1-1 INTRODUCTION.

Part Number 10037-30, NSN 4920-01-373-3143, Aircraft Cabin Leakage Tester is manufactured by APS SYSTEMS INC.

Part Number 10037-30 works on 220/380/440 VAC, 50/60 Hz, three phase electrical power and uses a digital mass flowmeter.

GENERAL DESCRIPTION. The Aircraft Cabin Leakage Tester consists of a cabinet and trailer assembly, an electrical motor which drives a single stage positive displacement blower; intake and outlet silencers; aftercooler and fan, relief and rate control valves, flowmeter, canopy seal compressor and control panel. An accessory kit consisting of hoses, adapters and stethoscope, completes the tester.

CABIENT. The cabinet (1) is constructed of structural steel. There is one removable section and two fixed sections.

ELECTRICAL MOTOR. Power for the Cabin Leakage Tester is supplied by a 50 hp, 230/460 volt, 3 phase, 60 Hz cycle, 3600 rpm, electrical motor

BLOWER. Single stage positive displacement type that provides the air for cabin pressure. It is driven by the electric motor and provides 400 cfm at 12.5 psi.

AFTERCOOLER (HEAT EXCHANGER). Air to air type sized to maintain blower discharge air within 15 degrees of the ambient air at maximum flow and pressure.

CANOPY SEAL COMPRESSOR. A small electric motor driven air compressor that provides air to the canopy seal at 1 cfm, 65 psig max.

ELECTRICAL PANEL. Houses the necessary electrical components required to start and run the Aircraft Cabin Leakage Tester.

TRAILER AND RUNNING GEAR ASSEMBLY. The trailer frame is of welded steel construction. The trailer rolls easily on four (4) steel wheels equipped with 6.90 x 9.00 inch, 6 ply tires. Individual leaf springs for each wheel gives tester good cushioning against road shocks and rough terrain, protecting the components of the Aircraft Cabin Leakage Tester. A hinged tow bar permits ease of positioning and towing. The front wheel steering is of the conventional type with steering knuckles, tie rods and king pins. A hand lever sets the rear wheel brakes, holding the Aircraft Cabin Leakage Tester in a fixed position during test operations or in parking on a grade. Two tie-down rings are provided in both the front and rear of the trailer frame to permit tie-down of the Aircraft Cabin Leakage Tester for storage or shipment.

LOUVERS. Allow ambient air to enter the cooling system. The amount of air flow is controlled by the louvers which are manually set at desired position from full closed to full open.

PROTECTIVE DEVICES AND INSTRIMENTATION. Protective devices for overload protection of the control circuit.

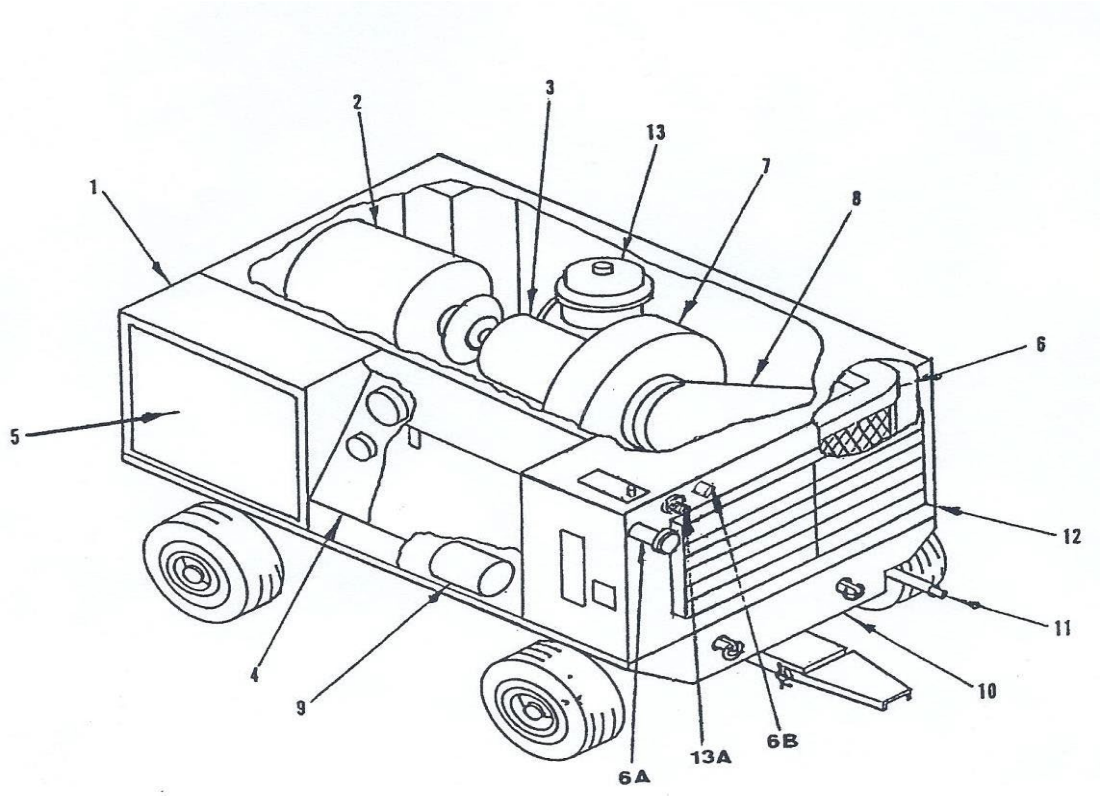
Fuse. A fuse is provided for overload protection of the control circuit

Circuit Breakers are provided for overload protection of the various circuits

Thermal Overloads. The motor starters (contactors) are protected by thermal overloads (heaters) against over currents.

Reverse Current Relay continuously monitors the phase relationship between each of the three incoming power lines. If an abnormal relationship exists, the relay will open to protect the motor from rotating in the wrong direction.

ELECTRICAL SYSTEM. The electrical system provides the circuits and controls for Aircraft Cabin Leakage Tester functioning. The electrical system's controls are mounted on a panel on the left side of the Tester with a hinged access door to permit facility of maintenance and inspection. The tester is designed to operate on 230 volts AC, 3 phase, 60 cycle. The tester can be converted 460 VAC operation.



KEY

1. Cabinet
2. Electric Motor
3. Blower
4. Control Panel
5. Electrical Panel
6. Aftercooler
6A. Cabin Pressure Air Outlet
6B. Cabin Pressure Gage Connection
7. Aftercooler Fan
8. Transition Flange
9. Canopy Seal Compressor
10. Trailer and Running Gear
11. Handbrake
12. Louvers
13. Relief Valve
13A. Canopy Seal Air Supply Outlet