B-91185
hub A-86938		

Construction Drawings: L-90558, L-96062, A-97313

6-2-P-R

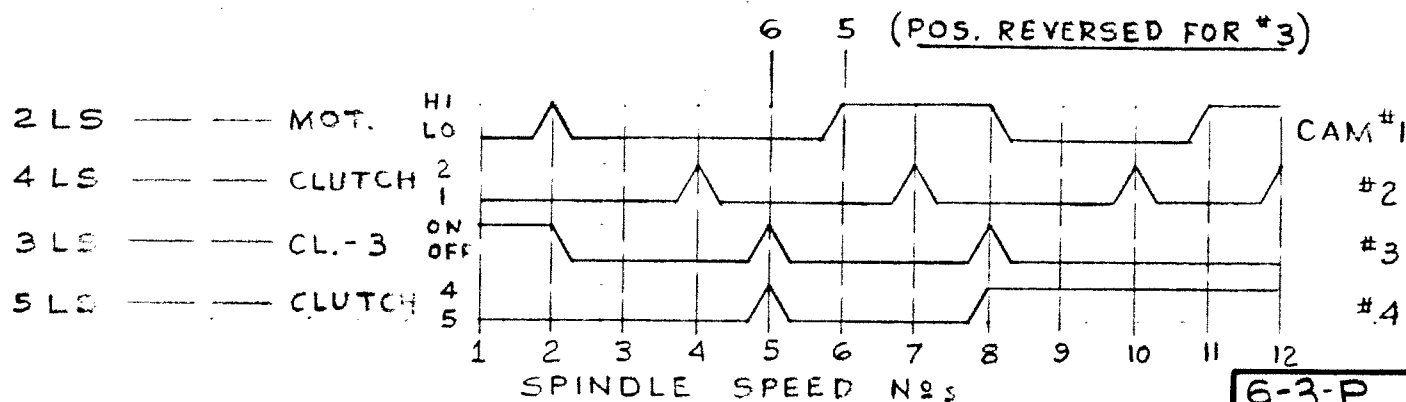
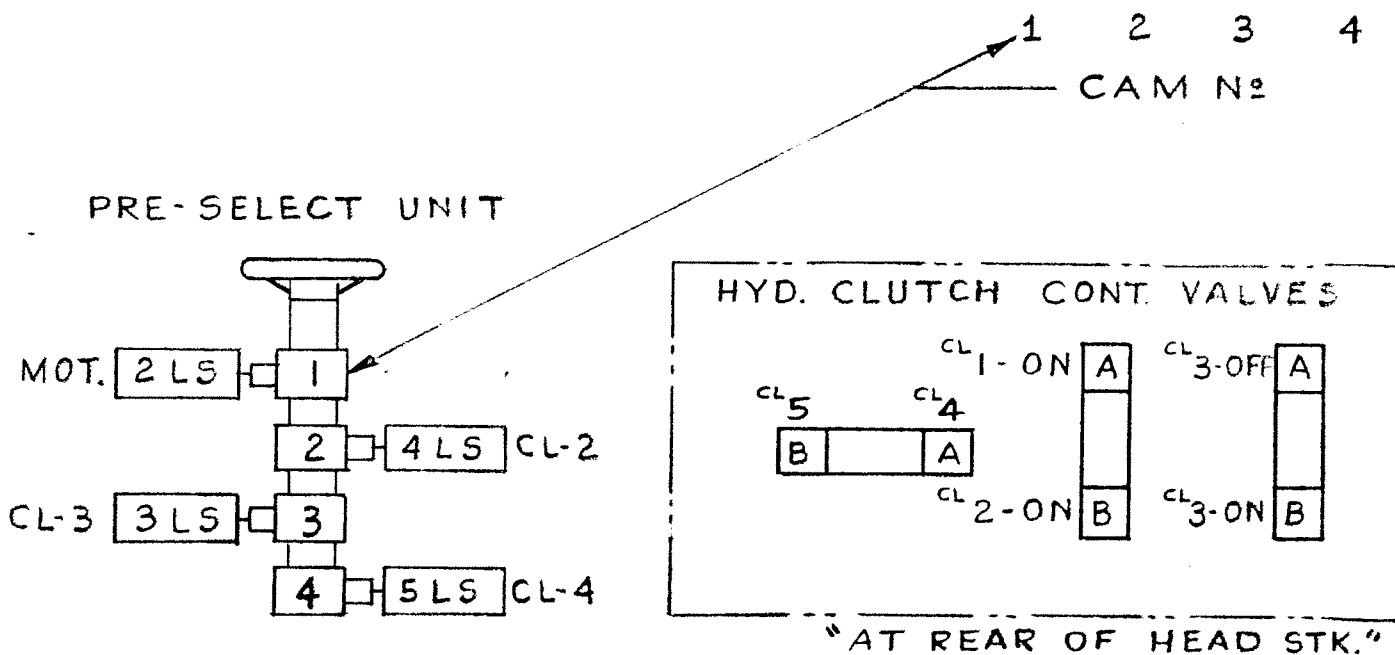
PRESELECTOR

Cover	L-95862	Closer	B-95872
Switch bracket	A-95863	Bushing	B-95873
Chart plate	A-95864	Sprocket	B-95874
Control plate	A-95865	Spacer	B-95875
Handwheel clip dial	A-97329	Spacer	B-95876
Handwheel	A-93691	Cam #2	B-95878
Shaft	A-95866	Stud	(4) B-95881
Dial drum	A-95867	Key	B-95882
Clip	(8) B-31937	202-SZ	B-95883
Spacer	(4) B-74747	Micro-Switch	(4) B-95884
Index lever	B-74796	BX-2RM22-A2	
Roller	B-74797	Washer	2223
Spring	B-74799	Drum chart 30/1300	A-95868
Spacer	(2) B-74806	Drum chart 25/950	B-95869
Spacer	(2) B-74807	Cam #1	B-95877
Bushing	B-90287	Cam #3	B-95879
Arm	(2) B-95870	Cam #4	A-95880
Pivot	B-95871	Drum chart 31/1170	A-98020
		Drum chart 37/1600	A-98021

Construction Drawing: L-95885

6-3-P

SPINDLE SPEEDS						No	MOT.	CL.	CL.	CL.
NO. 6 UTL				NO. 3 UTL			HI/LO	2/1	3/1-2	HI/LO
25	30	31	37	30	39	1	L		3	L
50	60	61	74	60	78	2	H		3	L
73	88	90	108	90	115	3	L	1		L
103	123	126	151	125	160	4	L	2		L
115	158	141	193	195	245	5 6	L		3	H
146	176	180	216	175	225	6 5	H	1		L
206	246	253	303	250	315	7	H	2		L
230	316	284	389	385	490	8	H		3	H
338	464	414	568	570	720	9	L	1		H
474	650	580	796	795	1000	10	L	2		H
676	928	833	1142	1135	1440	11	H	1		H
950	1300	1170	1600	1600	2000	12	H	2		H



6-3-P

3" CAPACITY SPINDLE

Front brg. closer	A-86812	Timken brg. cone	B-91190
Rear brg. closer	A-86845	Timken brq. cup	B-91191
Brg. spacer	B-86850	Timken brg. cup	B-91192
Spindle	A-99973	Timken brg. cone	B-91193
Driving button	B-37291	Timken brg. cone	B-91546
Key	B-86865	Timken brg. cup	B-91547
Adj. nut	A-86846	XPO Kaydon brg.	B-91194
Adj. nut	A-86847	MRC brg. with loose	B-91196
Drive plate	A-89769	internal clearance	
Clutch plate (add. mach'g)	(6) A-89770	AS-568-361 O-ring	B-91197
Clutch hub	(4) A-99974	AS-568-372 O-ring	B-91198
Clutch back plate	A-99976	Smally wave spring	B-97725
Clutch front plate	A-90213	Waldes-Truarc 5100-500	B-97350
Clutch body	A-90214	Head	L-100478
Clutch sleeve	A-90215	30/1300 RPM 3" cap.	
70T. gear	A-99975	25/950 RPM 5" cap	
105T. gear	A-90217	37T. gear	A-86830
Spacer	B-90218	Roughing dwg. for A-86830	A-101374
Spacer	B-90219	37/1600 RPM 3" cap.	
Brg. Retainer	(4) B-90220	31/1170 RPM 5" cap.	
Key	B-99966	43T. gear	A-86829
		Roughing dwg. for A-86829	A-101373

Construction Drawing: L-100094

5" CAPACITY SPINDLE

Rear spacer	B-88432	AS-568-373 O-ring	B-91168
Spindle	A-99982	AS-568-380 O-ring	B-91169
Front spacer	B-90447	Head	L-100479
Key	B-86865	Front brg. closer	A-98436
Spacer	A-90417	Rear brg. closer	A-95799
Brg. retainer	(6) B-90220		
Adj. nut	A-88433	RANGE GEAR (STD.)	
Adj. nut	A-88434		
Clutch hub	A-99983	30/1300 RPM 3" cap.	
Clutch back plate	A-99985	25/950 RPM 5" cap.	
Clutch front plate	A-88437	37T. gear	A-86830
Clutch body	A-90423	Roughing drawing for A-86830	A-101374
Clutch sleeve	A-90422		
Drive plate (add. mach'g) (2)	A-88440	RANGE GEAR (SPL.)	
Clutch plate (add. mach'g) (3)	A-88441		
Separator spring	(6) B-97726		
96T. gear	A-99984	37/1600 RPM 3" cap.	
126T. gear	A-90445	31/1170 RPM 5" cap.	
Spirolox AS-800	B-97348	43T. gear	A-86829
Key	B-99966	Roughing drwg. for A-86829	A-101373
Timken Brg. cone	B-91161		
Timken Brg. cup	B-91162		
Timken Brg. cone	B-91163		
Timken Brg. cup	B-91164		
Kaydon Brg.	B-91165		
Kaydon Brg.	B-91166		
Kaydon Brg.	B-91167		
Driving button	B-42420		

Construction Drawings: L-100095

SPINDLE CONTROL

Lever	A-96005	Shaft	B-100437
Control housing	A-100429	Plunger	B-100438
Manifold	L-96006	Stop plate	B-100439
Spring (1 3/32 Lg.)	B-40728-C	Brake detent	B-100440
Dowel pin	B-105243	Pin	B-100441
Spring	B-48061	Detent plate	B-100442
Handle	B-92351	Bushing	B-100444
Switch	B-95884	Drill jig bushing	B-100445
Bushing	B-96010	Spring	B-100328
Bushing	B-96016		(2)
Directional valve	B-96017	For #3 UTL ONLY	
Directional valve	(3) B-104865		
Legend plate	B-102696	Manifold	A-99862
Manifold gasket	S-96260	Lever	A-100436
Lever guard	A-100430	Manifold	A-101924
Housing cover	A-100431	For #6 UTL ONLY	
Lever hub	A-100432		
Collar	A-100433	Manifold	A-96008
Guide	A-100434	Lever	A-102968
Lever plate	A-100435	MRC bearings	B-96018
Limit switch	B-103560	Manifold	B-88724
Breather	B-95755	Cylinder	B-105567
Switch plate	B-105451		

Construction Drawings: L-96020, L-99863

COLLET CHUCK 3" CAPACITY

Rear spindle guard	L-98018	Wedge shoe stud	(2)	B-42434
Finger holder friction	B-44275	Collet		A-44578
Cyl. link	B-86975	Colelt pad		A-49563
Yoke link pin	B-86976	Finger roller	(3)	B-62784
Wedge shoe	(2) B-98862	Finger roller pin	(3)	B-62785
Cyl. mtg. block	(2) A-86980	Wedge		A-74996
Handle	B-98019	Air cylinder		A-86981
VLIER M-62 Spring plunger	(3) B-98856	Collet hood		A-88235
with 5/8 jam nut		Finger holder		A-88236
Bunting bushing	(2) B-100664	Pin	(3)	B-88239
Continuous hinge		Plunger		B-89916
Yoke	B-99930	Ring		B-90472
Yoke brkt.	A-86967	Abutment sleeve		A-90473
Collet hood guard	A-100960	Yoke pivot		A-95952
Finger	A-97436	Spindle guard pin		B-86866
Finger assembly	(3) A-70711	False jaw screw	(4)	2231
	A-100969	Key		2233

Construction Drawings: L-104779, L-95954

COLLET CHUCK - 3" CAPACITY

REFER TO DRAWING: PNEUMATIC DIAGRAM A-96261
 VALVE & R-F-L MOUNTING A-108678
 REF: P/L 10925

<u>B & O</u> <u>PART NO.</u>	<u>PART DESCRIPTION</u>	<u>QUANTITY</u> <u>PER UNIT</u>
A-86981	AIR CYLINDER	1
B-108379	R.F.L. UNIT	1
B-88697	SPEED CONTROL MUFFLER	2
A-108677	BRACKET	1
A-95274	BRACE	2
B-108380	MODULAR BRACKET KIT	1
B-108381	4-WAY VALVE	1

OPTIONAL BAR FEED

B-91243	PRESSURE REGULATOR	1
B-96132	AIR MOTOR	1
B-88697	SPEED CONTROL MUFFLER	2
B-94279	PRESSURE GAGE	1
B-108679	4-WAY VALVE	1

OPTIONAL POWER RAPID TRAVERSE

B-91243	PRESSURE REGULATOR	1
B-101949	AIR MOTOR	1
B-88697	SPEED CONTROL MUFFLER	2
B-94279	PRESSURE GAGE	1
B-107069	NEEDLE VALVE	1
B-108679	4-WAY VALVE	1

6-7-P

COLLET CHUCK 3" CAPACITY

Air Cylinder	A-86981
R.F.L. Unit	B-96926
Air Valve	B-95900
SPD. Control Muffler	(2) B-88598
Bracket	A-97270
Brace	(2) A-95274

"OPTIONAL"-BAR FEED

Pressure Regulator	B-91243
Air Motor	B-96132
Air Valve	B-96503
SPD. Control Muffler	(2) B-88698
Pressure Gauge	B-94279

"OPTIONAL"-POWER RAPID TRAVERSE

Pressure Regulator	B-91243
Air Motor	B-101949
Air Valve	B-96503
SPD. Control Muffler	(2) B-88698
Pressure Gauge	B-94279
Needle Valve	B-85914

Construction Drawing: A-96261, L-97269

COLLET CHUCK 5" CAPACITY

Rear spindle guard	L-98018
Finger holder friction	B-44275
Cyl. link	B-86975
Yoke link pin	B-86976
Wedge shoe	B-98862
Cyl. mtg. block	A-86980
Handle	B-98019
Vlier M-62 spring plunger	B-98856
w/5/8 jam nut	
Bushing	B-100664
Steel butt hinges	B-95245
Yoke	A-88318
Yoke bracket	A-100961
Collet hood guard	A-97437
Finger	A-70711
Collet hood	A-88796
Finger assembly	A-100969
Spindle guard pin	B-32580
Finger roller	B-62784
Finger roller pin	B-62785
Collet pad	A-80597
Pin	B-88239
Air cylinder	A-88302
Finger holder	A-88311
Plunger	A-88313
Wedge	A-88315
Abutment sleeve	A-88316
Ring	A-88317
Wedge shoe stud	B-88320
Collet	A-88795
Collet pad screw	B-88797
Yoke pivot	A-95955
Key	#2233

Construction drawings: L-104780, L-95959

COLLET CHUCK 5" CAPACITY

Air Cylinder
R.N.L Unit
Air Valve
SPD. Control Muffler
Bracket
Brace

A-88302
B-96926
B-95900
(2) B-88698
A-97270
(2) A-95274

"OPTIONAL"-BAR FEED

Air Motor
Pressure Regulator
Air Valve
SPD. Control Muffler
Pressure Gauge

B-98108
B-91243
B-96503
(2) B-88698
B-94279

"OPTIONAL"-POWER RAPID TRAVERSE

Pressure Regulator
Air Motor
Air Valve
SPD. Control Muffler
Pressure Gauge
Needle Valve

B-91243
B-101949
B-96503
(2) B-88698
B-94279
B-85914

Handwritten notes:
1. 12
2. 12
3. 12
4. 12
5. 12
6. 12
7. 12
8. 12
9. 12
10. 12
11. 12
12. 12
13. 12
14. 12
15. 12
16. 12
17. 12
18. 12
19. 12
20. 12
21. 12
22. 12
23. 12
24. 12
25. 12
26. 12
27. 12
28. 12
29. 12
30. 12
31. 12
32. 12
33. 12
34. 12
35. 12
36. 12
37. 12
38. 12
39. 12
40. 12
41. 12
42. 12
43. 12
44. 12
45. 12
46. 12
47. 12
48. 12
49. 12
50. 12
51. 12
52. 12
53. 12
54. 12
55. 12
56. 12
57. 12
58. 12
59. 12
60. 12
61. 12
62. 12
63. 12
64. 12
65. 12
66. 12
67. 12
68. 12
69. 12
70. 12
71. 12
72. 12
73. 12
74. 12
75. 12
76. 12
77. 12
78. 12
79. 12
80. 12
81. 12
82. 12
83. 12
84. 12
85. 12
86. 12
87. 12
88. 12
89. 12
90. 12
91. 12
92. 12
93. 12
94. 12
95. 12
96. 12
97. 12
98. 12
99. 12
100. 12

Construction Drawings: A-96261, L-97269

HEAD END BRACKET 3" CAPACITY

Spindle gear	A-95789	34T. gear	A-96791
Head gear	A-95790	35T.-27T. gear	A-95792
Head end bracket	L-100499	Shaft	A-99940
Cover	A-100500	Gear shifter	B-105003
Bearing closer	A-100501	Gear shifter cap	B-99949
Lever stud	B-95019	54T-72T. gear	A-100502
Key	B-60449	Pivot block	B-101950
Spacer	B-65145	Gear lever	B-101951
Coupling	B-65161	Knob	B-95020
Gasket	A-95773	Sight gauge	B-95753
36T.-54T. gear	A-95774	Garlock 63x293 seal	B-97319
Brg. closer	A-95776	Breather vent	B-98952
Shaft	A-95777	CR #6203 seal	B-99957
Brg. spacer	B-95779	Spring plunger #26908	
Spacer	B-95780	MRC Bearing 205-S	B-94912
Spacer	B-95781	MRC Bearing 204-S	B-95767
Brg. spacer	B-95782	MRC Bearing 203-S	B-95768
Gear stud	B-95783	MRC Bearing 205-SZ	B-95769
Spacer	B-95784	MRC Bearing 206-S	B-99964
Feed shaft	B-95788	Plate	B-68467
Brg. closer	B-97316	Lever pin	B-106472
PLUNGER	B-94759	CR 11734 SEAL	B-103193

(4)
(2)

(2)
(2)

Construction Drawing: L-107373

BARDONS & OLIVER PART NUMBER	QTY	VENDOR CODE	SOURCE CODE	REPAIR CODE
- Collet Chuck - A-95274 Brace A-97270 Bracket A-99986 Air cylinder B-88698 Speed control muffler B-95900 Air valve B-96926 R.F.L. unit	2 2	Sheffer 5AC3K4 Schrader 4504-0004 Numatics 12DSA4410-011B Wilkerson CBI-04-F00		

REF: CONSTRUCTION DRAWINGS:

L-97269

TITLE: Pneumatic Equipment

6-9-P

Bardons & Oliver, Inc. - Cleveland, Ohio U.S.A. LOT 434-14
-15

HEAD END BRACKET - 3" CAPACITY

SPINDLE GEAR - 70T	A-95789	34T GEAR	A-95791
HEAD GEAR - 68T	A-95790	35T - 27T GEAR	A-95792
HEAD END BRACKET COVER	L-100499	SHAFT	A-105448
BEARING CLOSER	A-100500	GEAR SHIFTER	B-107280
LEVER STUD	A-100501	GEAR SHIFTER CAP	B-99949
KEY	B-95019	54T - 72T GEAR	A-100502
SPACER	B-60449	PIVOT BLOCK	B-101950
COUPLING	B-65145	GEAR LEVER	B-101951
BASKET	B-105447	KNOB	B-95020
36T - 54T GEAR	A-95773	SIGHT GAUGE	B-95753
BEARING CLOSER	A-95774	GARLOCK 63 X 293 SEAL	B-97319
SHAFT	A-95776	BREATHER VENT	B-98952
BEARING SPACER	A-95777	CR#11734 SEAL	B-103193
SPACER	B-95779	CR#6203 SEAL	B-99957
SPACER	B-95780	SPRING PLUNGER#26908	B-94759
BEARING SPACER	B-95781	MRC BEARING 205-S	B-94912
GEAR STUD	B-95782	MRC BEARING 204-S	(4)
SPACER	B-95783	MRC BEARING 203-S	(2)
FEED SHAFT	B-95784	MRC BEARING 205-SZ	B-95768
BEARING CLOSER	B-95788	MRC BEARING 206-S	B-95769
	B-97316	PLATE	B-99964
		SHIM	B-68467
			B-107302

CONSTRUCTION - L-107372
L-107373

HEAD END BRACKET 3" CAPACITY

Spindle gear	A-95789	34T. gear	A-96791
Head gear	A-95790	35T.-27T. gear	A-95792
Head end bracket	L-100499	Shaft	A-99940
Cover	A-100500	Gear shifter	B-105003
Bearing closer	A-100501	Gear shifter cap	B-99949
Lever stud	B-95019	54T-72T. gear	A-100502
Key	B-60449	Pivot block	B-101950
Spacer	B-65145	Gear lever	B-101951
Coupling	B-65161	Knob	B-95020
Gasket	A-95773	Sight gauge	B-95753
36T.-54T. gear	A-95774	Garlock 63x293 seal	B-97319
Brig. closer	A-95776	Breather vent	B-98952
Shaft	A-95777	CR #6203 seal	B-99957
Brig. spacer	B-95779	Spring plunger #26908	
Spacer	B-95780	MRC Bearing 205-S	(4)
Spacer	B-95781	MRC Bearing 204-S	(2)
Brig. spacer	B-95782	MRC Bearing 203-S	
Gear stud	B-95783	MRC Bearing 205-SZ	
Spacer	B-95784	MRC Bearing 206-S	
Feed shaft	B-95788	Plate	B-68467
Brig. closer	B-97316	Lever pin	B-106472

Construction Drawing: L-100506

6-9-P-R

Spindle gear 82T	A-95793	Gear 28T	A-95795
Head gear 56T	A-95794	Gear 41T - 27T	A-95796
Head end bracket	L-100499	Lever stud	B-95019
Shaft	A-105448	Plate	B-68467
Gear 54T - 72T	A-100502	Spacer	B-65145
Bearing closer	A-100501	Key	B-60449
Cover	A-100500		
Shaft	A-95777		
Bearing Closer	A-95776		
Gear 36T - 54T	A-95774		
Gasket	A-95773		
Gear Shifter	B-107280		
Coupling	B-105447	Shims	B-107302
Gear lever	B-101951	CR#11734 seal	B-103193
Pivot block	B-101950	CR#6203 seal	B-99957
Gear shifter cap	B-99949	Garlock 63 x 293 seal	B-97319
Bearing closer	B-97316	MRC bearing 206-S	B-99964
Feed shaft	B-95788	" " 205-SZ	B-95769
Spacer	(2) B-95784	" " 203-S	B-95768
Gear stud	(2) B-95783	" " 204-S	B-95767
Bearing spacer	B-95782	" " 205-S	B-94912
Spacer	B-95781	Breather vent	B-98952
Spacer	B-95780	Sight gauge	B-95753
Bearing spacer	B-95779	Knob	B-95020
		Spring plunger #26908	B-94759

6-10-P

HEAD END BRACKET 5" CAPACITY

Spindle gear	A-95793	28T. gear	A-95795
Head gear	A-95794	41T-27T. gear	A-95796
Head end bracket	L-100499	Shaft	A-99940
Cover	A-100500	Gear shifter	B-105003
Bearing closer	A-100501	Gear shifter Cap	B-99949
Lever stud	B-95019	54T-72T. gear	A-100502
Key	B-60449	Pivot block	B-101950
Spacer	B-65145	Gear lever	B-101951
Coupling	B-65161	Knob	B-95020
Gasket	A-95773	Sight gauge	B-95753
36T-54T. gear	A-95774	Garlock 63x293 seal	B-97319
Brg. closer	A-95776	Breather vent	B-98952
Shaft	A-95777	CR #6203 seal	B-99957
Brg. spacer	B-96779	Spring plunger #26908	
Spacer	B-95780	MRC Bearing 205-S	B-94912
Spacer	B-95781	MRC Bearing 204-S	B-95767
Brg. spacer	B-95782	MRC Bearing 203-S	B-95768
Gear stud	B-95783	MRC Bearing 205-SZ	B-95769
Spacer	B-95784	MRC Bearing 206-S	B-99964
Feed shaft	B-95788	Lever pin	B-106472
Brg. closer	B-97316		
Plate	B-68467		

Construction Drawing: L-100506

CROSS SLIDE & CARRIAGE

Cross feed dial	B-42854	Stop	B-63539
Cross slide gib	A-100205	Wiper	B-97921
Cross slide	L-95591	Wiper cover	B-74623-1
Carriage	L-95592	Wiper cover	B-74624
		Wiper cover	B-74625
Clamp	(2) A-63376	Wiper	B-97922
Rear cap	A-74615	Rt. frt. taper gib	B-74627
Handwheel	A-98229	Lt. frt. taper gib	B-74628
Front cap	A-95594	Rear gib	B-74629
Feed screw	A-95595	Handle	B-95020
Feed screw nut	B-74619	Trip pin	B-95163
Compensating nut	B-74620	Lever stud	B-96066
Nylon tip	(4) B-102225	Handle hub	B-95902
Gib screw w/B-102225	(4) B-31890	Binder stud	B-95596
Clip	(6) B-31937	Locating pin	B-99068
Tee bolt	B-34400	Washer	1071
Trip	B-36375	Washer	2162
Brg. spacer	(2) B-36377	Shoe	2252
Brg. spacer	B-36378	Plug	2253
Stud	B-37754	Plug	2281
Adj. nut	B-40580	Plug	2332
Feed screw gear	B-63453	Reid tool SKA-13	B-97333
Dovetail guard	A-106192	Knurled knob	
		MRC Bearing #7305	B-105071
Clamp lever sub. ass'y	B-96070	Gits oiler	1220

Construction Drawings: L-95597, L-95598

6-11-P

CARRIAGE APRON

Carriage apron	L-107142	Spacer	B-105347
Right side cover	A-107144	Bushing	B-65319
Left side cover	A-107145	Spacer	(6) B-65322
Cr. fd. lever	A-94824	Bushing	B-65339
Long. fd. lever	A-107146	Sleeve	B-65340
Gear shift lever	A-94826	Screw	B-65341
Chip guard	A-99520	Shift pin	B-65342
Worm gear	B-65296	Brg. spacer	B-65352
Knockout spring	B-31760	Bushing	B-65387
Fd. lever spring	B-31917	Bushing	B-65388
Rev. lever spring	B-31918	Lever guard	(2) B-67045
Spring	B-45759	Fd. lever cam	(2) B-67046
Stud	B-37754	Clutch plug	(3) B-69183
Feed arrow	B-41719	Stop screw	(6) A-69817
Adj. nut	B-100231	Spacer	B-70631
Spring	B-105547	Stop screw roll	A-71323
Spring	B-52222	Bushing	(2) B-73036
Brake valve spring	B-59673	Pin	B-81534
Spacer	B-65291	Handle	B-92351
Triple cluster gear	A-65259	Knob	(3) B-93655
Tooth clutch gear	A-96032	Front gasket	A-94991
Gear shifter stud	B-65275	Left side gasket	A-94992
Tooth clutch	B-65286	Right side gasket	A-107147
Bushing	B-65287	Cam shaft	A-94994
Tooth clutch	B-65289	Gear shift cam	A-94995
Clutch bolt nut	B-65293	Hollow shaft	A-94996
Spacer	B-65295	Shaft	(3) A-94997
Tooth clutch	B-96031	Guide sleeve	B-107148
f. lever plunger	B-65302	Pinion shaft	A-105367
Dbl. cluster gear	B-65306	Clutch bolt	(2) A-95000
Dbl. cluster gear	B-65307	Lever	B-95001
Dbl. cluster gear	B-65308	Detent holder	B-97382
Idler gear	B-65310	Shifter block	A-107149
Worm	B-65311	Shifter pin	(2) B-107150
40 T. gear	B-65312	KO rod plug (15/16)	B-95005

CARRIAGE APRON

Lever stop	(2)	B-95006	Handwheel	A-94998
Detent plate		B-95008	Knob	B-95020
Cam spacer		B-95009	Spring	B-95025
Feed dial		B-95010	Spring plunger	B-94759
Idler gear stud		B-95012	Seal	B-95748
Sleeve		B-95013	Seal	B-95749
Bearing spacer	(3)	B-95014	Seal	B-95750
Gear 25T		B-95015	Sight gauge Bijur	B-95753
Spacer		B-95016	Bijur pump KIC-C-2367	B-95754
Feed lever stud	(2)	B-95019	Arrow breather	B-95755
Pinion shaft gear		B-95022	Drill jig bushing	B-95756
Retainer	(2)	B-95024	Bearing MRC 202-S	B-95757
Spacer	(2)	B-95026	" " 207-S	B-95758
Pin	(4)	B-95027	" " R-4	B-95759
Feed lever rod	(2)	B-95028	" " 104-KS	B-95760
Rev gear shaft		B-95065	" " 107-KS	B-95761
Gib		B-95965	Bearing MRC 204-S	B-95767
Clutch bushing		B-96021	Bearing Aetna	B-95762
Lever stop, Ecc		B-96138	Dial feed plate	B-95670
Cap		B-105349	Gasket	A-95836
Knockout button		B-105457	Bearing Torr. NTA-1828	B-96033
Feed disengage pin		B-105458	Bearing Torr. TRC-1828	B-96034
CS knockout rod		B-105459	Brg Torr. HJ162412 & IR121612	B-105350
Handwheel shaft 9T		B-106084	Shim, knockout	B-105456
Dial marker		B-106086	Carriage dial	A-106085
Spacer		B-106167	Race Torr. TRA-1423	B-106165
Apron cover		L-107143	Race Torr. TRA-1828	B-106166
Brass shoe		C-1049	Gits oiler #1220	B-106890
" "		C-2246	Gits oiler #302	B-106891
" "		C-2281	Cap gasket	B-105348
" "	(6)	C-2289	Bearhug nut BH-02	B-107035
Washer		C-1066	Bearhug nut BH-04	B-101547
Washer		C-1071	Bearhug nut BH-07	B-107037

Construction Drawings: L-107139, L-107140

CARRIAGE APRON

Carriage apron	L-94820	Bunting bushing	B-65318
Right side cover	A-94822	Bunting bushing	B-65319
Left side cover	A-94823	Spacer	(6) B-65322
Cr. fd. lever	A-94824	Bushing	B-65339
Long. fd. lever	A-94825	Sleeve	B-65340
Gear shift lever	A-94826	Screw	B-65341
Chip guard	A-99520	Shift pin	B-65342
Worm gear	B-65296	Brg. spacer	B-65352
Knockout spring	B-31760	Bushing	B-65387
Fd. lever spring	B-31917	Bushing	B-65388
Rev. detent spring	B-31918	Lever guard	(2) B-67045
Clutch spring	B-34684	Fd. lever cam	(2) B-67046
Stud	B-37754	Clutch plug	(3) B-69183
Feed arrow	B-41719	Stop screw	(6) A-69817
Adj. nut	B-100231	Spacer	B-70631
Spring	B-46766	Stop screw roll	A-71323
Spring	B-52222	Bushing	(2) B-73036
Spring	B-59673	Pin	B-81534
Spacer	B-62521	Handle	B-92351
Triple cluster gear	A-65259	Knob	(3) B-93655
Tooth clutch gear	A-96032	Front gasket	A-94991
Gear shifter stud	B-65275	Left side gasket	A-94992
Tooth clutch	B-65286	Right side gasket	A-94993
Bushing	B-65287	Cam shaft	A-94994
Tooth clutch	B-65289	Gear shift cam	A-94995
Clutch bolt nut	B-65293	Hollow shaft	A-94996
Spacer	B-65295	Shaft	(3) A-94997
Tooth clutch	B-96031	Long fd. lever rod	B-95138
f. lever plunger	B-65302	Pinion shaft	A-95669
Dbl. cluster gear	B-65306	Clutch bolt	(2) A-95000
Dbl. cluster gear	B-65307	Lever	B-95001
Dbl. cluster gear	B-65308	Detent holder	B-97382
Idler gear	B-65310	Shifter block	B-95003
Norm	B-65311	Shifter rod	B-95004
40 T. gear	B-65312	KO rod plug (15/16)	B-95005

PRIOR TO 2-2-14

RECORD

6-12-P

CARRIAGE APRON

Lever stop	(2)	B-95006	Bijur B-5734	B-95753
CS knockout rod		B-95007	Sight-gauge	
Detent plate		B-95008	Bijur KIC-C-2367	B-95754
Cam spacer		B-95009	Lube pump 1" stroke	
Feed dial		B-95010	Bijur B-4067	(2)
Idle gear stud		B-95012		
Sleeve		B-95013	MRC bearings 202-S	(2)
Brg. spacer	(3)	B-95014	MRC bearings 204-S	(3)
25 T. gear		B-95015	MRC bearings 207-S	B-95758
Spacer		B-95016	MRC bearings 104-KS	(3)
FD disengage pin		B-95017	MRC bearings 107-KS	B-95760
RO rod plug (1-1/16)		B-95018	MRC bearings R-4	B-95761
FD lever stud	(2)	B-95019	Aetna bearings	(2)
Knob	(2)	B-95020	Torrington	(3)
Washer		B-95021	NTA-1828 bearing	B-95762
Pinion shaft gear		B-95022	TRC-1828 plate	B-96033
Retainer	(2)	B-95024	Drill jig bushing 5/16 ID	(2)
Spring	(8)	B-95025	Jergens #26908 plunger	(4)
Spacer	(2)	B-95026	Brass shoe	B-95756
Pin	(4)	B-95027	Brass shoe	B-94759
Cr. fd. lever rod		B-95028	Brass shoe	#1049
Rev. gear shaft rod		B-95065	Brass shoe	#2246
Plug		B-95066	Brass shoe	#2281
Gasket		A-95836	Arrow breather	#2289
Clutch bushing		B-96021	Vent ASP-2BV	B-95755
Lever stop		B-96137	Washer	#1066
Long. fd. lever rod		B-95138	Washer	#1071
Sub-assembly			Apron cover	L-102374
Tooth clutch w/40T. gear		B-96536	Carriage dial	A-102375
Tooth clutch w/23T. gear		B-96537	Handwheel	A-98229
Worm gear sub assembly		B-95325	Dial feed plate	B-95670
Victoprene seals			Gib	B-95965
#60096			Dial marker	A-102376
#62302		B-95749	Bushing	B-102377
#62314		B-95748	Handwheel shaft	B-102378
		B-95750	Gits oiler	#302
			Gits oiler	#1220

Construction Drawing: L-104592, L-104593, L-104594

Prior to 2-3-84 RECORD

CARRIAGE APRON

Carriage apron	L-94820	Spacer	B-105347
Right side cover	A-94822	Bushing	B-65319
Left side cover	A-94823	Spacer	(6) B-65322
Cr. fd. lever	A-94824	Bushing	B-65339
Long. fd. lever	A-94825	Sleeve	B-65340
Gear shift lever	A-94826	Screw	B-65341
Chip guard	A-99520	Shift pin	B-65342
Worm gear	B-65296	Brg. spacer	B-65352
Knockout spring	B-31760	Bushing	B-65387
Fd. lever spring	B-31917	Bushing	B-65388
Rev. lever spring	B-31918	Lever guard	(2) B-67045
Spring	B-34684	Fd. lever cam	(2) B-67046
Stud	B-37754	Clutch plug	(3) B-69183
Feed arrow	B-41719	Stop screw	(6) A-69817
Adj. nut	B-100231	Spacer	B-70631
Spring	B-105547	Stop screw roll	A-71323
Spring	B-52222	Bushing	(2) B-73036
Brake valve spring	B-59673	Pin	B-81534
Spacer	B-62521	Handle	B-92351
Triple cluster gear	A-65259	Knob	(3) B-93655
Tooth clutch gear	A-96032	Front gasket	A-94991
Gear shifter stud	B-65275	Left side gasket	A-94992
Tooth clutch	B-65286	Right side gasket	A-94993
Bushing	B-65287	Cam shaft	A-94994
Tooth clutch	B-65289	Gear shift cam	A-94995
Clutch bolt nut	B-65293	Hollow shaft	A-94996
Spacer	B-65295	Shaft	(3) A-94997
Tooth clutch	B-96031	Long fd. lever rod	B-95138
f. lever plunger	B-65302	Pinion shaft	A-105367
Dbl. cluster gear	B-65306	Clutch bolt	(2) A-95000
Dbl. cluster gear	B-65307	Lever	B-95001
Dbl. cluster gear	B-65308	Detent holder	B-97388
Idler gear	B-65310	Shifter block	B-98000
Worm	B-65311	Shifter rod	B-98004
40 T. gear	B-65312	KO rod plug (15/16)	B-98001
Cap gasket	B-105348		
Cap	B-105349		

6-12-P

CARRIAGE APRON

Lever stop	(2)	B-95006	Bijur B-5734	B-95753
CS knockout rod		B-95007	Sight-gauge	
Detent plate		B-95008	Bijur KIC-C-2367	B-95754
Cam spacer		B-95009	Lube pump 1" stroke	
Feed dial		B-95010	Bijur B-4067	
Idler gear stud		B-95012	Torrington brg. HJ-162412 & 1R121612	B-105350
Sleeve		B-95013	MRC bearings 202-S	(2) B-95757
Brg. spacer	(3)	B-95014	MRC bearings 204-S	(3) B-95767
25 T. gear		B-95015	MRC bearings 207-S	B-95753
Spacer		B-95016	MRC bearings 104-KS	B-95760
FD disengage pin		B-95017	MRC bearings 107-KS	B-95761
KO rod plug (1-1/16)		B-95018	MRC bearings R-4	B-95751
FD lever stud	(2)	B-95019	Aetna bearings	(3) B-95762
Knob	(2)	B-95020	Torrington	
			NTA-1828 bearing	B-96033
Pinion shaft gear		B-95022	TRC-1828 plate	(2) B-96034
Retainer	(2)	B-95024	Drill jig bushing 5/16 ID	(4) B-95758
Spring	(8)	B-95025	Jergens #26908 plunger	B-94759
Spacer	(2)	B-95026	Brass shoe	#1049
Pin	(4)	B-95027	Brass shoe	#2246
Cr. fd. lever rod		B-95028	Brass shoe	#2281
Rev. gear shaft rod		B-95065	Brass shoe	#2289
			Arrow breather	B-95755
Gasket		A-95836	Vent ASP-2BV	
Clutch bushing		B-96021	Washer	#1066
Lever stop		B-96137	Washer	#1071
Long. fd. lever rod		B-95138	Apron cover	L-94821
Sub-assembly			Carriage dial	A-95668
			Handwheel	A-94998
			Dial feed plate	B-95670
			Gib	B-95965
			Dial marker	B-65334
			Handwheel shaft	B-95023
			Gits oiler	#302
			Gits oiler	#1220

Construction Drawing: L-105564, L-105565, L-105566

Sub-Assemblies: B-95325, B-96536, B-96537

6-12-p

CARRIAGE APRON

Carriage apron	L-94820	Spacer	B-105347
Right side cover	A-94822	Bushing	B-65319
Left side cover	A-94823	Spacer	(6) B-65322
Cr. fd. lever	A-94824	Bushing	B-65339
Long. fd. lever	A-94825	Sleeve	B-65340
Gear shift lever	A-94826	Screw	B-65341
Chip guard	A-99520	Shift pin	B-65342
Worm gear	B-65296	Brig. spacer	B-65352
Knockout spring	B-31760	Bushing	B-65387
Fd. lever spring	(2) B-31917	Bushing	B-65388
Rev. lever spring	B-31918	Lever guard	(2) B-67045
Spring	B-45759	Fd. lever cam	(2) B-67046
Stud	B-37754	Clutch plug	(3) B-69183
Feed arrow	B-41719	Stop screw	(6) A-69817
Adj. nut	B-100231	Spacer	B-70631
Spring	B-105547	Stop screw roll	A-71323
Spring	B-52222	Bushing	(2) B-73036
Brake valve spring	B-59673	Pin	B-81534
Spacer	B-62521	Handle	B-92351
Triple cluster gear	A-65259	Knob	(3) B-93655
Tooth clutch gear	A-96032	Front gasket	A-94991
Gear shifter stud	B-65275	Left side gasket	A-94992
Tooth clutch	B-65286	Right side gasket	A-94993
Bushing	B-65287	Cam shaft	A-94994
Tooth clutch	B-65289	Gear shift cam	A-94995
Clutch bolt nut	(2) B-65293	Hollow shaft	A-94996
Spacer	(2) B-65295	Shaft	(3) A-94997
Tooth clutch	B-96031	Long fd. lever rod	B-95138
f. lever plunger	(2) B-65302	Pinion shaft	A-105367
Dbl. cluster gear	B-65306	Clutch bolt	(2) A-95000
Dbl. cluster gear	B-65307	Lever	B-95001
Dbl. cluster gear	B-65308	Detent holder	B-97382
Idler gear	B-65310	Shifter block	B-95003
Worm	B-65311	Shifter rod	B-95004
40 T. gear	B-65312	NO rod plug (15/16)	B-95005
Cap gasket	B-105348	Pinion sleeve	B-106087
Cap	B-105349	Spacer	B-106167

6-12-P

CARRIAGE APRON

Lever stop	(2)	B-95006	Bijur B-5734	B-95753
CS knockout rod		B-105459	Sight-gauge	
Detent plate		B-95008	Bijur KIC-C-2367	B-95754
Cam spacer		B-95009	Lube pump 1" stroke	
Feed dial		B-95010	Bijur B-4067	
Idle gear stud		B-95012	Torrington brg. HJ-162412 & 1R121612	B-105350
Sleeve		B-95013	MRC bearings 202-S	(2) B-95757
Brig. spacer	(3)	B-95014	MRC bearings 204-S	(3) B-95767
25 T. gear		B-95015	MRC bearings 207-S	B-95758
Spacer		B-95016	MRC bearings 104-KS	(3) B-95760
FD disengage pin		B-105458	MRC bearings 107-KS	B-95761
KO rod plug (1-1/16)		B-95018	MRC bearings R-4	(2) B-95759
FD lever stud	(2)	B-95019	Aetna bearings	(3) B-95762
Knob	(2)	B-95020	Torrington	
Knock-out button		B-105457	NTA-1828 bearing	B-96033
Pinion shaft gear		B-95022	TRC-1828 plate	(2) B-96034
Retainer	(2)	B-95024	Drill jig bushing 5/16 ID	(4) B-95756
Spring	(8)	B-95025	Jergens #26908 plunger	B-94759
Spacer	(2)	B-95026	Brass shoe	#1049
Pin	(4)	B-95027	Brass shoe	#2246
Cr. fd. lever rod		B-95028	Brass shoe	#2281
Rev. gear shaft rod		B-95065	Brass shoe	#2289
Knock-out shim		B-105456	Arrow breather	(6) B-95755
Gasket		A-95836	Vent ASP-2BV	
Clutch bushing		B-96021	Washer	#1066
Lever stop		B-96137	Washer	#1071
Long. fd. lever rod		B-95138	Apron cover	L-106083
Sub-assembly			Carriage dial	A-106085
TRA-1828 thrust washer		B-106166	Handwheel	A-94998
TRA-1423 thrust washer		B-106165	Dial feed plate	B-95670
Worm gear sub assembly		B-95325	Gib	B-95065
Victoprene seals			Dial marker	A-106086
#60096		B-95749	Handwheel shaft	B-106084
#62302		B-95748	Gits oiler	#302
#62314		B-95750	Gits oiler	#1220

Construction Drawing: L-106088, L-106168, L-106169
Sub-Assemblies: B-95325, B-96536, B-96537

6-12-P

CARRIAGE APRON

Carriage apron	L-94820	Bunting bushing	B-65318
Right side cover	A-94822	Bunting bushing	B-65319
Left side cover	A-94823	Spacer	(6) B-65322
Cr. fd. lever	A-94824	Bushing	B-65339
Long. fd. lever	A-94825	Sleeve	B-65340
Gear shift lever	A-94826	Screw	B-65341
Chip guard	A-99520	Shift pin	B-65342
Worm gear	B-65296	Brg. spacer	B-65352
Knockout spring	B-31760	Bushing	B-65387
Fd. lever spring	B-31917	Bushing	B-65388
Rev. detent spring	B-31918	Lever guard	(2) B-67045
Clutch spring	B-34684	Fd. lever cam	(2) B-67046
Stud	B-37754	Clutch plug	(3) B-69183
Feed arrow	B-41719	Stop screw	(6) A-69817
Adj. nut	B-100231	Spacer	B-70631
Spring	B-46766	Stop screw roll	A-71323
Spring	B-52222	Bushing	(2) B-73036
Spring	B-59673	Pin	B-81534
Spacer	B-62521	Handle	B-92351
Triple cluster gear	A-65259	Knob	(3) B-93655
Tooth clutch gear	A-96032	Front gasket	A-94991
Gear shifter stud	B-65275	Left side gasket	A-94992
Tooth clutch	B-65286	Right side gasket	A-94993
Bushing	B-65287	Cam shaft	A-94994
Tooth clutch	B-65289	Gear shift cam	A-94995
Clutch bolt nut	B-65293	Hollow shaft	A-94996
Spacer	B-65295	Shaft	(3) A-94997
Tooth clutch	B-96031	Fd. lever rod	B-95138
Fd. lever plunger	B-65302	Pinion shaft	A-95669
Dbl. cluster gear	B-65306	Clutch bolt	(2) A-95000
Dbl. cluster gear	B-65307	Lever	B-95001
Dbl. cluster gear	B-65308	Detent holder	B-97382
Idler gear	B-65310	Shifter block	B-95003
Worm	B-65311	Shifter rod	B-95004
40T. gear	B-65312	KO rod plug (15/16)	B-95005

CARRIAGE APRON

Lever stop	(2)	B-95006	Bijur B-5734	B-95753
CS Knockout rod		B-95007	Sight-gauge	
Detent plate		B-95008	Bijur KIC-C-2367	B-95754
Cam spacer		B-95009	Lube pump 1" stroke	
Feed dial		B-95010	Bijur B-4067	
Idler gear stud		B-95012	Fitting	(2)
Sleeve		B-95013	MRC Bearings 202-S	B-95757
Brg. spacer	(3)	B-95014	MRC Bearings 204-S	B-95767
25T. gear		B-95015	MRC Bearings 207-S	B-95758
Spacer		B-95016	MRC Bearings 104-KS	B-95760
FD Disengage pin		B-95017	MRC Bearings 107-KS	B-95761
KO rod plug (1 1/16)		B-95018	MRC Bearings R-4	B-95759
FD Lever stud	(2)	B-95019	Aetna bearings	(3) B-95762
Knob	(2)	B-95020	Torrington	
Washer		B-95021	NTA-1828 Brg.	B-96033
Pinion shaft gear		B-95022	TRC-1828 Plate	B-96034
Retainer	(2)	B-95024	Drill jig bushing 5/16 I.D.	B-95756
Spring	(8)	B-95025	Jergens #26908 plunger	B-94759
Spacer	(2)	B-95026	Brass shoe	#1049
Pin	(4)	B-95027	Brass shoe	#2246
Cr. fd. lever rod		B-95028	Brass shoe	#2281
Rev. gear shaft rod		B-95065	Brass shoe	#2289
Plug		B-95066	Arrow breather	B-95755
Gasket		A-95836	Vent ASP-2BV	
Clutch bushing		B-96021	Washer	#1066
Lever stop		B-96137	Washer	#1071
Long. fd. lever rod		B-95138	Apron cover	L-102374
Sub-assembly			Carriage dial	A-102375
Tooth clutch w/40T. gear		B-96536	Handwheel	A-94998
Tooth clutch w/23T. gear		B-96537	Dial feed plate	B-95670
Worm gear sub. ass'y		B-95325	Gib	B-95965
Victoprene seals			Dial marker	A-102376
#60096		B-95749	Bushing	B-102377
#62302		B-95748	Handwheel shaft	B-102378
#62314		B-95750		

Construction Drawing: L-102379, L-95041, L-95042, L-95043

6-12-P

TURRET SLIDE & SADDLE

Turret cover	B-36154	Carrier nut	B-58792
Turret	A-60307	Clamp nut	B-59767
Tumbler	A-62969	Gib screw	(2) B-58815
Saddle	L-101495	Lockbolt bushing	(6) B-58820
Slide	L-104103	Oil plug	B-58855
Turret clamp	A-74561		
Lockbolt lever	A-62968	Stop rod	B-60283
Pawl	B-67784	Knockout rod	B-80809
Bevel gear nut	B-13962	Left front gib	B-60286
Knockout spring	B-31760	Rear gib	B-60287
Knockout rod plug	B-80810	Rear gib	B-60288
	B-33163	Stop screw	B-60289
Lockbolt spring	B-33479	Ind. stop shaft	B-60290
Ind. stop shaft bevel gear	B-33481	Stop	B-60291
Ratchet	B-36163	Tumbler screw	B-104521
Turret bevel gear	B-36164	Slide cap (clamp)	B-95514
Binder bolt	(6) B-36180	Slide cap (front)	B-60297
Jam nut	B-80811	Slide cap (front)	A-60298
Mach. procedure clamp ring	A-84562	Lower cap (front)	A-60300
Turret clamp ass. instr.	A-83197	Lower cap (rear)	A-60301
Turret locating ring	A-41143	Rack	A-60302
Chip guard	A-41822	Saddle way (front)	A-60303
Chip guard support	A-41827	Saddle way (rear)	A-60304
Steel way screw	(13) B-58225	Saddle way (front)	A-60305

TURRET SLIDE & SADDLE

Pawl cam	B-104023	Spring retainer	B-72028
Lockbolt lever roller	B-62961	Release trip	B-73875
Washer	B-62962	Clamp stud	B-73876
Lockbolt	A-62963	Clamp release	B-73877
Stop pin	B-62964	Link	B-73878
Pawl spring	B-62966	Washer	B-73879
Lockbolt lever pin	B-62980	Slide cap (rear)	A-74562
Pawl pivot pin	B-62981	Guard	B-74563
Right front gib	B-63014	Clamp spacer	B-74586
Lever washer	B-63347	Clamp ring locator	B-77660
		Soft pin	(2) # 279
Latch pivot	B-95515	Pin	(2) # 301
Latch	B-95516		
Ratchet pin	(3) B-64965	Shoe	(6) #1049
Turret locating ring pin	(2) B-65368	Washer	(6) #1060
Pawl stop	B-67791	Washer	(4) #1067
Clamp stud	B-95517		
Stop screw roll	A-70945	Brass shoe	(3) #2254
Spring guide	B-70964		
Binder hub	B-92239	Plug	(20) #2397
Binder handle	B-92325		
Handle knob	B-92351		
Tumbler seat	B-71971	Timken cone #3 Prec.	(8) B-101838
Lockbolt sleeve	B-72027	Shoe	(2) #1146
Bushing	B-103204		

Construction Drawings: L-95518-19, L-74564-65

6-13-P

SADDLE APRON

Dial	A-95673	Spring	B-31917
Feed Lever, Power	A-107238	Feed Arrow	B-42100
Seal Retainer	B-95679	Spring	B-52222
Pinion Shaft	A-99718	Spacer	B-62521
Dial Feed Plate	B-95676	Clutch Bolt Nut	B-65293
Turnstile Handle	B-65823	Dbl. Cluster Gear	B-65306
Turnstile Hub	A-99719	Dbl. Cluster Gear	B-65307
Apron	L-107236	Dbl. Cluster Gear	B-65308
Apron Cover	A-107239	Worm	B-65311
Right Side Cover	A-107240	Spacer	B-65322
Chip Guard	A-99520	Dial Marker	B-105416
Turnstile Sleeve	A-94831	Sleeve	B-65340
Left Side Cover	A-107241	Screw	B-65341
Top Cover	A-95422	Shift Pin	B-65342
Lever	A-98921		
Worm Gear	B-65296	Lever Screw	B-65817
Lever	B-65803	Fd. Lever Plunger	B-65822
Triple Cluster Gear	A-65808	Tooth Clutch	B-96031
Cam	A-69916	Tooth Clutch	B-65824
Cam Shaft	A-94994	Gear	B-95730
Front Gasket	A-95122	Rear Cover	B-65834
Left Side Gasket	A-96064	Rear Gasket	B-65836
Right Side Gasket	A-96065	Lever Guard	B-67045
Hollow Shaft	A-95125	Fd. Lever Cam	B-67046
Shaft	A-95126	Clutch Plug	B-69183
Clutch Bolt	A-95127	Bushing	B-73036

(3)

(2)

(2)

(2)

(3)

(2)

(5)

(2)

SADDLE APRON

Handle	(5)	B-92351	Brass Shoe	C-1049
Knob	(3)	B-93655	Washer	C-1066
Lever Stop		B-95006	Brass shoe	C-2246
Cam Spacer		B-95009		
Fd. Lever Stud		B-95019	Spring plunger	B-94759
Knob		B-95020	Seal	B-95748
Retainer		B-95024	J. M. 9846 hat gasket	B-95752
Spring	(4)	B-95025	Sight gage Bijur	B-95753
Spacer		B-95026	Bijur pump KIC-C-2367	B-95754
Pin	(2)	B-95027	Arrow breather	B-95755
Gasket		B-95130	Drill jig bushing	B-95756
Feed Dial		B-95131		
Detent Plate		B-95133	Bearing MRC 207S	B-95758
Spacer		B-95134	Bearing MRC R-4	B-95759
Spacer		B-107244	Bearing MRC 104-KS	B-95760
Spacer	(2)	B-95136	Bearing MRC 107-KS	B-95761
Brg. Spacer	(2)	B-95137	Bearing MRC 204S	B-95767
Feed Lever Rod		B-95028	Bearing Aetna	B-85762
Top Gasket		B-95731	Race Torrington TRA-1423	B-106165
Plug		B-95837	Gits oiler 302	B-106891
Lever Stop		B-96138	Bearhug nut BH-04	B-101547
Clutch Bushing		B-97309	Bearing nut BH-07	B-107037
Guide Sleeve		B-107242		
Guide Sleeve		B-107243		

Construction Drawings: L-107232, L-107233, L-107235

SADDLE APRON

Dial	A-95673	Spring	B-31917
Feed Lever	A-95674	Feed Arrow	B-42100
Seal Retainer	B-95679	Spring	B-52222 (3)
Pinion Shaft	A-99718	Spacer	B-62521 (2)
Dial Feed Plate	B-95676	Clutch Bolt Nut	B-65293
Turnstile Handle	B-65823	Dbl. Cluster Gear	B-65306
Turnstile Hub	A-99719	Dbl. Cluster Gear	B-65307
Apron	L-95728	Dbl. Cluster Gear	B-65308
Apron Cover	A-94828	Worm	B-65311
Right Side Cover	A-96024	Spacer	B-65322 (2)
Chip Guard	A-99520	Dial Marker	B-65334
Turnstile Sleeve	A-94831	Sleeve	B-65340
Left Side Cover	A-96025	Screw	B-65341
Top Cover	A-95422	Shift Pin	B-65342 (2)
Lever	A-98921	Bushing	B-65386
Worm Gear	B-65296	Lever Screw	B-65817
Lever	B-65803	Fd. Lever Plunger	B-65822
Triple Cluster Gear	A-65808	Tooth Clutch	B-96031
Cam	A-69916	Tooth Clutch	B-65824
Cam Shaft	A-94994	Gear	B-95730
Front Gasket	A-95122	Rear Cover	B-65834
Left Side Gasket	A-96064	Rear Gasket	B-65836
Right Side Gasket	A-96065	Lever Guard	B-67045
Hollow Shaft	A-95125	Fd. Lever Cam	B-67046
Shaft	A-95126	Clutch Plug	B-69183 (3)
Clutch Bolt	A-95127	Bushing	B-73036

SADDLE APRON

Handle	(5)	B-92351	J.M. #9846 Hat Gasket	B-95752
Knob	(3)	B-93655	Arrow Breathr Vent ASP-2BV	B-95755
Lever Stop		B-95006	BIJUR KIC-C-2367	B-95754
Cam Spacer		B-95009	Lube Pump	
Fd. Lever Stud		B-95019	1" Stroke	
Knob		B-95020	BIJUR B-5734	B-95753
Retainer		B-95024	Sight-Gauge	
Spring	(4)	B-95025	BIJUR B-4067	
Spacer		B-95026	Fitting	
Pin	(2)	B-95027	MRC Bearings	
Gasket		B-95130	R-4	B-95759
Feed Dial		B-95131	104-KS	B-95760
Detent Plate		B-95133	107-KS	B-95761
Spacer		B-95134	204-S	B-95767
Brg. Spacer		B-95135	207-S	B-95758
Spacer	(2)	B-95136	Aetna Brgs.	B-95762
Brg. Spacer	(2)	B-95137	Jergens	
Lg. Fd. Lever Rod		B-95138	#26908 Plunger	B-94759
Top Gasket		B-95731	Drill JIG Bushing 5/16 Hole	B-95756
Plug		B-95837	Brass Shoe	1049
Lever Stop		B-96138	Washer	1066
Clutch Bushing		B-97309	Brass shoe	2246
Tooth Clutch & Worm		B-96538	Brass shoe	2281
Victoprene Seal				
#62302	(2)	B-95748		

Construction Drawings: L-95672, L-95142, L-95143

6-14-P

COOLANT PUMP & PIPING

Manifold	A-106352
Gusher coolant pump	B-106208
Bronze Apollo ball valve	
No. 70-103-01 1/2" NPT	B-94875
American flexible metal hose Type F@	B-95995
Parker 360° hydraulic swivel	
adapter Part S2202-12-12	B-95996

Construction L-106365

6-15-P

COOLANT PUMP & PIPING

Manifold		A-95994
Gusher-coolant pump		B-97122
Model 9050- $\frac{1}{4}$ HP		
Bronze 'Apollo' ball	(2)	B-94875
Valve No. 70-103-01- $\frac{1}{2}$ " NPT		
American flexible	(2)	B-95995
Metal hose-type F2		
Parker: 360 deg. hyd.	(4)	B-95996
Swivel adaptor-part		
No. S2202-12-12		

Construction Drawing: L-98139

6-15-P

3" CAPACITY BAR FEED

FRONT & CENTER STAND	(2)	L-107885
REAR STAND		L-107884
REVOLVING HEAD SLEEVE		A-68204
REAR BEARING CLOSER		A-70146
SLIDING HEAD		A-96098
FRONT BEARING CLOSER		A-96202
CHUCK GUARD		A-96203
INNER SLEEVE #1		A-97410
INNER SLEEVE #2		A-97409
INNER SLEEVE #3		A-97408
BRACKET		A-101699
REVOLVING HEAD		A-105210
CHUCK JAW - LH		A-105747
CHUCK JAW - RH		A-105748
CHAIN GUARD		A-107879
SPROCKET GUARD		A-107886
SPROCKET GUARD		A-107887
MOTOR BRACKET		A-107888
SUPPORT TUBE PIVOT		A-107896
CHUCK PLATE		B-38594
CHUCK SCREW		B-63182
INNER BEARING SPACER		B-68188
END BEARING SPACER		B-68191
PIN		B-69148
LEVER		B-70163
COLLAR		B-70171
SUPPORT TUBE		B-70172
BAR	(2)	B-70187
HANDLE		B-93655
CHAIN EXTENSION	(2)	B-96106
IDLER SHAFT		B-96108
DRIVE SHAFT		B-96109
14T SPROCKET	(2)	B-96129
PILLOW BLOCK	(4)	B-96130
AIR MOTOR		B-96132
SPLIT COLLAR		B-101778
BEARING	(2)	B-105007
ADJUSTOR		B-105209
2 PC. COLLAR		B-105921
#40 1/2P X 141" LG DETACHABLE		
ROLLER CHAIN - SINGLE WIDTH		B-106898
#40 1/2P ROLLER CHAIN SINGLE WIDTH		
CONNECTING LINK		B-106899
#40 1/2P ROLLER CHAIN SINGLE WIDTH		
OFFSET LINK		B-106900
GUIDE		B-107889

6-16-P

PIVOT PLATE
COUPLING
SUPPORT STRIP
AIR VALVE WITH BASE
WASHER

(4)

B-107890
B-107891
B-107893
B-108679
C-1069

CONSTRUCTION DRAWINGS: REVOLVING HEAD L-96204
STANDS L-107897-8

6-16-P

3" CAP. - BAR FEED

Rear brg. closer		Collar	B-70171
Sup. tube brkt.		Support tube	B-70172
Lever		Bar	B-70187
Sliding head		Stand hd. washer	B-70191
Rear stand		Sprocket guard	A-96104
Center stand		Motor bracket	A-96105
Front stand		Chain extension	B-96106
Bracket		Idler shaft	B-96108
Chuck plate		Drive shaft	B-96109
Air valve		Chain guard	B-96111
Chuck screw		14T sprocket	B-96129
Handle		Boston pillow block	B-96130
Revolving head		Coupling	B-96131
Inner brg. spacer		Air motor	B-96132
End brg. spacer		Inner sleeve #1	B-97410
Front brg. closer		Inner sleeve #2	A-97409
Chuck guard		Inner sleeve #3	A-97408
Revolving hd. sleeve		Washer	#1056
Pin		Washer	#1069
Chuck jaw (L.H.)		MRC brg. XLS 3-3/4	B-105007
Chuck jaw (R.H.)		#40- $\frac{1}{2}$ P x 14" lg.	B-106898
Adjustor		detachable roller chain-	
Sprocket guard		single width	
		#40- $\frac{1}{2}$ P roller chain - single	B-106899
		width - connecting link	
		#40-1/2P roller chain - single	
		width - offset link	B-106900

Construction Drawings: L-96204, L-97321, L-97322

3" CAP - BAR FEED

Rear brg. closer	A-70146	Collar	B-70171
Sup. tube brkt.	A-70155	Support tube	B-70172
Lever	B-70163	Bar	(2) B-70187
Sliding head	A-96098	Stand head washer	B-70191
Rear stand	A-101687	Sprocket guard	A-97324
Center stand	L-101688	Sprocket guard	A-96104
Front stand	L-101700	Motor bracket	A-96105
Bracket	A-101699	Chain exten.	(2) B-96106
Chuck plate	B-38594		
Air valve	B-96503	Idler shaft	B-96108
		Drive shaft	B-96109
Center plug	B-61952	Sprocket guard	A-98122
Chuck screw	B-63182	Chain guard	B-96111
Chuck jaws	A-63185	14T. sprocket	(2) B-96129
Handle	B-93655	Boston pillow block	(4) B-96130
Revolving head	A-96201	Coupling	B-96131
Inner brg. spacer	B-68188	Air motor	B-96132
End brg. spacer	B-68191	Inner sleeve No.1	B-97410
Front brg. closer	A-96202	Inner sleeve No.2	A-97409
Chuck guard	A-96203	Inner sleeve No.3	A-97408
Revolving head sleeve	A-68204	Washer	(8) #1056
Pin	B-69148	Washer	(4) #1069
		MRC brg. XLS 3-3/4	(2) B-105007
		#40-kp. x 141" lg. detachable	
		roller chain - single width	
		#40-kp. roller chain - single	(2)
		width - connecting link	

Construction Drawings: L-96204, L-97321, L-97322

5" CAP. BAR FEED

Bracket	A-101699	Washer	B-98090
Handle	A-98097	Idler shaft	B-98091
Rear bearing closer	A-98098	Chain guard	B-98092
Support tube brkt.	A-98101	Drive shaft	A-98093
Sliding head	A-98102	Support tube	A-98094
Rear stand	L-101701	Collar	A-98095
Center stand	L-101702	Motor bracket	A-98096
Front stand	L-101703	Drive sprocket guard	A-98099
Knob	B-93655	Idler sprocket guard	A-98100
		Sliding head tube	(2) A-98103
Jaws	(4) B-77122	Air motor	B-98108
Locknut	A-80770	Inner sleeve #1	A-98063
Sleeve	A-80772	Inner sleeve #2	A-98064
Front brg. closer	A-80773	Inner sleeve #3	A-98065
Guard	A-80774	Inner sleeve #4	A-98066
Chuck	A-80780	Inner sleeve #5	A-98067
Wood's coupling sleeve	B-95121	Inner sleeve #6	A-98068
Wood's coupling-hub	B-98114	Washer	(8) #1056
Wood's coupling-hub	B-98824	Washer	(4) #1069
Knob	B-95020	#40-xpx141" Detachable roller	B-106898
Lever stud	B-95810	chain-single width	
Chain exten.	(2) B-96106	#40-xp Roller chain-single	(2) B-106899
		width connecting link	
Pin	B-98087	Timken L432310 Brg. cup	(2) B-101839
Pillow block	(4) B-98088	Timken L432349 Brg. cone	(2) B-101840
Sprocket	(2) B-98089	Air valve	B-96503
		#40-1/2p roller chain single width	
		offset link	B-106900

Construction Drawings: L-98109, L-98110, L-98111, L-98112

MOTOR DRIVE

Motor plate

A-88189

Construction drawings :

L-91498

ELECTRICAL EQUIPMENT

Control enclosure
Enclosure bracket
Control box brace
Washer

L-96125
L-96151
A-95274
C-1067

(3)
(6)

Construction Drawings: L-96152

SQUARE TURRET

LEVER	A-42151	LEVER BUSHINGS	B-42146
BASE	A-106258	LEVER COLLAR	B-42147
SQUARE TURRET	A-58496	LEVER COLLAR	B-42148
SPRING	B-31931	LEVER BALL	B-42149
SPRING L.B.	B-32049	CENTER STUD	B-43627
BINDER LEVER COLLAR	B-32475	INDEXING PLATE	B-43629
SPRING PLUNGER	B-32476	CENTER BUSHING	B-51200
LOCKBOLT SLEEVE SCREW	B-34175	CENTER SLEEVE	B-51201
SPRING	B-34684	TUMBLER	A-81956
LOCKBOLT	B-39900	PIVOT SCREW	B-58489
LOCKBOLT SLEEVE	B-39901	TUMBLER PLUNGER	B-58490
LOCKBOLT BUSHING	B-39902	TEE NUT	B-96177
BOTTOM PLATE	B-39905	SQUARE HEAD SCREW	(4) 2041
LOCKBOLT CAM	B-39910	PLUG	(12) 2397
LOCKBOLT LEVER	B-39912	PLUG	2414
INDEX PLUNGER	B-39914	GITS OILER	(2) B-95803
LEVER SHAFT	B-42145	SPRING GUIDE	B-106255
		SPRING	B-106256
		PIN	B-106257

CONSTRUCTION DRAWING: L-106261
LEVER KNOB ASSEMBLY: B-59209

SQUARE TURRET

Lever	A-42151	Lever bushings	B-42146
Base	A-58497	Lever collar	B-42147
Square turret	A-58496	Lever collar	B-42148
Spring	B-31931	Lever ball	B-42149
Spring L.B.	B-32049	Center stud	B-43627
Binder lever collar	B-32475	Indexing plate	B-43629
Spring plunger	B-32476	Center bushing	B-51200
Lockbolt sleeve scr.	B-34175	Center sleeve	B-51201
Spring	B-34684	Tumbler	A-81956
Lockbolt	B-39900		
Lockbolt sleeve	B-39901	Pivot screw	B-58489
Lockbolt bushing	B-39902	Tumbler plunger	B-58490
Bottom plate	B-39905	Tee nut	B-96177
Lockbolt cam	B-39910	Sq. hd. screw	2041
Lockbolt lever	B-39912	Spring	2075
Index plunger	B-39914	Plug	2397
Lever shaft	B-42145	Gits oiler	B-95803
	(4)		(4)
			(12)
			(2)

Construction Drawing: L-58576

6-22-P-R

REAR TOOL #741

Body		A-36566
Wedge	(2)	B-33278
Tee nut	(4)	B-96177
Sq. head set screw	(2)	B-68290
Adapter for 24" swing		B-52500

Construction Drawing: A-97258

FRONT TOOL #746

Body		A-36567
Wedge	(2)	B-33278
Tee nut	(4)	B-96177
Sq. head set screw	(2)	B-68290

Construction Drawing: A-47500

CROSS SLIDE TAPER ATTACHMENT

Tool slide taper gib	B-333347	3" T.P.F. - 8" Long	A-33704
Swivel slide taper gib	B-333348	Swivel plate	A-36852
Yoke	B-34819	Swivel slide	
Base	A-36875	20 T.P.F. (4.232) - 7" Long	
Tool slide	A-63200	Swivel plate	A-53001
Gib screw	B-31890	Follower	B-53055
Swivel stud	B-333343	Stationary sine bar	
Tool slide stud	B-333344	Taper attachment	
Follower	B-333345	.500 T.P.F.	
Bracket	B-36876	.600 T.P.F.	
Bracket stud	B-97265	.625 T.P.F.	
Tee nut	B-96177	Sine bar slide	A-42180
Knurled hd. scr.	#1008	Sine bar	A-42181
Washers	#1069	Sine bar back taper	A-42220
Square hd. scr.	B-68290	2 1/2 T.P.F. - 12" Long	
		Swivel slide	A-49656
		Swivel	A-49657

Construction Drawing: L-36895, L-36896

CARRIAGE THREAD CHASING ATTACHMENT

Bracket	A-71286
Lg. fd. lever	A-71859
Lever	B-71288
Leader	A-71289
Lever	B-102209
Leader nut	B-32079
Spring	B-48061
Leader bushing	B-71290
Follower	B-71291
Follower rack	B-71292
Closer	B-71293
Disengage block	B-71294
Pin	B-71306
Kickout plugner	B-71297
Stop lever	B-71298
Knock out adjustment	B-71299
Bushing	B-71301
Knockout rod	B-71302
Lever catch	B-71303
Detent	B-71304
Knockout rod plunger	B-71305
Lever rod	B-95810
Lever pivot	B-71307
Pinion shaft	B-71858
Kickout plun. sparing	B-52312
Cover	B-71319
Spring	B-56121
Knob	B-95020
WMS. soc. wrench #270-S	B-98227
WMS. eng. wrench BW-10A	B-98226
Spacer	B-102953

(2)

Construction Drawing: L-71300

POWER RAPID TRAVERSE

Control box	A-98515
Handwheel	A-106254
Cover	A-98518
Housing	A-98519
Bushing	B-72844
27T. gear	B-75169
Stud	B-75188
Spacer	B-74747
Cam shaft	B-76550
Lever	B-76551
Detent	B-76552
Stop block	B-76554
Cover	B-76555
Gasket	B-76556
Feed screw	A-98520
Chip guard	A-98521
Feed scr. guard const.	A-98522
Sleeve	A-98523
Flange	B-98524
43T. gear	B-98525
Stop block	B-98526
Speed cont. muffler	B-88698
Press. reg.	B-91243
Air motor	B-101949
Air valve	B-96503
Compression spring	B-99051
Plug	#2281
Bijur fitting	(2)
Switch	B-95884

Construction Drawings: L-98527, L-98528

INCH/METRIC DIAL

Conversion dial unit No. 65103	A-97149
Machine slave hub by B & O	
Increment ring O/333	
Machine ring by B & O	B-97150
Handwheel (No. 3 UTL)	
Nut (No. 3 UTL)	A-97151
Nut (No. 6 UTL)	B-98565
Adapter	B-97152
Clip	B-97153
Delrin fluted-head finger	B-97306
Screw No. 94323D191	B-97330
Machine with power rapid traverse	
Handwheel (No. 6 UTL)	L-106463

Construction Drawing: A-97328

USING THE CONVERSION DIAL

1. Inch measurement

With the inch engraving on the selector ring to the top, the engraved dial will now revolve at the same speed as the lead screw.

2. Millimetre measurement

The conversion dial can be changed from inch to metric by turning the selector ring slowly 180° in a clockwise direction until it can be felt clicking into the detent position. This will show the mm engraving at the top. The engraved dial will now revolve at a higher speed than the leadscrew spindle, 2.54 to 1.

3. Reversion to inch measurements

The selector ring is returned to the detent position in a counter-clockwise direction. A small arrow engraved beside the inch and mm engraving shows the direction of rotation in each case.

4. Zero set

The engraved dial can be set at zero or any other position on the dial by unscrewing the thumb screw, moving it to the required position and then re-tightening the thumb screw.

INCH/METRIC READOUT

Plug bracket		A-99740
Bushing	(2)	B-72844
Feed screw'		A-98520
Sleeve		B-98523
Flange		B-98524
Housing		A-99389
cover		A-99390
Guard		A-99391
25T. gear		B-99392
35T. gear		B-99393
15T. gear		B-99394
Spacer	(2)	B-99395
Encoder digital readout		B-99396
End plate (rework)		B-99741
Plugs		#2281
MRC bearing R-6-22		
Fd. screw guard (welding)		A-98522

Construction Drawing: L-99397

TURRET COOLANT DIST.

Adapter		A-85518
Housing		A-98339
Shut-off	(6)	B-84993
Locknut	(6)	B-85521
Stem		A-98337
Manifold		A-98338

Construction Drawing: L-98340

TURRET LEADING ATTACHMENT

Follower brkt.	A-97770	12T. gear	B-71531
Cover	B-83396	Collar	B-71532
Spacer	A-78836	Cover	B-71534
Follower brkt. cover	A-97776	Feed lever plunger	B-71536
Splined shaft	A-97777	Eccentric pin	B-71539
Leader	A-97778	42T. gear	B-71540
Feed shaft	B-100342	36T. gear	B-71541
Long fd. lever rod	B-97783	Rack	B-71542
Gear housing	L-97769	Roller	B-71543
Lever brkt.	A-100333	Cover	B-71545
Lever	A-97772	Cam	A-71547
Spacer	A-97773	Bushing	B-73454
Right side cover	A-97774	Spring	B-79065
Bearing closer	B-97775	Shear pin	B-83937
	B-31750	Feed lever stud	B-95019
Spring	B-31917	Knob	B-95020
Spring	B-52222	Seal spacer	B-97779
Follower	A-71511	Shift rod	B-97780
Feed screw gear	B-71513	32T. gear	B-97781
Bearing closer	B-71514	8T. pinion	B-97782
Washer	B-71515	Gear stud	B-97784
Bushing	B-71518	Closer gasket	B-97785
Washer	B-71520	Cover gasket	A-97786
Spacer	B-71521	Apron gasket	A-97787
30T. gear	B-71522	Washer	#1721
Splined shaft	B-71523	Garlock seal	B-95748
20T. gear	B-71525	MRC 104-KS	B-95760
Coupling	B-71526	MRC 107-KS	B-104877
Closer	B-71528	MRC 203-S	B-95768
Spring retainer	B-71530	Slide cap (clamp)	B-104959
Binder handle sub-ass'y	A-104856	Spring	B-48009

Construction Drawings: L-97789, L-97790, L-97791

CHUCK GUARD

Guard
Hood
Knob
Washer

A-102484
A-102485
B-84088
C-2303

Construction Drawing: L-102483

6-32-P

HYD. POWER CHUCK - 15" CUSHMAN

Anti-rotation bracket	
Bracket	A-102990
Adapter	A-102019
Draw tube	A-102020
Cyl. guard	A-102021
Spacer	A-102022
Spacer	A-102023
Clamp	A-102991
15" 3 Jaw chuck	A-103001
#10-590-15-AllC dwg. 01-227423	
10" Thru-hole cyl.	
#10-766-10-000 dwg. 01-232511	
Hose package #06-229841	
Master jaw gripping pads	(7 sets)
#98-226791-01,10,19,28,37,46,54-	(3 sets)
Hardened top jaws	
#03-226433, 4, 5--	
Hydraulic power unit	
#98-208774	
Washer	(4) C-1069

Construction Drawing: L-102018
Foundation Drawing: A-103027

12.5" SMW Power Chuck

Control Box Brace	(2)	A-95274
Bracket		A-97270
Adapter Plate		A-103270
Dist. Ring Bracket		A-103271
Chuck Guard		A-103272
Driving Button		B-37291
Knob		B-84088
Valvair Muffler H057-14	(2)	B-88698
Wilker F-R-L Unit		B-96926
Numatics MK40 33DSA5410		B-97159
Valve Mtg. Plate		B-103287
12.5" Chuck Model SP315/90		
Part No. 11112032		

Long Pointed Soft Jaws
Part No. 11135525

Construction	L-103269
Pneumatic Circuit	A-103284
Construction Valve Mtg.	A-103286

16" SMW Power Chuck

Control Box Brace	(2)	A-95274
Bracket		A-97270
Adapter Plate		A-103295
Dist. Ring Bracket		A-103296
Chuck Guard		A-103297
Driving Button		B-42420
Knob		B-84088
Muffler HO57-14	(2)	B-88698
F-R-L Unit CBL-04-F00		B-96926
Air Valve MK40 33DSA5410		B-97159
Valve MTG Plate		B-103287
16" Chuck Model BB400/140		
Part No. 11212040		

Long Pointed Soft Jaws	(3)
Part No. 11235540	

Construction	L-103294
Pneumatic Circuit	A-103284
Construction Valve Mtg.	A-103286

12" S-P HYD. POWER CHUCK

Bracket	A-103516
Adapter	A-89034
Draw tube	A-101200
Cylinder guard	A-101201
Anti-rotation bracket	A-103517
Clamp	B-103519
Polypack power unit	B-101157
Pressure SW 836 C9A	
35-375 PSI	
12" - 3 jaw model CC-300	
Power chuck - SP dwg. E-3690	
8 RHC 8" Thru hole rot..	
Hyd. cyl. SP dwg. E-3947	
12 CC-355-X hard ser.	
Master jaw pads	
Coupler SP dwg. #14438	

Hyd. diagram B-101168
Construction L-103518

3" J & L COLLET

Spl. collet	A-95697
Spl. collet hood	A-98534
J&L 3" collet pad	#15239

Construction Drawing: A-104860

4-1/2" J & L COLLET

Spl. collet hood	A-104901
Spl. collet	A-104902
Spl. collet pad scr. (3)	B-104903
4 1/2" collet pad	A-104912

Construction Drawing: A-104904

4-1/2 GISHOLT COLLET

Spl. collet hood	A-105475
Spl. collet	A-105476
Spl. collet pad screw (4)	B-105477
Hardinge - Gisholt pad	
No. MP-2622	
(Cap. 4½ - Size 3L)	

Construction Drawing: A-105474

P/L No. 10552

6-39-P

REAR SLIDE STOCK STOP

SPL. HEX TURRET		L-107224
TURRET BUSHING	(2)	A-107223
STOP SUPPORT		A-107256
STOP HOLDER		A-107257
SQ. HD. SET SCREW	(2)	B-68290
PLASTIC HANDLE		B-92351
SPECIAL BEVEL GEAR		B-107252
PLUG	(2)	B-107276
CLAMP	(8)	B-107258

CONSTRUCTION DRAWINGS: L-107255 & (REVOLV. STOP) A-77222

P/L #10762

6-40-P

DIGITAL READOUT

"Z" AXIS SCALE MOUNT	L-112668
"X" AXIS SCALE MOUNT	L-112669
READER HEAD MOUNT	B-112673
READER HEAD PLATE	A-112681
READER HEAD MOUNT	A-112682
POWER TUBE MOUNT	A-112683
POWER TUBE SUPPORT	A-112684
END COVER	B-112701
END COVER	B-112702
LINEAR ENCODER LS-303C (420MM) WITH 3M ARMORED CABLE	B-112686
LINEAR ENCODER LS-303C (720MM) WITH 3M ARMORED CABLE	B-112687
DIGITAL READOUT VRZ-730	B-112688
POWER TUBE 1020	(6 FT) B-112893
UNARMORED CABLE EXTENSION (1 M)	(2) B-112894

CONSTRUCTION DWGS L-112695

6-42-P

3" CAPACITY COLLET CHUCK

REFER TO DRAWING: L-95954 - COLLET CHUCK CYL. CONSTRUCTION
A-100969 - FINGER ASSEMBLY CONSTRUCTION
L-113545 - COLLET CONSTRUCTION

<u>B & O</u> <u>PART NO.</u>	<u>PART DESCRIPTION</u>	<u>QUANTITY</u> <u>PER UNIT</u>
A-70711	FINGER	3
A-86967	YOKE	1
A-97436	COLLET HOOD GUARD	1
A-100960	YOKE BRACKET	1
B-42434	WEDGE SHOE STUD	2
B-62784	FINGER ROLLER	3
B-62785	FINGER ROLLER PIN	3
A-74996	WEDGE	1
B-86866	SPINDLE GUARD PIN	1
A-88236	FINGER HOLDER	1
B-88239	PIN	3
B-89916	PLUNGER	1
B-90472	RING	1
A-90473	ABUTMENT SLEEVE	1
B-95699	COLLET PAD SCREW	3
A-95952	YOKE PIVOT	1
A-113526	COLLET	1
A-113527	COLLET HOOD	1
C-2233	KEY	1
A-86981	AIR CYLINDER	1
	SUPERIOR COLLET PAD 1022	
L-98018	REAR SPINDLE GUARD	1
B-44275	FINGER HOLDER FRICTION	1
B-86975	CYLINDER LINK	1
B-86976	YOKE LINK PIN	1
B-98862	WEDGE SHOE	2
A-86980	CYLINDER MOUNTING BLOCK	2
B-98019	HANDLE	1
B-98856	VLIER M-62 SPRING PLUNGER WITH 5/8 JAM NUT	
B-100664	BUSHING	2
B-106021	OILRITE OILER STYLE DOSF	1
B-95245	STANLEY STEEL BUTT HINGES	2

6-43-P

COLLET CHUCK - 3" CAPACITY

REFER TO DRAWING: PNEUMATIC DIAGRAM A-96261
VALVE & R-F-L MOUNTING A-108678
REF: P/L 10925

<u>B & O</u> <u>PART NO.</u>	<u>PART DESCRIPTION</u>	<u>QUANTITY</u> <u>PER UNIT</u>
A-86981	AIR CYLINDER	1
B-108379	R.F.L. UNIT	1
B-88697	SPEED CONTROL MUFFLER	2
A-108677	BRACKET	1
A-95274	BRACE	2
B-108380	MODULAR BRACKET KIT	1
B-108381	4-WAY VALVE	1

OPTIONAL BAR FEED

B-91243	PRESSURE REGULATOR	1
B-96132	AIR MOTOR	1
B-88697	SPEED CONTROL MUFFLER	2
B-94279	PRESSURE GAGE	1
B-108679	4-WAY VALVE	1

OPTIONAL POWER RAPID TRAVERSE

B-91243	PRESSURE REGULATOR	1
B-101949	AIR MOTOR	1
B-88697	SPEED CONTROL MUFFLER	2
B-94279	PRESSURE GAGE	1
B-107069	NEEDLE VALVE	1
B-108679	4-WAY VALVE	1

6-43-P