

THREADS PER INCH	SPINDLE SPEED R.P.M.					
	30	60	88	123	158	176
	TIME IN SECONDS TO TRAVEL ONE INCH					
4.0	8.000	4.000	2.727	1.951	1.519	1.364
8.0	16.000	8.000	5.455	3.902	3.038	2.727
9.0	18.000	9.000	6.136	4.390	3.418	3.068
10.0	20.000	10.000	6.818	4.878	3.797	3.409
11.0	22.000	11.000	7.500	5.366	4.177	3.750
11.5	23.000	11.500	7.841	5.610	4.367	3.920
12.0	24.000	12.000	8.182	5.854	4.557	4.091
13.0	26.000	13.000	8.864	6.341	4.937	4.432
14.0	28.000	14.000	9.545	6.829	5.316	4.773
16.0	32.000	16.000	10.909	7.805	6.076	5.455
18.0	36.000	18.000	12.273	8.780	6.835	6.136
20.0	40.000	20.000	13.636	9.756	7.595	6.818
24.0	48.000	24.000	16.364	11.707	9.114	8.182
32.0	64.000	32.000	21.818	15.610	12.152	10.909

THREADS PER INCH	SPINDLE SPEED R.P.M.					
	246	316	464	650	928	1300
	TIME IN SECONDS TO TRAVEL ONE INCH					
4.0	.976	.759	.517	.369	.259	.185
8.0	1.951	1.519	1.034	.738	.517	.369
9.0	2.195	1.709	1.164	.831	.582	.415
10.0	2.439	1.899	1.293	.923	.647	.462
11.0	2.683	2.089	1.422	1.015	.711	.508
11.5	2.805	2.184	1.487	1.062	.744	.531
12.0	2.927	2.278	1.552	1.108	.776	.554
13.0	3.171	2.468	1.681	1.200	.841	.600
14.0	3.415	2.658	1.810	1.292	.905	.646
16.0	3.902	3.038	2.069	1.477	1.034	.738
18.0	4.390	3.418	2.328	1.662	1.164	.831
20.0	4.878	3.797	2.586	1.846	1.293	.923
24.0	5.854	4.557	3.103	2.215	1.552	1.108
32.0	7.805	6.076	4.138	2.954	2.069	1.477

5A-3F3

3 IN CAPACITY

THREADS PER INCH	TIME IN SECONDS TO TRAVEL ONE INCH					
	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	30	60	88	123	158	176
4.0	8.000	4.000	2.727	1.951	1.519	1.364
8.0	16.000	8.000	5.455	3.902	3.038	2.727
9.0	18.000	9.000	6.136	4.390	3.418	3.061
10.0	20.000	10.000	6.818	4.878	3.797	3.409
11.0	22.000	11.000	7.500	5.366	4.177	3.750
11.5	23.000	11.500	7.841	5.610	4.367	3.920
12.0	24.000	12.000	8.182	5.854	4.557	4.091
13.0	26.000	13.000	8.864	6.341	4.937	4.432
14.0	28.000	14.000	9.545	6.829	5.316	4.773
16.0	32.000	16.000	10.909	7.805	6.076	5.455
18.0	36.000	18.000	12.273	8.780	6.835	6.136
20.0	40.000	20.000	13.636	9.756	7.595	6.818
24.0	48.000	24.000	16.364	11.707	9.114	8.182
32.0	64.000	32.000	21.818	15.610	12.152	10.909

THREADS PER INCH	TIME IN SECONDS TO TRAVEL ONE INCH					
	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	246	316	464	650	928	1300
4.0	.976	.759	.517	.369	.259	.185
8.0	1.951	1.519	1.034	.738	.517	.369
9.0	2.195	1.709	1.164	.831	.582	.415
10.0	2.439	1.899	1.293	.923	.647	.462
11.0	2.683	2.089	1.422	1.015	.711	.508
11.5	2.805	2.184	1.487	1.062	.744	.531
12.0	2.927	2.278	1.552	1.108	.776	.554
13.0	3.171	2.468	1.681	1.200	.841	.600
14.0	3.415	2.658	1.810	1.292	.905	.646
16.0	3.902	3.038	2.069	1.477	1.034	.738
18.0	4.390	3.418	2.328	1.662	1.164	.831
20.0	4.878	3.797	2.586	1.846	1.293	.923
24.0	5.854	4.557	3.103	2.215	1.552	1.108
32.0	7.805	6.076	4.138	2.954	2.069	1.477

5" CAPACITY

TIME IN SECONDS TO TRAVEL ONE INCH

SPINDLE SPEED IN REVOLUTIONS PER MINUTE

THREADS PER INCH	25	50	73	103	115	146
4.0	9.600	4.800	3.288	2.330	2.087	1.644
8.0	19.200	9.600	6.575	4.660	4.174	3.288
9.0	21.600	10.800	7.397	5.243	4.696	3.696
10.0	24.000	12.000	8.219	5.825	5.217	4.110
11.0	26.400	13.200	9.041	6.408	5.739	4.522
11.5	27.600	13.800	9.452	6.699	6.000	4.720
12.0	28.800	14.400	9.863	6.990	6.261	4.930
13.0	31.200	15.600	10.685	7.573	6.783	5.340
14.0	33.600	16.800	11.507	8.155	7.304	5.750
16.0	38.400	19.200	13.151	9.320	8.348	6.570
18.0	43.200	21.600	14.795	10.485	9.391	7.390
20.0	48.000	24.000	16.438	11.650	10.435	8.210
24.0	57.600	28.800	19.726	13.981	12.522	9.860
32.0	76.800	38.400	26.301	18.641	16.696	13.150

TIME IN SECONDS TO TRAVEL ONE INCH

SPINDLE SPEED IN REVOLUTIONS PER MINUTE

THREADS PER INCH	206	230	338	474	676	950
4.0	1.165	1.043	.710	.506	.355	.253
8.0	2.330	2.087	1.420	1.013	.710	.505
9.0	2.621	2.348	1.598	1.139	.799	.568
10.0	2.913	2.609	1.775	1.266	.888	.632
11.0	3.204	2.870	1.953	1.392	.976	.695
11.5	3.350	3.000	2.041	1.456	1.021	.726
12.0	3.495	3.130	2.130	1.519	1.065	.758
13.0	3.786	3.391	2.308	1.646	1.154	.821
14.0	4.078	3.652	2.485	1.772	1.243	.884
16.0	4.660	4.174	2.840	2.025	1.420	1.011
18.0	5.243	4.696	3.195	2.278	1.598	1.137
20.0	5.825	5.217	3.550	2.532	1.775	1.263
24.0	6.990	6.261	4.260	3.038	2.130	1.516
32.0	9.320	8.348	5.680	4.051	2.840	2.021

TIME IN SECONDS TO TRAVEL ONE INCH						
THREADS PER INCH	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	30	60	88	123	158	176
4.0	8.000	4.000	2.727	1.951	1.519	1.36
8.0	16.000	8.000	5.455	3.902	3.038	2.72
9.0	18.000	9.000	6.136	4.390	3.418	3.06
10.0	20.000	10.000	6.818	4.878	3.797	3.40
11.0	22.000	11.000	7.500	5.366	4.177	3.75
11.5	23.000	11.500	7.841	5.610	4.367	3.92
12.0	24.000	12.000	8.182	5.854	4.557	4.09
13.0	26.000	13.000	8.864	6.341	4.937	4.43
14.0	28.000	14.000	9.545	6.829	5.316	4.77
16.0	32.000	16.000	10.909	7.805	6.076	5.45
18.0	36.000	18.000	12.273	8.780	6.835	6.13
20.0	40.000	20.000	13.636	9.756	7.595	6.81
24.0	48.000	24.000	16.364	11.707	9.114	8.18
32.0	64.000	32.000	21.818	15.610	12.152	10.90

TIME IN SECONDS TO TRAVEL ONE INCH						
THREADS PER INCH	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	246	316	464	650	928	1300
4.0	.976	.759	.517	.369	.259	.185
8.0	1.951	1.519	1.034	.738	.517	.369
9.0	2.195	1.709	1.164	.831	.582	.419
10.0	2.439	1.899	1.293	.923	.647	.462
11.0	2.683	2.089	1.422	1.015	.711	.508
11.5	2.805	2.184	1.487	1.062	.744	.531
12.0	2.927	2.278	1.552	1.108	.776	.554
13.0	3.171	2.468	1.681	1.200	.841	.600
14.0	3.415	2.658	1.810	1.292	.905	.646
16.0	3.902	3.038	2.069	1.477	1.034	.738
18.0	4.390	3.418	2.328	1.662	1.164	.831
20.0	4.878	3.797	2.586	1.846	1.293	.923
24.0	5.854	4.557	3.103	2.215	1.552	1.108
32.0	7.805	6.076	4.138	2.954	2.069	1.477

THREADS PER INCH	TIME IN SECONDS TO TRAVEL ONE INCH					
	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	25	50	73	103	115	140
4.0	9.600	4.800	3.288	2.330	2.087	1.64
8.0	19.200	9.600	6.575	4.660	4.174	3.28
9.0	21.600	10.800	7.397	5.243	4.696	3.69
10.0	24.000	12.000	8.219	5.825	5.217	4.11
11.0	26.400	13.200	9.041	6.408	5.739	4.52
11.5	27.600	13.800	9.452	6.699	6.000	4.72
12.0	28.800	14.400	9.863	6.990	6.261	4.93
13.0	31.200	15.600	10.685	7.573	6.783	5.34
14.0	33.600	16.800	11.507	8.155	7.304	5.75
16.0	38.400	19.200	13.151	9.320	8.348	6.57
18.0	43.200	21.600	14.795	10.485	9.391	7.39
20.0	48.000	24.000	16.438	11.650	10.435	8.21
24.0	57.600	28.800	19.726	13.981	12.522	9.86
32.0	76.800	38.400	26.301	18.641	16.696	13.15

HREADS PER INCH	TIME IN SECONDS TO TRAVEL ONE INCH					
	SPINDLE SPEED IN REVOLUTIONS PER MINUTE					
	206	230	338	474	676	950
4.0	1.165	1.043	.710	.506	.355	.253
8.0	2.330	2.087	1.420	1.013	.710	.505
9.0	2.621	2.348	1.598	1.139	.799	.568
10.0	2.913	2.609	1.775	1.266	.888	.632
11.0	3.204	2.870	1.953	1.392	.976	.695
11.5	3.350	3.000	2.041	1.456	1.021	.726
12.0	3.495	3.130	2.130	1.519	1.065	.758
13.0	3.786	3.391	2.308	1.646	1.154	.821
14.0	4.078	3.652	2.485	1.772	1.243	.884
16.0	4.660	4.174	2.840	2.025	1.420	1.011
18.0	5.243	4.696	3.195	2.278	1.598	1.137
20.0	5.825	5.217	3.550	2.532	1.775	1.263
4.0	6.990	6.261	4.260	3.038	2.130	1.516
32.0	9.320	8.348	5.680	4.051	2.840	2.021

5A-3F-3

SELECTOR ASSEMBLY

Valve body	B-84049
Valve spool	B-84050
Washer	B-86200
Brass shoe	(2) #1049
Roll pin	(2) 1/8x1/2 lg
Roll pin	1/8x5/8 lg
1/4 dia steel ball	(2)

Linear O-ring	11-012
Linear O-ring	11-017
C-H standard retaining nut	# 15-676
Truarc retaining ring	5103-50
Clippard plug	#11755

REPLACED

BY DRW. SAME No. DATE 5-4-78

CROSS SLIDE & CARRIAGE

Cross slide		L-87960
Front bracket		A-87961
Valve bracket		A-87962
Stud		B-37754
Adjusting nut		B-40580
Gib screw	(4)	B-58815
Cam	(3)	B-87315
Cam lock	(3)	B-87217
Valve cover		B-87320
Actuator	(5)	B-87321
Valve bracket cover		B-87324
Retainer		B-87325
Manifold		B-87728
Rear bracket		A-87964
Short front cap		B-87965
Long front cap		A-87966
Rear cap		A-87967
Cap gib	(2)	B-87968
Carriage gib	(2)	B-87969
Cam positioner	(3)	B-87970
Cam plate		A-87971
Stop screw	(2)	A-87972
Stop block	(2)	B-87973
Stop pin	(2)	B-87974
Valve block	(2)	B-87975
L.V. gasket	(2)	B-88330
Dial	(3)	B-87977
Dial cap	(5)	B-87978
Key	(5)	B-87979
Thrust washer	(4)	B-87980
Spring housing	(2)	B-87981
Carriage		L-88339
Cross slide gib		B-88342
Hydraulic cylinder rod		A-87983
Cylinder rod guard		A-88072

Glyd ring S-12547-010	(5)	B-87984
Spring LC-022A-7-MW	(5)	
Spring LC-063J-1-MW	(2)	
Spring LC-063J-3-MW	(2)	
11-09- "O" ring	(5)	
11-011 "O" ring	(5)	

MACHINE WITH STANDARD CROSS SLIDE ADJUSTMENT

Bracket		A-88106
Cylinder mounting plate		A-87683
Adjusting nut		B-87676
Extension rod		B-87677
Extension rod		B-87678
Bushing		B-87680
Bushing	(2)	B-87684
Rod		B-87681
Tube guard		B-88107
Adjusting screw		B-88108
Adjusting screw cap		B-88332

MACHINE WITH CROSS SLIDE TOOL RELIEF

Omit standard parts B-87681 and B-87684

Add		
Cylinder adjusting nut		B-87685

COOLANT PUMP

Manifold		B-88034	Parker #831 hose
Mounting plate		A-88156	Gusher coolant pump 6-P3 X-long
Spring	(4)	B-88825	Hansen coupling
Parker Push-lok fitting			Socket 4-S26
1/2 - 1/2 - 30182-4			Plug B4-T26
Guard		A-88823	
Bumper	(4)	B-88824	

TURRET AND SADDLE

M.R. quad ring seal	Q-4271	Chip guard	A-88482
Torrington ball bushing		Wiper	A-88480
No. 10 SF 16		Wiper cover	(2) A-88481
No. 17 SF 28 (ball only)		Shaft	A-88479
Timken bearing cup 2525 (2)		Cam plate	A-88478
Timken bearing cone 2558 (2)		Rear cover	A-88477
Bunting bushing C-67 (2)		Top cover	L-88476
McGill bearing CYR-1-1/2"(2)		Hydraulic cylinder guard	(2) A-88498
McGill bearing CFH-1-1/8"(6)		Hydraulic cylinder rod	A-88483
Kaydon bearing KF040XP0		Stem bracket	A-88484
Spring LC-022A-7-MW (8)		Hydraulic cylinder	A-88485
Truarc snap ring 5100-62		Stop screw	(6) B-88486
O-ring 11-009 (8)		Spacer	B-88487
O-ring 11-011 (23)		Shim	(9) B-88488
O-ring 11-124 (4)		Rear cap	(3) A-88146
MRC bearing 203 SFFG		Cap gib	(3) B-88147
Saddle	L-88806	Gib	(3) B-88148
Hex turret	L-88473	Oiler	(3) B-88151
End plate	L-88474	Socket set screw	(3) B-88338
Hydraulic cylinder brkt. (2)	A-88475	Dog point	(3) B-88149
		Dog point	(3) B-88150

BED, PAN, AND LEGS

Left hand leg		L-87267	Hose guard		A-89346
Bushing		B-87518	Tooling guard		L-89374
Head guard		L-89377	Angle bracket		B-89383
Hose manifold		A-87579	Bracket		A-88192
Strap	(5)	B-87696	Chip chute		A-89390
Spring clip	(2)	B-88194	Window		A-88652
Coolant manifold		B-88195	Main guard		L-89375
Turret manifold		A-88726	Side guard		A-89376
			Cover		A-89379
Brace	(2)	A-88207	Cover		A-89380
Thomson ball bushing			Cover		A-89381
pillow block unit PB12A	(2)		Cover		B-89382
Handle		246-264	Rod		B-88201
Bed		L-88808	Spacer	(2)	B-89385
Right hand leg		L-88807	Spacer	(2)	A-88308
Pan		L-88713	Roller	(2)	B-89384
Bedway	(2)	A-88610	Conveyor chip chute		L-89592
Front splash guard		A-89378			
Rear splash guard		L-89347			