

**VARIABLE MASS OPERATING SYSTEM  
SMALL FRAME**

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

---

This Variable Mass Operating System (VMOS™) can be used in right-handed AR-15 receivers that will accept a Mil-Spec carrier group.

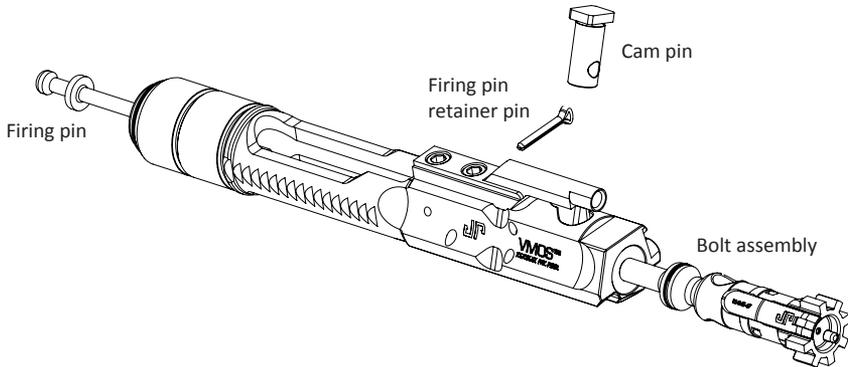
**The VMOS™ carrier will only function with a JP Silent Captured Spring.** The standard buffer retainer plunger will prevent the carrier from cycling. This carrier is designed for rifles requiring extra cycling mass or those relying upon mass regulation for reliability. This includes suppressed setups and rifles without an adjustable gas system. Like our Silent Captured Spring, the reciprocating masses of this carrier can be reconfigured to suit your particular rifle. Alternate masses and disassembly instructions are available on our website.

## **CARRIER ASSEMBLY**

1. Install the bolt assembly into the front of the carrier with the extractor facing to the ejection port side until the cam pin hole in the bolt aligns with the rearmost section of the cam pin hole in the carrier. The extractor will be to the right at ~45° when looking at the carrier from the rear.
2. Insert the cam pin through the carrier and into the bolt assembly. Rotate the cam pin to align it with the firing pin channel.
3. Insert the firing pin from the rear of the carrier until it drops all the way into the center of the bolt. The firing pin should protrude from the face of the bolt when the bolt is in its rear most position.
4. Insert the firing pin retaining pin into the bore from the left side of the carrier until it protrudes from the right side of the carrier.

At this point, the firing pin should move back and forth within the bolt so that it sits proud of the bolt face when pushed forward but is completely below the bolt face when pulled to the rear. The firing pin should move freely within the bolt and carrier with almost zero resistance. If the pin does not move freely, recheck your installation. If problem persists please contact JP before using this bolt carrier group in your rifle.

## BOLT CARRIER ASSEMBLY



## CARRIER INSTALLATION

1. Ensure that that bolt assembly is pushed to its forward most position. The cam pin should be centered on the top of the carrier, directly below the carrier gas key.
2. Make sure that the top charge handle is in position. Top charging handles must be inserted and slid partially forward prior to installing the carrier group. If you are using a JP side-charge upper (SCR-11™ or PSC-11™), the side-charge handle must be installed and pushed fully forward before the BCG is inserted.
3. Slide the bolt carrier group into the bore of the upper receiver until it locks into place in the barrel extension. The rear of the carrier should be flush or slightly below the rearmost surface of the upper receiver. Ensure that any charging handles are in their forwardmost position and locked in place
4. Reassemble the upper and lower receivers as normal.

Check for smooth function using the charging handle. Ensure that the bolt locks back when the bolt catch is depressed or an empty magazine is inserted and the charging handle is pulled. Use the bolt release to let the bolt forward without interference from the charging handle and ensure that it travels fully forward into battery.

**THANKS FOR YOUR BUSINESS!**