

HYDRAULIC/HYDROSTATIC SCHEMATIC  
S130 (S/N 529211001 & Above)  
(S/N 529611001 & Above)  
(S/N A1Z711001 & Above)  
(S/N A8KA11001 & Above)  
(S/N A84W11001 & Above)

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LEGEND

- |  |   |  |   |
|--|---|--|---|
| ① RESERVOIR:<br>Capacity . . . . . 14.0 Qts. (13,25 L)   | ⑮ LIFT CYLINDER SPOOL - MADE TO<br>RESTRICT FLOW DURING BOOM<br>DOWN BUT NOT DURING BOOM UP | ③① RELIEF VALVE: 3300 PSI (228 Bar)  | ④④ PILOT ACTIVATED DIRECTIONAL<br>CONTROL VALVE - HYDRAULIC<br>POWERED BOB-TACH             |
| ② SPRING LOADED FILTER BY-PASS<br>VALVE: 45-55 PSI (3,1-3,8 Bar)   | ⑯ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - BICS CONTROL                            | ③② FILTER - HYDRAULIC (CANISTER)   | ④⑤ RESTRICTION - 0.089 inch (2,26 mm)   |
| ③ DIFFERENTIAL PRESSURE SWITCH:<br>36-44 PSI (2,5-3,0 Bar)<br>Normally Closed  | ⑰ PILOTED ACTIVATED DIRECTIONAL<br>CONTROL VALVE - TILT CONTROL                             | ③③ FILTER - CASE DRAIN (SINTERED<br>BRONZE)  | ④⑥ RESTRICTION - 0.025 inch (0,6 mm)  |
| ④ DRIVE MOTOR SHUTTLE VALVE  | ⑱ PILOTED ACTIVATED DIRECTIONAL<br>CONTROL VALVE - LIFT CONTROL                             | ③④ FILTER - BICS CONTROL VALVE<br>(SCREEN)   | ④⑦ RELIEF VALVE - 2000 PSI (137 Bar)  |
| ⑤ RELIEF/REPLENISHING VALVE - HIGH<br>PRESSURE: 5000 PSI (345 Bar)   | ⑲ PULL BUTTON ACTIVATED<br>DIRECTIONAL CONTROL VALVE - LIFT<br>ARM BY-PASS                  | ③⑤ CHECK VALVE - BUCKET POSITION<br>VALVE  | ④⑧ RELIEF VALVE - 1200 PSI (83 Bar)   |
| ⑥ RELIEF VALVE - CHARGE INLET:<br>360 PSI (24,8 Bar)<br>at High Engine Idle<br>With 140 degrees F. (60 degrees C.) Fluid | ⑳ PILOTED ACTIVATED DIRECTIONAL<br>CONTROL VALVE - UNLOADING<br>SPOOL                       | ③⑥ RESTRICTION   | ④⑨ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE (TWO COIL)                               |
| ⑦ FRONT AUXILIARY MANUAL PRESSURE<br>BLEED-OFF VALVE   | ㉑ PILOTED ACTIVATED DIRECTIONAL<br>CONTROL VALVE - FLOW CONTROL<br>SPOOL                    | ③⑦ VARIABLE CAPACITY DISPLACEMENT<br>BIDIRECTIONAL HYDROSTATIC PUMP                      | ⑤① FIXED CAPACITY DISPLACEMENT<br>HYDRAULIC MOTOR   |
| ⑧ HYDRAULIC PUMP . . . . . Gear Type<br>16.9 GPM (64 L/min.) at High Engine Idle   | ㉒ FLOW DIVIDER ADJUSTMENT VALVE   | ③⑧ SHUTTLE RELIEF VALVE<br>(Not Adjustable - Factory Set)<br>65 PSI (4,5 Bar)            | ⑤② ANTICAVITATION VALVE   |
| ⑨ RELIEF VALVE - MAIN:<br>2650-2750 PSI (183-190 Bar)<br>at Front Quick Couplers   | ㉓ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - BASE                                    | ③⑨ FIXED CAPACITY DISPLACEMENT<br>BIDIRECTIONAL HYDROSTATIC<br>MOTOR                     | ⑤③ PROPORTIONAL RELIEF VALVE –<br>(Fan Speed Regulator):<br>1566 - 1784 PSI (108 - 123 bar) |
| ⑩ RELIEF/ANTICAVITATION VALVE -<br>PORT 3500 PSI (241,3 Bar)   | ㉔ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - ROD                                     | ③⑩ CHECK VALVE - With 80 PSI (5,5 Bar) Spring  | ⑤④ FILTER - BOB-TACH VALVE  |
| ⑪ ANTICAVITATION VALVE   | ㉕ LOAD SHUTTLE VALVE - BLEED OFF  | ④① SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - BUCKET POSITION<br>VALVE (ON/OFF)   |   |
| ⑫ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - AUXILIARY  | ㉖ SOLENOID ACTIVATED DIRECTIONAL<br>CONTROL VALVE - TWO COIL                                | ④② CHECK VALVE - BICS CONTROL VALVE  |   |
| ⑬ RELIEF/ANTICAVITATION VALVE -<br>PORT (OPTIONAL) 3500 PSI (241,3 Bar)  | ㉗ PILOT ACTIVATED DIRECTIONAL<br>CONTROL VALVE - REAR AUXILIARY                             | ④③ CHARGE PUMP -<br>12.8 GPM (48,5 L/min) at High Engine Idle                            |   |
| ⑭ LOAD CHECK VALVE   | ㉘ RESTRICTION - 0.343 inch (8,73 mm)  | ④④ CHECK VALVE - With 300 PSI (20,7 Bar)<br>Spring And With 0.016 inch (0,40 mm) Orifice |   |
|  | ㉙ RESTRICTOR - 0.031 inch (0,8 mm)  |  |   |

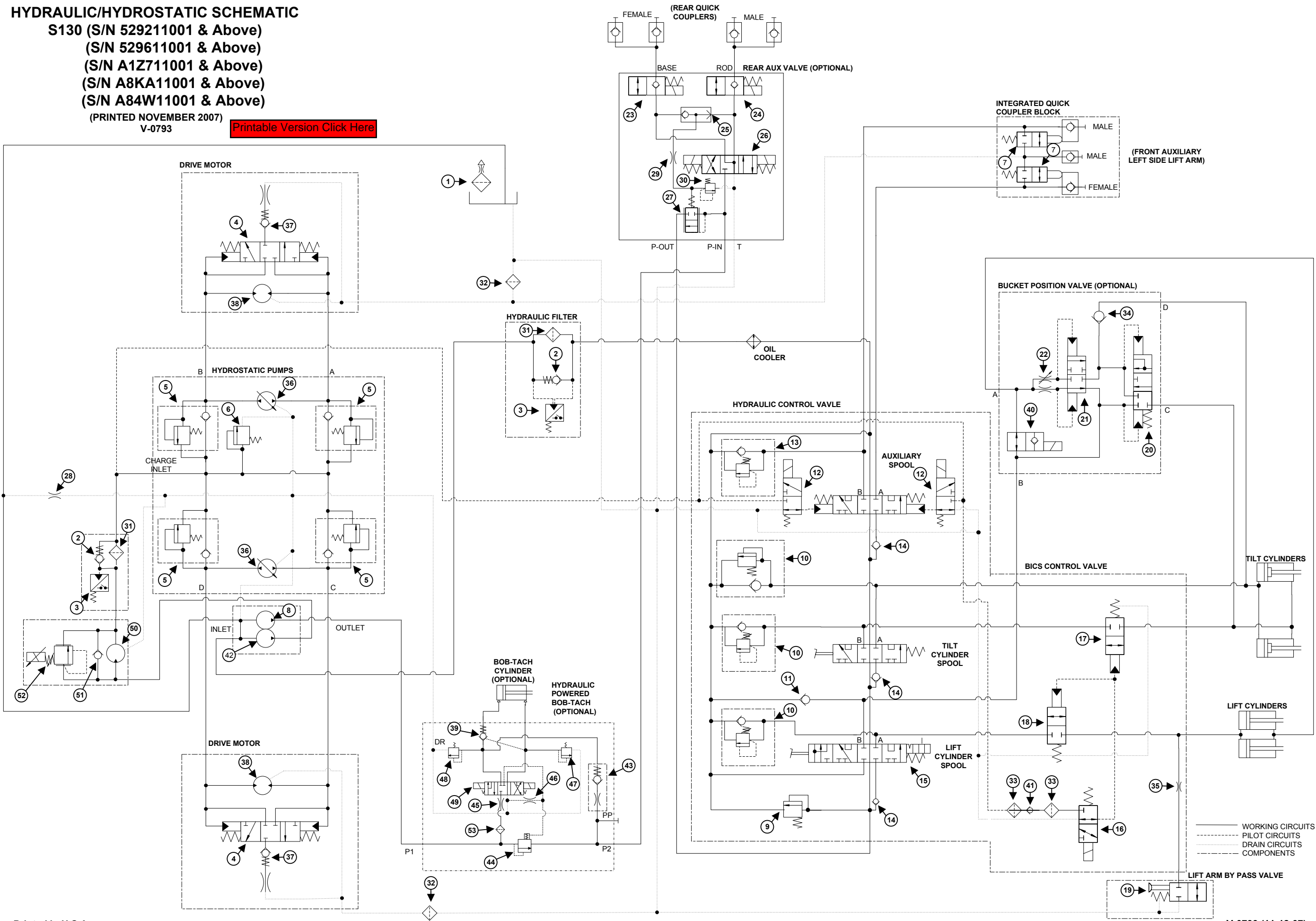
NOTE: Unless otherwise specified  
springs have NO significant  
pressure value.

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HYDRAULIC/HYDROSTATIC SCHEMATIC  
WITH SJC OPTION  
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LEGEND

- 1

RESERVOIR:  
Capacity . . . . . 14.0 qt. (13,2 L)
- 2

SPRING LOADED FILTER BY-PASS  
VALVE: 45-55 PSI (3,1-3,8 bar)
- 3

DIFFERENTIAL PRESSURE SWITCH:  
36-44 PSI (2,5-3,0 bar)  
Normally Closed
- 4

DRIVE MOTOR SHUTTLE VALVE
- 5

RELIEF/REPLENISHING VALVE - HIGH  
PRESSURE: 5075 PSI (350 bar)
- 6

RELIEF VALVE - CHARGE INLET:  
360 PSI (24,8 bar)  
at High Engine Idle  
With 140 degrees F. (60 degrees C.) Fluid
- 7

FRONT AUXILIARY MANUAL  
PRESSURE BLEED-OFF VALVE
- 8

HYDRAULIC PUMP . . . . . Gear Type  
16.9 GPM (64 L/min.) at High Engine Idle
- 9

RELIEF VALVE - MAIN:  
2650-2750 PSI (183-190 bar)  
at Front Quick Couplers
- 10

PORT RELIEF/ANTICAVITATION VALVE  
3500 PSI (241,3 bar)
- 11

ANTICAVITATION VALVE
- 12

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - AUXILIARY
- 13

PORT RELIEF/ANTICAVITATION VALVE:  
. . . . . (Optional)  
3500 PSI (241,3 bar)
- 14

LOAD CHECK VALVE
- 15

LIFT CYLINDER SPOOL - MADE TO  
RESTRICT FLOW DURING BOOM  
DOWN BUT NOT DURING BOOM UP
- 16

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - BICS CONTROL
- 17

PILOTED ACTIVATED DIRECTIONAL  
CONTROL VALVE - TILT CONTROL
- 18

PILOTED ACTIVATED DIRECTIONAL  
CONTROL VALVE - LIFT CONTROL
- 19

PULL BUTTON ACTIVATED  
DIRECTIONAL CONTROL VALVE -  
LIFT ARM BY-PASS
- 20

PILOTED ACTIVATED DIRECTIONAL  
CONTROL VALVE - UNLOADING  
SPOOL
- 21

PILOTED ACTIVATED DIRECTIONAL  
CONTROL VALVE - FLOW CONTROL  
SPOOL
- 22

FLOW DIVIDER ADJUSTMENT VALVE
- 23

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - BASE
- 24

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - ROD
- 25

LOAD SHUTTLE VALVE - BLEED OFF
- 26

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - TWO COIL
- 27

PILOT ACTIVATED DIRECTIONAL  
CONTROL VALVE - REAR AUXILIARY
- 28

CHARGE PRESSURE SENSOR
- 29

RESTRICTOR - 0.031 inch (0,8 mm)
- 30

RELIEF VALVE: 3300 PSI (228 bar)
- 31

FILTER - HYDRAULIC (CANISTER)
- 32

FILTER - CASE DRAIN (SINTERED  
BRONZE)
- 33

FILTER - BICS CONTROL VALVE  
(SCREEN)
- 34

CHECK VALVE - BUCKET POSITION  
VALVE
- 35

RESTRICTION
- 36

VARIABLE CAPACITY DISPLACEMENT  
BI-DIRECTIONAL HYDROSTATIC PUMP
- 37

SHUTTLE RELIEF VALVE  
(Not Adjustable - Factory Set)  
65 PSI (4,5 bar)
- 38

FIXED CAPACITY DISPLACEMENT  
BI-DIRECTIONAL HYDROSTATIC  
MOTOR
- 39

CHECK VALVE - With 80 PSI (5,5 bar) Spring
- 40

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE - BUCKET POSITION  
VALVE (ON/OFF)
- 41

CHECK VALVE - BICS CONTROL VALVE
- 42

RESTRICTION - 0.343 inch (8,7 mm)
- 43

FILTER - Bob-Tach Valve
- 44

PILOT ACTIVATED DIRECTIONAL  
CONTROL VALVE - HYDRAULIC  
POWERED BOB-TACH
- 45

RESTRICTION - 0.089 inch (2,26 mm)
- 46

RESTRICTION - 0.025 inch (0,6 mm)
- 47

RELIEF VALVE - 2000 PSI (137 bar)
- 48

RELIEF VALVE - 1200 PSI (83 bar)
- 49

SOLENOID ACTIVATED DIRECTIONAL  
CONTROL VALVE (TWO COIL)
- 50

FIXED CAPACITY DISPLACEMENT  
HYDRAULIC MOTOR
- 51

ANTICAVITATION VALVE
- 52

PROPORTIONAL RELIEF VALVE –  
(Fan Speed Regulator):  
1566 - 1784 PSI (108 - 123 bar)
- 53

CHARGE PUMP -  
12.8 GPM (48,5 L/min) at High Engine Idle
- 54

CHECK VALVE - With 300 PSI (20,7 bar) Spring  
with 0.016 inch (0,40 mm) orifice
- 55

SOLENOID ACTIVATED CONTROL  
VALVE - FORWARD/REVERSE
- 56

SERVO PISTON -Swash Plate
- 57

POSITION SENSOR -Swash Plate

**NOTE:** Unless otherwise specified, springs have  
NO significant pressure value.

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