EMERGENCY PROCEDURES

September 2022

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C 172

NON CRITICAL ACTION

1. Maintain aircraft control.
2. Analyze the situation and take proper action.
3. Land as soon as conditions permit

GROUND OPERATION EMERGENCIES

Emergency Engine Shutdown on the Ground

1. FUEL SELECTOR ---------- OFF
2. MIXTURE ---------- IDLE CUTOFF
3. IGNITION ---------- OFF
4. MASTER SWITCH ---------- OFF

Engine Fire during Start

If Engine starts

1. POWER ---------- 1700 RPM
2. ENGINE ---------- SHUTDOWN

If Engine fails to start

1. CRANKING ---------- CONTINUE
2. MIXTURE ---------- IDLE CUT-OFF
3 THROTTLE ---------- FULL OPEN
4. ENGINE ---------- SHUTDOWN
   - FUEL SELECTOR ------ OFF
   - IGNITION SWITCH --- OFF
   - MASTER SWITCH ----- OFF

TAKEOFF EMERGENCIES

ABORT

1. THROTTLE ---------- IDLE
2. BRAKES ---------- AS REQUIRED

IN-FLIGHT EMERGENCIES

Engine Failure Immediately After Takeoff

1. BEST GLIDE ---------- ESTABLISH
2. FUEL SELECTOR ---------- OFF
3. MIXTURE ---------- IDLE CUTOFF
4. IGNITION ---------- OFF
5. FLAPS ---------- AS REQUIRED
6. MASTER SWITCH ---------- OFF

ENGINE FAILURE IN FLIGHT - Forced Landing

1. A/S TRIM FOR BEST GLIDE
2. SELECT FORCED LANDING AREA
3. **ENGINE RESTART PROCEDURE (Big L)**
   - FUEL SELECTOR - BOTH
   - MIXTURE - RICH
   - THROTTLE - FULL OPEN
   - CARB HEAT - ON
   - IGNITION - BOTH
   - MASTER - ON
   - PRIMER - IN & LOCKED

   ---- **If engine fails to start** ----------
   - MAYDAY CALL
   - CURRENT FREQ OR 121.5, TRANSPONDER 7700
   - SELECT TOUCH DOWN POINT
   - FLAPS AS REQUIRED (FULL DOWN)
   - DOORS - UNLATCH
4. **If restart fails - Secure engine (Big L)**

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- Clear engine every 30 seconds switch Off then ON
- 500 feel AGL minimum
- Execute the "GO-AROUND PROCEDURE"

Engine Fire In-Flight

1. FUEL SELECTOR ---------- OFF
2. MIXTURE---------- IDLE CUTOFF
3. THROTTLE ---------- IDLE
4. IGNITION ---------- OFF
5. FLAPS ---------- AS REQUIRED
6. MAY DAY CALL --------121.5 / TRANSPONDER 7700
7. MASTER SWITCH ---------- OFF
8. HEAT/AIR VENTS---------- CLOSED
9. OVERHEAD VENTS ---------- OPEN
10. A/S ---------- 100K
    - If fire is not extinguished, increase A/S so that an incombustible fuel /air mixture will result

EMERGENCY DESCENT

1. Declare an emergency; Current freq., 121.5, transponder 7700
2. Carb heat - ON, Throttle - IDLE
3. Flaps - FULL DOWN (remain in the white arc)
4. Speed - TOP OF WHITE ARC (for training Vfo -10)
5. Bank angle - 30 to 45
6. Select forced landing area
7. Touchdown in the landing area with minimum airspeed
   - Engine power is available for maneuvering

Electrical Fire / High Ammeter

1. MASTER SWITCH ---------- OFF

Negative Ammeter Reading

1. ELECTRICAL LOAD ---------- REDUCE
   Radios & Lights –OFF
   Alternator reset – Alternator switch OFF then ON
   If negative amps, Alternator – OFF

Cabin Fire

1. MASTER ---------- OFF
2. VENTS/CABIN AIR/HEAT ---------- CLOSED
3. LAND AS SOON AS POSSIBLE

Oil System Malfunction

1. LOW PRES, NORMAL TEMP – LAND ASAP
2. LOSS OF PRESS, HIGH TEMP – REDUCE POWER
   SELECT FORCED LANDING AREA
   EXCUTE FORCE LANDING -- PAGE **E-3**

Structural Damage or Controllability Check

**** CAUTION ****

Do not reset flaps if significant structural damage is located in the wings.

1. Climb to at least 1500’ above the terrain (if practical) at controllable airspeed.
2. Simulate a landing approach and determine the airspeed at which the aircraft becomes difficult to control (minimum controllable airspeed).
3 Plan to fly a straight-in approach. Fly the normal approach airspeed for your flap setting, or 10 KIAS above the minimum controllable airspeed, whichever is higher. For asymmetrical flaps, use your minimum flap setting for approach airspeed Plan to touch down at no less than minimum controllable airspeed. Do not begin to reduce final approach airspeed until the aircraft is very close to the runway.

Recall

1. Eagle initiates a recall with a blanket radio call that is no acknowledged.
2. Individual aircraft are then contacted separately to minimize confusion and radio congestion
3. Do not leave the area until instructed by Eagle.
4. Do not call Eagle for recovery. Eagle will sequence aircraft
5. Prepare for possible diversion, see inflight guide.

Lost Procedures; (Climb, Conserve, Confess & Comply 4C's)

1. Attempt to climb to an altitude that provides the best visibility.

2.Choose a power setting that will give you an economical fuel burn and lean for endurance. The bottom of the green arc (RPM) works well. Verify fuel remaining.

3. Look for prominent landmarks. Remember, airports often are located along major roads.
4. Tune in a local VOR. Navigational aids can be found on the Sectional Charts located in the aircraft.
5. Attempt to contact air Traffic Control. Possible Flight Service Station frequencies are: 122.0, 122.1,122.2, 122.6 or 123.6.
6. If all else fails: Set emergency code 7700 in your transponder, call “MAYDAY” 3 times on guard frequency/ 121.5, giving your call sign and stating you are lost.
7. If unable to get reoriented, land before your fuel is completely Exhausted. Select a good field and fly a low approach over it to determine whether it is suitable for landing. Determine the wind direction and land.
8. Call the Aero Club. If a farmhouse or other dwelling is not within sight, stay with the aircraft.

RADIO FAILURE

1. Determine if an actual radio failure exists.
   a. If the Garmin 345 intercom fails the panel lights will go off and only the pilot's headset will be automatically connected to the number one Nav-Com (fail safe).
   b. Ensure the volume is turned up approximately mid-range.
   c. Select a frequency ATC, FSS or nearest tower.
   d. Select a Comm-MIC button, the lights in the Comm transmitter/receiver will illuminate.
   e. when transmitting the Comm-MIC light should flash (no flashing, no transmitting).
   f. Turning off the intercom with the left inter button (full CCW) will force the intercom into the fail-safe mode.

CONTROLLED AIRFIELDS

1. If unable to determine the landing runway prior to enter in the airport traffic area, fly at least 2000' above the depicted airport elevation and observe wind indicators or other aircraft. Once the landing runway been determined enter the pattern.
   a. Acknowledge tower light signals by rocking your wings.
   b. If no light signal is received and no traffic conflicts exist, land. Refer to standard light signals chart for definition of light signals.

2. **ACADEMY AIRFIELD**
   a. Enter the pattern for the eastern runway displaying your landing light.
   b. Observe tower for a steady green light on base and final. If no light is observed and no visible conflict exists with other traffic or runway restriction, land.

3. UNCONTROLLED AIRFIELDS
   a. Remain 500’ above the published pattern altitude while attempting to determine the landing runway.
   b. If unable to use traffic to determine the landing runway, use wind indicators.
   c. Once the landing runway has been determined, join the traffic pattern and land.

4. WHILE HOLDING NUMBER ONE OR TAXIING
   a. Turn the aircraft towards the tower and flash the landing light and watch for a light signal.

LANDING EMERGENCIES

Landing with a Flat Tire

1. Main Gear: Land on the side of the runway corresponding to the good tire.
2. Nose Gear: Land in the center of the runway, hold nose wheel off the ground as long as possible
3. Stop the aircraft on the runway. Shut down the aircraft and call maintenance.

LIGHT SIGNALS

COLOR & TYPE OF SIGNAL	ON THE GROUND	IN FLIGHT
Steady Green	Cleared for takeoff	Cleared to land
Flashing Green	Cleared to taxi	Return for landing (to be followed by a steady green)
Steady Red	Stop	Give way to other aircraft and continue circling
Flashing Red	Taxi clear of runway in use	Airport unsafe – Do not land
Flashing White	Return to starting point on airport	----------
Alternating Red & Green	Warning – Exercise extreme caution!	Warning – Exercise extreme caution!

To acknowledge tower signals: Day: Rock wings
Night: Blink Landing Lights