



AIR FORCE SAFETY CENTER

DoD HUMAN FACTORS ANALYSIS AND CLASSIFICATION SYSTEM (HFACS) Version 7.0



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**DEPARTMENT OF DEFENSE
HUMAN FACTORS ANALYSIS AND CLASSIFICATION SYSTEM (DOD HFACS) VERSION 7.0**

Introduction. Human factors describe how our interaction with tools, tasks, working environments, and other people influence human performance. Human factors are the leading cause of DoD mishaps. The DoD HFACS model presents a systematic, multidimensional approach to error analysis and mishap prevention. Mishap investigators will use DoD HFACS including the applicable HFACS codes in the mishap analysis. Codes pertaining to Non-Factors Worthy of Discussion (NFWOD) and Other Findings of Significance (OFS) will also be included in the mishap analysis but will not be entered into AFSAS.

Purpose. This guide provides a template that organizes the human factors identified in the investigation. It is designed for use by all members of an investigation board in order to accurately record all aspects of human performance associated with the individual and the mishap or event. DoD HFACS helps investigators to:

- Perform a more complete investigation
- Classify particular actions (or inactions) that sustained the mishap sequence
- Contribute to the AFSAS database as a repository for detecting mishap trends and preventing future mishaps

Description. As described by James Reason (1990), *active failures* are the actions or inactions of individuals that are believed to cause or contribute to the mishap. Traditionally referred to as “error,” they are the last “acts” committed by individuals, often with immediate consequences. In contrast, *latent failures* are pre-existing conditions within an organization which indirectly affect the sequence of mishap events. These latent failures may lie undetected for some period of time prior to their manifestation as an influence on an individual’s actions during a mishap.

Reason’s “Swiss Cheese” model describes the four levels within which active failures and latent failures may occur during complex operations (see figure 1). The holes in the layers represent failed or absent hazard mitigation controls which may contribute to the overall mishap circumstances. Working backward from the mishap, the first level of Reason’s model depicts those *Acts* that most immediately lead to a mishap. Most causal factors are uncovered at this level, however, Reason’s model forces investigators to address the latent failures, or “holes”, within the causal sequence of events which may be overlooked if the focus is limited to individual actions only. Latent failures and conditions are described within the context of Reason’s model as *Preconditions, Supervision, and Organizational Influences*.

Application. Mishaps are the result of individual and organizational factors that are further categorized as causal and/or contributory. Individuals whose actions impacted the outcome of the mishap should be identified as “mishap persons” and investigated. Their acts and preconditions will be identified at the Person Level within AFSAS. The context in which these acts and preconditions occurred will be captured as supervisory and organizational factors and will be identified at the Mishap Level. These factors are attributed to the mishap itself and not to a specific person.

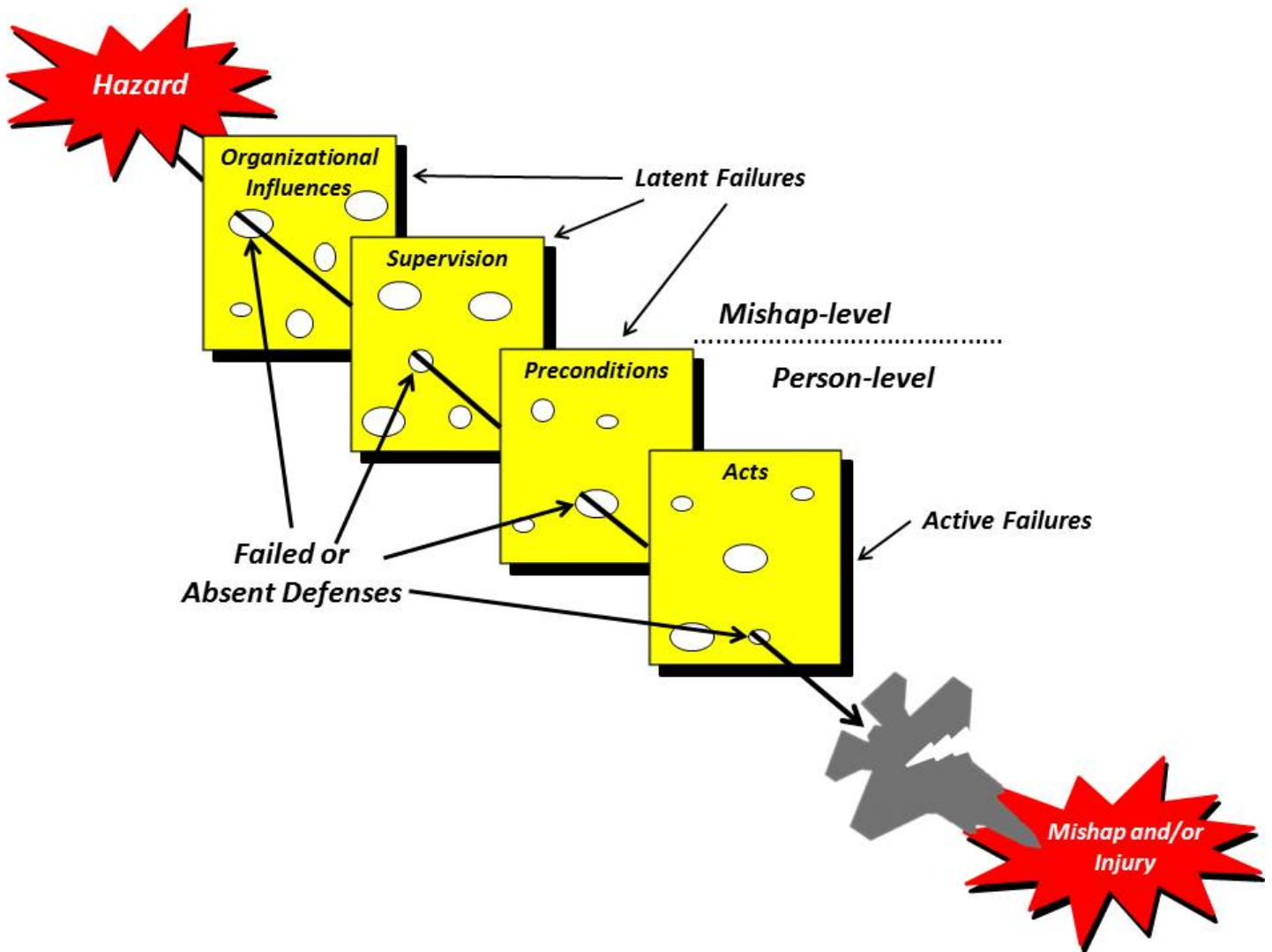
Investigators will be guided on the utilization of HFACS v7.0 through a series of questions within AFSAS. For Class A, Class B, and Class E Physiological mishaps, investigators will be required to answer all questions and provide input at the nanocode level. For Class C and D mishaps and Dull Sword Events, investigators will be permitted to use nanocodes but they will not be required; they will answer the questions only. These new coding rules have been embedded in AFSAS to guide the investigator. Each human factor code that the investigator identifies must be rated as causal or contributory for its influence on the mishap.

- Causal factors are deficiencies which, if corrected, would likely have prevented or mitigated damage and/or injury. Cause does not imply blame. Events/conditions that are highly probable results of other events/conditions are not causal and should be rated as contributory.
- Contributory factors are independent events/conditions that do not directly result in damage and/or injury, but are integral to the progression of the mishap sequence. Contributory factors allow progression of other events/conditions. If an event/condition is considered to be both contributory and causal, rate it only as causal.

Benefits of DoD HFACS Version 7.0.

1. Structured analysis of human error patterns
 - Detailed, complete and operationally focused
2. Gets to the “Why”, not just the “What”
 - More accurate root cause determination
 - Permits more effective risk management
3. Data-driven approach
 - Supports research across the DoD
 - Easily applied to both new mishaps and previous reports
4. Can be used for more than just operational situations
 - As a brainstorming tool for risk management
 - In developing interview questions
 - Applies to both on- and off-duty mishaps

Swiss Cheese Model (figure 1)



ACTS

Q1.

Did the mishap person make a performance-based error?

- Yes, see Acts AE100, and go to Q2
- No, go to Q2

Q2.

Was the mishap person's action a result of poor judgment and/or decision-making?

- Yes, see Acts AE200, and go to Q3
- No, go to Q3

Q3.

Did the mishap person violate a commonly known law or regulation?

- Yes, see Acts AV000, and go to Q4
- No, go to Q4

PRECONDITIONS

Q4.

Was the environment a factor in the mishap?

- Yes, go to Q4a
- No, go to Q5

Q4a.

Did the physical environment affect the mishap person?

- Yes, see Preconditions PE100, and go to Q4b
- No, go to Q4b

Q4b.

Did the technological environment affect the mishap person?

- Yes, see Preconditions PE200, and go to Q5
- No, go to Q5

Q5.

Did the mishap person's mental, sensory, or physical state contribute to the mishap?

- Yes, go to Q5a
- No, go to Q6

Q5a.

Did the mishap person have a medical or physical condition?

- Yes, see Preconditions PC300, and go to Q5b
- No, go to Q5b

Q5b.

Did the mishap person's state of mind create an unsafe situation?

- Yes, see Preconditions PC200, and go to Q5c
- No, go to Q5c

Q5c.

Was sensory information misperceived or misunderstood?

- Yes, see Preconditions PC500, and go to Q5d
- No, go to Q5d

Q5d.

Did the mishap person's mental awareness create an unsafe situation?

- Yes, see Preconditions PC100, and go to Q6
- No, go to Q6

Q6.

Did challenges with teamwork contribute to the mishap?

- Yes, see Preconditions PP100, and go to Q7
- No, go to Q7

SUPERVISION

Q7.

Did supervision or supervisory policies contribute to the mishap?

- Yes, go to Q7a
- No, go to Q8

Q7a.

Did a supervisor violate a commonly known law or regulation?

- Yes, see Supervision SV000, and go to Q7b
- No, go to Q7b

Q7b.

Did supervision fail to plan or assess known hazards?

- Yes, see Supervision SP000, and go to Q7c
- No, go to Q7c

Q7c.

Did a supervisor or supervision prove inadequate?

- Yes, see Supervision SI000, and go to Q8
- No, go to Q8

ORGANIZATIONAL INFLUENCES

Q8.

Did the organization or organizational policies contribute to the mishap?

- Yes, go to Q8a
- No, Finished!

Q8a.

Did a problem with resources create an unsafe situation?

- Yes, See Organizational Influences OR000, and go to Q8b
- No, go to Q8b

Q8b.

Was selection or staffing of personnel a factor?

- Yes, See Organizational Influences OS000, and go to Q8c
- No, go to Q8c

Q8c.

Did an organizational instruction or policy create an unsafe situation?

- Yes, See Organizational Influences OP000, and go to Q8d
- No, go to Q8d

Q8d.

Did the safety climate/culture contribute to an unsafe situation?

- Yes, See Organizational Influences OC000
- No, Finished!

ACTS
“Active Failures or Actions”

PERFORMANCE-BASED ERRORS (AE100): are factors that occur when a specific action is performed in a manner that leads to a mishap.

Unintended Operation of Equipment	AE101
Checklist Not Followed Correctly	AE102
Procedure Not Followed Correctly	AE103
Over-Controlled/Under-Controlled Aircraft/Vehicle	AE104
Breakdown in Visual Scan	AE105
Rushed or Delayed a Necessary Action	AE107

AE101 Unintended Operation of Equipment: is a factor when an individual’s movements inadvertently activate or deactivate equipment, controls or switches when there is no intent to operate the control or device. This action may be noticed or unnoticed by the individual.

AE102 Checklist Not Followed Correctly: is a factor when the individual, either through an act of commission or omission, makes a checklist error or fails to run an appropriate checklist.

AE103 Procedure Not Followed Correctly: is a factor when a procedure is performed incorrectly or accomplished in the wrong sequence.

AE104 Overcontrolled/Undercontrolled Aircraft/Vehicle/System: is a factor when an individual responds inappropriately to conditions by either over- or undercontrolling the aircraft/vehicle/system. The error may be a result of preconditions or a temporary failure of coordination.

AE105 Breakdown in Visual Scan: is a factor when the individual fails to effectively execute visual scan patterns.

AE107 Rushed or Delayed a Necessary Action: is a factor when an individual takes the necessary action as dictated by the situation but performs these actions too quickly or too slowly.

JUDGMENT & DECISION-MAKING ERRORS (AE200): are factors that occur when an individual proceeds as intended, yet the plan proves inadequate or inappropriate for the situation, e.g. “An honest mistake.”

Inadequate Real-Time Risk Assessment	AE201
Failure to Prioritize Tasks Adequately	AE202
Ignored a Caution/Warning	AE205
Wrong Choice of Action During an Operation	AE206

AE201 Inadequate Real-Time Risk Assessment: is a factor when an individual fails to adequately evaluate the risks associated with a particular course of action and this faulty evaluation leads to inappropriate decision-making and subsequent unsafe situations.

AE202 Failure to Prioritize Tasks Adequately: is a factor when the individual does not organize, based on accepted prioritization techniques, the tasks needed to manage the immediate situation.

AE205 Ignored a Caution/Warning: is a factor when a caution or warning is perceived and understood by the individual but is ignored by the individual.

AE206 Wrong Choice of Action During an Operation: is a factor when the individual, through faulty logic or erroneous expectations, selects the wrong course of action.

VIOLATIONS (AV000): are factors when the individual *intentionally* breaks the rules and instructions. “*Violations are deliberate.*”

Performs Work-Around Violation	AV001
Commits Widespread/Routine Violation	AV002
Extreme Violation - Lack of Discipline	AV003

AV001 Performs Work-Around Violation: is a factor when the consequences/risk of violating published procedures was recognized, consciously assessed and honestly determined by the individual, crew or team to be the best course of action. Routine “work-arounds” and unofficial procedures that are accepted by the community as necessary for operations are also captured under this code.

AV002 Commits Widespread/Routine Violation: is a factor when a procedure or policy violation is systemic in a unit/setting and not based on a risk assessment for a specific situation. It needlessly commits the individual, team, or crew to an unsafe course-of-action. These violations may have leadership sanction and may not routinely result in disciplinary/administrative action. Habitual violations of a single individual or small group of individuals within a unit can constitute a routine/widespread violation if the violation was not routinely disciplined or was condoned by supervisors.

AV003 Extreme Violation – Lack of Discipline: is a factor when an individual, crew or team intentionally violates procedures or policies without cause or need. These violations are unusual or isolated to specific individuals rather than larger groups. There is no evidence of these violations being condoned by leadership. These violations may also be referred to as “exceptional violations.”

PRECONDITIONS
“Latent Failures or Conditions”

ENVIRONMENT: *The environment surrounding a mishap is the physical or technological factors that affect practices, conditions, and actions of individual(s).*

PHYSICAL ENVIRONMENT (PE100): are factors such as weather, climate, fog, brownout (dust or sand storm) or whiteout (snow storm) that affect the actions of individual.

Environmental Conditions Affecting Vision	PE101
Vibration Affects Vision or Balance	PE103
Heat/Cold Stress Impairs Performance	PE106
External Force or Object Impeded an Individual’s Movement	PE108
Lights of Other Vehicle/Vessel/Aircraft Affected Vision	PE109
Noise Interference	PE110

PE101 Environmental Conditions Affecting Vision: is a factor that includes obscured windows; weather, fog, haze, darkness; smoke, etc.; brownout/whiteout (dust, snow, water, ash or other particulates); or when exposure to windblast affects the individual’s ability to perform required duties.

PE103 Vibration Affects Vision or Balance: is a factor when the intensity or duration of the vibration is sufficient to cause impairment of vision or adversely affect balance.

PE106 Heat/Cold Stress Impairs Performance: is a factor when the individual is exposed to conditions resulting in compromised performance.

PE108 External Force or Object Impeded an Individual’s Movement: is a factor when acceleration forces greater than one second cause injury or prevent/interfere with the performance of normal duties. Do not use this code to capture G-induced loss of consciousness.

PE109 Lights of Other Vehicle/Vessel/Aircraft Affected Vision: is a factor when the absence, pattern, intensity or location of the lighting of other vehicle/vessel/aircraft prevents or interferes with safe task accomplishment.

PE110 Noise Interference: is a factor when any sound not directly related to information needed for task accomplishment interferes with the individual’s ability to perform that task.

TECHNOLOGICAL ENVIRONMENT (PE200): are factors when automation or the design of the workspace affects the actions of an individual.

Seat and Restraint System Problems	PE201
Instrumentation and Warning System Issues	PE202
Visibility Restrictions (not weather related)	PE203
Controls and Switches are Inadequate	PE204
Automated System Creates an Unsafe Situation	PE205
Workspace Incompatible with Operation	PE206
Personal Equipment Interference	PE207
Communication Equipment Inadequate	PE208

PE201 Seat and Restraint System Problems: is a factor when the design of the seat or restraint system, the ejection system or seat comfort has poor impact-protection qualities.

PE202 Instrumentation and Warning System Issues: is a factor when instrument factors such as design, reliability, lighting, location, symbology, size, display systems, auditory or tactile situational awareness or warning systems create an unsafe situation.

PE203 Visibility Restrictions (not weather related): is a factor when the lighting system, windshield/windscreen/canopy design, or other obstructions prevent necessary visibility. This includes glare or reflections on the windshield/windscreen/canopy. Visibility restrictions due to weather or environmental conditions are captured under PE101.

PE204 Controls and Switches are Inadequate: is a factor when the location, shape, size, design, reliability, lighting or other aspect of a control or switch are inadequate.

PE205 Automated System Creates an Unsafe Situation: is a factor when the design, function, reliability, symbology, logic or other aspect of automated systems creates an unsafe situation.

PE206 Workspace Incompatible with Operation: is a factor when the workspace is incompatible with the task requirements and safety for an individual.

PE207 Personal Equipment Interference: is a factor when the individual's personal equipment interferes with normal duties or safety.

PE208 Communication Equipment Inadequate: is a factor when communication equipment is inadequate or unavailable to support task demands. This includes electronically or physically blocked transmissions. Communications can be voice, data or multi-sensory.

PHYSICAL AND MENTAL STATE: The mental and physical states of individuals are how people know, think, learn, understand, perceive, feel, hurt, guess, recognize, notice, want, wish, hope, decide, expect, remember, forget, imagine, and believe.

PHYSICAL PROBLEM (PC300): are medical or physiological conditions that can result in unsafe situations.

Substance Effects (alcohol, supplements, medications, drugs)	PC302
Loss of Consciousness (sudden or prolonged onset)	PC304
Physical Illness/Injury	PC305
Fatigue	PC307
Trapped Gas Disorders	PC310
Evolved Gas Disorders	PC311
Hypoxia/Hyperventilation	PC312
Inadequate Adaptation to Darkness	PC314
Dehydration	PC315
Body Size/Movement Limitations	PC317
Physical Strength & Coordination (inappropriate for task demands)	PC318
Nutrition/Diet	PC319

PC302 Substance Effects (alcohol, supplements, medications, drugs): is a factor when the individual uses legal or illegal drugs, supplements, energy drinks or any other substance with measurable effect that interferes with performance.

PC304 Loss of Consciousness (sudden or prolonged onset): is a factor when the individual has a loss of functional capacity/consciousness due to G-LOC, seizure, trauma or any other cause.

PC305 Physical Illness/Injury: is a factor when a physical illness, injury, deficit or diminished physical capability causes an unsafe situation. This includes pre-existing and operationally-related medical conditions, over-exertion, motion sickness, etc.

PC307 Fatigue: is a factor causing diminished physical/mental capability resulting from chronic or acute periods of prolonged wakefulness, sleep deprivation, jet lag, shift work or poor sleep habits.

PC310 Trapped Gas Disorders: is a factor when gasses in the middle ear, sinuses, teeth or intestinal tract expand or contracts.

PC311 Evolved Gas Disorders: is a factor when inert-gas evolves in the blood causing an unsafe situation. This includes chokes, CNS, bends, paresthesias or other conditions caused by inert-gas evolution.

PC312 Hypoxia/Hyperventilation: is a factor when the individual has insufficient oxygen supply to the body and/or breathing above physiological demands causes impaired function.

PC314 Inadequate Adaptation to Darkness: is a factor when the normal human limitation of dark-adaptation rate affects safety, for example, when transitioning between aided and unaided night vision.

PC315 Dehydration: is a factor when the performance of the individual is degraded due to dehydration as a result of excessive fluid losses due to heat stress or due to insufficient fluid intake.

PC317 Body Size/Movement Limitations: is a factor when the size, strength, dexterity, mobility or other biomechanical limitations of an individual creates an unsafe situation. It must be expected that the average individual qualified for that duty position could accomplish the task in question.

PC318 Physical Strength & Coordination (inappropriate for task demands): is a factor when the relative physical strength and/or coordination of the individual is not adequate to support task demands.

PC319 Nutrition/Diet: is a factor when the individual's nutritional state or poor dietary practices are inadequate to fuel the brain and body functions resulting in degraded performance.

STATE OF MIND (PC200): are factors when an individual's personality traits, psychosocial problems, psychological disorders or inappropriate motivation creates an unsafe situation.

Psychological Problem	PC202
Life Stressors	PC203
Emotional State	PC204
Personality Style	PC205
Overconfidence	PC206
Pressing	PC207
Complacency	PC208
Motivation	PC209
Mentally Exhausted (Burnout)	PC215

PC202 Psychological Problem: is a factor when the individual met medical criteria for a psychiatric disorder.

PC203 Life Stressors: is a factor when the individual's performance is affected by life circumstance problems (includes relationship issues, financial stressors, recent move, etc.).

PC204 Emotional State: is a factor when the individual is under the influence of a strong positive or negative emotion and that emotion interferes with duties.

PC205 Personality Style: is a factor when the individual's personal interaction with others creates an unsafe situation. Examples are authoritarian, over-conservative, impulsive, invulnerable, submissive or other personality traits that result in degraded performance.

PC206 Overconfidence: is a factor when the individual overvalues or overestimates personal capability, the capability of others or the capability of aircraft/vehicles or equipment.

PC207 Pressing: is a factor when the individual knowingly commits to a course of action that excessively presses the individual and/or their equipment beyond reasonable limits (e.g., pushing self or equipment too hard).

PC208 Complacency: is a factor when the individual has a false sense of security, is unaware of, or ignores hazards and is inattentive to risks.

PC209 Motivation: is a factor when the individual's motivation to accomplish a task/mission is excessive, weak, indecisive or when personal goals supersede the organization's goals.

PC215 Mentally Exhausted (Burnout): is a factor when the individual has the type of exhaustion associated with the wearing effects of high operational and/or lifestyle tempo in which operational requirements impinge on the ability to satisfy personal requirements and leads to degraded effectiveness.

SENSORY MISPERCEPTION (PC500): are factors resulting in degraded sensory inputs (visual, auditory or vestibular) that create a misperception of an object, threat or situation.

Motion Illusion – Kinesthetic	PC501
Turning/Balance Illusion – Vestibular	PC502
Visual Illusion	PC503
Misperception of Changing Environment	PC504
Misinterpreted/Misread Instrument	PC505
Misinterpretation of Auditory/Sound Cues	PC507
Spatial Disorientation	PC508
Temporal/Time Distortion	PC511

PC501 Motion Illusion – Kinesthetic: is a factor when physical sensations of the ligaments, muscles or joints cause the individual to have an erroneous perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation you must code PC508.)

PC502 Turning/Balance Illusion – Vestibular: is a factor when stimuli acting on the balance organs in the middle ear cause the individual to have an erroneous perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation you must code PC508.)

PC503 Visual Illusion: is a factor when visual stimuli result in an erroneous perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation you must code PC508.)

PC504 Misperception of Changing Environment: is a factor when an individual misperceives or misjudges altitude, separation, speed, closure rate, road/sea conditions, aircraft/vehicle location within the performance envelope or other operational conditions.

PC505 Misinterpreted/Misread Instrument: is a factor when the individual is presented with a correct instrument reading but its significance is not recognized, it is misread or is misinterpreted.

PC507 Misinterpretation of Auditory/Sound Cues: is a factor when the auditory inputs are correctly interpreted but are misleading/disorienting or when the inputs are incorrectly interpreted and cause an impairment of normal performance.

PC508 Spatial Disorientation: is a factor when an individual fails to correctly sense a position, motion, or attitude of the aircraft/vehicle/vessel or of oneself. Spatial Disorientation may be unrecognized and/or result in partial or total incapacitation.

PC511 Temporal/Time Distortion: is a factor when the individual experiences a compression or expansion of time relative to reality. This is often associated with a “fight or flight” response.

MENTAL AWARENESS (PC100): are factors of an attention management or awareness failure that affects the perception or performance of individuals.

Not Paying Attention	PC101
Fixation	PC102
Task Over-Saturation/Under-Saturation	PC103
Confusion	PC104
Negative Habit Transfer	PC105
Distraction	PC106
Geographically Lost	PC107
Interference/Interruption	PC108
Technical or Procedural Knowledge Not Retained after Training	PC109
Inaccurate Expectation	PC110

PC101 Not Paying Attention: is a factor when there is a lack of state of alertness or a readiness to process immediately available information. The individual has a state of reduced conscious attention due to a sense of security, self-confidence, boredom or a perceived absence of threat from the environment. This may often be a result of highly repetitive tasks.

PC102 Fixation: is a factor when the individual is focusing all conscious attention on a limited number of environmental cues to the exclusion of others.

PC103 Task Over-Saturation/Under-Saturation: is a factor when the quantity of information an individual must process exceeds their mental resources in the amount of time available to process the information.

PC104 Confusion: is a factor when the individual is unable to maintain a cohesive and orderly awareness of events and required actions and experiences a state characterized by bewilderment, lack of clear thinking or (sometimes) perceptual disorientation.

PC105 Negative Habit Transfer: is a factor when the individual reverts to a highly learned behavior used in a previous system or situation and that response is inappropriate for current task demands.

PC106 Distraction: is a factor when the individual has an interruption of attention and/or inappropriate redirection of attention by an environmental cue or mental process.

PC107 Geographically Lost: is a factor when the individual is at a different location from where one believes they are.

PC108 Interference/Interruption: is a factor when an individual is performing a highly automated/learned task and is distracted by another cue/event that results in the interruption and subsequent failure to complete the original task or results in skipping steps in the original task.

PC109 Technical or Procedural Knowledge Not Retained after Training: is a factor when the individual fails to absorb/retain required information or is unable to recall past experience needed for safe task completion.

PC110 Inaccurate Expectation: is a factor when the individual expects to perceive a certain reality and those expectations are strong enough to create a false perception of the expectation.

TEAMWORK (PP100): factors refer to interactions among individuals, crews, and teams involved with the preparation and execution of a task/mission that resulted in human error or an unsafe situation.

Failure of Crew/Team Leadership	PP101
Inadequate Task Delegation	PP103
Rank/Position Intimidation	PP104
Lack of Assertiveness	PP105
Critical Information Not Communicated	PP106
Standard/Proper Terminology Not Used	PP107
Failed to Effectively Communicate	PP108
Task/Mission Planning/Briefing Inadequate	PP109

PP101 Failure of Crew/Team Leadership: is a factor when the crew/team leadership techniques failed to facilitate a proper crew/team climate, to include establishing and maintaining an accurate and shared understanding of the evolving task and plan on the part of all crew/team members.

PP103 Inadequate Task Delegation: is a factor when the crew/team members failed to actively manage the distribution of tasks to prevent the overloading of any individual member.

PP104 Rank/Position Intimidation: is a factor when the differences in rank of the team/crew caused the task performance capabilities to be degraded. Also, conditions where formal or informal authority gradient is too steep or too flat across a crew/team and this condition degrades collective or individual performance.

PP105 Lack of Assertiveness: is a factor when an individual failed to state critical information or solutions with appropriate persistence and/or confidence.

PP106 Critical Information Not Communicated: is a factor when known critical information was not provided to appropriate individuals in an accurate or timely manner.

PP107 Standard/Proper Terminology Not Used: is a factor when clear and concise terms, phrases, hand signals, etc. per service standards and training were not used.

PP108 Failed to Effectively Communicate: is a factor when communication is not understood or is misinterpreted as the result of behavior of either sender or receiver. Communication failed to include backing up, supportive feedback or acknowledgement to ensure that personnel correctly understood announcements or directives.

PP109 Task/Mission Planning/Briefing Inadequate: is a factor when an individual, crew or team failed to complete all preparatory tasks associated with planning/briefing the task/mission.

SUPERVISION

“Direct Supervisory Chain of Command”

SUPERVISION: Supervision is a factor in a mishap if the methods, decisions or policies of the supervisory chain of command directly affect practices, conditions or actions of the individual(s).

SUPERVISORY VIOLATIONS (SV000): are factors when supervisors willfully disregard instructions or policies.

Failure to Enforce Existing Rules (supervisory act of omission)	SV001
Allowing Unwritten Policies to Become Standard	SV002
Directed Individual to Violate Existing Regulations	SV003
Authorized Unqualified Individuals for Task	SV004

SV001 Failure to Enforce Existing Rules (supervisory act of omission): is a factor when unit (organizational) and operating rules have not been enforced by a supervisor.

SV002 Allowing Unwritten Policies to Become Standard: is a factor when unwritten or “unofficial” policy is perceived and followed by the individual, although it has not been formally recognized by the organization.

SV003 Directed Individual to Violate Existing Regulations: is a factor when a supervisor directs a subordinate to violate existing regulations, instructions or technical guidance.

SV004 Authorized Unqualified Individuals for Task: is a factor when an individual has not met the general training requirements for the job/weapon system and is considered non-current but supervision/leadership inappropriately allows the individual to perform the task for which the individual is non-current.

PLANNED INAPPROPRIATE OPERATIONS (SP000): are factors when supervision fails to adequately plan or assess the hazards associated with an operation and allows for unnecessary risk.

Directed Task Beyond Personnel Capabilities	SP001
Inappropriate Team Composition	SP002
Selected Individual with Lack of Current or Limited Experience	SP003
Performed Inadequate Risk Assessment – Formal	SP006
Authorized Unnecessary Hazard	SP007

SP001 Directed Task Beyond Personnel Capabilities: is a factor when supervisor/management directs personnel to undertake a task beyond their skill level or beyond the capabilities of their equipment.

SP002 Inappropriate Team Composition: is a factor when the makeup of the crew/team should have reasonably raised safety concerns in the minds of members involved in the task, or in any other individual directly related to the scheduling of this task.

SP003 Selected Individual with Lack of Current or Limited Experience: is a factor when the supervisor selects an individual whose experience is not sufficiently current or proficient to permit safe task execution.

SP006 Performed Inadequate Risk Assessment – Formal: is a factor when supervision does not adequately evaluate the risks associated with a task or when pre-mission risk assessment tools/programs are inadequate.

SP007 Authorized Unnecessary Hazard: is a factor when supervision authorizes an activity or task that is unnecessarily hazardous without sufficient cause or need.

INADEQUATE SUPERVISION (SI000): are factors when supervision proves inappropriate or improper and/or fails to identify hazards; recognize and control risk; provide guidance, training and/or oversight.

Supervisory/Command Oversight Inadequate	SI001
Improper Role-Modeling	SI002
Failed to Provide Proper Training	SI003
Failed to Provide Appropriate Policy/Guidance	SI004
Personality Conflict with Supervisor	SI005
Lack of Supervisory Responses to Critical Information	SI006
Failed to Identify/Correct Risky or Unsafe Practices	SI007
Selected Individual with Lack of Proficiency	SI008

SI001 Supervisory/Command Oversight Inadequate: is a factor when the availability, competency, quality or timeliness of leadership, supervision or oversight does not meet task demands. Inappropriate supervisory pressures are also captured under this code.

SI002 Improper Role-Modeling: is a factor when the individual’s learning is influenced by the behavior of supervisors and when that learning manifests itself in actions that are either inappropriate to the individual’s skill level or violate standard procedures.

SI003 Failed to Provide Proper Training: is a factor when one-time or recurrent training programs, upgrade programs, transition programs or any other local training is inadequate or unavailable, etc. (Note: the failure of an individual to absorb the training material in an adequate training program does not indicate a training program problem.)

SI004 Failed to Provide Appropriate Policy/Guidance: is a factor when policy/guidance or lack of a policy/guidance leads to an unsafe situation.

SI005 Personality Conflict with Supervisor: is a factor when a supervisor and individual member experience a "personality conflict" that leads to a dangerous error in judgment/action.

SI006 Lack of Supervisory Responses to Critical Information: is a factor when information critical to a potential safety issue was provided but supervisory/management personnel failed to act upon it (failure to close the loop).

SI007 Failed to Identify/Correct Risky or Unsafe Practices: is a factor when a supervisor fails to identify or correct risky behaviors or unsafe tendencies and/or fails to institute remedial actions. This includes hazardous practices, conditions or guidance.

SI008 Selected Individual with Lack of Proficiency: is a factor when a supervisor selects an individual that is not proficient in a task, mission or event.

ORGANIZATIONAL INFLUENCES
“Upper-Level Management, Command Level”

ORGANIZATION: *An organization is the communications, actions, omissions or policies of upper-level management that directly or indirectly affect supervisory practices, conditions or actions of the operator(s).*

RESOURCE PROBLEMS (OR000): are factors when processes or policies influence system safety, resulting in inadequate error management or creating an unsafe situation.

Command and Control Resources are Deficient	OR001
Inadequate Infrastructure	OR003
Failure to Remove Inadequate/Worn-Out Equipment in a Timely Manner	OR005
Failure to Provide Adequate Operational Information Resources	OR008
Failure to Provide Adequate Funding	OR009

OR001 Command and Control Resources are Deficient: is a factor when installation resources are inadequate for safe operations. Examples include: command and control, airfield services, battlegroup management, etc.

OR003 Inadequate Infrastructure: is a factor when support facilities (dining, exercise, quarters, medical care, etc.) or opportunity for recreation or rest are not available or adequate. This includes situations where leave is not taken for reasons other than the individual’s choice.

OR005 Failure to Remove Inadequate/Worn-Out Equipment in a Timely Manner: is a factor when the process through which equipment is removed from service is inadequate.

OR008 Failure to Provide Adequate Operational Information Resources: is a factor when weather, intelligence, operational planning material or other information necessary for safe operations planning are not available.

OR009 Failure to Provide Adequate Funding: is a factor when an organization or operation does not receive the financial resources to complete its assigned task/mission.

PERSONNEL SELECTION & STAFFING (OS000): are factors if personnel management processes or policies, directly or indirectly, influence system safety and results in poor error management or creates an unsafe situation.

Personnel Recruiting and Selection Policies are Inadequate	OS001
Failure to Provide Adequate Manning/Staffing Resources	OS002

OS001 Personnel Recruiting and Selection Policies are Inadequate: is a factor when the process through which individuals are screened, brought into the service or placed into specialties is inadequate.

OS002 Failure to Provide Adequate Manning/Staffing Resources: is a factor when the process through which manning, staffing or personnel placement or manning resource allocations are inadequate for task/mission demands.

POLICY AND PROCESS ISSUES (OP000): are factors if these processes negatively influence performance and result in an unsafe situation.

Pace of Ops-tempo/Workload	OP001
Organizational Program/Policy Risks not Adequately Assessed	OP002
Provided Inadequate Procedural Guidance or Publications	OP003
Organizational (formal) Training is Inadequate or Unavailable	OP004
Flawed Doctrine/Philosophy	OP005
Inadequate Program Management	OP006
Purchasing or Providing Poorly Designed or Unsuitable Equipment	OP007

OP001 Pace of Ops-tempo/Workload: is a factor when the pace of deployments, workload, additional duties, off-duty education, PME or other workload-inducing conditions of an individual or unit creates an unsafe situation.

OP002 Organizational Program/Policy Risks not Adequately Assessed: is a factor when the potential risks of a large program, operation, acquisition or process are not adequately assessed.

OP003 Provided Inadequate Procedural Guidance or Publications: is a factor when written direction, checklists, graphic depictions, tables, charts or other published guidance is inadequate, misleading or inappropriate.

OP004 Organizational (formal) Training is Inadequate or Unavailable: is a factor when one-time or initial training programs, upgrade programs, transition programs or other training that is conducted outside the local unit is inadequate or unavailable.

OP005 Flawed Doctrine/Philosophy: is a factor when the doctrine, philosophy or concept of operations in an organization is flawed or accepts unnecessary risk which leads to an unsafe situation or unmitigated hazard.

OP006 Inadequate Program Management: is a factor when programs are implemented without sufficient support, oversight or planning.

OP007 Purchasing or Providing Poorly Designed or Unsuitable Equipment: is a factor when the processes through which aircraft, vehicle, equipment or logistical support are acquired allows inadequacies or when design deficiencies allow inadequacies in the acquisition.

CLIMATE/CULTURE INFLUENCES (OC000): are factors where the working atmosphere within the organization influences individual actions resulting in human error. (e.g. command structure, policies and working environment).

Organizational Culture (attitude/actions) Allows for Unsafe Task/Mission	OC001
Organizational Over-confidence or Under-confidence in Equipment	OC003
Unit Mission/Aircraft/Vehicle/Equipment Change or Unit Deactivation	OC004
Organizational Structure is Unclear or Inadequate	OC005

OC001 Organizational Culture (attitude/actions) Allows for Unsafe Task/Mission: a factor when explicit/implicit actions, statements or attitudes of unit leadership set unit/organizational values (culture) that allow an environment where unsafe task/mission demands or pressures exist.

OC003 Organizational Over-confidence or Under-confidence in Equipment: is a factor when there is organizational over- or under-confidence in an aircraft, vehicle, device, system or any other equipment.

OC004 Unit Mission/Aircraft/Vehicle/Equipment Change or Unit Deactivation: is a factor when the process of changing missions, aircraft/vehicle/equipment or an impending unit deactivation creates an unsafe situation.

OC005 Organizational Structure is Unclear or Inadequate: is a factor when the chain of command of an individual or structure of an organization is confusing, non-standard or inadequate and this creates an unsafe situation.

