



NOTE:
 USE 'FARMER' TRIPLE LOG 3/4" FLARE FITTINGS.
 ALL TUBING TO BE 3/8" UNLESS NOTED.
 .25" - 5' TUBING - .035" WALL.
 .625" - 1' TUBING - .049" WALL.
 SEE MANIFOLD SUB-ASSEMBLIES #C-11251 & C-11252 FOR MOUNTING DETAILS.

▲ - USE 750' X 15" DOUBLE EXTRA STRONG SEAMLESS STEEL NIPPLES TO MOUNT CHECK VALVE (1) AT BOTH TILT CYLINDER PORTS.

▲ - STANDARD VOLTAGE 115V-60HZ
 ▲ - STANDARD VOLTAGE 230/460V-50-60HZ

□ - INDICATES PIPED PORT

COIL FILTER SHOWN IN START POSITION

VALVE OPERATION AND REQUIREMENTS

- (7) SYSTEM PRESSURE RELIEF VALVE — SET AT 1500 P.S.I.
- (8) PRESSURE REDUCING VALVE:
 THIS VALVE IS USED FOR REDUCED PRESSURE TO OPERATE SKID CLAMPS AND SHIFT TABLE. SET THIS PRESSURE TO THE POINT WHERE THE SHIFT TABLE WILL OPERATE UNDER MAXIMUM COIL LOAD. GREATER PRESSURES MAY CAUSE THE SKID CLAMP CYLINDERS TO DAMAGE THE SKID.
- (11) CHECK VALVES WITH INTERNAL ORIFICE:
 THESE VALVES ARE MOUNTED IN THE TILTING CYLINDER PORTS CAUSING FREE FLOW INTO THE CYLINDER AND A FLOW CONTROLLED FLOW OUT OF THE CYLINDER. THE ORIFICE INDUCES POWER LOCKING OF THE TILTING FRAME. ALSO IN CASE OF A HYDRAULIC POWER LOSS THE FRAME WILL LOWER UNDER A CONTROLLED CONDITION.
- (13) PILOT OPERATED CHECK VALVE:
 THIS VALVE IS USED AS A HYDRAULIC LOCK TO FIX THE CLAMP CYLINDERS IN ANY EXTENDED OR RETRACTED POSITION.
- (14) HAND VALVE:
 IN CASE OF AN ELECTRIC OR HYDRAULIC PUMP POWER LOSS, OPENING THESE VALVES ALLOWS THE TILTING FRAME TO LOWER. ALSO DURING MAINTENANCE AND POWER IS NOT AVAILABLE, OPENING THESE VALVES WILL ALLOW THE TILTING FRAME TO BE TILTED BY A HOIST OR JACK.
- (15) HAND VALVE:
 OPEN THIS VALVE TO SET OR READ SYSTEM PRESSURE.
- (16) HAND VALVE:
 OPEN THIS VALVE TO SET OR READ REAR REDUCED PRESSURE.
- (17) TILTING CYLINDER VALVE
 ENERGIZE THIS VALVE AND THE TILTING FRAME WILL BE PIVOTED BY HYDRAULIC CYLINDER (11). NOTE: THIS IS AN INTERNAL PILOT OPERATED SOL VALVE AND WILL NOT OPERATE IF PUMP PRESSURE IS NOT AVAILABLE.
- (18) SKID CLAMP CYLINDER VALVE
 WHEN THIS VALVE HAS BEEN ENERGIZED THE CLAMP CYLINDERS WILL EXTEND OR RETRACT AS REQUIRED. THIS IS A DETENTED VALVE AND WILL REMAIN IN EITHER OF ITS TWO POSITIONS UNTIL IT HAS BEEN RE-ENERGIZED. IF DURING MANUAL MODE THE CLAMP CYLINDERS ARE EXTENDED THEY SHOULD BE RETURNED TO THE STARTING MODE (SEE MANUAL MODE).
- (19) TABLE SHIFT CYLINDER VALVE
 OPERATION OF THIS VALVE WILL EXTEND OR RETRACT THE SHIFT TABLE CYLINDER VALVE (AS REQUIRED).
- (23) HYDRAULIC PRESSURE SWITCH
 A REQUIREMENT OF THE AUTO MODE IS A SENSING SWITCH TO INDICATE THE SHIFT TABLE IS IN POSITION AND IS READY FOR TILTING.
- (24) GAGE SNUBBER WITH INTERNAL ORIFICE
 THE INTERNAL ORIFICE OF THIS SNUBBER VALVE IS USED AS A TIME DELAY OF PRESSURE BUILD UP IN PRESSURE SWITCH (23).

SEQUENCE OF OPERATION

STARTING MODE (REF TO FIG 1)
 TILT CYLINDER WILL BE EXTENDED. TABLE SHIFT CYLINDER WILL BE RETRACTED. SKID CLAMP CYLINDER WILL BE RETRACTED. SET OPERATORS SEL SWITCH TO AUTO OR MANUAL MODE. IF ANY OF THESE CYLINDERS ARE OUT OF POSITION RETURN THEM TO STARTING MODE BY FOLLOWING THE PROCEDURE UNDER MANUAL MODE.

MANUAL MODE
 EACH OF THE THREE FUNCTIONS OF THE COIL FILTER CAN BE ACTUATED BY PISHUTTON. AFTER THE HYDRAULIC PUMP MOTOR HAS BEEN STARTED TURN THE OPERATORS SELECTOR SWITCH TO MANUAL THEN SELECT THE PROPER PUSHBUTTON FOR DESIRED FUNCTIONS. RELEASING THE PUSH BUTTON WILL CAUSE THAT FUNCTION TO STOP EXCEPT THE CLAMP CYLINDER. THE CLAMP CYLINDERS WILL ALWAYS BE FULLY EXTENDED UNLESS THEY ARE STOPPED BY CLAMPING A SKID.

AUTO MODE FORWARD TILT
 AFTER THE COIL FILTER IS IN THE START MODE AND THE OPERATORS SELECTOR SWITCH HAS BEEN PLACED IN AUTO MODE WITH PUMP MOTOR OPERATING PUSH FORWARD SHIFT BUTTON ENERGIZING VALVE (9) SOL "A" CAUSING CYLINDER (20) TO EXTEND. MOVING THE COIL NEXT TO THE SADDLE WHEN THE COIL IS STOPPED MOVING THE TABLE WILL BUILD UP AND ACTIVATE PRESSURE SWITCH (23). WHEN PRESSURE SWITCH (23) HAS BEEN CLOSED VALVE (9) SOL "A" WILL BE ENERGIZED CAUSING FORWARD TILTING OF THE TABLE. WHEN THE TILTING FRAME HAS TRAVELED 45° VALVE (9) SOL "B" WILL BE AUTOMATICALLY ENERGIZED CAUSING CYLINDER (20) TO RETRACT. WHEN CYLINDER (20) IS FULLY RETRACTED THE CLAMP CYLINDERS WERE BEING EXTENDED THE TILTING FRAME CONTINUED TO PIVOT. AFTER THE TILTING FRAME HAS PIVOTED FORWARD SOL "A" WILL BE ENERGIZED STOPPING TILT CYLINDER (20). THE PUMP MOTOR WILL STOP AUTOMATICALLY. COIL NOW CAN BE REMOVED.

AUTO MODE REVERSE TILT
 TO REVERSE TILT THE FILTER, PLACE OPERATORS SELECTOR SWITCH IN AUTO AND WITH PUMP MOTOR RUNNING, PUSH REVERSE TILT BUTTON ENERGIZING VALVE (9) SOL "B" EXTENDING CYLINDER (20) REVERSE PIVOTING FRAME. AT THE END OF REVERSE TILT VALVE (9) SOL "A" WILL BE AUTOMATICALLY ENERGIZED RETRACTING CYLINDERS (20) UNCLAMPING SKID. WHILE CLAMP CYLINDERS WERE BEING RETRACTED THE FRAME CONTINUED TO PIVOT AND STOPPED AUTOMATICALLY BY DE-ENERGIZING VALVE (9) SOL "A". AT THE END OF REVERSE TILT VALVE (9) SOL "B" WILL BE AUTOMATICALLY ENERGIZED AND CYLINDER (20) RETRACTED CAUSING THE TABLE SHIFT TO RETURN TO LOADING POSITION. BEING MOVED INTO THIS POSITION VALVE (9) SOL "A" WAS AUTOMATICALLY DE-ENERGIZED STOPPING CYLINDER (20). THE PUMP MOTOR WILL STOP AUTOMATICALLY TO AWAIT THE NEXT CYCLE.

JUL 1997

REV.	DESCRIPTION	DATE
01	REVISED	12/10/58
02	REVISED	12/10/58
03	REVISED	12/10/58
04	REVISED	12/10/58
05	REVISED	12/10/58
06	REVISED	12/10/58
07	REVISED	12/10/58
08	REVISED	12/10/58
09	REVISED	12/10/58
10	REVISED	12/10/58
11	REVISED	12/10/58
12	REVISED	12/10/58
13	REVISED	12/10/58
14	REVISED	12/10/58
15	REVISED	12/10/58
16	REVISED	12/10/58
17	REVISED	12/10/58
18	REVISED	12/10/58
19	REVISED	12/10/58
20	REVISED	12/10/58

31	VALVE (CONTINUED)	93868
30	VALVE	93868
29	VALVE	93868
28	VALVE	93868
27	VALVE	93868
26	VALVE	93868
25	VALVE	93868
24	VALVE	93868
23	VALVE	93868
22	VALVE	93868
21	VALVE	93868
20	VALVE	93868
19	VALVE	93868
18	VALVE	93868
17	VALVE	93868
16	VALVE	93868
15	VALVE	93868
14	VALVE	93868
13	VALVE	93868
12	VALVE	93868
11	VALVE	93868
10	VALVE	93868
9	VALVE	93868
8	VALVE	93868
7	VALVE	93868
6	VALVE	93868
5	VALVE	93868
4	VALVE	93868
3	VALVE	93868
2	VALVE	93868
1	VALVE	93868
QTY	DESCRIPTION	UNIT

60 HZ

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SEE: FUTURE USE D-150773

3099675	121058
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