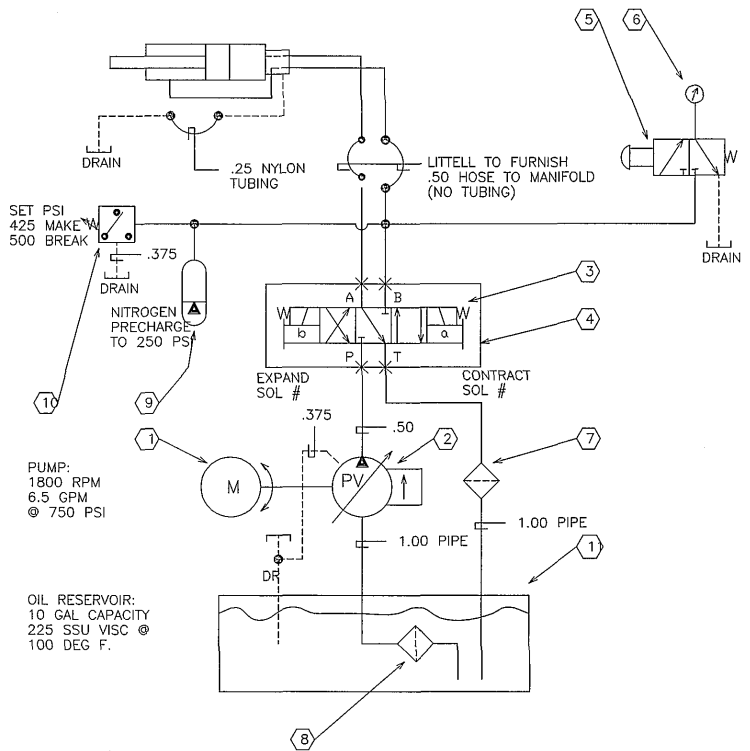


DATE	SYM	WAS	BY
10/26/78	5	ADDED	MP
02/22/79	5	REVISED	RNM
06/14/79	A	REVISED	FAS
06/30/88	B	094155	TJG
12/13/89	C	ADDED	TJG
02/20/90	D	DGSME-01Y-10	TJG

SPINDLE EXPANSION (REF ONLY - FURNISHED BY LITTELL)
CYLINDER (SEE PARTS LIST PER JOB)
W/ROTARY UNION



VENDOR CAUTION NOTES:

1. EXTREME DIMENSIONS OF ASSEMBLED UNIT MUST NOT EXCEED 16" W X 23" H X 28" L.
2. PRESSURE SWITCH & SOLENOID VALVE WILL BE WIRED BY LITTELL TO NUMBERED TERMINAL STRIP IN NEMA 12 BOX FURNISHED & MTD BY LITTELL.
3. SEE LITTELL DWG #C-134740 FOR TYP ASS'Y CONFIGURATION.
4. THIS UNIT RATED FOR 110 V - 50-60 HZ (FOR 220V SEE DWG #B-237417, FOR 24 VDC SEE DWG #B-264455).
5. FOR DIAGRAM WITH PRESSURE REDUCING SYSTEM FOR HYDRAULIC EXPANSION SYSTEM TO ELIMINATE COIL DISTORTION AT SMALL I.D. SEE DWG #C-263864.

11	1	RESERVOIR - 10 GAL - SPECIAL INCL BAFFLE, OIL GAUGE, DRAIN, CLEANOUT ACCESS ETC	
10	1	SWITCH - PRESS "SQ-D" CLASS 9012, TYPE - ADW-5	093804
9	1	ACCUMULATOR - HYD "VICKERS" #A1-75-11, 3000 PSI, 1 QT, .75 NPT	092665
8	1	STRAINER - "VICKERS" SUCTION #OF3-08-11 PART #215239	270807
7	1	FILTER - "VICKERS" RETURN LINE #OFM-101-10	096383
6	1	GAUGE - PRESS "VICKERS" LIQUID FILLED, 0-1500 PSI, DUAL SCALE PSI /BARS #CO-1012	.
5	1	VALVE - "PNEUTROL" PUSH TO READ #GI-21-5 .25 NPT	220476
4	1	SUBPLATE - "VICKERS" SIDE PORTED #DGMS-3-1 E-10-S	238157
3	1	VALVE - "VICKERS" 4 WAY, 3 POS, DOUBLE SOL, SPRING CENTERED #DG4V3-3C-MWB-50 110 V 50-60 HZ	.
2	1	PUMP - "VICKERS" VAR VOL, PRESSURE COMPENSATED #PVB6A-FRS-20-CA-11	210618
1	1	MOTOR - SEE CHART ON DWG #C-134740	
SYM	QTY	DESCRIPTION	LITTELL PT NO

NOTE:
ALL FITTINGS TO BE "PARKER" TRIPLE-LOK
ALL TUBING TO BE .50 UNLESS NOTED
.25 - .50 TUBING - .035 WALL
.625 - 1.00 TUBING - .049 WALL

SEQUENCE OF OPERATION - REEL EXPAND/CONTRACT

1. CONTROLLED BY 4 WAY, 3 POS, DOUBLE SOL, SPRING CENTERED VALVE.
2. SPINDLE POSITION IS MAINTAINED BY AN ACCUMULATOR IN COMBINATION WITH A PRESSURE SWITCH WHICH SENSES PRESSURE LOSS DUE TO INTERNAL LEAKAGES.
3. HYDRAULIC PUMP OPERATES INTERMITTENTLY IN AUTOMATIC MODE TO MAINTAIN PRESSURE ON ROD END OF CYLINDER. WHEN EXPAND SOLENOID IS ENERGIZED BY SIGNAL FROM PRESSURE SWITCH, INDICATING DROP OFF OF PRESSURE BELOW 425 PSI IN ACCUMULATOR, PUMP STARTS & VALVE ENERGIZES. WHEN PRESSURE IN ACCUMULATOR REACHES 500 PSI, VALVE DE-ENERGIZES & PUMP STOPS WHEN "DELAY" TIMER TIMES OFF.

PARTS LIST

COPYRIGHT VERNER INTERNATIONAL GROUP INC. ALL RIGHTS RESERVED. THIS DOCUMENT CONTAINS UNPUBLISHED CONFIDENTIAL AND PROPRIETARY INFORMATION OF VERNER INTERNATIONAL GROUP INC. NO DISCLOSURE OR USE OF ANY PORTIONS OF THESE MATERIALS MAY BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF VERNER INTERNATIONAL GROUP INC.

CHKD.	01/29/91	TJG
DRN.	01/29/91	DRR
DES.		
	DATE	NAME
TITLE DIAGRAM - HYDRAULIC - GRAPHICAL		PART NO.
MACHINE #S250 AC REEL		B-134539
ORIG. NO.	SHT	OF
		SCALE:

