

FEDERAL AVIATION AGENCY

H-3 Sheet 1 Revision 3 SIKORSKY S-52 July 14, 1961

HELICOPTER SPECIFICATION NO. H-3

Manufacturer Sikorsky Aircraft, Division of United Aircraft Corp.,
Bridgeport 1, Conn.

I - Model S-52, 2 PCLH, Approved February 25, 1948

Engine	Aircooled Motors, Franklin 6V4-165-B32F												
Fuel	91 minimum grade aviation gasoline												
Engine limits	3000 rpm (165 hp net after cooling)												
Airspeed limits	Never exceed 100 mph True Ind.												
Rotor limits	Maximum 320 rpm Minimum 270 rpm												
Altitude limits	Avoid slow speed operation between 10 and 300 ft. above the ground surface. (See approved flight manual)												
C.G. range	(73.4) to (77.7)												
Empty weight C.G. range	None												
Datum	79.2 inches forward centerline main rotor shaft												
Leveling means	Main rotor shaft perpendicular												
Maximum weight	2100 lbs.												
No. of seats	2 (43) (Minimum crew 1)												
Maximum baggage	75 lbs. (71)												
Fuel capacity	41 gals. (73)												
Oil capacity	2 gals. (82)												
Rotor blade	Main rotor collective pitch 3.25° to 15.3° Main rotor azimuth pitch angles, with collective pitch control at 3.25° and the blades on the droop and starting stops, are as follows: On blade placed at 90° to left of fuselage centerline: <table> <tr> <td>Extreme Stick Position</td> <td>Blade Angle</td> </tr> <tr> <td>Forward</td> <td>-3°</td> </tr> <tr> <td>Aft</td> <td>+11°</td> </tr> </table> On blade placed in extreme forward position: <table> <tr> <td>Extreme Stick Position</td> <td>Blade Angle</td> </tr> <tr> <td>Left</td> <td>+4°</td> </tr> <tr> <td>Right</td> <td>-3°</td> </tr> </table> Mechanical limits of main rotor coning: -3° to +30° Mechanical limits of main rotor hunting: 0 to -3° (autorotation)	Extreme Stick Position	Blade Angle	Forward	-3°	Aft	+11°	Extreme Stick Position	Blade Angle	Left	+4°	Right	-3°
Extreme Stick Position	Blade Angle												
Forward	-3°												
Aft	+11°												
Extreme Stick Position	Blade Angle												
Left	+4°												
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Page No.	1	2	3
Rev No.	3	3	3

0 to +20° (starting)
Tail rotor collective pitch -3.5° to +22°

Serial Nos. eligible	52001 thru 52003
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: Items 1, 2, 101, 102, 103, 201, 202, 203, 204, 301, 302, 401

Specifications Pertinent to All Models

Certification basis	Type Certificate No. 3 (CAR 6)
Production basis	None. Prior to original certification a FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.
Equipment:	A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change between that item and the equivalent required item.

Rotors and Rotor Equipment

1. Main rotor blades (3) Sikorsky Dwg. (S-11-10-2000)	106 lbs.	(79)
2. Tail rotor blades (2) Sikorsky Dwg. (S-11-15-2020)	3 lbs.	(312)

Engine and Engine Accessories - Fuel and Oil System

101. Starter (Delco-Remy 12 volt manual engaging)	18 lbs.	(79)
102. Oil cooler (Heat Exchanger, Inc.)	15 lbs.	(63)
103. Main gear box (Dwg. S-11-35-4000)	71 lbs.	(76)

Landing Gear

201. 2 Main wheel-brake assemblies (5.00-5) - Goodyear Wheel assembly No. 9510130	8 lbs.	(89)
Brake assembly No. 9510120	4 lbs.	(89)
202. 2 Main wheel 4-ply rating tires and tubes (5.00-5)	8 lbs.	(89)
203. 1 Nose wheel (Goodyear 10") Assembly No. 510646-M	2 lbs.	(14)
204. 1 Nose wheel 6-ply rating tire and tube (U.S. Royal 10" channel tread).	4 lbs.	(14)

Electrical Equipment

301. Voltage regulator, Auto-Lite VSR-4007-C	2 lbs.	(88)
302. Battery, AW12-25 Willard 27 lbs. (127.5)		
303. Generator (12 volt furnished with engine)	11 lbs.	(79)
304. Landing light, Grimes D-3150-2	2 lbs.	(6)
305. Position lights, Grimes Model E		Neglect weight
306. Tail light, Grimes Model S		Neglect weight

Interior Equipment

401. CAA Approved Helicopter Flight Manual		
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NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each helicopter at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).

NOTE 2. The following placards must be displayed on the instrument panel in full view of the pilot:

- "This helicopter must be operated in accordance with the operating limitations (or pertinent sections) of the CAA Approved Helicopter Flight Manual."
- "No Acrobatic Maneuvers Approved."
- "Instrument Flight Prohibited."
- "Avoid operation between 1800 - 2100 rpm."
- "Maximum operating rpm 3000 rpm.
Minimum operating rpm at sea level - 2800.
Minimum operating rpm at 5000 feet - 2875."

Minimum operating rpm at 10,000 feet - 2950.

Minimum operating rpm at 13,600 feet - 3000."

- (f) "Avoid slow speed operation between 10 and 300 feet. (see Flight Manual)."

NOTE 3. These helicopters must be maintained in conformance with instructions given by Sikorsky Aircraft in its Service Inspection Guide Report, SER-1805.

NOTE 4. Information essential to the proper maintenance of the helicopter including retirement times of critical parts is included in the manufacturer's service instructions provided with each helicopter.

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