

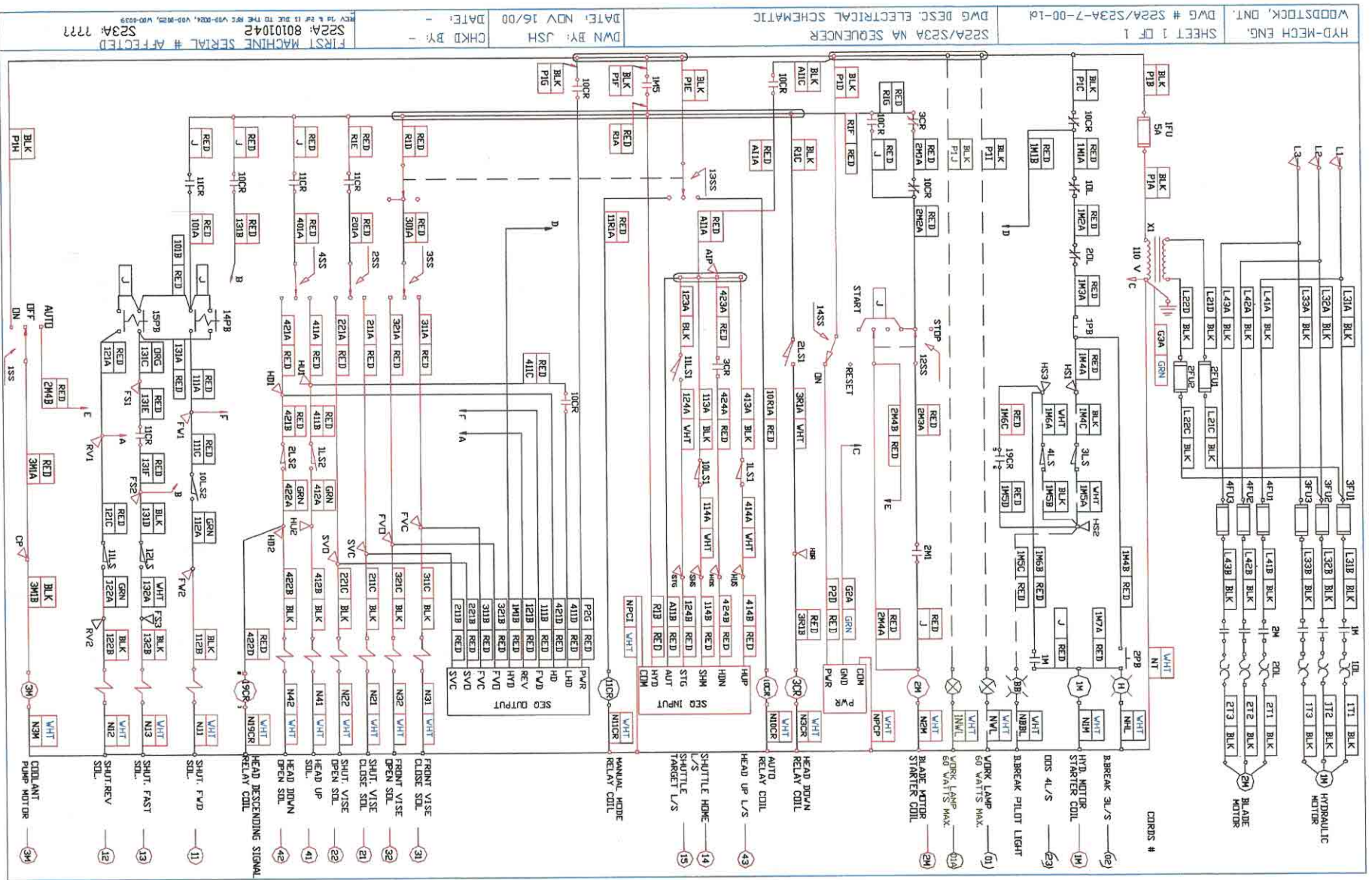
S22A POWER COMPONENTS for SPECIFIC VOLTAGES							
Description & (Item Code) as on schematic	MACHINE VOLTAGE						Component Manufacturer
	3ph 208V	3ph 240V	3ph 380	3ph 415V	3ph 480V	3ph 600V	
2HP HYDRAULIC PUMP MOTOR (1M) Frame Size 145TC, 1800 R.P.M.							
CONTACTOR (1M)	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	Klockner Moeller
AUX. CONTACT BLOCK (1 O/L)(1 N/O & 1 N/C)	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	Klockner Moeller
MANUAL PROTECTOR OVERLOAD (1 O/L)	PKZMO-6.3	PKZMO-6.3	PKZMO-4	PKZMO-4	PKZMO-4	PKZMO-4	Klockner Moeller
MOTOR F.L.A. (1750 RPM)	6.1A	6.0A	3.5A	3.2A	3A	2.5A	
3HP BLADE DRIVE MOTOR (2M) Frame Size 182TC, 1800 R.P.M.							
CONTACTOR (2M)	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	SE00 11 PKZO	Klockner Moeller
AUX. CONTACT BLOCK (2 O/L)(1 N/O & 1 N/C)	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	NHI-11-PKZO	Klockner Moeller
MANUAL PROTECTOR OVERLOAD (2 O/L)	PKZMO-10	PKZMO-10	PKZMO-6.3	PKZMO-6.3	PKZMO-6.3	PKZMO-4	Klockner Moeller
MOTOR F.L.A. (1750 RPM)	8.6A	8.0A	4.8A	4.6A	4.0A	3.5A	
CONTROL TRANSFORMER (TR) 500 VA							
TRANSFORMER PART # (TR)	9070 T500D3	9070 T500D1	9070 T500D33	9070 T500D33	9070 T500D1	9070 T500D5	Square-D
PRIMARY FUSE FUSE PART # FUSE HOLDER PART # (2FU1, 2FU2)	9A Fast Acting, ATM9 USM1	8A Fast Acting, ATM8 USM1	6A Fast Acting, ATM6 USM1	6A Fast Acting, ATM6 USM1	5A Fast Acting, ATM5 USM1	4A Fast Acting, ATM4 USM1	Gould
SECONDARY FUSE FUSE PART # FUSE HOLDER PART # (3FU)	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	Gould
	MACHINE VOLTAGE						
	3ph 208V	3ph 240V	3ph 380	3ph 415V	3ph 480V	3ph 600V	
DISCONNECT RATING (A) & PART #	30A CH361	30A CH361	30A HMG	30A HMG	30A CH361	30A CH361	Square-D
FUSE RATING (A) & FUSE PART # 1FU1 - 1FU3	30A TRS30R	30A TRS30R	20A AJT20	15A AJT15	15A TRS15R	15A TRS15R	Gould

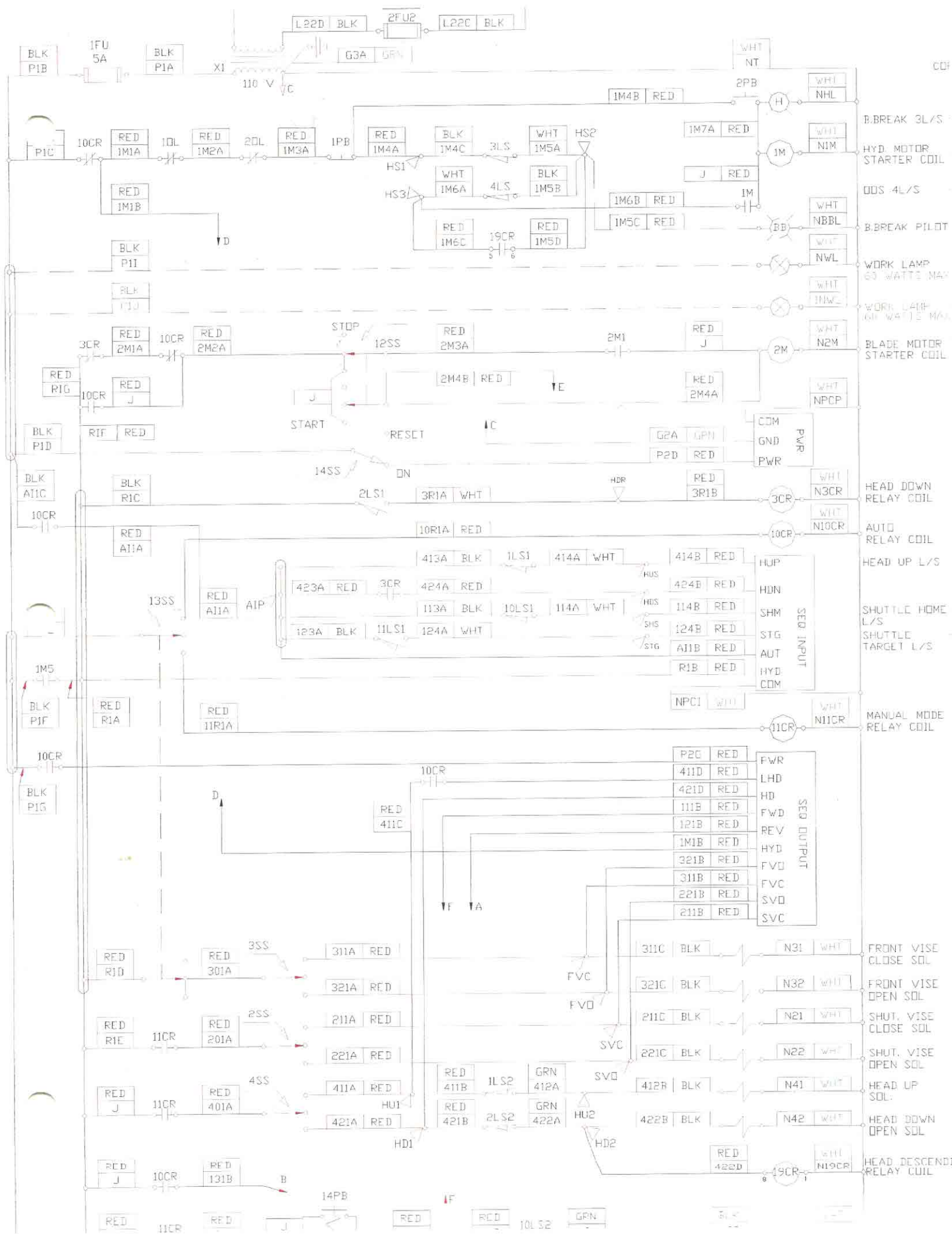
S22A SEQUENCER POWER COMPONENTS for SPECIFIC VOLTAGES

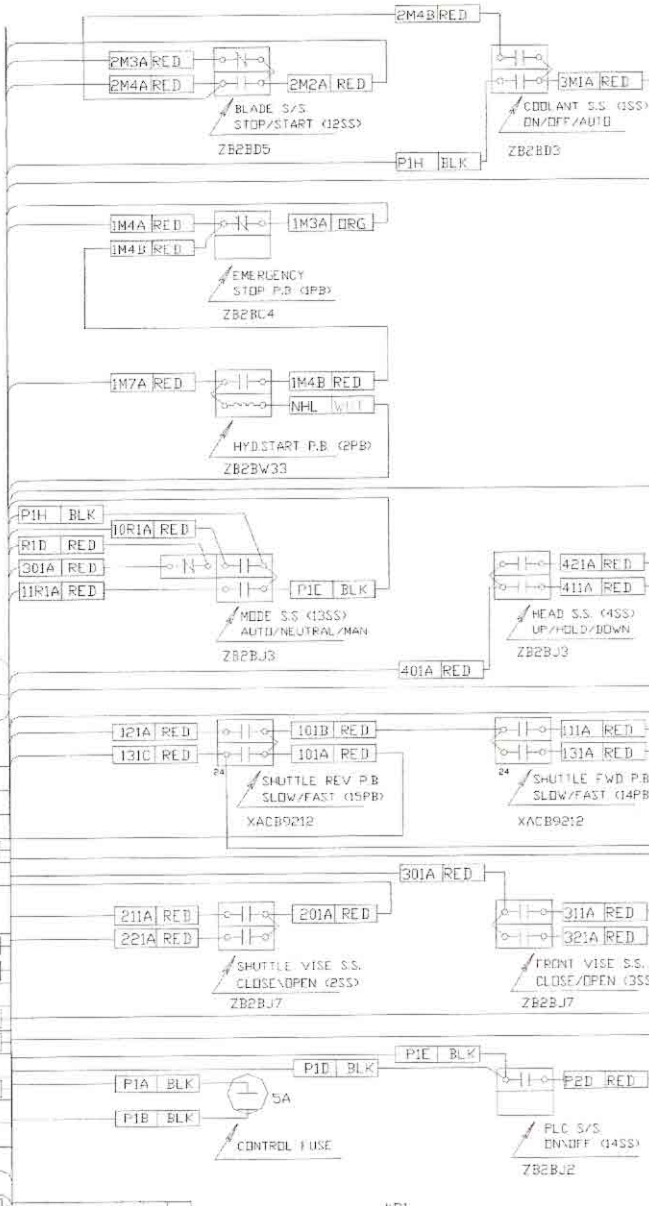
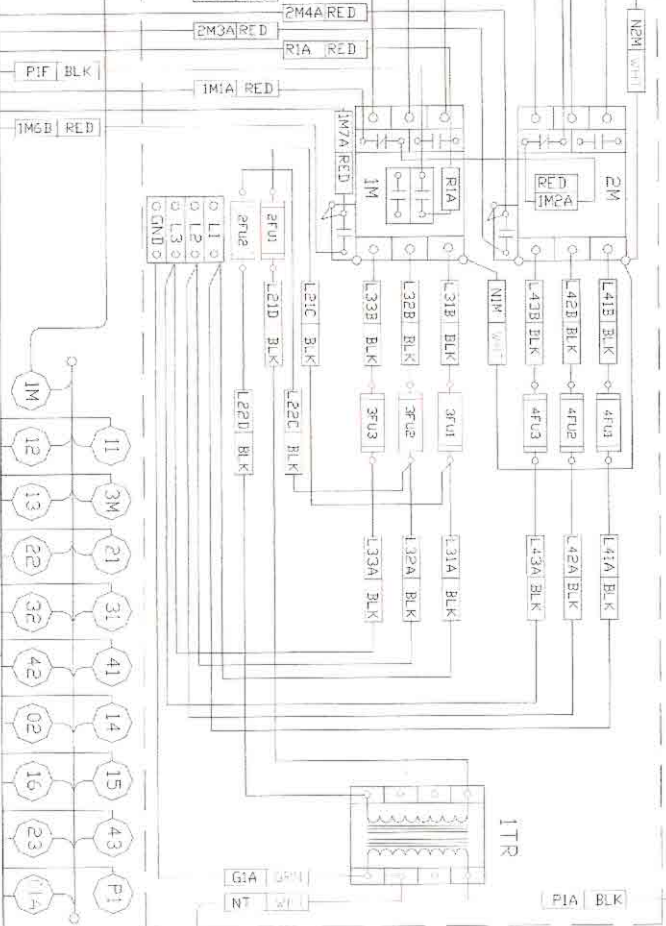
Description & (Item Code) as on schematic	MACHINE VOLTAGE						Component Manufacturer
	3ph 208V	3ph 240V	3ph 380	3ph 415V	3ph 480V	3ph 575V	
2HP HYDRAULIC MOTOR (1M) Frame Size 145TC, 1800 R.P.M.							
CONTACTOR (1M)	LC1D1210	LC1D1210	LC1D1210	LC1D1210	LC1D1210	LC1D1210	Telemecanique
OVERLOAD (1 O/L)	LR2D1312	LR2D1312	LR2D1308	LR2D1308	LR2D1308	LR2D1308	Telemecanique
MOTOR F.L.A. (1750 RPM)	6.1A	6A	3.5A	3.2A	3A	2.5A	
(3FU1 - 3FU3) FUSE PART # FUSE HOLDER PART #	15A T.D ATDR15 30310	15A T.D ATDR15 30310	8A T.D ATDR8 USM3	8A T.D ATDR8 USM3	8A T.D ATDR8 30310	6A T.D ATDR6 30310	Gould
3HP BLADE DRIVE MOTOR (2M) Frame Size 182TC, 1800 R.P.M.							
CONTACTOR (2M)	LC1D1210	LC1D1210	LC1D1210	LC1D1210	LC1D1210	LC1D1210	Telemecanique
OVERLOAD (2 O/L)	LR2D1314	LR2D1314	LR2D1310	LR2D1310	LR2D1310	LR2D1308	Telemecanique
MOTOR F.L.A. (1750 RPM)	8.6A	8A	4.8A	4.6A	4A	3.5A	
(4FU1 - 4FU3) FUSE PART # FUSE HOLDER PART #	20A T.D ATDR20 30310	20A T.D ATDR20 30310	10A T.D ATDR10 USM3	10A T.D ATDR10 USM3	10A T.D ATDR10 30310	8A T.D ATDR8 30310	Gould
CONTROL TRANSFORMER (TR) 500 VA							
TRANSFORMER PART # (TR)	9070 T500D3	9070 T500D1	9070 T500D33	9070 T500D33	9070 T500D1	9070 T500D5	Square-D
PRIMARY FUSE FUSE PART # FUSE HOLDER PART # (2FU1, 2FU2)	10A Fast Acting, ATM10 USM1	8A Fast Acting, ATM8 USM1	6A Fast Acting, ATM6 USM1	6A Fast Acting, ATM6 USM1	5A Fast Acting, ATM5 USM1	4A Fast Acting, ATM4 USM1	Gould
SECONDARY FUSE FUSE PART # FUSE HOLDER PART # (1FU)	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	5A T.D ATDR5 USM1	Gould

OPTIONAL PLC ELECTRICAL PARTS LISTS

LIST OF S22/23A ELECTRICAL COMPONENTS			
Item Code as on S22/23A Schematic	Description	Part Number	Component Manufacturer
1PB-Emergency Stop Push Button	Red mushroom head, latching push button. Mounting base with 1 N/C contact block.	ZB2 BT4 ZB2 BZ102	Telemecanique Telemecanique
2PB-Hydraulic Start Push Button	Green, illuminated, flush head push button. Light module with 1 N/O contact block plus 130V (BA9s) light bulb.	ZB2 BW33 ZB2 BW061 SP105	Telemecanique Telemecanique Spectro
3PB-Cycle Start Push Button	White, illuminated, flush head push button. Light module with 1 N/O contact block & 130V (BA9s) light bulb.	ZB2 BW31 ZB2 BW061 SP105	Telemecanique Telemecanique Spectro
4PB-Blade Stop Push Button	Black, non-illuminated, flush head push button. Mounting base with 1 N/C contact block.	ZB2 BA2 ZB2 BZ102	Telemecanique Telemecanique
5PB-Blade Start Push Button	Green, illuminated, flush head push button. Light module with 1 N/O contact block and 130V (BA9s) light bulb.	ZB2 BW33 ZB2 BW061 SP105	Telemecanique Telemecanique Spectro
1SS-Coolant Selector Switch	Black, 3 positions, maintained selector switch. Mounting base with 2 N/O contact blocks.	ZB2 BD3 ZB2 BZ103	Telemecanique Telemecanique
2SS-Shuttle Vise Selector Switch	Black, 1 position spring return from left to center & 1 position maintained to right s/s. Mounting base with 2 N/O contact blocks plus 1 N/C contact.	ZB2 BD7 ZB2 BZ103 ZB2 BE102	Telemecanique Telemecanique Telemecanique
3SS-Front Vise Selector Switch	Black, 1 position spring return from left to center & 1 position maintained to right s/s. Mounting base with 2 N/O contact blocks plus 1 N/C contact.	ZB2 BD7 ZB2 BZ103 ZB2 BE102	Telemecanique Telemecanique Telemecanique
4SS-Head Selector Switch	Black, 3 positions, maintained selector switch. Mounting base with 2 N/O contact blocks plus 2 N/C contact blocks.	ZB2 BD3 ZB2 BZ103 ZB2 BE102	Telemecanique Telemecanique Telemecanique

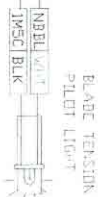




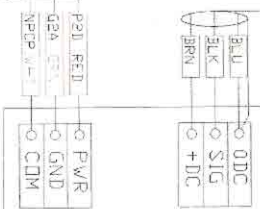
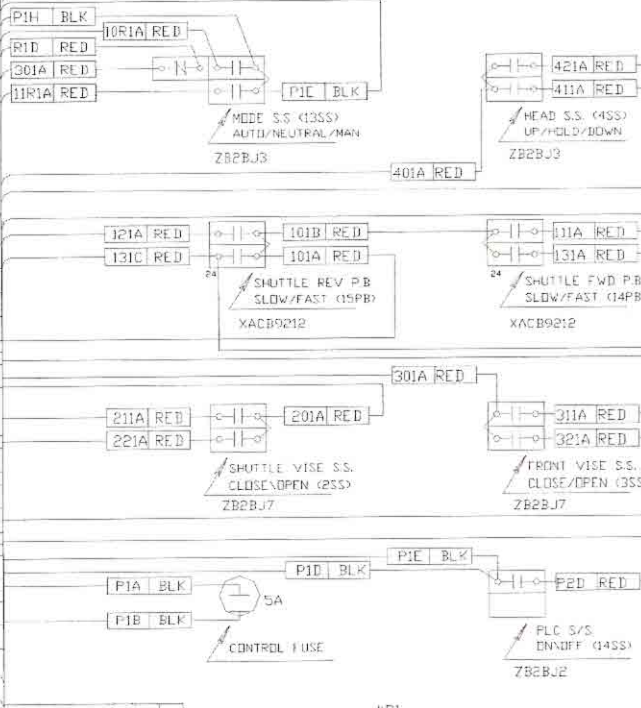
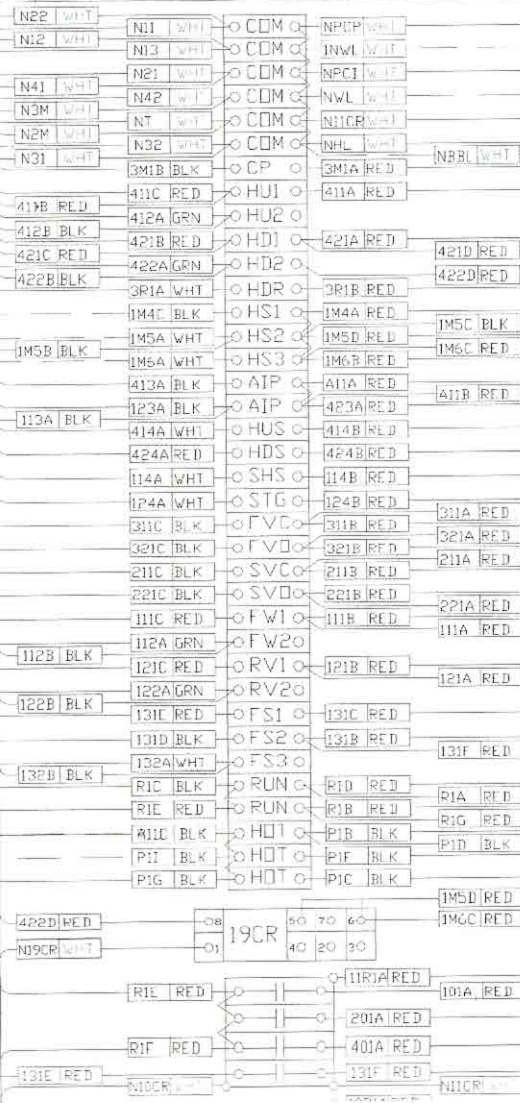


NOTE: WHEN DCS IS INSTALLED, WIRE 1M5D IS TO BE MOVED FROM #6 ON 19CR RELAY #5 ON 19CR RELAY BASE. AN OPRN RELAY GER-2-S THEN REQUIRES TO BE INST.

CONNECTIONS FOR OPTIONS ONLY

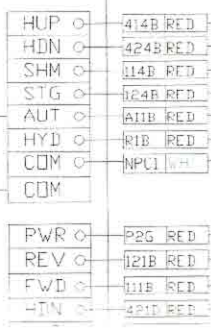


11CR

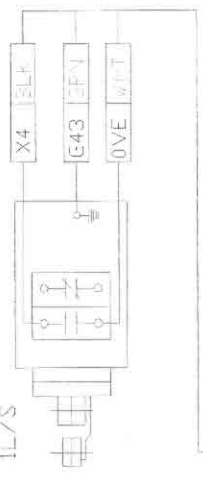


SEQUENCE

SSC9ENH01



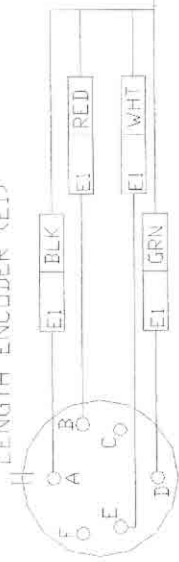
XCK-P121
HEAD UP
1L/S



BLD SPD PRXI
(P1)

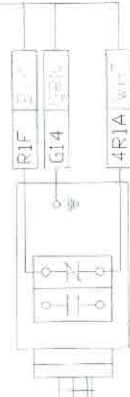


STEGMAN 6-111-090-04
LENGTH ENCODER (E1)

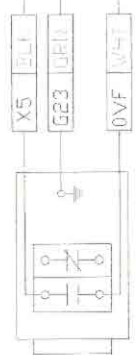


- HEAD LIFT (41)
- FRT VS CL (31)
- SHTL VS CL (21)
- SHTL FAST (13)
- SHTL FWD (11)
- LAMP (01)
- HEAD LWR (42)
- FRT VS DP (32)
- SHTL VS DP (22)
- SHTL REV (12)
- COOL'T PUMP (3M)

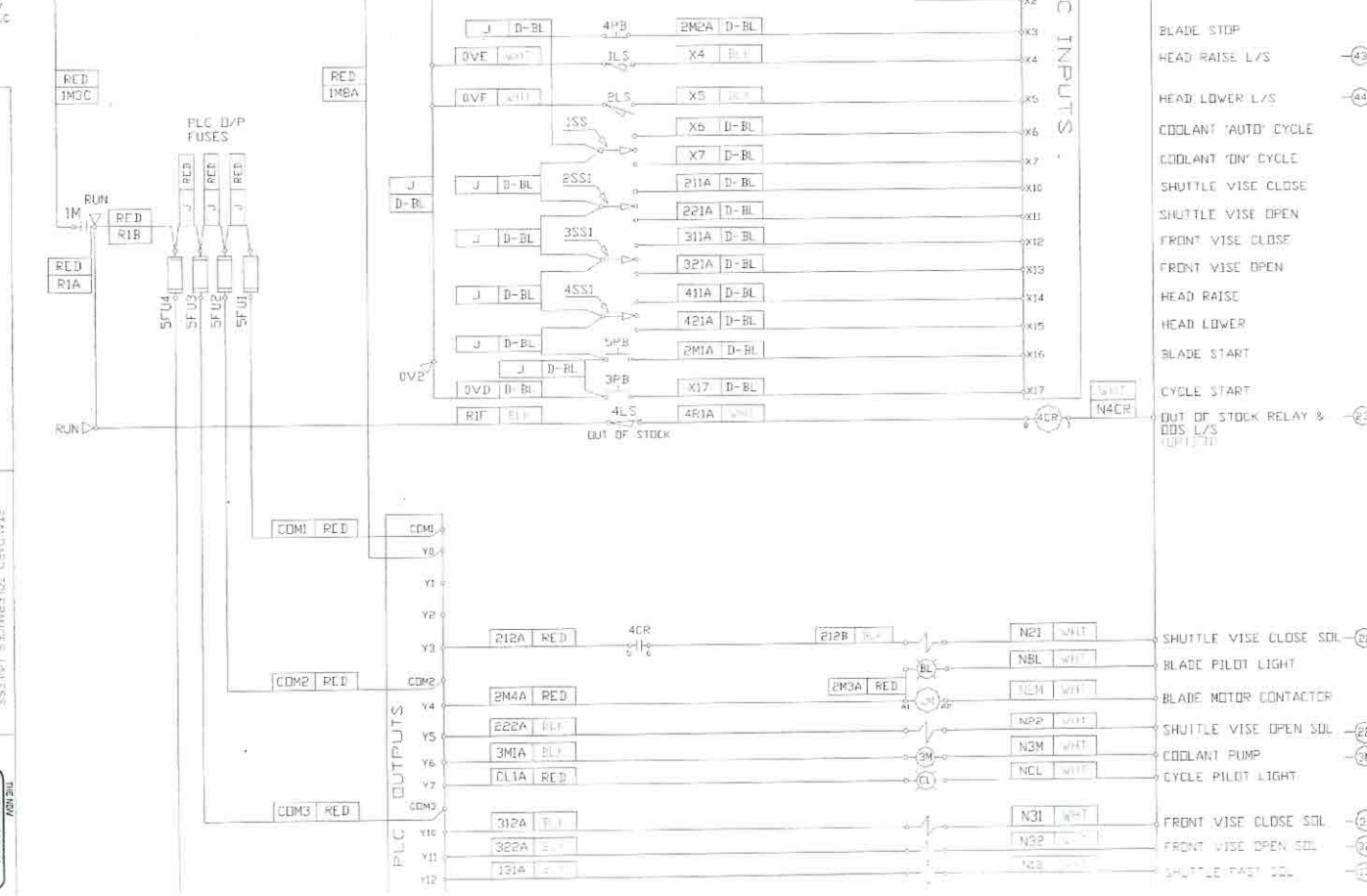
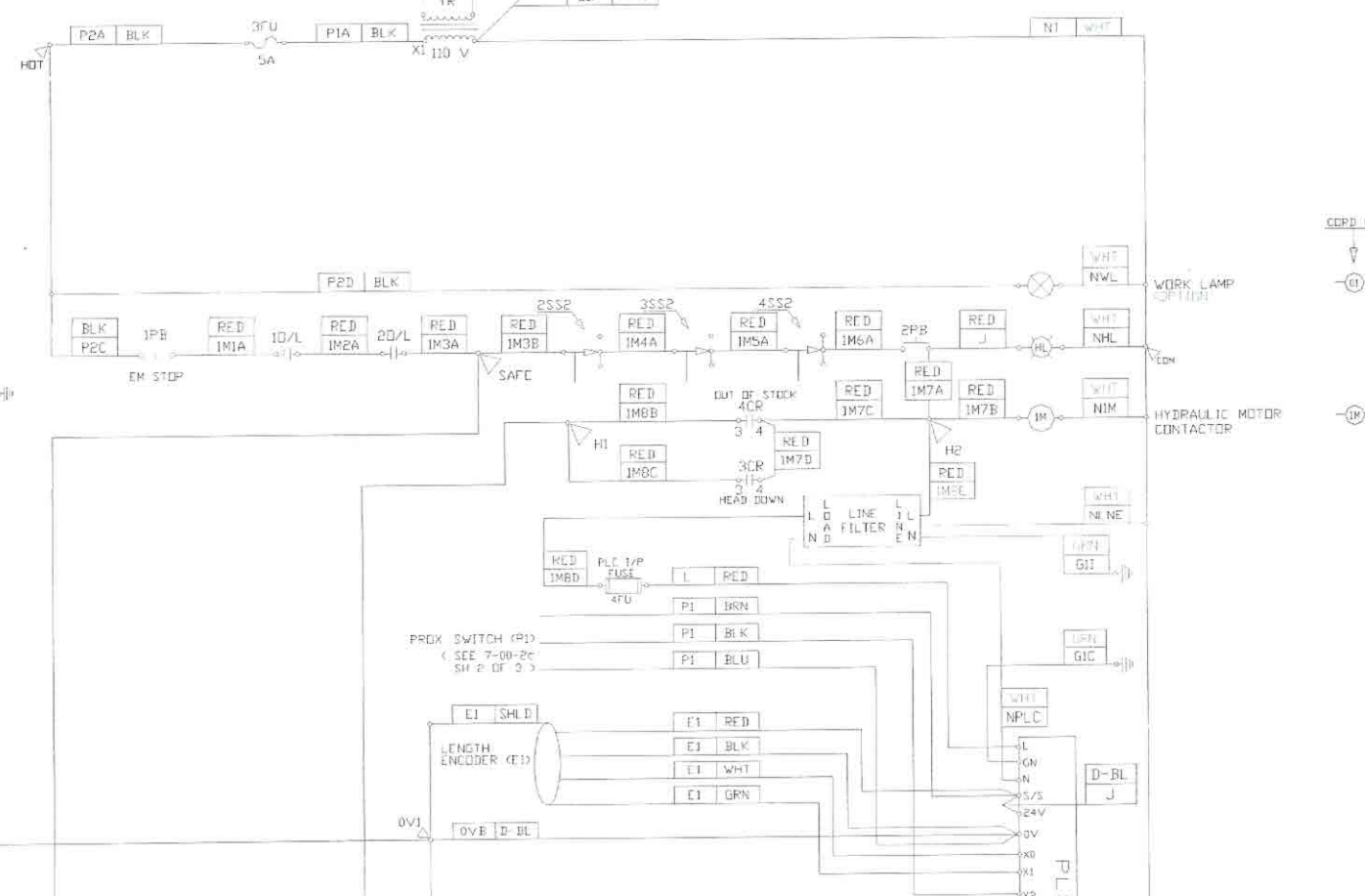
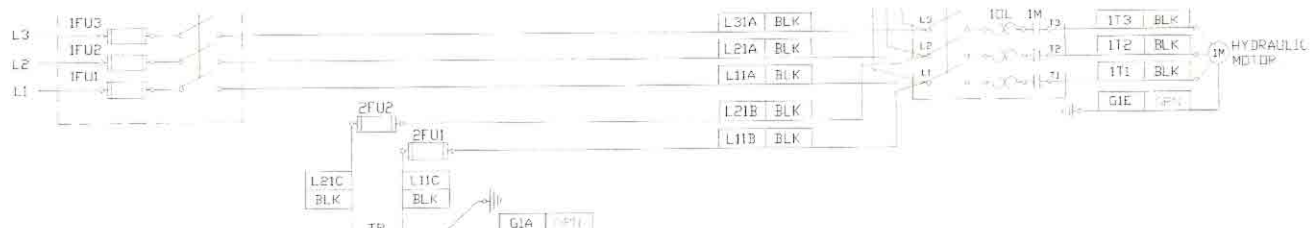
XCK-L115
OUT OF STOCK
4L/S



XCK-L115
HEAD DOWN
2L/S



REV. REVISIONS				STANDARD TOLERANCES, UNLESS OTHERWISE SPECIFIED			
REV.	ECN NUMBER	DATE	BY	DIMENSIONS ARE IN INCHES			
1	400-221	2/14/2011	JW/B	ANGULAR			
2				LINEAR			
3				X ± .010 IN			
4				X ± .005 IN			



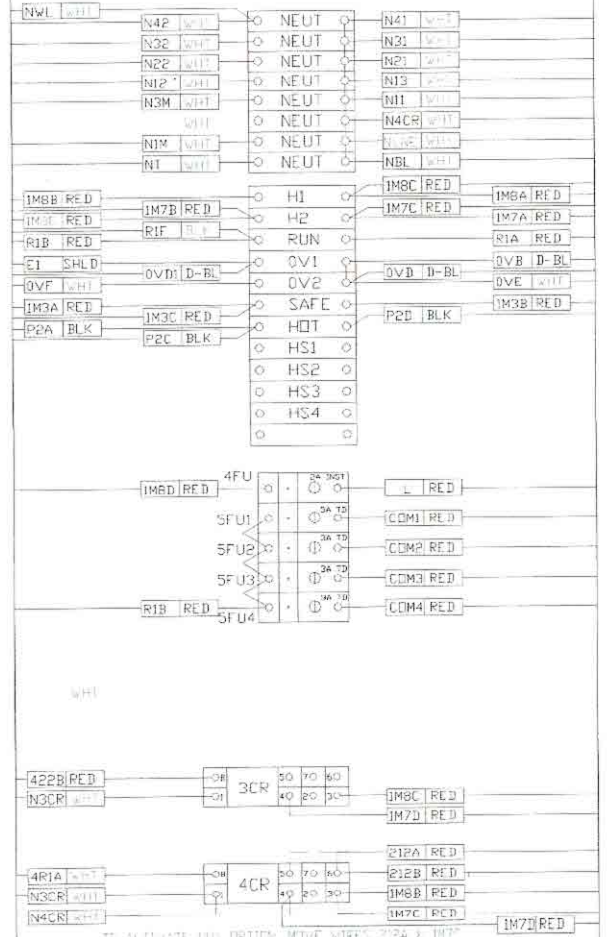
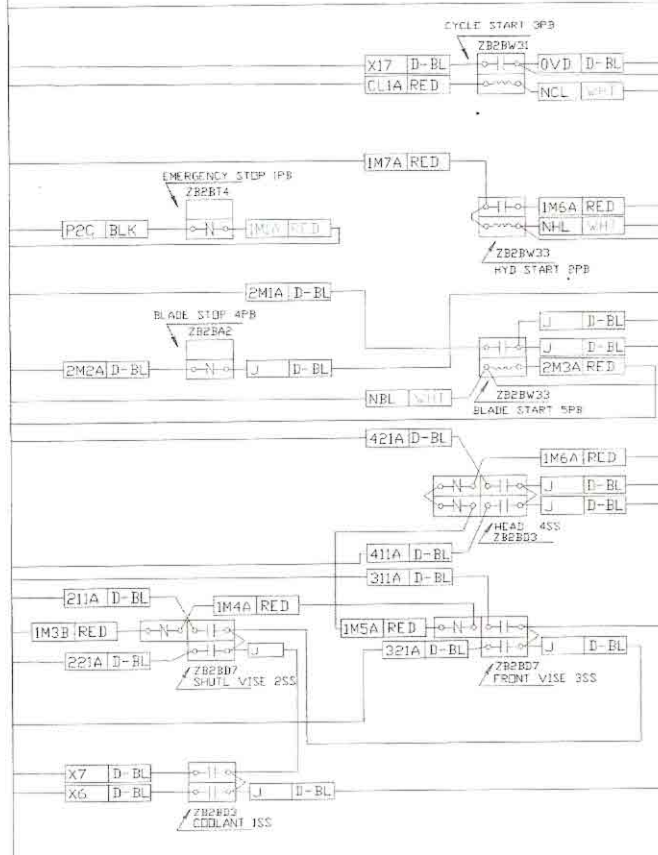
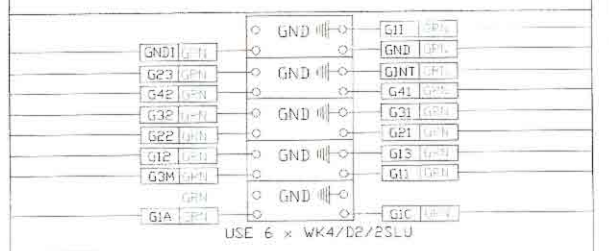
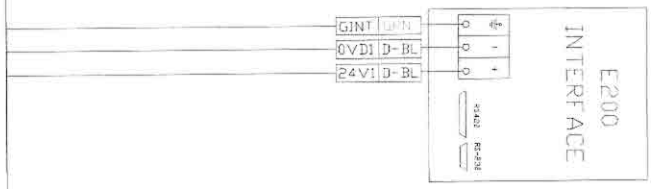
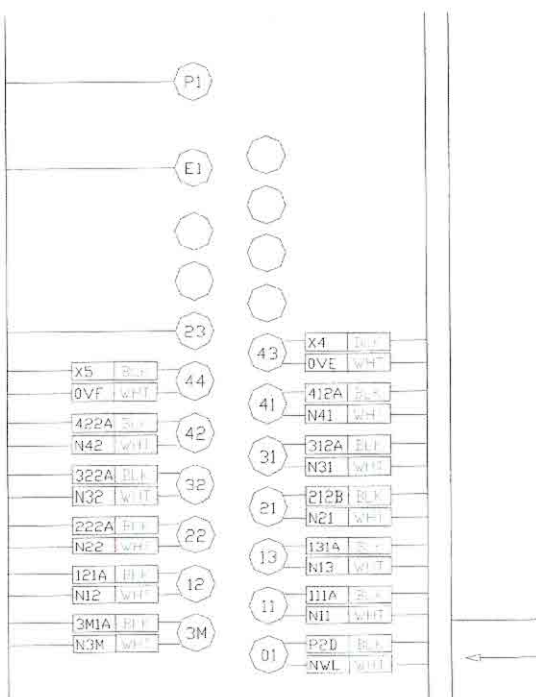
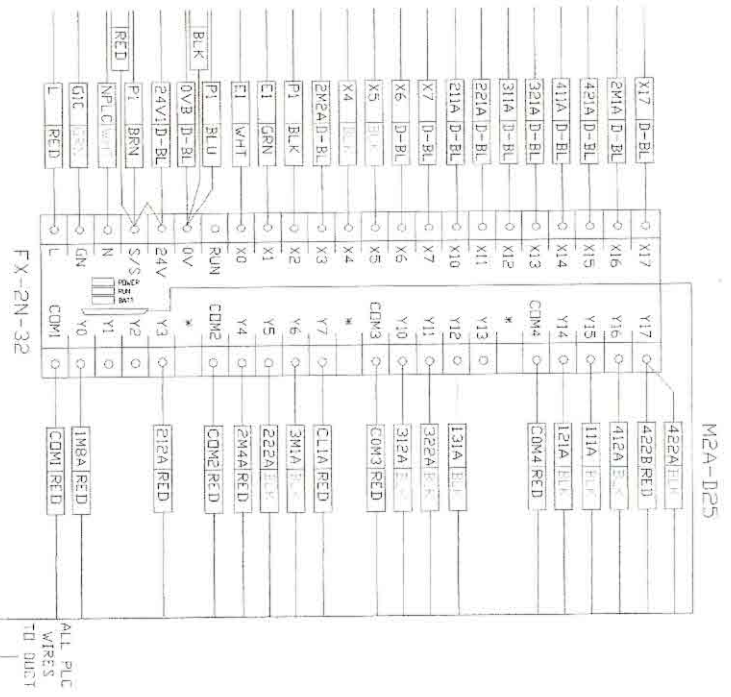
- PLC INPUTS**
- X1: BLADE STOP
 - X2: HEAD RAISE L/S
 - X3: HEAD LOWER L/S
 - X4: COOLANT 'AUTO' CYCLE
 - X5: COOLANT 'ON' CYCLE
 - X6: SHUTTLE VISE CLOSE
 - X7: SHUTTLE VISE OPEN
 - X8: FRONT VISE CLOSE
 - X9: FRONT VISE OPEN
 - X10: HEAD RAISE
 - X11: HEAD LOWER
 - X12: BLADE START
 - X13: CYCLE START
 - X14: OUT OF STOCK RELAY & BBS L/S
 - X15: (N4CR)
 - X16: SHUTTLE VISE CLOSE SOL
 - X17: BLADE PILOT LIGHT
 - X18: BLADE MOTOR CONTACTOR
 - X19: SHUTTLE VISE OPEN SOL
 - X20: COOLANT PUMP
 - X21: CYCLE PILOT LIGHT
 - X22: FRONT VISE CLOSE SOL
 - X23: FRONT VISE OPEN SOL
 - X24: SHUTTLE VISE SOL

REVISIONS			
REV.	REV. NUMBER	DATE	BY
1	REV. 001	10/20/01	SM 7 BC
2	REV. 002	10/20/01	SM 7 BC

STANDARD TOLERANCES UNLESS OTHERWISE SPECIFIED	
UNIT	TOLERANCE
INCH	±0.005
MILLIMETER	±0.15

DIMENSIONS ARE IN INCHES	
UNIT	TOLERANCE
INCH	±0.005
MILLIMETER	±0.15

THESE DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED



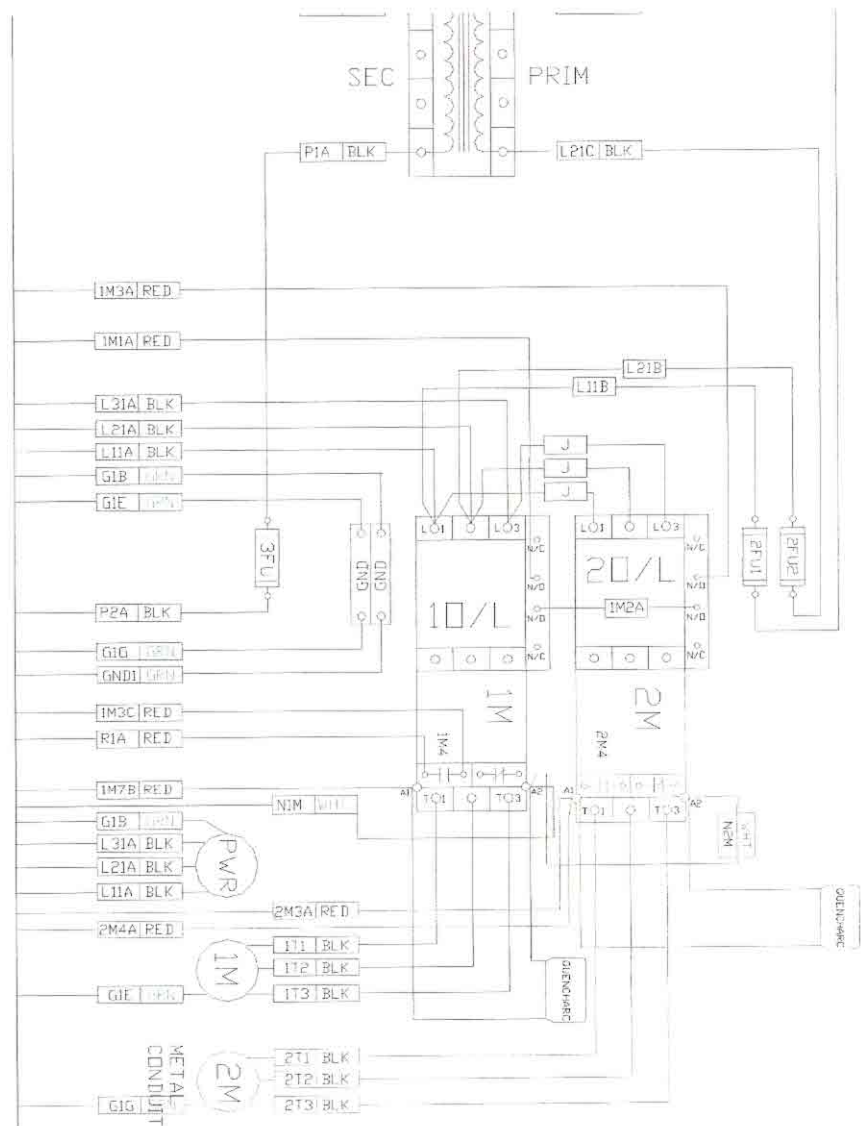
REVISIONS			
REV.	ECN NUMBER	DATE	BY
1	622 005	JULY 2001	SH / BG
2			
3			
4			

SPECIFICATIONS			
OTHERS: SPECIFIED			
DIMENSIONS ARE IN INCHES			
LINEAR			
DATE: JULY 2001			
DATE: JULY 2001			



1TR
500 VA

PWR HYD BLADE
IN MOTOR MOTOR



REVISIONS				STANDARD TOLERANCES UNLESS OTHERWISE SPECIFIED			
REV.	ECN NUMBER	DATE	BY	DIMENSIONS ARE IN INCH	UNLESS	NOTED	OTHER
1	400-001	2001 NOV 15	SS	1/16			
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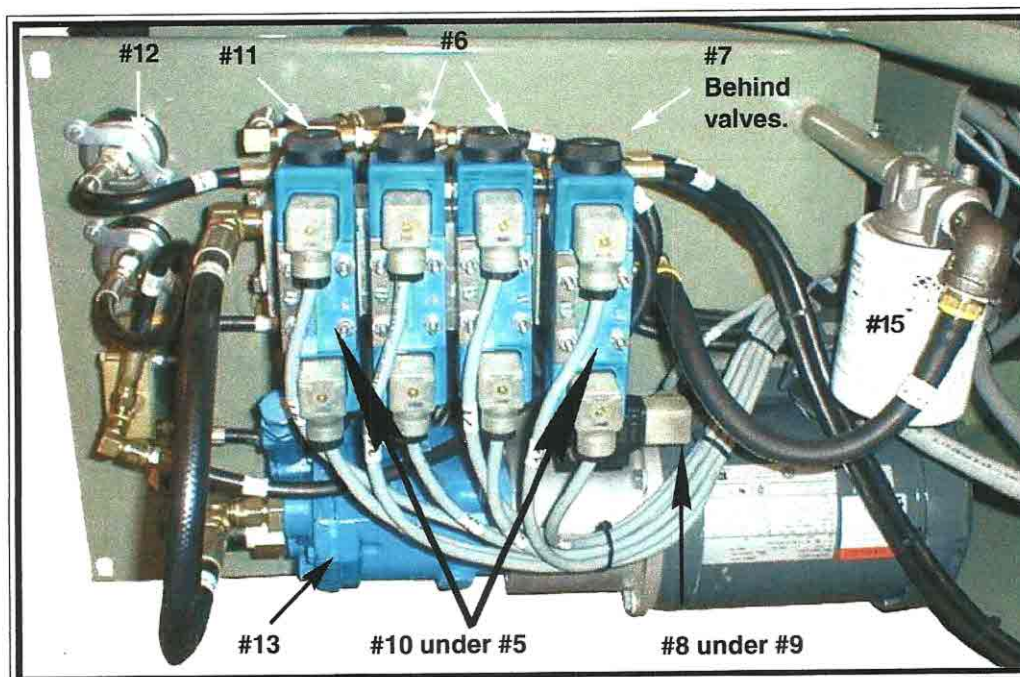


SECTION 5, HYDRAULIC SYSTEM

The S-20A Series II hydraulic system does not require any special work on a new machine before its start-up. The hydraulic tank is filled with Texaco Rando HD 46 hydraulic oil and all machine functions have been tested at the factory to ensure proper operation upon initial start-up.

HYDRAULIC COMPONENTS LIST and LOCATIONS

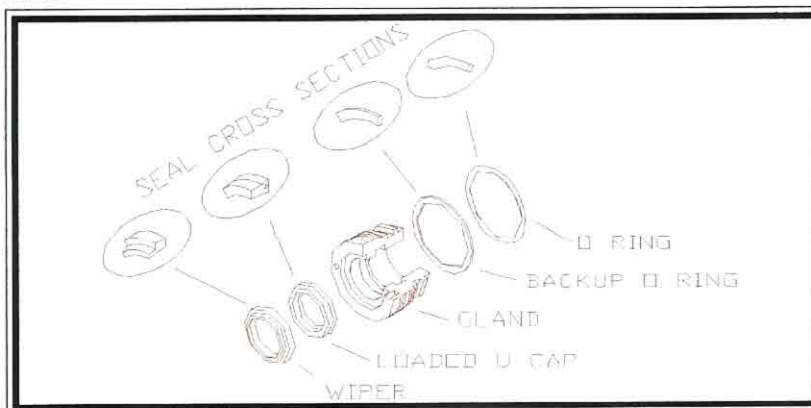
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1 (not shown)	MAIN HEAD CYLINDER	S22A-C4-00
2	2 (not shown)	WISE CYLINDER	S22A-C3-00H
3	1 (not shown)	SHUTTLE CYLINDER	S22A-C1-00
4	1 (not shown)	DDF VALVE	DDF1-0-00
5	2	DIRECTIONAL VALVE	DCV3P-AB-T
6	2	DIRECTIONAL VALVE	DCV3P-AB-C
7	1	MANIFOLD BLOCK	MB4P
8	1	SHUTTLE CUSHION BLOCK	CHB-20
9	1	CUSHION VALVE	PV2P-A-C
10	2	DOUBLE PILOT CHECK VALVE	DPCH-1
11	1	INLINE CHECK VALVE	460-4M-4M
12	1 (see pg. 1.4)	PRESSURE GAUGE (1000 psi)	PG-10
13	1 (see pg. 1.4)	PUMP	HYP-1
14	1 (see pg. 1.4)	SUCTION STRAINER	SS-100-00
15	1 (see pg. 1.4)	RETURN FILTER	AE-10
16		HOSE KIT ASSEMBLY	S22A HK
17	1 (not shown)	WISE PRESSURE REDUCING VALVE	S22A VVP OPTION KIT



Door Mounted Hydraulic Assembly

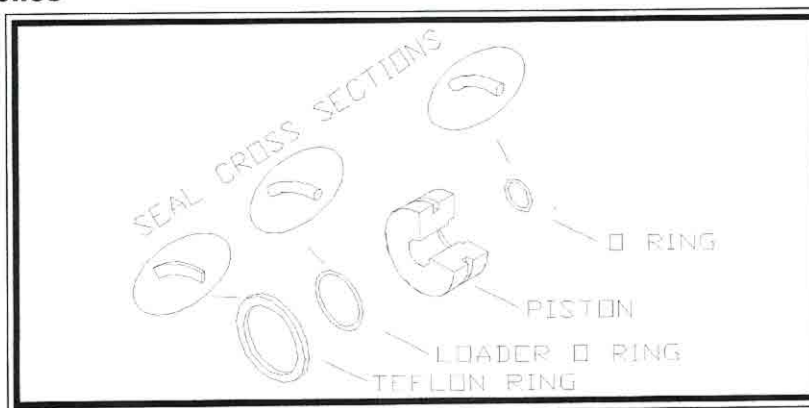
CYLINDER ASSEMBLIES

Gland assemblies



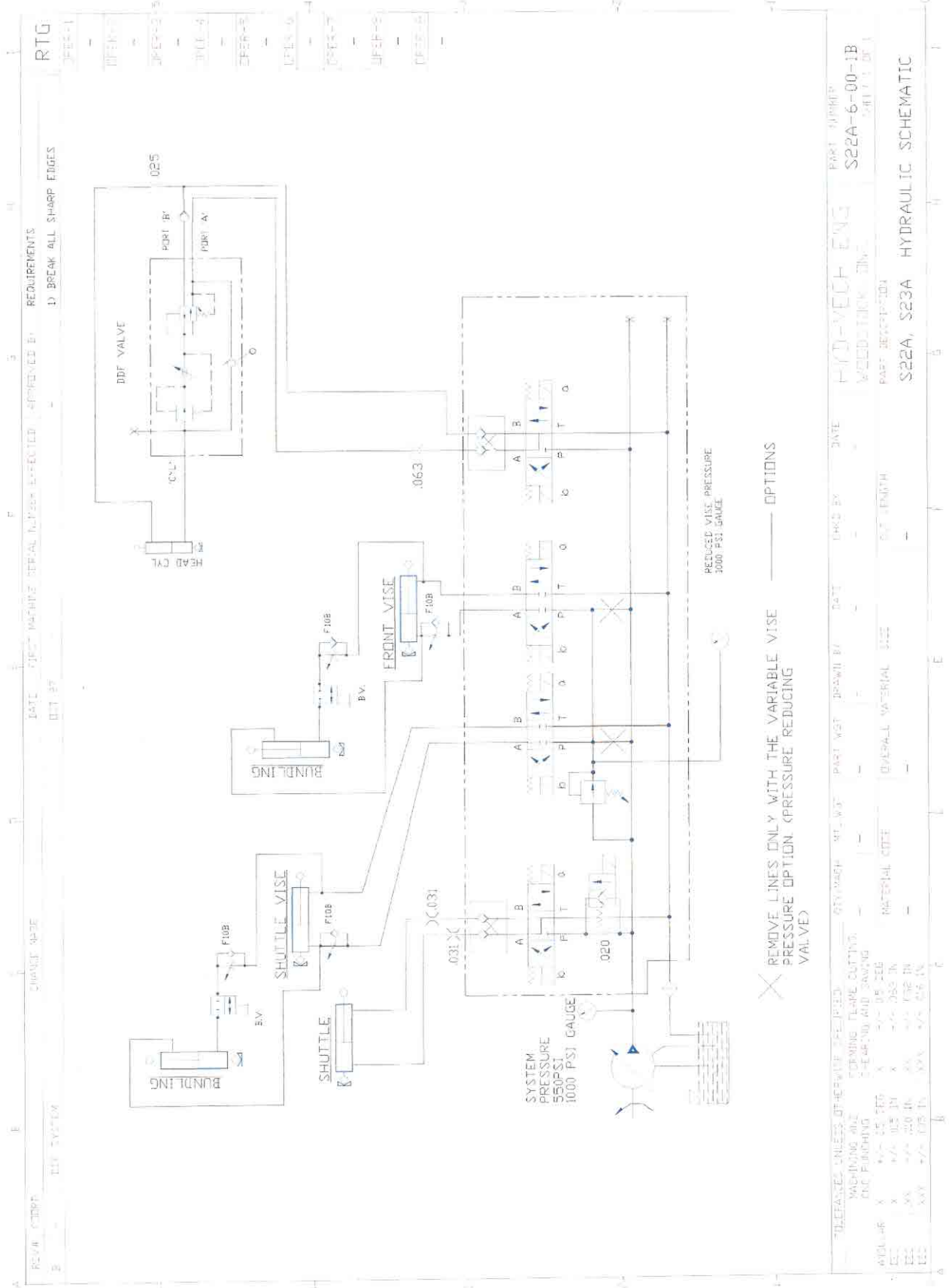
CYLINDER DIAMETER	F O-RING RING	F BACKUP O-RING	G GLAND	H LOADED U CAP	I WIPER
2.0"	2-224	8-224	CS20-GL-01	1250-1125-250B	U-1125
2.5"	2-228	8-228	CS25-GL-01	1870-1125-312B	U-1250
3.0"	2-232	8-232	CS30-GL-01	1870-1125-312B	U-1250
3.5"	2-236	8-236	CS35-GL-01	2500-1500-375B	U-1500
4.0"	2-342	8-342	CS40-GL-01	2500-2250-375B	U-2250
5.0"	2-350	8-350	CS50-GL-01	2500-2250-375B	U-2250

Piston assemblies



CYLINDER DIAMETER	A TEFLON RING	B LOADER O-RING	C PISTON	D O-RING
2.0"	TFE-S2000	2-129	CS20-PS-01	2-114
2.5"	TFE-S2500	2-137	CS25-PS-01	2-116
3.0"	TFE-S3000	2-145	CS30-PS-01	2-116
3.5"	TFE-S3500	2-151	CS35-PS-01	2-118
4.0"	TFE-S4000	2-153	CS40-PS-01	2-124
5.0"	TFE-S4500	2-157	CS50-PS-01	2-124

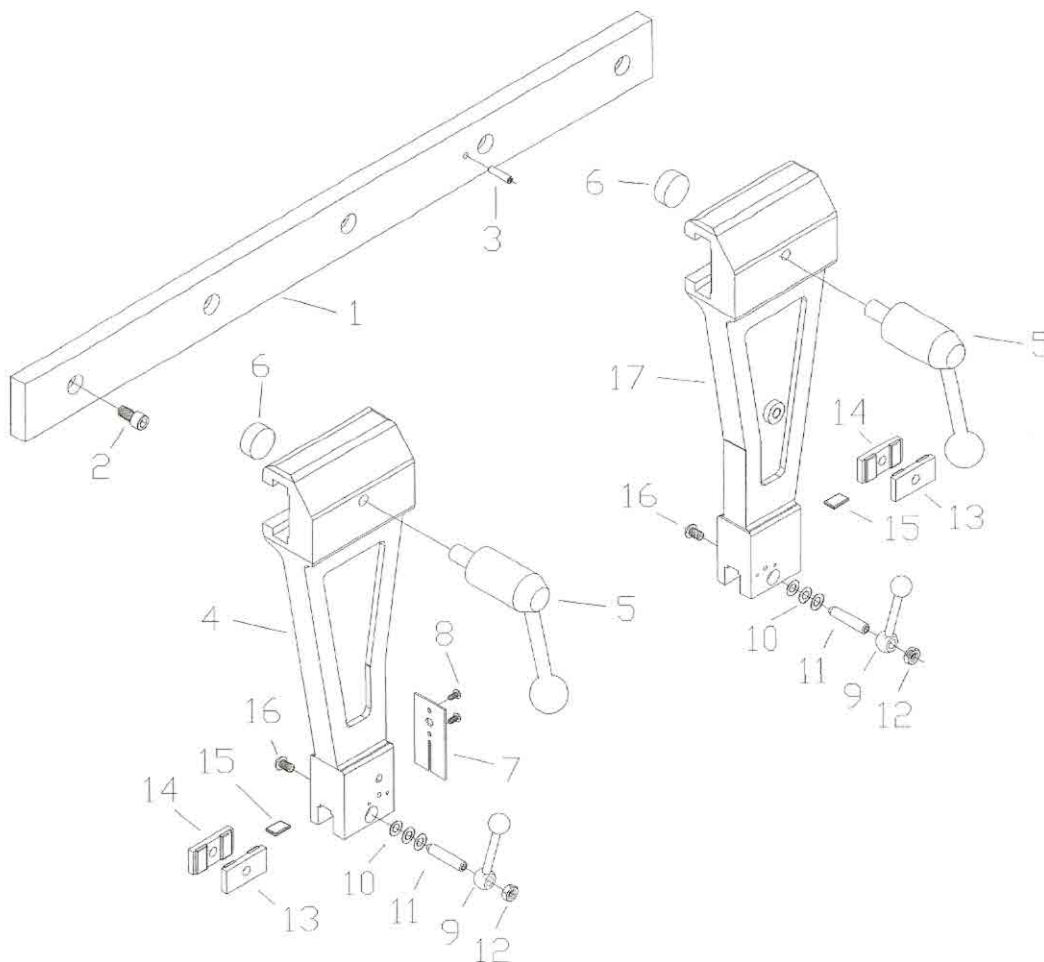
HYDRAULIC SCHEMATIC & PLUMBING DRAWINGS





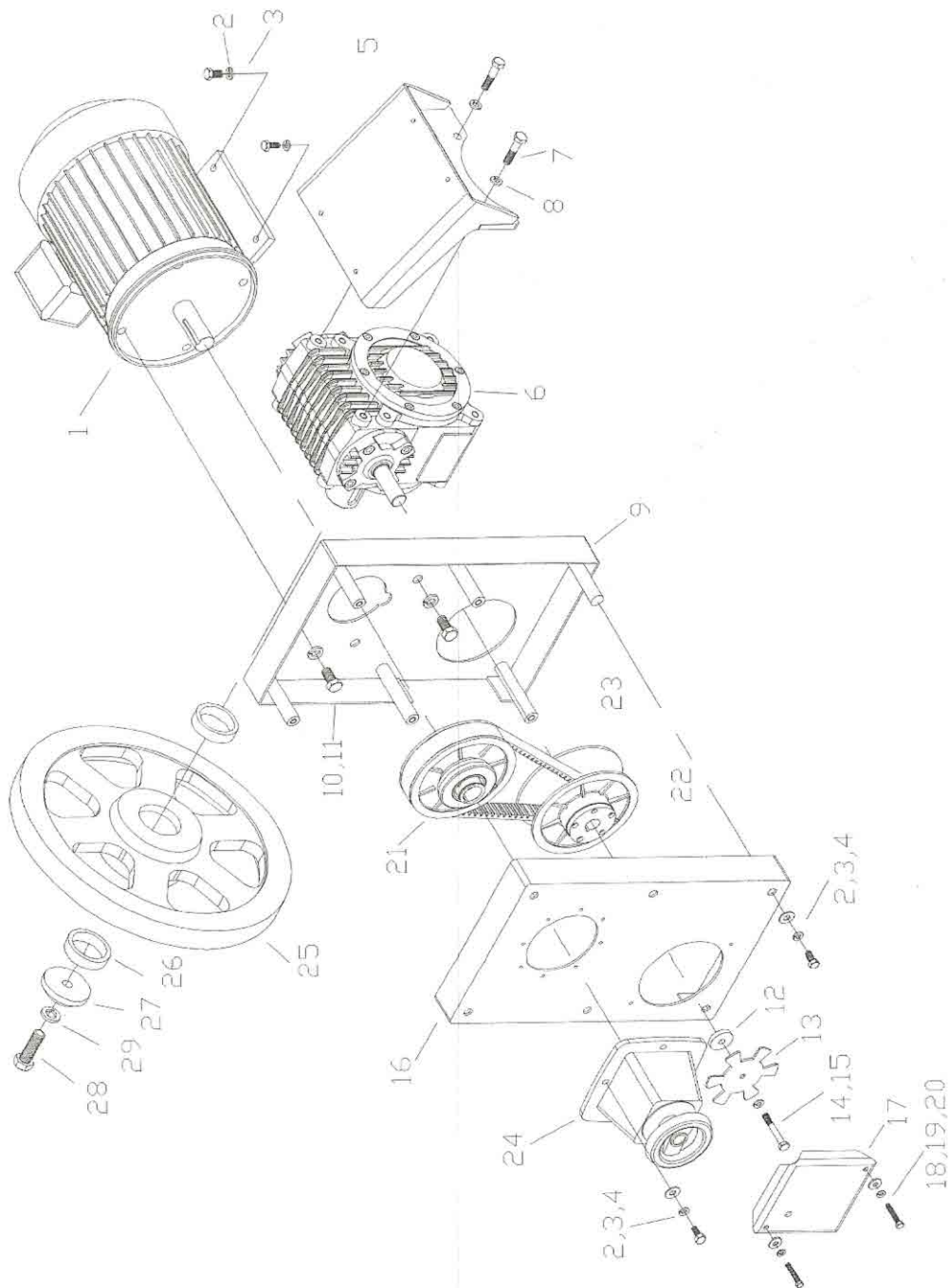
SECTION 6, MECHANICAL ASSEMBLIES

GUIDE ARM & CARBIDE ASSEMBLIES



ITEM	QTY	S22 PART NUMBER	DESCRIPTION
1	1	S22-45-01A	GUIDE ARM BAR
2	5	A1-.375 X.75	SOCKET HEAD CAP SCREW
3	1	.25X1	ROLL PIN
4	1	S22-45-02A	IDLER ARM
5	2	S22-45-06	GUIDE ARM LOCKING HANDLE
6	2	S22-45-05	CLAMPING PAD
7	1	S22-45-04	COOLANT NOZZLE COVER
8	2	SB1-.19X.5	SOCKET BUTTON HEAD SCREW
9	2	S22-45-08	CARBIDE LOCKING HANDLE
10	6	30 C0750-040	DISC SPRING
11	2	S2-.375X1.75D	SOCKET SET SCREW, DOG POINT
12	2	3/8-24 JNUT	JAM HEX NUT
13	2	CRB-100-21-00	CARBIDE PLATE, FRONT
14	2	CRB-100-22-00	CARBIDE PLATE, REAR
15	2	CRB-TL-770	CARBIDE, TOP
16	2	F1-.312X.5	FLAT SOCKET HEAD SCREW
17	1	S22-45-03A	DRIVE ARM

(WITH VARIABLE SPEED)



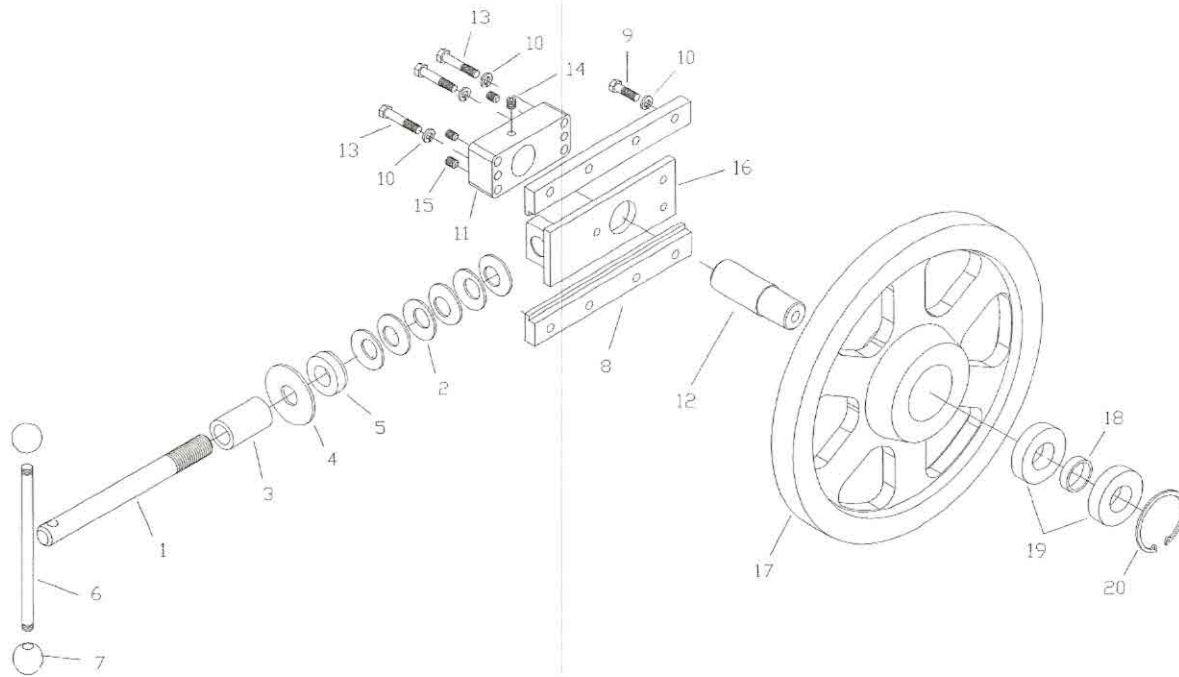
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	182TC FRAME	3 HP, 1800RPM, SPECIFY VOLTAGE
2	12	B1-.312X.75	HEX HEAD CAP SCREW
3	12	.312LOC	LOCK WASHER
4	10	.312FLT	FLAT WASHER
5	1	S22A-42-00B	MOTOR SEAT WELDMENT
6	1	HM4A	RENOLD GEAR BOX, 39:1
7	4	B3-12x30	METRIC HEX HEAD CAP SCREW
8	4	M12 LOC	LOCK WASHER
9	1	S22A-411-00A	VSD INNER COVER WELDMENT
10	4	B1-.5X1	HEX HEAD CAP SCREW
11	4	.5LOC	LOCK WASHER
12	1	S22A-412-04	TARGET SPACER
13	1	S22A-41-01	PULSAR TARGET
14	1	B3-8X60	METRIC HEX HEAD CAP SCREW
15	1	M8LOC	LOCK WASHER
16	1	S22A-41-02A	OUTER BOX SHELL
17	1	S22A-41-03	OUTER BOX TACH COVER
18	2	B1-.25X1.5	HEX HEAD CAP SCREW
19	2	.25LOC	LOCK WASHER
20	2	.25FLT	FLAT WASHER
21	1	R150B	MECHANICAL PULLEY
22	1	F150B	SPRING PULLEY
23	1	28X800	DRIVE BELT
24	1	RF150 ADJ	SPEED SDJUSTOR
25	1	S22-3-07E	DRIVE WHEEL
26	2	S22-44-01A	DRIVE WHEEL SPACER
27	1	S22-44-02	RETAINING CAP
28	1	B3-16X50	METRIC HEX HEAD CAP SCREW
29	1	M16LOC	LOCK WASHER

3 HORSE POWER DRIVE SPEED ADJUSTOR INSTALLATION IN STRUCTIONS AND PARTS LIST.

The speed adjustor is packaged seperately for shipping purposes. Installation of the speed adjustor must be completed prior to connecting the power supply.

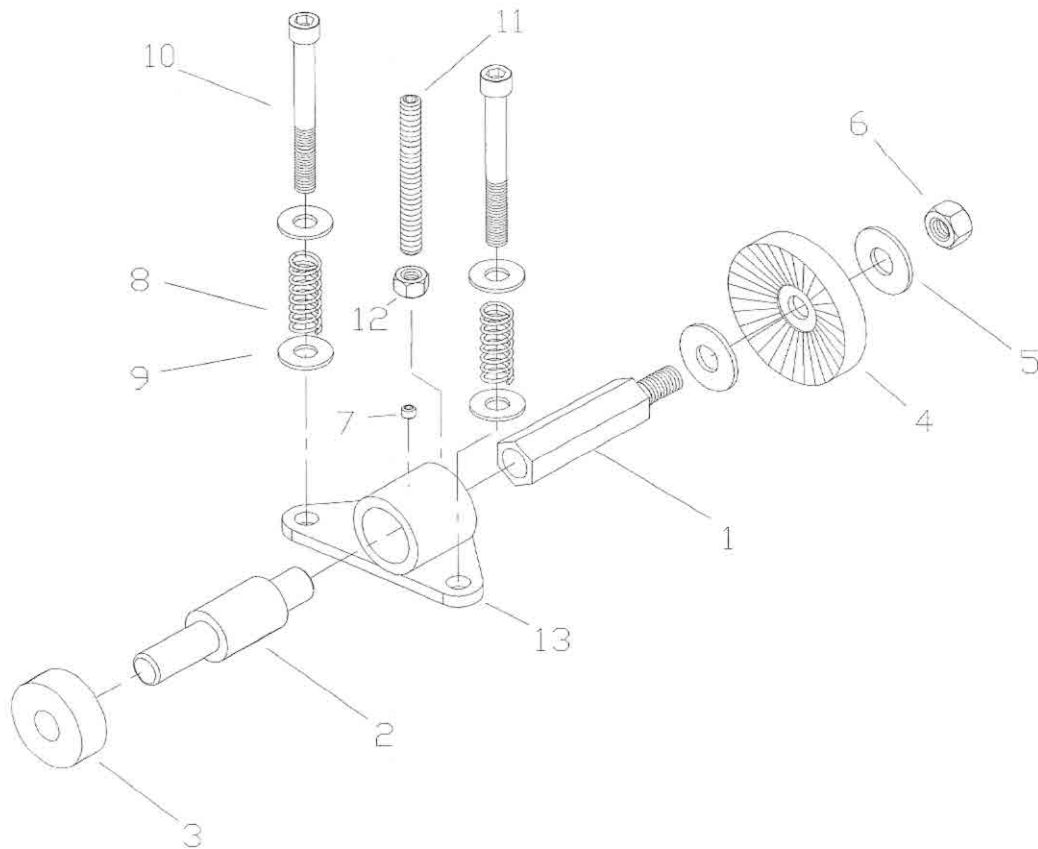
Remove the assembly from the coolant reservoir and remove the wrapping. Rotate the handwheel of the speed adjustor completely counter clockwise. Hold the assembly so that the speed clock decal faces you. Rotate the assembly until 75 surface feet per minute on the decal is positioned at the 12 O'clock position. Hold the cup of the speed adjustor assembly with one hand while rotating the body of the speed adjustor assembly until the needle alignes with 75 surface feet per minute at the 12 O'clock position. The assembly is now ready to be bolted to the outer cover of the variable speed drive housing using the four 5/16" x 3/4" hex head bolts (Item #2, B1-.312x.75).

IDLER WHEEL ASSEMBLY



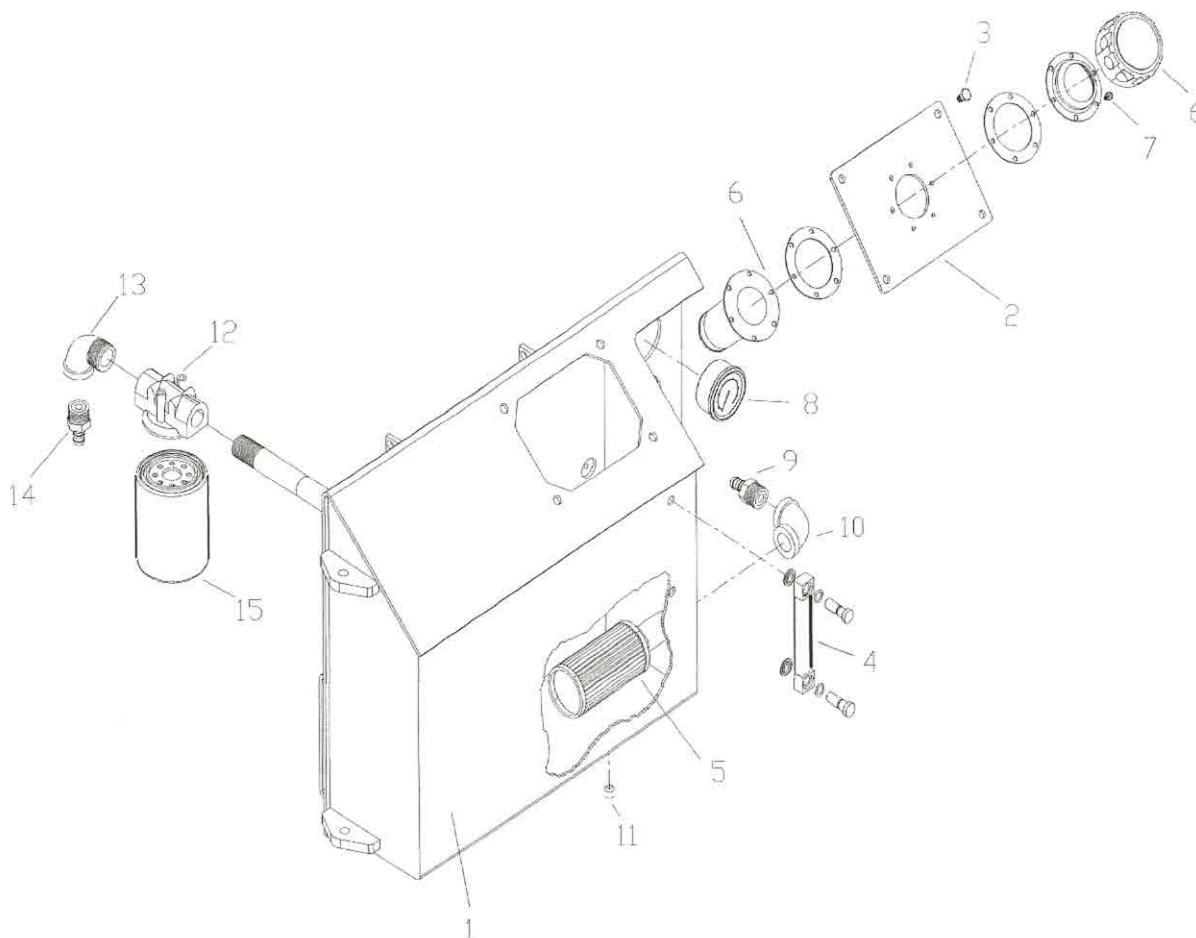
ITEM	QTY	S-22 PART NUMBER	DESCRIPTION
1	1	S22-42-01A	BLADE TENSION SHAFT
2	8	30 K2000-097	DISC SPRING
3	1	S22-42-03A	BLADE TENSION COLLAR
4	1	S22-42-04	STOP PLATE
5	1	4462-00	THRUST BEARING
6	1	S22-42-02A	TENSIONER HANDLE
7	2	1993	1 3/8 BALL KNOB, 1/2 nc
8	2	S20-3-05	SLIDE WAYS
9	8	B1-.375X1	HEX HEAD CAP SCREW
10	11	.375LOC	LOCK WASHER
11	1	S20-33B-01	BLOCK
12	1	S20-3-08A	IDLER SHAFT
13	3	B2-.375X2	HEX HEAD CAP SCREW (NF)
14	1	S2-.375X.375-F	SOCKET SET SCREW, FLAT POINT (NF)
15	3	S2-.375X2-C	SOCKET SET SCREW, CUP POINT (NF)
16	1	S20-331-00	BASE WELDMENT
17	1	W16-45A-01	IDLER WHEEL
18	1	W16-45A-02	IDLER WHEEL SPACER
19	2	6307 2RS	BALL BEARING
20	1	HO-315-PA	INTERNAL RETAINING RING
21	1	B1-.5X1.5	HEX HEAD CAP SCREW
22	1	.5LOC	LOCK WASHER
23	1	S22-44-02	RETAINING CAP

BLADE BRUSH ASSEMBLY



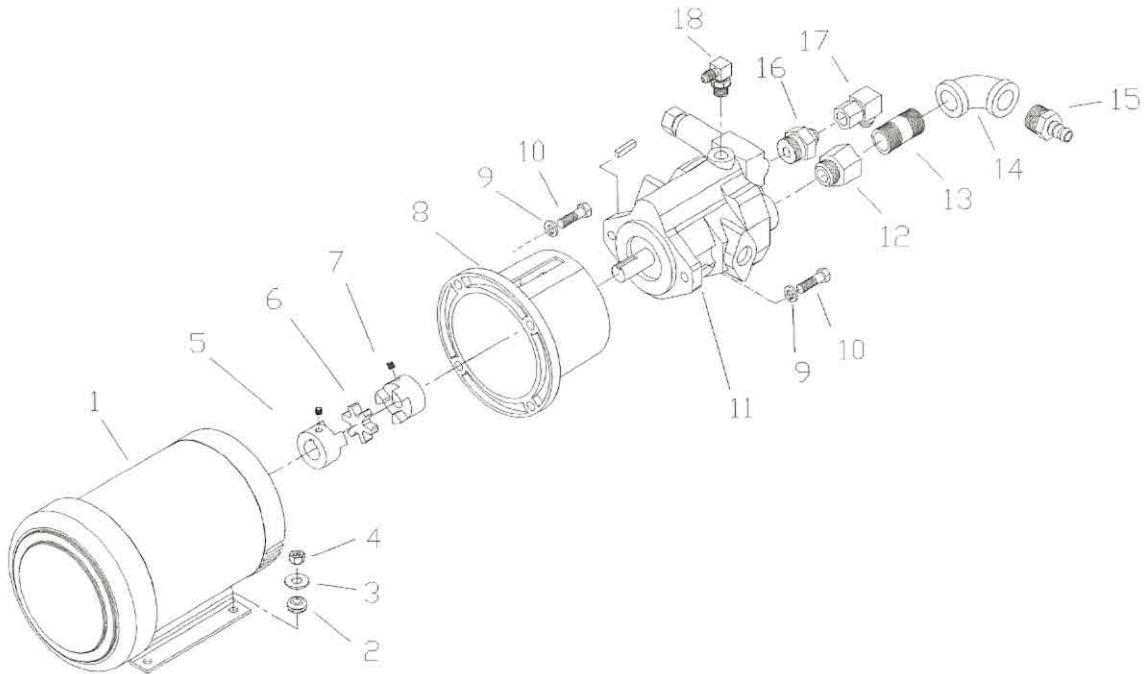
ITEM	QTY	S-22 PART NUMBER	DESCRIPTION
1	1	S22-43-01	SHAFT EXTENSION
2	1	W6440-4	BEARING
3	1	S20-925-03	POLYURETHANE WHEEL
4	1	5043	3" BLADE BRUSH
5	2	.5FLT	FLAT WASHER
6	1	.5-13HXNUT	HEX NUT
7	1	S1-.25X.25-C	SOCKET SET SCREW, CUP POINT
8	2	TC 13	COMPRESSION SPRING
9	4	.375FLT	FLAT WASHER
10	2	A1-.375X3.5	SOCKET HEAD CAP SCREW
11	1	S1-.375X2.5	SOCKET SET SCREW, FLAT POINT
12	1	.375-16HXNUT	HEX NUT
13	1	S22-431-00	BEARING PLATE WELDMENT

HYDRAULIC TANK ASSEMBLY (Less hoses)



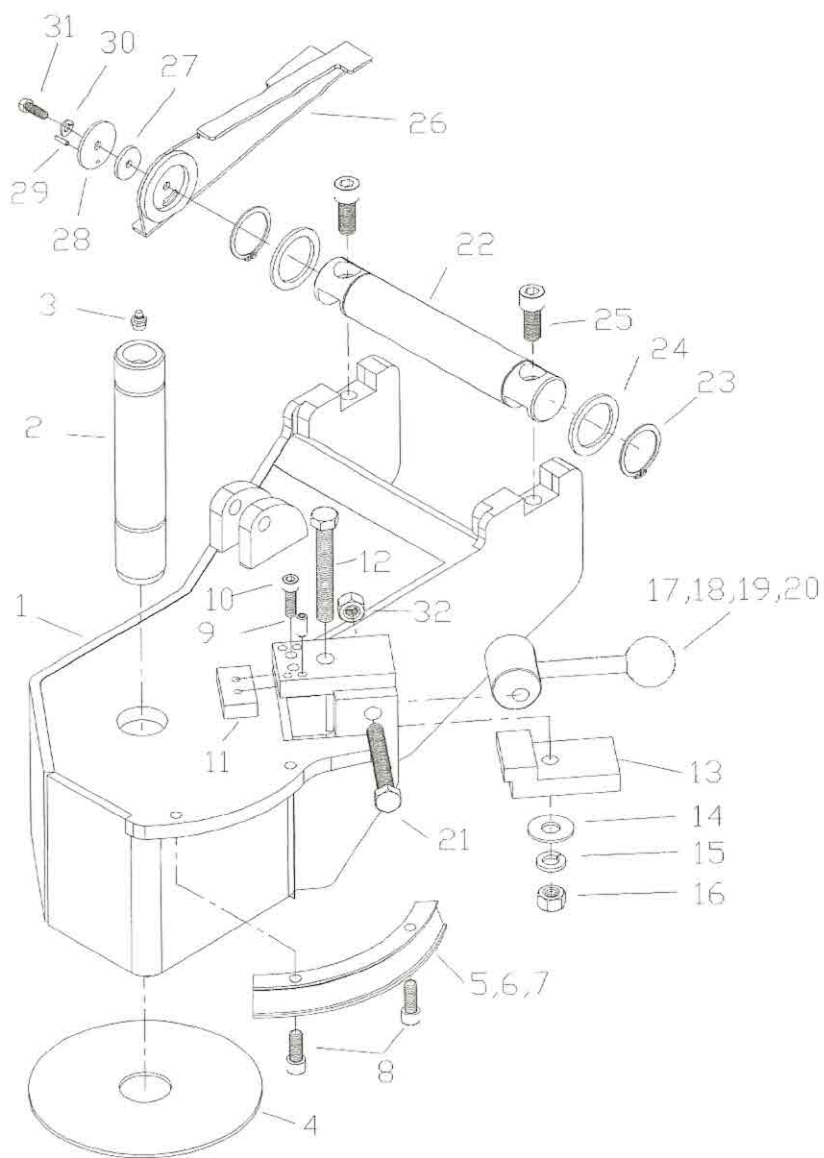
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-611-00B	POWER PACK WELDMENT
2	1	S22A-61-01	OIL TANK LID
3	4	B1-.312x.75	HEX HEAD CAP SCREW
4	1	SNA2B/TO	OIL LEVEL/TEMPERATURE GAUGE
5	1	TFS-100-0-P	SUCTION STRAINER
6	1	SES-3-40-S-80	50 micron FILLER BREATHER
7	6	T1-.19x.5	TRUSS HEAD MACHINE SCREW
8	1	CFIP-070B	1000psi PRESSURE GAUGE
9	1	0188-12-12	HOSE BARB FITTING (MNPT)
10	1	MP 100-E	90 deg ELBOW (FNPT-FNPT)
11	1	01HP-4	PIPE PLUG
12	1	SAF07-25-0	FILTER HEAD
13	1	MP 116-E	90 deg FITTING (MNPT-FNPT)
14	1	30182B-12-8	HOSE BARB FITTING (MNPT)
15	1	SF6520	10 micron RETURN FILTER

HYDRAULIC PUMP ASSEMBLY (Less hoses)



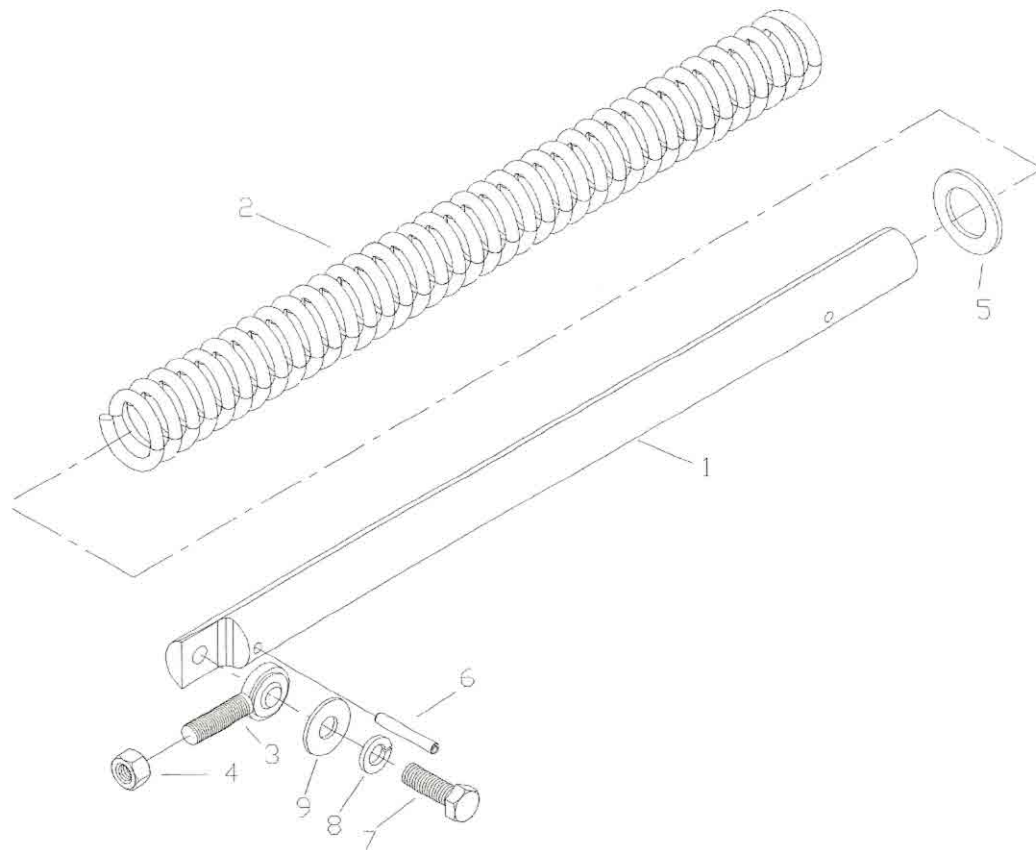
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	145TC	2HP, 1800 RPM, SPECIFY VOLTAGE
2	4	RB-220	RUBBER GROMMET
3	4	.312FLT	5/16" FLAT WASHER
4	4	.312HXNUT	5/16-18 HEX NUT
5	1	10692	7/8 LOVEJOY HUB
6	1	N075	LOVEJOY INSERT
7	1	10690	7/8 LOVEJOY HUB
8	1	6028	BELL HOUSING
9	6	B1-.375x1	HEX HEAD CAP SCREW
10	6	.375LOC	3/8" LOCK WASHER
11	1	PVQ-13-A2R-SE-1S-10-CM7	HYDRAULIC PUMP
12	1	0502-12-12	ADAPTER, 1 1/16 MNF-3/4 FNPT
13	1	MP-113-E2	3/4"x2 BMI PIPE NIPPLE
14	1	MP-100E	3/4" 90DEG. BMI ELBOW
15	1	0188-12-12	HOSE BARB-MNPT
16	1	0503-12-8	ADAPTER, 1 1/16" MNF-MJIC
17	1	3903-8-8	90 DEG. ELBOW, FNPT-FNPT

PIVOT LINK ASSEMBLY



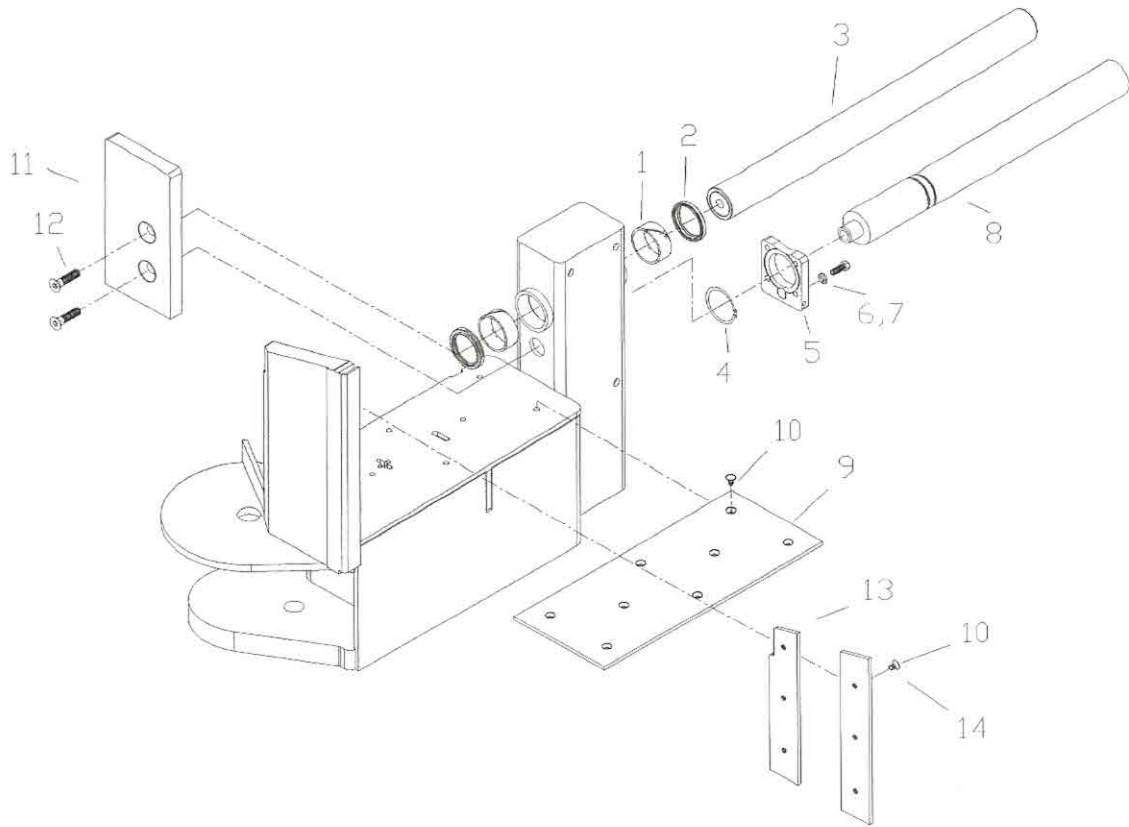
ITEM	QTY	S22A PART NUMBER	DESCRIPTION
1	1	S22-21-00C	PIVOT LINK WELDMENT
2	1	S22-2-01	PIVOT PIN
3	1	1627-B	PIVOT PIN GREASE FITTING, 1/4 NP
4	1	S22-2-08	THRUST PLATE
5	1	S22-2-02B	SCALE SUPPORT
6	1	S22-2-05A	ANGLE SCALE
7	2	N-.125X.250	PRESS IN RIVET
8	2	A1-.375X1	SOCKET HEAD CAP SCREW
9	2	S1-.312X.75-C	SOCKET SET SCREW, CUP POINT
10	2	A1-.312X1	SOCKET HEAD CAP SCREW
11	1	S20-42-03	BRAKE SHOE
12	1	B1-.5X3.5	HEX HEAD CAP SCREW
13	1	S22-22-00	BRAKE TOUNGE WELDMENT
14	1	.5FLT	FLAT WASHER
15	1	.5LOC	LOCK WASHER
16	1	.5-13HXNUT	HEX NUT
17	1	S20-42B-02	BRAKE CAM
18	1	S20-423-B-01	BRAKE HANDLE
19	1	8470939	1/2" id BLACK TUBE
20	1	1993	1 3/8" BALL, 1/2" NC
21	1	B1-.5X3.75	HEX HEAD CAP SCREW
22	1	S22-3-01A	HORIZONTAL PIN
23	2	SH-0150-PA	EXTERNAL RETAINING RING
24	2	TRB 2435	THRUST WASHER
25	2	A2-.5X1.25	SOCKET HEAD CAP SCREW
26	1	S22A-72A-02	HEAD UP LIMIT SWITCH LEVER
27	1	S22A-72A-03	GUIDE
28	1	S22A-72A-04	FRONT PLATE
29	1	.125x.5	ROLL PIN
30	1	.25LOC	LOCK WASHER
31	1	B1-.25x.75	HEX HEAD CAP SCREW
32	1	.5-13HXLOCNUT	HEX LOCK NUT

COUNTER BALANCE SPRING ASSEMBLY



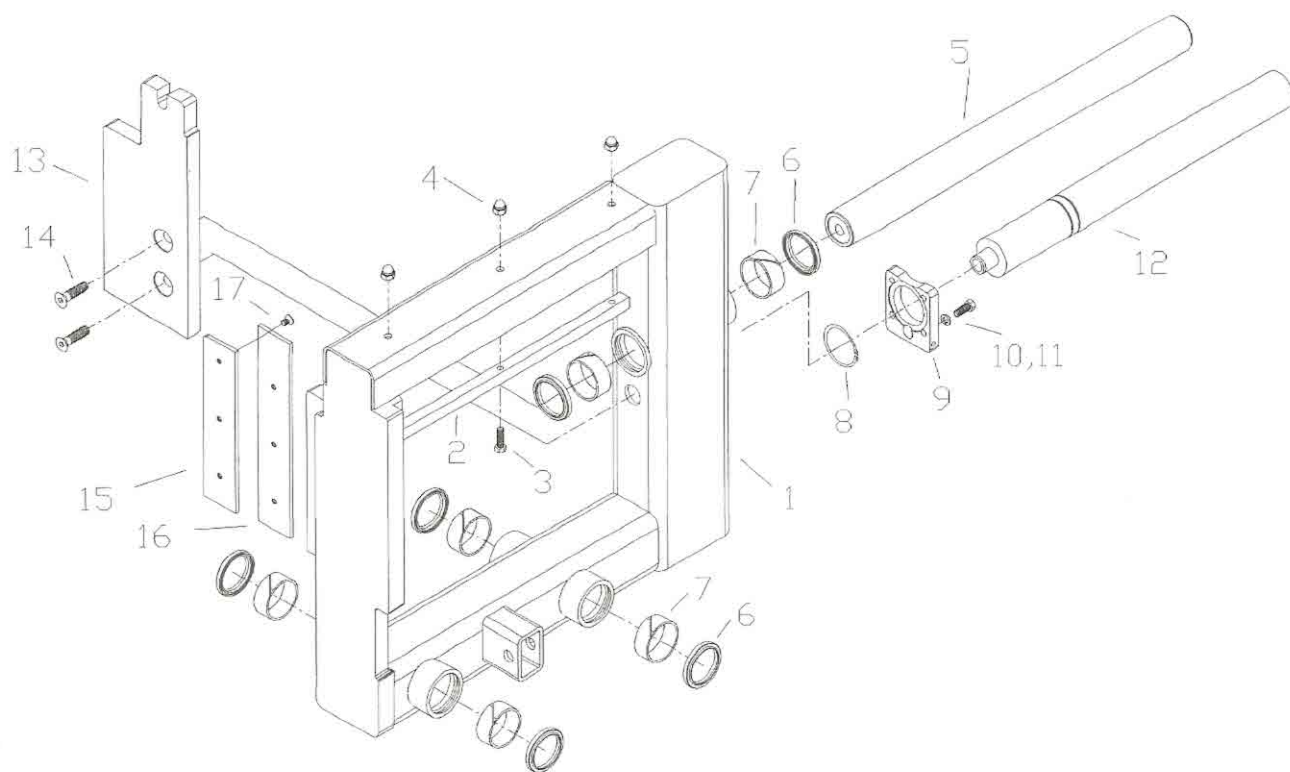
ITEM	QTY	S-22 PART NUMBER	DESCRIPTION
1	1	S22-2-03	SPRING GUIDE
2	1	S22-2-06	COMPRESSION HEAD SPRING
3	1	CM8	ROD END
4	1	.5NF HXNUT	HEX NUT
5	1	S22-2-07	SPRING SUPPORT
6	1	.25X1.75	ROLL PIN
7	1	B1-.5X1.5	HEX HEAD CAP SCREW
8	1	.5LOC	LOCK WASHER
9	1	.5FLT	FLAT WASHER

FRONT VISE ASSEMBLY



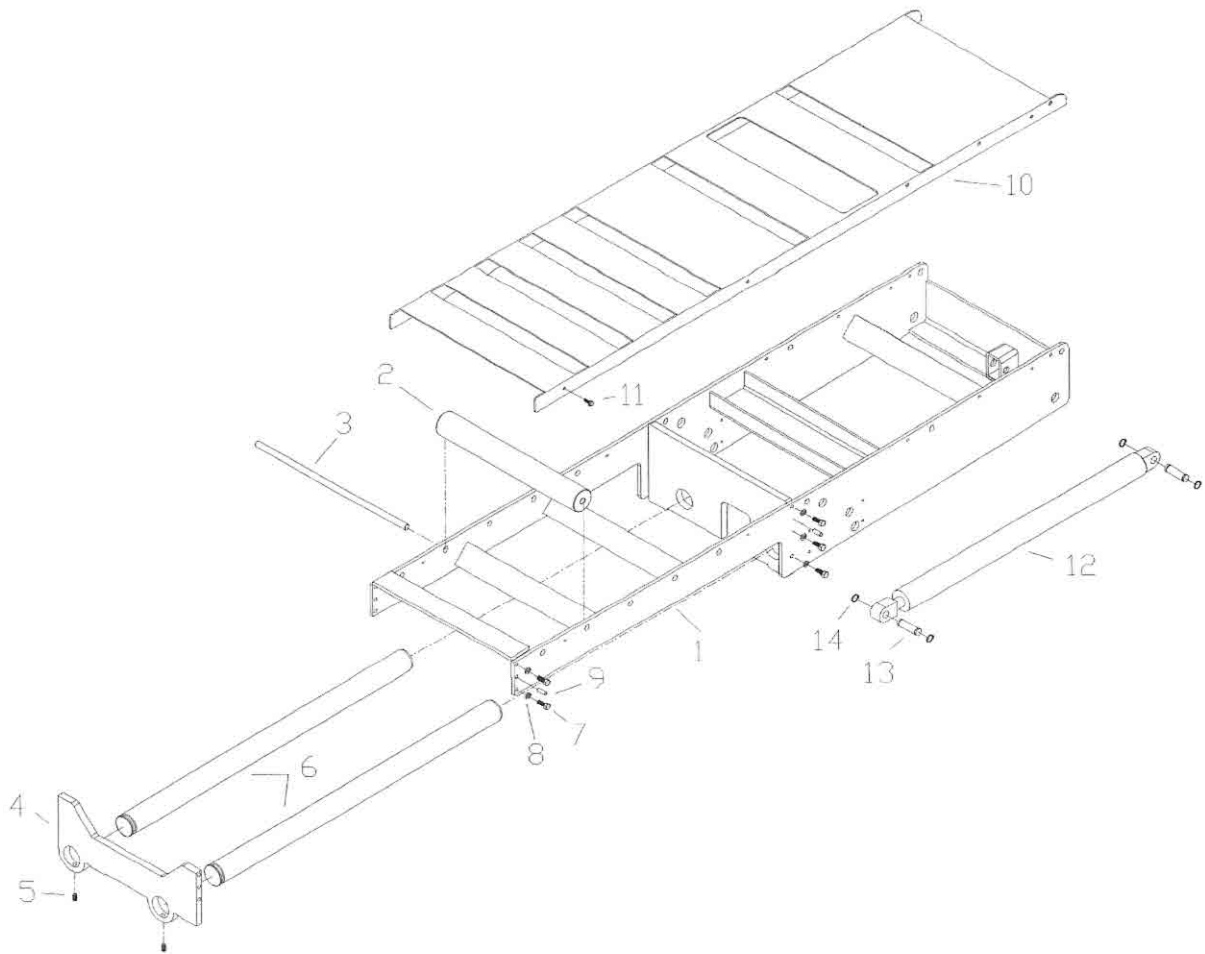
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	2	7.260X1X.125	WEAR RING
2	2	H2250	2 1/4" SHAFT WIPER
3	1	S22A-1-03	JAW GUIDE SHAFT
4	1	SH-0237-PA	2 3/8" EXTERNAL RETAINING RING
5	1	S22A-1-02B	CYLINDER MOUNTING PLATE
6	4	B1-.375x1	HEX HEAD CAP SCREW
7	4	.375LOC	LOCK WASHER
8	1	S22A-C3-00G	VISE CYLINDER
9	1	S22-1-01A	WEAR PLATE
10	14	F1-.312x.5	FLAT SOCKET HEAD CAP SCREW
11	1	S22A-1-01C	FRONT MOVABLE JAW
12	2	F1-.75x2	FLAT SOCKET HEAD CAP SCREW
13	1	S22A-G1-01	FRONT WEAR STRIP
14	1	S22A-G1-02	REAR WEAR STRIP

SHUTTLE VISE ASSEMBLY



ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-521-00C	SHUTTLE VISE WELDMENT
2	1	S22-52-02	GUIDE BAR
3	3	B1-.375x1.25	HEX HEAD CAP SCREW
4	3	3/8-16ACRN	ACORN NUT
5	1	S22A-1-03	JAW GUIDE SHAFT
6	6	H2250	2 1/4" SHAFT WIPER
7	6	7.260x1x.125	2 1/3" WEAR RING (702 STRIP)
8	1	SH-0237-PA	2 3/8" EXTERNAL RETAINING RING
9	1	S22A-1-02B	CYLINDER MOUNTING PLATE
10	4	B1-.375x1.25	HEX HEAD CAP SCREW
11	4	.375LOC	LOCK WASHER
12	1	S22A-C5-00G	VISE CYLINDER
13	1	S22A-52-01E	MOVABLE JAW
14	2	F1-.75x2	FLAT SOCKET HEAD CAP SCREW
15	1	S22A-G1-03	WEAR STRIP, SHORT
16	1	S22A-G1-04	WEAR STRIP, LONG
17	6	F1-.312x.5	FLAT SOCKET HEAD CAP SCREW

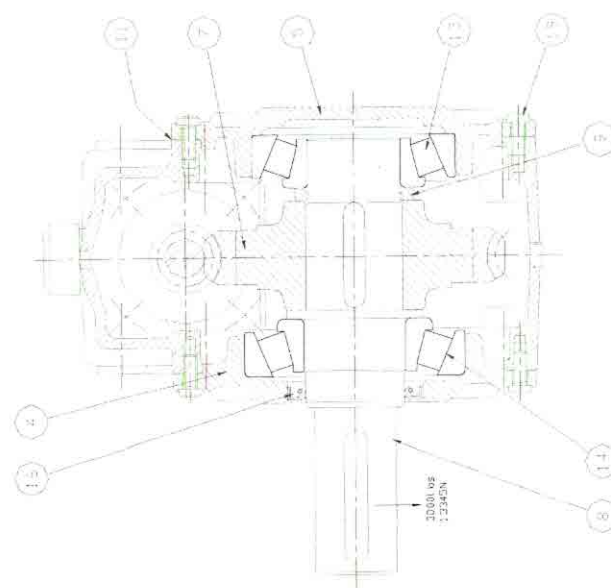
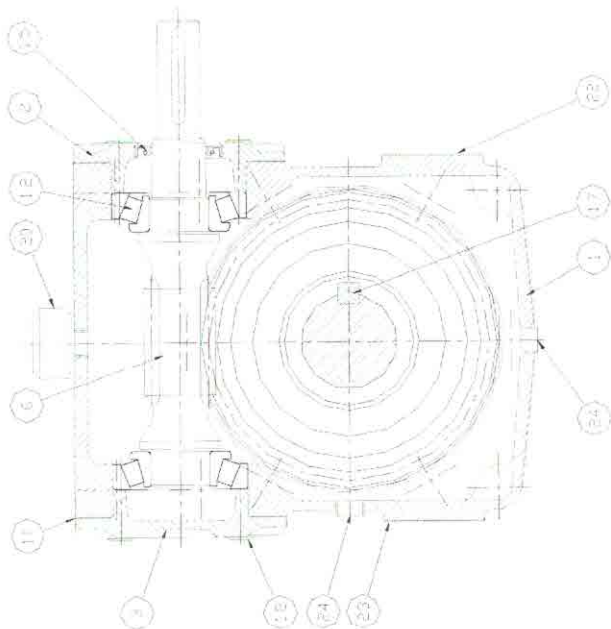
INFEEED CONVEYOR ASSEMBLY



ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-51-00	CONVEYOR WELDMENT
2	8	S22-14-00A	ROLLER ASSEMBLY
3	8	S22-1-07A	ROLLER AXLE
4	1	S22A-5-04A	FRONT SHAFT SUPPORT
5	2	S1-.375x.75C	SOCKET SET SCREW, CUP POINT
6	2	S22A-5-01	SHUTTLE SHAFT
7	8	B1-.375x1	HEX HEAD CAP SCREW
8	8	.375LOC	3/8" LOCK WASHER
9	4	.375x1PO	PULLOUT DOWEL PIN
10	1	S22A-5-03A	CONVEYOR COVER
11	4	H5-.25x.75	1/4" SELF THREADING SCREW
12	1	S22-C1-00	SHUTTLE CYLINDER
13	2	S22A-5-02A	CYLINDER PIN
14	4	SH-0075-PA	3/4" EXTERNAL RETAINING RING

(The output shaft is assembled on the opposite side shown for the S22A)

(The output shaft is assembled on the opposite side shown for the S22A)



3-DP	ORDER	QUANTITY	REF NO	DATE
259076		96	56936	14.12.92

PART NO	QTY	ING NO	MATERIAL	DESCRIPTION
1	1	7/68/EE	CAST IRON BS.432-CP 250	GEARCASE
2	1	7/62/EE	CAST IRON BS.432-CP 250	WORMSHAF. CAP
3	1	7/62/EE	CAST IRON BS.432-CP 250	WORMSHAF. COVER
4	1	7/66/EE	CAST IRON BS.432-CP 250	WHEELSHAF. CAP
5	1	5/68/EE	CAST IRON BS.432-CP 250	WHEELSHAF. COVER
6	1	7/62/EE	AUST. STEEL SAE 9520	WHEELSHAF. SINGLE START
7	1	6/62/EE	PHOS-PH BRONZE/CAST IRON	WORMWHEEL 39 TEETH
8	1	7/66/EE	ALUM. STEEL BS 970 B7MA/UT	WHEELSHAF. SPACER
9	1	7/66/EE	ALUM. STEEL BS 970 B7MA/UT	WORMSHAF. SHAFT 11, 21, 31, 41, 51, 61, 71, 81, 91, 101, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000
10	1	6/66/EE	ALUM. STEEL BS 970 B7MA/UT	WORMSHAF. SHAFT 11, 21, 31, 41, 51, 61, 71, 81, 91, 101, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000

PART NO.	QTY	DWG NO.	MATERIAL	DESCRIPTION
12	2			TAPER ROLLER BEARING REF. 31307
13	1			TAPER ROLLER BEARING REF. 30311
14	1			TAPER ROLLER BEARING REF. 30312
15	1			OLDFEAL 32-55A7 SPIN DUAL
16	1			OLDFEAL 58-55A8 SPIN DUAL
17	1			ALUMINUM ROLLER 0.5" x 0.5" x 5" x 8" R.R.C.
18	8			LOW HEAD SOCKET CAP SCREWS M10x25
19	12			LOW HEAD SOCKET CAP SCREWS M8x20
20	1			(CUSTOMER TO PROVIDE "RANETT" PLOG AND FIT BRUSH HORN "PLOG" REF. 36661)
21	1			MOBIL OIL SUE 632 (NOT SHOWN)
22	1			NAMEPLATE SIZE 4
23	1			ANODIZED ALUMINUM
24	1			ANODIZED ALUMINUM
25	1			3/8"BSPT TAFFER PLOG
26	1			TRANSIT INPUT SHAFT PROTECTOR (NOT SHOWN)
27	1			TRANSIT OUTPUT SHAFT PROTECTOR (NOT SHOWN)

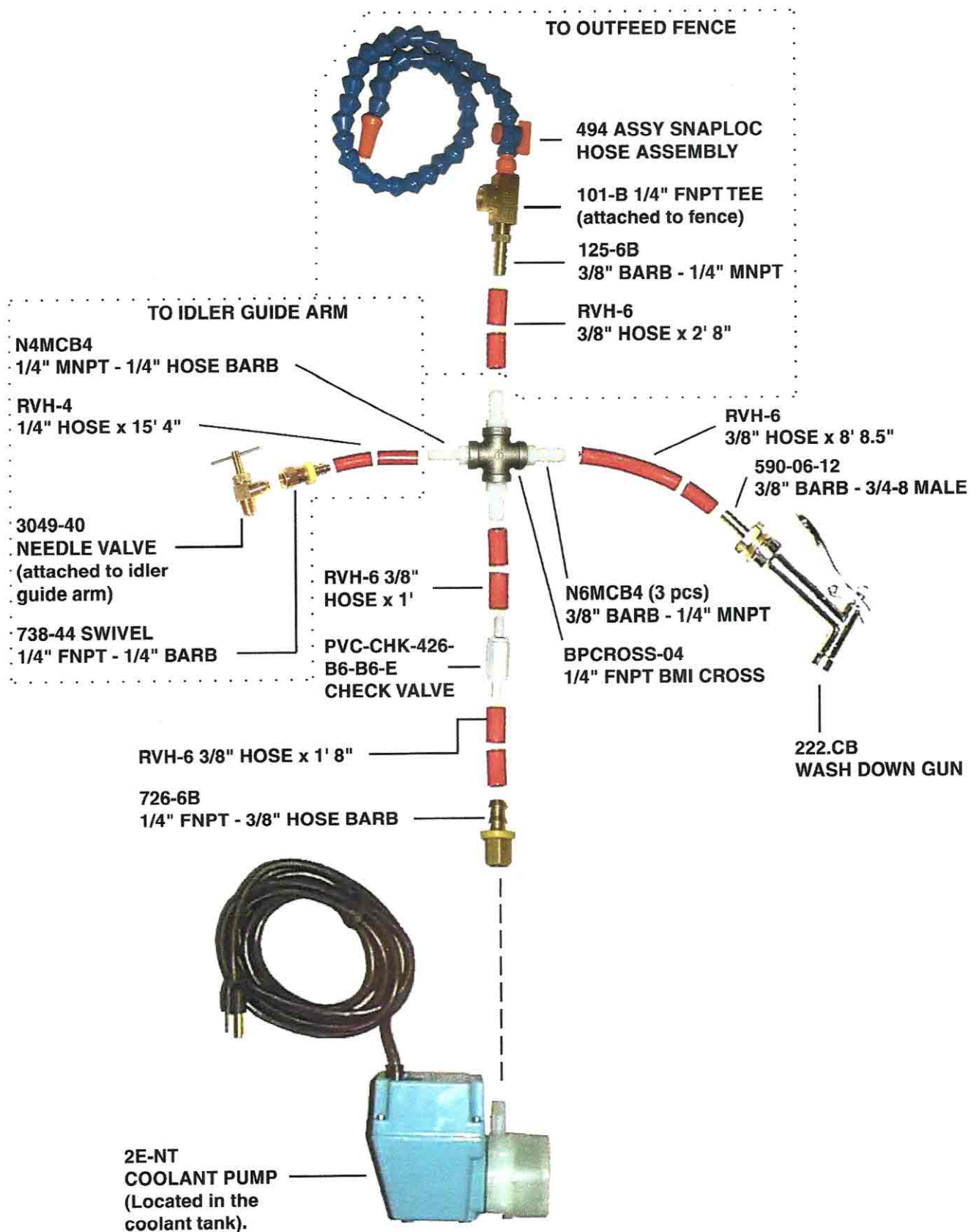
I	BREATH, BRAIN & OIL ADDED, BRASS PLUG & WASHER REMOVED 15 12 92 S. FL	
II	PART NOS 2425 & 26 ADDED 8-26-92	
A	19/12/91	
	ISSUE	MODIFICATION
	CUSTS	-
	PART No.	
	FILE	-
	STRES. No.	A1
	DRG No.	16/6281E

RENOLD ☐ YEARS ☐	ALL DIMENSIONS IN MILLIMETERS UNLIMITED M.T. DIMS. TO ANGULAR 10°S DRAWING PRACTICE TO BS 308:1985 WELDING SYMBOLS TO BS 499:1983 ALL SHARP CORNERS TO BE REMOVED UNLESS OTHERWISE STATED
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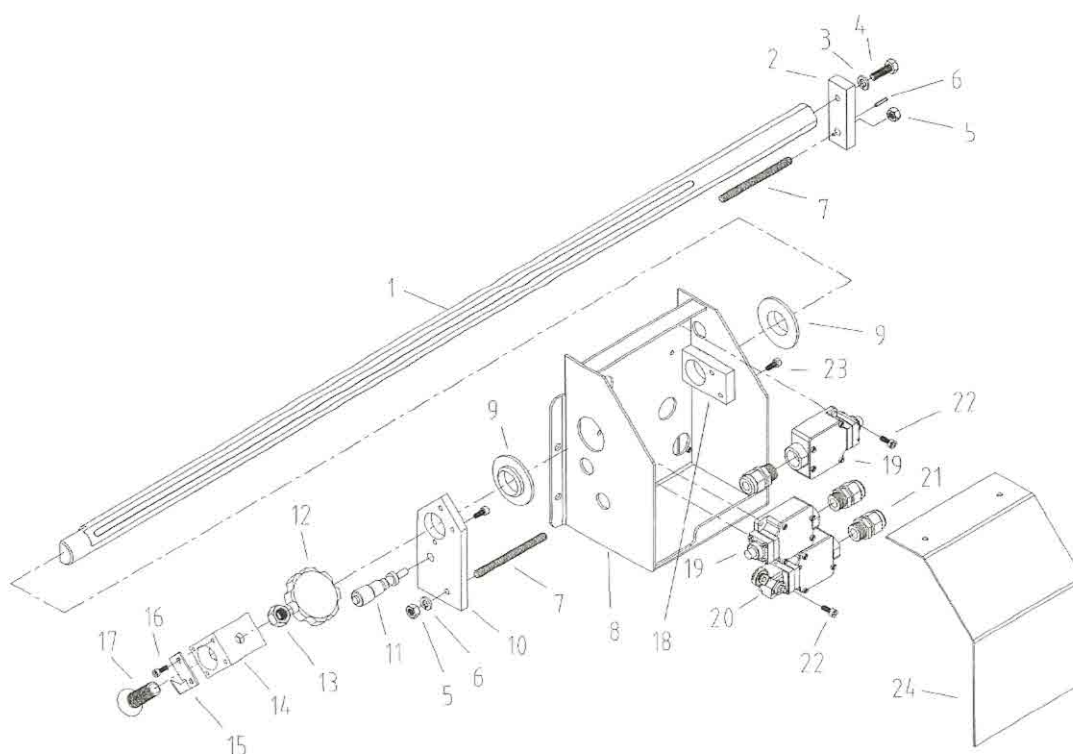
TITLE	PLUT SCALE	DRAWN	CHECKED
SECTIONAL ARRANGEMENT OF 100mm CRS SINGLE REDM WORM GEAR UNIT - MODEL HM4	1:1.5	SH	S H
MATERIAL :-	STEEL	15.12.92	15.1.1992

PROJECTION

COOLANT GROUP



LENGTH CONTROL ASSEMBLY

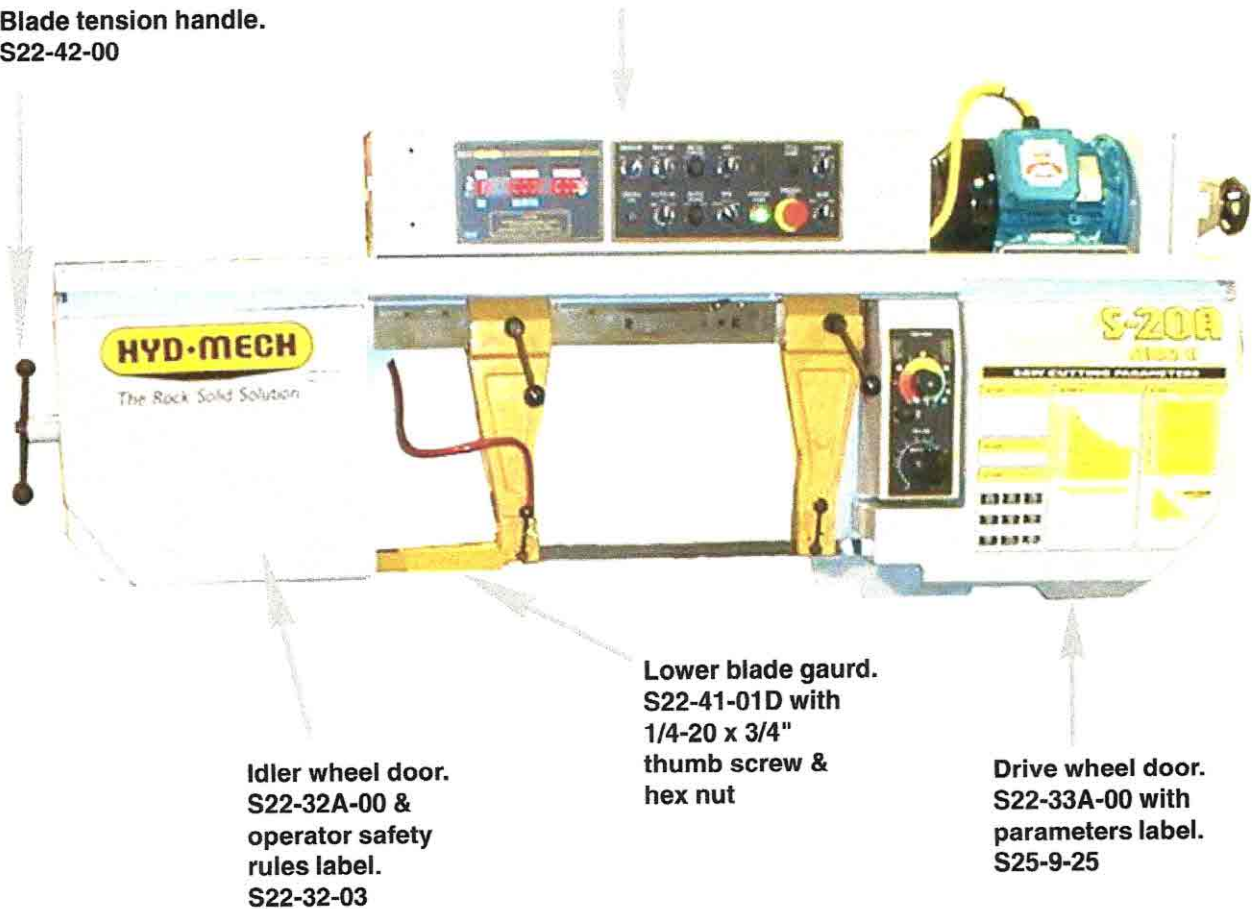


ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-722-03B	STANDARD LENGTH CONTROL SHAFT
2	1	S22A-722-06A	LIMIT SWITCH ACTUATOR
3	1	.312LOC	LOCK WASHER
4	1	B1-.312x1	HEX HEAD CAP SCREW
5	2	.312HXNUT	HEX NUT
6	1	.125x.625	ROLL PIN
7	2	S22A-722-10	LIMIT SWITCH TRIP PIN
8	1	S22A-7221-00	LENGTH CONTROL BOX WELDMENT
9	2	Z-HMS-1125-HS	HAT SEAL
10	1	S22A-722-02A	LIMIT SWITCH FINGER
11	1	149-147	MICROMETER HEAD
12	1	1/2-20x5/8	GRIP KNOB, 2"
13	1	.5-20HXNUT	HEX NUT, FINE THREAD
14	1	S22A-722-08	LENGTH ADJUSTOR BLOCK
15	1	S22A-722-09	LENGTH CONTROL POINTER
16	1	A1-.19x.375	SOCKET HEAD CAP SCREW
17	1	F1-.5x2.5	FLAT SOCKET HEAD CAP SCREW
18	1	S22A-722-07A	SHAFT GUIDE
19	2	XCKL-110	LIMIT SWITCH, PLUNGER
20	1	XCKL-115	LIMIT SWITCH, ROLLER
21	3	3221	HEYCO LIQUID TIGHT CABLE FITTING
22	6	T1-.19x.5	PHILLIPS TRUSS HEAD MACHINE SCREW
23	2	H5-.25x.75	HEX HEAD SELF TAPPING MACHINE SCREW
24	1	S22A-722-01	LENGTH CONTROL BOX LID

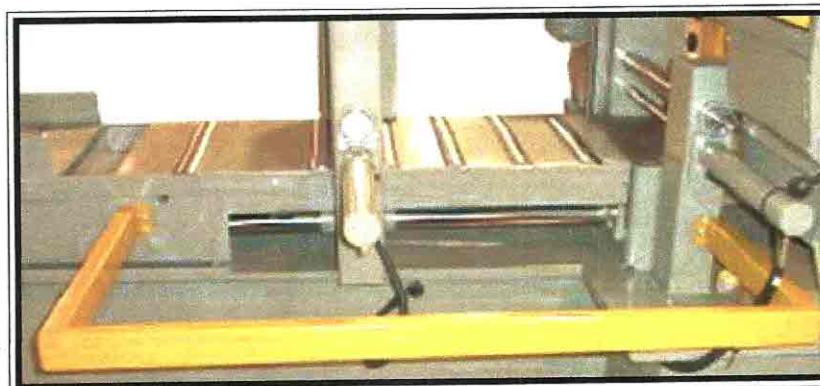
DOORS and COVERS

Blade tension handle.
S22-42-00

Control box lid.
S22-71-02



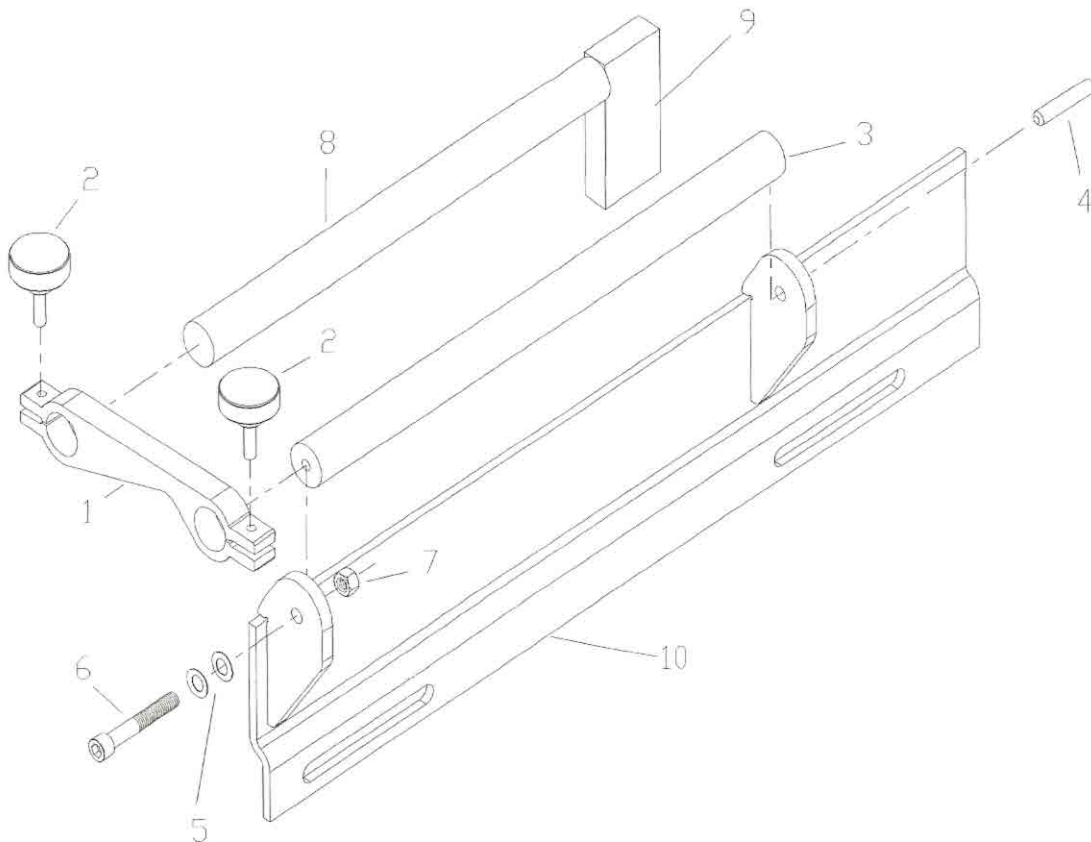
Shuttle gaurd
S22A-91-00 and
two 3/8" x 3/4"
hex bolts & lock
washers



Tensioner cover
S22A-4-01 & four
#10 x 1/2" self
tapping screws
and logo label
S20-9-20.

SECTION 7, OPTIONS

WORK STOP



ITEM	QTY	S-22 PART NUMBER	DESCRIPTION
1	1	S22-G15-01	ARM
2	2	KHU-30	KNOB, 5/16-18X1 STUD
3	1	S22-G15-02	GUIDE BAR
4	1	S1-.375X2.25-C	SOCKET SET SCREW, CUP POINT
5	2	30 C0750-040	DISC SPRING
6	1	A1-.375X2.5	SOCKET HEAD CAP SCREW
7	1	.375-16HXNUT	HEX NUT
8	1	S22-G15-03	BAR
9	1	S22-G15-04	STOPPER
10	1	S22-G151-00	MATERIAL STOP WELDMENT

OVER HEAD BUNDLING

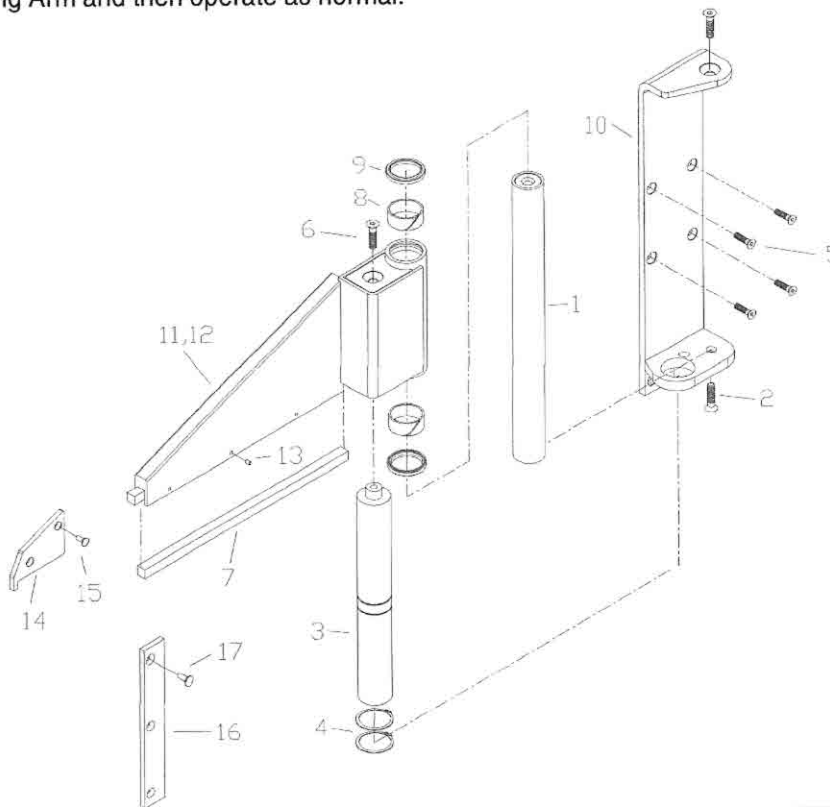
NOTES:

- 1) The relative speed of the bundling jaws and vise jaws can be adjusted with the needle valves at each cylinder.
- 2) The following steps will ensure the efficient operation of the Overhead Bundling.

a) The material should be loaded into the machines vises and advanced to a position where a trim cut can be performed.

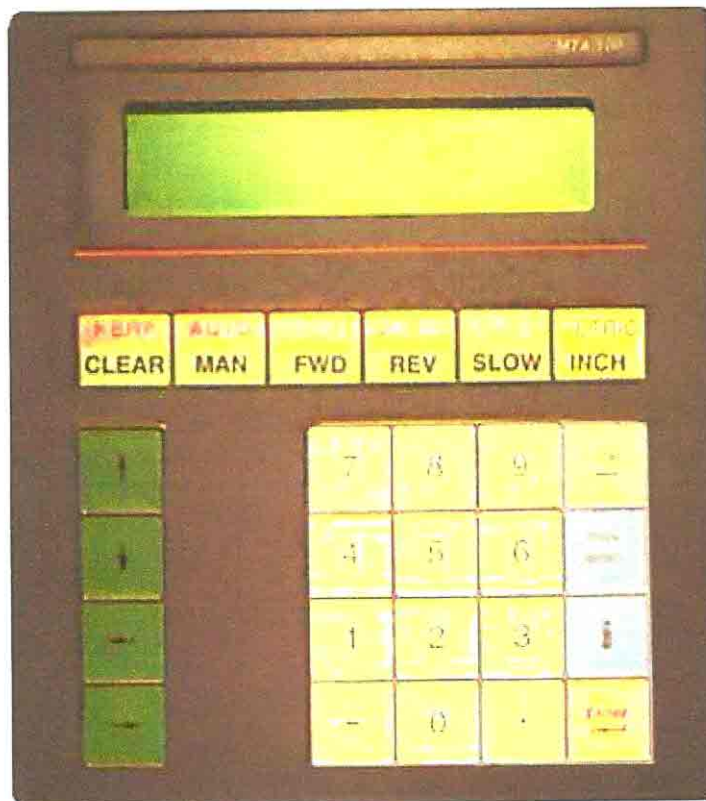
b) Close the Fixed Vise until the Overhead Bundling Arm is slightly ($1/32"$ to $1/64"$) above the material to be cut.

c) Close the ball valve located on the Fixed Overhead Bundling cylinder to lock the position of the Overhead Bundling Arm and then operate as normal.



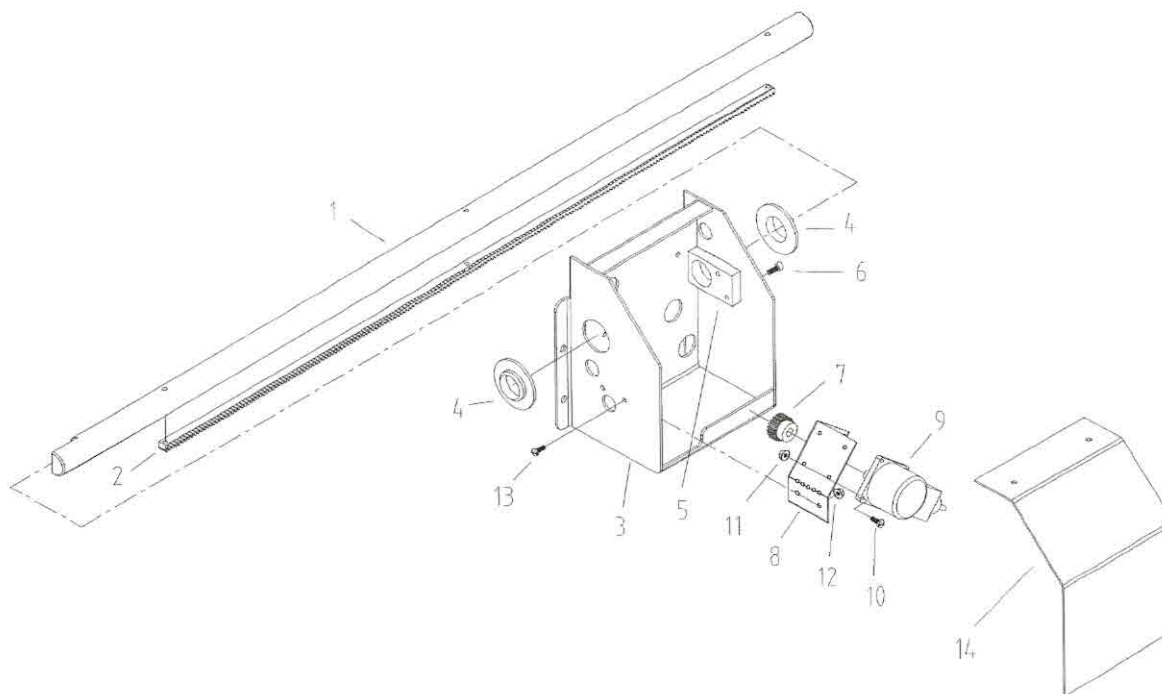
ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-53-01	BUNDLING GUIDE SHAFT
2	2	F1-.75x2	FLAT SOCKET HEAD CAP SCREW
3	1	S22A-C23-00	BUNDLING CYLINDER
4	2	SH-0237-PA	2 3/8" EXTERNAL RETAINING RING
5	4	F1-.5x1.5	FLAT SOCKET HEAD CAP SCREW
6	1	F1-.75x1.5	FLAT SOCKET HEAD CAP SCREW
7	1	S22A-53-02	WEAR STRIP
8	2	7.260x1x.125	2 1/4" WEAR RING (702 STRIP)
9	2	H2250	2 1/4" SHAFT WIPER
10	1	S22A-533-00A	BUNDLING FRAME
11	1	S22A-532-00A	BUNDLING ARM, FRONT
12	1	S22A-531-00A	BUNDLING ARM, SHUTTLE (SHOWN)
13	3	S1-.25x.375C	SOCKET SET SCREW, CUP POINT
14	1	S22A-53-03	GUIDE PLATE
15	2	F1-.312x1	FLAT SOCKET HEAD CAP SCREW
16	1	S22A-53-04	BUNDLING KEEPER
17	3	F1-.375x1	FLAT SOCKET HEAD CAP SCREW

MITSUBISHI PLC 100
(SEE SECTION 2A FOR DETAILS)



Mitsubishi PLC 100 Control Panel

PLC LENGTH ENCODER ASSEMBLY (Required with the PLC option.)

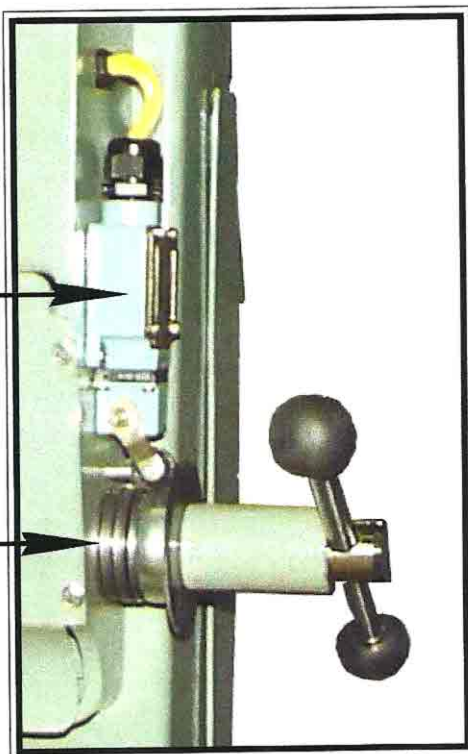


ITEM	QTY	S-22A PART NUMBER	DESCRIPTION
1	1	S22A-722-04	LENGTH SHAFT
2	1	S22A-722-05	GEAR RACK
3	1	S22A-731-00	LENGTH CONTROL BOX WELDMEN
4	2	Z-HMS-1125	HAT SEAL
5	1	S22A-722-07	SHAFT GUIDE
6	2	H5-.25x.75	SELF TAPPING SCREW
7	1	20HG20	SPUR GEAR c/w set screw
8	1	M16-7-02	ENCODER HINGE
9	1	6-111090-00	STEGMAN ENCODER
10	4	FL-.138x.5	FILLISTER HEAD MACHINE SCREW
11	4	6-32	KEEPS HEX NUT
12	2	10-24HXNUT	HEX NUT & LOCK WASHER
13	2	TI-.19x.5	TRUSS HEAD MACHINE SCREW
14	1	S22A-722-01	LID c/w logo label
15	1	.5LOC	LOCK WASHER
16	1	B1-.375x1.5	HEX HEAD CAP SCREW

BLADE BREAKAGE
(Standard on CE machines)

XCKL 115H7
LIMIT SWITCH

BLADE TENSIONER
ASSEMBLY



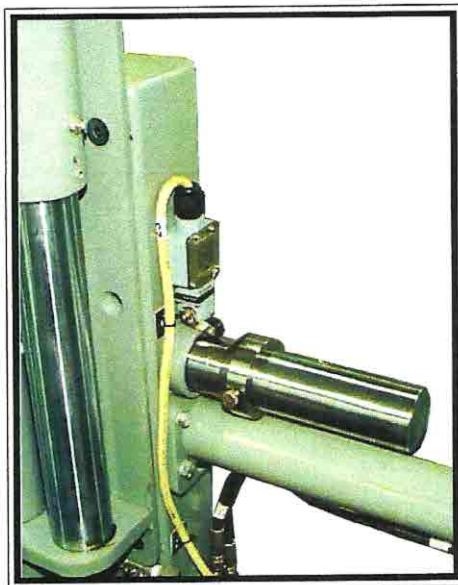
WORK LAMP ASSEMBLY

WORK LAMP
0618-3-AS



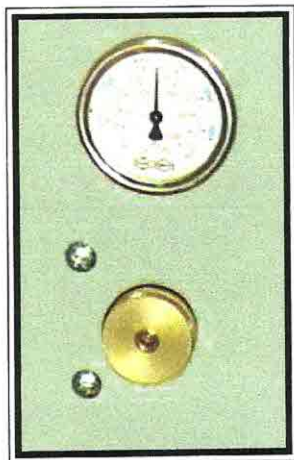
#MS3
MOUNTING STUD
WITH HEX NUT &
TOOTH WASHER

OUT OF STOCK SWITCH
(Standard on CE machines)

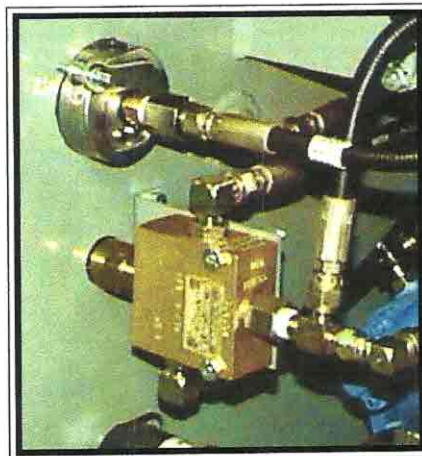


Limit switch & trip.

VARIABLE VISE PRESSURE



VVP control



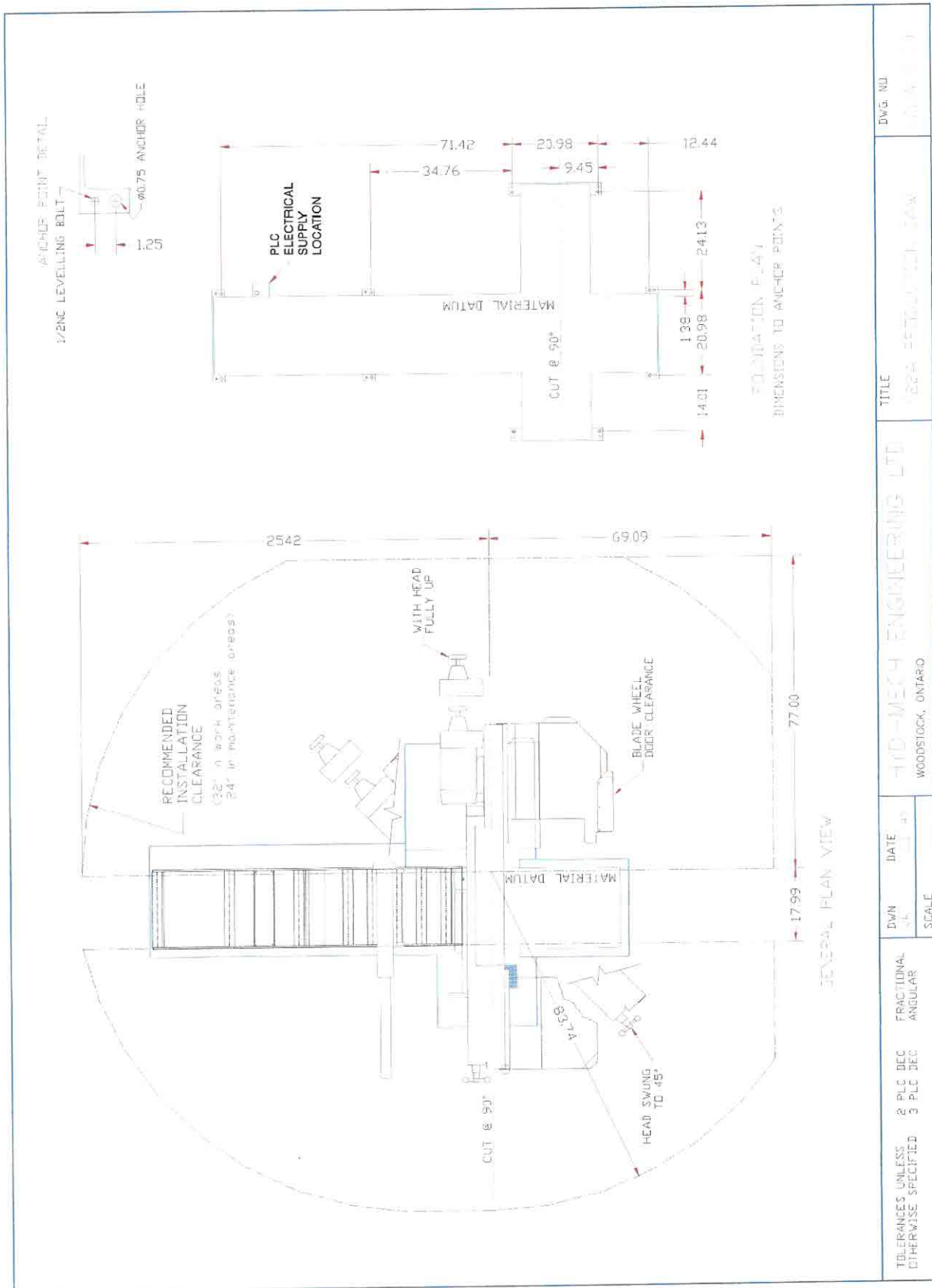
VVP valve assembly

SECTION 8, SPECIFICATIONS

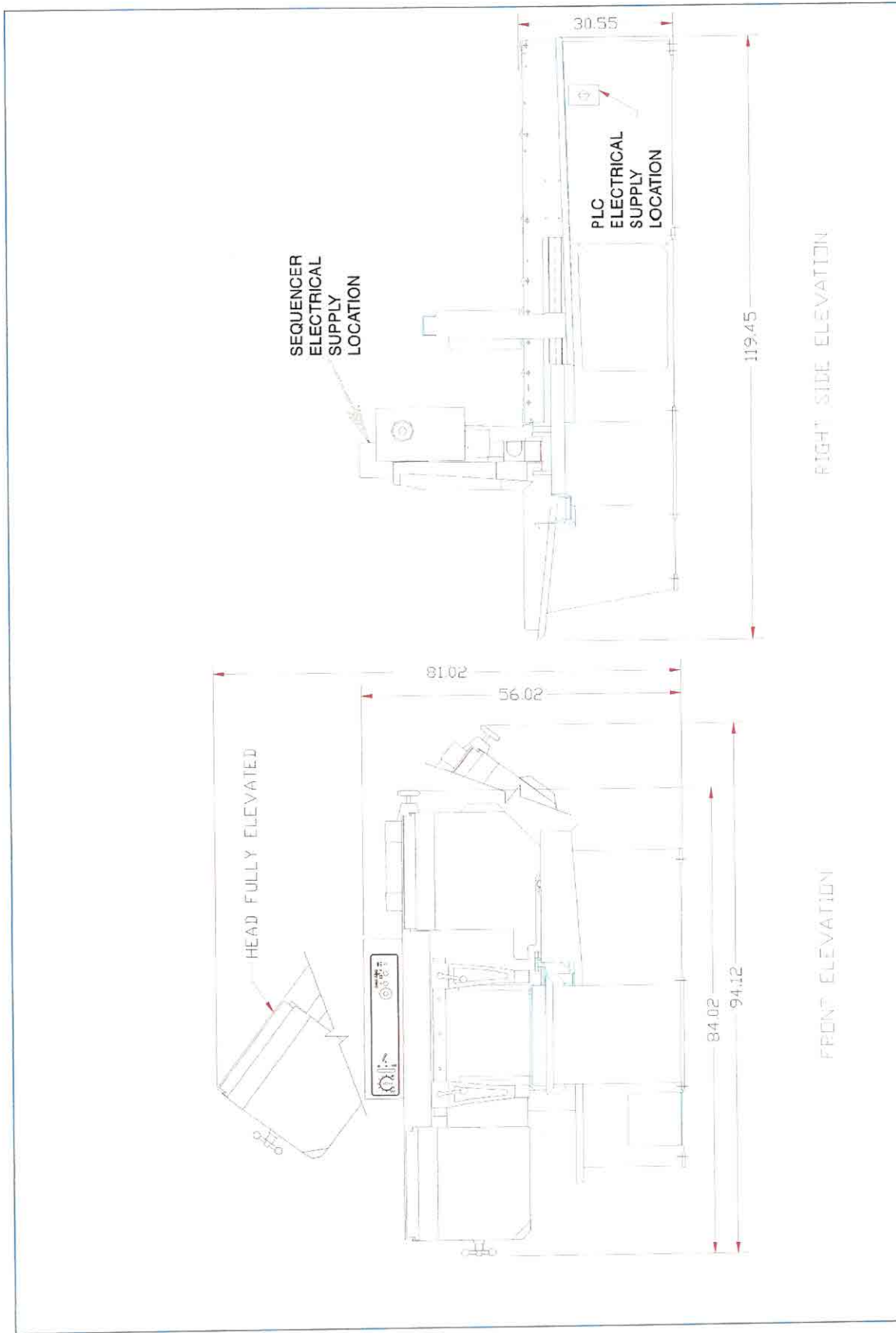
SPECIFICATION LIST

Cutting Capacity	rectangular round	13" High x 18" Wide 12" diameter @ 45 Degrees
Blade	length width thickness	13' 6" 1" (Actual measurment1.075" including teeth) .032"
Blade speed	3 HP Variable Speed	75 to 400 Surface Feet/Minute - Variable
Blade guides		Carbide
Blade wheel diameter		16"
Motors		3 Horsepower Variable Speed Drive 2 HP 1800 RPM, Hydraulic Pump Drive
Coolant pump		3.5 Gallons Per Minute
Coolant reservoir		6 Gallons
Table height		30 " High
Shuttle Stoke		29"
Machine weight		3000 pounds
Maxiumum Work Load		5000 pounds
Overall Dimensions		84" Wide x 120" Long x 56" High

LAYOUT DRAWINGS



TOLERANCES UNLESS OTHERWISE SPECIFIED	2 PLC DEC 3 PLC DEC	FRACTIONAL ANGULAR	DWN JL	DATE 11-10-10	SCALE	HYD-MECH ENGINEERING LTD WOODSTOCK, ONTARIO	TITLE PUMP FOUNDATION PLAN	DWG. NO. P-100-100



TOLERANCES UNLESS OTHERWISE SPECIFIED	2 PLC DEC 3 PLC DEC	FRACTIONAL ANGULAR	DWG. NO.	DATE	SCALE	HYD-MECH ENGINEERING LTD	TITLE	DWG. NO.
						WOODSTOCK, ONTARIO	HYD-MECH ENGINEERING LTD	222-111-1111

SECTION 9, WARRANTY

Hyd-Mech Group Ltd. warrants each new S-20A Series II bandsaw to be free from failure resulting from defective material and workmanship under proper use and service for a period of one year following the date of shipment to the user. Hyd-Mech's sole obligation under this warranty is limited to the repair or replacement without charge, at Hyd-Mech's factory, warehouse, or approved repair shop, of any part or parts which Hyd-Mech's inspection shall disclose to be defective. Return freight must be prepaid by the user.

This warranty, in its entirety, does not cover maintenance items, including but not limited to lubricating grease and oils, filters, V-belts, saw blades, etc., nor any items therein which show signs of neglect, overloading, abuse, accident, inadequate maintenance, or unauthorized altering.

MOTOR, GEARBOX, PUMP, ELECTRIC COMPONENTS, VALVES, HOSES, FITTINGS, and any other items used in the manufacture of the S-20A Series II, but not originally manufactured by Hyd-Mech are subject to the original manufacturer's warranty. Hyd-Mech will provide such assistance and information as is necessary and available to facilitate the user's claim to such other manufacturer.

Liability or obligation on the part of Hyd-Mech for damages, whether general, special or for negligence and expressly including any incidental and consequential damages is hereby disclaimed. Hyd-Mech's obligation to repair or replace shall be the limit of its liability under this warranty and the sole and exclusive right and remedy of the user.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, WRITTEN OR ORAL, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This warranty may not be changed, altered, or modified in any way except in writing by Hyd-Mech Group Ltd.

**HYD-MECH GROUP
1079 Parkinson Road
P.O. BOX 1030
Woodstock, Ontario
N4S 8A4**

**Phone: (519) 539-6341
Fax: (519) 539-5126
Toll Free (877) 237-0914
e-mail: info@hydmech.com**

SEQUENCER PARAMETERS

NOTE: With the V.V.P., option parameter #1 is increased to allow vises to close.

0.		1.		2.		3.	
4.							

mitsubishi PLC PARAMETERS

SPEED CONSTANT	WHEEL TRGETS	LTH CLB (PRESS "ENTER")
ACTUAL LTH	LTH CONSTANT	ACCEL DIST
DECEL DIST	MIN FST DIST	TARGET WINDOW
FVO DWELL	SVO DWELL	CLOSE TIME
FEED RATE	ACTUAL POSITION	HOLD SHT HOME
YES / NO	YES / NO	
BRKN PROX	MIN BLD SPEED	SPD PROX DELAY
YES / NO		
POWER DWN TIMER	BLADE CLEAR	TRIM CUT
	YES / NO	YES / NO
COOLANT	QUEUE	
BLD / BLD+DWN	REPEAT	

DATE: ___/___/___
MM DD YY

SER# _____

VOLTAGE: _____