Pilatus Porter

User guide

Version 1.3.1

(FOR MICROSOFT FLIGHT SIMULATOR 2024 ONLY)

ABOUT THIS AIRCRAFT

This digital aircraft has been created for simmers who seek authenticity and depth.
Built around a high-fidelity flight model, it delivers realistic aerodynamic behavior across all flight regimes, from short-field operations to demanding approaches in complex terrain and weather.

The model is designed for advanced users equipped with quality peripherals such as flight sticks, pedals, and throttle quadrants. It rewards precise control, checklist discipline, and an understanding of real-world flight planning, especially for operations away from conventional airports or paved runways.

Both wheeled and amphibious versions are included, allowing operations from land, water, and mixed environments. Equipped with fully functional GNS and GTN avionics, this aircraft supports true IFR and VFR navigation, letting experienced pilots test their skills in realistic bush, cargo, and utility missions.

FINDING YOUR COMMUNITY FOLDER

Before installing required add-ons (like PMS50 GTN 750/650), you need to locate your Community folder — this is where all third-party aircraft and mods go.

Default Locations:

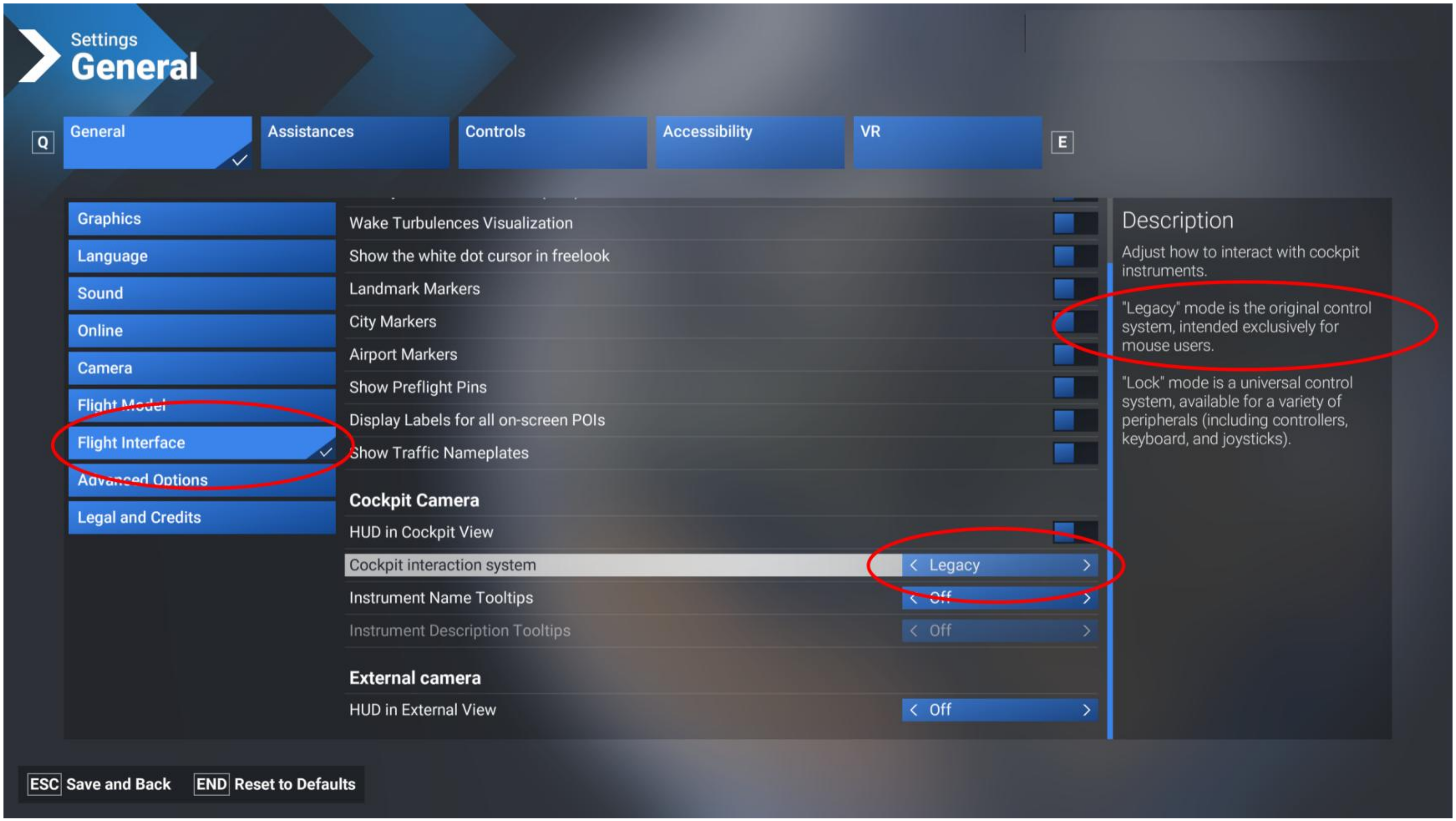
Steam version	C:\Users\[Your Username]\AppData\Roaming\Microsoft Flight Simulator 2024\Packages\Community
MS Store version	C:\Users\[Your Username]\AppData\Local\Packages\Microsoft.Limitless_8wekyb3d8bbwe\LocalCache\Packages\Community

You can easily change the location from within Microsoft Flight Simulator:

- Open the Marketplace tab in the main menu.
- Select Library in the top right.
- Click the small cogwheel icon above the list of installed content.
- In the dialog that appears, you can view or change your content installation path.

COCKPIT INTERACTION SYSTEM

"Legacy" mode is the original control system, intended exclusively for mouse users.



GTN 750/650

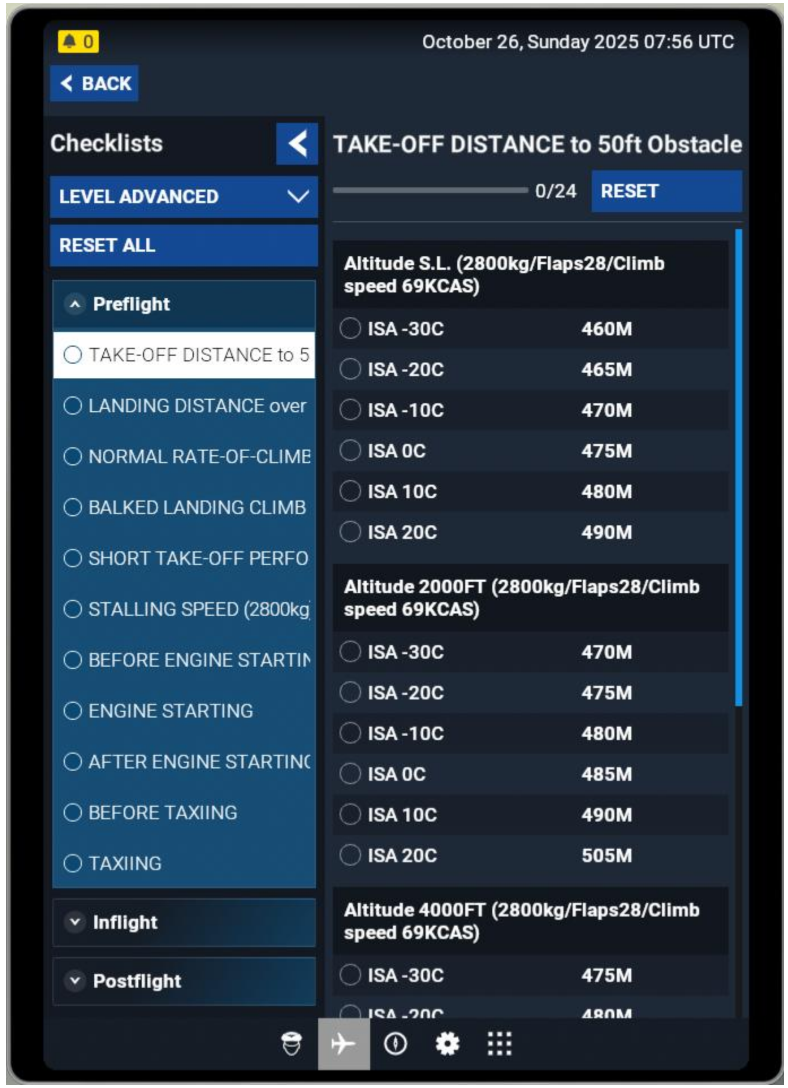
To enable the GTN 750/650 avionics, you need to install a free add-on from the official PMS50 website (https://pms50.com/msfs/). Make sure it's installed into the Community folder.

Click the purple sticker labeled 530 or 750 — the number corresponds to the selected system

MECHANICAL CHECKLIST

Use the built-in mechanical checklist to follow proper take-off and landing procedures.
Click the CHL sticker on the dashboard to open it.
A set of clear, step-by-step instructions will appear — flipping the switch after each step will guide you through the full procedure safely and correctly.

USE A DETAILED CHECKLIST



(FOR MICROSOFT FLIGHT SIMULATOR 2024 ONLY)

INTRODUCTION

The PC-6/B2-H4 Porter aircraft is a single-engined, strut-braced, high-wing monoplane of all-metal construction.
It is designed for use as an all-purpose utility aircraft and has seating capacity for a pilot, co-pilot, and six passengers.

Good climbing and low-speed handling characteristics, STOL capability, and a wide-track landing gear enable the aircraft to be operated from rudimentary landing grounds.

The aircraft is fitted with a conventional fixed landing gear equipped with spring/oil shock absorbers.
The brakes are hydraulically operated.

PT6A-27 free turbine engine provides power for the aircraft. The engine consists of a gas generator section and a free single-stage power turbine which drives a Hartzell three-bladed, full-feathering, reversing, constant-speed propeller.

The power plant is controlled by operation of the power plant control lever. Operation of the lever varies engine power from reverse to take-off thrust.

ENGINE DESCRIPTION

The PT6A-27 engine has a three-stage axial, single-stage centrifugal compressor driven by a single-stage reaction turbine. Another single-stage reaction turbine, counter-rotating with the first, drives the output shaft. Fuel is sprayed into the annular combustion chamber by fourteen individually removable fuel nozzles mounted around the gas generator case. An igniter unit and two igniters are used to start combustion. A hydro-pneumatic fuel control schedules fuel flow to maintain the power set by the gas generator power lever. Propeller speed is kept constant by the propeller governor, except in the beta range where the maximum propeller speed is controlled by the pneumatic section of the propeller governor.
Immediately following touchdown, partial or full reverse thrust may be obtained by lifting and retarding the power lever aft of the detent. Reverse thrust can be varied by moving the power lever to any position aft of the lift detent.

BETA RANGE

BETA MODE operation of the propeller is used in flight to effect fast deceleration and high rates of descent. In the beta range, the propeller blades are set at a low positive pitch angle to provide a braking effect for steep controlled descents. When operating in the beta mode, the propeller pitch angle is controlled by power lever movement between the lift detent and the point where constant speed operation becomes effective.

FUEL SYSTEM

Fuel is carried in integral tanks in the inboard section of each wing.
Each tank has two outlets — one to a collector box and one to a water drain tank.

The collector box, which is fitted with an electrically operated boost pump, supplies fuel to the engine via an engine-driven fuel pump.

Total usable fuel is 1145 lbs (170 US gal/644 ltr/520 kg).

ELECTRICAL SYSTEM

The power source for the electrical system is a starter/generator, which supplies aircraft power at 28V DC. The aircraft fuselage provides the earth return for the system, with storage provided by a 28V 34 Ah nickel-cadmium battery.

A standard NATO external power connector is fitted on the port side of the fuselage.
Solid-state inverters and a phase adaptor provide single- and three-phase 26V AC and 115V AC power for the radio communication, navigation equipment, and instruments.

FURNISHING

Two crew seats, with provision for seat-pack dinghy/survival kit stowage, are bolted to the floor and equipped with a full shoulder harness with inertia reel locking. Passenger seats, which have only lap straps, slide in rails mounted in the cargo floor and are held in position by a locating shear pin. When not required, the passenger seats can be removed to allow the carriage of cargo and can be stowed on special rails provided in the aft fuselage, behind the rear cabin bulkhead.

MAIN LANDING GEAR AND TAIL WHEEL

The wide-track landing gear is installed well forward of the aircraft's center of gravity(CG). All three wheels are supported by mechanical springs inside hydraulic shock absorbers. The tail wheel is steerable.

TAXYING

Release the parking brake, roll forward and check brakes for correction operation. Before turning, ensure the tail wheel lock is disengaged. It is necessary to weave the nose to clear the taxi path.

Little power (approximately 70–75% Np) is required to keep the aircraft moving at the correct taxi speed. The tail wheel of the Porter can only be steered 25° either side of center. When the angle exceeds 25°, the tailwheel becomes free-castoring. This makes the aircraft easy to taxi under all conditions except in strong cross winds, when continual brake application is necessary to overcome weathercock action of the keel surface.

Forward visibility is reasonably good, but the nose of the aircraft creates a blind spot on the starboard side. Before making a turn to starboard, perform a weaving maneuver to ensure the blind spot is clear of obstructions.

USE OF REVERSE THRUST DURING TAXYING

CAUTION

Propeller damage will result from reversing
or feathering on unsuitable ground. Maximum time for reverse thrust is 1 minute.

Position the aircraft carefully, ensuring taxi path is
clear, preferably by use of wing walkers.
Lock the tail wheel and use reverse thrust as required.
The aircraft cannot be steered by the tail wheel or the brake.

TAKE-OFF

CAUTION

Do not exceed ITT limits (Max 750°C).
This rating is the maximum power permissible and corresponds to 550 SHP at sea level up to 59°F (15°C) ambient temperature.
The maximum allowable output torque must not be exceeded.

SETTING TAKE-OFF POWER

Advance the power control lever to obtain computed take-off torque pressure.
Note any increase in Ng and Np speeds above the maximum limits (101.5% Ng, 100% Np).

Note:
Inability to reach computed torque due to ITT limitation is an indication of engine deterioration.

TAKE-OFF

As aircraft gains speed, gently and smoothly lower nose to take-off attitude.
To maintain attitude until aircraft becomes airborne, apply slight back pressure.
At 60 kts IAS and 100 ft AGL, carry out the after take-off check.

Note

As airspeed is gained during take-off, an increase in torque pressure at a fixed power control lever position is normal and should be retained, provided limiting torque pressure is not exceeded. ITT also increases by up to 25°C during the take-off.
To avoid exceeding the limit, ITT should not exceed 725°C before commencing take-off roll.

With a tail-low attitude maintained, the aircraft can be flown off at 45 to 50 knots IAS.

SHORT TAKE-OFF TECHNIQUE

The aircraft is held on the brakes as the power control lever is advanced to computed take-off torque.
A three-point attitude is maintained during the ground roll. Maintain lift-off attitude to 50 ft. Action after take-off is as for the normal take-off.

If maximum angle of climb is required to clear obstacles, an IAS of 56 knots may be used in all conditions.

Speeds in the range 50–55 knots IAS may be used if necessary in calm conditions.

CROSSWIND TAKE-OFF TECHNIQUE

The take-off is commenced as for the short take-off. Once airborne, crab the aircraft into wind to maintain track on runway heading.

FLAPLESS TAKE-OFF

A flapless take-off requires a 150% increase in distance over the short take-off ground roll and a 120% increase in distance to 50 ft AGL.

ROUGH FIELD OPERATION AND EFFECT OF LARGE WHEELS

Operation on short, dry, or short, wet grass has little effect on take-off distances.
The oversize wheels do not have a significant effect on the distance used on tarmac or grass.

AFTER TAKE-OFF CHECK (60 KIAS, 100 FT)

Flaps — UP
Propeller — 92.5% Np
Cabin Fan — OFF
Oil Cooler Flap — As required (optimum oil temp 74°–80°C)

CLIMB

Maximum climb power corresponds to 538 SHP at sea level on a standard day.

Because of rapidly varying conditions in the climb, power should be set by using 92.5% Np and a nominal ITT value of 705°C, except where the maximum torque pressure would override the ITT limits.

Nominal en-route climbing speed is 80 knots IAS.

Maximum rate of climb is achieved at 77 knots IAS at sea level, reducing by approximately 1 knot per 2000 feet.

The best angle of climb is achieved at 56 knots IAS, with 28° flaps selected.

CRUISE

CAUTION

Sustained cruise at the limiting ITT is to be avoided.

Anticipate the cruise altitude selected, level out, and reduce power after the IAS stabilizes, correcting for any decrease in yaw.

The setting of cruise power must be accomplished using the torque indicator, since this is the only system common to both aircraft performance and engine operating conditions.

The maximum approved power for cruising corresponds to 495 SHP at sea level on a standard day. However, use of this rating will result in cruise speeds above the maximum structural cruising speed (118 kts).

Cruise power should be set by using 92.5% Np and the required torque pressure to maintain speeds of 118 kts IAS or lower.
The maximum ITT limit (705°C) for cruising should be observed.

CRUISE IAS

The cruise IAS noted below may be sustained at the relevant altitude.

Altitude (ft)	KIAS (maximum)
0 – 5,000	115 and below
5 – 8,000	110 and below
8 – 12,000	105 and below
12 – 16,000	100 and below

STALLING SPEEDS

Variation of stalling speed with aircraft weight is shown below

Flap angle	Aircraft weight (lb) 4850 Stalling Speed (KIAS)	Aircraft weight (lb) 5700 Stalling Speed (KIAS)
0° Flap	51	53
15° Flap	48	49
30-38° Flap	45	46

DESCENT

Normal descent is at en-route cruising IAS, 92.5% Np, and torque adjusted to maintain the desired rate of descent.

Maximum rate of descent configuration:
IAS – 100 knots
Propeller Control – In MAX RPM position
Power Control Lever – Retard to detent

Range speeds with propeller feathered are 70 knots IAS (clean) and 60 knots IAS (with flaps extended).

NORMAL APPROACH AND LANDING

Base Leg

Lookout.
30° bank turn. Whilst in turn:

- Reduce power to 10 PSI
- Trim nose up (approx. 3 turns)
- Flap to 28° (below 82 knots)
- Commence descent when speed falls to 70 knots
- At 400 ft AGL, commence turn onto finals.

FINAL APPROACH – NORMAL APPROACH

Lookout.
Maximum 30° bank turn. Whilst in turn:
- Flap to 38° (for full-stop landing only).
- Adjust speed to 60 knots IAS and
- Trim.

Use elevator to control IAS and engine power to control rate of descent (normal torque 10–12 PSI).
Adjust approach to commence round-out just short of the touchdown point.

FLAPLESS APPROACH

Speed 70 knots IAS on base leg and finals.
Trim as required.
Round-out point will be displaced further downwind than for a normal landing.

REVERSE

Reverse thrust is obtained by lifting the power control lever and moving it aft of the detent. The maximum permissible power in full reverse is 500 SHP, for not more than ONE minute. This rating is achieved at 41.6 PSI torque and 95% Np. The limiting ITT (750°C) should not be exceeded.

AFTER LANDING

LO-IDLE – Select.
Tail Wheel – STEERABLE. Control on LH side of pilot's seat to be fully back.
Flaps – UP.
Trims – All NEUTRAL.
Pitot Heat – OFF.

CROSS-WIND LANDING

Make the necessary allowances for wind effect when turning on final approach and for drift allowance during the final approach. In gusty, high-wind conditions, full flap should not be used; the maximum allowable crosswind component is 15 knots.

A small amount of power is retained throughout the round-out, and sufficient rudder is applied to align the aircraft with the runway. As soon as the aircraft has been aligned with the runway, the power control lever is fully retarded so that the aircraft touches down without delay.

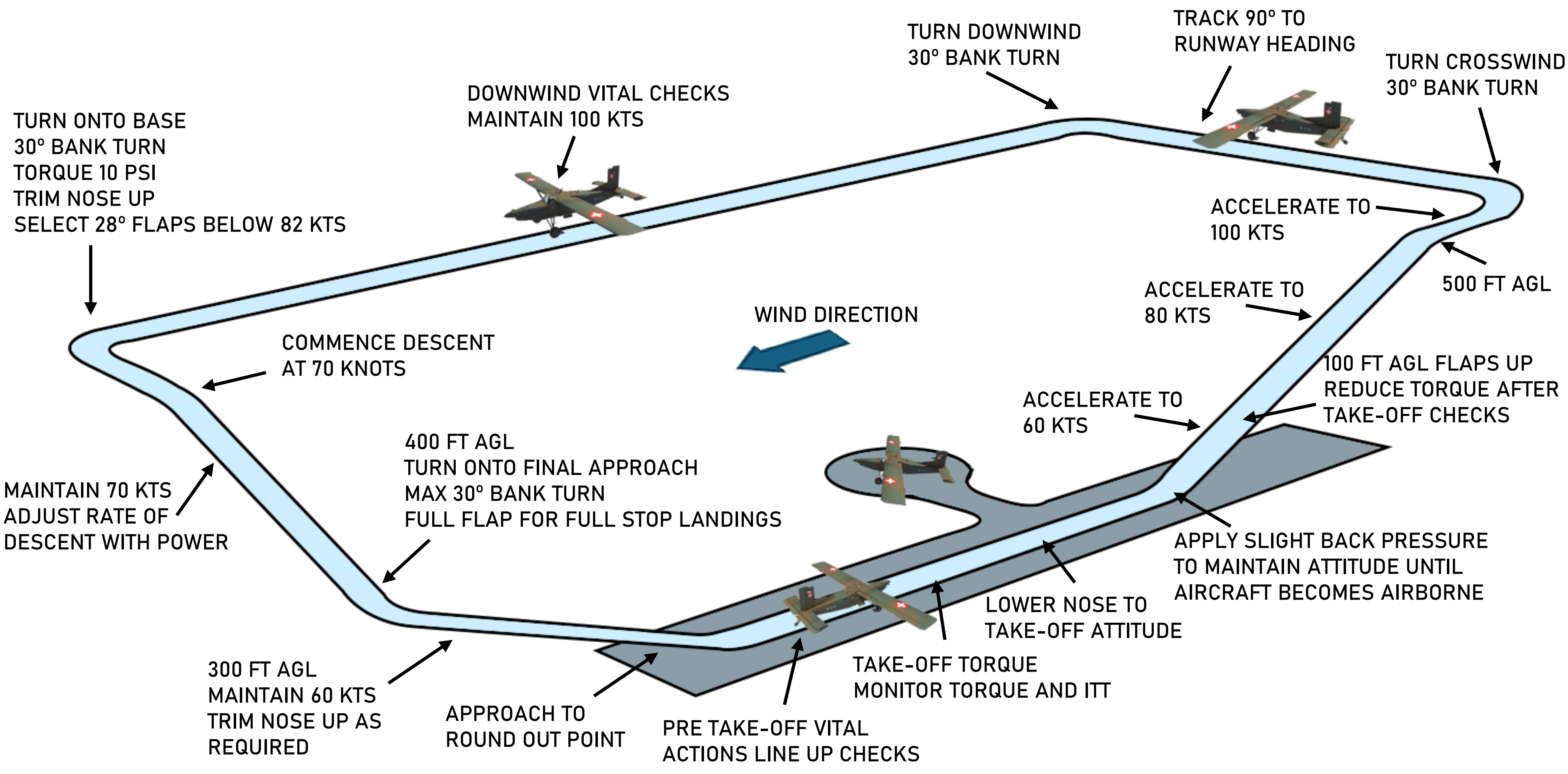
In strong crosswinds, aileron may be needed to maintain wings level as the aircraft is being yawed straight.

TOUCH AND GO LANDINGS / GO AROUND

Take-off power should be applied smoothly when going around from either a missed approach or a bad landing. The application of power in the normal landing configuration (i.e., 28° flap with full nose-up trim) causes a strong pitch-up which requires considerable strength to overcome.
The pilot should be prepared for this by making the necessary nose-down trim change. This removes control column loads, enabling normal aircraft climb attitude for go-around to be maintained.
At 100 ft AGL and 60 kts IAS, after-takeoff checks are to be completed, and normal circuit downwind and base leg checks will apply.

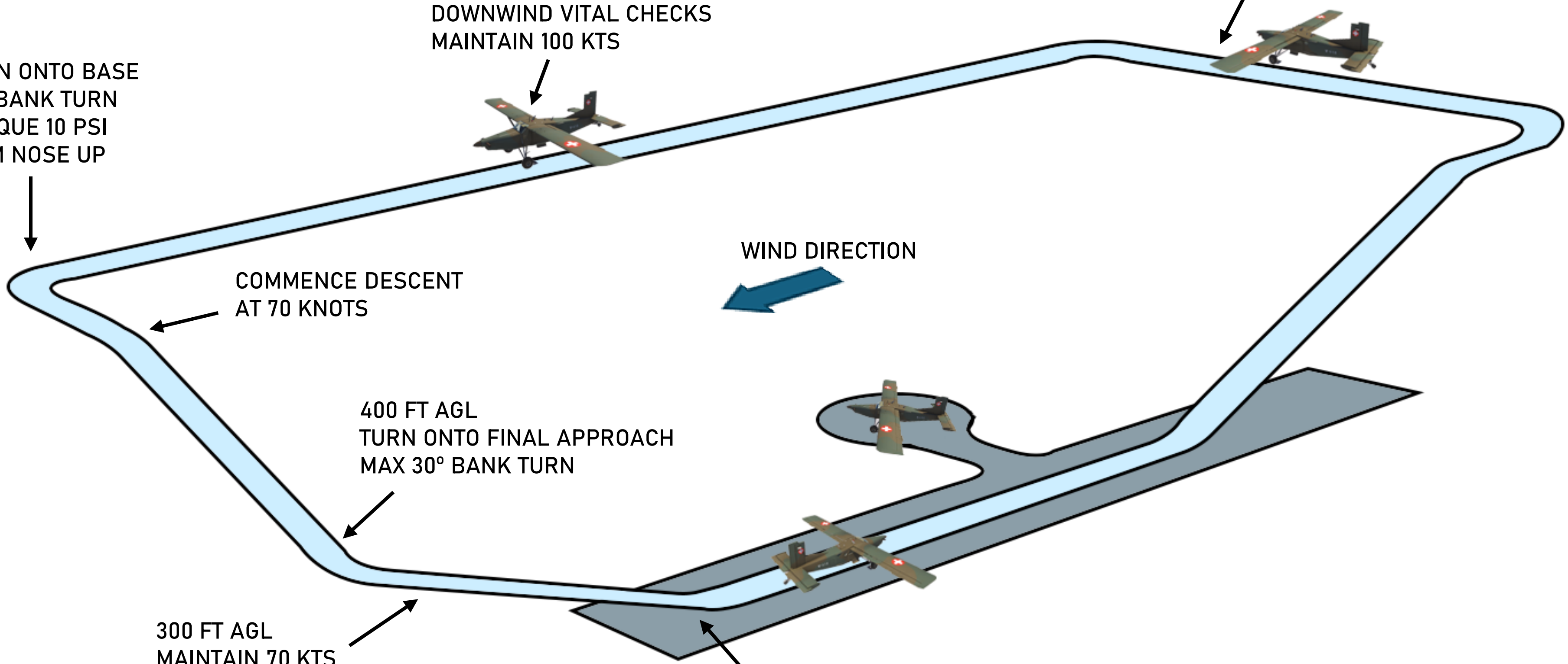
TYPICAL CIRCUIT

AIRSPEEDS ARE CONSTANT FOR ALL CALCULATED GROSS WEIGHTS AND WIND CONDITIONS

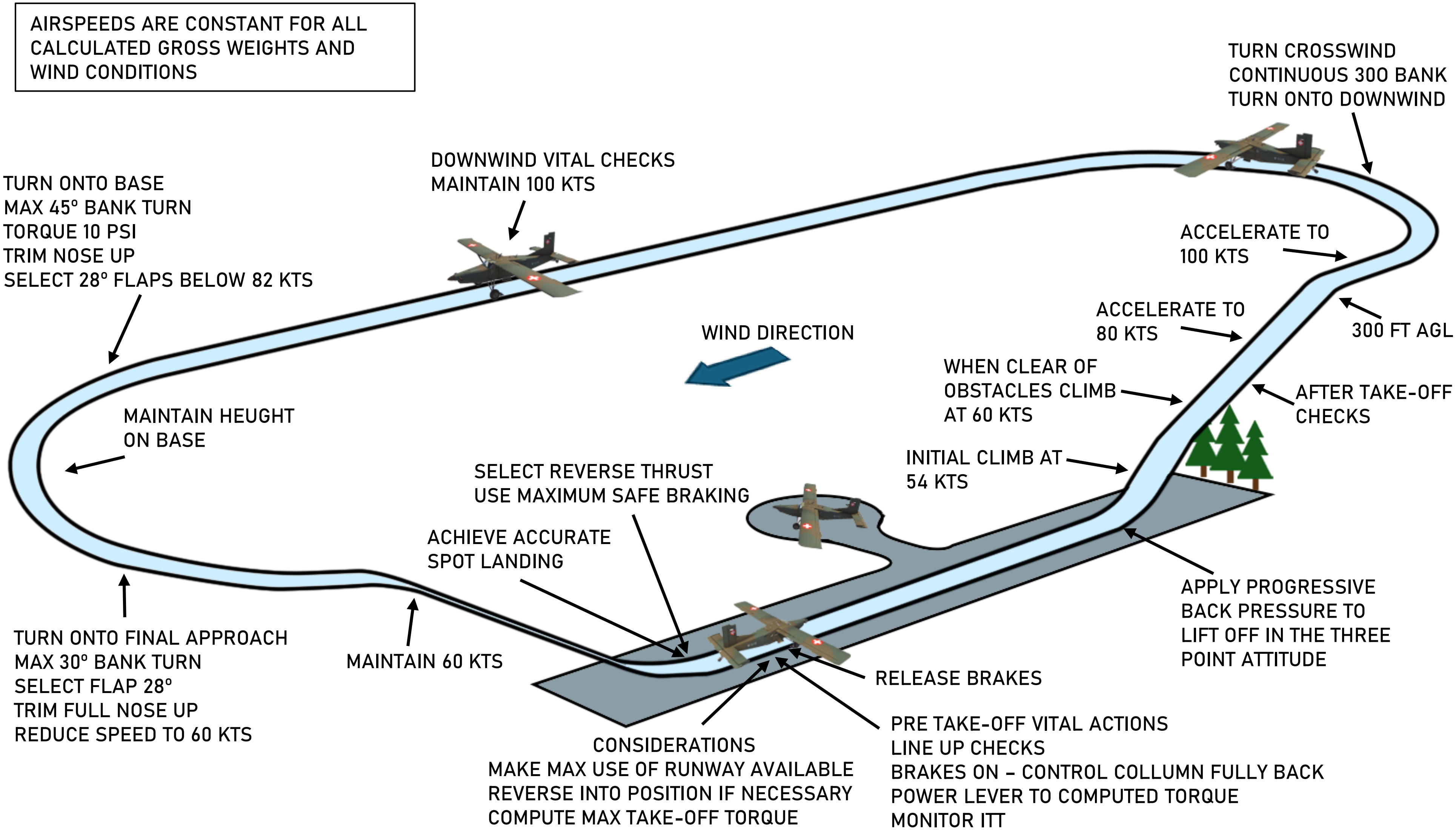


TYPICAL FLAPLESS CIRCUIT

AIRSPEEDS ARE CONSTANT FOR ALL CALCULATED GROSS WEIGHTS AND WIND CONDITIONS



TYPICAL LOW LEVEL CIRCUIT / SHORT LANDING



BETA APPROACH

WARNING

When in the approach pattern and/or flare out, “BETA” must be carefully selected in order to avoid inducing a speed below the stalling speed.

CAUTION

Full flap is only lowered for full-stop landing. Maximum braking on a sealed surface can burst a tyre.

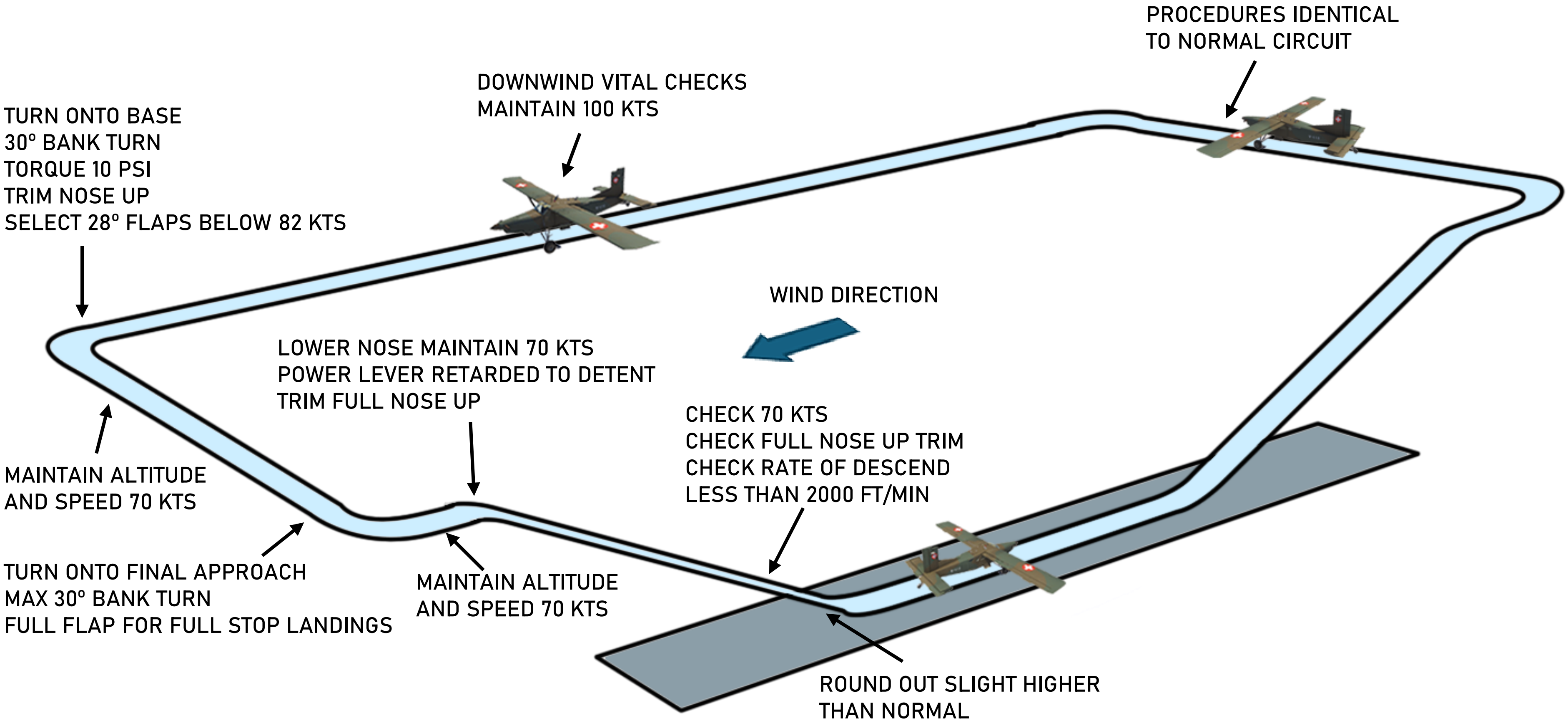
Speed in the descent: 70 knots IAS, flaps 28°–38°.
Commence descent when the touchdown point disappears under the exhaust pipe.
Lead with forward control column movement. In the descent, apply full nose-up trim and check rate of descent is not above 2000 ft/min.

NOTE

BETA MODE is provided in descent at airspeeds below 100 KIAS with the POWER lever near or at the detent. Only small movements of the POWER lever are necessary to change rate of descent or airspeed. Approaches in full BETA MODE (POWER lever at detent) are not permitted at airspeeds below 1.3 Vs

TYPICAL BETA APPROACH

AIRSPEEDS ARE CONSTANT FOR ALL CALCULATED GROSS WEIGHTS AND WIND CONDITIONS



LANDING EMERGENCIES

Forced landings without power (FLWOP) may be classified as follows:

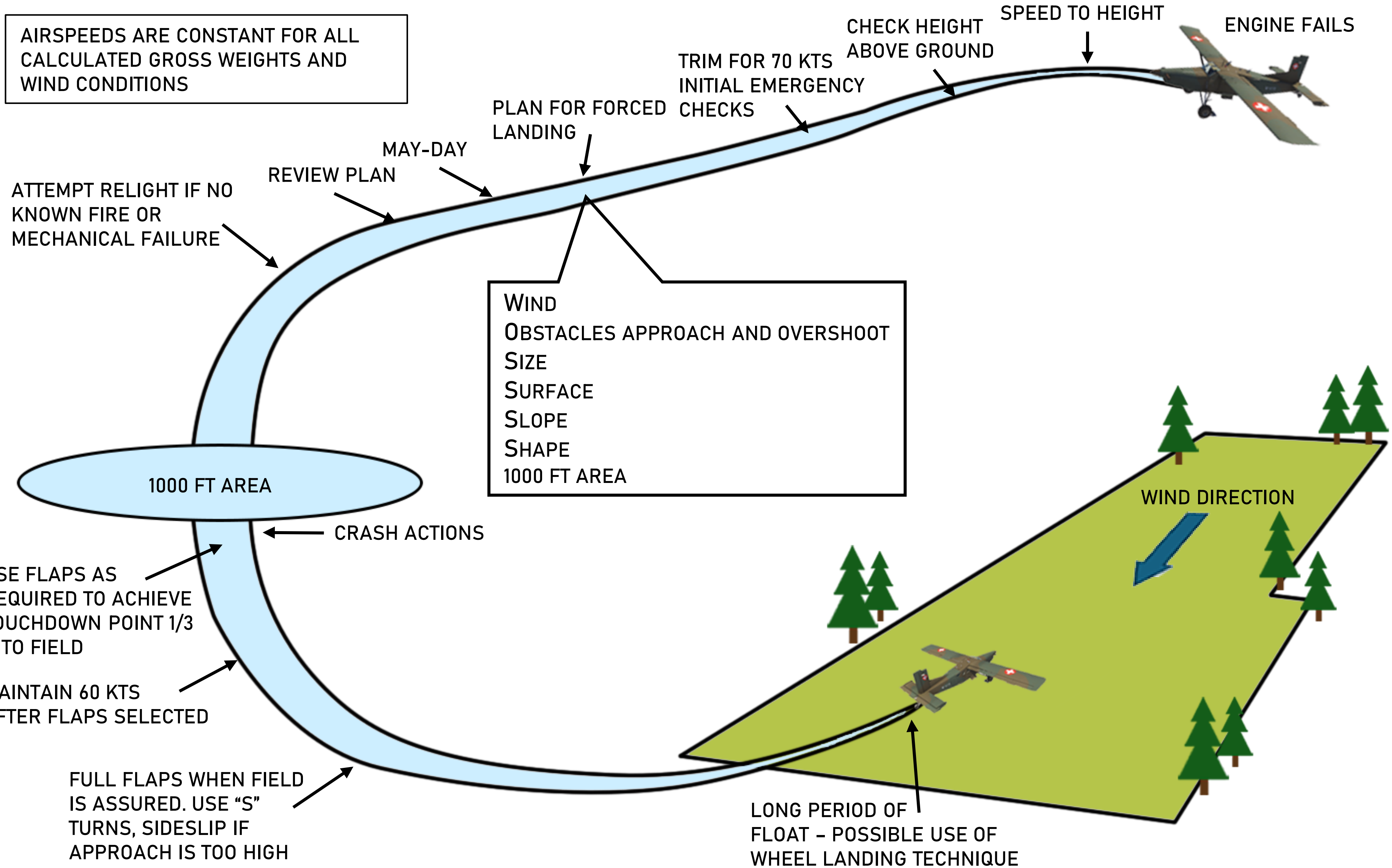
- Engine failure immediately after takeoff
- Engine failure at low level (below 1500 ft. AGL)
- Engine failure at high level

Plan of action for Forced Landing. For selection of field and 1000 ft. area, the following considerations are to be taken into account:

- wind strength and direction
- obstacles approach and over-shoot
- size and shape
- surface condition
- slope
- select 1000 ft area

A MAYDAY call may be transmitted before or after attempting a relight depending on height available. Attempt to relight (if the failure is due to flame-out and hot relight is unsuccessful) in accordance with appropriate procedures. Maintain a glide speed of 70 knots. At the 1000 ft. area to landing use flap as required to achieve a touchdown point one third into the field. The approach can be adjusted by the use of flap, slipping turns, “S” turns or side slips. Maintain 60 knots IAS after flap is selected. Select full flap when field is assured. Land into the wind, if possible, and apply brakes to bring aircraft to a full stop.

TYPICAL FORCED LANDING WITHOUT POWER



PC-6 Amphibious Operations

(FOR MICROSOFT FLIGHT SIMULATOR 2024 ONLY)

PREFLIGHT & SETUP

The PC-6 amphibian combines aircraft and boat systems, so always check both sides before flight.

- Floats: Check for dents, water in bilges, and tight hatches. Drain if needed.
- Gear: Verify position — UP for water, DOWN for land.
- Water Rudders: Free and responsive; retract before takeoff.
- Controls & Surfaces: Full travel, no obstructions.
- Cockpit: Check fuel, instruments, trim neutral, and correct flap setting.

Before starting engine on water, make sure mooring lines are clear and the area behind the propeller is safe.

TAXIING & WATER HANDLING

Displacement Taxi: Use idle power near docks. Keep elevator aft to lighten the bows. Use water rudders DOWN for steering. Avoid quick throttle bursts—spray ingestion can damage the prop.
Step Taxi: For longer repositioning, add power smoothly to bring the aircraft onto the step (floats planing over water). Retract water rudders UP. Maintain about 35–40 KIAS. Turns must be gentle—tight turns can dig a float.
Sailing: In strong wind, idle or shut down the engine and let wind move you. Use ailerons and rudder as “sails” to steer.

Taxi Tips:

- Taxi into the wind when possible.
- Use ailerons into the wind and keep elevator aft in headwinds.
- Slow down before turns or entering narrow areas.
- Avoid high power near shore to prevent prop or float damage.

TAKEOFF PROCEDURES

Normal Water Takeoff

Set flaps to TO (28°), elevator trim neutral, water rudders UP, and gear UP.

Smoothly apply full power (≈47 PSI torque). Hold the control column aft until the bow waves flatten.

Ease forward slightly to bring the aircraft onto the step — you'll feel it start to skim.

Maintain step attitude until 60–65 KIAS, then apply gentle back pressure to lift off. Occasionally it may be necessary to gently help the floats unstick by either using some aileron to lift one float out of the water or by adding a small amount of back pressure on the elevator control. Once off the water, the seaplane accelerates more quickly.

Climb shallowly to 100 ft AGL before retracting flaps to UP. Maintain 75–80 KIAS climb.

Tips:

If the nose oscillates ("porpoising"), reduce power slightly and ease forward.

In crosswinds, hold aileron into the wind; allow upwind float to lift first.

GLASSY WATER TAKEOFF

Glassy water increases drag and makes height perception difficult. The takeoff technique is identical to a normal takeoff until the seaplane is on the step and nearly at flying speed. At this point, the water drag may prevent the seaplane from accelerating the last few knots to lift-off speed. To reduce float drag and break the grip of the water, the pilot applies enough aileron pressure to lift one float just out of the water and allows the seaplane to continue to accelerate on the step of the other float until lift-off.

Use slightly more power and wait for a few extra knots (≈67–70 KIAS).

Keep a fixed pitch attitude using a visual reference (shoreline or reflection).

Don't "rotate" sharply—let the aircraft fly itself off the water.

Stay low until a positive climb is established, then retract flaps.

ROUGH WATER TAKEOFF

The objective in a rough water takeoff is similar to that of a rough or soft field takeoff in a landplane: to transfer the weight of the airplane to the wings as soon as possible, get airborne at a minimum airspeed, accelerate in ground effect to a safe climb speed, and climb out.

During rough water takeoffs, open the throttle to take-off power just as the floats begin rising on a wave. This prevents the float bows from digging into the water and helps keep the spray away from the propeller. Apply a little more back elevator pressure than on a smooth water takeoff. This raises the nose to a higher angle and helps keep the float bows clear of the water.

Once on the step, the seaplane can begin to bounce from one wave crest to the next, raising its nose higher with each bounce, so each successive wave is struck with increasing severity. To correct this situation and to prevent a stall, smooth elevator pressures should be used to set up a fairly constant pitch attitude that allows the seaplane to skim across each successive wave as speed increases. Maintain control pressure to prevent the float bows from being pushed under the water surface, and to keep the seaplane from being thrown into the air at a high pitch angle and low airspeed.

Fortunately, a takeoff in rough water is generally accomplished within a short time because if there is sufficient wind to make water rough, the wind is also strong enough to produce aerodynamic lift earlier and enable the seaplane to become airborne quickly.

Set flaps 28°and trim slightly nose-up.
Apply power gradually until the aircraft climbs onto the step.
Use light forward pressure to keep floats from pounding the waves.
Lift off as soon as control feels firm (≈55–60 KIAS).
Hold shallow climb until fully clear of the surface.

NORMAL WATER LANDING

Make normal landings directly into the wind. Seaplanes can be landed either power-off or power-on, but power-on landings are generally preferred because they give the pilot more positive control of the rate of sink and the touchdown spot. To touch down at the slowest possible speed, extend the flaps fully. Use flaps, throttle, and pitch to control the glidepath and establish a stabilized approach at the recommended approach airspeed.

As the seaplane approaches the water's surface, smoothly raise the nose to the appropriate pitch attitude for touchdown. As the floats contact the water, use gentle back pressure on the elevator control to compensate for any tendency of the nose to drop. When the seaplane is definitely on the water, close the throttle and maintain the touchdown attitude until the seaplane begins to come off the step. Once it begins to settle into the plowing attitude, apply full up elevator to keep the nose as high as possible and minimize spray hitting the propeller. As the seaplane slows to taxi speed, lower the water rudders to provide better directional control. Raise the flaps and perform the after-landing checklist.

Many landplane pilots are surprised at the shortness of the landing run, in terms of both time and distance. It is not uncommon for the landing run from touch down to idle taxi to take as little as 5 or 6 seconds.

Before landing: Gear UP, flaps TO (28°) or LD (38°), approach at 70 KIAS.
Descend gently (~3°). Keep power slightly on (~10 PSI torque).
Touch down on the float step area, not tail or nose.
Throttle to idle at contact; hold attitude and apply aft pressure as speed decays.

GEAR CHECK REMINDER

Before any water landing, confirm GEAR UP.
Before any land landing, confirm GEAR DOWN.
Perform a verbal callout:
"Gear up for water, gear down for land."

GLASSY WATER LANDING

Flat, calm, glassy water certainly looks inviting and may give the pilot a false sense of safety but this surface condition is frequently more dangerous than it appears for a landing seaplane.

The visual aspects of glassy water make it difficult to judge the seaplane's height above the water. Without adequate knowledge of the seaplane's height above the surface, the pilot may flare too high or too low. Either case can lead to an upset. If the seaplane flares too high and stalls, it will pitch down, very likely hitting the water with the bows of the floats and flipping over. If the pilot flares too late or not at all, the seaplane may fly into the water at relatively high speed, landing on the float bows, driving them underwater and flipping the seaplane.

Always perform glassy water landings with power. Perform a normal approach, but prepare as though intending to land at an altitude well above the surface.

Upon touchdown, apply gentle back pressure to the elevator control to maintain the same pitch attitude. Close the throttle only after the seaplane is firmly on the water. Three cues provide verification through three different senses—vision, hearing, and body sensation. The pilot sees a slight nose-down pitch at touchdown and perhaps spray thrown to the sides by the floats, hears the sound of the water against the floats, and feels the deceleration force. Accidents have resulted from cutting the power suddenly after the initial touchdown. To the pilot's surprise, a skip had taken place and as the throttle closed, the seaplane was 10 to 15 feet in the air and not on the water, resulting in a stall and substantial damage. Be sure all of the cues indicate that the seaplane is staying on the water before closing the throttle. After the seaplane settles into a displacement taxi, complete the after-landing checklist and lower the water rudders.

Use a power-on descent (≈150–200 ft/min) at 65–70 KIAS.
Maintain constant attitude; don't try to "feel" for the surface.
Choose a visual reference (shoreline or reflection).
Wait for contact—avoid pulling back.
After touchdown, reduce power and keep full aft pressure to stay on step.

ROUGH WATER LANDING

Describing a typical or ideal rough water landing procedure is impractical because of the many variables that affect the water's surface. Wind direction and speed must be weighed along with the surface conditions of the water. In most instances, though, make the approach the same as for any other water landing. It may be better, however, to level off just above the water surface and increase the power sufficiently to maintain a rather flat attitude until conditions appear more acceptable, and then reduce the power to touch down. If severe bounces occur, add power and lift off to search for a smoother landing spot.

In general, make the touchdown at a somewhat flatter pitch attitude than usual. This prevents the seaplane from being tossed back into the air at a dangerously low airspeed, and helps the floats to slice through the tops of the waves rather than slamming hard against them. Reduce power as the seaplane settles into the water, and apply back pressure as it comes off the step to keep the float bows from digging into a wave face. If a particularly large wave throws the seaplane into the air before coming off the step, be ready to apply full power to go around.

Avoid downwind landings on rough water or in strong winds. Rough water is usually an indication of strong winds, and vice versa. Although the airspeed for landing is the same, wind velocity added to the seaplane's normal landing speed can result in a much higher groundspeed, imposing excessive stress on the floats, increasing the nose-down tendency at touchdown, and prolonging the water run, since more kinetic energy must be dissipated.

Use partial flaps (28°) for better control authority.
Approach slightly faster (70–75 KIAS) and power slightly above idle.
Land parallel to wave troughs when possible.
Touch down tail-low with minimum descent rate.
Keep power slightly on during contact, then reduce slowly.
Hold back pressure until the aircraft is fully settled.

AFTER LANDING & TAXI

After landing, lower the water rudders and complete the after-landing checklist. The flaps are usually raised after landing, both to provide better visibility and to reduce the effects of wind while taxiing. It is a good practice to remain at least 50 feet from any other vessel during the taxi.

Maintain full aft yoke until speed drops below 30 KIAS.
Bring power to idle smoothly; avoid sudden changes.
Once fully slowed, extend water rudders for steering.
Flaps UP; gear UP for water taxiing.
Taxi slowly near docks or ramps—directional control is sluggish.

WATER LANDING COMMON HAZARDS

Hazard	Description	Correction
Porpoising	Nose oscillation due to excess back pressure or pitch instability.	Reduce power, ease forward, re-establish attitude.
Skipping	Bounce caused by high speed or abrupt flare.	Maintain attitude, reduce power, let it settle.
Swamping/Spray	Water over floats from high power or waves.	Reduce power, keep nose high, taxi clear.
Gear-Down Water Landing	Catastrophic error causing immediate flip.	Always verify GEAR UP before water contact.

DOCKING & BEACHING

Docking means securing the seaplane to a permanent structure fixed to the shore. To beach a seaplane means to pull it up onto a suitable shore surface, so that its weight is supported by relatively dry ground rather than water. Ramping is defined as using a ramp to get the seaplane out of the water and onto the shore.

Docking:

Approach into the wind, idle power.
Shut down just before contact.
Let aircraft drift the last few feet; use lines or a boat hook to guide.

Beaching (Amphibious Use):

Stop offshore; confirm gear DOWN and locked.
Taxi slowly toward shore at idle.
Retract water rudders before the floats touch land.
Maintain light power up the ramp, then reduce to idle and park brake ON.

PERFORMANCE FOR 2800 KG, GROSS WEIGHT, WITH NO WIND, ON LEVEL, PAVED RUNWAY. (Idle Control at High Idle Position)

CONDITIONS	Altitude feet	OUTSIDE AIR TEMPERATURE ISA -30°	ISA -20°C	ISA -10°C	ISA	ISA +10°C	ISA +20°C
TAKE-OFF DISTANCE Distance required to take-off and climb to 15 m (50 ft.) Take-off Power Flaps TO 28° Climb speed 69 KCAS	 S.L. 2000 4000 6000	m 460 470 475 485	m 465 475 480 490*	m 470 480 485* 495*	m 475 485* 490* 505*	m 480 490 505 570	m 490 505 590 675
LANDING DISTANCE ** At gross landing weight Distance required to land over 15 m obstacle and stop with brakes and reverse thrust Flaps LD 38° Approach at 68 KCAS	 S.L. 2000 4000 6000	m 285 300 310 325	m 295 310 320 335	m 305 320 330 345	m 315 330 340 355	m 325 340 350 365	m 335 350 360 375
NORMAL RATE-OF-CLIMB Take-off/Maximum continuous power Flaps up Airspeed 77 KCAS	 S.L: 2000 4000 6000	ft/min 1070 1040 1010 980	ft/min 1050 1020 990 960*	ft/min 1030 1000 970* 940*	ft/min 1010 980* 950* 920*	ft/min 990 960 930 895	ft/min 970 930 835 735
BALKED LANDING CLIMB Take-off/Maximum continuous power Flaps LD Airspeed 65 KCAS	 S.L. 2000 4000 6000	ft/min 800 770 740 710	ft/min 780 750 720 690*	ft/min 760 730 700* 670*	ft/min 740 710* 680* 650*	ft/min 720 690 660 610	ft/min 700 660 565 460

SHORT TAKE-OFF PERFORMANCE FOR 2800 KG, GROSS WEIGHT, WITH NO WIND, ON LEVEL, PAVED RUNWAY. (Idle Control at High Idle Position)

TAKE-OFF DISTANCE Distance required to take-off and climb to 15 m (50 ft.) Take-off Power Flaps TO 28° Climb speed 69 KCAS		m	m	m	m	m	m
	S.L.	425	430	435	440	445	455
	2000	435	440	445	450*	455	470
	4000	440	445	450*	455*	470	555
	6000	450	455*	460*	470*	530	635

STALLING SPEED

The stalling speeds for gross weight of 2800 kg for various angles of bank, and flap setting.

FLAP SETTING		ANGLE OF BANK		
		0° KCAS	30° KCAS	60° KCAS
Clean	0°	58	62	82
TO	28°	53	57	75
LD	38°	52	56	74

The loss in altitude after a stall at maximum weight is approximately 200 ft.