SECTION 1
GENERAL

TABLE OF CONTENTS

SECTION 1
GENERAL
TABLE OF CONTENTS (CONT'D)

INTRODUCTION

The format and contents of this Pilot's Operating Handbook and FAA Approved Airplane Flight Manual conform to GAMA (General Aviation Manufacturers Association) Handbook Specification No. 1 through Revision No. 2, dated October 18, 1996. Use of this specification by all manufacturers will provide the pilot with the same type of data in the same place in all handbooks.

Attention is called to Section 10, SAFETY INFORMATION. Beechcraft Corporation feels that it is highly important to have Safety Information in condensed form in the hands of the pilots. The Safety Information should be read and studied. Periodic review will serve as a reminder of good piloting techniques.

WARNING

Use only genuine Beechcraft Corporation or Beechcraft Corporation approved parts obtained from Beechcraft Corporation approved sources, in connection with the maintenance and repair of Beech airplanes.

Genuine Beechcraft Corporation parts are produced and inspected under rigorous procedures to ensure airworthiness and suitability for use in Beechcraft airplane applications. Parts purchased from sources other than Beechcraft Corporation, even if outwardly identical in appearance, may not have had the required tests and inspections performed, may be different in fabrication techniques and materials, and may be dangerous when installed in an airplane.

Salvaged airplane parts, reworked parts obtained from non-Beechcraft Corporation approved sources, or parts, components, or structural assemblies, the service history of which is unknown or cannot be authenticated, may have been subjected to unacceptable stresses or temperatures or have other hidden damage, not discernible through routine visual or usual nondestructive testing techniques. This may render the part, component, or structural assembly, even though originally manufactured by Beechcraft Corporation, unsuitable or unsafe for airplane use.

Beechcraft Corporation expressly disclaims any responsibility for malfunctions, failures, damage or injury caused by use of non-Beechcraft Corporation approved parts.

IMPORTANT NOTICE

This handbook should be read carefully by the owner and the operator in order to become familiar with the operation of the airplane. Suggestions and recommendations have been made within it to aid in obtaining maximum performance without sacrificing economy. Be familiar with, and operate the airplane in accordance with, the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual and/or placards which are located in the airplane. This handbook includes the material required to be furnished to the pilot by the Title 14 Code of Federal Regulations and additional information provided by the manufacturer and constitutes the FAA Approved Airplane Flight Manual.

As a further reminder, the owner and the operator should also be familiar with the Title 14 Code of Federal Regulations applicable to the operation and maintenance of the airplane, and, as appropriate 14 CFR Part 91 General Operating and Flight Rules. Further, the airplane must be operated and maintained in accordance with FAA Airworthiness Directives which may be issued against it.

The Title 14 Code of Federal Regulations places the responsibility for the maintenance of this airplane on the owner and the operator, who should ensure that all maintenance is done by qualified mechanics in conformity with all airworthiness requirements established for this airplane.

All limits, procedures, safety practices, time limits, servicing, and maintenance requirements contained in this handbook are considered mandatory for continued airworthiness and to maintain the airplane in a condition equal to that of its original manufacture.

Beechcraft Corporation Authorized Outlets can provide recommended modification, service, and operating procedures issued by both the FAA and Beechcraft Corporation, which are designed to get maximum utility and safety from the airplane.

USE OF THE HANDBOOK

WARNINGS, CAUTIONS, AND NOTES

The following definitions apply to (WARNINGS), (CAUTIONS), and (NOTES) found throughout the handbook:

WARNING

Operating procedures, techniques, etc., which could result in personal injury or loss of life if not carefully followed.

CAUTION

Operating procedures, techniques, etc., which could result in damage to equipment if not carefully followed.

NOTE

An operating procedure, technique, etc., which is considered essential to emphasize.

REVISING THE HANDBOOK

The Pilot's Operating Handbook is designed to facilitate maintaining the documents necessary for the safe and efficient operation of the airplane. The handbook has been prepared in loose-leaf form for ease in maintenance. It incorporates quick-reference tabs imprinted with the title of each section.

NOTE

In an effort to provide as complete coverage as possible, applicable to any configuration of the airplane, some optional equipment has been included in the scope of the handbook. However, due to the variety of airplane appointments and arrangements available, optional equipment described or depicted herein may not be designated as such in every case.

Immediately following the Title Page is a List of Effective Pages. A complete listing of all pages is presented along with the current status of the material contained; i.e. Original Issue, Reissued or Revised. A reissue of the manual or the revision of any portion will be received with a new List of Effective Pages to replace the previous one. Reference to the List of Effective Page(s) enables the user to determine the current

issue, revision, or reissue in effect for each page in the handbook, except for the Supplements Section.

When the handbook is originally issued, and each time it is revised or reissued, a new Log of Revisions page is provided immediately following the List of Effective Pages. All Log of Revisions pages must be retained until the handbook is reissued. A capital letter in the lower right corner of the Log of Revisions page designates the Original Issue ("A") or reissue ("B", "C", etc.) covered by the Log of Revisions page. If a number follows the letter, it designates the sequential revision (1st, 2nd, 3rd, etc.) to the Original Issue or reissue covered by the Log of Revisions page. Reference to the Log of Revisions page(s) provides a record of changes made since the Original Issue or the latest reissue.

That portion of a text or an illustration which has been revised by the addition of, or a change in, information is denoted by a solid revision bar located adjacent to the area of change and placed along the outside margin of the page.

REVISION SERVICE

The following publications will be provided, at no charge, to the registered owner/operator of this airplane:

1. Reissues and revisions of the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.
2. Original issues and revisions of FAA Approved Airplane Flight Manual Supplements.
3. Original issues and revisions of Beechcraft Corporation Service Bulletins.

The above publications will be provided only to the registered owner/operator at the address listed on the FAA Aircraft Registration Branch List or the Beechcraft Corporation Domestic/ International Owner's Notification Service List. Further, the owner/operator will receive only those publications pertaining to the registered airplane serial number. For detailed information on how to obtain "Revision Service" applicable to this

handbook or other Beechcraft Corporation Service Publications, consult any Beechcraft Corporation Authorized Outlet or refer to the latest revision of Beechcraft Corporation Service Bulletin No. 2001.

Beechcraft Corporation expressly reserves the right to supersede, cancel, and/or declare obsolete, without prior notice, any part, part number, kit, or publication referenced in this handbook.

The owner/operator should always refer to all supplements for possible placards, limitations, emergency, abnormal, normal and other operational procedures for proper operation of the airplane with optional equipment installed.

WARNING

It shall be the responsibility of the owner/operator to ensure that the latest revisions of publications referenced in this handbook are utilized during operation, servicing, and maintenance of the airplane.

SUPPLEMENTS

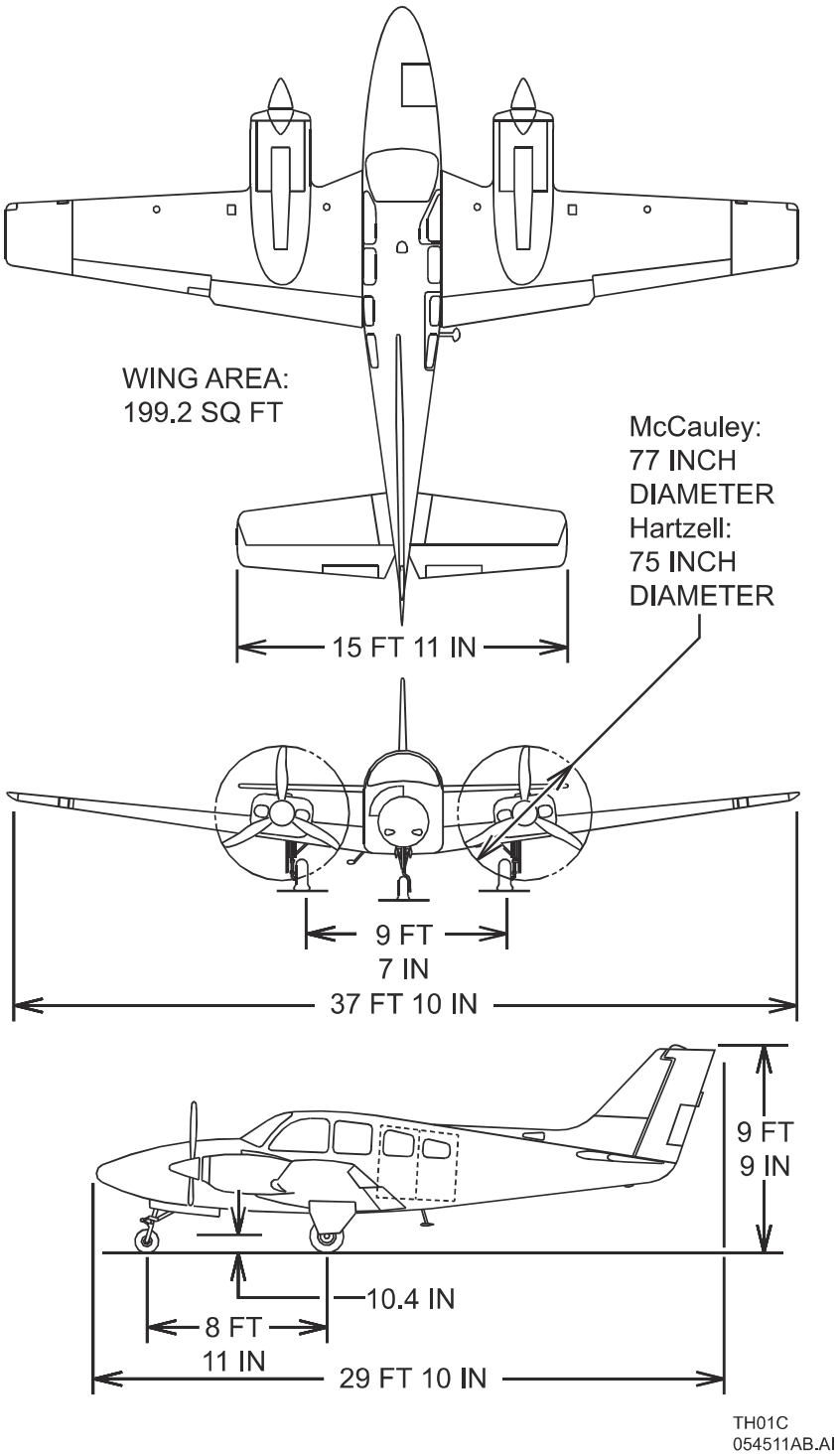
When a new airplane is delivered from the factory, the handbook delivered with it contains either an STC (Supplemental Type Certificate) Supplement or a Beechcraft Corporation Flight Manual Supplement for every installed item requiring a supplement. If a new handbook for operation of the airplane is obtained at a later date, it is the responsibility of the owner/operator to ensure that all required STC Supplements (as well as weight and balance and other pertinent data) are transferred into the new handbook.

AIRPLANE FLIGHT MANUAL SUPPLEMENTS REVISION RECORD

Section 9, SUPPLEMENTS, contains the FAA-approved Airplane Flight Manual Supplements, headed by a Log of Supplements page. When new supplements are received or existing supplements are revised, a new Log page will replace the previous one, since it contains a listing of all previous approvals, plus the new approval. The supplemental material will be added to the Section in accordance with the sequence specified on the Log page.

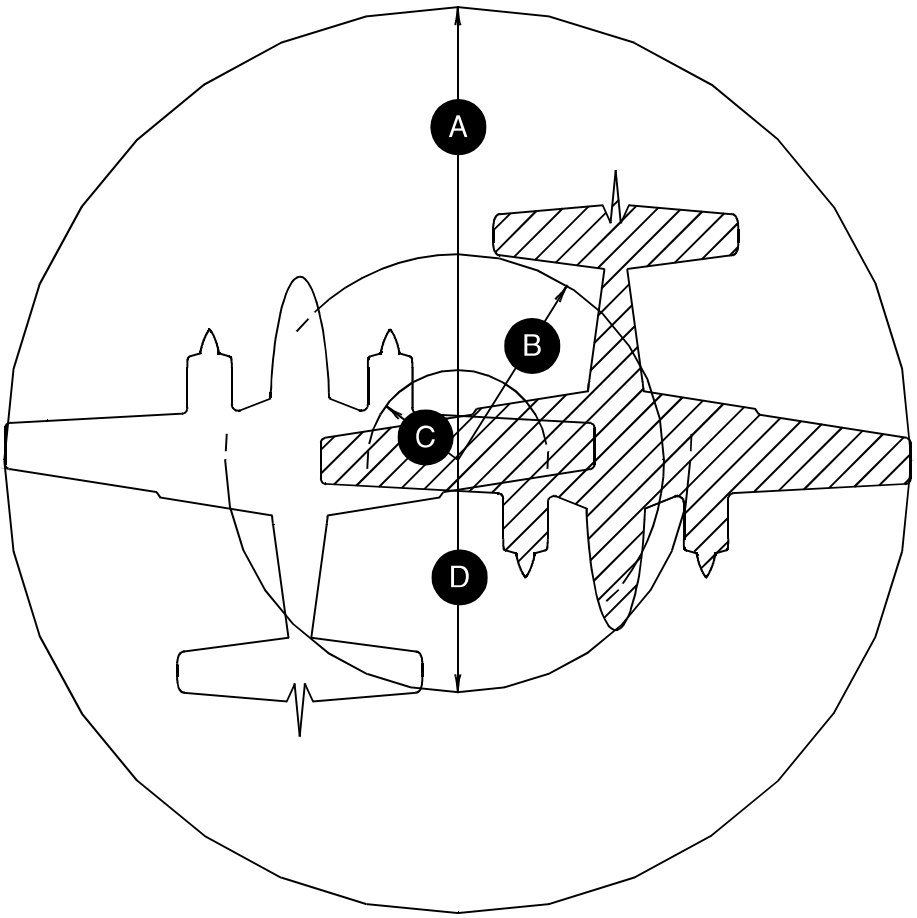
NOTE

Upon receipt of a new or revised supplement, compare the existing Log of Supplements in the handbook with the corresponding applicable Log page accompanying the new or revised supplement. It may occur that the Log page already in the handbook is dated later than the Log page accompanying the new or revised supplement. In any case, retain the Log page having the later date and discard the older Log page.



AIRPLANE THREE-VIEW

GROUND TURNING CLEARANCE



A RADIUS FOR WING TIP.....31 FT. 6 IN.

B RADIUS FOR NOSE WHEEL.....15 FT. 6 IN.

C RADIUS FOR INSIDE GEAR.....7 FT. 11 IN.

D RADIUS FOR OUTSIDE GEAR.....17 FT. 6 IN.

TURNING RADII ARE PREDICATED ON THE USE OF PARTIAL BRAKING ACTION AND DIFFERENTIAL POWER.

TH00C
020334AA.AI

DESCRIPTIVE DATA

ENGINES

NUMBER OF ENGINES

Two

ENGINE MANUFACTURER

Teledyne Continental Motors, Inc., (Mobile, Alabama)

ENGINE MODEL NUMBER

IO-550-C

ENGINE TYPE

Normally aspirated, Fuel-injected, direct-drive, air-cooled, six-cylinder, horizontally opposed, 550-cubic-inch displacement

HORSEPOWER RATING

300 H.P.

NUMBER OF PROPELLERS

Two

PROPELLER MANUFACTURER

McCauley Propeller (Vandalia, Ohio)

or

Hartzell Propeller, Inc (Piqua, Ohio)

NUMBER OF BLADES

Three

PROPELLER TYPE

McCauley Propellers (Standard):

Constant-speed, variable-pitch, three-blade propeller using a 3AF32C512-(X) hub with (X)-82NEA-5 blades.

NOTE

The letters appearing in the place of the (X) represent minor variations in the propeller hub or blades. They do not affect eligibility or interchangeability.

Hartzell Propellers (Optional):

Constant speed, variable-pitch, three-blade propeller using a PHC-J3YF-2UF hub with FC7391D(K) blades.

PITCH SETTINGS (30-INCH STATION)

McCauley Propellers (Standard):

Low . . . . . 15.2° ± 0.2°

Feathered . . . . . 82.5° ± 0.5°

Hartzell Propellers (Optional):

Low . . . . . 12.8° ± 0.2°

High . . . . . 18.5° ± 1.0°

Feathered . . . . . 80.0° ± 0.5°

PROPELLER DIAMETER

McCauley Propellers (Standard):

Max. . . . . .77 inches

Min . . . . . 76.5 inches

Hartzell Propellers (Optional):

Max. . . . . .75 inches

Min . . . . . .73 inches

FUEL

APPROVED ENGINE FUELS

Aviation Gasoline Grade 100LL (blue)
Aviation Gasoline Grade 100 (green)
Aviation Gasoline Grade 115/145 (purple)
Chinese Aviation Gasoline RH-95/130
Chinese Aviation Gasoline RH-100/130

FUEL CAPACITY

STANDARD SYSTEM

Total Capacity . . . . . 200 Gallons

Total Usable . . . . . 194 Gallons

OPTIONAL SYSTEM

Total Capacity . . . . . 172 Gallons

Total Usable . . . . . 166 Gallons

ENGINE OIL

OIL CAPACITY

Total . . . . . 12 Quarts (each engine)

SPECIFICATION

Use MIL-L-22851 Ashless Dispersant Oils meeting the requirements of the latest revision of Teledyne Continental Motors Corporation Specification MHS-24B or current applicable Teledyne Continental Service Bulletin. Refer to Section 8, HANDLING, SERVICING AND MAINTENANCE for a list of approved oils.

Ambient Air Temperature	Single Viscosity Grade Oil	Multiviscosity Grade Oil
Below 5°C	SAE 30 (max.)	15W-50, 20W-50
Above 5°C	SAE 50 (min.)	15W-50, 20W-50 25W-60

When operating temperatures overlap indicated ranges, use the lighter grade of oil.

MAXIMUM CERTIFICATED WEIGHTS

Maximum Take-off Weight . . . . . 5500 lbs
Maximum Landing Weight . . . . . 5400 lbs
Maximum Ramp Weight . . . . . 5524 lbs

CABIN AND ENTRY DIMENSIONS

Cabin Length . . . . . 12 ft 7 in.
Cabin Width (max.). . . . . 3 ft 6 in.
Cabin Height (max.) . . . . . 4 ft 2 in.
Fwd Cabin Door . . . . . 37 in. wide x 36 in. high
Aft Utility Door. . . . . 45 in. wide x 35 in. high

CABIN BAGGAGE VOLUMES

Aft Cabin Compartment . . . . . 37 cu ft
Between Spars . . . . . 12 cu ft
Extended Rear Compartment . . . . . 10 cu ft
Nose Compartment . . . . . 18 cu ft

SPECIFIC LOADINGS (AT MAXIMUM TAKE-OFF WEIGHT)

Wing Loading . . . . . 27.6 lbs/sq ft
Power Loading . . . . . 9.16 lbs/hp

SERVICE CEILING

Service Ceiling - Two Engines . . . . . 20,688 ft

SYMBOLS, ABBREVIATIONS AND TERMINOLOGY

The following glossary is applicable within this handbook.

GENERAL AIRSPEED TERMINOLOGY

CAS	*Calibrated Airspeed* is the indicated airspeed of an airplane corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.
GS	*Ground Speed* is the speed of an airplane relative to the ground.
IAS	*Indicated Airspeed* is the speed of an airplane as shown on the airspeed indicator when corrected for instrument error. IAS values published in this handbook assume zero instrument error.
KCAS	*Calibrated Airspeed* expressed in knots.
KIAS	*Indicated Airspeed* expressed in knots.

TAS — *True Airspeed* is the airspeed of an airplane relative to undisturbed air, which is the CAS corrected for altitude, temperature, and compressibility.

V_{MCA} — *Air Minimum Control Speed* is the minimum flight speed at which the airplane is directionally controllable as determined in accordance with Title 14 Code of Federal Regulations. The airplane certification conditions include one engine becoming inoperative and windmilling; a 5° bank towards the operative engine; take-off power on operative engine; landing gear up; flaps in take-off position; and most rearward C.G. For some conditions of weight and altitude, stall can be encountered at speeds above V_{MCA} as established by the certification procedure described above, in which event stall speed must be regarded as the limit of effective directional control.

V_{SSE} — *Intentional One-Engine-Inoperative Speed* is a speed above both V_{MCA} and stall speed, selected to provide a margin of lateral and directional control when one engine is suddenly rendered inoperative. Intentional failing of one engine below this speed is not recommended.

V_A — *Maneuvering Speed* is the maximum speed at which application of full available aerodynamic control will not overstress the airplane.

V_F — *Design Flap Speed* is the highest speed permissible at which wing flaps may be actuated.

V_{FE}	*Maximum Flap Extended Speed* is the highest speed permissible with wing flaps in a prescribed extended position.
V_{LE}	*Maximum Landing Gear Extended Speed* is the maximum speed at which an airplane can be safely flown with the landing gear extended.
V_{LO}	*Maximum Landing Gear Operating Speed* is the maximum speed at which the landing gear can be safely extended or retracted.
V_{NE}	*Never Exceed Speed is the speed* limit that may not be exceeded at any time.
V_{NO} or V_C	*Maximum Structural Cruising Speed* is the speed that should not be exceeded except in smooth air and then only with caution.
V_S	*Stalling Speed* or the minimum steady flight speed at which the airplane is controllable.
V_{SO}	*Stalling Speed* or the minimum steady flight speed at which the airplane is controllable in the landing configuration.
V_X	*Best Angle-of-Climb Speed* is the airspeed which delivers the greatest gain of altitude in the shortest possible horizontal distance.
V_Y	*Best Rate-of-Climb Speed* is the airspeed which delivers the greatest gain in altitude in the shortest possible time.

METEOROLOGICAL TERMINOLOGY

Flight in Icing Conditions — Flight when the OAT is 5°C (41°F) or colder, and in the presence of visible moisture.

Indicated Pressure Altitude — The number actually read from an altimeter when the barometric subscale has been set to 29.92 inches of mercury (1013.2 millibars).

ISA — *International Standard Atmosphere* in which:
(1) The air is a dry perfect gas;
(2) The temperature at sea level is 15° Celsius (59° Fahrenheit);
(3) The pressure at sea level is 29.92 inches of mercury (1013.2 millibars);
(4) The temperature gradient from sea level to the altitude at which the temperature is -56.5°C (-69.7°F) is -0.00198°C (-0.003566°F) per foot and zero above that altitude.

OAT — *Outside Air Temperature* is the free air static temperature, obtained either from the temperature indicator (IOAT) adjusted for compressibility effects, or from ground meteorological sources.

Pressure Altitude — Altitude measured from standard sea-level pressure (29.92 in. Hg/1013.2 millibars) by a pressure (barometric) altimeter. It is the indicated pressure altitude corrected for position and instrument error. In this handbook, altimeter instrument errors are assumed to be zero. Position errors may be obtained from the Altimeter Correction graphs.

Station Pressure	Actual atmospheric pressure at field elevation.
Wind	The wind velocities recorded as variables on the charts of this handbook are to be understood as the headwind or tailwind components of the reported winds.

POWER TERMINOLOGY

Cruise Climb	Power recommended for cruise climb.
Economy Cruise	The lowest power setting for which cruise power settings are presented.
Maximum Cruise	The highest power settings recommended for cruise.
Recommended Cruise	Intermediate power settings for which cruise power settings are presented.
Take-off and Maximum Continuous	Highest power rating not limited by time. To be used only for conditions which warrant the use of this rating.

ENGINE CONTROLS AND INSTRUMENTS TERMINOLOGY

EGT	The Exhaust Gas Temperature Display is used to identify the lean and best-power fuel flow mixtures for various power settings during cruise.
Manifold Pressure	The regulated absolute air pressure in the intake manifold of the engine located between the throttle valve and the cylinders.
Manifold Pressure Display	Displays the absolute pressure in the intake manifold of an engine, expressed in inches of mercury (in. Hg).

Mixture Control	This lever, in the idle cut-off position, stops the flow of fuel at the injectors and in the intermediate through the full rich positions, regulates the fuel air mixture.
Propeller Control	Used to control the RPM setting of the propeller governor. Movement of the control results in an increase or decrease in prop RPM.
Propeller Governor	Regulates the RPM of the engine/propeller by increasing or decreasing the propeller pitch through a pitch change mechanism in the propeller hub.
Tachometer	Displays the rotational speed of the propeller in revolutions per minute (RPM).
Throttle Control	Used to control power by introducing fuel-air mixture into the intake passages of an engine. Settings are reflected by readings on the manifold pressure display.

AIRPLANE PERFORMANCE AND FLIGHT PLANNING TERMINOLOGY

Accelerate-Stop Distance	The distance required to accelerate an airplane to a specified speed and, assuming failure of an engine at the instant that speed is attained, to bring the airplane to a stop.
Accelerate-Go Distance	The distance required to accelerate an airplane to a specified speed and, assuming failure of an engine at the instant that speed is attained, feather inoperative propeller and continue takeoff on the remaining engine to a height of 50 feet.
Climb Gradient	The ratio of the change in height during a portion of a climb to the horizontal distance traversed in the same time interval.

Demonstrated Crosswind Velocity	The velocity of the crosswind component for which adequate control of the airplane during takeoff and landing was actually demonstrated during certification tests. The value shown is not limiting.
GPH	U.S. Gallons per hour.
Route Segment	A part of a route. Each end of that part is identified by: (1) A geographical location; or (2) A point at which a definite radio fix can be established.

WEIGHT AND BALANCE TERMINOLOGY

Airplane Center of Gravity (C.G.)	The point at which an airplane would balance if suspended. Its distance from the reference datum is found by dividing the total moment by the total weight of the airplane.
Arm	The horizontal distance from the reference datum to the center of gravity (C.G.) of an item.
Basic Empty Weight	The weight of an empty airplane including full engine oil and unusable fuel. This equals empty weight plus the weight of unusable fuel, and the weight of all the engine oil required to fill the lines and tanks. Basic empty weight is the basic configuration from which loading data is determined.
C.G. Arm	The arm obtained by adding the airplane's individual moments and dividing by the sum of the total weight.
C.G. Limits	The extreme center of gravity locations within which the airplane must be operated at a given weight.

Jack Points	Points on the airplane identified by the manufacturer as suitable for supporting the airplane for weighing or other purposes.
Leveling Points	Those points which are used during the weighing process to level the airplane.
Maximum Ramp Weight	Maximum weight approved for ground maneuvering (includes weight of start, taxi, and run up fuel).
Maximum Take-off Weight	Maximum weight approved for the start of the take-off run.
Maximum Landing Weight	Maximum weight approved for the landing touchdown.
Moment	The product of the weight of an item multiplied by its arm. (Moment divided by a constant is used to simplify balance calculations by reducing the number of digits)
Payload	Weight of occupants, cargo and baggage.
Reference Datum	An imaginary vertical plane from which all horizontal distances are measured for balance purposes.
Empty Weight	The weight of an empty airplane before any oil or fuel has been added. This includes all permanently installed equipment, fixed ballast, full hydraulic fluid, full chemical toilet fluid, and all other operating fluids full, except that the engines, tanks, and lines do not contain any engine oil or fuel.
Engine Oil	Total system oil including undrainable.
Station	A location along the airplane fuselage usually given in terms of distance from the reference datum.

Tare	The weight of chocks, blocks, stands, etc., used on the scales when weighing an airplane.
Unusable Fuel	Fuel that is not available for flight planning.
Useful Load	Difference between Ramp Weight, and Basic Empty Weight.
Usable Fuel	Fuel available for flight planning.
Maximum Zero Fuel Weight	Maximum weight exclusive of usable fuel.

ACRONYMS

Generic:

ADC . . . . . Air Data Computer
AHRS . . . . . Attitude and Heading Reference System
GPS . . . . . Global Positioning System
GPWS . . . . . Ground Proximity Warning System
LNAV. . . . . Lateral Navigation
LPV . . . . . .Localizer Performance with Vertical Guidance
LRU. . . . . Line Replaceable Unit
MFD . . . . . Multifunction Display
PFD. . . . . Primary Flight Display
RNAV . . . . . Area Navigation
SBAS . . . . . Satellite Based Augmentation System (equivalent to WAAS in the United States)
TAWS . . . . . .Terrain Awareness and Warning System
VNAV or (VNV) . . . . . Vertical Navigation
WAAS . . . . . Wide Area Augmentation System

Garmin:

GDC . . . . . Garmin Air Data Computer
GDU . . . . . Garmin Display Unit
GEA . . . . . Garmin Engine Airframe Unit
GIA . . . . . Garmin Integrated Avionics Unit
GDL . . . . . Garmin Data Link
GMA . . . . . Garmin Audio Panel
GMU . . . . . Garmin Magnetometer Unit
GRS . . . . . Garmin Attitude and Heading Reference System
GSA . . . . . Garmin Autopilot Servo
GSM . . . . . Garmin Autopilot Servo Mount
GTX . . . . . Garmin Transponder
GWX . . . . . Garmin Airborne Weather Radar

THIS PAGE INTENTIONALLY LEFT BLANK