

— Specification and Description —

"Exhibit A"

SSA
skyhawk

The Cessna 172S Skyhawk SP

Specification and Description

Dated January 2004

Beginning With Serial #172S9569



A Textron Company

Introduction

This document is published for the purpose of providing general information for the evaluation of design, performance and equipment of the Cessna Skyhawk SP. Should more information be required, please contact:

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This document supersedes all previous Specification and Description documents and describes only the Skyhawk Model 172S, its powerplant and equipment.

Also included are the warranties applicable to the Skyhawk Model 172S aircraft, the Textron Lycoming IO-360-L2A engine, the McCauley propeller and the OEM-installed Bendix/King avionics.

In the event of any conflict or discrepancy between this document and the basic purchase agreement, the basic purchase agreement language shall govern.

Due to the time span between the date of this Specification and Description and the scheduled delivery date of the aircraft, Cessna reserves the right to revise the "Specification" whenever occasioned by product improvements, government regulations or other good cause.

General Description

All information herein applies to the Skyhawk SP (Model 172S).

The Skyhawk SP aircraft is an all-metal, single-engine piston, high-wing monoplane with a four-person seating capacity including a crew of one or two. Suitable allowance for luggage is provided.

The Model 172S is certified to the requirements of U.S. FAA Federal Aviation Regulation Part 23 including day, night, VFR and IFR.

Approximate Dimensions

Overall Height (max)	8'11"	(2.72 m)
Overall Length	27'2"	(8.28 m)
Wing		
Span (overall)	36'1"	(11.00 m)
Area	174 sq ft	(16.2 sq m)
Cabin		
Height (max)	48"	(1.22 m)
Length (firewall to aft baggage area)	142"	(3.61 m)
Width	39.5"	(1.00 m)
Cabin Door		
Height (front)	40.5"	(1.03 m)
Height (rear)	39"	(.99 m)
Width (top)	32.5"	(.83 m)
Width (bottom)	37"	(.94 m)
Baggage Door		
Height (front)	22"	(.56 m)
Height (rear)	21"	(.53 m)
Width	15.3"	(.39 m)

Design Weights and Capacities

Ramp Weight		
Normal category	2,558 lbs	(1,160 kg)
Utility category	2,208 lbs	(1,002 kg)
Takeoff Weight		
Normal category	2,550 lbs	(1,157 kg)
Utility category	2,200 lbs	(998 kg)
Landing Weight		
Normal category	2,550 lbs	(1,157 kg)
Utility category	2,200 lbs	(998 kg)
Standard Empty Weight ¹		
Normal category	1,665 lbs	(755 kg)
Utility category	1,665 lbs	(755 kg)
Maximum Useful Load		
Normal category	893 lbs	(405 kg)
Utility category	543 lbs	(246 kg)
Baggage Allowance	120 lbs	(54 kg)
Fuel Capacity		
Total capacity	56 gal	(212 L)
Total usable	53 gal	(200.6 L)
Total capacity each tank	28 gal	(106 L)
Total usable capacity each tank	26.5 gal	(100.3 L)
Oil Capacity	8 qts	(7.6 L)

Notes:

1. Standard empty weight based upon:
 - a) 0.6-mil primer on all details, 0.6-mil primer on all exterior surfaces and 2.0-mil paint on all exterior surfaces.
 - b) Engineering-defined standard aircraft.

Skyhawk SP Standard Equipment List

The following list of equipment is included on the standard aircraft and it does not reflect optional equipment.

AVIONICS:

KMA-28 Audio Panel/Marker
Beacon/Intercom
CI-102 Marker Beacon Antenna
KX-155A NAV/COM without Glide Slope
KI-208 VOR/LOC Indicator
CI-248 VHF/GPS Antenna
w/Internal Notch Filter
CI-215 NAV Antenna
KT-76C Transponder - Mode C
CI-105 Transponder Antenna
SSD 120-30A Blind Encoder
Pointer 3000-11 Emergency Locator
Transmitter (ELT)
Emergency Locator Transmitter (ELT) Whip
Antenna
Emergency Locator Transmitter (ELT)
Remote Mounted Switch
FN 300 Avionics Cooling Fan
Avionics Circuit Breaker Panel
Control Wheel Push-To-Talk Switch -
Pilot/Copilot
Mic & Phone Jacks
Pilot/Copilot/Passengers
Auxiliary Stereo Input Jack

ELECTRICAL POWER:

Alternator, 28 Volt, 60 Amp
Battery, 24 Volt, 12.75 AH, Manifold Type

Electrical Circuit Panel

- Ignition/Starter Switch, Key Operated
- Alternator/Battery Master Switch
- Split Avionics Master Switch
- Circuit Breakers, Electrical

- Switch Breakers, Electrical

Electrical J-Box

- Alternator Control Unit
- Ground Service Receptacle
- Starter Relay
- Alternator Relay
- Battery Relay
- Ground Power Relay

Auxiliary Power Jack - 12 Volt

ENGINE INSTRUMENTS:

Oil Pressure/Temperature
Ammeter/Vacuum
LH/RH Fuel Quantity
Fuel Flow/Exhaust Gas Temperature
Tachometer - Hour Recorder
Flight Hour Recorder

Annunciator Panel

- LH Low Fuel Light
- RH Low Fuel Light
- LH Low Vacuum Light
- RH Low Vacuum Light
- Low Oil Pressure Light
- Low Voltage Light

Annunciator Panel Test/Bright/Dim
Switch

ENVIRONMENTAL:

Windshield Defroster, Pilot/Copilot
Ventilator, Adjustable (6 places)
Heating System, Shrouded Muffler
w/Firewall Valve
Soundproofing

EXTERIOR:

Epoxy Corrosion Proofing, All Structure
LH Door, Pilot w/Hinged Window,
Lock and Key
RH Door, Copilot w/Hinged Window
Baggage Door, w/Lock and Key
Rear Window
All Windows Tinted
Gear Jack Pads
Fixed Landing Gear
White Polyurethane Exterior Paint
Refueling Steps and Handles,
Wing Struts and Fuselage
Fixed Cabin Entrance Steps
Tie Down Rings, LH/RH Wing & Tail

Tube Type Tires

- Nose - 5.00 X 5
 - Mains - 6.00 X 6
- Conical Camber Wing Tips
Strut Braced, Camber Lift Wings
Static Wicks

EXTERIOR LIGHTS:

Ground Recognition - Vertical Tail
Navigation, LH/RH Wing Tip & Vertical Tail
Wing Tip Navigation Light Detectors,
LH/RH
Wing Tip Strobe, LH/RH
Landing and Taxi, LH Wing
Underwing Courtesy, LH/RH

FLIGHT CONTROLS:

Hydraulic Brakes, Toe-Operated
Parking Brake
Stainless Steel Control Cables
Pilot/Copilot All Purpose Control Wheels
Electrical Preselect - Flaps
Dual Flight Controls -
Aileron/Elevator/Rudder
Steerable Nose Wheel
Aileron and Elevator Lock
Elevator Trim (Manual)

FLIGHT INSTRUMENTS:

Airspeed, w/True Airspeed
Attitude Gyro
Dual Mode Altimeter (In/Mb), Sensitive
20,000 ft.
Turn Coordinator, w/Slip Skid
Directional Gyro
Vertical Speed
Magnetic Compass
Digital Clock, w/OAT/Voltmeter/Flight
Time
Pitot System - Heated
Static System
Alternate Static Source
Dual Vacuum Pump System, Engine Driven
Audible Stall Warning System

FUEL SYSTEM:

Electric Auxiliary Fuel Pump
Engine Driven Fuel Pump
Integral Fuel Tanks, 53 Gal. Usable
Fuel Selector Valve, Left/Both/Right
Fuel Shutoff
Fuel Strainer, Incorporated with
Fuselage Quick Drain
Fuel Tank Quick Drain, 5 per wing
Fuel Sampler Cup
Fuel Vapor Return System

INTERIOR:

Mink Leather/ Mink Vinyl Seats
w/Mink Leather Insert
Seat Belts & Shoulder Harness,
Inertia Reel, All Seats
Pilot and Copilot Seats

- Adjustable Fore and Aft
- Reclining Backs
- Vertical Adjustment

Rear Seat Bench w/One Piece
Reclining Back
Kydex Upholstery w/Cloth Insert
Approach Plate Holder, Pilot Control
Wheel
Armrests - Pilot & Copilot
Doors/Passengers Side Wall
Wall-to-Wall Carpet
Pilot's Check List
Pilot's Operating Handbook
Fire Extinguisher, Hand Held
Glareshield w/Lighting
Clothes Hanger Bar
Metal Instrument Panel, w/Removable
Subpanels
Map/Glove Compartment
Baggage Net
Radio Call Plate
Map & Storage Pockets
Sun Visors, Pilot/Copilot
Cup Holders - Passengers
Control Wheel Lock - Pilot/Copilot
Jepp Manual Storage Console w/Cup Holders
Tow Bar

INTERIOR LIGHTING:

Avionics Instruments Internally Lighted
Avionics Radios Internally Lighted
Engine Instruments-Internally Lighted
Flight Instruments Internally Lighted
Glareshield Lighting
Interior Lights Dimming Control
Map Light, Pilot Control Wheel
Cabin Overhead Lights,
Pilot/Copilot/Passenger
Compass Internally Lighted
Fuel Selector Lighting

POWER PLANT & ACCESSORIES:

Lycoming IO-360-L2A Engine
180 HP @ 2700 RPM
Certified for 100LL & 100 Fuel
Fuel Injection System
Tubular Steel Engine Mount
Dynafoal Rear Mount
Automatic Alternate Engine Air
Oil Cooler
Shock Mounted Cowling
Induction Air Filter
Full Flow Oil Filter
Throttle Control
Vernier Mixture Control
Dual Ignition System, Shielded Magneto
Engine Exhaust Muffler
McCauley Fixed Pitch 2-Blade
Metal Propeller
Propeller Spinner, Polished
Electric Starter

Performance

Conditions

All estimated performance data are based on airplane weights at 2,550 pounds; standard atmospheric conditions; level, hard-surface, dry runways; and no wind. They are calculated values derived from flight tests conducted by Cessna Aircraft Company under carefully documented conditions and will vary with individual airplanes, pilots, and numerous other factors affecting flight performance.

Speed, CAS

Maximum at sea level 126 kts

Cruise, 75% power at 8,500 ft 124 kts

Cruise (Recommended lean mixture with fuel allowance for engine start, taxi, takeoff, climb and 45-minute reserve)

75% power at 8,500 ft range 518 nm (959 km)

53 gallons usable fuel time 4.26 hr

45% power at 10,000 ft range 638 nm (1,182 km)

53 gallons usable fuel time 6.72 hr

Rate of Climb at Sea Level 730 fpm (223 mpm)

Service Ceiling 14,000 ft (4,267 m)

Takeoff Performance

Ground roll 960 ft (293 m)

Total distance over 50-ft obstacle 1,630 ft (497 m)

Landing Performance

Ground roll 575 ft (175 m)

Total distance over 50-ft obstacle 1,335 ft (407 m)

Stall Speed, CAS

Flaps up, power off 53 kts

Flaps down, power off 48 kts

Wing Loading 14.7 lbs/sq ft (71.8 kg/sq m)

Power Loading 14.2 lbs/hp (6.4 kg/hp)

Engine: Textron Lycoming IO-360-L2A

180 BHP at 2,700 RPM

Propeller: 2-bladed Fixed Pitch, Diameter 76 in (1.9 m)

Specifications subject to change without notice.

Optional Equipment

Avionics

NAV I:

Standard Avionics Plus:

KLN 94 GPS-IFR

KLN-94 Data Cable

KLN-94 Data Card

MD 41-231 GPS-Nav Selector/Annunciator

155A Nav/Comm With Glideslope

KI 209A VOR/LOC/GS Indicator
With GPS Interface

NAV Antenna Coupler

• CI-2480 VHF-GPS Antenna
w/Internal Notch Filter

NAV II:

Standard Avionics Plus:

KLN 94 GPS-IFR

KLN-94 Data Cable

KLN-94 Data Card

MD 41-231 GPS-NAV
Selector/Annunciator (w/o MFD or HSI)

KX 155A Nav/Comm With Glideslope
(w/o HSI)

KI 209A VOR/LOC/GS Indicator With
GPS Interface (w/o HSI)

NAV Antenna Coupler

CI-2480 VHF/GPS Antenna
w/Internal Notch Filter

KAP 140 Two-axis Autopilot With Altitude
Preselect

KCM-100 Configuration Module

KS-270C Pitch Axis Servo Actuator

KS-271C Roll Axis Servo Actuator

KS-272C Elevator Trim Servo Actuator
Annunciator Panel w/ Pitch Trim Light
Exchanged w/ standard Annunciator
Panel

Directional Gyro - w/Heading Bug
Exchanged w/standard Directional Gyro

Pilot Control Wheel - Pitch Trim
Switch/AP Disconnect Exchanged
w/standard Pilot Control Wheel

Air Conditioning

Keith Products (STC)

ADF: with NAV I & NAV II only

KR 87 ADF System

KI-227 ADF Indicator

KA-44B ADF Antenna

KFC-55A HSI: with NAV II only *

KI 525 Pictorial Navigation Indicator (HSI)
Exchanged w/standard Directional Gyro

KG-102 Directional Gyro

KMT-112 Magnetic Azimuth Transmitter
(Flux Valve)

KA-51 Slaving Accessory

MD 41-233 GPS-Nav (HSI) Selector/
Annunciator (w/o MFD)

MD-41-24P Remote Relay Unit

KX-165A NAV/COM w/Glideslope

MFD: with NAV II only

KMD 540 Multifunction Display

KMD-540 Data Card - North America

CSE Avionics Selector/Annunciator
NAV/GPS (w/o HSI)

CSE Avionics Selector/Annunciator
HSI/NAV/GPS (w/HSI)

FIS & EGPWS Wire Provisions

SSD-120-30A-RS232 Blind Encoder
Exchanged w/ Standard Blind Encoder

KDR 510 FIS: with NAV II and MFD only

KDR-510 VDL Receiver (FIS)

CI-248 FIS Antenna

KAC-503 FIS Module

Exterior Striping Options

516B: Light Slate Metallic, China
Blue Metallic, and Charcoal
Metallic Vinyl Stripes; China Blue
Metallic Vinyl Cessna Logo;
Charcoal Metallic Vinyl Registration
Number; China Blue Metallic and
Charcoal Metallic Vinyl Skyhawk
SP Logo

516C: Wedgewood Blue, Burgundy,
and Light Navy Vinyl Stripes;
Burgundy Vinyl Cessna Logo; Light
Navy Vinyl Registration Number;
Burgundy and Light Navy Vinyl
Skyhawk SP Logo

Interior

Leather Seat Surfaces

Mink Leather, w/Perforated Mink
Leather Insert/Mink Vinyl