



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

These instructions outline the process of removing an existing JP-5™ barrel and proper installation a new one. This kit includes the **Barrel, Jam Nut, Barrel Cross Pin** and **Jam Nut Tool** if you ordered one.

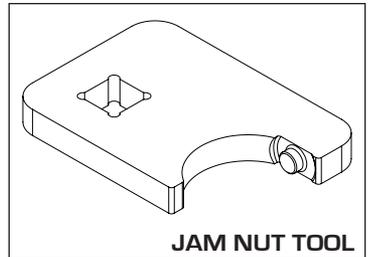
You will need the following tools for the installation:

- Vise
- 3/8" drive torque wrench
- 7/8" open-ended wrench
- Anti-seize
- Loctite® 271 (Red)
- Top rail vise clamps
- JP Universal Vise Clamps (recommended)
- Feeler gauges (specifically .018" and .019")
- Gold permanent marker or engraving pen

This installation involves setting a precision bolt gap which is critical for reliable firearm function. Some mechanical aptitude is required for a successful installation.

BARREL REMOVAL

1. Lock the upper receiver in a set of **JP Vise Clamps**, suitable action block or other means while taking care not to crush the receiver. If you do not have one of these options available, securing the receiver by its side flats with minimal pressure is the next best option but may result in cosmetic damage.
2. Remove the hand guard and barrel nut completely from the upper receiver (consult hand guard instructions), and remove the bolt carrier group.
3. Use the 7/8" open-ended wrench to thread the old **Barrel** out of the trunnion.



SETTING TRUNNION AND JAM NUT TENSION

1. Disassemble the bolt carrier group, and thoroughly clean the following components of any old thread locker, oil, obstructions, grit or particulate to ensure a clean installation:
 - Upper receiver (internal)
 - New **Barrel** face and threads
 - All bolt carrier components
 - Trunnion interior and threads
 - New **Jam Nut**

2. Reassemble the bolt carrier group assembly dry *with the firing pin and firing pin spring removed*.

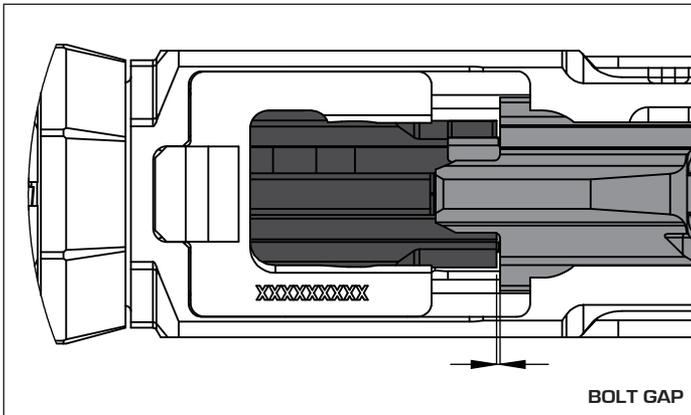
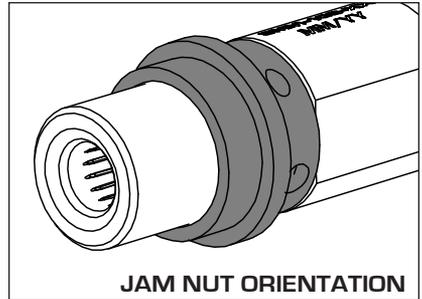
3. Thread the new **Jam Nut** with the cross holes toward the muzzle onto the new Barrel until bottoms.

4. Thread the **Barrel** assembly into the trunnion until the **Jam Nut** bottoms on the trunnion collar.

5. Use the torque wrench with the **Jam Nut Tool** to torque the **Jam Nut** to 55 ft-lbs.

This process ensures the **Jam Nut** and trunnion are under proper tension in final assembly. If this step is skipped, friction between the trunnion and upper receiver can interfere with achieving the correct final torque value.

6. Use the 7/8" wrench open-ended wrench to back the **Barrel Assembly** out one full rotation.



BOLT GAP ADJUSTMENT

1. Remove the upper receiver from the vise and secure in the top rail vise jaws.
2. Install the dry bolt carrier group with the firing pin and firing pin spring removed.
3. If your feeler gauges are long enough, install the lower receiver and measure the bolt gap through the magazine well. If your feeler gauges are not long enough, you will need to apply even pressure to push the bolt carrier forward without pushing it to one side. This lateral force will change the bolt gap measurement.
4. Adjust the bolt gap by turning the **Barrel** in or out of the trunnion. Turning the **Barrel** in (clockwise) increases bolt gap, turning it out (counterclockwise) decreases bolt gap. Adjust the **Barrel** position until the bolt gap is .018-.019". The bolt gap is defined as the smallest feeler gauge which has friction/drag when inserted and removed between the bolt and the bolt carrier.
5. Once the bolt gap is precisely .018-.019", use the **Jam Nut Tool** without a wrench to snug the **Jam Nut** against the trunnion hand tight without letting the **Barrel** rotate to secure this setting. Confirm the bolt gap is still .018-.019 after hand tightening the **Jam Nut**.
6. With the .018-.019" bolt gap achieved and the **Jam Nut** hand tight, use a gold sharpie or engraving pen to apply a clear witness mark across the seams between the trunnion, and the **Jam Nut**, and the **Jam Nut** and the **Barrel**. The witness marks allow for quick realignment of components to the correct bolt gap during final installation.

FINAL INSTALLATION

The final installation involves the use of the Loctite®. You may want to attempt a dry run without thread locker to ensure you can perform the steps confidently within the cure time.

1. Remove the **Barrel** assembly from the trunnion.
2. Apply a small amount of anti-seize to the trunnion threads.
3. Noting the position of the **Jam Nut**, back it out to expose the threads underneath.
4. Apply a small amount of Loctite® 271 only to the threads that engage with the **Jam Nut**.
5. Return the **Jam Nut** to its previous position with the witness marks aligned.
6. Carefully thread the JP-5™ into the trunnion until your witness marks realign on all three components back to their original position during the dry run.

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7. Reconfirm your bolt gap before proceeding.
 8. Use the torque wrench and **Jam Nut Tool** on the **Jam Nut** while using the 7/8 open ended wrench on the **Barrel** to counter-torque. Slowly and smoothly torque the **Jam Nut** to 45 ft-lbs. while using the open ended wrench to keep the **Barrel** from rotating.
 9. Reconfirm that the bolt gap is between .018-.019". If it has moved to outside of .018-.019", loosen the **Jam Nut**, and you may be able to return to step 5 and make a second attempt before Loctite cures. Take care to prevent **Barrel** rotation during torquing the **Jam Nut**. If the Loctite is already curing, remove the **Barrel** and **Jam Nut**, clean the Loctite and anti-seize off, and return to the **Bolt Gap Adjustment** section to try again.
 10. The optional **Barrel Cross Pin** can be installed to pin the **Jam Nut** to the **Barrel** at this time. This step requires a milling machine and carbide tooling, and is recommended for a gunsmith to perform.
 11. Allow 24 hours for the Loctite to cure.
 12. Install muzzle device, and pin and weld if necessary. Note: If more than 40 ft-lb is required for your muzzle device installation, secure the **Barrel** with a barrel vise so you do not change your bolt gap.
 13. Install barrel nut and hand guard (refer to handguard instructions).
 14. Reassemble the bolt carrier group with the firing pin and firing pin spring, reapply oil, and install in the upper receiver.