ALTERNATOR DECOUPLER PULLEYS

Designed, Engineered and Produced by the Original Equipment Manufacturer.

With almost 100 years of innovation and experience, the supplier of NAPA Belts/Hose delivers the highest quality parts in the market today. As OE design experts on the Accessory Belt Drive System (ABDS), NAPA’s supplier now offers a full line of Alternator Decoupler Pulleys (ADP) including Overrunning Alternator Decoupler (OAD) Pulleys and One-way Clutch (OWC) Pulleys. Every NAPA Belts/Hose ADP is the Original Equipment Part designed for each specific application.

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ADP Applications

Make Model Year Engine Part # ADP Tool

Audi TT 2000-2006 1.8L 37013P OWC 91024-1

Audi A3 & TT 2007-2011 2.0L A3 & TT 2006-2009 3.2L A4, A5, S5 2010-2011 2.0L, 3.0L, 3.2L, 4.2L 37103P OAD

BMW 325I, 328I, 328XI, 330I, 525I, 525XI, 530I, 530XI, Z4 2004-2009 2.5L and 3.0L 37021P OWC

Buick Lucerne 2009-2011 3.9L 37027P OAD 91024-3

Cadillac CTS 2010-2011 3.0L and 3.6L


Chrysler Voyager, Town & Country, Pacifica 2001-2007 3.3L/3.5L/3.8L 37015P Sebring, Jeep Compass & Patriot 2007-2008 2.4L 37018P

Dodge Avenger, Caliber 1.8L/2.0L/2.4L Caravan, Grand Caravan 2001-2007 3.3L and 3.8L 37015P

Ford, Mercury Crown Victoria, Grand Marquis 2000-2011 4.6L 190A/200A Alt 37004P

Lexus ES350, GS350, IS250, RX350 2009-2010 2.5L and 3.5L 37026P

Mercedes-Benz E300D 1996-1997 3.0L Diesel 37011P OWC 91024-1

Pontiac G6 2006-2010 3.9L 37022P OAD Solstice 2007-2010 2.0L 37024P Vibe 2009-2010 1.8L 37015P 91024-3 Vibe 2.4L 37017P

Porsche Boxter, Cayman, 911 2000-2009 2.7L/3.2L/3.4L 37014P OWC 91024-1


Scion XB 2008-2011 2.4L 37017P 91024-3 XD 2008-2010 2008-2010 37015P

Toyota Camry, Corolla, Matrix, Rav 4, Solara 2006-2010 2.4L 37017P Camry 2010-2011 2.5L 37028P

Celica, Corolla, Matrix 1998-2010 1.8Avalon, Camry, Highlander, RAV4, Sienna, Venza 2005-2011 3.5L 4 Runner 2010-2011 2.7L and 4.0L Tacoma 2007-2011 2.7L 37025P

Solid Serpentine Alternator Pulleys and Automatic Belt Tensioners were first utilized by Original Equipment Manufacturers (OEMs) in 1979. Their sole purpose was to transmit power to the alternator using one belt and tensioner eliminating the need for multiple V-Belts within the Accessory Belt Drive System (ABDS).

Since that time, OEs have further enhanced alternator pulley technology with the introduction of One-Way Clutch (OWC) Pulleys and Overrunning Alternator Decoupler (OAD) Pulleys. Both of these advancements are the culmination of years of research and development to help improve the performance and efficiency of car and light truck engines.

OWC’s were first used in 1997 followed by the OAD in 1999. Today, more and more vehicle manufacturers are recognizing the performance gains achieved with these pulleys and have designed them into their belt drive systems.

NAPA Belts/Hose OAD Pulleys Absorb Engine Vibration for a Quieter, Smoother Ride and Better Performance

Since 2004, NAPA belts/Hose has provided the Aftermarket with OWC Pulleys and now offers OAD Pulleys. NAPA OAD Pulleys provide unique levels of engine vibration absorption within the ABDS. With its patented Torsion Spring, the NAPA OAD Pulley is able to isolate vibrations throughout the system to ensure peak performance of your engine. While the clutch mechanism is engaging and disengaging the alternator, the patented Torsion Spring is constantly absorbing vibration.
Advantages of OADs

NAPA Belts/Hose Overrunning Alternator Decoupler Pulleys (OAD’s) create a quieter, and longer lasting Accessory Belt Drive System (ABDS).

NAPA Belts/Hose OAD’s Reduce:
- Total System Vibration
- Tensioner Motion
- All Loads on All Accessories
- Steering Shudder

NAPA Belts/Hose OAD’s Improve:
Life and longevity of all accessory components including the A/C Compressor, Power Steering Pump, Tensioner and the Alternator Accessory Drive component life.

More and more OE’s are recognizing the performance gains achieved with OAD Pulleys and designing them into their vehicles.

Types of Alternator Pulleys
OAD’s allow lower system tension which means the alternator, water pump, and other accessory bearings will last much longer.

The Solid Alternator Pulley
Used to be the industry standard and has been around for many years. It has evolved from the V type to the V-ribbed type (serpentine belt). Its only purpose is to drive the alternator via the belt. If your alternator has a solid pulley, only replace if damaged, rusted, or worn.

One-Way Clutch Pulley
Has a simple one-way clutch inside that allows the rotor of the alternator to coast to a stop when the engine is shut down. This “overrunning” feature eliminates “chirp” sounds that occur when the engine decelerates quickly, causing the belt to slip (engine shut down or transmission).
A Closer Look at an OAD Assembly

Not a simple One-Way Clutch or Solid Pulley

The Overrunning Alternator Decoupler Pulley (OAD)
Not only has a one-way clutch inside, it also incorporates a torsion spring to absorb energy. The effects of the internal clutch are the same as mentioned above; however, the patented internal torsion spring design is the key to the much higher level of function associated with the OAD. The internal spring is tuned (engine specific) to absorb base engine vibrations (cylinder firing pulses) before they reach the alternator rotor and negatively affect the accessory drive. With the OAD installed you will see much less tensioner motion, reduced noise, vibration, and harshness and an all around more robust accessory drive.

* Never use a Solid or One-Way Clutch Pulley on a vehicle designed with an OAD Pulley. Downgrading will compromise performance and will lead to Accessory Belt Drive System problems including eminent, premature failure of the Serpentine Belt and Tensioner. For the Original Equipment Parts, NAPA Belts/Hose OAD Pulleys are the only sure way to go.
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