

| | | | | | | | |
|--|------|--|------|--|-------|--|------|
| ENGINEERING CHANGE PROPOSAL (ECP), PAGE 1 | | | | 1. DATE (YYMMDD) 20020404 | | Form Approved OMB No. 0704-0188 | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. | | | | | | 2. PROCURING ACTIVITY NO. L2A2008 | |
| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT / PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | | | | | 3. DODAAC | |
| 4. ORIGINATOR | | b. ADDRESS (Street, City, State, Zip Code) | | 5. CLASS OF ECP | | | |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | | 1 | | 7. PRIORITY R | |
| 6. JUST. CODE D | | 9. BASELINE AFFECTED | | | | | |
| 8. ECP DESIGNATION | | a. MODEL/TYPE M198 | | b. CAGE CODE 19200 | | c. SYSTEM DESIGNATION HOWITZER | |
| 9. BASELINE AFFECTED | | FUNCTIONAL <input checked="" type="checkbox"/> PRODUCT <input type="checkbox"/> ALLOCATED | | | | | |
| d. ECP NO. L2A2008 | | e. TYPE F | | f. REV | | 10. OTHER SYS./CONFIG. ITEMS AFFECTED | |
| | | | | | | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | |
| 11. SPECIFICATIONS AFFECTED | | | | 12. DRAWINGS AFFECTED | | | |
| | CAGE | Specification/Document | Rev. | SCN | CAGE | Number | Rev. |
| a. SYSTEM | | | | | 19200 | SEE ENCLOSURE LIST | |
| b. DEVELOPMENT | | | | | | | |
| c. PRODUCT | | | | | | | |
| 13. TITLE OF CHANGE MODIFY SPEAKER CIRCUIT BOARD ASSEMBLY AND CHANGE VARIOUS HARDWARE P/Ns | | | | | | | |
| 14. CONTRACT NO. AND LINE ITEM | | | | 15. PROCURING CONTRACTING OFFICER | | | |
| | | | | a. NAME (First, Middle Initial, Last) | | | |
| | | | | b. CODE | | c. TELEPHONE NO. | |
| 16. CONFIGURATION ITEM NOMENCLATURE HOWITZER, TOWED, M198 - HIPE PROGRAM | | | | | | 17. IN PRODUCTION | |
| | | | | | | NA <input type="checkbox"/> YES <input type="checkbox"/> NA <input type="checkbox"/> NO <input type="checkbox"/> | |
| 18. ALL LOWER LEVEL ITEMS AFFECTED | | | | | | | |
| a. NOMENCLATURE RADIO BOX ASSEMBLY | | | | b. PART NO. 12993050 | | c. NSN | |
| 19. DESCRIPTION OF CHANGE MODIFY CIRCUIT BOARD FOR SPEAKER BOX TO SUPPORT SPARE PART PROVISIONING. CHANGE VARIOUS VENDOR NAMES AND HARDWARE PART NOS. | | | | | | | |
| 20. NEED FOR CHANGE SUPPORT SPARE PART PROVISIONING AND CHANGE VENDOR NAMES AND HARDWARE PART NOS TO IMPROVE TDP. | | | | | | | |
| 21. PRODUCTION EFFECTIVITY BY SERIAL NUMBER NA | | | | 22. EFFECT ON PRODUCTION DELIVERY SCHEDULE NA | | | |
| 23. RETROFIT | | | | | | | |
| a. RECOMMENDED ITEM EFFECTIVITY NA | | | | b. SHIP / VEHICLE CLASS AFFECTED NA | | | |
| c. ESTIMATED KIT DELIVERY SCHEDULE NA | | | | d. LOCATIONS OR SHIP / VEHICLE NUMBERS AFFECTED NA | | | |
| 24. ESTIMATED COSTS / SAVINGS UNDER CONTRACT NA | | | | 25. ESTIMATED NET TOTAL COSTS / SAVINGS NA | | | |
| 26. SUBMITTING ACTIVITY | | | | b. TITLE | | | |
| a. AUTHORIZED SIGNATURE <i>Emil Meyer</i> | | | | PROJECT ENGINEER | | | |
| 27. APPROVAL / DISAPPROVAL | | | | | | | |
| a. CLASS I | | b. CLASS II | | c. CLASS II | | DO NOT CONCUR IN CLASSIFICATION OF CHANGE | |
| <input type="checkbox"/> APPROVAL RECOMMENDED | | <input type="checkbox"/> DISAPPROVAL RECOMMENDED | | <input type="checkbox"/> APPROVED | | <input type="checkbox"/> CONCUR IN CLASSIFICATION OF CHANGE | |
| d. GOVERNMENT ACTIVITY AMSTA-AR-FSA-T | | | | e. SIGNATURE <i>Roger...</i> | | f. DATE SIGNED (YYMMDD) 02 04 08 | |
| g. APPROVAL | | h. GOVERNMENT ACTIVITY | | i. SIGNATURE <i>Arthur J. Heyderman</i> | | j. DATE SIGNED (YYMMDD) 2002 05 16 | |
| <input checked="" type="checkbox"/> APPROVED | | TACOM-ARDEC, AMSTA-AR-FSA-R | | ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | | | |
| <input type="checkbox"/> DISAPPROVED | | | | | | | |

2002 APR 12 P 2:10
 AMSTA-AR-FSA-T
 16 APR 2002

ENGINEERING CHANGE PROPOSAL ENCLOSURE LIST

ECP NO. L2A2008
 PAGE NO. NO. OF PAGES

| CAGE CODE | DOCUMENT ITEM NUMBER | LATEST DOCUMENT DATE | CUST. | OTHER PENDING ECPS NUMBER | CONFLICTS | | LEGEND CODE: END ITEMS AFFECTED | | | | | | | | | |
|-----------|----------------------|----------------------|-------|---------------------------|-----------|----------|---------------------------------|-------|---|---|---|---|---|---|--|--|
| | | | | | YES | NO | A | B | C | D | E | F | G | H | | |
| | | | | | 19200 | 12992918 | 010808 | ARDEC | | | | X | | | | |
| 19200 | 12993010 | 020225 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993011 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993012 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993014 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993015 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993017 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993030 sh 1 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993030 sh 2 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993049 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993050 sh 1 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993051 sh 1 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993077 | | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993081 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993083 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | 12993088 | | ARDEC | | | | X | | | | | | | | | |
| 12900 | SQ12993010 | | ARDEC | | | | X | | | | | | | | | |
| 19200 | SQ12993050 | 010808 | ARDEC | | | | X | | | | | | | | | |
| 19200 | SQ12993077 | | ARDEC | | | | X | | | | | | | | | |
| 19200 | DTL12993030 | 010808 | ARDEC | | | | X | | | | | | | | | |

END ITEMS AFFECTED

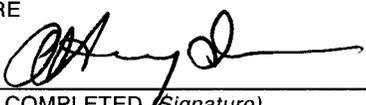
CHANGE AFFECTS

| | | | |
|---------------------------------|---|-----|--------------------|
| A RADIO BOX ASSEMBLY - 12993050 | B | NO | REPAIR PARTS |
| | | NO | SPECIFICATIONS |
| | | NO | ITEM INST. |
| C | D | NO | TEST EQUIPMENT |
| | | NO | GAGES |
| | | NO | SPECIAL TOOLS |
| E | F | NO | INTERCHANGEABILITY |
| | | NO | ASSOC. LISTS |
| | | YES | QA DATA |
| G | H | NO | PACKAGING |
| | | NO | PUBLICATIONS |

CONCURRENCE

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |

| | |
|------|---------------------------------|
| DATE | SIGNATURE OF ACCEPTING OFFICIAL |
|------|---------------------------------|

| | | | |
|---|--|---|---|
| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
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| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | | 3. DODAAC |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 19200 | 1 |
| | | 7. CAGE CODE | 8. DOCUMENT NO. |
| | | 19200 | 12992918 |
| 9. TITLE OF DOCUMENT WASHER, SEALING | 10. REVISION LETTER | | 11. ECP NO. |
| | a. CURRENT | b. NEW | L2A2008 |
| | - | A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | NOR Sht 1 of 2 |
| 13. DESCRIPTION OF REVISION | | | |
| REMOVE: Note 5 in its entirety. | | | |
| CHANGE Note: | | | |
| FROM: 4. ONLY THE ITEM DESCRIBED ON THIS DRAWING WHEN PROCURED FROM THE VENDOR (S) LISTED HEREON IS APPROVED BY U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (ARDEC), PICATINNY ARSENAL, NJ 07806-5000 FOR USE IN THE APPLICATION (S) SPECIFIED HEREON. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR APPROVAL BY ARDEC. | | | |
| TO: 4. IDENTIFICATION OF THE SUGGESTED SOURCE (S) OF SUPPLY HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM. | | | |
| CHANGE: FROM: SOURCE CONTROL DRAWING | | | |
| TO: VENDOR ITEM DRAWING | | | |
| CHANGE Table: FROM: APPROVED SOURCE (S) OF SUPPLY | | | |
| TO: SUGGESTED SOURCE (S) OF SUPPLY | | | |
| See NOR Continuation Sheet | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | | c. TYPED NAME (First, Middle Initial, Last) | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE | e. SIGNATURE | f. DATE SIGNED (YYMMDD) | |
| ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team |  | 20020516 | |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |
| | | | |

NOTICE OF REVISION (NOR) CONTINUATION SHEET

THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.

| | | | |
|----------------------------|-------------------------------------|---|-------------------------|
| DATE: 20020404 | ECP NUMBER: L2A2008 | NOR SHEET NUMBER: 2 of 2 | NOR NUMBER: 1 |
| CAGE CODE: 19200 | DOCUMENT NUMBER: 12992918 | DOCUMENT TITLE: WASHER, SEALING | |

DESCRIPTION OF REVISION

CHANGE Vendor Address: FROM: McMASTER – CARR SUPPLY COMPANY
P.O. BOX 440
NEW BRUNSWICK, NJ 08903-0440

TO: McMASTER – CARR SUPPLY COMPANY
473 RIDGE RD
DAYTON, NJ 08810

CHANGE Vendor CAGE CODE: FROM: 18D74 TO: 2V507

| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) | Form Approved |
|---|--|---|-------------------|
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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 19200 | 2 |
| US ARMY, TACOM-ARDEC | | 7. CAGE CODE | 8. DOCUMENT NO. |
| | | 19200 | 12993010 |
| 9. TITLE OF DOCUMENT | 10. REVISION LETTER | | 11. ECP NO. |
| CIRCUIT BOARD ASSEMBLY, SPEAKER BOX | a. CURRENT | b. NEW | L2A2008 |
| | A | B | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES | | | NOR Sht 1 of 5 |
| HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| REMOVE NOTES: 6 8 IN THEIR ENTIRETY | | | |
| CHANGE NOTES: | | | |
| FROM: 2 POSITION THE POTENTIOMETER WITH THE 2 LOCATING BOSSES AND 3 – PINS AS SHOWN. CONNECT VOL 1 TO CENTER PIN AND VOL 2 TO TOP MOST PIN. | | | |
| TO: 2 ATTACH POTENTIOMETER HARNESS WITH WHT WIRE TO VOL 1 AND WHT / BLU WIRE TO VOL 2. | | | |
| FROM: 3 AFTER SOLDERING, APPLY 1.00 LONG PIECES OF INSULATION SLEEVING, ELECTRICAL, HEAT SHRINKABLE, M23053/5-104-0 PER SAE-AMS-DTL-23053/5. | | | |
| TO: 3 WIRE, SINGLE, 22 AWG, RED, M22759/32-22-2 PER AS22759/32. LENGTH REFERS TO CUT LENGTH +/- .12 PRIOR TO STRIPPING. | | | |
| FROM: 5 USE A SINGLE WIRE FROM TWISTED PAIR SPECIFIED IN 4 . | | | |
| TO: 5 TWISTED WIRE PAIRS SHOWN UNTWISTED FOR CLARITY. | | | |
| FROM: 12 PROTECT RECEPTACLE WITH CAP, PROTECTIVE, NAS813-12, MS90376-12R PER SAE-AS90376 OR USE A FUNCTIONAL EQUIVALENT. | | | |
| TO: 12. QAP 12993010 APPLIES. | | | |
| CHANGE TABLE: U2 PART NO. FROM: DG303AAK / 883 TO: HI1-0303-2 | | | |
| See NOR Continuation Sheet | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | | c. TYPED NAME (First, Middle Initial, Last) | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE | e. SIGNATURE | f. DATE SIGNED (YYMMDD) | |
| ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team |  | 2002 0516 | |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |
| | | | |

NOTICE OF REVISION (NOR) CONTINUATION SHEET

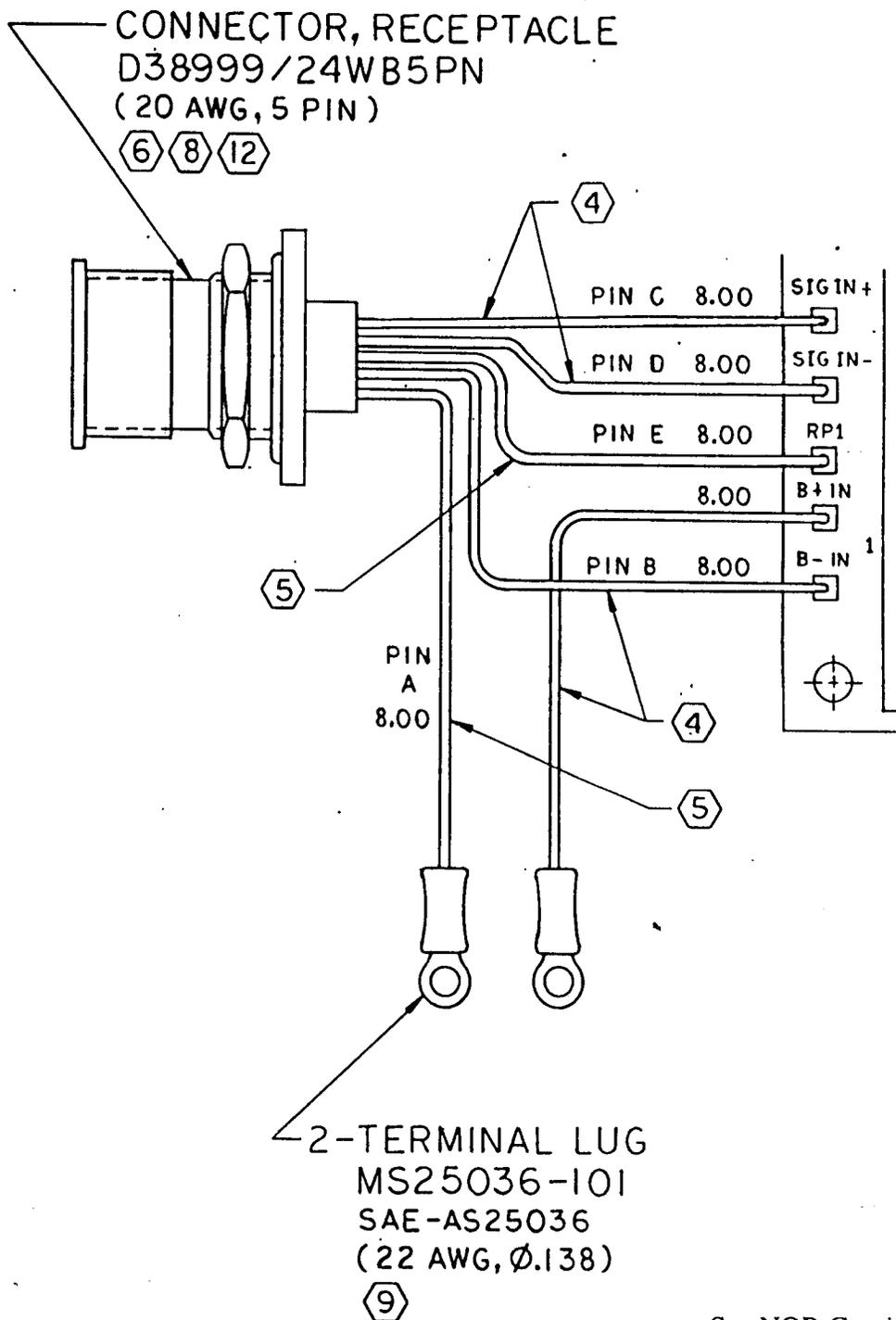
THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.

| | | | |
|---------------------|------------------------------|--|-------------------------|
| DATE: 20020404 | ECP NUMBER: L2A2008 | NOR SHEET NUMBER: 2 of 5 | NOR NUMBER: 2 |
| CAGE CODE: 19200 | DOCUMENT NUMBER: 12993010 | DOCUMENT TITLE: CIRCUIT BOARD ASSEMBLY, SPEAKER BOX | |

DESCRIPTION OF REVISION

CHANGE CALLOUTS ON VIEW:

FROM:



See NOR Continuation Sheet

NOTICE OF REVISION (NOR) CONTINUATION SHEET

THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.

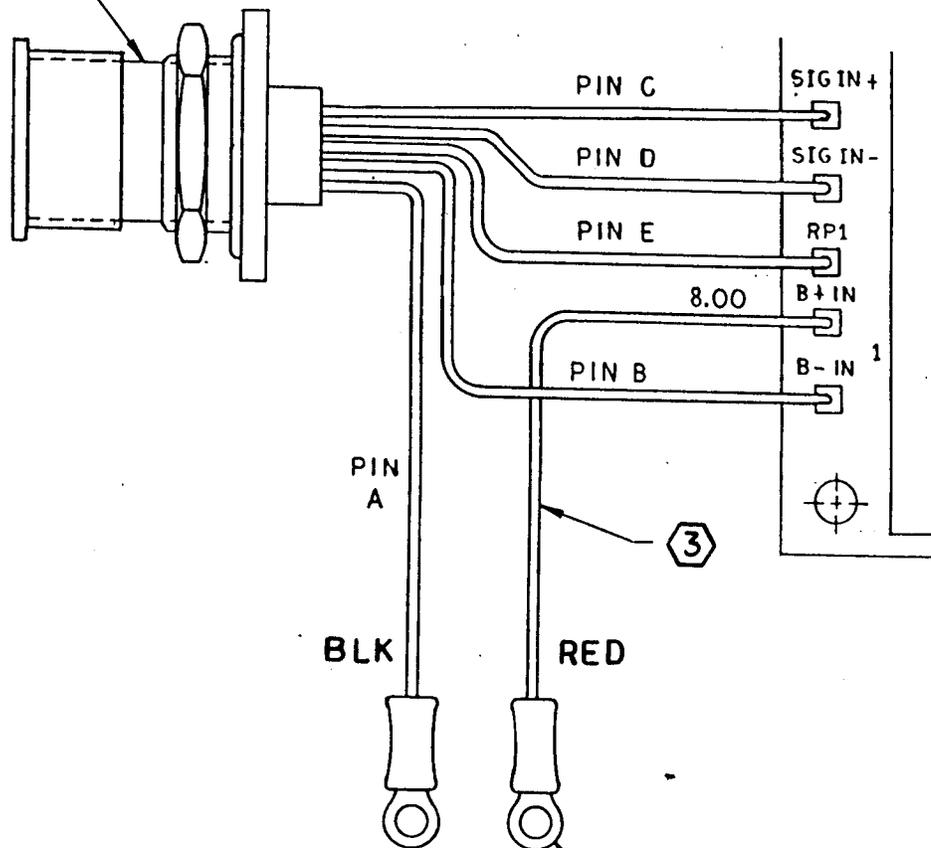
| | | | |
|---------------------|------------------------------|--|------------------|
| DATE: 20020404 | ECP NUMBER: L2A2008 | NOR SHEET NUMBER: 3 of 5 | NOR NUMBER: 2 |
| CAGE CODE: 19200 | DOCUMENT NUMBER: 12993010 | DOCUMENT TITLE: CIRCUIT BOARD ASSEMBLY, SPEAKER BOX | |

DESCRIPTION OF REVISION

CHANGE CALLOUTS ON VIEW:

TO:

CONNECTOR HARNESS,
SPEAKER BOX
12993077
⑤



TERMINAL LUG
MS25036-101
SAE-AS25036
(22 AWG, ϕ .138)
⑨

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NOTICE OF REVISION (NOR)
CONTINUATION SHEET

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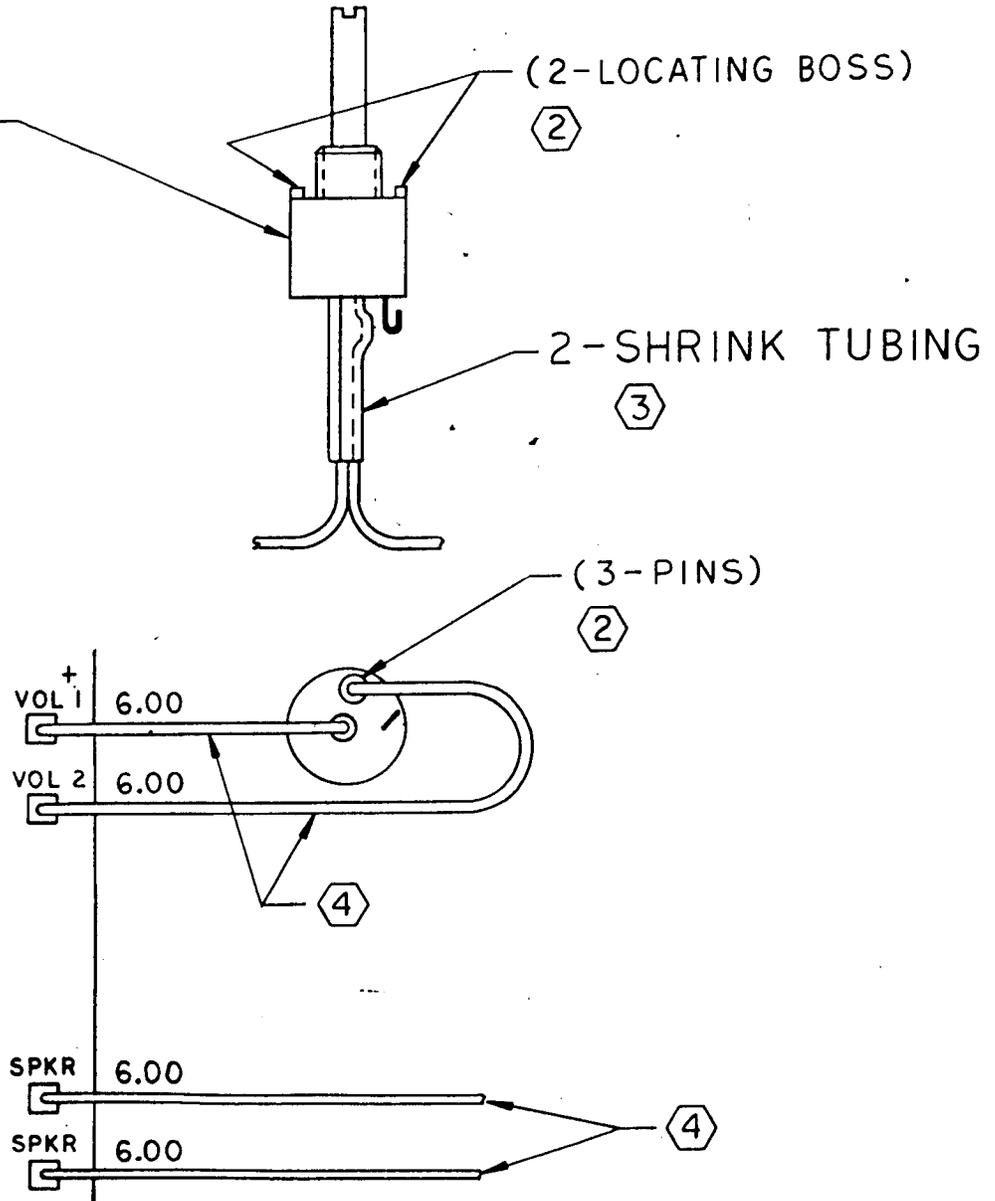
DESCRIPTION OF REVISION

CHANGE CALLOUTS ON VIEW:

FROM:

POTENTIOMETER
12993014

②



See NOR Continuation Sheet

NOTICE OF REVISION (NOR) CONTINUATION SHEET

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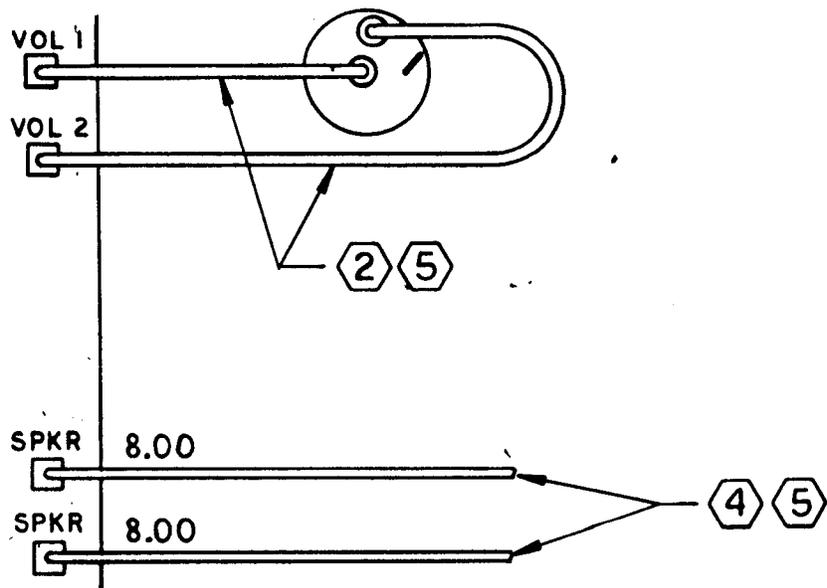
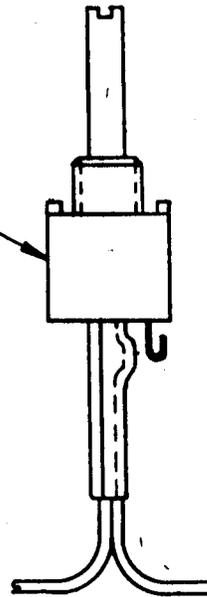
DESCRIPTION OF REVISION

CHANGE CALLOUTS ON VIEW:

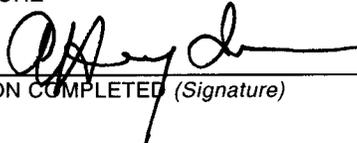
TO:

POTENTIOMETER
HARNESS -12993088

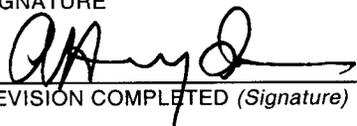
②



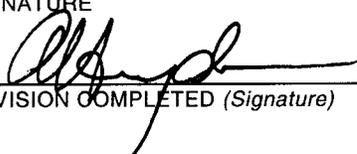
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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 3 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993011 |
| 9. TITLE OF DOCUMENT CIRCUIT BOARD, SPEAKER | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Vendor Address: FROM: PPI TIME ZERO 262 BUFFALO AVE PATERSON, NJ 07503 TO: PPI 255 MIDLAND AVE GARFIELD, NJ 07026 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 05 16 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

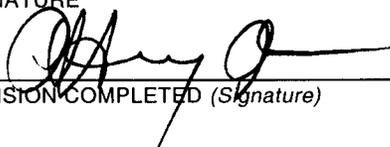
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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 4 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993012 |
| 9. TITLE OF DOCUMENT OPERATIONAL AMPLIFIER | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Vendor Address: | | | |
| FROM: BURR BROWN CORPORATION INTERNATIONAL AIRPORT INDUSTRIAL PARK P.O. BOX 11400 TUCSON, AZ 85734 | | | |
| TO: TEXAS INSTRUMENTS 6730 S TUCSON BLVD TUCSON, AZ 85734 | | | |
| CHANGE Vendor CAGE CODE: FROM: 13913 | | | |
| TO: 33804 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. MEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 0516 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

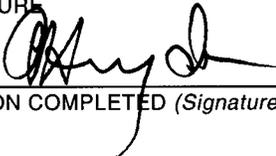
| | | | |
|---|--|-------------------------------------|---|
| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. | | | 2. PROCURING ACTIVITY NO. L2A2008 |
| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | | 3. DODAAC |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 5 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993014 |
| 9. TITLE OF DOCUMENT POTENTIOMETER | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION CHANGE NEXT ASSY: FROM: 12993010 TO: 12993088 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. (2) Revised document must be received before manufacturer may incorporate this change. (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | c. TYPED NAME (First, Middle Initial, Last) | | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 05/6 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

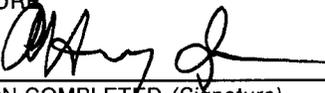
| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
|---|--|---|------------------------------------|
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 | 19200 | 6 |
| US ARMY, TACOM-ARDEC | AMSTA-AR-FSA-T | 7. CAGE CODE | 8. DOCUMENT NO. |
| | | 19200 | 12993015 |
| 9. TITLE OF DOCUMENT | | 10. REVISION LETTER | |
| DC - DC CONVERTER | | a. CURRENT | b. NEW |
| | | - | A |
| 11. ECP NO. | | | |
| | | L2A2008 | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES | | | |
| HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Vendor Address: | | | |
| FROM: LAMBDA ELECTRONICS INC. 515 BROAD HOLLOW ROAD MELVILLE, NY 11747-3700 | | | |
| TO: LAMBDA ELECTRONICS INC. 3055 DEL SOL BLVD. SAN DIEGO, CA 92154 | | | |
| CHANGE Vendor CAGE CODE: FROM: 80103 | | | |
| TO: 9T790 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
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| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | | c. TYPED NAME (First, Middle Initial, Last) | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE | e. SIGNATURE | f. DATE SIGNED (YYMMDD) | |
| ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team |  | 20020516 | |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |
| | | | |

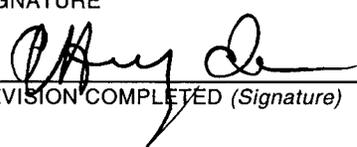
| | | | |
|---|--|--|--|
| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
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| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | 3. DODAAC | |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 7 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993017 |
| 9. TITLE OF DOCUMENT ANALOG SWITCH | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Vendor Address: FROM: INTERSIL CORP 1025 W NASA BLVD MELBOURNE, FL 32919 | | | |
| TO: INTERSIL CORP 2401 PALM BAY RD. PALM BAY, FL 32905 | | | |
| CHANGE Vendor Part No. FROM: DG303AAK / 883 TO: HI1-0303-2 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
|---|--|---|--|
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
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| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | 3. DODAAC | |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 9 |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993030 sht 2 |
| US ARMY, TACOM-ARDEC | AMSTA-AR-FSA-T | | |
| 9. TITLE OF DOCUMENT SPEAKER BOX ASSEMBLY | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| Zone B-5 CHANGE: FROM: 4 – SCREW, MACH, PAN HD TO: 4 – SCREW, MACH, PAN HD NASM35206-247 MS35206-247 (.164-32 x .75) PER NASM35206 (.164-32 x .75) | | | |
| Zone B-5 CHANGE: FROM: 4 – NUT, SLFLKG, HEX TO: 4 – NUT, SLFLKG, HEX NASM21083-N08 MS21083-N08 PER NASM21083 | | | |
| Zone F-5 CHANGE FROM: FROM CIRCUIT BOARD " B + IN " | | | |
| TO: FROM CIRCUIT BOARD " B + IN " (RED WIRE) | | | |
| Zone F-5 CHANGE FROM: FROM CONNECTOR " PIN A " | | | |
| TO: FROM CONNECTOR " PIN A " (BLK WIRE) | | | |
| CHANGE: U2 PART NO. IN SCHEMATIC FROM: DG303AAK / 883 TO: HI1-0303-2 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-T | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 05 16 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |

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|---|---|--|--|
| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | <i>Form Approved</i> <i>OMB No. 0704-0188</i> |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | 2. PROCURING ACTIVITY NO. L2A2008 |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. | | | 3. DODAAC |
| PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | | 6. NOR NO. 10 |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 8. DOCUMENT NO. 12993049 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | |
| 9. TITLE OF DOCUMENT COVER ASSEMBLY, RADIO BOX | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| Zone D-5 CHANGE: FROM: 2 – NUT, SLFLKG, HEX NASM21083-N3 TO: 2 – NUT, SLFLKG, HEX MS21083-N3 PER NASM21083 | | | |
| Zone B-7 CHANGE: FROM: 2 – SCREW, SHOULDER NASM51975-21 TO: 2 – SCREW, SHOULDER MS51975-21 PER NASM51975 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 19200 | 11 |
| US ARMY, TACOM-ARDEC | | 7. CAGE CODE | 8. DOCUMENT NO. |
| 9. TITLE OF DOCUMENT RADIO BOX ASSEMBLY | | 19200 | 12993050 sht 1 |
| | | 11. ECP NO. L2A2008 | |
| 10. REVISION LETTER | | | |
| a. CURRENT | | b. NEW | |
| - | | A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES | | | |
| HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| REMOVE: Note ⑦ in its entirety. | | | |
| CHANGE: Revision Status of Sheets Block: Sheet 1: FROM " - " TO: " A " | | | |
| CHANGE Note: FROM: ③ APPLY PRIMER, GRADE N, FORM R, MIL-S-22473 TO MALE THREADS ON RECEPTACLE, FOLLOWED BY THREADLOCKER, TYPE II, GRADE N, ASTM D5363. | | | |
| TO: ③ APPLY PRIMER, GRADE N, FORM R, MIL-S-22473 TO MALE THREADS ON RECEPTACLE, FOLLOWED BY THREADLOCKER, AN0321, ASTM D5363. | | | |
| CHANGE Note: FROM: ⑧ PLAIN HEX NUTS IN ACCORDANCE WITH ACME B18.2.2 | | | |
| TO: ⑧ PLAIN HEX NUTS IN ACCORDANCE WITH ASME B18.2.2 | | | |
| Zone F-5 CHANGE: FROM: 8 - SCREW, CAP, HEX HD TO: 8 - SCREW, CAP, HEX HD NASM90726-3 B1821AH025F050N (.250-28 x .50) PER ASME B18.2.1 (.250-28 x .50 LONG) | | | |
| Zone B-5 CHANGE: | | | |
| FROM: 2 - NUT, PLAIN, HEX TO: 2 - NUT, PLAIN, HEX N220N03CAKNN094NNFF1 N220N03CAKNN094NNPF1 (.375 - 16) (.375 - 16) ④ ⑧ ④ ⑧ | | | |
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| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 05 16 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |

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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 12 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993051 sht 1 |
| 9. TITLE OF DOCUMENT RADIO BOX WELDMENT | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT - | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Revision Status of Sheets Block: Sheet 1 FROM: " - " TO: " A " | | | |
| CHANGE The First Sentence in NOTE ⑦ | | | |
| FROM: ⑦ PROTECTIVE FINISH: FINISH NO. 7.2.2 OF MIL-STD-171, COLOR BLACK NO. 37038. | | | |
| TO: ⑦ PROTECTIVE FINISH: FINISH NO. 7.2.1 OR 7.3.1 OF MIL-STD-171. | | | |
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| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | | c. TYPED NAME (First, Middle Initial, Last) | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE | e. SIGNATURE | f. DATE SIGNED (YYMMDD) | |
| ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team |  | 70020516 | |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |
| | | | |

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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE 19200 | 6. NOR NO. 13 |
| a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993077 |
| 9. TITLE OF DOCUMENT CONNECTOR HARNESS, SPEAKER BOX | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT | b. NEW - | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | NOR Sht 1 of 2 |
| 13. DESCRIPTION OF REVISION SEE NOR Continuation Sheet 2 of 2 For PROPOSED NEW DRAWING | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input type="checkbox"/> (1) Existing document supplemented by this NOR may be used in manufacture. <input type="checkbox"/> (2) Revised document must be received before manufacturer may incorporate this change. <input checked="" type="checkbox"/> (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-T | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 2002 05 16 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |

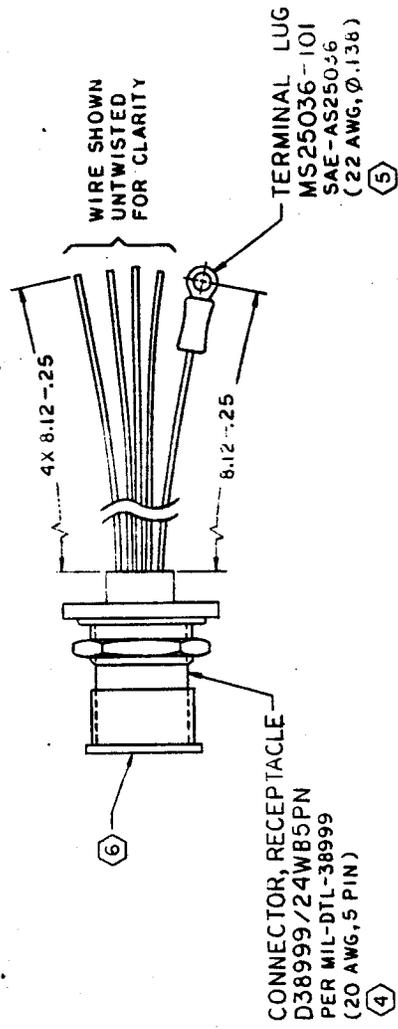
NOTES:
 1. APPLICABLE STANDARDS/SPECIFICATIONS:

- A. MIL-STD-100E
- B. ANSI Y14.5M-1982
- ② WIRE, SINGLE, 22 AWG, BLK, M22759/32-22-0 PER AS22759/32.
- ③ WIRE, TWISTED PAIR, UNSHIELDED, 22 AWG, M27500-22RC2U00 PER NEMA WC-27500.
- ④ INSERT AND CRIMP PINS OF CONNECTOR RECEPTACLE ACCORDING TO THE RECOMMENDED ASSEMBLY INSTRUCTIONS PER MIL-DTL-38999. CRIMP UTILIZING TOOLING CONFORMING TO MIL-DTL-22520.
- ⑤ CRIMP TERMINAL WITH TOOLING TO MEET THE MECHANICAL STRENGTH OF UL-468A OR SAE-AS7928.
- ⑥ PROTECT RECEPTACLE WITH CAP, PROTECTIVE, NAS813-12 OR USE A FUNCTIONAL EQUIVALENT.
- 7. GAP 12993077 APPLIES.

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WIRING DIAGRAM

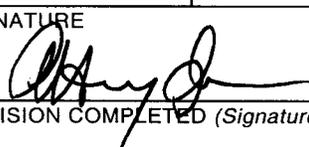
②③

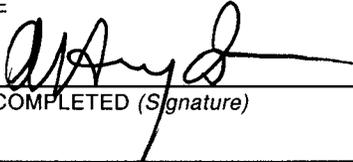


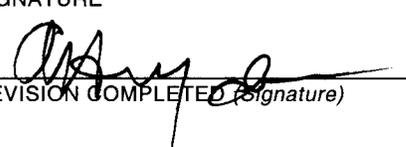
NOR CONTINUATION SHEET
 2 OF 2
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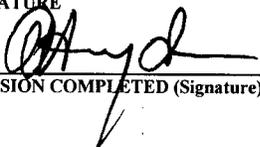
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| PMIC | DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE NOTED | CONTRACT NUMBER | U.S. ARMY AIRCRAFT MATERIAL DEVELOPMENT AND MANUFACTURING CENTER WRIGHT-PATTERSON AIRFB, OH 45433-0001 |
| A | NO. 1 SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE NOTED | CONTRACTOR | CONNECTOR HARNESS, SPEAKER BOARD |
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| NOTICE OF REVISION (NOR) THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM. | | | 2. PROCURING ACTIVITY NO. L2A2008 |
| | | | 3. DODAAC |
| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 19200 | 14 |
| US ARMY, TACOM-ARDEC | | 7. CAGE CODE | 8. DOCUMENT NO. |
| | | 19200 | 12993081 |
| 9. TITLE OF DOCUMENT END CAP | 10. REVISION LETTER | | 11. ECP NO. |
| | a. CURRENT | b. NEW | L2A2008 |
| | - | A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES | | | |
| HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE Vendor Address: FROM: RAYCHEM CORP, ELECTRONICS DIV. 300 CONSTITUTION DRIVE MENLO PARK, CA 94025-1164 TO: TYCO ELECTRONICS / RAYCHEM 300 CONSTITUTION DRIVE MENLO PARK, CA 94025-1164 | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. (2) Revised document must be received before manufacturer may incorporate this change. (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | | c. TYPED NAME (First, Middle Initial, Last) | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE | e. SIGNATURE | f. DATE SIGNED (YYMMDD) | |
| ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team |  | 20020516 | |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |
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| 4. ORIGINATOR | b. ADDRESS (Street, City, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. 15 |
| a. TYPED NAME (First, Middle Initial, Last) | PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 19200 | 8. DOCUMENT NO. 12993083 |
| US ARMY, TACOM-ARDEC | | 7. CAGE CODE | |
| 9. TITLE OF DOCUMENT SCREW, MODIFIED | 10. REVISION LETTER | | 11. ECP NO. L2A2008 |
| | a. CURRENT | b. NEW | |
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| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES | | | |
| HOWITZER, TOWED, 155mm, M198 | | | |
| 13. DESCRIPTION OF REVISION | | | |
| CHANGE NOTE: | | | |
| FROM: 2. SCREW, CAP, SOC HD, NAS1352-5-16 TO BE ALTERED AS INDICATED. | | | |
| TO: 2. SCREW, CAP, SOC HD, NAS1352-C5-16 TO BE ALTERED AS INDICATED. | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. | | |
| | (2) Revised document must be received before manufacturer may incorporate this change. | | |
| | (3) Custodian of master document shall make above revision and furnish revised document. | | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

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| NOTICE OF REVISION (NOR) THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
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| 4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) US ARMY, TACOM-ARDEC | b. ADDRESS (Street, City, State, Zip Code) PICATINNY ARSENAL, NJ 07806-5000 AMSTA-AR-FSA-T | 7. CAGE CODE 19200 | 8. DOCUMENT NO. 12993088 |
| 9. TITLE OF DOCUMENT POTENTIOMETER HARNESS | 10. REVISION LETTER a. CURRENT b. NEW - | 11. ECP NO. L2A2008 | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HOWITZER, TOWED, 155mm, M198 | | | NOR Sht 1 of 2 |
| 13. DESCRIPTION OF REVISION SEE NOR Continuation Sheet 2 of 2 For PROPOSED NEW DRAWING | | | |
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| a. (X one) | (1) Existing document supplemented by this NOR may be used in manufacture. (2) Revised document must be received before manufacturer may incorporate this change. (3) Custodian of master document shall make above revision and furnish revised document. | | |
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| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15.a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |

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| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | 2. PROCURING ACTIVITY NO. | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. PLEASE <u>DO NOT</u> RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUE CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM | | 3. DODAAC | |
| 4. ORIGINATOR | b. ADDRESS (Street, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) JASON L. COOK | ARDEC AMSTA-AR-QAT-F PICATINNY ARSENAL, NJ 07806-5000 | 19200 | 17 |
| | | 7. CAGE CODE 19200 | 8. DOCUMENT NUMBER SQ12993010 |
| 9. TITLE OF THE DOCUMENT QUALITY ASSURANCE PROVISION FOR THE CIRCUIT BOARD ASSEMBLY, SPEAKER BOX | 10. REVISION LETTER | | 11. ECP NO. |
| | a. CURRENT | b. NEW NEW | L2A2008 |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HIPE Program – M198 Howitzer | NOR SHT 1 OF 2 | ECP PAGE OF | |
| 13. DESCRIPTION OF REVISION CHANGE: NEW DOCUMENT “SEE NOR CONTINUATION SHEET 2 OF 2 FOR INITIAL RELEASE QUALITY ASSURANCE PROVISION” | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input checked="" type="checkbox"/> | (1) Existing document supplemented by this NOR may be used in manufacture. | |
| | <input type="checkbox"/> | (2) Revised document must be received before manufacturer may incorporate this change | |
| | <input type="checkbox"/> | (3) Custodian of master document shall make above revision and furnish revised document. | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15. a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |

QUALITY ASSURANCE PROVISIONS (QAP)
(DARCOM-R-702-10)

1. **COMMAND AGENCY:**
U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER
PICATINNY ARSENAL, NJ 07806-5000

2. **THESE QAP'S FORM PART OF DRAWING/SPECIFICATION 12993010 AS SPECIFIED IN THE CONTRACT.**
INSPECTION SHALL BE CONDUCTED AS SPECIFIED HEREIN AND IN ACCORDANCE WITH REFERENCED DOCUMENTS.

3.

PART I - LIST OF APPLICABLE DOCUMENTS

Drawings

12993010 Circuit Board Assembly, Speaker Box
12993030 Speaker/Amplifier Assembly

Standards

MIL-STD-202 Test Method Standard Electronic And Electrical Component Parts
MIL-STD-1916 DoD Preferred Methods for Acceptance of Product

Specifications

DTL12993030 Detail Specification for the Speaker/Amplifier Assembly for the M198 Howitzer Improvement Power Enhancement (HIPE)

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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| 4. RELEASE NUMBER | | | | | | | | | | | | | |
| 5. DATE | | | | | | | | | | | | | |
| 4. RELEASE NUMBER | | | | | | | | | | | | | |
| 5. DATE | | | | | | | | | | | | | |
| REVISION STATUS OF SHEETS | 6. REVISION | - | - | - | - | - | | | | | | | |
| | 7. SHEET | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| | 8. REVISION | | | | | | | | | | | | |
| | 7. SHEET | | | | | | | | | | | | |

8. QAP FOR: Circuit Board Assembly, Speaker Box CAGE CODE 19200

9. SUBMITTED BY: JASON COOK AMSTA-AR-QAC-F 10. QAP NO. : 12993010

| | | | | |
|---------------------|---|------------------------------|---------------------|------------------------|
| 11. DATE: 020404 | 12. APPROVED: STEPHEN J. SALIE Ch, AMSTA-AR-QAC-F | 13. RELEASE NO. : L2A2008 | 14. PAGE NO. : 1 | 15. NO. OF PAGES: 5 |
|---------------------|---|------------------------------|---------------------|------------------------|

QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

3.

PART II. CONFORMANCE PROVISIONS (CONT'D)

d. A statement, as follows, certifying that material meets all requirements of the contract:
 "The undersigned, individually, and as the authorized representative of the contractor, warrants and represents that: All the information supplied above is true and accurate; the material covered by this certificate conforms to all contract requirements (including but not limited to the drawings and specifications); the analyses appearing herein are true and accurate analyses; and this certificate is made for the purpose of inducing payment and with knowledge that the information and certification may be used as a basis for such payment."

e. Signature and title of certifying official.

2. First article.

2.1 Submission. Unless otherwise specified, a first article sample consisting of three (3) Circuit Board Assembly, Speaker Box shall be submitted for inspection and approval in accordance with the terms of this contract. The sample items will be subjected to any or all of the conformance inspections listed in Part III of this QAP and may be inspected for compliance with any or all of the requirements of the applicable drawing(s) and specification(s). The certification requirements of Part IV apply.

2.2 Rejection. If any sample item fails to comply with any of the applicable requirements, the first article sample shall be rejected. The Government reserves the right to terminate inspection upon any failure to comply with any of the requirements.

3. Verification. Verification inspection shall consist of inspection of all conformance characteristics contained in Part III, Inspection Requirements, and Part IV, Certification Provisions, of this QAP. Failure to comply with the conformance criteria specified shall be cause for rejection of the lot or quantity represented. All other characteristics of the tracer assembly and components there of which are not specifically listed herein are subjected to control under the contractor's quality program or inspection system.

3.1 Lot formation. Inspection lots shall comply with the lotting requirements of MIL-STD-1916, paragraph 4.2.

3.2 Attributes sampling inspection. The provisions/procedures of MIL-STD-1916 are applicable to this QAP. Unless otherwise specified, attributes sampling for the conformance characteristics listed in Part III herein shall be in accordance with MIL-STD-1916, Table II, using the verification level cited in the conformance criteria columns of Part III. The procedure in MIL-STD-1916 for normal inspection shall be used at the start of production for current or previous suppliers of the item. For all new suppliers of the item, tightened inspection shall be used at the start of production and be continued until the criteria for normal inspection are met.

3.2 Alternative verification provisions. Unless otherwise specified, alternative verification provisions, such as statistical process control (preferred), variables or continuous sampling plans, may be used by the contractor in lieu of the inspection provisions contained herein when such alternative(s) provide an equivalent or better level of quality, and provided they have been described in a written proposal which has been approved by the Government.

3.3 Inspection equipment. Unless otherwise specified herein or the contract, all inspection equipment required to perform the examinations and tests in this QAP shall be designed, documented and maintained by the contractor, including any fixtures necessary to accommodate the test procedures. Inspection equipment shall incorporate the appropriate measurement capability, precision and accuracy to assure rejection of all nonconforming product.

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| | | | | | CAGE CODE 19200 |
| 16. REVISION SYMBOL AND DATE | - 020404 | | | | 10. QAP NO. 12993010 |
| | | | | | 11. PAGE NO. 3 |
| | | | | | |

QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

3.

PART III. INSPECTION REQUIREMENTS

1. Classification of Conformance Characteristics.

| <u>CHARACTERISTIC</u> | <u>CONFORMANCE CRITERIA</u> | <u>INSPECTION CLASS METHOD</u> |
|-------------------------|-----------------------------|--------------------------------|
| <u>CRITICAL</u> : NONE | | |
| <u>MAJOR</u> | | |
| 101. Speaker output | 100% | 501 |
| 102. Power off | 100% | 502 |
| 103. Volume control | 100% | 503 |
| 104. Feedback | 100% | 504 |
| 105. Solder Workmanship | 100% | 505 |
| 106. Conformal coating | 100% | 506 |

2. Special Sampling. The contractor shall submit a qualification sample for First Article Testing (FAT) for the purpose of qualification. Prior to testing, all first article submissions shall conform to the characteristics cited in paragraph 1 above. In addition, FAT may include environmental testing in accordance with 507.

PART IV – CERTIFICATION PROVISIONS

Certification shall include test data and results for the characteristics specified below. Certification shall be provided prior to performing final acceptance inspection, and remain in effect throughout the contract for government acceptance. This does not relieve the contractor from inspection throughout the contract production, including recording data and results there from. Recorded data and results shall be made available to the government upon request. A new certification will be required should any changes occur in materials, manufacturing processes, and techniques, which affect characteristics previously certified.

| <u>NUMBER</u> | <u>CHARACTERISTIC</u> | <u>CERTIFICATION METHOD</u> | <u>TEST TO COMPLY WITH</u> |
|---------------|-----------------------|-----------------------------|----------------------------|
| NONE | | | |

PART V – TEST METHODS AND PROCEDURES

501. Speaker output. Apply input power of 11.5-14.7 Vdc across pin A to pin B and 6.75 ± 0.5 Vdc across pin E to pin D. Install an 8 Ohm speaker at the speaker connection of the Circuit Board Assembly, Speaker Box. Apply an input signal of 20 Mv ±10 percent, 1 Khertz ±10 percent at the connector, across pin C and D. Create a short circuit between the terminal lugs of the connector harness. Rotate the potentiometer shaft to the extreme clockwise. Verify that the speaker provides an audio output.

502. Power off. After conducting 501, remove the short between the terminal lugs. Verify that the Circuit Board Assembly, Speaker Box powers down.

| | | | | | | |
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| | | | | | | CAGE CODE 19200 |
| 16. REVISION SYMBOL AND DATE | - 020404 | | | | | 10. QAP NO. 12993010 |
| | | | | | | 11. PAGE NO. 4 |
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QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

3.

PART V – TEST METHODS AND PROCEDURES

503. Volume control. With the same power input, frequency input, and short circuit applied per 501 verify that the volume is controlled by the potentiometer shaft in accordance with clockwise being maximum volume and counter-clockwise being minimum volume.

504. Feedback. Apply input power of 11.5-14.7 Vdc across pin A to pin B and 0.0 ± 0.5 Vdc across pin E to pin D. Install an 8 Ohm speaker at the speaker connection of the Circuit Board Assembly, Speaker Box. Apply an input signal of 20 Mv ± 10 percent, 1 Khertz ± 10 percent at the connector, across pin C and D. Create a short circuit between the terminal lugs of the connector harness. Rotate the potentiometer shaft to the extreme clockwise. Verify that the speaker provides an audio output.

505. Solder workmanship. All soldering shall be free of burs, cracks, pits and any other physical flaws. All soldered connections shall also be in accordance with the requirements of all applicable documents referenced within this specification. Handbook IPC-HDBK-001 may be used for guidance.

506. Conformal coating. Visually verify that the Circuit Board Assembly has been finished with conformal coating as required.

507. Environments. When installed in the upper level assembly this Circuit Board Assembly shall meet the operational and environmental requirements of DTL12993030.

PART VI – NOTES

601. Inspection equipment. The contractor is required to furnish all equipment to perform inspections and tests stipulated herein and any others required for acceptance. Inspection equipment cited in "INSPECTION METHODS" column of part III should be interpreted as suggestions. Better methods and more accurate equipment are always recommended. A description of the set-up and procedure shall be submitted to the government technical agency prior to use. Standard measuring equipment used for gauging and measurement shall be accurate within ten percent of the specified tolerance for the related characteristics. Equipment and procedures used for minor characteristics shall be approved by the local government quality assurance representative.

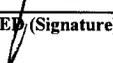
602. Guidance documents. The following documents may be used for guidance.

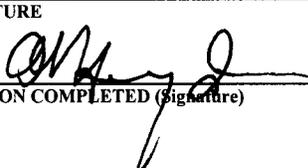
| <u>Document</u> | <u>Nomenclature</u> |
|-----------------|---|
| IPC-HDBK-001 | Requirements for Soldered Electrical and Electronic Assemblies, Handbook and Guide to |

(Unless otherwise indicated, copies can be obtained from IPC, 2215 Sanders Road, Northbrook, Illinois, 60062-6135)

603. Acquisition requirements. First Article Testing of this item may be waived if the contractor has passed FAT for and is under contract to build the higher level assembly, part number 12993030.

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| | | | | | | CAGE CODE 19200 |
| 16. | REVISION SYMBOL AND DATE | - 020404 | | | | 10. QAP NO. 12993010 |
| | | | | | | 11. PAGE NO. 5 |

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| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUE CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM | | | 2. PROCURING ACTIVITY NO. |
| | | | 3. DODAAC |
| 4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) JASON L. COOK | b. ADDRESS (Street, State, Zip Code) ARDEC AMSTA-AR-QAT-F PICATINNY ARSENAL, NJ 07806-5000 | 5. CAGE CODE 19200 | 6. NOR NO. 18 |
| | | 7. CAGE CODE 19200 | 8. DOCUMENT NUMBER SQ12993050 |
| 9. TITLE OF THE DOCUMENT QUALITY ASSURANCE PROVISION FOR THE RADIO BOX ASSEMBLY | | 10. REVISION LETTER a. CURRENT - | |
| | | b. NEW A | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HIPE Program - M198 Howitzer | | NOR SHT 1 OF 1 | 11. ECP NO. L2A2008 |
| 13. DESCRIPTION OF REVISION <u>CHANGE:</u> <u>Page 4</u> FROM: 501 <u>Thread-locker</u> . Apply a primer per Grade N, Form R, in accordance with MIL-S-22473 to male threads on connector plug, followed by thread-locker, type II, grade N per ASTM-D5363. TO: 501 <u>Thread-locker</u> . Apply a primer per Grade N, Form R, in accordance with MIL-S-22473 to male threads on connector plug, followed by thread-locker, AN0321 per ASTM-D5363. | | ECP PAGE OF | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input checked="" type="checkbox"/> | (1) Existing document supplemented by this NOR may be used in manufacture. | |
| | <input type="checkbox"/> | (2) Revised document must be received before manufacturer may incorporate this change | |
| | <input type="checkbox"/> | (3) Custodian of master document shall make above revision and furnish revised document. | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15. a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETE (Signature)  | | c. DATE SIGNED (YYMMDD) |

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| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUE CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM | | | 2. PROCURING ACTIVITY NO. |
| | | | 3. DODAAC |
| 4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) JASON L. COOK | b. ADDRESS (Street, State, Zip Code) ARDEC AMSTA-AR-QAT-F PICATINNY ARSENAL, NJ 07806-5000 | 5. CAGE CODE 19200 | 6. NOR NO. 19 |
| | | 7. CAGE CODE 19200 | 8. DOCUMENT NUMBER SQ12993077 |
| 9. TITLE OF THE DOCUMENT QUALITY ASSURANCE PROVISION FOR THE CONNECTOR HARNESS | | 10. REVISION LETTER a. CURRENT b. NEW NEW | |
| | | 11. ECP NO. L2A2008 | |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HIPE Program – M198 Howitzer | | NOR SHT 1 OF 2 | ECP PAGE OF |
| 13. DESCRIPTION OF REVISION CHANGE: NEW DOCUMENT “SEE NOR CONTINUATION SHEET 2 OF 2 FOR INITIAL RELEASE QUALITY ASSURANCE PROVISION” | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input checked="" type="checkbox"/> | (1) Existing document supplemented by this NOR may be used in manufacture. | |
| | <input type="checkbox"/> | (2) Revised document must be received before manufacturer may incorporate this change | |
| | <input type="checkbox"/> | (3) Custodian of master document shall make above revision and furnish revised document. | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15. a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature)  | | c. DATE SIGNED (YYMMDD) |

QUALITY ASSURANCE PROVISIONS (QAP)
(DARCOM-R-702-10)

1. **COMMAND AGENCY:**
U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER
PICATINNY ARSENAL, NJ 07806-5000

2. **THESE QAP'S FORM PART OF DRAWING/SPECIFICATION 12993077 AS SPECIFIED IN THE CONTRACT.**
INSPECTION SHALL BE CONDUCTED AS SPECIFIED HEREIN AND IN ACCORDANCE WITH REFERENCED DOCUMENTS.

3. **PART I - LIST OF APPLICABLE DOCUMENTS**

Drawings

12993077 Connector Harness

Standards

MIL-STD-202 Test Method Standard Electronic And Electrical Component Parts

MIL-STD-1916 DoD Preferred Methods for Acceptance of Product

Specifications

MIL-DTL-38999 Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect

MIL-DTL-16878 Wire, Electrical, Fluoropolymer-Insulated, Copper or Copper Alloy

MIL-DTL-22520 Crimping Tools, Terminal, General Specification For

Non-government publications.

SAE-AS22759/9 Wire, Electrical, Fluoropolymer-Insulated, Copper or Copper Alloy

SAE-AS7928 Terminals, Lug: Splices, Conductor: Crimp Style, Copper, General Specification for
(Copies can be obtained from Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096)

UL 486A Wire Connectors and Soldering Lugs for Use with Copper Conductors, Standard for
(Copies can be obtained from Underwriters Laboratories, 333 Pfingsten Rd, Northbrook, IL, 60062)

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

| | | | | | | | | | | | | | | |
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| 4. RELEASE NUMBER | | | | | | | | | | | | | | |
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| 4. RELEASE NUMBER | | | | | | | | | | | | | | |
| 5. DATE | | | | | | | | | | | | | | |
| REVISION STATUS OF SHEETS | 6. REVISION | - | - | - | - | - | | | | | | | | |
| | 7. SHEET | 1 | 2 | 3 | 4 | 5 | | | | | | | | |
| | 8. REVISION | | | | | | | | | | | | | |
| | 7. SHEET | | | | | | | | | | | | | |

8. QAP FOR: Connector Harness CAGE CODE 19200

9. SUBMITTED BY: JASON COOK AMSTA-AR-QAT-F 10. QAP NO. : 12993077

| | | | | |
|------------------|--|---------------------------|------------------|---------------------|
| 11. DATE: 020404 | 12. APPROVED: STEPHEN J. SALIE Ch, AMSTA-AR-QAC-F | 13. RELEASE NO. : L2A2008 | 14. PAGE NO. : 1 | 15. NO. OF PAGES: 5 |
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QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

3.

PART II. CONFORMANCE PROVISIONS (CONT'D)

2.2 Rejection. If any sample item fails to comply with any of the applicable requirements, the first article sample shall be rejected. The Government reserves the right to terminate inspection upon any failure to comply with any of the requirements.

3. Verification. Verification inspection shall consist of inspection of all conformance characteristics contained in Part III, Inspection Requirements, and Part IV, Certification Provisions, of this QAP. Failure to comply with the conformance criteria specified shall be cause for rejection of the lot or quantity represented. All other characteristics of the tracer assembly and components there of which are not specifically listed herein are subjected to control under the contractor's quality program or inspection system.

3.1 Lot formation. Inspection lots shall comply with the lotting requirements of MIL-STD-1916, paragraph 4.2.

3.2 Attributes sampling inspection. The provisions/procedures of MIL-STD-1916 are applicable to this QAP. Unless otherwise specified, attributes sampling for the conformance characteristics listed in Part III herein shall be in accordance with MIL-STD-1916, Table II, using the verification level cited in the conformance criteria columns of Part III. The procedure in MIL-STD-1916 for normal inspection shall be used at the start of production for current or previous suppliers of the item. For all new suppliers of the item, tightened inspection shall be used at the start of production and be continued until the criteria for normal inspection are met.

3.2 Alternative verification provisions. Unless otherwise specified, alternative verification provisions, such as statistical process control (preferred), variables or continuous sampling plans, may be used by the contractor in lieu of the inspection provisions contained herein when such alternative(s) provide an equivalent or better level of quality, and provided they have been described in a written proposal which has been approved by the Government.

3.3 Inspection equipment. Unless otherwise specified herein or the contract, all inspection equipment required to perform the examinations and tests in this QAP shall be designed, documented and maintained by the contractor, including any fixtures necessary to accommodate the test procedures. Inspection equipment shall incorporate the appropriate measurement capability, precision and accuracy to assure rejection of all nonconforming product.

PART III. INSPECTION REQUIREMENTS

1. Classification of Conformance Characteristics.

| <u>CHARACTERISTIC</u> | <u>CONFORMANCE CRITERIA</u> | <u>INSPECTION CLASS METHOD</u> |
|-------------------------|---------------------------------|------------------------------------|
| <u>CRITICAL:</u> NONE | | |
| <u>MAJOR</u> | | |
| 101. Functional Lengths | 100% | 501 |
| 102. Circuit Continuity | 100% | 502 |
| 103. Crimp Assembly | 100% | 504/506 |

| | | | | | | | |
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| | | | | | | | CAGE CODE 19200 |
| 16. | REVISION SYMBOL AND DATE | - 020404 | | | | | 10. QAP NO. 12993077 |
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QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

3.

PART IV – CERTIFICATION PROVISIONS

Certification shall include test data and results for the characteristics specified below. Certification shall be provided prior to performing final acceptance inspection, and remain in effect throughout the contract for government acceptance. This does not relieve the contractor from inspection throughout the contract production, including recording data and results there from. Recorded data and results shall be made available to the government upon request. A new certification will be required should any changes occur in materials, manufacturing processes, and techniques, which affect characteristics previously certified.

| <u>NUMBER</u> | <u>CHARACTERISTIC</u> | <u>CERTIFICATION METHOD</u> | <u>TEST TO COMPLY WITH</u> |
|---------------|-----------------------|-----------------------------|----------------------------|
| 401. | Wire Characteristics | COC | 507 |
| 402. | Crimp Tool | COC | 503/505 |

PART V – TEST METHODS AND PROCEDURES

501. Functional lengths. Inspection of functional lengths and all other dimensions shall be done by means of Standard Measuring Equipment (SME) and standard inspection techniques. The Standard Measuring Equipment used for measuring or gauging shall be accurate within ten percent of the specified tolerance for the related characteristics.

502. Circuit continuity. The cable assembly shall be tested for continuity in accordance with MIL-STD-202, Method 303, to determine its conformance to the provisions of drawing 12993077. Measurements shall be conducted according to the wiring diagram as shown. Maximum allowable resistance shall be 1.0 Ohm.

503. Crimp tool and dies (lug). The crimping tool and dies shall be in conformance with UL-486 or SAE-AS7928 for the applicable military specified wire.

504. Crimp assembly (lug). The crimp shall be inspected visually by use of the crimp inspection window. The wire shall be completely inserted and uniformly crimped within the lug. The inspection window is called out in drawing 12992919.

505. Crimp tool and dies (connector). The crimping tool and dies shall be in conformance with MIL-DTL-22520 for the applicable military standard wire gauge and contact.

506. Crimp assembly (connector). The crimp shall be performed in accordance with the assembly procedures of MIL-DTL-38999.

507. Wire characteristics. MIL-DTL-16878 or SAE-AS22759/9 defines the characteristics of the wire.

| | | | | | |
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| | | | | | CAGE CODE 19200 |
| 16. REVISION SYMBOL AND DATE | - 020404 | | | | 10. QAP NO. 12993077 |
| | | | | | 11. PAGE NO. 4 |
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QUALITY ASSURANCE PROVISION (QAP)

(DARCOM-R-702-10)

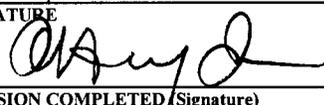
3.

PART VI – NOTES

601. Inspection equipment. The contractor is required to furnish all equipment to perform inspections and tests stipulated herein and any others required for acceptance. Inspection equipment cited in “INSPECTION METHODS” column of part III should be interpreted as suggestions. Better methods and more accurate equipment are always recommended. A description of the set-up and procedure shall be submitted to the government technical agency prior to use. Standard measuring equipment used for gauging and measurement shall be accurate within ten percent of the specified tolerance for the related characteristics. Equipment and procedures used for minor characteristics shall be approved by the local government quality assurance representative.

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| | | | | | CAGE CODE 19200 |
| 16. | REVISION SYMBOL AND DATE | - 020404 | | | 10. QAP NO. 12993077 |
| | | | | | 11. PAGE NO. 5 |

| NOTICE OF REVISION (NOR) | | 1. DATE (YYMMDD) 20020404 | Form Approved OMB No. 0704-0188 |
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| THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED. | | 2. PROCURING ACTIVITY NO. | |
| Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUE CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM | | 3. DODAAC | |
| 4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) JASON L. COOK | b. ADDRESS (Street, State, Zip Code) ARDEC AMSTA-AR-QAT-F PICATINNY ARSENAL, NJ 07806-5000 | 5. CAGE CODE 19200 | 6. NOR NO. 20 |
| | | 7. CAGE CODE 19200 | 8. DOCUMENT NUMBER DTL12993030 |
| 9. TITLE OF THE DOCUMENT DETAIL SPECIFICATION FOR THE SPEAKER/AMPLIFIER ASSEMBLY | 10. REVISION LETTER a. CURRENT - | b. NEW A | 11. ECP NO. L2A2008 |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HIPE Program – M198 Howitzer | NOR SHT 1 OF 2 | ECP PAGE OF | |
| 13. DESCRIPTION OF REVISION <u>DELETE:</u> 3.5.1 - 3.5.4 <u>REPLACE WITH:</u> 3.5.1 <u>Power.</u> The Speaker/Amplifier Assembly shall operate with between 11.5-14.7 Vdc across pin A to pin B and 6.75 ± 0.5 Vdc across pin E to pin D. 3.5.2 <u>Speaker output.</u> The Speaker/Amplifier Assembly shall use an input signal of 20 Mv ±10 percent, 1 Khertz ±10 percent at the connector, across pin C and D. 3.5.3 <u>Power off.</u> The Speaker/Amplifier Assembly shall power down after the 11.5-14.7 Vdc input power is removed from across pin A to pin B. 3.5.4 <u>Volume control.</u> Volume shall be controlled by the volume control knob. Minimum volume direction shall be counter-clockwise, maximum volume direction shall be clockwise. <u>ADD:</u> 3.5.6 <u>Feedback.</u> The Circuit Board Assembly, Speaker Box shall deliver no audio output when receiving 11.5-14.7 Vdc across pin A to B and 0.0 ± 0.5 Vdc across pin E to pin D. | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input checked="" type="checkbox"/> | (1) Existing document supplemented by this NOR may be used in manufacture. | |
| | <input type="checkbox"/> | (2) Revised document must be received before manufacturer may incorporate this change | |
| | <input type="checkbox"/> | (3) Custodian of master document shall make above revision and furnish revised document. | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT | c. TYPED NAME (First, Middle Initial, Last) | | |
| TACOM-ARDEC, AMSTA-AR-FSA-R | | | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | f. DATE SIGNED (YYMMDD) 2002 05/16 | |
| 15. a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | c. DATE SIGNED (YYMMDD) | |

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| | | 3. DODAAC | |
| 4. ORIGINATOR | b. ADDRESS (Street, State, Zip Code) | 5. CAGE CODE | 6. NOR NO. |
| a. TYPED NAME (First, Middle Initial, Last) JASON L. COOK | ARDEC AMSTA-AR-QAT-F PICATINNY ARSENAL, NJ 07806-5000 | 19200 | 20 |
| | | 7. CAGE CODE 19200 | 8. DOCUMENT NUMBER DTL12993030 |
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| | | a. CURRENT - | b. NEW A |
| | | | 11. ECP NO. L2A2008 |
| 12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES HIPE Program – M198 Howitzer | | NOR SHT 2 OF 2 | ECP PAGE OF |
| 13. DESCRIPTION OF REVISION | | | |
| <p><u>CHANGE:</u> 4.4.3 to 4.4.3 <u>Test mounting</u>. For all shock and vibration testing (tests 4.7.1.2, 4.7.1.3, and 4.7.2.2) the Speaker/Amplifier Assembly shall be installed in an enclosure mechanically equivalent to 12993050. The Speaker/Amplifier Assembly shall also be mounted with shock mounts and mounting brackets mechanically equivalent to those described in 12993000 sheet 7. The enclosures, mounts, and brackets used shall be treated as test fixtures for the applicable tests. If a radio box (12993050) is used as the test fixture, remove or secure all cables and loose parts.</p> <p><u>DELETE:</u> 4.6.1 - 4.6.4 <u>REPLACE WITH:</u> 4.6.1 <u>Power</u>. Apply input power in accordance with 3.5.1. Verify that the Speaker/Amplifier Assembly meets the requirements of 3.5.2-3.5.6. Ensure the power switch is in the "ON" position.</p> <p>4.6.2 <u>Speaker output</u>. Apply power in accordance with 3.5.1. Apply an input signal of 20 Mv \pm10 percent, 1 Khertz \pm10 percent at the connector, across pin C and D. Rotate the volume control knob to the extreme clockwise. Verify that the speaker provides an audio output. Ensure the power switch is in the "ON" position.</p> <p>4.6.3 <u>Power off</u>. After conducting 4.6.2, continue supplying all frequency and power inputs. Switch the Power Switch to "OFF." Verify that the Speaker/Amplifier Assembly powers down and no longer provides an audio output.</p> <p>4.6.4 <u>Volume control</u>. With the same power and frequency input applied per 4.6.2 verify that the volume is controlled by the volume control knob shaft in accordance with 3.5.4. Ensure the power switch is in the "ON" position.</p> <p><u>ADD:</u> 4.6.6 <u>Feedback</u>. Apply power in accordance with 3.5.6. Apply an input signal of 20 Mv \pm10 percent, 1 Khertz \pm10 percent at the connector, across pin C and D. Ensure the power switch is in the "ON" position. Rotate the potentiometer shaft to the extreme clockwise. Verify that the speaker provides no audio output.</p> | | | |
| 14. THIS SECTION FOR GOVERNMENT USE ONLY | | | |
| a. (X one) | <input checked="" type="checkbox"/> | (1) Existing document supplemented by this NOR may be used in manufacture. | |
| | <input type="checkbox"/> | (2) Revised document must be received before manufacturer may incorporate this change | |
| | <input type="checkbox"/> | (3) Custodian of master document shall make above revision and furnish revised document. | |
| b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT TACOM-ARDEC, AMSTA-AR-FSA-R | | c. TYPED NAME (First, Middle Initial, Last) | |
| d. TITLE ARTHUR J. HEYDERMAN Chief, FSAC Prod & Log Eng Spt Team | e. SIGNATURE  | | f. DATE SIGNED (YYMMDD) 20020516 |
| 15. a. ACTIVITY ACCOMPLISHING REVISION | b. REVISION COMPLETED (Signature) | | c. DATE SIGNED (YYMMDD) |