SAFETY INFORMATION NOTICE

SUBJECT: GENERAL

Simulated Engine-Off Landing (EOL) training

For the attention of	
	

AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
EC120	B	
AS350	B, BA, BB, B1, B2, B3, D	L1
EC130	B4, T2	

Current helicopter accident / incident statistics indicate that the greatest exposure to accidents or incidents is during simulated engine-off landing (EOL). The purpose of this Safety Information Notice is to raise the level of awareness of Flight Instructors involved in simulated EOL training and to stress on key points.
The information contained in the supplement of each aircraft RFM dedicated to simulated EOL training procedure should be applied.
Furthermore, EASA released an Operational Evaluation Board (OEB) report including Training Areas of Specific Emphasis (TASE) which should receive special attention (see web link below).
At last, IHST published a HE5 safety leaflet on risk management in training and some reel safety videos to consider (see web link below).

Simulated EOL training shall be performed with a minimal crew (an interpreter is sometimes required additionally).
The engine reduction to idle position shall be completed when the helicopter is in autorotative descent and established on the glide path for the appropriate suitable area:
- perform first attempt Power on (Fuel Flow Control Lever or twist grip on flight position), execute the flare then go around then,
- perform the training: Power on, Power recovery or simulated EOL (FFCL at 67/70 % Ng or twist grip on idle position),
- check engine rating,
- enter autorotation at a proper height,
- use sufficient anti-torque pedal travel when power is reduced, especially on aircraft with Fenestron (EC120 B, EC130 B4 & T2),
- maintain proper NR during the descent,
- if power is recovered, smoothly roll the throttle back to marry the needles as you pass through about 200ft AGL,
- wait to apply the collective pitch at a correct height to avoid hard landing, loss of heading control and possible damage to the tail rotor and to the main rotor blade stops,
- engine-off landing: collective pitch to be fully lowered only once the aircraft has stopped.

TIPS for airman:
- keep in mind that a higher All Up Weight increases the risk of NR overspeed and hard landing,
- do not lower the nose too abruptly when power is reduced, to avoid a rotor RPM drop and a steep dive,
- be prepared to conduct engine-off landing if power recovery is unsuccessful,
- aft cyclic input during the ground slide will do nothing at all except chop off the tail boom,
- for go-around maneuvers, anticipate the decision process.

Useful links:
OEB
http://www.easa.europa.eu/system/files/dfu/EASA-OEB-Final-Report-EC_120-16052012.pdf
http://easa.europa.eu/system/files/dfu/EASA-OEB-Final-Report-Eurocopter_AS350_Family_(B3e)-04-06082012.pdf
HE5 Safety leaflet and Reel Safety videos
http://easa.europa.eu/essi/ehest/2013/03/he5
http://ihst.org/Default.aspx?tabid=3210