



DAYTONA
AIRSOFT

Daytona Airsoft Systems Installation Manual: LCT AK



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Basic Information

Introduction

When properly installed, your Daytona Airsoft Systems (DAS) recoil kit provides you the ability to experience heavy recoil with no cooldown, and without expensive, heavy gas magazines to keep serviced.

Please note that the DAS LCT AK kit has been designed to install and function in donor bodies from LCT. We only recommend the usage of LCT donor bodies, but the kit may work in certain other steel-bodied AEG AKs.

These include:

- E&L
- DBoys
- Classic Army

Please note that attempting to install the kit into one of the above-mentioned donors may require modification of the kit and/or donor body above and beyond the installation procedure defined in this manual. Extra tuning post-install may also be required.

For the User

This guide assumes some technical knowledge and ability on the part of the installer. If you are not familiar with how various airsoft systems operate, and if you have never disassembled/built an airsoft gun before, you should consider having your local gun tech do the install for you.

You also need access to good-quality tools. Airsoft AKs compatible with the DAS kit are assembled largely from carbon steel, and poor-quality tools will likely break.

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What You Need

In order to install the DAS kit into your donor body, you will need the following tools:

Necessary:

- Narrow pin punch
- Flathead and Phillips head screwdrivers
- Hammer
- Calipers or other accurate measuring tool
- 5mm hex wrench
- 4mm hex wrench
- 3mm hex wrench
- 2.5mm hex wrench
- 2mm hex wrench
- 1.5mm hex wrench
- Channel-lock Pliers
- Needle-nose Pliers
- Thread lock (Loctite blue recommended)
- Rotary tool and bit capable of cutting steel
- Blowtorch or high temperature heat gun
- Hand drill with bits equivalent to 2.5mm-3mm metric, and a half-inch step drill bit
- Cotton swabs

Helpful:

- Bench vise
- Center punch
- Rubber mallet
- Drill press



Disassembling Your Donor Body

A Note Before Starting

If you have already taken apart your donor body, or if you are already familiar with disassembling an LCT AK, you can skip to the section of this manual dealing with installing the DAS kit.

Please note that the example donor used in this manual is the LCT AK12 (LCK12). Certain steps will have minor differences for other body types. These are noted where possible. If something is not clear, please email DAS support.

If you are using an EBB from LCT, you will have to remove the mock bolt assembly as in a normal field strip. This disassembly process covers a standard AEG takedown.

How to Disassemble Your AEG Donor

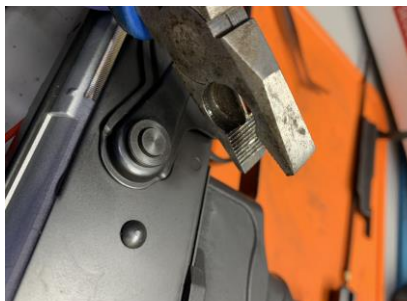


Primary Disassembly

1. Pull the dust cover pin up and then remove it from the donor. You may need to use the mallet and punch depending on if the pin is difficult to move.
2. Remove the dust cover by pulling it backwards and then lifting up.
 - Push the button at the rear of the dust cover and pull the cover up and off if you are not building a AK12-series rifle
 - You will also have to remove the rear tangent sight and its leaf spring on non-AK12 series donors.
3. Loosen the set screw holding the locking button in place using a 1.5mm hex key.
4. Push the spring guide rod forward and out of the locking button and then pull it out of the mock bolt.
5. Slide the mock bolt back to the rear of the receiver and pull it out of the receiver.



6. Unscrew the two screws holding the hop up chamber to the yoke at the end of the barrel using a 2mm hex key.
7. Loosen the two set screws within the front trunnion using the 2mm hex key.
8. Punch out the pin located below the trunnion and behind the lower hand guard.
 - Non-AK12 series donors do not have this pin. You can skip to the next step for all other donor bodies.
9. Pull the front end of the donor body off the receiver. You can tap the trunnion with the rubber mallet if it is stuck or difficult.
10. Clamp the top of the bolt holding the fire selector lever with the wide opening of the needle-nose pliers and unscrew it.



11. Pull the fire selector and its associated hardware off of the receiver.
12. Pry off the base plate on the grip. Unscrew the bolt on the bottom of the pistol grip and pull the grip off the receiver.
 - Most non-AK12 series donors do not have a base plate on the bottom of the grip. You should be able to see the bolt if that is the case.
13. Pull the gearbox up and out of the receiver. Remove the magazine well spacer if you have not already done so.



Barrel Group Disassembly

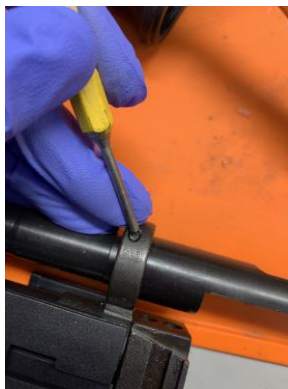
Because of the high heat involved with removing the AEG hop up yoke, you should disassemble the outer barrel group in order to avoid potential damage due to heat transfer.

Disassembling this portion of the donor also gives you more spacer for clamping the outer barrel and unscrewing the hop up support yoke.

1. Slide the upper and lower handguards apart and remove them from the barrel group.
 - You can use the 4mm hex wrench to remove the rail panels if you feel that the bolts holding them on are causing friction against the gas tube



2. Punch out the pin holding the trunnion to the outer barrel.



3. Unscrew the set screw on the bottom of the front sight block using the 2mm hex wrench.



4. Punch out the two pins holding the front sight block to the outer barrel.



5. Unscrew the set screw on the muzzle device using the 2mm hex wrench.



6. Punch out the two pins retaining the muzzle device and remove the muzzle device from the outer barrel



Removing the Hop Up Support Yoke

In our experience, LCT using strong thread locker or superglue on this portion of the outer barrel. It can be difficult to remove on many models, and often requires the heat from blowtorch if a heat gun doesn't work.

We highly recommend using a bench vise for this part of the disassembly. It may even be required if your support yoke proves difficult in unscrewing.

1. Clamp the outer barrel securely. A bench vise works best.

- Make certain the jaws on the vise are clamped hard. You won't mar or scratch your barrel provided it does not rotate, and a tight clamp works best.
2. Heat the yoke where it is screwed onto the outer barrel.
 - You might see some smoke or dull redness from the heat. This is normal, and is often a good indicator that you've heated the material enough.



3. Clamp the yoke with the channel-lock pliers.



4. Unscrew the yoke from the outer barrel.
 - If the yoke won't rotate counter-clockwise, apply more heat.



The yoke and outer barrel will be **very hot**. Do not touch them without first allowing them to cool, or cooling them with an air gun. If possible, perform this part of the disassembly in a well-ventilated area.

Disassembling the Receiver

You need to remove the trigger guard and magazine release from the receiver to install the DAS kit. You may also find it helpful to remove the stock.

1. Flip the receiver so that the trigger guard and magazine release face up.
2. Unscrew the four (4) screws holding the trigger guard and magazine release in place with the 2mm hex wrench.



3. Unscrew the bolt on the bottom of the buffer tube using the 2.5mm hex wrench.



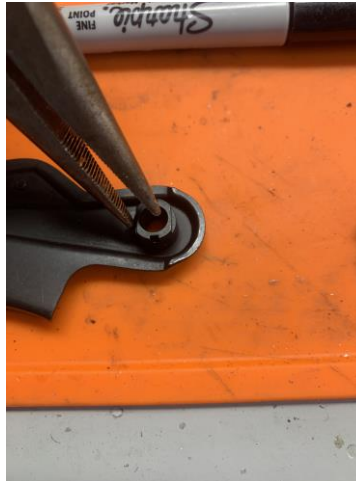
4. Punch out the pin retaining the buffer tube on the stock adapter and slide the buffer tube off.



Disassembling the Selector Lever

The DAS kit uses the original donor selector lever, but it must first be modified.

1. Turn the selector lever upside down so that the adaptor bushing the connects with the mechanism on the gearbox points up.
2. Hold the selector down firmly and grab the bushing with needle-nose pliers.



3. Remove the bushing by rocking and twisting it with the pliers until it comes free.
 - You may want or need to put the selector lever in a clamp or vise to get the required force to remove the bushing

What to Keep and What to Set Aside

Now that you've disassembled your donor, you likely have several piles of parts. For the most part, you need nothing from the original internals and fittings with some exceptions.

Keep the following:

- The selector lever (which you modified in the section above this)
- The inner barrel, if you are not installing an aftermarket barrel with the kit (this will require disassembly of the donor hop up chamber).
- All of the disassembled externals and their fittings, minus the bolt for the bottom of the pistol grip.



Installing the Daytona Kit

Inside the Box

If you haven't already, open the box containing the kit. Remove the packing materials and lay everything out.

Your kit should contain the following items:

- Macro airline with fitting
- Recoil spring and guide rod
- Hop up chamber
- Barrel ring and c-clip
- Trigger with screw
- DAS Standard hop up rubber
- Air valve
- Gas piston bushing
- Trigger chassis
- Complete bolt carrier assembly
- Trigger block and pin
- Charging handle with screw
- Recoil guide rod block with lock button
- Pistol grip adapter with bolt and two screws
- Outer barrel adapter
- Internal selector bar

Please note that you no longer require a separate trigger spring, and that no such spring is included.

Compare the contents of your package with the above list and the image below. If you believe you are missing any parts, please contact DAS for assistance.

Also note that the image below shows the previous generation kit. The new generation kit features several updates, but no new/different parts. This manual will be updated with an updated image in the near future.



Assembling the Trigger Unit

Your trigger unit comes with the sears and spring pre-installed, but still requires some additional assembly.

1. Slide the trigger block onto the chassis so that the two right-angle points face towards the rear of the chassis.



2. Remove the screw from the trigger using the 2mm hex wrench.
3. Place the screw in the hole of the trigger block and apply some thread lock to the exposed threads.



4. Screw the trigger into place, making sure it faces the correct way.
5. Push the pin through the holes in the chassis and trigger block to secure the pieces together.



In order to make moving the receiver around easier for the rest of the assembly, leave the pistol

grip adapter and its screws off until later.

Assembling the Selector Lever

1. Remove the selector bar bolt from the selector bar.
2. Place the donor selector lever onto the DAS selector bar. Make certain that the safety block points down.
3. Add thread lock to the hole in the selector bar.
4. Screw the bolt back into place. Start by hand and then tighten with the wide part of some pliers. Try to eliminate any wiggle between the selector lever and selector bar.



Assembling the Inner Barrel Group

Remember that you will need to take the donor barrel group apart if you intend on using the stock barrel. If you are installing an aftermarket barrel, then you can leave the donor barrel group alone.

Inner Barrel Assembly:

1. Slide the Daytona hop up bucking onto the correct end of the inner barrel.
2. Slide the barrel ring onto the barrel from the muzzle end of the inner barrel. Make certain that the slot for the c-clip faces the muzzle end.
3. Push the barrel ring down so that the opening on the bucking end slides over the lip of the hop up bucking.
 - Sometimes you may find it difficult to slide the barrel ring down the barrel, over the bucking, or both. Careful removal of some of the inner material of the barrel ring with a file and/or drill can be done to correct the spacing. This issue is most common on aftermarket barrels, which often have a slightly larger outer diameter than a stock brass LCT barrel.
4. Align the notches on the inner barrel with the opening of the barrel ring.

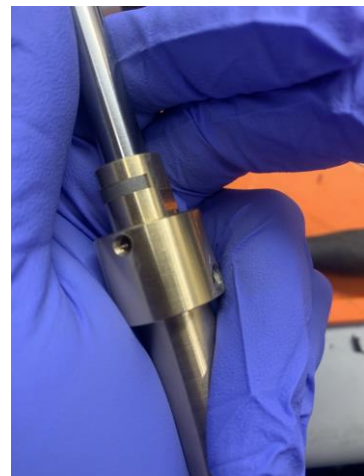
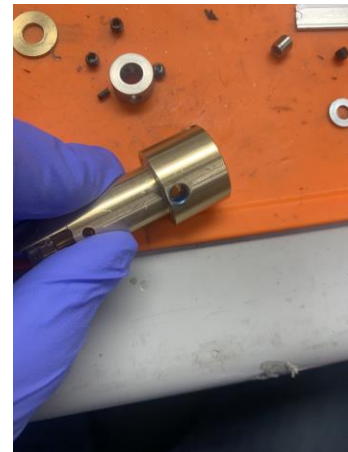


- Place the c-clip into the c-clip slot on the barrel ring and tap it down. This is best done with a rubber mallet.



Hop Up Chamber Assembly

- Remove all set screws from the hop up chamber using the 2mm and 2.5mm hex wrenches.
- Place a drop or two of thread lock onto the threads for the hop up adjustment screw.
- Screw the hop up adjustment screw back into place using the 2.5mm hex wrench. Look into the inside of the chamber and keep turning the screw until you see it protrude into the chamber.
- Absorb the excess thread lock on the bottom of the adjustment screw with a cotton swab.
- Back the adjustment screw up so that it no longer protrudes into the chamber.
- Clean any excess thread lock on top of the screw as well as in and on the chamber with cotton swabs or paper towels.
- Push the inner barrel group into the chamber, leading with the bucking. Make certain that the window of the inner barrel faces upwards.
 - Do not shove or force the inner barrel group into the chamber. Too much force can deform the bucking, leading to jams, feeding issues, and poor accuracy.
- Apply some hop up using the 2.5mm hex wrench while looking down the barrel. Apply enough so that you can clearly see the protrusion of the mound into the chamber.
- Rotate the barrel clockwise or counterclockwise until the mound is dead center within the chamber.
- Apply thread lock to the two set screw holes on either side of the chamber.
- Insert and tighten the set screws using the 2mm hex wrench to lock the inner barrel group in place within the hop up chamber.
- Remove the set screws from the rear of the outer barrel adapter using the 2mm hex wrench.
 - The rear of the adapter is the end without the threads



13. Screw the two forward set screws back into place with some thread lock.
14. Insert the inner barrel group through the back of the outer barrel adapter.
15. Align the inner barrel group so that everything is centered.
 - The large ridge towards the front of the barrel adapter is the top of the unit.
16. Apply thread lock to the two rear holes and screw the set screws back into place to secure the inner barrel group and hop up chamber to the outer barrel adapter.



17. Remove any set screws not yet touched, apply thread lock, and screw them back into place with the 2mm hex wrench.

Assembling and Modifying the Air Valve

The air valve comes out of the box with a valve stem return spring installed. This can be left installed for a stiffer trigger pull. DAS recommends removing the return spring to soften the trigger pull.

1. Apply a small amount of thread lock to the fitting on the air line.
2. Screw the airline into place on the bottom of the air valve. Start with your fingers and then finish with the needle-nose pliers.
 - Do not overtighten this fitting. It does not need to be as tight as you can make it. Make certain to only use the pliers on the uppermost portion of the fitting and not on the knurled portion.

3. Unscrew the cover on the back of the air valve using the flat head screwdriver.



4. Dump the small internal spring out of the valve.



5. Screw the cover back into place. Tighten it down. Do not apply thread lock, as the o-ring provides an adequate seal as well as locking force.

Modifying the Receiver for Assembly

In this portion you will cut and drill the receiver in order to install the trigger unit and selector lever. Do not apply any thread lock until final assembly.

Modifying the Receiver for the Selector Lever

1. Punch out the small fitting opposite the selector hole.

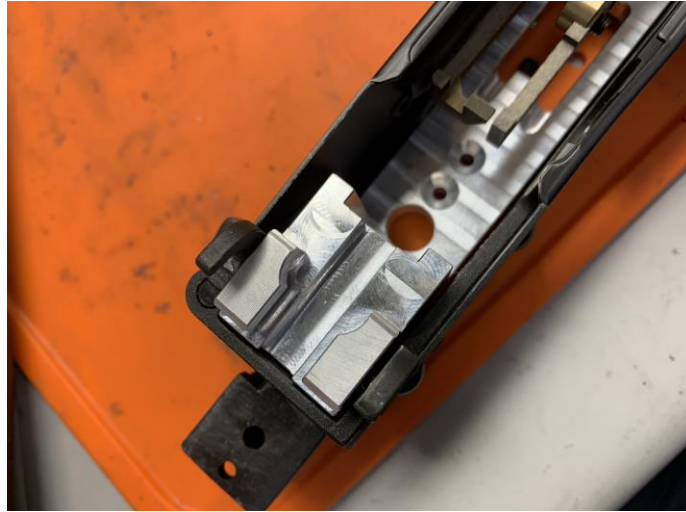


2. Remove the loose fitting from the other side of the receiver if it does not fall out on its own.
 - Sometimes this little piece gets stuck. You can often use a drill pushed through from the selector hole to reduce it in size so that it can fall out without risk of damaging the receiver.
3. Cut a notch using the rotary tool in front of the selector hole large enough to allow the selector bar to slide through.



Modifying the Receiver for the Trigger Unit

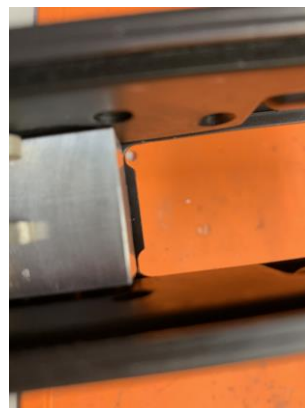
1. Place the trigger unit into the receiver and check the fit. The top rear portion of the trigger unit should have little to no space between itself and the rear trunnion of the receiver.



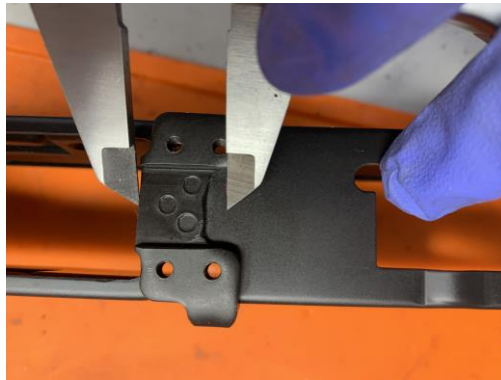
2. Remove some material from the bottom rear portion of the trigger chassis if there is a large gap. Continue removing small portions and test-fitting until you have minimized the space between trunnion and chassis.
3. Measure the space between the center of the fitting hole on the bottom of the chassis and the front of the chassis. Calipers that can be locked into position work best.



4. Measure the distance from the front of the trigger chassis to the edge of the magazine well and add this number to the one you found above.



5. Remove the trigger chassis from the receiver and flip the receiver over. Use the number you found above to find and mark the spot on the bottom of the receiver where the hole for the screw will go.



6. Drill the hole for the screw. A drill press works best if you have one, but a power hand drill will also work. It can be beneficial for both to use the center punch on the correct spot to keep the bit from moving.
 - The bit size should be an m2.5 or m3. Check the diameter of the bit you use against the locking bolt and make certain the hole will be slightly larger.



7. Place the trigger chassis into the receiver and check the position of the hole. Test fit the bolt. Enlarge or modify the hole as necessary to line up with the hole on the trigger chassis. Do not use thread lock.
8. Insert the selector lever into the hole to test fit it. Ensure that the lever can rotate between safe, automatic, and semi-automatic. Ensure that safe still functions.
 - If you cannot rotate the lever into or out of safe, you may need to remove some material from the back of the trigger chassis to allow it to sit farther back.



Modifying the Pistol Grip

You must modify the pistol grip to allow the airline through. Depending on the grip being used, you may also need to enlarge the hole for the grip bolt.

1. Check the fit of the bolt through the bolt hole on the bottom of the grip.
2. Enlarge the hole to match the diameter of the threading on the grip bolt if necessary.
3. Clamp the grip with the bottom facing upwards.
4. Punch a pilot hole on the bottom of the grip, towards the back of the grip.
5. Drill a hole into the bottom of the grip.
6. Check the hole against the airline and make sure it fits through easily. Widen the hole if necessary.



Installing the Inner Barrel Group

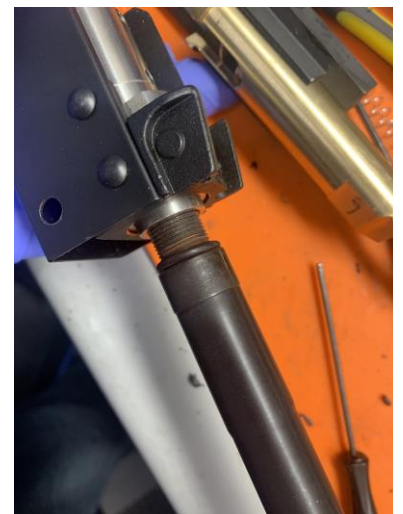
1. Remove the selector lever and trigger chassis from the receiver.
2. Slide the inner barrel group through the hole in the front trunnion of the receiver so that the hop up chamber is at the rear of the barrel group until the flange on top of the unit stops forward movement.



3. Thread the feed tube back into the bottom of the chamber. Use a small amount of thread lock on the threads.
4. Insert an AK magazine into the magazine well, adjusting the position of the feed tube so that it sits centered in the feed hole of the magazine.



5. Tighten the two set screws on top of the trunnion to lock the barrel in place. Use thread lock.
6. Remove the magazine from the magazine well.
7. Place the upper trunnion portion back onto the outer barrel. Do not reattach any set screws or reinsert any pins.
8. Screw the outer barrel into the DAS kit barrel adapter.



- Place an o-ring over the threads on the barrel to help space the outer barrel.
9. Push the spring guide bushing into the gas tube.

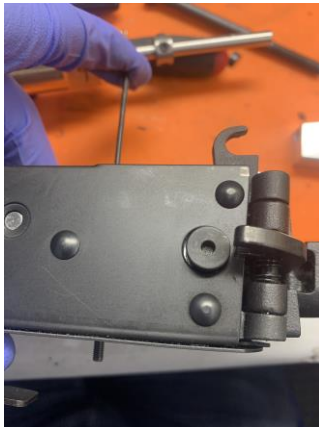


10. Reassemble your outer barrel group.

Installing the Trigger Chassis

Installing the Chassis and the Grip Adapter

1. Place the trigger chassis into the receiver and screw the bolt into place.
2. Push the screws for the grip adapter down from the top of the trigger chassis.



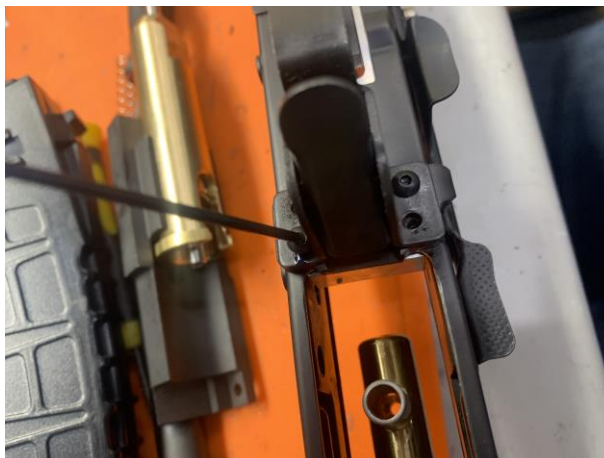
3. Apply thread lock to the holes in the top of the grip adapter.
4. Screw the grip adapter into place.



Reassembling the Trigger Guard and Magazine Catch

It is important to do the previous section first, because the bolt for the trigger chassis will be hidden by the magazine catch.

1. Turn the receiver upside down.
2. Place the trigger guard and magazine catch into position. Apply thread lock to all holes.
3. Screw all four screws back into place.
 - You may find it helpful to do a diagonal pattern on the first two screws to better hold the guard in position.



Installing the Pistol Grip

The grip can sometimes be difficult to install due to the tendency for the grip bolt to slide around the grip adapter.

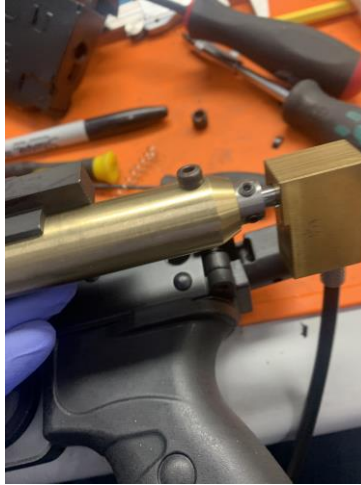
1. Push the grip bolt up into the pistol grip. Use your finger or a hex wrench to hold its position steady.
2. Slide the grip onto the adapter. Use the sliding motion while holding the grip bolt steady to find the hole.
3. Screw the bolt into place at least a couple of rotations and push the grip into place.
4. Tighten the bolt.
 - Try to avoid over-tightening the bolt. Your plastic pistol grip may crack if this fitting gets overtightened.
 - If the hole in the base of the grip is too wide for the bolt head, place a washer beneath the bolt head to allow it to properly grab the pistol grip

Installing the Bolt Carrier Assembly

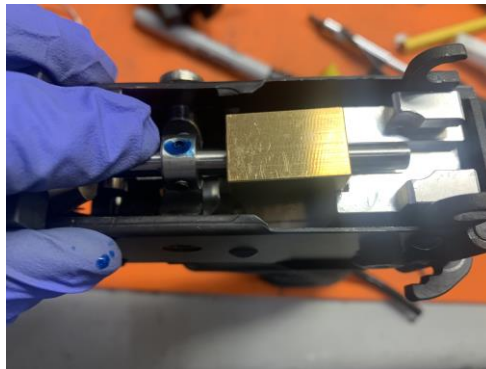
The bolt carrier will slide into place over top of the trigger chassis and inner barrel group. Make sure that the bolt handle is not installed on the bolt carrier at this point. Remove it if you have already installed it.

It will also be useful to loosen the shaft collar to allow the airshaft more movement during the installation process. This is especially true if you have performed the plunger mod and want to install the plunger spring.

1. Slide the air valve into place at the rear of the air shaft. Make sure that the valve stem button faces forward.



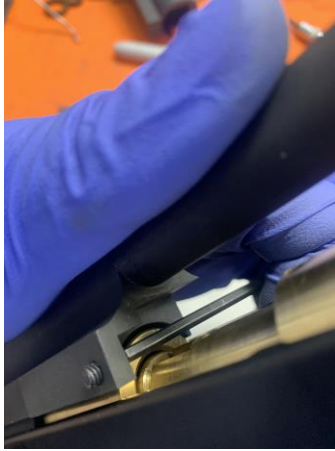
2. Rotate the bolt carrier so that the side where the bolt handle goes faces towards the top of the receiver.
 - Sometimes it can be easier to rotate the bolt the other way. Try both and see if one works better.
3. Slide the piston portion of the bolt carrier into the hole in the front trunnion.
4. Guide the air line from the air valve down into the hole in the chassis and out of the bottom of the pistol grip.
 - You may find it useful to try and catch the bottom of the airline with a long, thin hex wrench or screwdriver to help guide it through the hole in the pistol grip.
5. Push the bolt carrier towards its rearward position and rotate it to its correct position.
6. Push the bolt down into place so that it properly engages with the guide rails on the receiver. You can push down on the air valve to help seat the assembly.
7. Slide the bolt forward, push the shaft collar back into position, and tighten it down. Use thread lock on the set screws.



Installing the Bolt Handle

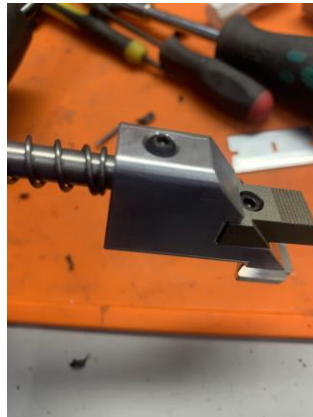
1. Push the bolt backwards so that the hole for the bolt handle is visible.
2. Apply some thread lock to the hole in the bolt handle.
3. Insert the bolt for the bolt handle through the hole and hold it in place with a hex wrench.

4. Screw the bolt handle into place. Hold it in its proper position with your fingers and tighten the bolt from the other side.



Installing the Recoil Spring Assembly

1. Apply thread lock to the screw holding the spring guide rod inside the spring guide base.
2. Slide the recoil spring down onto the spring guide rod.



3. Remove the cover locking button.
 - **This step is only necessary on AK12-series donors. For all others that use the locking button to hold the dust cover in place, do not perform this step.**



4. Insert the spring guide rod and spring into the hole on the back of the bolt carrier.

5. Push forward on the base. You may find it useful to rotate the base to one side to properly clear the receiver and DAS kit parts.
6. Guide the spring guide base back, righting it so that it is vertical as you do, so that the flange on the bottom slides into the matching groove at the back of the trigger chasses.



Congratulations, you have completed all major installation steps for the DAS LCT AK Kit.

Before reinstalling any external parts, you should lubricate the moving parts of the engine. DAS recommends *GetSome* brand lubricant, available from our website.

7. Reinstall external components such as the stock tube, stock, and dust cover.

If you encountered any issues during your install, or your gun is not working correctly, please reach out to DAS Support.

Please check the website for more guides on troubleshooting and maintenance.

We also invite you to join the Daytona Airsoft Systems Group on Facebook to speak directly with other DAS enthusiasts as well as DAS employees.