Lancair **N4XE**

Engine Failure on Takeoff

**(Not Airborne)**

# Sufficient Runway Remaining

1. Throttle – CLOSED
2. Brakes – APPLY
3. Stop Straight Ahead

# Insufficient Runway Remaining

1. Throttle – Closed
2. Brakes – APPLY MAX
3. Fuel Selector – OFF
4. Master Switches – OFF
5. Ignition Key Switch – OFF
6. Door Latch - UNLATCH

Maintain directional control, maneuver to avoid obstacles.

Engine Failure on Takeoff

**(If Airborne)**

## Sufficient Runway Remaining

1. Airspeed – FLARE TO **85 Kts.**
2. Gear - DOWN
3. Flaps – DOWN
4. Land straight ahead
5. Throttle – CLOSED
6. Brakes – APPLY

# Insufficient Runway Remaining

1. Airspeed – **120 Kts** Best Glide
2. Throttle – CLOSED
3. Prop – PULL FEATHER RPM
4. Master Switches – OFF
5. Ignition Key Switch – OFF
6. Gear – AS REQUIRED
7. Flaps – AS REQUIRED
8. Maintain directional control and make only shallow turns to avoid obstacles. **Flare to 85 kts**

#### **Best Glide Configuration**

1. Gear – UP
2. Flaps – UP
3. Prop – PULL TO LOW RPM
4. Airspeed – **120 kts.**

Best demonstrated feathered glide is 3 NM per 1000 ft. 120 kts, 700 FPM, glide ratio 19:1

Engine Failure on Takeoff

**(Return to airport >1000’ AGL)**

1. Airspeed – **120 kts.**
2. Fuel Selector – FULLEST TANK
3. Throttle – 50% SETTING
4. Ignition Key – CYCLE, BOTH
5. Fuel Pump – BOOST LO, then HI
6. Flaps (Final) – AS REQUIRED
7. Gear – When Airport Assured

Engine Failure in Flight

### Establish Best Glide – **120 kts.**

1. GPS/Chelton – NEAREST
2. Landing Site – BEST SUITABLE
3. Air Start – ATTEMPT RESTART
4. Throttle – FULL IN PROP - IN
5. Fuel Selector – FULLEST TANK
6. Ignition Key – CYCLE, BOTH
7. Fuel Pump – LO/HI BOOST
8. **Mixture – ATTEMPT LEANING**
9. Unable to start – PULL PROP FULL FEATHER (LOW RPM)
10. Radio – 121.5 DECLARE EMERGENCY MAYDAY
11. Transponder – 7700

##### Off Airport Landing

### Seat Belts / Harnesses – TIGHT

1. Door Seal– DEFLATE UNLATCH
2. Gear – LEAVE UP RETRACTED
3. Fuel Selector – OFF
4. Ignition Key Switch – OFF
5. Flaps – DOWN when assured
6. Master Switches – OFF
7. Communicate 121.5 - LOCATION
8. Airspeed – DECREASE TO TOUCHDOWN **Flare to 85 kts**

###### Rough Running Engine

1. Ignition Key – CYCLE, BOTH
2. Fuel Pump – LO BOOST
3. Mixture – RICH, ADJUST
4. Engine EGTs – Which Cylinders?

**Engine Fire In Flight**

**Electrical**

1. Avionics Master Switches – OFF
2. Master Switches – OFF
3. All Electrical Equipment – OFF
4. **Land immediately and exit the aircraft as soon as possible**
5. **Determine Fire Cause Later**

**Engine Fire During Start**

1. Starter – CONTINUE CRANKING
2. Throttle – FULL OPEN
3. Master Switch B - OFF
4. Fuel Pump – SHOULD BE OFF
5. Fuel Selector – OFF
6. Starter – CONTINUE CRANKING

##### Loss of Pressurization >12,500’

1. Oxygen Mask – ON within 5 Sec
2. Aircraft Control – MAINTAIN
3. **Emergency Decent** – INITIATE
4. **Check Door Seal** – Cycle CB

**If Cabin door is unsecured:**

1. Do not attempt to correct in flight
2. Oxygen masks – ON (everyone)
3. **Emergency Descent** – INITIATE
4. **Pull Knob** DIVERT PRESS AIR
5. Cabin Dump – DEPRESSURIZE
6. Aircraft – LAND IMMEDIATELY

Do not attempt to check door until aircraft is depressurized and on the ground.

##### Emergency Decent Procedure

1. Throttle – IDLE (Monitor Cabin)
2. Speed Brakes – DEPLOY
3. Propeller – PUSH HIGH RPM
4. Push Nose Down – DESCEND
5. Airspeed – **170 kts – 274 kts**

**Caution do not exceed VNE**

Propeller Over Speed

1. Prop Control – PULL (REDUCE)
2. Throttle –PULL (REDUCE)
3. Airspeed – SLOW -- NOSE UP
4. **SLOW AIRSPEED TO REGAIN RPM CONTROL**
5. Oil Pressure – CHECK
6. Oil Quantity - CHECK
7. Prop Control Regained – ADD POWER
8. Airspeed – STAY BELOW WHEN OVERSPEED OCCURRED
9. Engine – MONITER CLOSLY
10. Aircraft – LAND IMMEDIATELY

###### Speed Brakes Stuck Deployed

CYCLE PANEL ROCKER SWITCH

CYCLE COPILOT JOYSTICK

Circuit Breaker – PULL OUT

Landing airspeed – **110 kts.**

**Emergency Gear Extension**

1. Airspeed – **BELOW 120 kts**
2. 10° Flap (if available)
3. Hydraulic Pump Circuit Breaker – PULL
4. Gear Handle – DOWN
5. Emergency Hand Pump – PUMP

Pump handle until main gear lights are GREEN and handle is stiff.

**Emergency Speed Reduction**

1. Throttle – IDLE
2. Aircraft – NOSE UP
3. Speed Brakes – DEPLOY
4. Gear – EXTEND **<150 kts**
5. Flap – EXTEND **<132 kts.**

**EGT Shows Low Temp**

Presumed Valve or Fuel Injector

Engine Smooth – Failed Probe

Cycle Ignition Key – L/R/BOTH

###### High Oil Temp

###### Low Oil Pressure

Oil Pump Failure – Land Immediately

Engine Loss of Oil – Land Immediately

Reduce Throttle – PULL

Reduce RPM - FEATHER PULL

Monitor Engine Parameters

###### High Oil Pressure

After Engine Warm 99=Sensor Failed

###### High Water Coolant Temp (CLT)

Coolant Pump or Thermostat Failure

Reduce Throttle – PULL

Reduce RPM - FEATHER PULL

Monitor Engine Parameters

###### Wide Open Throttle

Throttle Cable Broken

Prop – Pull to Low RPM (NOT Feather)

Ignition Switch – to LEFT or RIGHT

Intermittent Kill Engine – Limp to Airport

### Aircraft – Land Immediately

Radio – DECLARE EMERGENCY

Over Airport – FEATHER PROP

ENGINE KILL –LAND ENGINE OUT

**Runaway Trim**

REMOVE COPILOT GRIP JOYSTICK

CYCLE CHINA HAT – Pilot Side

CYCLE CHINA HAT – Copilot Side

PULL CIRCUIT BREAKER – Landyard

**Autopilot Control Failure**

Prepare for Significant Control Input

DEPRESS AUTOPILOT DISCONNECT

Autopilot on Panel – TURN OFF

Autopilot Circuit Breaker – PULL

**Alternator Failure**

Panel Annunciator Light – ON RED

Volt Meter – READING <13.5V

BUSS TIE (Covered Switch)-DEPRESS

Unnecessary Equipment – TURN OFF

ALT Circuit Breaker – PULL

Volt Meter – Monitor >11.5V Needed

**Air Intake ICING Detected**

Visualize Air Intake – OBSERVE ICE

Pitot Heat - ON

Alternate Air (Under Panel) – PULL

Wings, Prop – DETERMINE THREAT

Altitude – DESCEND or CLIMB

Communicate – ADVISE ATC

Power Settings – ADD THROTTLE PRN

OVERHEAD APPROACH

Engine Out Procedure

High Key - Low Key

VFR Landing Position Guide

### Trim for Best Glide 120 KIAS

### Overfly Runway (1/3 down runway) cross at 3000’ AGL (High Key)

### Start 360° in Pattern

### Abeam Numbers @ 1500’ AGL (Low Key)

### Constant Stable Turn Base-to-Final

### Flaps as Needed

### Gear DOWN on Final

### Power OFF Landing

Instrument Approach

Engine Out Procedure

IFR Landing Position Guide

### Trim for Best Glide 120 KIAS

### Vectors to ILS Outer Marker

Cross LOM at 5000’ AGL

(3000 above listed)

Turn on Localizer (Above Glide Slope)

### Maintain Clean Configuration

Expect Descent xxx VSI

Expect GS to Swing @ 200’ AGL

Lower Gear When GS Begins Move

Below DH, Maintain Heading

(Ignore OBS Needles)

Begin Flair to 85 KIAS at 50’ AGL

Hold 85 KIAS below 20’ AGL

Flaps as Needed

Brace for Impact