

RIFLE MARKSMANSHIP

M16-/M4-SERIES WEAPONS



August 2008

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HEADQUARTERS

Chapter 3

Troubleshooting and Destruction

Commanders and unit armorers are responsible for the field level maintenance of weapons and for the destruction of weapons, when necessary. Soldiers are responsible for keeping their weapons clean and operational at all times—in training and in combat—therefore, they should be issued an operator's TM and cleaning equipment for their assigned weapons.

STOPPAGES

3-1. A stoppage is a failure of an automatic or semiautomatic firearm to complete the cycle of operation. The firer can apply immediate or remedial action to clear the stoppage. Some stoppages cannot be cleared by immediate or remedial action and may require weapon repair to correct the problem. A complete understanding of how the weapon functions is an integral part of applying immediate action procedures.

IMMEDIATE ACTION

3-2. Immediate action involves quickly applying a possible correction to reduce a stoppage without performing troubleshooting procedures to determine the actual cause. Apply immediate action only once for a stoppage. If the rifle fails to fire a second time for the same malfunction, inspect the weapon to determine the cause of the stoppage or malfunction, and take the appropriate remedial action. The key word **SPORTS** will help the firer remember the steps for immediate action:

- (1) **Slap** gently upward on the magazine to ensure that it is fully seated and that the magazine follower is not jammed.

NOTE: When slapping up on the magazine, be careful not to knock a round out of the magazine into the line of the bolt carrier, causing more problems. Slap only hard enough to ensure that the magazine is fully seated. Ensure that the magazine is locked into place by quickly pulling down on the magazine.

- (2) **Pull** the charging handle fully to the rear.
- (3) **Observe** the ejection of a live round or expended cartridge.

NOTE: If the weapon fails to eject a cartridge, perform remedial action.

- (4) **Release** the charging handle; do not ride it forward.
- (5) **Tap** the forward assist assembly to ensure that the bolt is closed.
- (6) **Squeeze** the trigger and try to fire the rifle.

REMEDIAL ACTION

3-3. Remedial action is the continuing effort to determine the cause of a stoppage or malfunction and attempt to clear the stoppage once it has been identified. To apply the corrective steps for remedial action—

- (1) Try to place the weapon on SAFE.

NOTE: A bolt override may not allow the weapon to be placed on SAFE.

- (2) Remove the magazine.
- (3) Lock the bolt to the rear.
- (4) Place the weapon on SAFE (if not already done).

MALFUNCTIONS

3-4. Malfunctions are caused by procedural or mechanical failures of the rifle, magazine, or ammunition. Prefiring checks and serviceability inspections identify potential problems before they become malfunctions. This section describes the primary categories of malfunctions.

NOTE: In training, Soldiers must alert other Soldiers and range personnel when experiencing weapon malfunctions.

FAILURE TO FEED, CHAMBER, OR LOCK

3-5. This malfunction can occur when loading the rifle or during the cycle of operation. Once the magazine has been loaded into the rifle, the forward movement of the bolt carrier group could lack enough force (generated by the expansion of the action spring) to feed, chamber, or lock the bolt (Figure 3-1).

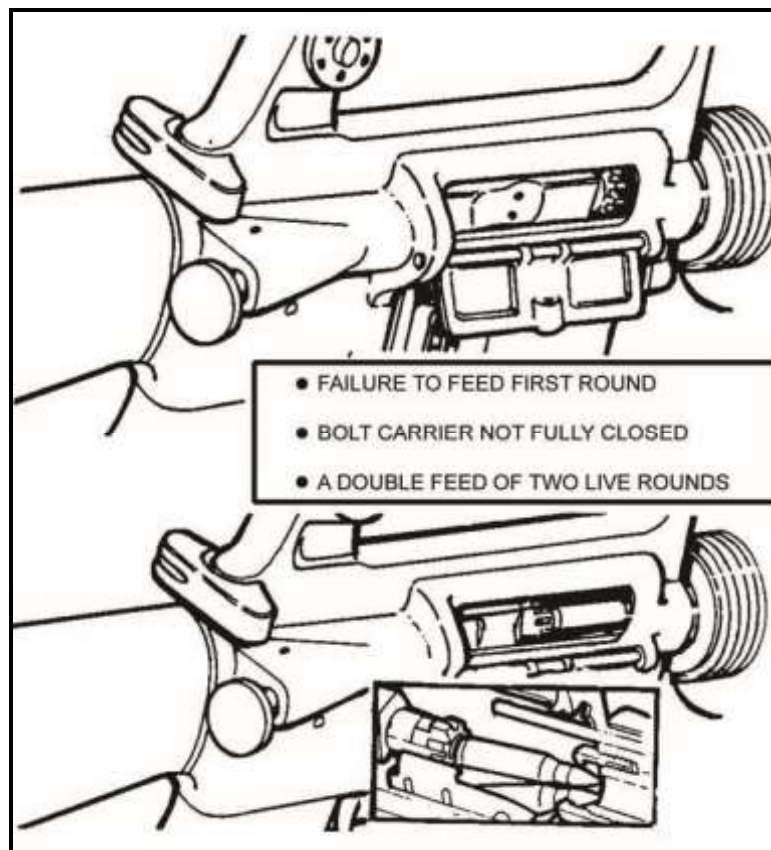


Figure 3-1. Failure to feed, chamber, or lock.

Probable Causes

- 3-6. The malfunction could be the result of one or more of the following:
- ⌘ Excess accumulation of dirt or fouling in and around the bolt and bolt carrier.
 - ⌘ Defective magazine (dented, bulged, or a weak magazine spring).
 - ⌘ Improperly loaded magazine.
 - ⌘ Defective round (projectile forced back into the cartridge case, which could result in a stubbed round, or the base of the previous cartridge could be separated, leaving the remainder in the chamber).
 - ⌘ Damaged or broken action spring.
 - ⌘ Exterior accumulation of dirt in the lower receiver extension.
 - ⌘ Fouled gas tube (resulting in short recoil).
 - ⌘ A magazine resting on the ground or pushed forward (causing an improper lock).

Corrective Action

3-7. Applying immediate action usually corrects the malfunction. To avoid the risk of further jamming, watch for ejection of a cartridge and ensure that the upper receiver is free of loose rounds.

3-8. If immediate action fails to clear the malfunction, take remedial action.

NOTE: Do not force the bolt carrier.

3-9. If resistance is encountered (which can occur with an unserviceable round)—

- (1) Lock the bolt to the rear.
- (2) Remove the magazine.
- (3) Clear the malfunction.

3-10. For example, to correct a bolt override (a cartridge has wedged itself between the bolt and charging handle)—

- (1) Ensure that the charging handle is pushed forward and locked into place.
- (2) Attempt to place the weapon on SAFE.
- (3) Secure the rifle, and pull the bolt to the rear until the bolt seats completely into the buffer well.
- (4) Turn the rifle upright and allow the overridden cartridge to fall out.

FAILURE TO FIRE CARTRIDGE

3-11. Despite the fact that a round has been chambered, the trigger has been pulled, and the sear has released the hammer, a cartridge may fail to fire. This occurs when the firing pin fails to strike the primer with enough force or when the ammunition is defective. The firer must follow unit safety guidelines until the determining factors of the misfire have been identified and corrected.

Probable Causes

3-12. Excessive carbon buildup on the firing pin (Figure 3-2, A) is often the cause, because the full forward travel of the firing pin is restricted. A defective or worn firing pin can give the same results. Inspection of the ammunition could reveal a shallow indentation or no mark on the primer, indicating a firing pin malfunction (Figure 3-2, B). Cartridges that show a normal indentation on the primer (but did not fire) indicate faulty ammunition or failure of the cartridge to fully seat in the chamber.

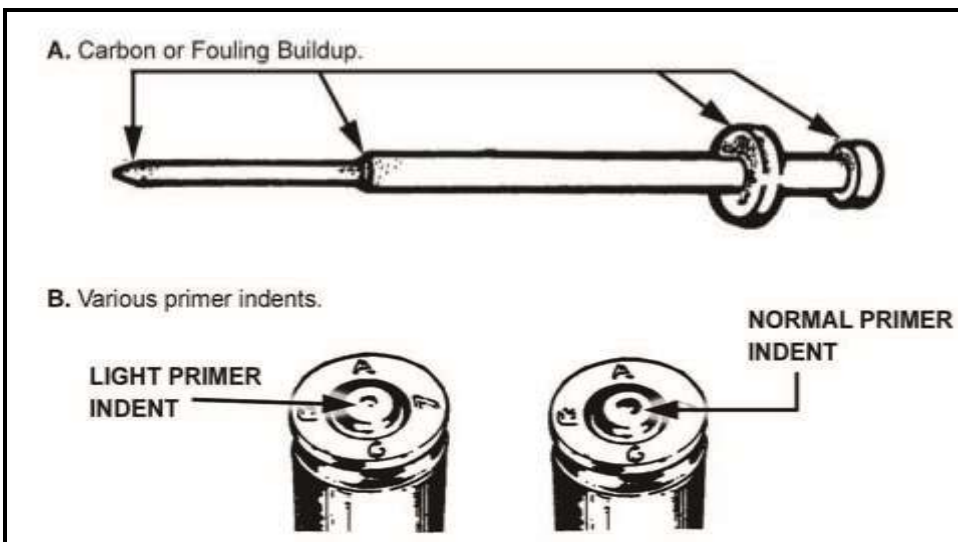


Figure 3-2. Failure to fire.

Corrective Action

3-13. If the malfunction continues—

- (1) Inspect the firing pin, bolt, bolt carrier, and locking lug recesses of the barrel extension.
- (2) Remove any accumulation of excessive carbon or fouling.
- (3) Inspect the firing pin for damage.

3-14. If the round is suspected to be faulty, dispose of it IAW the unit SOP, and ensure that it is reported and returned to the agency responsible for issuing ammunition.

WARNING

If an audible pop or reduced recoil occurs during firing, immediately cease fire. This could be the result of a round being fired without enough force to send the projectile out of the barrel. Do not apply immediate action. Instead, perform the following actions:

- 1. Lock the bolt to the rear.**
- 2. Place the selector lever in the SAFE position.**
- 3. Remove the magazine.**
- 4. Visually inspect the bore to ensure that a projectile is not lodged in the barrel.**
- 5. If a projectile is lodged in the barrel, do not try to remove it. Turn the rifle in to the unit armorer.**

FAILURE TO EXTRACT

3-15. A failure to extract results when the cartridge case remains in the chamber of the rifle. The bolt and bolt carrier might move rearward only a short distance, but more commonly, the bolt and bolt carrier recoil fully to the rear, leaving the cartridge case in the chamber. A live round is then forced into the base of the cartridge case as the bolt returns in the next feed cycle.

WARNING

A failure to extract is an extremely serious malfunction, requiring the use of tools to clear. A live round could be left in the chamber and accidentally discharged. If a second live round is fed into the primer of the chambered live round, the rifle could explode and cause personal injury. This malfunction must be properly identified and reported.

Ejection failures should not be reported as extraction failures.

Probable Cause

3-16. Short recoil cycles and fouled or corroded rifle chambers are the most common causes of failures to extract. A damaged extractor or a weak or broken extractor spring can also cause this malfunction.

Corrective Action

3-17. This malfunction is one of the hardest to clear; the severity of the failure determines the corrective action procedures.

NOTE: If the bolt has moved rearward far enough to strip a live round from the magazine in its forward motion, the bolt and bolt carrier must be locked to the rear.

3-18. With the bolt locked to the rear and the weapon on SAFE, perform the following actions:

- (1) Remove the magazine and all loose rounds.
- (2) Tap the weapon's buttstock on a hard surface to cause the cartridge to fall out of the chamber.

3-19. However, if the cartridge case is ruptured, it can be seized. When this occurs, perform the following actions:

- (1) Insert a cleaning rod into the bore from the muzzle end.
- (2) Force the cartridge case from the chamber by tapping the cleaning rod against the inside base of the fired cartridge.

3-20. If cleaning and inspecting the mechanism and chamber reveals no defects but failures to extract persist, the extractor and extractor spring should be replaced. If the chamber surface is damaged, the entire barrel must be replaced.

FAILURE TO EJECT

3-21. Ejection of a cartridge is an element in the rifle's cycle of functioning, regardless of the mode of fire. This malfunction occurs when the cartridge is not ejected through the ejection port and either remains partly in the chamber or becomes jammed in the upper receiver as the bolt closes. When the firer initially clears the rifle, the cartridge could strike an inside surface of the receiver and bounce back into the path of the bolt.

Probable Cause

3-22. The cartridge must be extracted before it can eject. Failures to eject can also be caused by a buildup of carbon or fouling on the extractor or by short recoil. Short recoil is usually due to a buildup of fouling in the bolt carrier mechanism or gas tube. Resistance caused by a carbon-coated or corroded chamber can impede the extraction and ejection of a cartridge.

Corrective Action

3-23. While retraction of the charging handle usually frees the cartridge and permits removal, the charging handle must not be released until the position of the next live round is determined.

3-24. If another live round has been sufficiently stripped from the magazine or remains in the chamber, remove the magazine and all live rounds before releasing the charging handle.

3-25. If several malfunctions occur and are not corrected by cleaning and lubricating, replace the ejector spring, extractor spring, and extractor.

OTHER MALFUNCTIONS

3-26. Table 3-1 describes other malfunctions that can occur and the appropriate corrective actions.

Table 3-1. Other malfunctions.

MALFUNCTION	CORRECTIVE ACTION
The bolt fails to lock in the rearward position after the last round in the magazine is fired.	Check for a bad magazine or short recoil.
The bolt fails to lock in the rearward position when the bolt catch has been engaged.	Check the bolt catch; turn in the weapon to the unit armorer.
The weapon fires two or more rounds when the trigger is pulled and the selection lever is in the SEMI position.	This indicates a worn sear, cam, or disconnecter. Turn in the weapon to the unit armorer so that he can repair and replace the trigger group parts.
The trigger fails to pull or return after release with the selector set in a firing position.	This indicates that the trigger pin has backed out of the receiver or the hammer spring is broken (A, Figure 3-3). Turn in the weapon to the unit armorer so that he can repair and replace it.
The magazine fails to lock into the magazine well.	Check the magazine and magazine catch for damage (B, Figure 3-3). Turn in to the unit armorer to adjust or replace the catch.
Any part of the bolt carrier group fails to function.	Check for incorrect assembly of components (C, Figure 3-3). Correctly clean and assemble the bolt carrier group, or replace damaged parts.
The ammunition fails to feed from the magazine.	Check for a damaged magazine (D, Figure 3-3). A damaged magazine could cause repeated feeding failures and should be turned in to the unit armorer or exchanged.

NOTE: For more information about troubleshooting malfunctions and replacing components, see organizational and direct support maintenance publications and manuals.

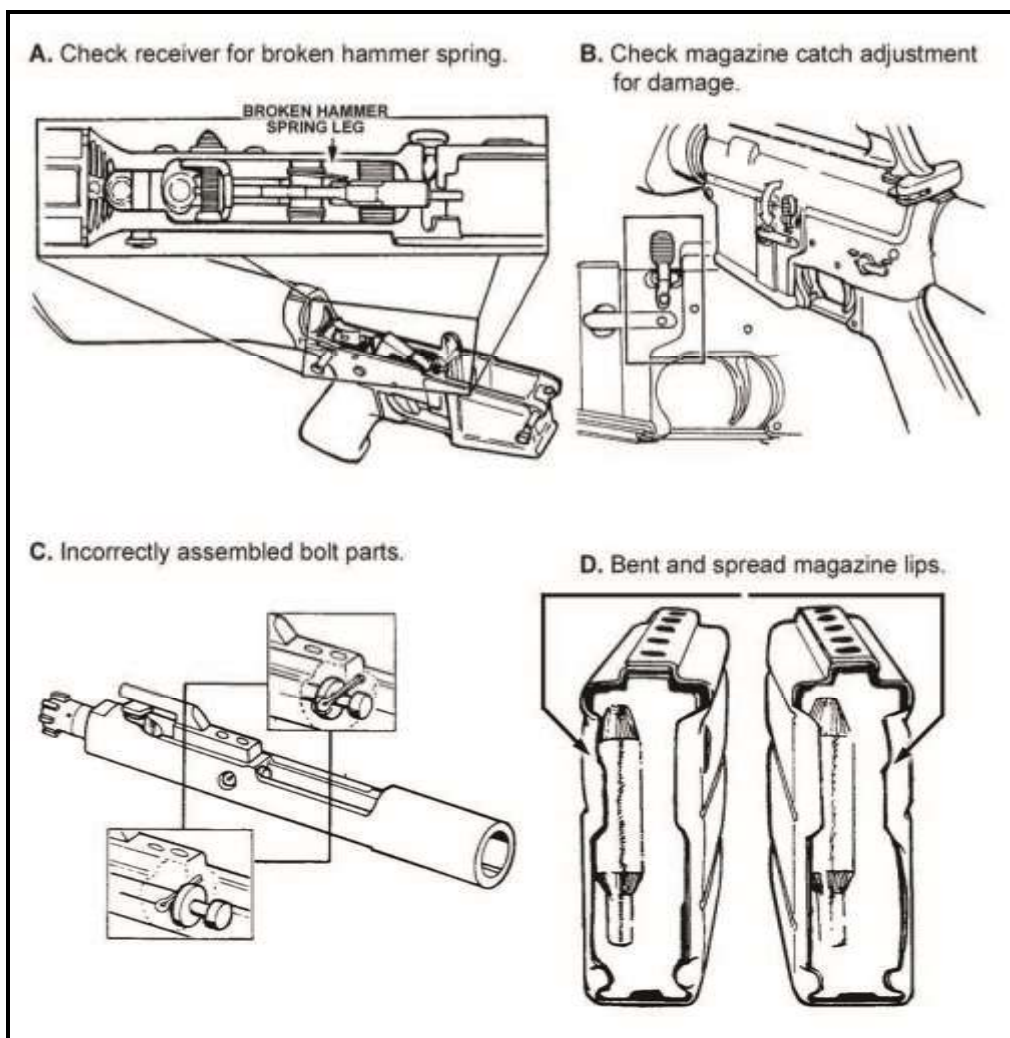


Figure 3-3. Other possible malfunctions.