

SECTION 1

GENERAL

1.1 INTRODUCTION

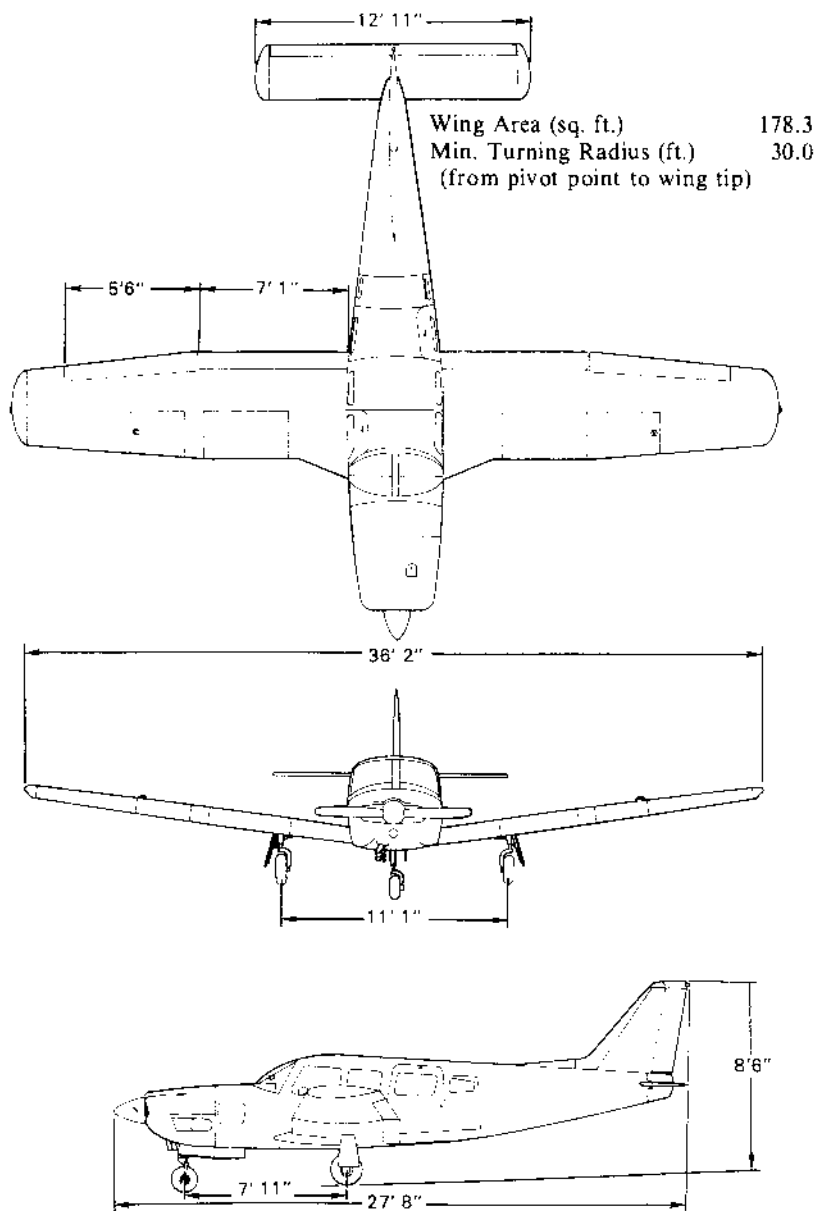
This Pilot's Operating Handbook is designed for maximum utilization as an operating guide for the pilot. It includes the material required to be furnished to the pilot by FAR/CAR. It also contains supplemental data supplied by the airplane manufacturer.

This handbook is not designed as a substitute for adequate and competent flight instruction, knowledge of current airworthiness directives, applicable federal air regulations or advisory circulars. It is not intended to be a guide for basic flight instruction or a training manual and should not be used for operational purposes unless kept in a current status.

Assurance that the airplane is in an airworthy condition is the responsibility of the owner. The pilot in command is responsible for determining that the airplane is safe for flight. The pilot is also responsible for remaining within the operating limitations as outlined by instrument markings, placards, and this handbook.

Although the arrangement of this handbook is intended to increase its in-flight capabilities, it should not be used solely as an occasional operating reference. The pilot should study the entire handbook to familiarize himself with the limitations, performance, procedures and operational handling characteristics of the airplane before flight.

The handbook has been divided into numbered (arabic) sections each provided with a "finger-tip" tab divider for quick reference. The limitations and emergency procedures have been placed ahead of the normal procedures, performance and other sections to provide easier access to information that may be required in flight. The "Emergency Procedures" Section has been furnished with a red tab divider to present an instant reference to the section. Provisions for expansion of the handbook have been made by the deliberate omission of certain paragraph numbers, figure numbers, item numbers and pages noted as being intentionally left blank.



THREE VIEW
Figure 1-1

1.3 ENGINE

2 BLADE PROPELLER

- | | | |
|-------------------------|--|--------------|
| (a) Number of Engines | | 1 |
| (b) Engine Manufacturer | | Lycoming |
| (c) Engine Model Number | | IO-540-K1G5D |

- | | Max. Cont.
<u>Power</u> | T.O. Power-
<u>5 Min. Limit</u> |
|---------------------------------|---|------------------------------------|
| (d) Rated Horsepower | 294 | 300 |
| (e) Rated Speed (rpm) | 2600 | 2700 |
| (f) Bore (inches) | | 5.125 |
| (g) Stroke (inches) | | 4.375 |
| (h) Displacement (cubic inches) | | 541.5 |
| (i) Compression Ratio | | 8.7:1 |
| (j) Engine Type | Six Cylinder, Direct Drive,
Horizontally Opposed, Air Cooled,
Fuel Injected | |

3 BLADE PROPELLER

- | | | |
|---------------------------------|---|--------------|
| (a) Number of Engines | | 1 |
| (b) Engine Manufacturer | | Lycoming |
| (c) Engine Model Number | | IO-540-K1G5D |
| (d) Rated Horsepower | | 300 |
| (e) Rated Speed (rpm) | | 2700 |
| (f) Bore (inches) | | 5.125 |
| (g) Stroke (inches) | | 4.375 |
| (h) Displacement (cubic inches) | | 541.5 |
| (i) Compression Ratio | | 8.7:1 |
| (j) Engine Type | Six Cylinder, Direct Drive,
Horizontally Opposed, Air Cooled,
Fuel Injected | |

1.5. PROPELLER

2 BLADE PROPELLER

- | | | |
|----------------------------|--|----------|
| (a) Number of Propellers | | 1 |
| (b) Propeller Manufacturer | | Hartzell |

(c) Blade Model	F8475D-4
(d) Number of Blades	2
(e) Hub Model	HC-C2Y(K,R)-1()F
(f) Propeller Diameter (inches)	
(1) Minimum	78.5
(2) Maximum	80
(g) Propeller Type	Constant Speed, Hydraulically Actuated

3 BLADE PROPELLER

(a) Number of Propellers	1
(b) Propeller Manufacturer	Hartzell
(c) Blade Model	F7663R-O
(d) Number of Blades	3
(e) Hub Model	HC-C3YR-1()F
(f) Propeller Diameter (inches)	
(1) Minimum	76
(2) Maximum	78
(g) Propeller Type	Constant Speed, Hydraulically Actuated

1.7 FUEL

AVGAS ONLY

(a) Fuel Capacity (U.S. gal.) (total)	107
(b) Usable Fuel (U.S. gal.) (total)	102
(c) Fuel Grade, Aviation	
(1) Minimum Grade	100 - Green or 100LL - Blue Aviation Grade
(2) Alternate Fuels	Refer to latest revision of Lycoming Service Instruction 1070.

1.9 OIL

(a) Oil Capacity (U.S. quarts)		12
(b) Oil Specification	Refer to latest issue of Lycoming Service Instruction 1014.	
(c) Oil Viscosity per Average Ambient Temp. for Starting		
	SINGLE	MULTI
(1) Above 60° F	50	40 or 50
(2) 30° F to 90° F	40	40
(3) 0° to 70° F	30	40 or 20W-30
(4) Below 10° F	20	20W-30

1.11 MAXIMUM WEIGHTS

(a) Maximum Takeoff Weight (lbs.)		3600
(b) Maximum Landing Weight (lbs.)		3600
(c) Maximum Ramp Weight (lbs.)		3615
	FORWARD	AFT
(d) Maximum Weights in Baggage Compartments	100	100

1.13 STANDARD AIRPLANE WEIGHTS

Refer to Figure 6-5 for the Standard Empty Weight and the Useful Load.

1.15 BAGGAGE SPACE

	FORWARD	AFT
(a) Compartment Volume (cubic feet)	7.0	17.3
(b) Entry Width (inches)	16.0	48.0
(c) Entry Height (inches)	22.0	26.0

1.17 SPECIFIC LOADING

(a) Wing Loading (lbs. per sq. ft.)	20.2
(b) Power Loading (lbs. per hp)	12.0