 <b>A320</b> <small>SIMULATOR</small> <b>FLIGHT CREW OPERATING MANUAL</b>	<b>OXYGEN</b>	1.35.00	P 1
	<b>CONTENTS</b>	SEQ 001	REV 23

**35.00 CONTENTS**

**35.10 GENERAL**

**35.20 FIXED OXYGEN SYSTEM FOR COCKPIT**


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**35.40 PORTABLE OXYGEN SYSTEM**


**35.50 ELECTRICAL SUPPLY**

 AIRBUS TRAINING <b>A320</b> SIMULATOR FLIGHT CREW OPERATING MANUAL	<b>OXYGEN</b>	1.35.10	P 1
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**DESCRIPTION**

- The oxygen system consists of :
- a fixed oxygen system for the cockpit
  - a fixed oxygen system for the cabin
  - a portable oxygen system.

R The oxygen system supplies adequate breathing oxygen to the crew and passengers in case of depressurization or presence of smoke or toxic gas.

 AIRBUS TRAINING <b>A320</b> SIMULATOR FLIGHT CREW OPERATING MANUAL	<b>OXYGEN</b>  FIXED OXYGEN SYSTEM FOR COCKPIT	1.35.20	P 1
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<b>DESCRIPTION</b>
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The cockpit's fixed oxygen system consists of :

- A high-pressure cylinder, in the left-hand lower fuselage.
- A pressure regulator, connected directly to the cylinder that delivers oxygen, at a pressure suitable for users.
- Two overpressure safety systems to vent oxygen overboard, through a safety port, if the pressure gets too high.
- A supply solenoid valve that allows the crew to shut off the distribution system.
- Three (or four, as installed) full-face quick-donning masks, stowed in readily-accessible boxes adjacent to the crewmembers' seats (one at each seat).

**OPERATION**

The crewmember squeezes the red grips to pull the mask out of its box, and this action causes the mask harness to inflate.

A mask-mounted regulator supplies a mixture of air and oxygen or pure oxygen, or performs emergency pressure control. With the regulator set to **NORMAL**, the user breathes a mixture of cabin air and oxygen up to the cabin altitude at which the regulator supplies 100 % oxygen. The user can select 100 %, in which case the regulator supplies pure oxygen at all cabin altitudes.

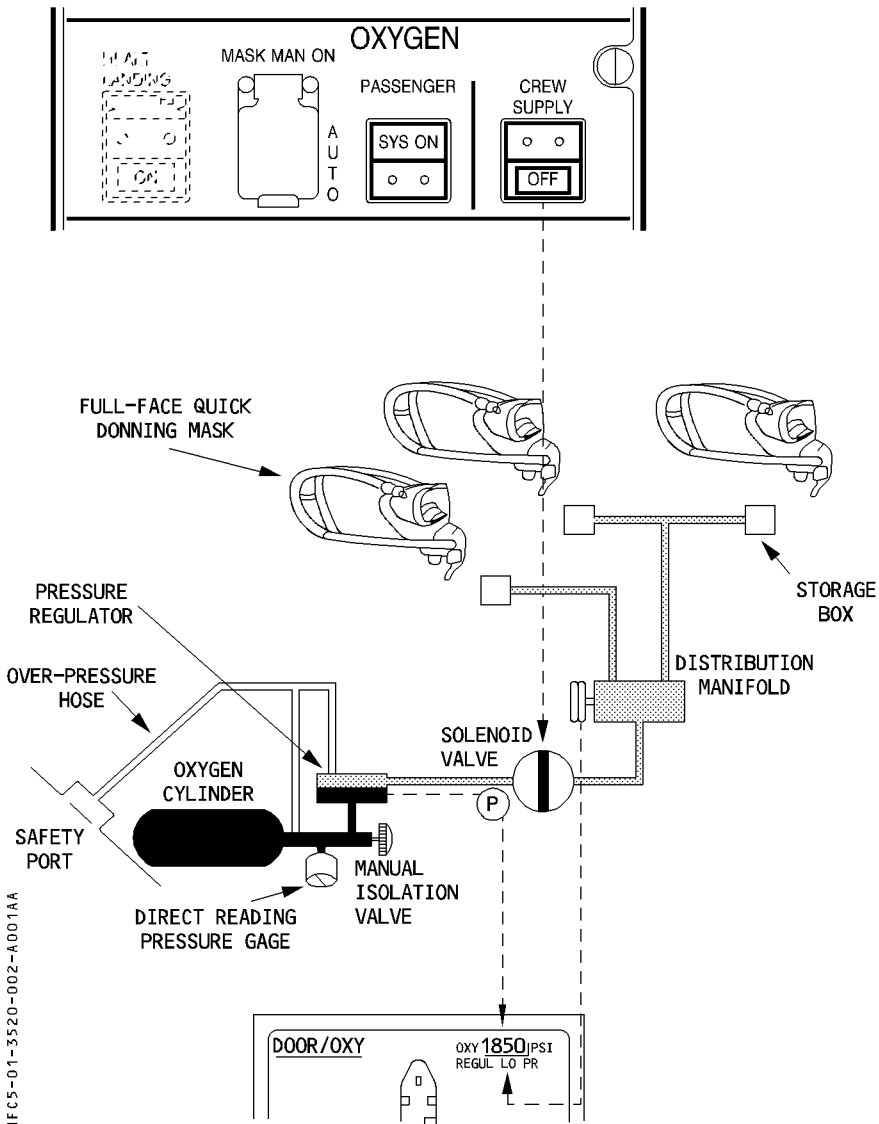
If the situation calls for it, the user can use the emergency overpressure rotating knob and receive pure oxygen at positive pressure.

The storage box contains a microphone lead, with a quick-disconnect, for connection to the appropriate mask microphone cable.

- R Note : Each mask may have a removable film that protects the visor against scratches.  
 R This strip is optional and may be removed from the mask at any time.



R

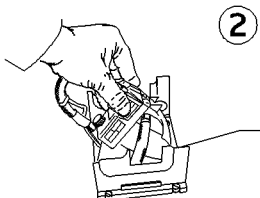
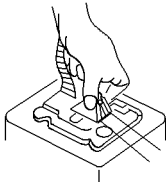


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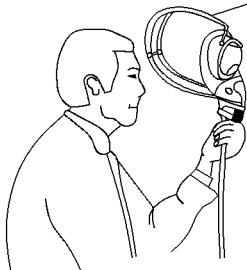
**MASK SETTING**

**1** TAKE THE MASK BY SQUEEZING THE RED GRIP



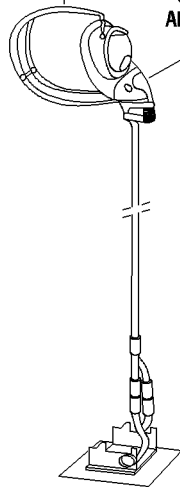
REMOVE THE MASK THE HARNESS INFLATES

**4** DONNING OF THE MASK (HARNESS INFLATED)



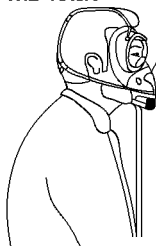
INFLATABLE HARNESS

**3**

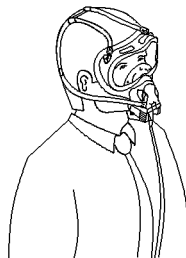


SEE CONTROLS AND INDICATORS

**5** RELEASE THE RED HAND SIDE GRIP HARNESS DEFLATES AND MAINTAINS THE MASK



**6**

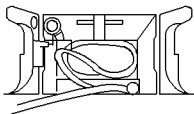


NFC5-01-3520-003-A001AA

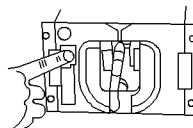
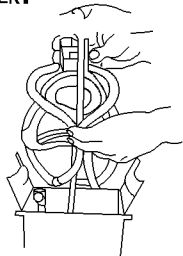


## R MASK STOWAGE

- 1 - COIL THE HOSE, AND PLACE IT IN THE BOTTOM OF THE STOWAGE BOX.
- 3 - PLACE THE MASK IN THE STOWAGE BOX.  
- MAKE SURE THE MASK REGULATOR IS FULLY SEATED AGAINST THE STOP IN THE STOWAGE BOX.



- 2 - POSITION THE REMAINING HOSE IN THE MIDDLE OF THE MASK.  
- FOLD THE TWO HARNESS PORTIONS TOGETHER.
- 4 - CLOSE THE DOORS, THEN FULLY PRESS THE "RESET TEST" BUTTON.  
- ONCE THE "RESET TEST" BUTTON IS RELEASED, CHECK THAT THE "OXY ON" FLAG COMPLETELY DISAPPEARS.  
- PRESS THE EMERGENCY PRESSURE SELECTOR, AND CHECK THAT THE BLINKER REMAINS BLACK.

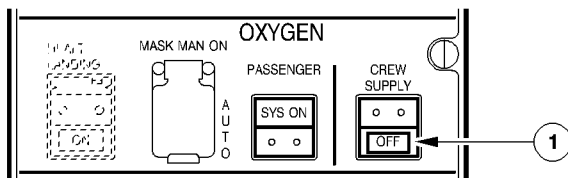


NFC5-01-3520-004-A001AA

## CONTROLS AND INDICATORS

### OVERHEAD PANEL

NFC5-01-3520-004-B001AA



#### 1 CREW SUPPLY pushbutton

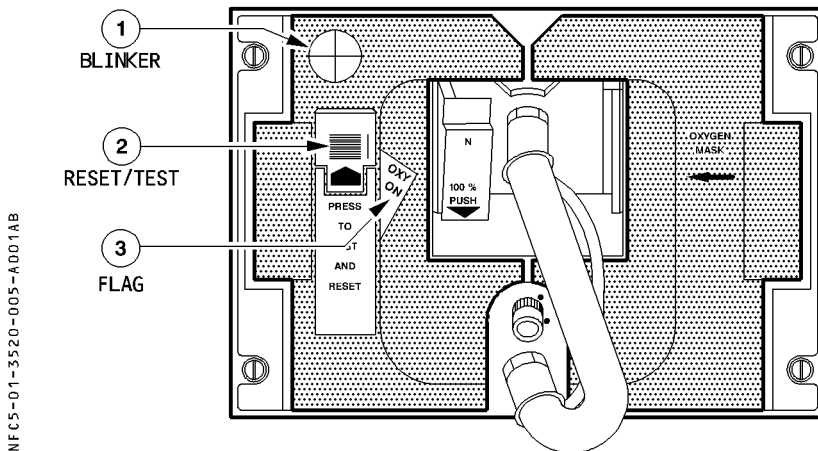
This pushbutton controls the solenoid valve.

On : The valve is open, and supplies low pressure oxygen to the masks (normal position in flight).

OFF : The valve is closed, and the white light comes on.



## STOWAGE BOX



### ① Blinker flowmeter (yellow)

This indicator flashes when oxygen is flowing.

### ② RESET / TEST control slide

R The crewmember presses the slide, and pushes it in the direction of the arrow to test : the operation of the blinker ; the regulator supply ; system sealing downstream of the valve ; and the regulator sealing and system operation. Pressing the RESET control slide, after the oxygen mask has been used, cuts off the oxygen, and the mask microphone.

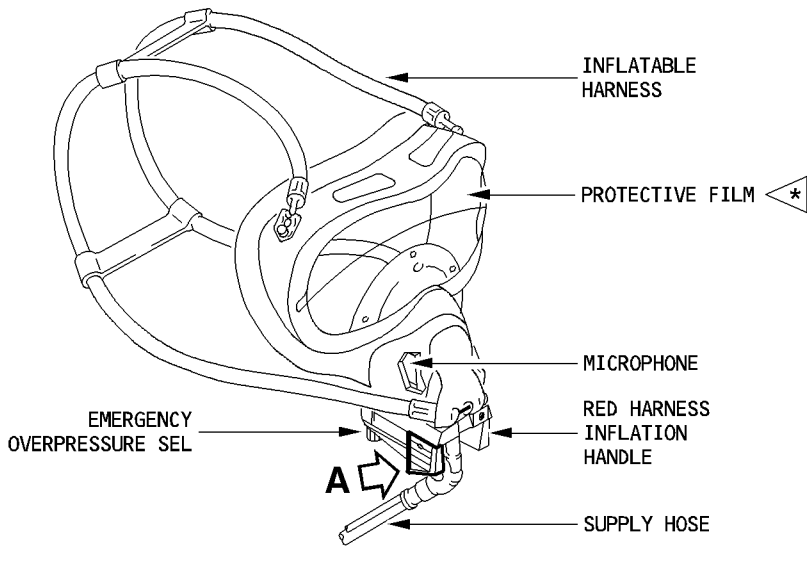
### ③ OXY ON flag

R As soon as the left flap door opens, the mask is supplied with oxygen and, once it closes (mask still supplied with oxygen), the "OXY ON" flag appears.



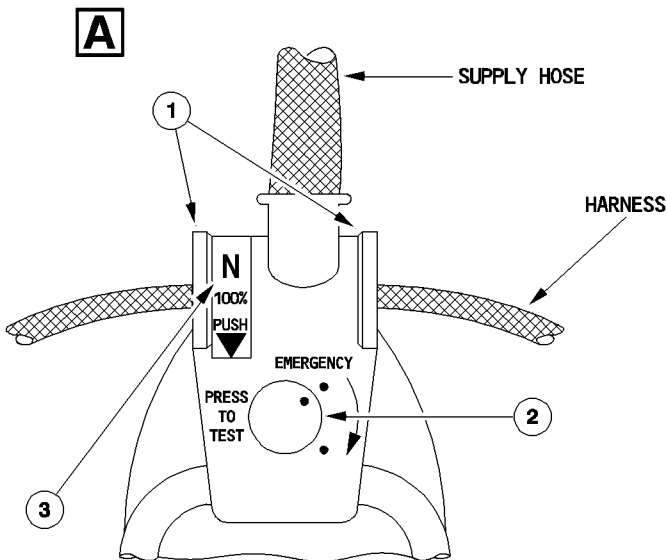
**CREW OXYGEN MASK**

R




NFC5-01-3520-006-A001AA

**PRESSURE REGULATOR**



NFC5-01-3520-006-B001AA



	<b>OXYGEN</b>	1.35.20	P 7
	FIXED OXYGEN SYSTEM FOR COCKPIT	SEQ 001	REV 32

① Red grips

Squeezing the right-hand side grip unlocks the two-flap door, and permits the harness to inflate.

② EMERGENCY pressure selector

This selector creates an overpressure, which eliminates condensation and prevents smoke, smell, or ashes from entering the mask.

- Pressing this knob generates an overpressure for a few seconds.
- Turning the knob, in the direction of the arrow, generates a permanent overpressure.

*Note : Overpressure supply is automatically started, when cabin altitude exceeds 30,000 feet.*

③ N/100 % selector

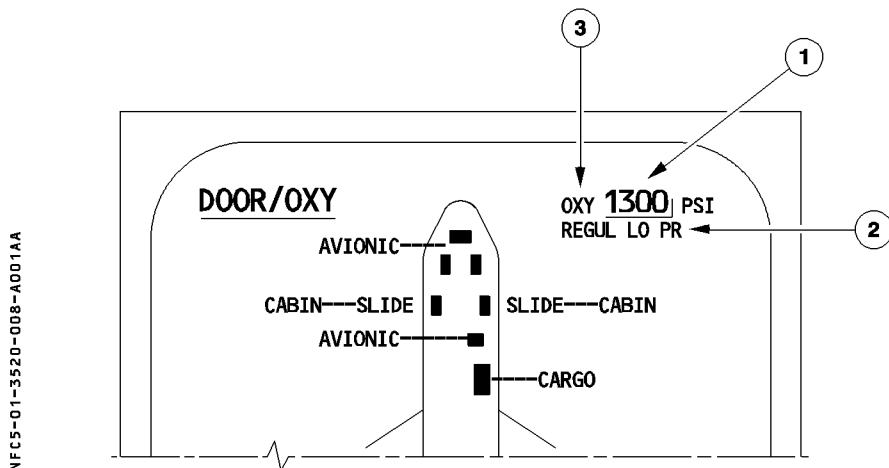
R Pushing the button up from underneath releases it, and it pops up to the N (normal) position. Pressing it again returns it to 100 %.

100 % : The mask delivers 100 % oxygen.

N : The mask delivers a mixture of air and oxygen, the content of which varies with cabin altitude. When cabin altitude goes above 35000 feet, the air inlet closes and the wearer breathes 100 % oxygen.



## DOOR/OXY ECAM PAGE



### ① OXY high pressure indication

- R Green : When pressure is  $\geq 400$  psi.  
 R Amber : When pressure is  $< 400$  psi.  
 R An amber half frame appears when oxygen pressure is  $< 1500$  psi.  
 R In this case, the flight crew must check that the remaining quantity is not  
 R below the minimum (refer to OPERATING LIMITATIONS, 3.01.35).

### ② REGUL LO PR indication

Appears amber if oxygen pressure on the low-pressure circuit is low (50 psi).

### ③ OXY indication

Normally green.

Becomes amber when :

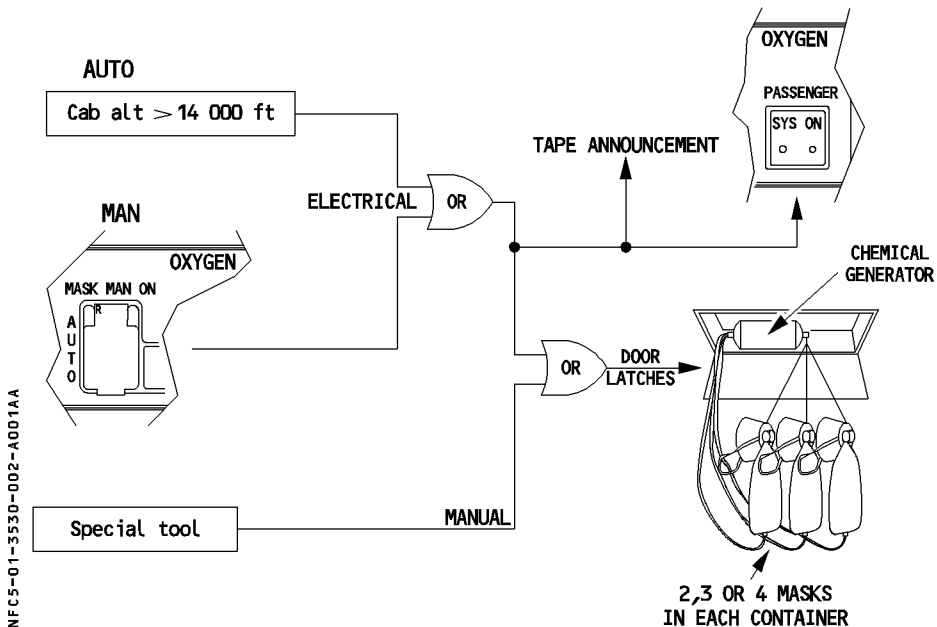
- Pressure goes below 400 psi.
- Low oxygen pressure is detected.
- The OXYGEN CREW SUPPLY pushbutton switch on overhead panel is OFF.

**DESCRIPTION**

The cabin's fixed oxygen system supplies oxygen to the occupants, in case of cabin depressurization. Chemical generators produce the oxygen. Each generator feeds a group of 2, 3, or 4 masks. Generators and masks are in containers above the passenger seats, in the lavatories, in each galley (◁), and at each cabin crew station.

**OPERATION**

Each container has an electrical latching mechanism that opens automatically to allow the masks to drop, if the cabin pressure altitude exceeds 14000 feet (+ 0, - 500 feet). The flight crew can override the automatic control. When the masks are released, the passenger address system automatically broadcasts prerecorded instructions for their use. The generation of oxygen begins when the passenger pulls the mask towards the passenger seat. The chemical reaction used for oxygen generation creates heat. Therefore, the smell of burning or smoke, and cabin temperature increase, may be associated with the normal operation of the oxygen generators. The mask receives pure oxygen under positive pressure for about 15 minutes, until the generator is exhausted. A reset is available for the rearming of the system after the masks are restowed. A manual release tool allows crewmembers to manually open the doors in case of electrical failure.

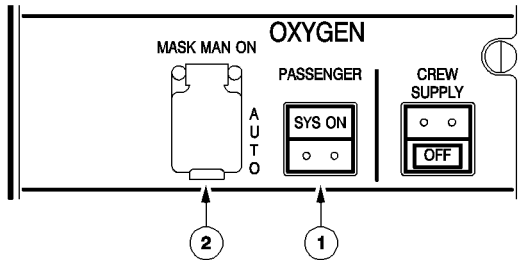




## CONTROLS AND INDICATORS

### OVERHEAD PANEL

NFC5-01-3530-003-A001AA



#### ① PASSENGER SYS ON light

This light comes on in white, when the control for the oxygen mask doors is activated, and it remains on until the TMR RESET pushbutton is pressed (see maintenance panel, below).

#### ② MASK MAN ON pushbutton

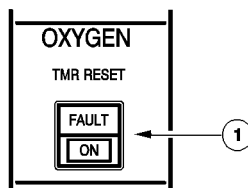
The guard keeps this button in the AUTO position.

AUTO : The mask doors open automatically, when the cabin altitude exceeds 14000 feet.

Pressed : The mask doors open.

### OVERHEAD MAINTENANCE PANEL

NFC5-01-3530-003-B001AA



#### ① TMR RESET pushbutton

The maintenance crew uses this pushbutton to reset the control circuit, after the system has operated.

ON : The PASSENGER SYS ON light goes off.

R FAULT : This light comes on in white, when the door latch solenoids are energized for more than 30 seconds.



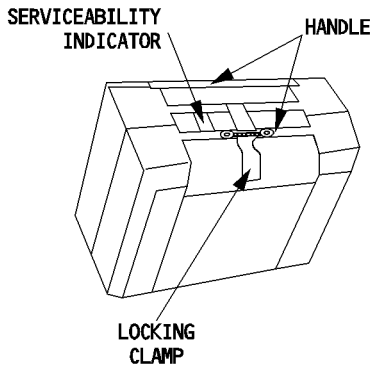
## DESCRIPTION

### FLIGHT CREW'S PORTABLE OXYGEN SYSTEM

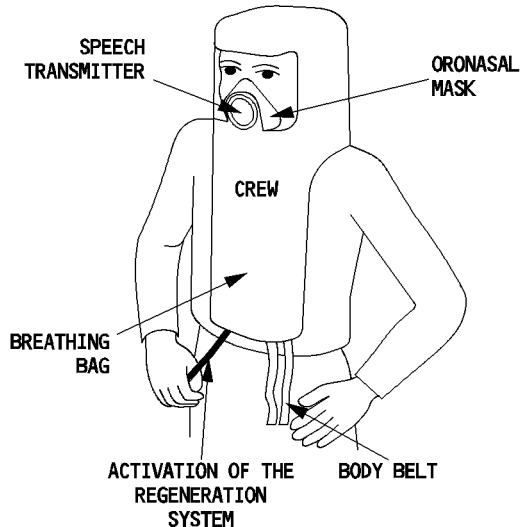
The smoke hood on the left back side of the cockpit protects the eyes and respiratory system of one member of the flight crew while he is fighting a fire, or if smoke or noxious gases enter the cabin, or if the cabin loses pressure.

The smoke hood uses a chemical air regeneration system, which is in the breathing key. An oronasal mask allows the hood's wearer to inhale regenerated air, and it returns the exhaled breath to the regeneration system.

The hood is serviceable as long as the yellow indicator on the case is not broken. The hood should work satisfactorily for at least 20 minutes.



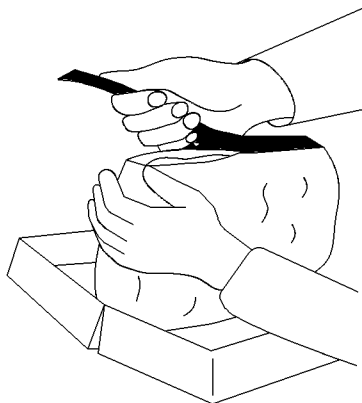
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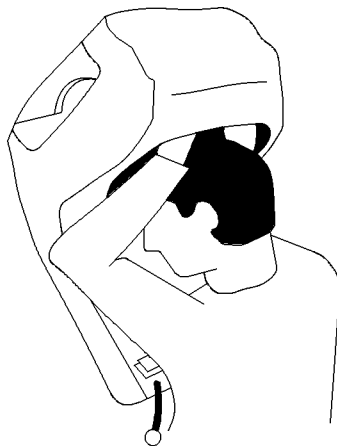


## USING THE HOOD

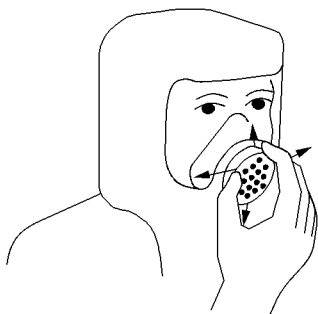
- 1 REMOVE UNIT FROM CASE AND REMOVE THE HOOD FROM THE PROTECTIVE BAG BY TEARING OFF THE STRIP.**



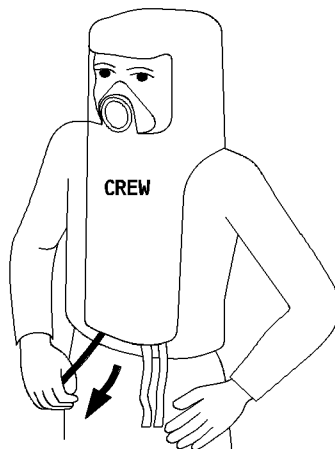
- 2 ENLARGE THE NECK SEAL AND PULL THE HOOD OVER YOUR HEAD.**



- 3 CORRECTLY ADJUST THE INNER MASK.**



- 4 PULL DOWN THE LANYARD TO ACTIVATE THE AIR REGENERATION SYSTEM.**



NFC5-01-3540-002-A112AB

**MEMO DISPLAY**

- HI ALT SET : The ECAM displays this memo in green, when the crew sets the HI ALT LANDING pushbutton to ON. In this case, the passenger mask release altitude is 16000 feet (+ 0,500 feet).

**BUS EQUIPMENT LIST**

**FOR INFO**

R

		NORM			EMER ELEC		
		AC	DC	DC BAT	AC ESS	DC ESS	HOT
CREW OXY CTL						SHED	
PAX OXYGEN	ACTUATION				SHED		
	AUTOCONTROL					SHED	