

INFERNO

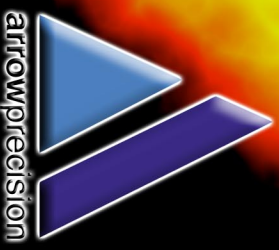


Arrow Precision Limited
Unit 7 Elliott Industrial Park
Eastern Road
Aldershot
Hampshire GU12 4TF
United Kingdom

Tel: (01252) 408 552
Fax: (01252) 408 551

Email: sales@arrow-precision.com
Web: www.arrow-precision.com

INSTRUCTION MANUAL



INFERNO INSTRUCTION MANUAL I.3.I

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 and feeder. (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- In cold weather the velocity adjuster may not seem to do very much, adjust the velocity to the desired setting, or as near as possible and then don't turn it up any further).

Section 5 - Exhaust Valves

Attention-this gun is shipped with two exhaust valves. One installed in the gun and one is the spares kit. They are both different types, as follows:

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.

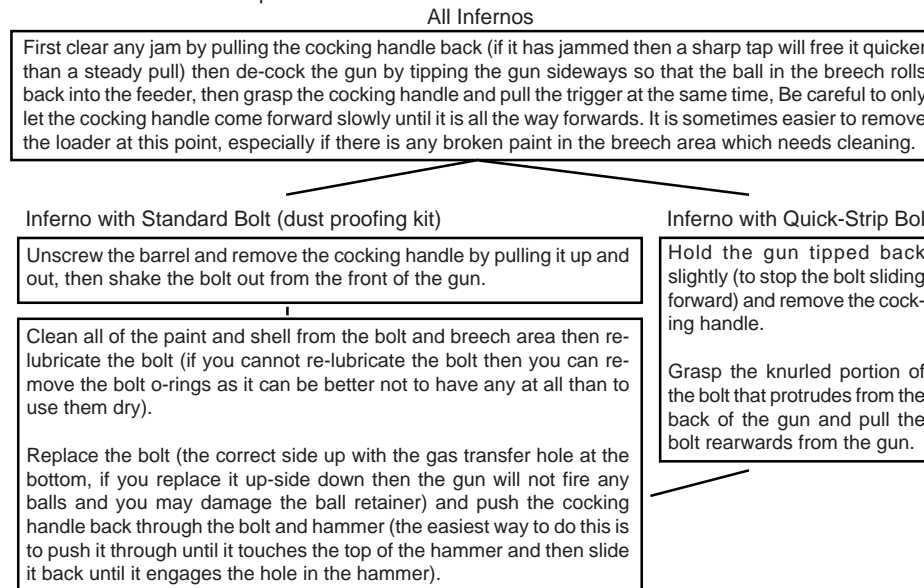
White (hard) seal: Used for temperatures above 80° Fahrenheit (26° Celsius) and input pressures above 1,000 psi, this seal is extra hard to resist extreme pressure and temperature, but may not seal properly at lower temperatures.

If you experience loss of performance in warm conditions then please make sure that the 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 squeegee 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:



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 a thin **suitable lubricant**. Make sure that the hammer and bolt are a loose fit in the bores, if not then replace the relevant o-rings.
- 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".

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.

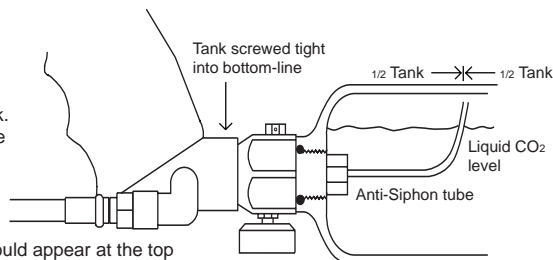
Gun will fire single shots OK but drops off or goes fully auto under rapid fire:

- 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.**



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 and out of the gun and shake the bolt out of the front of the gun.
- 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 and guide.
- 4/ Then holding your hand over the end, tip the gun backwards and shake until the hammer and damping ring fall into your hand.
- 5/ 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.
- 6/ Then using a 1/8 allen wrench, remove the front and rear grip frame retaining screws and remove the grip frame.
- 7/ 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/ Using a 9/64 allen wrench, remove the top cap retaining screw and then remove the top cap.
- 9/ If you need to remove the ball retainer then use a 5/64 allen wrench to remove the screws and washers and lift of the cover. The retainer can then be picked out with a fine piece of wire or something similar.
- 10/ If you need to dismantle the valve body, unscrew the valve guide and then remove the exhaust valve and spring.
- 11/ Re-assembly is the reversal of the above.

TIPS/MAINTENANCE

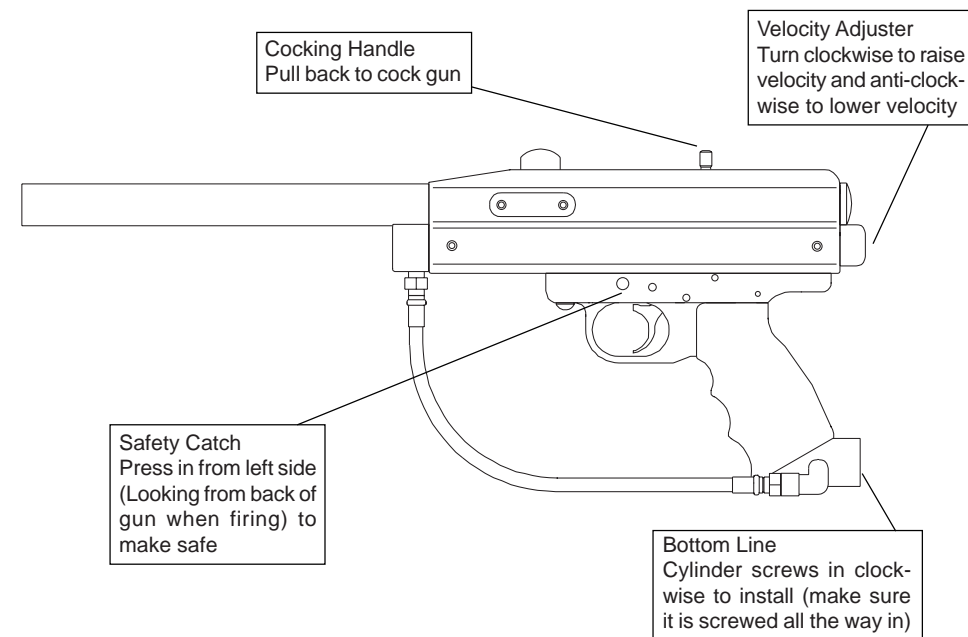
When chronographing your gun, do so after it has been pressurised for a few minutes, as the velocity will often decrease slightly during this period. If you often play in cold weather and you experience problems with your tank getting too cold for your gun to work properly then it might be worth considering an air system, although a cheap option is to warm your tank up between games by dipping it in luke-warm water (even cold water will help!). If you often play in very hot weather and experience problems then it is worth considering the "Angry" regulator, although a cheaper option may be to keep your gun and tanks in the shade and use a neoprene tank cover.

Keep your gun clean, it's velocity and consistency are dependant upon this. Remove the bolt every couple of games and clean both it and the top bore before oiling with a suitable oil and replacing, occasionally squirt some oil down into the hammer chamber from above while the bolt is out. Make sure that you keep the barrel clean, any water, oil or broken paint in the barrel will cause extreme inaccuracy. If you are playing in very cold conditions the velocity in most cases will be lower than 300 fps, if this is the case then turn the velocity adjuster down until the velocity starts to drop and then turn it back in a quarter of a turn. This will ensure the best level of cold-weather performance.

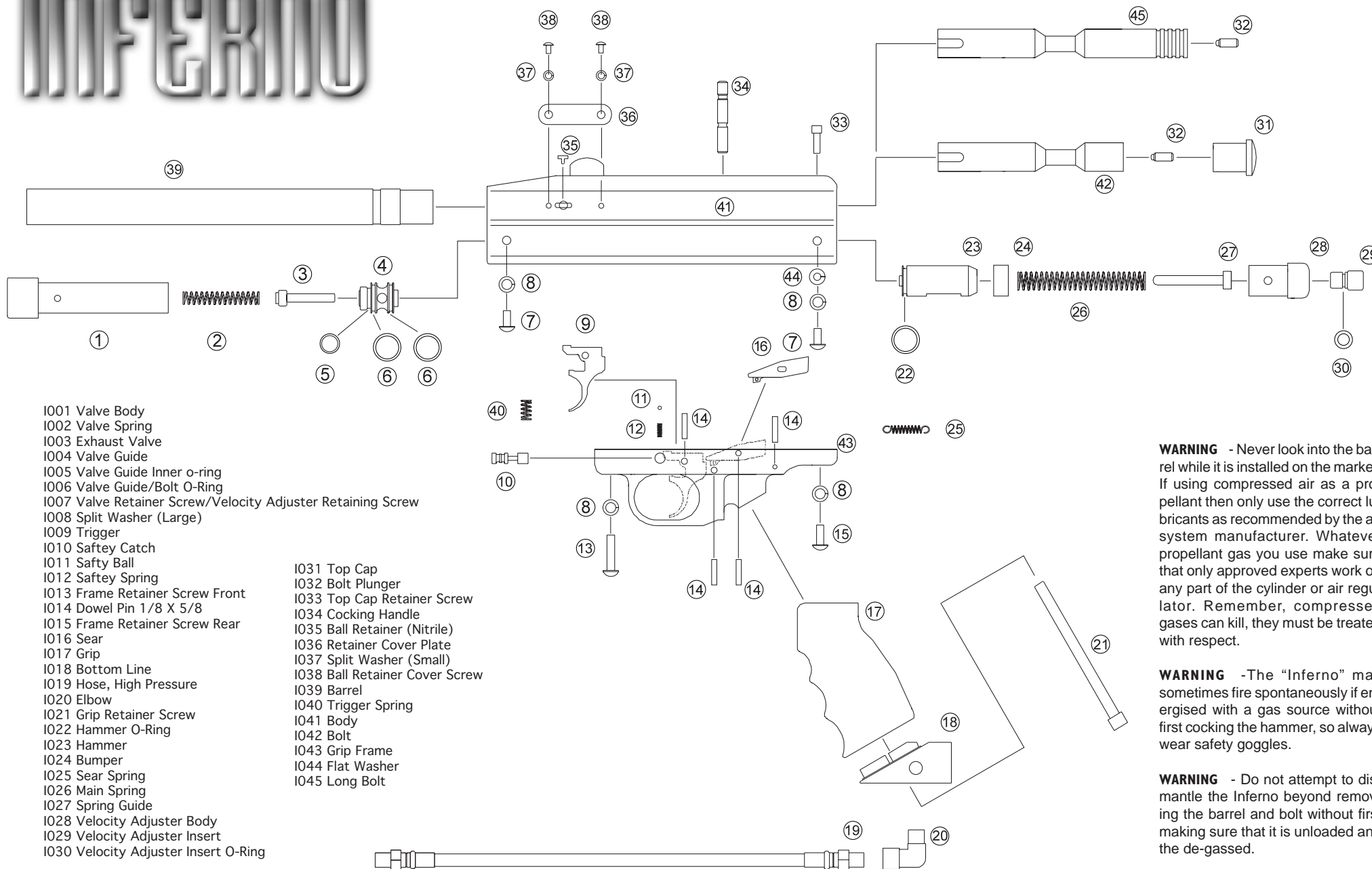
As your gun is manufactured from metal parts, **it will need periodic applications of lubricant.** The correct lubricant is any **light oil** that will not harm any of the seal or o-rings, we recommend "Inferno-lube", which is specially blended for use in your Inferno. Always use an anti-siphon tank that has been set-up for your gun, this will keep your velocity consistent, by making sure liquid CO₂ does not enter your gun.

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 withdrawn 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.



INFERNO



- I001 Valve Body
- I002 Valve Spring
- I003 Exhaust Valve
- I004 Valve Guide
- I005 Valve Guide Inner o-ring
- I006 Valve Guide/Bolt O-Ring
- I007 Valve Retainer Screw/Velocity Adjuster Retaining Screw
- I008 Split Washer (Large)
- I009 Trigger
- I010 Safety Catch
- I011 Safety Ball
- I012 Safety Spring
- I013 Frame Retainer Screw Front
- I014 Dowel Pin 1/8 X 5/8
- I015 Frame Retainer Screw Rear
- I016 Sear
- I017 Grip
- I018 Bottom Line
- I019 Hose, High Pressure
- I020 Elbow
- I021 Grip Retainer Screw
- I022 Hammer O-Ring
- I023 Hammer
- I024 Bumper
- I025 Sear Spring
- I026 Main Spring
- I027 Spring Guide
- I028 Velocity Adjuster Body
- I029 Velocity Adjuster Insert
- I030 Velocity Adjuster Insert O-Ring

- I031 Top Cap
- I032 Bolt Plunger
- I033 Top Cap Retainer Screw
- I034 Cocking Handle
- I035 Ball Retainer (Nitrile)
- I036 Retainer Cover Plate
- I037 Split Washer (Small)
- I038 Ball Retainer Cover Screw
- I039 Barrel
- I040 Trigger Spring
- I041 Body
- I042 Bolt
- I043 Grip Frame
- I044 Flat Washer
- I045 Long Bolt

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 the de-gassed.