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CS TRUCKS HOWO Aircraft Refueling Truck

User's Manual



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Preface

Thank you for purchasing CS GROUP products. For better using your SINOTRUK HOWO aircraft refueling 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 fuel 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 operation, the skilled operator should carefully read the contents of this manual.

After master the truck performance characteristics, methods of operation and precautions, then could start to operate this fuel tanker 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

*CS TRUCKS Fuel Tanker Truck based on type II HOWO 8*4 Heavy Duty LHD / RHD truck chassis, Aviation Refuel tanker capacity could up to 30,000liters, mainly used for Aircraft Fuel storage, transportation and refueling, and the working aerial can be multiple airport*

The vehicle designed to fully rely on the advantages of the original of HOWO brand, customized 8x4 driving model chassis, fully consider the product's convenience and reliability, also the chassis adopt Germany MAN technology features. The fuel tanker material is international standard Aluminum alloy, which can effective to avoid rusting. As for tank capacity, this is strictly 10CBM and safety enough to transport & refueling oil based on customer requirement.

The HOWO HW76 classical LHD 8x4 Aircraft Refueling Truck equipped with famous China brand stainless steel fuel pump ZH150-120-HY model, front cabinet with integrated control system, Euro standard Manhole, top & side & rear guard plate, safety fuel inlet & outlet valves with flowmeter, also equipped with durable filter for safety usage, specialized electric 20m hose reel with refueling gun, with fire extinguisher, all to help better use of the trucks. Cab for the single-row comfortable seat, nice driving feeling. Therefore, the vehicle is an ideal Fuel Tanker Truck mainly for Aircraft Jet Fuel transportation & refueling function.



(Preview for your HOWO 30,000L Aircraft Refueling Truck)

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Chapter 2, Main Technical Data

Basic parameter:

Items		HOWO LHD 30,000L Aircraft Refueling Truck
SIZE	Outer Dimension（L×W×H）(mm)	12500*2550*3950
	Wheelbase (mm)	1800+4625+1350
Kerb Weight（kg）		10800
GEAR	Gearbox brand	HOWO HW19710 brand
	Model	10-shift gearbox
	Type	Manual model, 10F & 2R
Cab capacity（includes driver）		2
ENGIN	Brand	HOWO
	Model	WD615.47
	Type	Six cylinder inline, four stroke, water-cool, turbocharged Inter-cooling, diesel
	Rating Power（kW/HP）	273 / 371

Note: 1. We keep the right to revise the parameters on the list above.

Fuel Tanker basic parameter list

Items			Parameter
Fuel tanker	Capacity (Liters)		30,000
	Material		Standard Aluminum Alloy 6mm
	Special Equipment	Control System	Integrated control box with aluminum door
		Filter	Durable model with efficiently flow rate 2500L/min
		Refueling Hose	20m electric hose reel pipes and gun
		Valves	Equipped on side of tank
		Climbing Ladder	Equipped at rear of tank
		Safety Guard	Equipped on top of tank
Fuel Pump	Model		Stainless Steel Fuel Pump ZX150-120-HY

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Chapter 3, Fuel Pump Assembly

Brief introduction of fuel pump:

HOWO fuel tanker truck use TOP Chinese brand Stainless-Steel Fuel Pump and pump model is ZX150-120-HY, which is newly produced National Patent Products which based on many years' independent developing & production of arc gear pump. Also, the pumps comply with national standards, which including speed increaser, pump body, impeller, inducer, mechanical seal, and other components. And the pump is suitable is suitable for conveying light oils such as AV Gas, AG Kerosene, with temperature range from -40℃ to 80℃. Advanced features for the pump showing as below: Simple Structure, Smooth Operation, High Efficiency and Reliable Operation.

Below is overview for combined fuel pump picture for reference:



Name	**Fuel Pump**
Model	**ZX150-120-HY**
Material	**Stainless steel fuel pump**
Fuel Flow Rate (m^3 /h)	**150**
Working Distance (m)	**120**
Revolving Speed (r/min)	**1190**
Rated Power (kw)	**67**
Self-Suction Height (m)	**6**
Self-Suction Time (s)	**⩽240/4m**
Suitable Medium	**Aircraft Fuel**

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How to Installation & Maintenance stainless steel fuel pump:

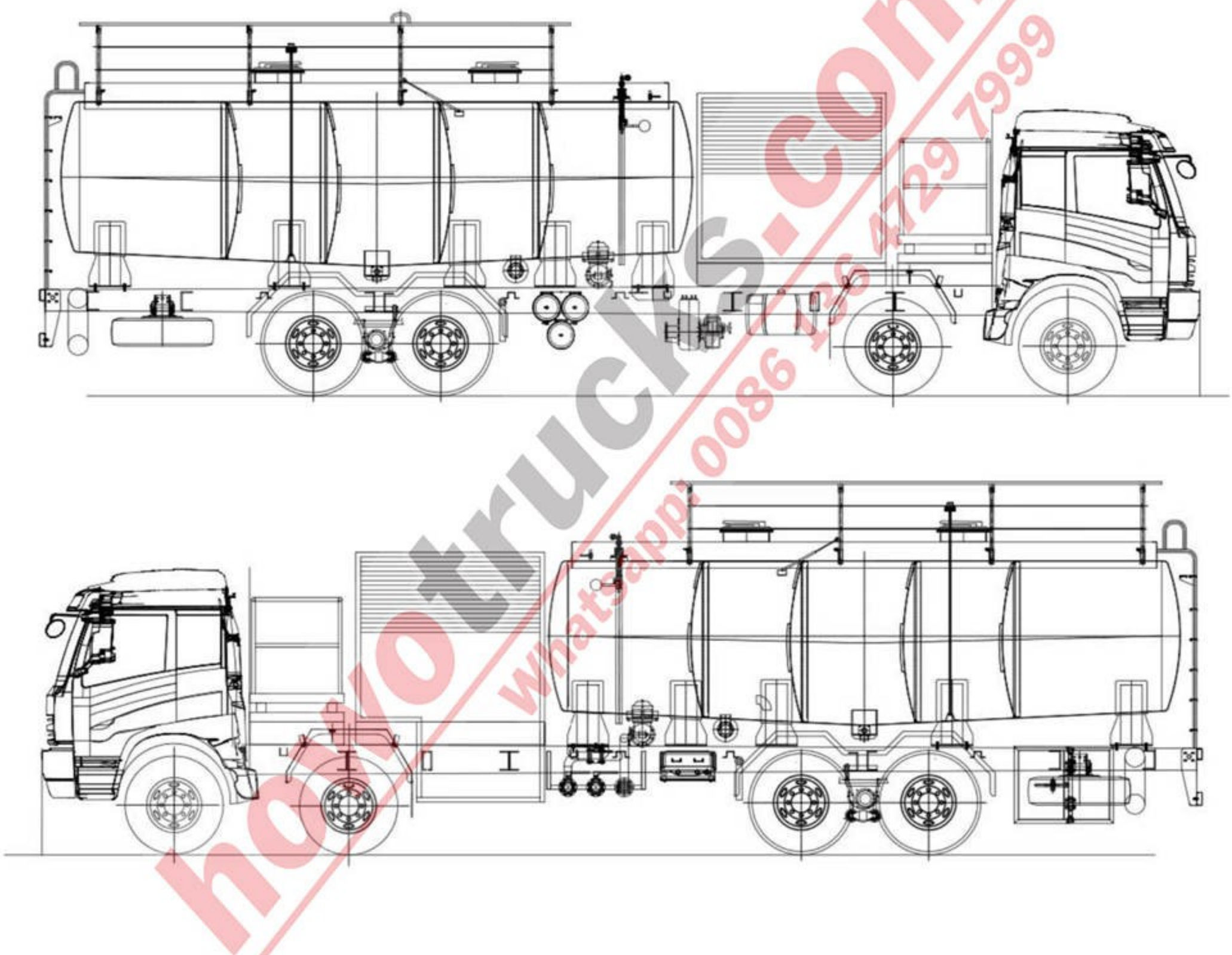
Items	Notification	
1	Usage	1. Installed on Fuel Tanker Truck 2. Installed on Fuel Storage House
2	What need to pay attention while installed on fuel tanker truck	1. The pump get power from PTO 2. The pump is installed in hanging bracket under chassis frame 3. Pumping-In pipeline should match with pump hole, and max. suction height less than 7m 4. On working condition, the pressure gauge less than 0.35MPa
3	Before start working	1. Test the shaft valve direction of rotation 2. Test the Fittings and Flange sealing 3. Test all valves
4	Cleaning suggestion	1. Washing the filter have a month, so to avoid any block 2. Adjust the discharging pressure of safety valve
5	Pump revolution speed suggestion	The pump revolution speed should be from LOW to HIGH, and speed up slowly. Not allowed any over revolution speed or any instability speed
6	Watching pressure gauge & vacuum gauge while pump working	1. When pressure gauge higher, means the lifting is over height or the pumping-out pipeline is blocked 2. When vacuum gauge high, means the suction is over distance or the pumping-in pipeline is blocked
7	Maintenance for cold weather and not working	Discharging all storage inside pump, which can avoid frost crack
8	Maintenance for long-term use	Treated with anti-rust processing and keeping properly
9	Maintenance for bearings	Filling calcium grease every half year
10	Pipeline installation suggestion	The pipeline should be installed at proper height and position
11	Stop working suggestion	When stop the truck, firstly disconnect the PTO handle, secondly close the inlet & outlet valve of the fuel pump
12	Start working suggestion	1. Press clutch pedal and pull out the PTO 2. When no medium inside the fuel pump, strictly forbidden starting

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Chapter 4, Aircraft Refueling Truck Structure Components

i ,Fuel Tanker Structure Components

Overview for HOWO 8x4 aircraft refueling tanker truck technical drawing:



Above drawing show that the aircraft refueling truck uses an HOWO HW76 classical LHD 8x4 truck chassis, with an aluminum alloy fuel tank. The vehicle comprises a ***Chassis System, Tank Assembly, Bottom Filling System, Level Measurement, Aircraft Refueling Control System,*** *and* ***Sampling System****. It features pumping, pressure regulation, purification, and metering functions, making it a specialized vehicle capable of independently, quickly, and safely refueling and pumping fuel from aircraft on the ground. The piping is made of aluminum alloy and includes a stainless-steel fuel pump and 20m refueling hose reel with gun. The control cabinet has a roller*

shutter door for both aesthetics and safety. The aircraft-specific fuel in the tank is filtered and metered before being injected into the aircraft fuel tank or other receiving equipment via a gravity refueling hose reel. A HYJ-63X connector valve is located on the left side of the truck for convenient bottom filling, and a ladder at the rear facilitates access to and from the tank. And the whole truck equipped with Deadman control system, with the pipe pressure control valve, full sets gauge device. Customized to be equipped with hydraulic working platform, matched with 2 sets 4m DN65 hose reel and stainless-steel connector. All guarantee truck working efficiently in Africa for aircraft refueling process.



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▶ Tank Assembly:

The aircraft fuel tank mainly consists of an Aluminum Alloy tank body， efficiently volume can be up to 30000Liters, baffles, manholes and European standard manhole covers, bottom valves, electronic level alarms, stainless steel float level gauges, enclosures, subframes, movable guardrails, and a cannon barrel.

The tank head has a wall thickness of 6mm, and the tank body has a wall thickness of 6mm. The cross-section is square to round, and it is welded from high-quality aluminum alloy plates. The tank body is embedded in the upper and lower connecting plates of the chassis beam, resulting in a robust structure. The tank is equipped with baffles inside to reduce fluid fluctuations during vehicle acceleration and deceleration. The top of the tank has a protective plate and a water guide pipe, as well as a European standard manhole (including an emergency release device and a built-in breather valve). An emergency shut-off valve is located at the bottom of the tank.

The head is a hydraulically expanded disc-shaped head, and the weld to the tank body is a butt weld.

The baffle is the same disc-shaped baffle as the head, with a thickness of 6mm. The baffle has process openings such as a 500mm diameter maintenance manhole.

An electronic level gauge is installed on the tank to monitor the amount of oil stored in the tank.

European standard manhole cover, overflow/leakage detection rod and socket, bottom loading port (connector valve HYJ-63X), emergency shut-off valve, and static discharge coil.

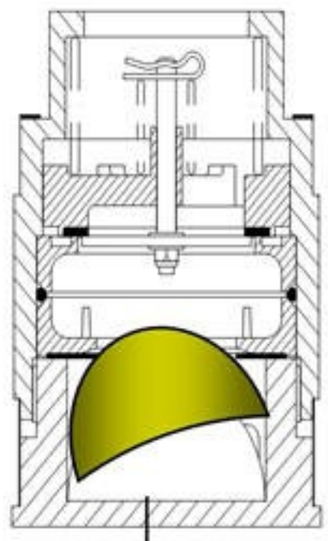
***European Standard Manhole Cover**: This manhole cover is installed on top of the aircraft fuel tank. Made of cast aluminum alloy, it features flame-retardant breathing function, emergency release device function, and all-around overflow prevention function. The manhole cover has a built-in breather valve, allowing the oil inside the tank to breathe, expanding or contracting freely with the external temperature. The breather valve pressure is set to open when the positive pressure inside the tank is 4 kPa to 7 kPa, and when the negative pressure is -2 kPa to 4 kPa. A semi-circular copper core is installed at the lower end of the built-in breather valve. Under normal circumstances, the brass semi-circular weight is at the bottom of the valve, and the breather valve is working*

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properly. When the tanker truck overturns, the brass semi-circular weight moves, sealing the valve opening and ensuring that the oil inside the tank does not leak out. See the diagram below.

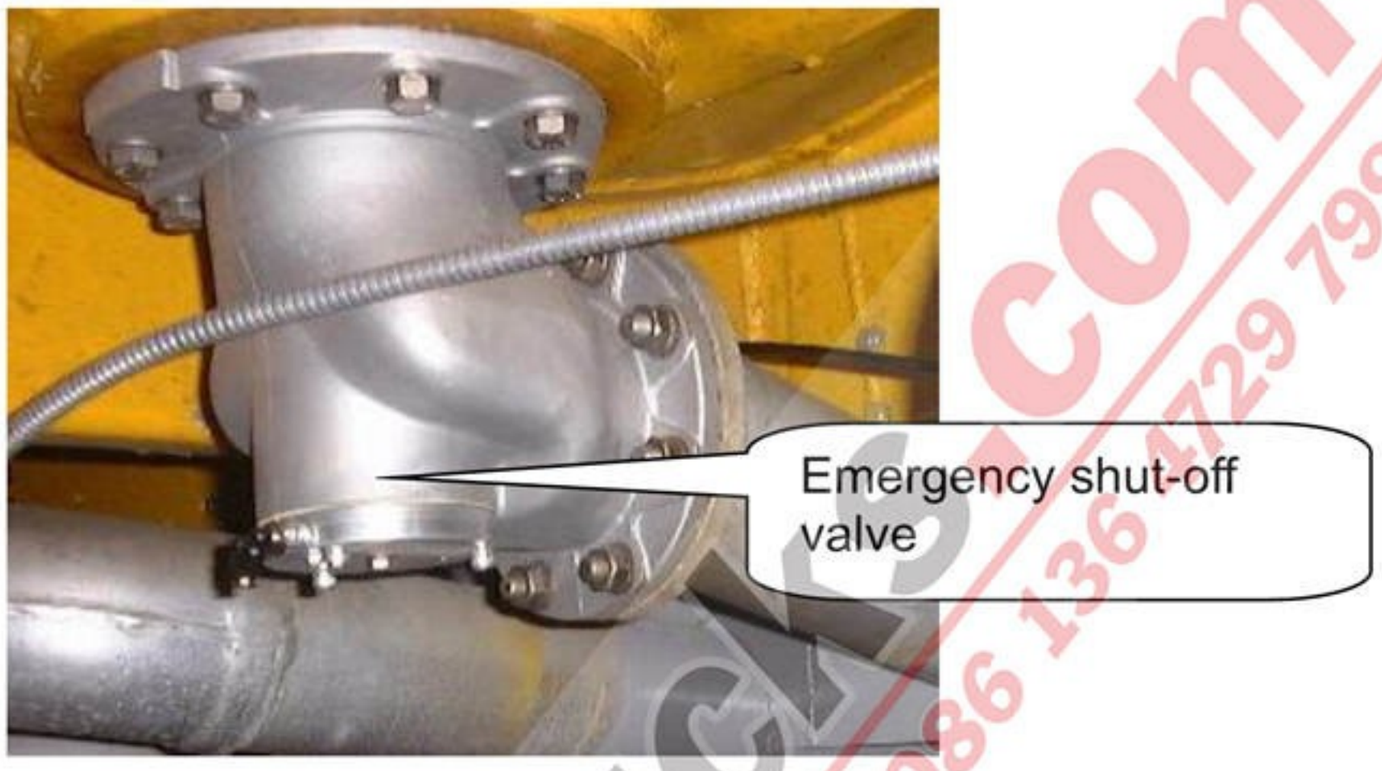






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***Emergency shut-off valve (bottom valve)**: Installed at the very bottom of the tank, made of cast aluminum, it isolates and connects the tank to external pipelines. When the bottom valve is subjected to severe impact, the shearing mechanism breaks, keeping the valve body intact. It also protects against oil leakage should the downstream pipeline be damaged by impact. Opening and closing are pneumatically controlled. The pneumatic control switch is located in the control box.*



***Overflow prevention sensor and overflow prevention socket:** The overflow prevention sensor is installed on the manhole cover on the top of the tank and is connected to the overflow prevention socket via electrical wiring to prevent oil from overflowing from the manhole cover when the tank is full during filling operations. The overflow prevention socket is installed inside the control box. The length of the overflow prevention sensor probe can be adjusted according to the actual oil volume. For a small adjustment, it can be adjusted up or down by about 40mm by unscrewing the upper set screw on the sensor head. If this adjustment is insufficient, the probe can be removed, the upper part of the probe aluminum tube can be appropriately cut off, and the electrical wiring can be installed according to specifications.*



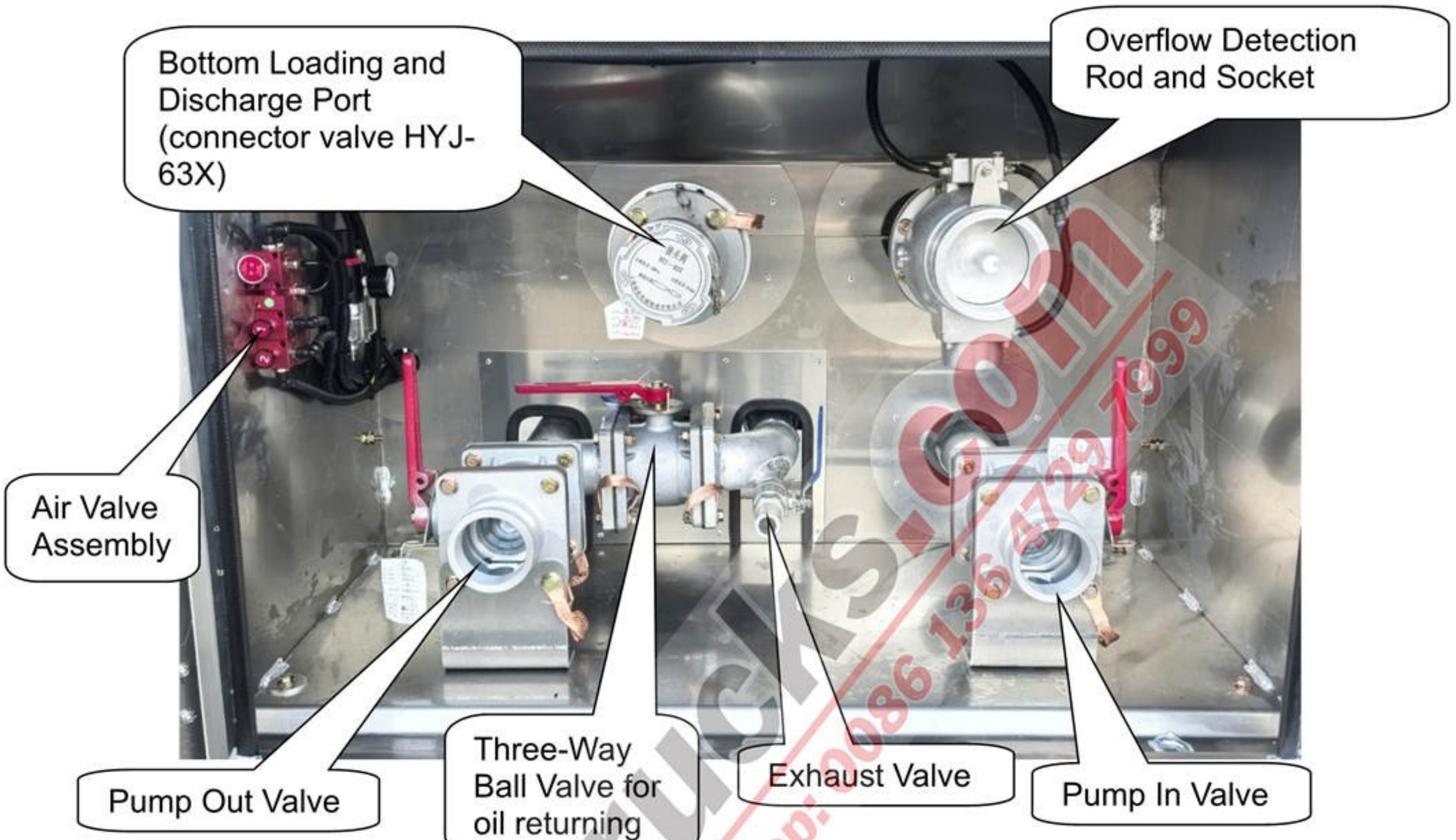
Overflow Prevention Sensor



Overflow Prevention Socket

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▶ Bottom Filling System:



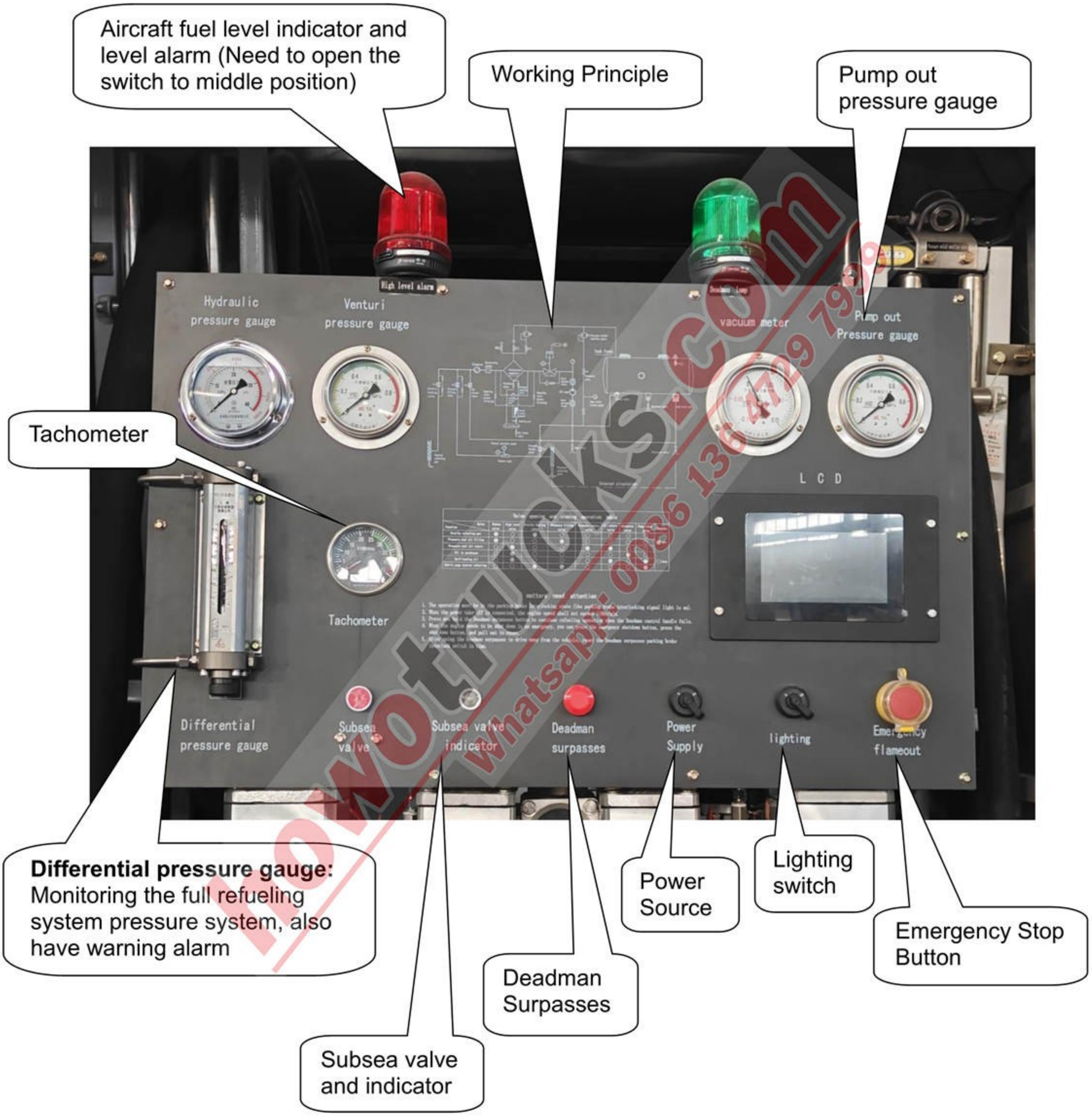
Main Air Valve:
Release the button to make pump in and pump out system working

Oil Returning Air Valve: Bottom Valve
Release the button to make oil returning system working

Fuel Pump Out Air Valve:
Release the button to make aircraft fuel pump out system working



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▶ Level Measurement

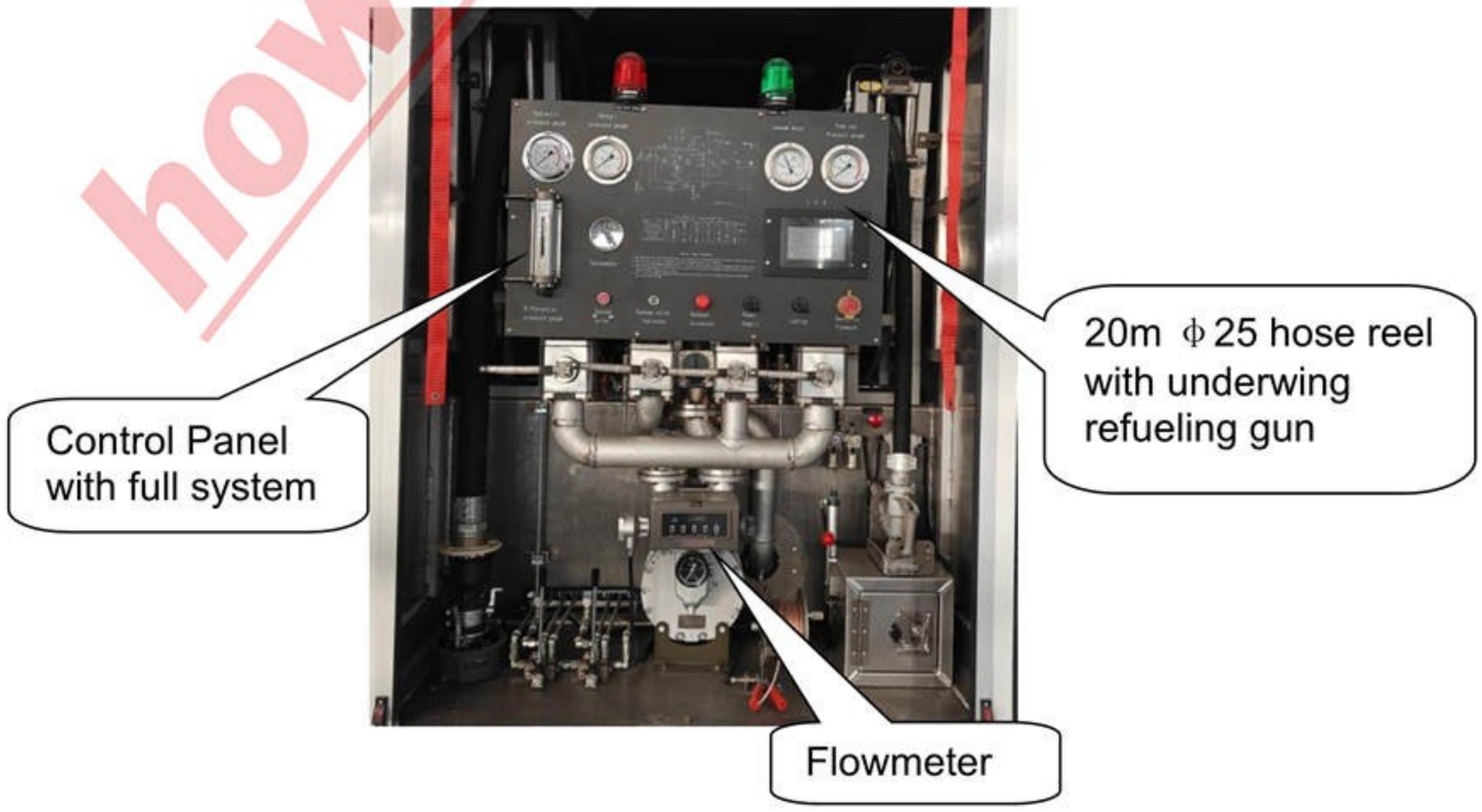
Front driver side of truck have two level measurement system:

1. *Aircraft fuel level gauge with 3" plate*
2. *Integrated control panel have level indicator*



▶ Aircraft Refueling Control System

Standard Submersible valve, stainless steel fuel pump with pump in and pump out valve, filter separator system (exhaust valve connected to the top of the tank via pipe, with a small valve; lower automatic return drain valve and manual valve drain pipe), filter separator, flowmeter, 20m hose reel with gun and control valve, refueling nozzle.



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▶ Sampling System

1) Pump outlet sampling valve (i.e., pre-filtration sampling valve, inlet connection of the filter separator);

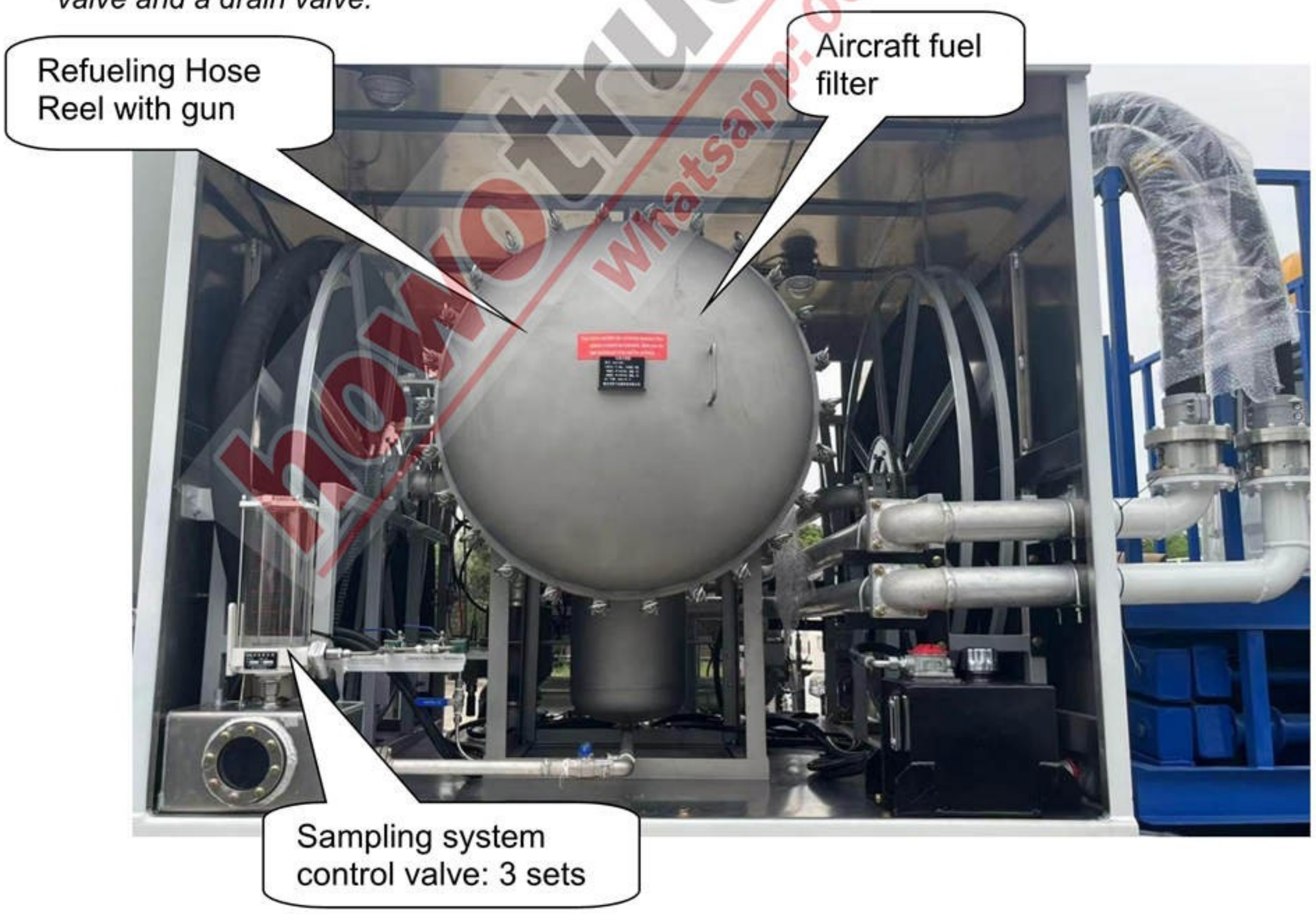
2) Sampling after filtering valve (outlet connection of the filter separator);

3) Filter separator drainage sampling valve (connected to the filter separator automatic return drain valve and drain pipe valve);

4) Sampling valve combined with retarder

5) Sampler (transparent mode);

6) Sampler sampling recovery tank. The residual liquid from the sampler, sampling valve, and retarder is connected to the recovery tank via valves; the recovery tank is equipped with a vent valve and a drain valve.

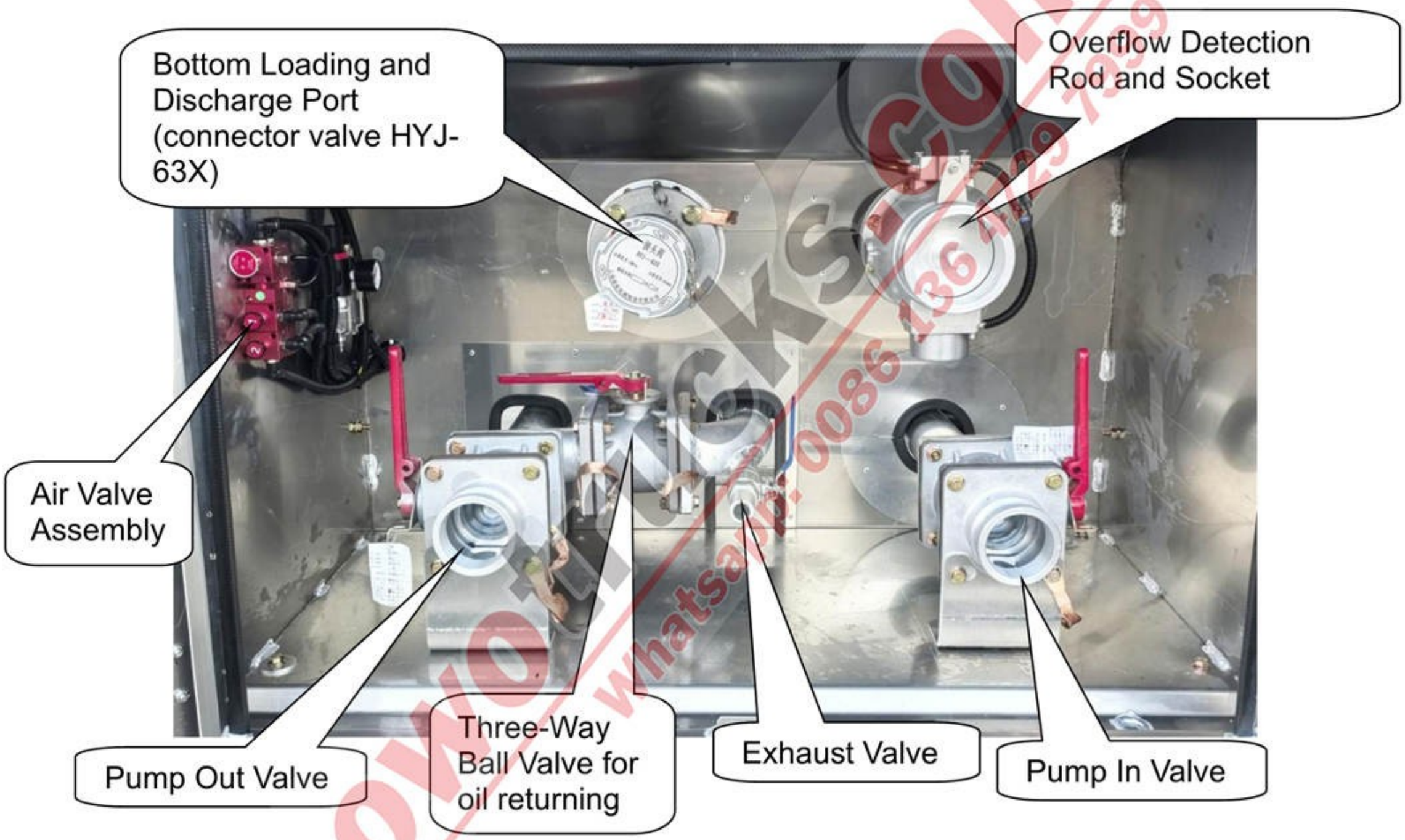


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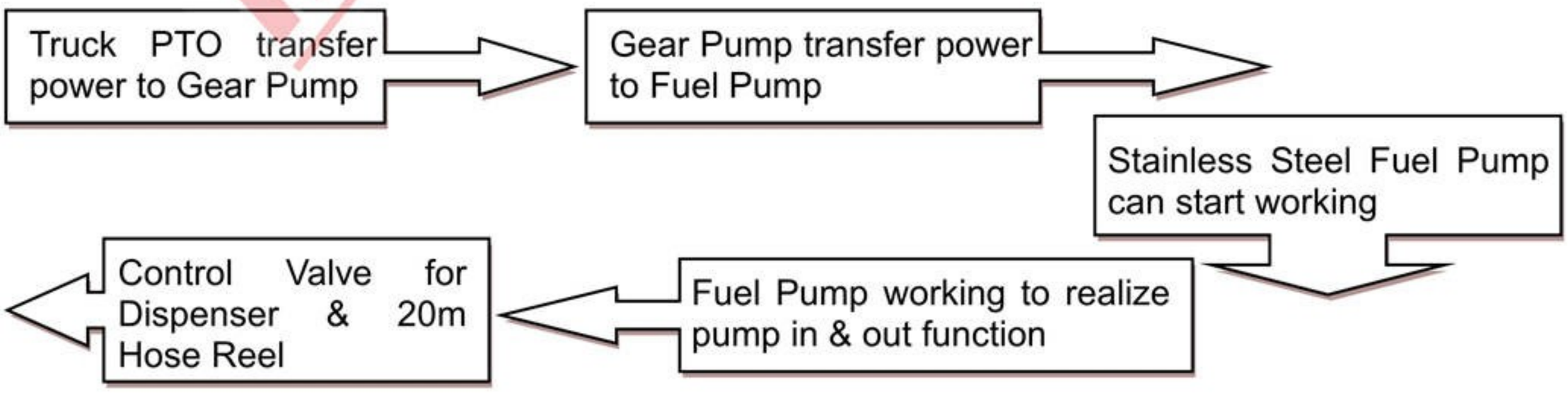
ii ,Fuel Pipeline Structure Components

Pipeline is to fuel truck what blood vessel is to human body! The fuel tanker trucks pipeline system is simple but very practical. One main pipeline connect with fuel tank and fuel pump, which means there are two ways to collection fuel: firstly is pumping fuel directly through Fuel pump; secondly is collection fuel from top Euro Manhole.

At the rear of the fuel tanker which installed two sets Refueling Machine and 20m Hose Reel, and on driver side of the tanker equipped Fuel inlet & outlet valves (Pipeline system as below):



Simple working principle guidance:



Chapter 5, Aircraft Refueling Truck Working Principles

The operator should fully understand Whole Structure and Working Principle for HOWO 8x4 heavy duty Aircraft Refueling Truck before any operation. Only trained person can operate this vehicle properly and to prevent unnecessary accidents and equipment damage.

i ,How are the fuel trucks working?

The HOWO Aircraft Refueling Tanker Truck makes use of the power take off (PTO) to get power from the HOWO engine, and then transfer the power to the Gear Pump, the Gear Pump driving hydraulic oil to rotate the stainless-steel fuel pump. The fuel pump, pipelines, valves, joints, refueling machine dispenser and 20m ϕ25 hose reel with gun consist of the pipeline system. Turn on / off valves through the regulated program, the pump can absorb fuel into the tank, also can pumping-out the fuel. As for the refueling system, this can be used refueling all trucks through the special gun. And then come to all function.

ii ,What is the main component for truck?

The fuel tanker truck is refitted based on the customized HOWO 8x4 LHD chassis. The refit part includes fuel carrying assembly, actuator device, pipeline system, operation system and refueling machine.

- *Fuel carrying assembly: An Aluminum Alloy material container shaped ellipse, standard one compartments, which is used to store and transport oil.*
- *Actuator device: includes power take off, gear pump, drive line, fuel filter, etc., which can pass the power from the chassis to the fuel pump.*
- *Pipeline system helps come to all special functions.*
- *Operation system: integrated control panel helps come to all special functions' convert.*
- *Refueling machine: helps to refuel all kinds of trucks.*
- *Sample system: to guarantee fuel meet requirement.*

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iii, How to operate fuel tanker trucks? (Very Important)

Preparations before use:

(1) Check that the anti-static strip at the rear of the vehicle is on the ground and that all equipment is functioning normally.

(2) Insert the anti-static rod into damp ground to prevent static electricity from causing a fire.

(3) Check that the clutch operating handle, power take-off operating handle, or control valve switch are in the correct positions, and that the throttle is turned to minimum. Check that all ball valve handles are in the correct positions.

(4) Check the lubricating oil level in the pump's gearbox; add gear oil if necessary.

(5) If there is no liquid in the pump, add a guide fluid beforehand. When using a new vehicle for the first time, a guide fluid must be added to the pump to prevent dry running and damage to the pump body.

(6) Check that the unloading pipeline, unloading valve, and transfer pipe are empty and clean, ensuring that all pipelines are suitable for loading and unloading media.

(7) If liquid needs to be pumped out, rotating equipment should be kept away from the tanker truck to prevent entanglement. When the liquid is completely pumped out, stop the pump immediately and then close the valves. (8) In case of emergency, the emergency shut-off valve remote control switch should be closed immediately.

(9) When using a pump for loading or adding material through the manhole on the top of the tank, a designated person should monitor the liquid level in the tank through the manhole to prevent overflow and ensure sufficient expansion space inside the tank.

(10) The parking brake must be applied before loading and unloading, and the wheels must be secured with wheel chocks.

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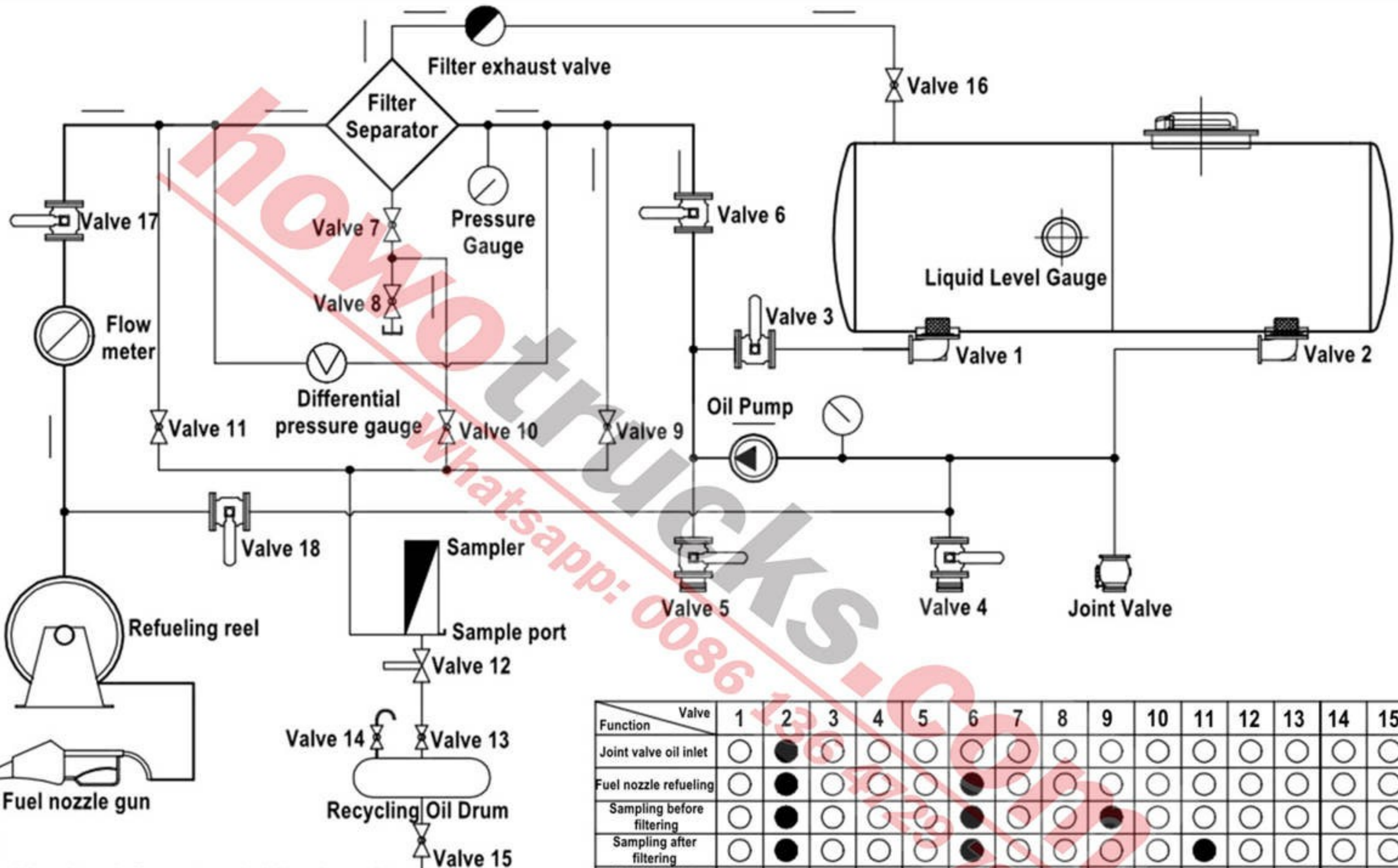
(11) Warning signs must be set up before loading and unloading.

(12) When filling the tank with oil: first connect the overflow prevention socket to the oil depot control terminal.

(13) When refueling, first open the bottom valve and then start the vehicle, turn on the power take-off switch. If the oil level in the tank is too low, the pump must be stopped immediately. The power take-off switch must not be turned on while the vehicle is in motion.

Control Panel and Working Principle:

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Instruction:

1. When loading oil into the tank: first connect the joint valve, anti overflow socket, and oil & gas recovery interface to the control end of the oil depot.
2. When refualing: first open valves 2 and 6.then open valve 17, then start the engine, and turn on the power take off switch, When the power take off is connected and work normally the oil pump starts to run, Fueinozzle refueling operation, During the refueling process. the speed of the pump can be adiusted. by control ling the throttle (the speed must be reasonable and not too high) When the amout of oi l in the tank Is too low, the pump must be stopped immediately, and turn off valve 2. Then turn off valve 6 and valve 17
3. It is strictly prohibited to turn on the power take-off switch during driving

Function \ Valve	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Joint valve oil inlet	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	●	○	○
Fuel nozzle refueling	○	●	○	○	○	●	○	○	○	○	○	○	○	○	○	●	●	○
Sampling before filtering	○	●	○	○	○	●	○	○	●	○	○	○	○	○	○	●	○	○
Sampling after filtering	○	●	○	○	○	●	○	○	○	○	●	○	○	○	○	●	○	○
Sewage outlet sampling	○	○	○	○	○	○	○	○	○	●	○	○	○	○	○	●	○	○
Pump in oil	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	●	○	○
Pump out oil	○	●	○	○	●	○	○	○	○	○	○	○	○	○	○	●	○	○
Mobile pump station	○	●	○	●	○	○	○	○	○	○	○	○	○	○	○	●	○	○
Pumping oil back	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●
Remarks								● Turn ON					○ Turn OFF					

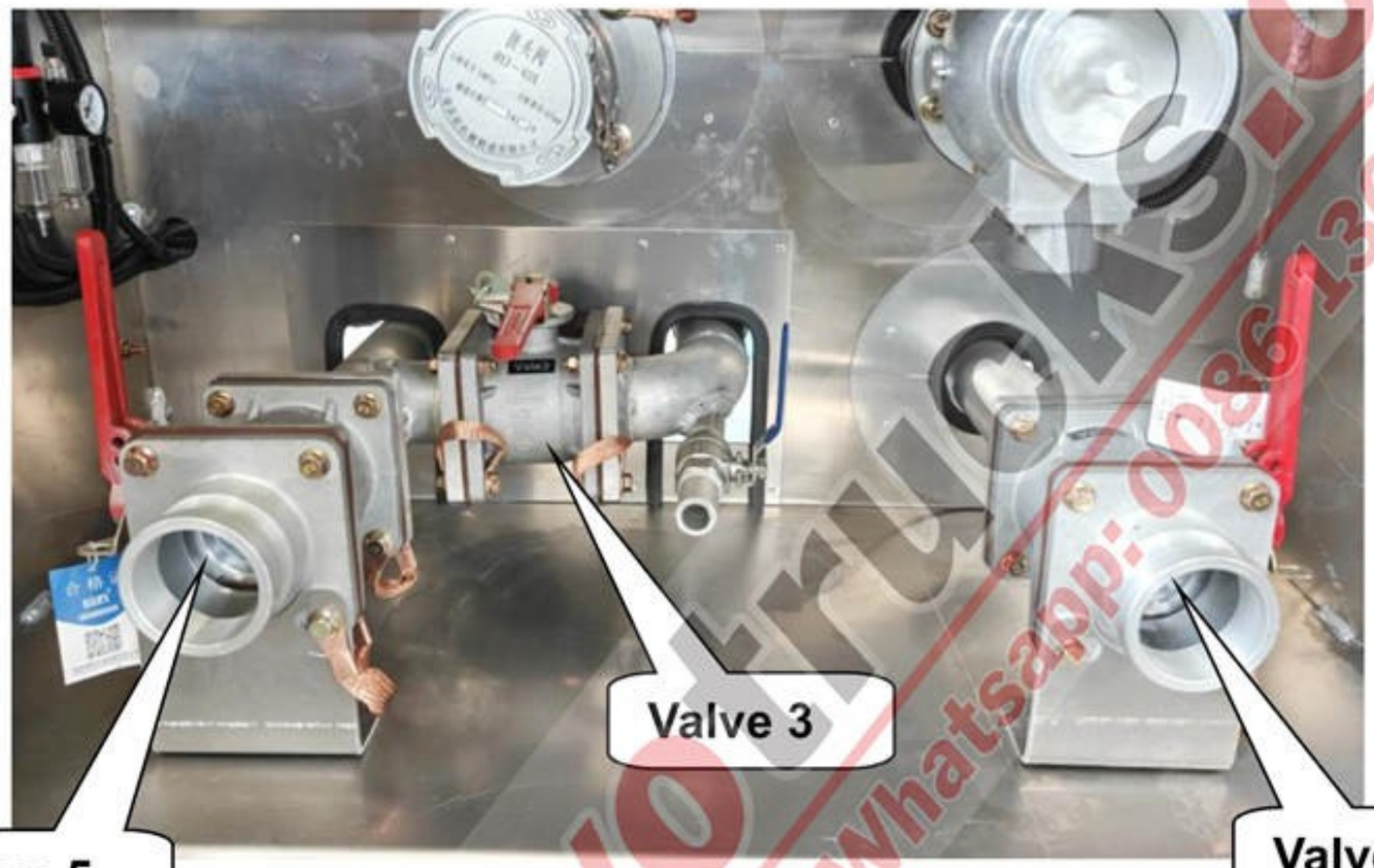
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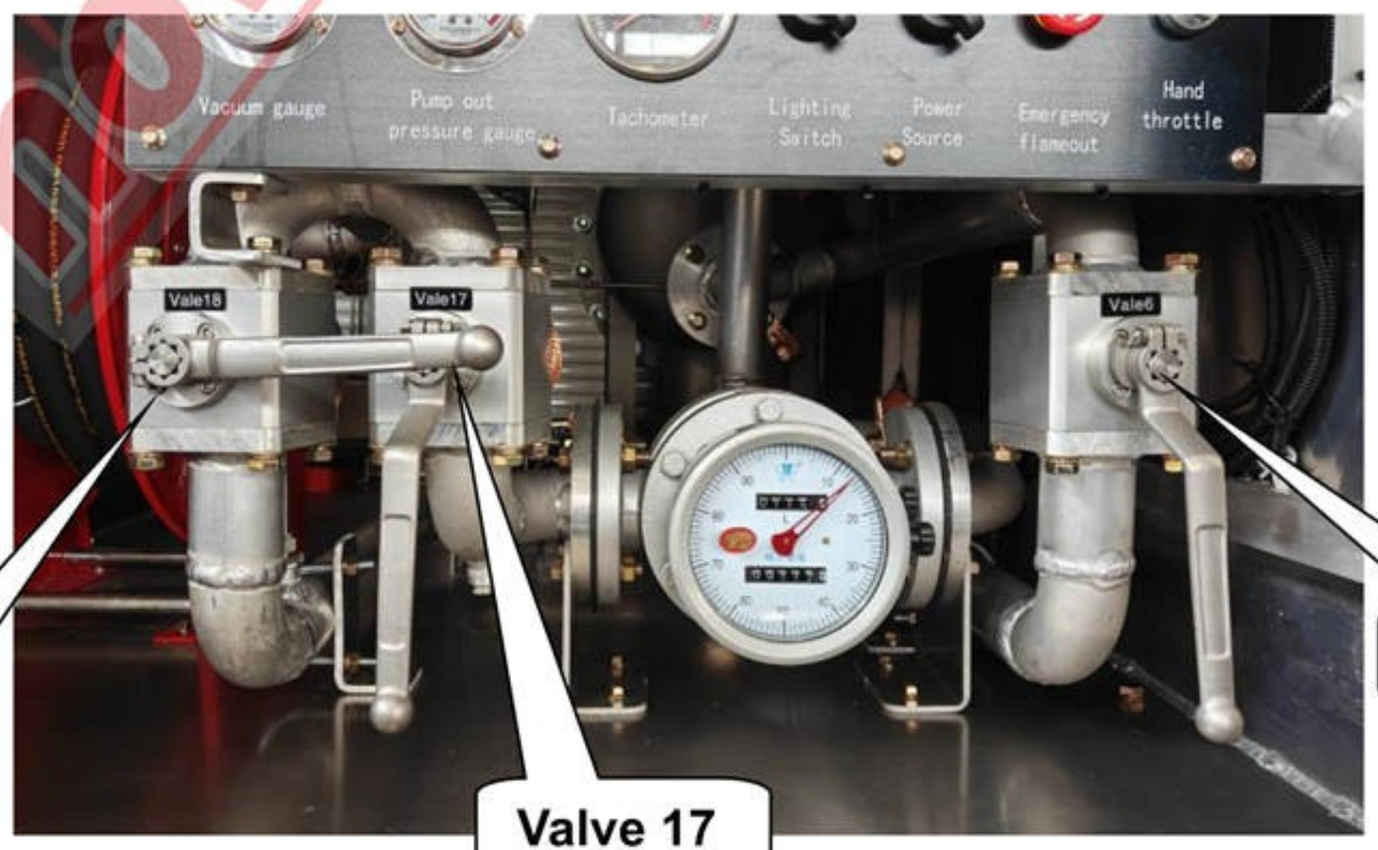
Main Air Valve:
Release the button to make pump in and pump out system working



Valve 1

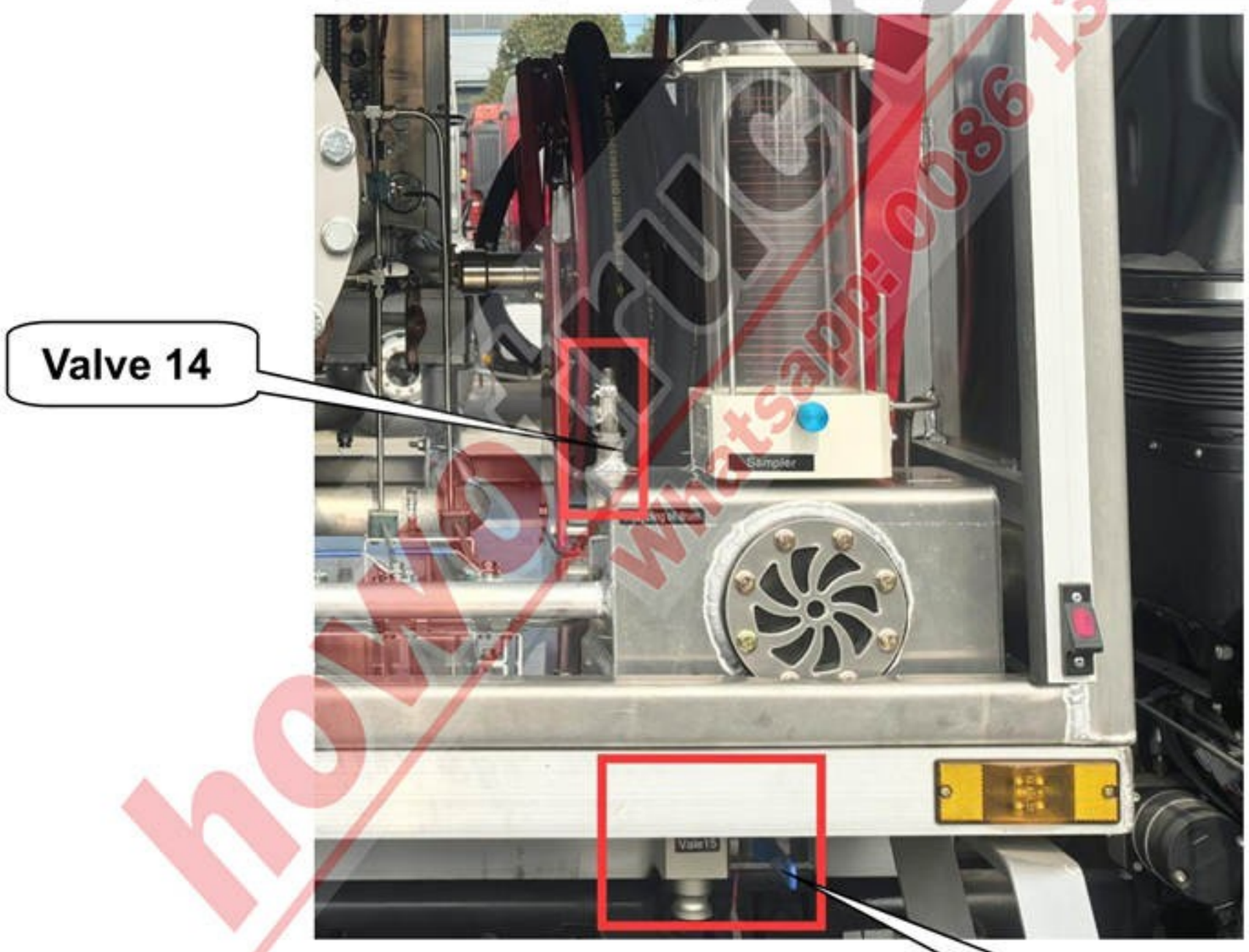
Valve 2





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Aircraft Fuel Loading Process:

@ The first choice of aircraft fuel loading method is directly from top EURO Manhole

@ The second choice of aircraft fuel loading method is by Fuel Pump *(Steps as below)*

1、*Start the truck engine, Press the clutch and make sure totally separated, Pull Out the PTO button, the fuel truck start working.*



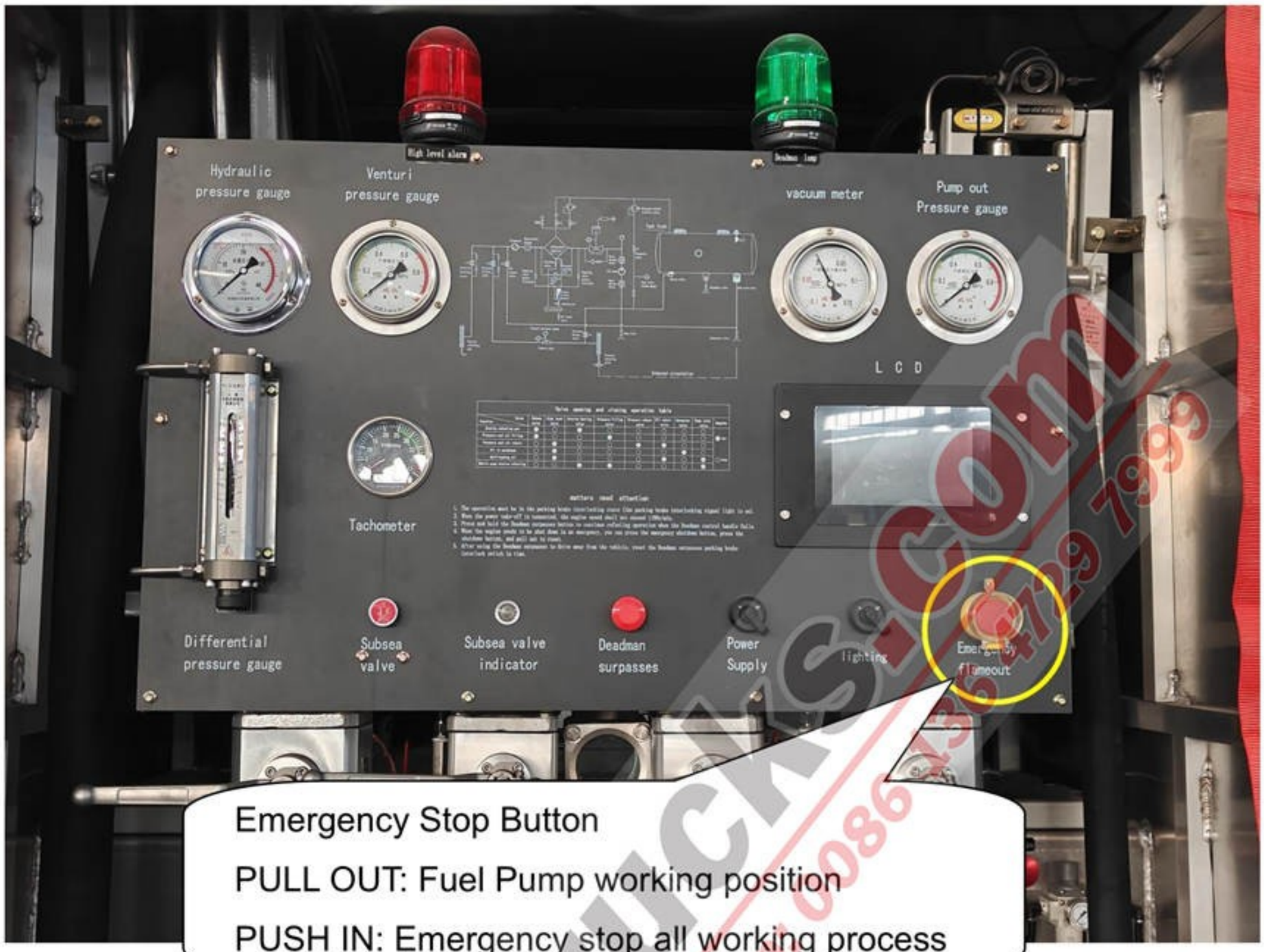
Please Note：When wrench is PARALLEL with pipeline, the pipe flow;

When wrench is VERTICAL with pipeline, the pipe closed.

2、*Read the above Operation Chart carefully before any operation:*

a) *Before operating valves, you should operate the power take off (PTO), the truck transmission gearbox should be in neutral, when the engine is idle, step on the clutch pedal, pull out the PTO button, and then release the clutch pedal slowly. The fuel pump will start operating, adjust the accelerator button to make engine idle speed 800rpm to 1000rpm.*

b) *Before any other operation, the most important thing is opening the* ***Emergency Stop Valve*** *controller, then the pump pipeline and the fuel tank is unblocked, and the oil can be pumping-in & pumping-out of tank.*



c) Special function operation showing as below, which mainly has following four functions:

- ***Fuel Truck Pipeline System**: There are mainly below 6 parts for fuel truck pipeline system. (Rear system based on truck component)*

Fuel hose and gun：Consists of Fuel inlet & out valve, 20m hose reel and Refuel gun

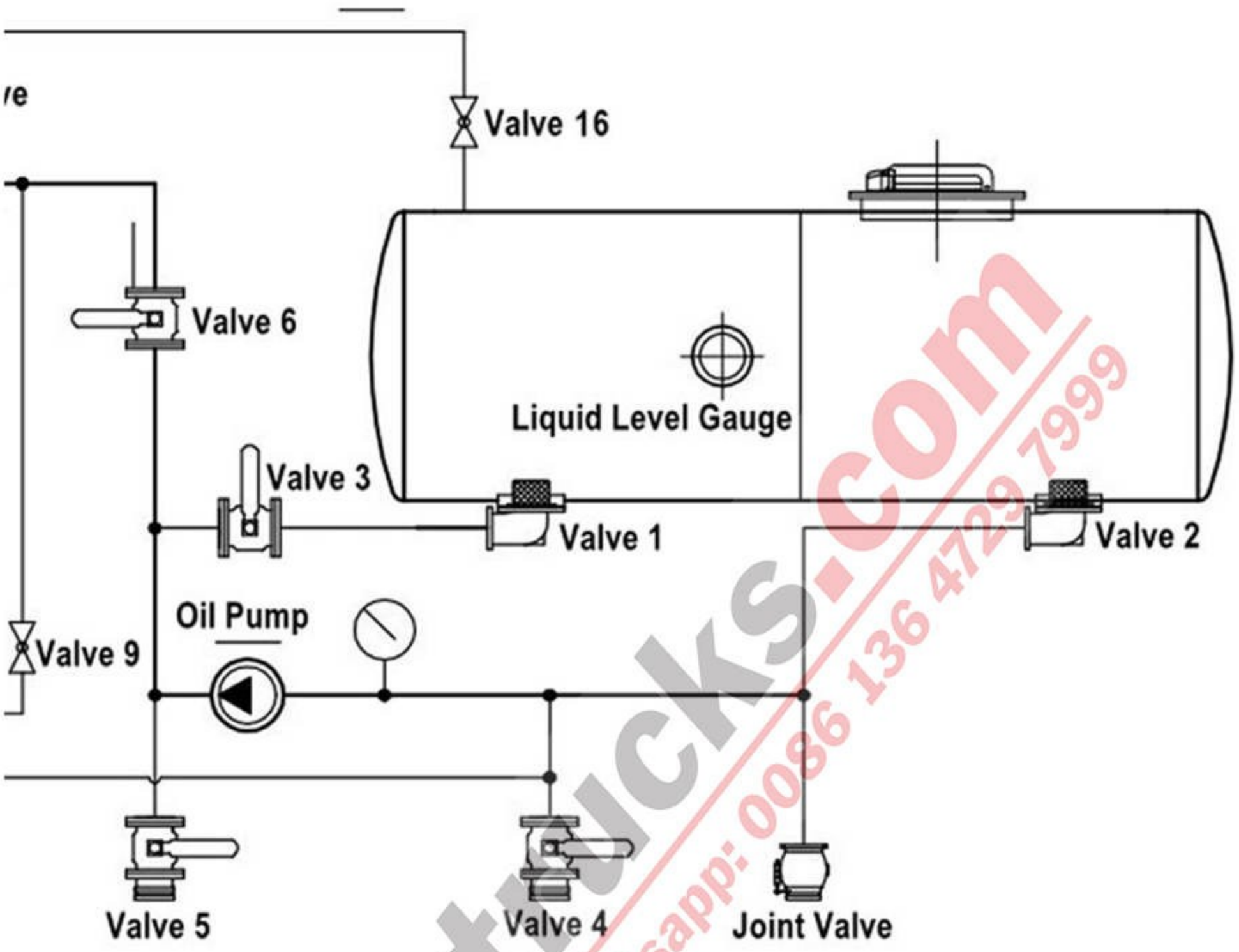
Fuel Pump: 80YHCB-60 stainless steel fuel pump, provide power for fuel inlet & outlet of tank, also realize all fuel pump process

Multi-Function Valves: Fuel Inlet Valve, Fuel Outlet Valve

Fuel Pipeline: Multiply fuel pipeline service for fuel transportation

Integrated Control System: Integrated control system for safety and convenient usage

Sampling System: Checking the fuel system suitable for working or not



Pump-in Type: *Release the **Main Air Valve**, only open the **submarine valve 1**, close the **submarine valve 2**, open the **valve 3** and **pump in valve 4**; close **pump out valve 5** and **valve 6**; all others system valves closed, then connect one end of the on-board delivery fuel pipeline to **pump in valve 4** and the other end to the aircraft fuel storage tank. Start truck engine, make the transmission gearbox at neutral position, pull out the power take-off (PTO) button to make PTO working, then to rotation fuel pump start working; and the fuel pump can pump aircraft fuel into the tanker body.*

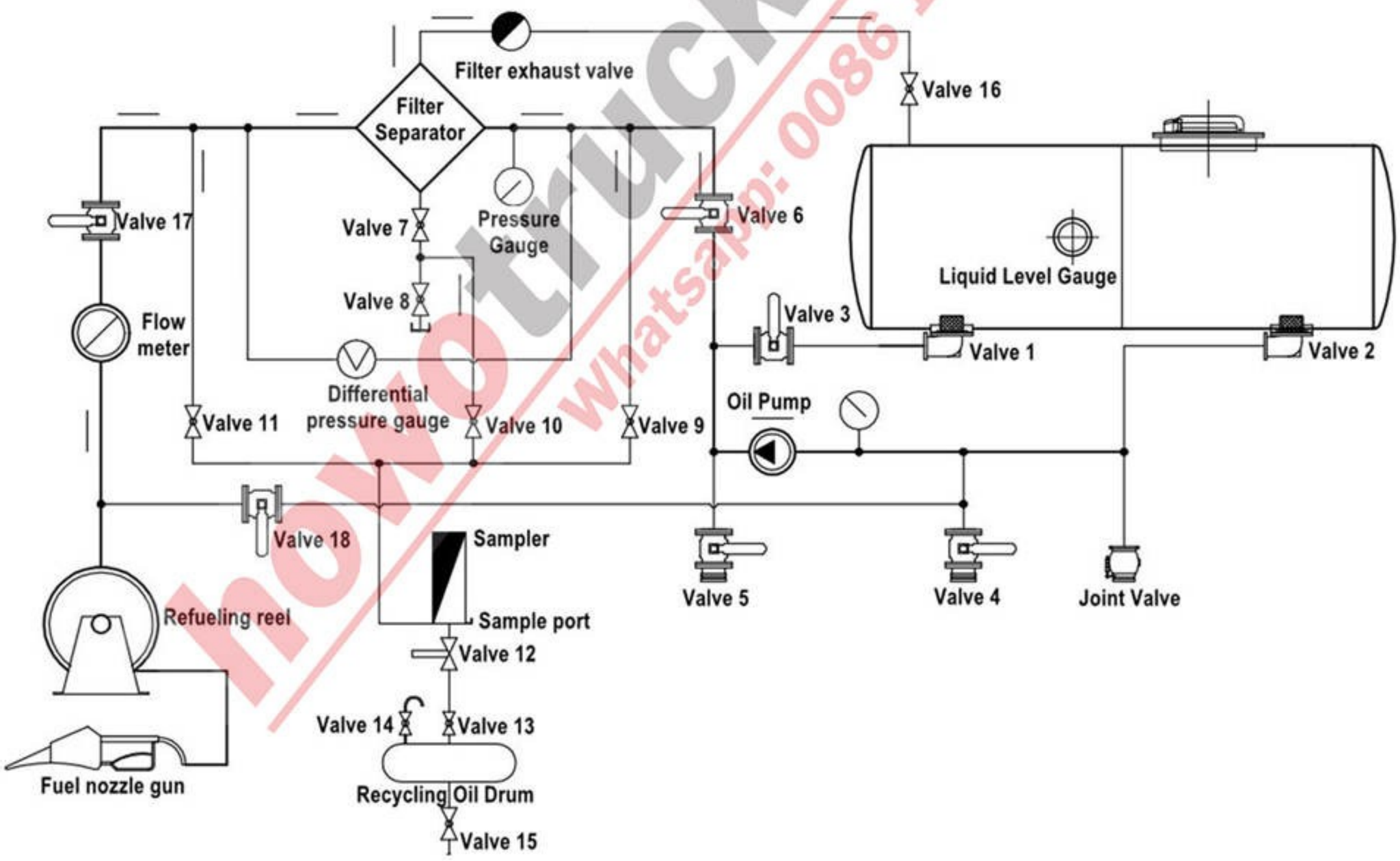
*When adding aircraft fuel to the tank from the oil depot, use a special unloading valve connector. Connect the unloading valve, oil and gas recovery interface, and anti-overflow/leakage probe socket to the oil depot filling equipment; open the **Main Air Valve** and submarine valve (**valve 2** and connector valve; the other valves are closed); and add aircraft fuel to the tank through the oil depot operation.*

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Pump-out Type:

*Model One--Gravity self-unloading type: Under the action of the air circuit, open the **Main Air Valve** and submarine **valve 2**, and then open **valve 5**, gravity flow can be achieved.*

*Model Two—Pump out from fuel pump: Release the **Main Air Valve**, only open the **submarine valve 2**, close the **submarine valve 1**, open the **pump out valve 5**, close **valve 4** and **valve 6**, others system valves closed. Then connect one end of the on-board material delivery fuel pipeline to **valve 5**, and connect the other end to the aircraft fuel storage tank. Start truck engine, make the transmission gearbox at neutral position, pull out the power take-off (PTO) button to make PTO working, then to rotation fuel pump start working; and the fuel pump can pump aircraft fuel into the tanker body.*



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Aircraft Refueling Type:

Before refueling the aircraft's fuel tank with the refueling nozzle, all valves must be closed.

The specific refueling procedure is as follows:

(1) The remote emergency shut-off switch on the rear emergency shut-off valve of the tank should be in the pop-up position (pressing it off means it's closed, rotating it in the direction of the arrow to pop it off means it's open);

(2) Start the truck engine,

*(3) Open the **submarine valve 2** (the switch is located inside the pump box on the left), and open **valves 6** and **valve 17**;*

*(4) Press the clutch panel and same time pull out the PTO button to make it working, then can rotate to make fuel pump working; (the **submarine valve 2** must be opened first, and the pump must not run dry);*

(5) Turn on the power switch of the refueling machine reel;

(6) Pick up the refueling gun, insert the nozzle into the aircraft fuel tanker, and begin refueling process;

(7) After refueling, retract the refueling nozzle and refueling hose;

(8) Turn off the power take-off, close all valves, and shut off the engine.

Sampling before filtration:

(1) Open valves 1, 3, 6, and 9;

(2) Open the sampler and remove the sample.

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Sampling after filtration:

(1) Open valves 1, 3, 6, and 11;

(2) Open the sampler and remove the sample.

Sampling during wastewater discharge:

(1) Open valves 7 and 10;

(2) Open the sampler and remove the sample.

Draining oil from the sampler:

(1) Open valve 12;

(2) The oil in the sampler will automatically flow into the recovery oil tank.

Draining oil from the oil tank:

(1) Open valve 15;

(2) Connect the container holding the recovery oil to the outlet of valve 15. After all the recovery oil has flowed out, close ball valve 15.

Filter drainage

(1) Open valves 7 and 8;

(2) Connect the container for the wastewater and impurities from the filter to the outlet of valve 8. After all the wastewater and impurities have flowed out, close ball valves 7 and 8.

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Chapter 6, Troubleshooting and Maintenance

Please pay attention to below troubleshooting method when need help:

Problem	Reason	Method
Suction of the tank (concave)	1. The discharging speed is too fast 2. The breather valve failed	1. Reduce the discharge speed or open the small cover of the observation hole or open the exhaust gas recovery pipe 2. Clean or replace the breather valve
Liquid seeps out of the ventilation valve	1. The temperature of the liquid in the tank is too high 2. The breather valve failed	1. Reduce the temperature of the liquid in the tank 2. Clean or replace the breather valve
The emergency shut-off valve cannot be opened	1. The valve controls the air pressure that is too low 2. The valve controls air leakage	1. Adjust the pressure of the oil and gas separator 2. Repair the air leak pipeline
The emergency shut-off valve cannot be opened	3. Damaged valves 4. The operation is incorrect	3. Repair or replace 4. Both control switches are turned on
The emergency shut-off valve cannot be closed	1. Dirt buildup in the valve 2. Cotton yarn and other debris wrap around the valve plate 3. Damaged valve gasket	1. Remove clumps 2. Remove debris 3. Repair or replace
The ball valve does not work Or it may not be completely switched	1. Dirt clumps inside the valve 2. Cotton yarn and other debris wrap around the valve plate 3. Valve gasket damaged	1. Clear clumps 2. Remove debris 3. Repair or replace

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The unloading is not smooth	1. Discharge pipes and valves are blocked 2. The breather valve failed 3. The gas phase inside and outside the tank is unbalanced 4. The liquid viscosity is too high 5. Clogged filters 6. The oil pump failed	1. Eliminate blockages 2. Repair or replace 3. Reduce the discharge speed or open the small cover of the observation hole or open the exhaust gas recovery pipe 4. Reduces liquid viscosity 5. Wash or replace the filter 6. Repair or replace
There are more leftovers	1. The slope of the car parking lot is too great 2. There is a foreign object in the pipe	1. Park on the flat ground 2. Clean up foreign objects
Abnormal pumping (or too little suction)	1. There is no priming fluid in the pump 2. The depth of self-priming liquid is more than 5 meters 3. The tank is too dirty, the discharge port is blocked, and there is water in the tank that freezes in winter	1. Add about 15 liters of primer fluid to the pump from the inlet or outlet 2. Exceeding the scope of use of the vehicle 3. Remove the discharge pipe, remove debris, and melt the ice with hot water or hot air.
Failure of chassis components	See chassis instruction manual	See chassis instruction manual
Faulty oil truck filter	See the oil truck filter instruction manual	See the oil truck filter instruction manual

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Chapter 7, Others for Attention

After carefully reading the above information, you must be well known how to use the HOWO 8x4 Fuel 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. *Fuel Tanker Truck Owner's Manual*

- *Carefully examination the fuel truck:*
  1. *Examine all parts, especially steering device, braking device, Suspension, tires and other joints, etc.*
  2. *Examine Exhaust Braking System, maintenance if have any leakage.*
  3. *Examine the tire pressure.*
  4. *Examine all lights on the truck, including Head Light, Fog Light, Turning Light, and Tail Light.*
  5. *Examine the rear Anti-Static tape, replace it if not tough the ground*
  6. *Examine the off-road system*

- *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, especially for long-distance transport.*

- *When operating all the Valves, 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.*

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ii ,Maintenance

- *The maintenance of the chassis including clutch and transmission gearbox should be properly.*
- *The Maintenance of the pipeline systems and fuel pump refers to the "Fuel Tanker Truck Owner's Manual".*
- *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.*
- *The Fuel Pump, PTO, Gear Pump, Hydraulic Motor, Transmission Gearbox should be carefully washed, checked and maintenance every year.*
- *The strainer inside filter should be washed frequently. Exchange it if necessary.*

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Chapter 8, Over View for the Aviation Refueling Truck





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CEEC TRUCKS Rear Loader Components

11. Rear Hopper Assembly



12. 100% Customized Painting & Logo



13. Safety Device: Gauge & Adjuster





10. Push Plate & Scraper For Garbage Collection





1. Incabin CAN BUS Control Box



9. Rear Mounted CAN BUS Control Box



2. ISUZU NPR Truck

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8. Rear Tilting Device: 120L, 240L, 360L, 660L, 770L, 1100L



3. Customized Tire: 8.25R20 or 235/75R17.5



7. Rear Swage Tank And Foot Pedal



6. Integrated Curve Shaped Compactor Body

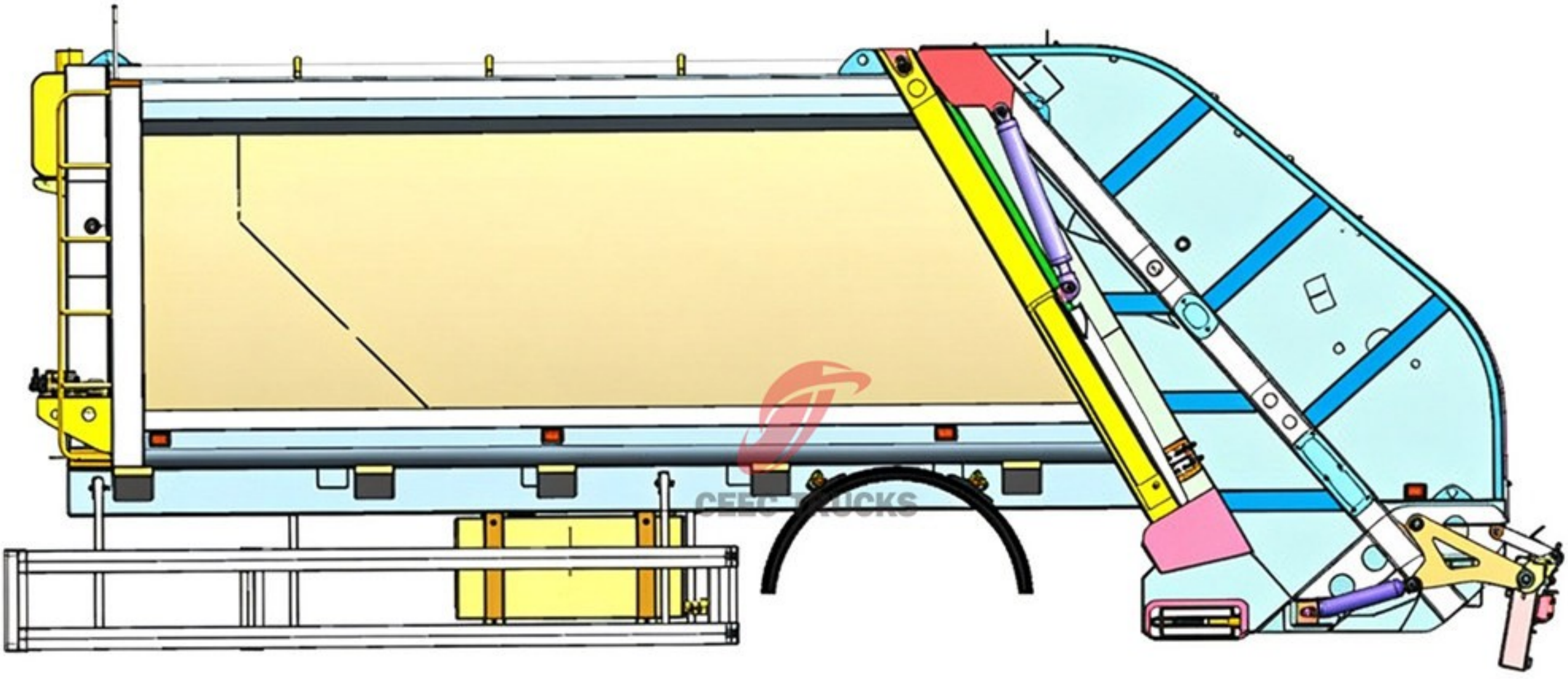


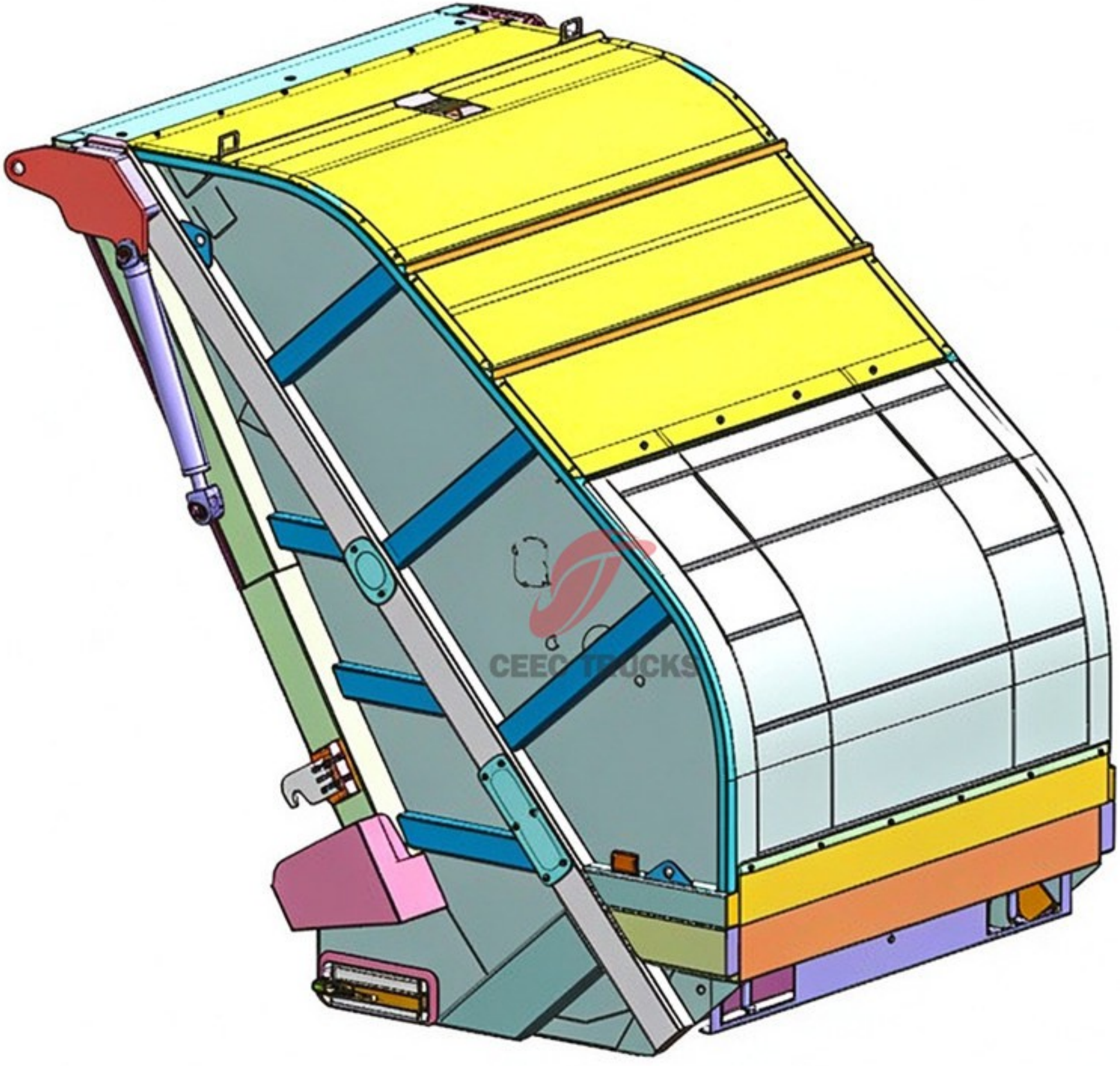
5. Sewage Water Tanker 100L-400L

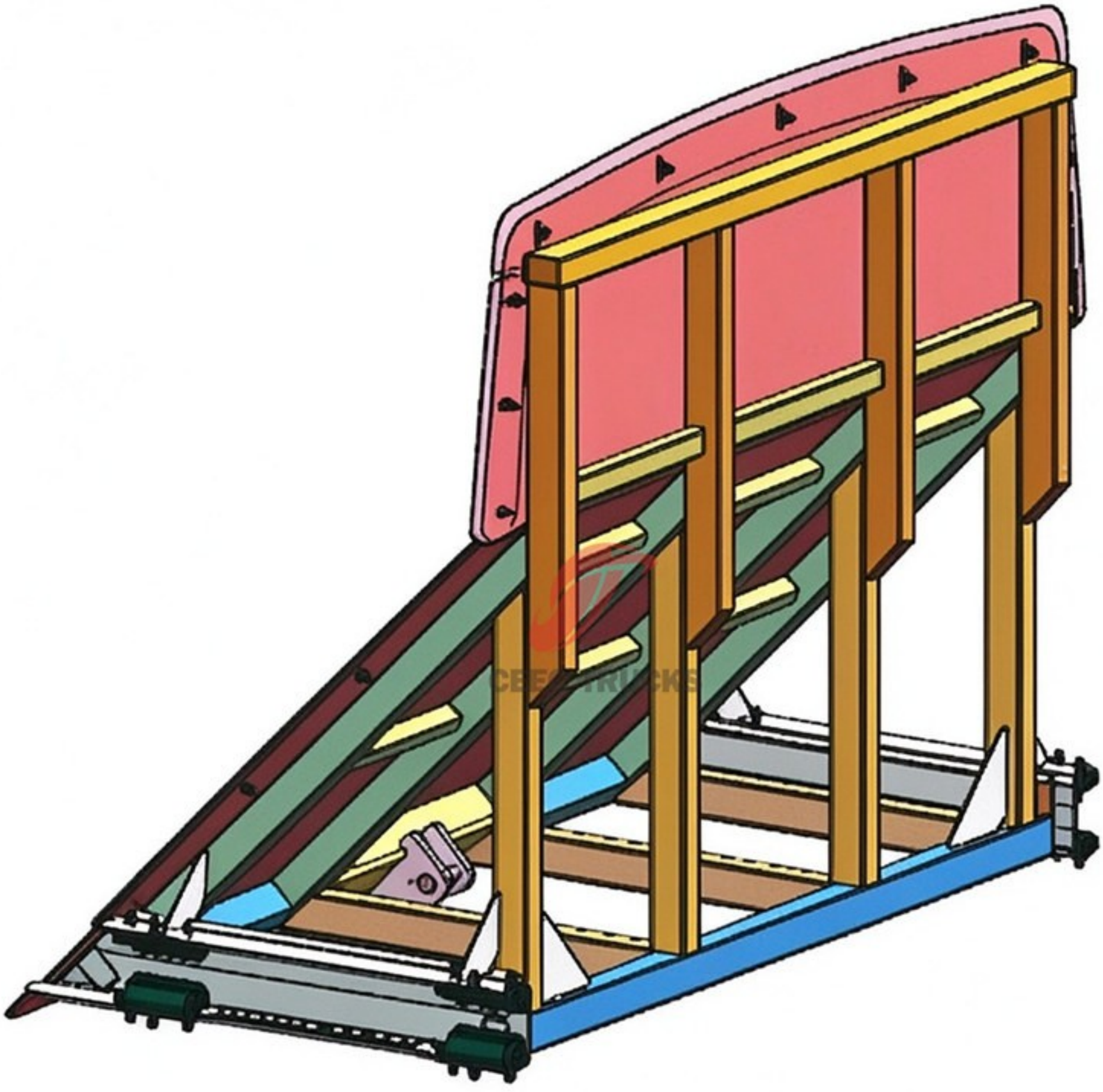


4. CE Certify Hydraulic Control Valve


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