Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

FEBRUARY 1998 ◆ VOL 26 ◆ NO 5

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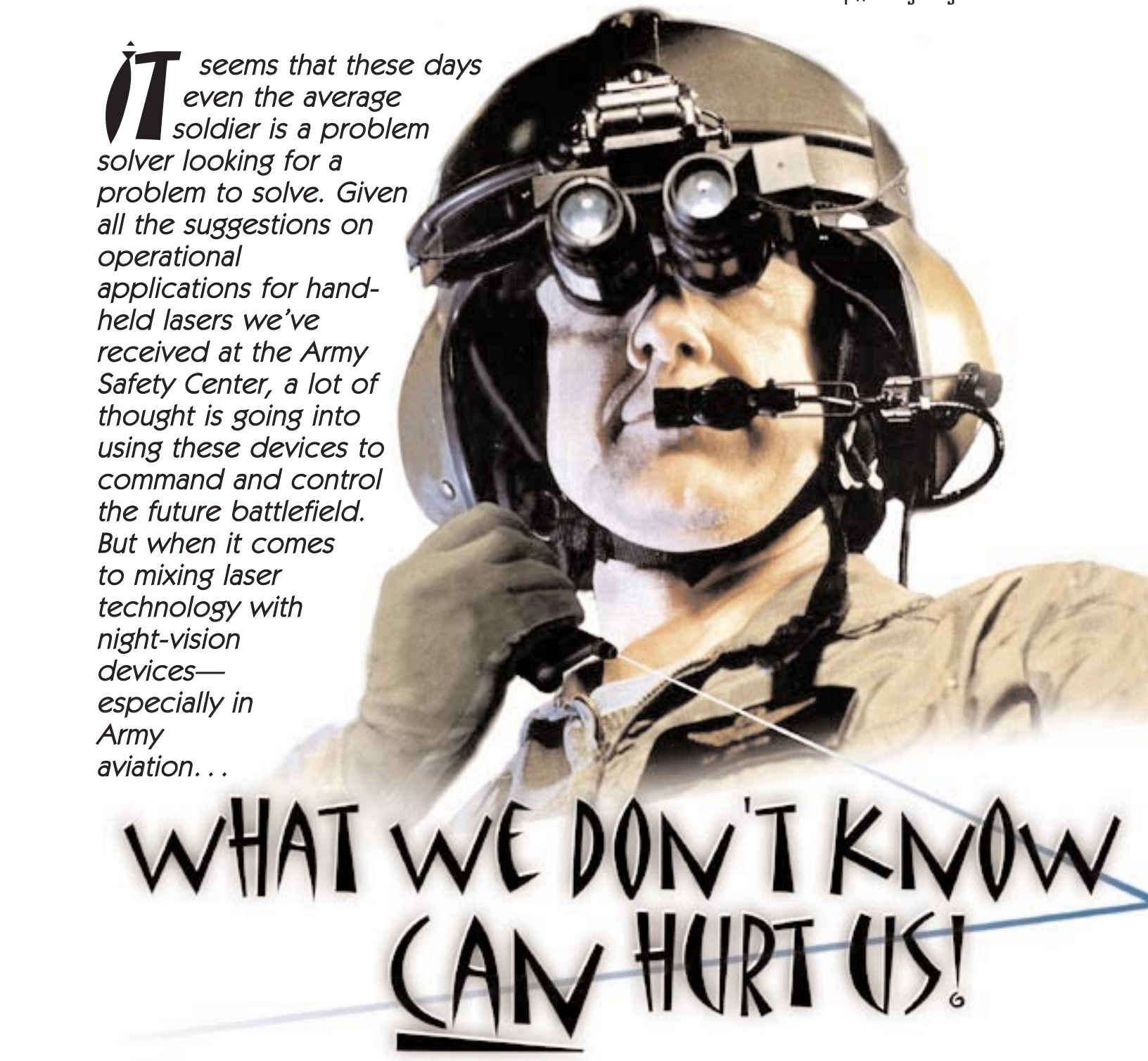


IT seems that these days even the average soldier is a problem solver looking for a problem to solve. Given all the suggestions on operational applications for hand-held lasers we've received at the Army Safety Center, a lot of thought is going into using these devices to command and control the future battlefield. But when it comes to mixing laser technology with night-vision devices—especially in Army aviation. . .

WHAT WE DON'T KNOW CAN HURT US!

HEADS-UP—Army aviation experienced five Class A accidents during the first quarter of this fiscal year, compared to one during the same period for the last 3 years. The first quarter was especially tough for the AH-64 community. Three of the five accidents involved AH-64s. — BG Burt S. Tackaberry, Commanding General, U.S. Army Safety Center

Testing the technology

Hand-held lasers are simple to buy, easy to use, and very effective. Buyers can purchase these devices from any number of catalogs or military-gadget stores. Some Army aircrewmembers started to use laser devices several years ago when about the only thing available was the red penlight type typically used for classroom pointers. Primarily because of the color, but also because we just didn't know what effect these lasers would have on NVGs or what sort of eye hazard they represented, they were prohibited last spring from use in the cockpits of Army aircraft until testing could be accomplished. Paragraph 8j of GEN-97-ASAM-04 (101430Z Apr 97) said:

"The use of laser pointers in the cockpit of Army aircraft is prohibited. Laser pointers may be used only in the cargo compartment of UH-1, UH-60, or CH-47 aircraft at the discretion of the PC. The PC should include the use of laser pointers in the crew and passenger briefing. Warning: Users should be aware that any laser can permanently or temporarily degrade the performance of NVGs if used improperly. Any laser that is not a Class 1 laser device has the potential to cause direct damage to the eye. Testing is currently being accomplished to assist in the selection and development of proper operating procedures for safely allowing the use of these devices in NVG aviation operations."

The message went on to list the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Laser Program, DSN 584-3932 (410-671-3932), as point of contact for laser issues.

This prohibition was included in the message because we just didn't know what hazards we were dealing with. In order to try to identify the hazards associated with hand-held-laser use in Army aircraft, a study group consisting of representatives from CHPPM (the laser folks), CECOM (electronic-equipment manager), PM-Night Vision (equipment-fielding folks), and the Safety Center (NVG systems manager) went to the laser range at Fort A.P. Hill, VA, and tested numerous lasers.

Personnel from CHPPM conducted the first part of the test by measuring the amount of energy reflected when individual lasers are fired through aircraft windscreens. In addition, they also measured the energy reflected off the instruments.

Following these reflective-energy measurements, the reps from CECOM, PM-Night Vision, and the Safety Center measured the amount of NVG-resolution degradation caused by each of the test lasers. In addition to this compatibility test, we evaluated the range individual lasers could be seen with NVGs. While we didn't establish go/no-go criteria for this part of the evaluation, we did get input from some operational folks about what tactics, techniques, and procedures they'd like to use. Based on this input, we determined that we should be able to see the lasers from 200 to 1500 meters under various ambient-light levels. The illumination levels during the test period varied from clear starlight to 91-percent moon illumination with clear skies.

We tested three Class 1 and five Class 3a and 3b lasers. Most of the lasers tested were available through normal distribution channels, but two of the lasers were catalog penlight type.

All the Class 1 lasers degraded the NVGs in varying degrees, but all of them measured within acceptable limits. The AN/PEQ-2 pointer/illuminator is a new laser that has high (Class 3b) and low (Class 1) power settings for the laser pointer. In the low power setting, the PEQ-2 only slightly degraded NVG resolution, which made it acceptable for use in the cockpit. This low-power laser was able to generate a good spot out to about 1500 meters under very dark conditions. However, it was able to generate only a weak spot out to about 400 meters under higher illumination. When we switched the PEQ-2 to the high-power level, we had much improved range, but significant NVG-image degradation made it unacceptable for aviation NVG use. This laser also has the capability of illuminating a larger area (like you would expect with a searchlight) by defocusing the laser beam.

Note: The Army has not approved the use of the AN/PEQ-2 (not to be confused with the "A" version). The AN/PEQ-A laser illuminator, which is currently in production, is not a Class 1 laser and should not be directed toward friendly personnel within 15 meters, even in the low-power mode.

We also looked at the Ground Commander's Pointer (GCP-1A). This device is near-IR and has two operating modes. One mode is low power (Class 1); the other is high power (Class 3b). The low-power position of this device degraded the NVGs more than the other Class 1 lasers but still was considered acceptable. This laser was able to point to target areas out to at least 2000 meters and more during very low illumination and to about 1600 meters during high illumination.

Note: With regard to the eye safety of laser pointers, model numbers make a difference (e.g., the GCP-1, GCP-1A, and GCP-2A are not the same power). All laser pointers sold in the U.S. are required by law to have the laser classification labeled on the device.

The next Class 1 laser we checked was the AN/PAQ-4C. This is a 0.7-milliwatt near-IR laser. It caused only slightly more degradation in the NVG

than the PEQ-2 but was well within the acceptability range for use with aviation NVGs. When we conducted the visibility test, we were able to see the laser spot out to about 2000 meters under very dark conditions and out to about 1500 meters under high ambient illumination. This laser was the overwhelming choice of the study group because it had adequate range under all illumination levels, was eye safe, and is readily available now as a standard piece of Army equipment. Although the PAQ-4C is not yet approved for use with aviation NVGs, look for its approval in an upcoming ASAM.

We evaluated several Class 3 lasers that worked very well in terms of useable range under various light levels, but none of them was satisfactory for use with aviation NVGs because of image degradation. In addition, none of the visible lasers we tested were acceptable because of their effects on the NVGs.

Summary

The upcoming ASAM on night vision will authorize the use of some Class 1 near-IR lasers. Use of these hand-held lasers in Army aviation will require not only ensuring that the right lasers are used but also good crew coordination as well.

Problems arise when lasers are used improperly or when devices are incorrectly labeled. One final word of caution: These devices are great tools, but they must be operated safely. Everyone who uses them should be aware of their associated hazards and make on-the-spot corrections to anyone not using them correctly.

—CW5 Bob Brooks, NVG Systems Manager, USASC, DSN 558-1253 (334-255-1253), brooksr@safety-emh1.army.mil

Presently fielded laser devices

AN/VVG-1, Laser Rangefinder. *Typically on M551 howitzers using a 694.3nm laser. Class 4.*

AN/VVG-2, Laser Rangefinder. *Typically on M60 tanks using a 694.3nm laser. Class 4.*

AN/VVG-3, Laser Rangefinder. *Typically mounted on M1 tanks using a 1064nm laser. Class 3b.*

AN/GVS-5, Laser Rangefinder. *Hand-held using a 1064nm laser. Class 3b.*

AN/TVQ-2, Ground/Vehicle Laser Locator Designator (G/VLLD) *using a 1064nm laser. Class 4.*

AN/PAQ-3, Modular Universal Laser Equipment (MULE) *using a 1064nm laser. Class 4.*

AN/PAQ-1, Laser Target Designator (LTD). *Hand-held laser using a 1064nm laser. Class 4.*

Laser Augmented Airborne TOW (LAAT). *In AH-1 helicopters using a Target Acquisition and Designator Sight Pilot Night Vision Sensor (TADS/PNVS) using a 1064nm laser. Class 3b.*

Mast Mounted Sight (MMS). *Used in OH-58D helicopters using a 1064nm laser. Class 4.*

AIM-1, Infrared Aiming light. *Used on some helicopters and mounted on small arms using an 820-850nm laser. Class 3b.*

TADS/PNVS, Laser Rangefinder Designator. *In AH-64 helicopters using a 1064nm laser. Class 4.*

LPL 30, Long-Range Laser Pointer. *Hand-held device used to mark targets. Uses a laser at 830nm. Class 3b.*

GCP-1, Ground commander's pointer. *Uses 820-825nm diodes. Class 3b. (Note: Several models of the GCP-1 and GCP-2 have been produced.)*

AN/PVS-6, Miniature Eyesafe Laser Infrared Observation Set (MELIOS). *Hand-held laser rangefinder using a 1540nm laser. Class 3a.*

M55, Laser Tank Gunnery Trainer. *Uses a 632.8nm laser. Class 1.*

Multiple Integrated Laser Engagement System (MILES). *Using 905nm lasers. Classes vary from 1 through 3b.*

PAQ-4A/B/C Infrared Aiming Light. *Small, light-weight, most commonly mounted on small arms. Class 1.*

What you can't see can hurt you

Class 3B hand-held lasers such as the LPL-30 long-range laser pointer and the GCP-1 ground commanders pointer can range in power from 5 milliwatts (mW) to 500mW. At the higher levels, they can cause serious eye injury if used improperly. The major hazard is to the unprotected eyes of users who look at the laser from within the direct beam.

The problem is, these lasers emit energy that is invisible to the unaided eye. As a result, users sometimes tend to look into the business-end of the device to try to ascertain whether or not it's working. With these near-infrared lasers, even if users looked at the beam at very close range, the most they'd see would be a very weak red dot of light, if that. But staring into the laser from within the beam can cause serious eye injury. Even that very weak red dot of light is delivering a laser overexposure—these are non-visible lasers.

Users should never stare into any laser, regardless of what the label says. Buyers should be wary of any claim of device safety unless the laser is clearly labeled a Class 1 laser in accordance with Title 21, Code of Federal Regulations (CFR), Part 1040, Performance Standards for Light-Emitting Products. This information must be on the label.

Users of laser pointers other than Class 1 must never aim a pointer at unprotected personnel. To protect themselves, users can unscrew the case enough to disable the power source or remove the batteries when storing it in their shirt pocket or rucksack.

Remember, these devices are not flashlights and should not be used haphazardly.

For more information, contact the Army Center for Health Promotion and Preventive Medicine (CHPPM) Laser Program, DSN 584-3932 (410-671-3932).

Laser-device classifications

Class 1

Class 1 laser devices are not capable of emitting hazardous laser radiation under any operating or viewing condition. These lasers include those that are fully enclosed.

Examples: PAQ-4A/B/C infrared aiming lights and many of the laser marksmanship trainers.

Class 2

Class 2 laser devices are usually continuous wave (CW) visible laser devices. Precautions are required to prevent continuous staring into the direct beam. Momentary exposure(>0.25 second) is not considered hazardous.

Examples: Laser pointers, construction lasers, and alignment lasers.

Class 3a

Class 3a lasers normally are not hazardous unless viewed with magnifying optics from within the beam. Includes visible- and invisible-frequency lasers.

Example: Miniature Eyesafe Laser Infrared Observation Set (MELIOS).

Class 3b

Class 3b lasers are potentially hazardous if the direct or specularly reflected beam is viewed by the unprotected eye. Care is required to prevent intrabeam (within the beam) viewing and to control specular (from mirrors, still water, etc.) reflections.

Examples: Many rangefinders and the AIM-1, GCP-1, and AN/PEQ-2A laser pointers.

Class 4

Class 4 lasers are—

- *Pulsed, visible, and near-infrared lasers capable of producing diffuse reflections and fire and skin hazards.*
- *Those lasers with an average output power of 500 milliwatts (mW) or greater.*

Safety precautions generally consist of using door interlocks to prevent inadvertent exposure to personnel entering the laser facility, using baffles to terminate primary and secondary beams, and wearing protective eyewear and clothing. For military operations during peacetime, these lasers are normally operated only on cleared, approved laser ranges or while using appropriate laser eye and/or skin protection.

Examples: Industrial welders and target designators.

Reference TB MED 524: Control of Hazards to Health from Laser Radiation

Pull-out posters pages 5-8

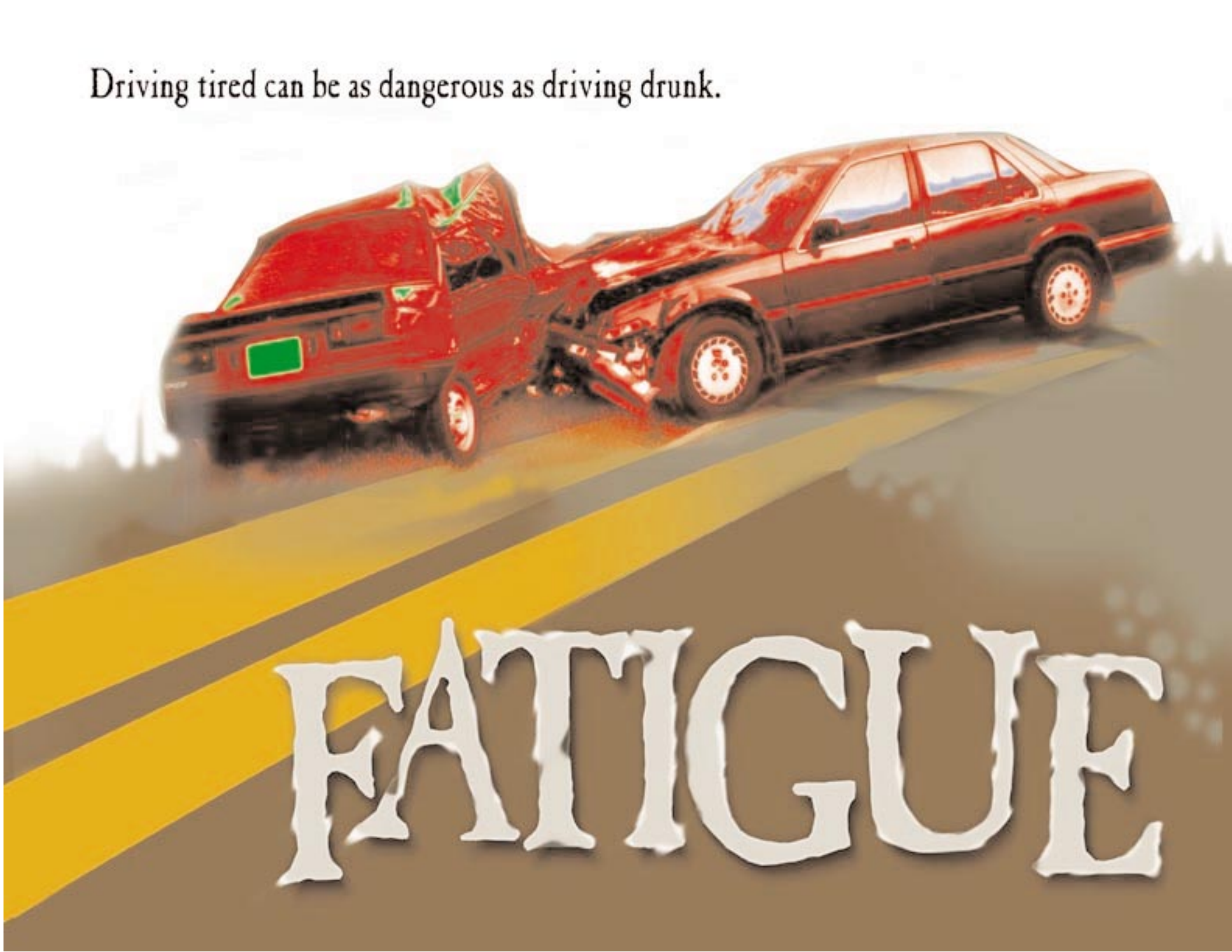
WHAT YOU CAN'T SEE CAN HURT YOU!

HAND-HELD LASERS: more than meets the eye

MISSIONS	HAZARDS	CONTROLS
PZ/LZ identification	Eye injury	Treat laser as loaded weapon
General-area illumination	NVG-image degradation	Develop/practice crew coordination
Slingload marking	NVG damage	Never look into laser
Target identification	Invisible/ reflected energy	Use low-power near-IR devices
	Battlefield confusion	Know and follow unit SOP for use

For more information, see February 1998 Flightfax or call CHPPM Laser Program, DSN 584-3932 (410-671-3932).

Driving tired can be as dangerous as driving drunk.



Shortfax
Keeping you up to date

ISAQ vs. TM: Which takes precedence?

According to an AMCOM Director of Aviation Engineering Message (191656Z December 97), there has been some confusion about what to do when there is a discrepancy between an Interim Statement of Airworthiness Qualification (ISAQ) and a technical manual. The short answer is that ***the ISAQ takes precedence over the technical manual, regardless of publication dates.***

An ISAQ is issued to authorize flight use of a system prior to full airworthiness release. It is issued separately from normal publications changes and retains its authority over technical manuals, regardless of respective dates.

For additional clarification concerning ISAQs or other issues relating to Army aircraft airworthiness, contact your local Logistics Assistance Representative or an AMCOM System Engineer supporting your system.

POC: Mr. Ron Branson, Aviation Systems Engineering, AMCOM, DSN 897-4904 (205-313-4904), bransonr@redstone.Army.mil

FYI: AVA adjustment in the works

The aviation vibration analyzer (AVA), NSN 6625-01-282-3746, is Army standard equipment for rotor track and balance analysis and analysis of other rotating-component-induced vibrations for all Army helicopters. The AVA indicates maintenance actions necessary to efficiently smooth rotor systems and eliminate unacceptable component-induced vibrations.

The current AVA will not process nor accept date entries beyond the year 1999. This results in an AVA system failure as it can't process diagnostics and corrections in accordance with Army standards. AMCOM is working on a software adjustment that will remedy the situation. The modification will be fielded by the end of 1998.

POC: Mr. Randall Bunley, AVA System Manager, AMCOM, DSN 788-0043 (205-842-0043), bunley-rc@redstone.army.mil

Helmet-liner reminder

The thermoplastic liner (TPL) system currently used in Army aviation helmets provides comfort, stability, retention, and impact protection to the wearer—if it's properly fitted. The TPL system conforms to variations on the surface of the head, providing several benefits over the previous sling suspension system. The TPL evenly distributes the weight of the helmet across the head, eliminating hot spots and improving comfort. In addition, impact forces during a mishap are distributed over a wider area of the skull, reducing the potential for injury.

Obviously, keeping all the layers of the TPL in the helmet provides the greatest benefit, but since the SPH-4 and SPH-4B come in only two sizes, layers may have to be removed to custom fit the helmet. However, at least ***two*** layers must be retained. The TPL system will not conform to the head if only one layer is used, and impact protection may be compromised.

The HGU-56/P, currently being fielded, comes in six sizes, permitting aviation crewmembers to choose the proper helmet size rather than remove TPL layers. In fact, removing TPL layers from the HGU-56 is not permitted; the TPL can be heat fitted if necessary.

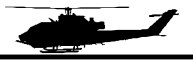
Unfortunately, a small percentage of Army aircrewmembers cannot obtain a proper helmet fit and still retain the required number of TPL layers. In these cases, the crewmember's ALSE shop should contact the U.S. Army Aeromedical Research Laboratory's helmet-fit program for assistance.

—CW2 Douglas Denno, Helmet Fit Program Manager, USAARL, Fort Rucker, AL, DSN 558-6804 (334-255-6804), alserp@rucker-emh2.army.mil

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH1



Class C

F series

■ During PMD, mechanic found 3-inch tear in vertical fin on tail-rotor side. Subsequent inspection revealed that 90-degree gearbox was loose, with 3/8- to 1/2-inch play at end of crosshead. Retaining bolts had backed out and allowed tail rotor to contact vertical fin during shutdown. Pilots acknowledged that they had felt tail rotor hit static stops during shutdown, but no damage was noted during postflight inspection.

Class E

F series

■ While at 2-foot hover just after liftoff, PI started pedal turn to the right to set up for terrain flight takeoff. Aircraft started to drift right. PC looked to the right, identified a rock sticking up, and announced the hazard as the right skid contacted the rock. Aircraft began right rolling motion, but PI recovered and flew 200 meters to suitable landing area. Skid tube was damaged at forward attachment point and was replaced.

■ Forward fuel boost pump segment light came on after takeoff. Aircraft landed immediately at takeoff airport. Maintenance replaced forward fuel boost pump.

■ During engine runup while performing hydraulic system check, No. 2 hydraulic segment light would not illuminate. Aircraft was shut down and mission canceled. Maintenance cleaned corrosion from electrical cannon plug.

■ Forward fuel boost pump segment light came on in cruise flight. After precautionary landing, maintenance repaired chaffing wire on boost pump.

AH64

Class E

A series

■ During attempt to land in response to indications of engine failure, engine caught fire. Crew was able to extinguish fire with onboard extinguishing system. Incident is under investigation.

■ During cross-country deployment, aircrew discovered oil seepage from No. 1 generator seal. Seal was replaced and mission continued.

■ Primary hydraulic caution/warning light came on during out-of-ground-effect hover. Aircraft landed without incident, and maintenance replaced hydraulic filter.

■ CE saw hydraulic fluid venting from auxiliary power unit during runup. Maintenance determined that APU had been overserviced. During maintenance, hydraulic servicing system could not be pressurized because of a stuck valve. Maintenance replaced solenoid valve.

■ Shaft-driven compressor and master-caution lights came on during cruise flight, and crew performed emergency landing and shutdown without incident. Maintenance replaced SDC.

■ During runup, HIT check on No. 2 engine indicated temperature differential above allowable limits. Aircraft was shut down with no further incident. Maintenance replaced anti-ice bleed valve on No. 2 engine.

CH47

Class E

A series

■ Right combining transmission debris screen tripped after takeoff, and indicator would not reset. Emergency landing was made to airfield without incident.

D series

■ Hydraulic fluid began to draw from return line fitting of utility hydraulic pump during cruise flight at 7000 feet msl. Crew made precautionary landing without incident, and inspection revealed that return line fitting was stripped, resulting in severe leak of hydraulic fluid.

■ Transmission oil hot light came on during approach. After landing, ground checks revealed no other indications of possible high temperature on any transmission. Caution warning panel was replaced.

■ No. 2 normal engine beep trim failed during hover. No. 2 N2 actuator was replaced.

OH58

Class D

D(l) series

■ When PC applied collective to transition into forward flight at 30 feet agl, aircraft settled due to suspected wind gust. PC continued to apply collective to arrest settling and experienced engine (132% <1 second) and mast (129% for 1 second) overtorque. Engine, 90-degree gearbox, and drive shafts will be replaced.

■ Aircraft experienced engine overtorque during takeoff. No other information reported.

Class E

C series

■ During hover, rotor wash caught copilot door and broke upper door hinge.

■ During runup, rotor tachometer failed when throttle was increased. Aircraft was shut down without incident. Maintenance replaced dual tachometer indicator.

D(l) series

■ Crew chief noticed smoke coming from aircraft at engine idle during runup. Crew executed emergency shutdown and heard a grinding noise while engine was spooling down. Compressor assembly was replaced and QDR submitted.

■ Several pitch and roll caution messages appeared during cruise flight, followed by two low hydraulic-pressure messages. Pilot broke formation and flew back to home base. During return flight, pitch and roll continued to display. Aircraft was landed and shut down without incident. Problem would not replicate.

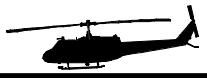
Class F

A series

■ **(Engine FOD)** Master-caution and engine chip-detector lights came on during MOC, and aircraft was shut down without incident. Inspection revealed 1¼-inch piece of broken snap-ring attached to bottom chip-detector plug.

For more information on selected accident briefs, call DSN 558-2785 (334-255-2785). Note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change.

UH1



Class C

H series

■ At 150 feet agl after takeoff, master caution and chip detector lights came on, and engine oil pressure dropped to zero. Crew initiated emergency governor operations, during which engine failed. Aircraft landed hard following autorotative descent.

Class E

H series

■ Fuel was seen leaking from main fuel filter at about 6 drops per minute during runup. Aircraft was shut down without incident. Maintenance replaced fuel filter drain valve.

■ Crew detected strong fuel odor in cruise flight just after takeoff. During return to airfield, crew did not notice any loss of fuel on the gauge or see signs of fuel leaking inside the aircraft. After landing, crew chief exited aircraft and saw fuel dripping from drain tube. Maintenance replaced fuel control.

■ During hover, PI noticed that transmission oil pressure was past 100 psi. Aircraft was immediately shut down. Maintenance replaced oil pressure transmitter.

UH60

Class C

A series

■ Damage to undersides of all four main-rotor blades found on postflight inspection. Aircrew noted no inflight difficulties. Suspect contact with AN/ALQ-144 antenna.

Class E

A series

■ En route to training area, weather became worse than forecast. Crew returned to airfield and canceled mission.

■ Upon shutdown, APU failed after 5 minutes of operation due to electronic sequence unit (ESU) failure. ESU was replaced.

■ During environmental control unit (ECU) lockout operations in cruise flight, No. 1 engine would not come out of ECU lockout position after several attempts. Aircraft landed and crew tried again without success. Maintenance replaced hydromechanical unit.

■ While conducting flight-control check during runup, crew experienced uncommanded up collective movement and shuddering in pedals. SAS2 yaw rate gyro failed. Part was replaced and aircraft released for flight.

L series

■ Crew had just dropped off M119A howitzer and had established cruise flight when nose cowling came open. Cowling was damaged when it hit and broke center windshield. It is suspected that crew chief had opened nose cowling to adjust volume on radio and failed to lock cowling.

■ Front right cargo door window was inadvertently jettisoned during passenger off-loading. The window was subsequently damaged while equipment was unloaded. Suspect that window was either jettisoned by passenger trying to open door or that a piece of equipment may have become entangled on jettison handle and then activated when crew chief opened door.

■ Stabilator failed in auto mode during cruise flight. Attempts to reset to auto mode were unsuccessful, so crew flew home in manual mode. Maintenance replaced stabilator actuator.

C12

Class C

F series

■ During ground taxi from parking, right-side prop assembly struck 50-pound wheeled fire extinguisher. Inspection revealed damage to right-side prop assembly and left-side engine cowling.

Class E

D series

■ During runup for training mission, left propeller gauge read 0 rpm. Aircraft was shut down without incident. Caused by failure of propeller rpm gauge.

F series

■ Crew began to notice acrid smell during cruise flight. As aircraft began initial descent for arrival, crew saw flames and smoke coming from between pilot's windshield and dash panel. Crew completed emergency procedure for electrical fire in flight, and fire ceased as master switch was turned off. Caused by faulty windshield heating element.

■ While in cruise at flight level 270 with an outside air temperature of -29°C and windshield heat in normal position, No. 1 windshield (outer) cracked from lower right corner to lower left corner and up right side to top right corner. Crew verified that checklist required no action and continued to home base and landed without further incident. Maintenance could not determine cause.

K series

■ No. 2 needle low light came on at 100 pounds in cruise flight. Crew initiated descent and, during crossfeed oscillations, light went out. Crew landed without further incident. Suspect check valve froze.

■ Front tire failed at about 100 KIAS during takeoff run. Crew aborted takeoff without incident. Suspect tire failure was due to repeated exposure to extreme cold temperatures. Tire broke bead from rim but did not separate or blow from rim.

C20

Class E

E series

■ After engine start, left alternator would not come on line, and mission was aborted. Caused by failure of left alternator converter.

F series

■ During normal engine start sequence, No. 1 start valve open indicator failed to display when start switch was depressed, and there was no indication of HP or LP rotation. Start attempt was aborted and mission terminated. Maintenance determined that several wires pulled loose from diode terminal block, breaking current path to engine starter.

J series

■ Pilot heard loud thud during cruise at FL 290 and discovered crack in outer windshield. Aircraft continued to home base and landed without incident. Maintenance could not determine cause for the failure, but windshield had been installed for 23 years.

C23

Class E

B series

■ During stall training, crew noted electrical odor in cockpit. Training was terminated and aircraft returned to airfield and landed without incident. Maintenance found and replaced resistor that had overheated.

■ Tire locked up on landing, and tire deflated during rollout. Aircraft came to safe stop without incident.

Aviation messages

Recap of selected aviation safety messages

Aviation safety-action message

AH-64-98-ASAM-02, 181526Z Dec 97, maintenance mandatory.

The FS 176 frame may develop cracks around the web holes and must be inspected. This frame was redesigned beginning with tail number 85-25351. This and subsequent-numbered aircraft do not require inspection.

The purpose of this message is to require a one-time visual inspection of the FS 176 frame on or before the next 10-hour/14-day interval; a recurring visual inspection of the FS 176 frame; scheduling of a one-time repositioning of the pitot and static lines; and a recurring eddy-current inspection on or before the next phase.

AMCOM contact: Mr. Howard Chilton, DSN 746-7271 (205-876-7271), chilton-hl@redstone.army.mil

Safety-of-flight message

UH-1-98-SOF-03, 221418Z Dec 97, technical.

Units have requested procedures to positively identify the 250-hour sliders manufactured by Collins when identification of cage code 0H0W5 is not possible. In many cases, the cage code was ink stamped and subsequently covered with paint. The 250-hour Collins sliders may be positively identified by serial number; verification by cage code is not required.

The purpose of this message is to provide serial numbers of subject sliders for positive part identification and to preclude unnecessary maintenance and disposal of serviceable repair parts.

AMCOM contact: Mr. Dave Scott, DSN 897-2068 (205-313-2068), scott-dc@redstone.army.mil

Safety-of-use message

SOU TACOM 98-01 to aviation units, 161937Z Dec 97, operational.

There have been several reported failures of D-1 refueling nozzles (NSNs 4930-01-440-1085, 4930-01-297-3777, 4930-01-369-6230, and 4930-01-369-9821). Although not Armywide, the situation seems to be occurring in hot-climate locations. Apparently, solar heating causes thermal expansion of fuel trapped inside the nozzles and increases internal pressure beyond the allowable limit. This over-pressure situation causes the shutoff linkage assembly to fail, resulting in a fuel spill. This message outlines a method of relieving internal pressure from the nozzle assembly until testing and analysis have been completed.

Unit commanders, contact your local TACOM Logistics Assistance Representative (LAR) or your state Surface Maintenance Manager for assistance. If you do not know who your LAR is, call DSN 367-6204/6293 for CONUS; DSN 375-6063/6064 for Germany; and DSN 315-722-3036/3881 for Korea.

TACOM contact: LTC Genaro J. Dellarocco, DSN 786-4200 (810-574-4200), dellarog@cc.tacom.army.mil

Let's share . . .

In Army aviation, we can't afford to learn every lesson first-hand. We must learn from each others' experience whenever we can and share what we know with each other.

Send your war stories and other lessons learned to *Flightfax* at flightfax@safety-emh1.army.mil or call Ms. Sally Yohn at DSN 558-2676 (334-255-2676).

IN THIS ISSUE

WS • War Stories, CC • Crew Commo, SF • Shortfax

Class A Accidents through December

		Class A Flight Accidents		Army Military Fatalities	
		97	98	97	98
1ST QTR	October	0	2	0	0
	November	0	1	0	0
	December	1	2	0	2
2D QTR	January	2		2	
	February	0		0	
	March	2		1	
3D QTR	April	2		2	
	May	1		1	
	June	3		0	
4TH QTR	July	1		8	
	August	0		0	
	September	0		0	
	TOTAL	12	5	14	2

U.S. ARMY SAFETY CENTER

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