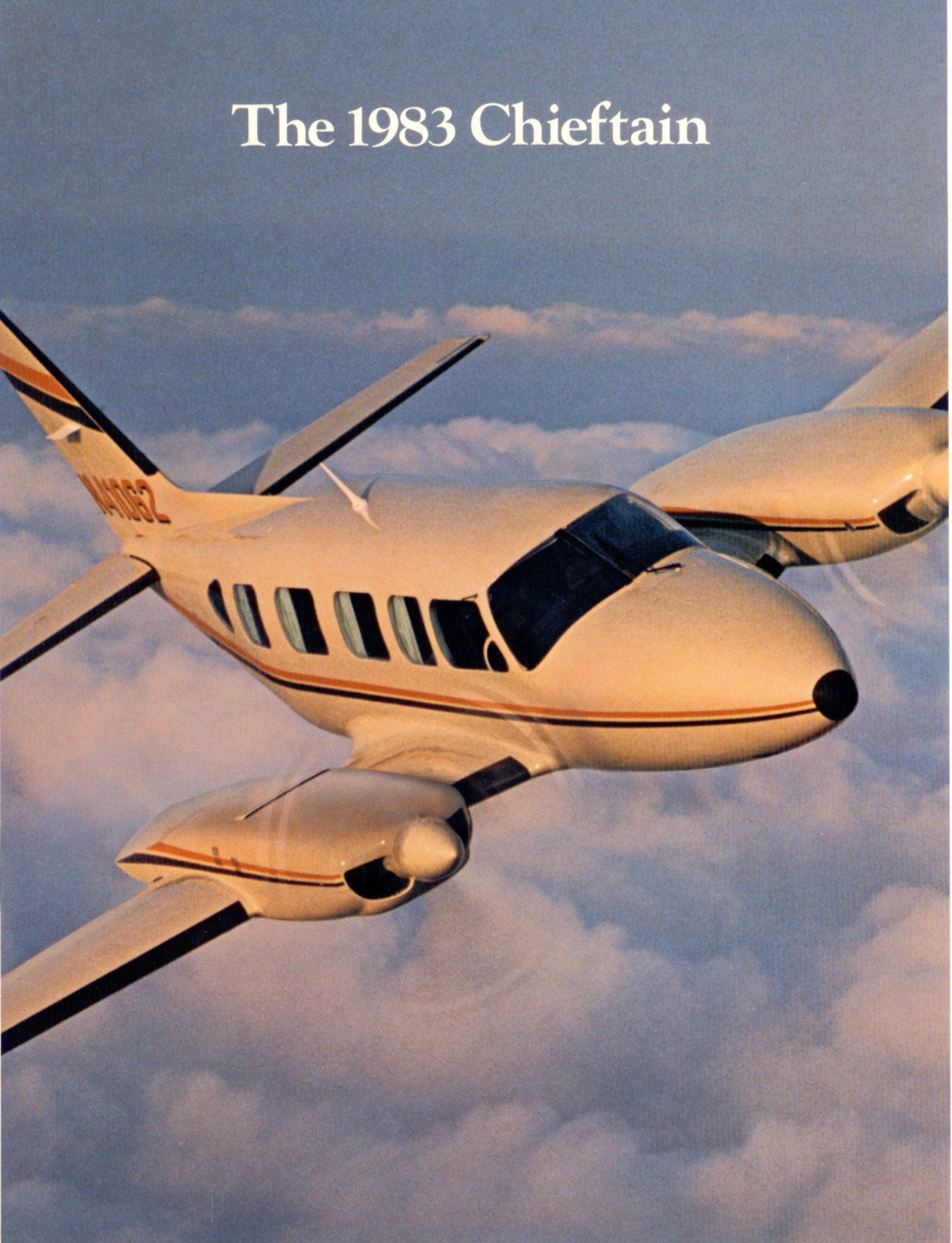
The 1983 Chieftain




MANIFOLD PRESSURE
RPM
EGT
FUEL FLOW
200 AIRSPEED
ALT
CLIMB
2 MIN. TURN
RADAR ALTITUDE
N81350
Bendix
GROUND CLEARANCE
LANDING GEAR
UP
DOWN
DOWN LOCKED
PIPER

Piper Aircraft Corporation

1983

Specifications/Performance

Standard Equipment

Chieftain

PA 31-350

Piper Aircraft Corporation

Chieftain PA 31-350

Specifications

ENGINES

Manufacturer	Lycoming
Model	TIO-540-J2BD & LTIO-540-J2BD
Rating (hp @ rpm) Maximum Normal Operating Power (MNOP)	315 BHP @ 2400 RPM
Rating (HP @ RPM) Maximum Continuous Power (MCP)	350 BHP @ 2575 RPM
Recommended TBO (hrs.)	1600

PROPELLERS

Manufacturer	Hartzell
Number of Blades	3
Type	Constant Speed/Full Feathering
Diameter (in./cm)	80/203

WEIGHTS

Maximum Ramp Weight (lbs./kg)	7045/3195
Maximum Take-off Weight (lbs./kg)	7000/3175
Maximum Landing Weight (lbs./kg)	7000/3175
Standard Empty Weight (lbs./kg)	4221/1915
Standard Useful Load (lbs./kg)	2824/1280

WING AREA AND LOADINGS

Wing Area ($ft.^2/m^2$)	229/21.3
Wing Loading ($lbs./ft.^2$)/(kg/m^2)	30.6/138.6
Power Loading (lbs./hp)/(kg/hp)	10.0/4.5

DIMENSIONS

Wing Span (ft./m)	40.67/12.4
Length (ft./m)	34.63/10.6
Height (ft./m)	13.0/4.0
Cabin Length (in./cm)	151/384
Cabin Width (in./cm)	50/127
Cabin Height (in./cm)	51.5/131
Passenger door size (in./cm)	45 x 27.5/114 x 70
With adjacent cargo door (in./cm)	45 x 44.5/114 x 113
Forward luggage door size (in./cm)	25 x 28/64 x 71
Nacelle locker door size (in./cm)	20 x 40/51 x 102

USABLE FUEL

Standard fuel (gal./L)	182/689
Optional fuel (gal./L)	236/893

OIL CAPACITY (gal./eng.)/(L/eng.) 3/11.4

BAGGAGE

Luggage capacity (lbs./kg)	
Nose	200/91
Aft	200/91
Nacelle (two)	300/136
Nacelle (two) w/opt. fuel	100/45
Luggage space ($ft.^3/m^3$)	
Nose	14/.40
Aft	22/.62
Nacelle (two)	26.5/.75
Nacelle (two) w/opt. fuel	12.0/.34
Cargo space ($ft.^3/m^3$)	
Total	217/6.15
Total w/opt. fuel	202.5/5.73

Performance

MAXIMUM SPEED (MNOP) (kts.)/(km/h)
(TAS at Average Cruise Weight) 231/427

CRUISING SPEEDS
(TAS at Average Cruise Weight)

Power %	Cruise Altitude (ft./m)	Cruise Speed (kts.)/(km/h)
75	20,000/6096	221/410
75	12,000/3658	205/380
65	20,000/6096	210/389
65	12,000/3658	191/354
55	15,000/4572	177/328
55	12,000/3658	173/321

CRUISE RANGE
Includes Allowance for Fuel Used During Start, Taxi, Take-off, Climb and a 45 Minute Reserve at Long Range Cruise Power.

Power %	Cruise Altitude (ft./m)	Range (nm/km)	
		Standard Fuel	Optional Fuel
75	20,000/6096	885/1640	1210/2241
75	12,000/3658	855/1584	1100/2148
65	20,000/6096	925/1714	1260/2333
65	12,000/3658	900/1668	1225/2267
55	15,000/4572	950/1760	1290/2389
55	12,000/3658	950/1760	1290/2389

RATE OF CLIMB
(At Sea Level and Gross Weight)

Two Engines (MNOP) - (fpm/mpm)	1120/342
Single Engine (MCP) - (fpm/mpm)	230/70

SERVICE CEILING

Two Engines (MNOP) (ft./m)	*24,000+/7317+
Single Engine (MCP) (ft./m)	13,700/4176

STALL SPEEDS
Power off, Flaps Down (kts./kmh) IAS 74/137

TAKE-OFF DISTANCE
(Sea Level, Zero Wind, Standard Temperature)

Ground Run (ft./m)	1350/411
Total distance over 50 ft. obstacle (ft./m)	2510/765

LANDING DISTANCE
(Sea Level, Zero Wind, Standard Temperature)

Ground Roll (ft./m)	1045/319
Total distance over 50 ft. obstacle (ft./m)	1880/573

* 24,000 feet is maximum approved altitude for the Chieftain

Standard Equipment

POWER PLANTS AND PROPELLERS

Engines — 2 counter rotating turbocharged Lycoming, with Bendix fuel injection; 350 hp at 2575 rpm; direct drive, 6 cylinder, dual ignition with shielded ignition harness
Dynafocal engine mounts
Propellers — 2 Hartzell, 3 blade extended hub, constant speed, full feathering, with propeller spinners
Propeller governors, two
Geared starters, 24 volt, two
Air filters, two
Oil coolers with thermostatic control, two
Oil filters, two
Alternate air sources — automatic, with manual controls, two
Electric cowl flaps, two
Dry pneumatic pumps, two
Engine driven hydaulic pumps, two

FLIGHT INSTRUMENTS AND INDICATORS

Piper Truspeed Indicator
Magnetic compass (illuminated)
Sensitive altimeter (In. and Mb.)
Piper pictorial turn rate indicator
Rate of climb indicator
8-day clock
3" pictorial gyro horizon (Air Driven) TSO'd
3" directional gyro (Air Driven) TSO'd
Gyro air filter
Outside air temperature gauge
Ammeter
Annunciator panel:
- Alternator inoperative L/R
- Pneumatic source inoperative L/R
- Low fuel flow L/R
- Fuel boost pump inoperative L/R
- Heater over temperature
- Flap
- Cabin door ajar
- Nose baggage door ajar

Dual manifold pressure gauge
Pneumatic gauge
Dual tachometer
Flight hour recorder
Fuel quantity gauges, two
Dual fuel flow gauge
Dual fuel pressure gauge
Combination oil pressure, oil temperature and cylinder head temperature gauges, two
Dual exhaust gas temperature gauge
Aileron trim position indicator (illuminated)
Elevator trim position indicator (illuminated)
Rudder trim position indicator (illuminated)
Wing flap position indicator (illuminated)
Cowl flap position indicator (illuminated)

COCKPIT, FLIGHT AND GROUND CONTROLS

Flight primary — dual with ram's horn type wheels. Provision for elevator trim switch, mike button, pitch sync. and autopilot disconnect on pilot and copilot control wheels.
Flight trim — pedestal (illuminated)
- Aileron
- Rudder
- Elevator

Engine controls:
- Throttle, two
- Propeller, two
- Mixture, two
- Cowl flap (electric), two
- Alternate air, two

Engine controls' friction locks
Dual flight controls
Stall warning horn
Cockpit and cabin heater/ventilation master controls
Steerable nose wheel
Brakes
- Pilot's toe brakes
- Provisions for copilot's toe brakes
- Parking brake

Landing gear, retractable hydraulic
Landing gear actuator control
Landing gear warning horn
Landing gear emergency extension — manual hydraulic
Wing flaps, 0° to 40° electrically operated — includes proportional preselect feature
Wing flap position indicator
Fuel control pedestal
- Fuel tank selectors, two
- Crossfeed selector
- Shut-off valves/with warning lights

Cabin exhaust vent
Alternate instrument static source and control

ELECTRICAL PROVISIONS

Dual 28 volt, 70 amp alternators
24 volt, 17 amp hour battery
Dual paralleling voltage regulators with overvoltage relays
Resettable type circuit breakers
Ammeter
External power supply receptacle
Circuit breaker panel, pilot — essential buss
Circuit breaker panel, copilot — avionics

AVIONICS PROVISIONS

Cabin speaker
Cockpit speakers, two
Headphone and microphone jacks — dual
External avionics racks and cabling provisions
Provisions for automatic locator beacon
Wide choice of optional avionics available
Circuit breaker panel, copilot — avionics

FUEL SYSTEM

Four bladder cell type fuel tanks with 192 gallon total capacity, 182 usable, equipped with NACA type anti-icing non-siphoning vents w/main tank baffles
Engine driven fuel pumps, two
Electric auxiliary fuel pumps, two
In-line low pressure fuel pumps, two
Fuel filters with quick drains, two
Fuel tank sump quick drains, four
Crossfeed drain
Fuel shut-off valves on engine firewall, two

ICE PROTECTION PROVISIONS

Heated pitot head — pilot's
Elevator horn anti icing boots
Deicing group available for flight in icing conditions

LIGHTING PROVISIONS

External lights
- Anti-collision strobe lights, three
- Navigation lights, three
- Landing/taxi lights, two

Courtesy lights
- Nose luggage compartment
- Stair door and rear luggage compartment
- Crew area

Cockpit lights
- Landing gear position, four: down/locked, three; intransit/not locked, one
- Instrument panel, switch and circuit breaker panel lighting, rheostat controlled
- Instrument panel back-up lights, two
- Overhead engine switch panel lighting, rheostat controlled
- Overhead map lights, two (white)
- Fuel control pedestal light (white)
- All lighting rheostats — centrally located in overhead panel

Cabin lights
- Passenger reading lights, individual, five
- Rear dome light

CABIN COMFORT SYSTEM

Janitrol 50,000 BTU combustion heater, thermostatically controlled with baseboard cabin outlets
Windshield defrosters
Sidewall cabin fresh air vents, individually controlled, eight
Recirculation/fresh air blowers with HI/LO speeds
Provisions for air conditioning
Cabin exhaust vent

EXTERNAL FEATURES

Three tone exterior paint design, in a wide choice of color combinations
Polyurethane paint — exterior finish
Corrosion proofing — internal and external
Main wheels — 6:50 x 10 with disc brakes; tires with tubes — 6:50 x 10, 8 ply rating
Nose wheel — 6:00 x 6, tire with tube — 6:00 x 6, 6 ply rating
Aircraft brakes
Stowable towbar
Tie down rings, three
Jack pads
Bonding straps across all control surfaces and fiberglass parts for lightning strike protection
Nose gear safety mirror
Cabin entrance door with built-in steps and pneumatic extender
Meets FAR Part 36 noise requirements
Cabin, nose and nacelle luggage door locks with keys and carpeting

COCKPIT AND CABIN APPOINTMENTS AND PROVISIONS

Choice of eleven interior color themes, which includes:
- fabric and vinyl seats, fabric side panels, wall to wall carpeting, vinyl headliner and color keyed curtains

Continued on back page

Standard Equipment Continued

Pilot/copilot seats — fabric and vinyl with headrests, folding armrests and oxygen mask storage underneath each seat. Seats adjust fore and aft, vertically and tilting with shoulder and safety belts and inertia reels.
Flashlight that stows under pilot's seat
Ash trays, two in crew area
Storm windows — pilot and copilot
No smoking/seat belt lighted signs with cockpit control switches
Forward cabin divider curtain
Cirgarette lighter, cockpit
Scuff plates, pilot and copilot
Shock mounted instrument panels
Removable instrument panels, three
Two-piece windshield
Sun visors, two
Four reclining and adjustable passenger seats — fabric and vinyl in Club arrangement with headrests, folding armrests, seat belts, oxygen mask storage underneath each seat, and magazine storage pockets on the back of each seat
Provisions for up to eight adjustable passenger seats
Ash trays, four located in each seat outboard armrest
Emergency exit window
Double glazed windows
Quietized soundproofing
Window curtains
Coat hanger support bar
Coat hangers, six
Luggage compartments with security straps:
Cabin walk-in, 22 cu. ft. — 200 lbs.
Fuselage nose, 14 cu. ft. — 200 lbs.
Nacelle, 13.25 cu. ft. — 150 lbs. each side
Removable floorboards
Provision for oxygen installation
Compass card
Compass card holder
Weight and balance plotter
Pilot's Operating Handbook — Jepp size
Passenger briefing cards
Aircraft logbook
Engine logbooks
Certificate of Airworthiness

PRODUCT SUPPORT
Piper Warranty Form
Piper Service Center Directory
Inspection Forms

The performance information is based on an airplane flown at gross weight under standard sea level atmospheric conditions except as noted and based on the latest data available at the time of publication approval. Take-off and landing performance is optimum. Actual performance depends on pilot techniques, operating surfaces and other factors. It is the responsibility of the pilot to determine that all operations are conducted within approved limits of design gross weight, center of gravity, and in accordance with the FAA-approved Airplane Flight Manual which is the only official source of operating parameters and performance information.

In accordance with GAMA format, range provides for taxi, take-off, climb at MCP, cruise at stated mixture and descent with 45-minute reserve at maximum range power. Empty weight includes unusable fuel, full operating fluids and full oil.

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