INCH-POUND

MIL-DTL-32267A(AR) w/AMENDMENT 2 <u>17 December 2012</u> SUPERSEDING MIL-DTL-32267A(AR) w/AMENDMENT 1 30 April 2012

DETAIL SPECIFICATION

FUZE, POINT DETONATING - M739A1

Inactive for new design after 30 September 2007

This specification is approved for use by the U.S. Army Armament Research, Development and Engineering Center (ARDEC), and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 This specification covers the fabrication of parts, assembling and loading for the Fuze, Point Detonating - M739A1 Artillery Ammunition Fuze with Booster Pellet.

Comments, suggestions, or questions on this document should be addressed to the commander, U.S. Army ARDEC, ATTN: RDAR-QES-E, Picatinny, NJ 07806-5000 or emailed to <u>usarmy.picatinny.ardec.list.ardec-stdzn-branch@mail.mil</u>. Since contact information can change, you may want to verify the currency of this address information using the ASSIST online database at https://assist.dla.mil.

AMSC N/A

FSC 1315

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2. Applicable documents

2.1 <u>General.</u> The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-D-14978 - Detonator, Stab, M55 Loading, Assembling and Packing

MIL-D-48025 – Detonator, Stab, M99, Loading, Assembling and Packing

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-331 – Fuze and Fuze Components, Environmental and Performance Tests for

- MIL-STD-1168 Ammunition Lot Numbering and Ammunition Data Card
- MIL-STD-1916 DOD Preferred Methods for Acceptance of Product

(Unless otherwise indicated, copies of these documents are available online at <u>https://assist.dla.mil/quicksearch/</u> or from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg. 4D Philadelphia, PA 19111-5094.)

2.2.2 <u>Other Government documents, drawings, and publications</u>. The following other Government documents, drawings and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (ARDEC) DRAWINGS

7548099 – Box, Packing, Ammunition for Lead Cup Assembly or Explosive Lead PA510 7548103 – Box, Set-up, Packing, Ammunition, Outer 7548104 – Box, Set-up, Packing, Ammunition, Inner 12992295 – Lead, Explosive

9255166 – Cup, Lead

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- 9255167 Disc, Lead
- 12992294 Pellet, Booster
- 9258607 Cup, Booster
- 9258609 Body, Fuze
- 9258611 Screw, Closing
- 9258613 Firing Pin Housing and Detonator Assembly
- 9258614 Support, Firing Pin
- 9258617 Housing, Detonator
- 9258618 Firing Pin Assembly
- 9258619 Pin, Firing
- 9258620 Retainer, Safing and Arming
- 9258622 Crossbar and Holder Assembly
- 9258624 Holder, Crossbar
- 9258625 Setting Sleeve Assembly
- 9258626 Retainer Interrupter
- 9258628 Sleeve, Setting
- 9258629 Interrupter
- 9258630 Safing and Arming Module Assembly
- 11720309 Pallet
- 9258632 Plate, Gear, Upper
- 9258634 Pin, Setback
- 9258636 Spring Pin, Setback
- 12973181 Spinlock
- 9258639 Rotor Assembly
- 9258640 Body, Rotor
- 9258641 Shaft, Rotor
- 9258642 Gear, Rotor
- 9258643 Plate and Spacer Assembly
- 9258644 Plate, Bottom
- 9258646 Spacer, Plate, Gear
- 9258647 Spring, Pin, Lock
- 9258650 Lower Plate and Shaft Assembly
- 9258651 Plate, Gear, Lower
- 9258652 Shaft, Pallet
- 9258653 Gear and Pinion Assembly
- 9258655 Escape Wheel and Pinion Assembly
- 9258682 Seal Disc
- 9282958 Safing and Arming Module and Retainer Assembly
- 9294595 Fuze Body and Setting Sleeve Assembly
- 9294606 Firing Pin and Housing Assembly
- 9294833 Safing and Arming Module Subassembly
- 9294992 Plug, Test
- 9294993 Disk, Test
- 9298909 Cap, Nose
- 9333937 Pin, Firing

9343014 – Pin, Lock, Rotor 9345331 - Fuze Body Assembly M739A1 9345332 - Fuze, PD, M739A1 11836270 – Delay Module, Impact 11836271 - Plunger Assembly 11836272 - Plunger 11836273 - Detent, Spin 11836274 - Spring Detent 11836275 - Retainer, Detent 11836276 - Lock, Detent 11836277 – Pin, Pivot 11836278 - Firing Pin Holder Assembly 11836279 – Holder, Firing Pin 11836281 - Pin, Firing Pin 11836282 - Slider 11836283 - Spring, Firing Pin 11836284 – Spring, Slider 11836285 – Retainer, Slider Spring 11836286 - Housing 11836287 - Spring, Plunger 11836288 - Cover, Housing 12998402 - Witness Block

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(Copies of these documents may be requested from US Army ARDEC, RDAR-EIS-PE, Picatinny, NJ 07806-5000, or email <u>usarmy.picatinny.ardec.list.drawing-request-help-desk@mail.mil</u>)

2.3 Non-Government Publications. The following documents form a part of this specification to the extent specified herein.

AEROSPACE INDUSTRIES ASSOCIATION of AMERICA, Inc. (AIA/NAS) NAS-410 – NAS Certification & Qualification of Nondestructive Test Personnel or equivalent

(Copies of AIA/NAS standards are available online from http://www.aia-aerospace.org or **Aerospace Industries Association** 1000 Wilson Boulevard, Suite 1700 Arlington, VA 22209-3928)

AMERICAN SOCIETY FOR TESTING AND MATERIALS ASTM E1742 – Standard Practice for Radiographic Examination

ASTM E 1255 – Standard Practice for Radioscopy

ASTM E 1411 – Standard Practice for Qualification of Radioscopic Systems

(Copies of ASTM standards are available online from <u>http://www.astm.org</u> or ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959)

2.4 <u>Order of precedence</u>. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 <u>First article</u>. When specified, a sample shall be subjected to first article inspection in accordance 4.2.

3.2 Lot acceptance. A sample shall be subjected to lot acceptance verification in accordance with 4.3.

3.3 <u>Components and assemblies</u>. The materials, components, and assemblies shall comply with all applicable drawings listed in 4.4.1.1 to 4.4.1.83.

3.4 <u>Ammunition lot numbering</u>. Fuze lot numbering shall be in accordance with MIL-STD-1168 and applicable drawings.

3.5 <u>Inspection lot formation</u>. Inspection lots shall comply with the lot formation requirements of MIL-STD-1916.

3.6 <u>Fuze not armed</u>. The ballistic sample fuzes shall not be shipped or stored without the S&A device in the safe condition.

3.7 <u>Propagation</u>. The fuze assemblies with test disk, test plug and booster cups shall arm and function high order as evidenced by a minimum .170 inch diameter hole in the test disk.

3.8 <u>Lead assembly output</u>. The lead assembly shall function high order as evidenced by a 0.0239 inch dent in a steel witness block as per 4.5.31.

3.9 <u>Boostering</u>. When booster is installed into fuze, the fuze shall function for all approved 155mm and 105mm artillery projectiles. Deliverable fuzes shall be boostered after LAT using the same manufacturer and process used for LAT samples.

3.10 <u>Ballistic requirements</u>. The fuze shall function when used on all approved 155mm and 105mm artillery projectiles.

3.11 <u>Premature bursts</u>. There shall be no premature bursts.

3.12 Early Burst. There shall be no early bursts.

3.13 <u>Non-function</u>. The fuze shall not function upon impact with target, when subjected to this test.

3.14 <u>Superquick (SQ)</u>. The fuze shall cause the projectile to function high order, and the fuze shall show no evidence of reverse functioning (see 6.6.5).

3.15 <u>Delay (DLY)</u>. The fuze shall cause the projectile to function high order 3-6 milliseconds after target impact.

3.16 <u>S&A in safe condition</u>. The S&A shall be in the safe condition prior to insertion into the fuze body.

3.17 <u>Impact delay drop</u>. The Impact Delay Module (dwg. 11836270) shall function satisfactorily as evidenced by the complete firing of the assembly.

3.18 <u>Jolt and jumble</u>. The fuze assemblies with inert boosters and booster cups shall comply with the requirement of MIL-STD-331, Tests A1 and A2.1.

3.19 <u>Transportation vibration</u>. The S&A and fuze assemblies less booster pellet and booster cup shall comply with the requirements of MIL-STD-331, Test B1.1, section B1.6.3.2, Sweep Method of procedure II.

3.20 <u>Leakage</u>. The fuze assemblies, less booster pellet and booster cup, shall comply with MIL-STD-331, Test. C4 except that the duration of immersion shall be five (5 plus or minus 0.5) minutes and the pressure shall be three (3 plus or minus 0.5) psi gauge.

3.21 <u>S&A functional</u>. The S&A Module shall arm within the time specified in 4.5.13.2 and temperature specified in 4.5.33. The module shall not arm as per test described in 4.5.14. Automatic time recording is optional.

3.22 <u>Die cast and molded components</u>. Cast and molded components shall be of uniform quality, free of cold shuts, blowholes, defects, voids, cracks, and foreign inclusions. Castings must be dry, clean, and free of chips. All unfilled castings shall be rejected. Cast and molded plastic parts are permitted to display surface color variations due to flow patterns and filler content.

3.23 <u>Bottom plate, surface porosity</u>. No voids greater than .005" X .005" shall be permitted in the ramp surface of the setback pin hole.

3.24 <u>Gear plate spacer, surface porosity</u> No voids greater than .005" X .005" shall be permitted in either spinlock bearing surface.

3.25 <u>Rotor body, surface porosity</u> No voids greater than .005" X .005" shall be permitted in the upper plate bearing surface.

3.26 <u>Gears, surface porosity</u>. No voids greater than .005" X .005" shall be permitted in any of the tooth profiles. No voids greater than .005" X .005" shall be permitted in the pinion flange upper bearing surface or in the gear flange lower bearing surface of the gear and pinion assembly. No voids greater than .005" X .005" shall be permitted in the escape wheel flange upper bearing surface or in the pinion flange lower bearing surface of the escape wheel pinion assembly.

3.27 The Plunger shall meet the requirements of Drawing # 11836272.

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3.28 The Firing Pin Holder shall meet the requirements of drawing # 11836279.

3.29 <u>Workmanship</u>. The parts shall be clean and free of burrs, sharp edges, unblended radii, surface defects, cracks, chips, dirt, grease, and oil (except where specifically required), rust and foreign matter. The cleaning method used shall not be injurious to any part, nor shall the parts be contaminated by the cleaning agent. All required markings shall be neat, legible and sharply defined.

3.30 <u>Detonator deterioration</u>. If the time between original acceptance of detonator lot into the assembly of the fuze exceeds two years, the detonator lot shall be subjected to the criteria specified in 4.5.40.

4. VERICATION

TABLE I. <u>Requirements/verification cross reference matrix</u>

METHODS OF VERIFICATION

CLASSES OF VERIFICATION

- N/A Not Applicable
- 1 Analysis
- 2 Demonstration
- 3 Examination
- 4 Test

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- A First Article Verification
- B Conformance Inspection

Section	Verification methods					Verific	cation	Section 4
		1	2	3	4	А	В	
3.1	First article			Х	Х			4.2
3.2	Lot acceptance			Х	Х		Х	4.3
3.3	Components & assy's			Х	Х	Х	Х	4.4.1.1, 4.4.1.83
3.4	Ammo lot numbering			Х			Х	4.4.1.53
3.5	Inspection lot formation			Х			Х	4.3.1
3.6	Fuze not armed			Х	X	Х	Х	4.2.3.6, 4.3.2.1.1 4.3.3.1.1
3.7	Propagation			Х	Х	Х		4.2.3.4, 4.4.1.53
3.8	Lead assy output				Х		Х	4.4.1.79
3.9	Boostering			Х		Х	Х	4.4.1.75
3.10	Ballistic requirements				Х	Х	Х	4.4.1.53
3.11	Premature bursts				Х	Х	Х	4.2.3.5, 4.3.4.1
3.12	Early burst				Χ	Х	Х	4.2.3.5, 4.3.4.1
3.13	Non-Function				Х	Х	X note 1	4.2.3.5, 4.3.4.1
3.14	Superquick				Χ		Х	4.2.3.5,4.3.4.1
3.15	Delay				Х		Х	4.2.3.5, 4.3.4.1
3.16	S&A safe			Х	Х		Х	4.4.1.51, 4.4.1.53
3.17	Impact delay drop				Х		Х	4.4.1.73
3.18	Jolt and jumble				Х	Х		4.2.3.1
3.19	Transportation vibration				Х	Х	Х	4.2.3.2, 4.3.4.1
3.20	Leakage				Х	Х		4.2.3.3, 4.4.1.52
3.21	S&A functional			Х	Х		Х	4.2.3.7
3.22	Die cast & molded parts			Х	Х		Х	See 4.4.1.d
3.23	Bottom plate			Х		Х	Х	4.4.1.22, 4.4.1.23
3.24	Gear plate spacer			Х		Х	Х	4.4.1.24, 4.4.1.25
3.25	Rotor body			Х		Х	Х	4.4.1.28, 4.4.1.29
3.26	Gears			Х		Х	Х	4.4.1
3.27	Plunger			Х		Х	Х	4.4.1.71
3.28	Holder, firing pin			Х		Х	Х	4.4.1.64
3.29	Workmanship			Х		Х	Х	4.4.1
3.30	Detonator deterioration			Х	Х	Х	Х	4.4.1.7, 4.4.1.32, 4.5.36

Note 1) First three production lots only

4.1 <u>Classification of verification</u>. The verification requirements are specified herein as follows:

a. First article verification (see 4.2).

b. Conformance inspection (see 4.3)

4.2 <u>First article verification</u>. When required, a first article sample shall be verified in accordance with 4.2.2

4.2.1 First article quantity.

4.2.1.1 <u>Components and assemblies</u>. Ten (10) each of every component, subassembly, and assembly listed in 4.4.1 through 4.4.1.83, except that for molded and stamped components five each shall be submitted from every die/mold cavity or stamping tool to be used in production.

4.2.2 <u>First article inspections to be performed</u>. The first article quantity specified in 4.2.1 is subjected to inspection in accordance with tests or examinations listed in the Classification of Characteristics paragraphs 4.4.1.1 through 4.4.1.83. The first article fuze listed in 4.4.1.1 through 4.4.1.83 shall be subjected to the testing of 4.2.3.

4.2.3 First article tests

4.2.3.1 <u>Jolt and jumble test</u>. Nine (9) fuze assemblies loaded with inert boosters and booster cups will be subjected to jolt and jumble testing per 4.5.1 and Figure 1.

4.2.3.2 <u>Transportation vibration test</u>. Fuze shall be subjected to vibration testing per 4.5.2, and Figure 1. After examination per 4.2.3.6, the fuze shall be ballistically tested per Table II.

4.2.3.3 <u>Leak test</u>. Forty eight (48) fuzes shall be randomly selected and subjected to the leak test per 4.5.8, and Figure 1. Any assembly that does not comply with 3.20 shall be classed as defective. As an option an alternative leak test may be performed per 4.5.8.1. Any assembly with a continuous stream of bubbles in excess of one bubble per second shall be classed defective. Assemblies which pass this test may also be used to satisfy the sample requirements for jolt and jumble or for propagation testing.

4.2.3.4 <u>Propagation test</u>. Propagation shall be verified per 4.5.17, and Figure 1.

4.2.3.5 <u>Ballistic tests</u>. Fuzes shall be conditioned and ballistically tested in accordance with Table II and 4.2.4.3.

4.2.3.6 <u>Fuze not armed</u>. All fuzes for test shall be X-rayed to verify S&A is not armed and is in the safe condition and is safe to transport and fire.

4.2.3.7 <u>S&A functional test</u>. S&A samples shall be tested in accordance with 4.4.1.42 and Figure 1.

4.2.4 First article rejection.

4.2.4.1. <u>Examinations and static tests</u>. If any component, subassembly or assembly fails to comply with any of the applicable requirements, the first article sample shall be rejected.

4.2.4.2 <u>Functioning performance tests</u>. Defect categories and rejection criteria for these tests are as follows:

4.2.4.2.1 <u>Reliability and sequential operational tests</u>.

a. <u>Safe condition (see 6.6.2)</u> - Any fuze found with the S&A module not in the safe condition after any environmental testing or prior to gunfire shall be cause for rejection.

4.2.4.2.1.1 Jolt and jumble. Any fuze which fails to meet the criteria of 4.5.1 shall be cause for rejection.

4.2.4.2.1.2 <u>Transportation vibration</u>. Any fuze which fails to meet the criteria of 4.5.2 shall be cause for rejection.

4.2.4.2.1.3 <u>Leak test</u>. Any fuze which fails to meet the criteria of 4.5.8 or 4.5.8.1 shall be cause for rejection.

4.2.4.2.1.4 <u>Propagation test</u>. Any fuze which fails to meet the criteria of 4.5.17 shall be cause for rejection.

4.2.4.2.1.5 <u>S&A functional tests</u>. Any safety failure shall be cause for rejection. More than two reliability failures shall be cause for rejection. Safety failures are defined as an S&A which arms faster than acceptable arm times. Reliability failures are defined as those failures which are not safety failures.

4.2.4.3 Ballistic testing.

4.2.4.3.1 <u>S&A fails X-ray.</u> Any S&A module found not in the full safe condition shall be cause for rejection. This is a critical defect.

4.2.4.3.2 <u>Premature burst</u>. Any premature burst shall be cause for rejection. This is a critical defect.

4.2.4.3.3 <u>Non-Functioning</u>. Any function in a non-function test shall be cause for rejection (see 6.11.3). This is a critical defect.

4.2.4.3.4 <u>Point detonating dud</u>. More than two PD dud (see 6.6.6) for all PD functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.2.4.3.5 <u>Delay dud</u>. More than two Delay dud (see 6.6.6) for all Delay functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.2.4.3.6 <u>Total duds</u>. For the sample, shown in Table II, more than three duds total shall be cause for rejection.

4.2.4.3.7 <u>Reverse functioning</u>. More than one reverse functioning shall be cause for rejection. This is a major defect.

4.3 Conformance verification.

4.3.1 <u>Inspection lot formation</u>. The lot formation shall be in accordance with the lot formation requirements of MIL-STD-1916. Fuze lot numbering shall be in accordance with MIL-STD-1168. Fuze nomenclature shall be in accordance with drawing number 9345331.

a. M55 Detonator same interfix from one manufacturer

- b. M99 Detonator same interfix from one manufacturer
- c. Lead assemblies same interfix from one manufacturer
- d. S&A assemblies same interfix from one manufacturer
- e. Booster pellet same interfix from one manufacturer
- f. Fuze Body & Setting Sleeve Assembly from one manufacturer.
- g. Delay Module from one manufacturer.
- h. Firing Pin, Housing & Detonator Assembly from one manufacturer.
- i. Cross Bar & holder Assembly from one manufacturer.
- j. Nose Cap from one manufacturer.
- k. Closing Screw from one manufacturer.

4.3.2 <u>Lot acceptance</u> A sample of fuzes shall be subjected to lot acceptance verification in accordance with the Requirements/Verification Cross Reference Matrix, requirements cited in this section and Table II and Table III.

4.3.2.1 Lot rejection (full sample).

4.3.2.1.1 <u>S&A fails X-ray</u>. All fuzes for test shall be x-rayed. Any S&A module found not in the safe condition shall be cause for rejection. This is a critical defect.

4.3.2.1.2 <u>Premature burst</u>. Any premature burst shall be cause for rejection. This is a critical defect.

4.3.2.1.3 <u>Non-Functioning</u>. Any function in a non-function test shall be cause for rejection. This is a critical defect.

4.3.2.1.4 <u>Point detonating dud</u>. More than two PD dud (see 6.6.6) for all PD functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.3.2.1.5 <u>Delay dud</u>. More than two Delay dud (see 6.6.6) for all Delay functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.3.2.1.6 <u>Reverse functioning</u>. For either large or reduced sample, more than one reverse functioning shall be cause for rejection. This is a major defect.

4.3.2.1.7 <u>Total duds</u>. For the sample, shown in Table II, more than three duds total shall be cause for rejection.

4.3.2.1.8 <u>S&A functional tests</u>. Any safety failure shall be cause for rejection. More than two reliability failures shall be cause for rejection. Safety failures are defined as an S&A which arms faster than acceptable arm times. Reliability failures are defined as those failures which are not safety failures.

4.3.3. <u>Switching criteria for ballistic test sample</u>. After three consecutive lots are passed the sample may be reduced to 60 fuzes and tested per Table III. If any lot fails to meet the requirements, the sample shall revert to the full 120 fuze sample of Table II.

4.3.3.1 Lot rejection (reduced sample).

4.3.3.1.1 <u>S&A fails X-ray</u>. All fuzes for test shall be x-rayed. Any S&A module found not in the safe condition shall be cause for rejection. This is a critical defect.

4.3.3.1.2 <u>Premature burst</u>. Any premature burst shall be cause for rejection. This is a critical defect.

4.3.3.1.3 <u>Non-Functioning</u>. Any function in a non-function test shall be cause for rejection. This is a critical defect.

4.3.3.1.4 <u>Point detonating dud</u>. More than two PD dud (see 6.6.6) for all PD functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.3.3.1.5 <u>Delay dud</u>. More than two Delay dud (see 6.6.6) for all Delay functioning ballistic test phases shall be cause for rejection. This is a major defect.

4.3.3.1.6 <u>Reverse functioning</u>. For either large or reduced sample, more than one reverse functioning shall be cause for rejection. This is a major defect.

4.3.3.1.7 <u>Total duds</u>. For the reduced sample, more than two duds total shall be cause for rejection.

4.3.3.1.8 <u>S&A functional tests</u>. Any safety failure shall be cause for rejection. More than two reliability failures shall be cause for rejection. Safety failures are defined as an S&A which arms faster than acceptable arm times. Reliability failures are defined as those failures which are not safety failures.

4.3.4 Lot acceptance inspections to be performed.

4.3.4.1 <u>Ballistic tests</u> Fuze shall be conditioned and ballistically tested in accordance with Table II and 4.3.2.1 or Table III and 4.3.3.1.

4.4 <u>Examinations and tests.</u> Conformance examination and tests are specified in the requirements/cross reference matrix Table I and 4.4.1.1 through 4.4.1.83. Sampling shall be in accordance with MIL-STD-1916 unless otherwise specified herein. (See 6.5).

4.4.1 Classification of characteristics

a. <u>Sampling requirements</u>. Inspection sampling requirements for Critical, Major and Minor characteristics are defined in MIL-STD-1916. Unless specified otherwise, Inspection Level IV shall be used for all characteristics defined as Majors and Inspection Level II for all Minor characteristics; Critical characteristics shall be addressed in accordance with MIL-STD-1916. Conformance inspection of any of the critical defects listed in paragraphs 4.4.1.1 to 4.4.1.83 shall apply 100% plus VL-VII sampling to verify the performance of the screening operation.

b. <u>Conformance inspection</u>. Conformance inspection shall be performed in accordance with 4.4.1.1 to 4.4.1.83.

c. If any sample fails to comply with applicable requirement it shall be rejected.

d. In Table I, Section 3.22 shall comply with section 4.4.1.5, 4.4.1.11 to 4.4.1.14, 4.4.1.16 to 4.4.1.17, 4.4.1.22 to 4.4.1.25, 4.4.1.28 to 4.4.1.31, 4.4.1.34 to 4.4.1.37, 4.4.1.40, and 4.4.1.41.

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.1	Pin, Firing	sheet 1 of	1	9258619
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258618 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Diameter of shaft and profile of point	Level IV	3.3	Gage
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.2	Firing Pin Assembly	sheet 1 of 1		9258618
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294606 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101	Pull Test	(80)	3.3	4.5.3
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () - Quantity	,			

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Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.3	Pin, Firing	sheet 1 of	1	9333937
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294606 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101 102 103	Diameter of shaft and profile of point Unit weight, max Pull test	Level IV Level IV (80)	3.3 3.3 3.3	Gage Gage 4.5.3
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () - Quantity				1

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.4	Support, Firing Pin	sheet 1 of	1	9258614
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294606 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Load test	(80)	3.3	4.5.4
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () - Quantity				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.5	Housing, Detonator	sheet 1 of	9258617	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294606 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Depth of detonator cavity	Level IV	3.3	Gage
102	Shrinkage defects, unfilled or	note 1	3.3	Visual
	incomplete			
103	Presence of flash or gates	note 1	3.5	Visual
Minor				
201	True position of detonator cavity With	Level II	3.3	Gage
	outside diameter			
202	Cavity identification missing or	note 1	3.3	Visual
	improper			
203	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual
IOTES:				
Note 1. This	inspection applies only when molded, plastic cor (3) consecutive samples from each mold cavity.			

from beginning and end of each production run (See 4.5.28).

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.6	Firing Pin and Housing Assembly	sheet 1 of	1	9294606
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258613 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101 102 103 104	Load test Inward buckling of firing pin tube Distance from bottom detonator cavity to firing pin point Outside diameter, max	Level IV Level IV 100% Level IV	3.3 3.3 3.3 3.3	4.5.20 Visual Gage Gage
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.7	Firing Pin Housing and Detonator	sheet 1 of	9258613	
	Assembly			
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Detonator inverted or missing prior to application of seal tape	100%	3.3	Gage
102	Overall length, max	Level IV	3.3	Gage
	Firing Pin Housing and Detonator Assembly Proper	100%	3.3	X-ray/4.5.36
	Detonator Deterioration	/1	3.30	4.5.40
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
IOTES:			1	
1. Detonato	r deterioration test is required if the criteria in sec	ction 3 30 is met		

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.8	Holder, Crossbar	sheet 1 of	1	9258624
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258622 INSPECTION METHOD REFERENCE
Critical	None defined			
- • -	Presence of four rain holes Presence of four dimples Presence of longitudinal separation	note 1 note 1 note 1	3.3 3.3 3.3	4.5.7 4.5.7 4.5.7
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: Note 1 Five ((5) parts per punch per day			

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.9	Cup, Booster	sheet 1 of	sheet 1 of 1	
CLASSIFICATION		CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Thickness of bottom of cup	Level IV	3.3	Gage
102	Depth of wrench holes	Level IV	3.3	Gage
103	Inside diameter of cup	Level IV	3.3	Gage
104	Depth of cup	Level IV	3.3	Gage
105	Thread length, min	Level IV	3.3	Gage
106	Pitch diameter of thread	Level IV	3.3	Gage
107	Major diameter of thread	Level IV	3.3	Gage
Minor				
201	Location of wrench holes	Level II	3.3	Gage
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				
NUTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.10	Interrupter	sheet 1 of 1		9258629
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258625 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101	Large diameter, min	Level IV	3.3	Gage
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				1

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.11	Sleeve, Setting (die check)	sheet 1 of	2	9258628
		CONFORMANCE	REQUIREMENT	NEXT HIGHER ASSEMBLY 9258625
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Body diameter, min	note 1	3.3	4.5.23
102	Interrupter diameter, max.	note 1	3.3	4.5.23
103	O-ring diameter, min	note 1	3.3	4.5.23
104	True position of small slot with	note 1	3.3	4.5.23
	retainer seating diameter			
105	True position of large slot with retainer	note 1	3.3	4.5.23
	seating diameter			
106	True position of screwdriver slot with	note 1	3.3	4.5.23
	retainer seating diameter			
107	Interrupter diameter, min	note 1	3.3	4.5.23
108	Width of screwdriver slot	note 1	3.3	4.5.23
109	Radial length of stop	note 1	3.3	4.5.23
110	Location of stop	note 1	3.3	4.5.23
111	Large outside diameter	note 1	3.3	4.5.23
112	Length of O-ring diameter	note 1	3.3	4.5.23
otes: Iote 1 Three	(3) parts per cavity.			
	(5) parts per cavity.			

4.4.1.11	Sleeve, Setting (die			
	check)	sheet 2 of 2		9258628
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258625 INSPECTION METHOD REFEREN
Major				
113	True position of large outside diameter with body diameter	note 1	3.3	4.5.23
114	Distance from retainer to top of outside diameter	note 1	3.3	4.5.23
115	True position of O-ring diameter with body diameter	note 1	3.3	4.5.23
116	Depth of retainer seating diameter	note 1	3.3	4.5.23
117	Length of large outside diameter	note 1	3.3	4.5.23
118	Retainer seating diameter	note 1	3.3	4.5.23
<u>Minor</u>				
201	Depth of small slot	note 1	3.3	4.5.23
202	Depth of large slot	note 1	3.3	4.5.23
203	Depth of interrupter cavity	note 1	3.3	4.5.23
204	Width of large slot	note 1	3.3	4.5.23
205	Width of small slot	note 1	3.3	4.5.23
206	Thickness of stop	note 1	3.3	4.5.23
207	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.12	Sleeve, Setting	SHEI	ет 1 оf 1	9258628
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258625 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Body diameter, min	note 1	3.3	4.5.27
102	Interrupter diameter, max.	note 1	3.3	4.5.27
103	O-ring diameter	note 1	3.3	4.5.27
104	Retainer seating diameter	note 1	3.3	4.5.27
105	Length of large outside diameter	note 1	3.3	4.5.27
Minor				
201	Width of large slot	note 1	3.3	4.5.27
202	Width of small slot	note 1	3.3	4.5.27
203	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual
NOTES: Note 1. Three	e (3) parts per 50,000 pieces per cavity. Sample :	size increases for	l larger productio	n run (see 4.5.34)

PARAGRAPH	TITLE			DRAWING NUMBER	
4.4.1.13	Retainer Interrupter (die check)	sheet 1 of 2		9258626	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 925862 INSPECTION METHOD REFERENCE	
Critical	None defined			REPEREINCE	
Major					
101	Width of large tab	note 1	3.3	4.5.23	
102	Width of small tab	note 1	3.3	4.5.23	
103	True position of small tab with body diameter	note 1	3.3	4.5.23	
104	True position of large tab with body diameter	note 1	3.3	4.5.23	
105	Interrupter diameter	note 1	3.3	4.5.23	
106	Depth of smallest inside diameter, min	note 1	3.3	4.5.23	
107	Body diameter	note 1	3.3	4.5.23	
108	Distance from bottom to top of body diameter	note 1	3.3	4.5.23	
Minor					
201	Smallest inside diameter	note 1	3.3	4.5.23	
202	Depth of interrupter diameter	note 1	3.3	4.5.23	
203	True position of interrupter diameter with body diameter	note 1	3.3	4.5.23	

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.13	Retainer Interrupter (die	SHEE	ет 2 оғ 2	9258626
	check)			
				NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	9258625
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
Minor				
204	Diameter over tabs	note 1	3.3	4.5.23
-				
205	Thickness of large tab	note 1	3.3	4.5.23
206	Thickness of base	note 1	3.3	4.5.23
207	Evidence of poor	Level II	3.22 & 3.29	Visual
	workmanship			
	-			
NOTES:		1	1	
Note 1. Three (3) p	parts per cavity.			

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.14	Retainer Interrupter	SHE	925862	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 925862 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Interrupter diameter	note 1	3.3	4.5.27
101	Depth of smallest inside	note 1	3.3	4.5.27
102	diameter, min Distance from bottom to top of body diameter	note 1	3.3	4.5.27
<u>Minor</u> 201 202	Thickness of base Evidence of poor workmanship	note 1 Level II	3.3 3.22 & 3.29	4.5.27 Visual

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.15	Setting Sleeve Assembly	SHEE	т 1 оғ 1	9258625
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294595 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Retainer inverted	100%	3.3	Gage
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				1

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.16	Plate, Gear, Lower (die check)	sheet 1 of	2	9258651
				NEXT HIGHER ASSEMBLY 9258650
LASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	9238030 INSPECTION METHOD
Critical	None defined			REFERENCE
<u>Critical</u>	ivone defined			
<u>Major</u>				
<u>101</u>	Diameter of gear and pinion hole	note 1	3.3	4.5.24
101	True position of gear and pinion hole	note 1	3.3	4.5.24
102	Diameter of escape wheel and pinion	note 1	3.3	4.5.24
105	hole	note 1	5.5	4.3.24
104	True position of escape wheel and	note 1	3.3	4.5.24
104	pinion hole		5.5	
105	Diameter of pallet shaft hole	note 1	3.3	4.5.24
105	True position of pallet shaft hole	note 1	3.3	4.5.24
100	Diameter of rotor hole	note 1	3.3	4.5.24
107	True position of rotor hole	note 1	3.3	4.5.24
109	Diameter of lock pin hole	note 1	3.3	4.5.24
110	True position of lock pin hole	note 1	3.3	4.5.24
111	Flatness	note 1	3.3	4.5.24
112	Diameter of module pin holes	note 1	3.3	4.5.24
113	True position of module pin holes	note 1	3.3	4.5.24
	(three)			
114	Radius of locating notch	note 1	3.3	4.5.24
115	True position of locating notch	note 1	3.3	4.5.24
116	Diameter of assembly lug	note 1	3.3	4.5.24
117	True position of assembly lug	note 1	3.3	4.5.24
118	Die breakage in gear and pinion hole,	note 1	3.3	4.5.24
	max			
OTES:	(5) parts per punch.			

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	TITLE			DRAWING NUMBER
4.4.1.16	Plate, Gear, Lower (die check)	sheet 2 of	2	9258651
	(continuation sheet)			
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258650 INSPECTION METHOD REFERENCE
Major				
119.	Die breakage in escape wheel and	note 1	3.3	4.5.24
	pinion hole, max Die breakage in rotor hole, max	note 1	3.3	4.5.24
Minor				
201	Thickness	note 1	3.3	4.5.24
202	Outside diameter	note 1	3.3	4.5.24
203	Diameter of lead hole, min	note 1	3.3	4.5.24
204	True position of lead hole	note 1	3.3	4.5.24
	Diameter of setback pin boss hole, min	note 1	3.3	4.5.24
206	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.17	Plate, Gear, Lower	sheet 1 of	1	9258651
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258650 INSPECTION METHOD REFERENCE
Critical	None defined			
Moior				
<u>Major</u> 101	Diameter of gear and pinion hole	note 1	3.3	4.5.7
101	Diameter of escape wheel and pinion	note 1	3.3	4.5.7
	hole			
	Diameter of rotor hole	note 1		4.5.7
	Flatness	note 1		4.5.7
105	Lubricant missing	Level IV note	3.3	Visual
		2		
Minor				
201	Thickness	note 1	3.3	4.5.7
202	Outside diameter	note 1	3.3	4.5.7
203	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual

Note 2. Inspection sample shall be taken from the production lot.

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.18	Shaft, Pallet	sheet 1 of	1	9258652
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258650 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Diameter of smallest diameter	Level IV	3.3	Gage
102	Runout of smallest diameter	Level IV	3.3	Gage
103	Lubricant missing	Level IV	3.3	Visual
Minor				
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
201	Evidence of poor workinaliship		3.27	v isual
NOTES:				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.19	Lower Plate and Shaft Assembly	sheet 1 of	1	9258650
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
Critical	None defined			
-	Pushout test Distance from plate to bearing surface	Level IV Level IV	3.3 3.3	4.5.16 Gage
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:	· · · · · · · · · · · · · · · · · · ·			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.20	Pin, Lock Rotor	sheet 1 of	1	9343014
classification <u>Critical</u>	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
102	Length of locking diameter, min Cutoff nib present on locking diameter end	Level IV Level IV	3.3 3.3	Gage Visual
	Lubricant missing	Level IV	3.3	Visual
	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.21	Spring, Pin Lock	sheet 1 of	1	9258647
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
	Length under min load Length under max load	Level IV Level IV	3.3 3.3	Gage Gage
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:	•		-	•

PARAGRAPH	Conformance inspection by class			DRAWING NUMBER
4.4.1.22	Plate, Bottom (die check)	sheet 1 of	3	9258644
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				4.5.00
101	True position of lead hole	note 1	3.3	4.5.23
	Diameter of large setback pin hole.	note 1	3.3	4.5.23
103	True position of large setback pin hole.	note 1	3.3	4.5.23
104	Diameter of small setback pin hole.	note 1	3.3	4.5.23
105	True position of small setback pin hole	note 1	3.3	4.5.23
106	Diameter of locking pin hole	note 1	3.3	4.5.23
107	True position of locking pin hole	note 1	3.3	4.5.23
108	Angle of top of setback pin hole	note 1	3.3	4.5.23
	Depth of large setback pin hole	note 1	3.3	4.5.23
110	Surface porosity	note 1	3.23	4.5.23 and 4.5.25
NOTES:	· ·		•	
Note 1. Three	(3) parts per cavity.			

Conformance inspection by classification of characteristics

		DRAWING NUMBER
ET 2 OF	3	9258644
ORMANCE LITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
ote 1	3.3	4.5.23
ote 1	3.3	4.5.23
ote	e 1	e 1 3.3

Conformance ins	pection by	y classification of characteristics	

	TITLE			DRAWING NUMBER
4.4.1.22	Plate, Bottom (continuation sheet)	sheet 3 of	3	9258644
				NEXT HIGHER ASSEMBLY 9258643
LASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	9238043 INSPECTION METHOD
		CRITERIA	1740-16KALI	REFERENCE
<u>Minor</u>				
	Distance from bottom plate to bottom	note 1	3.3	4.5.23
	of setback pin and lead holes			
202	Thickness from top plate to bottom of	note 1	3.3	4.5.23
	plate			
203	Thickness of thick portion of plate	note 1	3.3	4.5.23
204	Thickness of thin portion of plate	note 1	3.3	4.5.23
205	Depth of rotor hole	note 1	3.3	4.5.23
206	Diameter of top of setback pin boss	note 1	3.3	4.5.23
	True position of top of setback pin boss	note 1	3.3	4.5.23
	True position of outside diameter	note 1	3.3	4.5.23
	Diameter of two assembly holes	note 1	3.3	4.5.23
	True position of assembly holes.	note 1	3.3	4.5.23
211	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual
	1 1			
OTES:			1	1

Conformance inspection by classification of characteristics

	TITLE			DRAWING NUMBER
4.4.1.23	Plate, Bottom	sheet 1 of	1	9258644
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
102 103 104	Diameter of large setback pin hole Depth of setback pin hole Surface porosity Diameter of lead hole Lubricant missing	note 1 note 1 note 1 note 1 Level IV note 2	3.3 3.3 3.23 3.3 3.3 3.3	4.5.27 4.5.27 4.5.25 & 4.5.27 4.5.27 Visual
Minor				
201	Thickness from top of plate to bottom of plate.	note 1	3.3	4.5.27
202	Thickness of thin portion of plate	note 1	3.3	4.5.27
	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual

Note 1. Three (3) parts per 50,000 pieces per cavity. Sample size increases for larger production (see 4.5.34) Note 2. Inspection sample shall be taken from a production lot.

.4.1.24 SSIFICATION	Spacer, Plate, Gear (die check)	sheet 1 of	-	9258646
	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
	None defined			
<u>Major</u>				
	Depth of lead hole	note 1	3.3	4.5.23
	True position of lead hole	note 1	3.3	4.5.23
	Diameter of locking pin hole	note 1	3.3	4.5.23
104	True position of locking pin hole	note 1	3.3	4.5.23
105	True position of spin shaft holes	note 1	3.3	4.5.23
	Diameter of spin detent spring holes	note 1	3.3	4.5.23
	True position of spin detent spring holes.	note 1	3.3	4.5.23
108	Profile of rotor lug slot	note 1	3.3	4.5.23
	Profile of spin detent area	note 1	3.3	4.5.23
	Profile of rotor cavity	note 1	3.3	4.5.23
	Profile of pallet shaft and gear area	note 1	3.3	4.5.23
112	Surface porosity	note 1	3.24	4.5.23 & 4.5.25

PARAGRAPH			•	DRAWING NUMBER
4.4.1.24	Spacer, Plate, Gear (die check)	SHEET 2 OF	3	9258646
	(continuation sheet)			
				NEXT HIGHER ASSEMBLY 9258643
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NSPECTION METHOD REFERENCE
<u>Major</u>				
-	Outside diameter	note 1	3.3	4.5.23
114	Radius of locating notch	note 1	3.3	4.5.23
115	True position of locating notch	note 1	3.3	4.5.23
116	Diameter of tab	note 1	3.3	4.5.23
117	True position of tab	note 1	3.3	4.5.23
118	Thickness of bottom	note 1	3.3	4.5.23
119	Diameter of module holes (four)	note 1	3.3	4.5.23
120	True position of module holes (three)	note 1	3.3	4.5.23
121	Diameter of upper plate tab hole	note 1	3.3	4.5.23
122	True position of upper plate tab hole	note 1	3.3	4.5.23
123	Depth of upper plate tab hole, min.	note 1	3.3	4.5.23
124	Profile of gear slot	note 1	3.3	4.5.23
125	Diameter of lead hole	note 1	3.3	4.5.23
126	Diameter of spin shaft holes	note 1	3.3	4.5.23
127	Width of spin tabs slots	note 1	3.3	4.5.23
128	Location of spin tab slots	note 1	3.3	4.5.23
NOTES: Note 1. Three	e (3) parts per cavity.			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.24	Spacer, Plate, Gear (die check)	SHEET 3 OF	3	9258646
	(continuation sheet)			
LASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
Minor				
201	Thickness	note 1	3.3	4.5.23
202	True position of outside diameter	note 1	3.3	4.5.23
203	Diameter of rotor hole	note 1	3.3	4.5.23
204	True position of rotor hole	note 1	3.3	4.5.23
205	Diameter of pallet shaft hole	note 1	3.3	4.5.23
206	True position of pallet shaft hole	note 1	3.3	4.5.23
207	Depth of spin shaft holes	note 1	3.3	4.5.23
208	Any chamfer missing	note 1	3.3	4.5.23
209	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual

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PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.25	Spacer, Plate, Gear	sheet 1 of	1	9258646
classification Critical	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258643 INSPECTION METHOD REFERENCE
102	Diameter of locking pin hole Surface porosity Diameter of spin shaft holes Thickness of bottom Width of spin tab slots	note 1 note 1 note 1 note 1 note 1	3.24 3.3 3.3	4.5.27 4.5.25 & 4.5.27 4.5.27 4.5.27 4.5.27
Minor 201	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual

Note 1. Three (3) parts per 50,000 pieces per cavity. Sample size increases for larger production (see 4.5.34).

Conformance inspection by classification of characteristics

PARAGRAH	TITLE			DRAWING NUMBER
4.4.1.26	Plate and Spacer Assembly	sheet 1 of	1	9258643
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
	Presence of lock pin disk stake	Level IV	3.3	Visual
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.27	Shaft, Rotor	sheet 1 of 1		9258641
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
	Diameter of bearing diameters Lubricant missing	Level IV Level IV	3.3 3.3	Gage Visual
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

ASSIFICATION <u>Critical</u> None <u>Major</u> 101 Weig 102 Angu surfac 103 Diam 104 True 105 Diam	neter of locking pin hole position of locking pin hole	SHEET 1 OF CONFORMANCE CRITERIA note 1 note 1 note 1 note 1	3 REQUIREMENT PARAGRAPH 3.3 3.3 3.3	9258640 NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE 4.5.23 4.5.23 4.5.23
<u>Critical</u> None <u>Major</u> 101 Weig 102 Angu surfac 103 Diam 104 True 105 Diam	e defined ght, min. ularity of spin detent holding aces. neter of locking pin hole e position of locking pin hole	note 1 note 1 note 1	3.3 3.3 3.3	9258639 INSPECTION METHOD REFERENCE 4.5.23 4.5.23
<u>Major</u> 101 Weig 102 Angu surfac 103 Diam 104 True 105 Diam	e defined ght, min. ularity of spin detent holding aces. neter of locking pin hole e position of locking pin hole	note 1 note 1 note 1	3.3 3.3 3.3	INSPECTION METHOD REFERENCE 4.5.23 4.5.23
<u>Major</u> 101 Weig 102 Angu surfac 103 Diam 104 True 105 Diam	ght, min. ularity of spin detent holding aces. neter of locking pin hole position of locking pin hole	note 1 note 1	3.3 3.3	4.5.23
101 Weig 102 Angu surfac 103 Diam 104 True 105 Diam	ularity of spin detent holding aces. neter of locking pin hole position of locking pin hole	note 1 note 1	3.3 3.3	4.5.23
102 Angu surfac 103 Diam 104 True 105 Diam	ularity of spin detent holding aces. neter of locking pin hole position of locking pin hole	note 1 note 1	3.3 3.3	4.5.23
surfac 103 Diam 104 True 105 Diam	nces. neter of locking pin hole position of locking pin hole	note 1	3.3	
104 True 105 Diam	position of locking pin hole			4 5 23
105 Diam		note 1		T.J.4J
			3.3	4.5.23
106 True	neter of setback pin hole	note 1	3.3	4.5.23
	position of setback pin hole	note 1	3.3	4.5.23
107 Finisl	sh on bearing surface	note 1	3.3	4.5.23
108 Surfa	ace porosity	note 1	3.25	4.5.23 & 4.5.25
109 Diam	neter of rotor shaft hole	note 1	3.3	4.5.23
110 True	position of rotor gear lugs	note 1	3.3	4.5.23
111 Diam	neter of large detonator hole, min	note 1	3.3	4.5.23
112 True	position of large detonator hole	note 1	3.3	4.5.23
113 Deptl	th of detonator hole	note 1	3.3	4.5.23

Conformance inspection by classification of characteristics

	TITLE			DRAWING NUMBER
	Body, Rotor (die check) (continuation sheet)	SHEET 2 OF	3	9258640
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE
<u>Major</u>				
-	Protrusion of rotor gear lugs, min	note 1	3.3	4.5.23
115	Thickness of rotor at detonator hole	note 1	3.3	4.5.23
	Thickness from bearing surface to bottom of flange	note 1	3.3	4.5.23
117	Thickness of rotor at flange	note 1	3.3	4.5.23
118	Outside diameter	note 1	3.3	4.5.23
119	True position of outside diameter	note 1	3.3	4.5.23
120	Profile of locking pin notch	note 1	3.3	4.5.23
<u>Minor</u>				
201	Diameter of rotor gear tab hole	note 1	3.3	4.5.23
	Depth of rotor gear tab hole	note 1	3.3	4.5.23
203	Diameter of rotor gear lugs	note 1	3.3	4.5.23
	Diameter of large detonator hole, max.	note 1	3.3	4.5.23

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.28	Body, Rotor (Die check) (continuation sheet)	sheet 3 of	3	9258640
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE
Minor				
205	Diameter of small detonator hole	note 1	3.3	4.5.23
206	Protrusion of rotor gear lugs, max.	note 1	3.3	4.5.23
207	Radius from center to detonator boss	note 1	3.3	4.5.23
208	Profile of large irregular slot	note 1	3.3	4.5.23
209	Diameter of bearing surface	note 1	3.3	4.5.23
210	Profile of flange	note 1	3.3	4.5.23
211	Evidence of poor workmanship	Level II	3.22 & 3.29	Visual
NOTES: Note 1. Thre	e (3) parts per cavity.			

Conformance inspection by classification of characteristics

4.4.1.29	Body, Rotor	sheet 1 of 1		9258640
		CONFORMANCE	REQUIREMENT	NEXT HIGHER ASSEMBLY 9258639
LASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
Critical	None defined			
Major				
101	Weight, min.	note 1	3.3	4.5.27
102	Surface porosity	note 1	3.25	4.5.25 & 4.5.27
103	Diameter of rotor shaft hole	note 1	3.3	4.5.27
104	Thickness of rotor at detonator hole	note 1	3.3	4.5.27
105	Thickness of rotor at flange	note 1	3.3	4.5.27
106	Lubricant missing	Level IV note 2	3.3	Visual
Minor				
201	Evidence of poor workmanship	Level II	3.22 &	Visual
			3.29	
OTES:	·			

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.30	Gear, Rotor (die check)	sheet 1 of	2	9258642
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE
Major				
	Tooth to tooth composite error	note 1	3.3	4.5.24
102	Diameter of rotor shaft hole	note 1	3.3	4.5.24
103	Diameter of assembly tab	note 1	3.3	4.5.24
104	True position of assembly tab	note 1	3.3	4.5.24
105	Diameter of small rotor lug hole	note 1	3.3	4.5.24
106	True position of small rotor lug holes	note 1	3.3	4.5.24
107	Profile around rotor shaft hole	note 1	3.3	4.5.24
108	Thickness	note 1	3.3	4.5.24
NOTES:				

Conformance ins	pection b	y classification	of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.30	Gear, Rotor (die check) continuation	sheet 2 of	2	9258642
	sheet			
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD
Minor				REFERENCE
	Diameter of large rotor lug hole	note 1	3.3	4.5.24
202	True position of large rotor lug holes	note 1	3.3	4.5.24
203	Diameter of setback pin hole	note 1	3.3	4.5.24
204	True position of setback pin hole	note 1	3.3	4.5.24
205	Profile of rotor flange notch	note 1	3.3	4.5.24
206	Large radius	note 1	3.3	4.5.24
207	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.31	Gear, Rotor	sheet 1 of	1	9258642
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258639 INSPECTION METHOD REFERENCE
<u>Major</u>				
101	Diameter of rotor shaft hole	note 1	3.3	4.5.7
102	Tooth to tooth composite error	note 1	3.3	4.5.7
103	Thickness	note 1	3.3	4.5.7
104	Lubricant missing	Level IV note 2	3.3	Visual
Minor 201	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual

Note 2. Inspection sample shall be taken from a production lot.

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.32	Rotor Assembly	sheet 1 of	1	9258639
LASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD
				REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Detonator inverted or missing	100%	3.3	Gage or Visual
102	Distance between bearing surface,	Level IV	3.3	Gage
	max			_
103	Detonator push out test	Level IV	3.3	4.5.11
104	Sensitive end not flush or below flush	Level IV	3.3	Gage or Visual
105	Rotor gear stake incomplete or missing	Level IV	3.3	Visual
106	Detonator Deterioration	/1	3.30	4.5.40
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
	r r r			
OTES:				1

Conformance inspection by classification of characteristics

Conformance inspection by classification of characteristics

	TITLE			DRAWING NUMBER
4.4.1.33	Spinlock	sheet 1 of	1	12973181
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
Major				
101	Weight	(80)	3.3	4.5.26
102	Load test	(80)	3.3	4.5.22
103	Profile of holding surfaces	Level IV	3.3	Gage
104	Lubricant missing	Level IV	3.3	Visual
105	Length of malassembly tab (long)	Level V	3.3	Gage
106	Length of malassembly tab (short)	Level V	3.3	Gage
<u>Minor</u>				
201	Evidence of poor workmanship	Level II	3.29	Visual

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.34	Gear and Pinion Assembly (die check)	sheet 1 of	2	9258653
LASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
-	Diameter of small diameters	note 1	3.3	4.5.23
102	Tooth to tooth composite error of large gear	note 1	3.3	4.5.23
	Tooth to tooth composite error of pinion	note 1	3.3	4.5.23
104	Distance between bearing surfaces	note 1	3.3	4.5.23
	Surface porosity	note 1	3.26	4.5.23 & 4.5.25
106	Gate above flush, max.	note 1	3.3	4.5.23
107	Flash in chamfer areas (not firm)	note 1	3.3	4.5.23
108	Thickness of gears	note 1	3.3	4.5.23
	Distance from lower bearing surface to top of pinion.	note 1	3.3	4.5.23
110	Distance from hub diameter to end	note 1	3.3	4.5.23

Conformance inspection by classification of characteristics

paragraph 4.4.1.34	Gear and Pinion Assembly (die check) (continuation sheet)	sheet 2 c		drawing number 9258653
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
202 203 204	Hub diameter True position of hub diameter Bearing diameter True position of bearing diameter Evidence of poor workmanship	note 1 note 1 note 1 note 1 note 1	3.2 3.2	4.5.23 4.5.23 4.5.23 4.5.23 Visual
NOTES: Note 1. Thre	e (3) parts per cavity.		1	

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.35	Gear and Pinion Assembly	sheet 1 c	of 1	9258653
				NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	9294833
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Diameter of small diameters	note 1	3.3	4.5.27
102	Tooth to tooth composite error of	note 1	3.3	4.5.27
	large gear			
103	Tooth to tooth composite error of	note 1	3.3	4.5.27
	pinion.			
104	Surface porosity	note 1	3.26	4.5.25 & 4.5.27
105	Gate above flush, max.	note 1	3.3	4.5.27
106	Flash in chamfer areas (not firm)	note 1	3.3	4.5.27
107	Thickness of gear	note 1	3.3	4.5.27
108	Lubricant missing	Level IV	3.3	Visual
		note 2		
Minor				
	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual
201	Evidence of poor workinaliship	note 1	5.22 & 5.27	V ISUUI
NOTES:				

Note 1. Three (3) parts per 50,000 pieces per cavity. Sample size increases for larger production runs (see 4.5.34) Note 2. Inspection sample shall be taken from a production lot.

ARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.36	Escape Wheel and Pinion	sheet 1 of	2	9258655
	Assembly (die check)			
	•			NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	9294833
Critical	EXAMINATION OR TEST None defined	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
Major				
	Diameter of small diameters	note 1	3.3	4.5.23
102	Tooth to tooth composite error on	note 1	3.3	4.5.23
	pinion			
103	Distance between bearing surfaces	note 1	3.3	4.5.23
104	Surface porosity	note 1	3.26	4.5.23 & 4.5.25
105	Gate above flush, max.	note 1	3.3	4.5.23
106	Flash in chamfer areas (not firm)	note 1	3.3	4.5.23
107	Thickness of escape wheel	note 1	3.3	4.5.23
108	Distance from bearing surface to	note 1	3.3	4.5.23
	end of pinion			
109	Distance from bearing surface to	note 1	3.3	4.5.23
	end			
OTES:				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.36	Escape Wheel and Pinion Assembly	sheet 2 of 2		9258655
	(die check) (continuation sheet)			
		CONFORMANCE	REQUIREMENT	NEXT HIGHER ASSEMBLY 9294833
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
2.6				
<u>Minor</u>				
201	Small bearing surface diameter	note 1	3.3	4.5.23
202	True position of small bearing surface	note 1	3.3	4.5.23
	diameter			
203	Large bearing surface diameter	note 1	3.3	4.5.23
204	True position of large bearing surface diameter	note 1	3.3	4.5.23
205	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual
NOTES:				
	e (3) parts per cavity.			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.37	Escape Wheel and Pinion	sheet 1 of	1	9258655
	Assembly			
				NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	9294833 INSPECTION METHOD REFERENCE
	None defined	Chillen		
<u>Major</u>				
101	Diameter of small diameters	note 1	3.3	4.5.27
102	Tooth to tooth composite error on	note 1	3.3	4.5.27
	pinion			
103	Surface porosity	note 1	3.26	4.5.25 & 4.5.27
104	Gate above flush, max	note 1	3.3	4.5.27
105	Flash in chamfer areas (not firm)	note 1	3.3	4.5.27
106	Thickness of escape wheel	note 1	3.3	4.5.27
107	Lubricant missing	Level IV	3.3	Visual
		note 2		
Minor				
<u>201</u>	Evidence of noon workmonship	note 1	3.22 &	Visual
201	Evidence of poor workmanship	note 1		v Isual
			3.29	

Note 1. Inree (3) parts per 50,000 pieces per cavity. Sample size increases for larger production run (Note 2. Inspection samples shall be taken from production lot

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.38	Pallet (die check)	sheet 1 of	1	11720309
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Total profile	note 1	3.3	4.5.24
102	Diameter of hole	note 1	3.3	4.5.24
103	Thickness	note 1	3.3	4.5.24
104	Excessive die breakage in hole	note 1	3.3	4.5.7 & 4.5.24
105	Excessive die breakage on engagement	note 1	3.3	4.5.24
	surfaces			
Minor				
201	Evidence of poor workmanship	note 1	3.29	Visual
NOTES:	-			
Note I Five (5) parts per punch.			

Conformance inspection by classification of characteristics

	TITLE			DRAWING NUMBER
4.4.1.39	Pallet	sheet 1 of	1	11720309
				NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	9294833
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
Major				
	Profile of engagement surfaces (2	note 1	3.3	4.5.7
	places)			
102	Diameter of hole	note 1	3.3	4.5.7
103	Thickness	note 1	3.3	4.5.7
104	Lubricant missing	Level IV	3.3	Visual
		note 2		
Minor				
	Evidence of poor workmanship	note 1	3.29	Visual

Note 1. Five (5) parts per day per punch. Note 2. Inspection sample shall be taken from a production lot.

LASSIFICATION EXAMINATION OR TEST CONFORMANCE REQUIREMENT PARAGRAPH NEXT HIGHER ASSEMBLY PARAGRAPH PARAGRAPH NEXT HIGHER ASSEMBLY PARAGRAPH REFERENCE	4 4 1 40	Dista Casa Uman (dia shash)	1	2	0259622
LASSIFICATIONEXAMINATION OR TESTCONFORMANCE CRITERIAREQUIREMENT PARAGRAPH9294833 NEPECTION METHOD REFERENCECriticalNone defined	4.4.1.40	Plate, Gear, Opper (the check)	SHEET I OF	2	
LASSIFICATIONEXAMINATION OR TESTCRITERIAPARAGRAPHINSPECTION METHOD REFERENCECriticalNone definednote 13.34.5.24101Diameter of gear and pinion holenote 13.34.5.24102True position of gear and pinion holenote 13.34.5.24103Diameter of escape wheel and pinion holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24			CONFORMANCE	PEOLIDEMENT	
CriticalNone definedMajor101Diameter of gear and pinion holenote 13.34.5.24102True position of gear and pinion holenote 13.34.5.24103Diameter of escape wheel and pinion holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24	LASSIFICATION	EXAMINATION OR TEST			INSPECTION METHOD
101Diameter of gear and pinion holenote 13.34.5.24102True position of gear and pinion holenote 13.34.5.24103Diameter of escape wheel and pinion holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	<u>Critical</u>	None defined			
101Diameter of gear and pinion holenote 13.34.5.24102True position of gear and pinion holenote 13.34.5.24103Diameter of escape wheel and pinion holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	<u>Major</u>				
103Diameter of escape wheel and pinion holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24		Diameter of gear and pinion hole	note 1	3.3	4.5.24
holenote 13.34.5.24104True position of escape wheel and pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pinnote 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	102	True position of gear and pinion hole	note 1	3.3	4.5.24
pinion holenote 13.34.5.24105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pinnote 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	103	1 1	note 1	3.3	4.5.24
105Diameter of pallet shaft holenote 13.34.5.24106True position of pallet shaft holenote 13.34.5.24107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pinnote 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	104	1 1	note 1	3.3	4.5.24
107Diameter of rotor holenote 13.34.5.24108True position of rotor holenote 1note 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pinnote 13.34.5.24111True position of module pinnote 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	105	Diameter of pallet shaft hole	note 1	3.3	4.5.24
108True position of rotor holenote 13.34.5.24109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pinnote 13.34.5.24111True position of module pinnote 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	106	True position of pallet shaft hole	note 1	3.3	4.5.24
109Flatnessnote 13.34.5.24110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	107	Diameter of rotor hole	note 1	3.3	4.5.24
110Diameter of module pin holes (three)note 13.34.5.24111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	108	True position of rotor hole	note 1	3.3	4.5.24
111True position of module pin holes(three)note 13.34.5.24112Radius of locating notchnote 13.34.5.24113True position of locating notchnote 13.34.5.24	109	Flatness	note 1	3.3	4.5.24
holes(three) 112 Radius of locating notch 113 True position of locating notch 114 note 1 115 note 1 115 note 1 116 note 1 117 note 1 118 note 1 118 note 1 119 note	110	Diameter of module pin holes (three)	note 1	3.3	4.5.24
113True position of locating notchnote 13.34.5.24	111	1 1	note 1	3.3	4.5.24
113True position of locating notchnote 13.34.5.24	112	Radius of locating notch	note 1	3.3	4.5.24
114Diameter of assembly lugnote 13.34.5.24	113		note 1	3.3	4.5.24
	114	Diameter of assembly lug	note 1	3.3	4.5.24

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.40	Plate, Gear, Upper (die check)	sheet 2 of 2		9258632
	(continuation sheet)			
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
<u>Major</u>				
115	True position of assembly lug	note 1	3.3	4.5.24
116	Die breakage in gear and pinion hole,	note 1	3.3	4.5.24
	max.			
117	Die breakage in escape wheel and	note 1	3.3	4.5.24
	pinion hole max			
118	Die breakage in rotor hole, max.	note 1	3.3	4.5.24
<u>Minor</u>		note 1	3.3	4.5.24
201	Thickness	note 1	3.3	4.5.24
202	Outside diameter	note 1	3.3	4.5.24
203	Diameter of flash-hole	note 1	3.3	4.5.24
204	True position of flash -hole	note 1	3.3	4.5.24
205	Profile of setting slot	note 1	3.3	4.5.24
206	Evidence of poor workmanship	note 1	3.22 & 3.29	Visual
NOTES: Note 1. Five (5) parts per punch.			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.41	Plate, Gear, Upper	sheet 1 of 1		9258632
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Diameter of gear and pinion hole	note 1	3.3	4.5.7
102	Diameter of escape wheel and pinion	note 1	3.3	4.5.7
	hole			
103	Diameter of rotor hole	note 1	3.3	4.5.7
104	Flatness	note 1	3.3	4.5.7
105	Lubricant missing	Level IV note 2	3.3	Visual
Minor				
201	Thickness	note 1	3.3	4.5.7
202	Outside diameter	note 1	3.3	4.5.7
203	Evidence of poor workmanship	note 1	3.22 &	Visual
			3.29	
	(5) parts per day per punch. ection sample shall be taken from a production lot.			

PARAGRAPH	Conformance inspection by class			DRAWING NUMBER
4.4.1.42	Safing and Arming Module Subassembly	SH	eet 1 of 1	9294833
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258630 INSPECTION METHOD REFERENCE
<u>Critical</u>				
1	Arming time, below 850ms	/3	3.3	4.5.13.2
2	Rotor not locked by the spin detents after non-arming test, spin lock	/3	3.3	4.5.14
Major				
101	Presence of spinlock springs	100%	3.3	Gage
102	Arming test	100%	3.3	4.5.13.1
103	Arming time	100%	3.3	4.5.13.2
104	Locking of rotor	100%	3.3	4.5.13.3
105	Lead assembly push out test	Level IV	3.3	4.5.12
106	Lead cup stake not flush or below flush	Level IV	3.3	Gage or Visual
107	Lead improperly assembled or missing	Level IV	3.3	Gage or Visual
108	Protrusion of pins	Level IV	3.3	Visual
109	Lubricant missing	Level IV	3.3	Visual
110	Outside diameter, max	Level IV	3.3	Gage
111	Height, max	Level IV	3.3	Gage
112	S&A arming test at 2500 ± 100 RPM cold (-45 F)	(20)	3.21	4.5.33
113	S&A arming test at 1700 ± 100 RPM hot (+145 F)	(20)	3.21	4.5.33
114	S&A arming test at 1700 ± 100 RPM ambient (+70 F)	(20)	3.21	4.5.33
115	S&A non-arming test at 1100 ± 50 RPM at ambient and hot.	/ <u>1</u>	3.21	4.5.14
116	S&A jolt and jumble test	(20), / <u>2</u>	3.18	4.5.1
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual

Conformance inspection by classification of characteristics

NOTES:

 $\frac{1}{2}$ Twenty samples each shall be used for arming and non-arming tests. See figure 1 for testing sequence. $\frac{1}{2}$ This test is waived if prime contractor makes full-up fuze; however, test is required if S&A purchased from sub-vendor. () Denotes sample size.

3 Conformance inspection of any of the critical defects listed above shall apply 100% plus VL-VII sampling to verify the performance of the screening operation in accordance with MIL-STD-1916

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.43	Spring, Pin Setback	sheet 1 of	1	9258636
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9258630 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Length under min. load	Level IV	3.3	Gage
102	Length under max. load	Level IV	3.3	Gage
Minor				
201	Ends not square	Level II	3.3	Visual
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:	·			•

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.44	Pin Setback	sheet 1 of	1	9258634
		CONFORMANCE	REQUIREMENT	NEXT HIGHER ASSEMBLY 9258630
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Load test	(80)	3.3	4.5.21
102	Weight	(80)	3.3	4.5.26
103	Diameter of small end	Level IV	3.3	Gage
104	Length of small diameter	Level IV	3.3	Gage
105	Radius of small diameter	Level IV	3.3	Gage
106	Radius of outside of large diameter (top	Level IV	3.3	Gage
	end)			
107	Radius of outside of large diameter	Level IV	3.3	Gage
	(bottom end)			
108	Large diameter	Level IV	3.3	Gage
109	Length of large diameter and ramp	Level IV	3.3	Gage
	angle			
110	Angle of ramp	Level IV	3.3	Gage
111	Lubricant missing	Level IV	3.3	Visual
Minor	, č			
201	Location of large diameter	Level II	3.3	Gage
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:			1	1
() - Quanti	ty			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.45	Safing and Arming Module Assembly	sheet 1	of 1	925863
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 928295 INSPECTION METHOD REFERENCE
Critical 1	Rotor not locked in unarmed position after non-arm test, setback pin	/1	3.3	4.5.15
<u>Major</u> 101	Push test on setback pin disk	Level IV	3.3	4.5.18
102	Setback pin freedom of movement test	100%	3.3	4.5.19
103	Setback pin disk and stakes not flush or below flush	Level IV	3.3	Gage or Visual
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual

/1 Conformance inspection of any of the critical defects listed above shall apply 100% plus VL-VII sampling to verify the performance of the screening operation in accordance with MIL-STD-1916

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PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.46	Retainer, Safing and Arming	sheet 1 of 1		9258620
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9282958 INSPECTION METHOD REFERENCE
Critical				
None Defined				
<u>Major</u>				
101	Pitch diameter of thread	Level IV	3.3	Gage
102	Major diameter of thread	Level IV	3.3	Gage
103	Height of spinlock slot	Level IV	3.3	Gage
104	Width of spinlock slot	Level IV	3.3	Gage
105	True position of spin lock slots	Level IV	3.3	Gage
106	Inside Diameter	Level IV	3.3	Gage
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				
INCTES.				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.47	Safing and Arming Module and Retainer	sheet 1	of 1	9282958
	Assembly			NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	0245221
Critical	None defined			
<u>Major</u> 101 102 103	Overall height, max S&A Transportation vibration test Spinlock freedom of movement	Level IV (20) 100%	3.19	Gage 4.5.2 4.5.39
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual

4.4.1.48	Body, Fuze	SHEET]	l of 2	9258609
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBL 9294595 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	True position of flash hole with delay module cavity	Level IV	3.3	Gag
102	Diameter of flash hole	Level IV	3.3	Gag
103	True position of firing pin housing and detonator cavity with delay module cavity	Level IV	3.3	Gag
104	Diameter of setting sleeve cavity, max.	Level IV	3.3	Gag
105	Pitch diameter of external thread	Level IV	3.3	Gag
106	Pitch diameter of S&A retainer thread	Level IV	3.3	Gag
107	Minor diameter of S&A retainer thread	Level IV	3.3	Gag
108	Diameter of delay module cavity	Level IV	3.3	Gag
109	Diameter of setting sleeve retaining ring groove	Level IV	3.3	Gag
110	Profile of ogive	Level IV	3.3	Gag
111	Length from nose to base of wrench slot flange	Level IV	3.3	Gag
TES:				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.48	Body, Fuze (continued)	sheet 2 of 2		925860
		CONFORMANCE	REQUIREMENT	NEXT HIGHER ASSEMBLY 929459
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Major</u>				
112	Width of wrench slots	Level IV	3.3	Gage
113	Outside diameter at base,	Level IV	3.3	Gage
	max.			
114	SQ and/or delay	Level IV	3.3	Visual
	nomenclature missing or			
	improperly located			
115	Length from flange to bottom	Level IV	3.3	Gage
	of nose cap groove			
116	Diameter of nose cap groove	Level IV	3.3	Gage
117	Undercut for nose cap	Level IV	3.3	Gage
<u>Minor</u>				
201	True position of outside	Level II	3.3	Gage
	diameter at base with major			e
	diameter of external thread			
202	Depth of automation wrench	Level II	3.3	Gage
	hole, max. (as applicable)			-
203	Distance from base of fuze to	Level II	3.3	Gage
	base of wrench slot flange,			_
	min.			
204	Evidence of poor	Level II	3.29	Visual
	workmanship			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
	Fuze Body and Setting Sleeve Assembly	sheet 1	of 1	9294595
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Interrupter non-arming test	100%	3.3	4.5.10
102	Interrupter arming test	100%	3.3	4.5.9
	Setting sleeve assembly torque test	(80)	3.3	4.5.5
	Setting sleeve retaining ring stake test	(80)	3.3	4.5.6
105	Retaining ring stake missing	Level IV	3.3	Visual
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () - Quantity				

PARAGRAPH	TITLE				DRAWING NUMBER
4.4.1.50	Screw, Closing	sheet 1	OF	1	9258611
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA		REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
Critical	None defined				
-	Pitch diameter of thread Height of undercut, max.	Level IV Level IV		3.3 3.3	Gage Gage
-	Base thickness Evidence of poor workmanship	Level II Level II		3.3 3.29	Gage Visual
NOTES:					

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.51	Fuze Body Assembly, prior to assembling Safing and Arming Module and Retainer Assembly	sheet 1	of 1	9345331
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMEN' PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
Critical 1	S&A module not in the unarmed position	/1	3.3	4.5.30
<u>Major</u> 101	Delay module spinlocks not in unarmed position	100%	3.3	Gage or Visual
102 103	Delay module missing or inverted Step height between body and	100% Level IV	3.3 3.3	Gage or Visual Gage or Visual
104	nose cap and completeness of crimp Safety plug(when used) not removed	100%	3.3	Visual
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual

/1 Conformance inspection of any of the critical defects listed above shall apply 100% plus VL-VII sampling to verify the performance of the screening operation in accordance with MIL-STD-1916.

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.52	Fuze Body Assembly	sheet 1	of 1	9345331
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345332 INSPECTION METHOD REFERENCE
<u>Critical</u> 1	Dimension from external flange to bottom of S&A module retainer	/2	3.3	Gage
<u>Major</u> 101	Dimension from external flange to bottom of closing	Level IV	3.3	Gage
102	screw Leak test	(48) note 1	3.3	4.5.8 or 4.5.8.1
103	Length from tip of nose cap to flange, max.	Level IV	3.3	Gage
104	Fuze not set super quick	Level IV	3.3	Visual
105	Fuze Body Assembly proper	100%	3.3	X-ray/4.5.37
<u>Minor</u> 201	Lot identification nomenclature missing or inadequate	Level II	3.4	Visual
202	Evidence of poor workmanship	Level II	3.29	Visual

NOTES: () - Quantity /1 Leak test is for first article verification only

2 Conformance inspection of any of the critical defects listed above shall apply 100% plus VL-VII sampling to verify the performance of the screening operation in accordance with MIL-STD-1916.

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.53	Fuze, PD, M739A1. Destructive Test	sheet 1 of 2		9345332
	Destructive Test			NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>				
1	Premature Burst	note 1	3.11	4.2.3.5 or 4.3.4.1
2	Non-functioning test	note 2	3.13	4.2.3.5 or 4.3.4.1
3	S&A not in safe condition	note 1	3.3	4.5.35
Major				
101	Initiation of M99	(9)	3.18	4.5.1
	detonator during Jolt and Jumble Test			
102	Delay module armed or functioned during jolt and jumble test	(9)	3.18	4.5.1
103	Setting sleeve assembly interrupter not fully seated after jolt and Jumble test	(9)	3.18	4.5.1
104	Functioning SQ	note 2	3.14	4.2.3.5 or 4.3.4.1
105	Reverse Functioning	note 2	3.14	
106	Early burst	note 1	3.12	
TOTES:) – Quantity. Note 1 - 100% of ba Note 2 - See Table				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.53	Fuze, PD, M739A1. Destructive Test	sheet 2 of 2		9345332
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY INSPECTION METHOD REFERENCE
<u>Major</u>				
107	Functioning delay	Note 2	3.15	4.2.3.5 or 4.3.4.1
108	Propagation Test	(50)	3.7	4.5.17
	functioning			
109	Parts damaged, broken or	(9)	3.29	4.5.1
	disassembled during Jolt and Jumble			
110	Examination for proper	(9)	3.29	4.5.1
-	application of sealant and			
	lubrication after Jolt and			
	Jumble test			
111	Parts damaged	Note 1	3.29	Visual
Minor				
201	Lot identification	Level II	3.4	Visual
	nomenclature missing or			
	inadequate			
202	Evidence of poor	Level II	3.29	Visual
	workmanship			
	Ĩ			
OTES:	1		1	
) - Quantity.	11			
lote 1 - 100% of b lote 2 - See Table				
$1010 \ge 2$ - See Table				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE				DRAWING NUMBER
4.4.1.54	Cap, Nose	sheet 1	of 1		9298909
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA		REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
Critical	None defined				
	Presence of scoring (4 places)	Level IV			Visual
102 <u>Minor</u>	Thickness	Level IV		3.3	Gage
201	Evidence of poor workmanship	Level II		3.29	Visual
NOTES:					

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.55	Fuze Body Assembly, prior to	sheet 1	of 1	9345331
	assembling Nose Cap			
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY NSPECTION METHOD REFERENCE
Critical	None defined			
	Firing pin and detonator assembly missing or inverted	100%	3.3	Visual
	One or more crossbar (s) missing	Level IV	3.3	Gage
103	Crossbar holder assembly stake missing	Level IV	3.3	Visual
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:	· · · · · · · · · · · · · · · · · · ·			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.56	Cover, Housing	SHEET	1 of 1	1183628
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 1183627 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101	Diameter of center hole, min	note 1	3.3	Gage
102	True position of center hole	note 1	3.3	Gage
103	Outside diameter, max	note 1	3.3	Gage
Minor 201	Evidence of poor workmanship	note 1	3.29	Visual

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.57	Spring, Plunger	sheet 1	of 1	11836287
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836270 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
	Load P1 or P2 does not comply with	Level IV	3.3	Gage
	drawing requirements			
	Does not work freely in a dia. bore at an installed height	Level IV	3.3	Gage
	Does not work freely over a dia. rod at	Level IV	3.3	Gage
	an installed height			
Minor				
	Solid height, max	Level II	33	Gage
-	Evidence of poor workmanship	Level II		Visual
202	Evidence of poor workmanship		5.29	v isual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.58	Housing	sheet 1	of 1	11836286
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836270 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101	Diameter of center hole, min	note 1	3.3	Gage
102 103	Location of center hole Inside diameter, min	note 1	3.3 3.3	Gage
103	Outside diameter, min.	note 1 note 1	3.3	Gage Gage
105	Inside length	note 1	3.3	Gage
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.59	Retainer, Slider Spring	sheet 1 of 1		11836285
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836278 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>	None defined			
Minor				
201	Presence of slots	Level II	3.3	Visual
202	Outside diameter	Level II	3.3	Gage
203	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				·

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE				DRAWING NUMBER
4.4.1.60	Spring, Slider	sheet 1	OF	1	11836284
					NEXT HIGHER ASSEMBLY 11836278
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA		REQUIREMENT PARAGRAPH	I 1030270 INSPECTION METHOD REFERENCE
Critical	None defined				
<u>Major</u>					
	Load P1 or P2 does not comply	Level IV		3.3	Gage
	with drawing requirements				
	Does not work freely in a diameter bore at an installed	Level IV		3.3	Gage
	height				
	Does not work freely over a	Level IV		3.3	Gage
	diameter rod at an installed height				
<u>Minor</u>					
201	Solid height, max.	Level II		3.3	Gage
202	Evidence of poor workmanship	Level II		3.29	Visual
NOTES:	· * ·				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.61	Spring, Firing Pin	sheet 1	sheet 1 of 1	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836278 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101 102	Load P1 or P2 does not comply with drawing requirements. Does not work freely in a diameter bore at an installed height.	Level IV Level IV	3.3 3.3	Gage Gage
<u>Minor</u> 201 202	Solid height, max. Evidence of poor workmanship	Level II Level II	3.3 3.29	Gage Visual
NOTES:	workmanship			

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.62	Slider	SHEET]	l of 1	11836282
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836278 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Outside diameter of spring mating surface, max.	Level IV	3.3	Gage
102	Inside diameter, min	Level IV	3.3	Gage
103	Inside diameter (ball locking), min.	Level IV	3.3	Gage
104	Length of undercut, min.	(12) note 1	3.3	Gage
105	Length of locking surface, min	(12) note 1	3.3	Gage
106	Length to slider ball mating surface	Level IV	3.3	Gage
<u>Minor</u>				
201	Outside diameter, max.	Level II	3.3	Gage
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () –Quantity	tructive testing. Reject the lot if one or mor	a defects in the sec		

Note 1 Destructive testing. Reject the lot if one or more defects in the sample.

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.63	Pin, Firing	sheet 1	of 1	11836281
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836278 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
101	Width of tip, max	Level IV		Gage
102	Depth of cavity, min	Level IV		Gage
103	Location of notch	Level IV	3.3	Gage
104	Diameter of notch, max	Level IV	3.3	Gage
105	Outside diameter, max	Level IV	3.3	Gage
106	Diameter of cavity, min	Level IV	3.3	Gage
Minor				
201	Profile of point	Level II	3.3	Gage
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.64	Holder, Firing Pin	sheet 1	of 1	1183627
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 1183627 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Inside diameter, min	note 1	3.3	Gage
102	Outside diameter, max.	note 1	3.3	Gage
103	Presence of longitudinal separation	note 1	3.3	Visual
104	True position of outside diameter	note 1	3.3	Gage
105	Small inside diameter, min.	note 1	3.3	Gage
106	True position of ball seating diameter	note 1	3.3	Gage
107	Small outside diameter of forward end.	note 1	3.3	Gage
108	Length from bottom of forward housing seat to rear surface of the flange	note 1	3.3	Gage
109	Large outside diameter of forward end.	note 1	3.3	Gage
<u>Minor</u>				
201	Evidence of poor workmanship	Level II	3.29	Visual

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Conformance inspection by classification of characteristics

PARAGRAPH	TITLE				DRAWING NUMBER
4.4.1.65	Firing Pin Holder Assembly	sheet 1	OF	1	11836278
					NEXT HIGHER ASSEMBLY
		CONFORMANCE		REQUIREMENT	
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA			INSPECTION METHOD REFERENCE
Critical	None defined				
<u>Major</u>					
101	Push off force does not	(5)		3.3	4.5.29.2
	withstand 5 lbs	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
102	Missing firing pin	Level IV		3.3	Visual
103	Either ball missing	Level IV		3.3	Visual
Minor					
201	Evidence of poor	Level II		3.3	Visual
-01	workmanship			010	

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.66	Pin, Pivot	sheet 1 of 1		11836277
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836271 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Outside diameter, max.	Level IV	3.3	Gage
	Overall length, max. Evidence of poor workmanship	Level II Level II	3.3 3.29	Gage Visual
NOTES:		I	L	1

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.67	Lock, Detent	sheet 1 of 1		11836276
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836271 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
102	Pin hole diameter True position of pin hole dia. Distance across tabs, max.	Level IV Level IV Level IV	3.3 3.3 3.3	Gage Gage Gage
<u>Minor</u> 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:		1	1	

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.68	Retainer, Detent	sheet 1 of 1		11836275
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836271 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Thickness, max.	Level IV	3.3	Gage
	Outside diameter, max. Evidence of poor workmanship	Level II Level II	3.3 3.29	Gage Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.69	Spring Detents	sheet 1 of 1		11836274
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836271 INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
	Load P1 or P2 does not comply with drawing requirements	Level IV	3.3	Gage
	Does not work freely in diameter bore at an installed height.	Level IV	3.3	Gage
103	Does not work freely over a diameter rod at installed height.	Level IV	3.3	Gage
Minor				
201	Solid height, max.	Level II	3.3	Gage
202	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

TITLE			DRAWING NUMBER
Detent, Spin	sheet 1 of 1		11836273
EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836271 INSPECTION METHOD REFERENCE
None defined			
Diameter of spring cavity.	Level IV	3.3	Gage
minimum			
Overall length	Level IV	3.3	Gage
Diameter of mating surface for firing pin holder	Level IV	3.3	Gage
Height maximum from	Level IV	3.3	Gage
1 0 1	Level IV	3.3	Gage
Evidence of poor workmanship	Level II	3.29	Visual
	Detent, SpinEXAMINATION OR TESTNone definedDiameter of spring cavity, minimumOverall lengthDiameter of mating surface for firing pin holder Height maximum from inside of spring cavity. Large outside diameterEvidence of poor	Detent, SpinSHEETCONFORMANCE CRITERIAEXAMINATION OR TESTCONFORMANCE CRITERIANone definedLevel IVDiameter of spring cavity, minimumLevel IVOverall lengthLevel IVDiameter of mating surface for firing pin holder Height maximum from inside of spring cavity. 	Detent, SpinSHEET 1 OF 1EXAMINATION OR TESTCONFORMANCE CRITERIAREQUIREMENT PARAGRAPHNone definedImage: Conformance CRITERIAREQUIREMENT PARAGRAPHDiameter of spring cavity, minimum Overall lengthLevel IV3.3Diameter of mating surface for firing pin holder Height maximum from inside of spring cavity. Large outside diameterLevel IV3.3Evidence of poorLevel IV3.3

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.71	Plunger	sheet 1	of 1	118362
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 118362 INSPECTION METHOD REFERENCE
<u>Critical</u>				
<u>Major</u>				
101	Outside diameter, max.	<u>/1</u>	3.3	Gage
102	Distance between tabs, min.	/ <u>1</u> / <u>1</u> / <u>1</u> / <u>1</u> / <u>1</u> / <u>1</u>	3.3	Gage
103	Inside diameter, min.	<u>/1</u>	3.3	Gage
104	Spin detent hole diameter	<u>/1</u>	3.3	Gage
105	Width across ball slots, min.	<u>/1</u>	3.3	Gage
106	Depth of detent retainer counter bore, min.	<u>/1</u>	3.3	Gage
Minor				
201	Overall length, max.	Level II	3.3	Gage
202	Width of pin slot, min.	Level II	3.3	Gage
203	Depth of pin slot	Level II	3.3	Gage
204	Evidence of poor workmanship	Level II	3.29	Visual
OTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.72	Plunger Assembly	sheet 1	of 1	11836271
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 11836270 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
102	Pin fails to withstand pullout force Detent retainer fails to withstand push out force	(5) (5)	3.3 3.3	4.5.29.2 4.5.29.2
Minor 201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				1
() - Quantity				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.73	Delay Module, Impact	sheet 1	of 1	11836270
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345331 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
Major	Unight of protocology may	Level IV	2.2	Case
	Height of protrusion, max.	Level IV		Gage
	Outside diameter, max	Level IV		Gage
	Height from top of housing to the bottom housing cover, max.	Level IV	3.3	Gage
104	Non-arming test	100% note 1	3.3	4.5.29.1
105	Arming test	100% note 1	3.3	4 .5.29.3
106	Drop test	Level IV	3.3	4.5.29.4
107	Cover fails to withstand push out force.	(5)	3.3	4.5.29.2
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES: () - Quantity Note 1 Arming	shall be performed before non-arming.			

PARAGRAPH	TITLE				DRAWING NUMBER
4.4.1.74	Pellet, Booster	sheet 1	of 1		12992294
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA		REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9345332 INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined				
<u>Major</u> 101 102 103 104	Cracked, chipped or broken Weight Height Diameter	Level IV Level IV Level IV Level IV		3.3 3.3	Visual Gage Gage Gage
<u>Minor</u> 201	Evidence of poor workmanship	Level II			Visual

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.75	Fuze, PD, M739A1	sheet 1	of 1	9345332
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u> 101	Booster pellet improperly oriented in booster cup. note 1	Level IV	3.3	Visual
102	Length from base of flange to base of booster cup.	Level IV	3.3	Gage
103	Sealant not 360 deg around	Level IV	3.3	Visual
104	booster cup External fuze body threads damaged	Level IV	3.3	Visual
105	Fuze, PD, M739A1 assembled properly	/2	3.3	X- ray/4.5.35/4.5.38
Minor				
201	Marking missing or	Level II	3.3	Visual
202	misleading Evidence of poor workmanship	Level II	3.29	Visual
	assembling booster cup to fuze led on fuzes undergoing ballistic sar			

Conformance inspection by classification of characteristics

TITLE			DRAWING NUMBER
Disc, Lead	sheet 1	of 1	9255167
EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 12992295 INSPECTION METHOD REFERENCE
None defined			
Thickness Diameter, minimum	Level IV Level IV	3.3 3.3	Gage Gage
Evidence of poor workmanship	Level II	3.29	Visual
	1	1	1
	Disc, Lead EXAMINATION OR TEST None defined Thickness Diameter, minimum	Disc, Lead SHEET 1 EXAMINATION OR TEST CONFORMANCE CRITERIA None defined Image: Conformance of the second seco	Disc, LeadSHEET 1 OF 1EXAMINATION OR TESTCONFORMANCE CRITERIAREQUIREMENT PARAGRAPHNone definedImage: Conformance conformance conformation or testImage: Conformance c

Conformance inspection by classification of characteristics

	TITLE			DRAWING NUMBER
4.4.1.77	Lead, Explosive	sheet 1	12992295	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE
<u>Critical</u> 1	Cracks or splits	/ <u>1</u>	3.3	Visual
<u>Major</u> 101	Weight of Composition	Level IV	3.3	Gage
102	Identification missing or color incorrect	Level IV	3.3	Visual
103	Assembly distorted or damaged to the extent that functioning may be improper	Level IV	3.3	Visual
104	Diameter maximum	Level IV	3.3	Gage
105	Overall length, max.	Level IV	3.3	Gage
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual

 $/\underline{1}$ Conformance inspection of any of the critical defects listed above shall apply 100% plus VL-VII sampling to verify the performance of the screening operation in accordance with MIL-STD-1916.

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER	
4.4.1.78	Lead Explosive	sheet 1 of 1		12992295	
	(Prior to disc assy)				
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE	
<u>Critical</u>	None defined				
<u>Minor</u>	Density of explosive in lead cup	/ <u>1</u>	3.3	4.5.32	
201	Evidence of poor workmanship	Level II	3.29	Visual	
NOTES					
NOTES: <u>1</u> Sample production at a rate of 5 every 4 hours as described in paragraph 4.5.32. This paragraph applies only when alternative method of loading is used (see drawing 12992295).					

			DRAWING NUMBER		
Lead Assembly, destructive	SHEE	т 1 оғ 1	12992295		
lot acceptance test					
EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9294833 INSPECTION METHOD REFERENCE		
None defined					
Dutput test	(150)	3.8	4.5.31		
NOTES: () Denotes sample size.					
	lot acceptance test EXAMINATION OR TEST Ione defined Dutput test	Iot acceptance test EXAMINATION OR TEST CONFORMANCE CRITERIA Ione defined Dutput test (150)	Iot acceptance test CONFORMANCE CRITERIA REQUIREMENT PARAGRAPH Ione defined (150) 3.8		

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.80	Cup, Lead	sheet 1 of	1	9255166
				NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	9255165
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
Critical	None defined			
<u>Major</u>				
	Thickness of bottom of cup	Level IV	3.3	Gage
	Length	Level IV	3.3	Gage
103	Inside diameter	Level IV	3.3	Gage
2.61				
<u>Minor</u>			2.20	T 7 • 1
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				I
TOTED.				

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.81	Box, Set-up, Packing,	sheet 1 of	1	7548104
	Ammunition, Inner			
				NEXT HIGHER ASSEMBLY 7548103
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD
Critical	None defined			REFERENCE
Cilicai	None defined			
Major				
-	Box damaged exposing contents	Level IV	3.3	Visual
102	Label missing or incorrect	Level IV	3.3	Visual
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

Conformance inspection by classification of characteristics

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.82	Box, Set-up, Marking,	sheet 1 of	1	7548103
	Ammunition, Outer			
				NEXT HIGHER ASSEMBLY
		CONFORMANCE	REQUIREMENT	7548099
CLASSIFICATION	EXAMINATION OR TEST	CRITERIA	PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101	Barrier bag damaged	Level IV	3.3	Visual
102	Label missing or incorrect	Level IV	3.3	Visual
<u>Minor</u>	Evidence of a converting on this	L avei II	2 20	Viewal
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				<u> </u>

PARAGRAPH	TITLE			DRAWING NUMBER
4.4.1.83	Box, Packing, Ammunition	sheet 1 of	7548099	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY
		CRITERIA	FARAORAFII	REFERENCE
<u>Critical</u>	None defined			
Major				
101	Box damaged exposing contents	Level IV	3.3	Visual
102	Label missing or incorrect	Level IV	3.3	Visual
	Strap missing or loose	Level IV	3.3	Visual
	Marking incomplete, misleading or unidentifiable	Level IV	3.3	Visual
Minor				
201	Evidence of poor workmanship	Level II	3.29	Visual
NOTES:				

4.5 Methods of inspection.

4.5.1 Jolt and jumble test. The S&A with test vehicle assemblies or retainers, as well as the loaded fuze assemblies with inert boosters and booster cups, shall be subjected to the jolt test as specified in MIL-STD-331, Test A1. After completion of the jolt test, the fuze shall not be disassembled, but shall be radiographically inspected in two planes to determine the proper safe condition of the setback pin, rotor, interrupter and firing pin assemblies and then shall be subjected to the jumble test in accordance with MIL-STD-331, Test A2.1. At the conclusion of the Jumble Test, the fuzes shall be x-rayed to assure safe disassembly. The fuzes shall then be disassembled to determine compliance with the requirements of the test. As a minimum inspection requirement for Critical Defects, no S&A explosive element shall be initiated nor shall any S&A be in the armed or partially armed condition. The partially armed condition of the sealant past the area of application and examine the S&A internally for flaking of Emralon as an indication of excessive application. As a minimum inspection requirement for the S&A internally for the Impact Delay Module, the firing pin shall be in the safe position and the spin detents shall be in the un-armed position.

4.5.2 <u>Transportation vibration test.</u> The S&A with test vehicle assemblies or retainers, as well as loaded fuze assemblies with inert boosters, shall be subjected to the transportation vibration test in accordance with MIL-STD-331, Test No. B1.1, Section B1.6.3.2, Procedure II.

4.5.3 <u>Firing pin/assembly pull test</u>. The firing pin (dwg. 9333937) or firing pin assembly (dwg. 9258618), whichever is applicable, shall be assembled to an applicable test fixture and an axial pull load of 80 pounds shall be applied to the firing pin shaft. If two or more firing pin shafts, during the testing of the firing pin assemblies (9258618), come loose or separate, the lot of firing pin assemblies shall be rejected. If two or more firing pins (9333937), show evidence of deformation, i.e., the final over-all length exceeds the drawing requirement, the lot of firing pins shall be rejected. Any item subjected to the pull test shall not be returned to the lot.

4.5.4 <u>Support, firing pin, load test</u>. The firing pin support shall be assembled to an applicable test fixture and the required load shall be applied in an axial direction at a uniform rate. The results of the test shall be recorded to determine compliance with the requirements. If one or more parts fail to meet the requirements of the 100-pound load test, the lot shall be rejected. If two or more parts fail to meet the requirements of the 140-pound test, the lot shall be rejected. Parts subjected to this test shall not be returned to the lot.

4.5.5 <u>Setting sleeve assembly torque test</u>. The torque required to rotate the setting sleeve assembly shall be applied to the screw driver slot in the setting sleeve while holding the fuze body in such a manner as to avoid damage. If two or more assemblies fail to meet the requirements of the test, the lot shall be rejected. Assemblies subjected to this test may be returned to the lot.

4.5.6 <u>Setting sleeve retaining ring stake test</u>. The torque shall be applied to the screwdriver slot while holding the fuze body in such a manner as to avoid damage. Starting with the sleeve set in the SQ position apply a 10-in. lb. torque in the clockwise direction and inspect

visually for ring movement when the sleeve rotates to the Delay retaining ring stop. Then apply the 10-in. lb. torque in a counterclockwise direction and inspect visually for ring movement when the sleeve rotates to the SQ retaining ring stop. If any rotation of the retaining ring is observed, in either SQ or Delay position, check the flash hole opening of the slot. If it is less than 0.120 inches diameter, when the sleeve is against the SQ stop, the assembly shall be classed defective. If two or more defectives are found, the lot shall be rejected. Assemblies subjected to this test may be returned to the lot.

4.5.7 <u>Dimensional control of stamped parts</u>. As a control of the punch during production, five (5) parts from each punch shall be selected for inspection. The five parts are to be selected from the end of the day's production. As a control of each punch for production, the parts shall be inspected to the requirements listed on the applicable Classification of Defects . If any defective parts are found when inspection is performed for control of the tool, the tool producing the defective part shall be removed from production. Further, that portion of production since the last tool check shall be rejected.

4.5.8 <u>Leak test</u>. The test shall be performed in accordance with the procedure specified in MIL-STD-331, Test No. C4, except as provided in 3.20. When immersing the test assemblies in the water solution, care should be taken to displace all externally entrapped air. The test assemblies should be submerged in a horizontal position for testing. After completion of the test and drying of the samples, the assemblies shall be sectioned to reveal all cavities internal to the various seals. Examine all external and internal surfaces of parts for evidence of water entry using ultra-violet light. Any assembly that does not comply with the requirements of 3.20 shall be classed defective. The accept/reject criteria shall be in accordance with paragraph 4.2.4.2.1.3. Fuzes subject to the test in 4.5.8 are sectioned for evaluation.

4.5.8.1 <u>Alternative leak test</u>. The following optional method may be used to perform the water proofness test required by 3.20. This method required pressurizing the test assemblies in air prior to submersion in water and does not require the use of any additive to the water. In an approved test apparatus, pressurize the test assemblies in air at 3 ± 0.5 psi for 5 ± 0.5 minutes. Then lower the assemblies into water while maintaining the required air pressure above the water. The assemblies, in a horizontal orientation, shall be agitated while submerged to remove surface-entrapped air. After the assemblies have been agitated and there is a minimum of 3 inches of water above the assemblies (remaining in horizontal orientation), release the air pressure above the water and observe the test assemblies for the presence of bubbles for a minimum of 30 seconds. Any assembly with a continuous stream of bubbles in excess of one bubble per second shall be classed defective. The accept/reject criteria shall be in accordance with paragraph 4.2.4.2.1.3. Assemblies which pass this test may also be used to satisfy the sample requirements for Jolt and Jumble testing (see 4.5.1) or for Propagation testing (see 4.5.17).

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4.5.9 <u>Interrupter arming test</u>. The unarmed assembly shall be subjected to this test by approved equipment. The setting sleeve shall be rotated at 1700 revolutions per minute (RPM's) maximum. Any assembly which has a flash hole opening of less than 0.078 inch shall be rejected and removed from the lot.

4.5.10 <u>Interrupter non-arming test</u>. The unarmed assembly shall be subjected to this test by approved equipment. The setting sleeve shall be rotated until it comes to rest against the SQ stop. The assemblies shall be rotated at 1100 RPM's minimum. Any assembly which has greater than .005 inch gap between the flash hole and the interrupter shall be rejected and removed from the lot.

4.5.11 <u>Push test of detonator in rotor assembly</u>. The rotor assembly shall be assembled to an applicable test fixture and the required load shall be applied to the insensitive end of the detonator in an axial direction. Any assembly in which the detonator does not remain flush or below flush under the applied loads shall be classed defective.

4.5.12 <u>Lead assembly push out test</u>. The safing and arming module subassembly shall be disassembled and assembled to the applicable test fixture and the required load shall be applied to the lead cup assembly from a direction opposite the green end. Sampling shall be in accordance with MIL-STD-1916. If one or more lead cup assemblies or displaced material do not remain flush or below flush with the bottom plate, the lot shall be rejected. A dummy lead may be used for test purposes. Assemblies subjected to this test shall not be returned to the lot. This test may be performed on safing and arming module (9294833) after completion of the push test on the setback pin disk provided the subassembly has not been damaged by the test (see 4.5.18).

4.5.13 Arming test

4.5.13.1 <u>Arming</u>. The unarmed safing and arming module subassembly shall be subjected to this test by approved non-operator-dependent equipment. The safing and arming module subassembly shall be assembled to the applicable rotation holding fixture and rotated about its central axis in the counterclockwise direction when viewed from the top at both 1700 \pm 100 Revolutions Per Minute (RPM) and 2500 \pm 100 RPM. Any assembly that fails to arm shall be rejected.

4.5.13.2 Arming time. The unarmed safing and arming module assembly while being tested as specified in 4.5.13.1 shall be automatically tested for the arming time. The time required for each module to reach the armed position shall be automatically determined and recorded by applicable test equipment. The acceptance or rejection shall be automatic. The rotor shall be restrained from movement until the required RPM is achieved and the arming time count shall begin automatically with the removal of the restraint. Any unit that fails to arm between 850ms to 1200ms when spun at 1700 ± 100 RPM shall be rejected. Any unit that arms in less than 850ms when spun at 1700 ± 100 RPM is considered a critical defect and the lot is automatically rejected. Any unit that fails to arm between 850ms to 1200ms when spun at 1700 ± 100 RPM is considered a critical defect and the lot is automatically rejected. Any unit that fails to arm between 850ms to 1200ms when spun at 1700 ± 100 RPM is considered a critical defect and the lot is automatically rejected. Any unit that fails to arm between 850ms to 1200ms when spun at 1700 ± 100 RPM and conditioned hot shall be rejected. Any unit that fails to arm between 578ms to 3s when spun at 2500 ± 100 RPM and conditioned cold shall be rejected.

4.5.13.3 <u>Locking</u>. The armed safing and arming module subassembly subjected to the arming test in 4.5.13.1 shall be examined for the rotor being locked by the rotor lock pin. Any assembly that is not in the locked position after the arming test shall be rejected.

4.5.13.4 <u>Qualification test</u>. The Acceptance Inspection Equipment must pass a dynamic qualification test to demonstrate its reliability prior to its introduction into the production process for each contract (see 4.5.30.3).

4.5.14 <u>Non-arming test, spin lock</u>. The unarmed safing and arming module subassembly after successful completion of the arming test shall be assembled to the applicable test fixture and subjected to this test in rotation-approved equipment. The assembly shall be rotated about its central axis in a counterclockwise direction when viewed from the top at 1100 ± 50 RPM's. Any assembly which is not in the full safe position (rotor locked by both spinlocks) after being spun at 1100 ± 50 RPM's for a minimum of 1.5 seconds shall be classed defective and removed from the lot.

4.5.15 <u>Non-arming test, setback pin</u>. The unarmed safing and arming module assembly shall be assembled to the applicable test fixture and subjected to this test by rotation-approved equipment. The assembly shall be rotated about its central axis in a counterclockwise direction when viewed from the top at 4000 RPM's minimum. Any assembly which is not in the safe, out-of-line position after being spun at 4000 RPM's minimum for a minimum of 0.5 seconds, shall be classed defective and removed from the lot. The spinlocks may retract during this test and the rotor may move to a partially armed position provided the setback pin prevents arming. The rotor assemblies of all units that successfully pass this test must be returned to the fully safe position.

4.5.16 <u>Push test on pallet shaft</u>. The lower plate and shaft assembly after staking or pressing shall be held in an appropriate test fixture and the required push-out force shall be applied axially to the pallet shaft from the staked or press-fit side of the plate. Sampling shall be conducted in accordance with MIL-STD-1916. If one or more assemblies fail to withstand the two-pound push-out force, the lot shall be rejected. Assemblies subjected to this test may be returned to the lot.

4.5.17 <u>Propagation test</u>. Fuze body assemblies (Dwg. 9345331) shall be assembled with test disk (Dwg. 9294993), test plug (Dwg. 9294992) and booster cup (Dwg. 9258607). The S&A module assemblies (Dwg. 9258630) shall have setback pin removed so that the pin is not locking the rotor. The fuze assembly shall be spun about its central axis at a spin rate not exceeding 3400 RPM to arm the fuze. The assembly shall then be dropped, nose down, while spinning, a sufficient height onto a hard surface, to initiate the explosive train. The fuze assemblies shall then be disassembled and determination made of high-order functioning, which is defined as a minimum 0.170-inch hole in the test disk. The sample of fuze assemblies shall be tested with half set super-quick (SQ) and half set delay. Identify reverse functioning (see 6.6.5) for information only. Note: Determination of reverse functioning may be accomplished by examination of the Seal Disc (Dwg. 9258682). The accept/reject criteria shall be in accordance with 4.2.4.2.1.4. First article samples used for the propagation test may be selected prior to the application of RTV to the S&A Module and Retainer Assembly (see Dwg. 9345331) so as to facilitate disassembly following the test.

4.5.18 <u>Push test on setback pin disk</u>. The safing and arming module assemblies shall be disassembled and assembled to the applicable test fixture and the required load shall be applied through the setback pin to the setback pin disk. As an alternative method, the safing and arming

module may be checked without disassembling. For this method, a probe shall be inserted through the setback pin disengagement hole of the rotor as viewed from top. Sampling shall be conducted in accordance with MIL-STD-1916. If one or more setback pin disks do not remain flush or below flush with the bottom plate under the applied load, the lot shall be rejected. Assemblies subjected to the is test shall not be returned to the lot. Note: This test may be followed by a lead assembly push-out test (see 4.5.12).

4.5.19 <u>Setback pin freedom of movement test</u>. The safing and arming module assembly shall be assembled to an applicable test fixture and the setback pin shall be depressed such that a minimum distance of .350 inches shall be obtained from the top of the upper gear plate to the top of the setback pin. After release, the setback pin must return to the locking position. The test method shall cause the setback pin, after being depressed the minimum distance, to contact the ramp surface before returning to its original position. Any setback pin that does not depress to the required height shall be rejected and removed from the lot. In addition, any setback pin that does not return to the locking position shall be rejected and removed from the lot.

4.5.20 <u>Firing pin and housing assembly load test</u>. The firing pin and housing assembly shall be assembled to an applicable test fixture and the required load shall be applied in an axial direction at a uniform rate. When the applied load reaches one hundred (100) pounds, the maximum deflection shall not exceed .035 inches. Sampling shall be conducted in accordance with MIL-STD-1916. If one or more assemblies exceed the maximum deflection of .035 inches, the lot shall be rejected. Assemblies subjected to this test shall not be returned to the lot.

4.5.21 <u>Setback pin load test</u>. The setback pin shall be assembled to an appropriate test fixture that allows a minimum of .060 inch protrusion of the small diameter. The fixture shall provide support on the large diameter and the chamfer. The required load shall be applied perpendicular to the longitudinal axis at a uniform rate. If two or more setback pins are deformed or fractured, the lot shall be rejected. Setback pins subjected to this test shall not be returned to the lot.

4.5.22 <u>Spinlock load test</u>. The spinlock shall be assembled to an appropriate test fixture that holds the spinlock by the shaft hole. The load shall be applied perpendicular to the indicated surface at a uniform rate. If two or more spinlocks are fractured or deformed, the lot shall be rejected. Spinlocks subjected to this test shall not be returned to the lot.

4.5.23 <u>Die check for cast parts</u>. A sample of at least three (3) parts from each cavity shall be inspected in accordance with the applicable die check classification of defects and tests paragraph to qualify a new or reworked cavity for use in the production. Individual cavity identification must be provided. If any defective parts are found during qualification of the cavity, the cavity producing the defective part shall not be used in production. All cavities formerly removed from production because of some fault may, after reworking, be returned to production providing they pass the qualification test. When production from a cavity reaches 100,000 pieces since the last qualification test, a sample of three (3) parts from that cavity shall be subjected to the qualification test.

4.5.24 <u>Die check for stamped parts</u>. A sample of at least five (5) parts from each punch shall be inspected in accordance with the applicable die check classification of defects and tests paragraph to qualify a new or reworked tool for use in the production. If any defective parts are found during qualification of the tool, the tool producing the defective part shall not be used in production. All tools removed from production because of some fault may, after reworking, be returned to production providing they pass the qualification test above. When production reaches 100,000 pieces since the last qualification test, a sample of five (5) parts shall be subjected to the qualification test.

4.5.25 <u>Surface porosity</u>. Preliminary inspection for surface porosity shall be performed using Government approved sample display boards. If no suspect defects are found when comparing lot samples with display boards or visual comparison samples, the lot shall be accepted without further inspection for surface porosity. Suspect defects shall be examined using appropriate magnification, e.g., toolmaker's microscope, to determine compliance with the applicable requirements. Any void which exceeds either the length or width requirement dimension shall be classed as a defect. Any sample that exceeds the applicable maximum number of surface porosity defects shall be cause for rejection of the lot. If a suspect defect is found on an inside surface, such as the inside diameter of a hole, the part shall be sectioned prior to examination under magnification, taking care to avoid cutting into the suspect area.

4.5.26 <u>Weight test</u>. The parts shall be weighed on a balance capable of reading grams to three decimal places. If two or more samples fail to meet the weight requirements, the lot shall be rejected. Parts subjected to this test may be returned to the lot.

4.5.27 <u>Dimensional control of cast parts</u>. As a control of the cavity during production, three (3) or more parts from each cavity shall be inspected during the production run. The production run is defined as that period of operation of the die from the time the die has reached proper operating temperature until the die is cooled below that temperature. Of the three (3) or more samples to be inspected, one shall be selected at the start, one at the end and the others during the production run. As a control of each cavity during production, the parts shall be inspected to the requirements listed on the applicable Classification of Defects and Test charts. If any defective part is found when inspection is performed for control of the cavity, the cavity producing the defective part shall be removed from production and that portion of production since the last previous check shall be rejected.

4.5.28 <u>Production verification of mold</u>. The first component from each cavity produced during a production run and the last component from each cavity produced during the same production run shall be examined. A production run is defined as the continuous forming of consecutive components by a mold or die which has been prepared in accordance with its operating specifications, and maintained in the same operating condition between the first and last samples which represent that production run. The production run represent be the two samples shall be rejected if either of the samples are found to be defective. Samples shall be permitted to cool to room temperature ($80 \pm 20F$) prior to examination for compliance with dimensional requirements.

4.5.29 Impact delay module tests.

4.5.29.1 <u>Non-arming</u>. The unarmed delay module, impact shall be rotated, in a vertical position with the firing pin pointing up, at a speed of 1,075 rpm min. for 3 seconds min. After the test, the module shall be examined for the safe, unarmed position, i.e., firing pin safe and spin detents in unarmed position per Dwg. 11836270. Any module which has armed shall be classed defective and removed from the lot.

4.5.29.2 <u>Load test</u>. The specified load shall be applied in the direction specified on the applicable drawing using a suitable test fixture. Any assembly in which any part moves, deforms, becomes loose or detaches shall be classed defective and the lot shall be rejected. Assemblies subjected to this test shall not be returned to the lot. Note: For the load test on the pivot pin, detent retainer and slider spring retainer, some deformation of the part is permitted, provided the part does not detach from any staked area.

4.5.29.3 <u>Arming</u>. The unarmed delay module, impact shall be rotated, in a vertical position with the firing pin pointing up, at a speed of 2,025 rpm max. for 5 seconds max. After the test, the module shall be examined for proper arming, i.e., detent lock in armed position as shown in Dwg. 11836270. Any module which does not arm shall be classed defective and removed from the lot. Following inspection, the module shall be restored to the unarmed position.

4.5.29.4 <u>Drop test</u>. Use accepted modules from the arming test (see 4.5.29.3) the armed module shall be dropped, forward end down, from a maximum height of sixteen (16) inches, onto a steel plate. The module may be guided, initially, to maintain proper orientation. Any module in which the firing pin has not been released shall be classed defective and the lot shall be rejected. Modules subjected to this test shall not be returned to the lot.

4.5.30 <u>S&A Module not in unarmed position</u>. The gage shall be capable of detecting the following conditions.

a. The rotor is in the safe position

b. The setback pin and spring are present.

c. The setback pin is engaged in and locking the rotor.

d. Both spinlocks are present and engaged in the rotor.

4.5.30.1 <u>S&A gage</u>. Of primary importance is that the gage, whether semi-automatic or fully automatic, shall make the decision for safety of the rotor is not to be at the discretion of the operator/inspector. The use of or operation of the gage should be such that the rejected S&A is controlled so that it cannot be inadvertently added to the accepted product. A rigid procedure for material handling of critical defects shall be part of the operation/use of any gage inspecting for such a defect.

4.5.30.2 <u>S&A/Fuze assembly</u>. The inspection shall be the last operation prior to assembling the S&A retainer assembly into the body of the fuze. This means there is a smooth, continuous flow of accepted product between the gaging station and the assembly operation. It is desirable that accepted units be automatically marked for identification.

4.5.30.3 <u>Gage reliability/Safety qualification</u>. The gage shall pass a qualification test to demonstrate its reliability prior to its introduction into the production process. One thousand (1000) S&A/retainer assemblies shall be used for this purpose and they shall be of the following description. When tested with all 1000 of the below masters, the gage shall pass the test with no incorrect decisions (see 6.7).

- a. 300 properly assembled, fully safe.
- b. 175 with both spinlocks missing (independent detection of each).
- c. 175 with setback pin missing.

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- d. 175 with setback pin and both spinlocks missing.
- e. 175 with rotor, setback pin, and both spinlocks missing.

4.5.31 Lead assembly output test. The lead assembly output test shall be performed in accordance with 4.4.1.79 by holding a lead charge on a 1018 cold finish witness block (Drawing # 12998402). The gap between the M55, which is used for initiation of the lead shall be no less than 0.1145 inches. High order functioning shall be evidenced by a minimum dent depth in the witness block of 0.0239 inches. If two (2) or more lead assemblies fail to meet the requirement, the lot shall be rejected.

4.5.32 <u>Density of explosive in lead cup (when loaded by alternate method)</u> A minimum of five (5) assemblies, representative of the explosive of the explosive leads being processed, shall be loaded and densities determined to qualify each press prior to its use in production. In addition, a sample of five (5) leads shall be processed during the last portion of each four (4) hour's production from each press and density determined as a control of each press during production.

If any defective lead is found when inspection is performed for control of a press, the press producing the defective leads shall be removed from production. Further, that portion of production since the last control check shall be returned for corrective action.

All presses removed from production because of some fault, may after corrective action be returned to production providing they pass qualification tests above.

The samples shall be selected prior to assembly of the lead disc and crimping and the following procedure used to determine the density of the explosive charge.

- a. Measure and record height (h) from base of cup to top of explosive column to 0.001 cm.
- b. Weigh and record weight of loaded cup to 0.001 grams.
- c. Remove explosive from cup.
- d. Weight empty cup to 0.001 grams.

e. Measure inside diameter (d) of empty cup to .001 cm.

f. Measure end thickness of empty cup to 0.001 cm.

g. Calculate weight of explosive by subtracting the value obtained in (4) above from the value obtained in (2) above.

h. Calculate the explosive column height by subcontracting the cup thickness measured in (6) above from the total height (h) measured in (1) above.

i. Calculate the explosive volume using the formula $V = \Pi xr^2$ (h) (h is the value obtained in (8) above and r = d/2 from (5) above).

j. Calculate the density by dividing the weight obtained in (7) above by the volume obtained in (9) above.

4.5.33 <u>S&A functional test.</u> Sixty (60) S&A samples shall be provided and tested IAW figure 1. Twenty (20) samples conditioned ambient (+70F) and subjected to transportation vibration shall be tested in sequence starting with setback freedom of movement testing, followed by non-arming testing at 1100 RPM, and completed with arming test at 1700 RPM. Twenty (20) samples conditioned at cold (-45F) temperature shall be tested for arming spun at 2500 RPM. Twenty (20) samples conditioned at hot (+145F) shall be tested for non-arming at 1100 RPM and arming at 1700 RPM. The samples shall be tested as described in paragraph 4.5.13.2 and 4.5.14. Testing shall be within 30 seconds of chamber exit. Units are to be considered destructively testing.

4.5.34. <u>Dimensional control of die cast parts</u>. The sample quantities for this test shall be three (3) for production runs up to fifty thousand (50,000) pieces. When a production run exceeds 50,000 pieces, the sample quantity shall be increased by one (1) for each twenty-thousand (20,000) pieces or portion thereof in excess of 50,000. The number of samples selected and the total number of pieces refer to each cavity of the die. Criteria for selection of the first and last pieces shall be as specified in 4.5.27. If any defective parts are found when inspection is performed for control of the cavity, the cavity producing the defective part shall be removed from production. Further, that portion of production since the last control check shall be rejected.

4.5.35 <u>Radiographic examination (X-ray)</u>. The sample shall be radio graphically inspected in two planes as follows to determine compliance with the safety aspects of the test:

a. Horizontal Plane – Screwdriver slot facing viewer.

b. Horizontal Plane - Screwdriver slot at left.

As a minimum inspection requirement for Critical Defects, no S&A shall be in an armed or partially armed (setback pin not locking rotor) condition. As a minimum inspection requirement for Major Defects, the x-ray shall indicate that no metal parts components are broken and that the screwdriver slot is in proper alignment. Inspection shall be performed by level II inspector or higher. Use NAS-410 or equivalent for x-ray qualifications.

4.5.36 <u>Firing Pin Housing and Detonator Assembly proper</u>. Inspection shall be performed by level II inspector or higher. Use NAS-410 or equivalent for x-ray qualifications and standards. The X-ray equipment shall be capable of detecting the following components and assemblies:

a. M99 Stab Detonator half loaded

b. M99 Stab Detonator missing

c. Firing Pin Support bent or missing

4.5.37 <u>Fuze Body Assembly proper</u>. Inspection shall be performed by level II inspector or higher. Use NAS-410 or equivalent for x-ray qualifications and standards. Radiographic Inspection shall be in the two planes, 90 degrees apart, with the first plane orientation at 2 o'clock for the Setback Pin Disk of the S&A Module & Retainer Assembly plane orientation. The X-ray equipment shall be capable of detecting the following components and assemblies:

a. Firing Pin, Housing, & Detonator Assembly upside down

b. Interrupter missing

c. Crossbar and Holder Assembly with bent crossbar(s)

d. Crossbar and Holder Assembly with missing crossbar(s)

e. Impact Delay Module with missing springs, plunger or slider or firing pin

f. S&A Module and Retainer Assembly with missing Setback Pin

g. S&A Module and Retainer Assembly with rotor partially armed (Setback Pin NOT engage)

h. S&A Module and Retainer Assembly with rotor fully armed (Setback Pin NOT engage)

i. Impact Delay Module NOT fully seated

j. S&A Module and Retainer Assembly NOT fully seated

k. Impact Delay Module closing screw missing

1. Foreign Material present

4.5.38 <u>Fuze, PN, M739A1 assembled properly</u>. Inspection shall be performed by level II inspector or higher. Use NAS-410, E1742, ASTM E 1255, and ASTM E 1411 for x-ray qualifications and standards. The X-ray equipment shall be capable of detecting the following components and assemblies:

a. Safe and Arming Device is fully seated and oriented properly

b. Setback Pin is engaged in and locking the rotor

c. Booster Pellet is fully seated

d. Booster Pellet chipped or broken

4.5.39 <u>Spinlock freedom of movement test</u>. The Safing and Arming Module and Retainer Assembly shall be assembled to an applicable test fixture and the spinlocks shall be moved outward to verify clearance of the retainer. After release, both spinlocks must return to the locking position. If either spinlock shows interference with the retainer, that unit is rejected and removed from the lot. In addition, if either spinlock does not return to the locking position, that unit is rejected and removed from the lot.

4.5.40 <u>Detonator deterioration</u>. The detonators shall be tested as specified in MIL-D-14978 for M55 and MIL-D-48025 for M99 prior to assembling detonator into the fuze.

5 PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DOD personnel or in-house personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The M739A1 PD/DLY Fuze is the Army's primary fuze for 105mm and 155mm bursting projectiles for point detonating and delay fuze functions. The M739A1 PD/DLY fuze contains an Impact Delay Module (IDM) assembly. The IDM provides fuze initiation delay based upon the completion of mechanical actions caused by projectile deceleration and will function at 3 - 6 milliseconds after target impact. There is no known commercial user or application.

6.2 <u>Acquisition requirements</u>. Acquisition documents must specify the following:

a. Title, number and date of this specification.

b. Packaging requirements (see 5.1 and 6.10)

c. Requirements for submission of first article sample.

d. Requirements for submission of inspection equipment designs.

e. Certificate of conformance for each lot or shipment of product.

f. Applicable stock number.

6.3 <u>Submission of contractor inspection equipment design for approval</u>. Submit copies of designs as required to: Commander, US Army ARDEC, ATTN: RDAR-QEM-A, Picatinny Arsenal, New Jersey 07806-5000.

6.4 <u>Drawings</u>. Drawings listed in Section 2 of this specification under the heading U.S. Army Armament Research, Development, and Engineering Center (ARDEC) may also include

drawings prepared by, and identified as U.S Army Armament, Research and Development Command (ARRADCOM), Rock Island Arsenal or Picatinny Arsenal drawings. Technical data originally prepared by these activities is now under the cognizance of ARDEC.

6.5 <u>Submission of alternative quality conformance provisions</u>. Alternative conformance procedures may be proposed by the contractor. All contractor proposed alternative quality conformance provisions will be submitted to the Government for evaluation/approval as directed by the contracting activities.

6.6 <u>Definitions</u>.

6.6.1 <u>Delay (DLY)</u>. A high-order function 3 - 6 milliseconds after target impact by penetrating (8-inch thick plywood) and functioning .5 to 35 feet behind the target rear face.

6.6.2 <u>Safe condition</u>. The safe condition of an S&A consists of the rotor located in the safe position with the spin locks and setback pin locking the rotor.

6.6.3 <u>Premature burst.</u> A malfunction in which a fuze functions before arming time. This includes functions in handling, loading and inside the barrel.

6.6.4. <u>Early burst</u>. A malfunction in which a fuze functions after arming time and before impact.

6.6.5. <u>Reverse function</u>. Reverse functioning is defined as delay functioning of the fuze when set in the Superquick (SQ) position.

6.6.6 <u>Dud</u>. Fuzes which fail to function where intended should be classified as duds. For Superquick (SQ) firings into a plywood target at 600 feet, intended functioning of the fuze is on impact with the target (on the target). For Delay (DLY) firings into a plywood target at 600 feet, intended functioning of the fuze is behind the target and before subsequent impact with the ground.

6.6.7 <u>Superquick (SQ)</u>. The fuze should be capable of functioning on the target upon impact.

6.7 <u>Time limit qualification requirement test</u>. It is in the contractor's interest to prepare assemblies as close to the product time limit requirements as practicable. The tolerance of the test samples is optional for the contractor provided that the 850 millisecond minimum time tolerance is in the plus direction (increasing time) and the 1200 millisecond (maximum time) is in the minus direction (for example: 850 + 50 and 1200 - 50). Once established the proven test limits are to be considered the machine not-go reject limits for production and SPC.

6.8 <u>Calibration and verification standards</u>. The calibration and verification standards to be used in production should be selected by the contractor and approved by the government. The time limits should be within the product drawing limits and within the proven capability of the machine during the qualification test.

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6.9 Check test for deterioration of detonator. DELETED

6.10 Performance Oriented Packaging (POP). Prior to shipment, the manufacturer will make sure the container has been tested by a government approved Performance Oriented Packaging (POP) test Laboratory for compliance with POP requirements in accordance with Title 49 Code of Federal Regulations. Test will be to a weight at least 10% greater than the actual gross weight to be marked on the tested container. POP marking will not be applied to the container until verified by the government. The POP test report will be generated by the Manufacturer/Laboratory in accordance with DI-PACK-81059 (Data Item Description) following the test. The report must be kept on file by the contractor and must also be submitted in accordance DI-PACK-81059 to the U.S. Army Tank-automotive and Armaments Command – Armament Research, Development and Engineering Center, ATTN: RDAR-EIL-P, Picatinny Arsenal, New Jersey, 07806-5000. For multi-year contracts, the contractor will re-perform POP testing at a certified test laboratory if: (a) the initial POP test report expires before the end of the contract or (b) there is a change in container manufacturer or design of the exterior shipping container. No re-test is needed if all packaging is purchased while under an unexpired POP test.

6.11 Justification for critical characteristics.

6.11.1 <u>S&A arming time</u>. Proper arm time is essential to ensure fuze function is away from gun and at intended impact area. A short or instantaneous arming time can cause an in bore or close function resulting in injury or death. Verification paragraph 4.4.1.42(C1).

6.11.2 <u>Rotor not locked / S&A not safe</u>. When S&A locks are not engaged in the rotor, an inadvertent arming and detonation could occur. This is critical to ensure safety during handling, shipping and use. Verification paragraph 4.2.4.3.1, 4.4.1.42 (C2), 4.4.1.45 (C1), 4.4.1.48(C1), 4.4.1.51 (C1), 4.4.1.52(C1), 4.4.1.53 (C3).

6.11.3 <u>Non-Function</u>. The S&A must not Arm in or close to the gun. Non-function testing demonstrates the fuze does not function when fired against targets within the safe distance away from the gun. This is critical to prevent functioning in-bore or near the gun crew. This is verified by design, in-process arming time testing, first article, and for the first three production lots. Verification paragraph 4.2.4.3.3, 4.4.1.53 (C2).

6.11.4 <u>Premature burst</u>. A premature burst can cause an in-bore or near-by projectile function. This check is needed to prevent a defective fuze lot from being fielded. Verification paragraph 4,2,4,3,2, 4.4.1.53 (C1 and C2).

6.11.5 <u>Lead cup cracked or split</u>. Unintentional detonation of the lead which is in line with main explosive would cause detonation of round. Verification paragraph 4.4.1.77 (C1).

6.11.6 <u>Stab detonators</u>. Certain characteristics, as called out in the appropriate specification, will not be considered critical/special inspections when delivered in a complete fuze. These characteristics should be inspected as 100% majors. These characteristics if

discrepant could result in hazardous or unsafe conditions only during the processing of explosive loaded components, but would not present a safety hazard in a safed final fuze assembly. See MIL-D-14978 paragraphs 4.3.2.2 & 4.3.2.3 and MIL-D-48025 paragraphs 4.4.2.5, 4.4.2.6, & 4.4.2.7.

6.12 <u>Amendment Notations</u> The margins of this specification are marked with vertical bars to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

6.13 Subject term (key word) listing.

Ballistic Function Dud Early Burst Lost Time Off Time Premature Burst Safe Position Safe Separation Distance

TABLE II. Ballistic test first article and first three lots

#	TEST / TARGET	SET	CALIBER	ZONE	CHARGE	WEAPON	QE	PROJECTILE	TEMP	QTY
1	NONFUNCTION - 1 INCH PLYWOOD 115 FT FROM MUZZLE EXIT	SQ	105MM	7	M67	M102	N/A	M1 inert note 2	AMB	10
2	FUNCTION - 1 INCH PLYWOOD 600 FT FROM MUZZLE EXIT	SQ	105MM	7	M67	M102	N/A	M1 inert note 2	AMB	10
3	FUNCTION -2 INCH PLYWOOD 600 FT FROM MUZZLE EXIT	SQ	105MM	1	M67	M102	N/A	M1 inert note 2	AMB	5
4	FUNCTION - 8 INCH PLYWOOD 600 FT FROM MUZZLE EXIT	DLY	105MM	7	M67	M102	N/A	M1 inert note 2	AMB	5 note 1 10
5	FUNCTION - 8 INCH PLYWOOD 600 FT FROM MUZZLE EXIT	DLY	155MM	Charge 1	M231	M109A5/A6	N/A	M107 inert note 2	AMB	10
6	FUNCTION - 8 IN PLYWOOD 600 FT FROM MUZZLE EXIT	DLY	105MM	1	M67	M102	N/A	M1 inert note 2	AMB	10
7	FUNCTION - GROUND	SQ	105MM	7	M67	M102	N/A	M1	AMB	5 note 1 5
8	FUNCTION - GROUND	SQ	155MM	Charge 1	M231	M109A5/A6	N/A	M107	AMB	20
9	FUNCTION - GROUND	SQ	155MM	Charge 5	M232A1	M109A5/A6	N/A	M795	AMB	10
10	FUNCTION - GROUND	SQ	105MM	7	M67	M102	N/A	M1	-45F	10
11	FUNCTION - GROUND	SQ	105MM	7	M67	M102	N/A	M1	+145F	10
									TOTAL	120

2. With inert projectiles use spotting charge

TABLE III. Reduced sample lot verification ballistic testing

#	TEST / TARGET	SET	CALIBER	ZONE	CHARGE	WEAPON	QE	PROJECTILE	TEMP	QTY
1	FUNCTION - 1 INCH PLYWOOD AT 600FT FROM MUZZLE EXIT	SQ	105MM	7	M67	M102	N/A	M1 inert note 2	+70	10
2	FUNCTION - 2 INCH PLYWOOD AT 600FT FROM MUZZLE EXIT	SQ	155MM	Charge 1	M231	M109A5/A6	N/A	M107 inert note 2	+70	5
3	FUNCTION - 8 INCH PLYWOOD AT 600FT FROM MUZZLE EXIT	DLY	105MM	7	M67	M102	N/A	M1 inert note 2	+70	10
4	FUNCTION - 8 INCH PLYWOOD AT 600FT FROM MUZZLE EXIT	DLY	155MM	Charge 1	M231	M109A5/A6	N/A	M107 inert note 2	+70	10
5	FUNCTION - 8 INCH PLYWOOD AT 600FT FROM MUZZLE EXIT	DLY	105MM	1	M67	M102	N/A	M1 inert note 2	+70	5
6	FUNCTION - GROUND IMPACT	SQ	105MM	3	M67	M102	N/A	M1	+70	10 note 1
7	FUNCTION - GROUND IMPACT	SQ	155MM	Charge 1	M231	M109A5/A6	N/A	M107	+70	10
									TOTAL	60



130 M739A1 fuzes (120 for ballistic testing, 10 for spares) 50 M739A1 with test plug and booster cup (see note 1) 9 M739A1 with inert booster and booster cup (see note 2) 48 M739A1 less booster and booster cup (see note 3) 80 S&A Module Subassembly (see note 4)

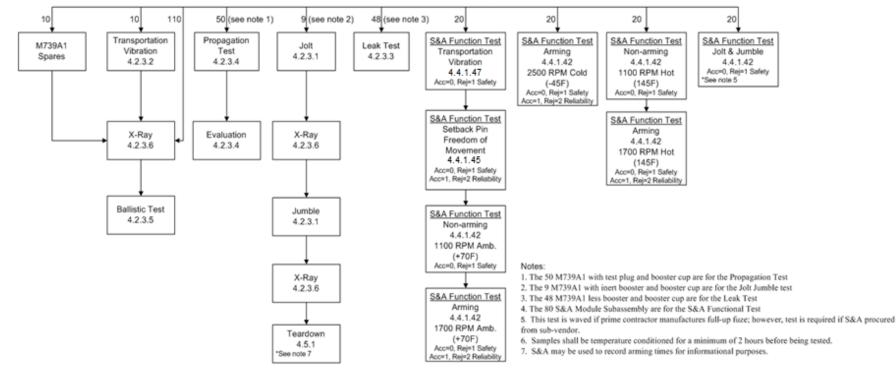


Figure 1. First article flow chart

Preparing activity: Army–AR (Project 1315-2013-001)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <u>https://assist.dla.mil</u>