

FLYSIMWARE

— FLY THE VINTAGE SKIES —



LANCAIR LEGACY(STARHAWK)

Version 1.0

**COCKPIT
GLASS**

OVERVIEW OF PANELS

MAIN PANELS

PILOTS & COPILOT PANELS

Pilot Panel G3X-PFD / G5

Center Panel GTN 750 / Transponder / Autopilot

Center Panel GTN 750XI / Transponder / Autopilot

Copilot Panel G3X-MFD

**COCKPIT
GLASS**

DETAILED INFORMATION

GARMIN GTR200 (COM2 RADIO)

CARMIN GMC305 AUTOPILOT

Annunciator Warning Panel

Oxygen Unit

Circuit Breakers

EFB Tablet

Maintenance Page

CENTER PEDESTAL

MAIN COCKPIT

Throttle Quadrant, Fuel Valves and Tank Selectors

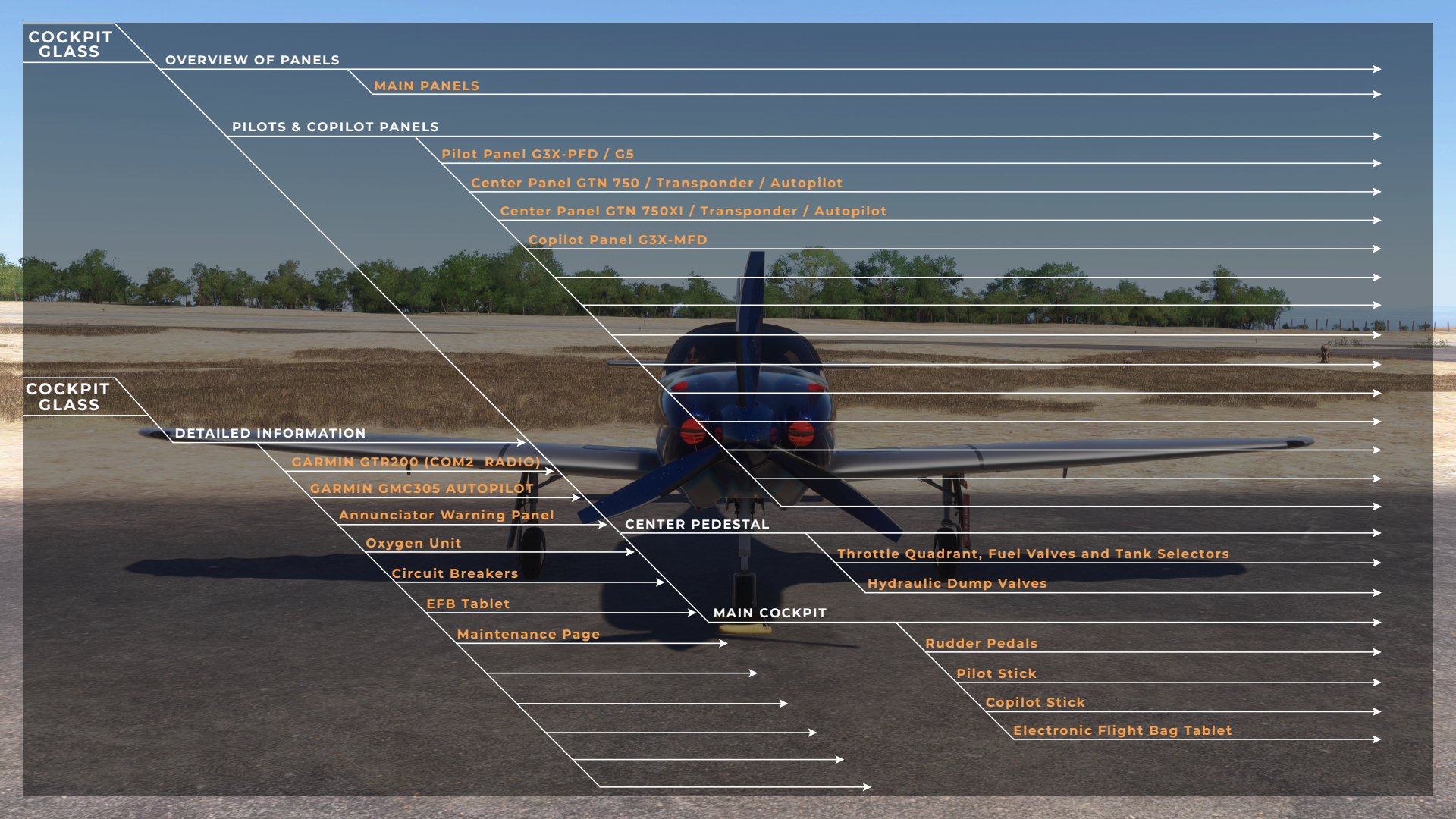
Hydraulic Dump Valves

Rudder Pedals

Pilot Stick

Copilot Stick

Electronic Flight Bag Tablet



INTERIOR

CABIN

Canopy

Canopy Open

Cabin/Cargo Lights

DETAILED INFORMATION

EXTERIOR

AIRCRAFT

Canopy

Canopy Open

Ground Power Unit

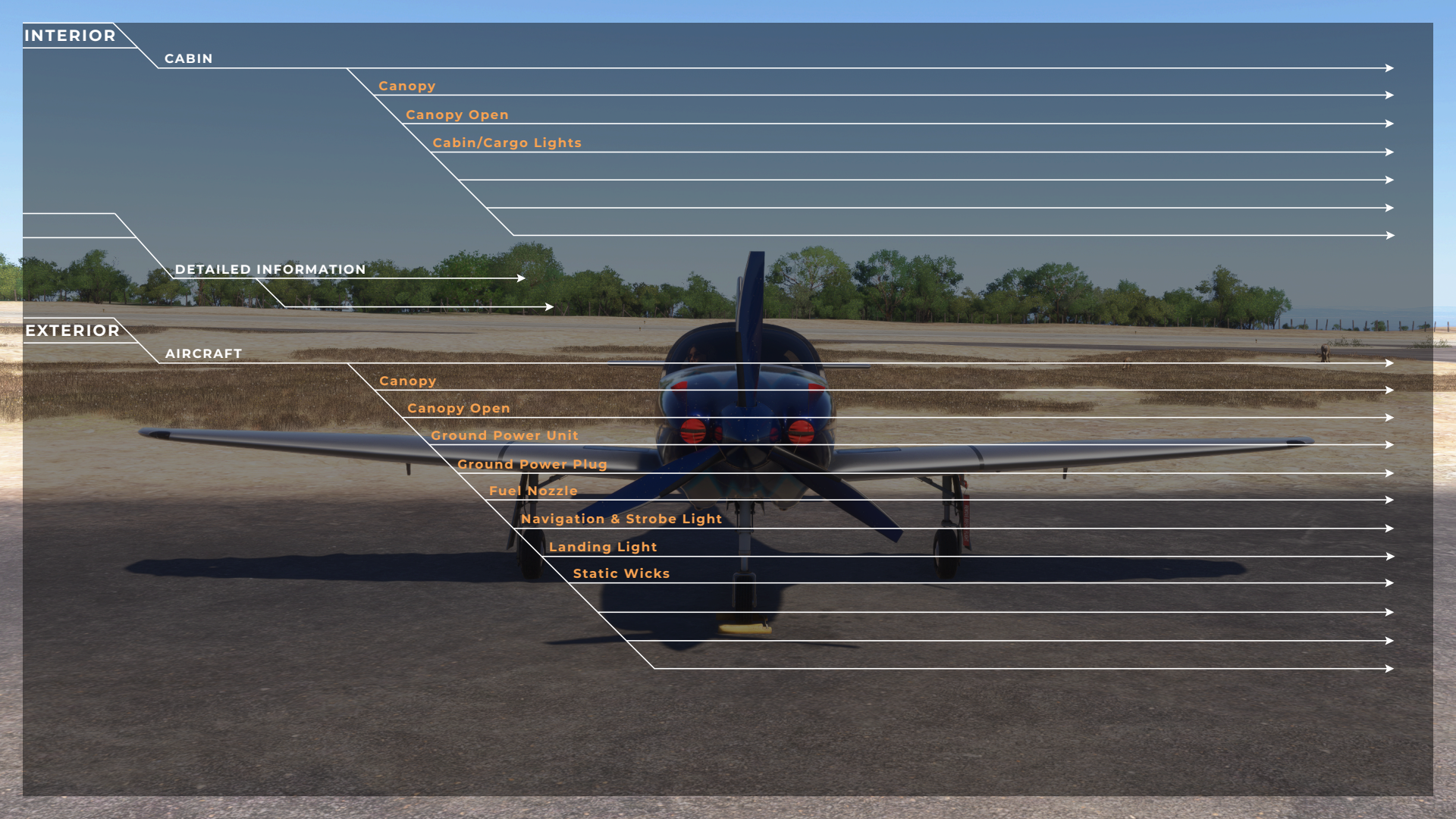
Ground Power Plug

Fuel Nozzle

Navigation & Strobe Light

Landing Light

Static Wicks



PREFLIGHT DETAILED INFORMATION

EXTERIOR

Ailerons

Elevator's & Rudder

Nose tire And Chokes

Propeller

Engine Plugs

Oil Door

Ground Equipments Tip

VARIANT OPTION

EXTERIOR

INTERIOR



COCKPIT
ANALOG

OVERVIEW OF PANELS

MAIN PANELS

PILOTS & COPILOT PANELS

Pilot Panel

Center Panel

Copilot Panel

COCKPIT
ANALOG

DETAILED INFORMATION

Annunciator Warning Panel

Autopilot Panel

EFB Tablet

CENTER PEDESTAL

Throttle Quadrant

Fuel Valves And Tank Selectors

Hydraulic Dump Valves

MAIN COCKPIT

Pilot Stick

Copilot Stick

Electronic Flight Bag Tablet

COMING SOON



NOTE: Product support and update information can be found on Flysimware's Discord Community.

To report bugs or find solutions please locate the PRODUCT SUPPORT section!

Discord link:

<https://discord.gg/WBXhEQVWma>

Website:

<https://flysimware.com/website2019/contact/>

Avsim:

<https://www.avsim.com/forums/forum/728-flysimware-forum/>

LANCAIR LEGACY 10-550N (NATURALLY ASPIRATED ENGINE)

Exterior

Length: 22.4 ft

Width: 22.5 ft

Height: 8.0 ft

Interior

Two Seats

Cargo Compartment behind seats, Max 75 lbs

Operating Weights

Max T/O Weight: 2550 lb

Empty Weight: 1729 lb

Fuel Capacity: 384 lbs

Power Plant

Piston single engine

Engine Model: Continental IO-550N

Propeller 3 blades, feathering

Propeller: MT propeller MTV-9-D-C-F/CF183-50a

Range & Ceiling

8,500 ft, 75% Power, 45 Min reserve: 597nm

Eco cruise, 16,000 ft, 45% Power, 45 Min reserv: 1,002nm

Service ceiling: 18,000 ft

Runway

Takeoff run distance at Sea level: 1,254 ft

Takeoff run distance at 9,000 ft: 2,088 ft

Landing Roll out distance sea level: 1,330 ft

Landing Roll out distance 9,000 ft: 1.854 ft

Performance

Max Speed: 274 KIAS

Max level flight speed: 249 KTAS at sea level

Cruise speed at 8,500ft, 75%Power: 235 KTAS

Economy cruise, 16,000 ft, 45%Power: 203 KTAS

Best climb rate at 3,000 ft: 2,313fpm

Best climb rate at 9,000 ft: 1,560 fpm

LANCAIR LEGACY TSIO 550N (TURBOCHARGED)

Exterior

Length: 22.4 ft

Width: 22.5 ft

Height: 8.0 ft

Interior

Two Seats

Cargo Compartment behind seats, Max 75 lbs

Operating Weights

Max T/O Weight: 2550 lb

Empty Weight: 1729 lb

Fuel Capacity: 384 lbs

Power Plant

Piston single engine

Engine Model: Continental TSIO-550E(Turbocharged)

Propeller 3 blades, feathering

Propeller: MT propeller MTV-9-D-C-F/CF183-50a

Range & Ceiling

16,000 ft, 75% Power, 45 Min reserve: 602nm

Eco cruise, 22,000 ft, 45% Power, 45 Min reserv: 782nm

Service ceiling: 18,000 ft

Runway

Takeoff run distance at Sea level: 1,110 ft

Takeoff run distance at 9,000 ft: 1,459 ft

Landing Roll out distance sea level: 1,330 ft

Landing Roll out distance 9,000 ft: 1.854 ft

Performance

Max Speed: 274 KIAS

Max level flight speed: 279 KTAS at 24,000 ft

Cruise speed at 16,000 ft, 75%Power: 262 KTAS

Economy cruise,22,000 ft, 45%Power: 200 KTAS

Best climb rate at 3,000 ft: 3,022fpm

Best climb rate at 9,000 ft: 2,937 fpm

Flight Sim Variant Information

1. Castering Nose gear steering & braking

- Castoring Nose Gear + Differential Braking — Use this variant if you have rudder pedals and toe brakes. This is the realistic setup: the nose wheel free-castors, and steering is controlled by applying left or right brake.
- Steering + Standard Brakes — Use the variant with the “Steering” suffix only if you do not have rudder pedals or toe brakes. This version allows nose wheel steering with a joystick twist axis and uses a standard brake button.

2. Engine Management

- 10-550N Engine - Naturally Aspirated
- TS10-550E Engine - Turbocharged
 - Naturally Aspirated — If the variant name does not include “Turbo,” this is the naturally aspirated version. As you climb, manually lean the mixture to maintain the correct fuel-to-air ratio for best performance and fuel consumption.
 - Turbocharged — If the variant name includes “Turbo,” this is the turbocharged version. Leave the mixture lever full forward up to the 18,000 ft critical altitude; above that, begin leaning the mixture for best fuel consumption.

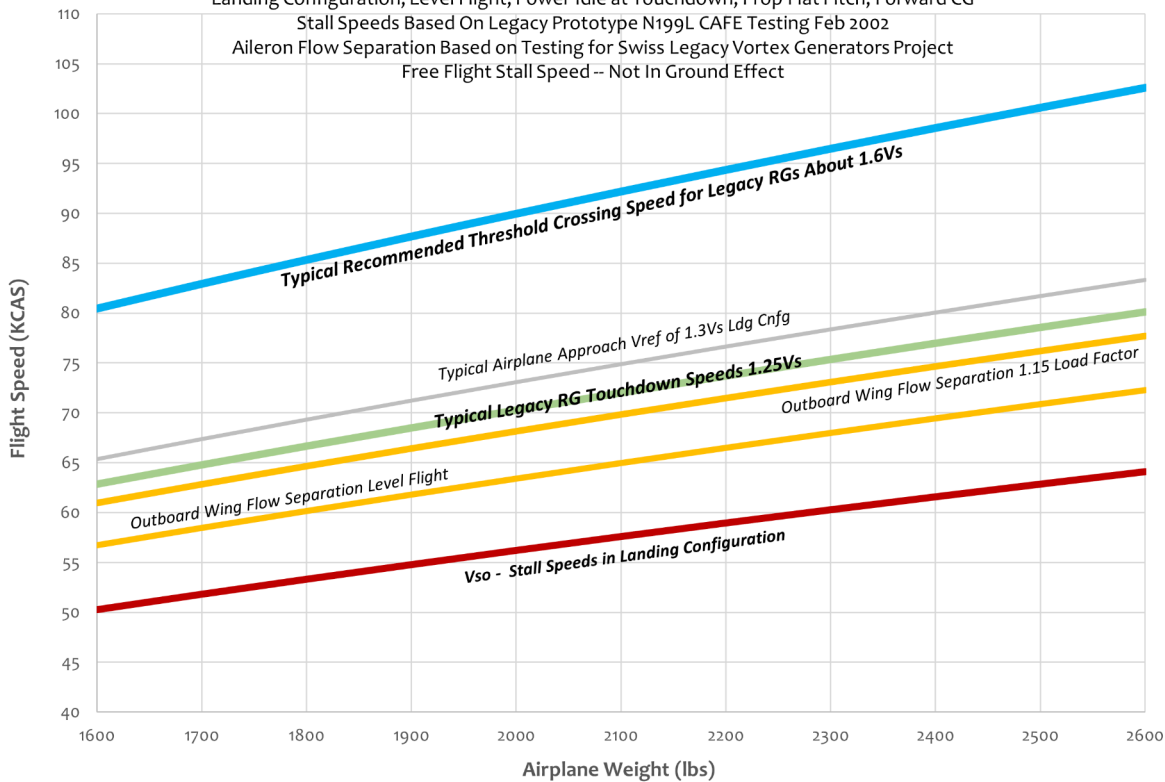
3. Propeller Feathering-Use the StarHawk variant to enable propeller feathering.

- Propeller feathering can only be activated after the prop lever has first been moved all the way back to the bottom position using either your hardware or mouse. Once the lever is fully back, you must use the mouse to grab the prop lever a second time and pull it farther down into the feather range. The propeller RPM must be above 1,000 RPM for feathering to activate.

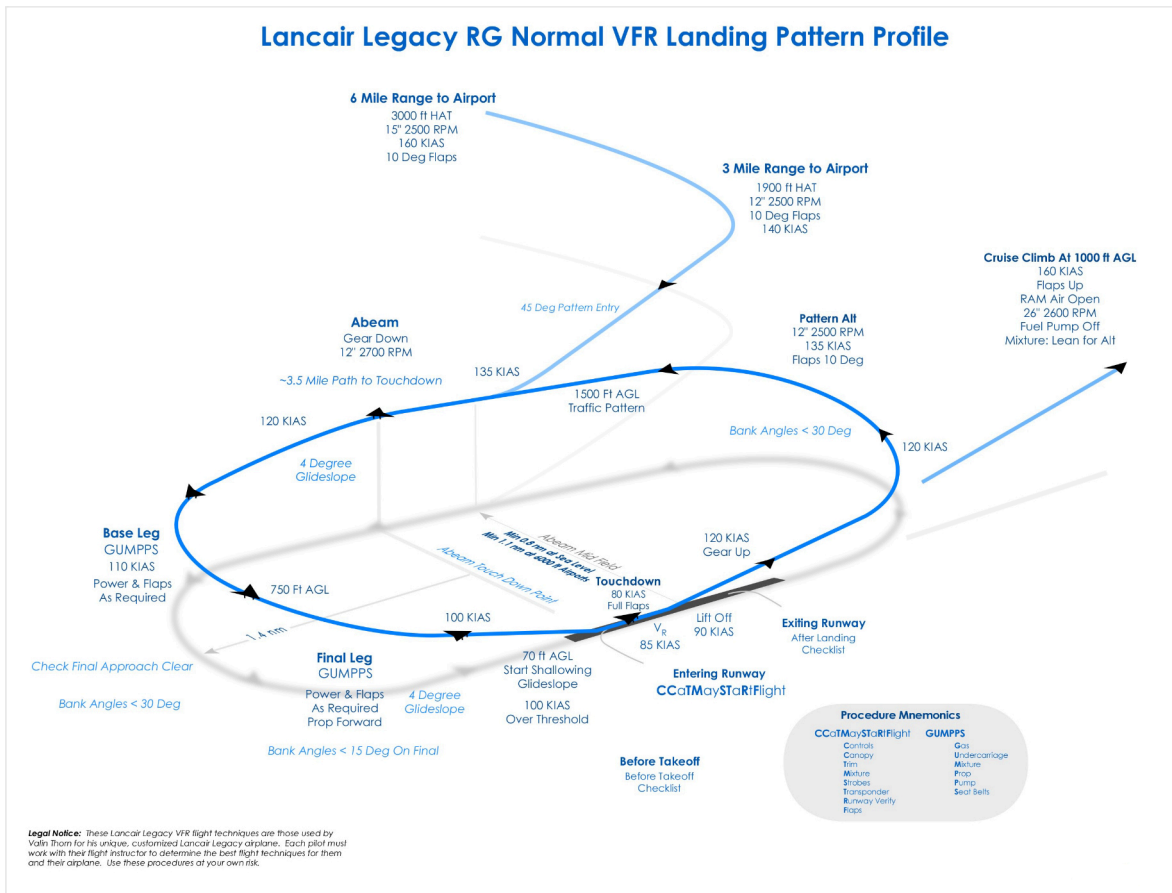
Flight Performance Data

Legacy RG Approach & Landing Speeds

Landing Configuration, Level Flight, Power Idle at Touchdown, Prop Flat Pitch, Forward CG
 Stall Speeds Based On Legacy Prototype N199L CAFE Testing Feb 2002
 Aileron Flow Separation Based on Testing for Swiss Legacy Vortex Generators Project
 Free Flight Stall Speed -- Not In Ground Effect

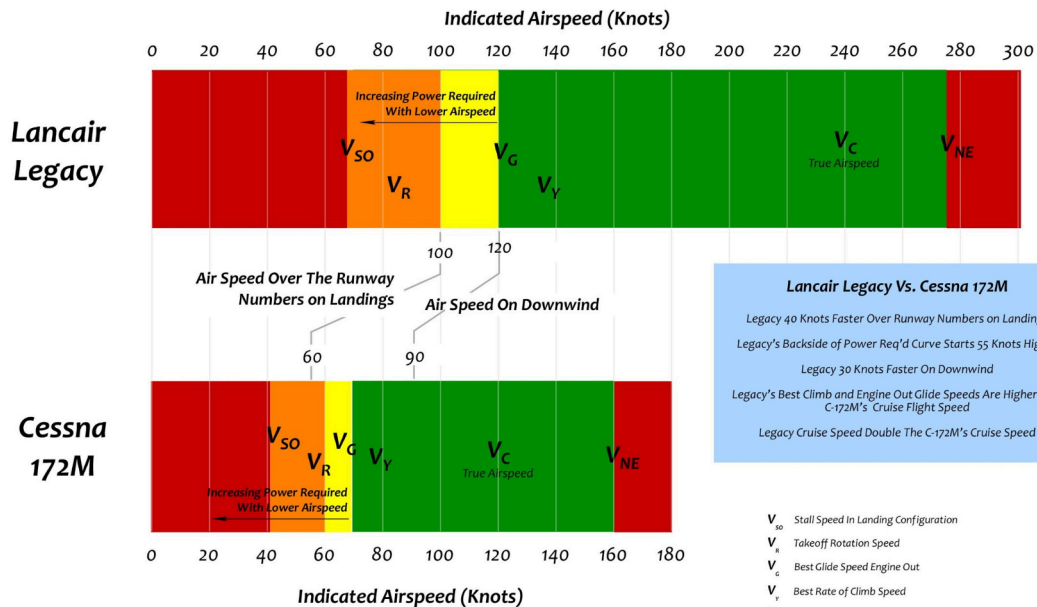


Flight Performance Data



Flight Performance Data

Experimental Lancair Legacy Flight Envelope Speeds Vs. Typical Certified Light Airplane



- V_{SO} Stall Speed In Landing Configuration
- V_R Takeoff Rotation Speed
- V_G Best Glide Speed Engine Out
- V_Y Best Rate of Climb Speed
- V_C Cruise True Air Speed
- V_{NE} Never Exceed Speed

TrueSim System Overview

TrueSim is an advanced maintenance and wear simulation system that models the real-world aging and condition of the aircraft over time. Instead of static or purely visual effects, TrueSim continuously tracks usage, environmental exposure, and operational behavior to simulate gradual system degradation. Components such as oil levels, filters, tire, and other systems will wear down naturally based on how the aircraft is operated. Factors like engine run time, ground movement, environmental conditions, and general usage all contribute to the aircraft's evolving condition, creating a more realistic and persistent ownership experience.

The system operates seamlessly in the background during normal flight and retains its state between sessions, ensuring that the aircraft's condition and wear is available. Maintenance features can be enabled or disabled at any time through the EFB settings, allowing users to choose between a fully simulated experience or a simplified mode depending on their preference.

MAIN PANELS



Pilot Panel G3X-PFD / G5



PARKING LEVER BRAKE
Press to toggle lever brake on/off

PILOT AIR VENT
Hold drag to adjust the pilot air vent

CARBON MONOXIDE BUTTON
Press push to test the carbon monoxide button

CAUTION WARNING SWITCH
Hold to toggle & drag 3-way switch:
Up: DIM
Center: Bright
Down: Test

AOA TEST BUTTON
Press push to test the AOA

AOA DIMMER
Press push to test the AOA dimmer

ANNUNCIATOR PANEL
Click here for detailed info.

GARMIN PFD G3X TOUCH

GARMIN G5

ALTERNATOR 2 SWITCH
Press to toggle battery switch on/off

FUEL PUMP SWITCH
Hold to drag 3-way switch:
Up: High
Center: Off
Down: Low

CANOPY LEVER SWITCH
Press to set canopy lever switch position on/off

BATTERY SWITCH
Press to toggle battery switch on/off

NAV STROBE LIGHT SWITCH
Hold to drag 3-way switch:
Up: Nav/Strobe Light
Center: Nav Light
Down: Off

ESS BUS SWITCH
Press to toggle ess bus switch on/off

PANEL LIGHT KNOB
Hold drag to adjust the light knobs brightness

ALTERNATOR 1 SWITCH
Press to toggle battery switch on/off

AVIONICS SWITCH
Press to toggle avionics switch on/off

FLAPS SWITCH
Hold to drag Flaps Switch:
To set flaps position to up or to down.
Hold the flaps switch for few seconds to move them up or down.

MASTER LIGHTS KNOB

LOGO LIGHTS KNOB

LANDING LIGHT SWITCH
Hold to drag 3-way switch:
Up: Landing
Center: Off
Down: Pulse

RUDDER TRIM SWITCH
Press to drag lock the rudder trim switch to left or right

FOOTWELL LIGHTS KNOB

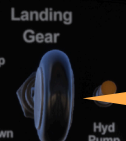
CARGO LIGHTS KNOB

MAGNETO
Hold to drag Magneto:
To set magneto position to right, to left or to both.
Hold the magneto for few seconds to start the engine.

Center Panel GTN 750 / Transponder / Autopilot

COCKPIT — Pilot & Copilot Panels

AOA INSTRUMENT DISPLAY



LANDING GEAR
Hold to set gear position up/down

LANDING GEAR SAFE LIGHTS

GARMIN GTN 750 (PMS50)



Click here for detailed info.
GARMIN GTR200 (COM2 RADIO)

GARMIN GMC305 AUTOPILOT UNIT

Click here for detailed info.



Center Panel GTN 750XI / Transponder / Autopilot

AOA INSTRUMENT DISPLAY



LANDING GEAR

Hold to set gear position up / down

LANDING GEAR SAFE LIGHTS

GARMIN GTN 750XI (TDS)

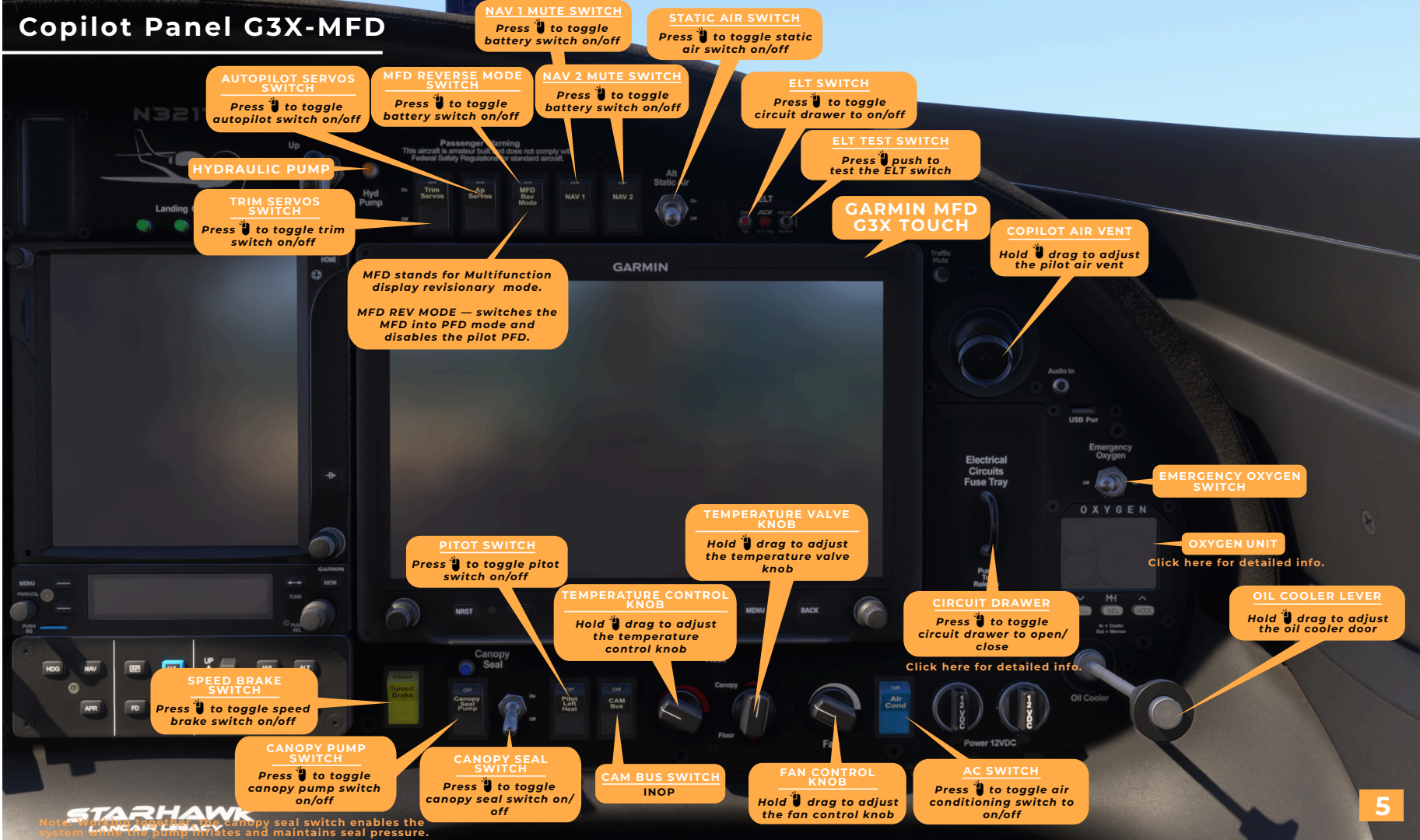
[Click here for detailed info.](#)

GARMIN GTR200 (COM2 RADIO)

GARMIN GMC305 AUTOPILOT UNIT

[Click here for detailed info.](#)

Copilot Panel G3X-MFD



AUTOPILOT SERVOS SWITCH
Press to toggle autopilot switch on/off

MFD REVERSE MODE SWITCH
Press to toggle battery switch on/off

NAV 1 MUTE SWITCH
Press to toggle battery switch on/off

STATIC AIR SWITCH
Press to toggle static air switch on/off

ELT SWITCH
Press to toggle circuit drawer to on/off

ELT TEST SWITCH
Press to test the ELT switch

HYDRAULIC PUMP

TRIM SERVOS SWITCH
Press to toggle trim switch on/off

MFD stands for Multifunction display revisionary mode.
MFD REV MODE — switches the MFD into PFD mode and disables the pilot PFD.

GARMIN MFD G3X TOUCH

COPILOT AIR VENT
Hold to adjust the pilot air vent

EMERGENCY OXYGEN SWITCH

OXYGEN UNIT
Click here for detailed info.

TEMPERATURE VALVE KNOB
Hold to adjust the temperature valve knob

PITOT SWITCH
Press to toggle pitot switch on/off

TEMPERATURE CONTROL KNOB
Hold to adjust the temperature control knob

CIRCUIT DRAWER
Press to toggle circuit drawer to open/close
Click here for detailed info.

OIL COOLER LEVER
Hold to adjust the oil cooler door

SPEED BRAKE SWITCH
Press to toggle speed brake switch on/off

CANOPY PUMP SWITCH
Press to toggle canopy pump switch on/off

CANOPY SEAL SWITCH
Press to toggle canopy seal switch on/off

CAM BUS SWITCH INOP

FAN CONTROL KNOB
Hold to adjust the fan control knob

AC SWITCH
Press to toggle air conditioning switch to on/off

Note: Working together, the canopy seal switch enables the system while the pump inflates and maintains seal pressure.

Lever's

STARHAWK

PROPELLOR LEVER


Hold  drag to adjust propellor RPM control

ALLYSON THORN
VALIN THORN

MIXTURE LEVER

Hold  drag to adjust mixture lever

RAM AIR LEVER

Hold  drag to adjust the ram air lever

THROTTLE LEVER

Hold  drag to adjust throttle lever

FUEL SELECTOR

Hold  drag to set fuel selector position to right, left or off

FUEL TANK
SELECTOR



Hydraulic Dump Valves

CROSS OVER DUMP VALVE
Press  to toggle cross over dump valve to on/off

PRIMARY DUMP VALVE
Press  to toggle primary dump valve to on/off

HYDRAULIC PRESSURES
Measured in psi

HYDRAULIC PRESSURES

HYDRAULICS DUMP VALVES

RETRACT CIRCUIT

CIRCUIT DEPLOY


Rudder Pedals

RUDDER PEDALS

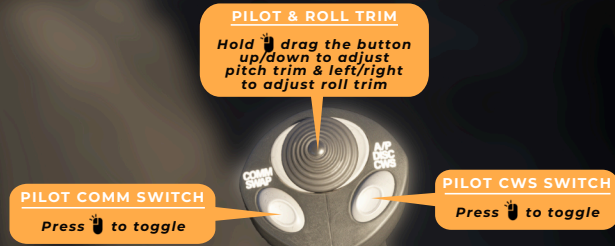
RUDDER PEDAL HANDLE

Press  hold to adjust rudder pedal's position

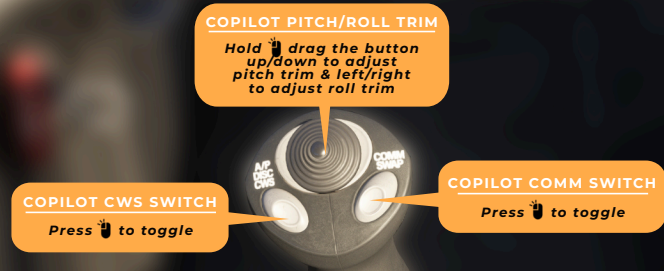
FOOTWELL LED LIGHTS

Press  hold to rotate footwell knob to adjust brightness. Access it from the pilot panel.

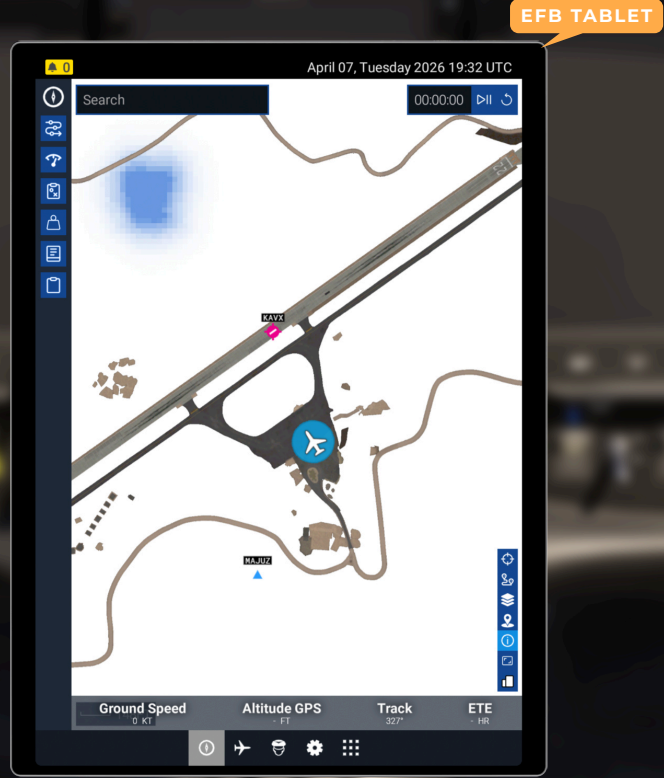
Pilot Stick



Copilot Stick



Electronic Flight Bag Tablet



[Click for the detailed info.](#)

Canopy

CANOPY HOTSPOT

Press  to toggle canopy to open/close

Note: Make sure to click the canopy lever to unlock the canopy before clicking this hotspot

CANOPY LEVER

Press  to toggle canopy lever to lock/unlock the canopy

Canopy Open

CANOPY HOTSPOT

Press  to toggle canopy to open/close



Canopy

Click on the raise/lower canopy to open/close the canopy.

Note: Clicking on the raise/lower canopy shows enter aircraft/canopy light switch options.

Note: These decals are just a toggle.

↑ RAISE CANOPY

↓ LOWER CANOPY

Click on the door handle to open the door.

Note: Clicking on the hotspot shows you raise/lower canopy options.

OPEN CANOPY

STATIC PORT
KEEP CLEAR

Canopy Open

Turn on the cabin lights during night time, to enter the aircraft.

ENTER AIRCRAFT
CANOPY LIGHT SWITCH
RAISE CANOPY
LOWER CANOPY

Ground Power Unit






Access this GPU from the EFB Tablet.

GPU Power Plug



The bulbs light up based on the battery voltage.

-  Red illuminates when the battery voltage is below 24.8V
-  Amber illuminates between 24.8–25.3V
-  Green illuminates above 25.3V

Fuel Nozzle

FUEL NOZZLE

Fuel nozzle will show once the fuel caps are removed and either the custom fuel truck or the ATC fuel truck has arrived.

Request fuel supply services from the ground crew through ATC

Navigation & Strobe Light



NAVIGATION RED LIGHT

Green Navigation Light on the other wing

STROBE LIGHTS

Landing Light

LANDING LIGHT

There is no taxi light on this aircraft



STATIC WICKS

Ailerons



1. Check both ailerons by moving them up and down.
2. They should move freely with no resistance.

Elevator's & Rudder



1. Check both elevator's and a rudder by moving them up and down and left to right simultaneously.
2. They should be move freely with no resistance.

Nose Tire & Chokes

1. *Inspect nose tire for proper shape and inflation.*
2. *Ensure no excessive wear, cuts, or flat spots.*

1. *Click here to mount or remove chokes*

Propeller



The propeller should turn smoothly, with normal resistance from engine compression

Engine Plugs



1. Remove engine plugs.
2. No foreign objects left behind after removal.

Oil Door

SHOW / HIDE
TOP
NACELLE COVER

SHOW / HIDE
BOTTOM
NACELLE COVER

1. Open the oil access door to check the engine oil level during preflight.
2. Ensure the oil quantity is within the recommended range and the cap is securely fastened.

Check EFB maintenance page for oil levels.

Ground Equipments Tip

SHOW / HIDE
TOP
NACELLE COVER

Click decal to show/hide top nacelle cover

SHOW / HIDE
BOTTOM
NACELLE COVER

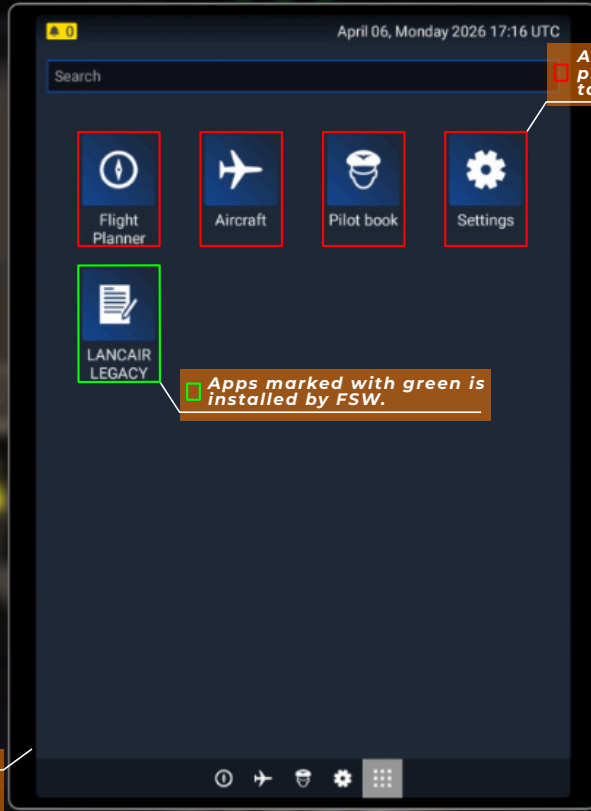
Click decal to show/hide bottom nacelle cover

Mount/remove pitot cover

- 1. Ground equipment can be mounted/removed individually during preflight as per checklist.*
- 2. By mounting/removing the chocks, resets all items (nacelle covers, oil cap, oil door and fuel caps) to their default state.*

Note: This excludes the pitot cover, as it is up to you to remove before flying.

EFB Tablet Detailed Info.



Apps marked with red are pre-installed on the tablet.

Apps marked with green is installed by FSW.

Note: "We have reported a bug to Asobo that viewing the pages in the bezel is lower quality than the widget. It is our our recommendation to use the widget or the pop-out and place it on anothe monitor for high quality display."

[Return](#)

EFB Tablet Detailed Info.



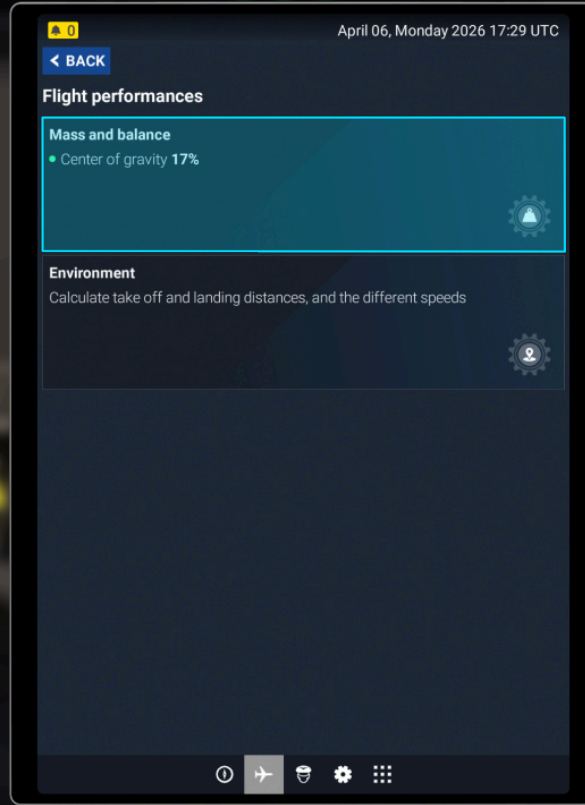
Aircraft

The Aircraft page is organized into three main categories:

- Flight Performance (including Mass and Balance and Environment submenus)
- Checklists (available in Standard, Advanced, and Expert levels)
- Aircraft Information (providing reference data specific to the airframe)

[Return](#)

EFB Tablet Detailed Info.



EFB Tablet Detailed Info.

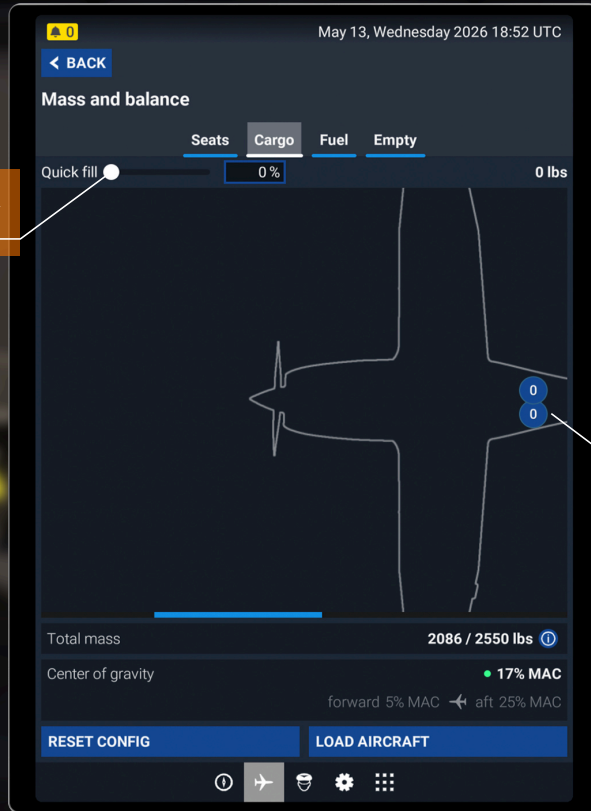


Select seat positions to assign passengers and baggage, adjusting loads according to operational weight requirements.

Once weight requirements are confirmed, select Load Aircraft to apply passenger and baggage loading to the aircraft

EFB Tablet Detailed Info.

WARNING: The Quick Fill function may permit loading beyond operational limits, potentially resulting in an unflyable aircraft.



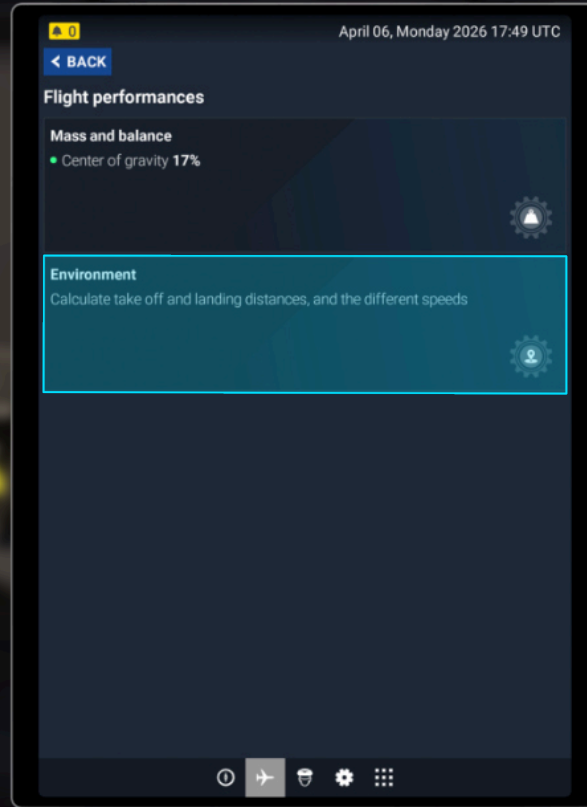
In the Cargo section, select the desired cargo options to allocate baggage in accordance with load requirements

EFB Tablet Detailed Info.



Set fuel quantities in accordance with mission and operational requirements.

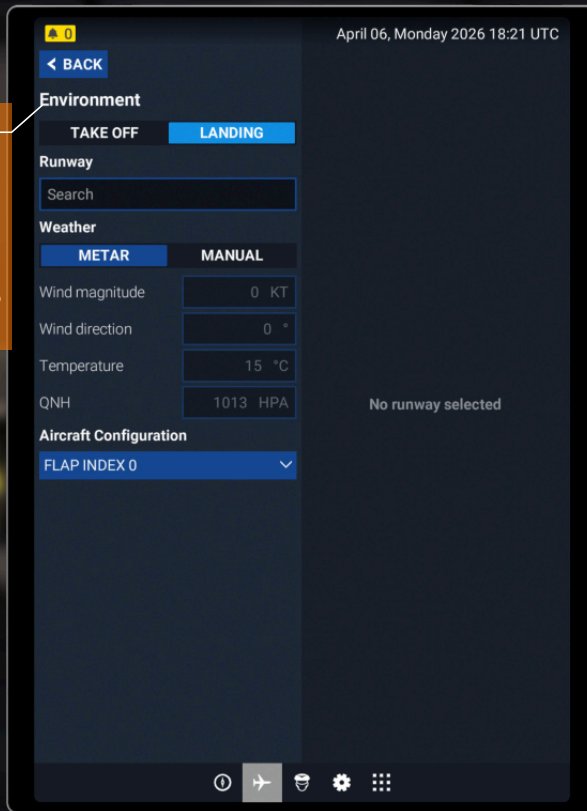
EFB Tablet Detailed Info.



EFB Tablet Detailed Info.

ENVIRONMENT

The Environment Page provides the tools to compute accurate takeoff and landing performance by combining runway selection with live METAR data or custom manual weather inputs. Users can set wind magnitude and direction, temperature, QNH, and aircraft configuration (such as flaps). These settings allow the system to generate realistic performance numbers tailored to the specific runway and weather conditions.



EFB Tablet Detailed Info.

LEVEL STANDARD

Select the checklist level to access Standard, Advanced, or Expert options.
 Note: Use level standard as we do not offer any other levels of standard.

- LEVEL STANDARD ^
- STANDARD
- ADVANCED
- EXPERT

🔔 0
April 15, Wednesday 2026 21:10 UTC

< BACK

Checklists

LEVEL ADVANCED

0/8
RESET

RESET ALL

- ^ Preflight
- PREFLIGHT-CABIN
- PREFLIGHT-EXTERIOR
- PRESTART
- START
- COLD ENGINE START
- AFTER ENGINE START
- BEFORE TAXI
- TAXI BEFORE TAKE OFF
- ENGINE RUNUP
- ▼ Inflight
- ▼ Postflight

○ CAMERAS
ON / RECORDING

Check if the cameras are on and recording

○ PREFLIGHT INSPECTIO
COMPLETE

Complete the preflight inspection

○ WEIGHT BALANCE
WITHIN LIMITS

Check the weight and balance

○ EMERGENCY EQUIPME
ONBOARD

Check if the emergency equipment is onboard

○ BRIEFED
BRIEFED

Check if the passengers are briefed

○ SEATS BELTS
ADJUST / SECURI

Check if the seat belts are adjusted and secure

○ LOGISTICS
FLT BAG, WATE

Check if logistics are on board

○ ALL SWITCHES
CONFIGURE FOF

Check if all the switches are configure for engine start

🕒
✈️
🛩️
⚙️
☰

EFB Tablet Detailed Info.

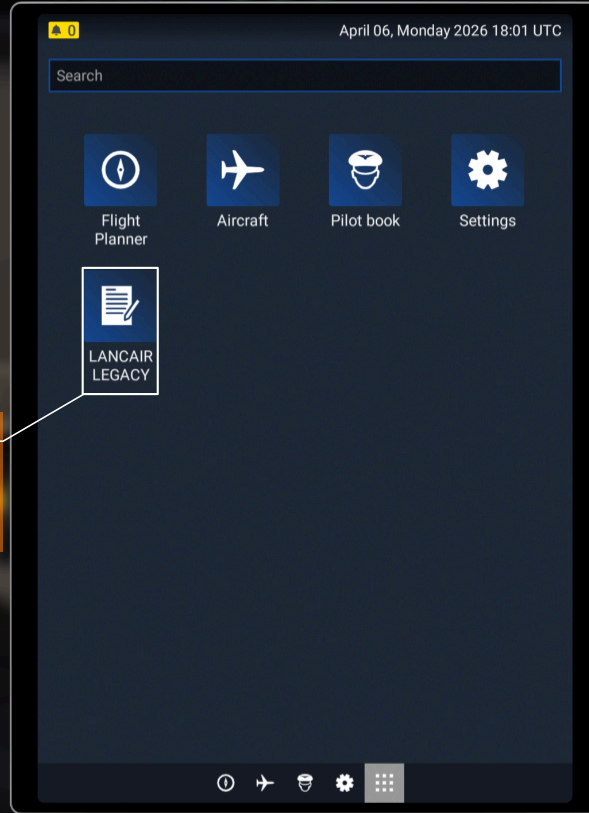
AIRCRAFT INFORMATION
The Aircraft Information page provides essential reference data about the aircraft's capabilities and configuration

The screenshot shows a tablet interface with a dark blue background. At the top right, it displays the date and time: "May 12, Tuesday 2026 20:34 UTC". Below this is a "BACK" button. The main title is "Flysimware Lancair Legacy". The data is presented in a list format:

Cabin	LEGACY G3X GTN750
Landing Surface	-
Fuel	18 gal/h
Cruise Speed	235 kt
Max Altitude	18 000 ft
Range	600 nm

At the bottom of the screen, there is a navigation bar with icons for home, flight, headset, settings, and a grid of apps.

EFB Tablet Detailed Info.



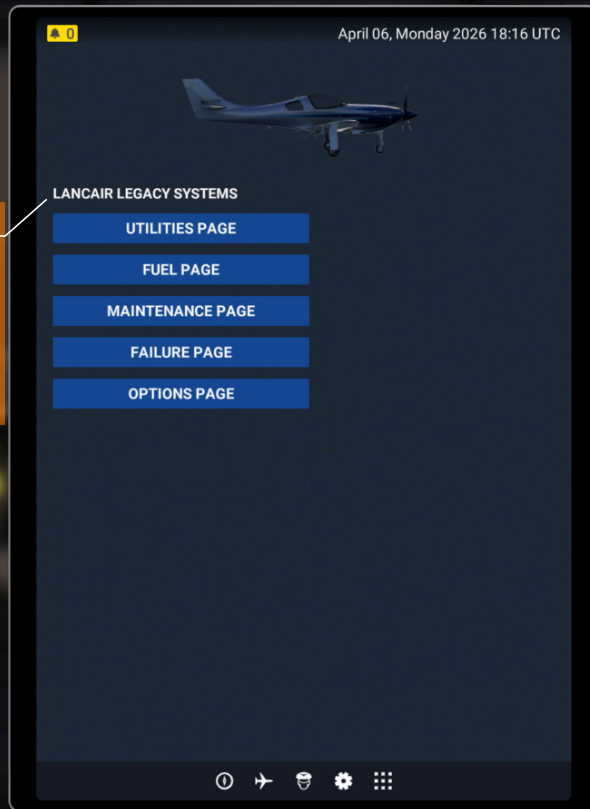
LANCAIR LEGACY OPTIONS
A dedicated menu for adjusting the Lancair's Legacy customization, realism settings, optional equipment, and performance configurations.

EFB Tablet Detailed Info.

LANCAIR LEGACY SYSTEMS

This section gives you access to all Lancair Legacy app pages. After opening any page, use the Go Back button to return to this main menu.

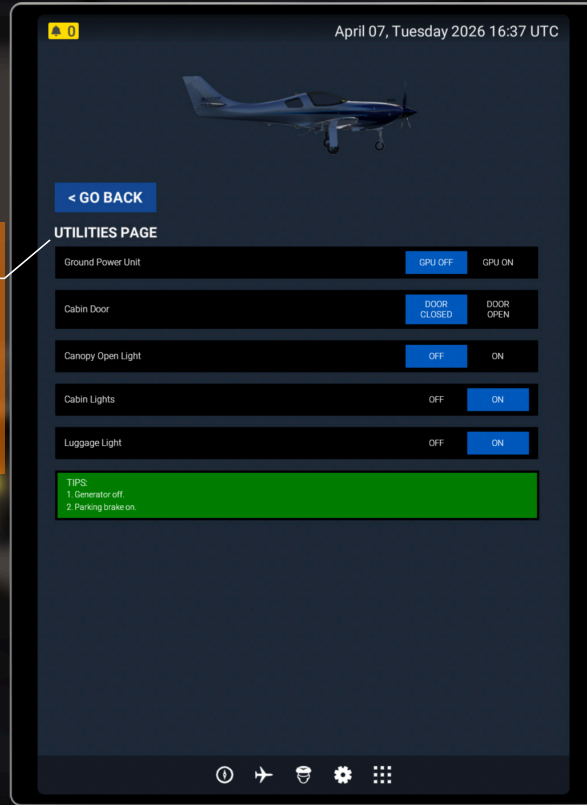
If you navigate anywhere outside the Lancair Legacy app without exiting the page you were on, the next time you open the Lancair Legacy app it will automatically return to that same page. The only way to get back to this menu is by using the Go Back button.



EFB Tablet Detailed Info.

UTILITIES PAGE

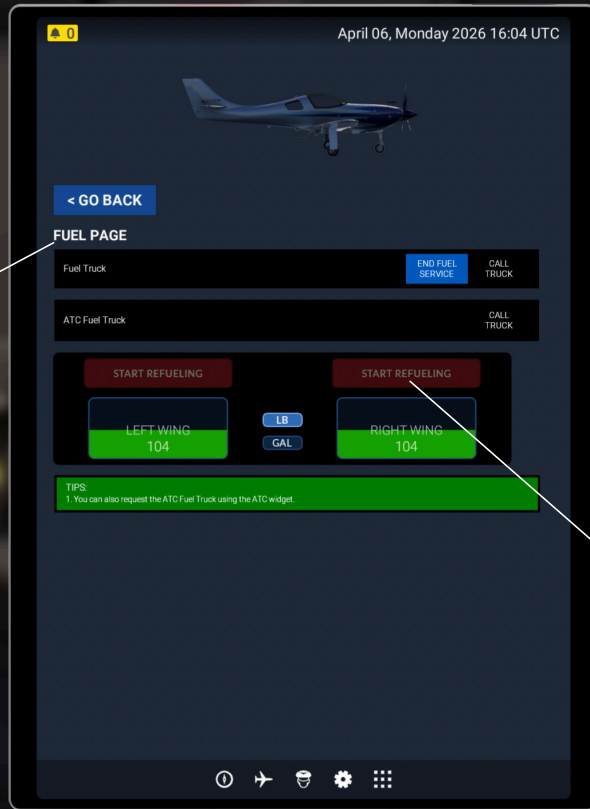
The Utilities Page allows you to control essential aircraft functions for ground operations and pre-flight setup. In addition to GPU access, you can manage the cabin door for passenger entry, toggle canopy and cabin lights for visibility, and control the luggage light for loading operations. These options help ensure the aircraft is properly prepared, safe, and ready before departure.



EFB Tablet Detailed Info.

FUEL PAGE

The Fuel Page allows you to manage fuel loading and monitor the Lancair's Legacy complete fuel system. You can request a fuel truck, end fuel service, or call the ATC fuel truck directly from the EFB—and also request it through the ATC widget as an alternative. Fuel quantities can be displayed in either pounds or gallons based on your preference.



Fueling

Click the red start fueling button(s) to fuel for one tank or click both for fueling both tanks. Red indicates not fueling.

EFB Tablet Detailed Info.

MAINTENANCE PAGE

The Maintenance Page is powered by Flysimware's TrueSim system. TrueSim simulates real world wear, aging and system degradation over time. This feature can be turned ON/OFF in the EFB settings.

[Click here for detailed info.](#)

April 07, Tuesday 2026 00:40 UTC

< GO BACK

MAINTENANCE PAGE

PREVENTIVE MAINTENANCE

WEAR RATE
 1X 2X 4X

CONTINENTAL IO-550N
 CONTINENTAL TSIO-550OE
 6 CYLINDER, AIR-COOLED
 FUEL-INJECTED, 310 - 350 HP

FULL MAINTENANCE REPAIR
Resets all preventive maintenance conditions to default.

ENGINE OVERALL CONDITION
 100.0%

LEFT MAGNETO SPARK PLUGS

CYL 1	CYL 2	CYL 3	CYL 4	CYL 5	CYL 6
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

RIGHT MAGNETO SPARK PLUGS

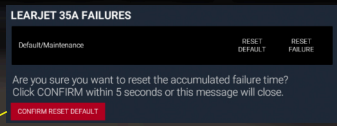
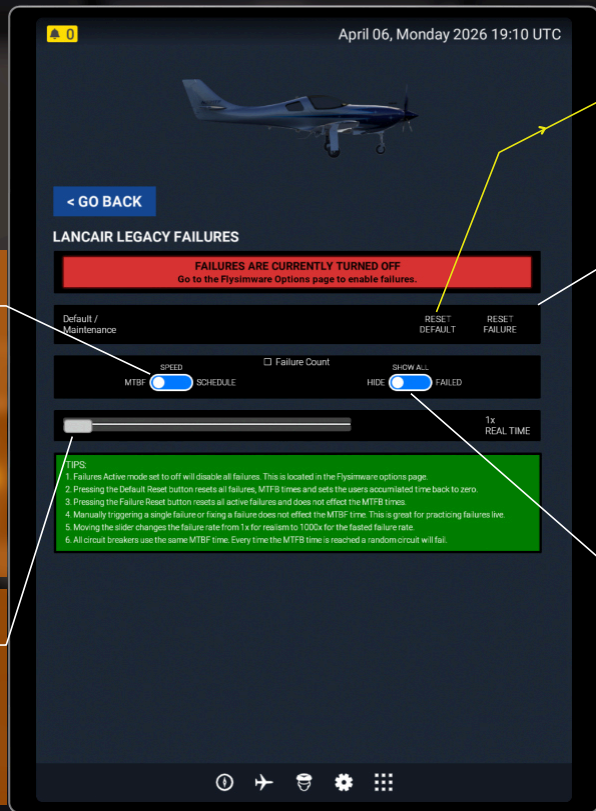
CYL 1	CYL 2	CYL 3	CYL 4	CYL 5	CYL 6
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ENGINE OIL LEVEL ENGINE AIR FILTER

ⓘ ✈️ 🛠️ ⚙️ ☰

[Return](#)

EFB Tablet Detailed Info.



MTBF/SCHEDULE MODE

The Failures Page for the Lancair Legacy lets you choose how failures are generated using the MTBF/Speed/Scheduled mode switch. In MTBF mode (Mean Time Between Failures), systems fail automatically over time based on their reliability settings and the current time scale. In Speed mode, failures will occur above indicated speed or between a speed range, so for example, an engine failure can be set to fail at V1 to simulate a V1 engine failure. In Scheduled mode, you instead script specific failures to occur within a defined time window, which is ideal for training, testing, and repeatable scenarios.

SLIDER

The real-time slider is only active in MTBF mode and lets you accelerate failure progression from 1x up to 1000x; it is completely disabled in Scheduled mode. At 1000x, for example, a failure that would normally occur after 1000 MTBF hours will now show up after just 1 hour of real time.

DEFAULT/MAINTENANCE

The Default Maintenance section is where you service the aircraft's failure system. Reset Failure simply fixes all current failures at once, whether you're in flight or on the ground, without touching any of your accumulated MTBF time. Reset Default is more drastic: pressing it shows a temporary confirmation button for five seconds, and if you confirm, the MTBF time is reset to defaults and the user's accumulated time is reset back to zero, clearing all stored wear that normally carries over between flights.

FAILURE DISPLAY MODE

The three-way display switch (Hide / Show All / Failed) works in both MTBF/Speed/Scheduled modes and controls which failures appear in the list. Hide removes the list so you can treat the aircraft realistically and deal with problems through normal procedures and maintenance reset instead of watching them on screen, Show All reveals every failure so you can monitor MTBF, Speed or Scheduled modes. The Failed switch position only displays currently listed failures.

EFB Tablet Detailed Info.

FAILURE

In MTBF mode, the Failure column shows the exact name of each failure along with its default MTBF hours. You can use the plus and minus controls to increase or decrease those hours for each item; these adjustments are saved for future flights, and clicking directly on the hours restores that failure's MTBF value to its default.

FAILURE TYPE

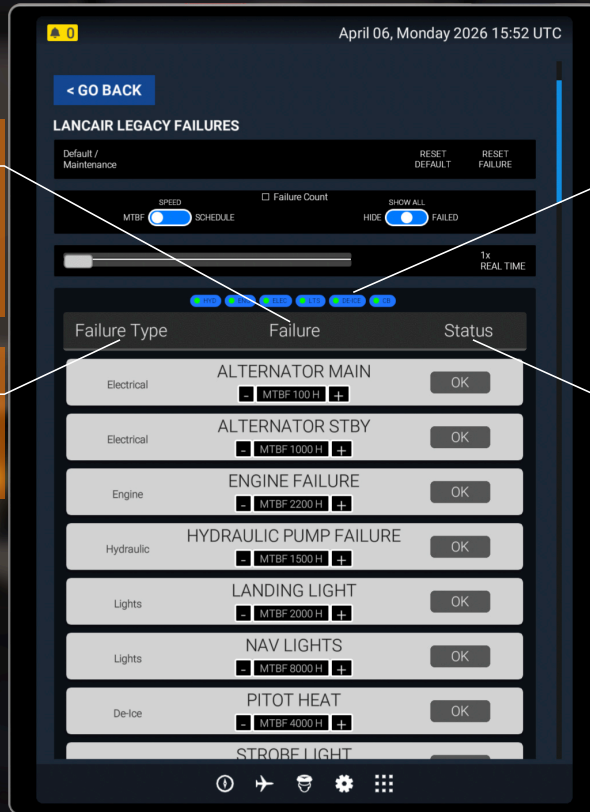
The Failure Type column shows which system each item belongs to, such as hydraulic, pneumatic, engine, or circuit breaker, so you can immediately see what part of the aircraft a given failure affects.

CATEGORY FILTER

The filters buttons (HYD, PNEU, ENG, ELEC, LTS, DE-ICE, CB) display (Failure Type) categories. Each filter button will display green to show and red to hide for that specific category.

STATUS

In MTBF mode, the Failure column shows the exact name of each failure along with its default MTBF hours. You can use the plus and minus controls to increase or decrease those hours for each item; these adjustments are saved for future flights, and clicking directly on the hours restores that failure's MTBF value to its default.



EFB Tablet Detailed Info.

FAILURE

In Scheduled mode, the Failure column shows the failure name together with its Start and Range times, which you set in five-minute increments to define when the failure may occur. The plus and minus controls for Start and Range are linked for convenience: if you press minus on Range while it is within five minutes of Start, the Start is lowered automatically, and if you press plus on Start while it is within five minutes of Range, the Range is increased automatically, so you don't have to keep adjusting both values by hand.

FAILURE TYPE

The Failure Type column shows which system each item belongs to, such as hydraulic, pneumatic, engine, or circuit breaker, so you can immediately see what part of the aircraft a given scheduled event affects.



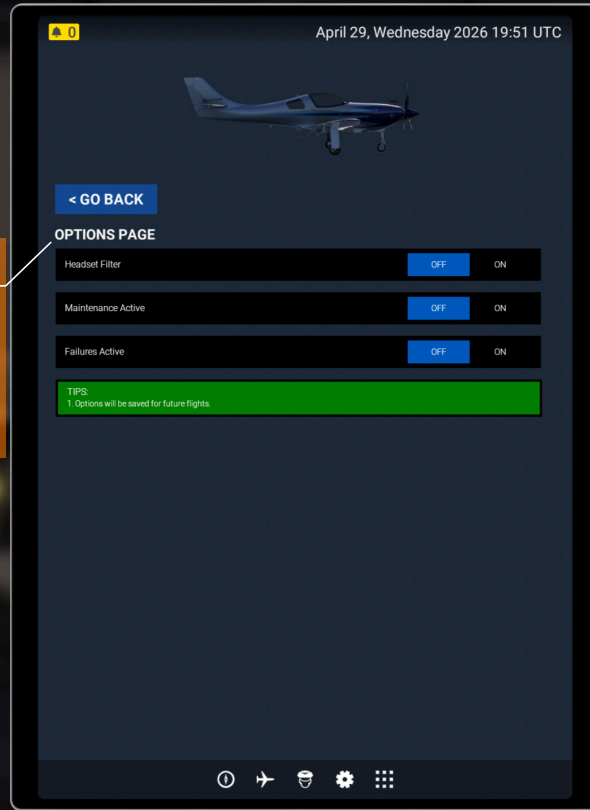
STATUS

In Scheduled mode, the Status column is used to arm and clear scripted failures. It shows Arm when the failure is ready to be scheduled, and once the event has occurred the status changes to Failed in red; clicking it again clears the failure and returns the status to Arm so you can reuse the same setup.

EFB Tablet Detailed Info.

OPTIONS PAGE

The Options Page allows you to configure key aircraft behaviors and system settings. You can enable Maintenance Mode or activate Failures to access and adjust their respective settings pages. These options let you customize the level of realism, from controlled testing to full system simulation, and all changes are saved automatically for future flights.



For more detailed information

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**GARMIN GMC305 AUTOPILOT UNIT
Manual PDF**

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Annunciator Panel



Yellow are the cautions.



Red are the warnings.



Illuminates whenever the canopy is not fully latched.



Illuminates when the aircraft is configured for landing but the landing gear is not down.

This occurs when:

- Airspeed is below approximately 110 knots.
- Trailing edge flaps are greater than about 19 degrees.
- Landing gear is not fully extended.

Annunciator Panel



Illuminates when an engine fire condition is detected.



Indicates carbon monoxide has been detected in the cockpit. This warns the pilot of possible exhaust gases entering the cabin.



Illuminates when the main alternator voltage drops below normal operating levels while the engine is running.

This can occur at low engine RPM or if the main alternator is not supplying sufficient electrical power.



Illuminates when the standby alternator is actively supplying power to the electrical system.

Annunciator Panel



This occurs when:

- Airspeed is below approximately 110 knots.
- Trailing edge flaps are greater than about 19 degrees.
- Landing gear is not fully extended.

This warns the pilot of possible exhaust gases entering the cabin.



Illuminates whenever the speed brake is deployed.



Illuminates when the aircraft altitude exceeds 10,000 feet and the oxygen unit is turned off.

Note: The oxygen system is not fully simulated at this time. The annunciator is currently based only on whether the oxygen unit is powered on or off. More detailed system behavior may be implemented in a future update.

Oxygen Unit



Overview

The EDS-ip Oxygen System is an intelligent, fully integrated aviation oxygen system designed to automatically adapt to each user's breathing needs. It monitors respiratory patterns and delivers the precise amount of oxygen through a cannula or mask, ensuring efficient usage and proper oxygen levels at various altitudes. This system enhances safety, comfort, and oxygen conservation during flight.

Note: Requires battery and avionics bus switch to turn on oxygen unit into the sim.

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Oxygen Unit

CLR/OFF

CLR/OFF: To turn the system off simply press and hold the **CLR/OFF** button until the unit shows **OFF**. This will require the button to be held down for ~2 seconds. The fast click is clr and long hold click is off.

SEL

SEL: To turn the system on press & release the **SEL** button. The control head will light-up all the icons.

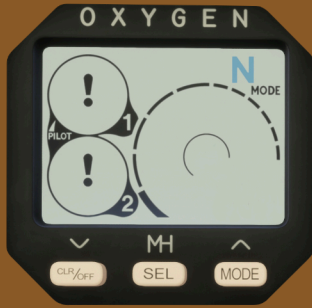
Cycle the selector mode button to cycle through the three modes:

- a) Thousands (1000) of ft. for Pressure Altitude readout.
- b) Hundreds (100) of psig. for Tank / Cylinder pressure readout.
- c) Tenths (1/10) for regulator pressure readout.

MODE

MODE: The control head has two basic modes of operation; N and D mode. You can toggle the unit between the modes with the MODE key. Both modes deliver the same amount of oxygen as a function of pressure altitude.

Oxygen Unit



N MODE: The N shows you are operating in night (also called manual) mode and delivers oxygen on-demand at all pressure altitudes.

Save state, recommended to leave in d



D MODE: The D shows you are operating in Day (also called delayed) mode. The user can pre-select pressure altitude settings from 4K ft. to 11K ft.

Oxygen Unit



PA: Pressure Altitude.

X1000: Altitude values are indicated in thousands of feet.



PSI: Pounds Per Inch

X100: Altitude values are displayed in hundreds of psi.

Note: The tenths for the values is disabled or always zero only on this particular psi



PSI: Pounds Per Inch Gauge

X100: Altitude values are displayed in hundreds of psi.

Oxygen Unit



Station status circle.

Everything unique to the stations will show up in these status circles.

Status Circle displaying 1 & 2 simultaneously, representing the pilot and copilot.



Station O2 Flow-flags: Shows station has responded with a pulse of oxygen.



Station Alert Icon & Station Active Inspiration Response: The Station Alert icon displays warnings for apnea, flow faults, and missing stations.

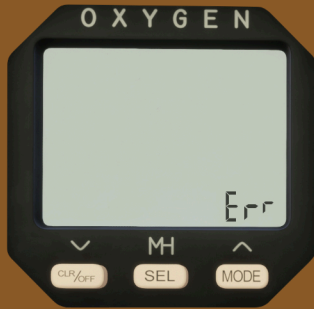
NOTE: Both station O2 flow flags and Station Active inspiration response these will blink off for 1.5 sec and on for 1.5 which is total of 3 sec which is 20 breaths/ minute

Oxygen Unit



O2 Alert Icon

When the O₂ alert icon and O₂ flow flags is displayed, it typically indicates a failure when pressure reaches or drops below 500 PSI or either originating from the EFB Failure Page. You can either resolve the issue through the Failure Page or activate the emergency oxygen system, which bypasses the regulator and ensures both pilot and co-pilot receive sufficient oxygen.



OXYGEN SYSTEM – REGULATOR FAILURE (ERR / AIR WARNING)

The Oxygen system uses pneumatic air and regulators to supply oxygen on demand.

If pneumatic air is lost or regulators fail:

- Oxygen flow to masks stops
- Air warning appears
- ERR indication may display

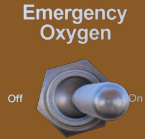
Cause:

- Loss of pneumatic air
- Regulator failure

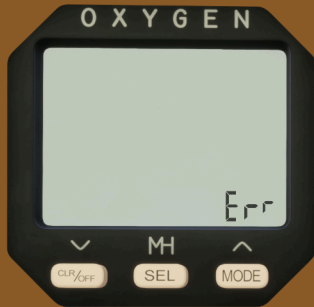
Effect:

No oxygen is delivered despite available tank pressure.

Oxygen Unit



Emergency oxygen switch



Procedure(Emergency Bypass):

- Turn EMERGENCY switch on
- Bypasses regulators
- Oxygen flows continuously to masks

Note:

- Higher oxygen consumption
- Use only when required
- Warning remains until fault is fixed or emergency bypass switch is active.

Maintenance Page Detailed Info.

PREVENTIVE MAINTENANCE

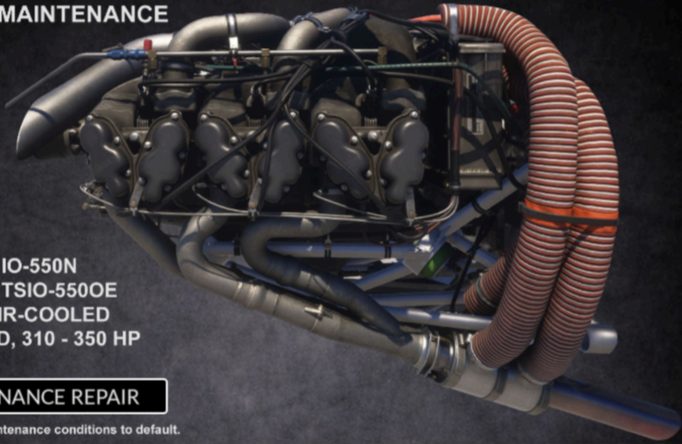
WEAR RATE

1X 2X 4X

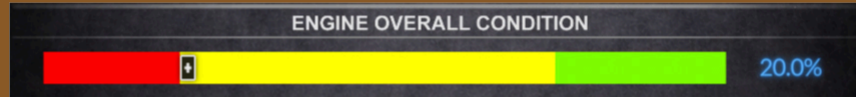
CONTINENTAL IO-550N
CONTINENTAL TSIO-550OE
6 CYLINDER, AIR-COOLED
FUEL-INJECTED, 310 - 350 HP

FULL MAINTENANCE REPAIR

Resets all preventive maintenance conditions to default.



Wear rates increase if time acceleration (2x/4x) is used.
All systems degrade continuously based on usage and time.



ENGINE & OIL SYSTEM

Engine Condition:

Gradually degrades over time

Performance reduces as condition drops from green → yellow → red

Red indicates a failed engine (no usable power)

Degradation is influenced by:

Spark plug condition

Air filter condition



SPARK PLUGS

Running the engine rich will cause the spark plugs to foul. Fouled spark plugs wear out faster. This worsens the engine's overall condition more quickly. Reduced condition results in noticeable loss of engine performance.

TURBO VS NON - TURBO

Turbo Aircraft:

Mixture is automatically optimized by TrueSim.
No manual leaning required.
Prevents plug fouling and extends engine life.

Non - Turbo Aircraft:

Running rich increases plug wear.
Proper mixture management improves longevity.



OIL SYSTEM (CRITICAL)

Oil Consumption: ~1 quart every 5 hours (at 1x rate)

If oil loss reaches ~3.5 quarts:

Red indicates 3.5 quarts.

Engine will fail immediately.

Engine can be restored by clicking fill oil or full maintenance repair. (This is considered an engine overhaul).

Warning:

Using time acceleration can rapidly lead to engine failure.

Maintenance Page Detailed Info.



TIRE PRESSURE

Gradually decreases over time.
 Fully animated visual deflation.
 Tires can be refilled at any time.
 No effect on aircraft performance at this time.
 Can be refilled using the Fill Tires or full maintenance repair.



HYDRAULIC RESERVOIR

Slowly depletes over time.
 When depleted:
 Landing gear will stop functioning normally.
 Emergency extension available via hydraulic relief system.
 Can be refilled using the Fill Reservoir or full maintenance repair.

It requires parking brake on and engine off.

Maintenance Page Detailed Info.



BULB LIFE

Landing lights degrade over time. Individual Bulbs can fail independently. Failed bulbs will no longer illuminate. Can be replaced using the Replace Bulbs or full maintenance repair.



STRUT PRESSURE

Slowly decreases over time. Can be refilled manually. No current impact on aircraft handling (visual/maintenance only) Can be refilled using the Fill Struts or full maintenance repair.

It requires parking brake on and engine off.

Maintenance Page Detailed Info.



OXYGEN PRESSURE

Depletes based on system usage.
 Use the “Details” button for full system explanation.
 Can be refilled using the Fill Oxygen or full maintenance repair.



BRAKE PAD LIFE

Wears down over time.
 At 0% :
 Brakes become ineffective.
 Parking brake will not hold.
 Can be restored using Replace Pads or full maintenance repair.

It requires parking brake on and engine off.

GENERAL NOTES

All maintenance items degrade gradually based on usage.
Most systems can be restored instantly via maintenance actions.
Some failures are visual or procedural only due to current simulator limitations.
Future simulator updates may expand realism. (e.g., Tire physics)

DIRT BUILDUP(Rates & Conditions)



Maintenance Page Detailed Info.

The aircraft will naturally accumulate:

- Oil & Leaks
- Runway tar
- Insect splatter
- Regular Dirt
- Dust
- Mud
- Mud buildup on tires

These effects build up dynamically based on:

- Surface type (Runway, dirt, gravel, etc.)
- Weather conditions (Rain vs dry)
- Ground movement and speed
- Altitude (Insects accumulate at lower levels)

Environmental Interaction:

Rain will gradually wash away certain dirt types.
Heavier rain = faster cleaning
Some effects like oil and insects are more persistent and won't fully wash off.

At any time while parked, you can:

- Use the EFB maintenance page
- Select "Wash aircraft"
- Restore the aircraft to a clean state

Built using the simulator's native tools with custom logic, this system runs continuously in free flight with full save-state persistence—ensuring the aircraft retains its condition and environmental buildup across sessions for a consistent, immersive experience.



MUD (4MIN)

Builds in rain on soft/wet surfaces while moving on ground.



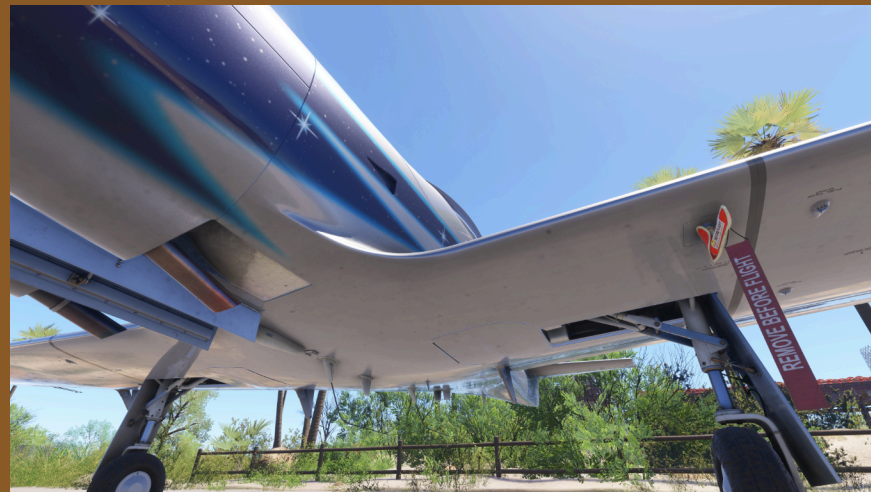
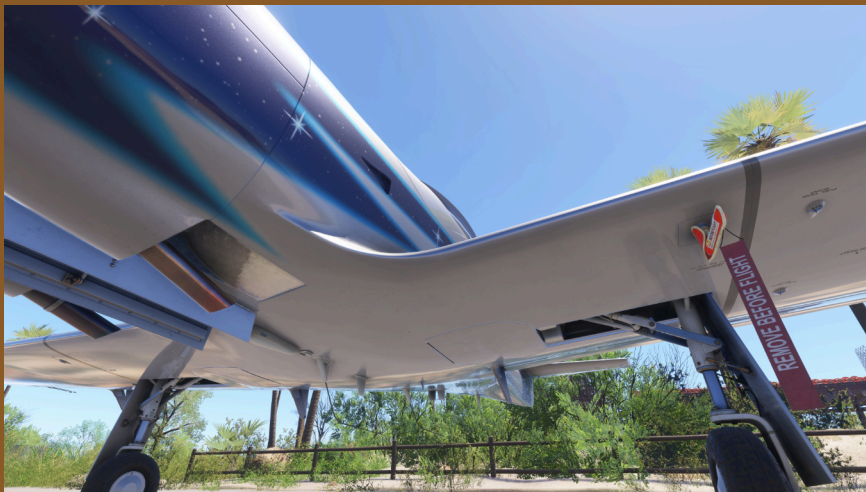
MUD (TIRES) (8MIN)

Same as mud, but affects tires only.



DUST (4MIN)

Buils in rain on soft/wet surfaces while moving on ground.



REGULAR DIRT (20HRS)

Builds slowly over time while moving in dry conditions.



INSECTS (1HR)

Builds when:

On ground above ~20 knots OR
Below ~500 ft AGL
Only in dry conditions.

[Return](#)



RUNWAY TAR (40 HRS)

Builds slowly on hard runway surfaces above ~20 knots

[Return](#)



OIL LEAKS (17HRS)

Buils over time while engine is running.

Maintenance Page Detailed Info.

RAIN WASH (AIRCRAFT BODY)

Requirements:

Rain must be active.
Works faster above ~20 knots

CLEANS:

Mud
Mud (Tires)
Dust
Regular Dirt

DOES NOT CLEAN:

Insects
Oil Leaks
Runway Tar

Note: Wash rate increases with rain intensity.
Wash rate doubles at higher speeds.

RAIN WASH (TIRES)

Requirements:

Rain active.
Landing gear down(no effect when gear is up).
Faster above ~20knots.

CLEANS:

Mud (Tires only)

DOES NOT CLEAN:

Any other dirt types

MANUAL WASH

Requirements:

Aircraft on ground.
Parking brake ON.
Engine OFF.

Effect:

Instantly removes all:
Mud
Mud (Tires)
Dust
Regular dirt
Insects
Runway tar
Oil leaks