WI 2300 SERIES
MAINTENANCE MANUAL



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(BDI) Unigage 65
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(BRS) Brake switch 65
(EDS) Emergency Disconnect switch 65
(F/R Contactor) Direction contactor 65
(FU) Fuses 65
(HCM) Hydraulic control module 65
(HM) Horn 65
(HNS1 & HNS2) Horn switches 65
(HSS) "Rabbit/Turtle" toggle switch 65
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(KYS) Key switch 66
(LMS - initial) Limit switch 66
(LMS - 1700 mm) Limit switch 66
(LOS1, LOS2) Lower switches 66
(MAIN PCB) Main circuit board 66
(ORS) Override switch 66
(PM / M2) Pump motor 66
(P) Pump contactor 66
(PCB) Distributor PCB 66
(POT, FS, RS) Traction pod 66
(PV) Proportional valve 66
(RAS) Raise switch 67
(SAS) Safety reverse switch 67

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Torques

Standard torques

Note: The torques listed in the manual always take precedence over standard torques.

Standard screws and nuts			
Grade:	**8 and 8.87**	**10 and 10.9**	**12 and 12.9**
Thread size	**Torque (Nm)**		
M5 x 0.8	5 - 6	7 - 8	8 - 10
M6 x 1	8 - 10	12 - 14	14 - 16
M8 x 1.25	20 - 25	30 - 35	34 - 40
M10 x 1.5	40 - 45	60 - 65	70 - 75
M12 x 1.75	70 - 80	100 - 110	115 - 130
M16 x 2	170 - 190	240 - 270	280 - 320
M20 x 2.5	340 - 380	450 - 500	550 - 600
M24 x 3	580 - 650	800 - 900	900 - 1050
M30 x 3.5	1150 - 1300	1600 - 1800	1850 - 2100

Umbrako screws and nuts		
Grade	**10 and 10.9**	**12 and 12.9**
Thread size	**Torque (Nm)**	
M5 x 0.8	8	11
M6 x 1	14	19
M8 x 1.25	33	45
M10 x 1.5	63	86
M12 x 1.75	111	152
M16 x 2	270	372
M20 x 2.5	521	717

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The lift cutout should therefore be activated as close to 20% of the battery's residual capacity as possible. It may be slightly above 20% but never below this level.

Note: For new trucks the battery discharge indicator should be set at the latest after ten discharge and charge cycles.

Battery Discharge Indicator (BDI) Adjustment

The acid density is a very reliable indicator of the charge status of a lead acid battery. However, since it is unrealistic to continually measure the acid density of a truck battery to an industrial standard, the battery voltage is used to determine the charge status.

To adapt the BDI to the battery used and the truck's specific application profile, you need the battery manufacturer's data sheet. The important values are the density of the electrolyte for an 80% discharged battery (20% battery residual capacity) and for a fully charged battery (100% battery capacity).

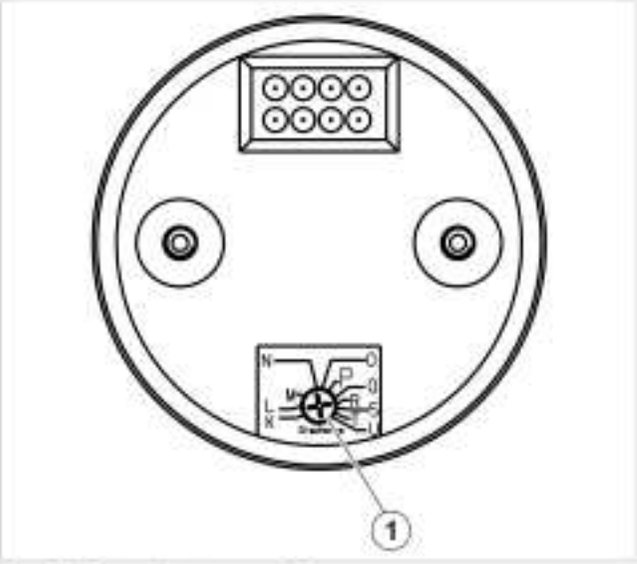


Fig. 55 Potentiometer on BDI

Finally, via the potentiometer (1) on the back of the BDI the display is set to the actual discharge terminal voltage of the battery at 20% residual capacity.

The standard factory setting for the battery discharge indicator is "N".

Wet cell battery calibration

1. Fully charge the battery according to the battery manufacturer's service instructions.
2. Measure the acid density in accordance with the battery manufacturer's maintenance instructions to check if the battery is actually 100% charged.
3. Operate the truck in its normal environment until the battery is empty.

⇨ Both LEDs of the BDI will flash and the lift cutout system will be activated.

4. Leave the battery if possible for 10 to 12 hours (one hour at least!).
5. After this interval measure the acid density on at least three different battery cells. The smallest recorded value is the decisive one.
6. Compare the density recorded with the density specified by the battery manufacturer for an 80% discharged battery (20% residual capacity):

Note: If the battery is more than 80% discharged (less than 20% residual capacity), set the potentiometer (1) to direction U.

If the battery is less than 80% discharged (less than 20% residual capacity), set the potentiometer (1) to direction K.

7. Recharge the battery and check the calibration. Repeat the calibration as required.

Discharge terminal voltage setting in volts/cell										
K	L	M	N	O	P	Q	R	S	T	U
1.57	1.63	1.68	1.73	1.78	1.82	1.84	1.86	1.89	1.91	1.93

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Contact pins

Item No.	Part No.
1	116858
2	803450-048
3	803452-005

Replacement Parts

Part No.	Description
813426	Harness, complete

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