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RAINMAKER INC. WORKS ON NEW INNOVATIONS IN AIR AND FLUID DELIVERY, THAT CAN HELP MAKE OFF-ROAD RACING SAFER hen it comes to the racing environment in Baja, racers have to contend with very high levels of dust and heat. For decades, these conditions caused poor visibility and dehydration, which not only hinder performance, but can also be a safety risk. This is one of the reasons why racers now use a full-face helmet with air ducts to provide fresh, cool air to breathe, as well as hydration through drinking tubes that are routed into the helmet.



From the viewpoint of RainMaker Inc., a leading manufacturer specializing in innovative medical and safety technology, the current air and fluid delivery systems to helmets can present some safety issues. According to Jessi James Hedland, VP Business Development at MagLock Air and FluidLogic, two of RainMaker Inc.'s subsidiaries, the company found that the hoses and fittings used to deliver fluids and fresh air are typically made from rubber, a technology borrowed from the RV industry. "This was adopted by the racing world and has been used for a long time," says Hedland. "The problem is that it's simply a vacuum hose fitting. When it's new, it can be too tight to remove easily, and over time the rubber composition gets harder. As they get used, the hoses and fittings stretch and easily fall off. We noticed crew chiefs using safety wire and duct tape to keep them on, but in an emergency situation, that can lead to difficulty removing the hoses to get the driver out of the vehicle. It just isn't safe."

Searching for more efficient methods to deliver fluids to a racing helmet, the company began experimenting with magnets and thought they could be used as a coupling device to eliminate rubber fittings altogether. "It's a magnetic coupling system for attaching the cool air hose to the helmet," says Hedland. "The magnets are self-centering so for driver switches, especially during long desert races, they can be accomplished much more quickly. The magnets are also used with billet-aluminum sleeves so that they connect and disconnect quickly and effortlessly."

BELL IS WORKING WITH FLUIDLOGIC, THROUGH ITS SUBSIDIARY RAINMAKER SOLUTIONS, TO INCORPORATE THE MAGLOCK AIR TO A VARIETY OF ITS RACING HELMETS THAT HAVE TOP AND SIDE MOUNTED AIR ATTACHMENT POINTS.



According to Hedland, it takes 35-lbs. of pressure to pull the magnets apart, so they won't come off in a rollover or accident. "When the driver needs to pull away from the MagLock, they pull from the side which only has a 10-lbs. side-load, making it almost effortless to disconnect." Some of the first prototypes were used successfully by Ricky and Luke Johnson, then the word quickly spread to other racers. "We tested the MagLock Air for a year and had a soft launch at the 50th BFGoodrich Tires SCORE Baja 1000 last November," said Headland. "We showed up at the SCORE Contingency and some of the top teams put it in their vehicles before the race. Teams like Cops Racing, UTV teams, RPM Off-Road and Apdaly Lopez actually drove with the units during the race."

The success of the MagLock Air allowed the company to team up with Bell Helmets to help get the brand into more distribution channels, as well as into the hands of more racers and teams in all forms of motorsports. "It was important for us to partner with a known safety manufacturer in the racing industry, like Bell," said Ed Jaeger, CEO/Founder at RainMaker Inc. "This gave the MagLock Air immediate legitimacy with racers and helped them see the advantages of the product in both real-world racing applications and with the overall safety aspects it can provide."

Bell was quick to adapt the MagLock air into its line of products and is currently marketing the product through its network within the racing industry. "As a leader in safety, Bell Racing takes a progressive approach to developing and advancing innovations that enhance driver protection and performance, and have embraced MagLock as the future for connecting our helmets to onboard systems," said Bell Racing USA President and COO Kyle Kietzmann. "We have seen too many instances where drivers struggle to free themselves from their cars especially after a crash and MagLock offers a quick and reliable solution."

MAGLOCK AIR MAKES A CONNECTION

With Bell exposing MagLock Air to other forms of road racing, off-road racers and enthusiasts can also find out more information on the product, through PCI Race Radios, and the <u>www.maglock.com</u> website. "This is one of the very first technologies that was originally developed in off-road racing, and trickled over to other motorsports," said Jaegar. "We came up with the idea for this product, and our future fluid delivery products, from my experience in Baja racing and it has finally come to fruition."

The MagLock technology is also being tested for use in areas more than just air delivery, and according to Jaeger, the motorsports industry will soon see this type of technology used with quick connections for communications, air and water delivery. "We've done a ton of testing in these areas and have come up with a system derived from our FluidLogic subsidiary, that will remind the driver to drink, as well as deliver fluids based on biometric input," said Jaeger.

While the fluid delivery system is still being tested, Hedland says more information on it will be released soon, and that prototypes are with some SCORE teams during the 2018 season. In addition to its use in racing, Headland also points out that the MagLock Air technology can also be used outside the racing world. "The system is also consumer friendly for the UTV market," says Hedland. "Most recreational drivers find it a hassle to use a fresh air pumper system. But the MagLock Air may change all that, since it's a small and easy to use. We're simply looking to make a better connection with the equipment. In a variety of applications, this makes it safer and allows the driver to do their job better." For more information on the Maglock, visit <u>https://www.bellracing.com/Shop/Product/MagLock-Ait-Kit</u> **\$J**



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