PARTS MANUAL

Starke Energy Series

EDS30-40

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STARKE ENERGY

19. Appendix I

ISO3691-1980

Motor Industrial Vehicle—Safety Norms

The Second Part Safety Code of motor industrial trucks in service, operation and maintenance

14 Safety rules for the user and driver

In order to use the motor industrial truck well, this part set up some rules. The 14.1 is applied to the user, the 14.2 is for the driver.

14.1 Applied to the user

The users are the owner or the leaser individual or corporation of the truck.

14.1.1 The qualification of the driver

The driver of the motor industrial truck should be trained, pass examination and get the operation qualification.

14.1.2 The truck working in flammable and explosive circumstance

Only the industrial motor truck getting the qualification of the national authoritative department and getting the license of working in the flammable and explosive circumstance, should work in the circumstance.

This kind of truck should be marked with proper stamp sign, and the relevant building or the plant should be marked too.

The classification of the building or the field condition should agree on by the user and the national relevant authoritative department.

14.1.3 Passenger

Except for special seats, the vehicle cannot carry passengers. The passengers are forbidden to step on the ascent machine or the attachment, except for the following conditions:

The truck mounted working platform (except for the high-lift order picker):

A） The platform should be fixed on fork rack/ fork firmly.

B） If there is no ascent control device, when there is person on the platform, the driver should leave the driving position.

C） When there is person standing on the platform with ascent control device, only this ascent control device on the platform can be used.

D） The overall weight of the platform, the load and the people should not over the half of the weight marked on the vehicle nameplate.

E） The platform on the truck should not be used to transport people. But if for the hand work, the truck can be adjusted for operation in a small range.

14.1.4 The use of the forklift

14.1.4.1 The change of the capacity and nameplate of the truck

The truck in use shall not exceed the rated capacity stipulated by the factory.

Without the permit of the factory, any amendment of the design is forbidden, and should not add any attachment on the truck, in order to prevent the influence of the capacity and operation safety of the truck.

Any changing because of adding attachment should not reduce the security and accord to the requirement of this rule. After adopting the attachment, the capacity of the truck, the operation and the repair direction board, label or pattern should be altered correspondently.

The user should ensure all the nameplate and label in proper position, and maintain

handwriting clear.

14.1.4.2 Stability

The user should pay attention to section 6 of the code, which is about the stability of the truck in the working conditions.

When operating correctly, the high lift truck accord with the section 6 is steady, but the incorrect operating or the wrong maintenance could let the truck working unsteadily.

The factors that may influence the stability are: the condition of the ground and the floor, gradient, speed, load, the weight of the storage battery, the dynamic force and the static force as well as the judgment train conditions of the drivers.

When the truck is working in the condition differ to the regular working condition stated in the section 6, should reduce the load.

When the truck mounted attachment working without load, it should be viewed as partial load.

14.1.4.3 The protection requirement and protection equipment

The truck should be painted with obvious color differing from the surrounding circumstance.

The driving type high –lift truck should be mounted with protection cabin, except for the condition where the load could not drop onto the driver.

When convey the load maybe fall to the driver using high –lift truck, should adopt shielding shelf with enough height, weight and the opening size is small enough to prevent the entire load or part of them from falling onto the driver.

When it is necessary to denote the working condition, the truck should add caution device, such as light or flash lamp.

In the permit of the factory, it is allowed to install turning hand hold on the steering wheel formerly without it.

14.1.4.4 The transportation and storage of the fuel

The truck should refuel in the stated place. The fuel station should be ventilated, in order to reduce the accumulation of the fuel gas to the least. In opening pit, subway entrance, and lift well or other similar conditions nearby should not fill in the liquefied petroleum gas and replace other dismountable liquefied petroleum gas container.

It is forbidden to smoke in the place of refuel, and should alarm using placard.

If the liquid fuel is not transport using pipeline, it should be transported using airtight container.

Only the personnel trained and appointed can fill or change the liquefied petroleum gas container.

When store and transport the liquefied petroleum gas container should fasten up the filling valve and the safety valve should connected to the vaporization room directly. When storing the container, should screw the protective cap on the connection mouth.

Before filling and/or reusing, should inspect the container to ensure that it is vapor proof. Especially pay attention to the valve and the connective part is vapor proof. The damaged container should not be used. Only the permitted corporation could repair the liquefied petroleum gas container.

14.1.4.5 The charging and changing of the battery

The battery charging station should set in the appointed area. The charging station should prepare the equipment using for flushing and neutralizing the overflow electrolyte, the fire control device, the measure avoiding the truck damage the charging device and the adequacy ventilation facility blow away the fume off from the battery.

In the area of charging, it is forbidden to smoke and alarm with placard.

Only the personnel trained and permitted can change or charge the battery. The battery repairing people should wear protective clothes.

All the work of changing the battery should carried out according to the description of user's manual from the factory. When reinstall the battery, should adopt measures to make the battery connecting, orientation and fixation correctly. Do not put tools and other metal substance on the lidless battery.

Without the special approval (for example the truck factory), the electrical motor truck should not change the battery with different voltage, weight or size.

It is obliged to use the battery stated by the factory. It is obliged to prepare the facility for changing battery safely. When hanging up the battery using hoisting equipment, it is necessary to use insulated sleeve.

If adopting chain hoist, it is necessary to equip chain box. If adopting chain block, the lidless battery should be covered by a piece of rubber blanket or other insulated materials, to prevent the short circuit of chain and the connecting wire or connecting terminal between the battery lattices.

14.1.4.6 The invalid or damaged truck

If finding the motor industrial truck existing insecurity factors, it should stop using and give away on the spot. After repairing and recovery to the safety conditions, it can be reused.

14.1.4.7 Accident

Once the accident happens, for example the staff injures, the truck damages the building or the equipment, firstly should organize salvage, do best to protect the accident field and report to the governor.

14.1.5 Operating conditions

14.1.5.1 Channel and stacking field

The ground of the operating field should have enough carrying capacity, and it is necessary to maintain it well not to influence the truck operating safely.

The transporting channel of the truck should have well visual field, and it is easy to turn, and no grade, steep slope, narrows channel and low roof board. The outline or the borderline must be clear.

In the road where it is easy to meet the stepping truck, the width of the channel should be adjusted.

Advising the grade of the channel should not over 10%, the top and the bottom of the slope should transit smoothly, to prevent the load vibration or the bottom of the truck from colliding the ground.

When the grade is over 10%, installing a sign is advised.

If the truck is in operation (transport) and the load block off the sight, when the vehicle is operating, the load should located on the backward of the truck operation direction.

For example: in some conditions (for example stacking and climbing), when the vehicle is operating, the load is required on the forward of the vehicle operation direction. Then, the driver should drive the vehicle carefully. It is necessary to attend: if the operation condition require, should equip accessory (assistant) equipment or assistant.

The passage, road, runway, floor or slope should maintain good operating conditions, to prevent the truck or the load from being damaged, and to prevent reducing the stability of the vehicle.

In dangerous state, including the barrier danger on the top should mark on the clear location.

The firefighting passage, the upstairs passage and the firefighting equipment should maintain expedite.

14.1.5.2 Gangplank or transition board

All the gangplank or transition board should has enough safety coefficients to bear the truck with load. On the gangplank or transition board should marked the max passing load perpetually.

The gangplank or transition board should fix firmly, to prevent the accidental move, vibration or slide.

On the gangplank or transition board should equipped handing or other available equipment to the effect of safety transport. On the conditions of possible, should set the fork hole or suspending ear for moving goods.

The gangplank or transition board should have non-slip finishing.

On the both sides of the gangplank or transition board, should mount the facility to prevent the truck from going over its edge.

When the gangplank or transition board is fixed its location, should adopt measures to prevent the reverse joint truck from moving suddenly.

14.1.5.3 Lighting

When the photometric brightness on the operating field is less than 32LX, the vehicle should equipped auxiliary light.

14.1.5.4 The suspending of the truck

The sling should be tied to the lifting spot which the factory appointed.

14.1.5.5 The synchronizing operation of the truck

Conveying bulky or heavy load using two trucks simultaneously is a dangerous operating which requires special care. And this kind of conditions should be taken as special conditions and carried out under the supervision of the operator responsible for operation.

14.1.5.6 Elevator (lifter)

The elevator (lifter) for transporting the industrial truck can bear the overall weight of truck, load and the drivers. This kind of elevator (lifter) must be appointed, and the drivers should use the appointed elevator (lifter).

14.1.5.7 Operating on the road vehicle (trailer) and rail vehicle

Before the motor industrial truck drive to the road, the road vehicle should apply the brake and wedging to prevent moving.

Exception: the road vehicle equipped with automatic snap lock type parking brake cannot use the wedge.

The industrial motor truck passing in and out without connect to the tractor, to prevent the semi-trailer hold up can use support.

It is necessary to build up the operating communication and operating order, to prevent the rail vehicle move accidentally when downloading.

The road vehicle (trailer) and rail vehicle should endure the overall weight of vehicle, load and the drivers. It is necessary to inspect if the pavement is crushing, having holes or other damage.

When the industrial truck is operating at high place or platform, should not use the industrial truck to move other vehicles. Never open the door of the rail truck using industrial truck; expect for equipped with special device and the driver has passed the train to use the device.

14.2 Applied to the driver

The safety operating of the industrial truck lies on the control manner of the driver ro a considerable degree. The safety rules applied to the drives are as follows:

A） general rule;

B） transporting (lifting and stacking) rule;

C） operating (driving) rule;

D） the rule for the driver maintaining the truck.

Without regard to the rules maybe conduce:

A） the serious danger of damaging the driver or other personnel;

B） Damage the materials.

14.2.1 General rule

Only the personnel who have been trained and get the qualification of operation are permitted to drive the industrial truck.

The motor industrial truck could not carry passengers, except for equipped with the facility for the passengers sitting.

The driver should pay special attention to the operating circumstance, including the person nearby other staves and fixed or moving substances, and it is necessary to watch out for the passerby at any moment.

No matter whether there is load on the lifting part of the truck, it is forbidden anyone passing or standing under the lifting part of the truck.

If the people, building, organization or equipment accident happens, it is necessary to report to the relevant officer at once.

The driver should not change, add or demolish the truck components without the permission to influence the performance of the truck .It is not allowed to install accessorial frame or handle on the steering wheel ,except the factory has installed it.

The driver should use the truck in the using range. When operating high stacking job, convey high and multi-piece piled goods using driving type high-lift truck, it is necessary to use the truck with blind goods shelf and canopy guard shelf.

Exception: if there is no danger of the load fall down on the driver, the truck without blind goods shelf can be used.

When operating high stacking job, convey high and multi-piece piled goods using walking type truck, the blind goods shelf is necessary.

14.2.2 Load carriage (lifting and stacking) rule

14.2.2.1 Load

The industrial truck or the combination of the industrial truck and attachment only can convey the load not over its rated load weight. The capacity of the industrial truck with attachment maybe less than the one marked on the nameplate.

Any measure of enhancing the capacity of the truck is forbidden, for example the adding people or balance weight.

In any conditions, especially when using the attachment, it is necessary to pay attention to the operation, location, fixation and transportation of the load. The truck with attachment when unloaded should be treated as with some capacity.

Only the rank stabilized or safety load can be conveyed, especially when convey the super long or high load, should pay special care.

When convey the load which center of gravity is uncertain, operating the vehicle should special carefully.

14.2.2.2 The loading and unloading of goods.

When loading the goods with forks:

A） The space between the forks should fit the width of the conveying load.

B） The fork should insert into the inner of the load as deep as possible. But pay attention to not make the fork tip touch the substance except the load. Then the fork should lift to the enough height to move the goods.

C） When conveying high and multi-piece piled goods, it is necessary to tilt the mast back ward a little (if can tilt back) to stabilize the load, and should be careful specially.

When unloading the goods, it is necessary to descend carefully. If possible, tilt the mast forward a little (or limited) in order to put ready the load and draw out the fork.

14.2.2.3 Stacking

When stacking, the mast should tilt backward to ensure the stability of the load, approach

the goods pile slowly.

When the truck approach and face to the goods pile, it is necessary to adjust the mast to the vertical location, and lift the load a little higher than the height of the pile. Then running backward the truck or if using reach truck, extended the fork and descend it to unload the goods.

After lifting, start the vehicle, no matter with or without load, it is necessary to operate the brake carefully and placidly.

It is necessary to ensure that the stacking is firm.

After stacking, draw off the fork, and lower the fork to the operating height. After confirm there is no block on the road, drive away the truck.

As for truck can tilt backward, it is necessary to use this function to stabilize the load.

14.2.2.4 Unpiling

The truck approaches the pile slowly, and stopped when the fork tip is 0.3 m far away from the pile.

The space of the fork should adjusted to the width of the conveying load, and should check the weight of the load, to make sure the load is in the lifting weight range of the truck.

It is necessary to lift the fork vertically and insert it to the bottom of the goods.

After lifting, start the truck, no matter the truck with or without load, it is necessary to operate the brake carefully and placidly.

The fork should insert into the bottom of the load as possible. But pay attention to not make the fork tip touch the substance except the load. Then lift the fork to the enough height to move the goods.

Further lift the fork, make the goods away from the pile exactly. If the mast can tilt backward, the fork should tilt back properly to stabilize the load. If it is reach truck, it is necessary to draw back the fork.

After make sure the road is smooth, descend the load from the pile.

The fork should be descended to the operation height and the mast tilt backward mostly. After make sure the road is smooth, drive the truck away placidly.

14.2.3 Running (driving) rule

14.2.3.1 General rule

The driver should drive the truck along the right side of the road, and the driver should see the road clearly and attend other truck, passengers and safety space.

The drivers should abide by all the traffic rules, including the speed limit specified in the factory.

It is necessary to hold a certain space with the front operating truck.

The driver should drive the truck with earnest and responsible attitude at any time. The sudden starting, stopping and turn over at high speed are forbidden. Except for the requirement of the operation conditions, advising the steering wheel should not put on the limiting position when the vehicle is starting. If starting on the limiting position, it is necessary to operate carefully.

The load or the device that bears load must be kept at the operating height when the truck is moving. If possible, the load shall be tilted backward when the vehicle is running. Except for stacking operation, it is not permitted to lift the load. This regulation does not apply to truck specially designed that can move with lifting load.

In operation (or called transport) state, if the load obstruct the driver’s sight, then when the truck running, the load should be located in the back of the truck's moving direction.

Exception: Under some condition (such as stacking and climbing), the load should be located in the front of the truck's moving direction when the truck is moving. At this moment, the driver should drive the truck very carefully. If operating conditions requires, some subsidiary (attached help) facilities or the other person’s lead can be adopted.

In crossroads and the occasion that would obstruct the driver's sight, the driver must reduce the speed of the truck, and issue sound signal.

When the truck is operating with load, the driver must control turning equipment and brake system slowly and stably.

In crossroads and the occasion that would obstruct the driver's sight or some dangerous occasion, the truck must not exceed other truck moving at the same direction.

The driver must avoid the truck rolling over some fluffy object in order to avoid article damages or personnel hurts.

It is forbidden that to put the arms, legs or the head in the columns of mast or between the trucks other moving components.

When the vehicle is running, the driver must not let his body outside the contour line of the truck.

When turning, if there are some other trucks or pedestrians, the driver must issue warning signal.

The driver must comply with all labels about ground load carrying capacity and requirements of other instructive labels.

The driver must pay special attention to the load carrying capability of slopes and channels leading to electric elevator.

14.2.3.2 Vehicle speed

The truck speed should coordinate with the status of person's activity, visibility, road or the ground conditions and load conditions of the running area. When the vehicle is moving on wet and smooth road surface the driver must be very carefully.

Under any situation, the vehicle speed must be controlled within the range that the truck can be stopped safely.

14.2.3.3 Running on the slope

When operating on the slope, the following regulations must be obeyed:

A) Moving up and down a slope slowly.

B) Except for the side loading and no lifted load truck, it may as well make the bearing load device's surface towards the downgrade direction.

C) Turning on the slope and bestride the slope are all forbidden.

D) When the vehicle is near the slope, high platform or platform edge, the driver must drive carefully. The distance between the vehicle and the platform or platform edge must keep at least a truck tire width.

E) When the gradient is more than 10% during the truck's running up and down the slope, if possible, when the lifted load truck and flat stacking truck (except the side bearing load fork-lift truck, cross-country fork-lift truck , stride- truck and platform carrying vehicle) moves, the load surface must be in a upgrade direction.

F) When the truck works on various slopes, the load and the load bearing device must tiltt backward (if possible), and the driver can only elevate the load's height that is enough for running through the road surface and local barrier.

14.2.3.4 Get across a gap

It must be ensured that under hanging devices (such as: lamps, pipeline and fire extinguishing system) there is an enough clearance height.

Before getting across the passage and door, it must be ensured that there is an enough gap among the vehicle, the driver and the load.

14.2.3.5 Working in road truck and railroad vehicle

Before a motor-driven industry truck runs on (or run down) the road vehicle or railroad vehicle, some necessary measures must be taken to prevent road truck and railroad vehicle from moving.

Before a semi- trailer that is not linked with a tractor runs on the road truck or railroad truck,

it must be ensured that the supporting part of the stilt of the semi- trailer is located at the supporting position.

Before a motor-driven industry truck runs on the road vehicle or railroad vehicle, it must be ensured that the floor board can endure all the weight of the industry vehicle, load and the driver. Besides, it is required to check the plank to see if there are crashes, holes or other damages.

When the industry truck works on high place or platform, it is forbidden to move other truck by industry truck. It is also prohibited to close railroad truck's door by industry truck except for one case that the industry truck is equipped with a special device and the driver has also been trained how to use this device.

If possible, the truck should cross over the railway virgule.

14.2.3.6 The truck operating on the gangplank or transition board

Before the motor industrial truck pass the gangplank or transition board, it is necessary to make sure the firm of the board.

The overall weight of the truck should not excess the rated capacity of the gangplank or the transition board.

When passing the gangplank or the transition board, the driver should drive the truck carefully and slowly.

14.2.3.7 The use of the truck in elevator (lifter)

Before the motor industrial vehicle driving into the elevator (lifter), it is necessary to make sure the elevator (lifter) can endure the overall weight of the truck, load and drivers.

Before allow the truck driving in or out of the elevator (lifter), all other personnel should leave away from the elevator (lifter).

After the bridge box floor of the elevator (lifter) is even to the ground, the truck should slowly drive in as the positive direction.

It should be the load go into the elevator (lifter) first not the driver, this is specially adopted to the walking type truck.

After the truck driving into the elevator (lifter), it is necessary to put the control device in the central position, switch off the power, and tighten the brake.

14.2.3.8 Parking

After the driver leaving, the carrying device must lower to the lowest position, put the control device to the central position, switch off the power, and tighten the brake, stay steady the vehicle to prevent accidental move or make bold by others without approval.

When parking the truck, the firefighting passage, access stairs and firefighting passages should keep fluently.

The parking location of the truck should keep a safety distance to the railway.

14.2.4 The vehicle maintaining rule for the drivers

14.2.4.1 General rule

Before starting the truck, it is necessary to inspect the technical condition of the truck. According to the different type of the truck, should pay more attention to some special location: [for example: fuel oil system, alarm system, power system, brake, steering equipment, lighting, wheel and air tire pressure (namely gas filled type) and lifting system (including lifting chain, wire rope, limit switch and hydraulic cylinder).

If the truck is found to be repaired, or during the operation the defect develops, it is necessary to report it to the superior in concern. It is forbidden to repair or adjust the truck by the truck by the driver without permission. The truck which fuel oil system is leaking could not be uses without repair.

14.2.4.2 Refuel

Before refuel, it is necessary to close the engine, brake the truck and the driver should leave the truck.

The open flame and smoking is forbidden during refueling.

14.2.4.2.1 Liquid fuel (for example gasoline and diesel fuel)

The truck using liquid fuel should add fuel in the appointed places.

Before take away the refueling equipment, cover the filler cap and clear up the excessive fuel, the engine could not start up.

14.2.4.2.2 Liquefied petroleum gas fuel (liquefied petroleum gas)

Only the personnel trained and appointed can refuel or change the liquefied petroleum gas container.

The person charging for refuel liquefied petroleum gas should wear protective suit (that is to say long sleeve unit and glove).

The pouring of the fixed type liquefied petroleum gas container and the pouring and change of the liquefied petroleum gas container should be carried on the appointed place.

When transporting or conveying the liquefied petroleum gas container, it is necessary to be careful, the container should not fall down, nor be thrown, rolling or draw. If it is necessary to transport several containers one time, a proper transporting device should be adopted.

The liquefied petroleum gas container should not be filled in excessive.

Before filling the fuel, power off the engine, brake the truck, and the driver leave away the truck.

It is necessary to using soap liquid to check the leak dictation.

The truck driven by liquefied petroleum gas could not park near the heat source, open flame or the similar ignition, and not near to the open air pit, the entrance of the under crossing, the elevator well or other similar place, and could not change the removable container in the upper place.

Before fill fuel into all liquefied petroleum gas container and before the reuse of the removable liquefied petroleum gas container, it is necessary to inspect if there is defect or damage as follows:

A） the dent, scoring and groove of the pressure container;

B） the damage of any kinds of valve and fluid level gage;

C） the scraping in the safety valve;

D） the damage or the loss of the safety bonnet;

E） the leak in the connection of valve or screw-threaded joint;

F） The deterioration, damage or lose of the flexibility seal in the connection of prime or air feed.

If finding the above defect and/or damage, the container should not be used until repaired.

The truck which is driven by liquefied petroleum gas is over night or stay indoor for a long time and the liquefied petroleum gas container stayed on the truck, it is necessary to close all of the feed valves on the container.

14.2.4.3 The charging and changing of the battery

The charging and changing of all the battery should be carried out by the personnel who has been trained and appointed staves and proceed as the description of the user's manual of the battery or truck factory. As usual the driver can be appointed.

Before charging or changing battery, the truck should be located correctly and brake.

When charging, the exhaust cap should be in the correct position to prevent the electrolyte spilling out, and make sure that the wind hole is in effect. Open the cover of the battery (or separate room) to exhaust the gas and thermal.

In the battery charging area, should adopt measures to prevent open flame, spark or electric arc. Smoking is forbidden.

The tools and other metal substance should put far away from the top of the battery without

cover.

The top of the battery should keep dry; the connection terminal should keep clean, wipe a little Vaseline and screw down correctly.

Without approval, the battery of different voltage, weight or size could not replace the former one in the vehicle.

When reinstalling the battery, the battery should be put on the correct place.

Inspecting the liquid surface in the battery using open fire is forbidden.

When getting the solvent in the acid carboy, the acid carboy tilting device or siphon pipe could be used. When diluting oil of vitriol confect the electrolyte, only adding the oil of vitriol into water is permitted, not add water into oil of vitriol.

15 Maintenance

15.1 General description

Good performance of the motor industrial truck depends upon maintenance. Truck may damage personal health and properties in case of maintenance neglect.

15.2 Maintenance items

The following items shall be carried on for all motor industrial vehicles shall be in accordance with schedule, especially with maintenance instructions supplied by the manufacture.

Only professional and qualified maintenance personnel are allowed to go along with the inspection, maintenance, modification and repair.

15.2.1 Brake set, steering mechanism, control mechanism, alarming device, lighting, adjustor, and overload protection device for lifting shall be kept within safe operation condition.

15.2.2 Regular inspection shall be taken for components and members of lifting and inclination systems, which shall be kept within safe operation condition.

15.2.3 Regular inspection shall be taken for safety protection shelf and safety devices, which shall be kept within safe operation condition.

15.2.4 Regular inspection and maintenance shall be taken for all the hydraulic systems.

Inspection must be taken for oil cylinder, valve, and other similar components to ensure that internal leakage or external leakage would not develop into a dangerous condition.

15.2.5 Inspection and maintenance shall be taken for storage battery, driving motor, contactor and controller, limit switch, protection device, lead wire and connecting assembly, which shall be kept within safe operation condition. Special attention shall be paid to electrical insulation state.

15.2.6 Inspection for damage and leakage must be taken for exhaust gas system of internal combustion truck, adjustor of carburetor, evaporator, and fuel injection pump.

Notice: hazardous substances may be produced by the internal combustion engine in case of operation under close place. Sufficient ventilation is recommended in that condition.

15.2.7 Check damaged condition of wheel tread, side face and wheel rim of the air-filled type pneumatic tire. Pressure of the tire that is specified by the manufacture must be kept. Gas in the tire shall be firstly released before dismantling the air-filled type pneumatic tire from separable rim.

15.2.8 Check the bonded condition between solid tire and metal wheel band or wheel rim. Foreign matters on wheel tread of the tire shall be cleared if necessary.

15.2.9 Make sure that all the nameplates, indicator boards and labels (pattern) are clear and legible.

15.2.10 Inspection shall be taken for fuel oil system and auxiliary fittings to see if there is any leakage. Soap bath shall be used for leakage inspection of liquefied petroleum gas system. truck must leave the working site in case of any leakage in fuel oil system. And the truck cannot be put into operation until all the leakages have been repaired.

Inspection must be taken before reuse of all the dismountable liquefied petroleum gas containers or filling fuel into all the liquefied petroleum gas containers, to see whether there is the following defective or damage:

A） Dent, scuffing, flute;

B） Damage of various valves or lever meters;

C） Scraps in emergency valve;

D） Damage or loss of emergency valve bonnet;

E） Leakage at connection of valve and thread;

F） Deterioration, damage, or loss of flexible seal at connections of gas filling or gas supply.

In case of occurrence of any defective or damage as above mentioned, no container would be allowed to be used before repair.

15.2.11 neither modification in design nor addition to the truck shall be taken without permission of the manufacture for sake of weakening performance or operation security of the truck. Nameplate and instruction manual shall be revised accordingly in that condition.

15.2.12 Special purpose truck or equipment that is designed for dangerous condition, or is permitted to be used under dangerous condition, shall be paid special attention to, thus ensure the original safe operation performance of the truck.

15.2.13 all the components that are used for replacement must be of the same model, or at least of the same quality with the original part.

15.2.14 Industrial truck must be kept clean for sake of fire. Find loose or defective part in time. Keep clean for lifting device, carrying device, wheel tread, foot pedal, and floor of the truck. No grease, oil stain, or other dirty substances shall be kept.

15.3 Inspection

15.3.1 If any potential defective, abrasion, or damage is found in the vehicle after inspection, which would threaten safe performance, effective measure shall be taken. Truck cannot be put into operation before repair.

15.3.2 Protective maintenance, lubrication and inspection shall be taken in accordance with schedule for the truck. Data that are in demand of record shall be carefully kept.

EDS30-40ACX

Electric Dock Stocker

PARTS MANUAL

Foreword

1. Usage

The repair parts listed in this manual is for the CPD20SRE-16 /18 type truck, including electrical, drive, steering, truck frame, accessory and optional parts.

2. Truck identification

A truck plate fixed on the significant position of the truck, display a product model in the nameplate, serial number and date of manufacture of the truck, this is the identification information of the truck.

3. How to order parts

When you want to order parts, your order must specify the type of vehicle, number of trucks, serial number, part number parts and required components name, if you have any questions on the material number of related parts, please inform your dealer, and the project required to do a complete supplement.

4. How to use this manual

This parts manual includes the all parts of the truck or assembly drawings, these drawings include standard parts and accessories.

The part number and parts name were marked in each figure, and provides additional information.

Each BOM. Drawing represents a component, the list of parts is the repair parts.

5. Unnoticed revision of truck

Continuing improvement and advancement of product design may cause changes to your machine.

6. The meaning of comment symbol in the parts manual

O.D external diameter	I.D internal diameter
C represents a change	Y decomposition of graph
Z Not provided separately	X exchange of the main parts
F not shown	

Configuration of product

Product Model： EDS30-40ACX

Traction motor 2X4.5KW/36V（AC）

Controller

Drive controller: 2XCURTIS 1234E-5321

Pump controller： CURTIS 1234E-5321

Battery

800Ah/36V

Brake

Solenoid brake： 32Nm/(40W/36V)

Wheel

Dimension of drive wheel： 16X7X10 1/2 Solid rubber tire

Dimension of load wheel： 10X5X6 1/2 Solid rubber tire

Hydraulic

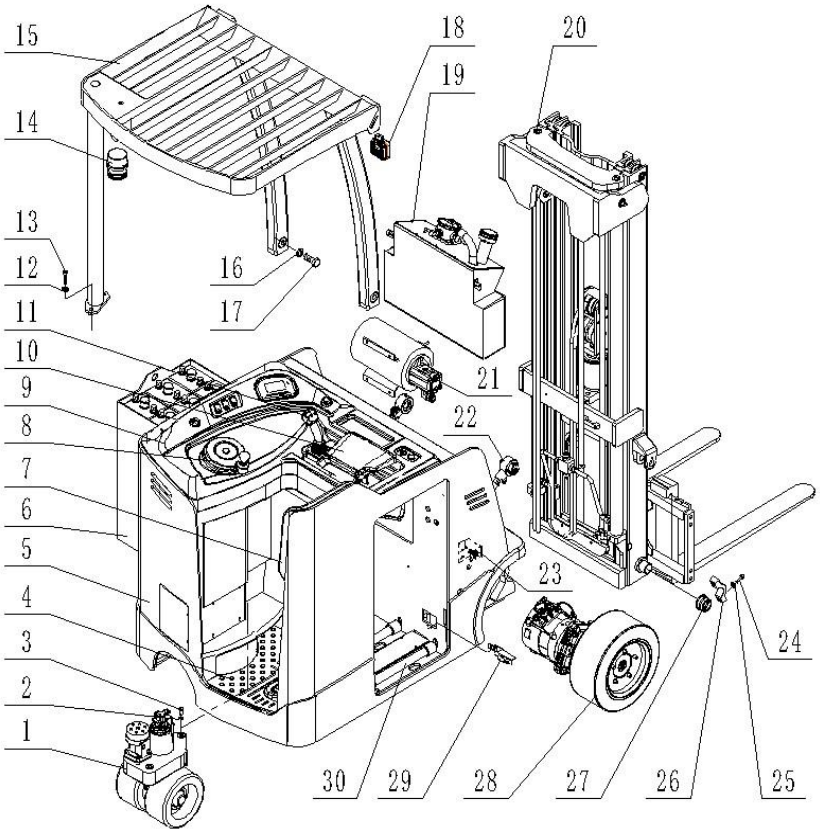
Pump motor： 10KW/36V

Pump 12CC

List of wearing parts

Index	Content	Parts name	Parts ERP No.	No.	Remarks
	0.071	Dust ring	0902040020	LBH 32	
	0.071	Shaft seal	0902030177	RU3000320-Z20	
	0.071	Seals	0902030178	CKS-0320	
	0.071	Hole seal	0902030179	OSI 63	
	0.071	O-ring 38×3.5	0902050073	GB1235-76	
	0.071	Support ring	31060501027	D63x16x2.5	
	2.00	Washer 12	0902010005	JB 982-1977	
	2.00	Washer 14	0902010006	JB 982-1977	
	2.00	Washer 16	0902010007	JB 982-1977	
	2.00	Washer 22	0902010010	JB 982-1977	
	1.01	Fuse.20A	060811046		
	1.03	Fuse.400A	060710037		
	1.03	Fuse.250A	060805038		

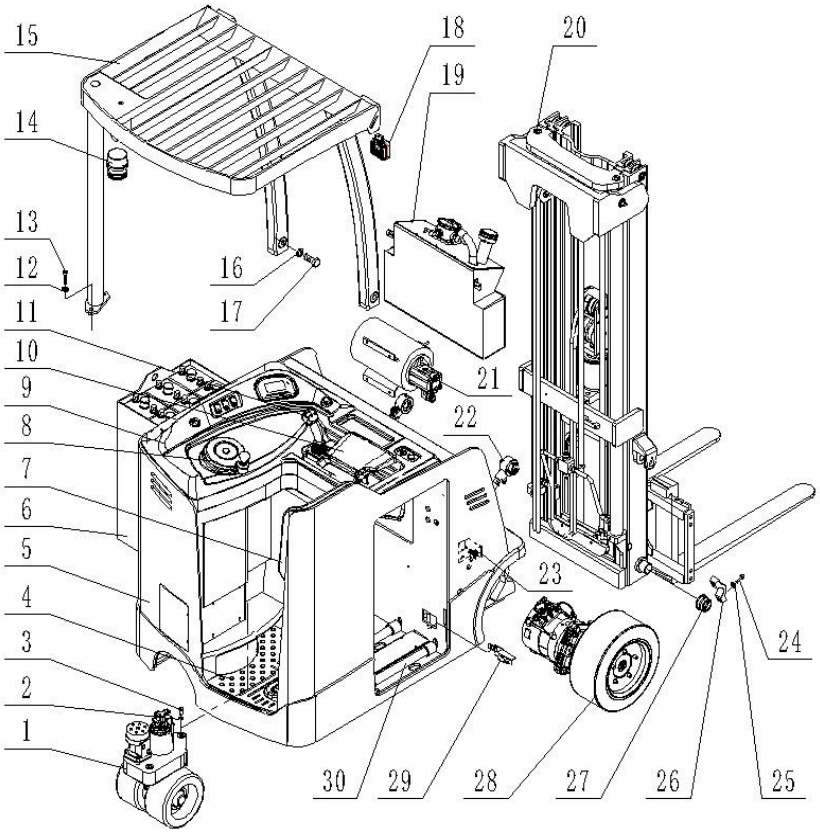
Final Assembly



Index 0.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.2-00	Steering wheel assembly	1	Refer to 4.00	Y
2	GB/T 93	Washer 16	3		
3	GB/T 5780-2000	Screw M16x65	3		
4	CPD20SR-16.14-00	Pedal assembly	1	Refer to 0.01	Y
5	CPD20SR-16.1-00	Frame welding	1		
6	CPD20SR-16.24-00	Electric system	1	Refer to 1.00	Y
7	CPD20SR-16.13-00	Back cushion	1	Refer to 0.02	Y
8	CPD20SR-16.16-00	Steering mechanism	1	Refer to 0.03	Y
9		Hood	1	Refer to 5.00	Y
10	CPD20SR-16.15-00	Arm cushion assembly	1	Refer to 0.04	Y
11	CPD20SR-16.17-00	Control handle assembly	1	Refer to 0.05	Y
12	GB/T 93-1987	Washer 16	2		
13	GB/T 70.1-2008	Screw M16x35	2		
14		Warning light	1		
15	CPD20SR-16.8-00	Overhead guard	1		
16	GB/T 93-1987	Washer 20	2		
17	GB/T 5783-2000	Screw M20x60	2		
18		Headlight	2		
19	CPD20SR-16.11-00	Hydraulic system	1	Refer to 2.00	Y
20	CPD20SR-16.3A-00	Mast assembly	1	Refer to 6.00	Y
21	CPD20SR-16.9-00	Pump motor	1	Refer to 0.06	Y
22	CPD20SR-16.6-00	Tilt oil cylinder assembly	2	Refer to 0.07	Y
23	CPD20SR-16.12-00	Potentiometer	1	Refer to 0.08	Y

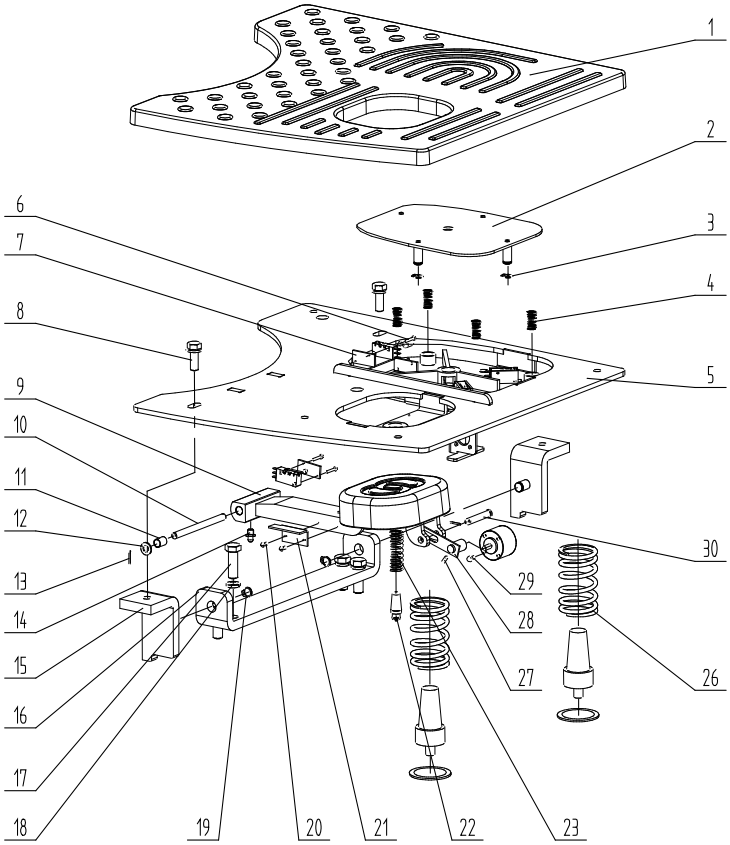
Final Assembly



Index 0.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	GB/T 70.1-2008	Screw M16x60	4		
25	GB/T93-1987	Washer 16	4		
26	CPD20SR-16.1-45	Hoop	2		
27	RY20S.1-01	Shaft sleeve	2		
28	CPD20SR-16.23-00	Motor assembly (left/right)	2	Refer to 3.00	Y
29	CPD20SR-16.5-00	Side door switch(left/right)	2	Refer to 0.09	Y
30	CPD20SR-16.7-00	Roller	4	Refer to 0.10	Y

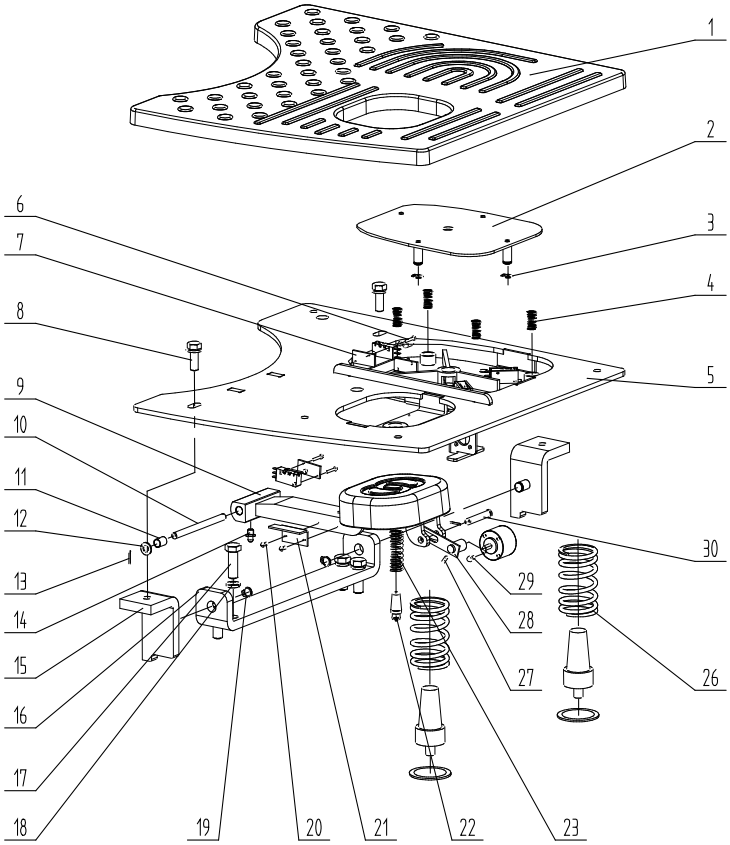
Pedal Assembly



Index 0.01 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.14.01-01	Pad	1		
2	CPD20SR-16.14.01.04-00	Pedal	1		
3	GB/T 894.1-1986	Circlip for shaft 11	4		
4	CPD20SR-16.14.01-09	Spring II	4		
5	CPD20SR-16.14.01.01-00	Pedal frame assembly	1		
6	GB70.1-2000	Screw M3x20	8		
7	CPD20SR-16.14.01-03	Lining plate	4		
8	GB5789-2000	Screw M10x25	2		
9	CPD20SR-16.14.01.02-00	Brake pedal	1		
10	CPD20SR-16.14.01-02	Pin I	1		
11		Bush φ8x10	2		
12	GB95-2000	Washer 8	2		
13	GB91-2000	Pin φ2x12	3		
14	GB7940.1-95	Oil cup M6	1		
15	CPD20SR-16.14.02-00	Swing frame	2		
16	CPD20SR-16.14-03	Fixed frame	1		
17	GB5783-2000	Screw M12x35	4		
18	GB93-2000	Check ring 12	4		
19	GB/T 894.1-1986	Circlip for shaft 12	2		
20	GB/T 70.2-2000	Screw M4x10	2		
21	CPD20SR-16.14.01-04	Limit plate	1		
22	CPD20SR-16.14.01-08	Brake limit	1		
23	CPD20SR-16.14.01-07	Spring I	1		

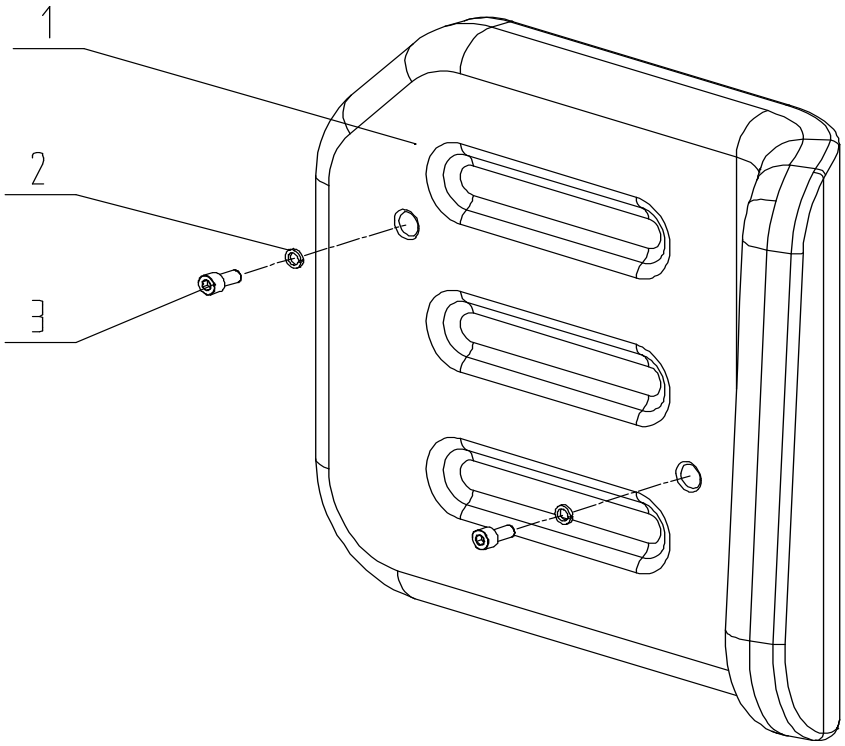
Pedal Assembly



Index 0.01 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	CPD20SR-16.14-04	Washer	2		
25	CPD20SR-16.14-02	Anti-vibration pad	2		
26	CPD20SR-16.14-01	Spring	2		
27	GB77	Screw M5x10	1		
28	CPD20SR-16.14.01.03-00	Swing arm	1		
29	GB70.1-2000	Screw M4x10	4		
30	CPD20SR-16.14.01-06	Pin II	1		

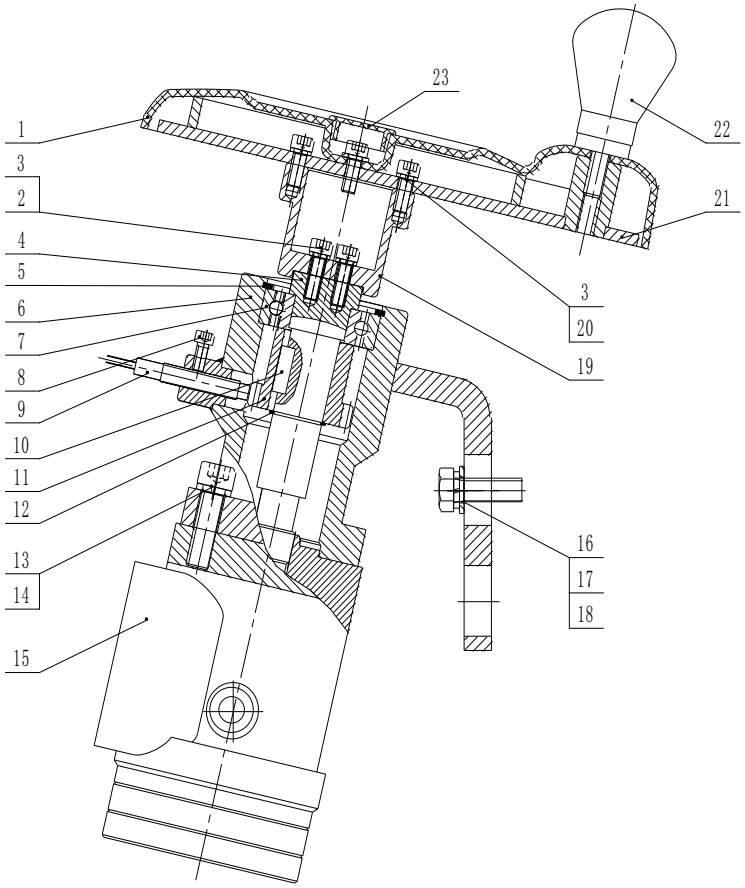
Back Cushion Assembly



Index 0.02 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.13-00	Pad	1		
2	CPD20SR-16.13-01	Lining plate	1		
3	GB/T 70.1-2000	Screw M8X16	2		

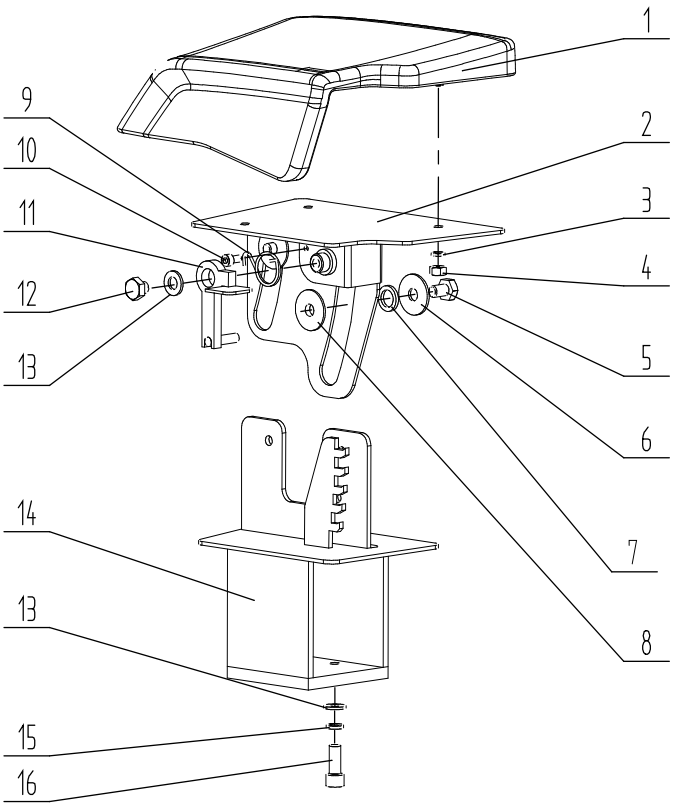
Steering Mechanism



Index 0.03 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SRE-16.16-01	Cover	1		
2	GB/T 70.1	ScrewM6%x20	2		
3	GB/T 93-1987	Washer 6	2		
4	CPD20SR-16.16-01	Shaft	1		
5	GB/T893.1-1986	Circlip for hole52	1		
6	CPD20SR-16.16.1-00	Seat	1		
7	GB276-94	Bearing 6205	1		
8	GB/T 70.1-2008	Screw M5%x12	1		
9	LJ8A3-2-Z/BX	Proximity switch	1		
10	GB/T1096-1979	Flat key6%x20	1		
11	CPD20SR-16.16-02	Induction gear	1		
12	GB/T894.1-1986	Circlip for shaft22	1		
13	GB/T 93-1987	Washer 10	4		
14	GB/T 70.1-2008	ScrewM10%x35	4		
15	BPBS5T-63-F12-Y-P/C	Steering gear	1		
16	GB/T 95-2002	Washer 10	1		
17	GB/T 93-1987	Washer 10	4		
18	GB/T 5781-2000	Screw M10%x30	4		
19	CPD20SRE-16.16-02	Sleeve	4		
20	GB/T 70.1-2008	Screw M6%x16	1		
21	CPD20SRE-16.16.01-00	Seat	1		
22	CBD25Z.04-02B	Handle	1		
23	CDD10B-09A	End cap	1		

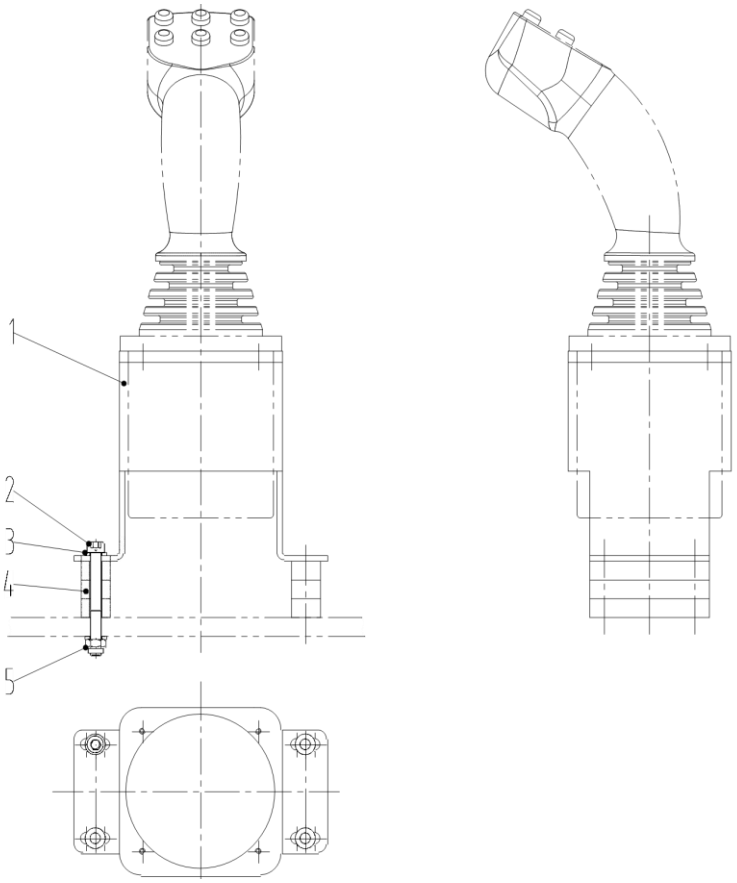
Arm Cushion Assembly



Index 0.04 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.15.01-00	Arm cushion	1		
2	CPD20SR-16.15.03-00	Support	1		
3	GB93-2000	Washer 8	3		
4	GB6170-2000	Nut M8	3		
5	GB5783-2000	Screw M10x16	3		
6	GB96.2-2000	大Washer 10	3		
7	CPD20SR-16.15-04	Pad	3		
8	CPD20SR-16.15-03	Pad	3		
9	CPD20SR-16.15-01	Spring	1		
10	GB70.1-2000	Screw M6x12	1		
11	CPD20SR-16.15.02-00	Limit plate	1		
12	CPD20SR-16.15-02	Screw M10	1		
13	GB95-2000	Washer 10	3		
14	CPD20SR-16.15.03-00	Support	1		
15	GB93-2000	Washer 10	3		
16	GB5783-2000	Screw M10x30	3		

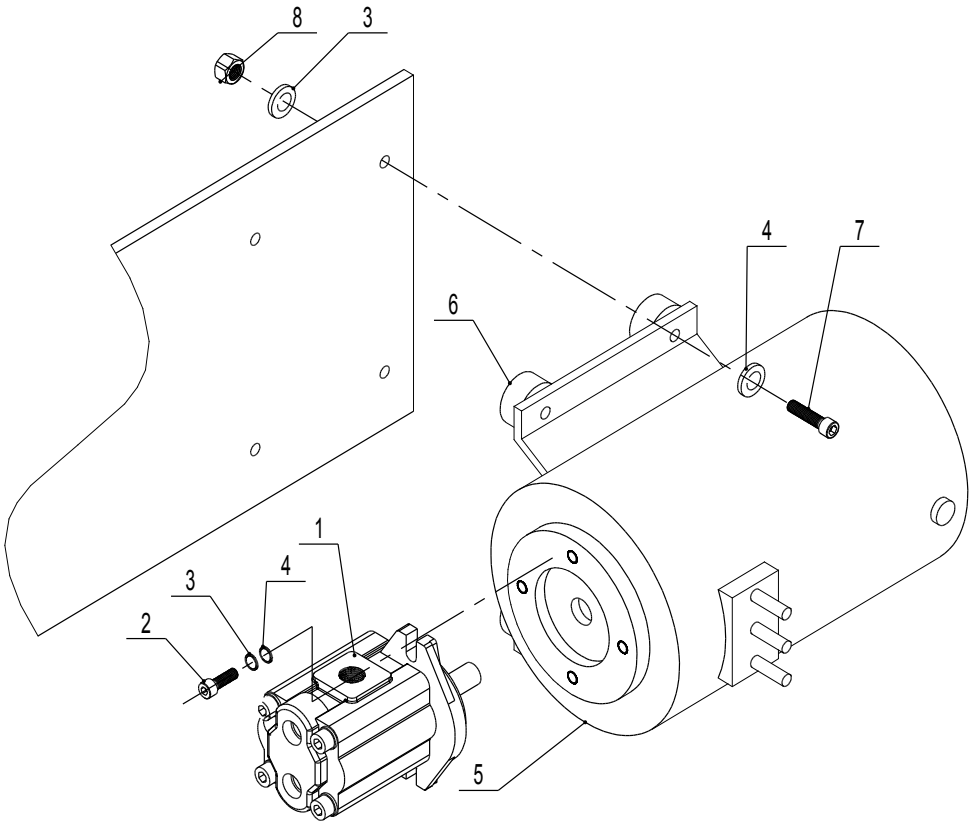
Control Handle Assembly



Index 0.05 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.17.1-00	Handle seat	1		
2	CPD20SR-16.17-01	Sleeve	1		
3	GB/T 70.1-2008	Screw M6x35	1		
4	GB/T 889.1-2000	Nut M6	1		
5	GB/T 70.1-2008	Screw M8x30	2		
6	GB/T 95-2002	Washer 8	2		
7	GB/T 889.1-2000	Nut M8	2		
8	GB/T 818-2000	Screw M5x15	1		
9	GB/T 95-2002	Washer 5	1		
10	GB/T 93-87	Washer 5	1		
11	YJ01	Control handle	1		

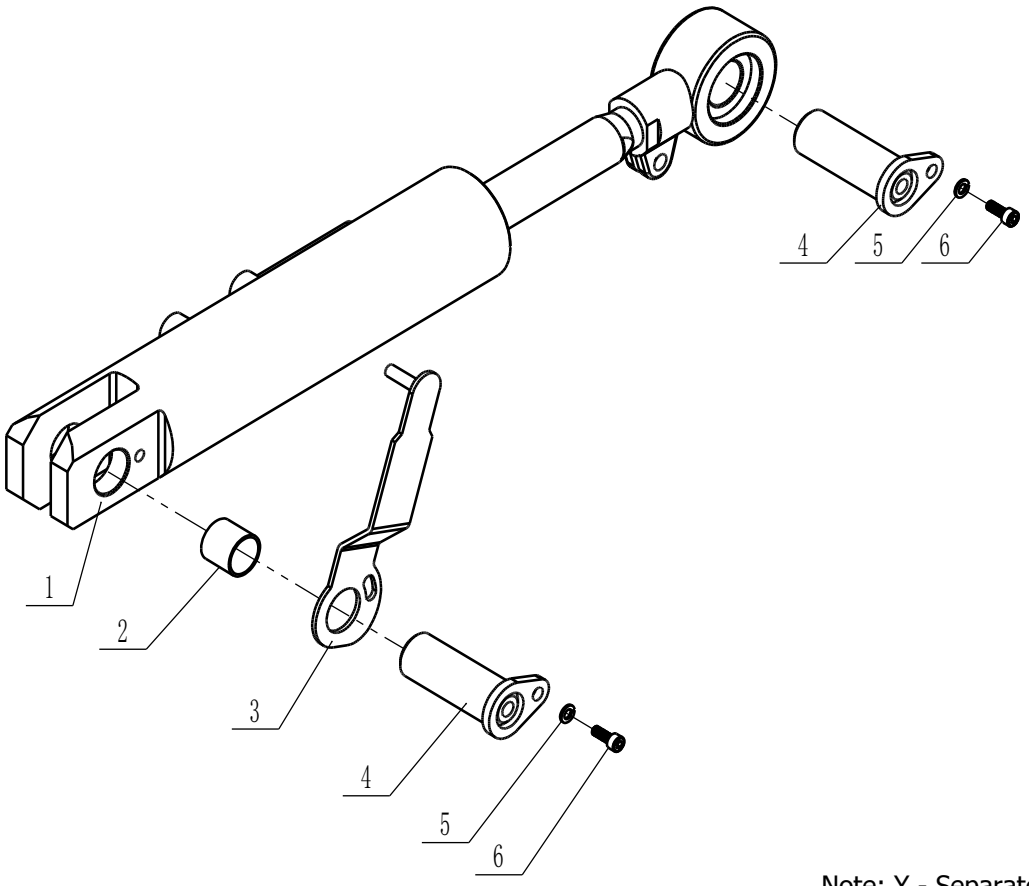
Pump Motor



Index 0.06 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	DSG05C12F2H9-R	Pump	1		
2	GB/T 70.1-2000	Screw M10*30	2		
3	GB/T 93-1987	Washer 10	6		
4	GB/T 95-2002	Washer10	6		
5	XYQD-10-5H	Pump motor	1		
6	φ42X 20Xφ11	Rubber pad	4		
7	GB/T 70.1-2000	Screw M10*40	4		
8	GB/T 41-2000	Nut10	4		

Til Oil Cylinder Assembly

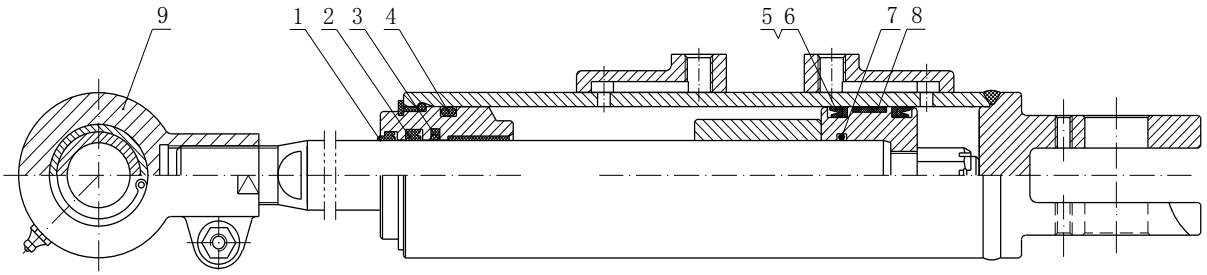


Index 0.07

Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.6-00	Tilt oil cylinder	1	Refer to 0.071	Y
2	3020	Bush	1		
3	CPD20SR-16.12.3-00	Swing arm	1		
4	CPD20SR-16.21-00	L-pin	2		
5	GB/T 93-1987	Washer 8	2		
6	GB/T 70.1-2008	Screw M8x20	2		

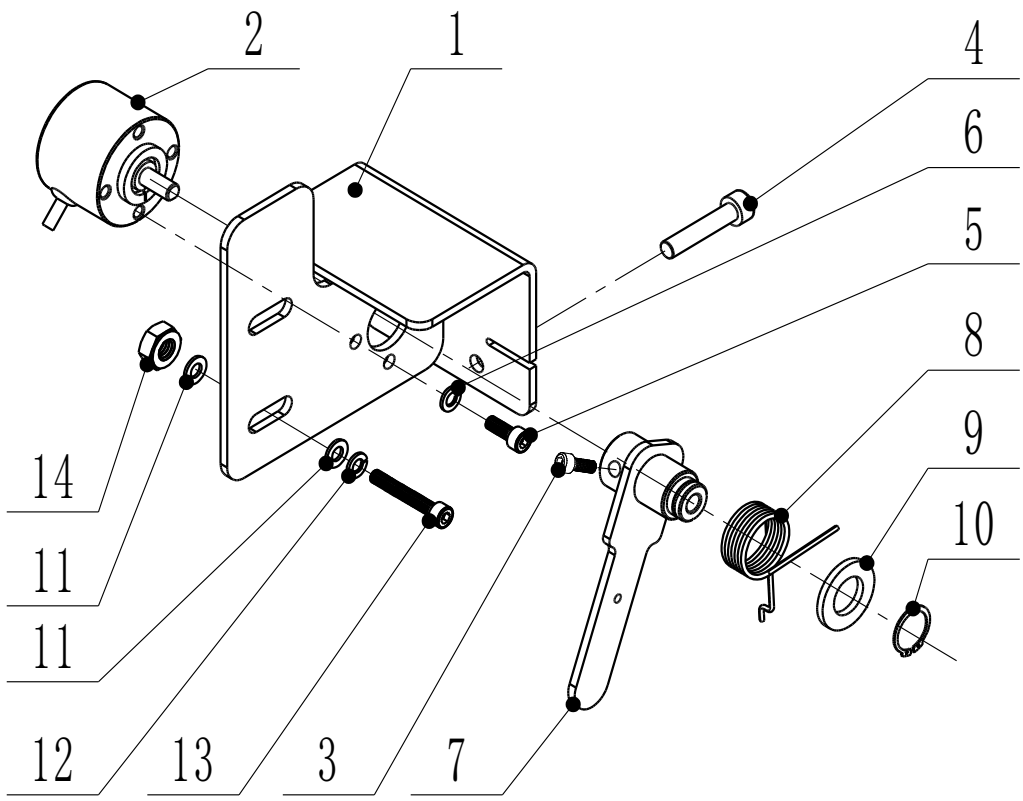
Til Oil Cylinder Assembly



Index 0.071 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	LBH 32	Dust ring	1		
2	RU3000320-Z20	Shaft seal	1		
3	CKS-0320	Seals	1		
4	GB1235-76	O-ring 63x5.7	1		
5	OSI 63	Hole seal	1		
6	D63×φ53×2.5	Check ring	2		
7	GB1235-76	O-ring 38×3.5	1		
8	D63x16x2.5	Support ring	1		
9	D04F 1.9A-5	Ring	1		

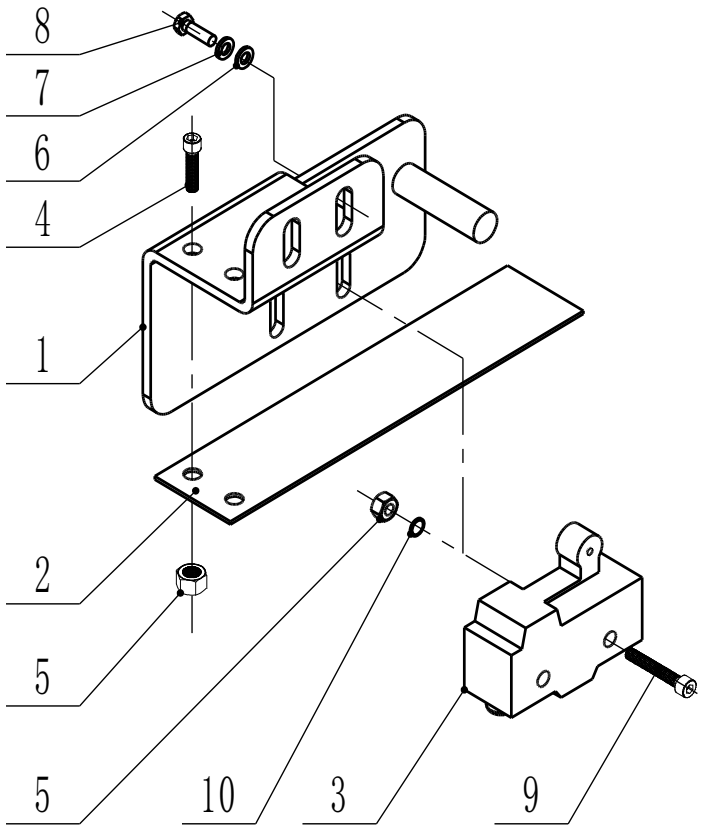
Potentiometer Assembly



Index 0.08 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.12.1-00	Potentiometer seat	1		
2	AM38EV004	Potentiometer	1		
3	GB/T 70.1-2000	Screw M5x16	1		
4	GB/T 70.1-2000	Screw M6x30	1		
5	GB 93-87	Washer 4	4		
6	GB/T 70.1-2000	Screw M4x12	4		
7	CPD20SR-16.12.2-00	Swing arm	1		
8	CPD20SR-16.12-01	Spring	1		
9	CPD20SR-16.12-02	Washer	1		
10	GB 894.1-86	Circlip for shaft13	1		
11	GB/T 95-2002	Washer 6	2		
12	GB/T 93-1987	Washer 6	2		
13	GB/T 70.1-2008	Screw M6x40	2		
14	GB/T 889.1-2000	Nut M6	2		

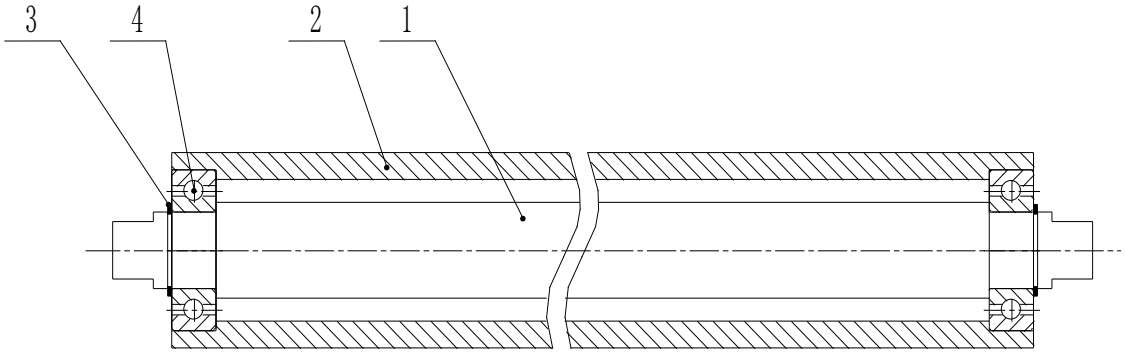
Side Door Switch Assembly (left/right)



Index 0.09 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.5-01	Baseplate	1		
2	CPD20SR-16.5-02	Washer	1		
3	TM1704	Microswitch	1		
4	GB/T 70.1-2008	Screw M4x10	2		
5	GB/T 889.1-2000	Nut M4	4		
6	GB/T 95-2002	Washer 6	2		
7	GB/T 93-1987	Washer 6	2		
8	GB/T 70.1-2008	Screw M6x16	2		
9	GB/T 70.1-2008	Screw M4x30	2		
10	GB/T 95-2002	Washer 4	2		

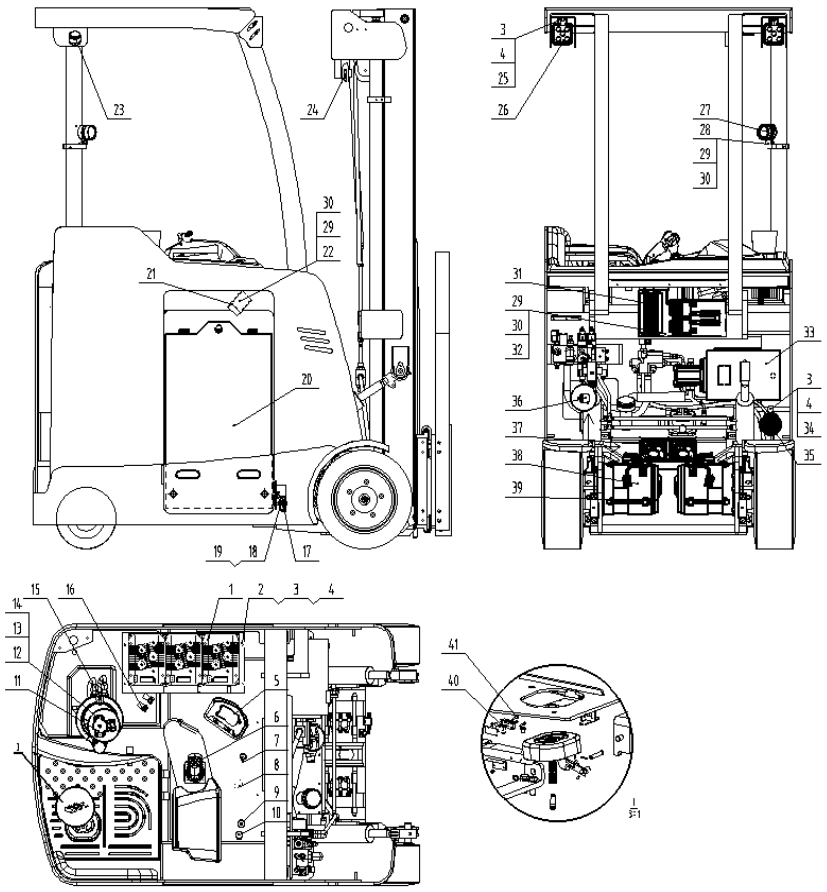
Roller Assembly



Index 0.10 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.7-01	Shaft	1		
2	CPD20SR-16.7-02	Roller	2		
3	GB 894.1-86	Circlip for shaft 20	2		
4	GB/T 276-1994	Bearing 6004	2		

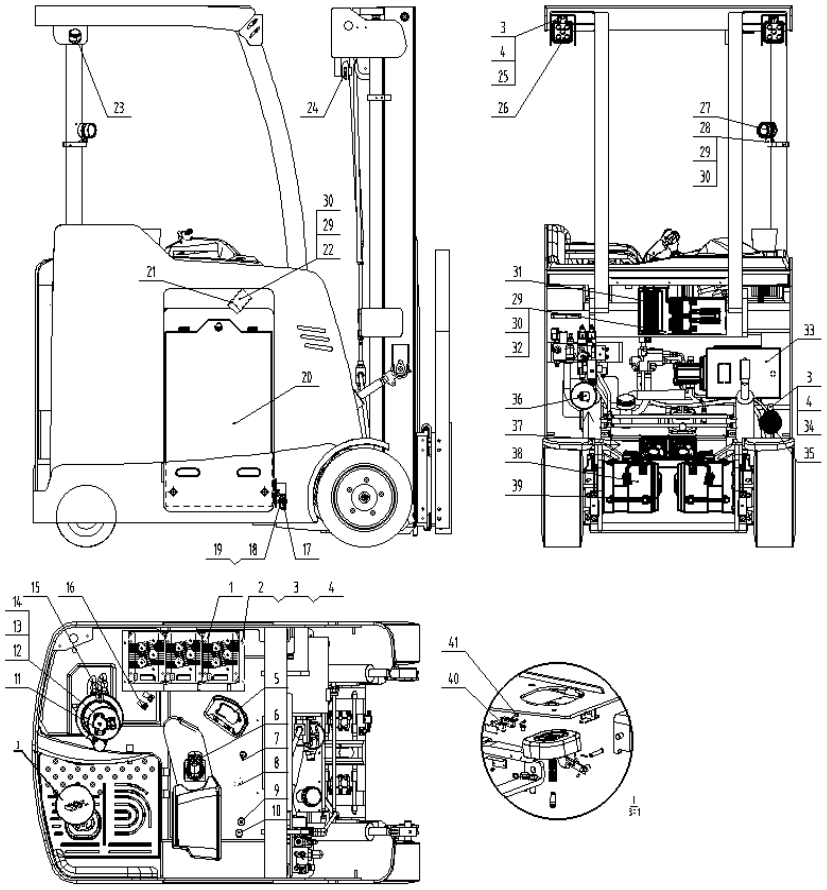
Electric System



Index 1.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	5206010023	Controller assembly	1		
2	908240048	Screw M8x25	4		
3	908370011	Washer 8	7		
4	908350013	Washer 8	7		
5	60701069	Instrument enGage IV 5089	1		
6	60704245	Control handle	1		
7	60908028	Key switch JK421	1		
8	60907025	Emergency stop switch	1		
9	60710272	USB interface	1		
10	60710231	Cigarette lighter	1		
11	60801004	Steering potentiometer	1		
12	908370003	Washer 4	2		
13	908350008	E	2		
14	908420008	Screw M4x35	2		
15	541157	Proximity switch	1		
16	60902043	Headlight switch	1		
17	60901026	Microswitch	2		
18	908280029	Screw M4X30	4		
19	908010002	Nut4	4		
20	605607	Battery	1		
21	60809072	Connector 350A (grey)	1		
22	908240031	Screw M6x40	2		
23	61101029	Strobe light LTD152/12V	1		

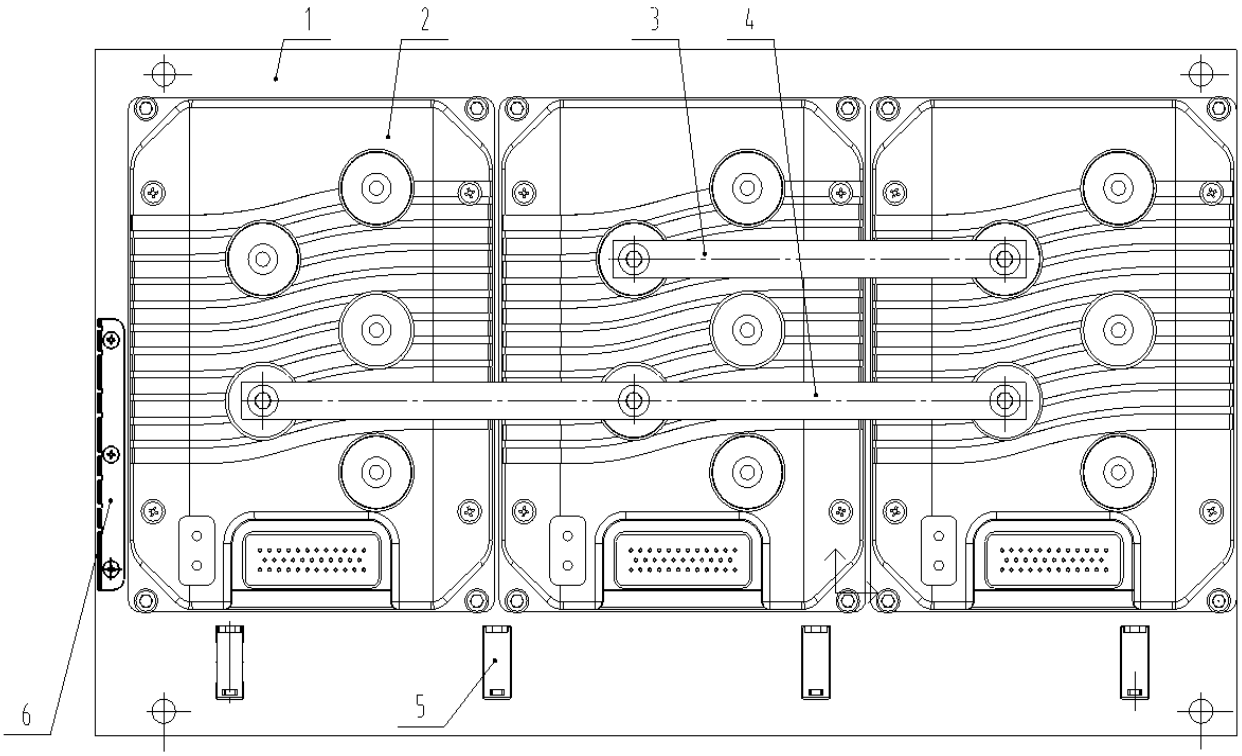
Electric System



Index 1.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	60707066	Proximity switch	1		
25	908420027	Screw M8x16	2		
26	61101112	LED headlight	1		
27		Reading light	1		
28	908240019	Screw M6x12	1		
29	908370007	Washer Φ6	5		
30	908350011	Washer Φ6	5		
31	5204010001	Contactor assembly	1		
32	908240022	Screw M6x16	4		
33	603450	Motor (pump)	1		
34	908240042	Screw M8x12	1		
35	60810031	Horn 12V	1		
36	60707075	Potentiometer 45 degree	1	AM38-V05-45T	
37	603154	Axial fan12V	1		
38	603447	Travel motor	1		
39	60706106	Electric brake	2		
40	60901032	Microswitch	2		
41	908080008	Screw M3x30	2		

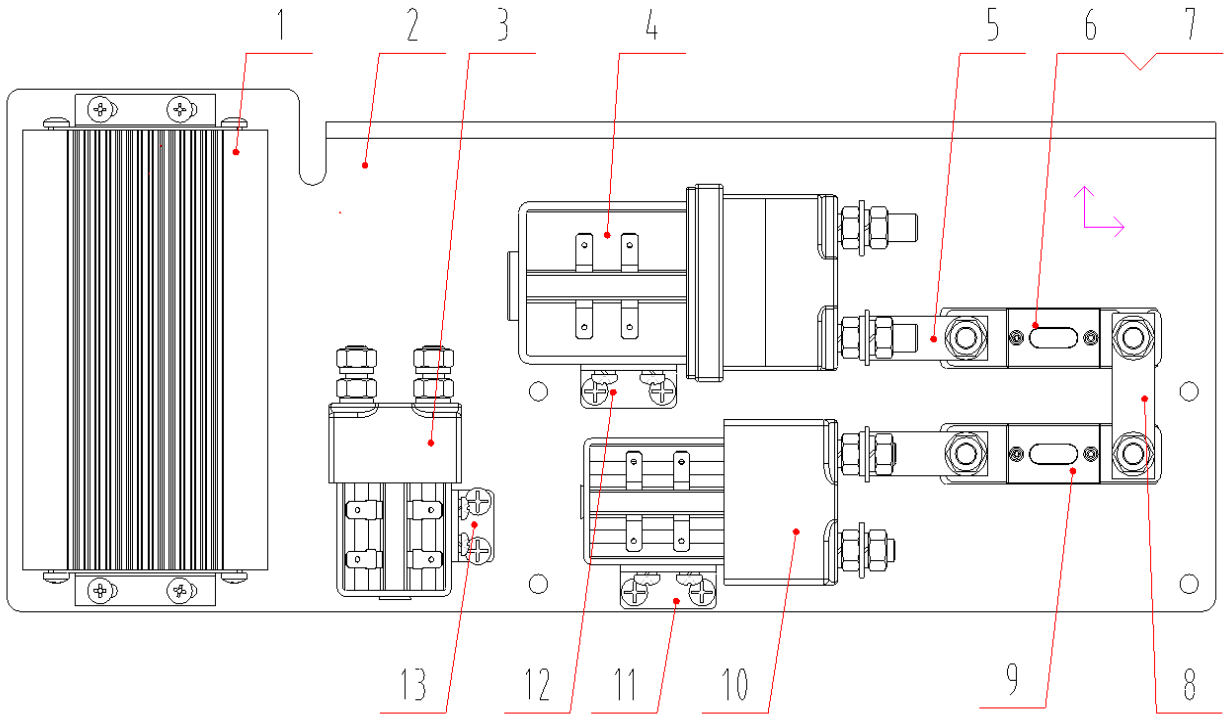
Controller Assembly



Index 1.02 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR.00.01.01.DQ	Fixed plate	1		
2		Controller CURTIS 1234E-5321 (350A/36-48V)	1		
3	CPD20SR.00.01.02.DQ	Connecting strap 1	1		
4	CPD20SR.00.01.03.DQ	Connecting strap 2	1		
5		Line card	1		
6	ZK.02.00	Socket5	1		

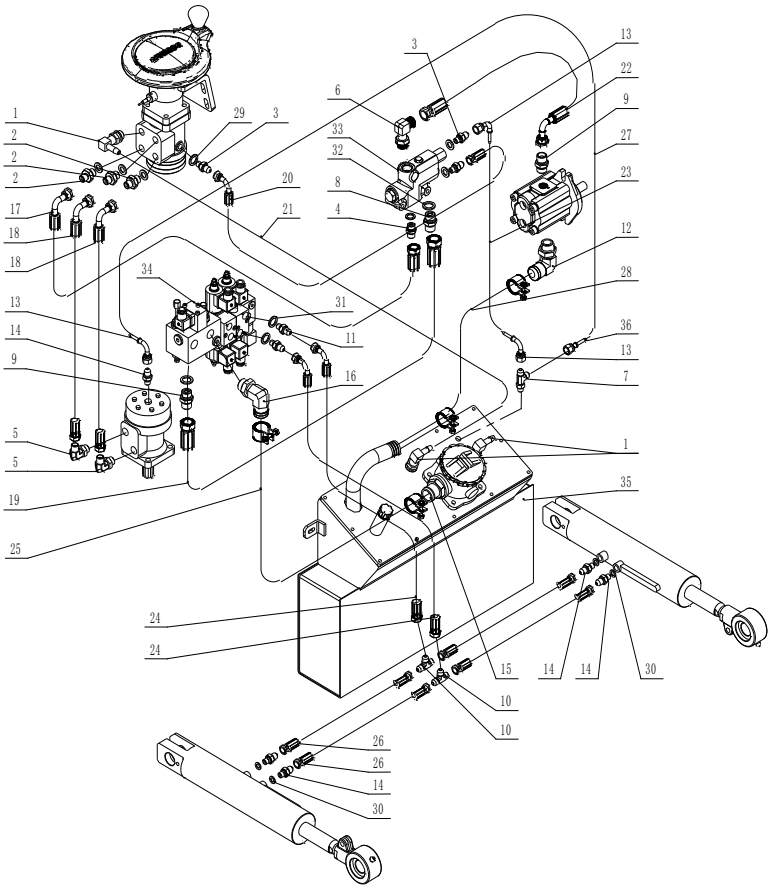
DC Contactor Assembly



Index 1.03 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1		DC-DCconverter.DC36V-12V/250W	1		
2	CPD20SR.00.02.01-DQ	Dc baseplate	1		
3		Contactor.SW80-6	1		
4		Contactor.ALBRIGHT SW200-997/24V	1		
5	60710302	Connecting strap4	2		
6		Fuse.400A	1		
7		Support	2		
8	CPD20SR.00.02.06DQ	Connecting strap5	1		
9		Fuse.250A	1		
10		Contactor.ALBRIGHT SW180-838/24V	1		
11		CPD20SR180 Fixed plate	1		
12		CPD20SR200 Fixed plate	1		
13		CPD20SR80 Fixed plate	1		

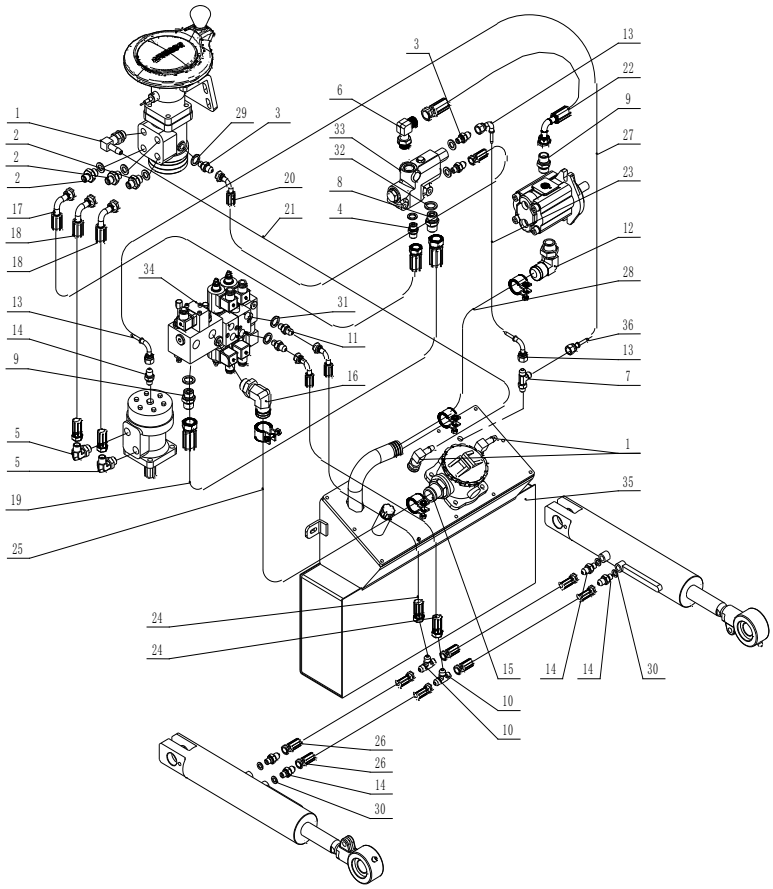
Hydraulic System



Index 2.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	1577610000A	Joint	3		
2	1577600010	Joint 16X1.5/20X1.5	3		
3	1QL-14-12	Joint	3		
4	CPD10S.8-03	Joint 16X1.5/18X1.5	3		
5	CPD20SR-16.11-01	Joint	3		
6	1577607000a	Joint M22*1.5/M22*1.5-60%d/90%d	3		
7	AQQH-14-14-12OG	Joint	2		
8	303760002b	Joint 22-22	2		
9	3037600002	Joint 1/2-22	1		
10	AQ-14	Joint	1		
11	1QB-16-06	Joint	1		
12	2087602100Ha	Joint	3		
13	20791-14-04	Joint	2		
14	1QL-14	Joint	2		
15	CQD20X.3-15	Joint	1		
16	CPD20SR-16.11-02	Joint	3		
17	15047600002	Oil pipe/2800	5		
18	CPD20SR-16.11-04	Oil pipe	1		
19	15077600001	Oil pipe/650	1		
20	CPD20SR-16.11-05	Oil pipe	1		
21	CPD20SR-16.11-06	Hose10%x2500	2		
22	15077600006	Oil pipe/430	1		
23	CPD20SR-16.11-07	Hose8%x300	1		

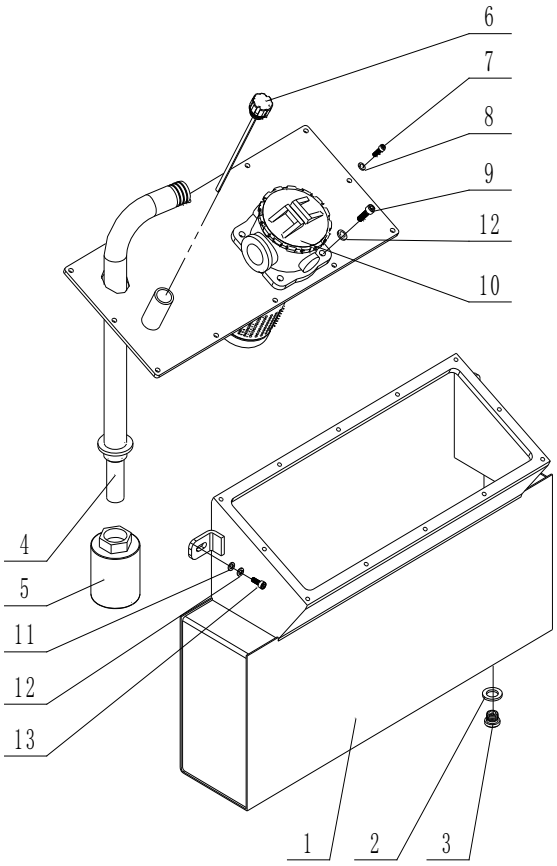
Hydraulic System



Index 2.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	CPD20SR-16.11-11	Oil pipe/550	1		
25	CPD20SR-16.11-08	Hose20	1		
26	CPD20SR-16.11-12	Oil pipe260	1		
27	CPD20SR-16.11-09	Hose8%x2000	2		
28	CPD20SR-16.11-10	Hose32	1		
29	JB 982-1977	Washer 12	4		
30	JB 982-1977	Washer 14	1		
31	JB 982-1977	Washer 16	1		
32	JB 982-1977	Washer 22	3		
33	DYXL-F80L-12N7-A	DYXL priority valve	5		
34	SK7758-RY-3CN	Solenoid valve	3	Option I	
	SK7758-RY-CN(2-28)	Solenoid valve	2		
35	CPD20SR-16.10-00	Oil tank	1	Refer to 2.01	Y
36	20711-14-04	HoseJoint	1		

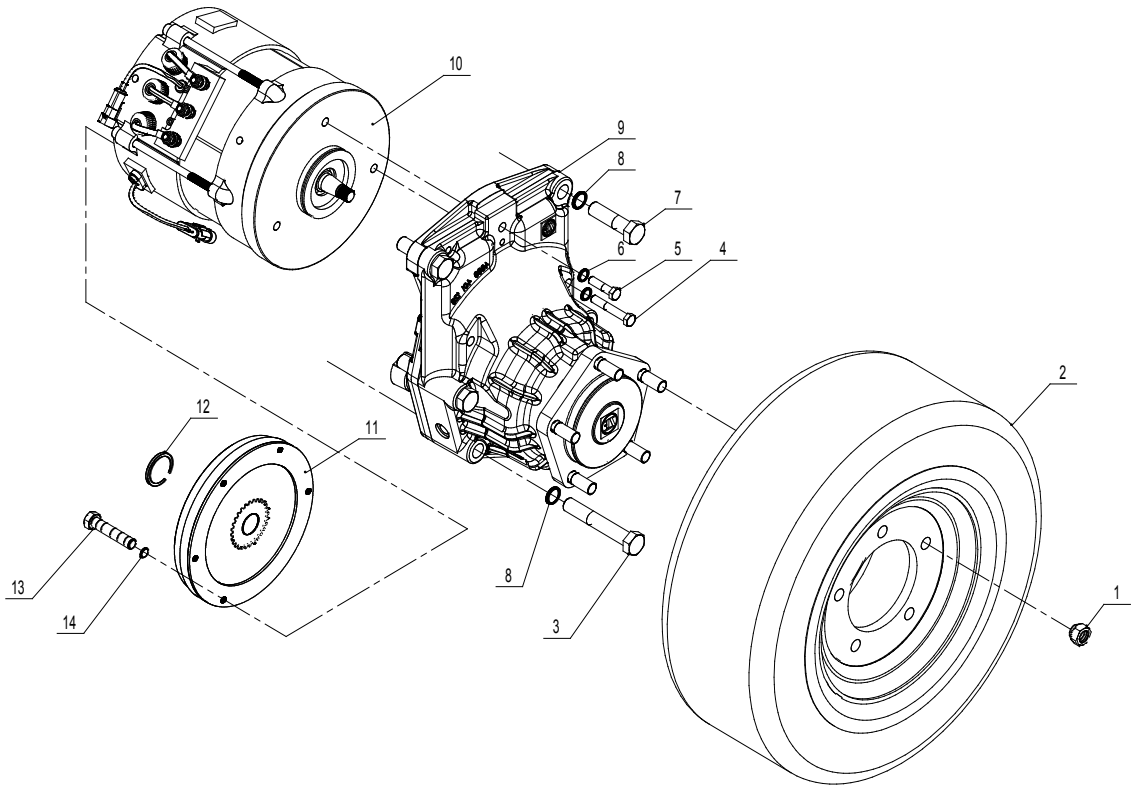
Oil Tank Assembly



Index 2.01 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.10.2-00	Oil tank welding	1		
2	JB982-77	Washer20	1		
3	JFA.1-01	Plug M20	1		
4	CPD20SR-16.10.1-00	Oil tank cover	1		
5	WU-63X100-J	Filter	1		
6	AMX.2.2-00	Cover	1		
7	GB/T 70.1-2000	Screw M6X20	12		
8	GB/T 859-1987	Washer 6	12		
9	GB/T 70.1-2000	Screw M8X20	4		
10	RFA-63X30L	Filter	1		
11	GB/T 95-2002	Washer 8	2		
12	GB/T 93-1987	Washer 8	6		
13	GB/T 70.1-2008	Screw M8X20	2		

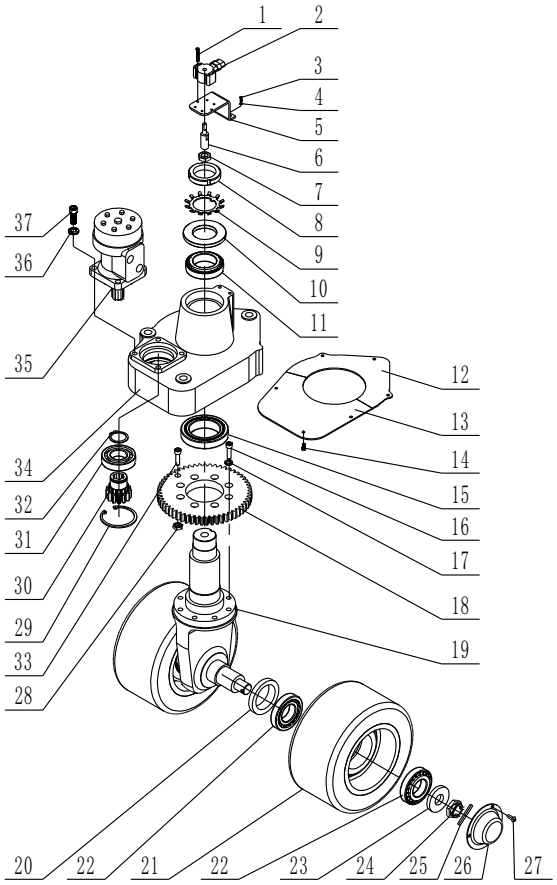
Drive Wheel Assembly



Index 3.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	23654-34051	Nut M14*1.5	5		
2	CPD20SR-16.23.1-00ZF	Tyre 16*7*10 1/2	1		
3	GB/T 5785-2000	Screw M14*1.5*95	5		
4	GB/T 5780-2000	Screw M10*80	2		
5	GB/T 5780-2000	Screw M10*50	1		
6	GB/T 93-1987	Washer 10	3		
7	GB/T 5785-2000	Screw M14*1.5*60	2		
8	GB/T 93-1987	Washer 14	7		
9	GP21	Drive wheel	1		
10	XYQ-4.5-5ALH	Drive motor	1	Left motor	
	XYQ-4.5-5ARH	Drive motor	1	Right motor	
11	D14-S	Electric brake	1		
12	GB/T 894.1	Circlip for shaft 25	1		
13	GB/T 5780	Screw M6X40	3		
14	GB/T 93	Washer 6	3		

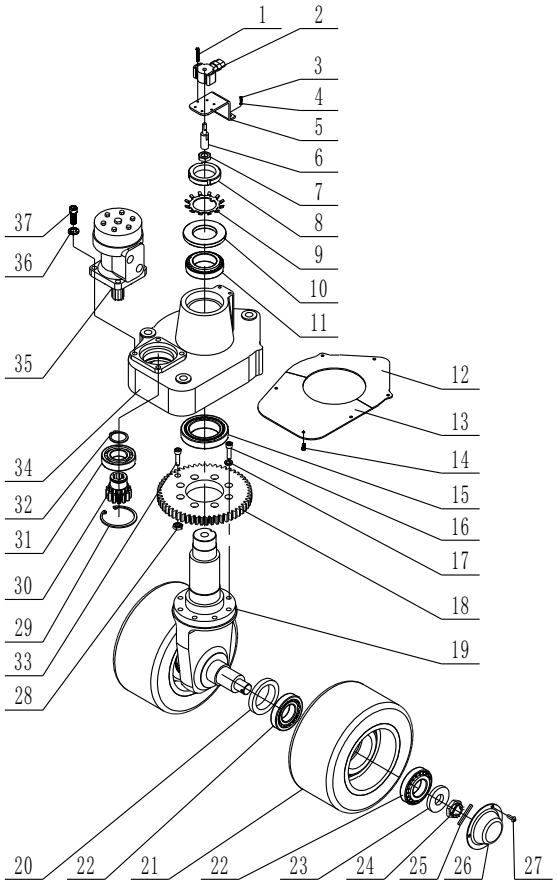
Steering Wheel Assembly



Index 4.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	GB/T818-2000	Screw M4x35	2		
2	SK1036-0002	Potentiometer	1		
3	GB/T70.1-2008	Screw M6x16	2		
4	GB/T93-1987	Washer6	2		
5	CPD20SR-16.2-07	Support	1		
6	CPD20SR-16.2-02	Shaft	1		
7	GB/T6172.1-2000	NutM16	1		
8	CPD20SR-16.2-03	Nut	1		
9	CPD20SR-16.2-04	Washer	1		
10	CPD20SR-16.2-05	Bearing cover	1		
11	GB/T297-1994	Bearing 32010	1		
12	CPD20SR-16.2-06	Lower baffle II	1		
13	CPD20SR-16.2-01	Lower baffle I	1		
14	GB/T70.1-2000	ScrewM6%x10	12		
15	GB/T297-1994	Bearing 32013	1		
16	GB/T70.1-2000	ScrewM10x25	8		
17	GB/T93-1987	Washer10	8		
18	CPD20SR-16.2.2-02	Gear	1		
19	CPD20SR-16.2.2-01	Shaft	1		
20	HG4-692-67	Oil seal 48%x82%x11	2		
21	CPD20SR-16.2.3-00	Drive wheel assembly	1		
22	GB/T297-1994	Bearing 30208	4		
23	CPD20SR-16.2-10	Washer	2		

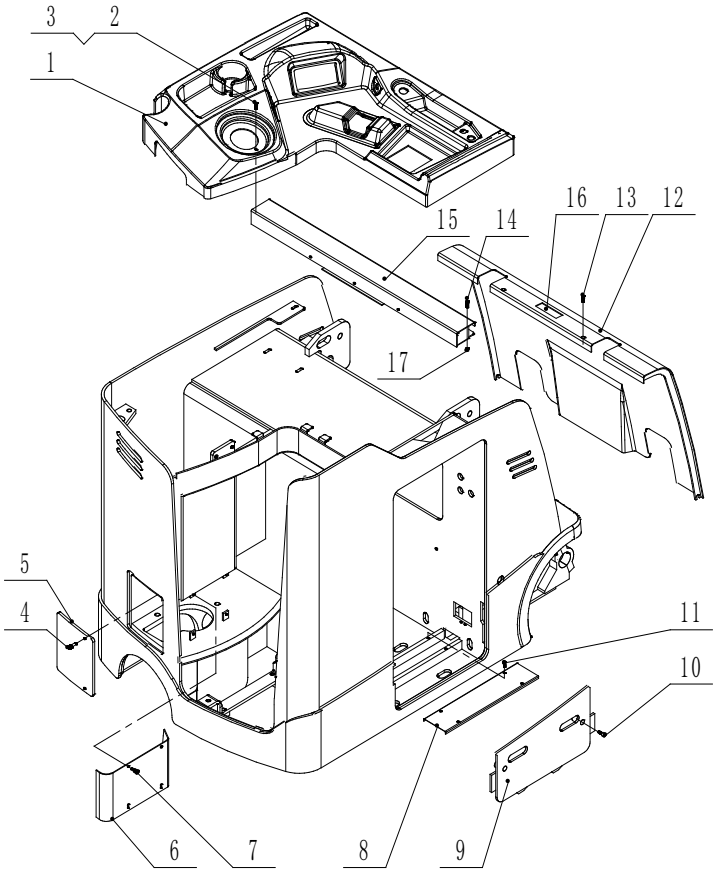
Steering Wheel Assembly



Index 4.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	CPD20SR-16.2-09	Nut	2		
25	GB/T91-1986	Pin 4%x40	2		
26	CPD20SR-16.2-08	Dust cover	2		
27	GB/T70.2	Screw M6X16	6		
28	GB/T6172.1-2000	Nut	1		
29	GB/T893.1-1986	Circlip for hole72	1		
30	CPD20SR-16.2.1-02	Gear	1		
31	GB/T276-1994	Bearing 6207	1		
32	GB/T894.1-1986	Circlip for shaft35	1		
33	GB/T70.1-2000	Screw M12x25	1		
34	CPD20SR-16.2.1-01	Reduction gear box	1		
35	BMR-80H2A1Y1	Hydraulic motor	1		
36	GB/T93-1987	Washer10	4		
37	GB/T70.1-2008	ScrewM10%x20	4		

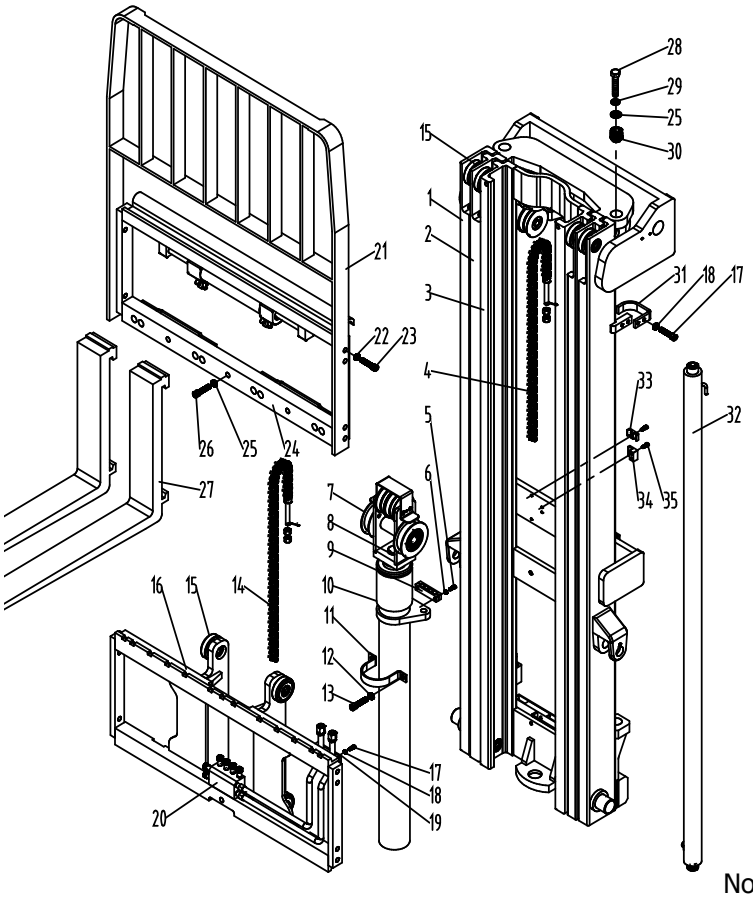
Hood Assembly



Index 5.00 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.18-00	Housing assembly	1		
2	GB/T 70.1-2008	Screw M6x16	1		
3	GB/T 95-2002	Washer 6	1		
4	GB/T70.2	Screw M6x12	2		
5	CPD20SR-16.23-00	Cover plate welding	1		
6	CPD20SR-16-03	Baffle	1		
7	GB/T70.2	Screw M6x20	4		
8	CPD20SR-16-05	Baffle 2	2		
9	CPD20SR-16.4-00	Side door	2		
11	GB/T 70.1-2000	Screw M12X25	4		
10	GB/T70.2	Screw M6x20	4		
12	CPD20SR-16.20-00	Coverplate	1		
13	GB/T 70.1-2008	Screw M8x16	2		
14	GB/T 70.1-2008	Screw M8x20	2		
15	CPD20SR-16.19-00	Footlock	2		
16	909170008	Puller 105*38	2		
17	GB/T 889.1-2000	Nut M8	2		

Three-level Mast Assembly

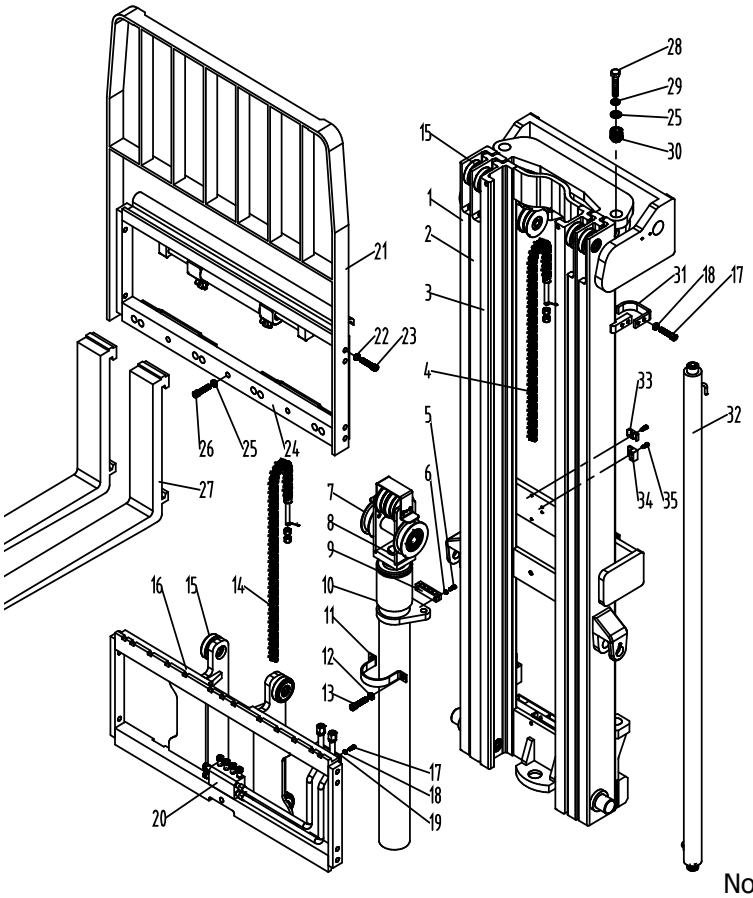


Index 6.00

Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.3A.1-00	Outer mast assembly	1		
2	CPD20SR-16.3A.2-00	Middle mast assembly	1		
3	CPD20SR-16.3A.3-00	Inner mast assembly	1		
4	CPD20SR-16.3A.13-00	Side chain	2		
5	GB/T70.1	Screw M6%x35	2		
6	GB/T93	Washer 6	2		
7	CPD20SR-16.3A.9-00	Chain wheel seat	1	Refer to 6.3	Y
8	GB/T 894.1	Circlip for shaft 40	1		
9	CPD20SR-16.3S-03	Platen	2		
10	CPD20SR-16.3A.7-00	Middle oil cylinder	1		
11	15074500001	Fixed ring	1		
12	GB/T93	Washer12	2		
13	GB/T70.1	Screw M12%x20	2		
14	CPD20SR-16.3A.12-00	Chain	2		
15	CRA78.3 GL78.3-00	Roller wheel 78.3	12		
16	CPD20SR-16.3A.4-00	Fork frame	1		
17	GB/T70.1	Screw M8%x25	6		
18	GB/T93	Washer8	6		
19	CPD20SR-16.3A-03	Platen 3	1		
20	CPD20SR-16.3A.14-00	Valve block	1		
21	CPD20SR-16.3A.5-00	Load-backrest	1		
22	GB/T93	Washer14	8		
23	GB/T5786	Screw M14%x1.5%x30	8		

Three-level Mast Assembly

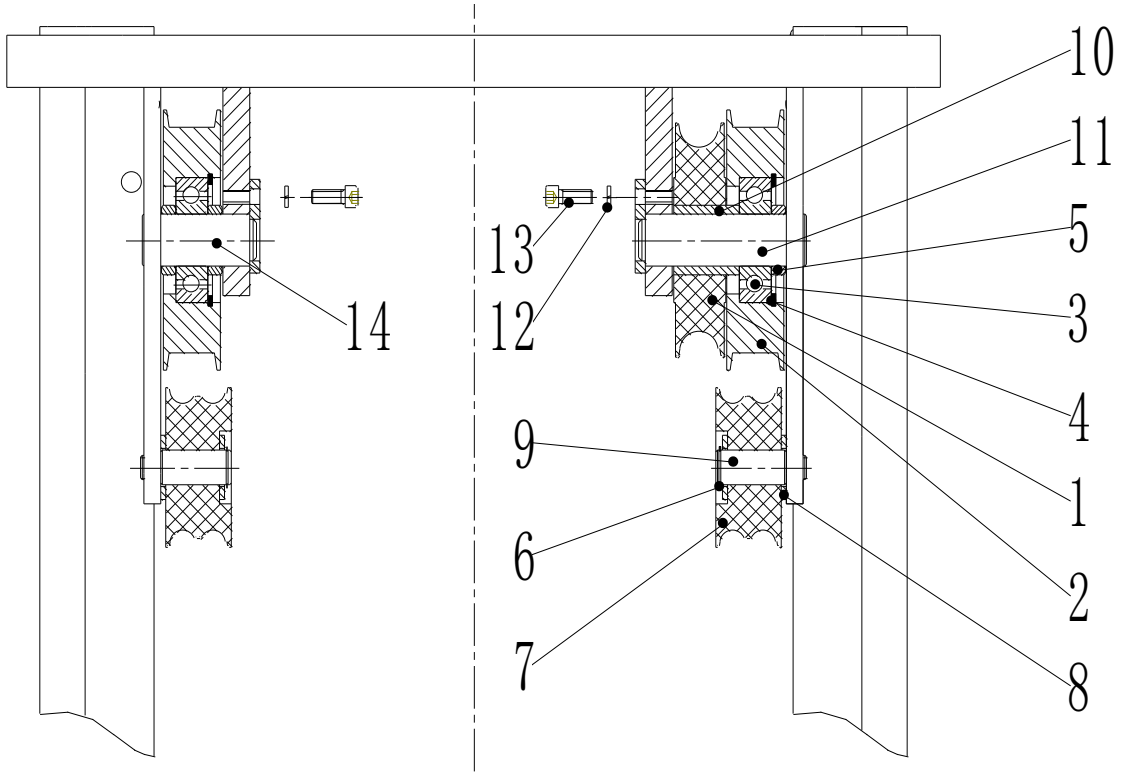


Index 6.00

Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	AC15	15 side-shifter assembly	1		
25	GB/T93	Washer16	3		
26	GB/T70.1	Screw M16%x25	1		
27	CPD20SR-16.3A.6-00	Fork assembly	2		
28	GB/T5785	Screw M16%x1.5%x65	2		
29	GB/T95	Washer16	2		
30	15803002202	Screw	2		
31	CPD20SR-16.3A-01	Platen	2		
32	CPD20SR-16.3A.8-00	Side oil cylinder	2		
33	CPD20SR-16.3A-05	Platen 4	4		
34	CPD20SR-16.3A-02	Platen 2	1		
35	GB/T70.1	Screw M6%x30	6		

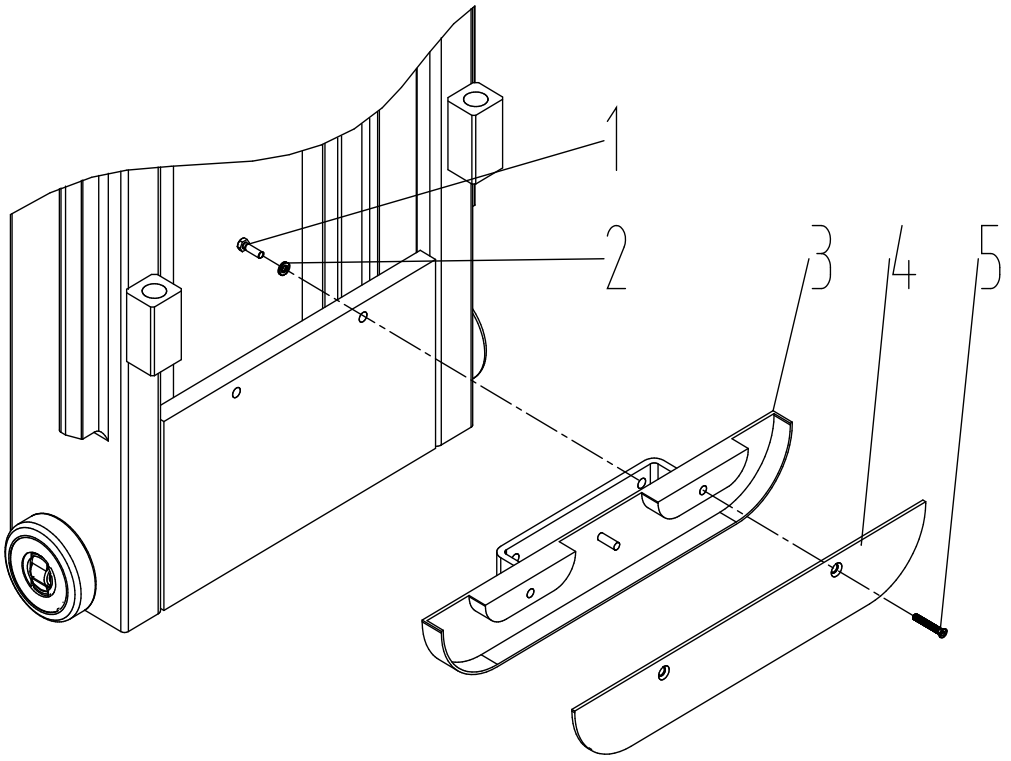
Chain Wheel/Sliding Wheel Assembly



Index 6.01 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.3A.1-00	Outer mast assembly	1		
2	CPD20SR-16.3A.2-00	Middle mast assembly	1		
3	CPD20SR-16.3A.3-00	Inner mast assembly	1		
4	CPD20SR-16.3A.13-00	Side chain	2		
5	GB/T70.1	Screw M6%x35	2		
6	GB/T93	Washer 6	2		
7	CPD20SR-16.3A.9-00	Chain wheel seat	1		
8	GB/T 894.1	Circlip for shaft 40	1		
9	CPD20SR-16.3S-03	Platen	2		
10	CPD20SR-16.3A.7-00	Middle oil cylinder	1		
11	15074500001	Fixed ring	1		
12	GB/T93	Washer12	2		
13	GB/T70.1	Screw M12%x20	2		

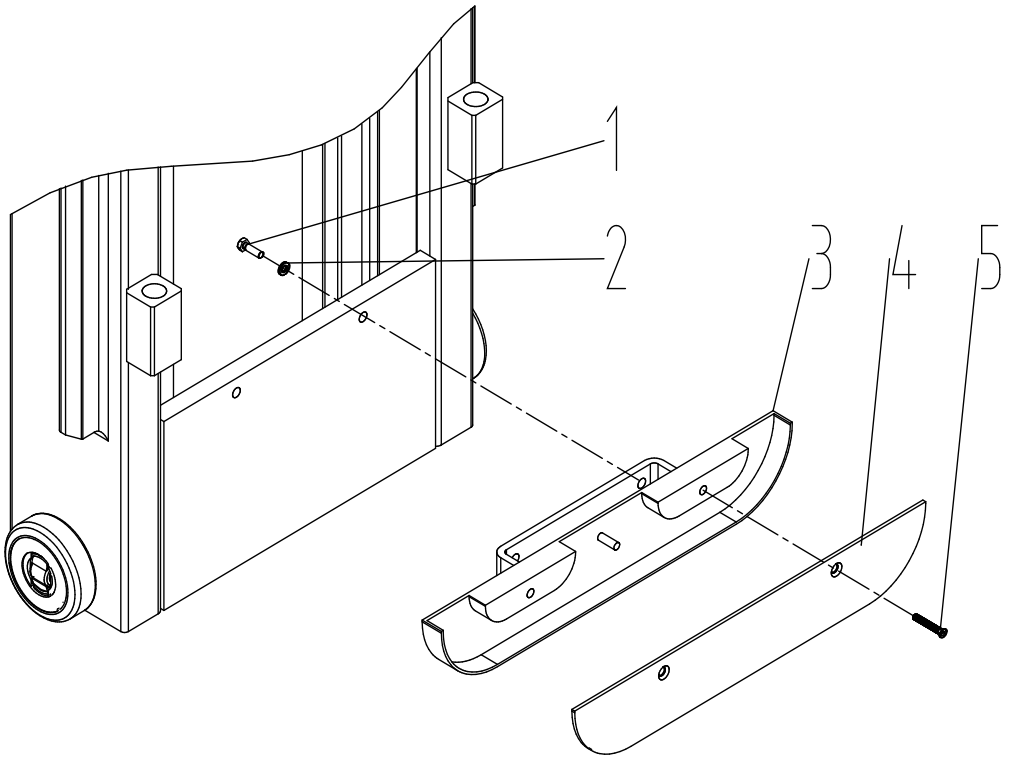
Fixed Seat



Index 6.02 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	GB/T 70.1-2008	Screw M6%x30	2		
2	GB/T 93-1987	Washer 6	2		
3	CPD20SR-16.3A.11.1-00	Fixed seat	1		
4	CPD20SR-16.3A.11-01	Platen	1		
5	GB/T819.1	Screw M6%x16	2		

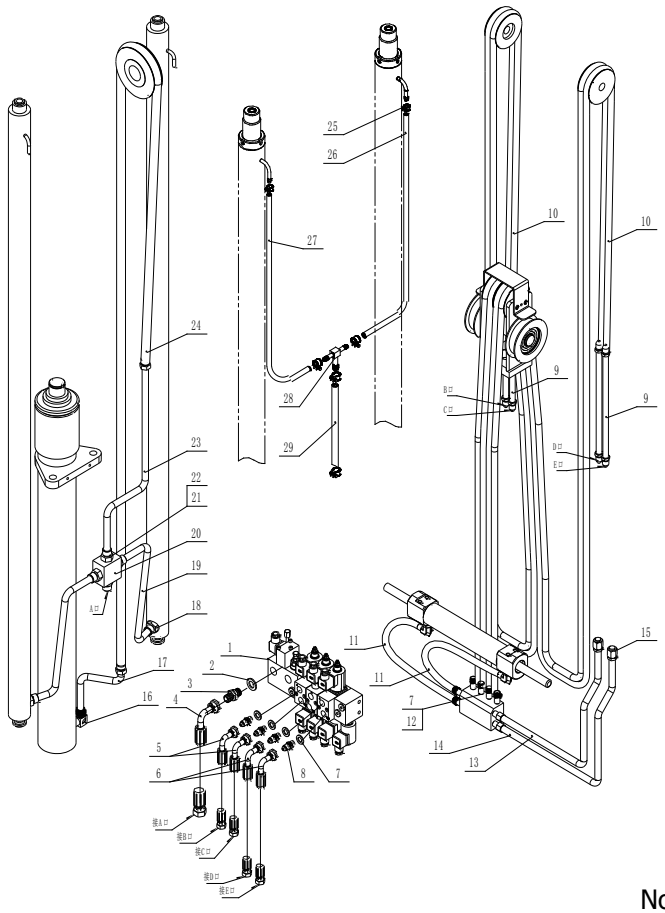
Chain Wheel Assembly



Index 6.03 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	CPD20SR-16.3A.9.1-00	Chain wheel seat	1		
2	15803007001	Chain wheel	2		
3	GB/T893.1	Circlip for hole 72	2		
4	GB/T 894.1	Circlip for shaft 30	2		
5	GB276-93	Bearing 6306（both sealed）	2		
6	CPD20SR-16.3S.3-09	Sliding wheel 1	2		
7	CPD20SR-16.3S.6-03	Shaft	1		
8	GB/T73	Screw 6*16	2		
9	CPD20SR-16.3S.6-04	Retaining ring	2		
10	CPD20SR-16.3A.9-01	Guard plate	1		

Three Level Mast Pipeline

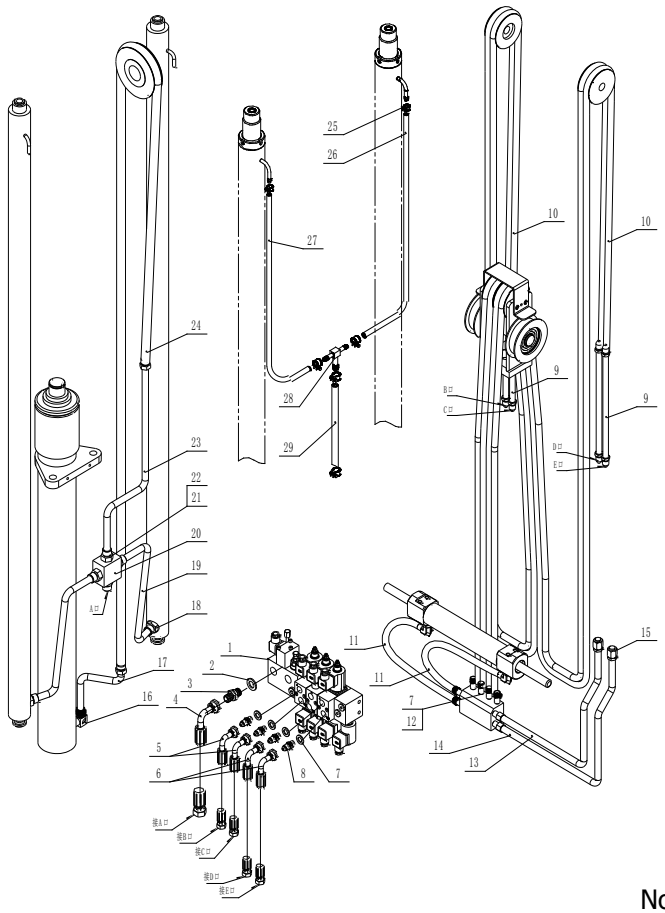


Index 6.04

Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
1	SK7758-RY-3CN	Solenoid valve	1		
2	JB 982-1977	Washer 22	2		
3	3037600002	Joint1/2-22	3		
4	CPD20SR-16.3A.10-01	Oil pipe1	1		
5	CPD20SR-16.3A.10-02	Oil pipe2	2		
6	CPD20SR-16.3A.10-03	Oil pipe3	2		
7	JB 982-1977	Washer 16	8		
8	1QB-16-06	Joint	4		
9	CPD20SR-16.3A.10-04	Rigid pipe1	4		
10	CPD20SR-16.3A.10-05	Oil pipe4	4		
11	15077600008	Oil pipe	2		
12	CQD10A.15-07	JointM16x1.5/M16x1.5	4		
13	CPD20SR-16.3A.10-06	Rigid pipe2	1		
14	CPD20SR-16.3A.10-07	Rigid pipe3	1		
15	CPD20SR-16.3A.10.1-00	End cap	2		
16	1577607000A	JointM22*1.5*121	1		
17	CPD20SR-16.3A.10-08	Rigid pipe4	1		
18	AQF-F16L-2T-1	88 relief valve	2		
19	CPD20SR-16.3A.10-09	Rigid pipe5	2		
20	CPD20SR-16.3A.10-10	Valve block	1		
21	1577600009	Joint20/22	4		
22	GB/T3452	O-ring 17%x2.65	4		
23	CPD20SR-16.3A.10-11	Rigid pipe6	1		

Three Level Mast Pipeline



Index 6.04 Note: Y - Separate lllustration

No.	PART NUMBER	DESCRIPTION	Qty	Remarks	Note
24	CPD20SR-16.3A.10-12	Oil pipe5	1		
25	JB/ZQ3777-86	Pipe clamp 8-16	6		
26	CPD20SR-16.3A.10-13	Hose %c8/1.5M	1		
27	CPD20SR-16.3A.10-14	Hose %c8/1.3M	1		
28	1577605000	T-joint	1		
29	CPD20SR-16.3A.10-15	Hose %c12/1.5M	1		

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