

**TECHNICAL ORDER 00-105E-9 TECHNICAL CONTENT MANAGER** 

WRITTEN CORRESPONDENCE:

HQ AFCESA/CEXF ATTN: Fire and Emergency Services Egress Manager 139 Barnes Drive Suite 1 Tyndall AFB, Florida 32403-5319

E-MAIL: HQAFCESA.CEXF@tyndall.af.mil

INTERNET: HQ AFCESA Fire and Emergency Services PUBLIC WEB PAGE: http://www.afcesa.af.mil/CEX/cexf/index.asp Safety Supplements: http://www.afcesa.af.mil/CEX/cexf/\_firemg

PHONE:

**AX** 

(850) 283-6150 DSN 523-6150

(850) 283-6383 DSN 523-6383

For technical order improvements, correcting procedures, and other inquiries, please use the above media most convenient.

#### **SEGMENT 27 INFORMATION CHANGE NOTICE**

This page is provided to notifiy the user of any informational changes made to Technical Order 00-105E-9 in this Segment and the current Revision. Informational changes will be referenced in the Adobe Reader's Bookmark tool as a designator symbol illustrated as a <[C]> for quick reference to the right of the affected aircraft. The user shall insure the most current information contained in this TO is used for his operation. Retaining out of date rescue information can negatively affect the user's operability and outcome of emergencies. If the user prints out pages his unit requires, the user shall print the affected page(s), remove and destroy the existing page(s), and insert the newly printed page(s) in the binder provided for that purpose. A Master of this TO shall be retained in the unit's library for reference, future printing requirements and inspections.

CHAPTER AIRCRAFT **EXPLANATION OF CHANGE** PAGE

None.

#### NOTE

Chapter 28 contains emergency rescue and mishap response information for the following NATO aircraft:

FRA, CAN GEU GBR ESP, PRT, USA GBR BEL DNK, ITA, TUR USA, ITA USA, NLD CAN, TUR **MULTI-NATION** FRA **MULTI-NATION** FRA GEU FRA, GEU, TUR FRA CAN, USA CAN, USA CAN FRA, ESP NLD NLD BEL, GBR GRE FRA GBR GRE

AIRBUS A310-300/CC-150 **AIRBUS A310-304** ANDOVER CC2 AVIOCAR 212 **BAE 146** BN 2A C-20/H C-27A/G222 C-31A/F-27 CC-129/C-47 C-130/T-10 C-130H C-135 C-135 FR C-140 **C-160 TRANSALL ASTARTE** C-160 TRANSALL GABRIEL CC-138/UV-18A/B CC-142/E-9A CC/CE/CP-144 **CN-235** DO-28 FOKKER 60 748 HAWKER SIDDELEY HU-16B NORD 262\*\* **TRISTAR C2/C2K** YS-11A

\* Aircraft information pending

\*\* Aircraft removed from inventory

#### **CHAPTER 28**

#### NATO

#### CARGO

#### AEROSPACE EMERGENCY RESCUE AND MISHAP RESPONSE INFORMATION

#### 28-1. INTRODUCTION AND USE.

28-2. This section contains emergency rescue and mishap response information illustrations in alphanumerical order relative to type and model of aircraft. This arrangement of illustrations is maintained from Chapter 4 throughout the remainder of the publication.

#### 28-3. GENERAL ARRANGEMENT.

28-4. Aircraft type designation has been positioned in the upper right corner of the horizontal illustration for rapid identification. Additional aids to rapid orientation are:

a. Recent technological advances in aviation have caused concern for the modern firefighter. Aircraft hazards, cabin configurations, airframe materials, and any other information that would be helpful in fighting fires, the locating and rescue of personnel will be added as the information becomes available. b. Suggested special tools/equipment are listed in the upper left corner, on the Aircraft/Entry page of each listed aircraft.

c. Procedural steps covering emergency/ normal entrances, cut-ins, engine/APU shutdown, safetying ejection/escape systems, and aircrew extraction are outlined on the left side of each page with coordinated illustrations on the right.

d. Illustrations located on right side of pages are coordinated with text by numerals and small letters depicting both paragraph and subparagraph on the page.

e. Each illustration is consistently colored and/or pattern keyed to highlight essential emergency rescue information.

f. Details are pulled directly from the illustration to highlight an area, thus eliminating unnecessary searching for desired information.

#### **AIRCRAFT HAZARDS**

## AIRBUS A310-300.1 NOTE:

This Airbus A310-300 is also known as the Canadian CC-150 Polaris.

#### AIRCRAFT DIMENSIONS

WING SPAN 144' 0" (43.89 M) LENGTH 153' 1" (46.66 M) HEIGHT 51' 10" (15.80 M)

#### NOTE:

The Airbus 310-300 is an extended range airliner. Additonal fuel tanks can be added to the lower cargo area to extend range or it can be configured as a cargo carrier.

#### ACCOMODATION:

Crew of two on flight deck. It has provisions for third and fourth crew seats. Typical seating is 20 first class and 200 economy class. Aircraft is certified up to 280 people.

#### ARMAMENT:

None carried.





#### SPECIAL TOOLS/EQUIPMENT AIRBUS A310-300 AIRBUS A310-300. 3 Skin Penetration Tool DOUBLE TRACK SLIDE Power Rescue Saw Crash Ax AIRCRAFT ENTRY SINGLE TRACK SLIDE 1. FRONT, AFT, AND EMERGENCY DOORS ТΟ a. Reach hand into hatch "a". а OPEN b. Hold and pull handle "b" to the horizontal position. (Green line appears.) c. Open front and aft doors in the forward 4a direction of the aircraft. **CUT-IN ZONES** FRONT, AFT, AND d. Open emergency exits from up to down. EMERGENCY EXITS (EXTERNAL ENTRY) NOTE: A red flashing light in front or aft door windows indicates a residual pressure inside the cabin. Opening from outside automatically neutralizes the slide deployment. 2. FRONT AND AFT CARGO DOOR -FRONT AND AFT **RIGHT SIDE** CARGO DOOR-**RIGHT SIDE** a. Unlock doors by pressing pushbutton "c". b. Pull handle "d" downwards. c. Opening doors, green indicator "e" is lighted. d. Set and hold selector "f" on open for at least 3 seconds. e. Open doors to upper lock. BULK DOOR - AFT RIGHT SIDE a. Pree button "g". b. Hold and turn handle "h". c. Push door inside. d. Reset handle in initial position. e. Push door upwards to upper lock. PUSH 9 **BULK DOOR** CLOSED 4. CUT-IN OPEN a. Use the skin penetrator, power rescue saw,

or crash ax as applicable. See 6 zones

#### ENGINE AND APU SHUTDOWN

1. ENGINE SHUTDOWN

### AIRBUS A310-300.4 a. Place throttle levers, located on center pedestal, to AFT position.

- Push fuel levers, located aft of throttles, to DOWN position.
- c. Pull both emergency engine shut off valve handles, located on left overhead panel.
- d. Place APU shutdown switch, located on forward center overhead panel, on OFF position.
- e. Pull emergency APU shut off valve, located on center of overhead panel.
- f. Press battery switches, located on right center overhead panel, to OFF position.
- 2. APU SHUTDOWN ON GROUND
- a. Open APU shutters, located at nose wheel or panel between main landing gear.
- b. Press APU pushbutton to ON position.



### AIRBUS A310-300.5 **AIRCREW EXTRACTION,** SLIDE DEPLOYMENT AND ESCAPE ROUTES

- 1. AIRCREW EXTRACTION
- a. Disconnect lap belts and shoulder harnesses from crew members and flight crew members.
- b. Disconnect lap belts from passengers.
- 2. SLIDE DEPLOYMENT-INTERNAL
- a. Set arming lever, located on front, aft and wing exits, to ARMED position.
- b. Hold and lift opening door handle. Front and aft doors have a system that assist their opening.
- c. Push wing exits from up to down.
- 3. MANUAL SLIDE INFLATION-INTERNAL
- a. In case of non automatic inflation, pull handle at base of door opening.
- 4. ESCAPE ROUTES
- a. Follow arrows for double and single track slides on both sides of fuselage.



# AIRBUS A310-304

The aircraft information is pending release.



# AVIOCAR 212 T.O. 00-105E-9



#### BAE SPECIAL TOOLS/EQUIPMENT

146.2 Crash Ax

#### AIRCRAFT ENTRY

- 1. FORWARD & AFT SERVICE DOORS
- a. Pull handle out, to fullest extent, rotate clockwise to open door. Doors are located on right side fuselage.

#### 2. AFT CARGO BAY DOOR

a. Twist handle to "UNLOCK", then push door inwards. Door is located aft of main landing gear on right side fuselage.

#### 3. FORWARD CARGO BAY DOOR

a. Twist handle to "UNLOCK", then push door inwards. Door is located forward of main landing gear on right side fuselage.

#### 4. OTHER DOORS

- a. To open avionics bay door, located under forward service door, twist handle to "UN-LOCK", then push door inwards.
- b. To open hydraulics bay door, located just aft of forward cargo bay door, twist handle to "UNLOCK", then push door inwards.
- c. To open air conditioning bay door, located forward of the APU bay door, release two latches to lower door outwards.
- d. To open APU bay door, located forward of tail cone, release three latches to lower door outwards.
- 5. WINDOW PANEL EXIT
- a. Panel opens from inside inwards left and right. Escape ropes are located near panel.
- 6. CUT-IN
- a. Cut-in where fuselage is marked. See illustrated marking.



#### BAE **ENGINE SHUTDOWN AND** 146.3 **AIRCREW EXTRACTION**

1. ENGINE SHUTDOWN

- a. Slide baulk release down and move thrust levers/High Pressure valve, located on center pedestal, back to fullest extent to CLOSE.
- b. For fire engine handles 1, 2, 3, and 4, located on center overhead panel, pull through rotary baulk to fullest extent (4.75") to close Low Pressure valve.
- c. Place battery switch, located left center overhead panel, down to OFF.
- d. Depress pilot's brake pedals, located aft of thrust levers, simultaneously and pull to park on "YEL", release brake pedals.
- e. Turn oxygen system isolation valve, located on right console, to OFF.

#### NOTE:

APU emergency shutdown switches are located at rear of air conditioning bay access and at refuel panel.

- 2. AIRCREW EXTRACTION
- a. Disconnect seat belts and shoulder harness from crew members.
- b. Disconnect seat belts from passengers.



**BAE 146** 



#### SPECIAL TOOLS/EQUIPMENT Power Rescue Saw Crash Ax

N Crash

#### AIRCRAFT ENTRY

- 1. NORMAL ENTRY
- a. Use three entry doors to gain access to aircraft. Two doors located on the left side and one door located on the right side of fuselage.
- b. Aircraft accomodates ten personnel. Seats are mounted side by side, no aisles. Seat backs fold forward. Access to all seats are through the three entry doors.
- 2. EMERGENCY ENTRY AND EXITS
- a. Use three entry doors for emergency entry or exit.
- b. Cargo door, located on aft right side of fuselage may also be used as an emergency exit by removing door/window.

#### 3. OTHER CONFIGURATIONS

- a. During entry, rescue personnel may encounter aircraft configurations consisting of passenger, freighter, photographic, geophysical survey, parachutist transport (8 parachutists with 1 dispatcher), trainer, firefighting, environmental protection, cropspraying, or amulance with up to 3 stretchers and two attendants.
- 4. CUT-IN
- a. If doors are inoperable, use power rescue saw or crash ax to gain access.



### ENGINE SHUTDOWN AND

- 1. ENGINE SHUTDOWN
- a. Place four (4) engine magneto switches, located on left overhead panel, to the OFF position.
- b. Place two (2) fuel cock selectors, located on the center overhead panel, to the OFF position.
- c. Place the battery/alternators switch, located on the pilot's lower forward panel, to the CUT-OFF position.
- 2. AIRCREW EXTRACTION
- a. Disconnect crew and passenger lap belts and shoulder harnesses as applicable.



C-20/H.1

#### SPECIAL TOOLS/EQUIPMENT Power Rescue Saw

Crash Ax

#### AIRCRAFT ENTRY

#### 1. NORMAL ENTRY

- Rotate door handle, located on main cabin entrance door, clockwise, then open door outward.
- b. Pull door handle, located on pilot's compartment door, down, then open door outward.

#### 2. EMERGENCY ENTRY

- Pull emergency exit external handle, located on emergency hatch aft of wing, each side of fuselage, to unlock, then pull emergency exit hatch outward.
- b. Rotate pilot's escape hatch handle, located forward top center of fuselage, clockwise, then pull hatch up and aft.

#### 3. CUT-IN

a. Cut-in area are located at normal and emergency entrance points and at pilot's windows, left and right side of flightdeck.



### CLENGINE SHUTDOWN AND

#### 1. ENGINE SHUTDOWN

- a. Retard throttle control levers, located between pilot's and co-pilot's seat, to full CLOSE position.
- b. Place mixture control levers, located between pilot's and co-pilot's seats, to the aft CUT-OFF position.
- c. Turn master ignition switch, located on center overhead panel, to OFF position.
- d. Turn battery switch, located on overhead switch panel, to OFF position.

#### NOTE:

If engines fail to shutdown, pull firewall shutoff valve handle, located on engine fire extinguisher control panel, OUT.

- 2. AIRCREW EXTRACTION
- a. Unlatch lap belt and remove shoulder harness from crewmember(s).

#### NOTE:

If seat tracks are not damaged during crash landing, use adjustable seat control to retract seats to aft position in removing crewmember(s).



#### SPECIAL TOOLS/EQUIPMENT C-130H.1 AIRCRAFT DIMENSIONS Power Rescue Saw WING SPAN 133' (40.5M) FUEL F34 Crash Ax LENGTH (C-130H) 98' (29.8M) 9670 US GAL (36600 LITRES) (C-130H 30) 113' (34.3M) AIRCRAFT ENTRY HEIGHT 38.3' (11.68M) NOTE: For more information about the C-130, go to Chapter 6. The information in these procedures also include the C-130H30 model. 1. NORMAL ENTRY a. To open crew door, located forward left side of fuselage, turn door handle counterclockwise.

b. To open paratroop doors, located aft of engines on right and left side of fuselage, turn door handle clockwise, then push in and lift up the door.

#### 2. EMERGENCY ENTRY

- a. To open side emergency doors, located forward of engines right and left sides of fuselage, press button, turn handle, and then push door inside of aircraft.
- b. To open aft escape hatches, located over flight deck, between wings, and forward of vertical stabilizer, lift and pull up ring, then push hatch in. Be careful not to drop hatch on personnel.
- 3. CUT-IN
- a. Cut-in areas may or may not be designated by markings. Cut in to areas only marked to prevent cutting into high pressure lines with flammable fluids such as hydraulic lines.



## C ENGINE AND OXYGEN SHUTDOWN 1. ENGINE SHUTDOWN

- - a. Pull all four engine shutdown T-handles, located on center overhead panel.
  - b. Pull APU shutdown handle, located on center overhead panel right of engine shutdown T-handles.
  - c. Set electric power shutdown switch, located on center overhead panel right side, to OFF position.
- d. Close oxygen cocks, located in compartment in front of crew door, to CLOSE position.



## AIRCREW EXTRACTION

- 1. AIRCREW EXTRACTION-SEAT COMPONENTS
- a. Adjustable headrest
- b. Tip-up armrest
- c. Thigh support control
- d. Front-rear horizontal setting lever
- e. Harness winding locking lever
- f. Lumbars horizontal support setting
- g. Lumbars vertical support setting
- h. Back seat inclination lever
- i. Height setting lever
- j. Seat rotation lever



# T.O. 00-105E-9

C-135



#### C-135FR. 2 **ENGINE SHUTDOWN AND AIRCREW EXTRACTION**

#### 1. ENGINE SHUTDOWN

#### NOTE:

General shutdown of electric and fuel circuits.

- a. Pull the four (4) flame arrester valves "C.F.", located on windshield panel, to shut down fuel and hydraulic fluid, as well as all battery power.
- b. Set battery switch, located left of flame arrester valves, to OFF, to obtain general shutoff of electric circuits.
- c. Move power levers aft, lifting levers to override the idle stop.
- 2. AIRCREW EXTRACTION
- a. Disconnect lap belts and shoulder harnesses as applicable for crewmembers and passengers.



#### C-140.1 SPECIAL TOOLS/EQUIPMENT

#### Power Rescue Saw Skin Penetrator Tool

#### Crash Ax

#### AIRCRAFT ENTRY

#### 1. NORMAL ENTRY

- a. Pull exterior door handle, located left forward side of fuselage, out and turn clockwise.
- b. Extend stairway downwards by releasing the locking latch, located left top of stairway frame, and slide stairs forward to stop position. Lower stairs outward.
- 2. EMERGENCY ENTRY
- a. Push external plate, located left and right side over wing, to open emergency escape windows. Use caution while pushing inward.

#### NOTE:

Some C-140 models have four emergency escape windows. Only the right front forward window is equipped with a foldout step.

#### 3. CUT-IN

a. Cut in areas as marked on fuselage and engine cowlings. (See skin penetration locations.)



#### C-140.2 **ENGINE SHUTDOWN**

1. NORMAL ENGINE SHUTDOWN

#### NOTE:

If flight mechanic seat is occupied and/or in position, release seat prior to performing engine shutdown.

- a. Retard throttle levers, located on center console, to IDLE position, then raise and move aft to OFF position.
- b. Place battery switch and power select switch, located on overhead engine start panel, to OFF position.
- 2. EMERGENCY ENGINE SHUTDOWN
- a. Pull fire emergency T-handles, located on upper center instrument panel.
- b. Place battery switch and power select switch, located on overhead engine start panel, to OFF position.



CENTER CONSOLE

C-140

#### C-140.3 **AIRCREW EXTRACTION**

1. AIRCREW EXTRACTION

#### NOTE:

If seat tracks are not damage during crash landing, use adjustable seat control to retract seats to aft position in removing crewmember(s).

- a. Pull seat lock control release lever, located under right side of seat, downward to release seat from its locked position.
- b. Release lap belt and remove shoulder harness from crewmember(s). Release is a rotating buckle type.
- c. Passenger seats are equipped with lap belts only. Unlatch lap belt from passenger(s).



### **C-140** T.O. 00-105E-9



#### **ENGINE SHUTDOWN**

- C-160TA. 2 **1. ENGINE SHUTDOWN** 
  - a. Pull both throttle levers, located on center console, to AFT position.
  - b. Pull both fuel levers. located on center console right of throttle levers, to AFT position.
  - c. For APU shutdown, press on both APU buttons, located upper right center console, then press on APU switch to cut off right APU fuel.
  - d. For fuel cut off, switch off cocks for fuel tanks, then bring levers to AFT position. DO NOT MANIPULATE YELLOW AND BLACK LEVER.
  - e. For engine and APU fire extinction, pull engine fire switches, located on center overhead panel, then turn switches to left or right to deliver extinguisher agent.
  - f. For electric power cut off, pull down crash bar, located on upper left overhead panel, to OFF position.


#### **AIRCREW EXTRACTION,** -160TA.3 **CABIN CONFIGURATION AND ESCAPE ROUTES**

1. AIRCREW EXTRACTION

#### NOTE:

Navigator and loadmaster, sitting right beside the staircase, are secured by seat belts, all other crewmembers are secured by a seat belt and harness strap combination.

- Unlatch quick releases of seat belts and remove belt straps from navigator and loadmaster.
- b. In the cockpit, pull seat lock control release lever located right side of flight engineer's seat aftwards, to release seat from its locked position. Move seat aftwards to stop position. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract flight engineer.
- c. Unlatch seat lock control release pedal, located left side of co-pilot's seat, to release seat from its locked position. Move seat aftwards to stop position. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract co-pilot.
- d. Pull seat lock control release lever, located left side of pilot's seat aftwards, to release seat from its locked positiion. Move seat aftwards to stop position and rotate seat to the left towards stair case. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract pilot.

#### NOTE:

Passengers and crew may not exceed 18 personnel.



#### C-160TG.1 SPECIAL TOOLS/EQUIPMENT **C-160 TRANSALL GABRIEL** T.O. 00-105E-9 NO ARMAMENT Power Rescue Saw **IS CARRIED** Crash Ax H515 AIRCRAFT ENTRY FUEL F.34 7188 GAL HYDRAULIC OIL (17188 LITRES) 1. NORMAL ENTRY 5.28 + 5.28 US GAL a. For the crew door, located forward left side (20.1 + 20.1 LITRES) fuselage, push door shutter, then pull door lever. b. For the paratroop doors, located aft of wing roots, pull ring, press button, rotate handle, then lift up door. 0159 CARGO RAMP **RESERVOIR 2.64 US GAL** 2. EMERGENCY ENTRY (10 LITRES) a. For side emergency door, located on forward right side fuselage, pull ring, press button, rotate handle, then push door inward. CREW GASEOUS OXYGEN 1062 US GAL (440 LITRES BATTERY b. For top aft emergency hatches, located at base +SECOURS 150 LITRES) S.1774 (NACELLE) METHANOL - WATER of vertical stabilizer, pull ring, press button, rotate +EMERGENCY 40 US GAL 44/56 84.5 US GAL handle, then push door inward. (320 LITRES) NOTE: 2a Do not drop hatches inside cockpit or aft com-SIDE EMERGENCY DOOR partment section. Falling hatches can endanger crewmembers (if installed) or passengers. 2b TOP AFT 3. CUT-IN OP EMERGENCY HATCHES 1a a. Cut in panels for emergency rescue. DOOR SHUTTER 1a DOOR LEVER 1b 2a PARATROOP DOOR SIDE EMERGENCY DOOR 1a

**CREW DOOR** 

# C-160TG.2 **ENGINE SHUTDOWN**

- 1. ENGINE SHUTDOWN
- a. Pull both throttle levers, located on center console, to AFT position.
- b. Pull both fuel levers, located on center console right of throttle levers, to AFT position.
- c. For APU shutdown, set air intake valve switch to CLOSE position.
- d. For fuel cut off, switch off cocks for fuel tanks, then bring levers to AFT position. DO NOT MANIPULATE YELLOW AND BLACK LEVER.
- e. For engine and APU fire extinction, pull engine fire switches, located on center overhead panel, then turn switches to left or right to deliver extinguisher agent.
- f. For electric power cut off, pull down crash bar, located on upper left overhead panel, to OFF position.



## AIRCREW EXTRACTION, CABIN CONFIGURATION AND ESCAPE ROUTES

1. AIRCREW EXTRACTION

#### NOTE:

Navigator and loadmaster, sitting right beside the staircase, are secured by seat belts, all other crewmembers are secured by a seat belt and harness strap combination.

- Unlatch quick releases of seat belts and remove belt straps from navigator and loadmaster.
- b. In the cockpit, pull seat lock control release lever located right side of flight engineer's seat aftwards, to release seat from its locked position. Move seat aftwards to stop position. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract flight engineer.
- c. Unlatch seat lock control release pedal, located left side of co-pilot's seat, to release seat from its locked position. Move seat aftwards to stop position. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract co-pilot.
- d. Pull seat lock control release lever, located left side of pilot's seat aftwards, to release seat from its locked positiion. Move seat aftwards to stop position and rotate seat to the left towards stair case. Pull red release snap from harness quick release box until straps are released. Lift left armrest upwards and extract pilot.

#### NOTE:

Passengers and crew may not exceed 20 personnel.



# CC-138/UV-18A/B 1.0. 00-105E-9

The aircraft information is located in Chapter 12 containing US Air Force aircraft.

The aircraft information is located in Chapter 7 containing US Air Force aircraft.

#### SPECIAL TOOLS/EQUIPMENT Power Rescue Saw Crash Ax AIRCRAFT DIMENSIONS WING SPAN 64'4" (19.61 M) LENGTH 68' 5" (20.85 M) HEIGHT 20' 8" (6.30 M) EMER 1. NORMAL ENTRY a. Push button on cabin entry door handle, located on forward left side of fuselage. Handle will extend outward for rotation. b. Turn cabin door handle counterclockwise to unlock door.

- c. Pull cabin door outward.
- 2. EMERGENCY ENTRY
- a. Push in flap on emergency entrance door, located on right side of fuselage over right wing.
- b. Push door inward. Be careful of passengers while pushing door. Do not block entrance with door.
- 3. CUT-IN
- a. Cut-in where applicable, normally around cabin windows.

#### NOTE:

Aircraft accomodates a two pilot flight deck. Cabin seats 19 passengers. Seats will have typical restraint systems.





## AIRCRAFT PAINT SCHEME





# r.o. 00-105E-9

### AIRCRAFT CHARACTERISTICS

CN 235. 3 MISSION: Tactics and Logistics Transport

CREW: 1 Pilot, 1 Co-Pilot, 1 Navigator- Flight Engineer

#### PASSENGERS:

48 Troops

33 Parachutists with equipment Litters (+ 4 sanitaries) 21

HEIGHT UNDER PROPELLERS: 1.59 Meters

FUEL:

- Flash Point: 51°C
- Reservoir: 5,260 litres .

#### LIQUID HYDRAULIC: H 515

- Flash Point: 91°C
- Reservoir: 10 litres
- Complete Circuit or Loop: 25 litres

#### ENGINE OIL: 0156

- Flash Point: 268°C .
- (2 x 6,9 litres) : 13.8 litres .

#### OXYGEN (gas):

- Crew Cabin Circuit:1.441 litres .
- Pilot Emergency Bottle: cabin 620 litres
- Portable Emergency Bottles: (3x312 I) 936 litres

To open the access by pulling inwards on the spring loaded handles "A". To shut the circuit off, turn the handle "B" toward off. The oxygen circuit only feeds the cockpit.

MAXIMUM WEIGHT (at takeoff): 16,500 kg

#### ROLLING DISTANCE:

- At takeoff: 500 at 1100 m
- At landing: 700 at 900 m .

BRAKES: aluminium alloy rotors





BATTERY COMPARTMENT ACCESS IS ON EACH SIDE OF THE AIRCRAFT



**OXYGEN COMPARTMENT ACCESS** 



BATTERY AND DISCONNECT - CUT BREAK WIRE, UNSCREW & PULL HANDLE "B"



**OXYGEN BOTTLE** 





#### SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

# 235. Ax

#### 1. AIRCRAFT ENTRY

- a. To open the crew entry door, push button and pull handle. The door, when opened, will expose the door mounted ladder allowing entry.
- 2. EMERGENCY EXIT
- a. To open emergency exit, push on handle.
- b. With exit door handle out, turn in the clockwise direction of the arrow.
- c. Push door.

#### NOTE:

Entry through the crew door or through an emergency exit is to be avoided when engines are running.

- 3. JUMP DOORS
- a. The jump door consists of two separate halves. To open top half, push on door handle to expose handle for turning.
- b. Turn door handle in the direction of the arrow.
- c. Push and slide aft.
- d. To open bottom half, unlock interior handle, lift and angle at 45 degrees.
- e. Lift door and remove.
- 4. CABIN WINDOWS
- a. Windows may be used as a last resort exit.



r.o. 00-105E-9



# ENGINE, POWER, AND ENGINE FIRE SHUTDOWN

- 1. ENGINE SHUTDOWN
- a. On the central instrument panel, located between crewmembers, pull throttle levers aft.
- 2. POWER SHUTDOWN
- a. Pull and flip the battery switch, located on the overhead panel, down to the OFF position
- b. Pull and flip the generator switch, located on the overhead panel, down to the OFF position.
- 3. ENGINE FIRE SHUTDOWN (IN CASE OF FIRE ONLY)
- a. Push button down to unlock the safety locks.
- b. Pull the engine throttles to cut fuel supply.
- C. On the percussion halon extinguishers, turn lever L to the left. Turn lever R to the right.

#### NOTE:

The system contains two 2 kgs bottles of halon 1211.



**CN 235** 

## CN 235.9 **AIRCREW EXTRACTION**

#### 1. AIRCREW EXTRACTION

#### NOTE:

To allow access to the cockpit, the middle seat or Flight Engineer type seat must be removed.

- a. Undo the safety harness of the middle seat.
- b. Lift and hold the seat, then lower the seat back.
- c. Depress lock, lift and hang the seat to the partition, release the seat and proceed to crew seats.
- d. Seat adjustments levers (1) Armrest (2) Seat Lower (3) Safety Harness (4) Seat Front and Back
- e. To release safety harness, turn buckle to the left or right.



# CN 235. 10 **CARGO RAMP OPERATION**

r.o. 00-105E-9

1. CARGO RAMP OPERATION FROM COCKPIT

#### NOTE:

Opening the cargo door requires the activation of the hydraulic system using electric pumps. All steps take place on the overhead panel.

- a. To activate the electric circuit, move the master switch.
- b. Power the control panel by using the battery switches.
- c. Activate the hydraulic pumps by placing the hydraulic switches.

1a

- d. Push the button named "hyd press".
- e. Select the location to open the door from the cockpit - move cargo door switch toward the bottom to open and toward the top to close the door.
- 2. CARGO RAMP OPERATION FROM CARGO AREA PANEL
- a. Move cargo door switch toward the bottom to open the door, toward the top to close the door. Controls are located on the left side just aft of the jump door.



#### SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

Crash Ax

#### AIRCRAFT ENTRY

#### 1. NORMAL ENTRY

- a. Release double section entry door, located left side of fuselage, by pushing exterior handle for release and turning handle counterclockwise.
- b. Release sliding bolts, located inside top and bottom of frame of double section entry door.

#### 2. EMERGENCY ENTRY

#### NOTE:

Escape hatches are not removable from fuselage.

#### WARNING

Possible injury can result using the cockpit escape hatches for entry when propellers are rotating.

- a. Escape hatches are located on both sides of cockpit. Release hatch handle and turn handle clockwise to open.
- b. The second window at right side of fuselage can also be used as escape hatch.
- c. To open, pull red marked handle out and pull escape hatch open.
- 3. CUT-IN
- a. Cut-in as applicable at windshild and doors.





#### <sup>8</sup> ENGINE SHUTDOWN AND 28. 2 **AIRCREW EXTRACTION**

- 1. ENGINE SHUTDOWN
- a. Retard fire handles, located below center console, DOWNWARDS.
- b. Place battery and master switches, located left side pilot's overhead panel, in OFF position.
- 2. AIRCREW SHUTDOWN

#### NOTE:

Pilot and co-pilot seats aare equipped with a lap belt and harness combination.

a. Pull red release snap from harness quick release box until lap belt and harness straps are released.



2a

2a

RELEASE BOX

0 28	AIRFRAME MATERIALS	<b>DO 28</b>	•
3. 3	<ul> <li>ALUMINUM - ALLOY</li> <li>ALUMINUM - SANDWICH</li> <li>TITANIUM - ALLOY</li> <li>TITANIUM - FRAMEWORK, CFRP COVER</li> <li>CARBON - FIBER REINFORCED PLASTICS (CFRP)</li> <li>CFRP/KEVLAR</li> <li>CARBON - FIBER</li> <li>GLASS - FIBER REINFORCED PLASTICS (GFRP)</li> </ul>		







#### FOKKER 60 5a, 5b, 5e, 5f LOCK/UNLOCK HANDLE OPEN **AIRCRAFT ENTRY-Continued OKKER 60.4** LARGE CARGO DOOR UNLOCK 4. EMERGENCY EXIT 5a, 5b, 5e, 5f NOTE: LOCK/UNLOCK Emergency exit is mounted on large cargo door. HANDLE CLOSE LOCK a. To enter, push button to release door and pull 4a EMERGENCY EXIT door outward. Do not block exit area with door. 5. LARGE CARGO DOOR DOOR 5g VENT a. To open, turn handle clockwise to unlock. INSTRUCTIONS VENT FLAP FLAP CAUTION b. Turn handle to OPEN. KEEP FINGERS OUT c. Open door with open switch. a 5c, 5d d. To close, lower door with close switch. **OPEN AND CLOSE** OPEN CLOSE SWITCH PANEL e. Turn handle to close. 0 0 f. Turn handle to LOCK. g. Check vent flap, insure closure. LOCKED/SAFE HANDLE 6. MULTI-PURPOSE DOOR a. Lift the handle and turn. b. Push the door inwards. 6al HANDLE c. Lift the door using grip. d. Slide the door aft. MULTI-PURPOSE DOOR CABIN ESCAPE ROUTES 7. CUT-IN SKIN PENETRATION AREA a. Cut-in areas are applicable only if indicated on airframe. (Both sides of aircraft.) 7a **CUT-IN AREAS LH/RH SIDES**

## **FOKKER 60.5 ENGINE SHUTDOWN AND AIRCREW EXTRACTION**

#### **1. ENGINE SHUTDOWN**

NOTE:

Configurations may vary.

- a. Move gangbar or battery cut-off switch, located on overhead panel, DOWNWARD.
- b. Pull emergency shut-off valves, located on upper forward instrument panel, OUT.
- c. Move RPM and HPC control handles, located on center console, REARWARD.
- d. Turn crossfeed valve control. located on aft portion of center console, OFF.
- e. If needed, pull emergency fuel and hydraulic shut-off handles, located on overhead panel, OUTWARD.
- 2. AIRCREW EXTRACTION

#### NOTE:

Crew of two and one observer are located in cockpit. Ejection seats are not used. Seats are equipped with shoulder harnesses and seat belts. Cabin attendant seats may also be equipped with same type restraints.

1b

- a. Disconnect shoulder harnesses and seat belts from crewmembers and cabin attendants.
- b. Disconnect seat belts from passengers.



# SPECIAL TOOLS/EQUIPMENT 748 HAWKER SIDDELEY.1 Power Rescue Saw Crash Ax

AIRCRAFT ENTRY

- a. For passengers, enter through the passenger entrance door, located on the aft left side of the fuselage.
- b. For crew members, enter through the crew/freight door on the forward left side of the fuselage.
- 2. EMERGENCY ENTRY
- a. Remove emergency exits, located on each side over the wing, by turning the external handle.
- b. Flight deck sliding windows can be used by crew members for evacuation. Windows must be unlocked internally.
- 3. CUT-IN
- a. Cut-in fuselage as required.

**OTHER HAZARDS:** Battery acid Asbestos Bromochlorodifluoromethane (BCF Fire Extinguishant) Cartridge operated equipment Fluorolastomers (Burnt seals) Lead Polychlorinated Biphenyls (PCBs) Water Methanol Halon (Fire Extinguishant) Fuel: JP-8 Hydraulic oil: H-515 High pressure gases: Air/Nitrogen Engine oil: O-149 Oxygen



# ENGINE SHUTDOWN AND AIRCREW EXTRACTION 1. ENGINE SHUTDOWN a. Pull the high pressure cock control levers, located on the center console, aft to the OFF position. b. Turn both battery switches, located on upper right overhead panel, to the OFF

- upper right overhead panel, to the OFF position.
- 2. AIRCREW EXTRACTION
- a. Disconnect crew member's lap belt and shoulder harness.
- b. Disconnect passenger's lap belt.





# SPECIAL TOOLS/EC Power Rescue Saw Crash Ax SPECIAL TOOLS/EQUIPMENT

#### AIRCRAFT ENTRY

#### 1. NORMAL ENTRY

#### NOTE:

The main entrance door consists of an upper and lower section with door release handles on each section.

- a. Rotate upper section handle of main entrance door. located on left rear side of fuselage, up and swing door in.
- b. Reach inside aircraft and rotate lower section handle, located at top center of lower section of main entrance door, down and swing door in.
- 2. EMERGENCY ENTRY
- a. Rotate emergency door handle, located on lower center of emergency door on right hand side of fuselage, and swing door in.
- 3. CUT-IN
- a. Cut-in pilot and co-pilot escape hatches, located above cockpit side windows.
- b. Cut-in bow hatch, located on top of nose forward of windshields.
- c. Cut-in cargo loading hatch, located on top of fuselage between wing flaps.
- d. Cut-in cabin windows. located on both sides of fuselage, as marked.



# ENGINE SHUTDOWN AND AIRCREW EXTRACTION

- 1. ENGINE SHUTDOWN
- a. Pull throttles, located on overhead control panel, aft to CLOSED position.
- b. Pull mixture controls, located on overhead control panel, aft to IDLE CUT OFF.
- c. Pull master ignition switch, located on overhead control panel, OUT.
- d. Rotate fuel tank selectors, located on overhead control panel, to OFF position.
- e. Position battery switch, located in center of main console for HU-16A and B model aircraft and at left of main console for HU-16B/ASW (1) and (2) aircraft, to OFF postion.
- Rotate APU fuel shutoff valve, located on forward side of aft cabin bulkhead, to OFF position.
- 2. AIRCREW EXTRACTION
- a. Unlatch lap belts and remove shoulder harness from crewmembers.
- b. Unlatch lap belts and remove any other applicable restraints from passengers.







#### **ENGINE SHUTDOWN**

- **ENGINE SHUTDOWN**1. ENGINE SHUTDOWN
  a. Pull throttle levers, located on cert console, back to CLOSE.
  b. Place fuel and ignition switches, leasted off of throttles to OFF. a. Pull throttle levers, located on center
  - located aft of throttles, to OFF. This also closes the HP fuel valve.
  - c. In case of engine fire, pull firepull handle, located on upper windshield panel. Fire extinguisher switch is behind handle. Turn switch left or right to extinguish corresponding engine.
  - d. In case of APU fire, pull APU fire handle, located on flight engineer's upper left panel.
  - e. Place battery switch, located on flight engineer's left center panel, to OFF.



# **AIRCREW EXTRACTION RISTAR C2/C2K.4**

#### 1. AIRCREW EXTRACTION

a. Disconnect crew seats by rotating the rotary buckle.

- b. Disconnect the attendant seats restraint system at the central release point.
- c. Disconnect lap belts on the passenger seats by lifting the central buckle.
- d. Evacuate personnel through doors that are operational. Use interior controls and switches if power is still available.
- e. Deploy escape slides using interior switches.

#### NOTE:

Five escape ropes are mounted in the flight deck for overhead escape hatch evacuation.



# AIRCRAFT HAZARDS NOTE: No armament is carried.

No armament is carried.

#### NOTE:

Fuel capacity is 1332 GAL or 5040.68 Litres.



T.O. 00-105E-9
#### SPECIAL TOOLS/EQUIPMENT Power Rescue Saw Crash Ax

YS-11A. 2

#### AIRCRAFT ENTRY

### 1. NORMAL ENTRY

- a. The main door is operated and locked hydraulically in link motion with the stairway.
- b. The external operation of the main entry door is achieved via the stairway control switch and the battery switch located on the external power panel.
- c. The internal operation of the main entry door is achieved via the the stairway control switch and lock-unlock lever on the forward attendant panel.
- d. There is an external handle, located externally on the flight deck door on the forward right side of the fuselage.
- 2. OVERWING EMERGENCY EXIT DOORS
- a. Manually release latch and pull handle on emergency exit doors, located over right and left wings.
- 3. GALLEY DOOR AND AFT CARGO DOOR
- Manually push in at the PUSH HERE button and turn handle from inside and outside.
- 4. FORWARD CARGO DOOR
- a. Door is operated manually from the outside only and by the PUSH HERE button, then turn handle.
- 5. CUT-IN
- a. Cut-in fuselage as required.



## F.O. 00-105E-9

### Image: Second state </tat</td> Image: Second stat <

1. ENGINE SHUTDOWN

- a. Position high pressure fuel cock, located on center console, to the OFF position.
- b. Position throttle levers, located on center console, to the MINIMUM position.
- c. Position fuel booster pump switches to OFF position.
- d. Position generator to OFF position.
- e. Position battery switch to OFF position.
- 2. AIRCREW EXTRACTION
- a. Unlatch lap belts and remove shoulder harness from crewmembers.
- b. Unlatch lap belts and remove any other applicable restraints from passengers.



# T.O. 00-105E-9