



C-141 APG

HOME STUDY BOOKLET

FOR ENGINEERS

443d TECHNICAL TRAINING SQUADRON

443d MILITARY AIRLIFT WING, TNG (MAC)

ALTUS AIR FORCE BASE, OKLAHOMA

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C-141 AIRPLANE GENERAL PHASE

OBJECTIVES

EACH STUDENT WILL:

BECOME FAMILIAR WITH THE AIRCRAFT.

KNOW THE LOCATION OF SYSTEM COMPONENTS AND CONTROLS.

UNDERSTAND THE SYSTEM WARNING LIGHTS.

UNDERSTAND BOTH THE NORMAL AND EMERGENCY OPERATION
OF THE SYSTEMS.

EACH STUDENT SHOULD BE ABLE TO:

LIST THE DIMENSIONS OF THE AIRCRAFT.

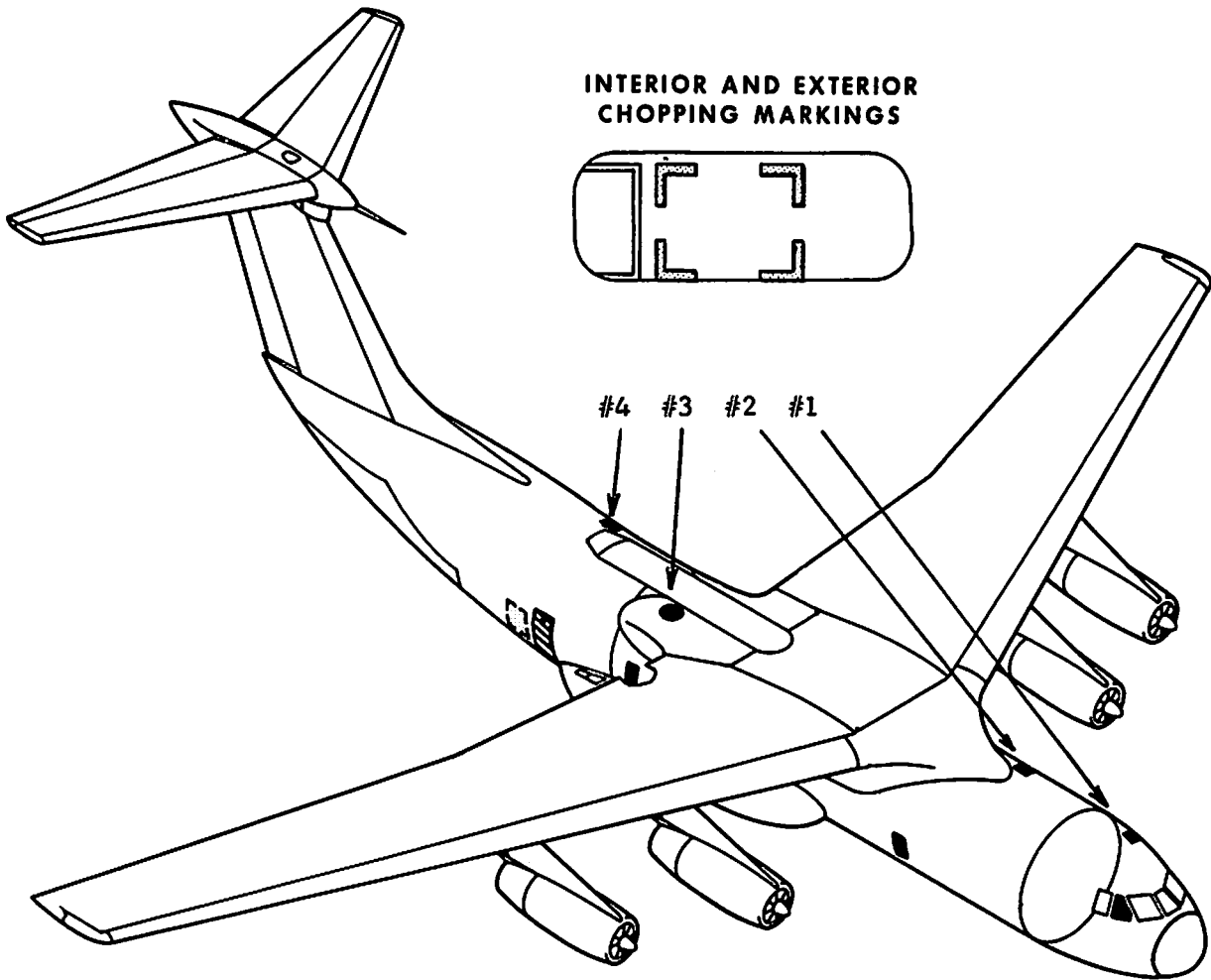
IDENTIFY THE EMERGENCY EXITS.

EXPLAIN THE OPERATION OF THE:

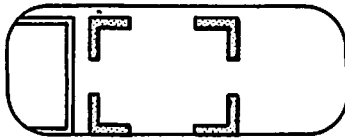
DOOR WARNING SYSTEM.

ANNUNCIATOR AND MASTER CAUTION LIGHT SYSTEM.




TAKEOFF WARNING SYSTEM.



INTERIOR AND EXTERIOR
CHOPPING MARKINGS

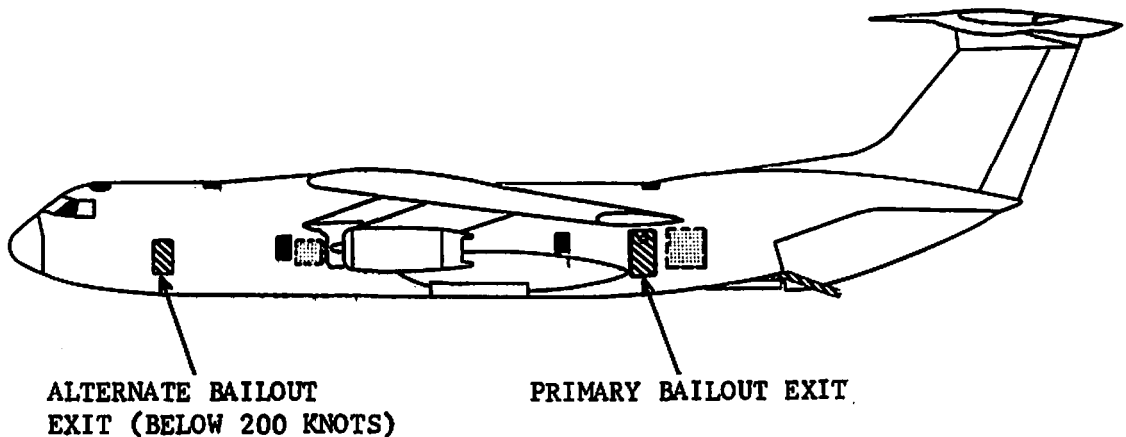


#4 #3 #2 #1

-  EXIT IN FLIGHT AND ON GROUND
-  EXIT ON GROUND ONLY
-  CHOPPING LOCATION

AIRCRAFT DESCRIPTION

1. The C-141 aircraft dimensions are: wing span (160 feet) and fuselage length
2. of (145 feet) including the radome. The height to the top of the horizontal
3. fin with the pitch trim neutral is (39 feet 3 inches) with the pitch trim
4. full nose up the height is (40 feet 7 inches). The designed maximum gross
5. weight is (325,000 lbs) minus (1900 lbs) of fuel for start, taxi and run-
6. up gives us the maximum flight weight of (323,100 lbs).
7. The flight station and cargo compartment are pressurized. This makes the
8. aircraft desirable as a troop carrier or air evacuation airlift.



9. The aircraft has several emergency entrances and exits on the top and
10. and sides of the fuselage. All escape hatches may be opened from either
11. the inside or outside of the aircraft. The pilot's and copilot's sliding
12. windows can be opened only from the inside. There are four hatches on the
13. top of the fuselage numbered from front to rear. Number two (2) hatch is
14. the depressurization hatch. Number three (3) hatch is the plug type and
15. must be pulled in after aircraft is depressurized. Number four (4) hatch
16. must be opened with CAUTION as it swings down and may hit the person standing

17. on the rope ladder. The Nr 4 hatch contains the crash position indicator.
18. There are four plug type hatches on the side of the fuselage which cannot
19. be opened with the aircraft pressurized. The primary bailout exits are
20. the left and right troop doors. The crew entrance door may be used below
21. 200 KCAS.

AIRCRAFT DESCRIPTION QUIZ

1. What is the wing span of the C-141? (Line 1) 160
2. What is the maximum design ramp gross weight of the C-141? (Lines 4 & 5)
325,000
3. What is the maximum flight weight of the C-141? (Line 6)
323,100
4. How many hatches are there on the top of the fuselage? (Lines 12 & 13)
4
5. Which hatch contains the crash position indicator (CPI)? (Line 17)
#4
6. The side emergency exits cannot be opened during pressurized flight.
(Lines 18 & 19)
 - a. True
 - b. False
7. The pilots' sliding windows may be opened from the inside only. (Lines 11-12)
 - a. True
 - b. False
8. Which hatch is used for emergency depressurization of the aircraft?
(Lines 13 & 14)
#2
9. Which doors are the primary bailout exits? (Lines 19 & 20)
LT & RT Troop Doors

MASTER CAUTION LIGHT SYSTEM

1. The master CAUTION lights provide a means to monitor the annunciator panel
2. lights at pilots' flight station. Both pilots are warned at the same time by
3. two master CAUTION lights, which are (located on their respective instrument
4. panels).
5. A signal from the malfunctioning unit is sensed and turns ON a light with a
6. word-warning. This (ANNUNCIATOR light will flash) or blink ON and OFF, and
7. at the same time turn ON the (master CAUTION) lights steadily. This
8. condition will continue until the malfunction is cleared or until the pilot's
9. or copilot's master CAUTION light is depressed. If the malfunction is of a
10. nature which cannot be cleared and the master CAUTION light is depressed,
11. the ANNUNCIATOR light will at that time remain (ON) (but will stop blinking)
12. and will continue to illuminate steadily.
13. If any of the ANNUNCIATOR lights remains ON and another malfunction occurs,
14. it will again illuminate the master (CAUTION)lights. Each time a master
15. CAUTION light is depressed it re-arms the system. A test switch is located
16. forward of the copilot's throttle quadrant. By placing this switch to the
17. TEST position, all ANNUNCIATOR and master CAUTION lights at the pilots'
18. station will illuminate enabling the lights to be checked. A two position
19. switch on the copilot's overhead panel enables the crew to select (BRIGHT
20. or DIM) for night operation. (The DIM position is inoperative) when the
21. (thunderstorm lighting switch is in the ON position.)

MASTER CAUTION LIGHT SYSTEM QUIZ

1. What constitutes the master caution warning system? (Lines 2-4)
 - a. Pilots MASTER
 - b. CO's MASTER
 - c.

2. How may the pilots' master caution lights be turned out? (Lines 7-9)
 - a. MALFUNCTION IS Cleared
 - b. Press MASTER CAUTION LIGHT

3. Should the master CAUTION light be depressed by either pilot, the ANNUNCIATOR light will continue to blink ON and OFF. (Line 11)
 - a. True
 - b. False

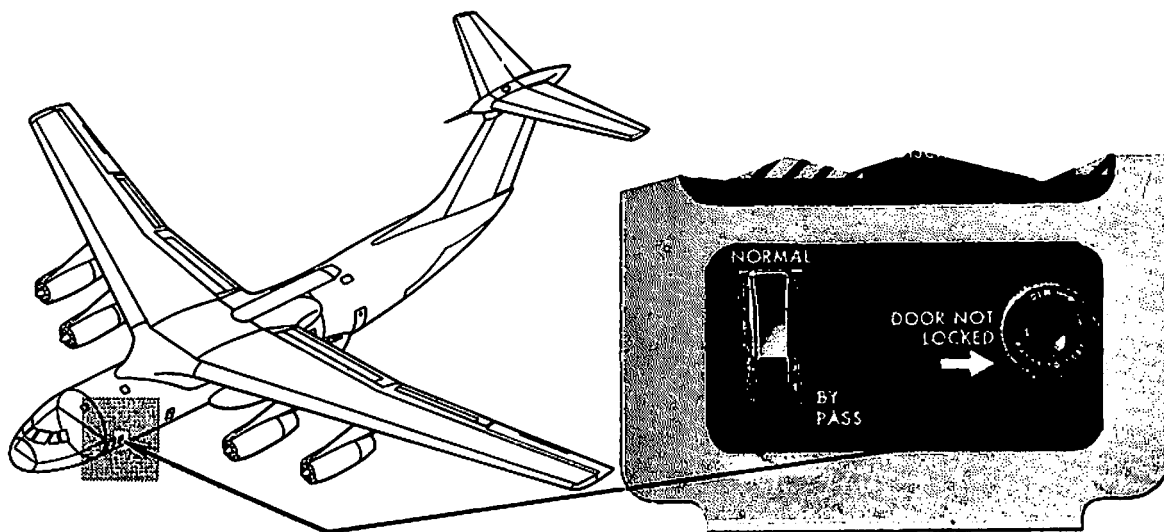
4. Should another malfunction occur after the system has been reset, the master CAUTION lights will again come on STEADY. (13 & 14)
 - a. True
 - b. False

5. Placing the test switch to the TEST position will test the master CAUTION lights and annunciator panel lights. (Lines 16-18)
 - a. True
 - b. False

6. The warning lights and annunciator lights may be dimmed with the thunderstorm light switch ON. (Lines 20 & 21)
 - a. True
 - b. False

DOOR WARNING SYSTEM

1. Should a door in the door warning system become (unlocked during flight or
2. on the ground), a warning system light on the annunciator panel will start
3. flashing and the (master CAUTION light) will illuminate steadily. When a
4. particular door is unlocked the (RED) NOT LOCKED light for that door is
5. illuminated, and also the (DOOR OPEN) light on the annunciator panel.



6. If after inspection it is found that the door is closed and locked, the
7. switch next to the (RED) NOT LOCKED light may be placed to the (BYPASS)
8. position. This will eliminate that particular door from the door warning
9. system (allowing that RED light to stay ON), but will put out the
10. ANNUNCIATOR and the master CAUTION lights. Now if another door becomes
11. unlocked, the door warning circuit will again warn the crew. The doors
12. which are in the door warning circuit are: CREW ENTRANCE, LEFT AND RIGHT
13. TROOP, PRESSURE, RAMP, PETAL, AND STABILIZER ACCESS.

DOOR WARNING SYSTEM QUIZ

1. The door warning system operates only while the aircraft is in flight. (Lines 1-3)
 - a. True
 - b. False

2. How may the DOOR OPEN light on the annunciator panel be turned out? (Lines 6-10)
 - a. CLOSE DOOR
 - b. BYPASS SW

3. The bypass switch adjacent to the door NOT LOCKED light will turn OUT the light next to the door when positioned to BYPASS. (Lines 6-9)
 - a. True
 - b. False

4. The emergency depressurization hatch is connected to the door warning system. (Lines 11-13)
 - a. True
 - b. False

5. Which doors, if unlocked or open, will activate the master caution warning system DOOR OPEN light? (Lines 11-13)
 - a. CREW ENTRANCE
 - b. LT TROOP DOOR
 - c. RT TROOP DOOR
 - d. PRESS DOOR
 - e. PETAL DOOR
 - f. RAMP DOOR
 - g. STAB HATCH DOOR

TAKEOFF WARNING SYSTEM

1. The Takeoff Warning System consists of a light located on the pilot's
2. instrument panel. When this light is illuminated, it will indicate that
3. the items monitored by this system are set or the (takeoff conditions have
4. been satisfied). The takeoff warning circuit is also wired to the (Nr 9
5. touchdown relay) which prevents the light from coming ON in flight. The
6. power requirements for the TAKEOFF WARNING system are obtained from the
7. following circuit breaker panels.
8. a. Isolated AC Avionics Bus (over navigator's station).
9. b. Isolated AC Bus (circuit breaker panel Nr 3).
10. c. Main DC Bus Nr 1 (circuit breaker panel Nr 4).
11. d. Main DC Bus Nr 2 (circuit breaker panel Nr 4).
12. e. Autopilot - Disengaged.
13. f. Spoilers closed and locked, armed and spoiler select switch positioned
14. to RTO position.
15. g. Thrust reversers closed and locked.
16. h. Flaps set in TAKEOFF/APPROACH position.
17. i. All doors in the door warning system are closed and locked.
18. j. Button on either hydraulic pitch trim lever depressed (this action must
19. be done last).

TAKEOFF WARNING SYSTEM QUIZ

1. The **TAKEOFF** warning light is located on the: (Lines 1 & 2)
 - a. annunciator panel.
 - b. control pedestal.
 - c. pilot's instrument panel.
 - d. pilot's overhead panel.

2. Which buses have to be powered for operation of the takeoff warning system? (Lines 8-11)
 - a. ISO AC BUS
 - b. ISO AVIONICS AC BUS
 - c. MAIN DC #1
 - d. MAIN DC #2

3. The **TAKEOFF** warning light is turned OFF at liftoff by: (Lines 4 & 5)
 - a. hydraulic trim actuation.
 - b. the touchdown relay.
 - c. the autopilot being ON.
 - d. moving the flaps to up.

4. If the **TAKEOFF** warning light failed to be activated, what would you check? (List below) (Lines 12-19)
 - a. THRUST REVERSERS
 - b. ELECT POWER
 - c. FLAPS
 - d. SPOILERS
 - e. DOOR
 - f. AUTOPILOT

5. What is the last action required to complete the circuit that turns ON the green **TAKEOFF** warning light? (Lines 18 & 19)

PITCH TRIM LEVER BUTTON

EACH STUDENT SHOULD BE ABLE TO:

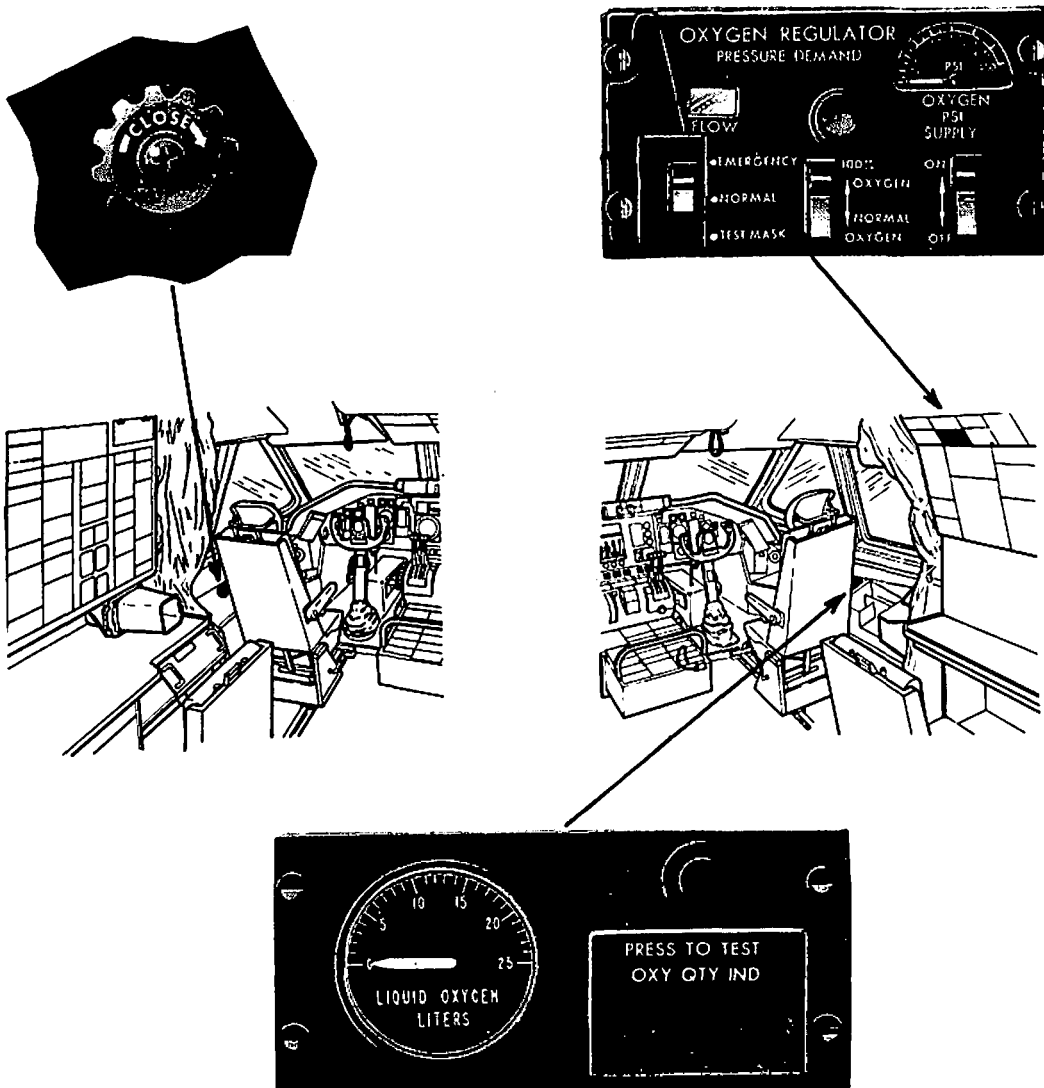
IDENTIFY THE COMPONENTS OF THE CREW AND TROOP OXYGEN SYSTEMS.

EXPLAIN THE FUNCTIONS OF THE CREW AND TROOP OXYGEN SYSTEMS COMPONENTS.

EXPLAIN CREW AND TROOP OXYGEN SYSTEMS OPERATION.

LIST OXYGEN LOW WARNINGS.

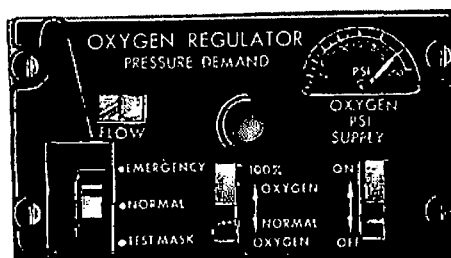
LIST THE TROOP OXYGEN ON WARNINGS.



CREW OXYGEN SYSTEM

1. The crew oxygen converter is located in the left side of the nose wheel well.
2. The converter is used to store (25 liters of liquid oxygen). The buildup
3. coil on the bottle aids in the changing of the liquid to a gas. A pressure
4. regulator on the converter regulates the pressure to (300 psi). Relief
5. valves will dump gaseous oxygen overboard at (320 - 420 psi) system pressure.
6. Liquid oxygen quantity is measured and indicated on an instrument located
7. on the (copilot's side console). When oxygen quantity is depleted to
8. (2.5 liters), or (10%) of converter capacity, an (OXY QUANTITY LOW) light
9. on the annunciator panel illuminates. The (manual shutoff valve control) is
10. located (aft of the pilot's side console). The oxygen is too cold to be
11. used directly, so a (heat exchanger) has been installed on top of the
12. nose wheel well in the (avionics compartment). In addition, a (warming
13. coil) is installed downstream of the heat exchanger for additional warming
14. during high altitude depressurized flight. This warming coil is located on
15. the (overhead equipment rack) in the forward part of the cargo compartment.
16. From the warming coil the oxygen is distributed to the flight station
17. regulators and recharger hoses. Oxygen is supplied to (nine diluter demand
18. pressure breathing regulators). One is located at each crew position.
19. Each regulator has a (visual flow indicator), (pressure gage), and 3
20. switches to control regulator operation. An inlet filter is installed to
21. keep foreign particles from entering the regulator. The switches are:

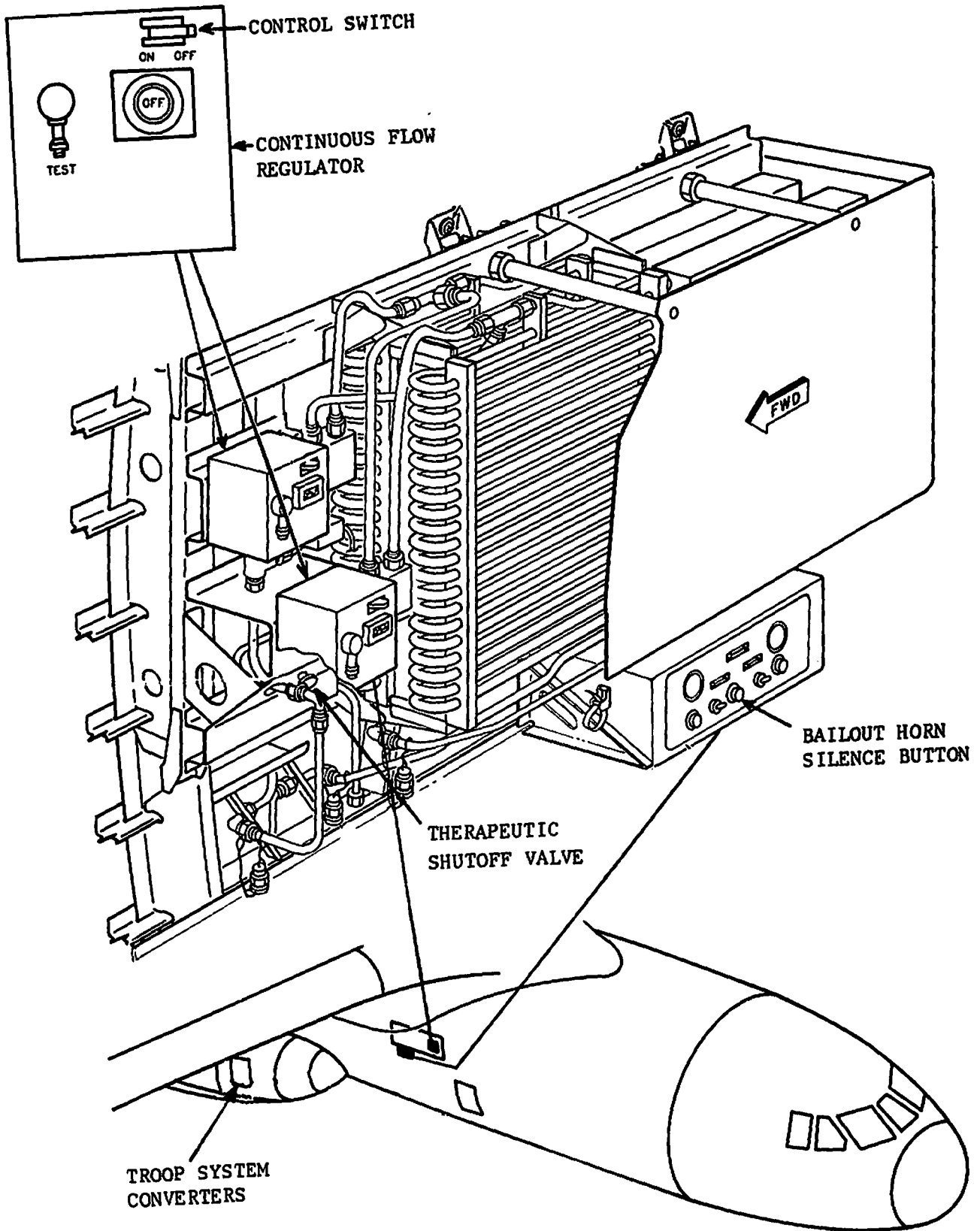
22. A manual two position ON and OFF supply switch; plus a diluter switch having
23. two positions, (NORMAL and 100%). In the (NORMAL position) oxygen is
24. diluted with cabin ambient air automatically. In the (100% position)
25. pure oxygen is delivered to the mask. The third switch has three
26. positions: (EMERGENCY) - delivers continuous flow under pressure; (NORMAL) -
27. flow is controlled automatically by the regulator; and (TEST MASK) - used to
28. check for leaks. The switch must be held in the TEST MASK position. To
29. complete the system, there are (5) recharger hoses. They are located:
30. One in front of the flight engineer's panel, one aft of the navigator's
31. panel, one inside the crew entrance door, one in the crew latrine, and one
32. just outside of the crew latrine door in cargo compartment. There are
33. positions for (4) (MA-1A) walk-around bottles in the flight station and
34. one in the crew latrine. Several more positions for additional walk-around
35. bottles are located in the cargo compartment.



CREW OXYGEN SYSTEM QUIZ

1. The capacity of the crew liquid oxygen converter is: (Line 2)
25 LITERS
2. Crew oxygen system pressure is regulated to 300 psi by a regulator at each crew position. (Line 4)
 - a. True
 - b. False
3. Liquid oxygen will be dumped overboard if system pressure should exceed 320 - 470 psi. (Line 5)
 - a. True
 - b. False
4. Liquid oxygen quantity is measured and indicated on an instrument located on the copilot's side console. (Lines 6 & 7)
 - a. True
 - b. False
5. When bottle capacity has dropped to 2.5 liters or below a light next to the quantity instrument will come ON. (Lines 7-9)
FALSE (LITE IS ON ANNUNCIATOR PANEL)
6. A manual shutoff control for the crew oxygen system is located aft of the pilot's side console. (Lines 9 & 10)
 - a. True
 - b. False
7. The five recharger hoses receive oxygen pressure from the crew oxygen system for reservice of MA-1A bottles. (Line 29)
 - a. True
 - b. False

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TROOP OXYGEN SYSTEM

1. The troop system has (two converters) located in the (forward part of
2. the right gear pod). They each have a (75 liter capacity). Operation
3. of the troop converters is the same as the crew converter. Each con-
4. verter will (operate independently) or in parallel. Each converter has a
5. (manual shutoff valve) located in the cargo compartment on the right side
6. under the center wing.
7. The troop regulator panel, located on the right side of the cargo com-
8. partment, houses warming coils, regulators and therapeutic oxygen shutoff
9. valves.
10. A small control panel located just below the regulator panel contains the
11. two converter gages.
12. (Continuous flow) regulators have a (two position switch), OFF and ON.
13. The OFF position is the automatic position. In the OFF position, if
14. cabin altitude rises above (12,500 feet to 14,000 feet), the regulators
15. will automatically open allowing oxygen flow into the troop manifold, and
16. will shut off the flow when cabin altitude passes back below (11,500 feet).
17. Troop oxygen can be manually turned "ON" by placing the switch to ON.
18. The LOX QTY LOW lights will come ON when the converter capacity is
19. depleted to 7.5 liters or 10% of capacity. The only warning which is
20. given in the flight station when the troop oxygen system manifold has
21. pressure in it is the sound of the bailout horn. The occupants of the
22. cargo compartment are warned by a line psi switch which turns ON (cabin

23. lights BRIGHT), turns ON (OXYGEN ON light) on the troop oxygen panel, and
24. sounds the (bailout horn). This bailout horn may be silenced by depressing
25. the (horn shutoff button) on the troop oxygen control panel. The troop
26. oxygen system does not have a pressure gage.

TROOP OXYGEN SYSTEM QUIZ

1. Where are the troop oxygen converter manual shutoff valves located?
(Lines 5 & 6)

2. What is the capacity of the troop oxygen system converters? (Line 2)
75 LITERS

3. What type of regulators are used in the troop oxygen system? (Line 12)

4. Control switch positions are ON and OFF. (Line 11)
 - a. True
 - b. False

5. Should aircraft altitude rise above 12,500 feet to 14,000 feet, the regulator will automatically open. (Lines 13-15)
 - a. True
 - b. False

6. The troop oxygen converters LOX QTY LOW lights will come ON should the quantity drop to 10% of converter capacity. (Lines 18 & 19)
 - a. True
 - b. False

7. List the three (3) warnings which are given when the troop oxygen manifold is pressurized in the cargo compartment by the troop oxygen system. (Lines 21-23)
 - a.
 - b.
 - c.

8. When the bailout horn is actuated by the troop oxygen system it can be silenced by the bailout switch located over the pilot's head. (Lines 24 & 25)
 - a. True
 - b. False

9. The troop oxygen system does not have a pressure gage. (Lines 25 & 26)
 - a. True
 - b. False

CARGO SMOKE SYSTEM

ENGINE AND APU OVERHEAT AND FIRE DETECTION SYSTEMS

ENGINE AND APU FIRE EXTINGUISHING SYSTEMS

EACH STUDENT SHOULD BE ABLE TO:

EXPLAIN UNIT FUNCTIONS AND LOCATIONS.

EXPLAIN OPERATION OF THE CONTROLS.

IDENTIFY WARNING SIGNALS.

EXPLAIN SYSTEM PREFLIGHT.

DESCRIBE ELECTRICAL POWER REQUIREMENTS.

SMOKE DETECTOR SYSTEM

1. The smoke detector system in the C-141 consists of five (5) smoke detector
2. units. These units are located in the following areas, one just forward of
3. the Nr 2 overhead escape hatch, one just forward of the Nr 3 overhead escape
4. hatch, two located just ahead of the two outflow and safety valves in the
5. upper deck area and one just forward of the crew galley in the underdeck area.
6. Smoke contamination of 30% or more will activate the photo-electric cell in
7. the detector and send a signal to the CARGO SMOKE light on the engineer's
8. panel. The pilots will be warned by the master CAUTION lights and a CARGO
9. SMOKE word warning light on the annunciator panel.
10. The system test switch is located next to the engineer's CARGO SMOKE light.
11. It is used to test each smoke detector for operation. The power for the
12. cargo smoke detector system comes from the 28 volt Isolated DC Bus via
13. circuit breaker panel Nr 3.

SMOKE DETECTOR SYSTEM QUIZ

1. How many smoke detectors are there in the smoke detection system? (Line 1)

2. In case of 30% smoke contamination, what warnings will be given in the flight station? (Lines 6-9)

Pilot's station:

a.

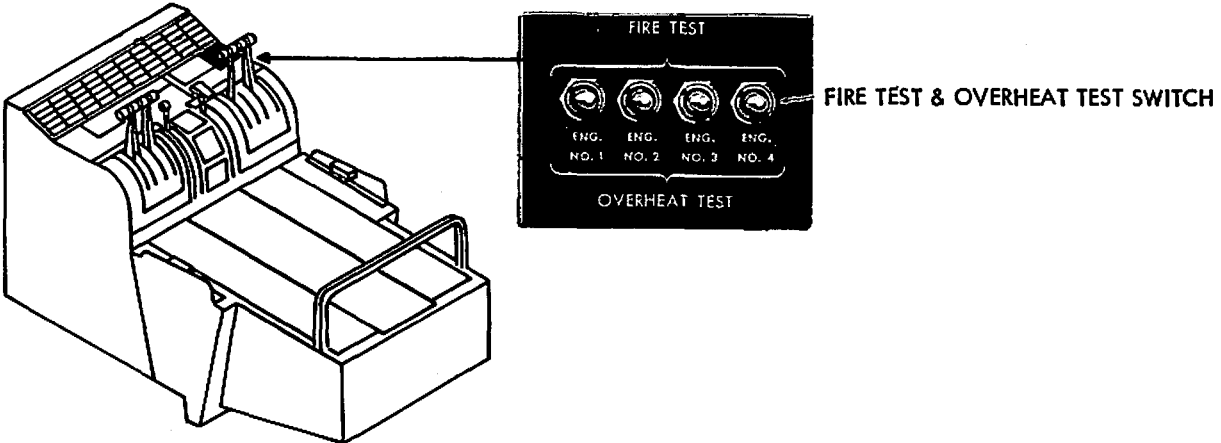
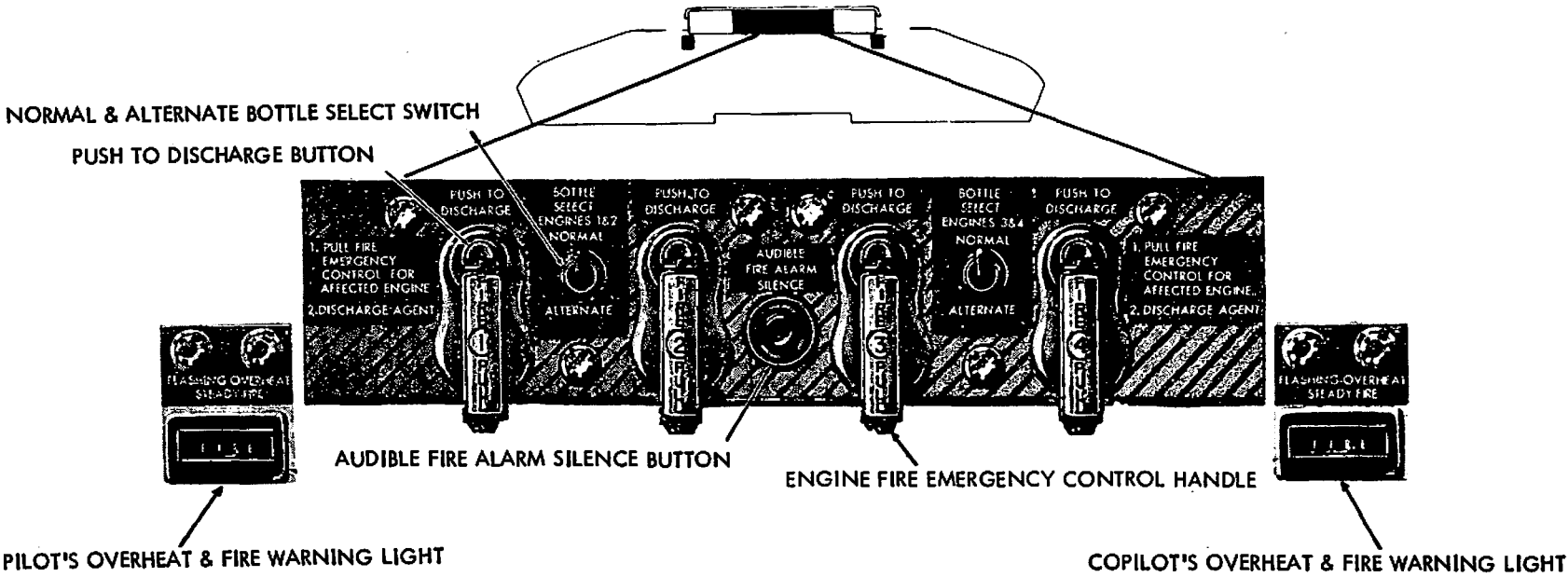
b.

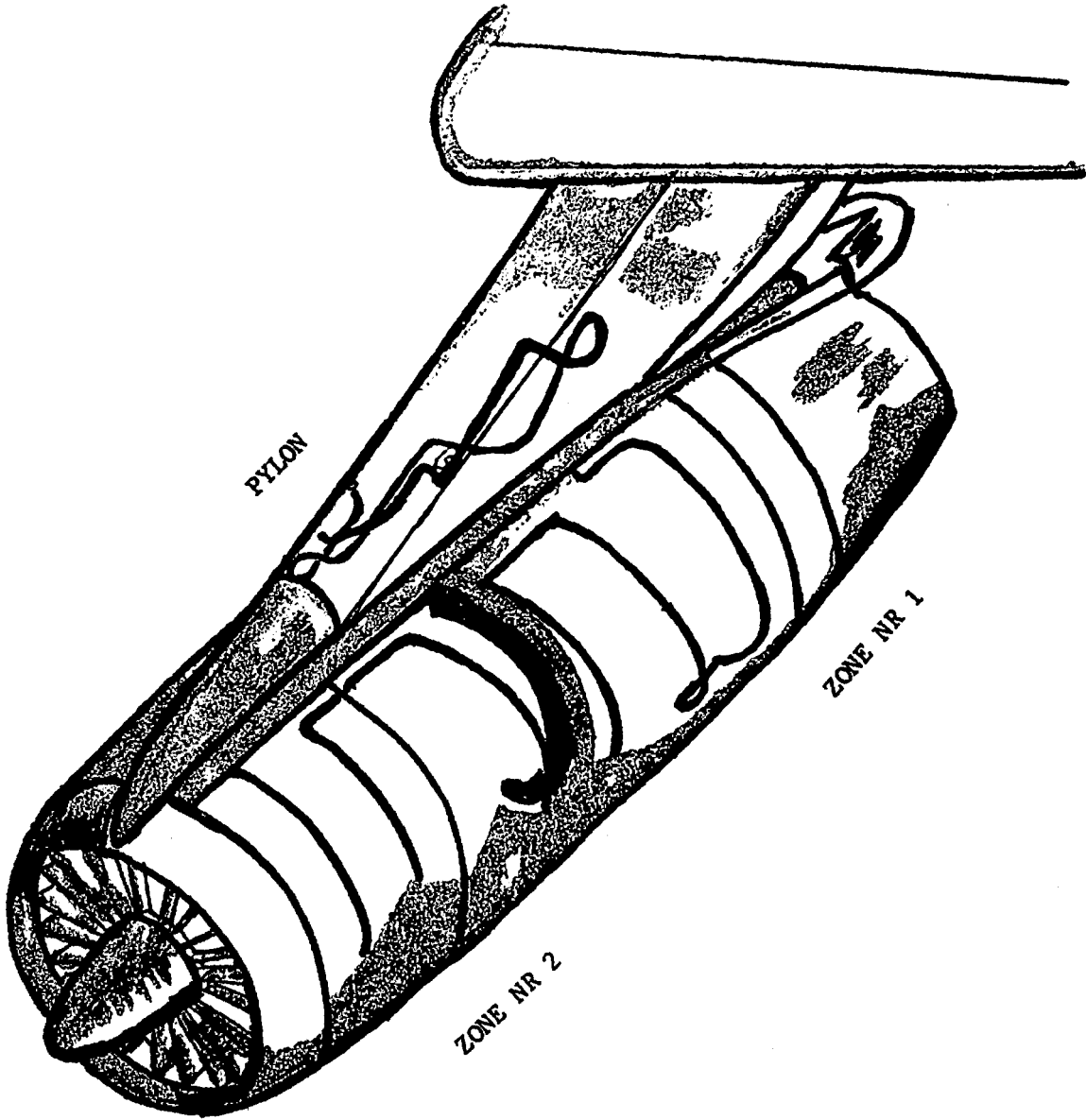
Engineer's station:

3. The power source for the smoke detection system is the Isolated DC Bus.

The circuit breaker panel is Nr _____. (Line 13)

FIRE WARNING & EXTINGUISHING SYSTEM CONTROLS & INDICATORS





OVERHEAT AND FIRE DETECTOR ELEMENTS

ENGINE OVERHEAT AND FIRE WARNING

1. The engine overheat and fire warnings are indicated by lights and an audible
2. tone over the interphone and flight deck loudspeaker.
3. The warnings which will be given to the pilots in the case of an engine
4. overheat in either Zone 1 or Zone 2 or in the pylon will be a (FLASHING)
5. light in the master FIRE warning lights and a (FLASHING) light in the
6. affected Engine FIRE CONTROL HANDLE.
7. In the case of a fire in the engine compartments, the same detection loop
8. will sense the temperature increase and the warning received by the pilots
9. will be a (STEADY) light in the master FIRE warning lights, a (STEADY)
10. light in the affected Engine FIRE CONTROL Handle, plus an audible tone
11. over the interphone and flight deck loudspeaker. The audible tone is
12. silenced by the Audible Fire Alarm Silence Button which is located between
13. Nr 2 and 3 Engine Fire Control Handles. The system is preflighted by
14. 4 TEST switches located just forward of the COPILOT'S THROTTLES.
15. The Inconel detection loop in the engine and pylon is powered by 115 volt
16. AC from the Isolated AC Bus via circuit breaker panel Nr 3.
17. The warning lights receive power from the 28 volt DC Isolated Bus via
18. circuit breaker panel Nr 3.
19. Should a power failure occur in the loop (115 volt Isolated AC Bus power),
20. no warning would be given to the crew in case of an Overheat or Fire.
21. Should the 28 volt DC power fail to the warning lights, no warning would
22. be given in the case of an Overheat condition, but the crew would have the
23. AUDIBLE TONE over the interphone system, in the case of an engine FIRE.

ENGINE OVERHEAT AND FIRE WARNING QUIZ

1. What warnings will the pilot have in case of engine overheat? (Lines 3-6)
 - a. _____ lights in the Engine Fire Control Handle.
 - b. _____ master FIRE warning lights.

2. How will an engine fire warning be indicated? (Lines 7-11)
 - a.
 - b.
 - c.

3. The engine fire and overheat detection circuit is powered by 115 volt AC power from the _____ AC Bus. The circuit breaker panel is Nr _____. (Lines 15 & 16)

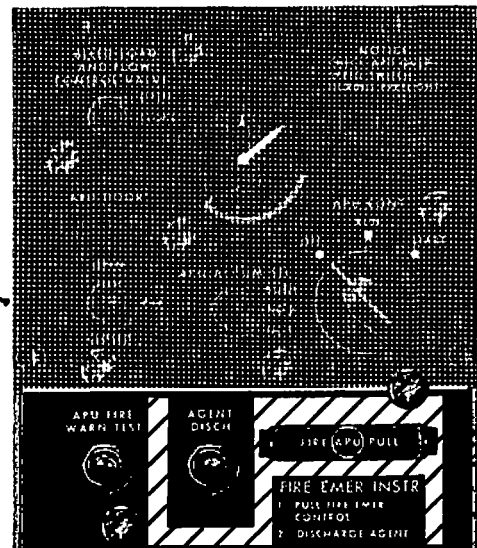
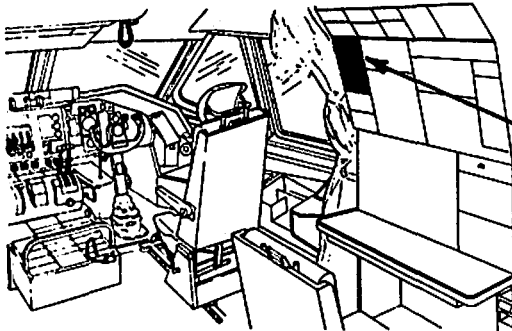
4. The engine fire warning lights receive their power from the _____ DC Bus. The circuit breaker panel is Nr _____. (Lines 17 & 18)

5. The audible tone over the headsets and flight station loudspeaker is silenced by a button located between Nr _____ and _____ Engine Fire Control Handles. (Lines 11-13)

6. The preflight of the engine fire and overheat system is accomplished by switches located on the center console in front of the _____ throttles. (Lines 13 & 14)

APU FIRE WARNING

1. The APU has a fire detection system very much like the engine overheat and
2. fire warning system. The APU does not have an overheat warning, only a
3. FIRE warning system. The detection loop uses 115 volt AC power from the
4. Main AC Bus via circuit breaker panel Nr 1. The warning lights receive
5. their power from the 28 volt Isolated DC Bus via circuit breaker panel Nr 3.
6. The APU fire warnings will be the master CAUTION lights, an annunciator
7. APU FIRE light and an audible tone over the interphone and flight deck loud-
8. speaker. The flight engineer will receive a STEADY light in the APU Fire
9. Control Handle, an Audible Tone over the interphone, and a STEADY light in
10. the APU Fire Control Handle next to the crew entrance door. The audible tone
11. is silenced by the same Audible Fire Alarm Silence Button which is used for
12. the engines. If any one of the doors are unlocked or open in the door
13. warning circuit the bailout horn will also sound. The bailout horn will
14. continue to sound until the fire is extinguished once it has been initiated
15. by an APU fire.



APU FIRE WARNING QUIZ

1. The APU has only a _____ warning. (Lines 2 & 3)
2. In case of APU fire the following warnings will be given in the flight station. (Lines 6-10)
 - a.
 - b.
 - c.
 - d.
3. With a door open the _____ horn will sound until the fire is extinguished. (Lines 13 & 14)
4. The audible tone over the headsets and flight station loudspeaker is silenced by a button located between Nr _____ and _____ Engine Fire Control Handles, (Lines 11-13, Page 27)

ENGINE AND APU FIRE CONTROL HANDLES

1. When an engine fire is indicated, the (copilot) will silence the audible
2. signal and the (pilot) will pull the Engine Fire Control Handle. This
3. action will (isolate the engine) from all combustibles, (except engine oil).
4. The actions which take place are as follows:
5. (Mechanically closes) cable-operated fuel shutoff valve.
6. (Electrically closes) fuel shutoff valve at the fuel control.
7. (Electrically closes) hydraulic supply and pressure valves.
8. (Electrically closes) the engine (Zone II cooling) ejector doors.
9. (Electrically closes) the engine bleed air shutoff valve.
10. (Electrically opens) the generator line contactor (GLC) and deenergizes the
11. generator.
12. (Electrically shuts off) both the 4-Joule and the 20-Joule ignition.
13. The APU Fire Control Handles will (electrically) operate or deenergize the
14. following items when activated:
15. Closes the bleed air valve and opens the DC APU control circuit.
16. Closes fuel supply valve and fuel control shutoff valve.
17. Deenergizes the generator.
18. Closes the APU (inlet and exhaust doors) as (oil pressure drops below 3.5
19. psi). Cuts ignition and closes hydraulic start valves below 35% APU rpm.
20. Arms the agent discharge switch adjacent to that APU Fire Control Handle.

ENGINE AND APU FIRE CONTROL HANDLES QUIZ

1. The Engine Fire Control Handle isolates the engines from all combustibles. (Lines 2 & 3)
 - a. True
 - b. False

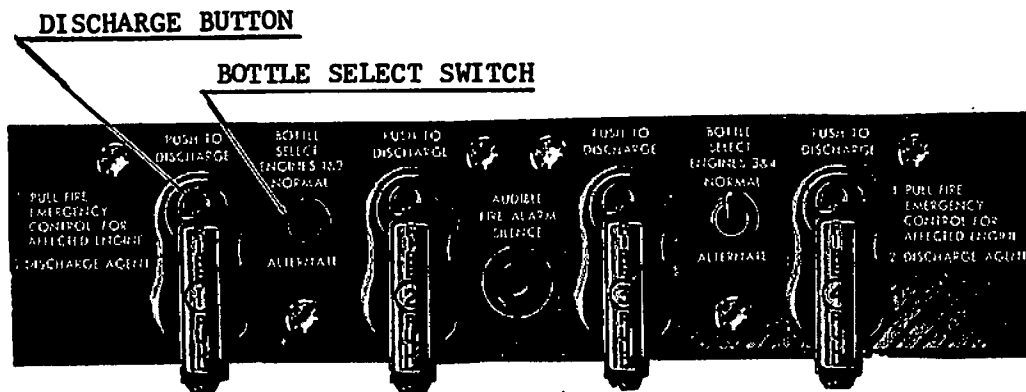
2. The Engine Fire Control Handle operates the mechanically operated fuel shutoff valve. (Line 5)
 - a. True
 - b. False

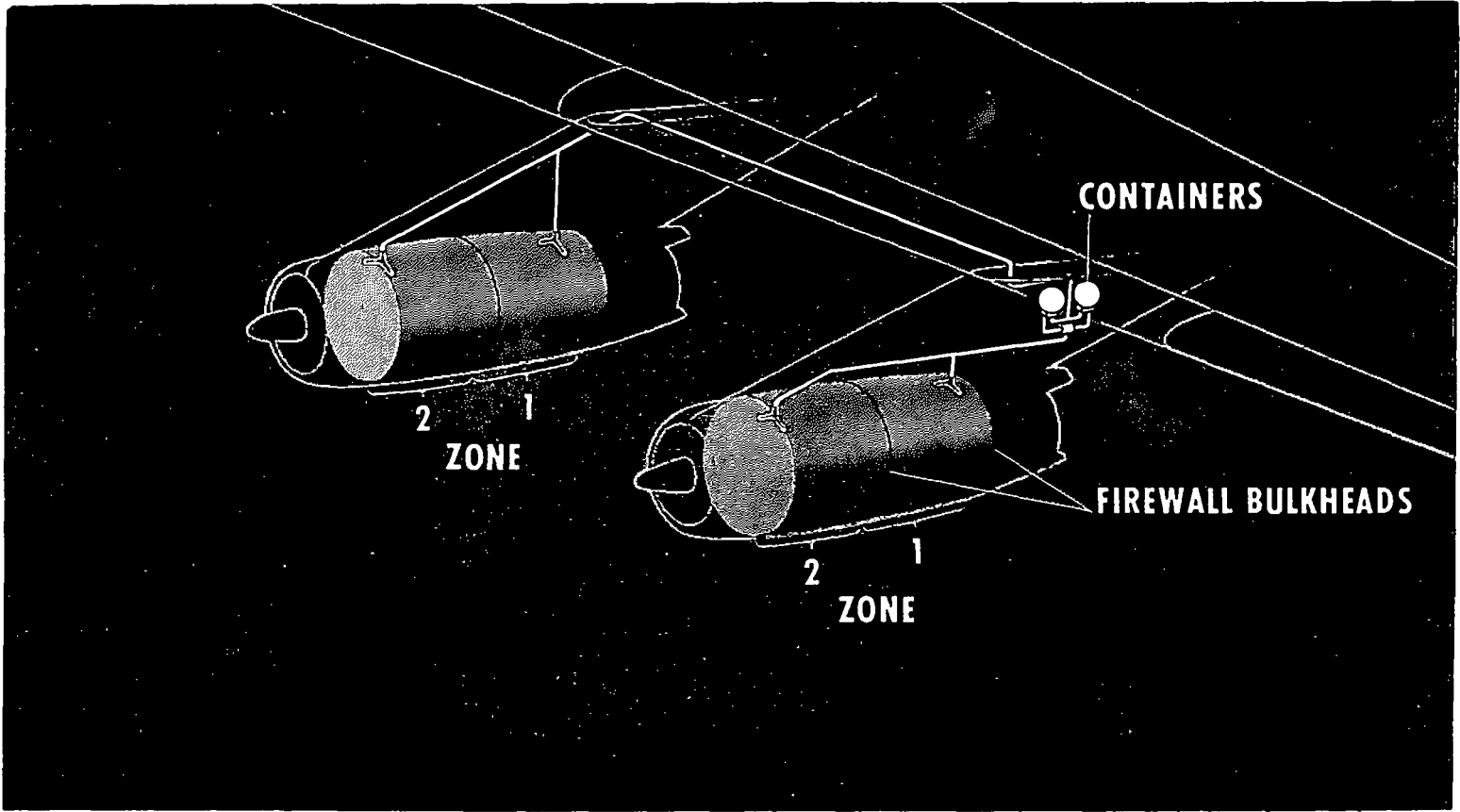
3. What actions are accomplished by pulling the Engine Fire Control Handle? (Lines 4-12)
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.

4. The APU Fire Control Handle arms the agent discharge switch. (Line 20)
 - a. True
 - b. False

ENGINE AND APU FIRE EXTINGUISHING SYSTEMS

1. The high rate discharge systems which are used have four bottles for the
2. engines and one bottle for the APU. Two bottles are located in (each
3. outboard pylon). One or two bottles may be used for each engine fire by
4. using a select switch which has two positions; NORMAL and ALTERNATE. The
5. agent is discharged to (Zone I and Zone II) of the engine. The discharge
6. buttons, which are under (plastic covers) behind the Engine Fire Control
7. Handles are operable at all times DC power is available. The Engine Fire
8. Control Handle does not need to be pulled to discharge the agent. Two inde-
9. pendent sources of electrical power are used to discharge the agent. These
10. sources are the Isolated DC Bus and the Main DC Bus Nr 2.
11. Each bottle has its own pressure gage. All bottles should be serviced to
12. (600 psi). Should any engine bottle pressure (drop below 225 psi) an
13. annunciator light will come ON, one light for each engine bottle. Excessive
14. bottle temperature releases a fusible plug that will drain the agent
15. overboard and blow out a red disk on the side of each outboard pylon.
16. The APU has only a one shot system. The APU Fire Control Handle must be
17. pulled to arm the adjacent discharge switch.





ENGINE FIRE EXTINGUISHER SYSTEM

ENGINE AND APU FIRE EXTINGUISHING SYSTEMS QUIZ

1. The engine and APU fire extinguishing bottles are serviced with DB and charged to _____ psi. (Lines 11 & 12)
2. In case of thermal or electrical discharge of the fire extinguishing bottles in the pylon, what warning will be given in the flight station? (Lines 12 & 13)
 - a.
 - b.
3. What is the minimum fire bottle pressure required to insure agent discharge to the engine? (Line 12)
4. The Engine Fire Control Handle does not need to be pulled to discharge the agent. (Lines 7 & 8)
 - a. True
 - b. False
5. The select switch must be moved to the ALTERNATE position to discharge the second bottle to the same engine. (Lines 3 & 4)
 - a. True
 - b. False
6. It is possible to discharge two fire bottles to any one engine. (Lines 3 & 4)
 - a. True
 - b. False
7. A fire extinguisher bottle is located in each engine pylon. (Lines 2 & 3)
 - a. True
 - b. False

8. The Isolated DC Bus and the Emergency DC Bus are used to supply power to discharge the bottles. (Lines 9 & 10)
 - a. True
 - b. False

9. The APU has a two-shot system for fighting a fire. (Line 16)
 - a. True
 - b. False

10. The agent is discharged only into Zone I. (Line 5)
 - a. True
 - b. False