



NOVEMBER 2017

Winning with Aftermarket Programs

Original Equipment Manufacturers count on BorgWarner for Delco Remy® starters and alternators for their new truck applications. We're also there with the same genuine products in the aftermarket. In fact, we have a number of aftermarket programs that can help you win through increased sales, reduced inventory, expanded offerings or extended capabilities into submarkets.

Our key aftermarket programs include:

24-Volt Off-Highway Starter & Alternator Program



Expand your product offering and do more with less. We can cover practically all of your off-highway needs with 25 Delco Remy part numbers that cover 120-plus cross references. Our genuine Delco Remy 24-volt starters and alternators provide OEM performance and quality—all

backed by trusted, knowledgeable support.

Mitsubishi Starter Program

2 BorgWarner



Cut your starter SKUs in half by converting your Mitsubishi starter inventory to genuine Delco Remy starters. Reduce your inventory from 30 to 15 starters with our allmakes replacement part numbers for Mitsubishi Diamond Gard.

Kenworth/Peterbilt Starter & Alternator Application Guide



Starters or alternators found on Kenworth and Peterbilt trucks can easily be replaced with genuine Delco Remy starters and alternators. Both starters and alternators are new service/ no core with industry-leading warranties.

Ford F-650 & F-750 Program



This program offers new and remanufactured genuine Delco Remy starters and alternators for 15 years of coverage for F-650 and F-750 trucks, all of which are OE-approved with demonstrated performance and durability. Anchored on the 24SI[™] and 28SI[™] alternators, the program

aims to replace the 22SI[™], which most Ford F-650 and F-750 trucks were equipped with at the factory.

APU & Transport Refrigeration Programs



Our BorgWarner transport refrigeration and auxiliary power unit (APU) starters and alternators are tested and manufactured to OE quality specification standards. **APU:** The nine part numbers cover virtually all Thermo King, Carrier and Rigmaster units. All

starters and alternators are new service models. **Transport Refrigeration:** Five part numbers cover the most popular transport refrigeration applications. The new service models (no reman core) have been thoroughly tested and validated.

Visit DelcoRemy.com > Download Literature to see guides and reference charts.

BorgWarner

Tech Tip: Starting Motor Gear Differences

ave you ever gone to replace a starting motor and discovered that the recommended replacement starter has a different pinion than the original unit? Good news, it can still be used for the replacement.

Starting motor pinions and drive assemblies are specifically designed to match the engine ring gear for proper mesh and performance.

If you're dealing with an older application:

- Conduct a quick check of the engine type to make sure it has not been replaced.
- Next, confirm that your recommended replacement model is appropriate for the engine being serviced.
- Check the removed starter pinion and engine ring gear for damage. Putting a good starter on a damaged ring gear will most likely damage the starter pinion.
- Verify the ring gear tooth count for the engine being serviced. After verifying the engine, ring gear and starter, you can still use a starter with a different pinion.

This is acceptable because most starting motors have a pinion centered in the drive end mounting that mates with the ring gear when energized (Figure A). Starting motors can be optimized with a pinion change to match the engine characteristics. Because the engine ring gear is fixed, any change to the pinion would require an offset to the shaft position in order to properly mesh with the ring gear (Figure B).



Figure A: Starter with pinion centered

Figure B: Starter with pinion offset



Performance between the two designs should be fairly compatible and suitable for replacement. The pinion differences exist to better match the motor performance with engine needs for a given motor family or manufacturer.



If you have any questions, visit **delcoremy.com**, or contact us at **800-372-0222**.



Watch our short Tech Tip video to learn more about what to do when a replacement starter has a different pinion than the original unit.



Visctronic[®] + XD11 = The Solution

Our independent warehouse distributors can now add BorgWarner thermal products—new OE service—to their weekly Delco Remy® branded rotating electrics order. The product offering provides 75-80% coverage of the North America market and will only continue to grow.

Two of the thermal product offerings—the Visctronic® fan drive and XD11 fan—are designed specifically for Navistar applications, making them useful to customers experiencing field issues. The Visctronic with an XD11 fan can be used as a drop-in replacement module for 2010-2013 Prostar 13L applications. It utilizes the same shaft mount configuration, eliminating the need for complicated conversions. Plus, the Visctronic comes programmed to operate with the existing truck calibration.

Visctronic Fan Drives



- Precise fan speed control: ECU closed loop control optimizes fan speed for improved fuel economy and horsepower availability
- Quiet fan operation: Smooth fully variable control decreases noise and vibration for reduced driver fatigue and improved cooling system durability
- Low parasitic drag at fan idle speed: Results in increased efficiency
- Maintenance free: Self-contained unit, nothing to service or maintain
- Proven, reliable technology: Invented by BorgWarner and in production for decades

ASK FOR:

Visctronic 882B Part #10025195EA

XD11 Fan Part #F10026097

XD11 Fans



- Superior performance
- Meets the peak truck cooling requirements globally
- Best cooling performance at low rpms, using Visctronic fan drives

New Part Numbers

Go to The Latest at delcoremy.com to find the following:

- Newly released heavy duty starters
- New part-number cross references
- Most frequently searched competitor part number cross references

Delco Remy			ENDIS ATHMA	os neutos sator s	() ратоницов естикна расулат	
Net/OFF 3 the 3 decay 3 on a minimum contract notice New Var T Numbers Added mann for Themas Added and the set of the						Recent Posts - detachery 11 days the mini distantise for Death the Applications - link 1% of distantise - distanting - the Post Application Charges - there Post Residence Added - these Specific face Program Application 12019
Competition P/N	and .	Dates Rama Replacement P.N.	Product Description	Indiante Aparticument	- Auto	h = 214
Der-0002-014	PaciarMeaduchi	of Males 2007 P.P. EDITOR	10 Ind. Baller	di franci	Tage	
196072011	Normal Loss Andre	Ad Matun 200 P.N 000127	10 mit, Ped Moart Abendor	Tanous Nanshar Brights	alternation April 2011	er (7) 9 Correct (8)
LMP109008	Losso Navilla	Ad Malon 2007 P.75 (200042)	10 Folk Barter	Training Brights	August 2	(1) Connect (2)
L8P21000H	Lasta North	Advision 2000 P.A. INCOME.	10 Foll, Ped Moart Alternator	Tateui Digite	Datio Re	ey (7)
12140141305	Peter	Al Malan 360 P.N 860107	12 Holt, Ped Mount Alternator	Version Parcel Engine	January	(011 Consect (8)
Meet Temperity see	eched newly added part no	nter mas whereas			(anany)	(it terrest in
Competitor P/N	Band	Daite Barry Deplacement P.N.	Product Description	Unidate Application	January	211 General (4)
041-6005-003	Parcar Mitadouhs	Al Malan 2007 P.M. EDITOR	to not, butter	tit Degrees	Adj 2010	Convert (2)
4040248091	Karataciuses Neville	Ad Matan 200 Ang. 400 P/N BARAN	12 Init. Pad Mount Alternation	High-Output Neventer Engine	Jane 201 Jane 201	+ Connect (3) + Connect (3)
			0			

CONNECT

BorgWarner Helps Establish Alternator Efficiency Recommended Practice

elping establish a standard for the industry benefits everyone—fleet customers, distributors and manufacturers. It's one of the reasons BorgWarner's Bob Jeffries has long been involved with the Technology and Maintenance Council (TMC) of the American Trucking Association.

TMC is charged with developing recommended practices (RPs) for the industry on the maintenance and operations of vehicles. Currently, there are nearly 500 RPs that have been adopted by TMC, including one that was recently spearheaded by Jeffries.

Jeffries—along with BorgWarner's Mike Bradfield and input from a colleague at Nippon Denso—developed RP 180: Standard for Establishing Alternator Efficiency.

"This RP ensures that, regardless of the manufacturer, we are all testing alternator efficiency to the same standards," he explains. "It's an important RP because fuel remains one of the top costs of operating a vehicle."

With Bradfield's help, the committee developed an efficiency formula that was based on the MODAC (Mobile Data Acquisition) study. They also established profiles for average line haul trucks as well as traditional Class 8 trucks, so the formula could be adapted to the particular vehicle type.

"This RP doesn't favor any manufacturer. It is simply a testing standard that ensures end users have a common way to evaluate alternator efficiency," Jeffries explains. "Efficiency can be a moving target. This

RP allows a true apples-to-apples

Once adopted by TMC, RPs are commonly used in specifications for the purchase of a vehicle or truck.

"This is an important process because it allows various parts of the industry to come together and work through maintenance issues and establish standards that make the industry better—something we all want."

As a Silver Spark Plug member of TMC, Jeffries has been recognized for his influence and excellence in the maintenance of commercial vehicles. He's helped develop four other RPs.

