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AES MP110-SP Maintenance Platform

Technical Specification

1. Product Model

AES MP110

2. Vehicle Description:

The AES MP110 Series Maintenance Platform Vehicle is designed for aircraft ground support personnel use. It allows servicing of aircraft within its maximum working height limit. The maintenance vehicle consists of a diesel engine driven chassis, hydraulically actuated scissor lift mechanism, platform and stabilizers. Stabilizers provide increased stability with platform raised. Platform and stabilizer control is achieved using reliable solenoid operated valves. All functions, except stabilizer retraction, may be operated from platform mounted control panel.

3. Specifications

Overall dimensions(L×W×H)	5970mm×2400mm×2000mm
Platform height	2000mm – 11100mm
Platform (L×W)	4220mm×1460mm
Unladen weight	8500kg
Lifting capacity	500kg (evenly distributed load)
Height of the platform railings	1100mm

4. Chassis

1) Engine Model	Mitsubishi S4S, Diesel, Euro 2
Max. rated output	47KW @ 2200 rpm
Max. torque rating	250Nm@ 1400 rpm
2) Transmission Model	Oerlikon Graziano PST2
Type	Automatic, power shift with torque converter
3) Front Axle	
Type	Steering axle with suspension, disk brake.
Suspension	Alloy steel leaf spring
Capacity	4700 kg
4) Rear Axle	
Type	Drive axle with suspension, drum brake.
Suspension	Alloy steel leaf spring
Capacity	5,000 kg

5) Parking Brake	Spring brake actuators acting on drive shaft.
6) Tire	8.25-15

5 · Lifting scissors

a) Three scissors lifts with two single-stage cylinders.

b) The scissors arms are fabricated from heavy-duty rectangular steel tubes with reinforced scab plates welded on both top and bottom.

a) Self-lubricating bushings on scissors eliminates regular lubrication.

b) Pilot operated check valves are installed on the lifting cylinders for maximum safety.

6 · Platform

a) Maximum platform deck height of 11 meter.

b) Maximum lifting capacity of 500Kg evenly distributed on platform.

c) Sleeves are installed at all pivot points, cylinder attachment points and roller shaft.

d) Galvanized anti-skid plate platform deck.

e) Platform deck perimeter safety handrails in stainless steel, and can be easily removable.

f) There is rubber bumper mounted on all sides of platform with100mm diameter, 15mm thick.

7 · Electric system

a) The platform control panel is water-proof, the ground control panel is installed in the cab. The fixed platform control panel installed on the deck consists of push buttons controlling the platform only.

b) The toggle switches are water-proof.

c) A “pressure hold” button installed on both control panels.

d) 2 directional working lights mounted on the rails of the platform.

e) Emergency engine stop push buttons are installed on the cab control panel as well as on the platform pendant control. Pressing down any one of these push buttons will kill the engine.

8 · Hydraulic system

a) The system pressure is 14Mpa, adjustable by relief valve.

b) All hydraulic control components are located on the side of the chassis. This allows easy access for steam cleaning and maintenance.

c) Hydraulic pump directly installed on the engine, without PTO (Power take off) unit

d) Solenoid operated valves for selecting and controlling lift platform movement.

e) Four stabilizers are installed at the front and rear of scissors.

f) There are two additional sources that can provide the system with hydraulic pressure in case of an engine failure. One is a battery powered, push button controlled pump with an internal relief valve, the other one is a hand pump. These two pressure sources are designed for emergency evacuation only. In an emergency, retracting and lowering the platform, and retracting the stabilizers can be operated by the emergency pressure source for evacuation of the maintenance platform.

9. **Interlocks**

a) Prevent vehicle being driven while PTO is engaged.

b) Prevent vehicle being driven with platform raised.

c) Prevent vehicle being driven with stabilizers lowered.

d) Prevent platform lowering while extended.

e) Prevent platform rising too high without using stabilizers.

f) In the event of an accident, there are remote engine stop switches located on control panels.

g) A warning buzzer sounds when either the platform is lowering or the vehicle is reversing.