

PULSEFIRE[®]

LONG RANGE TORCH

USER MANUAL



CAREFULLY READ AND UNDERSTAND ALL INFORMATION CONTAINED WITHIN THIS MANUAL BEFORE OPERATING THIS DEVICE. DO NOT DISCARD. THIS MANUAL SHOULD ALWAYS ACCOMPANY THIS DEVICE AND BE TRANSFERRED WITH IT UPON CHANGE OF OWNERSHIP, OR WHEN LOANED TO ANOTHER PERSON.



WELCOME TO QUALITY.

Thank you for choosing the Pulsefire LRT (long range torch), the epitome of flamethrower technology. You own the best, because we don't do anything less.

Our products have been developed to be as safe as propelling ignited liquid fuel can be. There are always inherent risks with flamethrower use, but a thorough understanding of its operation and a respect for its capabilities will go a long way.

When you handle the products we produce, you'll immediately notice the level of quality that comes with impeccable attention to detail in manufacturing. Every product we build is a perfect union of precision machining, metal forming, welding, and assembly.

WE'RE HERE FOR YOU.

A company is only as good as its people. We will always do everything in our power to make your experience the best it can be, before and after purchasing. If it's broke, we'll fix it. If you have a question, we'll answer it. If you just want to tell us how much you enjoy your flamethrower, we'll thank you.

Give us a call at **(772) 204-0700** or e-mail us at **info@exothermic.tech** with any questions or concerns and we'll do our best to help!



Exothermic Technologies
7356 Commercial Cir Unit D
Fort Pierce, FL 34951

NOT OPEN TO PUBLIC

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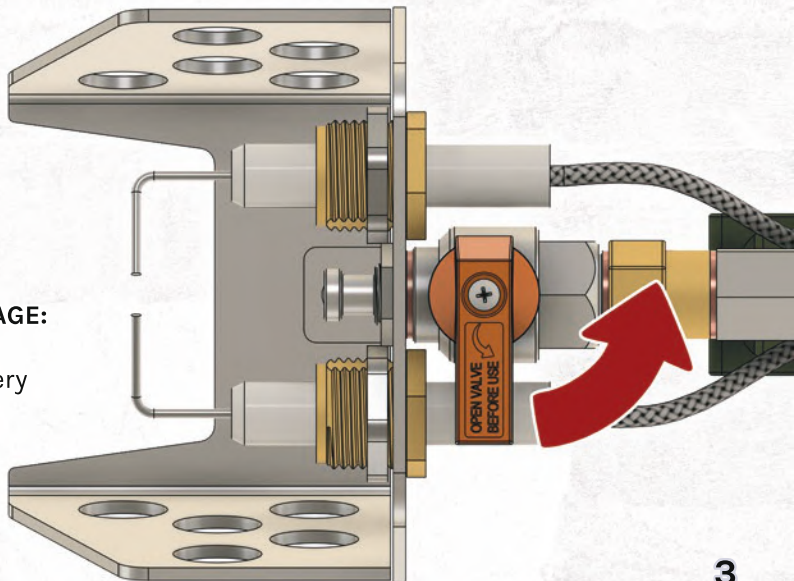


THIS MANUAL CONTAINS IMPORTANT SAFETY WARNINGS AND USAGE INSTRUCTIONS. READ AND UNDERSTAND BEFORE USE. DO NOT DISCARD.

The valve at the nozzle **must be opened before use**. The valve in this image is closed. Turn lever 90 degrees, per arrow direction, to open. Keep closed when not in use to prevent leaks.

INCLUDED IN PACKAGE:

- Pulsefire LRT
- Rechargeable battery
- Battery charger



IMPORTANT SAFETY AND USAGE INFORMATION



WHEN THE POWER SWITCH IS ON, AND THE TRIGGER BUTTON IS PRESSED, THE SYSTEM WILL EMIT A BLAST OF FUEL AND FLAMES UP TO AND BEYOND 25 FEET AWAY. DO NOT PRESS TRIGGER UNTIL READY AND AIMED IN A SAFE DIRECTION.

LITHIUM BATTERY SPECIFIC

DO NOT drop, puncture, submerge, short circuit, or otherwise damage the battery or wires in any way. If damage is sustained, move battery to a fireproof location and contact your local battery/hazmat disposal agency for instructions. **DO NOT** charge or install any battery with visible damage. **DO NOT** leave battery in direct sunlight. **DO NOT** charge except with a quality Li-Po balance charger provided or recommended by Exothermic Technologies. Battery performance is reduced below 32°F - keep batteries at room temperature for best performance. **DO NOT** charge unless battery is at least 32°F. A low voltage cutoff circuit exists to cut power to the trigger when voltage reaches 10.5 to protect the battery. Voltage is lower during use than it is when the system is idle, so be aware that it will stop seemingly early.



DO NOT discard in household trash - contact local battery disposal facility.

BEFORE USE

Remove battery from the unit and **charge in a fireproof location. DO NOT leave unattended.** Battery must be fully charged before first use. **ALWAYS** inspect battery for excessive bulging, frayed wires, or other physical damage. **DO NOT** pinch any wires when installing lid to housing, it can cause a dangerous short circuit. **DO NOT** use if you detect or suspect any fuel leaks or wire damage. Contact us for instructions if a fault is suspected or found.

DURING USE

DO NOT use in excessively windy conditions. **ALWAYS** keep all body parts as far away as possible from the nozzle. **ALWAYS** aim in a safe direction (away from people, animals, and materials not intended to be ignited). **DO NOT** aim unit upward at an angle greater than 45 degrees due to higher risk of fuel dripping onto operator. Drips can occur at any time, even when the unit is off. Use in an upright position only. **DO NOT** touch nozzle area or electrodes during or immediately after use to avoid burns or high voltage shocks.

REFUELING

DO NOT open cap unless unit is on ground or grounded surface. **ALWAYS** pour fuel with fuel supply nozzle making direct contact with reservoir or funnel. Adhering to these guidelines will help prevent static buildup risks.

AFTER USE

Turn off main power switch. Extinguish any residual flame at nozzle area by blowing air at it from the side (**DO NOT** put yourself in front of the nozzle for any reason). Close the nozzle valve. **DO NOT** touch nozzle area or electrodes during or immediately after use to avoid burns or high voltage shocks.

STORAGE

Unit should be stored with reservoir no more than 3/4 full to allow for expansion. Ensure nozzle valve is in closed position. Disconnect battery and store separately in a fireproof area away from water, heat, sparks, or other physical hazards. Battery should be stored with its charge around 11.1-11.3 volts for maximum longevity.

GENERAL

Keep out of reach of children. **DO NOT** expose to or use in temperatures greater than 140°F or lower than 20°F. **DO NOT** drop or impact. **DO NOT** transport while filled with fuel, as fuel may leak from nozzle. If temperature or elevation changes significantly, slowly open and close the cap briefly to vent any excess pressure in or out. **DO NOT** use if there is any malfunction whatsoever. Contact us and we will take care of it.

ARC IGNITION

High voltage sparks are generated between the electrodes at the nozzle. **DO NOT** stare at spark. **DO NOT** touch or bring any part of your body or any other object near the electrodes during use. **DO NOT** use if the wires from the electrodes to the arc ignition box are damaged.

CALIFORNIA VERSION NOTICE

If you have a California model, the installed fan nozzle produces an extremely hot flame blast. **DO NOT** press the trigger for more than one second at a time with this nozzle installed.

**Seriously, read this stuff.
IT REALLY IS IMPORTANT.**

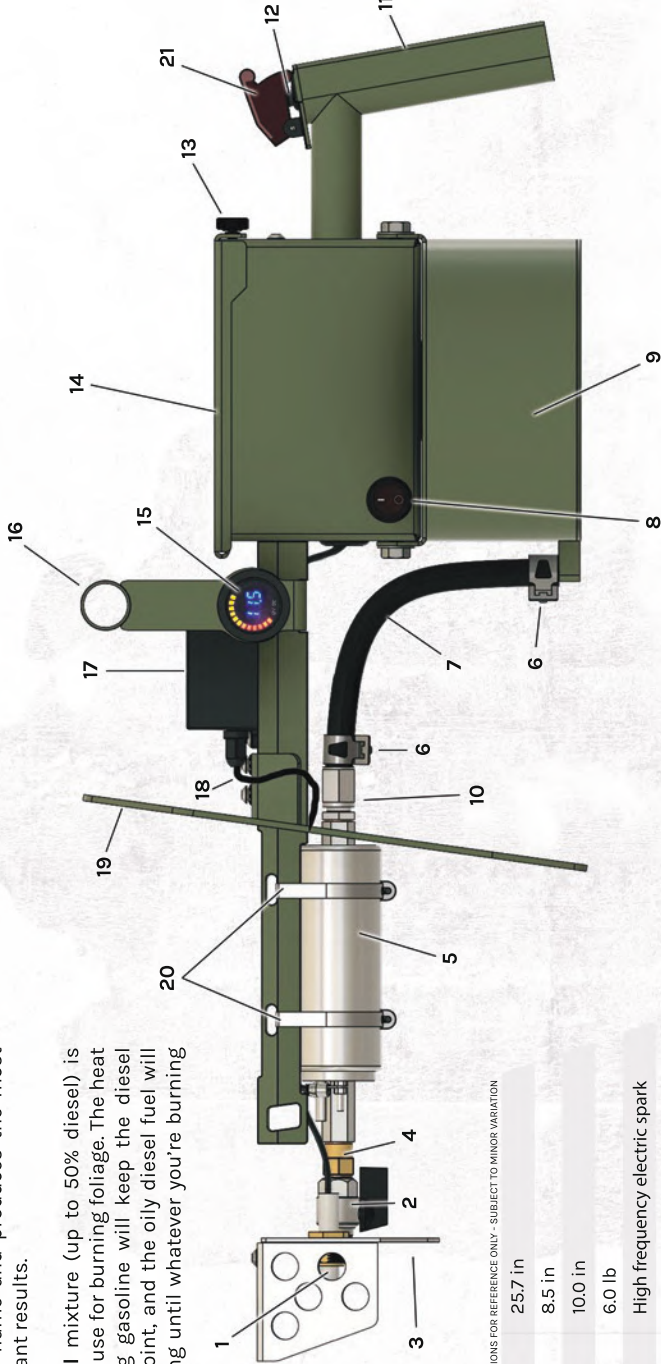
COMPATIBLE FUEL

Gasoline (unleaded, any octane) will produce a bright hot flashy flame and produces the most reliable and brilliant results.

A **gasoline-diesel** mixture (up to 50% diesel) is what you want to use for burning foliage. The heat from the burning gasoline will keep the diesel above its flash point, and the oily diesel fuel will keep the fire going until whatever you're burning is toast.

PULSEFIRE®

LONG RANGE TORCH



1. Electrode
2. Nozzle with valve
3. Nozzle drip shield
4. Check valve
5. Fuel pump
6. Hose clamp
7. Hose
8. Power switch
9. Fuel tank
10. 37° flare fittings
11. Rear handle
12. Trigger switch
13. Thumb screw
14. Lid
15. Voltage gauge
16. Front handle
17. HVT (arc ignition)
18. High voltage wires
19. Heat shield
20. Fuel pump clamps
21. Trigger switch cover

SPECIFICATIONS FOR REFERENCE ONLY - SUBJECT TO MINOR VARIATION

Length	25.7 in
Width	8.5 in
Height	10.0 in
Weight	6.0 lb
Ignition	High frequency electric spark
Default Nozzle	.072" solid stream
Typical Reach	25 ft*
Fuel Capacity	0.35 gal
Compatible Fuel	Gasoline, gasoline-diesel mixture
Primary Materials	Aluminum, Viton, brass
Finish	Powder coat
Battery	2200 mAh 3-cell rechargeable lithium

*under ideal conditions

OPERATING INSTRUCTIONS

1

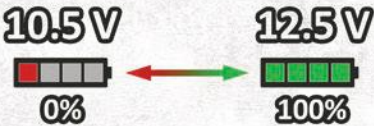
Plug the charger's 2-prong plug into a 110-120V AC outlet.

Remove the battery from the unit and charge in a fireproof location. Insert the white connector into the charger's 4-pin socket as shown, aligning the raised ridges on the connector with the socket (Figure 1).



READ THE WARNINGS ON PAGE 4 REGARDING LITHIUM BATTERIES.

The LEDs on the charger should become steady red (Figure 2). The battery is now charging. The first charge may take much longer than usual due to initial cell balancing. The lights will become steady green once charging is complete. At that time, carefully disconnect the battery and unplug the charger from the outlet. Do not damage the wires or a short may occur.



2

Remove the lid from the Pulsefire by unscrewing the black thumb screw from the rear of the unit (Figure 3). Lift the lid by the rear portion, and move the lid forward and upward to unhook it from the front of the housing (Figure 4).

Plug the battery's yellow connector into the Pulsefire's yellow connector (Figure 5). Position the battery in the unit in the best way to prevent strain on the wires.

Tuck charging wires out of the way before reinstalling lid. If they are pinched or damaged, a dangerous short can occur.

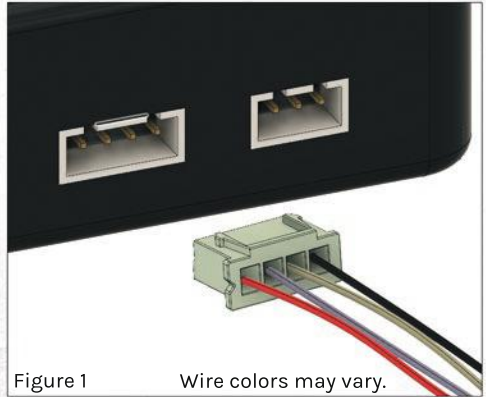


Figure 1



Figure 2

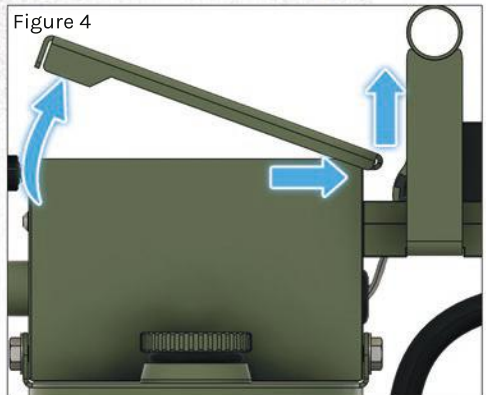


Figure 4

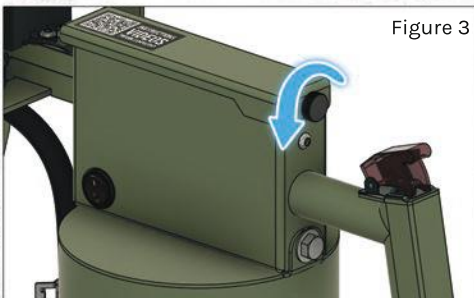


Figure 3

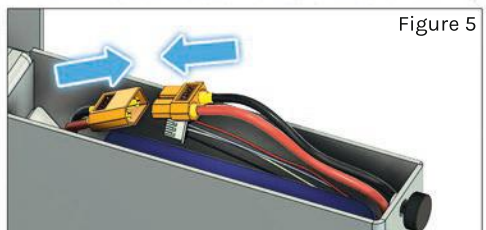
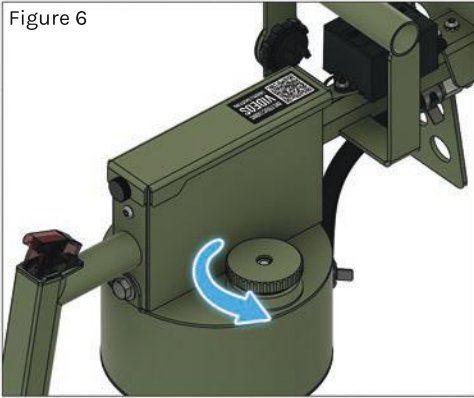


Figure 5

Figure 6



3

Unscrew the fuel cap by rotating it counter-clockwise (Figure 6). Pour fuel in, being careful to wipe up any spills. Reinstall fuel cap by rotating it clockwise. Hand tighten only; the reservoir is not subject to high pressure. No need to go too crazy.



DO NOT USE OR STORE ANY DIESEL MIX AT TEMPERATURES BELOW 32°F.



ALWAYS GROUND THE LRT BEFORE AND DURING FUELING.

WHAT FUEL SHOULD I USE?

Gasoline (unleaded, any octane) will produce a bright hot flashy flame and produces the most reliable and brilliant results.

A **gasoline-diesel mixture** (up to 50% diesel) is what you want to use for burning foliage. The heat from the burning gasoline will keep the diesel above its flash point, and the oily diesel fuel will keep the fire going until whatever you're burning is toast.



DO NOT TURN ON POWER UNTIL THE UNIT IS OUTDOORS AND POINTING IN A SAFE DIRECTION.

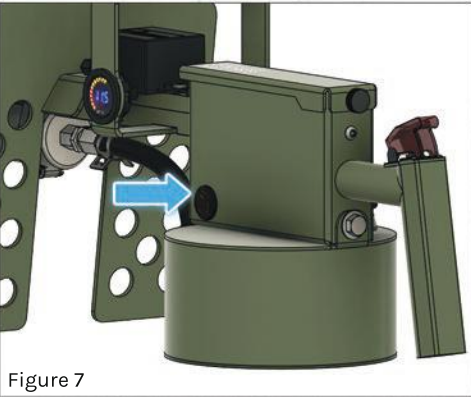


Figure 7

4

Remove nozzle cap, if installed. Open nozzle valve, if equipped. Turn on the power switch (Figure 7). The voltage gauge will illuminate and display a reading. The system is now armed and ready to fire. Remember, around 10.5 volts, power to the trigger will stop to protect the battery from damage. *Learn more on Page 4.*

Aim the Pulsefire in a safe direction, flip up red trigger switch cover, and press the trigger switch (Figure 8) to generate a flaming fuel stream from the nozzle out to 25+ feet away. **Be aware that everything in the path between you and your target may be exposed to fuel and flame. Drips will occur at the nozzle.**

5

Press the power switch to turn off the system (Figure 7). Blow out any remaining flames at the nozzle. Close the nozzle valve. Be aware of hot surfaces (Figure 9).



Figure 8

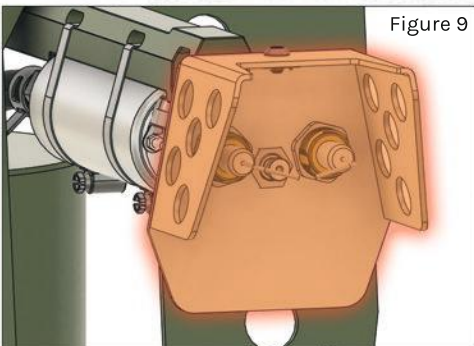


Figure 9

MAINTENANCE

Use brake cleaner and a cloth to keep the electrodes clean. Be sure to avoid getting any on the powder coated surfaces; it will damage the finish. Clean only when cool.

Regularly inspect hose for cracks or other degradation in material. Replace with a fluoroelastomer core 5/16" inner diameter hose if degradation is observed, or every 10 years. Modern automotive fuel injection hose is typically fluoroelastomer core.

Keep debris from collecting in fuel reservoir and plumbing. Disconnect hose from fuel pump and rinse reservoir and hose with water if necessary. Immediately replace with fuel after cleaning.

Inspect Li-Po battery for bulging, cracked/frayed wires, or other physical damage. Replace if any problems are present, otherwise replace after 200 cycles, or every 2 years using a 2200 mAh or larger capacity 3-cell (11.1 volt nominal) Li-Po battery with an XT60 connector.

TROUBLESHOOTING

No fuel is emitted.

- The nozzle valve is closed.
- The nozzle, check valve, pump, or reservoir is obstructed.
- The fuel pump is faulty or disconnected electrically.

The power switch is on but the voltage gauge does not display anything.

If pressing the trigger activates the pump and arc ignition:

- The gauge is faulty or a wire is disconnected.

If pressing the trigger does nothing:

- Battery is excessively drained, or not plugged in.
- A wire is disconnected.

The power switch is on but the trigger switch does not activate the pump and/or arc ignition.

If both pump and ignition don't work, and you can hear a **click** when pressing the trigger, the main power switch may be faulty, or connections loose. If you don't hear a click when pressing the trigger:

- Trigger switch may be faulty or a wire is disconnected.
- The low voltage cutoff circuit may be active.

If only one (pump or ignition) doesn't work:

- There may be a loose/disconnected wire to the respective part.
- The pump or arc ignition may be faulty.

The battery charger lights flash red even though the battery is connected.

- The battery is likely faulty. Try another battery.
- The charger may be faulty (rare).

Some charger lights are red even after at least one has been green for at least 20 min.

- The battery may be unbalanced and unable to be charged.
- The charger may be faulty.

Fuel is being emitted but not ignited.

- The white insulators on the electrodes may be covered in black carbon buildup. Clean them.
- The electrodes may require re-alignment to ensure the spark is positioned properly relative to the fuel stream. A video guide is available on our website (<https://exothermic.tech>)
- Too much diesel (if mixed fuel) or fuel is nonflammable. Try 100% gasoline.

Contact us for all of your support needs. We'll do everything we can to help.

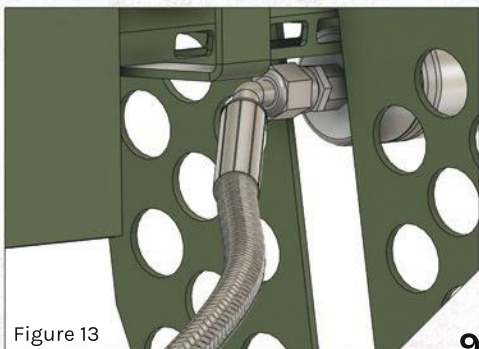
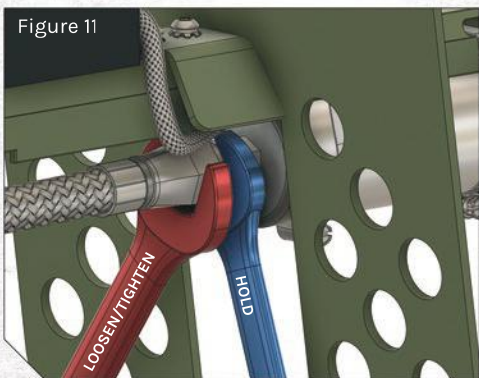
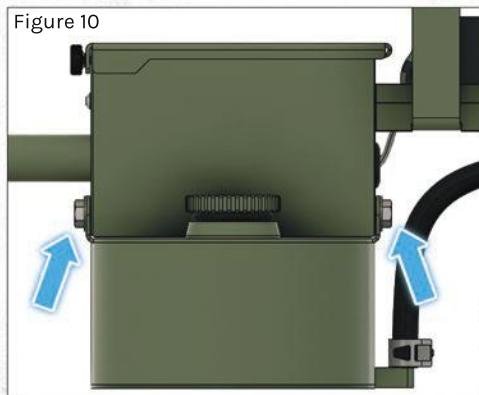
**OPTIONAL BACKPACK RESERVOIR (SOLD SEPARATELY)
VIDEO INSTRUCTIONS ARE BEST - VISIT OUR WEBSITE**

1 Use a 13 mm wrench to remove the two screws holding the fuel tank to the body (Figure 10).

2 Use a 16 mm wrench to hold the fuel pump fitting while using a 19 mm wrench to unscrew the hose assembly from that fitting (Figure 11).

3 Install a copper flare seal on both male fittings by carefully placing it over the flare on the fuel pump fitting and the backpack fitting (Figure 12). Ensure they remain straight and in-position during the next step.

4 Thread the 45 degree hose end of the hose assembly onto the fuel pump fitting at an angle that is comfortable for use (Figure 13). Once fully threaded and snug, use a wrench to **tighten to 20 ft-lb (240 in-lb)**.



IMPORTANT: Hold the fuel pump fitting with the 16 mm wrench while tightening the hose assembly onto the fitting (Figure 11). You want to tighten the hose end onto the fuel pump fitting without turning the already installed fitting more.

Thread on the straight hose end to the backpack fitting fully by hand and as straight as possible. Use a wrench to **tighten to 15 ft-lb (180 in-lb)**.

5 Fill with fuel, check for leaks, and the system is ready to use.

LIMITED LIFETIME WARRANTY



Subject to the terms, conditions and limitations outlined below, Exothermic Technologies guarantees its products against defects in materials and workmanship for life.

To make a claim under this warranty, e-mail info@exothermic.tech and include a detailed description of problem. For repairs that are covered by the warranty, Exothermic Technologies will pay the transportation charges to return your product and transport it back.

If a material or workmanship defect is found, and a valid claim is received, Exothermic Technologies will repair the product. In the event of a defect, this is your exclusive remedy. Once Exothermic Technologies validates your claim, we will provide a return label and make it right. In no event will Exothermic Technologies accept any shipment that is sent C.O.D.

LIMITATIONS OF WARRANTY

This warranty is valid only for products purchased and used in the United States. The warranty will be void if damage is caused by misuse, abuse, or normal wear and tear.

There are no warranties which extend beyond the description on the face hereof. The sole and exclusive remedy pursuant to this warranty is the repair of the product, at the sole discretion of Exothermic Technologies. The implied warranties of merchantability and fitness for a particular purpose are expressly disclaimed.

All disclaimers and limitations of liability shall still apply even if the limited remedy of repair and replacement fails of its essential purpose. In states where permitted, Exothermic Technologies assumes no liability for incidental or consequential damage or for incidental expenses. Any action against Exothermic Technologies based on an alleged breach of this warranty must be brought within one (1) year of the claimed breach. Exothermic Technologies's liability for breach of warranty shall be limited to repair of the product, at the sole discretion of Exothermic Technologies.

The purchaser assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. Exothermic Technologies will not be responsible for injuries or damages resulting from careless handling, unauthorized or unsafe modifications, neglect, fire damage, water damage, theft, abuse, ordinary wear and tear, or unreasonable use of the product. Under no circumstances shall Exothermic Technologies be responsible for incidental or consequential damages with respect to economic loss or injury or property damage, whether as a result of breach of express or implied warranty, negligence or otherwise.

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TL;DR If it's broke, and it's our fault, we'll fix it, all costs covered. If it's broke, and it's not our fault, we'll fix it, just cover shipping. If it's a major repair or replacement, we'll charge as little as possible to get you back in action.

CONTACT US



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