

THE FLORIDA DEPARTMENT OF TRANSPORTATION

## AVIATION

# EMERGENCY

## RESPONSE GUIDEBOOK

Basic Aircraft Guide

#### INTRODUCTION

The Basic Aircraft Guide for Emergency Responders (the Basic Aircraft Guide) is intended to aid first responders and rescue personnel responding to aviation emergencies both on and off of Florida's airports. The Basic Aircraft Guide is a tool for first responders to use to identify certain critical details about different makes and models of aircraft, such as fuel tank locations, fuel capacities, battery locations, the presence of ballistic parachute systems, seatbelt airbags, and passenger capacities. The Basic Aircraft Guide can aid first responders by allowing them to become familiar with the basic characteristics of certain aircraft before they arrive at an emergency site. When available, emergency response information was obtained from aircraft manufacturers, military publications, and on-line resources. For additional or specific aircraft materials, the contact information for the aircraft manufacturers has also been included.

The Basic Aircraft Guide is divided into the following sections and subsections:

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#### DISCLAIMER

Information contained in this document, including illustrations, depictions of standard airplane configurations, and diagrams are intended to be representative only. No attempt has been made to include customer options or post-delivery modifications to aircraft. These materials are provided as reference information only and do not account for the many variables that occur during an emergency. Furthermore, in some cases, illustrations are based on the best available information and may not be the most current representation of a specific aircraft type. Only trained emergency responders, fully aware of the hazards associated with the emergency response field, should attempt to respond to an aviation related emergency. While efforts were made to ensure the accuracy of the information presented, the Florida Department of Transportation and its consultants cannot be held responsible for any injuries or fatalities incurred during training or during emergency response activities.

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## **BASIC TERMINOLOGY**

Aft – The rear section of an aircraft.

**Auxiliary Power Unit (APU)** – A device that provides energy to an aircraft for uses other than propulsion. APUs are commonly found in the tail of large aircraft and are primarily used to help start the main engines.

Avionics – Electronic systems on an aircraft, including communications, navigation, monitoring, flight control, collision avoidance, aircraft management, and weather radar systems.

**Ballistic Parachute System (BPS)** – An emergency parachute system, usually located in the rear of small aircraft, that is ejected from the casing via a small explosion.

**Composites** – Engineered or naturally occurring materials made from two or more constituent materials with significantly different physical or chemical properties. Composites can potentially cause hazardous conditions to fire fighters and first responders such as skin irritation, puncture, and severe respiratory problems from inhalation of fiber particulates.

Electronic Module Assembly (EMA) – Sensing system and power supply

**Emergency Locator Transmitter (ELT)** – A transmitter used to aid in the detection and location of distressed or lost aircraft.

Forward – The front section of an aircraft.

Fuselage – An aircraft's main body section that holds crew and passengers or cargo.

**Inflator Assembly** – Gas canister containing 6,250 psi compressed helium to inflate the airbag during crash. When the gas is released into a Seatbelt Airbag Assembly via the inflator hose, the gas swill be released at the surrounding temperature.

**Interface Cable Assembly** – Cable which connects the Electronic Module Assembly, inflator, and Seatbelt Airbag Assembly.

**Pressure Vessel** – A closed container designed to hold gases or liquids at a pressure substantially different from the ambient pressure.

**Seatbelt Airbag Assembly (SAA)** – Personal restraint system with airbag built into the webbing of the seatbelt to provide enhanced occupant protection during and aircraft crash.

**Uninterrupted Power Systems (UPS)** – A source of emergency power when the main input power source fails. It can help protect aircraft electronics, radar control systems, air traffic control software, and IT systems from unforeseen power outages.

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## PROPELLER AND TURBOPROP AIRCRAFT

## **AVIAT AIRCRAFT A-1 HUSKY**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	50 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by Aviat Aircraft.

Aircraft Information:

672 S. Washington | P.O. Box 1240 Afton WY 83110 Phone: 307-885-3151 Fax: 307-885-9674

## AVIAT AIRCRAFT A-1 HUSKY

#### FIRE EMERGENCY PROCEDURES

#### D. FIRES

1.	Engine	Fire	Starting

- a. Continue cranking in an attempt to start the engine.
- If starts is successful, run engine at 1700 RPM for a few minutes before shutting down to inspect damage.
- c. If starting is unsuccessful continue cranking engine for two to three minutes:
  - 1. Mixture. Cut Off

2	Throttle	Full Onen
		a un copen

- 3. Obtain fire extinguisher
- d. When ready to extinguish fire:
- Discontinue cranking
   Master, Ignition Switch
  - 2. Master, Ignition Switch. Off 3. Fuel Valve. Off
- e. Make a thorough inspection before conducting another flight.
- D. FIRES (continued)

3.

4

#### 2. Engine Fire On Take-Off

3	Before Lift-Off
	1. Throttle
	2. Brakes Apply Heavily
	3. Mixture. Cut-Off
	4. Switches (after engine stops)
b.	After Lift-Off
	1. Throttle
	<ol> <li>Complete as much of "Fire in Flight" as possible</li></ol>
	<ol><li>Land As Soon As Possible</li></ol>
	(Follow Forced Landing With No Power)
Fir	e In Flight (Engine)
a.	Fuel shut off Off
b.	Mixture
c.	SwitchesOff
d.	Cabin Heat Off
e.	Airspeed (that which will provide an incombustible mixture)
f.	Land As Soon As Possible
	(Using Forced Landing With No Power)
Fir	e in Flight (Electrical)
Th Th	e initial indication of an electrical fire is an odor of burning insulation e following procedure should be used.
a.	Master Switch
b.	All Radio/Electrical Switches Off
c.	Fire Extinguisher
d.	Land As Soon As Possible

## **AVIAT AIRCRAFT A-1 HUSKY**

#### FIRE EMERGENCY PROCEDURES

#### D. FIRES (continued)

If landing cannot be made immediately and fire appears out and electrical power is necessary for continuance of flight

c.	Master Switch
f.	Circuit Breakers Check for open circuit, do not reset
g.	Radio/Electrical Switches. On (On one at a time, with delay after each one until faulty circuit is located.)
h	Land As Soon As Possible

## **ICON A-5 AMPHIBIOUS LIGHT SPORT**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	20 gallons
Emergency Exits:	1
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by ICON Aircraft Inc.

Aircraft Information:

14300 SW 129th St #101 Miami, FL +1 305-255-5077

## **ICON A-5 AMPHIBIOUS LIGHT SPORT**

#### **IGNITION SWITCH**

DESCRIPTION OF AIRPLANE AND SYSTEMS / INSTRUMENT PANELS

7-11

(5) Pitch trim position indicator with markings for DOWN, T/O and UP

(6) Strobe light switch

(7) Nav light switch

(8) Taxi light switch

(9) Landing light switch

(10) Bilge pump switch with indicator light for ON

(11) Heater control

(12) Water rudder control with indicator light for EXT (water rudder extended)

(13) Engine throttle control

(not shown) Hour meter located beneath the center arm rest

#### 7.5.3 MASTER SWITCH AND KEY

#### FIGURE 7-3 MASTER SWITCH AND KEY PANEL



The master switch and key panel is located to the lower left of the flight instrument cluster. It contains the key switch for selecting between 'A' and 'B' and 'BOTH' on the engine electrical and control systems as well as engaging the starter. The master switch is the main electrical switch for the entire aircraft electrical system.

NOTE: In the event it becomes necessary to turn off the master switch in flight, the engine will continue to run.

CHANGE A1

ICON A5 / PILOT'S OPERATING HANDBOOK

## AMERICAN AVIATION CORPORATION AA-5A CHEETAH







Critical Response Information		
Number of Engines:	1	
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passengers max.)	
Fuel Capacity:	37 gallons	
Emergency Information:	See following pages	

Sources:

Photos and diagrams provided by Flying Magazine and Gulfstream Aerospace Corporation, Maintenance Manual Models: AA-55 Traveler, AA-5A Cheetah, AA-5B Tiger.

ENGINE

#### **AMERICAN AVIATION CORPORATION AA-5A CHEETAH**

#### FLAMMABLE MATERIAL LOCATIONS

- 1. Right Fuel Tank Cap
- Right Fuel Tank Cap
   Right Sump (Under Wing)
   Left Sump (Under Wing)
   Left Fuel Tank Cap



LONG RANGE TANKS)

## **AMERICAN AVIATION CORPORATION AA-5A CHEETAH**

#### **BATTERY LOCATION**



### **AMERICAN CHAMPION 8KCAB SUPER DECATHLON**





Critical Response Information				
Number of Engines:	1			
Passenger & Crew Capacity:	2 max.			
Fuel Capacity:	40 gallons			
Battery Location:	Behind the baggage compartment			
Emergency Information:	See following pages			

#### Sources:

Photos and diagrams provided by Jetphotos.com and American Champion Aircraft, Pilot's Operating Manual Super Decathlon (8KCAB).

#### Aircraft Information:

32032 Washington Ave Burlington, WI 53105 TEL: (262) 534-6315

### AMERICAN CHAMPION 8KCAB SUPER DECATHLON

#### FLAMMABLE MATERIAL LOCATIONS



#### FUEL SYSTEM

The fuel system is shown in Figure 6-2. Welded aluminum fuel tanks are located in the inboard section of the wing. Two 20 gallon tanks are standard. Wing tanks proper can be drained by removeing a 1/4" pipe plug from the inboard corner of the tank. Fuel lines between the tanks and the rear sump are drained from a quick drain on the belly of the aircraft.

## **AIR TRACTOR AT-502B**



Critical Response Information				
Number of Engines:	1			
Passenger & Crew Capacity:	2 max.			
Fuel Capacity:	170 gallons			
Emergency Information:	See following pages			

#### Sources:

All diagrams are provided by Air Tractor.

#### Aircraft Information:

PO Box 485, Olney, TX 76374 info@airtractor.com 940-564-5616

## AIR TRACTOR AT-502B

#### FIRE EMERGENCY PROCEDURES

#### **EMERGENCY PROCEDURES**



#### **Ground Engine Fire**

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#### DRY MOTORING RUN

The following procedure is used to clear an engine anytime it is deemed necessary to remove internally trapped fuel and vapor, or if there is evidence of a fire within the engine. Air passing through the engine serves to purge fuel, vapor or fire, from the combustion section, gas generator turbine, and exhaust system. This may not necessarily be considered an emergency.

- 1) START CONTROL LEVER "S" Full aft at fuel cut-off "C"
- 2) **IGNITOR SWITCH – OFF**
- 3) BATTERY SWITCH (BATT) ON
- 4) FUEL VALVE LEVER ON
- START SWITCH ON
- 6) MAINTAIN STARTER OPERATION FOR THE DESIRED DURATION. (Refer to Limitations section for duty cycles)
- 7) START SWITCH OFF

- WARNING
- 8) FUEL VALVE LEVER OFF (CLOSED) 9) BATTERY SWITCH (BATT) - OFF

SHOULD THE FIRE PERSIST AS INDICATED BY SUSTAINED ITT, CLOSE THE FUEL VALVE TO THE "OFF" POSITION AND CONTINUE MOTORING

10) ALLOW A FIVE MINUTE COOLING PERIOD FOR THE STARTER BEFORE ANY FURTHER STARTING OPERATION IS ATTEMPTED



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#### **In-Flight Engine Fire EMERGENCY PROCEDURES In-Flight Engine Fire** Technique for determining if an engine fire exists-1) POWER LEVER - Reduce to minimum level to sustain flight 2) HOPPER – Consider Emergency Dump F.E.V.E.R Check 3) Look for suitable landing spot Fluctuating fuel flow 4) ITT and TORQUE - Monitor to see if engine stabilizes at reduced Erratic engine operation power setting Visual indications (flames, smoke) Determine source of fire and if it is minor or major in 5) **E**xcessive ITT proportion **R**oughness 3-7 89 Air Tractor 402/502/504/602 Pilot Training Course

## AIR TRACTOR AT-502B

#### FIRE EMERGENCY PROCEDURES

## EMERGENCY PROCEDURES



**In-Flight Engine Fire** 

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## In-Flight Engine Fire

#### IF FIRE IS STILL MINOR....

**Find suitable field to land while power is still available**. Stop as soon as possible and before shutting down swing tail of aircraft into the wind. This will allow a growing fire to blow away from the cockpit providing more safety to exit the aircraft as well as by time to try to extinguish the fire before it spreads to the rest of the plane. **Once the aircraft is stopped** proceed as follows:

- 1) POWER LEVER Idle position
- 2) PROPELLER LEVER "P" Pull aft to feather stop "F"
- 3) START CONTROL LEVER "S" Pull aft to fuel cut-off "C"
- ITT Monitor for fire indications inside engine (Usually indicated by a high ITT out of limits after fuel cut-off). If ITT remains out of limits proceed with "DRY MOTORING RUN", but leave fuel off.
- 5) IF ITT is falling All switches OFF. Use screwdriver to remove R/H side of cowling and use fire extinguish to put out remaining fire.

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#### EMERGENCY PROCEDURES **In-Flight Engine Fire In-Flight Engine Fire IF FIRE IS MAJOR....** 1) FUEL VALVE LEVER - OFF 2) PROPELLER LEVER "P" - Pull aft to feather stop "F" 3) START CONTROL LEVER "S" - Pull aft to fuel cut-off "C" 4) POWER LEVER - Idle 5) All Switches - OFF 6) Prepare for forced landing. Secure seat harness. If going into rough terrain turn Battery Switch ON, extend flaps, and turn Battery OFF. Side slip aircraft to prevent flames from reaching cockpit. 7) 3-9 91 Air Tractor 402/502/504/602 Pilot Training Course
#### **AIR TRACTOR AT-502B**

#### FLAMMABLE MATERIAL LOCATIONS

## **Fuel System**



- 2 wet wing tanks: 120-290 gallons depending on model and options
   Optional additional wing tanks
- Both tanks feed into a common header tank
  - Fuel valve: MAIN and OFF on left side of cockpit forward of throttle quadrant (cannot select individual tanks)
- 2 Fuel gauges (If equipped with MVP-50, all indications are on the one digital screen along with fuel flow)
  - Note: Half a tank remaining is not half of the gauge
  - 4 Gallons in each wing tank ungaugeable
- · Strainers in each tank, main fuel filter located forward side of firewall
  - Fuel Filter Warning light will illuminate in the event of a clogged firewall fuel filter (the is a bypass on this filter that will allow fuel to continue to the FCU, but if the FCU filter clogs, flameout can occur)
- Single electrical airframe mounted fuel pump and engine driven fuel pump both capable of delivering fuel to the fuel control pump at a minimum of 15 psi
  - The engine driven pump operates continuously while the electrical boost pump is only used to pressurize the lines prior to starting and as a back-up to the engine driven boost pump.
  - The Fuel Control Unit (FCU) has its own fuel pump as well that is capable of providing fuel to the engine with unrestricted operation up to 10,000 ft (402/502) and 12,500 ft (602) msl.
- Fueled via over wing fuel caps
  - Optional single point refueling common on a lot of aircraft. Relocates fueling port to lower left aft side of fuselage.





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#### AIR TRACTOR AT-502B

#### FLAMMABLE MATERIAL LOCATIONS

## **Dispersal Systems**

400 – 600 Gallon single piece fiberglass hopper depending on model





Agricultural

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**1 ENGINE** 

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Air Tractor 402/502/504/602 Pilot Training Course

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# **1 ENGINE**

## **AIR TRACTOR AT-502B**

#### FLAMMABLE MATERIAL LOCATIONS



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#### **AIR TRACTOR AT-502B**

#### **BATTERY LOCATIONS**

ENGINE



1-22

**Electrical** 



- 2 Gill 24-volt batteries (63 amp-hrs) wired in parallel for high cranking power, mounted at the base of the firewall (502A -60AG/-65AG and 602 are 3 battery systems)
  - Ground start receptacle on lower left side of cowling
    - · Should be used if less than 24 volts in the batteries to prevent a hot start



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Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	254 gallons
Emergency Information:	See following pages

Sources: All diagrams are provided by Air Tractor.

Aircraft Information:

PO Box 485, Olney, TX 76374 info@airtractor.com 940-564-5616

#### FIRE EMERGENCY PROCEDURES

#### **Ground Engine Fire**

- 1) START CONTROL LEVER "S" Full aft at fuel cut-off "C"
- 2) IGNITOR SWITCH OFF
- 3) BATTERY SWITCH (BATT) ON
- 4) FUEL VALVE LEVER ON
- 5) START SWITCH ON
- MAINTAIN STARTER OPERATION FOR THE DESIRED DURATION. (Refer to Limitations section for duty cycles)
- 7) START SWITCH OFF
- 8) FUEL VALVE LEVER OFF (CLOSED)
- 9) BATTERY SWITCH (BATT) OFF
- 10) ALLOW A FIVE MINUTE COOLING PERIOD FOR THE STARTER BEFORE ANY FURTHER STARTING OPERATION IS ATTEMPTED

#### **In-Flight Engine Fire**

- 1) POWER LEVER Reduce to minimum level to sustain flight
- 2) HOPPER Emergency Dump
- 3) Look for suitable landing spot
- 4) ITT and TORQUE Monitor to see if engine stabilizes at reduced power setting
- 5) Determine source of fire and if it is minor or major in proportion

#### IF FIRE IS STILL MINOR ....

*Find suitable field to land while power is still available*. Stop as soon as possible and before shutting down swing tail of aircraft into the wind. This will allow a growing fire to blow away

from the cockpit providing more safety to exit the aircraft as well as by time to try to extinguish the fire before it spreads to the rest of the plane. *Once the aircraft is stopped* proceed as follows:

- 1) POWER LEVER Idle position
- 2) PROPELLER LEVER "P" Pull aft to feather stop "F"
- 3) START CONTROL LEVER "S" Pull aft to fuel cut-off "C"
- ITT Monitor for fire indications inside engine (Usually indicated by a high ITT out of limits after fuel cut-off). If ITT remains out of limits proceed with "DRY MOTORING RUN", but leave fuel off.
- 5) IF ITT is falling All switches OFF. Use screwdriver to remove R/H side of cowling and use fire extinguish to put out remaining fire.

#### IF FIRE IS MAJOR ....

- 1) FUEL VALVE LEVER OFF
- 2) PROPELLER LEVER "P" Pull aft to feather stop "F"
- 3) START CONTROL LEVER "S" Pull aft to fuel cut-off "C"
- 4) POWER LEVER Idle
- 5) All Switches OFF
- 6) Prepare for forced landing. Secure seat harness. If going into rough terrain turn Battery Switch ON, extend flaps, and turn Battery OFF.
- 7) Side slip aircraft to prevent flames from reaching cockpit.

#### **Electrical Fire In-Flight**

- 1) BATTERY and GENERATOR OFF
- 2) Cockpit Air Vents OPEN to ventilate any smoke as required
- 3) All remaining electrical switches OFF
- 4) CIRCUIT BREAKERS Check to identify faulty circuit if possible
- 5) Land as soon as possible

## AIR TRACTOR AT-802A EMERGENCY DOOR REMOVAL

#### **Emergency door removal**

The Air Tractor is equipped with emergency escape, or Rescue, handles on both doors of the aircraft. These are large red handles at the base of the door, not to be confused with the normal door opening handles located halfway up on the forward side of the door or at the top of the door(usually painted the same color as the aircraft).



When the rescue handle is rotated toward the front of the aircraft, the two connecting rods pull the hinge pins out of the hinges at the base of the door. This allows the door to fall down and out regardless of the position of the normal door entry lever. BE ADVISED, as soon as the Rescue lever is turned, the person turning the lever will be holding the full weight of the door. For this reason it is important to brief any ground personnel handling the airplane, on normal operation of the door.

**1 ENGINE** 

#### FLAMMABLE MATERIAL LOCATIONS



Oil Cooler air intake located on left side of engine cowling.



Oil cooler blower motor: Provides cooling to engine oil cooler while engine is running with prop feathered on the ground.



Fuel Selector Valve



#### FLAMMABLE MATERIAL LOCATIONS

The components of a basic agricultural configuration are simple, they consist of the following:

- 2.5 in. stainless plumbing and streamlined extruded aluminum tubes
- 48 nozzles (drilled and tapped for an additional 48 if desired)
- · Spray Pump; Agrinuatics 3 in. capacity
- Fan: Lane Elect (Weath-Aero, a less common option)
- Control Valve
- Strainer
- Gate Box
- Hopper Vent
- Flow Meter



Hopper Vent (Open end points aft for wet chemical, forward for dry)









#### FLAMMABLE MATERIAL LOCATIONS

#### 800 Gallon hopper

Hopper quantity









#### FLAMMABLE MATERIAL LOCATIONS

The smoke system is a 2 gallon tank and pump

- Smoke Tank located just aft of cockpit on left side. Fill port is on the left side of fuselage just aft of the door at the base of the fiberglass canopy.
- Total quantity is approximately 2 gallons and is pumped into the right exhaust stack
- Activation is via a press and hold button on the control stick.





#### **BATTERY LOCATION**

The AT-802's electrical system is energized by turning the master switch key 90 deg to the right. This will allow the three 24 volt batteries to provide power to all the DC instruments. After the engine is running, the starter generator will switch over from turning the engine to providing DC power.

The electrical system is protected by a series of circuit breakers located on both sides of the lower instrument panel. There is also a single master breaker located underneath the cowling on the upper right corner of the firewall. This is the "CB MAIN BUS" breaker and protects the main power bus.

A Ground Power Receptacle located just in front of the left gear leg on the bottom of the fuselage and can be used to supplement the aircraft's batteries during engine start. Be sure to check orientation of the plug before attempting connection.

System components:

- 24 volt 250 amp system
  - Lucas 250-Amp 28-Volt starter generator (SG)/ 300 amp version optional
  - · Generator Control Unit (GCU) mounted R/H side below cockpit floor
  - · Line Contractor Relay (LCR) right side of firewall
  - Start Relay right side of firewall
  - Start Switch Lower instrument panel
  - Generator Switch Lower instrument panel
  - Pilot's Panel Voltmeter Lower instrument panel
  - Low Voltage Warning Light Upper instrument panel
  - 15 amp GCU Circuit Breaker Lower instrument panel
- 3 Gill 24-volt batteries (63 amp-hrs) wired in parallel for high cranking power
  - · Ground start receptacle on lower left side of cowling
  - Should be used if less than 24 volts in the batteries to prevent a hot start



#### **BEECH BONANZA F33A**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew, 5 passengers)
Fuel Capacity:	80 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

#### **BEECH BONANZA F33A**

#### **EMERGENCY EXITS**





## **1 ENGINE**

#### **BEECH BONANZA V35B**



<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew, 5 passengers)
Fuel Capacity:	80 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

#### **BEECH BONANZA V35B**

#### **EMERGENCY EXITS**





#### **BEECH G36 BONANZA**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max.
Fuel Capacity:	80 gallons
Fuel Locations:	Wing tanks
Emergency Information:	See following pages

Sources:

Diagrams and photos provided by Beechcraft and Textron Aviation.

Aircraft Information:

#### **BEECH G36 BONANZA**

#### FLAMMABLE MATERIAL LOCATIONS



**1 ENGINE** 

# **1 ENGINE**

## **BEECH G36 BONANZA**

#### **EMERGENCY EXIT**



#### **BEECH SIERRA 200-B24R**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew, 5 passengers)
Fuel Capacity:	60 gallons

For additional emergency response information on this aircraft please contact:

#### **BEECH SKIPPER 77**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max. (1 crew, 1 passengers)
Fuel Capacity:	60 gallons

For additional emergency response information on this aircraft please contact:

#### **BEECH SUNDOWNER 180-C23**







# Critical Response Information Number of Engines: 1 Passenger & Crew Capacity: 2 max. (1 crew, 1 passengers) Fuel Capacity: 60 gallons

For additional emergency response information on this aircraft please contact:





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	130 gallons
Emergency Information:	See following pages

Sources:

Diagrams and photos provided by Globalair.com and NATOPS FLIGHT MANUAL, Navy Model T-34B Aircraft, NAVAIR 01-90kDB-1, March 2, 1981.

Aircraft Information:

#### FLAMMABLE MATERIAL LOCATIONS



#### **EMERGENCY EXIT**



Figure 1-24. Emergency Canopy Open Handle

#### EMERGENCY CANOPY OPEN HANDLE.

Both sections of the canopy may be opened simultaneously in an emergency by pulling the red EMERGENCY CANOPY OPEN handle which is located on the right side of each cockpit (figure 1-24). Operation of this handle from either cockpit actuates the canopy opening system which operates by compressed nitrogen under 2,300 to 3,000 pounds pressure.

#### **BATTERY LOCATION**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	169 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from U.S. Air Force Fact Sheets and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

#### FLAMMABLE MATERIAL LOCATIONS



#### **BATTERY LOCATION**



#### **AIRCRAFT ENTRY**



# 1 ENGINE

## **BEECH T-6 TEXAN II**

#### **ENGINE SHUTDOWN**



1. ENGINE SHUTDOWN

#### NOTE:

- KOTE: Emergency engine shutdown (to include shutting off fuel, hydraulics, and bleed air supply via the firewall shutoff handle), can be accomplished in the front cockpit only. If the front cockpit is not accessible and the engine needs to be shutdown, normal engine shutdown can also be accomplished from the rear cockpit. (In the event the front cockpit controls are not accessible or damaged, and the engine is still running, the PCL can also be placed to "OFF" from the rear cockpit.)
- Move power control lever (PCL) to idle and raise finger tab, located on the forward side of throttle handle.
- Retard power control handle (PCL), located on left console, to full aft OFF position.
- c. Remove metal clip and pull emergency firewall shutoff handle, located on left aft control panel of forward cockpit, to the UP position.
- Place battery and generator gang switches, located on right horizontal control panel, aft or down to OFF position.
- Lift up and move auxiliary battery switch, located right side battery/generator switch on right console, aft to OFF position.



#### SEAT SAFETYING AND AIRCREW EXTRACTION



#### **CESSNA 120/140**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	25 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by AOPA and Cessna, Operation Manual for Cessna 120 and 140.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### CESSNA 120/140

#### FLAMMABLE MATERIAL LOCATIONS



Figure 4 — Fuel System

#### FUEL SYSTEM:

The quantity of fuel should be checked before each flight. There are two 121/2 gallon tanks, one in each wing with direct reading gas gauges in the cabin at the wing root. A good precaution is to physically check the fuel quantity in die tank and security of tank caps before entering the airplane. The fuel system is shown diagrammatically in Figure 4. The fuel is brought to the engine by gravity flow through aluminum alloy tubing which runs aft of the cabin door post beneath the doorsill and across to the center of the ship where the two lines connect to the tank selector valve. A single fuel line runs forward from the selector valve to the fuel strainer on the firewall and thence to the carburetor. Fuel may be drained at the fuel strainer. The fuel tank selector valve provides fuel flow from either the right tank or the left tank and provides a shut-off for both tanks. The selector valve cannot be set to provide fuel flow from both tanks simultaneously. Important - The fuel valve handle indicates the setting of the valve by its position above the valve dial.

## CESSNA 120/140 BATTERY LOCATION



#### Figure 13 — Battery, Maintenance of Correct Electrolyte Level



#### CARE - RESPONSIBILITIES

#### BATTERY:

The battery is located behind the baggage compartment and is reached by unfastening the snap fasteners holding the fabric partition.

## CESSNA 150/152





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	26 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com
## **CESSNA 150/152**

#### **EMERGENCY RESCUE ACCESS**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	24 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by AOPA and Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### **EMERGENCY INFORMATION**





**NOTE:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

Sheet 1 of 3

#### EMERGENCY RESCUE ACCESS

#### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY

Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side.

Sheet 2 of 3

#### FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

1 ENGINE

#### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY MODEL 162

DETAIL A

- **NOTE 1:** Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, pull the fuel shutoff valve to the OFF position.
- NOTE 2: To fully remove electrical power from the airplane, the battery must be disconnected.
- **NOTE 3:** Momentarily push the RESET button on the ELT Remote switch and release on the remote mounted switch.

Sheet 3 of 3

#### FUEL AND ELECTRICAL SHUTDOWN

## CESSNA 172 SKYHAWK, 177 CARDINAL, 182 SKYLANE, 206 STATIONAIR, 210 CENTURION





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passengers)
Fuel Capacity:	Up to 90 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### CESSNA 172 SKYHAWK, 177 CARDINAL, 182 SKYLANE, 206 STATIONAIR, 210 CENTURION

#### **EMERGENCY RESCUE ACCESS**



#### CESSNA 172 SKYHAWK, 177 CARDINAL, 182 SKYLANE, 206 STATIONAIR, 210 CENTURION

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



#### CESSNA 172 SKYHAWK, 177 CARDINAL, 182 SKYLANE, 206 STATIONAIR, 210 CENTURION

#### FUEL AND ELECTRICAL SHUTDOWN





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	65 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by AOPA; Cessna, Skywagon 185 Model A185F, Owner's Manual; and Cessna, Skywagon 180/185 Series & AGcarryall 1969 Thru 1976 Service Manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### FLAMMABLE MATERIAL LOCATIONS



Figure 2-2.

Fuel is supplied to the engine from two tanks, one in each wing. The total usable fuel, for all flight conditions, is 62 gallons.

Fuel from each wing tank flows by gravity through a fuel accumulator tank, shutoff valve, fuel strainer and by-pass in the electric auxiliary fue pump (when it is not operating) to the cylinders via a fuel control unit and manifold. Vapor and excess fuel from the engine-driven fuel pump and fuel control unit are returned to the main fuel tanks by way of the fuel accumulator tank.

To provide fuel flow to the engine, squeeze together the double button of the fuel shutoff valve control knob (located on the floor console), releasing the lock, and push the knob full in. Fuel will flow from both wing fuel tanks simultaneously.

#### FLAMMABLE MATERIAL LOCATIONS



Figure 2-3.

#### FIRE EMERGENCY PROCEDURES

#### FIRES.

ENGINE FIRE IN FLIGHT.

Although engine fires are extremely rare in flight, the following steps should be taken if one is encountered:

- Fuel Shutoff Valve Knob -- "OFF."
- Pull mixture control to idle cut-off.
- (3) Turn off master switch.
- Establish a 120 MPH glide.
- (5) Close cabin heat control.
- (6) Select a field suitable for a forced landing.

(7) If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide an incombustible mixture.

(8) Execute a forced landing as described in paragraph Emergency Landing Without Engine Power. Do not attempt to restart the engine.

#### ELECTRICAL FIRE IN FLIGHT.

The initial indication of an electrical fire is the odor of burning insulation. The immediate response should be to turn off the master switch. Then close off ventilating air as much as practicable to reduce the chances of a sustained fire. If an oxygen system is available in the aircraft and

dense smoke makes breathing difficult, occupants should use oxygen masks until the smoke clears.

If electrical power is indispensable for the flight, an attempt may be made to identify and cut off the defective circuit as follows:

(1) Master Switch -- Off.

(2) All other switches (except ignition switch) -- Off.

(3) Check condition of circuit breakers to identify faulty circuit if possible. Leave faulty circuit deactivated.

(4) Master Switch -- "ON."

(5) Select switches "ON" successively, permitting a short time delay to elapse after each switch is turned on until the short circuit is localized.

(6) Make sure fire is completely extinguished before opening vents.

#### **BATTERY LOCATION**



HYDRAULIC FLUID: SPEC. NO. MIL-H-5606 OXYGEN: SPEC. NO. MIL-O-27210D

RECOMMENDED FUEL:

#### ENGINE MODEL O-470-Series CONTINENTAL

Compliance with conditions stated in Continental aircraft engine Service Bulletins M74-6 and M75-2 and supplements or revisions thereto, are recommended when using alternate fuel.

- FUEL: 1. MINIMUM: 80/87 Aviation grade
  - 2. ALTERNATES:
  - a. 100/130 Low Lead Avgas (with lead content limited to a maximum of 2 cc Tetraethyl lead per gallon).
  - b. 100/130 Higher Lead Avgas (with lead content limited to a maximum of 4.6 cc Tetraethyl lead per gallon).

#### **BATTERY LOCATION**

3 FUEL FILLER Service after each flight. Keep full to retard condensation. Refer to paragraph 2-18 for details.

DAILY

- **5** FUEL CELL DRAINS Drain off any water and sediment before first flight of the day.
- **9** PITOT AND STATIC PORTS Check for obstructions before first flight of the day.
- 22 OIL FILLER CAP Whenever oil is added, check that filler cap is tight and oil filler door is secure.
- 13 OIL DIPSTICK

Check on preflight. Add oil as necessary. Refer to paragraph 2-20 for details.

15 FUEL STRAINER

Drain off any water and sediment before first flight of the day. Refer to paragraph 2-19 for details.

**16** INDUCTION AIR FILTER

Inspect and service under dusty conditions. Refer to paragraph 2-21 for details.

6 OXYGEN CYLINDERS

Check for anticipated requirements before each oxygen flight. Refer to Section 14 for details.



#### **14** ENGINE OIL SYSTEM

Refill with straight mineral oil and use until a total of 50 hours have accumulated or oil consumption has stabilized, then change to ashless dispersant oil.



#### 11 TIRES

Maintain correct tire pressure as listed in figure 1-1. Also refer to paragraph 2-24.

#### **16** INDUCTION AIR FILTER

Clean filter per paragraph 2-21. Replace as required,

#### 8 BATTERY

Check electrolyte level and clean battery compartment each 50 hours or each 30 days.

#### 14 ENGINE OIL SYSTEM

Change oil each 50 hours if engine is NOT equipped with external oil filter; if equipped with external oil filter, change filter element each 50 hours and oil at each 100 hours, or every 6 months.

#### 17 SPARK PLUGS

Remove, clean and re-gap all spark plugs. Refer to Section 11 or 11A for details.

#### **BATTERY LOCATION**

100 HOURS FUEL/AIR CONTROL UNIT SCREEN Remove and clean screen in bottom of fuel/air control unit on fuel-injected engines. then reinstall and safety screen. **15** FUEL STRAINER Disassemble and clean strainer bowl and screen. **19** VACUUM SYSTEM OIL SEPARATOR Remove, flush with solvent, and dry with compressed air. VACUUM RELIEF VALVE FILTER SCREEN Remove, flush with solvent, and dry with compressed air. 20 ALTERNATOR SUPPORT BRACKET Check alternator support bracket for security and cracking. (Refer to Service Letter SE71-42. 21 CARBURETOR DRAIN PLUG Refer to paragraph 2-45 for servicing procedures. **10** CASTERING AXLE Check and refill if required. Refer to Section 5. 200 HOURS 23 VACUUM RELIEF VALVE FILTER Change each 1000 hours or to coincide with engine overhauls. **5** FUEL CELL SUMP DRAINS Drain off any water or sediment. 12 BRAKE MASTER CYLINDERS Check fluid level and refill as required with hydraulic fluid. Refer to paragraph 2-25 for details. 500 HOURS

2 VACUUM SYSTEM CENTRAL AIR FILTER Replace every 500 hours.



7 GROUND SERVICE RECEPTACLE

Connect to 12-volt, DC, negative-ground power unit for cold weather starting and lengthy ground maintenance of the aircraft's electrical equipment with the exception of electronic equipment. Master switch should be turned on before connecting a generator type or battery type external power source. Refer to Section 16.

The ground power receptacle circuit incorporates a polarity reversal protection. Power from the external power source will flow only if the ground service plug is connected correctly to the aircraft.

# **1 ENGINE**

## **CESSNA 208B GRAND CARAVAN EX**



Critical Response Information	
·	
Number of Engines:	1
Passenger & Crew Capacity:	14 max.
5 1 5	
Fuel Capacity:	332 gallons
Emergency Exits:	4
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### **CESSNA 208B GRAND CARAVAN EX**

#### **EMERGENCY RESCUE ACCESS**



**ENGINE** 

## **CESSNA 208B GRAND CARAVAN EX**

#### FLAMMABLE MATERIAL LOCATIONS



## **CESSNA 208B GRAND CARAVAN EX**

#### FUEL AND ELECTRICAL SHUTDOWN



## CIRRUS SR20, SR22



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passengers)
Fuel Capacity:	94.5 gallons

For additional emergency response information on this aircraft please contact:

+1-833-735-0651 (United States) info@cirrusaircraft.com

## **ROCKWELL COMMANDER 114**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passengers max.)
Fuel Capacity:	70 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Commander Aircraft Corporation and AOPA.

#### Aircraft Information:

1600 Westheimer Dr. Norman, OK, USA 73069 1950 Goddard Ave. Norman, OK, USA 73069 Tel: +1-405-366-6454 Email: info@commanderair.com

#### **ROCKWELL COMMANDER 114**

#### **BATTERY LOCATION**



- 1. ENGINE OIL FILLER
- 2. ENGINE OIL FILTER
- GASCOLATOR
- 4. FUEL TANK SUMP DRAIN VALVES
- 5. FUEL TANK FILLER VALVES AND CAPS
- 6. FUEL SELECTOR VALVE DRAIN
- (S/N 14000 THRU 14149 PRIOR TO
  - INCORPORATION OF SB-114-4A) 7. BATTERY
  - 8. HYDRAULIC POWER PACK
  - 9. MAIN GEAR STRUT INFLATING VALVE

- 10. MAIN TIRE INFLATING VALVE
- 11. BRAKE MASTER CYLINDERS
- 12. VACUUM SYSTEM RELIEF VALVE
- FILTER AND VACUUM FILTER CARTRIDGE 13. INDUCTION AIR FILTER
- 14. NOSE GEAR STRUT INFLATING VALVE
- 15. NOSE TIRE INFLATING VALVE
- 16. NOSE GEAR SHIMMY DAMPENER
- 17. BRAKE FLUID RESERVOIR (S/N 14150 & SUBS)
- 18. FUEL SUMP DRAIN (S/N 14150 &SUBS. S/N 14000 THRU 14149 AFTER INCORP. OF SB-114-4A)
- 19. AIR OIL SEPARATOR



## **ROCKWELL COMMANDER 114**

#### FLAMMABLE MATERIAL LOCATIONS



## **CESSNA CORVALIS**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passengers)
Fuel Capacity:	106 gallons

For additional emergency response information on this aircraft please contact:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com 7





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	34 gallons
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by Flight Design.

Aircraft Information:

91 ROUTE 169 Woodstock, CT 06281 flightdesignusa@rcn.com TEL. 860-963-7272 FAX. 860-963-7152

#### **BALLISTIC RECOVERY SYSTEM**

#### 7.3.9. Ballistic recovery system

The CTLS LSA is always delivered with a ballistic recovery system. Deployment of the recovery system is described in detail in Chapter 3 - Emergency Procedures.

Warning: The recovery system is a very important safety element of this aircraft. Even assuming that the recovery system will never be used, it is absolutely essential that the pilot regularly familiarizes him/herself with the deployment of the system and the simple actions involved. It also pays off to watch the videos showing successful deployment of the parachute which the recovery system manufacturer has posted on its website. Some of the videos show real-life deployment filmed from the cockpit and illustrate well just how useful this system can be in doubtful situations.

The ballistic recovery system comprises a recovery parachute and a ballistic rocket which are located in the upper baggage compartment above the controls mixer behind the main bulkhead. The rocket is activated via a pull cable attached to the deployment handle on the upper side of the tunnel in the cockpit.



The parachute egress hatch is on the upper side of the fuselage, directly above the recovery system. The opening is covered by a light flap which easily lifts off when the system is deployed. The installations design effectiveness has been repeatedly confirmed through ejection tests.

After deployment of the recovery system, the aircraft is suspended by four main belts. Two front belts are connected to the big engine frame, directly next to its attachment points to the engine firewall at the A-pillar root. The two rear belts are attached to hard points close to the main landing gear support on the main bulkhead. With this attachment the aircraft is suspended with approximately 13° nose down pitch under the parachute. In this stable position, the aircraft will come down nose

#### **BALLISTIC RECOVERY SYSTEM**

wheel and engine / engine mount first. Deformation of the metal structure will absorb much of the impact energy before the airframe itself is affected.

In non-deployed condition the belts are covered by the fuselage roof and stored behind the main bulkhead. When deployed, typically the opening forces are strong enough to pull these belts through the roof. In very rare cases (extreme low aircraft weight and at stall speed) it might happen that the belts do not tear open the aircraft roof. In this case the aircraft will come down with little more pitch down, and the rear belt not tightened. Experience from a real CT ejection has shown this is a proper descent position.

The following picture shows the installation of the two variants of recovery systems used in the aircraft. The next illustration (not to scale!) shows the aircraft position suspended under the parachute.



Installation of BRS rescue system (in container)



Installation of Junkers Magnum rescue system (Softpack)

#### FLAMMABLE MATERIAL LOCATIONS



#### BATTERY LOCATION



The aircraft is equipped with a Hawker Battery SBS 8 (Fig. 5).



#### Battery SBS 8

## **DIAMOND DA20**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max. (1 crew, 1 passenger)
Fuel Capacity:	24.5 gallons

For additional emergency response information on this aircraft please contact:

Diamond Aircraft Industries, Inc. Tel: 1-519-457-4000 Fax: 1-519-457-4021 Web: www.diamondaircraft.com

## **DIAMOND DA20**



## **DIAMOND DA40**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passenger max.)
Fuel Capacity:	50 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Diamond Aircraft Industries, Inc. Tel: 1-519-457-4000 Fax: 1-519-457-4021 Web: www.diamondaircraft.com



## 1 ENGINE

## DAHER-SOCATA TBM 700





<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	290 gallons
Battery Location:	Engine compartment
Emergency Information:	See following pages
Fuel Capacity: Battery Location: Emergency Information:	290 gallons Engine compartment See following pages

#### Sources:

All diagrams and photos provided by TBM, AOPA, and Globair.com.

Aircraft Information:

+1 844 4 TBM AOG TBMCare@daher.com

#### DAHER-SOCATA TBM 700

#### FIRE EMERGENCY PROCEDURES

#### **ENGINE FIRE ON GROUND**

Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke, $\ldots$
1 - Power lever IDLE
2 - Condition lever CUT OFF
3 - "BLEED VALVE" switch OFF
4 - "FREON" or "AIR COND" switch (if installed) OFF
5 - Brakes AS REQUIRED
6 - Tank selector OFF
7 - Ask for ground assistance, if necessary
8 - CRASH lever PUSH
9 - EVACUATE as soon as possible

#### **CABIN FIRE ON GROUND**

1 - Power lever IDLE
2 - Condition lever CUT OFF
3 - Brakes AS REQUIRED
4 - Ask for ground assistance, if necessary
5 - CRASH lever PUSH
6 - Cabin extinguisher (if installed) AS REQUIRED
7 - EVACUATE as soon as possible

#### ENGINE FIRE IN FLIGHT

Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke,
1 - Power lever IDLE
2 - Propeller governor lever FEATHER
3 - Condition lever CUT OFF
4 - "AUX BP" fuel switch OFF
5 - Tank selector OFF
6 - "BLEED VALVE" switch OFF
7 - "FREON" or "AIR COND" switch (if installed) OFF
8 - In case of high altitude (above 12000 ft), undertake an EMERGENCY DESCENT (Refer to Chapter 3.6)
0 Berform a EORCED LANDING (ENCINE OUT OFF) (Befor to

9 - Perform a FORCED LANDING (ENGINE CUT OFF) (Refer to Chapter 3.7)

#### WARNING

AFTER ENGINE FIRE, DO NOT ATTEMPT AN AIR START
### FLAMMABLE MATERIAL LOCATIONS

### FUEL TANKS

Fuel tanks are formed by sealed casings in each wing. Each fuel tank comprises a filling port located at the end of wing upper surface, two drain valves located at the lower surface (one near main landing gear, at trailing edge side, the second one near wing root side, at leading edge), a vent valve located on the lower surface, a suction strainer and three level gages.



Figure 7.7.4A - FUEL SYSTEM DRAINING POINTS AND CLOGGING INDICATOR

# **1 ENGINE**

# DAHER-SOCATA TBM 700

### SEATBELT OPERATION



# **EMERGENCY EXITS**



Figure 7.3.2 - EMERGENCY EXIT

### Emergency exit (Figure 7.3.2)

The emergency exit is installed on the right side of the fuselage and opens towards the inside. It is equipped with two handles, one inside and the other outside, each located on the upper frame.

When the airplane is parked, the closing system may be locked by a safety pin provided with a flag marker. The handle is then inoperable.





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	301 gallons
Battery Location:	Engine compartment
Emergency Information:	See following pages

### Sources:

All diagrams and photos provided by TBM.

Aircraft Information:

+1 844 4 TBM AOG TBMCare@daher.com

## FIRE EMERGENCY PROCEDURES

# **ENGINE FIRE ON GROUND**

Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke, ...

1 - Power lever IDLE
2 - Condition lever CUT OFF
3 - "BLEED" switch OFF
4 - "AIR COND" switch OFF
5 - Brakes AS REQUIRED
6 - Tank selector OFF
7 - Warn ground assistance, if necessary
8 - CRASH lever PULL DOWN
9 - EVACUATE as soon as possible

# **CABIN FIRE ON GROUND**

1 - Power lever	IDLE
2 - Condition lever CUT	OFF
3 - Brakes AS REQU	RED
4 - Warn ground assistance, if necessary	
5 - CRASH lever PULL DO	OWN
6 - Cabin extinguisher AS REQU	RED
7 - EVACUATE as soon as possible	

### FIRE EMERGENCY PROCEDURES

# **ENGINE FIRE IN FLIGHT**

Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke, ...

1 - Power lever	IDLE
2 - Propeller governor lever	FEATHER
3 - Condition lever	. CUT OFF
4 - "AUX BP" fuel switch	OFF
5 - Tank selector	OFF
6 - "BLEED" switch	OFF
7 - "AIR COND" switch	OFF

- 8 In case of high altitude (above 12000 ft), undertake an EMERGENCY DESCENT (Refer to Chapter 3.6)
- 9 Perform a FORCED LANDING (ENGINE CUT OFF) (Refer to Chapter 3.7)

# **WARNING**

AFTER ENGINE FIRE, DO NOT ATTEMPT AN AIR START

### SEATBELT OPERATION



ENGINE

# **EMERGENCY EXITS**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max.
Fuel Capacity:	290 gallons
Emergency Exits:	3
Emergency Information:	See following pages

### Sources:

All diagrams and photos provided by TBM.

Aircraft Information:

+1 844 4 TBM AOG TBMCare@daher.com

## SEATBELT OPERATION



# 1 ENGINE

# **DAHER-SOCATA TBM 900**

### **EMERGENCY EXIT LOCATION AND OPERATION**



### CABIN ACCESS DOOR LOCATION AND OPERATION



# **1 ENGINE**

# **DAHER-SOCATA TBM 900**

# COCKPIT ACCESS DOOR



# **EXTRA AEROBATIC PLANES 300 LT**



Critical Response Information			
Number of Engines:	1		
Passenger & Crew Capacity:	2 max.		
Fuel Capacity:	58.4 gallons		
Emergency Information:	See following pages		

Sources:

Photos and diagrams obtained from the Flying Bulls, SkyThrills, and Maintenance Manual Extra 300LT Doc. No: EA-0D702.

Aircraft Information:

Schwarze Heide 21 46569 Hünxe Germany Email Main: extraaircraft@extraaircraft.com Phone: +49 2858-9137-0 Fax: +49 2858-9137-30



**1 ENGINE** 

# **EXTRA AEROBATIC PLANES 300 LT**

### **BATTERY LOCATION**

This chapter describes the electrical power system and its operation. This covers the battery system and the alternator system.

The electrical installations on the firewall are shown on figure 1.

A functional schematic of the complete electrical system is shown on figure 2.



Figure 1

Electrical Installations in Firewall Area

# **PIPER J-3 CUB**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	12 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from AOPA and Piper J-3 Cub J3C-65 Owner's Manual.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# **PIPER J-3 CUB**

### FLAMMABLE MATERIAL LOCATIONS



FUEL TANK: The fuel tank is located in the fuselage just behind the fire-

wall, and has a capacity of twelve gallons (U. S.). This fuel tank is supported by flat steel straps lined with felt to prevent chafing. If it becomes necessary to remove the fuel tank, drain fuel, disconnect fuel line and shutoff valve control wire. Remove filler cap and all lines and controls which run under the tank to the instrument panel. Then remove the diagonal fuselage tube running from the upper right longeron to the center of the fuselage cross tube at the floor behind the firewall. This is easily done by removing the bolt in each end of the tube, sliding the tube upward until it clears the lower fitting, and then sliding it downward outside the lower fitting. The tank may then be removed from the cockpit without removing the cowling.





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	10 max.
Fuel Capacity:	320 gallons
Battery Location:	Mounted on the left and right sides of the lower, forward portion of the firewall
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by Daher, Kodiak.

Aircraft Information:

Daher 1200 Turbine Drive Sandpoint, Idaho 83864 +1 208-263-1111 **1 ENGINE** 

### EMERGENCY FIRE PROCEDURES

### 3-8 SMOKE AND FIRE

### ENGINE FIRE IN FLIGHT

1. Power Lever 2. Propeller Control Lever	
3. Fuel Condition Lever	CUTOFF
4. Firewall Fuel Shutoff	OFF (Pull Out)
5. Firewall Air Shutoff	OFF (Pull Out)
6. AUX BUS Switch	OFF
7. Airspeed	AS REQUIRED TO EXTINGUISH FLAMES
8. Overhead Vents	OPEN
9. Wing Flaps	SET APPROPRIATELY FOR AIRSPEED
10. Engine Out Emergency Landing	EXECUTE

### ELECTRICAL FIRE IN FLIGHT

1. Master Switch	OFF
2. AVN BUS Switch	OFF
3. AUX BUS Switch.	OFF
4. Generator Switch	OFF
5. Alternator Switch	OFF
6. Vents	CLOSED
7. Fire Extinguisher	ACTIVATE
8. All Other Electrical Switches	OFF

**NOTE:** If fire appears to be out and electrical power is required to safely continue the flight, continue with the following procedures.

9. Circuit Breakers	CHECK FOR FAULTY CIRCUIT I	BUT DO NOT RESET
<ol><li>Master Switch</li></ol>		ON
<ol> <li>Avionics Master Sv</li> </ol>	witch	ON
12. Generator		ON
<ol><li>Alternator</li></ol>		ON
14. Other Electrical Sv	witches TURN ON MIN. REQU	RED ONE AT A TIME
<ul> <li>Uptil the short of</li> </ul>	irouit is identified, then secure offend	ing component



**WARNING:** If available, oxygen masks should be donned until smoke clears. After fire extinguishers are discharged, the cabin should be ventilated to remove smoke or CO2 residue.

### **EMERGENCY FIRE PROCEDURES**

CA	DI	IN I		D	
CA			E.	R	

1. Master Switch	OFF
2. Avionics Master Switch	OFF
3. AUX Bus Switch	OFF
4. Generator	OFF
5. Alternator	OFF
6. Vents	CLOSED
7. Forward OR Aft Fire Extinguishers	ACTIVATE

**CAUTION:** In order to reduce exposure to toxic residue from extinguishing agents, do not activate all three fire extinguishers simultaneously. If the large aft fire extinguisher is activated, do not activate either of the forward extinguishers until the cabin has been ventilated.

8.	Emergency Descent	. PERFORM
9.	Cabin	VENTILATE
	(Open all ventilation outlets, pilot storm window, and slightly	open right
	crew door)	

NOTE: Once fire is out, oxygen masks may be donned until smoke clears.

# WING FIRE 1. Pitot-Static Heat OFF 2. Stall Warning Heat OFF 3. Strobe Lights OFF 4. NAV Lights OFF 5. Landing/Recognition Lights OFF 6. Taxi Lights OFF



**WARNING:** Perform a sideslip as necessary to keep the flames away from the cabin and fuel bays. Land the airplane as soon as possible.

### CABIN FIRE DURING GROUND OPERATIONS

1. Power Lever	IDLE
2. Brakes	STOP THE AIRCRAFT (if taxiing)
3. Propeller Control Lever	FEATHER
4. Fuel Condition Lever	CUTOFF
5. Master Switch	OFF
6. Airplane	EVACUATE
7. Fire	EXTINGUISH

### ENGINE FIRE DURING START

1. Fuel Condition Lever	CUTOFF
2. Auxiliary Fuel Pump	OFF
3. Ignition Switch	OFF
4. Starter Switch LO / MOTOR (Observe	e Starting Cycle Limits)
5. Firewall Fuel Shutoff	OFF (Pull Out)



**CAUTION:** If the fire persists, indicated by continued high ITT indications, continue motoring the engine.

6. Starter Switch	OFF
7. Master Switch	OFF
8. Airplane	EVACUATE
9. Fire	EXTINGUISH

### FLAMMABLE MATERIAL LOCATIONS



Figure 7-62 - Fuel System Schematic

# LAKE LA-4-200 BUCCANEER



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passengers max.)
Fuel Capacity:	40 gallons
Battery Location:	Right-hand forward section of baggage compartment
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by Lake Central Air Services (LCAS), Lake Buccaneer Owner's Manual, and Lake Maintenance Manual, LA4 Series and Model 250, January 3, 2003.

# LAKE LA-4-200 BUCCANEER

### FLAMMABLE MATERIAL LOCATIONS



FUEL SYSTEM DIAGRAM

### FUEL SYSTEM

A 40 gallon capacity gas tank equipped with a Mareng Bladder type fuel cell is located behind the rear portion of of the cabin in the upper mid-section of the hull. The tank is bounded by and supported from the major bulkhead structures.

# MAULE AIR M-7-235 ORION





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	5 max. (1 crew min., 4 passengers max.)
Fuel Capacity:	Standard Tanks: 43 gallons
	Auxiliary Tanks: 30 or 42 gallons
Battery Location:	Installed in battery frame assembly behind rear cabin bulkhead
Fuel Tank Locations:	Each wing contains a 23.8-gallon fuel tank mounted in the inboard end

### Sources:

All photos and information provided by Stol Aircraft. For additional emergency response information on this aircraft please contact:

2099 GA Hwy. 133 South, Moultrie, GA 31788 (229) 985-2045 - Main Office

# **MOONEY BRAVO, EAGLE, OVATION 2**







# Critical Response InformationNumber of Engines:1Passenger & Crew Capacity:4 max. (1 crew, 3 passenger max.)Fuel Capacity:89 gallonsEmergency Information:See following pages

For additional emergency response information on this aircraft please contact:

Mooney Airplane Company Tel: 1-830-896-6000 Fax: 1-830-896-3133

# NANCHANG CJ-6



<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (2 crew min., 2 passengers max.)
Fuel Capacity:	80 gallons

Sources: Photos obtained from AOPA.



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	269 gallons
Emergency Information:	See following pages

### Sources:

Photos and diagrams obtained from Boeing and Pilot's Flight Operating Manual, Army Model P-51-D-5 British Model Mustang IV Airplanes.

### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

### FLAMMABLE MATERIAL LOCATIONS



Figure 9-Fuel System

### FLAMMABLE MATERIAL LOCATIONS



Figure 16-Fuel System Line Diagram

# **AIRCRAFT HAZARDS**



## **BATTERY LOCATION**



5.106-71154 PANEL ASSEMBLY

IO.INERTIA SWITCH SCR-695

15. SCR-695 DETONATOR BUTTONS

# **PIPER PA24 COMMANCHE**



### **Critical Response Information**

Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passenger max.)
Fuel Capacity:	60 gallons
Emergency Information:	See following pages

### Sources:

All diagrams provided by Piper and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# **PIPER PA24 COMMANCHE**

# FIRE RESCUE CHART



# PIPER PA 28-161 WARRIOR, PA 28-181 ARCHER, PA 28R-201 ARROW



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew, 3 passenger max.)
Fuel Capacity:	77 gallons
Emergency Information:	See following pages

### Sources:

All diagrams provided by Piper and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# PIPER PA 28-161 WARRIOR, PA 28-181 ARCHER, PA 28R-201 ARROW

## **FIRE RESCUE CHART**


# **PIPER PA-32-300 CHEROKEE SIX**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	84 gallons
Battery Location:	Beneath the floor of the forward baggage compartment
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from AOPA and Cherokee Six 300 Information Manual PA-32-300, July 17, 1975.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# **PIPER PA-32-300 CHEROKEE SIX**

### FLAMMABLE MATERIAL LOCATIONS



### FUEL SYSTEM

The standard fuel capacity of the Cherokee Six is 84 gallons, all of which is usable except for approximately one pint in each of the four tanks. The two main inboard tanks, which hold 25 gallons each, are attached to the wing structure with screws and nut plates and can be removed easily for service or inspection. The tip tanks are constructed of resin-impregnated fiberglass, and each one holds 17 gallons.

# **1 ENGINE**

# **PIPER PA32R-301 SARATOGA**







# Critical Response InformationNumber of Engines:1Passenger & Crew Capacity:7 max. (1 crew, 6 passenger max.)Fuel Capacity:197 gallonsEmergency Information:See following pages

### Sources:

All diagrams provided by Piper and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# PIPER PA32R-301 SARATOGA

## FIRE RESCUE CHART



# PIPER PA45-350P MALIBU







<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew, 5 passenger max.)
Fuel Capacity:	122 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Piper and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# PIPER PA45-350P MALIBU

# FIRE RESCUE CHART



# PIPER PA-46-350P MALIBU MIRAGE, M350



<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	120 gallons
Battery Location:	Beneath the left floor panel of the forward baggage compartment
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by the Piper Aircraft Group.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

# PIPER PA-46-350P MALIBU MIRAGE, M350

## FIRE EMERGENCY PROCEDURES

### 3.3a ENGINE FIRE DURING START (3.7)

Starter (crank engine)	PUSH
Mixture	IDLE CUT-OFF
Throttle	OPEN
Fuel Selector	OFF
Emergency (EMERG) Fuel Pump	
Abandon if fire continues	

### Electrical Fire (smoke in cabin):

Cabin Pressure Dump/Normal Switch	DUMP
Cabin Pressurization Control	PULL to unpressurize
After 5 second delay:	
Battery Master Switch	OFF

### NOTE

Activation of the Ground Clearance switch can be used to maintain communications on Comm 1.

ALTR	SwitchesOF	F
Cabin	HeatOF	F

# PIPER PA-46-350P MALIBU MIRAGE, M350 FLAMMABLE MATERIAL LOCATIONS

### 7.17 FUEL SYSTEM

Fuel is stored in two main integral wing tanks (see Figure 7-27), located outboard of the mid-wing splice. Fuel quantity held by each wing tank is 60 usable gallons with one gallon of unusable fuel, for a total of 122 gallons. The minimum fuel grade is 100 or 100LL aviation grade. Each tank gravity feeds fuel through finger screens into three lines leading to collector/sump tanks located at the root of each wing, just aft of the main spar. During preflight the collector/sump tank and one of the three lines can be inspected in each main wheel well. Collector/sump tanks vent back to the main tanks by a fourth line located forward of the main spar. The main tanks vent to the atmosphere by non-icing vents installed in the most outboard forward access panels of each wing tank. Reverse fuel flow from collector tanks to main tanks is prevented by 2 flapper check valves installed in each collector tank. Collector tank sumps are the lowest points in the fuel system, and each has a drain valve for draining collector and main tanks.



FUEL SYSTEM SCHEMATIC Figure 7-27

# PIPER PA-46-350P MALIBU MIRAGE, M350

### **EMERGENCY EXIT**

### 3.59 EMERGENCY EXIT (3.3ab)

The second window aft of the windshield on the right side of the fuselage is an emergency exit.

### NOTE

The cabin must be depressurized before attempting to open the emergency exit.

To use the emergency exit, remove the plexiglas cover over the handle, pull the handle, and pull in on the exit window.





<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	173 gallons
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by the Piper Aircraft Group and Globair.com.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

### FIRE EMERGENCY PROCEDURES

### 3.14 ENGINE FIRE

On Ground (During engine start or taxi)

### Indication: Red "ENGINE FIRE" annunciator illuminated.

Power Lever	IDLE
Condition Lever	CUTOFF / FEATHER
Brakes	AS REQUIRED
Firewall Shutoff Valve	LIFT COVER - PULL OFF
Bleed Air Lever	PULL OUT (closed)
ECS Switch	OFF
Fuel Pump Switch	OFF
Ignition Switch	OFF
Radio	EMERGENCY CALL
Battery Switch	OFF
Aircraft	EVACUATE
Fire	EXTINGUISH

# In Flight

### Indications: Red "ENGINE FIRE" annunciator illuminated or Visual Verification

Engine Power	REDUCE TO MINIMUM ACCEPTABLE
	ACCORDING TO FLIGHT SITUATION
Oxygen	AS REQUIRED (all aircraft occupants)
Mic Select Switch	
Confirm that fire exists then:	:
Condition Lever	CUTOFF / FEATHER
Firewall Shutoff Valve	LIFT COVER - PULL OFF
ECS Switch	OFF
Bleed Air Lever	PULL OUT (closed)

### FIRE EMERGENCY PROCEDURES

# 3.15 ELECTRICAL FIRE, SMOKE OR FUMES

# If source is known:

Oxygen	CREW (100%) AND PASSENGERS
	DON MASKS
Mic Select Switch	MASK
Fire (if necessary)	EXTINGUISH
Faulty Circuits	ISOLATE
Smoke Evacuation (if necessary).	EXECUTE CHECKLIST
-	(per para. 3.16)
Land	NEAREST SUITABLE AIRPORT
If source is unknown:	
Oxygen	CREW (100%) AND PASSENGERS
	DON MASKS
Mic Select Switch	MASK
Fire (if necessary)	EXTINGUISH
Smoke Evacuation (if necessary).	EXECUTE CHECKLIST
	(per para, 3.16)
Generator	OFF
Alternator	OFF
Autopilot	DISENGAGE
Battery	OFF
Cabin Altitude Select	SELECT 500 FEET ABOVE
	FIELD ELEVATION
Standby Instruments	VERIFY ON and FLAG
	IS PULLED ON GYRO
(Transition to standby instrumen	ts and maintain attitude control using
standby attitude gyro)	
Emergency/Ground Clearance Sw	itchON
Emergency Descent	ACCOMPLISH PER PARA. 3.17
T	O A SAFE ALTITUDE CONSISTENT
	WITH TERRAIN
Land	NEAREST SUITABLE AIRPORT
(Perform Emergency Landing Gear	Extension procedure and 0° Flap Landing)
If smoke or fire still persists:	
All Tie Bus Breakers	PULL
Land	NEAREST SUITABLE AIRPORT
(Perform Emergency Landing Gear	Extension procedure and 0° Flap Landing)

### FLAMMABLE MATERIAL LOCATIONS

### 7.17 FUEL

The fuel system consists of two main, inboard, and header wing tanks, two header tank boost pumps, supply and vapor return fuel lines, and four sump drains. Fuel is drawn from both wings simultaneously, with float valves and switches employed to prevent air ingestion. The two header tank and two fuel return sump drains are located on the lower aft left and right sides of the cowling. The filter sump drain is located adjacent to the left header sump drain. Upon engine shutdown, the fuel remaining in the fuel manifold drains into an EPA fuel purge system. This system utilizes accumulated engine bleed air to force the residual fuel into the burner upon shutdown. A slight and momentary increase in ITT and the possible presence of smoke in the exhaust is normal as the residual fuel is consumed. The fuel shut-off valve is located on the center pedestal and is pulled for the closed position. A fuel temperature indicator, located on the lower left corner of the instrument panel, displays the fuel temperature sensed by a fuel temperature probe, located in the right inboard fuel tank. During operations where the fuel temperature indicator is below -23°C (-10°F), the fuel return solenoid valve downstream of the high pressure gear driven pump opens and returns unused fuel from the fuel control unit to the outboard left and right fuel tanks. This returning of warmed fuel to the fuel tanks slows the cooling process of the fuel, which allows the aircraft to operate at temperatures as cold as -54°C (-65°F) for a longer period of time.



### **BATTERY LOCATION**

### 7.19 ELECTRICAL

Power for the 28 Vdc negative ground dual fed split bus electrical system is supplied by a direct driven 200 ampere generator and a belt driven 135 ampere alternator. The generator and the alternator are located on the aft end of the engine. Although the units do not operate in true parallel fashion, both units are kept running at the same time. The generator is considered the primary current source and the alternator is the back-up. The units that control the generator and the alternator are adjusted such that the generator furnishes all of the load and the alternator is the backup. In the event that the generator should fail or be turned off for any reason, the alternator picks up the entire load. A single 24 Vdc lead acid battery of 38 ampere hour capacity, is located in the battery compartment in the right side of the nose of the aircraft just forward of the wing leading edge. The battery provides power for engine starting and also acts as an emergency source of electrical power in the event the generator and the alternator should both fail.



# **EMERGENCY EXIT**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (2 crew min., 4 passengers max.)
Fuel Capacity:	260 gallons
Emergency Information:	See following pages

Sources:

All diagrams and photos are provided by the Piper Aircraft Group.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

ENGINE

### FIRE EMERGENCY PROCEDURES

### 3.14 ENGINE FIRE

### On Ground (During engine start or taxi)

### Indication: Red "ENGINE FIRE" annunciator illuminated.

Power Lever	
Condition Lever	CUTOFF / FEATHER
Brakes	AS REQUIRED
Firewall Shutoff Valve	LIFT COVER - PULL OFF
Bleed Air Lever	PULL OUT (closed)
ECS Switch	OFF
Fuel Pump Switch	OFF
Ignition Switch	OFF
Radio	EMERGENCY CALL
Battery Switch	OFF
Aircraft	EVACUATE
Fire	EXTINGUISH

## In Flight

### Indications: Red "ENGINE FIRE" annunciator illuminated or Visual Verification

Engine Power	REDUCE TO MINIMUM ACCEPTABLE
	ACCORDING TO FLIGHT SITUATION
Oxygen	AS REQUIRED (all aircraft occupants)
Mic Select Switch	MASK
Confirm that fire exists then	:
Condition Lever	CUTOFF / FEATHER
Firewall Shutoff Valve	LIFT COVER - PULL OFF
ECS Switch	OFF
Bleed Air Lever	PULL OUT (closed)

### FIRE EMERGENCY PROCEDURES

### 3.15 ELECTRICAL FIRE, SMOKE OR FUMES

### If source is known:

Oxygen	CREW (100%) AND PASSENGERS
	DON MASKS
Mic Select Switch	MASK
Fire (if necessary)	EXTINGUISH
Faulty Circuits	ISOLATE
Smoke Evacuation (if necessary).	EXECUTE CHECKLIST
	(per para, 3.16)
Land	NEAREST SUITABLE AIRPORT
If source is unknown:	
Oxygen	CREW (100%) AND PASSENGERS
(), jgen	DON MASKS
Mie Select Switch	MASK
Fire (if necessary)	EXTINGUISH
Smoke Evacuation (if necessary)	EXECUTE CHECKLIST
Shioke Evacuation (If necessary)	(per para 3 16)
Generator	OFF
Alternator	OFF
Autopilot	DISENGACE
Battary	OFF
Cabin Altituda Salaat	SELECT SOO EEET ABOVE
Cabin Annuac Scient	FIELD FLEVATION
Standby Instruments	VERIEV ON and ELAC
Stationy Instruments	IS PULLED ON CYPO
(Transition to standby instrument	is rolled on or no
(mainshift) to standby mist union standby attitude gyra)	and maintain attrade control using
Emorganey/Ground Clearance Su	itch ON
Emergency/Oround Creatance Sw	ACCOMPLISH DEP DADA 3 17
Emergency Descent	Y) A SAEE ALTITUDE CONSISTENT
1	WITH TEDDAIN
1 1	WITH TERRAIN
(Darton Emersonaul on ting Coor	Estancian procedure and 0° Elan Landina)
(Perform Emergency Landing Gear	Extension procedure and o Plap Landing)
If smoke or fire still persists:	
All Tie Bus Breakers	PULL
Land	NEAREST SUITABLE AIRPORT
(Perform Emergency Landing Gear	Extension procedure and 0° Flap Landing)

## FLAMMABLE MATERIAL LOCATIONS

### 7.17 FUEL

The fuel system consists of two main, inboard, and header wing tanks, two header tank boost pumps, supply and vapor return fuel lines, and four sump drains. Fuel is drawn from both wings simultaneously, with float valves and switches employed to prevent air ingestion. The two header tank and two fuel return sump drains are located on the lower aft left and right sides of the cowling. The filter sump drain is located adjacent to the left header sump drain. Upon engine shutdown, the fuel remaining in the fuel manifold drains into an EPA fuel purge system. This system utilizes accumulated engine bleed air to force the residual fuel into the burner upon shutdown. A slight and momentary increase in ITT and the possible presence of smoke in the exhaust is normal as the residual fuel is consumed. The fuel shut-off valve is located on the center pedestal and is pulled for the closed position. A fuel temperature indicator, located on the lower left corner of the instrument panel, displays the fuel temperature sensed by a fuel temperature probe, located in the right inboard fuel tank. During operations where the fuel temperature indicator is below -23°C (-10°F), the fuel return solenoid valve downstream of the high pressure gear driven pump opens and returns unused fuel from the fuel control unit to the outboard left and right fuel tanks. This returning of warmed fuel to the fuel tanks slows the cooling process of the fuel, which allows the aircraft to operate at temperatures as cold as -54°C (-65°F) for a longer period of time.



### **BATTERY LOCATION**

### 7.19 ELECTRICAL

Power for the 28 Vdc negative ground dual fed split bus electrical system is supplied by a direct driven 200 ampere generator and a belt driven 135 ampere alternator. The generator and the alternator are located on the aft end of the engine. Although the units do not operate in true parallel fashion, both units are kept running at the same time. The generator is considered the primary current source and the alternator is the back-up. The units that control the generator and the alternator are adjusted such that the generator furnishes all of the load and the alternator is the backup. In the event that the generator should fail or be turned off for any reason, the alternator picks up the entire load. A single 24 Vdc lead acid battery of 38 ampere hour capacity, is located in the battery compartment in the right side of the nose of the aircraft just forward of the wing leading edge. The battery provides power for engine starting and also acts as an emergency source of electrical power in the event the generator and the alternator should both fail.



# **EMERGENCY EXIT**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	11 max. (1 crew min., 10 passenger max.)
Fuel Capacity:	406 gallons
Emergency Information:	See following pages

### Sources:

All diagrams provided by Pilatus Aircraft Rescue and Fire Fighting Information document May 2008.

Aircraft Information:

Pilatus Business Aircraft Ltd Broomfield, CO, USA Phone: 1 (800) 745-2887

ENGINE

# FIRE PROTECTION EQUIPMENT AND POTENTIAL FIRE HAZARDS



Please, see Disclaimer on page 4

Date of issue: May 14th, 2008

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### **EMERGENCY DOORS AND EXITS**

### Passenger/Crew Door Left Side (Opens downwards)

Cargo Door Left Side (Open upwards)



### Emergency Exit Right Side (Opens inwards)



Date of issue: May 14th, 2008

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# **EMERGENCY PROCEDURES AND FUEL MAINTENANCE SHUT-OFF**

### Flight Deck Emergency Procedures (Numbered in sequence order)



Access to the Fuel Maintenance Shut-Off Lever (Numbered in sequence order)



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## ACCESS TO BATTERY COMPARTMENT



### DISCLAIMER

THIS AIRCRAFT RESCUE AND FIRE FIGHTING INFORMATION SUMMARISES SELECTED DATA AND INFORMATION RELATING TO PC-12 AIRCRAFT CONTAINED IN THE FOCA APPROVED AIRPLANE FLIGHT MANUAL (AFM). IT HAS BEEN PREPARED TO THE ATTENTION OF RESCUE AND FIRE FIGHTING PERSONAL WHO MIGHT BE INVOLVED IN A RESCUE OPERATION OF A PC-12.

NO UPDATE SERVICE OF THIS DOCUMENT WILL BE PROVIDED.

PILATUS REJECTS ALL AND ANY LIABILITY WITH RESPECT TO ANY HANDLING, MAINTENANCE AND/OR OPERATION OF THE PC-12 AIRCRAFT WHICH IS NOT IN FULL AND STRICT COMPLIANCE WITH THE PROVISIONS OF THE PILOT OPERATING HANDBOOK (POH). THE PRESENT DOCUMENT DOES NOT CONTAIN AND SHALL NOT BE DEEMED TO CONTAIN ANY REPRESENTATIONS, WARRANTIES AND/OR COVENANTS REGARDING THE SPECIFICATIONS AND/OR OPERATIONS OF THE PC-12. IN PARTICULAR THE PRESENT DOCUMENT DOES NOT CONTAIN ANY REPRESENTATIONS OR WARRANTIES AS TO THE COMPLETENESS TO THE DESCRIPTION OF POTENTIAL FIRE HAZARDS.

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Date of issue: May 14th, 2008

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# **PILATUS PC-6 PORTER**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	11 max. (1 crew, 10 passenger max.)
Fuel Capacity:	89 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Pilatus Customer Support Email: publications@pilatus-aircraft.com

# **PILATUS PC-6 PORTER**

# HAZARDOUS EQUIPMENT LOCATIONS

### PC-6 HAZARDOUS EQUIPMENT

- Wing fuel tanks
- Rear fuselage collector tank
- Engine Oil
- Crew Oxygen (optional)

- Passenger Oxygen (optional)
- H4 Tail Wheel Shock absorber (24 bar)
- Main Wheels (3.3 or 1.4 bar)
- Tail Wheel (3.2 bar max.)



# **AVIAT AIRCRAFT PITTS S1 SPECIAL**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	20 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by Aviat Aircraft. Emergency information is provided by Aviat Aircraft Airplane Flight Manual for Model Pitts S-2B Airplane (1996).

Aircraft Information:

672 S. Washington | P.O. Box 1240 | Afton WY 83110 Phone: 307-885-3151 Fax: 307-885-9674

# **1 ENGINE**

# **AVIAT AIRCRAFT PITTS S1 SPECIAL**

### FIRE EMERGENCY PROCEDURES

### FIRES

# DURING START ON GROUND

1. Cranking: Continue to crank the engine in an attempt to start the engine and use any fuel in the lines.

		Do not use the boost pump.
		Leave the MIXTURE
		control in idle cutoff
		and set the fuel selector
		to OFF.
2.	Mixture:	Idle cut-off
3.	Fire Extinguisher:	Obtain (have
		ground attendants obtain)
4.	Engine:	Secure
	A. Master Switch:	Off
	B. Ignition Switch:	Off
	C. Fuel Selector:	Off
5.	Fire:	Extinguish using
		fire extinguisher, wool
- Carlos		blanket, or dirt.
6.	Fire Damage:	Inspect, repair
	or rep	lace damaged components or
	wir	ing before conducting flight.
ENGINE FIF	E IN FLIGHT	
1.	Mixture:	Idle cut-off
. 2.	Fuel Selector Valve:	Off
3.	Master Switch:	Off
4.	Airspeed:	95 MPH (83 KTS),
		(If fire is not extinguished,
		increase glide speed to find
		an airspeed which will
	provid	e an incombustible mixture.
	If	fire is not extinguished and
	you have	a parachute jettison canony
	you mave	d leave aircraft if you have
		no reave anerart il you have
5	Forced Landing	proper autude.)
2.	Forced Landing;	(an depention of the P
	Execute	as described in Emergency
	Landi	ng Without Engine Power).

# **AVIAT AIRCRAFT PITTS S1 SPECIAL**

### FIRE EMERGENCY PROCEDURES

# ELECTRICAL FIRE IN FLIGHT

1.	Master Switch:	Off
2.	All Avionics Swit	ch: Off
3.	Vents/Cabin Air:	Closed
4.	Fire Extinguisher:	Activate
	, ,	(if available)
	WARN	ING
Afte entilate the	r discharging an exting cabin.	guisher within a closed cabin,
If fir ontinuance of	e appears out and elec of flight:	trical power is necessary for
6.	Master Switch:	On
7.	Circuit Breakers:	Check for faulty
8.	Radio/Electrical St	circuit, do not reset. witches: On one at
9.	Vents/Cabin Air:	until short circuit is localized. Open when it is
		is completely entire
		15 COMDICICITY CEMINGUICHAG





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passengers max.)
Fuel Capacity:	60 gallons
Battery Location:	Aft of the baggage compartment
Emergency Information:	See following pages

Sources:

Photos and information provided by Van's Aircraft, Inc. For additional emergency response information on this aircraft please contact:

Van's Aircraft, Inc. 14401 Keil Road NE Aurora, OR 97002 Phone: 503-678-6545 FAX: 503-678-6560

# FLAMMABLE MATERIAL LOCATIONS

VAN'S AIRCRAFT, INC.

ENGINE



### FUEL SYSTEM

Each wing tank holds 30 US gallons of fuel, virtually all of which is useable. Fuel quantity is detected by floats in each tank and displayed on the G3X. Due to the shape of the fuel tank and location of the floats the quantity indicated above 25 gallons per tank is unreliable; below 25 gallons the quantity indicators are reasonably accurate. The G3X allows resetting the total fuel on board (not derived from the floats) at any time, mostly useful after filling the tanks, and the fuel used indication, based on fuel flow, is accurate. It tends to indicate slightly more fuel used than actual, in the neighborhood of one gallon in 40.

### **EMERGENCY PROCEDURES**

### EMERGENCY CHECKLIST

### FIRE DURING START

- 1. Cranking.....CONTINUE
- 2. Throttle.....FULL OPEN
- 3. Mixture.....CUTOFF
- 4. Fuel Selector .....OFF
- 5. Battery/Alt Switch .....OFF
- 6. Fire Extinguisher..... GRAB
- Egress Aircraft
- Extinguish Fire or Clear Area

### ENG FAIL DURING TAKEOFF

- 1. Throttle..... IDLE
- Brakes .....AS REQ'D
- If Departing Prepared Surface
  - a. Mixture ..... CUTOFF
  - b. Battery/Alt Switch ..... OFF
  - c. Magnetos.....OFF
  - d. Fuel Selector ..... OFF

### ENG FAIL IMM AFTER TO

- 1. Glide.....ESTABLISH
- 2. Landing Site .....SELECT
- 3. Mixture.....CUTOFF
- 4. Fuel Selector ..... OFF
- Battery/Alt Switch .....OFF

### ENG FAIL IN FLIGHT

- 1. Glide.....ESTABLISH
- Landing Site ......SELECT
   Restart ......ATTEMPT
- (if warranted)
- 4. Mixture.....CUTOFF
- 5. Fuel Selector ......OFF
- 6. Flaps..... EXTEND
- 7. Battery/Alt Switch ..... OFF

### ENG RESTART IN FLIGHT

1. Throttle.....<sup>1</sup>/<sub>4</sub> OPEN

- 2. Prop..... FULL FWD
- 3. Mixture.....RICH
- 4. Boost Pump.....ON
- 5. Fuel Selector ......SWITCH TANKS
- 6. Magnetos.....BOTH ON

### ENG FIRE IN FLIGHT

- 1. Mixture.....CUTOFF
- 2. Fuel Selector ..... OFF
- 3. Boost Pump.....OFF
- Cabin Heat/Fwd Vents.....OFF
- 5. Forced Landing ..... EXECUTE

### FORCED LANDING

- 1. Airspeed ...... 85 KIAS
- 2. Mixture.....CUTOFF
- Fuel Selector ......OFF
- 4. Flaps..... EXTEND
- 5. Battery/Alt Switch ..... OFF
- 6. Flaps..... AS REQ'D
- Fly All the Way Into Crash, Attempt to Touchdown at Minimum Speed

### ROUGH ENGINE OR LOSS OF POWER

- 1. If sudden and severe:
  - a. Check Mags One at a Time
- 2. Throttle..... ADJUST
- 3. Mixture..... ADJUST
- 4. Boost Pump.....ON
- 5. Fuel Selector ......SWITCH TANKS
- If Plug Fouling Suspected

   Lean Engine
- If Intake Blockage Suspected

   ALT AIR Door.....OPEN

### LOW OIL PRESSURE

- 1. Power ..... REDUCE
- 2. Eng Failure May be Imminent

### **EMERGENCY PROCEDURES**

- Use power while available to maneuver within gliding distance of landing site
- b. Maintain glide profile
- If Engine Fails
  - a. Glide.....Establish
  - b. Mixture.....CUTOFF
  - c. Fuel Selector .....OFF
  - d. Flaps..... EXTEND
  - e. Battery/Alt Switch ...... OFF

### HIGH OIL TEMP

- 1. Oil Cooler Door .....PUSH IN
- 2. Power Demand..... REDUCE
- 3. Airspeed .....INCREASE
- 4. If Oil Temp Remains High:
  - a. Land As Soon As Conditions Permit

### ELECTRICAL FIRE

- 1. Battery/Alt Switch .....OFF
- 2. IBBS Switch.....OFF
- 3. Overhead Vents.....OPEN
- 4. Fire Extinguisher...... USE If Req'd
- 5. Land As Soon As Conditions Permit

### ALTERNATOR FAILURE

- 1. Batt/Alt SwBATT, then BATT/ALT
- 2. If Reset Attempt Fails:
  - a. BATT/Alt Sw.....BATT
  - b. Voltage ..... CHECK
- 3. If Less than 11.5 Volts
  - a. ESS BUS Switch.....ON
  - b. Batt/Alt Switch.....OFF
  - c. B/U Switches ON, As Req'd
- If Req'd Prior to Landing
  - a. Batt/Alt Switch.....BATT

### AUTOPILOT MALF

- 1. AP Disconnect ..... DEPRESS
- 2. AP Panel Buttons ..... OFF
- 3. Speed/Bank .....AS REQ"D
- 4. To Remove Electrical Power:
  - a. Batt/Alt Switch.....OFF
  - b. ESS BUS Switch.....ON
  - c. ESS BUS Items .. AS REQ'D
- 5. If Trim Necessary
  - a. ESS BUS Trim Switch ... B/U

### b. Use UP/DOWN Panel Switch

### RUNAWAY TRIM

- 1. Maintain Aircraft Control
- 2. Use Bank to Control Pitch Up
- 3. Trim Switch on ESS BUS ...... OFF
- 4. Adjust Speed for Trim Condition

### CO MONITOR ALARM

- 1. If Oxygen Available.....DON
- 2. Cabin Heat/FWD Vents ..... OFF
- Overhead Vents.....OPEN
- 4. Land As Soon As Conditions Permit

### STATIC SOURCE BLOCKAGE

- 1. Alt Static Switch .....ALT
- 2. Apply Corrections
- 3. Crosscheck with GPS

### SPINS

- 1. Throttle..... IDLE
- 2. Rudder..... OPPOSITE SPIN/BALL
- 3. Stick ..... FWD TO BREAK STALL
- 4. RECOVER FROM DIVE

### DOOR DEPARTURE

- 1. Speed..... REDUCE
- 2. Rudder..... INTO OPEN DOOR
- 3. Loose Items.....STOW
- 4. Elevator ..... CHECK VISUALLY
- 5. Land as Soon as Conditions Permit

### DITCHING

- 1. Radio..... TRANSMIT MAYDAY
- 2. Flaps ..... FULL
- 3. Airspeed.....70 KIAS
- 4. Descend ...... 300 FPM
- 5. Approach
  - a. High Wind.....INTO b. Light Wind.....ParallelTo Swells
- 6. Seat/Shoutlder Harnesses ... TIGHTEN
- 7. Doors ...... UNLATCH
- 8. Evacuate After Touchdown

### ICING

- 1. Turn Back or Change Altitude
- 2. Throttle.....OPEN
- 3. Pitot Heat .....ON
- ALT AIR Door.....OPEN, if Req'd
# VAN'S AIRCRAFT RV-3





<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	30 gallons
Fuel Tank Locations:	Each wing has a 14.7-gallon tank

Sources:

Photos and information provided by Van's Aircraft, Inc. For additional emergency response information on this aircraft please contact:

Van's Aircraft, Inc. 14401 Keil Road NE Aurora, OR 97002 Phone: 503-678-6545 FAX: 503-678-6560

# **NORTH AMERICAN T-28 TROJAN**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	177 gallons

Sources:

Photos obtained from Boeing and NATA. For additional emergency response information on this aircraft please contact:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## **NORTH AMERICAN T-6 TEXAN**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	140 gallons

Sources:

Photos obtained from Boeing. For additional emergency response information on this aircraft please contact:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## **THRUSH AIRCRAFT 510G**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	228 gallons
Battery Location:	Aft of the engine on the engine mount lower longerons, accessible through the cowling skins
Emergency Information:	See following pages

Sources: All diagrams provided by Thrush Aircraft Inc.

Aircraft Information:

300 Old Pretoria Road Albany, Georgia 31721 Phone: (229) 883-1440 Fax: (229) 439-9790 Email: info@thrushaircraft.com

# THRUSH AIRCRAFT 510G FLAMMABLE MATERIAL LOCATIONS

#### GENERAL DESCRIPTION

A 230 U.S. gallon fuel supply is available for the Turbo Thrush. In each wing, fuel is contained inside integral wing tanks (wet wing fuel tanks) just outboard of the fuselage. The left wing and right wing fuel tanks are interconnected through a 5 U.S. gallon header tank that is located in the fuselage. The fuel supply lines, to the engine, are routed from the header tanks outlet finger screen through a fuel shutoff (on/off) valve to an electric driven fuel boost pump. The electric driven fuel boost pump discharge is then routed through a 25-micron main fuel filter to an engine driven fuel boost pump. The electric driven fuel boost pump serves two purposes, first as a backup system to provide continuous fuel pressure to the engines high pressure fuel pump in case the engine driven fuel boost pump fails and secondly to provide boosted fuel pressure to the engines high pressure fuel pump during engine starting. The aircraft's fuel system is equipped with two fuel filters, a ¼ inch mesh finger strainer is installed in the outlet fitting from the header tank and a 25-micron, airframe supplied, main fuel filter located on the forward L/H side of the firewall. Fuel from the aircraft fuel system enters the engines high pressure fuel pump which has two fuel filters, an 74micron inlet filter and a 10-micron discharge filter (Refer to the engines appropriate maintenance manual for pertinent maintenance details for the engine supplied filters and fuel systems). The fuel tank vent system is designed to keep the fuel spillage to a minimum. The fuel tanks are vented through tubing connected at both the inboard and outboard ends of the individual fuel tanks to the centrally located vent system in the fuselage. Ram air enters a vent scoop, on the fuselage, under the left wing and pressurizes the vent system to maintain positive pressure on the fuel tanks. The vent system is provided with two quick drain, located on the fuselage under each wing to drain any fuel that might happened to have got in the tanks outboard vent lines. At engine shutdown, fuel from the flow divider/dump valve, located at the 6 o'clock position on the engines fuel nozzle manifold or start control unit on older engines equipped with a start control unit, is directed to a residue fuel reservoir "EPA tank" mounted inboard on the L/H aft shin skin. This reservoir holds approximately 3 engine shutdowns worth of fuel before the fuel will exit the reservoirs' vent system. (NOTE: This reservoir should be emptied after each shutdown.) (NOTE: It is common and normal after an engine compressor Water Wash or Performance Recovery Wash to have water or soap appear in the reservoirs' drained waste fuel.) The fuel quantity gauge is located on the lower left instrument panel. The fuel quantity indicated system consists of two transmitters, one indicator gauge, and a L/H or R/H tank fuel quantity selector switch. A transmitter, installed in each wing tank transmits an electrical signal to the single fuel quantity indicator. The instrument reads both the left and right fuel tanks singularly as chosen by the electrical control switch, adjacent to the fuel

# THRUSH AIRCRAFT 510G

#### **EMERGENCY FIRE PROCEDURES**

#### ENGINE FIRES

The following Dry Motoring Run procedure is used to clear an engine at any time when deemed necessary to remove internally trapped fuel and vapor or when there is evidence of a fire within the engine. Air that passes through the engine serves to purge fuel, vapor, or fire from the combustion sections, the gas generator turbine, the power turbine, and the exhaust system.

EFFECTIVE 1/26/05

2-5

#### THRUSH AIRCRAFT INC – S2R-T34 TURBO THRUSH AIRCRAFT MAINTENANCE MANUAL

- A. Fuel Condition Lever Cut Off
- B. Ignition Switch Off
- C. Master Switch On
- D. Fuel Shutoff Valve On
- E. Fuel Auxiliary Pump Switch On
  - This will provide lubrication for the engine-driven fuel pump.
- F. Engine Starter Switch On

#### \*\*\* WARNING \*\*\*

If the fire persists as indicated by the sustained interturbine temperature, close the fuel system shutoff valve at this point and continue motoring.

- G. Maintain the starter operation for the desired duration. The maximum starter duration is 3 minutes.
- H. Engine Starter Switch Off
- I. Fuel Auxiliary Pump Switch Off
- J. Fuel Shutoff Valve Off
- K. Master Switch Off
- L. Allow a 5-minute cooling period for the starter before going any further with the starting operation.

ELECTRICAL FIRES

Circuit breakers will automatically trip and stop the current flow to a shorted circuit. However, as a safety precaution in the event of an electrical fire, turn the battery switches to off. Use a fire extinguisher approved for electrical fires to extinguish the flame.

## **PIPER PA-42 CHEYENNE 400LS**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max. (1 crew min., 8 passenger max.)
Fuel Capacity:	582 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by the Piper Aircraft Group and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275 **2 ENGINES** 

## **PIPER PA-42 CHEYENNE 400LS**

#### **CRASH RESCUE CHART**



# **ROCKWELL 690A TURBO COMMANDER**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (1 crew min., 10 passenger max.)
Fuel Capacity:	389 gallons

For additional emergency response information on this aircraft please contact:

Twin Commander Aircraft LLC, an Ontic Company 1176 Telecom Drive Creedmoor, NC 27522 Phone: 919.956.4300 Fax: 919.682.3786

# EADS ATR 42





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	48 max. (2 crew min., 46 passenger max.)
Fuel Capacity:	1,514 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by ATR Product Support.

Aircraft Information:

ATR Aircraft 1 Allée Pierre Nadot 31712 BLAGNAC Cedex FRANCE +33 (0)5 62 21 62 21

# EADS ATR 42

#### **CRASH CREW CHART**



# EADS ATR 72-500, 72-600





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	74 max. (1 crew min., 72 passenger max.)
Fuel Capacity:	1,680 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by ATR Product Support.

Aircraft Information:

ATR Aircraft 1 Allée Pierre Nadot 31712 BLAGNAC Cedex FRANCE +33 (0)5 62 21 62 21

# EADS ATR 72-500, 72-600

# CRASH CREW CHART





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (1-2 crew min., 9 passenger max.)
Fuel Capacity:	421.9 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Piaggio Aero Technical Support in the Rescue and Fire Fighting Information Guide.

Aircraft Information:

Piaggio Aerospace 1515 Perimeter Road West Palm Beach, FL 33406 Phone: +1 561 253 0104

# FUEL STORAGE LOCATIONS



#### **OXYGEN BOTTLE LOCATIONS / CABIN DOOR ENTRY**



Piaggio Aero Technical Support Oct.16/07 6

#### **EMERGENCY EXIT DOOR / BATTERY LOCATION**

#### **Emergency Exit Door**

#### NO BREAK-IN-POINTS AVAILABLE





## Push, lift and rotate to open

#### Battery Location: inside baggage compartment



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ENGINES

# **OTHER BATTERY / COMPOSITES LOCATION**

#### **Other battery locations**





Composites bottom view



# **BEECH 18, E18S**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (1 crew min., 7 passenger max.)
Fuel Capacity:	260 gallons

For additional emergency response information on this aircraft please contact:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com **2 ENGINES** 







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew min., 19 passenger max.)
Fuel Capacity:	676 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by the Hawker Beechcraft Corporation.

Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

#### **CRASH, FIRE, AND RESCUE INFORMATION**



#### **EMERGENCY EXIT LOCATIONS**

THE 1900C IS CONFIGURED WITH A 52-INCH BY 52-INCH CARGO DOOR AFT OF THE PASSENGER CABIN ON THE LEFT SIDE OF THE AIRPLANE. THE CARGO DOOR IS HINGED AT THE TOP AND CAN BE OPENED FROM INSIDE OR OUTSIDE. A PARTITION SEPARATES THE CARGO COMPARTMENT FROM THE CABIN AREA.

THE 1900C HAS THREE EMERGENCY EXIT DOORS. TWO ARE ON THE RIGHT SIDE OF THE FUSELAGE AT THE LEADING AND TRAILING EDGES OF THE WING, AND ONE IS ON THE LEFT SIDE OF THE FUSELAGE AT THE TRAILING EDGE OF THE WING.

THE 1900 CONFIGURATION WITHOUT A CARGO DOOR (NOT SHOWN) HAS TWO EMER-GENCY EXIT DOORS ON THE RIGHT SIDE ONLY. THE AFT PASSENGER AIRSTAIR DOOR SERVES AS THE SECOND EMERGENCY EXIT ON THE LEFT SIDE.



EMERGENCY EXITS

EMERGENCI EXILS FROM THE OUTSIDE. THE DOORS ARE RELEASED WITH A FLUSH-MOUNTED PULL-OUT HANDLE. THE PLUG-TYPE DOORS REMOVE COMPLETELY FROM THE FRAME INTO THE CABIN WHEN THE LATCHES ARE RELEASED.

#### FLAMMABLE MATERIAL LOCATIONS



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#### **BEECH B300/B300C KING AIR**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max.
Fuel Capacity:	475 gallons
Emergency Information:	See following pages

Sources:

All photos and diagrams provided by AOPA and Beechcraft.

Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

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# BEECH B300/B300C KING AIR

#### **EMERGENCY INFORMATION**



# **BEECH B300/B300C KING AIR**

#### **EMERGENCY INFORMATION**



# BEECH BARON 58, 58P, 58TC, B55, E55



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	196 gallons
Emergency Exits:	2

For additional emergency response information on this aircraft please contact:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (2 crew min., 13 passengers max.)
Fuel Capacity:	675 gallons
Battery Location:	In the right wing center section, accessible through a panel on the top of the wing
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Airforce Technology and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

#### **EMERGENCY EXITS**



Figure 2-11. Cabin Door and Cabin Emergency Hatch C

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ENGINES

#### **EMERGENCY EXITS**



Figure 2-12. Cabin Door and Cabin Emergency Hatch D T

#### **EMERGENCY EXITS**

TM 1-1510-218-10



Figure 9-1. Emergency Exits and Equipment

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#### FLAMMABLE MATERIAL LOCATIONS



Figure 2-18. Fuel System

2-5

#### FLAMMABLE MATERIAL LOCATIONS



#### **ENGINE SHUTDOWN**



## **BEECH DUCHESS 76**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	4 max.
Fuel Capacity:	100 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Beechcraft Duchess 76 Pilot's Operating Handbook and FAA Approved Airplane Flight Manual, July 1994.

#### Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

# **BEECH DUCHESS 76**

#### FLAMMABLE MATERIAL LOCATIONS


### **BEECH DUCHESS 76**

#### FIRE EMERGENCY PROCEDURES

Section III Emergency Procedures BEECHCRAFT Duchess 76

#### ENGINE FIRE (GROUND)

- 1. Mixture Controls IDLE CUT-OFF
- 2. Continue to crank affected engine
- 3. Fuel Selectors OFF
- 4. Battery and Alternator Switches OFF
- 5. Extinguish fire with extinguisher

#### ENGINE FIRE IN FLIGHT

Shut down the affected engine according to the following procedure and land immediately. Follow the applicable single-engine procedures in this section.

- 1. Fuel Selector OFF
- 2. Mixture Control IDLE CUT-OFF
- 3. Propeller FEATHER
- 4. Aux Fuel Pump OFF
- 5. Magneto/Start Switch OFF
- 6. Alternator Switch OFF



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (2 crew min., 13 passenger max.)
Fuel Capacity:	549 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by the Hawker Beechcraft Corporation.

#### Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

#### **CRASH, FIRE, AND RESCUE INFORMATION**



#### **EMERGENCY EXIT LOCATIONS**



EXTERNAL VIEW

#### FLAMMABLE MATERIAL LOCATIONS



### **BEECH KING AIR B350**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew min., 19 passenger max.)
Fuel Capacity:	676 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

# **BEECH KING AIR B350**

#### **EMERGENCY EXIT LOCATIONS**



EXTERNAL VIEW



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max. (1 crew min., 8 passenger max.)
Fuel Capacity:	470 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

### **CRASH FIRE, AND RESCUE INFORMATION**



#### **EMERGENCY EXIT LOCATIONS**

O2 LINES IN CABIN CEILING



AN EMERGENCY EXIT DOOR IS THE FUSELAGE CAN BE CUT ABOVE THE WINDOW PROVIDED ON THE RH SIDE OF THE FUSELAGE AT THE AFT END OF THE PASSENGER COMPARTMENT. LEVEL ANYWHERE FROM IMMEDIATELY AFT OF THE THE PILOTS' "D" WINDOWS TO THE AFT PRESSURE BULKHEAD. (DOUBLE ROW OF RIVETS APPROXIMATELY ONE FOOT BACK OF THE AFT COMPARTMENT WINDOWS.) DASHED LINES ARE NOT PAINTED ON THE FUSELAGE. AVOID O2LINES. THE EMERGENCY EXIT DOOR IS NOT OPENABLE FROM OUTSIDE THE AIRPLANE. WARNING: OXYGEN LINES AND ELECTRICAL WIRING COULD BE ENCOUNTERED. 17'3" PUSH BUTTON AND TURN HANDLE AIRSTAIR DOOR THE AIRSTAIR ENTRANCE DOOR (CABIN DOOR) IS LOCATED NEAR THE AFT END OF THE PASSENGER COMPARTMENT ON THE LEFT SIDE TO OPEN 0 OF THE FUSELAGE. THE DOOR IS HINGED AT THE BOTTOM AND SWINGS OUTWARD AND 0 0 0 DOWNWARD WHEN OPENED. TO OPEN THE DOOR, DEPRESS THE RELEASE 0 BUTTON ADJACENT TO THE DOOR HANDLE AND ROTATE THE HANDLE CLOCKWISE. PULL OUT AT THE TOP OF THE DOOR, AND WITH THE AID OF THE HYDRAULIC DAMPER, LET THE DOOR DROP DOWN TO THE FULLY OPEN POSITION. LATCH PINS LATCH HOOKS (2) (4) 10 000 14'3" r 0 Ι. 0 (St 12 12'3 - 35'6" **EXTERNAL VIEW** 

50'3"

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

#### FLAMMABLE MATERIAL LOCATIONS



### **BEECH SUPER KING AIR B200**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (1 crew min., 16 passenger max.)
Fuel Capacity:	550 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

# **BEECH SUPER KING AIR B200**

### EMERGENCY EXIT LOCATIONS









Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	196 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY RESCUE ACCESS**



#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



### FUEL AND ELECTRICAL SHUTDOWN



- **NOTE:** Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF position.
- NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.
- **NOTE:** Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.

Sheet 3 of 3

### **CESSNA 320F SKYKNIGHT**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	196 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

# **CESSNA 320F SKYKNIGHT**

### EMERGENCY RESCUE ACCESS



## **CESSNA 320F SKYKNIGHT**

ENGINES

2

#### FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS



#### WHEEL FIRE:

WHEELS CONTAIN MAGNESIUM COMPONENTS

WARNING: APPROACH LANDING GEAR FROM FORWARD OR AFT WHEN FIGHTING WHEEL FIRE.

FIRE AND SMOKE VISIBLE:

WARNING: ALTHOUGH CABIN INTERIOR FURNISHINGS ARE FABRICATED FROM FAA APPROVED MATERIALS, THESE MATERIALS MAY GIVE OFF TOXIC FUMES, MELT AND/OR COMBUST DURING EXPOSURE TO EXTREME HEAT. USE OF PROTECTIVE CLOTHING AND BREATHING APPARATUS ARE REQUIRED UNTIL YOU ARE SURE THE AREA IS SAFE.

CESSNA MODEL 320F (Sheet 2 OF 3)

1010X3005

# CESSNA 320F SKYKNIGHT FUEL AND ELECTRICAL SHUTDOWN



## CESSNA 337 SKYMASTER



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	128 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Aircraft Compare and Cessna, Turbo System Super Skymaster Owner's Manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

# **CESSNA 337 SKYMASTER**

#### FLAMMABLE MATERIAL LOCATIONS



### **CESSNA 337 SKYMASTER**

#### **BATTERY LOCATION**



Electrical energy is supplied by a 28-volt, direct-current system powered by two engine-driven alternators (see figure 2-3). Electrical energy is stored in a 24-volt battery located in the lower left portion of the front engine compartment. Power is supplied to all electrical circuits through a split bus bar, one side containing electronic system circuits and the other side having general electrical system circuits. Both sides of the bus are on at all times except when either an external power source is connected or the starter switches are turned on; then a power contactor is automatically activated to open the circuit to the electronics bus. Isolating the electronic circuits in this manner prevents harmful transient voltages from damaging the semi-conductors in the electronics equipment.

### **CESSNA 402 BUSINESSLINER**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (1 crew min., 9 passenger max.)
Fuel Capacity:	102 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

## **CESSNA 402 BUSINESSLINER**

#### EMERGENCY RESCUE ACCESS



no fuel or flammable materials are near the area that is to be cut.

# CESSNA 402 BUSINESSLINER

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



# CESSNA 402 BUSINESSLINER FUEL AND ELECTRICAL SHUTDOWN







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (1 crew min., 10 passenger max.)
Fuel Capacity:	348 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com N

#### **EMERGENCY RESCUE ACCESS**



- Note 1: To prevent injury to personnel and occupants, the cutout areas are to be used only when access through the cabin entry, and emergency exit doors is not possible. If the cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- Note 2: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure that no fuel or flammable materials are near the area that is to be cut.

ENGINES

2

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. Wheels contain magnesium components.

Fire and smoke: Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

Sheet 2 of 3

### FUEL AND ELECTRICAL SHUTDOWN



- **NOTE:** Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF position.
- NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.
- **NOTE:** Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.

200

1721 272



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (1 crew min., 9 passenger max.)
Fuel Capacity:	102 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Cessna and are located in the Emergency Rescue Access and Fire Fighting Procedures manual.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

#### **EMERGENCY RESCUE ACCESS**



- **NOTE 1:** To prevent injury to personel and occupants, the cutout areas are to be used only when acess through the cabin entry and emergency exits door is not possible. If the cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure that no fuel or flammable materials are near the area that is to be cut.

### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. Wheels contain magnesium components.

**Fire and smoke:** Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

### FUEL AND ELECTRICAL SHUTDOWN



- **NOTE:** Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF position.
- NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.
- **NOTE:** Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.




Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max.
Fuel Capacity:	260 gallons
Emergency Information:	See following pages

Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com N

### **EMERGENCY INFORMATION**



THESE PROCEDURES WERE SPECIFICALLY DESIGNED FOR AIRPLANE MODEL 421C; HOWEVER, MOST OF THE INFORMATION SHOWN WILL APPLY TO THE EARLIER MODELS 421, 421A, 421B.

5110R4009

5110R4008 5110R4009 5110R4008

CESSNA MODEL 421C (Sheet 1 OF 3)

### FLAMMABLE MATERIAL LOCATIONS



### FUEL AND ELECTRICAL SHUTDOWN

A32246

### FUEL AND ELECTRICAL SHUTDOWN







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max.
Fuel Capacity:	366 gallons
Emergency Information:	See following pages

### Sources:

All diagrams and information provided by AOPA and Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



- NOTE 1: To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- NOTE 2: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut. Sheet 1 of 3

### EMERGENCY RESCUE ACCESS

## **EMERGENCY INFORMATION**



Sheet 2 of 3

breathing equipment until you are sure the area is safe.

Fire and smoke: Cabin interior furnishings are made from FAA approved materials, that can cause toxic

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

fumes, melt, and burn when exposed to extreme heat. Use protective clothing and

## **EMERGENCY INFORMATION**

CESSNA AIRCRAFT COMPANY MODEL 425 EMERGENCY RESCUE ACCESS



- **NOTE:** Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF position.
- NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.
- **NOTE:** Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.

Sheet 3 of 3

### FUEL AND ELECTRICAL SHUTDOWN



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	8 max.
Fuel Capacity:	475 gallons
Emergency Information:	See following pages

Sources:

All diagrams and information provided by AOPA and Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY MODEL 441

- NOTE 1: To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- NOTE 2: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

Sheet 1 of 3

### EMERGENCY RESCUE ACCESS

## **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY MODEL 441

DETAIL A

Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. Wheels contain magnesium components.

Fire and smoke: Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

Sheet 2 of 3

### FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY

NOTE: Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF position.

NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.

NOTE: Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.

FUEL AND ELECTRICAL SHUTDOWN

Sheet 3 of 3



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max.
Fuel Capacity:	102 gallons
Emergency Information:	See following pages

### Sources:

Photos and diagrams provided by Disciplines of Flight and Cessna Aircraft Company.

### Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



- NOTE 1: To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- NOTE 2: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut. Sheet 1 of 3

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EMERGENCY RESCUE ACCESS

### **EMERGENCY INFORMATION**



**CESSNA AIRCRAFT COMPANY** 

Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. Wheels contain magnesium components.

Fire and smoke: Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

Sheet 2 of 3

### FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

## **EMERGENCY INFORMATION**

### CESSNA AIRCRAFT COMPANY MODEL 335 AND 340A EMERGENCY RESCUE ACCESS

A38843  $\mathbf{D} \otimes \mathbf{O}$ Put the mixture A В levers to IDLE CUTOFF. ELT switch (NOTE) DETAIL A Put the battery Put the magneto Set the fuel switch to OFF. switch to OFF. selectors to OFF.

DETAIL B

DETAIL C

- NOTE: Fuel flow to the engines is stopped when the mixture levers are in the IDLE CUTOFF position. To prevent fuel leakage, put the fuel selectors in the OFF positon.
- NOTE: To fully remove electrical power from the airplane, the battery must be disconnected.
- NOTE: Momentarily place the remote mounted switch to the RESET position and release. This will place the transmitter in the AUTO position.

Sheet 3 of 3

### FUEL AND ELECTRICAL SHUTDOWN

# CASA CN-235-300



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	53 max. (2 crew min., 51 passengers max.)
Fuel Capacity:	1,390 gallons

Sources: Photos obtained from Airforce Technology.

# **CONVAIR CV-340 CONVAIRLINER**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	42 max. (2 crew min., 40 passengers max.)
Fuel Capacity:	1,000 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Airliners.net and Allegheny Airlines, Convair 340/440 Operations Manual.

# **CONVAIR CV-340 CONVAIRLINER**

## **EMERGENCY EXITS**



# **DIAMOND DA42**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passenger max.)
Fuel Capacity:	79 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Diamond Aircraft Industries, Inc. Tel: 1-519-457-4000 Fax: 1-519-457-4021 Web: www.diamondaircraft.com

# **DIAMOND DA42**

# EMERGENCY EXIT PROCEDURES / EMERGENCY EQUIPMENT LOCATIONS





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	84 max. (5 crew min., 79 passenger max.)
Fuel Capacity:	1,748 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Bombardier Customer Support and Services Tel: 1-613-271-3292 Email: bombardiercustomerservice@gilmore.ca

## **EMERGENCY EXIT LOCATIONS**







<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	92 max. (2 crew min., 90 passengers max.)
Fuel Capacity:	1,724 gallons
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by De Havilland Canada.

Aircraft Information:

1959 de Havilland Way Sidney, British Columbia Canada V8L 5V5 1.800.663.8444

## CABIN EXIT LOCATIONS



## CABIN EXIT LOCATIONS



# DE HAVILLAND DHC-6 DASH 6 TWIN OTTER 100/200





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	20 max.
Fuel Capacity:	370 gallons
Emergency Exits:	3
Emergency Information:	See following pages

Sources:

All diagrams and photos provided by Viking Air.

Aircraft Information:

1959 de Havilland Way Sidney, British Columbia Canada V8L 5V5 1.800.663.8444

# DE HAVILLAND DHC-6 DASH 6 TWIN OTTER 100/200

## CABIN DIMENSIONS AND EXIT LOCATIONS



# **MCDONNELL DOUGLAS DC-3**







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	34 max. (2 crew min., 32 passenger max.)
Fuel Capacity:	804 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet-Oct. 31, 2009.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

# MCDONNELL DOUGLAS DC-3

## FLAMMABLE MATERIAL LOCATIONS





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	5 max.
Fuel Capacity:	1,824 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Northrop Grumman and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Northrop Grumman Corporation 2980 Fairview Park Drive Falls Church, VA 22042 703-280-2900

## FLAMMABLE MATERIAL LOCATIONS



## **ENGINE SHUTDOWN**

### ENGINE SHUTDOWN

- 1. ENGINE SHUTDOWN
- a. To move the condition levers, located on center console, to different positions, the detent release at the outboard side of each condition lever must be lifted, then move condition levers to extreme AFT position.
- Place left and right generator switches, located on the overhead control panel, in OFF position.



## **AIRCREW EXTRACTION**

### AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

NOTE:

- Crewmembers are attached to the seats by use of a torso harness.
- Remove oxygen mask by pulling down on release tabs on either side of helmet mask.
- The oxygen/communication lead is joined by a positive locking ring. To release, pull up on round collar while pulling apart connection.
- . Release two lap belts, then two shoulder harness koch fittings.
- 2. EMERGENCY RELEASE

a. Actuating the emergency release handle, located on forward right side of seat, will free the crewmember from the seat. However, the parachute and survival kit will remain attached to the crewmember.



# FAIRCHILD DORNIER 328





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity;	37 max. (3 crew min., 34 passengers max.)
Fuel Capacity:	8,011 gallons

Sources:

Photos obtained from Globair.com.

# **NORTHROP GRUMMAN G-21A GOOSE**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (1 crew min., 7 passengers max.)
Fuel Capacity:	220 gallons

#### Sources:

For additional emergency response information on this aircraft please contact:

Northrop Grumman Corporation 2980 Fairview Park Drive Falls Church, VA 22042 703-280-2900
## **NORTHROP GRUMMAN G-44 WIDGEON**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	5 max. (1 crew min., 4 passengers max.)
Fuel Capacity:	108 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Grumman, Widgeon Model G-44A Service Manual and AOPA Pilot.

Aircraft Information:

Northrop Grumman Corporation 2980 Fairview Park Drive Falls Church, VA 22042 703-280-2900

## **NORTHROP GRUMMAN G-44 WIDGEON**

### **BATTERY LOCATION**



## NORTHROP GRUMMAN G-44 WIDGEON

### FLAMMABLE MATERIAL LOCATIONS



## **GRUMMAN GULFSTREAM I**







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	28 max. (2 crew min., 26 passenger max.)
Fuel Capacity:	1,804 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Gulfstream Aerospace Corporation.

#### Aircraft Information:

Gulfstream Aerospace Corporation Savannah, GA 1-800-810-4853

## **GRUMMAN GULFSTREAM I**

### **CRASH CREW CHART**



## **BAE JETSTREAM 31/41**





#### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	122 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by BAE Systems.

Aircraft Information:

BAE Systems Stirling Square, 6 Carlton Gardens, London, SW1Y 5AD, United Kingdom+44 (0) 1252 373232

## **BAE JETSTREAM 31/41**

### **DOORS AND EXITS**



## **SWEARINGEN METRO**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (1 crew min., 19 passenger max.)
Fuel Capacity:	652 gallons

For additional emergency response information on this aircraft please contact:

M7 Aerospace LP 10823 Northeast Entrance Road San Antonio, TX 78216 Tel:1-210-824-9421

## **MITSUBISHI MU-2G**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (1-2 crew min., 9 passenger max.)
Fuel Capacity:	366 gallons

For additional emergency response information on this aircraft please contact:

Mitsubishi Heavy Industries 4951 Airport Parkway, Ste 530 Addison, TX 75001 Tel: 1-972-934-5480 Fax: 1-972-934-5488 Web: http://www.mu-2aircraft.com

### **PARTENAVIA P-68B VICTOR**





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	7 max. (1 crew min., 6 passenger max.)
Fuel Capacity:	142 gallons

For additional emergency response information on this aircraft please contact:

Vulcanair Inc. 1101 30th Street Suite 500 Washington D.C. Tel: 1-202-625-4347 Tel: 1-202-625-4367 Web: www.vulcanair.com

## **PIPER PA-30 TWIN COMANCHE**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	90 gallons

For additional emergency response information on this aircraft please contact:

Piper Aircraft, Inc. 2926 Piper Drive Vero Beach, FL 32960 Tel: 1-772-567-4361 Fax: 1-772-978-6592

## **PIPER PA-31 NAVAJO**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	7 max.
Fuel Capacity:	190 gallons
Fuel Locations:	Wing tanks
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Piper Aircraft Inc.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

## PIPER PA-31 NAVAJO

### CABIN LAYOUT



### **PIPER PA34-220T SENECA**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passenger max.)
Fuel Capacity:	90 gallons

For additional emergency response information on this aircraft please contact:

Piper Aircraft, Inc. 2926 Piper Drive Vero Beach, FL 32960 Tel: 1-772-567-4361 Fax: 1-772-978-6592

## **PIPER PA34-220T SENECA**

#### **CRASH RESCUE CHART**



### **PIPER PA-44-180 SEMINOLE**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	4 max. (1 crew min., 3 passenger max.)
Fuel Capacity:	110 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by the Piper Aircraft Group and are located in the Aircraft Crash Recovery Guide.

Aircraft Information:

Piper Aircraft, Inc. 2926 Piper Drive Vero Beach, FL 32960 Tel: 1-772-567-4361 Fax: 1-772-978-6592

## PIPER PA-44-180 SEMINOLE

### **CRASH RESCUE CHART**







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	165 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Bureau of Aircraft Accidents Archives and Aerostar Maintenance Manual.

Aircraft Information:

Piper Aircraft Inc. 2926 Piper Drive Vero Beach, FL 32960 1.877.879.0275

## FLAMMABLE MATERIAL LOCATIONS



### FLAMMABLE MATERIAL LOCATIONS

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			;	ç,
29.	LANDING LIGHT LAMPS			-
30.	NOSE LANDING GEAR (NLG) AIR DUCTS (600 & 601) RIGHT			
	SIDE ONLY NI & STEERING FLOW CONTROL	· .	1	2
	VALVES			* ·
31.	LOWER ENGINE COWLING			
32.	PNEUMATIC PRESSURE REGULATOR	v		
	CONTROL VALVES			•
	BLEED VALVE (DIVERTER VALVE - 602P ONLY) (601P, 602P AND 700P)			
33.	WING TANK VENT VALVE	EXTENDED WING		
34.	AILERON HINGE	ONLY		
35.	SEALED AREA OF WING FUEL TANK			
36.	SEALED AREA OF WING FUEL TANK FLAPPER VALVE			
37.	SEALED AREA OF WING FUEL TANK FLAPPER VALVE			
38.	AILERON BELLCRANK			
.39., 40.,	41., 42., & 44. SEALED AREAS OF WING FUEL TANK			
43.	SEALED AREA OF WING FUEL TANK			
	FUEL LEVEL TRANSMITTER & ELEC.			
	. `			
45.	FLAP ACTUATOR			
46.	FLAP FLOW CONTROL VALVES			
47.	PUSH ROD AND BALANCE ROD BOOTS (601P, 602P AND 700P)			
48.	TRIM TAB BELLCRANK AND	-		
49.	FLEXIBLE CONTROLS EXTERNAL POWER SUPPLY PLUG			

### **BATTERY LOCATION**



#### **BATTERY LOCATION**

- 1. LANDING LIGHTS RADAR ANTENNA AIR INLET SCOOP (600 & 601)
- 2. INSIDE NOSE SECTION ACCESS COVER STEERING VALVE NOSE GEAR UP SWITCH LEFT NOSE GEAR TRUNNION PIN NOSE GEAR BUNGEE (A/F 0001-0611)
- 3. INSIDE NOSE SECTION ACCESS COVER RIGHT NOSE GEAR TRUNNION PIN AIR DUCTS (600 & 601)
- 4. RUDDER BELLCRANK ASSEMBLY
- 5. FLAP CONTROL VALVE
- 6. MLG CONTROL VALVE
- 7. ELEVATOR AND AILERON IDLER
- CONTROL SYSTEM CROSSOVER AND BALANCE TUBE (601P, 602P & 700P)
- 9. CENTER OF HAT SHELF AILERON BELLCRANK
- OIL COOLER
- 11. SPINNER PROP ATTACH BOLTS PROP DOME BULKHEAD
- 12. OIL DIPSTICK
- 13. UPPER ENGINE COWLING
- 14. UNDER ENGINE COWLING INDUCTION AIR FILTER IN AIR BOX; AIR PUMP INLET FILTER

- 15. FLAPPER VALVE
- 16. WING FUEL TANK VENT VALVE AILERON HINGE STROBE LIGHT POWER SUPPLY (A/F 0157-0305) FLUX DETECTOR (LEFT WINGTIP ONLY, IF INSTALLED)
- 17. FUEL TRANSMITTER WIRING/PLUG TACH. GENERATOR/PULSE GENERATOR.
- 18. ELECTRICAL CONNECTORS WING TO FUSELAGE CONNECTIONS FUEL, HYDRAULIC & PNEUMATIC HOSES
- 19. FUSELAGE TANK, TRANSMITTER AND LOW FUEL WARNING PROBE

20.	HYDRAULIC LINES	LOCATED
		UNDER
21.	AUTOPILOT SERVO	FLOOR
	(IF INSTALLED)	OF BAG-
22.	AUTOPILOT CONTROLS,	BAGE
		COM-
	(IF INSTALLED)	PART-
23.	HYDRAULIC LINES	MENT

- 24. TACH. GENERATOR/PULSE GENERATOR
- 25. FUEL TRANSMITTER WIRING/PLUG
- 26. HORIZONTAL STABILIZER TO FUSELAGE CONNECTIONS. ELEVATOR & TRIM CONNECTIONS
- 27. ELEVATOR TRIM MOTOR
- BATTERIES (EXCEPT 700P)

LOCATED

UNDER FLOOR

PANELS UNDER

CARPET

## **ROCKWELL SHRIKE COMMANDER 500**





Critical Response Information		
Number of Engines:	2	
Passenger & Crew Capacity:	6 max. (2 crew min., 4 passengers max.)	
Fuel Capacity:	163 gallons	

Sources:

Photos obtained Smithsonian National Air and Space Museum and Mutley's hangar.

## ANTONOV AN-10, AN-12



Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	100 max. (5 crew, 95 passenger max.)
Fuel Capacity:	265 gallons

For additional emergency response information on this aircraft please contact:

Antonov 1 Tupolev Street Kiev, Ukraine 03062 Tel: (+380 44) 454-31-49 Fax: (+380 44) 400-81-44 Email: info@antonov.com

## **BOEING B-17 FLYING FORTRESS**





4

Critical Response Information		
Number of Engines:	4	
Passenger & Crew Capacity:	7 max. (2 crew min., 5 passengers max.)	
Fuel Capacity:	1,700 gallons	

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	133 max. (5 crew min., 128 passengers max.)
Fuel Capacity:	6,750 gallons
Battery Location:	In a battery compartment in the lower left forward fuselage
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Lockheed Martin and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

#### FLAMMABLE MATERIAL LOCATIONS



#### **GENERAL INFORMATION**



ENGINES

4

#### **ENGINE SHUTDOWN**



If seat track is not damaged during crash landing, use adjustable seat control to move seat in aft position when removing crewmember. Passenger seats do not have shoulder harness.

LOW SPEED GROUND

#### **EMERGENCY EXITS AND EQUIPMENT**





Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	32 max. (11 crew min., 21 passengers max.)
Fuel Capacity:	9,200 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Lockheed Martin and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

#### Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

#### **AIRCRAFT HAZARDS**



# AIRCRAFT ENTRY, FLAMMABLE MATERIAL AND BATTERY LOCATIONS



#### **ENGINE AND APU SHUTDOWN**

#### ENGINE/APU SHUTDOWN

- 1. ENGINE/APU SHUTDOWN
- a. Set parking brake by depressing toe pedals and pulling parking brake handle.
- b. Pull all four emergency shutdown handles.
- c. Place APU switch in OFF position. APUs may be secured externally by a safety switch located on left side of fuselage forward of the APU.

#### NOTE:

- The APU Normal/Safe switch also disables the automatic fire extinguisher circuit.
- To deactivate battery, located in nose wheelwell, remove quick disconnect fitting. (See battery location on page P-3.5.)



## TURBOJET AND TURBOFAN AIRCRAFT

## **BOEING AV-8B HARRIER II**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	1,141 gallons
Battery Location:	Underside of fuselage, aft of speed brake in door 60
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders
### FLAMMABLE MATERIAL LOCATIONS



### **AIRCRAFT HAZARDS**



### AIRCRAFT ENTRY AND CANOPY SAFETY



b. To fracture canopy, hold handle, run forward to extend cable approximately 40 inches, face away and jerk handle.

Some aircraft are not equipped with an external fracturing handle.

3. CUT-IN/FORCED ENTRY

a. Canopy is made of acrylic plastic and may be cut with a power rescue saw or crash ax. Cut along canopy frame.



### **ENGINE AND APU SHUTDOWN**

#### ENGINE AND APU SHUTDOWN AND BATTERY LOCATION

1. NORMAL AND EMERGENCY ENGINE AND APU SHUTDOWN

#### NOTE:

- Engine may be shut down using the throttle or fuel shutoff controls. GTS/APU may be shut down using APU generator switch or battery switch and APU generator switch.
- a. Raise throttle finger lifts and move engine throttle lever grip assembly aft to OFF position. When moving throttle aft, throttle finger lifts must be used in order to shut down aircraft.
- b. Press handle lock release, located on end of manual fuel shutoff lever and move lever to OFF position. Use of fuel shutoff lever will not immediately shut down aircraft.
- Place APU generator switch, located on electrical control panel, in the OFF position
- d. Place battery switch, located on electrical control panel in OFF (center) position. Next, set and hold APU generator switch in reset position until GTS/APU shuts down.
- 2. BATTERY LOCATION
- a. The battery is located on the underside of the fuselage, aft of speed brake in door 60. Disconnect battery if time permits or battery switch in cockpit is damaged or inaccessible. (See page AV-8B.4.)





### **AIRCREW EXTRACTION**

#### AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

NOTE:

- The pilot is attached to the seat by the use of an integrated harness. Additionally, the oxygen/ communication lead is connected to the seat pan. The anti-G suit hose is connected to an outlet on the left handl console.
- To remove the oxygen mask: Pull down on release tabs on either side of mask.
- b. To remove the oxygen/communication lead: Disconnect the lead from from the connection by pulling up on round collar while pulling apart the connection.
- c. Disconnect the G-suit hose: Pull the anti-G suit hose from left hand console.

#### NOTE:

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ENGINI

- Leg garters are secured around legs by a quick disconnect. Leg restraint lines attach to garters using the same type of quick disconnect.
- d. To disconnect leg garters: Apply pressure to both sides of the quick disconnect attaching leg restraint lines to garter (one each leg).
- e. To disconnect remaining restraints: Release lap belt and two shoulder harness koch fitting.
- 2. EMERGENCY RELEASE
- a. Squeeze and pull emergency restraint release handle, located on forward right hand side of seat, up and fully aft to locked position. This safeties the ejection initiation system and releases the inertia reel shoulder straps and leg restraints. However, the parachute and survival kit remain attached to the pilot. Repeating step 1e will release parachute and survival kit from crewmember.





<b>Critical Response Information</b>	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	1,083 gallons
Emergency Information:	See following pages

Sources:

All photos and diagrams provided by Dassault Aviation and from U.S. Air Force Fact Sheets and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

### **AIRCRAFT HAZARDS**



### EMERGENCY EXIT AND GROUND EGRESS



### **ENGINE SHUTDOWN**

### ENGINE, ARMAMENT, AND ELECTRIC SHUTDOWN

- 1. ENGINE SHUTDOWN
- a. Retard throttles, located on left console, AFT while pressing throttle lever.
- b. Place fuel cutoff switches, located on aft left console, to OFF, to stop fuel flow.
- c. Lift emergency shutoff valve switch guard, located just forward of throttles, and tip up switch AFT.
- Lift afterburner emergency shutoff valve switch guard, located just forward of throttles, and tip up switch AFT.
- 2. ARMAMENT SHUTDOWN
- Pull armament neutralization switch guard, located on upper left console, down and INWARD toward seat.
- 3. ELECTRIC SHUTDOWN
- Pull electric power shutdown switches (3), located on upper right console, DOWN, to shutoff battery, ALT 1 and ALT 2.



### SEAT SAFETYING AND AIRCREW EXTRACTION



### SEAT SAFETYING AND AIRCREW EXTRACTION

#### SEAT SAFETYING AND AIRCREW EXTRACTION-Continue

1. SEAT SAFETYING - F-1 CT OR CR FR VARIATION

#### NOTE:

- The Mirage F1 CR or CT uses the Martin Baker MK 10 Ejection seat. Safety pin storage pouch is located on the upper left side of the seat.
- a. Install lower ejection handle safety pin, located at bottom forward center of seat.
- b. Install canopy embrittlement initiator safety pin, located top left side of seat.
- 2. AIRCREW EXTRACTION
- Press ventral buckle pushbuttons and turn center portion one quarter turn clockwise to release straps.
- b. Press button to disconnect junction unit to lift and release oxygen, radio, and leggings connections.
- c. Set both oxygen shutoff pallets to OFF.
- d. To release the survival kit, unclip the sticker clips or cut the lowering line.



**MIRAGE F1 CT** 

LINE





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	2,109 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Lockheed Martin and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

### AIRCRAFT HAZARDS



### AIRCRAFT HAZARDS



### FLAMMABLE MATERIAL LOCATIONS







### **EJECTION SEAT SAFETY**



### **AIRCREW EXTRACTION**

#### AIRCREW EXTRACTION

3. AIRCREW EXTRACTION

NOTE:

- Use of Emergency Manual Chute Handle DOES NOT release aircrew restraints.
- a. Release lap belt by squeezing latch and release bar simultaneously.
- Release left and right survival kit buckles by depressing PUSH TO RELEASE button on each buckle
- c. Release left and right shoulder harness fittings by squeezing latch and release bar simultaneously for each fitting. (See pg F-16.23 for additional information.)

NOTE

- If the aircraft has collapsed landing gear or is in a gear up configuration and if time permits after rescue is complete, disconnect the electrical harness from the Flight Data Recorder, located on the left upper portion of the seat (front seat only on F-16B aircraft.) Grasp the lanyards attached to the connector and pull sharply downward. This will preserve recorded data of the mishap.
- The "G" suit hose located to the left side of the seat is directional in its separation at the disconnect. Pull straight down with a 12 to 70 pound pull force. If an offset direction is taken to disconnect hose from aircrew member, disconnect will not occur.



#### AIRCREW EXTRACTION-Continued 3. AIRCREW EXTRACTION - Continued

NOTE

- The shoulder harness fittings encountered may be different than the fitting mentioned on page F-16.22. Fittings may be a First or Second generation Koch or a Frost.
- Release left and right Frost shoulder harness fittings by squeezing latch and release bar simultaneously for each fitting as depicted on page F-16.22.
- Release left and right First Generation Koch shoulder harness fittings by rotating and holding safety cover downward, then pushing thumb catch upward to release straps.
- Release left and right Second Generation Koch shoulder harness fittings by lifting the safety cover, access the release bar, then rotate release bar downward to release straps.
- The chest and leg strap ejector snap is released by pushing the small catch of the ejector snap hook q. inward to release straps.





SHOULDER HARNESS FITTINGS (2) (2nd GENERATION KOCH PARACHUTE CANOPY RELEASE BODY, PN 990010-1)



3e

CHEST AND LEG STRAP EJECTOR SNAP WITH CATCH (PN 68D37721)

ENGIN

### LOCKHEED MARTIN F-35/F-35B LIGHTNING II



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	2,076 gallons

Sources:

Photos obtained from Lockheed Martin. For additional emergency response information on this aircraft please contact:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

### AERO VODOCHODY L-159 ALCA (L-159A)



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	528 gallons

Sources:

All photos and information are provided by Aero Vodochody. For additional emergency response information on this aircraft please contact:

AERO Vodochody AEROSPACE a.s. U Letiště 374, Odolena Voda Tel: 420 255 762 542 E-mail: info@aero.cz





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Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	290 gallons
Emergency Information:	See following pages

Sources:

All diagrams obtained from Draken International and Aero Technical Flight Manual L39C Aircraft.

Aircraft Information:

**Draken Headquarters** 3330 Flightline Drive Lakeland, FL 33811 Tel: (760) 420-9230 Fax: 305-503-6700

### FLAMMABLE MATERIAL LOCATIONS

The fuel system of the airplane is used for fuel allocation and providing smooth engine operation throughout the operating range of altitudes and speed.

The fuel system consists of the main fuel system and tip tanks' system.

The main fuel system incorporates five fuselage tanks with a total capacity of 1100 liters (825 kg). To increase the range of flight two tip tanks are present with 100 liters capacity each. Total fuel load is 975 kg.



- 1 Right tip tank (100 I).
- 2 Fuselage tank №1 (260I).
- 3 Fuselage tank №2 (365I).
- 4 Fuselage tank №3 (135I).

- 5 Fuselage tank №4 (135I).
- 6 Fuselage tank №5 (205I). Feed tank.
- 7 Left tip tank (100 l).

### **EJECTION SEAT**



- 1. Seat Bucket Travel Limit Mechanism
- 2. Shoulder Harness Lock
- 3. Shoulder Belt
- 4. Parachute Manual Release Handle
- 5. Mixture Regulator
- 6. Shoulder Harness Arrestment Lever
- 7. Seat Bucket
- 8. Pilot Weight Setting Mechanism

- 9. Leg Fastening Strap
- 10. Survival Kit
- 11. Ejection Handles
- 12. Harness Fastening Clisp 13. Unlocking Hand-Rails
- 14. Central Lock
- 15. Pilote Parachute
- 16. Head Rest

### **EJECTION SEAT**



### EMERGENCY PROCEDURES

#### GROUND EMERGENCIES

#### ENGINE FIRE DURING START

### CAUTION

The latch preventing the movement of the throttle from IDLE to STOP is, in the forward cockpit a rotating lever and in the aft cockpit a sprig-loaded push pin.

Indications:

Fire warning light in warning panel. Any other signs of fire (smoke, ground crew report etc.)

#### Actions:

#### Immediately perform the following:

- 1. THROTTLE - To STOP
- OFF ENGINE SWITCH 2.
- 3 FUEL SHUT-OFF lever - CLOSE

#### If fire persists:

- 4. FIRE EXTINGUISHER button – DEPRESS
- EMERGENCY **EVACUATION** – PERFORM

#### EMERGENCY EVACUATION

In a situation where a rapid abandonment of the aircraft is required, proceed as follows:

- 1. ECS/PRESS LEVER - AFT position
- 2. CANOPY LOCK - AFT position



On the ground, when the aircraft is stationary, canopies must be jettisoned as they may fall back and injure the crew.

- 3. PARACHUTE HARNESS UNLOCK
- 4. P.E.C. guick

	DISCONNECT	- PULL
5.	"BATTERY"	– OFF
6.	AIRCRAFT	- ABANDON

#### EMERGENCY BRAKING

Indication:

Actions:

1. EMERGENCY - PULL GRADUALLY BRAKE LEVER

Loss of normal braking capability

#### NOTE

- Use the emergency brake with care as the anti-skid system is deactivated and a careless use may result in a blown tire.
- Do not use the emergency brakes from both cockpits simultaneously.

#### HOT BRAKES

Indications:

Perform the following after any event which requires excessive braking (e.g., aborted takeoff, landing at high GW's or speed, etc.) or when hot brakes are suspected (smoking brakes, ground crew confirmation, etc.)

#### Actions:

1. Request firefighting equipment and proceed directly to the designated hot brake area or nearest area clear of other aircraft and personnel.



Any leaking hydraulic fluid may be ignited by hot wheel and brake surfaces.

#### When in the hot brake area:

- 2. Align aircraft with nose into wind if possible.
- 3. Use only chocks, if available, or minimum possible toe brake pressure to hold aircraft stationary until engine is shut down.



Do not use the parking brake.

4. Delay engine shutdown until arrival of fire fighting equipment.

### EMERGENCY PROCEDURES



Hot wheels and brakes may ignite fuel drained overboard during engine shutdown.

#### If a brake fire occurs:

5. Go to EMERGENCY EVACUATION, this section.

#### TAKEOFF EMERGENCIES

#### ABORTED TAKE-OFF

#### NOTE

Aborting take-off at high speeds should not be taken lightly.

Once a decision to abort has been taken, accomplish the following immediately.

- NORMAL BRAKING

- Declare ABORT

- 1. THROTTLE STOP
- BRAKE
- 3. RADIO
- "BARRIER" As required
- Asses the situation (consult with the control tower) and decide on the course of action. (Emergency evacuation, clearing the runway, taxiing back etc.).

power

#### ENGINE FAILURE DURING TAKE-OFF

Indication:	Loss of
-------------	---------

#### Actions:

#### If possible:

- 1. ABORT TAKE-OFF Follow abort take-off procedure
- If airborne:

1. THROTTLE

 MAX. Consider controlling engine by means of the secondary circuit



With the emergency fuel controller, a rapid move of the throttle may result in a flame out or an excessive EGT. Move the throttle with care while closely monitoring RPM and EGT.

- SEC. REG. switch ON
- EXTERNAL STORES JETTISON

If thrust is insufficient to maintain a safe climb:

Forced landing – Perform

If a safe forced landing cannot be performed

EJECT!

#### ENGINE FIRE DURING TAKE-OFF

Indications: "FIRE" light or an outside report from the control tower or from another aircraft.

#### Actions:

#### If possible:

1.	ABORT TAKE-OFF	<ul> <li>Follow abort take-off procedure</li> </ul>
2.	FUEL SHUT OFF	- CLOSE
3.	FIRE EXTINGUISHER	
	button	– DEPRESS
4.	"BATTERY"	– Off
5.	EMERGENCY	
	EVACUATION	– PERFORM

#### If airborne:

- 1. THROTTLE
   MAX

   2. LANDING GEAR
   RETRACT
- EXTERNAL STORES JETTISON

At flame-out landing conditions, if fire persists:

- 4. THROTTLE STOP
- 5. FUEL SHUT-OFF lever CLOSE
- 6. FIRE

EXTINGUISHER button – DEPRESS



Do not attempt to restart engine after fire has been extinguished.

### EMERGENCY PROCEDURES

#### If fire is confirmed:

- Off 1. Cockpit press lever 2. OXYGEN - 100%
- Close
- Air shower

#### If forced landing conditions:

- 1. THROTTLE - STOP
- FUEL SHUT-OFF lever CLOSE
- 3. FIRE
  - EXTINGUISHER button DEPRESS



Do not attempt to re-start the engine after the fire has been extinguished.

If fire indication goes out:

- Fire warning circuit - Check
- 5. FORCED LANDING - PERFORM



- Do not use arresting barrier.
- Do not land with fire aboard.

If fire persists or a safe forced landing cannot be accomplished:

6. EJECT!

#### ENGINE FLAME-OUT

Indications:

Loss of power, EGT drop, RPM drop.

HOT START

#### CAUTION

Perform the engine hot start only if crucial lack of time does not make possible to perform any recommended engine start procedure. The hot start, if not successful, can damage engine or aggravate the situation.

Recommended in-flight engine start procedure is APU assisted or wind-milling, refer to IN-FLIGHT START.

Actions:

- 1. THROTTLE 2. If RPM<40%
- TURBO START
- 3. ENGINE START 4. THROTTLE
- SPEED 5.
- HEADING 6.
- 7. DRAG

If altitude is below 600 m AGL and a safe forced landing cannot be assured:

8. EJECT!



It takes 50 second up to IDLE (56 ± 1%). It is prohibited to move the throttle before the RPM is set to IDLE.

If the loss of power was accompanied by abnormal indications such as explosions, severe RPM fluctuations or RPM stuck at 0, consider carefully whether to attempt a restart as it might aggravate the situation and result in engine fire.

If no mechanical failure is evident and the engine is wind milling:

9. Air-start - Perform

If mechanical damage is suspected:

10. THROTTLE - STOP 11. Forced landing - Perform

If a safe forced landing cannot be assured: 12. EJECT!

IN-FLIGHT START

#### NOTE

Attempt a restart only if no damage is evident.

#### IN-FLIGHT START ENVELOPE:

 Below altitude 6.000 m Flight level

AIR SPEED:

450 km/h IAS - for Wind-milling start (above 15% RPM)

– STOP

– DEPRESS

- DEPRESS

- 260 km/h IAS

– To NEAREST

AIRFIELD

– REDUCE

- IDLE

### **MIKOYAN MIG-21**





Critical Response Information	
Number of Engines	1
Passenger & Crew Capacity	1 max.
Fuel Capacity	752 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Museum of Flight and History.net

**1 ENGINE** 

### **MIKOYAN MIG-21**

### AIRCRAFT DIAGRAM





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	7 max.
Fuel Capacity:	290 gallons
Fuel Tank Locations:	Each wing contains a fuel tank
Whole-Airframe Ballistic Parachute:	Aircraft nose; See following pages
Emergency Information:	See following pages

#### Sources:

All photos and diagrams obtained from AOPA, Aviation Weekly, and Cirrus Aircraft.

Aircraft Information:

+1-833-735-0651 (United States) info@cirrusaircraft.com

### **INTERIOR – MAXIMUM SEATING CONFIGURATION**







### LOCATION OF BALLISTIC PARACHUTE SYSTEM

#### 1 Avionics

Cirrus Perspective Touch flight deck based on Garmin G3000 integrated avionics, with two 14-in. flight displays and three touch screens.

three rows. Three cabin seats can be removed: two aft child seats can be installed.

#### 2 Engin

Single top-mounted 1.800-lb.-thrust Williams FJ33-5A turbofan. Fullauthority digital engine control provides single-lever thrust control.

3 | Parachute Cirrus Airframe Parachute System rocket deploys from compartment in the nose to recover aircraft if engine fails. Seats certified to 26g. 5 | Systems Electric-powered hydraulic pump raises and lowers gar. Bleed-air inlet anti-icing; pneumatic-boot wing

and tail deicing: TKS fluid windshield deicing.

### **MCDONNELL DOUGLAS T-45 GOSHAWK**



Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	432 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

### **MCDONNELL DOUGLAS T-45 GOSHAWK**

### FLAMMABLE MATERIAL AND BATTERY LOCATIONS


# **MCDONNELL DOUGLAS T-45 GOSHAWK**

### AIRCRAFT ENTRY



# **MCDONNELL DOUGLAS T-45 GOSHAWK**

### **ENGINE SHUTDOWN**



# **MCDONNELL DOUGLAS T-45 GOSHAWK**

### **AIRCREW EXTRACTION**





### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity (100 series):	126 max. (4 crew min., 102 passengers max.)
Passenger & Crew Capacity (300 series):	156 max. (4 crew min., 152 passengers max.)
Fuel Capacity:	6,000 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

Airbus 2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

### **EMERGENCY INFORMATION**



### **EMERGENCY INFORMATION**



### **EMERGENCY EXITS**





Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	16,380 gallons
Emergency information:	See following pages

Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

Airbus 2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

# FLAMMABLE MATERIALS AND HAZARDOUS COMPONENTS LOCATIONS



### **COMPOSITE MATERIAL LOCATIONS**



### **CONTROL HANDLES / DOOR CONTROLS AND BREAK-IN POINT**



### **BATTERY LOCATIONS AND CARGO DOOR CONTROL**



ENGINES

2

### APU EXTERNAL CONTROL AND APU ACCESS DOOR



Engine and APU Controls and FIRE Panels - Location







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	265 max. (2 crew min., 263 passengers max.)
Fuel Capacity:	16,140 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

#### Airbus 2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

# FLAMMABLE MATERIALS AND HAZARDOUS COMPONENTS LOCATIONS



### **COMPOSITE MATERIAL LOCATIONS**



### **CONTROL HANDLES / DOOR CONTROLS AND BREAK-IN POINTS**



N

### **BATTERY LOCATIONS AND CARGO DOOR CONTROL**



ENGINES

2

### APU EXTERNAL CONTROL AND APU ACCESS DOOR



Engine and APU Controls and FIRE Panels - Location







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	179 max. (2 crew min., 177 passengers max.)
Fuel Capacity:	10,790 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

### Airbus

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# FLAMMABLE MATERIALS AND HAZARDOUS COMPONENTS LOCATIONS



### **COMPOSITE MATERIAL LOCATIONS**



### EXTERNAL DOOR CONTROL HANDLES AND BATTERY LOCATIONS





### DOOR CONTROLS AND BREAK-IN POINT





### APU EXTERNAL CONTROL AND APU ACCESS DOOR







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	222 max. (2 crew min., 220 passengers max.)
Fuel Capacity:	7,861 gallons
Emergency Information:	See following pages

#### Sources:

**2 ENGINES** 

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

### Aircraft Information:

#### Airbus

2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

# FLAMMABLE MATERIALS AND HAZARDOUS COMPONENTS LOCATIONS



### **COMPOSITE MATERIAL LOCATIONS**



### **EXTERNAL CONTROL HANDLES AND CARGO DOOR CONTROLS**



### **BREAK-IN POINT AND BATTERY LOCATIONS**





### APU EXTERNAL CONTROL AND APU ACCESS DOOR











Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	379 max. (2 crew min., 377 passengers max.)
Fuel Capacity:	35,136 gallons
Emergency Information:	See following pages

### Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

### Airbus

2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

#### Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

# FLAMMABLE MATERIALS AND HAZARDOUS COMPONENTS LOCATIONS



# **COMPOSITE MATERIAL LOCATIONS**



### **CONTROL HANDLES AND CARGO DOOR CONTROLS**



### **BREAK-IN POINT AND BATTERY LOCATIONS**




## AIRBUS A-330

## APU EXTERNAL CONTROL AND APU ACCESS DOOR







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	440 passengers max.
Fuel Capacity:	44,476 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

#### Airbus

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- 5 RELEASE THE MANUAL OPERATING DEVICE. 6 STOP THE OPERATION OF THE HYDRAULIC AUXILIARY PUMP.















Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	440 passengers max.
Fuel Capacity:	37,194 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

Airbus 2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593









## **EMERGENCY INFORMATION**



NOTE: THE SAFETY DEVICES ARE STORED IN THE AIRCRAFT COCKPIT.

TYPICAL INSTALLATION











## **ANTONOV AN-72 / 74**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	41 max. (3 crew min., 38 passengers max.)
Fuel Capacity:	4,200 gallons

For additional emergency response information on this aircraft please contact:

Antonov 1 Tupolev Street Kiev, Ukraine 03062 Tel: (+380 44) 454-31-49 Fax: +380 44) 400-81-44 Email: info@antonov.com





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	134 max. (2 crew min., 132 passengers max.)
Fuel Capacity:	3,673 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders





### **EMERGENCY RESCUE ACCESS**



# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS





# EXTERNAL APU FIRE CONTROLS & COMPOSITE MATERIALS LOCATIONS









<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	5,311 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html 2 ENGINES

#### Apply large amounts of water initially with turrets. Transition to handline application to continue and maintain a cooling effect. WARNING: Approach landing gear trucks from forward or aft when fighting a wheel fire, as Wheels are equipped with fusible plugs designed to melt and deflate the tire when the Normal cooling: Move aircraft to a suitable location and allow brakes to cool on their own. PORTABLE OXYGEN BOTTLES LOCATION VARIES THROUGHOUT PASSENGER CABIN Fans: Placing fans may place firefighters very close to the hazard zone. VENT SURGE TANK APU EMERGENCY CONTROL PANEL LOCATED IN THE RIGHT WHEEL WELL AREA AUXILIARY POWER UNIT OIL TANK HYDRAULIC BRAKE ACCUMULATORS IN WHEEL WELL Water mist: Can be deployed from turret or handline. UEL TANK No. 1 wheels and tires may explode. APU FUEL LINE temperature is excessive. ð HOT BRAKES 5 WHEEL FIRE 1499 GAL - 5674 SYSTEM A, B AND STANDBY HYDRAULIC RESERVOIRS IN WHEEL WELL equipment across it. Signs could include but are not limited to deformity of structure, visual signs of flame impingement or uneven surfaces. Surface integrity can be checked with a pike pole, axe or any instrument used to sound surfaces for integrity. Rescue crews wearing full PPE to include SCBA's must use caution when moving across sections of aircraft that have been exposed to fatigue or fire as the result of an accident. Crews need to verify the integrity of the surface area before moving their weight and RIGHT SIDE EACH ENGINE - CFM-56 (LEFT SIDE ALL OTHERS) ENGINE OIL TANK **/ENT SURGE TANK** 2313 GAL -8755 L OPTIONAL AUXILIARY FUEL TANK IN LWR AFT CARGO COMPARTMENT CENTER FUEL TANK 499 GAL 5674 L ٩Ľ FUEL TANK No. 2 CREW OXYGEN BOTTLE FWD CARGO AREA PORTABLE OXYGEN ---BOTTLE BEHIND FIRST OFFICER PASSENGER OXYGEN (OPTIONAL) CAUTION:

## FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS

**BOEING 737-300/500** 

#### **EMERGENCY RESCUE ACCESS**



# **BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS**



## COMPOSITE MATERIALS LOCATIONS



## BOEING 737-700/800/900







Number of Engines:	2
Passenger & Crew Capacity (700 series):	148 max.
Passenger & Crew Capacity (800 series):	184 max.
Passenger & Crew Capacity (900 series):	189 max.
Fuel Capacity:	6,875 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



2 ENGINES

## BOEING 737-700/800/900

## **BATTERY LOCATION**

#### 737-600/-700/-800/-900/ER/BBJ/BBJ-2

#### **BATTERY LOCATIONS**



## BOEING 737-700/800/900

### FLAMMABLE MATERIAL LOCATIONS



CAUTION: Rescue crews wearing full PPE to include SCBA's must use caution when moving across sections of aircraft that have been exposed to fatigue or fire as the result of an accident. Crews need to verify the integrity of the surface area before moving their weight and equipment across it. Signs could include but are not limited to deformity of structure, visual signs of flame impingement or uneven surfaces. Surface integrity can be checked with a pike pole, axe or any instrument used to sound surfaces for integrity.

WHEEL FIRE

Apply large amounts of water initially with turrets. Transition to handline application to continue and maintain a cooling effect. Wheels are equipped with fusible plugs designed to melt and deflate the tire when the

temperature is excessive.

WARNING: Approach landing gear trucks from forward or aft at a 45 degree angle when approaching hot brakes or fighting a wheel fire, as rims and tires may pose a fragmentation hazard.



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	239 max. (2 crew min., 237 passengers max.)
Fuel Capacity:	11,240 gallons
Emergency Information:	See following pages

#### Sources:

**2 ENGINES** 

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## FLAMMABLE MATERIALS LOCATIONS



### **EMERGENCY RESCUE ACCESS**





Basic Aircraft Guide for Emergency Responders

# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS



## **BOEING 757-200**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	239 max.
Fuel Capacity:	11,240 gallons
Emergency Exits:	10 doors
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html
#### N ENGINES

AIRPLANE RESCUE AND FIRE FIGHTING INFORMATION



equipment across it. Signs could include but are not limited to deformity of structure, visual signs of flame impingement or uneven surfaces. Surface integrity can be checked with a pike CAUTION: Rescue crews wearing full PPE to include SCBA's must use caution when moving across sections of aircraft that have been exposed to fatigue or fire as the result of an accident. Crews need to verify the integrity of the surface area before moving their weight and





#### **BOEING 757-200**

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FLAMMABLE MATERIAL LOCATIONS

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December 12, 2019

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# 757-200 & 200 COMBI SERIES

1 ENTRY/SERVICE DOORS EXTERNAL HANDLE

2



## 3 TYPE 1 EMERGENCY EXIT DOOR



 PUSH ON "PUSH" PANEL TO GAIN ACCESS TO HANDLE.
PULL HANDLE FORWARD AND OUTWARD.
DOOR OPENS OUTWARD AND DOWN.
MARNING: STAND TO THE SIDE OF DOOR WHEN PULLING HANDLE FSCAPE SIDE DOES NOT DISARM AND WILL

WARNING: STAND TO THE SIDE OF DOOR WHEN PULLING HANDLE. ESCAPE SLIDE DOES NOT DISARM AND WILL DEPLOY IMMEDIATELY WHEN A TYPE 1 DOOR IS OPENED FROM THE OUTSIDE.

## EMERGENCY RESCUE ACCESS-1 OVERWING ESCAPE HATCHES

**BOEING 757-200** 



TO OPEN HATCH: TO OPEN HATCH: 1. LIFT LOWER PORTION OF HANDLE AWAY FROM THE SIDE OF THE AIRPLANE.

NOTE: ESCAPE SLIDE DISARMS AUTOMATICALLY WHEN DOOR OR HATCH IS OPENED FROM THE OUTSIDE, EXCEPT FOR TYPE 1 EMERGENCY EXIT DOOR.

**EMERGENCY RESCUE ACCESS** 

FLIGHT DECK WINDOWS CANNOT BE OPENED FROM THE OUTSIDE.

> LIFT LOWER PORTION OF HANDLE AWAY FROM THE SIDE OF THE AIRPLANE.
> PUSH INWARD AND UP ON THE HANDLE.
> PUSH HATCH INWARD.

### 4 CUT-IN AREAS

NOTE: CUT-IN AREAS REQUIRE METAL CUTTING PORTABLE POWER EQUIPMENT, BECAUSE OF TYPE OF STRUCTURE AND POSSIBLE NUURY TO PERSONNEL WITHIN, IT IS RECOMMENDED THAT MAJOR EFFORT TO GAIN ACCESS BE DIRECTED TO HATCHES AND DOORS, URGENCY OF SITUATION WILL DICTATE THE NECESSITY FOR A CUT-IN.

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### **2 ENGINES**

#### **BOEING 757-200**





**BATTERY LOCATIONS** 

2021

#### N ENGINES

#### **BOEING 757-200**

#### FLIGHT DECK CONTROL SWITCH LOCATIONS



757.0.5

AIRPLANE RESCUE AND FIRE FIGHTING INFORMATION





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	350 max. (2 crew min., 348 passengers max.)
Fuel Capacity:	24,100 gallons
Emergency Information	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



FLAMMABLE MATERIALS LOCATIONS

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

#### N ENGINES





#### BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS





#### **COMPOSITE MATERIALS LOCATIONS**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max.
Fuel Capacity:	23,980 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### **EMERGENCY EXITS**



For Reference Only, some configurations may vary.

#### SEATING DIAGRAM

MAXIMUM SEATING CAPACITY FOR FLIGHT: SIX (6) PEOPLE



#### **BATTERY LOCATION**



#### FLAMMABLE MATERIAL LOCATIONS



#### FLIGHT DECK CONTROL SWITCH LOCATIONS



FUEL CONTROL SWITCHES - CUTOFF

For Reference Only, some configurations may vary.



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	35,660 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



#### FLAMMABLE MATERIALS LOCATIONS

**BOEING 777** 







#### **EMERGENCY RESCUE ACCESS**





**2 ENGINES** 

#### BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS



#### **COMPOSITE MATERIALS LOCATIONS**



#### BOEING 777-300ER



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	400 passengers max.
Fuel Capacity:	37,590 gallons
Emergency Exits:	10 doors
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

### 2 ENGINES

#### BOEING 777-300ER

#### FLAMMABLE MATERIAL LOCATIONS



Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders 2021





8

1. DUEN INDOK: 1. PUEN INDOK: 2. PULL HANDLE FROM RECESS. 3. ROTATE HANDLE 180 DEGREES IN THE DIRECTION OF THE "OPEN" ARROW. 4. PULL DOOR OUTWARD.

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#### BOEING 777-300ER



### 2 ENGINES

#### BOEING 777-300ER



### **2 ENGINES**

#### **BOEING 777-300ER BATTERY LOCATIONS**



#### **BOEING 777-300F**





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	2 crew min.
Fuel Capacity:	37,590 gallons
Emergency Exits:	10 doors
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

### **2 ENGINES**

#### Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders



#### **BOEING 777-300F**

FLAMMABLE MATERIAL LOCATIONS

2021







NOTE: CUT-IN AREAS REQUIRE METAL CUTTING PORTABLE POWER EQUIPMENT. BECAUSE OF TYPE OF STRUCTURE AND POSSIBLE INJURY TO PERSONNEL WITHIN, TIS RECOMMENDED THAT MAJOR EFFORT TO GAIN ACCESS BE DIRECTED TO HATCHES AND DOORS. URGENCY OF SITUATION WILL DICTATE THE NECESSITY FOR A CUT-IN.



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**EMERGENCY RESCUE ACCESS** 

PUSH IN RED FLAPS.
PULL HANDLE FROM RECESS.
SOTATE HANDLE FROM RECESS.
PULL DOOR OUTWARD.
PULL DOOR OUTWARD.

#### **BOEING 777-300F**

#### EMERGENCY RESCUE ACCESS



**2 ENGINES** 



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MAIN BATTERY

777.1.4

**BATTERY LOCATION** 





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	375 max. (2 crew min., 373 passengers max.)
Fuel Capacity:	33,528 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



#### FLAMMABLE MATERIALS LOCATIONS

**BOEING 787**
### **EMERGENCY RESCUE ACCESS**



### **EMERGENCY RESCUE ACCESS**





### **EMERGENCY RESCUE ACCESS - BATTERY LOCATIONS**





# FLIGHT DECK CONTROL SWITCH LOCATIONS & COMPOSITE MATERIALS LOCATIONS



### BEECH 750/800/850XP/900XP SERIES





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (2 crew min., 8 passengers max.)
Fuel Capacity:	1,499 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Globair.com and Hawker Beechcraft Corporation.

#### Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

## BEECH 750/800/850XP/900XP SERIES

### **EMERGENCY INFORMATION**



## BEECH 750/800/850XP/900XP SERIES

### **EMERGENCY INFORMATION**





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### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity:	11 max. (2 crew min., 9 passengers max.)
Fuel Capacity:	1,372 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Hawker-Beechcraft in the Crash, Fire, and Rescue Information June 2007.

Aircraft Information:

Hawker Beechcraft Corporation Technical Manual Distribution Center Tel: 1-800-796-2665 Email: tmdc@hawkerbeechcraft.com

### **EMERGENCY FLIGHT DECK PROCEDURES**





To Remove Electrical Power •L and R Master Gen switch to EMER. Battery switch to OFF.



#### Engine Fire Emergency Procedures

• Lift cover and push illuminated LH and/or RH illuminated ENG FIRE switch to close fuel valve and arm engine extinguisher.

 Push either illuminated BOT ARMED switch. • Push remaining illuminated BOT ARMED switch (if necessary).

BOT 1 PUSH ARMED	LH ENG FIRE PUSH	RH ENG FIRE PUSH	RF/V RH/V OPEN OPEN LF/V LH/V CLOSE CLOSE	BOT 2 PUSH ARMED
------------------------	------------------------	------------------------	--	------------------------

#### Emergency Access to Fuselage

Cut in the immediate area of a fuselage window approximately 4"

- outward and around the window periphery. Use window above Wing Avoid cutting around aircraft door or emergency door as these
- areas are stiffened.
- Avoid cutting in the roof area as there are electrical and oxygen lines in that location.

#### To Remove Engine Power

• With thrust reversers - Pull up detent release lever and move the thrust reversers over the detents to the CUTOFF position. · Without thrust reversers - Pull lever up and move back over detents to CUTOFF position.



#### Shut off Oxygen System

Push SYS READY knob full forward.



#### **Emergency Locator Transmitter (ELT)**

The ELT can be turned off in two ways. • There is an ELT ON/TEST AUTO switch on the RH side of the Co-Pilot's instrument panel. Set the switch to the ON/TEST

position then back to AUTO. • On the ELT, set the switch from the ON position to the

AUTO position.



### **EMERGENCY DOORS & EXITS**

The 400/400A has one emergency exit located on the RH side of the passenger compartment. One of the cabin windows is located within the door. The passenger door also can be used as an emergency exit.

#### **Passenger Door**

To open the door, push and hold the button near the handle. Pull the handle outward and rotate to the open position. Pull the door open and return the handle to the stow position.



#### **Battery Compartment**

Actuate the buttons to open the door. The battery is located inside the aft fuselage on the LH side. Remove lockwire (cut if necessary) and remove battery connector from the battery. Battery could be 24 volt lead acid or nicad.

#### **Emergency Exit**

From the outside, the door is opened by pushing the lock, pulling the handle and pushing in on the door. Emergency exit door could be in either location shown depending on serial of aircraft.



ENGINES

2

### FLAMMABLE MATERIALS LOCATIONS





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (2 crew min., 6 passengers max.)
Fuel Capacity:	492 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.

**NOTE 2**: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

EMERGENCY RESCUE ACCESS

Sheet 1 of 3

### **EMERGENCY INFORMATION**



FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**



and then put it in the ARM position to stop the ELT transmission.

FUEL AND ELECTRICAL SHUTDOWN

Sheet 3 of 3

NOTE 2: The airplane is equipped with a small emergency battery and inertial switch that provide power to the cabin door and emergency escape hatch flood lights. These lights will remain on until the inertail switch is reset.



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (2 crew min., 6 passengers max.)
Fuel Capacity:	586 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



- NOTE 1: To prevent injury to personnel and occupants, the cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

EMERGENCY RESCUE ACCESS

Sheet 1 of 3

### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY

Fire and smoke: Cabin interior furnishings are made from FAA approved materials that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**

#### CESSNA AIRCRAFT COMPANY MODEL 525A EMERGENCY RESCUE ACCESS





**NOTE:** The airplane is equipped with a small emergency battery and internal switch that provide power to the cabin door and emergency escape hatch flood lights. These lights will remain on until the internal switch is reset.

#### FUEL AND ELECTRICAL SHUTDOWN





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Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (2 crew min., 8 passengers max.)
Fuel Capacity:	703 gallons
Emergency Information:	See following pages

#### Sources:

All photos and information provided by Cessna Aircraft Company. For additional emergency response information on this aircraft please contact:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



- **NOTE 1:** To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry, and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the window and find where occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

EMERGENCY RESCUE ACCESS

Sheet 1 of 3

### **EMERGENCY INFORMATION**

#### CESSNA AIRCRAFT COMPANY MODEL 525B EMERGENCY RESCUE ACCESS

A38875



Fire and smoke: Cabin interior furnishings are made from FAA approved materials that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**

#### CESSNA AIRCRAFT COMPANY MODEL 525B EMERGENCY RESCUE ACCESS



- **NOTE:** If the Emergency Locator Transmitter (ELT) is on, put the switch in the ON position for one second and then put it in the ARM position to stop the ELT transmission.
- **NOTE:** The airplane is equipped with a small emergency battery and inertial switch that provide power to the cabin door and emergency escape hatch flood lights. These lights will remain on until the inertial switch is reset.

#### FUEL AND ELECTRICAL SHUTDOWN

Sheet 3 of 3



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2

Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (2 crew min., 9 passengers max.)
Fuel Capacity:	870 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



- **NOTE 1:** To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin door and emergency escape hatch is not possible. If cutout areas must be used, carefully cut out the window and find where occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

EMERGENCY RESCUE ACCESS

Sheet 1 of 3

### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY

Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. The wheels have fusible plugs that will release the tire pneumatic pressure at a temperature of 310° F (155° C).

Fire and smoke: Cabin interior furnishings are made from FAA approved materials that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**



NOTE: The airplane is equipped with three emergency batteries and three 2G switches that provide power to the cabin door and emergency escape hatch flood lights. These lights will remain on until the 2G switches are reset. Sheet 3 of 3

#### FUEL AND ELECTRICAL SHUTDOWN

2 ENGINES





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max.
Fuel Capacity:	1,700 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**





NOTE 2: When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure that no fuel or flammable materials are near the area that is to be cut.

EMERGENCY RESCUE ACCESS

Sheet 1 of 3

### **EMERGENCY INFORMATION**



CESSNA AIRCRAFT COMPANY

Fire and smoke: Cabin interior furnishings are made from FAA approved materials that can cause toxic furnes, melt, and burn during very high heat conditions. Use protective clothing and breathing equipment until the area is safe.

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**



NOTE: The airplane has four small emergency batteries, each with an inertia switch that supplies power to the interior lights. These lights will come on and stay on until the inertia switches are reset.

NOTE: If the Emergency Locator Transmitter (ELT) is on, put the switch in the ON position for one second and then put it in the ARM position to stop the ELT transmission.

FUEL AND ELECTRICAL SHUTDOWN

Sheet 3 of 3



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (3 crew min., 12 passengers max.)
Fuel Capacity:	2,200 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

Cessna Aircraft Company Tel: (316) 517-6000 Web: www.cessnasupport.com

### **EMERGENCY INFORMATION**



EMERGENCY RESCUE ACCESS

Sheet 1 of 3

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### **EMERGENCY INFORMATION**



Fire and smoke: Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn during very high heat conditions. Use protective clothing and breathing equipment until the area is safe.

FLAMMABLE MATERIAL / PRESSURE VESSEL LOCATIONS

Sheet 2 of 3

### **EMERGENCY INFORMATION**



FUEL AND ELECTRICAL SHUTDOWN

Sheet 3 of 3

### **BOMBARDIER CHALLENGER 300**







#### **Critical Response Information**

Number of Engines: Passenger & Crew Capacity: Fuel Capacity: Emergency Information:

2 22 max. (3 crew, 19 passengers max.) 2,112 gallons See following pages

Sources: All diagrams provided by Bombardier.

Aircraft Information:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com
# **BOMBARDIER CHALLENGER 300**

#### **CRASH CREW CHART**



### **BOMBARDIER CHALLENGER 600**





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Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	22 max. (2 crew min., 20 passengers max.)
Fuel Capacity:	2,454 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Bombardier.

Aircraft Information:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com

#### **BOMBARDIER CHALLENGER 600**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	6,740 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**



#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



breathing equipment until you are sure the area is safe.

#### FUEL AND ELECTRICAL SHUTDOWN





2
9 max. (2 crew min., 7 passengers max.)
574 gallons
See Following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

#### EMERGENCY RESCUE ACCESS



**NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

# FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS PAGE



#### FUEL AND ELECTRICAL SHUTDOWN







<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	13 max. (1-2 crew min., 11 passengers max.)
Fuel Capacity:	752 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**



- **NOTE 1:** To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut.

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. The wheels have fusible plugs that will release the tire pneumatic pressure at a temperature of 310° F (155° C). Wheels contain magnesium components.

**Fire and smoke:** Cabin interior furnishings are made from FAA approved materials that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

#### FUEL AND ELECTRICAL SHUTDOWN





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (2 crew min., 13 passengers max.)
Fuel Capacity:	1,154 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

#### EMERGENCY RESCUE ACCESS



no fuel of flamable materials are near the area that is to be cut.

NOTE 3: The precatch release will keep the door in the closed position. Push the button to open the door.

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



#### FUEL AND ELECTRICAL SHUTDOWN





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1-2 crew, 4 passengers max.)
Fuel Capacity:	397 gallons
Emergency Information:	See following pages

#### Sources:

**2 ENGINES** 

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**



- **NOTE 1:** To prevent injury to personnel and occupants, cutout areas are to be used only when access through the cabin entry and emergency exit doors is not possible. If cutout areas must be used, carefully cut out the approved area and find where the occupants are before other cuts are made.
- **NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure no fuel or flammable materials are near the area that is to be cut out.

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



- Wheel fires: If the tires or wheels are on fire, approach the wheels from the forward or aft side. The wheels have fusible plugs that will release the tire pneumatic pressure at a temperature of 310°F (155°C).
- **Fire and smoke:** Cabin interior furnishings are made from FAA approved materials, that can cause toxic fumes, melt, and burn when exposed to extreme heat. Use protective clothing and breathing equipment until you are sure the area is safe.

#### FUEL AND ELECTRICAL SHUTDOWN



**NOTE:** If the Emergency Locator Transmitter (ELT) is on, put the switch in the ON position for one second and then put it in the ARM position to stop the ELT transmission.



#### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity:	14 max. (2 crew., 12 passengers max.)
Fuel Capacity:	1,757 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**



**NOTE 2:** When possible, use only pneumatic or hydraulic equipment to cut the airplane structure. Make sure that no fuel or flammable materials are near the area that is to be cut.

ENGINES

#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



#### FUEL AND ELECTRICAL SHUTDOWN







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	13 max. (2 crew,11 passengers max.)
Fuel Capacity:	864 gallons
Emergency Information:	See following pages

Sources:

All diagrams and information provided by Cessna Aircraft Company.

Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**





#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



#### FUEL AND ELECTRICAL SHUTDOWN







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	14 max. (2 crew , 12 passengers max.)
Fuel Capacity:	1,926 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams and information provided by Cessna Aircraft Company.

#### Aircraft Information:

#### **EMERGENCY RESCUE ACCESS**



#### FLAMMABLE MATERIALS / PRESSURE VESSEL LOCATIONS



#### FUEL AND ELECTRICAL SHUTDOWN



ENGINES

### **BOMBARDIER CRJ FAMILY**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	102 max. (2 crew min., 100 passengers max.)
Fuel Capacity:	2,740 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Bombardier Customer Support and Services Tel: 1-613-271-3292 Email: bombardiercustomerservice@gilmore.ca
# DASSAULT FALCON 2000, 2000EX



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew, 19 passengers max.)
Fuel Capacity:	2,407 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Dassault.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

# DASSAULT FALCON 2000, 2000EX

#### **EMERGENCY RESCUE ACCESS / SHUT-DOWN PROCEDURES**



# DASSAULT FALCON 2000, 2000EX

**EMERGENCY EQUIPMENT / FLAMMABLE MATERIALS LOCATIONS** 



#### **DASSAULT FALCON 6X**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	18 max. (2 crew min., 16 passengers max.)
Fuel Capacity:	5,043 gallons

#### Sources:

Photos and information provided by Dassault Aviation. For additional emergency response information on this aircraft please contact:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	16 max. (2 crew min., 14 passengers max.)
Fuel Capacity:	1,375 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by Dassault Aviation and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

#### FLAMMABLE MATERIAL LOCATIONS



#### **AIRCRAFT ENTRY**



#### **ENGINE SHUTDOWN**

#### MYSTERE-FALCON 20/T-11 ENGINE SHUTDOWN 1. ENGINE SHUTDOWN 6 a. Pull the fuel shut-off valve handles, located on the forward center console, to the OFF position. ٩ Retard the throttles, located on the center console, to the STOP position by overriding the IDLE position. 1c c. Place the battery switches, located on the overhead center console, number 1 and 2 to BATTERY SWITCH the OFF position. 1a FUEL SHUTOFF VALVES 1b THROTTLES,

# **2 ENGINES**

#### **EMERGENCY EXITS**

#### AIRCREW EXTRACTION, CABIN CONFIGURATION AND RESCUE ROUTES

- 1. AIRCREW EXTRACTION
- a. Press button on the seat travel adjusting lever and move lever upward (if applicable).
- b. Slide seat aft to facilitate crewmember removal (if applicable).
- c. Unlatch lap belt, remove shoulder harness, and remove crewmembers and passengers.
- 2. CABIN CONFIGURATION
- Red highlites and arrows indicate where crewmembers and passengers are located.
- 3. ESCAPE ROUTES
- Primary route (solid line) indicates preferred and most used egress path out of access door.
- b. Secondary routes (broken line) indicates other egress paths used for overwing emergency exits and cockpit windows.
- Secondary routes is used if access door is blocked or warped during impact.





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	125 max. (2 crew min., 123 passengers max.)
Fuel Capacity:	5,039 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet - Oct. 31, 2009.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### FLAMMABLE MATERIALS LOCATIONS



#### **EMERGENCY RESCUE ACCESS**



# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS





#### **EXTERNAL APU FIRE CONTROLS**



# **ECLIPSE EA 500**





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	250 gallons
Fuel Tank Locations:	Within each wing in a "wet wing" design
Battery Location:	The nose compartment outside the pressure vessel
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from One Aviation Corporation.

Aircraft Information:

ONE Aviation Corp. 3520 Spirit Dr. SE Albuquerque, NM 87106 contact@ONEaviation.aero (505) 245-7555, (505) 724-1784

# **ECLIPSE EA 500**

#### **EMERGENCY EXITS**

#### 1.7.2 Emergency Exits

The aircraft has a designated emergency exit located on the right side of the aircraft to be used in the event that the primary (left-side) exit is rendered unavailable. This door weighs approximately 12 lbs. To open the door:

- Remove the cover
- Pull the red handle to release the door
- Pull the door in to rotate approximately 90°
- Place door through exit hatch and discard on aircraft wing.



#### Figure 8. Emergency Exit







# Critical Response Information Number of Engines: 2 Passenger & Crew Capacity: 32 max. (2 crew min., 30 passengers max.) Fuel Capacity: 1,950 gallons Emergency Information: See following pages

All diagrams provided by Embraer.

Aircraft Information:

Embraer +1 954 359 3700

Aviation Emergency Response Guidebook
Basic Aircraft Guide for Emergency Responders

#### FLAMMABLE MATERIALS LOCATIONS





#### **EMERGENCY SHUT-OFF**



ENGINES

#### **EMERGENCY EXITS / DOOR CONTROLS**



To Open :

**2 ENGINES** 



#### **CUT-OUT AREAS**



#### **ENGINE / TIRE FIRE RESPONSE**



#### NOTE: Do not open the engine compartment before extinguishing the fire



# Critical Response Information

Number of Engines:

Passenger & Crew Capacity:

Fuel Capacity:

**Emergency Information:** 

124 max. (2 crew, 122 passengers max.)4,267 gallonsSee following pages

Sources: All diagrams provided by Embraer.

Aircraft Information:

Embraer +1 954 359 3700 2 ENGINES

2

#### FLAMMABLE MATERIALS LOCATIONS





#### **EMERGENCY EXITS**



#### The escape slide is automatically disarmed when door is opened from outside

**ESCAPE SLIDE** 

#### **CABIN AND CARGO DOOR CONTROLS**

To Open :



#### **CUT-OUT AREAS**



#### **ENGINE / TIRE FIRE RESPONSE**



#### NOTE: Do not open the engine compartment before extinguishing the fire

# EMBRAER LEGACY 450 & 500





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity (Model 450):	9 max.
Passenger & Crew Capacity (Model 500):	12 max.
Fuel Capacity:	1961.8 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Embraer and Globair.com.

Aircraft Information:

Embraer +1 954 359 3700

# EMBRAER LEGACY 450 & 500

#### **EMERGENCY INFORMATION – 450**



# EMBRAER LEGACY 450 & 500

#### **EMERGENCY INFORMATION – 500**



# EMBRAER LINEAGE 1000/1000E



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max.
Fuel Capacity:	7,132 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Embraer and Globair.com.

Aircraft Information:

Embraer +1 954 359 3700

# EMBRAER LINEAGE 1000/1000E

#### **EMERGENCY INFORMATION**



# **EMBRAER PHENOM 100E**







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (1 crew min., 7 passengers max.)
Fuel Capacity:	425 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Embraer.

Aircraft Information:

Embraer +1 954 359 3700

# **EMBRAER PHENOM 100E**

#### **EMERGENCY INFORMATION**



**2 ENGINES** 

# **EMBRAER PHENOM 300**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (2 crew min., 8 passengers max.)
Fuel Capacity:	786 gallons
Emergency Information:	See following pages
_	

#### Sources:

All photos and diagrams provided by Embraer.

Aircraft Information:

Embraer +1 954 359 3700
# **EMBRAER PHENOM 300**

## **EMERGENCY INFORMATION**







<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	2,130 gallons
Emergency Information:	See following pages

### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## AIRCRAFT HAZARDS



## **CANOPY SAFETY**



## CANOPY SAFETY-Continued

- 1. CANOPY SAFETY FOR F/A-18A/B/C/D-Continued
- Grasp quick disconnect hose, located at canopy behind ejection seat, and pull down to disconnect the emergency escape disconnect. This disarms the canopy thruster and rocket motors. Use quick disconnect for applicable model.

ENGINES

2



## ENGINE AND APU SHUTDOWN

## ENGINE AND APU SHUTDOWN

1. ENGINE SHUTDOWN-NORMAL AND EMERGENCY

#### NOTE

- The engines may be shut down by using the throttles or fuel shutoff valve controls.
- Raise finger lifts and move throttles, located on the left cockpit console, fully aft to OFF position.
- b. Lift guard and press the left and right fire warning lights, located on the upper forward instrument panel. A time delay of approximately 30 seconds or less (with engines at MIL through IDLE) may be expected before engine shutdown occurs.

#### NOTE:

On aircraft 160775 thru 160782 (F/A-18A, Cum 1 thru 7; F/A-18B, Cum 1), fuel shutoff valve controls are located aft of throttles. Pull controls to FULL UP position.

- 2. APU SHUTDOWN-NORMAL AND EMERGENCY
- Auxilliary Power Unit (APU) may be shut down by placing APU switch, located on the left cockpit console aft of the engine throttles, in OFFposition.



Puddling of fuel under aircraft indicates presence of residual fuel in engine bay. With APU running, this can cause fire or explosion. Ensure APU shutdown prior to crewmember rescue.

## ENGINE AND APU EXTERNAL SHUTDOWN

- 1. ENGINE AND APU EXTERNAL SHUTDOWN
- Disconnect electrical plug. If plug can not be disconnected, cut electrical cable with insulated cutters.
- b. Turn manual override arm clockwise to CLOSED position.

NOTE:

- On aircraft 160775 thru 160782 (F/A-18A, Cum 1 thru 7; F/A-18B, Cum 1), cut fuel shutoff valve linkage then turn shutoff valve arm forward.
- c. Place APU emergency shutdown switch (LH side of nose wheelwell) down in shutdown position.
- Place battery switch in OFF position to semiisolate the two batteries.
- e. To completely isolate the aircraft batteries, open external doors 10R and 10L (4 latches each), using a 1/4 inch drive socket wrench. Disconnect 4 battery bayonet couplings (2 per battery), turn couplings counterclockwise and pull.



## 

A/F-18

## **EJECTION SEATS**

## MARTIN-BAKER SJU-5/A, 6/A AND SJU-17(V)1/A, 2/A EJECTION SEATS

1. GENERAL INFORMATION

The F/A-18 uses two types of Martin-Baker ejection seats, the SJU-5/A, 6/A and SJU-17 (V) 1/A, 2/A. Both types are a rocket assisted ejection seat that provides support and necessary environmental equipment for crewmembers during flight, and a means of fast, safe escape during emergency flight conditions. The seat assembly incorporates features permitting seat ejection at ground level, at zero airspeed as well as during emergency flight conditions.

The basic structure of the seat consists of a main beam assembly, built to withstand high G-loads, support all of the components, and form the main framework for the seat.

The basic components of the seat assembly include a catapult, gas powered inertia reel, rocket motor, seat bucket assembly, drogue gun, parachute, guillotine, and survival equipment.

This ejection seat presents definite hazards which may cause fatal injuries to uninformed and careless personnel. Firefighting/rescue personnel must become thoroughly familiar with the locations and the safetying of the seat components in both normal and emergency conditions.

## EJECTION SEAT SAFETYING

EJECTION SEAT SAFETYING-NORMAL AND EMERGENCY-SJU-5/A, 6/A MODEL

#### NOTE:

Immediately upon gaining access to the aircraft cockpit, if time permits and no hazardous conditions exist, proceed with seat safetying procedures.

WARNING

If ejection control handle is not fully seated, safety pin cannot be installed and safe/armed handle cannot be rotated to the fully locked position. An unsafe seat exists if the entire word "SAFE" is not visible on the safe/armed handle. If ejection seat is not in a safe condi tion, initiation may occur if ejection control handle is pulled. Proper procedures for reset ting handle must be followed.

- a. Insert safety pin into ejection control handle if handle is in first detent (stowed) position. If ejection control handle is not in stowed posi tion, return handle to first detent (stowed position) by pressing handle into its housing and inserting safety pin.
- Press button on top of manual override handle and rotate handle UP and AFT. The safe/ armed handle will simultaneously rotate up and the entire word "SAFE" should be visible.

WARNING

In multi-seat aircraft, all ejection seats must be safetied.



A/F-18

A/F-18



#### **BOEING F/A-18 HORNET EJECTION SEATS** EJECTION SEAT SAFETYING-Continued 2b 2. EJECTION SEAT SAFETYING-NORMAL AND MANUAL EMERGENCY-SJU-(V)1/A, 2/A MODEL OVERRIDE HANDLE NOTE: 2b Immediately upon gaining access to the aircraft SAFE/ARMED cockpit, if time permits and no hazardous HANDLE conditions exist, proceed with seat safetying procedures WARNING If ejection control handle is not fully seated, safety pin cannot be installed and safe/armed handle cannot be rotated to the fully locked position. An unsafe seat exists if the entire 2a word "SAFE" is not visible on the safe/armed EJECTION handle. If ejection seat is not in a safe condi CONTROL tion, initiation may occur if ejection control HANDLE handle is pulled. Proper procedures for reset ting handle must be followed. a. Insert safety pin into ejection control handle if handle is in first detent (stowed) position. If ejection control handle is not in stowed posi tion, return handle to first detent (stowed position) by pressing handle into its housing and inserting safety pin. b. Press button on top of manual override handle and rotate handle UP and AFT. The safe/ armed handle will simultaneously rotate up and the entire word "SAFE" should be visible. WARNING EJECTION CONTROL In multi-seat aircraft, all ejection seats must be HANDLE SAFETY PIN

A/F-18

safetied.

## **BOEING F/A-18 SUPER HORNET**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	2,161 gallons

### Sources:

Photos provided by Boeing. For additional emergency response information on this aircraft please contact:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	5,305 gallons
Emergency Information:	See following pages

### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

## Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## **AIRCRAFT HAZARDS**



## FLAMMABLE MATERIAL LOCATIONS



## **AIRCRAFT ENTRY**

## AIRCRAFT ENTRY-Continued

3. EMERGENCY ENTRY

 Press button to open door 9, located on left side of fuselage forward of the engine air inlet, and remove canopy jettison T-handle.

#### NOTE:

Insure canopy jettison safety pin is removed from canopy jettison initiator before attempting canopy jettison.

b. Grasp canopy jettison T-handle and extend canopy jettison cable to full length (approxi mately 8 feet). Stand forward of door 9 to avoid falling canopy.

## WARNING

Avoid canopy impact area during jettison. See page F-15.3 item 5. Impact with personnel can injure or cause death.

c. Pull firmly and sharply on T-handle to jettison canopy.

#### NOTE:

Due to the strength of the canopy transparency, all sides of the canopy must be cut to reach the crewmember(s).

- 4. CUT-IN
- Cut through the canopy transparency, using a power rescue saw with a carbide tipped blade, along the canopy frame.
- b. Make 4 complete cuts and lift transparency up and away from cut-in area.



## **ENGINE SHUTDOWN**

## ENGINE SHUTDOWN

- 1. ENGINE SHUTDOWN
- NOTES:
  - Complete engine shutdown can be accomplished from only the front cockpit only. However, if over the left wing access to cockpit is used, the engines can be positioned to idle from the rear cockpit (two seat aircraft only) reducing the danger of intake suction.
- On F-15E 86-0184 and up, guard must be lifted before pressing fire extinguisher buttons.
- Operation of Main Engine fire buttons automatically closes the engine fuel shutoff valves and eliminates the need to position the engine master switches to OFF. The engine master switches are separated on all F-15 models. Engine master switches are positioned side-by-side on F-15s other than US based models.
- One engine must be operating to provide 28 volt DC power for operation of the Main Engine fire extinguisher system.
- a. Depress the left and right engine fire extinguisher buttons in the front cockpit located on the upper left side of the pilot's instrument panel. This action closes the engine fuel shutoff and bleed air.
- NOTE
- The jet fuel starter (JFS) must be running to provide 28 volt DC power for operation of the AMAD fire extinguisher system.
- In event JFS is running (during engine start) push AMAD fire buttons located on the upper left side of pilot's instrument panel. This closes the JFS fuel shut-off relay.
- c. Raise finger lifts on throttles and pull back to below IDLE. Release finger lifts and move throttles to OFF.



## EXTERNAL LEFT ENGINE SHUTDOWN

EXTERNAL LEFT ENGINE SHUTDOWN

## WARNING

READ THE FOLLOWING WARNINGS AND NOTES TO DETERMINE F-15 ENGINE VERSION FOR THIS PROCEDURE. To prevent death or injury, be careful when cutting near left engine fuel/oil lines. Do not insert cutting blade more than <u>two inches</u> into panel to prevent potential fuel/oil line rupture.

NOTES:

- External left engine shutdown procedures will be used only if engine shutdown from the cockpit is unsuccessful or impractical. If conditions warrant, the left engine may be shutdown using the following external methods.
- The throttle linkage for F-15s are connected to three different engine fuel controls: (1) The Unified Fuel Control (UFC) for Pratt-Whitney (PW) F100-PW-100 engine, (2) Main Fuel Control (MFC) for PW F100-PW-220/-220E, and (3) MFC for PW F100-PW-229 engine.

WARNING

Approximately 1pint of hot fuel will drain over board from the P&D valve, located forward of the -100/220 engine's UFC.

#### NOTE

On engine shutdown for the F100-PW-229 MFC fuel flow is cut off immediately and stores the residual fuel. No fuel will be drained over board.

#### NOTE:

- F-15E left engine cut-in area is blocked due to conformal fuel tank installation. Use Door 113L procedures for access.
- a. To gain access to the UFC or MFC and throttle shaft

(1) By opening door 113L, remove screws with a # 14 apex with adapter, using a speed handle or a battery powered drill. (Door is hinged and will open toward centerline.) If time does not allow removal of screws, follow the next step for cutting in.



# **2 ENGINES**

## **ENGINE SHUTDOWN**

## EXTERNAL LEFT ENGINE SHUTDOWN-Continued

## F-15



#### **BOEING F-15 EAGLE EJECTION SEAT SAFETYING** EJECTION SEAT INDICATOR F-15 EJECTION SEAT INDICATOR ARS INDICATOR NOTE: WARNING Do not touch indicator sealant when ARMED SAFE checking condition. Frequent touching A Seat Armed Indicator located on the upper right side wears off sealant exposing tip of red pin indicating a false ARMED ARS condition. of the seat can indicate WHITE for OK and RED for $\bigcirc$ SEAT ARMED. This indicates that the Advanced Recovery Sequencer (ARS) battery condition is serviceable or expended. If expended, the white sealant will be punctured by a protruding red pin. If this is a recent condition, it will take two hours for the seat to be considered safe to work around or remove. Electrical ARMED battery power is required to energize the recovery SIDE VIEW sequencer circuits for the numerous explosives on the at. Use extreme caution and judgement in this case If time permits, call the local Egress Shop before pro-ceeding. If emergency exists and time does not allow inspection by the Egress Shop, sever all exposed ballistic lines including top of seat for the rocket catapult. F-15 SAFETYING EJECTION SEAT WARNING The seat is armed regardless of canopy position. Jettisoning the aircraft canopy automatically arms the ACES II ejection seat. FIRED WARNING INDICATOR EMERGENCY MANUAL (FIRED INDICATION) CHUTE HANDLE On two seat aircraft, both seats must be safetied before either can be considered safe. Prior to entering the cockpit, locate the FIRED WARNING INDICATOR on seat bulkhead left side near canopy sill. A red spiral indicator will indicate system actuation or system malfunction if seat(s) are still in aircraft. Use EX-TREME CAUTION under these circumstances; system can still NORMAL SAFETYING of EJECTION SEAT(S) Rotate Ground Safety Lever, located left side of seat directly aft of the left Ejection Control Handle, UP and Forward. SAFETY PIN WITH STREAMER IOTE BALLISTIC GAS The Ejection Control Handle safety pin can ONLY be installed HOSE AND from the forward inboard side of the left handle DISCONNECT EMERGENCY MANUAL (CUT HERE Install safety pin in left Ejection Control Handle CHUTE HANDLE Install safety pin in the Emergency Manual Chute Handle, lo-cated on the right side of the seat. If Ejection Control Handle and Emergency Manual Chute Handle Pin are connected by one safety streamer, route Emergency Manual Chute Handle under aircrew's legs, otherwise extraction will cause entangle ment with streamer. EMERGENCY SAFETYING of EJECTION SEAT(S) AFTER CANOPY JETTISON WARNING otating the Ground Safety Lever in this situation does not lequately prevent the possibility of inadvertent ejection. 1a V EJECTION CONTROL HANDLES GROUND Rotate Ground Safety Lever, located left side of seat directly aft of the left Ejection Control Handle, UP and Forward. SAFETY 1b, 2a

Insert safety pin in left Ejection Control Handle

Cut ballistic hoses on left and right sides of seat(s), above disconnects, to prevent ballistic gas from actuating ejection devices, with ballistic hose cutting tool.

SAFETY PIN WITH STREAMER

LEVER

(SAFED POSITION)

## **AIRCREW EXTRACTION**

## AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

#### NOTE:

- Pulling the Emergency Manual Chute Handle WILL NOT release crewmember.
- Unsnap crewmember's mask from helmet on both sides.
- Release G suit hose on lower left hand side of seat.
- c. Release oxygen hose and oxygen T block on right hand side of seat. This also disconnects emergency oxygen.
- Release communication lead on right hand side of seat.
- e. Release safety belt by lifting cover and pulling release bar.
- Release left and right survival kit buckles by depressing PUSH TO RELEASE button on each buckle.
- g. Release left and right shoulder harness fittings by lifting cover and pulling release bar on each fitting.
- Extract crewmember over the rescue or left side of the cockpit. Insure that Ejection Control Handles, Ejection Safety Pin, and Ejection Safety Lever are not moved during extraction.



# **2 ENGINES**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	5,450 gallons
Battery Location:	Behind the left avionics bay door
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Lockheed Martin and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

## AIRCRAFT HAZARDS



## **AIRCRAFT HAZARDS**

## AIRCRAFT HAZARDS-Continued

1. VVE/

- NOTE: Weapons information is discussed on this page and the next.
- a. Ammunition storage for the M61A2 20mm multibarrel cannon Linear Linkless system located immediately forward of the right main landing gear door and across the belly of aircraft. Storage
- system is an overlapping conveyor belt design holding 480 rounds.
- b. Air-to Air: AIM-9M/X Sidewinder (1 per side weapons bay on LAU).
- c. Air-to-Air: AIM-120C AMRAAM, 3 per bay total of 6.
- d. Air-to Ground: 2 GBU-32 1,000 lb. JDAM (Joint Direct Attack Munition) PGMs on BRU-46 bomb racks.
- e. External carriage of 600 gal fuel tanks, AIM-9 and AIM-120 missiles.
- NOTE: T.O. 1F/A-22A-2 will contain authorized aircraft configurations.





## FLAMMABLE MATERIAL LOCATIONS





## **APU AND ENGINE SHUTDOWN**

## APU/ENGINE SHUTDOWN

1. APU SHUTDOWN

#### NOTE:

- There are five (5) ways to shutdown the APU.
- (1) Position the APU switch to OFF.
- (2) Position the APU Emergency Shutdown switch
- in the left wheel well to EMER OFF.
- (3) Flood the APU inlet with extinguishing agent.
- (4) Command the APU to shutdown using the PMA.(5) Depress the APU FIRE Switchlight.
- (5) Depress the APO FIRE Switchlight
- a. Place the APU switch, located on the Electric Panel left console forward of throttles, to OFF.
- b. The APU FIRE Switchlight, located on the right glareshield eyebrow, illuminates when a fire in the APU Compartment has been detected. Depressing the switchlight, on the ground, will shutdown the APU.
- The Emergency Shutdown Switch, located on the forward inboard side of the left main landing gear wheel well allows ground personnel to shutdown the APU during an emergency situation.
- 2. ENGINE SHUTDOWN
- Pull the friction lever, located left of left engine throttle, aft, to release throttle friction.
- Place the engine throttles, located on the left console, aft to lift over gate and continue aft to OFF.
- Depress the ENG FIRE warning switchlight, located on forward instrument panel, if illuminated. This action shuts off fuel, electrical power, ventilation, and air to the affected engine and arms the fire suppression system.
- d. If fire light remains illuminated: When the fire extinguisher is ready to discharge the extinguishing agent, the READY/ DISCH switchlight, located on the forward instrument panel illuminates. When the switchlight is depressed, the READY light goes off and the DISCH switchlight illuminates indicating that the halon has been discharged to the selected compartment.
- Postion battery switch, located on right corner panel, down to OFF. Another battery switch is located on the left main landing gear door frame above the PMA ports for external battery shutoff



## SAFETYING EJECTION SYSTEM AND AIRCREW EXTRACTION



## SAFETYING EJECTION SYSTEM AND AIRCREW EXTRACTION



## MAIN FUEL SHUT-OFF ACCESS



# FAIRCHILD DORNIER 328 JET





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	35 max. (2 crew min., 33 passengers max.)
Fuel Capacity:	1,195 gallons

Sources:

Photos and information provided by Business Jet Traveler and Fairchild Dornier.



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	1 max.
Fuel Capacity:	3,438 gallons
Emergency Information:	See following pages

### Sources:

Photos and diagrams obtained from U.S. Air Force Fact Sheets and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Northrop Grumman Corporation 2980 Fairview Park Drive Falls Church, VA 22042 703-280-2900

## AIRCRAFT HAZARDS



## FLAMMABLE MATERIAL LOCATIONS



## **AIRCRAFT ENTRY**



## **ENGINE SHUTDOWN**



ENGINES

2

## **ENGINE SHUTDOWN**

## ENGINE SHUTDOWN - Continued and EMERGENCY APU SHUTDOWN

- d. Set FIRE EXTING DISCH switch, located above pilot's instrument panel, right side, to left or right position. If fire indicator light remains lit, set switch to opposite position.
- Place MASTER ARM switch on armament control panel to SAFE.
- Place battery switch, located on right console, to OFF position.
- 3. EMERGENCY APU SHUTDOWN
- Place APU switch, located on left console, to OFF position.
- b. Pull APU fire T-handle, located above pilot's instrument panel.
- c. Set FIRE EXTING DISCH switch, located above pilot's instrument panel, right side, to left or right position. If fire indicator light remains lit, set FIRE EXTING DISCH switch to opposite position.

#### NOTE:

- IF APU fire persists after both aircraft fire extinguisher bottles are discharged, introduce agent into the APU compartment through the fire access port in fuselage access door F47.
- Place battery switch, located on right console, to OFF position.



## **EJECTION SEAT SAFETYING AND AIRCREW EXTRACTION**



## **BOMBARDIER GLOBAL EXPRESS**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	23 max. (2 crew min., 19 passengers max.)
Fuel Capacity:	6,674 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Bombardier.

Aircraft Information:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com

## **BOMBARDIER GLOBAL EXPRESS**

## **CRASH CREW CHART**



# **GRUMMAN GULFSTREAM II**







Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew, 19passengers max.)
Fuel Capacity:	3,991 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Gulfstream.

Aircraft Information:

Gulfstream Aerospace Savannah, GA 1 800-810-4853 2 ENGINES

# **GRUMMAN GULFSTREAM II**

## **CRASH CREW CHART**


## **GRUMMAN GULFSTREAM III**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew, 19 passengers max.)
Fuel Capacity:	4,133 gallons
Emergency Information:	See following pages
Sourcos:	

Sources: All diagrams provided by Gulfstream.

Aircraft Information:

Gulfstream Aerospace Savannah, GA 1 800-810-4853

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

## **GRUMMAN GULFSTREAM III**

### **CRASH CREW CHART**



## **GRUMMAN GULFSTREAM IV**





2
21 max. (2 crew, 19 passengers max.)
4,386 gallons
See following pages

Sources: All diagrams provided by Gulfstream.

Aircraft Information:

## **GRUMMAN GULFSTREAM IV**

#### **CRASH CREW CHART**



## **GRUMMAN GULFSTREAM V**



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew, 19 passengers max.)
Fuel Capacity:	6,150 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Gulfstream.

Aircraft Information:

Gulfstream Aerospace Savannah, GA 1 800-810-4853 2 ENGINES

### **GRUMMAN GULFSTREAM V**

#### **CRASH CREW CHART**





#### **Critical Response Information**

Number of Engines: Passenger & Crew Capacity: Fuel Capacity:

Emergency Information:

2 9 max. (2 crew min., 7 passengers max.) 1,297 gallons See following pages

#### Sources:

All photos and diagrams provided by AOPA and Gulfstream.

Aircraft Information:

#### **EMERGENCY INFORMATION**



**2 ENGINES** 



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max. (2 crew min., 7 passengers max.)
Fuel Capacity:	1,537 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by AOPA and Gulfstream.

Aircraft Information:





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	10 max. (2 crew min., 8 passengers max.)
Fuel Capacity:	2,240 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by AOPA and Gulfstream.

#### Aircraft Information:







#### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity:	12 max. (2 crew min., 10 passengers max.)
Fuel Capacity:	2,197 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Gulfstream.

#### Aircraft Information:

#### **EMERGENCY INFORMATION**



**2 ENGINES** 

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders





#### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity (G400):	18 max. (2 crew min., 16 passengers max.)
Fuel Capacity (G300/G400/G450):	4,370 gallons
Fuel Capacity (G350):	3,852 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by AOPA and Gulfstream.

#### Aircraft Information:











#### **Critical Response Information**

Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew min., 19 passengers max.)
Fuel Capacity:	6,118 gallons
Emergency Information:	See following pages

Sources: All photos and diagrams provided by Gulfstream.

Aircraft Information:



### **GULFSTREAM G650/G650ER**





#### Critical Response Information

Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew min., 19 passengers max.)
Fuel Capacity:	6,567 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Gulfstream.

#### Aircraft Information:

## GULFSTREAM G650/G650ER

#### **EMERGENCY INFORMATION**



2 ENGINES



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	18 max. (2 crew min., 16 passengers max.)
Fuel Capacity:	4,600 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Gulfstream.

#### Aircraft Information:





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	20 max. (2 crew min., 18 passengers max.)
Fuel Capacity:	6,900 gallons
Emergency Information:	See following pages

#### Sources:

All photos and diagrams provided by Gulfstream.

Aircraft Information:



### HONDA HA-420 JET



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	7 max. (1 crew min., 6 passengers max.)
Fuel Capacity:	424 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from HondaJet.

Aircraft Information:

Honda Aircraft Company 6430 Ballinger Rd. Greensboro, NC 27410 Phone: (336) 662-0246 (Main)

## HONDA HA-420 JET

#### FLAMMABLE MATERIAL LOCATIONS





2 ENGINES

## **ISRAEL AIRCRAFT INDUSTRIES 1124A WESTWIND II**



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	9 max. (2 crew min., 7 passengers max.)
Fuel Capacity:	1,429 gallons

Sources: Photos provided by Jetphotos.net.

Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

### **BOMBARDIER LEARJET 24 / 25**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	840 gallons

For additional emergency response information on this aircraft please contact:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com 2 ENGINES



<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	345 max. (2 crew min., 343 passengers max.)
Fuel Capacity:	904 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com

#### **CRASH CREW CHART**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (2 crew min., 9 passengers max.)
Fuel Capacity:	1,180 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Bombardier Inc. 800 René-Lévesque Blvd. West Montréal, Québec H3B 1Y8 Canada Tel: 1-514-861-9481 Tel: 1-316-946-2580 Email: bbad.pubs.dist@aero.bombardier.com

### **CREW CRASH CHART**



## MCDONNELL DOUGLAS MD-80, MD-90



Number of Engines:	2
Passenger & Crew Capacity:	172 max. (2 crew min., 170 passengers max.)
Fuel Capacity:	6,998 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

**2 ENGINES**


FLAMMABLE MATERIALS LOCATIONS

#### Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

# **2 ENGINES**

#### **EMERGENCY RESCUE ACCESS**



# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS





#### **EXTERNAL APU FIRE CONTROLS**







<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	179 max. (2 crew min., 172 passengers max.)
Fuel Capacity:	6,618 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html ENGINES

#### **EMERGENCY RESCUE ACCESS**

#### **MD-80 SERIES**

1 PASSENGER AND SERVICE DOORS



2 OVERWING EMERGENCY EXIT



TO OPEN DOOR

1. PUSH HANDLE

- **EMERGENCY RESCUE ACCESS-1** 
  - **3 TAIL CONE JETTISON LATCH**



4 CUT-IN AREAS CUT-IN AREAS

2. PULL HANDLE AND PUSH IN ON TOP OF DOOR. 3. LIFT UP FORCIBLY.

NOTE: CUT-IN AREAS REQUIRE METAL CUTTING PORTABLE POWER EQUIPMENT. BECAUSE OF TYPE OF STRUCTURE AND POSSIBLE INJURY TO PERSONNEL WITHIN, IT IS RECOMMENDED THAT MAJOR EFFORT TO GAIN ACCESS BE DIRECTED TO HATCHES AND DOORS. URGENCY OF SITUATION WILL DICTATE THE NECESSITY FOR A CUT-IN.

#### **MD-80 SERIES**

GENERAL NOTE:

#### **EMERGENCY RESCUE ACCESS-2**



#### **BATTERY LOCATIONS**

#### **MD-80 SERIES**

#### **BATTERY LOCATIONS**



#### FLAMMABLE MATERIAL LOCATIONS

#### **MD-80 SERIES**

#### FLAMMABLE MATERIAL LOCATIONS



#### FLIGHT DECK CONTROL SWITCH LOCATIONS

#### **MD-80 SERIES**

#### FLIGHT DECK CONTROL SWITCH LOCATIONS



## **BOEING P-8 POSEIDON**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max.
Fuel Capacity:	10,500 gallons

#### Sources:

Photos obtained from Boeing. For additional emergency response information on this aircraft please contact:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## PILATUS PC-24 SUPER VERSATILE JET





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	9 max. (1 crew min., 8 passengers max.)
Fuel Capacity:	888 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Pilatus Aircraft.

Aircraft Information:

Pilatus Business Aircraft Ltd Broomfield, CO, USA Phone: +1 (800) 745-2887

# PILATUS PC-24 SUPER VERSATILE JET

#### **EMERGENCY INFORMATION**



2 ENGINES

# PILATUS PC-24 SUPER VERSATILE JET

## **EMERGENCY INFORMATION**





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Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	598 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Northrop Grumman and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Northrop Grumman Corporation 2980 Fairview Park Drive Falls Church, VA 22042 703-280-2900

#### FLAMMABLE MATERIAL AND BATTERY LOCATIONS



## **ENGINE SHUTDOWN**

#### ENGINE SHUTDOWN

1. ENGINE SHUTDOWN (FWD COCKPIT ONLY)

NOTE:

- AETC operated aircraft have a throttle gate installed on the aft portion of the throttle console in the forward cockpit. The throttle gate must be disengaged prior to proceeding.
- For AETC aircraft only: Disengage throttle gate by pushing the red release arm inboard (toward ejection seat).
- b. For conventional aircraft: Raise finger lift and retard throttle, located on left console panel, to full aft OFF position.
- c. Push red guards down and place fuel shutoff switches to closed position. Wait 10 seconds for fuel valve to operate.
- Place battery switch, located on right vertical control panel, down to OFF position.

#### NOTE:

Engines can be throttled to idle from rear cockpit.

If engines fail to shutdown, turn battery switch ON and place fuel shutoff switches, locatated on left vertical panel, to CLOSED position. Place battery switch to OFF position.



If emergency canopy jettisonT-handle has been actuated, but canopy has not jettisoned, cut canopy hose at top aft of seat structure to prevent inadvertant canopy jettison.



#### SAFETYING EJECTION SYSTEM AND AIRCREW EXTRACTION



# **TUPLOEV TU-204**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	213 max. (3 crew, 210 passengers max.)
Fuel Capacity:	12,000 gallons

For additional emergency response information on this aircraft please contact:

Tupolev Public Stock Company Academician Tupolev Embankment 17 Moscow, Russia Tel. +7 499-267-25-33 Fax. +7 499-267-27-33 Email: tu@tupolev.ru





Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	192 max. (3 crew, 189 passengers max.)
Fuel Capacity:	9,800 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



FLAMMABLE MATERIALS LOCATIONS

ENGINES

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# **BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS**





## COMPOSITE MATERIALS LOCATIONS



# DASSAULT FALCON 50, 50EX



Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	11 max.
Fuel Capacity:	2,200 gallons
Emergency Exits:	2

#### Sources:

Photos and information provided by Dassault Aviation. For additional emergency response information on this aircraft please contact:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

# **DASSAULT FALCON 7X**



Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	19 max. (3 crew min., 16 passengers max.)
Fuel Capacity:	4,767 gallons
Emergency Information:	See following pages

Sources:

All photos and diagrams provided by Dassault Aviation.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

# DASSAULT FALCON 7X

## FLAMMABLE MATERIAL LOCATIONS



FUSELAGE FUEL TANKS LOCATION



# DASSAULT FALCON 7X EMERGENCY EXITS

#### Opening procedure from inside

Pulling the handle causes the emergency exit door to unlock and open. An instruction marking is bonded on the exit, with the following text:

- PULL HANDLE
- LIFT EXIT UPWARDS
- THROW EXIT OUTSIDE



EMERGENCY EXIT INTERIOR CONTROL HANDLE

Control Handle

#### EMERGENCY EXIT DOOR

#### DESCRIPTION

A type III emergency over wing exit is located on the right side of the cabin at the ninth window aft.

The exit is a removable panel including a conventional window in the center and a quick-release mechanism at the upper part.

Unlocking is controlled from the inside with a handle and from the outside by means of a pushbutton connected to the inside handle.

The Indication of the door status is provided by a proximity detector.

A REMOVE BEFORE FLIGHT pin can be installed for ground security to prevent a hatch opening.

#### **OPERATION**

#### Opening procedure from outside

The pushbutton is protected by a plexiglas cover.

Once the plexiglas cover has been broken, the pushbutton is depressed causing the emergency exit door to unlock and open.

An instruction marking is bonded on the door, below the push button, with the following text: - EXIT

- PUSH TO OPEN



EMERGENCY EXIT EXTERIOR VIEW

# **DASSAULT FALCON 8X**



Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	18 max.
Fuel Capacity:	5,100 gallons
Emergency Exits:	2
Aircraft Diagram:	See following pages

Sources:

All photos and diagrams provided by Dassault Aviation.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747

# **DASSAULT FALCON 8X**

#### **AIRCRAFT DIAGRAM**



# DASSAULT FALCON 8X

## AIRCRAFT DIAGRAM



# **DASSAULT FALCON 900**





<b>Critical Response Information</b>	
Number of Engines:	3
Passenger & Crew Capacity:	19 max. (2 crew, 17 passengers max.)
Fuel Capacity:	3,133 gallons
Emergency Information:	See following pages

Sources: All diagrams provided by Dassault.

Aircraft Information:

Dassault Falcon Jet Western Hemisphere 200 Riser Road Little Ferry, NJ 07643 +1 201-541-4747 **3 ENGINES** 

# **DASSAULT FALCON 900**

#### **EMERGENCY RESCUE ACCESS / SHUT-DOWN PROCEDURES**



# **DASSAULT FALCON 900**

**EMERGENCY EQUIPMENT / FLAMMABLE MATERIALS LOCATIONS** 



## **MCDONNELL DOUGLAS K-10A EXTENDER**



Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	79 max (4 crew min., 75 passengers max.)
Fuel Capacity:	53,134 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from U.S. Air Force and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

# **MCDONNELL DOUGLAS K-10A EXTENDER**

#### **AIRCRAFT CONFIGURATIONS**



# MCDONNELL DOUGLAS K-10A EXTENDER

## **EMERGENCY EXITS**



**3 ENGINES**
#### **MCDONNELL DOUGLAS K-10A EXTENDER** FLAMMABLE MATERIAL AND BATTERY LOCATIONS SPECIAL TOOLS/EQUIPMENT **KC-10A** Power Rescue Saw 1/4-In, Speed Handle Wrench 35 Ft. Ladder Fire Drill II GROUND EXIT OVERWING AIRCRAFT ENTRY WITH ROPE DOORS (DEACTIVATED, WARNING -BOLTED SHUT Keep clear of all entry doors during opening. Over-wing and aft left doors are bolted shut. Do not attempt to ingress or egress from these areas. DOOR CARGO 4800 1. NORMAL ENTRY (DEACTIVATED DOOR -BOLTED SHUT) Pull door control handle out of recess to disarm 14,600 escape slide.

FORWARD 8300 4800 6100 Move door control switch to open and hold. DOOR When door is fully open, release switch. 680 EMERGENCY ENTRY NOTE: MID-CARIN BATTERIES When emergency entry is used, door will DOORS OXYGEN automatically move to full open position under BOTTLES pneumatic pressure. (3 EACH) 2b Pull door control handle out of fuselage. EMERGENCY Rotate emergency override level from safe OVERRIDE position to emergency position and hold. LEVER Rotate door control handle to emergency position. ENERGENCY 2C F DOOR STILL DOES NOT OPEN CREW ENTRY/EXIT LADDER (CREW WARNING MUST POSITION 1a, 2a DOOR CONTROL AND DEPLOY) 1b Forward cabin doors have slide/rafts attached HANDLE DOOR and are very heavy. Required lifting force may FREE FALL CONTROL exceed 400 lbs. Mid cabin doors may or may SWITCH not have slide/rafts installed. STOWED POSITION Push door inward as far as possible and hold. Use any available means to pry door upward.

**3 ENGINES** 

#### **ENGINE SHUTDOWN**



**3 ENGINES** 

#### **AIRCREW SEATING**



#### **AIRCREW SEATING**



#### AIRCREW EXTRACTION



#### **AIRCRAFT ENTRY**



**3 ENGINES** 

## LOCKHEED MARTIN L-1011



<b>Critical Response Information</b>	
Number of Engines:	3
Passenger & Crew Capacity:	400 max. (3 crew, 397 passengers max.)
Fuel Capacity:	31,886 gallons

For additional emergency response information on this aircraft please contact:

Lockheed Martin Aeronautics Company 86 Cobb Parkway Marietta, GA 30063 Tel: 1-770-494-5444 Fax: 1-770-494-5445 Web: www.lockheedmartin.com

2021

**3 ENGINES** 



Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	412 max. (2 crew, 410 passengers max.)
Fuel Capacity:	26,160 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### FLAMMABLE MATERIALS LOCATIONS



#### **EMERGENCY RESCUE ACCESS**

#### PUSH BUTTON TYPE

NOTE: WHEN MOVED TO "EMERGENCY" POSITION AND HELD, ALLOWS DOOR CONTROL HANDLE TO BE MOVED TO "EMERGENCY" POSITION FOR EMERGENCY OPENING OF THE DOOR IF ELECTRICAL POWER IS NOT AVAILABLE.



#### NON PUSH BUTTON TYPE

NOTE: WHENPLACED IN "EMERGENCY" POSITION, DOOR CONTROL HANDLE WILL REMAIN IN THAT POSITION.





#### EMERGENCY RESCUE ACCESS





# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS



#### **EXTERNAL APU FIRE CONTROLS**



### **TUPOLEV TU-154**





Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	121 max. (3 crew, 118 passengers max.)
Fuel Capacity:	5,932 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Tupolev Public Stock Company Academician Tupolev Embankment 17 Moscow, Russia Tel. +7 499-267-25-33 Fax. +7 499-267-27-33 Email: tu@tupolev.ru

## **TUPOLEV TU-154**

#### **EMERGENCY EXIT LOCATIONS**





Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	379 max. (2 crew, 377 passengers max.)
Fuel Capacity:	56,605 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

Airbus 2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

# FLAMMABLE MATERIALS & HAZARDOUS COMPONENTS LOCATIONS



#### **COMPOSITE MATERIALS LOCATIONS**



#### **CONTROL HANDLES / DOOR CONTROLS**





#### **BREAK-IN POINT & BATTERY LOCATIONS**



Batteries and Control Panel - Location



#### **APU EXTERNAL CONTROL & APU ACCESS DOOR**



Emergency Exit Light Control Panel - Location



Engine and APU Controls and FIRE Panels - Location



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	855 max. (2 crew, 853 passengers max.)
Fuel Capacity:	85,994 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Airbus S.A.S. Aircraft Rescue and Fire Fighting Chart.

Aircraft Information:

#### Airbus

2550 Wasser Terrace, Suite 9100 Herndon, VA 20171 - U.S.A. Phone: +1 703 834 3400 Fax: +1 703 834 3593

# FLAMMABLE MATERIALS & HAZARDOUS COMPONENTS LOCATIONS



#### **COMPOSITE MATERIALS LOCATIONS**



#### **CONTROL HANDLES / DOOR CONTROLS**





#### **BREAK-IN POINT & BATTERY LOCATIONS**





#### **APU EXTERNAL CONTROL & APU ACCESS DOOR**





**4 ENGINES** 

## ANTONOV AN-124



#### **Critical Response Information**

Number of Engines:	4
Passenger & Crew Capacity:	94 max. (6 crew min, 88 passengers max.)
Fuel Capacity:	69,913 gallons
Emergency Information:	See following pages

For additional emergency response information on this aircraft please contact:

Antonov 1 Tupolev Street Kiev, Ukraine 03062 Tel: (+380 44) 454-31-49 Fax: (+380 44) 400-81-44 Email: info@antonov.com





Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	189 max. (3 crew, 186 passengers max.)
Fuel Capacity:	17,534 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html





#### **EMERGENCY RESCUE ACCESS**





# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS



CRITICAL SWITCH LOCATIONS AND THEIR OPERATION ARE SHOWN WITH THE EXPANDED VIEWS OF THE CONTROL MODULES





Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	219 max. (3 crew min., 216 passengers max.)
Fuel Capacity:	23,855 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html



#### FLAMMABLE MATERIALS LOCATIONS



# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS








#### **Critical Response Information**

Number of Engines:	4
Passenger & Crew Capacity:	664 max. (4 crew min, 660 passengers max.)
Fuel Capacity:	60,495 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### FLAMMABLE MATERIALS LOCATIONS



#### **EMERGENCY RESCUE ACCESS**



#### **EMERGENCY RESCUE ACCESS**





#### AFT OVERHEAD FLIGHT CREW REST AREA

# BATTERY LOCATIONS & FLIGHT DECK CONTROL SWITCH LOCATIONS





Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	607 max. (2 crew min., 605 passengers max.)
Fuel Capacity:	63,034 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### **EMERGENCY RESCUE ACCESS**

#### 747-81



# 

D) ENTRY DOOR HANDLE WHEELS RETRACTED: 13 FT - WHEELS EXTENDED: 19 FT 2 IN. E) CREW OVERHEAD ESCAPE HATCH WHEELS RETRACTED: 25 FT 10 IN. - WHEELS EXTENDED: 32 FT

#### **BATTERY LOCATION**



#### FLAMMABLE MATERIAL LOCATIONS

747-81



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## FLIGHT DECK CONTROL SWITCH LOCATIONS

747-8I

#### FLIGHT DECK CONTROL SWITCH LOCATIONS



FUEL CONTROL SWITCHES - CUTOFF



<b>Critical Response Information</b>	
Number of Engines:	4
Passenger & Crew Capacity:	10 max.
Fuel Capacity:	60,755 gallons
Emergency Information:	See following pages

Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### **EMERGENCY RESCUE ACCESS**



#### 1 ENTRY DOORS EXTERNAL HANDLE (2)

HANDLE RELEASE

TO OPEN DOOR: 1. PUSH HANDLE RELEASE BUTTON AND PULL HANDLE FROM RECESS. 2. ROTATE 180° IN DIRECTION OF "OPEN"

ARROW. 3. PULL DOOR OUTWARD

NOTE: OPENING A DOOR FROM THE OUTSIDE DISENGAGES THE EMERGENCY EVACUATION SYSTEM AND THE ESCAPE SLIDE WILL NOT DEPLOY.

#### 2 CREW OVERHEAD ESCAPE HATCH EXTERNAL HANDLE



TO OPEN HATCH:

1. PUSH RELEASE TRIGGER ON HANDLE (HANDLE WILL SPRING OUT FROM RECESS APPROXIMATELY 3 INCHES). 2. ROTATE HANDLE 180° CLOCKWISE.

3. PUSH HATCH INWARD.

#### 3 CUT-IN AREAS

NOTE: CUT-IN AREAS REQUIRE METAL CUTTING PORTABLE POWER EQUIPMENT. BECAUSE OF TYPE OF STRUCTURE AND POSSIBLE INJURY TO PERSONNEL WITHIN, IT IS RECOMMENDED THAT MAJOR EFFORT TO GAIN ACCESS BE DIRECTED TO HATCHES AND DOORS. URGENCY OF SITUATION WILL DICTATE THE NECESSITY FOR A CUT-IN.

## SEATING DIAGRAM



MAXIMUM SEATING CAPACITY FOR FLIGHT: TEN (10) PEOPLE

## **BATTERY LOCATION**



For Reference Only, some configurations may vary.

#### FLAMMABLE MATERIAL LOCATIONS



equipment across it. Signs could include out are not immed to deforming of addition, resources as a signs of flame impingement or uneven surfaces. Surface integrity can be checked with a pike WARNING: Approach landing gear trucks from forward or aft at a 45 degree angle when pole, axe or any instrument used to sound surfaces for integrity. approaching hot brakes or fighting a wheel fire, as rims and tires may pose a

fragmentation hazard.

For Reference Only, some configurations may vary.

## FLIGHT DECK CONTROL SWITCH LOCATIONS



FUEL CONTROL SWITCHES - CUTOFF



Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	4 max.
Fuel Capacity:	39,593 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## FLAMMABLE MATERIAL LOCATIONS



#### FLAMMABLE MATERIAL LOCATIONS



#### FLAMMABLE MATERIAL LOCATIONS





4

## EMERGENCY EXITS



#### **EMERGENCY EXITS**



#### **EMERGENCY EXITS**

#### AIRCRAFT ENTRY-Continued AND ENGINE SHUTDOWN

b. Emergency entry (gear up):

#### NOTE:

On gear up landings, the master hatch jettison handle will be inaccessible. Use hatch jettison handles on left and right sides of aircraft.

(1) Open hatch jettison handle door, located on both sides of the lower fuselage below aft escape hatch, and push hatch jettison handle release bar.



Face away from the aircraft and shield body (if possible) from debris as the hatches are jettisoned. Fragments could cause serious injury to personnel.

- (2) Pull hatch jettison handle(s) to jettison escape hatches.
- 3. CUT-IN
- a. Cut through the largest glass area available.

## ENGINE SHUTDOWN



When emergency aircraft shutdown needs accomplishing and the Emergency Generator Switch is not shut off and is left in either the "ON" or "AUTOMATIC" position, the engines will throttle/line down then the aircraft computer will automatically throttle the engines back to idle!!!

#### NOTE:

The last engine shutdown must be driving an operable generator. AC power is required for engine shutdown using Engine Start Switches.



#### **ENGINE SHUTDOWN**





#### **EJECTION SAFETYING AND AIRCREW EXTRACTION**



#### **EJECTION SAFETYING AND AIRCREW EXTRACTION**

#### AIRCREW EXTRACTION-Continued

- 3. AIRCREW EXTRACTION-Continued
- Disconnect left and right leg restraints at the crewmembers legs.
- Release lap belt by lifting cover and pulling release bar.
- c. Release left and right survival kit buckles by depressing "PUSH TO RELEASE" tab on each buckle.
- Release left and right should harness fittings by lifting cover and pulling release bar on each fitting.
- Place oxygen "ON-OFF" valve, located on side console at each crewmember's station, to "OFF".
- Disconnect oxygen hose and communications cord.
- g. Place oxygen "MSOGS" switch and "SPLY" switch, located on copilot's side console, to "OFF". This shuts down the oxygen generating system and stops the flow of oxygen from the system.









Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	104 max. (2 crew min., 102 passengers max.)
Fuel Capacity:	29,984 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## FLAMMABLE MATERIAL LOCATIONS



## **BATTERY LOCATIONS**













#### **ENGINE SHUTDOWN**



## AIRCREW EXTRACTION



# **MCDONNELL DOUGLAS DC-8-10**



Critical Response Information	
Number of Engines:	24
Passenger & Crew Capacity:	217 max. (3 crew min., 214 passengers max.)
Fuel Capacity:	24,275 gallons
Emergency Information:	See following pages

#### Sources:

All diagrams provided by Boeing and are located in the Airplane Rescue and Fire Fighting Information Pamphlet.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html


## MCDONNELL DOUGLAS DC-8-10

FLAMMABLE MATERIALS LOCATIONS

#### 2021

**4 ENGINES** 

#### **MCDONNELL DOUGLAS DC-8-10**

#### **EMERGENCY RESCUE ACCESS**



## **MCDONNELL DOUGLAS DC-8-10**

#### **BATTERY LOCATIONS**



**4 ENGINES** 



Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	19 max.
Fuel Capacity:	21,000 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## FLAMMABLE MATERIAL LOCATIONS, EMERGENCY ENTRY AND BATTERY LOCATIONS



#### **ENGINE SHUTDOWN**

#### ENGINE SHUTDOWN AND AIRCREW EXTRACTION

- 1. ENGINE SHUTDOWN
- Retard throttles, located on pilot's center console, to CUTOFF position (shuts off fuel and ignition).
- Pull engine fire switches located on overhead electrical distribution panel.
- Place battery switch, located top center on flight engineer's panel, to OFF position.

#### NOTE:

- Open circuit breakers at batteries forward in lower lobe instead of disconnecting or removing batteries for power shutdown.
- 2. AIRCREW EXTRACTION
- Unlatch seat belts and remove shoulder harnesses from flight crew and mission crew.

#### NOTE:

- If seat tracks are not damaged during crash landing, use adjustable seat controls for retraction.
- Rest area seats are equipped with seat belts only.
- Flight crew seat arm rests release to lift up.



#### **CABIN ARRANGEMENT**

#### CABIN ARRANGEMENT



E-3 30/35

#### **BOEING KC-135 STRATOTANKER**



Critical Response Information	
Number of Engines:	4
Passenger & Crew Capacity:	4 max.
Fuel Capacity:	29,411 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams provided by U.S. Air Force.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

## **BOEING KC-135 STRATOTANKER**

#### FLAMMABLE MATERIAL LOCATIONS



#### **BOEING KC-135 STRATOTANKER**

#### **PRIMARY ACCESS POINTS**





## HELICOPTERS

## **HUGHES 269**



#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

2 max. 60.8 gallons

For additional emergency response information on this aircraft please contact:

MD Helicopters, Inc. Mesa, AZ Tel: 1-800-388-3378 Fax: 1-480-346-6821 Email: pubs@mdhelicopters.com

## **HUGHES 369**



#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

5 max. (1 crew min., 4 passengers max.)

64 gallons

For additional emergency response information on this aircraft please contact:

MD Helicopters, Inc. Mesa, AZ Tel: 1-800-388-3378 Fax: 1-480-346-6821 Email: pubs@mdhelicopters.com



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	1,295 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

#### Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### AIRCRAFT HAZARDS





HELICOPTERS

#### **AIRCRAFT ENTRY**



#### **ENGINE SHUTDOWN**



#### **AIRCREW EXTRACTIONS**







#### **Critical Response Information**

Passenger & Crew Capacity:

**Emergency Information:** 

Fuel Capacity:

7 max. (1 crew min., 6 passengers max.) 143 gallons See following pages

Sources:

All diagrams provided by the American Eurocopter Fire Department AS350 Aircraft Guide.

Aircraft Information:

Eurocopter, An EADs Company Tel: 1-800-55-55-97-97 Email: customer.assistance@eurocopter.com

#### FUEL CELL LOCATION



# ELECTRICAL COMPONENT & BATTERY LOCATIONS, AND FRONT DOOR JETTISON





#### Front Door Jettison



HELICOPTERS

#### **EMERGENCY FUEL SHUT-OFF LEVERS**











#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

**Emergency Information:** 

7 max. (1 crew min., 6 passengers max.) 143 gallons See following pages

Sources:

All diagrams provided by the American Eurocopter Fire Department AS350 Aircraft Guide.

Aircraft Information:

Eurocopter, An EADs Company Tel: 1-800-55-55-97-97 Email: customer.assistance@eurocopter.com HELICOPTERS

#### FUEL CELL LOCATION



# ELECTRICAL COMPONENT & BATTERY LOCATIONS, AND FRONT DOOR JETTISON





## **Front Door Jettison**



HELICOPTERS

#### **EMERGENCY FUEL SHUT-OFF LEVERS**





#### AIRBUS AS-365 N3+





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	14 max. (2 crew min., 12 passengers max.)
Fuel Capacity:	347 gallons

#### Sources:

Photos and information obtained from Airbus Helicopters. For additional emergency response information on this aircraft please contact:

Airbus Helicopters Inc. 2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000





Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	27 max. (2 crew min., 25 passengers max.)
Fuel Capacity:	414 gallons

#### Sources:

Photos and diagrams obtained from Leonardo Company. For additional emergency response information on this aircraft please contact:

Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) – Italy T: +39 0331 229111





# Critical Response InformationNumber of Engines:2Passenger & Crew Capacity:8 max. (1 crew min., 7 passengers max.)Fuel Capacity:151 gallonsEmergency Information:See following pages

Sources:

Photos and diagrams obtained from Leonardo Company.

Aircraft Information:

Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) – Italy T: +39 0331 229111

#### **BATTERY LOCATION**

#### DC GENERATION SYSTEM

The 28 V dc electrical power is supplied by:

- two generators driven by the engine
- a 24 V dc, 33 Ah nickel-cadmium battery
- an external power source when the helicopter is on the ground.

The main components of the DC generation system are shown in Figure 7-39.

The battery, housed in the nose compartment, is provided with a temperature sensor. When the battery temperature exceeds 71  $\pm$ 3 °C, the sensor sends a signal to the DAU which causes the display of the BATT HOT caution message on the EDU1.



(Sheet 1 of 2)

#### SEATBELT OPERATION



#### SEATBELT OPERATION



#### FLAMMABLE MATERIAL LOCATIONS





ICN-0B-A-157000-G-00001-00644-A-02-1





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	17 max. (2 crew min., 15 passengers max.)
Fuel Capacity:	414 gallons

Sources:

Photos and diagrams obtained from Leonardo Company. For additional emergency response information on this aircraft please contact:

Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) – Italy T: +39 0331 229111

#### **BELL 206B3**





#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

5 max. (1 crew min., 4 passengers max.)

97 gallons

For additional emergency response information on this aircraft please contact:

Bell Helicopter Textron, Inc. P.O. Box 482 Fort Worth, TX 76101 Tel: 1-817-280-2011

#### **BELL 206L4**



#### **Critical Response Information**

Passenger & Crew Capacity:

7 max. (2 crew min., 5 passengers max.)

Fuel Capacity:

110 gallons

For additional emergency response information on this aircraft please contact:

Bell Helicopter Textron, Inc. P.O. Box 482 Fort Worth, TX 76101 Tel: 1-817-280-2011




Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	8 max. (2 crew min., 6 passengers max.)
Fuel Capacity:	215 gallons

Sources:

Photos obtained from Bell Helicopter and Globair.com. For additional emergency response information on this aircraft please contact:





#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

7 max. (2 crew min., 5 passengers max.) 128 gallons

For additional emergency response information on this aircraft please contact:





<b>Critical Response Information</b>	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (1 crew min., 14 passengers max.)
Fuel Capacity:	331 gallons

Sources:

Photos obtained from Bell Helicopter. For additional emergency response information on this aircraft please contact:





# Critical Response InformationNumber of Engines:2Passenger & Crew Capacity:9 max. (2 crew min., 7 passengers max.)Fuel Capacity:203 gallons

#### Sources:

Photos obtained from Bell Helicopter and Globair.com. For additional emergency response information on this aircraft please contact:







#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

4 max. (1 crew min., 3 passenger max.) 29 gallons

For additional emergency response information on this aircraft please contact:

Scott's - Bell 47, Inc. 780 S Elmwood Ave Building 15 PO Box 102 Le Sueur, MN 56058 Phone: 507-665-0035 Fax: 507-665-0038 Email: info@scottsbell47.com

# **BELL UH-1H**



#### **Critical Response Information**

Passenger & Crew Capacity:

15 max. (1 crew min., 14 passengers max.)

Fuel Capacity:

For additional emergency response information on this aircraft please contact:

Bell Helicopter Textron, Inc. P.O. Box 482 Fort Worth, TX 76101 Tel: 1-817-280-2011 204 gallons





Critical Response Information	
Number of Engines:	3
Passenger & Crew Capacity:	60 max. (5 crew min., 55 passengers max.)
Fuel Capacity:	3,212 gallons (internal) and 1,300 gallons (external)
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Airforce Technology and Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

# FLAMMABLE MATERIAL LOCATIONS



### **AIRCRAFT ENTRY**

#### AIRCRAFT ENTRY

H-53E

- 1. NORMAL ENTRY
- a. The upper half of personnel door may be opened from outside by pressing button and turning handle counterclockwise. Push upper half up to cabin ceiling and turn handle counterclockwise to lock in OPEN position. The lower half of personnel door swings in to right. Push button, turn handle counterclock wise and push.
- 2. EMERGENCY ENTRY
- a. The pilot/co-pilot's compartment window may be opened. Press button and turn handle.
- b. The cabin emergency escape hatch (left forward cabin) may be opened. Press button, turn handle counterclockwise and push inward.
- 3. CUT-IN/FORCED ENTRY
- a. Windows are made of acrylic plastic and may be cut or broken. Areas marked on fuselage CUT HERE also may be cut for access. Cut along window frames and marked fuselage areas only.
- b. All CH-53E's have a door in the center of the cabin floor. The door has no external handle, however, entry may be gained by cutting three lock bolts. Once cut, bolts may be pulled out allowing door to be pushed inward.



# **ENGINE AND APU SHUTDOWN**



# AIRCREW EXTRACTION



HELICOPTERS

# **EUROCOPTER (AEROSPATIALE) DAUPHIN**





#### **Critical Response Information**

Number of Engines:

Passenger & Crew Capacity:

Fuel Capacity:

Emergency Information:

15 max. (1 crew min., 14 passengers max.)338 gallonsSee following pages

For additional emergency response information on this aircraft please contact:

Eurocopter, An EADs Company Tel: 1-800-55-55-97-97 Email: customer.assistance@eurocopter.com



#### **Critical Response Information** Number of Engines: 1 Passenger & Crew Capacity: Fuel Capacity: 105 gallons

Emergency Information:

5 max. (1 crew min., 4 passengers max.) See following pages

Sources:

Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000

# FLAMMABLE MATERIAL LOCATIONS







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	8 max. (2 crew min., 6 passengers max.)
Fuel Capacity:	142 gallons
Emergency Information:	See following pages

Sources: Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000

**EMERGENCY EXITS** 



GROUND RESCUE BOOKLET H125

EMERGENCY ACCESS

**COCKPIT DOORS** 



Doors can be jettisoned by actuating the jettison handle. It causes the door to fall away. The handle can be actuated only from the inside

**FIRE LOCATIONS** 



**GROUND RESCUE BOOKLET H125** 

#### FIRE IN THE MAIN GEAR BOX (MGB) COMPARTMENT

WAIT FOR ENGINE AND ROTOR TO COME TO A COMPLETE STOP.



compartment

Approximately 3.0m height

- Spray the extinguishing agent through the easiest available way (gaseous extinguisher recommended) to saturate the MGB compartment. Do not try to open the cowlings.
- In case of severe flash-over, use foam.

**FIRE LOCATIONS** 



GROUND RESCUE BOOKLET H125

#### FIRE IN THE LUGGAGE COMPARTMENT

REMINDER: DO NOT TRY TO OPEN THE CARGO DOORS WITH THE ROTORS SPINNING.

#### DO NOT OPEN THE CARGO DOORS IF SOMEONE IS TRYING TO EVACUATE THROUGH THE SLIDING DOORS.



- The lateral cargo doors are on both sides.
- The rear cargo door is on the left side.
- Saturate the cargo compartments with the extinguishing agent (gaseous extinguisher recommended).

**FIRE LOCATIONS** 



GROUND RESCUE BOOKLET H125

#### FIRE IN THE ENGINE COMPARTMENT

- 1) WAIT FOR ENGINE AND ROTOR TO COME TO A COMPLETE STOP.
- 2) THE TEMPERATURE OF THE ENGINE EXHAUST NOZZLE COULD BE VERY HOT (UP TO 600°C).



- Spray the extinguishing agent (gaseous extinguisher recommended) between engine exhaust and engine nozzle.
- Proceed in circular movements until saturation.

# FLAMMABLE MATERIAL LOCATIONS



**GROUND RESCUE BOOKLET H125** 

POWERPLANTS	SAFRAN Helicopte	r Engines Arriel 2D (one)
FUEL CAPACITY		Up to 540 liters



ADDITIONAL FUEL TANK







#### **Critical Response Information**

Number of Engines:	1
Passenger & Crew Capacity:	8 max. (2 crew min., 6 passengers max.)
Fuel Capacity:	142 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000 HELICOPTERS

# AIRBUS H-130 EMERGENCY EXITS



#### **GROUND RESCUE BOOKLET EC130T2**

#### JETTISONING COCKPIT DOORS



Front doors can be jettisoned by actuating the jettison lever (from the inside), protected by a breakable transparent cover. It causes the door to fall away. It can be also be operated from the outside by the lever.

#### **EMERGENCY EXITS**



#### **GROUND RESCUE BOOKLET EC130T2**

#### **EMERGENCY ACCESS**

#### **OPENING COCKPIT DOORS**





Front doors can be opened by actuating the handles from the inside or the outside.

### **BATTERY LOCATION**

#### BATTERY

The aircraft battery is located on in the left side in the tail boom section.



### **FIRE LOCATIONS**



**GROUND RESCUE BOOKLET EC130T2** 

#### FIRE IN THE ENGINE COMPARTMENT

 WAIT FOR ENGINES AND ROTOR FULL STOP.
THE TEMPERATURE OF THE ENGINE EXHAUST NOZZLE COULD BE VERY HOT (UP TO 600°C).



Spray the extinguishing agent (gaseous extinguisher recommended) between engine exhaust and engine nozzle.
Proceed by circular movements until saturation.

#### **FIRE LOCATIONS**



**GROUND RESCUE BOOKLET EC130T2** 

#### FIRE IN THE LUGGAGE COMPARTMENT

REMINDER: DO NOT TRY TO OPEN THE CARGO DOORS WITH THE ROTORS SPINNING.

DO NOT OPEN THE CARGO DOORS IF SOMEONE IS TRYING TO EVACUATE THROUGH THE SLIDING DOORS.



- The lateral cargo doors are on both sides.
- The rear cargo door is on the left side.
- Saturate the cargo compartments with the extinguishing agent (gaseous extinguisher recommended).

#### **FIRE LOCATIONS**



**GROUND RESCUE BOOKLET EC130T2** 

#### FIRE IN THE MAIN GEAR BOX (MGB) COMPARTMENT

#### WAIT FOR ENGINES AND ROTOR FULL STOP.



Approximately 3.2m height Main Gear Box Cowling

- Spray the extinguishing agent through the easier available way (gaseous extinguisher recommended) for saturating the MGB compartment. Do not try to open the cowlings.
- In case of severe flash-over, use foam.





# Critical Response InformationNumber of Engines:2Passenger & Crew Capacity:8 max. (2 crew min., 6 passengers max.)Fuel Capacity:187 gallonsEmergency Information:See following pages

#### Sources:

Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000

# **EMERGENCY EXITS**



#### **GROUND RESCUE BOOKLET EC135/635**

#### Open the emergency exit



HELICOPTERS

#### **BATTERY LOCATION**

#### **Disconnect the battery**



Disconnect the battery only when the engines are switched off the rotors are stopped!

The battery is located right behind the engine cover. To disconnect the battery you have to resolve and remove the turn lock.



### FLAMMABLE MATERIAL LOCATIONS

#### Auxiliary fuel tank



#### **Fuel System**

The EC135 has two fuel tanks which are located under the seats, made of impact resistant rubber bladders. The fuel filler is located on the left side, behind the passenger door.



HELICOPTERS





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	11 max. (1 crew min., 10 passengers max.)
Fuel Capacity:	242 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000

# AIRBUS H-145 EMERGENCY EXITS

#### Open the emergency exit (sliding door)

If the sliding door is equipped with an (optional) Sliding Doors Jettisoning System, the below shown placard is attached to the door. Follow the instructions to remove the door in case the door cannot be opened.

EMERGENCY EXIT PULL EMERGENCY HANDLE TO FULL STOP TURN DOOR HANDLE AT LEAST 90° TOWARDS THE "OPEN" POSITION PULL DOOR OUTWARDS



1: Pull emergency handle 2: Turn door handle at least 90°, then pull the sliding door outwards

# **EMERGENCY EXITS**



Remove cap



Remove rubber



Pull handle down



Push window at ONE marking spot



Remove window

#### ACCESS TO BATTERY COMPARTMENT

#### **Disconnect the battery**



The battery is located right behind the engine cover on helicopters right side. To disconnect the battery turn the screw until cable can be pulled from the battery.



#### FLAMMABLE MATERIAL LOCATIONS

#### Auxiliary fuel tank



Location of the auxiliary fuel tank

#### 392.5 lb / 58.6 US gal.

#### **Fuel System**

The H145 has two fuel tanks which are located under the cabin floor (seat area), made of impact resistant rubber bladders. The fuel filler is located on the left side, behind the passenger door.






Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	15 max. (2 crew min., 13 passengers max.)
Fuel Capacity:	338 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Airbus Helicopters.

Aircraft Information:

2701 N. Forum Drive Grand Prairie, Texas, 75052 Tel. +1 972 641 0000 HELICOPTERS

#### **EMERGENCY EXITS**



#### **GROUND RESCUE BOOKLET H155**

#### **EMERGENCY ACCESS**

#### COCKPIT DOORS



Doors can be jettisoned by actuating the jettison handle. It causes the door to fall away. The handle can be actuated only from the inside

#### **EMERGENCY EXITS**



**GROUND RESCUE BOOKLET H155** 

#### WINDOWS



The fixed windows (including the sliding door windows) are jettisonable from inside or outside by pushing out / pulling out strongly after removing the sealretaining strip



#### **BATTERY LOCATION**



**GROUND RESCUE BOOKLET H155** 

THE FOLLOWING PROCEDURES ARE TO BE USED IN CASE OF EMERGENCY ON GROUND ONLY IF PILOTS ARE INCAPACITED.

#### **ELECTRICAL SHUTDOWN**

BATTERY

EMERGENCY CUT-OFF switch on overhead control panel Main battery is located between the nose and the cockpit of the aircraft. Emergency battery is located in the luggage compartment.



#### FLAMMABLE MATERIAL LOCATIONS



GROUND RESCUE BOOKLET H155

FUEL CAPACITY ...... Up to 1280 liters LH group (green): 577 liters RH group (yellow): 703 liters



ADDITIONAL FUEL TANK IN CARGO COMPARTMENT



## **MD-500E**





Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	6 max. (1 crew min., 5 passengers max.)
Fuel Capacity:	64 gallons
Fuel Tank Locations:	Two interconnected bladder cells in bays below passenger/cargo compartment floor of lower section
Emergency Information:	See following pages

Sources: Photos and diagrams obtained from MD Helicopters.

Aircraft Information:

https://www.mdhelicopters.com/contact.html

#### **MD-500E BATTERY LOCATION** ENGINE WASH FITTING ENGINE OIL TANK DRAIN 2 MAIN TRANSMISSION OIL COOLER DRAIN ENGINE OIL COOLER DRAIN ø STATION 137.50 BULKHEAD BYPASS INDICATOR SCAVENGE OIL FILTER A TRANSMISSION OIL LEVEL SIGHT GAUGE MAIN TRANSMISSION FILLER BATTERY MAIN TRANSMISSION DRAIN VALVES ni. LIQUID LEVEL SIGHT GAGE OVERBOARD OIL DRAIN LINE đ -ONE-WAY LOCK 8 ENGINE ACCESSORY GEARBOX DRAIN EXTERNAL POWER RECEPTCLE BREATHER FILLER ENGNE OIL TANK FILLER FUEL CELL DRAIN WALVE ENGINE COMBUSTION FUEL DRAIN GROUND B

LIQUID LEVEL SIGHT GAGE

TAIL ROTOR TRANSMISSION DRAIN

F03-031-1

FUEL SYSTEM FILLER

## MIL MI-17



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	33 max. (3 crew min., 30 passengers max.)
Fuel Capacity:	494 gallons

Sources:

Photos obtained from Army Technology

### **BOEING MODEL 234 / CH-47 CHINOOK**





#### **Critical Response Information**

Passenger & Crew Capacity:

44 max. (2 crew min., 42 passengers max.)

Fuel Capacity:

2,100 gallons

For additional emergency response information on this aircraft please contact:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html HELICOPTERS



#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

**Emergency Information:** 

2 max. (1 crew min., 1 passenger max.) 30.7 gallons See following pages

Sources: All Diagrams Provided by Robinson

Aircraft Information:

Robinson Helicopter Company 2901 Airport Drive Torrance, CA 90505 310-539-0508

### FUEL AND BATTERY SHUT OFF LOCATIONS







#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

Emergency Information:

4 max. (1 crew min., 3 passengers max.) 50 gallons See following pages

Sources: All Diagrams Provided by Robinson

Aircraft Information:

Robinson Helicopter Company 2901 Airport Drive Torrance, CA 90505 310-539-0508

### FUEL AND BATTERY SHUT OFF LOCATION



### SIKORSKY S-70 / JAYHAWK





### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

Emergency Information:

17 max. (4 crew min., 13 passengers max.)361 gallonsSee following pages

Sources: All diagrams provided by Sikorsky.

Aircraft Information:

Lockheed Martin Corporation Melissa Chadwick +1 (202) 740-5997

**HELICOPTERS** 

## SIKORSKY S-70 / JAYHAWK

### **CRASH RESCUE**



### **SIKORSKY S-76A**





#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

Emergency Information:

14 max. (2 crew min., 12 passengers max.)280 gallonsSee following pages

Sources: All diagrams provided by Sikorsky.

Aircraft Information:

Lockheed Martin Corporation Melissa Chadwick +1 (202) 740-5997

**HELICOPTERS** 

## SIKORSKY S-76A

### CRASH RESCUE



### SIKORSKY S-76A

### **COMPOSITE MATERIALS LOCATIONS**



### SIKORSKY S-76-B



#### **Critical Response Information**

Passenger & Crew Capacity:

Fuel Capacity:

**Emergency Information:** 

14 max. (2 crew min., 12 passengers max.)280 gallonsSee following pages

Sources: All diagrams provided by Sikorsky.

Aircraft Information:

Lockheed Martin Corporation Melissa Chadwick +1 (202) 740-5997 HELICOPTERS

## SIKORSKY S-76-B

### CRASH RESCUE



### SIKORSKY S-76-B

### **COMPOSITE MATERIALS LOCATIONS**



### **SIKORSKY S-92 HELIBUS**





Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	21 max. (2 crew min., 19 passengers max.)
Fuel Capacity:	760 gallons
Emergency Information:	See following pages

Sources:

Photos and diagrams obtained from Lockheed Martin and S-92 Helideck Manual.

Aircraft Information:

Lockheed Martin Corporation 6801 Rockledge Drive Bethesda, MD 20817 U.S.A. (301) 897-6000

## SIKORSKY S-92 HELIBUS EMERGENCY EXITS

Upper cabin door



Cabin emergency exits



Lower cabin door



Cockpit emergency exits



# SIKORSKY S-92 HELIBUS

### **BATTERY DISCONNECT**

#### **Disconnect battery**



Figure 8 – Aircraft battery

The aircraft battery is installed in the nose compartment.

To disconnect the battery;

- Open radome.
- Rotate the battery connector counter clockwise (CCW) until disconnected from the battery.
- Move connector away from battery.

## **SCHWEIZER 300C**







Critical Response Information	
Number of Engines:	1
Passenger & Crew Capacity:	2 max.
Fuel Capacity:	32.5 gallons
Emergency Information:	See following pages

Sources: All photos and diagrams obtained from Schweizer.

Aircraft Information:

3901 N Main Street Hangar 2S Ft. Worth, TX 76106 USA +1.817.405.2100 SchweizerUSA.com

HELICOPTERS

#### Aviation Emergency Response Guidebook Basic Aircraft Guide for Emergency Responders

## **SCHWEIZER 300C**

### FLAMMABLE MATERIAL LOCATIONS



### **SCHWEIZER 300C**

#### **EMERGENCY PROCEDURES – FIRE ON THE GROUND**

3-12. ENGINE/FUSELAGE/ELECTRICAL FIRE ON THE GROUND. Pull mixture control to IDLE CUTOFF. Set fuel shutoff valve in CLOSED position. Set battery switch in OFF position. Set alternator switch in OFF position. WARNING REMAIN CLEAR OF ROTOR BLADES DURING AND AFTER EVACUATION. Exit aircraft with fire extinguisher. • 3-13. ENGINE/FUSELAGE FIRE, OR FIRE OF UNDETERMINED **ORIGIN, IN FLIGHT - LOW/CRUISE ALTITUDE.** Note: If a fire is observed during flight, prevailing conditions such as day/night, altitude, and available landing areas must be considered in order to determine whether to execute a power-on or power-off landing. Power-on landing: Maintain airspeed and rotor RPM; be prepared to perform a full autorotation at any point in the approach. Immediately perform power-on landing to suitable area. If time permits: Set battery switch in OFF position. Set alternator switch in OFF position. Set cabin heater switch in OFF position.



Critical Response Information	
Number of Engines:	2
Passenger & Crew Capacity:	28 max. (4 crew min., 24 passengers max.)
Fuel Capacity:	3,640 gallons
Emergency Information:	See following pages

#### Sources:

Photos and diagrams provided by Boeing and U.S. Air Force, Technical Order 00-105E-9 and STANAG 3896 Aerospace Emergency Rescue and Mishap Response Information (Emergency Services), February 2006.

Aircraft Information:

Boeing Defense, Space and Security St. Louis, MO 63166 Tel: 1-314-232-0232 Web: www.boeing.com/contactus.html

#### FLAMMABLE MATERIAL AND BATTERY LOCATIONS



HELICOPTERS

### **AIRCRAFT HAZARDS**



OBOGS, OBIGGS, FLARE/CHAFF, BATTERY DISCONNECT AND LANDING GEAR PIN LOCATIONS

- 1. OBOGS/OBIGGS
- An onboard oxygen generating system (OBOGS) produced oxygen enriched air for the crew breathing and an onboard inert gas generating system (OBIGGS) produced nitrogen for fuel tank inerting. Both systems are located in the cabin floor panel.
- 2. FLARE AND CHAFF (Pyrotechnics)
- a. Dispensers are located on the aft right and left sponsons.
- 3. BATTERY DISCONNECT



RIGHT AFT SIDE

V-22

### AIRCRAFT ENTRY



- a. The side windows are removed by a window cutter assembly. Each assembly consists of a continuous length of explosive cord molded into a silicone rubber charge holder. A fiberglass retainer bolted to the window frame secures the charge holder against the side window. If pyrotechnics fall, cockpit windows are too thick for conventional ax and a power rescue saw OR extracation saw will have to be used.
- . PERSONNEL SURVIVAL EQUIPMENT LOCATIONS
- a. Forward Fire Extinguisher (mounted to bulkhead)
- . Cabin Door and Escape Hatch
- c. Flotation Equipment (provisions)
  d. Alternate Seat Position or 20-Man Life Raft
- Alternate Seat Position or 20-N
  Aft Right Side Escape Hatch
- Aft Fire Extinguisher
- . Escape/Maintenance Hatch (top of fuselage)
- . Aft Left Side Escape Hatch
- First Aid Kit Forward Left Side Escape Hatch
- k. 12 Man Life Raft
- Nuclear, Biological, Chemical (NBC), Ventilator



### **AIRCRAFT ENTRY**



### **ENGINE SHUTDOWN**



### **AIRCREW EXTRACTION**





## **BALLISTIC PARACHUTE SYSTEMS**

## **BALLISTIC PARACHUTE SYSTEMS**

### OVERVIEW

This section of the Basic Aircraft Guide is intended as a reference to familiarize first responders with the symbols used to identify whether an aircraft is equipped with a ballistic parachute system (BPS) and to provide precautionary procedures to follow when one is identified.

#### A. WHAT IS A BALLISTIC PARACHUTE SYSTEM?

The BPS is an emergency system that deploys a full-sized aircraft parachute using a rocket or canister of compressed gas as a ballistic deployment device. The device may deploy from any angle of the aircraft depending on the aircraft and installation. The rocket is deployed using a cockpit actuation handle that is physically attached to the rocket via a mechanical cable. The basic components of a BPS during deployment are shown in **Figure 1** below.



Figure 1 - Deployment of BPS

WARNING: If an aircraft is identified as having a BPS you should notify the parachute manufacturer and all persons working the accident site.

It is imperative to avoid the path of these systems, as both the ballistic device and the parachute can cause great bodily harm. It is also important to note the attachment straps coming out of the side of the aircraft. The locations of the embedded airframe straps and the egress hole for the BPS cannot be seen after the aircraft is painted. If the system is live and deploys on the ground, the straps can pose an entanglement hazard.
## **B. IDENTIFYING BPS-EQUIPPED AIRCRAFT**

#### **EXTERNALLY MOUNTED BPS**

The BPS comes in a variety of shapes and sizes, and the application and type of aircraft may affect how the system is attached. On smaller aircraft, the parachute may be externally mounted as shown in **Figure 2**.



Figure 2 - Externally Mounted BPS Examples

When the BPS is not externally-mounted or visible due to either application or circumstances of the accident, the area should be scanned for other indications that a BPS might be present. These indications could be a deployed parachute, a rocket canister either in the aircraft or around the accident site, or labeling on the aircraft.

WARNING: If a BPS is identified, and you cannot see the chute, assume that the ballistic device (rocket) is still live and aboard the aircraft.



Figure 3 - ASTM 2316-06 Standard Labeling

In an external application, it is possible for a BPS to come loose upon impact during an accident and be scattered among wreckage.

Labeling is an easy method for identifying a system; however, circumstances of the accident such as soot, dirt, damage, or darkness could prevent visual identification. Light sport aircraft require ASTM-standard labeling as shown in **Figure 3**.



Figure 4 - Pre-ASTM Standard Labeling Examples

Prior to the ASTM-Standard placards, many aircraft were identified with smaller subdued labels, as shown in **Figure 4**. These labels may be placed over where the ballistic device will deploy or located on the front windshield.

#### MANUFACTURER-INSTALLED BPS

A number of aircraft manufacturers have included BPSs as an option or even as standard equipment to ensure the safety of users. Examples include:

- Cirrus SR20, SR22, SF50 Vision Jet
- Icon A5 Amphibious Light-Sport Aircraft

### C. BALLISTIC PARACHUTE SYSTEM EXAMPLE LAYOUT

When it is determined that a BPS system is present, it is important to be familiar with the parachute assembly package and enclosed cable locations to avoid deploying the rocket. The diagrams below (**Figures 5 through 7**) show a generic aircraft illustrating the no-cut zones and parachute assembly location that houses the ballistic device and parachute.



Figure 5 - BPS Sample Layout



Figure 6 - Parachute Strap

Figure 7 - Parachute Assembly

In the close-up of **Figure 8**, the igniter and activation cable can be seen on the right. The line cutters are a small, time-delayed pyrotechnic devices used to level the airplane during descent. If these are identified in the wreckage, handle with caution, as they could be hot or in some instances, the cutting blade could be discharged out the end of the housing. Though each BPS may not look the same as displayed in **Figure 8**, each system will contain the same components. The two most important components that should be identified are the rocket and the activation cable.



Figure 8 - Parachute Assembly

If extraction is required for rescue, do not cut into the top or aft side of the fuselage indiscriminately as shown in **Figure 9**.



Figure 9 - No Cut Zones

It is important to note the position of the rockets and the direction in which they will fire. The ASTM has created a standard placard to be located on the rockets, as well. The rocket is usually red and about the size of a 16oz. soft drink can. When installed, it is encased in additional aluminum housing, as shown in **Figure 10**.



Figure 10 - Rocket Labeling

Undeployed rockets at the scene of an accident aircraft pose a serious threat to the safety of first responders. These rockets have significant power. The direction of travel is controlled by the cables attached to the rocket, but if the attachment is compromised in an accident, the direction of travel is less predictable.

**Figure 11** illustrates several versions of a BPS with arrows showing the direction in which the rocket is pointing. The arrows in **Figure 12** below point to the cables that would run to the cockpit actuation handle.



Figure 11 - Rocket Identification and Positioning Examples



Figure 12 - Actuation Cable Locations

Moving a damaged aircraft may stretch or distort the activation cable causing the rocket to ignite and launch. Cutting the cable as close to the igniter as possible can considerably reduce the chances of an inadvertent launch.

### D. APPROACHING AND DISABLING THE BPS

As the accident scene is approached, use caution and look for signs that a BPS may be present. If the parachute is out of the aircraft but the rocket is still visible treat the rocket as if it were live, as it could have broken loose upon impact. If the parachute canopy has not fully collapsed, collapse it by using either water or by rolling a heavy vehicle over the chute to prevent it from re-inflation. Roll up the collapsed canopy and secure. Straps and risers can become an entanglement hazard or an entrapment hazard if the canopy re-inflates. **Figure 13** below depicts the approximate scale of a parachute canopy compared to aircraft, as well as where to find the internally-routed cable handle in the cockpit.



Figure 12 - Parachute Canopy Scale

Do not try to disable the system until after contacting the manufacturer. Each system is different and should only be disabled with guidance from the manufacturer.

# DO NOT PULL THE HANDLE TO DISABLE, AS INTERNAL DAMGE TO THE ROCKET COULD CAUSE SERIOUS INJURY.

In order to perform rescue work in the cockpit of a BPS-equipped aircraft, and the parachute is present, but not deployed, you must secure the system by pinning or installing a zip-tie in the handle located in the cockpit.

To disable the system, the actuation cable must be cut. When cutting the cable, it is best to cut it as close to the igniter as possible to reduce the chance of an accidental deployment.

**Figure 14** below shows examples of tools that should not be used when cutting the actuation cable as they could bend or pull the cable causing the rocket to deploy.



Figure 13 - Unsafe Cutting Tools

Cable cutters such as those designed for cutting bicycle cables should be used to disable BPS igniters. Examples are shown in **Figure 15**.



Figure 14 - Ideal Cutting Tools



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## SEATBELT AIRBAG

## SEATBELT AIRBAG

## OVERVIEW

This section of the Basic Aircraft Guide is intended as a reference to familiarize first responders with a type of airbag system that may be installed on seatbelts used in some aircraft. Safety product requirements on aircraft have increased as air travel has become more prevalent. Within the last decade, new aircraft have been manufactured with airbags as standard equipment. These airbags, along with the seatbelt, can reduce the potential for injury in the event of an aircraft accident.

There are two-, three-, four-, and five-point restraint seatbelts that may contain an integrated airbag device. The airbag is stored in the lap belt of the two and three-point restraint systems and in the torso area of the four- and five-point systems. During an emergency landing, the airbag will inflate similar to an automotive airbag, protecting the head and torso of the occupant. The airbag will also self-deflate after ten seconds. These airbags may be located in the pilot, co-pilot, and passenger seats of an aircraft. The largest manufacturer of seatbelt airbags is AmSafe,<sup>1</sup> which is also one of the largest manufacturers of aircraft personal safety restraints. Therefore, this section uses AmSafe's seatbelt airbag systems as an example to help familiarize first responders with a type of airbag system that may be installed in some aircraft. The proprietary name for their system is AmSafe Aviation Inflatable Restraints (AAIR)<sup>®</sup>.

#### COMPONENTS

Typical AAIR<sup>®</sup> systems include:

- Electronic Module Assembly (EMA) Sensing system and power supply.
- Inflator Assembly Gas Canister containing 6,250 psi compressed helium to inflate the airbag during crash. When the gas is released into the Seatbelt Airbag Assembly (SAA) via the inflator hose, the gas will be released at the surrounding temperature.
- **Seatbelt Airbag Assembly** Personal restraint system with airbag built into the webbing to provide enhanced occupant protection during and aircraft crash.
- Interface Cable Assembly Cable which connects the EMA, inflator, and SAA.

Passengers are not hindered by the deflated airbag when trying to egress after a crash event because it is designed to deflate in less than ten seconds, as shown in **Figure 1**.

<sup>1</sup> https://www.amsafe.com/



Figure 1 – Deflated Airbag Example

### AIRCRAFT ACCIDENT OCCURS WHICH CAUSES THE AAIR® TO DEPLOY

When the AAIR<sup>®</sup> system is deployed in an aircraft accident, the system becomes static because the heliumfilled inflator assembly has exhausted its contents. These systems are designed to deflate in less than ten seconds after they deploy in order to allow passengers to exit the aircraft a crash. See **Figure 2** for examples of an AAIR<sup>®</sup> system.



Figure 2 – Seatbelt Examples

#### AIRCRAFT ACCIDENT OCCURS AND AAIR® SYSTEM DOES NOT DEPLOY

If an aircraft accident occurs and the AAIR<sup>®</sup> system does not deploy, follow the steps below to reduce the risk of deploying the system:

• Disconnect the cable assembly from the EMA. The EMA is usually installed under the seat and in some cases is attached to or secured below the floor of the seat. Disconnect from the cable assembly by depressing the locking mechanism which releases connector halves. See **Figures 3 and 4** below.



Figures 3 and 4 – EMA Assembly Location

• Disconnect the connector from the Inflator Assembly which is usually installed on, below, or just behind the seat. Disconnect by squeezing both sides of the connector and gently pulling away from the inflator. See **Figure 5**.



Figure 5 – Inflator Assembly Example

• If access to either of these connectors is not possible due to deformation of the seat assembly or the fuselage, the cable that connects to the inflator assembly can be cut.

# AIRCRAFT ACCIDENT OCCURS WHERE THERE IS A FIRE AND AAIR<sup>®</sup> SYSTEM DOES NOT DEPLOY

If a fire occurs after an aircraft crash event, the Inflator Assembly will auto-ignite at approximately 230° C or 446° F and will release the stored helium gas to inert the system and reduce the risk of injury to emergency personnel.

#### Notes:

This information was obtained using the AmSafe *First-Responder Reference Guide* found at: <u>http://www.aviationfirejournal.com/aviation/library/First-RespondersReferenceGuide.pdf</u>

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## **BASIC AIRPORT COMMUNICATIONS**

## **BASIC AIRPORT COMMUNICATIONS**

### **RADIO COMMUNICATIONS**

Airband, also known as "Victor" or Very High Frequency (VHF), is the band of frequencies used in the field of aviation for radio communications. Airband refers to the VHF band between 108 MHz and 136 MHz which covers use for commercial aircraft, general aviation aircraft, airport traffic control towers, and other aviation related uses.

The lower part of the VHF band, from 108 MHz to 117.95 MHz, is reserved for navigational aids such as Automatic Terminal Information Service (ATIS) messages, VHF Omnidirectional Range (VOR) navigation systems, and precision approach systems such as Instrument Landing Systems (ILS) or Local Area Augmentation System (LAAS). The remaining Airband frequencies are used for voice communications.

The aircraft emergency frequency, also known as "Guard," is a frequency on the Airband reserved for emergency communications for aircraft in distress. For civilian aircraft, the frequency is 121.5 MHz.

Aircraft are equipped with an emergency locator transmitter, which is a radio transmitter attached to the aircraft structure and operates from its own power source on 121.5 MHz and 243.0 MHz. It aids in locating downed aircraft by radiating a downward sweeping audio tone, 2-4 times per second. It is designed to function without human action after an accident.

### AIRPORTS WITHOUT AN AIRPORT TRAFFIC CONTROL TOWER (ATCT)

The regulatory requirements, recommended operations, and communications procedures outlined in Advisory Circular 90-66B, *Non-Towered Airport Flight Operations*, should be followed for airports without an ATCT or one that operates part time. If an ATCT is closed, aircraft in distress should contact the Air Route Traffic Control Center (ARTCC) on the guard frequency (121.5 MHz). Under normal circumstances, aircraft can communicate with airport staff at an airport without an ATCT via the Common Traffic Advisory Frequency (CTAF) allocation detailed on the pilot's Sectional Charts and/or Chart Supplement.

Pilots approaching an airport without an ATCT are able to communicate their intentions and obtain airport/air traffic information using the following methods:

- Communicating with a Flight Service Station (FSS) that is providing airport advisories on CTAF.
- Making self-announcing broadcasts on CTAF.

All inbound traffic should continuously monitor and communicate, as appropriate, on the designated CTAF starting from at least 10 miles from the airport until clear of the movement area. Departing aircraft should continuously monitor/communicate on the appropriate frequency from startup, during taxi, and until 10 miles from the airport, unless the Federal Aviation Regulations or local procedures require otherwise.

COMMUNICATIONS

Emergency responders should use the same phraseology on CTAF as pilots arriving at the airport. Responders should state who they are, their location, and their intentions. For example, if an emergency vehicle were to respond to an aircraft emergency at the Tallahassee International Airport (TLH), the message over CTAF should be "Emergency vehicle; Tallahassee; fire department on Taxiway Alpha responding to aircraft on fire at intersection of Taxiway Alpha and Taxiway Charlie." This message clearly informs all other air traffic and responders of what is going on without being too verbose. If the emergency is located on a runway or taxiway, the information should be repeated on CTAF at regular intervals until the scene is clear or when an aircraft announces their intention to land at the airport.

## AIRPORTS WITH AN AIRPORT TRAFFIC CONTROL TOWER

When communicating with the ATCT, emergency responders should follow these guidelines:

- Practice radio transmissions that are **timely**, **precise**, **concise**, and **disciplined**. Avoid radio transmissions are that are slow (or late), sloppy, long-winded, and disorganized, and are filled with pauses and extraneous verbiage.
- Always speak clearly and in a normal conversational tone.
- Always comply promptly and correctly with ATCT clearances and instructions. Listen before a transmission is made so instructions from the ATCT can be followed in a timely manner. Repeat any instructions given by the ATCT to confirm your understanding.
- Think before you speak. Each radio transmission should be to the point and should not include the words "uh" or "um".
- Make sure every initial call-up follows this specific four-part sequence as requested by the FAA **who** you are calling, **who** you are, **where** you are, and **what** you want if it is a request or what you are doing if it is a report.
- Follow the standard sequence:
  - the full and proper name of the facility being called (on initial call-up only)
  - your full aircraft identification (on initial call-up only)
  - your location (if needed) and
  - the type of message to follow or your request (if it's short)
  - the word "Over"
  - EXAMPLE: "COLUMBIA GROUND CESSNA THREE ONE SIX ZERO FOXTROT IFR MEMPHIS, OVER"
- For additional information and examples please refer to the FAA's "Radio Communications Phraseology and Techniques<sup>1</sup>" publication.

1

For information, please visit: <u>https://www.faa.gov/air\_traffic/publications/atpubs/aim\_html/chap4\_section\_2.html</u>

#### COMMUNICATIONS WITH THE AIRPORT TRAFFIC CONTROL TOWER

*ABEAM*- An aircraft is "abeam" when it is approximately 90 degrees to the right or left of the aircraft track. Abeam indicates a general position rather than a precise point.

ABORT- To terminate a preplanned aircraft maneuver; e.g., an aborted takeoff.

*ACKNOWLEDGE* – Let me know that you have received my message.

ADVISE INTENTIONS- Tell me what you plan to do.

AFFIRMATIVE- Yes.

**BLOCKED**– Phraseology used to indicate that a radio transmission has been distorted or interrupted due to multiple simultaneous radio transmissions.

*EMERGENCY*- A distress or an urgency condition.

GO AHEAD- Proceed with your message. Not to be used for any other purpose.

*HOW DO YOU HEAR ME?* A question relating to the quality of the transmission or to determine how well the transmission is being received.

*I SAY AGAIN*- The message will be repeated.

*IMMEDIATELY*– Used by ATC or pilots when such action compliance is required to avoid an imminent situation.

NEGATIVE- "No," or "permission not granted," or "that is not correct."

**OVER**- My transmission is ended; I expect a response.

*READ BACK*- Repeat my message back to me.

*ROGER*– I have received all of your last transmission. It should not be used to answer a question requiring a yes or a no answer.

*SAY AGAIN*- Used to request a repeat of the last transmission.

*SPEAK SLOWER* – Used in verbal communications as a request to reduce speech rate.

*STAND BY*– Means the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in "stand by for clearance." The caller should re-establish contact if a delay is lengthy. "Stand by" is not an approval or denial.

UNABLE- Indicates inability to comply with a specific instruction, request, or clearance.

VERIFY- Request confirmation of information; e.g., "verify assigned altitude."

*WILCO*- I have received your message, understand it, and will comply with it.

### PHONETIC ALPHABET

The chart to the right shows the phonetic alphabet which is used when performing aviation communications.

Responders should be familiar with the phonetic alphabet as pilots are instructed to use it when identifying their aircraft during initial contact with ATC facilities.

The use of the phonetic equivalents should also be used for single letters and to spell out groups of letters, or difficult words, during adverse communications conditions.

CHARACTER	TELEPHONY	PHONIC (PRONUNCIATION)
А	Alfa	(AL-FAH)
В	Bravo	(BRAH-VOH)
С	Charlie	(CHAR-LEE) or (SHAR-LEE)
D	Delta	(DELL-TAH)
E	Echo	(ECK-OH)
F	Foxtrot	(FOKS-TROT)
G	Golf	(GOLF)
н	Hotel	(HOH-TEL)
1	India	(IN-DEE-AH)
J	Juliet	(JEW-LEE-ETT)
К	Kilo	(KEY-LOH)
L	Lima	(LEE-MAH)
М	Mike	(MIKE)
N	November	(NO-VEM-BER)
0	Oscar	(OSS-CAH)
Р	Papa	(PAH-PAH)
Q	Quebec	(KEH-BECK)
R	Romeo	(ROW-ME-OH)
S	Sierra	(SEE-AIR-RAH)
т	Tango	(TANG-GO)
U	Uniform	(YOU-NEE-FORM) or (OO-NEE-FORM)
V	Victor	(VIK-TAH)
W	Whiskey	(WISS-KEY)
X	X-ray	(ECKS-RAY)
Y	Yankee	(YANG-KEY)
Z	Zulu	(ZOO-LOO)
1	One	(WUN)
2	Two	(TOO)
3	Three	(TREE)
4	Four	(FOW-ER)
5	Five	(FIFE)
6	Six	(SIX)
7	Seven	(SEV-EN)
8	Eight	(AIT)
9	Nine	(NIN-ER)
0	Zero	(ZEE-RO)

## **AIR TRAFFIC CONTROL LIGHT SIGNALS**

In the case of radio failure, a signal lamp, or light gun, can be used by the air traffic control tower to communicate with an aircraft in flight, an aircraft on the ground, or group vehicles and personnel. As indicated in **Figure 1**, the signals use red, green, and white lights to communicate the messages.

Color andType of Signal	Movement of Vehicles, Equipment and Personnel	Aircraft on the Ground	Aircraft in Flight
Steady green	Cleared to cross, proceed or go	Cleared for takeoff	Cleared to land
Flashing green	Not applicable	Cleared for taxi	Return for landing (to be followed by steady green at the proper time)
Steady red	Stop	Stop	Give way to other aircraft and continue circling
Flashing red	Clear the taxiway/runway	Taxi clear of the runway in use	Airport unsafe, do not land
Flashing white	Return to starting point on airport	Return to starting point on airport	Not applicable
Alternating red and green	Exercise extreme caution!!!!	Exercise extreme caution!!!!	Exercise extreme caution!!!!

Figure 1 – Air Traffic Control Light Signals

## AIRPORT SIGNAGE

## **AIRPORT SIGNAGE**

## **AIRPORT SIGN AND MARKING – QUICK REFERENCE**

MANDATORY INSTRUCTION SIGNS Taxiway/Runway Hold Position: 4 - 22 Hold short of runway on taxiway or intersecting runway Runway/Runway Hold Position: **4 - APCH** Hold short of aircraft on approach ILS Critical Area Hold Position: ILS Hold short of ILS approach critical area No Entry: Identifies paved areas where aircraft entry is prohibited LOCATION SIGNS Taxiway Location: Identifies taxiway on which aircraft is located **Runway Location:** Identifies runway on which aircraft is located DIRECTION SIGNS Runway Safety Area/Obstacles Free Zone Boundary: Exit boundary of runway protected areas ILS Critical Area Boundary: Exit boundary of ILS critical area Taxiway Direction: J Defines direction & designation of intersection taxiways(s) Runway Exit:  $\leq 1$ Defines direction & designation of exit taxiway from runway **Outbound Destination:** 22 个 Defines directions to takeoff runways Inbound Destination: FBO 뇌 Defines directions for arriving aircraft Information: NOISE ABATEMENT PROCEDURES IN EFFECT 2300 - 0500 Provides procedural or other specialized information Taxiway Ending Marker: Indicates taxiway does not continue

DISTANCE REMAINING SIGNS					
	Runway Distance Remaining:				
7	Provides remaining runway length				
	in 1,000 feet increments				
PAVEMENT MARKINGS					
	Holding Position:				
	Denotes entrance to runway from a				
	taxiway				
	ILS Critical Area/POFZ Boundary:				
	Denotes entrance to area to be				
<u></u>	protected for an ILS signal or				
	approach airspace				
	Taxiway/Taxiway Holding Position:				
	Denotes location on taxiway or				
	apron where aircraft hold short of				
	another taxiway				
	Non-Movement Area Boundary:				
	Delineates movement area under				
	control of ATCT. from non-				
	movement area				
	Surface Painted Holding Position:				
4 22	Denotes entrance to runway from a				
4 - 22	taxiway				
	Enhanced Taxiway Centerline:				
	Provides visual cue to help identify				
	location of hold position				
	Surface Painted Taxiway Direction:				
	Defines designation/direction of				
	intersecting taxiway(s)				
В	Surface Painted Taxiway Location:				
	identifies taxiway on which the				
	Taxiway Edge:				
	Defines edge of usable, full strength				
	taxiway				
	Dashed Taxiway Edge:				
	Defines taxiway edge where				
	adjoining pavement is usable				

## ON-AIRCRAFT LITHIUM BATTERY SYSTEMS

## **ON-AIRCRAFT LITHIUM BATTERY SYSTEMS**

### **OVERVIEW**

Batteries are frequently used in aircraft to provide power to essential components, from navigational equipment to auxiliary power systems. The most frequently used batteries in aviation include Lead Acid, Nickel Cadmium, Nickel-Metal Hydride, and Lithium-ion/Lithium-polymer (Li-ion/Li-poly). However, Li-ion/Li-poly technology has replaced more than 37% of all conventional battery applications. The use of Li-ion/Li-poly batteries to power different aircraft operating systems and components are becoming more common and are sometimes used in unusual or novel design features that could pose a safety risk. For example, there have been two notable fires associated with Li-ion batteries on the Boeing 787 Dreamliner.<sup>1.2</sup> The FAA has also issued a final rule on the operation of unmanned aircraft systems (UAS) over people stating that "damaged or defective lithium polymer or lithium-ion batteries that could cause casualties from battery fires or explosions."<sup>3</sup>

Although it has been reported that these battery systems have been "fixed," the contents of these batteries can still pose extreme hazards for aircraft and first responders. This section of the Basic Aircraft Guide is intended as a reference to identify any aircraft known to be equipped with Li-ion/Li-poly batteries and develop protocols for the safe handling of these batteries by emergency response crews. The protocols would also apply to UAS, most of which also use lithium batteries, though much smaller versions.

### LI-ION/LI-POLY BATTERIES

#### **BATTERY BASICS**

Li-ion/Li-poly batteries are found in multiple aircraft components and vary considerably in size, composition, construction, and configuration depending on the manufacturer. Applications of Li-ion/Li-poly batteries include avionics backup power supplies, emergency lighting, emergency locator transmitters (ELTs), powering auxiliary equipment, uninterrupted power systems (UPS), and engine start batteries for fighter jets and drones.

Aircraft batteries may be either the primary (single use) type or the secondary (rechargeable) type. They contain a positive and negative terminal and when the two terminals are connected, a chemical reaction occurs in the 'cell' that results in the flow of electrons. In a Li-ion/Li-poly battery, each 'cell' contains lithium which acts as the 'source' of electrons. A battery can be composed of multiple 'cells' to increase the flow of electrons and thus power to an aircraft system. **Figure 1** depicts an eight-cell Li-ion battery used in the Boeing 787.

<sup>&</sup>lt;sup>1</sup> National Transportation Safety Board. Auxiliary Power Unit Battery Fire Japan Airlines Boeing 787-8, JA829J, Boston, Massachusetts. NTSB/AIR-14/01. January 7, 2013.

<sup>&</sup>lt;sup>2</sup> Japan Transport Safety Board. Aircraft Serious Incident Investigation Report. Emergency Evacuation Using Slides, All Nippon Airways Co., LTD. Boeing 787-8, JA804A, Takamatsu Airport at 08:49 JST. January 16, 2013.

<sup>&</sup>lt;sup>3</sup> 86 FR 4314, Operation of Small Unmanned Aircraft Systems Over People, January 15, 2021.



Figure 1 – Basic battery configuration in Boeing 787 Dreamliner (April 2013)

#### **REGULATORY SAFETY**

Any battery intended for use as a power source for equipment installed or routinely carried on an aircraft must not only be safe but also have a high energy density, be lightweight, reliable, require minimal maintenance, and be able to operate efficiently over a wide environmental envelope. Li-ion/Li-poly battery manufacturers continue to develop new technologies in an attempt to achieve these criteria, which results in a wide variety of different Li-ion/Li-poly batteries on the market.

The increased introduction of different lithium battery types used in aircraft applications raises the need for design, installation, maintenance and monitoring requirements. Failure of a lithium battery can result in thermal runaway, which is an uncontrolled increase in pressure and temperature that often results in fire The FAA issued Advisory Circular 20-184, Guidance on Testing and Installation of Rechargeable Lithium Battery and Battery Systems on Aircraft, for manufacturers, installers, maintenance personnel, and users of installed rechargeable lithium batteries and battery systems on aircraft.

as the flammable gases vented from the battery are ignited due to the high temperatures. There have been two notable cases where an aircraft fire was caused by a Li-ion/Li-poly battery—Japan Airlines Flight 008 and All Nippon Airways Flight 692 in 2013.

The FAA has issued Advisory Circular (AC) 20-184, *Guidance on Testing and Installation of Rechargeable Lithium Battery and Battery Systems on Aircraft*, for manufacturers, installers, maintenance personnel, and users of installed rechargeable lithium batteries and battery systems on aircraft. The intent of AC 20-184 is to:

- Provide an acceptable means to show compliance with the airworthiness requirements for installed rechargeable lithium battery and battery systems on aircraft using standards provided in Radio Technical Commission for Aeronautics (RTCA) documents RTCA DO-347 and RTCA DO-311; and,
- Provide guidance on how to obtain installation approval for installed rechargeable lithium battery and battery systems on aircraft.

In addition to AC 20-184, the FAA issues Airworthiness Directives (AD) under the authority of 14 Code of Federal Regulations Part 39, Airworthiness Directives. ADs are legally enforceable rules for aircraft, aircraft engines, propellers, and appliances. They are issued when (a) an unsafe condition exists in a product and (b) the condition is likely to exist or develop in other products of the same type design. Since 2006, the FAA has issued 84 ADs regarding lithium batteries for various aircraft and their components. Two ADs have been issued for UASs and include requirements to reduce the presence of safety defects of lithium batteries in these aircraft systems. **Attachment 1** includes the ADs issued for aircraft and UASs for the presence of lithium batteries in aircraft systems or equipment.

#### AIRCRAFT POTENTIALLY CONTAINING A LI-ION/LI-POLY BATTERY

As mentioned earlier, Li-ion/Li-poly batteries are being used more frequently in aircraft applications. It is difficult to determine all aircraft models that could potentially contain a Li-ion/Li-poly battery. For example, these batteries come as standard equipment for some aircraft while other aircraft may contain a Li-ion/Li-poly replacement battery. Airbus, Bell Helicopter, Boeing, Leonardo, Lockheed Martin, Northrop Grumman, Robinson Helicopter Company, Sikorsky, and Textron have shown interest in using Li-ion/Li-poly batteries, but it is difficult to know with certainty which individual aircraft contains these batteries. Emergency personnel should follow standard safety procedures when dealing with any battery or electrical system.

**Table 1** includes a list of aircraft that may potentially contain or use a Li-ion/Lipoly battery. Please note that Table 1 is not exhaustive and is based on readily available information at the time of publishing the Basic Aircraft Guide. NOTE: Not all Li-ion/Lipoly batteries meet FAA Technical Standard Order (TSO) and Supplemental Type Certification (STC).

Table 1 is based on<br/>readily availableinformation at the time of<br/>publication of the Basic<br/>Aircraft Guide. It is not<br/>an exhaustive list of<br/>aircraft potentially<br/>containing Li-ion/Li-poly<br/>battery types.

Table 1         AIRCRAFT POTENTIALLY CONTAINING LI-ION/LI-POLY BATTERIES				
Manufacturer	M	odel		
Airbus	<ul> <li>A350 series</li> <li>A330-300 series</li> <li>A380-800 series</li> <li>A318, A319, A320, and A321 series</li> <li>C-295</li> <li>A300 F4-605R and 310-324</li> </ul>	<ul> <li>A330-200, -202, -203, -223, - 223F, -243, -243F, and -941</li> <li>A340-313, -541, and -642</li> <li>A350-941 and -1041</li> <li>H135/H145</li> <li>A350 XWB</li> </ul>		
Bell	• 505 Jet Ranger X			
Boeing	<ul> <li>787-9 series</li> <li>747-8 series</li> <li>737-600, -700, -700C, -800, - 900, and -900ER series</li> <li>767-200, -300, and -300F series</li> <li>767-2C</li> </ul>	<ul> <li>777- 200, -300, and -300ER series</li> <li>787-8</li> <li>DC3C</li> <li>F/A-18 Hornet</li> </ul>		
Bombardier	<ul> <li>DHC-8-100, DHC-8-200, DHC- 8-300, and DHC-8-400 series</li> <li>DHC-6-100/-200/-300, Twin Otter, turboprop airplanes</li> </ul>	<ul> <li>BD-500-1A10 and BD-500-1A11 series BD-100-1A10</li> <li>CL-600-2E25</li> <li>BD-700-1A11</li> </ul>		
Cessna/Textron	<ul> <li>208 and 208B Caravan</li> <li>650, Citation VII</li> <li>525/525C, Citation Jet</li> <li>700 series, Citation Longitude</li> </ul>	<ul> <li>560/560XL, Citation V</li> <li>550/S550, Citation II</li> <li>750, Citation X</li> <li>680, Citation Sovereign</li> </ul>		
Cirrus	Design SF50			
Dassault	<ul><li>Falcon 2000 series</li><li>Falcon 5X</li><li>Falcon 2000EX</li></ul>	<ul><li>Falcon 7X</li><li>Falcon 900EX</li><li>Falcon 900</li></ul>		
Embraer	<ul><li>ERJ 170-200 LR</li><li>EMB-550, Legacy</li></ul>	<ul><li>ERJ 190-300</li><li>EMB-600 (135BJ)</li></ul>		
Gulfstream	<ul> <li>GVI (G650)</li> <li>G280</li> <li>GV-SP (G550)</li> </ul>	<ul> <li>G150</li> <li>G500/600 (GVII)</li> <li>G200</li> </ul>		
Hawker Beechcraft	<ul> <li>B200 and other Part 23 aircraft</li> <li>Beechcraft BAe.125 Series 800A</li> </ul>	Beechcraft King Air 300 series		
Honda	• HA-420			
Kestrel	K-350 Turboprop			

AIRCRAFT POTENTIALLY CONTAINING LI-ION/LI-POLY BATTERIES				
Manufacturer	Model			
Learjet	• LJ45	• 35, 35A, 36, and 36A		
Leonardo	• AW169			
Lockheed Martin	• F-35			
Northrop Grumman	B-2 Spirit	Global Hawk (RQ-4)		
Pilatus	• PC-12, PC-12/45, and PC-12/4	17		
Piper	PA-32-series			
Robinson	• R66	• R44		
Sikorsky	CH-53K King Stallion			
Spectrum Aeronautical	• S-40			
Tecnam	• P2012			
UASs	Civil small unmanned aircraft weighing less than 55 pounds	Small unmanned aircraft systems		

SOURCES: FAA Airworthiness Directives (AD), Li-ion/Li-poly Battery Manufacturers webpages.

#### EMERGENCY RESPONSE AND HANDLING

Given the ubiquity around devices containing Li-ion/Li-poly battery types, all airport personnel should be aware of their potential hazards. Lithium batteries are installed in most personal electronic devices (PEDs) and rechargeable power banks. Therefore, these battery types can potentially be located in the aircraft cabin and carriage areas, so it is important that both cabin crew and emergency responders are aware that crushed, overheated, or overcharged lithium batteries can cause a fire or pose a risk of explosion.

Fires involving lithium batteries require careful handling. When a lithium battery cell short circuits or heats, it becomes unstable and can potentially explode. The explosion could quickly spread fire to surrounding items. Larger lithium

WARNING: Do not use fire-resistant burn bags to isolate burning lithium-type batteries. Transferring a burning appliance into a burn bag may be extremely hazardous. Do not move the device until you are certain the fire is extinguished and the device is cool.

batteries, like those found powering aircraft electrical systems, are comprised of multiple cells connected in line inside a single casing. Therefore, the risk of overheating spreading from one cell to the next is increased and could result in multiple explosions as the cells ignite. The priority in any instance of Li-ion/Li-poly battery overheating is to cool the device as quickly as possible with water or other non-flammable liquid to prevent or limit the number of cells that ignite. Where cells have already ignited, Halon fire extinguishers should be used to contain the spread of flames until it is safe to cool the device with water or other non-flammable liquid.

According to FAA's Safety Alerts for Operators (SAFO) 09013, the technique for fighting a fire involving Li-ion or Li-poly batteries is the same, regardless if the battery is a disposable or rechargeable lithium battery or battery pack.<sup>4</sup>

- Relocate passengers and other personnel away from the battery.
- Utilize a Halon, Halon replacement, or water fire extinguisher to prevent the spread of the fire to adjacent battery cells and materials.
- Pour water, or other non-alcoholic liquid, from any available source over the cells immediately after knockdown or extinguishment of the fire.
- Leave the device in its place and monitor for reigniting.
- Once the device has cooled and there is no evidence of smoke or a fire, then don personal protective equipment (PPE), if available, before removing the battery.

Additional guidance and sources to consider for airport operators when considering emergency response to Li-ion/Li-poly batteries can be found at the following resources:

- AC 20-42, Hand Fire Extinguishers for Use in Aircraft.
- AC 120-80, In-Flight Fires.
- International Air Transport Association (IATA), Cabin Operations Safety Best Practices Guide.
- IATA, Lithium Batteries Risk Mitigation Guidance for Operators.
- IATA, Lithium Battery Toolkit.
- International Civil Aviation Organization (ICAO) Doc 9481 AN/928, Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods.

WARNING: DO NOT

attempt to pick up and

move a smoking or burning device! B<u>odily</u>

injury may result.

A fire in one cell of a battery may propagate to

other cells. If the device

is hot, the potential for propagation <u>exists.</u>

<sup>&</sup>lt;sup>4</sup> Federal Aviation Administration, Safety Alert for Operators 09013, Fighting Fires Caused by Lithium Type Batteries in Portable Electronic Devices, and supplement. https://www.faa.gov/other\_visit/aviation\_industry/airline\_operators/airline\_ safety/safo/all\_safos/media/2009/SAFO09013.pdf. June 23, 2009,

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## **PROCEDURES FOR MILITARY AIRCRAFT**

## PROCEDURES FOR MILITARY AIRCRAFT

## INTRODUCTION

This section of the Basic Aircraft Guide is intended as a reference to familiarize first responders with the possible emergency access procedures associated with military aircraft incidents or accidents. This section also includes commonly found markings used on military aircraft or its equipment to signal the presence and/or location of emergency survival systems that are pertinent to first responders or crewmembers. However, due to the high variability of military aircraft types, this section does not include a list of aircraft-specific safety procedures and survival systems. This section is focused on rescuing personnel involved in a military aircraft incident or accident. This includes general protocols on how to respond to a military aircraft incident or accident with potential military armaments, weapons systems, or large fuel loads.

## OVERVIEW

Military aircraft come in all shapes and sizes, which presents a challenge to first responders in emergency situations. When responding to a military aircraft incident or accident, there are three specific issues that must be considered by responders when approaching an emergency situation. These issues include the following:

- Weapons systems Explosive materials that could pose an increased risk to first responders and crewmembers.
- Survival systems and actuation devices If triggered inappropriately or a malfunction is present, these systems can pose risk to crewmembers and first responders.
- **Exceptional fuel loads** Tanker aircraft could present an exceptional risk of explosion due to high fuel load.

In an accident involving a military aircraft, the nearest military installation should be notified immediately. Once notified, military authorities will normally dispatch assistance teams, which will include some or all of the appropriate personnel. First responders should not attempt to handle or disarm any weapons systems present on military aircraft. All weapons systems, including munitions, must be handled by trained personnel and/or according to guidance issued from the nearest military installation. Florida military installations and general contact information is included below.

WARNING: In an accident involving a military aircraft, the nearest military installation should be notified.

#### FLORIDA MILITARY INSTALLATIONS AND CONTACT INFORMATION

Florida is home to over 30 active and reserve military installations, hospitals, and training centers operated by the Army, Navy, Air Force, and Coast Guard. Included in this section are only installations that operate some air component with an active airfield.

#### **US Air Force Installations**

Eglin Air Force Base - Valparaiso, FL

– Phone: (850) 882-1110

Hurlburt Field - Mary Esther, FL

– Phone: (850) 884-1110

Patrick Air Force Base - Brevard County, FL

– Phone: (321) 494-1110

Tyndall Air Force Base - Panama City, FL

- Phone: (850) 283-1113
- MacDill Air Force Base Tampa, FL
  - Phone: (813) 828-1110

Homestead Air Reserve Base - Homestead, FL (Miami Area)

– Phone: (305) 224-7000

#### **US Coast Guard Installations**

Air Station Clearwater, US Coast Guard - Clearwater, FL

– Phone: (727) 535-1437

#### **US Naval Air Stations Installations**

Naval Air Station Jacksonville – Jacksonville, FL

– Phone: (904) 542-2338

Naval Air Station Key West - Key West, FL

– Phone: (305) 293-2268

Naval Air Station Pensacola - Pensacola, FL

– Phone: (850) 452-0111

WARNING: First responders should not attempt to handle or disarm any aircraft weapons systems. The nearest military installation should be notified to appropriately handle military aircraft weapons systems and munitions. Naval Air Station Whiting Field - Milton, FL

- Phone: (850) 623-7121

Naval Air Station Panama City - Panama City, FL

– Phone: (850) 234-4011

### EMERGENCY RESPONSE AND SURVIVAL SYSTEMS

As previously mentioned, this section of the Basic Aircraft Guide does not include an exhaustive list of aircraft-specific safety emergency procedures and survival systems. This section provides first responders with a general overview of military aircraft survival systems and safety procedures associated with such systems.

#### **EMERGENCY ACCESS**

In an emergency situation, ensuring the safety of pilots, passengers, and crew is the primary goal. If conditions permit, enter the aircraft through normal access provisions (e.g., doors, canopies, and hatches). Do not enter through confined spaces unless this type of entry is absolutely necessary. Depending upon the type of aircraft, normal access doors may be located on either side of the fuselage, or

DO NOT enter through confined spaces unless this type of entry is absolutely necessary

in the rear of the fuselage. Doors may open to the side, up or down, and from the interior or exterior of the aircraft. In many cases an emergency release is provided in the interior at the hinge side of the door. The release location is normally indicated, and the pull handle is typically painted red. Some aircraft doors deploy escape slides or chutes when opened from the inside of the aircraft. If deployed during the rescue process, these escape slides or chutes may endanger the rescue crew attempting to enter the aircraft. If equipped, there will be markings near the door openings.

#### **Emergency Hatches**

If the normal access door is unable to be used, some military aircraft may have an additional emergency exit hatch. Hatch locations vary according to the type of aircraft and may be located on the sides, bottom or top of the fuselage. Hatches designed for normal personnel access are hinged and may be opened internally or externally. Hatches designed for emergency escape from the interior of the aircraft are generally secured internally with quick-opening compression devices around the circumference. When these are released from the inside or outside of the aircraft the complete hatch is removed. **Figure 1** is representative of one type of aircraft.



Figure 1 – Example aircraft emergency hatches

#### **Jet Canopy Removal**

The canopy, a metal framework with a transparent material covering, is provided to enclose the cockpit and afford protection and visibility to the pilot and/or crew. The canopy system includes the canopy itself, plus all the components used in opening and closing for normal entrance and exit, as well as those used in jettisoning the canopy during an emergency. Three types of canopies are commonly used on military aircraft:

- The clamshell is hinged aft and opens upward at the forward end. When the clamshell is opened manually, it must be physically held, propped, or locked open with a canopy lock depending on type of aircraft.
- The sliding type rests on tracks on the fuselage and opens and closes by a sliding action. The sliding type canopy offers the greatest ease in rescue of crewmembers since no overhead restrictions exist. In normal operation, opening and closing may be accomplished either pneumatically, electrically, hydraulically, or mechanically with counterbalance springs. In the event of malfunction or mechanical damage to the canopy system, it may be opened manually.
- The hinged type is hinged at the side or top and opens from the side. Figure 2 depicts examples of the three types of canopy systems commonly found on certain types of military aircraft.



Figure 2 – Example canopy systems on military aircraft
# **Jettisoning the Canopy**

If normal operation is not possible, jettisoning is another method of opening the canopy. A handle for this purpose is located on the exterior of the aircraft, either left or right under the canopy sill and includes labels. The labels will look similar to those in **Figure 3**. The handle is typically concealed behind a hinged access door and is normally red or yellow and black in color. The trajectory of the canopy is normally up and aft under conditions with no wind. Personnel selecting canopy jettison need to stand in the opposite direction of this trajectory while

WARNING: During adverse jettisoning conditions, the canopy can impact the aircraft, causing possible damage to fuel cells and creating a fire hazard.

making sure that the impact area is vacated by all personnel. During adverse conditions, the canopy can impact the aircraft, causing possible damage to fuel cells and creating a fire hazard. Under these conditions, all considerations for canopy jettison cannot be overlooked.





#### **Forced Entry**

If forced entry is required to access the aircraft, the easiest method of extraction is to cut through the clear plastic aircraft canopy. Using a power rescue saw, this is accomplished by cutting the plastic along the edges of the frame. Commence cutting at the front of the frame. After three sides have been cut, carefully cut the fourth side, and prevent the cover from falling on the crewmember(s) during removal. Caution should be taken when cutting the top rear of the canopy to avoid hitting crewmember(s) and activating the ejection seat firing mechanisms in this area. **Figure 4** provides an example of forced entry using a rescue saw.

Forced entry into fuselage areas presents a more difficult task. The increase in performance of aircraft has placed a demand on increasing the thickness and strength of the aircraft skin. Fire protection personnel, when cutting through the fuselage, must have a knowledge of the aircraft interior. They must know the locations of bulkheads, equipment inside the aircraft that would prevent entry, location of fuel lines and tanks, fuel, flammable liquids, oxygen lines and cylinders, and where forcible entry presents the least obstacles to cut and gain entry. On large aircraft, an outline of cutting areas is stenciled on the aircraft exterior. These marked areas offer the least resistance and most safety in gaining entry. Markings are red dashed lines in a rectangular or square shape. Emergency responders must not be dependent upon these markings, as they may be damaged during an incident. When making forcible entry, the desire is to gain the largest opening as quickly as possible. The power rescue saw, equipped with metal cutting blades, is the most satisfactory tool for forcible entry. If the aircraft is relatively thin skinned, three cuts may be made and then the area cut may be bent down and outward from the aircraft. If the aircraft fuselage is of thicker material, four sides must be cut. When cutting through an aircraft, particularly when utilizing the power rescue saw, a danger exists of ignition of fuel, or any other flammable liquid present by the cutting operation. Adequate fire prevention measures must be taken and standby protection should always be at hand.





WARNING: When cutting through an aircraft, particularly when utilizing the power rescue saw, a danger exists of ignition of fuel, or any other flammable liquid present by the cutting operation.

### **REMOVAL OF PERSONNEL**

As soon as crewmembers are reached, immediately disconnect their oxygen face masks and hoses. If a pressure suit is worn by crewmembers, depressurize the suit before opening the faceplate. These procedures will be followed except when an oxygen mask or faceplate would provide additional fire, fumes, or heat exposure to the crewmember.

### **Harness Release**

There are multiple types of seat restraints used in military aircraft. Though most commonly a multi-point safety harness of some form will be found in military aircraft. Generally, these comprise of multiple straps connecting to one or two buckles. The buckles can be released by pulling up on the emergency release tab and separating them.

On aircraft utilizing certain types of ejection seats, an emergency harness release system (i.e., typically a handle) is incorporated on the seat to release the crewmember. By pulling this handle, most devices employed to restrain the crewmember in the seat are released. In some cases, the parachute and survival kit are still attached to the crewmember and must be manually separated as well. The combined weight of the parachute and survival kit is between thirty and sixty-five pounds, which adds to the difficulty of personnel rescue. Some seats employ an explosive cartridge in the emergency release system. When the handle is actuated, the cartridge is expended and forcibly releases and cuts through the restraints and parachute chords to release the crewmember saving precious time during the rescue.

## **Personnel Ejection Systems**

Airport operators are encouraged to develop an Ejection Seat Training Program (ESTP) in accordance with guidelines issued in AC 91-87, Ejection Seat Training Programs. An ESTP could help train airport personnel on techniques to prevent the inadvertent firing of an ejection seat, canopy, or hatch during rescue operations. Firing of the escape system devices, especially the ejection seat, during rescue operations could be fatal for the crewmember and very likely for fire protection personnel as well. As previously stated, ejection seats vary in design, operation, and firing procedures. For example, some military aircraft may eject downward instead of upward, such as in the Boeing B-52 Stratofortress. If ejection



WARNING: If it is determined that an ejection seat is present, steps should be taken to safety the ejection seat as an initial precaution to rescuing personnel.

Firing of the escape system devices, especially the ejection seat, during rescue operations would in all probability be fatal for the crewmember and very likely for fire protection personnel.

seats are present on the aircraft, it should be marked outside the canopy. **Figure 5** provides an example of an ejection seat warning label. In any event involving a military aircraft incident, the nearest military installation should be notified as soon as possible.

Many ejection seats are fired from the aircraft by pulling down a face curtain handle. The lower firing handle (i.e., "D" ring) is normally located on the forward portion of the seat between the legs of the occupant. However, the lower firing handle may be located elsewhere on the seat. If it is determined that an ejection seat is present, steps should be taken to safety the ejection seat as an initial precaution to rescuing personnel.

The method of safetying the ejection seat varies with the manufacturer's different models and modification to the seat. The firing mechanism which causes the seat to eject is mechanically or gas activated. All seats have ground safety features which will render the seat safe for removal of personnel. Safetying of the seat or seats may be accomplished by:

- Insertion of safety pins in the catapult firing mechanism and the drogue gun.
- Insertion of safety pins in the ejection seat firing handles, triggers, or face curtain.
- By rotating the seat ejection ground control safety lever up and forward, if incorporated; or, by rotating a red flag up to safety the lower ejection control handle.
- Mechanically actuated firing mechanisms may be disarmed through the following:
  - insertion of safety pins in the catapult firing initiator;
  - disconnecting the gas line between the firing initiator and a catapult by means of the quick disconnects; or,
  - cut the initiator hose between the firing mechanism and the catapult.

**Figures 6 through 8** provide an example of possible locations of each of the parts of the ejection seat system described above. Additional information can be found in FAA AC 91-87, *Ejection Seat Training Programs*.



Figure 6 – Example Ejection Seat Drogue Gun



Figure 7 – Example Ejection Seat Safety Pin Location



Figure 8 – Examples of Ejection Seat Control Handles