

SERVICE MANUAL (ANSI)

TELEHANDLERS

MODELS ZB2044



161850AB September 2014

SKYJACK

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Section 1
SCHEDULED MAINTENANCE

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Table 2.1 Telehandler Specifications and Features

MODEL	ZB2044	
Engine		
Type	Cummins QSB4.5C160T3	
Max RPM	2500 rpm	
Horsepower @ 2300 RPM	168 HP	
Horsepower @ 2500 RPM	163 HP	
Fuel type	Diesel	
Transmission		
Type	DANA T32000	
Speeds forward	3	
Speeds Reverse	3	
Top Speed	20.5 mph (33 km/h)	
Gear Ratios		
1st Gear	4.64 : 1	
2nd Gear	2.23 : 1	
3rd Gear	0.82 : 1	
Electrical		
System voltage	12 volts negative ground	
Standard Batteries		
Type	HP-31E	
Quantity	2	
Cranking amperes @ 0°F (-17°C)	725 A	
Total cranking amps @ 0°F (-17°C)	1450 A	
Cranking amperes @ 32°F (0°C)	1100 A	
Reserve capacity	180 minutes	
Dimensions		
Overall length (less forks)	243 in (617 cm)	
Overall width	102 in (259 cm)	
Overall Height	108 in (274 cm)	
Curb weight (standard machine with open cab)	41,500 lbs. (18,370 kg)	45,000 lbs. (20,000 kg)
Maximum capacity	20,000 lbs. (9,071 Kg)	
Wheelbase	138 in (350 cm)	
Round steer turning Radius (inside)	220 in (559 cm)	
Boom		
Number of sections	2	3
Maximum lift height	32 ft. 4 in (985 cm)	44 ft. 10 in (1366 cm)
Maximum forward reach	16 ft 6 in (502 cm)	27 ft 5 in (835 cm)
Standard Forks	2¾ x 6 x 60 in (6.9 x 15.2 x 152.4 cm)	2¾ x 6 x 60 in (6.9 x 15.2 x 152.4 cm)
Carriage rollback	19°	19°
Carriage forward tilt	80°	80°
Operating Times		
Boom extend (at max. boom angle)	13 seconds	
Boom retract (at max. boom angle)	9.5 seconds	
Boom raise*	19 seconds	
Boom lower*	20 seconds	
Carriage roll forward	12 seconds	
Carriage roll back	12 seconds	
Frame level right (stop to stop) **	15 - 20 seconds	
Frame level left (stop to stop) **	15 - 20 seconds	

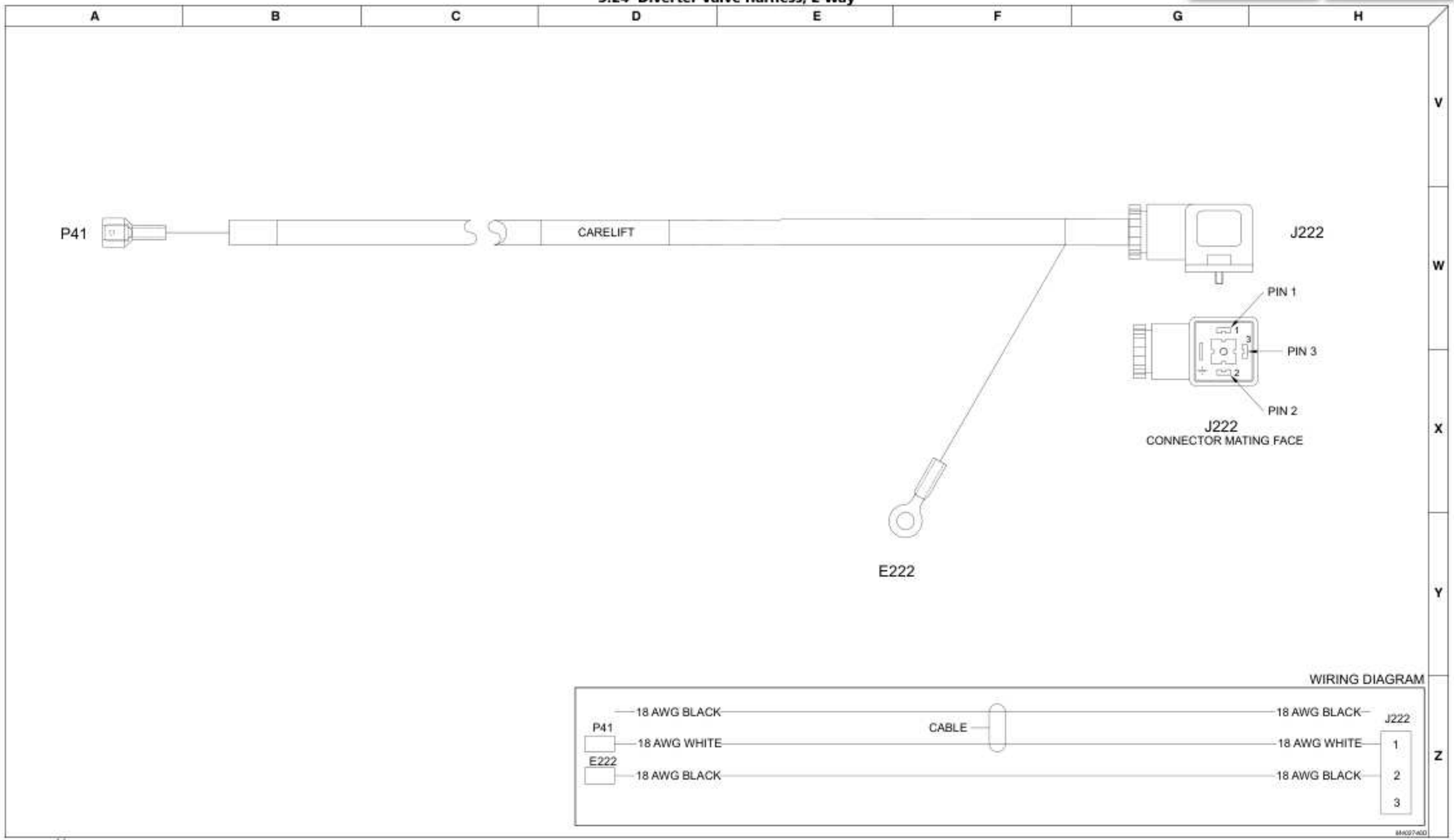
238-B

* Measured with boom fully retracted.

** Under no circumstances should the frame level cycle take less than 15 seconds to complete in either direction.

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3.24 Diverter Valve Harness, 2-Way



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Active Fault Codes

1. During normal operation the single or four parameter screen will be displayed.



2. When the PowerView receives a fault code from an engine control unit the single or four parameter screen will be replaced with the "Active Fault Codes" message.



3. If the word "MORE" appears above the "Arrow Buttons" there are more active fault codes that may be viewed. Use the "Arrow Buttons" to scroll to the next "Active Fault Code"



4. To acknowledge and "Hide" the fault and return to the single or four parameter display touch the "Enter Button".



5. The display will return to the single or four parameter display, but the display will contain the "Active Fault" warning icon. Touching the "Enter Button" will re-display the hidden fault.



6. Touching the "Enter Button" once again will hide the fault and return the screen to the single or four parameter display.

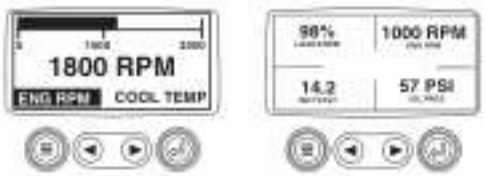


7. The Single or Four parameter screen will display the fault icon until the fault condition is corrected. NOTE: Ignoring active fault codes could result in severe engine damage.



Shutdown Codes

1. During normal operation the single or four parameter screen will be displayed.



2. When the PowerView receives a severe fault code from an engine control unit the single or four parameter screen will be replaced with the "Shutdown!" message.

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Safety Precautions (Continued)

Know and understand all safety precautions before going on to the next section.

- **DRIVE UPHILL LOADED**. When holding a load, driving uphill decreases potential for load to slip out.



- **LEVEL FRAME ON SLOPES** before elevating boom



- **WHEN TRANSPORTING LOADS** fully retract the boom, keep the load low to the ground and forks tilted back slightly. This is the most stable position possible for the vehicle.



- **KEEP** forks close to the ground when in motion to increase telehandler stability and decrease potential for injury to others. When fully stopped, lower forks completely to the ground.



- **TILT** forks backward slightly when traveling to decrease potential of load slipping off.



- **SECURE** loose loads with chains or straps to decrease potential of spills or injury to others.



- **TETHER LOADS** that may swing, keeping them close to the ground. Provide ample clearance for personnel to guide the load safely.



- **SLINGING LOADS** is acceptable only when the load is appropriately attached to a jib boom or the throat of a tilted fork, and the precautions outlined in Section 1.1 are followed.



- **BE AWARE** of the telehandler's travel envelope, especially when turning. Keep sufficient clearance at all times between the telehandler and any obstacles or people.



- **KEEP OTHERS AWARE** at all times during operation.



- **CHECK** lights for proper function before operating.



- **ENSURE ALL** tires are in good condition and lug nuts are properly tightened.



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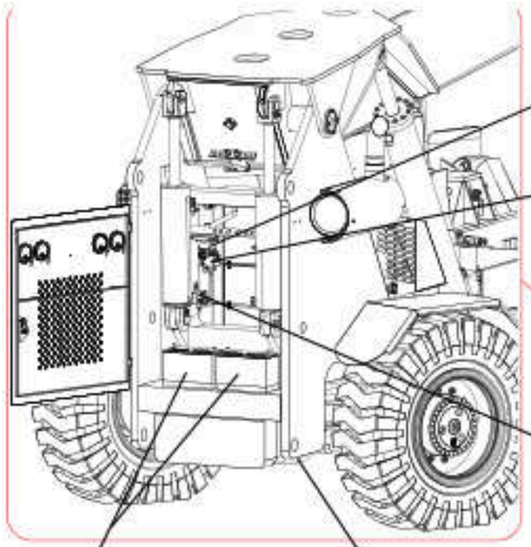
Table 2.5 Pressure Settings

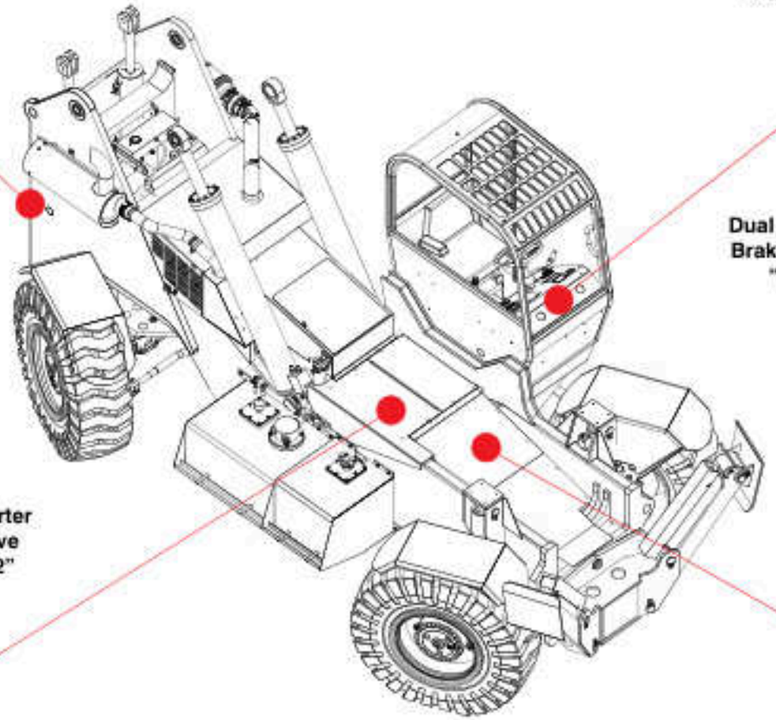
Models ZB2044			
Maximum Pump Pressure	P1		3150 psi
	P2		3200 psi
Stand-by Pump Pressure	P1		500 psi
	P2		550 psi
Lift	Maximum pump pressure controlled		3200 psi
			3200 psi
Extension	Maximum pump pressure controlled		3200 psi
			3200 psi
Carriage Tilt Cylinder	Port Relief	Rod End	3100 psi
		Base End	1500 psi
	Crossover Relief	Rod End	3400 psi
		Base End	1800 psi
Frame Level Cylinder	Port Relief	Rod End	1500 psi
		Base End	1500 psi
Auxiliary Hydraulics	Port Relief	Rod End	2000 psi
		Base End	2000 psi
Outrigger	Port Relief	Rod End	2500 psi
		Base End	2500 psi
Pressure Reducing Valve	Pilot Pressure		325 psi
Priority Valve Pressure Relief	Steering Pressure		2800 psi

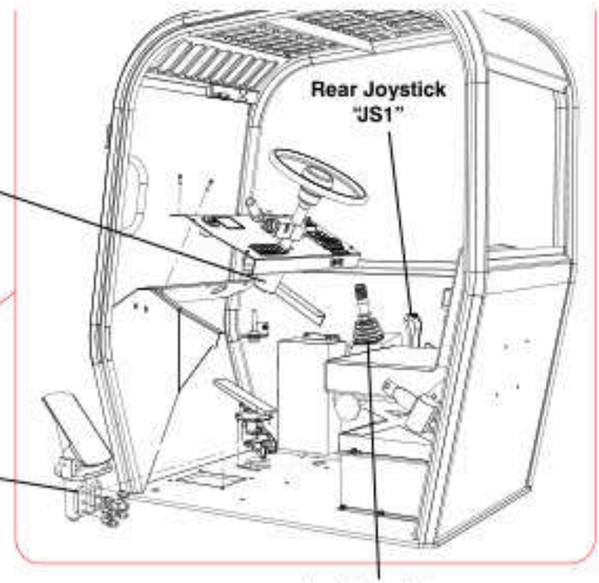
Note: all pressure settings to be checked at idle

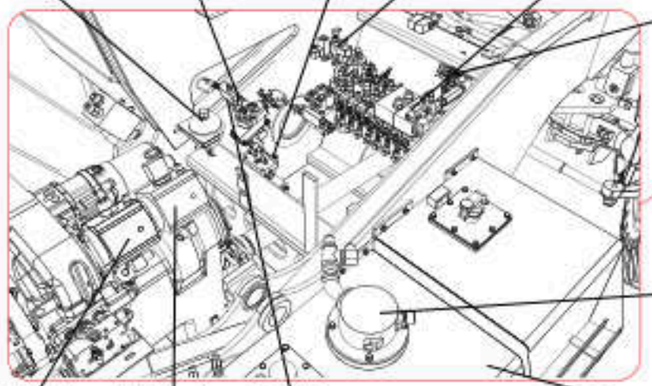
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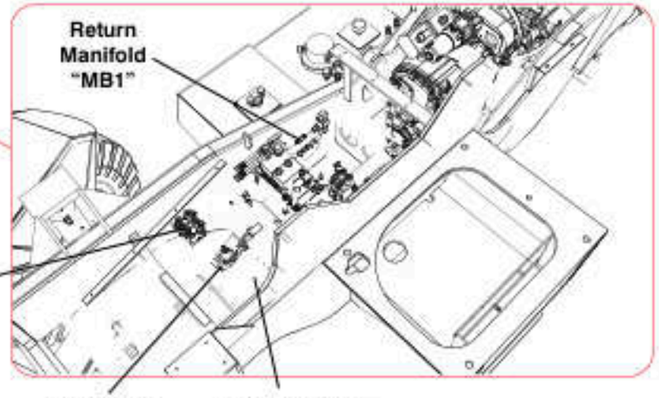
3.17 Hydraulic Manifolds Location











Axle Lock ChargeAccumulator "ACC4"

Axle Lock Control Vavle

Crossover Relief Valve "CRV1"

Battery

Rear Axle Lock Cylinder "C14"

Orbital Steering Motor "OSM1"

Rear Joystick "JS1"

Dual Charge Brake Pedal "V4"

Front Joystick "JS2"

Pilot Pressure Accumulator "ACC1"

Pressure Reducing Valve "PRV1"

Steer Function Valve "V1"

Brake Charge Valve "V3"

Main Valve Assembly

Diverter Valve "V2"

Return Line Filter "F1"

Suction Strainer "STR1"

Hydraulic Pump "P1"

Hydraulic Pump "P2"

Priority Valve "PRT1"

Return Manifold "MB1"

Frame Level Control Manifold

Park Brake Valve "V5"

Brake Charge Accumulators "ACC2" & "ACC3"

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