

Corrections to the book

"Flight Performance and Planning"

Edition 4, 2020

Update according to the Swedish Civil Aviation Authority learning objectives that are valid from **2023-01-09**.

SIDA	RÄTTNING
22	<p>Under the heading "Concepts", add the following <u>after</u> the existent sentence:</p> <p>Note that the term 'mass' is used to describe a quantity of matter, and 'weight' when describing the force. However, the term 'weight' is normally used in aviation to colloquially describe mass. The pilot should always note the units to determine whether the term 'weight' is being used to describe a force (e.g. unit newton) or quantity of matter (e.g. unit kilogram).</p>
22	<p>Under the paragraph "Basic empty mass", replace <u>the first</u> sentence with the following:</p> <p>Basic empty mass is the mass of an aircraft plus standard items such as: unusable fuel; full operating fluids; fire extinguishers; emergency oxygen equipment.</p>
22	<p>Under the paragraph "Zero fuel mass", add the following <u>after</u> the last sentence:</p> <p>The maximum zero fuel mass is the maximum permissible mass of an aircraft with no usable fuel.</p>
22	<p><u>After</u> the paragraph "Take-off mass, Maximum take-off mass", add the following:</p> <p><i>Performance-limited take-off mass</i> The take-off mass subject to departure airfield limitations.</p> <p><i>Maximum structural take-off mass</i> The maximum permissible total mass of an aircraft at commencement of take-off.</p>
22	<p><u>After</u> the paragraph "Landning mass, Maximum landning mass", add the following:</p> <p><i>Performance-limited landing mass</i> The mass subject to the destination airfield limitations.</p> <p><i>Maximum structural landing mass</i> The maximum permissible total mass of an aircraft at landing under normal circumstances.</p>
23	<p>Under the paragraph "Useful load", add the following <u>after</u> the last sentence:</p> <p>This is also called traffic load and the definition is the total mass of passengers, baggage and cargo, including any non-revenue load.</p>

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PAGE	CORRECTION
151-152	Due to regulation changes regarding fuel requirements the green text boxes are altered to the texts below. The regulation changes takes effect October 30, 2022.

We cannot commence a flight without having sufficient fuel/energy and oil. To determine what is sufficient, we must consider the meteorological conditions, any element affecting the performance of the aircraft, any delays that are expected in flight, and any contingencies that may reasonably be expected to affect the flight. Remember that the longer the flight, the more likely it is that unexpected things will happen.

The pilot-in-command must plan with a quantity of fuel/energy to be protected as final reserve fuel/energy to ensure a safe landing. To determine the quantity of the final reserve fuel/energy, the pilot-in-command must first consider the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation and then the likelihood of unexpected circumstances where the final reserve fuel/energy may no longer be protected.

The final reserve fuel/energy should under all circumstances be no less than the required fuel/energy to fly:

1. for 10 minutes at maximum continuous cruise power at 1 500 ft (450 m) above the destination under VFR by day, taking off and landing at the same aerodrome/landing site, and always remaining within sight of that aerodrome/landing site.
2. for 30 minutes at holding speed at 1 500 ft (450 m) above the destination under VFR by day.
3. for 45 minutes at holding speed at 1 500 ft (450 m) above the destination or destination alternate aerodrome under VFR flights by night.

The amount of final reserve fuel/energy can differ depending on what is required according to above but may never be less than the values in this box. It is advisable to bring more, if it the mass and performance limitations allow it. When planning the fuel/energy quantity, in case of holding, and if the aircraft documentation does not provide approved data for flying in the holding, the pilot should take the fuel/energy flow data from the long-range/best-range cruise data.

The quantity of the final reserve fuel/energy should be planned before flight and be an easily recalled figure against which the pilot-in-command can check the current fuel/energy state of the aircraft. The planned final reserve fuel/energy should be protected as a reserve in normal operations. If the fuel/energy on board falls below the final reserve fuel/energy, the pilot-in-command should consider this to be an emergency.

According to NCO.OP185, the pilot-in-command must monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and that it is not less than the fuel/energy that is required to fly to an aerodrome where a safe landing can be made. If the amount of fuel during flight in controlled airspace is so low that there is only one aerodrome available for landing without using the final reserve fuel/energy, ATC should be notified using the phrase "MINIMUM FUEL". If the amount of fuel during flight in controlled airspace however is so low that you must use part of the final reserve fuel/energy, it should be considered an emergency, and ATC should be notified using the phrase "MAYDAY MAYDAY MAYDAY FUEL".