



**U.S. Department
of Transportation
Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 19006
DATE: 11/25/19

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Crash Resistant Fuel System (CRFS) Safety Standards.

Purpose: This SAFO seeks to inform registered owners and operators of helicopters about compliance standards for CRFSs. These CRFS safety standards reside in Title 14 of the Code of Federal Regulations (14 CFR) Parts 27 and 29, and in Title 49 of the United States Code (49 U.S.C.) § 44737 (2018).

Background: On November 2, 1994, helicopter fuel system crash resistance became a regulatory requirement in Amendment 27-30 of 14 CFR part 27 and Amendment 29-35 of 14 CFR part 29. The amendments included §§ 27.952 and 29.952, along with related regulatory sections of part 27 and part 29. The regulations applied only to newly type-certificated rotorcraft. Since the regulations were not retroactive, no requirement existed to incorporate their requirements into existing fleets. The regulations also did not apply to newly manufactured rotorcraft produced under a type design that existed before the November 2, 1994, effective date of the regulations. The design requirements included in part 27 of Amendment 27-30 and part 29 of Amendment 29-35 are intended to increase safety in the event of a survivable crash by either decreasing the likelihood of, or delaying, post-crash fires. The intent of both amendments is to (1) minimize crash-induced fuel leaks during and after a crash, and (2) increase the time occupants have to egress the aircraft following a crash.

Discussion: On October 5, 2018, 49 U.S.C. § 44737 (2018) became public law; it applies only to newly manufactured rotorcraft. Although the applicable regulations adopted in 1994 did not apply retroactively to rotorcraft type certificated before then, the statute mandates that the requirements apply broadly to all newly-manufactured rotorcraft for which manufacture is completed on or after 18 months from October 5, 2018, irrespective of the date of type certification. This law lists helicopter fuel system safety requirements for operation of rotorcraft in the National Airspace System. The requirements take effect April 5, 2020, 18 months after the date of enactment to include excerpts from §§ 27.952 and 29.952, §§ 27.963 and 29.963, and §§ 27.975 and 29.975. The requirements are consistent with recommendations provided to the FAA by the Aviation Rulemaking Advisory Committee Rotorcraft Occupant Protection Working Group to improve rotorcraft fuel system crash resistance. The 14 CFR part 21, 27, and 29 certification approval process for fuel systems does not change with the establishment of the 49 U.S.C. § 44737 (2018) requirements.

Recommended Action: Owners and operators should review the fuel system crash resistance capability requirements applicable to their helicopters.

Older model helicopters (pre-Nov. 2, 1994 type designs) manufactured prior to April 5, 2020:

While these helicopters are not covered by either 49 U.S.C. § 44737 (2018) or regulations to meet the CRFS safety standards of 14 CFR part 27 through Amendment 27-30 and part 29 through Amendment 29-35, the Federal Aviation Administration (FAA) recommends owners and operators install fuel systems that improve the fuel system crash resistance capability of their helicopters.

Newer model helicopters (Nov. 2, 1994 and later type designs) manufactured after Nov. 2, 1994 but prior to April 5, 2020:

These helicopters are not covered by 49 U.S.C. § 44737 (2018), but they are required by regulation to meet the full CRFS safety standards of 14 CFR part 27 through Amendment 27-30 and part 29 through Amendment 29-35. The FAA recommend owners and operators ensure that their helicopters are in fact compliant with the CRFS standards.

Helicopters of any type design manufactured on or after April 5, 2020:

These are covered rotorcraft subject to 49 U.S.C. § 44737 (2018). Operation is prohibited unless the helicopter meets the statutory requirements, which incorporate some of the CRFS safety standards of 14 CFR part 27 through Amendment 27-30 or part 29 through Amendment 29-35. The design of helicopter models type-certificated on or after Nov. 2, 1994 should already exceed statutory requirements. The design of helicopter models type-certificated before Nov. 2, 1994, will likely need to be updated in order to meet statutory requirements.

The FAA maintains a list of helicopters compliant with full CRFS safety standards of 14 CFR part 27 through Amendment 27-30 and part 29 through Amendment 29-35. A separate list of helicopters that meet minimum CRFS requirements established by 49 U.S.C. § 44737 (2018), but do not comply with full CRFS safety standards of 14 CFR part 27 through Amendment 27-30 or part 29 through Amendment 29-35 is also maintained. The second list further identifies helicopters that exceed 49 U.S.C. § 44737 (2018) minimum requirements and comply with other related CRFS regulatory sections. Operators can access these lists by navigating to the current version of Special Airworthiness Information Bulletin (SAIB) number SW-17-31. Note that there may be a revision to the SAIB – to search for a revised version, operators can click [here](#), or navigate to the link below and enter “SW-17-31” into the search field: http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSAIB.nsf/MainFrame?OpenFrameset

Contact: Questions or comments regarding this SAFO should be directed to the Aircraft Maintenance Division’s General Aviation Branch at (202) 267-1675.

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

H13EU
Revision 24
AIRBUS HELICOPTERS
DEUTSCHLAND GmbH
MBB-BK 117 A-1
MBB-BK 117 A-3
MBB-BK 117 A-4
MBB-BK 117 B-1
MBB-BK 117 B-2
MBB-BK 117 C-1
MBB-BK 117 C-2
MBB-BK 117 D-2
MBB-BK 117 D-3
January 14, 2025

TYPE CERTIFICATE DATA SHEET No. H13EU

This data sheet, which is part of Type Certificate No. H13EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: AIRBUS HELICOPTERS DEUTSCHLAND GmbH (AHD)
D-86609 Donauwoerth
Germany

Type Certificate Holder Record: Eurocopter Deutschland GmbH changed name to Airbus Helicopters Deutschland GmbH on January 7, 2014.

I. Model MBB-BK 117 A-1 (Transport Category A&B) Helicopter, Approved March 29, 1983.

Engines. 2 Lycoming LTS 101-650 B-1

Fuel. See Rotorcraft Flight Manual.

Installed Engine Limits

	Output Shaft Torque % (Ft-Lbs.)	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
<u>Normal Operation</u>				
Takeoff power (5 min.)	71 (368)	102.7 (49159)	102 (6120)	782 (1440)
Max. continuous	71 (368)	102.7 (49159)	102 (6120)	763 (1405)
<u>One Engine Inoperative</u>				
2.5 minutes power	100 (519)	105.6 (50548)	102 (6120)	832 (1528)
30 minutes power	91.5 (475)	104.8 (50469)	102 (6120)	796 (1463)
Max. continuous	83 (431)	102.7 (49159)	102 (6120)	763 (1404)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
Min. Continuous		
gross weight up to 4409 lbs.	98 (376)	80 (307)
gross weight 4409 - 6283 lbs.	98 (376)	85 (326)
Max. Continuous	102 (391)	104 (399)
Max. Transient	106 (406)	110 (422)
Min. Transient	85 (326)	---

Page No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Rev. No.	24	6	13	13	13	6	13	13	19	18	23	24	18	17	24	20	19	18	24	23

I. Model MBB-BK 117 A-1 (Transport Category A&B) Helicopter, Approved March 29, 1983. (cont'd)

<u>Airspeed Limits (IAS).</u>	Max. V_{NE} = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.
<u>C.G. Range.</u>	Longitudinal C.G. Limits Max. forward range: up to 3747.8 lb: 172.2 in. aft of datum up to 4409.2 lb: 170.7 in. aft of datum up to 6283.1 lb: 173.8 in. aft of datum Max. rearward range: up to 3747.8 lb: 183.9 in. aft of datum up to 6283.1 lb: 179.7 in. aft of datum Straight line variation between points given. Lateral C.G. Limits. Max. deviation 3.9 in right or left of the fuselage median plane.
<u>Empty Weight C.G. Range.</u>	None
<u>Max. Weight.</u>	6283 lbs.
<u>Min. Crew.</u>	1 (right-hand seat only).
<u>Passengers.</u>	7 (See NOTE 1A).
<u>Max. Baggage.</u>	Max. permissible floor loading: 123 lb/sq. ft. Max. loading: 2645 lb Aft of rear seat bank: 551 lb
<u>Fuel Capacity.</u>	160.5 US gal. (1071.6 lb., 179.6 in.) total; 158.0 US gal. (1054.9 lb.) usable: 132.5 US gal. (884.5 lb., 179.88 in.) in main tank, and 25.5 US gal. (170.4 lb., 187.36 in.) in supply tank. (See NOTE 1B)
<u>Oil Capacity.</u>	Engine oil (each tank) has been included with the minimum gross weight 2 x 1.14 US gal. (176.77 in.). Main transmission oil has been included with the minimum gross weight 3.3 US gal. (176.38 in.)
<u>Max. Operating Altitude.</u>	See Rotorcraft Flight Manual, Model MBB-BK 117 A-1.
<u>Rotor Blade and Control Movements</u>	For rigging information refer to the MBB Model MBB-BK 117 Maintenance Manual.

II. Model MBB-BK 117 A-3 (Transport Category A&B) Helicopter, Approved September 10, 1985.Engines. 2 Lycoming LTS 101-650B-1Fuel. See Rotorcraft Flight Manual.Installed Engine Limits

	Output Shaft Torque % (Ft-Lbs.)	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
<u>Normal Operation</u>				
Takeoff power (5 min.)	71 (368)	102.7 (49159)	102 (6120)	782 (1440)
Max. continuous	71 (368)	102.7 (49159)	102 (6120)	763 (1405)
<u>One Engine Inoperative</u>				
2.5 minutes power	100 (519)	105.6 (50548)	102 (6120)	832 (1528)
30 minutes power	91.5 (475)	104.8 (50469)	102 (6120)	796 (1463)
Max. continuous (See Note 6.)	83 (431)	102.7 (49159)	102 (6120)	763 (1404)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

Rotor Limits.

	<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
Min. Continuous		
gross weight up to 4409 lbs.	98 (376)	80 (307)
gross weight 4409 - 6283 lbs.	98 (376)	85 (326)
Max. Continuous	102 (391)	104 (399)
Max. Transient	106 (406)	110 (422)
Min. Transient	85 (326)	---

Airspeed Limits (IAS).

Max. VNE = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range.

Longitudinal C.G. Limits

Max. forward range: at 3748 lb: 172.2 in. aft of datum
at 4409 lb: 170.7 in. aft of datum
at 7055 lb: 175.1 in. aft of datum

Max. rearward range: at 3748 lb: 183.9 in. aft of datum
at 7055 lb: 178.5 in. aft of datum

Straight-line variation between points given.

Lateral C.G. Limits.

Up to 6283 lb.: Max. deviation 3.94 in. right or left of the fuselage median plane.
Above 6283 lb.: Max. deviation 3.15 in. right or left of the fuselage median plane.

Empty Weight C.G. Range.

None.

Max. Weight.

7055 lb.

Min. Crew.

1 (right-hand seat only).

Passengers.

7 (See NOTE 1A).

Max. Baggage.

Max. permissible floor loading: 123 lb/sq. ft.
Max. loading: 2645 lb.
Aft of rear seat bank: 551 lb.

II. Model MBB-BK 117 A-3 (Transport Category A&B) Helicopter, Approved September 10, 1985. (cont'd)

Fuel Capacity. 160.5 US gal. (1071.6 lb., 179.6 in.) total; 158.0 US gal. (1054.9 lb.) usable:
132.5 US gal. (884.5 lb., 179.88 in.) in main tank, and 25.5 US gal (170.4 lb., 187.36 in.)
in supply tank. (See NOTE 1B)

Oil Capacity. Engine oil (each tank) has been included with the minimum gross weight
2 x 1.4 US gal. (176.77 in.).

Main transmission oil has been included with the minimum gross weight
3.3 US gal. (176.77 in.).

Max. Operating Altitude. See Rotorcraft Flight Manual, MBB BK-117 A-3.

Rotor Blade and Control Movement For rigging information refer to the MBB Model BK 117 Maintenance Manual.

III. Model MBB-BK 117 A-4 (Transport Category A&B) Helicopter, Approved April 24, 1987.

Engine. 2 Lycoming LTS 101-650B-1

Fuel. See Rotorcraft Flight Manual.

Installed Engine Limits

	Output Shaft Torque % (Ft-Lbs.)	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
<u>Normal Operation</u>				
Takeoff power	83 (430)	102.7 (49159)	102 (6120)	782 (1440)
Max. continuous	71 (368)	102.7 (49159)	102 (6120)	763 (1405)
<u>One Engine Inoperative</u>				
2.5 minutes power	100 (519)	105.6 (50548)	102 (6120)	832 (1528)
30 minutes power	91.5 (475)	104.8 (50469)	102 (6120)	796 (1463)
Max. continuous (See Note 6.)	83 (431)	102.7 (49159)	102 (6120)	763 (1404)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
Min. Continuous		
gross weight up to 4409 lbs.	98 (376)	80 (307)
gross weight 4409 - 6283 lbs.	98 (376)	85 (326)
Max. Continuous	102 (391)	104 (399)
Max. Transient	106 (406)	110 (422)
Min. Transient	85 (326)	---

Airspeed Limits (IAS). Max. V_{NE} = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with
outside air temperature and altitude.

C.G. Range. Longitudinal C.G. Limits (Straight-line variation between points given.)

Max. forward range: at 3748 lb: 172.2 in. aft of datum
at 4409 lb: 170.7 in. aft of datum
at 7055 lb: 175.1 in. aft of datum

Max. rearward range: at 3748 lb: 183.9 in. aft of datum
at 7055 lb: 178.5 in. aft of datum

III. Model MBB-BK 117 A-4 (Transport Category A&B) Helicopter, Approved April 24, 1987. (cont'd)

<u>Lateral C.G. Limits.</u>	Up to 6283 lb.: Max. deviation 3.84 in. right or left of the fuselage median plane. Above 6283 lb.: Max. deviation 3.15 in. right or left of the fuselage median plane.
<u>Empty Weight C.G. Range.</u>	None.
<u>Max. Weight.</u>	7055 lb.
<u>Min. Crew.</u>	1 (right-hand seat only).
<u>Passengers.</u>	7 (See NOTE 1A).
<u>Max. Baggage.</u>	Max. permissible floor loading: 123 lb/sq. ft. Max. loading: 2645 lb. Aft of rear seat bank: 551 lb.
<u>Fuel Capacity.</u>	160.5 US gal. (1071.6 lb., 179.6 in.) total: 158.0 US gal (1054.8 lb.) usable: 132.5 US gal. (884.5 lb., 179.6 in.) in main tank, and 25.5 US gal (170.4 lb., 187.36 in.) in supply tank. (See NOTE 1B)
<u>Oil Capacity.</u>	Engine oil (each tank) has been included with the minimum gross weight. 2 x 1.14 US gal. (176.77 in.). Main transmission oil has been included with the minimum gross weight. 3.3 US gal. (176.77 in.).
<u>Max. Operating Altitude.</u>	See Rotorcraft Flight Manual, MBB BK-117 A-4.
<u>Rotor Blade and Control Movement</u>	For rigging information refer to the MBB Model BK 117 Maintenance Manual.

IV. Model MBB-BK 117 B-1 (Transport Category A & B) Helicopter, Approved December 11, 1987.

<u>Engines.</u>	2 Lycoming LTS 101-750B-1
<u>Fuel.</u>	See Rotorcraft Flight Manual.

Installed Engine Limits

	Output Shaft Torque % (Ft-Lbs.)	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
<u>Normal Operation</u>				
Takeoff power (5 min.)	83 (430)	102.7 (49159)	102 (6120)	786 (1447)
Max. continuous	71 (368)	102.7 (49159)	102 (6120)	765 (1408)
<u>One Engine Inoperative</u>				
2.5 minutes power	100 (519)	105.6 (50548)	102 (6120)	836 (1536)
30 minutes power	91.5 (475)	104.8 (50469)	102 (6120)	800 (1471)
Max. continuous (See Note 6.)	83 (431)	102.7 (49159)	102 (6120)	765 (1408)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

IV. Model MBB-BK 117 B-1 (Transport Category A & B) Helicopter, Approved December 11, 1987. (cont'd)

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, %(RPM)</u>
Min. Continuous		
gross weight up to 4409 lbs.	98 (376)	80 (307)
gross weight 4409 - 6283 lbs.	98 (376)	85 (326)
Max. Continuous	102 (391)	104 (399)
Max. Transient	106 (406)	110 (422)
Min. Transient	85 (326)	---
<u>Airspeed Limits (IAS).</u>	Max. V _{NE} = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.	
<u>C.G. Range.</u>	Longitudinal C.G. Limits	
	Max. forward range: at 3748 lb: 172.2 in. aft of datum at 4409 lb: 170.7 in. aft of datum at 7055 lb: 175.1 in. aft of datum	
	Max. rearward range: at 3748 lb: 183.9 in. aft of datum at 7055 lb: 178.5 in. aft of datum	
	Straight line variation between points given.	
<u>Lateral C.G. Limits.</u>	Up to 6283 lb.: Max. deviation 3.84 in. right or left of the fuselage median plane. Above 6283 lb.: Max. deviation 3.15 in. right or left of the fuselage median plane.	
<u>Empty Weight C.G. Range.</u>	None.	
<u>Max. Weight.</u>	7055 lb.	
<u>Min. Crew.</u>	1 (right-hand seat only)	
<u>Passengers.</u>	7 (See NOTE 1A)	
<u>Max. Baggage.</u>	Max. permissible floor loading 123 lb/sq. ft. Max. loading: 2645 lb. Aft of rear seat bank: 551 lb.	
<u>Fuel Capacity.</u>	160.5 US gal. (1071.6 lb., 179.6 in.) total: 158.0 US gal (1054.8 lb.) usable: 132.5 US gal. (884.5 lb., 179.6 in.) in main tank, and 25.5 US gal (170.4 lb., 187.36 in.) in supply tank. (See NOTE 1B)	
<u>Oil Capacity.</u>	Engine oil (each tank) has been included with the minimum gross weight. 2 x 1.14 US gal. (176.77 in.). Main transmission oil has been included with the minimum gross weight. 3.3 US gal. (176.77 in.)	
<u>Max. Operating Altitude.</u>	See Rotorcraft Flight Manual, MBB BK-117 B-1.	
<u>Rotor Blade and Control Movement</u>	For rigging information refer to the MBB BK 117 Maintenance Manual.	

V. Model MBB-BK 117 B-2 (Transport Category A & B) Helicopter, Approved December 7, 1992.Engines. 2 Lycoming LTS 101-750B-1Fuel. See Rotorcraft Flight Manual.Installed Engine Limits

	Output Shaft Torque % (Ft-Lbs.)	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
<u>Normal Operation</u>				
Takeoff power (5 min.)	83 (430)	102.7 (49159)	102 (6120)	786 (1447)
Max. continuous	71 (368)	102.7 (49159)	102 (6120)	765 (1408)
<u>One Engine Inoperative</u>				
2.5 minutes power	100 (519)	105.6 (50548)	102 (6120)	836 (1536)
30 minutes power	91.5 (475)	104.8 (50469)	102 (6120)	800 (1471)
Max. continuous (See Note 6.)	83 (431)	102.7 (49159)	102 (6120)	765 (1408)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
Min. Continuous		
gross weight up to 4409 lbs.	98 (376)	80 (307)
gross weight 4409 - 7385 lbs.	98 (376)	85 (326)
Max. Continuous	102 (391)	104 (399)
Max. Transient (max 12 sec.)	106 (406)	110 (422)
Min. Transient	85 (326)	---

Airspeed Limits (IAS). Max. VNE = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.C.G. Range. Longitudinal C.G. Limits

Max. forward range: at 3748 lb: 172.2 in. aft of datum
at 4409 lb: 170.7 in. aft of datum
at 7385 lb: 173.2 in. aft of datum

Max. rearward range: at 3748 lb: 183.9 in. aft of datum
at 7385 lb: 178.0 in. aft of datum

Straight line variation between points given.

Lateral C.G. Limits. Up to 6283 lb.: Max. deviation 3.94 in. right or left of the fuselage median plane.
Above 6283 lb.: Max. deviation 3.15 in. right or left of the fuselage median plane.

Empty Weight C.G. Range. None.Max. Weight. 7385 lb.Min. Crew. 1 (right-hand seat only)Passengers. 7 (See NOTE 1A)

Max. Baggage. Max. permissible floor loading 123 lb/sq. ft.
Max. loading: 2645 lb.
Aft of rear seat bank: 551 lb.

V. Model MBB-BK 117 B-2 (Transport Category A & B) Helicopter, Approved December 7, 1992. (cont'd)

Fuel Capacity. 160.5 US gal. (1071.6 lb., 179.6 in.) total: 158.0 US gal (1054.8 lb) usable: 132.5 US gal. (884.5 lb., 179.6 in.) in main tank, and 25.5 US gal (170.4 lb., 187.36 in.) in supply tank.
(See NOTE 1B)

Oil Capacity. Engine oil (each tank) has been included with the minimum gross weight. 2 x 1.14 US gal. (176.77 in.).

Main transmission oil has been included with the minimum gross weight. 3.3 US gal. (176.77 in.)

Max. Operating Altitude. See Rotorcraft Flight Manual, BK-117 B-2.

Rotor Blade and Control Movements. For rigging information refer to the MBB BK 117 Maintenance Manual.

VI. Model MBB-BK 117 C-1 (Transport Category A&B) Helicopter, Approved December 7, 1992.

Engines 2 Turbomeca Arriel 1E2

Fuel See Rotorcraft Flight Manual.

Installed Engine Limits

	Torque Limits %	Gas Generator Speed N-1 % (RPM) °C	Temperature TOT °C	Power RPM %
<u>Normal Operation</u>				
Takeoff power (5 min.)	83	100.6 (52111)	845	102*
Max. continuous	71	100.0 (51800)	845	102*
<u>One Engine Inoperative</u>				
2.5 minutes power	125	103.3 (53509)	885	102
Max. continuous	91.5	100.3 (51955)	845	102

*Max PA > 8000 ft and V < 55 KIAS 104%.

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
Min. continuous	98	80 (<2000 kg) 85 (>2000 kg)
Max. continuous	102	104
PA > 8000 ft + V < 55 KIAS		

For all serial numbers

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

Airspeed Limits (IAS). Max. V_{NE} = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. Longitudinal C.G. Limits

Max. forward range: at 3748 lb: 172.2 in. aft of datum
at 4409 lb: 170.7 in. aft of datum
at 7385 lb: 173.2 in. aft of datum

Max. rearward range: at 3748 lb: 183.9 in. aft of datum
at 7385 lb: 178.0 in. aft of datum

VI. Model MBB-BK 117 C-1 (Transport Category A&B) Helicopter, Approved December 7, 1992. (cont'd)

	Straight line variation between points given.
<u>Lateral C.G. Limits.</u>	Up to 6283 lb.: Max. deviation 3.94 in. right or left of the fuselage median plane. Above 6283 lb.: Max. deviation 3.15 in. right or left of the fuselage median plane.
<u>Empty Weight C.G. Range.</u>	None.
<u>Max. Weight.</u>	7385 lb.
<u>Min. Crew.</u>	1 (right-hand seat only)
<u>Passengers.</u>	7 (See NOTE 1A)
<u>Max. Baggage.</u>	Max. permissible floor loading 123 lb/sq. ft. Max. loading: 2645 lb. Aft of rear seat bank: 551 lb.
<u>Fuel Capacity.</u>	187 US gal. (1248 lb., 173.6 in.) total: 184.2 US gal (1230.2 lb.) usable: 132.5 US gal. (884.5 lb., 179.6 in.) in main tank, and 26.2 US gal 175.3 lb., 134.6 in.) in auxiliary fuel tank, and 25.5 US gal (170.4 lb., 187.36 in.) in supply tank.
<u>Oil Capacity.</u>	Engine oil (each tank) has been included with the minimum gross weight. 2 x 1.14 US gal. (176.77 in.) Main transmission oil has been included with the minimum gross weight. 3.3 US gal. (176.77 in.).
<u>Max. Operating Altitude.</u>	See Rotorcraft Flight Manual, MBB-BK 117 C-1.
<u>Rotor Blade and Control Movements.</u>	For rigging information refer to the MBB BK 117 C Maintenance Manual.

VII. Model MBB-BK 117 C-2 (Transport Category A&B) Helicopter, Approved January 17, 2002.

For Serial Numbers 9004 through 19999

<u>Engines.</u>	2 Turbomeca ARRIEL 1E2 engines			
<u>Fuel.</u>	See Rotorcraft Flight Manual.			
<u>Installed Engine Limits</u>				
	Torque Limits %	Gas Generator Speed N-1 % (RPM)	Temperature TOT °C	Power RPM %
<u>Normal Operation</u>				
Takeoff power (5 min.)	88	101.9 (52835)	845	102*
Max. continuous	71	100.0 (51995)	845	102*
<u>One Engine Inoperative</u>				
2.5 minute power	125	103.3 (53509)	885	102
Max. continuous	91.5	101.9 (52835)	845	102

*Max PA > 8000 ft and V < 55 KIAS 104%.

VII. Model MBB-BK 117 C-2 (Transport Category A&B) Helicopter, Approved January 17, 2002. (cont'd)

<u>Rotor Limits.</u>		<u>Power On, % (RPM)</u>	<u>Power Off, % (RPM)</u>
	Min. continuous	96	80 (<2000 kg) 85 (>2000 kg)
	Max. continuous	104	104

For all serial numbers

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

Airspeed Limits (IAS). Max. V_{NE} = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. Longitudinal C.G. Limits (Straight line variation between points given.)

Max. forward range: at 7900 lb: 172.2 in. aft of datum
at 4409 lb: 170.7 in. aft of datum

Max. rearward range: at 3858 lb: 183.7 in. aft of datum
at 7900 lb: 179.0 in. aft of datum

Lateral C.G. Limits. Up to 6614 lbs (3000 kg): Max. deviation 3.94 in. (100 mm) right or left of the fuselage median plane.
Above 6614 lbs (3000 kg): Max. deviation 3.15 in. (80 mm) right or left of the fuselage median plane.

Empty Weight C.G. Range. None.

Max. Weight. 3585 (kg) (7900 lbs)

Min. Crew. 1 (right-hand seat only)

Passengers. standard: 9, when equipped and operated in accordance with FMS 9.2-27: ten

Max. Baggage. Max. permissible floor loading 123 lb/sq. ft.

<u>Fuel Capacity.</u>	with standard fuel tank	total fuel: 879.1 l usable fuel: 867.5 l
	with self-sealing fuel tank	total fuel: 861.6 l useable fuel: 850.0 l

Oil Capacity. Refer to Rotorcraft Flight Manual

Max. Operating Altitude. 18000 ft.

Rotor Blade and Control Movements. For rigging information refer to the MBB BK 117 C-2 Maintenance Manual.

Information Pertinent to the MBB-BK117 C-2(e)

Effective from Serial Number 9601 if Garmin G500H cockpit is installed.

Type design changes to the MBB-BK117 C-2 that install Garmin 500H avionics equipment and limit operations to VFR only have been approved. These type design changes result in a helicopter that AHD has named MBB-BK117 C-2e. EASA issued an amended type certificate (EASA.R.010 dated April 17, 2015) that identifies the MBB-BK117 C-2e. In accordance with FAR 21.19, the FAA determined that the type design changes involved did not rise to the level that required an FAA amended type certificate. However, the FAA does wish to recognize that helicopters with these type design changes exist; therefore, the designation MBB-BK117 C-2(e) will be used. See Note 12 for more information on the type design changes for MBB-BK117 C-2(e).

For Serial Numbers 20003 through 20999

Fuel.	See Rotorcraft Flight Manual.
--------------	-------------------------------

	Torque Limits %	Gas Generator Speed N-1 %	Temperature TOT °C	Power RPM %
<u>Normal Operation</u>				
Takeoff power (5 min.)	95	100.6	933	108.3
Max. continuous	74	98.5	916	108.3
Extended Power (30 min.)	95	100.6	933	108.3
<u>One Engine Inoperative</u>				
30 seconds power	150	105.7	1021	108.3
2 minutes power	130	104.3	1002	108.3
Max. continuous	100	101.7	960	108.3

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, %(RPM)</u>
Min. continuous	94	80 (<2200 kg) 85 (>2200 kg)
Max. continuous	108.3	109

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

C.G. Range. Longitudinal C.G. Limits (Straight line variation between points given.)

Max. forward range:	at 5289 lbs (2400 kg): 171.3 in. (4347 mm) aft of datum
	at 8157 lbs (3700 kg): 172.5 in. (4379 mm) aft of datum
	at 8377 lbs (3800 kg): 172.6 in (4383 mm) aft of datum
Max. rearward range:	at 4407 lbs (2000 kg): 185.2 in. (4700 mm) aft of datum
	at 8157 lbs (3700 kg): 178.9 in. (4540 mm) aft of datum
	at 8377 lbs (3800 kg): 178.1 in (4525 mm) aft of datum

Empty Weight C.G. Range. None.

<u>Min. Crew.</u>	1 (right-hand seat only)
-------------------	--------------------------

Passengers.	9 (standard configuration)
-------------	----------------------------

Max. Baggage. Max. permissible floor loading 123 lb/sq. ft.

<u>Fuel Capacity.</u>	with standard fuel tank	total fuel	: 915.8 liter
		usable fuel	: 903.8 liter

VIII. Model MBB-BK 117 D-2 (Transport Category A&B) Helicopter, Approved October 9, 2014. (cont'd)

<u>Oil Capacity.</u>	Refer to Rotorcraft Flight Manual
<u>Max. Operating Altitude.</u>	20000 ft. 16000 ft (PA/DA whichever is less) for hover in ground effect, takeoff and landing
<u>Rotor Blade and Control Movements.</u>	For rigging information refer to the MBB BK 117 D-2 Maintenance Manual.

IX. Model MBB-BK 117 D-3 (Transport Category A&B) Helicopter, Approved November 25, 2020.

For Serial Numbers 21001 and subsequent

<u>Engines.</u>	2 Safran Helicopter Engines (former Turbomeca) ARRIEL 2E engines
<u>Fuel.</u>	See Rotorcraft Flight Manual.
<u>Installed Engine Limits*</u>	

	Torque Limits %	Gas Generator Speed N-1 %	Temperature TOT °C	Power RPM %
<u>Normal Operation</u>				
Max. continuous	74	98.5	916	108.3
Extended Power (30 min.)	95	100.6	933	108.3
<u>One Engine Inoperative</u>				
30 seconds power	150	105.7	1021	108.3
2 minutes power	143	104.3	1002	108.3
Max. continuous	100	101.7	960	108.3

* See Rotorcraft Flight Manual for AEO transient limits

<u>Rotor Limits.</u>	<u>Power On, % (RPM)</u>	<u>Power Off, %(RPM)</u>
Min. continuous	94	80 (<2250 kg) 85 (>2250 kg)
Max. continuous	107.5	109

For all serial numbers

See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

<u>Airspeed Limits (IAS).</u>	Max. VNE = 150 Kt. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.
-------------------------------	--

<u>C.G. Range.</u>	Longitudinal C.G. Limits (Straight-line variation between points given.)
--------------------	--

Max. forward range: at 5289 lbs (2400 kg): 171.3 in. (4347 mm) aft of datum
at 8377 lbs (3800 kg): 172.6 in. (4383 mm) aft of datum

Max. rearward range: at 4407 lbs (2000 kg): 185.2 in. (4700 mm) aft of datum
at 8377 lbs (3800 kg): 179.1 in. (4550 mm) aft of datum

<u>Lateral C.G. Limits.</u>	Up to 6614 lbs (3000 kg): Max. deviation 3.94 in. (100 mm) right or left of the fuselage median plane. Above 6614 lbs (3000 kg): Max. deviation 3.15 in. (80 mm) right or left of the fuselage median plane.
-----------------------------	---

<u>Empty Weight C.G. Range.</u>	None.
---------------------------------	-------

IX. Model MBB-BK 117 D-3 (Transport Category A&B) Helicopter, Approved November 25, 2020. (cont'd)

<u>Max. Weight.</u>	8377 lbs (3800kg)
<u>Min. Crew.</u>	1 (right-hand seat only)
<u>Passengers.</u>	9 (refer to the RFM for approved seat configurations)
<u>Max. Baggage.</u>	Max. permissible floor loading 123 lb/ft ² (Loading 600 kg/m ²).
<u>Fuel Capacity.</u>	With standard fuel tank total fuel : 915.8 liter usable fuel : 903.8 liter
<u>Oil Capacity.</u>	Refer to Rotorcraft Flight Manual
<u>Max. Operating Altitude.</u>	20000 ft. 20000 ft (PA/DA whichever is less) for hover in ground effect, takeoff, and landing
<u>Rotor Blade and Control Movements.</u>	For rigging information refer to the MBB BK 117 D-3 Maintenance Manual.

DATA PERTINENT TO ALL MODELS.

<u>Datum.</u>	Refer to the appropriate BK117 RFM or MM.
<u>Leveling Means.</u>	Alignment Points are given in the Maintenance Manual.
<u>Serial Nos. Eligible.</u>	A German (Luftfahrt-Bundesamt (LBA)) Certificate of Airworthiness endorsed as noted below under "Import Requirements" must be submitted for each individual rotorcraft for which application for FAA certification is made.
<u>Production Basis:</u>	Production Certificate No. 343CE . The manufacturer (Airbus Helicopters Inc.) is authorized to issue airworthiness certificates under 14 CFR 21.183 (a). NOTE: These models listed on the Airbus Helicopters Inc. Production Limitation Record are being produced under Licensing Agreement between AIRBUS HELICOPTERS DEUTSCHLAND GmbH and Airbus Helicopters Inc., Columbus, Mississippi, dated January 30, 2014.
<u>Certification Basis.</u>	FAR 21.29 and FAR 29 effective Feb. 1, 1965, plus Amendments 29-1 through 29-16. Equivalent Safety Findings and Special Conditions in NOTE 4. The Airworthiness criteria for Helicopter Instrument Flight, dated December 15, 1978, for IFR certification. <u>For the Model MBB-BK 117 A-1:</u> Type Certificate No. H13EU issued March 29, 1983. Date of application for Type Certificate: February 19, 1979. <u>For the Model MBB-BK 117 A-3:</u> Type Certificate No. H13EU amended September 10, 1985. Date of application for amended Type Certificate: April 2, 1985. <u>For the Model MBB-BK 117 A-4:</u> Type Certificate No. H13EU amended April 24, 1987. Date of application for amended Type Certificate: August 14, 1986. <u>For the Model MBB-BK 117 B-1:</u> Type Certificate No. H13EU amended December 11, 1987. Date of application for amended Type Certificate: June 22, 1987. <u>For the Model MBB-BK 117 B-2:</u>

Type Certificate No. H13EU amended December 7, 1992.
Date of application for amended Type Certificate: January 23, 1991.

For the Model MBB-BK 117 C-1:

Type Certificate No. H13EU amended December 7, 1992.
Date of application for amended Type Certificate: March 8, 1991.

For S/N up to and including 7509 with modification per SB-MBB-BK117-60,112 and S/N greater than or equal to 7510.

FAR Part 29 dated. Feb. 1, 1965,
including Amendments 29-1 to 29-16
FAR 29.927, 29.1091, 29.1103, 29.1195 Amend. 17
FAR 29.1, 29.1517, 29.1587 Amend. 21
FAR 29.143 Amend. 24
FAR 29.901, 29.903, 29.908, 29.955, 29.961, 29.1041, 29.1043, 29.1045, 29.1047,
29.1093 Amend. 26
FAR 29.2 Amend. 32
JAR 29 (First Issue): 29.45 to 29.87

For the Model MBB-BK 117 C-2:

Type Certificate No. H13EU amended January 17, 2002.
Date of application for amended Type Certificate: October 18, 2000.

FAR 21.29 and FAR 29 effective Feb. 1, 1965, plus Amendments 29-1 through 29-40 with the following exceptions.

FAR 29.631 at Amendment 29-40 for roof cover, overhead panel, and center beam only
FAR 29.903 at Amendment 29-26
FAR 29.923 at Amendment 29-26
FAR 29.927 at Amendment 29-17
FAR 29.547 at Amendment 29-16
FAR 29.571 at Amendment 29-16
FAR 29.863 at Amendment 29-16
FAR 29.901(c) at Amendment 29-16
FAR 29.917 at Amendment 29-16
FAR 29.1011 at Amendment 29-16
FAR 29.1019(a) at Amendment 29-16
FAR 29.1021 at Amendment 29-16
FAR 29.1163 at Amendment 29-16
FAR 29.1181 at Amendment 29-16
FAR 29.1183 at Amendment 29-16
FAR 29.1189 at Amendment 29-16
FAR 29.1309(b),(d),(e) at Amendment 29-16
FAR 29.1521 at Amendment 29-16

and the following FAR's that revert to the original Amendment 29-16 certification basis and were not codified at that time

FAR 29.610(d)(4)
FAR 29.1027
FAR 29.1305(a)(21) and (23)
FAR 29.1337(e)

FAR Part 36 Appendix H at Amendment 36-22

For the Model MBB-BK 117 D-2:

Type Certificate No. H13EU amended: October 9, 2014.
Date of application for amended Type Certificate: December 21, 2009.

14 CFR 21.29 and 14 CFR 29 effective Feb. 1, 1965, plus Amendments 29-1 through 29-40 for the new or changed parts with respect to the MBB-BK117 C-2, identified in the

document ETYC 1183/09-MHa, supplemented with requirements from other amendments listed below:

14 CFR 29 requirements with amendment through 29-51 for:
 29.25, 29.59, 29.62, 29.67, 29.77, 29.81, 29.85, 29.143, 29.173, 29.175, 29.177, 29.351, 29.397, 29.562, 29.602, 29.865, 29.923, 29.1317, 29.1323, 29.1329, 29.1351, 29.1359, 29.1457, 29.1459, 29.1521, 29.1587, B29.5, B29.7
 14 CFR 29.631 at Amendment 29-40 for the entire tail section only

14 CFR 36 Appendix H at Amendment 36-25

The main differences between the MBB-BK117 C-2 and the MBB-BK117 D-2 are as follows:

- a) Installation of Turbomeca Arriel 2E engines with FADEC control.
- b) New tail section including composite structure and fanned tail rotor (FENESTRON) with composite blades.
- c) New cockpit indication system using integrated modular avionics.
- d) Auto Flight System as a standard configuration of the MBB-BK117 D-2.
- e) Main gearbox modifications to support 30-minute run-dry capability.
- f) Maximum take-off weight increased to 3650 kg.

The German Authority Luftfahrt-Bundesamt (LBA) originally type certificated this under its type certificate number (LBA 3049). The FAA validated this product under U.S. Type Certificate Number (H13EU). Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the German LBA (EASA TC R.010).

Limitation in TCDS Revision 23 on the MBB-BK117 D-2 not meeting Category A performance when operated at a gross weight above 8157 lbs (3700 kg) up to a maximum 8377 lbs (3800 kg) is removed in this TCDS Revision 24.

For the Model MBB-BK 117 D-3:

Type Certificate No. H13EU amended: November 25, 2020.
 Date of application for amended Type Certificate: March 23, 2018.

For significantly affected areas with respect to MBB-BK 117 D-2 as identified in CRD D0000M505304, Revision C, dated June 19, 2020, 14 CFR § 29 effective February 1, 1965, plus Amendments 29-1 through 29-55 for the following requirements: 29.571, 29.573

For the remaining areas, systems, parts, or appliances, 14 CFR § 29 effective February 1, 1965, plus Amendments 29-1 through 29-55 for the following requirements: 29.610, 29.631, 29.1501, A29.4

For the remaining areas, systems, parts, or appliances, 14 CFR § 29 effective February 1, 1965h, plus Amendments 29-1 through 29-51 for the following requirements: 29.1, 29.25, 29.59, 29.62, 29.67, 29.77, 29.81, 29.85, 29.143, 29.173, 29.175, 29.177, 29.351, 29.397, 29.602, 29.923, 29.1323, 29.1329, 29.1351, 29.1359, 29.1457, 29.1459, 29.1521, 29.1587, B29.5, B29.7

14 CFR § 29 effective February 1, 1965, plus Amendments 29-1 through 29-40 for all the other applicable requirements with the following exceptions:
 29.631 at Amendment 29-16 (for cockpit windcreens only),
 29.863 at Amendment 29-16 (for unaffected parts from BK 117 C-1),
 29.865 at Amendment 29-43 for External Loads applicable to Common Cargo Hook Beam and Hoist installation.
 29.1011 (b),(e) at Amendment 29-16,
 29.1019 at Amendment 29-16,
 29.1021 (for Main Gearbox only) at Amendment 29-16

See Note 4 for updated ELOS finding for Alternative Category “A” Continued Take-Off and Balked Landing Procedures on the Model D-3 helicopter

The main differences between the MBB-BK 117 D-2 and the MBB-BK 117 D-3 are as follows:

- a) New five bladed main rotor with bearingless design
- b) Elongated rotor mast with integrated flanges for blade attachment

- c) Redesigned upper controls with five arm swashplate and adapted kinematics
- d) Enlarged hub cap
- e) Adaption of rigging procedure and tooling for main rotor controls
- f) Removal of mechanic stick centering device
- g) Integration of an electric hydraulic pump into one hydraulic system to allow full range pre-flight check of flight controls
- h) Adaption of IMA SW HELIONIX to V8.0 according to Technical Note Major change TN X460C1555E01 for the common part shared with EC175 and TN D460M0520E03 for the MBB BK 117 specific part.
- i) Adaption of Automatic Flight Control System software to new rotor dynamics
- j) Removal of anti-vibration systems (improved) Light Active Vibration Control System (LAVCS(+)) and 3Hz Landing Gear dampers
- k) Adaption of stiffness of forward cross tube and LG skids
- l) Adaption of stiffness of horizontal stabilizer
- m) Adaption of stiffness of tail rotor Smart Electro-Mechanical Actuator rod
- n) Relocation of roof mounted Emergency Locator Transmitter antenna and addition of alternative ARTEX ELT-4000.
- o) Shortening of the deflector from optional upper (roof mounted) cable cutter
- p) Removal of structural reinforcements for LAVCS and LG dampers
- q) Adaption of stiffness of pilot and co-pilot collective control sticks
- r) Replacement of DTD by wireless Airborne Communication Server
- s) Redesign of optional main rotor blade folding kit (provisions only)
- t) Maximum weight limit will be extended to 3,800 Kg (no longer considered an alternative MTOW).

Import Requirements.

To be considered eligible for operation in the United States, each aircraft manufactured under this type certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states (in the English language): "The aircraft covered by this certificate has been examined, test, and found to comply with the German LBA TC Number 3049 (or EASA TC Number R.010) approved under the U.S. Type Certificate Number H13EU and to be in a 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 FAR Sections 21.183(c) or 21.185(c).

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

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an airworthiness certificate for imported aircraft.

Model MBB-BK 117 A-1 is ineligible for a U.S. certificate of airworthiness. See Note 9.

Equipment.

The minimum required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the respective helicopter for certification.

For the Model MBB-BK 117 A-1, LBA-approved MBB-BK 117 A-1 Rotorcraft Flight Manual dated December 9, 1982, Revision 0, or later approved revision, is required.

For the Model MBB-BK 117 A-3, LBA-approved MBB-BK 117 A-3 Rotorcraft Flight Manual dated March 15, 1985, or later as required.

For the Model MBB-BK 117 A-4, LBA-approved MBB-BK 117 A-4 Rotorcraft Flight Manual Revision 1 dated April 8, 1987, or later as required.

For the Model MBB-BK 117 B-1, LBA-approved MBB-BK 117 B-1 Rotorcraft Flight Manual Revision 0, dated December 10, 1987, or later as required.

For the Model MBB-BK 117 B-2, LBA-approved MBB-BK 117 B-2 Rotorcraft Flight Manual Revision 2 dated November 20, 1992, or later as required.

For the Model MBB-BK 117 C-1, LBA-approved MBB-BK 117 C-1 Rotorcraft Flight Manual Revision 0 dated October 2, 1992, or later as required.

For the Model MBB-BK 117 C-2, LBA-approved MBB-BK 117 C-2 Rotorcraft Flight Manual Revision 0 dated December 20, 2000, or later as required.

For the MBB-BK 117 C-2(e), EASA-approved MBB-BK 117 C-2e Rotorcraft Flight Manual Revision 1 dated June 17, 2015, or later as required. See Note 12.

For the Model MBB-BK 117 D-2, EASA-approved MBB-BK 117 D-2 Rotorcraft Flight Manual Revision 0 dated April 16, 2014, or later as required.

For the Model MBB-BK 117 D-3, EASA-approved MBB-BK 117 D-3 Rotorcraft Flight Manual Revision 4.1 dated March 29, 2021, or later as required.

Service Information.

Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul maintenance manuals, which contain a statement that the document is LBA approved, are accepted by the FAA, and are considered FAA approved. These approvals pertain to the type design only.

“Each of the documents listed below must state that it is approved by the EASA or – for approvals made before September 28, 2003 – by the German LBA. Any such documents are accepted by the FAA and are considered FAA approved.

- Service Bulletin,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

This applies only to the acceptance of the type design data.”

NOTES:

- NOTE 1. Current weight and balance report including list of required equipment and list of equipment included in certified empty weight and loading instructions when necessary, must be provided for each helicopter at the time of original certification: the certificated empty weight and corresponding center of gravity location must include unusable fuel of (16.7 lb. at 176.77 in.) and engine oil (2 x 9.64 lb. at 176.77 in.) and transmission oil of (27.8 lb. at 176.38 in.).
- NOTE 1A. Ten (10) passengers are permitted with MBB Kit Number 117-86099 or, -86100 installed.
- NOTE 1B. With 80 Kg auxiliary fuel tank installed (P/N 117-891011) 187 US gal. (1248 lbs, 173.6 in.) total; 184.2 US gal. (1230.2 lbs, 173.5 in) usable.
- NOTE 2. The following placard must be displayed in clear view of the pilot:
- "This helicopter must be operated in compliance with the operating limitations specified in the LBA-approved Rotorcraft Flight Manual. The "Airworthiness Limitations" section of the Rotorcraft Maintenance Manual must be complied with".
- In addition, all placards required in the LBA-approved Rotorcraft Flight Manual must be installed in the appropriate locations.
- NOTE 3. For Model MBB-BK 117 A-1: Refer to the MBB-BK 117 Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Preliminary Revision 4, dated 20 February 1983, or a later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.
- For Model MBB-BK 117 A-3 and Model MBB-BK 117 A-4: Refer to the MBB-BK 117 Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Temporary Revision 6, dated 5 March 1983, or a later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 A-4: Refer to the MBB-BK 117 Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Revision 4, dated July 1, 1986, or later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 B-1; Refer to the MBB-BK 117 Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Revision 8, dated December 15, 1987, or later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 B-2; Refer to the MBB-BK 117 Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Revision 18, dated January 17, 1992, or later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 C-1; Refer to the MBB-BK 117 C Maintenance Manual Appendix A; Chapter 9, "AIRWORTHINESS LIMITATIONS", Revision 0, dated October 2, 1992, or later LBA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 C-2; Refer to the MBB-BK 117 C-2 Maintenance Manual; Chapter 4, "AIRWORTHINESS LIMITATIONS", Revision 0, or later LBA/EASA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 D-2; Refer to the MBB-BK 117 D-2 Maintenance Manual; Chapter 4, "AIRWORTHINESS LIMITATIONS", Revision 0, or later EASA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

For Model MBB-BK 117 D-3; Refer to the MBB-BK 117 D-3 Maintenance Manual; Chapter 4, "AIRWORTHINESS LIMITATIONS", Revision 0, dated September 25, 2020, or later EASA-approved issue, for the retirement life limitations of the helicopter parts which are critical from a fatigue standpoint. These values of retirement on service life cannot be increased without FAA Engineering approval.

Additional information essential for proper maintenance of the helicopter is contained in the MBB-BK 117 Maintenance and Repair Manual.

NOTE 4.

Equivalent Safety Findings

For Models MBB-BK 117 A-1 up to B-1;
FAR 29.175(b) Demonstration of Static Longitudinal Stability (See NOTE 8)

For Models MBB-BK 117 A-1 up to C-1:
FAR 29.811(h)(1) Exterior Markings
FAR 29.1151(b) Rotor Brake Controls

For Model MBB-BK 117 C-2:
FAR 29.807 (a)(4) Emergency exits
FAR 29.1151(b) Rotor Brake Controls
FAR 29.1303 (a),(j) VNE indication
FAR 29.1549 (b) Powerplant Instruments
FAR 29.1457(d)(5) Amdt 52, FAR 135.151(g)(1)(i), ELOS No: SP4261RD-R
FAR 29.1457(c) Cockpit voice recorders, with Airbus modification E-2711

For Model MBB-BK 117 D-2:
14 CFR 29.807 (a)(4) Emergency exits
14 CFR 29.1545(b)(4), 29.1549(b) Airspeed & Powerplant indication green marking
14 CFR 29.1305, 29.1351(b)(6), 29.1435(a)(3) Part Time Display of Vehicle Parameters
14 CFR 29.1397 and 29.1401 Dual Color Anti Collision light

For Model MBB-BK 117 D-3
14 CFR 29.807 (a)(4) Emergency exits
14 CFR 29.1305, 29.1351(b)(6), 29.1435(a)(3) Part Time Display of Vehicle Parameters

14 CFR 29.1397 and 29.1401 Dual Color Anti Collision light
 14 CFR § 29.59(d) Takeoff Path: Category A and 29.1587(a)(6)(ii) Performance information. The ELOS finding is documented in ELOS Memorandum AT115461B-R-F-01.

Special Conditions

For Models MBB-BK 117 D-2 and MBB-BK 117 D-3:
 14 CFR 29.1049, 29.1305, 29.1521 for 30 min Extended Power Rating

- NOTE 5. The engine limits shown are installed limits. For computation purposes 100 percent engine output shaft torque is 519 ft.-lb. and, 100 per cent engine output shaft (N2) speed is 6000 rpm. Also 100% Gas Generator speed is 47,870 rpm.
- NOTE 6. This emergency rating can be used for demonstration/training purposes.
- NOTE 7. All modifications or alterations of the powerplant installation type design approved under H13EU must be reviewed by the type certificating office before approval of changes in type design are granted. This includes the engine air intake system, the transmission compartment, engine model, and fuel changes.
- NOTE 8. Airspeed limitations must comply with MBB Service Bulletin BK-117-40-4 (Reference U.S. AD 85-02-04) and minimum ambient air temperature must be limited to -35°C unless MBB Service Bulletin BK-117-40-7 has been accomplished or the MBB stick Position Augmentation System (SPAS) kit has been installed as basic equipment).
- NOTE 9. Model MBB-BK 117 A-1 S/N 7001 to S/N 7054 may be converted to Model BK 117 A-3 in accordance with MBB Service Bulletin SB-MBB-BK 117-10-4 dated April 15, 1985, or later revision. In addition, these serial number helicopters may be further converted to model BK117 A-4 in accordance with MBB Service Bulletin SB-MBB-BK117-80-105 dated November 26, 1987, or later revision. Model MBB-BK 117 A-1 helicopters are ineligible for U.S. certificate of airworthiness due to Airbus Helicopter Deutschland discontinued maintenance of the approved flight manuals for this model; reference Airbus Helicopter Deutschland Technical Information Letter, No. BK117 006-2005.
- Model MBB-BK 117 A-3 S/N 7055 to S/N 7121 may be converted to Model BK 117 A-4 in accordance with MBB Service Bulletin SB-MBB-BK 117-80-105 dated November 26, 1987, or later revision.
- Model MBB-BK 117-B1 S/N 7140 to S/N 7243 may be converted to Model BK 117 B-2 in accordance with ECD Drawing No. 117-800121 (refer to BK 117 Service Information SI-MBB-BK117-36).
- Model MBB-BK-117 A-4, any eligible serial number, may be converted to Model MBB-BK-117 B-1 in accordance with MBB Service Bulletin SB-MBB-BK 117-80-126, revision 1, dated May 16, 1995.
- Model MBB-BK117 D-2, any eligible serial number, may be converted to Model MBB-BK117 D-3 in accordance with Airbus Service Bulletin MBB-BK117 D-2-00-003/xx, where the “xx” refers to the customer specific configuration. Once modified according to the design change approved under EASA Major Change Approval 10076247, any MBB-BK117 D-2 helicopter shall be re-identified as MBB-BK117 D-3 and all the related data from this data sheet will apply.
- The validation approval of EASA Major Change Approval 10077593 (“Population 2” Hoist System) for the MBB-BK117 D-3 is also valid for the model MBB BK117 D-2 helicopter converted into a model MBB BK117 D-3.
- Model MBB-BK 117 B-2 S/N 7203 is ineligible for U.S. registration.
- NOTE 10. Any changes to the type design of this helicopter by means of a amended type certificate (TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA's) must be submitted thru the project aircraft certification office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes (major repairs or alterations) by means of a FAA Form 337 (field approval) that require ICA's must have those ICA's reviewed by the field approving FSDO.
- NOTE 11. Effective January 7, 2014, Eurocopter Deutschland GmbH name was changed to Airbus Helicopters Deutschland GmbH.

NOTE 12. Type design changes to the MBB-BK117 C-2 were approved June 30, 2015. These type design changes resulted in the MBB-BK117 C-2(e), starting from Serial Number 9601. The MBB-BK117 C-2(e) is a VFR only configuration of the MBB-BK117 C-2 utilizing a Garmin 500H flight display system. See Rotorcraft Flight Manual under the Equipment section of this TCDS.

NOTE 13. This MBB-BK117 D-3 Common Cargo Hook Beam installation (EASA Major Change Approval 10081993) deals only with the detachable parts of the common cargo hook beam system (cargo hook beam, onboard systems cargo hook, detachable electrical part, landing gear provisions). The common cargo hook beam system will be used for HEC and NHEC operations. The fixed provisions have been approved under AH DOA privileges and are a pre-requisite for CCHB installation.

A service bulletin (SB BK117-25-98-0002) will be released for the model MBB-BK117 D-3 helicopters already delivered with the common cargo hook beam fixed provisions. The same fuel tank protection mitigations also need to be implemented on the MBB-BK117 D-2 delivered with common cargo hook beam or fixed provisions only. The in-service fleet of the MBB-BK117 D-2 with common cargo hook beam installed is addressed by the airworthiness follow-up sheet, reference ETJA-2021-174

Limitations applicable to the MBB-BK117 D-3 Common Cargo Hook Beam installation:

The following modifications are a pre-requisite for the embodiment of this design change:

- K-8113: change of fuel system and airframe parts in the framework of CCHB validation
- K-8272: fuel pump modification due to fuel tank drop tests results
- K-6355: mechanical fixed provisions and electrical integration
- K-6829: placards for the CCHB system
- K-6583: bore holes and bushings in the FWD and AFT cross tubes

Airworthiness Limitations: approved by validation of EASA Major Change Approval E-6722 (TFSAC 23.117.0001.A), dated May 25, 2023.

NOTE 14: For the validation approval of EASA Major Change Approval 10077593 applicable to the model MBB-BK117 D-3, Installation of the COLLINS AEROSPACE "Population 2" Hoist System (P/N 44301-12-XXX), the following Technical Documents are applicable:

- BK117 D-3 FMA 11-69 Rev 0, Appendix for FAA-registered helicopters, which lists specific Limitations, Procedures, and Performance Data applicable only to FAA-registered helicopters, as well as a list of the Flight Manual Supplements (FMS) and Flight Manual Appendices (FMA) approved by the FAA as part of the Type Certificate
- BK117 D-3 FMA 11-80 Rev. 0, Appendix for Limitations for FAA-registered helicopters
- BK117 D-3 FMA 11-81 Rev. 0, Appendix for Performance Data for FAA-registered helicopters
- BK117 D-3 FMA 11-82 Rev. 0, Appendix for CAT A Operations for FAA-registered helicopters
- BK117 D-3 FMA 11-83, Rev. 0, Appendix for Operation with Opened/Removed Doors for FAA-registered helicopters
- BK117 D-3 FMA 11-84, Rev. 0, Appendix for OEI Training for FAA-registered helicopters
- BK117 D-3 FMS 9.2-4 Rev. 3, External Hoist System;

Airworthiness Limitations:

- approved by validation of EASA Major Change Approval E-6506 (TFSAC 21.BK117.0001.A and 21.BK117.0007.A), dated November 3, 2021.

NOTE 15: Ditching note for MBB-BK117 C-2, MBB-BK117 D-2, MBB-BK117 D-3:

The emergency flotation system is approved as a ditching provision according to FAR 29.801 Amdt.40 (Ref. Rotorcraft Flight Manual Supplement 9.2-9).

In order for the helicopter to be fully approved for ditching the following additional equipment must be installed in accordance with FAR 29.801, 29.1411 and 29.1415:

- approved survival type emergency locator transmitter,
- approved life rafts along with survival equipment,
- approved life preserver for each occupant.

it is the operator's responsibility to ensure that the equipment not covered under ditching certification meets all the applicable airworthiness and operational requirements.

.....END.....