

# Tecnam Eaglet Standard Operating Procedures and Maneuvers Supplement



June 4, 2015

## **Normal Takeoff**

Flaps Take Off

Trim set

Fuel pump on

Check for traffic

Line up on white stripe

Full power

Stick should be located in the middle of the travel space

Steer with feet only

Gradually apply back pressure to lift the nose off ground  
but leave the mains on the ground

Rotate 48kts

Climb out 68kts

Flaps up - 500 agl

Follow noise abatement procedures

## **Level Off**

Lower nose to achieve level flight

Reduce power to 5100RPM

Reset trim to remain in level flight

Verify: flaps up, engine instruments green

*Note: Start level off approximately 100ft before  
desired altitude to avoid overshooting.*

## **Straight and Level Flight**

Use outside references to establish and maintain the  
desired pitch attitude and wings level position.

*Note: use instrument panel glareshield position  
with respect to the horizon*

Check the ball of the slip/skid indicator.

*Note: Ball to the left of center requires left rudder  
for balanced flight, ball to right of center requires  
right rudder for balanced flight. Keep the ball in  
the middle by "stepping on the ball."*

Trim as required.

*Note: Use trim to minimize the stick force required  
to hold the desired pitch attitude not to change the  
attitude.*

Check the altimeter and vertical speed indicator.

Make small pitch corrections necessary to maintain  
desired altitude.

Do not fixate on any one instrument.

## Turns (Level Flight)

Look in the direction of turn before banking!  
Use rudder and aileron together to establish the desired bank angle.

Simultaneous apply back pressure to elevator.

Once the desired bank angle is established, neutralize the rudder and aileron inputs. Keep in elevator.

*Note: Level altitude turns require some elevator force (back stick) to maintain a constant altitude (more bank, more elevator back stick.)*

Use rudder and aileron together to roll out of the bank to wings level.

Release any back stick elevator pressure.

Neutralize the rudder and aileron.

Check that the ball is centered.

*Note: To roll out on a specific heading, lead the heading by one third the bank angle (example: 30 degrees bank angle, lead rollout by 10 degrees.)*

## Climbs

Apply full power and right rudder as needed

Raise the nose to the desired climb pitch attitude

Refine pitch attitude to maintain desired airspeed

*Note:  $V_x = 56\text{kts}$  (best angle)*

*$V_y$  (best rate) = 68kts*

*cruise climb = 70-80kts*

Set trim to hold desired attitude and airspeed.

Keep the ball centered.

## Descents

Reduce power to desired RPM and lower nose to the pitch attitude for desired airspeed.

*Note: For a cruise descent, reduce power to maintain a descent rate of approximately 500 ft/min. and maintain cruise speed.*

Trim as required to minimize elevator force.

Keep the ball centered.

## Level Off From Descent

Simultaneously add desired power and raise the nose.  
Trim to eliminate stick pressure.

*Note: To level off from a descent, lead the level off by approximately 100 feet*

*Note: To level off in cruise flight bring power to 5100RPMs. To level off for the traffic pattern bring power to approximately 3200 rpms.*

## Normal Landing

10nm from airport, landing light on, fuel pump on, listen to AWOS and/or request airport advisory

5nm from airport begin self announcing position

Enter traffic pattern following noise abatement procedures

As you enter the pattern power back to 3,800 rpms to get the aircraft slowed down, retrim

Downwind leg 3,600 RPM, 60-65kts level flight, retrim

Abeam of numbers, reduce power to 2,800 rpms, add first notch of flaps, retrim for 60kt decent

Base, add landing flaps, retrim, adjust power/ power if need be for appropriate decent altitude and to maintain 60kt decent

Final, adjust power if need be for appropriate decent altitude and to maintain 60kt decent

Once the runway is made, reduce power to idle

20 feet above runway, begin transition from maintaining

airspeed to maintaining attitude. Focus eyes at far end of the runway. Gradually increase back pressure on stick to try and hold aircraft 2 feet off the runway as long as possible. Use your feet to point airplane down the runway and hand to maintain altitude and keep it over the centerline.

Once main wheels touch the ground, steer with feet.

Gradually lower the nose wheel and begin applying brakes as needed

Clear runway

Make radio call

Reset trim, put flaps up.

*Note: If fast, raise nose; if slow, lower nose.*

*Summary: **PITCH CONTROLS AIRSPEED, POWER CONTROLS ALTITUDE.***

## **Slow Flight**

2 clearing turns  
Reduce power to 3,500  
Increase pitch attitude and trim to maintain altitude  
Once within the white arc, bleed in flaps  
Adjust pitch and power to maintain altitude at 48kts

### **Recovery**

Full power  
Pitch for level attitude  
Bleed out flaps while in the white arc

## **Power Off Stall**

2 clearing turns  
Reduce power to 3500 rpm  
Increase pitch attitude and trim to maintain altitude  
Once within the white arc, bleed in flaps  
Adjust pitch and power to maintain altitude until 60kts  
At 60kts, reduce power to idle and establish 60kt glide  
Descend 300 feet and then gradually pitch back to maintain altitude and induce a stall.

### **Recovery**

Simultaneously apply full power, right rudder as needed, pitch for level attitude, and remove first notch of flaps (approximately 3 seconds).  
Once airspeed has increased to 60kts, establish 60kt climb  
Bleed out flaps and climb to desired altitude.

Return to cruise flight

*Note: For turning stall maintain shallow bank angle and keep plane coordinated.*

## **Power On Stall**

2 clearing turns  
Reduce power to 3000 rpm  
Increase pitch attitude and trim to maintain altitude  
Once within the white arc, add 1 notch of flaps  
Adjust pitch and power to maintain altitude until 48kts  
At 48kts, apply full power, right rudder, and immediately pitch back to further reduce airspeed until stall  
Watch coordination and maintain heading

### **Recovery**

Pitch for level attitude  
Once airspeed has increased to 60kts, establish 60kt climb  
Remove flaps and climb to desired altitude.  
Return to cruise flight.

*Note: For turning stall maintain shallow bank angle and keep plane coordinated.*

## **Steep Turns**

4800 RPM - Establish cruise flight at or below 93kts rpm

2 clearing turns

Trim airplane for level flight

Choose landmark for entry heading

Begin roll to 45° bank

At 30°, add 100-200rpm and continue roll to 45°  
adjusting back pressure as needed

Maintain altitude

10° prior to roll-out heading, begin roll out and reduce  
power 100-200rpm.

Roll out at entry altitude and heading.

## **Turns Around a Point**

Determine wind direction

Select a suitable site. Should have emergency landing  
areas and not disturb the neighbors.

Establish cruise flight at or below 93kts 4800 rpm

Select four points around the point that are equidistance  
from the center. These four points are your  
targets.

Enter maneuver at 1000 feet

When point in abeam of wing begin turn

Steepest turn should be downwind. Shallowest upwind.

Keep object same distance from aircraft by adjusting  
bank angle. Steeper brings it closer. Shallower  
takes it further away.

## **S-Turns Across a Road**

Determine wind direction

Select either Rt 50, Rt 404, or Rt 301. Winds should be  
perpendicular to road. (Talk to ESN tower for 50)

Establish cruise flight at or below 93kts 4800 rpm

Select target distance from road

Enter maneuver at 1000 perpendicular to road

When over the road begin turn

Steepest turn should be downwind. Shallowest upwind.

Airplane should be wings level only when crossing the  
road. Adjust bank angle accordingly.

## **Loss of Engine**

Establish and trim for best glide speed 68kts  
Select emergency landing site and head that way

### **IF there is time, try to restart engine**

*Work right to left*

Throttle - Half Open

Fuel - Verify On Both

Fuel Pump - On

Ignitions - Check

Attempt re-start

### **IF there is time, call for help giving position**

Radio 121.5 MHz

Transponder 7700

### **Secure Engine**

If engine will not restart - Fuel Shutoff Up

Ignition Switches - Off

Flaps - as necessary

Master off after final flaps

Unlock and prop open doors with headset prior to touchdown

## **Go-Arounds**

Apply full power

Reduce flaps to take-off setting

Pitch for level attitude until 60kts and then begin climb

Bleed out flaps

## **Short Field Takeoff**

Take-off flaps

Fuel pump on

Stop aircraft at the very end of the runway

Hold brakes and apply full power

Release brakes

Climb out at 56kts

Above obstacle height, raise flaps and pitch for 68kts

## **Short Field Landing**

Fuel pump on

Set up final approach at 55kts

Establish aim point prior to actual touch down point

After touch down, maintain full after elevator, retract flaps, apply brakes but do not skid!

## **Soft Field Takeoff**

Inspect field condition checking for grass height, holes, debris, and wetness

Fuel pump on

Flaps - Take-off

Full aft pressure during taxi continuing through takeoff

Apply full power

As soon as main wheels leave the ground, lower nose to level attitude and fly aircraft 5 feet off the ground until 60kts

Climb out at 60-68kts

## **Soft Field Landings**

Fuel pump on

Perform low pass to inspect field condition for grass height, holes, debris, and wetness

Set up normal approach to landing

Keep nose wheel off the ground as long as possible holding aft pressure as long as possible

Use minimal braking and keep aircraft moving until parked

*Note: Be sure to check NOTAMS that runway is open! Kentmorr closes when it is muddy.*

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## **Crosswind Takeoff**

*Modify appropriate takeoff procedures as such:*

Begin ground roll with full aileron into the wind

Gradually take out most of the aileron as aircraft accelerates

Upon lift-off, establish coordinated crab into the wind

## **Crosswind Landing**

*Modify appropriate landing procedures as such*

Add 5kts approach speed, especially in gusts

Apply rudder to point nose down the runway

Apply aileron to hold aircraft over the centerline

*Net effect should be the aircraft slightly cross controlled with the wing down into the wind*

*Control input should be increased as aircraft decelerates and maintained until landing*



## **Forward Slips**

Apply full rudder.

Simultaneously, apply opposite aileron, such that the track across the ground is maintained.

Pitch to maintain airspeed.

More wing down and more opposite rudder will steepen the angle of descent.

Less wing down and less opposite rudder will shallow the angle of descent.

This is most effective with no power, full flaps, wing down into the crosswind.

*This is most effective with no power and full flaps*

## **Flat Tire Upon Landing**

Stop aircraft

Radio call - Notify UNICOM and landing traffic of runway situation

If able, push aircraft off of runway while keeping as much weight off of that wheel as possible

If unable to reach UNICOM - Call CSP emergency numbers for assistance

## **Aborted Takeoff**

Retard throttle

Apply full braking

Steer as appropriate

Note: Grass can be used to slow the airplane down

## **Loss of Engine Immediately After Takeoff**

Pitch DOWN for 60kts

Make shallow turns right or left

Off runway 29 - prepare for ditching

## **Ditching**

Pitch for 68

Head towards a boat or shoreline

Place MAYDAY call 121.5 and squawk 7700

Seats belts: TIGHTEN

Flaps: FULL DOWN

Fuel selector: BOTH OFF

Electrical fuel pump: OFF

Ignition: BOTH OFF

Turn master switch off

Prop open doors

Landing speed: 47 KIAS

Ditch with high aircraft nose attitude

## **Engine Fire - Emergency Decent**

Cabin heat shut off

Shut off fuel

Turn fuel pump off

Apply full throttle

Pitch for highest possible airspeed within the yellow arc to try and snuff out flames

Select emergency field

Mayday 121.5 and 7700

Prepare for forced landing (use loss of engine checklist)

Employ slip to increase decent and keep fire away from firewall

## **Emergency Descent**

Reduce power to idle.

Flaps up.

Lower the pitch attitude to increase airspeed until desired rate of descent is obtained. If air is smooth  $\leq 134$  kts if turbulent  $\leq 106$  kts

Banking bank to 45 degrees.

Trim.

Approaching desired altitude, level the wings and gradually raise the nose.

Add power and trim to level off, if available.

## **Spin Recovery**

From the FAA Airplane Flying Handbook

Reduce the power to idle

Position the ailerons to neutral

Apply full opposite rudder against the rotation

After spin rotation stop, neutralize the rudder

Begin applying back-elevator pressure to raise the nose to level flight

## **Overheating Cylinders/Water (In-Flight)**

Reduce RPMs to lowest possible to maintain safe flight

Land as soon as practicable

### **Overheating Oil Without Loss of Oil Pressure**

Reduce RPMs  
Lower angle of attack  
If oil temperature continues to climb, land

### **Overheating Oil With Loss of Oil Pressure**

Select and head towards emergency landing spot  
Declare an emergency 121.5 and 7700  
Prepare for loss of engine and use of appropriate checklist

### **Loss of Radio**

If in a pattern at a towered field, look for light gun signals.  
If under flight following or in towered airspace with radar, squawk 7600  
Otherwise return home or to nearest appropriate airport  
Overfly and observe airport traffic pattern  
Carefully merge with traffic  
Execute normal landing

### **Loss of Flap Control**

If flaps are down, maintain airspeed below 68 kts when returning to airport  
If flaps are up, return home and execute normal landing

### **Loss of Trim Control**

Fly the aircraft paying special attention to airspeed in the pattern

### **Loss of Brakes**

If you are fast and have adequate runway, go-around and re-approach using short field landing technique  
Land with minimum airspeed  
Roll into the grass on the side of the runway if needed to stop the plane

### **Electrical Fire**

Master Switch - OFF  
Aux Alternator - OFF  
Vent fumes from cabin  
Land as soon as practical

### **Loss of Generator or Alternator**

Switch to the other  
Limit electrical load  
If both are out, turn off all unneeded electrical equipment  
Land as soon as practical  
Use no-flap landing