

BASIC MAINTENANCE INSTRUCTIONS

Basic maintenance should be carried out when required. Failure to do so will void your Manufactures Warranty. A full strip of the gun should be done when your marker is subjected to adverse conditions.



Stage 1
Cock the marker then engage the safety catch. Remove the cocking handle (part No. 0034) from the main body (Part No.1310).



Stage 2
Remove the long bolt from the Inferno, (Part No.0045) it should slide out easily.



Stage 3
Squeeze the Inferno with a Powerball Bow Tie Squeegee making sure it removes all dirt and paint.



Stage 4
Using Inferno lube squirt a few drops on the long bolt.
IMPORTANT
Also squirt a small amount of oil onto the cocked hammer before replacing the bolt to prevent rusting.



Stage 5
Place the long bolt back into the Inferno marker. Make sure two holes are facing down and one hole is facing up.



Stage 6
When replacing the cocking pin make sure you align the cocking pin with the hole in the hammer.

NO ALKALINE OR SOAP CLEANERS ARE TO BE USED AS THIS ATTACKS THE ALUMINIUM PARTS

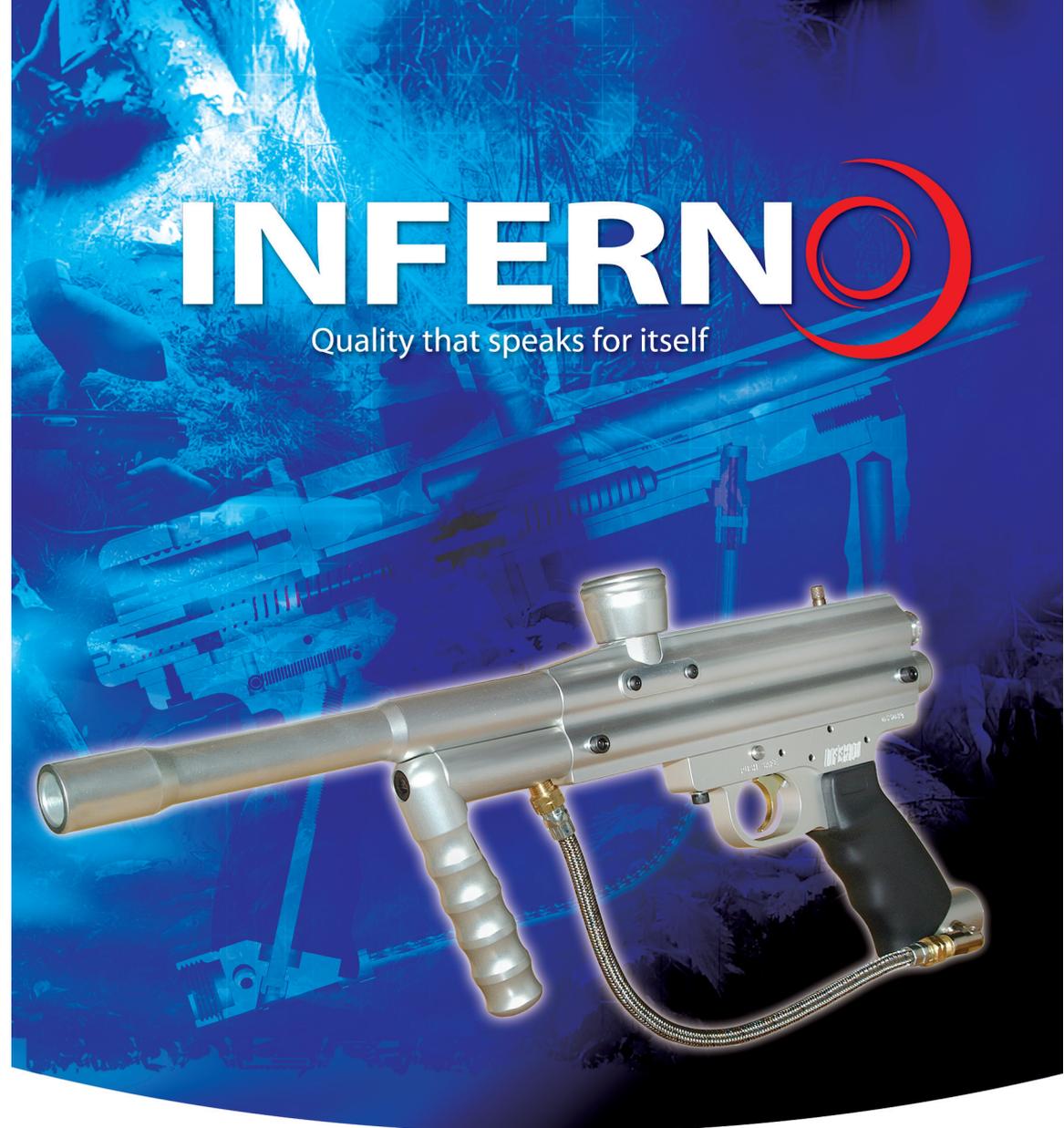
WIPE THE EXTERIOR CLEAN WITH AN OILY RAG OR MOISTENED SPONGE. DO NOT IMMERSE MARKERS IN WATER!



Extended warranty - 2 year Manufactures Warranty

All Inferno markers now come with a 2 year warranty. The warranty covers markers purchased from 1st January 2008 onwards.

The warranty is subject to necessary maintenance of marker's as specified in the Inferno manual, supplied with your marker.



Instruction manual

V-1.3.4



PRECAUTIONS/SAFETY INSTRUCTIONS

Please read this manual carefully before using this paintgun.

Always treat the “Inferno” (and any other firearm) as if it were loaded, this will avoid unpleasant “surprises”. The “Inferno” paintball gun is not a toy, it can cause injury or death if misused. Always use a barrel plug when not playing. When using the “Inferno” you must make sure that yourself and anyone who is within range is wearing approved eye and ear protection.

Please make sure that this manual is included with the gun if you sell this paintgun. Read these instructions prior to use. Always make sure that both you and anyone within range is wearing approved eye protection. Always store the paintgun with the gas tank and loader removed.

If you need to make sure that the paintgun is un-loaded then do this by removing the loader and then tipping any remaining balls out of the breech and then firing the gun twice while pointed in a SAFE direction and then removing the gas source.

WARNING - Never look into the barrel while it is installed on the marker.

If using compressed air as a propellant then only use the correct lubricants as recommended by the air system manufacturer. Whatever propellant gas you use make sure that only approved experts work on any part of the cylinder or air regulator: Remember, compressed gases can kill, they must be treated with respect.

WARNING -The “Inferno” may sometimes fire spontaneously if energised with a gas source without first cocking the hammer, so always wear safety goggles.

WARNING - Do not attempt to dismantle the Inferno beyond removing the barrel and bolt without first making sure that it is unloaded and de-gassed.

OPERATING INSTRUCTIONS

Section 1 - Preparing For Use

Make sure that you and everyone else within range is wearing approved eye and ear protection. Make sure that the safety catch is set to “safe” by pressing the safety catch in from the left side of the gun (viewed from the rear) and install a barrel safety plug into the barrel before cocking the gun by pulling the cocking handle to the rear until it locks backwards. Install the gas supply and the feed system, then check the muzzle velocity as in section 4 below. You are now ready to play paintball.

Section 2 - Making the Gun Safe

Install a barrel safety plug in the barrel, tip the gun sideways so that the ball in the breech rolls back into the feeder. Then grasp the cocking handle and pull the trigger at the same time, be careful to only let the cocking handle come forward slowly until it is all the way forwards. Then push the safety catch to “safe”. The gun is now safe and if you are finishing for the day you can remove the gas tank. (Never store the gun with the feeder or the tank installed as this can be dangerous and/or cause damage to the gun).

Section 3 - Firing

First carry out the instructions as in “Preparing for Use” as above. Then push the safety catch to the fire position and pull the trigger when you are ready, the “Inferno” will fire every time you pull the trigger.

Section 4 - Velocity Adjustment

Because the firing velocity of your gun is dependant on such things as temperature, weather and altitude, you must test the velocity before use (and subsequently before every day of use). You must use a chronograph to measure the firing velocity of your gun. The velocity must not exceed 300 feet per second (the limit at some fields may be less). At the rear of the gun you will find the velocity adjustment screw. Turning this clockwise will increase the velocity and turning it anti-clockwise will decrease the velocity. (TIP- When using CO₂) In cold weather the velocity adjuster may not seem to do very much, don’t wind it in all the way.

Section 5 - Exhaust Valves

Attention-There are two different exhaust valves available for the inferno, with characteristics as follows:

(CO₂ ONLY) Black (soft) seal: Used for temperatures below 80° Fahrenheit (26° Celsius) and input pressures below 1,000 psi, this seal exhibits good sealing characteristics at very low temperatures and pressures. Its resilience means that leakage caused by dirt or grit can usually be cured by cleaning the sealing surface.

(When using Air) White (hard) seal: Used for temperatures above 80° Fahrenheit (26° Celsius) and input pressures above 1,000 psi, this seal is extra hard to resist extreme pressure and temperature, but may not seal properly at lower temperatures.

The exhaust valve installed in your gun depends on the model type and the country in which you live. Some models of Inferno are supplied with a spares kit.

If you experience loss of performance in warm conditions, then please make sure that a white seal is installed in your gun.

TROUBLESHOOTING

If you break a ball:

If you break a ball in the barrel then all that is needed in most cases is to squeeze out the barrel with a barrel cleaner. You can do this without removing the barrel if you are careful not to damage the ball retainer. If you break a ball in the breech then proceed as follows:

All Infernos

First clear any jam by pulling the cocking handle back (if it has jammed then a sharp tap will free it quicker than a steady pull) then de-cock the gun by tipping the gun sideways so that the ball in the breech rolls back into the feeder; remove hopper/loader and cap with ‘hopper stopper’ then grasp the cocking handle and pull the trigger at the same time. Be careful to only let the cocking handle come forward slowly until it is all the way forwards.

Inferno with Quick-Strip Bolt

Hold the gun tipped back slightly (to stop the bolt sliding forward) and remove the cocking handle. Grasp the grooved portion of the bolt that protrudes from the back of the gun and pull the bolt rearwards from the gun.

Clean all of the paint and shell from the bolt and breech area then re-lubricate the bolt. Replace the bolt (the correct side up with the gas transfer hole at the bottom, if you replace it up-side down then the gun will not fire any balls and you may damage the ball retainer) and push the cocking handle back through the bolt and hammer (the easiest way to do this is to push it through until it touches the top of the hammer and then slide it back until it engages the hole in the hammer).

Gun will not fire even though tank is installed:

- 1/ Some tank valves are opened by screwing the tank onto the gun, make sure that the tank is screwed in all the way. If the gun still will not work then the valve may be faulty or incompatible with your gun.

If the velocity is too low and will not turn up then it could mean:

- 1/ Inlet gas pressure too low, below 500 psi inlet pressure (CO₂) gun may not achieve 300 fps. This could be because the tank is either too cold or empty.
- 2/ Inlet gas pressure too high, above 1200 psi inlet pressure gun will not achieve maximum velocity and may not re-cock reliably.
- 3/ Hammer speed too slow, caused by dirt or something else. Strip gun, clean all moving parts and assemble after lubricating with Inferno-lube. Make sure that the hammer and bolt are an easy sliding fit in the bores, if not then replace the hammer O-ring.
- 4/ Mainspring worn out.
- 5/ Poor flow of gas in system, could be a bad valve on tank or other blockage.
- 6/ Bolt installed upside down.

If the gun does not re-cock properly (goes fully-auto or burps) then it could be:

- 1/ Inlet pressure too low, below 300 psi the gun will not cock reliably. Re-fill tank or warm tank up (with lukewarm **water, not heat**).
- 2/ Inlet pressure too high, cool tank down or use a regulator.
- 3/ Hammer speed too slow, see above.
- 4/ Mainspring worn out.

If the gun double feeds (fires two balls at once) then:

- 1/ Check the ball retainer by unscrewing the cover plate and removing the retainer; inspect it for damage, especially any cuts or cracks around the base of the rubber “spike”. replace part if necessary.

TROUBLESHOOTING

If you experience ball breakage in the barrel then:

- 1/ Bad paintballs, buy better quality next time.
- 2/ Velocity too high, reduce velocity.
- 3/ Liquid CO₂ entering gun, have an anti-siphon tube fitted to your tank.

If you experience ball breakage in the breech then:

- 1/ Poor feeding, make sure that balls can enter breech as fast as you can fire them. Make sure hopper and elbow are clean. If you fire long bursts very fast then you may need a motorised loader. Also make sure that the balls are not breaking in the loader; this could be because they are too brittle or because you are shaking the hell out of them!
- 2/ Liquid CO₂ entering gun causing gas to be blown up into the feeder; make sure your cylinder is fitted with an anti-liquid device.

If you experience poor accuracy then it could be:

- 1/ Poor paint.
- 2/ Paint or oil in barrel, clean it out.
- 3/ Velocity too high.

Leaks from barrel:

- 1/ Exhaust valve is dirty or worn out, clean or replace.

Gun will fire single shots OK but drops off or goes fully auto under rapid fire:

- 1/ Poor flow causing gas starvation under rapid fire, check tank valve is flowing enough gas and there are no other obstructions in gas supply. Poorly fitted expansion systems etc. are usually the worst culprits.

Instructions for fitting anti-siphon tubes

We recommend that any work that is carried out on the gas cylinder is carried out by a qualified professional, and the information in this chapter is intended to be used by such a person. **PLEASE DO NOT ATTEMPT TO SERVICE YOUR GAS CYLINDER YOURSELF.**

- 1/ Screw valve into bottom-line **all the way on.**
- 2/ Install anti-siphon tube into valve until it is tight.
- 3/ Bend tube up so that it is within 1/16" of touching the top of the tank, around halfway down the length of the tank.
- 4/ Then mark the valve at the top when it is installed on the gun (with a punch mark or something similar).
- 5/ Then have the valve installed **by a professional at Arrow Precision.**
- 6/ **Ensure cylinders and valve/regulator is Pi marked and in test.**

Now when your tank is installed on your gun, the mark should appear at the top of the valve and the tube will then only draw gas CO₂ from the top of the cylinder.

Instructions For Full Disassembly of the Inferno

- 1/ Before starting make sure that the Inferno is unloaded and de-gassed by removing the loader and cylinder and then unscrewing the barrel. Then point the gun in a safe direction and cock and fire it once to verify that it is de-gassed.
- 2/ Pull the cocking handle up this will allow you to remove the long bolt. Tip the gun up and the bolt should slide out the back of the Inferno.
- 3/ Using a 1/8 allen wrench, remove the two button head screws that retain the velocity adjuster, then withdraw the velocity adjuster and then the mainspring guide and bumper.
- 4/ Using a 3/16 allen wrench remove the cap head screw that holds the grip and bottom-line to the grip frame and then remove those parts.
- 5/ Then using a 1/8 allen wrench, remove the front and rear grip frame retaining screws and remove the grip frame.
- 6/ Using a 1/8 allen wrench, remove the two button head screws and washers that hold the valve body in place and slide out the valve body from the front.
- 8/ If you need to remove the ball retainer then use a 5/64 allen wrench to remove the screws and washers and lift off the cover. The retainer can then be picked out with a fine piece of wire or something similar.
- 9/ If you need to dismantle the valve body, unscrew the valve guide and then remove the exhaust valve and spring.
- 10/ Re-assembly is the reversal of the above.



TIPS/MAINTENANCE (CLEANING GUIDE ON BACK PAGE)

Given the correct treatment the Inferno will perform reliably for many years. Cleaning dirt and contamination from the working parts will reduce wear rates considerably, so always clean your gun after use. A well maintained gun will shoot more consistently and more accurately, for longer. Therefore your target will receive more paintballs, this is what you want!

Always start any work on the gun by removing the CO² or air cylinder and any paintball hopper.

To field clean the gun, cock the gun and apply the safety, this stops hammer from being able to rotate if trigger is accidentally pulled and exposes more area for lubrication. Then remove the cocking handle by pulling upwards, this will allow the bolt to be removed, backwards, from the breech chamber. Wipe any residual paint from the feed stub and then clean the bolt using an oiled lint free cloth. Using a "squeegee," clean straight through, from rear of the marker out of barrel, do not go from barrel end as this will drag contaminants into marker internals. Ensure the barrel is clean by inspection, any paint, water or oil residue in the barrel will cause extreme inaccuracy. Then squirt some "Inferno-lube" oil (available from Arrow-Precision Ltd) down through the cocking handle slot so lubricant reaches the hammer assembly. The bolt can then be replaced into the breech after a light spray of oil, rotate once to spread oil and ensure the transfer port is facing down towards trigger. After aligning the hole in the bolt and the hammer, insert the cocking handle and check by cycling the action. Wipe over external surfaces with an oiled lint free cloth.

TIPS

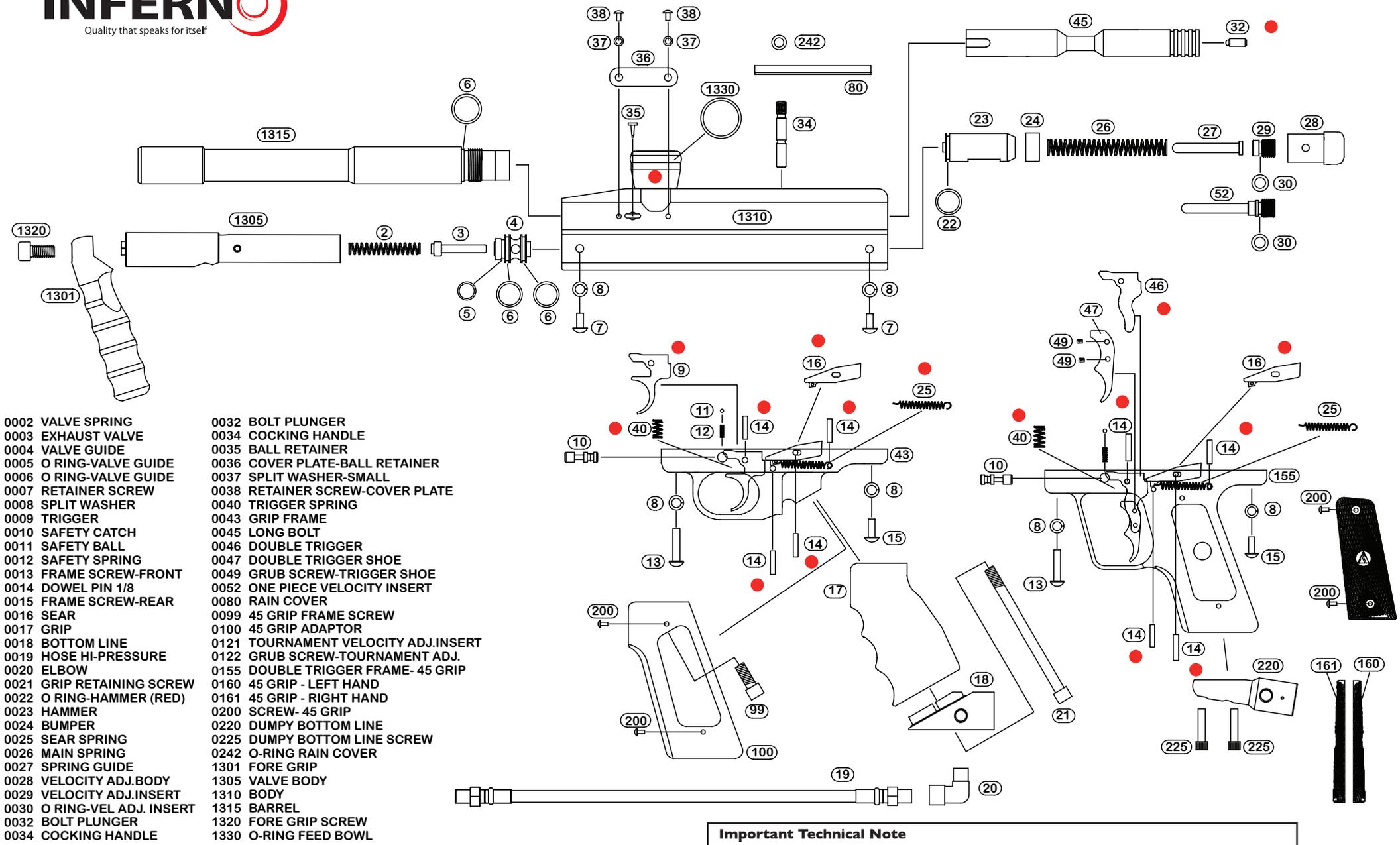
It is a legal obligation to ensure your Inferno is not producing velocities over 300 feet per second, Chronograph your gun to be certain it isn't. Then re-check after a few minutes.

- 1/ Playing in cold weather you may notice it becomes difficult to achieve velocities near 300 fps. The velocity adjuster can be used to compensate, but do not wind it all the way in an attempt to get the best velocity. This will cause the Inferno to use even more gas and reduce the temperature of the tank further, making the problem worse. CO₂ needs to "boil off" into a gas and absorbs heat to do so, so warming the tank slightly will help, placing in warm room or water for a hour or so will be sufficient to allow the gun to function properly again.
- 2/ Conversely in very hot weather the Inferno may not be able to fire when using CO₂, as the pressure will have increased to beyond operating limits.
- 3/ If you experience either situation demonstrating the limitations of CO₂, using an air system may be a better propellant source. Air systems offer some advantages over CO₂ - Air gives better shot to shot consistency as it is delivered at a fixed pressure to the gun. The pressure of CO₂ changes considerably as the temperature changes, air is not affected by temperature changes nearly as much. Arrow-Precision Ltd can supply the correct "Pi" marked "Airborn" regulators and high pressure air cylinders to achieve this safely.
- 4/ The "Inferno-lube" is recommended for use in the Inferno because it has been specifically formulated- It will not adversely affect seals and O rings like other lubricants might and is the optimal grade to ensure correct functioning. Always use a tank fitted with an internal "anti-siphon", this ensures no liquid CO₂ enters the gun in use. This gives better general consistency and avoids undesirable effects like accelerated wear, poor accuracy and ball breakage.

THINGS NOT TO DO

- 1/ Do not dry fire (that is, fire the gun without any gas supply), as this allows all the working parts to "slam" into each other. If this happens excessively, then serious damage will result.
- 2/ Do not use liquid CO₂ (i.e. a siphon tank), this can cause accelerated wear on the working parts and undesirable side effects such as poor accuracy and ball breakage.
- 3/ If the "Inferno" goes fully auto when firing then it could possibly be because the cocking handle has with drawn from the hammer; if this is the case then "catching" the cocking handle will not stop the gun from firing. In this case the gun can be stopped from firing by turning the gas supply off. Be careful not to push the cocking handle down while the gun is "running away", as this may cause damage to the gun.





- | | |
|-----------------------------|-------------------------------------|
| 0002 VALVE SPRING | 0032 BOLT PLUNGER |
| 0003 EXHAUST VALVE | 0034 COCKING HANDLE |
| 0004 VALVE GUIDE | 0035 BALL RETAINER |
| 0005 O RING-VALVE GUIDE | 0036 COVER PLATE-BALL RETAINER |
| 0006 O RING-VALVE GUIDE | 0037 SPLIT WASHER-SMALL |
| 0007 RETAINER SCREW | 0038 RETAINER SCREW-COVER PLATE |
| 0008 SPLIT WASHER | 0040 TRIGGER SPRING |
| 0009 TRIGGER | 0043 GRIP FRAME |
| 0010 SAFETY CATCH | 0045 LONG BOLT |
| 0011 SAFETY BALL | 0046 DOUBLE TRIGGER |
| 0012 SAFETY SPRING | 0047 DOUBLE TRIGGER SHOE |
| 0013 FRAME SCREW-FRONT | 0049 GRUB SCREW-TRIGGER SHOE |
| 0014 DOWEL PIN 1/8 | 0052 ONE PIECE VELOCITY INSERT |
| 0015 FRAME SCREW-REAR | 0080 RAIN COVER |
| 0016 SEAR | 0099 45 GRIP FRAME SCREW |
| 0017 GRIP | 0100 45 GRIP ADAPTOR |
| 0018 BOTTOM LINE | 0121 TOURNAMENT VELOCITY ADJ.INSERT |
| 0019 HOSE HI-PRESSURE | 0122 GRUB SCREW-TOURNAMENT ADJ. |
| 0020 ELBOW | 0155 DOUBLE TRIGGER FRAME- 45 GRIP |
| 0021 GRIP RETAINING SCREW | 0160 45 GRIP - LEFT HAND |
| 0022 O RING-HAMMER (RED) | 0161 45 GRIP - RIGHT HAND |
| 0023 HAMMER | 0200 SCREW- 45 GRIP |
| 0024 BUMPER | 0220 DUMPY BOTTOM LINE |
| 0025 SEAR SPRING | 0225 DUMPY BOTTOM LINE SCREW |
| 0026 MAIN SPRING | 0242 O-RING RAIN COVER |
| 0027 SPRING GUIDE | 1301 FORE GRIP |
| 0028 VELOCITY ADJ.BODY | 1305 VALVE BODY |
| 0029 VELOCITY ADJ.INSERT | 1310 BODY |
| 0030 O RING-VEL ADJ. INSERT | 1315 BARREL |
| 0032 BOLT PLUNGER | 1320 FORE GRIP SCREW |
| 0034 COCKING HANDLE | 1330 O-RING FEED BOWL |

Important Technical Note

When converting any Inferno marker from CO2 to air you must use The Air Conversion kit
 These parts must be changed: 26: MAIN SPRING 4:VALVE GUIDE 3:EXHAUST VALVE
 22: HAMMER O-RING (RED)

Old velocity adjusters are still ok for converting to Air.You must use a chronograph to measure the firing velocity of your gun.The velocity must not exceed 300 feet per second (the limit at some fields may be less).

Please do not change parts marked with a red dot.These parts require specialist tools and can be factory fitted at Powerball