DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

1H4
REVISION 34
Centerpointe Aerospace Inc.
S-55
S-55B
S-55C
MILITARY MODELS (See NOTE 7)

September 19, 2019

HELICOPTER SPECIFICATION NO. 1H4

Type Certificate Holder Centerpointe Aerospace Inc.

279 Blackland Road Royse City, TX 75189

Type Certificate Holder Record California Helicopter Airways Inc, became Centerpointe Aerospace Inc. on September 19, 2019.

Sikorsky Aircraft transferred TC 1H4 to California Helicopter Airways Inc. on May 06, 2015.

I. MODEL NUMBER: S-55, 9-12 PCLH. Approved 03/25/52

S-55C, 9-12 PCLH. Approved 10/03/56

(Model S-55C is the same as Model S-55 except for an inclined tail cone and minor modifications. See Item 207 for amphibious gear and Items 208, 209, and 210 for float

gears.)

Engines P&W Wasp S1H2 (See Item 101 for optional engines)

Fuel 80/87 minimum grade aviation gasoline

Engine Limits Maximum continuous

Sea Level

35.0 in. Hg., 2,200 rpm (550 hp)

Straight line manifold pressure variation with altitude to 8,000 ft.

33.0 in. Hg., 2,200 rpm (550 hp)

Takeoff (one minute)

36.5 in. Hg., 2,250 rpm (600 hp)

Rotor Limits: Maximum 245 rpm / Minimum 170 rpm

Airspeed Limits Never exceed 95 knots CAS

C.G. Range (+125.0) to (+136.0)

Empty Weight C.G. Range None

Maximum Weight 7,200 lb.

Number of Seats Nine. (Pilot & co-pilot at +99; 2 passengers at +102; 2 passengers at +153, 3

passengers at +190)

Maximum Baggage 250 lb. (+217). (See Note 5 for cargo capacity)

Fuel Capacity 140 gal (+116). (See Item 107 for auxiliary tank and Note 4 regarding unusable fuel)

Oil Capacity 9.4 gal. (+77)

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Rotor Blade Movements For rigging information, refer to Maintenance Manual.

Serial Numbers Eligible See Note 7.

Required Equipment In addition to the pertinent required basic equipment specified in CAR 6, the following

items of equipment must be installed: 102, 103, 104, 105, 106, 201(a), 202, 205(a),

206, 301(a) or (b), 302, 303, 401(a), 603.

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Specifications pertinent to all models:

Datum 130.6 in. forward of center of main rotor hub.

Leveling Means Plumb line from top of cargo door frame.

Certification Basis Type Certificate No. 1H4 (CAR 6, May 1946)

Production Basis: Production Certificate No. 105

Equipment A plus (+) or a minus (-) sign preceding the weight of an item indicates net weight

change when that item is available.

Engine	and Engine Accessories - Fuel and Oil System	Net Weight Cl	hange
101.	Engines		_
	(a) P&W Military R-1340-57 (same limitations as for S1H2)		None
	(b) P&W Military R-1340-49M1	865 lb.	(+48)
	Engine limits		
	Maximum continuous		
	Sea level: 34.0 in. Hg., 2,200 rpm (550 hp)		
	Straight line manifold pressure variation with altitude		
	to 5,000 ft.: 32.5 in. Hg., 2,200 rpm (550 hp)		
	Takeoff (1 minute): 36.0 in. Hg., 2,250 rpm (600 hp)		
	(c) P&W Military R-1340-40		
	Same limitations as for R-1340-49M1	865 lb.	(+48)
	(d) Canadian-built P&W S1H2		
	Same limitations and weights as for S1H2 engines		
	(e) Canadian-built P&W S3H2		
	Same limitations as R1340-40. See 101(c)		
102.	Starter Model AN4116L3 or AN4116L7B	28 lb.	(+29)
			(/
103.	Auxiliary Fuel Pump, Electric		
	(a) Thompson Model TF 36800-1	3 lb.	(+41)
	(b) Lear-Romec Model RG 9790-3A	6 lb.	(+41)
	(c) Adel Model 26900-1 or -3	2 lb.	(+41)
	(d) Adel Model 24000-1 or -3	3 lb.	(+41)
104.	Fuel pump, engine-driven, Model AN4100-1	3 lb.	(+41)
105.	Oil cooler, engine, Harrison Radiator Co.		
105.	No. 8518060 or No. 8520619	17 lb	(+72)
	NO. 0310000 01 NO. 0320019	17 10.	(+12)
106.	Oil cooler, transmission, Harrison Radiator Co.		
	No. 8517955; Fan, transmission, Sikorsky Dwg. S14-35-5053	26 lb.	(+165)
40=			
107.	Auxiliary 85 gal fuel tank installation in accordance with Sikorsky Dwg. S14-30-6280,		
	fuel arm at (+184). Load adjuster required with this installation.	10.33	(104)
	Fuel tank		(+184)
	Fuel transfer pump	4 lb.	(+175)

Landii	ng Gear	
201.	Two main wheel-brake assemblies, 6.50-10, Type III (a) Goodyear Model L610HBM Wheel assembly No. 530858M, 9530853, or 9531954	20 lb. (+186)
	Brake assembly No. 9520926	
202.	Two main wheel, 6-ply rating tires, 7.50-10, Type III, with regular tubes	33 lb. (+186)
205.	Two nose wheel assemblies, 6.06-06, Type III	
	(a) Goodyear Model L6MBD	8 lb. (+60)
	Wheel Assembly No. 511500-M	
206.	Two nose wheel, 6-ply rating tires, 6.00-6, Type III, with regular tubes	15 lb. (+60)
207.	Amphibious gear installed in accordance with Sikorsky Dwg. S14-25-6100:	
	Float assembly	410 lb. (+117)
	Nose wheel assembly	78 lb. (+6)
	Main wheel assembly	59 lb. (+203)
	Float struts, tubes, etc. Airspeed limit: Never exceed 85 knots CAS.	44 lb. (+84)
	Maximum weight: 6,835 lb.	
208.	Inflatable type float gear installed in accordance with Sikorsky Dwg. S14-25-6250.	
200.	Removable portion (with S14-25-6251 or S14-25-6316 dampers)	307 lb. (+139)
	Removable portion (with S14-25-6288 dampers)	296 lb. (+139)
	Permanent portion (fuselage modification)	8 lb. (+106)
	Item 401(g) required with this installation.	
209.	Emergency inflatable float gear installed in accordance with Sikorsky Dwg. S14-25-6350.	170 lb. (+124)
	Item 401(h) required with this installation	
210.	Fixed emergency float gear installed in accordance with Sikorsky Dwg. S14-25-6450. Exhaust modification in accordance with Sikorsky Dwg. S14-05-3183 required.	169 lb. (+106)
	Item 401(j) required with this installation	
Electr	ical Equipment	
301.	Generator	
	(a) (1) 24V, 200 Amp., Eclipse-Pioneer 30E18	40 lb. (+148)
	(2) 24V, 200 Amp., General Electric 2CM63C	34 lb. (+148)
	(b) 24 V, 100 amp., Eclipse-Pioneer 901-9	28 lb. (+148)
302.	Battery	
	(a) 24V, 36 Amp. Hr., Model AN3150-2	80 lb. (+212)
	(b) 24V, 24 Amp. Hr., Model AN3151-2	56 lb. (+212)
303.	Two inverters, 115V, A.C. 400 cycle 3 phase, 250 V.A. output, Jack-Heintz Model	36 lb. (+230)
	F15-2 or Eclipse Model 12143-1-A	
304.	Two landing lights	
	(a) 24V, 600W, Model AN3095-9 (with Item 302(a) only)	13 lb. (+214)
	(b) 24V, 250W, Model AN3095-8	13 lb (+214)

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Interior Equipment

- 401. (a) FAA Approved Helicopter Flight Manual, dated 4 January 1954, revised 9 July 1957. This issue supersedes issue dated 25 March 1952.
 - (b) Supplement dated 29 August 1952, revised 25 August 1955 to FAA Approved Helicopter Flight Manual. Contains operational information for Items 601 and 602.
 - (c) (d) (e) (f) Deleted 25 June 1954.
 - (g) Supplement dated 7 December 1954, revised 9 July 1957, to FAA Approved
 - (h) Supplement dated 20 December 1955, revised 17 March 1959, to FAA Approved Helicopter Flight Manual. Required when Item 209 is installed.
 - Supplement dated 29 January 1956 to FAA Approved Helicopter Flight Manual. Contains operational information for Item 606.
 - (j) Supplement dated 17 August 1956, revised 9 July 1957, to FAA Approved Helicopter Flight Manual. Required when Item 210 is installed.
 - (k) Deleted 17 October 1962.
 - Supplement dated 21 February 1957, to FAA Approved Helicopter Flight Manual. Contains operational information for Item 607.
- 402. Troop Seats, Military Specification MIL-S-5804

(a)	3-place seat	12 lb. (+100)
(b)	4-place seat	21 lb. (+165)
(c)	3-place seat	13 lb. (+176)

Miscellaneous Equipment (not listed above)

601. Hydraulic hoist installation in accordance with Sikorsky Dwg. No. S14-50-2240

External hoist portion	17 lb. (+117)
Internal hoist winch	27 lb. (+215)
Hoist guillotine and cable guard	2 lb. (+156)
See Note 6 for operating limitations.	

Neglect

- 602. Cargo sling installation in accordance with Sikorsky Dwg. No. S14-50-2500 See Note 6 for operating limitations.
- 603. Fixed stabilizer installation in accordance with Sikorsky Dwg. S14-40-8211 and Sikorsky Service Information Circular 1440-298 Supp. 3. (Required only for 7,200 lb.).
- 604. Tail rotor assembly, S14-15-1500-5 (105 inch diameter). Installed in accordance with Sikorsky Service Information Circular No. 1415-444, dated 18 February 1954, and Revision A, dated 25 August 1954. See Service Information Circular for weight change.
- 605. Main rotor blades installed in accordance with Sikorsky Dwg. No. S14-10-2100. +8 lb. (+131)
- 606. Hydraulic Hoist Installation in accordance with Sikorsky Dwg. No. S14-05-5021

With Breeze Winch P/N BL 413	109 lb. (+137)
With Breeze Winch P/N BL 1315	94 lb. (+137)
See Note 6 for operating limitations.	

- 607. Cargo sling installation in accordance with Sikorsky Dwg. No. S14-50-2530. See Note 6 for operating limitations.
- 608. Inclined tail cone installation in accordance with Sikorsky Kit Dwg. S14-05-2134 (S-55 only) +26 lb. (+391)

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. In the case of air carrier operators having an approved weight control system, the weight and balance report need not be in the helicopter. When changes are made to the helicopter which affect weight and balance, see instructions contained in Section IV of the Flight Manual.

P&W R1340-40, -49M1 Engines

M.P. at 2,200 R.P.M.

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 FAA Approved Rotorcraft Flight Manual."
- (b) Deleted 25 June 1954.
- (c) Deleted 25 June 1954.
- (d) "Decrease V_{NE} 4.5 knots per 1,000 ft. altitude."

P&W R1340-57, S1H2 Engines

M.P. at 2,200 R.P.M.

(e) "Manifold Pressure Placard":

For leve	l flight only	For level flight only		
ALT.	M.P. IN. BG.	ALT.	M.P. IN. HG.	
S.L.	35.0	S.L.	34.0	
2,000	31.5	2,000	30.5	
4,000	28.5	4,000	27.5	
6,000	26.0	6,000	25.0	
8,000	23.5	8,000	22.5	
10.000	22.0	10,000	21.0	

- (f) "During ground idling left window <u>must</u> be closed to prevent excessive carbon monoxide in pilot's compartment."
- (g) "With Amphibious Gear installed decrease V_{NE} 4.5 knots per 1,000 ft. altitude above 2,000 ft." (Required when Item 207 is installed.)
- NOTE 3: Information essential to the proper maintenance of the helicopter including retirement time of critical parts is contained in the Sikorsky S-55 Maintenance Manual provided with each helicopter. These values of retirement or service life should not be increased without FAA engineering approval.
- NOTE 4: Fuel and oil capacities as indicated are total tank capacities. The forward fuel tank capacity includes unusable fuel of 4.75 gal., the aft fuel tank (auxiliary) includes unusable fuel of 2.5 gal., which must be included in the empty weight. These values correspond to the rotorcraft ground altitude which is 1-1/2° nose up.
- NOTE 5: The cabin floor area between Stations 84 and 206 is structurally satisfactory for a uniformly distributed loading of 175 p.s.f. when used for cargo purposes.
- NOTE 6: The hydraulic hoist (Items 601, 606) and the cargo sling (Items 602, 607) are special purpose equipment and are to be operated in accordance with the limitations described in CAR 8. Information concerning the operating limitations is also contained in the Helicopter Flight Manual.

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NOTE 7: The following serial numbers are eligible:

GROUP A: COMMERCIAL MODELS

| SERIAL
NUMBER |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| NUMBER |
55034	55100	55143	55160	55161	55252	55270	55278	55279
55292	55306	55325	55383	55385	55389	55433	55434	55458
55482	55507	55508	55532	55533	55558	55559	55560	55561
55584	55585	55586	55587	55610	55633	55670	55671	55690
55691	55692	55707	55708	55725	55726	55727	55728	55743
55744	55745	55750	55757	55758	55759	55770	55771	55772
55773	55785	55791	55808	55825	55838	55840	55841	55842
55879	55880	55881	55882	55883	55884	55888	55889	55890
55896	55897	55903	55904	55910	55911	55912	55928	55939
55940	55960	55981	55992	551002	551003	551004	551005	551015C
551020A	551022C	551050C	551059C	551067C	551068C	551070C	551077C	551078C
551089C	551090C	551109C	551113C	551114C	551115C	551122C	551123C	551124C
551133C	551134C	551143C	551144C	551145C	551154C	551155C	551156C	551164C
551165C	551166C	551174C	551175C	551183C	551190	551206	551207	551215
551222	551223	551224	551225					

GROUP B: MILITARY CONVERSIONS

The following serial numbers refer to military helicopters that have been converted to S-55B for identification purposes only:

Eligible for certification as a modified version of the S-55 and is known as the S-55B for identification purposes. The modifications include incorporation of the Wright R-1300-3 engine, hydromechanical clutch and electrical and fuel system changes. Item 401(a) and revision No. 1 dated 9 March 1959 required for Serial No. 55617.

1328: (Military serial number.) An S-55B helicopter (surplus military UH-19G) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued May 10, 1978.

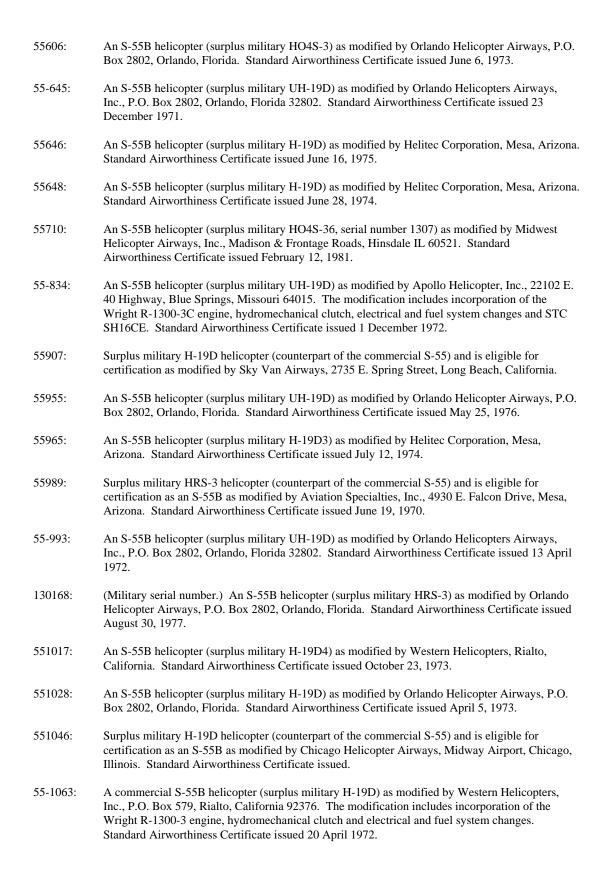
55020: Surplus military HRS-1 helicopter (counterpart of the commercial S-55) and is eligible for certification as modified by Nayak Aviation Corporation, 206 E. Terminal Drive, International Airport, San Antonio, Texas. Standard Airworthiness Certificates issued.

55040: Surplus military HRS-1 helicopter (counterpart of the commercial S-55) and is eligible for certification as modified by Airnews, Inc., International Airport, San Antonio, Texas.

55068: Surplus military HRS-1 helicopter (counterpart of the commercial S-55) and is eligible for certification as modified by Nayak Aviation Corporation, 206 E. Terminal Drive, International Airport, San Antonio, Texas. Standard Airworthiness Certificates issued.

55079:	Surplus military HRS-1 helicopter (counterpart of the commercial S-55) and is eligible for certification as modified by Nayak Aviation Corporation, 206 E. Terminal Drive, International Airport, San Antonio, Texas. Standard Airworthiness Certificates issued.
55102:	An S-55B helicopter (surplus military HRS-3) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued September 5, 1973.
55-105:	An S-55 helicopter which is eligible for certification as an S-55B as modified by California Helicopter Parts, Inc., Sun Valley, California.
55106:	An S-55B helicopter (surplus military HRS-3) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued June 26, 1974.
55124:	Surplus military H-19A helicopter (counterpart of the commercial S-55) and is eligible for certification as modified by World Helicopters, Inc., 2801 E. Spring Street, Long Beach, California.
55188:	Surplus military HRS-3 helicopter (counterpart of the commercial S-55) and is eligible for certification as an S-55B as modified by Olympic Helicopters, Inc., 8241 Perimeter Road, Boeing Field, Seattle, Washington. Standard Airworthiness Certificate issued April 25, 1969.
55-213:	An S-55B helicopter (surplus military CH-19E) as modified by Orlando Helicopters Airways, Inc., P.O. Box 2802, Orlando, Florida 32802. Standard Airworthiness Certificate issued 30 January 1973.
55231:	An S-55B helicopter (surplus military HRS-3) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued September 6, 1973.
55239:	An S-55B helicopter (surplus military CH-19E) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued August 30, 1977.
55260:	An S-55B helicopter (surplus military HRS-3) as modified by Helitec Corporation, Mesa, Arizona. Standard Airworthiness Certificate issued July 7, 1975.
55-324:	An S-55B helicopter (surplus military UH-19B) and is eligible for certification as modified by Deltaire Industries Ltd., 474 Agar Drive, International Airport, South, Vancouver, B.C., Canada, subject to FAA determination of conformity to Sikorsky Civil Certification Report No. 37, dated 20 April 1972.
55337:	An S-55B helicopter (surplus military H-19E) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued April 24, 1978.
55-452:	An S-55B helicopter (surplus military CH-19E) as modified by Orlando Helicopters Airways, Inc., P.O. Box 2802, Orlando, Florida 32802. Standard Airworthiness Certificate issued 16 November 1972.
55503:	An S-55B helicopter (surplus military HO4S-3) as modified by Air International, P.O. Box 603, Miami, Florida. Standard Airworthiness Certificate issued October 2, 1967.
55577:	An S-55B helicopter (surplus military HO4S-3) as modified by Aviation Specialties Co., Mesa, Arizona. Standard Airworthiness Certificate issued.
55579:	An S-55B helicopter (surplus military HO4S-3) as modified by Aviation Specialties, Mesa, Arizona. Standard Airworthiness Certificate issued July 27, 1973.
55582:	An S-55B helicopter (surplus military HO4S-3) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued February 22, 1973.

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551121:	An S-55B helicopter (surplus military H-19D4) as modified by Helitec Corporation, Mesa, Arizona. Standard Airworthiness Certificate issued June 14, 1974.
551130:	An S-55B helicopter (surplus military H-19D) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued June 7, 1973.
551135:	Surplus military HO4S-3G helicopter (counterpart of the commercial S-55) and is eligible for certification as an S-55B as modified by Canadian Helicopters Overhauls Ltd., Vancouver International Airport, Vancouver B.C., Canada. Standard Airworthiness Certificate issued March 27, 1969.
55-1148:	An S-55B helicopter (surplus military H-19D4) as modified by Carson Helicopters, Inc., 32H Blooming Glen Road, Perkasie, PA. Standard Airworthiness Certificate issued on August 22, 1972.
551186:	An S-55B helicopter (surplus military H-19D5) as modified by Aviation Specialties, Mesa, Arizona. Standard Airworthiness Certificate issued September 22, 1971.
551209:	An S-55B helicopter (surplus military H-19D5) as modified by Apollo Helicopters, Blue Springs, Missouri. Standard Airworthiness Certificate issued September 13, 1977.
55-1248:	An S-55B helicopter (surplus military UH-19D) as modified by Orlando Helicopters Airways, Inc., P.O. Box 2802, Orlando, Florida 32802. Standard Airworthiness Certificate issued 21 September 1972.
55-1273:	An S-55B helicopter (surplus military H-19D5) as modified by Aviation Specialties, Inc., 4600 East McKellips Road, Falcon Field, Mesa, Arizona 85201. Standard Airworthiness Certificate issued 12 October 1972.
56-1549:	(Military serial number.) An S-55B helicopter (surplus military UH-19D) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued October 20, 1975.
57-1616:	(Military serial number.) An S-55B helicopter (surplus military UH-19D) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued December 1, 1980.
57-1626:	(Military serial number.) An S-55B helicopter (surplus military UH-19D) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued June 19, 1981.
57-5928:	(Military serial number.) An S-55B helicopter (surplus military UH-19D) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued March 20, 1981.
57-5962:	(Military serial number.) An S-55B helicopter (surplus military UH-19B) as modified by Orlando Helicopter Airways, P.O. Box 2802, Orlando, Florida. Standard Airworthiness Certificate issued September 25, 1979.

GROUP C: CONVERSIONS FROM S-55 TO S-55B MODELS

The following serial numbers refer to helicopters which have been converted from standard S-55 models to S-55B models for identification purposes only:

55270: An S-55 helicopter which is eligible for certification as an S-55B as modified by Carson Helicopters, Inc., 32H Blooming Glen Road, Perkasie, Pennsylvania.

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NOTE 8:

55325: An S-55 helicopter which is eligible for certification as an S-55B as modified by Carson Helicopters, Inc., 32H Blooming Glen Road, Perkasie, Pennsylvania.

55883: An S-55 helicopter which is eligible for certification as an S-55B, as modified by Orlando Helicopter Airways, Inc., PO Box 2802, Orlando, Florida, 32802. This modification includes incorporation of Sikorsky Service Bulletin No. 38. A standard Airworthiness Certificate was issued on July 19, 1989.

55907: An S-55 helicopter which is eligible for certification as an S-55B as modified by Carson Helicopters, Inc., 32H Blooming Glen Road, Perkasie, Pennsylvania.

55912: An S-55 helicopter which is eligible for certification as an S-55B, as modified by Orlando Helicopter Airways, Inc., PO Box 2802, Orlando, Florida, 32802. This modification includes incorporation of Sikorsky Service Bulletin No. 38. A standard Airworthiness Certificate was issued on July 17, 1980.

551005: An S-55 helicopter which is eligible for certification as an S-55B as modified by Carson Helicopters, Inc., 32H Blooming Glen Road, Perkasie, Pennsylvania.

The applicant for an airworthiness certificate for military versions of the S-55 series will be required to provide evidence to the local General Aviation District Office (GADO), Flight Standards District Office (FSDO), Manufacturing Inspection Field Representative (MIFR), Manufacturing Inspection Satellite Office (MISO), or Manufacturing Inspection District Office (MIDO) regarding the eligibility of the particular rotorcraft for conversion and rebuilding accomplished in order to establish conformity with the Type Design. As of February 24, 1981, this information will no longer be provided by Sikorsky Aircraft.

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