

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

H13EU
Revision 15
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
June 30, 2015

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
Rev. No.	15	6	13	13	13	6	13	13	13	15	14	14	14	15	13	14	15

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>	<p>Longitudinal C.G. Limits</p> <p>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</p> <p>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</p> <p>Straight line variation between points given.</p> <p>Lateral C.G. Limits.</p> <p>Max. deviation 3.9 in right or left of the fuselage median plane.</p>
<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>	<p>Max. permissible floor loading: 123 lb/sq. ft.</p> <p>Max. loading: 2645 lb</p> <p>Aft of rear seatbank: 551 lb</p>
<u>Fuel Capacity.</u>	<p>160.5 US gal. (1071.6 lb., 179.6 in.) total; 158.0 US gal. (1054.9 lb.) usable:</p> <p>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.</p> <p>(See NOTE 1B)</p>
<u>Oil Capacity.</u>	<p>Engine oil (each tank) has been included with the minimum gross weight 2 x 1.14 US gal. (176.77 in.).</p> <p>Main transmission oil has been included with the minimum gross weight 3.3 US gal. (176.38 in.)</p>
<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-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 (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

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 seatbank: 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 seatbank: 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.

Engines. 2 Lycoming LTS 101-750B-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.)	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 seatbank: 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-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.)	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. 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

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 seatbank: 551 lb.

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

<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, BK-117 B-2.
<u>Rotor Blade and Control Movements.</u>	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.

<u>Engines</u>	2 Turbomeca Arriel 1E2			
<u>Fuel</u>	See Rotorcraft Flight Manual.			
<u>Installed Engine Limits</u>				
	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 PA > 8000 ft + V < 55 KIAS	102	104

For all serial numbers
See Rotorcraft Flight Manual for other limitations including speed and temperature transients.

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

<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	Temperature TOT	Power RPM
	%	% (RPM)	°C	%
<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

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 and subsequent

Fuel. See Rotorcraft Flight Manual.

	Torque Limits	Gas Generator Speed N-1	Temperature TOT	Power RPM
	%	%	°C	%
<u>Normal Operation</u>				
Takeoff power (5 min.)	95	100.6	918	108.3
Max. continuous	74	89.5	901	108.3
Extended Power (30 min.)	95	100.6	918	108.3
<u>One Engine Inoperative</u>				
30 seconds power	150	105.7	1006	108.3
2 minutes power	130	104.3	987	108.3
Max. continuous	100	101.7	945	108.3

<u>Rotor Limits.</u>	<u>Power On. % (RPM)</u>	<u>Power Off. % (RPM)</u>
Min. continuous	94	80 (<2000 kg) 85 (>2000 kg)
Max. continuous	108.3	109

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

Max. forward range:	at 5289 lbs (2400 kg): 171.3 in. (4347 mm) aft of datum
	at 8043 lbs (3650 kg): 172.5 in. (4379 mm) aft of datum
Max. rearward range:	at 4407 lbs (2000 kg): 185.2 in. (4700 mm) aft of datum
	at 8043 lbs (3650 kg): 178.9 in. (4540 mm) aft of datum

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

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

Oil Capacity. Refer to Rotorcraft Flight Manual

Max. Operating Altitude. 20000 ft.
16000 ft (PA/DA whichever is less) for hover in ground effect, takeoff and landing

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

DATA PERTINENT TO ALL MODELS.

Datum. Refer to the appropriate BK117 RFM or MM.

Leveling Means. Alignment Points are given in the Maintenance Manual.

Serial Nos. Eligible. 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.

Production Basis: 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.

Certification Basis. 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.

For the Model MBB-BK 117 A-1:

Type Certificate No. H13EU issued March 29, 1983.

Date of application for Type Certificate: February 19, 1979.

For the Model MBB-BK 117 A-3:

Type Certificate No. H13EU amended September 10, 1985.

Date of application for amended Type Certificate: April 2, 1985.

For the Model MBB-BK 117 A-4:

Type Certificate No. H13EU amended: April 24, 1987.

Date of application for amended Type Certificate: August 14, 1986.

For the Model MBB-BK 117 B-1:

Type Certificate No. H13EU amended: December 11, 1987.

Date of application for amended Type Certificate: June 22, 1987.

For the Model MBB-BK 117 B-2:

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 29.903 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 29.631
 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 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).

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).

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.

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.

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

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

Special Conditions

For Model MBB-BK 117 D-2:

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 r.p.m.

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 certifying 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-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.
- 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.

.....END.....