

RAINIER FLIGHT SERVICE

RV-12iS Oil and Fuel Guide

RV-12iS Oil System

- Our RV-12iS includes a dry sump oil system.
- This means, among other things and unlike our other airplanes, the RV takes **VERY LITTLE** oil to fill to capacity.
- The RV does **NOT** accept conventional oil! The oil required may be provided by maintenance upon request.
- Additionally, when the engine is not running, oil tends to drain down to the bottom of the system, **NOT** into the oil tank, making it impossible to know how much oil is in the system.
- **To check the oil level, the oil must first be moved into the tank.**

Checking and Moving the Oil into Tank

- **To check the oil level in the RV, we must follow a very specific procedure as outlined in the POH:**
 1. Remove oil cap from oil tank and place cap in holder on oil door.
 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. Return cap to oil tank and secure.

Let's Break That Down:

1. Remove Oil Cap
 - a. The oil cap can be easy to lose in the cowling of the airplane. Be sure you have a good grip on it when you remove it.
 - b. It may be easily stored in the oil access door.



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2. Turn Propeller
 - a. **Before turning the propeller, MAKE SURE BOTH 'LANE' switches are in the OFF position, and the key is NOT in the ignition.**
 - b. The easiest way to accomplish this step is to gently and continuously turn the propeller in the direction of rotation.
 - c. The engine may also gurgle more quickly and easily if you turn the prop until you feel stiffness, then hold it there for a moment before continuing.

3. The Gurgle
 - a. As you turn the propeller, listen for noise at the oil access door.
 - b. You will hear a sound similar to a draining sink when the process is complete and should now be able to check the oil level.
 - c. **If you do not hear a gurgle, the process is NOT complete.** Continue turning the propeller or ask for assistance if you think something is wrong.

4. Checking Oil Level
 - a. The dipstick should be resting in the tank. Remove it, wipe it with a clean, dry towel, and replace it in the tank.
 - b. Lift the stick again and check to see where the level of oil is on the stick. **The flat portion of the stick is the NORMAL** range.
Note: The difference between the top of the stick and the bottom of the stick is only 0.5 QTS.
 - c. **DO NOT PUT MORE OIL THAN IS REQUIRED INTO THE TANK.** Usually, only a few ounces are required, if any is required at all. When in doubt, ask maintenance for assistance.



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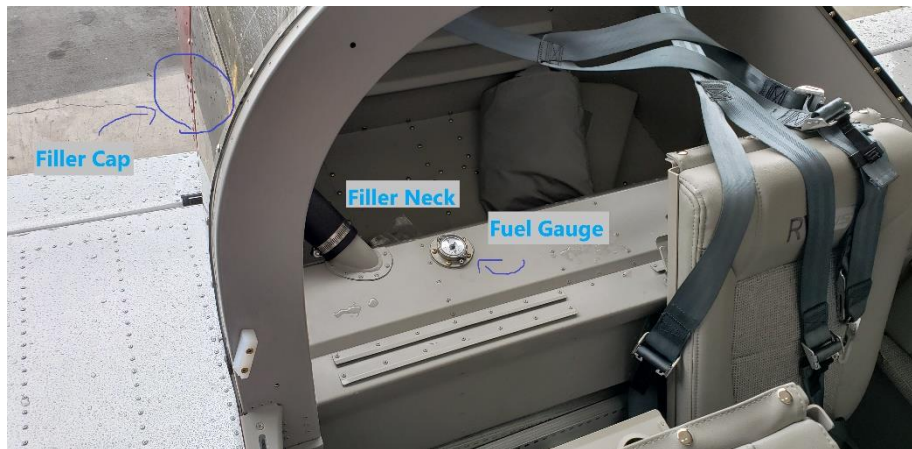
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5. Return Cap to Oil Tank and Secure
 - a. Place the dipstick back in the tank, and replace the oil cap, being sure not to lose the cap in the engine cowling.



RV-12iS Fuel Levels

- The RV has one, 20.2-gallon fuel tank. It is located behind the pilot and passenger seats.
- The fuel tank comes equipped with a mechanical fuel gauge, located on the top of the tank.
- A full tank may also be noted by fuel sitting at or just below the bottom of the filler neck.



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Fueling the RV-12iS

- Ground the aircraft via the exhaust pipe.
- Drag the fuel line out away from the aircraft until you have enough slack to bring the line under the wing and reach the fuel opening.
- Please DO NOT drag the fuel line over the wing of the aircraft!
- When stepping up to the wing, be careful not to lean on the flaperon. It is very fragile and will easily be bent out of shape.

Additional Notes on Fueling the RV-12iS

- Like the C162's, the RV-12 has a limited takeoff weight. Please ask the next client or instructor how much fuel they require before filling the tank.
- When in doubt, fill only to the $\frac{3}{4}$ tank mark or don't fill at all.
- According to the Flight Training Supplement (FTS), if the amount of fuel entering the tank is more than the vent lines can handle, the tank will 'burp' fuel back out at you. Be careful and fuel slowly!

