

Engine limits (cont'd)	Torque Pressure	Output Shaft Speed	Turbine Temp.	Gas Gen. Speed
*250-C20				
Take-off (5 min.)	100% (76 psi) (317 HP)	100% (6,000 rpm)	793°C (1459°F)	104% (53,010 rpm)
Max. Continuous	85% (65 psi) (270 HP)	100% (6,000 rpm)	743°C (1369°F)	104% (53,010 rpm)

*250-C20 engine is used in 206B only. 206A may be modified to 206B by using SI-206-80 incorporating 250-C20 engine.

Rotor limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach Reading 107%) Minimum 355 rpm (Dual Tach Reading 90%)	Maximum 394 rpm (Dual Tach Reading 100%) Minimum 374 rpm (Dual Tach Reading 95%)
Airspeed limits	Never exceed 150 mph (130 knots)CAS Decrease V_{ne} 4 mph (3.5 knots) per 1000 ft. above 3000 ft.	
C.G. Range	Straight line variation between points given. (a) Longitudinal C.G. Limits (+106) to (+112.1) at 3,000 lbs (+106) to (+112.4) at 2,900 lbs. (+106) to (+113.4) at 2,600 lbs. (+106) to (+114.2) at 2,350 lbs (+106) to (+114.2) at 2,100 lbs (b) Lateral C.G. Limits 2.3 inches left to 3.0 inches right at longitudinal C.G. 106.0 3.0 inches left to 4.0 inches right at longitudinal C.G. 108.0 to 114.2	
Empty weight C.G. range	Refer to Section 1 of the appropriate Model Maintenance Manual.	
Maximum weight	3,000 lbs. for standard skid landing gear equipped; 2,900 lbs. for other landing gear equipped. (See note for external cargo configuration information)	
Minimum crew	1 at (+65.0)	
Passengers	1 at (+65.0) and 3 at (+104.0)	
Maximum cargo	1,200 lbs maximum. See Rotorcraft Flight Manual for loading schedule.	
Fuel capacity	76 gallons (+116.0); unusable fuel 10 lbs. at (+120.0)	
Oil capacity	5.5 quarts (+179.0); usable oil, 2 quarts (included in capacity). Undrainable oil 1.0 lbs. at (+167.)	
Rotor blade and control movements	For rigging information refer to the 206A Maintenance Manual.	
Serial Nos. eligible	4-251, 254-660, 672-715	

III - Model 206A-1 (OH-58A) 4 PCLH (Normal Category), Approved May 6, 1969

(See note 12 for Conversion of Military Models)

Engine Allison Model 250-C10D (See Note 14 and 34)

Fuel ASTM D1655 Jet B (See Note 8)

Engine limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Temp.</u>	Gas Gen. <u>Speed</u>
Takeoff (5 Min)	92 psi (317 HP)	103% (6,180 rpm)	738°C (1360°F)	104% (53,164 rpm)
Max. Continuous	79 psi (270 HP)	103% (6,180 rpm)	693°C (1,280°F)	104% (53,164 rpm)

(See Rotorcraft Flight Manual for transient limits)

NOTE: Powerplant cooling has been demonstrated to be adequate for the following ambient temperature schedule: 125°F at sea level, decreasing at a lapse rate of 3.6°F per 1000 feet to 89°F at the maximum operating altitude of 10,000 feet.

Rotor limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 390 rpm (Dual Tach Reading 110%)	Maximum 394 rpm (Dual Tach Reading 100%, N ₂ 103%)
	Minimum 330 rpm (Dual Tach Reading 93%)	Minimum 347 rpm (Dual Tach Reading 98%, N ₂ 101%) (See Rotorcraft Flight Manual for transient limits.)

Airspeed limits Never exceed 120 knots CAS
Decrease V_{ne} 3.5 knots/1000 ft. above 3000 ft.

C.G. Range Straight line variation between points given.

(a) Longitudinal C.G. Limits
 (+106) to (+112.1) at 3,000 lbs
 (+105.2) to (+114.2) at 2,500 lbs
 (+105.2) to (+114.2) at 1,800 lbs

(b) Lateral C.G. Limits
 2.6 inches right
 2.4 inches left

Empty weight C.G. range Refer to Section 1 of the appropriate Model Maintenance Manual.

Maximum weight 3,000 lbs.

Minimum crew 1 at (+65.0)

Passengers 1 at (+65.0) and 2 at (+104.0)

Maximum cargo 1,200 lbs maximum. See Rotorcraft Flight Manual for loading schedule.

III - Model 206A-1 (cont'd)

Fuel capacity	71.5 gallons (+116.0); unusable fuel 6 lbs. at (+110.0) included in capacity
Oil capacity	5.5 quarts (+179.0); usable oil, 2 quarts (included in capacity). Undrainable oil 2.8 lbs. at (+153.)
Rotor blade and control movements	For rigging information refer to the 206A-1 Maintenance Manual.
Serial Nos. eligible	39,998 and up

IV - Model 206B 5 PCLH (Normal Category), Approved 19 August 1971 (See Note 31)

Engine Allison Model 250-C20 with Chandler Evans Model MC-40 Fuel Control System. (See Note 21)
See Note 20 for Alternate Fuel Control. Engine Type Certificate No. E4CE.

Fuel MIL-J-5624 Grade JP-4 and JP-5

Engine limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Temp.</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min.)	100% (76 psi) (317 HP)	100% (6,016 rpm)	793°C (1459°F)	104% (53,010 rpm)
Max Continuous	85% (65 psi) (270 HP)	100% (6,016 rpm)	737°C (1359°F)	104% (53,010 rpm)

Rotor limits	<u>Power Off</u>	<u>GW 3,000 lbs or less</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach 107%) Minimum 355 rpm (Dual Tach 90%)	Maximum 394 rpm (Dual Tach 100%) Minimum 374 rpm (Dual Tach 95%)	Maximum 395 rpm (Dual Tach 100%) Minimum 382 rpm (Dual Tach 97%)

Airspeed limits	(a)	3,000 lbs or less Never exceed 150 mph (130 knots) CAS Decrease V_{NE} 4mph (3.5 knots) per 1,000 ft. above 3,000 ft. Maximum altitude 20,000 ft.
	(b)	3000 - 3200 lbs Never exceed 140 mph (122 knots) CAS Decrease V_{NE} 8 mph (7 knots) per 1,000 ft. above 3,000 ft. Maximum altitude 13,500 ft.

C.G. range	(a)	Longitudinal C.G. Limits.												
		<table> <thead> <tr> <th><u>Prior to S/N 2212</u></th> <th><u>S/N 2212 and Sub</u></th> </tr> </thead> <tbody> <tr> <td>(+106) to (+111.4) at 3,200 lbs.</td> <td>(+106) to (+111.6) at 3,200 lbs.</td> </tr> <tr> <td>(+106) to (+112.1) at 3,000 lbs.</td> <td>(+106) to (+112.3) at 3,000 lbs.</td> </tr> <tr> <td>(+106) to (+112.4) at 2,900 lbs.</td> <td>(+106) to (+112.6) at 2,900 lbs.</td> </tr> <tr> <td>(+106) to (+113.4) at 2,600 lbs.</td> <td>(+106) to (+113.6) at 2,600 lbs.</td> </tr> <tr> <td>(+106) to (+114.2) at 2,350 lbs.</td> <td>(+106) to (+114.2) at 2,425 lbs.</td> </tr> <tr> <td>(+106) to (+114.2) at 2,100 lbs.</td> <td>(+106) to (+114.2) at 2,100 lbs.</td> </tr> </tbody> </table>	<u>Prior to S/N 2212</u>	<u>S/N 2212 and Sub</u>	(+106) to (+111.4) at 3,200 lbs.	(+106) to (+111.6) at 3,200 lbs.	(+106) to (+112.1) at 3,000 lbs.	(+106) to (+112.3) at 3,000 lbs.	(+106) to (+112.4) at 2,900 lbs.	(+106) to (+112.6) at 2,900 lbs.	(+106) to (+113.4) at 2,600 lbs.	(+106) to (+113.6) at 2,600 lbs.	(+106) to (+114.2) at 2,350 lbs.	(+106) to (+114.2) at 2,425 lbs.
<u>Prior to S/N 2212</u>	<u>S/N 2212 and Sub</u>													
(+106) to (+111.4) at 3,200 lbs.	(+106) to (+111.6) at 3,200 lbs.													
(+106) to (+112.1) at 3,000 lbs.	(+106) to (+112.3) at 3,000 lbs.													
(+106) to (+112.4) at 2,900 lbs.	(+106) to (+112.6) at 2,900 lbs.													
(+106) to (+113.4) at 2,600 lbs.	(+106) to (+113.6) at 2,600 lbs.													
(+106) to (+114.2) at 2,350 lbs.	(+106) to (+114.2) at 2,425 lbs.													
(+106) to (+114.2) at 2,100 lbs.	(+106) to (+114.2) at 2,100 lbs.													
Straight line variation between points given.														

IV - Model 206B (cont'd)

C.G. Range (cont'd)	(b)	Lateral C.G. Limits 2.3 inches left to 3.0 inches right at longitudinal C.G. 106.0 3.0 inches left to 4.0 inches right at longitudinal C.G. 108.0 to 114.2 Straight line variation between points given.
Empty Weight C.G. range		Refer to Section 1 of the appropriate Model Maintenance Manual.
Maximum weight		3,200 (See note 11 for external cargo configuration information)
Minimum crew		1 at (+65.0)
Passengers		1 at (+65.0), 3 at (+104.0)
Maximum cargo		1,200 lbs maximum. See Rotorcraft Flight Manual for loading schedule.
Fuel capacity		76 gallons (+116.0); unusable fuel 6.7 lbs. at (+120.0) S/N 3567 and subsequent 91 gallons usable (+118); unusable 6.7 lbs. (+120.0)
Oil capacity		5.5 quarts (+179.0); usable oil, 2 quarts (included in capacity); undrainable oil, 1.0 lbs. (+167).
Rotor blade and Control Movements.		For rigging information refer to the 206B Maintenance Manual.
Serial Nos. eligible		661, 671, 716 and up except 2520, 2529, 2536, 2538, 2542, 2581, 2585, 2589, 2601, 2605.

V - Model 206B-1 5 PCLH (Normal Category), Approved November 10, 1971

Serial Nos. eligible No eligible serial numbers exist.

VI - Model 206L 7 PCLH (Normal Category), Approved September 22, 1975

Engine	Allison Model 250-C20B or 250-C20J with Bendix P/N DP-N1 or DP-N2 Fuel Control. Engine Type Certificate No. E4CE.			
Fuel	ASTM Type Jet B (JP-4) and ASTM Type Jet A or A-1 (JP-5). See Rotorcraft Flight Manual for fuel mixtures and fuel temperature limitations.			
Engine limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Temp.</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min.)	100% (101 psi) 420 shp	100% (6,016 rpm)	810°C (1490°F)	105% (53,519 rpm)
Max. Continuous	88% (89 psi) 370 shp	100% (6,016 rpm)	738°C (1360°F)	105% (53,519 rpm)

(See Rotorcraft Flight Manual for transient limits)

VI - Model 206L (cont'd)

Rotor limits	<u>Power Off</u>						<u>Power On</u>					
	Maximum 422 rpm (Dual Tach Reading 107%) Minimum 355 rpm (Dual Tach Reading 90%)						Maximum 395 rpm (Dual Tach Reading NR 100%,) Minimum 382 rpm (Dual Tach Reading 97%)					
Airspeed limits	H _p FTx1000	0	2	4	6	8	10	12	14	16	18	20
	<u>OAT°C</u>		<u>V_{ne}</u>	<u>IAS</u>		<u>MPH</u>						
	46	150	--	--	--	--	--	--	--	--	--	--
	40	150	146	--	--	--	--	--	--	--	--	--
	20	150	150	145	138	131	123	116	--	--	--	--
	0	150	150	150	145	138	130	123	115	108	101	93
	-20	150	150	150	150	145	137	130	123	115	108	100
	-40	147	142	138	132	128	123	119	114	110	105	101
	-50	135	130	126	121	117	112	108	104	100	96	92

NOTE: ABOVE NOS BASED ON
MAX. MACH_{Advancing BladeTip} OF 0.95

C.G. range	(a)	Longitudinal C.G. Limits (See Note 19). Forward Limit (+118) up to 2,800 lbs. changing linearly to (+119.1) at 4,000 lbs. Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.8) at 4,000 lbs.
	(b)	Lateral C.G. Limits Left 4.0 inches. Right 3.5 inches
Empty weight		Refer to Section 8 of the appropriate Model Maintenance Manual.
C.G. range		
Maximum weight		4,000 lbs.
Minimum crew		1 at (+65.0)
Passengers		1 at (+65.0) and 2 at (+91.0), and 3 at (+129.0)
Maximum cargo		1,464 lbs maximum. See Rotorcraft Flight Manual for loading schedule.
Fuel capacity		98.0 gallons at (+128.9); unusable fuel 1 gal. at (+94)
Oil capacity		5.5 quarts (+205.0); usable oil, 2 quarts (included in capacity). Undrainable oil 1.6 lbs. at (+192)
Rotor blade and control movements		For rigging information refer to the 206L Maintenance Manual
Serial Nos. eligible		45004 through 45153 and 46601 thru 46617

VII - Model 206L-1 7 PCLH (Normal Category), Approved May 17, 1978.

(See Note 26 for 4,150 lbs. gross weight.)

Engine Allison Model 250-C28B with Bendix gas producer Fuel control DP-T3. Engine Type Certificate No. E1GL.

Fuel ASTM Type Jet B (JP-4) and ASTM Type Jet A or A-1 (JP-5). See Rotorcraft Flight Manual for fuel mixtures and fuel temperature limitations.

Engine limits	Torque Pressure	Output Shaft Speed	Turbine Out Temp	Gas Gen. Speed
Takeoff (5 min.)	100% (59 psi) 435 shp	100% (6,016 rpm)	791°C (1456°F)	104% (52,980 rpm)
Max. Continuous	85% (50 psi) 370 shp	100% (6,016 rpm)	743°C (1369°F)	104% (52,980 rpm)

(See Rotorcraft Flight Manual for transient limits)

Rotor limits	Power Off	Power On
	Maximum 422 rpm (Dual Tach Reading 107%)	Maximum 395 rpm (Dual Tach Reading 100%)
	Minimum 355 rpm (Dual Tach Reading 90%)	Minimum 382 rpm (Dual Tach Reading 97%)

Airspeed limits	Hp FTx1000 OAT° C	0		2		4		6		8		10		12		14		16		18		20	
		VNE	IAS	MPH																			
	46	150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	40	150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	20	150	150	145	138	131	123	116	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	0	150	150	150	145	138	130	123	115	108	101	93											
	-20	150	150	150	150	145	137	130	123	115	108	100											
	-40	147	142	138	132	128	123	119	114	110	105	101											
	-50	135	130	126	121	117	112	108	104	100	96	92											

NOTE: ABOVE NOS. BASED ON
MAX MACH_{Advancing BladeTip} OF 0.95

C.G. range	(a)	Longitudinal C.G. Limits. (See Note 19.) (Internal Loading) Forward Limit (+118) up to 2,800 lbs. changing linearly to (+119) at 4,050 lbs. Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+127) at 4,050 lbs. (External Loading) Forward Limit (+118) up to 2,800 lbs. changing linearly to (+119.2) at 4,250 lbs. Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.7) at 4,250 lbs.
	(b)	Lateral C.G. Limits Left 4.0 inches Right 3.5 inches

VII - Model 206L-1 (cont'd)

Empty weight	Refer to Section 8 of the appropriate Model Maintenance Manual.
C.G. range	
Maximum Weight	4,050 lbs (Internal Loading) 4,250 lbs (External Loading)
Minimum Crew	1 at (+65.0)
Passengers	1 at (+65.0), 2 at (+91.0), and 3 at (+129.0)
Maximum Cargo	See Rotorcraft Flight Manual for loading schedule
Fuel Capacity	98.4 gallons (+130.4); unusable fuel, 1 gallon at (+94)
Oil Capacity	5.5 quarts (+205.0); usable oil, 2 quarts (included in capacity); undrainable oil, 1.6 lbs (+192)
Rotor blade and Control Movement	For rigging information refer to the 206L-1 Maintenance Manual.
Serial Nos. eligible	45154 thru 45790

VIII - Model 206L-3 7PCLH (Normal Category). Approved December 10, 1981.

Engine	Allison Model 250-C30P with Bendix Gas Producer Fuel Control DP-V1. Engine Type Certificate E1GL.
Fuel	ASTM Type Jet B (JP-4) and ASTM Type Jet A or A-1 (JP-5). See rotorcraft Flight Manual for fuel mixture and fuel temperature limitations.

Engine Limits (See Note 28)	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Out Temp</u>	Gas Gen. <u>Speed.</u>
Takeoff (5 min.)	100% (62 psi) 435 shp	100% (6,016 rpm)	768°C (1,414°F)	105% (53,550 rpm)
Max. Continuous	85% (53 psi) 370 shp	100% (6,016 rpm)	716°C (1,320°F)	105% (53,550 rpm)

(See Rotorcraft Flight Manual for Transient Limits)

Rotor limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach Reading 107%) Minimum 355 rpm (Dual Tach Reading 90%)	Maximum 395 rpm (Dual Tach Reading 100%) Minimum 382 rpm (Dual Tach Reading 97%)

Airspeed limits	Basic VNE is 130 KIAS sea level to 3,000 feet density altitude. Decrease VNE for ambient conditions in accordance with Airspeed Limitation Placard in the FAA approved Rotorcraft Flight Manual, dated December 9, 1981.
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VIII - Model 206L-3 (cont'd)

C.G. range	(a)	Longitudinal C.G. Limits. (See Note 19.) (Internal Loading) Forward Limit (+118) up to 2,800 lbs. changing linearly to (+119.1) at 4,150 lbs. Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.85) at 4,150 lbs. (External Loading) Forward Limit (+118) up to 2,800 lbs. changing linearly to (+119.2) at 4,250 lbs. Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.7) at 4,250 lbs.
	(b)	Lateral C.G. Limits Left 4.0 inches Right 3.5 inches
Empty weight C.G. range		Refer to Section 8 of the appropriate Model Maintenance Manual.
Maximum Weight		4,150 lbs (Internal Loading) 4,250 lbs (External Loading)
Minimum Crew		1 at (+65.0)
Passengers		1 at (+65.0), 2 at (+91.0), and 3 at (+129.0)
Maximum Cargo		See Rotorcraft Flight Manual for loading schedule
Fuel Capacity		110.7 gallons (+131.7); unusable fuel, 1 gallon at (+94)
Oil Capacity		5.5 quarts (+205.0); usable oil, 2 quarts (included in capacity); undrainable oil, 1.6 lbs (+192)
Rotor blade and Control Movement		For rigging information refer to the 206L-3 Maintenance Manual.
Serial Nos. eligible		51001 thru 51612

IX - MODEL 206L-4 7PCLH (Normal Category). Approved October 2, 1992

Engine	Allison Model 250-C30P with Bendix Gas Producer Fuel Control DP-V1. Engine Type Certificate No. E4CE.
Fuel	ASTM Type jet B (JP-4) or ASTM Type Jet A or A-1 (JP-5). See 206L-4 Rotorcraft Flight Manual for fuel mixture and fuel temperature limitations.

Engine Limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Out Temp</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min)	100%(71.4 psi) 495 shp	101% (6,076 rpm)	768°C (1,414°F)	105% (53,550 rpm)
Maximum Continuous	75%(54 psi) 373.7 shp	101% (6,076 rpm)	716°C (1,320°F)	105% (53,550 rpm)

(See 206L-4 Rotorcraft Flight Manual for Transient Limits)

IX - MODEL 206L-4 (cont'd)

Rotor Limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach Reading 107%) Minimum 355 rpm (Dual Tach Reading 90%)	Maximum 398 rpm Dual Tach Reading 101%) Minimum 390 rpm (Dual Tach Reading 99%)
Airspeed limits	Basic VNE is 130 KIAS sea level to 3,000 feet density altitude. Decrease VNE for ambient conditions and internal loading in accordance with Airspeed Limitation Placard in the 206L-4 Rotorcraft Flight Manual. Also see the 206L-4 Rotorcraft Flight Manual for VNE limits associated with peculiar operating conditions.	
C.G. range	<p>(a) Longitudinal C.G. Limits. (See Note 19)</p> <p>(Internal Loading)</p> <p>Forward Limit (+118.0) up to 2,800 lbs. changing linearly to (+119.4) at 4,450 lbs.</p> <p>Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.4) at 4,450 lbs.</p> <p>(External Loading)</p> <p>Forward Limit (+118.0) up to 2,800 lbs. changing linearly to (+119.5) at 4,550 lbs.</p> <p>Aft Limit (+128.5) up to 2,900 lbs. changing linearly to (+126.3) at 4,550 lbs.</p> <p>(b) Lateral C.G. Limits</p> <p>Left 4.0 inches up to 4,150 lbs., 1.2 inches above</p> <p>Right 3.5 inches up to 4,150 lbs., 1.61 inches above</p>	
Empty Weight C.G. range	Refer to Section 8 of the appropriate Model Maintenance Manual.	
Maximum weight	4,450 lbs. (2018.5 kg) (Internal Loading) 4,550 lbs. (2063.8 kg) (External Loading)	
Altitude limits	Maximum altitude at 4,150 lbs. or less is 20,000 feet pressure altitude. Maximum altitude at 4,151 lbs. to 4,450 lbs is 10,000 feet density altitude	
Minimum crew	1 at (65.0)	
Passengers	1 at (+65.0), 2 at (+91.0), and 3 at (+129.0). Refer to 206L-4 Rotorcraft Flight Manual for limitations.	
Maximum cargo	Refer to 206L-4 Rotorcraft Flight Manual for loading schedule.	
Fuel capacity	110.7 gallons (+131.7): unusable fuel, 1 gallon at (+94)	
Oil capacity	5.5 quarts (+205.0); usable oil, 2 quarts (included in capacity); undrainable oil, 1.6 lbs. (+192).	
Rotor blade and Control Movement	For rigging information refer to the 206L-4 Maintenance Manual.	
Serial Nos. eligible	52001 and subsequent.	

X. - Model 407 7PCLH (Normal Category). Approved February 9, 1996

Engine Allison Model 250-C47B with Chandler Evans EC-135 (FADEC) Fuel Control System.

Fuel ASTM-D-1655, Type Jet B, Jet A, and Jet A-1; MIL-T-5624 Grade JP-4
(See Note 8) (NATO F-40); MIL-T-5624 Grade JP5 (NATO F-44); and MIL-T-83133 Grade JP8 (NATO F-34).
See Rotorcraft Flight Manual for fuel mixture and fuel temperature limitations.

Engine Limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Out Temp</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min)	100% (91.4 psi) 674 shp	100% (6,317 rpm)	779°C (1,434°F)	105% (53,550 rpm)
Maximum Continuous	93.5% (85.5 psi) 630 shp	100% (6,317 rpm)	727°C (1,341°F)	105% (53,550 rpm)

(See 407 Rotorcraft Flight Manual for Transient Limits)

Rotor Limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach Reading 107%) Minimum 351 rpm (Dual Tach Reading 85%)	Maximum 413 rpm Dual Tach Reading 100% Minimum 409 rpm (Dual Tach Reading 99%)

Airspeed limits Basic VNE is 130 KIAS sea level to 3,000 feet density altitude. Decrease VNE for ambient conditions and internal loading in accordance with Airspeed Limitation Placard in the 407 Rotorcraft Flight Manual. Also see the 407 Rotorcraft Flight Manual for VNE limits associated with peculiar operating conditions.

C.G. range	(a) Longitudinal C.G. Limits cm (in.)
	Forward Limit (Internal Loading) 302.3 cm (+119.0) up to 2041 kg (4,500 lbs.) changing linearly to 303.5 cm (+119.5) at 2268 kg (5,000 lbs.) Aft Limit (Internal Loading) 327.7 cm (+129.0) up to 2268 kg (5,000 lbs.) Forward Limit (External Loading) 302.3 cm (+119.0) up to 2041 kg (4,500 lbs.) changing linearly to 304.8 cm (+120.0) at 2495 kg (5,500 lbs.) Aft Limit (External Loading) 327.7 cm (+129.0) up to 2495 kg (5,500 lbs.)
	(b) Lateral C.G. Limits (Internal Loading) Left 6.4 cm (2.5 in.) up to 1588 kg (3,500 lbs.), changing linearly to 3.8 cm (1.5 in.) at 2268 kg (5,000 lbs.) Right 7.6 cm (3.0 in.) up to 1588 kg (3,500 lbs.) changing linearly to 5.1 cm (2.0 in.) at 2268 kg (5,000 lbs.) Lateral C.G. Limits (External Loading) Left 6.4 cm (2.5 in.) up to 1588 kg (3,500 lbs.), changing linearly to 3.0 cm (1.2 in.) at 2495 kg (5,500 lbs.) Right 7.6 cm (3.0 in.) up to 1588 kg (3,500 lbs.) changing linearly to 4.3 cm (1.7 in.) at 2495 kg (5,500 lbs.)

X. - Model 407 (cont'd)

Maximum weight (Mass)	2268 kg (5,000 lbs.) (Internal Loading) 2722 kg (6,000 lbs.) (External Loading)
Altitude limits	Maximum altitude at 2268 kg (5,000 lbs.) or less is 20,000 feet pressure altitude. Maximum altitude above 2268 kg (5,000 lbs.) is 10,000 feet density altitude
Minimum crew	1 pilot
Maximum Occupants	7 (includes crew)
Maximum cargo	Refer to 407 Rotorcraft Flight Manual for loading schedule.
Fuel capacity	483.7 litres (106.4 Imp. Gal) (127.8 US Gal) usable, 10.0 litres (2.21 Imp. Gal) (2.65 US Gal) unusable.
Oil capacity	5.21 litres (4.58 Imp. Quarts) (5.5 US quarts); usable oil 2 US quarts included in capacity. Undrainable oil, 1.6 lbs.
Rotor blade and Control Movement	For rigging information refer to the 407 Maintenance Manual
Serial Nos. eligible	53000 to 53003, 53005 and subsequent.

Data Pertinent to all Models

Datum	<p>Model 206 Station 0 (datum is 7 inches forward of most forward point of fuselage cabin nose section).</p> <p>Models 206A, 206A-1, 206B, 206B-1, 206L, 206L-1, 206L-3, 206L-4, and 407 Station 0 (datum is 1 inch forward of most forward point of fuselage cabin nose section or 55.16 inches forward of jack point centerline).</p> <p>Leveling means 206 Series except 206A or B S/N 104-583. Plumb line from ceiling left rear cabin to index plate on floor. 206A or B S/N 104-583. Level pads on right side in the transmission compartment.</p>
Certification basis	<p>FAR 21.29 and CAR 6 dated December 20, 1956, Amendments 6-1 thru 6-4, CAR 6.307(b) and 6.637 of Amendment 6-5, Special Conditions dated October 2, 1962, as revised February 8, 1966, plus the water/alcohol power augmentation special conditions dated November 14, 1967, revised September 15, 1975. Special conditions for "IFR Instrument Flight requirements for Bell Model 206B/L" submitted to Bell by FAA (ASW-216) letter dated July 16, 1975.</p> <p>Exemption No. 595 for Model 206A only.</p> <p>Exemption No. 595A for Model 206A-1 only.</p> <p>Exemption No. 595B for Model 206B AND 206B-1 only.</p> <p>For 206L-3 FAR 27.1529 is accepted by applicant 4/23/92 (See Note 3)</p> <p>For 206L-4 FAR 21.29 and Part 27 dated 2 October 1964 Amendment 27-1 thru 27-24 with: 27.45, 27.141, 27.1309 at Amdt 27-20; 27.1093, 27.1545 at Amdt 27-8; 27.79, 27.143, 27.173, 27.175, 27.1519, 27.1585, 27.1587 at Amdt 27-1; 27.2, 27.307, 27.337, 27.351, 27.427, 27.501, 27.571, 27.613, 27.629, 27.663, 27.674, 27.685, 27.727, 27.783, 27.807, 27.861, 27.865 at Amdt 27-28; and 27.391, 27.395, 27.397, 27.681, 27.1357, 27.1361, replaced by 6.220, 6.225, 6.323, 6.623, 6.624, 6.625, 6.626 of CAR Part 6 dated 6 December 1956 Amendment 6-1 thru 6-4. Exceptions to FAR 27 are the deletion of: 27.71, 27.177, 27.399, 27.562, 27.610, 27.954, 27.1195, 27.1322.</p>

Equivalent Safety Findings: 1. Skid Landing Gear (Drop Test) - FAR 27.723, 27.725, and 27.727; 2. Fuel Tanks (Drop Test) - FAR 27.965(c)(1) and (c)(2).

FAR Part 36 dated 3 November 1969 Amendment 36-1 thru 36-14, Subpart H.

Certification basis For 206B S/N 5101 through 5257. Meets fuel system qualification to NPRM 90-24. Crash resistant fuel system is normal and transport category rotorcraft, Draft paragraph 29-952 and associated revised paragraphs.

For Model 407

- (a) FAR part 27, dated October 2, 1964 Amendment 27-1 through 27-30 with; Paragraph 27.561(b)(3) at Amdt 27-24;
Section 27.563 at Amdt 27-25;
Section 27.785 at Amdt 27-24;
Section 27.1093 at Amdt 27-8; and
Section 27.173 at Amdt 27-1.
Exceptions to FAR 27 are the deletion of sections: 27.562, 27.1195, and 27.952(b)(1)
- (b) FAR 36 Amdt 36-1 through 36-20.
- (c) Transport Canada Special Conditions
High Intensity Radiated Fields (HIRF), SCA 95-02, April 26, 1995
- (d) Equivalent Safety Findings exist with respect to the following regulations:
-FAR 27.307(b)(5), 27.723, 27.725,
and 27.727 Skid Type Undercarriages
-FAR27.952 Forward Fuel Tank Drop Test
-FAR27.952 Aft Fuel Tank Drop Test
-FAR27.965(c)(1) and (2) Fuel Tank Pressure Test
-FAR27.1305(p) Engine Anti-Ice Annunciation

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the helicopter for certification.

In addition, the following items of equipment are required:

- (a) Engine Out Warning System all models.
- (b) Outside air temperature gage for Models 206A, 206A-1, 206B, 206L, 206L-1, 206L-3, 206L-4, and 407.
- (c) FAA approved Helicopter Flight Manual.
- (1) a. Model 206A dated October 20, 1966, reissued May 15, 1970.
b. Model 206A (Serial No. 503 only) dated October 20, 1966, reissued August 19, 1968, for 2900 lbs gross weight.
c. Model 206A dated April 2, 1971, for 205-C20 Engine.
- (2) Model 206B, dated July 30, 1971, reissued December 20, 1972. Model 206B, Serial No. 2212 (See Note 21), dated July 1, 1977.
Model 206B, Serial No. 5101 through 5257 (See note 31), TH-67 Configuration Fuel System and Torque Indicator (BHT-206B3-FMS-33), dated 5 October, 1993.
- (3) Model 206L, dated September 22, 1975.
- (4) Model 206L-1, dated May 17, 1978.
- (5) Model 206L-3, dated December 9, 1981.
- (6) Model 206L-4, dated October 2, 1992.
- (7) Model 407, dated February 9, 1996.

Production Basis None for 206. Production Certificate No. 100 for Models 206A, 206A-1, 206B, 206B-1, 206L, 206L-1, 206L-3, 206L-4 and 407. (See Note 29 and Note 32 for helicopters produced by Bell Helicopter Textron, Canada)

NOTE 1. Current weight and balance report including list of required equipment and list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each helicopter at the time of original certification. The certificate empty weight and corresponding C.G. locations must include undrainable oil and unusable fuel for the appropriate model.

NOTE 2. The following placard must be displayed in front of and in clear view of the pilot: "THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER FLIGHT MANUAL."

All placards required in the approval flight manual must be installed in the appropriate locations.

NOTE 3. The retirement times of critical parts are listed in the following table. These limitations may not be changed without FAA engineering approval.

MODEL 206, 206A-1 AND 206B-1

For a list of Critical Parts contact; Manager, Rotorcraft Directorate; Department of Transportation; Federal Aviation Administration Fort Worth, Texas 76193-0100

MODEL 206A and 206B, except for S/Ns 5101 through 5257, (Refer to FAA approved Chapter 4 of the Maintenance and Overhaul Manual, BHT - 206A/B Series-MM, for airworthiness lives of components)

MODEL 206B (S/Ns 5101 through 5257) (Refer to FAA approved Chapter 4 of the Maintenance Manual, BHT-206B3-MM-1, Airworthiness Limitations, for service lives of components)

MODEL 206L (Refer to FAA approved Chapter 4 of the Maintenance Manual, BHT-206L-MM-1, for airworthiness lives of components applicable to 206L)

MODEL 206L-1 (Refer to FAA approved Chapter 4 of the Maintenance Manual, BHT-206L-1-MM-1, for airworthiness lives of components applicable to 206L-1)

MODEL 206L-3 (Refer to FAA approved Chapter 4 of the Maintenance Manual, BHT 206L3-MM-1 for the service lives of components applicable to the Model 206L-3)

MODEL 206L-4 (Refer to FAA approved Chapter 4 of the Maintenance Manual, BHTI 206L4-MM-1 for service lives of components applicable to the 206L-4)

MODEL 407 (Refer to approved Chapter 4 of the Maintenance Manual, BHT-407-MM-1 for service lives of components applicable to the Model 407)

NOTE 4. Information essential for proper maintenance is contained in the appropriate Model Bell Helicopter Textron maintenance or overhaul manual.

NOTE 5. Reserved

NOTE 6. Power on rotor and engine output shaft speed limits increase (inversely with power as shown in approved flight manuals for all models).

NOTE 7. Reserved

- NOTE 8. For all operations below 40^oF ambient temperature, all fuel used in the Model 206A and 407 helicopters must contain Phillips PFA-55 MB anti-icing additive in concentrations of not less than 0.035% or 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 Rotorcraft Flight Manual. This additive is eligible as described above but not required for use in the Models 206B, 206L, 206L-1, 206L-3, and 206L-4 helicopter.
Note Anti-ice additive is eligible but not required and the above does not apply for Model 206A helicopters equipped with Fuel Filter Kit P/N 206-706-603-1, -3. RFM Supplement BHT-206A-FMS-17 dated January 13, 1970, is required.
- NOTE 9. Engine fuel system components as listed below are required to assure satisfactory engine/rotor drive system torsional stability.
- Model 206A with Model 250-C18 or 250-C18B engine:
 Accumulator Assy. Allison *P/N 6848165,
 Double Check Valve *P/N 6854622,
 plus Accumulator Assy. Kit Allison P/N 6858338
 or
 Accumulator Assy. Allison *P/N 6848165,
 Double Check Valve Allison *P/N 6873599,
 plus Accumulator Assy. Kit Allison P/N 6874921
- Model 206B and Model 206L with Bendix Fuel Control:
 Allison Accumulator Kit P/N 6887645 (See Allison 250 Installation Bulletin No. 1004.)
- Model 206L-1 with Bendix DP-T3 fuel control:
 Equipment required for system torsional stability (accumulator P/N 6857224 and Double Check Valve P/N 6876557) is approved and included as part of the Allison Model 250-C28B engine.
- Model 206L-3 with Bendix DP-V1 Fuel Control:
 Equipment required for system torsional stability (accumulator P/N 685722) is approved and included as part of the Allison Model 250-C30P engine.
- * These items are included in basic 250-C18, 250-C18B, and 250-C10D engines.
- NOTE 10. The engine air induction systems on the Models 206A, 206B, 206L, 206L-1, and 206L-3 have been substantiated for icing characteristics as necessary to demonstrate that ice accumulation on the engine air inlet will not adversely affect engine operation or cause a serious loss of power when the helicopter is operated in icing conditions within the capability of the remainder of the helicopter to operate under such conditions.
- NOTE 11. Models 206A and 206B helicopters that have external cargo hooks installed per Service Instructions No. 206-4 (revised July 1, 1968, or later) or No. 206-17 meet the structural and design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when operated at 3,350 pounds gross weight in accordance with the limits of the 206A FAA approved Helicopter Flight Manual Supplement dated May 3, 1967, as reissued August 19, 1968, or the 206B FAA approved Helicopter Flight Manual Supplement dated July 30, 1971, reissued December 20, 1972, as appropriate. The retirement times listed in Note 3 are not changed.
- NOTE 12. Prior to civil certification, the military Model OH-58A must be modified in accordance with approved data. Information regarding modification to the Model 206A-1 configuration is contained in Type certification No. H2SW Type Design Data. In addition, all historical records of the aircraft must be available and conformity to the FAA approved 206A-1 type design data must be shown.

- NOTE 13. Allison Model 250-C18B engine is required with Water-Alcohol Power Augmentation Kit P/N 206-706-400-1 for improved performance shown in Rotorcraft Flight Manual Supplement dated November 26, 1969, reissued May 15, 1970. The 250-C18D engine is also eligible without water alcohol power augmentation at limitations and performance shown for the 250-C18 engine.
- NOTE 14. Engine must be modified in accordance with Airworthiness Directives 69-18-4.
- NOTE 15. Reserved
- NOTE 16. Reserved
- NOTE 17. Models 206A and 206B helicopters that have an external cargo hook installed per Service Instruction No. 206-94 meet the structural and design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when operated to 3,350 pounds gross weight in accordance with the limits of 206A FAA-approved Helicopter Flight Manual Supplement dated June 16, 1972, as reissued December 20, 1972. The retirement times listed in Note 3 are not changed.
- NOTE 18. Model 206A helicopters may be converted to Model 206B helicopters in accordance with Bell Helicopter Company Service Instruction No. 206-80, dated May 11, 1971, or later revision.
- NOTE 19. Installed battery capacity must be at least 13 ampere hours for the 206L and 17 ampere hours for the 206L-1, 206L-3, 206L-4, and 407 to insure fuel transfer pump operation and c.g. control after electrical system failure. A special emergency circuit for fuel transfer pump operation is provided.
- NOTE 20. Bendix P/N DP-N1 or DP-N2 are eligible on Model 206B helicopters - See Allison 250 Installation Bulletin No. 1004.
- NOTE 21. Model 206B, Serial No. 2212 and subsequent

Engine	Allison Model 250-C20B with Bendix P/N DP-N2 Fuel Control
Alternate Fuel Control	CECO Mod. MC-40, Control P/N 104900A3-2, Governor P/N 6851468E
Alternate Engine	Allison Model 250-C20J with Bendix P/N DP-N2 and Bendix power turbine governor AL-AAI
Fuel	ASTM Type Jet B (JP-4) and ASTM Type Jet A or A-1 (JP-5). See Rotorcraft Flight Manual for Fuel Mixture and Fuel Temperature Limitations

Engine limits	Torque <u>Pressure</u>	Output <u>Shaft Speed</u>	Turbine <u>Out Temp.</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min.)	100% (317 shp)	100% (6,016 rpm)	810°C (1490°F)	105% (53,519 rpm)
Max. Continuous	85% (270 shp)	100% (6,016 rpm)	738°C (1360°F)	105% (53,519 rpm)

Rotor Limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 422 rpm (Dual Tach Reading 107%)	Maximum 395 (Dual Tach Reading 100%)
	Minimum 355 rpm	Minimum 382 rpm

(Dual Tach Reading 90%)

(Dual Tach Reading 97%)

Empty Weight C.G. range Refer to Section 8 of the appropriate Model Maintenance Manual.

- NOTE 22. Model 206A and 206B engine Fuel Controls must be set for 235 pounds per hour (pph) Maximum Fuel Flow. Model 206L fuel control must be set for 270 PPH, Model 206L-1 must be set for 290 PPH, and 206L-3 must be set for 325 PPH (except for Note 28), and Model 206L-4 must be set for 356 PPH.
- NOTE 23. For the Model 206L-1, only Marathon Model CA 170 or Saft Model 1756 batteries are eligible.
- NOTE 24. Model 206L-1 or 206L-3 helicopters that have an external cargo hook installed per Service Instruction No. 206-2012 meet the structural and design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when operated to 4,250 pounds gross weight in accordance with the limits of the appropriate FAA-approved Helicopter Flight Manual Supplement, 206L-1, dated May 17, 1978, or 206L-3, dated December 11, 1981, No. BHT-206L-3-FMS4. Model 206L-4 helicopters equipped with this external cargo hook may operate to 4,550 pounds gross weight in accordance with the limits of FAA approved Helicopter Flight Manual Supplement, BHT-206L4-FMS-4 dated October 1992.
- The retirement times listed in Note 3 are not changed. Model 407 helicopters equipped with an external cargo hook may operate to 2495 kg (5,500 lbs.) gross weight in accordance with the limits of Transport Canada approved Rotorcraft Flight Manual Supplement BHT-407-FMS-5, Supplemental Cargo Hook P/N 206-706-341 dated February 9, 1996.
- NOTE 25. Model 206B helicopters, Serial Nos. 498 through 2211, may be converted to the configuration defined by Note 21 by modification as prescribed by Bell Helicopter Textron Service Instruction No. 206-112, dated March 17, 1978, or later revision. Alternate engine (Model 250-C20J) does apply to these aircraft.
- NOTE 26. Model 206L-1 helicopters that have main rotor yoke, P/N 206-011-149-101, installed, may be operated to 4,150 pounds internal gross weight in accordance with the limits of 206L-1 FAA-approved Helicopter Flight Manual Supplement, dated November 9, 1979. The retirement times listed in Note 3 are not changed.
- NOTE 27. Note deleted in entirety per Revision 33.
- NOTE 28. Bell Helicopter Textron Service Instruction Number 206-2039 provides for an increased takeoff power rating up to 456 HP. Special maintenance procedures are required with use of this rating. See Service Instruction Number 206-2039. Not applicable to 206L-1 or 206L-4.
- NOTE 29. Model 206B S/N 3959 and subsequent except 4048, Model 206L-3 S/N 51215 and subsequent and Model 206L-4 S/N 52001 and subsequent are manufactured by Bell Helicopter Textron Inc., a Division of Textron Canada Limited, under the Canadian Department of Transportation, Manufacturers Approval No. 1-86. S/N 4048 was produced under FAA Production Certificate No. 100 by Bell Helicopter Textron Inc., Fort Worth, Texas.

Import Requirements:

To be considered eligible for operation in the United States, each Aircraft manufactured under this Type Certificate must have a U. S. Airworthiness Certificate that may be issued on the basis of the Canadian Department of Transport Certificate of Airworthiness for Export signed by the Minister of Transport containing the following statement:

"The rotorcraft covered by this certificate has been examined, tested, and found to comply with the type design approved under Type Certificate H2SW and to be in condition for safe operation".

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is 21.183(c) or 21.185(c). The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.21 exported from countries other than the country of manufacture (e.g., third party country) is FAR Sections 21.183(d) or 21.183(b).

NOTE 30. The Allison engine Model 250-C20JN is the 250-C20J engine with an auxiliary gear pad. The 250-C20J may be modified into 250-C20JN with Allison kit P/N 6896857. See Allison Installation Bulletin No. 1012 Rev 3.

NOTE 31. MODEL 206B, SERIAL NO. 5101 THROUGH 5257

Engine: Allison Model 250-C20J, P/N 23006900, with Bendix Fuel Control. The engine is modified with Allison Kit, P/N 6896857. (See Detroit Diesel Allison Installation Bulletin 1012, Rev 3). The engine is used with P/N 23005745 Gearbox Assembly which includes the spare accessory drive.

C.G. Range: (Same as 206B S/N 2212 and sub)

Passengers: None

Fuel Capacity: 82.6 gallons (+118.97); unusable fuel, 1 gallon (+104.5)

All other data is same as Model 206B as noted in Section IV of this document.

NOTE 32. Model 407 S/N 53000 to 53003, 53005 and subsequent are manufactured by Bell Helicopter Textron Inc., a Division of Textron Canada Limited, under the Canadian Department of Transportation, Manufacturers Approval No. 1-86.

Import Requirements:

To be considered eligible for operation in the United States, each Aircraft manufactured under this Type Certificate must have a U. S. Airworthiness Certificate that may be issued on the basis of the Canadian Department of Transport Certificate of Airworthiness for Export signed by the Minister of Transport containing the following statement:

"The rotorcraft covered by this certificate has been examined, tested, and found to comply with the type design approved under Type Certificate H2SW and to be in condition for safe operation".

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is 21.183(c) or 21.185(c).

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.21 exported from countries other than the country of manufacture (e.g., third party country) is FAR Sections 21.183(d) or 21.183(b).

Prior to the issuance of an FAA Airworthiness Certificate, the Maintenance Manual, BHT-407-MM-1, Chapter 5, must be identified by the statement "FAA SUPPLEMENT" at the top of all pages including the List of Effective pages for this chapter.

NOTE 33. Bell Helicopter Textron Service Bulletins are approved by Transport Canada and include a statement to that effect. Such approval may be interpreted as approved by FAA.

NOTE 34. The Allison engine Model 250-C10D military's designation is T63-A-700. This engine is identified by this designation in the military operator's manual for the OH-58A helicopter (TM55-1520-228-10).

NOTE 35. Any alteration to the type design of the model 407 requires instructions for continued airworthiness. These instructions must be submitted and accepted by the Fort Worth Aircraft Evaluation Group prior to approval for return to service.

NOTE 36. The model 407 rotorcraft employs electronic engine controls, commonly named Full Authority Digital Engine Controls (FADEC) and is recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have only manual (non-electronic) controls. (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 FADEC. This type of testing must employ the particular FADEC's diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.

.....END.....