1/01/10

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CONTENTS

CAUTION: READ ALL WARNINGS BEFORE USING OR ATTEMPTING ANY WORK ON YOUR VICTORY. SHOULD YOU BE UNSURE AT ANY POINT, STOP AND SEEK PROFESSIONAL SUPPORT.

WARNING

This Paintball Marker is not a toy. Misuse may cause serious injury or death. Eye protection designed specifically for Paintball must be worn by user and any other persons within 200 yards (183 meters) of this Marker. Must be at least 18 years old to purchase, at least 14 years old to use or operate under adult supervision, 10 years of age or older to use or operate on insured Paintball fields meeting ASTM-standard F1777-97. Read owner's manual prior to using or operating this Paintball Marker. .

WARRANTY

Bob Long Technologies warrants our paintball markers to be free from defect in materials and workmanship for a period of 1 year from purchase date. This warranty will only be honored for the initial retail purchaser and is non-transferable. Wear items such as batteries and seals are not covered under warranty. Main PCB, electro-pneumatic solenoid, eye PCB's and wire harnesses will be covered under warranty for a period of 6 Months from purchase date.

This warranty does not cover:

> Any system failure resulting from the use of a non-authorized propellant. The only authorized propellants are nitrogen or compressed air.

> Damage to electro-pneumatic solenoid resulting from external air source regulation failure. The use of an external regulated air source is your choice, so research well and choose wisely.

> Damage to electro-pneumatic solenoid from foreign objects, specifically Teflon® tape.

> Surface damage such as scratches, nicks, or dings.

> Improper disassembly or re-assembly.

> Improper lubrication. The only authorized grease for maintaining a Bob Long marker is Molykote® 55 made by the Dow Corning Corporation (Dow 55). Authorized oil is limited to Tri-flow® or any other synthetic oil made specifically for maintaining a paintball marker.

> Modification or any other alteration of a marker or its parts. Dremels, acid, most things involving a show on the Bravo network or HGTV fit in this category.

> Misuse of any conceivable kind. Basically if it involves law enforcement officers, the phrase "I hope we don't get caught!", use as a pry bar, or other things that would have made it into an episode of the show Jackass.

This warranty is limited to repair or replacement of defective items with the initial retail purchaser to pay shipping costs. The initial retail purchaser must enclose a copy of the original sales receipt with the marker to be repaired for this warranty to be honored.

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Quick Start

Installing Air Tank

Much like any other tournament marker, the Victory requires the use of compressed air or nitrogen only. Use of a low pressure compressed air system is recommended with each Bob Long marker. If using an adjustable-output air system, set the system's output to between 450 and 550 psi. Make sure the ASA (Air Source Adapter) is in the off position by turning the chrome cam drive knob on the bottom of the ASA. Attach your compressed air tank by screwing it into the ASA. When you are ready to chrono your marker turn the cam drive knob clockwise until it completes turning – this is shortly after you hear air pressurizing the marker.

Powering On Marker

Press and release the power button on the back of the grip frame to turn the marker on. The startup sequence has a battery indicator which will show the current power level of your battery with a flickering red, yellow, or green LED light as the marker powers up. If the LED is showing Red on startup replace the battery before using your marker.

After the startup battery indication the LED will display a solid or blinking blue light.

To power off marker: Press and hold the power button for 1.5 seconds, until the LED turns off, then release. Every time the marker is turned on, the eyes are enabled. The marker can be turned off regardless of the state of the eyes.

Adjusting Velocity

Both the High Pressure and Low Pressure regulators on the Victory come preset from the factory. Prior to play you may need to adjust them to account for paint to bore match, atmospheric differences, and your field's maximum chronograph limit. The velocity of your marker is controlled through the HPR, which is adjusted with a 1\8" hex wrench.

Turning the screw clockwise (or inward) will increase your velocity; turning the screw counterclockwise will decrease your velocity. Only turn the wrench 1/8th -1/16th of a turn with each adjustment.

Turning Eyes On/Off

Each time the marker is turned on the eyes are enabled regardless of status when the marker was shut off. To disable the eyes briefly press and release the power button when the marker is turned on. Briefly press it a second time to re-enable the eyes.

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Adjusting the Trigger

The Victory trigger has two adjustment screws. The bottom screw is for trigger post-travel and the top screw adjusts the activation point (where the marker fires). To adjust the screws insert a hex key and turn the screw. The screws have Loctite to prevent the adjustment from slipping, so a firm steady pressure is needed for the adjustment.

Removing/Replacing Trigger

For most operation and maintenance the trigger does not need removal. If an aftermarket trigger is being installed or debris enters the trigger area removal and cleaning may be necessary.

1. In order to remove the trigger use a 5/64" hex wrench to remove the trigger mounting screw. The trigger will slide towards the front of the grip frame when the mounting screw is removed. If you have any problems removing the trigger from the front remove the grip frame then remove the trigger from the top.
2. The Victory trigger is a new design and is not backwards compatible with Generation 1 Marqs. The major difference with the new trigger is the offset geometry to accommodate the grip frame's internal air channel.
3. Ensure that the bearing spacer is in the right side of the grip frame when installing a trigger. The picture to the right shows the position of the spacer with the grip frame removed.

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Maintenance

Amount of Time	Estimated Cases of paint	Recommended Upkeep
While talking smack with your friends in between games		• Removing the engine and barrel • Run a clean swab through the firing chamber if there is broken paint or debris in the chamber • Put a drop of oil on the bolt o-rings if your friends are still flapping their gums • Reinstall engine
After a day of play	1-2 Cases	• Repeat above steps • Wipe down marker outside • Clean and lube bolt
After a Weekend	2-4 Cases	• Repeat above steps • Clean and grease outside of engine • Inspect o-rings for damage • Clean debris and old grease from engine area
A Month	10 Cases	• Repeat above steps • Clean, inspect, and grease HPR Piston o-ring • Disassemble, clean, inspect, and grease all engine o-rings
6 months or when consistency issues appear	20+ Cases	• Clean, inspect, and grease LPR Piston and o-rings

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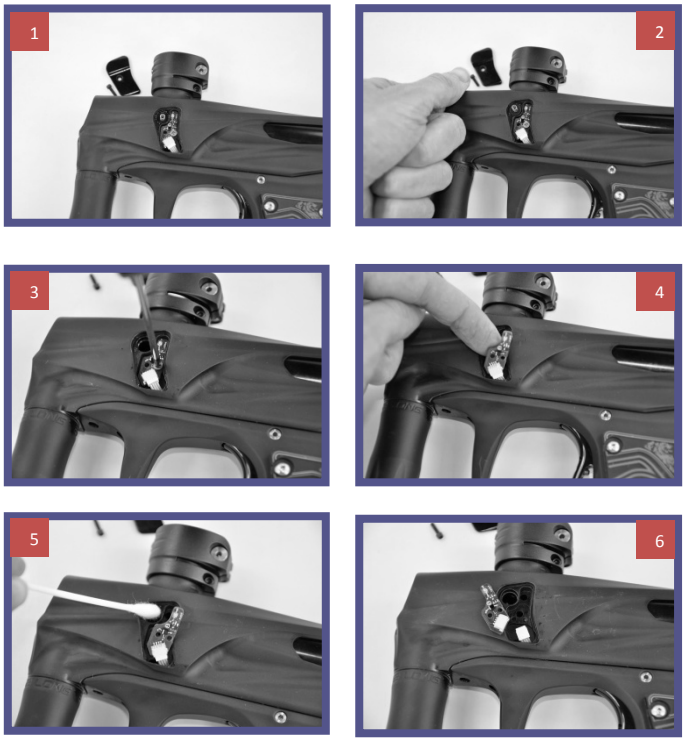
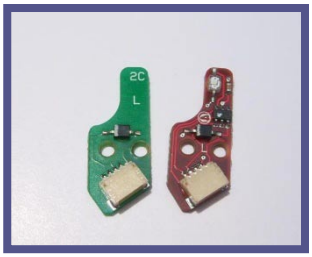
Maintaining the Eyes and Detents

In the event of a chopped ball or debris in the breach, your Victory eyes may need cleaning.

1. Remove the eye cover screw using a 5/64" hex wrench, and remove the eye cover.
2. Remove the detent and spring by pressing on the detent from inside the chamber.
3. Carefully unscrew the PCB retaining screw. (Phillips head)
4. Gently tilt the eye PCB away from the body of the marker.
5. Use a clean cotton swab to clean the surface of the eye, the eye holes, detent and detent hole. Dampen the swab with alcohol if necessary.
6. If removing the eyes from the wiring harness unplug the harness from the eye PCB by pulling on the white plug and not the wires. Pulling on the wires could potentially damage your harness.
7. After the eye, detent, and mounting area have been sufficiently cleaned, reinstall the PCB and reinstall the PCB retaining screw and eye cover.



- The 4C eye system will allow for higher rates of fire through quicker cycling times.
- To determine whether the 4C eyes are installed refer to the picture at the bottom left. The 4C eyes have more components as well as the number 4 silk screened onto the PCB.
- The standard Delrin detents can be replaced with the Super Ds - an upgraded Type III anodized detent. If the Super Ds are used the sides of the detents must be greased slightly. Also, the Super Ds must be rotated slightly each time the eyes are cleaned in order to ensure even wear.



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Maintaining the HPR (In-Line-Regulator)

Your Victory comes equipped with the best regulators on the market. To ensure the best consistency and the highest flow possible, it is recommended that you clean and lubricate the in line regulator (HPR) according to the maintenance schedule.

1. Degas the marker and ensure that there are no paintballs in the breech or barrel of the marker.
2. Unscrew the regulator base from the marker counter-clockwise.
3. Reach into the regulator base with tweezers or needle nose pliers to remove the regulator piston.
4. After the piston is removed turn the regulator base upside down and tap the spring stack and spring follower into your hand.
5. The main valve does not need to be removed from the marker body or serviced. Never replace or attempt to service a working main valve.
6. Inspect the surface of the piston and piston o-ring for excessive wear or nicks and replace as necessary.
7. Inspect the interior walls of the regulator base. Use a swab on the interior of the regulator base to clean debris and old grease.
8. When reassembling the spring follower (spring stack assembly) make sure that the top and bottom spring washers curve to the outside. A close up of the spring assembly with the retaining o-ring is shown to the right. The retaining o-ring does not require lubrication

   If in doubt – just stack the spring washers like this:

)()()()(
9. Grease the piston o-ring with and gently replace the spring follower (spring stack assembly) and piston into the regulator base. There is a concave area around the o-ring that holds additional lube and reduces the need for frequent maintenance. Reassemble the regulator to the marker.

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MAINTAINING THE LPR

1. Begin by removing the grip panel screws
2. Disconnect the wiring harness by pulling on the plug – not the wires. Note how the wires and holes in the plug are offset to one side. You will need to align them during reassembly.
3. Remove the front and rear grip frame screws. You may need to switch back and forth between them since they are held captive by the grip frame.
4. Remove the three Phillips head screws from the LPR and the one Phillips head screw from the adjustment assembly.
5. Disconnect the right eye wire if removing the LPR adjustment assembly. Assembly removal is optional.
6. Set the adjustment assembly to the side and tilt the LPR away from the marker body. Disconnecting the air line is not required.
7. When you removed the adjuster during the previous step your balls may have rolled around. The rolling around and one ball bigger than the other is normal. Just wipe them off and reinsert the small one in the adjuster first during reassembly. A drop of blue Loctite on the adjustment screw will prevent it from moving once your pressure is set.
8. Wipe off old grease, and apply a new coating to the piston o-ring. There is a concave area around the o-ring that holds additional lube and reduces the need for frequent maintenance.
9. Inspect the inside of the LPR body. Use a cotton swab to clean out any old grease.
10. Reassemble the LPR and reattach it to the body. Partially insert each of the three screws before fully tightening them to ensure proper alignment.

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SETTING INITIAL HPR PRESSURE

The HPR pressure is adjusted through a hex screw at the bottom of the regulator. Turning the screw clockwise increases the pressure and therefore the velocity. Turning it counterclockwise will lower the pressure and velocity. Only turn the wrench in small increments – for example 1/8th -1/16th of a turn with each adjustment.

After servicing the regulator you can perform an initial adjustment before setting pressures using the tester. Begin with the adjustment screw flush with the bottom of the regulator body. Attach the air tank to the marker and gas up the marker. Gradually turn the adjustment screw clockwise until you hear air enter the marker. Then turn the adjustment screw one complete turn additionally. **ALWAYS TEST YOUR VELOCITY WITH A CHRONOGRAPH AFTER ADJUSTING YOUR HPR.**

SETTING INITIAL LPR PRESSURE

The Low Pressure Regulator is adjusted through a hex screw at the bottom of the grip frame in front of the trigger guard as shown in the picture to the right. Turning the screw clockwise increases the pressure. Turning it counterclockwise will lower the pressure. Only turn the wrench in small increments i.e. 1/8th -1/16th of a turn with each adjustment. Our regulators are sensitive . Torqueing them in huge increments makes them sad. Sad regulators cause inconsistent performance.

After servicing the regulator you can perform an initial setting before setting pressures using the tester. Start by positioning the adjustment screw flush with the LPR Adjustment Assembly before reattaching your grip frame. This doesn't require a huge amount of force. Act like a gorilla cranking down the screws and you may warp your balls.

LPR adjustment screw location

SETTING PRESSURES IF NO PRESSURE TESTER IS AVAILABLE

This is a method of setting your regulators to approximate factory settings without the aid of a pressure tester. With both regulators, turning clockwise (in) increases pressure and turning counter-clockwise (out) decreases pressure. This method does not provide peak performance but will enable initial functionality if a tester is not available.

1. Degas marker before beginning adjustments.
2. Set the HPR adjustment screw flush with the bottom of the regulator.
3. Turn the LPR adjustment screw in until you encounter resistance.
4. Adjust the LPR setting to 1 ½ turns out/counter-clockwise.
5. Turn the ASA on to gas up the marker.
6. Slowly turn up the HPR adjustment screw until you hear air flowing into the regulator then make one complete additional turn.
7. Adjust the HPR at chronograph by 1/16 of a turn (15-25 degrees) between readings until reaching desired velocity.

   If the marker is unable to reach desired velocity:
8. Return the HPR adjustment screw to the position from step #2, increase the LPR by 1/8 turns in.
9. Re-chronograph and adjust HPR by 1/16 of a turn (15-25 degrees) until reaching desired velocity.
10. Repeat steps 8 and 9 if necessary.

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SETTING PRESSURES USING THE PRESSURE TESTER

The most accurate method to get your marker performing great after cleaning the regulators is by setting the pressures using the pressure tester. The LPR controls the marker cycling and contributes to the noise and kick experienced when firing the marker. Setting the LPR too low will result in problems with consistency. The HPR controls the velocity of the marker. Once you have performed the initial settings use a chronograph to fine tune your velocity.

1. Remove the engine
2. Insert pressure tester. The LPR (160 psi) gauge faces the rear of the marker and the HPR (300 psi) gauge faces the top of the marker. *The gauges on your marker may vary from the size of those pictured but the functionality is the same.*
3. Connect air system to the marker and turn on the air
4. Turn on the marker and disable the eye system
5. While adjusting the LPR and HPR pull the trigger to allow pressures to equalize when you decrease either setting.
6. Set the HPR to 200-210 PSI and LPR to 75-85 PSI

NOTE: The supercharged engine which has a red blast guide will run at slightly lower pressures. Starting at 75 PSI on the LPR to get reliable cycling is recommended at a minimum. While the HPR setting helps establish initial operations always use a chronograph to ensure you are firing within limits that are legal and safe for your playing area.

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MAINTAINING THE ENGINE

Before beginning maintenance on the engine make sure you have a clean surface to work on, something to wipe off old grease, and oil and grease for your marker.

1. Remove the engine by (a) raising the back cap to free the retaining pin then (b) sliding the engine to the rear.
2. Slide the bolt off of the Quick Disconnect Ram Shaft.
3. Unscrew the Volume Chamber from the Ram Housing
4. Slide the Valve Spring and the Blast Guide/Poppet Shaft forward off of the Ram Shaft.
5. The back cap can be removed by unscrewing the engine retaining pin. When reassembling these don't act like a gorilla tightening the screw. A drop of blue Loctite on the threads will ensure it stays snug without requiring excessive force.
6. The back block can be removed by removing the two screws located on the back of the engine.
7. Once the engine is disassembled wipe all of the old grease from the parts.
8. Inspect the o-rings for any damage to include cuts, abrasions, or other Emo indicators.
9. Place a fresh layer of lube on the engine o-rings.
10. Reassemble the engine and place a drop of Tri-Flow on each bolt o-ring.

NOTE: The front of the Volume Chamber and the back of the Poppet shaft have o-rings on the inside which need lubricated as well.

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REMOVAL OF THE ASA

Under normal conditions the ASA does not require removal. However, since people like to take things apart for the heck of it, we figure you ought to know the easiest way to do it without messing something up. CAUTION: Regularly taking things apart to see how they work may result in a future career as an engineer.

1. Remove the grip panels and the battery from the grip frame.
2. Remove the ASA access block retention screw using a 3/32" hex wrench.
3. Loosen each of the four ASA mounting screws – do not use the ball end of a hex wrench to break the screws free.
4. Once all four screws are broken free, use of a ball end hex wrench will speed their removal
5. Remove the ASA from the grip frame and inspect the o-ring between the ASA and frame for any damage.
6. Lubricate the o-ring and reassemble by reversing the above steps.

NOTE: When tightening the screws use a star pattern similar to changing a tire. If you try and tighten all of the screws completely before making sure all four are close to snug you may damage the assembly or have an unstable seal. This is the kind of damage that results in heckling by your friends and pictures with the caption of FAIL. Of course, if that happens your marker probably won't work either.

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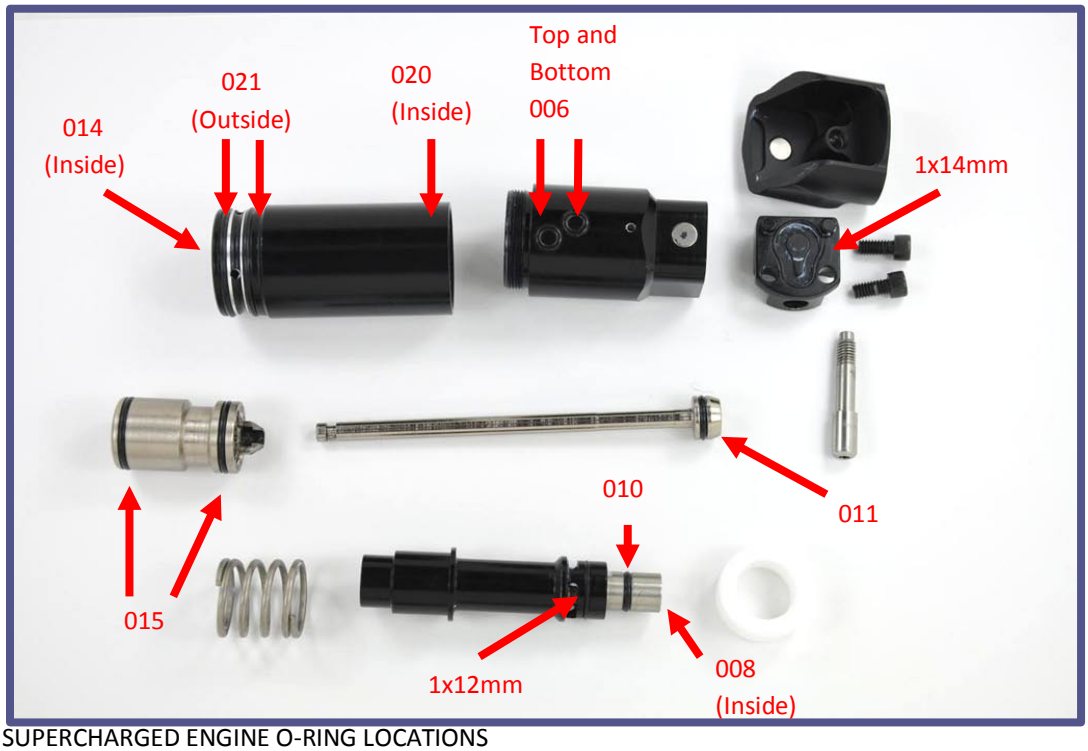
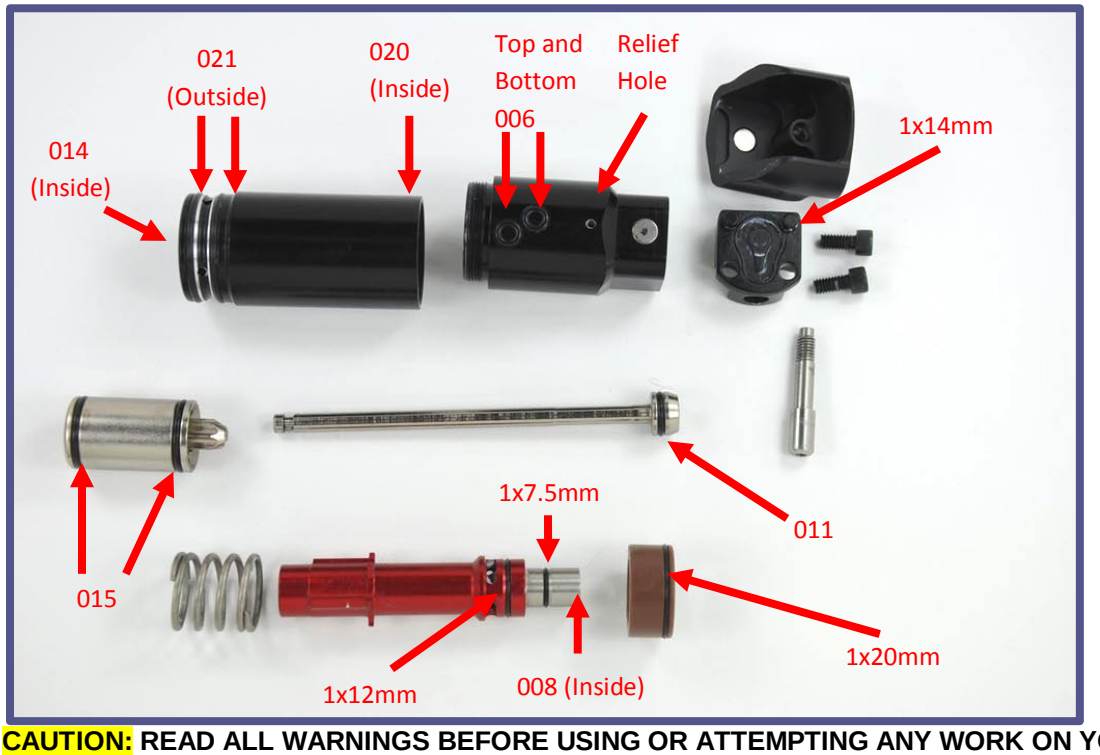
O-RINGS AND FASTENERS

ORIGINAL ENGINE O-RING LOCATIONS



SUPERCHARGED ENGINE O-RING LOCATIONS



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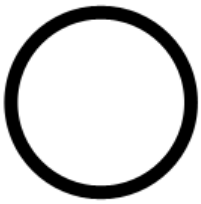
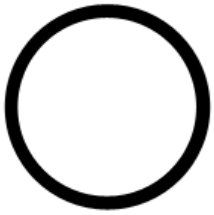
O-Rings

Part Name	Specifications	Quantity
Solenoid to Mainbody Seals	1 x 3mm Buna (Durometer 70)	2
Solenoid Manifold to Solenoid Seal	1 x 3mm Buna (Durometer 70)	1
Grip Frame to Mainbody Seal	1 x 4mm (Durometer 70)	1
LPR Housing to Mainbody Seal	1 x 6.5mm Buna (Durometer 70)	1
Rear, Outside of Poppet Shaft (Supercharger Only)	1 x 7.5mm Buna (Durometer 70)	1
Cam Drive ASA to Grip Frame Seal	1 x 12mm Buna (Durometer 70)	1
Rear, Outside of Blast Guide	1 x 12mm (Durometer 70)	1
Back Block to Ram Housing Seal	1 x 14mm (Durometer 70)	1
Outside of Ram Housing	006 Buna (Durometer 70)	4
Rear, Inside of Poppet Shaft	008 Buna (Durometer 70)	1
Rear, Outside of Poppet Shaft	010 Buna (Durometer 70)	
Rear, Outside of Quick Release Ram Shaft	011 Buna (Durometer 70)	1
Outside of LPR Piston	012 Buna (Durometer 70)	1
Front, Inside of Volume Chamber	014 Buna (Durometer 70)	1
Pillow Bolt	015 Buna (Durometer 70)	2
HPR Above Mounting Point	018 Buna (Durometer 70)	1
Brown Poppet Seal (Donut) (Supercharger Kit Only)	020 Buna (Durometer 70)	1
Rear, Inside of Volume Chamber	020 Buna (Durometer 70)	1
Front, Outside of Volume Chamber	021 Buna (Durometer 70)	2

O-Ring Diagrams

1x3mm		1x4mm	
1x4.5mm		1x6.5mm	
1x7.5mm		1x12mm	
		006	
008		010	
012		014	
020		021	

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Fasteners

Part Function	Specifications	Quantity
Bottom PCB to Grip Frame	M2 x 4mm Pan Head Machine Screw 18-8 SS	1
LPR Adjuster to Mainbody	M2 x 10mm Flat Head Machine Screw 18-8 SS	1
Top PCB to Grip Frame	M2 x 12mm Pan Head Machine Screw 18-8 SS	2
LPR Housing to Mainbody	M2 x 12mm Flat Head Machine Screw 18-8 SS	3
Solenoid Manifold, Through Solenoid to Mainbody	M2 x 20mm Flat Head Machine Screw 18-8 SS	2
Eye PCB to Mainbody	2-56 x ¼" Flat Head Machine Screw 18-8 SS	2
Eye Cover to Main Body	2-56 x 5/16" Socket Head Cap Screw BO	2
ASA Access Block to Grip Frame	4-40 x 5/16 Socket Head Cap Screw BO	1
Leverlock Feed Neck to Mainbody	4-40 x 7/16" Socket Head Cap Screw BO	1
Cam Drive ASA to Grip Frame	4-40 x 7/16 Socket Head Cap Screw BO	4
Grip Panel Screw	6-32 x 3/16" Button Head Socket Cap Screw 18-8 SS	6
Trigger Travel Adjustment	6-32 x 1/4" Cup Point Socket Set Screw 18-8 SS	1
Trigger Activation Point Adjustment	6-32 x 1/2" Cup Point Socket Set Screw 18-8 SS	1
Back Block to Ram Housing	8-32 x 3/8" Socket Head Cap Screw BO	2
LPR Adjustment	10-32 x ¼" Cup Point Socket Set Screw 18-8 SS	1
Air Passage Plug	10-32 x 5/16" Cup Point Socket Set Screw 18-8 SS	2
Grip Frame to Mainbody	10-32 x 3/8" (Modified) Button Head Socket Cap Screw 18-8 SS	6

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Q & A

1. **Q:** My Victory is VERY bouncy and I can't do anything! I've topped out the debounce and AMB what else should I do?
   A: Make sure the trigger spring is installed. Back out the trigger activation set screw ½ turn.

2. **Q:** Where can I get additional o-ring kits?
   A: Bob Long Technologies and authorized dealers can supply kits.

3. **Q:** What is the recommended dwell setting?
   A: Dwell should be at 6 when you get the marker and after you use it. There's no advantage to running a higher dwell to "break it in". There are exactly zero heavy springs in the In Line Reg or LPR that need broken in.

4. **Q:** What pressure should my LPR and HPR be set to with the tester?
   A: 200-210 PSI on the HPR. 75-85 PSI on the LPR.

5. **Q:** I am seeing large velocity fluctuations – what should I do?
   A: Check for a good paint to barrel match. Ensure the HPR shim stack is assembled correctly and that your engine, LPR, and HPR are lubed with Dow 55.

6. **Q:** I lowered my bolt delay and now the eyes keep reading it as a eye malfunction and lowered my bps to 12. What should I do?
   A: The bolt delay is too low at 8ms, the eyes are activating too early while the bolt is still cycling backwards to prepare itself for the next paintball to drop. The eyes activate, see your bolt, and never register a change from the bolt to the ball coming in place. Raising the setting to 10 will normally clear this problem.

7. **Q:** So what is this bolt delay setting?
   A: Bolt delay is actually an eye activation setting and not a bolt setting. Essentially you need a delay added in so the eyes don't turn on as the bolt is on its backward travel. If they turn on too soon, the marker thinks the bolt is a ball and will queue up the next shot. This causes skipped shots and often chops. Keep it at 10 (or higher)...because your board isn't seeing a gap between when the bolt cycles and the ball drops and thinks the eyes are malfunctioning.

8. **Q:** What weight is the stock Victory micro switch?
   A: 80g

9. **Q:** How much oil should I put on the bolt?
   A: Just a drop on each o-ring. Put a drop on, then use your finger to put it around the entire ring. Too much oil can cause bolt movement problems or result on oil splattering on the eye system in extreme cases.

10. **Q:** What threading is the barrel?
    A: Autococker

11. **Q:** Is the Stock trigger a roller bearing?
    A: Yep

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12. **Q:** What items are recommended to keep in my toolkit?
    A: Each of the following:
    - Pressure Tester
    - Dow 55
    - Triflow oil
    - O-rings
    - Hex key set
13. **Q:** How do I reset the settings to factory on the Ryujin board?
    A: Hold the tourney lock for 10sec

14. **Q:** My feedneck isn't tightly clamping my loader- what should I do?
    A: Use a hex wrench to tighten the adjustment screw..

15. **Q:** I can't seem to get an adjustment screw on my trigger to move – what should I do?
    A: Most triggers have blue Loctite on the adjustment screw. Just apply some steady force with the hex wrench and the screw will move.

16. Q: Where can I find additional information and other users of Bob Long Markers?
    A: www.intimidatorowners.com also the PBNation subforums dedicated to Bob Long products located at http://www.pbnation.com/forumdisplay.php?f=146

17. Q: Where do I ship my marker if I need repairs?
    A: It depends on the shipping method you are using.
    If using USPS ship it to:
    Bob Long Technologies
    P.O. Box 457
    Mokelumne Hill, CA 95245

    If shipping UPS or FEDEX ship it to:
    Bob Long Technologies
    11669 HWY 26
    Mokelumne Hill, CA 95245

    Trying to ship to an address other than listed above will result in your package being returned undelivered.

Troubleshooting Guide	
Marker will not turn on out of the box	-Ensure that the battery that you're using in your new marker is a high quality alkaline 9 volt. -Verify that your battery is correctly oriented (matching with the correct terminals), and that it is making firm contact with the prongs on the circuit board. -Make sure that the wiring harness is correctly inserted into the receptacle, and that the on\off pad is making contact with the switch on the circuit board.
Velocity is inconsistent over the chronograph	-Always check that your paintballs are of high quality, and consistent in size, as well as using a good paint to bore match. -Make sure the LPR and the HPR are set to the proper pressures. -If this does not correct your issue, verify that your HPR and LPR are lubricated and that their seals are in good condition. -Replace your battery. -Inspect the engine internal o-rings for nicks or debris and ensure they are properly lubricated
Marker is breaking paint	- Always check that your paintballs are of high quality, and consistent in size, as well as using a good paint to bore match. -Make sure the LPR and the HPR are set to the proper pressures. -Ensure that your detents and bolt face are in good condition, and there is no debris in the breech of the marker. -Reset your board settings to factory settings and use a force-fed loader. -Check the tension/pressure settings if you are using a force fed loader. Having too high of a feed pressure with fragile paint can cause balls in the stack to break
Marker does not gas up after tank is connected	-Verify that the pin valve on your tank is outputting pressure to the regulator—some tanks will not work properly with certain ASAs. -Attempt gassing up the marker with another tank to see if this remedies the issue.
Marker does not display correct LED indicator color when turned on	-Verify that your battery is correctly oriented (matching with the correct terminals), and that it is making firm contact with the prongs on the circuit board. -Verify that the breech of the maker is clear of obstructions, the bolt is in the back position, and that the eyes are clean and plugged into the harness.
Marker is leaking from the ASA	-Check the tank o-ring (015 Urethane D90) for nicks or tears. -Check that the ASA is securely connected to the grip frame.
Marker is leaking from the HPR	-Replace the piston o-ring inside the regulator.
Air is leaking from the front of the marker frame	-Verify that the grip frame screws at the front and back of the marker are tightened.
Marker fires more than one shot per pull, or has trigger bounce	-Raise your marker's debounce level, and make sure that your trigger activation level is not too short. -Verify that your trigger has the spring installed and that it is properly functioning. -Verify that your marker is in semi-automatic mode. -Increase the HPR pressure slightly or lower the LPR slightly

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Marker double feeds	-Verify that detent springs are in place and detents move freely -Replace the marker's ball detents if they are excessively worn -If using Super Ds make sure the detents are lubricated on the sides
LPR or HPR pressure changes	- Place a drop of blue loctite on the LPR adjustment screw. - Ensure regulators are cleaned and lubricated.
4C eyes are not recognized by the board	-Clean both of the eyes. -Make sure that none of the wires are pulled loose from the white plugs in the wiring harness.

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