

BFS III™ Dry Fire Function Check List

WARNING: Always insure that your firearm is completely unloaded before performing a dry fire test. Remove the ammunition magazine, and insure that there is not a loaded round in the chamber. Best yet, perform this task with the upper receiver and magazine removed.

WARNING: Even though you believe your firearm is unloaded, it is always important to point your muzzle in a safe direction while performing the following tasks.

1. Function Check the Disconnecter Motion.

- A. With the Selector on Binary and the Hammer forward, push on the tail of the Disconnecter.
- B. The IDS protrusion should slip under the front tip of the Disconnecter.

2. Function Check the IDS Motion.

- A. With the Selector in Binary and the Hammer forward, push on the back of the IDS.
- B. The IDS protrusion should slip out from under the front tip of the Disconnecter.

3. Function check the Safety.

- A. Ensure that the Hammer is cocked on the sear.
- B. Move the Safety Selector to "Safe" Mode.
- C. Pull the Trigger.
- D. The Trigger should not move.
- E. Move the Safety Selector back to "Semi" Mode.
- F. The Hammer should not fall forward.

4. Function check the transition from "Semi" to "Safe."

- A. Ensure that the Hammer is cocked on the sear.
- B. Move the Safety Selector to "Semi" Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger still held back, re-cock the Hammer on the Disconnecter.
- F. While turning the selector back to "Safe" Mode, the Hammer should not move.
- G. Release the Trigger.
- H. The Hammer should fall to the sear.

5. Function check Semi Mode.

- A. Ensure that the Hammer is cocked on the sear.
- B. Pull the Trigger and keep it held back.
- C. The Hammer should fall forward and impact the Firing Pin.
- D. With the Trigger still held back, re-cock the Hammer.
- E. It should now be held back by the Disconnecter.
- F. Release the Trigger
- G. The Hammer should now fall to the sear and not to the Firing Pin.

6. Function check the transition from "Semi" to "Binary," Scenario I

- A. Move the Selector to "Semi" Mode.
- B. Ensure that the Hammer is cocked.
- C. Pull the trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger still held back, re-cock the Hammer on the Disconnecter.
- F. Hold the Trigger back while turning the Safety Selector to Binary Mode.
- G. The Selector should not be able to turn to Binary Mode.
- H. The Hammer should not have fallen while manipulating the selector.
- I. Now release the Trigger.
- J. The Hammer should fall off of the Semiautomatic Disconnecter and be caught by the sear.

7. Function check the transition from "Semi" to "Binary," Scenario II

- A. Move the Selector to "Semi" Mode.
- B. Ensure that the Hammer is cocked.
- C. Pull the trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger still held back, re-cock the Hammer on the Disconnecter.
- F. Hold the Trigger back while turning the Safety Selector to Binary Mode.
- G. The Selector should not be able to fully turn to Binary Mode.
- H. Continue to maintain pressure on the Selector.
- I. Release the Trigger while continuing to maintain pressure on the Selector.
- J. The Hammer should not move.
- K. Now release pressure on the Selector.
- L. The Hammer should fall off of the Disconnecter and be caught by the Sear.

8. Function check Binary Mode, Scenario I

- A. Ensure that the Hammer is cocked on the sear.
- B. Move the Safety Selector to "Binary" Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter.
- F. Slowly release the Trigger until the Hammer falls to the Firing Pin.
- G. Keep your finger held at the point that the Hammer fell forward
- H. Re-cock the Hammer on the Disconnecter.*
- I. Release the trigger and the hammer should reset to the Sear.

9. Function check Binary Mode, Scenario II

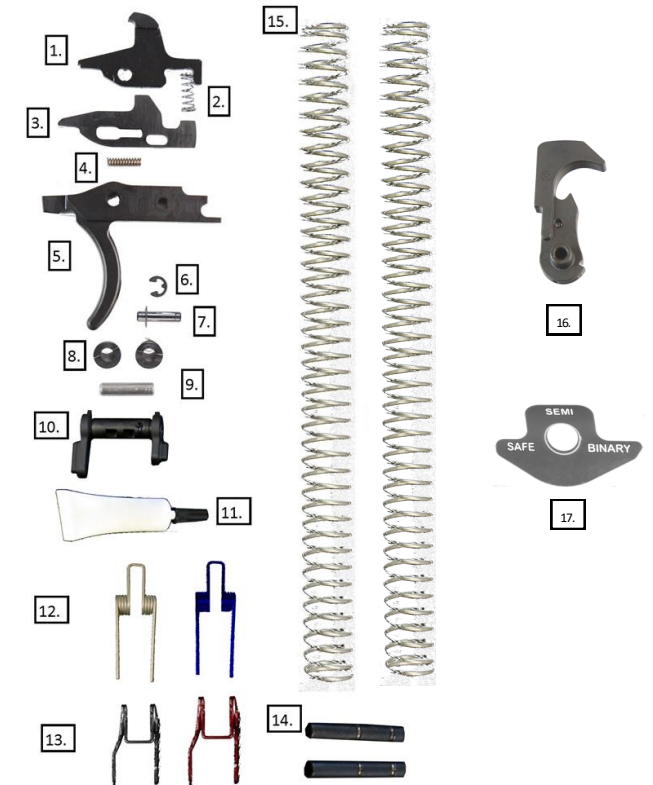
- A. Ensure that the Hammer is cocked on the sear.
- B. Move the Safety Selector to "Binary" Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter.
- F. Slowly release the Trigger until the Hammer falls to the Firing Pin.
- G. Keep the Trigger held at the point that the Hammer fell forward
- H. Re-cock the Hammer on the Disconnecter.
- I. Pull the Trigger in and the Hammer should not fall.
- J. Release the Trigger slowly until the Hammer falls to the Firing Pin.
- K. While keeping your finger at the breaking point, re-cock the Hammer.*
- L. Release the Trigger again, and it should reset at the Sear.

10. Function check Intermodal travel from Binary Mode to Semi Mode.

- A. Ensure that the Hammer is cocked on the sear.
- B. Ensure that the Safety Selector is in "Binary" Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter. *
- F. Continue to hold the Trigger back
- G. Rotate the Safety Selector from "Binary" Mode to "Semi" Mode.
- H. Release the Trigger.
- I. The Hammer should fall off the Disconnecter and rest on the Sear.

Franklin Armory® Binary Firing System III™ Installation Manual
Patented (#9,952,012 & 9,952,013)

- PARTS INCLUDED**
- 1. Disconnecter
 - 2. White Disconnecter Spring
 - 3. IDS
 - 4. IDS Spring (X2)
 - 5. Trigger
 - 6. C-Clip
 - 7. IDS Guide Rod (and C-Clip)
 - 8. Spacer (x2)
 - 9. Slave Pin
 - 10. Selector, Long Paddle, Short Paddle, and Screws
 - 11. Lubricant
 - 12. Hammer Spring (Clear and Blue)
 - 13. Trigger Spring (Clear and Red)
 - 14. Hammer & Trigger Pins
 - 15. Buffer Spring (Medium w/black tip and Heavy is Clear)
 - 16. Hammer
 - 17. Red Label



Tools Required



Manufacturers Warning: The Binary Firing System III™ should only be installed by a Franklin Armory® Certified Armorer. Franklin Armory® will not be responsible for an improper installation.

Step 1: Locate all of the components and tools necessary for the installation. Read the entire instructions before attempting the installation of the BFS III™.

Step 2: Ensure that the left side of the customer supplied lower receiver does not have oil residue that would prevent the application of the Safety Selector Indicator Sticker. (If necessary, use alcohol or a similar oil removing substance to clean the receiver.) Remove the Safety Selector Indicator Sticker from the backing and squarely apply it to the left side of the customer supplied lower receiver. (See figures 2a-2b.)

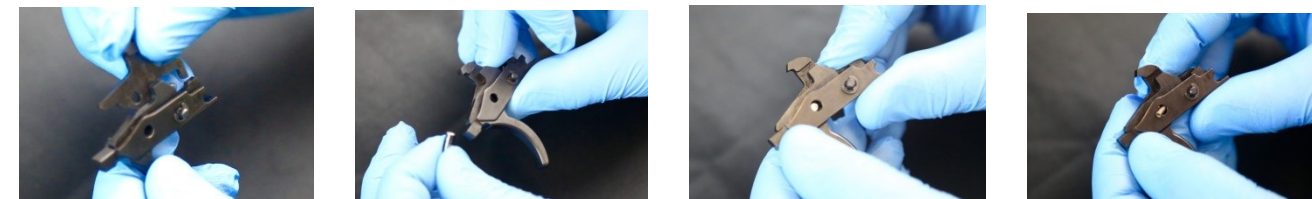


Figure 2a



Figure 2b

Note: Franklin Armory® requires all Certified Armorers to install this red sticker on every BFS III™. If the sticker is not applied, an unsuspecting user of the firearm could accidentally discharge the weapon causing injury or even death.



*It is important that the IDS be pushed forward by the Hammer every time this operation is tested. It is possible to re-cock the hammer and not push the IDS forward which will not provide an accurate test. In addition, it is possible the appearance of a malfunction by hand cycling the function test without an upper receiver attached. This would happen if the Safety Selector was in Binary Mode, the Trigger was pressed so that the Hammer went forward. If the Hammer was only lightly re-cocked, the selector would not be able to go back into Semiautomatic Mode until the IDS was pushed forward. Consequently, pressing down on the Hammer (just like when a carrier performs a full cycle) will force the tail of the Hammer to push the backside of the IDS forward. This will then allow free movement of the Safety Selector.

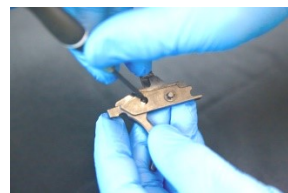


Figure 3e



Figure 3f



Figure 3g

Step 3: The Trigger sub-assembly is prebuilt at the factory. If the Slave Pin should fall out in transit, then the sub-assembly will need to be rebuilt. The IDS will be pinned to the Trigger by the IDS Guide Rod. The Disconnecter may need to be repositioned so that the Slave Pin can be inserted from the right side of the Trigger. (See figures 3a and 3b.) Do not slide the Slave Pin past the Disconnecter until the IDS Spring is set in place. (See figures 3c and 3d.) From the left side of the Trigger, insert the IDS Spring through the Trigger Pin hole and lead the IDS Spring rearward in the slot in the IDS. (See figure 3d) With a pick, compress the IDS Spring rearward so that the Slave Pin can be pushed through all the way to the left side of the Trigger. (See figure 3e and 3f.) Place the Spacers on either end of the Trigger with the half round portion facing upward on the outside ends. Wrap the one of the two Trigger Springs around the assembly. (See figure 3g) We recommend the stronger MilSpec Trigger Spring so that a faster Trigger return will be experienced. The lighter Red Trigger Spring is available for use if it is preferred to have a slightly lighter pull.

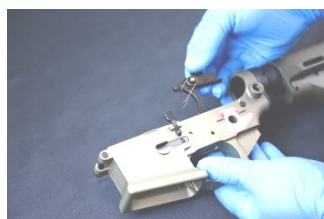


Figure 4a



Figure 4b



Figure 4c



Figure 4d

Step 4: Slide the Trigger sub-assembly into the lower receiver. (See figure 4a.) Position one Trigger Pin through the left side of the receiver so that it barely holds the left side spacer in position, and run the other Trigger Pin in from the right side. (See figure 4b.) It is best to have the smooth end of the Trigger Pin enter from the right side of the receiver and be lightly tapped until the other Trigger Pin and Slave Pin have drifted out. (See figures 4c and 4d.)

Step 5: Wrap the Hammer Spring around the Hammer as shown. (See figure 5a.) We recommend the lighter Blue Hammer Spring on most applications. However, you may wish to use the clear MilSpec Hammer Spring on any firearm that uses ammunition with hard primers. There will be a slight difference in overall pull weight depending on which spring is chosen. Install the Hammer with the remaining Hammer/Trigger Pin.



Figure 5a



Figure 5b

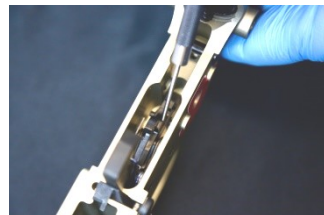


Figure 5c



Figure 5d

Function Check: With the Hammer and Trigger Sub-Assembly installed, the Binary Mode can be tested. One should be able to cock the Hammer, pull the Trigger, hold the Trigger back, re-cock the Hammer on the Disconnecter, and then release the Trigger to allow the Hammer to fall fully forward. (Note: It is prudent to prevent the steel Hammer from hitting the receiver.)

Function Check: With the Hammer forward, apply forward pressure to the back face of the IDS. The IDS should slip forward from underneath the forward lip of the Disconnecter. (See figure 5c.)

Function Check: With the Hammer forward, apply downward pressure on the rear portion of the Disconnecter. The IDS should slip under the forward lip of the Disconnecter. (See figure 5d.)



Figure 6a



Figure 6b



Figure 6c

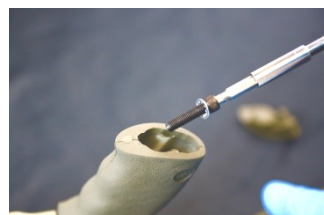


Figure 6d

Step 6: Ensure that the Hammer is cocked, and Install the Safety Selector in from the left side of the receiver. (See figure 6a.) Install the customer supplied Safety Detent into the appropriate hole in the receiver. (See figure 6b.) Install the customer supplied Safety Detent Spring and Grip to the receiver. (See figure 6c) Install the customer supplied Grip Screw. (See figure 6d.)

Step 7: With the Safety Selector in place, attach the Short Paddle to the Safety Selector with the supplied Selector Paddle Screw. Apply a small amount of moderate thread locking compound to the Safety Selector Paddle Screw. (See figure 7a.) Tighten the 4-40 Safety Selector Paddle Screw with a 1/16" allen wrench. There is no need to overtighten. Simply modestly snug the Safety Selector Paddle Screw in.

Function Check: Cock the Hammer and make sure that the IDS is in a forward position. Move the Safety Selector through all three modes. The Safety Selector should be easily manipulated between all three modes. (Note: The Safety Selector is not designed to go in to Safe Mode with the Hammer forward.)

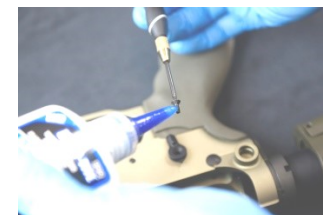


Figure 7a

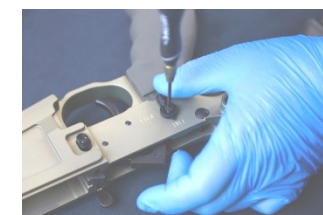


Figure 7b



Figure 8

Step 8: Slide the customer supplied buffer in to the included Medium or Heavy Buffer Spring. Slide both the buffer and the Medium or Heavy Buffer Spring into the receiver extension. (See figure 8.)

Note: the BFS III™ Buffer Springs are stiffer than a typical carbine buffer spring and are designed to help reduce the possibility of hammer follow as a function of carrier speed. The Medium Buffer Spring is marked with rubberized black paint on one end while the Heavy Buffer Spring is unmarked. Use the spring that works best for your particular application. It is possible that your existing spring might work better than either of the BFS III™ Buffer Springs.

Step 9: Perform the "BFS III™ Dry Fire Checklist" found on the last page of this manual. If the BFS III™ malfunctions during the Dry Fire Checklist, then it is important to fix the problem before moving forward to live fire testing.

WARNING: DO NOT LIVE FIRE TEST YOUR FIREARM UNTIL YOU HAVE COMPLETED AND PASSED THE BFSIII DRY FIRE CHECK LIST!

What to Expect When Live Fire Testing the BFS III™:

WARNING: Keep your finger off the trigger until you are ready to shoot.

WARNING: Never point your firearm at anything that you do not intend to destroy.

WARNING: Be sure of your target and what is behind it.

Test the Safe Mode:

With the Safety Selector in Safe Mode, the Trigger should not move, and the Hammer should not fall forward.

Test Semiautomatic Mode:

With the Safety Selector in Semi Mode, the firearm should fire one round every time the Trigger is pulled. When the Trigger is released, the Hammer should reset to the Sear.

Test Binary Mode:

With the Safety Selector in Binary Mode, the firearm should fire once every time the Trigger is pulled and once again when the Trigger is released. By releasing the Trigger slightly more, an audible reset should be perceived.

Note: It may be possible to fire on the pull phase in Binary Mode, and then again on the release phase in Binary Mode, but if the release phase reset is not performed, an operator can potentially pull the trigger again and then firearm will not fire. However, when the Trigger is released a second time, the firearm will fire. It is recommended that the operator use a "pull through, release through" technique when operating in Binary Mode.

Note: Depending on your specific firearm gas system, you may want to use a stiffer buffer spring to help prevent the possibility of hammer follow as a function of carrier speed. If hammer follow should occur, it will be likely that it will only occur under sustained "full speed" conditions. Additional modifications to your firearm gas port and carrier weight will further mitigate the potential of hammer follow with the BFS III™. It is beyond the scope of this document to provide all of the possible options to perfect the cycling of your firearm. If you are unsure of how to make any potential modifications to your firearm, it is recommended that you contact a Franklin Armory® Certified Armorer.

Remember, that the final installation is YOUR responsibility. If it is installed improperly, an accidental discharge may occur. If you have any doubts about the function of your BFS III™, please contact Franklin Armory® or a Franklin Armory® Certified Armorer.

If you have a suggestion on how to improve this installation procedure or if you have any questions, contact us at the following:

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