

# **POWERSTAR Skip Loader Truck**

## **User's Manual**

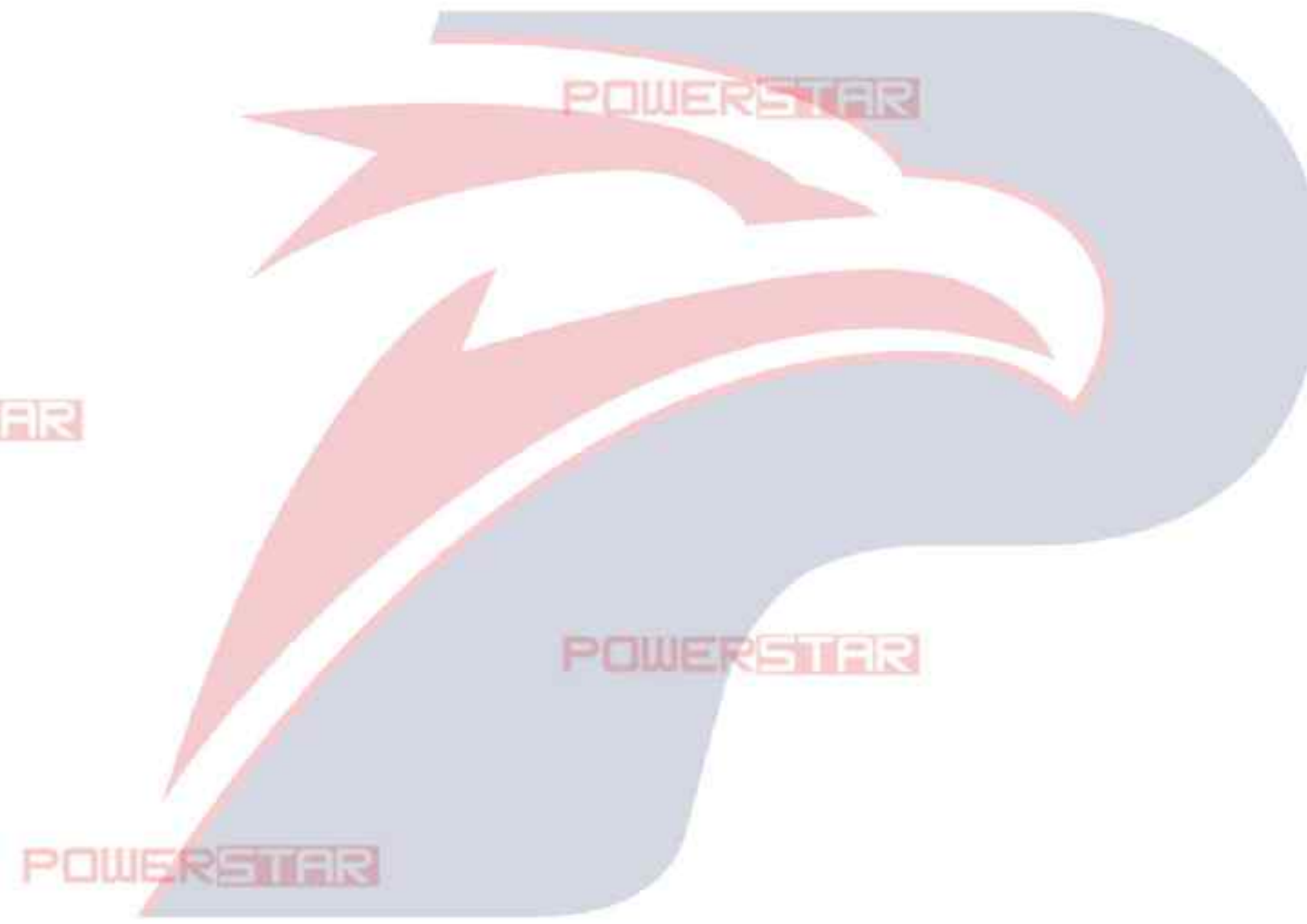
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**POWERSTAR TRUCKS INDUSTRY CO., LIMITED**

**<http://www.isuzutruckscn.com/>**



# Hook Lift Truck

# OWNER'S MANUAL

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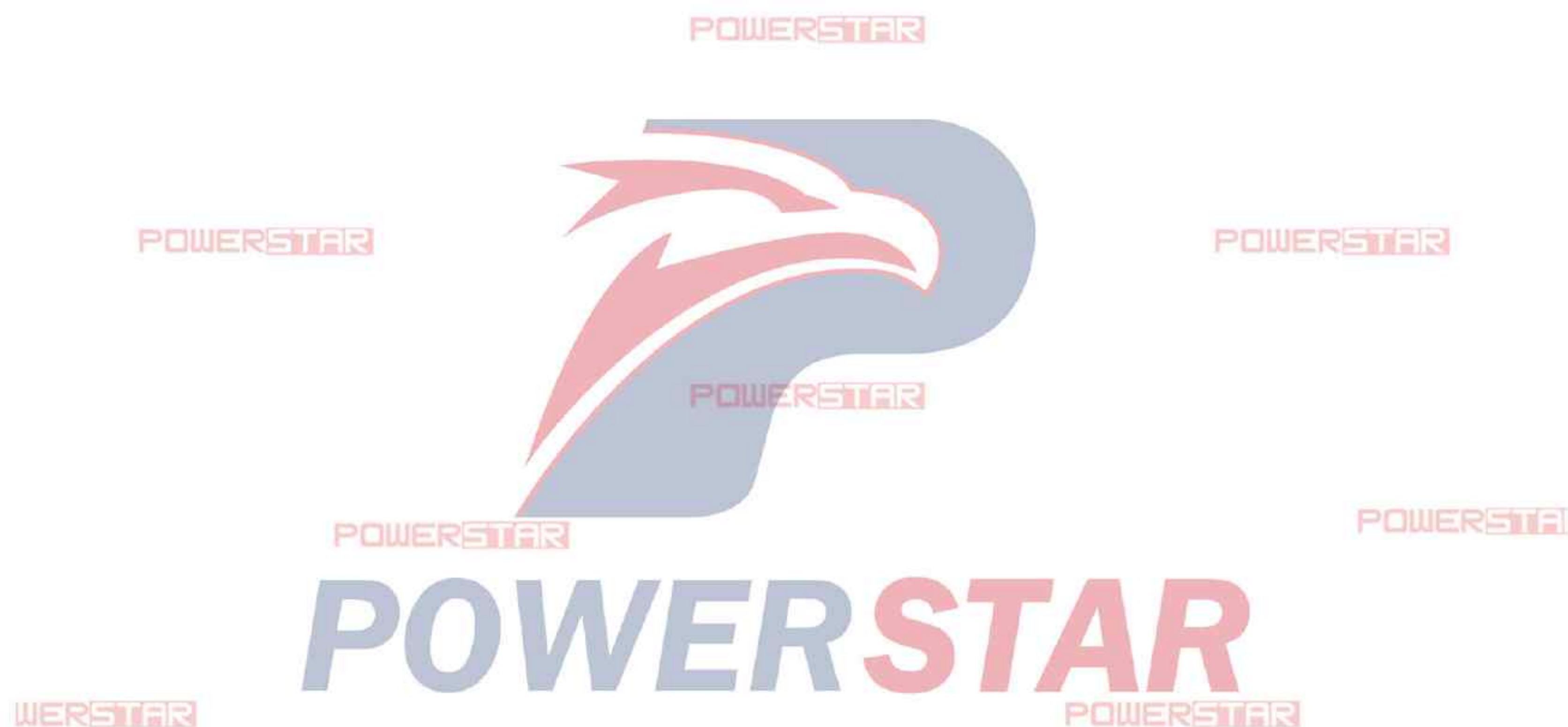
## Preface

Thank you for purchasing POWERSTAR TRUCKS products. For better using your ISUZU Hook Lift Truck, get the best operating performance, we strongly suggest that before the operation process you could read this manual instructions carefully, and to manipulate the program handily.

The manual detailed describes the performance of water tanker truck, structure, usage, precautions and maintenance of such knowledge. While showing details of the truck, both pictures and description will together help you get better understanding of how to use truck. Before the operation, the skilled operator should carefully read the contents of the manual.

After master the truck performance characteristics, methods of operation and precautions, then could start to operate this bucket truck. In order to ensure the staff turnover after the operation, and properly use of the truck. This manual book must be properly kept, shall not be lost and damage.

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## Chapter 1. General Description

POWERSTAR TRUCKS Hook Lift Truck based on type II ISUZU 4\*2 model small chassis, garbage container capacity could up to 5,000liters, mainly used for waste collection, storage and transportation, and the working aerial can be city street, factory, community and other areas of need.

The vehicle designed to fully rely on the advantages of the original ISUZU 4\*2 LHD chassis, fully consider the product's convenience and reliability. The garbage container material is international standard carbon steel, both internal and external with anti-rust painting, which can effective to avoid rusting. As for container capacity, this can be up to 5 CBM, with hydraulic joysticks and electric control box for easy operation. And can cover all customers' waste collection & transportation requirement.

The ISUZU 4\*2 Hook Lift Truck equipped with 5CBM sealed garbage container, hydraulic operation joysticks, cabin electric control box, customer required painting and logos. Therefore, the vehicle is an ideal Hook Lift Truck mainly used for garbage collection & delivery.



(Preview for your ISUZU 5CBM Hook Loader Truck)

## Chapter 2, Main Technical Data

### Basic parameter:

Items		5 CBM ISUZU Hook Loader Truck
S I Z E	Outer Dimension (L×W×H) (mm)	5300×1900×2200
	Wheelbase (mm)	3360
Kerb Weight (kg)		2800
G E A R	Gearbox brand	ISUZU
	Model	MSB 5-shift gearbox
	Type	Manual
Cab capacity (includes driver)		2+1
E N G I N	Model	ISUZU 4HK1-TCG40
	Type	Four cylinder inline, four stroke, turbocharged Inter-cooling, diesel
	Rating Power (kW/HP)	88 / 120

Note: 1. The vehicle height includes hook loader point.

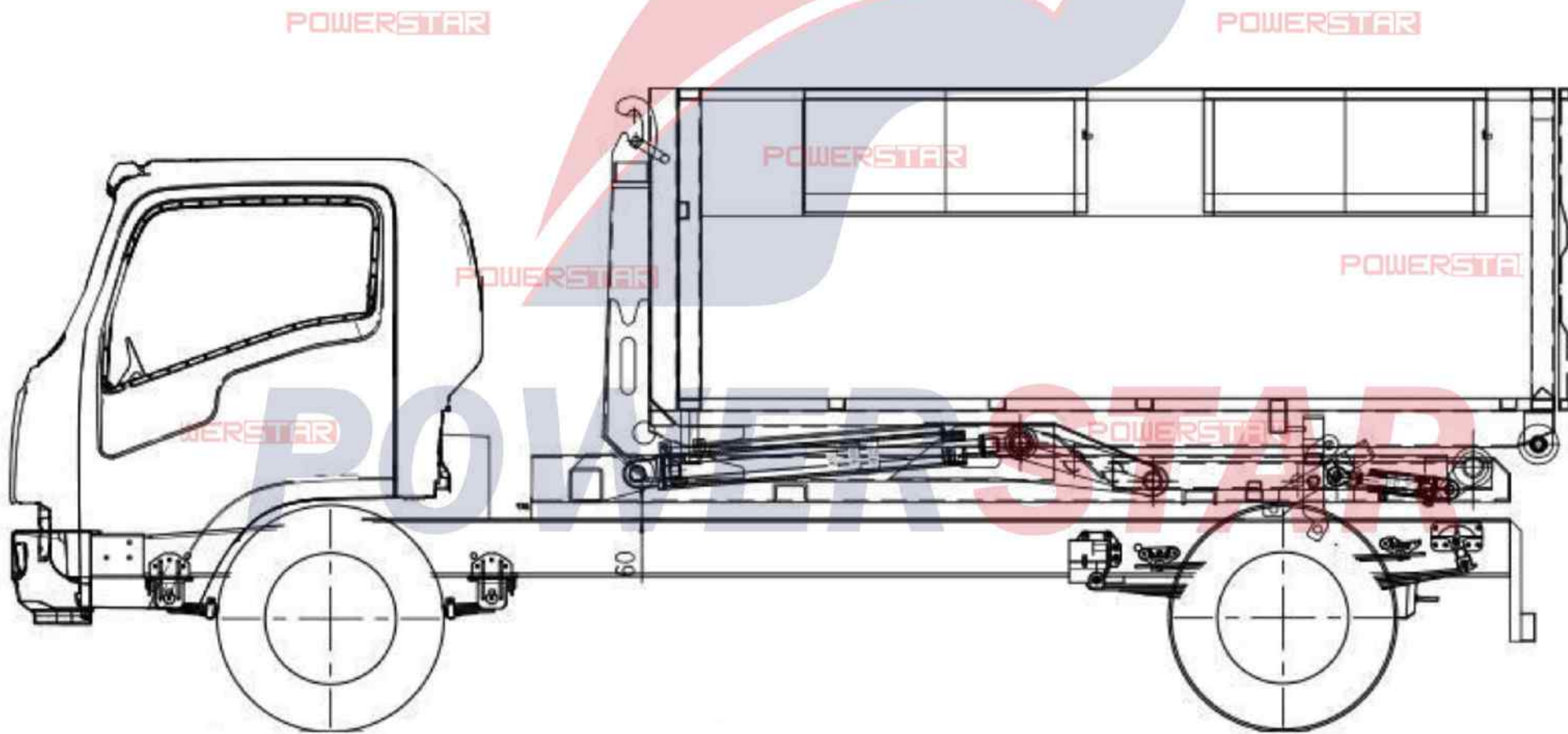
2. We keep the right to revise the parameters on the list above.

### Hook Loader Superstructure basic parameter list

Items		Parameter	
G a r b a g e C o n t a i n e r	Capacity (CBM)	5	
	Material	Standard Carbon Steel	
	P a i n t i n g	Internal	With anti-rust painting
		External	White painting with required logo
H o o k L o a d e r D e v i c e	Operation	Manual Operation Joysticks at rear Electric Control Box in cabin	
	Cylinder	Special Double cylinder device	
	Safety Assurance	Balance valve for safety	
	Operation Mode One	Garbage container locked, the truck can be act as garbage dumper truck	
	Operation Mode Two	Garbage container unlocked, and containers can be hung up and down	

## Chapter 3, Hook Lift Truck Structure Components

Overviews for ISUZU 4\*2 hook lift truck technical drawing:



Above drawing show the hook loader truck dimension for reference; the garbage container designed based on requirement, with rear open door easy for garbage discharge.

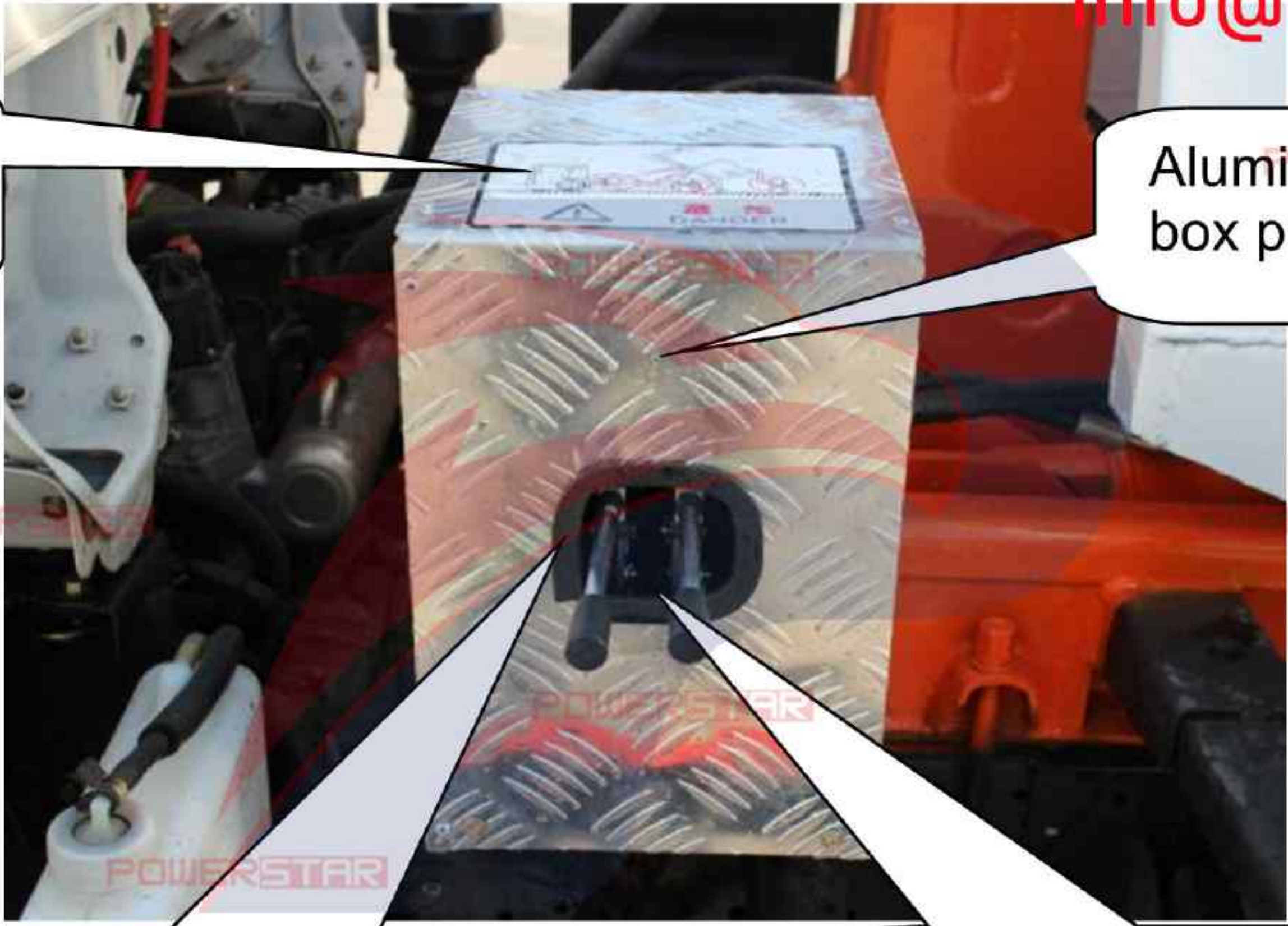
Left View: Hook arm, Garbage container, Manual operation joystick

Hook Arm Device  
Special two cylinders  
with balance valve for  
safety

Garbage Container  
Dimension: 3250\*1800\*1130 mm  
Top door and rear door as  
standard



Manual Operation Joysticks



Aluminum alloy box protect Valves

LEFT Joystick  
Control the garbage container Up & Down

RIGHT Joystick  
Control the garbage container Locked & Unlocked

Rear View: Top door, Rear door & safety fence.

4 set Container top door with handle



Container rear door with manual lock

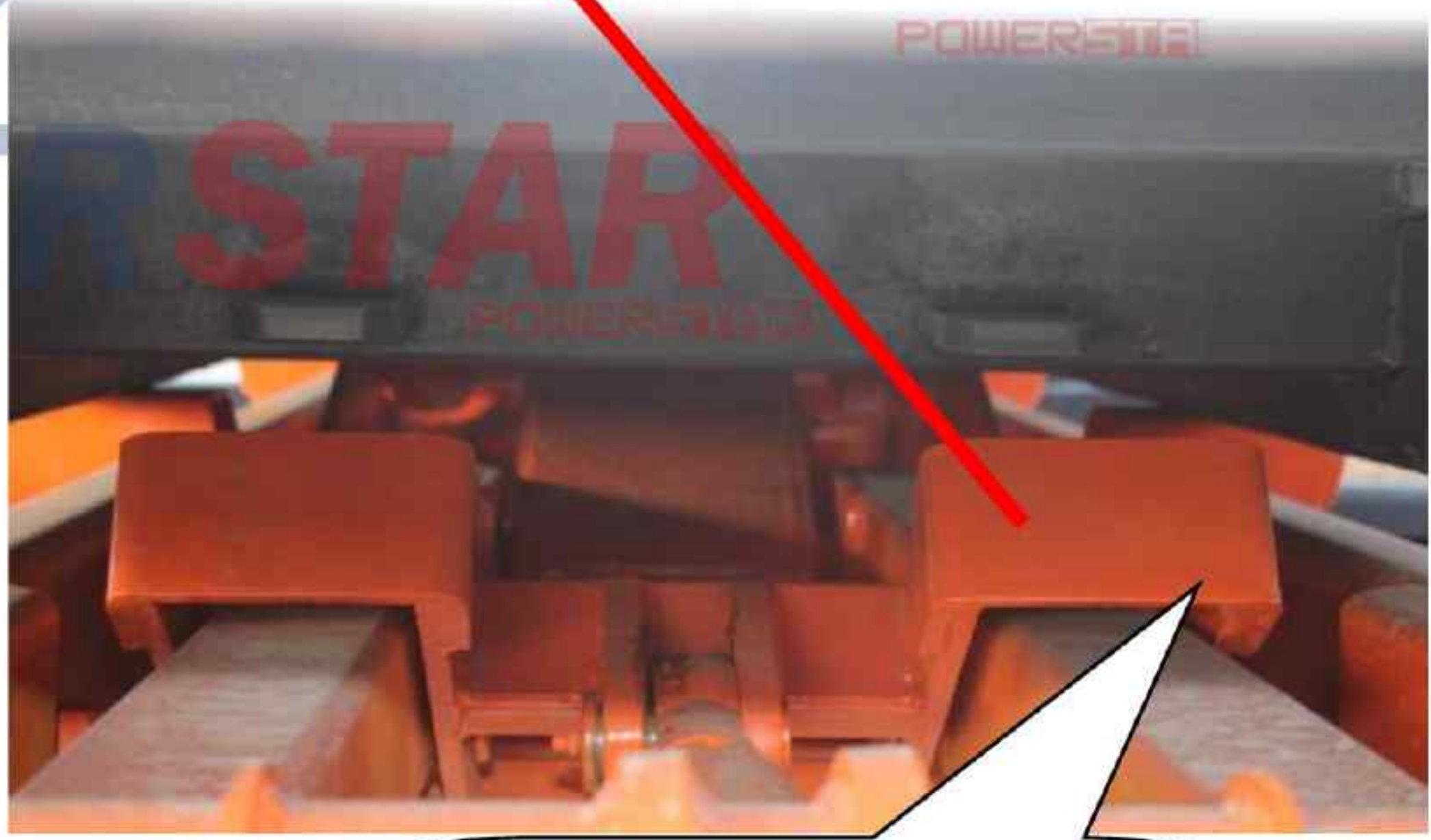
Side safety fence

Rear safety fence

(Container Lock position)



Garbage container rear door lock



Garbage container lock: Open position



## Chapter 4, Hook Lift Truck Working Principles

The operator should fully understand Whole Structure and Working Principle for ISUZU 4\*2 Hook Lift Truck before any operation. Only trained person can operate this vehicle properly and to prevent unnecessary accidents and equipment damage.

### i ,How are the Hook Lift Truck working?

The ISUZU 4\*2 Hook Lift Truck makes use of the special power take off (PTO) to get power from the engine, and then use the power to control hydraulic cylinder. Operate the manual hydraulic cylinder to realize garbage container Loading & Unloading working. Then can be used for garbage collection and transportation.

### ii ,What is the main component for truck?

The hook lift truck is refitted based on the ISUZU LHD 4\*2 chassis. The refit part includes Garbage carrying assembly, actuator device, hook loader system and operation system.

- Garbage carrying assembly: A carbon steel container, which is used to collect garbage.
- Actuator device: includes power take off, drive line, etc., which can pass the power from the chassis to the hydraulic system.
- Hook loader system: includes hook loader arm, two cylinders & balance valve, which combined working for lifting the container
- Operation system: including rear Hydraulic Operation Joysticks & cabin Electric Control Box, which helps come to all special functions' convert.

### iii, How to operate hook lift trucks?. (Very Important)

#### 1、 Ready to work

(If idle for a long time, please keep the truck engine run for a few minutes. Also, should ensure fuel tank and water tank are enough. )

#### A, Hydraulic Joysticks Operation Guidance

##### Step 1

Thoroughly check the hook lift truck to make sure working environment is good. Then start the truck engine. Press the Clutch Pedal, meanwhile press the Accelerator Handle Cable to Working Position.



**NOTE:** Please keep the Accelerator handle Cable at Driving Position while driving the truck!

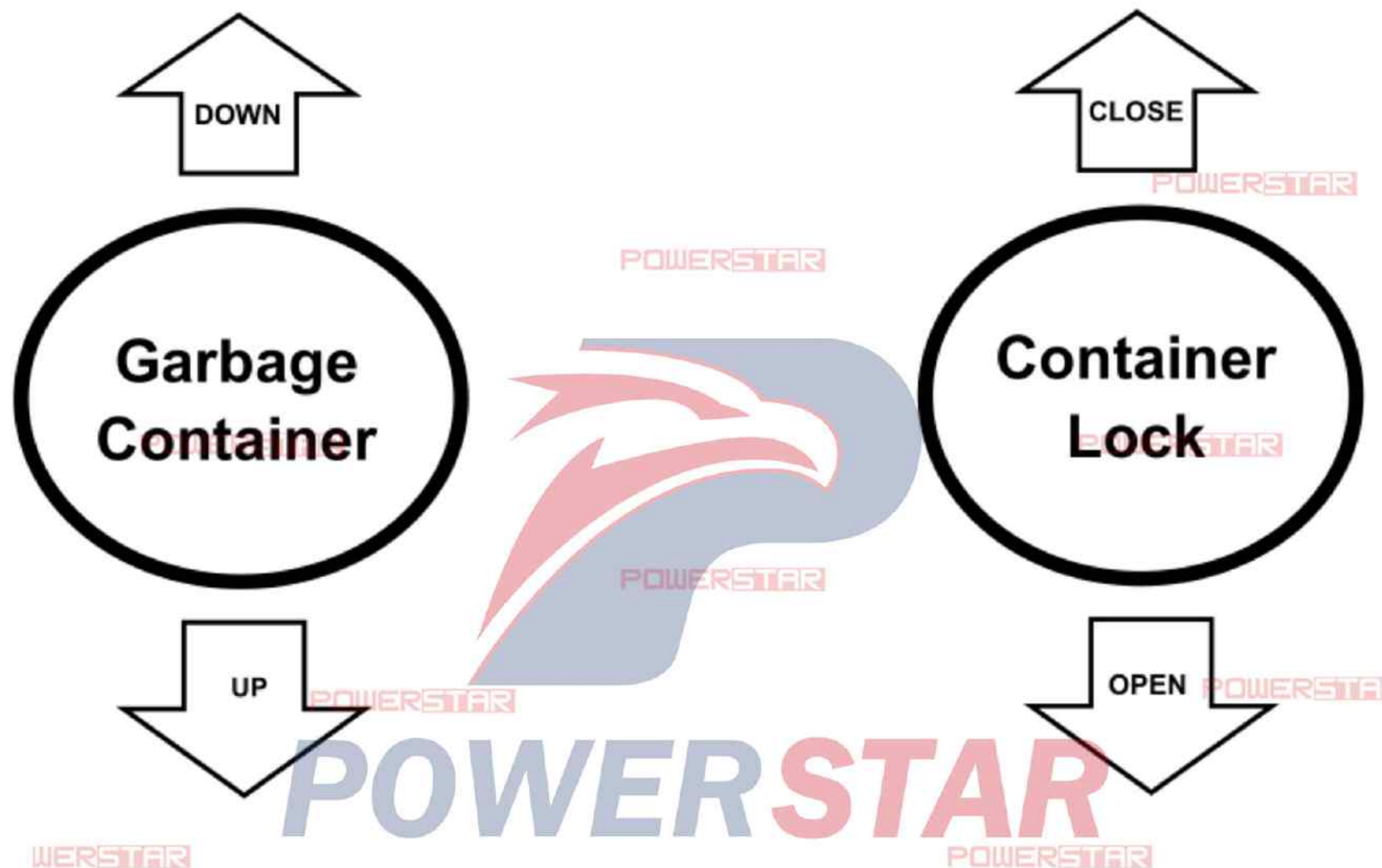
Please do not operating the garbage loading system while driving the truck!

Be familiar with how Operation Manual Joysticks can control the hook lift truck

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## Hook Loader Truck Operation Indicator



**LEFT Joystick:** Control the garbage container Up & Down

Operation 1, PUSH DOWNWARD → Garbage container Up

Operation 2, PULL UPWARD → Garbage container Down

**RIGHT Joystick:** Control the garbage container Locked & Unlocked

Operation 1, PUSH DOWNWARD → Garbage container Unlocked

Operation 2, PULL UPWARD → Garbage container Locked

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## Step 3

### Operation Mode One: Garbage container loading & unloading working

1. Push RIGHT Joystick downward, the garbage container unlocked
2. Pull LEFT Joystick upward, the garbage container unloading to ground  
Push LEFT Joystick downward, the garbage container loading on truck

Control the garbage container loading & unloading working



### Operation Mode Two: Container garbage discharging working

1. Pull RIGHT Joystick upward, the garbage container locked
2. Push LEFT Joystick downward, the garbage container lifting to discharge garbage  
Pull LEFT Joystick upward, the garbage container down to safety position

Control the container garbage discharging working

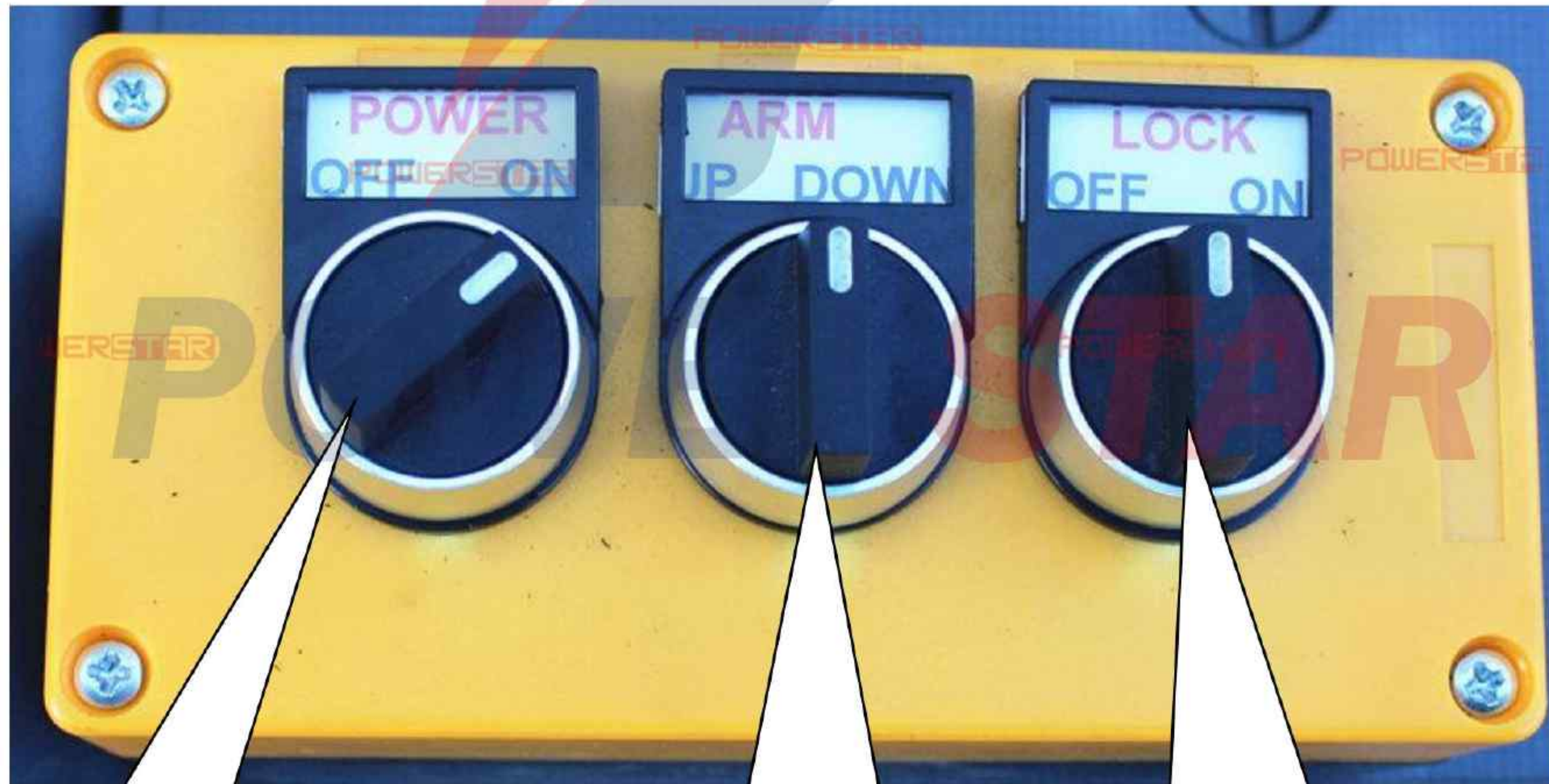


### Step 1

Same to Hydraulic Joysticks Operation Guidance steps.

### Step 2

Be familiar with how Electric Control Box can control the hook lift truck



**POWER SWITCH**  
LEFT: Power off  
RIGHT: Power on

**ARM SWITCH**  
LEFT: Container up  
RIGHT: Container down

**LOCK SWITCH**  
LEFT: Container unlocked  
RIGHT: Container locked

**POWER SWITCH:** Control the whole Electric Control Box power

Operation 1, TURN LEFT → Whole Electric Control Box power off

Operation 2, TURN RIGHT → Whole Electric Control Box power on

**ARM SWITCH:** Control the garbage container Up & Down

Operation 1, TURN LEFT → Garbage container Up

Operation 2, TURN RIGHT → Garbage container Down

**LOCK SWITCH:** Control the garbage container Locked & Unlocked

Operation 1, TURN LEFT → Garbage container Unlocked

Operation 2, TURN RIGHT → Garbage container Locked

### **Operation Mode One: Garbage container loading & unloading working**

3. Turn LOCK SWITCH LEFT, the garbage container unlocked
4. Turn ARM SWITCH RIGHT, the garbage container unloading to ground  
Turn ARM SWITCH LEFT, the garbage container loading on truck

Control the garbage container loading & unloading working



### **Operation Mode Two: Container garbage discharging working**

3. Turn LOCK SWITCH RIGHT, the garbage container locked
4. Turn ARM SWITCH RIGHT, the garbage container lifting to discharge garbage  
Turn ARM SWITCH LEFT, the garbage container down to safety position

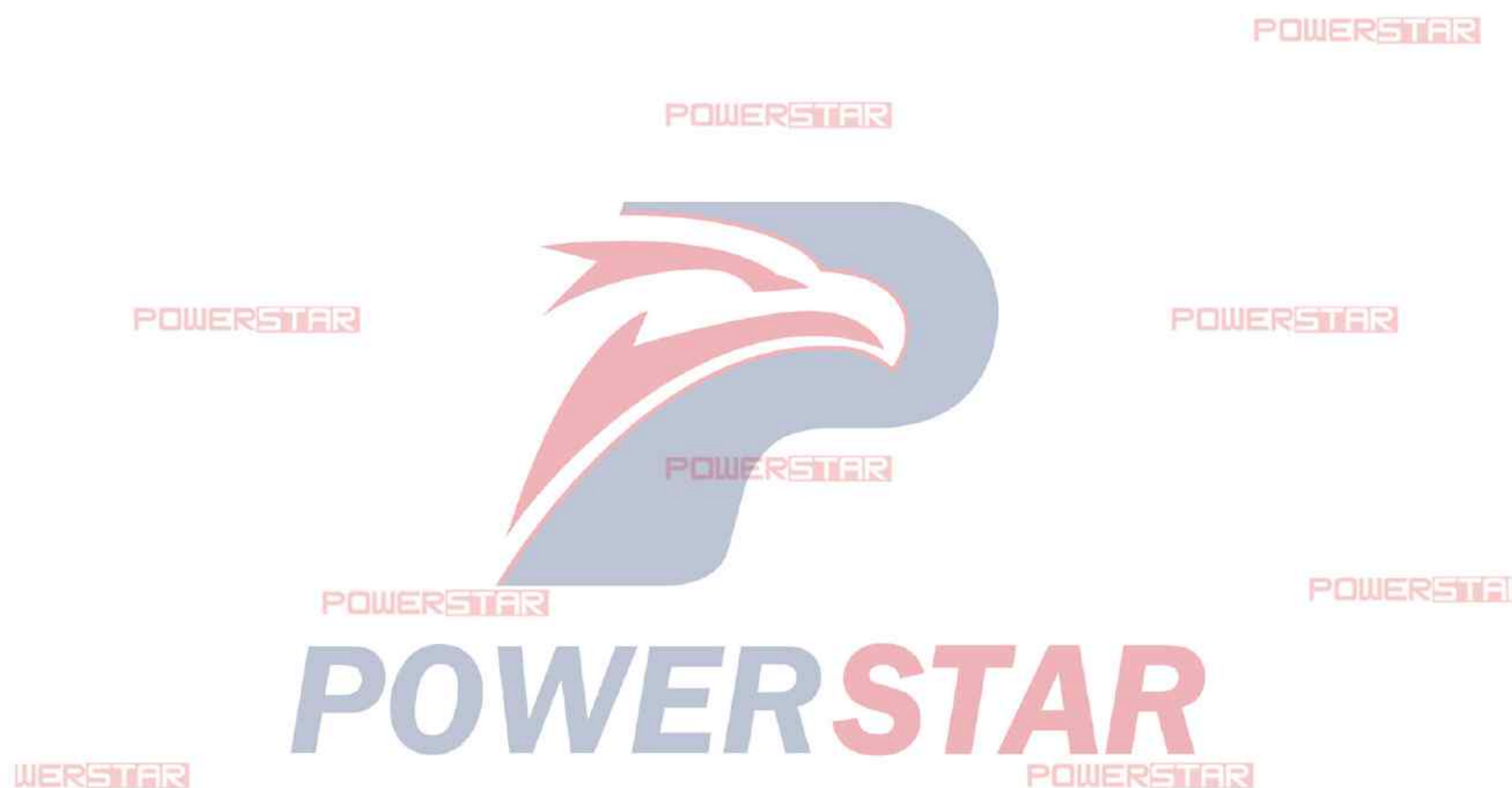
Control the container garbage discharging working



## Chapter 5, Others for Attention

After carefully reading the above information, you must be well known how to use the ISUZU Hook Lift truck; below show some parts you need to pay attention while using the truck.

1. Please strictly follow the Operation Manual, and note that only skilled worker can be allowed operate the hook loader truck.
2. Carefully checking the working environment, if the working place is slope with angle over 12%, you need to use block brake the wheel.
3. Keep nobody stand around when operating the hook loader truck.
4. Before operating the hook arm system to load and unload the garbage container, make sure the garbage container has been unlocked
5. Please do not adjust the hydraulic oil pressure, for which has been set in factory.
6. Please strictly follow the Owner's Manual to operate the hook loader truck. If any unusual phenomenon happens during operation, you should stop the working immediately and carefully found out the reason, only when the troubleshooting then you can restart working.
7. The Hydraulic Oil should keep clean during working, if the oil becomes dirty, please kindly change the oil to make sure the truck can work smoothly.



## Chapter 6, Troubleshooting

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Please kindly checking below possible troubleshooting, which just for your reference.

Malfunction	Possible Reason	Solution
Oil Cylinder Piston Rod Oil leakage	<ol style="list-style-type: none"> <li>1. Sealing ring damage</li> <li>2. Surface of the piston rod scratch</li> </ol>	<ol style="list-style-type: none"> <li>1. Carefully checking the sealing ring, change new one if necessary</li> <li>2. Use sandpaper burnish it, change new one if necessary</li> </ol>
Piston Rod Movement is Crawl or Peristalsis	<ol style="list-style-type: none"> <li>1. Hydraulic cylinder or hydraulic oil mixed with air</li> </ol>	<ol style="list-style-type: none"> <li>1. Eliminate air</li> </ol>
The Hydraulic Cylinder Lifting Powerless	<ol style="list-style-type: none"> <li>1. Piston sealing element damage</li> <li>2. System pressure too low (The safety valve imbalance)</li> <li>3. System pressure too low (The internal leakage)</li> <li>4. Oil pump damage</li> <li>5. Hydraulic oil storage shortage</li> <li>6. Oil filter blocked</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking &amp; replace the sealing element</li> <li>2. Checking &amp; adjust the safety valve pressure</li> <li>3. Checking &amp; replace the element</li> <li>4. Checking &amp; replace oil pump</li> <li>5. Checking &amp; refueling hydraulic oil</li> <li>6. Checking &amp; replace oil filter</li> </ol>
External Leakage	<ol style="list-style-type: none"> <li>1. Sealing ring damage</li> <li>2. Oil pipeline surface damage</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking &amp; replace new sealing ring</li> <li>2. Checking &amp; replace new pipeline</li> </ol>

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