



Litens and Romaine Electric Team Up to Restore Belt Drive System Integrity for the Mass Transit Bus.

Kent, Wash. – Sept 27, 2017 – We are pleased to announce that Romaine Electric, in partnership with the Litens Automotive Group, have brought to fruition a project to introduce the first overrunning alternator decoupler pulley AKA - The Monster OAD™ to the transit market. The Monster OAD™ is an 8 groove serpentine pulley specifically designed to eliminate systemic belt drive failures known to exist on every transit OEM engine platform.



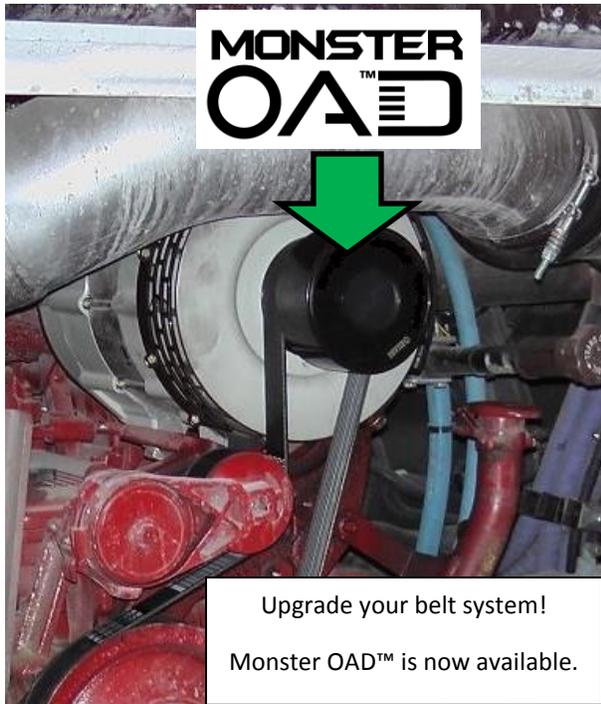
This revolutionary pulley design was created by the Litens Automotive Group over 15 years ago for use in the automobile industry and has become the industry standard on nearly all of the world's cars manufactured today.

The Monster OAD™ pulley has two primary functions that eliminate belt drive issues. First, the pulley has an overrunning feature that allows the alternator rotor to dissipate its inertia by overrunning or “freewheeling”. This feature is important during engine operation at transmission shift points as well as at engine shut down. The current application of a standard solid pulley, the alternator rotor inertia exceeds the horsepower carrying capacity of the belt resulting in noisy belt screech, where belt slippage and wear occur.

The second and most important feature of The Monster OAD™ is its ability to absorb the torsional vibration created by the engine. Torsional vibration is created when the engine's cylinders fire. Each time the piston moves up or down, it speeds up and slows down the crankshaft creating torsional vibration that is being transmitted into the belt drive system. In the current system what is being installed to absorb this vibration is the belt drive tensioner. The tensioner, in most applications is not able to withstand the punishment of this vibration and is failing prematurely due to the excessive loads/demands exerted on the belt drive system from the torsional vibration.



The Monster OAD™ utilizes a patented torsion spring design that is specifically engineered for each intended application. This spring connects the pulley to the alternator rotor, it absorbs and dissipates nearly all of the torsional vibration created by the engine acting like a “suspension system” for the belt drive. The overrunning design is also unique and patented. This too is a similar torsion spring that compresses and releases force on the shaft hub as inertia acts upon the pulley. Driving the alternator and releasing it when needed.



The Monster OAD™ eliminates all of the common failure points of the FEAD, front end accessory drive, or belt drive system. Failures that include literally breaking the tensioner spring or worse yet breaking the tensioner completely off of the engine block, belt breakage, belt derailment at transmission shift points and belt slippage that creates wear and terrible noise pollution. Other items taking abuse are the idler pulleys and fan drives that tend to seize and lead to further belt damage. The sad thing is that many of these failures have just become status quo for those who

operate transits. Replacement long before failure has become the norm for preventative maintenance programs all in efforts to try to reduce road calls and out of service situations. Contrary to common practice, it is not normal to replace a tensioner once or twice every year; it's not normal to have belts break or replaced at 30,000 mile intervals. Also, it is not normal to have idler pulleys seize up on a regular interval. The reason transits have accepted this “preventative maintenance” interval was a lack of a solution. No one has been able to produce an item that alleviates the hassles and expenses related to these failures until now. The Monster OAD™ is the cure, the end-all-be-all, for belt drive system failures.