APPENDIX M: Crash rescue DIAGRAMS

This appendix provides typical diagrams of various makes and models of helicopters. The intent is to provide crash rescue personnel on helibases or other locations with general information concerning aircraft layout, emergency ingress and egress, and emergency procedures for fuel and electrical power shutoff.

It is essential that helibase and other personnel with crash rescue responsibilities, or who may be assigned such responsibilities, receive a briefing by the Pilot on the specific characteristics of the helicopter with which they are working.
ENGINE OIL TANK

FUEL TANKS (INTERNAL)

FUEL FILLER CAP

FUEL SUMP DRAINS

LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH

BATTERY (INSIDE BAGGAGE COMPARTMENT)

HYDRAULIC TANK

FIRE EXTINGUISHER (ON FLOOR BESIDE PILOT'S SEAT)
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

* IF CABIN OR CARGO-PASSENGER DOOR FAILS TO OPEN, BREAK WINDOWS OR WINDSHIELD.

* ALL DOORS HAVE RECESSED HANDLES POINTING FORWARD, PULL OUT AND BACK OUTSIDE. INSIDE PULL UP TOWARDS HANDLES UP.

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURE.
1. ENGINE SHUTDOWN

A. ROTATE THROTTLE, LOCATED ON PILOT'S COLLECTIVE PITCH STICK, TO OFF POSITION.

B. OH-58 PULL FUEL SHUTOFF VALVE, LOCATED OVERHEAD IN CREW COMPARTMENT, AFT TO OFF POSITION. 206B TURN FUEL SWITCH ON PANEL TO OFF POSITION.

C. PLACE BATTERY SWITCH, LOCATED ON OVERHEAD SWITCH PANEL, TO OFF POSITION.

2. AIRCREW EXTRACTION

A. UNLATCH LAP BELTS AND REMOVE SHOULDER HARNESS FROM CREWMEMBER(S).
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH

- To gain entrance to cabin, slide or break either cabin door window.

- If cabin door or cargo passenger door fails to open, break windows or windshield.

- Pilot and passenger doors have recessed handles pointing forward, outside—pull out and back inside—pull up.

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**206L-3**

- Engine oil tank
- Hydraulic reservoir
- Battery switch
- Fuel tanks (3)
- Cargo-passenger door 2 places
- Cabin door 2 places
- Panel door (see inset)

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**Panel door handle**

Opening instructions:
1. Open rear door
2. Lift panel door handle
3. Rotate as shown

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See back side for emergency shutdown procedures.
Emergency Procedure:

1. Wait until all rotors have stopped.

2. Shut off fuel switch located in the instrument panel. It's usually covered by a metal red cover.

3. Disconnect battery located on nose of helicopter. Remove front panel, and rotate knob counterclockwise, and disconnect cable from battery.

4. Evacuate personnel if necessary.

5. Make sure ELT is in the on position, and remove from helicopter. ELT is located in the chin bubble area on the pilots side.

6. Remove fire extinguisher. It's located between the two front seats at shoulder level.

7. Remove first aid kit. It's located between the two aft facing seats in the rear passenger area.

8. If possible, secure the area from outside interference.
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

- TO GAIN ENTRANCE TO CABIN, SLIDE OR BREAK EITHER CABIN DOOR WINDOW AND PULL JETTISON HANDLE.
- IF CABIN DOOR FAILS TO JETTISON OR CARGO-PASSENGER DOOR FAILS TO OPEN, BREAK WINDOWS OR WINDSHIELD.
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

- TO GAIN ENTRANCE TO CABIN, SLIDE OR BREAK EITHER CABIN DOOR WINDOW.
- IF CABIN DOOR OR CARGO PASSENGER DOOR FAILS TO OPEN, BREAK WINDOWS OR WINDSHIELD.

- HYDRAULIC RESERVOIR
- ENGINE OIL TANKS (2)
- FUEL TANKS (5)
- CARGO-PASSENGER DOOR 2 PLACES
- CABIN DOOR 2 PLACES
- BATTERY
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH

- EMERGENCY ENTRANCE TO COCKPIT IS GAINED THROUGH JETTISON DOORS BY ACTUATING HANDLE LABELED DOOR JETTISON PUSH TRIGGER, TURN HANDLE. IF DOOR DOES NOT FALL AWAY, PULL AWAY.

- EMERGENCY ENTRANCE TO CARGO COMPARTMENT IS GAINED THROUGH CABIN DOOR OR UPPER DOOR ESCAPE HATCH, CABIN ESCAPE HATCH, RAMP ESCAPE HATCH, AND CUTOUT PANELS. ALL ESCAPE HATCHES CAN BE OPENED BY PULLING THE YELLOW TAB OUT AND PUSHING THE PANEL IN.

- AN ACCESS DOOR TO THE CARGO RAMP CONTROL LEVER IS LOCATED ON RIGHT SIDE OF AIRCRAFT BELOW THE RIGHT ENGINE. RAMP MAY BE LOWERED, PROVIDING EMERGENCY ENTRANCE, BY PLACING THE CONTROL LEVER IN THE DOWN POSITION.

- A RESCUE HATCH LOCATED IN FLOOR OF CARGO COMPARTMENT MAY BE USED FOR EMERGENCY EXIT IF LOWER RESCUE DOOR HAS BEEN PREVIOUSLY OPENED.

TYPE: TWIN-TURBINE ENGINE TANDEM ROTOR
CREW: NORMAL CONDITIONS 3-4
PASSENGERS: 33 FULLY EQUIPPED GROUND TROOPS
LITTERS: 24 W/3 MEDICAL ATTENDANT'S SEATS

See back side for emergency shutdown procedures.
CH-47

1. NORMAL SHUTDOWN
   
   A. POSITION ENGINE CONDITION LEVERS, LOCATED ON CONTROL PEDESTAL, TO STOP.
   
   B. POSITION FUEL VALVE SWITCHES, LOCATED ON OVERHEAD FUEL CONTROL PANEL, TO CLOSE.
   
   C. POSITION BATTERY SWITCH, LOCATED ON OVERHEAD ELECTRICAL CONTROL PANEL, TO OFF.

   NOTE: IF ENGINES FAIL TO SHUTDOWN, PULL FUEL SHUTOFF T-HANDLE, LOCATED AT TOP OF INSTRUMENT PANEL, OUT.

2. AIRCREW EXTRACTION
   
   A. UNLATCH SEAT BELTS AND REMOVE SHOULDER HARNESS FROM CREWMEMBER(S).
LOCATION OF SWITCHES AND EQUIPMENT
AND EMERGENCY SHUTDOWN PROCEDURES
MAY VARY FOR INDIVIDUAL AIRCRAFT.
CREWS SHOULD BE BRIEFED PRIOR TO
HELICOPTER DISPATCH.

1. PILOT/COPILOT BUBBLE AND JETTISON WINDOWS
2. MAIN CABIN DOOR
3. ESCAPE PANELS
4. FORWARD EMERGENCY DOOR

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURES
BOEING VERTOL
EMERGENCY SHUTDOWN
PROCEDURE

THE FOLLOWING PROCEDURES WILL BE FOLLOWED IN THE EVENT OF FIRE OR OTHER EMERGENCY DURING HOT REFUELING:

1. FUEL VALVES — CLOSED
2. BOOST PUMPS — OFF
3. ENGINE CONDITION LEVERS (ECLs) — STOP
4. PILOT & COPILOT EMERGENCY DOORS/BUBBLES — JETTISON

(CONSIDER LOCATION OF FIRE DUE TO LOCATION OF REFUELING POINT BEFORE JETTISONING COCKPIT DOORS.)

5. AIRCRAFT — EVACUATE
6. FIRE EXTINGUISHER — DIRECT ON FIRE

BV-107
Interagency Helicopter Operations Guide - February 2013
Appendix M

EMERGENCY SHUTDOWN PROCEDURE

THE FOLLOWING PROCEDURES WILL BE FOLLOWED IN THE EVENT OF FIRE OR OTHER EMERGENCY DURING HOT REFUELING:

1. ENGINE CONDITION LEVERS (ECLs) — STOP
2. T-HANDLES — PULL
3. BOOST PUMPS — OFF
4. PILOT & COPILOT EMERGENCY DOORS/BUBBLES — JETTISON
   (CONSIDER LOCATION OF FIRE DUE TO LOCATION OF REFUELING POINT BEFORE JETTISONING COCKPIT DOORS.)
5. AIRCRAFT — EVACUATE
6. FIRE EXTINGUISHER — DIRECT ON FIRE
LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURES
1. PASSENGERS — ALERT/EVACUATE
2. BOTH EMERGENCY FUEL VALVES — CLOSE
3. BOTH FUEL SUPPLY PUMPS — OFF
4. BOTH POWER LEVERS — OFF
5. BATTERY AND GENERATORS — OFF

EXTINGUISH FIRE WITH HAND FIRE EXTINGUISHER
BO-105

LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

EMERGENCY OPERATION

NORMAL OPERATION

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURES
1. PASSENGERS — ALERT/EVACUATE
2. BOTH EMERGENCY FUEL VALVES — CLOSE
3. BOTH FUEL SUPPLY PUMPS — OFF
4. BOTH POWER LEVERS — OFF
5. BATTERY AND GENERATORS — OFF

EXTINGUISH FIRE WITH HAND FIRE extinguisher
1. ENGINE SHUTDOWN
A. ROTATE THROTTLE CONTROL, LOCATED ON PILOT AND COPILOT COLLECTIVE LEVERS, TO FUEL CUT-OFF POSITION.

B. PLACE BATTERY SWITCH, LOCATED ON ELECTRICAL CONTROL CONSOLE, TO OFF POSITION.

2. AIRCREW EXTRACTION
A. UNLATCH LAP BELT AND REMOVE SHOULDER HARNESS FROM CREWMEMBER(S).
Appendix M-25

LOCATION OF SWITCHES AND EQUIPMENT AND EMERGENCY SHUTDOWN PROCEDURES MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.

COCKPIT SLIDING WINDOWS, CARGO DOORS, PASSENGER DOORS AND EMERGENCY ESCAPE HATCHES CAN BE JETTISONED BY PULLING APPROPRIATE EMERGENCY RELEASE HANDLES.

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURES
EMERGENCY SHUTDOWN PROCEDURE

S-58T

1. THROTTLE TWIST GRIP—OFF
   (CONTROL STICK RIGHT OF CENTER CONSOLE)

2. FUEL SHUTOFF VALVE SWITCHES—CLOSED
   (CENTER CONSOLE)

3. FUEL BOOST PUMP SWITCHES—OFF
   (CENTER CONSOLE)

4. BATTERY & GENERATOR SWITCHES—OFF
   (CENTER CONSOLE)

5. ROTOR BRAKE—ON
   IF ROTOR BLADES ARE TURNING
   (RIGHT OF OVERHEAD SWITCH PANEL)
   RED HANDLE—PULL DOWN & FORWARD

FUEL VALVE SWITCHES
FUEL BOOST PUMP SWITCHES
BATTERY & GENERATOR SWITCHES

ROTOR BRAKE
FIRE EXTINGUISHER
\-HANDLES

THROTTLE TWIST GRIP
Appendix M-27

SEE BACKSIDE FOR EMERGENCY SHUTDOWN PROCEDURES

SIKORSKY

CRASH RESCUE

S-61N

LOCATION OF SWITCHES AND EQUIPMENT MAY VARY FOR INDIVIDUAL AIRCRAFT. CREWS SHOULD BE BRIEFED PRIOR TO HELICOPTER DISPATCH.
1. ENGINE CONTROL LEVERS—OFF (CENTER OVERHEAD—FORWARD, PULL AFT, THEN DOWN TO CLEAR, DETENT AT END OF ARC).

2. FUEL SHUT-OFF VALVE SWITCHES—CLOSED (CENTER OF INSTRUMENT PANEL).

3. FUEL BOOST PUMP SWITCHES—OFF (CENTER OF INSTRUMENT PANEL).

4. BATTERY & GENERATOR switches—OFF (OVERHEAD SWITCH PANEL).

5. ROTOR BRAKE—ON (IF ROTOR BLADES ARE TURNING, RED HANDLE—PULL DOWN & FORWARD).

SIKORSKY S-61N

Appendix M-28
LOCATION OF SWITCHES AND EQUIPMENT
AND EMERGENCY SHUTDOWN PROCEDURES
MAY VARY FOR INDIVIDUAL AIRCRAFT.
CREWS SHOULD BE BRIEFED PRIOR TO
HELICOPTER DISPATCH.

AIRCRAFT ENTRY—ALL MODELS

1. NORMAL ENTRY
   A. TURN COCKPIT DOOR COUNTERCLOCKWISE
      TO THE OPEN POSITION TO OPEN DOOR.
   B. TURN CABIN DOOR COUNTERCLOCKWISE TO
      THE OPEN POSITION AND SLIDE DOOR AFT.

2. EMERGENCY ENTRY
   A. BREAK WINDOW IN COCKPIT DOOR AND PULL
      JETTISON LEVER AFT TO RELEASE DOOR
      HINGES.
   B. BREAK WINDOW IN CABIN DOOR AND ROTATE
      EMERGENCY HANDLE, LOCATED BELOW EACH
      WINDOW, TO THE AFT OPEN POSITION. ROTATE
      BOTTOM OF WINDOW OUT TO REMOVE WINDOW.

SEE BACK SIDE FOR EMERGENCY SHUTDOWN PROCEDURES
1. ENGINE SHUTDOWN
   NOTE: TO ACTIVATE THE INSTALLED FIRE EXTINGUISHING
   SYSTEM, ONE (T) HANDLE MUST BE PULLED,
   AGENT IS DISCHARGED TO LAST (T) HANDLE
   PULLED. THEN REPOSITION THE FIRE EXTINGUISH
   ER SWITCH FROM OFF TO MAIN OR RESERVE.
   BATTERY SWITCH MUST BE IN THE ON POSITION.
   A. PULL ENGINE EMERGENCY (T) HANDLES, LOCATED
      ON CONTROL QUADRANT, FULL AFT.
   B. PULL APU (T) HANDLE LOCATED ON UPPER CONSOLE,
      DOWN.
   C. PLACE BATTERY SWITCH, LOCATED ON UPPER
      CONSOLE, TO THE OFF POSITION.
2. AIRCREW—TROOP EXTRACTION
   NOTE: ALL AIRCREW SEATS HAVE A COMPLETE LAP BELT
   AND DUAL TORSO RESTRAINT SHOULDER
   HARNESS ATTACHED TO A ROTARY RELEASE
   BUCKLE.
   ALL TROOP SEATS HAVE A LAP BELT AND
   SHOULDER HARNESS ATTACHED TO A ROTARY
   RELEASE BUCKLE.