

FAIRBANKS FLOATPLANE COMPANY

CHECK RIDE PREPARATION ASES C-172 (Rev. JUNE 2,, 2014)

For checkride

Logbook with completed endorsements
IACRA completed
Bring checkbook/payment
Bring rubber boots.
Have POH (perf charts), appropriate and current charts and supplement (AFD)
Have completed weight and balance
Have appropriate weather brief (make note of winds!)
A/C logs available for inspection
Have A/C ready to go (fuel, oil, documents, emergency gear etc, loaded and ready)

Aircraft Notes:

- 1) Preflight checklist, normal and emergency procedures abbreviated checklist in the front L pocket. Complete checklists in POH in glovebox Use a CIGARS, CARS and GUMPS check and verify checklist.
- 2) Original POH is in glove box (leave be), Airworthiness and registration in pocket by pilot left ankle.
- 3) W&B envelopes and worksheets are in aircraft can.
- 4) Aircraft logs provided if needed – PIC needs to check for: Current annual or 100hr (note this ensures all AD's are complied), Transponder (and pitot static) 24 months, ELT 12 months/1hr/50%.
- 5) Wing and engine mods have no POH supplement - original perf charts apply. Rule of thumb for fuel flow is 9 gph. Watch Oil Temp EGT carefully, and do all engine adjustments smoothly!
- 6) Survival bag (20lbs) and sat phone in the aft baggage.
- 7) Hang key off mic hook whenever mags are cold!
- 8) Flap switch spring loaded to neutral. Hold flap handle for approximately 2seconds for ea 10 deg,of movement.
- 9) Water rudders UP for takeoff, flight and landing except as necessary in confined area takeoff!

Weight and Bal Data (8-13)

Empty Weight =1517 lbs, (includes unusable fuel and no qts of oil) Load Available w full fuel and 7 qts oil = 463 lbs. Seaplane has inherent forward CG. Load up to 120 pounds in aft baggage area, and/or 20 lbs. of ballast in most rearward float compartment to ensure CG within envelope. Ballast bags are accessed through farthest aft float access hole, and must be located against aft float bulkhead (Station 130). Use WB work sheet and Cessna Center of Gravity Moment Envelope chart to ensure aircraft loading is within envelope.

Pre-flight

Ensure mags are off!
Perform all normal preflight procedure items hit (see **checklist**). Note 4 fuel sumps.
Emphasize float assembly/hardware and rudder rigging:
View a/c from a distance to check for listing / overall condition
Pump out all float compartments
Examine rear rudder bumpers are secure / no jam. (No-Go Item)
Check bell cranks and springs on rudder assembly for damage
Look at rudder rigging (wire and pulleys) for condition / jams (No-Go Item)
Examine all float hardware (struts, spreader bars, flying wires, walking wire)

Starting

Preflight complete, passengers secure and briefed (Don't go forward of struts unless u can see prop!)
Plane beached (secure), rudders up
Pilot in seat/adjusted – leave door open and seat belt off
Master on, radios on (note in strong winds do while tied down):
SET FUEL COMPUTER FOR FUEL ADDED
Get ATIS
Call Gnd/clnc for squawk code, e.g. depart float pond heading 265 (for Minto Lk)
Radios/master off
Set altimeter, transponder (stdby), DG
Pre-start **checklist** items (in strong winds do while tied down):
Fuel both, Rudders up, Mix rich, Carb ht cold, Prime: Pump throttle twice, none if warm
Starting:
Master on, clear area, start, adjust to 500-800rpm, check oil pressure
Note: the a/c will likely pull off beach immediately, have a plan!
Off the beach **RUDDERS DOWN**
Radio Master ON, transponder, lights (as needed) ON
Once taxiing under control secure pilots door and seat belt
Call tower, e.g. taxiing pond XX

Idle taxi / warm up

RUDDERS DOWN

Keep rpm <~ 1000 for idle (displacement position) taxi, maintain full aft elevator.
Set mixture lean – about 1 inch out
Check flt instruments, radios, gps set...
Run **checklist** (verify):
Mag check and carb ht check (I used to recommend checks done at idle to protect prop, but the Administrator requires mag checks IAW POH, so @ 1700 RMP).

Idle Taxi Notes:

Idle 600-1000rpm prevent prop erosion and keep a/c slow.
Use full aft elevator for rearward center of buoyancy and better (water) rudder authority.
Use full opposite aileron to assist idle taxi turns – turning to left will give smaller radius.
In crosswind use normal aileron control to keep upwind wing down. In strong x-wind quartering from rear may need forward elevator to keep the tail from lifting - consider sailing instead especially if there are swells.
In strong winds (>20kts) may not be able to prevent a/c from weathervaning in idle taxi...
Cross wakes/swells at 45° angle

Pre-takeoff

Ready to go, call twr, eg. ready pond XX
Check area is clear
Takeoff **checklist** (verify):
C–Carb Heat, Mixture Rich
A- Area Clear
R– RUDDERS UP
S- Stick Back

Normal and x-wind takeoff

Align nose to right of path

In x-wind lineup to upwind side of channel and align nose to downwind (anticipate weathervane) and start with full aileron deflection into wind (very important to not let upwind wing lift).

Aft elevator and full power - in plow position (limit time in this position to minimum)

Reduce elevator pressure (adjust) to find step position and accelerate. One float can be raised @ 40 mph

Rotate ~50- 55mph and fly off water

Note: For normal and x-wind TO roll off (downwind float comes up first) to reduce run (10-15% less drag on one float)

Note: In very strong x-winds may want to use water rudders at start to control heading (retract when air rudder is effective or immediately when off water) or start run into wind and turn to TO heading (c.f. countered by wind) with some speed for better control.

Climb out

For obstacle clearance use 61mph (with 20° flaps), till clear

Pitch for climb, flaps up (Vy = 71, Cruise climb 90 mph)

Climb Power: 2500rpm (above 500')

Cruise

Power: 2450rpm

Lean to peak EGT, then enrich 100°F

Descent

Reduce power in small increments enrich mixture to maintain smooth op

Pre-landing

Checklist (verify):

Fuel both, **RUDDERS UP**, Mix rich, Carb ht on

Flaps 10° (<100mph),

Approach speed 80mph base, 70 mph final, 60 mph short final. Full Flaps when landing assured.

Normal and x-wind landing

Full flaps (30°)

Slow down short final and fly onto water with touch of power (don't get too slow, don't fly into water!)

In x-wind use wing low (slip) method (avoid side loads) and land to upwind side of channel

Note: In strong x-wind can adjust landing path into wind and arc to cross wind while on water (c.f. countered by wind)

Once on water, throttle back and use aft elevator to slow down (keep nose up as transition through plow).

To remain on step (step taxi) remove flaps to 20°, power on and pitch for step angle (before get too slow). (Use about 1600-1800 rpm and ~40mph so wont fly). Keep **water rudders up!**

After landing

Checklist (verify):

RUDDERS DOWN

Flaps raised, Carb ht COLD

When clear of channel (at FAI) call twr

Idle taxi (-1000 RPM) with full aft elevator

Dock/Ramp/Beach

Plan path careful, note weathervane tendency

Once lined up:

Check mags to "OFF" ensure P-leads grounding

Radios/lights off, seat belt off, door open

Pull mixture when have it made

Water **RUDDERS UP** as hit beach

Master and mags off (key remove)

Secure

Taxi rules of thumb

Stick is full aft unless on step (or strong tailwind)

Go slow (use idle/displacement taxi) unless you need to do a downwind turn in strong winds (use plow turn) or use step taxi to cover distance

Don't taxi downwind in extreme tailwind and swells – i.e. if need stick forward to prevent tail from coming up, sail downwind instead

Step taxi

RUDDERS UP

Transition from idle/displacement to plow (full power and aft elevator).

Try rocking forward, if feel additional drag not fast enough yet, if drag reduces rock forward to find minimum drag position (optimal planning angle)

If step taxi (not taking off) can use flaps retracted and reduce power once on step (~2000rpm, speed ~40mph so a/c wont fly)

Make turns as in flight. Caution on turn from downwind to upwind – do not do in >8kts of wind.

Watch for wake if doing a 180 turn.

Note: if experience porpoising, apply aft elevator (at top of oscillation). If continues for > 3 cycles pull power and transition to plow

Note: if experience skipping apply forward elevator to counter (pitch is a bit too high)

Plow taxi turns to downwind

RUDDERS DOWN

Transition to plow (high/full power and aft elevator) heading upwind

Make question mark shape turn downwind – if possible make 180 part of the turn to left

Use aileron opposite rudder (therefore upwind wing always has aileron up)

Note: keeping float tips up helps reduce weathervane tendency in turn downwind

Note: minimize time in plow position to limit prop erosion

Note: use same attitude/control deflections when turning upwind in idle/displacement config. In this case small bursts of power may help bring a/c around

Sailing

RUDDERS UP, engine off (or idle in strong winds)

Allow a/c to weathervane and start sailing backwards

Adjust air rudder to point tail in desired direction (L rudder moves tail to R visa-versa)

Apply full opposite aileron

Use doors and flaps to increase/decrease area...

If tails of floats dig in use full forward elevator

Rough water takeoff

Normal TO procedure (20° flaps) to step position
Once on step aft elevator to keep nose slightly high and lift off at minimum controllable airspeed (MCA)
Accelerate in ground effect
Fly out at normal speed (> 60 mph climb out)

Rough water Landing

Normal landing approach (full flaps), power on
Full stall landing onto water - slowest possible speed, slightly nose high
Power off and full aft elevator (hold on)

Glassy water takeoff

Normal TO procedure (20° flaps) to step position
Once flying speed is assured (>55mph) roll floats off and establish positive rate of climb
No turns below 200'

Glassy water landing

Configure 20° flaps (TO flap setting)
Use shore line references on approach
No turns below 200'
Establish stabilized approach 50-150fpm, POWER ON, NOSE UP (~60mph)
Fly onto water wings level. (if run out of room go-around)
Expect strong deceleration – stick back accordingly

Confined area takeoff

Normal TO configuration
Use maximum possible TO run: step turn or plow turn to upwind...
If glassy water, roughen surface before roll
Roll to one float from step (reduce drag 10-15%) and flyoff at normal speed (50-55mph)
Obstacle clearance climb at 61mph
Note: from rivers/sloughs if have curved path, put rudders back in to help control while in plow position. Once air rudder is effective can then raise water rudders

Confined area landing

Normal landing approach (full flaps), power on
Precision landing, power off (just) above water
Touchdown power off and full aft elevator

Note: landing run is much shorter than TO run. When inspecting a landing site, drag it at 70mph 10° flaps. If takes 15 seconds should have no problem getting back out (watch for obstacles on departure path). Also watch for obstacles in the water. Use touch and gos to test water run and to see if sand the bottom (too shallow)!

Emergency landing

Emergency **checklist** (memory)
Carb ht on, fuel both, mix rich, primer locked, mags both
Establish best glide (80mph, flaps up)
Find nearest possible landing spot (high sink rate, be conservative)
Keep speed up on approach (70-80) so have enough energy to flare
Flaps DOWN when landing assured NOT BEFORE
If over glassy water land (very) close to shore or land in bushes
In open ocean land parallel to swell if broad spaced, otherwise land in same direction as swell is moving
Do not land on strong pushy rivers with no engine (land on shore)

Go around (aborted landing)

Full power, flaps to 20°
Establish climb attitude (pitch for 70)
Flaps flaps to 10° flaps to 0°
Establish cruise climb (2500+, 80mph) and review **checklist**

Aborted takeoff

Power to idle, aft elevator, and turn into wind (unless a float is sinking, then turn towards the submerged float)

Misc Notes

Float designation indicates individual float displacement (ie weight capacity to just submerge). Combined floats must carry at least 180% of a/c max gross. Floats must have at least 4 compartments.

Seaplane base beacon is yellow/white (yellow/white/white is military)

Information on seaplane landing areas (no single source):

- Check AF/D (AK supplement) – e.g. ops and facilities at designated landing areas, and special rules (e.g. ANC)
- Check with local FBO's/pilots, local agency offices (Fish and Game, State parks, NPS, BLM etc.)
- Review seaplane organization directories

Personal flotation in ac not required by FAR unless further than gliding distance to shore. (part 91) , However, maritime statutes apply to all vessels on the water, and CG requires PFD for each occupant. Best type are inflatable.

When operating on water, normal right of way rules (ROW) are similar to land planes:

- General: Keep clear of all vessels, as possible, and avoid impeding their navigation.
- Xing: Vessel to other's right has ROW.
- Head-on: Alter course to right.
- Overtake: Overtaken has ROW; Overtaking shall alter course to keep clear.
- Special Circumstances: All vessels shall proceed with careful regard to existing circumstances, including limitations of respective craft. (Maritime statutes: Least maneuverable has ROW)

Channel markers (see below):

- keep red buoy to right when headed towards shore ("red-right-return")
- therefore green or black will be to left
- black and white (or red/white) striped mark center of channel

