

ML5070GWSZ Aircraft Lavatory Service Truck (Fuel-powered Type)



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1. Product Introduction

The ML5070GWSZ Aircraft Lavatory Service Truck is a dedicated airport ground support equipment used to receive wastewater from aircraft lavatories and flush aircraft waste tanks. The vehicle is modified based on a Qingling Class II chassis and is equipped with a large-capacity water tank, enabling lavatory service for various types of aircraft.

2. Product Features

2.1 The vehicle adopts a Qingling Class II chassis, featuring excellent maneuverability, lightweight chassis structure, and high reliability.

2.2 Equipped with a standard driver's cab, providing a wide field of vision.

2.3 Fitted with a large-capacity water tank to meet the service requirements of multiple aircraft.

2.4 The waste tank is equipped with an internal flushing pipeline, which is flushed by a clean water pump.

2.5 The water supply pipeline is equipped with a safety valve; when the pipeline pressure exceeds a preset value, automatic pressure relief is activated to ensure the safety of the aircraft water supply system.

3. Product Standards

- MH/T 6015-2014 Aircraft Lavatory Service Truck
- AC-137-CA-2015-19 Inspection Specification for Aircraft Lavatory Service Trucks

4. Main Performance Specifications

Item		Specifications
Chassis	Manufacturer	Qingling Isuzu (Chongqing) Automobile Co., Ltd
	Model	QL1070BUKAY
Engine	Manufacturer	Qingling Isuzu (Chongqing) Engine Co., Ltd.
	Model	4KH1CN6LB
Potable Water Tank Capacity (L)		1100
Waste Tank Capacity (L)		2600
Vacuum Pump Tank Capacity (L)		150
Water Supply Flow Rate (L/min)		120
Water Supply Pressure (MPa)		0.25~0.35
Curb Weight (kg)		4110
Overall Dimensions (L × W × H) (mm)		7400 × 1900 × 2290
Maximum Speed (km/h)		80
Working Platform Lifting Height (mm)		400~2900
Optional Vacuum Degree of Waste Tank (Vacuum Pump System)		0.2bar

5. Main Structure and Configuration

The ML5070GWSZ Aircraft Lavatory Service Truck mainly consists of the chassis assembly, tank assembly, electrical system, potable water supply system, and rear working platform.

1 Chassis Assembly

Chassis model and main specifications

1) The vehicle adopts a Qingling Class II chassis equipped with an Isuzu diesel engine. The cab is fitted with a heating and air-conditioning system and hydraulic power steering.

5.2 Water Tank Assembly (

The water tank is of an integral structure and is manufactured from SUS304 stainless steel plate. It consists of two completely separated compartments. A circular maintenance manhole is provided on the top of the tank, which allows convenient access for cleaning, disinfection, inspection, and other maintenance operations. The manhole cover is designed with reliable sealing performance and a simple locking device. The tank is mounted to the vehicle chassis frame using rubber shock absorbers, ensuring secure and reliable fixation. During vehicle operation, no relative movement occurs between the tank body and the chassis.

1) Potable Water Tank: The front of the tank is equipped with a level indicator, which clearly displays the liquid level inside the tank. A vent port is installed at the top of the tank to prevent vacuum formation inside the tank during water pump suction. Two filling inlets are provided on the top. A drain valve is installed at the bottom of the tank.

2) Waste Tank: The waste tank is used for storing wastewater discharged from aircraft lavatory systems. A drain valve is installed at the lowest point of the tank bottom, with its control located on the outer side of the rear of the vehicle. An internal tank flushing pipeline is provided inside the waste tank. An inspection window is installed on the rear end face of the waste tank, allowing visual observation of the wastewater level inside the tank.

5.3 Electrical System

1) Chassis electrical system (including original chassis lighting, instruments, and other electrical components).

2) Additional electrical system for the Aircraft Lavatory Service Truck, including control of the water pump for water filling, working platform lifting control, and lighting control for the modified vehicle components.

5.4 Potable Water Supply System

The potable water supply system consists of a water pump, pipelines, and a filling coupling, etc.

- 1) Water Pump: A stainless steel corrosion-resistant centrifugal pump driven by a hydraulic motor.
- 2) Piping: The water supply pipelines are made of stainless steel. The water filling hose adopts a rubber-fabric reinforced hose. In addition, a stainless steel safety valve is installed in the pipeline to ensure that the water supply pressure is adjustable within the range of 0.25 MPa to 0.35 MPa.
- 3) A standard compliant water filling coupling is provided.
- 4) Equipped with a resettable electronic flow meter.

5.5 Rear Working Platform

The rear working platform consists of an elevating platform, a water hose reel box, and a ladder assembly.

- 1) Elevating Platform: The load capacity is 150 kg. The platform guardrails are made of stainless steel tubes, and the floor is constructed from aluminum alloy anti-slip checker plates.
- 2) Water Hose Reel Box: The potable water filling hose leading to the elevating platform is stored in a hose storage box at the rear of the vehicle, enabling automatic retraction.
- 3) Ladder Assembly: It consists of a structural frame with aluminum alloy checker plates laid on the surface.

5.6 Vacuum Waste Discharge System (Optional): A vacuum pump is installed and driven by a hydraulic motor to generate negative pressure inside the waste tank, enabling rapid evacuation of aircraft lavatory waste.

5.7 Safety Protection Devices

- Equipped with a reversing buzzer alarm device.
- The working platform is equipped with an anti-collision safety switch to prevent collision with the aircraft during platform lifting.
- The working platform is equipped with an emergency engine shutdown button; in case of emergency, pressing the button will shut down the engine.
- The working platform is equipped with an emergency lowering unloading valve.

List of Special Tools and Spare Parts

No.	Item	Unit	数量 Qty.
1	Spare Wheel (Tire and Rim)	Set	1
2	8 kg Fire Extinguisher	Set	1
3	Vehicle-Mounted Tool Kit	Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
		Set	1
4	Fan Belts (3 pcs)	Set	1
5	Engine Oil Filter Element	Set	1
6	Diesel Fuel Filter Element	Set	1
7	Engine Air Filter Element	Set	1
8	Hydraulic Oil Filter Element	Set	1
9	Lift Cylinder Seal Kit	Set	1
10	Fuse	Set	5
11	Toggle Switch	Set	2
12	Wheel Chock	Set	2
13	Potable Water Coupling	Set	1
14	Waste Water Coupling	Set	1