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Abbreviated Aviation Accident Report (AAAR)  
DA Form 2397-AB

AAAR Use and Preparation for Manned Aircraft

DA Form 2397-AB: Abbreviated Aviation Accident Report (AAAR) is required for all manned aircraft ground accidents (regardless of class). The AAAR will also be used to record all manned Class C, D, E accidents and F (turbine engine FOD) aviation incidents. Additionally, this form may be used to report manned aviation Class A and B accidents in areas of combat or contingency operations when the submission of the DA Form 2397 series is deemed not practicable by the senior tactical commander. The AAAR reduces only Class C and above reporting requirements, but does not affect the quality or extent of the accident investigation.  
Investigation and submission of the AAAR will be IAW AR 385-10 and DA Pam 385-40.

Accident/Incident Classification Criteria

Class A accident. An Army accident in which—
(1) The resulting total cost of property damage is $2 million or more;
(2) An Army aircraft is destroyed, missing, or abandoned; or
(3) An injury and/or occupational illness results in a fatality or permanent total disability.

Class B accident. An Army accident in which—
(1) The resulting total cost of property damage is $500,000 or more but less than $2 million;
(2) An injury and/or occupational illness results in permanent partial disability; or
(3) When three or more personnel are hospitalized as inpatients as the result of a single occurrence.

Class C accident. An Army accident in which—
(1) The resulting total cost of property damage is $50,000 or more but less than $500,000;
(2) A nonfatal injury or occupational illness that causes 1 or more days away from work or training beyond the day or shift on which it occurred; or
(3) Disability at any time (that does not meet the definition of Class A or Class B and is a day(s)-away-from-work case).

Class D accident. An Army accident in which—
(1) The resulting total cost of property damage is $20,000 or more but less than $50,000;
(2) A nonfatal injury or illness results in restricted work, transfer to another job, medical treatment greater than first aid, needle stick injuries, and cuts from sharps that are contaminated from another person’s blood or other potentially infectious material, medical removal under medical surveillance requirements of an OSHA standard, occupational hearing loss; or
(3) A work-related tuberculosis case.

Class E ground accident. An Army ground accident in which the resulting total cost of property damage is $5,000 or more but less than $20,000.

Class E aviation accident. An Army aviation accident in which the resulting total cost of property damage is $5,000 or more but less than $20,000.

Class F aviation incident. Recordable incidents are confined to aircraft turbine engine damage because of unavoidable internal or external foreign object damage, where that is the only damage (does not include installed aircraft auxiliary power units). These incidents will be reported using DA Form 2397–AB (Abbreviated Aviation Accident Report); check “F” in the “Accident Classification” block.
**Types of aircraft accidents**

**Flight accidents.** Those accidents in which intent for flight exists (as defined below), and there is reportable damage to the aircraft itself. (Explosives, chemical agent, or missile events that cause damage to an Army aircraft with intent for flight are categorized as flight accidents to avoid dual reporting.)

**Flight-related accidents.** Those aircraft accidents in which there is intent for flight and no reportable damage to the aircraft itself, but the accident involves a fatality, injury to aircrew, ground crew, passengers, or other injury or property damage. These accidents are not to be used in the calculation of flight accident rates. For example, unintentional cutting of a hoist cable; failure or malfunction of a hoist system to include related equipment; unintentional jettisoning of cargo hook load or external stores.

**Aircraft ground accidents.** Injury or property damage accidents involving Army aircraft in which no intent for flight exists and the engine(s) is in operation (an installed aircraft auxiliary power unit (APU) is not considered an aircraft engine). In the case of an Aerostat balloon accident there must no intent for flight and the system must be operational. See the definition of operational Aerostat balloon below.

**Intent for Flight Definition:**
Intent for flight begins when power is applied or brakes released to move the aircraft under its own power, for the purpose of commencing authorized flight with an authorized crew. Intent for flight ends when the aircraft is at a full stop and power is completely reduced. Intent for Flight is the physical act of applying power to move the aircraft, not the thought process of the crew member as to what is going to occur in the future.

**MANNED AVIATION ACCIDENT/INCIDENT NOTIFICATION & REPORTING REQUIREMENTS & SUSPENSES**

<table>
<thead>
<tr>
<th>ACCIDENT/INCIDENT CLASS</th>
<th>PEACETIME</th>
<th>COMBAT*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TELEPHONIC WORKSHEET</td>
<td>DA FORM 2397</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>IMMEDIATE USACRC Telephonic notification (no hardcopy notification is required) DSN 558-2660/2539/3410 or Com (334) 255-2660/2539/3410</td>
<td>(CAI/IAI) 90 CALENDAR DAYS</td>
</tr>
<tr>
<td>C</td>
<td>IMMEDIATE USACRC Telephonic notification (no hardcopy notification is required) DSN 558-2660/2539/3410 or Com (334) 255-2660/2539/3410</td>
<td>N/A</td>
</tr>
<tr>
<td>D, E, &amp; F</td>
<td>N/A (Unless SOF Issue)</td>
<td>N/A</td>
</tr>
<tr>
<td>SUBMISSION METHODS</td>
<td>Class A-C Telephonic (Immediate) Class D, E, F - If SOF issue</td>
<td>Mail</td>
</tr>
</tbody>
</table>

*-When the senior tactical commander determines that normal peacetime investigation and reporting is not practicable.
# MISHAP INJURY COST STANDARDS TABLE

Cost Standards Table (DA Pam 385-40, Table 3–1)

<table>
<thead>
<tr>
<th>Mishap Injury Cost Standards Table for use in FY15 (using FY14 CPI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Lost Time per Injury</strong></td>
</tr>
<tr>
<td>Flying, Sub, Medical Officers</td>
</tr>
<tr>
<td>Other Officers</td>
</tr>
<tr>
<td>Enlisted Personnel/Cadets</td>
</tr>
<tr>
<td>Civilian Employees</td>
</tr>
</tbody>
</table>

How to use this table:

A. This table should be used to determine mishap costs based on the injury sustained by each individual involved in the mishap. The injury costs do not determine accident class.
B. Identify the severity of injury sustained for each individual.
C. For fatal, permanent total disability, partial disability injuries, or those injuries that do not result in lost time, apply the associated cost listed in the table one time for each individual injured. No lost time injuries include needle sticks, loss of consciousness, and treatment beyond first aid.
D. Injuries resulting in first aid treatment are valued at $0.
E. For lost time cases, multiply the number of days away from work beyond the day of the accident by the cost listed under Per Days Away from Work. For injuries that result in hospitalization, multiply the number of days hospitalized by the value listed under Per Day Hospitalized and add it to the Days Away from Work Injury Cost ((# of Days hospitalized * Costs) + Days Away from Work Injury Cost).
F. Injuries that result in restricted duty or temporary reassignment apply the cost listed under No Lost Time one time. Example: An individual loses consciousness at work and is returned to work on restricted duty for one day or more, the total cost of the injury is $1300.
G. To determine total injury cost for the mishap, add (sum) the injury costs for each individual.

Example: An individual is injured on the job and is hospitalized for one day, is then told to rest at home for two days, and is then put on restricted duty for three days after returning to work. The costs would be (1*8500) + (2*2400) + (1*1300)=$14600 cost of the injury.

By the end of the fiscal year, USACRC/SC will update all costs for the next FY in this table with the inflation factor based on Consumer Price Index (CPI) formula (using the average CPI from September of previous year to August of current year) to calculate inflation rate and will then post the updated chart on the USACRC internet homepage. The chart posted on the USACRC homepage will take precedence over any other injury cost table.

Notes:

1. Direct medical costs with a 1 to 1 indirect cost multiplier included. (Profiles, restricted duty, job transfers are included in No Lost Time cases.
2. Permanent Partial disability costs of military personnel include: training costs + likely medical interventions (cost of average hospital stay) + base pay for hospital stay + partial disability payments over 30–year period. Permanent total disability costs of military personnel determined based on inclusion of: training cost + likely medical interventions (cost of average hospital stay) + base pay for hospital stay + total disability payments over 30–year period.
3. Direct wage and medical costs from FECA data.

Values updated from FY 2014 Updated cost per injury type estimate table in 2013 dollars using the average CPI from Sep 2013–Aug 2014.

Value of Statistical Life based on OSHA value of $7.4M in 2006 dollars using the average CPI from Sep 2013–Aug 2014 to update.
Submission of Reports
Submit AAAR in legible hand-printed or typed copy via mail, FAX, courier, electronic mail, or the automated reporting system. Working copies on plain paper are acceptable, but each data element must reference the respective block of the AAAR.

- Mailing address:
  Commander U.S. Army Combat Readiness/Safety Center
  ATTN: CSSC-O, Quality Control Support Branch
  Bldg 4905, Ruf Ave
  Fort Rucker, AL 36362-5363

- Electronic Mail: usarmy.rucker.hqda-secarmy.mbx.safe-accident-info@mail.mil

- FAX:
  DSN 558-2266
  COM 334-255-2266

For questions pertaining to the completion or submitting the AAAR, contact Mr. Ron Underhill at (334) 255-3493 or DSN 558-3493, email or ronald.l.underhill.civ@mail.mil or ron.underhill@us.army.mil

VISIT OUR HOME PAGE:
https://safety.army.mil

ELECTRONICALLY SUBMIT THE AAAR TO
usarmy.rucker.hqda-secarmy.mbx.safe-accident-info@mail.mil

REACH THE USACRC HELP DESK AT
usarmy.rucker.hqda-secarmy.mbx.safe-helpdesk@mail.mil

For Class A, B, and C accidents, attach to the AAAR all substantiating documentation and supplemental forms required, or deemed appropriate; e.g., witness summaries/interviews, expanded narrative, lab/CCAD reports, Product Quality Deficiency Report (PQDR), other DA Form 2397 series, additional personnel information sections, and additional AAAR forms for involved aircraft other than the case aircraft, etc.

An electronic copy of the DA FORM 2397-AB may be obtained by clicking on https://safety.army.mil/home/, then click on REPORTING & INVESTIGATION, then FORMS or http://www.apd.army.mil/.

Supplemental Report Requirements
Follow-up data (e.g. Classification change, ECOD, ACOD, CCAD Report, PQDR, AFMES, ASOAP or other analytical results) are to be submitted as required. Complete only AAAR block 1 (case number) and those blocks to which the supplemental data applies and the substantiating documentation. An ECOD or ACOD will be submitted with all reports when an accident classification has been downgraded.
Instructions for Completion

Complete the entire form (both sides) for each manned Class C accident, all manned aircraft ground accidents and manned Class A and B combat accidents in areas of combat or contingency operations when the submission of the DA Form 2397 series is deemed not practicable by the senior tactical commander. For each manned Class D and E accident and Class F incident not involving human error, injury, or wire strike, only the front page (blocks 1-18) is required. For manned Class D and E accidents involving human error or injury, complete blocks 1 through 18, 21, 22, 23, and 24, and any other pertinent blocks. The AAAR will be completed as follows:

Block 1. The case number consists of the year, month, and day (YYYYMMDD) of the accident, the local time of the accident, and the seven digit aircraft serial number. Aircraft serial number must contain seven digits.

Block 2. Check the boxes of the appropriate classification and category. Classification criteria are listed on page 1 of this booklet; category is defined in DA Pam 385-40, paragraph 1-9a.

Block 3. Enter the mission, type, design, and series of the aircraft involved in the accident: e.g., UH-60L, OH-58D.

Block 4. Check the appropriate box. Dawn is that period of time between beginning of morning nautical twilight (BMNT) and official sunrise. Dusk is that period of time between official sunset and end of evening nautical twilight (EENT).

Block 5. Enter the total number of aircraft involved in the accident and submit an additional AAAR for each aircraft. Do not include aircraft with an engine(s) not in operation. In completing additional AAAR forms, do not duplicate data already provided in the initial form.

Block 6. Enter the name of the nearest military facility/establishment to the accident site.

Block 7. Check the appropriate boxes to indicate whether the accident occurred on or off post, or on/off an airfield. Note: Tactical landing zones under positive Air Traffic Control, (for example, Corps’ instrumented airfield, Division’s VFR helipad, stagefields, and support bases) are considered “on post” and “on airfield” for reporting purposes. Also, aircraft accidents occurring on joint-use civil airports and on civilian airports with USAR component facilities are considered “on post” and “on airfield” when there is intent to use the military facilities on that airport; e.g., visit the unit, acquire fuel, conduct training, etc. Enter the name of the closest city and state to the accident site. Identify the country. Enter the Military Grid Reference or latitude/longitude of the accident site.

Block 8. Enter the six digit UIC and abbreviated title of the organization aircraft involved.

Block 9. Enter the information pertaining to the organization most responsible/accountable for the accident. If the organization is the same as block 8, leave blank.

Block 10. Pertains to the estimate of the accident damage cost. Enter in blocks 10b through 10h only those costs associated with the aircraft to which this form pertains. Complete this block as follows:

- **Block 10a.** If “Yes,” enter the replacement cost per TB 43-0002-3 in block 10b and do not fill in blocks 10c and 10d (man-hours).

- **Block 10b.** Enter the cost of aircraft damage, excluding man-hour cost.

- **Block 10c.** If 10a is ‘No’, enter man-hours required to repair aircraft damage only.

- **Block 10d.** If 10a is ‘No’, enter man-hour cost that pertains to aircraft damage only, based on current cost criteria specified in
paragraph 1-10, DA Pam 385-40. Include other man-hour cost in block 10e (Other Damage Military).

- **Block 10e.** Enter all costs to other military property resulting from the accident (include aircraft with engine(s) not in operation, if applicable).

- **Block 10f.** Enter the damage cost to civilian property.

- **Block 10g.** Enter the injury costs of all personnel on board this aircraft. Obtain total injury cost by adding the cost of block 19 of DA Form 2397-9 or from the injury cost criteria on page 3 of this booklet.

- **Block 10h.** Enter the total of blocks 10b-g.

- **Block 10i.** Leave blank unless Block 5 indicates multiple aircraft are involved. Enter the total of blocks 10h from each AAAR when multiple aircraft are involved.

**Block 11.** Complete the general data blocks:

- **Block 11a.** Enter the mission as shown on the DA form 2408-12, AR 95-1, or the list on page 9 of this booklet. For maintenance operations with or without intent for flight, enter “S” for service. If none, enter “NA.” Check the appropriate box to indicate whether the mission was a single or multi-ship operation.

- **Block 11b.** Check the appropriate box to indicate the type flight plan on file at the time of the accident.

- **Block 11c.** Check the appropriate box to indicate whether or not a Digital Source Collector was installed and enter type.

- **Block 11d.** Check the appropriate box to indicate whether night vision devices(s) or system (NVD) were in use at the time of the accident/incident. If “Yes.” specify the type of NVD used.

- **Block 11e.** Check the appropriate box to indicate the phase of operation when the fire started. Identify type combustible material and the fire ignition source in block 15 (summary) of the AAAR.

- **Block 11f.** For Class C and above accidents checked “Yes”, complete DA Form 2397-6 and attach it to the report. For Class D and E accidents, and Class F incidents, explain in the block 15, Summary, the type and source of the spillage.

- **Block 11g.** Check the appropriate box to indicate whether the aircraft was participating in a named field training exercise (FTX). If “Yes,” enter the FTX name in the space provided (JRTC, NTC, Desert Eagle, etc…).

**Block 12.** Enter the flight parameters at the times indicated. Flight parameters pertain to both flight and ground operation of the aircraft. Phase of operation codes are listed on page 10 of this booklet.

- **Block 12a.** Enter the flight parameters at the onset of the emergency.

- **Block 12b.** Enter the flight parameters at the time of the first major impact/accident. Exception: If an in-flight strike occurred, resulting in a second impact, record the second impact here. This block can duplicate block 12a (emergency phase).

**Block 13.** Enter up to three event codes from the list starting at page 13 of this booklet that describes the accident/incident. Enter the event code that best describes the accident/incident in the first space. Exception: Events 12, 40, and 45 will be entered in the first space if applicable.

**Block 14.** Enter “D”, “S”, or “U” in the appropriate block to indicate whether human, materiel, or environmental factors played a definite, suspected, or undetermined role in the accident/incident. Substantiate each contributing factor as indicated by the present
and contributing findings (block 24, see page 16 of this booklet) for Class C and above accidents and all classes involving human error.

**Block 15.** Enter a concise summary of the accident sequence from the initial onset of the emergency until the aircraft is at rest, to include injuries resulting from the accident. Specify the actual Error/Failure/Effects and the Cause of the accident. The specified Error/Failure/Effects and Root Causes should be explained in the narrative of the summary. The summary should substantiate the findings entered in block 24. For D and E accidents, and F incidents not involving human error: describe all materiel failure and environmental contributing factors, fire ignition sources and combustible materiel in cases involving fire. Also, enter the Product Quality Deficiency Report (PQDR) number, category, and status when materiel deficiencies are involved. Use a continuation sheet on plain bond paper if necessary.

**Block 16.** This block must be completed for all reports containing a “D” or “S” in block 14b. Enter the requested data for materiel failure or malfunction resulting from fair wear and tear (FWT), maintenance error or manufacture/design deficiencies. For maintenance error over which the Army has control, block 14a must be completed. Additionally, block 21 must also be completed for the individual committing the error. “Major Component” column data is required only for those items involving the power and drive trains; e.g., engine, transmission, gearboxes, combining transmission, etc.

**Note:** A Product Quality Deficiency Report (PQDR) is required for all materiel failure accidents in accordance with AR 385–10, paragraph 3–9b(1) Note and DA Pam 738–751, paragraph 3–2.

**Block 17.** Check this block to reflect the environmental conditions present at the time and location of the accident/incident. This block must be completed for all reports. Environmental contributing factors will be checked and substantiated in the summary or findings, depending upon the classification and circumstances (see instructions for block 14).

**Block 18.** For Class C and above accidents, enter the data for the investigation board president. For Class D and E accidents and Class F incidents, enter the safety officer/representative who can answer questions pertaining to the report. Include the Army Knowledge Online (AKO) email address of the board president/ASO/POC.

**Note:** For Class D, E, & F reports that do not involve wire strikes, human error or injury, stop here. No further entry is required.

**Block 19.** Complete this block for night Class C and above accidents or night accidents involving human error, when NVD or environmental factors were present.

**Block 20.** Complete this block for accidents involving wire strikes.

**Block 21.** This block is required to be completed for all crewmembers with access to the flight controls who are involved in a Class A, B, or C accident and for personnel with causative roles, or who were injured in the accident regardless of Class (A-F). This block is not required for materiel failure Class D and E accidents where the only cause of the failure was FWT and Class F incidents. If more than three personnel are involved, use additional forms. Use the following instructions for completing block 21a. Blocks 21b and 21c are to be completed using the instructions for block 21a.

- **Block 21a.** Enter the individual’s last name, first, and middle initial.
- **Block 21a(1).** Enter the individual’s social security number.
- **Block 21a(2).** Enter the individual’s pay grade from the list on page 11 of this booklet, e.g., 04, W3, GS-09, WG-10, etc.
• **Block 21a(3).** Enter the individual’s gender.

• **Block 21a(4).** Enter the duty position code as shown on DA Form 2408-12 for the flight or from the list on page 11 of this booklet.

• **Block 21a(5).** Enter the personnel service code of the individual from the list on page 12 of this booklet.

• **Block 21a(6).** Enter the UIC of the unit to which the individual is assigned at the time of the accident.

• **Block 21a(7).** Check “D,” “S,” “N,” or “U” to indicate the individual’s causal role in the accident (definite, suspected, none, or undetermined).

• **Block 21a(8).** Check the box to indicate whether the individual was on the flight controls at the time of the accident or whether his or her previous control input had any influence on the accident.

• **Block 21a(9)a.** Indicate whether blood and urine samples were taken (tests are required for all aviation Class C and above accidents). **Block 21a(9)b.** Indicate if test results were positive or negative. If the results are “positive”, attach the AFMES results to the AAAR and address in findings at block 24 (authorized medication excluded).

• **Block 21a(10)(a).** Enter the total number of hours this individual slept during the 24 hours preceding the accident.

• **Block 21a(10)(b).** Enter the total number of hours this individual worked in the 24 hours preceding the accident.

• **Block 21a(10)(c).** Enter the total number of hours this individual flew in the 24 hours preceding the accident.

• **Block 21a(11)a and b.** If the individual is a rated aviator or nonrated crewmember, check the appropriate box to indicate RL and FAC levels.

• **Block 21a(11)c.** Enter the date the individual redeployed from a combat zone.

• **Block 21a(12).** Indicate whether or not the individual was injured. If “Yes,” DA Form 2397-9 is required to be submitted for each individual injured as a result of the accident. (Accidents involving injury require a flight surgeon or if flight surgeon is not available, an Army medical officer to be a member of the board.) Instructions for completing the 2397–9 are in DA PAM 385-40, paragraphs 3-12 and 3-31.

• **Block 21a(13).** Enter the total number of flight hours this individual has accrued in the accident aircraft Mission, Type, Design and Series.

• **Block 21a(14).** Enter total flight hours in all aircraft.

**Block 22.** This block pertains to class C and above accidents only.

• **Block 22a.** Any deformation of occupiable space constitutes a compromise for the purposes of this report, if “Yes,” submit DA Form 2397-6 with the AAAR. Instructions for completing the 2397–6 are contained in DA PAM 385-40, paragraphs 3-9 and 3-28.

• **Block 22b.** Indicate whether post-crash escape/rescue/survival difficulties were a factor in this accident. If “Yes,” submit DA Form 2397-10 for the individual(s) experiencing the difficulties. Instructions for completing the 2397–10 are contained in DA PAM 385-40, paragraphs 3-13 and 3-32.

• **Block 22c.** Indicate whether the protective/restraint equipment functioned as designed. If “No,” submit DA Form 2397-10 for the individual(s) utilizing the protective/restraint equipment. Additionally, check “No” and submit DA Form 2397-10 on the individuals if protective/restraint equipment was needed but
not available, or was a contributing factor in the accident. Instructions for completing the 2397–10 are in DA PAM 385-40, paragraphs 3-13 and 3-32.

**Block 23.** Check the boxes that best describe the cause(s) of the accident. Substantiate each box checked in Block 24 (Present and Contributing Findings). See Findings elements on page 17, 23 and 24 of this booklet.

**Block 24.** Instruction for writing findings (see findings elements on pages 17, 23 and 24 of this booklet) and recommendations are contained in DA Pam 385-40, paragraphs 3-5 and 3-24. Accident Errors and Root Causes associated with the findings are found on pages 17, 23 and 24 of this booklet, and are explained in Appendix B of DA Pam 385-40.

**Block 25.** List all substantiating data submitted with the AAAR.

**Block 26.** Class C and above accidents will be forwarded through the reviewing chain of command for signature and comment, IAW higher headquarters directions. Blocks 26a will be signed by the unit commander. Block 26b may be signed by any higher level chain of command. Block 26c approving authority is either the ACOM, ASCC, or DRU commander.
### Phase of Operation Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Starting engine/run-up</td>
</tr>
<tr>
<td>B</td>
<td>Stationary (engines running)</td>
</tr>
<tr>
<td>C</td>
<td>Taxi</td>
</tr>
<tr>
<td>D</td>
<td>Takeoff/Catapult/Launch</td>
</tr>
<tr>
<td>E</td>
<td>Hover IGE</td>
</tr>
<tr>
<td>F</td>
<td>Climb (after takeoff phase and a climb to altitude is established)</td>
</tr>
<tr>
<td>G</td>
<td>Cruise</td>
</tr>
<tr>
<td>H</td>
<td>Combat maneuver (masking, unmasking, gun run, evasive action, etc.)</td>
</tr>
<tr>
<td>I</td>
<td>Descent (does not include approach)</td>
</tr>
<tr>
<td>J</td>
<td>Approach (prior to landing/termination)</td>
</tr>
<tr>
<td>K</td>
<td>Emergency auto-rotation</td>
</tr>
<tr>
<td>L</td>
<td>Go-around (the intended landing/termination is aborted)</td>
</tr>
<tr>
<td>M</td>
<td>Landing (aircraft touchdown until forward motion stops and aircraft clears runway)</td>
</tr>
<tr>
<td>N</td>
<td>Low level (constant airspeed and altitude below 500 feet AGL)</td>
</tr>
<tr>
<td>O</td>
<td>Contour (varying altitude, while maintaining constant height above the contour of the earth’s surface and/or obstacle)</td>
</tr>
<tr>
<td>P</td>
<td>NOE (varying airspeed and altitude, using the earth’s contour or foliage for concealment)</td>
</tr>
<tr>
<td>Q</td>
<td>Hover OGE</td>
</tr>
<tr>
<td>R</td>
<td>Crash (crew has no control over aircraft altitude)</td>
</tr>
<tr>
<td>S</td>
<td>Aerobatics</td>
</tr>
<tr>
<td>T</td>
<td>Termination with power (planned/attempted termination of an autorotation is to a hover)</td>
</tr>
<tr>
<td>U</td>
<td>Undetermined or unknown</td>
</tr>
<tr>
<td>V</td>
<td>Power recovery (the process of returning the aircraft to powered flight from an engine-out configuration)</td>
</tr>
<tr>
<td>W</td>
<td>Training auto-rotation</td>
</tr>
<tr>
<td>X</td>
<td>Formation</td>
</tr>
<tr>
<td>Y</td>
<td>Preflight activity (any activity prior to the flight that caused or contributed to the accident; e.g., mission planning, crew assignment, training, preflight, etc.)</td>
</tr>
<tr>
<td>Z</td>
<td>Refueling (to identify the type refueling being conducted, use an additional code preceding the Z code; e.g., in-flight refueling should be coded as GZ).</td>
</tr>
</tbody>
</table>

#### Mission Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>Training</td>
</tr>
<tr>
<td>C</td>
<td>Combat</td>
</tr>
<tr>
<td>S</td>
<td>Service</td>
</tr>
<tr>
<td>F</td>
<td>Maintenance Test flight</td>
</tr>
<tr>
<td>A</td>
<td>Acceptance Test Flight</td>
</tr>
<tr>
<td>X</td>
<td>Experimental Test Flight</td>
</tr>
<tr>
<td>D</td>
<td>Imminent Danger</td>
</tr>
</tbody>
</table>
GRADE CODES

O1-O10: Commissioned Officers
W1-W5: Warrant Officer
E1-E9: Enlisted service members
GS1-GS15, SES1-5: DOD Civilians
WG1-WG15 & WS16-WS19: Wage board employees
XN: Foreign National
X1: Foreign Officers
X2: Foreign Enlisted
CAC: Civilian Army contractor employee
CIV: Non-DOD Civilian

DAC: Dept Army Civilian
KAD: USMA
ROTC: Reserve Officer Training Cadet
NRPT: Not reported
OC: WOC/OC
UNK: Unknown
UNKE: Unknown Enlisted
UNKO: Unknown Officer
OTH: Personnel other than above

Duty Position Codes

ABC  Aviation Battalion Commander
AC  Aircraft Commander
AC-A  Aircraft Commander- Aircraft Seat
AC-P  Aircraft Commander- Payload Seat
ADC  Approach-departure controller
AMC  Air mission commander
AO  Unmanned Aircraft Operator
AO-A  Aircraft Operator-Aircraft Seat
AO-P  Aircraft Operator-Payload Seat
AOP  Assistant Operations Officer
AOS  Assistant Operations SGT
ART  Armament/Arms Technician
AFTP  AFTP Supervisor
ASO  Aviation Safety Officer
AUC  Aviation unit commander
AVT  Avionics technician
CC  Company Commander
CE  Crew chief or flight engineer
CET  Combat-equipped troops or jumpers
CP  Copilot
DC  Deputy Commander
DCO  DA/DOD-level commander
DEP  Design & engineer personnel
DS  Direct Supervisor
E  Electrician
EO  External Operator
FAC  FWD Air Controller
FC  Flight Commander
FCO  Flight Leader
FCT  Weather personnel
FFT  Crash rescue/firefighters
FI  Flight Engineer instructor
FMAA  Final Mission Approval Authority
FSP  Flight service personnel
FTM  Fuel team member
FTS  Fuel team supervisor
G-3  G-3
GC  Ground unit commander
GCA  Final controller
GG  Ground guide or "Follow me" service
GM  General mechanic
GO  Ground Observer
GSY  Other ground support personnel
IE  Instrument flight examiner
IP  Instructor pilot
IO  Instructor Operator
IO-A  Instructor Operator- Aircraft Seat
IO-P  Instructor Operator- Payload Seat
JPM  PARA Jump Master
LCO  Supervisor or unit commander
LO  Liaison Officer
MBO  Mission Briefing Officer
MC  Mission Commander
MCO  Major Commander/Supervisor
ME  Maintenance test flight evaluator
MFP  Manufacturing or rework personnel
MO  Flight surgeon/medical officer/attendant
MP  Maintenance test pilot
MS  Maintenance supervisor
OAY  Others Aboard Aircraft
OGY  Others not aboard aircraft
OP  Operations Officer
OPN  Operations Dispatcher, etc.
OR  Gunner, Technical Observer, Aircraft Maintenance Personnel, Photographer
PAX  Passenger
PC  Pilot in command
PF  Pathfinder
PI  Pilot
PL  Platoon Leader
PPM  Power plant mechanic
PT  Pilot trainee
PTM  Power train mechanic
PTO  Pilot trainee, observer
PTR  Pilot trainee, rated
RAP  Rappeller
RM  Rappeller Master
RS  Rappeller Safety
SI  Standardization flight engineer instructor
SM  Structure/airframe mechanic
SO  Standardization Instructor Operator
SO-A  Standardization Instructor Operator- Aircraft Seat
SO-P  Standardization Instructor Operator- Payload Seat
SP  Standardization instructor pilot
S3  S3
TI  Technical Inspector
NR  Not reported

Personnel Service Codes

A  Active Army
B  Army Civilian
C  Army Contractor
C1  Army Direct Contractor
D  NAF employee
EO  Other U.S. military personnel
E1  Navy
E2  Air Force
E3  Marine Corps
FO  Foreign
F1  Foreign national direct hire
F2  Foreign national indirect hire
F3  Foreign national KATUSA
F4  Foreign military attached
G  Dependent
M  Government, Other
NO  National Guard
N1  NG Tech
N2  NG inactive duty for training (IDT)
N3  NG annual training (AT)
N4  NG active duty special work (ADSW)
N5  NG active guard/reserve (AGR)
N6  NG active duty for training other than annual (ADT)
N7  NGB Activated to active duty
O  Other
P  Public
RO  Reserve
R1  Reserve inactive duty training (IDT)
R2  Reserve annual training (AT)
R3  Reserve active duty training (ADT)
R4  Reserve full time manning (FTM)
R5  Reserve Tech
R6  Reserve activated to active duty
R7  Reserve active guard/reserve (AGR)
T  ROTC
U  Unknown
Z  Not Reported
Accident/Incident Event Codes

The following terms and definitions categorize manned aviation accidents by the type of event(s) involved. Select the event(s) that best categorize the accident and enter the code(s) in block 13 on the AAAR. Enter the event that best describes the accident in the first position for all manned flight accidents. For manned aircraft ground or flight-related, always enter event 12 or 40 in the first event position to depict the category. For foreign object damage confined to turbine engines, enter event 45 in the first position. Never enter condition events 14 (fratricide), 18 (Icing), 41 (IMC), 48 (brownout), and 65 (whiteout) in the first event position. When no listed event describes the accident, write the type event in block 13 in lieu of a selected event.

01 Precautionary Landing (PL). A landing resulting from unplanned events occurring while the aircraft is in flight that makes further flight inadvisable. This event is to be used for PLs where no other event applies. It may be used in conjunction with other events.

02 Forced landing (FL). A landing caused by failure or malfunction of engines, systems, or other components that make continued flight impossible. This event is to be used in conjunction with other events.

03 Aborted takeoff. An unplanned event that occurs before liftoff that interrupts a planned flight. This event is to be used for aborted takeoffs where no other event applies or in conjunction with other events.

04 Human factor. A psychological, physiological, or pathological condition that results in the interference of a crewmember’s duties, or mission that is delayed, diverted, or aborted.

05 Cargo. Injury or property damage resulting from internal or external cargo-related operations, e.g., intentional or unintentional jettisoning of cargo hook load.

06 Personnel-handling. Injury or property damage accidents/incidents that occur during hands-on handling of equipment or personnel.

07 External-stores. Injury or property damage involving external-stores operations, handling errors, or equipment failures.

08 Multiple-aircraft. Injury or property damage resulting from the interactions of two or more aircraft. To qualify as a multiple aircraft event, two or more active aircraft must be involved. An inoperative aircraft (engine not running) struck by an operating aircraft (engine running) does not qualify in this context.

09 Misappropriated aircraft. An aircraft accident that occurs during the operation of an Army aircraft that has been misappropriated, regardless of aircrew designation. Intent to fly must exist.

10 Unmanned Aircraft Systems (UAS). Have a “Q” designator, are flown or operated by an Air Vehicle Operator (AO) or External Pilot (EO).

11 Contractor accident. An aircraft accident that occurs as a result of a Government contractor’s operation in which there is damage to Army property or injury to Army personnel. Included is non-delivered equipment for which the Army has assumed responsibility in writing.

12 Aircraft ground accident. (When applicable, enter in first position.) Injury or property damage involving an Army Aircraft in which no intent to fly exists and an aircraft system is in operation.

13 Laser induced/related. Personnel injury or property damage resulting from or related to laser operations.

14 Fratricide. Persons killed, wounded, or equipment damage, in military action, mistakenly or accidentally, by friendly forces actively engaged with the enemy, who are directing fire at hostile force or what is thought to be hostile force. Not to be entered in the first position.


16 Un-commanded control input. An un-commanded aircraft pitch, yaw, or roll motion (regardless of amount) that is not induced by the crew or adverse environmental conditions.
17 **Cockpit Air Bags.** Activation/deployment of the cockpit airbags either intentional or unintentional.

18 **Icing.** Accidents/incidents as a result of icing conditions other than structural icing captured in Event 69. Not to be entered in the first position.

19 **Reserved for future use.**

20 **Refueling accident.** Damage or injury incurred during refueling operations on the ground or in flight.

21 **Midair collision.** Two or more aircraft collide in flight. Hover is considered flight for this event.

22 **Helocasting.** Property damage or personnel injury occurring during helocasting operations.

23 **Hard landing.** Damage incurred due to excessive sink rate on landing touchdown. Includes auto-rotation landings when skids are damaged, main rotor blade flexing into tail boom; tire blowing on touchdown; landing gear driven in fuselage; fuselage, wing, etc., buckling. Note: The landing area must be suitable for a probable successful landing.

24 **Wheels-up landing.** Aircraft equipped with retractable landing gear lands with the wheels in the well. Includes intentional and unintentional gear-up landings.

25 **Landing gear collapse/retraction.** During takeoff roll, landing, or taxi, the gear collapses for any reason or the crew inadvertently retracts the gear (does not include gear shearing due to hard landing).

26 **Undershoot.** When an approach is being made to prepared area or field and the aircraft touches down short of the suitable landing surface. (Does not include wire, tree, or other strikes on approach, except an aircraft striking an airport boundary fence.)

27 **Overshoot or overrun.** Landing in which the aircraft runs off the end of the runway because of touchdown speed, short runway, touching down too long, or failure of brakes.

28 **Ditching.** Landing in a controlled attitude in water. (Does not include creeks, streams, etc., or those landings to ships or barges in which the aircraft crashes in the water.

29 **Ground loop/swerve.** Aircraft damage is incurred because absolute directional control is not maintained (intentional or unintentional). Includes FW ground loops; RW auto-rotational landings; RW running landings due to anti-torque failures; aircraft running off side of runway. May be used in conjunction with event 80 for RW aircraft.

30 **Collision with ground/water.** Accidents in which the aircraft strikes the ground or water unintentionally. Includes crashing into a mountain under IFR, IMC, or night; inadvertent flight into the ground or water, such as making a gun run and failing to pull up; low-level flight resulting in striking ground or water.

31 **Aircraft collision on the ground.** Accidents in which two or more aircraft collide on the ground. None of the aircraft can be in flight. (Used in addition to 08 multiple aircraft event.)

32 **Other collisions.** Accidents when an aircraft collides with something not accounted for by other type events listed.

33 **Rotor over-speed.** Main rotor rpm exceeds the allowable limits.

34 **Fire and/or explosion on the ground.** Accidents that are initiated by a fire or explosion. The fire must be prior to lift-off on takeoff and/or after touchdown.

35 **Fire and/or explosion in the air.** Same as on the ground except fire must be after lift-off and before touchdown.

36 **Equipment loss or dropped object.** Accidents in which some part of the aircraft or attached equipment is lost in flight, other than cargo or external stores.

37 **In-flight breakup.** Accidents in which aircraft begins to break up in flight. In these accidents, any type of landing is not expected.

38 **Spin/Stall.** Fixed wing only accidents resulting from entering a stall condition or spinning due to loss of airspeed or excessive angle of attack.

39 **Abandoned aircraft.** Accidents in which all flight crewmembers eject or parachute.

40 **Flight-related accident.** (When applicable, enter in first position). Damage to property or injury to personnel without damage to the aircraft.

41 **Instrument meteorological conditions (IMC).** Aircraft must be in IMC conditions when the accident/incident occurs (not to be used in the first position).

42 **Rappelling.** Property damage or personnel injury occurs during rappelling operations.

43 **Fast Rope.** Property damage or property injury occurs during Fast Rope operations.

44 **Overstress.** Stress damage as a result of operating aircraft outside design limitations.

45 **Turbine Engine foreign object damage.** (When applicable, enter in first position.) Damage confined to a turbine engine, resulting from unavoidable external objects (excludes internal engine failures that produce damage).

46 **Rotor/prop wash.** Property damage or personnel injury resulting from rotor/prop wash (does not include damage incurred by event 75).

47 **Engine over-speed/temp.** Engine rpm or temperature exceeds the allowable limits.
48 **Brownout.** Loss of visual reference to the ground or horizon caused by rotor wash swirling dust around the aircraft (not to be used in the first position).

49 **Bird strike.** Any part of the aircraft collides with a bird while in flight.

50 **Tree strike.** Aircraft strikes vegetation during any phase of flight.

51 **Wire strike.** Aircraft strikes wire or power line during any phase of flight.

52 **Mast bumping/In-flight breakup.** Main rotor separates as result of mast bumping.

53 **Missing aircraft.** Aircraft does not return from a flight and is presumed to have crashed.

54 **Foreign object damage (FOD).** Damage as a result of objects foreign to the area of impact and the FOD damage is the only damage incurred (excludes turbine engine FOD).

55 **Dynamic rollover.** An uncontrolled aircraft rolling motion with some part of the landing gear in contact with a terrain feature (excludes tree/wire/object strikes that induce the rolling motion).

56 **Maintenance operational check (MOC).** Accidents that occur during a MOC while engine(s) is in operation and/or rotors turning.

57 **Weapons related.** Property damage or injury to personnel as a result of weapon operations.

58 **Lightning strike.** Damage or injury as a result of lightning striking an operational aircraft.

59 **Rescue operations.** Property damage or personnel injury occurs during rescue operations.

60 **Object strike.** Aircraft or aircraft component strikes object other than ground, trees, or objects included in other events.

61 **Air to ground collision.** Aircraft in the air collides with or strikes aircraft on the ground.

62 **Stump strike.** Aircraft contacts stump during routine landing.

63 **Antenna strike.** Aircraft damage caused by contact with an antenna.

64 **Engine/Transmission over-torque/load.** Engine/transmission is subjected to a torque load beyond specified limits, or an engine loses rpm because of over gross weight or environmental conditions.

65 **Whiteout.** Loss of visual reference to the ground or horizon caused by rotor wash swirling snow around the aircraft. (not to be used in the first position.)

66 **Tie-down strike.** Damage or injury as a result of a main rotor tie-down device attached to a main rotor during start.

67 **Parachute.** Accidents involving parachute/drop operations while inside the aircraft or static line still attached.

68 **Mast bumping.** Damage resulting from contact between the main rotor and mast but not resulting in rotor separation.

69 **Structural icing.** Formation of ice on an aircraft/UAS structure, to include the rotor systems. Does not include carburetor, induction, or pitot static system icing.

70 **Engine failure.** Engine fails to develop sufficient power to maintain flight and/or the internal failure of an engine (excludes fuel starvation, exhaustion, contamination, and turbine engine FOD).

71 **Transmission failure.** Internal failure of a main transmission and/or attached gearboxes.

72 **Vertical fin strike.** Damage caused by tail rotor blades coming in contact with vertical fin on single-rotor helicopters.

73 **Spike knock.** Damage occurs when the transmission spike contacts the striker plate with sufficient force to cause damage.

74 **Seatbelt/restraint harness strike.** Damage caused by unsecured seatbelt/restraint harnesses.

75 **Blade flapping.** Damage resulting from wind or rotor wash from other aircraft that causes the main rotor blades to flap to the extent that damage occurs.

76 **Fuel exhaustion.** Engine quits as a result of a lack of usable fuel aboard an aircraft.

77 **Fuel starvation/contamination.** Engine quits or loses power as a result of fuel ceasing to flow to the engine while usable fuel is still on board the aircraft. Example: The pilot fails to switch tanks when one runs dry or a blockage of fuel lines occurs because of contamination.

78 **Animal strike.** During takeoff or landing, an animal is struck by any part of the aircraft.

79 **Battery fire/overheat.** A fire in the battery compartment or overheated battery, usually resulting in electrical failure.

80 **Excessive yaw/spin.** May occur on the ground or in the air (helicopter only). A maneuver where the aircraft yaws excessively or spins when the power is added without adequate antitorque input, or a loss of antitorque control occurs.

81 **Tail-boom strike.** Main rotor contacts tail boom on the ground due to wind conditions. Excludes hard landings and damage caused by rotor wash.
Materiel Factor Events

In addition to events 70 and 71 listed above, the following terms and definition are used to categorize materiel factor related mishap events. The event applies regardless of the cause of the failure/malfunction (FWT, maintenance, design or manufacture), and is to be used in lieu of/or in addition to events 01 and 03.

82 Airframe. Failure or malfunction of any airframe structure to include doors, windows, fairings, canopies, etc., to include hardware.

83 Landing gear. Failure or malfunction of any part of the landing gear or Arresting Hook, exclusive of hydraulics.

84 Power train. Failure or malfunction of any part or component of the power train except when events 47, 64, 70, 76, and 77 apply.

85 Drive train. Failure or malfunction of any part or component of the drive train except when events 33, 64, 71 and 86 apply.

86 Rotor/propellers. Failure or malfunction of rotor or prop assembles, hubs, blades, etc. Excludes other power/drive train part failures; e.g. gearboxes, mast, etc.

87 Hydraulics system. Failure or malfunction of any hydraulic part. The failure of other systems resulting from hydraulic initiated will be coded as hydraulic.

88 Pneumatic system. Failure or malfunction of any pneumatic part. The failure of any other system resulting from pneumatic initiated will be coded as pneumatic.

89 Instruments. Failure or malfunction of any part of the instrument system that results in a faulty instrument indication.

90 Warning system. Failure of malfunction of any part of the warning system that results in a faulty warning indication.

91 Electrical system. Failure or malfunction of any part of the AC or DC electrical systems. Includes: current producing, transforming, converting, and amplifying parts; e.g., battery, generator, alternator, relay, etc.

92 Fuel system. Failure of any part of the fuel system. Does not include the fuel metering or fuel control units that will be reported as part of the engine.

93 Flight control. Failure of any part of the flight control system. Excludes hydraulic initiated control problems.

94 Utility/environmental control system. Failure of any part of the system. Includes auxiliary power units (APU)

95 Avionics. Failure of any part of the radio navigation or communication equipment.

96 Cargo-handling equipment. Failure of the cargo-handling equipment attached to the aircraft only.

97 Armament. Failure of any part to include the aiming and firing system.

98 Night vision system/device. Failure or malfunction of any part of the night vision system/device.
**Example - Human Error Finding**

**FINDING (Present and Contributing: Human Error – Individual Failure):**

<table>
<thead>
<tr>
<th>Required Information</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explanation of when and where the mistake/error occurred in context of the accident sequence of events.</td>
<td>While conducting day, nap-of-the-earth aircrew training at 50 feet AGL and 10 KIAS…</td>
</tr>
<tr>
<td>2. Aircraft and individual involved by duty position.</td>
<td>the Pilot in Command (PC) and Pilot (PI) of the UH-60…</td>
</tr>
<tr>
<td>3. Identification of mistake made (ref: aviation-specific mistakes/errors in DA PAM 385-40, Table B-1) and an explanation of how task/activity was performed improperly.</td>
<td>improperly scanned. That is, both crewmembers failed to properly scan for obstacles when they both became visually fixated on an animal on the ground…</td>
</tr>
<tr>
<td>4. Directive (ATM, SOP, FM, TM, etc.) or common practice governing performance of task/activity.</td>
<td>in contravention of TC 3-04.33, Task 1026.</td>
</tr>
<tr>
<td>5. Consequences of mistake/error.</td>
<td>As a result, the aircraft main rotor blades were damaged when they made contact with a tree at approximately 50 feet AGL. There were no injuries.</td>
</tr>
<tr>
<td>6. Identification of reasons (root causes/system inadequacies) for the mistake/error (ref: System Inadequacies in Table B-5 of DA PAM 385-40). NOTE: The finding may contain multiple System Inadequacies (Training, Individual, Leader, etc.).</td>
<td>The PC's and PI's actions were a result of overconfidence in each other's ability to clear the aircraft and maintain obstacle clearance.</td>
</tr>
<tr>
<td>7. Brief explanation of how each reason (root cause/system inadequacy) contributed to the mistake/error.</td>
<td>The PC and PI allowed the aircraft to fly too close to known obstacles resulting in damage to the main rotor blades.</td>
</tr>
</tbody>
</table>

**FINDING 1:** (Present and Contributing: Human Error- Individual Failure): While conducting day, nap-of-the-earth aircrew training at 50 feet AGL and 10 KIAS, the Pilot in Command (PC) and Pilot (PI) of the UH-60L improperly scanned. That is, both crewmembers failed to properly scan for obstacles when they both became visually fixated on an animal on the ground in contravention of TC 3-04.33, Task 1026. As a result, the aircraft main rotor blades were damaged when they made contact with a tree at approximately 50 feet AGL. There were no injuries.

The PC's and PI's actions were a result of overconfidence in each other’s ability to clear the aircraft and maintain obstacle clearance. The PC and PI allowed the aircraft to fly too close to known obstacles resulting in damage to the main rotor blades.
Accident Errors/Failures/Effects/System Inadequacy(ies)/Recommendations

NOTE: Explanations/Definitions for Accident Errors/Failures/Effects/System Inadequacy(ies)/Recommendations are located in DA PAM 385-40 Appendix B.

Errors
P01 Scan
P02 Maintain/recover orientation
P03 In-flight planning
P04 Preflight planning
P05 Estimate distance/closure/control input
P06 Detect hazards/obstacles
P07 Diagnose or respond to an emergency
P08 Coordination
P09 Failed to use or follow checklist
P10 Failed to follow maintenance manual (TM, SOP, TB, etc.), instructions while servicing acft/equip
P11 Failed to follow instructions (TM, TB, MWO, etc.) while repairing, installing, or adjusting equipment
P12 Inadequate/improper Inspection
P13 Failed to read/follow available SOPs, notices, ARs, General rules/principles, etc
P14 Inadequate tool/equip accountability
P15 Failed to secure materiel/equip/cargo
P16 Inadequate/improper LZ/termination point selection
P17 Improperly prepared LZ
Supervisor—Specific Mistakes/Errors
P18 Improper mix/match/number of personnel
P19 Inadequate time allowed for pre–mission preparation
P20 Set/permitted inappropriate launch time for Environmental conditions
P21 Permitted selection of inappropriate LZ for intended training or crew experience
P22 Failed to ensure repairs/services/inspections/MWO are IAW appropriate TMs, TB, MWOs, etc.
P23 Failed to take appropriate/timely action to prevent or stop violation of procedures/unsafe acts
P24 Inadequate mission planning for risk–management, operational, and logistic decisions
P25 Failed to brief/provide information
P97 Insufficient information to determine mistake/error
Materiel Failure/Malfunction
M01 Overheated/burned/melted
M02 Froze (temperature)
M03 Obstructed/pinched/clogged
M04 Vibrated
M05 Rubbed/worn/frayed
M06 Corroded/rusted/pitted
M07 Overpressured/burst
M08 Pulled/stretched
M09 Twisted/torqued
M10 Compressed/hit/punctured
M11 Bent/warped
M12 Sheared/cut
M13 Decayed/decomposed
M14 Electric current action (short, arc, surge, etc.)
M97 Insufficient information reported to identify type of failure/malfunction
Environmental Effects/Condition
E01 Illumination (dark, glare, etc.)
E02 Precipitation (rain, fog, ice, snow, etc.)
E03 Contaminants (fumes, dust, chemicals, FOD, etc.)
E04 Noise
E05 Temperature/humidity
E06 Wind turbulence
E07 Vibration
E08 Acceleration/deceleration
E09 Radiation (sunlight, X–ray, LASER, etc.)
E10 Work surface-space (slippery floor, cluttered walkway, steep rough road, etc.)
E11 Air pressure (explosion, decompression, altitude effects, etc.)
E12 Electricity (lightning, arc, surge, short, shock, etc.)
E13 Animals (deer, birds, rodents, insects, etc.)
E97 Insufficient information reported to identify environmental conditions

System inadequacy(ies)/Root cause(s)/Readiness shortcomings
01 Inadequate/improper supervision by “Higher command”
02 Inadequate/improper supervision by “Staff officer” e.g., operations, safety, supply, etc.
03 Inadequate/improper supervision by “Unit command”
04 Inadequate/improper supervision by “Direct supervisor” e.g., instructor, squad leader, aircraft commander, etc.
05 Inadequate school training
06 Inadequate unit training
07 Inadequate experience
08 Habit interference
09 Inadequate written procedures for operation under normal, abnormal, or emergency conditions
10 Inadequate facilities or services
11 Inadequate/improper Equip/materiel design or equipment not provided
12 Insufficient type/number of personnel
13 Inadequate manufacture, assembly, packaging, or quality control
14 Inadequate maintenance (inspection, installation, troubleshooting, record keeping, etc.)
15 Fear/excitement (inadequate composure)
16 Overconfidence (in self, others, equipment)
17 Lack of confidence (in self, others, equipment)
18 Haste/Attitude (motivation)
19 Fatigue (self induced)
20 Effects of alcohol, drugs, or illness
21 Poor attitude/indiscipline
22 Environmental conditions
97 Insufficient information reported to identify inadequacy/shortcoming/cause

Recommendations/Remedial Measures
01 Improve school training
02 Improve unit training

03 Revise procedures for operation under normal, abnormal, or emergency conditions
04 Ensure personnel are ready to perform (training, experience, psycho-physiological state, etc.)
05 Inform personnel of problems and remedies (meetings, publications, EIRs, etc.)
06 Positive command action (to encourage proper performance and discourage improper performance)
07 Provide personnel resources (number or qualifications) required for job
08 Redesign (or provide) equipment or materiel
09 Improve (or provide) facilities or services
10 Improve quality control
11 Perform studies to get solutions to system inadequacy(ies)
From the provided image of a page from a document, it appears to include sections titled "Organization Involved," "Organization Deemed Accountable," and "Component and Part Failure/Malfunction Data." Specific details such as dates, names, and other identifying information are present, indicating that the document is a form related to aviation accident reports. The text is too fragmented to transcribe completely, but it seems to be part of a larger report or form, likely used for accident investigation and data collection in the aviation industry. The document is formatted in a structured manner with fields for various types of data, including names, dates, and locations, typical of regulatory or formal reports.
COMPLETE BLKS 19 - 26 FOR ALL CLASS A, B, C, ACFT GROUND CLASS A, B, C AND ALL CLASS ACFTS INVOLVING HUMAN ERROR/INJURY.

19. MOON ILLUMINATION DATA
   (For night Class A, B, or C acfts. If blank a "no", no other entry is required.)
   a. Moon Above Horizon  Yes  No
   b. Moon Visible  Yes  No
   c. Moon Degree Above Horizon
   d. Percent of Moon Illumination
   e. Moon Brightness Rating

20. WIRE STIKE DATA
   (If "no" at B, a. no other entry is required)
   a. Wire Strike  Yes  No
   b. WSPS Installed  Yes  No
   c. WSPS Engaged Wire
   d. WSPS Cut Wire  Yes  No
   e. WSPS Functioned As Designed
   f. Wires Struck

21. PERSONNEL DATA
   (Complete for each crew member with access to flight controls or other personnel injured or having a contributing role in the accident; use additional forms as needed)
   a. Name (Last, First, MI)
      Teacher, Robert G.
      (B) On Fit Controls
      (a) Lab Test
      (b) Results
      (c) Activity (Last 24 hrs)
      (d) Hrs Slept
      (e) Hrs Flown
      (f) DATE Re-deployed from Combat Zone
      (g) Total Flight Hours
   b. Name (Last, First, MI)
      Learner, Laura M.
      (B) On Fit Controls
      (a) Lab Test
      (b) Results
      (c) Activity (Last 24 hrs)
      (d) Hrs Slept
      (e) Hrs Flown
      (f) DATE Re-deployed from Combat Zone
      (g) Total Flight Hours
   c. Name (Last, First, MI)
      Corner, James J.
      (B) On Fit Controls
      (a) Lab Test
      (b) Results
      (c) Activity (Last 24 hrs)
      (d) Hrs Slept
      (e) Hrs Flown
      (f) DATE Re-deployed from Combat Zone
      (g) Total Flight Hours

22. IMPACT/PROTECTIVE/ESCAPES/SURVIVAL/RESCUE DATA
   (For Class A, B, and C Aircraft)
   a. Aft Occupant Space Compromised
   b. Escape/Survival Difficulties (If "yes" DA Form 2397-6 is required)
   c. Protective Restraint Equip Functioned as designed (If "no" DA Form 2397-10 required for the individual)

23. ACDT CAUSE FACTORS
   (BRI 24 must support all cause factors checked. See DA Pam 385-40 for definition of cause factors)
   a. Training Failure (Site etc. but not No training)
   b. Standards Failure (Sites)
   c. Leader Failure (Site)
   d. Individual Failure (Site)
   e. Support Failure (Inadequate equipment)

24. FINDINGS AND RECOMMENDATIONS
   (See instructions in DA Pam 385-40 for writing findings and recommendations. Use additional sheet if required)
   Finding 1: (Present and Contributing to Human Error/Individual Failure). While conducting day, nap-of-the-earth aircrew training at 50 feet AGL and 10 KIAS, the PC and PI of the UH-60L improperly scanned. That is, both pilots failed to properly scan for obstacles when they both became visually fixated on a animal on the ground in contravention of TC 3-04.33 Task 1026. As a result, the aircraft's main rotor blades were damaged when they made contact with a tree at approximately 50 feet AGL. There were no injuries.
   The PC's and PI's actions were the result of overconfidence in each other's ability to clear the aircraft and maintain obstacle clearance. The PC and PI allowed the aircraft to fly too close to known obstacles resulting in damage to two of the main rotor blades.

RECOMMENDATION 1:
   a. Unit Level Action: Commander Company A, 1-234 Avn Regt, inform all assigned personnel of the facts and circumstances surrounding this accident.
   b. Higher Level Action: None.
   c. Army Level Action: None.

USACRC
duty

25. LIST OF ATTACHMENTS (CCAD DA Forms 2397-4, 8, 9, etc.)

26. COMMAND REVIEW
   (Required for Class A and B combat and all Class C acfts. Use separate sheet for noncompliance, additional findings, and recommendations.)
   a. Unit Commander
   b. Reviewing Official
   c. Approving Authority
   d. DA Review

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After interviewing the accident aircraft crewmembers, the board determined that human error was the cause of this accident. The PC and the PI failed to properly scan while conducting TC 3-04.33 task 1026 (maintain airspace surveillance). The PC and PI simultaneously became visually fixated for several seconds on a deer approximately 50 feet off of the nose of the aircraft. The PC’s and PI’s improper scan can be attributed to the PC’s and the PI’s overconfidence in each other’s ability to clear the aircraft of obstacles when flying NOE because they had flown with each other several times in the past month and both stated they were very comfortable flying with each other. The PC did not conduct a crew mission briefing for this flight in contravention of the unit safety and standardization SOP chapter 12-3 and TC 3-04.33 task 1000 (participate in crew mission briefing).

The crew did not properly employ all of the tenets of crew coordination IAW TC 3-04.33 chapter 6 in that the crew did not announce actions, provide aircraft control and obstacle advisories, or communicate positively. The board determined that the lack of crew coordination was due to the crew’s overconfidence in themselves and each other’s ability to complete the mission without a crew mission briefing. The CE sitting in the left gunner’s seat felt the aircraft was too close to the trees but did not advise the PC because he felt the PC could see how close the blades were to the trees and would avoid hitting them.

NOTE: For the example AAAR on pages 20, and 21 of this booklet an additional Present and Contributing Finding (block 24) should be written on the crewmembers (PC, PI and CE) using the information provided in the summary and continuation (block 15) with a Task Error of improper crew coordination and a system inadequacy of overconfidence.
FINDING (Present and Contributing: Materiel Failure):

Required Information | Example
--- | ---
1. Explanation of when and where the materiel failure/malfunction occurred in the context of the accident sequence of events. | During engine run-up of the CH-47D with rotor blades turning…
2. Name and part number (PN) or national stock number (NSN) of the part, component or system that failed. | The retention bolts (P/N NAS624H-5) securing the fixed droop stop to the aft rotor system red blade pitch shaft failed.
3. Mode of failure (corroded, burst, twisted, decayed, etc.) (see DA PAM 385-40, Appendix B, Table B-3 for definitions and examples) NOTE: Only one Task Error failure per finding. | The excessive pressure on the engaged threads allowed the threads to strip from the nuts.
4. Consequences of materiel failure | This failure allowed the fixed droop stop and bolts to separate from the aircraft. As a result, during shutdown, with both engine condition levers at stop and the main rotor blades coasting slowly, the aircraft red main rotor blade contacted the fuselage…
5. Identification of reasons (root causes/system inadequacies) materiel failure/malfunction caused or contributed to accident. NOTE: The finding may contain multiple System Inadequacies (Design, Manufacture, etc.) | The droop stops failed due to improper installation by the manufacturer during aircraft overhaul.
6. Brief explanation of how each reason (root cause/system inadequacy) contributed to materiel failure/malfunction. | That is, the bolts (P/N NAS624H-5) installed in the separated fixed droop stop, though nearly identical in appearance were 1/8-inch shorter than the bolts (P/N NAS624H-7) required by TM 55-1520-240-23P1.

FINDING 1 (Present and Contributing: Materiel Failure)

During engine run-up of the CH-47D with rotor blades turning, the retention bolts (P/N NAS624H-5) securing the fixed droop stop to the aft rotor system red blade pitch shaft failed. The excessive pressure on the engaged threads allowed the threads to strip from the nuts. This failure allowed the fixed droop stop and bolts to separate from the aircraft. As a result, during shutdown, with both engine condition levers at stop and the main rotor blades coasting slowly, the aircraft red main rotor blade contacted the fuselage, resulting in minor fuselage and main rotor blade damage.

The droop stops failed due to improper installation by the manufacturer during aircraft overhaul. That is, the bolts (P/N NAS624H-5) installed in the separated fixed droop stop, though nearly identical in appearance, were 1/8-inch shorter than the bolts (P/N NAS624H-7) required by TM 55-1520-240-23P1.
**Additional Example –**
**Present and Contributing Finding: Environmental**

**FINDING (Present and Contributing: Environment):**

<table>
<thead>
<tr>
<th>Required Information</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explanation of when and where the environmental factor occurred in the context of the accident sequence of events.</td>
<td>While ground-taxing to the parking ramp…</td>
</tr>
<tr>
<td>2. Aircraft and if applicable, the individual(s) involved by duty position.</td>
<td>the AH-64D…</td>
</tr>
<tr>
<td>3. Description of environmental factor encountered (see DA PAM 385-40, Appendix B, Table B-4 for definitions and examples).</td>
<td>encountered an unforecast sudden microburst with winds exceeding 80 knots.</td>
</tr>
<tr>
<td>4. Consequences of environmental effect.</td>
<td>As a result, the aircraft became airborne in a nose-low condition and subsequently entered a right spin from which the crew was unable to recover.</td>
</tr>
<tr>
<td>5. Explanation/identification of reason(s) environmental conditions caused the accident.</td>
<td>Microbursts are environmental events that cannot be seen or forecasted with present meteorological measuring equipment nor are they visible to aircraft crewmembers. They are normally a phenomenon associated with thunderstorms; however, there were no thunderstorms reported or visible in the vicinity.</td>
</tr>
</tbody>
</table>

**FINDING 1 (Present and Contributing: Environment)**

While ground-taxing to the parking ramp, the AH-64D encountered an unforecast sudden microburst with winds exceeding 80 knots. As a result, the aircraft became airborne in a nose-low condition and subsequently entered a right spin from which the crew was unable to recover. The aircraft struck the ground causing aircraft damage and injuring one crewmember.

Microbursts are environmental events that cannot be seen or forecasted with present meteorological measuring equipment nor are they visible to aircraft crewmembers. They are normally a phenomenon associated with thunderstorms; however, there were no thunderstorms reported or visible in the vicinity.