v1.0.2a

THE GOOSE

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Table of Contents

Table of Contents

Extras, Limitations and Known Issues

Hidden Switches, GPS, Aircraft options

The RTDM switches, along with a GPS unit and aircraft options, are located under a floor cover between the pilot and co-pilot seats. Here you can select and/or show
-Yoke Types
-Yokes
-Wheel Hubs
-Boarding ladder (only if the main door is open)
-Anchor (water only)
-Fishing stool (water only)
-Water Helper (help steer the plane on water, water only)

NOTAM

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Big Radials does not endorse, nor in turn, is endorsed by the manufacturer(s) of the depicted subject matter.

Introduction

Thank you for purchasing The Goose. This manual will guide through everything you need to know to take your JRF-6B Goose on the adventures of your dreams!

Installation

Copy the contents of the ZIP file to your community folder. The default locations are

Windows Store:
C:\Users\[YOUR USERNAME]\AppData\Local\Packages\Microsoft.FlightSimulator_[RANDOM LETTERS]\LocalCache\Packages\Community

Steam:
C:\Users\[YOUR USERNAME]\AppData\Roaming\Microsoft Flight Simulator\Packages\Community
Or
C:\Users\[YOUR USERNAME]\AppData\Local\Packages\Microsoft.FlightDashboard_[RANDOM LETTERS]\LocalCache\Packages\Community

History of The Goose

The Grumman Goose is an American twin-engine amphibious flying boat. The two air cooled nine cylinder Pratt & Whitney R-985 Wasp Junior SB engines are capable of producing 450 hp each for takeoff. For a fast cruise at low altitudes these engines deliver a sustainable 400 hp at up to 5.000 ft. It features a hand cranked retractable landing gear and vacuum operated flaps.

The G-21 Goose, the base model, marked an important step in Grumman's history. It was the first monoplane produced by Grumman, their first twin engine aircraft and the first ever Grumman to enter service as an airliner for commercial use. It was commissioned in 1936 by wealthy Long Island businessmen as a means of rapid transportation between their private airstrips on Long Island and the financial district of New York City.

A total of 345 Gooses (yes Gooses, not Geese) were built. While the G-21 range of aircraft continued serving their purpose as luxury airliners and executive aircraft, a new JRF series was built for the US Navy, starting from 1938. The JRF-1 was designed as a utility version of the Goose for various transport tasks. This Goose series came to fulfill a number of roles including Search and Rescue operations, medical transports and even anti-submarine patrol.

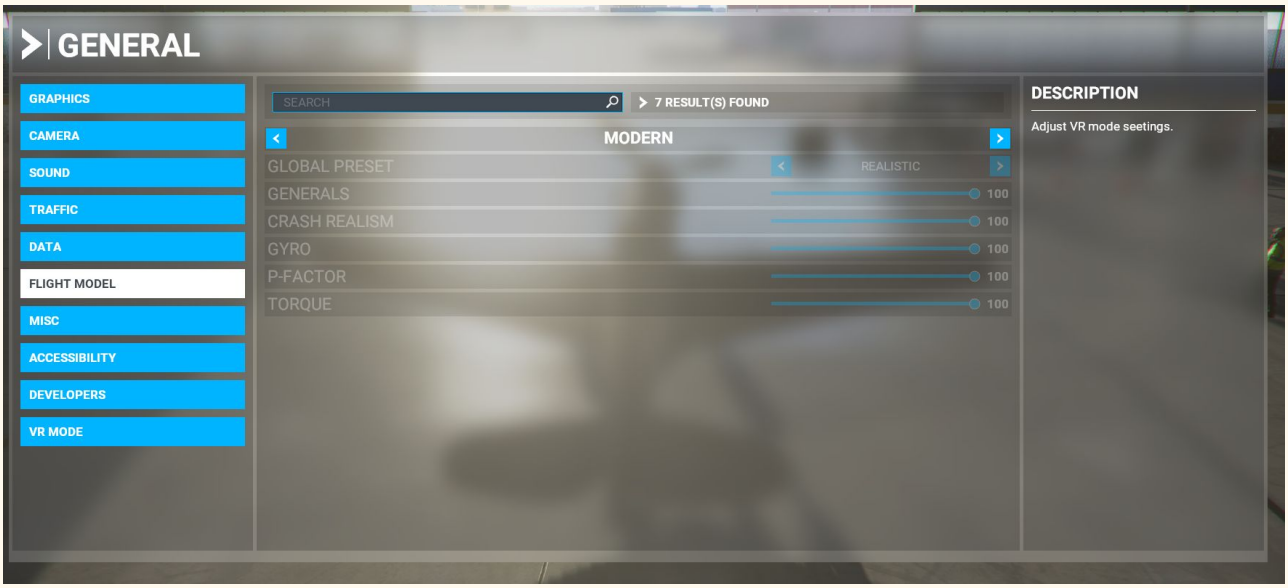
Your JRF-6B, 47 of which were built overall, was designed as a navigational training aircraft. It comes with none of the bells and whistles the executive aircraft have to offer, including sound insulation. It is a loud, raw version purpose-built for training with none of the additional comfort. In turn it is very capable even on very short airfields because of the decreased weight.

Recommended Specs & Settings

The Goose has been modeled with fluidity of frame rates in mind, which means you should not notice a significant drop in performance when using it.

Please use the same graphics settings you are used to.

The flight model has been specifically designed to feel best when following settings are used.



The Goose will fly on any difficulty levels you set - but if you are experiencing greater mishaps than normal on takeoff and landings, please try feel free to turn down some of these settings. Or practice taildragger takeoff and landing more 😉

Quick Start Guide

If you are just too eager to fly, and you don't care about real world procedures, please follow these tips and tricks to get you up in no time.

Center of Gravity

The empty Center of Gravity (CG) value in MSFS can be changed by the user and is reset upon loading any plane. We have fixed the CG for our Goose, but it is good practice to check before the flight. Please make sure the CG is at 26.9% MAC (± 1%), otherwise you may have an uncontrollable plane.

STARTUP

Simply use the default keybind Ctrl+E to start your engines and electrical systems. If engines stop, check your throttle is about ¼" open.

TAXI

Due to its rather shallow nose up attitude on the ground, taxiing the Goose generally is a breeze. Keep it slow to avoid mishaps, especially when braking. Open the side windows if you want to look cool. And for the ultimate cool factor, put on a pair of aviator sunglasses, peek through the nose hatch and have your Co-pilot taxi you to the runway.

TAKE OFF

Apply power swiftly but smoothly to achieve take off power (35,5 " MAP) . The tail should come up and level on its own. Since The Goose is a taildragger there will be the usual rudder dance to keep pointing down the runway! The plane should lift off at around 65 - 75 Knots. Passing 500 ft, retract gear and reduce RPM (Between 2.000 and 2.200 RPM are a good place to be).

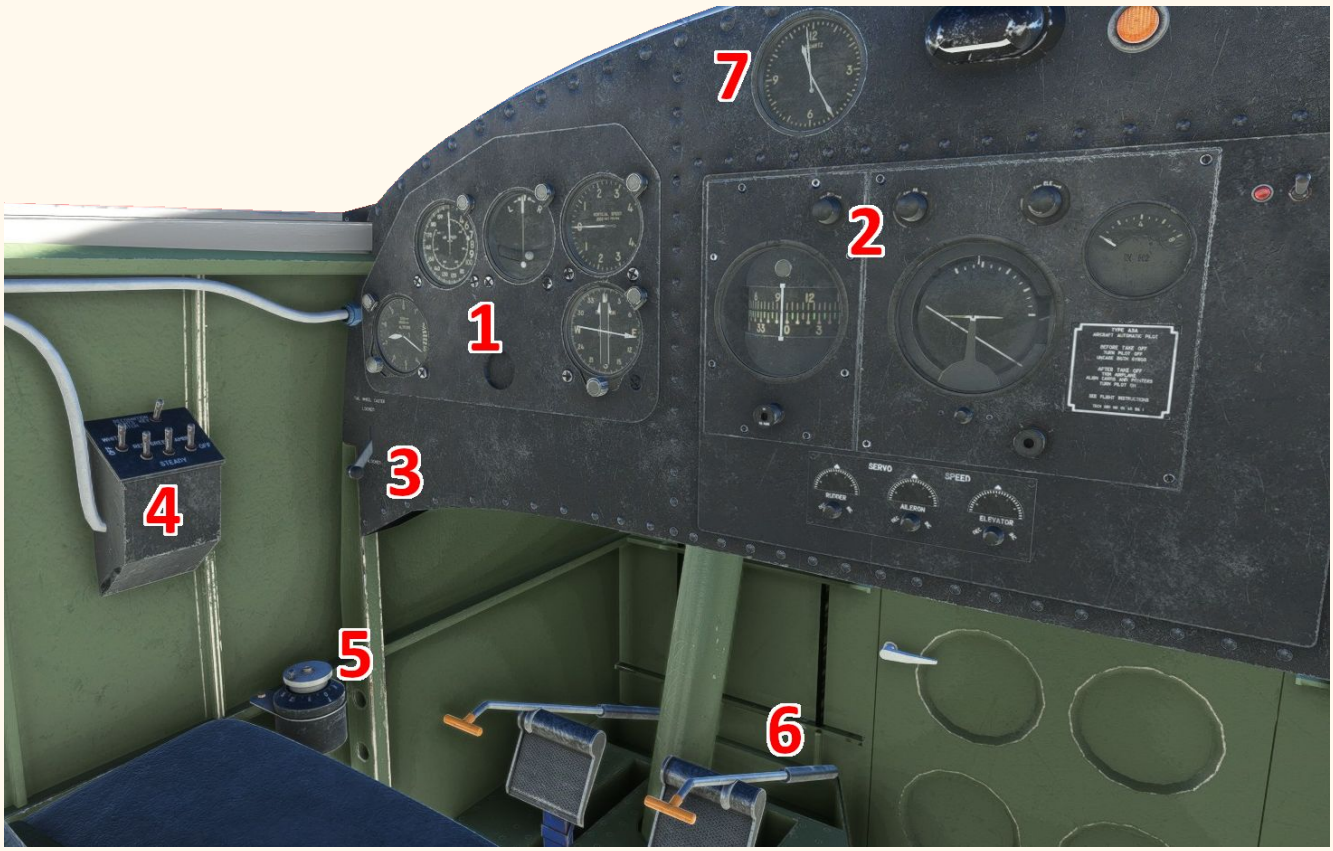
CRUISE

A power setting of about 32,5 - 33 " MAP and between 1.900 and 2.100 RPM will give you a decent cruise speed with good range.

LANDING

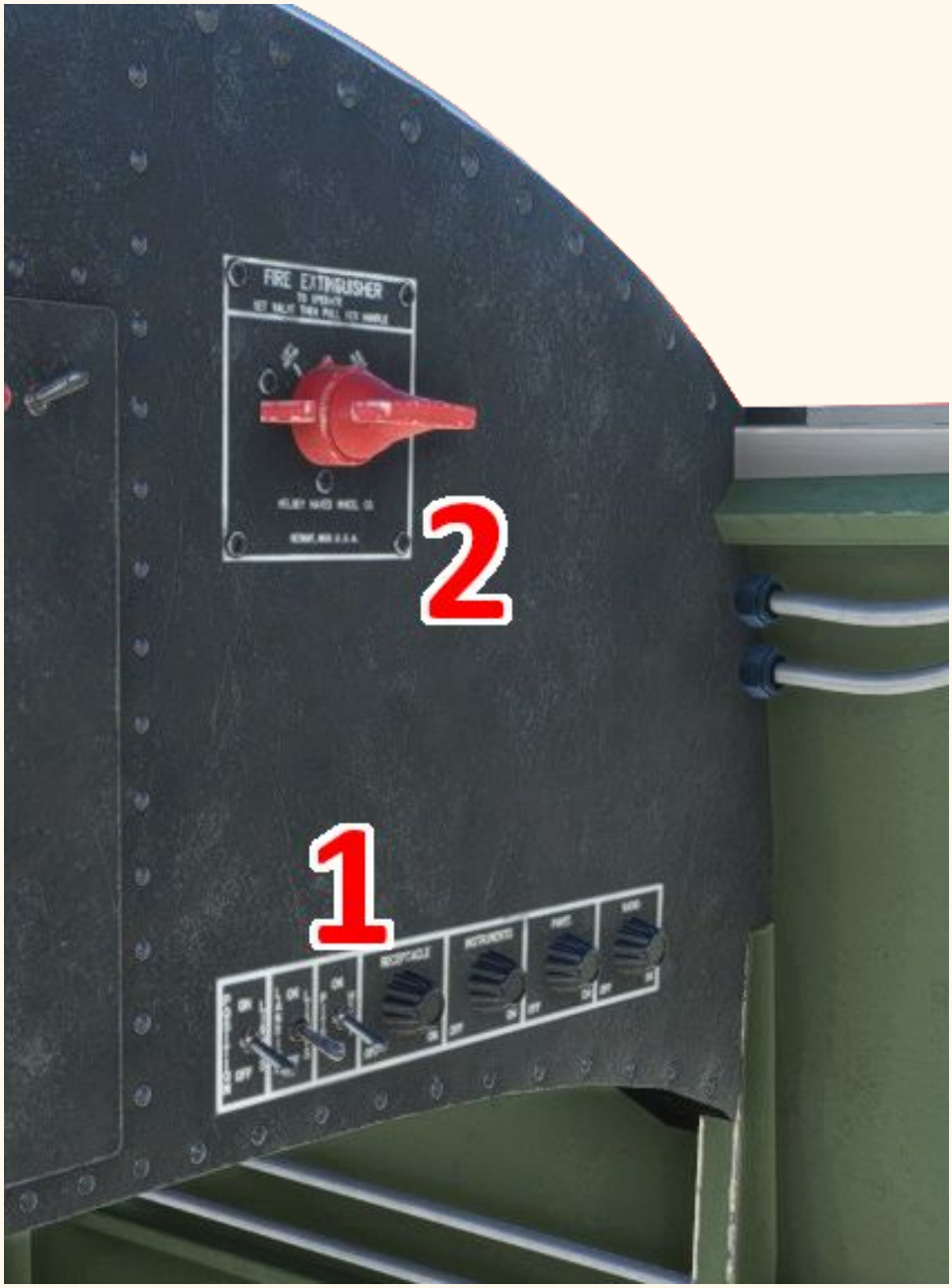
Slow down and lower your flaps (they will come out on their own once you are slow enough). Aim for an approach speed of around 80 - 100 Knots and a touchdown speed of about 60 - 75 Knots. With flaps your approach should be relatively steep. Upon touchdown, get ready to dance yet again while the aircraft slows down!

Port Layout



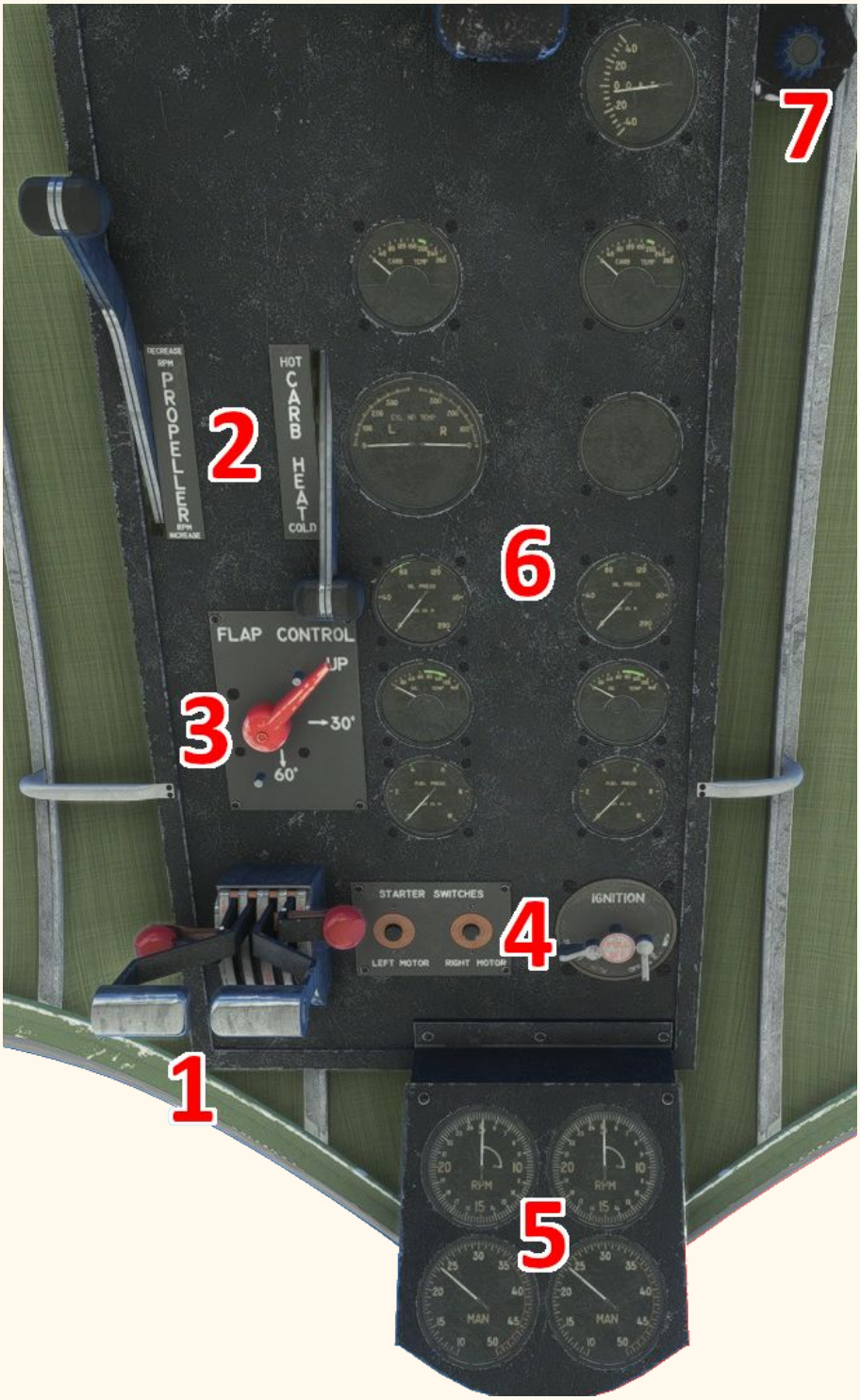
1 - Main Instrument Cluster
2 - Gyropilot Control Panel
3 - Tailwheel Lock
4 - Recognition Light Controls
5 - Rudder Trim
6 - Brake Lock Levers
7 - Clock

Starboard Layout



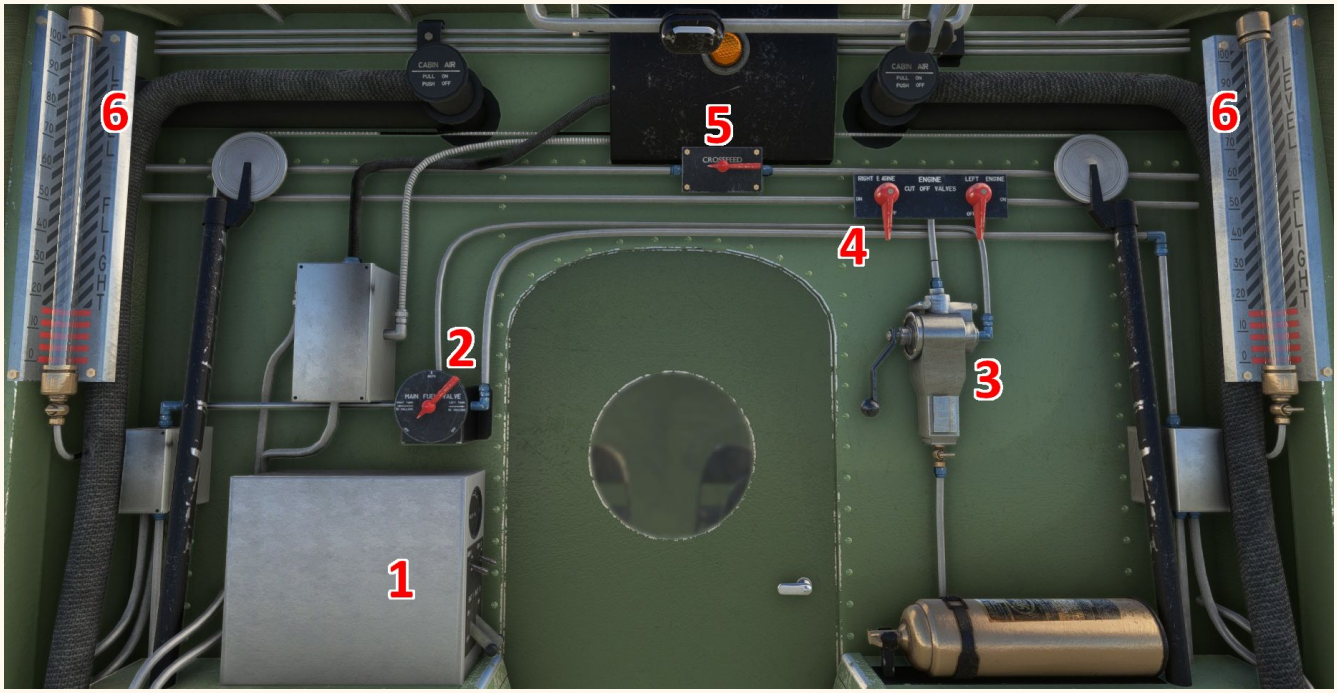
1 - Aircraft Lights Panel
2 - Fire Extinguisher Selector

Overhead Layout



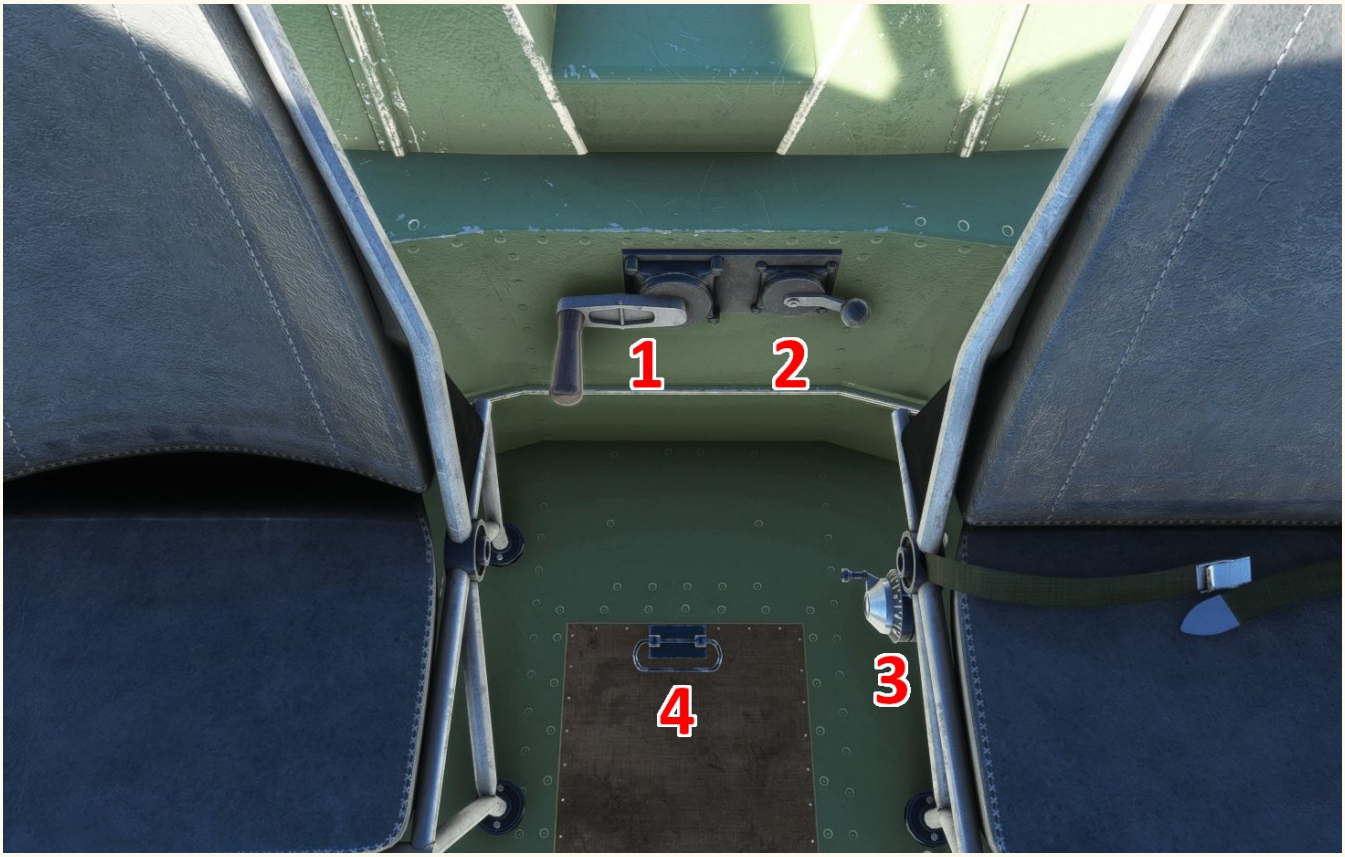
1 - Engine Throttle | Mixture
2 - Propeller | Carb Heat Controls
3 - Flap Control Valve
4 - Engine Start Controls
5 - Engine Power Gauges
6 - Pressure | Temperature Gauges
7 - Overhead Panel Lights Rheostat

Rear Bulkhead Layout



1 - Distribution Box
2 - Fuel Tank Selector
3 - Mechanical Fuel Pump (Wobble Pump)
4 - Fuel Cutoff Valves
5 - Fuel Crossfeed Valve
6 - Fuel Quantity Gauges

Floor Layout



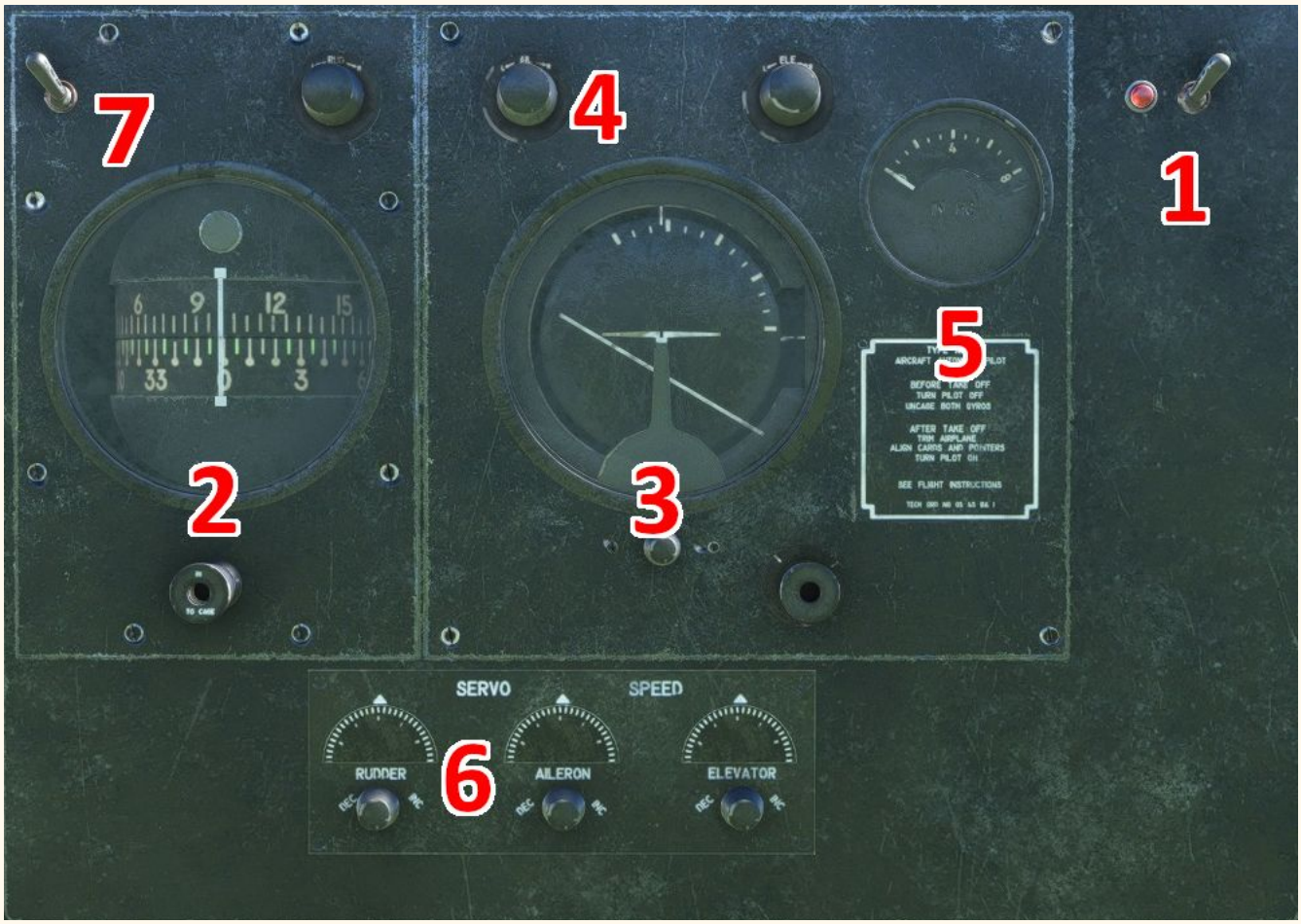
1 - Gear Crank Handle
2 - Gear Direction Selector
3 - Elevator Trim Crank
4 - Floor Compartment

Panel Layout

Main Instrument Cluster

1 - Airspeed Indicator; Knots
2 - Turn Coordinator
3 - Vertical Speed Indicator
4 - Altimeter
5 - Compass and Heading Selector Control

Gyropilot Panel



1 - Gyropilot Master (Down - OFF | Up - ON)
2 - Directional Gyro
3 - Artificial Horizon
4 - Gyropilot Rudder | Aileron | Elevator Controls
5 - Gyropilot Vacuum Gauge
6 - Gyropilot Rudder | Aileron | Elevator Servors - INOP
7- Heading Hold Mode (Down - OFF | Up - ON)

What the hell is it?
What the hell does it do?

Compass: Indicates your magnetic heading. The dial is fixed North up, the thin needle shows your current heading. The wide needle points to your reference heading, selected via the rotary knob below the compass.

Artificial Horizon: Indicate your current pitch and bank angle.The horizon index can be calibrated via the knob below the instrument

Airspeed Indicator: Shows your Indicated Air Speed (IAS). The outer ring shows up to 190 knots. The inner ring ranges from 200 to 440 knots (emergency use only, at that speed your wings might not be part of the aircraft anymore).

Turn Coordinator: Helps you coordinate your turn to avoid side slipping.

Directional Gyro: The top shows your current gyroscopic heading - note that this instrument is prone to gyroscopic drift, accumulating error over time.

The bottom shows the heading you want your Gyropilot to hold. This is adjustable via rotary knob.

Vertical Speed Indicator: Indicates your vertical speed in thousands of feet per minute.

Altimeter: Measures sea level altitude in hundreds (big hand) and thousands (small hand) of feet. The knob changes the pressure the altimeter is calibrated to, measured in inch Hg.

Clock: You know what a clock is, don't you?

These are all the gauges needed to hop in and just #FlyTheDamnPlane

Want to dive into more realistic procedures? The gauges on the Overhead Panel are what you're looking for. They keep you informed about everything the engines are doing as well as outside temperatures.

Outside Air Temperature: This gauge tells you the outside air temperature in degrees Celsius.

Fuel gauge: Shows the remaining capacity of a fuel tank in percent. There are 2 fuel gauges in the Goose. One on the left side of the rear bulkhead, and one on the right, showing the respective tank's fuel quantity. These gauges are only accurate during level flight.

Engine Manifold Pressure: This indicates the manifold pressure (MAP in short) in inch Hg.

RPM Gauge: This shows the revolutions of the propeller in hundreds per minute.

Ignition Controls: The "Magnetos" (self-contained generators) power the spark plugs. Depending on switch position either none, left, right or both banks of plugs are powered.

Additionally you can set the Emergency Ignition Switch, powering both Magneto circuits.

Gyropilot Vacuum: This indicates the pressure difference in inches Hg between the vacuum tube and the ambient air pressure. This allows you to check if your gyro pilot is able to function correctly.

Voltmeter: Shows the battery current in Volts.

Engine Starter Switches: Push and hold either switch to start the corresponding engine. Release when the engine catches.

Cylinder Head Temperature: Shows the engine's cylinder head temperature in degrees Celsius (°C).

Carburettor Temperature: Shows the temperature inside the carburettor body in °C.

Oil Temperature: This gauge shows oil temperature in °C.

Oil Pressure: The oil pressure in PSI.

Fuel Pressure: The fuel pressure within the fuel lines in PSI.

Gear Warning Light: This light illuminates if the landing gear is not down when either throttle is set to less than 1.200 RPM.

Power Management Console: Here you can find Throttle and Mixture levers. The large throttle levers control engine power output by changing how much of the air-fuel mix goes into the engines.

The red Mixture levers change the air-fuel mix by decreasing the amount of fuel passing through the carburettor.

Propeller Lever: Using this lever you can set the desired engine RPM. The constant speed governor will adjust blade pitch with each throttle change to hold the RPM you set.

Flap Control Valve: Use this valve to set the landing flaps to either UP, 30 ° or 60 °. Keep in mind that the flaps will only lower if you are slow enough.

Carburettor Heat Lever: If the carburettor air temperature drops close to 0 degrees, you can use Carb Heat to prevent icing. Keep in mind that this will also lower your maximum power output.

Flying Tips and Tricks

This section covers advanced tips and tricks or flying techniques to get the most out of your Goose (and to maybe even push it past some of its official limitations - but shhh, you didn't get that from us). Whether you want to avoid nasty surprises or dive into challenging bush adventures, we've got your back!

Short Takeoff:

If you want to take off in the shortest distance possible, first make sure your takeoff heading is as close as possible to where the wind is coming from. On runways there is not much wiggle room. When taking off from clearings or other areas without set runway directions however you can often face the wind directly. Leave the flaps retracted to minimise drag during takeoff roll. Once you're ready, hold the brakes and pull the yoke all the way back.

Increase throttle to 35,5 " MAP and wait for the engines to reach full power before releasing the brakes. While the engines build up their RPM be ready to act quickly however. The high engine placement and shallow nose-up angle mean The Goose is prone to dipping the nose when running at high throttle while holding the brakes. If this happens, release the brakes immediately and commence your takeoff roll. Otherwise release your brakes once the engines reach full power.

Push the yoke forward a little to force the tail up, thusly minimising your wing's Angle of Attack and therefore drag. This way you can squeeze out the last bit of acceleration. Lower the flaps fully once you reach 40 Knots. At 50 Knots the flaps will be in position. Swiftly pull back on the yoke, forcing the aircraft to lift off. You are still below stall speed but ground effect lets you stay in the air. Immediately start raising the gear or instruct your co-pilot to do so.

Level out and fly straight ahead, very close to the ground, to accelerate. At 65 Knots you can retract your flaps to 30 degrees, this will provide sufficient lift to keep accelerating without falling back to the ground. At 70 to 75 Knots you can smoothly transition into a climb and once you reach 80 Knots you can retract the flaps fully.

Using this technique and getting the timing just right, with a headwind of about 7 - 8 Knots at sea level, will allow you to take off from a runway shorter than 500 ft and clear obstacles at the end of the runway. This is especially useful on bush strips located on small clearings within forests. It is a close shave, but you will make it.

Crosswind Takeoff:
When facing relatively strong crosswind on takeoff, a taildragger's weathervaning tendency will be a significant challenge. This might end your flight before it even starts if the wind is strong enough. If you have plenty of runway at your disposal you can trade takeoff distance for maximum crosswind allowance however. You have two engines, why not use them to show the weather who's boss?

It's simple enough. Crosswind from your left, lead with the port engine. Set your port engine to full takeoff power (35,5 " MAP) and leave the right engine throttle on a lower value. The increase in thrust on your port side has the same effect as applying right rudder.

The same goes for crosswind from the right, just lead with the starboard engine instead. The natural tendency to yaw left due to the engine torque and P-factor means you can counteract higher crosswind from your right than from your left.

This increases your takeoff roll but prevents you from running out of rudder to compensate for crosswind. You know that The Goose could - as long as you have a rather long runway - theoretically take off with just one engine? Not suggesting anything here, do not try this at home.

Canyon Turn:
If you go on a trip through the mountains and you are staying within the valleys you will, sooner or later, take a wrong turn and end up in a narrow valley with a faceful of mountain in front of you. The terrain ahead of you is rising faster than you could climb and the valley is too narrow to simply turn around.

Fear not, the Canyon Turn is the technique that will save your life in this situation. First of all, don't panic! While cars turn in a set radius, you are flying an aeroplane. And during flight, planes speak degrees per second. The slower you go, the smaller the distance covered per second. This means tighter turns at lower speeds.

So obviously you want to slow down before running out of valley. Swiftly reduce throttle and keep your altitude to slow down. Or do a shallow climb to slow down even quicker, this is up to you and, more importantly, up to how much space you have left ahead of you. Do not slow down until you are near stall speed however. Fly just slow enough for full flaps. Now lower your flaps all the way and adjust throttle to keep your airspeed (this would be around 80 - 90 Knots). Fly as close as possible to the side of the valley facing the wind to maximise space and to avoid downdrafts. Then enter a 30 degree bank and turn the aircraft around.

Why not slower? Because at 80 - 90 Knots your wings themselves provide plenty of lift. Your flaps further increase the amount of lift you have. And since lift pulls you towards the inside of your turn this maximises degrees per second. At slower speed your wings do not provide enough lift without the help of flaps, keeping you from achieving maximum possible turn speed.

Approach by feel:

There are many numbers involved in flying. But it also requires a lot of feel for what the aircraft is doing. To nail the approach you have to feel it, even if it does not quite match the numbers.

Sometimes you should do what feels best to you. Start by reducing throttle, as usual. But instead of strictly following the numbers, just try to feel what The Goose is doing. How it responds to throttle changes, how it slows down and how the controls become more sluggish as you decelerate. Now aim for a point on the ground ahead of you. “Look where you want to go” plays a big role in flying. Try to adjust your throttle and controls to match up your glide path with the point you are aiming for. Keep in mind that this point will not be where you touch down. When approaching a runway, aim for a point before the threshold.

After doing this for a while, you will develop a good feel for how much throttle you need if you want to maintain a specific approach angle. Different airports and airfields require different approach angles, depending on whether there are obstacles near the threshold or whether there is difficult terrain around the runway.

Pick a couple runways with different lengths and different terrain around them, then try various approach angles and see how they work. This way you will develop a good feel for how shallow or steep to approach, just by looking at the terrain on and around your landing zone.

Ultimately the feel for power setting, controls and optimal approach angle will combine and you can intuitively judge when to start decelerating, what angle to fly and what power setting you will need, just going by what “feels right”. When you reach this point, you will notice that you consistently end up with the perfect airspeed just as you reach the point you were aiming for.

Developing this kind of feel for your aircraft and for your approach is an invaluable tool in case you have to perform an emergency landing. Especially when you lose your engines a go-around might prove a little bit difficult. Being able to feel out the approach for a landing site and nailing it on your first try will make the difference between repairing the engines and rebuilding the whole aircraft.

Short Landing:
If you want the shortest landing distance possible, there is a special technique involved. It's not that hard but requires you to be comfortable on the verge of stall speed. Thusly it is recommended you practise slow flight first.

To set up for a short landing you follow the same procedure as for a normal landing. Your approach and touchdown speeds will be lower however. The aircraft will stall at 56 Knots in landing configuration (full flaps, gear down). This means that you ideally aim for an approach speed of 57 Knots. Be very cautious when flying that slow, a pull on the yoke will cause you to stall and shall therefore always be preceded by a throttle increase.

Your approach, apart from the lower speed, will be just like a normal approach. Pull the yoke back just before touchdown for a gentle flare. Be aware that the tail wheel will set down first, fractions of a second before your main wheels touch the ground.

Immediately upon touchdown you should retract your flaps fully. This increases the weight on your wheels, giving you an increase in rolling resistance as well as grip. Now fully pull back on the yoke. You can now apply full brakes without skidding. Keep holding full brakes to rapidly slow down The Goose. When you notice your tail lifting, release the brakes right away. Then reapply them. As your speed decreases you will have to transition from brakes fully applied to intermittent braking. With practice you will get a feel for it and develop the muscle memory to keep your nose from dipping down while not sacrificing your braking distance.

Sideslip Landing
This is the most difficult of the bunch because it requires crossing your controls very close to stall speed. Being able to perform a sideslip approach and landing is going to be very helpful in the most remote unprepared airstrips however. Sometimes you encounter groups of trees or a hill directly at the runway threshold, but no obstacles towards the side of the threshold. That's when a sideslip landing is your best option. When flying the bush trip "Canadian Fishing Holiday" you will encounter an airfield where this technique will helpful.

To perform this maneuver, you will have to apply opposite aileron and rudder inputs, forcing The Goose to crab sideways. Choose the runway you want to land on, then imagine another parallel runway, roughly 50 - 100 metres (or around 150 - 300 ft) next to it. Now approach the imaginary runway as you would approach any other runway. You are now on a glideslope, flying parallel to your runway of choice but off its side. Once you can see the runway threshold ahead, 45 degrees off to either side, you will have to start crabbing sideways towards it.

To do this you need to add a little bit of throttle, use ailerons to bank TOWARDS the runway and apply opposite rudder, AWAY FROM the runway. You are now flying sideways, approaching your runway threshold diagonally. Your nose is pointed parallel to the runway all the time. Just before reaching the threshold, smoothly level your wings and bring your rudder back to neutral. This will stop the crabbing and, without your Goose turning either direction, line you up for landing. Now touch down and come to a stop as usual.

Water Turning:

Moving around on water is quite different from taxiing on solid ground. Wind will carry you away, The Goose wants to point the nose into the wind and you have nothing except water resistance to provide lateral stability. Furthermore, because The Goose has no water rudder, your only means of turning are the regular rudder and differential throttle.

If you want to turn, taxi slowly!

To turn, apply full rudder into the turn and increase throttle on the outside engine. Leave the one on the inside at idle. Do keep in mind that you will not be able to turn on the spot however. Any thrust the props generate - even at idle - will carry you forward, more so when you increase throttle for one of the engines.

If you want a tighter turn radius, you can add aileron input towards the inside. This will push the inside pontoon further into the water, increasing drag on that side and therefore making your turn radius smaller.

None of this will let you turn like you would on land. Keep this in mind when planning where to land. Sometimes it is best to look for a safe shore, lower your landing gear and beach the aircraft. This lets you turn around on solid ground. Then roll back into the water, raise your gear and proceed with takeoff.

Step Taxi:

The advantage of landing on water, besides the freedom of having 70 % of Earth's surface available as a runway, is that you can quickly move around. Much quicker in fact that on land.

If you want to cover ground, do a Step Taxi!

This is simple to do. Increase power to about 15 - 18 " MAP to accelerate and pull back on your yoke, about halfway. Keep an eye on your airspeed indicator. At around 25 Knots you will feel The Goose rise out of the water. Well dosed back pressure on the yoke will keep her slightly nose high. Adjust throttle to maintain around 25 - 30 Knots. You're now "on the step", the aircraft's hull rises and only the step and lower portion of the keel will be in the water. The result is drastically decreased drag, requiring very little power to keep your speed. And you are fast enough for the rudder to be effective.

Bush Trip “(Canadian Fishing Holiday)”

You have a dream of going on a long fishing trip in Canada. And now you have an overhauled Goose as well. And you’re on holiday. What better way of spending it than by fulfilling your dream trip in your dream aircraft?

Your Goose is ready to go at Seattle, you packed your baggage and fishing tackle and it’s time to go. You do not know the area along the coast of British Columbia. However an old flying buddy of yours is operating a floatplane business out of Kitimat, he knows the area like the back of his hand. He’ll join you for the trip, from start to finish, and guide you to some great fishing spots.

You will be taking the scenic route, flying over some of Canada’s most remote areas. This means breathtaking views and raw nature. To make the most of this trip you should stay inside the sounds and valleys.

Of course the rugged nature of this area also means you will face some difficult approaches, requiring you to fly very close to stall speed. So make sure to keep an eye on your airspeed unless you want to have a meet and greet with some of Canada’s tree population.

And the most important thing: Have fun! You’re on holiday after all.

Just make sure to shut down your engines when landing on water, even on idle the air displaced by the props will pull you forward.

Aircraft Check & Startup

Before starting up, make sure to have received a weather report, especially temperature. Also check you have sufficient fuel on board unless you want to fly a glider.

Aircraft Check

1.	Doors and Hatches	CLOSED AND LOCKED
2.	Cargo (if loaded)	SECURED
3.	Cabin	SECURED
4.	Battery & Generator Switches	OFF
5.	Emergency Ignition Switch	OFF
6.	Fuel Tank Selector	OFF
7.	Fuel Cut-Off Valves	CLOSED
8.	Mixture	IDLE CUT-OFF

Startup

1.	Parking Brake	SET
2.	Battery Switch & Generator Switches	ON
3.	Carburettor Air	COLD
4.	Propeller Control	DECREASE RPM
5.	Fuel Tank Selector	ON DESIRED TANK or BOTH
6.	Fuel Cut-Off Valves	ON
7.	Fuel Cross-Feed Valve	CLOSE
8.	Wobble Pump	OPERATE UNTIL 3 TO 4 PSI FUEL PRESSURE
9.	Emergency Ignition Switch	ON

10.	Mixture	IDLE CUT-OFF
11.	Prime Engine	PUMP THROTTLE 4 TO 8 STROKES, depending on temperature
12.	Throttle	CRACKED
13.	Magnetos	BOTH
14.	Starter	ENGAGE
15.	Mixture	AUTOMATIC RICH once engine catches. If engine stops return to IDLE CUT-OFF
16.	Throttle	IDLE, WAIT FOR OIL PRESSURE
17.		INCREASE If oil pressure does not increase within 30 s check for engine damage.

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18. Repeat steps 9. To 15. for the other engine.

Warmup & Taxi

Engine Warmup

1.	Throttle	ESTABLISH 800 TO 1.000 RPM
2.	Propeller Control	Approx. 60 seconds after start full forward to INCREASED RPM
3.	Oil Pressure	CHECK NO PRESSURE DROPS. Pressure falling as low as 25 PSI is no need for concern at low RPM.
4.	Oil Temperature	WAIT FOR AT LEAST 30 ° C before takeoff

REMARK: Operating oil temperature will be reached rapidly thanks to the oil temperature control unit.

Unlike many other taildraggers, The Goose offers very good forward visibility. Constant S-Turns are not required while taxiing. To avoid parking boops it is advisable to know where the nose ends.

Use differential brakes to assist turns but take care not to brake too hard. The shallow nose-up angle at which The Goose sits on the ground makes the aircraft eager to dip its nose under braking. Thusly, like with any taildragger, it is mandatory to keep your speed low during taxi.

Taxi

1.	Parking Brake	RELEASE
2.	Throttle	800 TO 1.000 RPM
3.	Look out both sides, and in front	
4.	Taxi	CAUTIOUSLY, < 10 Knots
5.	Brakes	SMOOTHLY
6.	Yoke	FULL BACK
7.	Keep both hands on controls	

Engine Runup, Takeoff, After Takeoff

Engine Runup

1. Parking Brake—---------- SET
2. Yoke—---------- FULL BACK
3. Propeller Control—---------- INCREASE RPM
4. Mixture—---------- AUTO RICH
5. Manifold Pressure—---------- 30 “ Hg
6. Maximum Cylinder Head Temperature—---------- 205 ° C
7. Oil Pressure—---------- MIN. 25 PSI, DESIRED 70 - 90 PSI
8. Oil Temperature—---------- 60 - 102 ° C
9. Fuel Pressure—---------- 4 - 6 PSI

Takeoff

1. Fuel Cross-Feed Valve—---------- CLOSED
2. Tail Wheel—---------- LOCKED
3. Carburettor Heat—---------- COLD (except when damp)
4. Elevator Trim—---------- NEUTRAL
5. Rudder Trim—---------- NEUTRAL
6. Mixture—---------- AUTO RICH
7. Parking Brake—---------- RELEASE
8. Throttle—---------- SMOOTHLY INCREASE
9. Manifold Pressure—---------- 35,5 “ Hg for FIVE MINUTES MAX
10. RPM—---------- 2.300
11. Maximum time for takeoff power setting—---------- 5 MINUTES

REMARK: For water takeoff with less than full fuel the right tank should carry 30 gallons more than the left tank to counteract engine torque.

It is advisable to keep your windows closed during water takeoff to keep out the spray. If you want to look extra cool make sure you leave them open.

After Takeoff

1. Flaps—---------- RETRACT
2. Landing Gear—---------- UP, Confirm UP by looking through inspection windows

Climb & Cruise

Climb

1.	Throttle----------	DECREASE TO 32,5 - 34,5 “ MAP
2.	Propeller Control----------	2.000 - 2.200 RPM Higher RPM for gradual climbs, lower RPM for rapid climbs
3.	Cylinder Head Temperature----------	MAX. 260 ° C
4.	Carburettor Heat----------	AS REQUIRED Use Carburettor Heat if Carburettor Temperature is below 5 ° C

REMARK: Always reduce Throttle before reducing RPM to avoid overstressing the engines.

Cruise

1.	Throttle----------	34,5 “ Hg MAX
2.	Propeller Control----------	1.600 - 2.200 RPM Use higher RPM setting at higher altitude
3.	Mixture----------	AUTO RICH 70 % Power or less AUTO LEAN
4.	Cylinder Head Temperature----------	MAX. 232 ° C
5.	Oil Pressure----------	70 PSI
6.	Oil Temperature----------	70 ° C
7.	Fuel Pressure----------	4 - 6 PSI
8.	Carburettor Heat----------	AS REQUIRED Use Carburettor Heat if Carburettor Temperature is below 5 ° C. The lever allows fine control for heat.

Approach & Final

Flaps will slow you down considerably. If you fly a shallow approach you will notice that a lot of throttle is needed to maintain a good glide angle with full flaps. Therefore it is recommended to fly a steeper approach or use half flaps only.

Approach

1. Altitude ——---------- ABOVE 1.000 FEET AGL
2. Mixture —---------- AUTO RICH
3. Propeller control—---------- INCREASE RPM
4. Fuel Tank Selector—----------—---------FULLEST TANK or BOTH
5. Speed—----------80 - 100 KNOTS
6. Gear—---------- DOWN for land
   UP for water
   Confirm by looking through inspection windows
7. Flaps—---------- AS REQUIRED
8. Elevator Trim—----—----------ADJUST
9. Tail Wheel—----------CHECK LOCKED

Final

1. Altitude 500 feet—----------DISTANCE ¼ NM
2. Speed—----------MAINTAIN 60 - 75 KNOTS
3. Throttle—---------- 15 “ Hg
4. Gear—---------- CHECK DOWN, visible through inspection window AND Gear Warning Light OFF
   FOR WATER LANDING CHECK UP and Gear Warning Light ON
5. Elevator Trim—----------ADJUST

REMARK: Aim for touchdown speed of around 60 - 65 Knots in a three point attitude or 70 - 75 Knots for a wheel landing.

Landing & Go-Around

The Goose is quite gentle on landing. However, since it is a taildragger, you must always be ready to use your rudder as the tail is unstable.

Landing

1. Propeller Control—---------- INCREASE RPM
2. Over threshold—---------- CUT THROTTLE
3. Landing speed—---------- 60 - 75 KNOTS
4. Touchdown—---------- MAIN WHEELS or THREE POINT
5. On excessive bounce or balloon—---------- GO AROUND
6. Rudder—----------MAINTAIN DIRECTIONAL CONTROL
7. Yoke——---------- KEEP TAIL UP
8. Brakes---------- CAUTIOUSLY ONCE TAIL IS DOWN
9. Turn off runway

REMARK: For wheel landings make sure you keep the tail up after touchdown, increasing forward pressure on the yoke as the aircraft slows down. This ensures maximum airflow for directional control. Once the tail wheel touches down despite full forward pressure pull the yoke all the way back for ground operations.

Crosswind Landing

When landing in strong crosswinds of more than 15 kts you will need significant rudder input to keep the plane straight. Do not land while crabbing sideways, always straighten out before touchdown. Use rudder away from crosswind direction and dip a wing to stay straight.

Go-Around

1. Throttle—---------- 35,5 “ Hg for FIVE MINUTES MAX
2. Propeller Control—---------- 2.300 RPM
3. Gear—---------- UP, Confirm through inspection window
4. Climb

Shutdown

Shutdown

1. Parking Brake—----------SET
2. Propeller Control—----------DECREASE RPM
3. Throttle—----------800 - 1.000 RPM
   Leave the engines running for a few minutes to cool them down
4. Cylinder Head Temperature—----------WAIT UNTIL 140 ° C MAX
5. Fuel Cross-Feed Valve----------CLOSE

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6. Mixture—----------IDLE CUT-OFF
7. Fuel Cut-Off Valve—----------CLOSE
8. Magnetos----------OFF when prop stops turning

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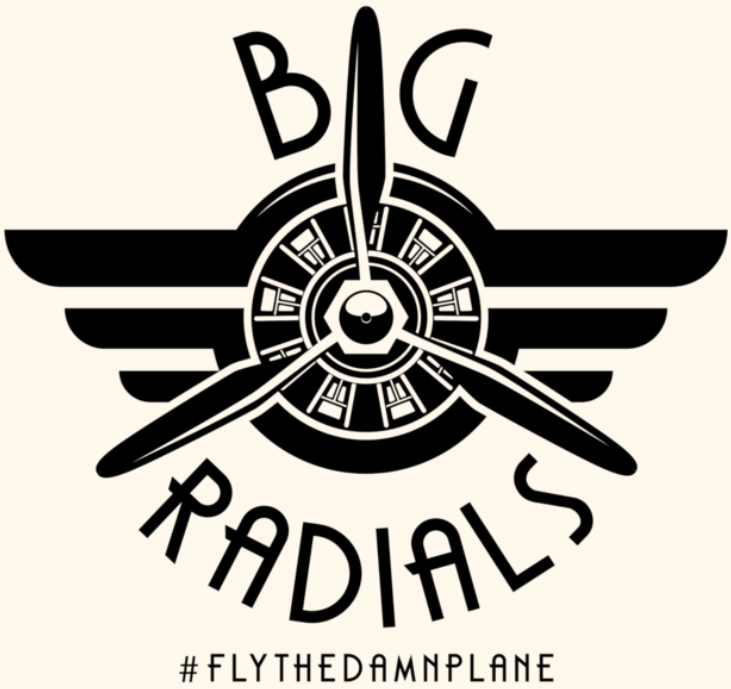
9. Repeat steps 6. to 8. for the other engine

10. Emergency Ignition Switch—----------OFF
11. Fuel Tank Selector—----------OFF
12. Carburettor Air—----------COLD
13. Battery & Generator Switches—----------OFF

Come Talk To Us



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