

Cancelled See 21-4B

Federal Aviation Agency



AC NO: AC 21-4A

AIRCRAFT

EFFECTIVE : 9/16/66

SUBJECT : SPECIAL FLIGHT PERMITS FOR OPERATION OF OVERWEIGHT AIRCRAFT

1. **PURPOSE.** This circular provides guidance material with respect to special flight permits to operate an aircraft in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available.
2. **CANCELLATION.** AC No. 21-4, effective February 14, 1966, is canceled.
3. **REFERENCE.** Federal Aviation Regulations Part 21, Sections 21.197(b) and 21.199; International Flight Information Manual.
4. **GENERAL.** The excess weight is limited to additional fuel, fuel carrying facilities, and navigational equipment necessary for the flight. The nearest FAA district or area office will help explain requirements for obtaining these permits.
 - a. FAR 21.199 establishes procedures which applicants must follow to obtain a special flight permit. Application is made on FAA Form 1779, (see sample form attached).
 - b. FAR Part 43 prescribes requirements for approval, return to service, and alteration records associated with the installation of the additional facilities. Alterations are recorded on FAA Form 337. See Appendix B of FAR Part 43 and Advisory Circular 43.9-1A for instructions on completion of this form.
 - c. Discuss the proposed flight with the manufacturer of the aircraft or a repair station operator relative to the availability of technical data on the installation of additional fuel tank installations.
 - d. Determine well in advance of any proposed flight to any foreign country what additional requirements may be imposed by that country due to the issuance of the overweight authorization. To facilitate receiving permission to operate over or within a foreign country,


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the request for permission should include a statement which shows the deviation from international (ICAO) airworthiness standards (these are the same as the U.S. regulatory requirements) as follows: "This aircraft complies with ICAO International Airworthiness Standards of Annex 8 except for..." (List the items of noncompliance.) A copy of the subject statement should also be included with the FAA Form 1779 when submitted to the FAA.



- e. If an aircraft is being exported, check Treasury, Commerce (civil type) or State (military type) Departments for applicable requirements. The International Flight Information Manual provides further guidance.

5. CRITERIA USED TO DETERMINE THE SAFETY OF ADDITIONAL FACILITIES. In approving the installation of additional facilities, the issuing authority must find that the altered aircraft is safe for operation. To assist in arriving at such a determination, the following questions are normally considered:
- a. Does the technical data include installation drawings, structural substantiating reports, weight, balance, new center of gravity limits computations, and aircraft performance limitations in sufficient detail to allow a conformity inspection of the aircraft to be made?
 - b. In what ways does the aircraft not comply with the applicable airworthiness requirements (See FAR 21.199(5))?
 - c. Are the fuel tanks vented to the outside? Are all areas in which tanks are located ventilated to reduce fire, explosion, and toxicity hazards?
 - d. Are the tanks even when empty strong enough to withstand the differential pressure at maximum operating altitude for a pressurized aircraft?
 - e. Have means been provided for determining the fuel quantity in each tank prior to flight?
 - f. Are shutoff valves, accessible to the pilot, provided for each additional tank to disconnect these tanks from the main fuel system?
 - g. Are the additional fuel tank filler connections designed to prevent spillage within the aircraft during servicing?
 - h. Is the engine oil supply and cooling adequate for the extended weight and range?

6. LIMITATIONS. The following types of restrictions may be necessary for safe operation of the aircraft (See FAR 21.199(6)):
- a. Revised operational airspeeds for use in the overweight condition.
 - b. Increased pilot skill requirements.
 - c. A prescribed sequence for using fuel from various tanks as necessary to keep the aircraft within its center of gravity range.
 - d. Notification to the control tower of the overweight takeoff condition to permit use of a runway to minimize flight over congested areas.
 - e. Avoidance of severe turbulence. If encountered, the aircraft should be inspected for damage as soon as possible.
 - f. Notification to the nearest Federal Aviation Agency District or Area Office located at the point of departure from the U.S. in sufficient time for that office to determine that the aircraft still conforms to the terms and conditions of the special flight permit.



C. W. Walker
Director
Flight Standards Service

FEDERAL AVIATION AGENCY		FORM APPROVED BUDGET BUREAU NO. 04-R082
APPLICATION AND AUTHORIZATION FOR FERRY PERMIT		
1. APPLICATION		
INSTRUCTIONS: Submit in duplicate to authorized Federal Aviation Agency representative or designated manufacturing inspection representative.		
DESCRIPTION OF AIRCRAFT		
REGISTERED IN NAME OF Ted K. Bauer	ADDRESS 1496 Oak Lane Vienna, Virginia 21666	
MAKE Beech	MODEL D50A Modified in accordance with Flight Inc., Dwg. 2-26189	
MANUFACTURER'S SERIAL NO. 4312	IDENTIFICATION MARK N9314Z	
DESCRIPTION OF FLIGHT		
FROM Logan International Airport Boston, Massachusetts	TO Croydon Airport Surrey, England	
VIA Reykjavik Airport Iceland	DATE 1/2/65	DURATION 15 days
PURPOSE Delivery of aircraft to owner.		
I HEREBY request authority to ferry the above-described aircraft for the flight specified.		
 (SIGNATURE OF APPLICANT)		Agency and Pilot (TITLE)
		12/4/64 (DATE)
2. AUTHORIZATION		
INSTRUCTIONS: Retain this authorization in aircraft for duration of flight. This is your authority to conduct the flight requested above. This permit is valid until landing is effected at the destination indicated in your request, provided the aircraft is flown by a properly certified crew, is operated in accordance with applicable Civil Air Regulations, and in accordance with the following special limitations:		
1. <u>AIRCRAFT.</u>		
Aircraft must conform to Flight Inc., Dwg. 2-26189 dated May 6, 1964.		
2. <u>CREW QUALIFICATIONS.</u>		
a. Pilot in command and/or minimum crew must have at least the following qualifications.		
(1) Private pilot certificate.		
(2) Multiengine rating.		
REMARKS:		
DATE ISSUED 12/8/64	SIGNATURE OF FAA REPRESENTATIVE  Principal General Maintenance Inspector	DESIGNEE NO. CE-GADO-22

3. OPERATION LIMITATIONS.

- a. Maximum weight must not exceed 8,150 pounds.
- b. Maximum quantity of fuel carried in auxiliary tanks must not exceed 106 gallons in fwd tank, 164 gallons in center tank, and 45 gallons in aft tank.
- c. Center of gravity limits must not exceed (fwd) +116.8 and (aft) +124.6.
- d. Acrobatics are prohibited.
- e. Use of autopilot while in overweight condition is prohibited.
- f. Avoid moderate to severe turbulence.
- g. When an overweight landing is made or the aircraft has been flown through moderate or severe turbulence while in an overweight condition, the aircraft must be inspected for damage after landing. The inspections performed and the findings must be entered in the aircraft log. The pilot must determine, before the next takeoff, that the aircraft is airworthy.
- h. The following airspeed limits must not be exceeded in the overweight condition:
 - (1) $V_c = 185$ mph
 - (2) $V_{ne} = 205$ mph
- i. Operation in the overweight condition must be conducted to avoid areas having heavy air traffic, to avoid cities, towns, villages, and congested areas, or any other areas where such flights might create hazardous exposure to person or property on the ground.
- j. Takeoff is limited to Runway 9 or 15 at Logan International Airport.
- k. Prior to requesting clearance to takeoff position, the pilot in command must advise the tower of the overweight condition and of any limitations with respect to a specific runway or prescribed meteorological conditions.

4. This aircraft complies with the International Airworthiness Standards of Annex 8 to the Convention on International Civil Aviation except for the auxiliary fuel tank installation in the passenger compartment of the aircraft.