

# PR8000

*Operation and Maintenance Manual*



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**PRPOWER**  
Performance and Reliability

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## 1. CE MARK



The CE mark (European Community) certifies that the product complies with essential safety requirements provided by the applicable Community Directives.

## 2. MAINTENANCE & OPERATION

Dear Customer, many thanks for the purchase of our product. Contained in this manual is all the necessary information for use and the general maintenance of the lighting tower.

The responsibility for the correct operation of the lighting tower depends on the operator.

Before installation and operation of the lighting tower, read the manual carefully. If this manual is not clear or comprehensible, contact PR Power Australia wide on:

1300 399 499

**All the specifications and pictures in this manual are subject to modifications without prior notice.**

### 3. GENERAL INFORMATION

The lighting tower is designed, produced and tested to meet the European Standards and to reduce the electrical risks in compliance with the laws.

**The manufacturer declines responsibility from any unauthorised modification of the product.**

#### 3.1 EQUIPMENT DOCUMENTATION FOR THE LIGHTING TOWER







Together with this manual we are supplying the following documents:



- Engine use and maintenance manual.
- Instruction manual and use for the lighting tower (this manual).
- Alternator use and maintenance manual.
- Check list for the lighting tower.
- CE declaration of conformity. Warranty certificate.
- Pre-delivery check report.




## 4. SAFETY SIGNS


These signs inform the user of any danger which may cause injury.

Read the precautions and descriptions below:

Danger signs	Description
	<ul style="list-style-type: none"> <li>• Read the instruction handbook before operating the lighting tower.</li> </ul>
	<ul style="list-style-type: none"> <li>• Danger of electric discharges.</li> <li>• Consult the manual.</li> </ul>
	<ul style="list-style-type: none"> <li>• Attention dangerous exhaust fumes.</li> <li>• Maintain safe distance from the emission zone.</li> </ul>
	<ul style="list-style-type: none"> <li>• Danger of burns.</li> <li>• Don't touch the exhaust and engine when the lighting tower is in operation.</li> </ul>
	<ul style="list-style-type: none"> <li>• Danger: don't open when the engine is hot</li> </ul>
	<ul style="list-style-type: none"> <li>• Stop the engine before refueling.</li> <li>• Use diesel fuel only.</li> </ul>

	<ul style="list-style-type: none"> <li>• Danger possible spillage of corrosive substances</li> </ul>
	<ul style="list-style-type: none"> <li>• Danger possible crush point</li> </ul>

Prohibition signs	Description
	<ul style="list-style-type: none"> <li>• It is prohibited to clean, lubricate or regulate moving parts.</li> </ul>
	<ul style="list-style-type: none"> <li>• It is prohibited to extinguish fires with water, use fire extinguishers only.</li> </ul>
	<ul style="list-style-type: none"> <li>• It is prohibited to use open flames.</li> </ul>

Information signs	Description
	<ul style="list-style-type: none"> <li>• This sign indicates the lifting point for the lighting tower.</li> </ul>

## 5. SAFETY REGULATIONS TO OBSERVE

**The manufacturer is not responsible of any damage to equipment or persons, as a result of operators not adhering to the correct safety regulations.**

### 5.1 BEFORE OPERATING THE MACHINE

- It is advised you wear protective clothes, gloves, safety shoes and ear plugs.
- It is recommended you understand the correct operation of the lighting tower.
- It is recommended that all authorised staff read and understand all warnings and dangers described in this manual.
- Place barriers 2 meters from the lighting tower to prevent unauthorised staff approaching the unit.
- Ensure yourself that the lighting tower is not operating and that there are no moving parts.
- Only authorised staff can operate the lighting tower.
- Read the operating instructions and safety warning stickers placed on the lighting tower.
- Connect the unit to the earth through the earth clamp.
- The unit must be connected to the earth using a copper cable with a minimum cross-section of 6 mm<sup>2</sup>.
  - **PR POWER is not responsible for any damage caused by failure to earth.**

### 5.2 DURING MAINTENANCE

- Always turn off the lighting tower before any maintenance.
- Extraordinary maintenance must always be carried out by authorized staff.
- Before any maintenance operation on the floodlights, disconnect the power and wait for the lamps to cool.
- The fluid of battery contains sulphuric acid which is extremely corrosive and harmful to the skin. Always wear protective gloves and be extremely careful to avoid spillage when pouring the acid.
- Contact with engine oil can damage your skin. Put on gloves when using engine oil. If you come in contact with engine oil, wash it off immediately.

### 5.3 DURING TRANSPORT

- **Warning!**  
Before towing the lighting tower, ensure the engine is switched off to avoid causing damage to the equipment.
- Only use the correct lifting points as indicated on the tower.
- The lifting point, where present, must be used for the temporary raising and not for suspension in the air of the equipment for long periods.
- The manufacturer is not responsible for any damage caused by negligence during transport.



## **6. GENERAL DANGER INFORMATION**

### **6.1 DANGER OF BURNS**

- Do not touch hot surfaces with hands e.g. silencers and engine when it is operating.
- Do not touch the floodlights when turned on.
- Always use gloves.

### **6.2 DANGER OF ELECTROCUTION**

- Do not touch electrical parts, it may cause an electric shock.
- Do not touch the electric cables when the lighting tower is operating.

### **6.3 DANGER OF INJURY**

- Do not remove the protective guards placed on the moving parts including, air intakes and fan belts.
- Do not clean or attempt maintenance on moving parts.
- Use appropriate clothing and safety wear, whilst operating the lighting tower.

### **6.4 WARNING OF FIRE OR EXPLOSION DURING REFUELING**

- Turn off the engine before refueling.
- Do not smoke during refueling.
- Refueling must be conducted in a way that does not cause fuel spillage.
- In the event of fluid spillage during refuelling, dry and clean parts as required.
- Check that there isn't any spillage of fuel and hoses and hoses are not damaged.

### **6.5 NOISE**

- Use ear plugs or ear muffs for noise protection.

### **6.6 EXHAUST FUMES**

- The exhaust fumes are dangerous for your health. Maintain a safe distance from the emission zone.
- In the event the lighting tower is used in a closed area, ensure that the exhaust fumes can be easily dispersed in a safe manner.

## 7. GENERAL DESCRIPTION OF THE LIGHTING TOWER

The PR8000 has been designed to take into consideration 3 fundamental characteristics:

- Compact design
- Reliability
- Quality manufacturing and design

The construction materials used, guarantee not only extreme strength of the tower, but they are also synonymous of longer life, in fact these materials are protected against oxidation like rust.

The ability to lower the tower is a key factor for manouverability and transportation. The lighting tower can be installed and used by a single operator safely. The floodlights used on the lighting tower, complete with lamps, are made from the world's leading manufacturers.

## 8. LIGHTING TOWER NOT IN USE

If the lighting tower is not in operation for a long period (more than one year), we recommend you keep the oil, fuel and the coolant in the engine to avoid oxidizing effects; we recommend you also disconnect the battery cables.

When the lighting tower is in operation again, the fluids must be replaced, the battery charged; the belts and hoses must be checked and a visual inspection of the electrical connections must be performed.

## 9. TECHNICAL SPECIFICATION

### 9.1 GENERATOR

Model	<b>Synchronous</b>
Three phase voltage	<b>20 kVA - 415 V</b>
Frequency	<b>50 Hz</b>
Cos $\varphi$	<b>0,8</b>
Insulation class	<b>F</b>
Mechanical protection	<b>IP 23</b>

### 9.2 ENGINE

Make/Type	<b>Kubota D1703-E2BG</b>
Number of cylinders	<b>3</b>
Displacement	<b>1647 cm<sup>3</sup></b>
Power	<b>17,2 HP (SAE NET Continuous) 19,4 HP (SAE Standby)</b>
Engine speed	<b>1500 r.p.m.</b>
Cooling	<b>Water</b>
Fuel	<b>Diesel</b>
Starting system	<b>Electric</b>
Oil sump capacity	<b>7,0 l</b>
Radiator capacity	<b>5,5 l</b>
Specific fuel consumption	<b>230 gr/kWh</b>
Fuel tank capacity	<b>180 l</b>
Average operating hours	<b>80 hrs approx</b>
Noise level DBA at 7 metres	<b>90 Lwa</b>
Battery	<b>12 V - 80 Ah</b>

**9.3 HYDRAULIC GEAR BOX****9.3.1 ELECTRICAL MOTOR**

Feeding	<b>400 V 50-60 Hz ± 10%</b>
Power	<b>2 HP</b>
Poles	<b>4</b>
Mechanical protection	<b>IP55</b>

**9.3.2 GEAR PUMP**

Displacement	<b>3,2 cm<sup>3</sup></b>
Maximum pressure	<b>210 bar</b>
Factory setting pressure	<b>180 bar</b>
Emergency action system	<b>Manual</b>

**9.3.3 HYDRAULIC FLUID**

Reservoir capacity	<b>20 l</b>
Fluid type	<b>ISO/DIN 6743/4 mineral oil</b>
Fluid viscosity	<b>15-100 mm<sup>2</sup> sec – ISO 3448</b>
Fluid temperature	<b>-15°C ÷ +80°C</b>
Fluid maximum contamination level	<b>Class 10 in accordance with NAS 1638 with filter B 25 &gt; 75</b>

**9.4 LIGHTING TOWER**

Maximum height	<b>9 mt</b>
Raising	<b>Hydraulic</b>
Section	<b>7</b>
Rotation Section	<b>360°</b>
Floodlights group tilt	<b>41°</b>
Electrical coiled cable	<b>11G2,5 mmq</b>
Electrical cable of floodlights	<b>H07RN-F</b>
Maximum cable load	<b>3300 kg</b>
Maximum wind stability	<b>110 km/h</b>
Minimum dimension with trailer for fast towing type B (L x W x H mm)	<b>3630 x 1690 x 2580</b>
Maximum dimension with trailer for fast towing type B (L x W x H mm)	<b>3777 x 2300 x 9000</b>
Dry weight	<b>1710 Kg</b>

**9.5 RAISING AND LOWERING CABLE**

Cable type	<b>AZN625APPCOM</b>
Cable diameter	<b>6 mm</b>
Outer wires diameter	<b>0,4 mm</b>
Weight per meter	<b>0,15 Kg</b>
Construction	<b>6x(12+(6)+6+1)KF+PP</b>
Type of lay	<b>Right hand ordinary lay</b>
Tensile strength	<b>2160 N/mm<sup>2</sup></b>
Strands	<b>Compacted</b>
Preformed	<b>Yes</b>
Steel wires	<b>Carbon</b>
Protection of wire rope	<b>Galvanized class B</b>
Minimum breaking load	<b>32,3 kN 3230 Dan 3294 Kg</b>

**9.6 FLOODLIGHT**

Lamp	<b>Metal halide</b>
Power	<b>4x2000 W</b>
Degree of protection	<b>IP 65</b>
Constructor material of the body	<b>Die-cast primary aluminium UNI 5076 alloy</b>
Constructor material of lampholder	<b>Ceramic</b>
Lampholder	<b>K12s-7 base</b>
Dimensions (L x H x D mm)	<b>535 x 540 x 250</b>

The floodlight is protected by tempered glass and silicone seals. External bolts are stainless steel.

## 9.7 LAMP

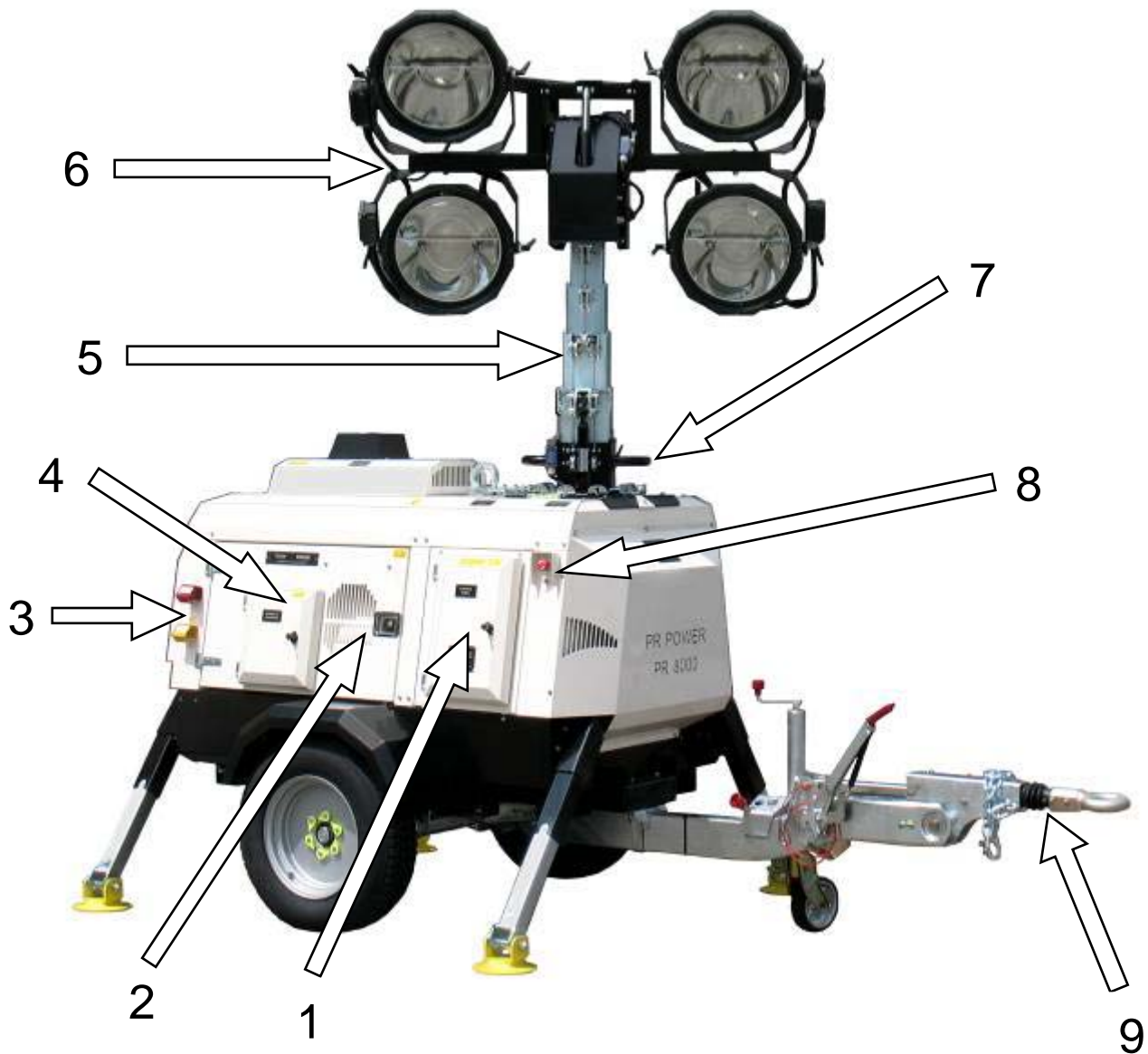
The metal halide lamps used in the floodlights of the lighting tower provide a brighter lighting system than traditional halogen lamps.

The metal halide lamp is a high intensity discharge lamp.

**In the event the lights are accidentally switched off, you must wait for the lamps to cool (about 15 minutes) before re-igniting.**

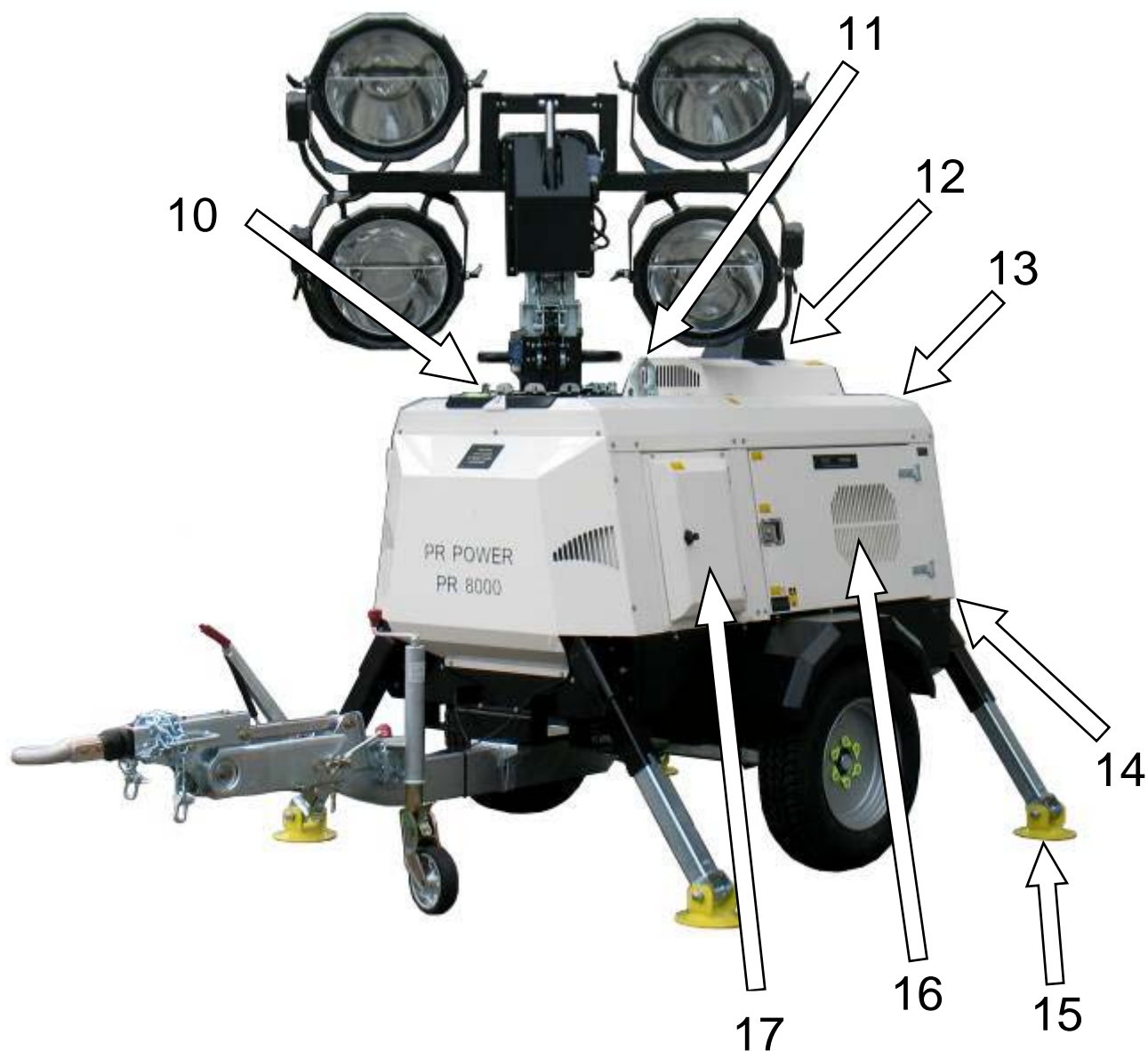
## 10. IDENTIFICATION OF EXTERNAL COMPONENTS

### 10.1 LIGHTING TOWER BREAKDOWN

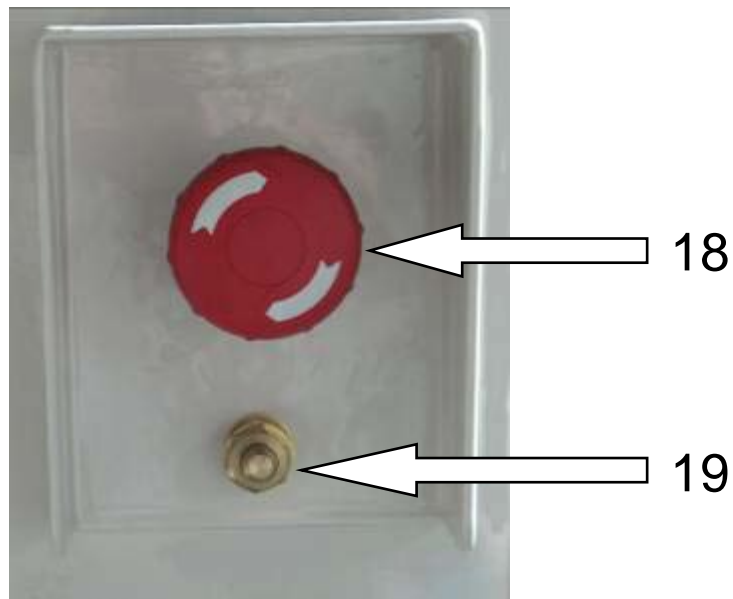


Items	Description
1	Control panel door
2	Engine inspection door
3	Lockable battery and starting key insulator switch
4	Hydraulic Controls
5	Telescopic mast
6	Floodlights
7	Floodlights rotation handles
8	Emergency stop button
9	Heavy Duty Trailer for fast or slow towing





Items	Description
10	Mast rotation locking pin
11	Lifting hook
12	Gas exhaust outlet
13	Radiator cap
14	Air outlet grill
15	Hydraulic stabilizers
16	Door engine inspection
17	Door for papers



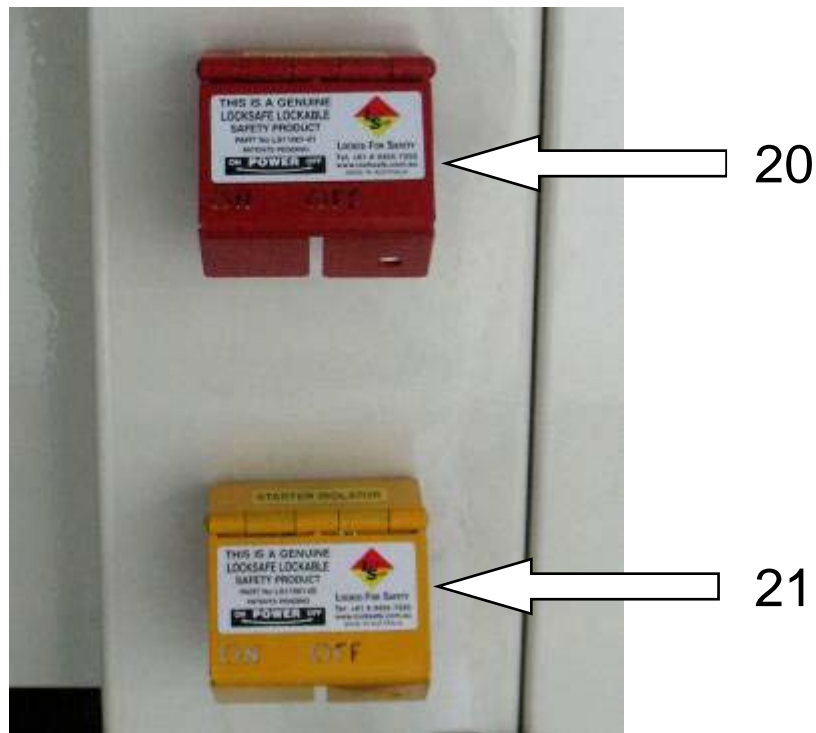
Items	Description
18	Emergency stop button
19	Earth clamp connection

Connect the unit to the earth, through the clamp (19).

The unit must be connected to earth using a copper cable with a minimum cross-section of 6 mm<sup>2</sup>.

**PR POWER is not responsible for any damage caused as a result of failing to earth.**

Make sure that the emergency stop button (18) is armed. If not, turn the grip handle in clockwise direction. In an emergency it is possible to stop the generating set by pressing the stop button (18).

**10.2 BATTERY AND STARTING SWITCH**

Items	Description
20	Lockable battery isolator switch
21	Lockable starting key isolator switch

The machine is supplied with the battery switch disconnected **(20)**.

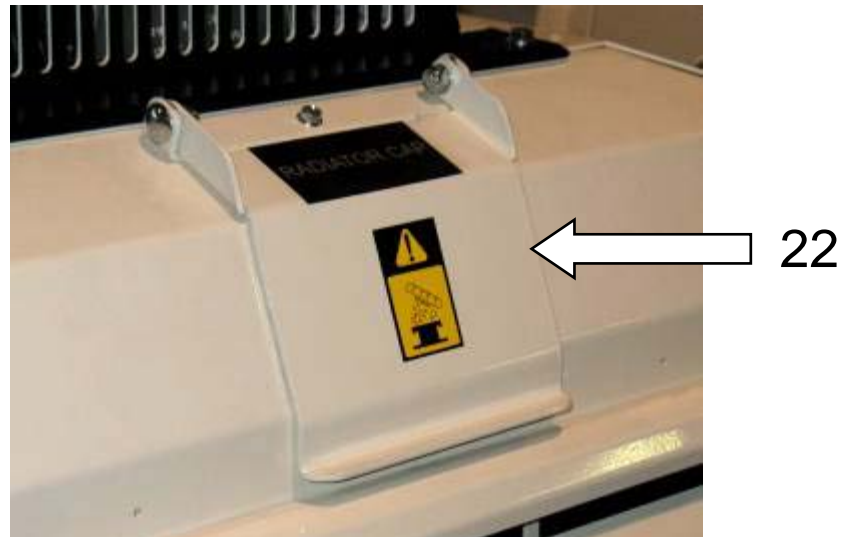
Connect the battery switch **(20)**.

If the lighting tower is not operating for long periods, we recommend you disconnect the battery switch **(20)**.

The machine is supplied with the starting key switch disconnected **(21)**.

Connect the starting key switch **(21)**.

### 10.3 RADIATOR CAP PROTECTION PLATE



Items	Description
22	Radiator cap protection plate

To fill up and replace coolant, firstly lift the protection plate of the radiator cap and then unscrew the radiator cap.

The coolant will last for one day if filled all the way up before operation start; therefore check the coolant level before every operation.

In order to avoid personal injury do not remove the radiator cap when the engine is running. When the engine is idle, loosen the cap slightly to relieve any excess of pressure before removing cap completely.

If the lighting tower is not operating for a long period of time (more than one year), we recommend you keep the coolant in the radiator in order to avoid oxidizing effects.

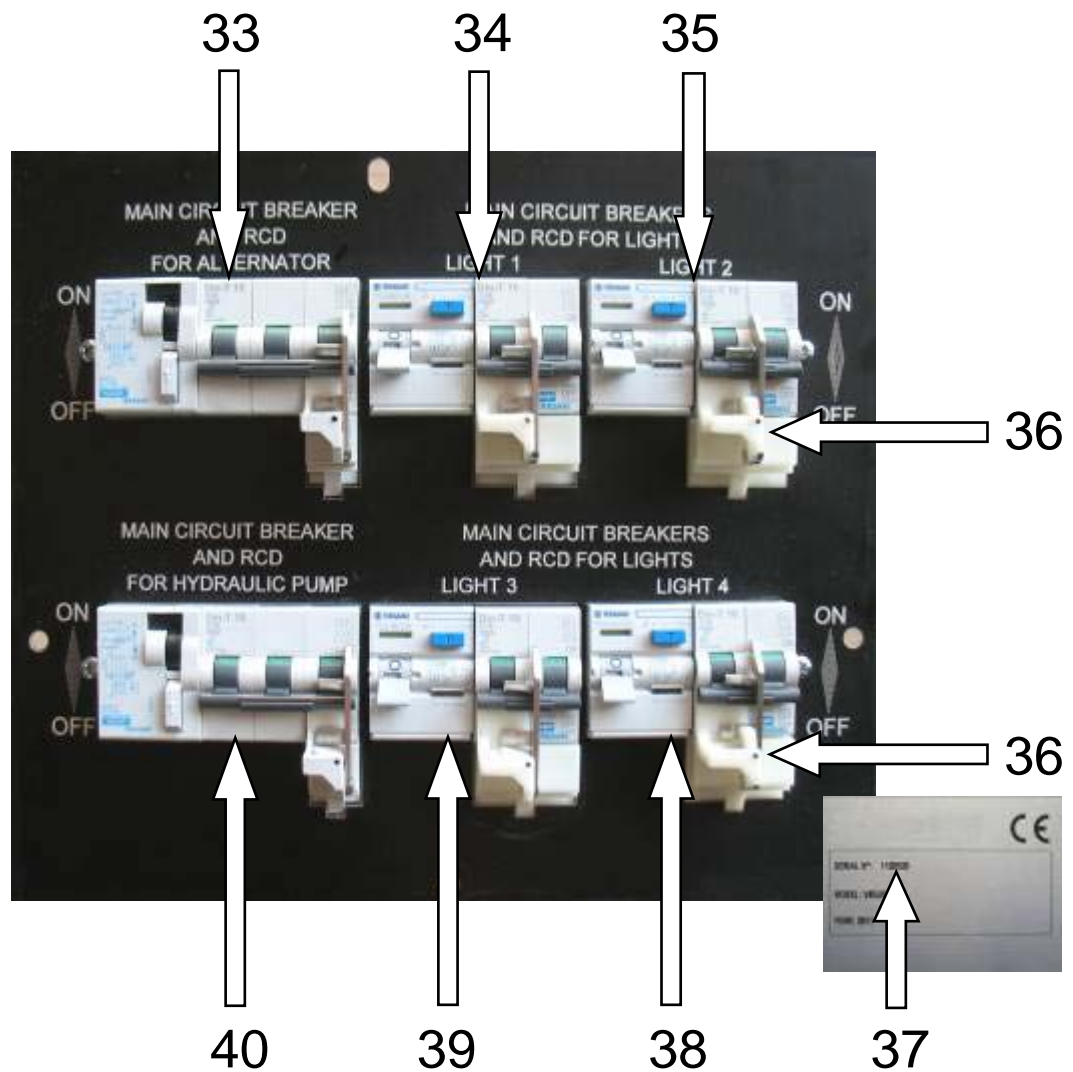
## 11. IDENTIFICATION OF INNER COMPONENTS

### 11.1 UPPER CONTROLS DESCRIPTION



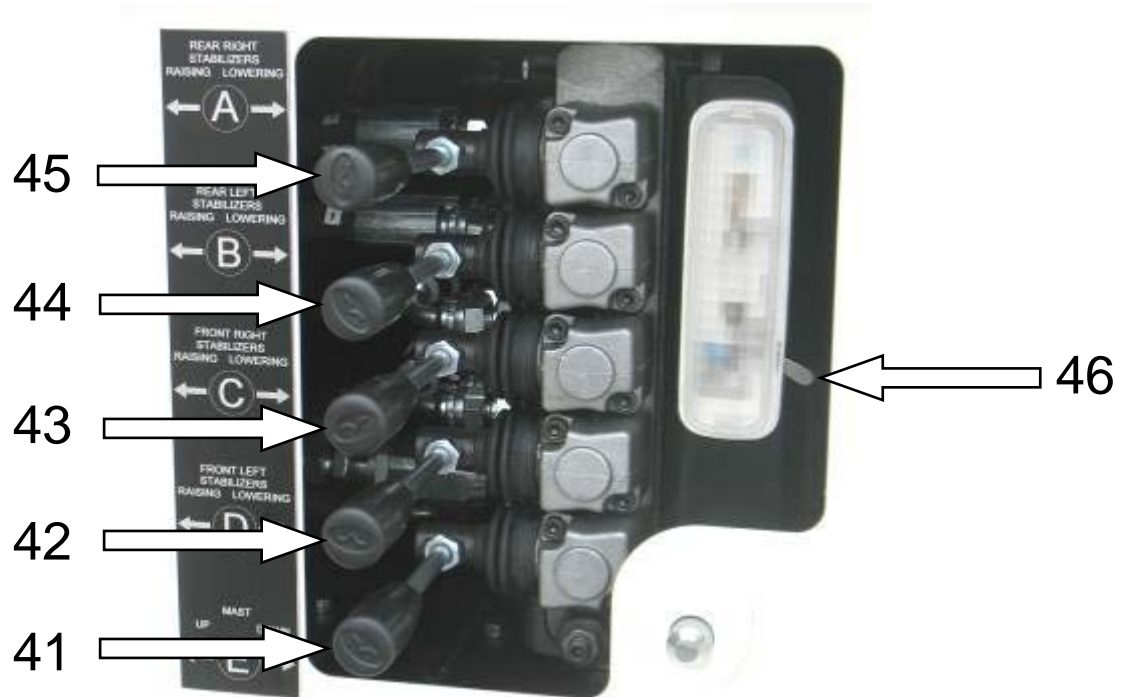
Items	Description
23	Starting key
24	Battery charge signal lamp
25	Hour meter
26	Preheater signal lamp
27	Fuel gauge – Monitor fuel level
28	Lever for floodlights group tilt
29	Low fuel level signal lamp
30	High water temperature signal lamp
31	Lamp switch
32	Low oil pressure signal lamp

## 11.2 LOWER CONTROLS DESCRIPTION



Items	Description
33	32 A main circuit breaker and 100 mA RCD for alternator
34	16 A main circuit breaker and 40 A/30 mA RCD for light 1
35	16 A main circuit breaker and 40 A/30 mA RCD for light 2
36	Lock din
37	Serial number
38	16 A main circuit breaker and 40 A/30 mA RCD for light 4
39	16 A main circuit breaker and 40 A/30 mA RCD for light 3
40	10 A main circuit breaker and 100 mA RCD for hydraulic pump

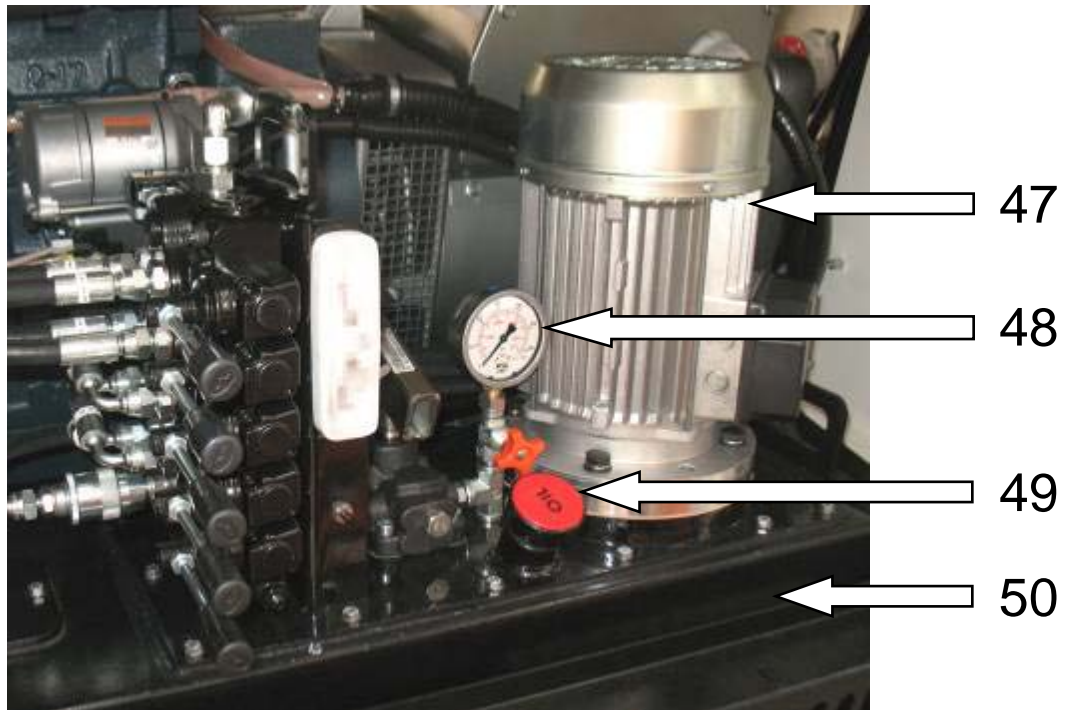
### 11.3 CONTROLS LEVERS



Items	Description
41	Raising and lowering lever (E)
42	Raising and lowering lever for front left stabilizer (D)
43	Raising and lowering lever for front right stabilizer (C)
44	Raising and lowering lever for rear left stabilizer (B)
45	Raising and lowering lever for rear right stabilizer (A)
46	Lamp switch



#### 11.4 HYDRAULIC GEAR BOX



Items	Description
47	Engine hydraulic gear box
48	Oil pressure gauge indicator
49	Hydraulic oil tank cap
50	Hydraulic oil tank

Regularly check the level of hydraulic oil. Add oil if the level dips down lower than half a tank (total tank capacity 20L).

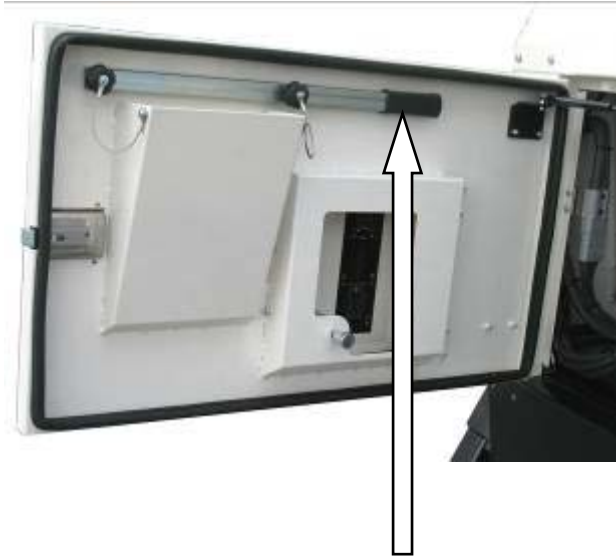
An inspection must be performed at least 30 minutes after the engine has been turned off and with the telescopic mast lowered.

When topping up the oil, use only hydraulic oil with a high index of viscosity and adapt to use for **+ 46°C** to **- 46°C** temperatures. We advised the use of the oil "Shell Tellus Oils TX 46". It is sufficient to fill the tank with approximately 16Ll of oil.

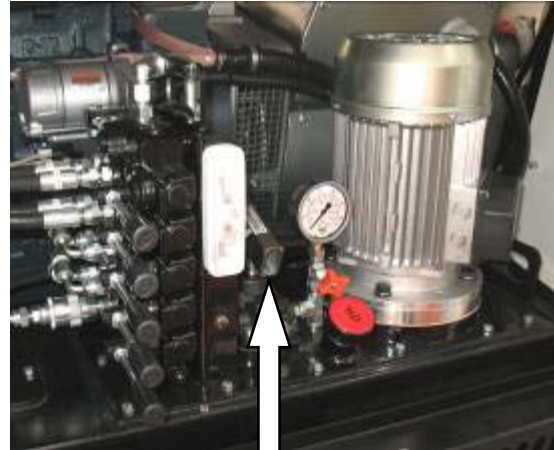
Always use protective gloves during the replacement and inspection of the motor oil levels.



#### 11.4.1 LOWERING HANDLE BAR BRACKET IN CASE OF EMERGENCY



51



52

Items	Description
51	Handle
52	Manual pump

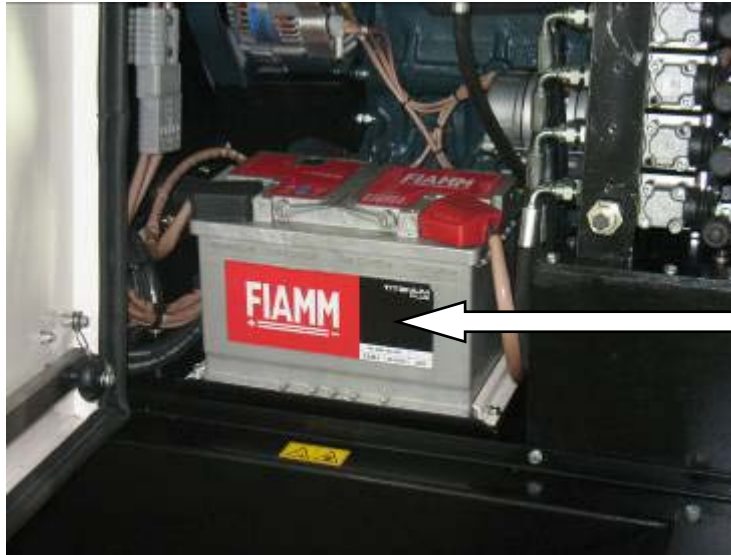
**WARNING:** It is strictly prohibited to raise the stabilisers when the lighting tower mast is raised.

In the event of damage to the hydraulic pump or generating set, it is possible to move the hydraulic components of the lighting tower by using the manual pump installed.

Insert the handle (51) of the manual pump that is inside the cabinet (52).

Engage the levers (41, 42, 43, 44 and 45) located on the control panel in relation to the hydraulic components you want to move, and at the same time, engage the manual pump. When you have achieved the desired position, release the lever.

In order to move another hydraulic component, repeat the procedure.

**11.5 BATTERY****53**

Items	Description
53	80 Ah 12 V battery

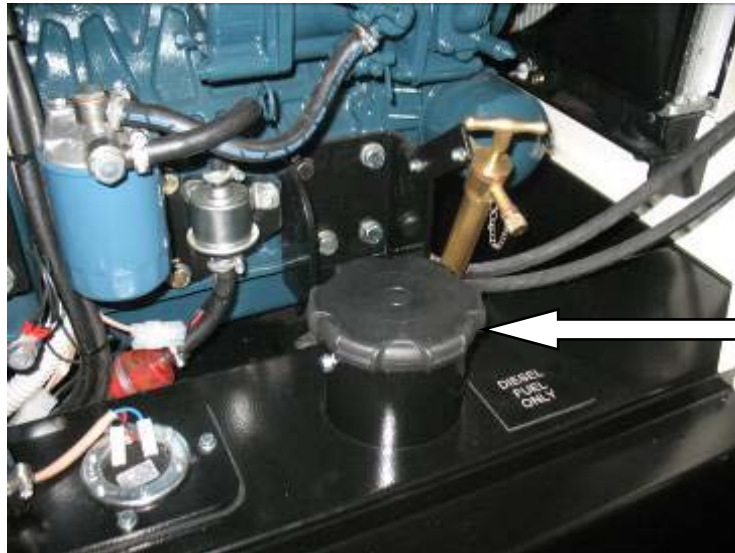
The lighting tower is supplied with the battery switch disconnected **(20)**.

Connect the battery switch **(20)**.

The battery fluid contains Sulphuric Acid which is extremely corrosive and harmful to the skin.

Always wear protective gloves and be extremely careful to avoid spillage when pouring the acid.

If the machine has to be switched off for a long period, we recommend disconnecting the battery switch **(20)**.

**11.6 FUEL TANK**

Items	Description
54	Fuel tank cap

Fill up the tank with diesel fuel to the tank capacity (180L). The amount of fuel available can be determined by viewing the the fuel indicator **(27)** located on the control panel.

Always turn off the engine before refueling.

Refueling must be performed, avoiding any fuel spillage.

If the lighting tower is switched off for a long period (more than one year), we suggest keeping the fuel in the tank in order to avoid oxidizing effects.

**11.7 ENGINE OIL CAP**

Items	Description
55	Engine oil cap
56	Oil level indicator

Check the engine oil level before starting the lighting tower or five minutes after stopping.

**Do not discharge polluting liquids into the atmosphere.**

If the lighting tower is switched off for a long period (more than one year), we suggest keeping the oil in the engine to avoid oxidizing effects.

## 11.8 CHANGE ENGINE OIL



57

58



59

Items	Description
57	Engine oil drain cap
58	Manual pump for extracting the oil from the engine
59	Wiggins Fast Fuel (*)

Use the manual pump to change oil.

Remove the discharge cap (57) from the pump and apply a rubber hose (not supplied) to the top. Place the hose out of the lighting tower and into a container to store the oil. Unscrew the oil cap and discharge the oil by pumping it.

**WARNING: After using the pump, screw the cap back securely before restarting the engine.**

Contact with the engine oil can damage your skin. Wear gloves when handling engine oil. If you come in contact with the engine oil, wash it off immediately.

For the correct type of oil to use in the lighting tower, refer to the Kubota Engine Owner's Manual.

Change oil (7L oil sump capacity) after the initial 50 hours of operation and every 200 hours or 1 year thereafter.

**Do not discharge polluting liquids into the atmosphere.**

If the lighting is switched off for a long period (more than one year), we suggest keeping the oil in the engine to avoid oxidizing effects.

Up to 25° C	SAE 30 - SAE 10W-30 - SAE 10W-40
Between 0° C and 25° C	SAE 20 - SAE 10W-30 - SAE 10W-40
Down to 0° C	SAE 10W - SAE 10W-30 - SAE 10W-40

(\*) **Note:** The Wiggins Fast Fuel is an option only.

## **12. OPERATING INSTRUCTIONS**

### **12.1 LIGHTING TOWER POSITIONING**

Place the lighting tower on a level surface, ensuring not to exceed 10° inclination.

Choose an open and ventilated location, ensuring discharge of the exhaust fumes happens well away from the work-zone.

Check the hot air released does not circulate back into the engine. This way causes engine temperature to rise to dangerous levels.

Barriers should be placed 2 meters away from the lighting tower to prevent unauthorised staff accessing the lighting tower.

### **12.2 CONNECTING OF THE BATTERY**

The lighting tower is supplied with the battery disconnected.

Connect the battery switch (20).

### **12.3 CONNECTING OF THE STARTER MOTOR**

The lighting tower is supplied with the starting disconnected.

Connect the startng switch (21).

### **12.4 EARTHING**

Connect the unit to earth, through the clamp (18) if required by applicable standards or site requirements.

The unit must be connected to the earth in accordance with the applicable standards or site requirements.

**The manufacturer is not responsible for any damage caused by failure of incorrect earthing.**

### **12.5 PRELIMINARY CHECKS**

At time of purchase, the lighting tower is supplied with engine oil, hydraulic oil and coolant in the radiator.

Before next use of the lighting tower, check fluid levels.

Check that the circuit breakers (34-35-38-39) placed on the control panel are in the "OFF" position.

Make sure that the emergency stop button (18) is armed. If not, turn the grip handle in clockwise direction.

### **12.6 ENGINE STARTING**

The operating instructions for the lighting tower are located inside the lockable cabinet to prevent unauthorised personal accessing the instructions.

Position the starting key (23) in the first position to avoid the glow plugs' pre-heating, the signal lamp (26) will glow. When the light (26) is off, start the engine by moving key (23) fully in clockwise direction.



Note: If the engine fails to start, turn the key to the “OFF” position and wait 10 seconds before restarting.

Let the engine run for about 5 minutes to warm up.

## 12.7 RUNNING IN

For the first 50 hours of operation, do not employ more than 70% of the maximum power indicated in the technical specifications. This ensures proper engine operation.

## 12.8 USE OF LIGHTING TOWER

### Earth Leakage Circuit Breaker

The product is equipped with an Earth Leakage Circuit Breaker (ELCB) (32-34) which guarantees user protection against electric shocks, due to contact with live components of the circuit or insulation fault.

**Warning! In order to guarantee ELCB proper operation, the lighting tower must be connected to the earth. Earthing must conform to IEC 364 standard.**

Check the operation of the earth leakage circuit breaker (32-34) periodically by pressing the “TEST” button located on the control panel.

The hour meter indicates the operating hours of the engine. Refer to the hour meter to identify when the next maintenance schedule is due.

## 12.9 GENERATOR ALARMS

The generating set is equipped with an engine protection system (DAS) that shuts down the lighting tower after 20 seconds of a failure, signalled visually by the signal lamps on the control panel. When the issue is resolved, restarting will clear the DAS memory.

### Low oil pressure

When the engine oil pressure is too low, the light comes on (32). Check the engine oil level.

### High water temperature.

When the engine water temperature is too high, the light comes on (30). Check the engine water level.

### No battery charge.

When the alternator doesn't charge the battery or the battery does not hold loads, the light comes on (24). Check the alternator and the battery.

### Low fuel level.

When fuel level is low, the low fuel light indicator comes on (29). Periodically check the fuel level by the display (27). Fill up the tank with the fuel level is low.

## 12.10 REMARKS

It is important that the operator is always careful of potential breakdowns.

It is required that the lighting tower is operated by authorised and trained personel only.

It is recommended that a visual check is performed regularly before operating the lighting tower.

The authorised operator must not allow anyone to stand close to the lighting tower, when it is in operation.

Always leave a clear space around the lighting tower.

It is recommended positioning the lighting tower on level stable ground. Refer to the spirit level placed on the frame (Fig. 1).

(Fig. 1)



**It is also recommended to position the lighting tower on a level stable surface, to allow secure support for the stabilisers.**

Pull the hand brake if the tower is not secured for towing on a truck/vehicle.

Authorised, trained personel are the only staff allowed to operate the lighting tower.

**Before operating lighting tower it is recommended the authorised staff read and understand all warnings and dangers described in this manual.**

PR POWER is not responsible of any damage to equipment or persons, as a consequence of not adhering to the safety guidelines.

For the electrical connection between the floodlights and the control panel of the lighting tower, it has been used a turn cable 11G2,5 mmq placed to the inside of cylinder that allows for comfortable sliding.

The coil cable needs to be inspected to ensure that high temperatures have not affected the integrity of the coil.



### 12.11 USE OF THE LIGHTING TOWER

Before operating the lighting tower it is recommended that the operator read and understand the manual.

Rotate the floodlights in the position you require, unscrewing the stop nut on the floodlight support. (Fig. 2).

Manually tilt the floodlights by unscrewing the lever (Fig. 3) placed on the lamp brackets for the floodlight.

(Fig. 2)

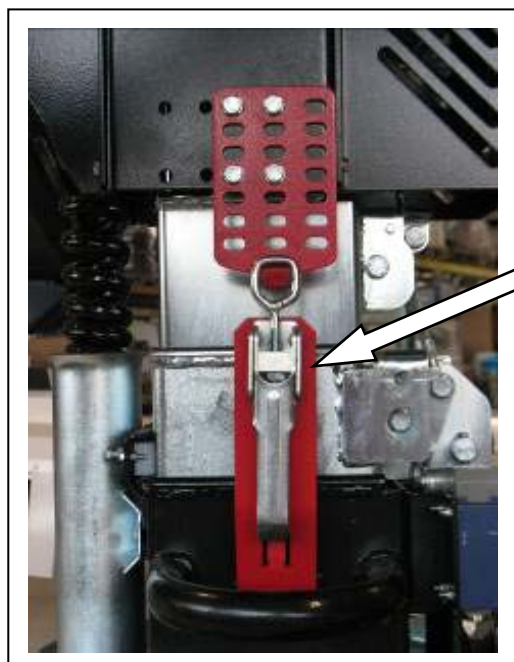


(Fig. 3)



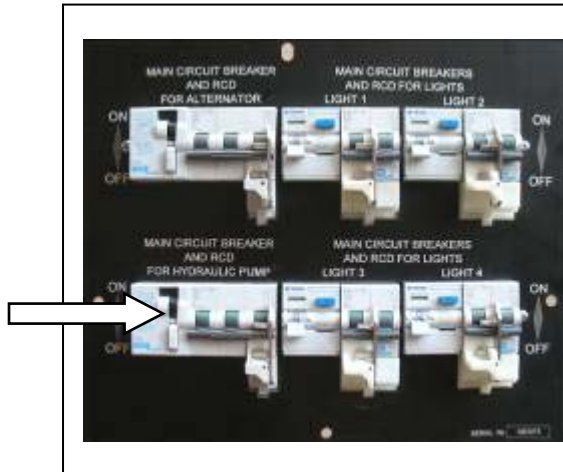
**Warning!!! Before raising up the telescopic mast check that transport hooks are unlocked. (Fig.4)**

(Fig. 4)



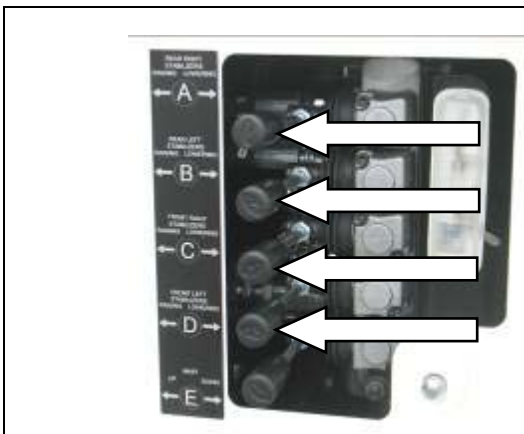
Start the engine like described at the chapter **“12.6 ENGINE STARTING”**.  
Check that the circuit breaker (Fig. 5) on the control panel is in the “ON” position.

(Fig. 5)

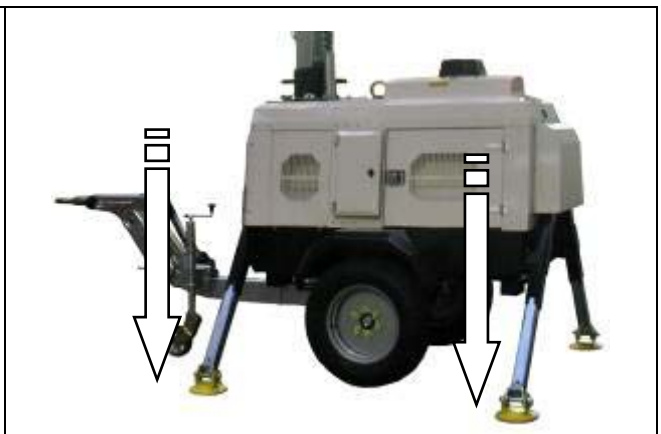


Lower the front and rear stabilisers via the control levers located along side the control panel (Fig. 6). The control levers enable the adjustment of each stabiliser leg (Fig. 7). In order to locate the stabiliser you wish to move, see the diagram located on the control panel.

(Fig. 6)



(Fig. 7)



Refer to the spirit level for the correct stability of the lighting tower (Fig. 8).

**Warning! It is not possible to raise the tower if all stabilisers are not correctly positioned.**

(Fig. 8)



The Mast Control Lever located on the control panel allows the mast to be raised and lowered (Fig. 9).

The maximum height of the lighting tower is achieved when the red stripe appears on the mast.

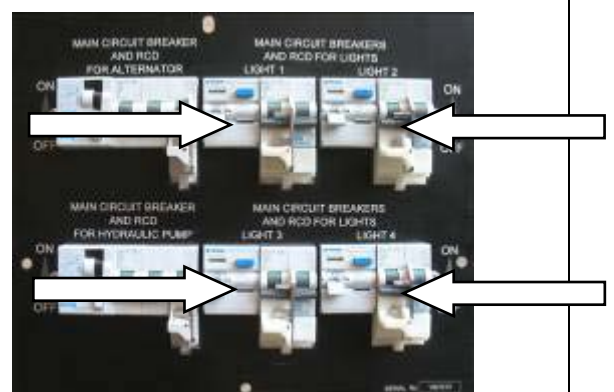
Proceed to light the lamps via the respective circuit breakers located on the control panel.

Light the first lamp (Fig. 10) and allow 2 minutes for it to warm up, then light the next lamp, remembering to allow each lamp to warm up for 2 minutes.

(Fig. 9)



(Fig. 10)



Tilt the floodlights via the control lever (Fig. 11). Maximum tilt is approximately 41°.

(Fig. 11)

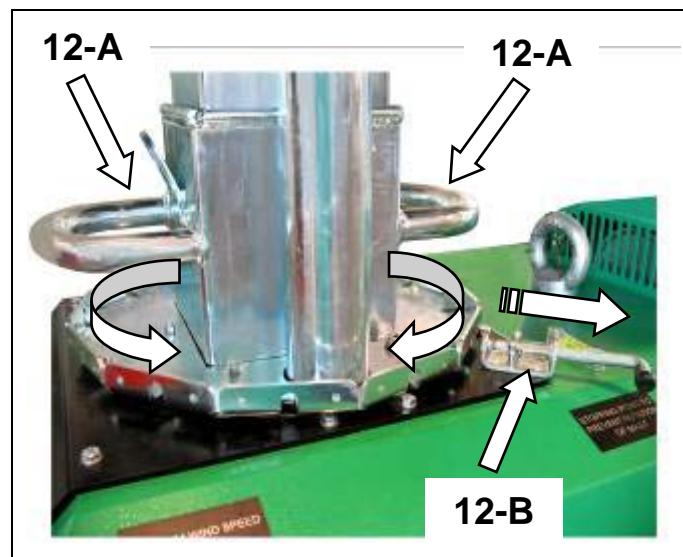


**In the event the lights are accidentally switched off, wait for the lamps to cool (about 15 minutes) before a re-lighting.**

Manually rotate the mast to the desired position by using the two handles (Fig. 12-A).

Pull the locking pin from the mast (Fig. 12-B) to enable rotation. To lock the mast into position re-insert the pin.

(Fig. 11)



**WARNING:** It is strictly prohibited to raise the stabilisers when the lighting tower is in vertical position at its maximum height.

**WARNING:** The lighting tower is designed to withstand 110 km/h winds at its maximum height. In the event the tower is operating in a windy location, retract the telescopic mast slowly.

In case of hydraulic gear box or generating set engine failure, it is still possible to lower the mast. Make reference to the chapter “**11.4 HYDRAULIC GEAR BOX**”.

## **12.12 STOPPING THE ENGINE**

Switch off all the lamps via the circuit breakers **(34-35-38-39)**.

Allow the engine to continue to operate for approximately 1 minute, then turn the starting key **(40)** to the stop position.

In an emergency it is still possible to stop the generating set by pressing the stop button **(18)**.

### **13. LIGHTING TOWER MAINTENANCE**

We recommend regular cleaning of the lighting tower to avoid the build up of dirt. The frequency of the cleaning depends on the location of the lighting tower.

Any extraordinary service items not mentioned above require a specialised technician.

#### **13.1 LUBRICATION OF THE ROLLERS**

For the lubrication of the rollers, use low temperatures and extremely high speed bearing grease. We recommend to the use of SKF LGLT 2 grease, a premium quality fully synthetic oil based grease using lithium soap. In the event another product is used, the grease must have a base oil viscosity equal to 18 mm<sup>2</sup>/s at 40°C and to 4,5 mm<sup>2</sup>/s at 100°C.

#### **13.2 LUBRICATION OF MAST SECTIONS**

For the lubrication of the mast sections, we recommend using light lubricating oil such as WD40. Spray it on the metal parts of the mast, in order to avoid squeaking and scraping noises during the raising and the lowering operations. In the event of frequent use of the lighting tower, lubricate every three months.

#### **13.3 LUBRICATION OF STABILISERS**

Grease the stabiliser's regularly, using a dense grease. Verify if the movement of the stabiliser is correctly.

#### **13.4 CHECK HYDRAULIC CYLINDER**

Confirm regularly the conditions of the hydraulic pushing cylinder, ensuring there are no traces of rubbing, leaks or corrosion.

#### **13.5 CHECK STEEL CABLES**

The steel cables are 6mm diameter composed of Carbon wires with Class B Galvanized protection and a Polymer core with a minimum breaking load of 3294 kgs. They enable the raising and lowering of the telescopic mast. It is recommended to inspect the cables every 250 hours service to verify their condition and ensure their correct position inside the pulleys. It is the Manufactures recommendation that all cables and pulleys are replaced as required. If the steel cable shows unusual signs of wear or damage, do not use the lighting tower and contact PR Power.

#### **13.6 CHECK OF HYDRAULIC CONNECTIONS**

Check the connections for the hoses that transport the hydraulic oil from the tank to the cylinder. Check hoses are sufficiently tightened. Check for wear and tear on the hoses. Check for oil loss.

## 14. TROUBLESHOOTING GUIDE

Listed below are the most common issues that may occur during operation of the lighting tower and possible remedies.

If the engine does not operate correctly, we recommend you follow the maintenance operations and the maintenance schedules as described in the engine "Operator's manual" in chapter "MAINTENANCE", in order to find and to eliminate the cause of the problem.

### 14.1 MAIN ISSUES

#### **FAULT**

- When turning the start key to the ON position, the ignition indicator light does not light up and the starter motor does not work.

#### **CAUSE**

The battery is disconnected.

#### **REMEDY**

Open the door and connect the battery.

#### **CAUSE**

The battery is not charged.

#### **REMEDY**

Recharge the battery.

#### **CAUSE**

The battery is defective.

#### **REMEDY**

Replace the battery.

#### **CAUSE**

The starter motor does not work.

#### **REMEDY**

Contact Project Rentals.

#### **CAUSE**

The emergency stop button is pressed.

#### **REMEDY**

Check that the stop button is armed. If it is not armed, turn the grip handle in clockwise direction.

#### **CAUSE**

There are disconnected cables in the electrical system.

#### **REMEDY**

Check the electrical system to locate the disconnected cables (Refer to the wiring diagram).

### **FAULT**

- The starter motor works, but the engine does not start.

#### **CAUSE**

Possible lack of fuel in the tank.

#### **REMEDY**

Refuel the machine.

#### **CAUSE**

Fuel filter is dirty.

#### **REMEDY**

Replace the fuel filter.

#### **CAUSE**

The fuel pump does not work.

#### **REMEDY**

Check the electrical connection of the pump and eventually if problem continues contact PR POWER.

### **FAULT**

- The starting of the engine is difficult.

#### **CAUSE**

The air cleaner element is dirty.

#### **REMEDY**

Clean up the element or replace it.

#### **CAUSE**

Injection pump wear.

#### **REMEDY**

Do not use poor quality fuel as it will cause pump wear. Check the fuel injection pump element and replace if necessary.

#### **CAUSE**

Over heating of moving parts.

#### **REMEDY**

Check lubricating oil system.

Check to see if lubricating oil filter is working properly or replace it.



**FAULT**

- Output voltage unstable.

**CAUSE**

Irregular engine speed.

**REMEDY**

The engine is set to the correct speed.

**CAUSE**

The alternator is defective.

**REMEDY**

Replace the alternator and if problem continues contact PR POWER.

**FAULT**

- The lighting tower shuts down. The low oil pressure indicator light is on.

**CAUSE**

The oil level is low.

**REMEDY**

Check the level and add oil if necessary.

**CAUSE**

The pressure switch is defective.

**REMEDY**

Replace the pressure switch.

**CAUSE**

The "DAS" TP0401 engine protection panel is defective.

**REMEDY**

Replace the panel.

**FAULT**

- The lighting tower shuts down. The high water temperature indicator light is on.

**CAUSE**

The level of the coolant in the radiator is low.

**REMEDY**

Check the level and add coolant if necessary.



PR8000 9mt 4x2000W METAL HALIDE

**CAUSE**

Radiator inlet or outlet clogged.

**REMEDY**

Clean carefully.

**CAUSE**

Radiator fan does not work.

**REMEDY**

Check the fan.

**CAUSE**

The engine protection panel "DAS" TP0401 is defective.

**REMEDY**

Replace the panel.

**FAULT**

- The lighting tower shuts down. The battery charge indicator light is on.

**CAUSE**

The battery is defective.

**REMEDY**

Replace the battery.

**CAUSE**

The engine's alternator fails.

**REMEDY**

Check it alternator and if problem continues contact PR POWER.

**CAUSE**

The engine protection panel "DAS" TP0401 is defective.

**REMEDY**

Replace the panel.

**FAULT**

- After refueling, the fuel level monitor does not move.

**CAUSE**

The fuel level monitor does not work.

**REMEDY**

Check the fuel level monitor and the electrical connection.

**CAUSE**

The fuel float does not work.

**REMEDY**

Check the fuel float and the electrical connection. If the sensor is blocked, replace it.

**FAULT**

- When the engine is running the hour meter does not work.

**CAUSE**

The hour meter does not work.

**REMEDY**

Check the hour meter and the electrical connection.

**FAULT**

- The automatic earth leakage relay trips during the operation of the lighting tower.

**CAUSE**

There has been a current leak, during the use of the auxiliary socket.

**REMEDY**

Check the electrical system connected to the auxiliary socket, check that the amp draw does not exceed the required level.

**CAUSE**

Electrical connections interrupted.

**REMEDY**

Check the external electrical system and if the problem continues contact PR POWER.

**CAUSE**

Connection to Earth not correctly carried out.

**REMEDY**

Check that the connection to Earth is correct.

**FAULT**

- The raising and lowering lever of the telescopic mast does not work.

**CAUSE**

Defective electrical connection.

**REMEDY**

Check the electrical connection.

**CAUSE**

The hydraulic gear box does not work.

**REMEDY**

Check that the automatic earth leakage relay is armed. If it is not armed rearm it.

Check the electrical system of the hydraulic gear box.

Check the oil level inside the hydraulic gear box, and top up if necessary.

Replace the hydraulic gear box and contact PR POWER directly.

**FAULT**

- The lowering telescopic mast lever does not work.

**CAUSE**

Defective electrical connection.

**REMEDY**

Check the electrical connection.

**CAUSE**

The hydraulic gear box fails.

**REMEDY**

Manually jack down the mast, using the handle inside the door (refer to chapter “**11.4.1 Lowering Handle Bar Bracket in Emergency**”), to lower the mast.

**FAULT**

- One or more lamps do not light.

**CAUSE**

Defective lamps.

**REMEDY**

Before replacing the lamp, it is advised you test the lamp by installing the lamp that has failed in a floodlight where the lamp was previously working.

**FAULT**

- The lamp fails to light.

**CAUSE**

The lamp has been accidentally turned off.

**REMEDY**

The lamp could not be relight, it is necessary to wait for the lamp to cool down(about 15 minutes).

**CAUSE**

The automatic earth leakage relay has been tripped.

**REMEDY**

Rearm the automatic earth leakage relay.

**15. REPLACE THE LAMP AND LENSES**

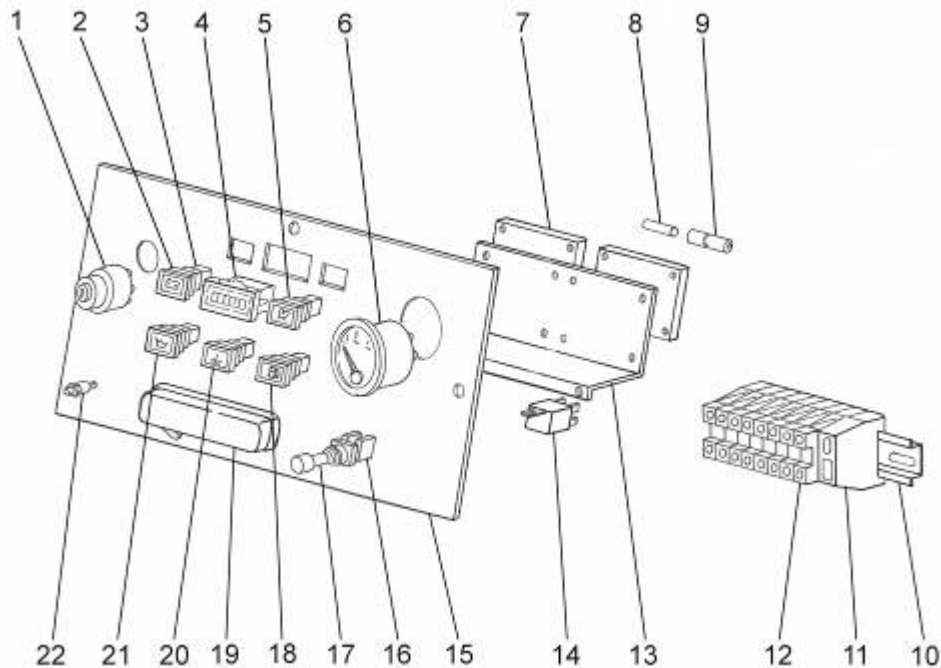
In the event you need to replace the lamps or the lenses, open the lamp by unlocking the hook placed on the rear cover and replace the lamp. Close the cover.

<b>Type of lamp:</b>	Metal halide
<b>Base:</b>	K12s-7
<b>Nominal power:</b>	2000 W
<b>Nominal voltage:</b>	240 V – 50 Hz



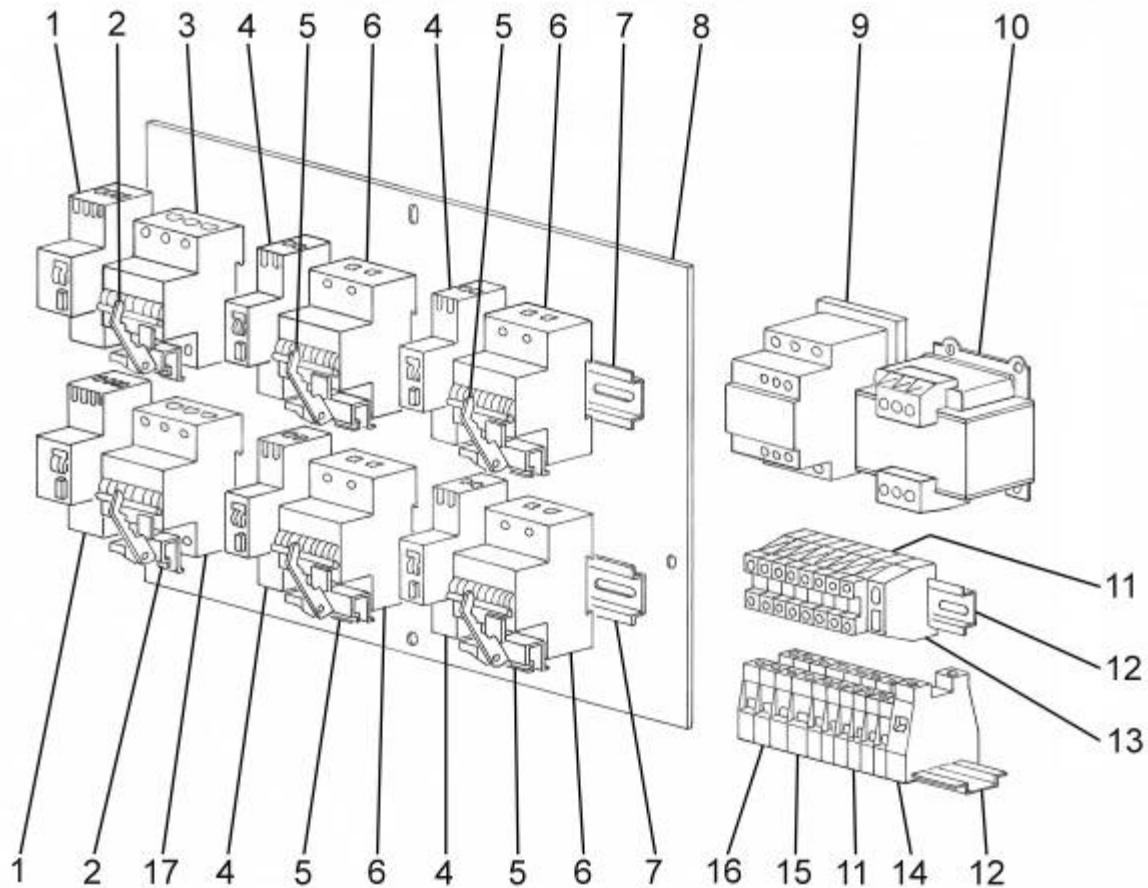
## 16. SPARE PARTS

### 16.1 UPPER COMMAND PANEL SPARE PARTS LIST



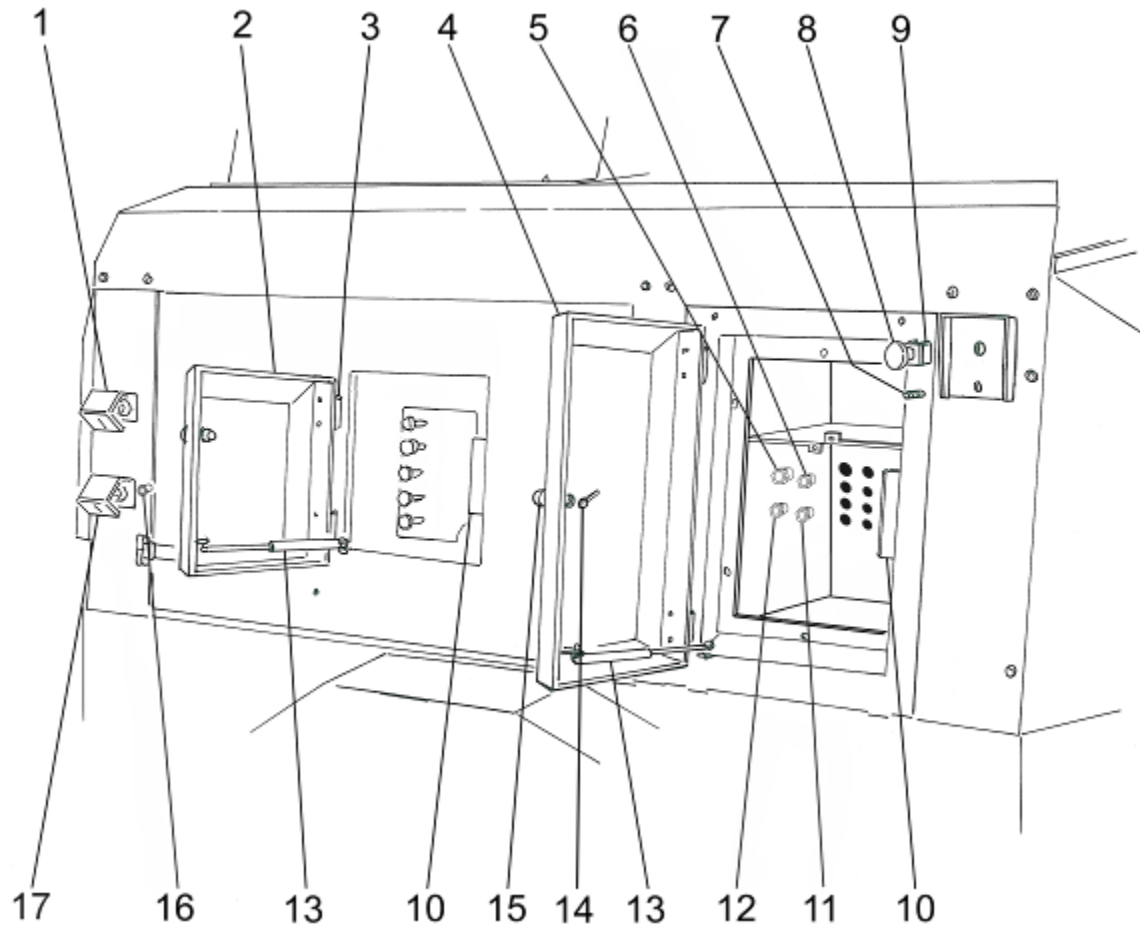
Items	Code	Denomination
1	-	Starting key (Kubota engine part)
2	6205	Battery charge signal lamp
3	6184	Female 2 ways faston holder
4	9328	12 V 50 Hz hour meter
5	6206	Preheater signal lamp
6	11144	Monitor fuel level
7	8027	TP0401 DAS electronic panel
8	6175	8 A fuse
9	6193	Fuse holder
10	7806-170	Support
11	11327	Stop terminal board black
12	12716	4 mm² grey terminal board
13	12584	Electronic panel support
14	6921	12 V relay
15	12490-SA	Aluminium front plate
16	9572	Contact for lever
17	7302	Electronic lever
18	6202	Low fuel level signal lamp
19	12602	Front lighting lamp
19	12745	C5W-12 V lamp
20	6203	Water temperature signal lamp
21	6204	Low oil pressure signal lamp
22	12603	Push button light

## 16.2 LOWER COMMAND PANEL SPARE PARTS LIST



Items	Code	Denomination
1	12732	100 MA 4P automatic earth leakage relay
2	12677	Lock din left hand locking assembly
3	12675	32 A 3P main circuit breaker
4	6239	40A/30mA RCD
5	12674	Lock din middle locking assembly
6	12730	16 A main circuit breaker
7	7806-265	Support
8	12490-SB	Aluminium front plate
9	9774	12 A 24 V AC 50/60 Hz contactor
10	12503	50 VA 230/400 V 12/24 V transformer
11	12716	4 mm <sup>2</sup> grey terminal board
12	7806-170	Support
13	11327	Stop terminal board black
14	11650	35 mm <sup>2</sup> yellow/green terminal board
15	8769	6 mm <sup>2</sup> grey terminal board
16	11328	10 mm <sup>2</sup> grey terminal board
17	12678	10 A 3P main circuit breaker

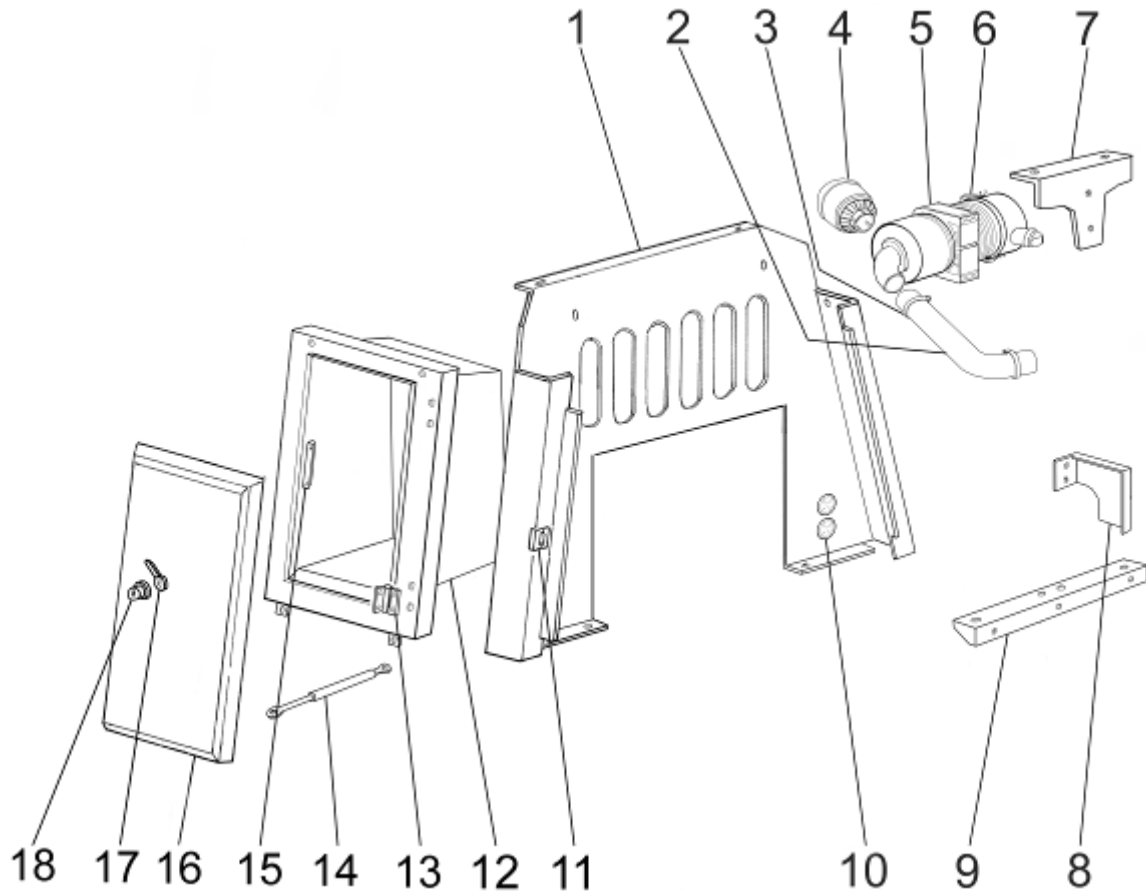
### 16.3 CONTROL PANEL DOOR SPARE PARTS LIST



Items	Code	Denomination
1	-	Lockable battery insulator switch
2	12568	Hydraulic gear box door
3	8766	Hinge
4	12489	Command panel door
5	12706	PG21 d.20,5 press metal sheath
6	12705	PG16 d.15,5 press metal sheath
7	6840	Earth clamp connection
8	6188	Emergency stop button
9	6189	Contact for emergency stop button
10	12227-06-Z	Lock plate
11	12703	PG13,5 d.10 press metal sheath
12	12704	PG13,5 d.12 press metal sheath
13	10536	100N gas spring
14	12531	Click tab
15	12533	Lock assembly
16	12144	Rubber protection for battery switch
17	-	Lockable starting key insulator switch

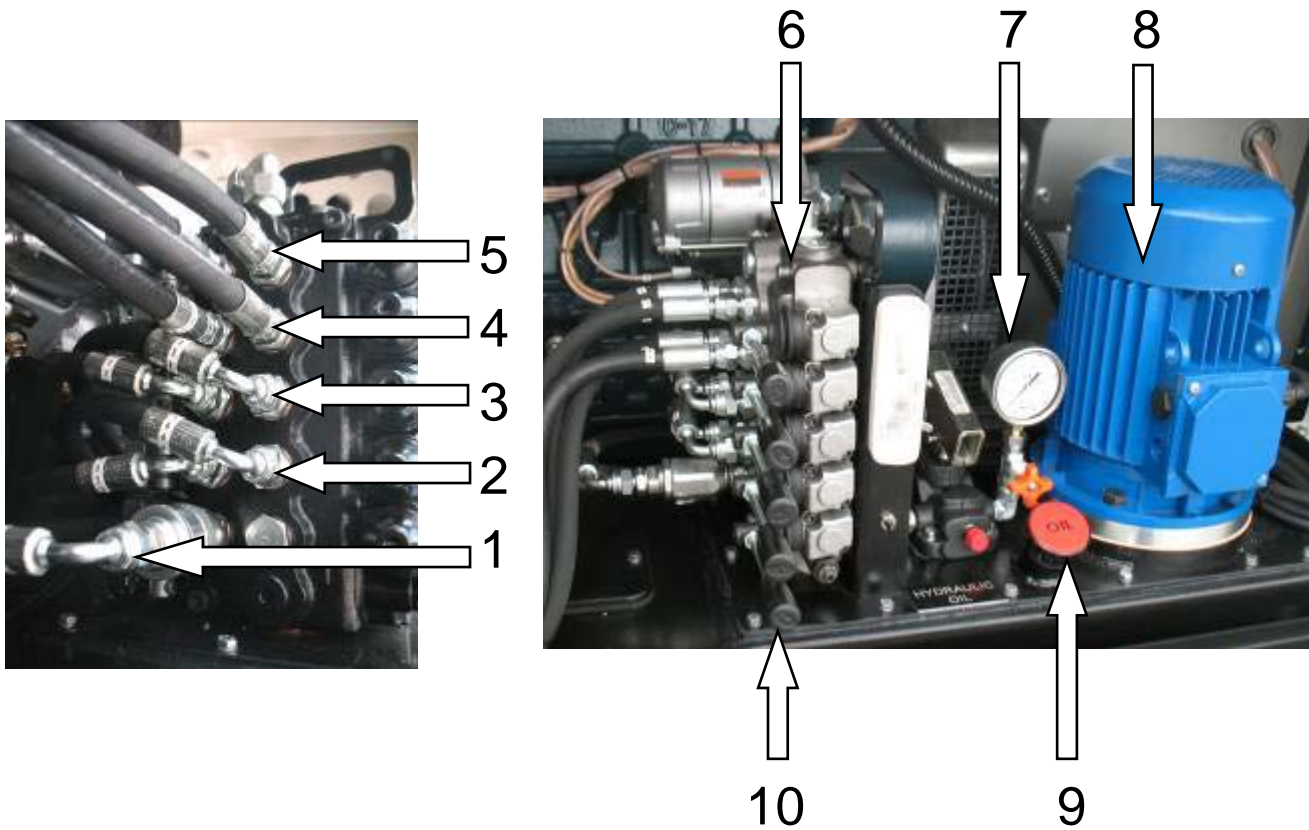


#### 16.4 CENTRAL PANEL AND RADIATOR SUPPORT SPARE PARTS LIST



Items	Code	Denomination
1	12484	Central panel
2	12491	Collector air filter
3	12728	60-80 metal clamp
4	12665	Pre-cleaner
5	12663	Filter bracket
6	12664	FPG radial 90° filter
7	12226	Air filter support
8	12304	Belt cover
9	12198	Radiator support
10	6167	Rubber seal
11	6118	Contrast for lock
12	12482	Left front side panel
13	8766	Hinge
14	10536	100N gas spring
15	12227-06-Z	Lock plate
16	12567	Door
17	12534	Click tab
18	12533	Lock assembly

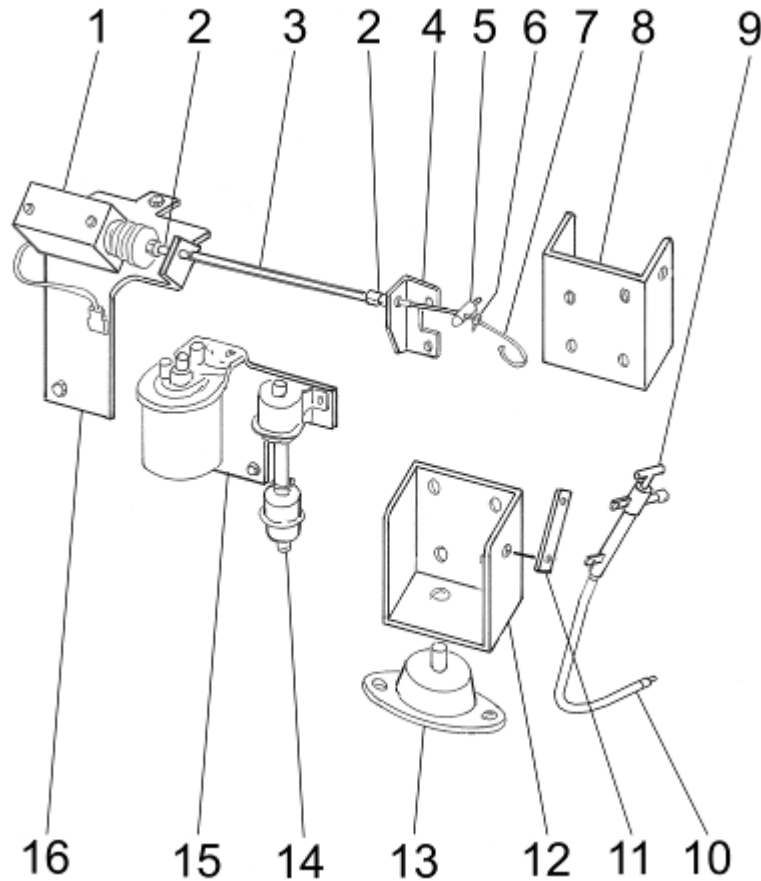
## 16.5 SPARE PARTS LIST HYDRAULIC PARTS



Items	Code	Denomination
-	12628	Hydraulic gear box complete
1	12458	Hydraulic cylinder oil tube
2	12459	Left front stabilizer oil hose
3	12460	Right front stabilizer oil hose
4	12461	Left rear stabilizer oil hose
5	12462	Right rear stabilizer oil hose
6	12628-2	Switchboard oil pipe linking
7	12628-1	Manometer
8	12628-4	400 V 2 HP electrical motor
9	12628-5	Oil tank cap
10	12628-3	Lever

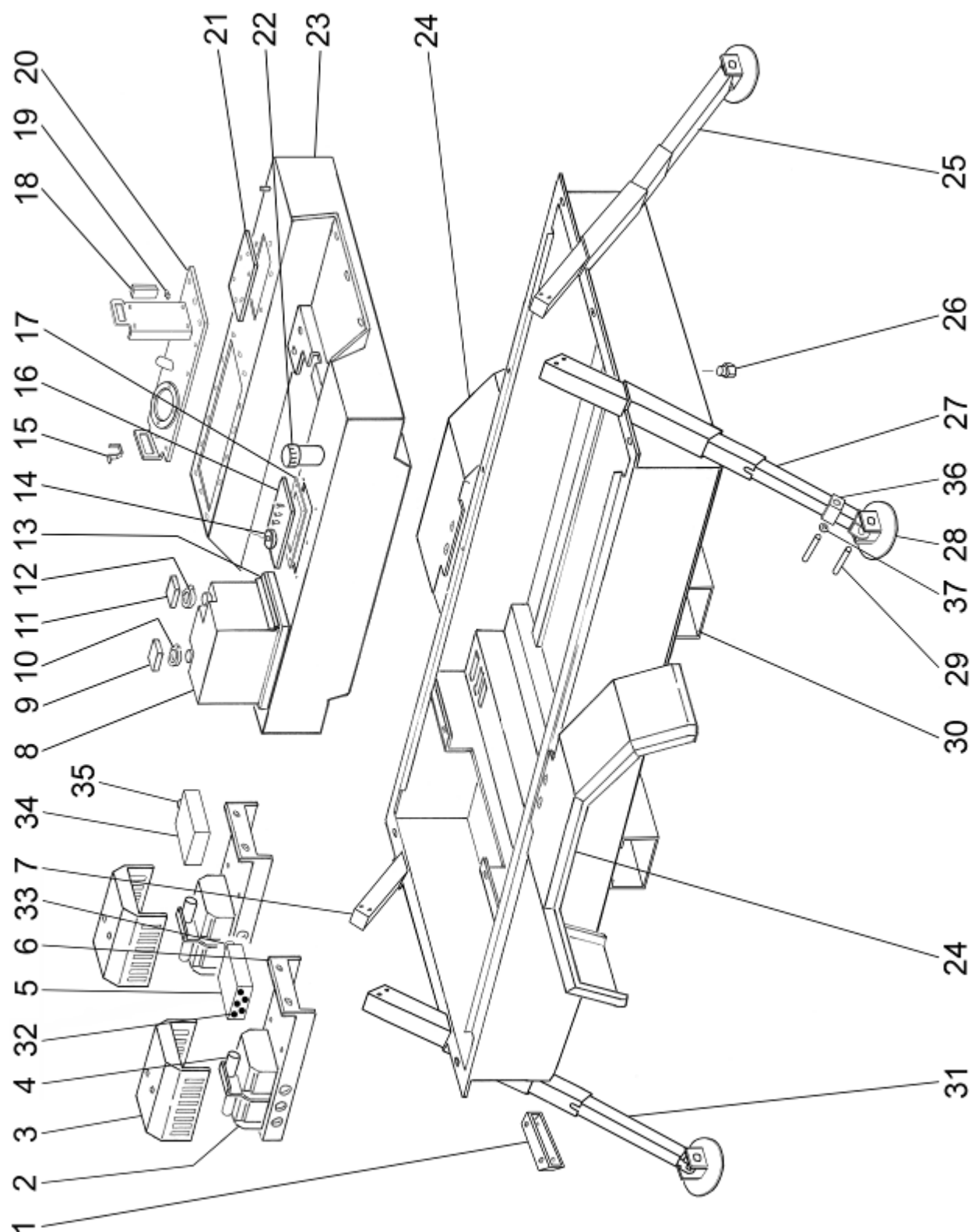
(\*) For particular the hydraulic gear box, please specify in detail the parts required

## 16.6 SPARE PARTS LIST FOR SOLENOID AND ENGINE SUPPORT



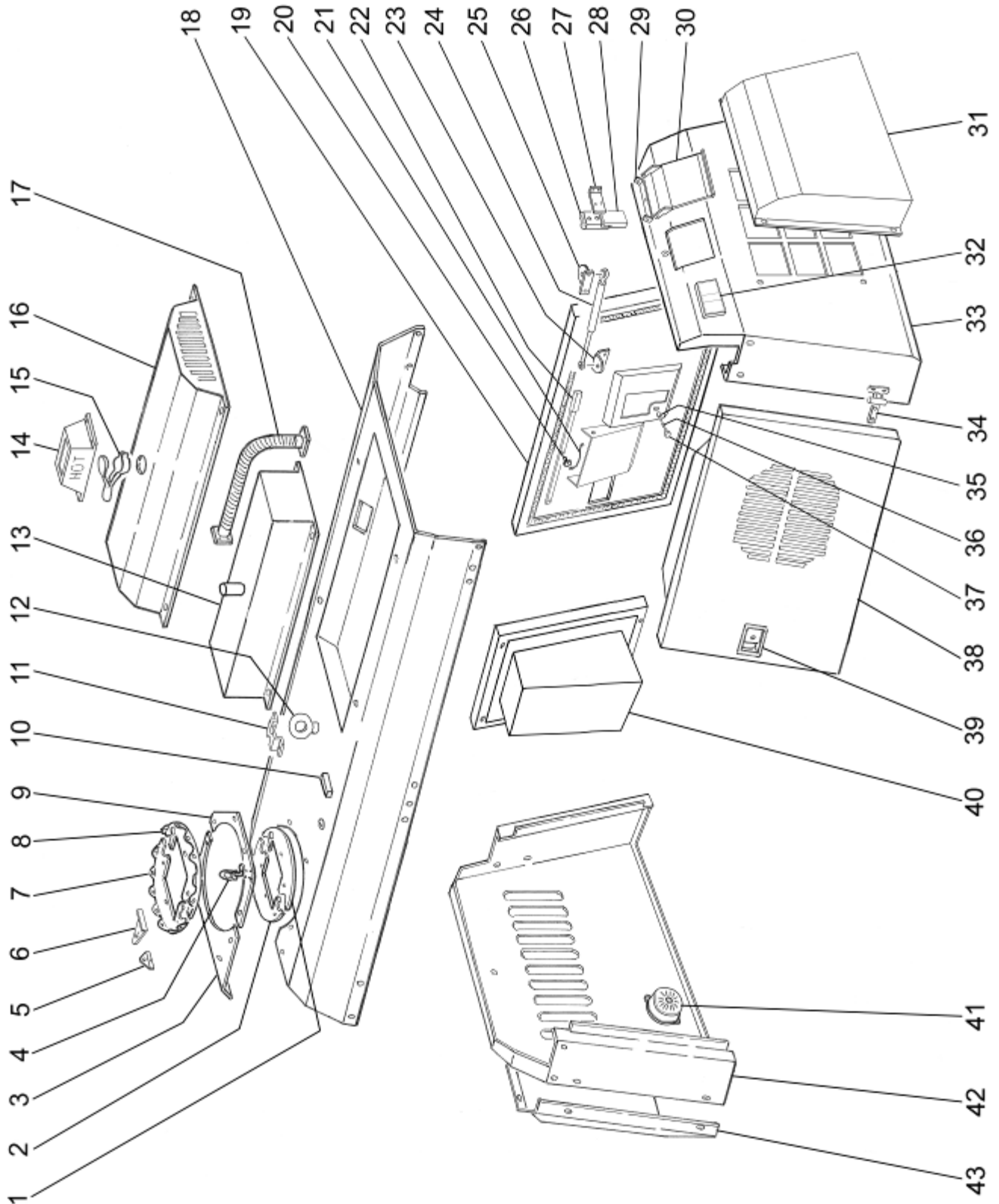
Items	Code	Denomination
1	6843	50x50x100 solenoid
2	6882	M6 rope tightener
3	11714	Bowden sheat
4	11686	Tightener plate
5	11710	Wire pin
6	6878	Bobden pawl
7	6881	Bowden wire
8	11614	Right engine support
9	7125	Oil drain pump
10	6146-P	Oil drain pipe
11	6105	Oil pump support
12	11615	Left engine support
13	7656	T3 shock absorber
14	8028	Fuel prefilter
15	12190	Fuel filter support
16	11685	Solenoid support

## 16.7 SPARE PARTS LIST FOR FRAME



Items	Code	Denomination
1	12191	Rudder spacer
2	10695	2000 W ballast with capacitor
3	11275-3	Ballast cover
4	10695-1	60µF capacitor with ballast
5	12725	Electrical box
6	11619	Ballast support
7-28-29	12428	Hydraulic stabilizer front right
8	7668	12 V 80 Ah battery
9	7127	Red cover for battery
10	6885	Battery positive terminal
11	6886	Battery negative terminal
12	6153	Blue cover for battery
13	9303	Battery fixed
14	10580	Fuel level
15	12623	Cable fixing plate
16	9919	Fuel tank cover
17	8024	Gasket for fuel tank
18	12602	Front lighting lamp
18	12745	C5W-12 V lamp
19	12603	Push button light
20	12472	Support flange unit oil
21	12478	Cover oil tank
22	6906	Fuel tank cap
23	12474	Fuel tank
24	12475	Fender
25-28-29	12430	Hydraulic stabilizer rear right
26	10266	1" drain cap
27-28-29	12429	Hydraulic stabilizer rear left
28	12431	Stabilizer support
29	10117-Z	Tie rod
30	12473	Base
31-28-29	12427	Hydraulic stabilizer front left
32	12703	PG13,5 d.10 press metal sheath
32	12704	PG13,5 d.12 press metal sheath
32	12705	PG16 d.15,5 press metal sheath
33	7202	PG21 press sheath
34	12726	Electrical box
35	12704	PG13,5 d.12 press metal sheath
35	12705	PG16 d.15,5 press metal sheath
35	12706	PG21 d.20,5 press metal sheath
36	12203-Z	Hydraulic stabilizer
37	12203-07-Z	Spacer

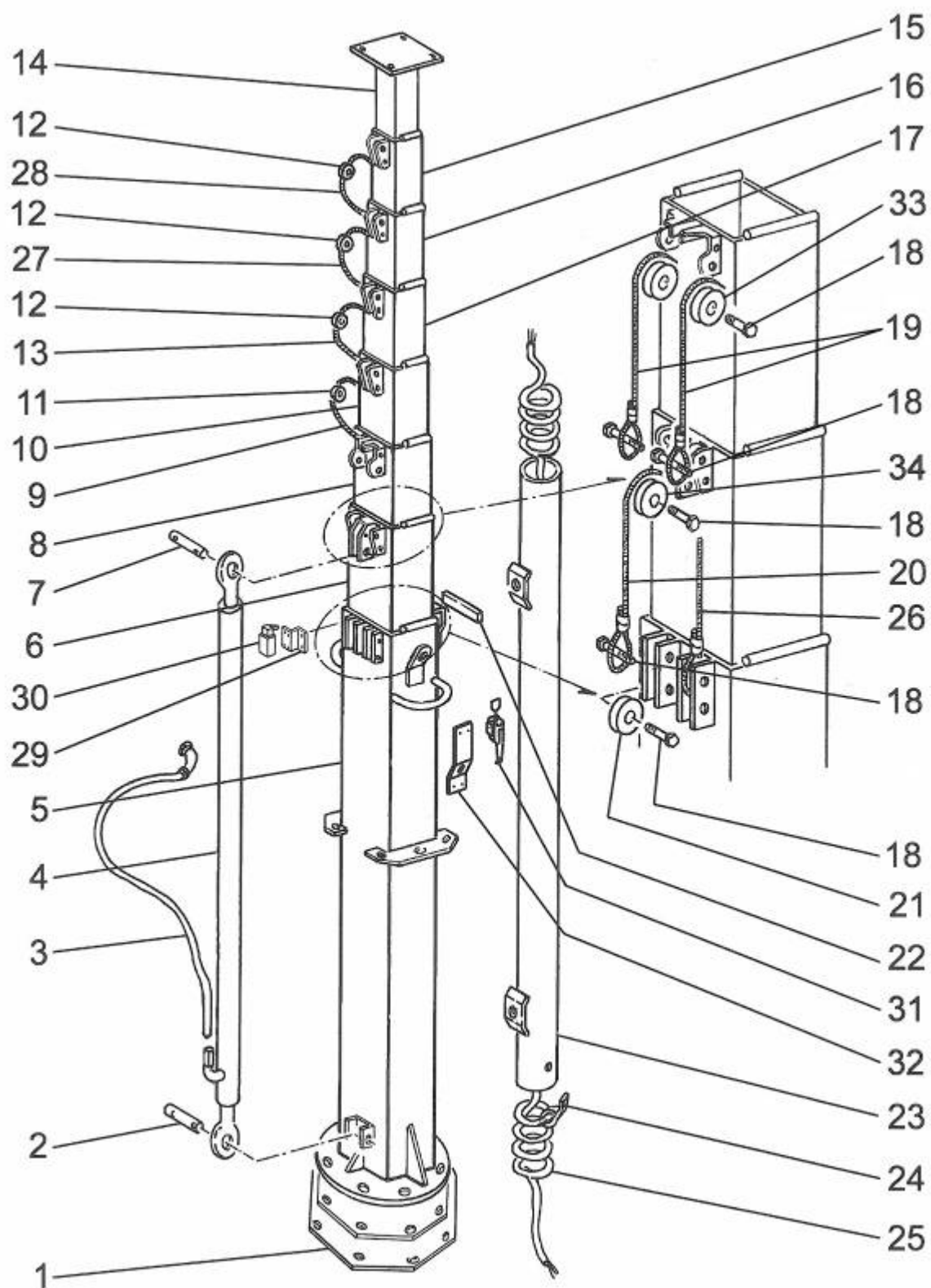
## 16.8 SPARE PARTS LIST FOR CANOPY





Items	Code	Denomination
1	12479	Mast guide flange
2	9858	Mast guide flange
3	9859	Front flange
4	8178	Lock pin
5	12306	Mast position plate
6	12307	Mast position plate
7	9901-1-Z	Mast guide flange
8	12480-Z	Mast guide flange with blocking
9	9860	Rear flange
10	7237	Spirit level
11	8984	Plate for hook
12	9452	M24 hook
13	11633	Discharge silencer
14	12202	Plate for silencer
15	11705	D.48 rain cover
16	12209	Silencer cover
17	11706	Silencer flexible extension
18	12481	Top panel
19	12487	Right side door
20	6251	Knob
21	C003-350	Steel cable (l 350 Ø 3)
22	12628-6	Handle for hydraulic pump
23	12208	Gas spring plate
24	11836	200N gas spring
25	11835	Gas spring plate
26	12630	Connector for battery cable
27	12195-05	Plate for electric clamp
28	12630	Connector for battery cable
29	11833	Plate for radiator cover
30	11834	Radiator cover
31	12476	Air radiating closing
32	-	Catadiotor
33	12486	Back fairing
34	6432	Hinge
35	5008	Pin
36	5009	Spring
37	5010	Knob
38	12483	Left side door
39	6201	Handle with lock
40	12488	Right front side panel
41	12437	Siren
42	12485	Head fairing
43	12477	Air inlet box

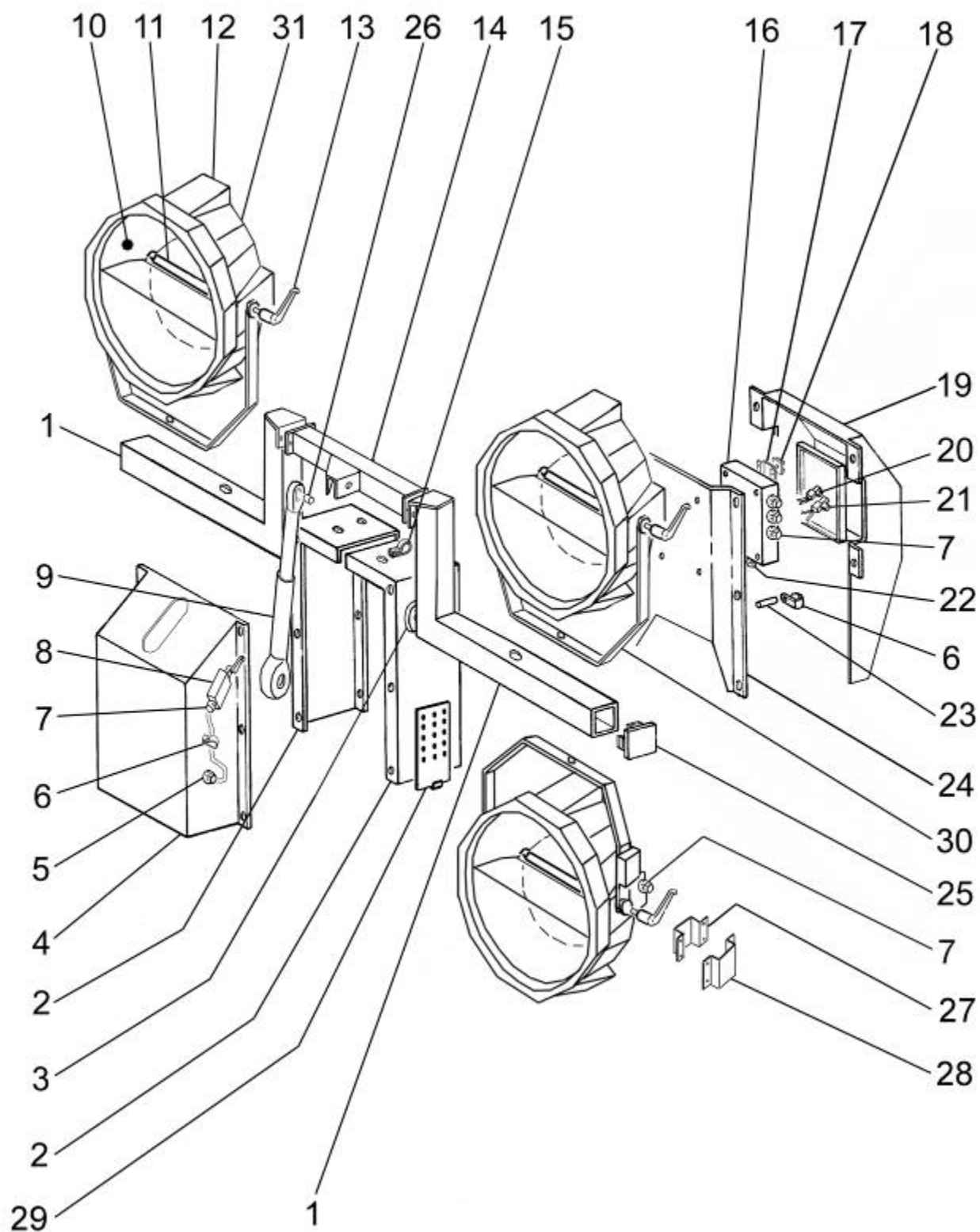
## 16.9 SPARE PARTS LIST FOR TELESCOPIC MAST





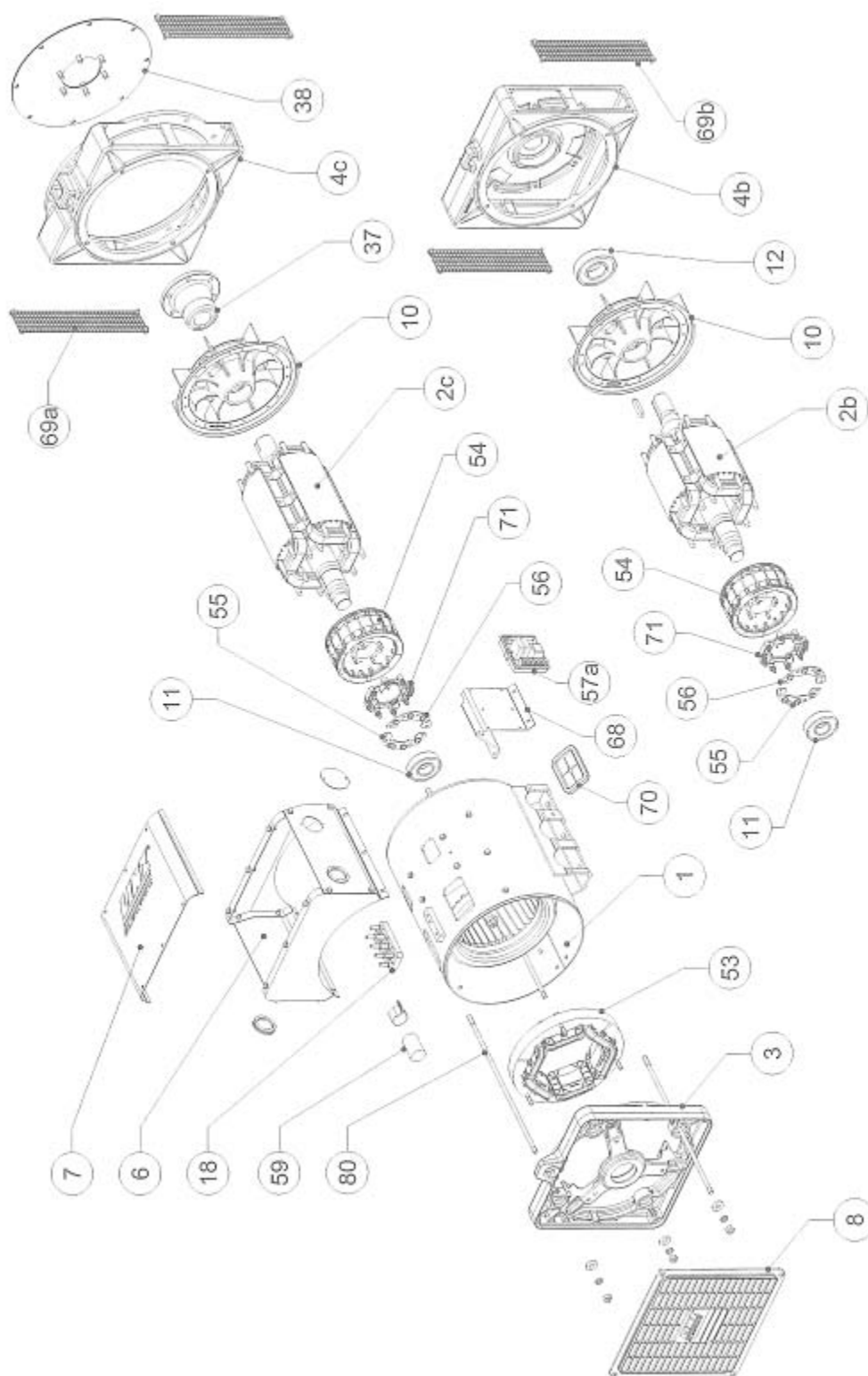
Items	Code	Denomination
1	11277-12	Thrust assembly
2	6231	Hydraulic cylinder lower pin
3	12458	Hydraulic cylinder tube
4	9560	Hydraulic cylinder
5	12207	1° section mast
6	9542	2° section mast
7	6230	Hydraulic cylinder top pin
8	9543	3° section mast
9	12993	High Rated 3.3 tonne Steel cable (l 1400 Ø 6)
10	9544	4° section mast
11	13006	Ø 60 SKF High Rated wheel for steel cable
12	13020	Ø 63 Standard wheel for steel cable
13	12994	High Rated 3.3 tonne Steel cable (l 1415 Ø 6)
14	9548	8° section mast
15	9547	7° section mast
16	9546	6° section mast
17	9545	5° section mast
18	10281	T.E 8.8 10x50
19	12992	High Rated 3.3 tonne Steel cable (l 1385 Ø 6)
20	12991	High Rated 3.3 tonne Steel cable (l 1460 Ø 6)
21	9553	Ø 60 Standard wheel for steel cable
22	6261	Nylon bar
23	10188	Tube guides cable
24	7531	15/15 RSGU1 clamp
25	12693	11G2,5 mm turn cable
26	12990	High Rated 3.3 tonne Steel cable (l 1440 Ø 6)
27	12995	High Rated 3.3 tonne Steel cable (l 1430 Ø 6)
28	12996	High Rated 3.3 tonne Steel cable (l 1455 Ø 6)
29	12305	Security sensor support
30	12254	3 A 240 V AC security sensor
31	6433	Floodlight locking hook
32	12868	Support lever
33	13005	Ø 58 SKF High Rated wheel for steel cable
34	13008	Ø 63 SKF High Rated wheel for steel cable

## 16.10 LAMPS SPARE PARTS LIST



Items	Code	Denomination
1	9477	Floodlights support
2	9476	Floodlights support
3	11991	6205 2RS bearing
4	9479	Ropes protection
5	1061	Ø 16 ½" gas press sheath
6	7531	15/15 clamp
7	12703	PG13,5 d.10 press metal sheath
8	12254	3 A 240 V AC security sensor
9	9481	12 V actuator
10	10693-1	Glass for floodlight
11	10694	2000 W metal halide lamp
12	10693	Floodlight with glass
13	7217	Hand lever
14	9478	Plate
15	11471	24/15 clamp
16	12727	Electrical box
17	11269-25	Rectifier support
18	9614	Rectifier
19	12061	Turn cable protection
20	7126	Z10-1 clamp
21	6241	Z6-1 clamp
22	7202	PG21 press sheath
23	7020	Spacer for fixing turn cable
24	6029	Lighting support plate
25	10255	Cap
26	12750	GSM1416-20 bearing
27	11709	Plate A
28	11708	Plate B
29	12869	Floodlights support
30	10693-2	Floodlights support
31	12530	2000 W igniter

## 16.11 SPARE PARTS LIST FOR ALTERNATOR



Items	Code	Denomination
	12116	PRO18SA/4 Linz alternator complete
1	*	Frame with stator
3b	*	B14 rotation inductor
2c	*	SAE rotating inductor
3	E18SE001A	Rear shield
4b	E18SB013	B3/B14 front cover
4c	*	SAE front cover
6	*	Terminal box
7	E18BT004B	Terminal box cover
8	E18KA002D	Rear cover
10	E18VE002D	Fan
11	EXA11668335	Rear bearing
12	EX411668345	Front bearing
18	E18KA003B	8 stud terminal board
37	E13GE001A	Coupling hub
38	*	SAE coupling disc plate
53	E18ECO17B	Exciter stator
54	E18EC020A	Exciter rotor
55	E18ECO10A	(+) rotating bridge sector
56	E18EC011A	(-) rotating bridge sector
57	*	HVR-11 electronic regulator
59	*	E.M.I. filter
68	E18BT00EB	Electronic regulator support
69a	E18KA006A	SAE 2-3 lateral grille protection
69b	E18KA005A	SAE 4-5 B14 lateral grille protection
70	E18KA014B	Fair lead
71	E18EC000B	Rotating bridge insulator
80	*	Frame tie rod
81	E28KA011A	SAE top cover

\* When requesting spare parts please indicate the alternator's code and date of production









## 16.12 TRAILER FOR FAST TOWING HEIGHT ADJUSTABLE SPARE PARTS LIST





Items	Code	Denomination
(*)	12440	Trailer for fast towing height adjustable
1	7723	M10 female eyebolt
2	12696	Pin
3	12697-680	Chain

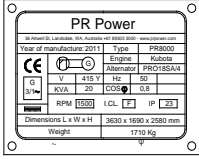
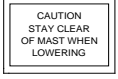

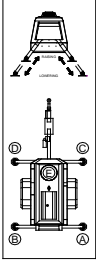


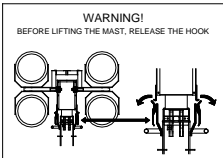

(\*) Please specify clearly the parts required

### 16.13 SPARE PARTS LIST FOR STICKERS FOR LIGHTING TOWER

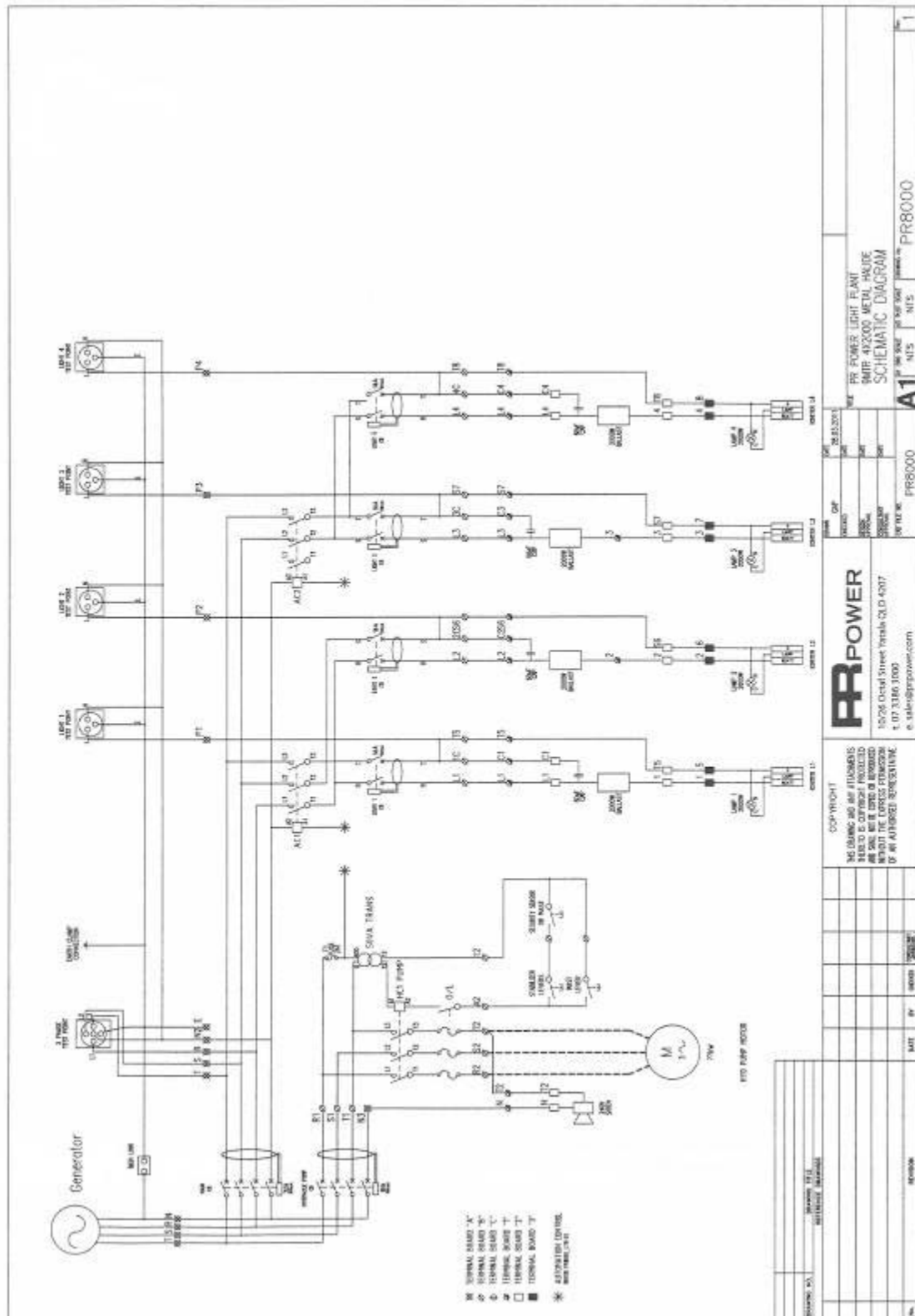
Sticker	Code
	10178
	10182
	10179
	10181
	10180
	10185
	10183
	10184
DANGER HIGH VOLTAGE	12546
EARTH STAKE	12559
EMERGENCY STOP	12545
BATTERY ISOLATOR	12547
MEN LINK	12668

RCD TEST POINT ONLY	12669
3 PHASE TEST POINT	12670
STARTER MOTOR ISOLATOR	12560
HIGH VOLTAGE	12561
DIESEL FUEL TANK CAP OPEN THE DOOR	6084
STOPPING POINT TO PREVENT ROTATION OF MAST	6085
RADIATOR CAP	6087
MAXIMUM WIND SPEED 110 Km/h	6091
	12562
	12344
DIESEL FUEL ONLY	11805
HYDRAULIC OIL	12308



	12347
	12033
	12345
	12346
	12566
	12565
	13244
 ENSURE DRAW BAR IS LOCKED IN PLACE AND SAFETY PIN FITTED	12569 (for trailer)

## 17. WIRING DIAGRAM





PR8000 9mt 4x2000W METAL HALIDE



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