

FEDERAL AVIATION ADMINISTRATION

H-1  
 Revision 40  
 BELL  
 47  
 47B  
 47B3  
 47D  
 47D1  
 47E  
 47G  
 47G-2  
 47H-1  
 June 15, 1980

HELICOPTER SPECIFICATION NO. H-1

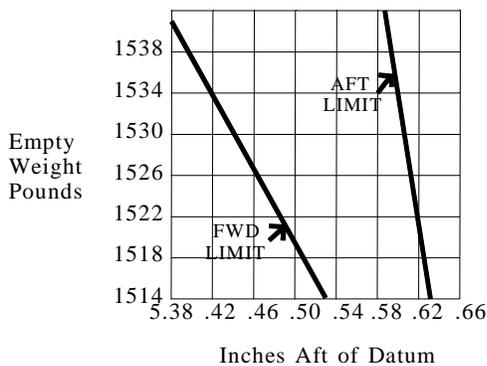
MANUFACTURER Bell Helicopter Textron, Div. of Textron, Inc.  
 Fort Worth, Texas

**I. Model 47 and 47-S - Approved May 1946: Deleted, February 15, 1950.**

**II. Model 47B, 2 PCL-SH, Approved November 4, 1947; Models 47B2 and 47B2S, Deleted June 15, 1950; Model 47B-S, Deleted December 12, 1951. (See NOTE 8 for Float Information)**

Engine Aircooled Motors Franklin 6V4-178-B3 (Becomes 6V4-178-B32 with Item 119)  
 Fuel 80 minimum octane aviation gasoline  
 Engine limits Maximum r.p.m. 3000 (178 hp.)  
 Carburetor Marvel MA4-5  
 Rotor limits  
 & operational Power On (Engine Tach.) Power Off (Rotor Tach.)  
 engine speeds Maximum 3000 Maximum 350  
 Minimum 2800 (S.L.) Minimum 285  
 Airspeed limits Never exceeds speed 92 m.p.h. (80 knots) True Ind.  
 C.G. range (-2.0) to (+2.9)  
 Empty weight C.G. range See Figure

MODEL 47B (without floats)



(In order to maintain empty weight C.G. limits, up to 25 lbs. of fixed ballast can be added in forward baggage compartment (Sta. -68) in addition to the maximum capacity 30 lb.)

Maximum weight 2200 lb.  
 No. of seats 2 (Pilot and passenger) (-32)  
 Maximum baggage Aft compartment 40 lb. (+43); Fwd. compartment 30 lb. (-68)  
 Fuel capacity 33 gal. (24 gal. at +25), (9 gal. at -24)  
 Oil capacity 3 gal. (+12), (including 1 gal. unusable)

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**II. Model 47B, Models 47B2 and 47B2S, Model 47B-S** (cont'd)

Control movements	(Tolerances +1/2°)	
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position	Swashplate Angle from Level
	Full forward	9° Down and forward
	Full aft	9° Down and aft
	Full left	8° Down and aft
	Full right	6° Down and right
Collective pitch	Blade average pitch settings; High 10°, low 1/2°	
Anti-torque rotor pitch	- Measured at tip; High +10-1/2° to +12-1/2°, low -8-1/2° to -9°	
Serial Nos. eligible	2 and up	
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 2, 3(b), 5, 6, 110, 112, 113(a), 114, 117, 130, 135, 202(1), 203, 204, 205, 213, 305, 306(a), 402.	

**III. Model 47B3, 2 POLH, Approved July 2, 1948; Model 47D, 2 PO-CLH, Approved February 25, 1948 2 PO-CLH, Approved November 18, 1948.** (See NOTE 8 for float models)

Model 47B3 is similar to the Model 47B except for revised cockpit enclosure and furnishings, engine compartment fairings and cowling, and other miscellaneous items.

Model 47D is similar to the Model 47B3 except for revised cockpit enclosure, revised wheel installation incorporating brakes, 24 volt electrical system, and minor changes to the fuel system and cowling.

Engine	Aircooled Motors Franklin 6V4-178-B32 (See Item 137 for optional engines)		
Fuel	80 minimum octane aviation gasoline		
Engine limits	Maximum r.p.m. 3000 (178 hp.)		
Carburetor	Marvel MA4-5		
Rotor limits & operational engine speeds	Power On (Engine Tach.)	Power Off (Rotor Tach.)	
	Maximum	3000	Maximum 350
	Minimum	2800 (S.L.)	Minimum 285
Airspeed limits	Never exceed speed 92 m.p.h. (80 knots) True Ind.		
C.G. range	(-2.0) to (+2.9)		
Empty weight C.G. range	None		
Maximum weight	2200 lb.		
No. of seats	2 (Pilot and passenger) (-32)		
Maximum baggage	40 lb. (+43), Models 47D, 47D (Floats) None, Models 47B3 (all configurations), 47D (Litters)		
Fuel capacity	33 gal. (24 at +25), (9 at -24)		
Oil capacity	3 gal. (+5) (including 1 gal. unusable)		
Control movements	(Tolerance +1/2°)		
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position	Swashplate Angle from Level	
	Full forward	9° Down and forward	
	Full aft	9° Down and aft	
	Full left	8° Down and aft	
	Full right	6° Down and right	
Collective pitch	Blade average pitch settings: High 11°, low 1/2°		
Anti-torque rotor pitch	- Measured at tip: High +10-1/2° to +12-1/2°, low -8-1/2° to -9°		
Serial Nos. eligible	Model 47B3: 29 and up. Model 47D: 1 and up.		
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: Model 47B3: 2, 3(b), 5, 6, 112, 113, 114, 118, 119, 130, 135, 202(a), 203, 204, 205, 213, 305, 306(b), 404. Model 47D: 2, 3(b), 5, 6, 112, 118, 119, 121, 122, 130, 135, 202(b), 203, 208, 209, 213, 313, 314, 407.		

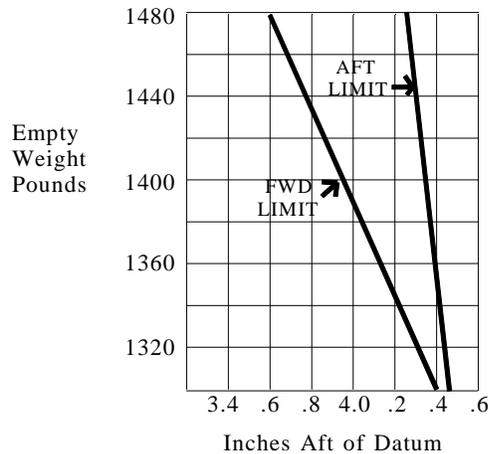
**IV - Model 47D1, 3 PCLH, Approved March 29, 1949.** (See NOTE 8 for float models)

Model 47D1 is similar to Model 47D, except for three-place seating arrangement, revised cockpit enclosure, gravity type fuel system, addition of ventral fin-fixed tab combination, main rotor counterweights, roller-bearing type transmission, movable battery, and elimination of cowling and tail boom covering.

Engine Aircooled Motors Franklin 6V4-178-B32 (See Item 137 for optional engines)  
 Fuel 80 minimum octane aviation gasoline  
 Engine limits Maximum r.p.m. 3000 (178 hp.)  
 Carburetor Marvel MA4-5

Rotor limits & operational engine speeds	<u>Power On (Engine Tach.)</u>	<u>Power Off (Rotor Tach.)</u>
	Maximum 3000	Maximum 350
	Minimum 2800 (S.L.)	Minimum 285
Airspeed limits	Never exceed speed 95 m.p.h. (80 knots) True Ind.	
C.G. range	(-2.0) to (+2.9)	

Empty weight C.G. range See Figure



(In order to maintain empty weight C.G. limits, fixed ballast may be added at Sta. -62 and +210 as required.)

Maximum weight	2200 lbs.
No. of seats	3 (Pilot and 2 passengers) (-30)
Maximum baggage	none
Fuel capacity	29 gal. (+24)
Oil capacity	3 gal. (+5), (including 1 gal. unusable)
Control movements	(Tolerance $\pm 1/2^\circ$ )
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position Swashplate Angle from Level
	Full forward $9^\circ$ Down and forward
	Full aft $9^\circ$ Down and aft
	Full left $7\ 1/2^\circ$ Down and aft
	Full right $6\ 1/2^\circ$ Down and right
Collective pitch	Blade average pitch settings; High $11^\circ$ , low $1/2^\circ$
Anti-torque rotor pitch	- Measured at tip: High $+10\text{-}1/2^\circ$ to $+12\text{-}1/2^\circ$ , low $-8\text{-}1/2^\circ$ to $9^\circ$
Serial Nos. eligible	47; 82; 145 and up. Copters Unlimited Bell 47D, S/N CS-1; Big State Industries, S/N 1001, 1002; Rep-Air S/N 001; Utility Copters, S/N 200; World Wide Helicopters S/N 15 and 57; Agrotors, Inc. S/N 895; Rebel Rotors S/N B-101-R and B-109-R; Kitz Kopters, S/N T-121, T-122, T-123, and B-110-R; Cavalier Helicopter Corp., S/N CH-2004; Nat'l Helicopter Serv. & Engr., S/N NH963; Shelby Aero., S/N SA-2; Gulf Coast Helicopters, S/N 1; World Helicopters, Inc., S/N WH5001, WH5003 thru WH5011, and WH5016. Louis Wm. Cottriel 5501, Kitz Kopter, Inc., S/N T558 and T610, and Florida Helicopters, S/N 001, K Copters S/N K732, K853 S/N K6112, Timothy Moriarty, S/N M-1; Houston Helicopter, S/N 101. Action Bell S/N N211

**IV - Model 47D1** (cont'd)

Required equipment In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed:  
2, 3(c), 5, 6, 112, 118, 119, 122, 132, 135, 202(b), 203, 208, 209, 213, 313, 314, 410.  
See Note 13.

**V - Model 47E, 2 PO-CLH, Approved April 18, 1950.**

Engine	Aircooled Motors Franklin 6V4-200-C32		
Fuel	91 minimum octane aviation gasoline		
Engine limits	Maximum r.p.m. 3100 (200 hp.)		
Carburetor	Marvel MA4-5		
Rotor limits & operational engine speeds	Power On (Engine Tach.)	Power Off (Rotor Tach.)	
	Maximum 3100	Maximum	360
	Minimum 2900 (S.L.)	Minimum	294
Airspeed limits	Never exceed 98 m.p.h. (85 knots) True Ind.		
C.G. range	(-2.0) to (+2.9)		
Empty weight C.G. range	None		
Maximum weight	2350 lbs.		
No. of seats	2 (Pilot and passenger) (-32)		
Maximum baggage	40 lbs. (+43)		
Fuel capacity	33 gal. (24 at +25), (9 at -24)		
Oil capacity	3 gal. (+5) (including 1 gal. unusable)		
Control movements	(Tolerance +1/2°)		
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position	Swashplate Angle from Level	
	Full forward	9° Down and forward	
	Full aft	9° Down and aft	
	Full left	7 1/2° Down and aft	
	Full right	6 1/2° Down and right	
Collective pitch	Blade average pitch settings: High 11°, low 1/2°		
Anti-torque rotor pitch	- Measured at tip: High +10-1/2° to +12-1/2°, low -8-1/2° to -9°		
Serial Nos. eligible	165 thru 173		
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 2(a), 3(c), 5, 6, 112, 118, 119, 122, 132, 134, 135, 202(b), 203, 208, 209, 213, 323, 328, 413.		

**VI - Model 47G, 3 PCLH, Approved June 19, 1953.**

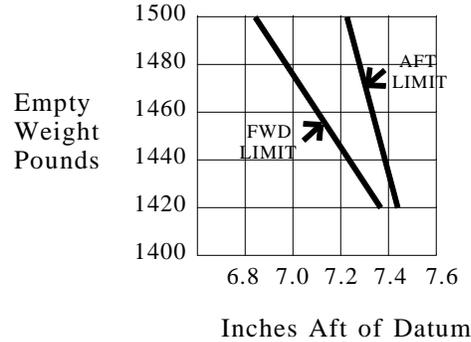
Model 47G is similar to the Model 47D1, except for saddle type fuel tanks, new and relocated battery, synchronized elevator, electrical system, ventral fin, tail rotor gear box and other minor items.

Engine	Aircooled Motors Franklin 6V4-200-C32		
Fuel	91 minimum octane aviation gasoline		
Engine limits	Maximum r.p.m. 3100 (200 hp.)		
Carburetor	Marvel MA4-5		
Rotor limits & operational engine speeds	Power On (Engine Tach.)	Power Off (Rotor Tach.)	
	Maximum 3100	Maximum	360
	Minimum 2900 (S.L.)	Minimum	294
Airspeed limits	Never exceed 100 m.p.h. (87 knots) True Ind. (Large Area Synchronized Elevator) 90 m.p.h. (78 knots) True Ind. (Small Area Synchronized Elevator)		
C.G. range	(-3.0) to (+4.0)		

**VI - Model 47G** (cont'd)

Empty weight C.G. range

See Figure

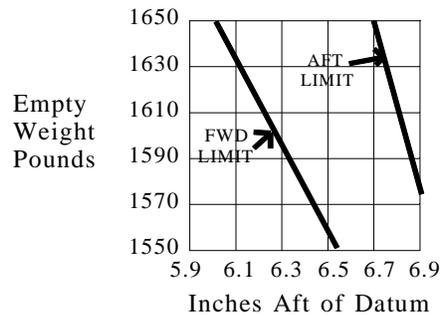


Maximum weight	2350 lb.
No. of seats	3 (Pilot and 2 passengers) (-30)
Maximum baggage	none
Fuel capacity	43 gal. (+5)
Oil capacity	3 gal. (+5), (including 1 gal. unusable)
Control movements	(Tolerance +1/2°)
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position Swashplate Angle from Level
	Full forward 9° Down and forward
	Full aft 9° Down and aft
	Full left 7 1/2° Down and aft
	Full right 6 1/2° Down and right
Synchronous elevator travels for cyclic pitch (Cable tension 25 lb.+5 lb.)	Stick Position Synchronous Elevator Angle of Chord from Level
	Full forward Leading edge up 14° +1/2°
	Full aft Leading edge down 27° +3° with min. travel of 37 1/2°
Collective pitch	Blade average pitch settings: High 11°, low 1/2°
Anti-torque rotor pitch	- Measured at tip: Metal blades - High +12-1/2° to +13-1/2°, low -10-1/2° to 11-1/2° (See S.I. 438) Wood blades - High +8-1/2° to +10-1/2° to -11°
Serial Nos. eligible	7; 295; 604; 666 and up; Continental Copters El Tomcat Mark II, S/N 1 thru 4 and 9, See Note 11; Continental Copters, S/N CCI-163, CCI-263, CCI-463, CCI-563, CCI-69-1; World Wide Helicopters, S/N 1209; Carson, S/N C5001 thru C5012, C5015; A.L. Hicks, CD-1, S/N 1; Shelby Aero, S/N SA3; Wiggins Airways, S/N 665-1; Agrotors, Inc., S/N 19; Gulf Coast Helicopters, S/N 2GC; Monahan, S/N 208; Carson Helicopters, Inc. C5016, C5018 and K Copters, S/N K651; Versatile, S/N 27; March Associates, S/N 5503; Versatile, S/N VH-2.
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 2, 3(c), 5, 6(b), 118, 129, 120(a), 132, 135, 215(a), 323, 328(a) or (b), 417.

**VII - Model 47G-2, 3 PCLH, Approved January 20, 1955.**

Model 47G-2 is similar to the 47G except for the installation of the Lycoming Model VO-435-A1A engine and the relocation of the fore, aft, and lateral cyclic hydraulic boost controls and installation of Lock and Load valves.

Engine	Lycoming VO-435-A1A, VO-435-A1B, VO-435-A1D, VO-435-A1E or VO-435-A1F	
Fuel	80 minimum octane aviation gasoline	
Engine limits	Maximum r.p.m. 3100 (200 hp.)	
Carburetor & carb. settings	Marvel MA4-5 (setting #10-3856)	
Rotor limits & operational engine speeds	Power On (Engine Tach.)	Power Off (Rotor Tach.)
	Maximum 3100	Maximum 360
	Minimum 2900 (S.L.)	Minimum 294
Airspeed limits	Never exceed 100 m.p.h. (87 knots) True Ind.	
C.G. range	(-3.0) to (+4.0)	
Empty weight C.G. range	See Figure	

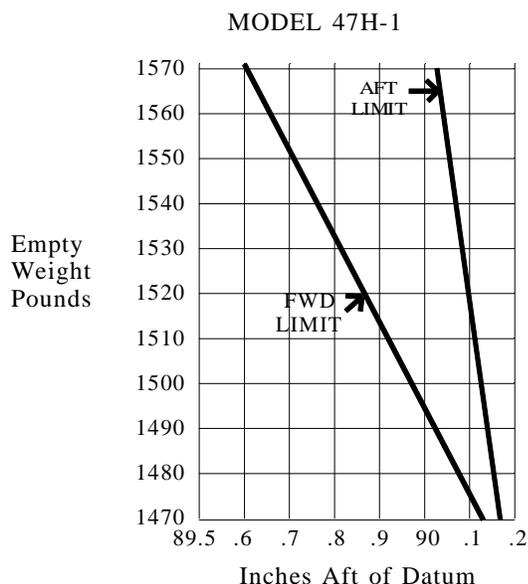


Maximum weight	2450 lb.	
No. of seats	3 (Pilot and 2 passengers) (-30)	
Maximum baggage	none	
Fuel capacity	43 gal. (+5)	
Oil capacity	3.5 gal. (+26.5) ( 1.5 gal. unusable)	
Control movements	(Tolerance +1/2°)	
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position	Swashplate Angle from Level
	Full forward	9° Down and forward
	Full aft	9° Down and aft
	Full left	7 1/2° Down and left
	Full right	6 1/2° Down and right
Synchronous elevator travels for cyclic pitch (Cable tension 25 lb. +5 lb.)	Stick Position	Synchronous Elevator Angle of Chord from Level
	Full forward	Leading edge up 14° +1/2°
	Full aft	Leading edge down 27° +3° with min. travel of 37 1/2°
Collective pitch	Blade average pitch settings: High 11°, low 1/2°	
Anti-torque rotor pitch	- Measured at tip: High +12 1/2° to +13-1/2°, low - 10 1/2° to 11 1/2° (See S.I. 438)	
Serial Nos. eligible	1342 and up, Scarborough G-21, S/N 1. Campbell CH-G2 S/N 1, Petroleum Helicopters, Inc. S/N 52, 491, 1282, Ronald Rogers, S/N RR-100, and Durkee Skeetercopter, Model DGH, S/N V-1. Continental Copters, S/N CCI-165 and CCI-101. K Copters, S/N K821, Ballew and Briggs S/N BB 2383, Action Bell, S/N M210.	
Required equipment	In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed: 2(b), 3(c), 5, 6(b), 120(a), 132, 139, 140, 215(a), 323, 328(b), 418.	

**VIII - Model 47H-1, 3 PCLH, Approved March 21, 1955.**

Model 47H-1 is similar to the 47G, except for semi-monocoupe tail boom, increased cabin width, contour fuel tanks, revised skid type landing gear, addition of baggage compartment.

Engine	Aircooled Motors Franklin 6V4-200-C32 (See Item 137(b) for opt. eng.)			
Fuel	91 minimum octane aviation gasoline			
Engine limits	Maximum r.p.m. 3100 (200 hp.)			
Carburetor	Marvel MA4-5			
Rotor limits				
& operational	Power On (Engine Tach.)	Power Off (Rotor Tach.)		
engine speeds	Maximum	3100	Maximum	360
	Minimum	2900 (S.L.)	Minimum	294
Airspeed limits	Never exceed 100 m.p.h. (87 knots) True Ind.			
C.G. range	(+81.5) to (+88.0)			
Empty weight C.G. range	See Figure			



In order to maintain empty weight C.G. limits fixed ballast may be added at Sta. +6 and +282 as required.

Maximum weight	2350 lbs.	
No. of seats	3 (Pilot and 2 passengers) (+56.5)	
Maximum baggage	200 lbs.	
Fuel capacity	35 gals. (+95)	
Oil capacity	2.7 gals. (+90) (including 0.7 gal. unusable)	
Control movements	(Tolerance $+1/2^\circ$ )	
Swashplate travels for cyclic pitch for basic configuration (for other configs., see appl. Bell Dwg. & Serv. instr.)	Stick Position	Swashplate Angle from Level
	Full forward	$9^\circ$ Down and forward
	Full aft	$9^\circ$ Down and aft
	Full left	$7^\circ$ Down and left
	Full right	$7^\circ$ Down and right
Synchronous elevator travels for cyclic pitch (Cable tension 30 lb. +35 lb.)	Stick Position	Synchronous Elevator Angle of Chord from Level
	Full forward	Leading edge down $0^\circ + 2^\circ$
	Full aft	Leading edge down $26^\circ + 28^\circ$
Collective pitch	Blade average pitch settings: High $11^\circ$ , low $1/2^\circ$	
Anti-torque rotor pitch	- Measured at tip: High $+12-1/2^\circ$ to $+13-1/2^\circ$ , low $-10-1/2^\circ$ to $11-1/2^\circ$	
Serial Nos. eligible	1347 and up. (See NOTE 12 on S/N's 1368 and 1370.)	

**VIII - Model 47H-1** (cont'd)

## Required equipment

In addition to the pertinent required basic equipment specified in CAR 6, the following items of equipment must be installed:  
2(b), 3(c), 5, 6(b), 118, 120(b), 129, 132, 140, 215(b), 323, 328(a) or (b), 419.

**SPECIFICATIONS PERTINENT TO ALL MODELS**

Datum All models except Model 47H-1:  
Station 0; Centerline of weld cluster just forward of leveling lugs (weld cluster approximately 2 in. forward of centerline mast)  
Model 47H-1:  
Station 0; 82 in. forward of centerline of weld cluster just forward of leveling lugs (weld cluster approximately 5 in. forward of centerline mast)

Leveling means Leveling lugs lower left-hand longeron aft of mast and adjacent cross tube

Certification basis Type Certificate No. H-1 (CAR 6, effective May 24, 1946) (structural loading cond. skid) Landing Gear dated 11-12-74)

Production basis Production Certificate No. 100

Equipment: A plus (+) or minus (-) sign preceding the weight of an item indicates the net weight change when that item is installed.  
"- -" indicates "same as preceding model."  
"—" indicates "does not apply."  
An E. indicates eligible.  
An N.E. indicates not eligible.  
The first number under a model indicates weight in pounds.  
The second number indicates location.

Rotors & Rotor Equipment	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
1. (a) Wood main blades Bell 47-110-120	E.	--	--	--	--	--	--	--
(b) Metal main blades Bell 47-110-250	—	—	—	—	—	—	E.	—
2. (a) Tail rotor wood Bell 47-642-020	N.E.	--	--	--	--	--	—	—
(b) Tail rotor metal Bell 47-642-102	E.	--	--	--	--	--	--	--
Eligible as indicated in Bell Serv. Instr. 185SI								
3. 2 Stabilizer Bar Dampners								
(a) Deleted								
(b) Houde Mfg. Co. A12141	4 (+2)	--	--	—	—	—	—	
(c) Houde Mfg. Co. A13965	4 (+2)	--	--	--	--	--	--	4 (+87)
4. Deleted								
5. 2 Main rotor counter-weights	Use act. wt. ch.	--	--	--	--	--	--	--
(a) Bell Dw. 47-110-120 installed in accordance with Bell Serv. Instr. 117SI								
6. Main rotor hub								
(a) Bell 47-120-164 (Alum. alloy yoke)	N.E.	--	--	--	--	—	—	—
(b) Bell 47-120-184 (Steel yoke)	75 (+2)	--	--	--	--	--	--	75 (+87)
7. Deleted								
8. Metal Main Rotor Blades Bell 47-706-590 Serv. Inst. 320SI	—	—	—	—	—	—	3 (0)	—
9. Tail Rotor Blade 47-642-117 S.I. 438						Use act wt. chg.	Use act wt. chg.	

## Engine and Engine Accessories - Fuel and Oil Systems

	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
<b>Starter</b>								
110. Delco-Remy 1109659	16 (-4)	—	—	—	—	—	—	—
111. Deleted, included in Item 119								
119. Delco-Remy 1109661	+2 (-4)	--	--	--	--	—	—	—
129. Delco-Remy 1109662	—	—	—	17 (-4)	--	--	—	17 (+80)
139. Eclipse-Pioneer 756-22C	—	—	—	—	—	—	19 (+4)	—
<b>Oil Cooler</b>								
112. Clifford E-36778	12 (+8.5)	12 (-12)	12 (-9)	--	--	—	—	—
120. (a) Harrison 8520470 (oil cooler valve included with this cooler)	—	—	—	9 (-8)	—	9 (-8)	--	—
(b) Bell 47-671-025	—	—	—	—	—	—	—	5 (+81)
<b>Oil Cooler Valve</b>								
114. United Aircraft UA32257V	3 (+7)	3 (-12)	—	—	—	—	—	—
122. Clifford U3225V DUB	—	—	2 (-12)	2 (-9)	2 (-12)	—	—	—
131. Deleted								
<b>Auxiliary Fuel Pump</b>								
113. (a) Auto pulse 6V521	6 (-12)	--	—	—	—	—	—	—
(b) Auto pulse 12V511	No wt. ch.	--	—	—	—	—	—	—
121. Weldon 4013A	—	—	3 (-12.5)	—	—	—	—	—
134. Weldon 4013C	—	—	—	—	3 (-16)	—	—	—
<b>2 Fan Belts</b>								
115. Deleted, included in Item 130								
123. Deleted, included in Item 130								
130. Bell 47-661-026	1 (-9)	--	--	—	—	—	—	—
132. Bell 47-661-041	—	—	—	No wt. ch.	--	--	--	--
<b>Fuel Filter and Drain - Deleted</b>								
<b>Oil Filter</b>								
117. Air Maze B15358	1 (0)	—	—	—	—	—	—	—
118. Air Maze 02S07	—	1 (+7)	--	--	--	--	—	1 (+93)
125. Deleted, included in Item 118								
128. Fram PB-5 (Fram Inst. Dwg. 61974)	3 (+24)	—	—	—	—	—	—	—
<b>Muffler</b>								
126. Bell 47-706-023 installed in accordance with Serv. Bull. 47011	5 (+14)	--	--	—	—	—	—	—
<b>Carburetor Air Filter</b>								
127. Deleted								
140. Purolator 51845 Bell Kit No. 47-2883-2, installed in accordance with Bell Service Instruction 235SI.	—	—	—	—	—	—	1 (+100)	--



	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
208. Wheel Assy. No. 9520265								
(cont'd) Brake Assy. No.:								
9520264	7 (+47)	--	--	--	--	--	--	--
9520425	--	--	--	--	-3 (+47)	--	--	--
9520908	--	--	No wt. ch.	--	--	--	--	--
For Models 47B & 47B3 install in accordance with Bell 47-726-023 & Serv. Instr. 40SI.								
211. Deleted, included in Item 208.								
214. Deleted, included in Item 208.								
2 Main Wheel Tires								
202. (a) 12.50, Type I, 4-ply rating, with regular tubes	10 (+47)	--	--	--	--	--	--	--
(b) 5.00-5, Type III, 4-ply rating, with regular tubes	3 (+47)	--	--	--	--	--	--	--
2 Front Wheels, 12.50, Type I								
205. Goodrich (Formerly Hayes) Wheel Assy. D-3-79-M)	4 (-42 1/2)	--	--	--	--	--	--	--
209. (a) General Wheel Assy. VG-1250-1	--	--	No wt. ch.	--	--	--	--	--
(b) Deleted, identical to Item 205.								
(c) General Wheel Assy. 204A42	--	--	No wt. ch.	--	--	--	--	--
(d) Firestone Wheel Assy. C0200FM	--	--	No wt. ch.	--	--	--	--	--
2 Front Wheel Tires								
203. 12.50, Type I, 4-ply rating, with reg. tubes	10 (-42 1/2)	--	--	--	--	--	--	--
2 Shimmy Dampeners								
206. (Deleted, included in Item 213.								
213. Bell 47-518-001	4 (-47)	--	--	--	--	--	--	--
Use actual weight for all float kits except those listed under Item 207(4)								
2 Floats								
207. (a) Air Cruiser Model 2199								
(b) Air Cruiser Model 2383								
(c) Goodyear Model SK106-409								
All floats to be installed in accordance with the following dwg. & the appl. Serv. Bulletin or Instr. indicated in the adjacent table. Supple. pages are required in Flight Manual								
207. (cont'd)	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1

	(1) Bell 47-350-005-3 & -8 Serv. Instr.	28SI	--	—	—	—	—	—	—
	(2a) Bell 47-350-009-1 & Serv. Instr.	—	53SI	--	—	—	—	—	—
	(2b) Bell 47-350-009-13 & Serv. Instr.	—	—	—	148SI	--	—	—	—
	(3) Bell 47-350-012-1 & Ser. Instr.	—	—	—	—	—	—	—	212SI
	(4) Bell 47-350-009-19 & -31 & Serv. Instr.	28SI	53SI	--	148SI	--	200SI	--	—
	47-350-009-19	110 (0)	--	--	--	--	--	--	—
	47-350-009-31	102 (0)	--	--	--	--	--	--	—
212.	Deleted, included in Item 207.								
2 Skids									
215.	(a) Bell 47-500-003 Installed in accord- ance with Serv. Instr. 151SI	Use act. wt ch.	--	--	--	--	Std.	Std.	—
	(b) Bell 47-500-022	—	—	—	—	—	—	—	50 (+75)
Electrical Equipment									
Generator									
305.	Autolite GFU 4105-12V 12 (+3)		--	—	—	—	—	—	—
308.	Frankline 17556, 25 amp +2 (+3)		--	—	—	—	—	—	—
313.	Pierson E2411, 24V 15 amp	—	—	15 (+2)	15 (-3)	—	—	—	—
319.	Pierson E2425, 24V 25 amp., Bell 47-706-034 installed in accordance with Serv. Instr. 100SI	—	—	8 (+2)	--	—	—	—	—
324.	Deleted.								
328.	(a) Type M-3 Leece Neville or Eclipse- Pioneer 24V 50 amp., Bell 47-706-242. Installed in accord. with Serv. Instr. 147SI	—	—	—	Use Act. wt. ch.	--	--	--	--
	(b) Leece Neville #G-001-2591-GA	—	—	—	—	—	Use act.	--	—
Battery									
306.	(a) Reading R-55, use with Item 110 only	47 (+39)	—	—	—	—	—	—	—
	(b) Reading R-37 use with Item 119 only	-11 (+39)	-11 (-68)	—	—	—	—	—	—
314.	Reading S12, two required	—	—	30 (-66)	30 (-67) or (+96)	—	—	—	—
323.	AN3154-1A	—	—	—	—	34 (-66)	34 (use act. arm)	--	--
327.	AN3151-2	—	—	—	—	—	54 (use act. arm)	--	--

	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
Night Flying Installations								
321. Bell 47-706-007, installed in accordance with Serv. Instr. 54SI. Supple. pages are required in Flight Manual.	—	—	Use act. wt. ch.	—	—	—	—	—
322. Bell 47-706-075, installed in accordance with Serv. Instr. 146SI. Supple. pages are required in Flight Manual.	—	—	—	Use act. wt. ch.	—	—	—	—
326. Bell 47-755-022, installed in accordance with Serv. Instr. 24SI. (Not eligible when floats installed) Supple. pages are required in Flight Manual.	Use act. wt. ch.	—	—	—	—	—	—	—
329. Bell 47-706-335, and Serv. Instr. as indicated. Supplemental pages are required in Flight Manual.	—	—	—	146SI	—	201SI	201SI	—
330. Bell 47-706-498, installed in accordance with Serv. Instr. 210SI. Supple. pages are required in Flight Manual.	—	—	—	—	—	—	—	Use act. wt. ch.
331. Bell 47-706-633-3 Anti-Collision Beacon Kit installed in accordance with Serv. Instr. 347SI. Flight Man. Supple. dated January 28, 1960 required.	—	—	—	—	—	—	7 (+82)	—

## Interior Equipment

402. "Bell Helicopter Model 47B & 47B-S CAA Appv'd Flight Manual," dated Nov. 4, 1947, Revision 1, dated May 12, 1950 latest approved.
403. Deleted.
404. "Bell Helicopter CAA Appv'd Flight Manual for Models 47B3 & 47B3-S," dated Nov. 4, 1948, Rev. 4 dated Oct. 9, 1950 latest approved.
405. Deleted.
406. Deleted.
407. "Bell Helicopter Model 47D & 47DS CAA Appv'd Flight Manual," dated Feb. 25, 1948, Rev. 13 dated Jan. 5, 1951, latest approved.
408. Deleted.
409. Deleted.

	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
410.	For 178 HP - "Bell Helicopter Model 47D1 CAA Appv'd Flight Manual," dated March 29, 1949, Rev. 7, dated December 15, 1952, latest approved. For 200 HP - Rev. 6 dated Jan. 5, 1951 to above 178 HP Manual, or Bell Helicopter Model 47D1, 200 HP, CAA Appv'd Flight Manual, dated January 14, 1953, Rev. 3, dated August 6, 1953, latest approved.							
411.	Deleted.							
412.	Deleted.							
413.	"Bell Helicopter Model 47E (Navy HTL-3) Flight Manual apprv'd May 12, 1950, Rev. 2 dated Jan. 12, 1951, latest approved.							
414.	(a) Cabin heater. Bell 47-706-116 & Serv. Instr. 198SI. Supple. pages are required in Flight Manual.	—	—	—	Use act. wt. ch.	—	—	—
	(b) Cabin heater. Bell 47-706-428 & Serv. Instr. 194SI. Supple. pages are required in Flight Manual.	—	—	—	—	Use act. wt. ch.	—	—
	(c) Cabin heater. Bell 47-706-636, installed in accordance with Bell Serv. Instr. 348SI; supersedes 47-706-543-1, installed in accordance with Bell Serv. Instr. 232SI.	—	—	—	—	—	36 (+4.5)	—
415.	Deleted, included in Item 414.							
416.	Deleted, included in Item 414.							
417.	"Bell Helicopter Model 47G CAA Appv'd Flight Manual" dated June 16, 1953, Rev. 1 dated Aug. 25, 1954 latest approved.							
418.	"Bell Helicopter Model 47G-2 CAA Appv'd Flight Manual," dated Dec. 31, 1957.							
419.	"Bell Helicopter Model 47H-1 CAA Appv'd Flight Manual." dated March 31, 1955, Rev. 1 dated July 8, 1955 latest appv'd.							

Miscellaneous Equipment	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
604. (a) Rotor Brake Bell 47-706-506 installed in accordance with Serv. Instr. 92SI, Flight Manual Sup'l dated Feb. 15, 1957 req'd.	—	—	—	6 (-9.5)	—	—	6 (-9.5)	—
(b) Rotor Brake, power operated Bell 47-706-589-9 installed in accordance with Serv. Instr. 262SI. Flight Manual Sup'l dated May 28, 1958 required.	—	—	—	—	—	10 (-21.5)	—	—
(c) Rotor Brake 47-706-542 installed in accordance with Serv. Instr. 224SI Flight Man. Sup'l dated Feb 2, 1956 req'd.	—	—	—	—	—	—	—	9 (+79)
605. Deleted.								
606. Deleted.								
607. Deleted.								
608. Fixed ballast (Total wt. to be determined for each helicopter)								
(a) Bell 47-739-091	Use act. wt. ch.	—	—	—	—	—	—	—
(b) Bell 47-739-020	—	Use act. wt. ch.	—	—	—	—	—	—
(c) Bell 47-739-029	—	—	Use act. wt. ch.	—	—	—	—	—
(d) Bell 47-739-043	—	—	—	Use act. wt. ch.	—	—	—	—
(e) Bell 47-260-015	—	—	—	—	—	—	—	Use act. wt. ch.
609. Deleted, included in Item 615.								
610. Deleted, included in Item 615.								
611. (a) Spray kit, Bell 47-705-029 & Serv. Instr. 47014. Supple. pages required in Flight Man.	—	Use act. wt. ch.	—	—	—	—	—	—
(b) Spray kit, Bell 47-706-004 & Serv. Instr. 52SI. Supple. pages are required in Flight Manual.	—	Use act. wt. ch.	—	—	—	—	—	—
(c) Spray kit, Bell 47-706-070 & Serv. Instr. as indicated. Supple. pages are required in Flight Manual.	—	—	—	141SI	—	202SI	—	—
(d) Cargo sling 47-706-660 installed in accordance with Bell Serv. Instr. 308SI.	—	—	—	—	—	—	29 (-6)	—



	47B	47B3	47D	47D1	47E	47G	47G-2	47H-1
621. (cont'd)								
(b) Fog Kit, Bell 47-706-066 & Serv. Instr. 142SI. Supple. pages required in Flight Manual.	—	—	—	Use act. wt. ch.	—	—	—	—
622. (a) Litter carrier, Bell 47-706-044 and Serv. Instr. as indicated. Supple. pages are required in Flight Manual.	—	56SI	56SI	144SI	—	144SI	144SI	—
(b) Litter carrier, Bell 47-706-334 and Serv. Instr. 193SI. Supple. pages are required in Flight Manual.	—	—	—	—	—	Use act. wt. ch.	—	—
(c) Litter carrier floats, Bell 47-350-011 and Serv. Instr. 206SI. Supple. pages are required in Flight Manual.	—	—	—	—	—	206SI	—	—
623. Deleted.								
624. Dual control kit, Bell 47-706-069 and Serv. Instr. 149SI. Supple. pages are required in Flight Manual.	—	—	—	Use act. wt. ch.	--	Use act. wt. ch.	Std.	Std.
625. Deleted.								
626. Deleted.								
627. Deleted.								
628. Deleted.								
629. Vibration isolator, Bell 47-706-398, installed in accordance with Serv. Instr. 94SI.	—	—	—	Use act. wt. ch.	—	Use act. wt. ch.	—	—
630. Deleted, included in Item 617.								
631. Snow-Shoe, Bell 47-706-373 and Serv. Instr. 162SI. Supple. pages required in Flight Manual.	—	—	—	Use act. wt. ch.	—	—	—	—
632. Deleted, included in Item 622.								
633. Hydraulic boost control, Bell 47-706-479 and Serv. Instr. 203SI. Supple. pages are required in Flight Manual.	—	—	—	—	—	Use act. wt. ch.	—	—

NOTE 1. Current weight and balance report, including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each helicopter at the time of original certification and at all times thereafter. In order to obtain the most consistent weight and balance results, all model helicopters should be weighed on jack-points rather than on wheels or floats. The applicable Bell Erection and Maintenance Manual contains complete information on this subject.

- NOTE 2. Deleted. See applicable FAA Approved Helicopter Flight Manual for placards and operation limitations.
- NOTE 3. Deleted.
- NOTE 4. Deleted.
- NOTE 5. Deleted.
- NOTE 6. Deleted.
- NOTE 7. Information essential to the proper maintenance of the helicopter including retirement time of critical parts is contained in the Bell Maintenance Manual provided with each helicopter. These values of retirement of service life cannot be increased without FAA Engineering approval.
- NOTE 8. A11 -S (47B-S, 47B3-S, 47D1-S, and 47E-S) model designations have been deleted from this specification as of January 25, 1952. The only significance of the -S marking was to differentiate between the installation of the float gear and land-type gear. No rotorcraft of the Model 47 series either commercial or military, have been delivered with the nameplate containing the -S designation. Any specific reference in Flight Manuals, Service Bulletins, etc., to the -S models should be considered as applicable to the basic model when float gear is installed.
- NOTE 9. Deleted October 4, 1965.
- NOTE 10. Deleted July 24, 1957.
- NOTE 11. Continental Copters, Inc., Model E1 Tom Cat, Mark II helicopters have been issued Restricted Category Airworthiness Certificates. These helicopters are eligible for Normal Category Airworthiness Certificates when all modifications have been removed, and the helicopter has been found to conform with the Bell Model 47G Type Design, and with all the applicable Airworthiness Directives.
- NOTE 12. Model 47H-1, S/N 1368 and 1370 may be operated with a revised empty weight C.G. range when operated with Rotorcraft Flight Manual dated December 10, 1963.
- NOTE 13. Model 47D-1 use Ventral Fin-Fixed Tab assembly, P/N 47-267-063-1.
- NOTE 14. Section I or Section III of the pertinent Model Maintenance and Overhaul Instruction Manual includes the following information. These replacement or service lives may be superseded by Airworthiness Directives. See equipment listing for eligibility of items on models.

ITEM	PART NUMBER	REPLACE AT HOURS
<b>MAIN ROTOR SYSTEM</b>		
Hub Yoke, Alum		Not Eligible
Hub Yoke, Steel	47-120-177-1 Used with 200 HP Eng.	3600
Mast	47-130-102 Used with 200 HP Eng.	2500
Grips (Wood Blades)	47-120-135-1, -2, -3, -5	2500
Grips (Metal Blades)	47-120-252-7	2500
Metal Blades	47-110-250-13	2500
Gimbal Ring	47-120-014-1 through -21	1200
Gimbal Ring	47-120-014-23	4800
<b>TAIL ROTOR SYSTEM</b>		
Tail Rotor blades (Metal)	47-642-102 (All Dash Numbers)	AD 70-10-8 or AD 80-10-4
Pitch Change Links	47-641-032-1	50
Delta Hinge Bolt	47-641-031-1	100
Delta Hinge Bearings	KP5A or K5A	100
Blade Grip Retaining Bolts	47-641-194-1	600
Rotor Shaft	47-645-077	Not Eligible
Hub Yoke	47-641-025-1 and 47-641-057-1	1200
Tail Rotor Blade	47-642-117-17 )	2500
Tail Rotor Yoke	47-641-126-5 ) S.I. 438	2500
Hub Yoke	47-641-025-7 or -9	2500
Hub Yoke	47-641-057-7 or -9	2500
Pitch Change Bearings - Single Row	R4AF4 (47-641-146), SIRP, 7R4AXIC	100
Pitch Change Bearings - Double Row	47-641-131-1	600

## POWER PLANT

Fan Belts (Matched Sets)	47-661-026-1	100
Fan Belts (Matched Sets)	47-661-028-1	100
Fan Belts (Matched Sets)	47-661-041 - All Dash Numbers	600
Engine Mount	47-612-131-1	2500
Engine Mount (gas or arc welded)	47-612-135-1	2500
Engine Mount	47-612-135-63	1200
Engine Mount	47-612-171 - All Dash Numbers	2500
Shear Screw	47-620-485-1	600
Transmission (200 Series)	47-	100
Pinion Ball Bearings		
Shaft	47-645-028 & 051	Not Eligible

.....END.....