

DUPLICATE

PILOT'S OPERATING HANDBOOK

PIPER CHEROKEE ARCHER II



FAA APPROVED IN NORMAL AND UTILITY CATEGORIES BASED ON CAR 3 AND FAR PART 21, SUBPART J. THIS HANDBOOK INCLUDES THE MATERIAL REQUIRED TO BE FURNISHED TO THE PILOT BY CAR 3 AND FAR PART 21, SUBPART J AND CONSTITUTES THE APPROVED AIRPLANE FLIGHT MANUAL AND MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.

AIRPLANE SERIAL NO. 28-7890490

AIRPLANE REGISTRATION NO. N2222T

PA-28-181

REPORT: VB-790

FAA APPROVED BY: Ward Evans

WARD EVANS

D.O.A. NO. SO-1

PIPER AIRCRAFT CORPORATION

VERO BEACH, FLORIDA

DATE OF APPROVAL: JUNE 18, 1976



WARNING

EXTREME CARE MUST BE EXERCISED TO LIMIT THE USE OF THIS MANUAL TO APPLICABLE AIRCRAFT. THIS MANUAL REVISED AS INDICATED BELOW OR SUBSEQUENTLY REVISED IS VALID FOR USE WITH THE AIRPLANE IDENTIFIED ON THE FACE OF THE TITLE PAGE WHEN OFFICIALLY APPROVED. SUBSEQUENT REVISIONS SUPPLIED BY PIPER AIRCRAFT CORPORATION MUST BE PROPERLY INSERTED.

MODEL PA-28-181, CHEROKEE ARCHER II

PILOT'S OPERATING HANDBOOK, REPORT: VB-790 REVISION

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PIPER AIRCRAFT CORPORATION
APPROVAL SIGNATURE AND STAMP

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APPLICABILITY

The aircraft serial number eligibility bracket for application of this handbook is 28-7690001 through 28-7690467. The specific application of this handbook is limited to the Piper PA-28-181 model airplane designated by serial number and registration number on the face of the title page of this handbook.

This handbook cannot be used for operational purposes unless kept in a current status.

REVISIONS

The information compiled in the Pilot's Operating Handbook will be kept current by revisions distributed to the airplane owners.

Revision material will consist of information necessary to update the text of the present handbook and/or to add information to cover added airplane equipment.

I. Revisions

Revisions will be distributed whenever necessary as complete page replacements or additions and shall be inserted into the handbook in accordance with the instructions given below:

1. Revision pages will replace only pages with the same page number.
2. Insert all additional pages in proper numerical order within each section.
3. Page numbers followed by a small letter shall be inserted in direct sequence with the same common numbered page.

II. Identification of Revised Material

Revised text and illustrations shall be indicated by a black vertical line along the outside margin of the page, opposite revised, added or deleted material. A line along the outside margin of the page opposite the page number will indicate that an entire page was added.

Black lines will indicate only current revisions with changes and additions to or deletions of existing text and illustrations. Changes in capitalization, spelling, punctuation or the physical location of material on a page will not be identified.

ORIGINAL PAGES ISSUED

The original pages issued for this handbook prior to revision are given below:

Title, ii through v, 1-1 through 1-14, 2-1 through 2-8, 3-1 through 3-12, 4-1 through 4-16, 5-1 through 5-26, 6-1 through 6-52, 7-1 through 7-26, 8-1 through 8-16, 9-1 through 9-14, 10-1 through 10-2.

PILOT'S OPERATING HANDBOOK LOG OF REVISIONS

Current Revisions to the PA-28-181 Cherokee Archer II Pilot's Operating Handbook, REPORT: VB-760 issued August 15, 1975.

Revision Number and Code	Revised Pages	Description of Revision	FAA Approval Signature and Date
Rev. 1 - 761 619 (PR760106)	6-i 6-37 6-44 6-46 7-25 8-5	Revised wording of 6.9 (a). Removed Piper Dwg. No. from item 155. Added items 236 and 238. Revised item 263. Revised ELT pilot's remote switch info. Revised 8.7 (a), items (1), (2), and (3).	<i>Ward Evans</i> Ward Evans Jan. 6, 1976
Rev. 2 - 761 619 (PR761112)	3-3 3-8 3-9 4-14 5-4 5-9 5-13 5-14 5-14a 5-14b 5-25 5-26 6-35 6-36 6-46 7-24 7-25	Revised checklist. Revised wording of 3.11. Revised 3.15 info. Revised approach speed in 4.29. Revised takeoff performance. Added Fig. 5-6, 5-8, and 5-30. Revised Fig. 5-5. Added Fig. 5-6 (Flaps Up Ground Roll). Added page (added revised Fig. 5-7). Added page (added Fig. 5-8 - 25° Ground Roll). Revised Fig. 5-29. Added Fig. 5-30 (Landing Ground Roll). Added items 114 and 116. Relocated items 127 and 129, added items 131 and 133. Added PAL transmitter item 263 (c), revised item 263 (c) to 263 (d). Revised ELT transmitter info. Revised ELT pilot's remote switch info.	<i>Ward Evans</i> Ward Evans Nov. 12, 1976
Rev. 3 - 761 619 (PR770601)	4-1 4-4 4-9	Revised item 4.3 (c). Revised Starting Engine When Hot. Revised item 4.13 (b)	<i>Ward Evans</i> Ward Evans June 1, 1977
Rev. 4 - 761 619 (PR790316)	iii 1-4 4-5 5-5 5-14 5-14b 6-1 6-3 7-10	Added serial no. effectivity. Revised para. 1.13 and footnote. Revised para. 4.5. Revised para. 5.5. Revised Fig. 5-6. Revised Fig. 5-8. Revised para. 6.1. Added Caution to para. 6.3. Added Warning to para. 7.15.	

PILOT'S OPERATING HANDBOOK LOG OF REVISIONS (cont)

Revision Number and Code	Revised Pages	Description of Revision	FAA Approval Signature and Date
Rev. 4 - 761 619 (PR790316) (cont)	7-11	Revised para 7.15.	<i>Ward Evans</i> Ward Evans March 16, 1979
	7-21	Added Caution to para. 7.23.	
	7-24	Revised para. 7.37.	
	8-13	Added Caution to para. 8.21; relocated info to pg. 8-14.	
	8-14	Added info. from pg. 8-13; relocated info. to pg. 8-15.	
	8-15	Added info. from pg. 8-14.	
Rev. 5 - 761 619 (PR900608)	1-3	Revised para. 1.9, item (c).	<i>J H Trompler</i> D.H. Trompler July 30, 1990
	8-1	Revised para. 8.1.	
	8-3	Revised para. 8.3.	
	8-4	Revised para. 8.5.	
	8-11	Revised para 8.19. Revised para. 8.21, item b. Relocated para. 8.21, item (c) to pg. 8-12.	
	8-11a	Added page.	
	8-11b	Added page. Added Fuel Comparison Chart.	
		Added info. to para. 8.21, item (b).	
	8-12	Added relocated para. 8.21, item (c) from pg. 8-11	

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GENERAL

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SECTION 1

GENERAL

1.1 INTRODUCTION

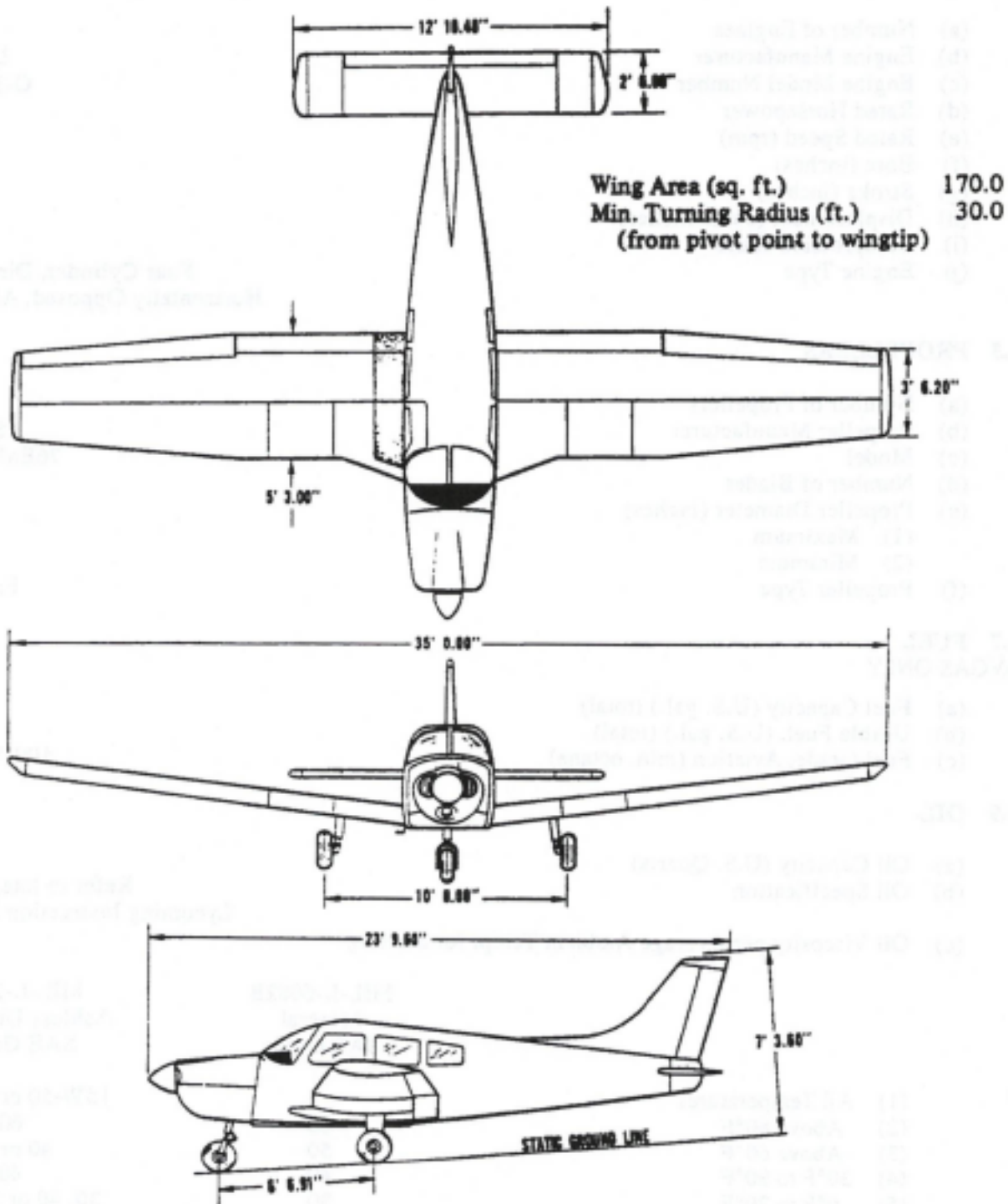
This Pilot's Operating Handbook is designed for maximum utilization as an operating guide for the pilot. It includes the material required to be furnished to the pilot by C.A.R. 3 and FAR Part 21, Subpart J. It also contains supplemental data supplied by the airplane manufacturer.

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 left blank intentionally.



THREE VIEW

Figure 1-1

1.3 ENGINES

(a) Number of Engines	1
(b) Engine Manufacturer	Lycoming
(c) Engine Model Number	O-360-A4M
(d) Rated Horsepower	180
(e) Rated Speed (rpm)	2700
(f) Bore (inches)	5.125
(g) Stroke (inches)	4.375
(h) Displacement (cubic inches)	361.0
(i) Compression Ratio	8.5:1
(j) Engine Type	Four Cylinder, Direct Drive Horizontally Opposed, Air Cooled

1.5 PROPELLERS

(a) Number of Propellers	1
(b) Propeller Manufacturer	Sensenich
(c) Model	76EM8S5-0-60
(d) Number of Blades	2
(e) Propeller Diameter (inches)	
(1) Maximum	76
(2) Minimum	76
(f) Propeller Type	Fixed Pitch

1.7 FUEL

AVGAS ONLY

(a) Fuel Capacity (U.S. gal.) (total)	56
(b) Usable Fuel (U.S. gal.) (total)	48
(c) Fuel Grade, Aviation (min. octane)	100/130 Green

1.9 OIL

(a) Oil Capacity (U.S. Quarts)	8
(b) Oil Specification	Refer to latest issue of Lycoming Instruction No. 1014.
(c) Oil Viscosity per Average Ambient Temp. for Starting	

	MIL-L-6082B Mineral SAE Grade	MIL-L-22851 Ashless Dispersant SAE Grades
(1) All Temperatures		15W-50 or 20W-50
(2) Above 80°F	60	60
(3) Above 60°F	50	40 or 50
(4) 30°F to 90°F	40	40
(5) 0°F to 70°F	30	30, 40 or 20W-40
(6) 0°F to 90°F	20W-50	20W-50 or 15W-50
(7) Below 10°F	20	30 or 20W-30

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

1.11 MAXIMUM WEIGHTS

	NORMAL	UTILITY
(a) Maximum Takeoff Weight (lbs)	2550	1950
(b) Maximum Landing Weight (lbs)	2550	1950
(c) Maximum Weights in Baggage Compartment	200	0

1.13 STANDARD AIRPLANE WEIGHTS*

(a) Standard Empty Weight (lbs): Weight of a standard airplane including unusable fuel, full operating fluids and full oil	1390
(b) Maximum Useful Load (lbs): The difference between the Maximum Takeoff Weight and the Standard Empty Weight	1160

1.15 BAGGAGE SPACE

(a) Compartment Volume (cubic feet)	24
(b) Entry Width (inches)	22
(c) Entry Height (inches)	20

1.17 SPECIFIC LOADINGS

(a) Wing Loading (lbs per sq ft)	15.0
(b) Power Loading (lbs per hp)	14.2

*These values are approximate and may vary from one aircraft to another. Refer to Figure 6-5 for the Standard Empty Weight value and Useful Load value to be used for C.G. calculation for the aircraft specified.

