The Dye Dam Database

BOLTS

Since its release in 2011, Dye has released a slew of bolts to help move the marker forward. While there is no perfect bolt for every situation, the list below will outline the differences and changes made as they

evolved. We will also look at a third party bolt released by Tech T (The L7) and how it stacks up against the Dye bolts.

Gen 1 Dye Bolt

The Gen 1 Dye was originally shipped with the dam upon its release. It is easily identifiable due to its all silver polished body, and wide oval holes in the birdcage. This bolt has been known to have performance issues when users attempt to turn up their FPS beyond 275 FPS. Some users experienced leaks, but this may have been attributed to the fact that users were using HPA tanks whose regulator outputs were set to well above the ideal operating pressures for the Dam. For example, the Dams ideal operating pressure is between 500-600 PSI. Users hooking up 800+ PSI tanks reported having leaks with this bolt.

Gen 2 Dye Bolt

This bolt was released as a replacement for the sometimes troublesome Gen 1 bolt. It remedied issues reported by some users pertaining to possible leaking when trying to achieve speeds greater than 265FPS. The visual characteristics that make this bolt identifiable are the line etched around the circumference of the can, and the additional holes added to the cage. The holes are now in the pattern of circles and ovals.

Iron Men Bolt

This bolt was released in late 2013. This green anodized and polished bolt boasted less friction between the bolt and the can, and a newly added rubber tip which was designed to be more forgiving on softer shelled paint and brittle paint as a whole. This bolt is meant for use in Magfed and Rotor applications, but not advised for use with First Strike Rounds as the protruding rubber tip may sometimes flip the round as it enters the breech.

Gen 3 - (The Box Rotor Bolt)

This bolt was released in around 2014/15. This bolt originally shipped with the Dye Box rotor. This bolt featured a tapered bolt tip which prevented paintballs from being scalped when using the box rotor. Because of the addition of the milled tapered red tip, it was no longer possible to remove the bolt through the can, and as a result the tip is now threaded and removable. This bolt now ships as a standard bolt for the Dye Dam (2016). It no longer comes with the box rotor in the box. This bolt has become one of the preferred bolts for FSR users as it doesn't have a rubber tip which might interfere with FSR feeding.

Tactical Iron Man Bolt

This bolt was released with the intention of being an upgrade. It features all the best features of its predecessors, namely; Green anodized polished finish, rubber tip, tapered bolt tip, and upgraded boost tube(Cage). This bolt has been said to be your best option for magfed, fsr, hopper, and box rotor usage.

Tech T - L7

This third party bolt by Tech T was designed as an attempt to increase the Dams overall efficiency and lower its sound signature. The producers of this bolt claim that because of its lower operating pressure requirements and lower dwell, it produces less kick, and a decreased sound signature, which in turn provide better accuracy due to the decrease in kick. This bolt has received mixed reviews in the community. Its major drawbacks are that it greatly suffers from FSBS (First Shot Bolt Stick), meaning, your first shot will sometimes fail to engage the bolt, but the following shots will fire successfully. But if you dont shoot your marker again for 3-4 minutes you experience FSBS again. Some have said that a finer lubricant rectifies this issue, others have yet to replicate these results. The bolt itself only comes with the bolt and buffer tube, you must provide your own can.

Eyepipes

Originally the Dye Dam shipped with an orange detent (Right in photo). This mode

Detents

Orange Detent VS Red Detent

Originally the Dye Dam shipped with an orange detent (Right in photo). This model detent was silently upgraded 2 years after release after users reported that they quickly lost their form and allowed for

multiple balls to feed. The new red version (Left in photo) are more rigid, and hold their form for longer periods of time. They also feature a small hole as seen in the photo to easier differentiate them.

DAM Boards

Green Vs Blue

The green board shown above was shipped with the dye dams from their release all the way up to early 2016. In 2016 they started shipping with the newly released box rotor board.

Each board has its own benefits and drawbacks.

Green board - max bps of 33, times out and turns off after approximately 10 minutes of inactivity, cannot be used with a box rotor, does not have a low battery indicator.

Blue board - max bps of 15, programmable inactivity shut off, can be paired with box rotor, has low battery indicator.

Eyes

These babies right here are what set your marker apart from the rest of them. Electronic eyes give your marker the ability to literally see the ball and judge whether or not it is safe to shoot. They also add another layer of realism in a sense that it won't fire if there's no ball in the breech, so you wont look like a fool dry firing at your enemies.

Solenoid

The Dam's solenoid is fairly robust and requires little to no maintenance, that is, unless you overload your bolt with grease. Sometimes this grease makes its way into the heart of your marker, and you may need to clean out your solenoid.

This video shows you the step by step instructions required in order to clean your solenoid, but please be noted that taking these actions MAY void your Dam warranty. Do so at your own risk, or after your warranty has expired.

Mags+Springs

Mag maintenance is key when it comes to expecting performance out of your marker. If your mags aren't feeding smoothly, you are essentially starving your marker of performance. Mag cleaning/maintenance is only necessary when mags internals are visibly dirty, or at the beginning and end of a paintball season.

A pile of fully disassembled mags

Shells arranged for drying after being washed.

Rap4 D-Mag "Upgrade" Springs

Many users have reported increased performance, specifically fewer ball breaks within the breach, by switching their Dam mag springs from stock, to D-Mag springs by Rap4.

When comparing the two, you can see that the Dam springs are thicker, and stiffer, which is great for harder shelled paint and ideal for first strike rounds, but may be too harsh on softer paint.

NOTE: Switching to Dmag Springs works great for regular roundball paint, but is not suggested for use with first strikes because first strikes end up flipping and jamming in breach. First strikes require stiffer springs to prevent flipping.

You can buy these "upgrade" springs by clicking on the links below.

Rap4 20 Round Springs - Canadian Store Link

Rap4 20 Round Springs - American Store Link

Dye Dam Stock Spring on Left | Rap4 Round Spring on Right

Mag Couplers

Mag couplers are an excellent way to boost your mag changing speeds on the field. They give you the ability to switch on the fly without having to go through the motions of putting your exhausted mag back in a pouch pocket/dump pouch, and having to reach for and reload a new one.

Dye Dam Couplers

With enough practice, you will be able to keep up with the best of them (Speed ballers and continuous feed magfed markers) when it comes to feeding your marker paint.

NOTE: WHEN ASSEMBLING YOUR DAM MAGS USING COUPLERS, DO NOT OVER TIGHTEN THE COUPLING SCREWS, AS THEY WILL PUT PRESSURE ON THE MAG SHELLS, AND PREVENT THE BALL FOLLOWERS FROM MOVING UP THE MAG CHANNEL, AND WILL INTERFERE WITH BALL LOADING, OR ONLY FEED HALF THE MAG

Box Rotor

Thinking of getting one? Thoughts on Box Rotor.

So you're thinking of getting a Box Rotor, but aren't sure if it's for you. Here are some thoughts from a long time, call it like it is, heavy user. (U.A.E.)

Simply put, I love it, and here's a small list of reasons why.

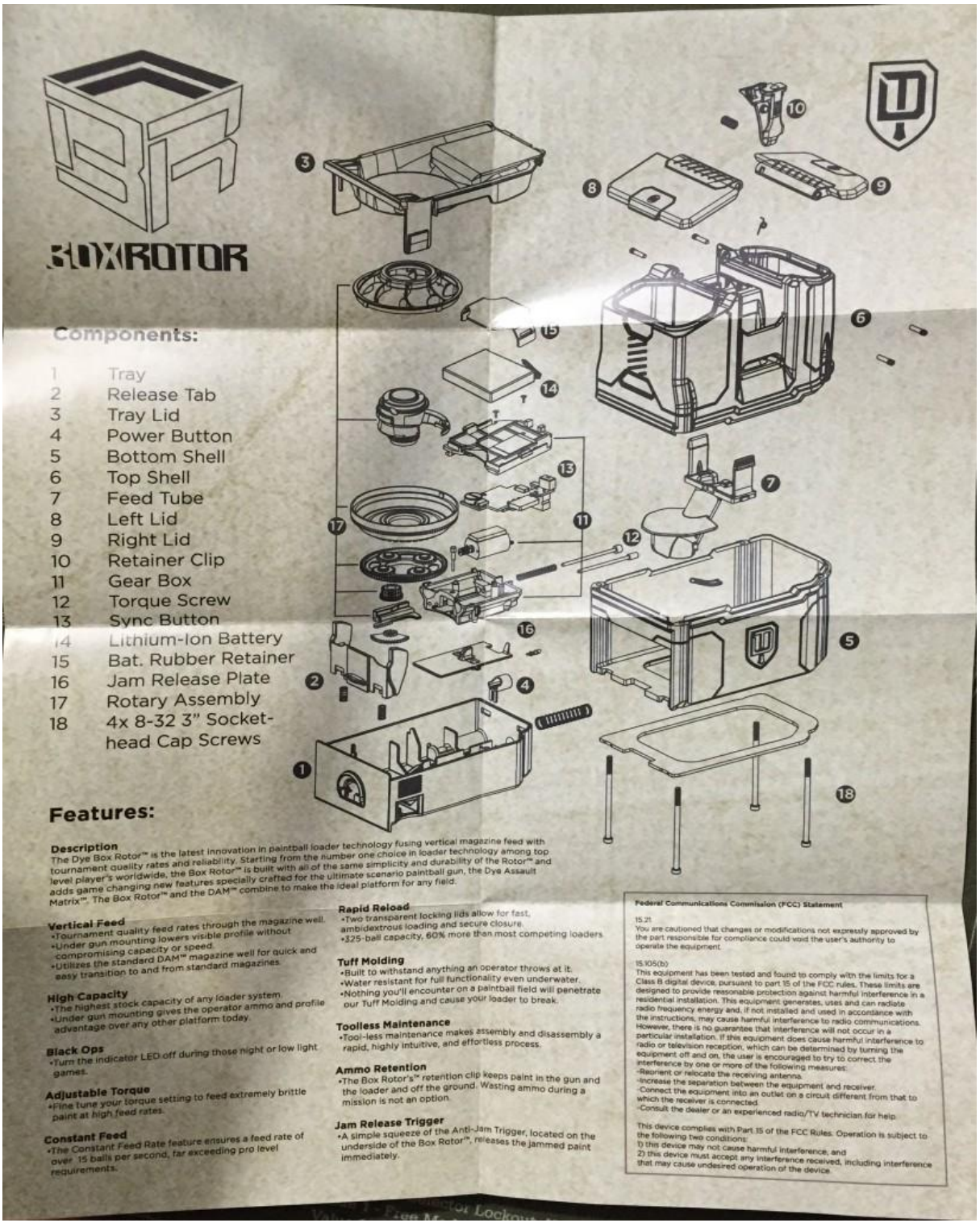
- Board Synchronization : The box rotor doesn't rely on sound, or sight, to feed balls. It's wirelessly synchronized with the marker itself so it knows when it needs to feed paint. This makes it way more energy efficient, and doesn't constantly put unnecessary stress on paintballs in the stack.
- Battery Life : The rechargeable battery is fantastic, I easily go a full day of paintball without even having to think about it draining on me. Be warned a full charge takes approximately 9 hours to complete
- The reload lids are large, and on both sides, so regardless of how you hold it, you can still easily fill it.
- 325 ball capacity and it feeds approx 30 balls per second.

- Tool-less quick tear down.

Things you should know about the box rotor.

- As great as the box rotor is, it's harder on paint than the regular hopper style rotor. That is not to say that it can't feed brittle paint, but you should learn how to adjust the tension settings on the engine to keep it from crushing paint. There is no 1 adjustment that fits all paint type settings. Calibrate it according to your field paint. It only takes a second.
- The box rotor itself isn't that heavy but loads it with 325 rounds, and it can be. But what do you expect out of a heavy gunner type load-out Drink your milk, mow face.

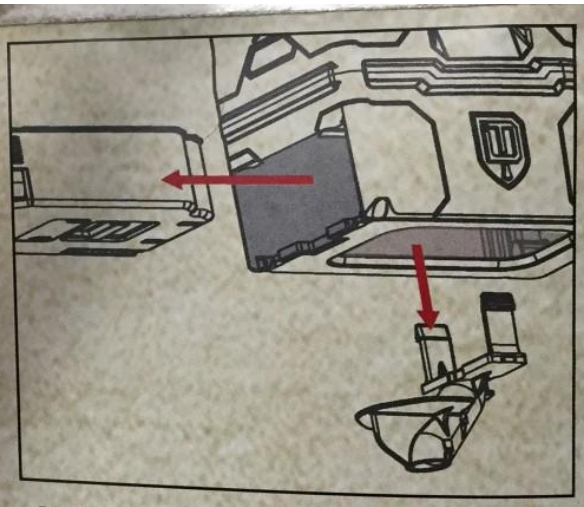
Box Rotor Manual Scans

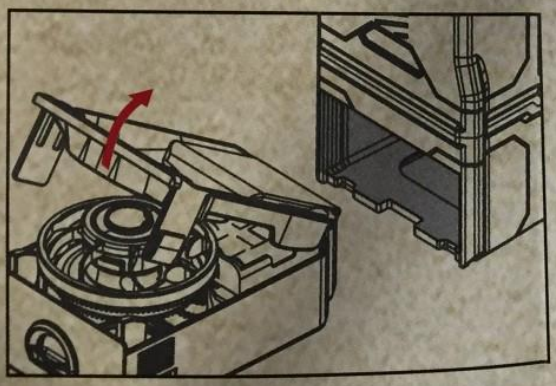


Cleaning the Box Rotor

The Box Rotor can be cleaned without tools and should only be cleaned with fresh water and a clean towel. **DO NOT** use abrasive cleaners or alcohol as permanent damage may occur. **DO NOT** allow the Gear Box to get wet. The circuit board is water resistant but should not be submerged in water to ensure optimal performance and longevity.

- Remove the Tray from the Box rotor by pressing down the Release Tab on the right side of the Box Rotor and pull the tray all the way out. Any paintballs inside the Box Rotor will fall through the bottom once the Tray is removed. If the Tray does not slide smoothly, shake the Box Rotor to clear any paintballs that may be blocking its motion.
- Wipe off the Tray assembly to clear any paint or debris from it. If more cleaning is required, remove the Tray Lid by pushing in on both of the Lid Tabs found on the front and back of the tray. Then pull upwards to rotate the Lid free of the Tray. Remove the Gear Box. All remaining parts can be cleaned with water and a clean towel.
- Once the tray is removed from the Box Rotor, all remaining parts can be cleaned with water and a clean towel.



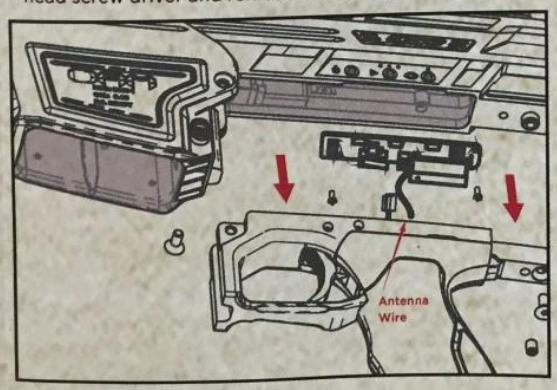


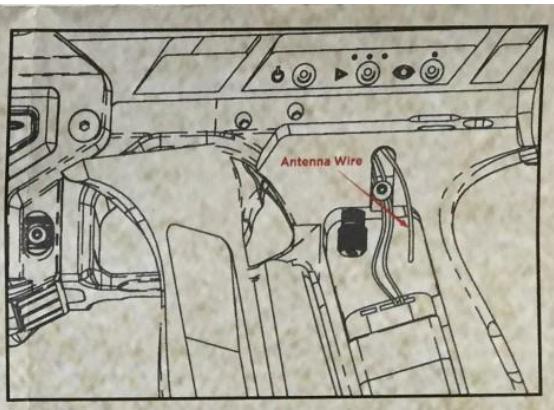
- Remove the Feed Tube by pressing both tabs on the front and back of the Magazine Neck. The tube should fall free of the Box and can be easily cleaned with a barrel swab.
- Remove the Retainer Clip by pushing back on the front face then pull upwards. Clean with water and a clean towel
- Reinstall the Retainer Clip by aligning the curved arm towards the back and pushing all the way down into the front cavity. It should spring back into place.
- Reinstall the feed tube by first aligning the tube so the bottom of the spout points to the right. Push the Tube into the magazine neck so that both of the tabs snap into place.
- Reassemble the Tray and slide it into the right side of the Box Rotor until it locks into place.

Installing the DAM Circuit Board

NOTE: Older model DAM's will need to have an updated circuit board installed to accommodate the new programming and Auxiliary Circuit Board that allow the Box Rotor to work. New guns will already have the updated parts.

- First remove the stock or stock attachment cover from the DAM by loosening the set screw with a 3/32" Allen wrench and sliding the part off of the gun.
- Remove the now exposed frame screw with a 3/32" Allen wrench.
- Hold the frame and body together to avoid damaging any wires and remove the two rear screws from the magazine well on both sides with a 3/32" Allen wrench. Note that the screws on the magazine well are longer then the screw that holds the back of the frame. DO NOT mix the screws up or you may cause permanent damage to the DAM.
- Carefully pull the frame away from the body. The battery wire should disconnect as you pull the frame away.
- Locate the circuit board behind the solenoid and disconnect both the eye wire and the solenoid wire from the circuit board and note their location.
- Remove both of the circuit board screws with a Philips head screw driver and remove the board.





- Be careful to keep the plastic button strip in place and avoid damaging the circuit board assembly. Now place the updated circuit board in the DAM and replace the screws. DO NOT over tighten the screws.
- Reconnect the eye wires and solenoid wires in their respective locations.
- Open the Sticky Grip and insert the new Antenna Wire through the same path as the battery wire. Be careful when handling the wire.
- Connect the battery wire to the board and gently place the frame back into position. Check that no wires are pinched between the frame and the body.
- Place the Antenna Wire into the frame so it sits above the battery and next to the spring tension adjuster.
- Close the Sticky Grip carefully to ensure no wires are damaged.
- For best operation DO NOT bend the Antenna Wire and limit contact with the frame.

Charging and Installing the Battery

- Remove the Tray from the Box Rotor by pushing down on the Release Tab on the right side of the Box Rotor and pulling the tray all the way out.
- Open the Tray Lid by pushing in on both of the Lid Tabs found on the front and back of the tray. Then pull upwards to rotate the Lid free of the Tray.
- Remove the Gear Box with the Battery. Insert the rechargeable Battery Plug into the Battery Charger.
- Insert the wall plug into the Charger and plug into the wall. A full charge takes up to 9 hours.
- Reinstall the Gear Box. Ensure that the gears are correctly seated. Insert the Battery Plug into its socket on the Gear Box.
- Reinstall the Lid ensuring that both tabs are locked into place and reinsert the assembled Tray into the Box rotor. The Tray can only fit into the Box Rotor one way.

Synchronizing the Box Rotor and the DAM

- Remove Tray and open Tray Lid to access the Gear Box.
- Remove Gear Box and locate the red Sync Button.
- Press the Power and the Fire Select ▶ Buttons simultaneously. All three blue Fire Select LEDs will flash.
- Press the red Sync button on the Box Rotor's Gear Box before the LEDs finish flashing. The button is located bellow the Battery Plug.
- Fire Select LEDs will stop flashing immediately after successful synchronization.
- Troubleshooting: If the box loader is NOT synchronized to a DAM, a red LED will flash on the Gear Box. Low Battery power or outside RF interference may cause synchronization to fail.

NOTE: The Box Rotor can be synchronized to any DAM circuit board, but only one at a time. This ensures that there is no cross communication between separate platforms.

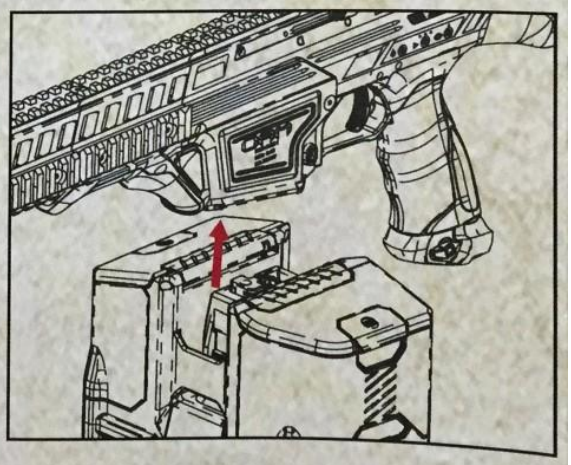
Attaching the Box Rotor to the DAM

- With a 5/32" Allen Wrench loosen the Front Angle Grip from the shroud and move it ~1 inch forward or remove entirely.
- Remove DTM or Toolkit Magazine from the DAM's Magazine Well.
- Insert Box Rotor into the magazine well with the DT Logo facing forward. Ensure Box Rotor is fully engages the magazine catch.
- Switch the On-the-Fly system forward to magazine fed operation.

WARNING: Once activated the Box Rotor will feed paintballs and the DAM will fire a paintball upon the next trigger pull.

- Press the power button on the left side of the Box Rotor to activate it.
- Gas up and power up the DAM to begin normal operation.

WARNING: The DAM will fire a paintball upon the next trigger pull.



Box Rotor Charger(s)

Dye silently rolled out an update to their chargers. The easiest way to tell the difference between the two without having to rip open your existing charger is to simply look at the LED light.

The one on the left has a red LED, this means its the V1.1 charger

The one on the right has a clear LED, this means its the V1.2 charger

This is also indicated on the left side of the board in white writing.

Charging Lights, and their meanings

VERSION 1.2 - RED LIGHT INDICATES CHARGING

VERSION 1.2 - GREEN LIGHT INDICATES CHARGE COMPLETE/NO BATTERY CONNECTED

Box Rotor Tension Adjustment

The box rotor, when it works properly, is an awesome addition to the Dam arsenal, but when it doesn't it can be a blender. As a manufacturer of such a product, it is damn well impossible to have a product like this work right out of the box, and the reason for this is simple, different paint types need different feed tension. What might work great for a thick shelled winter paint would absolutely obliterate soft shelled tournament paint. Find your ideal setting by taking the following steps to adjust your box rotor.

NOTE: A mod is available to FURTHER adjust your Box Rotor ball tension. It involves a very minor mod that could be found on the modifications page.

Box Rotor Synchronization

Box Rotor Synch Test and Firing mode feed demo

Product Walk Through

Silent Upgrades

Dye Tactical silently released new parts for their newer releases of the Box Rotor, they can be seen below. However, don't get your panties tied up in a knot if you don't have one. This can be EASILY replicated at home with a drill and a screw, check the modifications page for the "how to"



Modifications

Despite the best made plans of mice and men, not everything always goes as planned in a design process. This page is dedicated to the small, yet effective modifications that users have submitted that have yielded improvements in performance and reliability.

Dye Dam UL Stock Installation

SO you saw an UL stock online... It looks pretty cool right? And ofcourse, being the dye dam whore that you are (that we all are), you bought it.

And after what felt like a lifetime, it finally arrived at your door step. You tear open the packaging like its Christmas morning, only to find this...

Ack! Where's the buffer tube?! Well it turns out that it was never included in the first place, and some companies thought it would be a good idea to take pics of what it looks like when completed... A little misleading, yes? Anyways. This video will show you how to get your stock on your existing buffer tube (Shown below), unless that is, you bought this for your Dye Dam CQB, then you're in a bit of a pickle. Call your local Dye Rep, ask for the part.

Box Rotor Tension Adjustment Mod

There have been many arguments as to what the perfect amount of tension and turns to the adjustment set screw are. Some say 2, some say 3. (Set screw to flush -as in doesn't stick out at all- and unscrew 2 or 3 full turns). If you've tried 2 turns out and you still feel that your rotor is too harsh on fragile balls, you should maybe try 3 turns out. But before you do so, you will have to modify the Box Rotor Tray with a small adjustment. See video for more info. **Mod Discovery by Johan N**

Box Rotor Ball Stack Detent Modifier

Some people's Box Rotors feed just fine, and others seem to be a little temperamental. Here's a quick solution I've stumbled across on the Dam Owners Group on FB. This is an alternative to completely removing the detent **(the detents only purpose is to keep the 3-4 top balls in the stack from falling out when removing the box rotor... THAT'S IT).**

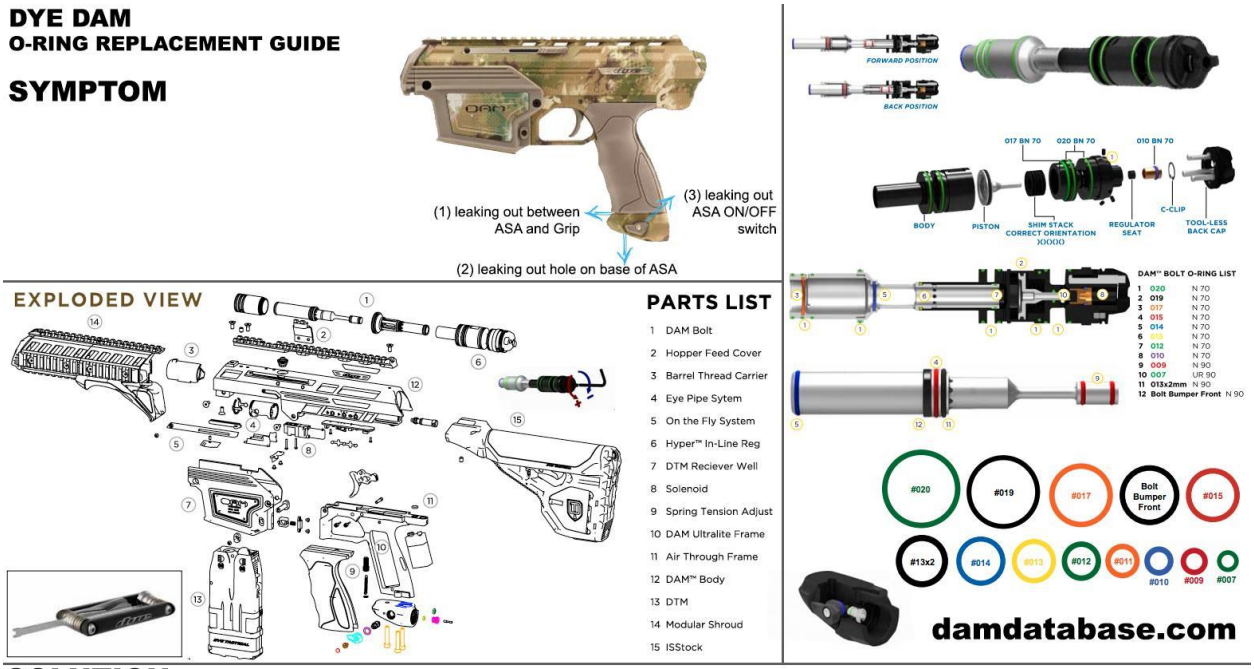
Box Rotor Stack Retaining Detent - Modified with set screw

For this modification, you will need a set screw (yes you can use the one that comes in your Dam Mag Toolkit), a drill, and a drill bit that is only just slightly smaller than the diameter of the set screw.

1. Drill a hole in the same spot shown below.
2. Insert the set screw, the set screw will thread itself.
3. Adjust the set screw so that the lip is now showing when looking from within the box rotor (You may need a smartphone for this)

Image taken from within the Box Rotor showing that the Retaining Detent has been retracted all the way back and is not obstructing ball movement.

Troubleshooting

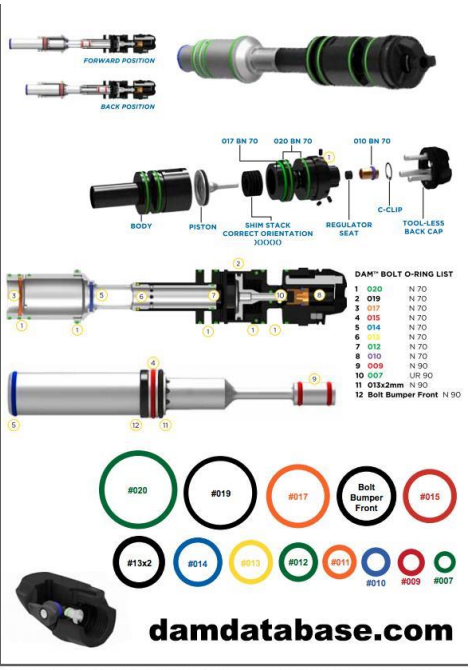


SOLUTION

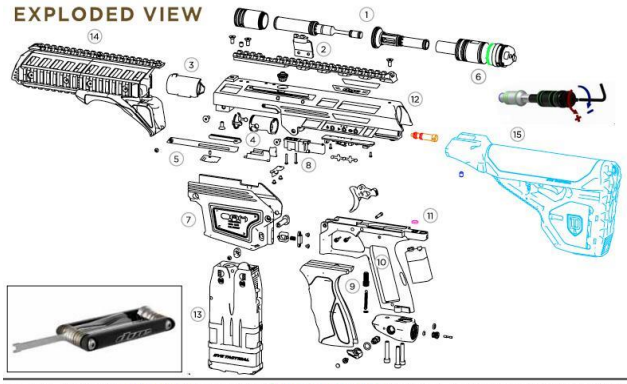
(1) Separate ASA from grip by removing 3 screws shown above. Check blue O-ring #14. Replace if necessary. If not damaged, apply light grease to o-ring to ensure seal.
(2) First check your HPA tank O-ring(s), as they may be damaged, and causing a leak. If problem isn't corrected, you need to replace the following o-rings. You will need a Dye tool to perform the following. Insert the Airport tool (Forked tool) into the pin housing, and turn counterclockwise 3-4 times. After removing the pin housing, extract the #005 o-ring using a dental pick, and inspect for damage. If not damaged, apply a light coating Dye Grease to this o-ring and replace. Also check pin housing o-ring for damage and lube.
(3) Remove Dye Jewel from ASA on/off switch. Use appropriate allen key to remove switch screw. Extract ASA On/Off switch o-ring using a dental pick, check for damage and lube.

DYE DAM
O-RING REPLACEMENT GUIDE

SYMPTOM



EXPLODED VIEW



PARTS LIST

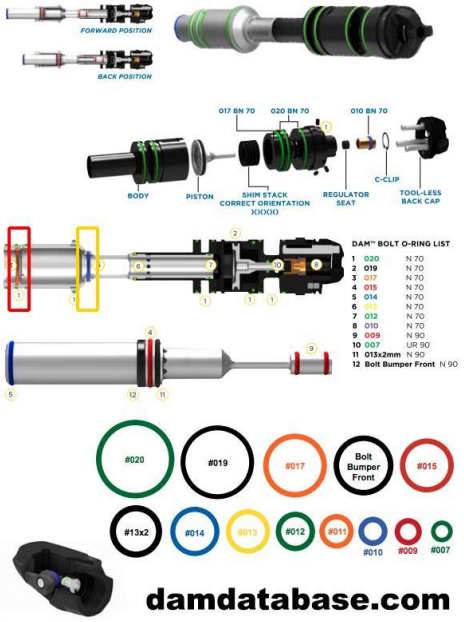
1 DAM Bolt
2 Hopper Feed Cover
3 Barrel Thread Carrier
4 Eye Pipe Sytem
5 On the Fly System
6 Hyper™ In-Line Reg
7 DTM Reciever Well
8 Solenoid
9 Spring Tension Adjust
10 DAM Ultralite Frame
11 Air Through Frame
12 DAM™ Body
13 DTM
14 Modular Shroud
15 ISStock

SOLUTION

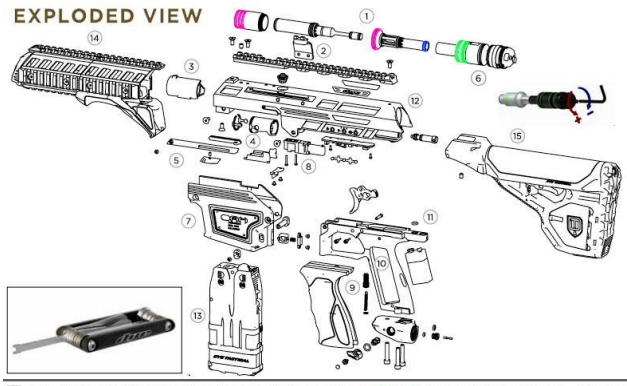
(1) Remove set screw holding the Stock/Back Cap in place. Ensure no ball is in the breech, marker is degassed (remove HPA air source, turn on marker, and bleed air by holding trigger for 2-3 seconds so that solenoid fires) Use a small allen key to remove the air through plug from the back of the Dam body. Check the air through plug o-rings for any damage. Replace o-rings as needed, mand apply light lubrication prior to replacing.
2) Remove Dam Ultralite Frame by first removing the magwell (and its 4 screws) as well as the Stock/Back Cap, and remove screw found under back cap. When frame is removed, check o-ring found at back of frame.
3) Remove bolt/inline regulator, and check green o-ring found found on back of the in line regulator shown above.

DYE DAM
O-RING REPLACEMENT GUIDE

SYMPTOM



EXPLODED VIEW



PARTS LIST

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SOLUTION

(1) Remove Bolt/Regulator assembly, check 2 o-rings furthest from back cap. Then separate regulator and bolt and check the o-ring indicated above. Lube o-rings, then test.
(2) Remove Bolt/Regulator assembly, check o-ring on bolt cage, as well as 3 o-rings on bolt can. Replace if necessary, apply dye grease, and test.
(3) Remove Bolt/Regulator assembly. Remove bolt tip o-ring and slide out bolt, so that you may gain access to the o-rings inside of the can, as well as the cage. Check o-ring inside of can (as indicated by box above in bolt diagram). Check o-ring inside of cage (as indicated by box above in bolt diagram). Replace and lube if necessary.

Checking and replacing the Dam Regulator Seat

It's leaking! Where from?

AIR LEAKING FROM THE AIRPORT

(Following is taken from the Dam Manual)

- Check the O-ring on the air system. If needed, change the O-ring and try again. The O-ring normally used is an 015/70 but some manufacturers might use a different size. Consult the manual of the air system you are using.
- Replace the #006 O-ring located inside the airport. This can be disassembled using a 3/16" Allen wrench and a 7/16" socket.
- Check that the hose connector is tight. Use a 7/16” Allen key to tighten. If needed remove and apply thread sealant to the thread and re-tighten. If unsure, consult expert advice.
- Check that the end of the hose is cut straight and is not worn out. If needed cut a small piece off the hose with a razor blade and re-insert the hose into the fitting. Make sure the hose goes all the way to the end.

AIR LEAKING BETWEEN BODY AND FRAME

(Following is taken from the Dam Manual)

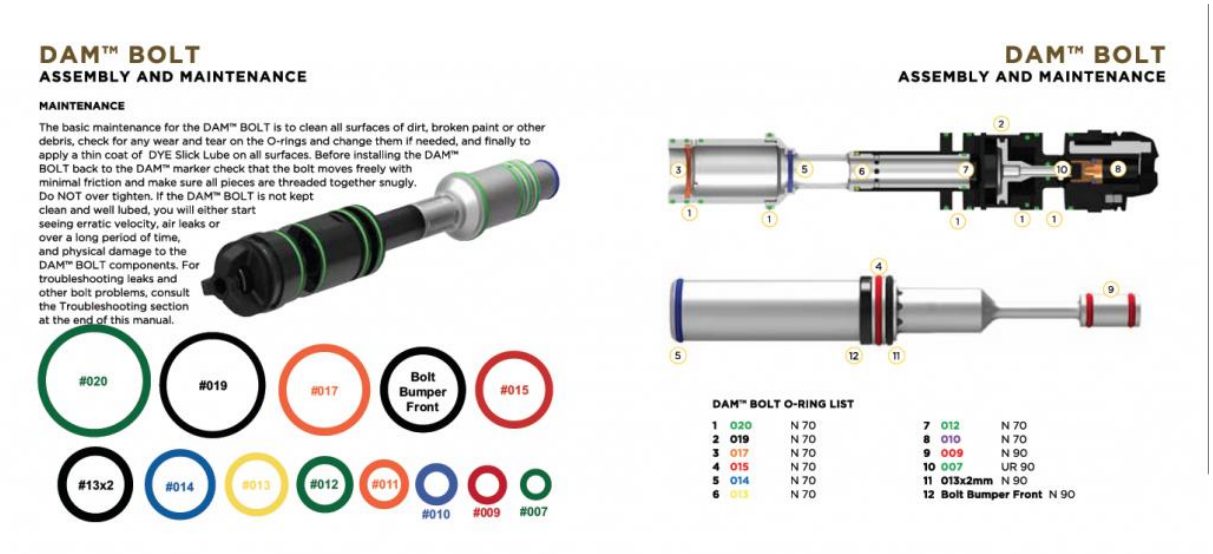
- Firstly, check that the In-Line Regulator input pressure has not been adjusted too high or too low.
- The other possibility is that one of the gas passages is leaking. Gas up the DAM without the frame attached and try to locate the exact point of leakage. If the leak is coming from one of the blocked holes remove the screw, apply some thread sealant and re-attach screw to the body.
- If the leak comes from the small hole on the bottom of the DAM’” body directly below the In-Line Regulator then consult a trained technician before attempting to disassemble the in-line Regulator.

AIR LEAKING FROM BACK OF THE DAM"

(Following is taken from the Dam Manual)

- Check that the bolt kit is tightened all the way into the DAM“. If the bolt kit is loose, it will start to leak.
- If the leak is coming from the Back of the regulator you will need to disassemble the regulator and change the #010 O-ring and the seat on the brass seat retainer mounted inside the in-line Regulator.
- If above does not solve the leak. remove the bolt kit and change the #020 O-ring on the back cap of the bolt. Also change the two 009 O-rings located on the tail of the bolt. Lube well and re-insert

the bolt kit into the DAM. Check bolt kit break down for o-ring locations



- Last. check that the gas passage blocking screw located on the right side of the DAM is not leaking. If the leak is coming from this hole, remove the screw and apply thread sealant to it. Make sure to tighten the screw well and wait for the sealant to dry (24-48 hours) before re-gassing the marker.

AIR LEAKING FROM FRONT OF THE DAM"

(Following is taken from the Dam Manual)

- Remove the Bolt kit from the marker and change the #017 O-ring located inside of the Can and the #014 O-ring located inside the Manifold. Lube well and re-assemble.
- If above doesn't help. try changing the #020 O-rings located outside of the Can. Lube well before re-inserting the bolt kit.

Electrical/Board/Eyes

IT'S NOT TURNING ON!

(Following is taken from the Dam Manual)

- Make sure battery is new and well charged.
- Check that battery dongle is connected to the DAM"' Circuit board
- Make sure there is no dirt or debris blocking the button from being pressed.

DAM WILL TURN ON / OFF BY ITSELF OR THE EYES WILL TURN ON / OFF BY THEM SELVES

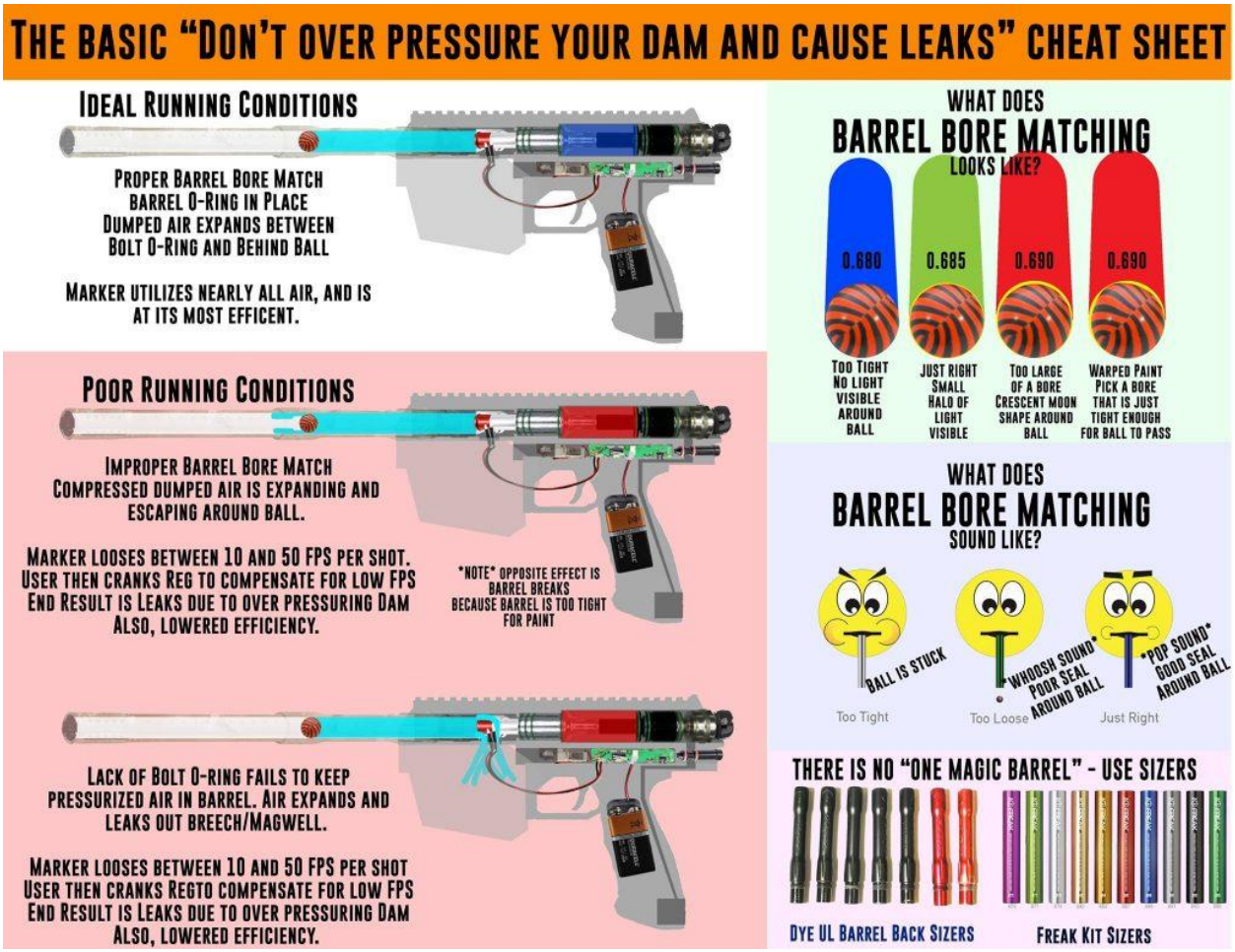
(Following is taken from the Dam Manual)

- Both of these problems are caused because the button(s) are being held down, as if they are pressed all the time.
- Remove board from the frame by removing the grip frame, disconnecting the cables and removing the board. Carefully remove the circuit board buttons and clean them well.
- Re-assemble and test. If problems persist, contact an authorized service centre.

DAM TURNS ON, THEN OFF AGAIN RIGHT AWAY/TURNS OFF TRYING TO SHOOT FIRST SHOT

There are two potential causes to this issue.

1. Battery is low/dead. Swap it with another, or test existing battery with a battery tester, or if you're on the field, stick the 9 9 volt terminals on your tongue and see if it still has some zap to it. [DURACELL batteries have proven to be the least troublesome batteries, DO NOT use generic/no name brand batteries, as they have proven to cause issues in performance]
2. Connection issue between the battery and the board. The battery harness is not properly seated in the board. Take the lower/grip off the body and reconnect. The poor connection starves the marker of energy and turns off. [If you are unsure about doing this, please watch the video titled "DYE DAM FULL TEAR DOWN, and then watch DYE DAM FULL REBUILD". Only watch parts relating to the gun grip, you don't have to take the whole thing apart just for this step.



It's double feeding/double shooting!

TRIGGER BOUNCE / DAM" SHOOTING MORE THAN ONE BALL PER PULL IN SEMI AUTOMATIC MODE

(Following is taken from the Dam Manual)

- Raise the trigger sensitivity level in the configuration mode.
- Check that the trigger is not adjusted too short.
- Make sure there is a trigger spring inside the frame.

DOUBLE FEEDING

(Following is taken from the Dam Manual)

- If you get two balls firing at once change the ball detents on the self-cleaning Eye Pipe.

It's breaking paint/chopping!

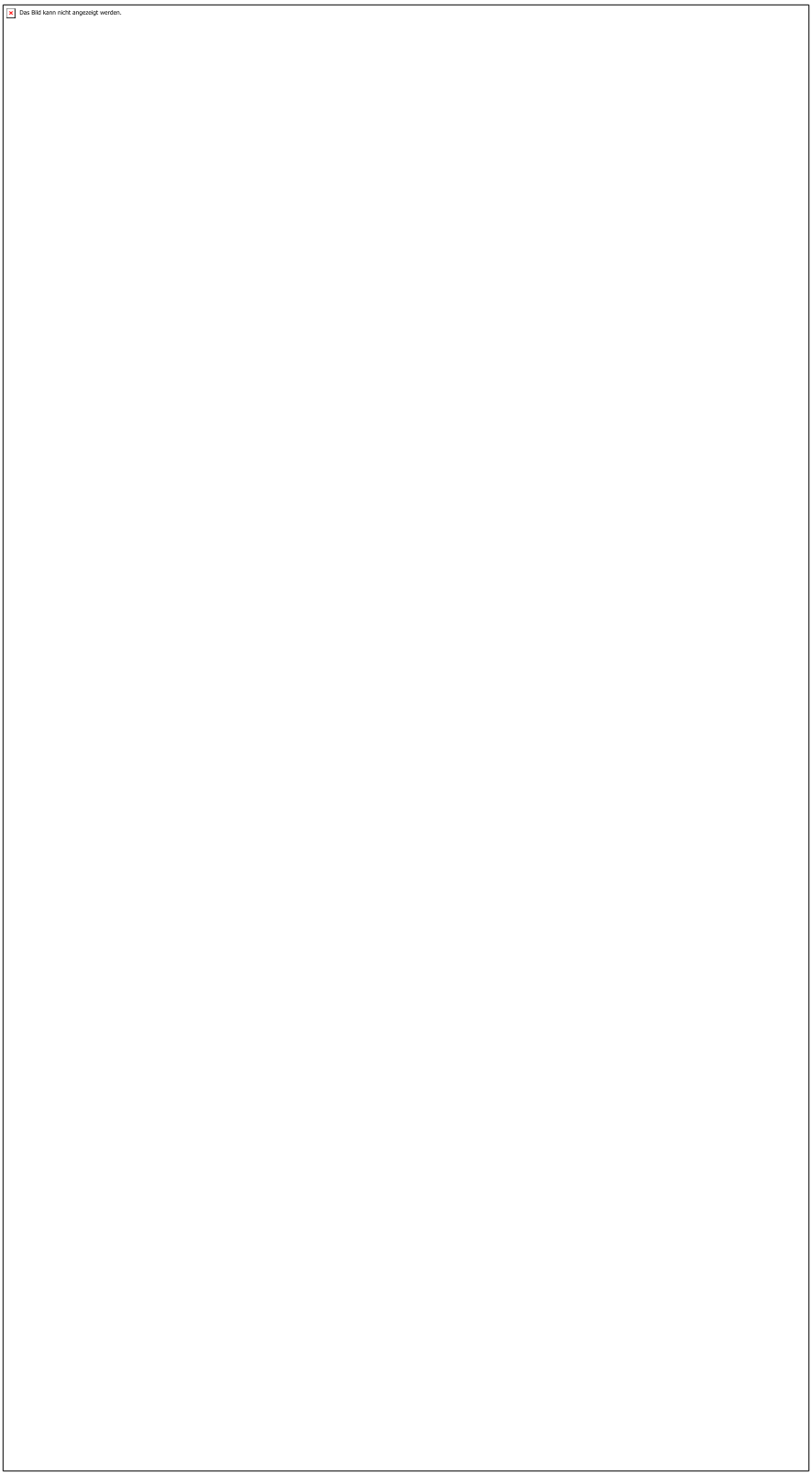
(Following is taken from the Dam Manual)

- Make sure you use high quality paintballs and that they are stored according to the manufacturer's instructions.
- Make sure your loader is working well and that the rate of fire is not set higher than the maximum feed rate of the loader.
- Check that the barrel you are using is not too tight for the paintballs you are using.
- Check the condition of the ball detents.

Full blown kind of special...

Ever wonder what your dam would do if you hooked it up to an unregulated 4500 PSI HPA tank? Well wonder no more. I present to you the new Dye Dam CQB bolt. Just kidding. But no, really, don't even think about doing something like this. When the user hooked up the tank to his dam, it literally crushed the bolt, and blew off part of the regulator. They could have been seriously injured.

The new and improved "CQB" bolt.



Note the missing back of the regulator grip

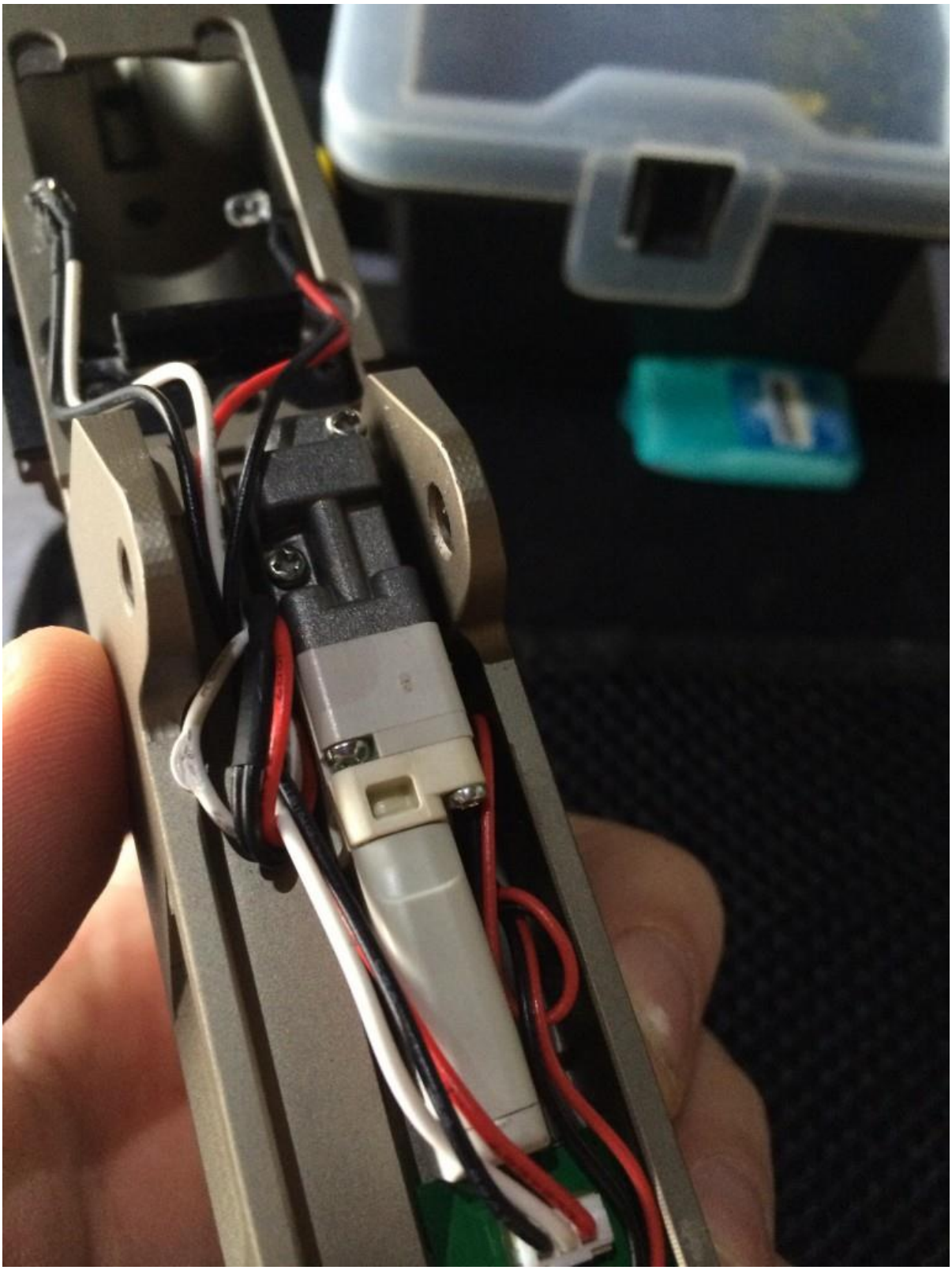
There are some things that should be Loc-Tited, and there are things that shouldnt be...

No, I am not proud of this personal submission, but some genius told me that one way you can keep the can from detaching from the bolt assembly when removing it from the dam would be to Loc-Tite it into place... fine, that's not a horrible idea, but it is when you use the Blue variety (Medium/Strong). Should you ever find yourself in such a stupid predicament, you will have to remove all the o-rings as shown in the pic below, and theb boil the loc-tite so that it melts away. There is no need to loctite the can to the bolt assembly, as it will never (Because it's physically impossible) come undone and loosen. The Dam's body has been designed so that there is no room for the can to come undone. It only comes undone when you are reversing the assembly out. With that being said, hey Dye Tech's, maybe the next one could be reverse threaded so it won't come out so easy?

Pictured above is what stupid looks like.

Wire management

Yes, wire management even applies to the Dam, keep your wires neat and organized and for the love of George, please be careful when putting it all together, or you could pinch a wire and ruin a perfectly good set of eyes.



"Why aren't my eyes working?"... Oh

Don't over-tigthen yo nuts

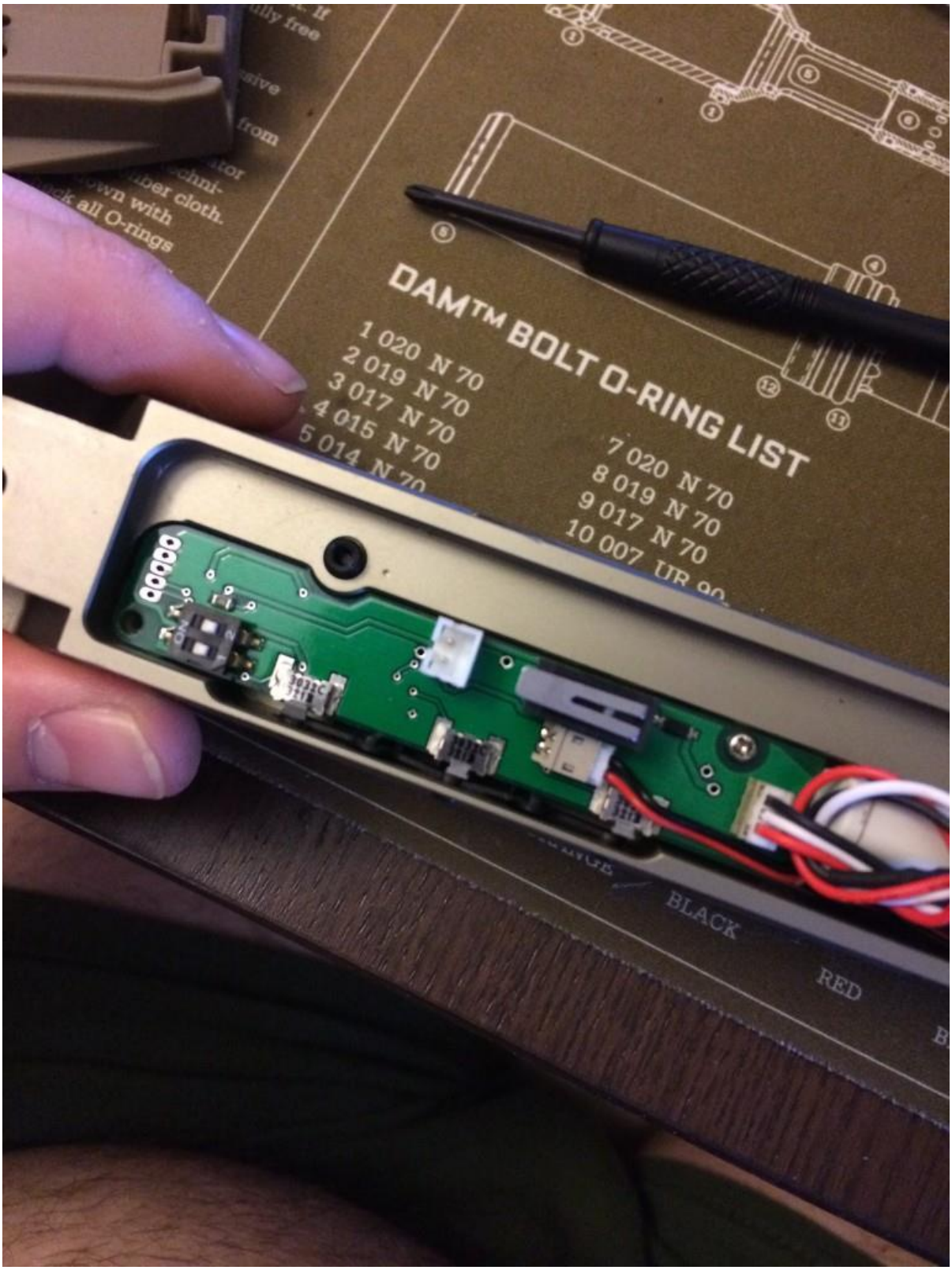
Snug, thats as far as you should go, or else this will happen.

Dam Grip - Do not over tighten screw

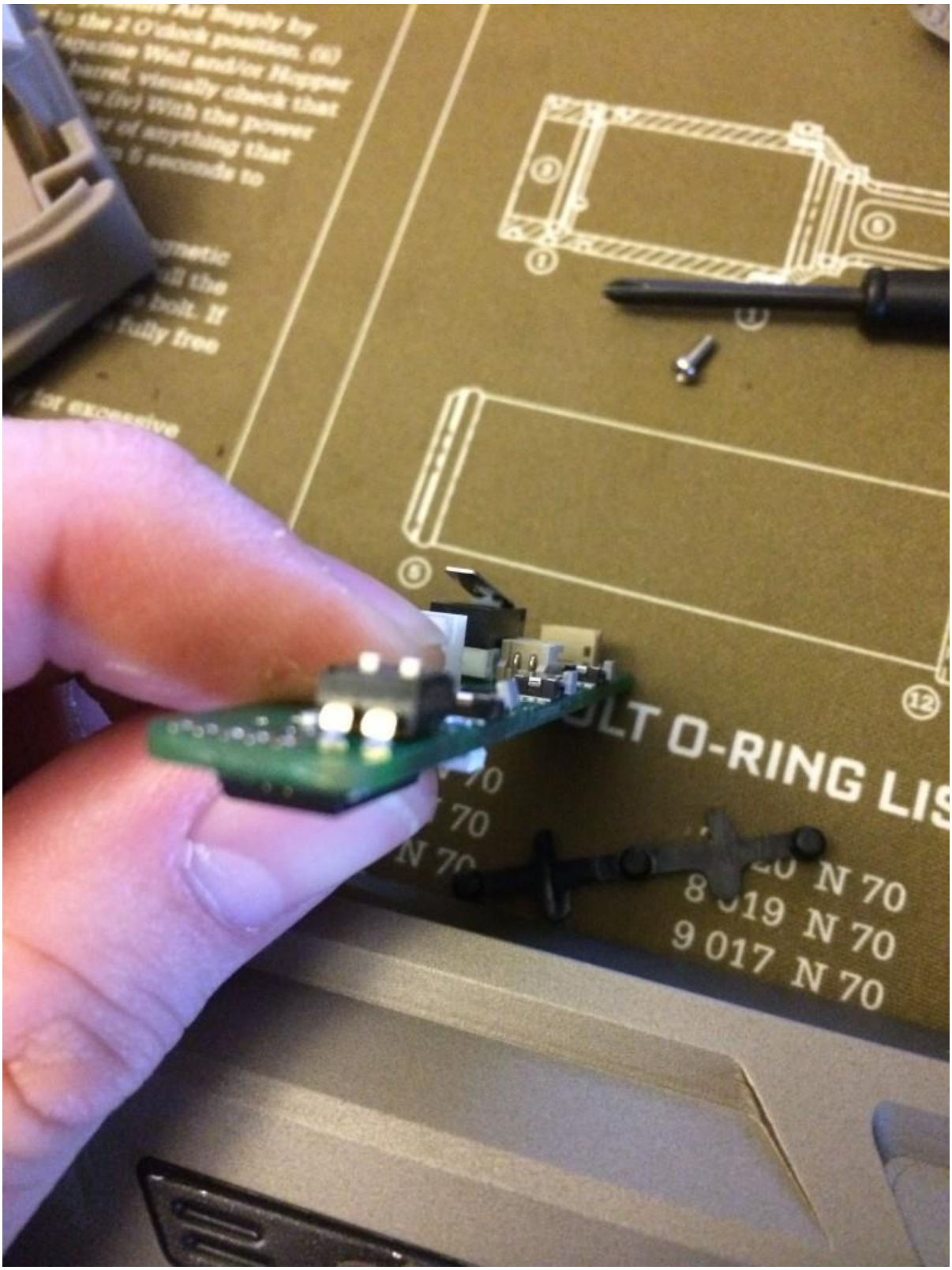
Or else you will cause the nut to detach from the grip and it will travel down the bolt.

Buttons are meant to be pushed, not squished

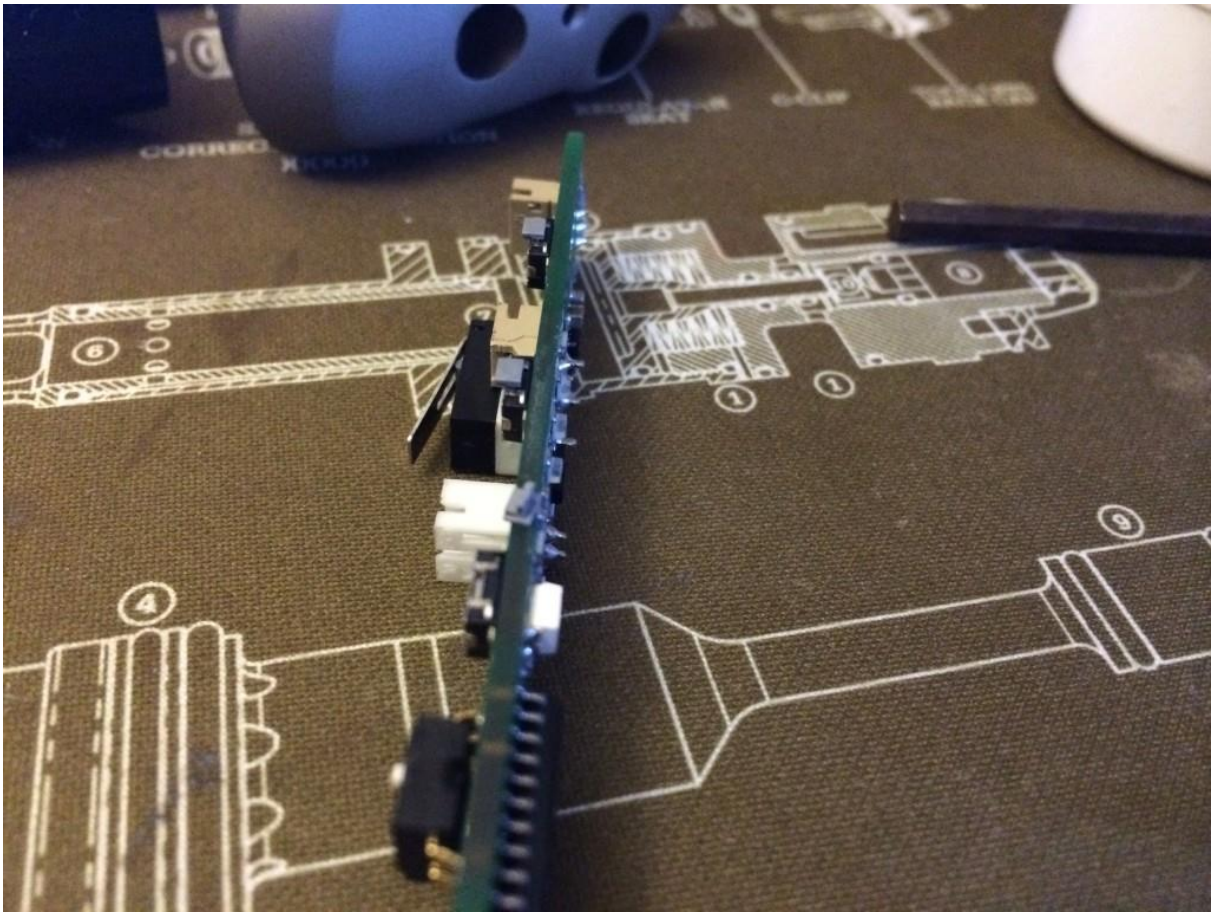
When replacing your board, be VERY mindful of the 3 buttons on the side. The user in these photos bent a button, and it later fell off, when he squished the board button against the button faces/caps. Be sure to place the board into the dam button side first to ensure that this doesn't happen.



How it happened



Button bent on board.



Button broken clean off

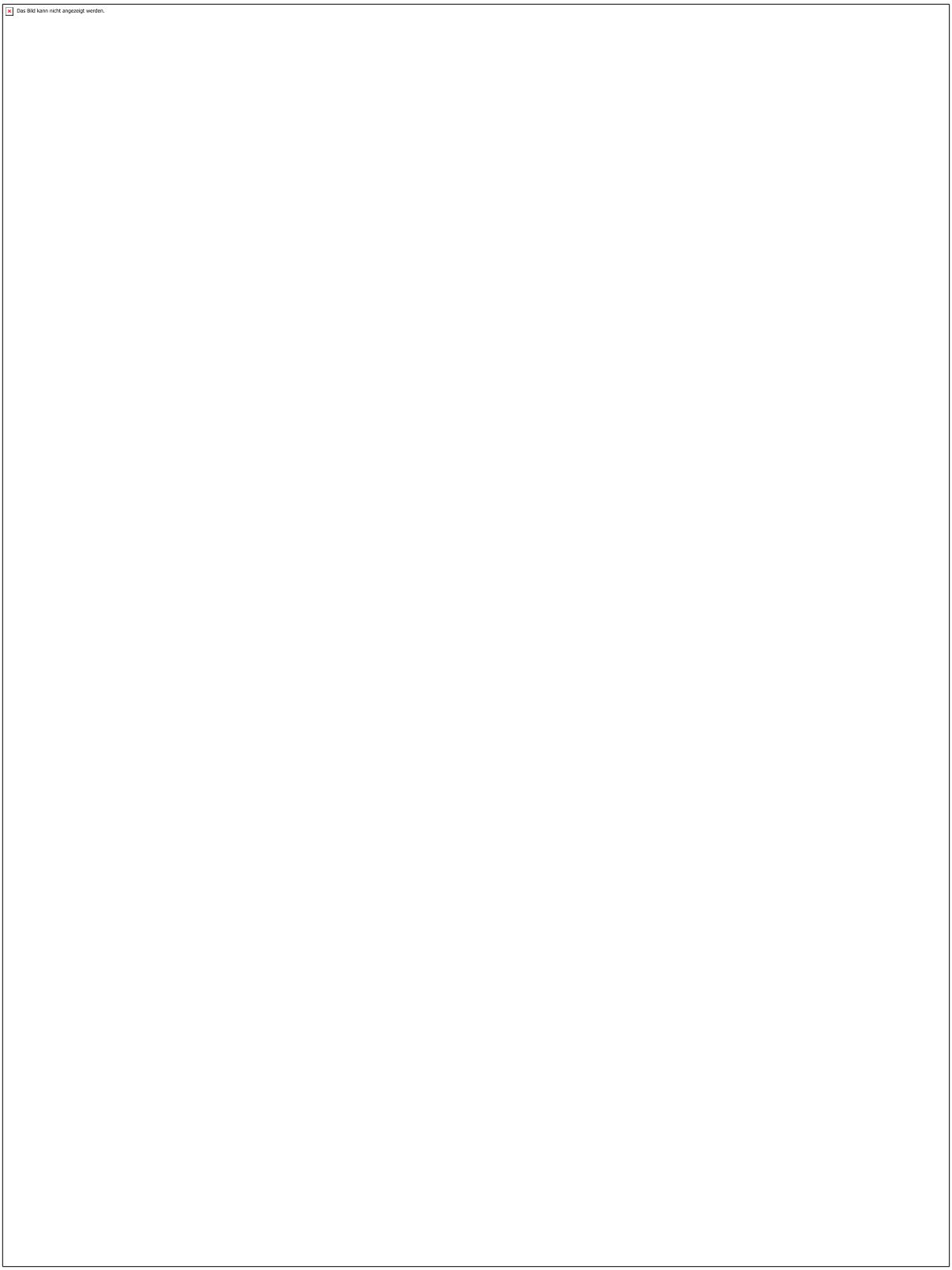
Story of the Caged BR bolt tip. (Another case of Loctite but this time with Vice Grips)

There is absolutely no need to ever apply LocTite to your can. It will never come undone while shooting. And in this guys case, it almost never came undone after shooting. Turns out he took some sort of vice grips to it and couldn't get it unstuck. After a good 10 minutes of brute force, and using creative leverage (Screw driver through the cage) I managed to free the poor Box rotor bolt.

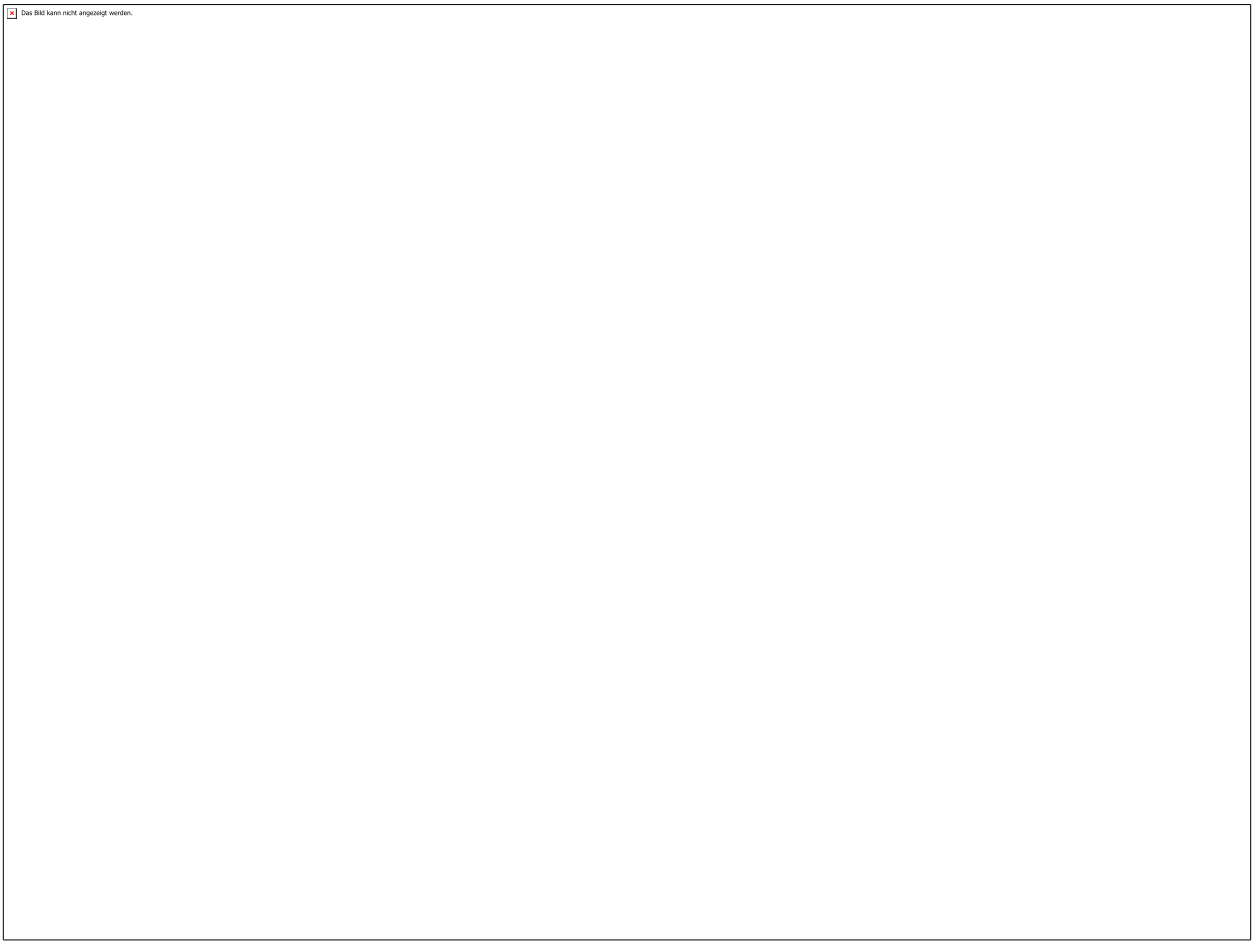
Entrapped Box Rotor bolt - Due to loc-tite.

And on the 11th day, God came down from heaven, and tightened this dudes bolt for him

Behold! The new CQB Shortened Bolt... No just kidding. Folks, don't over-tighten your bolt. Hand tighten, snugly. Looks like somebody used a tire iron or a power tool to do this.



Bolt tightened to hell. New "CQB SHORTENED BOLT".



Oh yeah, and his tips were completely missing

So you’re looking to buy a used Dam…

Thats great news! But here’s a list of things to look for prior to buying, as well as things to bring along with you so that you are prepared.

Always bring the following items to inspect a Dam.

1. Fresh 9 Volt battery. (I am stressing the fresh part)
2. Your own set of allen keys (In the event that they don’t have theirs anymore)
3. Your own Paintballs (I highly suggest firing some rounds, but if you are unable to due to the sale being in a public place, or a highly concentrated residential area such as a condominium, then dry firing into a sweater/pillow will do.

The Dam

- **Always Power it up,** never buy any marker without powering it on. In the event that it doesn't turn on with a fresh battery, it could mean 1 of 2 things, either the battery connector into the board isn't sitting right (usually a noob mistake when re assembling their marker) (5 minute fix), or that the board is dead. ($50 replacement). Either way, use this as leverage to lower the price. The marker is very simplistic in design, so that is the only two problems you will face in terms of electronics.
- **Power it up, With Air,** check for leaks. Most, if not all leaks can be fixed with a complete o-ring replacement (for those who don't know how to troubleshoot), or a re greasing of all moving parts/o-rings. Don't let this scare you. Use it as leverage, you can fix it yourself later. NOTE: That sometimes, if a Dam has been sitting aside unused, it may leak for a second until you fire a couple of shots.
- **Check the eyes.** After powering it up, with the air source not connected. stick your finger into the ball breach in front of the bolt. The eye's indicator (Fourth light from the left) should change from orange to green to indicate that the beam has been broken, and a "ball in place" signal has been registered.
- **Check all 3 of the buttons.** There are 3 buttons on the Dam. 1st Power (Hold down to power on and off), 2nd, Firing Mode selector (Semi, 3 Round, and Full Auto), and Eyes on/off (Hold to toggle between two) If one, or any of the buttons don't work, it may be because the button face isn't seated correctly on the board, OR the button self has broken on the board, (Again, 5 minute fix, or $50 replacement)
- **Remove the bolt -** Unscrew the bolt from the Dam, inspect it for anything unusual, like big scratches, or any other form of abuse. If the bolt comes unscrwewed while removing it from the Dam, relax, this is normal and sometimes happens. Use a barrel maid, or something long and narrow to push the bolt out of the Dam body.
- **Check threading on Ultra Lite Barrel, as well as the barrel block. -** You will have to loosen a set screw on top of the Dam (ask the owner to show you) to remove the barrel block.
- **Check the wiring -** To do this you will have to remove 5 of screws. (4 that hold the Mag Well on, and one that holds the Dam Grip in place (Where the stock screws in) Check to see that the wires haven't been pinched, or cut in any way shape or form.
- **Rotate the eye pipe -** Use the selector switch to rotate the eye pipe between Hopper Mode and Magfed mode. If you hear some crunching or loud grinding, it means that the owner hasn't cleaned it in a while and that there is some sand/debris in the gears (Easy 5 minute fix). Use this as leverage.
- **Check the Toolkit Mag for O-Rings and Tools -** You should have at least 4-5 Allen Keys and a wide variety of O-Rings, and 2-3 Extra screws.

Box Rotor

- Ask the owner to have charged the box rotor in advance, and tell him that you MUST see it working prior to buying. Power it on - the second you turn it on, the motor SHOULD cycle for a fraction of a second, just long enough to rotate the feeder plate 2-3 rotations.
- Turn the eye off on the Dam, and pull the trigger, if the dam is synchronized to the Box Rotor, it SHOULD activate with each trigger pull, but again, the eyes need to be off for it to send the signal without any balls in the chamber.
- Pull out the tray, and visually inspect it for any damage (gear teeth, frayed wires, etc.)
- Plug in battery to charger, see if it works - Depending on the version of the battery charger, the red light might turn off when plugged in, or stay on. Check the page on "BOX ROTOR" to see the two different types of chargers, and how they behave

Add Ons & Upgrades

Just to be clear, add on's aren't always upgrades... not all upgrades actually work as advertised.

Tech T - L7 Bolt

The tech T was released in mid 2016 with promises of increasing overall efficiency, lowering dwell, as well as consistency.

They largely delivered on these claims, but after some years of usage, it has yielded some interesting results.

We polled the users at the Dam Owners group on facebook. Of the 59 respondents that chimed in, a **staggering 24%** reported that the bolt delivered nothing but problems. The other **76% were very happy** with their gains.

Of the problems reported, here is a collection of the most common ailments that troubled this bolt.

1. FSDO (First Shot Drop Off/Bolt Stick) - This issue plagued a large number of users, some simply lived with it, others turned up the dwell to compensate (which is kinda silly because it defeats the whole purpose of having it), and others just dumped the bolt. After contacting an employee via FB about the issue, they said they were aware of it, but do not yet have a working solution.
2. Loose/Gradually Loosening parts - Parts began to fall out of place, and overall performance began to suffer. The bolt itself uses a spring to assist in resetting the position of the bolt. This used a rubber puck of sorts as a backstop. When the rubber puck moved out of its original setting, it would throw things out of whack.
3. Failing plastic parts - Parts would simply crack and fall apart (see pics)

At $90 USD, this upgrade is reasonably priced... that is, if you're one of the 75%, otherwise, you've got a lemon.

George Belegrinis created a poll.
Admin · December 19, 2017

Quick poll for those who've used the Tech T bolt

- I have it, it works great +45
- I have/had it, nothing but problems. +14

1 20 Comments

Like Comment Share

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IRONMEN
kamenstein
44g
UNIT
Z/T
ON/OFF
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35g
UNIT
Z/T
ON/OFF
New 3rd Party Dam Bolt

Echelon 14 (E14) One Piece Barrel Carrier

Entrepreneur Stephen Schurk noticed that the Dam was losing some efficiency due to the fact that its rotating plastic eyepipe lacked a proper seal between it and the aluminum barrel carrier. Being an avid magfed player himself, and having access to the necessary machinery to tinker, he set out to solve this problem. Enter the E14, a one piece. static, non rotating, aluminum, unibody barrel carrier. The E14 barrel carrier immediately became a big hit with the magfed community because it instantly added 10-20 FPS, as well as steadied shot for shot consistency.

At a price tag of $120 USD, this seemed to be a decent upgrade for the magfed community. Some users, however, noticed some shortfalls of this new product, such as;

1. Incompatibility with all barrel types. Some barrels didn't screw in all the way. (see pics)
2. Some bolts showed signs of wear, as the bolt would rub up against the aluminum barrel carrier (see pics)
3. Sizing of the detent groove was too tight, causing detents to be stretched further apart than normal, thus causing manipulation/modding. (see pics)

After a solid year of production, Stephen pulled the plug on production. Many players still use this product today, and they are a hot find on Dam related BST pages. (Dam Orphanage on Facebook)

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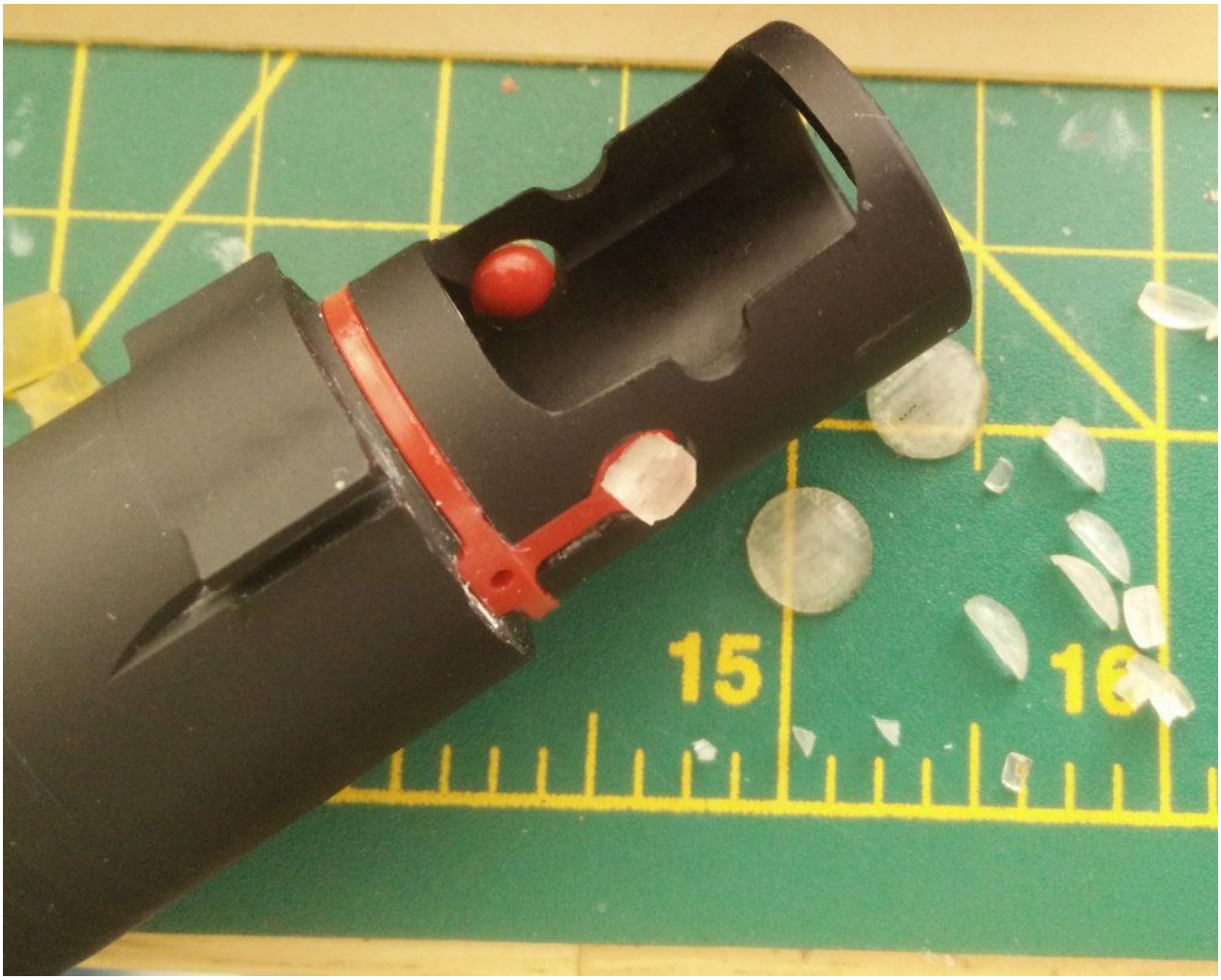
- 
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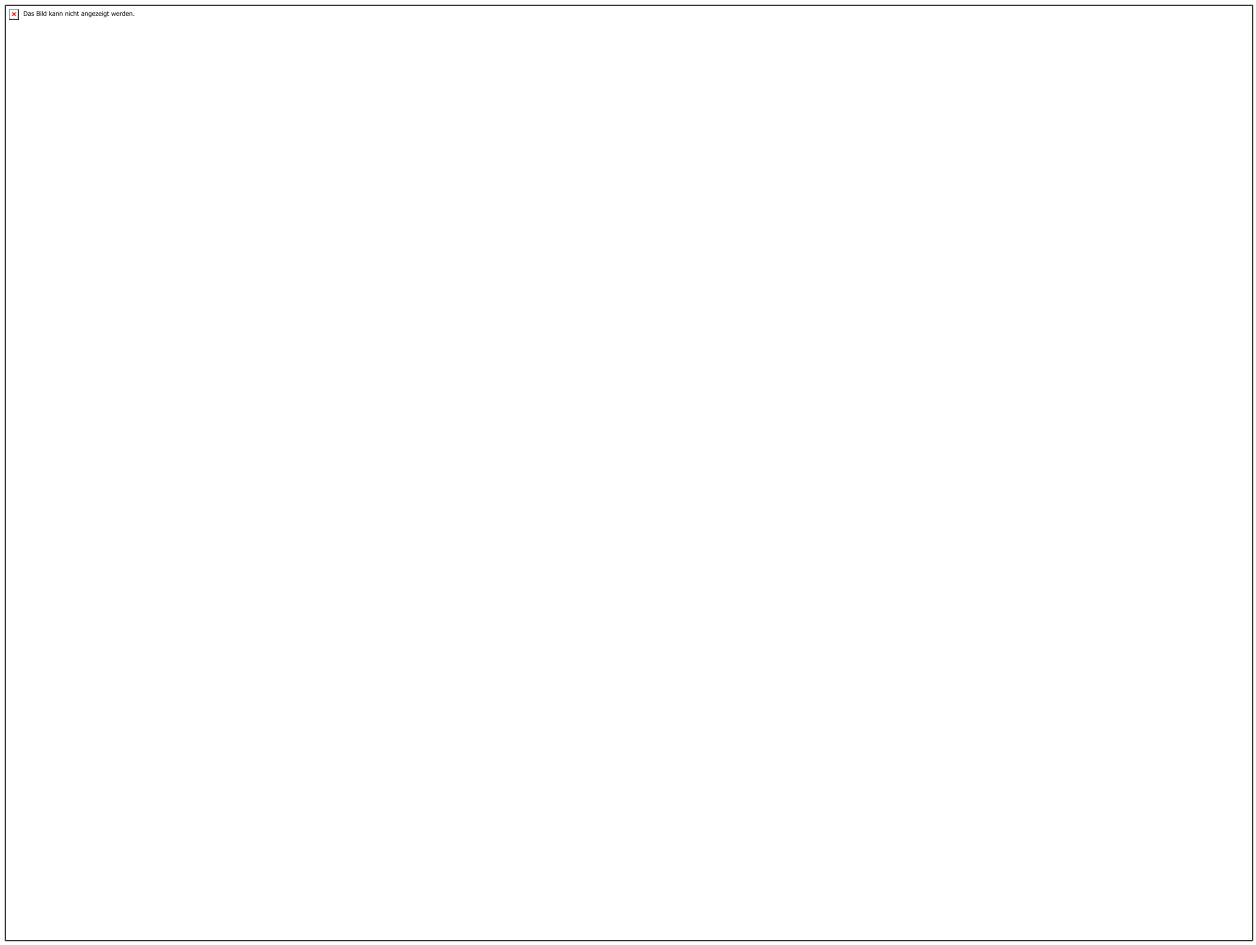
- 

Dye Barrel Thread Carrier

Dye has released some silent upgrades to their Dam product line, one of them is the Dam Threaded Barrel carrier. Dye set out to correct a known issue regarding velocity, and the way they corrected this was by milling out a slot in the barrel carrier, so that they could place a 019BN70 o-ring in front of the eyepipe. This greatly improved the transfer of forced air behind the ball, and stemmed the loss of air that would otherwise escape as the ball was propelled.

Dye Engineer, Billy Wing, also noted that an alternative to this for those who do not have access to this mod is to drop a 018 o-ring in a non modified barrel carrier, as it will yield similar results, however, turning

the eyepipe won't be as easy. A little grease will help out with the rotation (But who uses the rotating eyepipe, anyways)

Dye's new upgraded barrel carrier boasts approx 20-25 FPS increases, and their findings can be found in the chart pictured below.

The new updated barrel carrier runs for approx $15 USD, and can be bought from the link below

https://shop.dyepaintball.com/products/replacement-part-110

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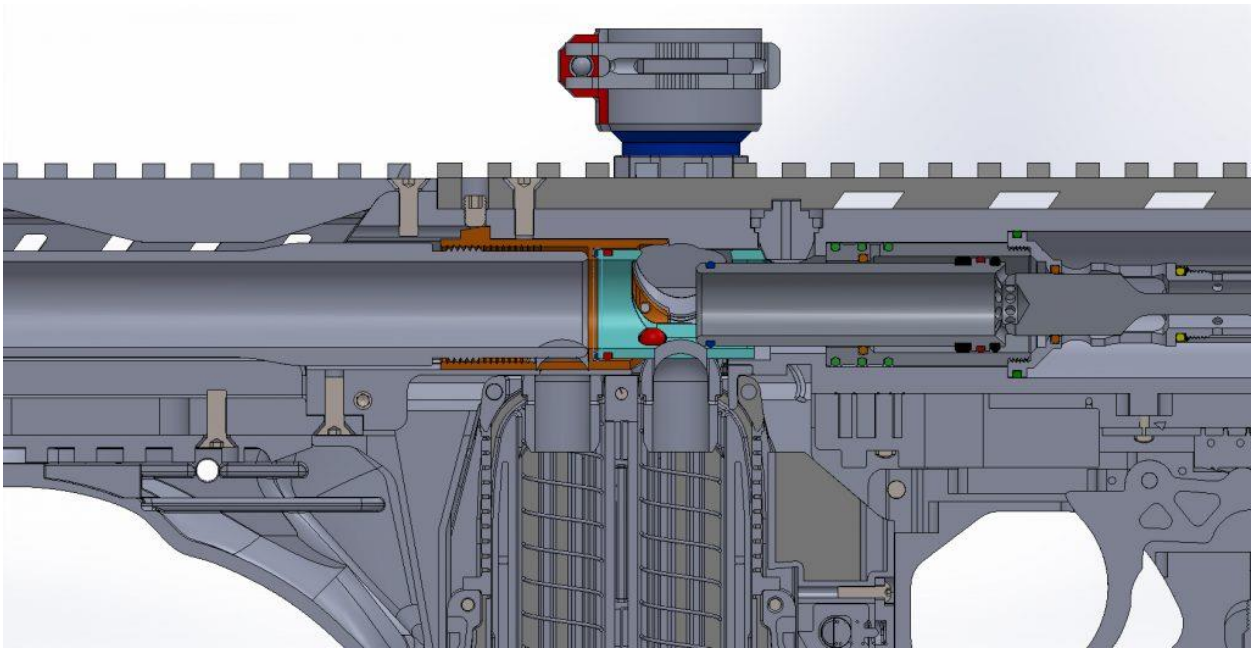

	Barrel Insert	Hyper(psi)	GUN	1	2	3	4	5	6	7	8	9	10	Avg.
DAM Barrel Insert	Original, no oring	130	No.1	289	289	285	291	289	289	291	291	285	293	289.2
			No.2	291	291	290	290	290	285	287	293	293	288	289.8
DAM Barrel Insert	Original , with #018 oring	130	No.1	300	305	304	304	304	304	307	304	304	306	304.2
			No.2	298	297	290	294	294	298	298	293	296	297	295.5
DAM Barrel Insert	Modified with S-020 oring	130	No.1	306	307	307	306	305	307	308	305	305	304	306
			No.2	298	299	300	300	302	299	296	297	295	293	297.9
DAM Barrel Insert	Modified 0.9 deep with #019 oring	130	No.1	317	313	315	319	313	315	309	316	309	316	314.2
			No.2	316	313	315	313	316	316	305	308	306	316	312.4

Dynamic Sports Air Through Stock

Dynamic Sports Gear stepped in where Dye left an opening, literally. Dynamic sports created an air through stock system that took advantage of Dye's auxiliary air input port. This add on was very appealing to a good chunk of players that longed for a more realistic playing style and appearance. Check out the pics below, it does indeed look pretty sexy. However this did not appeal to the entire player base, largely due to the fact that you are limiting your on field time due to the 13ci's ability to only shoot - BALLPARK - 150 shots.

Every so often a user posts a question about his leaking DSG Air Through Stock. The issue stems from the fact that they are using 2 x red o-rings. The o-ring on the front of the plunger should not be red. This is too big, and will get sheared every time you install the Air Through stock. Try using a smaller green o-ring, as it has shown to be a better fit, and won't get damaged upon insertion.

The DSG Air Through stock comes with:

- Dye DAM Air Stock Adapter (Aluminium)
- Air Connector Pin
- Stock Guide
- M-16 stock for HP bottles up to 50mm diameter
- ASA Lock Screw

Instead of using the ASA lock screw, you have the option of purchasing the ASA blocking plate to remove the ASA entirely.

This add on goes for a reasonable price tag of $260 CAN / $190 USD (Reasonable because most parts are made of CNC'd machined aluminum. Does not include a 13ci tank).

http://www.premiumpaintballproducts.com/en/paintball/Paintball_Gun_Upgrades/dye-dam-upgrades/dsg-dam-stock.html