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INDUSTRIAL SAFETY PRODUCTS



## WHITE PAPER:

IMPROVED SAFETY FEATURES OFFERED BY  
GORILLA ALL-PURPOSE WARNING WHIPS IN  
COMPARISON TO STANDARD WHIPS

*Dedicated to saving lives and protecting assets*

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## WHITE PAPER: Improved safety features offered by Gorilla All-Purpose Warning Whips in comparison to standard whips

*...it is critical that lighted warning whips function without fail.*



*Gorilla All-Purpose Warning Whips feature stainless steel components and hex base.*

*The re-engineered Gorilla All-Purpose Waterproof Lighted Warning Whip offers improved strength, better water resistance, more reliable power and brighter lighting when compared to warning whips previously introduced on the market.*

### Overview

The use of warning whips in mining operations, on construction sites and in other industrial settings serves to protect and save both lives and property. Because of the size of equipment used on these types of work sites, light-duty trucks, cars and other smaller equipment can often be difficult to see; thus, the installation of lighted whips on these vehicles is a relatively simple, but effective way, to further enhance safety efforts. In some cases this is even mandated by safety conscious companies and industries.

Procurement managers have a number of lighted warning whip options on the market to choose from; however, safety managers generally specify the standards each product must meet for their applications. In those instances where the sighting of other vehicles is impaired due to poor visibility, reduced lighting or high levels of dust and other particulates, it is critical that lighted warning whips function without fail. Price is less of a concern than the ability to obtain whips that are reliable, operate in a variety of environments and are easily visible.

Analysis and testing of previously marketed lighted whip models indicates several areas of potential concern, however. These concerns include difficulties with electrical grounding, potential failure due to corrosion and the inability to maintain water resistance. Lack of proper light spread, which limits visibility, has also been a concern reported by safety managers.

In 2013, Checkers Industrial Products introduced the new Gorilla All-Purpose Waterproof Lighted Warning Whip. But how does this new product address weaknesses in the market, and what is its potential impact on site safety?

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### POWER & GROUNDING

Until the introduction of the Gorilla All-Purpose Waterproof Lighted Warning Whip, safety industry manufacturers utilized base or socket grounding in the construction of whips. Ground wires were folded over a rod, creating a friction ground between the socket or hex base. Unfortunately, glue bond failures have been relatively common, creating a short in the circuit and, subsequently, a flickering or failing light.



Shown above is the stainless steel mounting base and the waterproof power connection.

*These improvements ensure reliable power while virtually eliminating potential short circuits...*

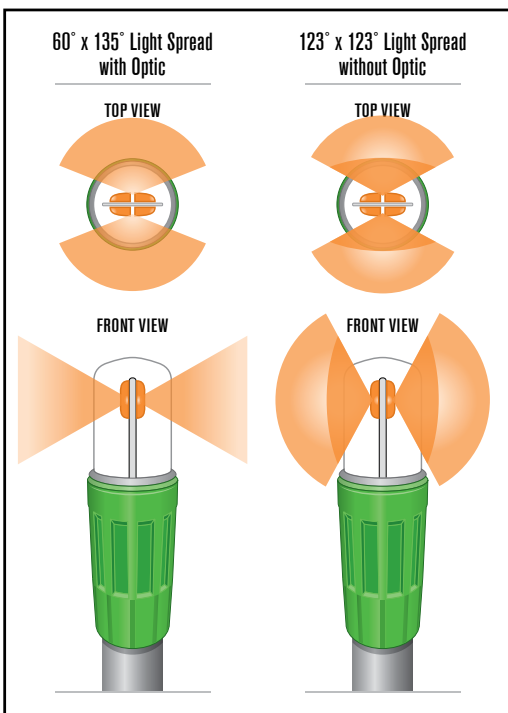
The new Gorilla All-Purpose Waterproof Lighted Warning Whip offers a continuous power and ground connection from the whip installation point all the way to the light. An IDC (insulation displacement connector) has been added to the light connection, along with a dual-plane RCA on the base. Finally, all internal wire is industrial grade, meeting Mil Spec MIL-W-16878, and is housed in a premium fiberglass resin. These improvements ensure reliable power while virtually eliminating potential short circuits, thus increasing the likelihood of vehicle visibility.

### WATER RESISTANCE

One of the greatest challenges faced by whip manufacturers is how to keep water out of the units themselves. Corrosion, minute cracks or chips in seals all negatively impact water resistance.

The re-engineered Gorilla All-Purpose Waterproof Lighted Warning Whip includes the Rocket™ Super Bright Waterproof LED, which includes a patent-pending waterproof LED light socket featuring a corrosion-proof, stainless steel hex base glued directly to the rod. A specialized o-ring seal between the lens and light base has also been incorporated into the design.

In June 2014, a Gorilla All-Purpose Waterproof Lighted Warning Whip was continually sprayed with water to evaluate its water-resisting capabilities. After being sprayed for more than 1,300 continual hours, the unit showed no signs of water incursion and continued to function flawlessly.



### LIGHTING STRENGTH AND DIRECTION

Ensuring that the light at the top of warning whips is strong enough to be seen has been a concern among users, particularly on work sites with reduced lighting, high concentrations of dust or air particulates, or which have a likelihood of rain, snow or other environmental concerns. Atmospheric loss reduces light brightness and effectiveness.

The modular light and lens incorporated into the Rocket™ II Super Bright Waterproof LED, which sits atop the new Gorilla All-Purpose Waterproof Lighted Warning Whip, features not only a powerful LED, but also a unique optic that addresses atmospheric loss. The optic captures the lost light emitting at a 123° vertical and horizontal spread and directs it into a 60° vertical x 135° horizontal spread, on each side of the board. This optical change creates a wider horizontal viewing angle and ensures greater directional light.



*The Rocket™ II Super Bright Waterproof LED features a replaceable LED circuit and an o-ring waterproof lens seal.*

*...the new Gorilla All-Purpose Waterproof Lighted Warning Whip provides constant, reliable power.*

To further enhance both performance and safety, the Gorilla All-Purpose Waterproof Lighted Warning Whip also offers users five light colors from which they can choose, along with multiple flash and non-flashing patterns that are easily programmable.

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## Conclusion

Made of high quality, industrial-strength materials and featuring a continuous power and ground connection from the installation point to the light, the new Gorilla All-Purpose Waterproof Lighted Warning Whip provides constant, reliable power. The new design resists water effectively, even in the most extreme environments. Finally, the new LED lighting design and mechanism ensures that the lights can be seen easily, without the atmospheric loss common in the industry.

Thus, with multiple lengths and customization options available, the new Gorilla All-Purpose Waterproof Lighted Warning Whip demonstrates the ability to improve workplace safety when compared to similar products previously introduced to the market.