

Triggers must be adjusted for height. The upper edge of the triggers must not press the sear arm, preventing it from engaging the notches. Rear trigger "back lash" will require adjustment. The rear trigger must be under spring tension for only about two thirds of its travel. The remaining third of its travel is under inertia only, known as "free play" or "back lash". The rear trigger must overtravel the mainspring tension, continue under inertia, then strike and release the sear.

Install and adjust a double lever double set trigger.

Your goal is to adjust the triggers to fire set or unset, cocking the lock, or setting the triggers, in any sequence. Simple tools are needed, including a screwdriver fitted to the tang bolt and mounting screw slots, a file to dress the top of the triggers, a bench vise with padded jaws, and patience.

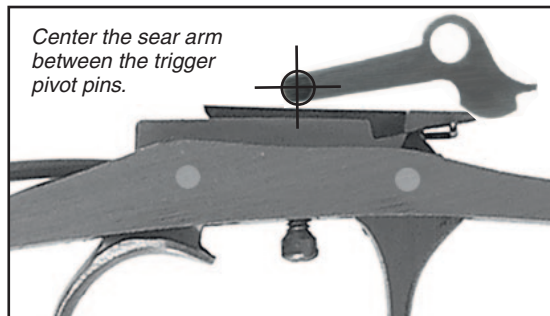
The lock must have a fly detent in the tumbler, to allow the use of a set trigger. On many locks, the sear arm's lowest position will vary at full down, half cock, and full cock. Cycle the lock as you view the inside. Notice the position of the sear arm at all three settings. The half cock position may be the lowest position. You will need to allow for this movement as the triggers are filed to the proper height.

With the lock inlet to final position, pull the lock to half and full cock. Inspect the inletting for sear clearance using Inlet Black. Resolve any interference, removing as little wood as possible.

Double set triggers arrive with a generic trigger height and plate length. Before you trim the plate, consider the position of the triggers. To function set or unset, the triggers must both engage the sear. Locate the trigger to center the sear arm between the triggers. In the unset position this will be at the center of the "V" between the front and rear trigger arms. The small trigger adjustment screw, mounted between the triggers, is a good visual indicator of this center, positioned below the sear.

Tuning double set triggers to function correctly, cock or set in any sequence, and fire reliably, with a light release, is fussy work, requiring patience. Mistakes are possible. Track stocks spare parts!

Triggers are centered below the sear arm, giving each trigger equal leverage. The trigger adjustment screw is often a good visual indicator of the center between triggers.



Center the sear arm between the trigger pivot pins.

To study set triggers, realize that trigger inertia releases the sear, not mainspring tension, and that some sear to trigger clearance is essential.

If the sear is rear of center, the front trigger will gain leverage, but the rear trigger will require additional travel to fire the sear. If the sear is forward of center, the rear trigger will have more leverage, with less leverage at the front trigger, causing a firmer release, if unset. If not centered, it is wise to position the sear arm very slightly rear of the trigger center, since the set trigger's mechanical advantage occurs during setting, and a light front trigger release is preferred.

Once trigger position is understood, you may elect to trim the plate, to more easily fit within a triggerguard casting, or a precarved stock's inlet. The remaining plate must accept a lock bolt at front, and probably a wood screw at the rear. Drill and countersink for a #6-5/8" wood screw.

With the trigger plate inlet flush and the tang bolt installed, use gentle constant pressure when replacing the trigger assembly, and tightening the tang bolt. Too much torque can cause the tang bolt to draw up the trigger too far, forcing it tight against the sear, an adjustment error.

If triggers do not reliably fire the lock, after clearances are cut, tighten the mainspring screw.



Sear must not rest firmly on set triggers.



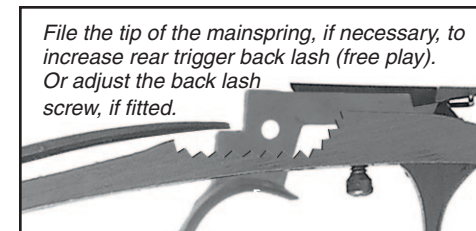
File triggers, as needed to achieve clearance.

If triggers are firmly against the sear, file at top (in red) for clearance. Never file or bend the sear!

Dismount the triggers, latch them to the set position, and return them to the stock. Cock the lock. If the sear will not engage securely at half cock, or at full cock, the triggers are too tall. File only a small amount from the tops of the triggers (shown in red above), and retest. This requires patience!

Dismount the triggers from the stock, clamp them in a padded vise, and carefully file the tops of the triggers, perhaps three strokes. NEVER file the hook on the front trigger, or the tooth on the rear trigger, when filing. This work is best done with a file, not with a bench grinder. Triggers are tempered, but they can be hand filed, slowly. Retest your work frequently. Don't cut too much!

Set the triggers, return them to the stock, and try cocking the lock to half and full cock. Repeat until the lock engages both half and full cock positions, when the trigger is set.



File the tip of the mainspring, if necessary, to increase rear trigger back lash (free play). Or adjust the back lash screw, if fitted.



Front trigger must be free, as it latches.

Adjust the rear trigger's back lash (free play), to allow the lock to be cocked, with the triggers unset. In the unset position, the rear trigger must not press the sear, preventing it from engaging half or full cock position. While unset, try wiggling the rear trigger. If it rotates slightly, all is well.

Test the lock with the trigger unset, cock full down, pulling it to engage the half and full cock notches. If it does not engage the notches, the rear trigger is lifting the sear, due to insufficient back lash.

Back lash may be adjusted several ways. A few triggers have a back lash adjustment screw behind the rear trigger. It lifts the mainspring to increase backlash, or lowers it to increase spring travel. Or, file the tip of the mainspring to achieve the same effect. The mainspring will stop against the plate, after the trigger travels beyond the reach of the spring's tip. Or, sometimes a slight reduction in mainspring mounting screw torque will provide a tiny bit more back lash, usually not.

Final clearance adjustment is easy. Slowly set the rear trigger, watching the front trigger rise up and over, engaging the rear trigger's hook. Clearance between the sear and the front trigger should allow this at the lowest position of the sear, which is probably half cock. Try setting the triggers with the cock full down, at half cock, and again at full cock. If the triggers are hard to set, the front trigger may be firmly against the sear. Remove the trigger assembly from the stock and file the top of the front trigger. Remove a small amount, assemble, test, and repeat as necessary.

Adjust the trigger engagement screw, between the two triggers, outboard several turns. Latch the triggers, then s-l-o-w-l-y turn the screw inboard, until the triggers release. Back off one full turn.

Never dry fire set triggers at half cock, which may chip the sear nose. Dry fire with the cock full down.

Refer to our book, **Triggers**, by Bill Newton, for further study. Order #Book-T only \$4.00