Daytona Airsoft Systems Installation Manual:
LCT G3

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Basic Information

Introduction

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

Please note that the DGA LCT G3 kit has been designed to fit and function within the LCT G3 series of rifles only. While it may be possible to modify the kit and/or the donor of a similar spec rifle from another brand, this is neither recommended nor supported and will likely require additional fitting and tuning beyond what this manual specifies.

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.

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What You Need

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

Necessary:

- 6mm hex wrench
- 3mm hex wrench
- 2mm hex wrench
- Phillips screwdriver
- Small flathead screwdriver, such as for eyeglasses
- Narrow pin punch
- Needle-nose pliers
- Hammer
- Semi-permanent thread lock, such as Loctite 243
- 4.5mm drill bit
- Power drill
- Vise or clamp

Helpful:

- Rubber mallet
- Drill press
- Deburring tools

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 G3 AEG, you can skip to the section of this manual dealing with installing the DGA kit.

How to Disassemble Your Donor

Primary Disassembly

1. Punch out the four body pins retaining the stock, the lower receiver, and the handguard.
    - You can store the two stock pins in the stock pin holder
2. Pull off the stock and handguard.
3. Remove the recoil guide rod and spring.
4. Slide the lower and upper receiver apart.

Upper Receiver Disassembly

1. Slide the hop up unit and inner barrel back out of the upper receiver.
2. Slide the mock bolt and its spring back out of the upper receiver.
3. Punch out the lower pin holding the outer barrel to the upper receiver.

4. Remove the three Phillips-head screws that retain the outer barrel bushing.

5. Pull the barrel assembly forward out of the upper receiver.

Lower Receiver Disassembly

1. Remove the pistol grip base plate by unscrewing the two screws using the Phillips driver.
2. Pull the positive and negative spade connectors off the terminals on the motor.
3. Pull the motor out of the pistol grip.

4. Unscrew the two motor grip screws inside the pistol grip using the Phillips driver.
5. Slide the pistol grip down off the lower receiver and gearbox.
6. Pull the cotter pin out from the right side of the lower receiver using the flathead driver and needle-nose pliers.

7. Punch the gearbox pin formerly held by the cotter pin out of the lower receiver
8. Rotate the selector to the “S” position

9. Punch the revealed pin out of the lower receiver with the narrow pin punch.

10. Pull the gearbox up and out of the lower receiver.
11. Punch the selector cover out of the right side of the lower receiver.

What to Keep and What to Set Aside

With you donor disassembled, you will have many parts. You only need to keep the items on the following list. Everything else can be safely removed.

Keep:

- Upper & lower receivers
- Outer barrel assembly
- Handguard
- Stock, receiver, and handguard pins
- Pistol grip, its base plate and base plate screws
- Original inner barrel if you are not upgrading to a better one (you will need to disassemble your donor's hop up unit for this)

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:

- Recoil spring guide rod
- Recoil spring
- Hop up chamber with feed tube
- Barrel ring and c-clip
- Bolt carrier
- Bolt tank & airshaft assembly
- Daytona Standard hop up rubber
- Air valve
- Air line with fitting
- Recoil spring guide rod block
- Trigger chassis
- Trigger chassis pin
- Internal selector
- Trigger
- Trigger adaptor
- 7 machine bolts
- Pistol grip adaptor and bolt
- Cocking handle tube adaptor

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

Assembling the Inner Barrel Group

Remember that you will need an AEG-spec inner barrel. This is not supplied with the kit. You **can** use the original barrel from your donor gun's body, but DGA recommends upgrading to a high-quality aftermarket stainless steel inner barrel. Remember, the DGA hop up rubber, barrel ring, and c-clip are designed for use with AEG inner barrels only.

Inner Barrel Assembly:

1. Slide the Daytona hop up bucking onto the correct end of the inner barrel.
2. 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.
3. Push the c-clip down into the slot of the barrel ring. Hammer it gently into place with a mallet if necessary.

Hop Up Chamber Assembly

1. Remove all set screws from the hop up chamber using the 2mm and 2.5mm hex wrenches.
2. Place a drop or two of thread lock onto the threads for the hop up adjustment screw.
3. 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.
4. Absorb the excess thread lock on the bottom of the adjustment screw with a cotton swab.
5. Back the adjustment screw up so that it no longer protrudes into the chamber.
6. Clean any excess thread lock on top of the screw as well as in and on the chamber with cotton swabs or paper towels.
7. 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.
8. 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.
9. Rotate the barrel clockwise or counterclockwise until the mound is dead center within the chamber.
10. Apply thread lock to the two set screw holes on either side of the chamber.
11. Insert and tighten the set screws using the 2mm hex wrench to lock the inner barrel group in place within the hop up chamber.

Barrel Adaptor Assembly

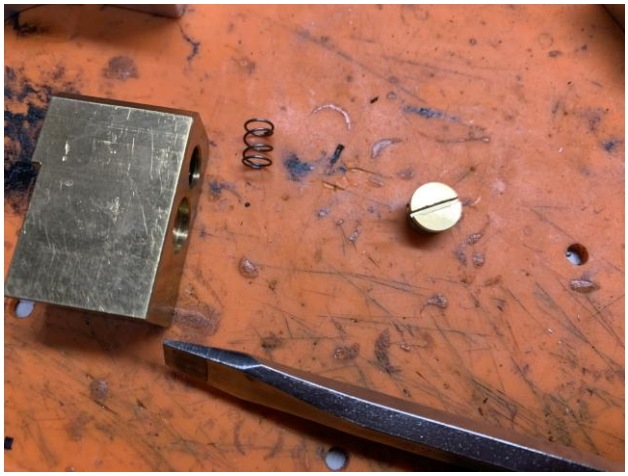
1. Slide the brass sleeve over the front of the assembled hop up chamber.

2. Slide the other end of the brass sleeve over the rear of the outer barrel adaptor.
3. Ensure that all three components are properly aligned – the feed tube, if installed, should point straight down.
4. Install and tighten the four set screws using the 2mm 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. DGA recommends removing the return spring to soften the trigger pull.

1. Remove the air line and fitting from the air valve. This needs to be removed in order to test fit the valve in the receiver.
2. Unscrew the cover on the back of the air valve using the flat head screwdriver.
3. Dump the small internal spring out of the valve.
4. 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.

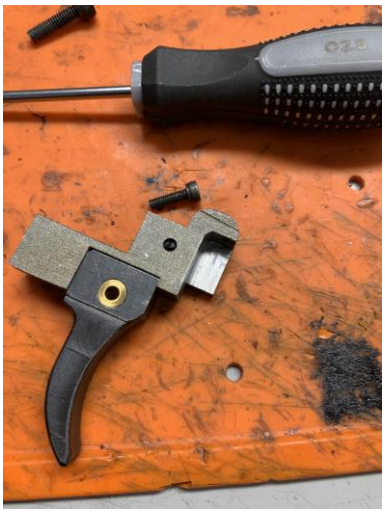


5. Install and tighten the air line in the air valve. Apply a small amount of thread lock. Do not overtighten – finger tight using some pliers is enough.

The airline fitting should be FINGER TIGHT only. Overtightening may break the fitting. DGA Is not responsible for fittings broken through overtightening!

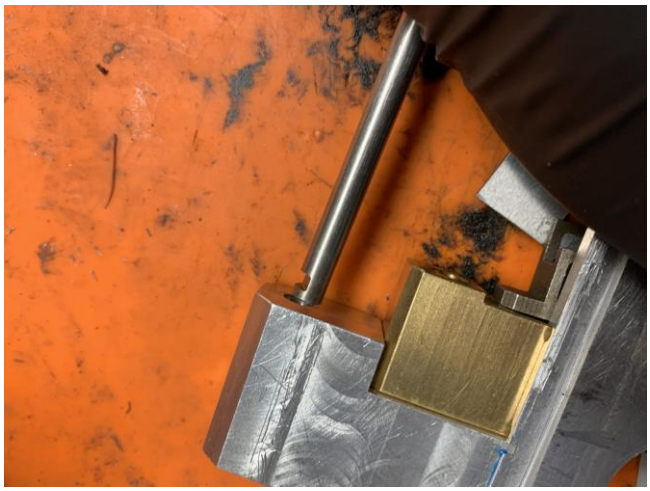
Assembling the Trigger Chassis

1. Screw the trigger and trigger adaptor together using the 2.5mm hex wrench and the thin hex bolt.
    - Remember to use thread lock
2. Insert the completed trigger up into the bottom of the trigger chassis and insert the trigger pin to hold it in place.



3. Drop the air valve down into its slot at the rear of the trigger chassis.
4. Install the recoil guide rod block at the rear of the trigger chassis, tightening the bolts with the 3mm wrench.
5. Drop the recoil guide rod into the guide rod block with the slot on the rod facing the top of the block.

6. Install the guide rod retention bolt with the 2mm driver.



Modifying the DGA Recoil Spring Guide Rod

Depending on whether you have an old-style or new-style LCT G3, you may need to shorten the guide rod included with your DGA kit.

There are two ways you can determine whether your donor is a first- or second-generation gun.

1. You can look at your donor body's mock bolt and recoil assembly and compare it to the image below. If your mock bolt and charging handle assembly looks like the top row of components, it is a first-gen gun. If it looks like the bottom row, it is a second-gen gun.

2. Check the serial number on the bottom of your receiver. If it starts with the letter "A" it is a second-gen body. If it does not, then the gun is a first-gen body.

If you have a first-generation LCT G3, no modification should be necessary. If you have a second generation LCT G3, you will need to modify the recoil guide rod in order to pull the charging handle back all the way.

To modify the recoil guide rod, you:

- Cut 1cm-3cm off the end of the rod that goes towards the muzzle of the gun using a tool like an angle grinder or rotary tool with cutoff wheel. You may wish the smooth the edges of the cut.
- Try the rod in the gun. Remove additional length from the rod as necessary.

Assembling the Lower Receiver

1. Drop the completed trigger and recoil assembly down into the lower receiver.
2. Install the short machine bolt into the hole beside the selector cover with the 2mm wrench.

3. Slide the pistol grip adaptor down onto the bottom of the lower receiver behind the trigger guard, ensuring that the air line passes through its hole.
4. Widen the center hole in the pistol grip so that the retention bolt can fit if necessary.
5. Slide the pistol grip over the adaptor and onto the lower receiver.
6. Tighten the bolt on the pistol grip adaptor using the 6mm wrench.

7. Remove the motor height adjustment screw from the grip base plate and reinstall the pistol base plate.

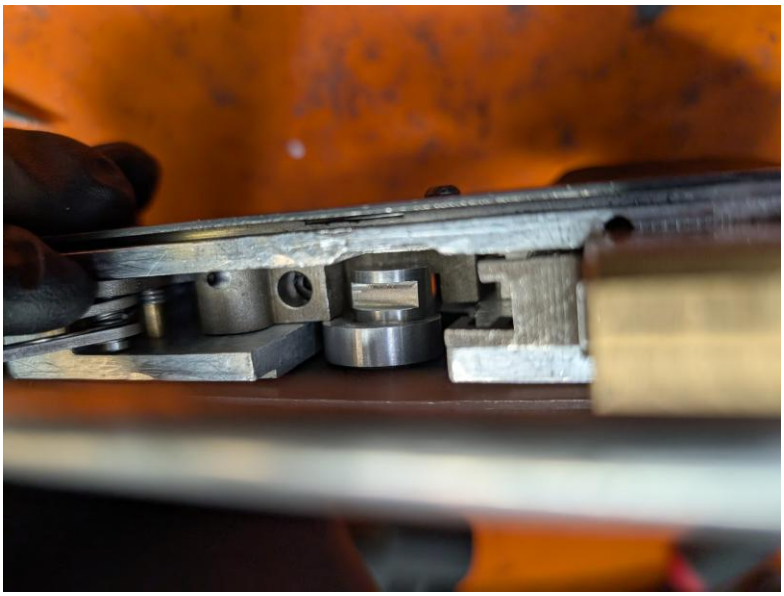
Installing the Selector Assembly

1. Remove the bolt from the DGA selector using the 2.5mm wrench and separate it into its 3 components.

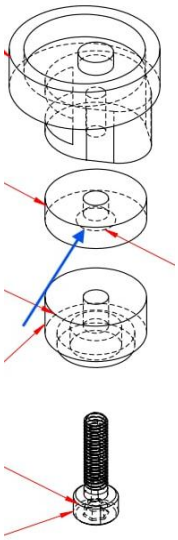
2. Drop the right-side receiver adaptor piece down into the trigger chassis.

3. Rotate the selector to the semi-auto (“E”) position.

4. Drop the selector cam adaptor down onto the selector cam, ensuring that the corresponding hole and nub line up. Press the adaptor into place so it lies as flat as possible.



5. Slide the selector spacer down between the cam adaptor and receiver adaptor.



6. Install and tighten the selector bolt through the right side of the receiver using the 2.5mm wrench.

Modifying and Assembling the Upper Receiver

Completing the Outer Barrel and Making the Hop Up Adjustment Hole

1. Slide the outer barrel over the inner barrel and screw them together. Ensure that the front sight and flat portion of the DGA barrel adaptor are aligned.

2. Slide the barrel assembly into the upper receiver. Do not install the retaining bolts.
3. Check the alignment of the hop up hole on the hop up chamber with the receiver and make a mark on top of the receiver for drilling the hop up adjustment hole.

4. Remove the barrel assembly.
5. Clamp the upper receiver in a vise or mill.
6. Use a punch to make a mark on the upper receiver to guide the bit.

7. Drill the adjustment hole. We recommend using a bit at least 4.5mm in diameter.

8. Remove the upper receiver from the clamp.

Completing the Upper Receiver

1. Pull back the cocking handle.
2. Push the cocking handle adaptor into the cocking handle tube.

3. Push the cocking handle forward.
4. Slide the outer barrel into the upper receiver.
5. Install and tighten the three retaining bolts with the 2.5mm wrench.

6. Install the barrel locking pin.

7. Apply some thread lock to the feed tube and screw it into the hop up chamber.

8. Reinstall the handguard and its pin.

9. Slide the DGA bolt carrier into the upper receiver.

Final Assembly

1. Slide the DGA recoil spring over the recoil spring guide rod.

2. Slide the lower receiver into the upper.
3. Install the lower receiver pin.

4. Slide the stock onto the rifle.
5. Install the two stock retention pins.

Congratulations, you have completed all major installation steps for the DGA LCT G3 kit.

If you haven't already, you should lubricate the moving parts of the engine. DGA recommends *GetSome* brand lubricant, available from our website.

If you encountered any issues during your install, or your gun is not working correctly, please reach out to DGA 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 DGA enthusiasts as well as DGA employees.