European Aviation Safety Agency

Guidance Material (GM) to Annex I – Definitions for terms used in Annexes II – VIII

Consolidated version including Amendment 3¹

21 July 2015

¹ For the date of entry into force of Amendment 3, refer to Decision 2015/012/R in the <u>Official</u> <u>Publication</u> of the Agency.

Disclaimer

This consolidated document containing GM to Annex I (Definitions) to Commission Regulation (EU) No 965/2012 on air operations includes the initial issue of and all subsequent amendments to the GM associated with this Annex.

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The official documents can be found at <u>http://www.easa.europa.eu/document-library/official-publication</u>.

SUMMARY OF AMENDMENTS

Summary of amendments

Chapter	Action	Amdt. no.	Amended by Regulation / ED Decision
GM 12 Annex I	New	3	ED Decision 2015/012/R (UPRT)
GM 11 Annex I	New	2	Reg. (EU) 2015/140 (Sterile flight deck procedures); ED Decision 2015/002/R
Annex I – the title	Amended	1	Reg. (EU) 800/2013 (NCC, NCO);
GM1 Annex I	Amended		ED Decision 2013/017/R
GM2 Annex I	Amended		

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DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

GM to Annex I

Definitions for terms used in Annexes II-VIII

GM1 Annex I Definitions

DEFINITIONS FOR TERMS USED IN ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL

For the purpose of Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 965/2012, the following definitions should apply:

- (a) 'Committal point' means the point in the approach at which the pilot flying decides that, in the event of an engine failure being recognised, the safest option is to continue to the elevated final approach and take-off area (elevated FATO).
- (b) 'Emergency locator transmitter' is a generic term describing equipment that broadcasts distinctive signals on designated frequencies and, depending on application, may be activated by impact or may be manually activated.
- (c) 'Exposure time' means the actual period during which the performance of the helicopter with the critical engine inoperative in still air does not guarantee a safe forced landing or the safe continuation of the flight.
- (d) 'Fail-operational flight control system' means a flight control system with which, in the event of a failure below alert height, the approach, flare and landing can be completed automatically. In the event of a failure, the automatic landing system will operate as a fail-passive system.
- (e) 'Fail-operational hybrid landing system' means a system that consists of a primary fail-passive automatic landing system and a secondary independent guidance system enabling the pilot to complete a landing manually after failure of the primary system.
- (f) 'Fail-passive flight control system': a flight control system is fail-passive if, in the event of a failure, there is no significant out-of-trim condition or deviation of flight path or attitude but the landing is not completed automatically. For a fail-passive automatic flight control system the pilot assumes control of the aeroplane after a failure.
- (g) 'Flight control system' in the context of low visibility operations means a system that includes an automatic landing system and/or a hybrid landing system.
- (h) 'HEMS dispatch centre' means a place where, if established, the coordination or control of the helicopter emergency medical service (HEMS) flight takes place. It may be located in a HEMS operating base.
- (i) 'Hybrid head-up display landing system (hybrid HUDLS)' means a system that consists of a primary fail-passive automatic landing system and a secondary independent HUD/HUDLS enabling the pilot to complete a landing manually after failure of the primary system.
- (j) 'Landing distance available (LDAH)' means the length of the final approach and take-off area plus any additional area declared available by the State of the aerodrome and suitable for helicopters to complete the landing manoeuvre from a defined height.
- (k) 'Landing distance required (LDRH)', in the case of helicopters, means the horizontal distance required to land and come to a full stop from a point 15 m (50 ft) above the landing surface.
- (I) 'Maximum structural landing mass' means the maximum permissible total aeroplane mass upon landing under normal circumstances.

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

- (m) 'Maximum zero fuel mass' means the maximum permissible mass of an aeroplane with no usable fuel. The mass of the fuel contained in particular tanks should be included in the zero fuel mass when it is explicitly mentioned in the aircraft flight manual.
- (n) 'Overpack', for the purpose of transporting dangerous goods, means an enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.
- (o) 'Package', for the purpose of transporting dangerous goods, means the complete product of the packing operation consisting of the packaging and its contents prepared for transport.
- (p) 'Packaging', for the purpose of transporting dangerous goods, means receptacles and any other components or materials necessary for the receptacle to perform its containment function.
- (q) 'Personal locator beacon (PLB)' is an emergency beacon other than an ELT that broadcasts distinctive signals on designated frequencies, is standalone, portable and is manually activated by the survivors.
- (r) 'Rotation point (RP)' means the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognised, a forced landing on the aerodrome can be achieved.
- (s) 'Touch down and lift-off area (TLOF)' means a load-bearing area on which a helicopter may touch down or lift off.

GM2 Annex I Definitions

ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms are used in the Annexes to this Regulation:

А	aeroplane
a/c	aircraft
AAC	aeronautical administrative communications
AAL	above aerodrome level
AC	advisory circular
AC	alternating current
ACAS	airborne collision avoidance system
ADF	automatic direction finder
ADG	air driven generator
ADS	automatic dependent surveillance
ADS-B	automatic dependent surveillance - broadcast
ADS-C	automatic dependent surveillance - contract
AEA	Association of European Airlines
AEO	all-engines-operative
AFFF	aqueous film forming foams
AFM	aircraft flight manual

AFN	aircraft flight notification
AFN	ATS facilities notification
AGL	above ground level
AHRS	attitude heading reference system
AIS	aeronautical information service
ALARP	as low as reasonably practicable
ALSF	approach lighting system with sequenced flashing lights
AMC	Acceptable Means of Compliance
AML	aircraft maintenance licence
AMSL	above mean sea level
ANP	actual navigation performance
AOC	aeronautical operational control
AOC	air operator certificate
APU	auxiliary power unit
APV	approach procedure with vertical guidance
ARA	airborne radar approach
ARA	Authority Requirements for Aircrew
ARO	Authority Requirements for Air Operations
ARP	Aerospace Recommended Practices
ASC	Air Safety Committee
ASDA	accelerate-stop distance available
ASE	altimeter system error
ATA	Air Transport Association
ATC	air traffic control
ATIS	automatic terminal information service
ATN	air traffic navigation
ATPL	airline transport pilot licence
ATQP	alternative training and qualification programme
ATS	air traffic services
ATSC	air traffic service communication
AVGAS	aviation gasoline
AVTAG	aviation turbine gasoline (wide-cut fuel)
AWO	all weather operations
BALS	basic approach lighting system
BCAR	British civil airworthiness requirements

BITD	basic instrument training device
САР	controller access parameters
CAT	commercial air transport
CAT / /	category I / II / III
СВТ	computer-based training
СС	cabin crew
CDFA	continuous descent final approach
CDL	configuration deviation list
CFIT	controlled flight into terrain
CG	centre of gravity
СМ	context management
CMV	converted meteorological visibility
CofA	certificate of airworthiness
СОР	code of practice
CoR	certificate of registration
COSPAS-SARSAT	cosmicheskaya sistyema poiska avariynich sudov - search and rescue satellite-aided tracking
СР	committal point
СРА	closest point of approach
CPDLC	controller pilot data link communication
CPL	commercial pilot licence
C-PED	controlled portable electronic device
CRE	class rating examiner
CRI	class rating instructor
CRM	crew resource management
CS	Certification Specifications
CVR	cockpit voice recorder
DA	decision altitude
DA/H	decision altitude/height
DAP	downlinked aircraft parameters
D-ATIS	digital automatic terminal information service
DC	direct current
DCL	departure clearance
D-FIS	data link flight information service
DG	dangerous goods
DH	decision height

DI	daily inspection
DIFF	deck integrated fire fighting system
DLR	data link recorder
DME	distance measuring equipment
D-METAR	data link - meteorological aerodrome report
D-OTIS	data link - operational terminal information service
DPATO	defined point after take-off
DPBL	defined point before landing
DR	decision range
DSTRK	desired track
EC	European Community
ECAC	European Civil Aviation Conference
EFB	electronic flight bag
EFIS	electronic flight instrument system
EGNOS	European geostationary navigation overlay service
EGT	exhaust gas temperature
ELT	emergency locator transmitter
ELT(AD)	emergency locator transmitter (automatically deployable)
ELT(AF)	emergency locator transmitter (automatic fixed)
ELT(AP)	emergency locator transmitter (automatic portable)
ELT(S)	survival emergency locator transmitter
EPE	estimated position of error
EPR	engine pressure ratio
EPU	estimated position of uncertainty
ERA	en-route alternate (aerodrome)
ERP	emergency response plan
ETOPS	extended range operations with two-engined aeroplanes
EU	European Union
EUROCAE	European Organisation for Civil Aviation Equipment
EVS	enhanced vision system
FAA	Federal Aviation Administration
FAF	final approach fix
FALS	full approach lighting system
FANS	future air navigation systems
FAP	final approach point

FAR	Federal Aviation Regulation
FATO	final approach and take-off
FC	flight crew
FCL	flight crew licensing
FCOM	flight crew operating manual
FDM	flight data monitoring
FDO	flying display operation
FDR	flight data recorder
FFS	full flight simulator
FGS	flight control/guidance system
FI	flight instructor
FLIPCY	flight plan consistency
FLTA	forward-looking terrain avoidance
FMECA	failure mode, effects and criticality analysis
FMS	flight management system
FNPT	flight and navigation procedures trainer
FOD	foreign object damage
fpm	feet per minute
FSTD	flight simulation training device
ft	feet
FTD	flight training device
FTE	full time equivalent
FTL	flight and duty time limitations
g	gram
GAGAN	GPS aided geo augmented navigation
GBAS	ground-based augmentation system
GCAS	ground collision avoidance system
GEN	general
GIDS	ground ice detection system
GLS	GBAS landing system
GM	Guidance Material
GMP	general medical practitioner
GNSS	global navigation satellite system
GPS	global positioning system
GPWS	ground proximity warning system

н	helicopter
HEMS	helicopter emergency medical service
HF	high frequency
Hg	mercury
ННО	helicopter hoist operation
HIALS	high intensity approach lighting system
HIGE	hover in ground effect
HLL	helideck limitations list
HOGE	hover out of ground effect
НоТ	hold-over time
hPa	hectopascals
HPL	human performance and limitations
HUD	head-up display
HUDLS	head-up guidance landing system
HUMS	health usage monitor system
IAF	initial approach fix
IALS	intermediate approach lighting system
ICAO	International Civil Aviation Organization
IDE	instruments, data and equipment
IF	intermediate fix
IFR	instrument flight rules
IFSD	in-flight shutdown
IGE	in ground effect
ILS	instrument landing system
IMC	instrument meteorological conditions
in	inches
INS	inertial navigation system
IP	intermediate point
IR	Implementing Rule
IR	instrument rating
IRS	inertial reference system
ISA	international standard atmosphere
ISO	International Organization for Standardization
IV	intravenous
JAA	Joint Aviation Authorities

JAR	Joint Aviation Requirements
kg	kilograms
km	kilometres
kt	knots
LDA	landing distance available
LDP	landing decision point
LED	light-emitting diode
LHS	left hand seat
LIFUS	line flying under supervision
LNAV	lateral navigation
LoA	letter of acceptance
LOC	localiser
LOE	line-oriented evaluation
LOFT	line-oriented flight training
LOQE	line-oriented quality evaluation
LOS	limited obstacle surface
LPV	localiser performance with vertical guidance
LRCS	long range communication system
LRNS	long range navigation system
LVO	low visibility operation
LVP	low visibility procedures
LVTO	low visibility take-off
m	metres
MALS	medium intensity approach lighting system
MALSF	medium intensity approach lighting system with sequenced flashing lights
MALSR	medium intensity approach lighting system with runway alignment indicator lights
MAPt	missed approach point
МСТОМ	maximum certified take-off mass
MDA	minimum descent altitude
MDH	minimum descent height
MEA	minimum en-route altitude
MED	medical
MEL	minimum equipment list
METAR	meteorological aerodrome report
MGA	minimum grid altitude

MHA	minimum holding altitude
MHz	megahertz
MID	midpoint
MLR	manuals, logs and records
MLS	microwave landing system
MLX	millilux
mm	millimetres
MM	multi-mode
MMEL	master minimum equipment list
MNPS	minimum navigation performance specifications
MOC	minimum obstacle clearance
MOCA	minimum obstacle clearance altitude
MOPSC	maximum operational passenger seating configuration
MORA	minimum off-route altitude
MPSC	maximum passenger seating capacity
MSA	minimum sector altitude
MSAS	multi-functional satellite augmentation system
MTCA	minimum terrain clearance altitude
Ν	North
NADP	noise abatement departure procedure
NALS	no approach lighting system
NCC	non-commercial operations with complex motor-powered aircraft
NCO	non-commercial operations with other-than-complex motor-powered aircraft
N _F	free power turbine speed
N _G	engine gas generator speed
NM	nautical miles
NOTAM	notice to airmen
NOTECHS	non-technical skills evaluation
NOTOC	notification to captain
NPA	non-precision approach
NPA	Notice of Proposed Amendment
NVD	night vision device
NVG	night vision goggles
NVIS	night vision imaging system
OAT	outside air temperature

ОСН	obstacle clearance height
OCL	oceanic clearance
ODALS	omnidirectional approach lighting system
OEI	one-engine-inoperative
OFS	obstacle-free surface
OGE	out of ground effect
OIP	offset initiation point
ОМ	operations manual
OML	operational multi-pilot limitation
ONC	operational navigation chart
OPS	operations
ORO	Organisation Requirements for Air Operations
OTS CAT II	other than standard category II
ΡΑΡΙ	precision approach path indicator
PAR	precision approach radar
PBE	protective breathing equipment
PBN	performance-based navigation
PCDS	personnel carrying device system
PDA	premature descent alert
PDP	predetermined point
PED	portable electronic device
PIC	pilot-in-command
PIN	personal identification number
PIS	public interest site
PLB	personal locator beacon
PNR	point of no return
РОН	pilot's operating handbook
PRM	person with reduced mobility
QAR	quick access recorder
QFE	atmospheric pressure at aerodrome elevation / runway threshold
QNH	atmospheric pressure at nautical height
RA	resolution advisory
RAT	ram air turbine
RCC	rescue coordination centre
RCF	reduced contingency fuel

RCLL	runway centre line lights
RF	fixed radius
RF	radio frequency
RFC	route facility chart
RI	ramp inspection
RI	rectification interval
RIE	rectification interval extension
RMA	regional monitoring agency
RNAV	area navigation
RNP	required navigation performance
ROD	rate of descent
RP	rotation point
RTCA	Radio Technical Commission for Aeronautics
RTODAH	rejected take-off distance available (helicopters)
RTODRH	rejected take-off distance required (helicopters)
RTOM	reduced take-off mass
RTZL	runway touchdown zone lights
RVR	runway visual range
RVSM	reduced vertical separation minima
S	South
SAFA	safety assessment of foreign aircraft
SALS	simple approach lighting system
SALSF	simple approach lighting system with sequenced flashing lights
SAp	stabilised approach
SAP	system access parameters
SAR	search and rescue
SAS	stability augmentation system
SBAS	satellite-based augmentation system
SCC	senior cabin crew
SCP	special category of passenger
SDCM	system of differential correction and monitoring
SFE	synthetic flight examiner
SFI	synthetic flight instructor
SID	standard instrument departure
SMM	safety management manual

SMS	safety management system
SNAS	satellite navigation augmentation system
SOP	standard operating procedure
SPA	operations requiring specific approvals
SPECI	aviation selected special weather report
SPO	specialised operations
SRA	surveillance radar approach
SSALF	simplified short approach lighting system with sequenced flashing lights
SSALR	simplified short approach lighting system with runway alignment indicator lights
SSALS	simplified short approach lighting system
SSEC	static source error correction
SSR	secondary surveillance radar
STAR	standard terminal arrival route
STC	supplemental type certificate
ТА	traffic advisory
ТАС	terminal approach chart
TAS	true airspeed
TAWS	terrain awareness warning system
тс	technical crew
тс	type certificate
TCAS	traffic collision avoidance system
TCCA	Transport Canada Civil Aviation
ТСН	type certificate holder
TDP	take-off decision point
TDZ	touchdown zone
THR	threshold
ті	Technical Instructions
ТІТ	turbine inlet temperature
TMG	touring motor glider
TODA	take-off distance available (aeroplanes)
TODAH	take-off distance available (helicopters)
TODRH	take-off distance required (helicopters)
TORA	take-off run available
T-PED	transmitting portable electronic device
TRE	type rating examiner

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

TRI	type rating instructor
TSE	total system error
TVE	total vertical error
TWIP	terminal weather information for pilots
UMS	usage monitoring system
UTC	coordinated universal time
V ₂	take-off safety speed
V ₅₀	stalling speed
V _{AT}	indicated airspeed at threshold
VDF	VHF direction finder
VFR	visual flight rules
VHF	very high frequency
VIS	visibility
VMC	visual meteorological conditions
V _{MO}	maximum operating speed
VNAV	vertical navigation
VOR	VHF omnidirectional radio range
V _T	threshold speed
VTOL	vertical take-off and landing
V _{TOSS}	take-off safety speed
WAAS	wide area augmentation system
WAC	world aeronautical chart
WIFI	wireless fidelity
ZFTT	zero flight-time training

GM3 Annex I Definitions

HELICOPTER EMERGENCY MEDICAL SERVICES (HEMS) FLIGHT

- (a) A HEMS flight (or more commonly referred to as HEMS mission) normally starts and ends at the HEMS operating base following tasking by the 'HEMS dispatch centre'. Tasking can also occur when airborne, or on the ground at locations other than the HEMS operating base.
- (b) The following elements should be regarded as integral parts of the HEMS mission:
 - (1) flights to and from the HEMS operating site when initiated by the HEMS dispatch centre;
 - (2) flights to and from an aerodrome/operating site for the delivery or pick-up of medical supplies and/or persons required for completion of the HEMS mission; and
 - (3) flights to and from an aerodrome/operating site for refuelling required for completion of the HEMS mission.

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

GM4 Annex I Definitions

HEAD-UP GUIDANCE LANDING SYSTEM (HUDLS)

A HUDLS is typically used for primary approach guidance to decision heights of 50 ft.

GM5 Annex I Definitions

HOSTILE ENVIRONMENT

The open sea areas considered to constitute a hostile environment should be designated by the appropriate authority in the appropriate Aeronautical Information Publication or other suitable documentation.

GM6 Annex I Definitions

NIGHT VISION IMAGING SYSTEM (NVIS)

Helicopter components of the NVIS include the radio altimeter, visual warning system and audio warning system.

GM7 Annex I Definitions

OFFSHORE OPERATIONS

Offshore operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer.

GM8 Annex I Definitions

PUBLIC INTEREST SITE

An example of a public interest sites is a landing site based at a hospital located in a hostile environment in a congested area, which due to its size or obstacle environment does not allow the application of performance class 1 requirements that would otherwise be required for operations in a congested hostile environment.

GM9 Annex I Definitions

TECHNICAL INSTRUCTIONS

The ICAO document number for the Technical Instructions is Doc 9284-AN/905.

GM10 Annex I Definitions

 V_1

The first action includes for example: apply brakes, reduce thrust, deploy speed brakes.

GM11 Annex I Definitions

TASK SPECIALISTS

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

For the purpose of this Regulation, persons that are carried in a specialised operation, e.g. on a parachute flight, sensational flight or scientific research flight, are considered to be task specialists.

GM12 Annex I Definitions

UPSET PREVENTION AND RECOVERY TRAINING (UPRT) DEFINITIONS

'Aeroplane upset prevention and recovery training' means a combination of theoretical knowledge and flying training with the aim of providing flight crew with the required competencies to prevent or recover from developing or developed aeroplane upsets.

'Aeroplane upset' means an aeroplane in flight unintentionally exceeding the parameters normally experienced in line operations or training, normally defined by the existence of at least one of the following parameters:

- a) pitch attitude greater than 25 degrees nose up;
- b) pitch attitude greater than 10 degrees nose down;
- c) bank angle greater than 45 degrees; or
- d) within the above parameters, but flying at airspeeds inappropriate for the conditions.

'Angle of attack (AOA)' means the angle between the oncoming air, or relative wind, and a defined reference line on the aeroplane or wing.

'Approach-to-stall' means flight conditions bordered by the stall warning and stall.

'Competency' means a combination of skills, knowledge, and attitudes required to perform a task to the prescribed standard.

'Developed upset' means a condition meeting the definition of an aeroplane upset.

'Developing upset' means any time the aeroplane begins to unintentionally diverge from the intended flight path or airspeed.

'Energy state' means how much of each kind of energy (kinetic, potential or chemical) the aeroplane has available at any given time.

'Error' means an action or inaction by the flight crew that leads to deviations from organisational or flight crew intentions or expectations.

'Error management' means the process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of further errors or undesired aircraft states.

'First indication of a stall' means the initial aural, tactile or visual sign of an impending stall, which can be either naturally or synthetically induced.

'Flight crew resilience' means the ability of a flight crew member to recognise, absorb and adapt to disruptions.

'Fidelity level' means the level of realism assigned to each of the defined FSTD features.

'Flight path' means the trajectory or path of the aeroplane travelling through the air over a given space of time.

'Flight path management' means active manipulation, using either the aeroplanes automation or manual handling, to command the aeroplane flight controls to direct the aeroplane along a desired trajectory.

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

'Load factor' factor means the ratio of a specified load to the weight of the aeroplane, the former being expressed in terms of aerodynamic forces, propulsive forces, or ground reactions.

'Loss of control in flight (LOCI)' means a categorisation of an accident or incident resulting from a deviation from the intended flight path.

'Manoeuvre-based training' means training that focuses on a single event or manoeuvre in isolation.

'Negative training' means training which unintentionally introduces incorrect information or invalid concepts, which could actually decrease rather than increase safety.

'Negative transfer of training' means the application (and 'transfer') of what was learned in a training environment (i.e., a classroom, an FSTD) to normal practice, i.e. it describes the degree to which what was learned in training is applied to actual normal practices. In this context, negative transfer of training refers to the inappropriate generalisation of knowledge and skill to a situation or setting in normal practice that does not equal the training situation or setting.

'Post-stall regime' means flight conditions at an angle of attack greater than the critical angle of attack.

'Scenario-based training' means training that incorporates manoeuvres into real-world experiences to cultivate practical flying skills in an operational environment.

'Stall' means a loss of lift caused by exceeding the aeroplane's critical angle of attack.

Note: A stalled condition can exist at any attitude and airspeed, and may be recognised by continuous stall warning activation accompanied by at least one of the following:

- a) buffeting, which could be heavy at times;
- b) lack of pitch authority and/or roll control; and
- c) inability to arrest the descent rate.

'Stall Event' means an occurrence whereby the aeroplane experiences conditions associated with an approach-to-stall or a stall.

'Stall (event) recovery procedure' means the manufacturer-approved aeroplane-specific stall recovery procedure. If an OEM-approved recovery procedure does not exist, the aeroplane-specific stall recovery procedure developed by the operator, based on the stall recovery template contained in GM5 ORO.FC.220&230, may be used.

'Stall warning' means a natural or synthetic indication provided when approaching a stall that may include one or more of the following indications:

- a) aerodynamic buffeting (some aeroplanes will buffet more than others);
- b) reduced roll stability and aileron effectiveness;
- c) visual or aural cues and warnings;
- d) reduced elevator (pitch) authority;
- e) inability to maintain altitude or arrest rate of descent; and
- f) stick shaker activation (if installed).

Note: A stall warning indicates an immediate need to reduce the angle of attack.

'Startle' means the initial short-term, involuntary physiological and cognitive reactions to an unexpected event that commence the normal human stress response.

'Stick pusher' means a device that, automatically applies a nose down movement and pitch force to an aeroplane's control columns, to attempt to decrease the aeroplane's angle of attack. Device activation may occur before or after aerodynamic stall, depending on the aeroplane type.

DEFINITIONS FOR TERMS USED IN ANNEXES II-VIII

Note: A stick pusher is not installed on all aeroplane types.

'Stick shaker' means a device that automatically vibrates the control column to warn the pilot of an approaching stall.

Note: A stick shaker is not installed on all aeroplane types.

'Stress (response)' means the response to a threatening event that includes physiological, psychological and cognitive effects. These effects may range from positive to negative and can either enhance or degrade performance.

'Surprise' means the emotionally-based recognition of a difference in what was expected and what is actual.

'Threat' means events or errors that occur beyond the influence of the flight crew, increase operational complexity and must be managed to maintain the margin of safety.

'Threat management' means the process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired aircraft states.

'Train-to-proficiency' means approved training designed to achieve end-state performance objectives, providing sufficient assurances that the trained individual is capable to consistently carry out specific tasks safely and effectively.

Note: In the context of this definition, 'train-to-proficiency' can be replaced by 'training-to-proficiency'.

'Undesired aircraft state' means flight crew-induced aircraft position or speed deviation, misapplication of controls, or incorrect systems configuration, associated with a reduction in margins of safety.

Note: Undesired states can be managed effectively, restoring margins of safety, or flight crew response(s) can induce an additional error, incident, or accident.

Note: All countermeasures are necessary flight crew actions. However, some countermeasures to threats, errors and undesired aircraft states that flight crew employ, build upon 'hard'/systemic-based resources provided by the aviation system.

'Unsafe situation' means a situation, which has led to an unacceptable reduction in safety margin.