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LOAD MOMENT INDICATOR

DS 85/0002

central unit/ console



SERVICE MANUAL

P/N 031-300-190-166 REV A 06/20/2003

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MANUAL REVISIONS

REV	DATE	NAME	DESCRIPTION
-	04/04/03	CSH	ECN 03-039
A	06/20/03	CSH	ECN 03-079

X1 Pin	CAN
1	CAN_SHLD
2	CAN +UB
3	CAN GND
4	CAN_H
5	CAN_L

Measure between pins 3 (GND) and 2 (+). Next, check all pins of the CAN bus cable for continuity and cross-check for short circuits. E-64 means that the pressure transducer is working fine, but the cable reel is not – so we most likely have a defective connection between those two components. If this is tested to not be the case (missing connections, short circuits – measure with Ohm-meter), the board in the cable reel might be defective (see also chapter [Angle Sensing](#)).

If you suspect a sensor error or problem with a sensor, compare the indicated physical value of the sensor on the display screen with the real value, i.e. length, angle, etc.

The voltages given are internal calculation values only; you will not be able to actually measure them anywhere on the electronics! Typical values to be expected are:

- Pressure transducers (piston and rod), 500mV @ 0 PSI; 4500mV @ maximum PSI
- Length sensor, 500mV @ retracted boom length; voltage extended depends on the various boom lengths.
- Angle sensor, 4500mV at 0°; 2500mV at 45°; or 500mV at 90°

Please refer to table below for more values.

Voltage Values displayed [mV] +/- 10mV	Value displayed	Value
Pressure Transducers 300 bar, type 314	<i>PSI</i>	<i>Bar</i>
500	0	0
1500	1088	75
2500	2176	150
3500	3263	225
4500	4351	300

Angle Sensor	degrees	
500	90	boom vertical
1500	67.5	
2500	45	
3500	22.5	
4500	0	boom horizontal

Length Sensor	feet	
500	0	fully retracted
1500		
2500		
3500		
4500		

16 SERVICE SCREEN FOR SENSOR CALIBRATION

16.1 ACTIVATING THE SERVICE SCREEN FOR SENSOR CALIBRATION

Enter the calibrate sensors menu by using the following procedure:

To start function press  + 



Press  to calibrate sensors.



Press  to enter user number.



At this point, a five digit Authorization Number must be entered. Use



and



keys to increase and decrease each digit. Use  to confirm entry.

Having successfully entered a valid password, use  and  keys to mark the piston-side, the rod-side zero setting, and length, and angle calibration. The calibration sensor screen will remain available and accessible without entering the user number until system is power off,

16.2 ZERO-SETTING THE TRANSDUCER INPUTS

NOTE: The only thing adjustable for the pressure transducers is the zero point, which is the voltage the transducer outputs when there is no (zero) pressure sensed.

CAUTION: Ensure there is no pressure in the hydraulic line when disconnecting the hoses from pressure transducers.

Use  and  keys to mark the piston-side or rod-side zero setting.

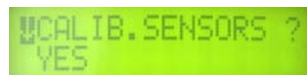


or



The piston-side or rod-side zero-point setting

function is activated as shown in the screens above and pressing  to calibrate selected sensor.



to continue, press .



to calibrate, press .



when the boom is in the rest position bleed to continue, press



.Press



to continue.

Full Version Available

PAT DS 85 Load Moment Indicator Service Manual

PAT DS 85 load moment indicator service manual with sensor calibration, error codes and troubleshooting procedures. Searchable 48-page PDF.

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