

BASE & HYDRAULIC POWER UNIT

BASE (LESS HYDRAULIC EQUIPMENT)

Base	L-91476	Knob		B-90351
Guard	L-87126	Feed valve manifold	(2)	B-89094
Motor plate	L-87067	Cross slide manifold		B-89093
Console lift bracket	A-88828	Bracket		B-89092
Pump base	A-88187	Manifold bracket		B-88725
End cover	A-88186	Manifold		B-88724
Check valve body	(8) A-92041	Pump base shim	(6)	B-88265
Turret slide manifold	A-87129	Pump base shim	(12)	B-88264
Cross slide & overhead slide manifold	A-87128	Guard	(2)	B-87874
Angle guard	A-92060	Guard	(2)	B-87873
Flow control valve - subplate	(8) A-92043	Piston cap	(8)	B-87136
Manifold spacer	A-88562	Piston	(8)	B-87135
Sump filter bracket	(4) A-87073	O-ring cap	(8)	B-87134
Cover gasket	(2) A-87072	O-ring sleeve	(8)	B-87133
End cover	A-87071	Piston shaft	(8)	B-87132
Low pressure manifold	A-87070	Filter bracket gasket	(4)	B-87074
Rapid manifold	(2) A-87069			
Pump base	(3) A-87068			
Overhead slide subplate	A-92054			

BASE & HYDRAULIC POWER UNIT

(HYDRAULIC EQUIPMENT)

Westinghouse 5 HP, frame 184T, 1800 RPM, 3 phase, 60 cycle, 230/460 volt, TEFC, with double end shaft G.L. Calrod immersion heater 2D356-500W-120V Powers Regulator model 134-1081, 50 - 130 deg F thermostat range with closed tank connection part 134-050 Woods Sure-flex coupling 5J sleeve Woods Sure-flex coupling 5J hub bore 3/4 dia with 1/8 W x 1/16 dp keyway Woods Sure-flex coupling 5J hub bore 7/8 dia. with 3/6 W x 3/32 dp keyway Woods Sure-flex coupling 5J hub bore 1" dia with 1/4 W x 1/8 dp keyway Woods Sure-flex coupling 5J hub bore 1-1/8" dia with 1/4 W x 1/8 dp keyway O-ring 11-008 O-ring 11-011 O-ring 11-111 O-ring 11-119 Quad ring Q-4111 Manatrol F-200-B-10 FCV Manatrol N400-B10 needle valve Manatrol needle & shut off valve MV-861-S with mounting kit MVK800 Manatrol relief valve CR-600-S-8-10 90 - 150 psi pressure range Manatrol check valve line mounted C-800-B-10 1/2 NPT brass Lee spring LC-055-J2 Bellofram diaphragm Class 4C for 1-3/4 dia & 5/32 stroke	(2) (4) (5) (4) (2) (8) (8) (54) (8) (8) (2) (2) (8) (8) (8) (2) (8) (8)	B-91465 B-91466 B-91467 B-91468 B-91469 B-91470 B-91531 B-91532 B-91337 B-85914 B-91349 B-91277 B-85917	Sun Hydraulics pressure reducing valve (min 25 psi control) part No. PPFPA-LEN-BBa Continental mounting bolt kit Model MN10S-W Continental air pilot, 3 position 4 way valve VA8M-3A-A-10 Continental air pilot 3 position 4 way valve VA12M-3L-A-10-B Marvel pressure line filter 33115M1 10 micron 1000 psi Marvel C-1-10-100 synclinal sump type filter 100 mesh 1" pt. Manatrol N-800-B-10 needle valve Manatrol MV-861-S with MVK-3 mounting kit valve Double A pressure comp. flow control valve QXA-005-11A1 Century Detroit fluid level gage 8575-T with fahrenheit scale Continental pressure comp. hyd. pump manifold mount PVR15-15B10-RM-0-1 Continental air pilot 3 Pos. 4 way valve VA12M-3A-A-10 Continental pressure comp. hydraulic pump manifold mounted double end shaft and with max. vol. cont. PVR1-6B03-RM-0-613 Continental air pilot 2 Pos 4 way valve VA12M-1A-A-10 Marsh pressure gage (0-200) Federal Brass type 700 filler breather cap assembly Marsh press gage 0-2000 psi Marsh pressure gage 0-600 psi	B-91276 B-91491 B-91472 B-91347 B-85891 B-91330 B-85912 B-91349 B-92061 B-85939 B-91346 B-91472 B-91345 B-91187 B-84303 B-85942 B-91795 B-84543
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BED, PAN, AND LEGS

#5 machine size plate	A-88279	L.H. leg	L-91067
Bed	L-91062	B & O nameplate	A-88278
R.H. leg	L-91065	Bushing	B-87518
Pan	L-86949'	Hose manifold	A-87579
Head guard	L-90464	Strap	(5) B-90608
Bedway	(2) A-90885	Spring clip	(2) B-88194
Front splash guard	A-90493	Coolant manifold	B-90491
Rear splash guard	L-90498	Turret manifold	A-88726
Hose guard	A-87695	Window	A-88652
Tooling guard	L-90497	Knob	(4) B-84088
Angle bracket	B-90492	Roller	(2) B-89384
Chip chute	A-88193	Spacer	(2) B-89385
Main guard	L-90499	Cover	B-89382
Side guard	A-90494	Wear strip	(2) B-91484
Cover	A-90465	PV box brace	A-91987
Cover	A-90495		
Cover	A-90496		
Spacer	(2) A-88307		
Spacer	(2) A-88308		
Filler plate	A-94659		

HEAD

Bearing closer	(2)	A-86066	AS450 clutch hub	(2)	A-86937
Bearing closer	(2)	A-86067	AS600 clutch hub	(2)	A-86938
Housing		L-91049	Spacer shim	(6)	B-88024
Cover	(2)	A-91051	Spacer shim	(7)	B-88152
Cover gasket	(2)	A-91052	1911-S MRC bearing		B-91176
Spindle speed chart		B-88920	212-S MRC bearing	(2)	B-91177
Manifold		L-87256	213-SF MRC bearing		B-91178
Spacer		B-86074	208-S MRC bearing	(2)	B-91179
Spacer	(2)	B-86079	5209-K MRC bearing	(2)	B-91180
Spacer		B-86082	5212-K MRC bearing	(2)	B-91181
Shaft		A-86083	307-SF MRC bearing		B-91182
Spacer		B-86131	5309 MRC bearing		B-91183
Spacer		B-86203	Fawick clutch with	(2)	B-91184
59T gear		A-86817	B&O hub A-86937		
49T gear		A-86820	Fawick clutch with	(2)	B-91185
27T gear		A-86821	B&O hub A-86938		
Pinion shaft		A-86831	Truarc snap ring		5100-237
61T clutch gear		A-86931			
71T clutch gear		A-86932			
71T clutch gear		A-86933			
95T clutch gear		A-86934			

HEAD RANGE GEAR (37/1600 RPM 3" CAPACITY)
(31/1170 RPM 5" CAPACITY)

93T gear		A-86124	Speed overlay 37/1600 RPM		B-91915
43T gear		A-86829	Speed overlay 31/1170 RPM		B-91916

HEAD RANGE GEARS (30/1300 RPM 3" CAPACITY)
(25/950 RPM 5" CAPACITY)

99T gear		A-86828	Speed overlay 30/1300 RPM		B-88180
37T gear		A-86830	Speed overlay 25/950 RPM		B-88181

SPINDLE - 3" CAPACITY

Head	L-91058	70 tooth gear	A-90216
Front bearing closer	A-86812	105 tooth gear	A-90217
Rear bearing closer	A-86845	Spacer	B-90218
Guard	A-89175	Spacer	B-90219
Bearing spacer	B-86850	Bearing retainer	(4) B-90220
Spindle	A-89917	Timken bearing cone)	B-91190
Driving button	B-37291	Timken bearing cup)	B-91191
Balancing ring	B-59734	Timken bearing cup)#3 PREC.	B-91192
Key	(2) B-86865	Timken bearing cone)	B-91193
Adjusting nut	A-86846	Timken bearing cone)	B-91546
Adjusting nut	A-86847	Timken bearing cup)	B-91547
Top cover	A-87578	XPO Kaydon bearing	B-91194
Rear guard	A-94696	MRC bearing with loose	
Spindle guard	A-88206	internal clearance	B-91196
Drive plate	(5) A-89769	Quad ring seal	B-91197
Clutch plate	(6) A-89770	Quad ring seal	B-91198
Clutch hub	A-90211	Smally wave spring SSR No. 0750	
Clutch back plate	A-90212	(6) B-94296	
Clutch front plate	A-90213		
Clutch body	A-90214		
Clutch sleeve	A-90215		

SPINDLE - 5" CAPACITY

Head	L-91059	Drive plate	(4) A-88440
Front bearing closer	A-88429	Clutch plate	(5) A-88441
Rear bearing closer	A-88430	Separator spring	(5) A-88442
Rear spacer	B-88432	Top cover	A-88727
Spindle	A-90469	Rear guard	A-88728
Front spacer	B-90447	Spindle guard	A-88729
Key (2)	B-86865	96T gear	A-88443
Balancing ring	A-88981	126T gear	A-90445
Spacer	A-90417	Timken bearing cone)	B-91161
Bearing retainer (6)	B-90220	Timken bearing cup) 3# PREC.	B-91162
Adjusting nut	A-88433	Timken bearing cone)	B-91163
Adjusting nut	A-88434	Timken bearing cup	B-91164
Clutch hub	A-90419	Kaydon bearing KG075XPO	B-91165
Clutch back plate	A-90418	Kaydon bearing KG080AHO	B-91166
Clutch front plate	A-88437	Kaydon bearing KG100AHO	B-91167
Clutch body	A-90423	Quad ring seal Q4373	B-91168
Clutch sleeve	A-90422	Quad ring seal Q4380	B-91169

COLLET CHUCK
3" CAPACITY

Yoke	A-86967	Cylinder mounting block	(2)	A-86980
Yoke bracket	A-86965	Finger holder friction		B-44275
Collet	A-44578	Pin	(3)	B-88239
Collet pad	A-49563	Wedge shoe	(2)	B-74999
Wedge	A-74996	Cylinder link		B-86975
Yoke pivot	A-88847	Yoke link pin		B-86976
Air cylinder	A-86981	Lever		B-88845
Abutment sleeve	A-90473	Actuator		B-87321
Finger holder	A-88236	Valve body		B-88334
Collet hood	A-88235	Valve closer		B-87529
Wedge shoe stud	(2) B-42434	Gasket		B-88335
Plunger	B-89916	O-ring		11-009
Ring	B-90472	O-ring		11-011
False jaw screw	(4) 2231	Glyd ring S-12547-010		B-87984
Key	2233	Reliance snap ring		B-71115
Finger	(3) A-70711	Spring		B-52222
Finger roller	(3) B-62784	Schrader 2 position 4-way		
Finger roller pin	(3) B-62785	air pilot valve 52051-6000 with		
		external pilot		B-93544
		ASP ISC SPD cont. muffler		
		Arrow	(2)	B-93689

COLLET CHUCK
5" CAPACITY

Yoke	A-88318	Cylinder mounting block	(2)	A-86980
Yoke bracket	A-88319	Finger holder friction		B-44275
Collet hood	A-88796	Pin	(4)	B-88239
Collet	A-88795	Wedge shoe	(2)	B-74999
Collet pad	A-80597	Cylinder link		B-86975
Wedge	A-88315	Yoke link pin		B-86976
Yoke pivot	A-88312	Lever		B-88845
Air cylinder	A-88302	Actuator		B-87321
Abutment sleeve	A-88316	Valve body		B-88334
Finger holder	A-88311	Valve closer		B-87529
Wedge shoe stud	(2) B-88320	Gasket		B-88335
Plunger	A-88313	O-ring		11-009
Ring	A-88317	O-ring		11-011
Collet pad screw	(6) B-88797	Glyd ring S-12547-010		B-87984
Key	2233	Reliance snap ring		B-71115
Finger	(4) A-70711	Spring		B-52222
Finger roller	(4) B-62784	Schrader 2 position 4-way		
Finger roller pin	(4) B-62785	air pilot air valve 52051-6000		
		with ext. pilot		B-93544
		Arrow ASP-ISC SPD cont. muffler	(2)	B-93689

MOTOR DRIVE

Adapter plate
Adapter plate shim

(3) A-88189
A-88323

Motor shaft
Imperial 30/20 HP motor,
constant torque, two speed
1800/900 RPM, single winding,
TEFC, NEMA D flange mounting
frame 326 UOZ, 3 phase, 60 cycle,
8 ft. long leads with B&O shaft
A-90867

A-90867
B-91208

Bardons & Oliver, Inc. - Cleveland, Ohio U.S.A.

5A-9-P

RECORD

MOTOR DRIVE - LOUIS ALLIS

30/15 HP

Motor plate
Motor shaft
Motor

A-96196
A-95701
B-95646

36/18 HP

Motor plate
Motor shaft
Motor

A-88189
A-96144
B-96208

5A-9-P

Hardware & Oliver, Inc. - Cleveland, Ohio U.S.A.

ELECTRICAL EQUIPMENT

Top mounting bracket	A-87705	Hoffman screw cover box A-402SC	
Bottom bracket	A-91478	Hoffman hinged cover box AHE-24x12x6	
Strap	A-87707	Johnson Service pressure switch	
Brace	A-87718	FOA-40	(5) B-91266
Fluidic pressure Switch panel	A-91118	Virbo insulator type 44	(2)
5 HP motor, 1800 RPM, TEFC, frame 184T with double end shaft, 3phase, 60 cycle 230/460 volt		30/20 HP motor, constant torque two speed, 1800/900 RPM, single winding, TEFC, NEMA D flange mounting, 3 phase, 60 cycle, volt, (less motor shaft)	
Gusher motor driven coolant pump model 6-P3 long impeller 6081-A, 1/4 HP motor nameplate to read 208/220 380/440 volt, 3450 RPM, 3 phase, 60 cycle		Allen Bradley Bul 705 reversing starter without overload 705-DOD-23, size 3	
Allen Bradley Bul 709 starter, size 1 709-BOD103, 3 pole, overload	(2)	Allen Bradley Bul 715 two speed starter, 715-DOD127, size 3, 3 pole overload	
Allen Bradley N-34 heater 230 V	(3)	Allen Bradley N-73 heater 230 V	(3)
Allen Bradley N-27 heater 460 V	(3)	Allen Bradley N-42 heater 460 V	(3)
Allen Bradley N-3 heater 230 V	(3)	Allen Bradley N-71 heater 230 V	(3)
Allen Bradley NN-2 heater 460 V	(3)	Allen Bradley N-41 heater 460 V	(3)
Allen Bradley N6 heater 230 V	(3)	Westinghouse circuit breaker type FB3150S with line terminal package style 624B100G09 230 V or type FB3090S with line terminal package style 624B100G02 460 V	
Allen Bradley N2X heater 460 V	(3)	Fusetron FRN 3.2 amp fuse	(2)
Allen Bradley Bul 836-C 7A pressure switch		Fusetron FRN 12 amp fuse	(2)
Allen Bradley 800T-PB16A illum pushbutton - amber		Multi fuse block 2502	(3)
Allen Bradley 800T-B6A pushbutton red		Fusetron FRN 1 amp fuse	(2)
Allen Bradley Bul 700 N600 control relay		Raychron C11A cycle timer 120 V 60 hertz, 2 pole cycle time 1 hour min. setting 1 minute FOR 230 VOLT	
GE Calrod 120 volt immersion heater 500 watt 2D-356	(2)	Fusetron FRN 20 amp fuse	(3)
Powers Regulator model 134-1081		Fusetron FRN 1 amp fuse	(3)
50 - 130 deg F thermostat range with closed tank connector Part 134-050		Fusetron FRN 12 amp fuse	(2)
Westinghouse Vari-depth handle mechanism 373D958G05 handle mechanism		Multi fuse block 2503	(2)
47A4446G21 handle		Multi fuse block 2502	
47A4446G16 shaft		Fusetron FRN 1 amp fuse	(3)
Westinghouse type MTA transformer 1500 VA catalog 1FO965		Fusetron FRN 25 amp fuse	(3)
Hoffman NEMA type 12 enclosure A-423608LP			
Hoffman panel A-42P36			
Hoffman pushbutton enclosure E-2PB			

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ELECTRICAL EQUIPMENT

FOR 460 VOLT

Fusetron FRS 10 amp fuse	(3)
Fusetron FRS 1/2 amp fuse	(3)
Fusetron FRS 6-1/4 amp fuse	(2)
Multi fuse block 2520	(8)
Fusetron FRS 1/2 amp fuse	(3)
Fusetron FRS 12 amp fuse	(3)

LAMP

Shield	A-88768
Lamp housing	A-88769
Gasket	A-90013
40 watt rapid start flourescent lamp 48" long	
40 watt strip fixture 48" long. No more than 2-3/4 wide, rapid start, low power factor	

TURRET AND SADDLE

Saddle	L-86711	28 tooth gear	A-86684
Hex turret	L-86735	14 tooth gear	A-86685
End plate	A-87033	Center post	a-86686
Hyd. cylinder bracket	(2) A-87279	Valve block	A-87032
Chip guard	A-86683	76 tooth gear	A-87035
Wiper	A-86950	38 tooth gear	A-87036
Wiper cover	A-86951	40 tooth gear	A-87037
Shaft	A-87044	Valve disc	A-87042
Cam plate	A-87220	Index cam plate	A-87219
Rear cover	A-87222	Valve cover	A-87225
Top cover	A-87224	Valve body	A-87248
Hydraulic cylinder guard	(2) A-87259	Valve stem	A-87548
Hydraulic cylinder rod	A-87261	Bushing	A-87549
Stem bracket	A-87547	Stop screw roll	A-87806
Hydraulic cylinder	A-88174	Hydraulic motor manifold	A-87933
Stop screw	(6) B-86769	Ball bushing	(2) A-88056
Shim	(9) B-87262	Spring	(9) B-52222
Rear cap	(2) B-88146	Spacer	(6) B-89095
Front cover	A-88850	Binder bolt	(6) B-88799
Cap gib	(2) B-88147	Valve spring	(3) B-45759
Gib	(2) B-88148	Spring	B-48009
Dog point S.S.S.	(2) B-88149	Hub	B-86687
Curvic coupling - lower	A-86517	Cover	B-86689
Curvic coupling - upper	A-86518	Cam	B-86703
Yoke	A-86644	Coupling	B-86707
Adapter	A-86706	Front cap	(2) B-86955
Pipe bracket	A-87058	Bushing	B-86996
Valve bracket	A-87090	Bushing	B-86997
Stop bracket	A-87226	20 tooth gear	B-87038
Index stop	A-87227	Gasket	A-89577
Turret cover	B-88052	Gasket	A-89578
Yoke plate	A-92645	Brass shoe	(6) B-89011
Bearing closer	B-88049	Spacer	B-87040
Cartridge	B-88050	Key	B-87047
Pipe cover	A-88851	Bearing closer	B-87216

TURRET AND SADDLE

Key	B-87238	Minnesota Rubber quad ring seal	Q-4271
Valve closer	B-87249	Torrington self align. ball	
Actuator	B-87250	bushing series SF 10SF16	B-91210
Gasket	B-88333	Spacer	2303
Cam lock	(7) B-87317	Plug	(9) 2397
Actuator	(9) B-87321	Plug	(6) 2409
Valve body	(2) B-88334	Plug	2441
Feed cam	(6) B-87218	Timken bearing cup #2 Prec.	(2) B-91212
Gasket	(2) B-88335	Timken bearing cone #2 Prec.	(2) B-91213
Valve closer	(2) B-87529	Bunting bushing C-67	(2) B-91214
Spacer	(5) B-87788	Hunt trim line valve 3-way	
Stop screw clamp	(6) B-87807	PO84-2001NC	B-91245
Clamp nut	(6) B-87808	McGill Camroll bearing CYR 1-1/2"	(2) B-91216
Dial	(6) B-87890	McGill heavy stud Camroll	
Glyd ring S-12547-10	(9) B-87984	CFH 1-1/8"	(6) B-91217
Spacer	B-92255	Kaydon bearing KF040XPO	B-91218
Bushing cover	B-94128	Dog point S.S.S.	(2) B-88150
Pivot pin	B-88051	Oiler	(2) B-88151
Spacer	(5) B-88053	Socket set screw	(2) B-88338
Spacer	(5) B-88054	Reliance snap ring	(10) B-71115
Actuator	B-88055	Truarc No. 5100-62	
Lock pin	(2) B-88057	Linear O-ring	11-029
Guide pin	B-88058	Linear O-ring	(9) 11-009
Ball bushing	B-91211	Linear O-ring	(10) 11-011
Key	B-88185	Linear O-ring	(4) 11-124
Gasket	B-88331	Linear O-ring	(14) 11-012
Pin	B-88619	Schrader 2 position 4-way valve	
Bracket	B-88821	No. 52051 6000 with external	
CharLynn Gerotor orbit motor		pilot	B-93544
mounting style 4 hole flange		Feed arrow	B-42100
Gerotor size 1-1/2" tapped		Bearing MRC 203 SFFG	B-91219
mounting holes on port surface		Flodar flow control valve SV-8	(6) B-91220
O-ring ports C-5-M	B-88175		

Bardons & Oliver, Inc. - Cleveland, Ohio U.S.A.

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RECIPROFEED ATTACHMENT

Feed signal block		A-87601	Chicago rawhide wiper ring	6145
Spring	(2)	B-43713	Auto-Diesel butt joint piston	
Stop nut		B-83877	ring 1-1/4 dia x 3/32 W x 1/16	
Rod bushing		B-83884	wall	
Piston		B-84986	Linear o-ring	11-121
Plunger cap		B-87602	Dieco spring 5-031 cut to 4"	
Plunger		B-87603		
Gasket		B-87785		
Gasket		B-87786		
Shoe	(2)	B-88140		
Piston rod		B-88902		
Cylinder		B-88903		
Cylinder cap		B-88904		
Cylinder mounting	(2)	B-88905		
Bumper	(2)	B-89235		
Brass shoe	(2)	2279		

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CROSS SLIDE AND CARRIAGE

Carriage		L-87959	Spring housing	(2)	B-87981
Cross slide gib		B-87963	Hydraulic cylinder		A-87982
Hydraulic cylinder rod		A-87983	Gasket		B-89179
Cross slide		L-87960	Glyd ring series C S12547-010	(5)	B-87984
Front bracket		A-87961	Spring	(5)	B-52222
Valve bracket		A-87962	Lee spring LC-063J-1-MW	(2)	
Stud		B-37754	Lee Spring LC072J=2-MW	(2)	
Adjusting nut		B-40580	O-ring	(5)	11-009
Gib screw	(4)	B-58815	O-ring	(5)	11-011
Cam	(3)	B-87315	Reliance 309 snap ring	(5)	B-71115
Cam lock	(3)	B-87317	Brass shoe	(2)	1049
Valve cover		B-87320	Brass shoe	(2)	2281
Actuator	(5)	B-87321	Jergens thumb screw part 43907		
Valve bracket cover		B-87324		(2)	2281
Retainer		B-87325	Bracket		A-88106
Splash guard		A-89247	Cylinder mounting plate		A-87676
Manifold		B-87728	Extension rod		B-87677
Rear bracket		A-87964	Extension nut		B-87678
Short front cap		B-87965	Bushing		B-87680
Long front cap		A-87966	Rod		B-87681
Rear cap		A-87967	Bushing	(2)	B-87684
Cap gib	(2)	B-87968	NTA1220 Torrington needle		
Carriage gib	(2)	B-87369	thrust bearing	(2)	B-91222
Cylinder rod guard		A-89571	TRB1220 Torrington thrust		
Guard cap		A-89572	race	(4)	B-91223
Cam positioner	(3)	B-87970	Tube guard		B-88107
Cam plate		A-87971	Adjusting screw		B-88108
Stop screw	(2)	A-87972	Adjusting screw cap		B-88332
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 clip	(5)	B-87978			
Key	(5)	B-87979			
Thrust washer	(4)	B-87980			

COOLANT PUMP - 1/2 HP

Pump pan
Pump guard
Cover

A-98119
A-98120
B-98121

Gusher motor driven coolant
pump, Model 9050, 1/2 HP,
230/460V, 3 phase, 60 cycle,
Impel. 6061-DW
Socket #4-S27 Series ST
Plug #B4-T26 Series ST

B-97122
B-94564
B-97341

COOLANT PUMP ($\frac{1}{4}$ H.P.)

Mount plate	A-88156	Spacer	(4)	B-78245
Guard	A-88823	Stud	(4)	B-88827
Bumper	(4) B-88824			
Spring	(4) B-88825			
Hansen Couplings socket -4 S27 series ST	B-94564			
Hansen Couplings plug B4-T26 series ST	B-94565			
Washer	(4) 1067			
Gusher motor driven coolant pump model 6-P3 long impeller 6081A, 1/4 HP motor nameplate to read 208/220 - 380/440 volt, 3 phase, 60 cycle	B-91226			

AUTOMATIC LUBRICATION

Raychron C11A cycle timer 120 volt, 60 hertz, 2 pole, cycle time 1 hour, minute setting 1 minute	B-91229	Bijur junction 5 way single B3263	(1)
Allied solenoid valve 2 way NC 1/4 NPT .125 orifice size conduit housing 20314	B-91230	Bijur junction 3 way tee B3494	(2)
Oilrite style SFM 1768		Bijur meter unit B1085 FSA2	(3)
Bijur junction 5 way single B-3263		Bijur compression nut B1095	
Bijur junction 3 way tee B-3494		Bijur compression bushing B1371	(2)
Bijur meter unit B1085 FSA2	(2)	Bijur closure plug B2488	
Bijur meter unit B1087 FSA4			
Bijur meter unit B2497 FJB2			
Bijur meter unit B2498 FJB3	(2)		
Bijur tubing clip A2435			
Bijur compression sleeve B1061	(16)		
Bijur compression nut B1095	(4)		
Bijur compression bushing B1371	(9)		
Bijur elbow adapter A3080			

CONSOLE

Console cabinet		L-88071	Marsh type 1 pressure gage	
Volume chamber		A-86478	2-1/2" dial 0-15 psi 1/8 NPT	
Short connector	(102)	B-89062	male bottom connection	B-88074
Function selector manifold	(6)	A-84070	Marsh type 1 pressure gage	
Vol. chamber cover		A-86479	2-1/2" dial 0-100 PSI 1-1/8 NPT	
Vol chamber gasket		A-86480	male bottom connection	B-88075
Setup panel		L-87212	Imperial Eastman 264-P tee for	
Guard		A-87659	3/8 OD tubing	(2)
Shelf		A-87727	Imperial Eastman 268-P	
Manual control panel		A-88091	straight connection for 3/8 OD	
5 port manifold		A-88092	tubing with 1/4 NPT	
Supply manifold panel		A-88093	Clippard Man 12 manifold	(4)
Diaphragm amp bracket		B-88809	Clippard 15006-1 1/8 pipe	(5)
Fairchild Hiller pneumatic			to 10-32 adaptors	
pressure regulator model			Northeast 3200-A snap relay	(4) B-91271
30 catalog 30122 0-10 psi 1/4			Northeast 2010 fluid amp valve	B-91244
NPT	(5)	B-88094	Dwyer manometer 1220-12	B-91425
Johnson Service 52 gate supply			Dwyer manometer 1220-24	B-91426
manifold JS dwg. 97-158-2	(4)	B-88095	Worthington lid support	
Setup panel gasket - Halco		A-88096	code 249-839	
Manual control panel gasket Halco		A-88097	stock 432-3-10	B-91427
JS FFM-14 5 port connector	(30)	B-91264		
JS plastic tee FFT-65	(85)	B-91265		
Humphrey shuttle valve S125		B-91473		
JS Fluidic diode FCO-401	(126)	B-91267		
JS FCO-120 (.012) orifice	(166)	B-91268		
Micro Switch llNFI-RG				
fluidic indicator	(6)	B-91270		
Koby Senior king air filter		B-91094		
JS F4014-163 diaphragm amplifier	(3)	B-93409		

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PUSH BUTTON

PUSH BUTTON BODY

B-83033

3/8 D. x 1/16 THK. NEOPRENE DISC

USED WITH THE FOLLOWING

A.B. OPERATOR BUTTONS

A.B. BUL. 800T - CAT. #A2

A.B. BUL. 800T - CAT.#D6

A.B. BUL. 800T - CAT. #A2-N13

SELECTOR ASSEMBLY

From Clippard

4-way air valve	B-97384	1/16 in. tube-spur connector	(3)
Adapter	B-97385	or	
Operator	B-97386	1/8 in tube-spur connector	(3)
"L" fitting #15000-2	B-97419		

5A-21-P

FUNCTION SELECTOR

Valve plug	B-85622	1/4 dia. steel ball	(2)	
Valve body	B-85623	Pitney-Bowes tube conn		#505-0002
Valve stem	B-85624	Linear O-ring		11-009
Pull knob	B-84088	Linear O-ring		11-111
MTG. nut	B-83874	Linear O-ring	(2)	11-112

PULSE BUTTON

Pulse button cover
Pulse button body
Diaphragm

B-86011
B-86012
B-86019

5/8 dia.x1/16 thk. Neopreme Disc.
Norgren male tube conn. 1/16 ID
Lee spring LC-038E-10

Used with following A.B. operaror buttons.

AB Bul 800T cat #A2 (2)

A.B. bul 800T A2-M13

TIME DELAY NEEDLE VALVE

Valve plug
Valve stem "std"
Valve body
Adaptor
Adjusting screw

B-91344
B-86459
B-86460
B-91328
B-91329

Washer
Rogan RB-51-1 knob
Lee LC-026-C-4 spring
O-ring - linear 11-111

1054

PILOT VALVE MANIFOLD

Hoffman box AHE-24x12x6
Supply manifold

A-87166
A-87167

Northeast 2010 fluidic amp
valve (25) B-91244
Pilot valve manifold B-93507

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5A-25-P

AIR CONTROL PANEL

Supply manifold	A-85301
Wilkerson 1237-2J-1/4" Microalescer filter	B-91239
Wilkerson 1206-4-1/2" Microalescer filter	B-91240
Wilkerson air filter with automatic drain and 5 micron element 1137-4F (2)	B-91241
Wilkerson Econo-mis lubricator 3002-E- 4-1/2 NPT	B-91242
Wilkerson pressure regulator 2001-4G 1/2 NPT 3 to 125 psi (3)	B-91243

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POWER VALVE MANIFOLD

Manifold
O-ring

(5) A-93542
568-012

Manifold cover

(3) B-93543

5A-27-P

VERTICAL SLIDE

Gib	B-87517	Dog	B-88137
Slide	A-88134	Adjusting screw - upper	B-88356
Bracket	L-88129	Shoe (2)	B-88357
LH Cap	A-88131	Decelerating valve	B-90000
RH cap	A-88132	Check valve	B-90001
LV body	A-90411	Body gasket	B-90415
Manifold	A-91833	Junction box	B-90424
Key	B-60489	Closer (2)	B-90895
Stop pin	B-84867	Stud nut	847
Hydraulic cylinder	B-85775	Adjusting nut	860
Stop block (2)	B-87370	Washer	2223
Adj. screw - lower	B-87371	Linear O-ring (2)	11-019
Dial marker	B-87372		
Connecting strip	B-88136		

NEW ULM - 3 IN. BAR FEED

Midwest New Ulm bar feed with telescoping bearing carrier		Bushing adapter #4	A-97403
3 in. x 12 ft. long capacity work	B-91278	Bushing adapter #3	B-97404
Stock pusher #1	A-97402	Bushing adapter #2	B-97405
Stock pusher #2	A-97401	Bushing #1	B-97406
Stock pusher #3	A-97400	Drip trough	A-88894
Stock pusher #4	A-88895	Drip trough bracket	A-88895
Inner sleeve #3	A-97408		
Inner sleeve #2	A-97409		
Inner sleeve #1	A-97410		

BAR FEED

Drip trough
Drip trough bracket

A-88894
A-88895

3" CAPACITY

Inner plunger
Inner sleeve

A-88538
A-91203

Midwest New Ulm barfeed with
telescoping bearing carrier
3" x 12' long capacity work
Three bushing BF-08-06 ID "A"
as per drawing A-92818

B-91278

5" CAPACITY

Inner sleeve

A-92717

Midwest New Ulm bar feed with
telescoping bearing carrier
5" x 12' long capacity work
One bushing BF-09-06
Two bushings BF-09-27
ID "A" as per drawing A-92523

NEW ULM - 5 IN. BAR FEED

Midwest New Ulm bar feed with
telescoping bearing carrier
5 in. x 12 ft. long capacity work

Stock pusher #1	B-91279
Stock pusher #2	A-97402
Stock pusher #3	A-97401
Stock pusher #4	A-97400
Stock pusher #5	A-88538
Stock pusher #6	A-98060
Stock pusher #7	A-98061
Inner sleeve #1	A-98062
Inner sleeve #2	A-98063
Inner sleeve #3	A-98064
	A-98065

Inner sleeve #4	A-98066
Inner sleeve #5	A-98067
Inner sleeve #6	A-98068
Bushing adaptor #1	A-98069
Bushing adaptor #2	A-98070
Bushing adaptor #3	A-98071
Bushing adaptor #4	A-98072
Bushing adaptor #5	A-98073
Bushing adaptor #6	A-98074
Bushing	A-98075
Drip trough	A-88894
Drip trough bracket	A-88895

CROSS SLIDE TOOL RELIEF

Cylinder adjusting nut	B-87685	Clippard 12098 spacer	(2) B-94207
Hannifin air cylinder	A-87682	Clippard 13100-15 2 pos. selector	(2) B-94207
Schrader 2 position 4-way		Clippard 12328 adaptor	(2) B-94207
valve Directair 4 No. 52051-9005		Clippard MJV-3 3-way valve	(2) B-94207
air pilot with ext. pilot (2)	B-93544	Hunt speed control plug 2001-EP	(2) B-88698
		Hoffman pushbutton enclosure	
		E-2PB	B-88272

SKIP FEED

Arrow		B-47044	Skip feed overlay	B-88841
Function selector	(6)	B-85625	Glyd ring S-12547-010	B-87984
Cam lock	(7)	B-87317	JS FLE-251LE	(2)
Actuator		B-87321	JS FCO-120 (-012) orifice	(7)
L.V. gasket		B-88330	JS fluidic diode FCD-401	(6)
Feed cam	(6)	B-87218	Linear O-ring 11-009	
Valve block		B-88836	Linear O-ring 11-011	
Start rapid cam		B-88837	Lee spring LC-022A-7-MW	
Valve closer		B-88838	Reliance snap ring 308	
Bracket		B-88839		
Cam plate		A-88840		
Skip feed tag		B-88867		

AIR POWER CHUCK

Guard
Adapter
Top cover
Rear guard

A-90820
A-90821
A-94302
A-93425

Chuck tag
Caution plate

B-94300
B-94301

A.T.L. - AIR POWER CHUCK CONTROL

Mounting plate	A-93911	Arrow muffler	(2)	B-90404
Detent hub	B-93913	Barksdale valve		B-93457
Pilot valve box	A-93933	Bellowfram air cylinder		B-93458
Manifold	A-93405	Tektro-power valve		B-93462
		Marsh 0 to 160 gage		B-93461

AIR RELAY SWITCH

Mounting plate
Clippard pilot sensor
and mounting bracket

B-93411

B-93412

Custom components pressure
switch - less limit switch
and terminal block B-93413

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5A-34-P

CHIP - CONVEYOR (MAYFRAN)

Chip chute
Cover
Side cover

L-93611
A-93006
A-93612

Strap (2) B-87696
Spring clip (2) B-88194
Mayfran chip-tote conveyor
ref. Drwg. No. 22938-A0