snorkel

TB100J
TB120
TB126J



MAINTENANCE MANUAL

Part Number 0192736
November 2018

Manufactured/EMS Kits
Installed 7-05 and after

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Appendix A – Glossary

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Annual Maintenance – Every 500 Hours

Item	Procedure	Information	P/F/R
90 day or 150 hour maintenance	Perform maintenance per schedule	Retain copy of checklist	
Hydraulic oil reservoir	Clean and replace fluid	Above 10°F (-13°C) ISO VG32 Below 10°F (-13°C) ISO VG15	
Hydraulic return filter	Replace	After first 50 hours, then at recommended interval	
Hydraulic reservoir suction filter	Clean and reinstall		
Hydraulic pressures	Pump setting	Standby pressure: 375 - 400 psi Maximum system relief pressure: 2,700 - 2,800 psi	
	Function pressures	Boom up: 2,400 - 2,500 psi	
		Boom down: 1,400 - 1,500 psi	
		Steer: 1,900 - 2,000 psi	
		Level: 2,700 - 2,800 psi	
		Extend: 2,000 - 2,100 psi	
		Retract: 2,400 - 2,500 psi	
Gear hubs	Replace fluid	Gear Lubricant SAE Grade 80W-90	
Swing drive	Replace fluid	Gear Lubricant SAE Grade 80W-90	
Engine coolant	Check condition	See engine owner's manual	
Front wheel bearings	Clean and repack	Extreme Pressure Grease Above 10° F NLGI Grade 2 Below 10° F NLGI Grade 1	

Performed by:_____ Date:_____

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2. At the lower controls, set the upper/lower selector switch to lower, pull the emergency stop button out and start the engine

3. At the lower controls, raise the boom to within 30 degrees above horizontal. Partially extend the boom (two to three feet), to allow for deadband calibration.

4. Press the EMS Error Reset button to re-initialize the system.

5. Locate the EMS display on the front of the wiring box.

6. To enter Calibration mode, enter the five digit calibration code, using the Function or F keys. The calibration code must be entered while the machine is initializing. Press Enter. The Calibrate Joystick screen will display.

   Note
   The EMS will be in initialization mode for approximately 7-10 seconds. The calibration code must be entered in that time frame. If the code is not entered in time, simply press the EMS Error Reset button located on the lower controls and try again.

7. Press the arrow down button to display the Calibrate Deadband screen. Refer to Figure 5.55.



Figure 5.55 – EMS Display

8. Press Enter to start Deadband Calibration. The calibration values will display. Refer to Figure 5.56.

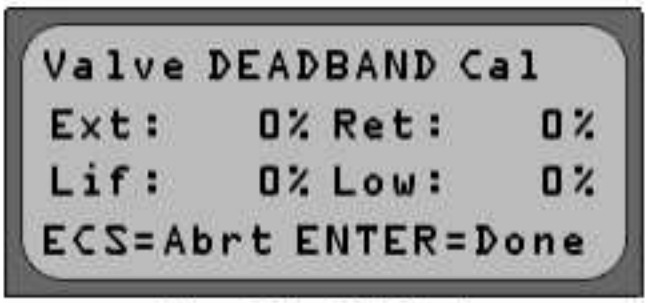


Figure 5.56 – EMS Display

9. Operate the extend switch and lower operation switch to extend the boom. Continue to hold the extend switch until the boom stops and the machine emits continuous beep.

10. Operate the retract switch and lower operation switch to retract the boom. Continue to hold the retract switch until the boom stops and the machine emits continuous beep.

11. Operate the lift switch and lower operation switch to lift the boom. Continue to hold the lift switch until the boom stops and the machine emits continuous beep.

12. Operate the lower switch and lower operation switch to lower the boom. Continue to hold the lower switch until the boom stops and the machine emits continuous beep.

    Observe the motion of the boom carefully, especially in cold oil conditions. If the boom fails to stop moving and does not emit a beep within two minutes, press Esc and then Enter to start the deadband calibration again.

    If the calibration is accepted for all four functions the screen in Figure 5.57 will display. Press Enter to continue to the next calibration procedure. If the deadband is the only thing being calibrated press Esc twice to exit calibration mode. The system will enter normal operation.

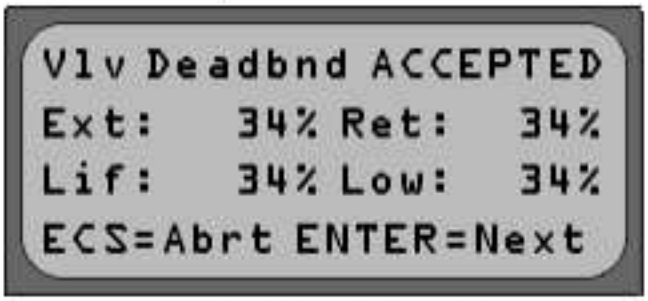


Figure 5.57 – EMS Display

If the data is rejected, the screen in Figure 5.58 will display. This means the boom angle was either too high or too low, before beginning the procedure. Or, the boom was extended or retracted too far, before beginning the procedure. Reposition the boom before beginning again.



Figure 5.58 – EMS Display

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Appendix C – General Specifications

General Specifications – PRO100 and TB100J

Aerial Platform	
Working height	106' (32.3 m)
Maximum platform height	100' (30.5 m)
Horizontal reach	66' (20.1 m)
Main boom	
Articulation	-1° to +74°
Extension	
Turntable rotation	360° continuous
Turning radius, inside	
Axles extended	16' 6" (5.0 m)
Wheelbase	12' (3.7 m)
Ground clearance	17" (44 cm)
Maximum wheel load	16,750 lbs (7,598 kg)
Maximum ground pressure	74 psi (511 kPa)
Weight, EVW	
Approximate	33,000 lbs (15,000 kg)
Width	
Axles retracted	8' 6" (2.6 m)
Axles extended	12' 10" (3.9 m)
Stowed length	44' 6" (13.6 m)
Stowed height	10' 4" (3.1 m)

Platform	
Dimensions	
Aluminum	30" x 92" (76 cm x 234 cm)
Rated work load	
Aluminum 76 cm x 234 cm	600 lb (272 kg)
Rotation	180 degrees
Maximum number of occupants	2 people

Function Speed	
Turntable rotation	
Booms retracted	165 seconds minimum
Booms extended	325 seconds minimum
Main boom	
Up	
Booms retracted	90 to 120 seconds
Booms extended	175 to 205 seconds
Down	
Booms retracted	90 to 120 seconds
Booms extended	175 to 205 seconds
Extend	80 to 100 seconds
Retract	80 to 100 seconds
Platform rotation	16 to 20 seconds
Drive – four wheel drive	
Booms down and retracted	
High speed, low torque	3.0 mph (4.8 km/h)
Mid speed, mid torque	1.5 mph (2.4 km/h)
Low speed, high torque	0.75 mph (1.2 km/h)
Booms up and/or extended	
To mid elevation	0.75mph (1.2 km/hr)
Above mid elevation	creep (0.06m/s)

Drive System	
Standard	Four wheel drive
Gradeability	25%

Tires	
Foam filled	15" x 22" (38 cm x 57 cm), 18 ply

Electrical System	
Voltage	12 V DC negative chassis ground
Source	Three - 12 V 550 CCA batteries
Fluid recommended	distilled water

Hydraulic System	
Maximum pressure	
Four wheel drive	2,800 psi (19,320 kPa)
Reservoir capacity	60 US gal (227 l)
System capacity	90 US gal (341 l)
Maximum operating temperature	200°F (93°C)
Hydraulic fluid recommended	
Above 10°F (-13°C)	ISO VG32
Below 10°F (-13°C)	ISO VG15

Engine	
Diesel	Cummins B3.3

Fuel Tank Capacity	
Diesel	40 US gal (151 l)

Ambient Air Temperature Operating Range	
Fahrenheit	0°F to 110°F
Celsius	-18°C to 43°C

Maximum Wind Speed	
Gust or steady	28 mph (45 km/h)

Vibration	less than 2.5 m/sec

Sound Threshold	below 97 dB(A)

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TB126J

TB125J

TB120

TB100J

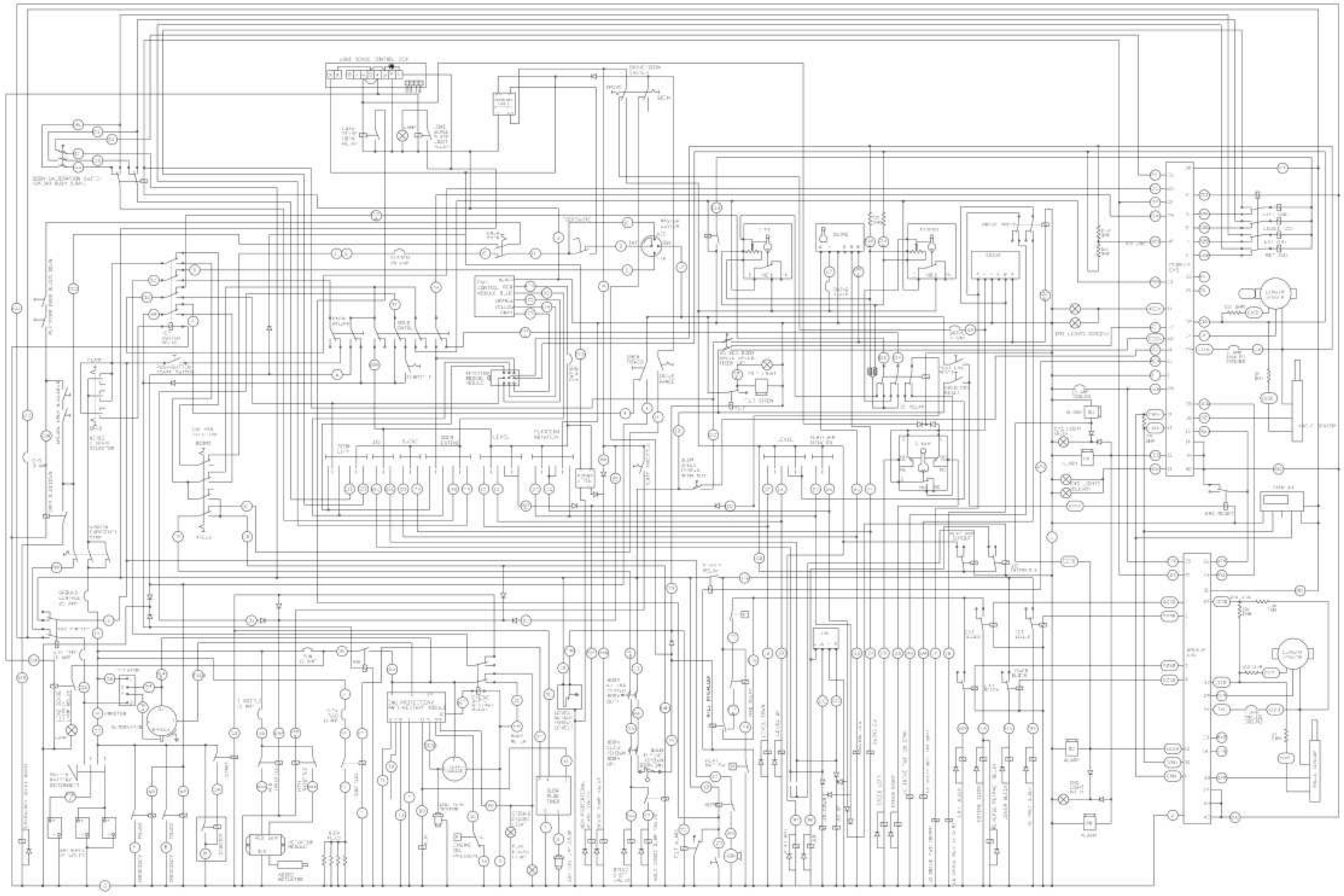


EMS Calibration and Troubleshooting Guide

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