

The 1983 Navajo C/R







Piper Aircraft Corporation

1983

Specifications/Performance
Standard Equipment

Navajo C/R

PA 31-325



Piper Aircraft Corporation

Navajo C/R PA 31-325

Specifications

ENGINES

Manufacturer	Lycoming
Model	TIO-540-F2BD & LTIO-540-F2BD
Rating (hp @ rpm) Maximum Normal	
Operating Power (MNOP)	275 BHP @ 2400 RPM
Rating (HP @ RPM) Maximum Continuous	
Power (MCP)	325 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)	6540/2966
Maximum Take-off Weight (lbs./kg)	6500/2948
Maximum Landing Weight (lbs./kg)	6500/2948
Standard Empty Weight (lbs./kg)	4099/1859
(Includes: unusable fuel, full operating and full oil)	
Standard Useful Load (lbs./kg)	2441/1107

WING AREA AND LOADINGS

Wing Area (ft. ² /m ²)	229/21.3
Wing Loading (lbs./ft. ²)/(kg/m ²)	28.4/138.5
Power Loading (lbs./hp)/(kg/hp)	10.0/4.5

DIMENSIONS

Wing Span (ft./m)	40.7/12.4
Length (ft./m)	32.6/9.95
Height (ft./m)	13.0/4.0
Cabin Length (in./cm)	131/333
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)	183.5/695
Optional fuel (gal./L)	237.5/899

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

3/11.4

BAGGAGE

Luggage capacity (lbs./kg)	
Nose	150/68
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

Performance

MAXIMUM SPEED (MNOP) (kts.)/(km/h)

(TAS at Average Cruise Weight)	228/422
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CRUISING SPEEDS

(TAS at Average Cruise Weight)

Power	Cruise Altitude	Cruise Speed
%	(ft./m)	(kts.)/(km/h)
75	20,000/6096	220/408
75	12,000/3658	202/374
65	20,000/6096	208/385
65	12,000/3658	190/352
55	16,000/4877	180/334
55	12,000/3658	175/324

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		Range
%	(ft./m)		(nm/km)
		Standard Fuel	Optional Fuel
75	20,000/6096	940/1742	1290/2389
75	12,000/3658	910/1686	1245/2364
65	20,000/6096	1000/1853	1365/252
65	12,000/3658	970/1798	1325/2454
55	16,000/4877	1040/1927	1415/2620
55	12,000/3658	1025/1900	1385/2565

RATE OF CLIMB

(At Sea Level and Gross Weight)

Two Engines (MNOP) - (fpm/mpm)	1220/366
Single Engine (MCP) - (fpm/mpm)	255/78

SERVICE CEILING

Two Engines (MNOP) (ft./m)	*24,000+/7317+
Single Engine (MCP) (ft./m)	15,300/4663

STALL SPEEDS

Power off, Flaps Down (kts./kmh) IAS	70/130
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TAKE-OFF DISTANCE

(Sea Level, Zero Wind, Standard Temperature)	
Ground Run (ft./m)	1000/305
Total distance over 50 ft. obstacle (ft./m)	2250/686

LANDING DISTANCE

(Sea Level, Zero Wind, Standard Temperature)	
**Ground Roll (ft./m)	1034/315
**Total distance over 50 ft. obstacle (ft./m)	1750/533

* 24,000 feet is maximum approved altitude for the Navajo C/R
** With standard brakes

Standard Equipment

POWER PLANTS AND PROPELLERS

Engines — 2 counter rotating turbocharged
Lycoming, with Bendix fuel injection; 325 hp at
2575 rpm; direct drive, 6 cylinder, dual ignition
with shielded ignition harness
Dynafoal 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 hydraulic 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
Fuel shut-off controls on main spar tunnel, two
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, 183.5 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/red)
All lighting rheostats — centrally located in
overhead panel
Cabin lights
Passenger reading lights, individual, five
Rear dome light

CABIN COMFORT SYSTEM

Janitrol 35,000 BTU combustion heater,
thermostatically controlled with baseboard cabin
outlets
Windshield defrosters
Overhead silent fresh air vent, individually
controlled — seven
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 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
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.

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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 hydraulic pumps, two

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underneath each seat. Seats adjust fore and aft,
vertically and tilting with shoulder and safety belts
and inertia reels.

Standard Equipment Continued

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
Cigarette 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 six 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. — 150 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.

Piper Aircraft Corporation reserves the right to make changes in specifications, materials, equipment or prices at any time without prior notice or to discontinue models as required.

Your Piper Dealer has listings of a wide variety of optional equipment and avionics. Items most frequently chosen by owners are packaged for factory installation at substantial price savings.



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FOR THE DOLLAR**

**PIPER AIRCRAFT CORPORATION
LOCK HAVEN, PENNSYLVANIA 17745**

a BANGOR PUNTA Company

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