

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1H2
Revision 4
VERTICAL AVIATION
S-52-2
(Military YH-18A)
S-52-3
(Military HO5S-1)
October 23, 2019

TYPE CERTIFICATE DATA SHEET NO. 1H2

This data sheet, which is part of Type Certificate (TC) Number 1H2, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

TYPE CERTIFICATE (TC) HOLDER: Vertical Aviation Technologies, Inc.
1609 Hangar Rd.
Sanford, FL 32773

TYPE CERTIFICATE HOLDER RECORD: Sikorsky Aircraft Corporation
6900 Main Street
Stratford, CT 06615-9129

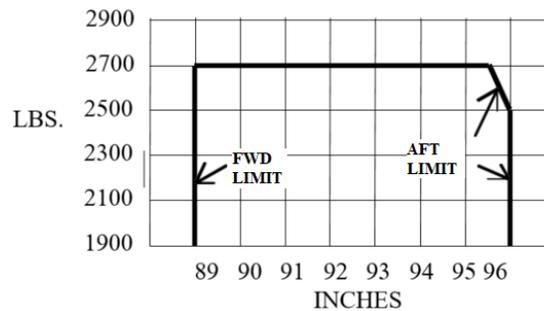
I-model S-52-2, 4 PCLH, Approved February 13, 1951; Model S-52-3, 4 PCLH, Approved January 31, 1952 (See note 4 for YH-18A and HO55-1)

Model S-52-3 similar to Model S-52-2 except for the addition of a V-type stabilizer, fuel system changes, electrical system changes and other minor revisions.

Engine	Aircooled Motors, Franklin 6V6-245-B16F (Military 0-425-1)
Fuel	91 minimum grade aviation gasoline
Engine limits	For all operations, 3275 rpm (245hp)
Rotor limits	Maximum 350 rpm. Minimum 260 rpm.
Airspeed limits	Never exceed (S-52-2) 100 knots True Ind. (S-52-3) 95 knots True Ind.

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C.G. range (S-52-2)
 (+89) to (+95.5) at 2700 lbs.
 (+89) to (+96.0) at 2500 lbs. or less
 Straight line variation between points given



(S-52-3) (+88) to (+94)

Empty weight C.G. range	None												
Datum	91 in. forward of centerline main rotor shaft												
Leveling means	Main rotor shaft perpendicular												
Maximum weight	2700 lbs.												
No. of seats	4 (Two at +50 and two at +87)												
Maximum baggage	<table border="0"> <tr> <td>Footwell, RH</td> <td>100 lbs.</td> <td>(+68)</td> </tr> <tr> <td>Footwell, LH</td> <td>100 lbs.</td> <td>(+68)</td> </tr> <tr> <td>Aft passenger position, RH</td> <td>200 lbs.</td> <td>(+87)</td> </tr> <tr> <td>Aft passenger position, LH</td> <td>200 lbs.</td> <td>(+87)</td> </tr> </table>	Footwell, RH	100 lbs.	(+68)	Footwell, LH	100 lbs.	(+68)	Aft passenger position, RH	200 lbs.	(+87)	Aft passenger position, LH	200 lbs.	(+87)
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Aft passenger position, RH	200 lbs.	(+87)											
Aft passenger position, LH	200 lbs.	(+87)											
Fuel capacity	(S-52-2) 61 gals. (+89.5); (S-52-3) 57 gals. (+89.5)												
Oil capacity	(S-52-2) 3.1 gals. (+108); (S-52-2) 3.5 gals. (+108)												
Rotor blade movements	For rotor rigging information see Erection and Maintenance Manual and applicable Service Information Circulars.												
Serial Nos. eligible	(S-52-2) 52005, 52006, 52008 (S-52-3) 52009 through 52095												
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: Items 101, 102, 201(a), 202, 205(a), 206, 302, 303, 401												
Datum	91 in. forward of centerline main rotor shaft												
Leveling means	Main rotor shaft perpendicular												
Maximum weight	2700 lbs.												
No. of seats	4 (Two at +50 and two at +87)												
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Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: Items 101, 102, 201(a), 202, 205(a), 206, 302, 303, 401.

Specifications Pertinent to All Models

Certification basis	Type Certificate No. 1H2 (Combination CAR 06, March 1, 1950, and CAR 6, January 15, 1951)
Production basis	Production Certificate No. 105
Equipment:	A plus (+) or minus (-) sign preceding the weight of an item indicates the net weight change when that item is installed.

Engine and Engine Accessories - Fuel and Oil System

101. Starter (Eclipse Pioneer) AN4116R1, Direct cranking	20 lbs. (+131)
102. Oil cooler & attaching parts (Harrison Radiator 10439B)	9 lbs. (+128)

Landing Gear

201. 2 Main wheel-brake assemblies, 5.00-5, Type III, (a) Goodyear Model L5HBM Wheel Assembly No. 9520265 Brake Assembly No. 9520425	8 lbs. (+106)
202. 2 Main wheel 6 ply-rating tires, 5.00-5, Type III, with regular tubes	11 lbs. (+106)
205. 2 Nose wheels, 10.00, Type I (a) Firestone Model B0200	4 lbs. (+36)
206. 2 Nose wheel 8 ply-rating tires, 10.00, Type I, channel tread, with regular tubes	5 lbs. (+36)

Electrical Equipment

301. Deleted - March 10, 1952	
302. Battery, AN 3151, 24V	47 lbs. (+6)
303. Generator, Eclipse-Pioneer 1298-1	23 lbs. (+133)
304. Two landing lights, Grimes D-3150-4	3 lbs. (+34)
305. Position Lights, AN3033-3, -4	Neglect weight
306. Tail light, Grimes S	Neglect weight

Interior Equipment

401. CAA Approved Helicopter Flight Manual dated January 31, 1952	
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NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions 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). When changes are made to the helicopter which affect weight and balance, see instructions contained in Section IV of the Flight Manual.

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

- (a) "This helicopter must be operated in compliance with the operating limitations specified in the CAA Approved Rotorcraft Flight Manual."
- (b) "Acrobatic and Instrument Flight Prohibited."
- (c) "Decrease Vne 4 knots per thousand feet of altitude above sea level."
- (d) "15 minute fuel supply remains when red light is on."

The following placard must be displayed on controls cover between rear passenger positions:

(a) "Maximum cargo weight	600#
(1) Each footwell	100#
(2) Each rear passenger position	200#

For loading instructions see section 4 of the Flight Manual."

NOTE 3. Information essential to the proper maintenance of the helicopter including retirement of critical parts is included in the manufacturer's service instructions provided with each helicopter.

NOTE 4. Information regarding modifications to be accomplished prior to civil certification of Military Models YH- 18A and HO5S-1 should be obtained from Sikorsky Aircraft. Specific conversion details for the Model HO5S-1 are provided in Sikorsky SPECIAL SERVICE INSTRUCTION NO. 101.

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