

Product overview



EAT•N

Powering Business Worldwide

✦ Your truck's driveline is only as strong as its weakest link.

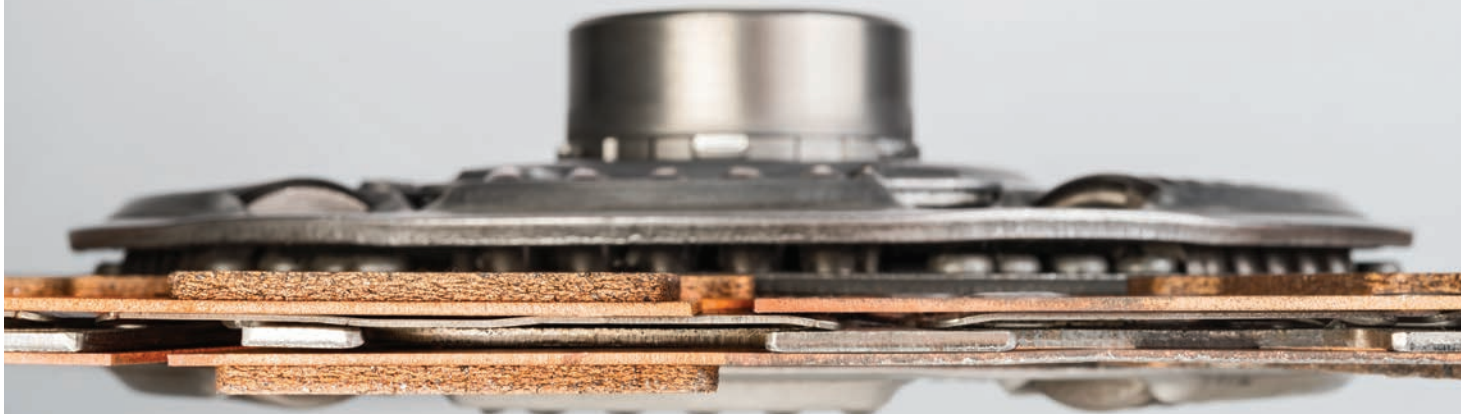
Every day, you're thinking about what's best for your customer. Fleets rely on you to perform the maintenance and repairs that keep their vehicles on the road. And you take pride in your workmanship, knowing that there is no substitute for quality. So instead of cutting corners with less expensive, lower quality products, you should invest in genuine Eaton aftermarket parts designed and tested to exacting standards for optimal performance.

Eaton's Vehicle Group provides more than 100 years of expertise as an original equipment manufacturer to the global automotive and commercial vehicle industry. Its products and solutions for OEM and Aftermarket are designed to offer driveline expertise through its clutch, transmission and traction modifying device as well as to improve a vehicle's overall efficiency, performance and power with products such as superchargers, engine valves, valvetrain systems and emission control components.

Insist on genuine Eaton parts and get back on the road with confidence. Because that's what matters.

For more information, visit www.eaton.com.

Find your next Eaton clutch with
the new web catalog.



[View online!](#)



Powering Business Worldwide

Eaton clutches are renowned for their reliability, durability, and performance. Eaton offers a complete clutch program for European and American commercial vehicles for the Aftermarket.

To review the full portfolio visit our new online catalog at
www.eaton.com/ClutchEMEA

www.eaton.com/vehicle 3

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Traction modifying devices

Traction modifying devices

Whether you are transforming your daily driver to a street/strip machine or want to improve your off-roader, Eaton has a differential that is right for your application.

Limited slip are torque sensing differentials that allow the wheel with traction to receive more torque. Locking differentials are ideally suited for off-road applications by ensuring each wheel receives equal torque to keep your vehicle moving on all types of terrain.

Eaton's world class traction solutions provide drivers with confidence, control and safety in virtually any traction situation.

Limited slip differential are torque sensing differentials that allow the wheel with traction to receive more torque.



Posi®

- Clutch style unit employs pyrolytic carbon fiber clutch packs to allow for chatter-free transfer of power
- Prevents wheel slip before it can get started
- Rebuildable design
- Used by performance vehicles



Truetrac®

- Helical gear differential automatically biases torque to ensure stability and increase traction
- Used in light and medium duty trucks specifically selected for utility and towing
- Available for front and rear applications

Locker - Locking differentials ensure each wheel receives equal torque, to keep your vehicle moving on all types of terrain.



Detroit Locker®

- Full positive locking differential automatically unlocks the faster turning wheel to allow wheel speed differentiation
- Provides 100% locking action even with one wheel off the ground
- Available in a wide range of car, light duty truck and performance



ELocker®

- Selectable traction for off-highway
- Provides 100% axle lock at the touch of a button
- Enhanced towing and off-road performance
- Used in front and rear wheel drive applications



MLocker®

- 100% full locking differential is proven with millions of units in service worldwide
- Automatically delivers traction on a variety of surfaces including wet roads, icy conditions, gravel, mud and dirt
- Used primarily in light duty trucks

Traction modifying devices for extreme off-highway conditions



Fully automatic, positive locking, traction differential

NoSPIN locking differential is a proven performer for light, medium and heavy duty trucks, off-highway, military and specialty equipment vehicles.

- Speed sensitive automatic locking & unlocking differential powers both drive wheels.
- Automatically unlocks the faster turning wheel to allow wheel speed differentiation
- Provides 100% locking action even with one wheel off the ground in forward and reverse
- Available for most axle suppliers, front and rear axle application



Eaton – NoSPIN® Differential



The extremely rugged and durable differential operates smooth and automatic

SureTrac heavy duty limited slip differential is designed for construction, military and farming vehicles:

- Responds instantly to torque feedback at any speed
- Reduces shock loads that can damage the drive train
- Enhances traction control in rugged and adverse conditions.
- Smooth automatic operation
- Significantly reduces tire wear
- Limits wheel spin out
- Increases productivity
- Front, rear or transfer case applications



Eaton – SureTrac® Differential

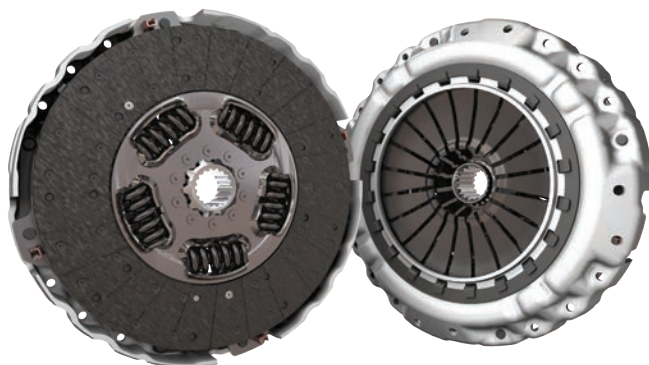
Complete aftermarket clutch program

Eaton once again innovates in the market and launches the line of agricultural clutches for several brands of tractors and combines, guaranteeing high performance, quality and durability.



Organic clutches 430mm

Eaton 430mm clutches feature the proven technology of a high-strength stamped steel bracket, robust diaphragm design, and premium organic driven disc facings. Eaton 430mm clutches are maintenance-free, adjustment free and lubed for life: this eliminates periodic adjustments and lubrication and extends the clutch service life.



NEW application for the aftermarket:

Self-adjust clutch designed for automated transmissions that operates in the EMEA market. This technology fits Mercedes Benz applications with self-adjust clutch.

Features:

- Made from 100% new components. No remanufactured or reused components
- soft-rate damper can significantly reduce severe vibration, cutting down on maintenance costs and downtime, and extending drivetrain component life
- Cushioned organic facings allow for smoother engagement and less pedal effort
- Soft-rate damper offers protection against harmful torsional vibrations and increases the durability of transmission synchronizers
- The standard pre-damper reduces idling noise
- Built to OEM quality and durability standards to insure outstanding performance and maximum clutch life

Specifications:

- **Cover assembly:** Pull wear through, push wear through, push self adjust
- **Torque capacity (Nm):** 2950 max.
- **Damper:** Soft-rate damper with a standard pre-damper
- **Applications:** automated manual transmission linehaul, vocational, bus and coach

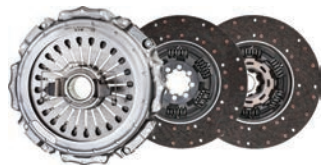
Clutch portfolio 280mm - 400mm



365mm twin plate clutch



362mm clutch



400mm twin plate clutch



280mm clutch

Features:

- Made from 100% new components. No remanufactured or reused components
- Soft-rate damper can significantly reduce severe vibration, cutting down on maintenance costs and downtime, and extending drivetrain component life
- Cushioned organic facings allow for smoother engagement and less pedal effort
- Soft-rate damper offers protection against harmful torsional vibrations and increases the durability of transmission synchronizers
- Pre-damper available depending on application

Specifications:

- **Cover assembly:** diaphragm, pull and push type
- **Torque range capacity** (Nm): 250 to 2950
- **Damper:** Soft-rate damper with a standard pre-damper (if applicable)
- **Applications:** Light commercial vehicle, automated and manual transmission
- **Driveline:** European and Brazilian

Severe duty clutches

430mm SD clutch:

The 430mm SD clutch offers patented cushioned ceramic facings to provide smooth launch characteristics and maximize protection against thermal stress.

Weight savings and reduced wear:

The Eaton 430mm SD offers the performance of a 400mm twin plate design from a one plate clutch, which is a weight savings. The lower inertia of the one plate design also protects transmission synchronizers from premature wear.

Maintenance and operations:

The robust clutch design and excellent thermal robustness provide longer service life and less maintenance cost. The cushioned ceramic facings protect against truck downtime caused by clutch failures in high temperature environments.

Vibration control:

The clutch design includes six disc springs and additional pre-dampers are available. The design features reduce idling noise and protect the driveline components from the torsional vibrations of the engine.

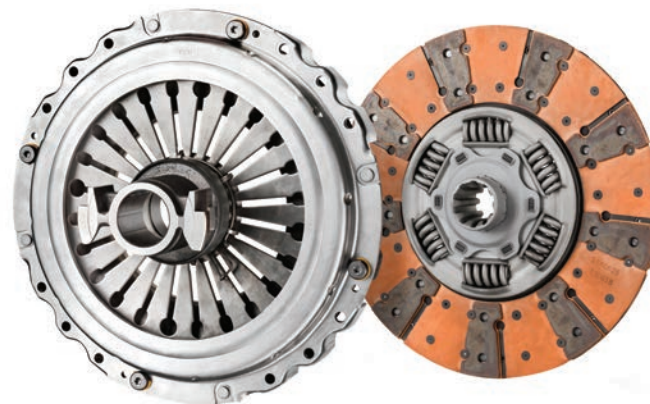
Features:

- Cushioned ceramic facing advantages
 - 30 to 49% increase in coefficient of friction
 - Excellent resistance to thermal stress
 - Engagement quality at par with organic facings
- Lower initial inertia than the comparable 400mm twin plate design

Specifications:

- **Cover assembly:** diaphragm, pull type
- **Torque capacity (Nm):** 2.600 max.
- **Damper:** 6-spring damper with pre-damper option
- **Primary application:** Severe duty vocational with manual Transmission / AMT upon Eaton Engineering approval
- **Additional applications:** heavyhaul, linehaul, bus, coach

On synchronized transmissions and to be used in applications with high shifting demands.



Angle spring clutches

EverTough and Advantage Series Clutches

The reliability you want, at the price point you need.

The Eaton clutches are engineered specifically for the aftermarket by optimizing key areas of the clutch to achieve the price and performance balance. These types of clutches manufactured by Eaton are 100% new and use genuine components, with a design based on millions of miles of clutch experience. With a one-year-unlimited mileage warranty, shows high performance on the job and a difference on the bottom line. That's something no other brand can match.

Feature for Advantage Series Why a Strap Drive Intermediate Plate Connection?

The strap drive connection improves the connection to the intermediate plate, eliminating lug failures and open clutch rattle. Alternatively to the strap drive is a lug drive, which is the most common design in the market. The lug is not fastened to the housing, it floats and vibrates when the clutch is open. This vibration of the intermediate plate lug can result in fatigue, which can lead to failure. The straps in the Advantage clutch design affix the intermediate plate to the housing so it does not vibrate, eliminating lug rattle and improving longevity.

Advantage Series

New, **industry-leading technology** designed and tested to outperform the highest OE specifications.

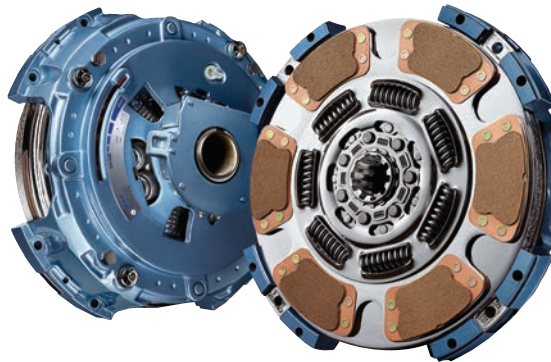
- Leading strap drive technology improves intermediate plate connection, for more reliable performance
- Designed to eliminate lug rattle and fatigue

- Dual seal release bearing for best-in-class 80.000 km lubrication intervals
- Tuned, dual damper system absorbs engine vibrations and prevents idle rattle
- Soft rate springs protect driveline components
- Two wear indicators for improved serviceability

EverTough® Series

Industry standard, proven technology for the aftermarket.

- Industry-standard lug drive intermediate plate connection
- Release bearing seal features a 360° design for 40.000 km lubrication intervals
- Three lubrication ports provide easy access for maintenance
- Premium single damper system for superior driveline vibration control



Agriculture clutches

Eaton quality and technology now available in the agriculture clutch line

Eaton offers a wide range of clutch assemblies designed specifically for the agricultural market.

For most applications Eaton can provide a clutch and guarantees a high performance, quality and durable solution. Various tractors and combines make use of Eaton products such as:

- John Deere
- Case New Holland (CNH)
- Massey Ferguson
- Valtra
- Agrale

New expansion for agriculture machines





Centrifugal clutches

Eaton's centrifugal clutches stand for their reliability and durability proven in the field for more than 10 years. Eaton supplies centrifugal clutches to the major OEMs who manufacture temperature control units for the commercial refrigerated trucks and trailers industry.

Centrifugal clutches for road transport temperature control units

Transport refrigeration equipment, cold chain monitoring solutions and replacement components help protect global food supply and other perishable cargo. Centrifugal clutch is one of the key components to drive the compressor of a refrigeration unit. It acts as a coupling element to transfer torque from the engine to the compressor. The engine builds up sufficient torque and transmits then torque to compressor.

Features:

- Provide smooth and automatic engagement at given speed
- No external power source needed
- Prevent the stalling of the engine
- Absorb vibration
- Dry friction technology with Non-asbestos material
- Enable to handle higher torque at lower rpm
- Wide operating temperature range (from -30 °C up to +80 °C)
- 100% tested for torque and engagement speed
- The engagement speed can be precisely controlled by design



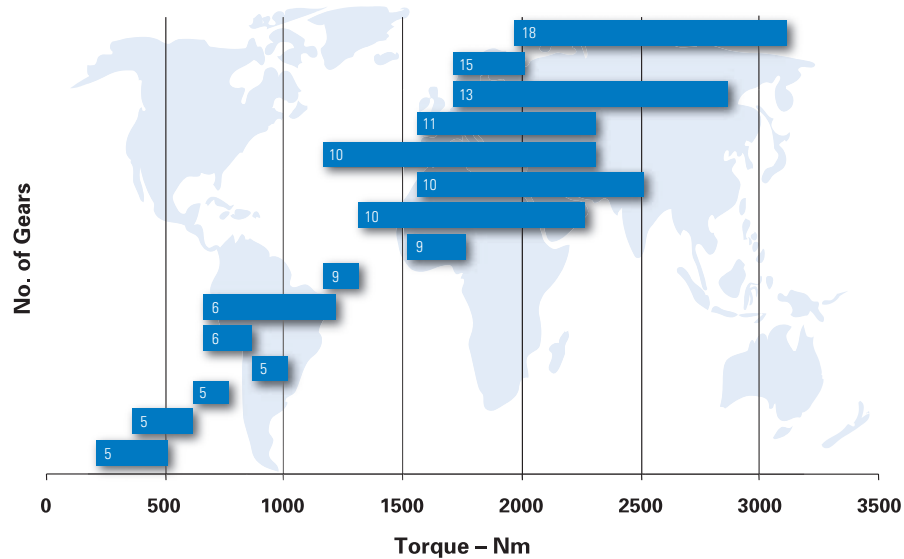
Commercial vehicle transmissions

With over 100 years of proven success in on-highway and off-highway applications, original equipment manufacturers around the globe count on Eaton's transmission solutions to enhance reliability, efficiency, safety, and drivability.

Eaton is a global leader in the design and manufacture of light, medium and heavy-duty transmissions. It offers the world's most complete line-up of transmissions for commercial vehicle applications, spanning line haul/ on- highway to pickup and delivery and buses to utility trucks and other vocational applications, such as snow plows, dump trucks and mixers.

Eaton extensive portfolio is manufactured in the United States, Europe, Brazil, Mexico, India and China.



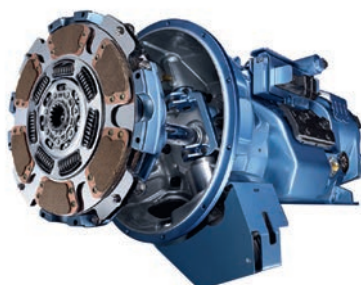


Eaton synchronized medium duty transmission

The world's most extensive lineup of commercial vehicle transmissions.

Eaton offers fully synchronized and non-synchronized manual transmissions as well as automated manual transmissions across a full spectrum of applications.

Original equipment manufacturers around the globe count on Eaton's extensive experience in tailor-made solutions that enhance the overall vehicle efficiency, reliability, safety and drivability.



**Eaton UltraShift® PLUS Automated
mechanical transmission**

Rugged, world-proven reliability and improved productivity

Eaton's leadership is demonstrated through:

- Eaton's Fuller brand of constant mesh manual transmissions serve as the industry standard and are available in every major OEM platform in North America, as well as many others globally.
- Eaton was the first to develop electronic integrated engine and transmission controls. Eaton was also a key contributor for the design of the SAE J1939 data link.
- More than 300,000 automated transmissions on the road covering more than 45 million miles.

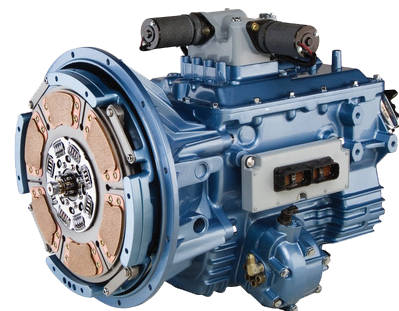


Shifting perceptions about efficiency, safety and sustainability.

Eaton's automated transmission, the medium duty UltraShift PLUS, provides extreme efficiency over other automated and automatic transmissions, as well as a number of performance and cost advantages. An electronic clutch actuator provides faster shifting, smoother engagement and improved low-speed maneuverability. Best of all, UltraShift PLUS can be tailored to the unique needs of each fleet in order to provide optimal performance.

Eaton's powertrain technologies are used by four of the top five heavy-duty OEMs globally and include:

- Synchronized manual transmissions (5 through 13 speeds)
- Constant mesh manual transmissions (5 through 18 speeds)
- Automated constant mesh manual transmissions (6 through 18 speeds)



Eaton medium duty UltraShift® PLUS transmission



Transmission parts

Transmission parts for agriculture applications

Transmission parts are developed under strict quality control measures throughout the entire manufacturing process, starting with the use of high quality materials and finalizing with the product packaging process

Eaton can guarantee high performance, quality with durability for applications that operate in challenging soil conditions. Eaton uses high quality materials and state-of-the-art-machining processes and equipment for the manufacturing of parts.

Parts are perfectly shaped for improved lubrication of the contact area which reduces friction, improves heat dissipation and thus prolongs the life of the transmission.



Engine valves and valvetrain

Eaton is known throughout the world for its expertise in engine air management. Our design and developmental results databases support the most comprehensive system analysis in the world. Focusing on efficient systems has helped reduce emissions and improved fuel economy. Eaton's global valve facilities apply their in-house developed proprietary technology to produce a complete range of original equipment and aftermarket valves. For over 75 years, Eaton has been designing and developing engine valve technologies for manufacturers requiring the highest quality standards for petrol, diesel and alternative fuel engines.



Engine valves

Focusing on efficient systems has helped reduce emissions and improved fuel economy.

Engineering

Eaton's global valvetrain facilities utilise state-of-the-art and proprietary technology to produce a complete range of original equipment and aftermarket products.

Eaton design and developmental results databases support the most comprehensive system analysis in the world.

Materials

Engine downsizing, coupled with increased power density, requires valves with higher strength and temperature resistance. This challenge can be addressed with high performance materials, hollow valves (which allow for internal cooling), and special seat and stem coatings.

Eaton hollow valves reduce engine knock, enabling specific power and fuel economy increases and improved catalytic converter efficiency.

Surface treatment

- Chrome plate
- Nitride

Design

Eaton offers a complete portfolio of valves to meet new trends in engine development. Our prototyping, failure analysis and proprietary instrumentation give Eaton clients and partners the best in valve design.

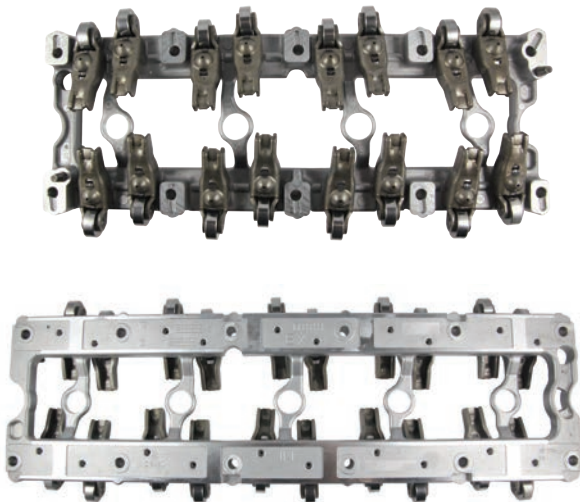
Eaton differentiates itself by using innovative technology to produce hollow, nickel-based superalloy and other specially-designed valves. Improving engine systems through valve design supports increased performance, lower emissions and overall efficiency.



Valvetrain

Eaton's valve actuation technologies are designed to achieve the highest valvetrain dynamic performance, ensuring low friction losses, and minimal components wear.

The rocker arms (RA), roller rocker arms (RRA), hydraulic lifters, and hydraulic lash adjusters (HLA) maintain precise valve lash and enable low friction, maintenance-free operations throughout the engine's lifecycle.



Rocker Arm Bridge (Carrier)



**Valve Actuation
HLA and RRA**



Valve Actuation HLA



Valve Actuation RRA

Supercharger service parts

Eaton is the world's largest producer of superchargers, the performance-boosting device of choice for many premium global brands. Eaton engineers and manufactures a full line of roots-type superchargers for a wide variety of engine applications.



Eaton TVS technology opens up a new world of possibilities for products that requires precision air flow solutions.

No longer applied only as a supercharging device used to increase horsepower and torque, TVS technology has moved beyond its traditional performance engine supercharging, evolving into a tool with a wide range of applications across various industries.

TVS technology is available in 2 different families: R-Series with 4 lobes optimized for peak engine power applications, and V-Series with 3 lobes optimized for peak efficiency at low engine speeds, which is ideal for 2-stage or compound boosting systems where a turbocharger and supercharger work in combination.

Eaton's Authorised Rebuilders have met stringent quality rebuild requirements. Only the best rebuilders can carry the Eaton Authorised Rebuilder name:

- 100% Genuine Eaton content
- Renown Eaton quality, reliability, and standards
- Outstanding technical capacities of each authorised rebuilder

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