

## **Comanche PA30 Airwork Procedures**

### **Steep turns** ( $\pm 100$ feet and min 3000agl min)

- Two 90 degrees clearing turns
- Mixtures Rich Below 5000feet
- Power 17" to slow down to maneuvering speed, 150mph at our weight
- 50° of bank
- Use 20" to maintain airspeed
- Execute a 360° in each direction

### **Slow flight clean** ( $\pm 50$ feet and 3000agl min)

- Two 90 degrees clearing turns
- Power to 15" to slow down
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- Cowl Flaps Open
- Adjust Power to Maintain 90mph
  
- Once done with slow maneuvering
- Verify props full forward
- Full throttle
- Go back to cruise
- Cowl Flaps Closed

### **Slow flight dirty** ( $\pm 50$ feet and 3000agl min)

- Two 90 degrees clearing turns
- Power to 15" to slow down below max gear speed (try to slow down more to minimize wear)
- Gear down
- Flaps 15° when in white arc
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- Full flaps
- Cowl flaps open
- Maintain 85mph
  
- Once done with slow maneuvering
- Verify props full forward
- Full throttle
- Gear up
- Accelerate to Vy 112mph
- Flaps up
- Cowl flaps closed
- Go back to cruise

## **Power on stalls** (min 5000agl and max 21rpm power)

- Two 90 degrees clearing turns
- Power back to 15"
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- Open cowl flaps
- Pull back manifold pressure until rpms indicate 2100)
- Slowly bring nose up
- Recover at first indication of of a stall (stall horn, buffet...)
- Verify props forward, full power to re accelerate
- Cowl flaps closed
- Go back to cruise

## **Power off stalls** (min 5000agl)

- Two 90 degrees clearing turns
- Power to 15" to slow down below max gear speed (try to slow down more to minimize wear)
- Gear down
- Flaps 15° when in white arc
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- Full flaps
- Cowl flaps open
- Power back to 12" inches of MP
- Establish descent, trim airplane
- Slowly bring nose up
- Recover at first indication of of a stall (stall horn, buffet...)
- Verify props forward, full power to re accelerate
- Establish positive rate of climb (verified by positive roc in VSI and climb in altimeter)
- Gear up (amber light when up)
- Climb out at Vy 112mph
- Flaps up
- Cowl flaps closed
- Go back to cruise

## **Accelerated stalls** (min 5000agl min)

- Two 90 degrees clearing turns
- Power to 15" to slow down
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- 45° of bank
- Smoothly increase back elevator pressure
- Recover at first indication of of a stall (stall horn, buffet...)
- Verify props forward, full power to re accelerate
- Cowl flaps closed
- Go back to cruise

## **Simulated single engine landings**

- Simulated zero thrust is 10" 2200rpm
- Complete engine shutdown and securing checklist
- GUMPS
- Airspeed blue line 105mph
- No more than flaps 15degrees (use no flaps if needed)
- Touch down on 1/3 of available runway

## **Emergency Descent** Refer to Piper Comanche Quick Reference Handbook

- Page 1-5

## **Systems and Equipment Malfunctions** Refer to Piper Comanche Quick Reference Handbook

## **Engine Failure During Takeoff Before Vmc** Refer to Piper Comanche Quick Reference Handbook

- Page 2-2

## **Engine Failure After Liftoff** Refer to Piper Comanche Quick Reference Handbook

- Page 2-3
- If more than 1000 feet AGL then Page 2-5

## **Approach and Landing with an Inoperative Engine** Refer to Piper Comanche Quick Reference Handbook

- Page 8-2

## **Maneuvering with One Engine Inoperative** Refer to Piper Comanche Quick Reference Handbook

### ABOVE 5000feet AGL

- Shutdown Page 2-10
- Restart Page 2-12

## **Vmc Demonstration** Refer to Piper Comanche Quick Reference Handbook

- Two 90 degrees clearing turns
- Power to 15" to slow down
- Propellers full forward once slowed down to below 125mph
- Mixtures Rich Below 5000feet
- Flaps UP
- Cowl flaps open
- Trim set for Take Off
- Left Engine Idle
- Right Engine Full Throttles
- 5 degrees bank into good engine
- Increase pitch to reduce speed at 1kt per second
- Apply rudder pressure to maintain directional control until full rudder is applied
- Recognize indications of loss of directional control, stall warning or buffet
- Recover promptly by simultaneously reducing power power sufficiently on the operating engine while decreasing the angle of attack as necessary to regain airspeed and directional control.
- Recover within 20 degrees of entry heading
- Advance power smoothly on the operating engine and accelerate to Vyse 105mph

## **Instrument Approach Power Setting**

Approaches flown at 120mph

- ILS (straight in)
  - Two engines: 15"MP Gear down at GS intercept
  - One engine: 20"MP Gear down at GS intercept
- Non Precision
  - Two engines: 15"MP Gear down at Final Fix
  - One engine: 20"MP Gear down at Final Fix if Straight In, **if single engine approach is a circle to land, the gear will remain up until you are in a position to start a normal descent to landing**

**25" When leveling off to maintain 120mph**