

CRM LESSON PLAN REPORT

PERFORM MAINTENANCE ON THE RIFLE, 5.56MM, M16A2
101-92Y10D05 / 05.0 ©

Approved
06 Sep 2016

Effective Date: 06 Sep 2016

SCOPE:

None

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Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Fort Lee, Virginia foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

SECTION I. ADMINISTRATIVE DATA

All Course Masters/POIs Including This Lesson

Courses				
<u>Course Number</u>	<u>Version</u>	<u>Title</u>	<u>Phase</u>	<u>Status</u>
551-92Y10	05.0	Unit Supply Specialist	N/A	Analysis

POIs				
<u>POI Number</u>	<u>Version</u>	<u>Title</u>	<u>Phase</u>	<u>Status</u>
551-92Y10	05.0 ©	Unit Supply Specialist	0	Analysis

Task(s) Taught(*) or Supported

<u>Task Number</u>	<u>Task Title</u>	<u>Status</u>
Individual		
101-92Y-1409 (*)	Perform Organizational (Unit) Maintenance on Small Arms	Approved

Reinforced Task(s)

<u>Task Number</u>	<u>Task Title</u>	<u>Status</u>
101-92Y-1013	Maintain Unit Supply Files	Approved
101-92Y-1301	Control Weapons and Ammunition in the Arms Room	Approved

Knowledge

<u>Knowledge Id</u>	<u>Title</u>	<u>Taught</u>	<u>Required</u>
None			

Skill

<u>Skill Id</u>	<u>Title</u>	<u>Taught</u>	<u>Required</u>
None			

Administrative/ Academic Hours

The administrative/academic (50 min) hours required to teach this lesson are as follows:

<u>Academic</u>	<u>Resident Hours / Methods</u>		
Yes	1 hr	30 mins	Hardware-Oriented Test
Yes	3 hrs	40 mins	Demonstration
Yes	0 hrs	15 mins	Reflective Discussion
Yes	1 hr	30 mins	Practical Exercise (Hands-On/Written)
Yes	0 hrs	35 mins	Discussion (Small or Large Group)
<hr/>			
Total Hours(50 min):	8 hrs	0 mins	

Instructor Action Hours

The instructor action (60 min) hours required to teach this lesson are as follows:

<u>Hours/Actions</u>		
0 hrs	15 mins	Classroom Breakdown
0 hrs	15 mins	Classroom Setup
1 hrs	0 mins	Logistics Support – Weapon
0 hrs	25 mins	Student Counseling
1 hrs	0 mins	Student Re-test
0 hrs	25 mins	Student Re-train
<hr/>		
Total Hours (60 min):	3 hrs	20 mins

Test Lesson(s)

<u>Hours</u>	<u>Lesson Number Version</u>	<u>Lesson Title</u>
None		

Prerequisite Lesson(s)

<u>Hours</u>	<u>Lesson Number Version</u>	<u>Lesson Title</u>
None		

Training Material Classification

Security Level: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Foreign Disclosure Restrictions

FD1. This training product has been reviewed by the training developers in coordination with the Fort Lee, Virginia foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

References

<u>Number</u>	<u>Title</u>	<u>Date</u>
AR 25-400-2	THE ARMY RECORDS INFORMATION MANAGEMENT SYSTEM (ARIMS)	02 Oct 2007
PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual.	22 Aug 2005
TM 9-1005-319-10	Operator's Manual for Rifle, 5.56 MM, M16A2 W/E (1005-01-128-9936); Rifle, 5.56 MM, M16A3 (1005-01-357-5112); Rifle, 5.56 MM, M16A4 (1005-01-383-2872); Carbine, 5.56 MM, M4 W/E (1005-01-231-0973); Carbine, 5.56 MM, M4A1 (1005-01-382-0953)	30 Jun 2010
TM 9-1005-319-23&P	FIELD MAINTENANCE MANUAL (INCLUDING REPAIRPARTS AND SPECIAL TOOLS LIST) FOR RIFLE, 5.56MM, M16A2 W/EPN 9349000 (NSN 1005-01-128-9936) (EIC: 4GM) RIFLE, 5.56MM, M16A3, W/E, PN 12012000 (1005-01-357-5112) RIFLE, 5.56MM, M16A4, W/E PN 12973001	28 Nov 2008

Student Study Assignment

None

Instructor Requirements

Primary Instructor and Assistant Instructor(s)

Support Personnel Requirements

Armorer
Computer System Analyst

Additional Support Personnel Requirements

<u>Name</u>	<u>Student Ratio</u>	<u>Qty</u>	<u>Man Hours</u>
Armorer	0:0	1	1.0
Computer System Analyst	0:0	1	8.0

**Equipment
Required
for Instruction**

<u>ID - Name</u>	<u>Student Ratio</u>	<u>Instructor Ratio</u>	<u>Spt</u>	<u>Qty</u>	<u>Exp</u>
1005-00-921-5004 - Magazine, Cartridge	1:1	0:0	No	1	No
1005-01-128-9936 - Rifle 5.56 Millimeter: M16A2	1:1	0:0	No	1	No
5180-00-357-7770 - Tool Kit, Repairman's, Small Arms	1:10	0:0	No	1	No
7021-01-C14-3190 - Computer, Micro Lap-Top Portable AC: M4500 Dell	0:0	0:0	No	2	No
7021-01-D01-0269 - PC Tablet, Data Entry: IPAD 2 WIFI 64GB Apple	1:1	0:0	No	1	No
7025-01-C11-4208 - Printer, Daisy Wheel/Dot Matrix/:2335DN MFP Dell	0:0	0:0	No	1	No
7050-01-C14-4309 - Interactive Pen Display: ID422W Smart	0:0	0:0	No	1	No
7490-01-T00-0291 - Card Programmer: RFC-03G Turning Technologies	1:1	0:0	No	0	No
7490-01-T00-0292 - Card Programmer: XRC-R02 Turning Technologies	1:30	0:0	No	0	No

(Note: Asterisk before ID indicates a TADSS.)

**Materials
Required**

Instructor Materials:

- a. Lesson plan.
- b. Practical Exercise (PE).
- c. Practical Exercise Solution.
- d. Required publications.

Student Materials:

- a. Student Handout.
- b. Practical Exercise.
- c. Required Publications.
- d. Rags.
- e. Pen or pencil.

**Classroom,
Training Area,
and Range
Requirements**

<u>ID - Name</u>	<u>Quantity</u>	<u>Student Ratio</u>	<u>Setup Mins</u>	<u>Cleanup Mins</u>
17135-3000 Laboratory Instructional Building, 3000 Square Foot		1:30	20	30

**Ammunition
Requirements**

<u>DODIC - Name</u>	<u>Exp</u>	<u>Student Ratio</u>	<u>Instruct Ratio</u>	<u>Spt Qty</u>
AB46 - Dummy Cartridge, 5.56 Millimeter	N	5:1	5:3	

**Instructional Guidance/
Conduct of Lesson**

NOTE: Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material.

NOTE: Instructor/Facilitator will ensure to incorporate ALM 2015 and OE experiences.

Army Learning Model

All instructors/facilitators will facilitate training under the Army Learning Model. Ensuring training is based on quality, relevance and effectiveness of face-to-face learning experiences through outcome-oriented instructional strategies. This type of instruction will foster critical thinking, initiative and operational relevance in context.

OE Integration

Instructors/facilitators will facilitate conversations from students and relate this lesson to current operational environments (OE) using personal experiences and/or examples obtained from the Center of Army Lessons Learned (CALL). Instructors/facilitators should provide sufficient OE variables and scenarios to produce the desired soldier training outcome for this lesson.

NOTE: Verify that training data is loaded on the system before beginning the lesson.

**Proponent Lesson
Plan Approvals**

<u>Name</u>	<u>Rank</u>	<u>Position</u>	<u>Date</u>
romulo.santos	Not available	Approver	06 Sep 2016

SECTION II. INTRODUCTION

Method of Instruction: Discussion (Small or Large Group)
Mode of Delivery: Resident Instruction
Instr Type (I:S Ratio): Military - ICH, (1:30)
Time of Instruction: 15 mins

Motivator

SLIDE 92Y10D05-01 (ON)

INSTRUCTOR NOTE: Have class draw weapons from the armsroom.

The commander has designated you as his or her representative, responsible for the organizational maintenance of small arms. As a unit supply specialist, you will prepare, maintain, submit, and file all maintenance requirements for the unit's organizational weapons. You must have the skills and ability to perform all unit maintenance tasks. The unit armorer is an important job and requires attention to detail. If the M16A2 rifle is not maintained to required standards, the weapon will not operate, unit readiness will be degraded, and your unit may not be prepared to perform its mission.

Introduce the lesson to the students.

SLIDE 92Y10D05-01 (OFF)

SLIDE 92Y10D05-02 (ON)

Review the lesson terminal learning objective with the students.

SLIDE 92Y10D05-02 (OFF)

Terminal Learning Objective

NOTE. Inform the students of the following Terminal Learning Objective requirements.

At the completion of this lesson, you [the student] will:

Action:	Perform Preventive Maintenance on the Rifle 5.56mm, M16A2
Conditions:	Assigned as a unit supply specialist, in a classroom environment, given the requirement to perform preventive maintenance on the M16A2 Rifle. Given TM 9-1005-319-10, TM 9-1005-319-23&P, DA Pam 750-8, DA Form 5988-E, DA Form 5990-E, armorer toolkit, safety equipment, cleaner, lubricant and preservative (CLP) and a M16A2 Rifle.
Standards:	The Student will perform preventive maintenance on the M16A2 Rifle in accordance with TM 9-1005-319-23&P and DA Pam 750-8, finding all deficiencies without losing accountability.
Learning Domain - Level:	None assigned
No JPME Learning Areas Supported:	None

Safety Requirements

General classroom, weapon and electrical equipment safety procedures will be followed.

Before starting an inspection and/or performing any maintenance procedures, be sure to clear the weapon. During the clearing procedure always keep the weapon pointed in a safe direction.

A potential safety hazard exists if the weapon is assembled or disassembled incorrectly.

Students will ensure that safety glasses are worn at all times during the assembly and disassembly of the weapon.

Risk Assessment Level

Low - Action Spring and Buffer Assembly

Assessment: The buffer assembly can cause injury if resistance is not placed on the buffer, while depressing the buffer assembly detent.

Controls: Additional instruction and supervision.

Apply resistance on the buffer.

Wear safety goggles.

Incorporate procedures and warning as described in TM 9-1005-319-23&P.

Leader Actions: When available, additional instructors qualified with weapons will assist the primary instructor during the block of instruction.

Primary instructor will utilize "stop-go" method when training. Student will not proceed until told to do so. Instructor will spot check each weapon.

Continually emphasize safety to the student. Let students know what the outcome will be if procedures are not followed exactly as prescribed.

Environmental Considerations

NOTE: Instructor should conduct a risk assessment to include environmental considerations IAW the current environmental considerations publication, and ensure students are briefed on hazards and control measures..

NOTE: It is the responsibility of all Soldiers, DA Civilians, and Contractors to protect the environment from damage.

NOTE: Have dirty rags turned in to the supply room and cleaned on a weekly basis.

Instructional Lead-in

Explain to the soldier that performing organizational maintenance on small arms is similar to performing maintenance on a car. It is important to keep your car in good running condition so you can get back and forth to work. In the U.S. Army, weapons must be maintained to specified standards so the unit can successfully perform its mission in peacetime and war.

SECTION III. PRESENTATION

TLO - LSA 1. Learning Step / Activity TLO - LSA 1. Identify the Characteristics, Capabilities and Features, and Major Components of the Rifle 5.56mm, M16A2.

Method of Instruction: Discussion (Small or Large Group)

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 20 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

a. Equipment Description and Data

SLIDE 92Y10D05-3 (ON)

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-23&P, WP 0002-1.

1. Characteristics. The M16 series rifles and M4 series carbines are lightweight weapons. They are air-cooled, gas-operated, and magazine-fed. They have a semiautomatic, burst fire capacity.

2. Capabilities and Features.

a) The rifles and carbines provide personnel with an offensive/defensive capability to engage targets with direct small arms fire.

b) The receivers are made of light-weight aluminum alloys; however, the safety durability, and function of the rifles/carbines are in no way reduced. The portability and logistical values are greatly increased, particularly when air transport is used.

c) The bolt locking action is one of the mechanical features of the rifle/carbine. The bolt assembly and barrel extension contain locking lugs which engage and lock the bolt assembly firmly in the barrel extension. The initial force of the explosion of the cartridge is absorbed by the barrel, barrel extension and bolt assembly.

d) The trigger guard is easily adaptable to winter operations. A spring-loaded retaining pin is depressed to allow ready access to the trigger when wearing arctic mittens.

e) The ejection port cover prevents dirt or sand from getting into the ejection port. The ejection port cover must be closed during periods when firing is not anticipated. It opens automatically with the forward or rearward movement of the bolt carrier assembly.

3. Location and Description of Major Components.

a) Charging Handle Assembly. This assembly provides a means of charging the weapon.

b) Bolt Carrier Assembly. The bolt carrier assembly carries bolt assembly to chamber and fires the weapon. It contains the firing pin, cartridge extractor, bolt assembly, cartridge ejector, and bolt cam pin.

c) M16A2 Upper Receiver and Barrel Assembly. The upper receiver contains

rear sight assembly, ejection port, ejection port cover, and a housing for the key and bolt carrier assembly and bolt assembly. The rifle barrel assembly is air-cooled, contains compensator and front sight assembly, and holds the two handguard assemblies and the sling swivel.

d) Magazine. The magazine has a 30 cartridge capacity.

e) Lower Receiver and Buttstock Assembly. The lower receiver contains the trigger assembly, sear, hammer assembly, selector lever, rifle grip, bolt catch, and buttstock assembly. The buttstock assembly houses the action spring, buffer assembly, and extension assembly.

f) Sling. The sling is adjustable and provides a means to carry the weapon.

INSTRUCTOR NOTE: Click on picture to show M16A2 Characteristics/Data video. Review the equipment data with the students after the video completes playing.

SLIDE 92Y10D05-3 (OFF)

b. Theory of Operation.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-23&P, WP 003-1.

1. General. The 5.56mm M16A2 is gas-operated. It fires in the semiautomatic mode. The weapon has positive locking of the bolt. The firing pin is part of the bolt carrier assembly and cannot strike the primer until the bolt assembly is fully locked.

2. Principle of Operation.

a) Charging Handle Assembly. This assembly provides initial charging of the weapon. The handle latch locks the charging handle assembly in the forward position during sustained fire to prevent injury to the operator.

b) Bolt Carrier Assembly. This assembly provides stripping, chambering, locking, firing, extraction, and ejection of cartridges using the drive springs and projectile propelling gases for power.

c) M16A2 Upper Receiver and Barrel Assembly. The upper receiver provides support for the bolt carrier assembly. The barrel chambers the cartridge for firing and directs the projectile.

d) Magazine. The magazine holds cartridges ready for feeding and provides a guide for positioning cartridges for stripping. It provides quick reload capabilities for sustained firing.

e) Lower Receiver and Buttstock Assembly. This assembly provides firing control for the rifle. Storage for basic cleaning materials is provided in the M16A2 rifle.

f) Sling. The sling provides the means for carrying the weapon.

Check on Learning:

Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct any misunderstandings.

Question: Which Major Component of the M16A2 contains the ejection port and ejection port cover?

Answer: M16A2 Upper Receiver and Barrel Assembly.

Question: Which assembly on the M16A2 Rifle provides stripping, chambering, locking, firing, extraction and ejection of cartridges?

Answer: Bolt Carrier Assembly.

Review Summary:

Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 2.

Learning Step / Activity TLO - LSA 2. Unload and Clear the M16A2 Rifle.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 15 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-4 (ON)-Click on picture to begin video. Be prepared to pause video at 1:02 at the conclusion of unload/clear portion of video.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-10, WP 0008-1.

WARNING: To be considered SAFE before disassembly, cleaning, inspecting, transporting, or storing, the weapon must be cleared.

- a. Point the M16A2 in a SAFE DIRECTION! Place selector lever on SAFE. IF weapon is not cocked, lever can not be pointed toward SAFE.
- b. Remove cartridge magazine by depressing magazine catch button and pulling cartridge magazine down.
- c. To lock bolt open, pull charging handle rearward. Press bottom of bolt catch and allow bolt to move forward until it engages bolt catch. Return charging handle to full forward position. If you haven't before, place selector lever on SAFE.
- d. Check receiver and chamber to ensure these areas contain no ammo.
- e. With selector lever pointing toward SAFE, allow bolt to go forward by pressing upper portion of bolt catch.

Check on Learning:

Determine if the students have learned the material

presented by soliciting student questions and explanations.
Ask the students questions and correct misunderstandings.

Review Summary:

Conduct a Review/Summary of the information presented in
the Learning Step

TLO - LSA 3. Learning Step / Activity TLO - LSA 3. Disassemble and Troubleshoot the M16A2 Rifle.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 1 hr 30 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security
Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-4 Click on the pause button to finish viewing the video.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-10, WP 0013 00-1.

WARNING: To be considered SAFE before disassembly, cleaning, inspecting,
transporting, or storing, the weapon must be cleared.

a. Disassemble the M16A2 Rifle.

1) Clear the M16A2.

2) Remove sling.

CAUTION: Do not use a screwdriver or any other tool when removing the
handguards. Doing so may damage the handguard and/or slip ring.

3) Place the weapon on the buttstock and press down on the slip ring with both
hands.

4) Have another person pull the handguards free (the Buddy System").

NOTE: The round handguards are identical and can be interchanged (top or
bottom).

5) Install the handguards using the same system.

CAUTION: Only use hand pressure to disengage the pivot and takedown pins.

Force other than hand pressure may cause damage to the weapon and replacement of
the weapon would be required. Only push the pivot and takedown pins far enough to
disengage the upper receiver from the lower receiver.

6) Push takedown pin as far as it will go. Pivot upper receiver from lower receiver.

7) Push receiver pivot pin as far as it will go.

8) Separate upper and lower receivers.

9) Pull back charging handle and bolt carrier.

10) Remove bolt carrier and bolt.

11) Remove charging handle.

12) Remove firing pin retaining pin.

- 13) Push in bolt assembly to locked position.
- 14) Drop firing pin out rear of bolt carrier.
- 15) Remove bolt cam pin.
- 16) Remove bolt assembly from carrier.

NOTE: Disassemble bolt assembly only when dirty or damaged. Press rear of extractor to check spring function. See your armorer if spring is weak.

- 17) Remove extractor spring.
- 18) Remove extractor and spring assembly.

NOTE: Do not separate spring assembly from extractor.

- 19) Press in buffer, depress retainer, and release buffer.
- 20) Remove buffer and action spring.

SLIDE 92Y10D05-4 (OFF)

SLIDE 92Y10D05-5 (ON) - Click on picture to view video.

b. Troubleshoot the M16A2 Rifle

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-23&P, WP 0004. Review the Troubleshooting Symptoms with the students, select several symptoms, show students pieces affected and steps checked to remedy.

SLIDE 92Y10D05-5 (OFF)

Check on Learning:

Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary:

Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 4. Learning Step / Activity TLO - LSA 4. Reassemble the M16A2 Rifle.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 15 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-6 (ON)-Click on picture to begin video. View video to the 3:40 mark to view portion on reassembly of M16A2.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-10 WP 0017.

a. Insert buffer spring and buffer.

NOTE: Be sure not to lose extractor spring and rubber insert.

b. The large end of extractor spring assembly in the extractor and seat it by pushing and turning clockwise.

c. Insert extractor assembly into bolt.

d. Instructor extractor pin.

NOTE: Stagger ring gaps to stop gas loss.

WARNING: Do not switch bolts between weapons.

e. Slide bolt into bolt carrier.

f. Insert bolt cam pin.

WARNING: Be sure the cam pin is installed in the bolt carrier assembly. If it isn't your weapon can still fire and will explode.

g. Drop in and seat firing pin.

h. Pull bolt out.

i. Insert firing pin retaining pin.

NOTE: Firing pin should not fall out when bolt carrier assembly is turned upside down.

j. Insert charging handle part way.

NOTE: Be sure bolt is extended from bolt carrier.

k. Slide in bolt carrier assembly.

l. Push charging handle and bolt carrier assembly together into upper receiver until fully seated.

m. Join upper and lower receivers.

n. Engage receiver pivot pin.

CAUTION: Selector lever must be on SAFE or SEMI before closing upper receiver.

o. Close upper and lower receiver assembly. Push in takedown pin.

p. Place the weapon on the buttstock and press down on the slip ring with both hands.

q. Have your partner install one handguard on top and the other on the bottom (the "Buddy System").

r. Install sling.

Check on Learning:

Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary:

Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 5. Learning Step / Activity TLO - LSA 5. Perform Function Check on the M16A2 Rifle.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 15 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-6 Click on pause to complete viewing the video on completing the function check on the M16A2.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-10, WP 0010 00-1.

WARNING: Before starting functional check, be sure to clear the weapon. DO NOT squeeze the trigger until the weapon has been cleared. Inspect the chamber to ensure that it is empty and no ammunition is in position to be chambered.

- a. Remove Magazine and Check Chamber.
- b. Perform Functional Check.

1) SAFE: Place selector lever on SAFE. Pull charging handle to rear and release. Pull trigger. Hammer should not fall.

NOTE: Slow is defined as 1/4 to 1/2 the normal rate of trigger release.

2) SEMI: Place selector lever on SEMI. Pull trigger. Hammer should fall. Hold trigger to the rear and charge the weapon. Release the trigger with a slow, smooth motion, until the trigger is fully forward (an audible click should be heard). Pull trigger. Hammer should fall.

3) BURST: Place selector lever on BURST. Charge weapon and squeeze trigger, hammer should fall. Hold trigger to the rear, pull charging handle to the rear and release it three times. Release trigger. Squeeze trigger. Hammer should fall.

SLIDE 92Y10D05-6 (OFF)

Check on Learning: Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary: Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 6. Learning Step / Activity TLO - LSA 6. Perform preventive maintenance on the M16A2 Rifle.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 1 hr

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-7 (ON)

INSTRUCTOR NOTE: Provide student with a blank DA Form 5988-E from the student handout. Refer students to DA Pam 750-8, figure 3-24.

- a. Verify the administrative information on the DA Form 5988-E.

- 1) Verify the DODAAC is WBAKT0.
- 2) Verify the organization is HHC, 13th Military Police Battalion.
- 3) Verify ADMIN NUM and SERIAL NUMBER of the weapon.

INSTRUCTOR NOTE: Have student enter the serial number of the weapon that they are going to PMCS as the serial number .

- 4) Verify M16A2 is listed as the EQUIP MODEL.
- 5) Verify Rifle 5.56mm is listed as the EQUIP NOUN.
- 6) Verify Quarterly is listed as the TYPE INSPECTION.
- 7) Verify the EQUIP NSN is 1005-01-128-9936.
- 8) Verify the TMs being used.

INSTRUCTOR NOTE: Refer students to TM 9-1005-319-23&P, WP 0008-1. Review the PMCS procedures with the students.

INSTRUCTOR NOTE: Instructor can pick additional faults to ensure students understand how identify and document faults.

b. Perform Preventive Maintenance Checks and Services for the M16A2.

1) Magazine (Serviceability Check).

a) Check for availability of magazine.

b) Disassemble magazine. Inspect tube for bulges, dents or damaged feeder lips. Inspect spring and follower for kinks or damage. Replace magazine if any of these conditions exist.

c) Reassemble magazine and check for binding during operation of follower.

Replace magazine if follower binds.

2) Charging Handle Assembly and Selector Lever.

a) Pull charging handle to rear. check that chamber is clear. Let bolt carrier assembly close. Push charging handle forward to locked position. Leave hammer in cocked position. DO NOT pull trigger.

b) Selector Lever - SAFE.

(1) Place selector lever in SAFE position. Pull trigger. Hammer should not fall.

c) Selector Lever - SEMI.

(1) Place selector lever in SEMI position. Pull trigger. Hammer falls.

(2) Hold trigger to the rear, charge weapon, and release trigger with a slow, smooth motion, without hesitations or stops, until the trigger is fully forward (an audible click should be heard). Hammer should not fall until trigger is pulled.

(3) Repeat the SEMI position test five times.

d) Selector Lever - BURST.

(1) Place selector lever in BURST position. Charge weapon and squeeze trigger. Hammer should fall.

(2) Hold trigger to the rear, pull charging handle to the rear, and release it three times. Release trigger, Squeeze trigger. Hammer should fall.

e) Selector Lever - SAFE

(1) With hammer in forward position, use moderate finger/thumb pressure to attempt to place selector lever in SAFE position.

3) Upper Receiver and Barrel Assembly (Handguard Assemblies).

a) Remove and inspect handguard assemblies internally and externally for cracks and/or damage. Cracks are acceptable providing they do not extend into the handguard retaining flange, or adversely affect rifle operation, operator safety, or proper retention of handguard assembly. Discard and replace handguard assembly if heatshield is loose enough to rattle when installed on rifle.

4) Upper receiver and Barrel Assembly (Serviceability Check).

CAUTION: Damage may occur if excessive force is used to release takedown pin. Use hand pressure ONLY.

a) Release takedown pins and open separate receivers. Hand check compensator for looseness on barrel; then hand check barrel for looseness on upper receiver. Check center slot of compensator for alignment.

INSTRUCTOR NOTE: Inform students that the compensator is loose and will need to be annotated on the DA Form 2404.

(1) Enter [4] in column a for the TM item number.

(2) Enter the date the fault was discovered. Enter [14 Feb 20XX].

(3) Enter [X] in column b for the status symbol that applies to the fault or deficiency.

(4) Enter [Compensator is Loose] in column c as a brief description of uncorrected faults.

INSTRUCTOR NOTE: Reference students to WP 0039 to determine level of maintenance required.

(5) Enter [DA Form 2407 (SPT)] in column d for the corrective action taken.

(6) Student will enter their license information (First letter of last name and last 4 of SSN) in the Inspectors Lic # position.

(7) Resume conducting the PMCS.

b) Check gas tube, forward assist assembly, and rear sight assembly for damage.

c) Push in on forward assist assembly several times to check for slippage of the forward assist pawl.

d) Rear sight spring should retain rear sight assembly in either position with firmness.

NOTE: If front or rear sight is moved, return to original position.

e) Check front sight post, detent, and spring for damage and corrosion. Clean and lubricate. Check charging handle and ejection port cover for defects and proper function. Check sling swivel and rivet for damage and proper function.

f) Inspect finish of upper receiver for scratches or worn shiny spots.

g) Inspect for painted surfaces on weapon.

h) If scratched or worn shiny in spots, disassemble and remove all lubricant from surface with dry solvent. Wear rubber gloves and use a wash pan to apply solvent. Let parts dry thoroughly. Roughen the surface using abrasive cloth and apply solid film lubricant. Allow 16 to 24 hours to dry before handling.

i) Hold barrel at 40-degree angle (muzzle down) Pull charging handle to rear. Hold bolt carrier assembly to rear and push charging handle forward. Release bolt carrier assembly. The bolt carrier assembly should close and lock under its own weight. If it does not, remove bolt assembly from the key and bolt carrier assembly and slide the key and bolt carrier assembly (without bolt) back and forth in the upper receiver and barrel assembly. If the gas tube hits carrier key on the inside of upper receiver, or if the gas tube binds in carrier key, correct the malfunction by adjusting (slightly bending) the gas tube in area of handguard assemblies.

5) Key and Bolt Carrier Assembly Bolt Assembly (Serviceability Check).

WARNING: Unless performed by qualified maintenance personnel, do not interchange bolt assemblies from one weapon to another. Doing so may result in injury to, or death of, personnel.

a) Remove and disassemble. Visually inspect bolt assembly for cracks, especially in the area of bolt cam pin hole. Check for cracks on locking lugs, for a cluster of pits or chipped bolt face, and for an elongated firing pin hole. If cracked or broken, replace.

b) Check for worn or missing bolt rings. check for proper staggering of bolt rings. Insert bolt assembly into key and bolt carrier assembly. Turn key and bolt carrier assembly so bolt assembly points down. bolt assembly must not drop out. remove bolt assembly. check for broken or missing firing pin retaining pin and bolt cam pin; replace as necessary.

c) check cartridge extractor, extractor spring assembly, cartridge ejector, and ejector spring for dirt and serviceability. If dirty, clean, lubricate, and assemble. If unserviceable, replace as necessary.

d) Check key and bolt carrier assembly and carrier key for damage and looseness.

e) Check firing pin for chips or breaks. Pits or wear in area of flange is permissible.

6) Lower Receiver and Buttstock Assembly (Serviceability Check).

a) Remove buffer assembly and action spring. Check buffer assembly for cracks. Check action spring for kinks and free length. Free length for rifle should be 11-3/4 inches minimum to 13-1/2 inches maximum. Do not attempt to adjust spring length.

b) Remove pistol grip screw, lockwasher, pistol grip, helical spring, safety detent, pivot pin detent, and helical spring. Clean and lubricate metal components. Also clean and generously lubricate pivot pin holes spring/detent holes. Replace defective/damaged components as necessary.

c) Disengage takedown pin and pull out; push back into re-engage takedown pin (an audible click should be heard). If an audible click is not heard, repair.

d) Lubricate helical compression spring and takedown pin detent by placing one

drop of lubricant on takedown pin detent and lowering buttstock assembly to vertical position. Allow lubricant to work its way around the helical compression spring and takedown pin detent.

e) Check components of buttstock assembly for damage.

f) Cracks in the critical area at front end of buttstock are not acceptable. Under the following conditions, hairline cracks (no chipped away material allowed) originating from the buttplate end of the buttstock are acceptable.

(1) One hairline crack, not to exceed 1 inch in length, per side of buttstock.

(2) Two additional hairline cracks up to 0.25 inch in length, per side of buttstock.

(3) A total of three cracks per side of buttstock, originating from buttplate end, is allowable.

NOTE: A small amount of side-to-side, up-and-down, or rotational movement of buttstock assembly is acceptable.

g) Check buttstock assembly for forward to rear movement and/or a 1/32 inch gap between buttstock assembly and lower receiver. If forward to rear movement is present and/or a 1/32 inch gap appears, tighten machine screw. If still not tight, remove buttstock assembly and check for loose receiver extension. If receiver extension is loose, repair. If not loose, replace buttplate, using new machine screw.

h) Check buttplate for cracks or damage.

(1) Cracks are visible around the buttplate mounting hole while screws are mounted.

(2) Cracks or separations around door assembly are visible when the door assembly is closed.

(3) If buttplate is cracked in excess of 0.25 inch in length and extends through buttplate, repair.

(4) Buttplate should not be removed except for repair or replacement of parts at which time a new machine screw, NSN 5305-01-147-8585, must be used.

i) Function check magazine catch and bolt catch.

NOTE: If a weapons lower receiver is missing one third or more of its exterior protective finish, resulting in an unprotected/light reflecting surface, it is a candidate for overhaul. This missing finish will be considered a shortcoming. This SH requires action to obtain a replacement weapon. Once a replacement has been received, evacuate the original weapon to depot for overhaul.

j) Check finish of lower receiver for scratches and worn shiny spots. If scratched or worn shiny in spots, repair in the same manner as stated for upper receiver.

7) M16 Series Rifles

a) Assemble weapon per TM 9-1005-319-10.

b) Check sling for damage. If damaged, replace.

c) Check for improperly assembled, broken, missing, or damaged parts. Check overall general appearance. Replace parts or repair as required.

8) Annual Safety and Serviceability Inspection Gaging. Check to ensure annual safety and serviceability inspection gaging has been done and that the next gaging

and inspection is scheduled.

9) Upon completion of PMCS, if a deficiency has been found the DA Form 5988-E will be signed by the armorer or supervisor.

SLIDE 92Y10D05-7 (OFF)

Check on Learning: Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary: Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 7. Learning Step / Activity TLO - LSA 7. Verify the DA Form 5990-E.

Method of Instruction: Demonstration

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 15 mins

Media Type: Actual Equipment / PowerPoint Presentation

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

SLIDE 92Y10D05-8 (ON)

a. Now that a fault that requires a higher level of maintenance is identified, the DA Form 5990-E, Maintenance Request Form, must be prepared. The SAMS-E operator will take the required information from the DA Form 5988-E or DA Form 2404. You will need to verify the information is accurate before taking the DA Form 5990-E and the weapon to the next level of maintenance for repair.

INSTRUCTOR NOTE: Remind students that a manual form DA 2407 can also be used as a Maintenance Request Form.

SECTION I - CUSTOMER DATA

1) Verify **WBAKT0** is entered as the UIC.

2) Verify **HHC, 13th MP BN** is entered as the unit.

3) Verify **(804) 765-8591** is entered as the phone number.

4) Verify **0** is entered as the UTIL CODE. Refer to DA Pam 750-8, App B, Table B-6 for applicable utilization codes.

SECTION II - ACTIVITY DATA

5) Verify the support agency information is accurate.

SECTION III - EQUIPMENT DATA

6) Verify **1** is entered in the TYPE MNT REQ location. Refer to DA Pam 750-8, App B, Table B-20 for available codes.

- 7) Verify **A** is entered in the ID location.
 - 8) Verify **1005011289936** is entered in the NSN location.
 - 9) Verify **M16A2** is entered in the MODEL location.
 - 10) Verify **Rifle 5.56mm** is entered in the NOUN location.
 - 11) Verify the serial number matches the serial number on the DA Form 5988-E.
 - 12) Verify **00001** is entered as the QTY.
 - 13) Verify a work order number is entered. This number will be generated by the SAMS-E System.
 - 14) Verify **12** is entered as the PRIORITY.
 - 15) Verify **A** is entered in the FAILURE DETECTED location. Refer to DA Pam 750-8, App B, Table B-3 for available codes.
 - 16) Verify **F** is entered as the LEVEL OF WORK.
 - 17) Verify ADMIN NUM is entered.
 - 18) Verify **Compensator is loose** is entered as the deficiency. The deficiency should match the deficiency listed on the DA Form 5988-E/DA Form 2404.
 - 19) Obtain signature in the PD AUTHENTICATING SIGNATURE if required. Signature of commander or commander's designated representative is required for all 01 through 10 Priority requests.
- SECTION IV - SIGNATURE DATA - Can be completed when weapon is turned in at support maintenance for repair.

b. Attach DA Form 2404/DA Form 5988-E to the DA Form 5990-E.

c. Submit all copies of the Maintenance Request Form to Support Maintenance with the weapons.

SLIDE 92Y10D06-8 (OFF)

Check on Learning:

Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary:

Conduct a Review/Summary of the information presented in the Learning Step.

TLO - LSA 8. Learning Step / Activity TLO - LSA 8. Practical Exercise - Perform Preventive Maintenance on a Rifle 5.56mm M16A2 PE.

Method of Instruction: Practical Exercise (Hands-On/Written)

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 1 hr 30 mins

Media Type: Actual Equipment / Practical Exercise

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

Complete the practical exercise included with this lesson.

- a. Give the students time to complete the practical exercise for this lesson.
- b. Assist the students as needed during the practical exercise to ensure material is understood.
- c. Review the practical exercise with the students and answer any questions the students may have.

Check on Learning: Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary: Review the practical exercise with the students. Review the questions and clear up any misunderstandings that the students may have.

TLO - LSA 9. Learning Step / Activity TLO - LSA 9. Conduct Rifle 5.56mm, M16A2 Performance Exam.

Method of Instruction: Hardware-Oriented Test

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, (1:10)*

Time of Instruction: 1 hr 30 mins

Media Type: Actual Equipment

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: U - Unclassified.

Note: Marked as (*) is derived from the parent learning object

The soldier will complete a hands on performance based examination covering the materials presented in this lesson. The exam will be graded on a GO/NO-GO basis. Student must receive a GO to be considered successful.

Check on Learning: Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct misunderstandings.

Review Summary:

- a. Conduct a Test Review/Analysis with the students.
- b. Review any questions and clear up any misunderstandings that the students may have.
- c. Ensure all test material is gathered from the students. Secure all test material until it can be secured.

SECTION IV. SUMMARY

Method of Instruction:	Reflective Discussion
Mode of Delivery:	Resident Instruction
Instr Type(I:S Ratio):	Military - ICH, (1:30)
Time of Instruction:	15 mins

Check on Learning

Determine if the students have learned the material presented by soliciting student questions and explanations. Ask the students questions and correct any misunderstandings.

Question: Which Work Package in TM 9-1005-319-23&P references the national stock number for the Tool Kit, Small Arms?

Answer: WP 0044, Table 2

Question: What is the first step before disassembly of the weapon?

Answer: Clear the weapon.

Question: What Work Package in TM 9-1005-319-23&P covers unit maintenance instructions?

Answer: WP 0008

Question: Which publication covers function checks on the M16A2 Rifle?

Answer: TM 9-1005-319-10

Review/ Summary

SLIDE 92Y10D05-9 (On)

During this lesson we covered the following topics:

- a. M16A2 equipment description, data and characteristics.
- b. Unload and clear the M16A2.
- c. Disassemble the M16A2.
- d. Perform unit maintenance on the M16A2.
- e. Reassemble the M16A2.
- f. Perform function check on the M16A2.
- g. Prepare the DA Form 2407

SLIDE 92Y10D05-9 (Off)

INSTRUCTOR NOTE: Have the class turn weapons into the armsroom.

SECTION V. STUDENT EVALUATION

Testing Requirements

The student will be evaluated on disassembly/assembly procedures and conducting preventive maintenance on a GO/NO-GO basis. The student must receive a GO to be successful.

Feedback Requirements

NOTE: Feedback is essential to effective learning.

Schedule and provide feedback on the evaluation and any information to help answer students questions about the lesson. Provide remedial training as needed.

Review the completed DA Form 2404 and DA Form 2407, if required, with the students and verify that the forms are correct.

Appendix A - Viewgraph Masters

Perform Maintenance on the Rifle, 5.56mm, M16A2 101-92Y10D05 / Version 05.0 ©

Sequence	Media Name	Media Type
1	M16A2 Intro	MP3
2	M16A2 Clear and Disassembly	MP3
3	M16A2 Assembly and Function Check	MP3
4	92Y10D05 Ver3 Classroom Presentation	PPTX

Appendix B - Assessment Statement and Assessment Plan

Assessment Statement: None.

Assessment Plan: None.

Appendix C - Practical Exercises and Solutions

PRACTICAL EXERCISE(S)/SOLUTION(S) FOR LESSON 101-92Y10D05 Version 05.0 ©

Appendix D - Student Handouts

Perform Maintenance on the Rifle, 5.56mm, M16A2 101-92Y10D05 / Version 05.0 ©

Sequence	Media Name	Media Type
10	92Y10D05 Ver3 Student Handout	DOCX
20	92Y10D05 Ver3 Practical Exercise	DOCX
21	92Y10D05 Ver3 Practical Exercise Solution	DOCX