



INSTALLATION INSTRUCTIONS – RIFLE CHASSIS

TOOLS REQUIRED:

3/8" Drive ratchet, T27 Torx wrench, small rubber mallet, small hammer and 3/32" pin punch (optional for bolt-catch installation), small Phillips screwdriver, small telescoping magnet. All other wrenches included

INSTALLATION:

1. Begin your installation by prepping your Mil-spec receiver. Your receiver should be a standard, bare Mil-spec receiver without a trigger guard. No other receiver will fit the chassis.

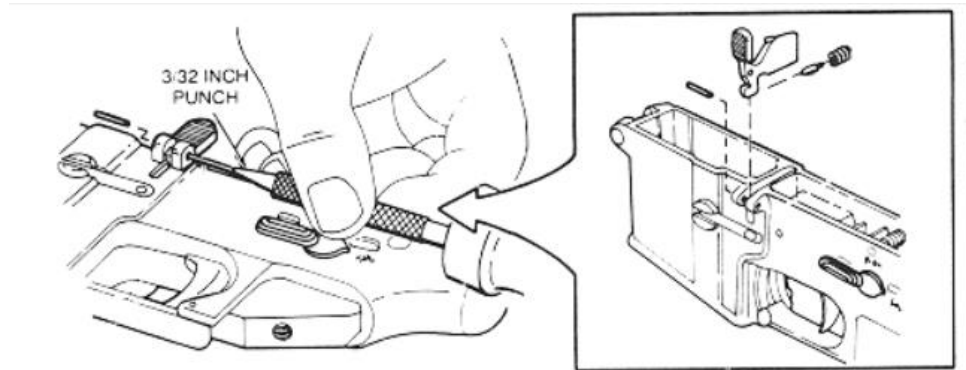
If you are starting with a completely bare receiver, you will need to install a bolt catch, our mag release components, and the provided RAVE 140 trigger and pins. If you are using an existing receiver from a previous project, just remove everything except the bolt catch.

2. **MAG CATCH:** Locate packet **#HP-100** and remove the mag catch assembly shown to the right. Un-thread the button by turning counter-clockwise. Un-thread the small pin on the mag catch. Set the button, spring, and pin aside. Insert the mag release into your Mil-spec receiver from the left side of the receiver. Place the mag release spring into the cavity on the right side of the Mil-spec receiver. It should be sitting over the mag release stud. Now push the mag release button into the button slot on the right side of the receiver. You must overcome the spring tension enough for the button to slide down into the slot on the receiver while pushing the mag catch out the other side. Now rotate the mag catch on the left side clockwise, threading the stud into the mag release button on the right side. **NOTE:** to work correctly, tighten until there is approximately 7/16"-1/2" of the button exposed on the right side. **NOTE:** *There are various videos of AR mag release installations online if the method above is unclear.*



3. **BOLT CATCH:** If your bolt catch is already installed, please proceed to STEP 4.
NOTE: The PSA JAKL requires its own low-profile bolt catch. To install a bolt catch, begin by putting 3-4 layers of tape on the side of the receiver. This will protect the receiver while

driving in the bolt catch roll pin. Tap the roll pin into the receiver just enough for it to stay in place on its own. Insert the spring, then the plunger. Hold the receiver upright and insert the bolt catch. While keeping the holes aligned, drive the roll pin through the receiver hole and bolt catch. Use the pin punch to seat the roll pin. **NOTE:** *There are various videos of AR bolt catch installations online if the method above is unclear.*

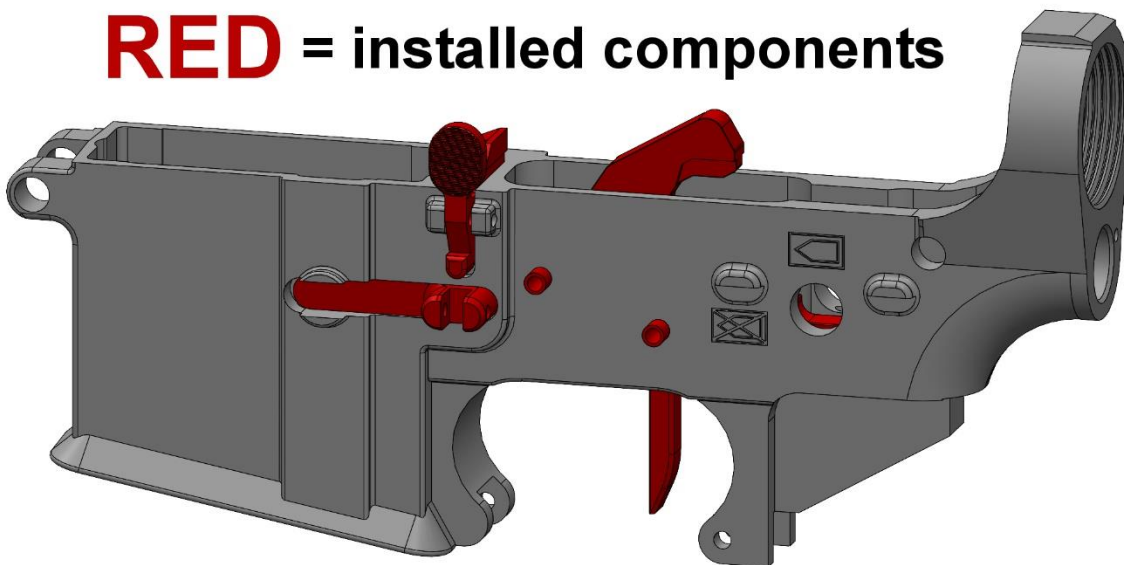


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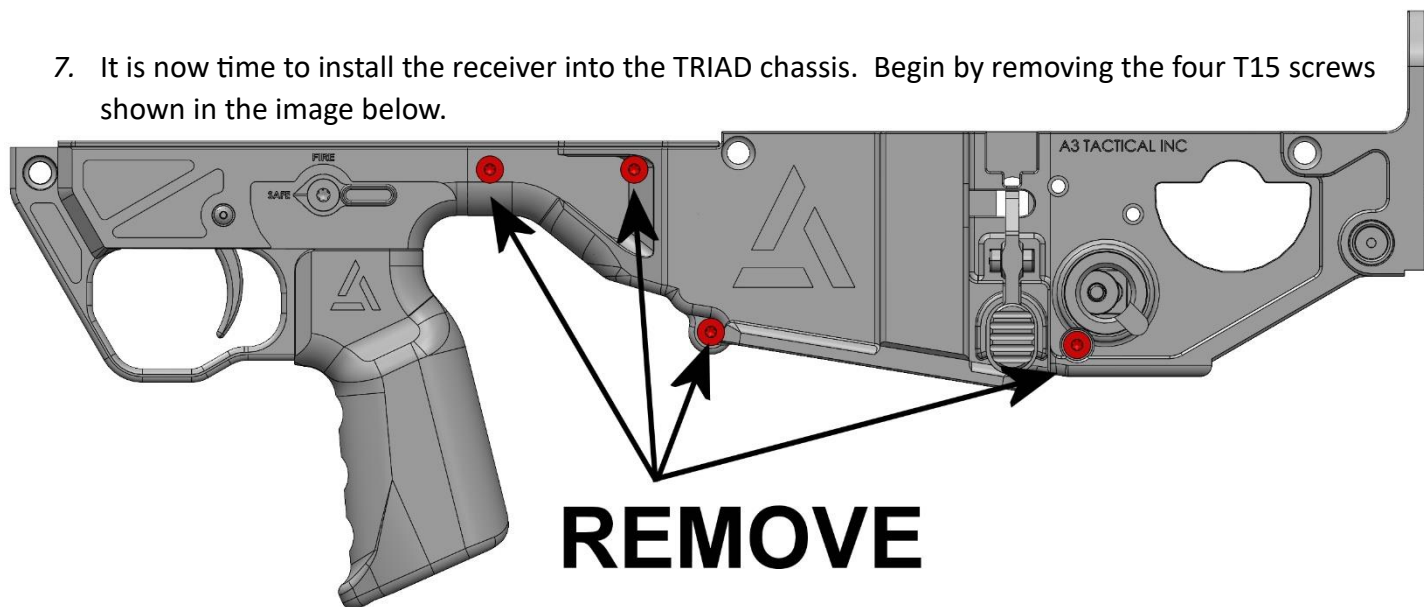
4. **TRIGGER:** Locate the RAVE 140 trigger and extended trigger pins from the **HP-105** hardware packet. Remove the screws from the trigger pins and set them aside. Install the trigger and pins, roughly centering the pins in the receiver. *NOTE: the extended trigger pins will be wider than your receiver, this is normal.*
5. **REAR SAFETY:** A rear safety selector is not necessary on the TRIAD however, the TRIAD can be run with both a front and rear selector if desired. If you want to run a rear selector, please install it at this time *using the instructions from the selector manufacturer.* After installing the rear safety, insert the selector detent into the receiver, then proceed.

6. At this point the receiver should have the bolt catch, trigger, and trigger pins installed (and optional rear selector). The finished receiver should look like the image below before proceeding.

RED = installed components

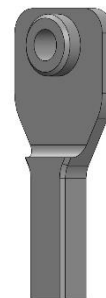


7. It is now time to install the receiver into the TRIAD chassis. Begin by removing the four T15 screws shown in the image below.

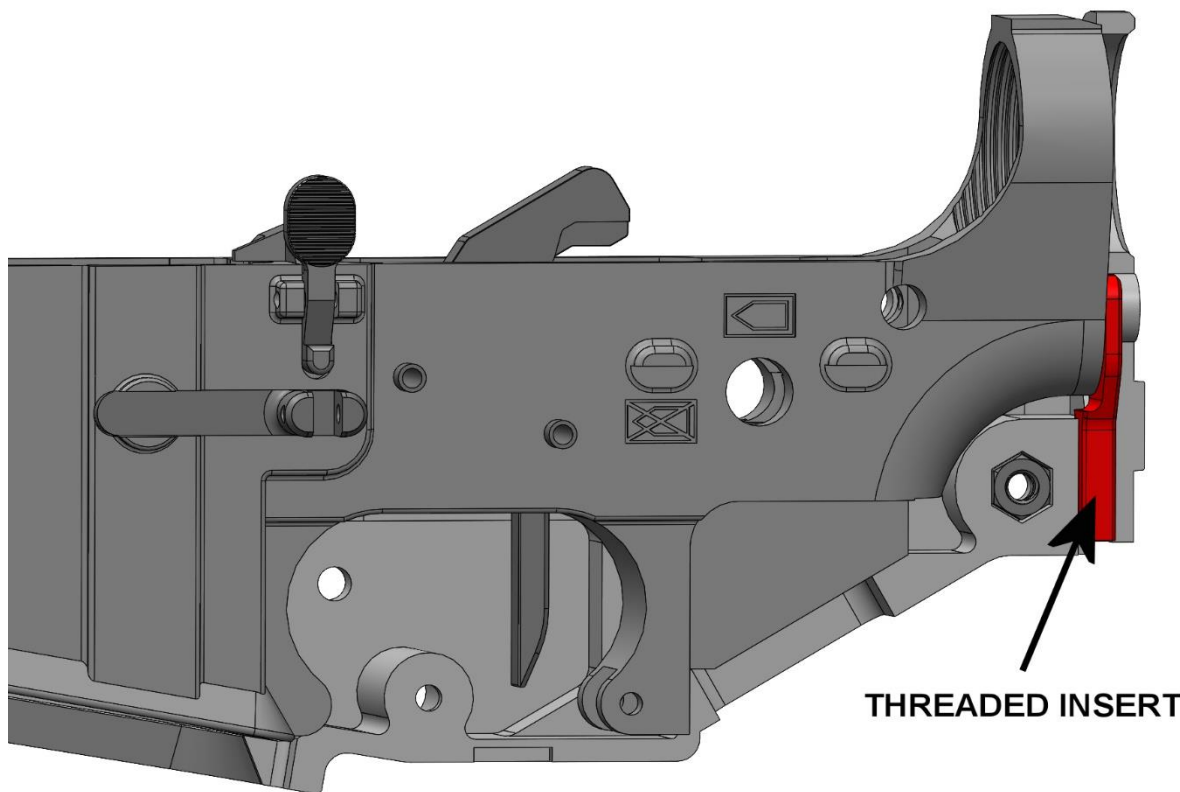


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8. Once the 4 screws are removed, remove the left side of the chassis and set it aside. Insert your receiver into the chassis, lining up the takedown pin holes. The receiver should fit snugly, with no interference or “wobble”. The exposed trigger pins should fit into the appropriate holes on the right side of the receiver and will help locate the receiver in the housing. Locate the 4 small T8 screws that were removed from the trigger pins earlier. Thread 2 of them into the trigger pins on the right side of the chassis. Tighten each screw only until the pin starts to rotate, they will be tightened fully in a later step.
9. Locate the steel threaded insert, shown to the right, from hardware packet **#HP-102** (**#HP-106** for JAKL kits).
10. Insert the threaded insert into the back of the chassis, as shown in the image below. The threaded portion goes to the top and the protruding section should be facing the front of the chassis as shown. Make sure the threaded hole lines up with the hole in the chassis before proceeding.



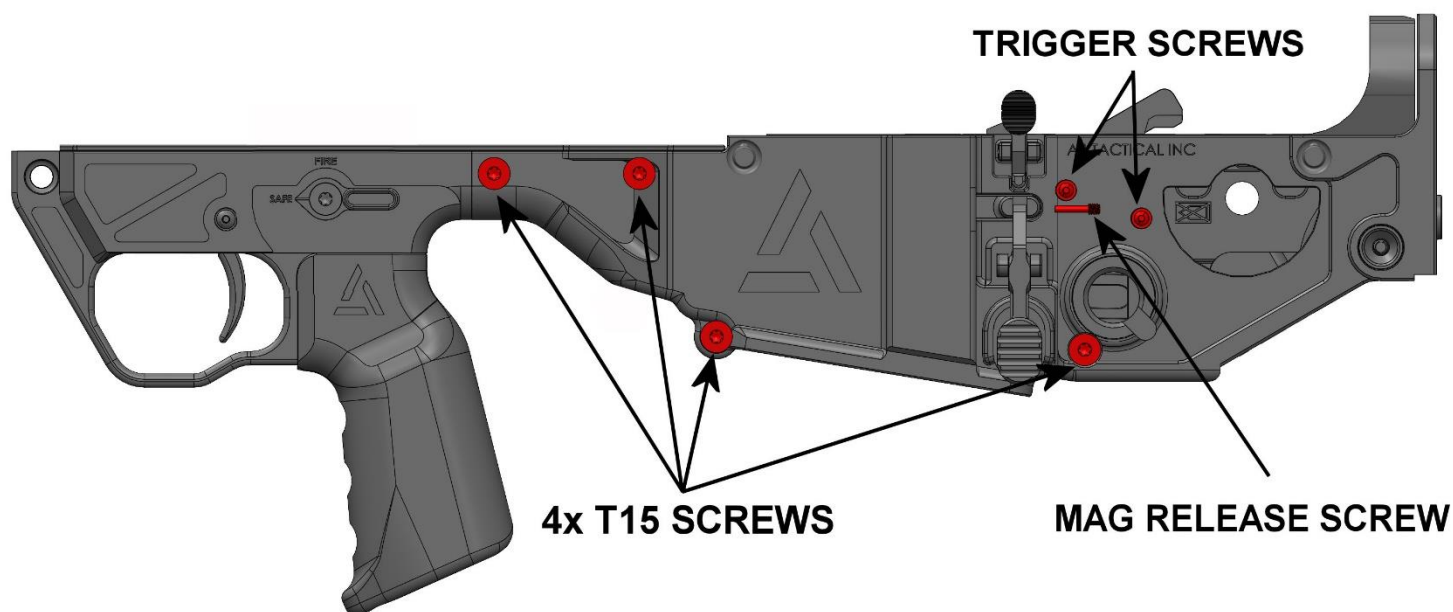
THREADED INSERT



THREADED INSERT

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11. Re-install the left-side chassis half, lining up the trigger pin holes. Again, the receiver should fit snugly, with no interference or “wobble”. Insert the four T15 screws that were removed earlier, and tighten.
12. Insert the two takedown pins from Hardware packet **#HP100**. This will align the receiver. **NOTE:** *If takedown pins do not line up, or inserting the pins forces a misalignment on other screw locations, please see TROUBLESHOOTING at the end of this instruction sheet.*
13. Insert the remaining two #4 trigger pin screws into the left side trigger pins. Leave these loose until the final step of the assembly.
14. Locate the mag release pin that was removed in Step #2. Apply thread-lock to the threads of the mag release pin and insert it into the mag release lever as shown. Thread in the pin using the 1/16” Allen wrench. This connection relies on Thread-Lock to stay in place, do not tighten. Thread in until flush and then test the lever to ensure there is no bind. If the lever binds, loosen the pin slightly until the mag release functions correctly.



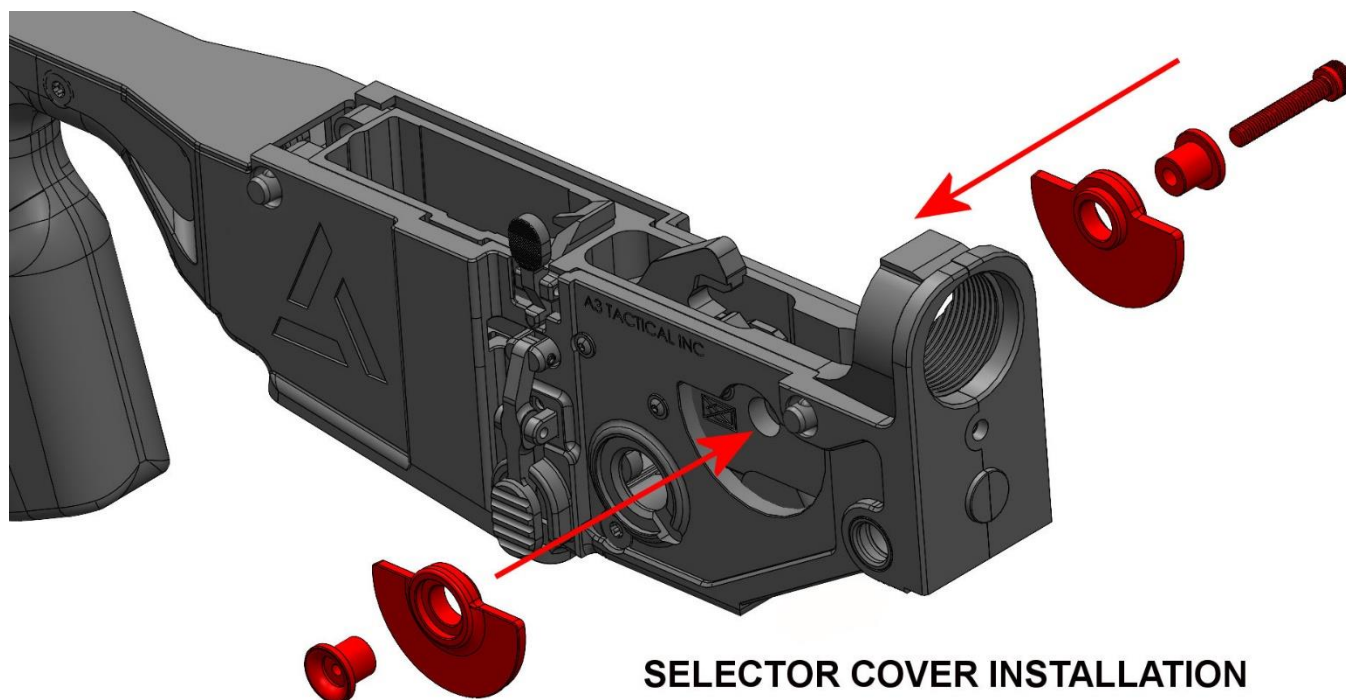
15. **GRIP BLOCK:** Locate the rear grip block assembly and 1/4" x 1/2" low-profile screw in your hardware box. If you are running a rear safety selector, insert the selector detent spring into the small hole at the top of the block. Install the block over the rear grip mount area on the internal Mil-spec receiver. Insert the 1/4" screw and tighten the block to the receiver.



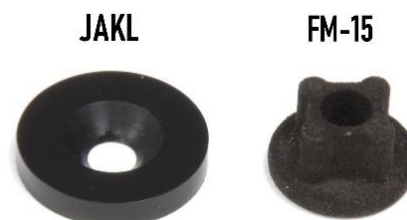
GRIP BLOCK

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16. If you are running a rear selector, you can skip this step and proceed to **step 17**. If you are not running a rear selector, locate the two Selector covers, and Selector insert assembly from Packet **#HP-100**. Disassemble the insert assembly and install it on the chassis as shown. Tighten the screw with a 9/64" Allen wrench.



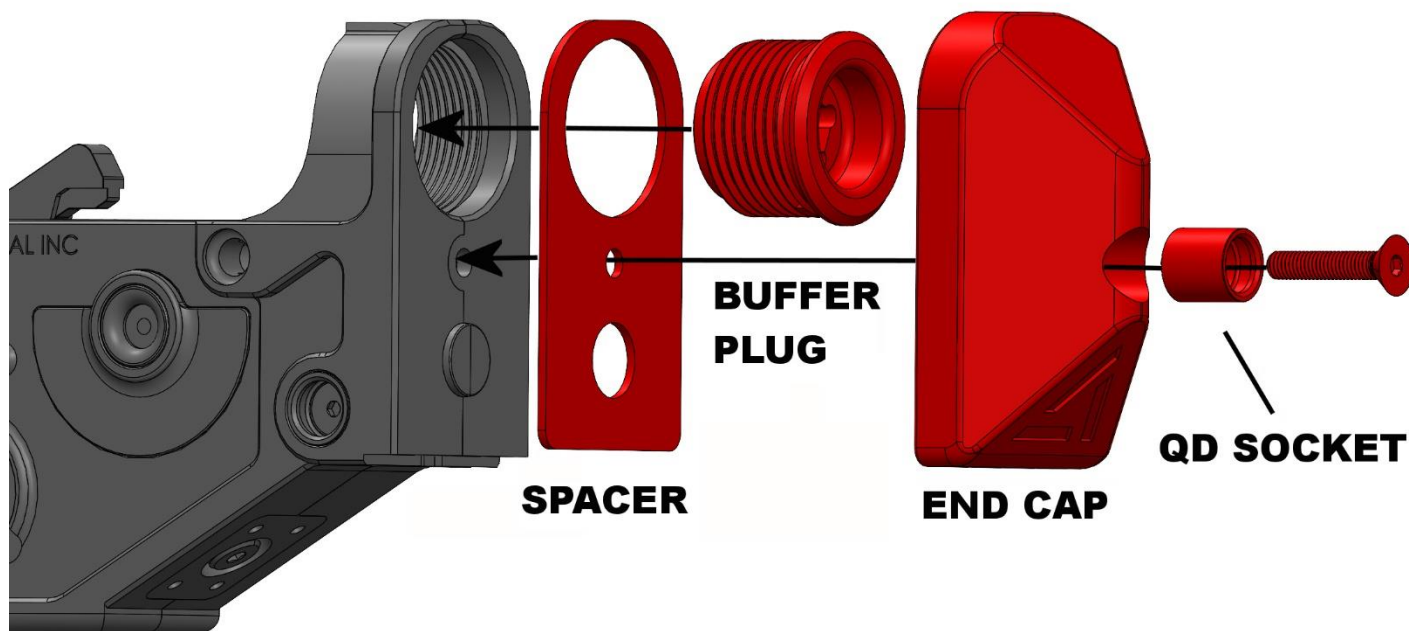
17. **BUFFER/BUFFER PLUG:** Locate the threaded buffer plug from the hardware box. If you have a Foxtrot Mike upper, you will need to install the polyurethane buffer into the buffer plug (the BRN's do not require a buffer). ***For Foxtrot Mike uppers, your buffer comes with the upper. Locate the buffer from the Foxtrot Mike hardware packet and simply press it into the A3 Tactical buffer plug. For JAKL users, your buffer already comes installed on your buffer plug.***



18. **PISTOL CAP AND SPACER:** Locate the pistol end cap and spacer shown in the image on the following page (NOTE: JAKL end cap will look slightly different than cap shown). Install the components in the order shown, using a 3/8" ratchet extension to thread and tighten the buffer plug to the back of TRIAD, and into the Mil-spec receiver.

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19. Slide the end cap over the end of the TRIAD. Insert the QD sling socket into the back of the end cap. Apply thread lock to the #10 x 1.00" screw then insert and tighten.



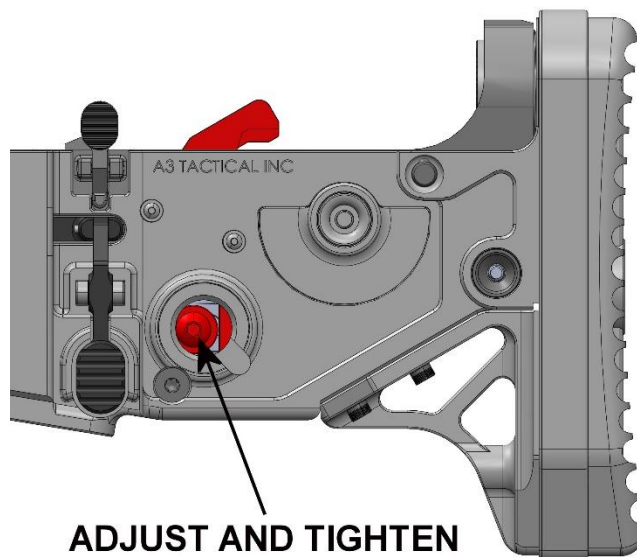
20. Using the 2 supplied T8 Torx wrenches, tighten the trigger pin screws, using a Torx wrench on each side of the receiver.

The assembly is now complete. Double-check that all fasteners are tight before proceeding.

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TRIGGER/SAFETY ADJUSTMENT: The main assembly is complete and it is now time to test and adjust the selector and trigger. This is a very important step and necessary, not only for proper functionality but more importantly for the safety of the firearm.

NOTE: Failure to adjust properly can prevent the safety from working correctly, resulting in an accidental discharge.



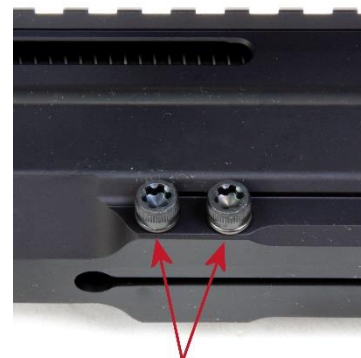
NOTE: Your forward linkage comes pre-adjusted but it is always a good idea to test it before proceeding. With the selector on SAFE, the forward trigger should have very minimal movement, if any. *If your TRIAD has excessive trigger movement in the safe position, please get in touch with our tech department and we will walk you through the adjustment procedure. This is a different adjustment from the following procedure.*

TRIGGER LINKAGE ADJUSTMENT

1. Loosen the trigger actuator screw through the access window, as shown, using the 1/8" Allen wrench. The actuator should be loose enough to allow sliding the actuator fore and aft.
2. With the safety selector on SAFE and the hammer primed (cocked), slide the actuator up against the face of the trigger leaving a very slight gap, then tighten. Tighten enough to collapse the lock washer only, do not over-tighten.
3. Move the selector to fire and test the trigger release. You should have a slight amount of movement before the trigger releases the hammer. Perform this test 3-4 times then re-tighten the trigger actuator screw.

FRONT TAKEDOWN LUG (FOXTROT MIKE UPPER ONLY):

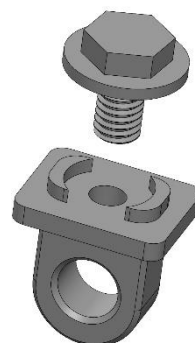
1. Locate the 2 long takedown pins from Hardware packet #HP-100. Temporarily connect the Foxtrot Mike upper to the TRIAD and take note of which bottom slot on the handguard lines up with the front takedown lug on the TRIAD chassis. Separate the upper and lower.
2. Due to the low-profile handguard on the Foxtrot Mike uppers, you will need to remove the handguard to install the front take-down lug. Using a **T27** Torx wrench, remove the 2 screws on the left side of the handguard. Slide the handguard off of the upper receiver.



REMOVE

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3. Locate the front takedown post assembly from hardware packet **#HP-101**. Disassemble the takedown post for installation. Takedown post and screw are shown to the right.
4. Using a telescoping magnet, insert the flanged screw down through the handguard, and into the appropriate M-LOK slot.
5. Add thread-lock to the threads of the takedown screw. While holding the screw in place with the magnet, thread the takedown post onto the screw as far as possible then remove the magnet. Re-install the handguard onto the Foxtrot Mike upper and tighten the mounting screws on the handguard.
6. Use the provided wrench from the hardware packet to tighten the screw through the side M-LOK slot as shown. Tighten just enough to allow the post to slide back and forth in the slot.
7. Re-install the upper, adjusting the M-LOK post to line up, then insert all 3 pins.
8. Use the wrench to fully tighten the takedown post screw with the closed end of the wrench. You can move from one side to the other to access the screw head during tightening.

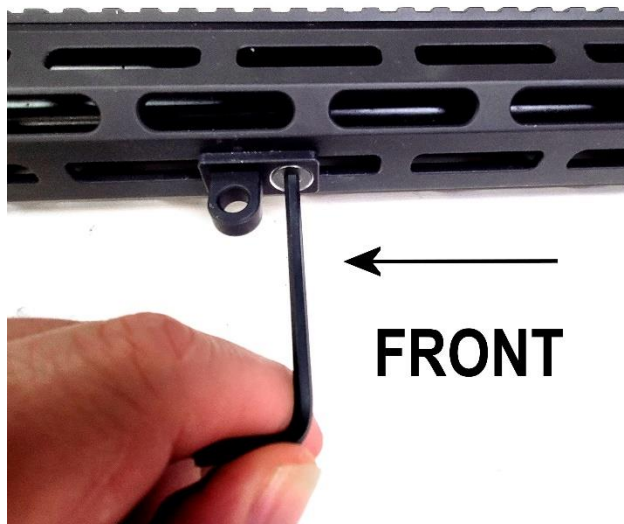
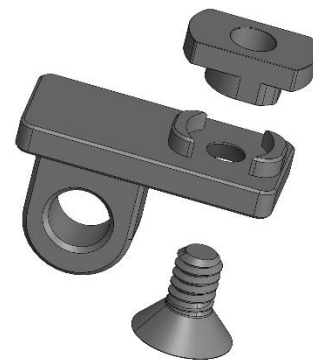




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FRONT TAKEDOWN LUG (BRN-180 UPPER ONLY):

1. Locate the 2 long takedown pins from Hardware packet **#HP-100**, and the front takedown lug assembly from **#HP-107**. Temporarily connect the BRN-180 upper to the TRIAD using the 2 long pins, taking note of which bottom slot on the handguard lines up with the front takedown lug hole on the TRIAD chassis. Separate the upper and lower.
2. Insert the front takedown lug into the appropriate M-LOK slot on the handguard. Insert with the lug offset forward, as shown in the image below. Tighten the nut using a 1/8" Allen wrench, leaving it just loose enough for the lug to slide in the slot.
3. Re-connect the TRIAD lower, lining up all 3 takedown lugs. Make sure the front takedown pin slides in and out easily then separate the lower and tighten the M-LOK nut, locking it in that position.



HANDGUARD (JAKL ONLY)

1. To be compatible with the TRIAD chassis, the JAKL requires our low-profile handguard. Simply remove the 4 factory screws and swap the handguards using the original mounting hardware. The new A3 Tactical handguard already has the front takedown lug built into it so no other modification to your upper is necessary.

CHEEK REST

Your TRIAD Rifle kits ship with our 1913 rubber cheek rest. The cheek rest mounts with a simple friction fit, that retains it to your upper Picatinny rail. There are 2 lugs on the backside of the cheek rest, designed to fit into the Picatinny slots. These prevent the cheek rest from sliding fore and aft. For proper fit, make sure that these lugs are lined up with the slots in the upper Picatinny rail.

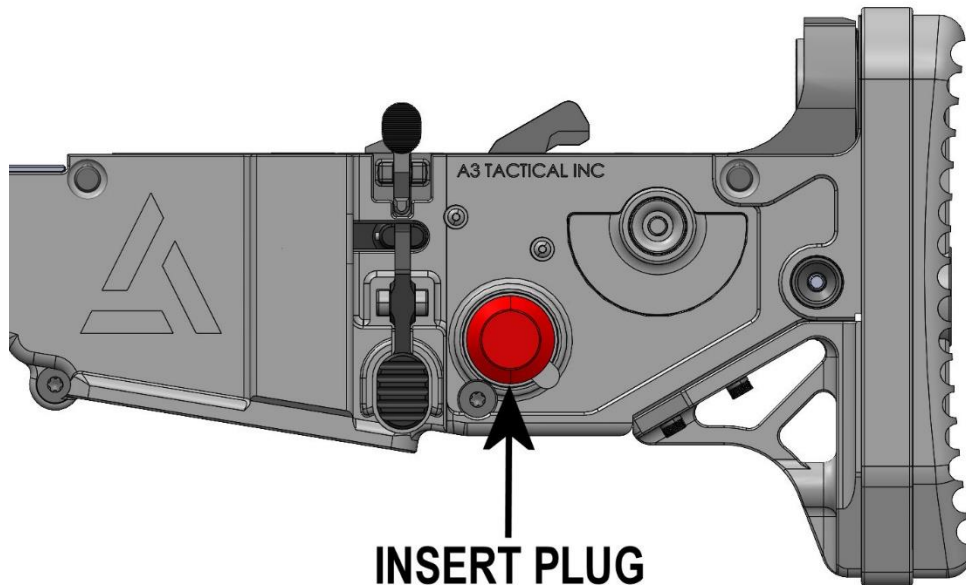


TEST FIRING

-NOTE: Before proceeding, check that there is no round in the chamber-

At this point, the lower chassis (with internal receiver) should be completely assembled, the trigger tested, and the upper installed.

1. With no magazine in the firearm, charge the weapon. Leaving the selector on SAFE, try to pull the trigger. It should not release the hammer. If it does, please proceed to the troubleshooting section of the instruction sheets. If the safety is working correctly, proceed.
2. With no magazine in the firearm, charge the weapon, place the selector on fire, and dry-fire the trigger. Perform this test 3-4 times to make sure the linkage is tight and the bolt is resetting the trigger properly. If the trigger is not functioning properly, proceed to the troubleshooting section at the end of the instruction sheets.
3. With an empty magazine installed, charge the weapon. The bolt catch should hold the bolt open. Release the bolt, then dry fire the trigger. If the bolt release is not functioning properly, proceed to the troubleshooting section at the end of the instruction sheets.
4. If everything so far has tested fine, you can proceed to live firing the weapon. Begin with 5-10 rounds in the magazine, slow firing to get a feel for the trigger and weapon function. If everything is running well, continue putting rounds through it, alternating through slow firing and rapid firing (if your range permits). If everything is working correctly, go ahead and final-check that the trigger actuator screw is still tight, then pop the plastic access cover cap into the hole. The access cover cap is in hardware packet **HP100**. If you need to adjust the trigger at a later time, the cover can be removed with a small screwdriver.





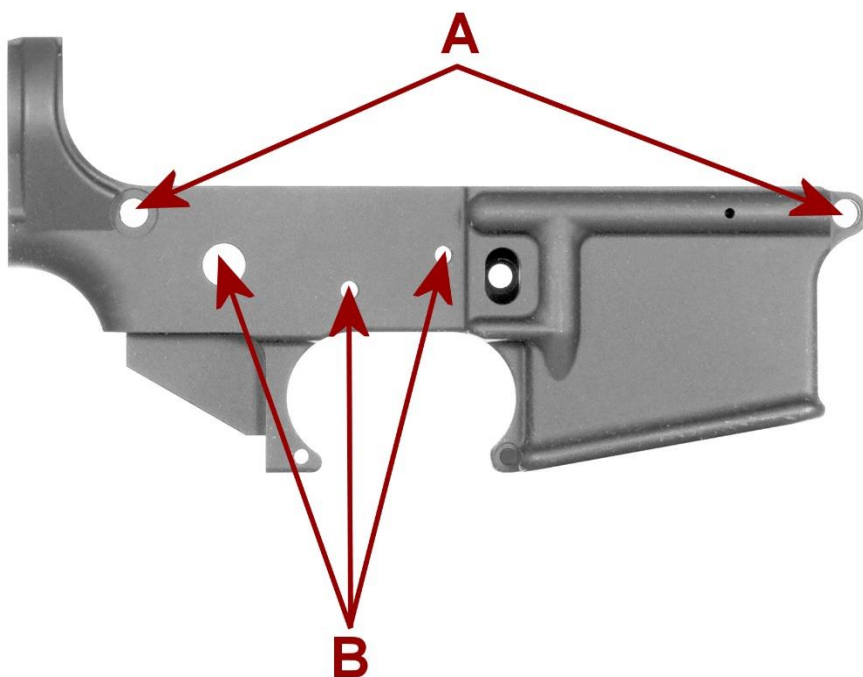
TROUBLESHOOTING – RECEIVER FITMENT

There are hundreds, maybe thousands of companies manufacturing Mil-spec AR receivers. Most companies buy raw forgings and then finish the machining themselves. While we have tested multiple brands for compatibility in the TRIAD, there are a few particulars that can still create minor fitment issues.

Using an optical comparator, we measured various brands of common Mil-spec receivers then compared those measurements to published Military specifications. What we found is a surprising amount of variance in some locations. Reference image below: The majority of receivers held spec on the “A” dimensions, and also on the 3 points of the “B” dimension. **Where the variance occurs is in the measurements of A relative to B.** Since the TRIAD chassis requires all 5 of these points to line up, this receiver variance can sometimes present a fitment issue where one, or a few holes just don’t line up perfectly. Generally the issue is that all holes align but the front takedown pin won’t line up.

How do I fix it? Short of changing out the receiver, the best option is the following:

1. Starting with the completed assembly, remove the buffer plug and lower grip mounting screw.
2. Remove the trigger pin screws and selector covers, and insert the takedown pins. This should align the receiver with the chassis. Now visually inspect the trigger pin holes for misalignment. Sometimes just loosening everything, installing the takedown pins and re-tightening everything will correct the mis-alignment.
3. If inserting the takedown pins misaligns the trigger pin holes then the receiver is too far out of spec and you will need to modify the holes in the TRIAD chassis. Using a Dremel, slightly open up the holes in either the trigger pin holes, or the front takedown pin hole until all hardware and pins can be inserted. Sometimes Dremmeling a small amount to each offending hole is preferable to a large amount to one hole.
4. Once everything fits, re-install all components, tighten hardware, and test to make sure the takedown pins function correctly.





TROUBLESHOOTING – TRIGGER ADJUSTMENT

Below is a list of the most common issues that can result from a misadjusted trigger linkage. If you are having any other issues, please contact our tech staff at 813-404-6757 or tech@a3tactical.com.

- **SAFETY NOT WORKING** – If the trigger still functions when the selector is on SAFE, the front trigger screw needs to be adjusted. This can be accessed under the front trigger housing cap. Remove the trigger housing cap to gain access to the trigger and selector. Locate the set screw on the trigger, just behind the selector. With the selector on SAFE, turn the screw clockwise until it hits the selector, then counter-clockwise 1/4 turn. This should reset the trigger and allow the safety to function properly. **NOTE:** you will need to reset the rear linkage anytime you adjust the front linkage. *Refer to TRIGGER/SAFETY ADJUSTMENT on Page 7.*



- **TRIGGER PULL DOES NOT RELEASE THE HAMMER** – this means that there is too much gap in the trigger linkage at the trigger actuator. Remove the side access cap(plug) and re-adjust the trigger actuator as explained in TRIGGER/SAFETY ADJUSTMENT on Page 7. *NOTE: if you repeat the adjustment procedure and still cannot get it to work, reset the safety first, as illustrated in the previous step, then re-adjust the trigger actuator.*
- **WEAPON ONLY FIRES ONE ROUND** – If only one round fires, but then you have a dead trigger for the next round, the firearm is failing to reset the trigger. This is due to the linkage adjustment being too tight. The rear trigger needs a small amount of forward movement during reset. If the trigger actuator is tight up against the trigger, it will prevent the trigger from resetting. *Refer to TRIGGER/SAFETY ADJUSTMENT on Page 3 and re-adjust the trigger actuator, leaving a very slight gap between the actuator and the trigger.*



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- **DOUBLE SHOT** – Pulling the trigger once results in a double shot and then a dead trigger. This is the same issue as the problem before. The linkage is too tight and not allowing the trigger to reset. Without a reset, the hammer can follow the bolt forward, striking the firing pin a second time.
- **DOUBLE FEED, FAIL TO EJECT, FAIL TO FEED** – these are all traditional issues related to the upper receiver, lower receiver, or magazine. None of these issues are related to the linkage in your TRIAD and can be diagnosed with standard AR troubleshooting guides, or by consulting your upper manufacturer.

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