AIRCRAFT FUELING, ENGINE OIL ADDING AND FUEL SAMPLING

GENERAL

Aircraft fueling shall be done at an approved aviation fuel bowser. Aircraft should be positioned so, that in case of fire it can be moved away easily. During fueling there shall not be hail, thunder or other discharges of static electricity. Aircraft electrics master switch and magnetos must be in OFF position. Fuel bowser grounding wire shall be connected to aircraft exhaust pipe to remove any static electricity.

Aircraft fuel quantity shall be measured with a dipstick marked with a/c registration. Measurement is done by dipping a dipstick into the tank in vertical position. This shall be repeated three times to get a reliable measurement. Flight instructor always verifies fuel quantity by measuring him/herself, also then when student has measured quantity already (NOTE: If student fuels the a/c outside home airfield during solo flight, fuel measuring should be done by himself with extra caution).

UNUSABLE FUEL

Unusable fuel is fuel left in a/c tanks, which can't be taken into account when planning a flight. Quantity of unusable fuel is dependent on aircraft type, and it is reported in aircraft flight manual.

OH-CET 7,6 liters / 2 US gallon / tank, 15,2 liters / 4 US gallons combined. When measuring quantity of fuel with a **dipstick marked with a/c registration**, dipstick gives the quantity of **usable fuel.**

OH-CKY 7,6 liters / 2 US gallon / tank, 15,2 liters / 4 US gallons combined. When measuring quantity of fuel with a **dipstick marked with a/c registration**, dipstick gives the quantity of **usable fuel.**

OH-CLE 3,8 liters / 1 US gallon / tank, 7,6 liters / 2 US gallons combined. When measuring quantity of fuel with a **dipstick marked with a/c registration, dipstick gives the quantity of usable fuel.**

OH-COX 3,8 liters / 1 US gallon / tank, 7,6 liters / 2 US gallons combined. When measuring quantity of fuel with a **dipstick marked with a/c registration**, **dipstick gives the quantity of usable fuel.**

AVIATION FUEL AND OIL GRADES AND AMOUNT OF USABLE FUEL.

	Fuel grade	**Usable fuel**	**Oil grade**
OH-CET	AVGAS 91/96 UL	83 l / 22 US gal	Total 15W50
OH-CKY	AVGAS 91/96 UL	128,5 l / 34 US gal	Total 15W50
OH-CLE	AVGAS 100 LL	90,2 l / 24 US gal	Exxon 20W50
OH-COX	AVGAS 100LL	90,2 l / 24 US gal	Shell W80+

ADDING ENGINE OIL

When adding engine oil, always verify oil suitability to aircraft in use. Add one full, unopened bottle (vol. 1 qrt) of aviation oil by using new, clean cardboard funnel. Mixing oil grades is prohibited.

If oil is spilled to engine cowling or airframe, it should be wiped away immediately. Empty oil bottles, funnels and wiping cloths must be discarded into a wastebin reserved for oil waste.

TAKING A FUEL SAMPLE

Water is condensated into aircraft tanks during cool and humid nights, in the winter when temperature varies below and above zero degrees and during long flights in high altitude. Tank caps may leak and rain may enter into the tanks.

Fuel sample must be taken before every flight. A sample is taken into a sampling vessel from a/c fuel drain valves and flight instructor verifies sample (NOTE: If student fuels the a/c outside home airfield during solo flight, fuel sampling should be done by himself with extra caution). Before sampling, aircraft should be stationary for at least 15 minutes to allow the water and sediment to settle in tanks and fuel system.

Fuel sample is examined for water and sediment. Water settles to the bottom of the samplinf vessel. Water and fuel create a distinctive layer between fluids. Color of AVGAS 100LL aviation fuel is light blue. Color of AVGAS 91/96 UL aviation fuel is clear transparent.

If amount of water in sample is very big (=vessel full of water) it may be difficult to make distinction between water and fuel. Adding a small amount of water into the sampling vessel indicates reliably if fluid is water or fuel. Odour is an unreliable way of examining; water starts to smell like fuel very soon when in contact with the fuel.

Sediment either settles to the bottom of the sampling vessel or floats in the fuel.

If water or sediment is found in the sample, fuel shall be emptied as long as to get a clean sample.

Examined fuel sample shall be taken into the canister reserved for that purpose. Spilling a fuel sample back into the a/c tanks or into the ground is prohibited!

LOCATION OF FUEL DRAIN VALVES:

OH-CET: One valve in each wing, near the fuselage. One pipe under engine cowling near nose landing gear, use by pulling a small handle inside engine bay, near oil filling cap.

OH-CKY, OH-COX, OH-CLE: One valve in each wing, near the fuselage. One pipe under engine cowling near nose landing gear, use by pulling a small handle inside engine bay, near oil filling cap. One valve under the fuselage.

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