



VAN'S AIRCRAFT
TOTAL PERFORMANCE

RV12iS

VAD-10045 POH SUPPLEMENT



REVISION SUMMARY

To verify the latest revision of the POH compare the rev level found on the cover page with the latest revision posted on the RV-12 Service Information page of the Van's Aircraft web site.

Rev	Section	Change	Date
0	All	Initial Release	07/16/26

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Purpose of this Manual

This POH Supplement was carefully prepared by the test pilots, flight instructors, and engineers of Van's Aircraft - the manufacturer of the RV-12iS. The POHS has been prepared with the goal of enabling the new pilot or a pilot transitioning from another aircraft to quickly and efficiently learn about features and characteristics specific to the RV-12iS.

This guide supplements the information provided in the Pilots Operating Handbook (POH) but does not replace it. Some sections of the POH are mirrored in this manual but this manual provides expanded, more detailed, and more-in-depth information than is practical to include in the POH. It is the intent of this document that applicable section of this supplement and POH be read and understood together.

Therefore, it is strongly recommended that the pilot be familiar with this Supplement, the Pilots Operating Handbook, and the aircraft prior to flight.

Definitions

The words "WARNING," "CAUTION," and "NOTE" are used throughout the manual with the following definitions:

WARNING

An operating procedure, practice, condition, etc. which may result in injury or fatality if not carefully observed or followed.

CAUTION

An operating procedure, practice, condition, etc. which if not strictly observed may damage the aircraft or equipment.

NOTE

An operating procedure, practice, condition, etc.

Recommended Reading

1. Pilot's Operating Handbook for RV-12iS
2. Aircraft Maintenance and Inspection Procedures for RV-12iS
3. User Manuals of any installed components and accessories

Recommended Links

1. General information about Van's Aircraft as well as drawing and manual revisions:
<https://www.vansaircraft.com/>
2. General information about the Sport Pilot rule and Light Sport Aircraft:
<https://www.eaa.org/en/aaa/aviation-communities-and-interests/light-sport-aircraft>
3. ACK ELT:
<http://ackavionics.com>
4. Dynon Avionics:
<https://dynonavionics.com/>
5. Garmin Avionics:
<https://buy.garmin.com/>
6. Information about Matco wheels and brakes:
<http://matcomfg.com/>
7. Rotax Owner Assistance Network:
<https://rotax-owner.com/en/>
8. FAA Aviation Handbooks and Manuals:
https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/

SECTION II**AIRCRAFT DESCRIPTION****INDEX**

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LIGHT SPORT AIRCRAFT OVERVIEW**A NEW AVIATION HORIZON:**

In 2004, the FAA created sport pilot/light-sport aircraft (SP/LSA) regulations. The most significant change in FAA regulations in 50 years, it allows easier and lower-cost access for those wishing to participate in the joy of flight. With adoption of SP/LSA, flying has become less expensive and easier than ever before. You can become a sport pilot with as little as 20 hours of flight instruction. In most cases, you can pass the medical requirements just by showing your driver's license.

RV-12iS DESIGN PHILOSOPHY**INTRODUCTION:**

Let's take a look at the design philosophy and goals that are the basis for this airplane. The goal was to achieve the maximum overall performance, flying enjoyment, ease of construction, building and flying economy, ease of maintenance, and pleasing appearance possible for a two-place airplane. Understanding how this was achieved might help you better appreciate many features of the RV-12iS as you encounter them while flying.

The formula for achieving maximum overall performance is amazingly simple: Maximize thrust, minimize drag; maximize lift, minimize weight. The implementation of this formula is a bit more complex, however. Thrust, for a given HP engine, has been maximized through use of a good propeller, streamlining of the engine cowl, and directing the engine outlet rearward. Drag is minimized by keeping the aircraft frontal area to a minimum and shaping all airframe components to reduce aerodynamic drag. Lift is maximized through use of a wing with adequate area and good airfoil. Weight is minimized by careful structural design, by using the best airframe materials, and by installation of only essential instrumentation and equipment. Most of the literally hundreds of features which comprise the overall RV-12iS package have been determined in the design stage.

RV-12iS DESIGN FEATURES:

The RV's "traditional" configuration - tractor engine, monoplane, stabilizer in the rear - is an exercise in logic and not simply a concession to convention. There are many good reasons why light planes have been built this way for decades, other than the often heard arguments of "entrenched design mentality" from those seeking "technological breakthroughs.". The bottom line is that this configuration has proven to offer the best compromise resulting in the best all-around airplane.

Designers often use the term "Mission Profile," which simply refers to the function an airplane is designed to perform. The RV-12iS mission profile is rather broad – it is intended to fill nearly all sport flying needs. The profile includes excellent flying qualities, maximum speed allowed under LSA rules, low stall speed, good visibility, simple assembly for the home-builder, and economical to own and operate. Meeting all these needs required a design "balancing act." Favoring one need often adversely affects others. An example would be emphasizing cross country cruise performance by installing extra radios, instruments and upholstery. The weight added would adversely affect all other performance parameters. This is not a "maybe," it is a certainty.

Given that low cost of ownership is a selling point for any Light Sport Aircraft and is a prime design goal of all RV designs, the RV-12iS incorporates wings that are easily removable. Because the cost of hangar space is typically the single largest aircraft ownership expense, removable wings mean that storage costs can be reduced (by sharing of 'on-airport' hangar space) or eliminated (by storage 'off-airport' at home). This design feature drove other features such as placement of fuel tank in the fuselage, and selection of full-span drooping ailerons (flaperons) which automatically hook-up upon wing installation. Because the RV-12iS would possibly be trailered to and from the airport, the wings-removed width had to be sufficiently narrow to allow it to be legally trailered. This limited the span of the horizontal tail surface to 8 ft. The limited tail span requires that the RV-12iS use a long fuselage placing the tail surfaces well aft for good control authority.

Seating arrangements vary between the RV designs, depending on the primary mission envisioned. Side-by-side seating was chosen for the RV-12iS because this arrangement is generally preferred for its primary mission: Sport Flying. Specific advantages of the side-by-side configuration include equal visibility for both occupants, more-easily achieved dual control capability, lots of instrument panel space, minimized CG travel for various loading conditions and a full cowling with room for engine accessories and plumbing. The RV-12iS design places the occupants further forward than the other side-by-side RV designs. This seating position allows for excellent visibility even in the downward direction because the wing leading edge is far aft relative to the occupants' eyes. The potential down-side of this 'cab-forward' arrangement is a CG further forward than desired. The selection of the light Rotax 912 iS Sport engine enables the RV-12iS to balance well, even with two heavy occupants sitting forward of the wing spar.

We feel that an RV-12iS in its basic form - with fixed-pitch prop, modest instrumentation and avionics, and Rotax 912 iS Sport engine - represents the best compromise.

Obviously, we could go on and on, covering every design decision, compromise, or concession. However, it should be apparent by now that every feature of the RV-12iS, whether major or minor, was the end product of much deliberation.

RV-12iS GENERAL DESCRIPTION**AIRFRAME:**

The RV-12iS is an all metal, two place, low wing, single engine fixed tricycle gear airplane designed to conform to the LSA category. The fuselage is made of conventional formed sheet bulheads, stringers and skin (semimonocoque). A major component of the fuselage is the center section bulkhead that supports the load of each wing spar and main landing gear. The removeable constant-chord wing is built around a main spar that inserts into the center section bulkhead.

The empennage consists of a conventional fin, rudder and a stabilator/anti-servo tab.

ENGINE AND PROPELLER:

The RV-12iS is powered by a Rotax 912 iS Sport four-stroke, four-cylinder, horizontally-opposed, air-cooled with liquid-cooled cylinder heads, electronic fuel injection, rated at 100 HP/73.5 kW @ 5800RPM. Power to the dual spark plugs is provided by two independent electronic ignition units. The 912 iS engine is furnished with a starter, two 14-volt generators and external rectifier-regulators. The propeller is a fixed ground adjustable pitch, 70 inch/177.8 cm diameter, composite, Sensenich model 2A0R5R70E two blade or optional Sensenich 3Y0R5 C70MY three blade.

FLIGHT CONTROLS:

The full span ailerons and flaps are combined into a single control unit, called flaperons. An internal mechanical mixer allows the flaperons, via torque rods, to “droop” and simultaneously perform the function of ailerons and flaps. The flap action on the RV-12iS is electrically operated. The stabilator and rudder are connected to the controls by pull cables. The stabilator trim tab is driven by a DC motor.

FLIGHT INSTRUMENTS:

The RV-12iS instrument panel employs an electronic flight instrument system (EFIS) display unit(s). All flight, navigation and engine parameter data are displayed on one screen, with an optional second screen available.

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SECTION III**GENERAL OPERATION INFORMATION AND PRE-FLIGHT PLANNING****INDEX**

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GENERAL

This section will give you the basic parameters and considerations for using your RV-12iS. Each phase of flight should be considered during pre-flight planning. Read through the information in the sections within the remainder of this document to help prepare for each phase of the upcoming flight.

BASICS OF LOADING THE RV-12iS

The RV-12iS design places the pilot and passenger forward of the CG and baggage/other payload aft of the CG. Thus, the most-forward loading condition occurs with the heaviest possible pilot and passenger weights combined with minimum fuel and no baggage. Conversely, the most-aft loading condition occurs when there is a very light pilot, no passenger, full fuel and maximum baggage.

The forward CG limit is established by the strength of the nose landing gear, by the amount of pitch trim authority required to trim the aircraft to 1.3 times stall speed with power off and flaps fully deployed, and by the pitch control authority required to rotate the aircraft to a landing attitude in ground effect, with power off and flaps fully deployed.

The aft CG limit is established by minimum pitch and yaw stability requirements.

WARNING

Loading the aircraft such that the CG falls outside the allowable range compromises safety and may result in injury or loss of life as well as damage to the aircraft.

COLD WEATHER OPERATION

The minimum operating temperature of the aircraft is -20°F (-30°C) and is limited by the EFIS.

SEVERE COLD:

- Drain the fuel system if the temperature falls below -30°F [-34°C].

WARMING OIL/BLOCKOFFS:

Engine RPM is limited until the oil reaches the minimum operating temperature. On cold days it will take longer to raise the temperature to the minimum temperature. Installing cooler blockoffs as described below will aid in heating the oil. To raise the temperature more rapidly, run the engine at the highest rpm allowed. Even though more air will be pushed through the coolers by the propeller at higher rpm, this cooling effect will be more than offset by the extra heat generated by the engine at higher rpm.

You may install oil cooler and radiator blockoffs as required to allow the oil to reach minimum operating temperatures. When installing blockoffs make sure to placard the panel as a reminder that blockoffs are installed. This will help ensure the operator is aware of the installation and in turn prevent inadvertent overheating concerns when flights are made from cold to warm weather conditions with the blockoffs mistakenly left in place.

FUEL SYSTEM CONSIDERATIONS:

It is imperative that the aircraft fuel system be properly checked at the fuel strainer valve and verified to be free of contaminants and water:

- Prior to flight as part of a pre-flight walkaround check.
- After the aircraft has been parked on the ground in conditions that are conducive to water entering the fuel system or with a partially full tank where condensation may form on the empty sides of the tank.
- After flight through precipitation in which water may have entered the fuel system through the fuel cap vent or worn seal or operations in humid conditions.
- After fueling the aircraft. For further information see the later section on fueling the aircraft.

Water remaining in the system in cold conditions may freeze in the fuel system lines and cause a blockage. A partially blocked fuel line should be noted by a corresponding drop in the fuel flow rate (fuel flow rate only available on Rotax 912 iS engines).

HOT WEATHER OPERATION

Satisfactory engine cooling and cooling of critical electrical components such as the 912ULS voltage regulator has been demonstrated for this aircraft at an outside air temperature of 100°F (38°F). This is not to be considered an operating limitation. Extra caution should be used when operating near or above this demonstrated temperature. Beyond the normal reductions in aircraft performance there are three main areas of focus when operating at elevated temperatures, coolant temperature while operating at low rpm on the ground, oil temperature during climb and elevated temperatures in the engine compartment beneath the cowling after shutdown.

Operating on the ground at idle rpm, little air is passed through the radiator and oil cooler. When temperatures are elevated a minimum 2000 rpm should be used instead of idle (which on the Rotax 912 iS may be as low as 1440 rpm). If the coolant temperature begins to rise engine rpm should be increased to 3500 rpm and above. This will push air from the propeller through the radiator and return the coolant temperature to a stable value within the operating limitations of the engine. Coolant temperature will rise more quickly with the wind coming from behind the aircraft or directly from the right side.

During climb oil temperature will begin to rise. The oil cooler has been designed for optimal flow and heat dissipation for the aircraft in a V_Y climb. When climbing at airspeeds below V_Y oil temps may reach elevated levels. If this happens lower the nose and choose a higher climb airspeed that will stabilize the oil temperature within operational limits.

There is a possibility of developing vapor lock when the aircraft is parked in hot weather conditions. A Rotax 912ULS aircraft will be more susceptible to vapor lock than a Rotax 912iS equipped aircraft. This condition is worsened after shutdown resulting in heat building up in the cowling compartment from the hot engine and oil tank. Under these conditions elevated temperatures may turn fuel into vapor. For this reason, when operating in hot weather conditions leave the oil door open after shutdown as a means of letting the heat escape. Also, leaving the canopy closed will elevate temperatures inside the cockpit on a hot day. If possible, the canopy should be latched in the mid open position using the Support Plate Canopy Latch. If it is not possible to leave the aircraft in this condition, extra care should be taken to open the cockpit, ventilate the cabin, cool objects that may have been in direct sunlight and run the fuel pump(s) to purge the fuel system of vapor (for more information see the POH Section 4, Normal Procedures).

AIRCRAFT FUELING

See also POH Section 8.3 - FUEL

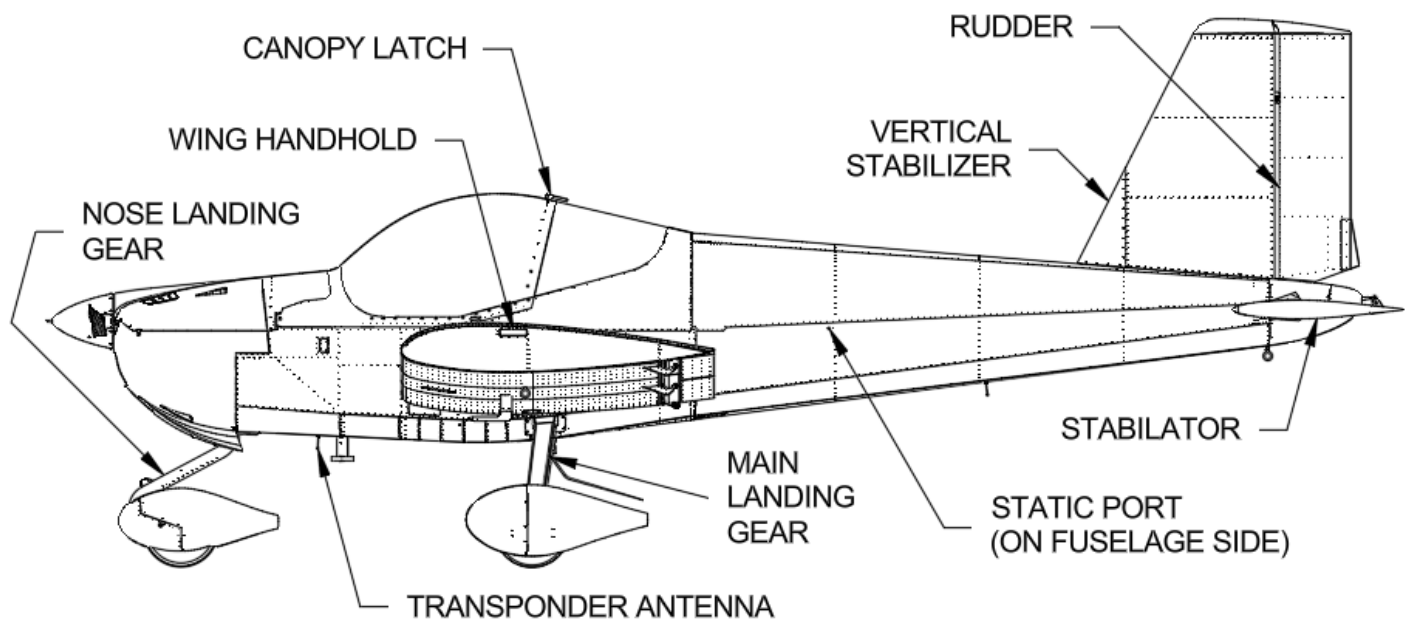
The fuel tank is designed to be sufficiently vented to allow fueling at fairly rapid rates. Some hoses may be able to deliver fuel at a high enough rate that the baffling inside the tank in combination with the vent size is insufficient. Use caution when using high rate of delivery hoses to avoid "burping" fuel out of the tank and possibly onto the person filling the tank. As the tank is filled use the mechanical gauge on top of the tank to stay aware of when the tank is nearly full. Even when the mechanical gauge shows full (due to tank geometry) the tank can still hold more fuel. Slow the fueling rate and while looking down the filler neck at the fuel level, slowly fill the tank into the base of the filler neck even with the seal between the tank and the filler neck to achieve the full 20.2 US gallon capacity.

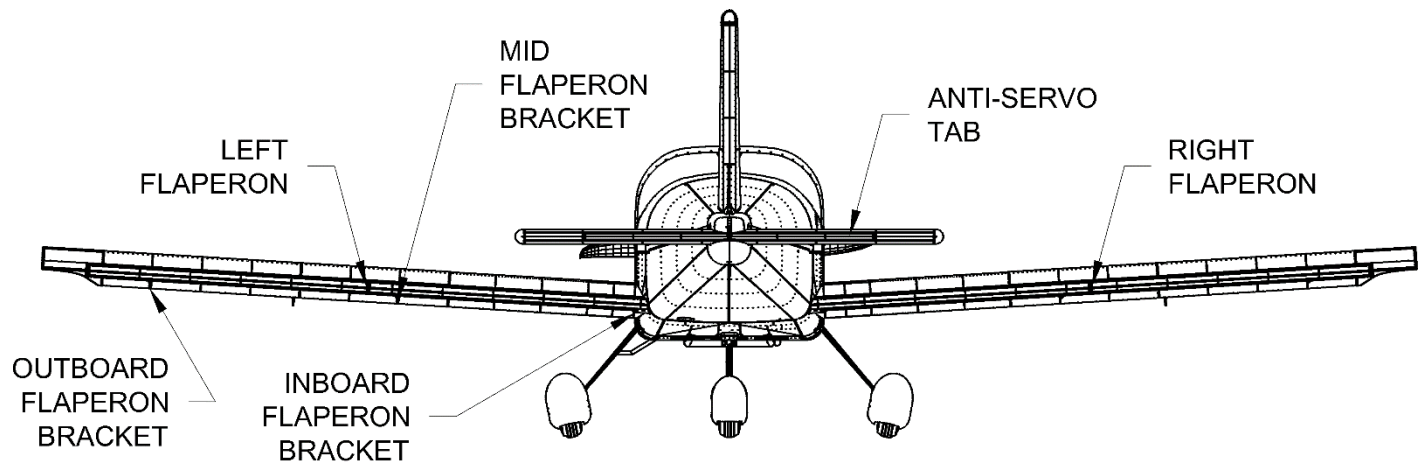
After fueling the aircraft, it is important (as instructed in the POH) to remove water and contaminants from the fuel system. Water in the fuel may cause engine failure, poor performance, may freeze in the fuel lines as noted above in cold weather operations etc.

- For Rotax 912 iS powered aircraft, turning on the boost pump will emulsify the water into the fuel making it impossible to remove at a gascolator. Wait until the water and contaminants have settled to the bottom of the drain line coming from the bottom of the fuel tank then drain them from the fuel system via the sump valve fitting.
- For Rotax 912ULS powered aircraft, the fuel pump is located between the tank and the gascolator. First run the fuel pump for 2 mins, then drain the gascolator to remove contaminants and water. Note the water may be mixed with the fuel (as shown in the pre-flight section below).

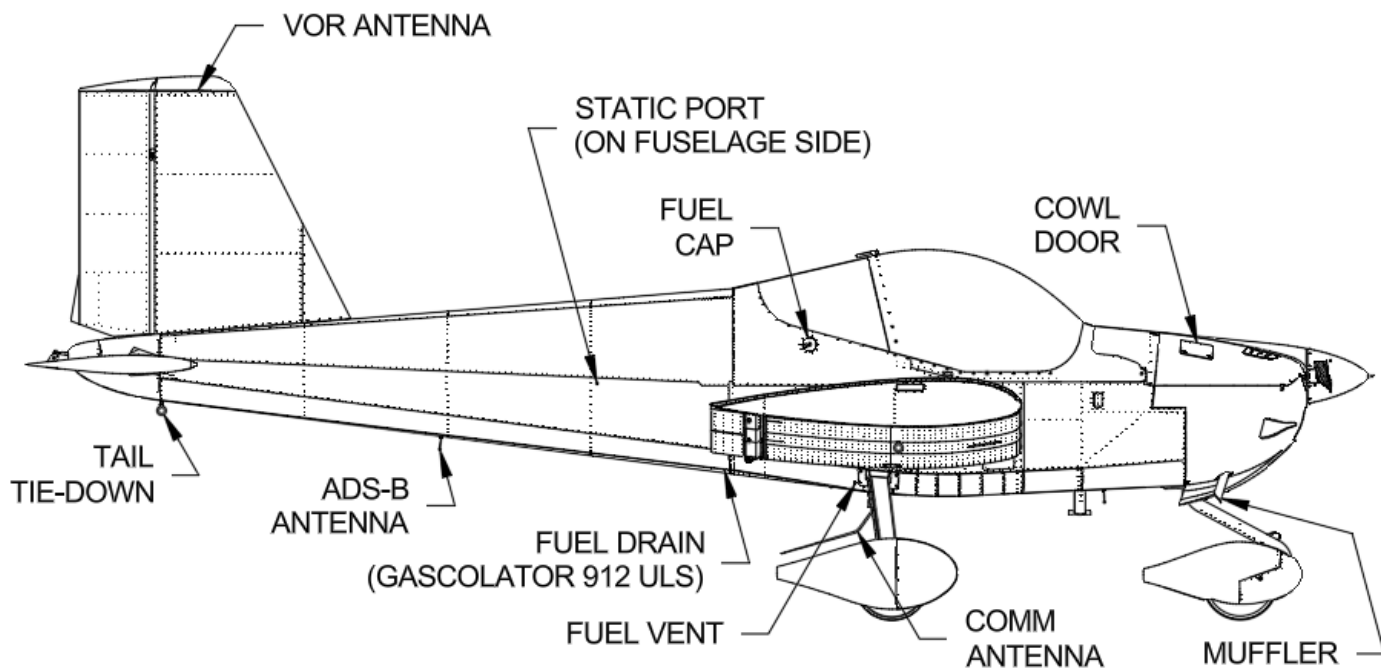
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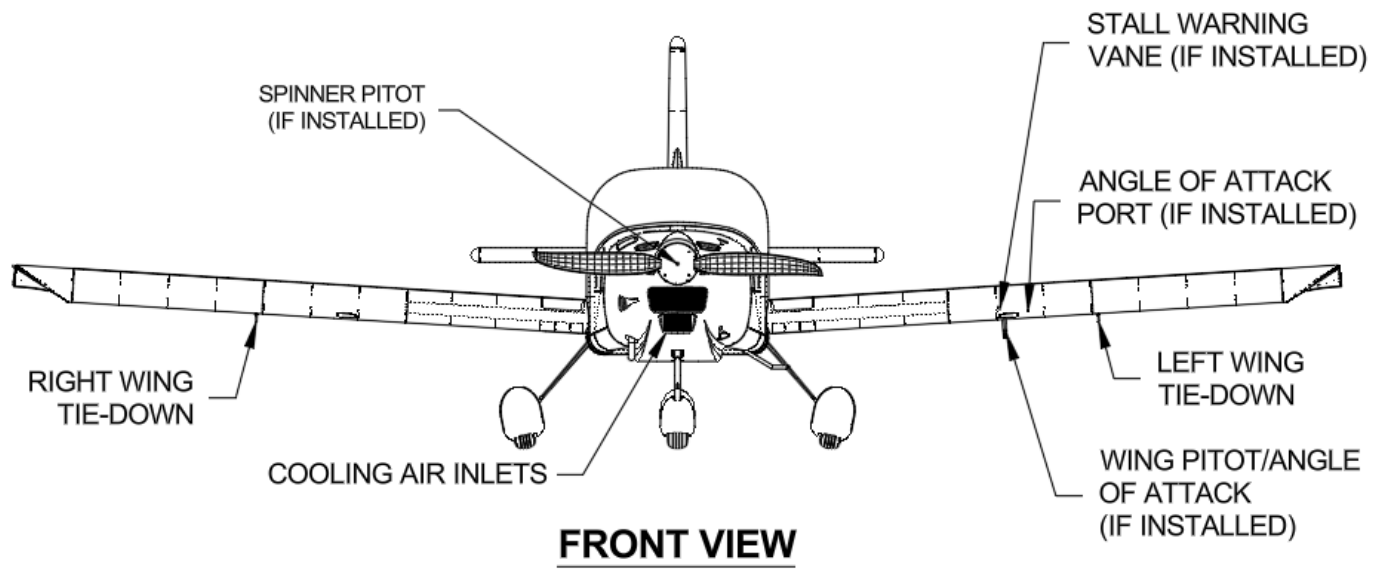
GENERAL**LEFT SIDE VIEW**



REAR VIEW



RIGHT SIDE VIEW

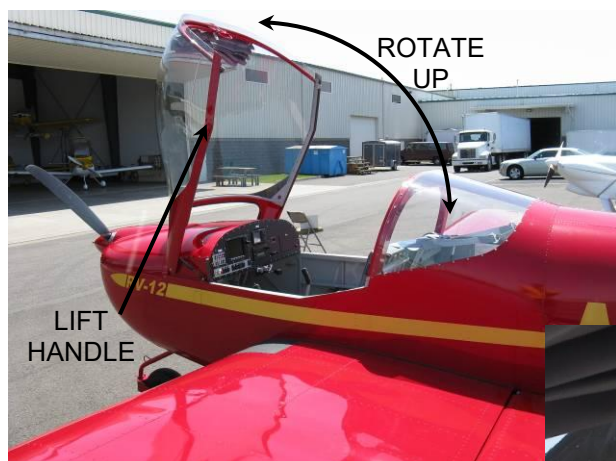


CABIN

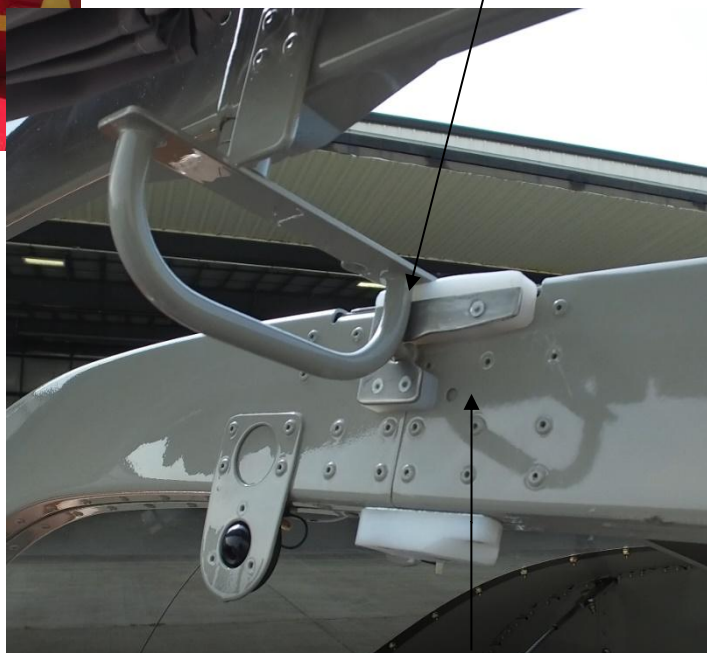
- Canopy – OPEN
Unless you are quite tall, it may be necessary to stand on the step or wing to unlatch the canopy.



- Canopy – CHECK operation, condition
Lift handles are located on each side of the canopy frame to be used for raising the canopy



CANOPY LATCHED
POSITION

**CAUTION:**

Take care unlocking the controls in gusty conditions.
In gusty conditions, a canopy left in the open position must be latched with the Support Plate Canopy Latch.

Support Plate Canopy Latch

CABIN (continued)

- Flight Control Locks – REMOVE
Collapse Rudder Lock then stow in baggage area.

CAUTION: Take care unlocking the controls in gusty conditions.

In gusty conditions, the canopy left in the open position must be latched with the Support Plate Canopy Latch.



- Fuel tank – CHECK FUEL LEVEL using the mechanical fuel gauge in the top of the tank



MECHANICAL
FUEL GAUGE

WARNING

Sample the fuel to remove contaminants (mainly water) before the fuel pumps are turned on. The high flow rate of the fuel pump(s) (especially for the 912 iS) will emulsify the water into the fuel making removal impossible.

-
- Fuel Sample – CHECK for water or sediment contamination. For E10 use, see the three photos showing the progressive separation of an ethanol-gas and water mixture, (shown on the next page).

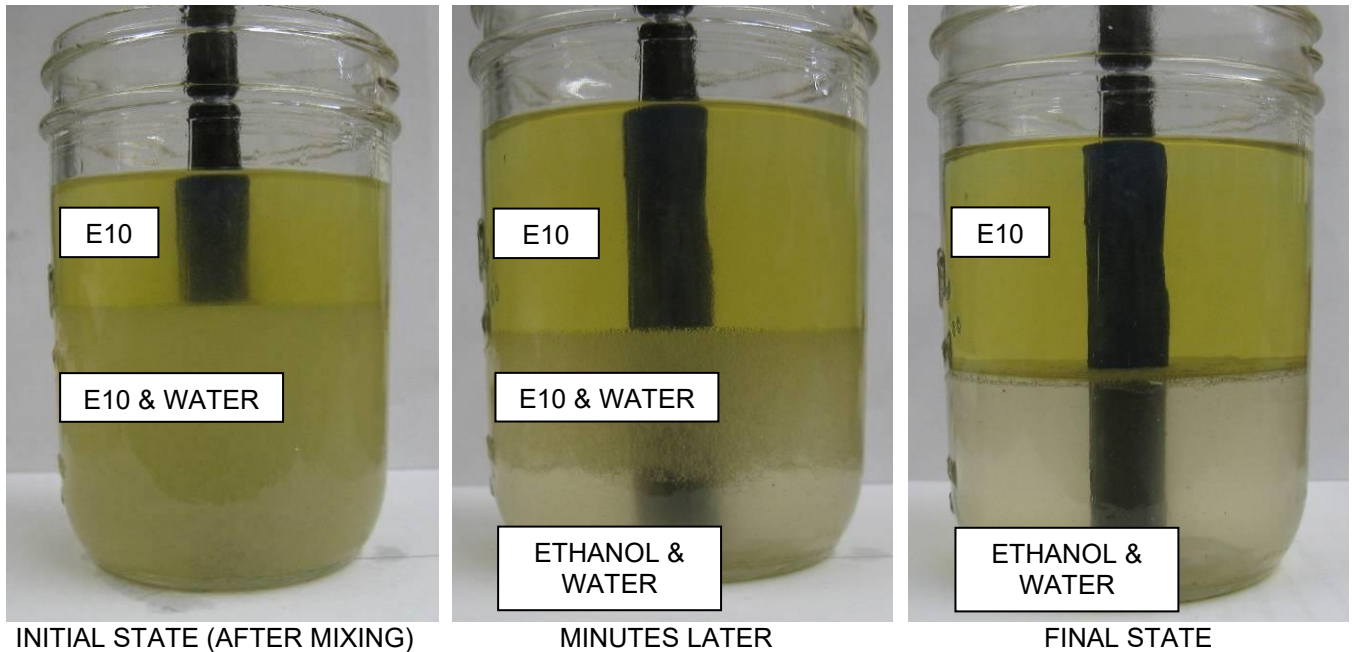
WARNING

Continue sampling fuel until there are no contaminants detected.

WARNING

During high ambient temperature conditions, run the fuel pump for 5 mins to flush the fuel lines and minimize the potential for vapor lock.





Refer to the pictures above:

E10 (fuel) - transparent yellow

E10 & Water - cloudy and yellowish

Ethanol & Water - transparent and colorless

ROTAX 912ULS SECOND FUEL SAMPLE

- For Rotax 912ULS equipped aircraft complete the rest of the pre-flight inspection with the fuel pump running; about 2 minute, and then resample the fuel.

Since the 912ULS gascolator is not at the absolute bottom of the fuel system, running the fuel pump will help move any water trapped in other areas of the system into the gascolator bowl. If a sample yields a large amount of water, the procedure should be repeated with at least 2 min intervals between attempts with the fuel pump on, until all water or debris are removed from the system. The restrictor fitting on the return line limits the flow rate and the pause between samples allows time for fuel within the system to move into the gascolator.

The recommended fuel pump run time to flush the fuel system is based on the low flow rate through the return line restrictor fitting. Particular attention should be given to the battery voltage when flushing the system; turn off all unnecessary electrical equipment to conserve battery power. If the battery voltage is low, proceed to engine start and then let the engine run for at least 5 mins at 2000 rpm to flush the fuel system



CABIN (continued)

- Master Switch – ON
- (If Garmin GTR-205x Installed
Check Radio – ON)
- Avionics – ON
- Parking Brake – OFF (if installed)



AVIONICS
SWITCH

PARKING
BRAKE (IF
INSTALLED)

CABIN (continued)

- Stall warning vane – ACTUATE (if installed)
- Stall warning horn – ON (tone through headset) when vane is actuated (if installed).
- (ULS ONLY) Fuel Shut-Off Valve – OPEN (Push Down)
- Lights / Strobes – CHECK then OFF
- Avionics – OFF
- Master Switch – OFF
- ELT – OFF
 - Baggage – RESTRAINED
- Foreign or Misplaced Objects - CHECK

**ACK ELT****WARNING**

Any items not stowed (such as glasses cases, water bottles, notebooks, pens/pencils) can fall into places in the cabin where they are inaccessible in flight.

Additionally, these items could become lodged behind rudder pedals or fall into the area under the seat pans where they may interfere with free and clear motion of the flight controls, thus presenting a safety hazard. Baggage must also be restrained from moving forward into the seat back. Placing a flat sheet of material able to withstand a forward load of 450lb resting on the c-channel and the seat back brace is one possible method of restraining the baggage from forward movement. Baggage should not be loaded so high in the baggage area that it may come forward.

LEFT MAIN LANDING GEAR

- Tire – CONDITION, proper inflation 25 psi
- Brake – CHECK condition, NO leakage
- Axle Nut – CHECK cotter pin installation
- Wheel Bearings – SHAKE top of tire left and right
- Pant (If Installed) – CONDITION CHECK
- Wheel Chocks – REMOVE

NOTE

Properly inflated tire has no contact between the outer portion of tread and pavement

VERIFY NO TIRE CORDS
SHOWING; TIRE TREAD IN
GOOD SHAPE WITH FEW OR
NO BALD SPOTS



BRAKE PADS
INTACT

VERIFY NO
BRAKE FLUID
LEAKAGE



AXLE NUT
COTTER
PIN

LEFT WING

- Wing – **CONDITION AND CONTAMINATION:** Look at wing in general, look for dents, wrinkles, missing or loose rivets (particularly dents in the leading edge) snow, frost.
- Tie-Down – **UNTIE** the tie-down rope/chain, **REMOVE** eye bolt if desired. Ensure eye bolt is secured in the wing if not removed.



- Stall Warning Vane – **CHECK** no obstructions (if installed)
- AOA Port – **CHECK** no obstructions
- Pitot Port – **CHECK** no obstructions (if installed)
- Wing Hand Hold – **APPLY FORCE** fore/aft & up/down; **CHECK** no free movement

PITOT PORT (IF
INSTALLED)

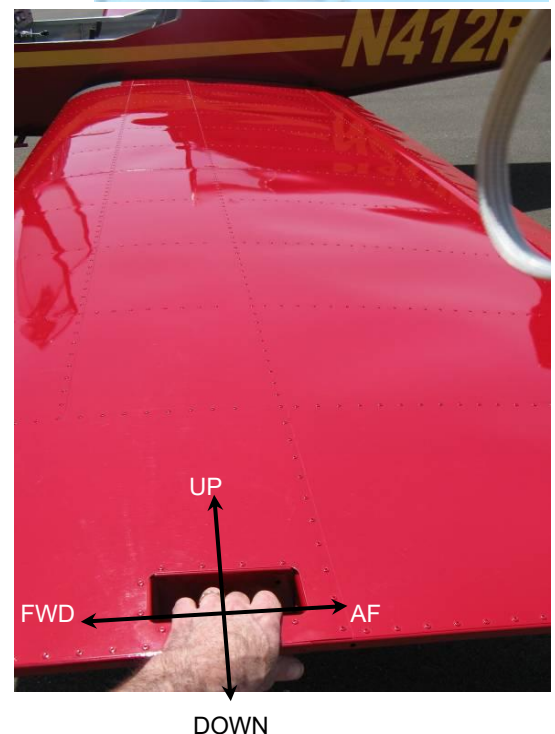
AOA PORT

**WARNING**

When applying fore and aft force check for play at the rear spar junction. This is usually discovered by hearing a clicking noise.

If this is the case, refer to the Maintenance Manual for corrective action.

Excessive fore and aft play in the left wing may also render the EFIS AOA indications inaccurate (and EFIS altitude and air speed indications if wing pitot installed).



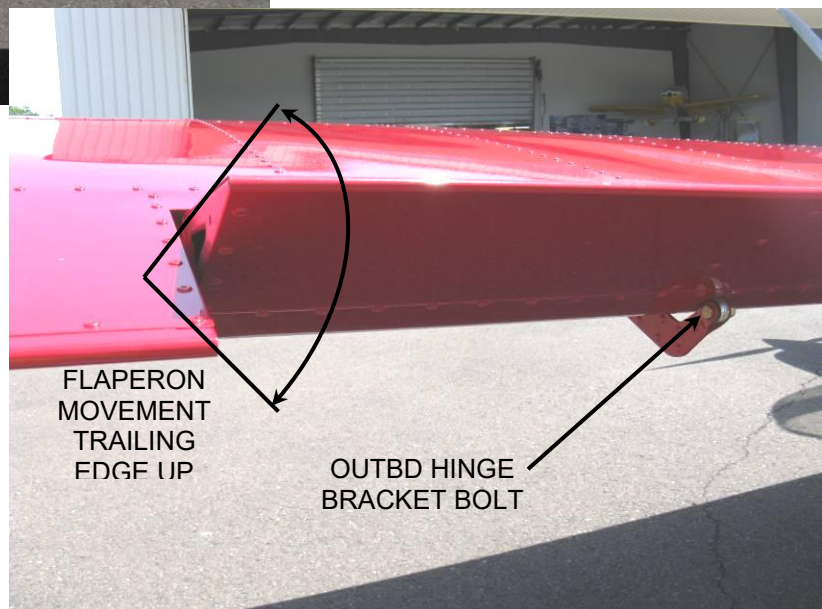
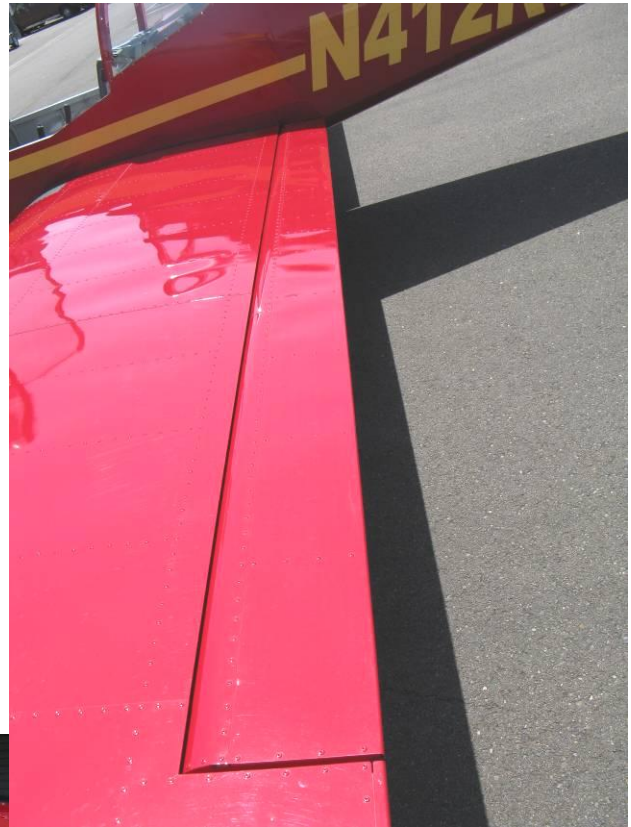
LEFT WING (continued)

- Flaperon – CONDITION

Look at flaperon in general, look for dents (particularly dents in the trailing edge), wrinkles, missing or loose rivets

- Flaperon – FREEDOM OF MOVEMENT

Move the flaperon through its full range of motion. Verify that it hits a definite stop at both ends of its travel and that there is no binding or limiting friction.



LEFT WING (continued)

- Flaperon - HINGE BRACKET ATTACHMENT

Verify that the outboard, mid, and inboard flaperon hinge bracket bolts are installed

MID HINGE
BRACKET BOLT



INBD HINGE
BRACKET BOLT

**FUSELAGE (LEFT SIDE)**

- Controls – CONNECTED

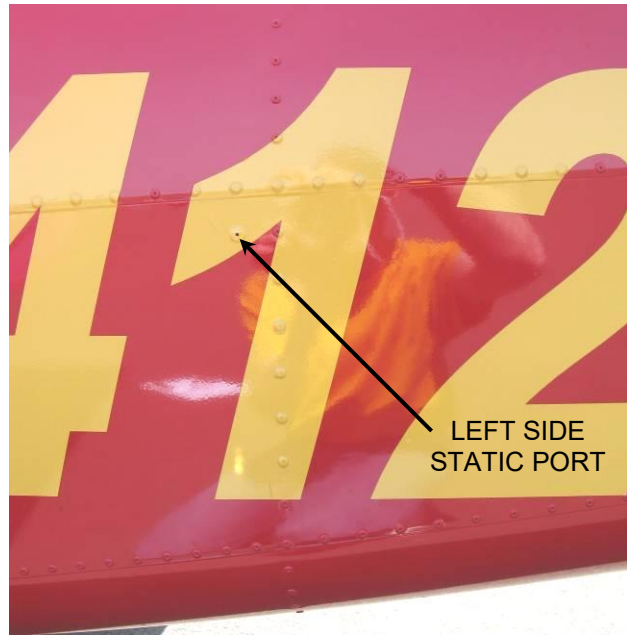
Verify that the tab on the inboard end of the flaperon fully engaged into the slot in the actuator when the wing was installed.

FLAPERON
TAB FULLY
ENGAGED IN
ACTUATOR
SLOT



FUSELAGE (LEFT SIDE) (continued)

- Static Port – CLEAN & OPEN

**EMPENNAGE**

- Vertical Stabilizer – CHECK condition and security

Look at vertical stabilizer in general, look for dents (Particularly dents in the leading edge), wrinkles, missing or loose rivets, missing or loose screws. Confirm solid attachment to the fuselage.



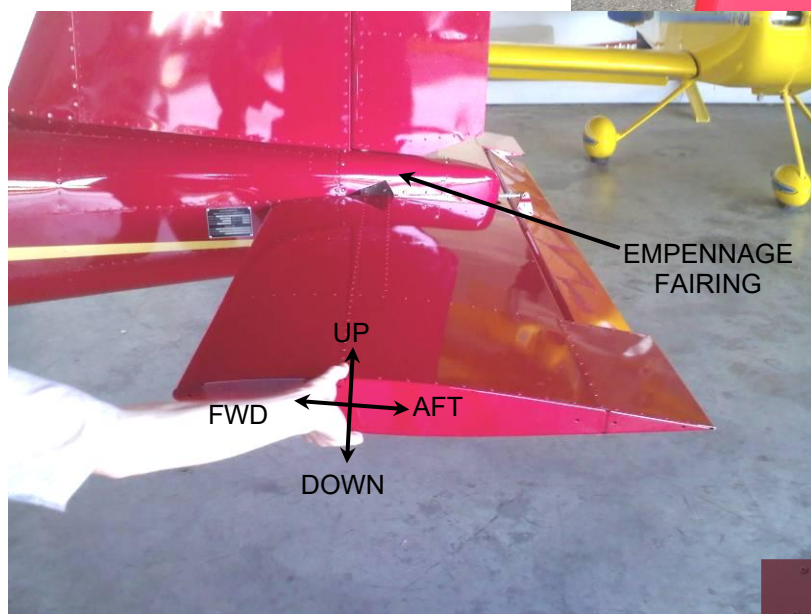
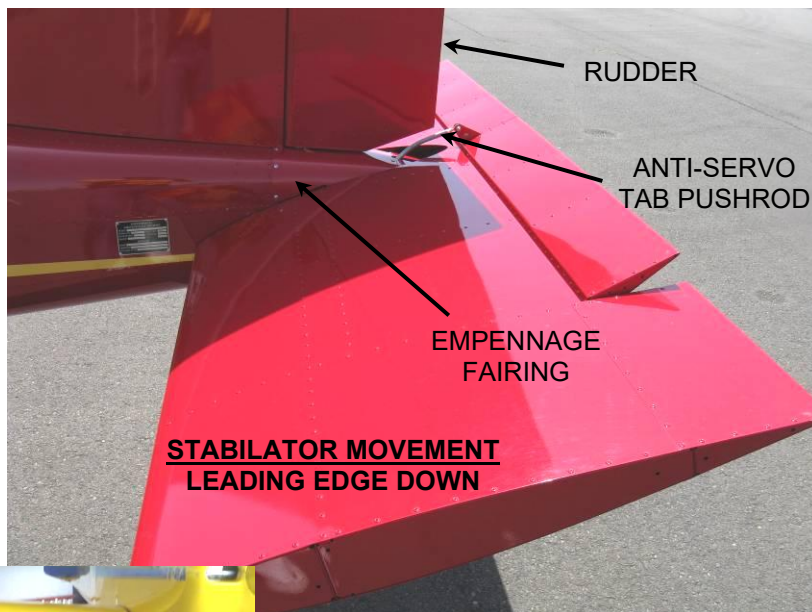
EMPENNAGE (continued)

- Stabilator – CHECK condition, freedom of movement

Look at stabilator in general; look for dents (particularly dents in the leading or trailing edges), wrinkles, missing or loose rivets.

Move the stabilator through its full range of motion. Verify that it hits a definite stop at both ends of its travel and that there is no binding or friction.

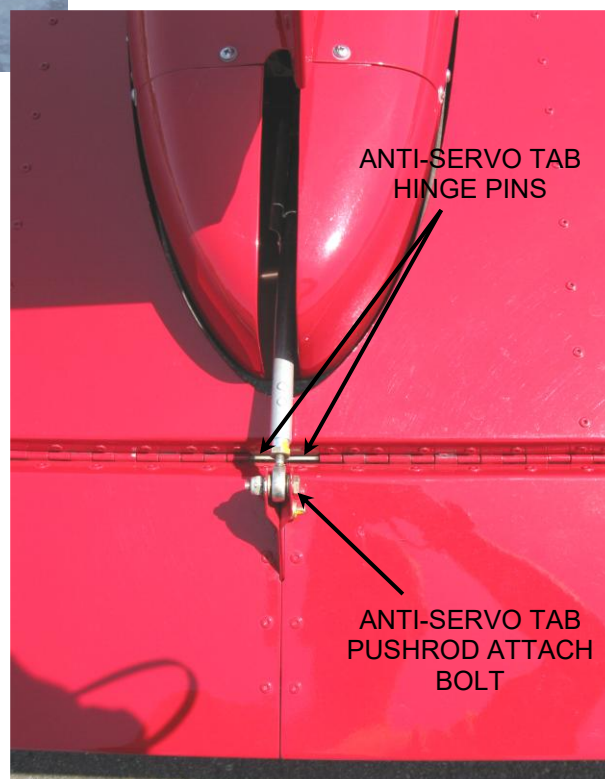
- Empennage Fairing - CHECK all screws installed, no evidence of interference with stabilator, anti-servo tab pushrod, or rudder



- Anti-Servo Tab – CHECK condition, proper attachment

Look at anti-servo tab in general, look for dents (particularly dents in the trailing edge), wrinkles, missing or loose rivets.

Verify that the anti-servo tab hinge pins are installed and that the anti-servo tab pushrod attach bolt is installed and that there is no free play in the anti-servo tab rod end bearing. Verify clearance between anti-servo tab pushrod in fully up position and rudder in any position.

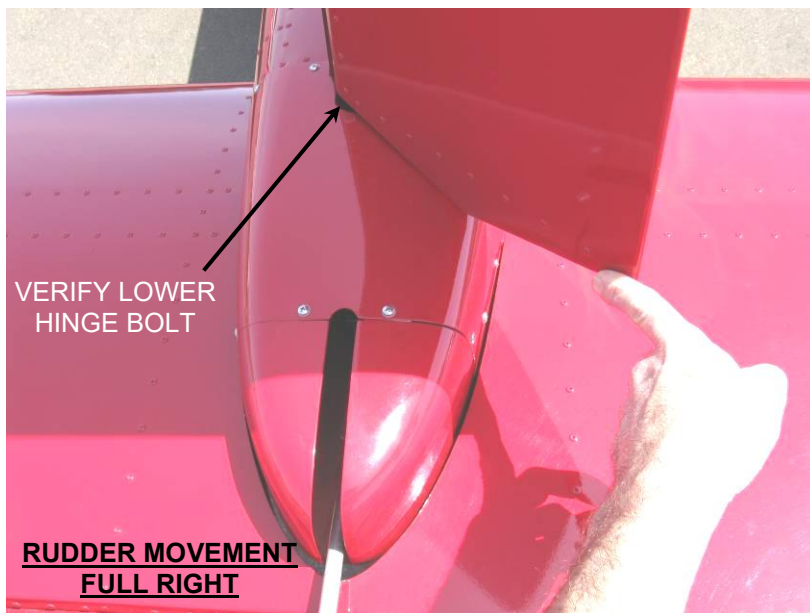
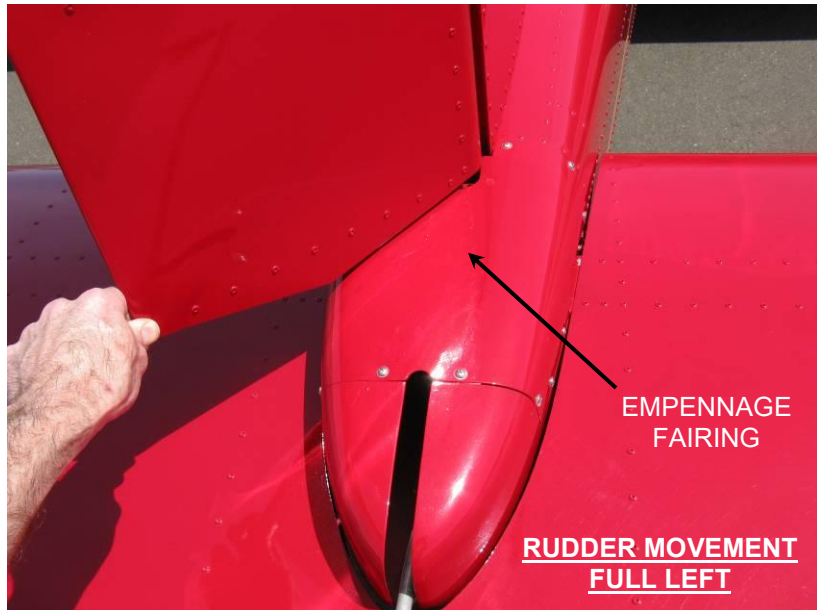


EMPENNAGE (continued)

- Rudder – CHECK condition, proper attachment, freedom of movement

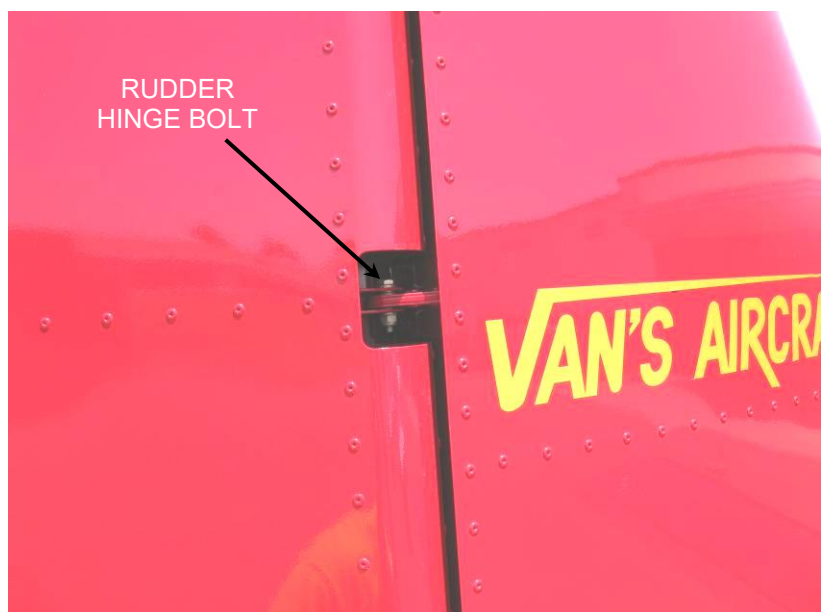
Look at rudder in general; look for dents (particularly dents in the trailing edge), wrinkles, missing or loose rivets.

Verify that the rudder hinge bolts and locknuts are installed.



- Look into the slot for the anti-servo pushrod and check:

Lower Rudder Hinge Bolt
Elevator Cable Bolts
Rudder Cable Bolts
Elevator Trim



EMPENNAGE (continued)

- Tie-Down – UNTIE RESTRAINT from eyelet

(Leave eyelet installed to minimize or prevent damage in case of over rotation of the aircraft; verify eyelet installed fully/tight)

**FUSELAGE (RIGHT SIDE)**

- Static Port – CLEAN & OPEN



- ADS-B Antenna – CONDITION (located beneath the tailcone)
- Comm. Antenna - CHECK condition & security

Verify that the ADS-B & comm. antennas are securely attached and have not been damaged. Verify that the skin surrounding the antennas is not bent or wrinkled.

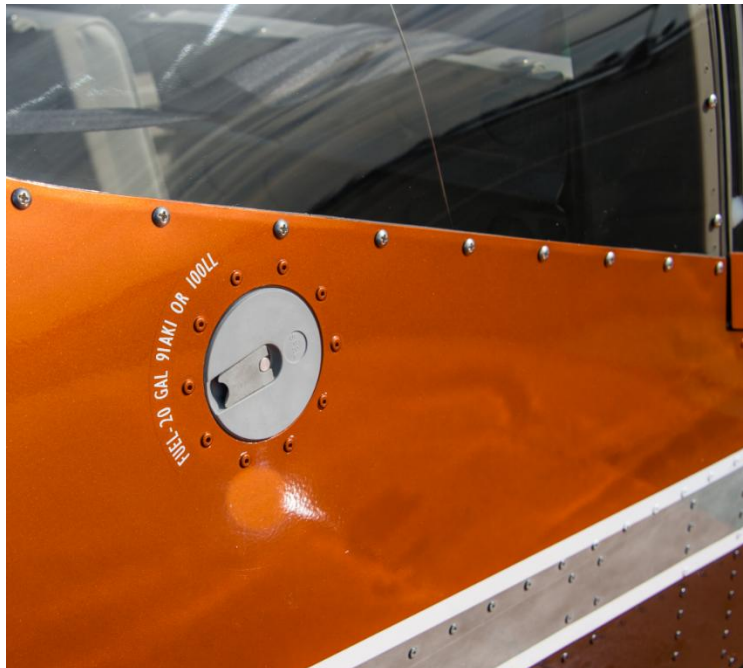


FUSELAGE (RIGHT SIDE) (continued)

- Fuel Vent Line- CLEAR
- Fuel Vent Air Line - CLEAR



- Fuel Cap - SECURE WHEN LATCHED



FUSELAGE (RIGHT SIDE) (continued)

- Controls - CONNECTED

**RIGHT WING**

- Flaperon - HINGE BRACKET ATTACHMENT

Verify that the outboard, mid, and inboard flaperon hinge bracket bolts are installed



RIGHT WING (Continued)**Flaperon – FREEDOM OF MOVEMENT**

Move the flaperon through its full range of motion. Verify that it hits a definite stop at both ends of its travel and that there is no binding or friction.



- **Flaperon – CONDITION**

Look at flaperon in general, look for dents (particularly dents in the trailing edge), wrinkles, missing or loose rivets.



RIGHT WING (Continued)

- Wing – CONDITION AND CONTAMINATION Look at wing in general, look for dents, wrinkles, missing or loose rivets (particularly dents in the leading edge) snow, frost.



- Wing Hand Hold – APPLY FORCE fore/aft & up/down; CHECK no free movement.

NOTE:

When applying fore and aft force check for play at the rear spar junction. This is usually discovered by hearing a clicking noise. If this is the case refer to the Maintenance Manual for corrective action.



- Tie-Down – UNTIE the tie-down rope/chain, REMOVE eye bolt if desired. Ensure eye bolt is secured in the wing if not removed.



RIGHT MAIN LANDING GEAR

- Tire – CONDITION, proper inflation 25psi
- Brake – CHECK condition, NO leakage
- Axle Nut – CHECK cotter pin installation
- Wheel Bearings – SHAKE top of tire left and right



- Wheel Pant (If Installed) – CONDITION CHECK
- Wheel Chocks – REMOVE

NOSE SECTION

- Transponder Antenna – CHECK condition & security



- Muffler – CHECK condition, security of attachment



NOSE SECTION (Continued)

- Cowl Door - OPEN
- Coolant – LEVEL CHECK



- Engine Oil – CHECK quantity, color, and clarity

WARNING

Before performing the engine oil check procedure, make sure the master and both ignition switches are at the OFF position.

1. Remove oil cap from tank cover.
2. Turn propeller by hand in direction of propeller rotation several times to pump oil from engine into oil tank.
3. A gurgling sound will be heard.
4. Check oil level on stick.
5. Replace the cap from the oil tank.

**ALTERNATIVE Engine Oil – CHECK**

1. Remove oil cap from tank cover.
2. MASTER – ON
3. Ignitions A OFF- B OFF
4. Use the start key to turn the propeller for 10 seconds
5. MASTER OFF
6. Check the oil level
7. Replace the cap from the oil tank

- Cowl Door - CLOSED
- Nose Landing Gear –
- CHECK attachment to fuselage



NOSE SECTION (Continued)

- Nose Tire – CONDITION, proper inflation 22psi (23psi maximum)

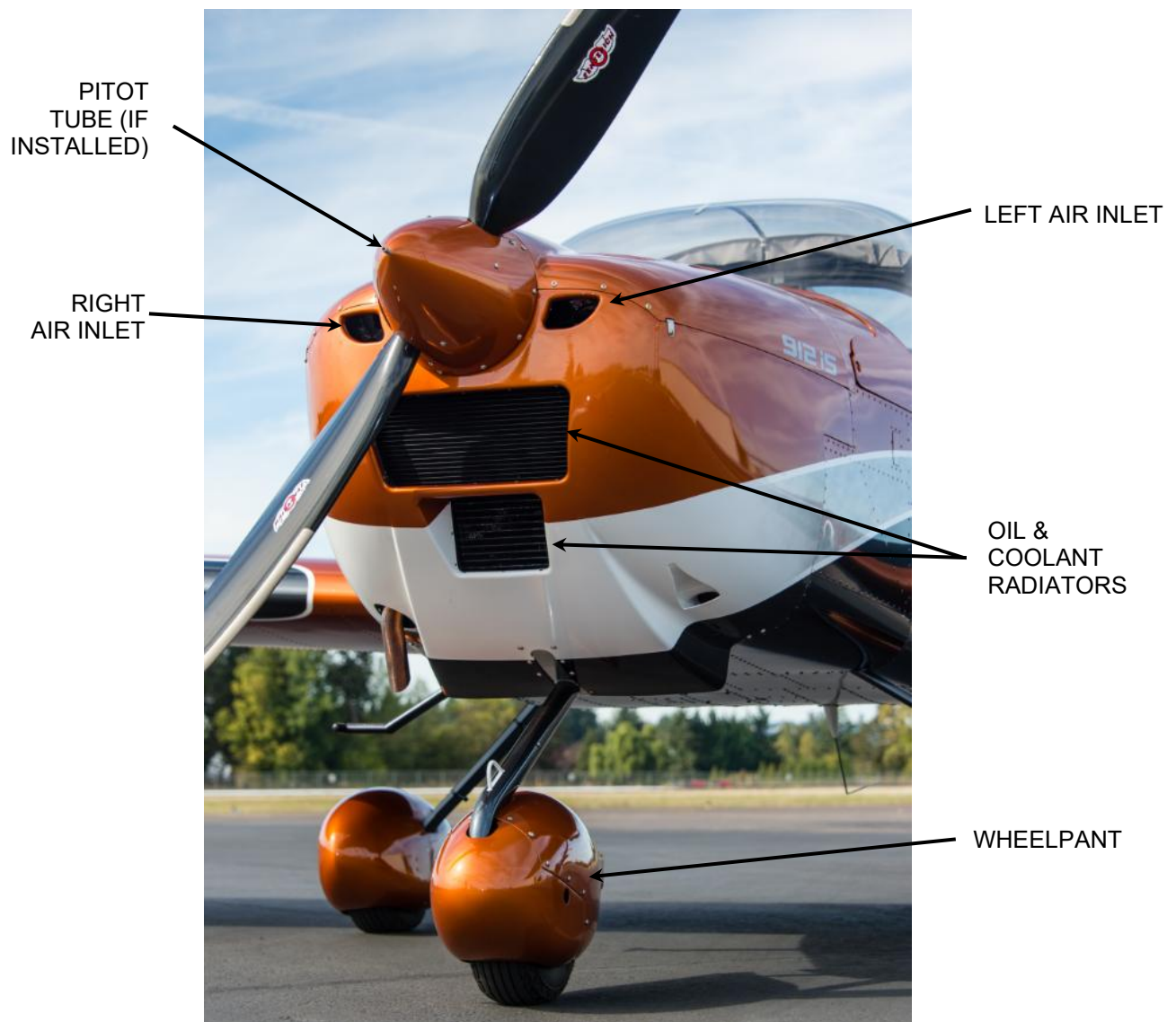
NOTE

Properly inflated tire has no contact between the outer portion of tread and pavement

- Wheel Pant (If Installed) – CONDITION CHECK
- Wheel Chocks - REMOVE
- Cowling – CHECK condition, all screws properly installed
- Right Air Inlet – CHECK unobstructed
- Propeller and Spinner – CHECK condition, security
- Pitot – CLEAN & OPEN
- Oil & Coolant Radiators – CHECK unobstructed
- Left Air Inlet – CHECK unobstructed
- Alt Air – CHECK closed

FINAL WALKAROUND

- Fuel Sample – CHECK until no more fuel/ water mixture is present.
- CHECK quick drain valve for leakage.



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POH SUPPLEMENT



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