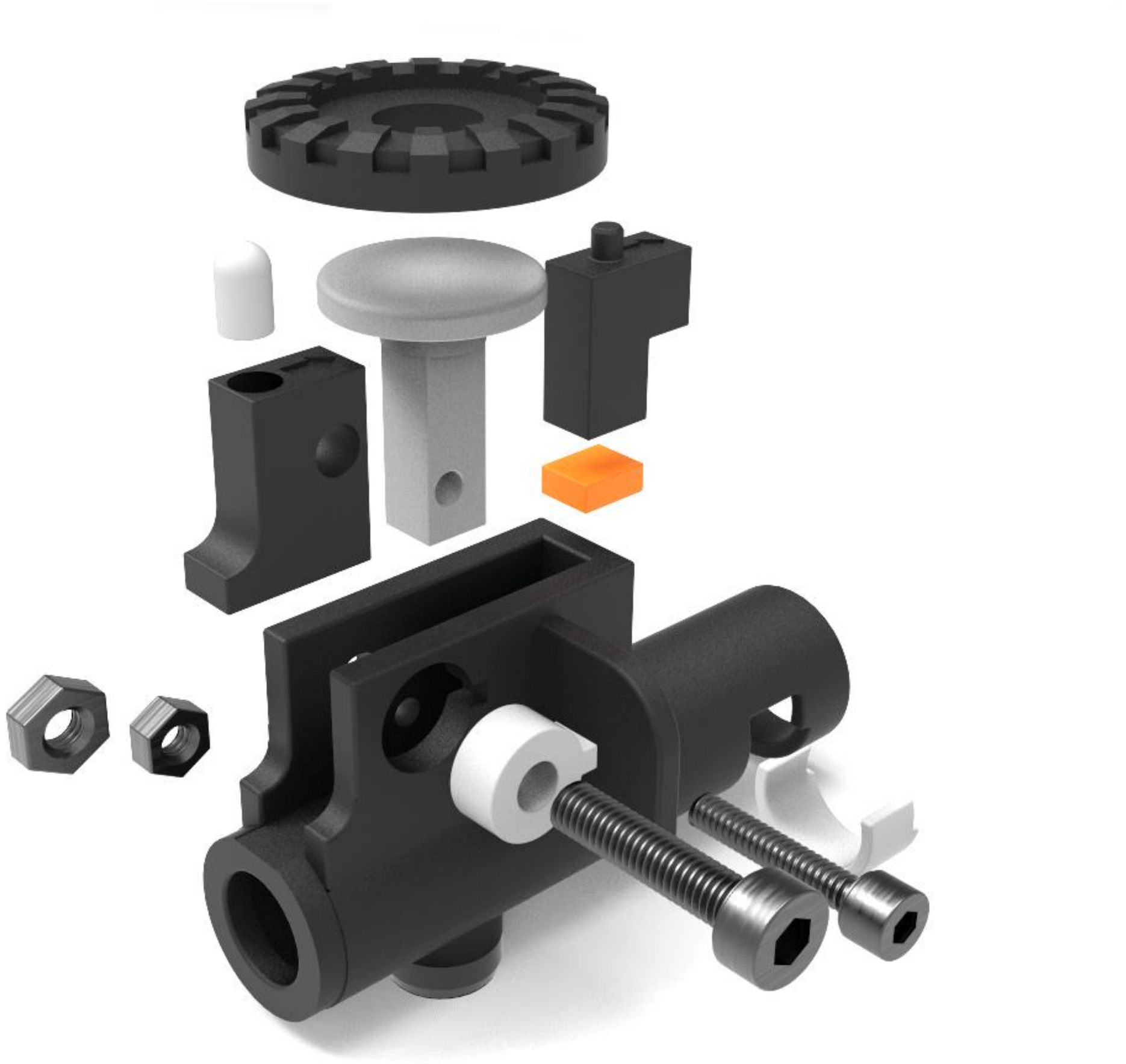
Unique Innovations and Solutions
Airtech Studios

Installation Manual

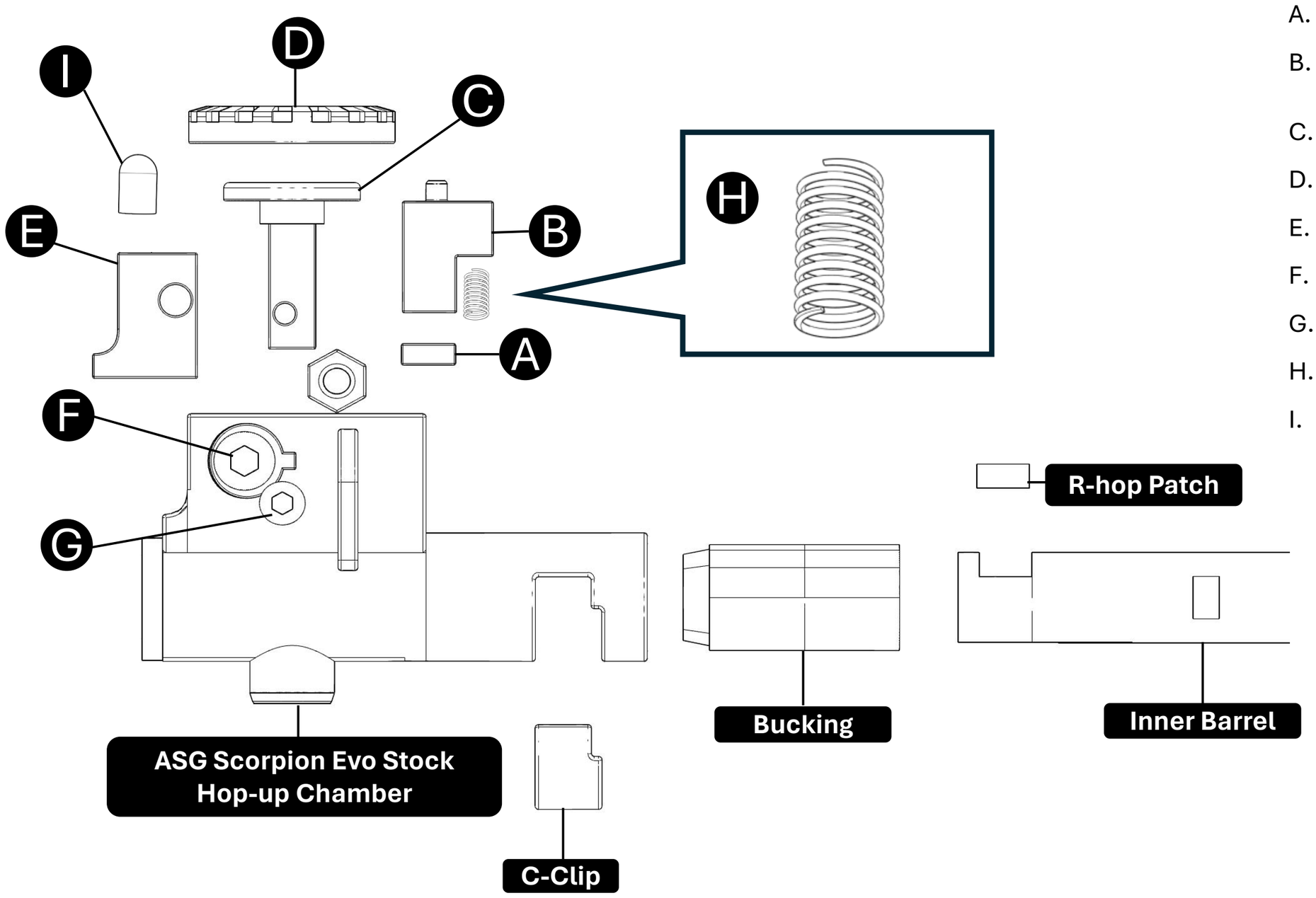
Airtech TDC Rotary Convertor Kit: ASG Scorpion Evo 3A1 AEG Hop-up Rotary Chamber Upgrade. V2



www.airtechstudios.com

Preparation

Airtech TDC Rotary Convertor Kit: ASG Scorpion Evo 3A1 AEG Hop-up Rotary Chamber Upgrade.



A. M-nub x2

B. TDC Trolley x2 (Flat & Curved Foot included)

C. Wheel Locking Unit

D. Hop Adjustment Wheel

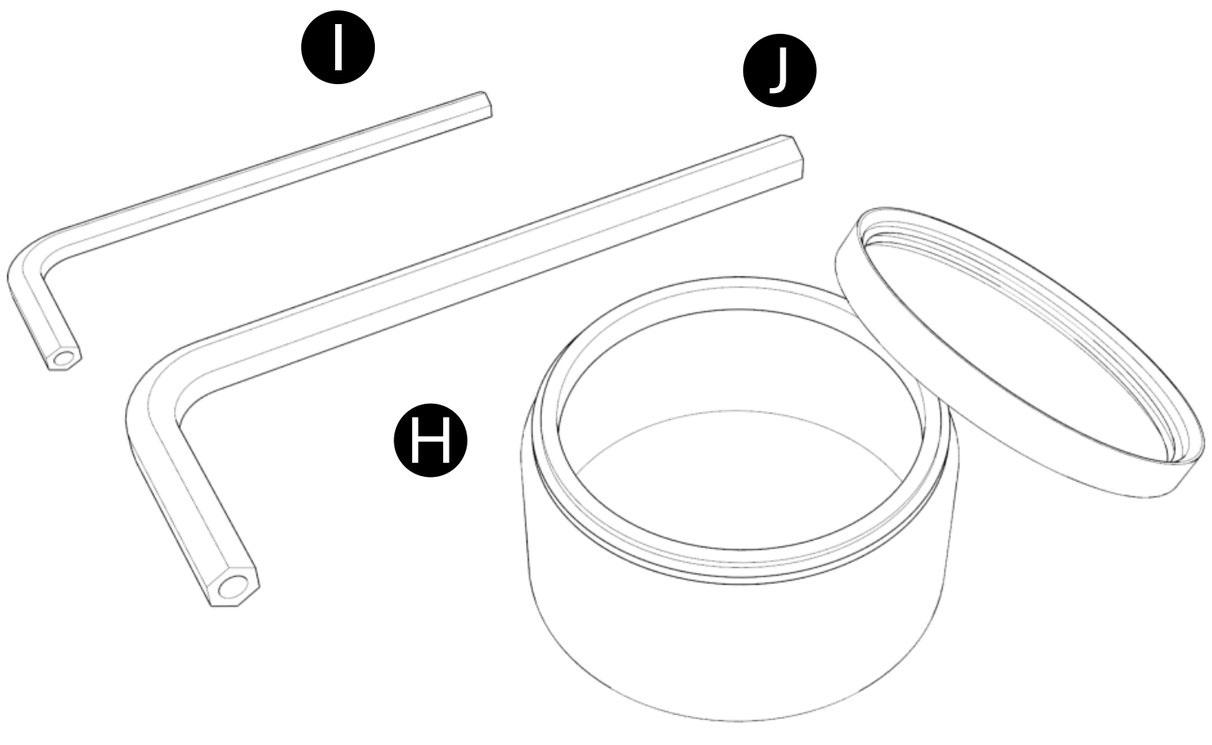
E. Back Bracket

F. M3 Bolt Screw and Nut

G. M2 Bolt Screw and Nut

H. Trolley Spring x 2

I. Ball Bearing

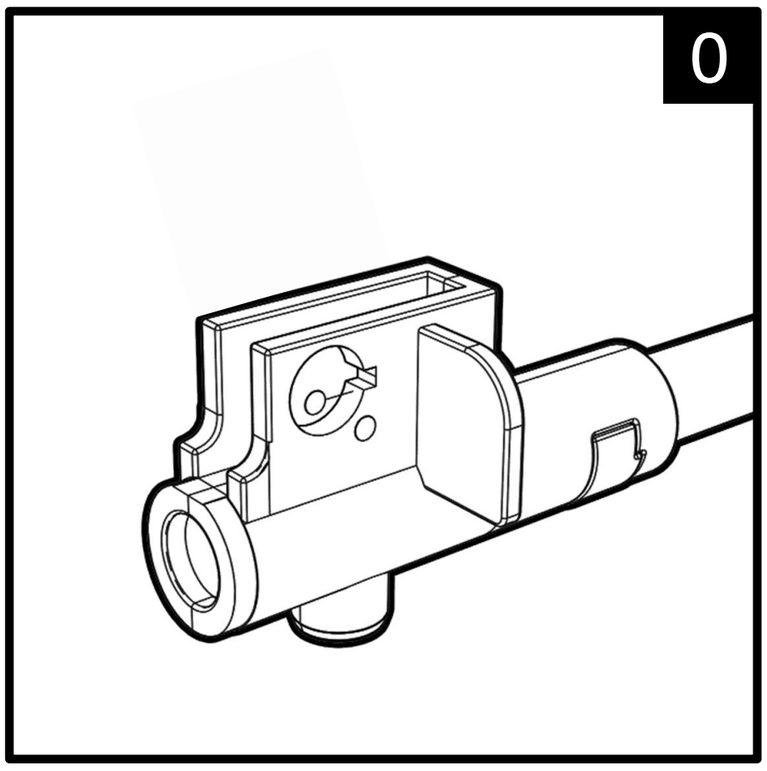


H. Airsoft Silicone Grease

I. M2 Allen Key

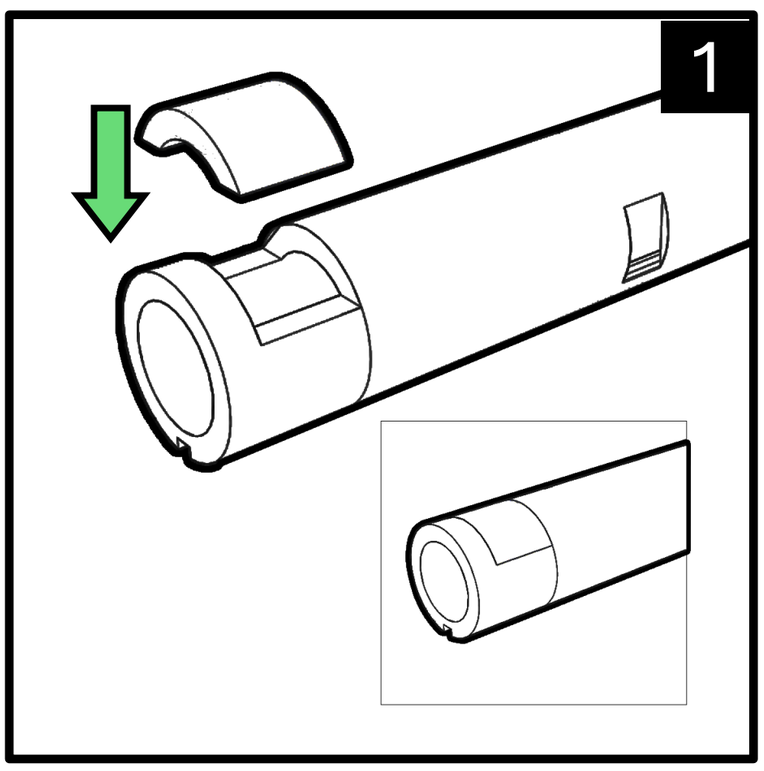
J. M3 Allen Key

0. Start by removing the hop-up chamber from the rifle.
Strip down all the components so that it I only the hop up chamber that remains. Strip down all the components of the hop up unit until on the chamber remains.



1. Install your chosen R-hop patch into the inner barrel – if you have pre-installed R-hop barrel already, you can skip this step. Flat-hop and normal bucking's will also function.

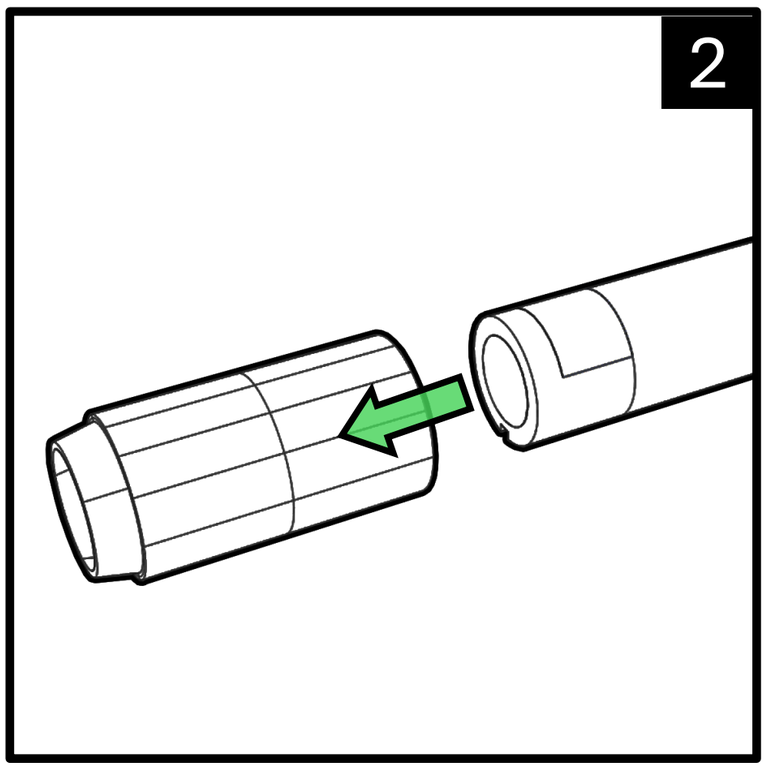
For R-hop patches we recommended brands like Psionic, Elvish and Silent Sniper. Drop-in buckings, including Maple leaf macaroon and Tru-hop can be used too.



2. Insert the inner barrel into the bucking.

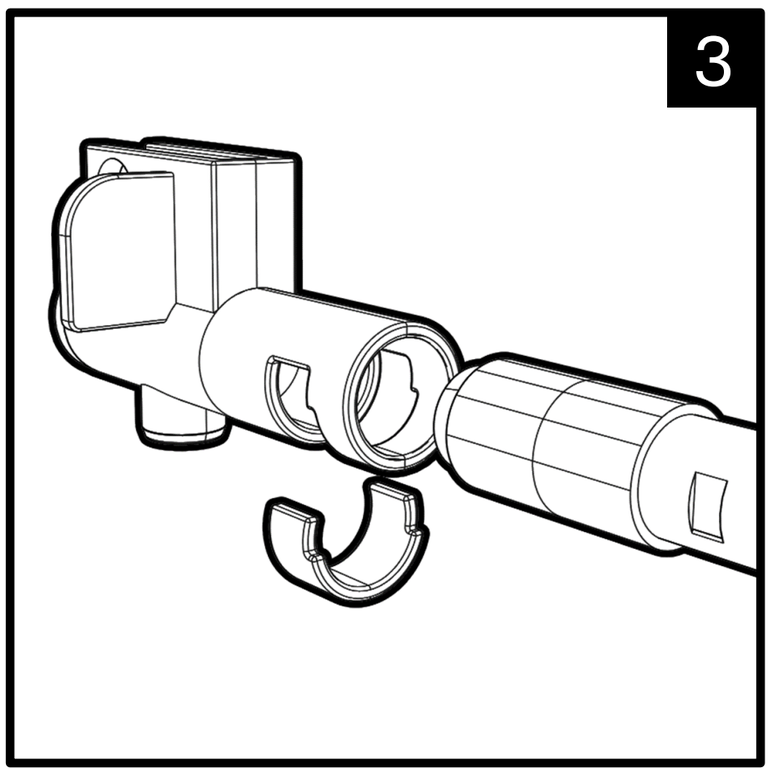
R-HOP Patch: Ensure that is it a mound less bucking type – you can modify yourself from a stock bucking.

R-Hop Buckings: Brands like Maple Leaf Macaroon, Tru-hop or TNT have R-hop already installed. Simple insert the inner barrel into the bucking



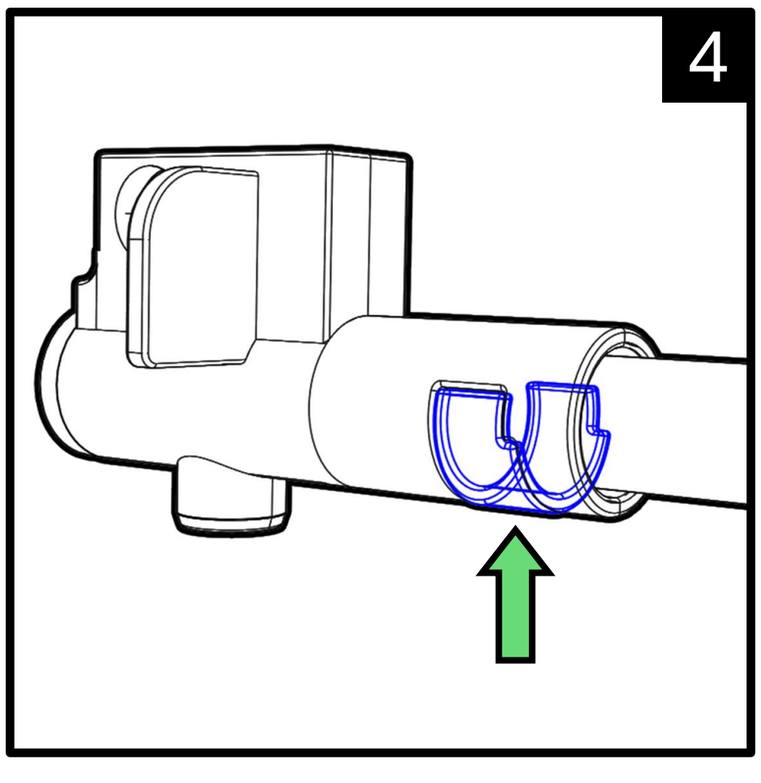
3. First insert the inner barrel/ bucking into the hop-up chamber.

Next Insert C-clip to lock the inner barrel. It also keeps your inner barrel centred correctly.



4. C-Clip Install

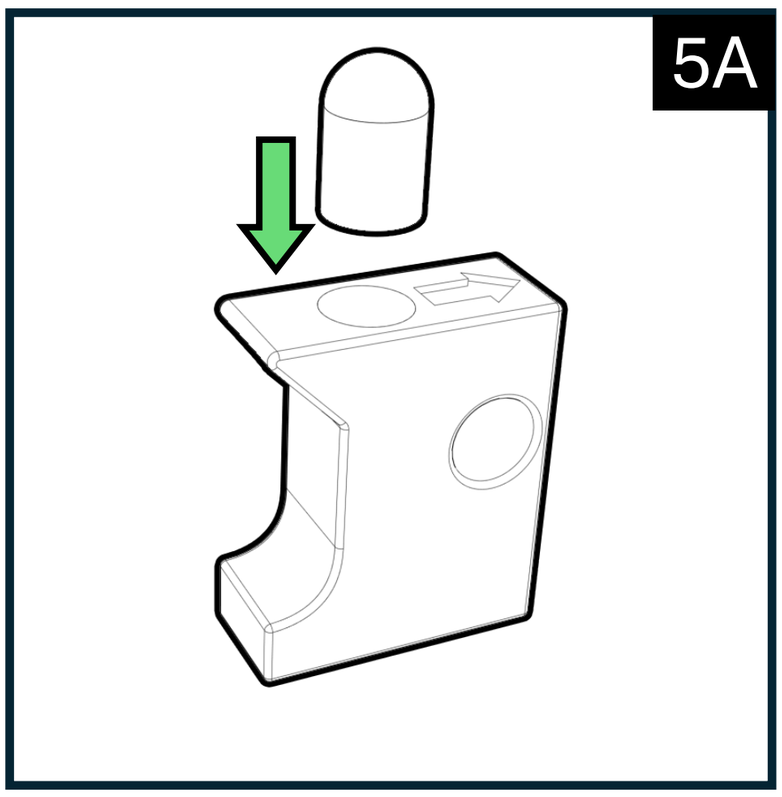
Once the C-Clip locks into place, it will latch onto the inner barrel to keep it centred. Ensure this is snug tight and locked to prevent any potential swerving when firing later on.



5a. Installing the Ball Bearing

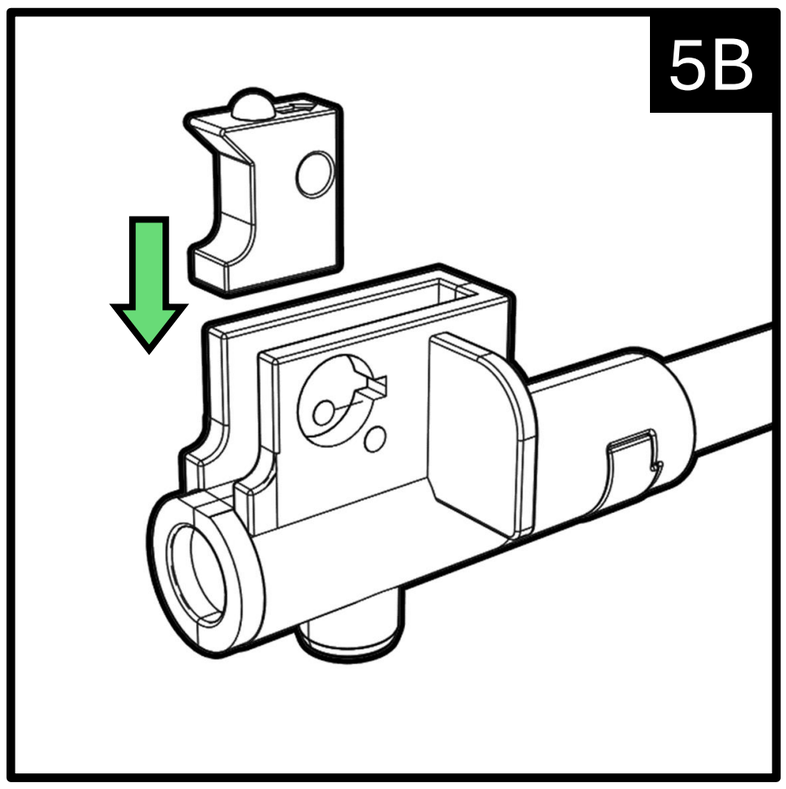
Align the ball bearing an insert it in to back bracket slot. It should be a snug fit with only the ball visible after its inserted.

Tip - Use a flat blunt metal object like a ruler to push it down in place



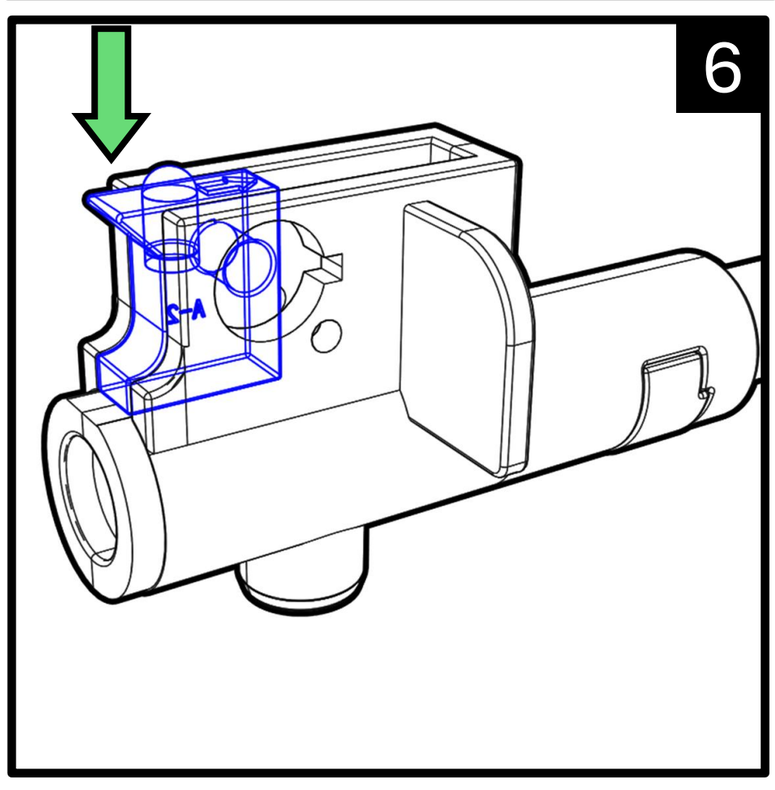
5B. Installing the back bracket unit

Align the back bracket to be placed at the back of the hop up unit. From the demonstration pic. You can see the ball bearing facing upwards and with the pointing side facing the back. This unit will control and lock your hop up adjustment wheel.



6. Demonstration of placement of Back Bracket

The Back Bracket will sit snugly at the end of the hop up unit. Ensure everything is in-line with the rest of the chamber. You may need to press it downwards with a little more force. When doing so, be careful not to damage the ball bearing – push down in the plastic bracket instead.

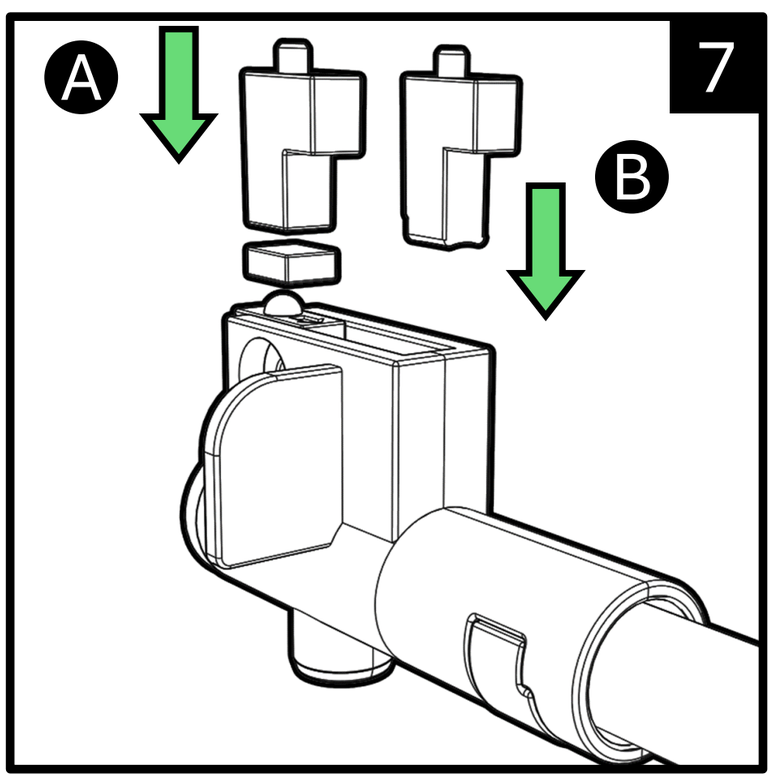


7A. Installing the M-nub and TDC Trolley

Peel the 3M film from the top of the M-nub and apply some silicone grease on the bottom and place the M-nub into hop up window inside the chamber.

A Choose the trolley unit with a flat foot that will press onto the M-nub.

B There is another Trolley with a curved foot that can be chosen for flat-hop, normal buckings, and some variations of R-hop. You can experiment which would work best for your setup.

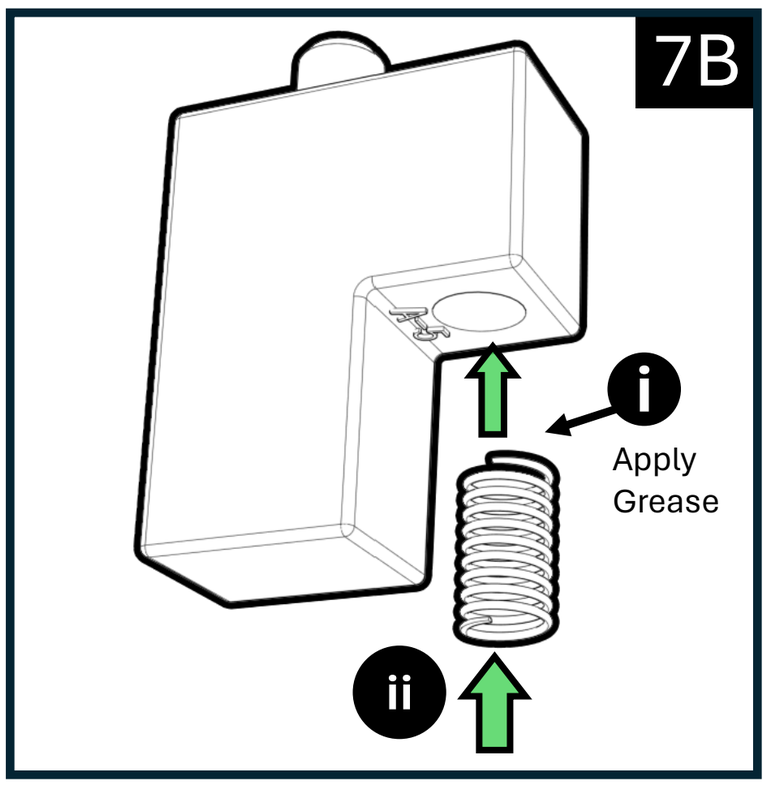


7B. Install Trolley Spring

Once you have chosen your style of Trolley this step will require to install the trolley spring underneath the trolley.

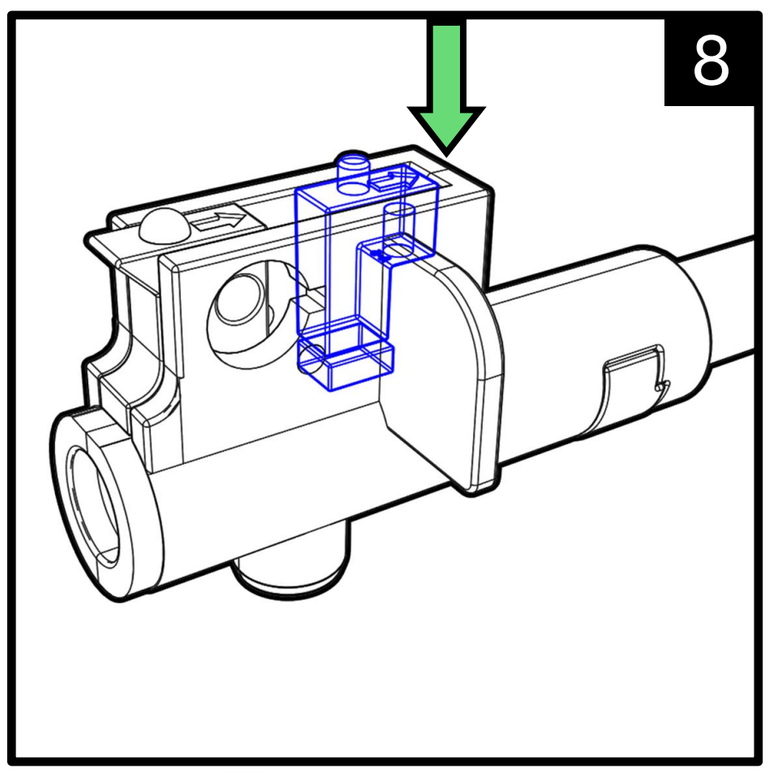
i. Dab some silicone grease on the top of the spring.
ii. Install the spring into the slot underneath the trolley.

The grease will ensure a smooth operation of the trolley travelling up and down chamber.



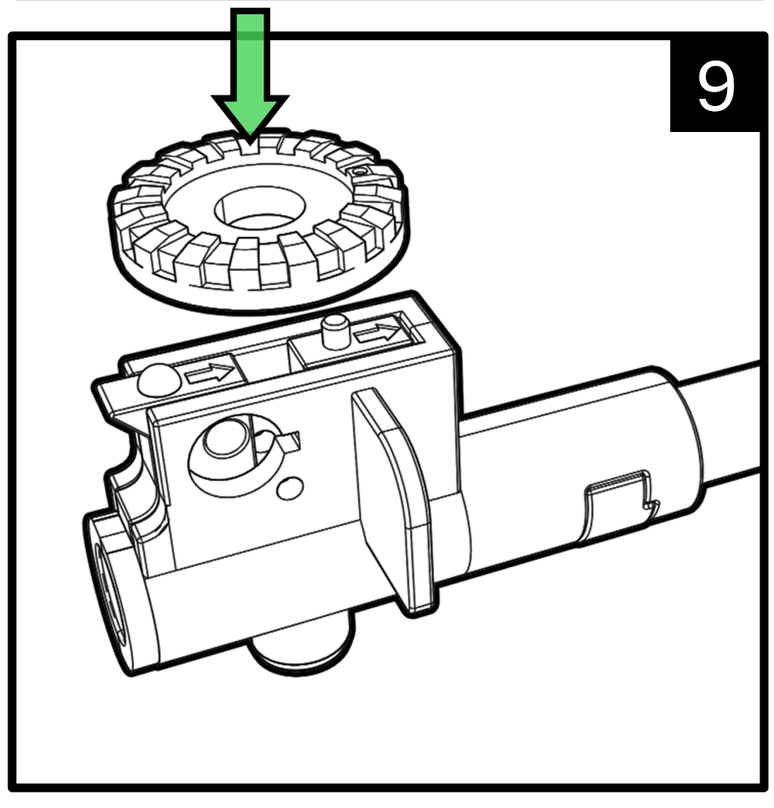
8. Installed Trolley

Ensure that the foot of the trolley connects with the M-nub and its adhesive side top. This will ensure the M-nub remains in place to future maintenance to keep the desired optimum performance.



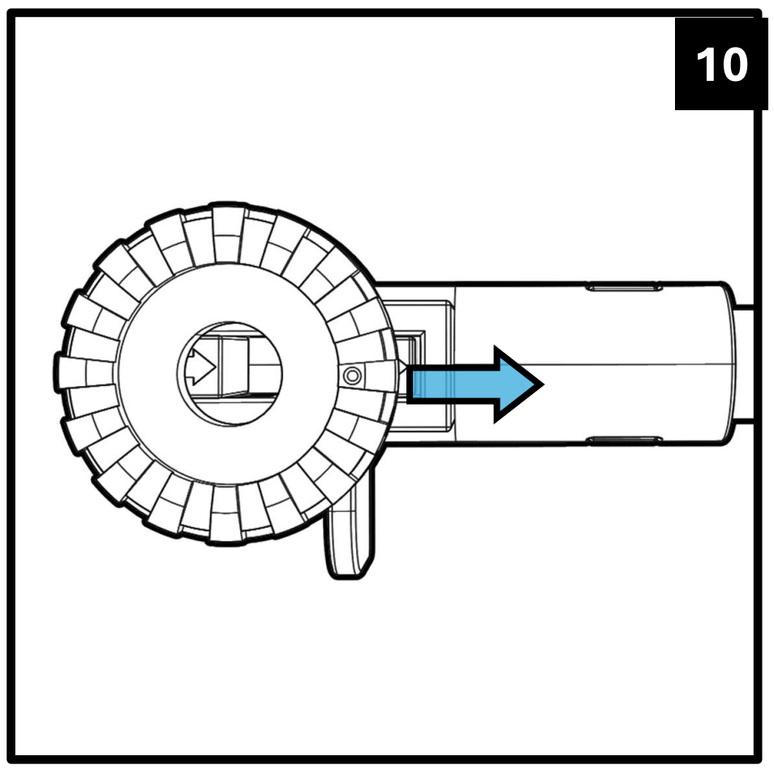
9. Installing the hop up adjustment wheel

Place the adjustment wheel at the middle of the hop up unit. You will see dot on the dials. Make sure that it is in the same direct as the arrows as this will set the hop into the zero hop, neutral position when upon the install. There is a demonstration of the dot in the next step.



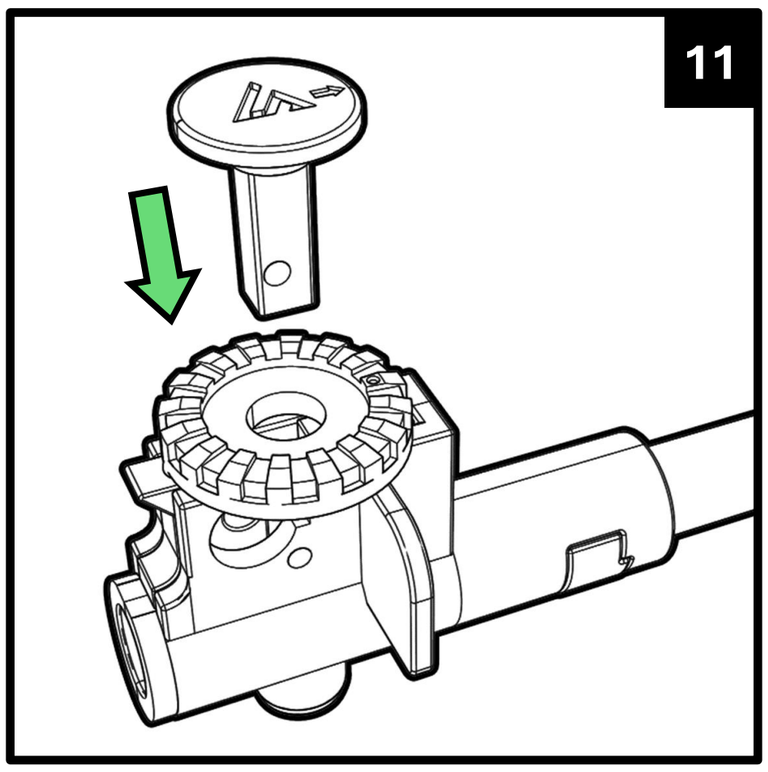
10. Locating orientation dot.

See demonstration to the right. You will see the dot facing the same direction as the front of the hop up unit.



11. Wheel locking unit.

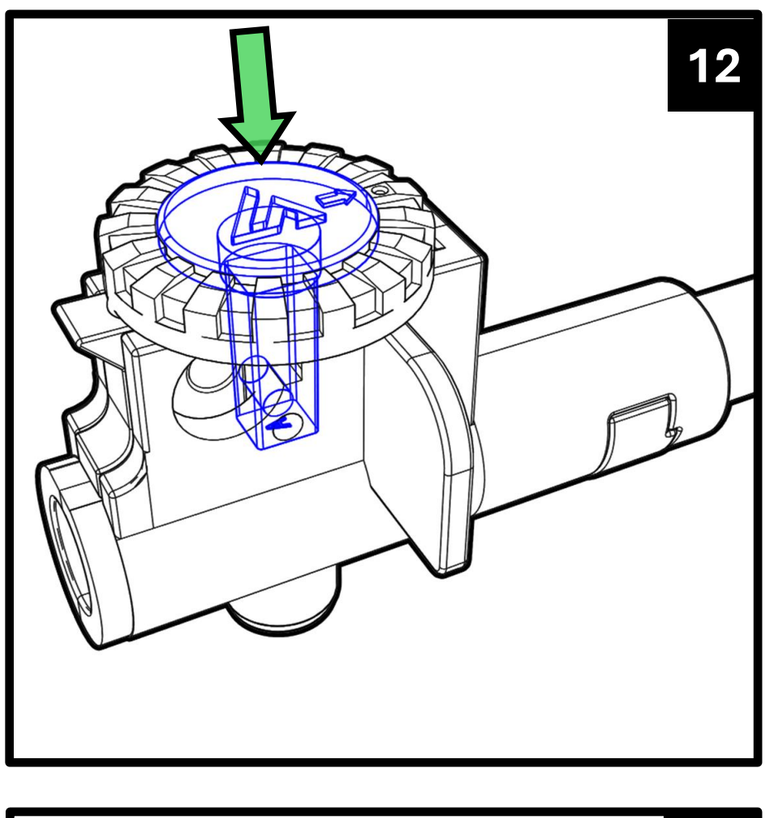
Align the arrow to be facing the front of the hop up unit and insert the unit though the middle of the locking wheel.



12. Wheel Lock position.

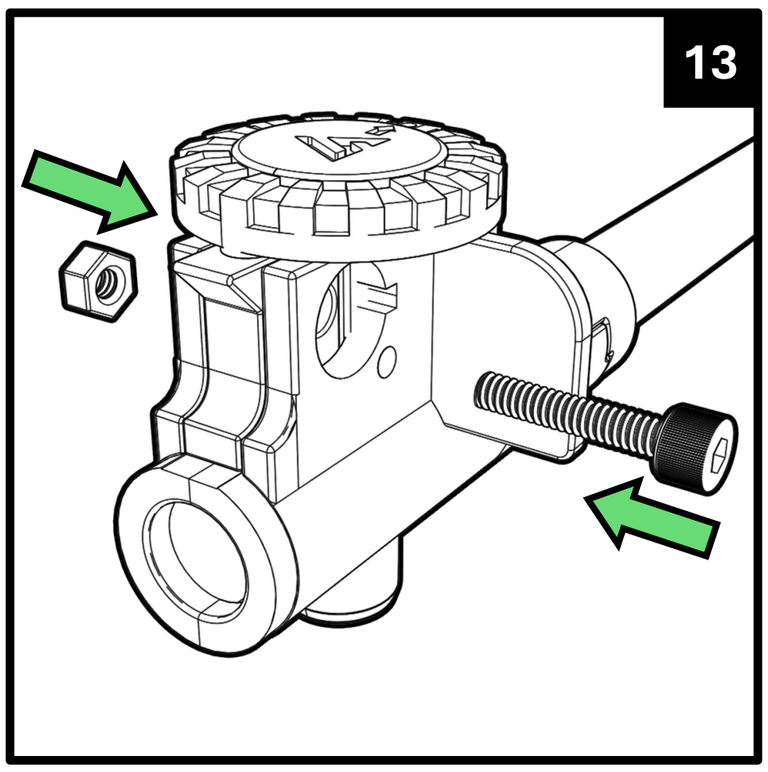
Apply some force to lock the wheel and the locking unit into place.

At the side of the hop up unit, you will see that the pin hole now aligns with the base of the locking unit.



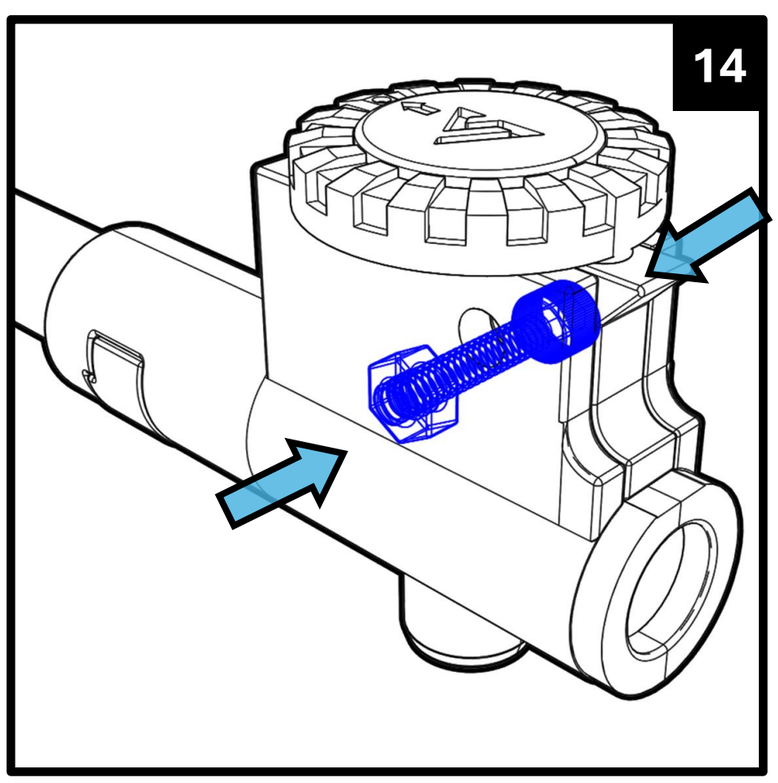
13. Installing the M2 bolt and nut

The step will secure the wheel locking unit using the M2 bolt and nut. Use the M2 Allen key to help you on this step.



14. Locking nut.

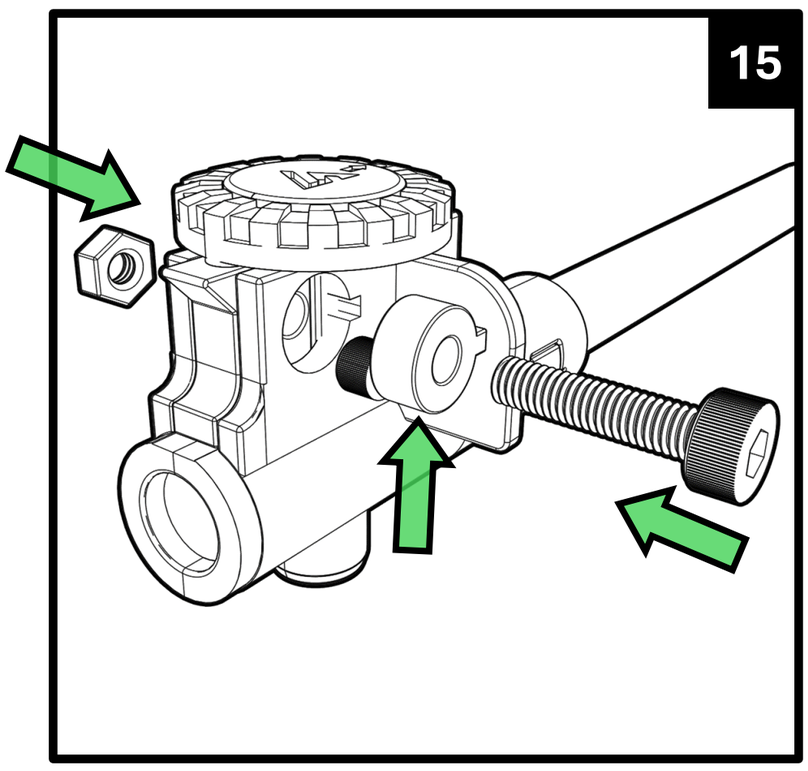
Make sure the bolt and nut are snug, but don’t overdo it otherwise it will be too tight causing potential adjustment issues later.



15. M3 bolt & Nut lock, and shim

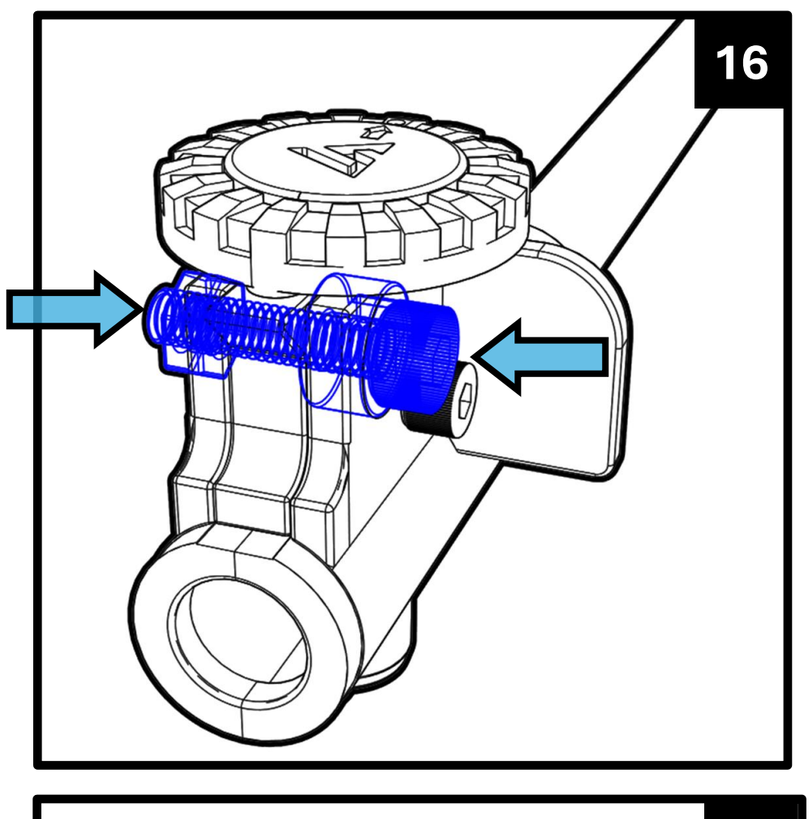
Firstly install the plastic shim in the side of the hop up unit.
Next ensure the pin holes are clear.

Take bolt and screw it through the shim, hop up unit and back bracket to the other side.



16. Secure the M3 bolt using the nut and tighten.

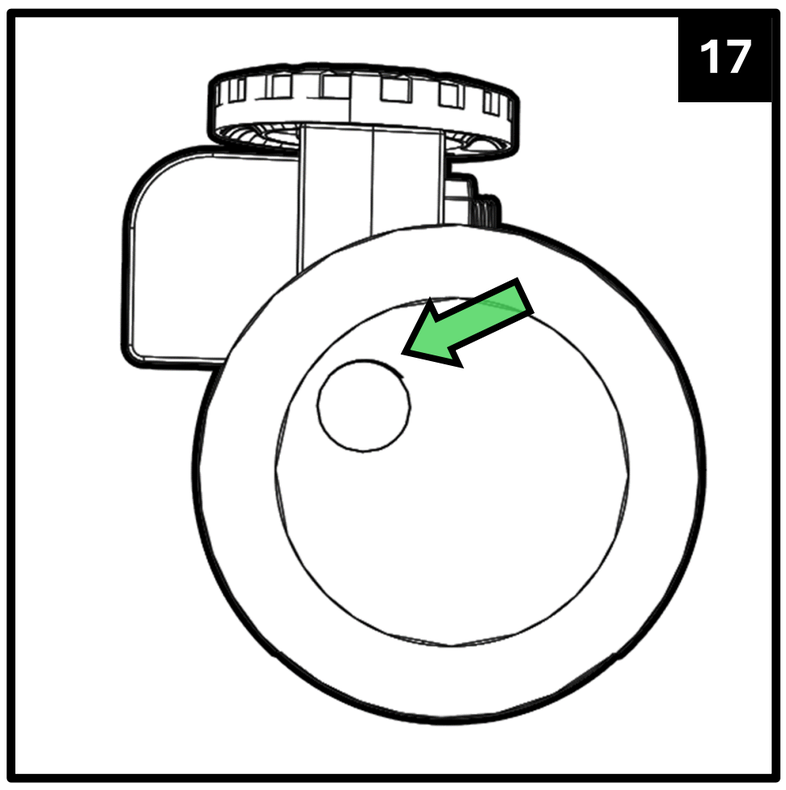
Don’t overdo it though – a nug fit is fine.



17. Checking if R-hop is working correctly.

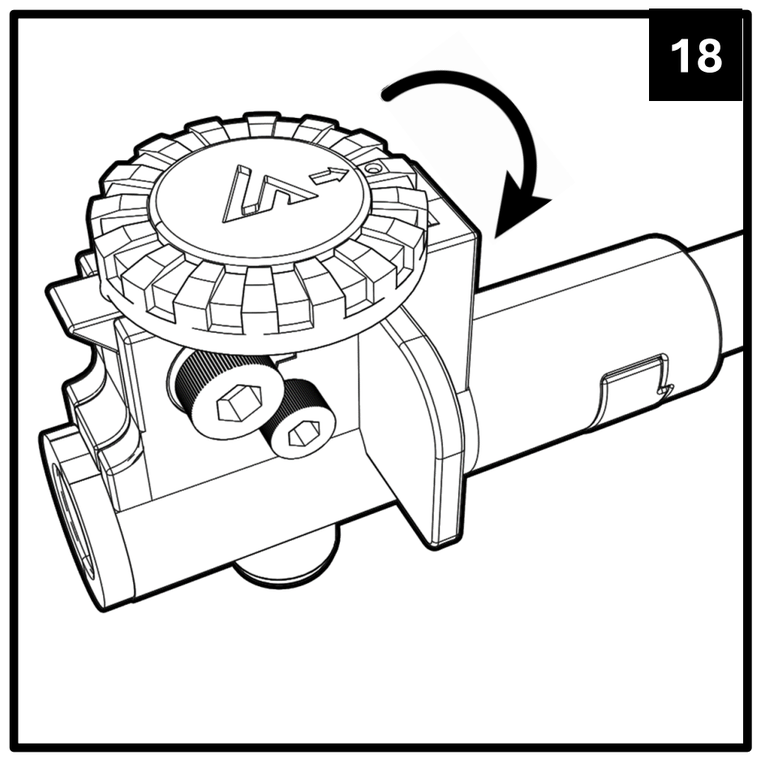
Take a peek into through the inner barrel at the front.
Ensure the hop up is still at the neutral position.

Once you look, you should be able to see a full circle with nothing protruding out from the hop up unit. This what we want with no hop applied to the system.



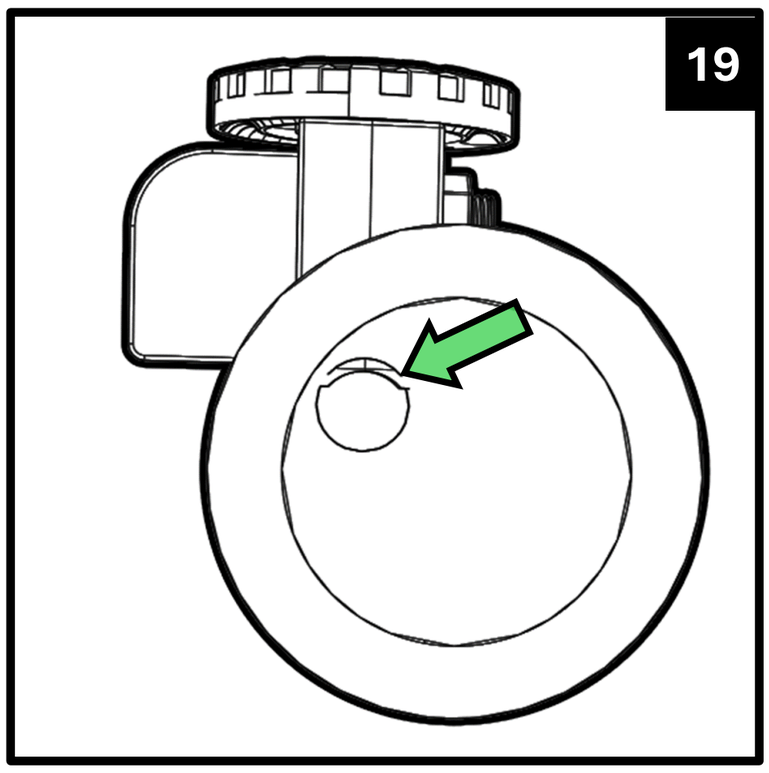
18. Applying hop up via the Adjustment wheel.

Dial the adjustment wheel to apply some hop



19. Peek into the inner barrel again and you should be able to see the R-Hop patch protruding downwards.

That will be area that will be apply hop on the passing BB. Turn back to zero hop (neutral) after the test.



Congrats! You've full installed the kit into your hop up chamber now. Assemble it back into the Scorpion and test shoot the rifle for you to find the best set up for your build.

If you encounter any issue during the install. Feel free to visit our website for the troubleshooting section or contract our CS team via info@airtechstudios.com