

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

<p>R00024BO Revision 1</p> <p>Sikorsky Model S-92A</p> <p>May 7, 2004</p>

TYPE CERTIFICATE DATA SHEET NO. R00024BO

This data sheet, which is part of Type Certificate (TC) Number R00024BO, 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: Sikorsky Aircraft Corporation
6900 Main Street
Stratford, CT 06497-9129

MODEL NUMBER	S-92A (Transport Helicopter, Category A, Approved 17 December 2002; Transport Helicopter, Category B, Approved May 7, 2004)
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ENGINES 2 General Electric Company Model GE CT7-8 (TC E8NE)

FUELS JET A, Jet A-1, JP-5, JP-8
For all operations below -20°C (-4°F) ambient temperature, all fuel used must contain MIL-DTL-85470(B) or equivalent anti-icing additive in concentrations of not less than 0.1% or more than 1.5% by volume

ENGINE AND TRANSMISSION LIMITS

DUAL ENGINE LIMITS							
Rating	Time	Q (%)	T4.5 (°C)	Ng (%)	Np (%)	Rated SHP @ SLS	Rated Np (%)
Max continuous		100	920	99.9	106	2043	105
		86 (1) when airspeed is greater than 100 KIAS					
30 Min (2)	30 min	100	957	101.5	106	2336	105
Takeoff	5 min	100	986	102.9	106	2520	105
Transient	12 sec		1013	103.9	115		
	10 sec	120 (3)					

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SINGLE ENGINE LIMITS							
Rating	Time	Q (%)	T4.5 (°C)	Ng (%)	Np (%)	Rated SHP @ SLS	Rated Np (%)
Max continuous		120	920	99.9	106	2043	105
OEI	30 min	120	979	102.4	106	2498	100
OEI	2 min	120	990	102.9	106	2520	100
OEI	30 sec	135	1010	103.7	106	2600	100
Transient	12 sec		1013	103.9	115		
	5 sec	156 (3)					
Max starting	peak		1000				

- Shaded box with bold number denotes a FADEC controlled limiter value.
- Q (%) values are gearbox limits.
- (1) 86% Q is not a gearbox limit. Its purpose is to limit flight control loads at high speed thereby preserving dynamic component replacement times.
- (2) Rating applies to hovering flight only.
- (3) Associated with abnormal rotor droop at FADEC controlled dual engine or OEI limit.
- 100% Q corresponds to a combined power input from both engines to the MGB of 4,170 shp at a rotor speed of 105% (258 rpm). Power turbine speed (Np) of 105% corresponds to 21,945 rpm.
- Maximum continuous dual engine torque may exceed 100% on one engine to a maximum of 110% provided that the torque on the other engine is proportionally less than 100% and the sum of the individual torque values does not exceed 200%.
- Np overspeed trip is at 121%.

ROTOR SPEED LIMITS

POWER OFF
Maximum 110% N _r
Minimum 95% N _r
POWER ON
Maximum 110% N _r
Minimum 95% N _r

DRIVE SYSTEM LIMITS

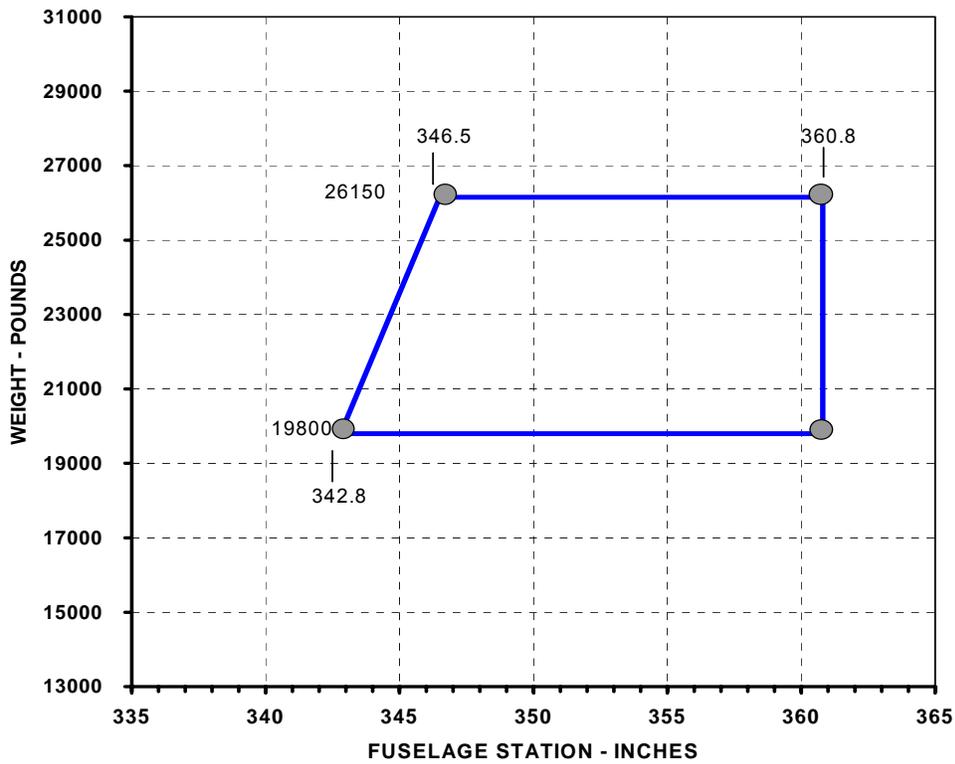
Dual Engine			
Torque (%)	No Inspect Req'd	Serviceability Check	Remove/Replace MGB
0% to 100%	Continuous		
101% to 120%	< 10 sec	≥ 10 sec	
121% to 140%		< 10 sec	≥ 10 sec
greater than 140%			Any occurrence

Single Engine			
Torque (%)	No Inspect Req'd	Serviceability Check	Remove/Replace MGB
0% to 120%	Continuous		
121% to 135%	< 30 sec	≥ 30 sec	
136% to 156%		< 5 sec	≥ 5 sec
greater than 156%			Any occurrence

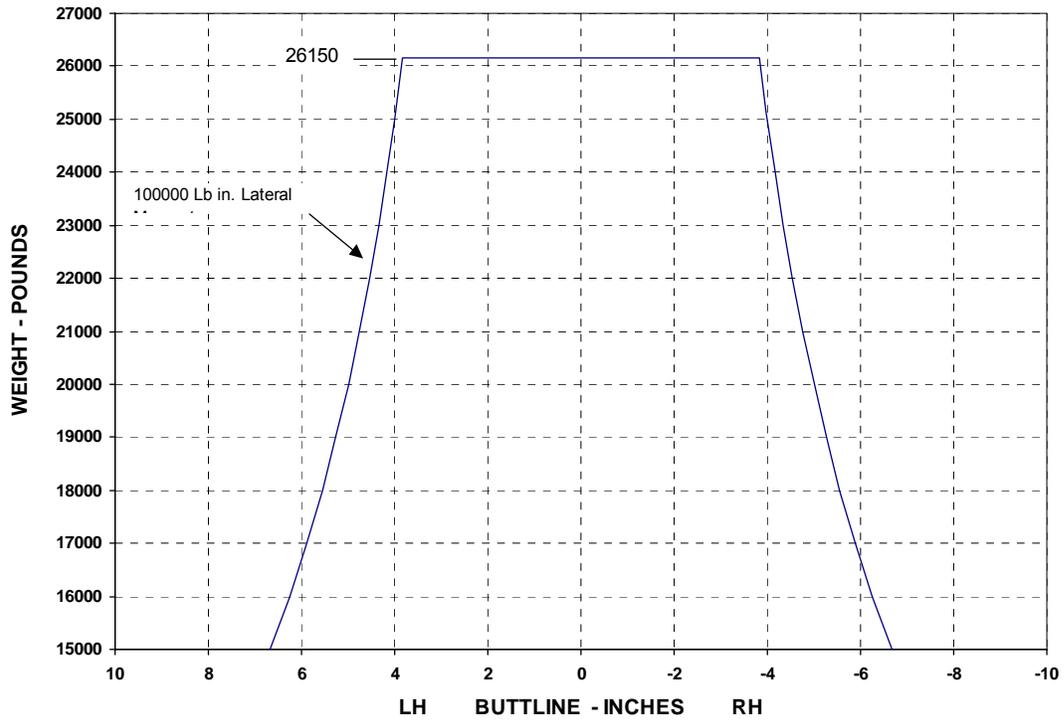
AIRSPEED LIMITS

Vne (never exceed) Power On	165 KIAS. See Rotorcraft Flight Manual for variations of Vne with gross weight and density altitude.
Vle/Vlo (gear extended/gear operating)	165 KIAS/165 KIAS.
Vne with floats "armed"	80 KIAS.
Vne Power Off	120 KIAS.

CENTER OF GRAVITY (CG) LIMITS



LATERAL C.G. LIMITS:



EMPTY WEIGHT C.G. RANGE

None

DATUM

341.2 inches forward of the main rotor centroid

LEVELING MEANS

Leveling plate at STA 238.3, BL 40 RH, and plumb line from top of RH forward doorframe.

MAXIMUM WEIGHT

26,150 pounds

ALTITUDE LIMITS

Takeoff and landing
3,500 feet density altitude

Enroute
15,000 feet density altitude

AMBIENT TEMPERATURE LIMITS

-40°C to ISA+29°C. Pre-heat must be used for cold soak starts when the OAT is -25°C or below. See Rotorcraft Flight Manual for Cold Weather Procedures.

MINIMUM FLIGHT CREW

Two pilots

NUMBER OF PASSENGERS	(see Note 6)
MAXIMUM BAGGAGE	700 pounds
FUEL CAPACITY	765 gals. (760 usable) at (362.5 inches) (see Note 1)
OIL CAPACITY	See General Electric Installation Manual SEI-866
ROTOR BLADE CONTROL MOVEMENTS	For rigging information refer to Maintenance Manual
MANUFACTURER'S SERIAL NUMBERS	920006 and subsequent
CERTIFICATION BASIS	<p>Type Certificate No. R00024BO 14 CFR Part 29 Amendments 29-1 to 29-45, inclusive 14 CFR Part 36 Amendment 20</p> <p><u>Equivalent Safety Findings:</u> Number TC0309BO-R/F-1 14 CFR Part 29.173 Static longitudinal stability. 14 CFR Part 29.175 Demonstration of static longitudinal stability.</p> <p>Number TC0309BO-R/F-4 14 CFR Part 29.177 Static directional stability.</p> <p>Number TC0309BO-R/A-1 14 CFR Part 29.631, Bird strike.</p> <p>Number TC0309BO-R/P-5 14 CFR Part 29.1181(a)(4) Designated Fire Zones; Regions Included.</p> <p>Number TC0309BO-R/P-1 14 CFR Part 29.1305(a)(24) Power Plant Instruments.</p> <p><u>Special Conditions:</u> No. 29-011-SC for Dual-Engine 30 Minute Power No. 29-008-SC for High Intensity Radiated Frequency</p> <p>Noise Control Act of 1972</p>
PRODUCTION BASIS	PC Number 105
EQUIPMENT	<p>The basic required equipment as prescribed in the applicable Airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.</p> <p>In addition, the following item(s) of equipment is (are) required: Rotorcraft Flight Manual SA S92A-RFM-001 Revision 1 or later FAA approved Revision.</p>

- NOTES -

- NOTE 1 Current weight and balance report, including list of equipment included in certified empty weight, and loading instructions, when necessary, must be provided for each rotorcraft at the time of original certification.
- See Rotorcraft Flight Manual loading section for variations of fuel weight and moment-arm with variations of fuel and fuel quantity.
- NOTE 2 The rotorcraft must be operated in accordance with the FAA approved Rotorcraft Flight Manual, SA S92A-RFM-001, or later FAA approved revision. All placards required in the FAA approved Rotorcraft Flight Manual must be installed in the rotorcraft. The following placard must be displayed in front of and in clear view of the pilots:
- “THIS HELICOPTER MUST BE OPERATED IN ACCORDANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE FAA APPROVED ROTORCRAFT FLIGHT MANUAL.”
- All placards listed in the approved flight manual must be installed in the specified locations.
- NOTE 3 Information essential to the proper maintenance of the rotorcraft is contained in the Sikorsky S-92A Maintenance Manual, Publication SA S92A-AMM-000, and the Airworthiness Limitations and Inspection Requirements Manual SA S92A-AMM-AWL-000 provided with each helicopter. The values of retirement (service) life contained in Chapter 4 of the Airworthiness Limitations and Inspection Requirements Manual or inspection intervals cannot be changed without FAA Engineering approval.
- NOTE 4 The term “Unlimited Life” is defined as 30,000 flight hours for the model S-92A rotorcraft. Operation of individual aircraft beyond 30,000 flight hours is contingent upon a Life Extension Program approved by FAA Engineering.
- NOTE 5 The model S-92A rotorcraft employs electronic engine controls that are recognized to be more susceptible to Electromagnetic Interference (EMI) than manual (non-electronic) controls used on other rotorcraft. EMI may be the result of radiated or conducted interference. For this reason, modifications that add or change systems that have the potential for EMI, must either be qualified to an FAA acceptable standard or tested at the time of installation for interference to the engine controls. This type of testing must employ the particular engine control’s diagnostic techniques and external diagnostic techniques. This testing must be accomplished in accordance with an FAA Engineering approved alternate test plan.
- NOTE 6 This Type Certificate defines configurations that include optional cabin interior furnishings and passenger provisions for carriage of up to 19 passengers. Seats have met the requirements of 14 CFR 29.562 and are to be installed in accordance with the installation limitations of TSO-C127a and of the Type Certificate. All replacement seats (crew and passenger) and foam cushion construction deviations even though compliant with TSO C127(a), must be evaluated for their impact to the surrounding seat envelope and its certification effect on 14 CFR 29.562(c)(5) and the applicable parts of 29.803 through 29.815. Additional optional seating arrangements and related passenger provisions may be approved in accordance with the Type Certificate Basis.

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