

M1 Rifle sear/hammer/trigger lug engagement problems and remedies

Except for the occasional doubling that occurs when a lightened trigger is squeezed slowly and held at the hammer release point, few problems are found in M1 trigger groups assembled from within specification parts. Problems are almost always caused by an off-specification or defective part and are best solved by repeating the bench check procedure on page 161 with greater attention to detail. Use a bright light and magnifying glass, as needed.

1. Begin by easing the hammer forward to the uncocked position.
2. Cycle the trigger to make sure that it moves freely and returns forward positively to stop position when released. If the trigger doesn't move or return freely, disassemble the trigger group and closely reinspect all parts. Look for and replace problem parts such as: (a) a bent trigger pin; (b) a damaged trigger assembly; (c) a damaged hammer spring housing and/or hammer spring; or (d) a bent, twisted, or otherwise damaged trigger housing.

3. Hold the trigger back, slowly thumb cock the hammer and recheck rear hammer hook and sear interaction. The front hammer hooks should just clear the trigger lugs as the rear hammer hooks contact and push back the sear. As the rear hammer hooks pass below the sear, it should snap forward and overlap the rear hooks by approx. 50% of the sear engagement surface. If not, check for: (a) altered front and/or rear trigger hooks; (b) altered trigger lugs; and/or (c) a heavily worn, peened, or altered sear. Replace any worn, damaged, or altered part found.
4. Ease the trigger forward and recheck hammer hand-off. See figs. 185~188.
5. Next, hold the hammer and slowly squeeze the trigger until 1st stage slack is taken up and the sear just contacts the rear hammer hooks. At this point, the trigger lugs should still engage the front hammer hooks approx. 50%. If not look for: (a) altered front/rear hammer hooks, (b) altered trigger lugs, or, (c) altered sear. Replace any defective part or parts and recheck. Also see sear stop position adjustment in figure 188.
6. Finally, recheck by cocking the hammer with the trigger forward to make certain the front hammer hooks fully engage the trigger lugs without hanging. Specified front hammer hook/lug engagement is 100% (.050" min.).

Although the failed hammer hand-off condition in this example was caused by shortened front hammer hooks only, failed hammer hand-off and limited front hammer hook/trigger lug engagement at the hand-off point can also occur as a result of trigger lug or sear alteration and/or accumulated sear, hammer hook, and trigger lug surface wear.

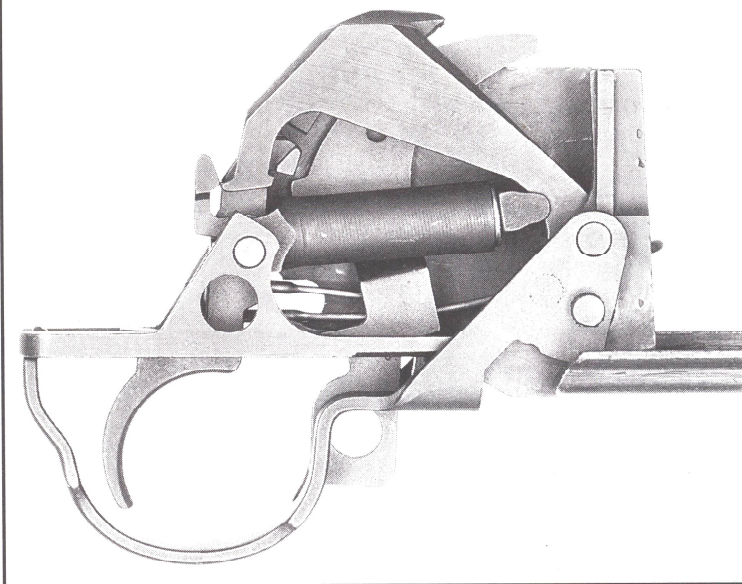


Figure 185- Shows a hammer with altered front hooks installed in an otherwise serviceable M1 trigger group. In this example, the front hammer hooks are too short to engage the trigger lugs at the point the sear releases the hammer to hand it off to the trigger. As the sear attempts hand-off, the front hammer hooks miss the trigger lugs and the hammer escapes. The result is that releasing the trigger also releases the hammer- one of the causes of uncontrolled fire.

Although the failed sear engagement condition in this example was caused by short rear hammer hooks only, failed sear engagement, early hammer hand-off, and limited trigger lug engagement at the hand-off point can also occur as a result of sear or trigger lug alteration and/or accumulated sear, hammer hook, and trigger lug surface wear.

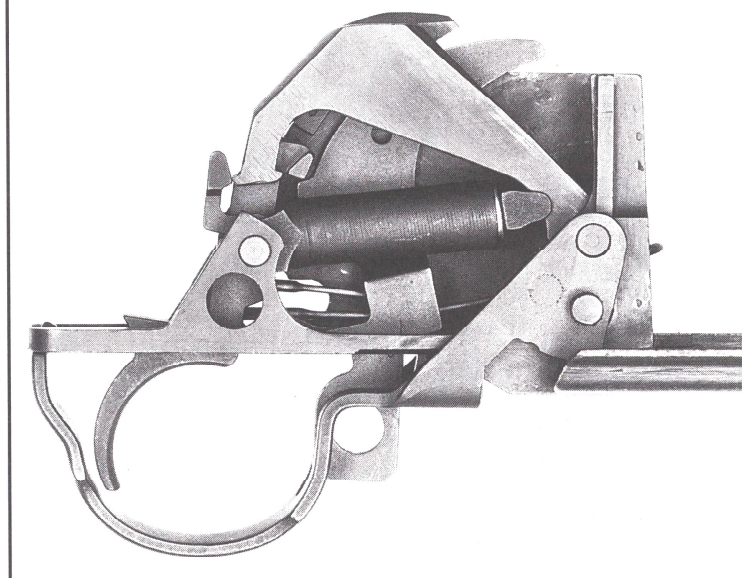


Figure 186- Shows a hammer with shortened rear hooks installed in an otherwise serviceable M1 trigger group. Here, the rear hooks are much too short for capture by the sear. As a result, the hammer doesn't disconnect or cock and can only follow the bolt forward. In cases where sear and/or rear hammer hook surface condition permits only partial sear (disconnect) engagement, hammer hand-off (if it occurs at all) will be early and trigger lug engagement minimal- another possible cause of uncontrolled fire.