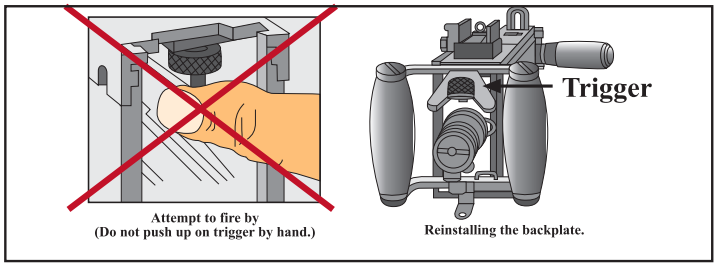
US ARMY M2 .50 CAL MG
M2 HEADSPACE & TIMING ADJUSTMENT PROCEDURE

M2 MG - HEADSPACE ADJUSTMENT

WARNING - Weapon may explode if not properly headspaced!
Note: Ensure charging handle is retracted before inserting barrel.
Note: Headspace and timing must be performed each time the barrel is installed
Note: Ensure barrel is a lined barrel (PN 7266131).

1. Raise cover all the way up, retract bolt to align barrel locking spring lug with 3/8" hole in right side of receiver.
2. With bolt retracted, screw barrel completely into barrel extension; then unscrew barrel two clicks. Allow bolt to go forward; barrel should not rotate.
3. Charge the weapon and allow the bolt to go forward. (Do not slam)
4. Retract the bolt until the barrel extension begins to separate (but not more than 1/16 inch) from the trunnion block. **(DO NOT INSERT ANY OBJECT BETWEEN THE BARREL EXTENSION AND TRUNNION BLOCK)**. Hold in this position until gage check is completed.
5. Raise cartridge extractor; Push in on alignment guide to insert gage. (Apply slight pressure on gage). Attempt to insert "**GO**" end of headspace gage in the T-slot between the face of bolt and rear of barrel all the way up to the ring. If "**GO**" end of headspace gage enters down to the ring, attempt to insert the "**NO GO**" end of headspace gage; if "**NO GO**" end does not enter, **headspace is set**. If "**NO GO**" end enters T-slot or "**GO**" end does not enter, retract bolt to align barrel locking spring lug with 3/8" hole in right side of receiver.
6. Screw barrel in one click at a time (if "**NO GO**" end enters slot) or one click out at a time (if GO end does not enter) rechecking after each click starting from **Step 4 above**.
7. Repeat until "**GO**" end can enter T-slot and "**NO GO**" will not enter T-slot.

CAUTION - Do not unscrew barrel more than a total of seven clicks. If condition occurs, turn in machine gun for next echelon inspection.



Attempt to fire by (Do not push up on trigger by hand.)

Reinstalling the backplate.

M2 MG - TIMING ADJUSTMENT

WARNING - Never charge gun with back plate off. Do not stand directly behind gun while removing backplate.
NOTE: Gun must be in single shot mode before removing backplate.
NOTE - Ensure proper headspace is set before attempting to adjust timing. Barrel must be installed.
NOTE - Each time the backplate is removed, remove gauge.

1. Raise cover all the way up. (Do not hold barrel while charging weapon). Charge the weapon and allow the bolt to go forward. (Do not slam).
2. Retract bolt just enough to insert "**FIRE**" gage with beveled edge against barrel notches.
3. Remove backplate (pull backplate latch lock straight back, while lifting up on backplate latch. Raise backplate assembly straight up and remove from receiver).
4. Turn timing adjustment nut all the way down (to the left), but not completely off the timing stud.
5. Retract bolt just enough to remove "Fire" Gage. Reinstall backplate. Insert "Fire Gage" and attempt to fire by pressing butterfly trigger; gun should not fire (firing pin not released).
6. Retract bolt just enough to remove "Fire" Gage. Remove backplate, screw nut one click at a time. Reinstall backplate. Retract bolt just enough to insert "Fire" Gage and attempt to fire by pressing on butterfly trigger (repeat procedure until the gun fires- firing pin releases).
7. After the gun fires, remove backplate, turn nut up two more clicks. Reinstall backplate, charge the weapon and allow the bolt to go forward. (Do not slam)
8. Retract bolt just enough to insert "**NO FIRE**" gage with beveled edge against barrel notches. Attempt to fire by pushing on the butterfly trigger; machine gun should not fire.
9. Retract bolt just enough to remove **"NO FIRE**" gage and insert **"FIRE"** gage with beveled edge against barrel notches. Attempt to fire by pushing on butterfly trigger; machine gun should fire. (Remove fire gage). **Timing adjustment is complete**.

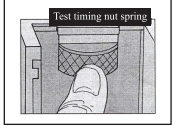
Reference: TM 9-1005-213-10 (WP0005)

Pre-check Checks

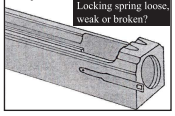
If your M2's in bad shape now, you won't be able to headspace and time it later. So before you go to the field, do these checks:

Gauges. If the headspace and timing gauges are bent, rusted or pitted, you can't acurately gauge, so get good gauges from your armorer. He can order new gauges with NSN 5220-00-535-1217.

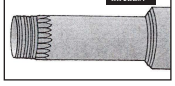
Timing nut. If the timing nut can be easily moved with one finger or it doesn't click as you move it, its spring is weak and it won't hold timing. Tell your armorer. The spring must be replaced.



Barrel locking spring. If the spring can't hold the barrel in place, the barrel can turn during firing and headspace is lost. So test the spring by getting the correct headspace and then trying to unscrew the barrel. If the barrel turns, the spring is weak or loose. Tell your armorer. The spring must be replaced.

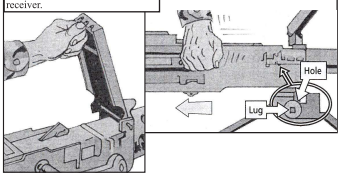


Barrel and barrel extension threads. If the threads are chipped or burred, it will be difficult to screw in the barrel. What's worse, you may think you've completely screwed in the barrel, but you haven't. Result: bad headspace. Your armorer can usually stone chips and burrs smooth.

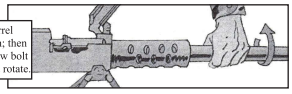


How to Headspace

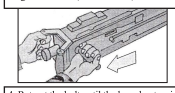
1. Raise cover all the way up. Retract bolt to align barrel locking spring lug with 3/8" hole in right side of receiver.



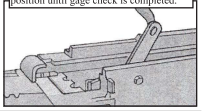
2. With bolt retracted, screw barrel completely into barrel extension; then unscrew barrel two clicks. Allow bolt to go forward; barrel should not rotate.



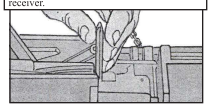
3. Charge the weapon and allow the bolt to go forward. (Do not slam)



4. Retract the bolt until the barrel extension begins to separate (but not more than 1/16 inch) from the trunnion block. **(DO NOT INSERT ANY OBJECT BETWEEN THE BARREL EXTENSION AND TRUNNION BLOCK)**. Hold in this position until gage check is completed.

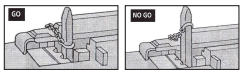


5. Raise cartridge extractor; Push in on alignment guide to insert gage. (Apply slight pressure on gage). Attempt to insert "**GO**" end of headspace gage in the T-slot between the face of bolt and rear of barrel all the way up to the ring. If "**GO**" end of headspace gage enters down to the ring, attempt to insert the "**NO GO**" end of headspace gage; if "**NO GO**" end does not enter, **headspace is set**. If "**NO GO**" end enters T-slot or "**GO**" end does not enter, retract bolt to align barrel locking spring lug with 3/8" hole in right side of receiver.



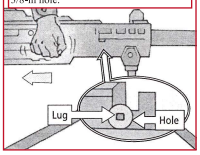
6. Screw barrel in one click at a time (if "**NO GO**" end enters slot) or one click out at a time (if GO end does not enter) rechecking after each click starting from **Step 4 above**.

7. Repeat until "**GO**" end can enter T-slot and "**NO GO**" will not enter T-slot.

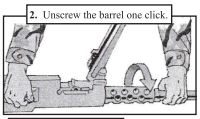


Headspace Too Tight

1. Pull back the charging handle until the barrel-locking spring lug is centered in the 3/8-in hole.

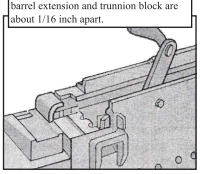


2. Unscrew the barrel one click.

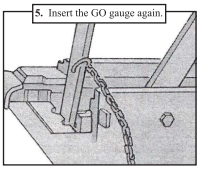


3. Ease the bolt forward.

4. Pull back the charging handle until the barrel extension and trunnion block are about 1/16 inch apart.



5. Insert the GO gauge again.



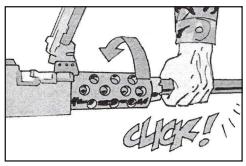
If the GO end fits and the NO GO end doesn't, the headspace is OK. If the GO end still won't fit, repeat these last five steps until it does.

Do not unscrew the barrel more than five clicks beyond the first two clicks in steps 1-5. If you turn the barrel more than seven clicks, something's wrong.
Tell your armorer.

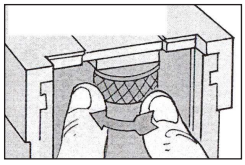
Headspace Too Loose

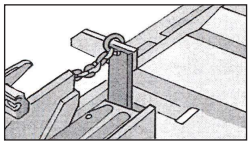
If the NO GO end of the gauge fits into the T-slot, the headspace is too loose. To fix loose headspace, do the same five steps you did for too tight headspace, except screw in the barrel one click.

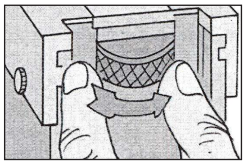
Repeat the five steps until the GO end fits, but the NO GO end doesn't.



How To Time







1. Raise cover all the way up. (Do not hold barrel while charging weapon). Charge the weapon and allow the bolt to go forward. (Do not slam).

2. Retract bolt just enough to insert "**FIRE**" gage with beveled edge against barrel notches.

3. Remove backplate (pull backplate latch lock straight back, while lifting up on backplate latch. Raise backplate assembly straight up and remove from receiver).

4. Turn timing adjustment nut all the way down (to the left), but not completely off the timing stud.

5. Retract bolt just enough to remove "Fire" Gage. Reinstall backplate. Insert "Fire Gage" and attempt to fire by pressing butterfly trigger; gun should not fire (firing pin not released).

6. Retract bolt just enough to remove "Fire" Gage. Remove backplate, screw nut one click at a time. Reinstall backplate. Retract bolt just enough to insert "Fire" Gage and attempt to fire by pressing on butterfly trigger (repeat procedure until the gun fires- firing pin releases).

7. After the gun fires, remove backplate, turn nut up two more clicks. Reinstall backplate, charge the weapon and allow the bolt to go forward. (Do not slam)

8. Retract bolt just enough to insert "**NO FIRE**" gage with beveled edge against barrel notches. Attempt to fire by pushing on the butterfly trigger; machine gun should not fire.

9. Retract bolt just enough to remove **"NO FIRE**" gage and insert **"FIRE"** gage with beveled edge against barrel notches. Attempt to fire by pushing on butterfly trigger; machine gun should fire. (Remove fire gage). **Timing adjustment is complete**.