

POWERSTAR Potable Water Truck

User's Manual



POWERSTAR TRUCKS INDUSTRY CO., LIMITED

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

Potable Water Truck

OWNER'S MANUAL

Preface

Thank you for purchasing POWERSTAR products. For better using your ISUZU potable water 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.

----POWERSTAR TRUCKS

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Chapter 1. General Description

*POWERSTAR TRUCKS Potable Water Truck based on type II ISUZU 4*2 model chassis, water tanker capacity could up to 6,000liters, mainly used for water storage, transportation, spraying and delivery work, 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 customized ISUZU 4*2 LHD chassis, fully consider the product's convenience and reliability. The water truck equipped with stainless steel water pump for regular use. The water tanker material is food grade stainless steel, which can be durable and service for a long time. As for tank capacity, this can be up to 6 CBM, with one manhole and platform on top, also with front spraying nozzle & rear spraying monitor for easy operation, and can cover all customers' water transport & delivery requirement.*

*The ISUZU 4*2 Potable Water Truck equipped with warning alarm, rear climbing ladder, side & rear-guard plate and front spraying nozzle & rear spraying monitor to help better use of the trucks. Also have rear working platform for easy operation. Therefore, the vehicle is an ideal Water Tanker Truck mainly for water transportation & water spraying.*



(Preview for your ISUZU 4*2 Potable Water Truck)

Chapter 2, Main Technical Data

Basic parameter:

Items		6 CBM ISUZU 4x2 Potable Water Truck
S I Z E	Outer Dimension (L×W×H) (mm)	6750*1940*2310 mm
	Wheelbase (mm)	3815
Kerb Weight (kg)		3380
G E A R	Gearbox brand	ISUZU MSB
	Model	5-shift gearbox
	Type	Manual
Cab capacity (includes driver)		2
E N G I N	Model	ISUZU 4KH1CN5HS
	Type	Four cylinder inline, four stroke, turbocharged Inter-cooling, diesel
	Rating Power (kW/HP)	96 / 130
	Emission Standard	Euro 5

Note: 1. The vehicle height includes Rear Climbing Ladder.

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

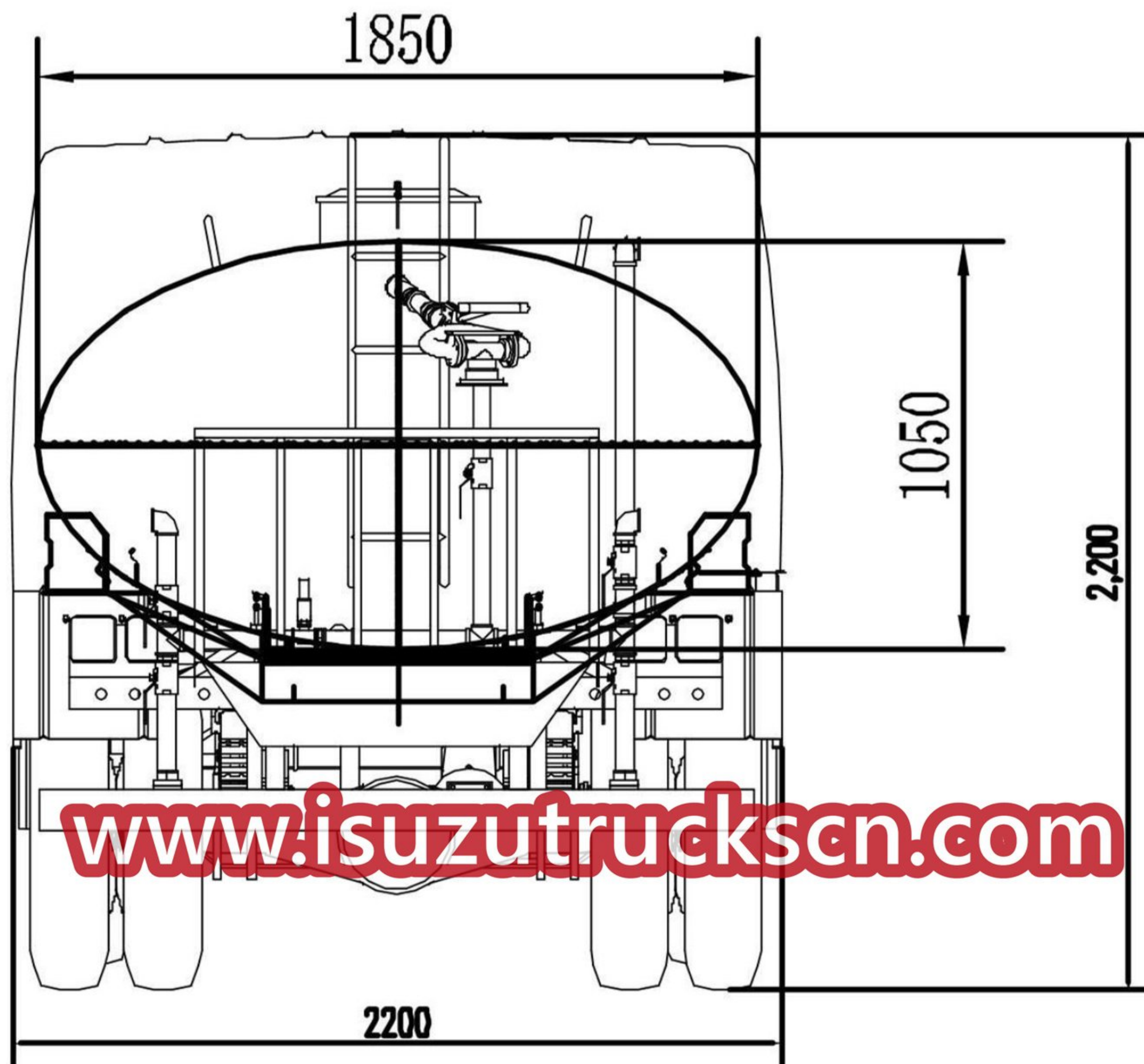
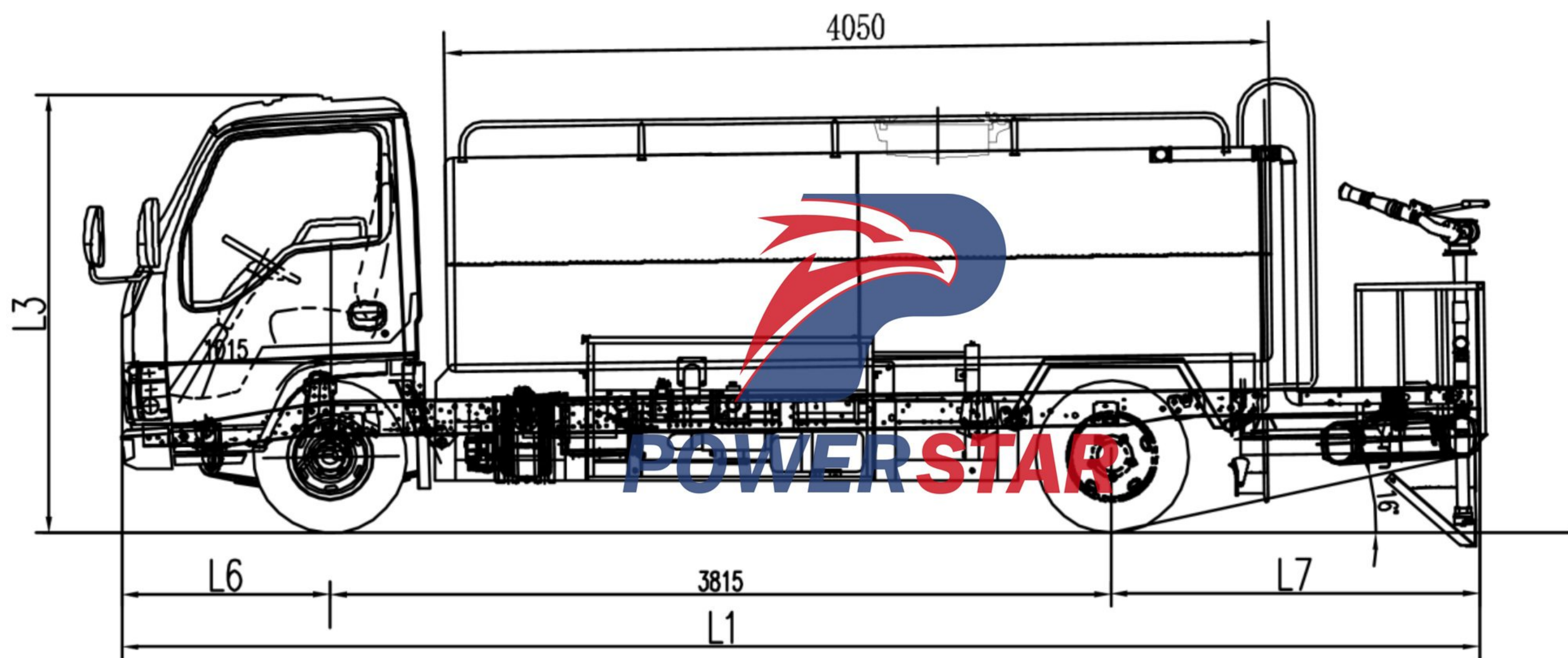
Water Tanker basic parameter list

Items		Parameter	
Water tanker	Capacity (CBM)	6	
	Material	Food grade stainless steel	
	Painting	Internal	Non
		External	White painting as required
	Special Equipment	Water Monitor	Equipped at rear platform
		Valves	Equipped on side & rear of tank
Climbing Ladder		Equipped at rear of tank	
Water Pump	Brand	Famous China brand stainless steel pump	
	Model	65SZB-40/45	
	Water Flow Rate	m ³ /h	40
		l/min	667
	Lifting (m)	45	
	Self-Suction Height (m)	6.5	
	Self-Suction Capacity (min/4m)	1	
	Rated Power (kw)	7.5	
More details for Water Pump showing as below			

Chapter 3, Water Tanker Truck Structure Components

i ,Water Tanker Structure Components

Overview for ISUZU 4*2 potable water truck technical drawing:



Above drawing show the water truck dimension for reference; the tanker has one 500mm manhole for easy maintenance, wave-board inside for safety, rear platform for easy operation. The whole water tank is **oval shape**, which equipped with round pipeline storage box:

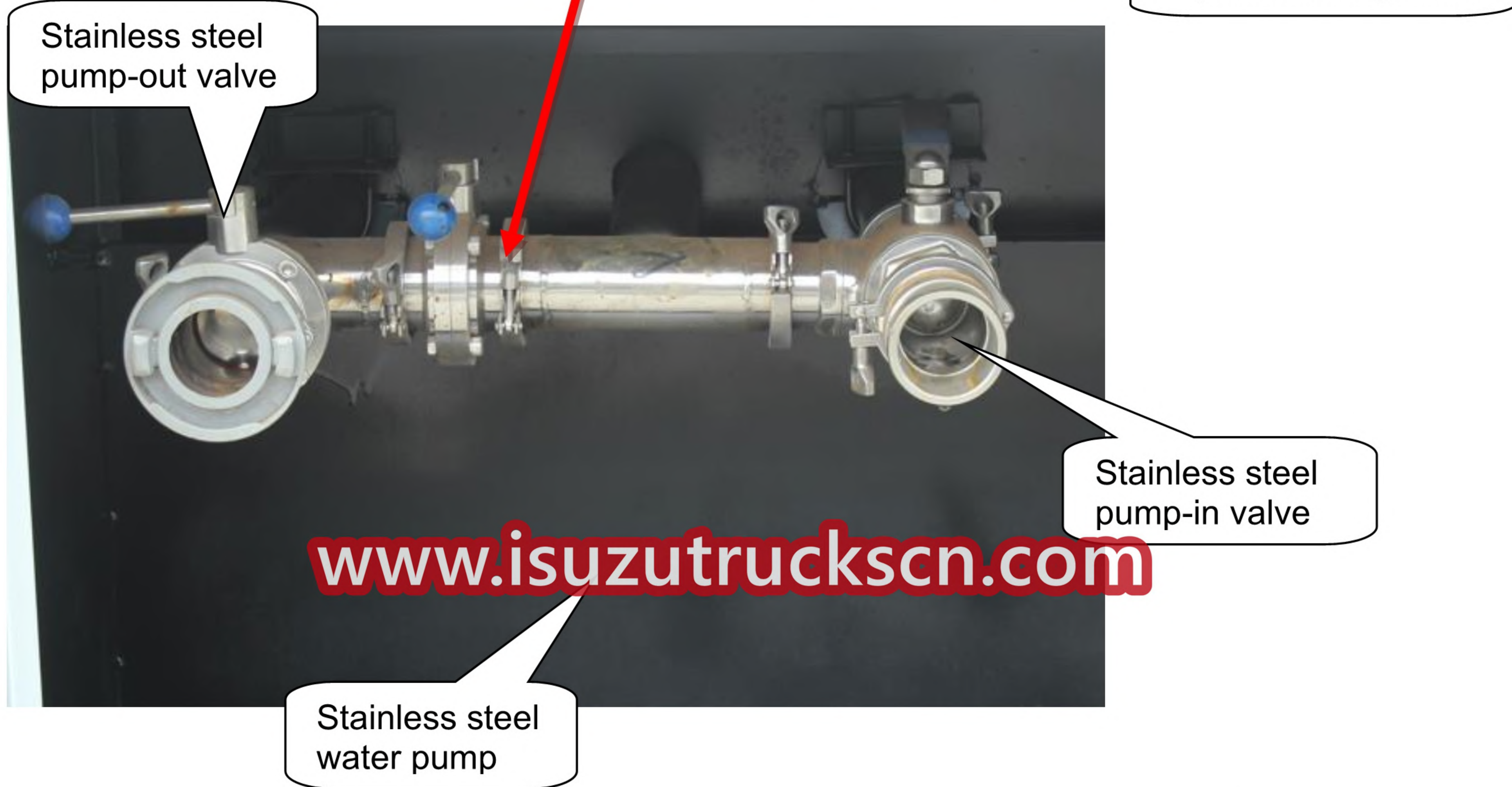
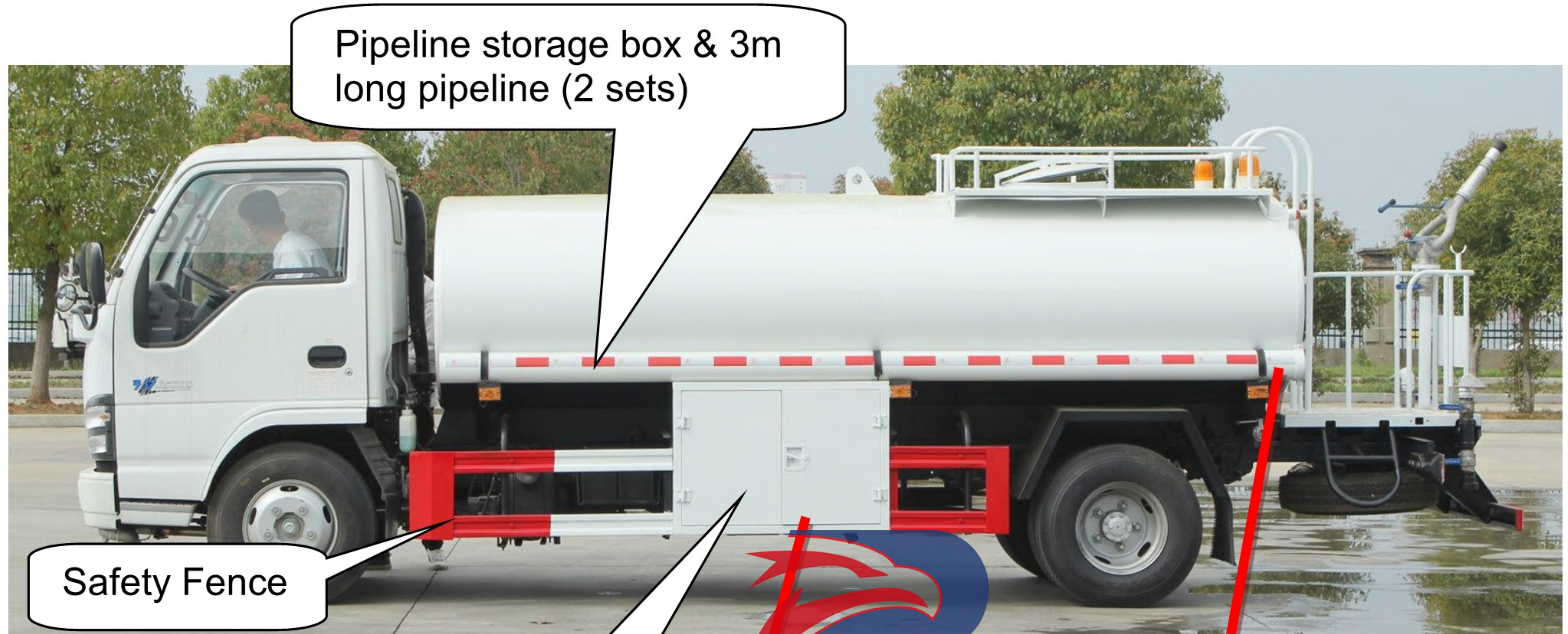
Top of the Tank: safety fence, manhole and manhole cover



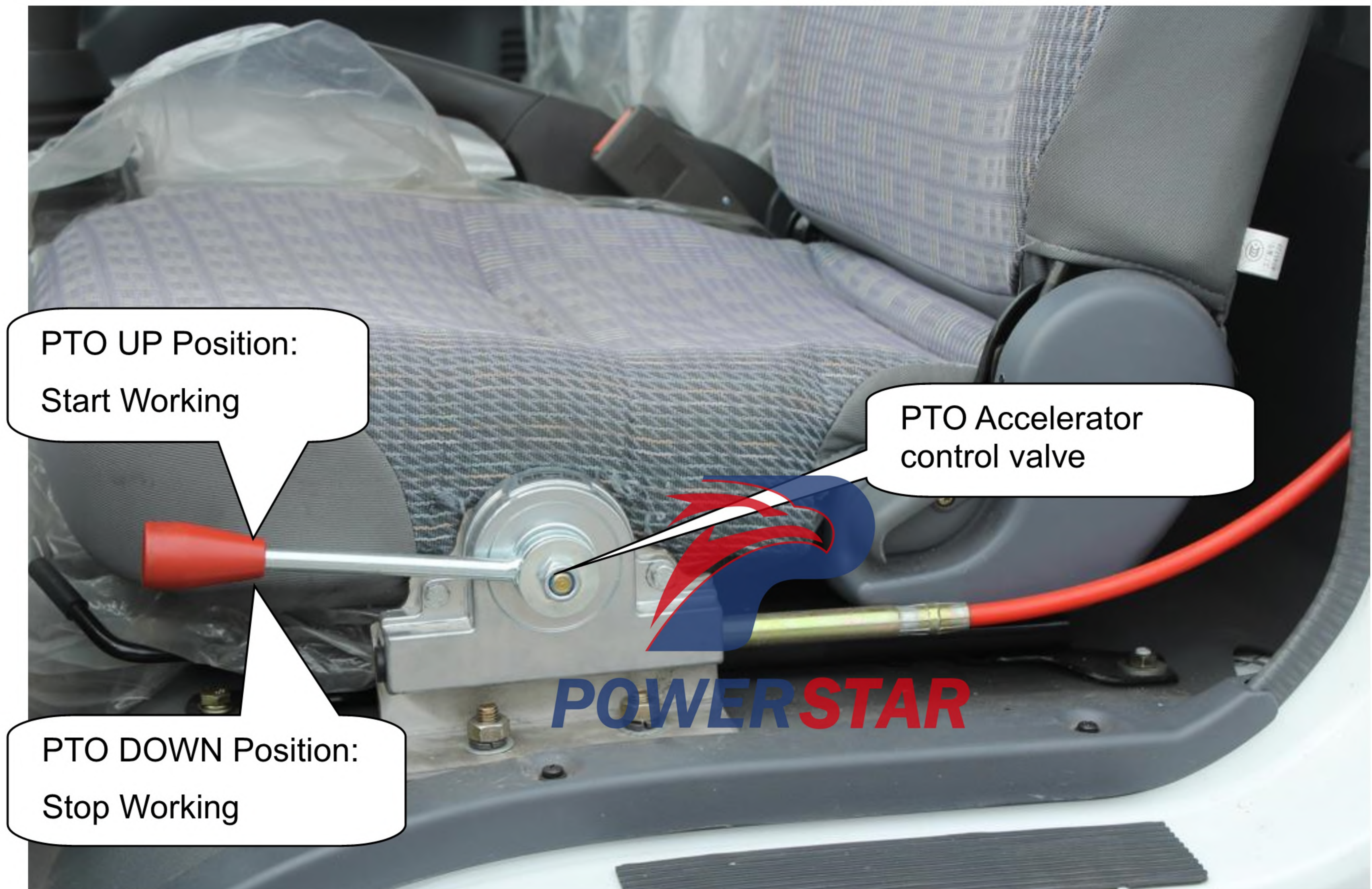
Rear of the Tank: Climbing ladder, water spraying monitor and nozzles.



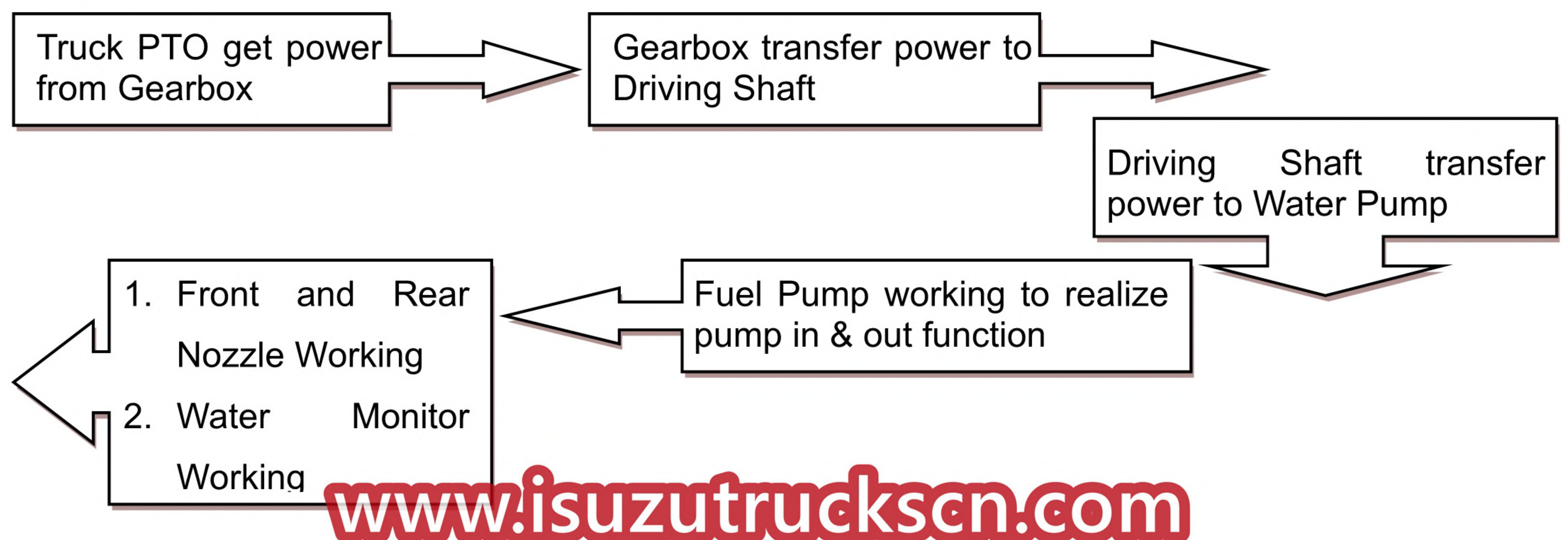
Right side of the Tank (Passenger side): Water pump system, pipeline storage box and Safety fence



In cabin: Pipeline storage box and Water pump system



Simple working principle guidance:



ii ,Water Pipeline Structure Components

Pipeline is to water truck what blood vessel is to human body! The water tanker trucks pipeline system is simple but very practical. One main pipeline connect with water tank and water pump, which means there are two ways to collection water: firstly is pumping water directly through 65SZB-40/45 stainless steel water pump; secondly is collection water from top Manhole.

At side of the truck which installed China brand water pump, also DN65 inlet water valve and outlet water valve (Pipeline system as below):

At rear of the truck which installed water platform, totally four water spraying nozzles & one water spraying monitor, also one reserved pipeline connector for necessary (Details showing as below):



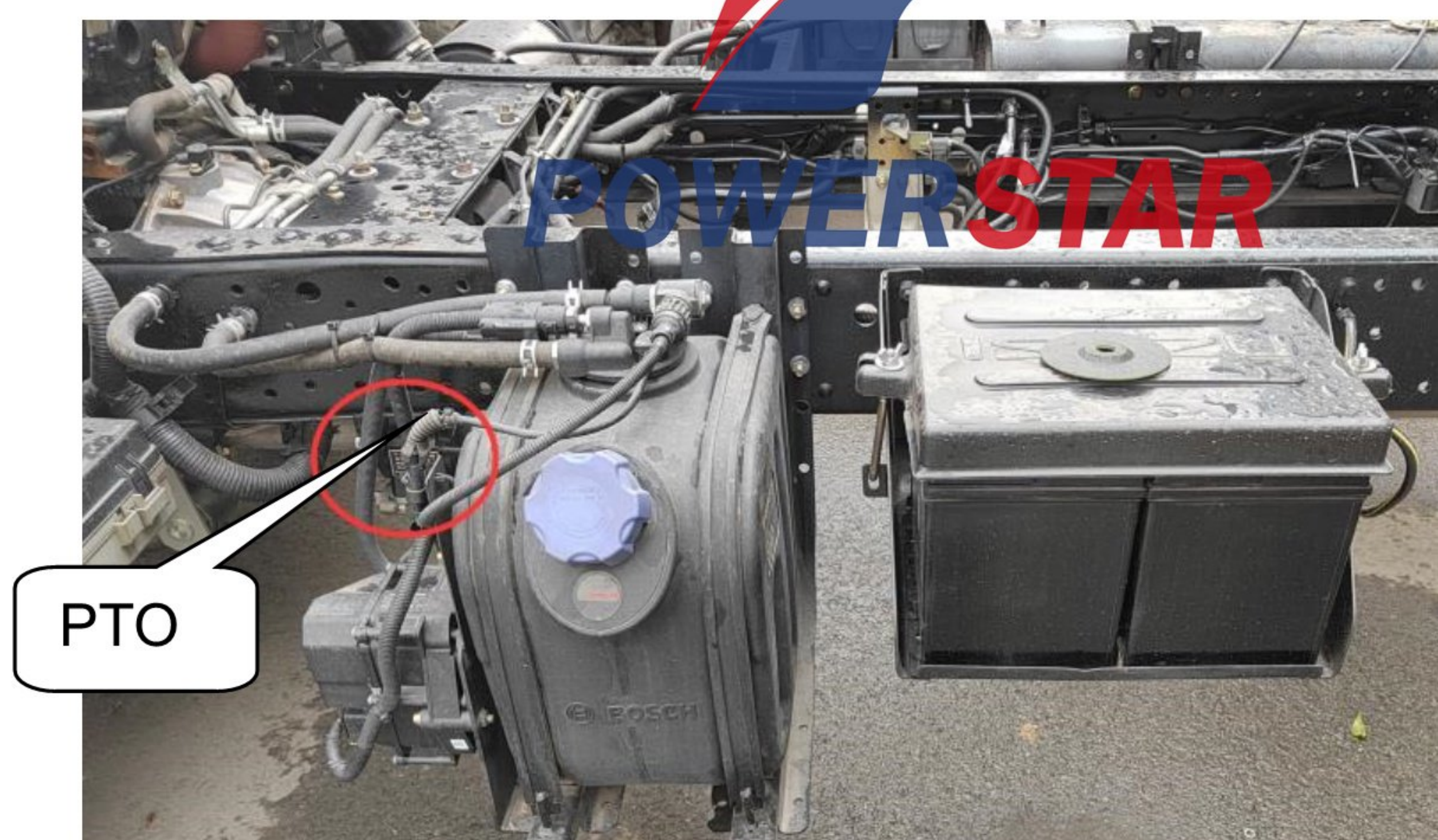
(Rear View for ISUZU 6000Liters water tank truck)

Chapter 4, Water Tanker Truck Working Principles

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

i ,How are the water trucks working?

The ISUZU 4*2 Potable Water Tanker Truck makes use of the special power take off (PTO) to get power from the engine, and then transfer the power to the Water Pump via axle so to rotate the stainless steel water pump. The pump, pipelines valves and joints consist of the pipeline system. Turn on/off valves through the regulated program, the pump can absorb water into the tank from the source or exhaust the water inside the tank through the set lines, and then come to all function.



ii ,What is the main component for truck?

The water tanker truck is refitted based on the original ISUZU LHD 4*2 chassis. The refit part includes water carrying assembly, actuator device, pipeline system and operation system.

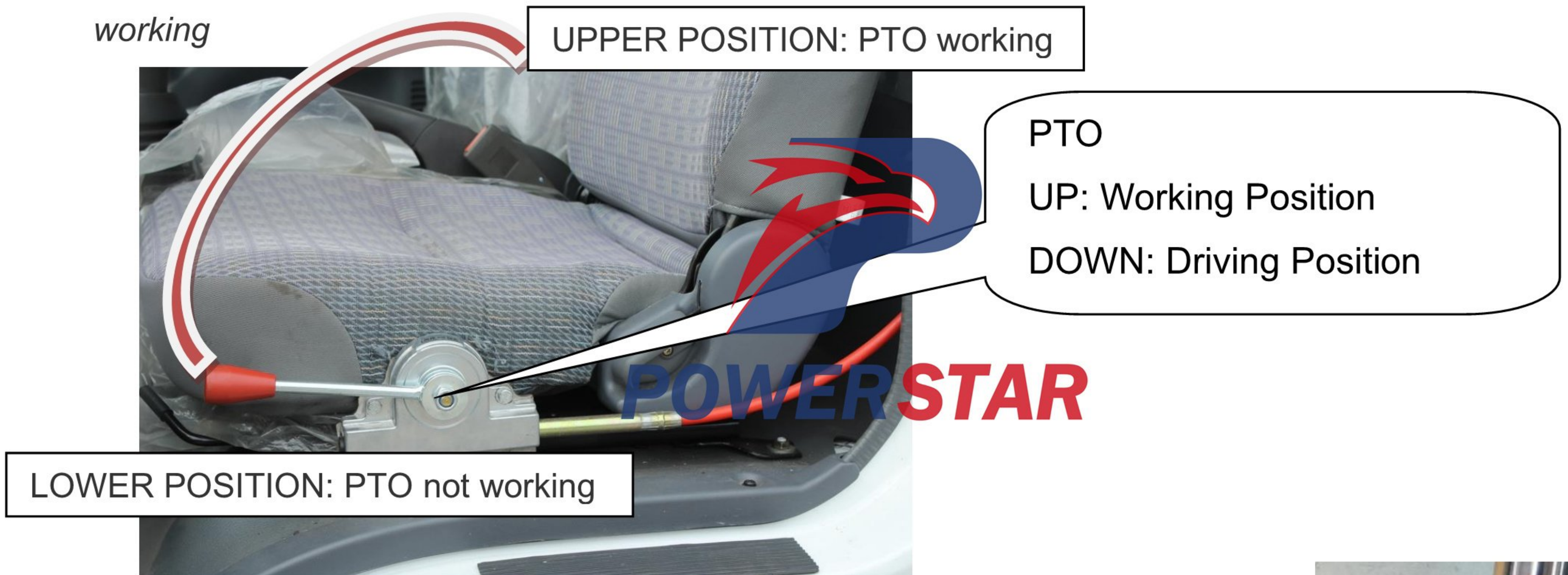
- Water carrying assembly: A food grade 304-2B stainless steel container shaped ellipse, which is used to storage, transportation and spraying water.
- Actuator device: includes power take off, driving shaft, stainless steel water pump, etc., which

can pass the power from the chassis to the pump.

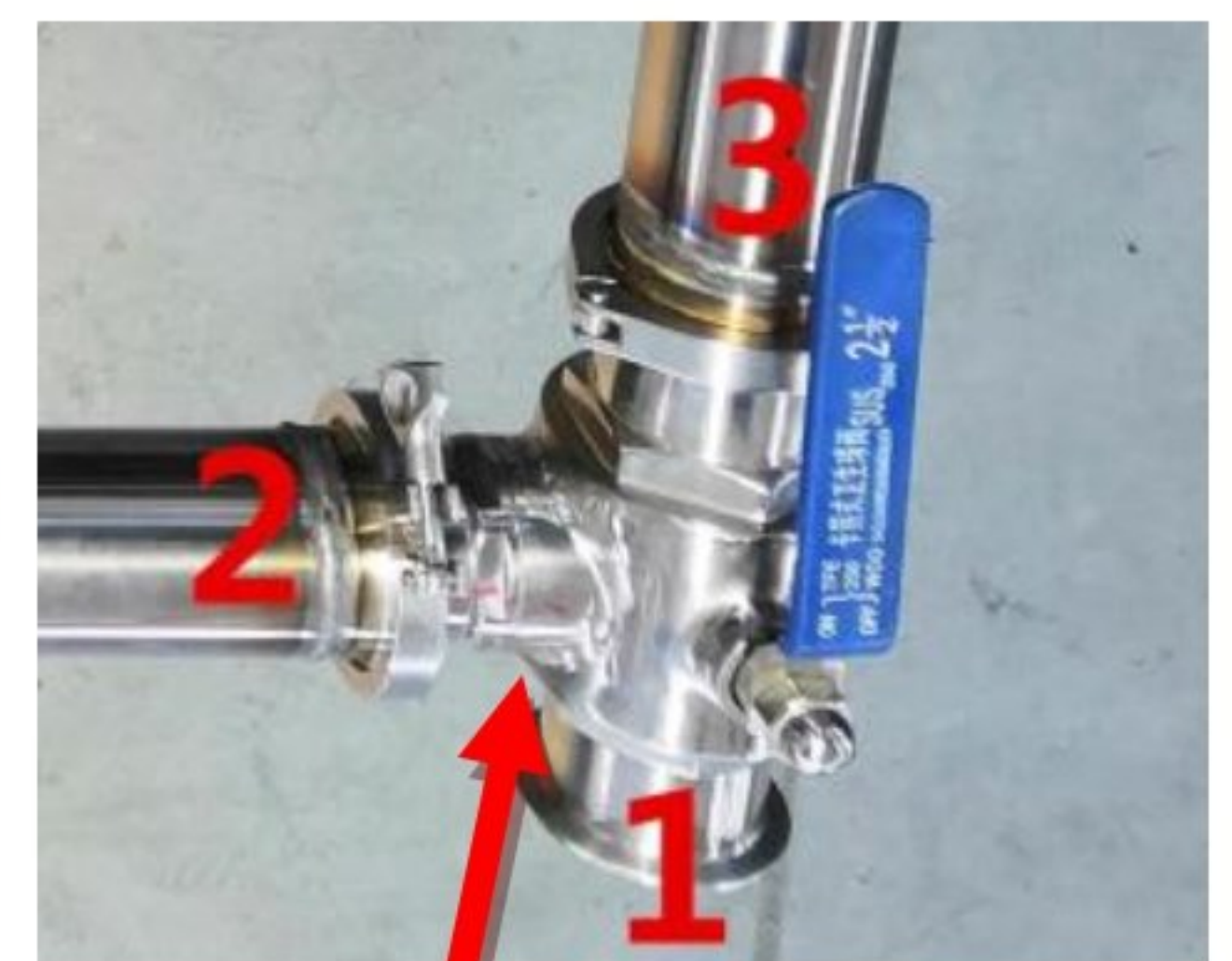
- Pipeline system helps come to all special functions, including side and rear water spraying.
- Operation system: helps come to all special functions' convert.

iii, How to operate water trucks?. (Very Important)

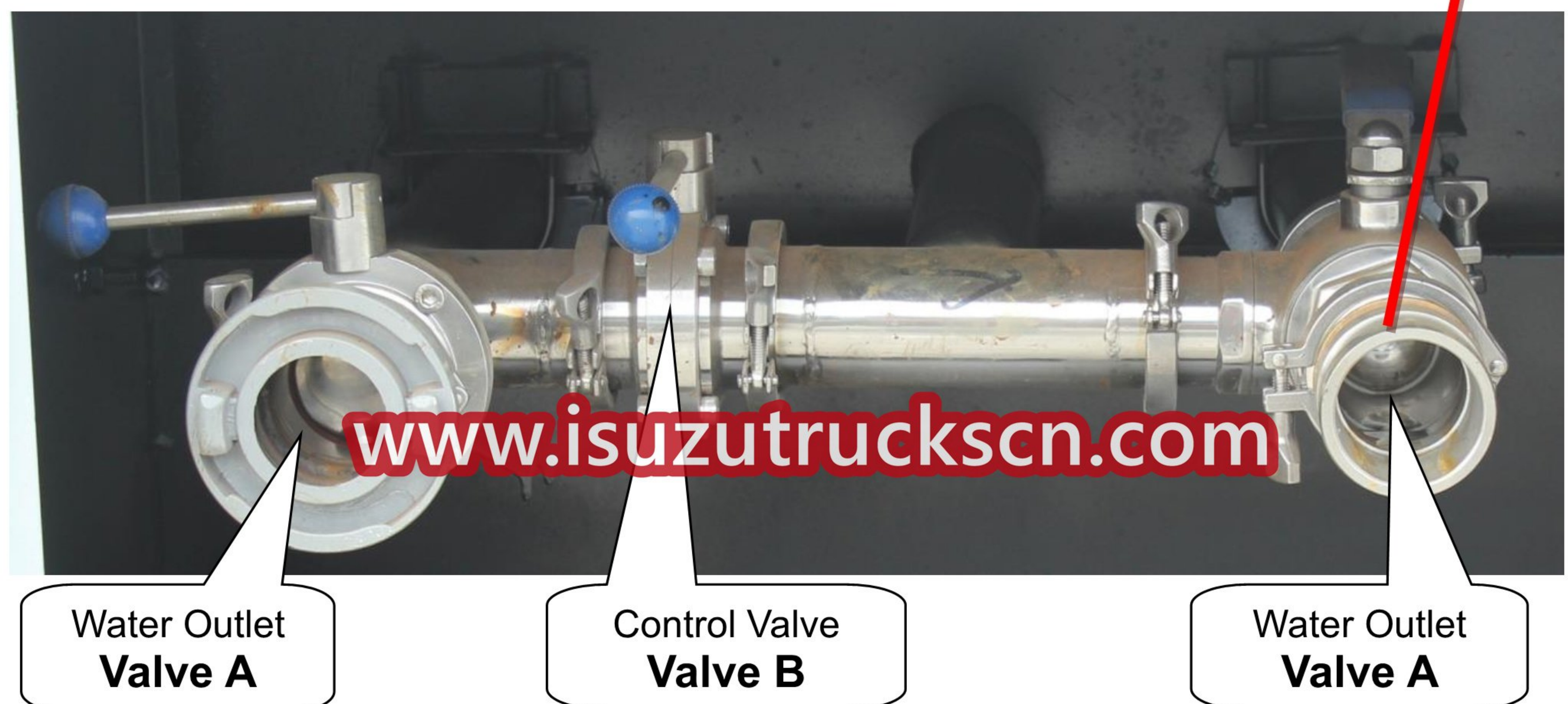
1. Start the truck engine, Press the clutch and Pull Out the PTO button, the water truck start working



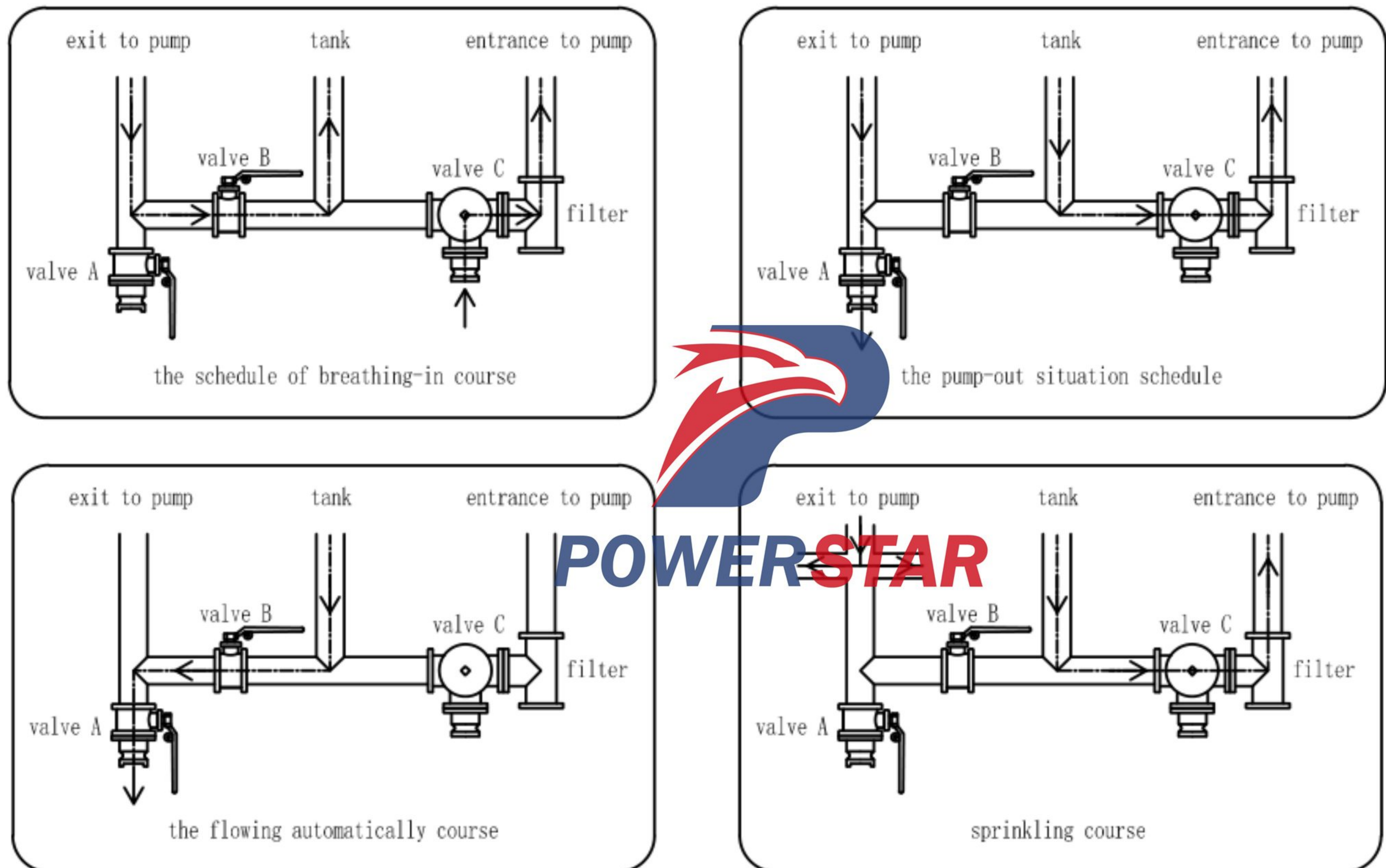
**Please Note: When wrench is PARALLEL with pipeline, the pipe flow;
When wrench is VERTICAL with pipeline, the pipe closed.**



2. Refer to Chapter 3 and get more information about valves structure component.

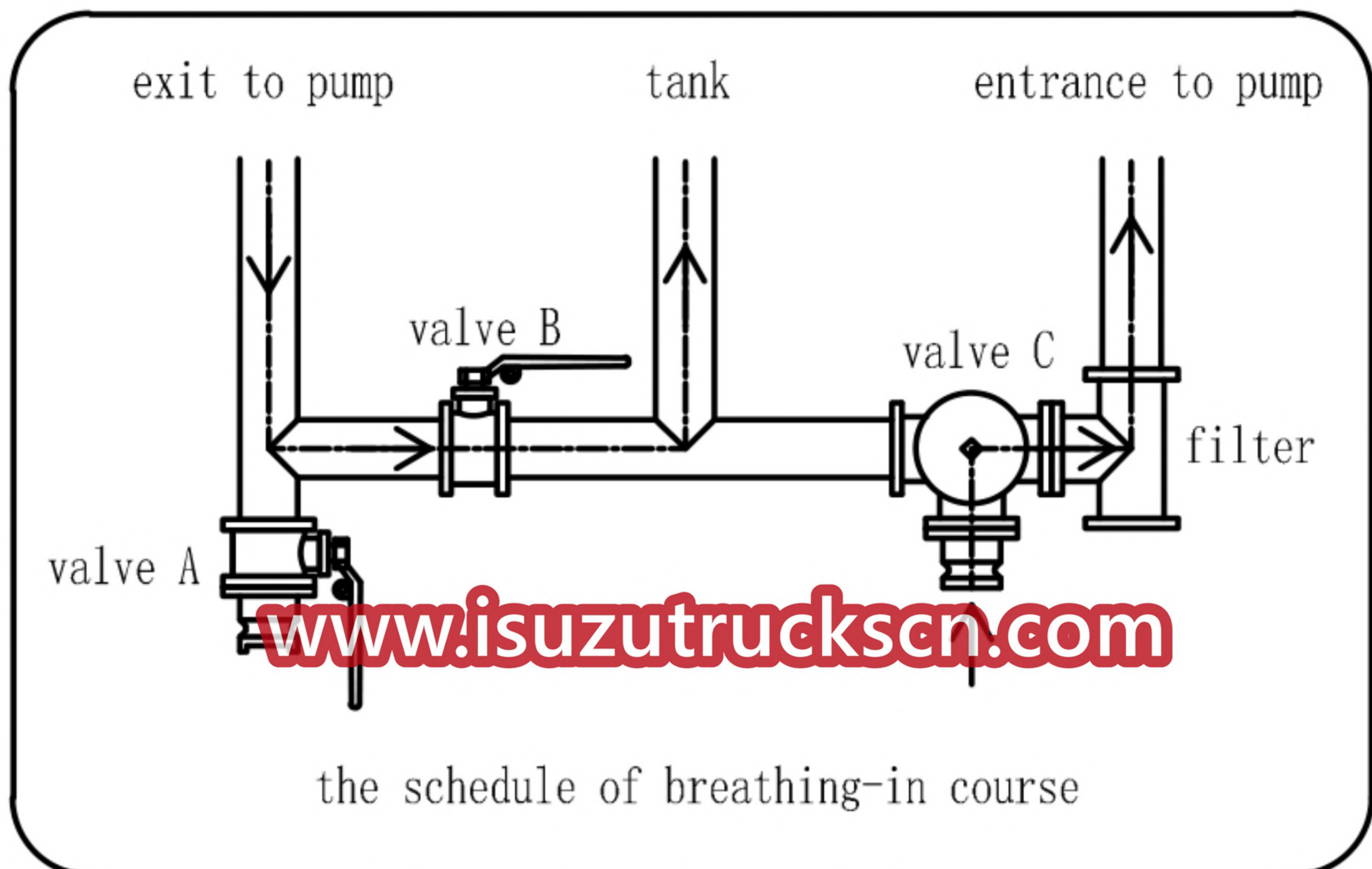
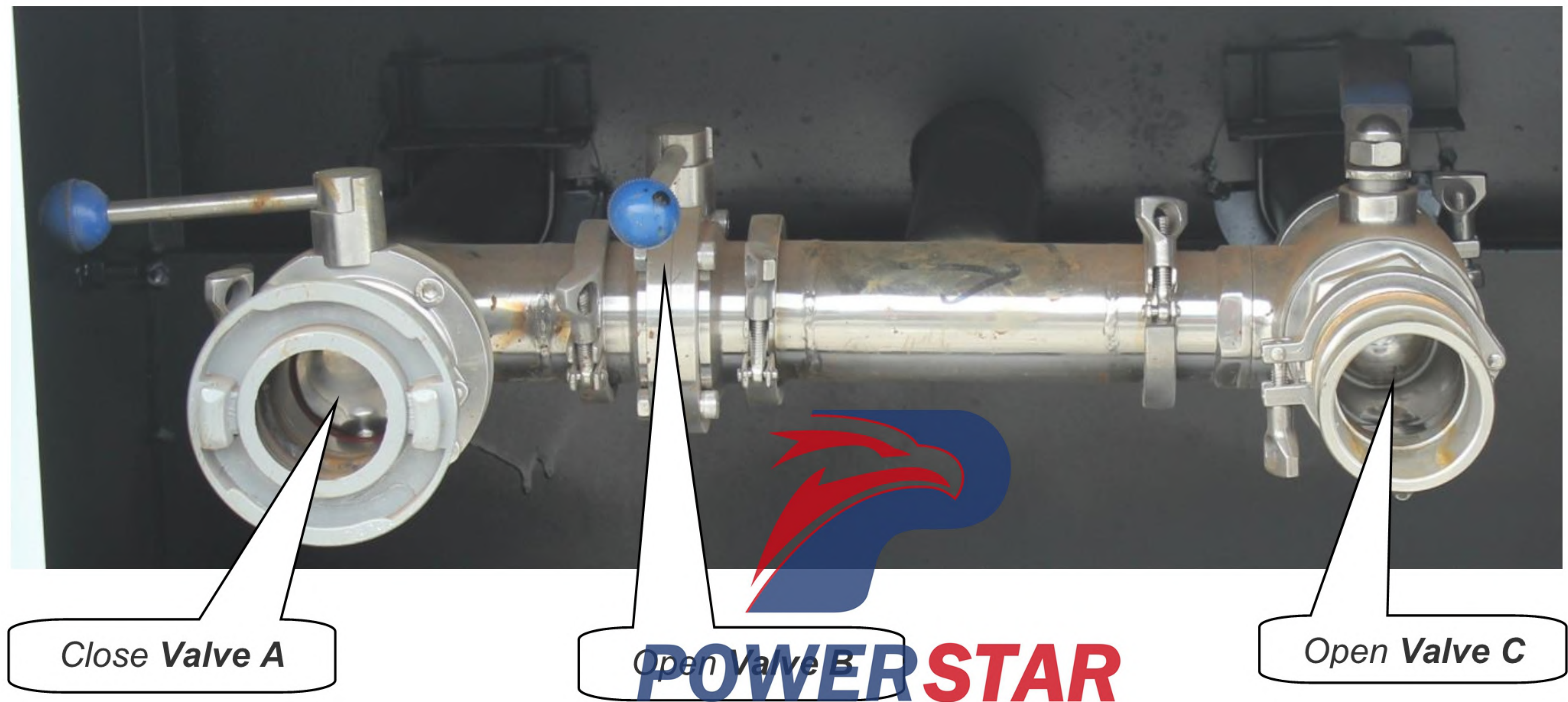


3. Read the below Operation Chart carefully before any operation:



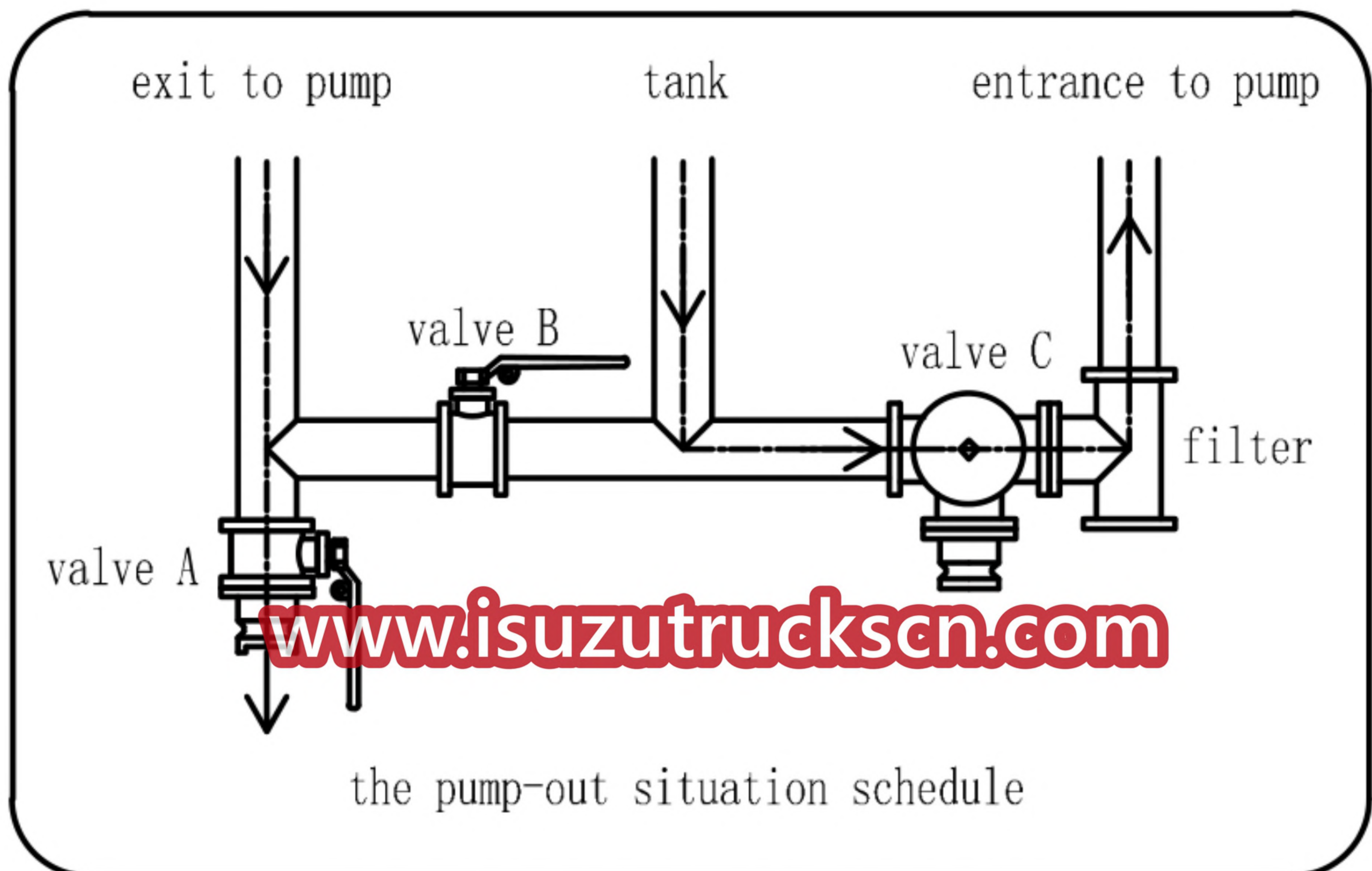
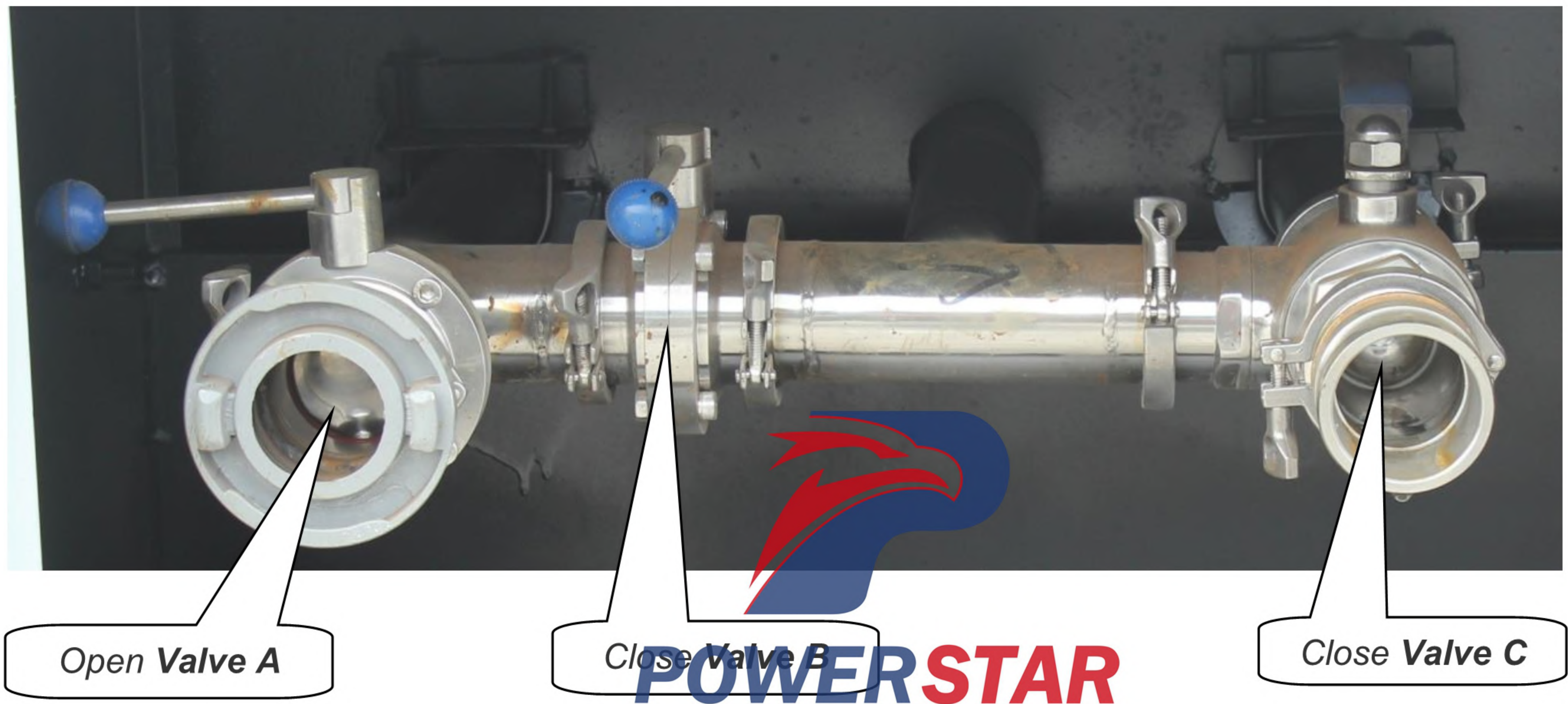
- Before operating valves you should operating the power take off (PTO), the truck transmission gearbox should be in neutral, when the engine is idle, step on the clutch pedal and turn the PTO switch on, and then release the clutch pedal slowly. The water pump will start operating.
- If this is **First Time to suction water**: You should injection at least 20Liters water into the water tank. Open the manhole cover and connect the tubes, then operation the Power Take Off and make pump working. Nearly 2 minutes later, when air exhaust out, the pump can start suction water normally.
- Special function operation showing as below, which mainly has following four functions:

- **Water pumping into the tank:** close **Valve A**, open **Valve B**, **Valve C** (Open 1 & 3, Close 2), connect the pipeline with Valve C, the other side of pipeline be in potable water storage box. then the pump start working and water go into the tank through Valve C, details showing as below chart.



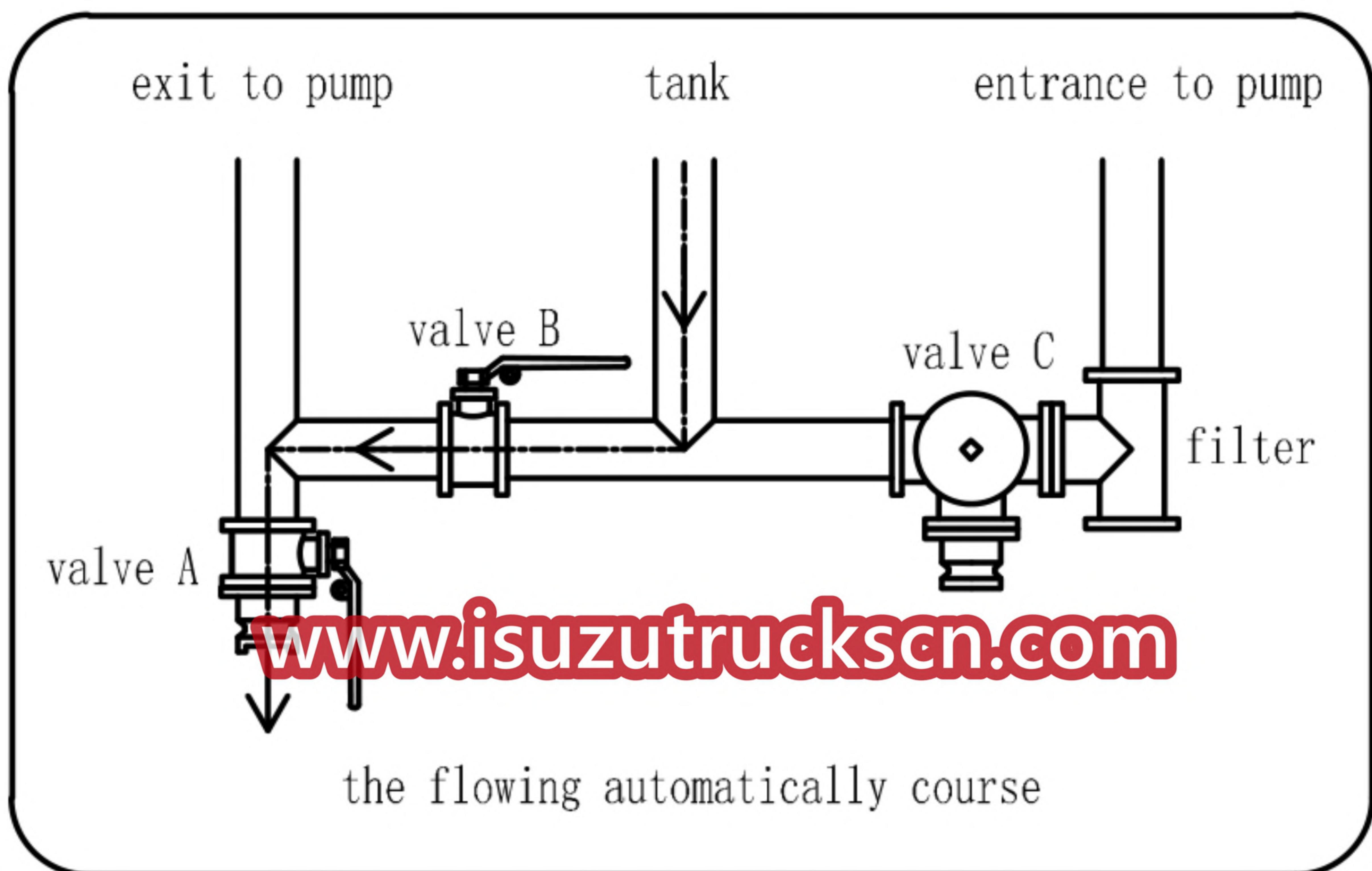
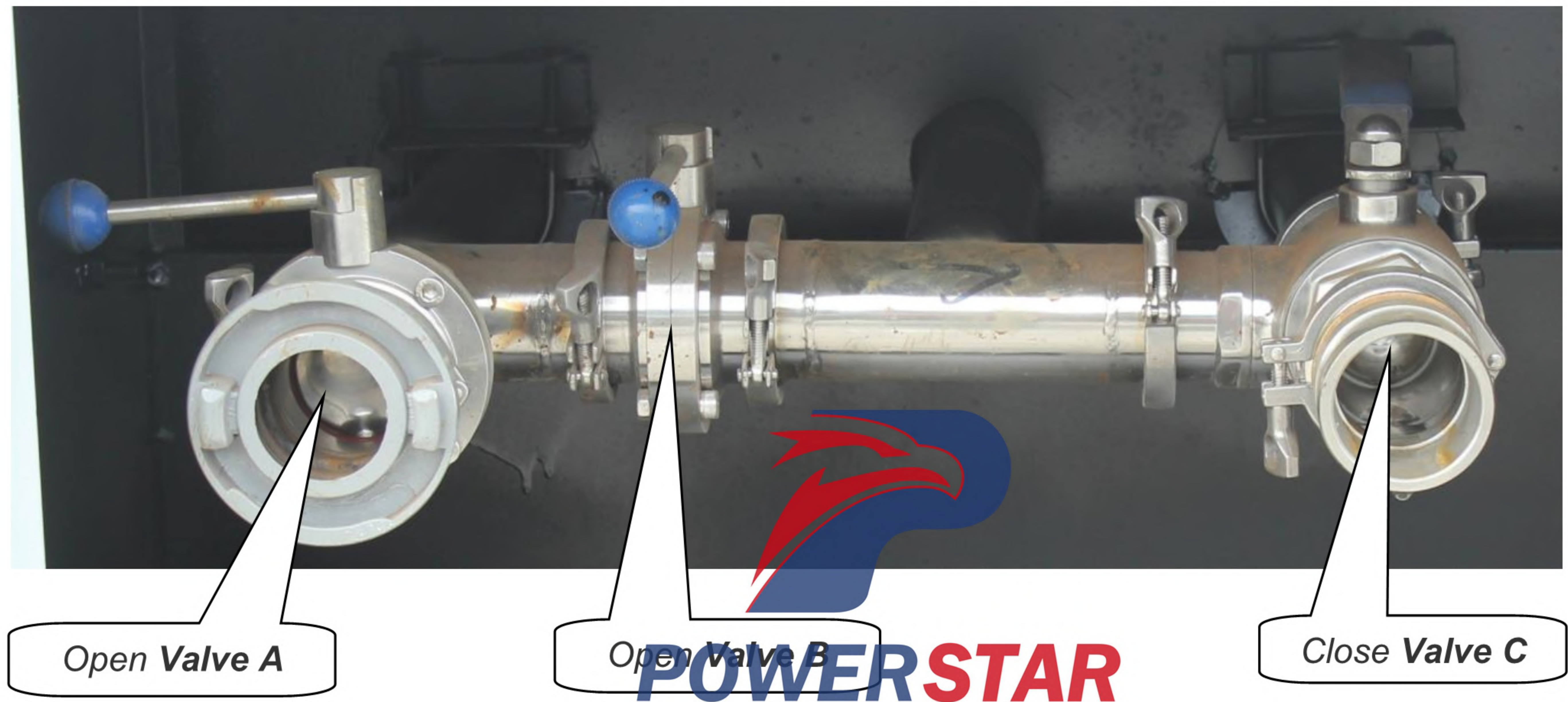
(Pump-In Process Working principle)

- **Water pumping out of the tank:** open **Valve A**, close **Valve B**, **Valve C** (Open 2 & 3, Close 1), then the pump start working and water go out of the tank through Outlet Valve A, details showing as below chart.



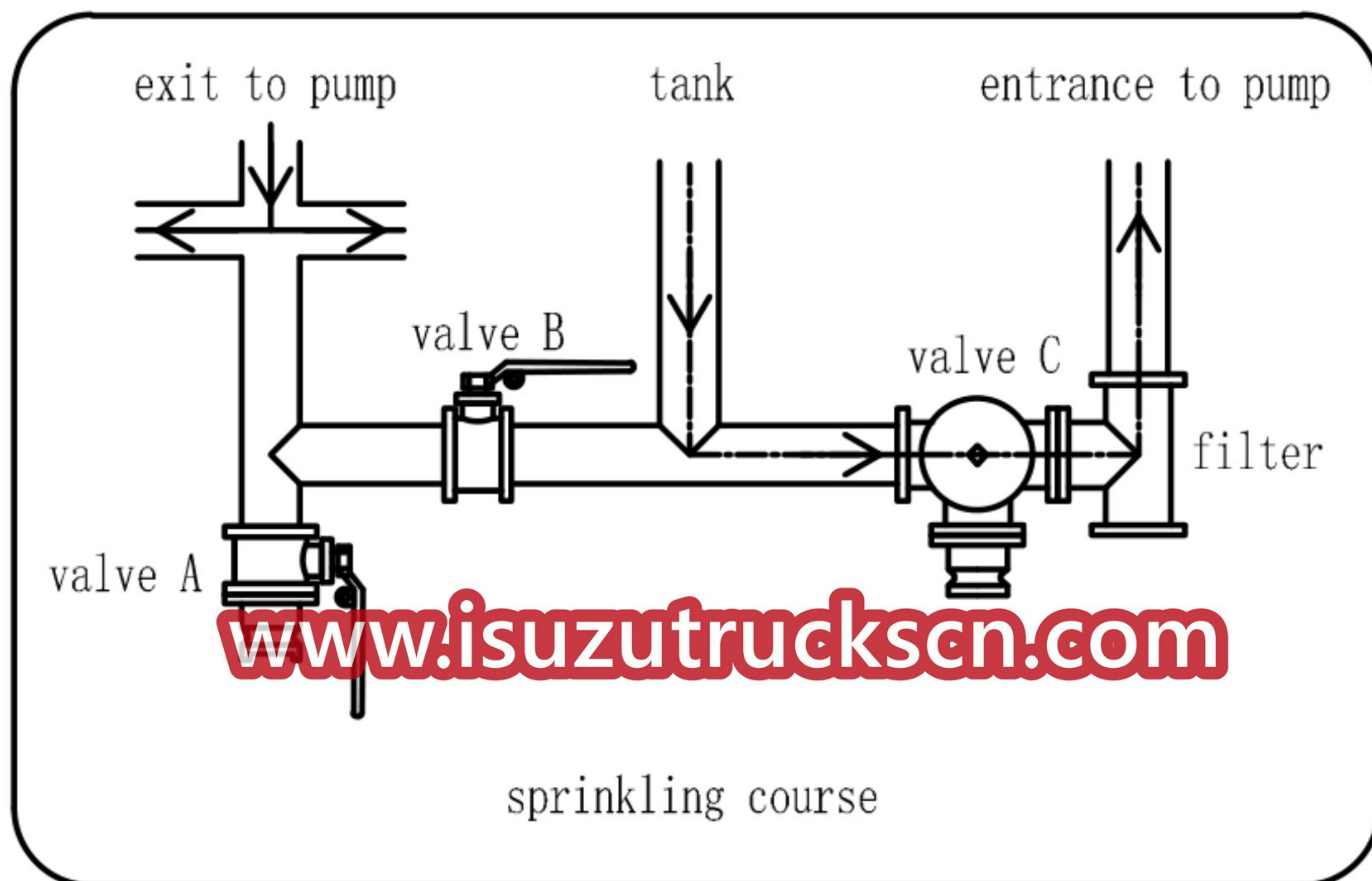
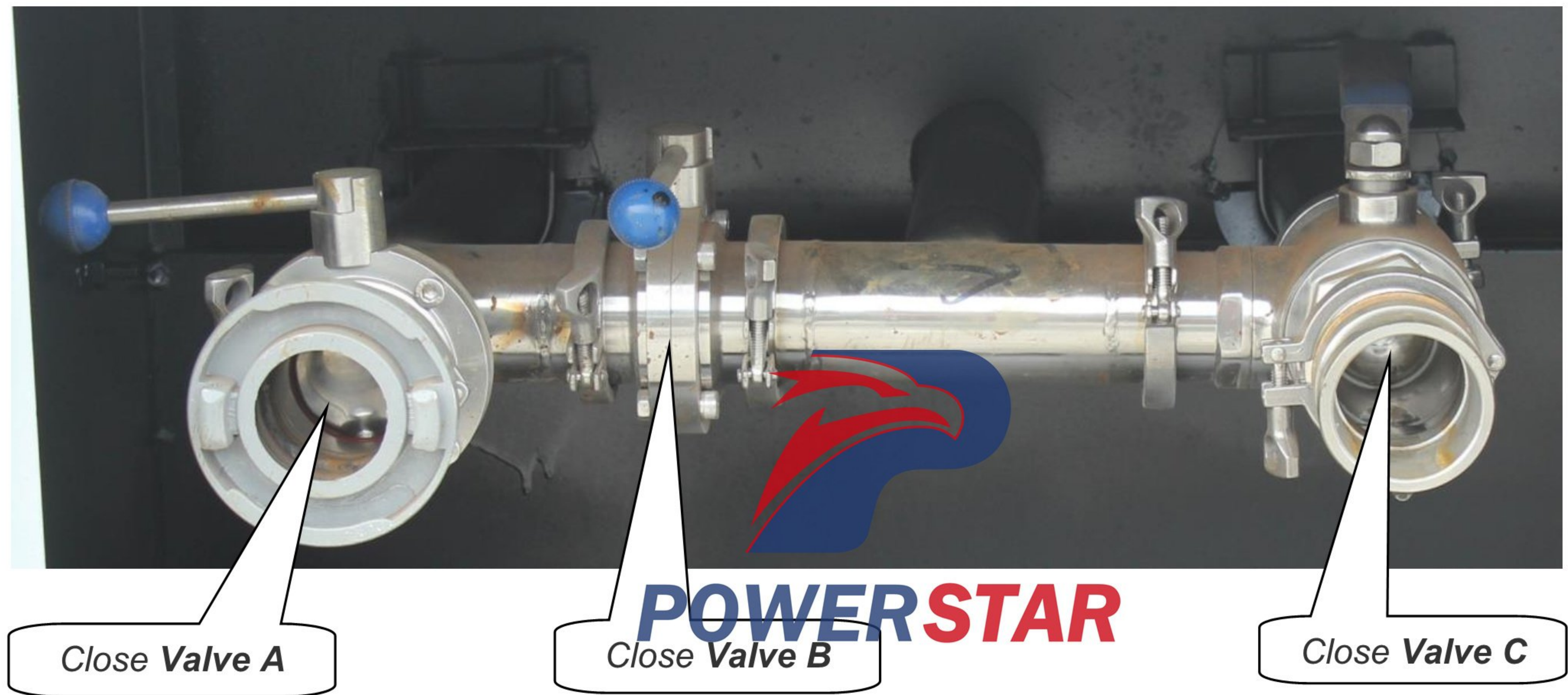
(Pump-Out Process Working principle)

- **Water flowing out of the tank automatically (Water Pump does not work):** Valve C (Close 1 & 2 & 3), open Valve A & Valve B, then the water flow out of the tank automatically by self-gravity, details showing as below chart.



(Flowing Automatically Process Working principle)

- **Water pumping out of the tank (Pump out from rear Valves):** close Valve A, Valve B & Valve C (Close1, Open 2 & 3),, then the pump start working and water pumping out of the tank, and finally spraying through rear Valves 1~6 (The Valves 1~6 can be controlled separated), details showing as below chart.

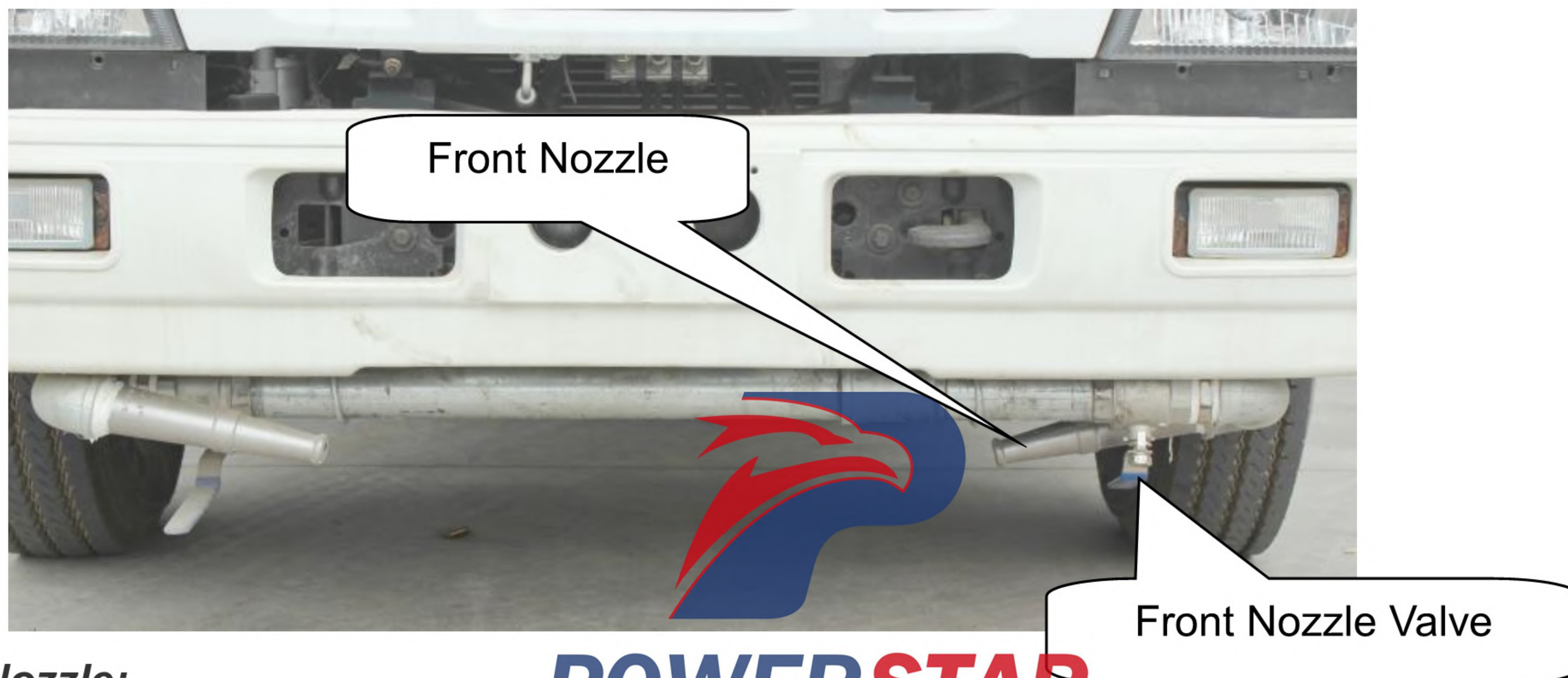


(Pump-Out Process Working principle)

Make sure at least one Nozzle keeps open before operating the sprinkling course.

PLEASE NOTE: Each Nozzle Has One Control Valve for Easy Operation

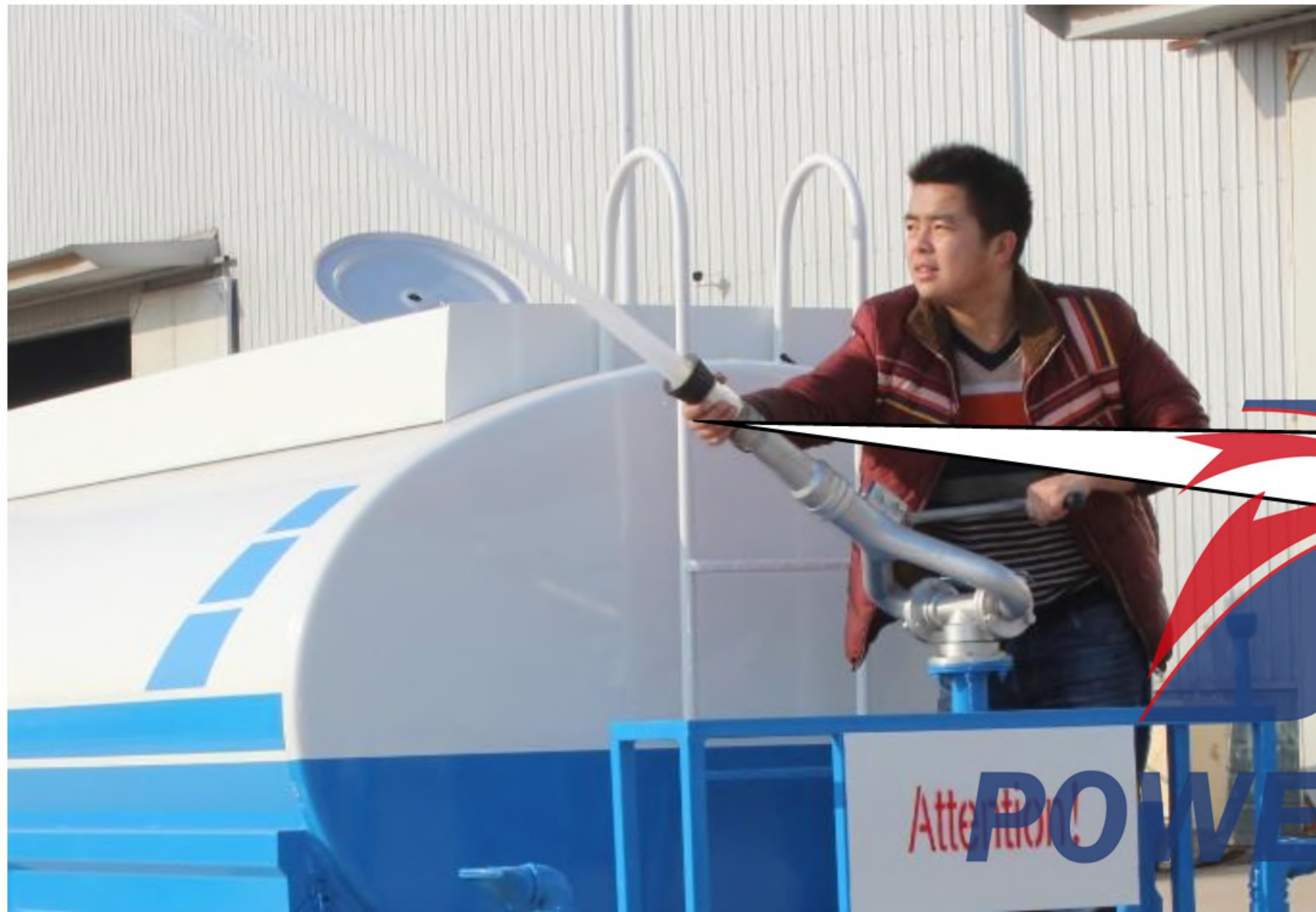
Front Nozzle:



Rear Nozzle:



Rear Spraying Monitor: Rotation the front control valve to choose water spraying forms



Water Spraying Form One:
Directly spraying



Water Spraying Form Two:
Wide-Angle spraying

Chapter 5, Others for Attention

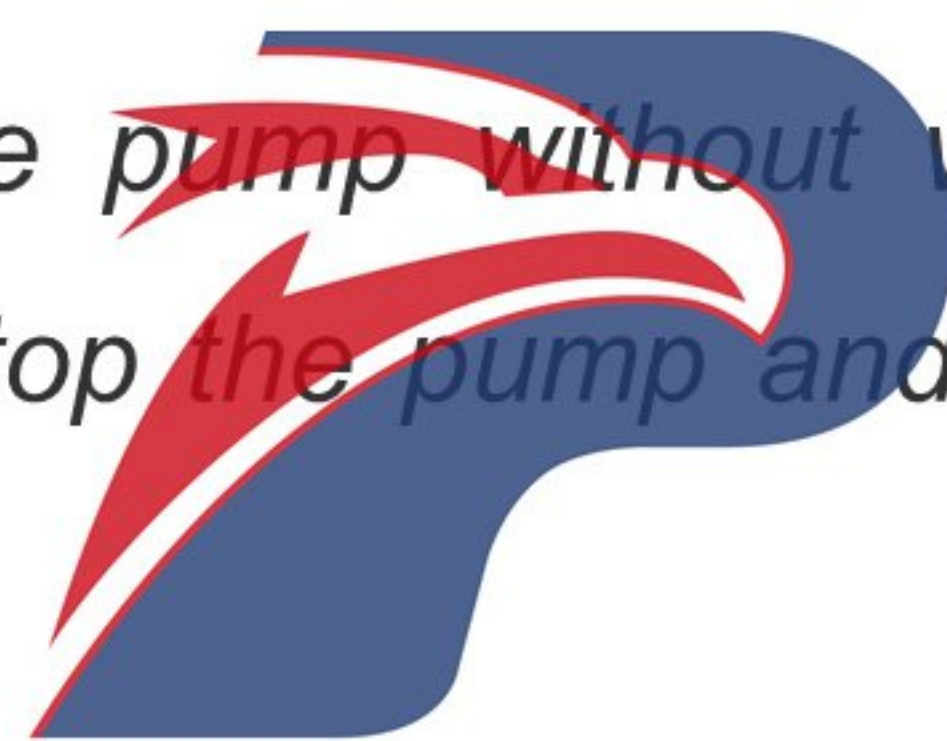
After carefully reading the above information, you must be well known how to use the ISUZU 4*2 Water Tanker Truck; below show some parts you need to pay attention while using the truck.

i ,Precautions for Use

➤ Please abide strictly by the following manual:

1. *Potable Water Truck Owner's Manual*

➤ It is strictly forbidden to operate the pump without water. When the pump working over 2 minutes without water, you should stop the pump and carefully check everything and find the reason.



➤ It is strictly forbidden to operate the Power Take Off (PTO) under the condition of the clutch not separation (Not step the clutch pedal). When release the clutch, you should slowly. The operation of the PTO must only on the condition of neutral for clutch.

➤ It is better not to do Half-Load transportation.

➤ When operating the Three-Way Valves (Valve A, B, C & others), it is not good to overexert, for overexert will influence the valve ball's leakproofness. The open & close for Three-Way Valves should completely, and strictly forbidden working when valves not operated completely.

ii ,Maintenance

➤ The maintenance of the Water Pump refer to the "*Potable Water Truck Owner's Manual*".

➤ When the temperature is below 0 °C, the storage water inside of the Pump, Pipeline and Tank should exhaust out to protect the parts from damage. If unused for a long time, please also exhaust out the water. When use truck again after long time, you should carefully check every parts.

- *It should be checked all coupling and lubrication at fixed period to exclude the tight parts, and make sure all parts in good lubrication condition.*
- *Both the Water Pump, PTO, Transmission Gearbox should be carefully washed, checked and maintenance every year.*
- *The strainer inside filter should be washed every time after use it.*

iii, Spare Parts List

Item	Products Name	Quantity
1	3 m long Pipeline	2 units
2	Standard Tools for chassis	1 set
3	Three-Way Valve Wrench	1 unit