

Rotor Limits	<p><u>Power Off</u> Maximum 339 rpm Minimum 294 rpm</p> <p><u>Power On</u> Maximum 324 rpm Minimum 294 rpm</p> <p>Continuous Operation 294 - 324 rpm</p>
Airspeed Limits	<p><u>Roof Mounted Pitot Static:</u></p> <p>Vne (never exceed speed) 124 knots up to and including 7,500 lbs. G.W. at sea level to 2000 ft. Vne (never exceed speed) 113 knots at 9500 lbs. G.W. at sea level to 2000 ft. Never Exceed 110 knots above 7,500 to 9,500 lbs. G.W. at sea level. Vne decreases 3 knots per 1,000 feet above sea level.</p>
C.G. Range	<p><u>Longitudinal C.G. Limits</u> (+134) to (+143) at 9,500 lbs. (+130) to (+144) at 8,600 lbs. and below</p> <p><u>Lateral C.G. Limits</u> 4.7 in. left from centerline of fuselage 6.5 in. right from centerline of fuselage See TM55-1520-210-10 Flight Manual center of gravity charts for specific loads/weights.</p>
Empty Weight C.G. Range	See Model UH-1H TM55-1520-210-10 Flight Manual
Datum	Station 0, datum is located 7.6 inches aft of the most forward point of the fuselage nose section. See TM 55-1520-210-10 Flight Manual.
Leveling Means	Plumb line from top of left main door frame.
Maximum Weight	9,500 lbs.
Minimum Crew	One (1) pilot
No. of Seats	See Note 19. (See TM-55-1520-210-10 for seat locations)
Fuel Capacity	208.5 gallons (+150.4) Usable fuel 206.5 gallons
Oil System	3.15 gallons (+173) Usable oil 1.5 gallons (included in capacity) See Note 1 for data on undrainable oil.
Rotor Blade and Control Movements	For rigging information refer to the Model UH-1H Maintenance Manual TM55-1520-210-23.
Serial No.'s Approved	US Military Surplus Helicopters as identified in FAA Approved Southwest Florida Aviation Report SWFA7, no revision, dated November 11, 1994, or later FAA approved revision. A current copy in on file at the FAA Atlanta ACO.

II - Model UH-1B (Restricted Category Military Surplus Helicopter), Approved January 19, 1994.

[SW204 and SW-204HP are the TC holder's model designations of this helicopter]

UH-1B, as surplus (SW204):

Engine Lycoming T53-L-11D
Fuel ASTM 1655, Type A (JP-5) or Type B (JP-4)
(See Note 11)

Engine Limits

	Torque Pres. (psi)	Output Shaft Speed (rpm)	Exhaust Gas Temp.
Takeoff (5 min.)	47.5 (1100 SHP)	6,600	610°C
Maximum Cont.	39.0 (900 SHP)	6,400	590°C

(See Notes 8 and 9)

Rotor Limits

<u>Power Off</u>	<u>Power On</u>
Maximum 339 rpm	Maximum 324 rpm
Minimum 295 rpm	Minimum 294 rpm

Continuous Operation 294 - 324 rpm

Airspeed Limits

Never Exceed 120 knots up to and including 6,600 lbs. G.W. from sea level to 2,000 MSL.
Never Exceed 112 knots from 6,600 to 7,200 lbs. G.W. from sea level to 2,000 MSL.
Never Exceed 95 knots from 7,200 to 8,500 lbs. G.W. from sea level to 2,000 MSL.
Vne decreases 3 knots per 1,000 feet above sea level.

C.G. Range

Longitudinal C.G. Limits
(+125) to (+136) to 6,600 lbs. and above
(+125) to (+136.4) to 6,500 lbs.
(+125) to (+137.3) to 6,250 lbs.
(+125) to (+138) at 6,000 lbs. or less

Lateral C.G. Limits
+/- 4.7 in. left from centerline of fuselage

Empty Weight C.G. Range See Model UH-1B (204) Maintenance Manual

Maximum Weight 8,500 lbs.

Minimum Crew One (1) pilot

Fuel Capacity 163 gallons with crashworthy system (+136)
Usable fuel 154.5 gallons with crashworthy system
168 gallons without crashworthy system (+136)
Usable fuel 160.5 gallons without crashworthy system

Oil System 3.25 gallons (+157)
Usable oil 1.5 gallons (included in capacity)

See Note 1 for data on undrainable oil.

Rotor Blade and Control Movements For rigging information refer to the Model UH-1B (204) Maintenance Manual TM55-1520-219-20.

Serial No.'s Approved US Military Surplus Helicopters as identified in FAA Approved Southwest Florida Aviation Report SWFA7, no revision, dated November 11, 1994, or later FAA approved revision. A current copy in on file at the FAA Atlanta ACO.

UH-1B, modified with alternate engine (SW204HP):

Engine Lycoming T53-L-13B or T5313B (See Note 7)

Fuel ASTM 1655, Type A (JP-5) or Type B (JP-4)
(See Note 11)

Engine Limits

	Torque Pres. (psi)	Output Shaft Speed (rpm)	Exhaust Gas Temp.
Takeoff (5 min.)	50.0 (1100 SHP)	6,600 (100%)	625°C
Max. Cont.	50.0 (1100 SHP)	6,600 (100%)	610°C

(See Notes 8 and 9)

Rotor Limits

<u>Power Off</u>	<u>Power On</u>
Maximum 339 rpm	Maximum 324 rpm
Minimum 295 rpm	Minimum 294 rpm

Continuous Operation 294 - 324 rpm

Airspeed Limits

Never Exceed 120 knots up to and including 6,600 lbs. G.W. from sea level to 2,000 MSL.
Never Exceed 112 knots from 6,600 to 7,200 lbs. G.W. from sea level to 2,000 MSL.
Never Exceed 95 knots from 7,200 to 8,500 lbs. G.W. from sea level to 2,000 MSL.
Vne decreases 3 knots per 1,000 feet above sea level.

C.G. Range

Longitudinal C.G. Limits
(+125) to (+136) to 6,600 lbs. and above
(+125) to (+136.4) to 6,500 lbs.
(+125) to (+137.3) to 6,250 lbs.
(+125) to (+138) at 6,000 lbs. or less

Lateral C.G. Limits
+/- 4.7 in. left from centerline of fuselage

Empty Weight C.G. Range

See Model UH-1B (204) Maintenance Manual

Maximum Weight

8,500 lbs.

Minimum Crew

One (1) pilot

Fuel Capacity	163 gallons with crashworthy system (+136) Usable fuel 154.5 gallons with crashworthy system 168 gallons without crashworthy system (+136) Usable fuel 160.5 gallons without crashworthy system
Oil System	3.25 gallons (+157) Usable oil 1.5 gallons (included in capacity) See Note 1 for data on undrainable oil.
Rotor Blade and Control Movements	For rigging information refer to the Model UH-1B (204) Maintenance Manual TM55-1520-219-20.
Serial No.'s Approved	US Military Surplus Helicopters as identified in FAA Approved Southwest Florida Aviation Report SWFA7, no revision, dated November 11, 1994, or later FAA approved revision. A current copy in on file at the FAA Atlanta ACO

Data Pertinent to all Models

Datum	Station 0 (datum is located 7.60 inches aft of the forward point of the fuselage cabin nose section).
Leveling Means	Plumb line from top of left main cabin door frame to index plate on floor.
Certification Basis	FAR 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-42.

Type Certificate H6SO issued April 17, 1989, for the purpose of:

- 1) Agricultural Operations under FAR 21.25(b)(1).

Note: In accordance with FAR 36.1(a)(4), compliance with noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1(a)(4) and defined under FAR 137.3.

- 2) Forest and Wildlife Conservation Operations under FAR 21.25(b)(2).

Note: In accordance with FAR 36.1(a)(4), compliance with noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3.

- 3) External Load Operations under FAR 21.25(b)(7).

Note: In accordance with FAR 36.1(a)(4), compliance with noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external load operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(b).

Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition may require noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of 14 CFR 29 airworthiness standards, transport category, Amendment 1, effective August 12, 1965 and 14 CFR 29.1529,

Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.

Production Basis

None. No helicopter may be manufactured under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category conformity document dated September 25, 2001 or later FAA approved revision.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the rotorcraft for certification. In addition the following items or equipment are required with each rotorcraft as specified:

- (a) Outside air temperature gauge
- (b) Engine tail pipe temperature gauge
- (c) The applicable rotorcraft operator's manual or flight manual as revised (See Note 5).
- (d) For the Model UH-1B modified with alternate engine (SW204HP), FAA approved Rotorcraft Flight Manual Supplement dated January 19, 1994, or later FAA approved revision, is required.
- (e) For the Model UH-1B as surplus (SW204), FAA approved Rotorcraft Flight Manual Supplement dated January 10, 1995, or later FAA approved revision, is required.
- (f) For the Model UH-1H (SW205), FAA approved Rotorcraft Flight Manual Supplement dated January 10, 1995, or later FAA approved revision, is required.

NOTE 1.

A current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each rotorcraft at the time of original airworthiness certification. For C.G. determination and use of ballast, if required, refer to the applicable operator's manual, or flight manual, and maintenance manual (See Note 4 for manual listing).

Model UH-1H (SW205): The certificated empty weight and corresponding C.G. locations must include undrainable oil of 1.72 lbs.(+154), and unusable fuel of 16.5 lbs. (+144).

Model UH-1B as surplus (SW204) and as modified with alternate engine (SW204HP): The certificated empty weight and corresponding C.G. locations must include undrainable oil of 1.72 lbs. and unusable fuel of 16.75 lbs. (+136).

NOTE 2.

The following placards must be prominently displayed in the cockpit on the instrument panel and in full view of the pilot:

All Models:

(a) External Loads: "External load operations Vne will be determined for each proposed external load application."

(b) "VFR OPERATIONS ONLY"

Models UH-1H (SW205) and UH-1B as surplus (SW204):

- (a) Operating Limits: "This helicopter must be operated in compliance with the operating limitations specified in the operator's manual."
- (b) Restricted Category Operations: "The rotorcraft must be operated in accordance with the restricted category operating limitations of FAR 91.313 in addition to the limitations noted in the operator's manual." See Note 5 for appropriate manual.

Model UH-1B modified with alternate engine (SW204HP):

- (a) Operating Limits: "This helicopter must be operated in compliance with the operating limitations specified in the operator's manual and Rotorcraft Flight Manual Supplement."
- (b) Restricted Category Operations: "The rotorcraft must be operated in accordance with the restricted category operating limitations of FAR 91.313 in addition to the limitations noted in the operator's manual and Rotorcraft Flight Manual Supplement." See Note 5 for the appropriate manual.

Models UH-1B as surplus (SW204) and as modified with alternate engine (SW204HP):

The following placard, as found in TM55-1520-219-10, must be prominently displayed in the cockpit on the instrument and in full view of the pilot:

CALIBRATED AIRSPEED - KNOTS								
WEIGHT	6,600 lbs. or less		7,200 lbs.		8,000 lbs.		8,500 lbs.	
ENGINE (RPM)	6400	6600	6400	6600	6400	6600	6400	6600
DENSITY								
ALTITUDE (FT)								
SL to 2000	120	120	109	112	95	101	86	95
3000	116	118	105	108	92	97	82	92
6000	102	108	92	97	77	86	68	80
9000	90	94	79	86	65	76	-	-
12000	77	84	68	75	-	-	-	-
15000	64	72	-	-	-	-	-	-
18000	51	61	-	-	-	-	-	-

From 0 to 70 knots use 6000 to 6600 rpm range.
From 70 to 120 knots use 6400 to 6600 rpm range.
Reduce speed when vibration is excessive.

NOTE 3. The retirement times of critical parts and corresponding approved replacement parts are listed in Southwest Florida Aviation Report Numbers SWFA3, no revision, dated October 26, 1993, SWFA4, no revision, dated October 26, 1993, and SWFA9, no revision, dated August 11, 1995, and also appear in Section 1 of the pertinent maintenance manual, as revised. These values of retirement or service life cannot be increased without FAA engineering approval.

Parts requiring overhaul and approved replacements for these parts are listed in Southwest Florida Aviation Report Numbers SWFA1, no revision, October 26, 1993, SWFA2, no revision, dated October 26, 1993, and SWFA8, no revision, August 11, 1995.

FAA approved revisions to the Southwest Florida Aviation Reports listed above are also acceptable.

NOTE 4. Any maintenance performed on these helicopters must be accomplished in accordance with applicable maintenance manuals listed below:

Models UH-1B as surplus (SW204) and as modified with alternate engine (SW204HP):

- (a) TM55-1520-219-34 Maintenance Manual with current revisions.
- (b) TM55-1520-219-20 Maintenance Manual with current revisions.
- (c) TM55-2840-229-23 Maintenance Manual T53 engines with current revisions.
- (d) TO2J-T53-16 Maintenance Manual T53 engines with current revisions.
- (e) TM38-750 Policy and Procedures for Maintenance Records.

Model UH-1H (SW205):

- (a) TM55-1520-210-23 Maintenance Manual with current revisions.
- (b) DMWR55-1520-210 ADM UH-1H/UH-1V/EH-1H/EH-1X helicopters with current revisions.
- (c) TM55-2840-229-23 Maintenance Manual T53 engines with current revisions.
- (d) TO2J-T53-16 Maintenance Manual T53 engines with current revisions.
- (e) TM38-750 Policy and Procedures for Maintenance Records.

Other maintenance methods, techniques and practices maybe used as an alternative to these manuals, provided the maintenance methods, techniques, and practices have been determined to be acceptable to the FAA.

NOTE 5. These helicopters must be operated in accordance with the applicable operator's manual and FAA approved flight manual supplement listed below:

Model UH-1B as surplus (SW204):

- (a) TM55-1520-219-10 Operator's Manual with revisions.
- (b) FAA approved Rotorcraft Flight Manual Supplement dated January 10, 1995 or later FAA approved revisions.

Model UH-1B, as modified with alternate engine (SW204HP):

- (a) TM55-1520-219-10 Operator's Manual with revisions.
- (b) FAA approved Rotorcraft Flight Manual Supplement dated January 19, 1994 or later FAA approved revisions.

Model UH-1H (SW205):

- (a) TM55-1520-210-10 Operator's Manual with revisions.
- (b) FAA approved Rotorcraft Flight Manual Supplement dated January 10, 1995 or later FAA approved revisions.

NOTE 6. Upgraded components used to modify these rotorcraft (as outlined in the reports in Note 3) may not be covered in the manuals listed above and will require the use of Bell Helicopter civilian Model 204 and 205 manuals or Lycoming civilian engine Model T53 manuals when completing overhauls and/or routine maintenance.

NOTE 7. The TC holder's model designation for the UH-1B modified by the installation of a Lycoming Military Model T53-L-13B or Commercial Model T5313B engine is model SW204HP. For installation of the Lycoming T53-L-13B or T5313B engine on the UH-1B, see Southwest Florida Aviation Report Number SWFA5, no revision, dated October 26, 1993, or later FAA approved revision. For limitations, see the Rotorcraft Flight Manual Supplement dated January 19, 1994.

NOTE 8. Torque pressure output by the engine sensing system varies with individual engines. A calibration of this value is required on each engine and the value corresponding to the maximum rated takeoff power is stamped on the engine data plate.

NOTE 9. Gas producer speed for maximum rated output varies with individual engines and must be determined during engine calibration and is then stamped on the engine data plate.

NOTE 10. FAA airworthiness directives and the military or manufacturer's alert service bulletins, technical bulletins, service instructions, operation safety notices and service letters for all Bell 204, 205 and Military UH-1 series rotorcraft and the Lycoming T5313B, T5311A and T5311B powerplants must be reviewed for applicability and complied with accordingly.

NOTE 11. Phillips PFA55MB anti-icing additive at a concentration not in excess of 0.01% by volume may be used in fuel for this rotorcraft. No fuel system anti-icing credit is allowed. For all operations below 40°F ambient temperature, all fuel used in the model UH-1H (SW205) helicopter must contain anti-icing additive in accordance with Phillips Specification PFA55MB in concentrations of not less than 0.035% nor more than 0.15% by volume. Blending this additive into the fuel and checking its concentration must be conducted in the manner prescribed by the military operator's manual.

- NOTE 12. Main rotor retention strap, Bell P/N 204-012-112-1, are not eligible for installaion.
- NOTE 13. Helicopter is not approved for IFR operation or flight into known icing conditions.
- NOTE 14. Southwest Florida Aviation, Inc. is the original holder of type certificate H6SO. Bell Helicopter Textron, Inc., has no involvement with this type certificate.
- NOTE 15. The following equipment is not authorized to be installed on restricted category rotorcraft:
- (a) Gun mounts
 - (b) Turrets
 - (c) Rocket launchers
 - (d) Similar equipment to items a, b, and c which have been designed for military combat or military training purposes related to combat.
- NOTE 16. The military external fittings (hard points) are removed from the airframe and civilian external fittings (auxiliary equipment mounting points) are installed in order to mount accessory equipment.
- NOTE 17. No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
- NOTE 18. This helicopter is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the helicopter owner/operator's business, which is other than air transportation.
- NOTE 19. Any alteration to the type design of this aircraft may require Instructions For Continued Airworthiness (ICA's). Changes to the Type Design by means of a Supplemental Type Certificate (STC) requiring ICA's or changes to existing ICA's must be submitted and reviewed by the Fort Worth Aircraft Evaluation Group (FTW-AEG). Type Design Changes by means of a field approval that require ICA's must have those ICA's reviewed by the Flight Standards District Office (FSDO) managing the field approval or the FTW-AEG.
- NOTE 20. Restricted Category aircraft may not be operated in a foreign ountry without the express written approval of that country.
- NOTE 21. This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.
- NOTE 22. Military to Civil or Military to Military engine changes are allowed, provided the replacement engine is of the same make and model as identified in this TCDS. The military or civil replacement engine must have proper military or civil records and have the applicable FAA Airworthiness Inspection accomplished and is in an airworthy condition.

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