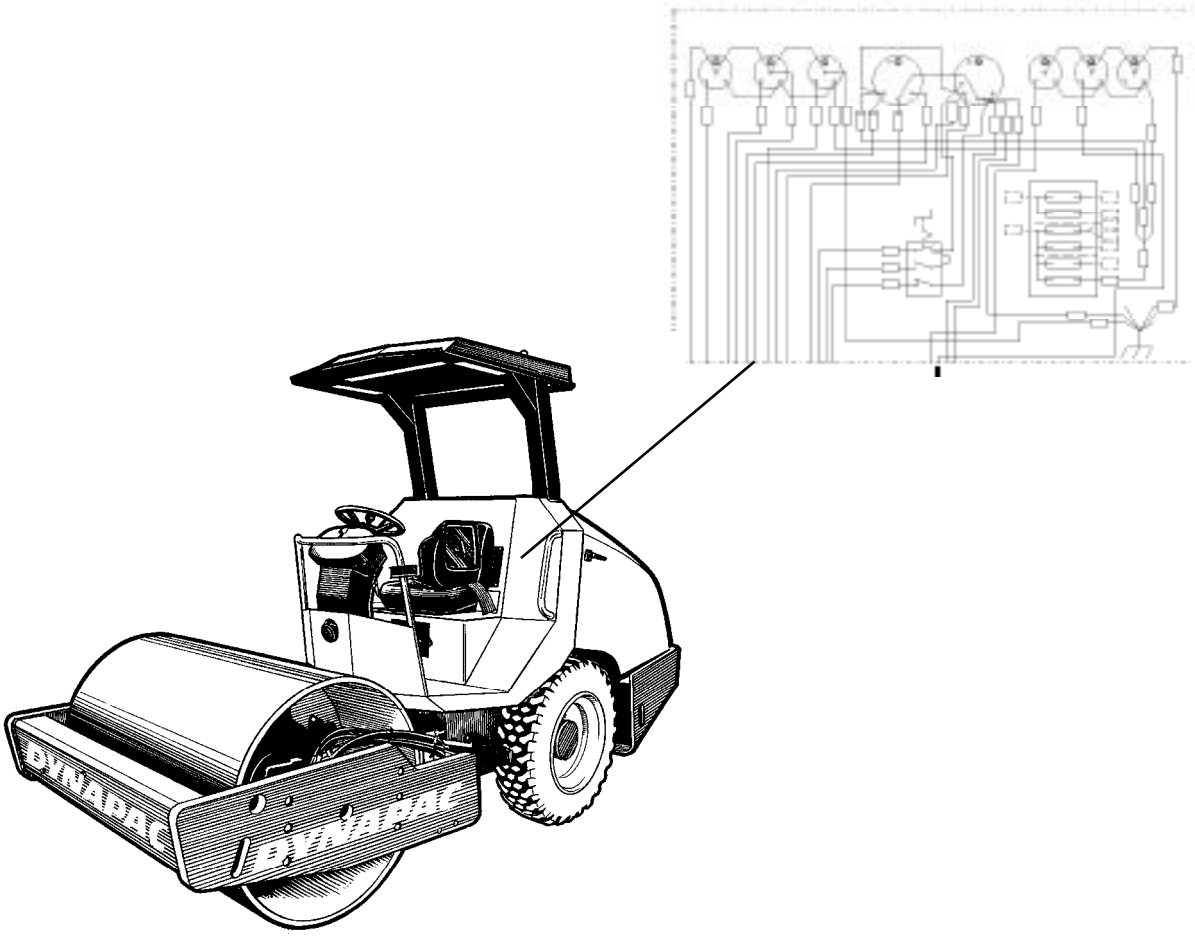
DYNAPAC

Workshop manual
W3018EN1.pdf
Electric circuit diagrams

Vibratory roller
CA134/CA144

From serial number:
81270134, 81370134, 83270144, 83370144



Subject to changes
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Table of Contents

Introduction

Warning symbols

WARNING ! Marks a danger or a hazardous procedure that can result in life threatening or serious injury if the warning is ignored.

CAUTION ! Marks a danger or hazardous procedure that can result in damage to the machine or property if the warning is ignored.

Safety information

Ensure good ventilation (extraction of air by fan) where the engine is run indoors.

General

- Familiarize yourself with the equipment on the machine.

- Only operate the machine if you are familiar with how the controls work and how the machine functions.

- Use your safety equipment such as helmet, protective shoes and hearing protection.

- Familiarize yourself with the machine's area of work.

- Only use the machine for its intended purpose.

The safety manual supplied with the machine must be read by all roller operators. Always follow the safety instructions. Do not remove the manual from the machine.

Safety regulations

Before start

- Study and understand the operating instructions before start.
- Check the machine for any serious faults.
- Do not operate the machine with defective instruments, warning lights or control elements.
- All safety devices must be in a secure position.
- Do not carry loose or secure them to the machine.
- Keep oily and inflammable material away from the machine.
- Before entering the driver's cab, check if persons or obstacles are in the way of or underneath the machine.
- Be careful when entering the driver's cab, use the steps.
- Adjust your seat before starting.

Start

- When starting, all operating levers must be in "neutral position".
- Only start the machine from the driver's seat.
- Check the indicating instruments after start to ensure that all functions are in order.
- Do not leave the machine unattended when the engine is running.

Jump starting

Do not connect the negative cable to the negative terminal on the dead battery. A spark can ignite the oxy-hydrogen gas formed around the battery.

Check that the battery used for jump starting has the same voltage as the dead battery.

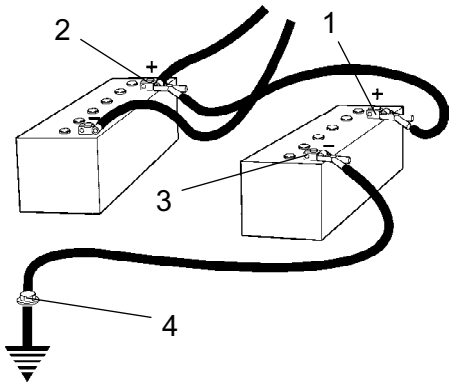


Fig. Jump starting

Turn the ignition and all power consuming equipment off. Switch off the engine on the machine which is providing jump start power.

First connect the jump start battery's positive terminal (1) to the flat battery's positive terminal (2).Then connect the jump start battery's negative terminal (3) to, for example, a bolt (4) or the lifjting eye on the machine with the flat battery.

Start the engine on the power providing machine. Let it run for a while. Now try to start the other machine. Disconnect the cables in the reverse order.

Electrical and hydraulic equipment

Personal safety must be observed when batteries are handled or tested.

A fully equipped medical kit, including eye-wash facilities, should be available and protective clothing, including eye protection, should be worn.

Acid splashes in the eye should be treated immediately with plenty of clean water and neutralized with sodium bicarbonate solution.

Acid splashes on clothing must be treated with an alkali, such as ammonia, if holes are to be avoided.

A safety hazard exist during or after battery charging due to emission of a highly flammable hydrogen gas. Any testing involving production of sparks, e.g. electrical load test, must not be performed until the gas has dispersed from the cell. A similas hazard occurs when a battery is fitted on to a vehicle immediately after the battery has been removed from a charging plant.

Hydraulic equipment is under high pressure. Fluids (fuel, hydraulic oil) which escape under high pressure can penetrate the skin and cause serious injury. Therefore immediately consult a doctor if such injury occurs.

Notice that failure on the hydraulic or electrical system may give the roller an unpredictable and dangerous function.

Type of Electrical circuit diagram

The electronic diagram are made after a new standard in mobile electronics.

The electrical system are divided onto sections that are displayed horisontally on the drawings.

The identification of the cables, connectors and so on are shown in the drawing.

The benefits of this way of displaying an electrical system are that it´s easier to follow the cables and troubleshoot the system.

DYNAPAC electric wiring standard

Wiring system

Cable colours and number marking

1. Cable types and cable colours

For wiring systems in rollers cable types RKUB and RK shall be used.

The following cable colours are to be used :

WH = white

RD = red

VT = violet

GN = green

YE = yellow

BU = blue

BN = brown

BK = black for grounding (chassis)

2. Grouping of conductors

In order to establish a uniform identification of wiring systems within a limited extent of cable colours each circuit has to be associated with one of the following nine (9) groups, using the feature or function of the component.

One cable colour hs to be used for each group. Individual cables within each group are identified by a three (3)-digit code, where the first digit indicates the colour of the cable.

The groups are as follows:

Group 1 LIGHTNING
Cable colour: WHITE
Cable marking: 101-199
This group includes all "white lighting"
Example:
- headlights, work lights
- auxiliary headlamps
- instruments, panel and gauge lighting
- cab lamp

Group 2 BATTERY
Cable colour: RED
Cable marking: 201-299
This group of circuits includes all live leads from battery and charging system to the live terminals of the various circuits when all switches are in "off" position with the exception of the main switch and the battery master disconnect switch.

Group 3 ENGINE
Cable colour: VIOLET
Cable marking: 301-399
This group of circuits is concerned with the functioning of the engine, including starter actuation, electrical ignition, engine run, engine stop and transmission.

Group 4 DIGITAL SIGNALS +5V
Cable colour: ORANGE
Cable marking: 401-499

Group 5 ACCESSORIES
Cable colour: GREEN
Cable marking: 501-599
Example:
- windshield wiper
- radio/cd
- heater, ACC

Group 6 COMMUNICATION
Cable colour: YELLOW
Cable marking: 601-699
Optical an accoustical devices.
Example:
- tail/stop/side direction lamp
- rotating beacon
- horn, back alarm, buzzer

Group 7 CONTROL
Cable colour: BLUE
Cable marking: 701-799
This group of circuits is concerned with the control characteristics of the roller actuated by the operator.
Example:
- vibration control
- sprinkler system control
- timer

Group 8 MONITORING
Cable colour: BROWN
Cable marking: 801-899
This group includes all circuits indicating and warning the operator about temperature level, quality, pressure, position, etc.
Example:
- oil pressure lamp
- charging lamp
- fuel level indicator
- oil temperature indicator
- fan belt indicator
- water level, sprinkler system indicator

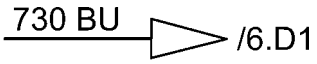
Group 9 CIRCUIT GROUNDING
Cable colour: BLACK
Cable marking: 901-999, 9000-9999
Negative (-) termination (chassis).

3. Explanation of electrical circuit diagram

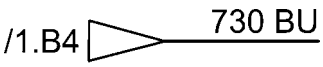
The circuit diagram contains 6 pages and some lines on one page may be connected to a component on another page.

In top of the pages, figures 1 to 6 are found and on right of pages, letters A to D are found.

Example



6.D1 means that line (730) continues on page 6 and is found down to left (with coordinates D1 on the page).



1.B4 mean that the incoming line is found on page 1 with coordinates B4.

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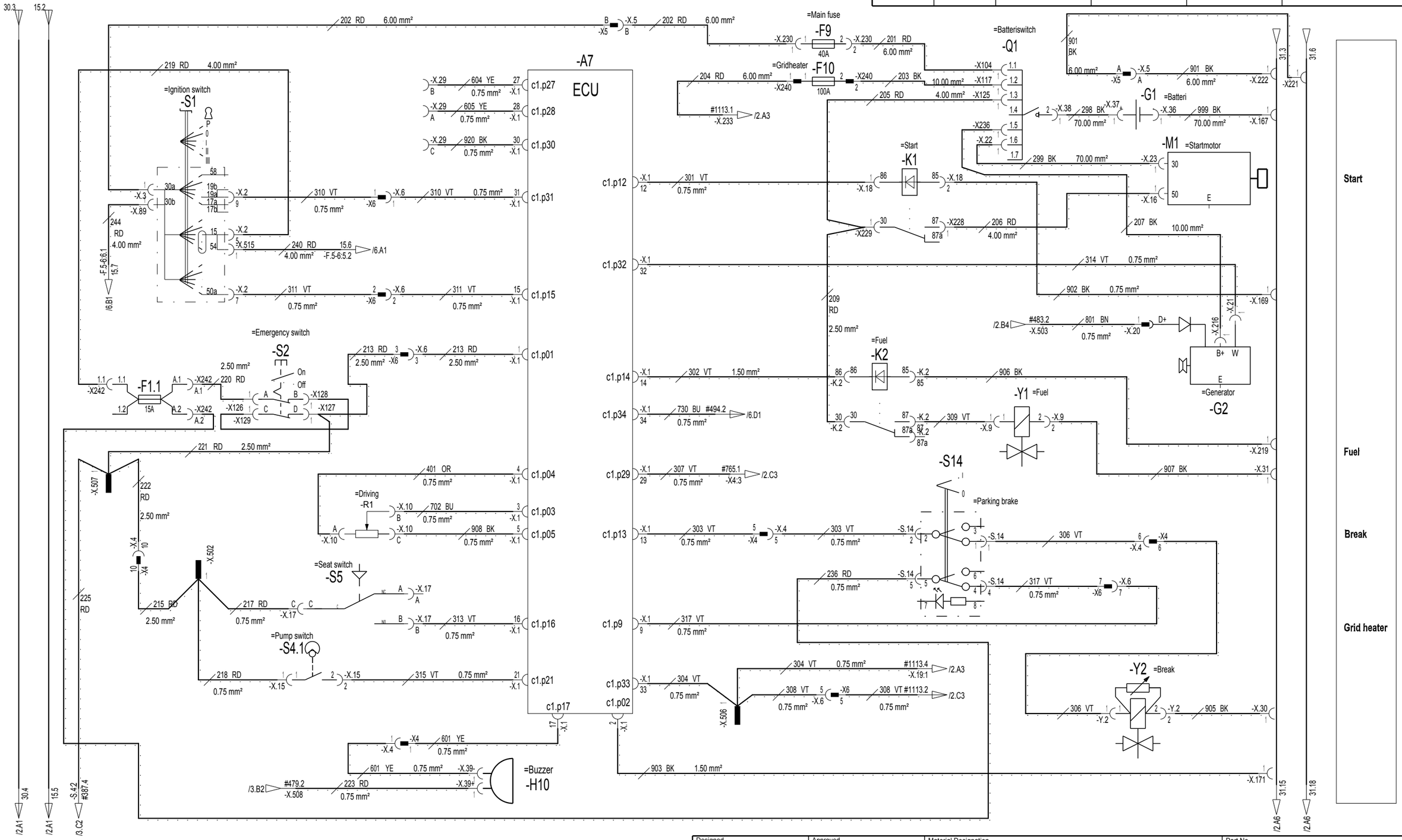

Wire area 1.5 mm unless otherwise stated

Ledningsarea 1.5 mm där annat ej anges

Designed TZ/GE	Approved TZ/LW	Material Designation	Part No
View E	Date 2004-04-05	Description Circuit diagram Start and stop Kretsschema Start och stopp	Model CA 134-144
	Reg.		Scale / Sheet of 1 / 6
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/1.D1 30.4

/1.D1 15.5

/1.D6 31.15

/1.D6 31.18

=Gridheater
-K5

/1.C4 #1113.4 -X.506 — 304 VT 0.75 mm² — 86 -X.19 — 85 -X.19 2 — 904 BK 0.75 mm² — -X.170

/1.A4 #1113.1 -X240:1 — 204 RD 6.00 mm² — 30 -X.233 — 87 -X.234 — 87a — 208 RD 4.00 mm² — -X.50

=Gridheater
-E26

=Instrument panel
-A8

-X.509

/3.B2 #479.3 -X.508 — 228 RD — 7 -X.33 — 229 RD 0.75 mm²

231 RD 0.75 mm² — 2 -X.34

V + J1:7

Keyswitch J2:2

Hour Meter Enable (H) J2:9

Fuel lev. (B) J1:8

Low fuel

Charging

Eng. temp. J1:1

Eng. press. J2:8

Brake J2:3

Glowing

V - J1:5

J2:5

-X.33 9 — -X.34 802 BN 0.75 mm² — 4 -X.6 — 4 -X.6 802 BN 0.75 mm² — -X.503 — 801 BN 0.75 mm² — #483.2 -X.20 — /1.B5

-X.33 8 — 803 BN 0.75 mm² — 8 -X.4 — 8 -X.4 803 BN 0.75 mm² — -X.13 1 — Fuel 2 — -X.13 2 — 913 BK 0.75 mm² — -X.232

-X.33 1 — 805 BN 0.75 mm² — 7 -X.4 — 7 -X.4 805 BN 0.75 mm² — -X.504 — 805 BN 0.75 mm² — -X.238

-X.34 8 — 807 BN 0.75 mm² — 9 -X.4 — 9 -X.4 807 BN 0.75 mm² — -X.505 — 807 BN 0.75 mm² — -X.239

-X.34 3 — 307 VT 0.75 mm² — 3 -X.4 — 3 -X.4 307 VT 0.75 mm² — #765.1 — /1.B4

-R2 1 — 2 =1.5 Kohm

-X.34 5 — 308 VT 0.75 mm² — #1113.2 — /1.C4

931 BK 0.75 mm² — -X.232

-A1
ECU

c1.p24 — 24 -X.1

c1.p25 — 25 -X.1

c1.p26 — 26 -X.1

c1.p35

808 BN — 806 BN 0.75 mm²

=Fuel sensor
-B3
Fuel

=Engine temp sensor
-B2
θ

=Engine pressure sensor
-B10
P

Fuel

Eng.Temp

Eng.Pressure

/3.A1 30.2

/3.A1 15.1

/3.A6 31.12

/3.A6 31.1

Wire area 1.5 mm unless otherwise stated
Ledningsarea 1.5 mm där annat ej anges

Designed TZ/GE	Approved TZ/LW	Material Designation	Part No
View E	Date 2004-04-06	Description	Model CA 134-144
	Reg.	Circuit diagram Gridheater, Warning panel Kretsschema Förvärmning, Varningspanel	Scale — Sheet / of 2 / 6
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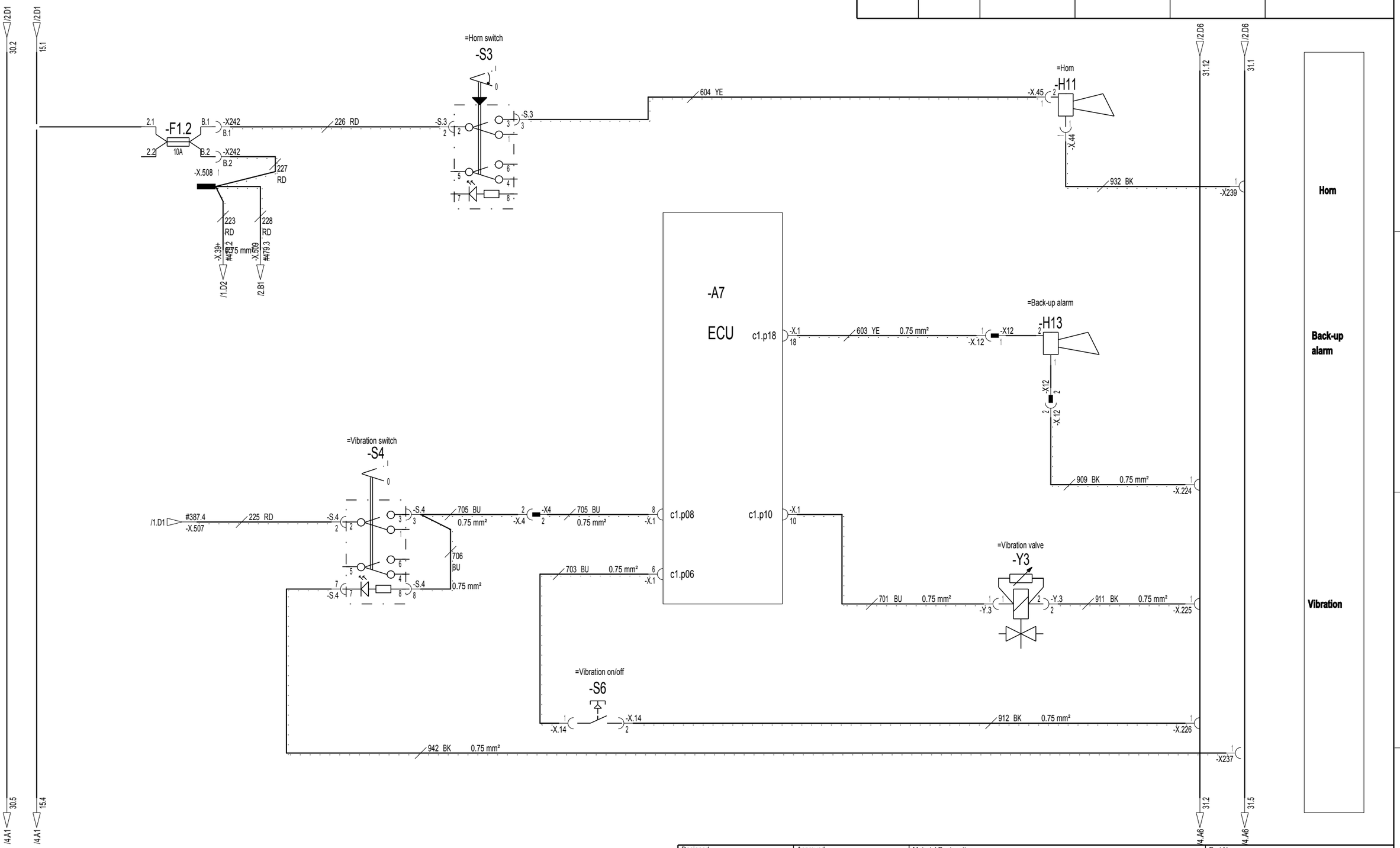
Rev.	Pls.	Change No.	Date	Issued by	Checked



Wire area 1.5 mm unless otherwise stated
Ledningsarea 1.5 mm där annat ej anges

Designed TZ/GE	Approved TZ/LW	Material Designation	Part No
View E	Date 2004-04-06	Description Circuit diagram Horn vibb and back-up alarm Kretsschema Signalhorn,vibb och back-alarm	Model CA 134-144
	Reg.		Scale / Sheet / of 3 / 6
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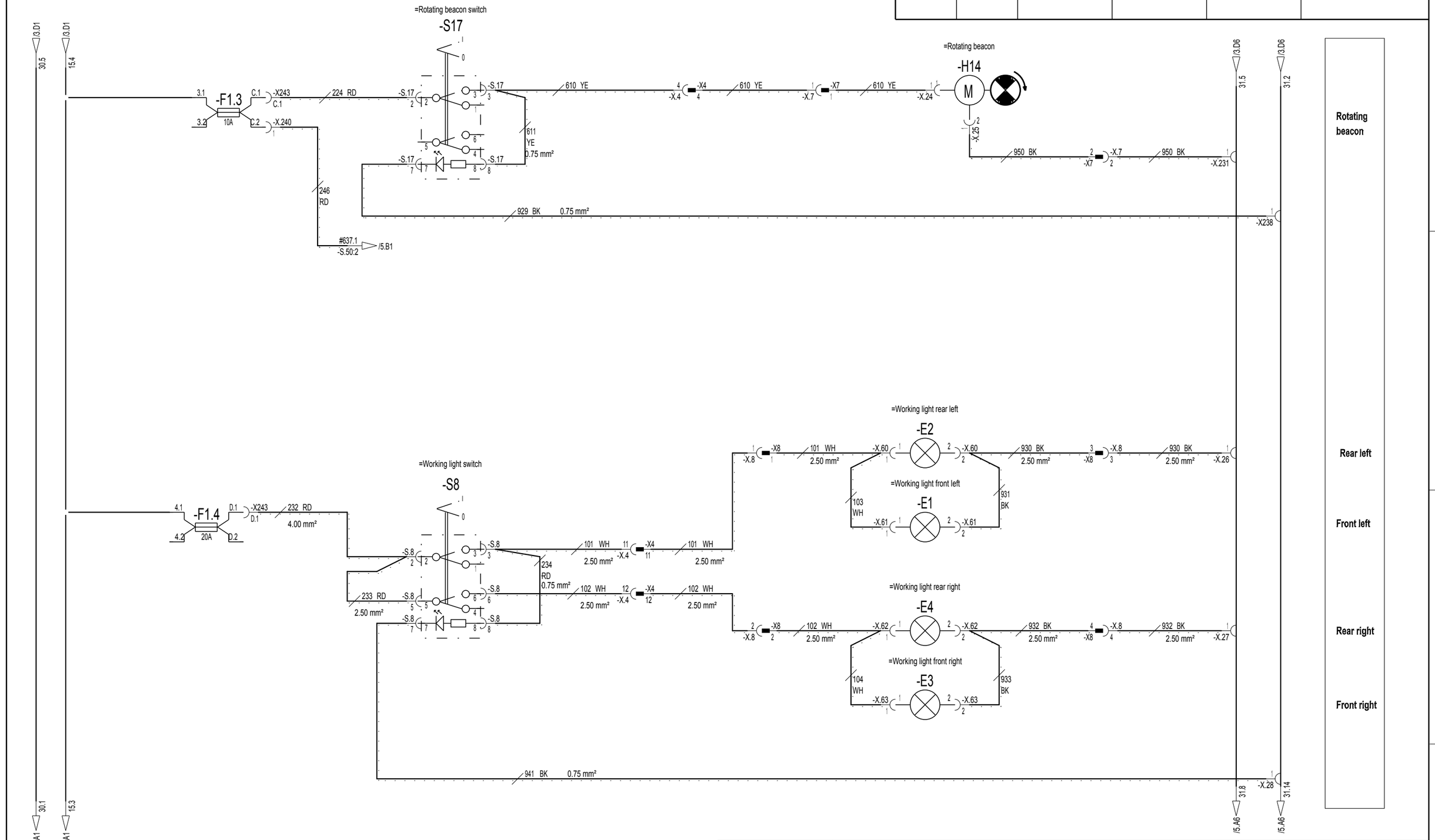
Rev.	Pls.	Change No.	Date	Issued by	Checked



Wire area 1.5 mm unless otherwise stated
Ledningsarea 1.5 mm där annat ej anges

Designed TZ/GE	Approved TZ/LW	Material Designation	Part No
View E	Date 2004-04-15	Description	Model CA 134-144
	Reg.	Circuit diagram Rotating beacom, working light Kretsschema Roterande varningsljus, arbetsbelysning	Scale / Sheet / of 4 / 6
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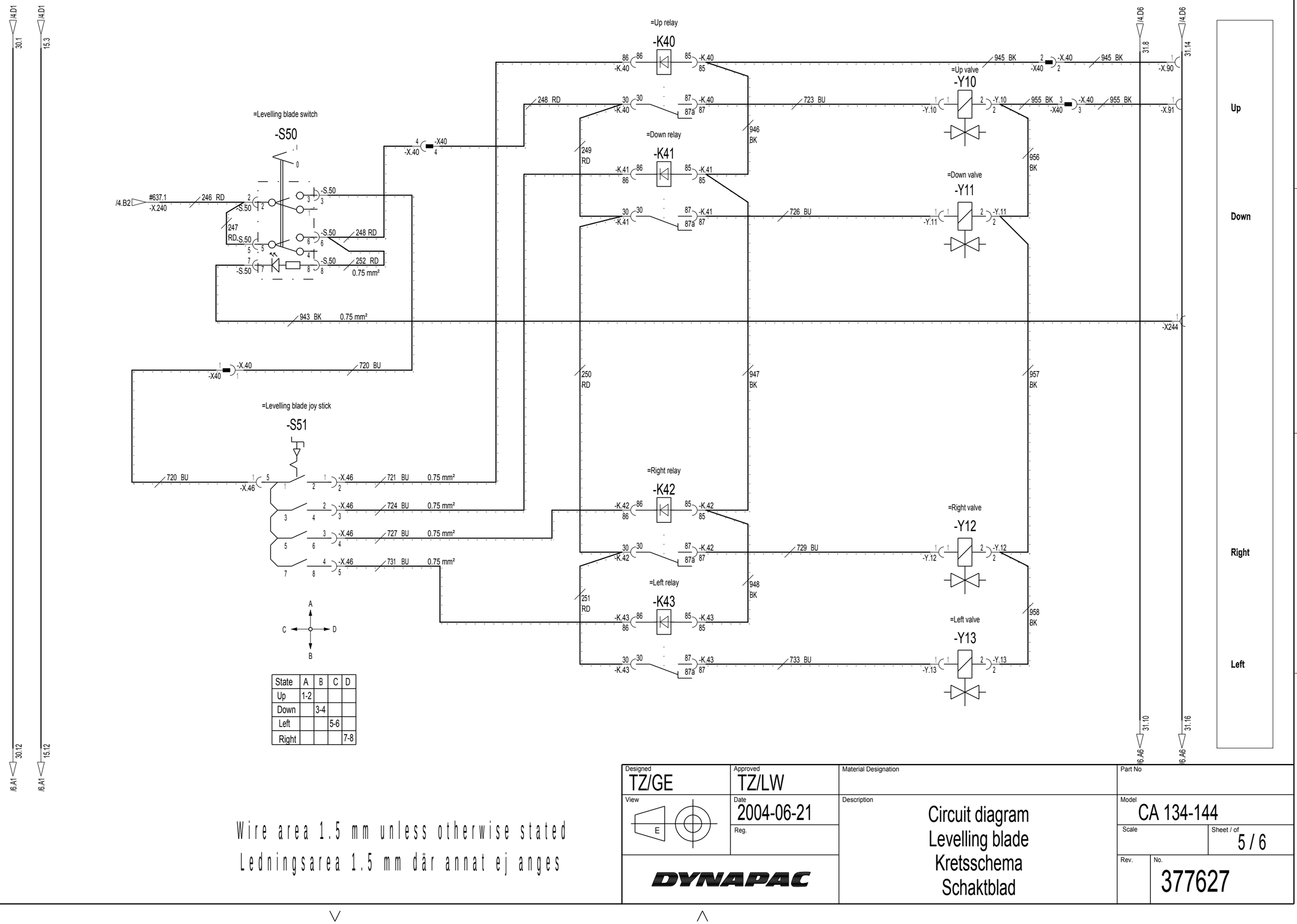

State	A	B	C	D
Up	1-2			
Down		3-4		
Left			5-6	
Right				7-8

Wire area 1.5 mm unless otherwise stated
Ledningsarea 1.5 mm där annat ej anges

Designed TZ/GE	Approved TZ/LW	Material Designation	Part No
View E	Date 2004-06-21	Description Circuit diagram Levelling blade Kretsschema Schaktblad	Model CA 134-144
	Reg.		Scale / Sheet / of 5 / 6
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=Head light switch
-S9

=Headlight right
-E10

=Headlight left
-E9

=Position direction right/ front
-E15

=Position direction left/ front
-E13

=Direction side right
-H20

=Direction side left
-H17

=Direction right/ rear
-H19

=Direction left/ rear
-H16

-H27/-E26
=Break/ position left

-H26/-E14
=Break/ position right

=Direction switch
-S10

=Hazard switch
-S11

=Flash relay
-K9

=Break light relay
-K10

=Registration plate lamp
-E17

-F1.5 20A
-F1.6 10A
-F1.7 5A
-F1.8 5A

Headlight Right/ front
Headlight Left/ front
Position/ direction Right/ front
Position/ direction Left/ front
Direction/ side Right
Direction/ side Left
Direction Right/ rear
Direction Left/ rear
Break light Left/ rear
Position Left/ rear
Break light Right rear
Position Right/ rear

Wire area 1.5 mm unless otherwise stated
Ledningsarea 1.5 mm där annat ej anges

Designed	Approved	Material Designation	Part No
TZ/GE	TZ/LW		
View: E	Date: 2004-07-12	Description: Circuit diagram Driving light Kretsschema Trafikbelysning	Model: CA 134-144
	Reg.		Scale / Sheet of: 6 / 6
DYNAPAC			Rev. / No.: 377627

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