

SAFETY INFORMATION NOTICE

SUBJECT: GENERAL

Cliff Edge Effect

For the attention of



AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
EC120	B	
AS350	B, BA, BB, B1, B2, B3, D	L1
AS550		A2, C2, C3, U2
AS355	E, F, F1, F2, N, NP	
AS555		AF, AN, SN, UF, UN, AP
EC130	B4, T2	
SA365 / AS365	C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K, K2
AS565		MA, MB, SA, SB, UB, MBe
SA366		GA
EC155	B, B1	
SA330	J	Ba, L, Sm
SA341	G	B, C, D, E, F, H
SA342	J	L, L1, M, M1, Ma
ALOUETTE II	313B, 3130, 318B, 318C, 3180	
ALOUETTE III	316B, 316C, 3160, 319B	
LAMA	315B	
EC225	LP	
EC725		AP
AS332	C, C1, L, L1, L2	B, B1, F1, M, M1
AS532		A2, U2, AC, AL, SC, UE, UL
EC175	B	
H160	B	
EC339		KUH/Surion
BO105	C (C23, CB, CB-4, CB-5), D (DB, DBS, DB-4, DBS-4, DBS-5), S (CS, CBS, CBS-4, CBS-5), LS A-3	E-4
MBB-BK117	A-1, A-3, A-4, B-1, B-2, C-1, C-2, C-2e, D-2, D-2m, D-3, D-3m	D-2m, D-3m
EC135	T1, T2, T2+, T3, P1, P2, P2+, P3, EC635 T1, EC635 T2+, EC635 T3, EC635 P2+, EC635 P3, T3H, P3H, EC635 T3H, EC635 P3H	

No. 3947-S-00

Context

A recent event occurred on an oil rig, with an aircraft parked in high wind conditions. The main rotor blades could not be tied down and snapped off the main rotor, in particular due to wind conditions.

In the frame of the still ongoing technical investigation, a contributing factor to the event has been identified. Without presuming the conclusion of this investigation and in line with Airbus Helicopters constant commitment to improve safety, Airbus Helicopters publishes this Safety Information Notice (SIN).

Cliff Edge Effect

Limitations for wind speed and direction are defined in the Flight Manual and in the maintenance documentation.

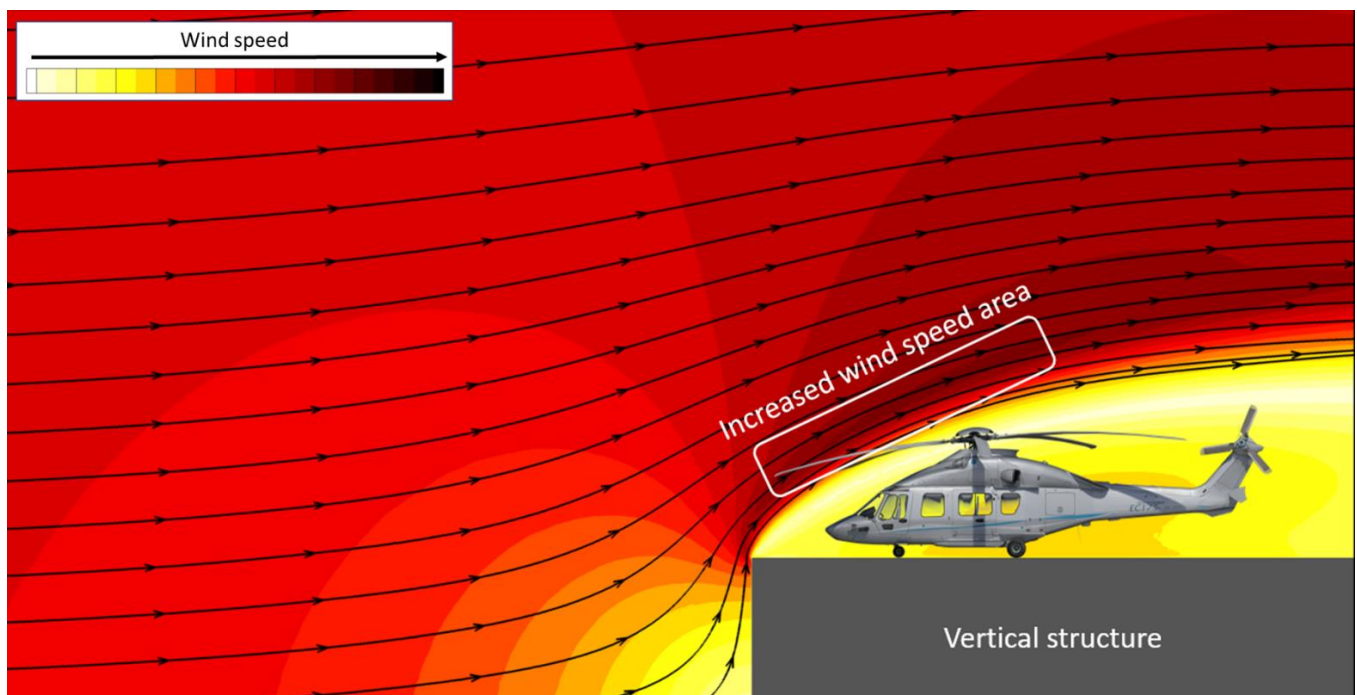
Airbus Helicopters would like to draw customers' attention to the fact that local environment may have an impact on wind speed and direction and consequently may affect wind conditions around the aircraft. Thus, local environment shall be taken into account to comply with the applicable limitations.

This SIN highlights a local aerodynamics phenomenon that is the "Cliff Edge Effect".

When the helipad is located on the top of a vertical structure, wind speed and direction on this helipad may be significantly affected. The vertical structures include but are not limited to buildings, tall boats, oil rigs or any kind of vertical structures that are located below the helipad and that would be an obstacle for the continuous airflow. On such structures, the airflow is deviated, resulting in:

- Turbulences
- Local wind speed increase
- Modification of wind direction.

Below is an illustration of such a phenomenon, with a simplified analysis of a theoretical laminar wind blowing on a vertical structure from the left.



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In the example above, with the aircraft located close to the edge of the vertical structure, the local speed and direction of the wind affecting the front of the main rotor disk are significantly impacted: speed is increased and wind direction is changed.

Thus, the local speed and direction of the wind can be locally outside the applicable limitations defined in the Flight Manual and in the maintenance documentation, potentially resulting in damage to the aircraft and/or injuries to people.

Airbus Helicopters would like to draw customer's attention to the fact that the increased wind speed area is affecting the aerodynamic loading of the blades and therefore should be taken into consideration to comply with the applicable wind limitations. Consequently, if the wind conditions get close to the applicable limitations, Airbus Helicopters recommends moving the aircraft as far as possible from the edge of the vertical structure. If necessary, secure the aircraft as soon as possible with mooring kits in accordance with the applicable technical documentation.