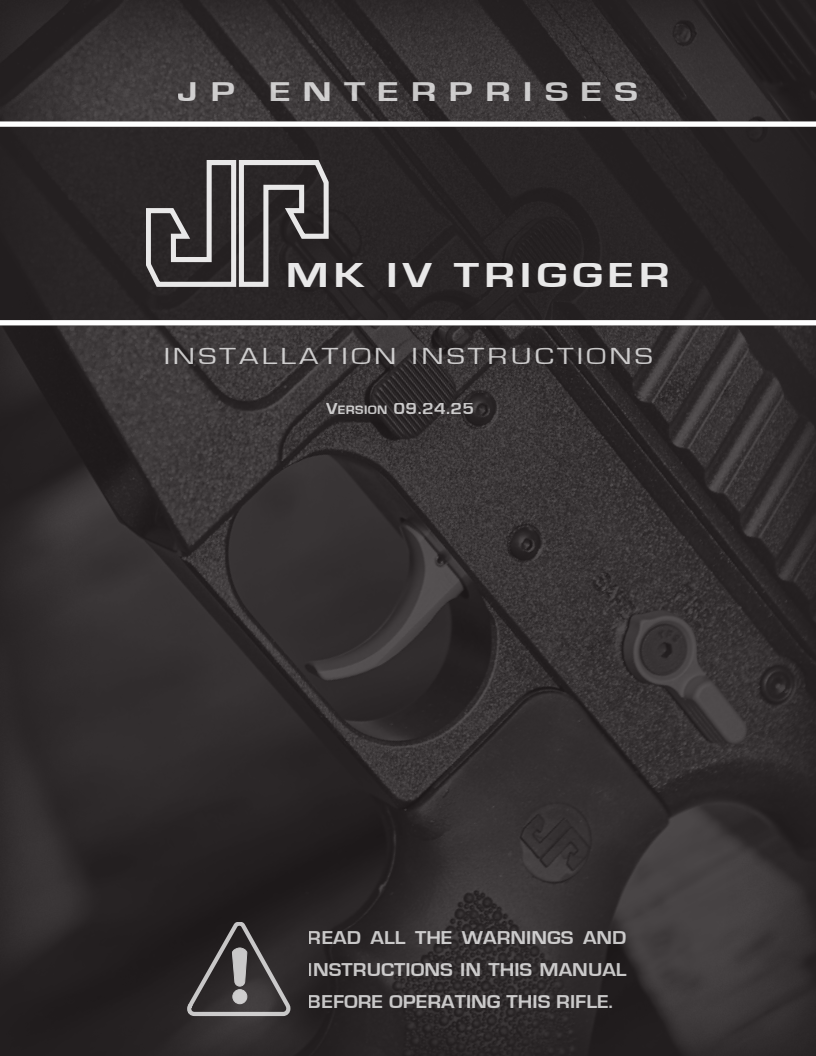
JP ENTERPRISES

MK IV TRIGGER

INSTALLATION INSTRUCTIONS

VERSION 09.24.25



READ ALL THE WARNINGS AND INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THIS RIFLE.

PARTS INCLUDED

TRIGGER

- MK IV Trigger
- Two (2) 4-40 x 3/8” overtravel set screw
- EZ Disconnector
- 4-40 x 1/4” disconnector adjustment set screw
- Disconnector spring
- Reduced power trigger spring

HAMMER

- JP Speed Hammer
- Competition reduced power hammer spring (yellow)
- Tactical reduced power hammer spring (red)
- D-clip

PINS

- Two (2) JP Anti-Walk Pins
- Four (4) 4-40 x 3/16” buttonhead cap screws

TOOLS

- .050 hex key
- Thread locker

SAFETY

OPTIONAL | SOLD SEPARATELY

SEE PG. 4

- Selector drum
- Safety lever(s)
- Safety detent
- Safety detent spring
- 8-32 x 3/8” flat head cap screw(s)
- 8-32 x 1/4” flat head cap screw
- 8-32 x 5/16” flat point adjustment screw
- 8-32 x 3/16” alloy locking set screw

CONTENTS

TOOLS REQUIRED

To perform the installation in this manual, you will need to have the following additional items available:

- Padded vice
- Plastic mallet
- Lacquer thinner or acetone
- Compressed air
- Protective eyewear
- Two (2) T8 hex keys
- Hammer stop (JPFC-HS recommended)
- Drift pin / slave pin (slightly smaller than the trigger pin)
- Quality sear grease (Armite LP-250 recommended)

INTRODUCTION

Thank you for purchasing the **JP MK IV Trigger**. The installation of this trigger group can be performed by almost anyone, takes only about fifteen minutes after some practice, and avoids any troublesome gunsmith fitting and the danger of ruining parts. The design intent was to make it possible for even those with limited tools or mechanical knowledge to achieve a successful, expert trigger installation.

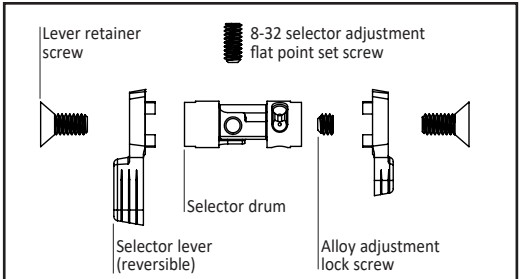
Before beginning, read these instructions thoroughly and review the installation video, which details our professional in-house installation procedure as a visual aid for the process.

Terms of orientation in these instructions—such as the right/left side of the rifle—assume the perspective of the operator handling the rifle as normal with the muzzle facing away.

SAFETY SELECTOR COMPATIBILITY

The **JP MK IV Trigger** will install the easiest and function the best with our adjustable **JP Dual-Throw/Sure-Set Safety Selector**. This safety is reversible for either a standard 90° throw or short-throw and includes our **Enhanced Safety Detent**, which is precision-machined from tool steel to provide a smooth throw without grease or break-in. Instructions for this safety appear at relevant points in this manual.

Be aware that the Sure-Set feature of this selector is only compatible with recent generations of JP triggers. The notched feature on the drum matches corresponding features on our trigger to ensure firm SAFE/FIRE settings with no possible imprecise, unsafe middle state. This feature makes the selector incompatible with non-JP triggers.



SELECTOR ASSEMBLY

The **JP MK IV Trigger** will also provide a functional fit with most aftermarket safety selectors, assuming the receiver is in spec. A safety function check is covered in the **ADJUSTMENTS** section below. Depending on the components you choose, you may encounter a tolerance stack-up that is not fixable without parts modification. Use of our safety will solve most such problems. Please call to order.

SPRING SELECTION

The final pull weight of the **JP MK IV Trigger** is determined primarily by the spring setup and will range from three to five pounds depending on the choice of hammer spring.

- **Yellow** (3-3.5 lbs.): This spring is for recreational or competition applications where absolute reliability is not a necessity. This setup may not yield full ignition reliability with military primers.

- **Red** (3.5-4 lbs.): This spring provides full ignition with all primers and must be used for military/police duty or home defense rifles to ensure ignition reliability and for large-frame (AR-10) rifles, which require a heavier pull weight in order to prevent the “finger bounce” doubling effect.

If you wish to achieve a 4.5-lb. trigger for service rifle high-power competition, you can order our **JPS4.5** spring set.

USING THREAD LOCKER

The **JP MK IV Trigger** and adjustable disconnector include adjustment set screws to optimize function for your particular receiver. If these adjustments are set properly the first time, they should not have to be readjusted or tuned. To complete the final setup, the included thread locker must be used and will never loosen once cured unless heat is applied to the screw collars. Do not use Loctite® 242 (blue) or substitute products like nail polish.

When using the included thread locker, be aware that you will have somewhere between a few minutes to an hour of working time, depending on humidity and heat. Because of this, make sure to practice the adjustment steps at least once before committing to the thread locker. If it sets before you obtain the correct setting, you will have to apply heat to the set screw collar to degrade the thread locker and clean all threads thoroughly for another attempt.

Make sure also not to apply excess thread locker. If the thread locker bleeds into the pin bearings or between the trigger and the receiver, it will lock up the entire mechanism.

PREPARATION

CAUTION

REMOVE MAGAZINE AND VISUALLY CHECK CHAMBER TO ENSURE THAT THE FIREARM IS UNLOADED.

ALWAYS WEAR EYE PROTECTION WHEN WORKING ON FIREARMS.

1. ***Separate the upper and lower assemblies***

2. ***Secure the lower assembly in a padded vise***

   Use a magwell insert block or clamp around the magwell with wooden blocks just tight enough to secure the receiver.

3. ***Degrease component threads with solvent***

   To ensure that the thread locker holds to the surfaces, thoroughly degrease the following threads:

   - the screw bosses of the trigger
   - the disconnector
   - the anti-walk pins
   - all included screws EXCEPT the 4-40 x 3/16” button head screws for the anti-walk pins. These screws have a blue thread locker coating and should not be cleaned.

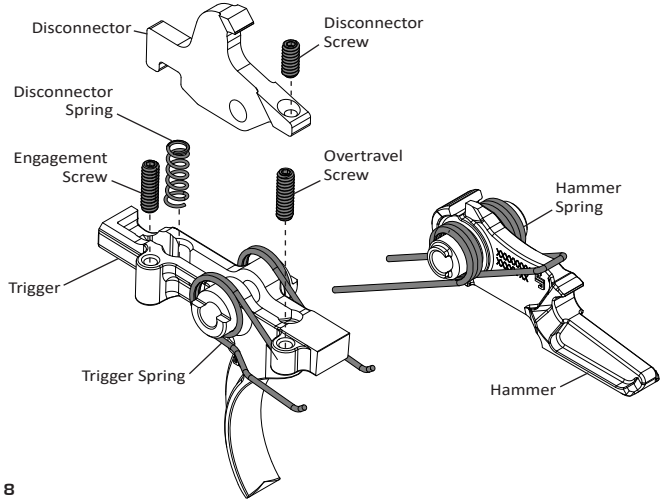
   Refer to the instructions for your safety selector for any degreasing recommendations of its components. For the JP safety selector, degrease the drum and screws.

It is important that all screw threads are thoroughly cleaned; simply soaking the parts in solvent will loosen the oils but may not carry them out of the threads. Follow the soaking with a blast of compressed air.

4. Install a single screw in each anti-walk pin

Apply a very small amount of thread locker to two of the 4-40 x 3/16" buttonhead cap screw and install one screw tightly into each of the pins with 10 in-lbf. Make sure that excess thread locker does not overflow the pin once the screw is installed.

5. Install the 4-40 x ¼" set screw in the disconnector



6. Assemble the trigger

Install the disconnector spring included in the kit by pressing the slightly wider end of the spring into the rear of the JP trigger. Then, install the supplied trigger spring on the trigger as shown. Finally, install the overtravel and engagement set screws as shown just far enough to hold them in place.

7. Install your chosen hammer spring <u>as shown</u>

8. Remove the existing trigger, hammer and pins

Using the plastic mallet and drift pin, carefully tap the existing trigger pins out of the lower receiver. First remove the hammer pin and hammer followed by the trigger pin, trigger and disconnector.

9. Assemble your safety selector (if installing for the first time)

Refer to your safety selector's instructions. Note that the initial installation below is temporary. DO NOT apply thread locker at this time components that would prevent removal of the safety.

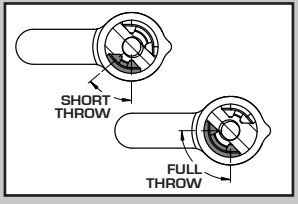
JP SAFETY SELECTOR

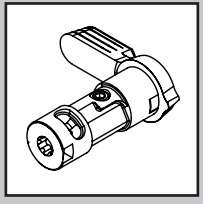
Assemble the JP safety selector drum with one lever

Locate the two detent grooves on one end of the safety drum. The longer groove will yield the full 90° throw while the shorter will yield the short throw. Your groove of choice will be oriented downward in assembly to interface with the safety detent.

JP SAFETY SELECTOR cont'd

Install one safety lever using the lever retainer screw (8-32 x 3/8" flat head), threading the screw into the safety drum **on the side opposite the detent grooves**. The lever should align with the SAFE or FIRE position on the left side of the receiver when assembled. If you intend this to be the final left-side lever in your setup, apply thread locker to the threads of the flat head screw.





10. Remove the existing safety selector (if you are replacing it)

Begin by loosening the grip screw so that the pistol grip can be slightly pulled away from the receiver without having to be removed. This will relieve tension on the detent plunger, which will descend the channel and allow you to remove the existing selector from the receiver. Take care not to lose the safety detent and spring.

11. Clean the fire control cavity of all dirt and debris

INSTALLATION

1. Apply a small amount of sear grease to the detent groove of the safety drum

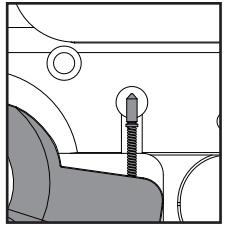
Take care that any threaded screw holes of the safety drum remain free of grease.

2. Insert the safety drum into the receiver

Ensure that the detent groove in the safety drum is located above the detent plunger.

3. Reinstall the pistol grip and safety detent

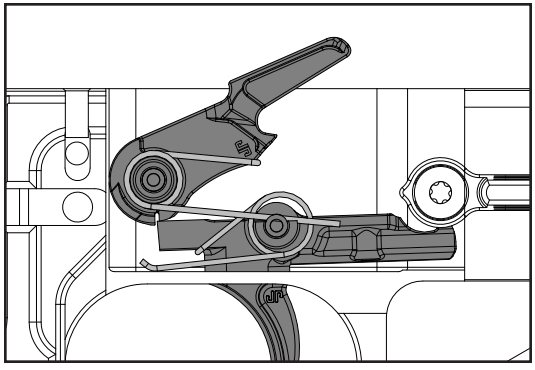
Slide the grip back in place making sure the detent spring is not pinched. Retighten the grip screw.



4. Insert the trigger and hammer into the receiver

You may find it easier to insert a drift pin or a smaller standard trigger pin first, using it as a slave pin. Then, press this out with the JP Anti-Walk Pin. The JP pin is sized to be a tight fit into the holes in the receiver and may require gentle force to install. If you have to tap the pin in, use a plastic mallet on the protected the end of the pin with the button head screw installed.

Make sure the trigger and hammer springs are oriented as shown on the next page.



ADJUSTMENT

I. SAFETY SELECTOR

Make sure that your safety fitment is adequate with the following steps before proceeding.

1. ***Cock the hammer and turn the safety lever to the SAFE position***

   If the safety binds, there is either an incompatibility with your safety or a tolerance stack-up. To resolve it, you can either grind the safety pad of the trigger or use our JP adjustable safety.

2. ***Turn the engagement screw down until the rear of the trigger contacts the safety***

   Do not force this contact past snug, and you may need to back out the engagement screw very slightly. The safety should freely rotate and not drag on the trigger. The trigger should not move noticeably with the safety engaged.

3. ***Turn the safety to FIRE***

4. ***Turn the engagement screw down another 1/2 rotation***

   This adjustment should not cause the hammer to fall. If it does fall within this ½ turn of adjustment, the fitment is too loose. This is due to a tolerance stack-up between all the parts. The easiest remedy to replace your safety with our JP adjustable safety.

5. ***Back the engagement screw out one full rotation***

II. OVERTRAVEL

1. ***Cock the hammer***

2. ***Turn the overtravel screw until it just bottoms in the receiver***

   At this point, you will not be able to pull the trigger at all.

3. ***Back out the overtravel screw slowly until you can pull the trigger just far enough to release the hammer***

   Make sure the hammer can travel all the way forward without binding or dragging on the trigger while it is pulled. If this is the case, back the screw out only enough to relieve this interference.

4. ***Back the screw out about 1/8 rotation from the tightest position where the hammer will release freely***

   You can test your setting by dry-firing the trigger, but be aware the vibration will start to migrate the screw.

   Less overtravel produces a more refined feel and shorter fire-to-reset travel. However, the trigger will be less tolerant of dirt and require more frequent cleaning of the fire control cavity. More overtravel will allow for greater dirt tolerance with reliable function, which we recommend for duty or defense rifles. This setting is a personal preference based on the rifle's application.

5. ***Apply thread locker to the overtravel screw***

   When satisfied with the overtravel setting, remove the screw, apply a drop of thread locker to the threads and re-install to the exact same point. Recheck your setting before the thread locker cures. Your working time will be limited, so refer to the **USING THREAD LOCKER** section at the beginning of this manual.

   Allow the thread locker to cure before continuing.

III. ENGAGEMENT | OPTIONAL ADVANCED SETUP

If you want finer sear engagement and a more refined trigger pull than you've achieved so far, this section details adjusting the trigger engagement. The installation as described to this point is perfectly safe and serviceable for your rifle. This section is optional ***except for the final step. Do not skip applying thread locker to the engagement screw before proceeding to the disconnector section.***

1. ***Turn the safety selector to FIRE***

2. ***Install your hammer stop (if available) and cock the hammer***

3. ***Turn the engagement screw slowly until the hammer releases***

4. ***Back the engagement screw out one complete turn and re-cock the hammer***

5. ***Repeat steps 3 and 4 until you can predict the point the hammer releases***

6. ***Back the engagement screw out one full turn and screw it back in stopping 3/4 to 1/2 turn <u>before</u> the hammer releases***

This remaining rotation will be your trigger pull or sear engagement. The more you screw it in, the shorter your final trigger pull will be. Do not attempt to minimize the engagement beyond ½ turn from the release point. That is the absolute minimum required engagement. Reducing the engagement further will make it very difficult to time the disconnector, and you will not have a safe and durable trigger setup.

At this point you can dry fire the trigger to see how it feels, although the disconnector is still not fitted. Again, be aware that without thread locker on the screw, your setting will migrate slightly with each pull of the trigger.

7. Double-check the safety fitment

Turn the safety to FIRE and confirm that it moves freely without binding against the trigger. If it binds, back the engagement out until it no longer does. If you do not want to alter your engagement setting, you can opt to modify the safety itself or just use our JP adjustable safety.

8. Apply thread locker to the engagement screw

When you are satisfied with the sear engagement, note its position and remove the engagement screw. Apply a drop of thread locker to the threads and repeat the installation and adjustment, skipping to your final chosen setting.

Allow the thread locker to cure before continuing.

IV. DISCONNECTOR

1. Install the disconnector

With the hammer in the forward/released position, use your drift pin to work the trigger pin out to one side until you have enough access to the disconnector recess to install the disconnector. If you're having difficulty, try removing the hammer to install the disconnector as the hammer spring can interfere with installing the trigger pin. Reinsert the pin to retain all components.

2. Turn down the disconnector screw

Thread the set screw in until it reaches bottom and the disconnector just starts to move. Then, turn it 1½ rotations further. If you place your thumb on top of the disconnector while turning in the screw, you should be able to feel it start to move.

3. Turn down the disconnector screw until the disconnector tip just touches (interferes with) the spur of the hammer

When you pull the hammer back at this point, it should not be retained by the disconnector. If the hammer is retained by the disconnector, you will have to release it by pressing down on the tail of the disconnector and then turning the disconnector set screw down another half turn. The hammer must be forward for you to adjust the screw. Once the hammer is not being held by the disconnector, you can begin to fine-tune the adjustment until it is set right at the point of release.

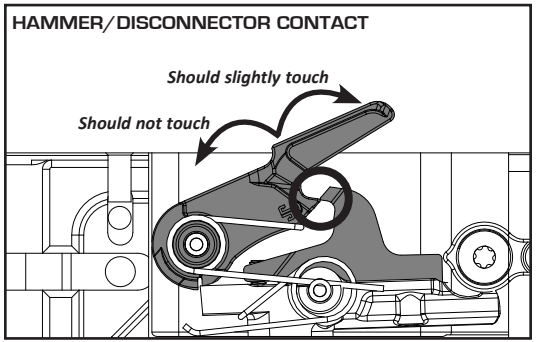
Back the disconnector screw out gradually and test the fit each time by cocking the hammer until the tip of the disconnector just

touches the disconnector spur of the hammer as it passes but will not retain it. The installation video will be very useful for this step.

4. ***Verify the disconnector setting***

Cock the hammer while keeping the trigger pulled. The hammer should be retained by the disconnector. When you slowly release the trigger, the hammer should release from the disconnector with an audible click and reset to the sear face of the trigger. If it does not release, you may have to turn the screw back down by a small amount.

Next, test for contact between the disconnector and the hammer by pressing the hammer forward and backward. Make sure this movement is directly inline and that you are not biasing the hammer towards the right or left. With a properly set disconnector, the hammer should act as follows:



- When the hammer travels forward (towards the fired position), the hammer ***should not touch*** the disconnector
- When the hammer travels backwards (toward the cocked position), the hammer ***should slightly touch*** the disconnector as it passes

5. ***Apply thread locker to the disconnector screw***

After noting your final screw position, apply a drop of thread locker to the threads of the disconnector screw and repeat the installation and adjustment, skipping to your final chosen setting.

Allow the thread locker to cure before continuing.

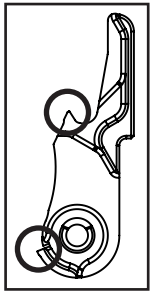
FINALIZATION & VERIFICATION

If you encounter difficulties installing the **JP MK IV Trigger** in your receiver or cannot verify the success of the installation as outlined below, contact JP Technical Support. Do not attempt to use your rifle with a potentially faulty trigger mechanism.

1. Install the remaining buttonhead screws into the anti-walk pins

Apply a very small amount of thread locker to the two remaining 4-40 x 3/16" buttonhead cap screws and install them tightly into each of the anti-walk pins. Use two T8 Torx keys to firmly tighten the screws into the threaded holes of the pins.

2. Apply sear grease to the engagement notch and disconnector notch of the hammer



3. Reassemble the upper and lower receivers

4. Verify function of the trigger as follows:

1. Turn the safety to FIRE position
2. Cycle the bolt with the charging handle
3. Squeeze the trigger but do not release it
4. Cycle the action again while still holding the trigger back
5. Release the trigger listening for the click of the hammer reconnecting
6. Repeat this process several times

5. Verify the function of the safety as follows:

1. Turn the safety to the SAFE position
2. Pull the trigger to make sure the hammer does not fall
3. Release the trigger
4. Turn the safety to FIRE and verify that the hammer does not fall
5. Repeat this process several times

JP SAFETY SELECTOR

Install the safety adjustment screw with thread locker as follows:

1. Cock the hammer
2. Rotate the safety to the SAFE position
3. Put a small drop of Loctite on the threads of the 8-32 flat point adjustment screw
4. Thread it into the hole on the top of the safety drum until stops against the trigger tail
5. Back the screw out 1/8 of a rotation for proper clearance
6. Install the 8-32 x 1/4" alloy locking adjustment screw in the right side of the safety, tensioning it to 16 in-lbf.

Install the safety lever(s) as desired with thread locker

If you have not installed it with thread locker already, remove the installed lever and reinstall it on your preferred side of the receiver by applying a small drop of Loctite to the threads of the 8-32 x 3/8" flat head screw. Install a second lever on the opposite side in the same way, or install the 8-32 x 1/4" flat head as a plug screw.

6. ***Test the tightness of the anti-walk pin screws***

After the thread locker has set, use two T8 Torx keys to verify the tightness of the anti-walk pin screws. With one wench in each of the screws on either side of the receiver, apply light counterclockwise force to the screws of each pin, which should not move. If the thread locker breaks under less than 10 lbf-in., remove the screws, degrease the components, and reinstall with thread locker.

DRY FIRE

When you've finished the installation of the **JP MK IV Trigger**, practice dry-firing it prior to using live ammunition. This will acquaint you with the feel and function of the new trigger. We recommend our **Hammer Stop Block** (**JPFC-HS**), which is ideal for repeated dry-firing without damage either to the receiver or your thumb.

USING YOUR RIFLE

Before firing or allowing anyone else to fire your rifle, the user should dry-fire it first to accustom himself to the refined trigger. While using your firearm, always remember the following rules:

1. ***Handle all guns as if they were always loaded.***
2. ***Never sweep yourself or anyone else with the muzzle.***
3. ***Keep your finger out of the trigger guard until ready to fire.***
4. ***Be certain of your backstop and your target.***

As a firearm operator, you must take responsibility for your own actions. JP Enterprises will not be responsible for any injury, death or property damage resulting from the use or misuse of these parts.

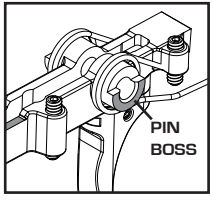
During operation of the rifle, take care never to engage the safety selector if the hammer is in the FIRE position. This may cause damage to the hammer/sear interface and possibly crack the trigger. A properly fitted trigger/safety selector relationship will not allow the selector to be engaged (with hammer down) without forcing it.

This fire control system is intended for use only by experienced competitive shooters and professionals. You must take responsibility for your own actions. JP Enterprises will not be responsible for any injury, death or property damage resulting from the use or misuse of these parts.

TROUBLESHOOTING

PROBLEM

The trigger will not even fit into lower receiver.



SOLUTION

The receiver is slightly too tight for the trigger. Remove a little material from the sides of the trigger pin bosses until the trigger will slide into the lower with no resistance.

PROBLEM

The safety either does not properly block movement in the trigger or it prevents the trigger from falling.

SOLUTION

This is most likely due to a tolerance stack-up, safety incompatibility, or receiver pin holes that are out of spec. In these cases, we recommend the use of our JP adjustable safety. This safety will allow you to achieve the proper safety engagement setting quickly.

PROBLEM

Rifle occasionally “doubles” (fires more than one round with a single trigger pull) under live-fire conditions.

SOLUTION

This is a potentially dangerous problem and must be solved before further use of the rifle.

Begin by performing a dry fire function test as described in the **FINALIZATION AND VERIFICATION** section above. Follow this with the disconnector timing test at the end of the **ADJUSTMENTS / IV. DISCONNECTOR** section. If your setup fails either of these tests, you’ll need to start fresh with your install, making sure to follow the directions closely. If your disconnector timing is at fault, you may only need to adjust the disconnector set screw to fix the issue. However, if your setup passes both of these tests, there are a few possibilities.

- **The “Finger Bounce” Effect:** This problem can be caused by a combination of improper trigger control technique and excessive recoil as compared to the trigger weight. As the rifle moves in and out from your shoulder under the recoil impulse, the trigger is bouncing against your finger and firing again.

  There are a few solutions to this issue. The first is modifying your technique. Gas guns require a firmer interface with the rifle than a bolt gun as well as a more deliberate trigger technique. While a bolt gun with a very light trigger can be feathered or free-recoiled, those techniques do not transfer to gas guns. Refer to the videos on our YouTube channel for more on gas gun trigger control.

  The second fix is to modify the overall configuration of the rifle to reduce overall recoil. In addition to solving the “doubling” issue, this will make the rifle more pleasant to shoot overall. Depending on the rifle platform, this can mean adding/upgrading a compensator, adding/adjusting an adjustable gas block, adding more mass to the operating system with a heavier bolt carrier or buffer, or switching to a stiffer lock piece in the case of the JP-5™.

- **The "Slam Fire" Effect:** This is caused by the firing pin striking the primer as the bolt carrier assembly comes forward into battery at high velocity. The inertia is imparted to the firing pin, and as the bolt closes, the firing pin continues forward at speed to strike the primer. You will notice that, when unloaded, the last round in the chamber will always show a firing pin witness mark due to this effect. If the primer is sufficiently sensitive and the firing pin velocity high enough, you may have a slam fire.

  Always use appropriate primers (small rifle or small rifle magnum) for a semi-auto rifle. Use of certain operating system components that speed up the bolt velocity or over-gassed operating system can exacerbate this problem. If the double occurs so fast that it is almost indistinguishable, then it is probably a slam fire. The sure fix for a constantly slam firing rifle is to switch to a titanium firing pin. The lower mass of the titanium firing pin makes it impossible for the pin to transfer enough kinetic energy to cause ignition.

PROBLEM

Repeated ignition failures

SOLUTION

Our custom springs (color-coded yellow) are balanced to give a 3- to 3.5-lb. pull weight and give reliable ignition using domestic (US-manufactured) ammunition and primers for recreational or competitive shooting use. If your rifle's intended use is for military, police or home defense, or if you intend to use foreign-manufactured ammunition, you must use a full power Mil-spec hammer spring. This will solve any ignition problems and give "duty" ignition reliability, which should be the criterion if lives may depend on the function of the weapon. If you are using reloaded ammo, you may also have high primers. Box the ammo with the case head up and examine the primers making sure that all primers are below flush.

TRIGGER ACCESSORIES

HAMMER STOP BLOCK

Trigger install tool to save damage to your receiver (or your thumb)

ARMITE LP-250

Premium sear grease that creates a smooth, consistent let-off for any trigger setup