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TECHNICAL REPORT

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COMBAT VEHICLE CREWMAN'S HELMET SURVEY

by

Thomas H. Judge

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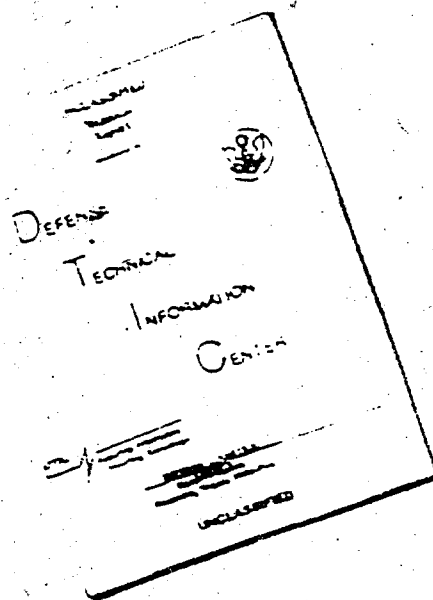


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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This survey was initiated at the recommendation of the National Research Council Committee on Military Helmets to identify helmet and component areas in need of improvements through research and development programs, product improvement, and logistic support. This survey was conducted by correspondence, using a question type format. This was sent to Combat Vehicle Crewmembers in the field and to Military Data (Cont'd)			

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Abstract Cont'd

Collection Agencies. The questions related to condition of CVC Helmets received from stocks, their design, safety, and general maintenance.

The survey showed that the Combat Vehicle Crewman needs a serviceable helmet - free from continued maintenance problems and logistic breakdowns that interfere with availability of replacement parts. Durability is a major concern of the Crewman and will be addressed in the on-going research and development program. The logistics breakdown and maintenance problems will be addressed at a proposed conference with the Defense Personnel Support Center, Defense Logistic Agency, US Army Troop Support & Aviation Materiel Readiness Command, and the US Army Materiel System Analysis Activity. One method to improving accessibility to helmet components and maintenance procedures is to initiate and publish a separate manual for the CVC Helmet that would address the maintenance program, identify individual components by stock numbers, and provide the user a servicing program to keep his helmet serviceable at the unit level.

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SUMMARY

This survey was initiated to identify helmet and component areas in need of material improvement and redesign. The survey was initiated at the recommendation of the National Research Council Committee on Military Helmets during a meeting held at the US Army Natick Research and Development Command, Natick, MA, in June 1979.

The information furnished as Part 1 of the Survey does identify areas the present Combat Vehicle Crewman's Helmet Research and Development Program must address to improve the quality and durability of the helmet, its components, and material composition.

The survey also pointed out the deficiencies in the unit and field supply and maintenance procedures required in everyday maintenance and support of the Combat Vehicle Crewman's Helmet Systems. These problem areas will be addressed through a proposed conference with the Logistics and Maintenance Support areas of the US Army Troop Support Aviation Readiness Command, Department of the Army Support Center, and the development agencies of electronic components and their supporting maintenance elements.

The Part 2 data was collected by Army Materiel Systems Analysis Activity (AMSAA) and Troop Support & Aviation Materiel Readiness Command (TSARCOM). It verifies the problems cited and recommendations made by field CVC units.

Support for this survey was provided by:

- 9 - US Army Installations
- 11 - US Army National Guard State Headquarters
- 27 - Individual Combat Vehicle Crewmen from Fort Hood
- 32 - Units of the Texas Army National Guard

Field data services were provided by the US Army Materiel Systems Analysis Activity, Aberdeen Proving Ground, MD, and the US Army Troop Support and Aviation Materiel Readiness Command, St. Louis, MO. Media support was furnished by Army Times.

It is apparent the Combat Vehicle Crewman seems to be more concerned in having a serviceable helmet that is free from continued maintenance problems and logistic breakdowns that contribute to the lack of replacement parts being available for servicing these helmets. They question the durability of the helmet and its components. From their field experience, they feel fully justified; therefore, action must center around these areas of concern to provide the crewman with a better helmet system and better helmet reliability.

Durability will be addressed in the on-going research and development program. By improving the durability, the continual need for maintenance should be reduced. One way to improve the accessibility to helmet components is to publish a separate manual for the CVC Helmet that would address the maintenance procedure, identify individual components by

stock number, and provide a user servicing program whereby the user can keep his helmet serviceable at the unit level. The present maintenance and logistic problems, along with the proposed recommendations for changes, will require the convening of a combined meeting of maintenance, logistic, and research and development personnel to review these problem areas in detail, and define proposals for positive corrective action. These actions could instill in the user a return of helmet reliability.

FOREWORD

These comments, conclusions, and recommendations represent the views of US Army and National Guard Combat Vehicle Crewmen who feel this survey may assist them in obtaining corrective action in eliminating some of their problems with the Combat Vehicle Crewman Helmet System.

These efforts were greatly enhanced by the support of US Army Installations located at Ft. Lewis, WA; Ft. Hood, TX; Ft. Riley, KS; Ft. Knox, KY; Ft. Stewart, GA; Ft. Carson, CO; Ft. Polk, The Canal Zone; Ft. Huachuca, AZ; HQ TRADOC; Ft. Belvoir, VA; and the Army National Guard State Headquarters of: Texas, Georgia, South Carolina, Florida, Massachusetts, Arkansas, Nevada, North Carolina, Alabama, Oregon, and Nebraska. The outstanding individual effort of support to this survey must also be recognized from Combat Vehicle Crewmen of Ft. Hood and members of the 32 Units of the Texas Army National Guard.

This report will identify the need to improve the CVC Helmet, through the present on-going research and development program. Further improvement of the logistic system to provide for adequate supplies of helmet components for servicing these helmets and returning them to serviceable use is necessary.

The results of this survey will be furnished HQ Training and Doctrine Command, Ft. Monroe, VA for use as a justification for establishing a requirement document for a new CVC Helmet System.

Appreciation is expressed for the outstanding administrative support in assembling this report provided by Ms. Joanne Witt and Ms. Linda Oliveira, Clothing, Equipment & Materials Engineering Laboratory, NARADCOM.

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US ARMY SURVEY OF COMBAT VEHICLE CREWMEN HELMETS

Introduction

This survey was initiated as a result of a National Research Council Committee on Military Helmets Meeting held at US Army Natick Research and Development Command, June 1979.

The need for the survey was to identify areas requiring improvements through research and development programs, product improvement, and logistic support. The results would also be evaluated for justification of a requirement document and forwarded to HQ Training and Doctrine Command for review and possible action.

With the assistance of HQ Training and Doctrine Command (TRADOC), Armor Center, Department of Army, Marine Corps, National Guard Bureau, HQ Forces Command (FORSCOM), HQ US Army Troop Support & Aviation Readiness Command (TSARCOM), and US Army Materiel Systems Analysis Activity (AMSAA), the survey was initiated 3 Jul 79. It was addressed to the armor community in general and to the two data collection agencies, HQ TSARCOM and USAMSAA for review of data related to various problems identified with the T-56 (Figure 1) and DH-132 (Figure 2) Helmets.

The survey, Part 1, was directed to the armor community in general and asked them to identify problem areas in the field of:

- A. Requisitions and Supply Support.
- B. Quality and Condition of Helmets Received from Stock.
- C. Durability of Helmets and Components.
- D. Fitness of Design to meet the Combat Vehicle Crewmen Needs.
- E. Safety Hazards associated with Helmets.
- F. Repair, Maintenance and Cleaning of Helmets.
- G. Components in need of Constant Repair and Replacement.
- H. Injuries Caused by the Helmet or its Components.
- I. Injuries to the Head While Wearing the Helmet.
- J. Deficiencies found with Helmets Manufacture or Assembly.
- K. Is There a Preference for Either the DH-132 or T-ty Helmet?
- L. Is the Chin Strap being Worn Correctly on DH-132 Helmet?
- M. Is the Level of Field Maintenance Adequate?

N. Are EIR's being Submitted and Replied to in a Way to Correct the Problem?

O. Can the EIR Procedure be Improved?

Data collection agencies such as USA Defense Personnel Support Center, TSARCOM, AMSAA and the Electronic Supply Center were requested to review their data banks and provide input to the same questions asked of the armor community.

Army Times was the only media support given to the survey although a number of military publications were contacted in this regard.

Survey Support

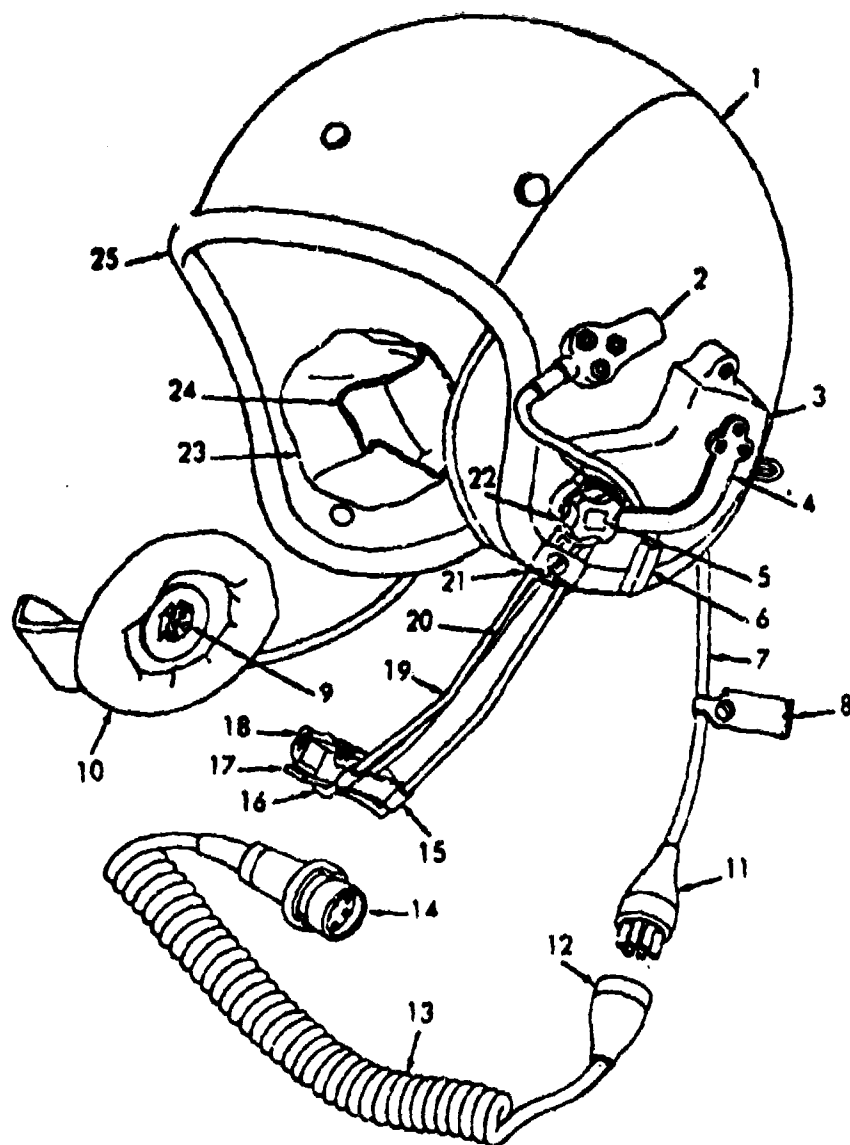
The Combat Vehicle Crewman's Helmet Survey was supported by input from:

- 9 - US Army Installations
- 12 - US Army National Guard State Headquarters
- 27 - Individual CVC Crewmen from Fort Hood
- 32 - Units of the Texas Army National Guard

Field Data was collected and submitted by:

US Army Materials Systems Analysis Activity, APG, MD.
US Army Troop Support and Aviation Materiel Readiness Command, St. Louis, MO.

Two inquiries were received as a result of the Army Times article.



ME 8400-201-23/5-1 ①

- | | |
|--|-----------------------------------|
| 1 Helmet shell | 14 Retractable cable plug U-161/U |
| 2 Microphone plug JJ-058 | 15 Microphone boom brace |
| 3 Switch box | 16 Microphone clip |
| 4 Microphone boom support | 17 Microphone, M-41/UR |
| 5 Square-headed microphone boom mounting screw | 18 Microphone cover CW-292/U |
| 6 Three-position switch | 19 Microphone boom |
| 7 Six-conductor cable | 20 Microphone cord |
| 8 Clothes clip | 21 Cord guide |
| 9 Earphone type NT49806 | 22 Microphone boom adjusting knob |
| 10 Earpad | 23 Insert pocket |
| 11 Male ball-out connector | 24 Foam rubber insert |
| 12 Female ball-out connector | 25 Rubber edging |
| 13 Retractable cable | |

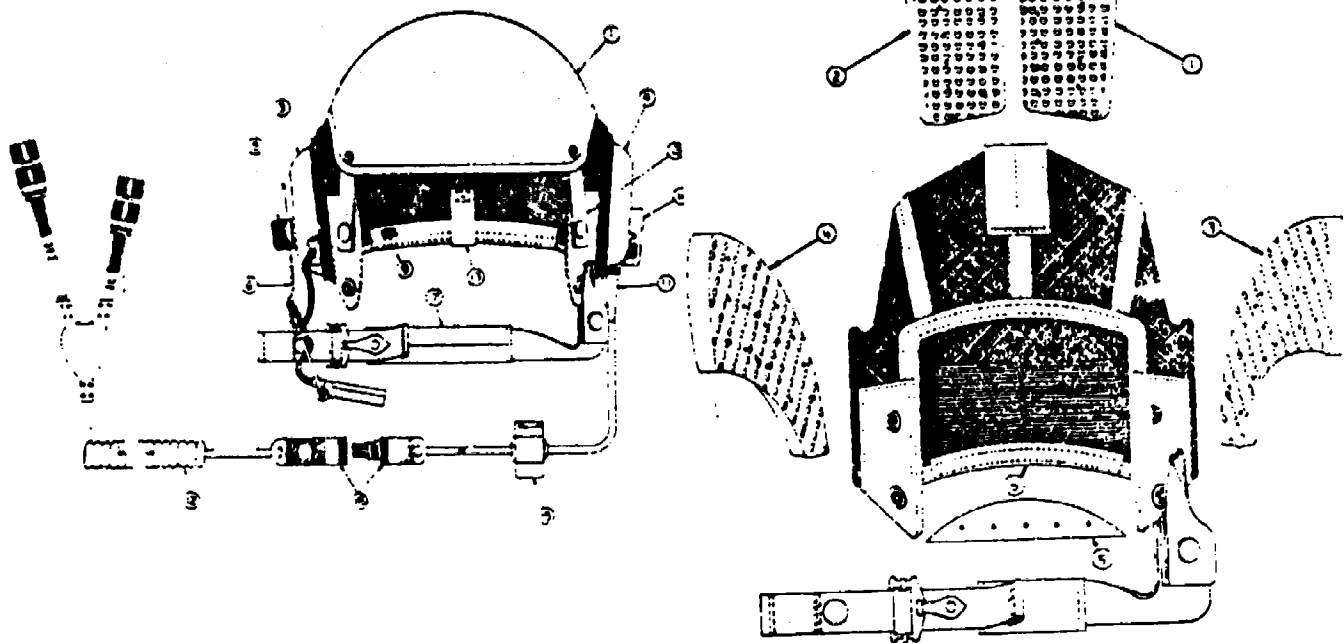
Model T-56 Combat Vehicle Crewman's Helmet

FIGURE 1

MODEL DH-132)[®]

COMPONENT PARTS

INNER HELMET



MK-1697/G ELECTRONICS

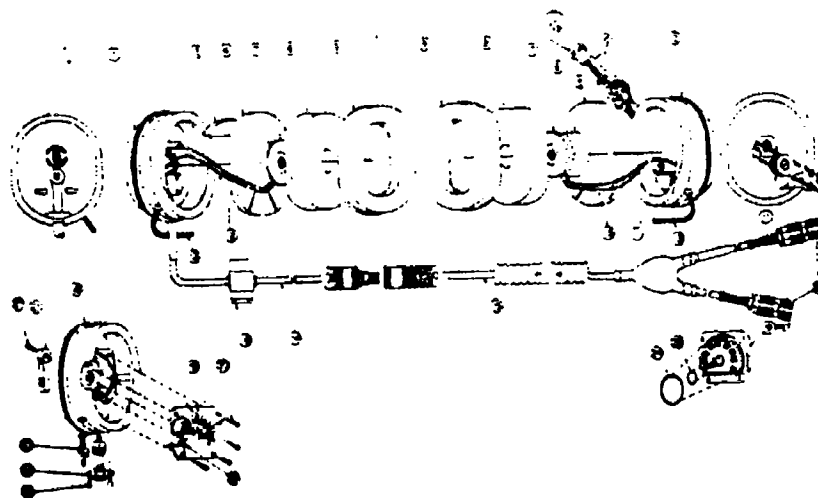


FIGURE 2

PARTS LIST

The following is a list of spare parts recommended for repair and maintenance of the CVC Model DH-132 Helmet. Substitution of inferior or odd parts may be detrimental to the operation of the equipment.

Nomenclature	III. No.	Item	Part No.	FSN
Helmet Assembly - Small	11		72F2510-1	8415-00-094-2679
Helmet Assembly - Medium	11		72F2510-2	8415-00-094-2691
Helmet Assembly - Large	11		72F2510-3	8415-00-094-2684
Outer Helmet Assy - Medium	11	1	72D2504-1	
Outer Helmet Assy - Large	11	1	72D2504-2	
Kit, Attachment Tab	11	13	72A2520	8415-00-163-9049
...Attachment Tab			72A2487	
...Post			80A2104-2	
...Washer, Spring, Blk			ARC202	
...Screw, Blk 3/16 in.			D-368	
Attachment Strip (Velcro)			75A3155	
...Adhesive				
Inner Helmet (less pads) - Small	12	6	72D2521-1	8415-00-134-9396
Inner Helmet (less pads) - Medium			72D2521-2	8415-00-134-9397
Inner Helmet (less pads) - Large			72D2521-3	8415-00-134-9398
Protective Pad Replacement Kit				
...Center Pad, Right, Small	12	2	71C2400-1R	8415-00-163-9040
...Center Pad, Right, Medium			71C2400-1R	8415-00-163-9042
...Center Pad, Right, Large			71C2400-1R	8415-00-163-9044
...Center Pad, Left, Small	12	1	71C2400-1L	8415-00-163-9040
...Center Pad, Left, Medium			71C2400-1L	8415-00-163-9042
...Center Pad, Left, Large			71C2400-1L	8415-00-163-9044
...Side Pad, Right, Small	12	4	71C2400-2R	8415-00-163-9041
...Side Pad, Right, Medium			71C2400-2R	8415-00-163-9043
...Side Pad, Right, Large			71C2400-2R	8415-00-163-9045
...Side Pad, Left, Small	12	3	71C2400-2L	8415-00-163-9041
...Side Pad, Left, Medium			71C2400-2L	8415-00-163-9043
...Side Pad, Left, Large			71C2400-2L	8415-00-163-9045
...Brow Pad	12	5	71C2400-3	8415-00-163-9046
...Pad, Chin Strap	11	7	72B2477	8415-00-163-9048
Switch w/Cover Kit	13	19	71C2313	5930-00-114-4359
...Screw, Gold	13	28	MS35229-1	
...Washer - ZINT Tooth/Gold			OR MS35229-2	
...Washer				
...O Ring	13	24	71A2320	5330-00-316-0360
...O Ring	13	25	71A2333	5330-00-316-0358
...Screw	13	20	71A2382	
Kit Insulating Compound			72A2526	
Switch Handle w/Screw	13	21&27	72B2525	5930-00-114-4362
Lead (Wire)	13	12	71A2391	5995-00-302-7520
Cord	13	13	70B2223	5995-00-302-7518
Upper Cord	13	14	71B2389	5995-00-302-7515
...Screw	13	26	MS35233-2	
...Clip, Clothing	13	18	73B2617	
...Audio Connector (Male)	11	16	71B2386	5935-00-134-1306
Cord, Retractable	13	15	70C2222	5995-00-302-7521
...Audio Connector (Female)	11	18	71B2387	5935-00-300-6498
...Connector	13	29	U-229/U	
Microphone and Boom (M138/G)	11	6	77B3706	
...Boom Support	13	11	71B2386	5965-00-135-0547
Headset-Microphone Kit (MK-1697/G)	13		71D2392	5965-00-313-8958
Earcup, Right	11	3	71C2319	
Earcup, Left	11	4	71D2317	
Receiver, Earphone	13	7	71B2383	5965-00-135-0506
Retainer, Earphone Kit				
...Earpad (seal)	13	9	74C2638	
...Receiver Retainer	13	8	72B2484	5948-00-134-1203
...Pad, Filler	13	3	72A2441	
...Pad, Filler	13	4	72B2507	
...Spacer	13	5	72A2505	
...Pad, Filler	13	5	72A2506	

PART 1 - CVC HELMET SURVEY FIELD RESULTS

This part of the report is divided into 15 sub-parts that are titled "Area Reviewed." In this sub-part the answers to the questions asked of the Combat Vehicle Crewman during the survey are consolidated and presented in a reasonable form for review.

Individual Field Comments - Comments submitted by the individuals of field units who have had problems with the CVC Helmet System are listed by subject area reviewed in Tables 1 to 12 (pages 19 to 33). In addition, each comment or problem is followed by the individual's recommendation and his rationale for that recommended action.

The following sections will further define the data received.

Summary of Field Problems - Lists the problems as they appeared in the replies in numbers and priority.

Summary of Field Recommendations - Identifies those recommendations presented by the field participant in the survey.

Survey Conclusions - Represents the author's conclusions of the problem areas in total and their recommendations.

Programmed Corrective Action - Cites those areas in need of corrective action and how this action is to be addressed in the present on-going CVC Helmet Research and Development Program. If the area cannot be addressed in the program, then an alternative recommendation will be presented by the author.

A. AREA REVIEWED - Requisition and Supply Support

Summary of Field Problems

Units are unable to request TM's and replacement parts. Supply procedures are creating considerable delays. These delays are keeping helmets out of service. TM's need stock numbers for helmet parts.

Summary of Field Recommendations:

Supply procedures should be changed to permit parts to be stocked at unit levels.

Survey Conclusions:

There seems to be a definite problem in the supply system overall, that restricts the requisitioning and supply of helmets and helmet parts to the unit level for maintenance of helmets.

Programmed Corrective Action:

A meeting will be programmed with representatives of the Defense Personnel Support Center, Defense Logistics Agency, US Army Troop Support and Aviation Materiel Readiness Command, and US Army Materials System Analysis Activity

to review the individual comments and develop a program that would address and provide resolutions to these problems. A recommendation is made to develop and publish a separate manual for the CVC Helmet that would address the maintenance program, identify individual components by stock numbers, and provide the CVC Crewman with the opportunity of keeping his helmet serviceable at the unit level.

B. AREA REVIEWED - Quality and Condition of Helmets Received from Stocks

Summary of Problems Cited:

Helmets are being issued without chinstraps and have loose mikes. Reissued helmets previously turned in are not inspected before reissue and are in poor condition.

Summary of Recommendations

Issue new helmets in lieu of used ones. Rebuild helmets turned in before reissue at unit levels.

Survey Conclusions:

Quality control procedures at the issue level must be reviewed and corrected where required. It is indicated that used helmets are being issued without reconditioning, presenting an unsatisfactory field condition which requires correction.

Programmed Corrective Action:

These problems will be programmed on the agenda of the proposed Supply Maintenance Conference on the CVC Helmet.

C. AREA REVIEWED - Durability of Helmets and Components

Summary of Problems Cited:

Breakdown of helmets and parts. Separation of shell from liner straps, and adhesive strip. Cracking; snaps breaking from straps. Condensation moisture seeps into microphone and earphone. Microphones weak at the elbow. Cords too thin. Earphone doesn't have enough support. Personnel do not properly maintain helmets.

Summary of Recommendations:

Design helmets with no exposed wires.
Design more durable wires and straps.
Design a new way of supporting the earphone.
Develop more durable helmets.

Survey Conclusions:

The lack of durability in the helmet and components must be addressed in the present research and development program for a new CVC Helmet. Definite improvements are required for the helmet and components.

Programmed Corrective Action:

Durability will be addressed during the entire program of the advance development of the CVC Helmet.

D. AREA REVIEWED - Fitness of Design to Meet the Combat Vehicle Crewmen's Need

Summary of Problems Cited:

Helmet is uncomfortable. It offers no eye protection. Is poor fitting, too bulky, and too hot.

Summary of Recommendations:

Use more comfortable material for interior of helmet. Incorporate a pivoting visor. Improve sizing.

Survey Conclusions:

It is evident that many feel these helmet designs do not meet the need of the Combat Vehicle Crewman and the sizing needs to be reviewed, possibly for a new tariff.

Programmed Corrective Action:

Helmet prototypes and concepts will address Human Factor needs as well as the total function of the design, sizing, and the helmet components.

E. AREA REVIEWED - Safety Hazards Associated with Helmets

Summary of Problems Cited:

Helmet cannot be used with protective mask.
Use of the switch to talk is a hazard for the driver.
Aircrewman's mouth injured occasionally by microphone.
Helmet falls over the eyes when straps break.
Fiberglass shell not strong enough.

Summary of Recommendations:

Have mask hook up like aircrew helmet.
Have a voice activated switch.
Reposition microphones.
Replace straps.

Survey Conclusions:

The safety hazards listed may seem minor in nature but to the CVC Helmet users, this is important for their safety. Therefore, these problems require an in-depth investigation and correction.

Programmed Corrective Action:

The safety of the helmet is being studied and evaluated under a number of tasks outlined in the advanced development program for the CVC Helmet.

F. AREA REVIEWED - Maintenance and Cleaning of Helmets

Summary of Problem Areas:

Personnel are not properly trained in the maintenance and cleaning of helmets.
Repair parts are hard to obtain.
Internal padding and webbing cannot be cleaned without complete disassembly.

Summary of Recommendations:

Establish a training program for maintenance and cleaning of helmets.
Set up a better parts supply system.
Redesign padding and webbing to be more readily removable for cleaning.

Survey Conclusions:

There is a problem with maintenance that becomes an expanded issue to cover other areas due to a breakdown in supply and training support.

Programmed Corrective Action:

A meeting has been proposed to review these areas and provide a resolution and improve supply support to maintenance activities in the field.

G. AREA REVIEWED - Components in Need of Constant Repair and Replacement

Summary of Problem Areas:

The following components are in need of constant repair: earphone; microphone; boom; cords; shells; switches; straps; and spaghetti cords.

Summary of Recommendations:

Redesign equipment to be more durable.

Survey Conclusions:

It is evident that the helmet and helmet components require a more durable design and approach of its components.

Programmed Corrective Action:

Durability of the helmet and components will be a prime consideration in all of the development tasks for the new helmet system. Through an EIR action, the latest DH-132 Helmet does have an improved heavier cord and improved durability.

H. AREA REVIEWED - Injuries Caused by the Helmet or its Components

Summary of Problem Areas:

Majority of input indicates no injuries.

Summary of Recommendations:

There were no recommendations.

Survey Conclusions:

There seems to be no witnesses or records of accidents or injuries for documentation in this area from field units.

Programmed Corrective Action:

Action was initiated along with the survey for the US Army Aeromedical Research Laboratory at Ft. Rucker, AL, to compile data with the US Army Safety Center on injury data from around the world.

I. AREA REVIEWED - Injuries to the Head While Wearing the Helmet

Summary of Problem Areas:

Injuries are being received when helmets are not worn. Some report discomfort from wearing the helmet.

Summary of Recommendations:

A training program might resolve some of the problems.

Survey Conclusions:

It seems the injuries are confined to those who don't wear their helmets in the vehicle.

Programmed Corrective Action:

Training procedures will have to be improved to include safety procedure of riding in combat vehicles.

J. AREA REVIEWED - Deficiencies Found with Helmet Manufacture or Assembly

Summary of Problem Areas:

Earpads slide off too easily.
Snaps and straps are lost and broken.
Earphones are not properly supported.
Helmets are not issued with chinstrap.

Summary of Recommendations:

Redesign the helmet and components with improved quality of design and materials.

Survey Conclusions:

The quality of workmanship and the durability of the material must be improved to provide a quality CVC Helmet.

Programmed Corrective Action:

The quality of workmanship will be addressed in detail in the specification for the new CVC Helmet. Material durability will be continuously monitored during the entire development program. Action should be taken to improve Quality Control procedures at plants.

K. AREA REVIEWED - Is There a Preference for Either the DH-132 or T-56 Helmet?

Summary of Comments Submitted:

The majority of personnel contacted in the survey favored the DH-132 Helmet over the T-56 Helmet.

L. AREA REVIEWED - Is the Chinstrap being Worn Correctly on the DH-132 Helmet?

Summary of Problem Areas:

Most helmets don't have chinstraps.
Cannot get chinstraps through supply.
Crewmembers remove them from helmets.
Crewmembers prefer not to wear them.

Summary of Recommendations:

Chinstraps should be permanently attached to helmet.

Survey Conclusions:

If the straps were permanently attached, they would be used more often.

Programmed Corrective Action:

The chinstraps will be evaluated; the advanced development program and the latest version of the DH-132 has the straps permanently attached to the helmet. EIR action has been completed in this area and chinstraps are now permanently attached.

M. AREA REVIEWED - Is the Level of Field Maintenance Adequate?

Summary of Problem Areas:

No helmet maintenance support in this area.
Crewmember maintenance and organization repair not adequate.
Maintenance training has not been implemented.

Summary of Recommendations:

Provide training at all levels of maintenance.
Provide repair parts for maintenance.

Survey Conclusions:

It is indicated that maintenance of helmets is very minimal and non-existent in most field units.

Programmed Corrective Action:

This is an area that must be addressed by Defense Logistics Agency and TSARCOM, and will be placed on the agenda of the proposed Logistic and Maintenance Conference.

N. AREA REVIEWED - Are EIR's being Submitted and Replied to in a Way to Correct the Problem?

Summary of Comments Submitted:

Most replies to the EIR's refused to address this problem. Those that did felt they had no problem.

O. AREA REVIEWED - Can the EIR Procedure be Improved?

Summary of Comments Submitted:

Most had no comments on this problem and some had little knowledge of the EIR procedure.
EIR's are not being submitted and some feel they are not being replied to.

Summary of Recommendations:

Users must be required to submit EIR's.
Replies should be required to the initiator.

Survey Conclusions:

It is evident the use of EIR's is at a very low level, and requires more education in the use and value to the improvement of helmet and component equipment.

Programmed Corrective Action:

The EIR Program is under revision and this revision will be consolidated with the Quality Deficiency Report (SF 368).

TABLE 1 - REQUISITION AND SUPPLY SUPPORT

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Information is needed on the repairing attachments of shell to liner.	Put a kit into the supply channels which would enable the unit to repair, replace straps, and adhesive strip.	None furnished
TM doesn't have stock number for Inner Filler which is needed in order to repair a DH-132 Helmet.	All the parts are replaceable, we should have them on hand or be able to get them at request.	None furnished.
Delay in receiving parts and receiving full quantity ordered.	Most repair parts are ordered on Priority 13 but are needed as if they are 06. A more rapid means of restocking would be appropriate.	None furnished
Operational parts are not replaceable at organizational level.	Organizational maintenance should be able to replace boom mikes, ear phones, and power cords.	This will facilitate availability of the equipment.
System is too slow. Helmets stay down too long due to lack of parts.	Commo should stock more parts on hand.	None furnished.
Some components are not stocked in the Army inventory or the National Stock Numbers (NSN's) are not published in the technical manuals. These parts in particular are the chin straps and foam rubber cushions inside the ear pieces. The upper and lower cable assembly are problems due to the unit of issue (U/I) in the Army Master Data File (AMDF) as AY instead of EA.	Recommend the foam rubber ear cushions and chin straps be made available in the Army Inventory System and be assigned NSN's. Also recommend upper and lower cord assemblies be changed on the AMDF to reflect U/I as EA.	The foam rubber ear cushions deteriorate causing the ear phones to be loose and fall out of the ear cup assemblies. If the foam rubber were made available, much of the damage to the ear phones could be prevented. The availability of the chin straps will provide the maximum sound protection and proper fit as emphasized in this.

TABLE 1 (CONT'D)

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Parts are available through supply channels but unit level commo personnel do not order or stock parts.	Unit level communication personnel should order and stock replacement parts at unit level.	Stockage of repair parts and repair by unit level would minimize down time on CVC Helmets and reduce the number of helmets.
Parts for repair of microphones attached to helmets are not available.	Possible stockage of more parts.	User inattention to sensitive equipment.
There seems to be a problem overall at this installation concerning requisitioning and supply support, i.e., long delay in receiving requisitioned parts and the outer shell of the CVC Helmet cannot be requisitioned without approval of the Battalion Commander.	To expedite repair of helmets. This procedure should be discontinued and the outer shells should not be considered non-expendable.	This procedure would expedite the repair of CVC's.
Elements of this Command have been unable to procure repair parts manuals for the Model DH-132 Helmet. No problems at user level; availability of repair parts particularly the keying switch is a problem at a maintenance level.	None furnished.	None furnished.
Occasionally there are shortages of subject equipment.	Introduce more into supply system.	It is not very professional when you have your loader wearing a steel pot.

TABLE 2 - QUALITY AND CONDITION OF HELMETS RECEIVED FROM STOCKS

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
New helmets arrive in good condition, the problem with reissued helmets is that when the helmets are returned to supply or CIF they are not checked before being reissued.	Before personnel are allowed to turn in helmets to supply or CIF, helmets should be T'd by Unit Communications personnel and DA 2407 made out on equipment.	By requiring a DA 2407 before personnel are allowed to turn in CVC, this would eliminate inoperative CVC Helmets from returning to the supply system and would allow Unit Commo personnel to order repair parts.
(1) Missing chinstraps; (2) Loose boom mikes.	(1) More chinstraps; (2) Need parts to repair mikes.	Difficult for crews to communicate and perform crew duties.
Used helmets are in poor condition.	Issue new helmets at CIF with initial issue at TASO. Have SM maintain that helmet until turn-in. Rebuild turned-in helmets.	None furnished.

TABLE 3 - DURABILITY OF HELMETS AND COMPONENTS

<u>INDIVIDUAL FIELD COMMENTS</u>		
<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Shell is very easily crushed. Several have been crushed when left in the turret. No replacements are available.	Have bags for storage, inside the turret.	Helmet does not have to be heavier or harder, however, to protect it, the individual needs a place to store it when he leaves the vehicle.

TABLE 4 - FITNESS OF DESIGN TO MEET THE COMBAT VEHICLE CREWMEMBER'S NEED

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Helmet is uncomfortable.	A more comfortable material could be used for the interior of the helmet.	At the present, the foam inserts may cause headaches.
Eye protection. The DH-132 Helmet offers no eye protection.	Incorporate a pivoting visor or eye shield similar to those on pilots' helmets.	A visor or eye shield would assist in areas where dust affects vision. Also, it would offer safety to eyes in wooded areas.
Not fitting individual properly.	Density of helmets should be increased to allow for proper sizing.	Due to authorized density at unit level, some users are not being fitted properly.
The Model T-56 CVC Helmet provides a poor fit as they tend to slide around on the head, also are bulky, especially for crewmembers in confined spaces (such as tank gunner) and when wearing a field jacket, the collar tends to catch the three-position switch and move it off the intercom position.	A cord, longer than the one presently supplied with the CVC Helmet, would make it easier for the Tank Commander during TANK GUNNERY PRACTICE. The present cord's length is a little short and requires the T.C. to disconnect when on the turret of the tank, while needing to maintain supervision of his crew. A longer cord would also put less strain on the connections on the helmet and control box. This cord should be an optional component.	None furnished.
Helmets are too hot in high temperatures.	Suggest better ventilation of helmet liner.	None furnished.

TABLE 5 - SAFETY HAZARDS ASSOCIATED WITH HELMETS

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Cannot use helmet with protective mask.	Have adapter to hook up with protective mask similar to flight helmet.	None furnished.
Using the switch to talk is a hazard for the driver. He has to have his hands on the laterals and his eyes on the road at all times.	There should be a voice activated relay box when he needs to talk on the radio.	His hands are on the laterals and his eyes on the road.
Crewmembers bang microphone into mouth occasionally.	Have microphone position one to two inches below opening of the mouth.	None furnished.
When straps are broken the helmet portion falls over the eyes.	Replace straps.	Replacement straps ordered but not received.
Fiberglass shell not strong enough.	Use sheet metal.	None furnished.
Movement outside the tank is limited.	Longer cord.	None furnished.
Chinstraps not being worn by crewmembers. Causes one not to be heard over intercom.	Chinstraps should be Qss items.	None furnished.
Removal of fiberglass shell results in vulnerability to sharp blows.	Uniform & equipment discipline.	Shell must remain detachable to facilitate servicing.

TABLE 6 - MAINTENANCE AND CLEANING OF HELMETS

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Operator and crew have tendency to leave CVC Helmet in hazardous place to become broken. Operator and crew do not clean CVC Helmet after use.	CVC be taken off vehicles, numbered, and hung in platoon corner. Weekly cleaning become a requirement.	None furnished.
Crews and supervisors are not adequately trained to perform these functions.	Supervisors and crews should be trained quarterly or semi-annually.	These helmets are being damaged due to inexperience.
Helmets not being properly cleaned.	At the organizational level, thorough cleaning could be conducted on a Q Service schedule, and rebuild capability could be obtained with proper tools and repair parts.	This would insure proper cleaning on a routine basis and eliminate wasteful and lengthy delay for evacuation to direct support and depot maintenance.
Repair is difficult because of a shortage of parts.	Increase supply of repair parts.	Too many down helmets.
Helmet Liner - The internal padding and webbing cannot be cleaned without complete disassembly.	Redesign padding and webbing so it is removable by the user for cleaning or washing.	Due to sensitivity of electronics, extreme care must be exercised when removing padding. Due to difficulty in cleaning, unsanitary conditions exist if helmets are not cleaned properly before transfer from one member to another.

TABLE 6 (CONT'D)

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Very little maintenance is performed by operators; helmets are left on top of vehicle during field problem, and become wet; also cords are cut by closing hatches on them.	Crewmembers be more careful with helmets and protect them better from rain and mutilation.	By affording more care to CVC Helmets, crewmembers would eliminate most problems encountered with the helmet.
In regard to the maintenance and cleaning of helmet, the different levels of maintenance for the helmet are impractical and delay repairs unnecessarily.	That maintenance be consolidated.	None furnished.
Repair parts are hard to obtain.	Have more repair parts in system.	None furnished.
User maintenance.	Handle as sensitive item.	Command emphasis and accountability would result in increased user awareness.
Difficult to remove ESH(?) phone housings for cleaning.	None furnished.	None furnished.

TABLE 7 - COMPONENTS IN NEED OF CONSTANT REPAIR AND REPLACEMENT

INDIVIDUAL FIELD COMMENTS			
PROBLEM	RECOMMENDATION	RATIONALE	
Radio receiving and transmitting components need constant repairs.	Redesign components to withstand the rigors of use and job performance.	To increase reliability.	
Boom pivots/microphones - Current boom pivots wear out easily causing microphones to fall below the chin or off the boom slide. Boom pivots and slides do not withstand fair wear and tear. Tightening of boom pivots have resolved the problem but only for a short period of time when riding in or driving a track vehicle. A loose boom pivot causes need to use a hand to hold the microphone when talking; this presents a safety hazard for both track commanders and drivers.	Redesign boom assembly as a one-piece slide assembly. Improve durability of boom pivots and the microphone.	Improved design and durability will reduce down time for CVC Helmet, loss of microphones, and safety hazards.	
Components in need of constant repair and replacement: Ear Pad Seal (comes off earphone); Brow pad and cover (DH-132); Chinstrap and pad (DH-132); Cable Assembly 71B2389 (DH-132); Cable Assembly CX10453/G (T-56).	None furnished.	None furnished.	
The repair components that most often fail are: 5995-00-302-7519, Cord. 5995-00-302-7515, Upper Cord. 5995-00-302-7521, Cord, Retractable. NSN, Part #77B3706, Microphone, Boom Assembly. 5930-00-114-4359, Switch Assembly.	None furnished.	None furnished.	

TABLE 7 (CONT'D)

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Microphone and speaker damage easily, cable assembly, electrical (5995-00-302-7515) and cord assembly. Retractable Cord (5995-00-302-7521), when under the stress of constant usage, often develops breakages of the inner line resulting in shortages.	A more durable communication equipment be used on the helmet with a smaller, more flexible gauge wire with longer longevity when exposed to stress and torque.	The combination of misuse by crewmembers and weather, dictate the use of a more durable communication equipment with the CVC Helmet.
Earphone, microphone boom, and cords.	Part on hand.	None furnished.

TABLE 8 - INJURIES TO THE HEAD WHILE WEARING THE HELMET

<u>INDIVIDUAL FIELD COMMENTS</u>		
<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Crewmembers receive injuries when helmet is not being worn. Also, crewmembers have their face too close to hazardous areas.	Crewmembers should wear CVC Helmet whenever they move a vehicle. Also, they should not expose unprotected areas of the face to metal.	None furnished.
Discomfort to some wearers.	None furnished.	None furnished.

TABLE 9 - DEFICIENCIES FOUND WITH HELMET MANUFACTURE OR ASSEMBLY

INDIVIDUAL FIELD COMMENTS

<u>PROBLEM</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
The M-138 microphone was defective upon receipt. This involved eight microphones received within a one-month period. The boom mike assembly sets worn out and needs to be closely attached. Earpads slide off too easy when person simply slides on helmet.	None furnished.	None furnished.
The earphone is the only deficiency.	Support them more to the CVC Helmet.	None furnished.
Earphones and microphones are not water tight. In rain they tend to short out.	Earphones and microphones should be waterproof to prevent shorting out intercom system.	None furnished.
Snaps and straps are lost and are easily broken.	Make chinstrap permanently attached and straps of stronger material.	Lost chinstrap prevents helmet from protecting ears.
Not issued with chinstrap.	Issue with chinstrap.	This would preclude always having to order the chinstrap.

TABLE 10- IS THE CHINSTRAP BEING WORN CORRECTLY ON THE DH-132 HELMET?

<u>PROBLEM</u>	<u>INDIVIDUAL FIELD COMMENTS</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
Most helmets do not have the straps. They are on order but very slow coming in.		None furnished.	None furnished.
Don't know, can't get them.		None furnished.	None furnished.
Crewmembers remove chinstraps.		Chinstraps should be permanently attached on one side.	None furnished.

TABLE 11 - IS THE LEVEL OF FIELD MAINTENANCE ADEQUATE?

<u>INDIVIDUAL FIELD COMMENTS</u>	<u>RATIONALE</u>
<u>PROBLEM</u>	<u>RECOMMENDATION</u>
For the past four years, at Annual Training, support maintenance has not stocked repair parts for CVC Helmets and, therefore, has provided no maintenance support in this area. Crewmember maintenance and organization repair is not adequate.	Crewmembers do more operators maintenance and organizational personnel maintain repair parts. TM 11-5965-286-14, Chapters 3 and 4, would eliminate most problems with CVC Helmet.
Lack of repair parts and T.M.'s for personnel.	Company level repairs can be performed at CO level.
Training has not been implemented to perform maintenance.	None furnished.

TABLE 12 - CAN THE EIR PROCEDURE BE IMPROVED?

<u>PROBLEM</u>	<u>INDIVIDUAL FIELD COMMENTS</u>	<u>RECOMMENDATION</u>	<u>RATIONALE</u>
They are not being submitted by the user.		Users must be required to submit EIR's when needed.	This will show that the EIR System works.

PART 2 - CVC HELMET DATA COLLECTION RESULTS

The Field Equipment and Technology Division of the US Army Materials Systems Analysis Activity (AMSAA) conducts field interviews with operating units and their personnel periodically. From these interviews, AMSAA assembles a report and this is forwarded to DARCOM research and development units for their review. AMSAA also, in many cases, assists in the resolution of field problems found during these visits. The data found in Tables 13a and 13b is from a number of their field interviews.

The US Army Troop Support and Aviation Materiel Readiness Command in St. Louis, is assigned the responsibility of researching and responding to Equipment Improvement Recommendations (EIR's) submitted by field units and individuals. These inquiries are thoroughly investigated and researched to maintain a high level of integrity in responding to the field with a technically accurate reply to the problem. A brief synopsis of the EIR's on the CVC Helmet is as follows:

EIR Control Number C85-54 surfaces the possibility of redesigning the chin strap as a permanent attachment to the helmet liner. Consideration had been given that a modification such as this may reduce the requisitioning of chin straps and pads as replacement parts for those which had become detached from the snap fasteners on the liner and were subsequently lost.

EIR Control Number 235209 highlights a requirement for face protection to be designed into the next generation of CVC Helmets. This requirement became apparent as a result of an injury incurred while wearing the CVC Helmet during operation of an armored personnel carrier. In order to preclude future injuries of the type cited in the EIR, the originator alluded to the use of a face shield such as that of a baseball catcher's mask.

EIR Control Number 200105 expresses a concern that the methods of tactical warfare encountered today have exceeded the ballistic protection capability of the CVC Helmet as it currently exists in the field. At the time this EIR was elevated a product improvement proposal was prepared which, when adopted, would incorporate ballistic protection in future procurements of the CVC Helmet.

EIR Control Number 542312 identifies a problem which existed with the sizing range of the small, medium and large helmets. The final evaluation concluded your Command was investigating the sizing criteria and any resulting changes would be incorporated in future procurements. In the interim the originator was advised to issue the helmet size which felt most comfortable to the wearer.

An area of safety which merits acknowledgement concerns the flame retardant capability of the CVC Helmet. Many components of the early model CVC Helmet (Model T-56) were highly flammable.

TSARCOM personnel feel it's appropriate to mention the complexity of management attendant to the logistic support of the CVC Helmet. The Defense Personnel Support Center at Philadelphia is designated the Integrated Materiel Manager. The US Army Support Activity (also located at Philadelphia), as a part of this Command, is the Service Item Control Center and as such performs retail management functions. However, the communication components of the helmet are managed by Communications and Electronics Materiel Readiness Command (CERCOM) at Ft. Monmouth, NH. Components of the helmet (less communications) are identified in our loose leaf organizational and direct support maintenance manual entitled, "General Repair Procedures for Clothing and Individual Equipment," (TM 10-8400-201-23). Components applicable to the communications portion of the helmet are addressed in CERCOMs operator's through general support maintenance manual entitled, "Headset-Microphone Kit, MK-1697/G," (TM 11-5965-286-14). Additionally, NARADCOM has published an operator's pamphlet for overpack with each helmet which identifies the components by part number and NSN (when assignment is known). When confronted with the choice of three sources of reference it is sometimes difficult for the field user to ascertain to which Command his inquiries should be directed. If only one source of reference were available would it not be easier to maintain the integrity of the documentation furnished to the field? It is strongly recommended that future procurements of the CVC Helmet include a requirement for provisioning technical documentation as well as technical manuals.

TABLE 13a - US ARMY MATERIEL SYSTEM ANALYSIS ACTIVITY DATA

REFERENCE NO.	PROBLEM AREA	RESOLUTION
77L04-062	<u>FACE PROTECTION</u> - The helmet lacks face protection which results in facial injuries. With 95 vehicles in operation, one or two minor injuries (mostly to the chin) are reported per month with occasional more severe injuries. Ninety percent of the injuries are to drivers and result from hitting unanticipated bumps (the bumps cannot be seen in the snow). This causes the driver's chin or face to impact the front slope of the vehicle. This is a problem with both the old (T-56) and new (DH-132) Helmet.	Short and long range development programs are being formulated to correct deficiencies in the armored vehicle crewman's ensemble. NARADCOM will surface this problem with TRADOC and attempt to validate the requirement for inclusion in the long range program. A milestone schedule with a projected fielding date has not been established, however, it will be within a two year period. When this system is fielded, this problem will be solved. This is a final report.
75L03-175	<u>CONTROL BOX CONNECTOR</u> - Suggest single connector at the C-2298 control box for both radio and intercom instead of the present connector for each function.	a. Background information/rationale: This equipment has been in the field for approx. fifteen years. There are approximately 200,000 sets in existence and it is estimated the cost for such a retrofit would be excessive. A 7-pin instead of a 6-pin connector is required to provide all the necessary functions of the application. Two separate grounds are required to eliminate feedback, which occurs when a common ground is used. A 6-pin audio connector is presently available as a result of adding one additional contact to the 5-pin audio connector insert configuration. It is manufactured by the General Connector Corp.; however, it does not have an assigned Government nomenclature. The development of a 7-pin audio connector would not be intermountable or intermateable with the present 6-pin design. b. The issue as presented is not considered to be a problem but rather an inconvenience, since two connectors are required with the present control box instead of one. A single connector with the necessary circuits (7) may be considered

TABLE 13a (CONT'D)

RESOLUTION

more desirable provided it can be designed within the same physical restraints as the present 5-pin for ease of retrofitting.

A procurement package has been submitted for the development of a miniature lightweight ten (10) pin audio connector. This connector, when developed, may be suitable for the recommended application and as a result, eliminate the need for two connectors on the control box. This is a final report.

BOOM - The clip holding the ball joint of the mouthpiece boom of the CVC Helmet frequently fails to hold the ball joint tightly.

76L01-007

Failure was due to a clip made of steel. An investigation was made of prior EIR's of this failure and the material for the clip was changed to beryllium copper. This material does not take a permanent set like steel. Helmets provided with the beryllium copper clips have been supplied to the Army since 11 Sep 74.

Repairs can best be made by ordering a new microphone and boom, M-138/G, NSN 5965-00-937-1851. You may or may not get a beryllium copper clip on the balljoint. The steel clips are still in the supply channels and will be issued until the supply is exhausted. To determine which is received, check with a magnet. Beryllium copper is non-magnetic. If problems occur with beryllium clips, an EIR should be submitted. This is a final report.

CORD, COILED - The coiled cord from the new DH-132 Helmet is not strong enough. Sometimes the cable wires will pull from the connector or break in the middle of the wires before the quick disconnect will separate. Also, the new cable will not withstand as many

77L01-006

The reported pull strength weakness in the new coiled cord may be due to a faulty bail-out connector rather than poor cable. The connector should separate with a force of three to six pounds while the cables should withstand a much stronger jerk. A common field problem is that the bail-out connector becomes dirty and will not

TABLE 13a (CONT'D)

PROBLEM AREA

REFERENCE NO.

RESOLUTION

accidental tank lid closings as the old style cable. Replacement rates on the new cords are running about 25% per year.

separate easily. The solution is to keep it clean and free of visible dirt, and to apply a light coating of silicone grease to the O-ring on the male portion of the bail-out connector. The grease aids in lubricating the parts for easy separation and in making a better moisture seal with the O-ring.

The problem with the lightweight cord being cut or broken by the tank lid falling on it is being investigated.

It is cheaper to replace the whole coil cord than to stock components and repair damaged cords.

The chin strap should be expendable and appropriate action has been taken to change the Army Master Data File to list the chin strap (NSN 8415-00-163-9048), with an expendable code of "X".

An EIR has been approved to allow the user to rivet or bolt the snap fasteners on the left hand side which, when done, should retain the swiveling action of the chin strap with respect to the helmet. This should help reduce the loss of chin straps.

This finding is being investigated.

7TL01-005

STRAP, CHIN - Why is the chin strap on the DH-132 nonexpendable (cost - \$1.75) yet the coil cord (cost \$29.96) is expendable? It is easy to lose a chin strap and the helmet cannot be turned in without one.

7TL01-007

WATERPROOFING - After several hours in a moderate rain, water gets into the ear pieces of the helmet and causes a feedback squeal. The intercom must then be disconnected. Exposure to this much rain and weather occurs during vehicle recovery operations. Repairs were made by disassembling the headset and switch and drying them out. Exposure to light rain does not cause this problem.

TABLE 13a (CONT'D)

<u>REFERENCE NO.</u>	<u>PROBLEM AREA</u>	<u>RESOLUTION</u>
79L01-033	NSN'S NOT AVAILABLE - The Outer Shells and the Ear Cup Assemblies are not listed by NSN in the TM. Consequently, other than minor repairable damage requires the occurrence of entirely new CVC Helmets to be obtained as replacements.	Although these items do not have NSN's, action has been initiated to do so. Until such time as the NSN's become available and changes to the RPSTL's are made, these items can be requisitioned by exception using the procedures contained in PS Magazine, Issue 312 (November 78), pages 4 to 7 (See Appendix A). The part number for the small and medium outer shells is 72D2504-1 and that for the large outer shell is 72D2504-2. The left ear cup assembly part number is 71D2317 and the right ear cup assembly part number is 71C2319. All of these part numbers use the same manufacturer's code: 97427. This is a final report.
79L02-061	ELECTRICAL CORD ASSEMBLY - The electrical cord assembly (NSN 5995-00-302-7519) is constantly deteriorating or dry-rotting from use (bending and moving) and the environment. The CVC helmet and headset (turned in for repair as Helmet Assembly - Medium, NSN 8415-00-094-2691) is often in the repair shop for about two weeks. A thicker insulation cord with perhaps flexible type metal tubing for better protection is needed.	This finding is being investigated.
79L03-142	CABLES BREAKING - The insulation on the electrical cable assembly and the retractable branched cord assembly cracks and frays. This results in broken wires. The wires also break due to continuous flexing and bending during normal operations.	This finding is being investigated.

TABLE 13a (CONT'D)

REFERENCE NO.

PROBLEM AREA

RESOLUTION

The contacts on the retractable cord assembly's female connector are contaminated by dirt and grease. This causes poor contact when the electrical plug connector is separated from the electrical receptable connector. The contacts are extremely difficult to clean satisfactorily due to the narrowness of the connector.

79L03-144

PAD FILLER FOAM - The pad filler foam (two of them within the earpad) in the Model DH-132 CVC Helmet deteriorates. This causes the earphone receiver to move which eventually breaks the electrical cable assembly and lead wires at the earphone terminal lugs.

This finding is being investigated.

The lugs are secured to the earphone by set screws. The lugs are crushed; consequently they cannot be removed from the serviceable earphone and the broken lead wires cannot be resoldered to the captive lugs in the earphone. A two-prong jack should be used at the earphone receiver.

79L05-061

CABLES BREAKING - The insulation on the electrical cable assembly and on the retractable branched cord assembly cracks and frays from use and environmental conditions and results in broken wires. Also, the contacts on the retractable cord assembly's female connector are contaminated by dirt and grease which causes poor contact. The contacts are extremely

This finding is being investigated.

REFERENCE NO.

PROBLEM AREA

TABLE 13a (CONT'D)

RESOLUTION

79L05-060

difficult to clean satisfactorily due to the narrowness of the connector. Of ninety-six units on hand, about fifty fail in about one-hundred hours of use. This is a recurring problem.

ELECTRICAL CABLE ASSEMBLY - The insulation on the electrical cable assembly and the retractable branched cord assembly cracks, frays, and dry rots. This results in broken wires. In cases where the cables are not broken but the insulation is cracking, the electrical tape used does not hold up too well in hot climates. Stock numbers for special fillers for the ear cups are not listed in TM 11-5965-286-14. Chin straps cannot be obtained. There is no NSN for the complete chin strap although the chin strap pad (NSN 5930-00-114-4359) is obtainable. No NSN is listed for the cloth strap from the helmet to the helmet liner. Of ninety-six DH-132 Helmets, about fifty per one-hundred hours of use require parts to put them back into working condition.

A new liner has to be ordered in order to get the chin strap since it is sewn to the liner. The liner can be obtained as follows:

Inner Helmet (less pads) - Small
NSN 8415-00-134-9396
Inner Helmet (less pads) - Medium
NSN 8415-00-134-9397
Inner Helmet (less pads) - Large
NSN 8415-00-134-9398

To order the cloth strap from the helmet to the helmet liner, order Kit Attachment Tab, NSN 8415-00-163-9049 (cost \$2.12). It is not cost effective to stock and place NSN's on all individual parts. This investigation is continuing.

79L05-059

PAD FILLER FOAM - The two pad filler foams within each earpad in the model DH-132 CVC Helmet deteriorate. This causes the earphone receiver to move and fall which eventually breaks the electrical cable assembly and lead wires at the earphone terminal lugs. The earphone kit retainer contains the following parts: Receiver Retainer (NSN 5948-00-134-1203), Pad Filler

The RPSTL was revised to include foam pads so the user can requisition replacements. The revised RPSTL (TM 11-5965-286-23P) was printed and forwarded to the US Army AG Publications Center in St. Louis, MO for distribution and is expected to be available by December 1979. This investigation is continuing.

TABLE 13a (CONT'D)

<u>REFERENCE NO.</u>	<u>PROBLEM AREA</u>	<u>RESOLUTION</u>
	(Gentex PN 72A2441), Pad Filler (Gentex PN 79B2504), Spacer (Gentex PN 72A2505), Pad Filler (Gentex PN 72A2505), and Earpad (Seal)(Gentex PN 74C2698). Only one item has a NSN. Other parts could not be ordered through the maintenance DS. Of ninety-six helmets about forty-eight earphone kit retainers fail after about one-hundred hours of use.	

Helmet, CVC, T56-6
TABLE 13b - US ARMY MATERIEL SYSTEM ANALYSIS ACTIVITY DATA

REFERENCE NO.

PROBLEM AREA

75L03-18G

CLAMP - No clamp to secure receiver wire to helmet. When wire is pulled loose - must replace entire system. Spare parts are not issued (or available). When components fail, the entire item must be requisitioned.

75L03-16S

CONNECTOR - The CVC Helmet's connector does not provide a suitable quick disconnect connector which will stay together. The connector on several helmets must be taped together.

RESOLUTION

The Combat Vehicle Helmet T56-6 is obsolete and is being replaced with the new DH-132 Helmet. All deficiencies occurring in the old helmet have been corrected in the new one. (See 75L03-16S for additional information). This is a final report.

The disconnect connector problem existed with the T56-6 Helmet only. This item has since been coded obsolete. The new CVC Helmet, DH-132, will replace the T56-6 Helmet. Approximately 30,000 DH-132 Helmets have been issued and are in use. The current procurement rate of delivery has been set at 2,000 each per month, or total quantity of 25,000 each per year. There are no reported current problems with the disconnect connector on the new DH-132 Helmet because they are equipped with an improved pull-apart connector.

NSN

8415-00-094-2679 (Med Shell w/
Small Liner)
8415-00-094-2691 (med)
8415-00-094-2684 (Lg)

Total D/O Qty By
NSN For Europe

141 each
1,585 each
1,197 each

EDD

31 Aug 75
31 Aug 75
31 Aug 75

This is a final report.

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