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GM LSX 8-Rib & 10-Rib Drive Conversion Kit Install Instructions



Included in the Innovators West 8-Rib & 10-Rib kits:

Crankshaft Damper
Alternator Pulley
Power Steering Pulley
Smooth Idler Pulley
Ribbed Tensioner Pulley
Water Pump Pulley (10-Rib Only)
Alternator Pulley Shim (Gen 5 Camaro Only)
Idler Pulley Stand (Gen 5 Camaro and C6 Corvette only)

Innovators West conversion kits are designed to convert all of the OEM (As supplied by GM) pulleys to either 8 or 10-rib width pulleys for use with a supercharger. When used with aftermarket supercharger systems additional supercharger pulleys, idler pulleys and/or tensioner pulleys may be needed. Contact the supercharger manufacturer for more information on the pulleys supplied with the supercharger kit and the availability of pulleys with increased rib counts.

Damper Installation Notes:

The factory bolt is torque to yield and should only be used one time. The included crankshaft bolt is a non-torque to yield bolt and may be reused if needed. Make sure to apply some red Loctite to the supplied crank bolt prior to tightening to **130 ft-lbs**.

Standard diameter and overdrive Dampers retain the standard sized a/c pulley and will use stock sized belt.

DO NOT remove the hub from the Damper case. Install as a complete assembly!

Innovators West Damper Install Video:

https://www.youtube.com/watch?v=S0swLZ3Q_sA

The Innovators West Damper comes keyed for a 3/16" crankshaft key. This keyway should match up to most aftermarket crankshafts with a 3/16" key or any stock crankshaft that has been cut for a key.

Innovators West dampers are designed for use with Innovators West damper pinning kits. The use of other brand pinning kits is not recommended.

Innovators West Pin Kit Video :

<https://www.youtube.com/watch?v=7hrFYigTU6c>



Power Steering Installation Notes:

A power steering removal/installer tool as shown below is required. Before removing the stock pulley, make a note of the space between the back of the factory pulley and the pump or mounting bracket (which ever is easier to measure). Remove the stock pulley. The included 8-rib power steering pulley is a 2 piece design. This design allows the outer pulley to be removed from the hub to install and tighten the power steering pump mounting bolts if needed. When installing the pulley make sure to pull the 8-rib pulley onto the power steering pump to the point at which the rear of the pulley is in the same position as the stock pulley. This is typically where the end of the pump shaft comes to the end of the pulley hub for most applications. The positioning of the hub on the pump shaft can be adjusted to correct any belt alignment issues if needed.



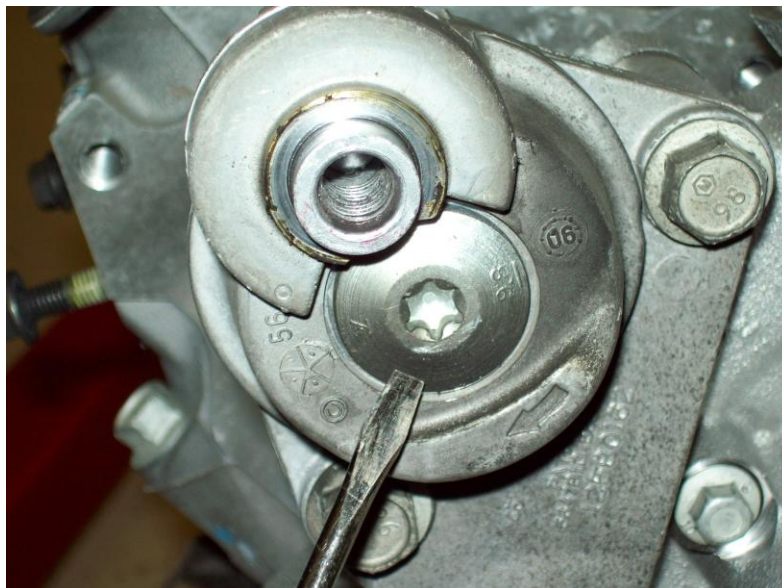
Alternator Pulley Installation Notes:

Vehicles equipped with the clutch/sprag style alternator pulley will need to remove the pulley from the alternator with the appropriate hex or spline pulley removal tool. Once removed the shaft will be the same as a normal alternator and the new pulley can be slid over the shaft. A new alternator pulley nut will need to be installed onto the end of the shaft to retain the new pulley (see Innovators West website for several nut options). On Gen 5 Camaro applications, a .070" pulley shim is supplied and must be installed behind the alternator pulley for proper alignment.



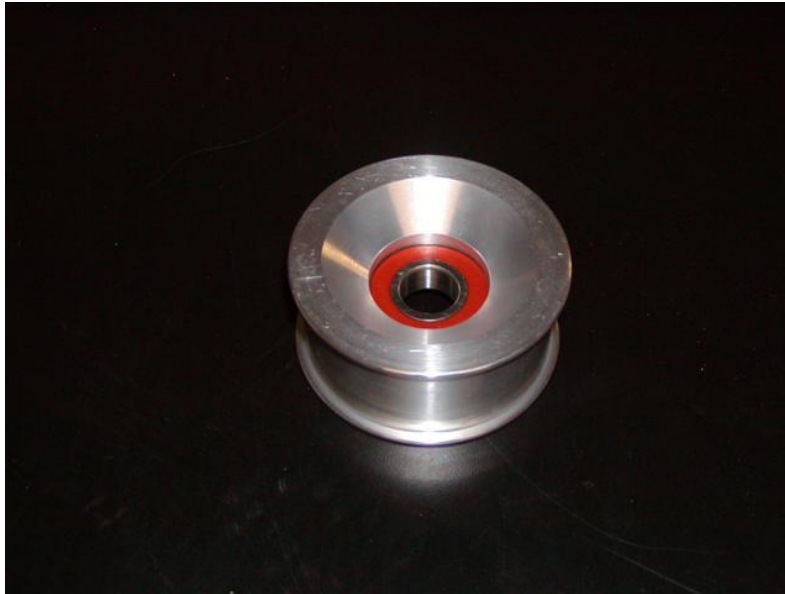
Tensioner Pulley Installation Notes:

Due to production tolerances there may be a need to clearance the head of the pivot bolt or the body on the factory tensioner to avoid rubbing on the included 8-rib tensioner pulley.



Idler/Tensioner Pulley Installation Notes:

The idler and tensioner pulley are designed to have the beveled face of the pulley facing outward (to the front of the vehicle) as shown below. The pulleys are designed to be retained with the factory bolts. If the factory bolt has a large, stamped steel dust shield, that dust shield should be removed. For LS Truck applications using a Magnuson supercharger system, the Magnuson supplied tensioner/idler bracket may need ground slightly for the idler pulley to clear the bracket and spin freely. On Gen 5 Camaro and C6 Corvette applications, a #981 idler pulley stand is supplied in order to properly position the smooth idler pulley.



Water Pump Pulley Installation Notes (10-Rib Only):

Drain the cooling system and remove the water pump from the engine. Before removing the stock pulley, make a note of the space between the back of the factory pulley and the pump. Remove the stock pulley. This can be done with a jaw style puller or by cutting the stock pulley off of the pump shaft. When installing the pulley make sure to press the 10-rib pulley onto the water pump pump to the point at which the rear of the pulley is in the same position as the stock pulley. Make sure to support the rear of the water pump in order to keep from pushing the large core plug out of the pump body. The positioning of the hub on the pump shaft can be adjusted to correct any belt alignment issues. Due to production tolerances there may be a need to clearance the body of the water pump to avoid rubbing on the back or rear of the 10-rib pulley.

Belt Alignment Information:

Laser alignment tools are available, but the most common method to check alignment is a straight edge. With the damper fully installed, you can use the front face of the damper and swing the straight edge from pulley to pulley to check alignment. The damper is the fixed point in the system and all other pulleys need to be adjusted to match the damper. Once all of the pulleys are installed, you can use an old belt or a piece of string to route through the pulleys. With the help of a friend to hold the tensioner arm back, mark where the ends meet on the string and remove from the vehicle and take a measurement from mark to mark. This will typically get you very close to the proper belt length needed on the first try.

