Federal Aviation Administration, DOT

§ 121.643 Fuel supply: All domestic operations.

No person may dispatch or take off an airplane unless it has enough fuel—
(a) To fly to the airport to which it is dispatched;
(b) Thereafter, to fly to and land at the most distant alternate airport (where required) for the airport to which dispatched; and
(c) Thereafter, to fly for 45 minutes at normal cruising fuel consumption or, for certificate holders who are authorized to conduct day VFR operations in their operations specifications and who are operating non-transport category airplanes type certified after December 31, 1964, to fly for 30 minutes at normal cruising fuel consumption for day VFR operations.


§ 121.641 Fuel supply: Nonturbine and turbo-propeller-powered airplanes: Flag operations.

(a) No person may dispatch or take off a nonturbine or turbo-propeller-powered airplane unless, considering the wind and forecast weather conditions, it has enough fuel—
(1) To fly to and land at the airport to which it is dispatched;
(2) Thereafter, to fly to and land at the most distant alternate airport specified in the dispatch release; and
(3) Thereafter, to fly for 30 minutes plus 15 percent of the total time required to fly at normal cruising fuel consumption to the airports specified in paragraphs (a) (1) and (2) of this section or to fly for 90 minutes at normal cruising fuel consumption, whichever is less.

(b) No person may dispatch a nonturbine or turbo-propeller-powered airplane to an airport for which an alternate is not specified under §121.621(c)(2), unless it has enough fuel, considering wind and forecast weather conditions, to fly to that airport and thereafter to fly for three hours at normal cruising fuel consumption.

§ 121.643 Fuel supply: Nonturbine and turbo-propeller-powered airplanes: Supplemental operations.

(a) Except as provided in paragraph (b) of this section, no person may release for flight or takeoff a nonturbine or turbo-propeller-powered airplane unless, considering the wind and other weather conditions expected, it has enough fuel—
(1) To fly to and land at the airport to which it is released;
(2) Thereafter, to fly to and land at the most distant alternate airport specified in the flight release; and
(3) Thereafter, to fly for 45 minutes at normal cruising fuel consumption
§ 121.645 Fuel supply: Turbine-engine powered airplanes, other than turbo-propeller: Flag and supplemental operations.

(a) Any flag operation within the 48 contiguous United States and the District of Columbia may use the fuel requirements of §121.639.

(b) For any certificate holder conducting flag or supplemental operations outside the 48 contiguous United States and the District of Columbia, unless authorized by the Administrator in the operations specifications, no person may release for flight or takeoff a turbine-engine powered airplane (other than a turbo-propeller powered airplane) unless, considering wind and other weather conditions expected, it has enough fuel—

(1) To fly to and land at the airport to which it is released; (2) After that, to fly for a period of 10 percent of the total time required to fly from the airport of departure to, and land at, the airport to which it was released; (3) After that, to fly to and land at the most distant alternate airport specified in the flight release, if an alternate is required; and (4) After that, to fly for 30 minutes at holding speed at 1,500 feet above the alternate airport (or the destination airport if no alternate is required) under standard temperature conditions.

(c) No person may release a turbine-engine powered airplane (other than a turbo-propeller airplane) to an airport for which an alternate is not specified under §121.621(a)(2) or §121.623(b) unless it has enough fuel, considering wind and other weather conditions expected, to fly to that airport and thereafter to fly for at least two hours at normal cruising fuel consumption.

(d) The Administrator may amend the operations specifications of a certificate holder conducting flag or supplemental operations to require more fuel than any of the minimums stated in paragraph (a) or (b) of this section if he finds that additional fuel is necessary on a particular route in the interest of safety.

(e) For a supplemental operation within the 48 contiguous States and the District of Columbia with a turbine engine powered airplane the fuel requirements of §121.643 apply.


§ 121.646 En-route fuel supply: flag and supplemental operations.

(a) No person may dispatch or release for flight a turbine-engine powered airplane with more than two engines for a flight more than 90 minutes (with all engines operating at cruise power) from an Adequate Airport unless the following fuel supply requirements are met:

(1) The airplane has enough fuel to meet the requirements of §121.645(b); (2) The airplane has enough fuel to fly to the Adequate Airport— (i) Assuming a rapid decompression at the most critical point;