

I - Model UH-12B, (Navy HTE-2, Army H-23B), 3 PCLM, Approved November 2, 1951 (Cont'd)

Leveling means	Lugs on brackets on left side from Station 66 to 100. On serials 323 to 345, 335 to 366, 377 to 410 and 412 and up - - top face of body castings at Sta. 107 and lug at Sta. 70 left side.
Maximum weight	2500 lbs.
No. of seats	3 (53)
Maximum Baggage	None
Fuel capacity	Main tanks 28 gals. (85) (26.5 usable) (See NOTE 1 for data on "System Fuel and Oil")
Oil capacity	10 quarts (92) (See NOTE 1 for data on "System Fuel and Oil")
Rotor blade movements	(Helicopter Level) (See Item 9 when 12-9 degree hub is installed)
Main blades:	
Collective pitch	+10° to +0.3° (measured at retention plate) (Low setting is determined as the lowest setting which will preclude overspeeding in autorotation).
Teetering	Control rotor $\pm 8^\circ$, Main rotor $\pm 8^\circ$
Wobble plate:	
Lateral	$\pm 8^\circ$
Longitudinal	$\pm 9^\circ$
Control blades:	
Neutral	9° incidence (Rotor hub and wobble plate level)
Anti-torque rotor blades:	
Flapping	+20° to -10°
Collective pitch	+15° to -3°
Horizontal stabilizer setting	-9° (with Helicopter Level)
Serial Nos. eligible	210 and 296 through 748 and DLW 3 (David Locke Webster III - See NOTE 9)
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 1, 2, 3, 4, 8, 101, 102, 103, 104, 105, 106, 107, 108, 109, 205, 208, 301, 302, 303, 304, 305, 307, 401(a), 605.

II - Model UH-12C (Army H-23C), 3 PCLH, Approved December 12, 1955

Engine	Aircooled Motors Franklin 6V4-200-C33 (See Item 117 for optional engine)
Fuel	91 min. grade aviation gasoline
Engine limits for all operations	Maximum rpm 3100 (200 hp) (See Item 415(c) when Supercharger, Item 113(b), is installed)

II - Model UH-12C (Army H-23C), 3 PCLH, Approved December 12, 1955 (Cont'd)

Rotor limits and engine operating speeds	Power Off (Rotor Tach.)	Power On (Engine Tach.)
	Maximum 360	Maximum 3100 rpm
	Minimum 300	Minimum (S.L. to 6000 ft.) 2900 rpm (Above 6000 ft. increase minimum rpm by 25 rpm for each additional 1000 ft. of altitude)
Airspeed limits	Configuration	Vne (Never Exceed) CAS
	Skid Gear	73 knots (84 mph)
	Float Gear	73 knots (84 mph)
	Skid & Litters	67 knots (77 mph)
	Float & Litters	67 knots (77 mph)
	The above airspeeds apply from S.L. to 2000 ft. Decrease Vne 2.0 knots (2.3 mph) per 1000 ft. of altitude above 2000 ft.	
Altitude limits	Avoid slow speed operation between 10 ft. and 325 ft. above ground surface (See Approved Flight Manual).	
C.G. range	Configuration (Continued)	
	Skid Gear	(80.1) to (84.6)
	Float Gear	(81.1) to (84.6)
	Skid & Litters	(80.1) to (83.6)
	Float & Litters	(81.1) to (84.6)
Empty weight C.G. range	None	
Datum	107.25 in. fwd. of tail boom-fuselage upper mounting face	
Leveling means	Top face of body castings at Sta. 107 and lug at Sta. 70 left side	
Maximum weight	2500 lbs.	
No. of seats	3 (53)	
Maximum Baggage	None	
Fuel capacity	Main tank 28 gals. (85) (26.5 usable) (See NOTE 1 for data on "System Fuel and Oil")	
Oil capacity	10 quarts (92) (See NOTE 1 for data on "System Fuel and Oil")	
Rotor blade movements	(Measured with respect to the mast) (NOTE: When the mast is vertical the Helicopter is 1° nose up)	
Main blades:		
Collective pitch	+10° to +0.3° (measured at retention plate) (Low setting is determined as the lowest which will preclude overspeeding in auto-rotation).	
Teetering	Control rotor ±12°, Main rotor ±9°	
Wobble plate:		
Lateral	±7.7° to ±8.3°	
Longitudinal	±8.0° to ±8.5°	
Control blades:		
Neutral	+9° incidence (Rotor hub and wobble plate perpendicular to mast)	

II - Model UH-12C (Army H-23C), 3 PCLH, Approved December 12, 1955 (Cont'd)

Anti-torque rotor blades:		
Flapping	+20° to -10°	
Collective pitch	+15° to -3°	
Horizontal stabilizer setting	Configuration	(with Helicopter Level)
	Skid Gear	0°
	Float Gear	-19°
	Skid & Litters	-19°
	Float & Litters	-19°
Serial Nos. eligible	749 through 937 and 1035 through 1045 except as noted below. (See NOTE 8 for serial no. J345)	
	NOTE: In order for individual Model H-23C helicopters procured under military cognizance and not having been issued a Form FAA 970, "Conformity Certificate - Military Aircraft," to be eligible for airworthiness certification, it must be determined in each case that the helicopter conforms to the type design.	
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 1, 2, 3, 4, 8, 101, 102, 103, 104, 105, 106, 107, 109, 114, 115, 205, 208, 301, 302, 303, 304, 305, 307, 415(a), 605	

Specifications Pertinent to All Models

Certification basis	Type Certificate No. 6H2 (CAR 6 as amended March 1, 1950)
Production basis	Production Certificate No. 423WE, Spare Parts Only
Equipment:	(Unless specifically noted, items of equipment are eligible on both UH-12B and UH-12C Helicopters)

Rotors and Rotor Equipment

1. 2 main rotor blades (See Item 9 when 12-9 degree hub is installed on UH-12B)
 - (a) Hiller Dwg. 53001 (UH-12B) 176 lbs. (85)
 - (b) Parsons Dwg. 40-001-5 (alternate 40-001-2, -3, or -4) (UH-12B) 176 lbs. (85)
 - (c) Parsons Dwg. 40-001-5 (alternate 40-001-2, -3, or -4) (UH-12C) 177 lbs. (84)
2. 2 control blades (See Item 9 when 12-9 degree hub is installed on UH-12B)
 - (a) Hiller Dwg. 36203 and 36117 (UH-12B) 32 lbs. (85)
 - (b) Hiller Dwg. 36123 (UH-12C) 33 lbs. (84)
3. 2 tail rotor blades
 - (a) Hiller Dwg. 55012 6 lbs. (328)
 - (b) Hiller Dwg. 55064 installed per Hiller Service Bulletin No. 80. Use actual weight change
4. Collective pitch ballast system
 - (a) Hiller Dwg. 30001 (UH-12B) 3 lbs. (85)
 - (b) Hiller Dwg. 30009 (UH-12C) 5 lbs. (85)
5. Omitted
6. Omitted
7. Dual control kit installation
 - (a) Hiller Dwg. 30005 and 30006 (UH-12B) Use actual weight change
 - (b) Hiller Dwg. 30012 (UH-12C) Use actual weight change
8. 2 Vibration absorbers Hiller Dwg. 33216 (lateral and longitudinal cyclic control system) Use actual weight

Specifications Pertinent to All Models (Cont'd)

9. 12-9 Degree hub installed per Hiller Service Bulletin No. 51 (UH-12B) Use actual weight change
 When this item is installed the following changes apply:
 (a) C.G. of items 1(a), 1(b) and 2(a) is at (84.2)
 (b) Rotor blade movements (Measured with respect to the mast)
 (NOTE - When the mast is vertical the Helicopter is 1° nose up)
 Main Blades:
 Collective Pitch Same as Basic UH-12B
 Teetering Control rotor $\pm 12^\circ$; Main rotor $\pm 9^\circ$
 Wobble Plate
 Lateral $\pm 7.7^\circ$ to $\pm 8.3^\circ$
 Longitudinal $\pm 8.0^\circ$ to $\pm 8.5^\circ$
 Control Blades
 Neutral $+9^\circ$ incidence (Rotor hub & wobble plate perpendicular to mast)
 (c) Item 401(f) is required with this installation

Engine and Engine Accessories - Fuel and Oil System

101. Oil cooler 8 lbs. (76)
 (a) Harrison No. 8518115 8 lbs. (76)
 102. Engine air intake system
 (a) Hiller Dwg. 76001, 76110 and 76118 (UH-12B) 4 lbs. (96.5)
 (b) Hiller Dwg. 76004, less mufflers (UH-12C) 10 lbs. (92)
 (c) Hiller Dwg. 76248 or Hiller Service Bulletin No. 74 (required with Item 117) 13.5 lbs. (97)
 103. Fuel pump
 (a) Weldon 6005-2 4 lbs. (85)
 104. Auxiliary fuel pump
 (a) Weldon 4013C 3 lbs. (78)
 105. Fan, Hiller Dwg. 74306 3 lbs. (78)
 106. Carburetor zone support bracket, Hiller Dwg. 76117 or 76119 1 lb. (97)
 107. Starter
 (a) Delco Remy 1109662 or equivalent 18 lbs. (78)
 108. System fuel and oil (See NOTE 1 for definition) (UH-12B) 7 lbs. (90)
 109. Unusable fuel (See NOTE 1 for definition) 9 lbs. (85)
 110. Long range fuel tank installation per Hiller Service Bulletin No. 42 and Dwg. 72006
 (a) Left-hand tank installation 5 lbs. (87)
 (b) Left-hand tank and support 28 lbs. (87)
 (c) Right-hand tank installation 4 lbs. (87)
 (d) Right-hand tank and support 28 lbs. (87)
 (Tank capacity 18 gals. each at Sta. 87)
 (Left tank to be used for single tank installations)
 111. Omitted
 112. Omitted
 113. Engine Supercharger Installation (6V4-200-C33 engine only)
 (a) Hiller Dwg. 76007 and Service bulletin No. 52 (UH-12B) Use actual weight
 (Item 401(g) contains engine operating limits and is required with this installation)
 (b) Hiller Dwg. 76007 and Service bulletin No. 52 (UH-12C) Use actual weight
 (Item 415(c) contains engine operating limits and is required with this installation)
 114. System fuel (1.5 gals. when drained in normal ground attitude from tank) (UH-12C) 9 lbs. (87)
 115. System oil (4 quarts when drained in normal ground attitude from tank) (UH-12C) 9 lbs. (90)
 116. Omitted
 117. Engine: Aircooled Motors Franklin 6V-335-B installed per Hiller Service Bulletin Use actual weight change
 No. 70 (Item 102(c) must be installed and Items 401(h) UH-12B or 415(e) UH-12C, are required. Item 113 is not eligible with this installation)
 Fuel: 91/96 Min. grade aviation gasoline Engine limits for all operations:
 Maximum rpm 3100 (210 hp)
 118. Automatic auxiliary fuel pump system 2 lbs. (55)
 (Item 401(i) required for UH-12B and Item 415(f) for UH-12C)

Landing Gear

201. 2 Main wheel-brake assemblies, 5.00-4 Type III	
(a) Goodrich Model 451M (UH-12B)	10 lbs.(105.5)
Wheel assembly No. D-3-142M	
Brake assembly No. D-2-113	
202. 2 main wheel tires, 5.00-4, Type III	
(a) 4 ply tires with regular tubes (UH-12B)	10 lbs.(105.5)
(b) 6 ply tires with regular tubes (UH-12B)	11 lbs.(105.5)
203. 2 Nose wheels, 10 inch Type I	
(a) Goodyear Model 510646M (UH-12B)	6 lbs. (32)
204. 2 Nose wheel 6 ply rating tires, 10.00, Type I	
(a) Channel Tread with regular tube (UH-12B)	6 lbs. (32)
205. Skid type gear, less scuff plates, handling wheels and axles	
(a) Hiller Dwg. 43000 (UH-12B)	104 lbs. (73)
(Four wheel gear, Items 201, 202, 203 and 204 installed per Hiller Dwg. 41000 and 42045, or floats Item 209, are approved optional equipment for the skid gear)	
(b) Hiller Dwg. 43036 (UH-12C)	96 lbs. (73)
(Floats, Item 209, are approved optional equipment for the skid gear)	
206. Omitted	
207. Omitted	
208. Tail skid, Hiller Dwg. 42202	2 lbs. (303)
209. Float type gear, Air Cruisers Model 3201-1	
(a) Hiller Dwg. 44012 (UH-12B)	Use actual weight change
(Item 401(b) required with this installation)	
(b) Hiller Dwg. 44012 (UH-12C)	Use actual weight change
(Item 415(b) required with this installation)	
(UH-12C horizontal stabilizer setting must be changed to -19 degrees when floats are installed)	
210. Skid gear scuff plates installation	
(a) Hiller Dwg. 43043 (UH-12B)	5 lbs. (44)
(b) Hiller Dwg. 43015 and 43016 (UH-12C)	3 lbs. (44)

Electrical Equipment

301. Generator	
(a) Pierson E-2422, 28-5 V/25a or equivalent	14 lbs. (85)
302. Battery	
(a) UH-12B	
Standard (AN-3151-2)	Fwd. 52 lbs. (22)
	Aft. 52 lbs. (126)
Lightweight (AN-3154-1A)	Fwd. 34 lbs. (22)
	Aft. 34 lbs. (126)
(b) UH-12C	
Standard (AN-3151-2)	Fwd. 52 lbs. (25)
	Aft. 52 lbs. (126)
Lightweight (AN-3154-1A)	Fwd. 34 lbs. (25)
	Aft. 34 lbs. (126)
Nickel Cadmium (19-10H-120)	Fwd. 28 lbs. (14)
	Aft. 28 lbs. (126)
303. Lighting system (See NOTE 6 for removable electrical equipment)	
(a) Hiller Dwg. 83062, 83059 and 83087 (UH-12B)	Use actual weight
(b) Deleted June 14, 1957	
304. Voltage Regulator, G.E. CR2795B-100-A1	5 lbs. (88.5)
305. Generator cutout, Hartman No. A-718	3 lbs. (88.5)
306. Omitted	
307. Accessories electrical harness	
(See NOTE 6 for removable electrical equipment)	
(a) Hiller Dwg. 83062 (UH-12B)	Use actual weight
(b) Deleted October 19, 1956	

Electrical Equipment (Cont'd)

308. Forward battery provisions kit, Hiller Dwg. 83156 (UH-12B) (See NOTE 7 for drain requirements) (Item 401(e) required with this installation)	7 lbs. (43.5)
309. Forward battery drain installation kit, Hiller Dwg. 83156-3 (UH-12B)	0.3 lb. (16.5)
310. Lightweight battery kit, 24V-AN 3154-1A, Hiller Dwg. 83155 (UH-12B) (See NOTE 7 for drain requirements) (Item 401(e) required with this installation)	34 lbs.
311. Glare shield installation kit, Hiller Dwg. 81250 (UH-12B)	0.3 lb. (28)
312. Instruments and cockpit lights kit, Hiller Dwg. 81252 (UH-12B)	1.4 lbs. (26)
313. Landing and navigation lights kit	
(a) Hiller Dwg. 81251 (UH-12B)	4 lbs. (54)
(b) Hiller Dwg. 83178 (UH-12C)	4 lbs. (54)
314. Standard forward battery installation, Hiller Dwg. 83107-3, less battery (UH-12C)	6 lbs. (25)
315. Lightweight forward battery installation, Hiller Dwg. 83107-5, less battery (UH-12C)	6 lbs. (25)
316. Omitted	
317. Nickel cadmium battery kit fwd., Hiller Dwg. 83199, less battery (UH-12C)	5 lbs. (14)
318. Lightweight aft battery rack installation, Hiller Dwg. 83181-4 (UH-12C)	
319. Nickel cadmium battery rack - aft installation, Hiller Dwg. 83181-5 (UH-12C)	3 lbs. (126)
320. Standard aft battery rack installation, Hiller Dwg. 83181-3 (UH-12C)	4 lbs. (126)
321. Omitted	
322. 50-Amp generator installation per Hiller Dwg. 76207 and Hiller Service bulletin No. 69	Use actual weight change

Interior Equipment

401. (a) Hiller Helicopter Model UH-12B CAA Approved Flight Manual dated
 March 27, 1952, revised September 17, 1954
- (b) UH-12B Flight Manual Revisions dated June 23, 1953
 (Required with Item 209)
- (c) UH-12B Flight Manual Revision dated February 25, 1954
 (Required with canopy removed, see NOTE 6)
- (d) UH-12B Flight Manual Revision dated April 6, 1954
 (Required when landing, navigation, map and/or instrument lights and/or
 glare shield are removed, see NOTE 6)
- (e) UH-12B Flight Manual Revision dated June 11, 1954
 (Required with removable battery ballast, see NOTE 7)
- (f) UH-12B Flight Manual Revision dated June 7, 1955
 (Required with Item 9)
- (g) UH-12B Flight Manual Supplement dated January 27, 1956
 (Required with Item 113)
- (h) UH-12B Flight Manual Revision dated November 6, 1957
 (Required with Item 117)
- (i) UH-12B Flight Manual Revision dated May 19, 1960
 (Required with Item 118)
415. (a) Hiller Helicopter Model UH-12C CAA Approved Flight Manual dated
 December 9, 1955, revised July 11, 1956
- (b) UH-12C Flight Manual Supplement dated December 15, 1955
 (Required with Item 209)
- (c) UH-12C Flight Manual Supplement dated March 30, 1956
 (Required with Item 113)
- (d) UH-12C Flight Manual Supplement dated July 11, 1956
 (Required with Item 606)
- (e) UH-12C Flight Manual Revision dated October 29, 1957
 (Required with Item 117)
- (f) UH-12C Flight Manual Revision dated May 3, 1960
 (Required with Item 118)

Miscellaneous (not listed above)

602. Cabin heater installation	
(a) Hiller Dwg. 88027 (UH-12B)	Use actual weight
(b) Hiller Dwg. 88047 (UH-12C)	Use actual weight
605. Ballast installation	
(See Loading Instructions in Flight Manual regarding ballast location and necessity for its use)	
(See NOTE 7 for movable battery ballast)	
(a) Hiller Dwg. 62170 and 62161 (UH-12B)	15 lbs.
(b) Hiller Dwg. 62227 (UH-12C)	15 lbs.
606. Litter installation on skid gear or float gear version	
(Item 607 also must be installed)	
Installation on skid gear version must be in pairs only, however, the right litter may be removed from float gear version. Heater installation Hiller Dwg. 88018 is optional	
(a) Hiller Dwg. 96190 (UH-12B)	Use actual weight
(b) Hiller Dwg. 96190 (UH-12C)	Use actual weight
607. Litter shoulder harness (2), Hiller Dwg. 96191	6 lbs. (67)
608. Seat shoulders harness (3), (If this item is removed, the seat back cables are to be retained)	14 lbs. (67.5)
(a) Hiller Dwg. 85030	
(a) Hiller Dwg. 85069	

NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions must be in each helicopter at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system). Ballast, when necessary, must be carried in accordance with Loading Instructions in the Approved Flight Manual.

Fuel and oil capacities as indicated are total tank capacities over and above "System Fuel and Oil". The fuel tank capacity includes "Unusable" fuel of 1.5 gallons, which cannot be used safely in all flight attitudes, and which must be included in the empty weight.

"System Fuel and Oil," which must be included in the empty weight, is that amount required to fill the fuel system and tank up to the tank outlet to the engine, plus the oil required to fill the oil cooler and lines.

NOTE 2. The following placards must be installed so as to be in full view of the pilot (applies to UH-12B and UH-12C except as noted).

- (a) Below airspeed indicator:
 - (1) UH-12B "Decrease Vne 3.0 mph per 1000 feet of altitude"
(Must be installed when Flight Manual Revision dated June 7, 1955, or prior is used for operation).
 - (2) UH-12B "Above 2000 ft., decrease Vne 2.3 mph (or 2.0 knots) per 1000 ft. of altitude."
(Must be installed when Flight Manual Revision dated September 26, 1955, or subsequent is used for operation).
 - (3) UH-12C "Decrease Vne 2.0 knots per 1000 ft. of altitude above 2000 ft."
- (b) Below tachometer: "Above 6000', see operating limitations."
- (c) On tunnel ahead of center seat or left side of instrument panel:
 - (1) "This helicopter must be operated in compliance with the operating limitations in the CAA/FAA Approved Rotorcraft Flight Manual."
 - (2) "Instrument flights prohibited"
 - (3) "No acrobatic maneuvers approved."
 - (4) "See Loading Instructions in Flight Manual."
 - (5) "Unsymmetrical loading must be to the left."
 - (6) UH-12B: "Do not stand while rotor is turning with canopy removed."
 - (7) "Avoid protracted rearward flight."
 - (8) UH-12C without litters: "With doors removed, Hover flight limited to 30 minutes in 8-hour period per pilot (see Flight Manual)"
 - (9) UH-12C with litters: "Flight prohibited with doors removed (see Flight Manual)"
- (d) On removable ballast weight: "See Loading Instructions in Flight Manual for proper usage."

NOTE 2 (Cont'd)

- (e) On auxiliary fuel tank valve (when installed): "Do not drain auxiliary fuel tanks with main tanks more than one-quarter full."
- (f) UH-12B on cabin floor ahead of parking brake lever: "Parking brake only - - pull."
- (g) On cabin heater outlet: "Use cabin heat in cruise and climb only."

NOTE 3. Information essential to the proper maintenance of the rotorcraft (helicopter) including retirement times of critical parts is included in the manufacturer's maintenance instructions provided with each rotorcraft. These values of retirement or service life cannot be increased without CAA/FAA Engineering approval.

NOTE 4. These helicopters must be serviced and maintained in conformance with instructions given by Hiller Helicopters in the pertinent model guide, repair handbook, and service and overhaul manuals.

NOTE 5. Deleted - November 12, 1952

NOTE 6. UH-12B. Certain items of equipment may be removed from the basic helicopter as indicated in Hiller Service Letter No. 15. Items 401(c) and 401(d) are required with this modification.

NOTE 7. Movable battery ballast may be used in lieu of Item 605 as permitted by the pertinent CAA/FAA Approved Rotorcraft Flight Manuals. Item 309 is required when battery is in forward position and cabin doors are installed on UH-12B.

NOTE 8. (a) Hiller UH-12C (Manufactured by Jensen Crop Dusters), serial No. J345, has been issued a Standard Category Airworthiness Certificate. Major modifications in accordance with Jensen Crop Dusters Master Drawing List dated May 17, 1961, were approved for serial N. J345. Jensen Crop Dusters FAA Approved Rotorcraft Flight Manual Supplement dated May 26, 1961, to Hiller UH-12C Helicopter Manual, required.

(b) Hiller UH-12C, World Helicopters serial No. WH6003 has been issued a Standard Category Airworthiness Certificate. This helicopter was built up from spare parts by Big State Industries Co., Inc., P.O. Box 548, Municipal Airport, Mineral Wells, Texas.

NOTE 9. (a) Hiller UH-12B, serial No. DLW 3, has been issued a Standard Category Airworthiness Certificate. This helicopter was built up from spare parts by Evergreen Helicopters, Inc., McMinnville, Oregon and is registered by: David Locke Webster, III, 1930 Cowper Street, Palo Alto, California.

(b) Hiller UH-12B, serial No. JR-1 has been issued a Standard Category Airworthiness Certificate. This helicopter was built up from spare parts by James P. Smith, 673 W. Maxzim, Fullerton, California, and was registered to same.

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