



MOREL
LIFTERS

Introduction of Morel

Morel first entered the racing lifters market in 1990, when they pioneered the use of bushing lifters in the Buick V6 Indy program. R&D for Buick and McLaren started in winter of 1990 and they were granted a patent in January 1992, which ran for 17 years and expired in 2009. Morel's lifters have run at the Indianapolis 500, Daytona 500, all NHRA events, APBA, and the BAJA 1000.

Morel is located in Cleveland, OH. The plant is 100,000 square feet houses over 100 pieces of specialty equipment for making lifters and gears. In addition, Morel has in-house heat treating with a full Metallurgical lab. With the ability to control the heat-treating process in house. This gives Morel a huge advantage over others when it comes to quality control.

The plant was started by Ed Morel's uncle, Joe Morel, over 60 years ago. Ed has worked there over 30 years and bought the company 20 years ago from Joe. Ed is a graduate mechanical engineer along with the plant manager Scott Britvec. The engineering staff has years of tool and die, plumbing, electrical, electronic, programming and hydraulic experience for the automotive industry as a tier 2 supplier. One of Morel's oldest customers is Eaton and that relationship spans 55 years.

When it comes to making quality parts in a production setting...Morel lifters and distributor gears are your clear choice.

Legend and Definitions

U/P Ultra Pro Body. Fully body design that is more stable at high rpm.

T/B Tie Bar. Vertical tie bar to retro fit the given engine.

HLT Hyd. Limited Travel. It is a hyd roller lifter that is treated like a solid roller lifter. Cheater lifter.

P/O Pressurized Oiling. Direct pressure fed oiling to the needle bearings and axle.

O/C On Center. Pushrod cup is centered. If off set it will be .180 and either Left or Right

NBA Nascar Bearing Axle. Developed with Hendrick,
This needle bearing assembly is for high Endurance applications.

UFRS Bushing Lifter. Instead of needles this lifter has a bushing in it.

Lifter Types

Street Series Hydraulic and Solid Roller



Street series lifters are used for cam profiles designed for mild street use or cams that are cataloged by GM, Ford, or Chrysler and designed for a .700" wheel. Morel does not recommend using them on anything more than .375" lobe lift and .050" duration no over 245 degrees. We recommend 1 full turn of preload. This is a slow leak down lifter. Available for all domestic production V-8 engines. Max spring pressure 150/400#

Pro Series Hydraulic and Solid Roller

Pro Hydraulic Roller



The Pro Series hydraulic roller revolutionized the hydraulic roller cam business in 2003. This lifter is made from 8620 tool steel and features a .750" wheel. With the ability to use springs up to 220#/525# this lifter will allow an engine to rpm well past the 6500 rpm range and not nose over. The lifter cannot be used with oil weight heavier than 15W40. Available for Chevy, Chrysler, and Ford production V-8 engines. We recommend 1 full turn of preload. This is a slow leak down lifter.

Pro Series Solid Roller



Pro Series lifters are based on the industry standard body design with a cutaway oil band. This lifter is recommended for use in performance drag race and circle track engines. This lifter should not be used in applications that require extended idling times. This lifter does not have pressure fed oiling. It does feature a full .750" wheel. Available for Chevy, Chrysler, and Ford production V-8 engines. Recommended spring rates of 250/600#.

Ultra Pro Hydraulic and Solid Roller

Ultra Pro Hydraulic Roller



The Ultra Pro shares all the enhancements of the Pro series with the addition of proprietary RMS finish. This finish enables the engine builder to run tighter lifter bore clearances to keep the lifter stable at higher rpm. In addition, the improved valving allows the lifter to sustain power at higher rpm. This lifter is made from 8620 tool steel and features a .750" wheel. With the ability to use springs up to 220#/525# this lifter will allow an engine to rpm well past the 7000 rpm range and not nose over. The lifter cannot be used with oil weight heavier than 5W40. We recommend 1 full turn of preload.

Available for Chevy, Chrysler, and Ford production V-8 engines. This is a slow leak down lifter.

Ultra Pro Solid Roller



The Ultra Pro series features a full body design for maximum stability at high rpm. This lifter is machined from 8620 tool steel and features a proprietary axle and roller design that has direct pressure fed oiling to the needle bearings. This lifter is the choice for endurance applications that have extended periods of idling. This lifter is recommended for dual purpose street and strip cars. Available for Chevy, Chrysler, and Ford production V-8 engines. On all .750" wheel applications we recommend a max of 297#/700# spring pressure. On all .810" wheel lifters we recommend a maximum of 424#/900# spring pressure.

The Morel Ultimate Fighter Roller Series (UFRS) of lifters uses bushings instead of roller bearings. We pioneered the use of bushing lifters beginning in 1990. We were granted a patent in January 1992, which ran for 17 years and expired in 2009. We developed the bushing lifters for the Buick turbo V-6 that ran races at the Indianapolis 500, when stock blocks were allowed. The benefit of the bushing is more contact area between the axle and bushing, which allows greater load carrying capacity. These lifters also use our full-time pressure oiling system that we use in our current Ultra Pro lifters.

The other major benefit is that as the bushing wears, you will see additional lash. This tells you it is time to rebuild the lifter. Lifters with roller bearings can be used until the bearings fail, which can have the possibility of additional engine damage. It is important that no restrictors in the oil system be used with these lifters. Proper engine maintenance for the lifters requires clean engine oil and proper oil temperatures and pressures. Externally, these lifters will look almost identical to the corresponding set of lifters using roller bearings. The bushings, like roller bearings, are concealed within the roller/axle/body assembly area. The bushing lifter will take any valve spring load known to the racing industry. Available for Chevy, Chrysler, and Ford production V-8 engines. The load capacity is 300X that of a needle bearing.

Ultra Pro TOP ALCOHOL 2.000 BORE SPACE Lifters



Design for Top Alcohol Hemi Based Blown engine applications. This is for all engine blocks set up for .903" lifter diameter with 2" lifter bore spacing. Machined from tool steel. Designed for extreme pressure loads.

Ultra Pro Key Way Solid Roller lifters



Developed for NASCAR the Morel key way is available in .937" diameter with the NBA roller assembly. All key way lifters are on center. Morel does not make an offset keyway lifter. These lifters are DLC (Diamond Like Coating) coated and require key way bushings available from CHE. These are for extreme racing applications including NASCAR and Off Road Truck. Tolerances are held to .0002" on diameter and seat height. These lifters can be put in any type of block as long as there is room for 1.062" bushing.