



# ZEN SIMPLICITY, ENLIGHTENED PERFORMANCE



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WARNING: This product does contain chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

# **A WARNING**

## PAINTBALL GUNS AND PAINTBALL GUN ACCESSORIES ARE NOT TOYS

Careless use or misuse may result in serious bodily injury or death! Eye protection designed for paintball must be worn by the user and all persons within range. Not for sale to persons under 18 years of age. Must be 18 years of age or older to operate or handle any paintball gun and paintball gun accessories without adult of parental supervision. Read and understand all cautions, warnings, and operating manuals before using any paintball gun or paintball gun accessory. Do not aim paintball gun at eyes or head of people or at animals. Paintball guns are to be used with Paintballs Only. To prevent fire or shock hazard, do not expose unit to rain or moisture. To prevent fire or shock hazard, do not disassemble any electronic paintball device. The disposal of the battery used to power this product may be regulated in your area. Please conform to all local or state regulations with regard to battery disposal. Use Common Sense and have fun. Any tampering with the unit voids your warranty. There are no consumer serviceable parts inside the unit. The use of non factory authorized components within this product may cause a fire or shock hazard.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

WARNING! Eye protection designed specifically for paintball must be worn by the user and persons within range. Safety is no accident.

⚠ iADVERTENCIA! Protección para loso ojos designados específcamente para paintball deben ser usados por el usario y personas dentro del alcanse. Seguridad no es accidente.

AVERTISSEMENT! Les équipements de protection des yeux conçus particulièrement pour le paintball doivent être utilisés par les personnes sur le terrain et aux alentours. La sécurité permet d'éviter les accidents

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## **Empire Limited Lifetime Warranty**

Read the full Operator's Manual for technical information, usage instructions, and maintenance tips for your Empire Prophecy Z2 Loader System. The full manual can be found on the CD enclosed with the loader or by contacting Paintball Solutions at 1-800-220-3222 or at www.paintballsolutions.com

## 1. Introduction

Congratulations on your purchase of the Empire Prophecy Z2 Paintball Loader. The Z2 loader system continues with the successful Empire Prophecy platform providing the reliability and performance you've come to expect from Empire Paintball. The backplate buttons and ON/OFF switch has been redesigned for easier operation while wearing gloves. The smaller and sleeker design is simple to operate and is the perfect choice for all levels of players.

NO TOOLS REQUIRED! That's right, no tools...period. You no longer need any tools to work on your loader, change the battery, disassemble to clean, swap out lids, etc. – just utilize the snap and lock technology and you are good to go.

## **Specifications**

- Model- Empire Prophecy Z2 Loader System
- Weight- 14.8 ounces
- Standard Power Source- (4) AA alkaline batteries
- Capacity- approximately 200 balls

#### Features:

- No tools needed for assembly and disassembly
- Integrated one piece feed neck for durability
- Simple ON/OFF Toggle Switch
- Sound Activated Force Feeding
- Radio Frequency (RF) upgradeable
- Low profile and lightweight
- Infrared Sensors observe the Drive Train to provide automatic ball iam clearance
- Forward and Reverse push buttons
- Empire Freeway™ Antijam to limit jamming
- Self-aligning shells for easier assembly and disassembly
- Magnetic Force Easy Load Lid
- Includes built in Rip Drive™System
- New drive carrier system for more consistent and faster feeding

## 2. Getting Started

## **Battery Installation**

There are no tools needed to install the batteries into the Empire Prophecy Z2 Loader. Be careful not to pull on the battery wiring harness when removing/installing the battery pack.



Remove the body front by pressing in the lower spring lock and the upper tab and then slide the body front forward (Figure 2.1).

Fig. 2.1

Push in the front tab on the floor and gently lift the front of the floor (Figure 2.2).



Remove the battery pack and install batteries into the pack following the polarity markings. Install the battery pack back into the backbone; lock the pack into place by pushing the front tab arm in and lowering the floor. Then reinstall the body front by sliding it back on.

Fig. 2.2

#### Notes:

- For best results, only use quality brand batteries. When replacing batteries, used batteries should be recycled.
- Make sure the batteries are installed correctly, pay attention to the (+/-) polarity markings.

## **Attaching the Loader**

You can attach your Empire Z2 loader to the marker's feed neck or you may need an elbow to attach it properly. The Empire Z2 is designed to fit in standard clamping style feednecks.

Place the Empire Z2 into your marker's feed neck, adjust the clamp adjustment screw, and push the clamp closed. If the clamp shows too much resistance when trying to close, loosen the feed neck's adjustment screw. If it's too loose, tighten the feed neck's adjustment screw, until the loader is secure.

#### Notes:

- You want to hold the loader securely but be careful not to crush or damage the feed neck.
- · Modifying the loaders feed neck will void warranty.

## **Powering the Loader**

Flip the toggle switch to the left, which is the ON position. The loader will spin until it's filled with paintballs. The loader will have a green flashing LED when on (Figure 2.3).



Fig. 2.3

## **Loader Operation**

The Z2 loader is activated by sound and sensors. Turn the Z2 to the ON position and you're ready to go. The Z2 will pickup the sound of each shot and use its sensors to load your marker. No programming adjustments are needed.

## **Advancing Drive**

You can advance drive by pressing the Forward button ▶ on the backplate (Figure 2.3). Each time the button is pressed, the drive will spin until it senses the ball stack is full or it times out. This is useful after you refill your loader to make sure the ball stack is full.

## 2. Getting Started Continued...

## **Reversing Drive**

You can reverse the drive by pressing the Reverse button ◀ on the backplate (Figure 2.3). Each time the button is pressed, the drive will spin in reverse and then run forward again until the ball reaches the marker breach. This is useful to clear a ball jam.

## **Turning ON/OFF the Loader**

Flip the toggle switch to the right, which is the OFF position; the loader is now OFF. If the loader is left on, it will shut off after 1 hour of inactivity.

## **Rip Drive**

The Rip Drive is the thumbwheel located under the Empire Z2 Loader. It has several uses:

- Manually load up to 13 paintballs into your paintball marker for every revolution of the thumbwheel. This can be done to chronograph your gun without the need to turn on the hopper, or to feed paintballs if your batteries should happen to die during a game.
- Clear a ball jam in your loader during a game by rotating the rip drive counter clockwise, then forwards again to pre-load the ball stack.

#### 3. General Care

## **Emptying the Loader for Storage**

With the loader turned OFF, turn it upside down to dump the paintballs out. While upside down, rotate the Rip Drive counter clockwise to release the paintballs. Do not store your Empire Z2 loader with any paintballs remaining inside.

When storing the loader for an extended period of time, disconnect the battery cap from the battery pack completely. Store in a dry place where it will not come in contact with the loader itself or any metal parts.

## **Cleaning Loader**

To clean the loader, use a clean dry cloth, or apply a small amount of water or goggle lens cleaner to a clean cloth. Apply only enough water or cleaner to dampen the cloth. Do not apply goggle lens cleaner directly to loader surfaces, as too much contact may deteriorate the plastic.

If any paintballs break inside the hopper, DO NOT use any Liquids or Chemicals to rinse out the hopper, doing so may cause severe damage to the loader electronics and void the warranty.

In most cases you will be able to clean the drive area of the loader by just removing the body front and wiping it out using a damp towel. If it is necessary to further clean the loader, follow the disassembly instructions.

## 4. Disassembly

## **Body Disassembly**

The body of the Empire Z2 Loader can be disassembled with no tools. Changing batteries and basic cleaning can be performed by removing only the body front. It is recommended you do not remove the body sides unless you need to access the drive assembly.



**Front Body-** Press in the lower spring lock and the upper tab, and then slide the front body forward and off the drive assembly (Figure 3.1).

Fig. 3.1

**Backplate Cover-** Press in the tab located on the bottom of the backplate cover and tilt the bottom of the cover up and away from the body. Once the bottom of the cover is away from the body, slightly lower the cover to release the upper locking tab and then remove (Figure 3.2).



Fig. 3.2

**Lid and Lid Spring-** The lid can be removed once the front body has been removed. Slightly separate the two body sides enough to slip the lid out of the left and right slots. It only needs to be separated by a 1/4" inch to remove the lid. The body sides do not have to be removed from the drive assembly to remove the lid (Figure 3.3).



Fig. 3.3

**Body Sides-** Press in each of the two spring locks located on the bottom of each body side and remove them from the drive assembly (Figure 3.4).

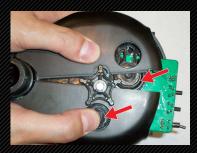


Fig. 3.4

**Drive Disassembly-** The drive assembly should only be taken apart for cleaning or repair. Remove the shell assembly first and follow the instructions below if it is necessary to work on the drive assembly.

**Floor-** Push in the front backbone arm and lift the front of the floor from the drive assembly, then push in both rear backbone arms with your thumb and fore-finger at the same time and lift floor from the drive assembly.



Outlet Cover- Locate the alignment tab on the right side of the outlet cover and gently pull it up and out of the slide. It might be necessary to tilt the outlet cover toward the motor to remove it as part of it locks under the motor (Figure 3.5).

Fig. 3.5

# 4. Disassembly Continued...

### **Drive Carrier**

The Drive Carrier is removed by removing the E-ring located on the top of the drive shaft. If necessary, use a small flat head screwdriver and gently pry the E-ring off, then lift the carrier off (Figure 4.1).



Fia. 4.

## **Rip Drive**

The Rip Drive is removed by removing the E-Ring located on the bottom of the drive shaft and pulling the Rip Drive off. If necessary, use a flat head screwdriver to help lift the Rip Drive off the drive shaft (Figure 4.2).



Fig. 4.2

## Separating the Slide from the Backbone

The slide is held to the backbone by three locking tabs (fig 4.3), located on the top of the slide. If neccessary, use a flat head screwdriver or coin gently pull the tabs one at a time toward the center of the slide until all three are released. Once all three locking tabs have been released the slide will lift off the backbone. It will also be necessary to unplug the motor harness from the circuit board (Figure 4.3).



Note: When separating the slide from the backbone, the pulley, pulley pin and belt will be loose. Be careful not to lose any of these parts.

Fig. 4.3

## **Spring Locks and Springs**

The spring locks and lock springs should not be removed unless the springs or locks need replacing. The spring locks are removed by removing the spring first and then sliding the lock out.

## **Circuit Board**

The circuit board can only be removed once the slide has been separated from the backbone. Gently flex the backbone arm that is closest to the board, to the right and lift the board off the front alignment post. While holding the backbone arm away from the board, rotate the board to the right to clear the slide locking tab. The board can now be removed from the backbone

## 5. Assembling Loader

## **Drive Assembly**

If the Drive Assembly is not assembled correctly the Empire Z2 Loader will not function properly. It is recommended that you do not take the drive apart unless necessary.

## **Installing Circuit Board**

- Line up the rear post on the backbone with the rear hole on the board and gently lower the board onto the post (Figure 5.1).
- Next lower the board onto the front post on the backbone. It may be necessary to bend the right side backbone arm out slightly, so the board can seat correctly on the post (Figure 5.1).



Fig. 5.1

## Installing the Sprocket to the Drive Shaft

- Slide the sprocket onto the drive shaft with the sprockets flat side facing the E-Ring slot.
- Put the E-Ring onto the drive shaft to hold the sprocket in place (Figure 5.2).
- The side of the sprocket with the pad print should face toward the circuit board (Figure 5.3).



Fig. 5.2

## **Installing the Lower Drive Components**

- Place the lower drive bearing into the bottom of the slide.
- Insert the drive shaft with sprocket attached into the slide. Make sure the pad printed side of the sprocket faces toward the circuit board.
- Place the pulley pin into the slide and slide the pulley onto it.
- Install motor into the slide.
- Put the drive belt onto the pulley and then stretch it onto the motor pulley (Figure 5.3).

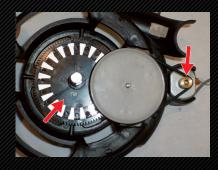


Fig. 5.3

# 5. Assembly Continued...

## Installing the Slide to the Backbone

- Make sure the bearing is installed in the backbone.
- Place the backbone with bearing facing the slide, onto the drive shaft and position the slides feed neck toward the backbones feed hole.
- Next you will have to lock the three backbone tabs onto the slide. Push the tabs
  into the backbone one at a time. It may be necessary to flip the drive assembly over
  while holding it together and use a coin or flat head screwdriver to lock in the
  final tab (Figure 5.4).



Fig. 5.4

Check that the pulley pin is seated in both the slide and backbone. If necessary
gently push the pin using a small flat head screwdriver, so it correctly seats in both
parts. Also check that the belt is properly positioned on the motor and pulley.

### **Installing Rip Drive**

Place the Rip Drive wheel on the bottom of the drive shaft and push it down until it stops. Install the E-Ring into the slot on the bottom of the drive shaft using a flat head screw driver or coin.

## **Installing Drive Carrier**

Place the drive carrier onto the drive shaft and install the E-Ring on to the drive shaft to hold the drive carrier in position. If necessary use a flat head screw driver or coin to push the E-Ring onto the drive shaft.



## **Installing Outlet Cover**

On the left side of the outlet cover you will notice two protruding parts. The one toward the front of the cover goes under the motor, and the other one goes into the feed area. Make sure these two parts of the cover are located properly before pushing the cover down into the right side alignment tab (fig 5.5).

Fig. 5.5

**Installing Floor-** Place the floor over the backbone assembly, line up the center of the floor over the motor area of the slide. Flex in the backbone arms and lock them into the floor, one at a time, starting with the one on the left side, nearest to the motor. Check that the floor, outlet cover and slide fit flush with no gaps. Also check from the right side of the drive assembly that the outlet cover sits flush with the slide (Figure 5.6).



Fig. 5.6

## **Testing Drive Assembly**

Once the drive assembly is back together, rotate the rip drive wheel to check that it is rotating correctly. There should be some resistance from the belt but the drive shaft should rotate smoothly.

## **Body Assembly**

Assemble the body in the order listed below. The drive assembly must be completely assembled before assembling the body.

## **Body Sides**

- Install the left rear side shell first; making sure the tongue on the inside of the shell
  is between the slide and backbone and slide it toward the center of the loader,
  locking the shell in place by the spring lock.
- Next, attach the right side rear shell to the drive assembly. Insert the tongue on the
  inside of the shell between the slide and backbone and slide it toward the center of
  the loader, locking the shell in place by the spring lock.
- Make sure the alignment posts are lined up, the tongue and groove of the body sides are interlocked, and that both lower spring tabs are locked into the body sides.

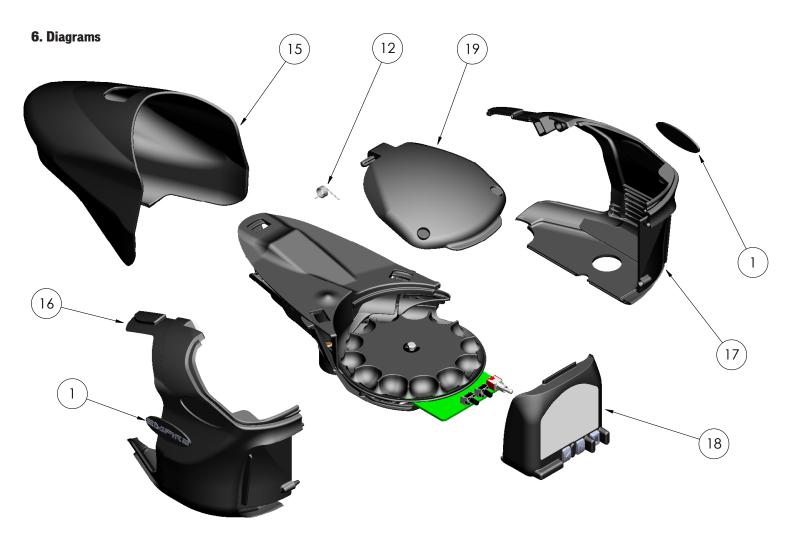
**Lid with Spring**- You will notice one side of the spring is longer than the other. Install the spring onto the longer lid pivot arm (left side) and with the longer part of the spring toward the center of the lid (Figure 5.7). With the lid in the fully open position, insert the pivot arm with spring into the left side of the body. Align the right side of the body with the pivot arm, bring the two sides of the body together, and close the lid. Check that the body is aligned and that the lid opens and closes correctly.

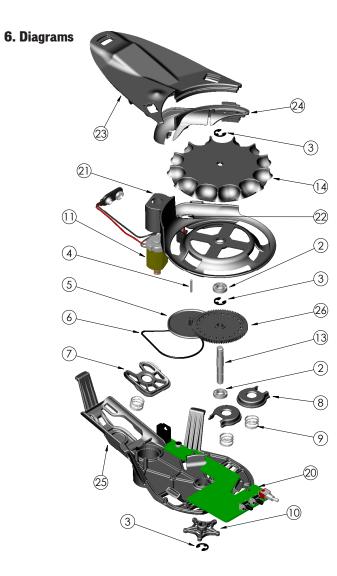


Fig. 5.7

**Backplate-** Put the top of the rear cover into the slot on the body, then gently rotate the cover down and lock the bottom tab into the body. Be careful not to damage the rear buttons on the circuit board.

**Body Front-** Slide the body front onto the drive assembly and push it until the upper tab and lower spring lock are in place. Be careful of the alignment and Do Not force it into place.





# 7. Parts List

REF #	DESCRIPTION	SKU #
not shown	Battery Holder	38746
1	Empire Bubble Sticker	38773
2	Bearing (R188)	38803
3	E-Ring (1/4 x .025 Thk)	38823
4	Pulley Dowel Pin (0.78 Dia x .500) 3882	
5	Pulley 31015	
6	Belt 3	
7	Spring Lock Front	31018
8	Spring Lock Back 3101	
9	Lock Spring	31020
10	Rip Drive 2 Wheel	31023
11	Motor with Harness	31024
12	Lid Spring	31025
13	Drive Shaft	31060
14	Drive Carrier	31061
15	Body Front	31062
16	Left Body Side	31063
17	Right Body Side	31064
18	Rear Cover (with decal)	31065
19	Lid 31	
20	Circuit Board	31068
21	Slide	31069
22	Slide Window	31070
23	Floor	31071
24	Outlet Cover	31072
25	Back Bone	31073
26	Sprocket 31074	

# 8. Troubleshooting Guide

Loader will not turn	Batteries are low on	Check the voltage of the batteries and
on	power or installed incorrectly	make sure they follow the polarity
		markings on the battery pack
	Circuit board is not plugged	Remove the floor and check the connection
	in correctly	connection between the board and wiring
	in correctly	harness
	Broken Wire	Check wiring connections for damage
Loader is not feeding	Outlet cover installed	Check that the outlet cover is sitting
_	incorrectly.	in the slide correctly. Look in the feed
		neck and drive area to check alignment
	Batteries are low on power	Replace batteries
Loader is feeding	Batteries are low	Check the voltage of the batteries with a
inconsistently		multimeter
	Drive Belt is wet or worn	Check drive belt condition, replace if
		necessary
Spring locks are not	Drive assembly is not	The drive assembly has to sit into the
locking into body	sitting in body correctly	lower groove on the inside of the rear
		body sides
	Rear body sides are not	Check if the tongue and groove of
	lined up	the rear body shells are interlocked
Lid is not staying	Lid spring not installed or	Check that lid spring is installed correctly.
open	installed correctly	, j
Balls are jamming	Outlet cover is worn	Replace outlet cover

#### LIMITED LIFETIME WARRANTY INFORMATION (ORIGINAL PURCHASE RECEIPT REQUIRED)

KEE Action Sports ("KEE") warrants that this product is free from defects in materials and workmanship for as long as it is owned by the original purchaser, subject to the terms and conditions set forth below. KEE Action Sports will repair or replace with the same or equivalent model, without charge, any of its products that have failed in normal use because of a defect in material or workmanship.

KEE Action Sports is dedicated to providing you with products of the highest quality and the industry's best product support available for satisfactory play.

Purchaser must register product to activate warranty..
Register your product either:

- 1. Online at www.paintballsolutions.com
- Complete the product registration card (if applicable) and mail along with a copy of your receipt to Paintball Solutions,

11723 Lime Kiln Rd., Neosho, MO 64850.

#### WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover problems resulting from abuse, the unauthorized modification or alteration of our product, problems resulting from the addition of aftermarket products and scratches or minor superficial imperfections. Due to the nature of paintball products it is important that the product be maintained by the user as indicated in the product manual to remain in good operating condition. Your Limited Warranty will be void if you fail to maintain the product as recommended in the product instruction manual. In addition, certain parts of a product may be subject to wear through regular usage. Replacement and repair of such parts is the responsibility of the user throughout the life of the product. These parts are not covered under the Limited Warranty. Examples of this type of part include (but are not limited to) goggle lens, straps, o-ring seals, cup seals, springs, ball detentes, batteries, hoses, drive belts, gears and any part of a product subject to continuous impact from paintballs. Hydrotesting of air cylinders is not covered under this warranty.

THE LIMITED WARRANTY ALSO DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES THIS WARRANTY IS THE SOLE WRITTEN WARRANTY ON KEE'S PRODUCT AND LIMITS ANY IMPLIED WARRANTY TO THE PERIOD THAT THE PRODUCT IS OWNED BY THE ORIGINAL PURCHASER. SOME STATES, PROVINCES AND NATIONS DO NOT ALLOW THE LIMITATION OF IMPLIED WARRANTIES OR OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE, PROVINCE TO PROVINCE, NATION TO NATION.

If you should encounter any problems with your product and you have added aftermarket parts on your product, please test it with the original stock parts before sending it in. Always unload and remove air supply before shipping markers. Do not ship your air supply tank if it is not completely empty. Shipping a pressurized air supply tank is unsafe and unlawful. Remove all batteries from products prior to shipping.

This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion of incidental or consequential damages.

#### HOW TO CLAIM YOUR LIMITED WARRANTY:

- Prior to shipping your product for warranty service, call or email KEE Customer Service at 1-800-220-3222 or tech@paintballsolutions.com and request a return authorization number and shipping address. To ensure your package is accepted and properly processed, the return authorization number must be clearly visible on the outside of the package.
- 2.All products returned for warranty service must include a copy of the original purchase receipt and a letter clearly listing the return authorization number, your complete name, address, phone number and email address and a description of the problem.
- 3. Products returned for warranty service should be sent only by delivery services that provide tracking services. KEE is not responsible for replacement of any products lost in transit.
- 4.Be sure to include return address information. If you do not include return shipment instructions, the ownership of the product is determined to be surrendered and the product will be disposed of at the discretion of KEE.

#### REPAIRS NOT COVERED BY WARRANTY

KEE Action Sports Authorized Service Centers will gladly perform repairs not covered by this Limited Warranty for a nominal charge to cover parts and labor. Repairs made by Service Centers will usually be faster and less expensive than those sent back to the factory.

How to return your product for service not covered by this Limited Warranty:

- Prior to shipping your product for service not covered by this Limited Warranty, call or email KEE Customer Service at 1-800-220-3222 or tech@paintballsolutions.com and request a return authorization number and shipping address. To ensure your package is accepted and properly processed, the return authorization number must be clearly visible on the outside of the package.
- 2. All products returned for service not covered by this Limited Warranty must include a copy of the original pur chase receipt and a letter clearly listing the return authorization number, your complete name, address, phone number and email address and a description of the problem.
- Products returned for service not covered by this Limited Warranty should be sent only by delivery services that provide tracking services. KEE is not responsible for replacement of any products lost in transit.
- 4. Any product returned to KEE for repairs not covered by this Limited Warranty must be shipped postage paid and include the repair fee. Please call or email KEE Customer Service for current repair fees. KEE will repair or replace the product with a reconditioned unit of the same or equivalent model. If you ship your pout without enclosing payment of the repair fee payment, KEE will bill you for the repair fee plus a \$5.00 handling fee. Upon receipt of repair and handling fees payment, the product or its replacement will be shipped to you. If you do not include return shipment instructions or fail to submit your payment for repairs within 60 days of billing, the ownership of the product is determined to be surrendered and the product will be disposed of at the discretion of KEE.

For repairs not covered by this Limited Warranty contact Paintball Solutions for repair pricing.

This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion of incidental or consequential damages.

For Warranty parts, service, information or manuals in other languages, (where applicable) go to:

Paintball Solutions: www.paintballsolutions.com

E-Mail: tech@paintballsolutions.com Telephone: 1-800-220-3222

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800-220-3222