071-COM-0032
Maintain an M16-Series Rifle/M4-Series Carbine
Status: Approved

Security Classification: U - Unclassified
Distribution Restriction: Approved for public release; distribution is unlimited.
Destruction Notice: None
Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the G2, Ft Benning, GA 31905 foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.
**Conditions:** You have just returned from a mission and have been directed to conduct maintenance on your weapon. You have with your M16 series rifle or M4 series carbine, technical manual TM 9-1005-319-10, and the appropriate cleaning kit and materials. Some iterations of this task should be performed in MOPP 4.

**Standards:** Clear, disassemble, clean, inspect, lubricate, assemble, and perform a function check on the M16/M4. Maintain the magazine and ammunition. All maintenance must be performed in accordance with TM 9-1005-319-10. Steps must be performed in sequence.

**Special Conditions:** None

**Safety Risk:** Low

**MOPP 4:** Sometimes

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**Task Statements**

**Cue:** None

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**DANGER**

None

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**WARNING**

Always clear the weapon before cleaning.
Ensure weapon is always pointed in a safe direction.
Failure to comply with above warnings may result in injury or death to personnel. Seek immediate medical attention if injury occurs.

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**CAUTION**

None

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**Remarks:** None

**Notes:** There is a Windows 3D interactive multi-media instructions (IMI) model that supports this task on the Central Army Registry (CAR) https://rdt.train.army.mil. Search for title: M4-Series Carbine - Windows 3D Interactive Multi-media Instructions (IMI).
Performance Steps

1. Clear the weapon.

2. Disassemble the weapon.
   a. Remove the sling.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Do not use a screwdriver or any other tool when removing the handguards. Doing so may damage the handguards, slip ring, or both.</td>
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<tr>
<td>Do not bend or dent the gas tube while removing handguard.</td>
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   b. Remove the handguards or lower adapter rails.
      Note: The operator is only authorized to remove the lower adapter rail and rail covers for cleaning, lubrication, or attaching accessories. The adapter rails for the M16A4 rifle and M4 carbine series replaced the handguards.
      (1) Place the weapon on the buttstock.
      (2) Press down on the slip ring with both hands.
      (3) Pull the handguards free.

   c. Push the takedown pin as far as it will go.

   d. Pivot the upper receiver from the lower receiver.

   e. Push the receiver pivot pin in as far as it will go.

   f. Separate the upper and lower receivers.

   g. Remove carrying handle, if applicable.
      (1) Loosen the screws on the left side of the clamping bar.
      (2) Lift the handle off once the clamping bar is loose.

   h. Pull back the charging handle.

   i. Remove the bolt carrier and bolt.

   j. Remove the charging handle.

   k. Disassemble the bolt carrier.
      (1) Remove the firing pin retaining pin.
         Note: Do not spread open or close split end of pin.
      (2) Push in bolt assembly to locked position.

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(3) Drop firing pin out of rear of bolt carrier.

(4) Remove the bolt cam pin by turning it one-quarter of a turn and lifting it out.

(5) Remove bolt assembly from carrier.

(6) Press the rear of the extractor pin to check spring function.
   Note: Any weak springs should be reported to the unit armor for replacement.

(7) Remove the extractor pin by pushing it out with the firing pin.

(8) Lift out the extractor and spring, taking care that the spring does not separate from the extractor.
   Note: Notify Field Maintenance if spring is damaged or missing.

l. Remove buffer and buffer spring from buttstock.
   (1) Press in buffer depress retainer and release buffer.
   (2) Remove buffer and action spring.

m. Remove the buttstock (M4 series only).
   (1) Extend the buttstock assembly to full open.
   (2) Separate the buttstock assembly from the lower receiver extension.
      (a) Grasp the lock lever in the area of the retaining nut.
      (b) Pull downward.
      (c) Slide the buttstock to the rear.

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**CAUTION**

Do not mix parts the parts of one weapon with other weapons. Parts are not interchangeable.

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3. Clean the weapon.
   Note: CLP (cleaner, lubricant, and preservative) is used in the steps to identify when lubricant is needed, however it can be replaced with LSA (weapons lubricant oil, semifluid), or LAW (lubricating oil, arctic weather) as applicable.
   Do not mix lubricants on the same weapon. The weapon must be thoroughly cleaned using dry cleaning solvent (SD) when changing from one lubricant to another.

   a. Clean the bore.
      Note: The bore of your weapon has lands and grooves called rifling. Rifling makes the bullet spin very fast as it moves down the bore and down range. Because it twists so quickly, it is difficult to push a new, stiff bore brush through the bore. You will find it easier to pull your bore brush through the bore. Also, because the brush will clean better if the bristles follow the grooves (called tracking), you want the bore brush to be allowed to turn as you pull it through.
      (1) Attach three cleaning rod sections together.
      (2) Attach the rod tip with a patch moistened with CLP or rifle bore cleaner (RBC).
      (3) Swab out the bore.
      (4) Attach the bore brush.
         Note: When using bore brush, don’t reverse direction while in bore.
      (5) Point muzzle down.
(6) Hold the upper receiver in one hand while inserting the end of the rod without the brush into the chamber.

(7) Let the rod fall straight through the bore.
   Note: About 2 to 3 inches will be sticking out of the muzzle at this point.

(8) Attach the handle section of the cleaning rod to the end of the rod sticking out of the muzzle.

(9) Pull the brush through the bore and out of the muzzle.

(10) Take off the handle section.

(11) Run the brush through the bore again by repeating the process.

(12) Replace the bore brush with the rod tip.

(13) Attach a patch with CLP to the rod tip.

(14) Pull the patch through the bore.

b. Clean the upper receiver group.

(1) Connect chamber brush to cleaning rod handle.

(2) Dip the chamber brush in CLP and insert in chamber and locking lugs.

(3) Push and twist to clean.

(4) Use a worn out bore brush to clean outside of gas tube.
   Note: Gas tubes will discolor from heat. Do not attempt to remove discoloration.

(5) Clean the entire upper receiver by wiping it down.

c. Clean the bolt carrier group.

(1) Clean carbon and oil from firing pin.

(2) Clean bolt carrier key with worn brush.

(3) Clean firing pin recess with pipe cleaner.

(4) Clean firing pin hole with pipe cleaner.

(5) Clean behind bolt rings and lip of extractor.

(6) Clean carbon deposits and dirt from locking lugs.

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**CAUTION**

Do not use a wire brush or any other type of abrasive material to clean aluminum surfaces. Damage to equipment may occur.

d. Clean the lower receiver group.

(1) Wipe dirt from trigger with a patch.

(2) Use a patch dampened with CLP to clean powder fouling, corrosion, and dirt from outside parts of lower receiver and extension assembly.
(3) Use pipe cleaner to clean buttstock drain hole.

(4) Clean buffer assembly, spring, and inside with patch dampened with CLP.

(5) Wipe dry.

e. Clean the ejector.

**WARNING**

Do not use a live round to perform this process.

(1) Place a few drops of CLP on the ejector.

(2) Press the ejector in using a spent round casing or dummy round.

(3) Hook casing under extractor and rock back and forth against ejector.

(4) Repeat this process a few times adding lubricant until the action of the ejector is smooth and strong.

(5) Dry off excess CLP when process is completed.

f. Clean the adapter rails and covers.

   Note: Do not apply CLP to the plastic surfaces of the rail covers.

   (1) Clean the adapter rails and rail covers with a general-purpose brush from the standard cleaning kit.

   (2) Lubricate the upper and lower rail assemblies and retaining clips in the rail covers.

**CAUTION**

Do not remove the heat reflective surface from lower adapter rail. Failure to comply may result in damage to equipment.

(3) Remove the lower rail assembly when debris is present and thoroughly clean the thermal liner.

(4) Rinse the upper and lower rail assemblies in fresh water as soon as possible, if exposed to salt water or corrosive materials.

(5) Lubricate the upper and lower rail assemblies, as required.

4. Inspect the weapon for serviceability.

   a. Inspect the upper receiver group.

      (1) Check handguards or rails for cracks, broken tabs, proper installation, and loose heat shields.

      (2) Check front sight post for straightness.

      (3) Check depression of the front detent.

      (4) Check compensator for looseness.

      (5) Check barrel for straightness, cracks, burrs, or looseness.
6. Check charging handle for cracks, bends, or breaks.

7. Check rear sight assembly for properly working windage and elevation adjustments.

8. Ensure the short and long range sight spring holds the selected sight in place.

9. Check gas tube for bends or retention to barrel.

b. Inspect the bolt carrier group.

1. Inspect bolt cam pin for cracking or chipping.

2. Inspect firing pin for bends, cracks, and sharp or blunted tip.
   Note: Bolts that contain pits in the firing pin hole need replacing.

3. Inspect for missing or broken gas rings.

4. Inspect bolt cam pin area for cracking or chipping.

5. Inspect locking lugs for cracking or chipping.

6. Inspect extractor assembly for missing extractor spring assembly with insert and for chipped or broken edges on the lip which engages the cartridge rim.

7. Inspect firing pin retaining pin to determine if bent or badly worn.

8. Inspect bolt carrier for loose bolt carrier key.

9. Inspect for cracking or chipping in cam pin hole area.

c. Inspect the lower receiver.

1. Inspect buffer for cracks or damage.

2. Inspect buffer spring for kinks.

3. Inspect buttstock for broken buttplate or cracks.

4. Inspect for bent or broken selector lever.

5. Inspect rifle grips for cracks or damage.

6. Inspect for broken or bent trigger.

7. Visually inspect the inside parts of the lower receiver for broken or missing parts.

d. Turn weapon in for maintenance if damaged or unservicable parts are found during inspection.

5. Lubricate the weapon.

   Note: Under all but the coldest arctic conditions, CLP is the lubricant to use on the weapon. Temperature between +10 degrees fahrenheit and -10 degrees fahrenheit, use either CLP or LAW. For -35 degrees fahrenheit or lower, use LAW only. Lightly lube means apply a film of lubricant barely visible to the eye. Generously lube means apply the lubricant heavily enough so that it can be spread with the finger.

   a. Lubricate the upper receiver and carrying handle.

      1. Lightly lubricate inside of upper receiver, bore, chamber, front sight, outer surfaces of barrel, and under the handguards.

      2. Apply a drop or two of lubricant to the front sight detent.

         (a) Depress and apply two or three drops of CLP to the front sight detent.
(b) Depress several times to work the lube into the spring.

(3) Apply a drop or two of lubricant to both threaded studs.

(a) Lightly lube the clamping bar and both round nuts.

(b) Lightly lube the mating surface.

(4) Apply one or two drops of lubricant to the adjustable rear sight.

(5) Ensure that the lubricant is spread evenly in the rear sight by rotating the following parts.

(a) Elevation screw shaft.

(b) Elevation knob.

(c) Windage knob.

(d) Windage screw.

b. Lubricate the lower receiver group.

(1) Lightly lube the inside and outside lower receiver extension, buffer, and action spring.

(a) Lightly lube the inside buttstock assembly.

(b) Generously lube the buttstock lock-release lever and retaining pin.

(2) Generously lube the take down pin, pivot pin, detents, and all other moving parts and their pins.

c. Lubricate the bolt carrier group.

(1) Lightly lube the charging handle and the inner and outer surfaces of the bolt carrier.

(2) Place one drop of CLP in the carrier key.

(3) Apply a light coat of CLP on the firing pin and firing pin recess in the bolt.

(4) Generously lube the outside of the bolt body, bolt rings, and cam pin area.

(5) Apply a light coat of CLP on the extractor and pin.

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**WARNING**

Do not interchange bolts between weapons.

6. Assemble the weapon.

a. Assemble the bolt carrier.

(1) Insert the extractor and spring.

(2) Push in the extractor pin.

(3) Slide the bolt into the carrier.
DANGER

The cam pin must be installed in the bolt group. Failure to do so will cause weapon to explode when fired next. Injury or death may occur.

(4) Replace the bolt cam pin.

(5) Drop in and seat the firing pin.

(6) Pull the bolt back.

(7) Replace the retaining pin.

b. Engage and then push the charging handle in part of the way.

c. Slide in the bolt carrier assembly.

d. Push in the charging handle and the bolt carrier group together.

e. Insert the action spring and buffer.

f. Install the buttstock assembly. (M4 series only)

   (1) Align the buttstock assembly with the lower receiver extension.

   (2) Pull downward on the lock release lever near the retaining pin.

   (3) Slide the buttstock assembly onto the lower receiver extension.

g. Join the upper and lower receivers.

h. Engage the receiver pivot pin.

i. Close the upper and lower receiver groups.

j. Push in the takedown pin.

k. Install the handguards.

l. Install the carrying handle, if applicable.

m. Install the sling.

7. Perform a function check.

8. Maintain the magazine.

   a. Disassemble magazine.

      (1) Insert the end of a cleaning rod into the hole in the base of the magazine.

      (2) Raise the rear of the magazine until the indentation on the base is clear of the magazine.

      (3) Slide the base forward until it is free of the tabs.

      (4) Remove the magazine spring and follower (do not separate).
b. Clean all parts using a rag soaked with CLP.

c. Dry all parts.

d. Inspect parts for damage such as dents and corrosion.
   Note: If any damage is found, turn in to maintenance.

e. Lightly lube the spring only.

f. Assemble the magazine.
   
   (1) Insert the follower and spring into the magazine tube.
   
   (2) Jiggle the spring to seat them in the magazine.
   
   (3) Slide the base under all four tabs until it is fully seated.
   
   (4) Make sure the printing is on the outside.

9. Maintain the ammunition.

   a. Clean the ammunition with a clean dry rag.

   b. Inspect for and turn in any ammunition with the following defects:

      (1) Corrosion.

      (2) Dented cartridges.

      (3) Cartridges with loose bullets.

      (4) Cartridges with the bullet pushed in.

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier scores a NO-GO, show the Soldier what was done wrong and how to do it correctly.

**Evaluation Preparation:** Setup: Provide the Soldier with the equipment and materials described in the conditions statement.

Brief the Soldier: Tell the Soldier what is required to successfully complete the task by reviewing the conditions and standards. Stress the importance of observing cautions, warnings, and dangers, as applicable.

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<tr>
<th>PERFORMANCE MEASURES</th>
<th>GO</th>
<th>NO-GO</th>
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<td>1. Cleared the weapon.</td>
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<td>7. Performed a function check.</td>
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<td>8. Maintained the magazine.</td>
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<td>9. Maintained the ammunition.</td>
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**Supporting Reference(s):**
Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card.

Safety: In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine.

Prerequisite Individual Tasks: None

Supporting Individual Tasks:

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<tr>
<th>Task Number</th>
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<tr>
<td>071-COM-0027</td>
<td>Unload an M16-Series Rifle/M4-Series Carbine</td>
<td>071 - Infantry (Individual)</td>
<td>Approved</td>
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Supported Individual Tasks: None

Supported Collective Tasks: None

Knowledges:

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<tr>
<td>071-WPN-0059</td>
<td>Identity and Location of Parts of Infantry Weapons</td>
</tr>
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<td>071-OPN-0016</td>
<td>Inspection Techniques</td>
</tr>
<tr>
<td>071-WPN-0063</td>
<td>Weapons Functions</td>
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<td>Load and Unload Infantry Weapons</td>
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<td>071-WPN-0011</td>
<td>Identify Operational Parts</td>
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<td>071-WPN-0014</td>
<td>Use Cleaning Materials</td>
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<td>071-WPN-0010</td>
<td>Perform a Function Check on Infantry Weapons</td>
</tr>
<tr>
<td>071-WPN-0006</td>
<td>Clear Infantry Weapons</td>
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**ICTL Data**: None