

REAL AERoclUB DE MENORCA MAHÓN

# NORMAL PROCEDURES

PA - 28 - 181

RACMM – Flight School  
Ed.1 Rv.2

July 2021

**EXTERIOR SAFETY INSPECTION**

- Chocks.....Remove
- Pitot cover.....Remove
- Tie down ropes.....Remove
- Flap position.....Check

**PRE-FLIGHT CHECKS**

**Cabin safety inspection**

- Control collumn.....Unblock
- Avionics.....Check off
  - Radio*.....*Off*
  - Transponder*.....*Off*
  - Radio aids*.....*Off*
- Fan.....Off
- Master & alternator switches.....Off
- Magentos.....Off
- Flap.....Check retracted
- Master switch.....On
- Fuel gauges.....Check level
- Master switch.....Off

**Exterior inspection**

- Control surfaces.....Check movement and interferences
- Wings.....Check free of ice, snow and frost
- Lights.....Check state and operation
- Fuel tanks.....Check level and secure cap
- Fuel drainage.....Drain
- Fuel vents.....Check unobstructed
- Main landing gear suspension.....Check extension (min 4.5in)
- Main landing gear tires.....Check condition
- Brakes.....Check
- Pitot.....Uncover & check unobstructed
- Windshield.....Clean
- Prop. blades & hub.....Check
- Fuel & oil.....Check no leaks
- Oil.....Check level
- Oil dipstick.....Properly sealed
- Inspection covers.....Secure
- Engine cowling.....Secure
- Front wheel tire.....Check condition



Front landing gear suspension.....Check extension (min 3.25in)  
 Air inlets.....Check unobstructed  
 Alternator belt.....Check  
 Stall warning.....Check  
 Pitot.....Check  
 Tow bar and control locks.....Stow  
 Baggage.....Stow and secure  
 Baggage door.....Close

**Cabin preparation**

Primary flight controls.....Check operation & ensure not crossed  
 Cabin door.....Close and secure  
 Docs.....Onboard  
 Seatbelts.....Fasten and adjust  
 Asientos vacíos.....Asegurar

**BEFORE START-UP**

Brakes.....Set  
 Carburettor heater.....Off  
 Fuel selector.....Fullest tank  
 Fuel gauge.....Check indication  
 Radios.....Switch on  
 Startup clearance.....Obtain (if required)  
 Radios.....Apagar  
 Strobe lights.....Switch on  
 Shout out....."CLEAR"

**ENGINE START (COLD)**

Primer.....Actuate (5 times)  
 Throttle.....Open 1/4"  
 Mixture.....Full rich  
 Master switch.....On  
 Electrical fuel pump.....Switch on A  
 Starter motor.....Actuate  
 Throttle.....Adjust (1000rpm)  
 Fuel pressure.....Check on green

*If it doesn't start in 10s, cancel startup and wait 1min for next try.*

Electrical fuel pump.....Switch off  
 Alternator.....Switch on



Mixture.....Adjust

**ENGINE START (HOT)**

Throttle.....Open 1/2”

Mixture.....Full rich

Master switch.....Switch on

Electrical fuel pump.....Switch on A

Starter motor.....Actuate

Throttle.....Adjust (1000rpm)

Oil pressure.....Check green

Electrical fuel pump.....Switch off

Mixture.....Adjust

Alternator.....Switch on

**ENGINE START (FLOODED)**

Throttlet.....Full forward

Mixture.....Cut off

Master switch.....On

Electrical fuel pump.....Off

Started motor.....Actuate

Mixture.....Advance slowly

Throttle.....Retard slowly to 1000rpm

Oil presure.....Check green

Mixture.....Adjust

Alternator.....Switch on

**ENGINE START (with EXTERNAL POWER)**

Master.....Off

Electrical equipment.....Off

GPU connector.....Connect

Normal ENGINE START.....Perform

Throttle.....Set for min rpm

GPU connector.....Disconnect

Master switch.....On

Ammeter.....Check

Oil pressure.....Check green

Mixture.....Adjust

Alternator.....Switch on

**ENGINE WARM UP**

Throttle.....1000-1200rpm

**TAXI**

Clearance.....Obtain  
 Chocks out time.....Note down  
 Navigation lights.....On  
 Taxi area.....Check clear  
 Throttle.....Apply smoothly  
 Brakes.....Check (both sides)  
 Turns.....Check RMI, horizon, bank, ball & compass

**GROUND CHECK**

Aircraft.....Align 45° with rwy (clear of it)  
*Face the wind if more than 15kts*  
 Parking brake.....Set  
 Fuel selector.....Change  
 Mixture.....Full rich  
 Throttle.....2000 rpm  
 Magnetos.....Max drop 175rpm. Max difference 50rpm  
 Vaccum.....Check 5.0±0.1”Hg  
 Oil temperature.....Check green  
 Oil pressure.....Check green  
 Annunciator pannel.....Press to check  
 Fuel pressure.....Check green  
 Mixture.....Lean to adjust  
 EGT.....Check peak  
 Mixture.....Full rich  
 Throttle.....Idle  
 Carburettor heater.....On  
 Tachometer.....Check rpm drop  
 Carburettor heater.....Off  
 Tachometer.....Check rpm recovery  
*Engine is warm enough for take off when, at throttle increase, it doesn't cough.*  
 Throttle.....1000rpm

**BEFORE TAKE OFF**

Master & alternator switches.....On  
 Flight instruments.....Check



Fuel selector.....Check correct tank  
 Electrical fuel pump.....Switch on A  
 Engine parameters.....Check within limits  
 Carburettor heater.....Off  
 Seat back.....Adjust  
 Mixture.....Full rich  
 Primer.....Blocked  
 Seatbelt & harnesses.....Adjust  
 Flaps.....Adjust  
 Trim.....Adjust (slightly behind neutral)  
 Flight controls.....Clear and not crossed  
 Briefing.....Complete  
 Door.....Closed and secured  
 Fan.....Off

**TAKE OFF (Normal)**

**Lining up**

Line up clearance.....Obtain  
 Landing light.....On  
 Flight controls.....Check free  
 Flaps.....Check  
 Trim.....Check  
 Approach and take off areas.....Clear  
 Transponder.....ALT  
 Rwy line up.....Check with compass

**Take off**

Brakes.....Apply  
 Take off clearance.....Obtain  
 Take off.....Announce  
 Throttle.....Apply 50%  
 Engine instruments.....Check green  
 Brakes.....Release  
 Throttle.....TOGA

- Crosswind less or equal to 5kt (gust included)  
*Push the control column forward and gradually release to neutral at 50kts.*
- Crosswind beyond 5kt or tailwing (gust included)  
*Push the control column forward and turn towards the wind to gradually release to neutral at 50kts, keeping some ailerons into the wind according to crosswind intensity.*

Directional control.....Keep with the pedals  
*Keep the rwy centerline*

Rotate.....At 55kt  
*Kindly pull the control collumn to initiate rotation so as to obtain 65kt on initial climb.*

**Short field take off**

Flaps.....25° (second position)

Brake.....Apply

Take off clearance.....Obtain

Take off.....Announce

Throttle.....Apply 50%

Engine instruments.....Check green

Throttle.....TOGA

Brakes.....Release

Directional control.....Keep the centre using pedals

Rotate.....At 50kts

*After leaving the ground, make use of ground effect and accelerate to an initial climb at 55kts. At 200ft accelerate to Vy= 76Kts*

Flaps.....Retract on sequence

**Short field and obstacles ahead take off**

Flaps.....25° (second position)

Brakes.....Apply

Take off clearance.....Obtain

Take off.....Announce

Throttle.....Apply 50%

Engine instruments.....Check green

Throttle.....TOGA

Brakes.....Release

Directional control.....Keep the centre using pedals

Rotate.....At 50kts

*After leaving the ground, make use of ground effect and accelerate to an initial climb at 55kts. At 200ft accelerate to Vx= 64Kts*

Flaps.....Retract on sequence

Obstacles.....Clear

*Once clear of obstacles accelerate to climb at Vy=76kt*

**CLIMB**

Vx. Best climb angle speed (flaps up) .....64kt

Vy. Best rate of climb speed (flaps up).....76kt

Cruise climb speed.....87kt

Electrical fuel pump.....Shut off upon reaching TOC



Landing light.....Keep on within CTR

**CRUISE**

*Refer to performance charts and Ops manual Avco-Lycoming*

Max normal power.....75%  
 Throttle.....As per charts  
 Mixture.....Adjust  
 Fuel tank.....Change every 30min

**DESCENT**

**Normal**

Throttle.....2500rpm  
 IAS.....122KIAS  
 Mixture.....Full rich  
 Carburettor heater.....On

**Powerless**

Carburettor heater.....On  
 Throttle.....Idle  
 IAS.....As required  
 Mixture.....As required  
 Power.....Verify usind throttel every 30s

**APPROACH**

Briefing.....Complete  
 Altimeter.....Adjust  
 Fuel selector.....Set appropriate tank  
 Seatback.....Adjust  
 Seatbelt and harnesses.....Adjust  
 Landing light.....On (within CTR)  
 Electrical fuel pump.....Switch on B  
 Carburettor heater.....On

**LANDING**

Mixture.....Full rich  
 Flaps.....Adjust for landing  
 Carburettor heater.....Off  
 Trim.....Adjust for 75KIAS  
 Vapp (Flaps 40°).....66KIAS  
 Clearance.....Obtain





**Leaving the runway**

Landing light.....Off  
 Flaps.....Retract  
 Trim.....Neutral  
 Non-essential electrical equipment.....Off  
 Pitot heater.....Off  
 Taxi clearance.....Obtain

**GO AROUND**

“GoAround-Flap”.....Call  
 Throttle.....TOGA  
 Flap.....Retract 1 dot  
 Pitch.....Adjust for Go Around  
 Positive climb.....Check  
 IAS......65Kts  
 ATC.....Notify

**ENGINE SHUT DOWN**

Electrical fuel pump.....Off  
 Fan.....Off  
 Radios.....Off  
 Throttle.....Idle  
 Mixture.....Cut off  
 Magnetos.....Off  
 Master & alternator switches.....Off  
 Chocks in time.....Note down

**PARKING**

Parking brake.....Apply  
 Control column.....Block  
 Flaps.....Check retracted  
 Chocks.....In place  
 Parking brake.....Release  
 Tie down ropes.....Secure