



MUC-OFF RELEASE LIGHTWEIGHT OVERSIZED PRECISION SHIFTING SYSTEM (L.O.P.S 2.0)

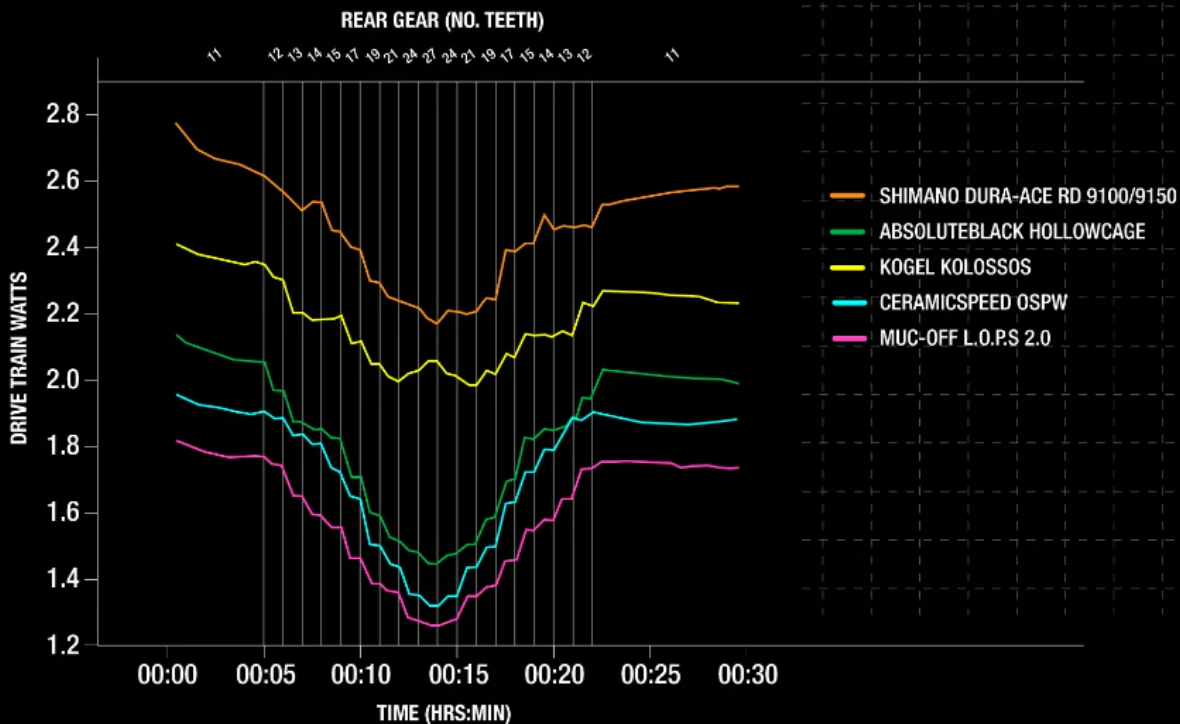
POOLE 08.09.2022, FOR IMMEDIATE RELEASE — Muc-Off, the global leaders in bicycle and motorcycle care and maintenance are excited to announce the next generation of precision shifting – the [Muc-Off Lightweight Oversized Precision Shifting 2.0 system \(L.O.P.S 2.0\)](#).

Formerly available only to Muc-Off sponsored pro teams and athletes including EF Education Easypost, INEOS Grenadiers and Elite Ironman triathletes Laura Philipp and Kat Matthews, a very limited number of these state-of-the-art systems are now available for general sale. L.O.P.S 2.0 was designed, developed, tested, and hand built in the UK for Shimano Dura-Ace RD 9100 and Shimano Dura-Ace RD9150 11-speed rear derailleurs. Why 11-speed only? Muc-Off's in-house testing found 11-speed chains to be on average 36.6% faster than 12-speed.

L.O.P.S 2.0 works by placing the chain at an optimized angle to reduce both articulation and friction, when compared to a stock set up – less friction, more speed, greater efficiency. The system joins [Ludicrous AF](#), Muc-Off's world's fastest race lube, and the roll out of their [Ultrasonic Chain Optimization service](#), as the latest offering from their growing range of racing performance products. This limited release, is another example of Muc-Off making unrivalled drivetrain efficiency technology available to all riders.

The key to developing an optimum shifting system, is in striking the perfect balance between material and build quality, weight, stiffness, and bearing efficiency, to deliver maximum efficiency across the board. These factors all impact on each other, so if one is aspect is favored too much, it can cancel-out gains made in other areas. With L.O.P.S 2.0, Muc-Off have built a system which strikes that balance perfectly, and the results of their testing are a testament to that.

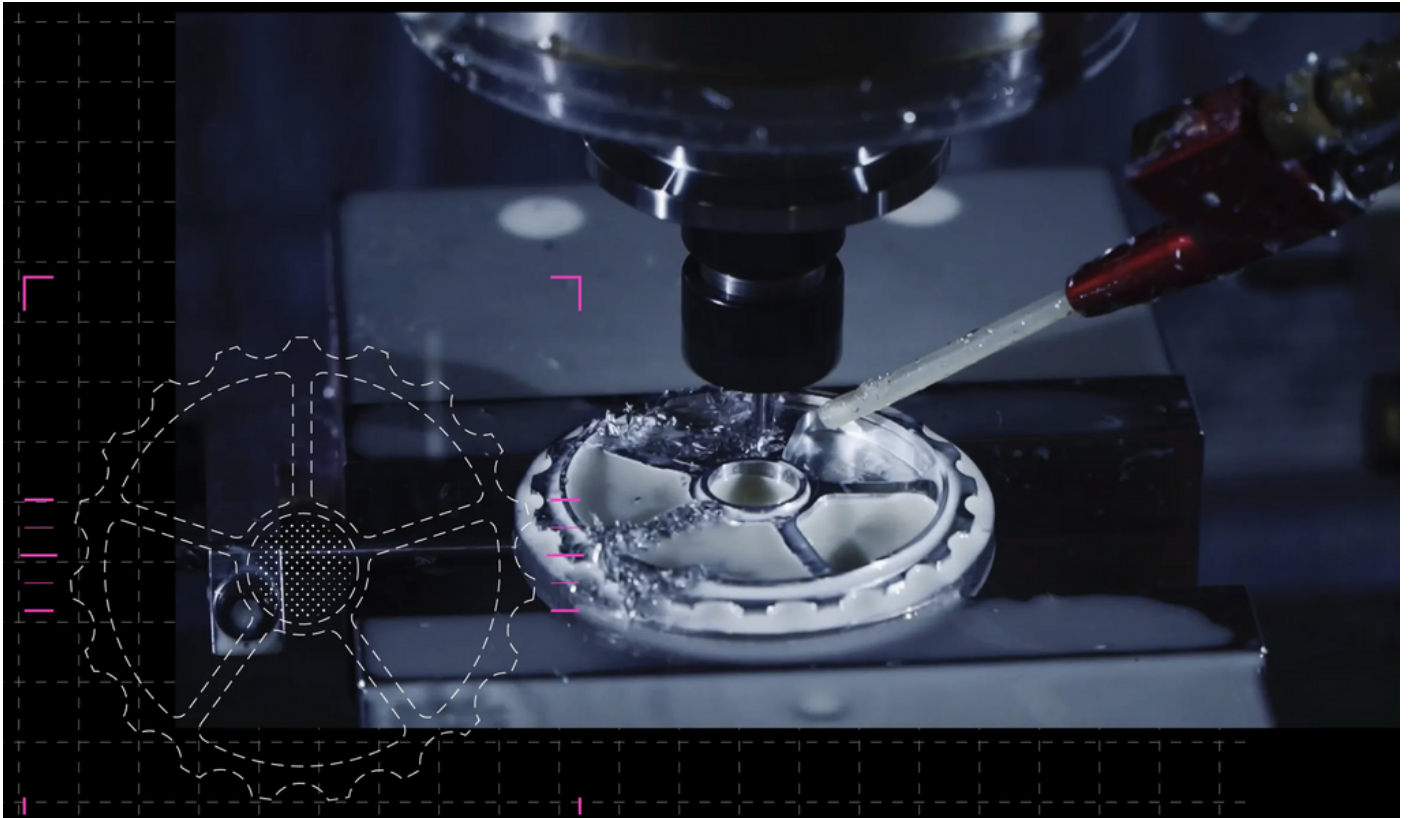
30 MIN, MULTI-GEAR COMPARATIVE TEST



Of the five oversized pulley systems Muc-Off tested, L.O.P.S 2.0 proved to be the most efficient overall. Their performance efficiency tests were completed on their in-house Full Cycle Drivetrain Dynamometer, which uses a full groupset to accurately simulate a real-world set up. The tests were completed over a thirty-minute period across multiple cassette ratios, with data benchmarked against rival systems, which include the CeramicSpeed OSPW, the AbsoluteBLACK Hollowcage, the Kogel Colossus, and of course Shimano stock (Shimano Dura-Ace RD 9100/9150). Throughout the full duration of the tests carried out, L.O.P.S 2.0 achieved the greatest levels of overall efficiency compared to the other systems tested.

The bearing choice inside systems like L.O.P.S 2.0 has a big impact on the overall efficiency. Muc-Off's was designed in the UK and has been treated with a special coating which reduces friction. During their testing, they used real-world-applicable radial loads to recreate the spring tension in a derailleur, ensuring the results from the lab, translate to the road. L.O.P.S 2.0 came top in bearing efficiency of those tested, delivering a 97% efficiency gain over Shimano stock, and a 16%pt improvement over the Kogel Kolossos in second place. Muc-Off's in-house Bearing Dynamometer features a knife edge guide that significantly increases the accuracy of their results, by neutralizing the effect of bearing wobble found in competitor systems with large clearances, allowing them to test in a way that would otherwise compromise their data accuracy.

Stiffness is also a critical ingredient to efficient shifting, but adding stiffness usually means adding weight. L.O.P.S 2.0 features a ground-breaking lightweight design to minimize this impact, thanks to its construction through additive manufacturing using a combination of Ti6Al4V titanium and military-grade carbon fiber. The result is a cage which offers 62% more stiffness than Shimano stock, and a system that maintains precise and optimized shifting performance each time it engages and disengages the pulley wheels.



The 13-tooth upper pulley wheel and 19-tooth lower are made from aerospace-grade aluminum and features a friction reducing coating; meaning it has 88% less friction than aluminum alloy, and 71% less than hard anodized metal.

"L.O.P.S 2.0 is an epic piece of technology that we're super excited to release. Our team worked hard to create this genuine piece of cycling innovation for the pro-peloton. The original system saw numerous designs, bearing combinations, and materials tried and tested in-house to learn what works best, but we always knew the true test would be how it performed at the top level. Across the board, the feedback from the pro-teams has been overwhelmingly positive in terms of the advantage it gives their riders. We're incredibly excited to now be able to offer a limited number of systems to all those aspiring pros out there; giving a few lucky riders the chance to experience this pro-level tech, and the drivetrain efficiency benefits L.O.P.S 2.0 delivers." – Alex Trimnell, CEO at Muc-Off.

Muc-Off has always been synonymous with innovation. Back in 1991, Rex and Marilyn Trimnell developed the X-Lite UK brand, where they designed and manufactured the world's first twin crown bicycle fork and the world's lightest bar ends. Three years later, their iconic pink bike cleaner was born, and bike parts made way for Muc-Off's now global care and maintenance range. But it's hard to ignore your roots, and the passion for producing performance bike componentry always remained.

The original iteration, L.O.P.S 1.0, was developed in conjunction with Team Bahrain-McLaren back in 2019, designed specifically to provide Mikel Landa with a substantial advantage in drivetrain efficiency, at the pivotal stage 20 time-trial at the 2020 Tour de France. The engineering challenges and pro-peloton demands proved a challenge, but the world threw down its own gauntlet in the form of a global pandemic.

During various UK lockdowns, the high-tech equipment normally housed in the Muc-Off lab was moved into the teams' kitchens and sheds, to continue work and meet Team Bahrain-McLaren's non-negotiable deadline. Muc-Off hit that original target and have since seen their systems adopted by EF Education EasyPost, running them at the majority of WorldTour TT stages, as well as at

multiple WTO races with BMC Pro-triathlon's Kat Matthews, and more recently with Laura Philipp, who won IRONMAN Hamburg running L.O.P.S 2.0 on her Canyon Speedmax CFR.



Just like its first iteration, every L.O.P.S 2.0 unit has been designed, machined and hand built in-house by a team of industry-leading engineers and scientists. The technical lead on the project, whose identity like all Muc-Off R&D staff remains confidential, recently returned to Muc-Off after being part of the original X-Lite program back in the 90's. Those early years with the brand helped shape their knowledge in designing and creating bike parts, something they've gone on to do successfully across the industry for decades.

"It has been incredible to come back to Muc-Off after a few years away. I was here for the original X-Lite days, and for the brand to be back making innovative products like L.O.P.S 2.0, that give riders such huge gains is extremely exciting." – L.O.P.S 2.0 Technical Lead at Muc-Off.

L.O.P.S 2.0 is the future of shifting performance. A combination of cutting-edge technology and facilities, industry-leading experts, and pro-level testing coming together to allow Muc-Off to produce something truly game-changing.

Priced at £999.99, a limited run of L.O.P.S 2.0 systems are available to buy now, [exclusively at muc-off.com](https://muc-off.com).

L.O.P.S 2.0 Technical Specification:

- Compatibility: 11-speed - Shimano Dura-Ace RD 9100 / Shimano Dura-Ace RD9150
- Weight: 79.4g
- Material: Additive Titanium & Carbon Fiber

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About Muc-Off:

Back in 1991 Rex and Marilyn Trimnell got things started with X-Lite UK. After designing and manufacturing the world's first twin crown bicycle fork, Rex created a perfectly pink spray to clean his kit. To make a long story short, Rex's cleaner was the best thing since sliced bread, and it wasn't long before word got out and Muc-Off was born.

Fast-forward to now and Muc-Off is now the go-to brand for top riders. And, in case you haven't noticed, they do a bit more than our original pink cleaner these days.