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TPL...Installation, Fitting, and Maintenance for the SPH-4 Helmet

(Script for Training Video)

By

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Biodynamics Research Division

September 1988

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**United States Army Aeromedical Research Laboratory
Fort Rucker, Alabama 36362-5292**

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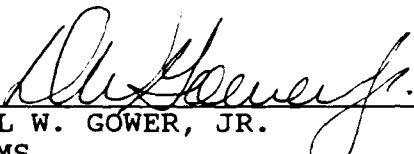
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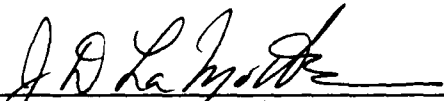
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19. ABSTRACT (Continue on reverse if necessary and identify by block number) The thermoplastic liner (TPL™) was accepted by the U.S. Army for use in the SPH-4 flyer's helmet in August 1988. This videotape demonstrates the U.S. Army Aeromedical Research Laboratory's techniques and procedures for installing, fitting, and maintaining the TPL™ in the SPH-4. Areas covered include TPL™ size selection, installation, fitting of the preformed TPL™, care and maintenance of the TPL™.			
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FINAL SHOOTING SCRIPT

"TPL . . . INSTALLATION, FITTING, AND MAINTENANCE FOR THE SPH-4 HELMET"

Presentation Sequence (PS #) # 1

Opens with the following TITLE:

-2C/600-011-1392-B
A0522-88-0033
TPL[Installation, fitting,
and maintenance for the
SPH-4 Helmet]
Produced for USAARL
08-10-1988
Running time 29.53
ETV Ft. Rucker AL

PS # 2

Opens with music and the ETV Aviation Center LOGO and the TITLE:

ETV
FORT RUCKER
ALABAMA

PRESENTS...

PS # 3

Continue music and dissolve to solid color background with SUPER title:

VIDEO PRODUCTION
BY
VISUAL INFORMATION BRANCH
AND
BIODYNAMICS RESEARCH DIVISION

U.S. ARMY AEROMEDICAL
RESEARCH LABORATORY
FORT RUCKER, ALABAMA

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



PS # 4

Continue music and opens with the following MONTAGE:

USAARL LOGO spinning in on star field.

PS # 4

Helicopter pilots wearing SPH-4s while flying NOE:

(VOICE OVER)

THE SPH-4 HELMET HAS BEEN PROVIDING SUPERIOR HEARING
PROTECTION AND GOOD CRASH IMPACT PROTECTION TO U. S.
ARMY AIRCREW MEMBERS SINCE ITS INTRODUCTION IN THE
LATE 1960S.

PS # 5

DISSOLVE to UH-60 with external fuel tanks:

VO:

IN THE LATE 1970S AND EARLY 1980S, INCREASING
MISSION LENGTHS,

PS # 6

DISSOLVE to pilot flying wearing PVS-5 Night Vision Goggles:

VO:

THE USE OF NIGHT VISION IMAGING DEVICES,

PS # 7

DISSOLVE to female pilot in helicopter wearing SPH-4:

VO:

AND AN INCREASE IN THE NUMBER OF FEMALE AIRCREW
MEMBERS WITH THEIR DIFFERENT ANTHROPOMETRIC HEAD
DIMENSIONS HAVE SURFACED SEVERAL DEFICIENCIES WITH
THE SPH-4 SLING SUSPENSION SYSTEM.

PS # 8

DISSOLVE to PANNING view of TPL kit on flat surface:

VO:

IN RESPONSE TO THESE PROBLEMS, A NEW SUSPENSION SYSTEM,
THE THERMOPLASTIC LINER OR TPL, WAS DEVELOPED FOR THE
SPH-4 HELMET. EXTENSIVE TESTING BY THE U.S. ARMY AEROMEDICAL
RESEARCH LABORATORY AND THE U.S. ARMY AVIATION BOARD HAS
DEMONSTRATED THAT THE TPL CAN REMEDY MANY OF THE SPH-4
FIT PROBLEMS WHILE PROVIDING INCREASED CRASH IMPACT
PROTECTION AND IMPROVED HELMET STABILITY.

PS # 9

DISSOLVE to solid background color with SUPER title:

(MAIN TITLE)

TPL...
INSTALLATION,
FITTING,
AND MAINTENANCE
FOR THE
SPH-4 HELMET

PS # 10

DISSOLVE to solid background color with SUPER title:

BY

MAJ JOHN V. BARSON
SSG DOUGLAS P. PRITTS
SGT BERNARD A. LANOUE

BIODYNAMICS RESEARCH DIVISION

AUGUST 1988

VO:

THIS TAPE WILL DEMONSTRATE THE INSTALLATION, FITTING,
AND MAINTENANCE OF THE THERMOPLASTIC LINER SYSTEM.

PS # 11

DISSOLVE to angled view from above of TM 10-8415-206-12&P laying on a
flat surface:

VO:

THIS VIDEOTAPE CANNOT COVER ALL ASPECTS OF SPH-4
HELMET MAINTENANCE THEREFORE, BEFORE ATTEMPTING
INSTALLATION OF THE THERMOPLASTIC LINER, YOU SHOULD
BECOME FAMILIAR WITH THE SPH-4 TECHNICAL MANUAL,
TM 10-8415-206-12 AND P, ESPECIALLY CHAPTER 4 AND APPENDIX B.

PS # 12

DISSOLVE to layout of TPL kit and zoom in on foam liner, then DISSOLVE
to each item as is mentioned in the narration:

VO:

THE THERMOPLASTIC LINER KIT OR TPL KIT IS AVAILABLE
IN THREE SIZES, SMALL REGULAR, REGULAR, AND EXTRA LARGE.

(PAUSE)

IT CONSISTS OF A 5/8TH INCH THICK EXPANDED FOAM LINER,

(PAUSE)

A CLOTH COVERED FOUR LAYER OPEN CELL PLASTIC LINER,

(PAUSE)

FOUR FOAM LINER PLUGS (PAUSE) SIX RUBBER HELMET SHELL PLUGS

(PAUSE)

FOUR STRIPS OF SELF ADHESIVE HOOK VELCRO,

(PAUSE)

TWO STRIPS OF SELF ADHESIVE PILE VELCRO,

(PAUSE)

AND A COPY OF FITTING AND USER INSTRUCTIONS

PS # 13

DISSOLVE to solid color background with SUPER title:

"TOOLS REQUIRED FOR TPL INSTALLATION"

VO:

MOST OF THE TOOLS NECESSARY TO INSTALL A THERMOPLASTIC LINER
ARE FOUND IN THE TECHNICAL MANUAL UNDER APPENDIX B, SECTION 3.

PS # 14

DISSOLVE to first tool in display, then DISSOLVE to each tool as it is described by narration:

VO:

ADDITIONAL TOOLS AND ITEMS INCLUDE THE FOLLOWING:

(PAUSE)

A NUMBER 1 PHILLIPS HEAD SCREWDRIVER

(PAUSE)

A 16 PENNY NAIL OR A POINTED AWL

(PAUSE)

AN ELECTRICIAN'S WIRE STRIPPER AND SCREW CUTTER TOOL

(PAUSE)

CELLOPHANE TAPE, DO NOT USE SCOTCH TAPE BECAUSE IT WILL NOT STICK AS WELL AS THE CELLOPHANE

(PAUSE)

QUICK SETTING EPOXY OR ONE HUNDRED MILE AN HOUR TAPE

(PAUSE)

A MODIFIED BUTTER KNIFE THAT IS MADE BY CUTTING OR GRINDING

A NOTCH IN AN ORDINARY, UNSERRATED TABLE BUTTER KNIFE AND

THEN BENDING THE KNIFE SLIGHTLY AS SHOWN.

PS # 15

DISSOLVE to solid color background with SUPER title:

"DETERMINING TPL KIT SIZE"

PS # 16

DISSOLVE to side-by-side comparison of standard liner and TPL liner:

VO:

THE FIRST STEP IN THE INSTALLATION OF THE TPL IS TO DETERMINE THE SIZE OF TPL KIT THAT WILL BE REQUIRED. BECAUSE THE TPL FOAM LINER IS 1/8 OF AN INCH THICKER THAN THE STANDARD SPH-4 LINER, THE INCREASED THICKNESS MAY REQUIRE SOME PERSONNEL TO BE MOVED UP FROM A REGULAR SIZED SPH-4 TO AN EXTRA-LARGE SPH-4 USING THE EXTRA-LARGE TPL KIT.

PS # 17

DISSOLVE to side-by-side regular SPH-4 and extra-large SPH-4 with TPL:

VO:

A WAY TO SAVE TIME IN DETERMINING THE SIZE REQUIRED FOR A CREWMEMBER IS TO INSTALL A TPL KIT IN A REGULAR AND AN EXTRA-LARGE SPH-4. HAVE ALL PERSONNEL WHO WILL BE FIT WITH TPLS TRY ON BOTH HELMETS TO FIND OUT WHICH FITS BEST. AFTER DETERMINING THE PROPER SIZE HELMET AND TPL KIT, THE HELMET MUST BE PREPARED FOR TPL INSTALLATION.

PS # 18

DISSOLVE solid color background with SUPER title:

"PREPARING THE HELMET FOR TPL INSTALLATION"

PS # 19

DISSOLVE to prepared SPH-4 helmet and FOLLOW action:

VO:

AS STATED EARLIER IN THIS PRESENTATION INSTALLATION
OF THE TPL SHOULD BE PERFORMED ONLY BY PERSONNEL FAMILIAR
WITH THE MAINTENANCE PROCEDURES IN THE TECHNICAL MANUAL.

OPEN on the microphone side of the helmet:

VO:

FOR INSTRUCTIONAL PURPOSES, THE SIDE OF THE HELMET WHERE
THE MICROPHONE BOOM ATTACHES WILL BE CALLED THE LEFT
SIDE OF THE HELMET.

HOLD POSITION while the helmet is rotated to show interior:

VO:

USING THE PROCEDURES IN THE TECHNICAL MANUAL, THIS HELMET
HAS HAD THE SLING SUSPENSION ASSEMBLY, THE EARCUP RETENTION
ASSEMBLY, AND THE FOAM LINER REMOVED. ANY EXCESS ADHESIVE
SHOULD NOW BE REMOVED FROM INSIDE THE HELMET SHELL.

(PAUSE VO while helmet is rotated to show nuts)

AT THIS POINT, YOU CAN SECURE THE VISOR HOUSING NUTS BY USING
EITHER THE QUICK SET EPOXY TO GLUE THE FOUR VISOR HOUSING NUTS
ONTO THE HELMET SHELL, OR A PIECE OF ONE HUNDRED MILE AN HOUR
TAPE CAN BE PLACED OVER EACH NUT ON THE INSIDE OF THE HELMET
SHELL. IF EPOXY IS USED, CARE SHOULD BE TAKEN NOT TO
GET IT ON ANY THREADED SURFACES.

(PAUSE VO while helmet is rotated to show front holes)

INSTALL THREE OF THE RUBBER PLUGS INTO THE EMPTY SUSPENSION

SCREW HOLES ON THE FRONT OF THE HELMET SHELL.

(PAUSE)

THEN REINSTALL THE VISOR HOUSING TAKING CARE NOT TO OVERTIGHTEN
THE SCREWS.

PS # 20

DISSOLVE to electrician's tool and snaps:

VO:

BEFORE PROCEEDING TO THE NEXT STEP, IT MUST BE DETERMINED IF
PNVS-5 NIGHT VISION GOGGLES ARE TO BE USED WITH THE HELMET.
IF SO, THEN THE NIGHT VISION GOGGLE ATTACHMENT SNAP SCREW
MUST BE SHORTENED BY AN EIGHTH OF AN INCH USING THE SCREW CUTTER
ON THE ELECTRICIAN'S TOOL. THIS IS DONE BY INSERTING THE
SNAP SCREW INTO THE APPROPRIATE SIZE CUTTING HOLE OF THE
ELECTRICIAN'S TOOL UNTIL IT IS FLUSH WITH THE OPPOSITE SIDE OF
TOOL, THEN BACK THE SCREW OUT APPROXIMATELY ONE-HALF TURN
AND QUICKLY CUT IT. ROTATE THE SCREW SEVERAL TIMES IN AND OUT
OF THE CUTTING HOLE TO REMOVE ANY METAL BURRS.

PS # 21

DISSOLVE to reinstalling of left side retention assembly:

VO:

REINSTALL THE LEFT EARCUP ASSEMBLY USING THE NIGHT
VISION GOGGLE MODIFICATION IF REQUIRED.

(PAUSE)

THIS COMPLETES HELMET PREPARATION AND THE INSTALLATION OF TPL
KIT CAN NOW TAKE PLACE.

PS # 22

DISSOLVE to solid color background with SUPER title:

"TPL KIT INSTALLATION"

PS # 23

DISSOLVE to left side of helmet looking slightly downward:

VO:

FIRST, WORKING FROM THE RIGHT SIDE OF THE HELMET, INSERT THE
TPL FOAM LINER INTO THE HELMET SHELL BY PUTTING THE LEFT SIDE
IN FIRST AND ROTATING IT CAREFULLY INTO PLACE.

HOLD position as helmet is rotated to show first inside front then back:

VO:

MARK THE INSIDE OF THE HELMET SHELL AT FRONT AND REAR
TO SHOW WHERE THE EDGES OF THE VELCRO ON THE FOAM LINER
FALL ON THE INTERIOR OF THE HELMET SHELL. THESE MARKS WILL
LATER BE USED TO LINE THE VELCRO FASTENERS THAT WILL HOLD
THE FOAM LINER IN PLACE.

(PAUSE)

REMOVE FOAM LINER BY ROTATING IT OUT IN THE OPPOSITE
DIRECTION FROM WHICH IT WAS PUT IN. THIS IS DONE BY
PULLING UP AND ROTATING THE RIGHT SIDE OF THE LINER UP
AND OUT OF THE HELMET SHELL.

(PAUSE)

TAKING CARE TO ALIGN THE PILE VELCRO FASTENERS WITH THE
PREVIOUSLY MADE ALIGNMENT MARKS, ATTACH A ONE INCH BY
ONE-HALF-INCH PILE VELCRO FASTENER TO THE INSIDE OF THE

FRONT OF THE HELMET SHELL AND ANOTHER TO THE INSIDE OF
THE REAR OF THE HELMET SHELL.

(PAUSE)

FOLD A SMALL PIECE OF PAPER OVER THE FRONT AND REAR EDGES
OF THE HELMET SHELL COVERING THE PILE VELCRO FASTENER.
THIS IS DONE SO THAT THE HOOK VELCRO FASTENER ON THE
FOAM LINER WON'T CATCH DURING INSERTION INTO THE SHELL.

(PAUSE)

REINSERT THE FOAM LINER IN THE SAME MANNER AS BEFORE
ENSURING THAT THE FRONT EDGE OF THE LINER AND THE FRONT
EDGE OF THE SHELL ARE EVEN.

(PAUSE)

ALIGN THE VELCRO FASTENERS ON THE SHELL AND THE LINER
AND PULL THE PIECE OF PAPER OUT FROM THE FRONT FASTENER
AND PRESS GENTLY ON THE FOAM LINER TO SECURE. LEAVE
THE BACK PIECE OF PAPER IN PLACE.

PS # 24

DISSOLVE to left side of the helmet and FOLLOW action:

VO:

TO INSTALL THE RIGHT SIDE EARCUP RETENTION ASSEMBLY
AND NIGHT VISION GOGGLE MODIFICATION IF REQUIRED,
A PIECE OF CELLOPHANE TAPE MUST BE WRAPPED AROUND
THE EARCUP RETENTION ATTACHMENT STRAP AND EARCUP TENSION
STRAP TO HOLD THE NUT IN PLACE.

(PAUSE)

STARTING WITH EITHER THE FRONT OR BACK HOLE AND USING
THE MODIFIED BUTTER KNIFE, SLIDE THE NOTCH OF THE KNIFE
BLADE BETWEEN THE STRAPS OF THE TAPE, STRAP AND NUT
ASSEMBLY UNTIL IT HOOKS OVER THE NUT. THEN SLIP THE
ENTIRE ASSEMBLY DOWN BETWEEN THE FOAM LINER AND THE
HELMET SHELL SO THAT THE NUT ALIGNS WITH THE PRE-PUNCHED
HOLE IN THE LINER AND THE SCREW HOLE IN THE HELMET SHELL.
THIS CAN BE A TIGHT FIT AND MAY TAKE SEVERAL ATTEMPTS TO
ACCOMPLISH. DO NOT RUSH OR YOU MAY DAMAGE THE FOAM LINER.

(PAUSE)

THE SIXTEEN PENNY NAIL OR AWL IS USED TO MAKE A HOLE IN THE TAPE
AND TO LINE UP THE HOLE IN THE NUT WITH THE HOLE IN THE HELMET.

(PAUSE)

INSERT THE ATTACHMENT SCREW AND WHILE PUSHING
YOUR FINGER THROUGH THE HOLE IN THE FOAM LINER,
HOLD THE NUT AND TIGHTEN THE SCREW.

(PAUSE)

REPEAT THESE STEPS FOR THE OTHER HOLE.

PS # 25

DISSOLVE to front view of the helmet looking towards the helmet's rear:

VO:

USING THE BUTTER KNIFE, CAREFULLY ROUTE THE
COMMUNICATION WIRE FROM THE RIGHT EARCUP BEHIND
THE REAR VELCRO FASTENER BETWEEN THE FOAM LINER
AND THE HELMET SHELL TAKING CARE NOT TO DAMAGE
THE LINER.

(PAUSE)

REMOVE THE PIECE OF PAPER COVERING THE REAR FASTENER
AND GENTLY PRESS THE INSIDE OF THE FOAM LINER OVER
THE FASTENER TO SECURE.

(PAUSE)

ATTACH THE 2-AND-1/4-INCH LONG BY ONE-INCH WIDE HOOK
VELCRO FASTENERS TO THE INSIDE SURFACE OF THE FRONT
AND REAR OF THE FOAM LINER NEAR THE EDGE OF THE LINER
AND ALLOW THEM TO SET FOR SEVERAL MINUTES.

(PAUSE)

CAREFULLY INSERT THE FOUR FOAM PLUGS INTO THE APPROPRIATE
HOLES OF THE FOAM LINER. THIS PLUGS CAN BE SQUEEZED SLIGHTLY
SO THAT THEY WILL FIT INTO THE HOLES EASIER.

(PAUSE)

INSTALL THE THREE RUBBER PLUGS INTO THE EMPTY SUSPENSION
SYSTEM HOLES ON THE REAR OF THE HELMET SHELL.

PS # 26

DISSOLVE to viewing helmet from the left side and FOLLOW action:

VO:

TO INSERT THE TPL INTO THE HELMET, SQUEEZE THE TPL BY FOLDING IT IN HALF LENGTHWISE AND SLIP IT INTO HELMET WITH THE TWO LARGE HOLES ON THE TOP TOWARDS THE FRONT OF THE HELMET.

(PAUSE)

ALIGN THE FRONT EDGE OF THE TPL WITH THE FRONT EDGE OF THE FOAM LINER AND PULL THE REAR OF THE TPL LOOSE FROM THE VELCRO. ADJUST THE TPL UNTIL IT FITS SMOOTHLY AGAINST THE FOAM LINER.

(PAUSE)

EXAMINE THE TPL AND HELMET MAKING SURE ALL OF THE COMPONENTS ARE PRESENT AND PROPERLY ALIGNED.

PS # 27

DISSOLVE to solid color background with SUPER title:

"CHECKING THE FIT OF THE INSTALLED TPL"

VO:

THE THERMOPLASTIC LINER THAT COMES IN THE TPL KIT HAS BEEN PREFORMED ON A MOLD PRIOR TO SHIPPING. OUR RESEARCH HAS LEAD US TO BELIEVE THAT THIS PREFORMING SHOULD ALLOW THE TPL TO FIT A MAJORITY OF PERSONNEL WITHOUT ANY MODIFICATIONS.

PS # 28

DISSOLVE to view 45 degrees off front facing fitting subject:

VO:

THERE ARE SEVERAL STEPS TO CHECKING THE FIT OF A TPL.

(PAUSE)

FIRST, HAVE THE CREWMEMBER DON THE HELMET AND TIGHTEN THE CHIN STRAP AND THE NAPE STRAP AS IT WOULD BE WORN WHILE FLYING.

(PAUSE WHILE DONNING HELMET)

ASK HIM IF HIS EARS FEEL LIKE THEY ARE FULLY INSIDE THE EARCUPS AND IF HE DETECTS ANY SOUND LEAKS.

(PAUSE)

IF THERE IS ANY QUESTION AS TO THE EARS FITTING, SLIDE YOUR FINGER UP UNDER THE EARCUP SEAL TO CHECK THE EAR LOBE POSITION.

(PAUSE WHILE CHECKING EAR LOBE POSITION)

ASK THE WEARER IF THE HELMET IS COMFORTABLE AND IF HE NOTICES ANY TIGHT OR LOOSE AREAS, OR PRESSURE POINTS.

(PAUSE)

CHECK TO SEE IF THERE IS ADEQUATE RETENTION BY TRYING TO ROTATE THE HELMET FORWARD AND BACKWARD, AND FROM SIDE TO SIDE. IF THE HELMET ROTATES TO COVER THE EYES, EXPOSES THE FOREHEAD, OR BREAKS THE EARCUP SEAL ON THE SIDES, THEN THE TPL MAY NEED FORM FITTING.

(PAUSE)

HAVE THE WEARER LOWER VISOR TO SEE IF THE TPL SITS LEVEL IN THE HELMET.

(PAUSE)

THE CREWMEMBER SHOULD THEN WEAR THE HELMET FOR 15-30 MINUTES
TO SEE IF PROBLEM AREAS DEVELOP.

(PAUSE)

ALTHOUGH A MAJORITY OF TPL USERS WILL BE ACCOMMODATED
BY THE PREFORMED LINER, CERTAIN INDIVIDUALS WILL REQUIRE
A CUSTOM MOLDING OF THE TPL TO THEIR HEAD. THE FOUR-LAYER
OPEN CELL PLASTIC LINER WITH THE BLACK COVER HAS THE CAPABILITY
TO BE HEATED AND MOLDED TO THE WEARER'S HEAD.
THE INSTRUCTION BOOKLET THAT COMES WITH THE TPL KIT HAS
A PROCEDURE FOR THE CUSTOM HEAT FITTING OF THE LINER.
WE RECOMMEND THAT YOU SHOULD NOT TRY THIS PROCEDURE
BECAUSE IT REQUIRES THAT THE HEATING OVEN BE CAPABLE OF MAINTAINING
A PRECISE TEMPERATURE. MOST HOME OVENS CANNOT DO
THIS AND WILL DAMAGE THE TPL. IF YOU HAVE SOMEONE WHO REQUIRES
CUSTOM FITTING, PLEASE CONTACT US AT THE ADDRESS OR TELEPHONE
NUMBER GIVEN AT THE END OF THIS PRESENTATION.

PS # 29

DISSOLVE to solid color background with SUPER title:

"TPL INSPECTION AND MAINTENANCE CRITERIA"

VO:

USE OF THE TPL IN THE SPH-4 DOES NOT SIGNIFICANTLY
CHANGE THE INSPECTION CRITERIA FOR THE HELMET.
THE HELMET IS TO BE INSPECTED AT THE NORMAL 120 DAY CYCLE.

PS # 30

DISSOLVE to inverted helmet with TPL looking from 45 degrees off front:

VO:

INSPECTION ITEMS FOR THE TPL INCLUDE:

(PAUSE)

REMOVING THE TPL TO INSPECT THE FOAM LINER FOR CRACKS,
GOUGES, AND OTHER PHYSICAL DAMAGE.

(PAUSE)

INSPECTING THE TPL FOR RIPS IN THE CLOTH COVER OR DAMAGE
TO THE BUBBLE PLASTIC.

PS # 31

FREEZE FRAME:

VO:

TO KEEP THE TPL FUNCTIONING WELL OVER TIME,
CARE MUST BE TAKEN NOT TO DAMAGE OR ABUSE IT.
TO PREVENT DAMAGE TO THE TPL, THE WEARER MUST FOLLOW
SEVERAL BASIC RULES:

(PAUSE)

THE TPL IS HEAT SENSITIVE. DO NOT LEAVE THE
HELMET IN AN ENCLOSED AIRCRAFT OR AUTOMOBILE IN
THE SPRING AND SUMMER MONTHS.

PS # 32

DISSOLVE to scene of knee board in SPH-4 with TPL:

VO:

THE FOAM LINER IN THE TPL KIT IS MADE OF A LOWER DENSITY FOAM TO IMPROVE CRASHWORTHINESS THEREFORE, IT IS MUCH MORE SENSITIVE TO ROUGH HANDLING THAN THE CURRENT LINER IN THE SPH-4 AND WILL DENT AND CRACK VERY EASILY. FOR THIS REASON, DO NOT PUT HEAVY ITEMS IN THE HELMET SUCH AS KNEEBOARDS OR TOOLS. ADDITIONALLY, SPECIAL CARE SHOULD BE TAKEN WHEN REMOVING THE FOAM LINER FOR HELMET REPAIRS.

PS # 33

DISSOLVE to scene removing black cover from TPL:

VO:

IF THE CLOTH COVER BECOMES SOILED, IT CAN BE REMOVED FOR LAUNDERING. WE RECOMMENDED THAT THE COVER BE WASHED BY HAND USING A MILD DETERGENT SUCH AS WOOLITE AND ALLOWED TO AIR DRY. ONCE DRY, THE BLACK COVER IS PUT BACK ON THE BUBBLE PLASTIC WITH THE TOP OF THE "Y" SHAPE IN THE STITCHING FACING TOWARDS THE END OF THE TPL WITH THE TWO BIG HOLES. THE COVER IS THEN REATTACHED USING ANY TYPE OF DOUBLE STICK TAPE.

PS # 34

DISSOLVE to front view of inverted helmet with TPL:

VO:

IF THE TPL SHIFTS IN THE HELMET, IT CAN BE ADJUSTED
EASILY BY PULLING THE BLACK LINER MATERIAL AWAY FROM
THE VELCRO HOOK FASTENERS AND REPOSITIONED.

PS # 35

DISSOLVE to skull cap:

VO:

ALTHOUGH UNNECESSARY, A SKULL CAP CAN BE USED WITH THE TPL.

PS # 36

DISSOLVE to solid color background with SUPER title:

"CONCLUSION"

VO:

USE OF THE THERMOPLASTIC LINER WILL REMEDY MOST SPH-4 FITTING
PROBLEMS WHILE IMPROVING CRASH IMPACT PROTECTION
AND HELMET STABILITY. THE INSTALLATION OF A TPL KIT TAKES
APPROXIMATELY 30 TO 60 MINUTES PER HELMET IF FORM FITTING
IS NOT REQUIRED. PLEASE UNDERSTAND THESE TIMES ARE
REPRESENTATIVE OF AN EXPERIENCED TPL INSTALLER. THE FIRST
FEW KITS YOU INSTALL WILL PROBABLY TAKE LONGER, BUT RUSHING
THE PROCEDURE ONLY INCREASES THE RISK OF DAMAGING THE TPL.
BY TAKING YOUR TIME AND INSTALLING THE TPL CORRECTLY, YOU WILL
GIVE YOUR AIRCREW MEMBERS A BETTER FITTING AND SAFER HELMET,
AND YOU WILL SAVE TIME, EFFORT, AND MONEY IN THE LONG RUN.

PS # 37

DISSOLVE to solid color background with SUPER title:

VO:

IF YOU HAVE ANY QUESTIONS OR PROBLEMS CONCERNING ANY ASPECT
OF THE TPL, OR IF ONE OF YOUR AIRCREW MEMBERS REQUIRES FORM
FITTING, PLEASE CONTACT US AT THE FOLLOWING ADDRESS OR
TELEPHONE NUMBERS:

CHIEF, LSE/CIE
U.S. ARMY AEROMEDICAL RESEARCH LABORATORY (USAARL)
P.O. BOX 577
ATTN: SGRD-UAD-IE
FT RUCKER, ALABAMA 36362-5292

TELEPHONE

AUTOVON 558-6882/6881

COMMERCIAL (205) 255-6882/6881

PS # 38

USAARL LOGO spinning in on star field.