

SECTION 8

EMERGENCY EQUIPMENT

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SECTION 8EMERGENCY EQUIPMENT

## 1. CREW OXYGEN SYSTEM (Figures 1, 2 and 3)

On all aircraft except aircraft 5041 and 5146, Oxygen for the flight crew is supplied by a single cylinder with a charge pressure of 1850 psig. The oxygen system is installed in the pressurized area of the aircraft. The cylinder is located in a zone with good air circulation, remote from any significant source of heat. The location, together with high pressure relief provisions, protects the cylinder from temperatures that might cause rupture.

On aircraft 5041 and 5146, Crew oxygen is stored in two 1850 psi cylinders connected in parallel and located, respectively, under the right flight compartment floor and in the forward avionics bay. A regulator, fitted to the neck of each cylinder, provides the required line connections, including one for an overpressure discharge line terminating at a common port to the rear of the oxygen servicing panel.

Eros quick-donning, diluter-demand type oxygen mask/regulator assemblies with microphones are provided for the pilot and copilot. The masks are stowed, ready for use, in stowage boxes in the left and right side consoles. Each stowage box incorporates a shutoff valve, a blinker type flow indicator, a spring-loaded RESET/TEST sliding handle, an OXY-ON indicator flag and two doors.

The mask is withdrawn from the stowage box by grasping the red release grips on the side of the regulator assembly and pulling upward to open the doors of the stowage box. The inflatable harness inflates when the release grips are grasped and the stowage box shutoff valve opens to deliver oxygen to the mask when the stowage box doors open. When the user has fitted the mask in place and released the release grips, the harness deflates and grips the user's head to keep the mask/regulator assembly firmly fitted. After the mask has been extracted from the stowage box, the doors may be closed without cutting off the oxygen supply to the mask. To stop the flow of oxygen, the RESET/TEST handle is actuated to move the OXY-ON indicator flag out of view and close the stowage box shutoff valve.

Oxygen is supplied from the oxygen cylinder (cylinders on aircraft 5041 and 5146) to each mask assembly at a regulated pressure of  $72.5 \pm 15$  psi. Oxygen is available in three phases and is controlled by the regulator on each mask. The first phase is an air/oxygen mixture available on demand when the flow selector marked N and 100% PUSH is set to N. The second is an undiluted oxygen supply available on demand when the flow selector is set to 100% PUSH. The third phase is an undiluted oxygen supply with an overpressure available when the flow selector is set to 100% PUSH and the EMERGENCY ON/OFF button is set to ON. With an undiluted oxygen supply, the oro-nasal mask also provides protection against smoke inhalation.

A flow indicator (blinker) enables the crew member to determine that oxygen is being delivered to the mask. The flow indicator is located in the stowage box and is visible with the doors open or closed.

An oxygen pressure gauge is provided on the copilot's side panel. The gauge is marked red for pressures below 200 psi and green for pressures between 200 and 1850 psi. An oxygen pressure gauge for ground crew use is located in the oxygen ground service panel. The gauge indicates the cylinder pressure and is calibrated from 0 to 2000 psi. If excessive pressures occur within the oxygen cylinder, a frangible disc, mounted on the cylinder head, ruptures and permits the oxygen to discharge overboard. The ground crew is alerted to oxygen overboard discharge by the rupturing of the green disc at the overboard discharge indicator, located on the fuselage just rear of the oxygen ground servicing panel.

## 2. EMERGENCY EXITS (Figure 4)

Emergency exits are provided by an overwing emergency exit and by the passenger/crew entrance door.

To unlock the passenger/crew door from the inside, the single-lever internal handle is pulled upward releasing the external handle. Continued rotation of the handle upward unlatches the door, allowing it to be opened when pushed outward.

To unlock the passenger/crew door from the outside, the external handle is released by a trigger, marked PUSH, in the handle itself. The handle is then turned 45 degrees counterclockwise, allowing the door to be opened with the assistance of the pull-out handle.

The overwing emergency exit opens inward. It is on the right side of the passenger cabin and can be unlatched from inside or outside the cabin. The operating latch mechanism is contained in the upper section of the door. The push plate and the inner unlatching handle are connected to a torque tube and adjustable latching bolts. Springs retain the latching bolts in an overcentre locked position. The inner unlatching handle has a Betalight sign which displays EXIT PULL and is readily visible during daylight or darkness. A hand grip is located immediately below the window set in the door. The grip is provided to support the door when opening it from inside the cabin. The outer push plate is captioned PUSH IN FLAP, PUSH DOOR INWARD.

### 3. PORTABLE FIRE EXTINGUISHER (Figure 5)

A portable fire extinguisher is located in the flight compartment on the bulkhead behind the copilot's seat. The extinguisher is charged with Halon 1211 extinguishing agent and is suitable for use on Class A, B and C fires. When required, the extinguisher is removed from its support by unlatching a quick release clamp.

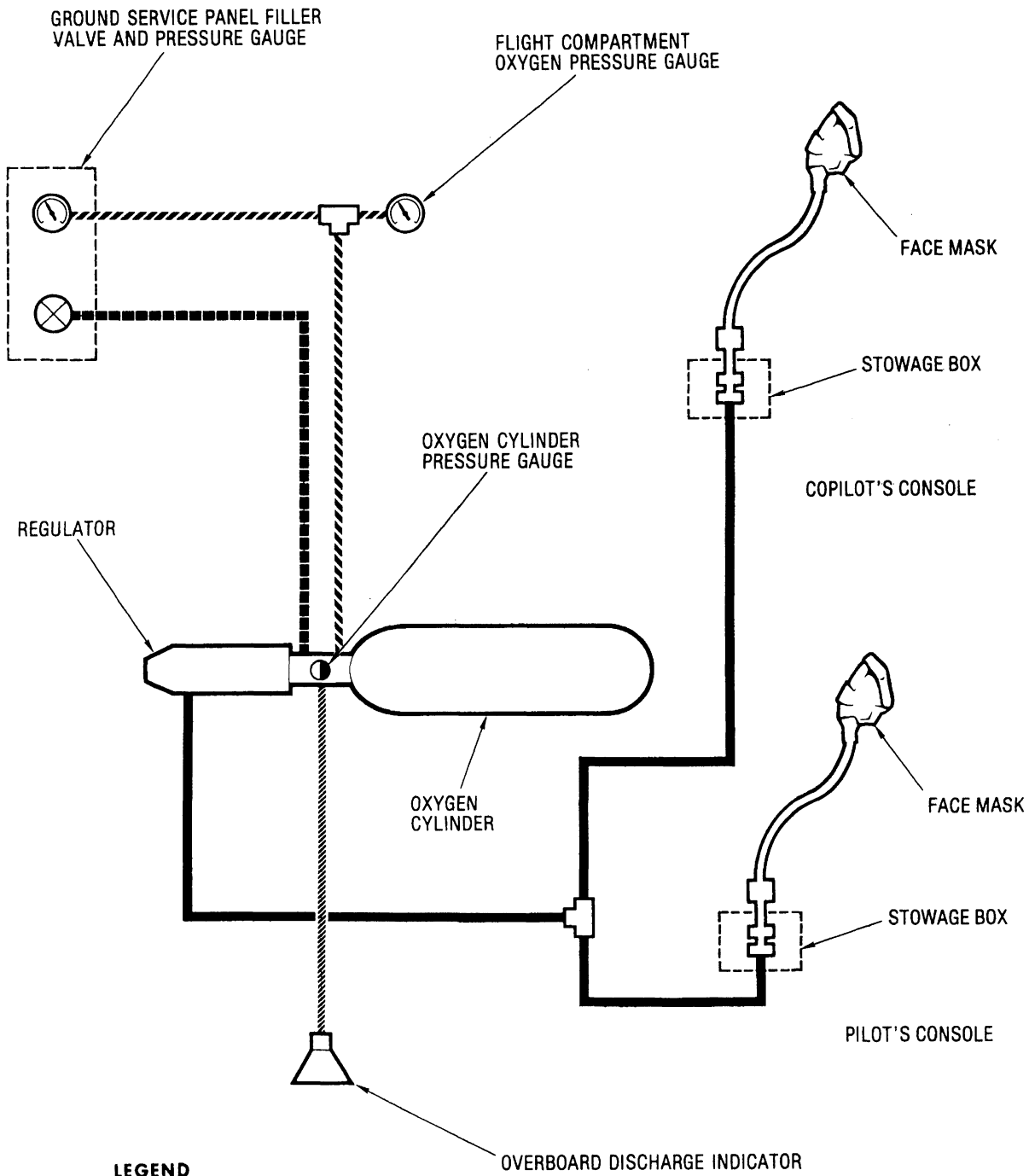
On aircraft 5001 to 5042 (MODEL 2-10), discharge of the extinguishing agent is effected by setting a button to the discharge position and squeezing a spring-loaded lever on the extinguisher operating head. The lever can be released at any time to stop the discharge.

On aircraft 5043 and subsequent (MODEL HAL-035-AVN), discharge of the extinguishing agent is effected by pulling the locking pin and squeezing a spring-loaded lever at the top of the extinguisher operating head. The lever can be released at any time to stop the discharge.

The charge pressure of the extinguishing agent allows the extinguisher to be used up to 10 feet away from very hot fires or fires generating a dangerous amount of smoke. If the discharge lever is held in the on position, the extinguisher is fully discharged in 12 seconds.

### 4. EMERGENCY LIGHTING

Emergency lighting is provided by three overwing floodlights located on the right side of the fuselage adjacent to the overwing exit, and by one ground floodlight near the passenger/crew entrance door. For further information on the emergency lighting, refer to SECTION 15, LIGHTING.

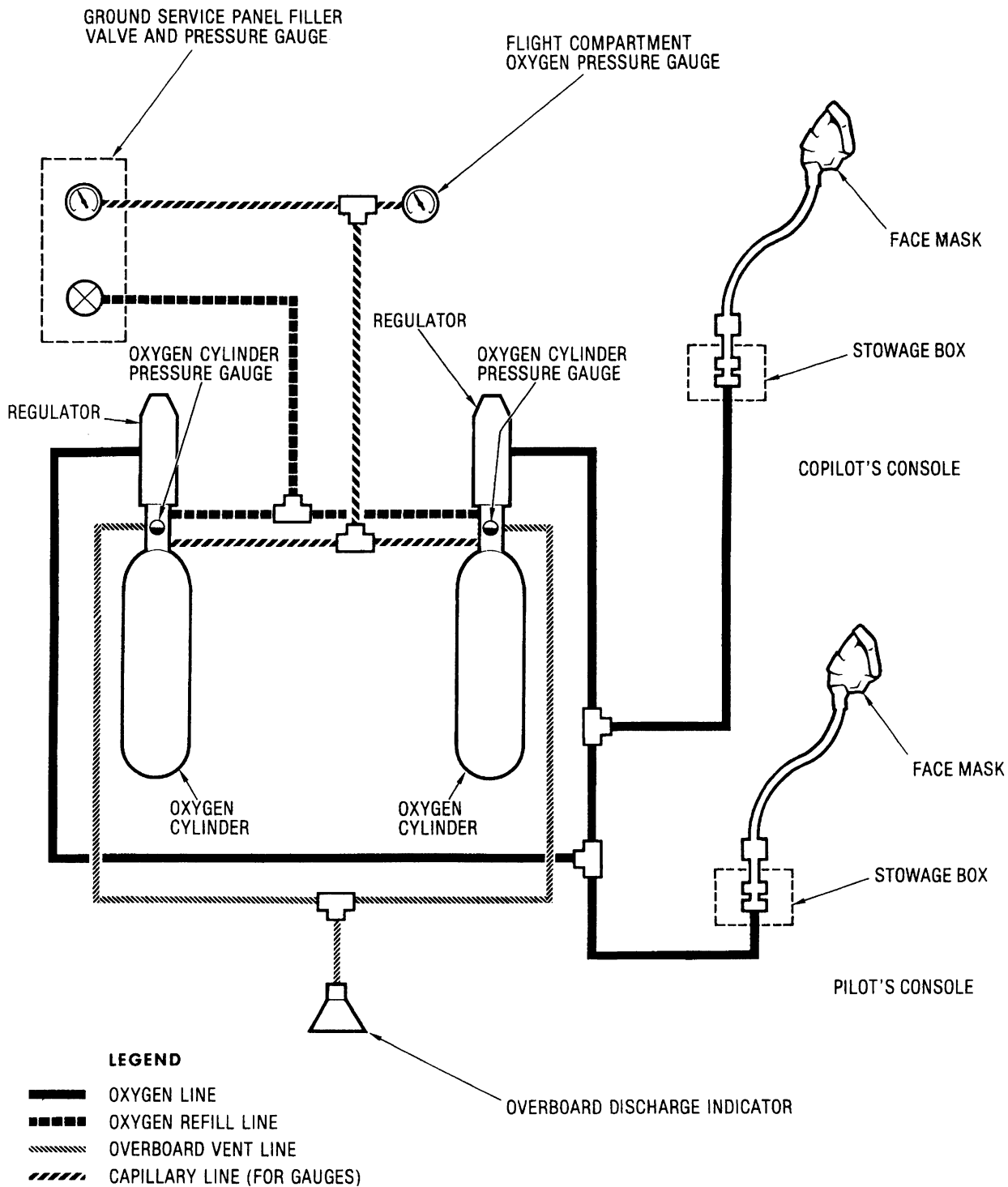


**LEGEND**

- OXYGEN LINE
- ⋯ OXYGEN REFILL LINE
- ▨ OVERBOARD VENT LINE
- - - CAPILLARY LINE (FOR GAUGES)

EFFECTIVITY : ON ALL A/C EXCEPT 5041 AND 5146

Crew Oxygen System - Schematic  
Figure 1 (Sheet 1)



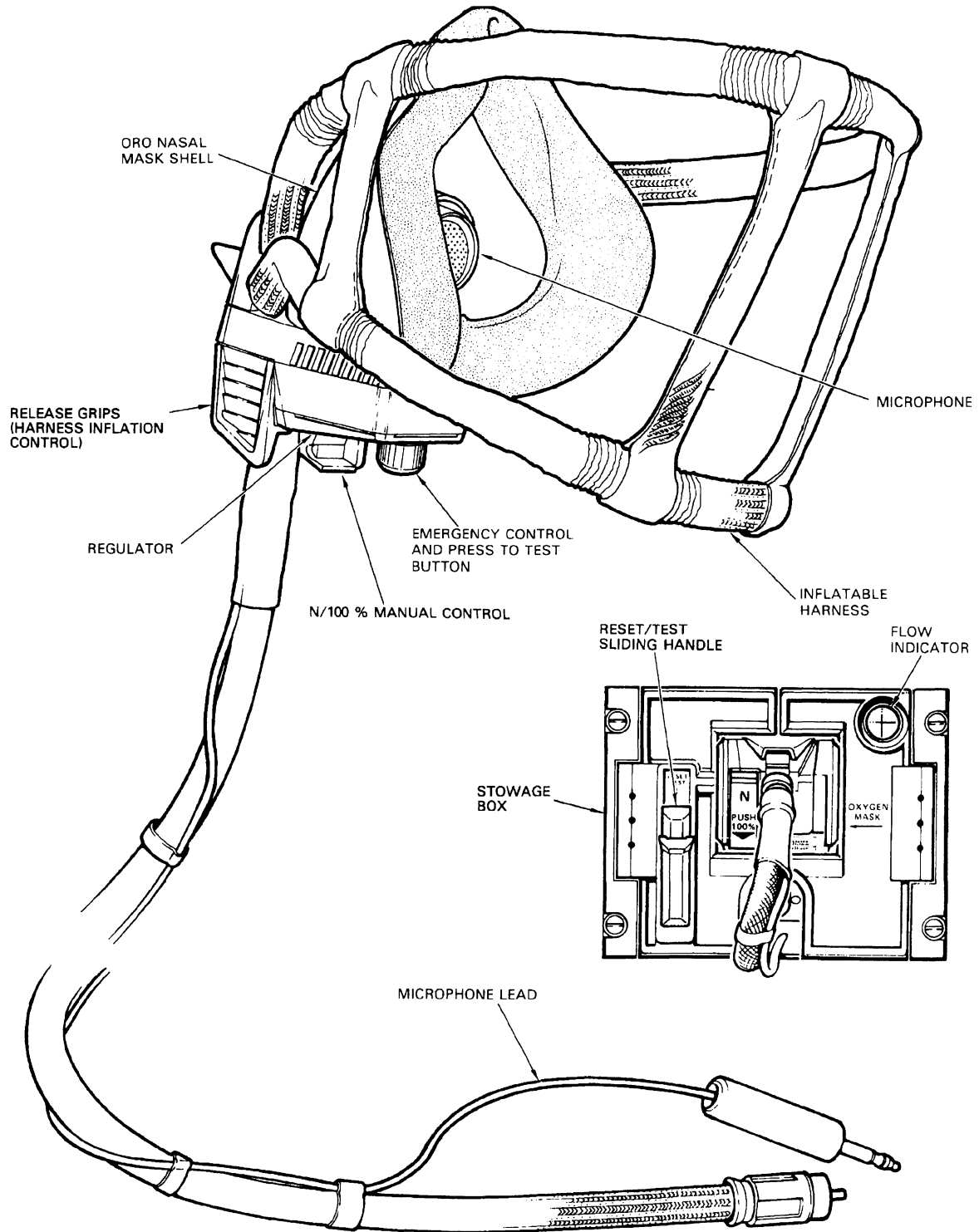
EFFECTIVITY : A/C 5041 AND 5146

Crew Oxygen System - Schematic  
Figure 1 (Sheet 2)

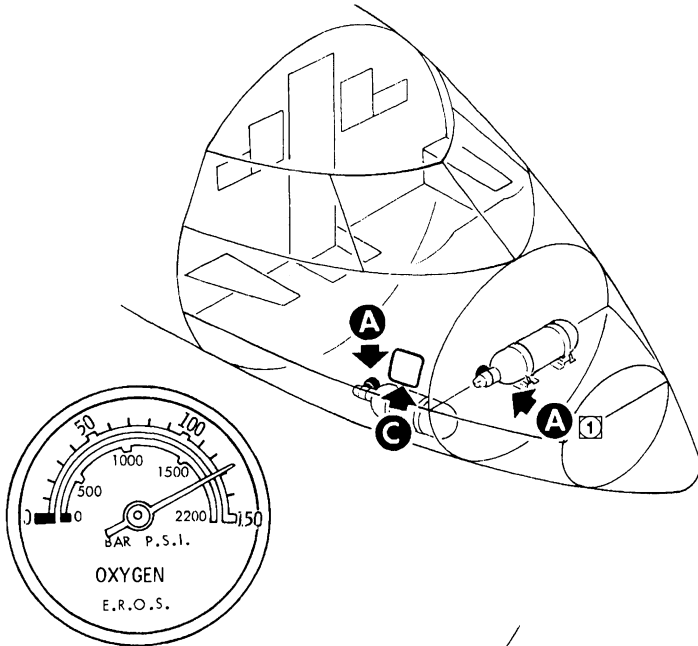
**SECTION 8**

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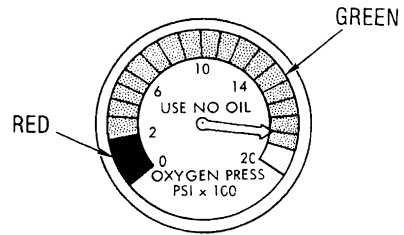
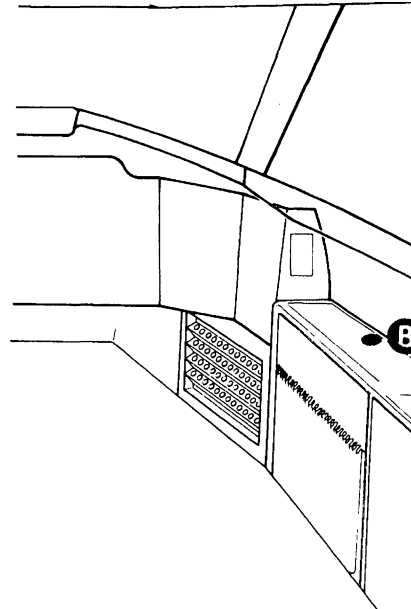




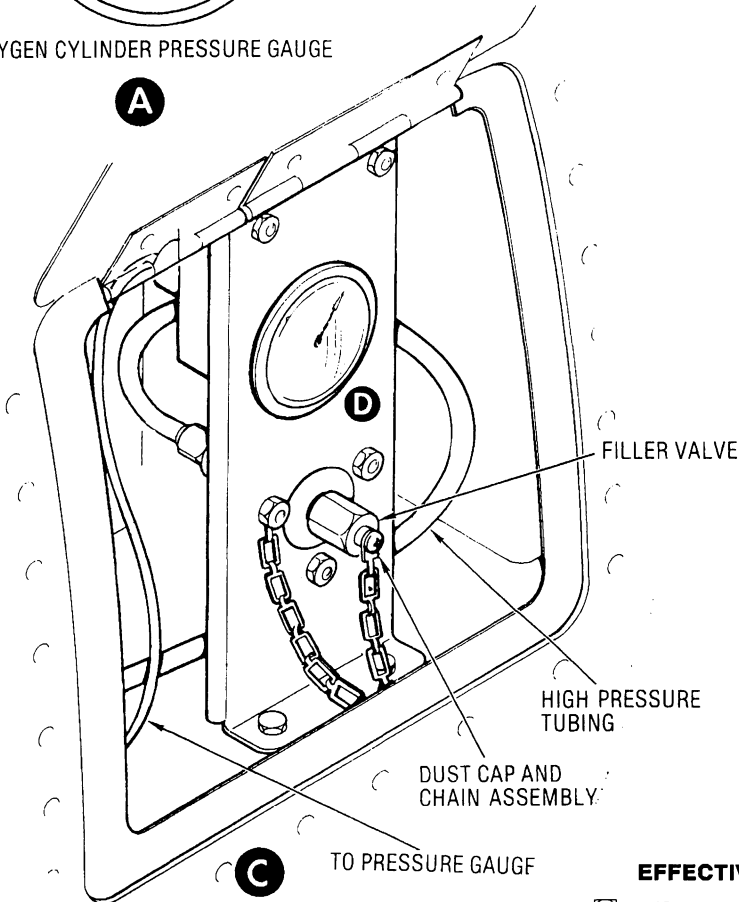
Oxygen Mask  
Figure 2



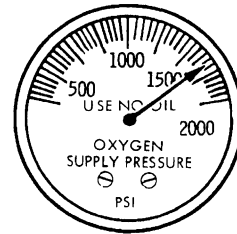
OXYGEN CYLINDER PRESSURE GAUGE



FLIGHT COMPARTMENT PRESSURE GAUGE



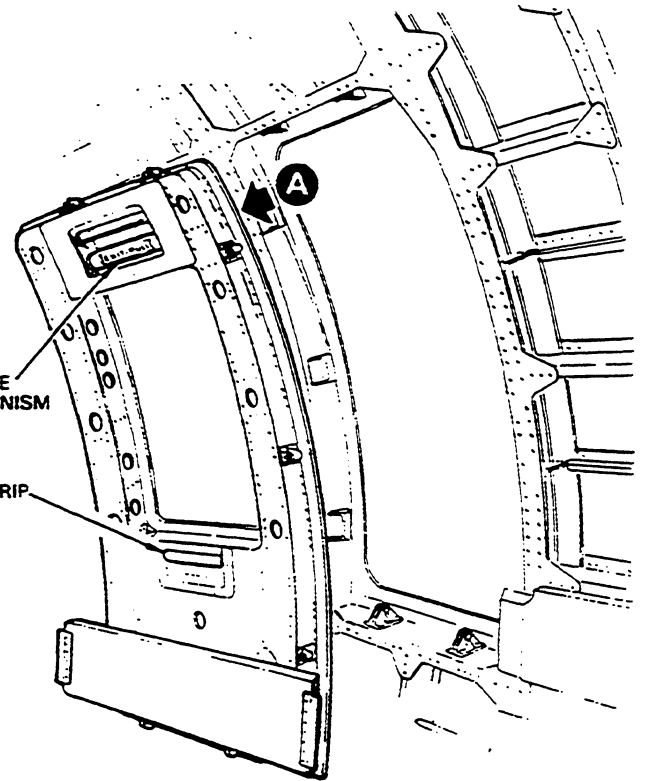
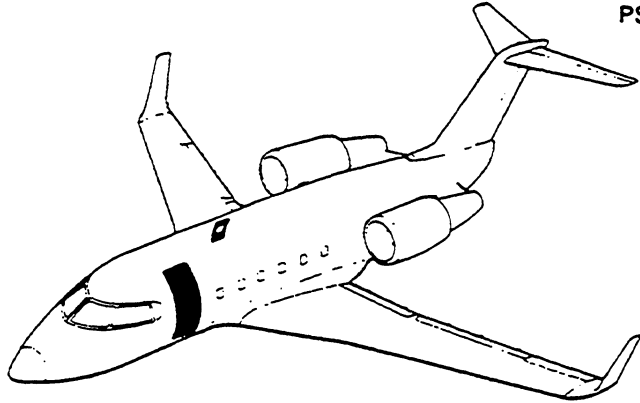
**B**



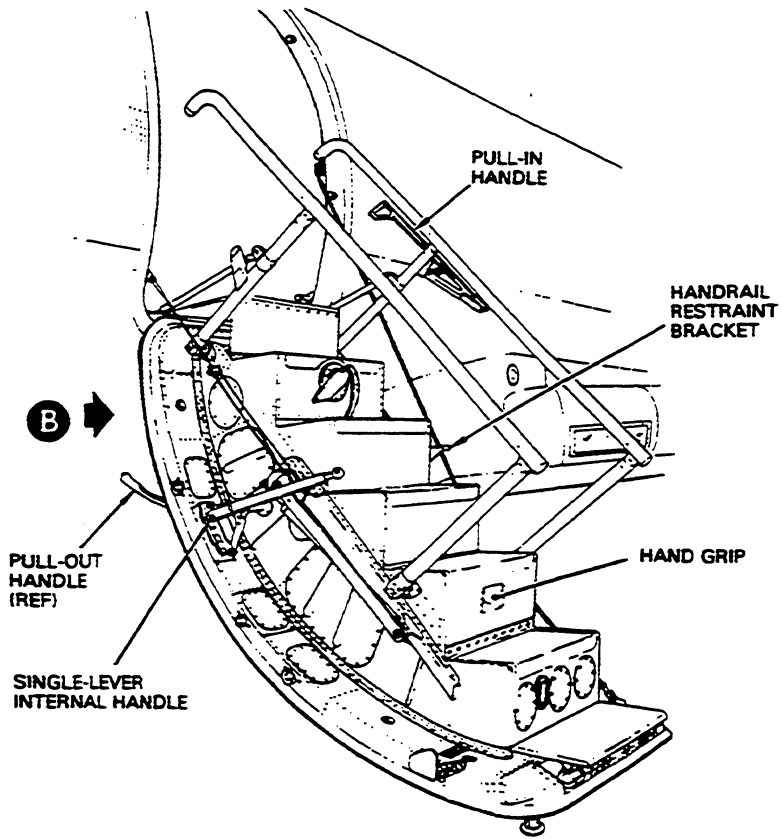
GROUND SERVICE PANEL PRESSURE GAUGE

**D**

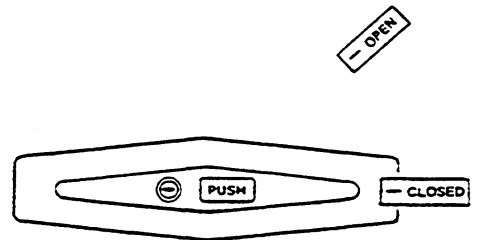
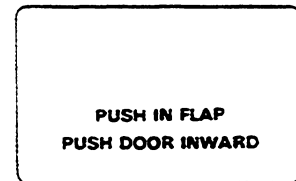
**EFFECTIVITY**  
① A/C 5041 and 5146



OVERWING EMERGENCY EXIT

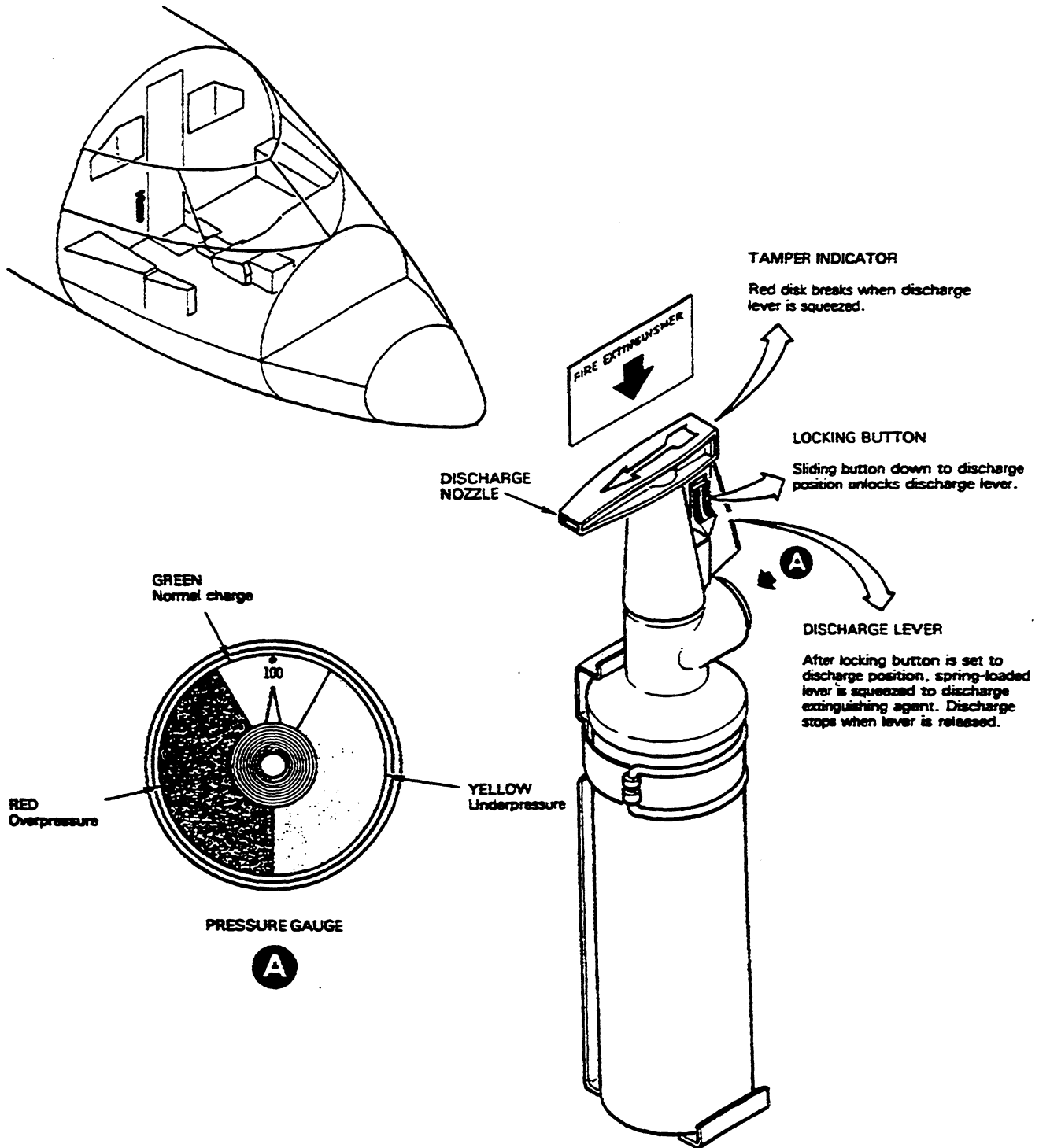


PASSENGER/CREW DOOR

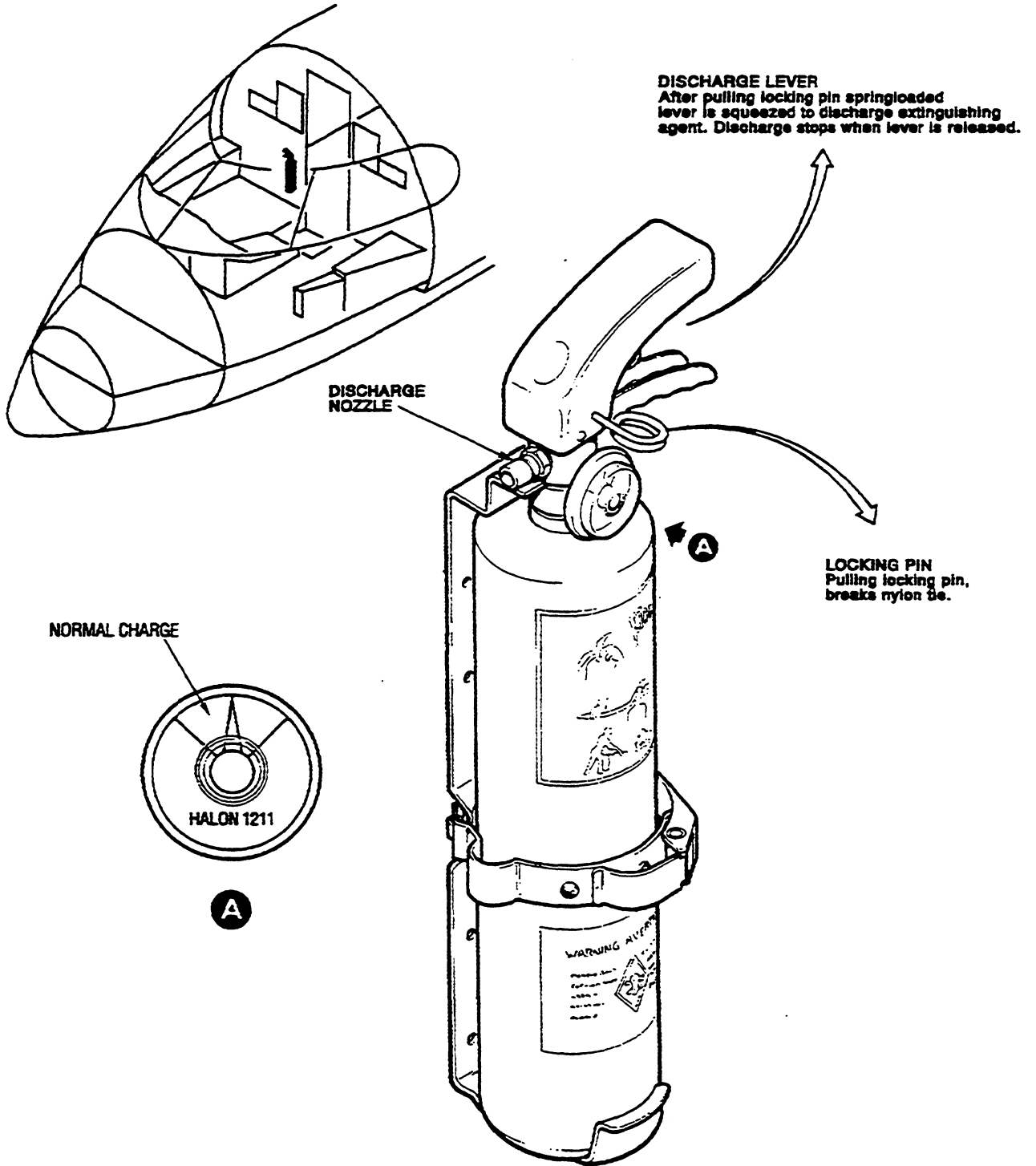


EXTERNAL HANDLE

Emergency Exits  
Figure 4



EFFECTIVITY: A/C 5001 TO 5042 (MODEL 2-10)



EFFECTIVITY: A/C 604S AND SUBS, (MODEL HAL-036-AVN)