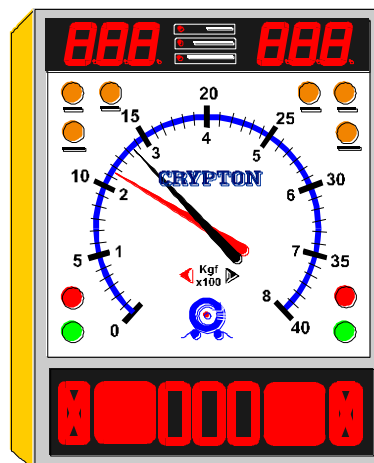


CRYPTON

In tune with the future



**Installation manual for up-dating
Crypton 630 Roller Brake Tester.**

**TES1346
Nov 2000**

IMPORTANT

Every reasonable effort has been made to ensure that information within these Calibration Instructions is correct at the time of release, but Crypton cannot accept-responsibility for any errors that may occur.

The information in these Instructions is subject to change without notice, and does not represent a commitment on the part of Crypton.

Service & Warranty

The reliability of this equipment is fully supported by our service agent, Transervice, with repair workshops and field service engineers to provide a full range of After-Sales Care, including installation, contract maintenance, factory overhaul and emergency repairs on site. Please refer to the page at the end of this manual for full details.

Note:

Your attention is drawn to our Terms & Conditions of Sale, particularly paragraph 2. If a service engineer is called out. under service warranty where, upon inspection and test the equipment is found to be in full working order and no fault found, the user is liable to be charged the cost incurred for this call out. Before calling out an engineer, ensure your equipment is faulty by checking its operation, particularly mains supply and fault codes/self test if applicable.

WARNING:

Do not attempt to install this equipment unless you have read and understood these instructions.

List of brackets and sensors, included in the update kit:

Disc (1) Tacho sensor for 3rd roller.

2 discs.
2 grub screws, 10 mm.
2 bolts, 10 x 30 mm.
2 spring washers.

Bracket for sensor for 3rd roller (6).

2 brackets-
4 bolts, 6 x 16 mm.
4 self-locking nuts, 6 mm.

Terminal box (2) and bracket (3).

2 mounting brackets.
2 terminal boxes.
4 bolts, 10 x 35 mm.
4 washers, 12 mm.
4 washers, 10 mm.
4 spring washers.
4 self-locking nuts.

Brackets (4) for “stop” sensor for 3rd roller assembly.

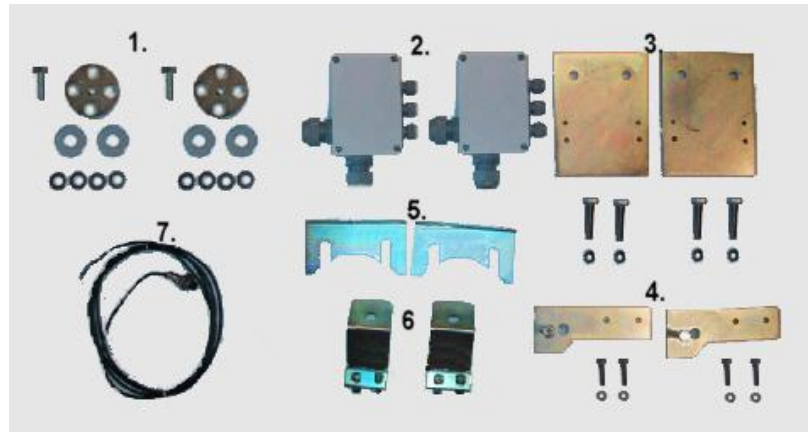
2 brackets.
4 bolts, 6 x 12 mm.
4 spring washers, 6 mm.
4 self locking nuts, 6 mm.
2 bolts, 8 x 40 mm.
2 self-locking nuts, 8 mm.

Bracket (5) for 2nd tacho sensor.

2 brackets.

Proximity sensors (7).

8 proximity sensors.



The position of the sensors and transducers in the roller units.

Remove the sensors and switches from the 3rd roller and its assembly.

Do not remove the brake force load cell.

Third roller tachometer.

Bolt the disc to the end of the 3rd roller where the old tachometer sensor was placed. Use 1 or 2 washers between the roller and disc as needed. Fit the bracket to the bearing support by drilling 2 holes and bolt the bracket on or fit by welding. Make sure that the hole for the sensor is opposite the holes in the disc.

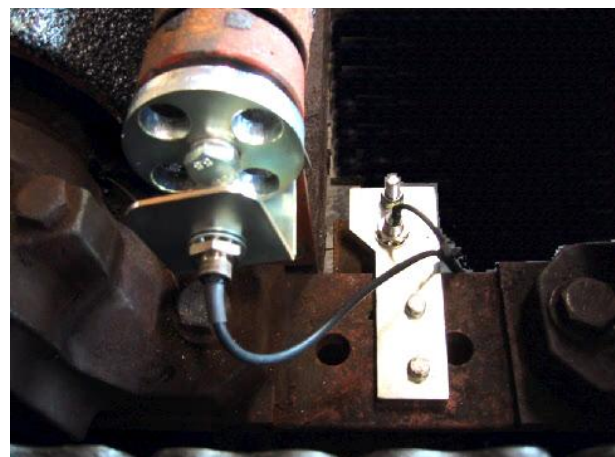
Mount the sensor in the allocated hole in the bracket and secure it with the two nuts. The distance between the sensor and the disc must be approximately 2 mm.



“Stop” sensor on 3rd roller assembly.

Mount the bracket for the “stop” sensor to the chassis so the hole for the sensor and the threaded hole is above the plate on the 3rd roller assembly (see photo). Secure it by drilling two holes and bolt it on, or by welding. Screw the bolt into the bracket from below and secure it with the self-locking nut. The function of the bolt is to stop the plate from hitting the sensor, which is fixed in the other hole by two nuts.

Adjust the bolt and the sensor so the plate, when in uppermost position, leans on the bolt approximately 2 mm from the sensor.



Bracket for 2nd tachometer sensor.

Loosen the two bolts, holding the plate between the gearbox and the roller, vertically placed above each other opposite the transducer. Slide the bracket (5) into position and re-tighten the bolts. Place the sensor in the bracket, with 3-4 mm space to the nuts, of the flange of the roller and secure it with the two nuts.



The junction box (2).

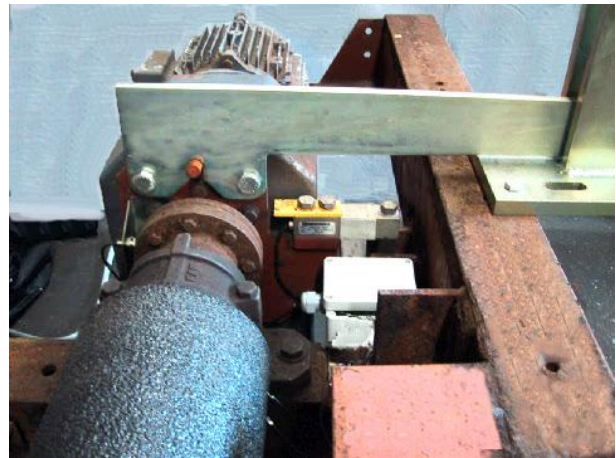
Bolt the junction box to the chassis next to the transducer either by bolting or by welding.



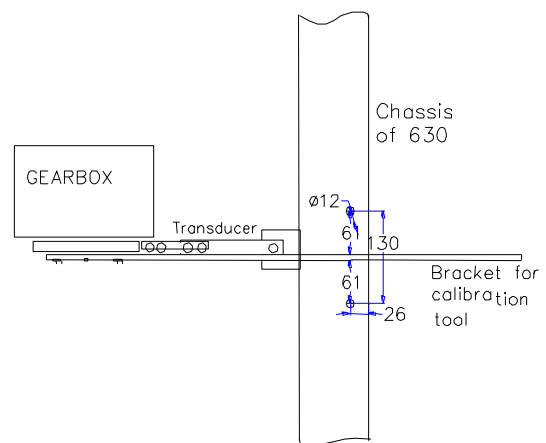
For the calibration tool-

Two 12 mm holes have to be drilled and threaded in the frame of the chassis opposite the transducer.

Bolt the bracket for the calibration tool on to the plate on which the Transducer is mounted (see photo).



Drill the holes at a equal distance (61 mm) on either side of the bracket where is crosses the frame. The holes must be 130 mm apart and 26 mm from the outer edge. The holes must be threaded.



Cables for the update of 630:

Cable no.	EWJ no.	Type	Location/Function
1	LT0000	13x0.50 [⊙]	Yellow box – Right roller unit
2	LT0000	13x0.50 [⊙]	Yellow box – Left Roller unit
3	Internal cable		
4	Internal cable		
5	Internal cable		
6	LT1003	2x0.50 [⊙]	Yellow box – cable transducers
7	LT1014	14x1.0 [⊙] + earth, screened	Yellow box – Display console
8	Not applicable		
9	Not applicable		
10	LT1006	12x0.50 [⊙]	Yellow box – Axle load simulation
11	LT1007	3x2x0.14 [⊙] pair twined screened	Yellow box – PC
12	Not applicable		
13	Not applicable		
14	LT1014	14x1.0 [⊙] + earth, screened	Display console – slave console
15	Not applicable		
16	LT1015	3x0.50 [⊙] screened	Yellow box – radio transducers
17	LF1014	4x0.50 [⊙]	Control – emergency stop
18			In-pit protection
19			In-pit protection
20			Air transducer external

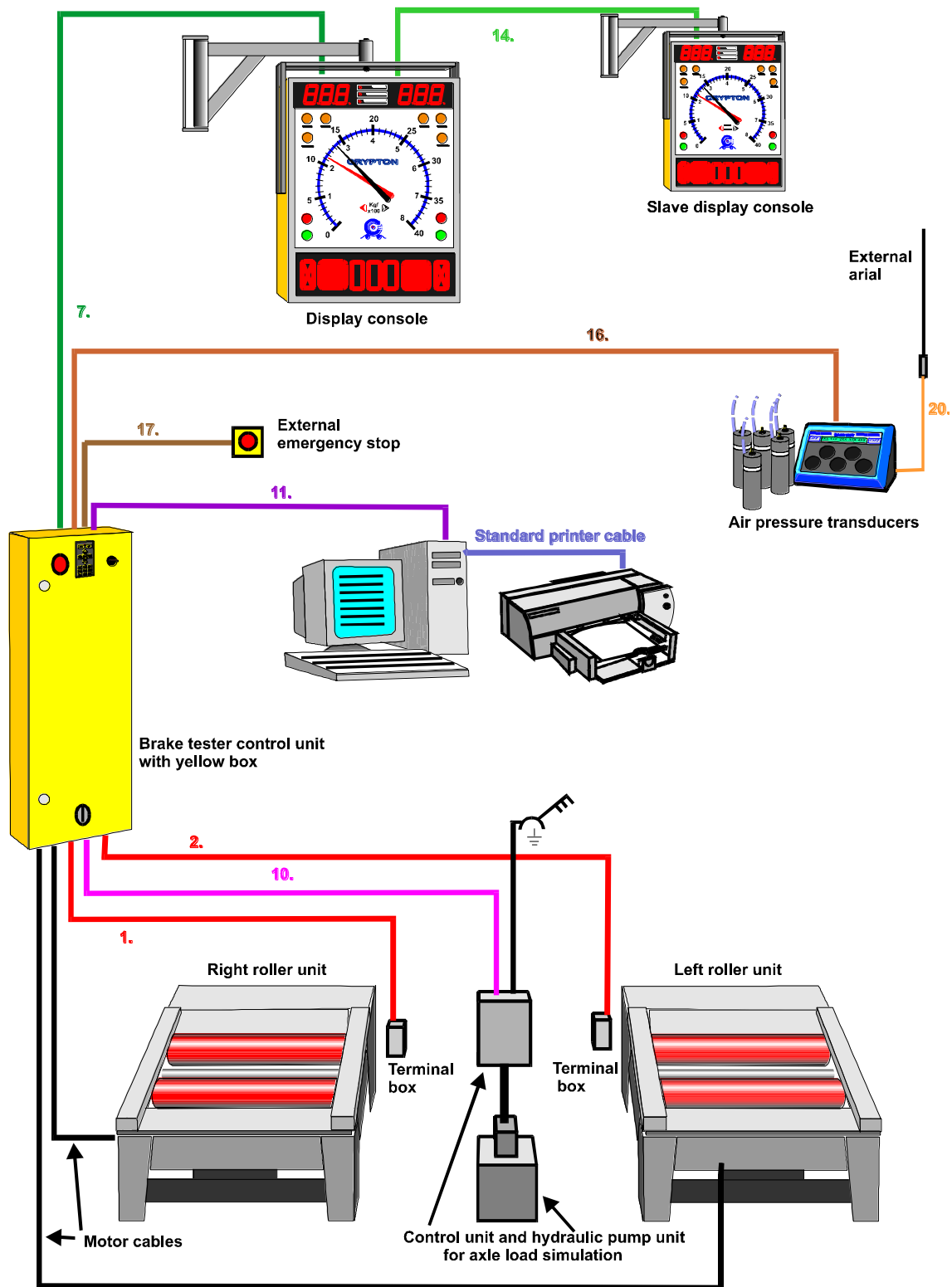
Note that the cable number 1, 2, 7, 11, and 16 correspond to the plug number.

The cables have to be fitted with Molex pins. The pins are included in the kit. A pair of Molex pliers no. HTR 1031E and an extractor tool no. HTL038 are necessary to fit the pins. These tools are manufactured in UK.

Important: The sockets are fitted with female plugs except one at a different place in each socket to avoid the plug being placed in the wrong socket. In socket one it is plug 1, in socket 2 it is plug 2 etc.

Take great care when fitting the pins to the cable that the female pin is fitted to right lead. In plug 1 the female pin is in number 1, in plug 2 – number 2, etc.

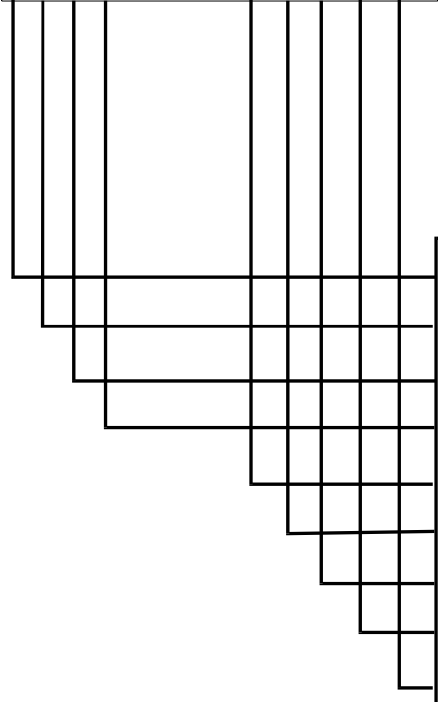
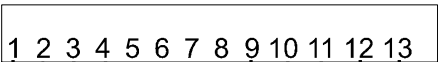
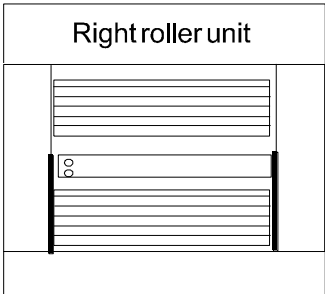
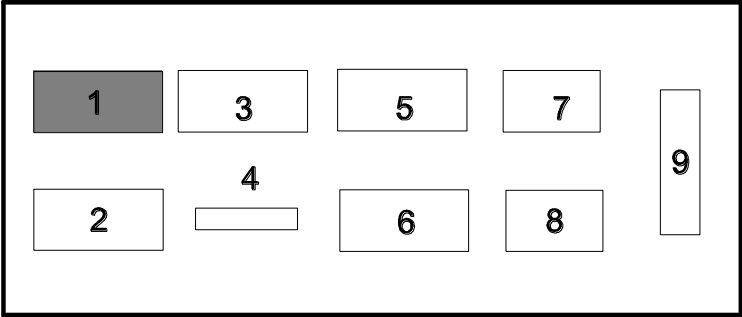
Overview of cables available for 630 update:



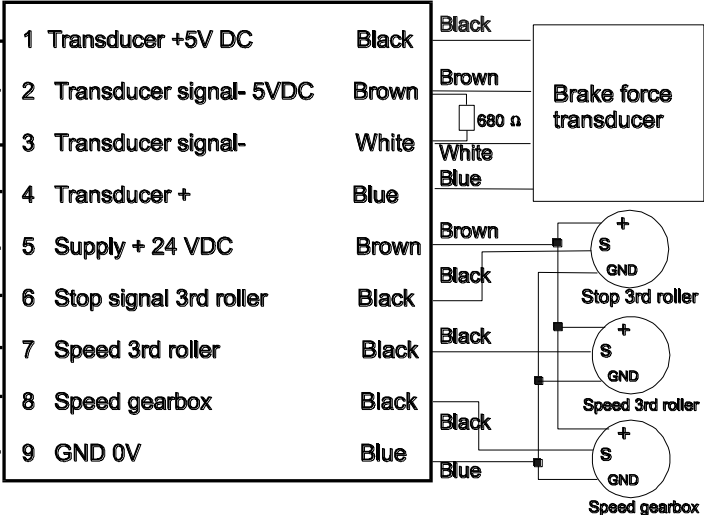
Cable 1- LT0000 - 13x0.50[°] **NOT provided in kit**

Cable between right roller unit and yellow box

Front - yellow box

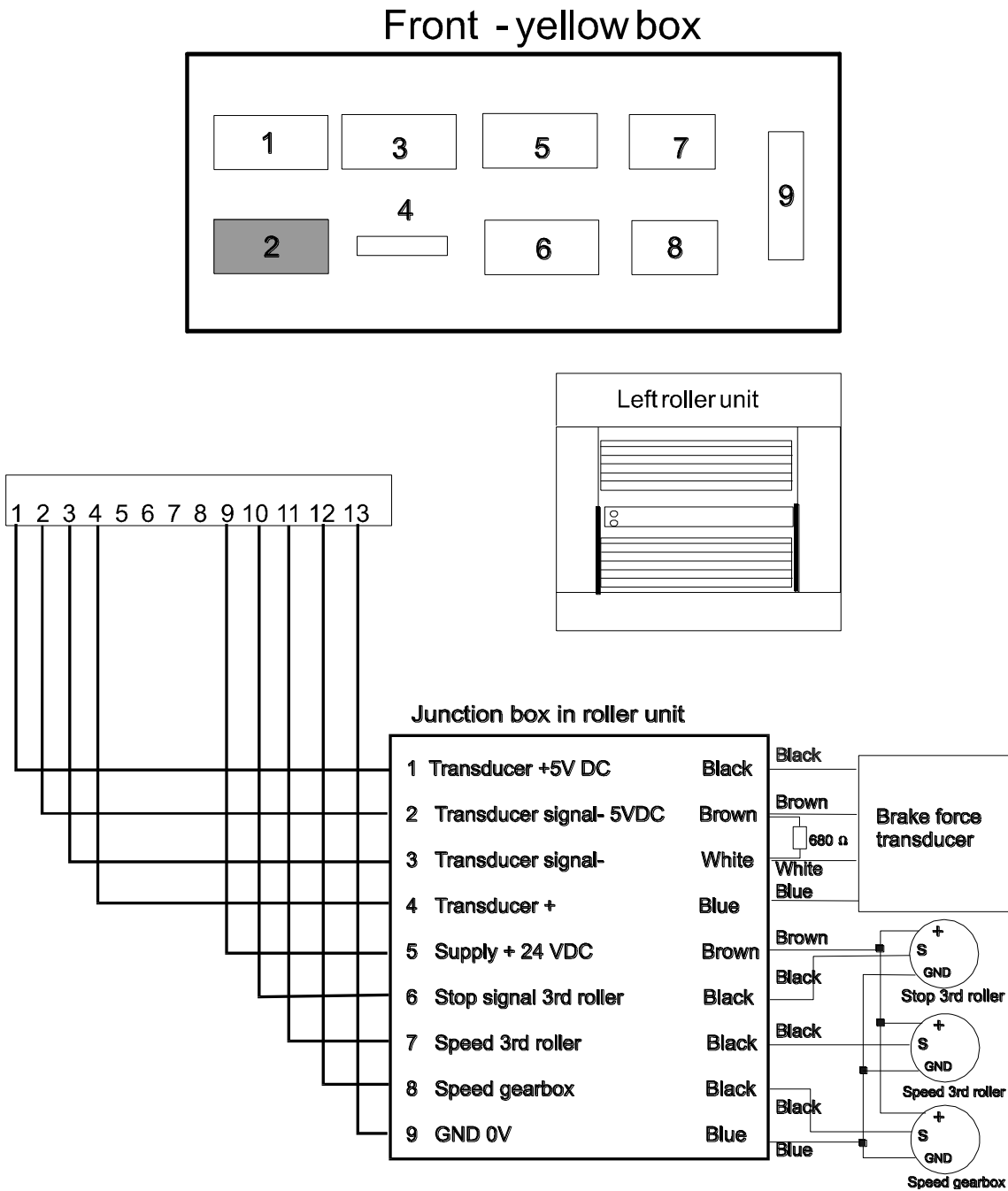


Junction box in roller unit



Cable 2 - LT0000 - 13x0.50[°] NOT provided in kit

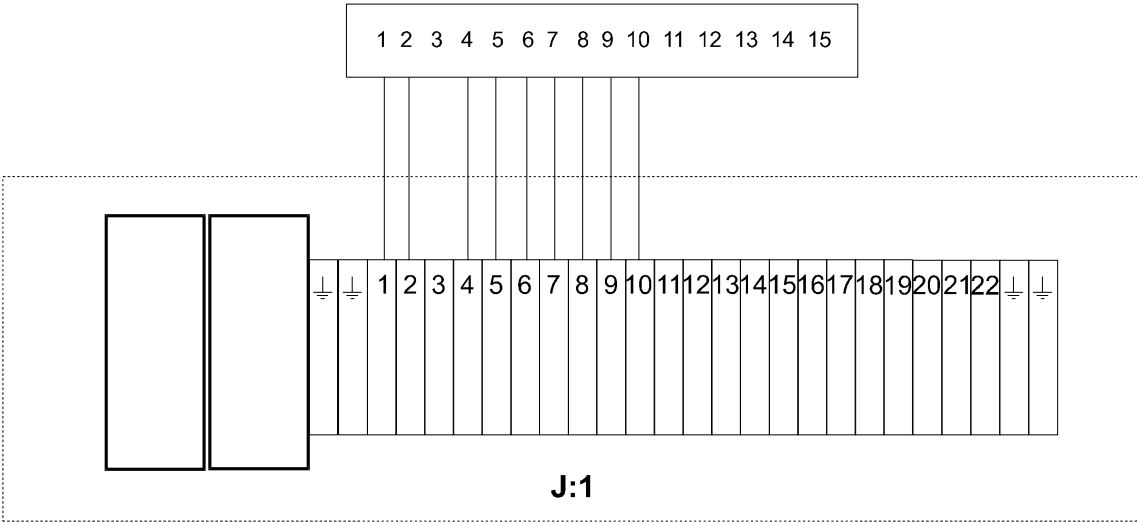
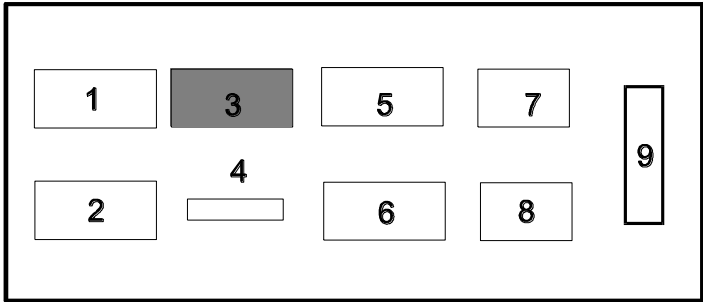
Cable between left roller unit and yellow box



Cable 3 - Internal cable – provided with the kit

From terminal J1 In control unit and plug 3 in yellow box

Front of yellow box

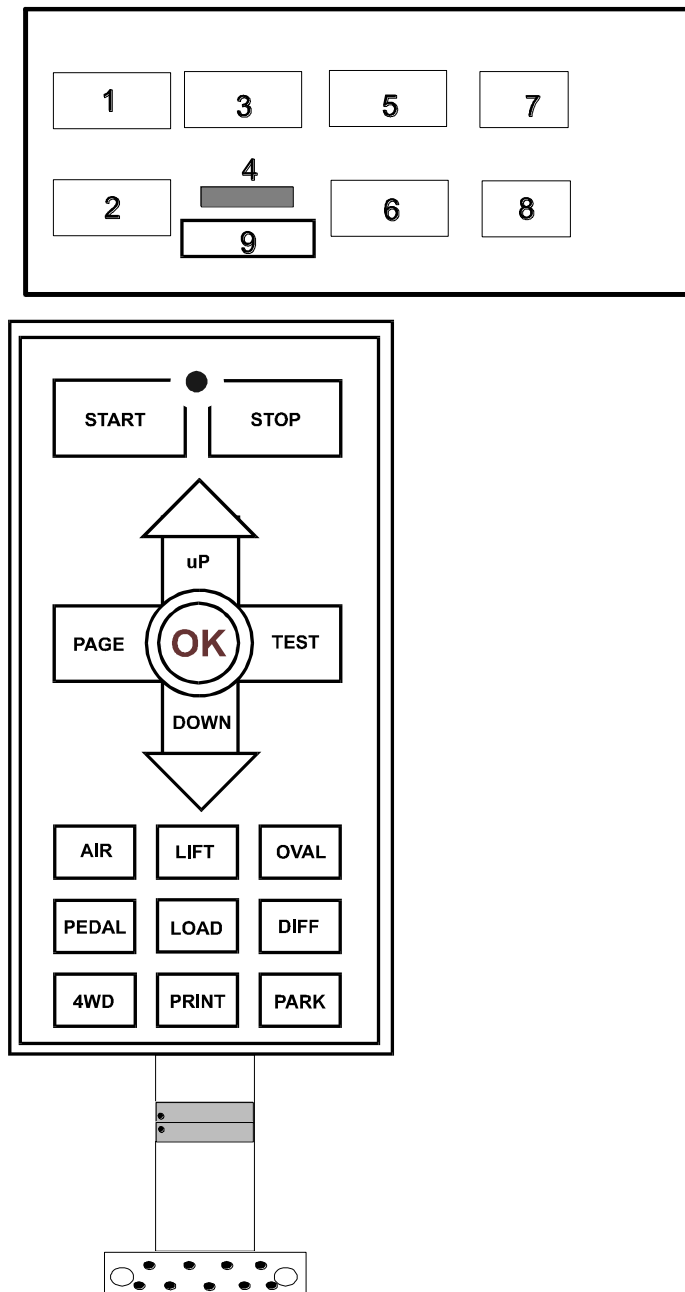


Terminal in control console

Cable 4 - LT1022 - Flat cable - Internal cable – provided with the kit

Cable between yellow box and keyboard on control console

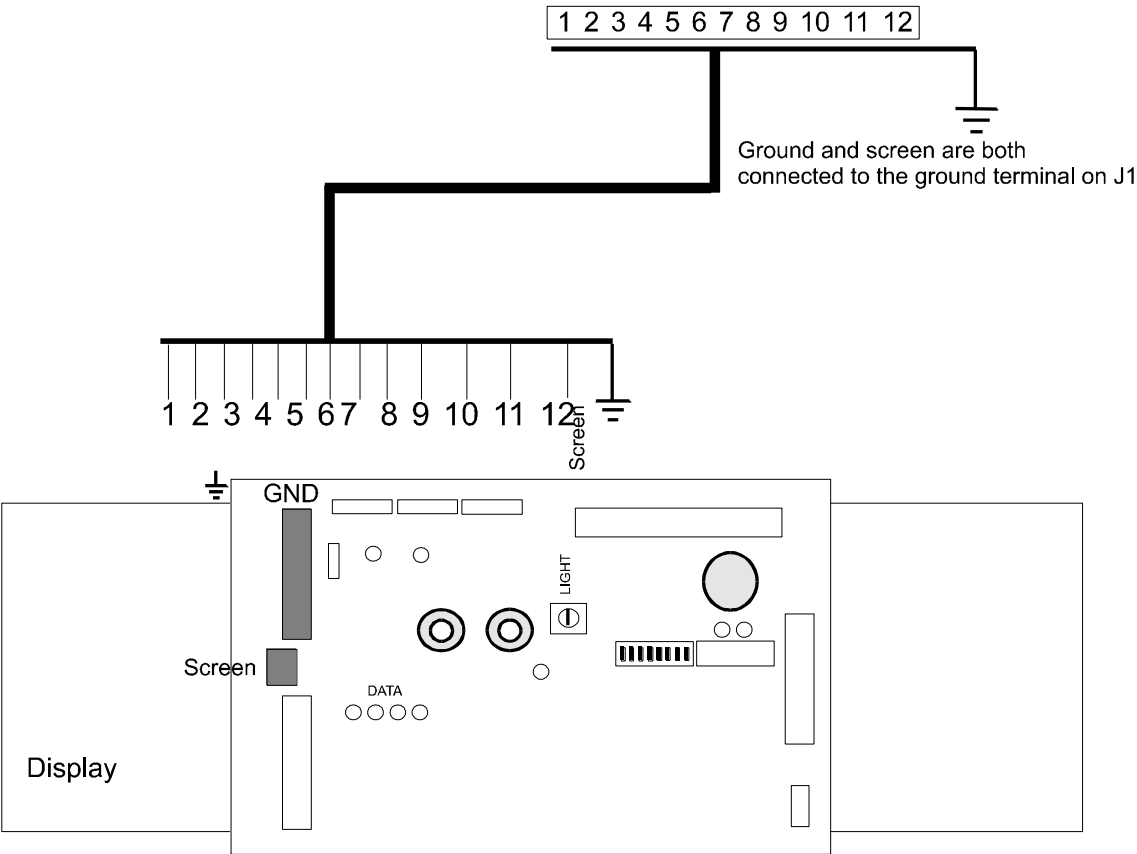
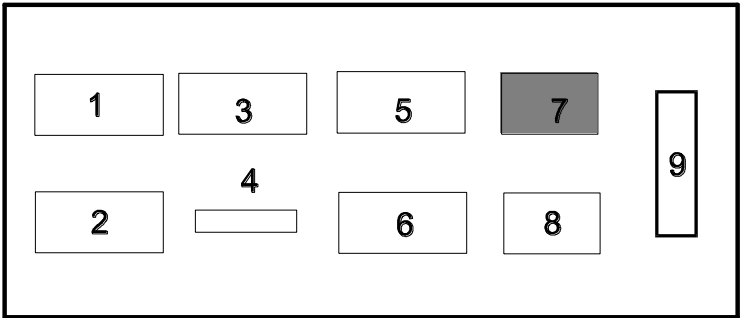
Front of yellow box



Cable 3 - LT1006 - 13x1.0[®] + earth, screened – 16 metres provided in kit

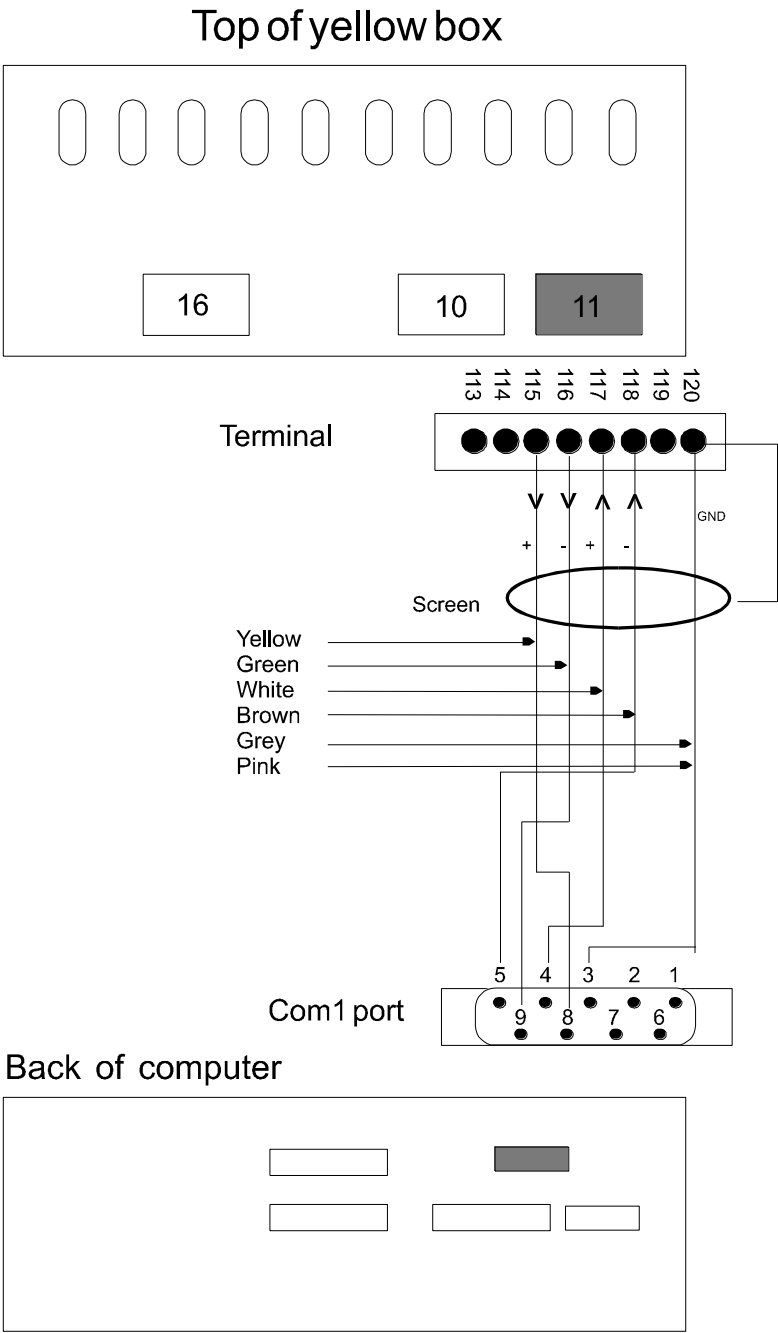
Cable between yellow box and Display Console

Front of yellow box

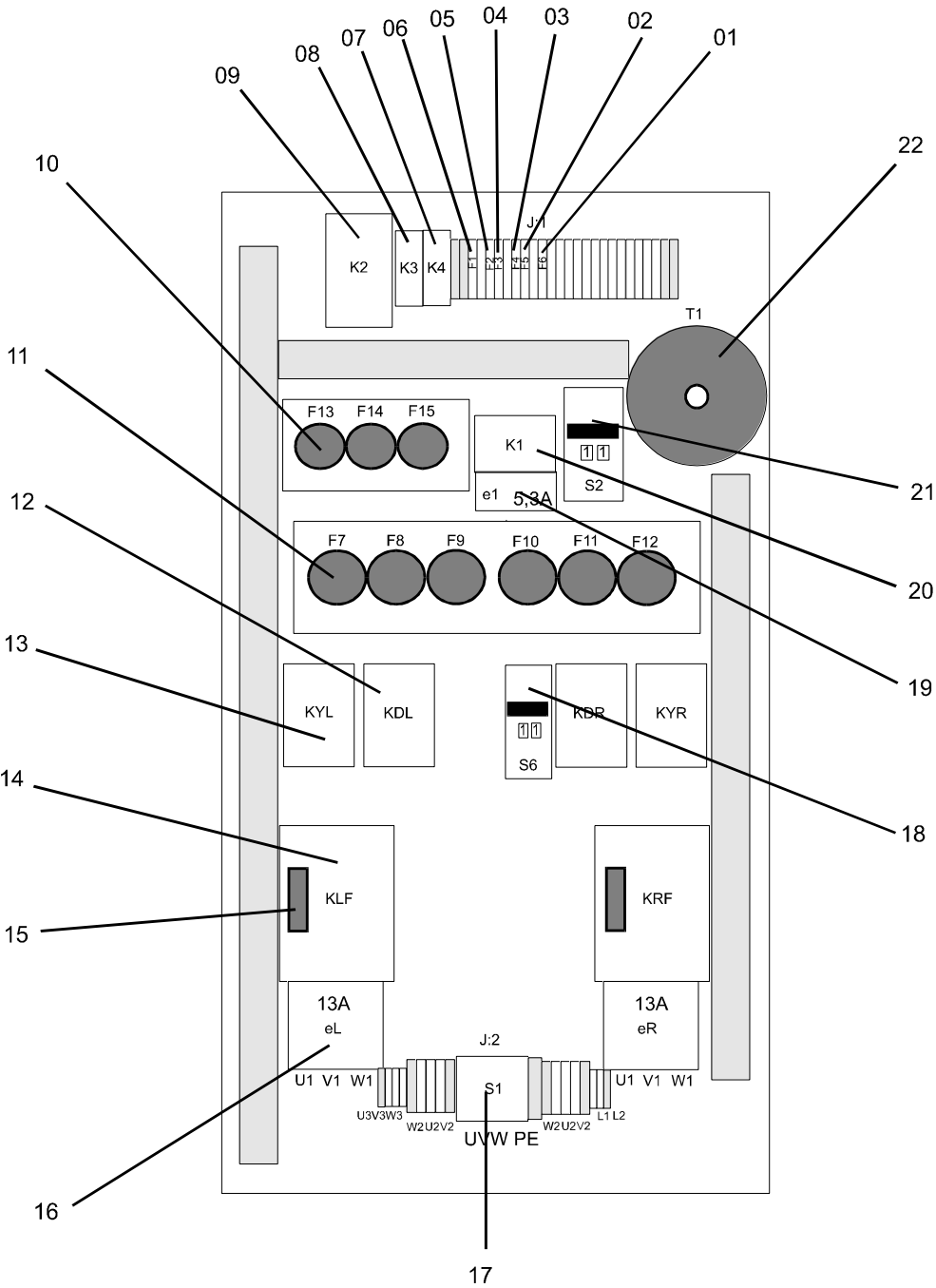


Cable 11 - LT1007 - 3x2xo.14^o (pair twisted???) screened – 16 metres provided in kit.

Data cable between yellow box and PC



High Voltage Unit in Control Console.

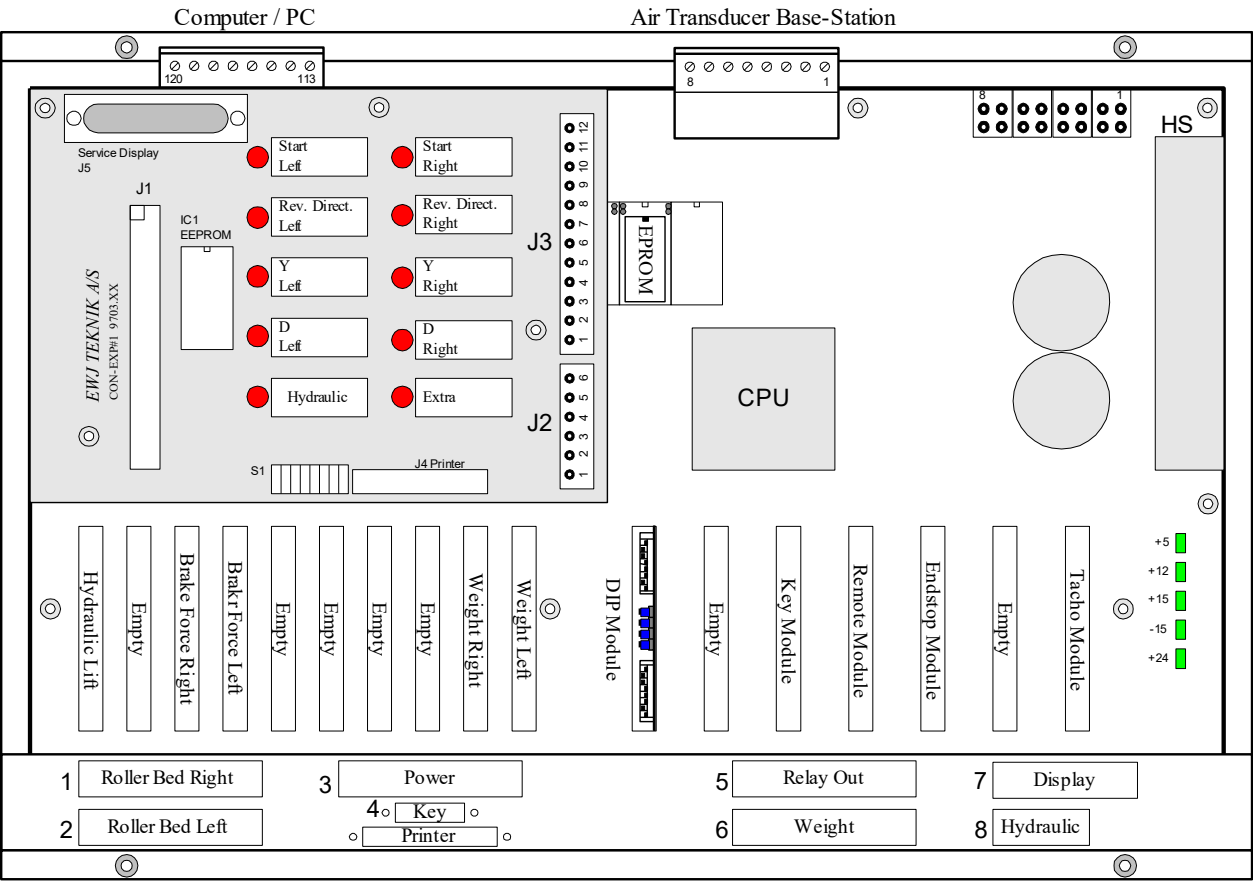


For description see next page.

Spare parts list for 92200/92330/92500 High Voltage Unit.

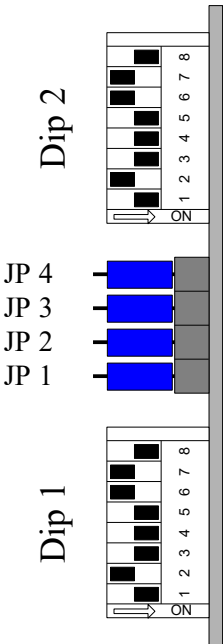
No.	Item no.	Description
01	FG1005	Fuse 5x20 T-3,15A
02	FG1008	Fuse, glass 5x20 T-6,3A
03	FG1008	Fuse, glass 5x20 T-6,3A
04	FG1008	Fuse, glass 5x20 T-6,3A
05	FG1008	Fuse, glass 5x20 T-6,3A
06	FG1003	Fuse, glass 5x20 T-0,5A
07	RS1011	Relay SGR282Z
08	RS1011	Relay SGR282Z
09	RN1000	Emergency stop relay
10	FD1008	Fuse 16A
11	FD1012	Fuse 63A
12	RK3025	Contactor CL25
13	RK3002	Contactor CL02
14	RK3045	Contactor CL45
15	RH3001	Switch BCLF01
16	RT3012	Thermal relay 10-16A
17	BH1023	Supply separator
18	FA1012	Automatic fuse 2P 2A - C
19	RT3004	Thermal relay
20	RK3050	Contactor 9A
21	FA1014	Automatic fuse 2P 4A - D
22	TR2010	Transformer
23	KV1000	Pointer Red
24	KV1001	Pointer, Black
25	KF1013	Red acrylic glass 565x165
26	KM1028	Frame complete with glass
27	KF1022	Clear acrylic glass 565x
28	RES9368	Display print LED display
29	UL1005	Lens Green
30	UL1004	Lens Red
31	UE1000	Bulb 30V
32	UF1000	Socket white
33	UE1007	Bulb 10mm yellow
34	UL1003	Lens yellow
36	AM5002	IR receiver
37	RES9372	Decoder print
38	XG1050	Pointer gear complete
39	RES9375	Driver print
40	XL9005	Chain, duplex
41	XL1065	Bearing SY65
42	MÅ1017	Motor 11kW
43	TBH3002	Transducer, brake force
44	DB1027	Rectifier for brake
45	XL1040	Bearing SY40
46	XL1055	Bearing SY55
47	XS4001	Gas cylinder
48	XV1107	Third roller complete
49	XV1020	Roller complete
50	TBH2010	Proximity sensor
60	EWJ3520	Remote control (lift)
61	EWJ5004	Yellow box
69	EWJ7050-7054	Air pressure transducer radio
70	RES9602	RS485 communication print

Yellow Box Overview.



DIP Switch Module (placed in lower centre of the yellow box).

Dip Switch and Jumper settings (The shown setting is not a specific setting):



- DIP1 1 **ON** Commercial vehicle control
 OFF Class IV - VII control
- 2 **ON** 8 / 4000 kgf scale
 OFF 6 / 3000 kgf scale
- 3 **ON** Automatic change of range
 OFF Set range

Table 1: Slip setting:

Reduction of speed before stop				Program version	
	18%	22%	26%	30%	UK-1.20
	12%	16%	20%	24%	UK-1.19
4	OFF	ON	OFF	<u>ON</u>	
5	OFF	OFF	ON	<u>ON</u>	
6	<u>ON</u> Tacho pulse check after 0.4 secs				
7	<u>ON</u> Tacho pulse check after 0.4 secs				
8	No function				

DIP2 Table 2: Delay at start

	1 sec	2 sec	3 sec	4 SEC
1	OFF	ON	OFF	ON
2	OFF	OFF	ON	ON

Table 3: Delay between left and right motor

	0.1 sec	1 sec	2.1 sec	3 SEC
3	OFF	ON	OFF	ON
4	OFF	OFF	ON	ON

Table 4: Y - D coupling

	2 sec	3 sec	5 sec	6 SEC
5	OFF	ON	OFF	ON
6	OFF	OFF	ON	ON

- 7 No function
- 8 **ON** Show "ready" display

Jumpers (between DIP1 and DIP2)

- JP1 ON Control with 4WD contactor
OFF Control without 4WD contactor
- JP2 **ON** Speed sensor on gearbox
OFF No double speed sensors
- JP3 ON Roller unit with lift
OFF Roller unit without lift
- JP4 ON Roller unit 92200 / 92330
OFF Roller unit 92500

System Test Procedure

The test provides an easy and fast way of checking the various functions of the brake tester.

The test is performed using the remote control and in the automatic operation mode

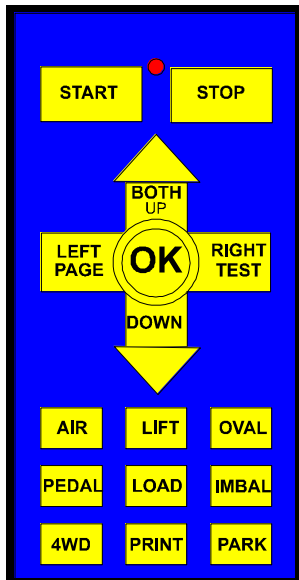
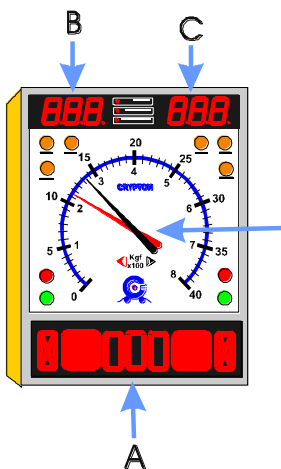


Figure Error! Unknown switch argument.

OK, (pause for at least 2 sec.) **TEST**.

To change from one test position to another (0 - 10) press: **TEST, UP** or **TEST, DOWN**.

The number of the test position is shown in the lower matrix display on both sides.



The following symbols are used as reference to certain part of the display:

- A. The three bottom LED digital figures
- B. The three top left LED digital figures
- C. The three top right LED digital figures
- D. The pointers in the centre of the display console

Test position 0.

Brake force can be read on the digital and analog display.

It is possible to start the motor when in this test position without a wheel set on the rollers.

Display:

Left brake force in Kgf.

Right brake force in Kgf.

Ana. Left and right brake force.

Keys:

START, PAGE Starts left motor.
START, TEST Starts right motor.
STOP Stops both motors.

Test position 1.

Test of zeroing adjustment.

Here you can follow the zeroing adjustment.

Display:

Left brake force in Kgf.

Right brake force in Kgf.

Ana. Left and right brake force.

Test position 2.

Adjustment of the pointers. The pointers must show 0 Kgf and 2/3 of the full scale.

Display:

Shows the brake force indicated by the pointers Kgf.

Ana. Left / right pointers must show the brake force shown on C.

Keys:

UP / DOWN Toggles between 0 Kgf and 2/3 scale.

Test position 3.

Tests the linearity of the analog display (pointers). The pointers move in steps of 100 Kgf.

Display:

B & C: The brake force must be the same as shown by the pointers.

Ana: The left and right pointers must show the same as B & C.

Test position 4.**For adjustment of the axle load simulation transducer.**

This position allows you to control the current to the hydraulic valve and then start and stop the hydraulic pump. Axle load increases with increased current.

Warning: The roller beds will lift with a wheel set placed on them.

Display:

A: Total weight for both roller units (tons).

B: ALIF@

C: The electric current, in Volts, transmitted to the valve in the roller unit.

Keys:

START Starts the hydraulic pump (lifting the rollers)

STOP Stops the hydraulic pump (lowering the rollers)

UP Increases the current in units of one Volt.

DOWN Decreases the current in units of one Volt.

Test position 5.

Shows the symbols and units which can appear on the matrix displays at the bottom of the display console.

Left matrix display:Right matrix display:

1: Axle and load		Tons
2: Axle number	Tons	
3: Pm		Bar
4: P ovality		Bar
5: Ovality		%
6: Imbalance		%
7: Park brake number		Remote control symbol
8: Printer		Printer
9: Lock		Key
10 Emergency stop		

Keys:

UP or **DOWN** Leaf through the symbols.

Test position 6.

Shows the DIP switch settings.

The left matrix display shows DIP switch block no. 1 and the right display shows DIP switch block 2.

The upper position indicates AON@ and the lower position AOFF@. The DIP switches are numbered 1 - 8 from left to right. When the position of a DIP switch on the print card in the yellow box is change, the display will change accordingly.

Test position 7.

The current from the amplified brake force transducer must be between 2.25 and 2.75 V.

Display:

B: The current from the amplifier of the left brake force, in Volts.

C: The current from the amplifier of the right brake force, in Volts.

Test position 8.

The current from the amplified weight transducer must be between 2.25 and 2.75 V.

Display:

B: The current from the left weight transducer amplifier, in Volt.

C: The current from the right weight transducer amplifier, in Volt.

Test position 9.

The weight is shown without a filter with a resolution of 5 kilos (during normal operation the resolution is 25 kilos).

Display:

B: The current of the left weight transducer amplifier, in Volts.

C: The current of the right weight transducer amplifier, in Volts.

Test position 10.

Test of light bulbs. The light bulbs is turned on successively by pressing **UP** or **D**

