



4. Calibration - Final position for Black Type Potentiometers

Carry out calibration no. 3. If machine does not work in auto, recalibrate steps 1 and 2, and




calibrate final positions as follows.


Final positions are calibrated opposite way round than for Grey Type Potentiometer.

Press and hold the -key


Switch on the device using the -key


The control lamp in the ON/OFF-key  turns on. When the control lamps in -key


and -key turn off, release the -key. The control lamp in -key is now


on. Press the -key again. When this control lamp flashes, the system can be fed with


data on the final positions:



Turn the manual control turn key  slowly to the right. Steering now moves to the final

position of the right side. When steering is in the utmost final position press the -key.


Turn the manual control turn key  slowly to the left. Steering now moves to the final

position of the left side. When the steering is in the utmost final position press the -key.


Turn steering to centre position using the manual control turn key 

Press the -key to escape from tuning mode. The control lamp in -key is now

continuously on.

Switch off the device using the -key.

Electrical connection of the potentiometers

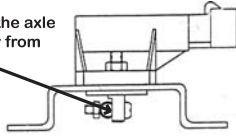
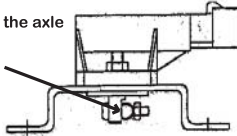
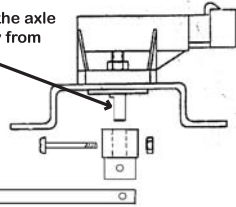
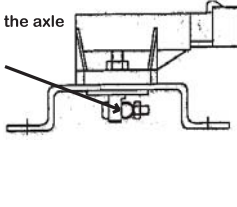
 **Caution! The polarity of the potentiometers is very important. If the wires are mixed up the potentiometers may be destroyed. Correct polarity is shown here:**

br	br	x	x	x	ws	x	x	gn	ws	br	x
bl	bl	x	x	x	gn	x	ws	br	gn	x	x
print											
Ventil A	Ventil B	Spritzen Verteiler	Rad	Verriegelung	(connected)	Potentiometer Deichsel (= Drawbar)	Potentiometer Schlepper (= Tractor)	Reserve			


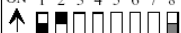
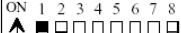
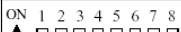
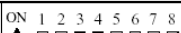
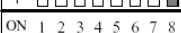


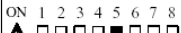
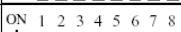
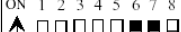
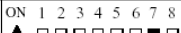
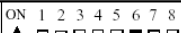
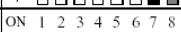
Colour codes:

Colour	Alternative colour
+12V	br: brown
Signal	gn: green
Ground	ws: white
	br: brown
	gn: green
	ws: white
	bl: blue
	gy: green/yellow

Location of potentiometers

All views from side	Tractor	Sprayer
High Drawbar	The flat side of the axle must point away from the connector. 	The flat side of the axle must point to the connector. 
Low Drawbar	The flat side of the axle must point away from the connector. 	The flat side of the axle must point to the connector. 

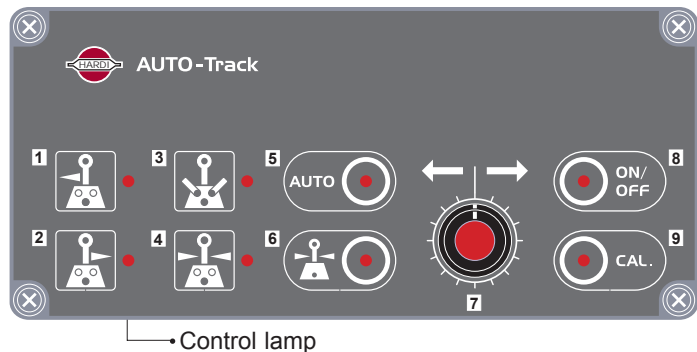
DIP Switches for # 6978

DIP-Switches	Speed
ON 1 2 3 4 5 6 7 8 ↑ 	0.2
ON 1 2 3 4 5 6 7 8 ↑ 	0.3
ON 1 2 3 4 5 6 7 8 ↑ 	0.4
ON 1 2 3 4 5 6 7 8 ↑ 	0.5
Length of tractor coupler	
ON 1 2 3 4 5 6 7 8 ↑ 	450 mm
ON 1 2 3 4 5 6 7 8 ↑ 	600 mm
ON 1 2 3 4 5 6 7 8 ↑ 	750 mm
ON 1 2 3 4 5 6 7 8 ↑ 	900 mm
ON 1 2 3 4 5 6 7 8 ↑ 	Tractor Poti - High Draw Bar
ON 1 2 3 4 5 6 7 8 ↑ 	Tractor Poti - Low Draw Bar
Commander III	
ON 1 2 3 4 5 6 7 8 ↑ 	long drawbar 2500mm / 2600mm
ON 1 2 3 4 5 6 7 8 ↑ 	short drawbar 2050mm / 2600mm
Commander II	
ON 1 2 3 4 5 6 7 8 ↑ 	long drawbar 2500mm / 2600mm
ON 1 2 3 4 5 6 7 8 ↑ 	short drawbar 2050mm / 2600mm

* Length from rear axle to centre of towing ring

Dip 5 Not used. For detailed information please refer to user's instruction book

Overview - Control box



- 1 - Control LEFT lamp
- 2 - Control RIGHT lamp
- 3 - Lock indication lamp
- 4 - Centre position lamp
- 5 - Automatic key
- 6 - Centre position key
- 7 - Manual control turn key
- 8 - ON/OFF key
- 9 - Calibration key

Installation - Power supply

The power supply of the control box is fitted directly to the tractor battery. A 25 Amp. fuse must be fitted to its wire; connect fuse holder to the plus side of the battery

Colour codes: Brown: +12 volt (V), Blue: Ground

Calibration

It is of essential importance that the drawbar is correctly fixed and free of slack when calibration is carried out.

Note! The system has to be restarted before a calibration takes effect.

1. Returning to basic tuning

When using this command all altered data will be over written and the system returns to basic tuning.

Press and hold the -key while switching on the device using the -key.

Control lamp in -key turns on

When the control lamps in -key and -key turn off, release the -key.

The control lamp in will now start to flash.

Press the -key again and the control lamp in will turn off.

The device switches off automatically.

2. Calibration - Centre position

Press and hold the -key and the -key while switching on the device using

the -key. Control lamp in -key turns on.

continues ...

When the control lamp in -key turns off, release the -key and the -key.

Control lamps in -key and -key will turn on.

Drive straight ahead with the tractor and trailer - if possible along a line - and use the manual control turn key to adjust the steering until the trailer follows the tractor exactly in its trail.

When the control lamp for centre position turns on, press the -key. The control lamp in the -key will now turn off.

Switch of the device using the -key.

3. Calibration - Final positions for Grey Type Potentiometer

Press and hold the -key

Switch on the device using the -key

The control lamp in the ON/OFF-key turns on. When the control lamps in -key and -key turn off, release the -key. The control lamp in -key is now on. Press the -key again. When this control lamp flashes, the system can be fed with data on the final positions:

Turn the manual control turn key slowly to the right. Steering now moves to the final position of the right side. When steering is in the utmost final position press the -key.

Turn the manual control turn key slowly to the left. Steering now moves to the final position of the left side. When the steering is in the utmost final position press the -key.

Turn steering to centre position using the manual control turn key Press the -key to escape from tuning mode. The control lamp in -key is now continuously on.

Switch off the device using the -key.