



**TRI-PACER
OWNER'S HANDBOOK**

OWNERS' HANDBOOK
FOR
Operation and Maintenance
OF
THE PIPER TRI-PACER

PA-22-160

PA-22-150

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PA., U. S. A.

NOTICE

THIS HANDBOOK IS NOT DESIGNED, NOR CAN ANY HANDBOOK SERVE, AS A SUBSTITUTE FOR ADEQUATE AND COMPETENT FLIGHT INSTRUCTION, OR KNOWLEDGE OF THE CURRENT AIRWORTHINESS DIRECTIVES, THE APPLICABLE FEDERAL AIR REGULATIONS, AND ADVISORY CIRCULARS. IT IS NOT INTENDED TO BE A GUIDE OF BASIC FLIGHT INSTRUCTION, NOR A TRAINING MANUAL.

THE HANDBOOK IS DESIGNED:

1. TO HELP YOU OPERATE YOUR TRI-PACER WITH SAFETY AND CONFIDENCE.
2. TO MORE FULLY ACQUAINT YOU WITH THE BASIC PERFORMANCE AND HANDLING CHARACTERISTICS OF THE AIRPLANE.
3. TO MORE FULLY EXPLAIN YOUR TRI-PACER'S OPERATION THAN IS PERMISSIBLE TO SET FORTH IN THE AIRPLANE FLIGHT MANUAL.

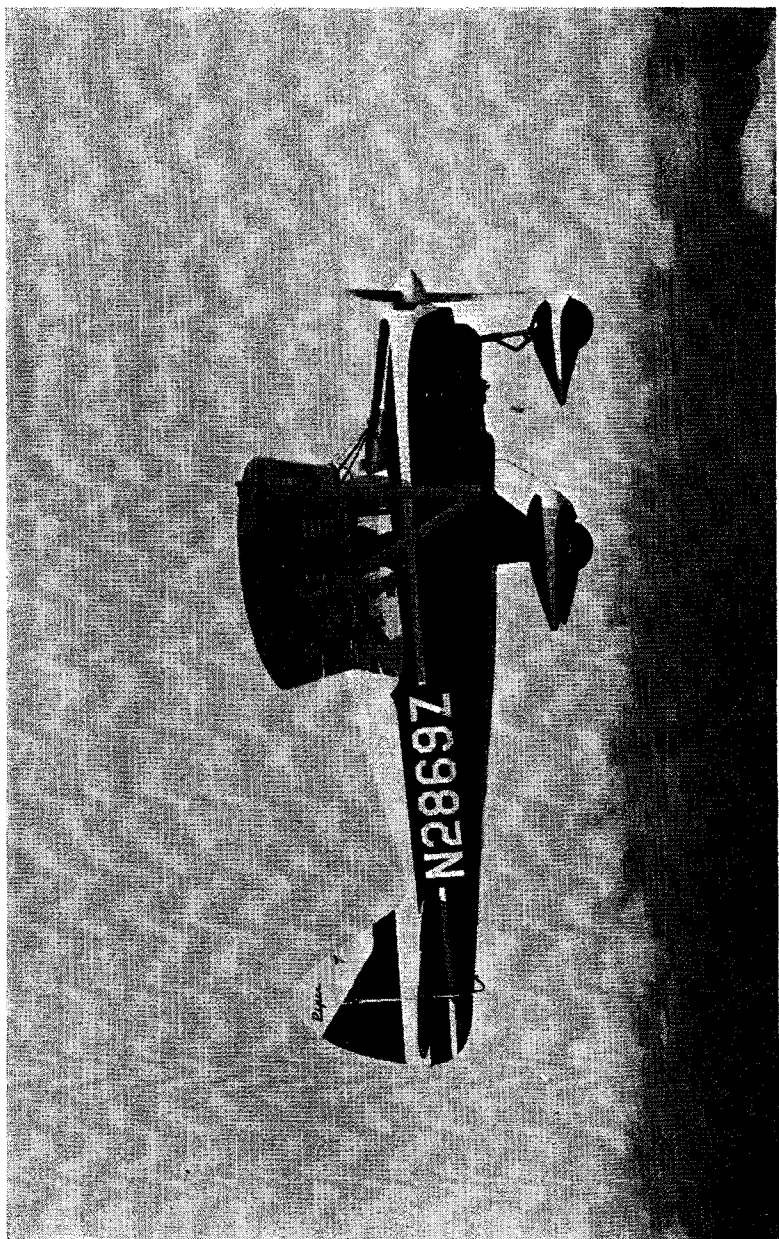
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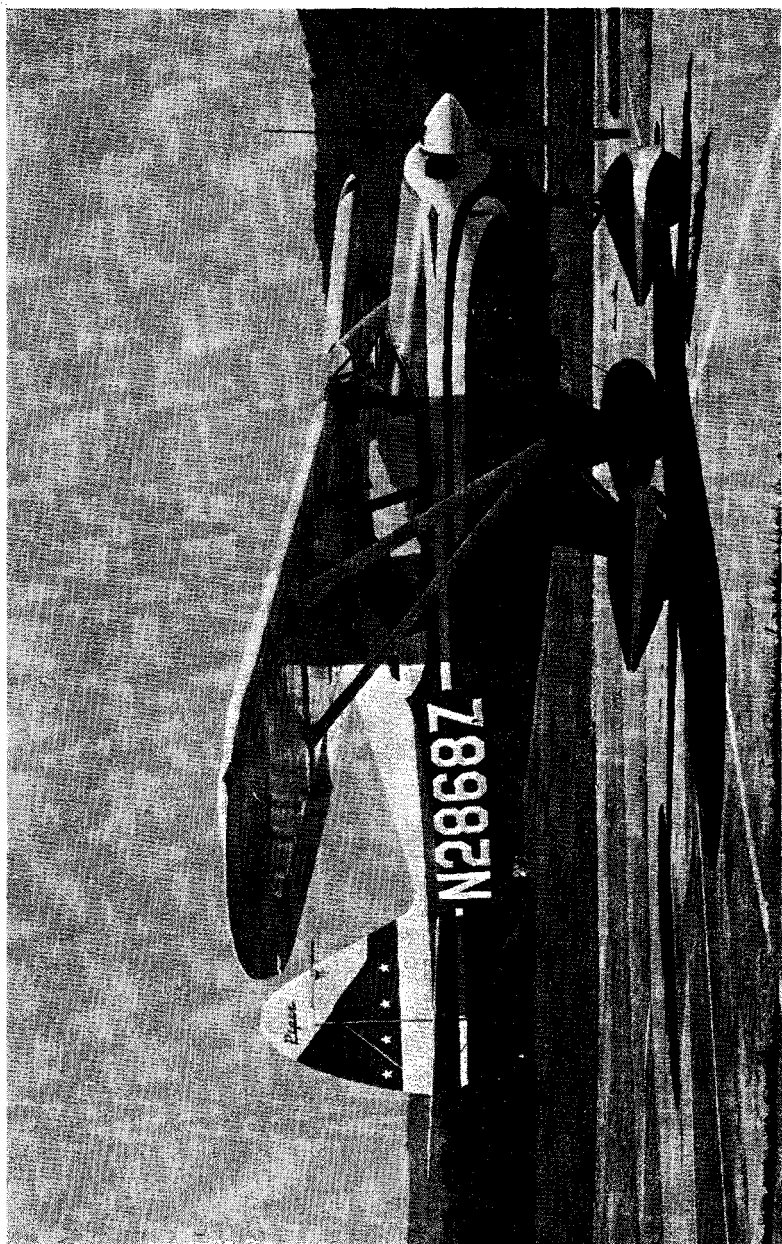
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DESIGN FEATURES

I. Specifications:

	<i>PA-22-150 Landplane</i>	<i>PA-22-150 Seaplane</i>
Engine	Lyc. O-320	Lyc. O-320
HP and RPM	150 at 2700	150 at 2700
Gross Weight (lbs.)	2000	1950
Empty Weight (Standard) (lbs.)	1100	1280
Useful Load (lbs.)	900	670
Wing Span (ft.)	29.3	29.3
Wing Area (sq. ft.)	147.5	147.5
Length (ft.)	20.6	22
Height (in.)	100	103
Propeller Diameter (max. in.)	74.0	74.0
Power Loading	13.3	13
Wing Loading	13.5	13.2
Baggage Capacity	100	100
Fuel Capacity (Standard)	36	36
Fuel Capacity (Optional)	44	44
Tire Pressure (lbs.)	Main 22 Nose 15	—
Top Speed (MPH)	139	115
Cruising Speed (75% power at sea level MPH)	123	105
Optimum Cruising Speed (75% power, 7000', MPH)	132	110
Stalling Speed (MPH)	49*	58
Take-off Run (ft.)	1220*	—
Take-off over 50' barrier (ft.)	1600*	—
Landing Roll (ft.)	500*	—
Landing Distance over 50' barrier (ft.)	1280*	—
Best Rate of Climb Speed (MPH)	84	75
Rate of Climb (ft. per min.)	725	675
Best Angle of Climb Speed (MPH)	70	65
Best Angle of Climb (ratio)	1:11	1:9
Service Ceiling	15,000	13,850
Absolute Ceiling	17,500	16,200
Fuel Consumption (gal./hr.-75% power)	9	9
Cruising Range	492	420
Cruising Range (Optional Tank)	600	515

* Flaps Extended

Performance figures are for standard airplanes flown at gross weight under standard conditions at sea level.

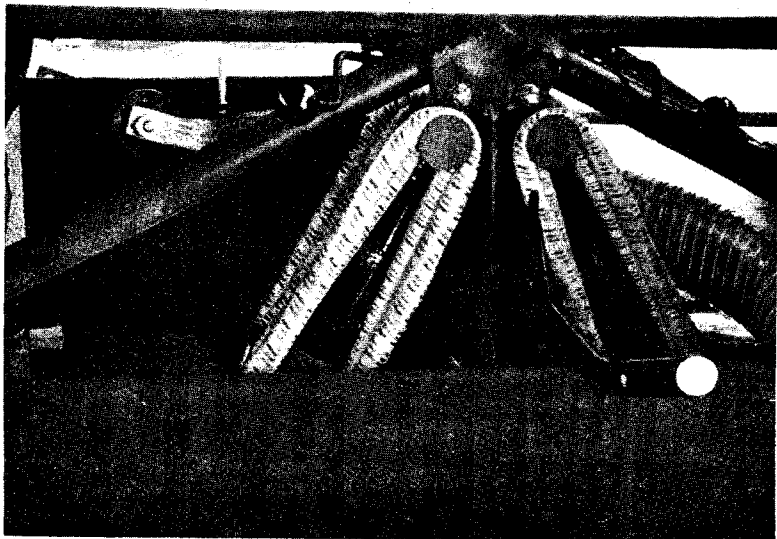
DESIGN FEATURES

I. Specifications:

	<i>PA-22-160 Landplane</i>	<i>PA-22-160 Seaplane</i>
Engine -----	Lyc. O-320-B	Lyc. O-320-B
HP and RPM -----	160 at 2700	160 at 2700
Gross Weight (lbs.) -----	2000	1950
Empty Weight (Standard) (lbs.) -----	1110	1290
Useful Load (lbs.) -----	890	660
Wing Span (ft.) -----	29.3	29.3
Wing Area (sq. ft.) -----	147.5	147.5
Length (ft.) -----	20.6	22
Height (in.) -----	100	103
Propeller Diameter (max. in.) -----	74	74
Power Loading -----	12.5	12.2
Wing Loading -----	13.5	13.2
Baggage Capacity -----	100	100
Fuel Capacity (Standard) -----	36	36
Fuel Capacity (Optional) -----	44	44
Tire Pressure (lbs.) -----	Main 22 Nose 15	— —
Top Speed (MPH) -----	141	117
Cruising Speed (75% power at sea level MPH) -----	125	107
Optimum Cruising Speed (75% power, 7000', MPH) -----	134	112
Stalling Speed (MPH) -----	49*	58
Take-off Run (ft.) -----	1120*	—
Take-off over 50' barrier (ft.) -----	1480*	—
Landing Roll (ft.) -----	500	—
Landing Distance over 50' barrier (ft.) -----	1280	—
Best Rate of Climb Speed (MPH) -----	84	75
Rate of Climb (ft. per min.) -----	800	750
Best Angle of Climb Speed (MPH) -----	70	65
Best Angle of Climb (ratio) -----	1:10	1:9
Service Ceiling -----	16,500	15,300
Absolute Ceiling -----	19,000	17,500
Fuel Consumption (gal./hr.-75% power) -----	9	9
Cruising Range -----	500	430
Cruising Range (Optional Tank) -----	610	525

* Flaps Extended

Performance figures are for standard airplanes flown at gross weight under standard conditions at sea level.



rudder action to give coordinated turns, still the controls can be crossed if desired to obtain slips or skids.

VI. Fuel System:

Two eighteen gallon fuel tanks located in the wings provide fuel storage in the Tri-Pacer. The tanks are drained individually according to the position of the fuel selector valve on the left forward cabin wall.

The rear fuel line from the right tank has a low point under the right front seat at which point is located a quick drain gascolator. The drain in this gascolator, which should be checked frequently for water or sediment, is reached through an opening in the right landing gear belly fairing.

An electric fuel gauge for each tank is located on the lower right side of the instrument panel.

The main fuel strainer, through which all fuel going to the carburetor flows, is located on the lower left engine side of the firewall. It is provided with a quick drain and should be drained regularly.

Fuel screens are provided at tank outlets, in the strainer and at the carburetor.

The engine primer pump on the right side of the instrument panel takes fuel from the main gascolator and pumps it directly to all four cylinders of the engine. To prevent malfunctioning of the engine, the primer must be locked in at all times except when in use.

An idle cut-off is incorporated in the mixture control so that full extension of the control stops the flow of fuel at the carburetor. The cut-off should always be used to stop the engine.

An eight gallon reserve fuel tank which fits under the rear seat is available as optional equipment. The fuel from this tank is pumped by an electric pump under the co-pilot's seat to the fuel strainer for the right main tank. From the strainer the fuel passes up the main supply line to the right tank.

To use the reserve fuel supply, first use the right tank until it is at least half empty, preferably completely empty; this must be done while sufficient fuel remains in the left tank to continue to operate the engine until the right main supply is replenished. When the right tank is half full or less, switch the selector valve to left tank and pull the reserve fuel knob. The reserve fuel will then be pumped into the right tank, in a period of about 25 minutes. Then turn the reserve pump off.

Fuel should not be pumped from the reserve tank to the right main tank while the selector valve is at the right tank position.

VII. Electrical System:

The master switch for the electrical system is located on the master switch fuse box under the left side of the pilot's seat. In the "up" position of this switch the main fuse is engaged; the "down" position is for the spare fuse, and the central position is "off".

The starter button is located on the bottom of the master switch fuse box. The starter cannot be operated unless the master switch is on.

Circuit breakers for the radio, lights and generator are in a bracket under the left side of the instrument panel. These units auto-