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CIVIL AERONAUTICS MANUAL 42

U. S. Department of Commerce — Civil Aeronautics Administration

Civil Aeronautics Manuals and supplements thereto are issued by the Office of Aviation Safety, Civil Aeronautics Administration, for the guidance of the public and are published in the Federal Register and the Code of Federal Regulations.

Supplement No. 3 — April 20, 1951

SUBJECT: Revisions to CAM 42

The purpose of this supplement is to provide holders of Civil Aeronautics Manual 42 with revised CAA rules and policies issued pursuant to Civil Air Regulation 42.11, 42.29, 42.31, and 42.32. These revised portions of CAM 42 were published in the Federal Register on October 12, 1950, November 7, 1950, December 15, 1950, and February 1, 1951.

Instructions for insertion of revised manual pages:

REMOVE AND DESTROY THE FOLLOWING PAGES:	INSERT IN LIEU THEREOF THE FOLLOWING PAGES:
42.11 and on the back 42.11	42.9-1 and on the back 42.11
42.26 and on the back 42.30	42.27(b)(1) and on the back 42.27(b)(1)
42.32 and on the back 42.32	42.29-2(b) and the back blank
42.32-4 and on the back 42.32-4	42.31-2 and on the back 42.31-2
	42.32-1 and on the back 42.32-2
	42.32-4 and the back blank
42.80-1 Figure 2 and on the back 42.80-1 Figure 3	42.80-1 Figure 2 and on the back 42.80-1 Figure 3

The following ink revisions should be made:

(1) On the page headed 42.16-1, delete the first two lines, i.e., "responsibility for maintenance, applicable time limitations, and the aircraft concerned."

(2) Delete CAM 42.45-2 in its entirety.

Office of Aviation Safety — E. S. HENSLEY, Director

42.5-4 APPLICATION FOR OVERSEAS AND INTERNATIONAL AUTHORIZATION. (*CAA rules which apply to section 42.5.*)

Application for overseas and international authorization shall be made to the local Aviation Safety Agent in the following manner:

(a) An applicant desiring to engage in overseas and international air transportation shall so indicate in the space provided on Form ACA-1602.

(b) The following information must be attached to the application:

(1) List of foreign areas for which operations specifications are desired.

(2) Points between which operations are contemplated.

(3) Type of activity; e. g., cargo, passengers, or a combination of both, etc.

(4) Statement to the effect that diplomatic clearances have been or will be obtained prior to departure either directly or through State Department channels for entry into, or flight over, all of the foreign countries involved. (Indicate which and duration.)

(5) Arrangements which the company has completed or contemplates for the servicing and maintenance of aircraft and equipment abroad.

(6) An outline of the method by which control will be exercised by company headquarters over operations outside the continental limits of the United States or its territories. (In lieu thereof, when a single aircraft and individual are involved, appropriate addresses in foreign countries through which the operator may be reached by normal communication channels.)

(c) An irregular air carrier possessing an irregular air carrier operating certificate, who desires to amend such certificate to include overseas and international operations authorization, shall make application on Form ACA-1014 and submit it to the local Aviation Safety Agent, together with the information required above.

(d) Any operator or pilot contemplating foreign flight should be well-acquainted with the airports of entry, fields to be visited, navigational facilities available, air laws, public health, customs, and any other requirements established by the country or countries into which operations are to be conducted.[2]

"CAR § 42.6 *Duration.* An air carrier operating certificate shall continue in effect unless it is surrendered, suspended, or revoked, or a termination date is set by the Board, after which it shall be returned to the Administrator."

"CAR § 42.7 *Display.* The air carrier operating certificate shall be kept available at the carrier's principal operations office for inspection by any authorized representative of the Administrator or Board."

"CAR § 42.8 *Inspection.* Any authorized representative of the Administrator or the Board shall be permitted at any time and place to make inspections or examinations to determine the air carrier's compliance with the Civil Air Regulations."

"CAR § 42.9 *Operations Base, Maintenance Base and/or Office.* On or before July 1, 1949, each irregular air carrier shall give written notice to the Administrator of his principal business office, his principal operations base, and principal maintenance base. Thereafter, prior to any change in any such office or base, he shall give written notice to the Administrator."

42.9-1 NOTICE. (*CAA rules which apply to section 42.9.*)

Three copies of each notice, in letter form, shall be delivered by the air carrier to the district office of the Civil Aeronautics Administration serving the air carrier's principal business office, operations base, or maintenance base, whichever is appropriate, in order to give notice to the Administrator.

[2] This information is normally contained in the International Flight Information Manual obtainable from the Office of Aviation Information, CAA, Washington 25, D. C.

AIRCRAFT REQUIREMENTS

§ 42.11 *Aircraft required.* An air carrier shall have the exclusive use of at least one aircraft. All aircraft used in the carriage of persons or property for compensation or hire shall be certificated in accordance with standard airworthiness requirements. No air carrier shall operate a large aircraft for the carriage of goods or persons for compensation or hire unless (a) the air carrier has the exclusive use of such aircraft, (b) the Administrator has found such aircraft safe for the service to be offered and has listed such aircraft in the air carrier operating certificate, and (c) such aircraft is not listed in the air carrier operating certificate or commercial operator certificate of any other air carrier or commercial operator.

42.11-1 LISTING OF AIRCRAFT. (*CAA rules which apply to section 42.11.*)

When an air carrier utilizes large aircraft, they shall be listed in the Operations Specifications—Aircraft Identification, Form ACA-518-A. When an aircraft is no longer regularly used in the air carrier's operation, it must be deleted from the Operations Specifications—Aircraft Identification, Form ACA-518-A. Prior to listing any aircraft in the operations specifications, the following standards shall be met:

(a) The aircraft must be properly registered and there shall be conspicuously displayed in the aircraft a current Airworthiness Certificate accompanied by an appropriate Operations Record or Airplane Flight Manual.

(b) The basic empty weight of the aircraft shall be provided and procedures effected to include the aircraft in the air carrier's weight control system.

(c) Proper application covering the maintenance of all the pertinent components of the aircraft in the maintenance manual must be submitted.

(d) The aircraft shall have the required equipment installed and shall show compliance with other requirements of applicable Civil Air Regulations, the Air Carrier Operating Certificate, and operational or route requirements. Required equipment shall include an adequate number of emergency exits for rapid evacuation in the event of an emergency or crash landing. The installation, operation, and marking of required emergency exits must comply with the pertinent airworthiness regulations. Emergency exits of passenger-carrying aircraft shall be clearly marked with luminous paint. Such markings are to be located either on or immediately adjacent to the pertinent exit and readily visible to passengers. Location and method of operation of the handles shall be marked with luminous paint. In those instances where aircraft are, on occasion, utilized in combination cargo/passenger operation, the aircraft shall be so loaded that emergency exits will be readily accessible in direct proportion to available passenger seats, as established in the preceding table.

(e) The aircraft, its components and accessories shall be in such condition initially that application of the maintenance time limitations listed in the maintenance manual covering overhaul and inspection periods will provide a continuous state of airworthiness.

§ 42.26 *Supplemental oxygen.* Except where supplemental oxygen is provided in accordance with the requirements of § 42.47, supplemental oxygen shall be furnished and used as set forth below: *Provided,* That upon application by an air carrier prior to March 1, 1950, the Administrator may authorize such air carrier to operate without full compliance with the following requirements where the Administrator finds that the air carrier has made a diligent effort to meet such requirements by March 1, 1950, and that the air carrier has shown that it will comply with such requirements by a date certain. The amount of supplemental oxygen required for a particular operation to comply with the rules in this part shall be determined on the basis of flight altitudes and flight duration consistent with the operating procedures established for such operation and route. As used in the oxygen requirements hereinafter set forth, "altitude" shall mean the pressure altitude corresponding with the pressure in the cabin of the airplane, and "flight altitude" shall mean the altitude above sea level at which the airplane is operated.

(a) *Crew members.* (1) At altitudes above 10,000 feet to and including 12,000 feet oxygen shall be provided for, and used by, each member of the flight crew on flight deck duty, and provided for all other crew members, during the portion of the flight in excess of 30 minutes within this range of altitudes.

(2) At altitudes above 12,000 feet oxygen shall be provided for, and used by, each member of the flight crew on flight deck duty, and provided for all other crew members, during the entire flight time at such altitudes.

(b) *Passengers.* Each air carrier shall provide a supply of oxygen for passenger safety as approved by the Administrator in accordance with the following requirements:

(1) For flights of over 30-minute duration at altitudes above 8,000 feet to and including 14,000 feet a supply of oxygen sufficient to furnish oxygen for 30 minutes to 10 percent of the number of passengers carried shall be required.

(2) For flights at altitudes above 14,000 feet to and including 15,000 feet a supply of oxygen sufficient to provide oxygen for the duration of the flight at such altitudes for 30 percent of the number of passengers carried shall generally be considered adequate.

(3) For flights at altitudes above 15,000 feet a supply of oxygen sufficient to provide oxygen for each passenger carried during the entire flight at such altitudes shall be required.

§ 42.27 *Supplemental oxygen requirements for pressurized cabin airplanes.* When operating pressurized cabin airplanes, the air carrier shall so equip such airplanes as to permit compliance with the following requirements in the event of cabin pressurization failure: *Provided,* That upon application by an air carrier prior to March 1, 1950, the Administrator may authorize such air carrier to operate without full compliance with such requirements where the Administrator finds that the air carrier has made a diligent effort to meet such requirements by March 1, 1950, and that the air carrier has shown that it will comply with such requirements by a date certain.

(a) *For crew members.* When operating such airplanes at flight altitudes above 10,000 feet, the air carrier shall provide sufficient oxygen for all crew members for the duration of the flight at such altitudes: *Provided,* That not less than a two-hour supply of oxygen shall be provided for the flight crew members on flight deck duty. (The oxygen supply required by § 42.29 may be considered in determining the supplemental breathing supply required for flight crew members on flight deck duty in the event of cabin pressurization failure.)

(b) *For passengers.* When operating such airplanes at flight altitudes above 8,000 feet, the air carrier shall provide the following amount of oxygen:

(1) Where an airplane is not flown at a flight altitude of over 25,000 feet a supply of oxygen sufficient to furnish oxygen for 30 minutes to 10 percent of the number of passengers carried shall be considered adequate, if at any point along the

route to be flown the airplane can safely descend to a flight altitude of 14,000 feet or less within 4 minutes.

(2) In the event that such airplane cannot descend to a flight altitude of 14,000 feet or less within 4 minutes, the following supply of oxygen shall be provided:

(i) For the duration of the flight in excess of 4 minutes at altitudes above 15,000 feet, a supply sufficient to comply with § 42.26 (b) (3);

(ii) For the duration of the flight at altitudes above 14,000 feet to and including 15,000 feet, a supply sufficient to comply with § 42.26 (b) (2); and

(iii) For flight at altitudes above 8,000 feet to and including 14,000 feet, a supply sufficient to furnish oxygen for 30 minutes to 10 percent of the number of passengers carried.

(3) Where an airplane is flown at an altitude above 25,000 feet, sufficient oxygen shall be furnished in accordance with the following requirements to permit the airplane to descend to an appropriate flight altitude at which the flight can be safely conducted. Sufficient oxygen shall be furnished to provide oxygen for 30 minutes to 10 percent of the number of passengers carried for the duration of the flight above 8,000 feet to and including 14,000 feet and to permit compliance with § 42.26 (b) (2) and (b) (3) for flight above 14,000 feet.

(c) For purposes of this section it shall be assumed that the cabin pressurization failure will occur at a time during flight which is critical from the standpoint of oxygen need and that after such failure the airplane will descend without exceeding its normal operating limitations, to altitudes permitting safe flight with respect to terrain clearance.

§ 42.28 *Equipment standards.* The oxygen apparatus, the minimum rates of oxygen flow, and the supply of oxgen necessary to comply with the requirements of § 42.26 shall meet the standards established in §§ 4b.831 and 4b.832: *Provided,* That where full compliance with such standards is found by the Administrator to be impractical, he may authorize such changes in these standards as he finds will provide an equivalent level of safety: *And provided further,* That upon application by an air carrier prior to March 1, 1950, the Administrator may authorize such air carrier to operate without full compliance with such requirements where the Administrator finds that the air carrier has made a diligent effort to meet such requirements by March 1, 1950, and that the air carrier has shown that it will comply with such requirements by a date certain.

§ 42.29 *Protective breathing equipment for the flight crew*—(a) *Pressurized cabin airplanes.* Each flight crew member on flight deck duty shall have easily available at his station protective breathing equipment covering the eyes, nose, and mouth, or the nose and mouth where accessory equipment is provided to protect the eyes, to protect him from the effects of smoke, carbon dioxide, and other harmful gases.

(1) Not less than a 300-liter STPD supply of oxygen for each flight crew member on flight deck duty shall be provided for this purpose.

(b) *Nonpressurized cabin airplanes.* The requirements stated in paragraph (a) of this section shall apply to nonpressurized cabin airplanes, if the Administrator finds that it is possible to obtain a dangerous concentration of smoke, carbon dioxide, or other harmful gases in the flight crew compartments in any attitude of flight which might occur when the aircraft is flown in accordance with either the normal or emergency procedures approved by the Administrator.

§ 42.29–1 *Protective breathing equipment and installation. (CAA policy which applies to § 42.29.)* Protective breathing equipment for the flight crew and its installation should comply with §§ 4b.651–1 and 4b.651–2.

§ 42.29–2 *Requirement of protective breathing equipment in nonpressurized cabin airplanes. (CAA rules which apply to § 42.29 (b).)* Protective breathing equipment for the flight crew shall be required in nonpressurized cabin air-

craft having built-in carbon dioxide fire extinguisher systems in fuselage compartments (for example, cargo or combustion heater compartments); except that protective breathing equipment will not be required where:

(a) Not more than five pounds of carbon dioxide will be discharged into any one such compartment in accordance with established fire control procedures, or

(b) The carbon dioxide concentration at the flight crew stations has been determined in accordance with § 4b.484–1 and found to be less than 3 percent by volume (correcter to standard sea-level conditions).

MAINTENANCE REQUIREMENTS

"CAR § 42.30 *General.* No person shall operate an aircraft which is not in an airworthy condition. All inspections, repairs, alterations, and maintenance shall be performed in accordance with Part 18 of the Civil Air Regulations, and with the maintenance manual when required by § 42.32 (d)."

42.30-1 GENERAL. (*CAA policies which apply to section 42.30.*)

It is the operator's responsibility to maintain all aircraft in an airworthy condition at all times when operated in irregular air carrier operation.

All maintenance, repairs, overhauls, and alterations shall be accomplished under the supervision of a certificated airman holding the appropriate mechanical rating for the work involved.

All repairs, overhauls, and alterations shall be in accordance with materials, procedures, and standards set forth in CAM 18 using proper equipment and tools for the type of work involved.

CAA Airworthiness Directives and manufacturers' manuals, directives, bulletins, and notes shall be complied with as directed.

Large aircraft must be maintained in accordance with the time limitations and maintenance schedules prescribed in the approved maintenance manual and the applicable Civil Air Regulations.

No engine or other major component which has not been maintained in accordance with the maintenance manual shall be installed in a large aircraft unless such engine or component is shown to be in an airworthy condition, and that it complies with current Airworthiness Directives. This may be accomplished by showing (1) that the engine or component is new and of current manufacture, (2) has been overhauled within the last 90 days by a certificated repair agency holding appropriate ratings, or (3) by disassembly to the extent necessary for the assigned agent to determine the airworthiness and extent of compliance with Airworthiness Directives and manufacturers' service bulletins.

Small aircraft must be maintained in accordance with the provisions of the applicable Civil Air Regulations and the manufacturer's recommendations. No aircraft will be dispatched on any flight during which the aircraft may exceed any prescribed maintenance time limitations.

"CAR § 42.31 *Inspections and maintenance.* (a) Aircraft shall be given a preflight check to determine compliance with § 42.51 (e) and, in addition, shall meet the following requirements:

"(1) Large aircraft shall be maintained and inspected in accordance with a continuous maintenance and inspection system as provided for in the maintenance manual.

"(2) Small aircraft shall either be maintained and inspected in accordance with subparagraph (1) of this paragraph or be given a periodic inspection at least every 100 hours of flight time and an annual inspection at least every 12 months. The annual inspection may be accepted as a periodic inspection.

"(b) A record shall be carried in the aircraft at all times showing that the latest inspections required by paragraphs (a) (1) or (2) have been accomplished, except such record may be kept at the principal operations base when the aircraft is maintained and inspected as provided in paragraph (a) (1) of this section."

42.31-1 INSPECTIONS AND MAINTENANCE—LARGE AIRCRAFT. (*CAA policies which apply to section 42.31 (a) (1).*)

A continuous maintenance and inspection system is one in which a prescribed schedule of maintenance and inspection functions is set forth in the maintenance manual approved by the Administrator. The schedules of maintenance functions shall include the overhaul time limitations and inspection program including time limitations which are considered adequate by the Administrator to maintain the aircraft in a continuously airworthy condition.

42.31-2 MAINTENANCE AND INSPECTION—SMALL AIRCRAFT. (*CAA policies which apply to section 42.31 (a) (2).*)

The operator may elect to establish a continuous maintenance and inspection system in his

maintenance manual for the maintenance of small aircraft in the same manner as is required for the maintenance of large aircraft. Under such circumstances the maintenance manual requirements and all limitations applicable to large aircraft will also be applicable to small aircraft. Otherwise the inspections shall be conducted in accordance with the periodic and annual inspection requirements of this section and, in addition, overhauls must be conducted at or before the time limitations recommended by the manufacturers of the aircraft, aircraft engine, or other components as prescribed in CAM 18.

§ 42.31-3 *Maintenance and inspection; all aircraft (CAA policies which apply to § 42.31 (a) (1) and (2)).* The following procedures will be applicable in establishing initial overhaul time limitations for both large and small irregular air carrier aircraft:

(a) Initial overhaul time limitations for large multi-engine aircraft powerplants of a new model or one which has never been used in air carrier service will not exceed 600 hours.

(b) The initial overhaul time limitations for an engine which is a development of a basic model on which substantial air carrier service experience exists will not exceed a value which is 400 hours less than the maximum time approved for any irregular air carrier on the basic model at that date or 600 hours, whichever is greater.

(c) The initial overhaul time limitation for an engine model on which substantial irregular air carrier service experience exists will not exceed a value which is 300 hours less than the maximum approved time for any irregular air carrier on that model engine and aircraft combination at that date or 700 hours, whichever is greater.

(d) Time limitations for all aircraft components (except engines) of aircraft new to the operation of a particular air carrier, but which has had previous substantial air carrier service experience, will not be greater than the lowest times approved (at that time) for the same components for other irregular air carrier operators of the same model aircraft.

(e) Initial overhaul time limitations for single-engine aircraft powerplants will be established in accordance with the manufacturer's recommended periods for new air carrier operators using such equipment. Where the manufacturer does not recommend specific periods for overhaul of the engine, one of the two following conditions will be applicable.

(1) Operators who have previously operated and satisfactorily maintained the engine in question (as revealed by service and overhaul records) may have the initial overhaul time limitation for that engine established at a figure not to exceed 600 hours.

(2) Operators who have not had the experience necessary to demonstrate the ability to operate and maintain the pertinent engine in accordance with subparagraph (1) of this paragraph, may have initial overhaul time limitations established at a figure not to exceed 500 hours for the engine concerned.

42.31-4 MAINTENANCE AND INSPECTION RECORDS. *(CAA policies which apply to section 42.31 (b).)*

The record required in this paragraph may consist of the aircraft log book if it is so arranged as to provide full information on the maintenance work performed on the aircraft. In case the aircraft is maintained under a continuous maintenance and inspection system, the maintenance records which are utilized in such system may be considered as complying with this requirement; however, all such records shall be complete and shall properly identify the aircraft, aircraft time, and the extent of maintenance work or inspections performed. When maintenance or inspection functions are performed away from the principal maintenance base, a copy of the record of maintenance or inspections performed shall be retained in the aircraft and a copy promptly mailed to the principal maintenance base.

"CAR § 42.32 *Additional maintenance requirements for large aircraft.* The following requirements are applicable to operations conducted in large aircraft:

"(a) *Facilities.* Facilities for the proper inspection, maintenance, overhaul, and repair of the types of aircraft used shall be maintained by the air carrier, unless arrangements acceptable to the Administrator are made with other persons possessing such facilities.

"(b) *Maintenance personnel.* A staff of qualified mechanics, inspectors, and appropriate supervisory personnel shall be employed by the air carrier and kept available for performing the functions specified in § 42.30, except where the air carrier has obtained the approval of the Administrator for the performance of such functions by some other person. The air carrier shall permit maintenance to be performed only by an individual competent therefor.

"(c) *Reporting of mechanical irregularities occuring in operation.* Each air carrier shall prescribe in its operations manual a procedure for the submission of written reports by the members of the flight crew for all mechanical irregularities occurring during the operation of the aircraft. The members of the flight crew designated by the air carrier shall submit a written report in accordance with such system to the person responsible for the maintenance of the aircraft. This report shall be submitted at the end of each through flight or sooner if the seriousness of the irregularity so warrants. Such report or copy thereof indicating the action taken shall be retained in the aircraft for the information of the next flight crew.[5]

"(d) *Maintenance manual.* (1) The air carrier shall prepare and maintain for the use and guidance of maintenance personnel a maintenance manual which contains full information pertaining to the maintenance, repair, and inspection of aircraft and equipment and clearly outlines the duties and the responsibilities of maintenance personnel. The form and content shall be acceptable to the Administrator. It shall contain a copy of the approved time limitations for inspection and overhauling of aircraft, aircraft engines, propellers, and appliances. Copies and revisions shall be furnished to all persons designated by the Administrator. All copies in the hands of company personnel shall be kept up to date.

"(2) A copy of those portions pertaining to the aircraft shall be carried therein.

"(3) Any changes prescribed by the Administrator in the interest of safety shall be promptly incorporated in the manual. Other changes not inconsistent with any Federal regulation, the air carrier operating certificate, or safe operating practices may be made without prior approval of the Administrator.

"(4) No maintenance, repair, or inspection of aircraft or equipment shall be made by the air carrier contrary to the provisions of the maintenance manual."

[5] See § 42.96 for the requirements for reporting aircraft or component malfunctioning and defects.

§ 42.32-1 *Facilities (CAA interpretations which apply to § 42.32 (a).)* Air carrier operators must provide facilities equivalent, at least, to minimum requirements set forth in CAR 52 in respect to facilities for inspection, maintenance overhaul and repair of aircraft and, in addition, must provide such other facilities as are necessary to accomplish all functions outlined in the maintenance manual. Some operators will choose to contract maintenance functions to outside agencies. In such cases, it will be necessary that the agencies performing major overhauls, repair or alteration under contract, be those specified in CAR 18.10 (b) or (c).

42.32-2 MAINTENANCE PERSONNEL. (*CAA policies which apply to section 42.32 (b).*)

The staff of maintenance personnel employed by the air carrier must be acceptable to the Administrator.

When the air carrier desires approval for the performance of maintenance functions by another agency, the air carrier must provide at least one competent person who will be fully responsible for all maintenance functions performed by the other agency. All contacts between the Administrator and the air carrier pertaining to maintenance of aircraft will be conducted through such designated employee. This employee will be responsible for determining that maintenance or inspection functions are performed only by individuals or agencies competent therefor.

42.32-3 REPORTING OF MECHANICAL IRREGULARITIES IN OPERATION. (*CAA policies which apply to section 42.32 (c).*)

All irregularities which are experienced and reported by the flight crews must be recorded under the established procedure including the aircraft identification, irregularity experienced, the corrective action taken as a result, and identification of the person making such corrections. This record may be included as a part of the aircraft log book if the log book provides for an extra copy of such data to be retained in the aircraft.

42.32-4 MAINTENANCE MANUAL. (*CAA rules which apply to section 42.32 (d) (1).*)

(a) GENERAL. The section of the maintenance manual which pertains to maintenance, repair, and inspection of aircraft shall include a detailed break-down of the aircraft's component parts and emergency equipment (in accordance with the requirements of section 42.24-1) which are subjected to maintenance functions; such as, overhaul, repair, inspection, or testing. This listing of components shall indicate the time limitations at which such functions are conducted. This section of the manual shall also include an outline or description of the maintenance functions conducted at each of the scheduled maintenance operations. In many cases the inspection work sheets and work assignment forms may be used to accomplish this requirement if such forms contain sufficient information to fully describe the work done.

The outline of duties and responsibilities of maintenance personnel is to be in such form that the line of authority can be clearly traced from the top management to the maintenance crews. An organization chart showing levels of responsibility and areas of authority will accomplish this purpose.

The maintenance manual shall be loose leaf in form with letter-size pages, and shall be numbered and indexed in a manner to facilitate its use as reference material by the personnel concerned. Each page shall include space in which the date of last revision will be indicated. Existing manuals may be utilized if they are found to fulfill the requirements of this section and are considered acceptable by the local Aviation Safety Agent—Aircraft Maintenance.

At any time when approval is granted for the amendment of time limitations, the pertinent pages for the manual must be promptly revised to indicate the new time limitations.

(b) MAINTENANCE TIME LIMITATIONS. The approved time limitations for inspection and overhauling of aircraft, aircraft engines, propellers, and appliances must be those time limitations substantiated by, and approved for, the air carrier operator by the Administrator. Initial approval of the time limitations or approval of amendments to the time limitations will be accomplished by the Regional Office of the region in which the principal maintenance base is located. This approval will be based, to a large extent, on

the recommendation of the Aviation Safety Agent—Aircraft Maintenance assigned to the operation. The procedures for amendment of such time limitations are as follows:

(1) NOTIFICATION OF INTENT TO AMEND TIME LIMITATIONS. An operator desiring to amend the currently approved time limitations should advise the Aviation Safety Agent—Aircraft Maintenance assigned to his operation at least 15 days prior to the submission of his intention to amend the time limitations indicating the components involved and the desired change.

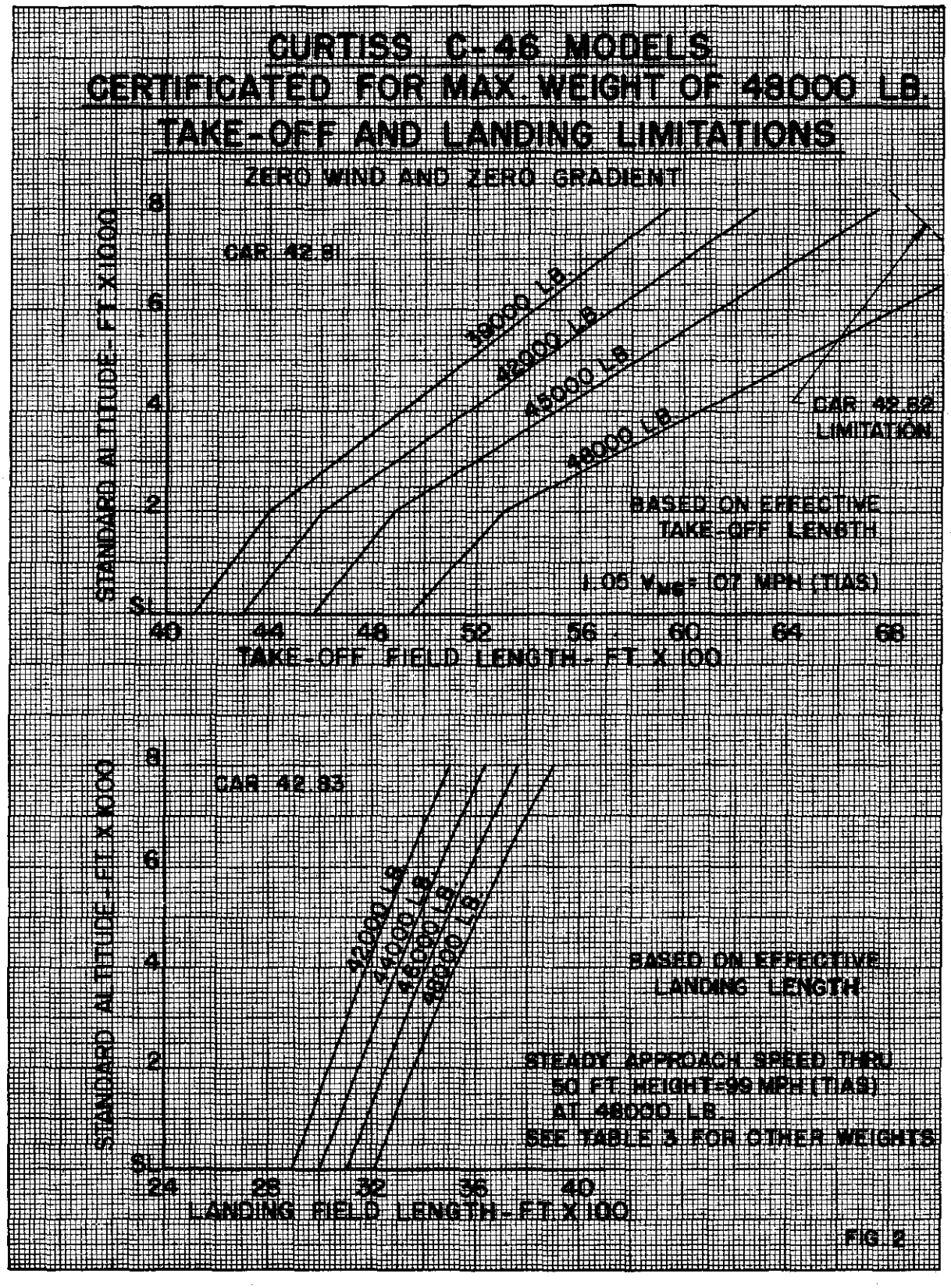
(2) APPLICATION FOR AMENDMENT. The Operator shall submit a written application in the form of a letter outlining the desired changes and attaching complete substantiating data. The letter shall include a statement to the effect that the operating, service, and overhaul records of the involved components for the past 30 days indicate that the changes requested will not adversely affect the continuous condition of airworthiness and safety of operation of the involved component. The substantiating data to be submitted with this letter will include a record of all mechanical irregularities, and malfunctions, and flight interruptions experienced during the preceding 30 days of operation. It will also include overhaul and inspection records pertaining to the most recent overhauls and inspections conducted on the involved components, under the currently approved time limitations.

(3) LIMITATIONS OF TIME ADJUSTMENTS. Requested increase of time limitations for the various components of the aircraft will not be in excess of the following increments:

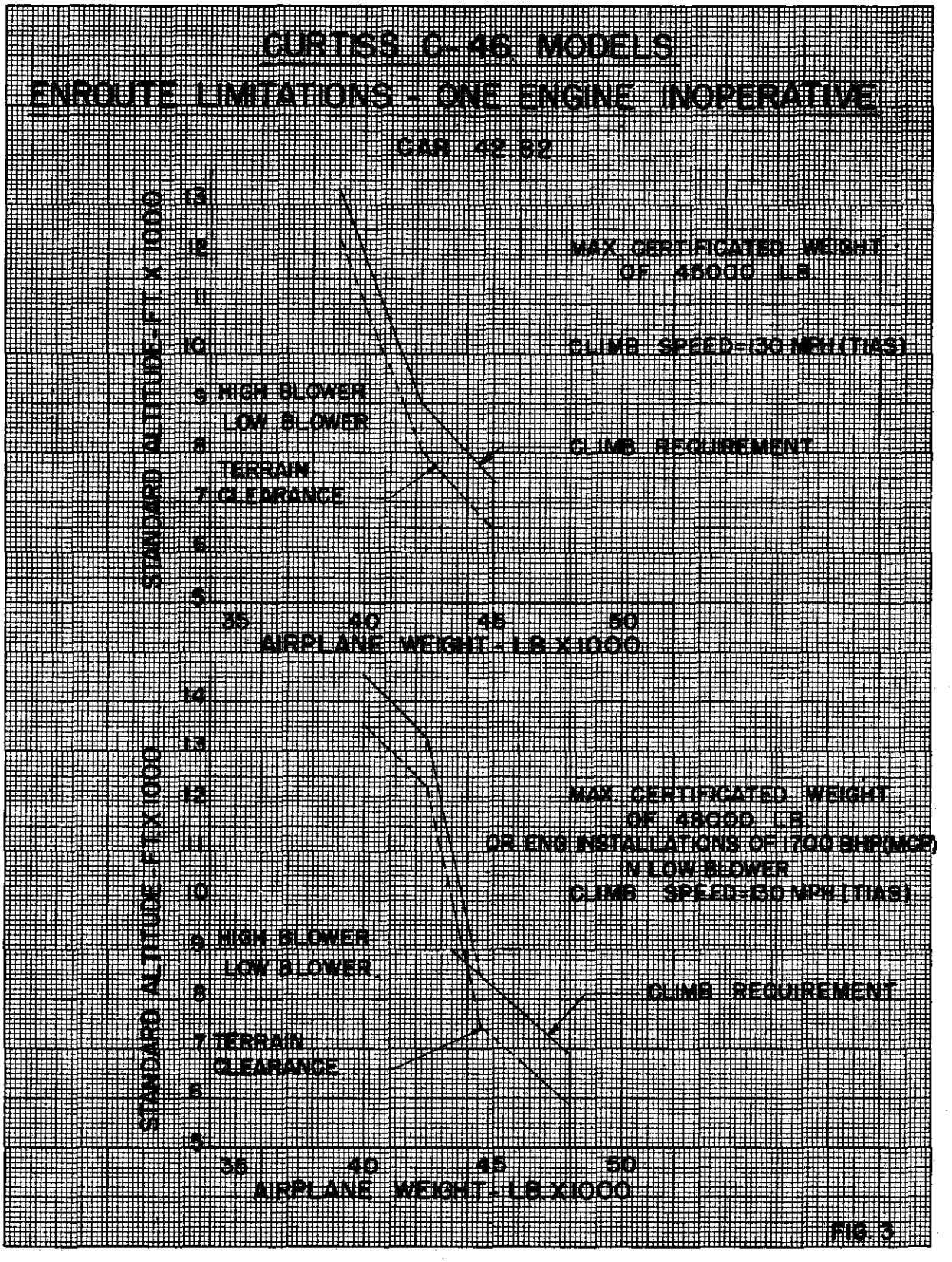
(i) AIRFRAME. Time adjustment up to 50 hours for the major or highest inspection periods may be made when properly substantiated. Where the inspection periods are in excess of 1,000 hours, deviation from this increment may be made on an individual component judged on its own merit. The maximum increases in overhaul periods for airframe will be 1,000 hours. Components of the aircraft such as landing gear, control systems, hydraulic systems, fuel systems, etc., should not be increased by more than approximately 10 percent of the existing overhaul period; however, this percentage may be adjusted by a reasonable amount so as to conform with the scheduling of other maintenance functions.

(ii) POWERPLANT. Time adjustments for engines, propellers, and accessories will be limited to increments of 100 hours for overhaul periods and 50 hours for the major or highest inspection periods when substantiated as outlined below.

Extensions of engine overhaul periods in excess of the existing approved time limitation may be substantiated on the basis of satisfactory findings resulting from three engine overhauls conducted at the completion of the existing authorized overhaul period. This procedure may be followed until the engine overhaul period reaches 1,000 hours. Extension of engine overhaul periods beyond 1,000 hours may be based on the results of the operation of 3 engines for an additional period of 100 hours in excess of the currently authorized period. Authorization to operate such engines must be obtained from the assigned agent. This will be accomplished when properly substantiated by a letter in which the engines are identified by make, type or model and serial number. The condition of these engines will be determined at completion of the additional period of operations. The overhaul inspection will be witnessed by the assigned agent in order that he may recommend approval or disapproval of the operator's request for additional time. Installation of engines which are being operated in excess of the currently approved time limitations in accordance with these provisions will be limited to one on a twin-engine aircraft and


CURTISS C-46 MODELS
CERTIFICATED FOR MAX. WEIGHT OF 48000 LB.
TAKE-OFF AND LANDING LIMITATIONS
ZERO WIND AND ZERO GRADIENT
CAR 42.81
STANDARD ALTITUDE - FT. X 1000
8
6
4
2
SL
40
44
48
52
56
60
64
66
TAKE-OFF FIELD LENGTH - FT. X 100
48000 LB
47000 LB
46000 LB
45000 LB
CAR 42.62 LIMITATION
BASED ON EFFECTIVE TAKE-OFF LENGTH
1.05 V_MC = 107 MPH (TIAS)
CAR 42.83
24
28
32
36
40
LANDING FIELD LENGTH - FT. X 100
BASED ON EFFECTIVE LANDING LENGTH
STEADY APPROACH SPEED THRU 50 FT. HEIGHT=99 MPH (TIAS) AT 48000 LB.
SEE TABLE 3 FOR OTHER WEIGHTS
FIG. 2

(4-20-51)



(4-20-51)

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