



HILLER AIRCRAFT CORPORATION
Firebaugh, CA 93622

Rotorcraft Flight Manual
For
BELL 47G Series Turbine Helicopter
with the Allison 250-C20/C20B Engine Installed

(Ref Supplement S10 for 250-C18A A&C, C10D (T63-A-700))

Supplemental Type Certificate No: SH657NW

Original Approved By: Charles C. Shroeder
Chief, Engineering & Manufacturing Br.
Federal Aviation Administration

Original Approval Date: September 6, 1978

<p>_____, Manager, AIR-711 for Approved Date: _____ Manager, Flight Test & Human Factors Branch, AIR-710 Federal Aviation Administration</p>

THIS DOCUMENT MUST BE CARRIED IN AIRCRAFT AT ALL TIMES.

Rev. #30

**HILLER AIRCRAFT CORPORATION
BELL 47G SERIES TURBINE HELICOPTER
ROTORCRAFT FLIGHT MANUAL**

LOG OF PAGES

<i>PAGE</i>		<i>DATE</i>
TITLE		OCTOBER 10, 2023
APPLICABILITY		FEBRUARY 9, 1998
A AND B-1		NOVEMBER 4, 1998
B		FEBRUARY 9, 1998
C AND D		NOVEMBER 4, 1998
i		FEBRUARY 9, 1998
ii		FEBRUARY 9, 1998
<i>SECTION I</i>		
1-1 AND 1-2		FEBRUARY 9, 1998
1-3		FEBRUARY 9, 1998
1-4		FEBRUARY 9, 1998
1-5		FEBRUARY 9, 1998
1-6 AND 1-7		FEBRUARY 9, 1998
1-8		OCTOBER 10, 2023
1-9		FEBRUARY 9, 1998
1-10		FEBRUARY 9, 1998
1-11		
<i>SECTION II</i>		
2-1 AND 2-2		FEBRUARY 9, 1998
2-3 AND 2-6		FEBRUARY 9, 1998
2-7		FEBRUARY 9, 1998
2-8		FEBRUARY 9, 1998
2-9 THRU 2-12		
<i>SECTION III</i>		
3-1 THRU 3-7		FEBRUARY 9, 1998
3-8 AND 3-8A		FEBRUARY 9, 1998
3-9		FEBRUARY 9, 1998
<i>SECTION IV (NOT FAA APPROVED)</i>		
4-1 THRU 4-4		FEBRUARY 9, 1998
4-5 THRU 4-8		FEBRUARY 9, 1998
<i>SUPPLEMENTS</i>		
1 THRU 4	FLOAT LANDING GEAR	FEBRUARY 9, 1998
1 OF 1	ROTOR BRAKE	FEBRUARY 9, 1998
1 THRU 3	CARGO HOOK/ LOAD SUPPORT KIT	FEBRUARY 9, 1998
1 THRU 3	INLET AIR CLEANER	FEB 9/ NOV 4, 1998
1 OF 1	GRAVITY FUEL SYSTEM KIT	FEBRUARY 9, 1998
1 AND 2	CARGO HOOK KIT	FEBRUARY 9, 1998
1 OF 1	41 GALLON FUEL SYSTEM	FEBRUARY 9, 1998
1 OF 1	EXTENDED SKID GEAR	FEBRUARY 9, 1998
1 OF 1	BB638/T-3 BATTERY KIT	FEBRUARY 9, 1998
1 THRU 12	ALLISON 250-C18A & C-C10D (T63-A-700) INST	OCTOBER 10, 2023

**HILLER AIRCRAFT CORPORATION
BELL 47G SERIES TURBINE HELICOPTER
ROTORCRAFT FLIGHT MANUAL**

LOG OF REVISIONS			
REVISION		PAGES REVISED	COMMENTS
NO.	DATE		
16	11/28/79	APPLICABILITY A,B-1	Added 47G and 47g-2A-1 to applicability page; added page B-1
17	2/11/80	A,B-1,D,1-8	Revised flight limit to allow operation in falling or blowing snow. Clarified wgt. Limit on cargo hook sup kit.
18	2/20/80	A,B-1,C	Added gravity fuel system & hook kit
19	2/2/80	A,B-1,1-6,1-7,2-3 thru 2-6,2-8	Revised fuel grade; added mech. Linear actuator
20	6/4/80	A,B-1,C	Added extend. Skid gear kit
21	1/30/81	A,B-1,1-9	Revised loadmeter markings
22	2/11/81	A,B-1,C,D	Retitled cargo hook sup. Kit to cargo hook/ load support kit. Clarified wgt. Limit for cargo/ load sup. Kit sup.
23	2/19/81	A,B-1,C	Added BB638/T-3 Bat. Kit
24	3/6/81	APPLICABILITY, A,B-1	Added 47G-2A to applicability page
25	8/14/81	A,B-1,D,2-2 thru 2-12	Added filter drain caution. Added aircraft attitude caution in cargo hook sup & added deceleration check per DDA ltr THO-520L-MM-81.
26	3/22/89	A,B-1,2-1 and 2-2	To correct engine & transmission oil quantities
27	5/1/89	A,B-1,C,D,1,1-9,3-8,3-8a	Added Allison 250-C18A&C sup-12 pg. Added pg. 2 & 3 to inlet air cleaner sup. Also added pg. 3-8a in basic manual for inlet air cleaner
28	2/9/98	ALL PAGES	OWNERSHIP NAME CHANGE- Changed Soloy to Hiller Aircraft Corp added identification numbers to sup
29		Title, A, B-1, C, D Sup. 4, pg. 1-3 Sup 10, pg. 1-12	Added Allison 250-C10D (T63-A-700) to Sup. 10 & Sup. 4
30		Title, Section 1 Page 1-9	Corrected Instrument Markings

Note: Revised text is indicated by a black vertical line.

**HILLER AIRCRAFT CORPORATION
 BELL 47G SERIES TURBINE HELICOPTER
 ROTORCRAFT FLIGHT MANUAL.**

LOG OF REVISED SUPPLEMENT PAGES		
NAME OF KIT	PAGE	DATE
Rotor Brake	1 of 1	6/25/79
Cargo Hook Support Kit	1 of 3	2/11/80
Cargo Hook/ Load Support Kit	1 thru 3	2/11/80
Cargo Hook/ Load Support Kit	3 of 3	8/14/81
Inlet Air Cleaner	1 thru 3	5/1/89
All Supplement Pages (Reflecting Ownership Name to Hiller)	All	2/9/98
Allison Gas Turbine 250-C18A & C 250-C10D (T63-A-700)	1 thru 12	11/4/98
Allison Gas Turbine 250-C18A & C 250-C10D (T63-A-700)	4 of 12	10/10/23
Note: Revised text is indicated by a black vertical line.		

**HILLER AIRCRAFT CORPORATION
BELL 47G SERIES TURBINE HELICOPTER
ROTORCRAFT FLIGHT MANUAL**

TABLE OF INSTRUMENT MARKINGS		250-C20B ENGINE	250-C20 ENGINE
Gas Producer Tachometer	Red Line Green Arc	59% and 105% 59% to 105%	SAME AS 250-C20B
Power Turbine Tachometer	Red Line Wide Green Arc Yellow Arc Yellow Arc	98% and 100% 98% to 100% 79% to 83% 56% to 65%	
Rotor Tachometer	Red Line Narrow Green Arc	90.6% and 104% 90.6% to 104%	
Turbine Outlet Temperature (TOT)	Red Dot Red Line Yellow Arc Green Arc	843°C 810°C 738°C to 810°C 360°C to 738°C	843°C 793°C 737°C to 793°C 360°C to 737°C
Torque (PSI) (600) Series Transmission Installed	Red Line Yellow Arc Green Arc	63 PSI 50.5 PSI to 63 PSI 0 PSI to 50.5 PSI	SAME AS 250-C20B
Torque (PSI) (900) Series Transmission Installed	Red Line Yellow Arc Green Arc	65 PSI 50.5 PSI to 65 PSI 0 PSI to 50.5 PSI	
Airspeed	Red Line	105 MPH	
Oil Temperature, Engine	Red Line Green Arc	0°C and 107°C 0°C to 107°C	
Oil Pressure Engine	Red Line Green Arc Yellow Arc	50 and 130 PSI 90 to 130 PSI 50 to 90 PSI	
Oil Temperature Transmission	Red Line Green Arc	40°C and 130°C 40°C to 130°C	
Oil Temperature Transmission	Red Line Green Arc	50 and 70 PSI 50 to 70 PSI	
Fuel Pressure	Red Line Green Arc	10 and 25 PSI 10 to 25 PSI	
Fuel Quantity Indicator	Red Arc	E radial to low end of scale	
Ammeter (Loadmeter) (If Hiller S.I 660-10 complied with) (If Hiller S.I 660-10 not complied with).	Red Line Yellow Arc Yellow Arc Yellow Arc	150 AMPS 80 to 150 AMPS 53% to 100% 44% to 100%	

**HILLER AIRCRAFT CORPORATION
BELL 47G SERIES TURBINE HELICOPTER
ROTORCRAFT FLIGHT MANUAL**

Gas Producer Tachometer (N1)	Red Line Green Arc	59% and 104% 59% to 104%
Power Turbine Tachometer (N2)	Red Line Wide Green Arc Yellow Arc Yellow Arc Green	98% and 100% 98% to 100% 79% to 88% 56% to 69% 10% to 25%
Rotor Tachometer (NR)	Red Line Narrow Green Arc	90.6% to 104% 90.6% to 104%
Turbine Outlet Temperature (TOT)	Red Dot Red Line Yellow Arc Green Arc	843°C 749° 693°C to 749°C 360°C to 693°
Torque (PSI) (600 Series Transmission Installed)	Red Line Yellow Arc Green Arc	78 PSI 66 PSI to 78 PSI 0 PSI to 66 PSI
Torque (PSI) (900 Series Transmission Installed)	Red Line Yellow Arc Green Arc	81 PSI 66 PSI to 78 PSI 0 PSI to 66 PSI
Airspeed	Red Line	105 MPH
Oil Temperature, Engine	Red Line Green Arc	0°C and 107°C 0°C to 107°C
Oil Pressure, Engine	Red Line Green Arc Yellow Arc	50 and 130 PSI 90 to 130 PSI 50 to 90 PSI
Oil Temperature, Transmission	Red Line Green Arc	40°C and 130°C 40°C and 130°C
Oil Pressure, Transmission	Red Line Green Arc	50 and 70 PSI 50 to 70 PSI
Fuel Pressure	Red Line	10 and 25 PSI 10 to 25 PSI
Fuel Quantity Indicator	Red Arc	E radial to low end of scale
Ammeter (Loadmeter) (If Hiller S.I 660-10 complied with) (If Hiller S.I 660-10 complied with)	Red Line Yellow Arc Yellow Arc Yellow Arc	150 AMPS 80 to 150 AMPS 53% to 100% 44% to 100%