

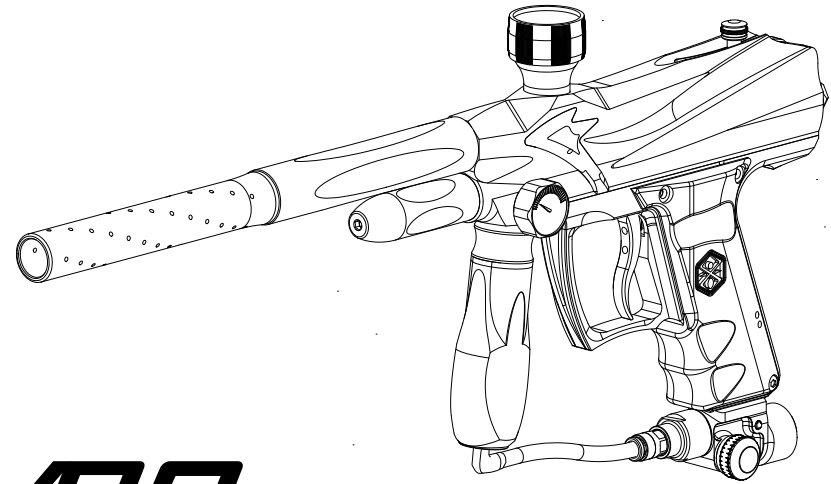


SPYDER

USERS MANUAL

VS2





VS2

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IMPORTANT SAFETY GUIDELINES

!CAUTION!

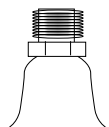
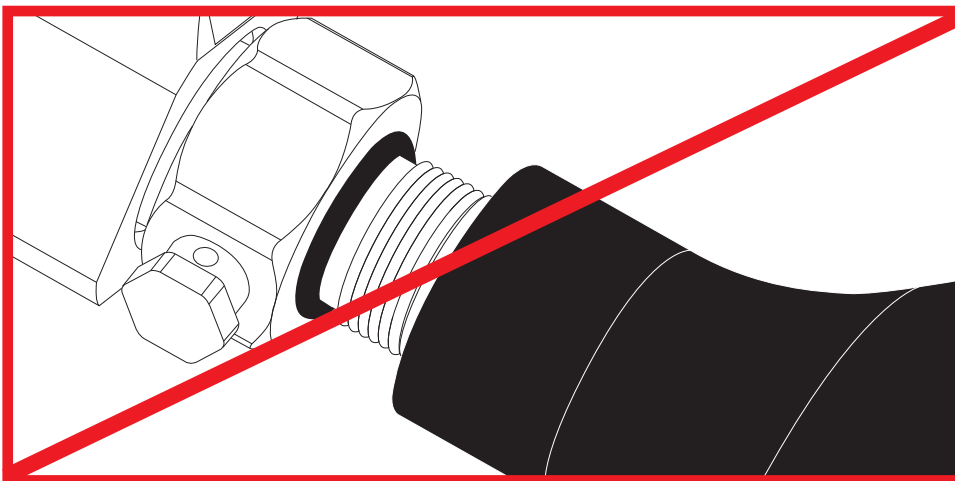
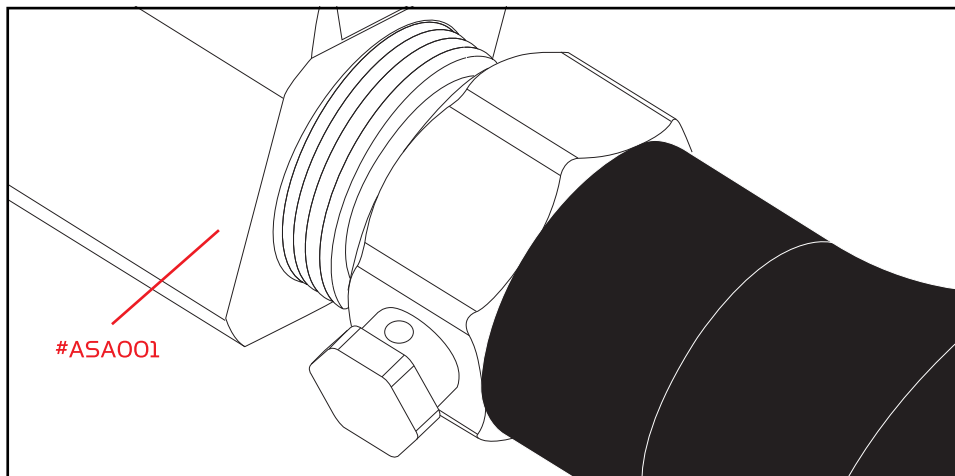
- This paintball marker is **NOT** a toy; It can cause serious injury or death.
- Kingman recommends that customers be at least 18 years of age to purchase this product.
- Read this manual and air system warnings before using this product.
- Any modifications or tampering of original factory parts will void all warranties and liabilities from Kingman.
- Kingman recommends using a barrel plug or barrel sock when marker is not in operation.
- To ensure proper adjustment on velocity (fps) Kingman strongly recommends using a chronograph for paintball use (located at most paintball fields).
- All persons using this product, or within range while this product is in use, must wear eye and face protection specifically designed for paintball.
- Never shoot or point your marker at a person that is not in a designated paintball facility and without proper paintball protection.
- Treat every paintball marker as if it were loaded.
- Never look down the barrel of a loaded or unloaded marker.
- Always keep the paintball marker in the SAFE or OFF mode until ready to operate.
- Always remove your Compressed Air source before disassembly.
- Fire only 0.68 caliber paintballs.
- Never shoot or point your marker at an animal.
- Transfer this instruction manual upon change of marker ownership.

OPERATION GUIDE / START UP

WARNING: Always keep the marker powered OFF or on SAFE until you are ready to fire.

1. Always attach a barrel plug or barrel sock over the tip of the barrel for safety precautions when the marker is not in use.
2. To install and charge the battery see pages 5 & 6.
3. Once the battery has been charged, press the upper button located at the rear of the trigger frame for 1 second to power ON. **CAUTION:** With the power ON, the marker is now ready to fire. **NOTE:** The circuit board will automatically be placed in Safe Mode until Safe Mode is turned off. **NOTE:** To turn off Safe Mode press the lower button for 1 second. **IMPORTANT:** To turn the power OFF press the upper button for 3-4 seconds, this will shut down the entire circuit board. See Electronics & Settings on pages 7 & 8.
4. Cock the marker by pulling the Top Cocking Knob (#STK001) rearward until it latches. **CAUTION:** If you let go before the bolt latches, your marker may fire. **NOTE:** You should hear an audible click and feel a tension release in the handle when cocking the marker. See Disassemble / Reassemble & Cleaning Internals on pages 13 & 14.
5. Attach an electronic loader on the Twist Clamp neck (#FND002) twist clockwise to fasten and counter clockwise to release the loader. Only use .68 caliber paintballs through the loader. **NOTE:** Kingman recommends that you use a force feed / high speed electronic loader to reach optimum performance.
6. The VS2 should only be operated using compressed air. Firmly hand tighten the Compressed Air Tank clockwise to C / A Regulator Adapter w/ Dove Tail (#ASA001). **NOTE:** This marker is equipped with a Regulator Dial that can adjust the pressure from 0-300psi. This marker functions properly between 200-250psi. **Please see page 4 for instructions on how to install a compressed air tank to your marker. IMPORTANT:** You should never need to use any hand tool to attach the Compressed Air Tank. Please see Regulator Adjustment Page on page 11.
7. Your paintball marker is intended to be used in a paintball facility with the proper paintball protection. **IMPORTANT:** Kingman recommends using a chronograph to ensure the marker's velocity is under 300 fps.
8. After operating the marker, be sure to turn the marker OFF and remove the loader, barrel & paintballs that might still be located in the marker's breech before storing. **CAUTION:** Paintballs might still be in the marker's breach even when the loader is empty. Be sure to completely discharge all paintballs.
9. Unscrew the air tank from the marker's C/A Regulator w/Dove Tail (#ASA001). Make sure to release the remaining air in the hose line or C/A Regulator w/ Dove Tail. **Please see page 4 for instructions on how to remove a compressed air tank from your marker. IMPORTANT:** You should never need to use any hand tool to remove the Compressed Air Tank. **CAUTION:** Do not unscrew the tank valve from the tank doing so may cause serious injury or death. **NOTE:** Never store a paintball marker with the Compressed air tank still attached. **NOTE:** It is recommended that the marker be placed in the uncocked position when the marker is stored.
10. Place the Barrel Plug or Barrel Sock over the barrel tip to avoid accidental discharge.
11. It is a good practice to lubricate your marker before and after each use, especially when storing the marker for an extended period of time. The Striker O-ring (#ORG001) connected to the Striker Bolt Mini (#STB001) will need a few drops of paintball gun oil. **NOTE:** The Delrin Bolt (#VBTO01) does not need to be lubricated. See Disassemble / Reassemble & Cleaning Internals on pages 13 & 14.

CO2 / COMPRESSED AIR TANK WARNINGS



! DANGER

The CO2 or Compressed Air Tank can fly off with enough force to cause serious injury or death if the Valve unscrews from the cylinder head. LOOK at the Valve when removing the cylinder from the marker. Be sure that the valve is turning with the cylinder rather than remaining stationary with the marker. STOP if the Valve starts to unscrew from the cylinder. If in doubt, screw the cylinder back onto the marker and contact a trained person for repair.

INSTALLING COMPRESSED AIR TANK

The VS2 should only be operated using compressed air. Firmly, attach the Compressed Air Tank clockwise to the markers C/A Regulator Adapter w/Dove Tail (#ASA001). Once the Compressed Air Tank has been attached turn the Regulator dial to the ON position to pierce the tank valve to energize the marker.

HELPFUL TIP: Make sure when installing a tank, to have the Compressed Air Tank filled. Make sure the Compressed Air Tank has a bottle o-ring on the top of the valve to prevent air leaks.

IMPORTANT: Do not install a Compressed Air Tank that has expired in hydro date. Hydro date means the tank has an amount of time before the tank can not be used. Please consult with the paintball field, store or manufacture of the Compressed Air Tank for further questions regarding hydro date specifications.

REMOVING COMPRESSED AIR TANK

Firmly, unscrew the Compressed Air Tank by turning counter-clockwise.

HELPFUL TIP: After playing with the marker, you should ALWAYS remove the Compressed Air Tank. When the tank is being removed, excess air will release underneath the C/A Regulator Adapter w/Dove Tail (#ASA001).

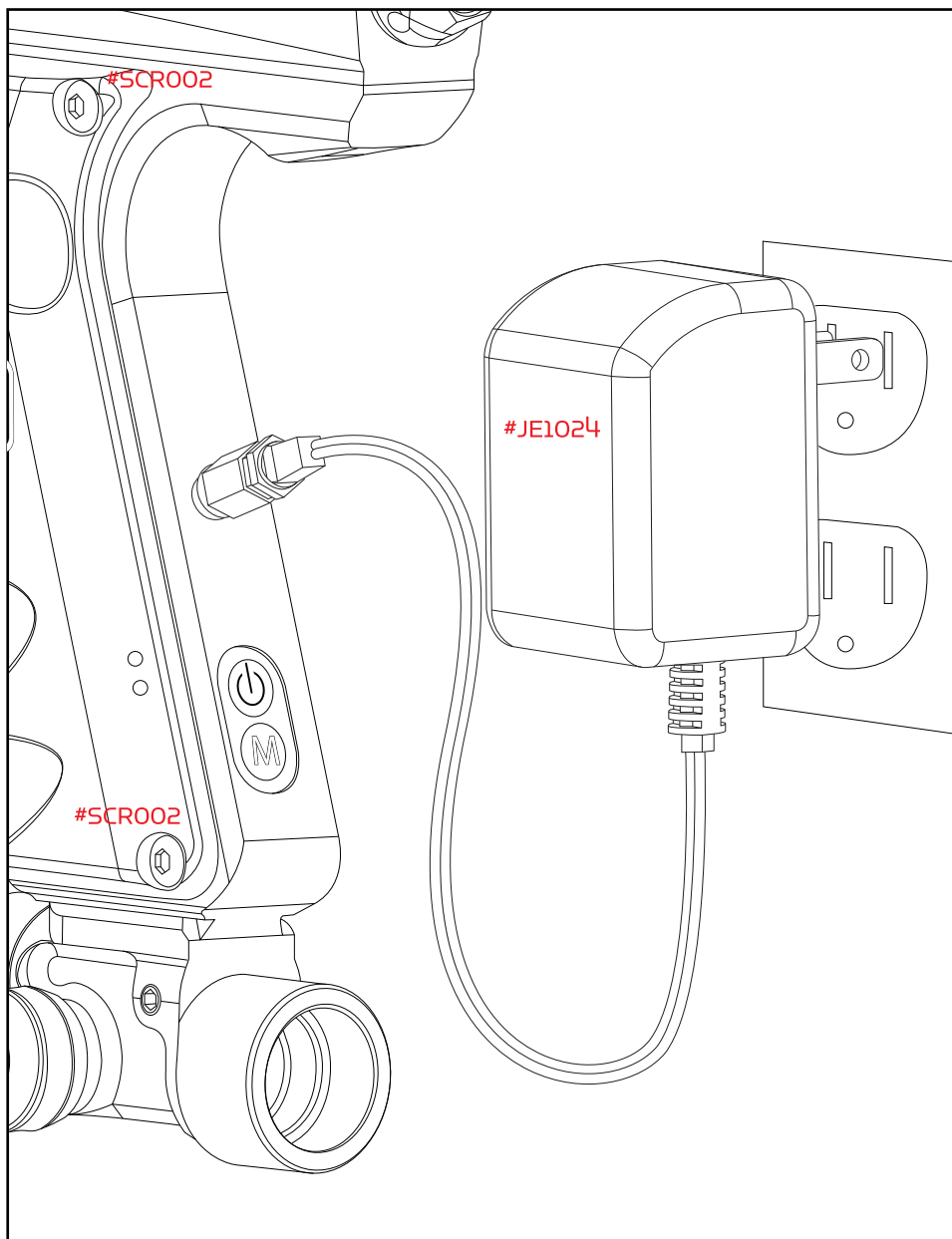
IMPORTANT: Never expose skin underneath the C/A Regulator Adapter w/Dovetail (#ASA001) when removing the tank. This can run the risk of getting skin burn from releasing excess GAS. Never store any Compressed Air Tank attached to the marker when not in use.

CAUTION: Markers that are equipped with an inline regulator may store residual air even after the compressed air tank has been removed. Always turn the inline regulator "OFF" using the ON/OFF knob and "dry fire" the marker a few times until the gauge reads "0 psi", it is now safe to remove the compressed air tank from the marker.

CO2 / COMPRESSED AIR TANK WARNINGS

- All valves must only be installed or removed by a qualified airsmith.
- See CO2 / Compressed Air tank labels for retest dates. Cylinder tanks must be retested periodically.
- Improper use, filling, storage or disposal of all air cylinders may result in death, personal injury and/or property damage.
- Always keep cylinders out of reach from children or any inexperienced person(s).
- Only properly trained personnel in accordance with CGA Pamphlets P.1 and G-6.3 must fill all air cylinders. Pamphlets are available from the Compressed Gas Association or www.CGANET.com.
- Never alter the cylinder in any way.
- DO NOT expose pressurized cylinders to temperatures in excess of 130 °F (54 °C).
- Cylinders heated to an excess of 250 °F (121 °C) must be condemned or requalified in accordance with test defined in CFR-49.
- The valve should NEVER be detached from the canister. Please seek immediate assistance from a trained airsmith should this occur.
- Any tank packed with the product is intended for paintball use only.
- Confirm that there is an attached urethane O-ring on the CO2 / Compressed Air tank valve before attaching the tank to the marker. The tank will leak air as soon as it is secured to the marker, if the O-ring is missing from the valve.
- A urethane O-ring is highly recommended before attaching any air supply to the marker.
- NEVER over pressurize a CO2 / Compressed Air cylinder.
- Avoid any direct skin exposure to the escaping gas, when installing or removing any air supply.
- Never expose cylinders to corrosive materials or clean with any caustic cleaners.

BATTERY CHARGING



INSTALLING A BATTERY

NOTE: Battery must be fully charged before initial use.

STEP 1 Remove the 3 M4x8 Screws (#SCRO02) and left side Grip Panel (#GRPO01).

STEP 2 Attach the Spyder battery (#JE1015 not pictured) to the Battery Harness (#WRH002 not pictured).

STEP 3 Retighten the 3 M4x8 screws (#SCRO02).

HELPFUL TIP: Please note how the parts are removed for easy reassembly. Refer to the picture on page 5.

CHARGING INSTRUCTIONS

To charge a Spyder 9.6 NiMH Battery the circuit board must be in the OFF Position. Spyder Batteries (#JE1015) are not fully charged when purchased. Using the supplied Spyder A/C Charger (#JE1024) place the charger in the charging port which is located at the rear of the Trigger Frame. Kingman recommends a charging time of **6-8 hours** for a complete charge.

IMPORTANT: You should never charge the battery over 24 hours or you can run the risk of damaging the battery or electronics. The battery charger will continue to power until removed from charging port.

NOTE: It is recommended that the battery be charged prior to use in order to ensure maximum performance, especially if the battery has not been used in over a week.

SPYDER 9.6 NiMH BATTERY LIFE

Always use the supplied Spyder 9.6volt NiMH Battery and Spyder Charger to operate this marker. A fully charged Spyder Battery will last about 3000 to 5000 shots. Number of shots depends on the settings of your firing methods. Under normal use and charging conditions the expected life of the Spyder 9.6 NiMH Battery to last approximately 700-1000 charging cycles.

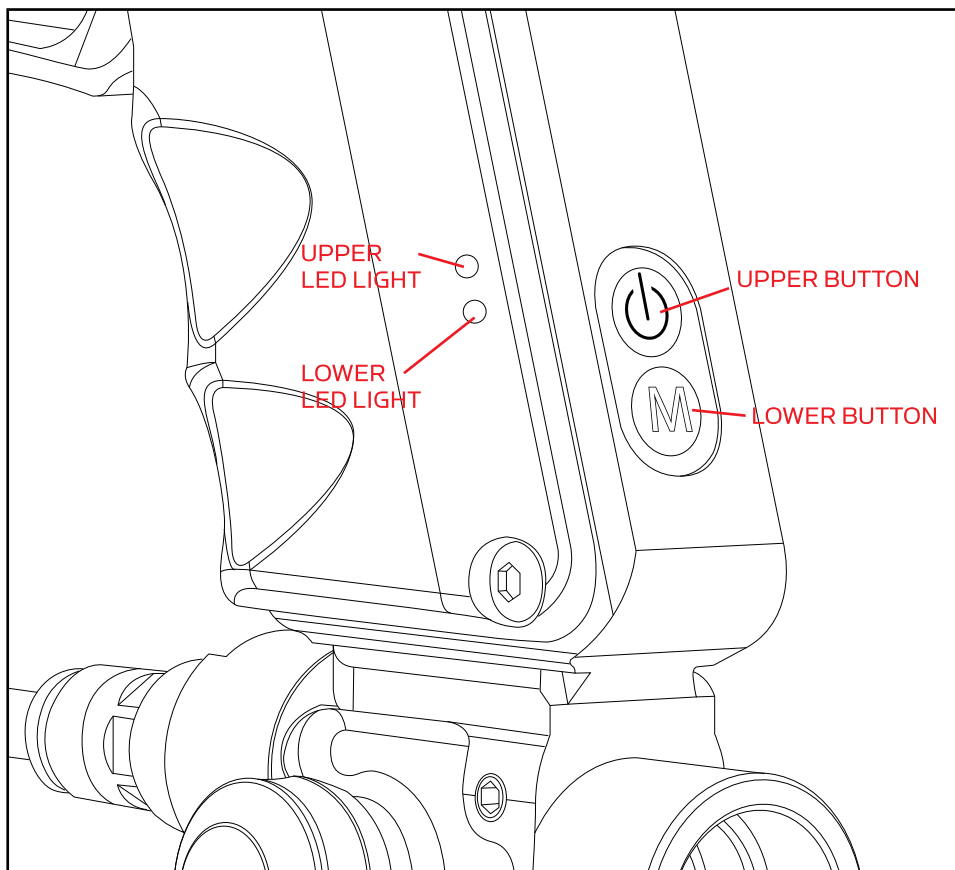
WARNING: This marker is not attended to use any normal 9 volt battery or chargers that are NON Spyder Products. Doing so will VOID all electronic warranties and liabilities from Kingman.

LOW BATTERY INDICATOR

The lower LED light will rapidly blink in Green if in Semi and blink rapidly in Orange if in 3 Burst.

NOTE: When the battery power is low it will require charging.

ELECTRONICS & SETTINGS



ELECTRONIC GRIP TROUBLESHOOTING

- Battery may need to be recharged.
- The Battery Wire Harness is not properly attached to the circuit board.
- The Coil Set Harness is not properly attached to the circuit board.
- The Touch Switch Harness is not properly attached to the circuit board.

NOTE: If the Markers Electronics have any dirt or paint, Kingman recommends using an aerosol can of air. Apply the can of air directly at the components that need cleaning.

CIRCUIT BOARD SETTINGS AND LED COLOR FUNCTIONS

POWER ON/OFF: Pressing the Upper Button for 1 second will power the marker ON illuminating the LED lights red and green. To Power OFF press and hold the Upper Button for 3-4 seconds, this shuts down the circuit board and turns both LED lights off.

NOTE: Once the circuit board is ON, it will automatically be set in Safe Mode.

SAFETY LIGHT ON/OFF: When the circuit board has been turned ON, to release out of Safety press the Lower Button for 1 second to turn OFF the Safety. Press the Lower Button for 1 second will activate Safe Mode ON.

NOTE: The Eye Mode will automatically turn ON after you exit the Safe Mode.

EYE MODE ON/OFF: When the circuit board has been turned ON press the Upper Button for 1 second to release Eye Mode OFF. Press the Upper Button for 1 second to turn ON the Eyes.

NOTE: When the Eye Mode is turned ON the trigger will not fire until there is a paintball in the breach.

NOTE: The Eye mode will not turn ON when the marker is in 3 Burst.

MODES SEMI / 3 BURST: Press and hold the Lower Button for about 3-4 seconds to change modes from Semi to 3 Burst. Press and hold the Lower Button for about 3-4 seconds to change back to Semi.

NOTE: The Eye mode will not turn ON when the marker is in 3 Burst Mode.

LED COLOR GUIDE

UPPER LED LIGHT in Red is Safe Mode ON.

UPPER LED LIGHT in Green is Eye Mode ON.

UPPER LED LIGHT off means Eye Mode OFF.

NOTE: When in Semi / 3 Burst mode the lower LED light (orange or green) might reflect on the upper LED light.

LOWER LED LIGHT in Green is Semi-Auto ON.

LOWER LED LIGHT in Orange is 3 Burst ON.

NOTE: When in 3 Burst mode the lower LED light (orange) might reflect on the upper LED light. The safety is only on when the upper LED light is RED.

WARNING

- The Spyder Electronic Markers are not water resistant.
- Extreme moisture can cause serious damage to any Spyder Electronic Markers.
- Always clean any dirt or paint inside the Markers Electronics.
- Never attempt to modify the Electronics circuitry. Doing so, it will VOID all electronic warranties and liabilities from Kingman.

REMOVAL OF THE TOURNAMENT LOCK SWITCH (NOT PICTURED)

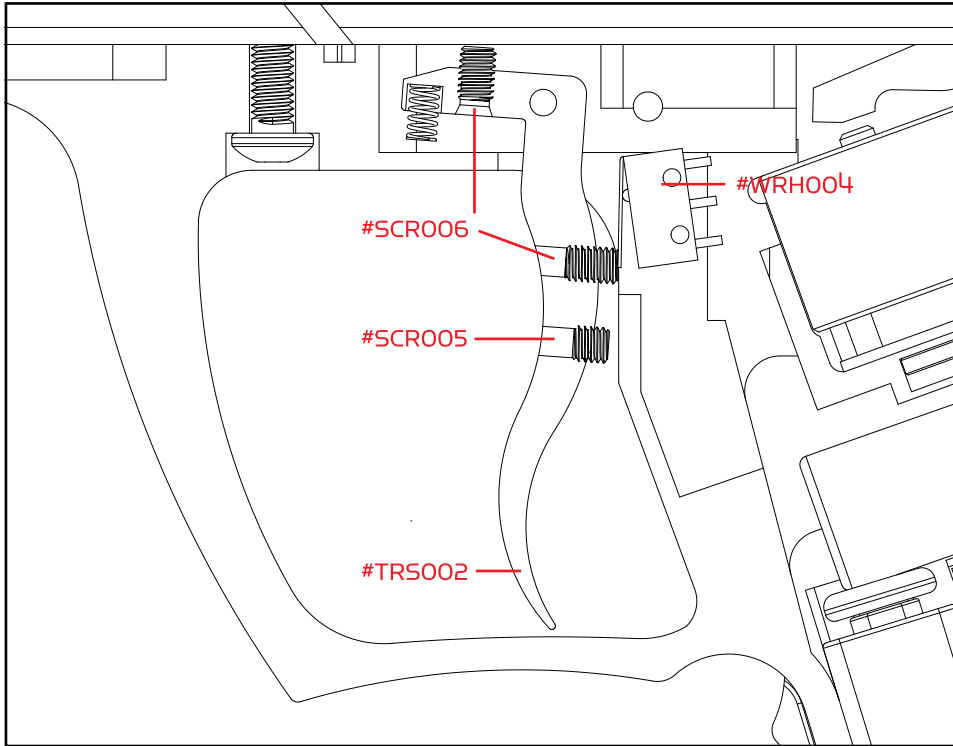
The VS Circuit Board (#ECB001) is equipped with a Tournament Lock Switch (#ELM003). When the Tournament Lock Switch is removed the marker can only fire in SEMI-AUTO, when reattached the 3 Burst Mode will be available.

STEP 1 Remove the 3 M4x8 Screw (#SCRO02) and left side grip panel (#GRPO01 not pictured).

STEP 2 Remove the Tournament Lock Switch (#ELM003) located to the right of the Spyder Battery.

HELPFUL TIP: Please note how the parts are removed for easy reassembly.

TRIGGER ADJUSTMENT



TRIGGER ADJUSTMENT

Part Names and Part Numbers describe in this section:

Trigger Screw (S) (#SCR005)

Trigger Screw (L) (#SCR006)

VS 2 Trigger (#TR5002)

Touch Switch (#WRH004)

Adjusting the top Trigger Screw (L) highest on the VS Trigger located underneath the Trigger Frame clockwise will swing the VS Trigger closer to the Touch Switch.

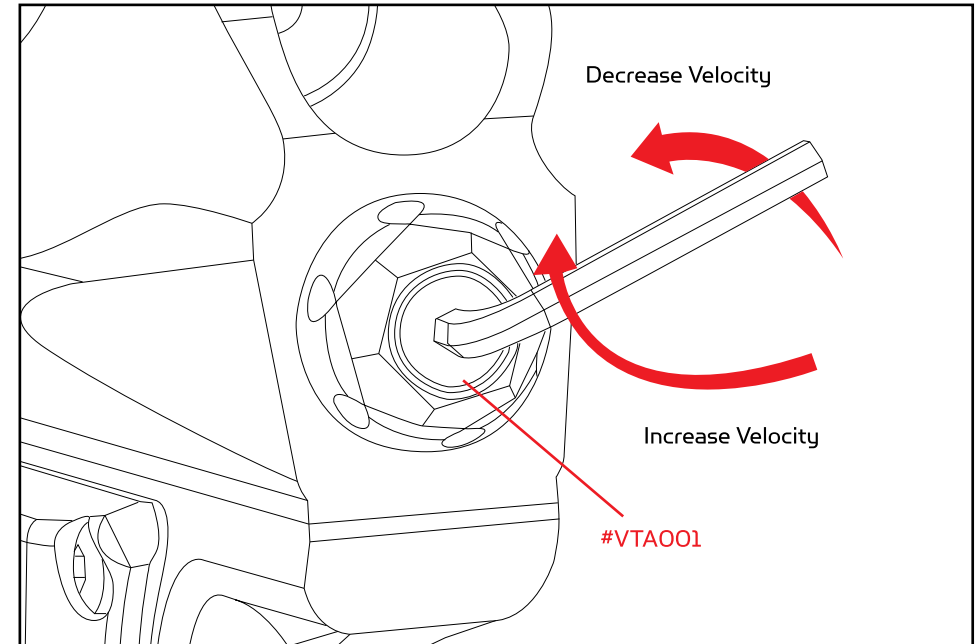
NOTE: Adjusting the Trigger Screw (L) counter-clockwise will increase the trigger gap.

Adjusting the middle Trigger Screw (L) clockwise will shorten the trigger stroke to the Touch Switch.

NOTE: This will increase trigger sensitivity. Adjusting the Trigger Screw (L) counter-clockwise will decrease the trigger sensitivity.

Adjusting the lower Trigger Screw (S) clockwise will shorten the Trigger stop when activating the Touch Switch.

VELOCITY ADJUSTMENT



VELOCITY ADJUSTMENT INCREASE / DECREASE

To increase your velocity FPS (Feet per second) using an allen wrench, turn the Velocity Adjuster & Spring Guide (#VTA001) clockwise.

To decrease your velocity FPS (Feet per second) using an allen wrench, turn the Velocity Adjuster & Spring Guide (#VTA001) counter-clockwise.

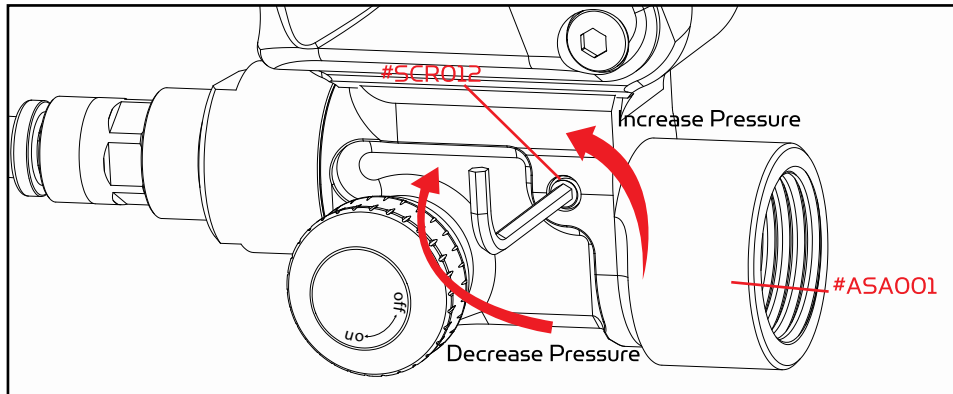
NOTE: Velocity Adjuster & Spring Guide (#VTA001) doesn't remove from the rear of the Striker Plug (#STP001).

RECOMMENDED: To guarantee proper adjustment Kingman recommends using a chronograph to ensure the marker's velocity is under 300 fps.

WARNING

- The recommended Velocity speed should be no greater than 300fps. Not doing so can cause serious injury if the velocity is dangerously high.
- Paintball markers are not intended to shoot any person less than 25 feet.
- Never point a loaded marker at any person who is not wearing the proper face / eye protection designed for paintball use.
- Never at any time should you look down the barrel when the marker is loaded or not.
- Using a paintball marker outside a non designated paintball field can be illegal, and is subject to law enforcement penalties if property damage is caused by the user.

REGULATOR ADJUSTMENT



REGULATOR ADJUSTMENT INCREASE / DECREASE

The VS marker is equipped with a C/A Regulator and ON / OFF. Once the Compressed Air Tank has been attached turn the Regulator dial to the ON position to pierce the tank valve to energize the marker. When finished, turn the Regulator dial towards the OFF position to allow the air to discharge. To increase the pressure on the C/A Regulator turn counter-clockwise on the ASA Reg Screw (#SCR012) located to the right of the dial. To decrease the pressure on the C/A Regulator turn clockwise on the ASA Reg Screw (#SCR012) located to the right of the dial.

NOTE: If the pressure is less than 200psi can cause cocking issues. By having the pressure above 200psi or greater will increase the velocity (fps).

NOTE: Adjustments made to the regulator will effect the marker's velocity.

HELPFUL TIP: When adjusting the pressure always view the Gauge (#GAG001 not pictured) to get the proper pressure setting.

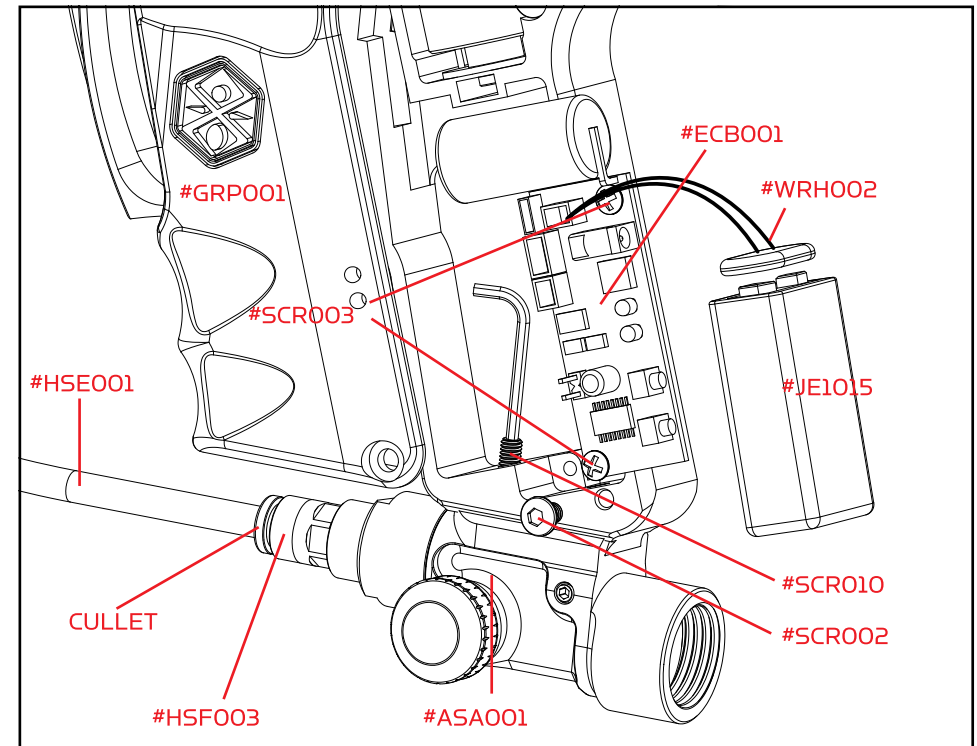
IMPORTANT: Never attempt to disassemble the regulator without professional assistance. Doing so will VOID all regulator warranties and liabilities from Kingman. If you experience any leaks or malfunctions with the regulator contact Kingman tech support.

IMPORTANT: Never expose skin underneath the C/A Regulator Adapter w/Dovetail (#ASA001) when removing the tank. This can run the risk of getting skin burn from releasing excess GAS. Never store any Compressed Air Tank attached to the marker when not in use.

HELPFUL TIP: After playing with the marker, you should ALWAYS remove the Compressed Air Tank. When the tank is being removed, excess air will release underneath the C/A Regulator Adapter w/ Dove Tail (#ASA001).

CAUTION: Markers that are equipped with an inline regulator may store residual air even after the compressed air tank has been removed. Always turn the inline regulator "OFF" using the ON/OFF knob and "dry fire" the marker a few times until the gauge reads "0 psi", it is now safe to remove the compressed air tank from the marker.

REGULATOR REMOVAL



REMOVING THE C / A REGULATOR W/ DOVE TAIL

IMPORTANT: Never attempt to remove or disassemble the C/A Regulator while the Compressed Air Tank attached.

HELPFUL TIP: Please note how the parts are removed for easy reassembly.

STEP 1 Twist the Rubber Fore Grip (#FRG001 not pictured) counter-clock wise to detach from the Vertical Adapter (#VRT001 not pictured).

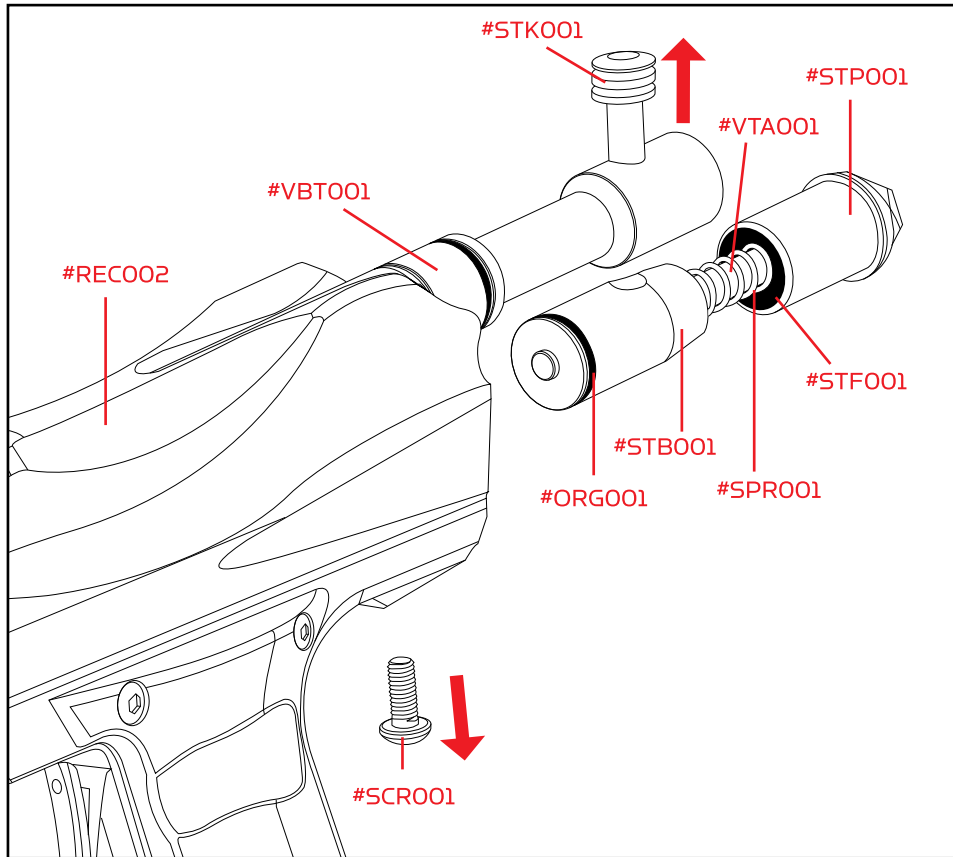
STEP 2 The Macro Line hose (#HSE001) is attached to the Macro Line Adapter (#HSFO03) which needs to be pulled apart. **TECH TIP:** Using your finger tips, pinch the cullet of the Marco Line Adapter rearward so the Macro Line hose can be detached. **TECH TIP:** To reattach the Macro Line hose to the Macro Line Adapter simply press firmly together. This will lock both parts together to create a seal.

STEP 3 Remove the 3 M4x8 (#SCR002) on the left side of the Grip Panel (#GRPO01). Carefully, detach the 9.6v Battery (#JE1015) from the Battery Harness (#WRH002).

STEP 4 Remove the 2 Circuit Board Screws (#SCR003) to allow the removal of the Circuit Board (#ECB001) from the Trigger Frame.

STEP 5 Once the Circuit Board has been removed this will allow access to the Dove Tail Lock Screw (#SCR010). Using the provided allen wrench loosen the C / A Regulator w/ Dove Tail from the Trigger Frame by turning counter-clock wise.

DISASSEMBLE / REASSEMBLE & CLEANING INTERNALS



INTERNAL TROUBLESHOOTING

ONE OR MORE OF THE FOLLOWING MAY CAUSE COCKING RELATED PROBLEMS:

- The pressure in the tank is too low.
- Marker needs lubrication on the Striker O-ring (#ORG001)
- Delrin Venturi w/Locking Knob (#VBTO01) needs to be wiped cleaned.
- The Striker O-ring (#ORG001) is damaged. Replace with new Kingman or Kingman approved O-ring.
NOTE: The O-ring (#ORG001) cannot be substituted with a TANK O-ring or a BLACK O-ring.
- Paintballs may be defective (i.e. expired, odd shape, etc.)

DISASSEMBLE / REASSEMBLE THE DELRIN BOLT & REAR INTERNALS

Part Names and Part Numbers describe in this selection:

Striker Knob (#STK001)	Delrin Bolt (#VBTO01)
Receiver (#REC002)	Striker Bolt Mini (#STB001)
Striker Buffer (#STF001)	Striker Plug (#STPO01)
Trigger Frame Screw (#SCRO01)	Velocity Adjuster & Spring Guide (#VTA001)
Striker O-ring (#ORG001)	Striker Spring (#SPRO01)

DISASSEMBLE THE DELRIN BOLT

STEP 1 Lift upward on the Striker Knob. This will allow the removal of the Delrin Bolt out of the rear of the Receiver. **TECH TIP:** The Delrin Bolt is able to slide out the rear without the removal of internal parts for easy cleaning.

REASSEMBLE THE DELRIN BOLT

STEP 1 Reinsert the Delrin Bolt back in place, the Striker Knob must be lined inside the hole of the Striker Bolt Mini. **TECH TIP:** There are 2 small indication marks milled on the top of the Receiver. This will help realign the Delrin Bolt easier with the Striker Bolt.

DISASSEMBLE THE LOWER REAR INTERNALS

STEP 1 Lift upward on the Top Striker Knob. This will allow the removal of the Delrin Bolt out of the rear of the Receiver.

STEP 2 Loosen the rear Trigger Frame Screw located underneath the Receiver. This will allow all internal parts such as Striker Plug with the Velocity Adjuster & Spring Guide, Striker Spring, Striker Buffer and Striker Bolt Mini.

REASSEMBLE THE LOWER REAR INTERNALS

STEP 1 Reinsert the Striker Bolt Mini with the hole facing upward and the flat spot on the Striker Bolt facing downward.

STEP 2 Place the Striker Buffer flush in the Receiver so the hole of the buffer will allow the Striker Spring to glide in.

STEP 3 Install the Striker Spring thru the hole of the Striker Buffer.

STEP 4 Reinsert the Striker Plug with Velocity Adjuster & Spring Guide thru the rear of the Receiver and tighten the Trigger Frame Screw.

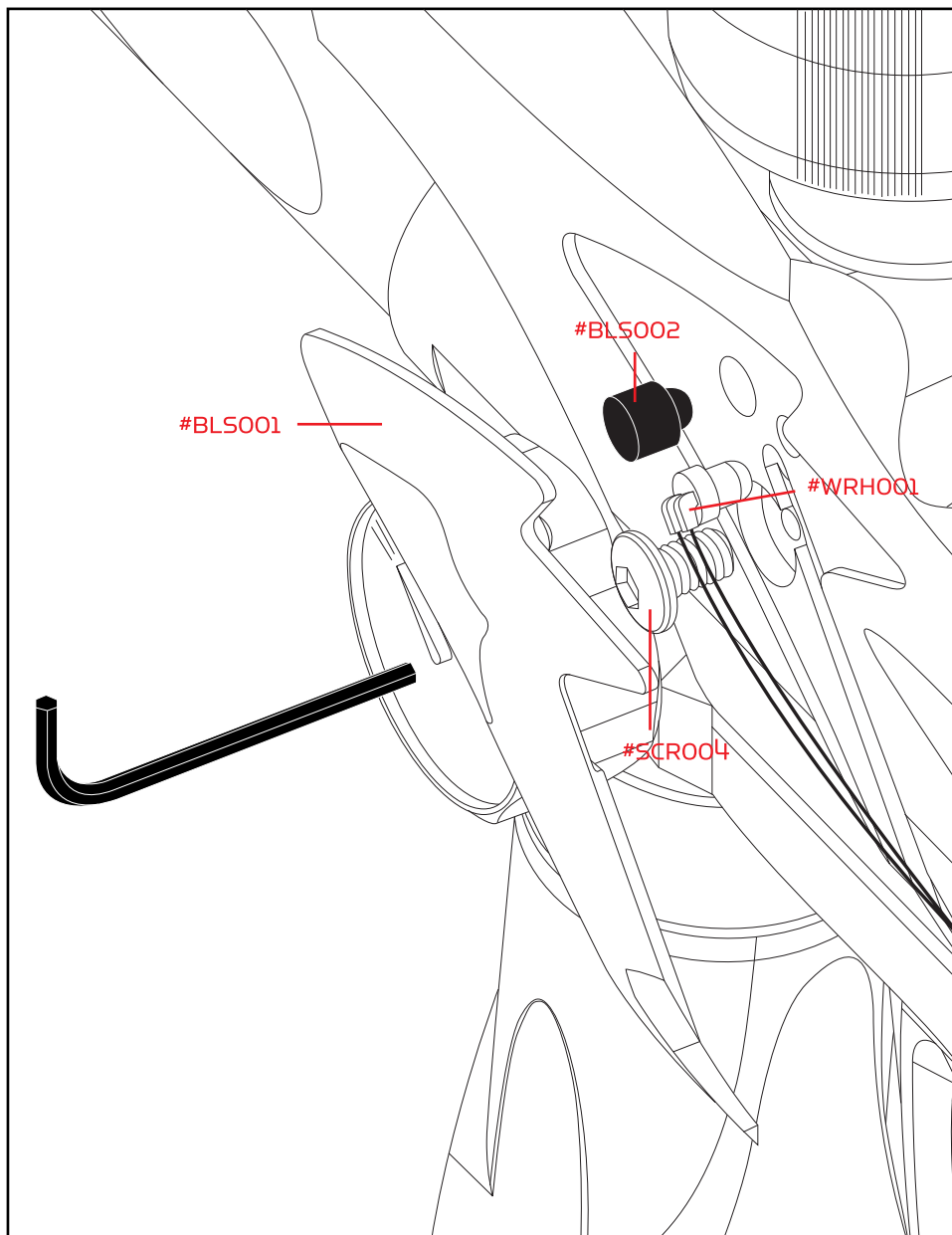
TECH INFO: The lower internals does not need to be exposed unless exchanging the Striker Spring or oiling the Striker O-ring.

HELPFUL TIP: Please note how the parts are removed for easy reassembly.

IMPORTANT: Never oil the Delrin Bolt. This will swell the bolt and cause cocking problems. Striker Buffer should be installed behind the Striker Bolt Mini at all times to ensure proper functioning.

WARNING: Never attempt to remove the markers internals while the Compressed Air bottle is attached. Make sure to remove all paintballs and loader before disassembling the marker.

ANTI CHOP EYES



ANTI CHOP EYES

The Anti Chop Eyes help prevent the chopping of paint by not allowing the marker to fire until a paintball is properly chambered in the breach. The Eyes transmit a beam across the inside of the breach. The circuit board is preset from the factory and does not need to be adjusted or altered. If the Eyes are ON and do not see each other when firing your marker, you will have to clean the Eyes.

CLEANING THE ANTI CHOP EYES

Using a squeegee or swab thru the breach should clean the Eyes enough for the Eyes to detect each other. Another way is to use an aerosol can of air thru the breach to remove any paint or dirt. To thoroughly clean the Eyes using the supplied allen wrench remove both Eye Panel Screws (#SCRO04) and Eye Panels (#BLS001). Once the Eye Panel Screws & Eye Panels are removed, proceed with a soft pinch to remove the Eye Wire Harness (#WRH001) from the receiver. Please use a cloth or paper towel to remove any paint or dirt that is blocking the Eyes.

IMPORTANT: Cleaning the Eyes often will help reduce dirt, paint or oil residue that blocks the Eyes

NOTE: Never attempt to rush the cleaning process or you can pinch the wires and cause the marker to malfunction with the Eye Mode ON. Take precaution not to over tighten the Eye Panel Screws or this can lead to stripping the head.

NOTE: When the Eye Panels are removed the Rubber Ball Stoppers (#BLS002) may be attached to the Eye Panels and can cause them to fall out.

HELPFUL TIP: Please note how the parts are removed for easy reassembly.

HELPFUL TIP / IMPORTANT: Before removing both Eye Panels use a needle or dental pick thru the hole of the Eye Panel to remove any dirt that can build up and block the allen screw from loosing. It's possible if the dirt is not removed you can strip the Eye Panel Screw.

CHANGING THE BALL STOPPERS

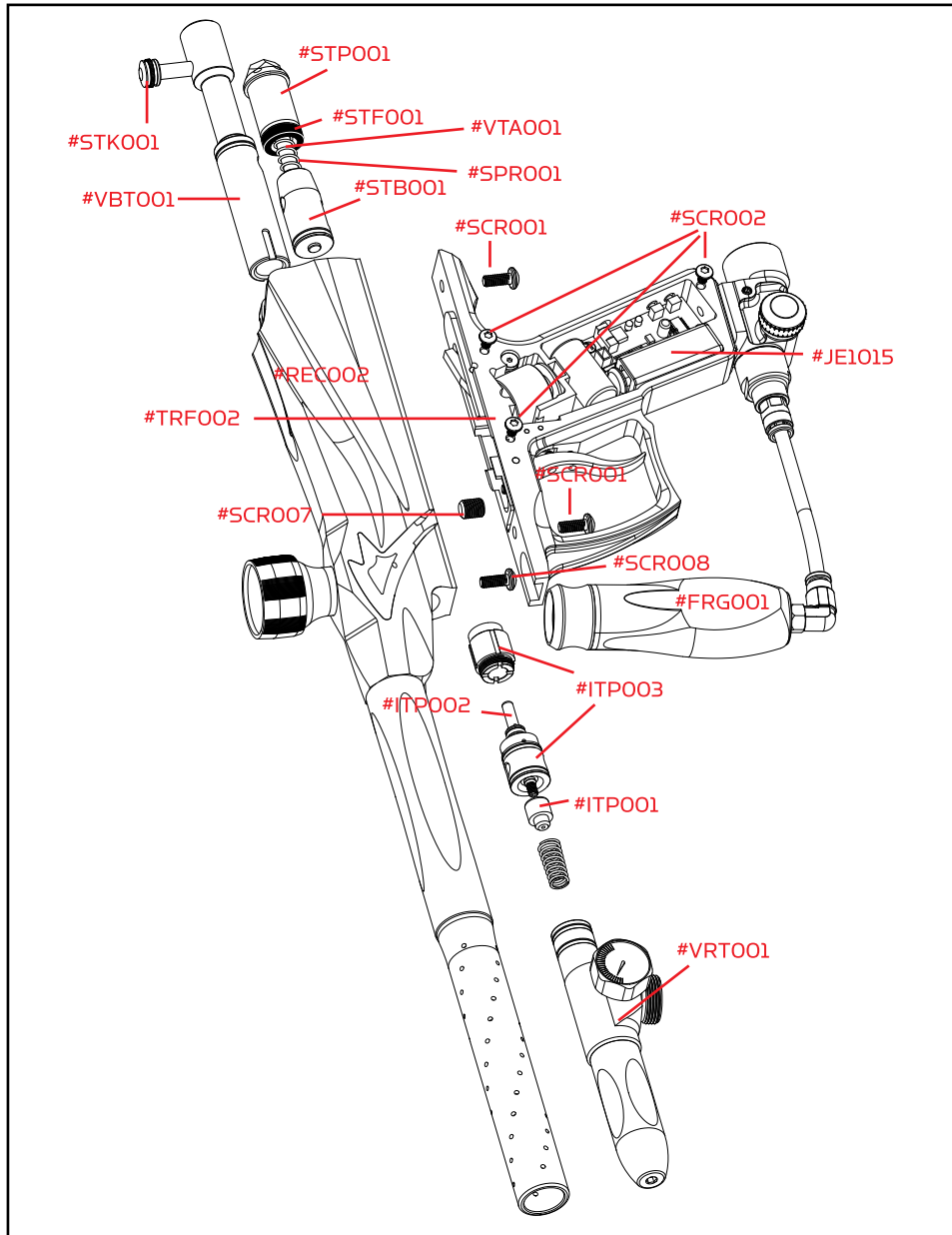
Experiencing paint rolling through the barrel can be related to small diameter paintballs or the loss of a Rubber Ball Stopper(s) (#BLS002). When removing Eye Panel Screws (#SCRO04) and Eye Panels (#BLS001) the Rubber Ball Stoppers (#BLS002) will be accessible for cleaning or replacement.

HELPFUL TIP: Please note how the parts are removed for easy reassembly.

HELPFUL TIP / IMPORTANT: Before removing both Eye Panels use a needle or dental pick thru the hole of the Eye Panel to remove any dirt that can build up and block the allen screw from loosing. It's possible if the dirt is not removed you can stripe the Eye Panel Screw.

NOTE: Take precaution not to over tighten the Eye Panel Screws or this can strip the head.

CUP SEAL REMOVAL



STEP BY STEP CUP SEAL ACCESS

Part Names and Part Numbers describe in this selection:

Cup Seal (#ITP001)	Trigger Frame Screw (#SCR001)
Rubber Fore Grip (#FRG001)	Vertical Adapter w/Gauge (#VRT001)
Trigger Frame (#TRF002)	Receiver (#RECO02)
M4x8 Head Screw (#SCR002)	Vertical Screw (#SCR008)
Eye Wire Harness (#WRH001)	9.6 Rechargeable Battery (#JE1015)
Valve Body Screw (#SCR007)	Valve Body (#ITP003)
Striker Plug (#STP001)	Striker Spring (#SPR001)
Top Cocking Knob (#STK001)	Striker Bolt Mini (#STB001)
Valve Pin (#ITP002)	Striker Buffer (#STF001)
Delrin Venturi Bolt (#VBTO01)	Velocity Adjuster & Spring Guide (#VTA001)

HELPFUL TIP: The sign of a worn Cup Seal is the presence of Compressed Air leaking down the barrel.

STEP 1 Twist the Rubber Fore Grip counter-clockwise to release off the Vertical Adapter w/Gauge. The Marco Line will hold the Rubber Fore Grip if it dangles from the C/A Regulator.

STEP 2 Remove all 3 M4x8 Screws on the left side of the Trigger Frame. The Grip Panel will allow access to the Circuit Board.

STEP 3 Gently detach the Eye Wire Harness (not pictured) from the Circuit Board. This will allow maneuvering around certain parts.

HELPFUL TIP: Gently move aside the Rechargeable Battery out of the Trigger Frame to view the Eye Wire Harness. Gently remove the Eye Wire Harness thru the coil set channel exiting thru the top of the Trigger Frame.

STEP 4 Remove both Trigger Frame Screws. This will then allow the Trigger Frame to disconnect from the Receiver. Pull upward on the Top Cocking Knob to allow the Delrin Bolt to release from the Striker Bolt Mini. Once the Striker Plug has been removed the Striker Spring, Striker Buffer and Striker Bolt Mini need to be removed out the rear of the Receiver.

TECH TIP: Notice how the Striker Bolt Mini is placed in the Receiver before removed to ease re-entry.

STEP 5 Loosen the Vertical Screw counter-clockwise to allow the Vertical Adapter w/Gauge to release from the Receiver.

STEP 6 Loosen the Valve Body Screw counter-clockwise to allow access to the Valve Body.

TECH TIP: Before loosening the rear Trigger Frame Screw place your finger in front of the Striker Plug, so the internal parts don't spring outward if the Delrin Bolt is in the cocked position.

STEP 7 Use a plastic or wooden dowell rod to push the Valve Body from the rear of the Receiver thru the front of the Receiver.

TECH TIP: Use an 8" or longer rod thru the lower rear section of the Receiver. Notice how the Valve Body is placed inside the Receiver before removing. This will help ease re-entry after installing the new Cup Seal.

STEP 8 Untwist both half's of the Valve Body to gain access of the Valve Pin.

STEP 9 Untwist the Cup Seal from the Valve Pin. Replace the defective Cup Seal.

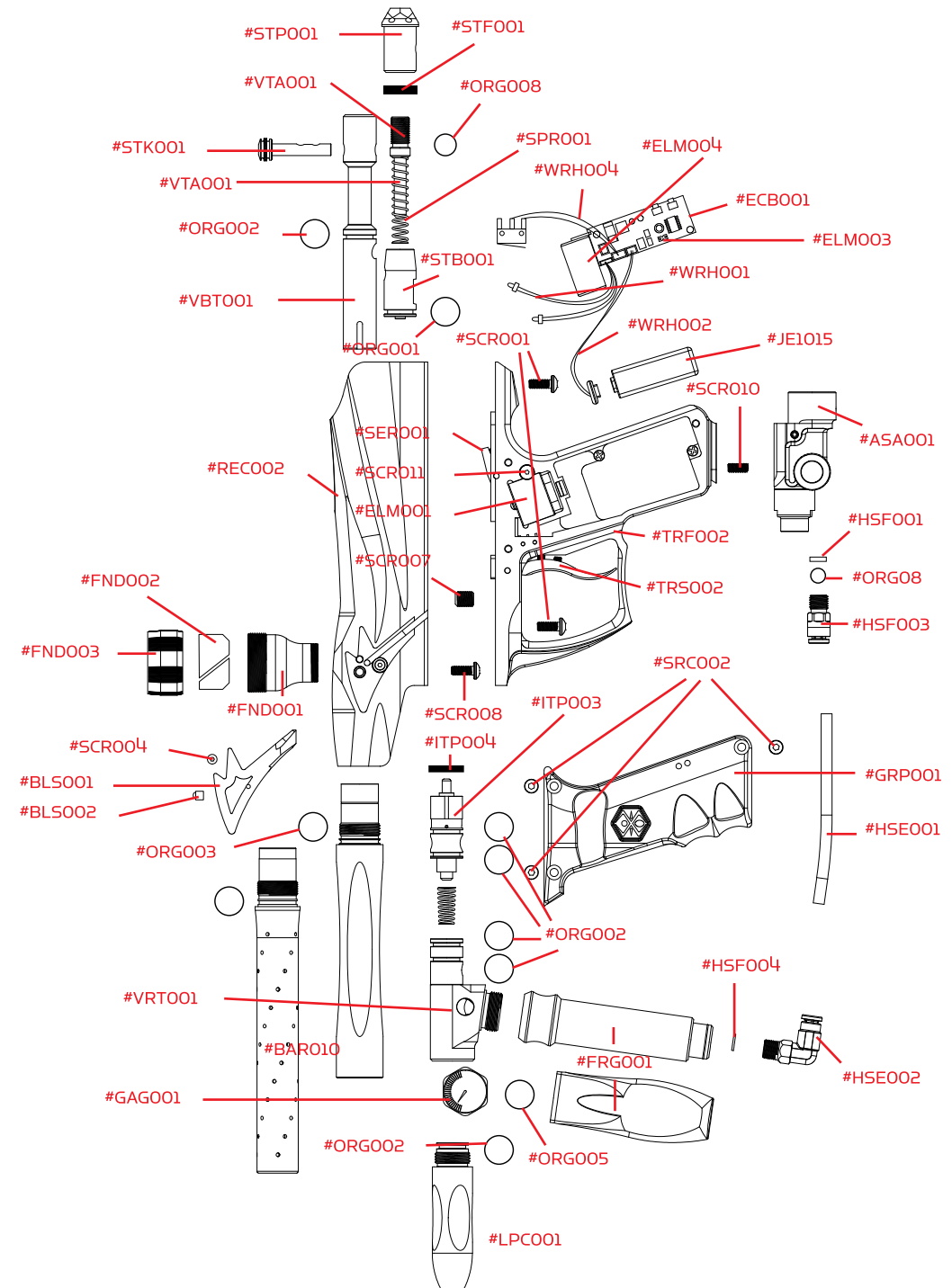
HELPFUL TIP: Please note how the parts are removed for easy reassembly.

CAUTION: Use the proper allen wrenches to fasten all screws and never apply more force than necessary.

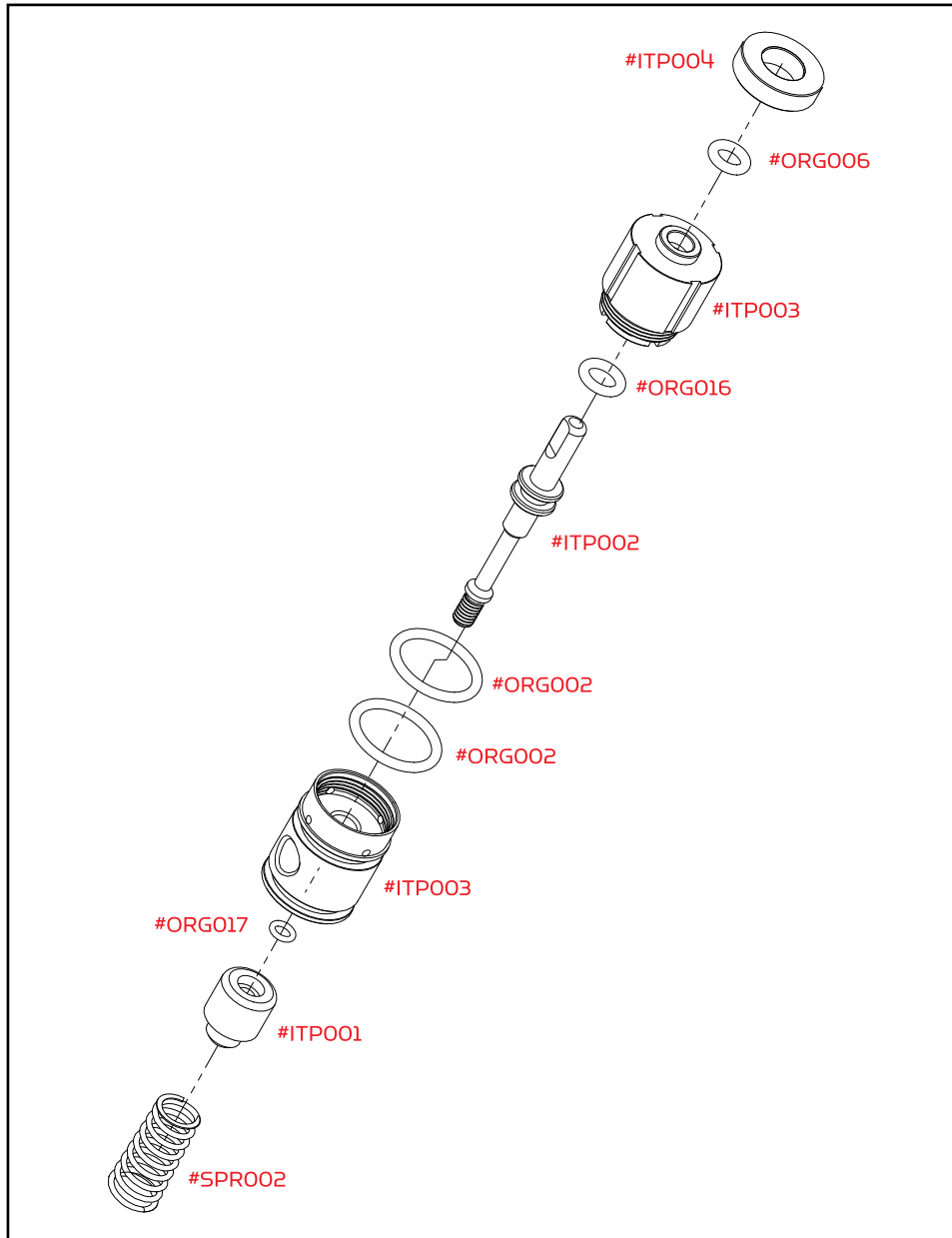
IMPORTANT: Always remove the Air Tank before any disassembly of your marker. Do not remove the Valve Body (#ITP001) unless specific Valve Body repairs are needed. Do not remove the Valve Body with a screwdriver as it will damage the Valve Body and cause air leaks.

VS2 PARTS LIST / SCHEMATICS

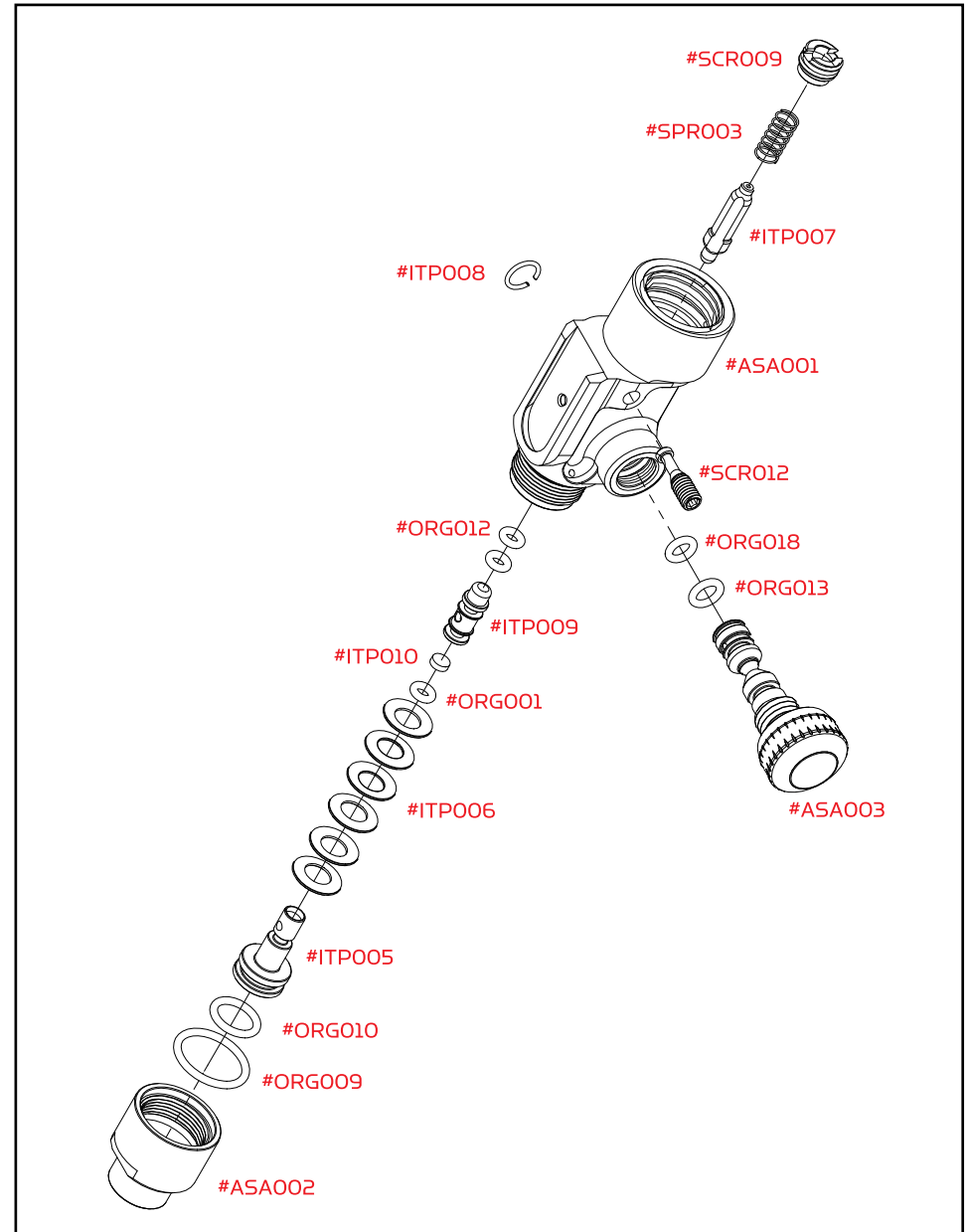
ASA001	C/A Reg. Adp w/ Dove Tail	ORG009	ASA Reg. Head O-ring
ASA002	C/A Reg. Adp w/ Dove Tail Cap	ORG010	ASA Piston O-ring (L)
ASA003	C/A Reg. On/Off Knob	ORG011	ASA Piston O-ring (S)
* BAR001	Barrel Plug	ORG012	Inner Piston O-ring (S)
BAR010	12" 2PCS Barrel	ORG013	ASA On/Off Knob O-ring
BLS001	Eye Panel Set	ORG014	Macro Line Inner O-ring
BLS002	Rubber Ball Stopper	* ORG015	Frame Screw O-ring
ECB001	Circuit Board	ORG016	Valve Pin O-ring (L)
ELM001	Coil Set	ORG017	Valve Pin O-ring (S)
* ELM002	Coil Pin	ORG018	VS ASA Inner On/Off Knob O-ring (S)
ELM003	Tournament Lock Switch	* PAK001	Spare Parts Kit
ELM004	Capacitor	REC002	Receiver
* ELM005	Touch Switch Membrane	* RPN001	Sear Roll Pin
FND001	Feed Neck	* RPN002	Trigger/Touch Switch Roll Pin
FND002	Twist Clamp w/ C Clip	* RPN004	ESP Trigger Roll Pin
FND003	Twist Clamp C Clip Insert	SCR001	Trigger Frame Screw (A)
FRG001	Rubber Fore Grip	SCR002	M4 x 8 Head Screw (A)
GAG001	300psi Mini Gauge	SCR003	Circuit Board Screw (+)
GRP001	Grip Panel	SCR004	Eye Panel Screw (A)
* GRP002	Grip Panel Cover	SCR005	Trigger Screw (S)
HSE001	Macro Line (5.25")	SCR006	Trigger Screw (L)
HSF001	Air Filter	SCR007	Valve Body Screw (A)
HSF002	45d Macro Line Hose Adapter (metric)	SCR008	Vertical Screw (A)
HSF003	Macro Line Hose Adapter (metric)	SCR009	ASA Reg. Inner Cap Screw (F)
HSF004	Plastic Washer	SCR010	Dove Tail Lock Screw (A)
ITP001	Cup Seal	SCR011	Coil Set Screw (A)
ITP002	Valve Pin	SCR012	ASA Reg. Adjust Screw (A)
ITP003	Valve Body	SER001	Sear
ITP004	Valve Body Buffer	SPR001	Striker Spring
ITP005	ASA Mini Piston	SPR002	Valve Spring
ITP006	ASA Pressure Disks	SPR003	ASA Reg. Inner Spring
ITP007	ASA Reg. Piercing Stem	* SPR009	ESP Sear Spring
ITP008	ASA Reg. On/Off C clip	* SPR010	ESP Trigger Spring
ITP009	Inner ASA Regulator Piston	STB001	Striker Bolt (mini)
ITP010	Piston Seat Disc	STF001	Striker Buffer
JE1015	9.6v Rechargeable Battery	STK001	Top Cocking Knob
* JE1024	A/C Charger	STP001	Striker Plug
LPC001	Low Pressure Chamber (m. black)	TRF002	Trigger Frame
ORG001	Striker Bolt O-ring	TR5002	VS Trigger (m. black)
ORG002	Bolt O-ring #015 80D	VRT001	Delrin Bolt w/ Locking Knob
ORG003	Barrel O-ring	* VBT002	Delrin Bolt Locking Screw (F)
ORG005	Vertical O-ring	* VBT003	Delrin Bolt Locking Bearing
ORG006	Inner Valve body O-Ring	* VBT004	Delrin Bolt Locking Spring
ORG008	#010 O-ring	VRT001	Vertical Adapter w/ Gauge
		VTA001	Velocity Adjuster & Spring Guide
		WRH001	Eye Wire Harness
		WRH002	Battery Harness
		WRH004	Touch Switch (3P)



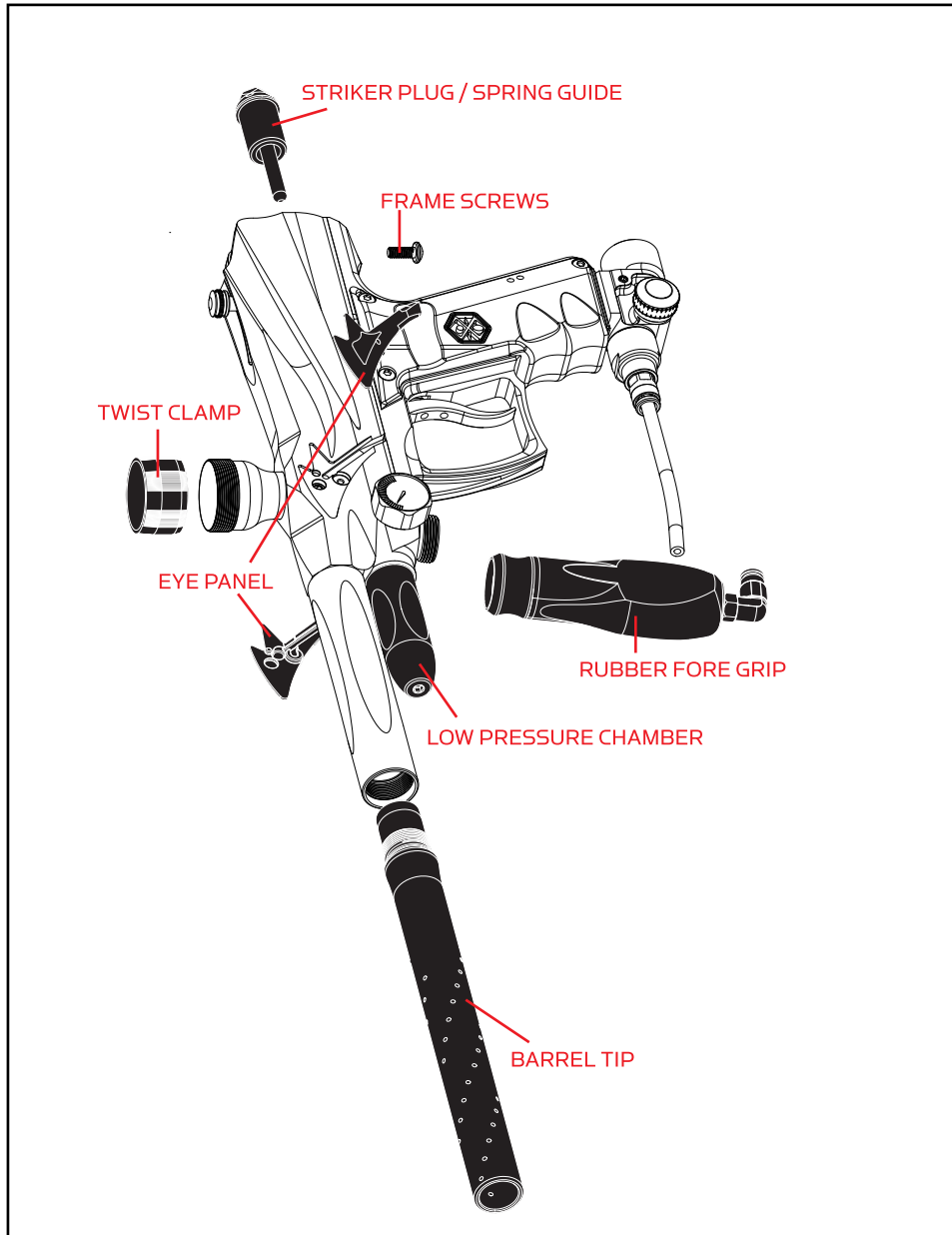
VS SERIES BALANCE VALVE SCHEMATICS



REGULATOR SCHEMATICS



OPTIONAL VS ACCESSORIES



STEP BY STEP VS UPGRADES

Follow these steps to guide to an easy assembly of your colored accessory kit upgrade.

BARREL TIP: Unscrew the barrel tip counter-clock wise to loosen from the back end of the barrel.

RUBBER FORE GRIP: Twist counter-clock wise so the rubber fore grip will separate from the vertical adapter.
TECH TIP: To remove the Macro hose off the 90° hose fitting press the clip away from the hose and pull apart at the same time. Press inward the Macro hose line firmly in the 90° hose fitting to secure a tight fit.

LOW PRESSURE CHAMBER: Unscrew the chamber counter-clockwise off the vertical adapter.

EYE PANELS: Place a metric 2mm allen wrench thru the hole of the eye panels, to loosen both eye panel screws.
TECH TIP: Before removing both eye panel screws, use a needle or dental pick thru the hole of the eye panel in case there is dirt that can block the allen screw from loosening.

TWIST CLAMP: Unscrew the twist clamp off the feed neck. If the c clip insert sticks simply tighten down the twist clamp towards the feed neck and loosen the twist clamp for replacement.

STRIKER PLUG: Loosen the rear trigger frame screw to allow the striker plug to release from the back of the receiver. **TECH TIP:** Before loosening the rear Trigger Frame Screw place your finger in front of the Striker Plug, so the internal parts don't spring outward if the Delrin Bolt is in the cocked position.

IMPORTANT: DO NOT attempt to remove the rubber fore grip, low pressure chamber or striker plug while the marker is charged with gas.

OPTIONAL VS ACCESSORIES

Available VS series accessories:

VS Body Kit (#31203) Blue
VS Body Kit (#31205) Red

VS Body Kit (#31204) Green
VS Body Kit (#31206) Yellow

1 1/4" Aero Twisted 2 Piece Barrel (#31207) Matte Black/Matte Black

9" Color Barrel Tip (#31208) Blue
9" Color Barrel Tip (#31210) Red

9" Color Barrel Tip (#31209) Green
9" Color Barrel Tip (#31211) Yellow

KINGMAN

WARRANTY STATEMENT

Kingman warrants the original retail purchaser that this product is free from defects in material and workmanship under normal use and service for a period of (1) year from the original date of purchase. Any Electronic Components in an Electronic Spyder marker are warranted for (6) months from the original date of purchase. Kingman agrees to repair or replace (at its discretion) any product within (a reasonable period of time). This warranty does not cover o-rings, cup seals, 9.6v rechargeable battery, charger, scratches, nicks, normal wear and tear of parts, any modifications, normal fading of anodizing and damage caused by dropping or hitting of products. This warranty shall not apply if it is shown by a Kingman Technician that the consumer caused the defect or malfunction because of misuse. This warranty only covers original factory parts. Any modifications or tampering of original factory parts will VOID warranty and liabilities from Kingman. Any damage caused by water will not be covered under warranty. Warranty repair can only be conducted by Kingman technician or Kingman authorized technician. For warranty to be effective, consumer must return the enclosed warranty registration card filled out, along with a copy of the purchase receipt, within (15) days of the original purchase date. This warranty is not transferable. Paintball markers are non-refundable. This warranty will not cover pick up, shipping, delivery, and/or house calls. If product needs repair, consumer will package it carefully and send together with your name, address, phone number and a brief description of the malfunction to:

KINGMAN GROUP

Attn: Tech Department
14010 Live Oak Avenue
Baldwin Park, CA 91706 U.S.A.
www.kingman.com

FOR TECHNICAL SUPPORT

Our Technical Support Department is open Monday through Friday, from 8am to 5pm (PST), and can be reached at (626) 430-2300.



www.spyder.tv

KINGMAN

WARRANTY REGISTRATION

PLEASE COMPLETE AND RETURN THIS FORM, ALONG WITH A COPY OF YOUR PURCHASE RECEIPT, WITHIN 15 DAYS OF PURCHASE SO THAT WE MAY VALIDATE YOUR 12 MONTH LIMITED WARRANTY.

NAME:

ADDRESS:

CITY:

STATE:

ZIP:

COUNTRY:

GENDER:

AGE:

JOB:

E-MAIL:

PHONE:

PRODUCT NAME/SERIAL #:

WHAT OTHER BRAND(S) OF MARKERS DO YOU OWN?

WHY DID YOU PURCHASE THIS KINGMAN MARKER?

WHAT IS THE NEXT PAINTBALL PRODUCT YOU INTEND TO BUY?

WHAT ARE YOUR HOBBIES (OTHER THAN PAINTBALL)?

WHAT ARE SOME PAINTBALL MAGAZINES YOU LIKE TO READ?

HAVE YOU MADE ANY ONLINE PURCHASES IN THE PAST 6 MONTHS?

Y / N

COMMENTS / SUGGESTIONS:

YES, I WOULD LIKE TO RECEIVE MORE INFO REGARDING NEW PRODUCTS, PROMOTIONS, AND SPECIAL OFFERS FROM KINGMAN.

MAIL TO:

KINGMAN GROUP 14010 LIVE OAK AVE. BALDWIN PARK, CA 91706 USA

ENJOY YOUR FUTURE.

