



HANGCHA

HANGCHA AERIAL PLATFORM EQUIPMENT CO.,LTD

Telescopic boom lift principle Instruction

Model: HB280P

Contents/目录

- 1.Electric System(电器系统)
- 2.Hydraulic System(液压系统)

Edit by Bruce Chan

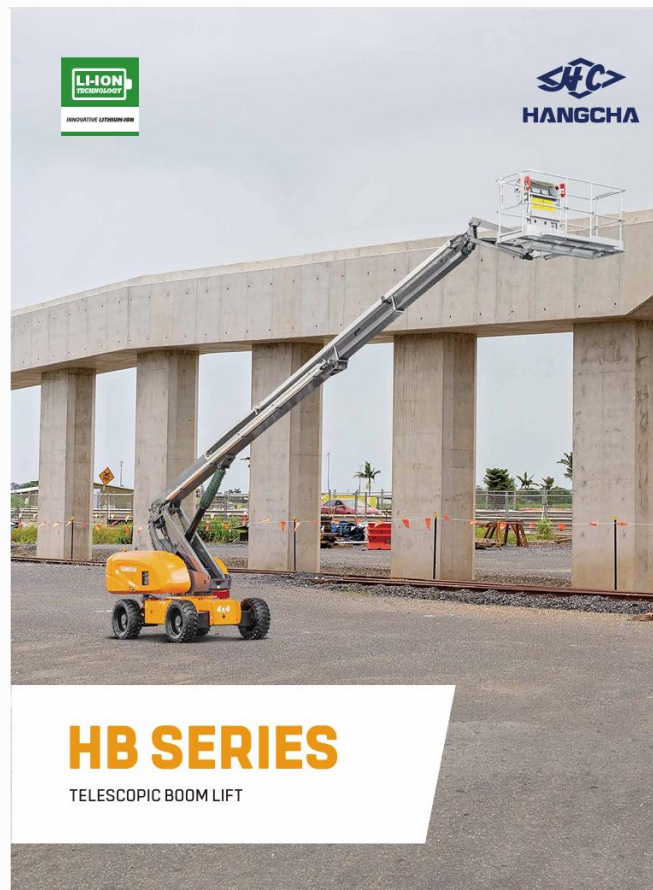


HB280P



Model definition / 型号命名含义

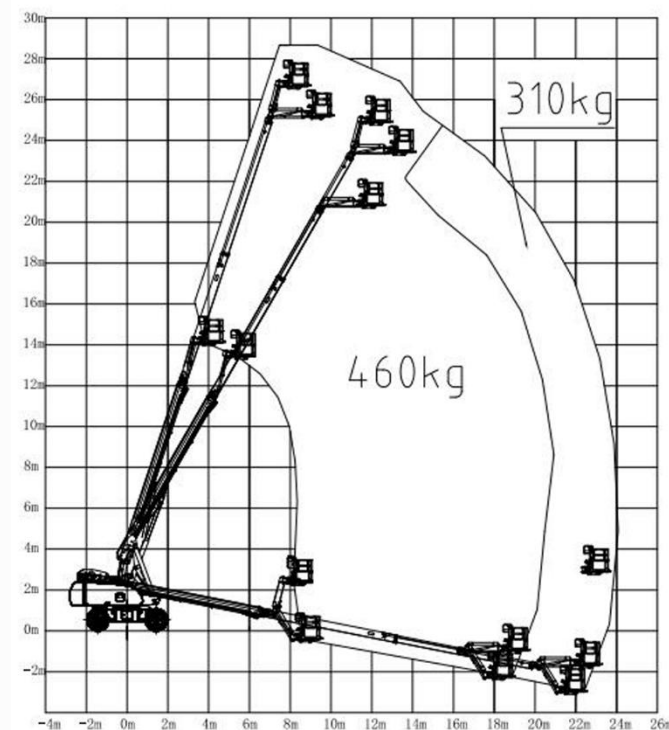
H	HANGCHA group / 杭叉集团简写
B	Telescopic B oom lift / 直臂式高空作业设备
280	Maximum working height 280 dm / 最大工作高度 280分米
P	Working power is P ermanent magnet motor / 工作动力为永磁电机
C	Working power is internal C ombustion engine / 工作动力为内燃机
B	Working power is lead-acid B attery pack / 工作动力为铅酸电池组



Scope of work diagram

作业范围图

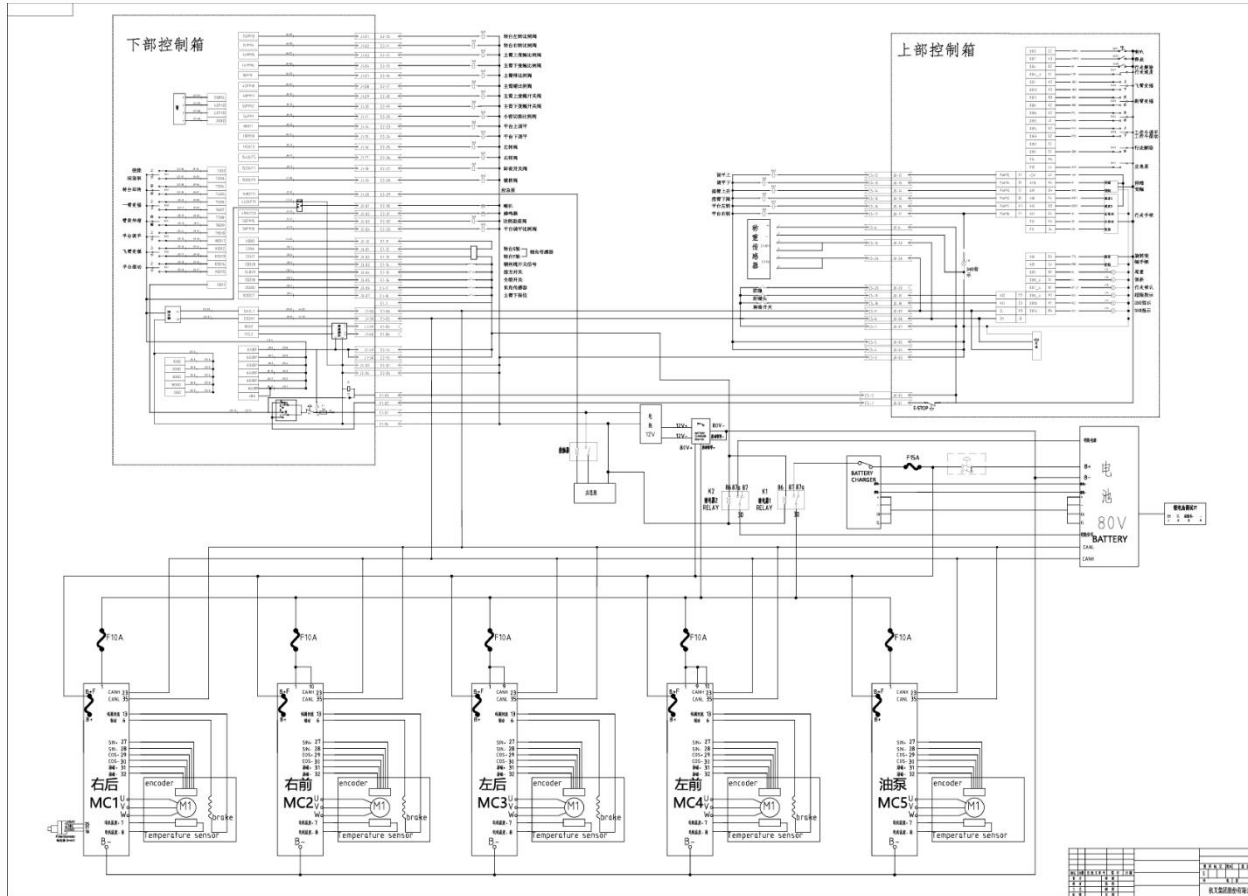
(HB280P)



Service is our business!

1.Electric System(电器系统)

1.) Electric principle/ 电气原理图



Electric schematic/电气原理图

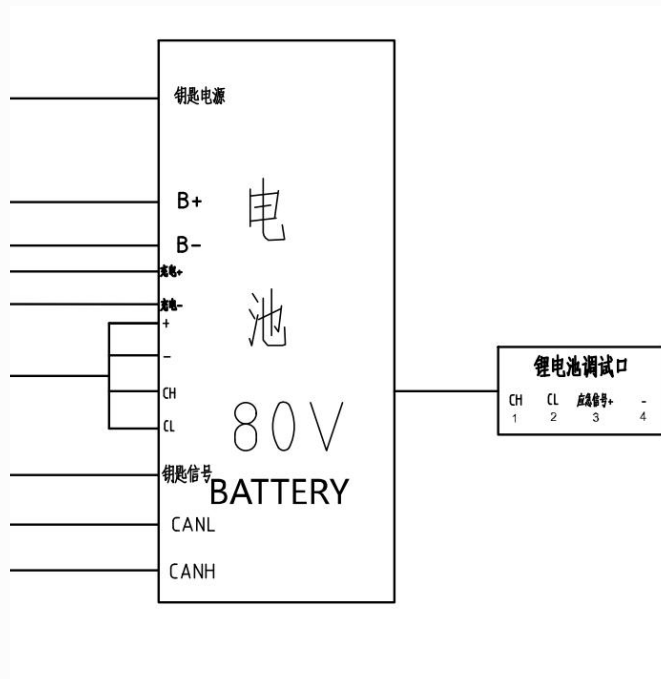


EVERY JOB IS
IN YOUR REACH

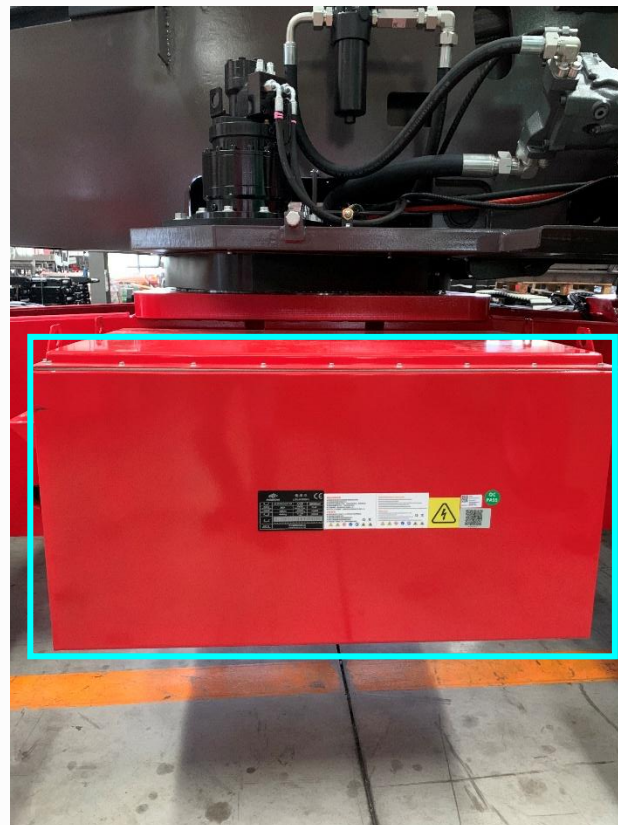
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1.Electric System(电器系统)

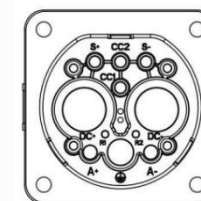
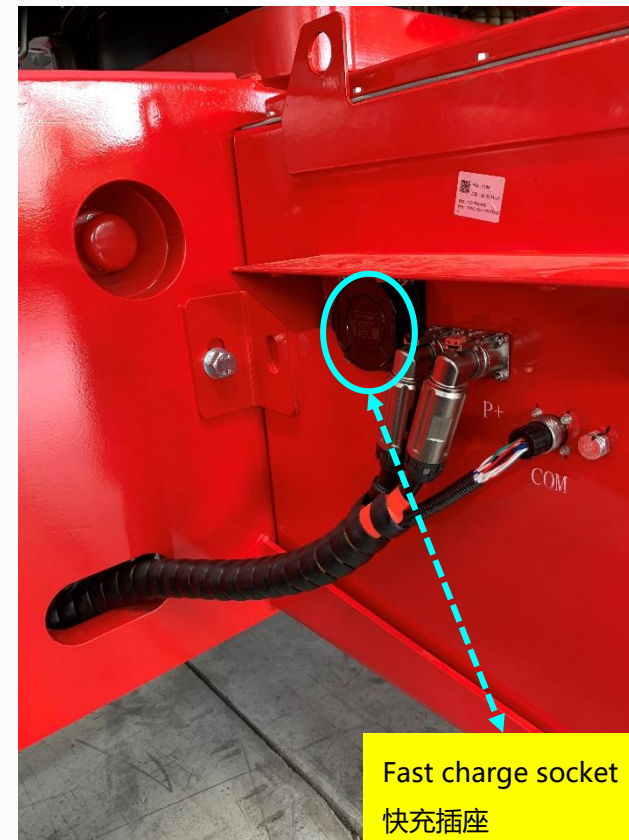
2.) Lithium battery / 锂电池



Lithium battery Diagram / 锂电池图纸



Lithium battery Location / 锂电池位置



1.Electric System(电器系统)

2.) Lithium battery / 锂电池

 HANGCHA		锂电池 Lithium Battery		
型 号 Model	DQ-EB7080560A0-C156	电池类型 Cell Type	磷酸铁锂电池E	
系统电压 System Voltage	80V	标称电压 Nominal Voltage	76.8V	
标称容量 Nominal Capacity	560Ah	标称能量 Nominal Energy	43008Wh	
重 量 Weight	460Kg	出厂日期 Date	2025.03	
编 号 Serial No.	 T 6 0 3 0 0 2 2 7 6 0 0 0 3 0 0 3 5 0 0 0 0 0 0 0 0 D Q L D B E 0 4 6 5 8 2			
制造厂商 Manufacturer	杭叉集团股份有限公司 HangCha Group Co.,Ltd			

Lithium battery parameter / 锂电池参数



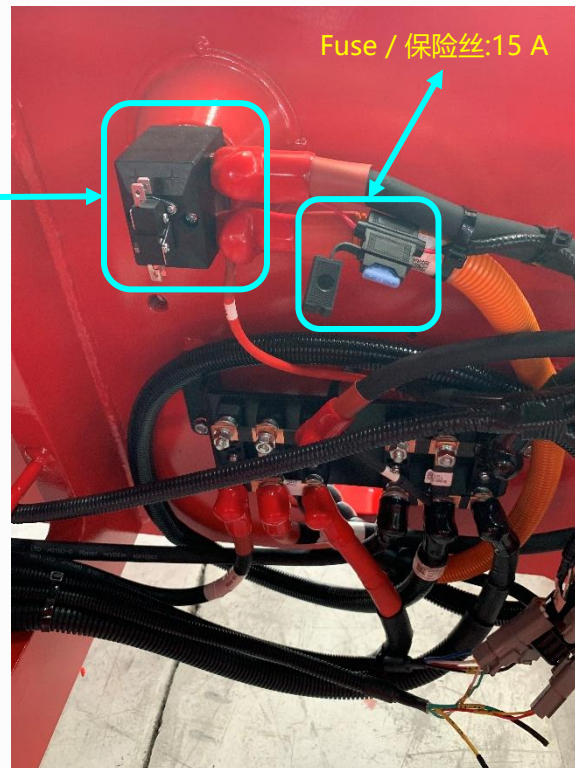
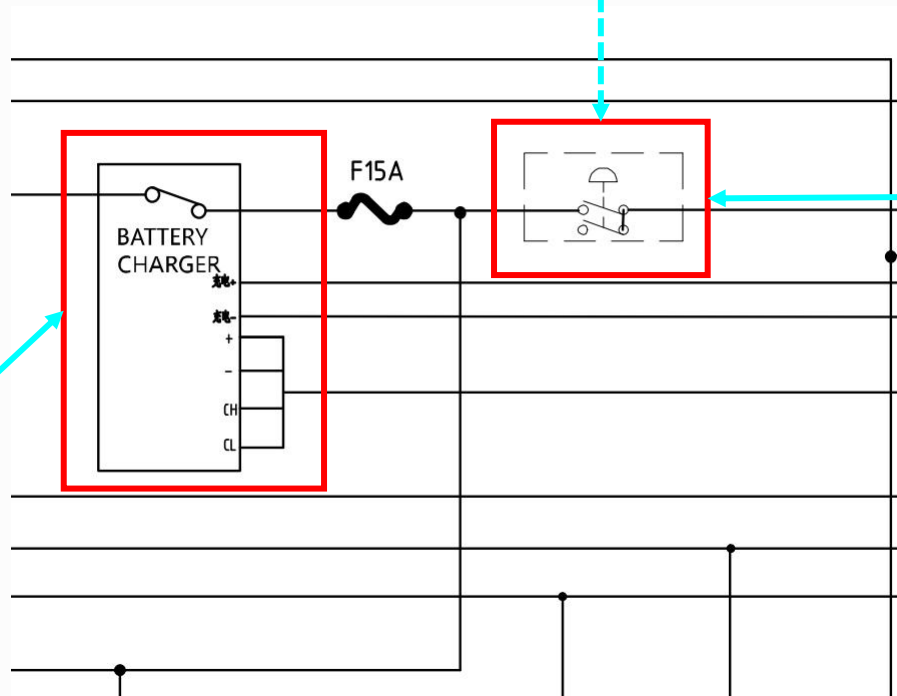
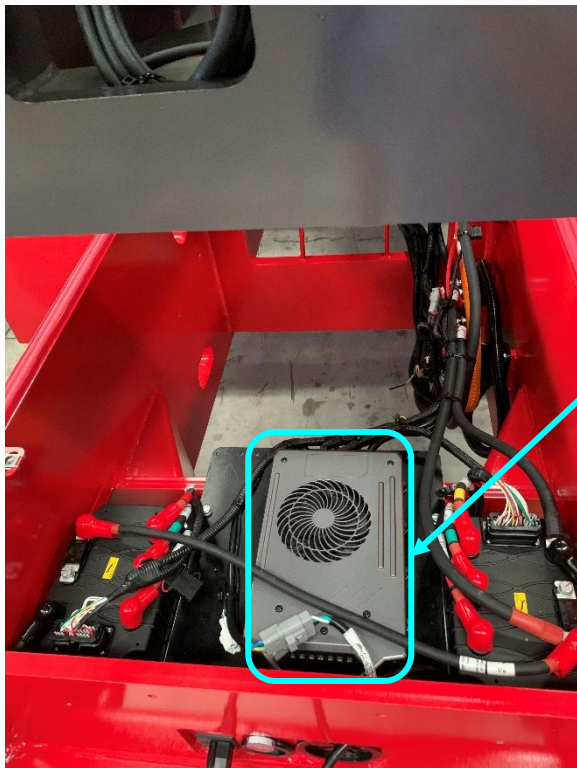
微信扫描二维码，小程序可
显示电池状态，仅限中文、
国内使用



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1.Electric System(电器系统)

3.) Battery charger / 电池充电器



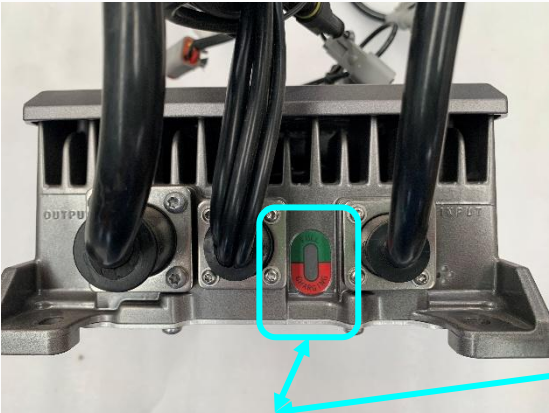
E-stop switch / 电源总开关

Battery charge Location / 电池充电器位置 Battery charge Diagram / 电池充电器图纸

1.Electric System(电器系统)



3.) Battery charger / 电池充电器



Charging / 充电中:
Red light flicker / 红灯闪烁
Full / 充满电:
Green light is glowing / 绿灯常亮

Indicator lamp / 充电指示灯

Empty load	Green and red light will be alternately flashes
Fault indication (“-”: pause 1s)	Over voltage , Over current : Red Green Red - - -
	Ambient temperature is too high or too low : Red Green Red Green - -
	Charger overheating : Green Red - - - -
	Output Under- Voltage : Red Green - - - -
	Input AC anomaly : Red Green Red Green Red -
	Integrated fault : Green Red Green - - - -
Full	Green light was glowing

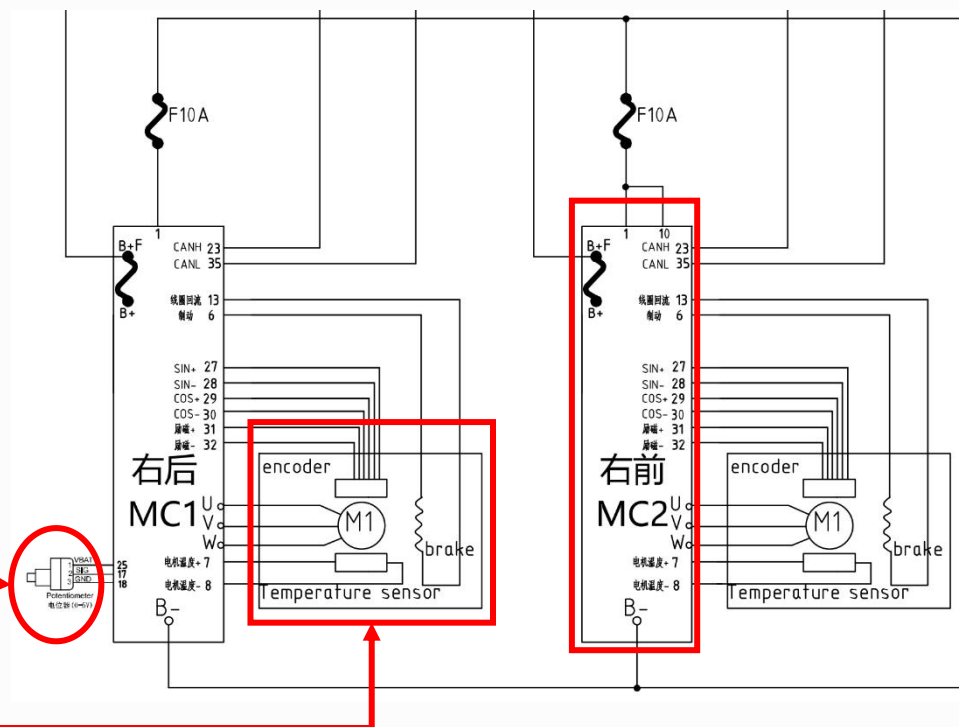
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1.Electric System(电器系统)

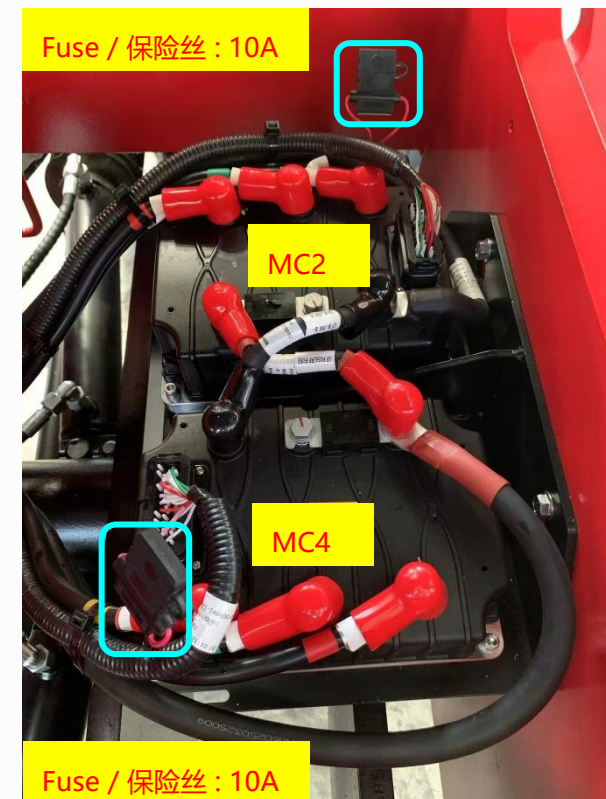
4.) Driving motor assembly / 行走电机总成



Driving motor assembly location
行走电机总成位置图



Driving motor assembly Diagram / 行走电机总成图纸



MC location / 控制器位置

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1.Electric System(电器系统)

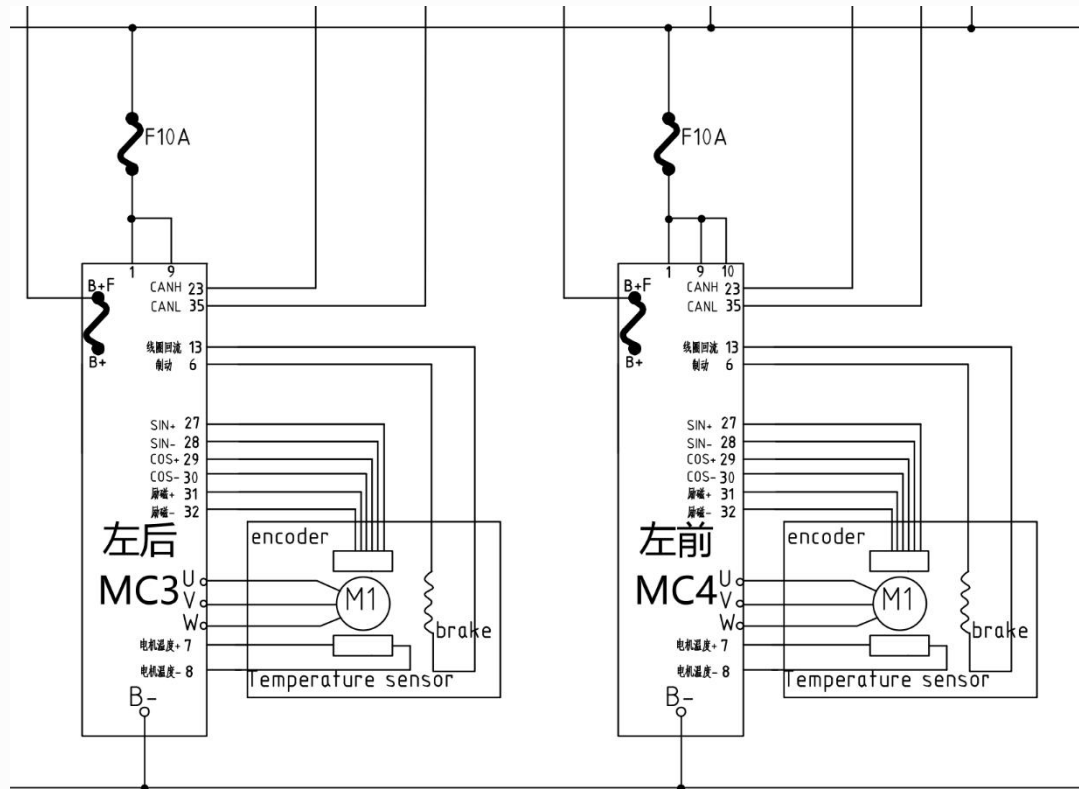
4.) Driving motor assembly / 行走电机总成



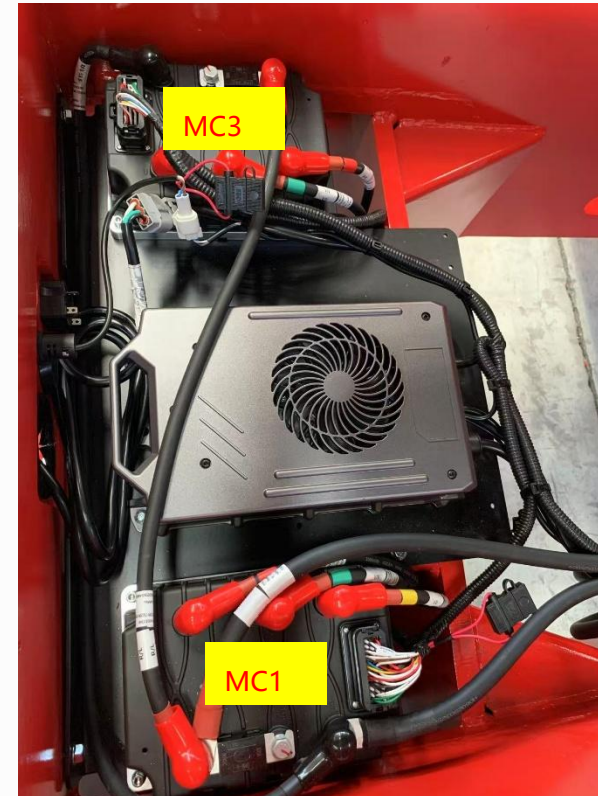
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1.Electric System(电器系统)

4.) Driving motor assembly / 行走电机总成



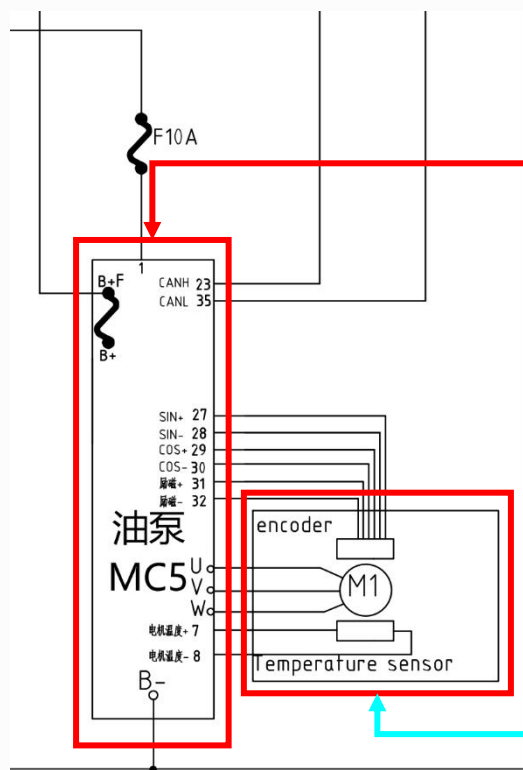
Driving motor assembly Diagram / 行走电机总成图纸



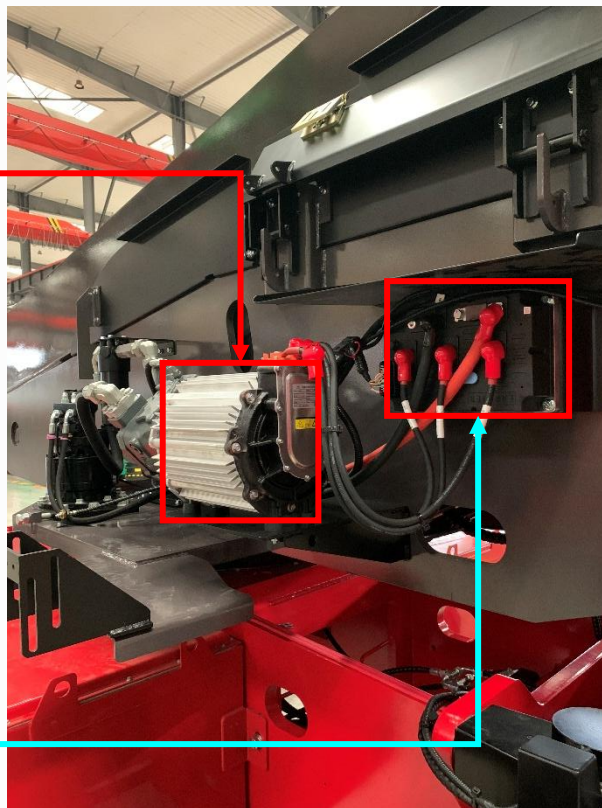
MC location / 控制器位置

1.Electric System(电器系统)

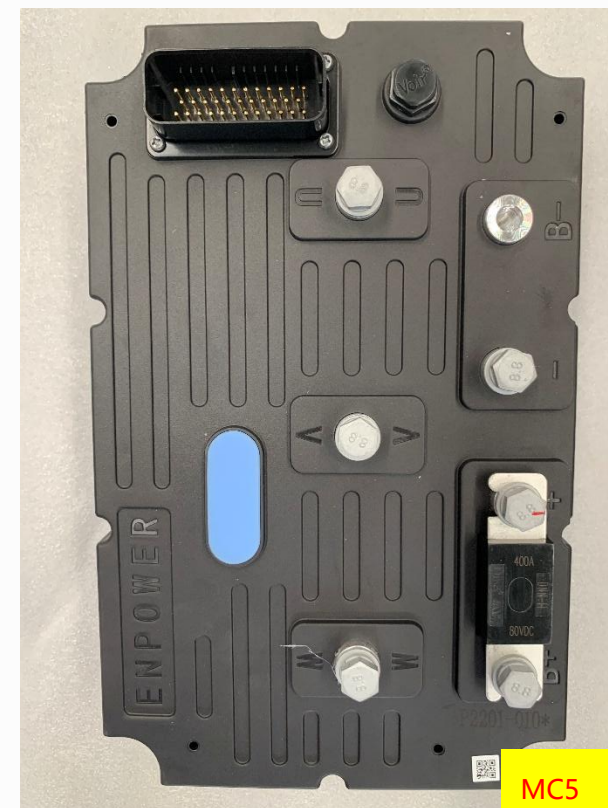
5.) Hydraulic oil motor assembly/ 液压油电机马达总成



Hydraulic oil motor assembly Diagram
液压油电机马达总成图纸



Hydraulic oil motor assembly Location / 电机马达位置图



1.Electric System(电器系统)

5.) Hydraulic oil motor assembly/ 液压油电机马达总成



Motor parameter / 永磁电机参数



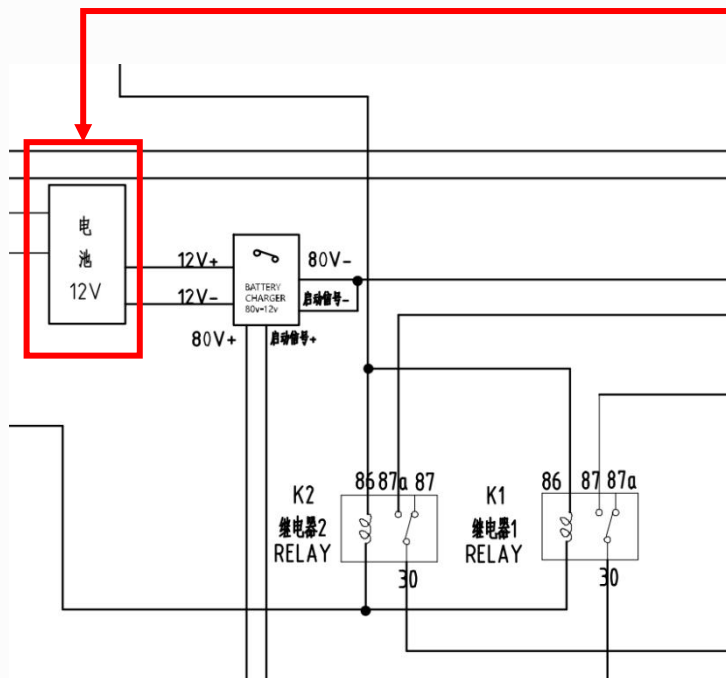
Encode / 编码器

Harness code / 线束编码: X27

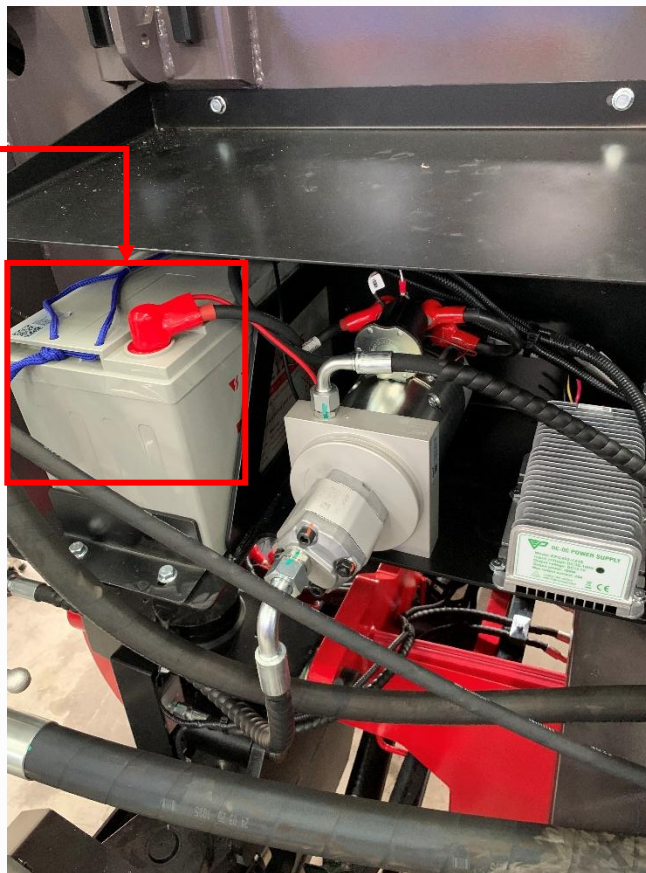
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1.Electric System(电器系统)

6.) Battery / 蓄电池



Battery Diagram / 蓄电池图纸



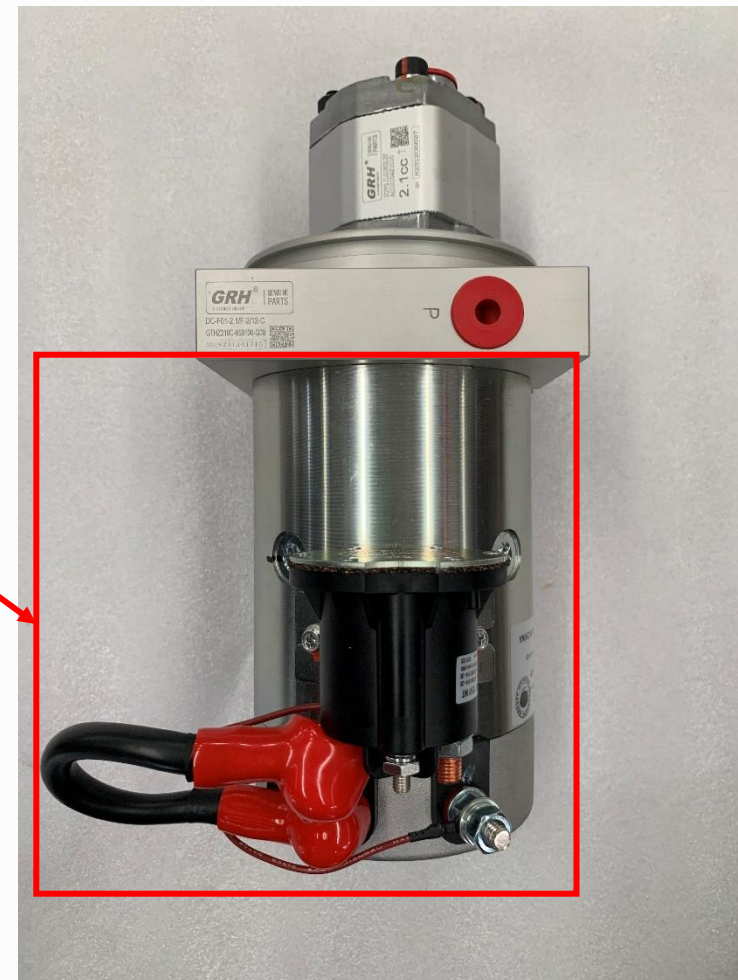
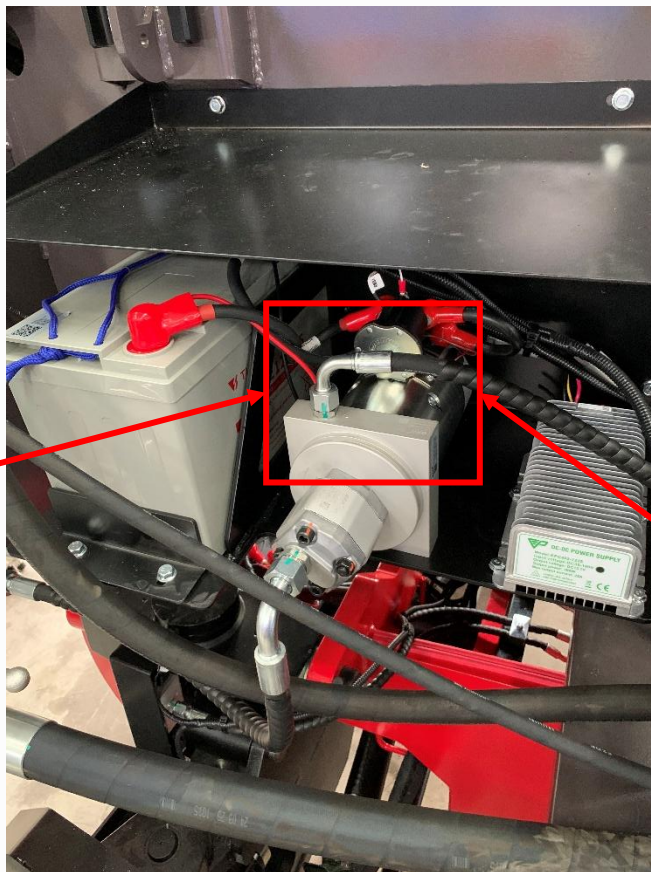
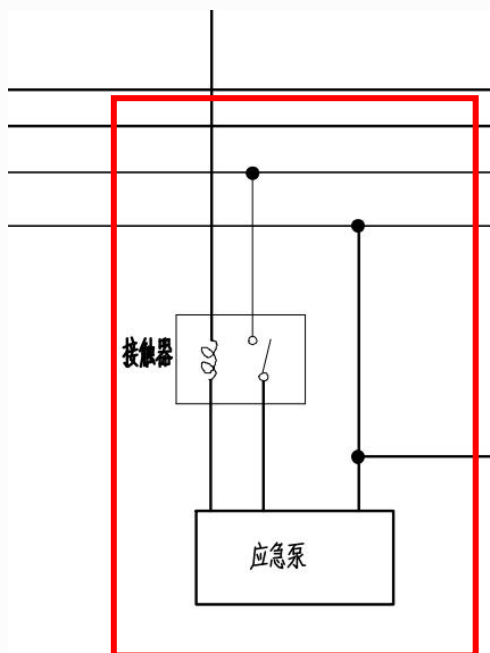
Battery location / 蓄电池位置



Battery parameter / 蓄电池参数

1.Electric System(电器系统)

7.) Emergency pump motor / 应急泵马达



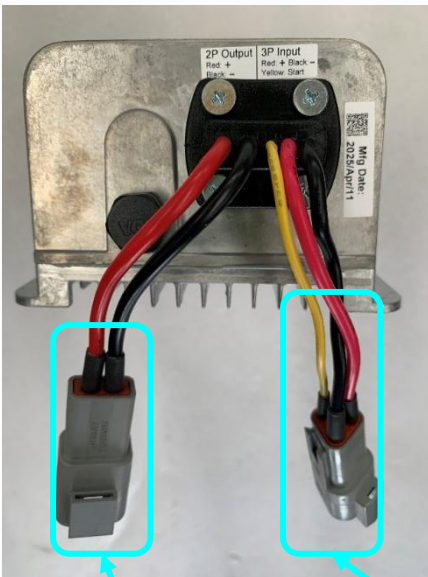
Emergency pump motor Diagram / 应急泵马达图纸

Emergency pump motor Location / 应急泵位置

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1.Electric System(电器系统)

8.) DC-DC battery charger/ DC-DC 充电器

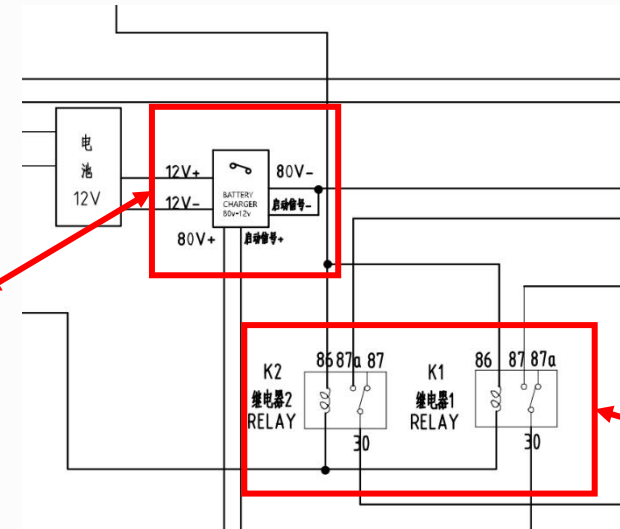
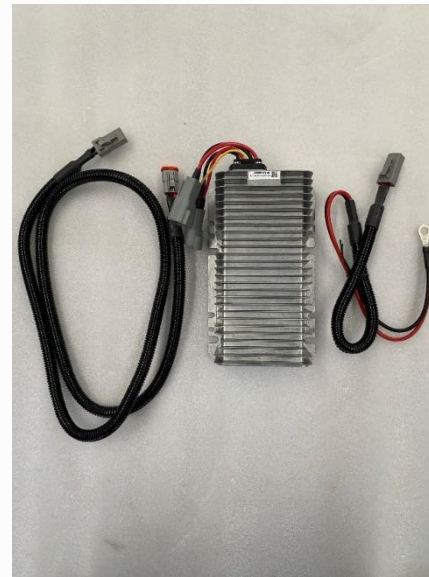


Red / 红线 : +
Black 黑线 : -

Red / 红线 : +
Black 黑线 : -
Yellow / 黄线 : Start / 开始



Parameter / 参数



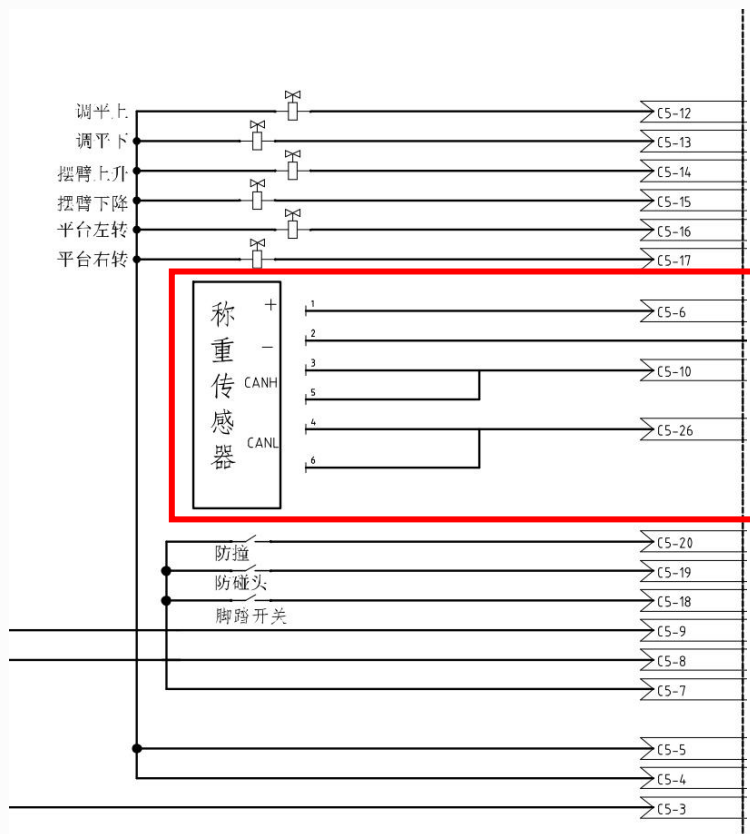
Battery charger Diagram/ 充电器图纸



Relay / 继电器: K1 & K2

1.Electric System(电器系统)

9.) Load cell sensor / 称重传感器



Load cell Diagram / 称重传感器图纸



Load cell Location / 称重传感器位置



Definition / 定义:

1. Range / 范围: 1000KG
2. Wiring signs / 针脚信号:
 - ①. VCC+(9-32VDC) ②. GND
 - ③. CAN1H ④. CAN1L
 - ⑤. CAN2H ⑥. CAN2L

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1.Electric System(电器系统)

10.) Foot pedal / 脚踏开关



Foot pedal Diagram / 脚踏开关图纸



Foot pedal Location / 脚踏开关位置



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1.Electric System(电器系统)

11.) Anti-collision sensor / 防撞传感器



Anti-collision sensor Diagram / 防撞传感器图纸



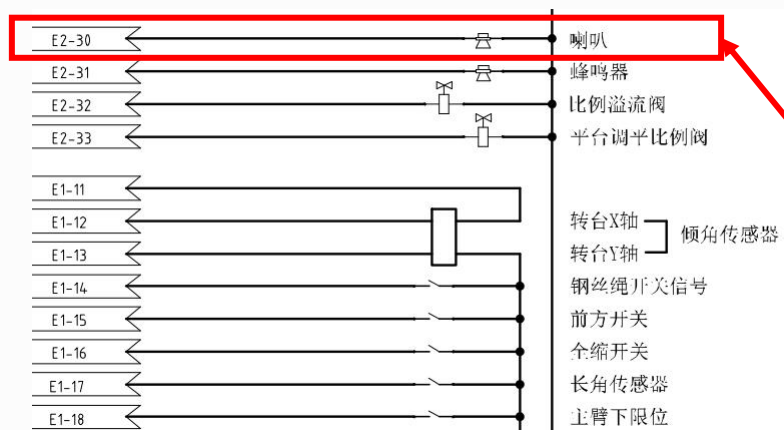
Anti-collision sensor Location / 防撞传感器位置



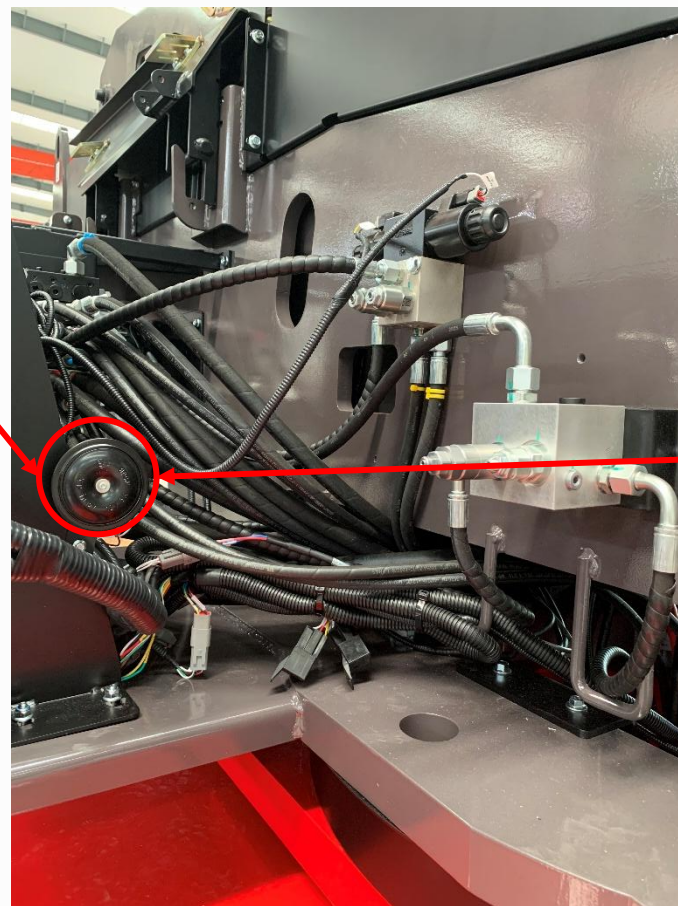
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1.Electric System(电器系统)

12.) Horn / 喇叭



Horn Diagram / 喇叭图纸



Horn Location / 喇叭位置

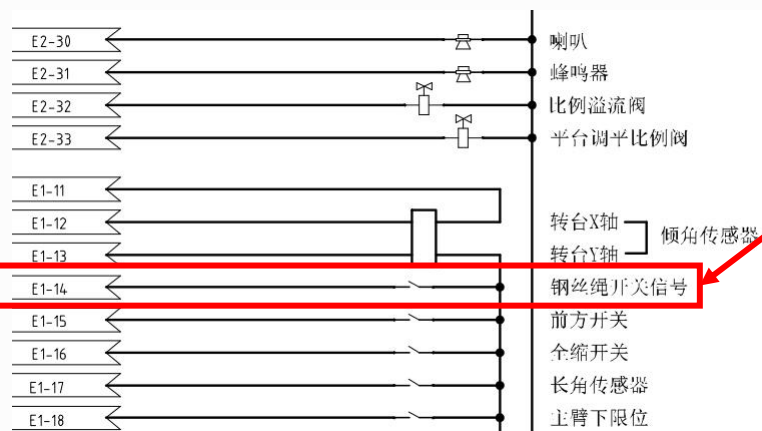


Harness code: X29
线束编号: X29

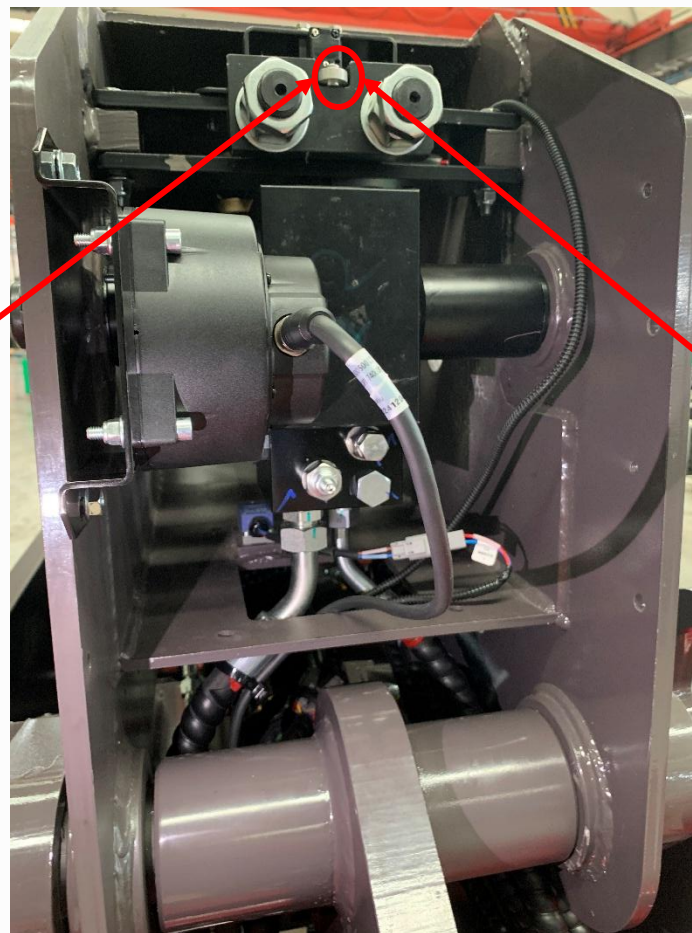
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1.Electric System(电器系统)

13.) Boom steel cable sensor/ 钢丝绳开关信号



Detect the steel cable loosen or not
检测钢丝绳受力是否松动



Harness code: X33
线束编号: X33

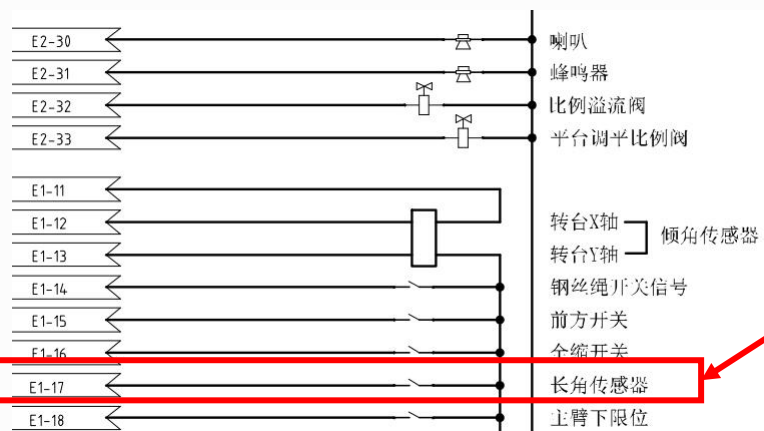
Boom steel cable sensor Diagram / 钢丝绳开关信号图纸

Boom steel cable sensor Diagram / 钢丝绳开关信号位置

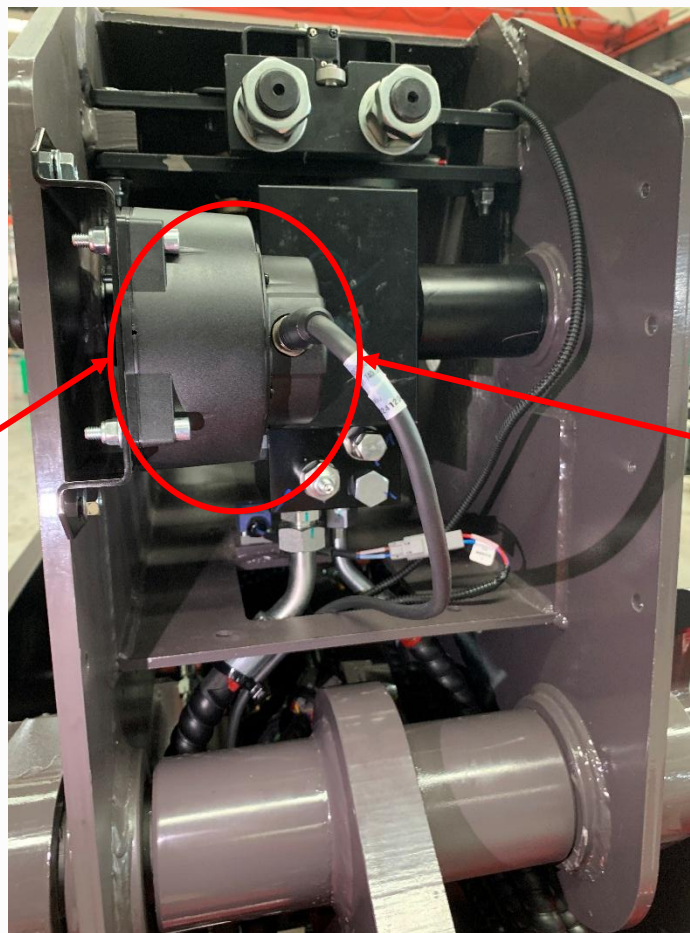
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1.Electric System(电器系统)

14.) Length & Angle sensor/ 长角传感器



Length & Angle Sensor Diagram / 长角传感器图纸



Length & Angle Sensor Location / 长角传感器位置

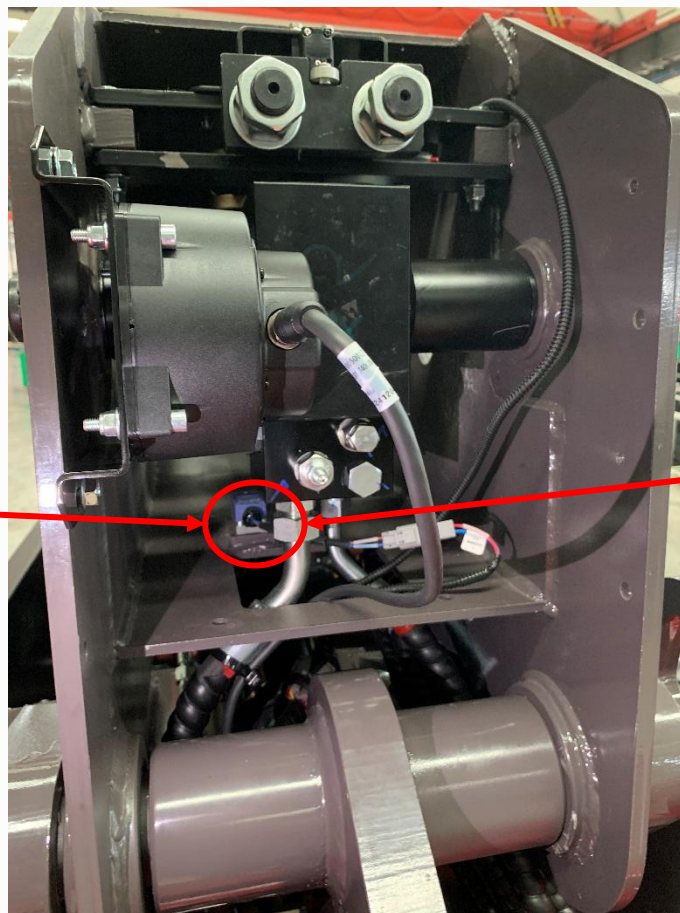
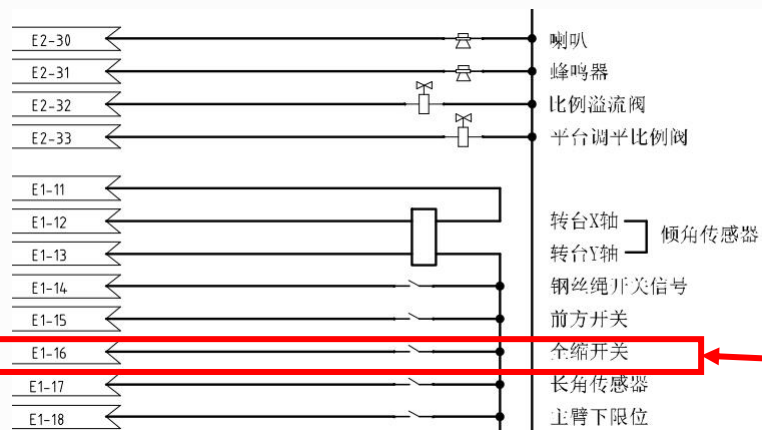


Harness code: X28
线束编号: X28

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1.Electric System(电器系统)

15.) Boom retract sensor / 全缩开关



Harness code: X34
线束编号: X34

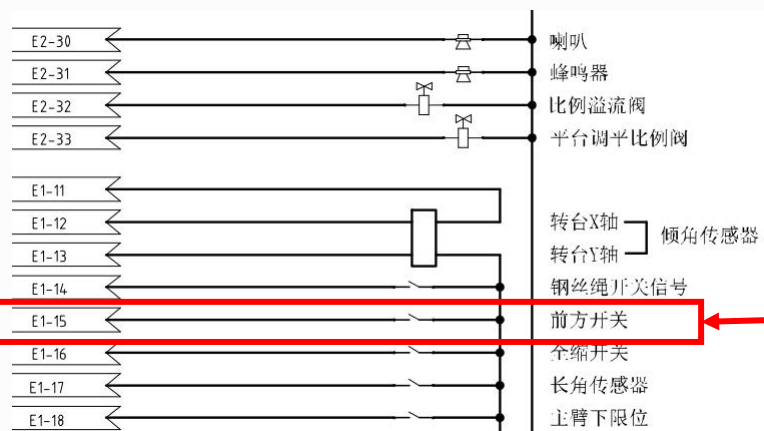
Boom retract Sensor Diagram / 全缩开关图纸

Boom retract Sensor Location / 全缩开关位置

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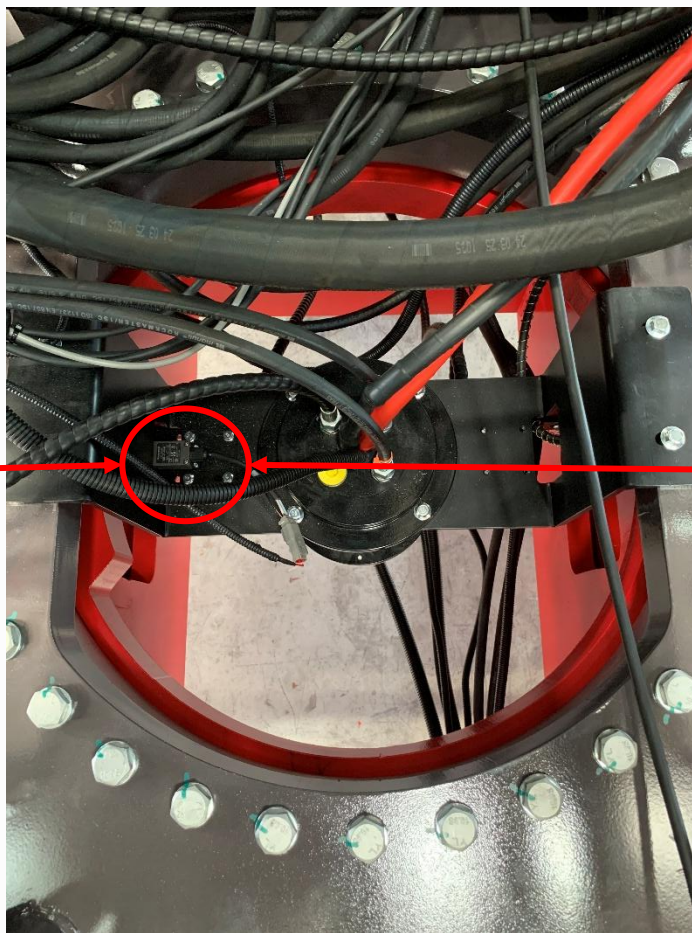
1.Electric System(电器系统)

16.) Front direction sensor / 前方开关



Detect the machine direction , while swing to 180°, moving direction is reversed

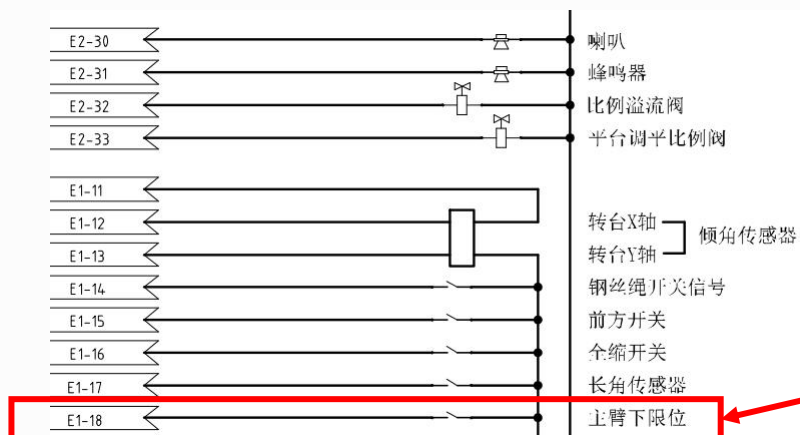
检测设备方向，当设备转到180°时，行走为反向



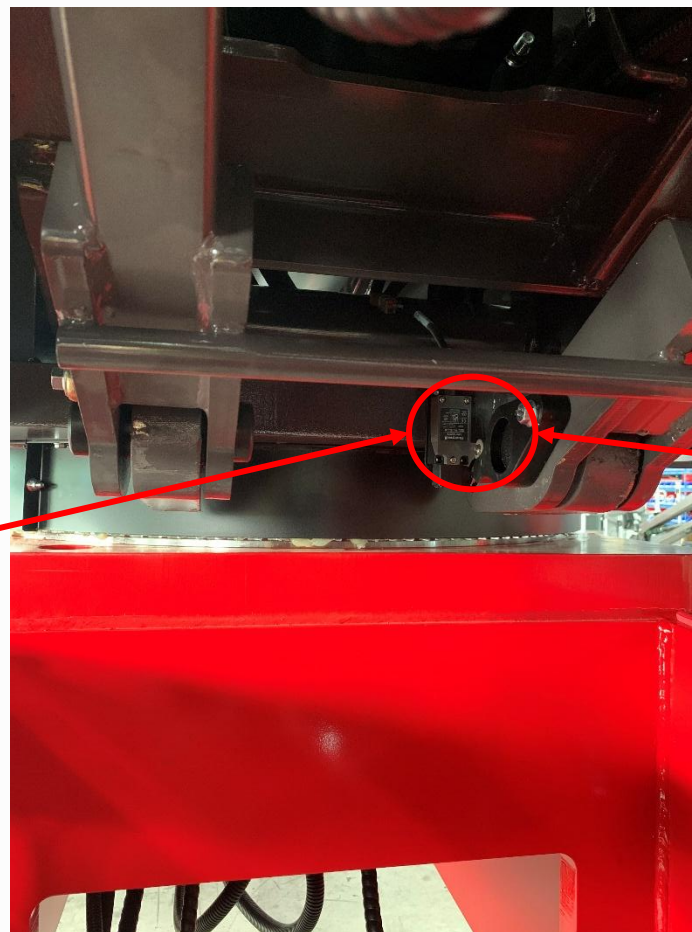
Harness code: X30
线束编号: X30

1.Electric System(电器系统)

17.) Boom lower limit sensor / 主臂下限位



Boom lower limit sensor Diagram / 主臂下限位图纸



Boom lower limit Sensor Location / 主臂下限位位置

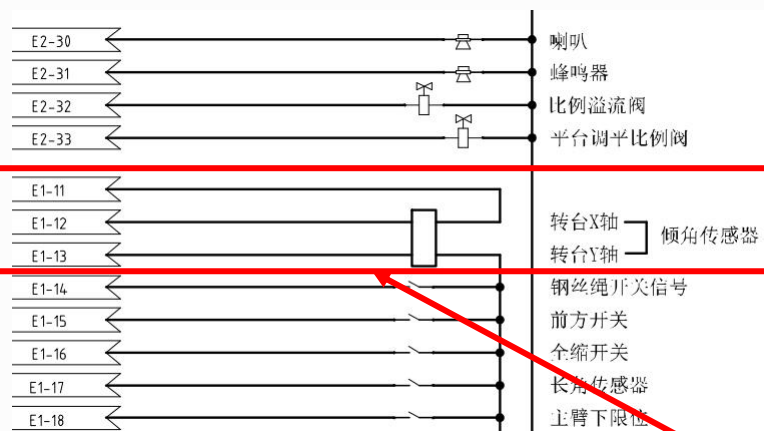


Harness code: X31
线束编号: X31

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1.Electric System(电器系统)

18.) Levelling sensor / 倾角传感器



Harness code: X23
线束编号: X23

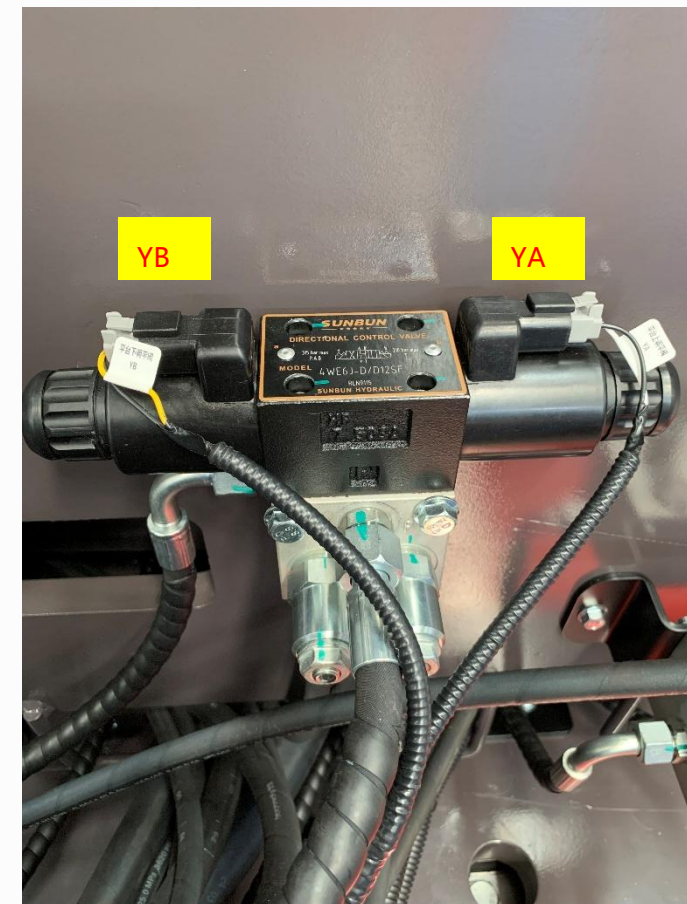
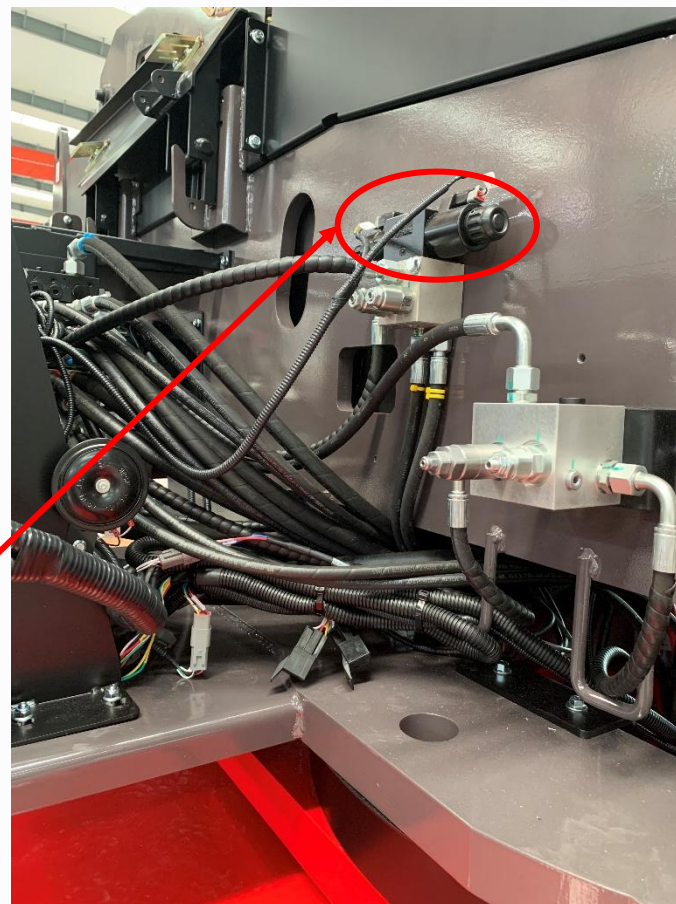
Levelling Sensor Diagram / 倾角传感器图纸

Levelling Sensor Location / 倾角传感器位置

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1.Electric System(电器系统)

19.) Solenoid valve / 电磁阀



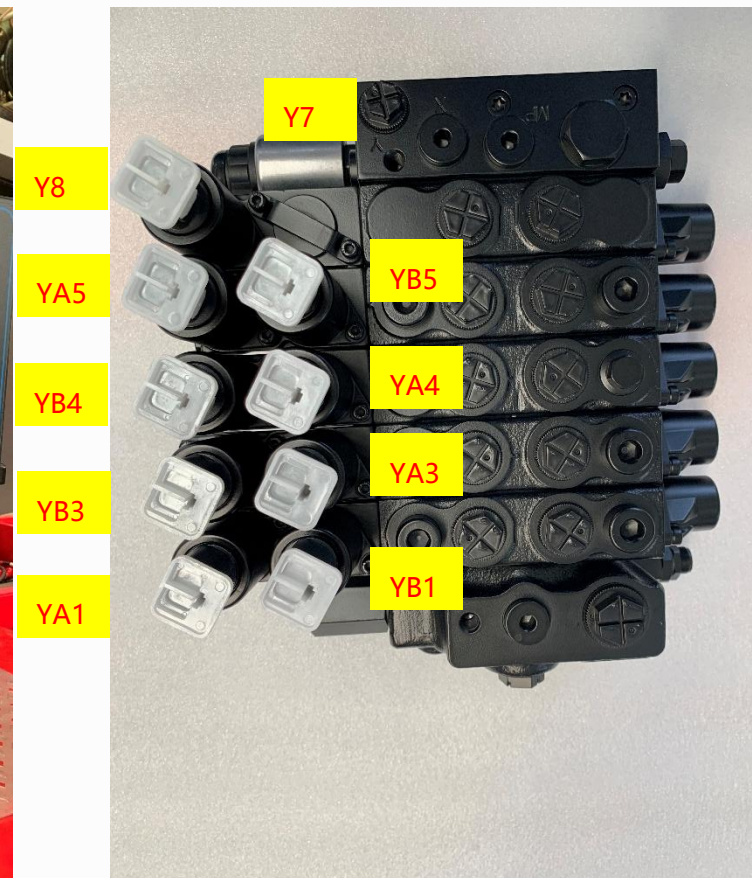
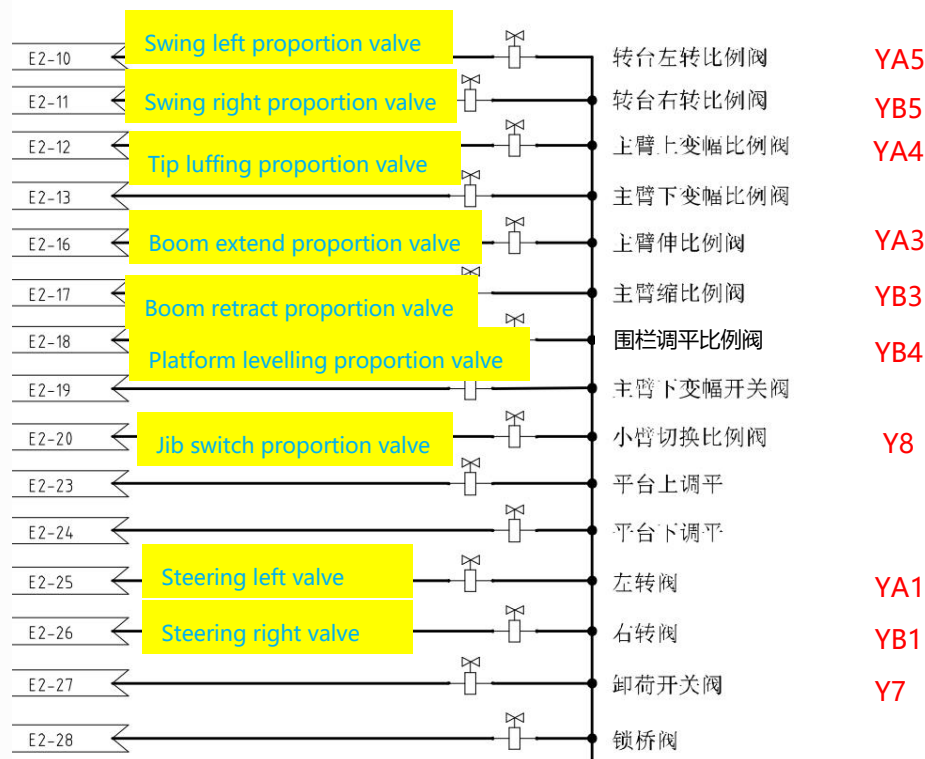
Solenoid valve Diagram / 电磁阀图纸

Platform tilt up & down Solenoid valve Location / 平台上下电磁阀位置

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1.Electric System(电器系统)

19.) Solenoid valve / 电磁阀

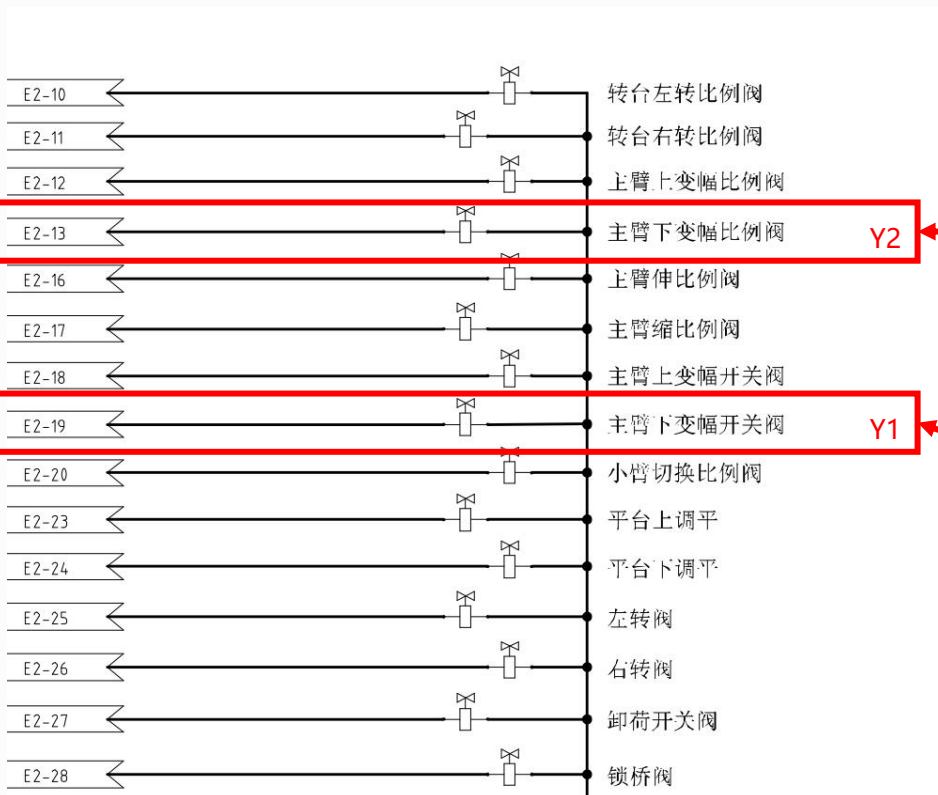


Solenoid valve Diagram / 电磁阀图纸

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1.Electric System(电器系统)

19.) Solenoid valve / 电磁阀



Solenoid valve Diagram / 电磁阀图纸



Bottom luffing proportion valve Harness code: Y2
主臂下变幅比例阀线束编号: Y2

Bottom luffing switch valve Harness code: Y1
主臂下变幅开关阀线束编号: Y1

Bottom luffing valve Location / 主臂下变幅电磁阀位置

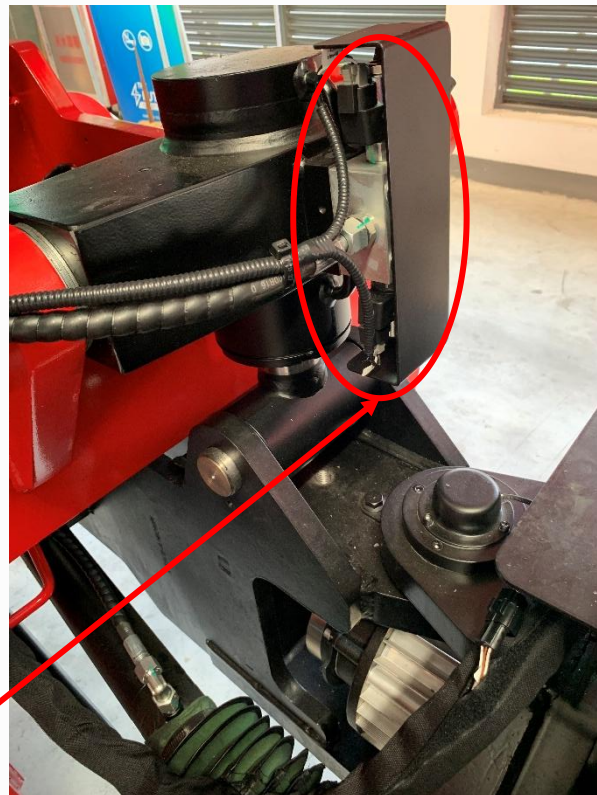
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1.Electric System(电器系统)

19.) Solenoid valve / 电磁阀



YC1/2/3/4



Harness code: YC
线束编号: YC

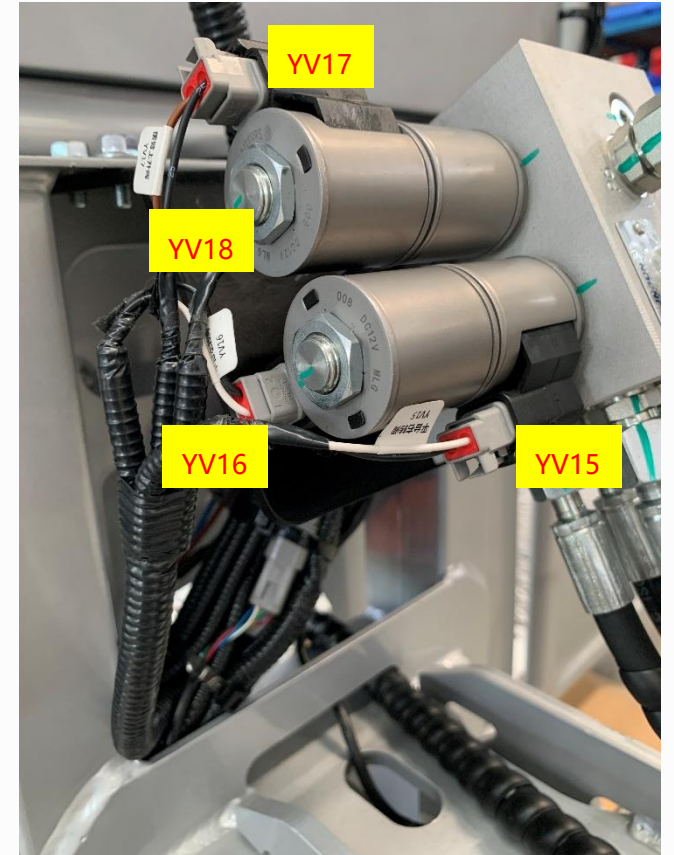
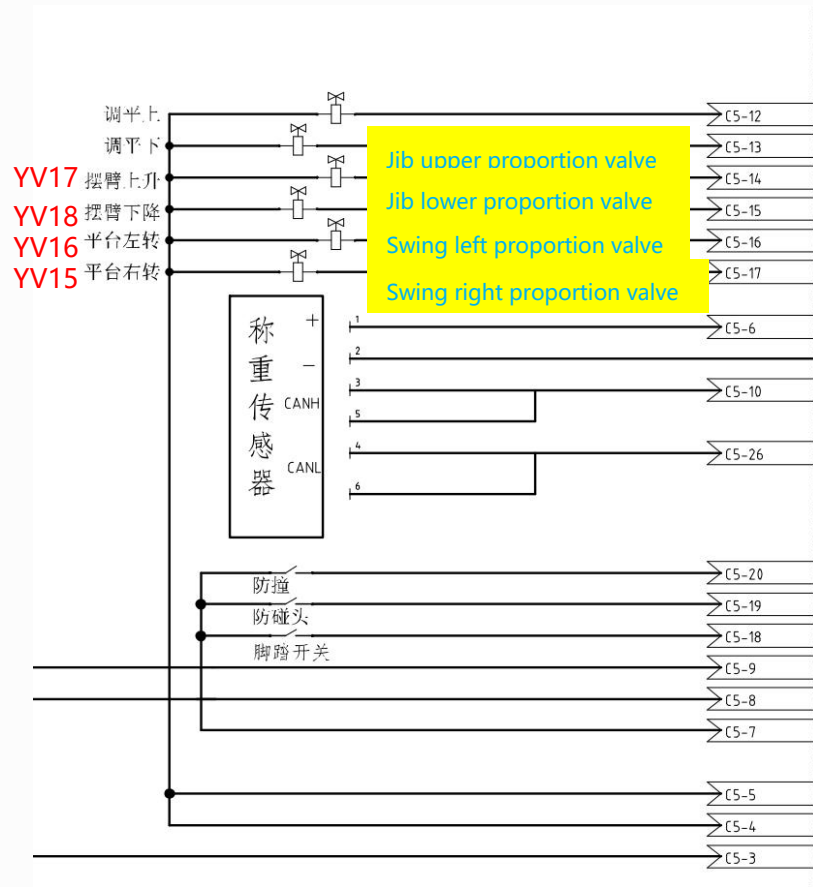
Solenoid valve Diagram / 电磁阀图纸

Axle lock Solenoid valve Location / 锁桥阀位置

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1.Electric System(电器系统)

19.) Solenoid valve / 电磁阀



Solenoid valve Diagram / 电磁阀图纸

1.Electric System(电器系统)

20.) Warning lamp / 警示灯

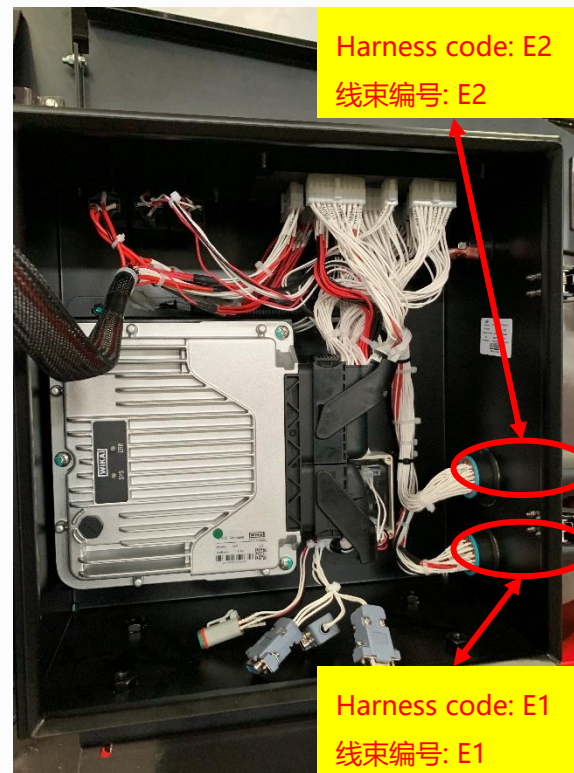
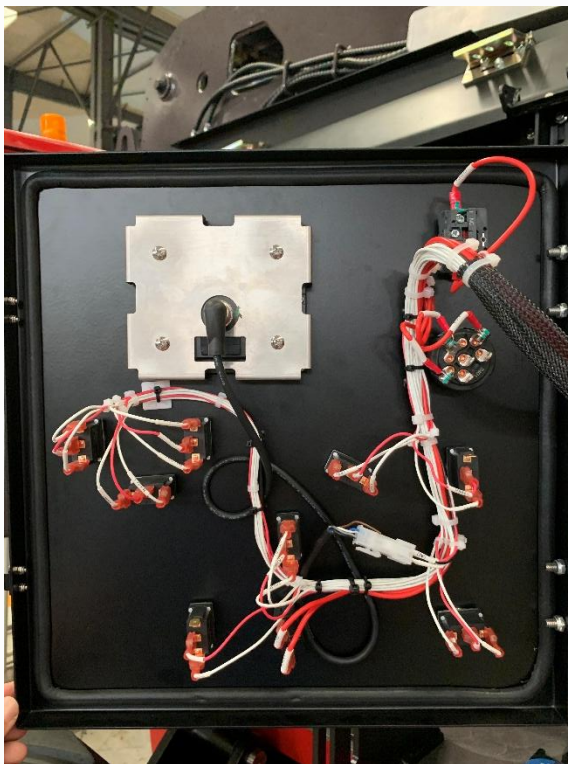


Warning lamp Location / 警示灯位置



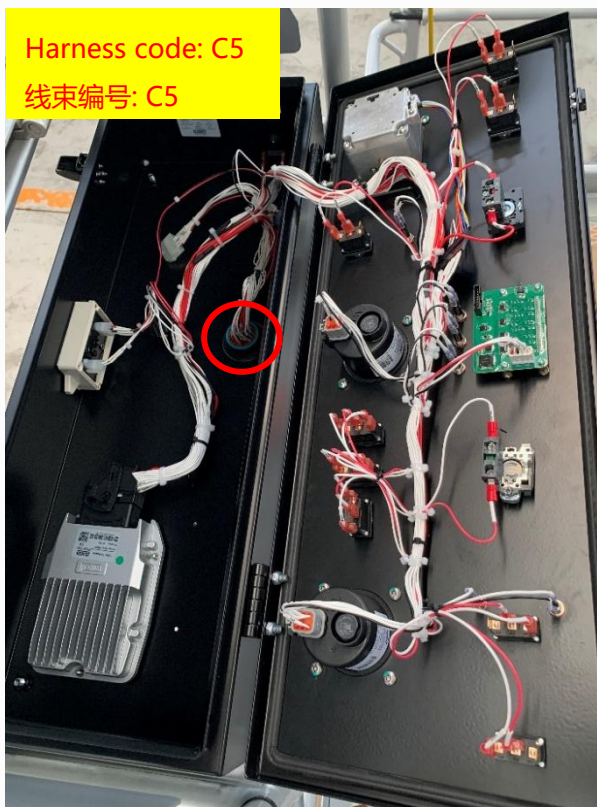
1.Electric System(电器系统)

21.) Turntable Control box / 下部控制箱



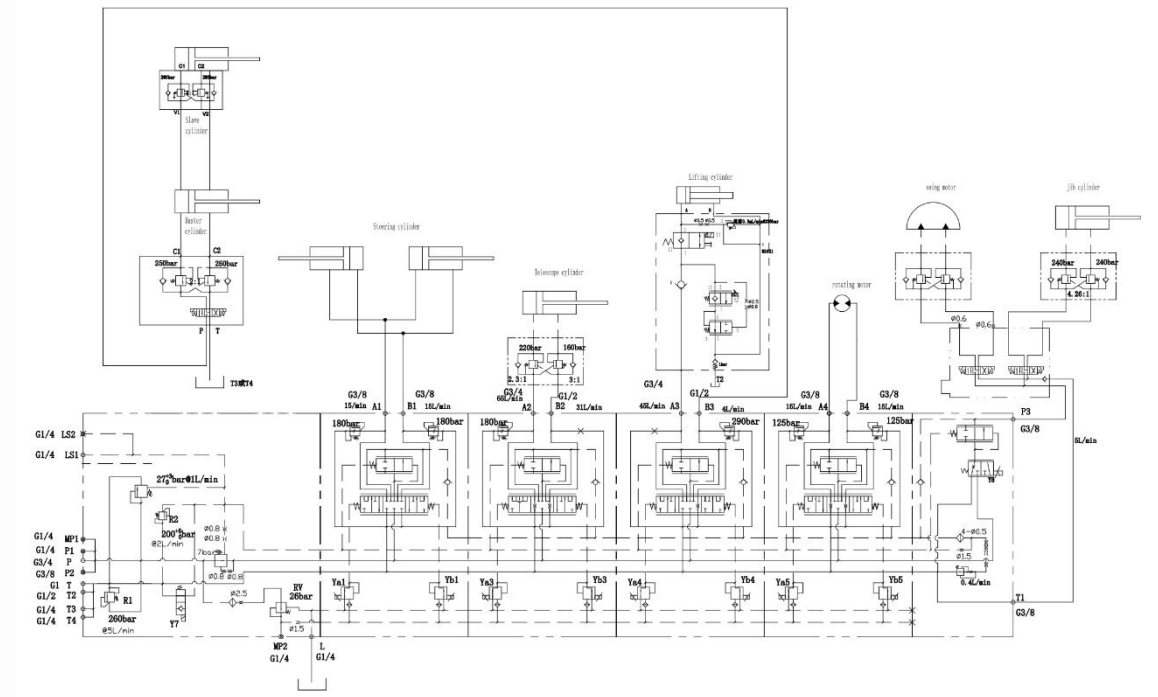
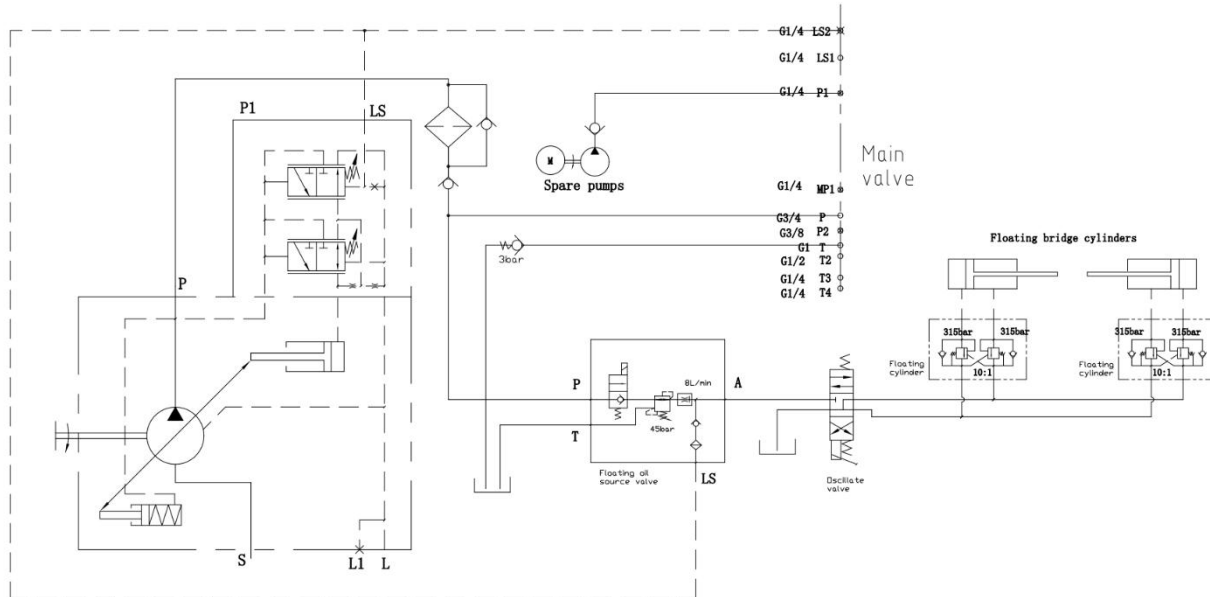
1.Electric System(电器系统)

22.) Platform Control box / 上部控制箱



2. Hydraulic System(液压系统)

1.) Hydraulic principle / 液压原理



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2. Hydraulic System(液压系统)

2.) Hydraulic oil tank / 液压油箱



Hydraulic oil tank Location / 警示灯位置



Capacity / 容量 : 100L



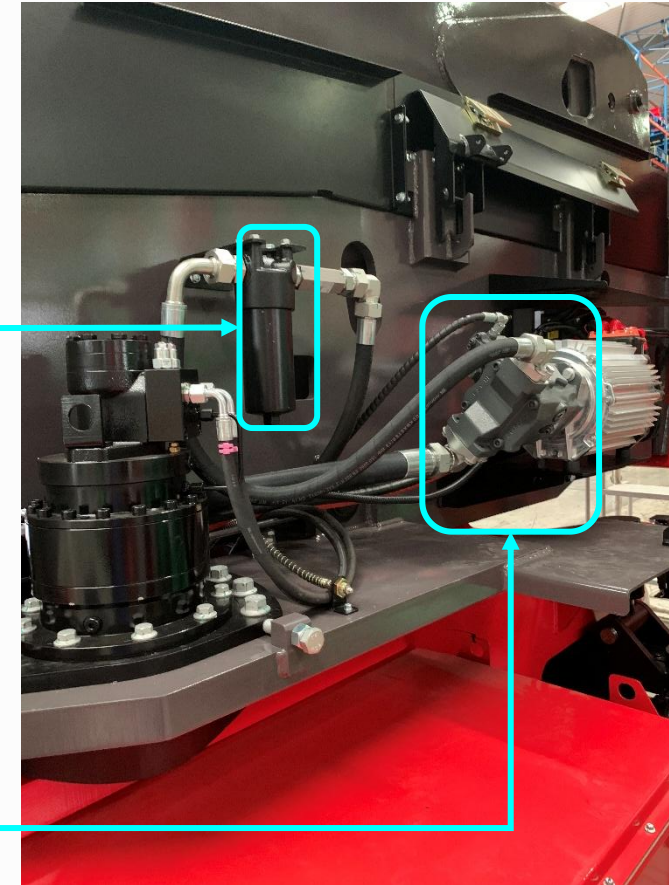
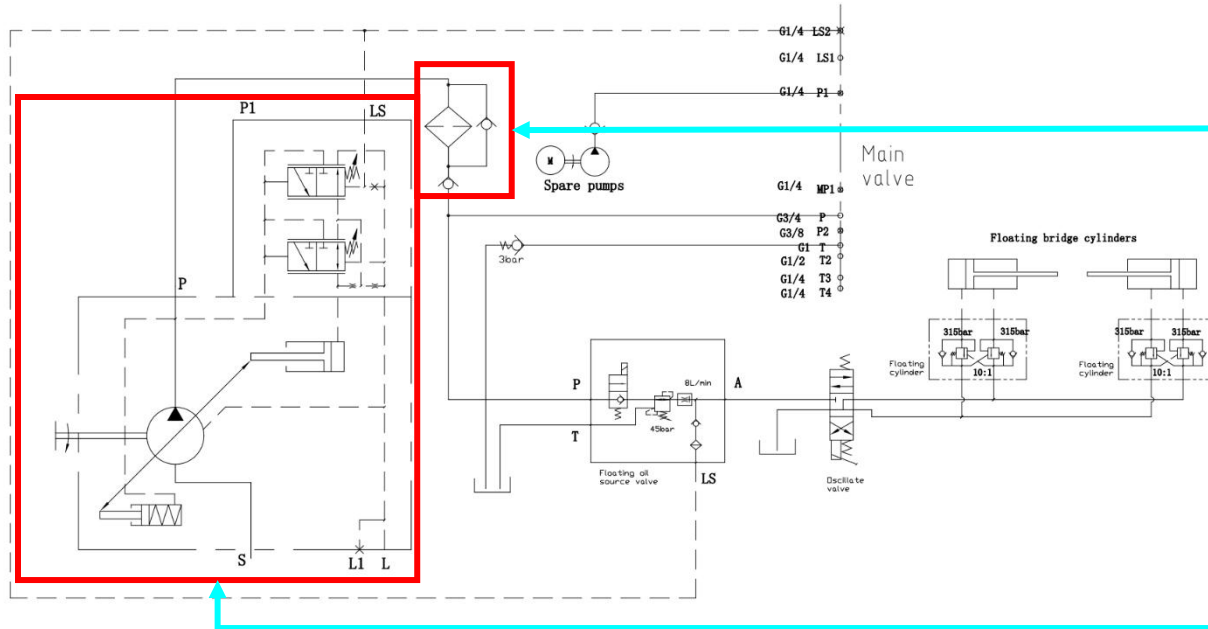
Filter maintenance period / 滤清保养周期 : 500H



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2. Hydraulic System(液压系统)

3.) Hydraulic main pump / 液压主油泵



Service is our business!

2. Hydraulic System (液压系统)

3.) Hydraulic main pump / 液压主油泵



Main pump / 主油泵



Pump parameter/ 油泵参数



Filter maintenance period / 滤清保养周期 : 500H

Service is our business!

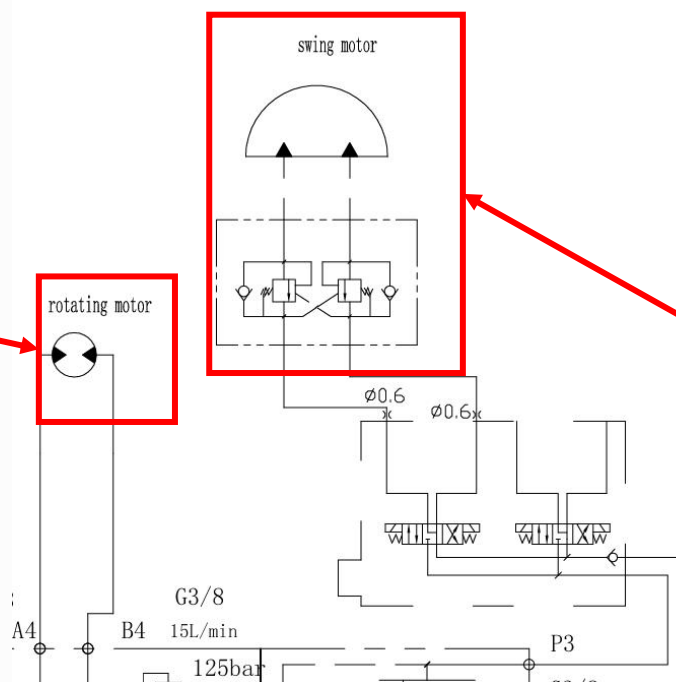
[illegible]

Pump displacement/ 油泵排量: 2.1 cc

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2. Hydraulic System(液压系统)

5.) Swing & Rotating motor / 回转 & 旋转马达

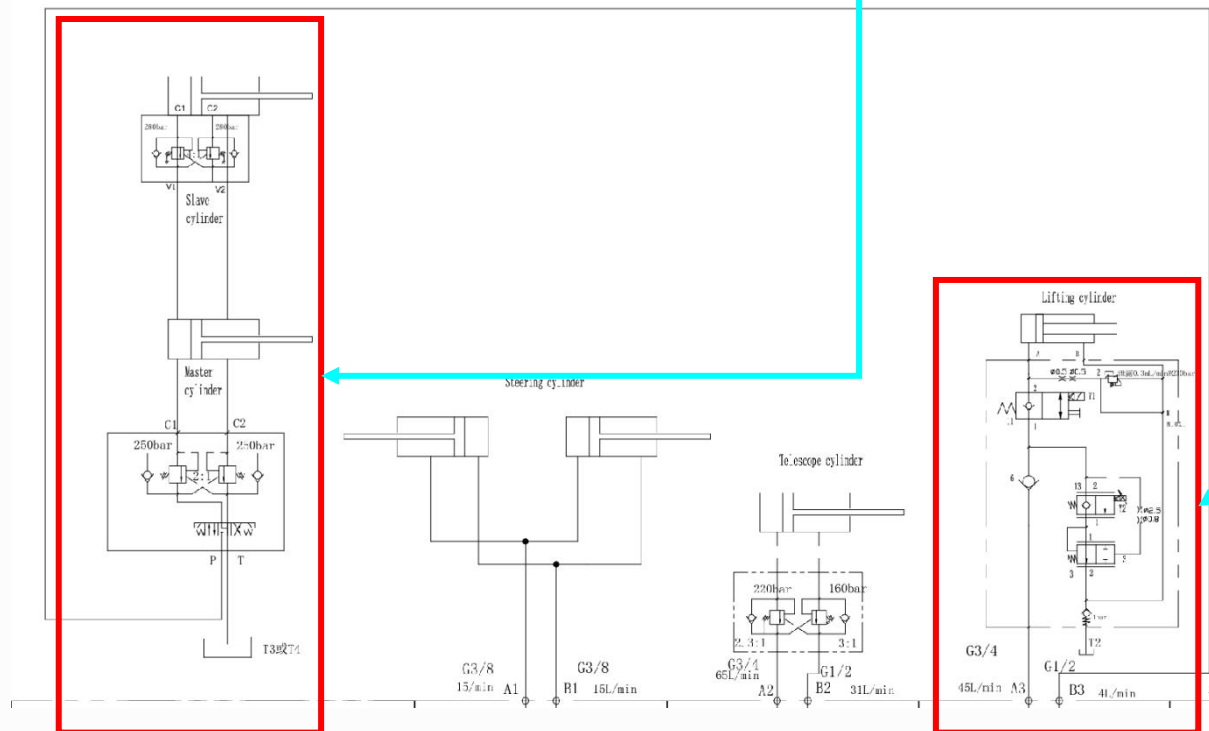


Swing & Rotating motor Diagram / 回转 & 旋转马达图纸

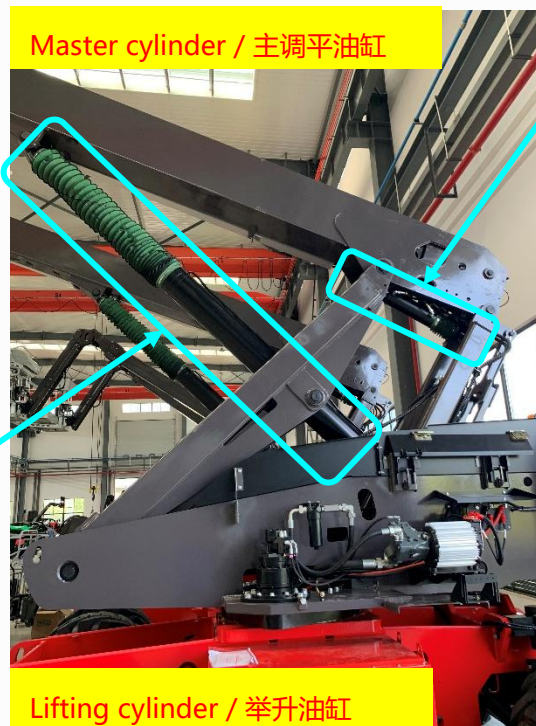
Service is our business!

2. Hydraulic System (液压系统)

6.) Hydraulic cylinder / 液压油缸

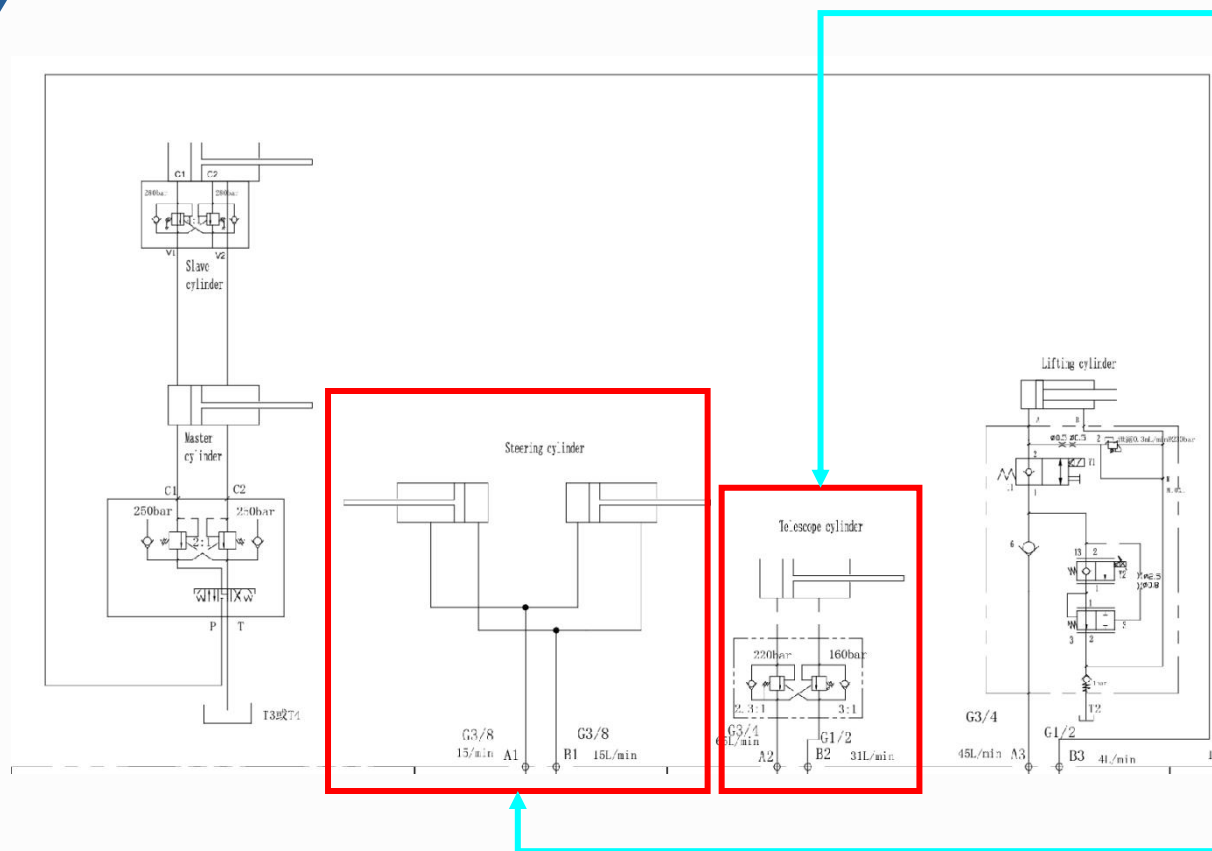


Hydraulic cylinder Diagram / 液压油缸图纸



2. Hydraulic System (液压系统)

6.) Hydraulic cylinder / 液压油缸

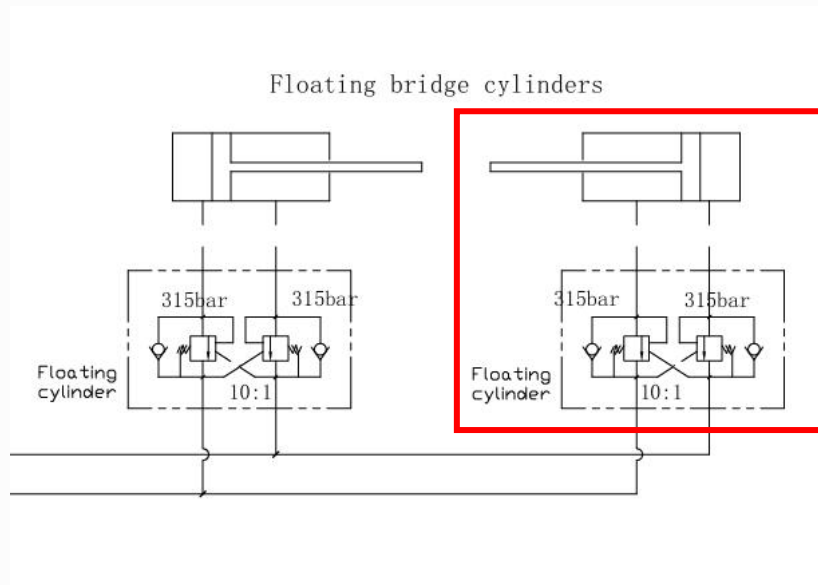


Hydraulic cylinder Diagram / 液压油缸图纸

Service is our business!

2. Hydraulic System(液压系统)

6.) Hydraulic cylinder / 液压油缸



Hydraulic cylinder Diagram / 液压油缸图纸

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HANGCHA AERIAL PLATFORM
EQUIPMENT

/// Option Lithium-ion Battery



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