

ENGINEERING CHANGE PROPOSAL (ECP) PAGE 1 of 2				1. DATE (YYMMDD) 010326		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 of any other aspect of this collection of information including suggestions for reducing this burden to 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. LOS5017R1	
PLEASE <u>DO NOT</u> 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. DODACC	
4. ORIGINATOR		b. ADDRESS (Street, City, State, Zip Code)		5. CLASS OF ECP			
a. TYPED NAME (First, Middle Initial, Last) Brian Donovan		AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000		I			
				6. JUST CODE C		7. PRIORITY. U	
8. ECP DESIGNATION				9. BASELINE AFFECTED			
a. MODEL / TYPE M249		b. CAGE CODE 19200		c. SYSTEM DESIGNATION MACHINE GUN, 5.56MM		FUNCTIONAL <input checked="" type="checkbox"/> PRODUCT ALLOCATED	
d. ECP NO. 0063-E-002R1				e. TYPE F		f. REV.	
						10. OTHER SYS / CONFIG. ITEMS AFFECTED YES <input checked="" type="checkbox"/> NO	
11. SPECIFICATION AFFECTED				12. DRAWINGS AFFECTED			
a. SYSTEM		CAGE Code		Specification / Document No.		REV. SCN	
		19200		SQ 9348405		SEE SHEET 2	
b. DEVELOPMENT							
c. PRODUCT						1	
						0	
13. TITLE OF CHANGE NEW OPERATING ROD DESIGN MAINTAINING CURRENT PART AND STOCK NUMBERS							
14. CONTRACT NO. AND LINE ITEM DAAE20-96-E-0326 DAAE20-99-D-0100				15. PROCURING CONTRACTING OFFICER			
				a. NAME (First < Middle, Last)			
				b. CODE		c. TELEPHONE NO.	
16. CONFIGURATION ITEM NOMENCLATURE MACHINE GUN, 5.56MM: M249						17. IN PRODUCTION X YES <input type="checkbox"/> NO	
18. ALL LOWER LEVEL ITEMS AFFECTED							
a. NOMENCLATURE PISTON ASSEMBLY				b. PART NO. 9348405		c. NSN 1005-01-134-6737	
19. DESCRIPTION OF CHANGE This revision replaces and supercedes the previously approved ECP LOS5017 in its entirety.							
20. NEED FOR CHANGE By maintaining the existing part and stock numbers there is a logistics savings.							
21. PRODUCTION EFFECTIVITY BY SERIAL NUMBER N / A				22. EFFECT ON PRODUCTION DELIVERY SCHEDULE N / A			
23. RETROFIT							
a. RECOMMEND ITEM EFFECTIVITY N / A				b. SHIP / VEHICLE CLASS AFFECTED N / A			
c. ESTIMATED KIT DELIVERY SCHEDULE N / A				d. LOCATIONS OR SHIP / VEHICLE NUMBERS AFFECTED N / A			
24. ESTIMATED COSTS / SAVINGS UNDER CONTRACT N / A				25. ESTIMATED NET TOTAL COSTS / SAVINGS N / A			
26. SUBMITTING ACTIVITY				b. TITLE			
a. AUTHORIZED SIGNATURE <i>Brian D. Donovan</i>				Brian D. Donovan, Mechanical Engineer, M249 SAW IPT			
27. APPROVAL / DISAPPROVAL							
a. CLASS I		b. CLASS II		c. CLASS II		DO NOT CONCUR IN CLASS I	
APPROVAL		DISAPPROVAL		CONCUR IN CLASS I		DO NOT CONCUR IN CLASS I	
<input checked="" type="checkbox"/> RECOMMENDED		<input type="checkbox"/> RECOMMENDED		<input type="checkbox"/> APPROVED		<input type="checkbox"/> DISAPPROVED	
						CATION OF CHANGE	
d. GOVERNMENT ACTIVITY				e. SIGNATURE		f. DATE SIGNED (YYMMDD)	
g. APPROVAL		h. GOVERNMENT ACTIVITY		i. SIGNATURE		c. DATE SIGNED (YYMMDD)	
<input checked="" type="checkbox"/> APPROVED		TACOM-ARDEC, AMSTA-AR-CCL		<i>Ronald E. Ette</i>		20010507	
<input type="checkbox"/> DISAPPROVED				Chief, CCAC Prod & Field Spt Team			

10 APR 2001

**ENGINEERING CHANGE PROPOSAL
CONTINUATION SHEET**

DATE: (YYMMDD)

SHEET: 2

010326

ECP NUMBER: 0063-E-0002R1

1. ORIGINATOR NAME AND ADDRESS

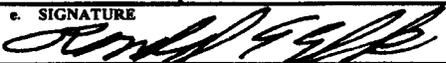
AMSTA-AR-CCL-A
TACOM-ARDEC
Picatinny Arsenal, NJ 07806-5000

2. CONTRACT NUMBER AND LINE ITEM:

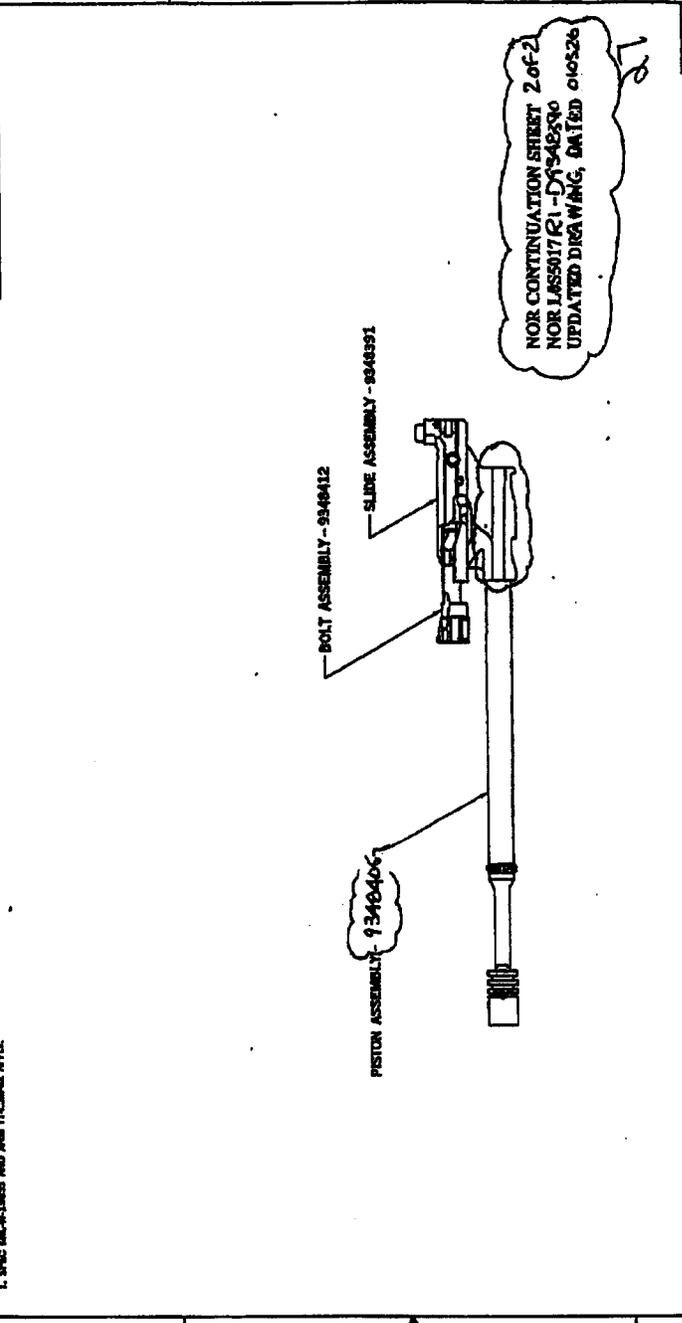
PAN NUMBER: L0S5017R1

BLOCK 12: DRAWINGS AFFECTED:

D 9348390
D 9348405
D 9348410
F 9348408
F 9348409

NOTICE OF REVISION (NOR)		1. DATE (YYMMDD)	Form Approved
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4. ORIGINATOR		5. CAGE CODE	3. DODACC
a. TYPED NAME (First, Middle Initial, Last)	b. ADDRESS (Street, City, State, Zip Code)	19200	6. NOR NO.
Brian D. Donovan	AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000	7. CAGE CODE	8. DOCUMENT NO.
9. TITLE OF DOCUMENT		19200	D 9348390
BOLT AND PISTON ASSEMBLY	10. REVISION LETTER	11. ECP NO.	
	a. CURRENT	b. NEW	0063-E-0002R1
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES		NOR SH. 1	
MACHINE GUN, 5.56MM; M249		OF 2	
13. DESCRIPTION OF CHANGE:			
SEE NOR CONTINUATION SHEET 2 OF 2, DATED 010326 FOR UPDATED DRAWING			
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
	<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-CCL-F			
Wanda E. Eide Chief, CCAC Prod & Field Spt Team		e. SIGNATURE	f. DATE SIGNED (YYMMDD)
			20010507
15.a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETEDS (SIGNATURE)	c. DATE SIGNED (YYMMDD)	

1. SPEC DIMENSIONS AND JOINT TOLERANCES APPLY.
 2. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS.
 3. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY.
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 10. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY.



PART NO. 9346390		METRIC	
BOLT AND PISTON ASSEMBLY			
D 19200		9346390	
1. SPEC DIMENSIONS AND JOINT TOLERANCES APPLY. 2. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS. 3. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 4. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 5. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 6. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 7. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 8. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 9. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. 10. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY.			

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a. TYPED NAME (First, Middle Initial, Last) Brian D. Donovan	AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000	19200	
		7. CAGE CODE 19200	8. DOCUMENT NO. D 9348405
9. TITLE OF DOCUMENT PISTON ASSEMBLY	10. REVISION LETTER		11. ECP NO.
	a. CURRENT A	b. NEW	0063-E-0002R1
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES MACHINE GUN, 5.56MM; M249	NOR SH. 1 OF 2		
13. DESCRIPTION OF CHANGE: SEE NOR CONTINUATION SHEET 2 OF 2, DATED 010326 FOR PROPOSED REVISION AND REDRAW			
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
	<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-CCL-F		c. TYPED NAME (First, Middle Initial, Last)	
14. a. ACTIVITY ACCOMPLISHING REVISION Chief, CCAC Prod & Field Spt Team		e. SIGNATURE 	f. DATE SIGNED (YYMMDD) 20010507
15. a. ACTIVITY ACCOMPLISHING REVISION		b. REVISION COMPLETEDS (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)	AMSTA-AR-CCL-A	19200	
Brian D. Donovan	TACOM-ARDEC	7. CAGE CODE	8. DOCUMENT NO.
	Picatinny Arsenal, NJ 07806-5000	19200	SQ 9348405
9. TITLE OF DOCUMENT	10. REVISION LETTER		11. ECP NO.
QAP FOR: PISTON ASSEMBLY: M249 M.G.	a. CURRENT	b. NEW	0063-E-0002R1
	C		
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES	NOR SH. 1		
MACHINE GUN, 5.56MM; M249	OF 10		
13. DESCRIPTION OF CHANGE:			
SEE NOR CONTINUATION SHEET 2 THROUGH 10 OF 10, DATED 010326 FOR UPDATED QAP			
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
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b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT	c. TYPED NAME (First, Middle Initial, Last)		
TACOM-ARDEC, AMSTA-AR-CCL-F			
Richard E. Elbe Chief, COAC Prod & Field Spt Team	e. SIGNATURE	f. DATE SIGNED (YYMMDD) 20010507	
15.a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETEDS (SIGNATURE)	c. DATE SIGNED (YYMMDD)	

QUALITY ASSURANCE PROVISION (QAP) – (CONTINUATION SHEET)

(DAR R 702 - 10)

LIST OF PUBLICATIONS

NUMBER

NOMENCLATURE

ASTM E 18	Standard Methods of Test for Rockwell Hardness and Rockwell Superficial Hardness of Material
ASTM B 117	Standard Method of Salt Spray (Fog) Testing
ASTM E 1444	Standard Practice for Magnetic Particle Examination

PART II CONFORMANCE PROVISIONS

1. General Provisions.

1.1 Classification of characteristics. There are two classes of characteristics covered in this QAP. These are: Major characteristics and Minor characteristics, as defined in MIL-STD-1916.

1.2 Workmanship. The quality of workmanship shall not adversely affect safety, function, performance, serviceability, interchangeability and appearance. Completed parts and assemblies shall not exhibit defective material or processing such as: seams, laps, laminations, cracks, fins, extraneous material, visible steps or irregularities, sharp edges, nicks, scratches, burrs, tool scores and gouges, deformations, missing operations, improper assembly, missing parts, stains, corrosion, nonspecified oxidation (rust) unauthorized salvaging operations (e.g., hammering to sharp, repair by welding, straightening, bending, etc.).

1.3 Certification provisions.

1.3.1 Certified test reports (CTR). When specified in the contract or documents referenced herein, the contractor shall make available to the government a CTR for each lot of parts, assemblies, subsystems and systems by lot number prior to acceptance. This test report is in addition to, and not in lieu of, any rights of the government under this contract or law. A CTR may be used as an element incident to, but shall not be used as the sole basis for Government acceptance of the contract item(s) unless so indicated in the technical documentation or contract. As a minimum, the report shall contain the following:

- a. Name of company and date.
- b. Contract number or purchase order number, national stock number and drawing number.
- c. Complete nomenclature of supplies together with lot number or other identification. The quantity in each lot or shipment shall be given.
- d. All inspections and tests required by contract (i.e., material, process, performance, functional, etc.) shall be recorded in test reports. These reports shall identify each lot submitted for acceptance by lot number, the specification or drawing, revision and date, grade or type as applicable, number of specimens tested, specified characteristics and requirements, and actual results obtained.
- e. Reports of raw material producer's chemical, mechanical, and physical analysis.
- f. A statement as follows, certifying that material meets all requirements of the contract.

NOR L055017 R1
 ECP # 0063-E-0002 R1
 NOR CONTINUATION SHEET
 3 OF 10, DATED 010326

CAGE CODE 19200
10. QAP NO: 9340405
14. PAGE NO. 2

16.	001110		
REVISION SYMBOL AND DATE			

QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)

(DAR R 702 - 10)

" 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 inspection test results, and the analyses appearing herein are true and accurate; and this certificate is made for the purpose of inducing payment and with knowledge that the information and certificate may be used as a basis for payment. "

g. Signature and title of certifying official.

2. First Article.

2.1 Submission. Unless otherwise specified, a first article sample consisting of the sample items in quantities as specified herein 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 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 quality characteristics not specifically listed herein are subject 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 continued until the criteria for normal inspection are met.

3.3 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.

3.4 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 ensure rejection of all nonconforming product.

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ECP # 0063-E-0002 R1
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10. QAP NO: 9348405
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REVISION			
SYMBOL			
AND DATE			

QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)
(DAR R 702 - 10)

PART III INSPECTION REQUIREMENTS

1. Classification of Conformance Characteristics.

<u>CLASS</u>	<u>CHARACTERISTICS</u>	<u>ZONE</u>	<u>METHOD</u>
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INSPECTION POSITION A: REAR PART, OPERATING ROD - DWG - 9348409

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

101	Profile (0.12) of 56.61	C-3/4 Sht.2	SMTE
102	Distance (3.90) Rear of Lug to Hole	D-4 Sht.1	SMTE
103	Width (7.06) of Elongated Hole	D-4 Sht.1	SMTE
104	Position (0.1) of 7.06 Hole	D-4 Sht.1	SMTE
105	Diameter (16.675) and 11/16 Thread, Operating Rod Hole	C-4, Sht.2	SMTE

MINOR: Criteria - Verification Level II of MIL-STD-1916

201	Radius (3.5)	A-4 Sht.1	SMTE
202	Length (15.7) of Lug	C-2 Sht.2	SMTE
203	Distance (12.5) Rear of Lug to Rear Face of Operating Rod Hole	B-2 Sht.2	SMTE
204	Position (0.15) of Operating Rod Hole & 11/16 Thread	C-4 Sht.2	SMTE
205	Distance (25.4) from Rear Face of Operating Rod Hole	B-3 Sht.2	SMTE
206	Location (34.75) from datum -D- to Face of Sear Catch	B-5 Sht.1	SMTE
207	Profile (0.4) of 11.85	C-7 Sht.1	SMTE
208	Length (7.70) of Elongated Hole	D-4 Sht.1	SMTE
209	Profile (0.42) of 29.4	E-5 Sht.1	SMTE
210	Height (33.30)	C-2/3 Sht.2	SMTE
211	Length (67.5)	B-5 Sht.1	SMTE
212	Width (18.9)	D-3 Sht.1	SMTE
213	Diameter (13.10)	C-1 Sht.2	SMTE
214	Position of Radius (40.0)	E-6/7 Sht.2	SMTE
215	Width (7.30)	F-7 Sht.2	SMTE
216	Radius (4.0) Front of Lug	C-2/3 Sht.2	SMTE
217	Profile (0.22) of 22.6 Lug	F-7 Sht.2	SMTE
218	Workmanship (See 1.2)		VISUAL

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CAGE CODE
19200

16. REVISION SYMBOL AND DATE	001110					10. QAP NO: 9348405
						14. PAGE NO. 4

QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)
(DAR R 702 - 10)

INSPECTION POSITION B: TUBE, OPERATING ROD - DWG - 9348410

CRITICAL: NONE

MAJOR: NONE

MINOR: Criteria - Verification Level II of MIL-STD-1916

201	Inside Diameter (12.5)	B-2	SMTE
202	Diameter (16.4)	B-1	SMTE
203	Flatness (0.2) of (16.4) Diameter	B-2	SMTE
204	Diameter (16.3)	B-7	SMTE
205	Position (0.08) of 16.3 Diameter	B-7	SMTE
206	Position (0.1) of 11/16 Thread	C-2/3	SMTE
207	Workmanship (See 1.2)		VISUAL

INSPECTION POSITION C: STEM, OPERATING ROD - DWG - 9348411

CRITICAL: NONE

MAJOR: NONE

MINOR: Criteria - Verification Level II of MIL-STD-1916

201	Diameter (9.825)	E-3 Sht.1	SMTE
202	Diameter (12.50) of Knurled End	D-4 Sht.1	SMTE
203	Diameter (7.9)	C-6 Sht.1	SMTE
204	Runout (0.16) of (7.9) Diameter	C-6 Sht.1	SMTE
205	Width (3.30) of Slot	D-7 Sht.1	SMTE
206	Position (0.1) of (3.3) Slot	C-7 Sht.1	SMTE
207	Major Thread Diameter (9.825)	D-7 Sht.2	SMTE
208	Pitch Thread Diameter (8.873)	D-7 Sht.2	SMTE
209	Position (0.1) of Pitch Thread Diameter	D-7 Sht.2	SMTE
210	Workmanship (See 1.2)		VISUAL

NOR LOS5017 RI
ECP # 0063-E-0002 RI
NOR CONTINUATION SHEET
6 OF 10, DATED 010526

						CAGE CODE 19200
16. REVISION	001110					10. QAP NO: 9348405
SYMBOL						14. PAGE NO.
AND DATE						5

QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)
(DAR R 702 - 10)

INSPECTION POSITION D: OPERATING ROD ASSEMBLY - DWG 9348406

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

101	All Components Present, Correct, and Properly Assembled		VISUAL
102	Salt Spray		(See 503)
103	Coating Weight		(See 504)
104	Supplemental Oil		(See 505)

MINOR: Criteria - Verification Level II of MIL-STD-1916

201	Profile (0.4) of 5.288 in Area "W"	D-6	SMTE
202	Profile (0.4) of 5.588 in Area "W"	C-6	SMTE
203	Protective Finish		VISUAL
204	Torque (25 Nm) of Rear Part, Operating Rod to Tube, Operating Rod	Note 3	SMTE
205	Workmanship (See 1.2)		VISUAL

INSPECTION POSITION E: PISTON - DWG - 9348406

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

101	Diameter (3.05) of Spring Pin Hole	D-5	SMTE
102	Diameter (17.91) of Ribs, 3 plcs	E-4	SMTE
103	Thickness of Chromium Plating	NOTE 5	SMTE

MINOR: Criteria - Verification Level II of MIL-STD-1916

201	Minor Diameter (8.526)	B-2/3	SMTE
202	Pitch Diameter (9.116) of Threads	B-2/3	SMTE
203	Position (0.08) of Pitch Diameter Thread	B-2/3	SMTE
204	Position (0.2) of (3.05) Spring Pin Hole	D-5	SMTE
205	Diameter (17.78) of Front of Piston	E-5	SMTE
206	Inside Diameter (13.535) of Front of Piston	C-5	SMTE
207	Runout (0.06) of (13.535) Inside Diameter	C-5	SMTE
208	Surface Roughness, 3 plcs	B-5, E-4, E-5	SMTE
209	Workmanship (See 1.2)		VISUAL

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NOR CONTINUATION SHEET
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CAGE CODE
19200

10. QAP NO:
9348405

14. PAGE NO.

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16. REVISION
SYMBOL
AND DATE

001110			

QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)
(DAR R 702 - 10)

INSPECTION POSITION F: PIN, SPRING - DWG - 9348407

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

- | | | |
|-----|------------------|-----------|
| 101 | Salt Spray | (See 503) |
| 102 | Coating Weight | (See 504) |
| 103 | Supplemental Oil | (See 505) |

MINOR: Criteria - Verification Level II of MIL-STD-1916

- | | | |
|-----|-----------------------|--------|
| 201 | Diameter (3.4) | SMTE |
| 202 | Length (14.5) | SMTE |
| 203 | Protective Finish | VISUAL |
| 204 | Workmanship (See 1.2) | VISUAL |

INSPECTION POSITION G: PIN, SPRING - DWG - 12556960

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

- | | | |
|-----|------------------|-----------|
| 101 | Diameter (2.15) | SMTE |
| 102 | Salt Spray | (See 503) |
| 103 | Coating Weight | (See 504) |
| 104 | Supplemental Oil | (See 505) |

MINOR: Criteria - Verification Level II of MIL-STD-1916

- | | | |
|-----|-----------------------|--------|
| 201 | Workmanship (See 1.2) | VISUAL |
|-----|-----------------------|--------|

INSPECTION POSITION H: PISTON ASSEMBLY - DWG - 9348405

CRITICAL: NONE

MAJOR: Criteria - Verification Level III of MIL-STD-1916

- | | | |
|-----|---|--------|
| 101 | All Components Present, Correct
and Properly Assembled | VISUAL |
|-----|---|--------|

MINOR: Criteria - Verification Level II of MIL-STD-1916

- | | | | |
|-----|--------------------------------------|--------|--------|
| 201 | Length (280.2) | C-5 | SMTE |
| 202 | Proper Orientation of Spring
Pins | NOTE 2 | VISUAL |
| 203 | Workmanship (See 1.2) | | VISUAL |

NOR LOS5017R1
 ECP # 0063-E-0002 R1
 NOR CONTINUATION SHEET
 8 OF 10, DATED 010326
 NOR LOS5017R1

CAGE CODE 19200
10. QAP NO: 9348405
12. PAGE NO.

16. REVISION SYMBOL DATE	001110				
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QUALITY ASSURANCE PROVISION (QAP) - (CONTINUATION SHEET)
(DAR R 702 - 10)

PART IV CERTIFICATION REQUIREMENTS

Certified test reports (CTRs) in compliance with paragraph 1.3.1 requirements are required as indicated.

<u>NUMBER</u>	<u>CHARACTERISTIC</u>	<u>TEST DATA TO COMPLY WITH</u>
401	Material	9348406 9348407 9348411 12556960 9348409 9348410
402	Heat Treatment	9348406 9348407 9348411 12556960 9348409
403	Hardness	9348406/Para. 501 9348407/Para. 501 9348411/Para. 501 12556960/Para. 501 9348409 /Para. 501
404	Protective Finish	9348406 9348407 12556960 9348408
405	Welding	9348408 and MIL-STD-1261
406	Case Depth Hardness	9348411/Para. 502 9348409 /Para. 502
407	Chromium Plating	9348406/QQ-C-320
408	Magnetic Particle Inspection	9348408 /Note 7

ECP # 0063-E-0002 R1
NOR CONTINUATION SHEET
9 OF 10, DATED 010326

CAGE CODE
19200

10. QAP NO:
9348405

12. PAGE NO.

16. REVISION SYMBOL DATE

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QUALITY ASSURANCE PROVISION (QAP) – (CONTINUATION SHEET)
(DAR R 702 - 10)

PART V TEST METHODS AND PROCEDURES

501 HARDNESS

Five samples shall be selected from each heat treatment batch. Testing shall be in accordance with ASTM E18. Each heat treatment batch shall remain segregated until all tests are completed. If any sample fails to comply with the hardness requirements, it shall be classified as defective and the lot shall be rejected. A heat treatment batch is defined as parts that have been heat treated at the same time in the same furnace and quench bath for all phases of the heat treatment process

502 CASE DEPTH HARDNESS

Three (3) samples shall be selected from each day's production from each carburizing furnace or salt pot used. Each sample shall be cut perpendicular to the cased surface and the cut surface shall then be prepared by grinding or rough polishing to remove the effects of the original cut. Etching will be done with a weak solution (1-10%) Nitric acid in alcohol and of sufficient time to develop a contrast in case and core structure. The depth of case shall be the total distance of penetration from the surface to the nearest point of uniform core structure as measured on a polished and etched specimen at a magnification not lower than 10 diameters. If any sample fails to comply with the specified requirements, it shall be classed defective and the lot shall be rejected.

503 SALT SPRAY TEST.

Five (5) parts shall be selected from each lot. The test shall be performed as specified in DOD-P-16232 and ASTM B 117 without the supplemental oil. Test procedures and equipment shall have the prior approval of the Government. If any part shows evidence of corrosion, it shall be classified as defective and the entire lot shall be rejected.

504 COATING WEIGHT.

Five (5) samples or five test panels shall be selected from each lot. The test shall be performed as specified in DOD-P-16232. Test procedures and equipment shall have the prior approval of the Government. If any sample does not meet the requirement of DOD-P-16232, it shall be classified as defective and the lot shall be rejected.

505 SUPPLEMENTAL OIL TREATMENT SALT SPRAY.

The test shall be performed for first article and at least semi-monthly during production. Three test panels from each processing tank or dispenser shall be prepared and tested in accordance with MIL-L-3150 or MIL-C-16173 (as applicable) and ASTM B117 using a 5% salt solution. The test duration and accept/reject criteria shall be as specified in the applicable specification. If any test panel fails to meet the applicable requirement, all items processed since the last acceptable test shall be rejected.

NOR LOS5017 R1
ECP # 0063-E-0002 R1
NOR CONTINUATION SHEET
10 OF 10. DATED 0103Z

CAGE CODE
19200

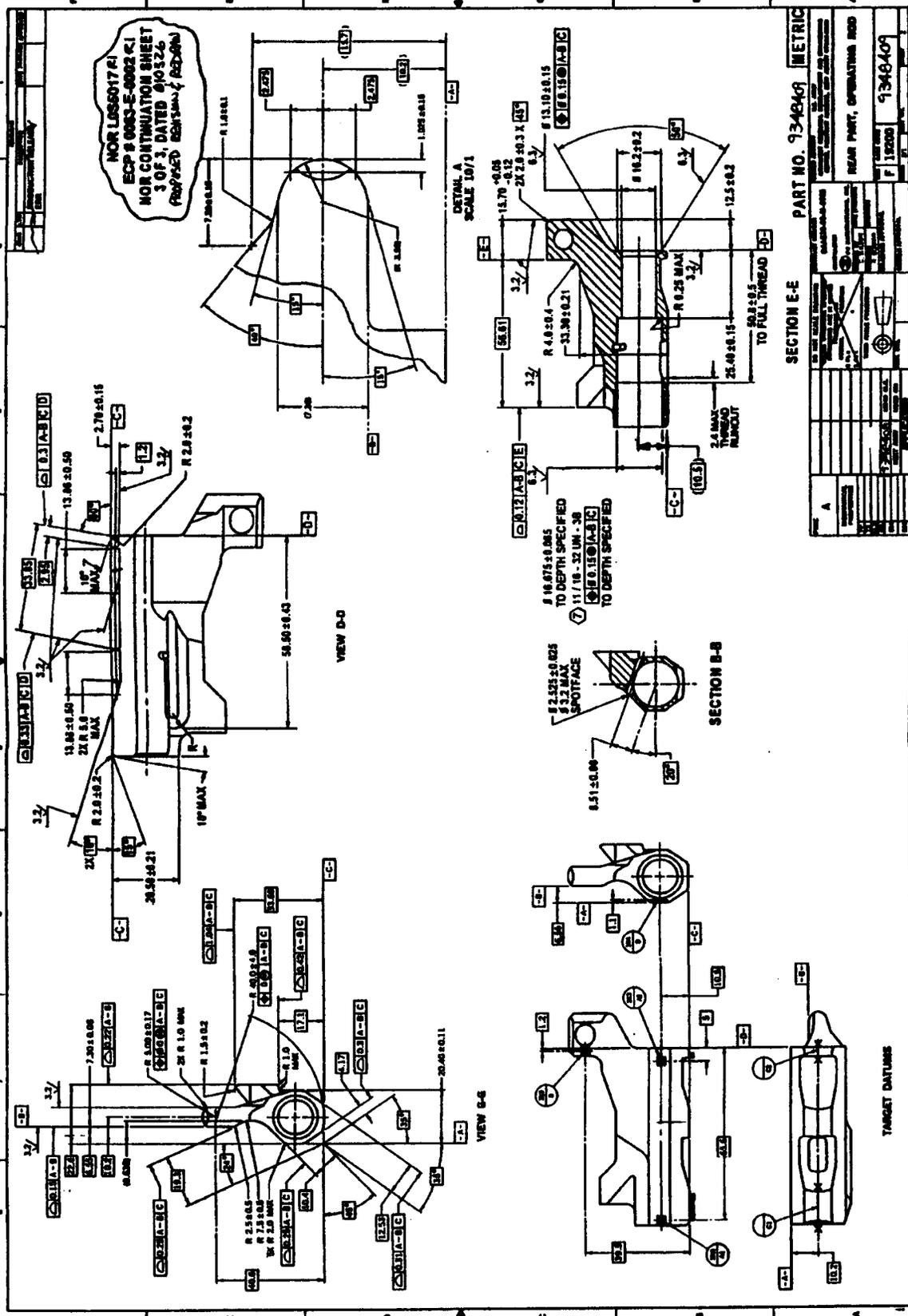
10. QAP NO:
9348405

16. REVISION
SYMBOL

001110		

DATE

NOTICE OF REVISION (NOR)		1. DATE (YYMMDD) 010326	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 of any other aspect of this collection of information including suggestions for reducing this burden to 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. L0S5017R1	
PLEASE DO NOT RETURN YOUR COMPLETED 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. DODACC	
4. ORIGINATOR	b. ADDRESS (Street, City, State, Zip Code)	5. CAGE CODE	6. NOR NO.
a. TYPED NAME (First, Middle Initial, Last) Brian D. Donovan	AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000	19200	
		7. CAGE CODE 19200	8. DOCUMENT NO. F 9348409
9. TITLE OF DOCUMENT REAR PART, OPERATING ROD		10. REVISION LETTER	
		a. CURRENT E	b. NEW
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES MACHINE GUN, 5.56MM; M249		11. ECP NO. 0063-E-0002R1	
		NOR SH. 1 OF 3	
13. DESCRIPTION OF CHANGE: SEE NOR CONTINUATION SHEETS 2 AND 3 OF 3, DATED 010326 FOR PROPOSED REVISION AND REDRAW			
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
	<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-CCL-F		c. TYPED NAME (First, Middle Initial, Last)	
Ronald E. Eibe Chief, CCAC Prod & Field Spt Team		e. SIGNATURE 	f. DATE SIGNED (YYMMDD) 20010507
15 a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETEDS (SIGNATURE)	c. DATE SIGNED (YYMMDD)	



NOR L055017 R1
 ECP 9 0003-E-0002 K-1
 NOR CONTINUATION SHEET
 3 OF 3, DATED #10326
 (REVISED DIMENSIONS & REQ.)

SECTION E-E
 PART NO. 934649 METRIC
 REAR PART, OPERATING END
 F 152009 934649

REVISIONS

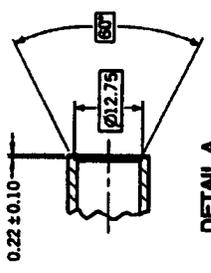
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DATE: 10/10/88
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 APPROVED BY: [Signature]

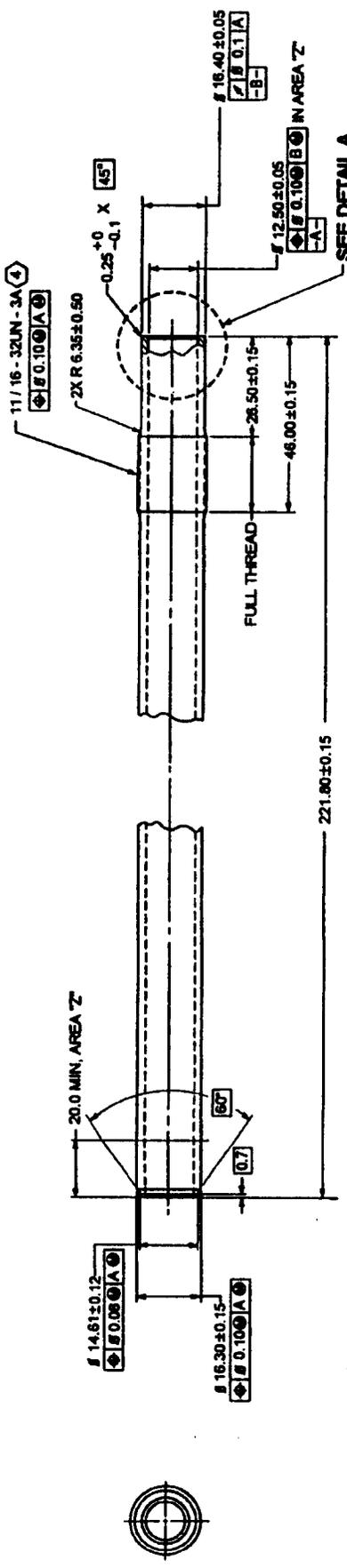
NOTICE OF REVISION (NOR)		1. DATE (YYMMDD)	Form Approved
This revision described below has been authorized for the document listed.		010326	OMB NO. 0704-0188
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, 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 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. LOS5017R1
PLEASE DO NOT RETURN YOUR COMPLETED 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. DODACC
4. ORIGINATOR	b. ADDRESS (Street, City, State, Zip Code)	5. CAGE CODE	6. NOR NO.
a. TYPED NAME (First, Middle Initial, Last)	AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000	19200	8. DOCUMENT NO. D 9348410
Brian D. Donovan		7. CAGE CODE 19200	
9. TITLE OF DOCUMENT	10. REVISION LETTER		11. ECP NO.
TUBE, OPERATING ROD	a. CURRENT B	b. NEW	0063-E-0002R1
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES	NOR SH. 1		
MACHINE GUN, 5.56MM; M249	OF 2		
13. DESCRIPTION OF CHANGE:			
SEE NOR CONTINUATION SHEET 2 OF 2, DATED 010326 FOR PROPOSED REVISION AND REDRAW			
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
	<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-CCL-F			
15. a. ACTIVITY ACCOMPLISHING REVISION	e. SIGNATURE	f. DATE SIGNED (YYMMDD)	
		20010507	
	b. REVISION COMPLETEDS (SIGNATURE)	c. DATE SIGNED (YYMMDD)	

DRAWING SHEET 0 1 2 3 4 5 6 7 8

- NOTES:
 1. SPEC. MIL-W-13865 AND AN61 Y14.5M - 82 APPLY.
 2. MATERIAL:
 STEEL TUBING, SEAMLESS, COMP. 1/020 TO 1/026,
 COLD FINISHED, ANNEALED, ASTM A 181.
 3. FINISH 3.2
 4. THREADS REPRESENTED IN INCHES.



DETAIL A



SEE DETAIL A

LOSS6017 R
 ECP # 0063-E-0002 R
 HOR CONTINUATION SHEET
 2 OF 2 DATED 01/05/26
 PROPOSED (REVISED AND REDRAWN)

PART NO. 13-48410		METRIC	
DO NOT SCALE DIMENSIONS			
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED			
TOLERANCES UNLESS OTHERWISE SPECIFIED:			
FINISH	MECHANICAL	±0.0005	±0.0005
FORM	MECHANICAL	±0.0005	±0.0005
DRILL	MECHANICAL	±0.0005	±0.0005
TURN	MECHANICAL	±0.0005	±0.0005
WELD	MECHANICAL	±0.0005	±0.0005
APPROVAL	DESIGN	DATE	BY
APPROVAL	MANUFACTURING	DATE	BY
APPROVAL	INSPECTION	DATE	BY
APPROVAL	QUALITY CONTROL	DATE	BY
APPROVAL	PROJECT ENGINEER	DATE	BY
APPROVAL	PROJECT MANAGER	DATE	BY
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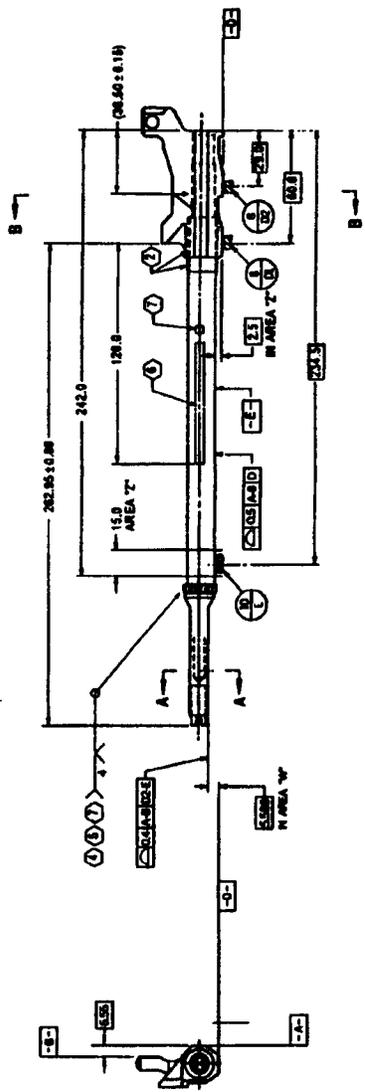
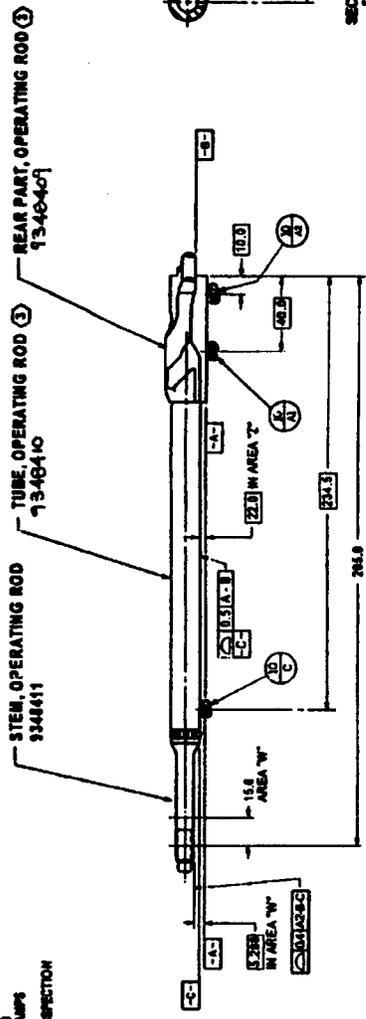
SCALE: AS SHOWN
 UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES
 TOLERANCES UNLESS OTHERWISE SPECIFIED:
 FRACTIONS DECIMALS
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 1/8 0.125
 3/16 0.1875
 1/4 0.25
 5/16 0.3125
 3/8 0.375
 7/16 0.4375
 1/2 0.5
 9/16 0.5625
 5/8 0.625
 11/16 0.6875
 3/4 0.75
 7/8 0.875
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 1 1/8 1.125
 1 1/4 1.25
 1 3/8 1.375
 1 1/2 1.5
 1 5/8 1.625
 1 3/4 1.75
 1 7/8 1.875
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 4 5/8 4.625
 4 3/4 4.75
 4 7/8 4.875
 5 5.0
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 5 5/8 5.625
 5 3/4 5.75
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NOTICE OF REVISION (NOR) This revision described below has been authorized for the document listed.		1. DATE (YYMMDD) 010326	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 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 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. LOS5017R1
			3. DODACC
4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) Brian D. Donovan	b. ADDRESS (Street, City, State, Zip Code) AMSTA-AR-CCL-A TACOM-ARDEC Picatinny Arsenal, NJ 07806-5000	5. CAGE CODE 19200	6. NOR NO.
		7. CAGE CODE 19200	8. DOCUMENT NO. F 9348408
9. TITLE OF DOCUMENT OPERATING ROD ASSEMBLY	10. REVISION LETTER a. CURRENT C		b. NEW b. NEW
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES MACHINE GUN, 5.56MM; M249		11. ECP NO. 0063-E-0002R1	
13. DESCRIPTION OF CHANGE: SEE NOR CONTINUATION SHEET 2 OF 2, DATED 010326 FOR PROPOSED REVISION AND REDRAW		NOR SH. 1 OF 2	
11. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X) one	<input checked="" type="checkbox"/>	(1) Existing document supplemented by his NOR may be used in manufacturing	
	<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-CCL-F		c. TYPED NAME (First, Middle Initial, Last)	
d. TITLE Ronald E. Culp Chief, CCAC Prod & Field Spt Team	e. SIGNATURE 		f. DATE SIGNED (YYMMDD) 20010507
15. a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETED (SIGNATURE)		c. DATE SIGNED (YYMMDD)

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NOR L080617 Z1
ECP # 0003-E-0002 R.1
NOR CONTINUATION SHEET
1 OF 2, DATED 010576
PROPOSED REV 15 JAN 78 (2024)

- NOTES:
1. SPEC. MIL-R-15401 AND AMS T143842 APPLY.
 2. APPLY LOCOTITE 800 TO MESSAGES, TUBES, OPERATING ROD - 9348410 AND REAR PART, OPERATING ROD - 9348409.
 3. APPLY TORQUE 25 TO 30 IN TO O-RINGS, OPERATING ROD - 9348409 AND TUBE, OPERATING ROD - 9348410.
 4. SMALL Ø 3.25 Ø AND SMALL INTERNAL GROOVES, HEADLESS - 080448 - 0214, EXTERNALLY SPACED, BOTH ENDS.
 5. WELD REQUIREMENTS:
 - A. WELD SYMBOLS IN ACCORDANCE WITH AWS A2.4.
 - B. WELD IN ACCORDANCE WITH ENDS 1, AMS D1.1, 14.8776.2
 - C. WELD METAL MAY PROTRUDE AT MAX. GRINDING PERMISSIBLE.
 - D. HEAT TREAT IN ACCORDANCE WITH SAE AMS-A-4875.
 - E. STRESS RELIEVE 1 HOUR AT 200°C (375°F) WELDING.
 - F. APPLY OILYITY - 1000 AMP, 75-90% AC AND "WPR KILLER".
 - G. 2.5 HIGH LETTERING 1.51 ± 0.1 DEEP PER MIL-STD-150.
 6. EACH OPERATING ROD ASSEMBLY SHALL BE MAGNETIC PARTICLE INSPECTED AFTER FINAL GRINDING FOR CRACKS (NONE ALLOWED PER AWS D1.1, SEAMS AND OTHER ILLEGIBLE DEFECTS IN WELD AREA ONLY THAT COULD ADVERSELY AFFECT FUNCTION OF PART WITH A CURRENT OF 400 TO 600 AMPS APPLIED IN THE WELD AREA). AFTER WELDING, THE WELD AREA SHALL BE APPLIED MAGNETIC PARTICLE TEST BANK "B" AFTER MAGNETIC PARTICLE INSPECTION BY AREA SPECIFIED.
 7. PROTECTIVE FINISH:
 - A. FINISH 1.51.3 OF MIL-STD-471.



PART NO. 9348408 METRIC

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