



**CARLISLE**<sup>®</sup>

*BRAKE & FRICTION*

**OE GRADE BRAKE & FRICTION SOLUTIONS**



**AFTERMARKET CATALOG**

At **Carlisle**, we are proud to maintain our position as a top-tier supplier for providing highly engineered motion control solutions for severe duty and high energy applications. OE-grade product development processes and global capabilities ensure Carlisle has the capacity to provide high-quality, cost-competitive solutions.

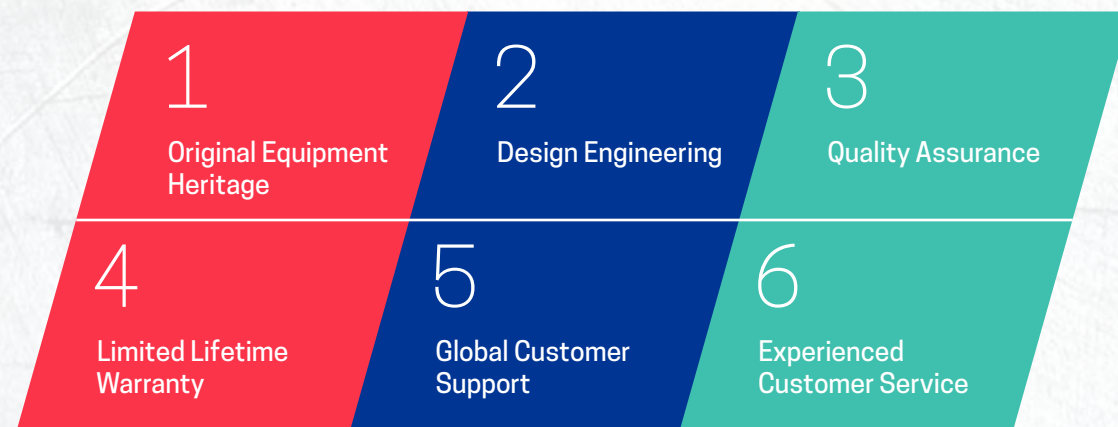
When choosing a Carlisle product, our customers expect a quality solution that will keep their application operating at an OE level of performance under the toughest environmental conditions. Carlisle remains determined to produce the highest quality

brake system products available for today's on- and off-highway fleet owners and equipment operators.

Carlisle product and design engineering teams are available to work with your technical support teams to optimize an appropriate solution in order to meet the specifications of your application.

From an aftermarket service kit to a complete brake system solution, Carlisle's engineering support and aftermarket sales representatives are prepared to help customers obtain industry-proven solutions the first time, every time.

## 6 REASONS TO CHOOSE CARLISLE AFTERMARKET PRODUCTS



### CARLISLE OFFERS OE GRADE BRAKE AND FRICTION SOLUTIONS

- OE and Aftermarket products are manufactured in the same ISO-certified facilities
- OE and Aftermarket products are manufactured on the same production lines
- Production of OE and Aftermarket products are managed by the same quality control/SPC system
- Carlisle Aftermarket products offer specific features not available from most aftermarket suppliers

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Carlisle Brake & Friction is a global leader in the development and supply of severe-duty and high performance brake, friction and hydraulic actuation product technologies, servicing both the Original Equipment and Aftermarket customer base in a variety of end markets.

Carlisle is committed to providing customers with premium quality brake system product solutions for both on- and off-highway applications. At Carlisle, the rigid quality, application testing and validation standards of our products result in motion control system components that demonstrate infallible field performance and provide superior customer value. Carlisle products are performance proven, offering the best possible value for aftermarket distributors, fleet owners and off-highway operations. For decades, Carlisle products remain a preferred brake system solution by professional repair shops and fleets striving to maintain the superior OE quality of their on-highway vehicles and off-highway mobile equipment.

Carlisle's long-standing history of design successes and demonstrated performance can be attributed to years of experience in research and development, testing proficiency and manufacturing excellence on a global scale.

More than 1,700 employees worldwide support our diverse motion control market segments with innovative solutions as well as a commitment and expertise that only a company with decades of industrial braking experience can provide.

Every day we are building stronger, closer relationships with customers, using our insight and experience in order to specifically tailor solutions to meet their individual needs. From identifying the appropriate brake, friction, hydraulic or aftermarket kit solution for your application to troubleshooting maintenance inquiries, Carlisle provides the customer service and support necessary to keep your equipment up and running smoothly.

## BRAKE ASSEMBLIES

### CALIPER BRAKE DEVELOPMENT - DESIGN AND TESTING:

- Extensive lab and field testing ensure performance characteristics meet all theoretical models
- Custom designed testing equipment simulates real world conditions and confirms engineering premises
- Structural endurance testing machines and inertia dynamometers test overall strength and performance



### CALIPER BRAKE VALIDATION AND PERFORMANCE TESTING:

- Dynamic friction (torque) tests are designed to simulate performance conditions under various application loading
- Chemical and thermal analysis equipment measures temperature saturation versus duty cycle
- Heat fade tests evaluate performance characteristics following an extreme heat episode
- Torque fatigue procedures test performance and durability under the most severe conditions

### GAS NITRIDING:

- Process designed to increase strength and hardness without affecting the rest of the part
- Provides part durability, reducing downtime due to fatigue, distortion or breakage
- Performed on all Carlisle friction discs and opposing plates



## HYDRAULIC ACTUATION

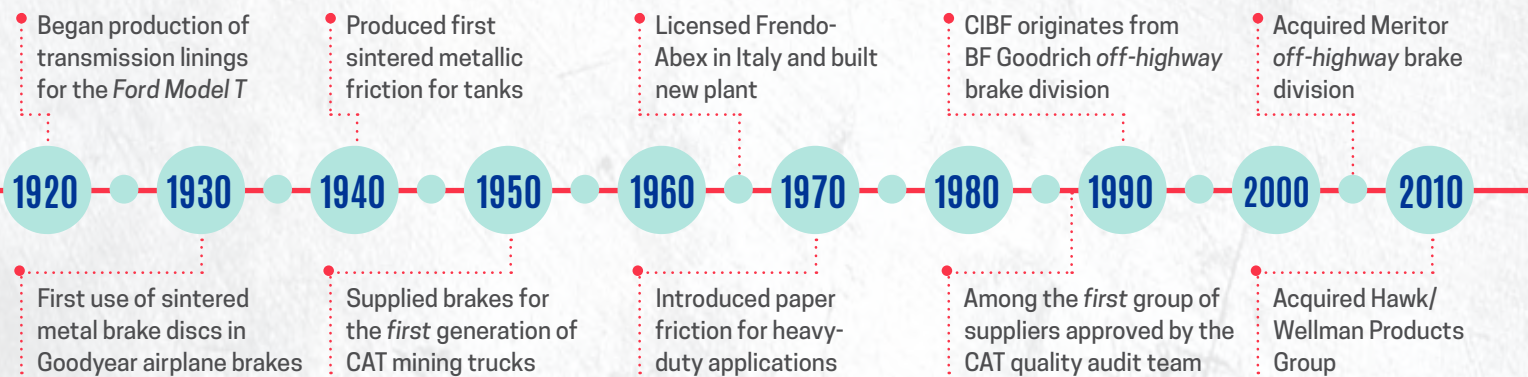
### BOOSTER AND MASTER CYLINDER TESTING PROCEDURES:

- Environmental chambers test performance under various possible conditions of a given application
- Hydraulic testing capabilities measure durability and validate lasting performance
- Failure analysis assessments ensure quality



### HYDRAULIC VALVE TESTING AND DESIGN:

- Each and every Carlisle valve is both performance and leak tested to ensure the highest level of quality
- Tested and proven capable of up to 3500 PSI input pressures
- Flow rate measures and pressure tolerance testing demonstrate superior flow capacity



## FRICTION PRODUCTS

### FURNACE FLATTENING:

- Provides stress relief for additional hardness control following heat treat and grinding
- Ensures part flatness, parallelism and hardness for proper fitment and performance
- Performed on all Carlisle friction discs and opposing plates

## MINING

**MINING PRODUCT SOLUTIONS:** Wet Brake Friction Discs, Disc Brake Pads, Dry Caliper Service Brakes, Park and Emergency Brakes, Hydraulic Actuation, Manifolds, Charge Valves, Clutch Discs, Transmission Discs

**CARLISLE SERVED MINING APPLICATIONS:** Front-end Loaders, Backhoe Loaders, Wheel Loaders, Haulage Trucks, Tractors, ADT's, Rough Terrain Cranes, Underground Mining, Winches and Tow Behind Scrapers



## AGRICULTURE

**AGRICULTURAL PRODUCT SOLUTIONS:** Wet Brake Friction Discs, Hydraulic Actuation, Disc Brake Pads, Service Brakes, Park Brakes, Ball on Ramp Brakes, Drum Brakes, Clutch Discs, Transmission Discs

**CARLISLE SERVED AGRICULTURAL APPLICATIONS:** Tractors, Combine Harvesters, Roller Mills, Scrapers, Utility Vehicles, Material Handling



## CONSTRUCTION

**CONSTRUCTION PRODUCT SOLUTIONS:** Clutch Friction, Wet Friction, Hydraulic Actuation, Service Brakes, Park and Emergency Brakes, Disc Brake Pads

**CARLISLE SERVED CONSTRUCTION APPLICATIONS:** Backhoe Loaders, Front-end Loaders, Wheel Loaders, Pavers, Graders, Excavators, Rollers, Scrapers, Bulldozers, Mobile Cranes, Haulage Trucks, Telehandlers, ADT's, Lift Trucks



## AEROSPACE

**AEROSPACE PRODUCT SOLUTIONS:** Steel Brake Rings, Steel Brake Cups, Steel Brake Insulators

**CARLISLE SERVED AEROSPACE APPLICATIONS:** Commercial and Military jets, Small Multipurpose Airliners and Helicopters.



## INDUSTRIAL

**INDUSTRIAL PRODUCT SOLUTIONS:** Wet Brake Friction, Drum Brakes, Dry Caliper Service Brakes, Disc Brake Pads, Hydraulic Actuation, Clutch Friction

**CARLISLE SERVED INDUSTRIAL APPLICATIONS:** Cranes, Material Handling Vehicles, Oil Rigs, Airport Tugs, Telehandlers, Logging and Forestry Equipment



## ON-HIGHWAY

**ON-HIGHWAY PRODUCT SOLUTIONS:** Disc Brake Pads, Clutch Buttons, Brake Blocks, Brake Shoes and Lined Shoe Assemblies

**CARLISLE SERVED ON-HIGHWAY APPLICATIONS:** Class 3 – 8 Commercial Trucks



## MILITARY

**MILITARY PRODUCT SOLUTIONS:** Park Brakes, Service Brakes, Combination Brakes, Hydraulic Actuation, Clutch Discs, Transmission Discs, Wet and Dry Friction

**CARLISLE SERVED MILITARY APPLICATIONS:** Light to Heavy-duty Armored Vehicles, Tanks, Military Transports, and Aircraft Barriers (cable brake), Land Attack and Assault Vehicles



## MOTORSPORTS

**MOTORSPORTS PRODUCT SOLUTIONS:** Disc Brake Pads, Clutch Transmission Friction, Disc Brake Rotors

**CARLISLE SERVED MOTORSPORT APPLICATIONS:** Circle Track, Dirt Track, Road Course, Drag Racing, Endurance, Rally and Stock Car Racing



# BRAKE ASSEMBLIES

# WET FRICTION

Originating from the acquisitions of such OEM off-highway brake assembly pioneers as B.F. Goodrich, Meritor and Rockwell Automation, today Carlisle has evolved to become the industry authority in brake system innovation. Adhering to tradition, Carlisle continues to invest in the design, testing and improvement efforts of both new as well as industry prominent Carlisle legacy brake assembly models. Designed to endure some of the world's harshest demands including off-highway earthmoving equipment, Carlisle brake assemblies are built to keep equipment in service under even the most extreme conditions.



In conditions of varying load, Carlisle **Park and Emergency Brake** assemblies are designed to retain predictable and repeatable performance characteristics.

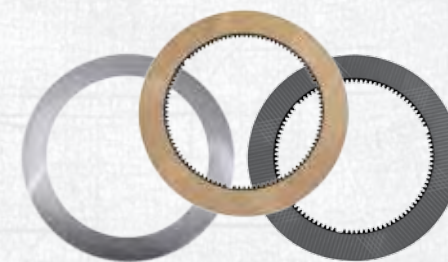
Carlisle park brakes are world-renowned for delivering the ultimate heavy-duty solution for safety, reliability, durability and lasting performance. Our spring apply, hydraulic release caliper park brakes are specifically designed for high torque static applications with a wide range of dynamic capabilities.

Carlisle's **Combination Brake** assemblies offer an integrated park and service braking solution. One set of opposed pistons are the SAHR park brake while the other two sets of opposed pistons are the hydraulically actuated service brake. Combination brake assemblies reduce the overall weight and space limitations necessary in maintaining two separate braking systems.

Large vehicles require increased braking capacity. Many of the world's largest off-highway vehicle and equipment applications depend on the trusted precision of Carlisle brake assembly performance. Decades of experience prove that Carlisle **Service Brakes** continuously meet the demands of a wide range of high energy, high torque severe-duty applications. Choose from any one of our hydraulically actuated, four to six piston caliper service brake assemblies, each built to withstand and perform under any of today's high energy, high torque dynamic braking conditions.

Carlisle wet friction product technologies set the industry standard for durability, fitment, safety and quality. Each Carlisle friction material available to the industrial aftermarket is specifically designed to maximize equipment uptime, reduce annual maintenance costs and meet the harsh demands of today's off-highway vehicles.

## MATERIAL TECHNOLOGY



Carlisle Paper friction discs demonstrate considerable performance advantages over the competition. With a proven tolerance to high heat and pressure loading conditions, our paper materials resist wear in order to deliver long-lasting, consistent performance.

**HDT Graphitic** discs are a unique and proprietary friction technology available exclusively through Carlisle's aftermarket distribution and custom rebuild channel partners.

The HDT graphitic disc is specifically designed for power shift transmission, forward and reverse clutch and wet brake applications.

The quality of **Steel** disc opposing plates is critical to the durability and performance of friction discs and motion control systems. Surface finish, geometry and fitment are all critical to achieving expected performance from mating friction discs.

All Carlisle steel opposing plates endure additional secondary operations and quality inspections to ensure proper flatness, parallelism and surface conditioning for structural strength and fitment.

Carlisle offers **Sinter Metallic** discs in a variety of formulations. Our Iron (Feramic), Bronze, Copper and Ceramic products provide exceptional performance and durability for power shift transmission, power take-off, steering clutch, wet brake and other motion control applications.

**Semi-Ceramic** Premium disc brake friction material offering OE level performance, superior durability, friction coefficient, fade resistance and overall friction life.

Carlisle's **Semi-Metallic**, economy grade friction material demonstrates increased performance and wear characteristics compared to competitive aftermarket offerings on the market today.

## OE GRADE FEATURES

- CNC machining capabilities ensure proper casting
- Rigid design and quality tolerances validate performance characteristics
- Cleanliness is made possible through enforcement of the Carlisle Operating System (COS), a continuous improvement process
- Engineered with high strength ductile iron or high grade aluminum to ensure lasting durability
- Torque spec procedure for hardware installation validates the performance of all assembly parts
- All Carlisle brake assemblies are tested to the same OE specifications

## OE GRADE FEATURES

- Choose between OE level or higher friction profiles
- Best in class fade resistance
- Superior wear rates minimize downtime and cost
- Superior resistance to glazing



# ON-HIGHWAY FRICTION HYDRAULIC ACTUATION

Under the VelveTouch® by Carlisle Brake and Friction aftermarket brand name, Carlisle develops friction technologies including disc brake pads and clutch friction materials for light- to heavy-duty, on-highway vehicle applications. As a world renowned OE brake block, clutch and transmission friction manufacturer, Carlisle is proud to maintain a proven track record in developing friction materials that consistently achieve flawless performance characteristics under even the most complex, severe-duty applications.



VelveTouch **Clutch Buttons** provide rebuilders and clutch manufacturers with a substantial performance advantage to ensure repeat business through exceptional performance advantages in terms of friction coefficient, durability, design and quality.

VelveTouch Carbon **Semi-Metallic Disc Brake Pads** were designed for severe duty on-highway applications ranging from class one through class six automotive and commercial truck fleets. Our unique F1 and F3 friction formulations combine the performance and heat resistance of carbon fiber composites with the durability of traditional semi-metallic brake pads. Carlisle's advanced friction technology capabilities partnered with the quality and safety of our aerospace design expertise is the foundation of Carbon Semi-Metallic brake pads. Whether its cost per mile reduction, improved drivability or safety, VelveTouch® Carbon Semi-Metallic brake pads will meet or exceed your expectations.



Carlisle remains dedicated to the testing and development efforts of new and existing hydraulic actuation products including boosters, master cylinders, slave cylinders, hydraulic valves and actuators.



Carlisle offers hydraulic control valves, specifically designed to provide the precise pressure modulation required in heavy-duty applications. For additional versatility, Carlisle offers hydraulic control valve options for use in open center, closed center and load sensing hydraulic systems. Carlisle valves also provide high flow capabilities, allowing the brakes to fully apply in less vehicle traveling distance, therefore eliminating the need for additional braking capability.

Carlisle manufactures hydraulic and mechanically actuated braking systems including Standard and Boosted Master Cylinders. Carlisle's standard actuation system offers a premium, fail-safe and cost effective solution for a variety of off-highway applications. For increased operator comfort and overall performance, Carlisle boosted master cylinder options deliver added vehicle control, stability and decreased stopping distance to stimulate balanced braking performance across axles.



## OE GRADE FEATURES

### CLUTCH BUTTONS:

- Designed for class 5 - 8 heavy-duty applications
- High friction materials
- Increased life and reduced annual maintenance costs
- Extended life of pressure plate and fly wheel with ultra-gentle friction formulations

### DISC BRAKE PADS:

- Mechanical bond friction material retention system
- Lower cost per mile through lasting performance
- Extend vehicle up-time
- Noise minimize (NVH)

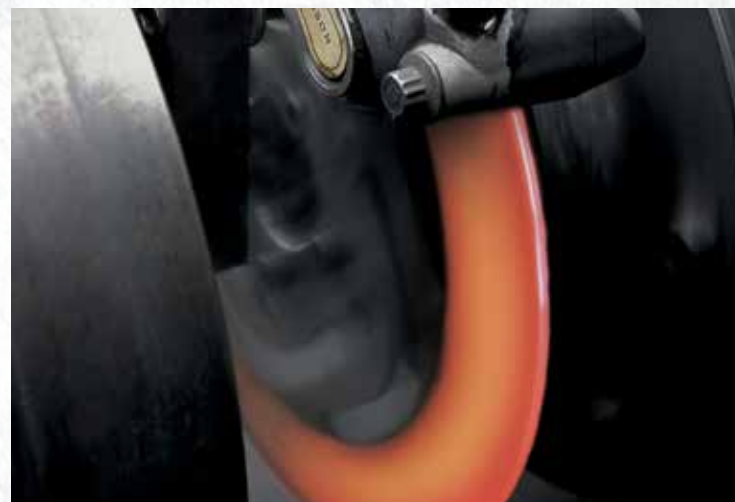
## OE GRADE FEATURES

### BOOSTED MASTER CYLINDERS:

- Designs offer reduced pedal effort and pedal travel to achieve operating pressure requirements
- Enhanced operator comfort due to progressive and controllable braking response characteristics
- Proven to be the off-highway industry's most efficient method of applying the brakes

### VALVES:

- Quiet, consistent, controlled operation
- Heavy-duty construction and proven quality
- High flow capabilities for increased pressure
- Externally adjustable valve option with settings for precise pressure requirements



# AFTERMARKET KITS

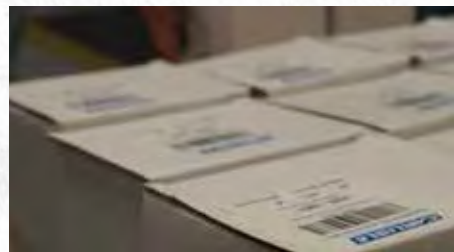
# AFTERMARKET KITS

Maintain the original equipment performance characteristics of your Carlisle brake system by replacing all wear parts with top-quality, Carlisle original, aftermarket components to ensure the maximum mileage and dependable operation of your equipment. Servicing your brake system assembly with genuine spare parts is your best guarantee for maintaining the original performance.

Each and every spare part required to maintain your Carlisle assembly from the seals and O-rings to the pistons and the linings, are designed to work together in perfect harmony. Every part is factory-fitted, conforming to the Carlisle standard of quality.

At Carlisle, we subject every spare part to a rigorous process beginning with the concept design, and ending with an engineering release. All Carlisle aftermarket kit components were developed and tested specifically for your original Carlisle brake or hydraulic assembly.

To ensure that our customers experience the same level of quality in our spare parts as experienced in our brake and hydraulic assemblies, each Carlisle spare part must first undergo testing and validation. Only when our skilled team of engineers have approved a part for form, fit and function will that part be added to a Carlisle aftermarket kit. By establishing thorough testing and validation standards, we are able to assure customers that the same high quality performance characteristics experienced in the original equipment will continue.



## SEAL KITS

Carlisle offers an extensive range of **Seal Kit** solutions for the aftermarket. Just as our brake and hydraulic assemblies are designed and manufactured, our industrial seal kits are developed using only the most advanced materials and technology to ensure the prolonged life and performance characteristics required in demanding off-highway applications.

### CARLISLE SEAL KIT BENEFITS:

- Premium seals for protection against leaks
- Designed to protect assemblies from damaging environmental contamination
- Wide variety of seal materials allow Carlisle to maintain compatibility in all actuation fluids
- Specifically designed to meet the requirements of your application
- Carlisle original seal kit components meet our dimensional tolerances
- Meets the Carlisle standard for high heat temperature resistance



## LINING KITS

Unlike the many aftermarket replacement parts suppliers that makeup today's deeply saturated market, Carlisle **Lining Kits** are manufactured to the standards of your original brake assembly.

### CARLISLE LINING KIT BENEFITS:

- Thru molded to provide max shear strength
- Back plate surface hardness prevents piston embedding
- Soft carrier from non-original Carlisle linings can lead to damage in other brake components and to brake failure
- Non-genuine linings exhibit poor insulation characteristics allowing disc heat to dissipate into the caliper
- Self-proclaimed "long lasting" non-original Carlisle linings can lead to early disc wear

Carlisle aftermarket lining kits feature friction linings designed and built to the OE specifications, delivering optimal performance in your heavy-duty equipment. By choosing to service your equipment with only a genuine Carlisle lining kit, you are providing the best possible technological and economical solution based on your equipment's total operating costs.



## OVERHAUL KITS

Extreme operating conditions, rough terrain and short stopping distances all impact the length of time necessary between scheduled maintenance.

Brake assemblies exposed to severe operating environments and recurring stops may require more frequent preventive maintenance including brake and hydraulic system overhaul to ensure lasting performance.

### CARLISLE OVERHAUL KIT BENEFITS:

- Complete repair solution, including seals, O-rings and linings where applicable
- Premium oil seals for the best possible protection against pesky leaks and damaging contamination
- All Carlisle original assembly parts ensure you maintain the same performance characteristics of the OE parts they replace

When you choose a Carlisle original aftermarket **Overhaul Kit**, you are restoring your assembly to its primary level of performance.

Carlisle replacement parts are specifically developed to compliment the performance characteristics of your assembly. Each component included in our overhaul kits are designed and tested for compatibility and include all of the components you need for a thorough, lasting repair.





**GLOBAL ENGINEERING AND APPLICATION SUPPORT:**

- 5 engineering laboratories located worldwide: Solon (US), Bloomington (US), Pontypool (UK), Orzinuovi (IT), and Suzhou (PRC)
- 26 inertia dynamometers
- 80+ engineers
- 9 patents
- 22 Pro-E seats
- 4 seats mechanical FEA software

As a leading manufacturer of brake assembly, friction material, hydraulic actuation and related components, we never stop looking for better solutions. Carlisle is dedicated to continuously advancing our brake system product technologies in each of the markets we serve, all across the world.

Intensive research and development as well as close work with OEMs result in high levels of operational reliability for all Carlisle OE and aftermarket products. A combination of more than 80 years of experience in designing innovative brake and friction solutions and a strong customer focus make Carlisle an excellent partner that our distributors can depend on.

At Carlisle, we are thoroughly familiar with customer-specific requirements as a result of our close cooperation based on the individual customer need. Our state-of-the-art technology permits us to supply the appropriate brake, friction and hydraulic products as well as offer related product testing and data validation, focusing on high dependability in even the toughest environmental conditions.

At Carlisle, we regulate each aspect of the total braking system from the pedal to the brake gaining control over braking performance. Our assurance of a quality system is possible because we design, develop and manufacture our own friction materials, brake assemblies and hydraulic actuation products.

At Carlisle, we go the extra mile to deliver our customers unrivalled service and support. To ensure that our customers benefit from our dependable expertise and friendly service, we routinely refine the knowledge and proficiency of our customer support team through our internal product training programs. With Carlisle, you can expect world-class quality not only from our products, but also from our talented teams.

Like many of our customers, Carlisle operates globally. Our experienced staff of motion control experts are ready to assist you from any of our regional customer support locations across the world. We work diligently to provide the most efficient, high-quality product

solutions based on the unique requirements of the customer in order to improve the overall experience.

Carlisle is proud to maintain a veteran customer service and support team collectively representing over 100 years of comprehensive experience to accommodate and answer your questions.

The Carlisle Industrial Aftermarket team is in charge of replacement parts and service business with end-customers and distribution partners in all major industrial markets. Our top priority is to remain a reliable partner in supplying our customers with high-quality products and service.

**CREATE A WINNING SPIRIT**

Growth and continuous innovation do not only require investment into technology, but also into talent and people. At Carlisle, our people do what it takes to get the job done. Innovation is an everyday event on our factory floors.

Each factory's innovative ideas and processes are enthusiastically shared across continents. As a result, the manufacturing environment in each of our plants is charged with the positive energy of continuous improvement. Our people make it work.

**CUSTOMER BENEFITS:**

- Global reach
- Over 60 years of combined representative experience
- Specific support focused exclusively on aftermarket

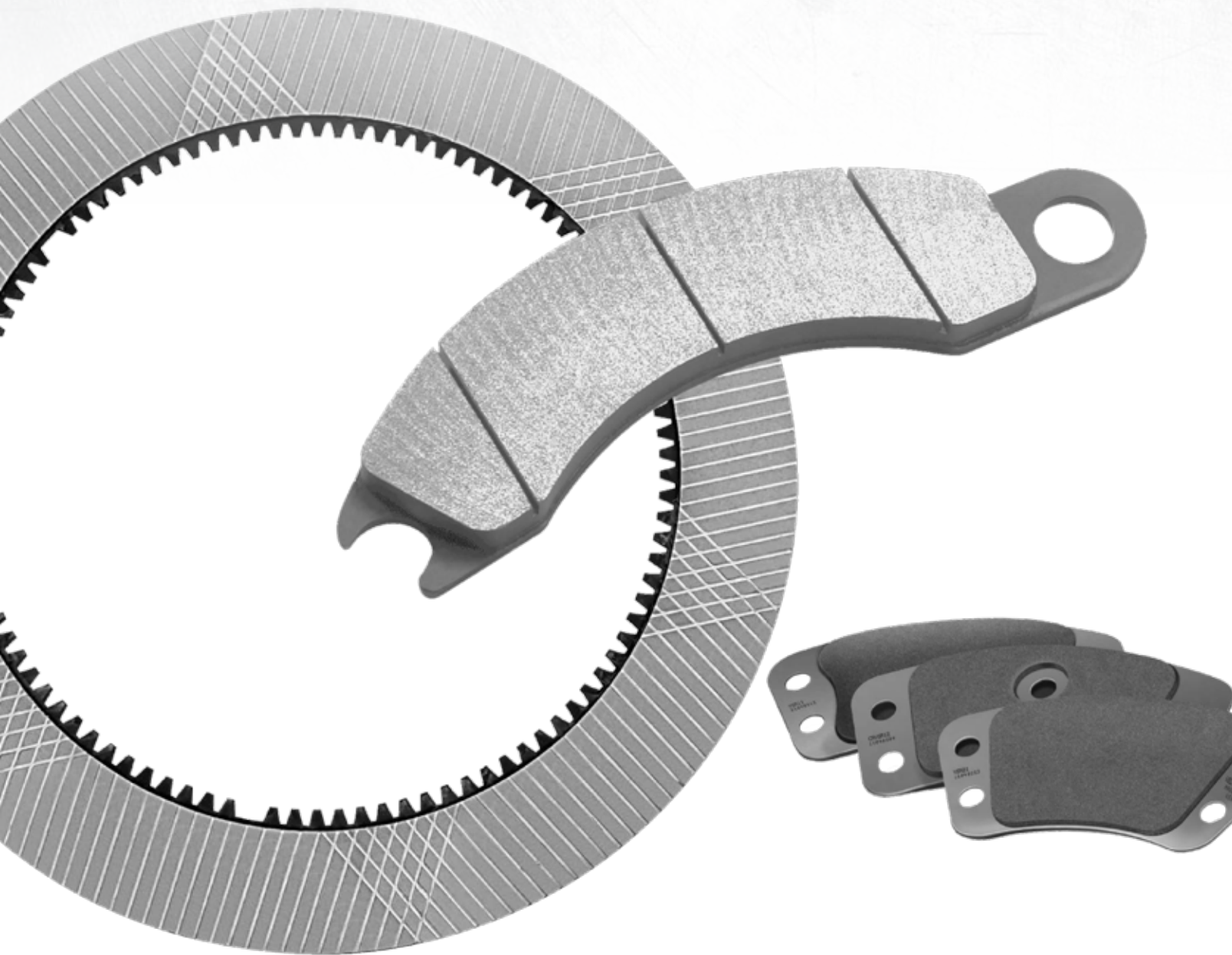
**SALES AND TECHNICAL SUPPORT:**

- Aftermarket Program Marketing team oversees development and production efforts of specific customer requests
- Field support and product training services available upon request
- Technical and engineering support available upon request





# FRICTION



## APPLICATION GUIDE

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21	FORD	25	MITSUI TCM	29	ZETTLEMEYER
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22	FURUKAWA	26	NISSAN		
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22	GIRLING	26	PACCAR		
22	GM DIESEL MARINE	26	ROCKFORD		
22	HAMWORTHY	26	ROCKWELL		
22	HITACHI (ALSO SEE EUCLID)	26	SAME		
22	HYSTER	26	SHANTUI		
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23	J C BAMFORD	26-27	TEREX		
23	JOHN DEERE	27	THWAITES		
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23	KOBELCO	27	TORO		
23	KOEHRING	27	TOYOTA		
23-24	KOMATSU	27	TRITEC		

# WET FRICTION DISCS & COMPONENTS

# WET FRICTION DISCS & COMPONENTS

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
ALLISON															
5197160	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
6750270	PC983	BRONZE	SPIRAL	62	INT TH	14.99	X	12.38	X	0.178	380.7	X	314.5	X	4.5
6759048	PC3455	BRONZE	SPIRAL	4	INT TH	9.60	X	8.04	X	0.247	243.8	X	204.2	X	6.3
6768446	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
6769326	PP886	STEEL	-----	30	(90)EX TH	15.25	X	12.67	X	0.195	387.4	X	321.8	X	5.0
6770590	PC4281	BRONZE	SPIRAL	100	INT TH	16.12	X	12.37	X	0.178	409.4	X	314.2	X	4.5
6770647	PC2145	BRONZE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
6771485	PC3456	BRONZE	SPIRAL	8	INT TH	12.00	X	10.25	X	0.250	304.8	X	260.4	X	6.4
6771491	PC3457	BRONZE	SUNBRST	52	INT TH	11.50	X	8.42	X	0.201	292.1	X	213.9	X	5.1
6771533	PC5762	BRONZE	SUNBRST	72	INT TH	9.69	X	7.01	X	0.193	246.1	X	178.1	X	4.9
6775541	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
6776610	PP885	STEEL	-----	30	(90)EX TH	15.25	X	12.67	X	0.120	387.4	X	321.8	X	3.0
6777592	PC10565	BRONZE	SPR/RAD	6	SLOTS	9.98	X	2.93	X	0.153	253.5	X	74.4	X	3.9
6777796	PP916	STEEL	-----	35	EXT TH	17.75	X	15.34	X	0.195	450.9	X	389.6	X	5.0
6779887	PP13021	STEEL	-----	8	EXT LG	18.43	X	15.28	X	0.197	468.0	X	388.0	X	5.0
6830221	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
6830293	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
6830295	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
6830368	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
6830920	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
6830920	PC4886	BRONZE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.204	371.3	X	303.0	X	5.2
6832138	PC3974	BRONZE	SUNBRST	89	INT TH	17.06	X	14.61	X	0.201	433.3	X	371.1	X	5.1
6833972	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
6834370	WPC4946	PAPER	2 PASS	30	INT TH	7.18	X	5.10	X	0.098	182.4	X	129.5	X	2.5
6834374	PP1035	STEEL	-----	18	EXT TH	7.64	X	5.53	X	0.100	194.0	X	140.5	X	2.5
6834487	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
6834487	WPC4963	PAPER	2 PASS	62	INT TH	12.56	X	10.21	X	0.148	319.0	X	259.3	X	3.8
6834488	PP983	STEEL	-----	16	EXT TH	13.19	X	10.75	X	0.103	335.0	X	273.1	X	2.6
6834679	PP1017	STEEL	-----	14	EXT TH	9.63	X	7.20	X	0.103	244.6	X	182.9	X	2.6
6834680	PP1019	STEEL	-----	38	EXT TH	13.19	X	10.83	X	0.103	335.0	X	275.1	X	2.6
6834720	PP984	STEEL	-----	16	EXT TH	13.19	X	10.75	X	0.120	335.0	X	272.9	X	3.0
6834766	PP1024	STEEL	-----	38	EXT TH	13.19	X	10.83	X	0.120	335.0	X	275.1	X	3.0
6835151	WPC4943	PAPER	2 PASS	42	INT TH	5.89	X	4.33	X	0.080	149.6	X	110.0	X	2.0
6835152	WPC4944	PAPER	2 PASS	60	INT TH	8.16	X	6.08	X	0.103	207.3	X	154.4	X	2.6
6835329	HPC4280	GRAPHITE	SUNBRST	16	INT TH	15.75	X	8.46	X	0.213	400.1	X	214.9	X	5.4
6835475	PP1035	STEEL	-----	18	EXT TH	7.64	X	5.53	X	0.100	194.0	X	140.5	X	2.5
6835687	WPC4665	PAPER	2 PASS	80	INT TH	9.12	X	6.86	X	0.098	231.6	X	174.2	X	2.5
6835720	WPC4945	PAPER	2 PASS	50	INT TH	10.84	X	8.40	X	0.125	275.3	X	213.4	X	3.2
6835748	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
6835996	PC4734	BRONZE	SPR/RAD	59	INT TH	9.60	X	6.72	X	0.154	243.8	X	170.7	X	3.9
6837565	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.39	X	0.153	253.5	X	187.7	X	3.9
6837690	PP1021	STEEL	-----	6	EXT TH	10.80	X	7.95	X	0.107	274.3	X	201.9	X	2.7
6838693	HPC4512	GRAPHITE	SUNBRST	52	INT TH	11.50	X	8.42	X	0.156	292.1	X	213.9	X	4.0
6880727	WPC4963	PAPER	2 PASS	62	INT TH	12.56	X	10.21	X	0.148	319.0	X	259.3	X	3.8
6884958	WPC4665	PAPER	2 PASS	80	INT TH	9.12	X	6.86	X	0.098	231.6	X	174.2	X	2.5
23010122	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
23010123	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
23010124	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23010125	HPC4280	GRAPHITE	SUNBRST	16	INT TH	15.75	X	8.46	X	0.213	400.1	X	214.9	X	5.4
23010436	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
23010437	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23010438	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23010439	WPC4963	PAPER	2 PASS	62	INT TH	12.56	X	10.21	X	0.148	319.0	X	259.3	X	3.8
23010871	PC10565	BRONZE	SPR/RAD	6	SLOTS	9.98	X	2.93	X	0.153	253.5	X	74.4	X	3.9
23013787	WPC7881	PAPER	2 PASS	71	INT TH	10.84	X	8.75	X	0.125	275.3	X	222.3	X	3.2
23015971	HPC5732	GRAPHITE	SUN/RAD	89	INT TH	17.06	X	14.62	X	0.205	433.3	X	371.3	X	5.2
23016610	PP1035	STEEL	-----	18	EXT TH	7.64	X	5.53	X	0.100	194.0	X	140.5	X	2.5
23040848	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
23041615	HPC5732	GRAPHITE	SUN/RAD	89	INT TH	17.06	X	14.62	X	0.205	433.3	X	371.3	X	5.2
23041616	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
ALLISON															
5197160	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
23041786	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
23042039	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23042197	WPC4943	PAPER	2 PASS	42	INT TH	5.89	X	4.33	X	0.080	149.6	X	110.0	X	2.0
23042198	WPC4944	PAPER	2 PASS	60	INT TH	8.16	X	6.08	X	0.103	207.3	X	154.4	X	2.6
23042199	WPC4665	PAPER	2 PASS	80	INT TH	9.12	X	6.86	X	0.098	231.6	X	174.2	X	2.5
23042200	WPC4946	PAPER	2 PASS	30	INT TH	7.18	X	5.10	X	0.098	182.4	X	129.5	X	2.5
23042201	WPC4945	PAPER	2 PASS	50	INT TH	10.84	X	8.40	X	0.125	275.3	X	213.4	X	3.2
23042202	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
23042210	HPC7881	PAPER	2 PASS	71	INT TH	10.84	X	8.75	X	0.125	275.3	X	222.3	X	3.2
23045454	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23045455	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
23045588	WPC10889	PAPER	2 PASS	44	EXT TH	7.07	X	4.56	X	0.098	179.6	X	115.7	X	2.5
23047289	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23047771	PP1019	STEEL	-----	38	EXT TH	13.19	X	10.83	X	0.103	335.0	X	275.0	X	2.6
23047772	PP1024	STEEL	-----	38	EXT TH	13.19	X	10.83	X	0.120	335.0	X	275.0	X	3.0
23048510	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23048511	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
23048628	WPC10891	PAPER	2 PASS	84	INT TH	9.95	X	8.18	X	0.098	252.7	X	207.8	X	2.5
29501423	PP10907	STEEL	-----	24	EXT TH	10.31	X	7.70	X	0.098	261.8	X	195.6	X	2.5
29516170	WPC10891	PAPER	2 PASS	84	INT TH	9.95	X	8.18	X	0.098	252.7	X	207.8	X	2.5
29528207	WPC10893	PAPER	-----	76	(77)INT TH	9.54	X	7.30	X	0.098	242.3	X	185.4	X	2.5
29529492	WPC4665	PAPER	2 PASS	80	INT TH	9.12	X	6.86	X	0.098	231.6	X	174.1	X	2.5
29536334	WPC10889	PAPER	2 PASS	44	EXT TH	7.07	X	4.56	X	0.098	179.6	X	115.7	X	2.5
29536337	WPC10895	PAPER	2 PASS	79	INT TH	10.01	X	7.79	X	0.126	254.3	X	197.9	X	3.2
29536345	PP10907	STEEL	-----	24	EXT TH	10.31	X	7.70	X	0.098	261.8	X	195.6	X	2.5
29537887	WPC4665	PAPER	2 PASS	80	INT TH	9.12	X	6.86	X	0.098	231.6	X	174.1	X	2.5
BELAZ															
1711482	PP12252	STEEL	-----	50	EXT TH	10.08	X	7.76	X	0.104	256.0	X	197.1	X	2.642
1711484	PC12250	BRONZE	SUNBRST	38	INT TH	9.59	X	7.30	X	0.152	243.6	X	185.4	X	3.861

# WET FRICTION DISCS & COMPONENTS

# WET FRICTION DISCS & COMPONENTS

REPLACES OEM PART NO.	VELVETOUGH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS		SIZE INCH			SIZE MM						
						O.D.	I.D.	Thick	O.D.	I.D.	Thick				
<b>CHAMPION</b>															
11300	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
14742	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
14748	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
28305	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
28310	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
37171	PP904	STEEL	-----	83	EXT TH	13.98	X	9.38	X	0.260	355.0	X	238.4	X	6.6
41092	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
<b>CLARK</b>															
215178	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
217162	PP981	STEEL	-----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
217163	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
217163	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
217757	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
218715	HPC4235	GRAPHITE	SUNBRST	80	INT TH	12.87	X	9.76	X	0.216	326.9	X	247.9	X	5.5
224246	PP9588	STEEL	-----	4	EXT LG	6.13	X	4.56	X	0.066	155.7	X	115.8	X	1.7
227495	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
227496	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
228114	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
230911	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
232316	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
232394	PP981	STEEL	-----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
232628	HPC9517	GRAPHITE	2 PASS	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
232778	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
232779	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
233166	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
234336	PC10158	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.093	133.1	X	92.7	X	2.4
236989	PC10135	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.114	148.6	X	107.7	X	2.9
237016	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
238174	PP981	STEEL	-----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
238313	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
242530	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
242716	HPC8674	GRAPHITE	SUNBRST	60	INT TH	6.88	X	5.71	X	0.156	174.8	X	145.0	X	4.0
244979	HPC8728	GRAPHITE	SUNBRST	52	INT TH	6.90	X	4.20	X	0.114	175.3	X	106.7	X	2.9
245741	WPC11578	PAPER	SPR/RAD	45	INT TH	5.25	X	3.65	X	0.098	133.4	X	92.7	X	2.5
245935	HPC9517	GRAPHITE	2 PASS	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
2106605	PP8347	STEEL	-----	12	EXT LG	16.31	X	10.00	X	0.185	414.3	X	254.0	X	4.7
2106606	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
2108352	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
2108427	PP7658	STEEL	-----	9	EXT LG	18.81	X	13.33	X	0.185	477.8	X	338.6	X	4.7
2108428	HPC5783	GRAPHITE	SUNBRST	38	INT TH	17.98	X	12.35	X	0.308	456.7	X	313.7	X	7.8
2110852	HPC8114	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.203	394.5	X	222.3	X	5.2
2110864	PP8347	STEEL	-----	12	EXT LG	16.31	X	10.00	X	0.185	414.3	X	254.0	X	4.7
2115239	PP7658	STEEL	-----	9	EXT LG	18.81	X	13.33	X	0.185	477.8	X	338.6	X	4.7
227496SI	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
2520-01-190-4298	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
HMPC-5837	HPC8751		SUNBURST	15	-----	7.34	X	2.56	X	0.187	186.4	X	64.9	X	4.7
HMPC-5837	HPC8751		SUNBURST	15	-----	7.34	X	2.56	X	0.187	186.4	X	64.9	X	4.7
M2108428	HPC5783	GRAPHITE	SUNBRST	38	INT TH	17.98	X	12.35	X	0.308	456.7	X	313.7	X	7.8
<b>EUCLID</b>															
4050720	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
4050728	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
4050741	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
4058551	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
4058554	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
6830293	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
6835329	HPC4280	GRAPHITE	SUNBRST	16	INT TH	15.75	X	8.46	X	0.213	400.1	X	214.9	X	5.4
12577948	PP11395	STEEL	-----	84	EXT TH	34.03	X	23.90	X	0.125	864.2	X	607.1	X	3.2
12579204	WPC11393	CORK	-----	84	EXT TH	34.03	X	23.90	X	0.295	864.2	X	607.1	X	7.5
12579870	WPC11396	PAPER	3 PASS	84	INT TH	32.71	X	22.03	X	0.224	830.8	X	559.6	X	5.7
308SH79	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2

REPLACES OEM PART NO.	VELVETOUGH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS		SIZE INCH			SIZE MM						
						O.D.	I.D.	Thick	O.D.	I.D.	Thick				
<b>EUCLID (CONTINUED)</b>															
E4050720	HPC4237	GRAPHITE	SUNBRST	62	INT TH	12.56	X	10.20	X	0.148	319.0	X	259.1	X	3.8
E4050741	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
E4095205	PP981	STEEL	-----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
M4095206	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
M4095311	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
<b>FENWICK</b>															
3501718	PP9595	STEEL	-----	36	(42)INT H	6.94	X	4.04	X	0.079	176.3	X	102.6	X	2.0
<b>FIAT ALLIS &amp; HITACHI</b>															
00014687	PP10095	STEEL	-----	67	INT TH	11.42	X	7.68	X	0.098	290.1	X	195.1	X	2.5
00022767	PC2231	BRONZE	SUNBRST	134	EXT TH	16.92	X	12.64	X	0.154	429.8	X	321.1	X	3.9
00022768	PP263	STEEL	-----	97	INT TH	16.10	X	11.89	X	0.091	408.9	X	302.0	X	2.3
00508053	PP9587	STEEL	-----	40	INT TH	6.00	X	3.24	X	0.063	152.4	X	82.3	X	1.6
00588222	PP10098	STEEL	-----	51	INT TH	8.86	X	5.43	X	0.118	225.0	X	137.9	X	3.0
00589025	PP10097	STEEL	-----	90	INT TH	13.86	X	10.47	X	0.138	352.0	X	266.0	X	3.5
04967564	PP10119	STEEL	-----	45	INT TH	7.09	X	4.53	X	0.079	180.0	X	115.0	X	2.0
04979644	PP10097A	STEEL	-----	90	INT TH	13.86	X	10.47	X	0.118	352.0	X	266.0	X	3.0
70044478	1355	BRONZE	-----	67	EXT TH	13.68	X	10.10	X	0.156	347.5	X	256.5	X	4.0
70057375	1355	BRONZE	-----	67	EXT TH	13.68	X	10.10	X	0.156	347.5	X	256.5	X	4.0
70095569	FCP3088	FERAMIC	-----	-	-----	16.75	X		X	0.313	425.5	X		X	8.0
70178360	1355	BRONZE	-----	67	EXT TH	13.68	X	10.10	X	0.156	347.5	X	256.5	X	4.0
70623017	PC2231	BRONZE	SUNBRST	134	EXT TH	16.92	X	12.63	X	0.155	429.8	X	320.7	X	3.9
70623018	PP263	STEEL	-----	97	INT TH	16.10	X	11.89	X	0.091	408.9	X	302.0	X	2.3
70642113	PC4728	BRONZE	SUNBRST	100	EXT TH	8.45	X	5.97	X	0.122	214.6	X	151.6	X	3.1
70734526	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
71004876	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
71005843	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
71010964	9030	BRONZE	-----	25	INT TH	9.87	X	4.89	X	0.141	250.6	X	124.1	X	3.6
73021215	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
73044593	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
73047703	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
73058783	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.				

# WET FRICTION DISCS & COMPONENTS

# WET FRICTION DISCS & COMPONENTS

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>FRISCH-FAUN (CONTINUED)</b>															
7381246	PP9621B	STEEL	----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
<b>FUNK</b>															
4050498	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
<b>FURUKAWA</b>															
352211-22280	PP9670	STEEL	----	64	EXT TH	6.46	X	4.22	X	0.060	164.1	X	107.2	X	1.5
<b>GALION</b>															
D106118	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
D72330	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
D72757	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
D72816	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
D72818	PP981	STEEL	----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
D77576	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
<b>GIRLING</b>															
64321506	PP9639	STEEL	----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
64321507	PC10163	BRONZE	SPR/WAG	27	INT TH	8.82	X	2.17	X	0.190	224.0	X	55.1	X	4.8
64322184	PP9596	STEEL	----	1	EXT LG	6.25	X	3.30	X	0.105	158.8	X	83.8	X	2.7
<b>GM DIESEL MARINE</b>															
5101603	HPC5003	GRAPHITE	SUNBRST	-	----	14.31	X	7.12	X	0.211	363.5	X	180.8	X	5.4
6835329	HPC4280	GRAPHITE	SUNBRST	16	INT TH	15.75	X	8.46	X	0.213	400.1	X	214.9	X	5.4
23010125	HPC4280	GRAPHITE	SUNBRST	16	INT TH	15.75	X	8.46	X	0.213	400.1	X	214.9	X	5.4
<b>HAMWORTHY</b>															
660.020.054	PP9639	STEEL	----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
660.020.492	PP9596	STEEL	----	1	EXT LG	6.25	X	3.30	X	0.105	158.8	X	83.8	X	2.7
<b>HITACHI (ALSO SEE EUCLID)</b>															
E12577948	PP11395	STEEL	----	84	EXT TH	34.03	X	23.90	X	0.125	864.2	X	607.1	X	3.2
E12579204	WPC11393	CORK	----	84	EXT TH	34.03	X	23.90	X	0.295	864.2	X	607.1	X	7.5
E12579870	WPC11396	PAPER	3 PASS	84	INT TH	32.71	X	22.03	X	0.224	830.8	X	559.6	X	5.7
<b>HVSTER</b>															
234215	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
449461	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
D96465	PC2407	BRONZE	SPR/WAG	72	(88)EX TH	8.97	X	6.50	X	0.125	227.8	X	165.1	X	3.2
D133917	PC2407	BRONZE	SPR/WAG	72	(88)EX TH	8.97	X	6.50	X	0.125	227.8	X	165.1	X	3.2
<b>INTERNATIONAL (DRESSER)</b>															
3044593	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
1027256C1	WPC9624	PAPER	2 PASS	15	INT TH	10.20	X	2.01	X	0.300	259.1	X	51.1	X	7.6
114622C1	WPC9624	PAPER	2 PASS	15	INT TH	10.20	X	2.01	X	0.300	259.1	X	51.1	X	7.6
1202656H1	PP9621B	STEEL	----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
175180H1	PC983	BRONZE	SPIRAL	62	INT TH	14.99	X	12.38	X	0.178	380.7	X	314.5	X	4.5
188828H1	PC3455	BRONZE	SPIRAL	4	INT TH	9.60	X	8.04	X	0.247	243.8	X	204.2	X	6.3
195409H1	PC2145	BRONZE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
196625H1	PC5762	BRONZE	SUNBRST	72	INT TH	9.69	X	7.01	X	0.193	246.1	X	178.1	X	4.9
196629H1	PC3456	BRONZE	SPIRAL	8	INT TH	12.00	X	10.25	X	0.250	304.8	X	260.4	X	6.4
196680H1	PC3457	BRONZE	SUNBRST	52	INT TH	11.50	X	8.42	X	0.201	292.1	X	213.9	X	5.1
259395C1	PC3456	BRONZE	SPIRAL	8	INT TH	12.00	X	10.25	X	0.250	304.8	X	260.4	X	6.4
259492C1	PC5762	BRONZE	SUNBRST	72	INT TH	9.69	X	7.01	X	0.193	246.1	X	178.1	X	4.9
302182R91	PC983	BRONZE	SPIRAL	62	INT TH	14.99	X	12.38	X	0.178	380.7	X	314.5	X	4.5
313807R1	PP886	STEEL	----	30	(90)EX TH	15.25	X	12.67	X	0.195	387.4	X	321.8	X	5.0
336822R1	PC4728	BRONZE	SUNBRST	100	EXT TH	8.45	X	5.97	X	0.122	214.6	X	151.6	X	3.1
399734R1	WPC9624	PAPER	2 PASS	15	INT TH	10.20	X	2.01	X	0.300	259.1	X	51.1	X	7.6
473032C1	WPC4963	PAPER	2 PASS	62	INT TH	12.56	X	10.21	X	0.148	319.0	X	259.3	X	3.8
615559C1	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
615840C1	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
615911C1	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
625615C1	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
630515C2	PC10134	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
634534C1	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
654594C3	HPC4519	GRAPHITE	SUNBRST	34	INT TH	7.80	X	5.53	X	0.098	198.1	X	140.5	X	2.5
658354C2	HPC4518	GRAPHITE	SUNBRST	45	INT TH	10.50	X	7.37	X	0.110	266.7	X	187.2	X	2.8
922541C1	WPC9607	PAPER	2 PASS	32	INT TH	6.60	X	3.10	X	0.070	167.6	X	78.7	X	1.8
922549C1	PP9604	STEEL	----	85	EXT TH	7.14	X	4.44	X	0.066	181.4	X	112.8	X	1.7

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>INTERNATIONAL (DRESSER) (CONTINUED)</b>															
922913C1	PP9610	STEEL	----	-	SPRING	7.08	X	6.83	X	0.016	179.8	X	173.5	X	0.4
<b>J C BAMFORD</b>															
04/500230	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
445/03205	WPC11899	PAPER	WAFFLE	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
445/03205	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
445/03206	PP10271	STEEL	PLATE	6	EXT LG	5.94	X	3.88	X	0.070	150.9	X	98.6	X	1.8
450/10224	WPC12423	PAPER	WAFFLE	15	INT TH	8.74	X	1.95	X	0.152	222.0	X	49.5	X	3.9
451/22702	PP9627A	STEEL	----	4	EXT LG	9.05	X	5.12	X	0.124	229.9	X	130.0	X	3.1
451/24201	PP9527	STEEL	----	4	EXT LG	9.05	X	5.12	X	0.124	229.9	X	130.0	X	3.1
<b>JOHN DEERE</b>															
AL38240	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
AL69560	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
AT101001	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
AT26632	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
AT315888	HPC9530	GRAPHITE	SUNBRST	12	INT TH	12.00	X	1.80	X	0.380	304.8	X	45.7	X	9.7
AT63106	HPC9530	GRAPHITE	SUNBRST	12	INT TH	12.00	X	1.80	X	0.380	304.8	X	45.7	X	9.7
RE37011	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
T67544	PC4135	BRONZE	SPR/WAG	60	INT TH	9.98	X	7.39	X	0.153	253.5	X	187.7	X	3.9
<b>KALMAR CLIMAX</b>															
507-275-343	WPC11464	PAPER	3 PASS	60	INT TH	18.34	X	11.19	X	0.217	465.8	X	284.2	X	5.5
507-275-803	WPC13111	PAPER	WAFFLE	49	INT TH	10.63	X	6.72	X	0.161	270.0	X	170.6	X	4.1
<b>KOBELCO</b>															
24100U110S11	WPC9533	PAPER	2 PASS	38	INT TH	6.09	X	3.74	X	0.144	154.7	X	95.0	X	3.7
37212-20270	PP9604	STEEL	----	85	EXT TH	7.14	X	4.44	X	0.066	181.4	X	112.8	X	1.7
<b>KOEHRING</b>															
38757	PP787	STEEL	----	52	EXT TH	10.60	X	7.90	X	0.090	269.2	X	200.7	X	2.3
38758	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.99	X	7.38	X	0.153	253.7	X	187.5	X	3.9
<b>KOMATSU</b>															
131-10-11120	PP10301	STEEL	----	131	INT TH	13.58	X	10.83	X	0.262	344.9	X	275.1	X	6.7
131-21-43220	PC10328	BRONZE	SPR/RAD	120	EXT TH	14.37	X	10.28	X	0.165	365.0	X	261.1	X	4.2
131-21-43440	PP10302	STEEL	----	77	INT TH	12.74	X	10.05	X	0.138	323.6	X	255.3	X	3.5
144-10-12150	PC10329	BRONZE	SPR/RAD	87	INT TH	14.76	X	10.10	X	0.278	374.9	X	256.5	X	7.1
145-21-13121	PC10330	BRONZE	SPR/RAD	111	EXT TH	13.27	X	9.46	X	0.163	337.1	X	240.3	X	4.1
145-21-13132	PP10300	STEEL	----	77	INT TH	12.74	X	10.05	X	0.091	323.6	X	255.3	X	2.3
232-25-51410	WPC7947	PAPER	2 PASS	105	INT TH	15.72	X	12.18	X	0.150	399.3	X	309.4	X	3.8
232-25-51430	PP7946	STEEL	----	138	EXT TH	16.52	X	12.77	X	0.095	419.6	X	324.4	X	2.4
232-25-51480	PP7946	STEEL	----	138	EXT TH	16.52	X	12.77	X	0.095	419.6	X	324.4	X	2.4
234-25-31350	WPC7947	PAPER	2 PASS	105	INT TH	15.72	X	12.18	X	0.150	399.3	X	309.4	X	3.8
235-25-11360	WPC7947	PAPER	2 PASS	105	INT TH	15.72	X	12.18	X	0.150	399.3	X	309.4	X	3.8
235-25-51430	PP7946	STEEL	----	138	EXT TH	16.52	X	12.77	X	0.095	419.6	X	324.4	X	2.4
324-15-12650	PP9657	STEEL	----	8	EXT LG	5.18	X	3.04	X	0.039	131.6	X	77.2	X	1.0
381-114622-1	WPC9624	PAPER													

# WET FRICTION DISCS & COMPONENTS

# WET FRICTION DISCS & COMPONENTS

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>KOMATSU (CONTINUED)</b>															
569-33-41260	WPC10792	CORK	-----	208	(226)EXT TH	26.80	X	20.10	X	0.270	680.7	X	510.5	X	6.9
569-33-41261	WPC10792	CORK	-----	208	(226)EXT TH	26.80	X	20.10	X	0.270	680.7	X	510.5	X	6.9
569-33-61240	WPC7768	PAPER	3 PASS	166	INT TH	25.98	X	19.37	X	0.200	659.9	X	492.0	X	5.1
569-33-61241	WPC7768	PAPER	3 PASS	166	INT TH	25.98	X	19.37	X	0.200	659.9	X	492.0	X	5.1
585-33-21240	WPC13476	PAPER	3 PASS	99	INT TH	25.98	X	20.28	X	0.200	659.9	X	515.0	X	5.1
712-85-12720	PP12481	STEEL	-----	5	EXT LUG	15.67	X	11.14	X	0.201	398.0	X	283.0	X	5.1
ED0675	PC12686	METALLIC	-----	115	INT TH	17.75	X	14.15	X	0.400	450.9	X	359.4	X	10.2
ED4276	PP12685	STEEL	-----	-	18 Bolt Holes	20.87	X	15.50	X	0.120	530.1	X	393.7	X	3.0
EH5306	PP11054	STEEL	-----	237	EXT TH	46.88	X	34.08	X	0.150	1190.7	X	865.7	X	3.8
EH6307	WPC11052UT	PAPER	3 PASS	168	INT TH	45.84	X	32.69	X	0.302	1164.4	X	830.2	X	7.7
EH6308	WPC11055	CORK	-----	237	EXT TH	46.88	X	34.08	X	0.325	1190.7	X	865.7	X	8.3
EM8365	PP11054	STEEL	-----	237	EXT TH	46.88	X	34.08	X	0.150	1190.7	X	865.7	X	3.8
EM8366	WPC11052UT	PAPER	3 PASS	168	INT TH	45.84	X	32.69	X	0.302	1164.4	X	830.2	X	7.7
EM8367	WPC11055	CORK	-----	237	EXT TH	46.88	X	34.08	X	0.325	1190.7	X	865.7	X	8.3
EM8370	WPC8973	CORK	-----	226	EXT TH	26.80	X	20.10	X	0.270	680.7	X	510.5	X	6.9
EM8372	PC12686	METALLIC	-----	115	INT TH	17.75	X	14.15	X	0.400	450.9	X	359.4	X	10.2
EM8373	PP12685	STEEL	-----	-	18 Bolt Holes	20.87	X	15.50	X	0.120	530.1	X	393.7	X	3.0
PB7601	PP8972	STEEL	-----	226	EXT TH	26.81	X	20.07	X	0.094	681.0	X	509.8	X	2.4
PB7602	WPC8973	CORK	-----	226	EXT TH	26.80	X	20.10	X	0.270	680.7	X	510.5	X	6.9
	WPK11273UT	KIT INCLUDES: 10-WPC11052UT 2-WPC11055 9-PP11054			-----	-	X	-	X	-	-	X	-	X	-
<b>LANCER BOSS</b>															
8576361	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
8699199	PC10135	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.114	148.6	X	107.7	X	2.9
9104559	PP9587	STEEL	-----	40	INT TH	6.00	X	3.24	X	0.063	152.4	X	82.3	X	1.6
<b>LANDINI</b>															
3304636	PP10036	STEEL	-----	14	INT TH	5.98	X	1.61	X	0.098	152.0	X	41.0	X	2.5
3302355M1	PC10069	BRONZE	-----	-	SEGMENT	-	X	-	X	-	-	X	-	X	-
3302840M1	PC10070	BRONZE	-----	-	SEGMENT	-	X	-	X	-	-	X	-	X	-
3535759M1	PP10015	STEEL	-----	21	INT TH	9.02	X	6.73	X	0.079	229.0	X	171.0	X	2.0
3535760M91	HPC10236	GRAPHITE	SUNBRST	28	EXT TH	9.41	X	7.09	X	0.157	239.0	X	180.0	X	4.0
3538838M1	PP10225	STEEL	-----	-----	EXT LG	8.98	X	5.91	X	0.104	228.0	X	150.0	X	2.7
<b>LANSING</b>															
T012-001-170	PP9587	STEEL	-----	40	INT TH	6.00	X	3.24	X	0.063	152.4	X	82.3	X	1.6
T719-001-170	PP9587	STEEL	-----	40	INT TH	6.00	X	3.24	X	0.063	152.4	X	82.3	X	1.6
<b>LEYLAND (WILSON)</b>															
821516	PP9639	STEEL	-----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
<b>LINK BELT SPEEDER SHOVELS</b>															
3A-4859	HPC4258	GRAPHITE	SUNBRST	36	INT TH	7.00	X	4.37	X	0.126	177.8	X	111.0	X	3.2
<b>MACK TRUCK</b>															
6770590	PC4281	BRONZE	SPIRAL	100	INT TH	16.12	X	12.37	X	0.178	409.4	X	314.2	X	4.5
308SH108	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
308SH133	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
308SH135	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
308SH79	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
308SH82	PC5762	BRONZE	SUNBRST	72	INT TH	9.69	X	7.01	X	0.193	246.1	X	178.1	X	4.9
308SH87	PC3457	BRONZE	SUNBRST	52	INT TH	11.50	X	8.42	X	0.201	292.1	X	213.9	X	5.1
308SH90	PC3456	BRONZE	SPIRAL	8	INT TH	12.00	X	10.25	X	0.250	304.8	X	260.4	X	6.4
495KB361	WPC12926	PAPER	2 PASS	30	INT TH	6.69	X	4.51	X	0.087	170.0	X	114.5	X	2.2
495KB367	PP12927	STEEL	-----	6	EXT TH	6.69	X	5.00	X	0.060	169.9	X	127.0	X	1.5
62SC-26	PP904	STEEL	-----	83	EXT TH	13.98	X	9.38	X	0.260	355.0	X	238.4	X	6.6
<b>MANITOU</b>															
109604	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
109604	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
136083	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
<b>MARATHON LE TOURNEAU</b>															
4015420	PP7554	STEEL	-----	54	INT TH	13.00	X	8.82	X	0.180	330.2	X	224.0	X	4.6
4039598	PC2235	BRONZE	-----	81	EXT TH	12.90	X	9.38	X	0.235	327.7	X	238.3	X	6.0
4132152	PC10558	BRONZE	-----	120	(126)EXT TH	21.20	X	15.17	X	0.234	538.5	X	385.2	X	5.9

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>MARATHON LE TOURNEAU (CONTINUED)</b>															
4156546	PP10559	STEEL	-----	87	INT TH	20.13	X	14.31	X	0.187	511.2	X	363.6	X	4.7
<b>MASSEY FERGUSON</b>															
1089578	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
80104609	HPC3993	GRAPHITE	SUNBRST	60	INT TH	9.98	X	7.38	X	0.153	253.5	X	187.5	X	3.9
1669474M1	PC10163	BRONZE	SPR/WAG	27	INT TH	8.82	X	2.17	X	0.190	224.0	X	55.1	X	4.8
1754345M1	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
1804831M1	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
185464M1	PP9563	STEEL	-----	6	(33)EXT TH	5.67	X	3.72	X	0.066	144.0	X	94.5	X	1.7
1860964M2	PC10163	BRONZE	SPR/WAG	27	INT TH	8.82	X	2.17	X	0.190	224.0	X	55.1	X	4.8
1860965M2	PP9639	STEEL	-----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
2757328M1	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
975743M1	PP10015	STEEL	-----	21	INT TH	9.01	X	6.73	X	0.078	228.9	X	170.9	X	2.0
<b>MERCEDES</b>															
A-307-270-23-39	WPC12957	PAPER	2 PASS	56	INT TH	11.11	X	9.15	X	0.140	282.3	X	232.5	X	3.5
<b>MINNEAPOLIS MOLINE</b>															
20-3000390	HPC4258	GRAPHITE	SUNBRST	36	INT TH	7.00	X	4.37	X	0.126	177.8	X	111.0	X	3.2
<b>MITSUBISHI</b>															
91824-08100	WPC9508A	PAPER	2 PASS	37	INT TH	6.13	X	3.46	X	0.102	155.7	X	87.9	X	2.6
<b>MITSUI TCM</b>															
BK-703701-0001	PP9682	STEEL	-----	10	EXT LG	6.78	X	4.25	X	0.079	172.2	X	108.0	X	2.0
BK-703701-1001	PP9579	STEEL	-----	8	EXT LG	5.90	X	3.44	X	0.091	149.9	X	87.4	X	2.3
BK-750102-4000	WPC9533	PAPER	2 PASS	38	INT TH	6.09	X	3.74	X	0.144	154.7	X	95.0	X	3.7
<b>MOXY</b>															
152066	PP9621B	STEEL	-----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
152069	PP9621B	STEEL	-----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
<b>NEW HOLLAND</b>															
566519	PP10121	STEEL	-----	21	INT TH	9.02	X	6.73	X	0.079	229.0	X	171.0	X	2.0
5105966	HPC10008	GRAPHITE	SPR/RAD	43	INT TH	8.98	X	4.92	X	0.138	228.0	X	125.0	X	3.5
5110139	PP10011	STEEL	-----	-	-----	14.72	X	8.46	X	0.197	374.0	X	215.0	X	5.0
5111281	PP10012	STEEL	-----	-	-----	17.52	X	9.45	X	0.276	445.0	X	240.0	X	7.0
5112343	PP10064	STEEL	-----	6	EXT LUGS	7.48	X	4.69	X	0.079	190.0	X	119.0	X	2.0
5112630	PP10176	STEEL	-----	34	INT TH	6.61	X	3.86	X	0.276	168.0	X	98.0	X	7.0
5113236	PP10016	STEEL	-----	53	EXT TH	6.81	X	4.69	X	0.079	173.0	X	119.0	X	2.0
5118100															

WET FRICTION DISCS & COMPONENTS

WET FRICTION DISCS & COMPONENTS

Table with columns: REPLACES OEM PART NO., VELVETOUCH PART NO., MATERIAL, GROOVE DETAILS, TEETH TANGS, SIZE INCH (O.D., I.D., Thick), SIZE MM (O.D., I.D., Thick). Rows include brands like NISSAN, O & K, PACCAR, ROCKFORD, ROCKWELL, SAME, TORO, TOYOTA, TRITEC, TROJAN, TWIN DISC, VALMET, VME - EUCLID, and TEREX.

Table with columns: REPLACES OEM PART NO., VELVETOUCH PART NO., MATERIAL, GROOVE DETAILS, TEETH TANGS, SIZE INCH (O.D., I.D., Thick), SIZE MM (O.D., I.D., Thick). Rows include brands like TEREX (CONTINUED), THWAITES, TIMBERJACK, TORO, TOYOTA, TRITEC, TROJAN, TWIN DISC, VALMET, VME - EUCLID, and TEREX.

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

# WET FRICTION DISCS & COMPONENTS

# WET FRICTION DISCS & COMPONENTS

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>VME - EUCLID (CONTINUED)</b>															
E6830293	HPC3973	GRAPHITE	SUNBRST	57	INT TH	11.96	X	9.26	X	0.153	303.8	X	235.2	X	3.9
M4095311	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
<b>VME - MICHIGAN</b>															
M2106606	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
M2108352	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
M232778	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
M232779	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
<b>VOLVO</b>															
1650310	PP12463	STEEL	-----	48	EXT TH	9.14	X	6.75	X	0.095	232.2	X	171.3	X	2.4
1650313	PP12455	STEEL	-----	31	(32)EXT TH	13.77	X	10.49	X	0.095	349.7	X	266.4	X	2.4
1650314	PP12457	STEEL	-----	31	(32)EXT TH	13.77	X	10.96	X	0.095	349.7	X	278.3	X	2.4
1650317	PP12456	STEEL	-----	31	(32)EXT TH	13.77	X	10.49	X	0.118	349.7	X	266.4	X	3.0
1650318	PP12458	STEEL	-----	31	(32)EXT TH	13.77	X	10.96	X	0.118	349.7	X	278.3	X	3.0
1650357	PP12460	STEEL	-----	31	(32)EXT TH	13.25	X	10.49	X	0.135	336.6	X	266.4	X	3.4
1650358	PP12461	STEEL	-----	30	(32)EXT TH	12.39	X	9.77	X	0.095	314.8	X	248.1	X	2.4
1650996	PP12459	STEEL	-----	31	(32)EXT TH	13.25	X	10.49	X	0.118	336.6	X	266.4	X	3.0
6231577	PP9639	STEEL	-----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
11036733	PP12462	STEEL	-----	30	(32)EXT TH	12.39	X	9.78	X	0.118	314.8	X	248.3	X	3.0
11036734	PP12464	STEEL	-----	48	EXT LG	9.14	X	6.75	X	0.118	232.2	X	171.3	X	3.0
11037468	WPC12465	PAPER	2 PASS	54	INT TH	12.91	X	10.43	X	0.146	328.0	X	265.0	X	3.7
11037469	WPC12466	PAPER	2 PASS	65	INT TH	8.58	X	6.39	X	0.108	218.0	X	162.3	X	2.8
11037474	WPC12467	PAPER	2 PASS	96	INT TH	11.58	X	9.46	X	0.146	294.0	X	240.2	X	3.7
11037475	WPC12468	PAPER	2 PASS	50	INT TH	12.44	X	9.71	X	0.146	316.0	X	246.5	X	3.7
11144415	WPK15204	COLLATED DISC PACKS	-----	-	-----	7.98	X	4.91	X	2.165	202.6	X	124.8	X	55.0
11145206	WPK15205	COLLATED DISC PACKS	-----	-	-----	6.46	X	3.65	X	1.488	164.0	X	92.7	X	37.8
15017294	WPK15206	COLLATED DISC PACKS	-----	-	-----	6.08	X	4.23	X	1.482	154.4	X	107.4	X	37.6
15017373	WPK15207	COLLATED DISC PACKS	-----	-	-----	7.98	X	4.91	X	2.126	202.6	X	124.8	X	54.0
15017386	WPK15208	COLLATED DISC PACKS	-----	-	-----	7.98	X	4.91	X	1.850	202.6	X	124.8	X	47.0
4720.945	PP9639	STEEL	-----	1	EXT LG	9.00	X	5.00	X	0.106	228.6	X	127.0	X	2.7
4780.00C5-7	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
<b>WABCO</b>															
A010124	HPC3951	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
A010437	HPC3970	GRAPHITE	SUNBRST	73	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
A010438	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
A101438	HPC3943	GRAPHITE	SUNBRST	72	INT TH	14.62	X	11.93	X	0.205	371.3	X	303.0	X	5.2
DC4208	PP270	STEEL	-----	104	INT TH	21.93	X	17.17	X	0.187	556.9	X	436.0	X	4.7
DC904814	2200SBG	BRONZE	SUNBRST	88	EXT TH	22.75	X	17.75	X	0.174	577.9	X	450.9	X	4.4
SR-9369	2200SBG	BRONZE	SUNBRST	88	EXT TH	22.75	X	17.75	X	0.174	577.9	X	450.9	X	4.4
<b>WAGNER</b>															
334055	PC4818	BRONZE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
334282	PP981	STEEL	-----	14	(20)EX TH	8.62	X	6.25	X	0.106	218.9	X	158.8	X	2.7
334290	HPC3945	GRAPHITE	SUNBRST	60	INT TH	7.68	X	5.71	X	0.156	195.1	X	145.0	X	4.0
339613	PC10133	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.102	148.6	X	107.7	X	2.6
339705	HPC3946	GRAPHITE	SUNBRST	72	INT TH	9.19	X	6.91	X	0.151	233.4	X	175.5	X	3.8
353131	PP9555	STEEL	-----	72	(90)EX TH	18.19	X	13.78	X	0.138	462.0	X	350.0	X	3.5
353183	PC10132A	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.090	133.1	X	92.7	X	2.3
355996	PC10158	BRONZE	RADIAL	45	INT TH	5.24	X	3.65	X	0.093	133.1	X	92.7	X	2.4
361674	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
361683	PP8347	STEEL	-----	12	EXT TH	16.31	X	10.00	X	0.185	414.3	X	254.0	X	4.7
367134	PC10135	BRONZE	RADIAL	52	INT TH	5.85	X	4.24	X	0.114	148.6	X	107.7	X	2.9
369816	HPC5782	GRAPHITE	SUNBRST	36	INT TH	15.53	X	8.75	X	0.245	394.5	X	222.3	X	6.2
370357	PP7658	STEEL	-----	9	EXT LG	18.81	X	13.33	X	0.185	477.8	X	338.6	X	4.7
370558	HPC5783	GRAPHITE	SUNBRST	38	INT TH	17.98	X	12.35	X	0.308	456.7	X	313.7	X	7.8
378857	WPC9471	PAPER	WAFFLE	48	INT TH	15.74	X	9.47	X	0.185	399.8	X	240.5	X	4.7
378858	PP9472	STEEL	-----	12	EXT LG	18.62	X	10.01	X	0.126	472.9	X	254.3	X	3.2
409040	PP9472	STEEL	-----	12	EXT LG	18.62	X	10.01	X	0.126	472.9	X	254.3	X	3.2
409165	WPC9471	PAPER	WAFFLE	48	INT TH	15.74	X	9.47	X	0.185	399.8	X	240.5	X	4.7
5537885800	PP9472	STEEL	-----	12	EXT LG	18.62	X	10.01	X	0.126	472.9	X	254.3	X	3.2
5540059200	PC9470	BRONZE	RADIAL	61	INT TH	17.70	X	12.02	X	0.185	449.6	X	305.3	X	4.7
5540059300	PP9469	STEEL	-----	12	EXT LG	18.62	X	13.25	X	0.126	472.9	X	336.6	X	3.2

REPLACES OEM PART NO.	VELVETOUCH PART NO.	MATERIAL	GROOVE DETAILS	TEETH TANGS	SIZE INCH			SIZE MM							
					O.D.	I.D.	Thick	O.D.	I.D.	Thick					
<b>WAGNER (CONTINUED)</b>															
5540904000	PP9472	STEEL	-----	12	EXT LG	18.62	X	10.01	X	0.126	472.9	X	254.3	X	3.2
5540916500	WPC9471	PAPER	WAFFLE	48	INT TH	15.74	X	9.47	X	0.185	399.8	X	240.5	X	4.7
<b>WARNER GEAR</b>															
12A66	WPC8293	PAPER	2 PASS	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
20-3000-390	HPC4258	GRAPHITE	SUNBRST	36	INT TH	7.00	X	4.37	X	0.126	177.8	X	111.0	X	3.2
3A66	PC10132	BRONZE	SPIRAL	45	INT TH	5.24	X	3.65	X	0.063	133.1	X	92.7	X	1.6
<b>WICHITA</b>															
308-11-24	PP270	STEEL	-----	104	INT TH	21.93	X	17.17	X	0.187	556.9	X	436.0	X	4.7
308-25-6	2200SBG	BRONZE	SUNBURST	88	EXT TH	22.75	X	17.75	X	0.174	577.9	X	450.9	X	4.4
<b>VALE</b>															
641 409	PP9595	STEEL	-----	36	(42)INT TH	6.94	X	4.04	X	0.079	176.3	X	102.6	X	2.0
900-952-803	PP9579	STEEL	-----	8	EXT LG	5.90	X	3.44	X	0.091	149.9	X	87.4	X	2.3
<b>Z.F.</b>															
4644-308-329	PP9621B	STEEL	-----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
<b>ZETTLEMEYER</b>															
2258 6806	PP9621B	STEEL	-----	35	INT TH	6.73	X	4.05	X	0.079	170.9	X	102.9	X	2.0
<b>ZF MERITOR</b>															
4475336181	PP13374	STEEL	-----	-	-----	7.86	X	6.23	X	0.118	199.7	X	158.2	X	3.0
<b>AFTERMARKET KIT</b>															
	WPK11955UT	PP9948 (Steel)	-----	61	EXT TH	7.90	X	4.00	X	0.087	200.7	X	101.6	X	2.2
		WPC11955UT (Paper)	WAFFLE	23	INT TH	7.00	X	2.73	X	0.148	177.8	X	69.4	X	3.8



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MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>BLUEBIRD</b>							
ALL AMERICAN		2003-2013		WPD0769x	D769	WPD0769x	D769
AMERICAN		1997-1998	Bendix w/3.36 In. Piston	WPD0184x	D184	WPD0184x	D184
AMERICAN		1997-1998	Bendix w/2.88 In. Piston	WPD0225x	D225	WPD0225x	D225
AMERICAN		1999-2002		WPD0786Ax	D786	WPD0786Ax	D786
COMMERCIAL BUS		1999-2002	Bosch w.2.6 In. Piston (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
COMMERCIAL BUS		Up to 1998	Bendix w/3.36 In. Piston	WPD0184x	D184	WPD0184x	D184
COMMERCIAL BUS		Up to 1998	Bendix w/2.88 In. Piston	WPD0225x	D225	WPD0225x	D225
CV200		1999-2002		WPD0786Ax	D786	WPD0786Ax	D786
CV200		1999-2002	bendix calipers	WPD0225x	D225	WPD0225x	D225
CV200		1999-2002	dayton calipers	WPD0224x	D224	WPD0224x	D224
TC1000		1997-1998	Bendix w/3.36 In. Piston	WPD0184x	D184	WPD0184x	D184
TC1000		1997-1998	Bendix w/2.88 In. Piston	WPD0225x	D225	WPD0225x	D225
TC1000		1999-2002		WPD0786Ax	D786	WPD0786Ax	D786
TC2000		1989-1997	Bendix w/2.88 In. Piston	WPD0225x	D225	WPD0225x	D225
TC2000		1998-2004	73mm 2 piston pin slide caliper	WPD0786x	D786	WPD0786Ax	D786
TC2000		1998-2004	66 mm 2 piston pin slide caliper	WPD0786Ax	D786A	WPD0786Ax	D786A
TC2000		1998-2004	2.88" rail slide caliper	WPD0225x	D225	WPD0225x	D225
TC2000		1998-2004	4 piston caliper	WPD0769x	D769	WPD0769x	D769
VISION		2003-2013		WPD0769x	D769	WPD0769x	D769
<b>BUICK</b>							
ENCLAVE		2008-2014				WPD0883x	D883
LACROSSE		2008-2009	V8	WPD1159x	D1159	WPD0508x	D814
LESABRE		2000-2005				WPD0508x	D814
PARK AVENUE		1997-2005				WPD0508x	D814
RAINER		2004-2007				WPD0883x	D883
REGAL		1995-1996		WPD0376x	D376	WPD0508x	D814
REGAL		1997-2004				WPD0508x	D814
RENDEZVOUS		2002-2007		WPD0856x	D844	WPD0508x	D814
RIVIERA		1997-1999	3.8			WPD0508x	D814
ROADMASTER		1995-1996		WPD0052x	D52		
SKYLARK		1995-1998		WPD0506x	D506		
VERANO		2012-2013				WPD0883x	D883
<b>CADILLAC</b>							
CONCOURS		1997-1999	4.6			WPD0508x	D814
DEVILLE		1997-2005	sedan			WPD0508x	D814
DEVILLE		2000-2005	limo, cab, chassis	WPD0784x	D784	WPD0508x	D814
DEVILLE		2005-2005	Sedan, Exc heavy duty	WPD1076x	D1076		
DTS		2006-2009	4.6 w/Standard Brakes	WPD1159x	D1159		
DTS		2006-2011	Hearse and Limo	WPD0784x	D784		
ELDORADO		1997-2002				WPD0508x	D814
ESCALADE		1999-2000	5.7	WPD0369x	D369		
ESCALADE		2002-2006		WPD0785x	D785		
ESCALADE		2007-2011		WPD1092x	D1092	WPD1194x	D1194
ESCALADE		2009-2011		WPD1363x	D1363	WPD1194x	D1194
FLEETWOOD	BROUGHAM	1995-1996	5.7	WPD0052x	D52		
SEVILLE		1997-2004				WPD0508x	D814
XTS		2013-2013				WPD0883x	D883
<b>CHEVROLET</b>							
ASTRO		1995-2002	4.3 AWD	WPD0369x	D369		
ASTRO		200-2002	RWD	WPD0052x	D52		

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control



**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction

Wet Friction

On-HWY Brake Pads

On-HWY Brake Pads

On-HWY Buttons

On-HWY Buttons

Park Brakes

Park Brakes

Service Brakes

Service Brakes

Combo Brakes

Combo Brakes

Hydraulic Control

Hydraulic Control

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>CHEVROLET (CONTINUED)</b>							
ASTRO		2003-2005	4.3	WPD0785x	D785	WPD0792x	D792
AVALANCHE		2002	single piston rear caliper	WPD0785x	D785	WPD0792x	D792
AVALANCHE		2002-2006	dual piston rear caliper	WPD0785x	D785	WPD0834x	D834
AVALANCHE		2003-2006	RWD	WPD0785x	D785	WPD0974x	D974
AVALANCHE		2007-2008	front bracket cast 285C/286C	WPD1092x	D1092	WPD1194x	D1194
AVALANCHE		2009-2011		WPD1363x	D1363	WPD1194x	D1194
AVALANCHE 1500		2002	5.3 w/ Limited Slip and Dual Piston Rear Caliper	WPD0785x	D785	WPD0834x	D834
AVALANCHE 1500		2002	5.3 w/o Limited slip. w/ Single Piston Rear Caliper.	WPD0785x	D785	WPD0792x	D792
AVALANCHE 1500		2006	5.3 2WD	WPD0785x	D785	WPD0974x	D974
AVALANCHE 1500		2006	5.3 4WD	WPD0785x	D785		
AVALANCHE 1500		2003-2005	5.3 2WD	WPD0785x	D785	WPD0974x	D974
AVALANCHE 1500		2003-2005	5.3 4WD	WPD0785x	D785		
AVALANCHE 2500		2002-2006		WPD0784x	D784	WPD0785x	D785
AVEO		2004-2011		WPD1035x	D1035		
AVEO5		2007-2011		WPD1035x	D1035		
B6P042 SCHOOL BUS		1979-1991	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
B6P042 SCHOOL BUS		1979-1991	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
B7T SCHOOL BUS		1993-2002	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
B7T SCHOOL BUS		1993-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
B7T042		1995-1997		WPD0224x	D224	WPD0224x	D224
BERETTA		1995-1996		WPD0506x	D506		
BLAZER (S10 SERIES)		1995-1997	rwd	WPD0154x	D154		
C1500 PICKUP		1995-1999		WPD0369x	D369		
C2500 PICKUP		1995-2000	7200 lbs. GVWR	WPD0369x	D369		
C2500 PICKUP		1995-2000	8600 lbs. GVWR	WPD0370x	D370		
C2500 SUBURBAN		1995-1999		WPD0369x	D369		
C3500 PICKUP		1995-2000	SRW	WPD0370x	D370	WPD0184x	D380
C3500 PICKUP		1995-2000	DRW	WPD0459x	D459		
C3500 PICKUP		1997-2002	single and dual piston calipers	WPD0184x	D184	WPD0184x	D184
C4		2003-2005		WPD1010x	D1010	WPD1010x	D1010
C4500		1995-1996		WPD0225x	D225	WPD0225x	D225
C4500	KODIAK	2003-2010	2 piston caliper	WPD1010x	D1010	WPD1010x	D1010
C4500	KODIAK	2003-2010	w/7.8mm Front Axle	WPD0769x	D769	WPD0769x	D769
C5500		1995-1996		WPD0225x	D225	WPD0225x	D225
C5500	KODIAK	2003-2010	2 piston caliper	WPD1010x	D1010	WPD1010x	D1010
C5500	KODIAK	2003-2010	w/7.8mm Front Axle	WPD0769x	D769	WPD0769x	D769
C5D042		1988-1990		WPD0184x	D184	WPD0224x	D224
C5D064		1988-1990		WPD0184x	D184	WPD0224x	D224
C5H042		1990-2002	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C60		1983-1978		WPD0224x	D224	WPD0225x	D225
C60		1988-1990	bendix calipers- single piston	WPD0184x	D184	WPD0184x	D184
C60		1988-1990	bendix calipers- 2 piston	WPD0225x	D225	WPD0225x	D225
C60		1988-1990	dayton calipers	WPD0224x	D224	WPD0224x	D224
C6500		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C6500		1990-1994		WPD0225x	D225	WPD0225x	D225
C6500		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C6500	KODIAK	2003-2010		WPD0769x	D769	WPD0769x	D769
C6D042		1983-1978		WPD0224x	D224	WPD0225x	D225
C6D042		1983-1990		WPD0224x	D224	WPD0224x	D224
C6D042		1988-1990	bendix calipers- single piston	WPD0184x	D184	WPD0184x	D184

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>CHEVROLET (CONTINUED)</b>							
C6D042		1988-1990	bendix calipers- 2 piston	WPD0225x	D225	WPD0225x	D225
C6D042		1988-1990	dayton calipers	WPD0224x	D224	WPD0224x	D224
C6D042		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
C6D042		1988-2002	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C6H042		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C6H042		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C6H042		2003-2007		WPD0769x	D769	WPD0769x	D769
C6H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 2 Piston Calipers	WPD0224x	D224	WPD0224x	D224
C6H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 4 Piston Calipers	WPD0224x	D224	WPD0769x	D769
C6H042 KODIAK		1998-1998		WPD0769x	D769	WPD0769x	D769
C70		1983-1987	bendix caliper- 2 piston	WPD0225x	D225	WPD0225x	D225
C70		1983-1987	dayton calipers	WPD0224x	D224	WPD0224x	D224
C70		1988-1990	bendix calipers- single piston	WPD0184x	D184	WPD0184x	D184
C70		1988-1990	bendix calipers- 2 piston	WPD0225x	D225	WPD0225x	D225
C70		1988-1990	dayton calipers	WPD0224x	D224	WPD0224x	D224
C7500		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7500		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7500		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7500		2003-2010		WPD0769x	D769	WPD0769x	D769
C7D042		1983-1987	w/Dayton Calipers	WPD0224x	D224	WPD0225x	D225
C7D042		1983-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C7D042		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
C7D042		1988-1990	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7D064		1983-1987	w/Dayton Calipers	WPD0224x	D224	WPD0225x	D225
C7D064		1983-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C7D064		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
C7D064		1988-1990	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H042		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H042		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7H042		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7H042		2003-2007		WPD0769x	D769	WPD0769x	D769
C7H042 KODIAK		1998-1998		WPD0769x	D769	WPD0769x	D769
C7H064		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H064		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7H064		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7H064		2003-2007		WPD0769x	D769	WPD0769x	D769
CAPRICE		1991-1993	11" REAR DRUM- HEAVY DUTY POLICE	WPD0614x	D614		
CAPRICE		1995-1996	9.5" rear drum	WPD0052x	D52		
CAPRICE		1995-1996	11" rear drum	WPD0153x	D614		
CAVALIER		1995-2002		WPD0506x	D506		
COBALT		2005-2007	Rear Disc; 5 lug	WPD1160x	D1028	WPD1033x	D1033
COLORADO		2004-2008		WPD1039x	D1039		
COLORADO		2009-2012	RWD	WPD1169x	D1169		
CORSICA		1995-1996		WPD0506x	D506		
EQUINOX		2005-2006		WPD0833x	D833		
EXPRESS 1500		1996-2002		WPD0369x	D369		
EXPRESS 1500		2003-2008		WPD0785x	D785	WPD0974x	D974
EXPRESS 1500		2009-2014		WPD1363x	D1363	WPD0974x	D974
EXPRESS 2500		1996-2002		WPD0369x	D369		
EXPRESS 2500		2003-2006	8 lug	WPD0784x	D784		

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Table with columns: MAKE/MODEL, SUBMODEL, ENGINE YEARS (LITER), NOTES, FRONT (VT #, FMSI), REAR (VT #, FMSI). Rows include CHEVROLET (CONTINUED) with models like EXPRESS 2500, IMPALA, and SILVERADO 1500.

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Table with columns: MAKE/MODEL, SUBMODEL, ENGINE YEARS (LITER), NOTES, FRONT (VT #, FMSI), REAR (VT #, FMSI). Rows include CHEVROLET (CONTINUED) with models like SILVERADO 1500, SUBURBAN 1500, and TAHOE.

# ON-HIGHWAY APPLICATIONS

# ON-HIGHWAY APPLICATIONS

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>CHEVROLET (CONTINUED)</b>							
TAHOE		2007-2008	front bracket cast 285C/286C	WPD1092x	D1092	WPD1194x	D1194
TAHOE		2008-2014		WPD1363x	D1363	WPD1194x	D1194
TAHOE	POLICE	2010-2014		WPD1092x	D1367		
TAHOE		2015-2015		WPD1363x	D1363		D1707
TRAILBLAZER		2002-2009				WPD0883x	D883
TRAVERSE		2009-2014				WPD0883x	D883
VENTURE		1997-2005	FWD			WPD0508x	D814
VENTURE		2002-2005	AWD	WPD0856x	D844	WPD0508x	D814
W3500		1996-1997		WPD0546x	D546		
W3500		1997-2009	except gas engine 14001-16000 GVV	WPD0825x	D825		
W3500	GAS ENGINE	1997-2009	From 10/1997-14,001 - 16,000 GVV	WPD0827x	D827		
W4		1996-1997		WPD0546x	D546		
W4	DIESEL ENGINE	1998-2007		WPD0825x	D825		
W4	GAS ENGINE	1999-2005	From 7/1999	WPD0827x	D827		
W4500		1996-1997		WPD0546x	D546		
W4500		1997-2009	except diesel engine 16001-19500 GVV and gas engine 14001-16000 GVV	WPD0825x	D825		
W4500		1998-2009	except diesel eng 14001-1600 GVV and gas engine 14001-16000 GVV	WPD0827x	D827		
W5500		1999-2009		WPD0827x	D827		
W5500HD		2005-2010		WPD0827x	D827		
<b>CHRYSLER</b>							
300		2005-2010	Vented Rear Disc	WPD1058x	D1058	WPD1057Ax	D1057
300		2005-2014				WPD1057x	D1057
300M		1999-2004		WPD0591x	D591		
ASPEN	LIMITED	2007-2009		WPD1084x	D1084	WPD0967x	D967
ASPEN		2007-2009				WPD0898x	D898
CONCORDE		1993-1997		WPD0591x	D591		
CONCORDE		1996-1997		WPD0642x	D642	WPD0782x	D641
CONCORDE		1998-2004				WPD0782x	D641
LHS		1993-2001		WPD0591x	D591		
LHS		1996-1997	3.5	WPD0642x	D642	WPD0782x	D641
LHS		1999-2001	3.5			WPD0782x	D641
NEW YORKER		1994-1994		WPD0591x	D591		
NEW YORKER		1996-1996	3.5	WPD0642x	D642	WPD0782x	D641
PACIFICA		2004-2007		WPD0931x	D997		
PROWLER		2001-2002	3.5			WPD0730x	D730
PROWLER		2001-2002		WPD0591x	D591		
TOWN & COUNTRY		1996-2000		WPD0642x	D642		
TOWN & COUNTRY		2001-2007	Rear Disc	WPD0857x	D857	WPD0858x	D858
TOWN & COUNTRY		2004-2004	3.3 Drum	WPD0856x	D844		
TOWN & COUNTRY		2008-2009		WPD1327x	D1327	WPD1326x	D1326
TOWN AND COUNTRY		1996-2000		WPD0591x	D591		
<b>COACHMAN MOTOR HOME</b>							
CATALINA		1976-1991	w/Front Disc Brakes	WPD0450x	D450		
CATALINA		1996-1998	w/Front Disc Brakes	WPD0655x	D655		
CATALINA		1997-1998	w/4 Wheel Disc Brakes	WPD0411x	D411	WPD0411x	D411
LEPRECHAUN		1976-1991	w/Front Disc Brakes	WPD0450x	D450		
LEPRECHAUN		1996-1998	w/Front Disc Brakes	WPD0655x	D655		
LEPRECHAUN		1997-1998	w/4 Wheel Disc Brakes	WPD0411x	D411	WPD0411x	D411
<b>DODGE</b>							
B1500 VAN		1996-1997		WPD0269x	D269		

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>DODGE (CONTINUED)</b>							
B1500 VAN		1998-1998		WPD0702x	D758		
B1500 VAN		1998-1998		WPD0758x	D702		
B2500 VAN		1996-1997		WPD0269x	D269		
B2500 VAN		1998-1998	5.2	WPD0655x	D655		
B3500 VAN		1996-1997		WPD0269x	D269		
B3500 VAN		1998-1998	5.2	WPD0655x	D655		
CALIBER	SRT-4	2008-2008	2.4	WPD1058x	D1058		
CARAVAN		1996-2000		WPD0642x	D642		
CARAVAN		1996-2000		WPD0591x	D591		
CARAVAN		2001-2007	Rear Drum	WPD0856x	D844		
CARAVAN		2001-2007	Rear Disc, Rear Drum, Except Caliper Cast 6623.9	WPD0857x	D857	WPD0858x	D858
CHALLENGER		2008-2013				WPD1057x	D1057
CHALLENGER	R/T	2009-2011	vented rear disc	WPD1058x	D1058	WPD1057Ax	D1057
CHARGER		2006-2011	R/T, Daytona, Police pkg, Vented Rear Disc	WPD1058x	D1058	WPD1057Ax	D1057
CHARGER		2006-2013				WPD1057x	D1057
DAKOTA		2000-2002		WPD0820x	D820		
DAKOTA		2005-2011		WPD1084x	D1084		
DURANGO		2000-2002		WPD0820x	D820		
DURANGO		2003-2003		WPD0758x	D702		
DURANGO		2003-2006		WPD0702x	D758	WPD0967x	D967
DURANGO		2003-2009				WPD0898x	D898
DURANGO		2004-2006		WPD0897x	D897		
DURANGO		2007-2009		WPD1084x	D1084	WPD0967x	D967
DURANGO		2011-2012/2014		WPD1455x	D1455	WPD1498x	D1498
DURANGO		2011-2014				WPD1498x	D1498
GRAND CARAVAN		1996-2000		WPD0642x	D642		
GRAND CARAVAN		1996-2000		WPD0591x	D591		
GRAND CARAVAN		1997-2000		WPD0591x	D519		
GRAND CARAVAN		2001-2005	Rear Drum	WPD0856x	D844		
GRAND CARAVAN		2001-2007	Rear Disc, Rear Drum, Except Caliper Cast 6623.9	WPD0857x	D857	WPD0858x	D858
GRAND CARAVAN		2008-2009		WPD1327x	D1327	WPD1326x	D1326
INTREPID		1993-1997		WPD0591x	D591		
INTREPID		1996-1997		WPD0642x	D642	WPD0782x	D641
INTREPID		1998-2004				WPD0782x	D641
JOURNEY		2009-2009		WPD1327x	D1327	WPD1326x	D1326
MAGNUM		2005-2008	Vented Rear Disc	WPD1058x	D1058	WPD1057Ax	D1057
MAGNUM		2005-2008	W/VENTED REAR ROTOR			WPD1057x	D1057
NEON		1996-1999	Rear Disc	WPD0642x	D642	WPD0782x	D641
NEON		2000-2004	except SRT-4			WPD0782x	D641
NITRO		2009-2009	w/Heavy Duty Brakes.	WPD1327x	D1327		
RAM 1500		2011-2014				WPD0898x	D898
RAM 1500 PICKUP		1996-1999		WPD0369x	D369		
RAM 1500 PICKUP		2000-2001		WPD0758x	D702		
RAM 1500 PICKUP		2000-2005		WPD0702x	D758	WPD0967x	D967
RAM 1500 PICKUP		200-2001		WPD0702x	D702		
RAM 1500 PICKUP		2002-2002		WPD0897x	D897		
RAM 1500 PICKUP		2002-2014				WPD0898x	D898
RAM 1500 PICKUP		2004-2008				WPD0758x	D702
RAM 1500 PICKUP	LARAMIE	2006-2006	4.7 Full Crew Cab	WPD0965x	D965	WPD0967x	D967
RAM 1500 PICKUP		2006-2008	Mega Cab	WPD0965x	D965	WPD0967x	D967

Wet Friction  
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# ON-HIGHWAY APPLICATIONS

# ON-HIGHWAY APPLICATIONS

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction

Wet Friction

On-HWY Brake Pads

On-HWY Brake Pads

On-HWY Buttons

On-HWY Buttons

Park Brakes

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Service Brakes

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Hydraulic Control

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MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>DODGE (CONTINUED)</b>							
RAM 1500 PICKUP		2006-2014	Except Mega Cab	WPD1084x	D1084	WPD0967x	D967
RAM 1500 PICKUP		2012-2012	TRADESMAN HD MODELS			WPD1400x	D1400
RAM 1500 VAN		1999-2002		WPD0758x	D702		
RAM 1500 VAN		1999-2003		WPD0702x	D758		
RAM 1500 VAN		2003		WPD0702x	D702	WPD0898x	D898
RAM 1500 VAN		2003-2003				WPD0898x	D898
RAM 2500 PICKUP		1998	RWD	WPD0370x	D370		
RAM 2500 PICKUP		1995-1997	4WD, Dana 44 FA	WPD0370x	D370		
RAM 2500 PICKUP		1995-1998	4WD, Dana 60 FA	WPD0459x	D459		
RAM 2500 PICKUP		2000-2002		WPD0821x	D821		
RAM 2500 PICKUP		2000-2008				WPD0758x	D702
RAM 2500 PICKUP		2003-2008		WPD0965x	D965	WPD0702x	D1077
RAM 2500 PICKUP		2009-2014		WPD1399x	D1399	WPD1400x	D1400
RAM 2500 PICKUP		2009-2014				WPD1400x	D1400
RAM 2500 VAN		1999-2003	5.2	WPD0655x	D655		
RAM 3500		2009-2014		WPD1399x	D1399	WPD1400x	D1400
RAM 3500 PICKUP		1995-1999		WPD0459x	D459		
RAM 3500 PICKUP		2000-2002		WPD0821x	D821		
RAM 3500 PICKUP		2000-2008				WPD0758x	D702
RAM 3500 PICKUP		2003-2008		WPD0965x	D965	WPD0702x	D1077
RAM 3500 PICKUP		2009-2013				WPD1400x	D1400
RAM 3500 VAN		1999-2003	5.2	WPD0655x	D655		
RAM 4500 PICKUP		2008-2015		WPD1335x	D1335	WPD1335x	D1335
RAM 5500 PICKUP		2008-2015		WPD1335x	D1335	WPD1335x	D1335
RAM C/V		2003-2004	FWD-front caliper casting #6623.9	WPD0857x	D857		
RAM C/V		2003-2007	FWD- front caliper casting #134731	WPD0856x	D856		
RAM C/V		2003-2007	with rear disc	WPD0857x	D857	WPD0858x	D858
RAM C/V		2008-2014		D1273			D1021
RAM C/V		2012-2014	dual piston front caliper		D1589		D1596
SPRINTER 2500		2002-2006	w/o sensor	WPD0949x	D949		
SPRINTER 2500		2002-2006	clip style sensor	WPD1136x	D1136		
SPRINTER 2500		2002-2006	w/o sensor	WPD1136x	D1136		
SPRINTER 2500		2002-2009	2.7 w/Bosch Calipers. Includes Electronic Wear Sensor.	WPD0949xA	D949A	WPD0928xA	D928
SPRINTER 2500		2007-2009	w/o Electronic Wear Sensor.	WPD1316xA	D1316A	WPD1317x	D1317
SPRINTER 3500		2002-2005	bosch rear caliper w/o sensor			WPD0928x	D928
SPRINTER 3500		2002-2005	bosch real caliper with sensor			WPD0928xA	D928A
SPRINTER 3500		2002-2005	clip style sensor	WPD1006xA	D1006A	WPD1006xA	D1006A
SPRINTER 3500		2002-2005	w/o sensor	WPD1006x	D1006A	WPD1006x	D1006
SPRINTER 3500		2002-2006	2.7 w/Bosch Calipers. Includes Electronic Wear Sensor.	WPD0949xA	D949	WPD0928xA	D928
SPRINTER 3500		2007-2009	DRW w/o electronic wear sensor	WPD1268xA	D1268	WPD1318xA	D1318
SPRINTER 3500		2007-2009	SRW w/o electronic wear sensor	WPD1268xA	D1268	WPD1317xA	D1317
SPRINTER 3500		2007-2009	DRW- with electronic wear sensor	WPD1268xA	D1268A	WPD1318xA	D1318A
SPRINTER 3500		2007-2009	SRW-with electronic wear sensor	WPD1268xA	D1268A	WPD1317xA	D1317A
<b>EAGLE</b>							
VISION		1993-1997		WPD0591x	D591		
VISION		1995-1997		WPD0642x	D642	WPD0782x	D641
<b>FIAT</b>							
DUCATO		2008-2010	LATIN AMERICA			WPD1490x	D1490
<b>FORD</b>							
AEROSTAR		1995-1997	3.0	WPD0387x	D249		

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>FORD (CONTINUED)</b>							
B600 BUS		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
B600 BUS		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
B700 BUS		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
B700 BUS		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
B800 BUS		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
B800 BUS		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
BRONCO		1995-1996		WPD0632x	D632		
C600 BUS	TILT CAB	1984-1990	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
C600 BUS	TILT CAB	1984-1990	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
C700 BUS	TILT CAB	1984-1990	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
C700 BUS	TILT CAB	1984-1990	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
C800 BUS	TILT CAB	1984-1990	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
C800 BUS	TILT CAB	1984-1990	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
C900 BUS	TILT CAB	1984-1990	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
C900 BUS	TILT CAB	1984-1990	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
C-MAX		2013-2013		WPD1044x	D1044		
CROWN VICTORIA		1998-1998	phenolic piston	WPD0748x	D748		
CROWN VICTORIA		2003-2009		WPD0931x	D997	WPD0932x	D932
E-150 ECONOLINE		1995-2003		WPD0632x	D632		
E-150 ECONOLINE		2007		WPD0655x	D655	WPD0802x	D802
E-150 ECONOLINE		2008-2014		WPD1328x	D1328	WPD1329x	D1329
E-150		2008-2009		WPD1328x	D1328	WPD1329x	D1329
E-250		2006-2007		WPD0655x	D655	WPD0802x	D802
E-250 ECONOLINE		1976-1991		WPD0120X	D120		
E-250 ECONOLINE		1989-1991		WPD0450x	D450		
E-250 ECONOLINE		1995-2005		WPD0655x	D655		
E-250 ECONOLINE		2000-2005		WPD0655x	D655	WPD0802x	D802
E-250 ECONOLINE		2008-2014		WPD1328x	D1328	WPD1329x	D1329
E-250		2008-2009		WPD1328x	D1328	WPD1329x	D1329
E-350 ECONOLINE		1978-1991		WPD0120X	D120		
E-350 ECONOLINE		1989-1991		WPD0450x	D450		
E-350 ECONOLINE	HD CLUB WAGON	1995-1996	4.9	WPD0655x	D655		
E-350 ECONOLINE		1995-2002		WPD0655x	D655		
E-350 ECONOLINE		1999-2007		WPD0655x	D655	WPD0802x	D802
E-350 ECONOLINE		2008-2015		WPD1328x	D1328	WPD1329x	D1329
E-350 SUPER DUTY		2006-2007		WPD0655x	D655	WPD0802x	D802
E-350 SUPER DUTY		2008-2009		WPD1328x	D1328	WPD1329x	D1329
E-450 ECONOLINE		2003-2003	5.4	WPD0655x	D655	WPD0655x	D655
E-450 SUPER DUTY		1996-2007		WPD0655x	D655	WPD0411x	D411
E-450 SUPER DUTY		2008-2010		WPD1328x	D1328	WPD1330x	D1330
E-550 SUPER DUTY		2002-2006		WPD0777x	D777	WPD0777x	D777
ESCAPE		2008-2012		WPD1047x			
ESCAPE		2013-2014		WPD1044x	D1044		
EXCURSION		2000-2005		WPD0756x	D824	WPD0757x	D757
EXCURSION		2000-2005		WPD0824x	D756		
EXCURSION		2000-2005		WPD0756xA	D756A		
EXPEDITION		1997-2002		WPD0702x	D702	WPD0711x	D711
EXPEDITION		1997-2002		WPD0758x	D702		
EXPEDITION		1997-2002		WPD0966x	D702		
EXPEDITION		2003-2006				WPD0935x	D935

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>FORD (CONTINUED)</b>							
EXPEDITION	EDDIE BAUER	2007-2009	5.4	WPD1278x	D1278	WPD1279x	D1279
EXPLORER		1995-2001		WPD0652x	D652	WPD0667x	D667
EXPLORER	SPORT	2001-2003	4.0	WPD0833x	D833	WPD0667x	D667
EXPLORER		2002-2005	4.0	WPD0833x	D833		
EXPLORER		2006-2010	All	WPD1158x	D1158	WPD1109x	D1109
EXPLORER		2011-2011	All	WPD1158x	D1158	WPD1377x	D1377
EXPLORER		2011-2014		WPD1508x	D1508		
EXPLORER SPORT TRAC		2001-2002	4.0	WPD0833x	D833		
EXPLORER SPORT TRAC		2003-2005	4.0	WPD0833x	D833	WPD0667x	D667
EXPLORER SPORT TRAC		2007-2010	All	WPD1158x	D1158	WPD1109x	D1109
F-150		2000-2004		WPD0966x	D702		
F-150 PICKUP		1993-2004		WPD0758x	D702		
F-150 PICKUP		1995-1996		WPD0632x	D632		
F-150 PICKUP		1996-2004	exc lightning	WPD0679x	D679	WPD0711x	D711
F-150 PICKUP		1999-2004	5, 7, 8 lug wheels; lightning	WPD0702x	D702	WPD0711x	D711
F-150 PICKUP		2004-2008		WPD0908x	D908		
F-150 PICKUP		2005-2008	All	WPD1083x	D1083	WPD1012x	D1012
F-150 PICKUP		2008-2009		WPD1392x	D1392		
F-150 PICKUP		2010-2011	All	WPD1414x	D1414	WPD1012x	D1012
F-150 PICKUP		2012-2014		WPD1414x	D1414		D1602
F-250		2010-2012		WPD1333x	D1333	WPD1334x	D1334
F-250		2012-2014		WPD1680x	D1680	WPD1691x	D1691
F-250 PICKUP		1976-1994		WPD0120X	D120		
F-250 PICKUP		1989-1996	All	WPD0450x	D450		
F-250 PICKUP	SUPER CAB	1995-1999	4.9	WPD0655x	D655		
F-250 PICKUP		1997-1999		WPD0702x	D702	WPD0711x	D711
F-250 PICKUP		1997-1999		WPD0758x	D702		
F-250 SUPER DUTY PICK UP		1999-2004		WPD0756xA	D756A		
F-250 SUPER DUTY PICK UP		1999-2004		WPD0824x	D756		
F-250 SUPER DUTY PICKUP		1999-2004	7.3	WPD0756x	D824	WPD0757x	D757
F-250 SUPER DUTY PICKUP		2005-2006		WPD1069x	D1069		
F-250 SUPER DUTY PICKUP		2007-2009		WPD1069x	D1069	WPD1067x	D1067
F-250 SUPER DUTY PICKUP		2010-2011	fr 12/18/06 to 12/12/10	WPD1069x	D1069	WPD1067x	D1067
F-250 SUPER DUTY PICKUP		2010-2011	fr 2/22/10 to 7/24/11; 2/22/10-9/15/10	WPD1069x	D1069	WPD1067x	D1067
F-250 SUPER DUTY PICKUP		2005-2007	2WD&4WD			WPD1068x	D1068
F-350		1999-2004	SRW, DRW	WPD0756x	D756	WPD0757x	D757
F-350		2010-2012	SRW	WPD1333x	D1333	WPD1334x	D1334
F-350		2010-2012	DRW	WPD1069x	D1069	WPD1334x	D1334
F-350		2012-2014	SRW, DRW	WPD1680x	D1680	WPD1691x	D1691
F-350 PICKUP		1977-1994		WPD0120X	D120		
F-350 PICKUP		1989-1994	All	WPD0450x	D450		
F-350 PICKUP		1995-1997		WPD0655x	D655		
F-350 SUPER DUTY PICKUP		1999-2004	7.3	WPD0756x	D824	WPD0757x	D757
F-350 SUPER DUTY PICKUP		1999-2004		WPD0756xA	D756A		
F-350 SUPER DUTY PICKUP		1999-2004		WPD0824x	D756		
F-350 SUPER DUTY PICKUP		2005-2008	DRW	WPD1069x	D1069	WPD1067x	D1067
F-350 SUPER DUTY PICKUP		2005-2008	SRW	WPD1069x	D1069		
F-350 SUPER DUTY PICKUP		2008-2009	DRW: fr 1/07 to 2/12/10	WPD1069x	D1069	WPD1067x	D1067
F-350 SUPER DUTY PICKUP		2010-2011	Except fr 2/22/10 to 7/24/11; 9/16/10-7/24/11	WPD1069x	D1069	WPD1067x	D1067
F-350 SUPER DUTY PICKUP		2005-2007	2WD&4WD			WPD1068x	D1068
F450		1988-1998		WPD0411x	D411	WPD0411x	D411

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>FORD (CONTINUED)</b>							
F450		1999-2004		WPD0777x	D777	WPD0777x	D777
F450		2005-2010		WPD1066x	D1066	WPD1066x	D1066
F450		2010-2012	pickup; 8 lug	WPD1069x	D1069	WPD1334x	D1334
F450		2010-2012	cab and chassis; 10 lug	WPD1066x	D1066	WPD1066x	D1066
F450		2013-2015	pickup; 8 lug	WPD1680x	D1680	WPD1691x	D1691
F450		2013-2015	cab and chassis; 10 lug	WPD1066x	D1066	WPD1066x	D1066
F-450 SUPER DUTY PICKUP		1995-1997	7.3	WPD0411x	D411	WPD0411x	D411
F-450 SUPER DUTY PICKUP		1999-2004		WPD0777x	D777	WPD0777x	D777
F-450 SUPER DUTY PICKUP		2005-2011		WPD1066x	D1066	WPD1066x	D1066
F47		1988-1998		WPD0411x	D411	WPD0411x	D411
F47		1999-2004		WPD0777x	D777	WPD0777x	D777
F47	2WD AND 4WD SUPER DUTY	1999-2004		WPD0777x	D777	WPD0777x	D777
F47		2005-2007		WPD1066x	D1066	WPD1066x	D1066
F47	2WD AND 4WD SUPER DUTY	2005-2010		WPD1066x	D1066	WPD1066x	D1066
F47		2008-2010		WPD1328x	D1328	WPD1330x	D1330
F47	2WD AND 4WD SUPER DUTY	2010-2012	pickup; 8 lug	WPD1069x	D1069	WPD1334x	D1334
F47	2WD AND 4WD SUPER DUTY	2010-2012	cab and chassis; 10 lug	WPD1066x	D1066	WPD1066x	D1066
F47	2WD AND 4WD SUPER DUTY	2013-2015	pickup; 8 lug	WPD1680x	D1680	WPD1691x	D1691
F47	2WD AND 4WD SUPER DUTY	2013-2015	cab and chassis; 10 lug	WPD1066x	D1066	WPD1066x	D1066
F53		1988-1998		WPD0411x	D411	WPD0411x	D411
F53	RV MOTOR HOME AND STRIPPED CHASSIS	1988-1998		WPD0411x	D411	WPD0411x	D411
F53		1999-2004		WPD0777x	D777	WPD0777x	D777
F53	RV MOTOR HOME AND STRIPPED CHASSIS	1999-2004		WPD0777x	D777	WPD0777x	D777
F53		2005-2007		WPD1066x	D1066	WPD1066x	D1066
F53	RV MOTOR HOME AND STRIPPED CHASSIS	2005-2007		WPD1066x	D166	WPD0777x	D777
F53		2007-2010	From 11/2007. Except 24K/26K GVW	WPD1066x	D1066	WPD1066x	D1066
F53		2007-2010	From 11/2007. 124K/26K GVW	WPD0786x	D786	WPD0786x	D786
F53	RV MOTOR HOME AND STRIPPED CHASSIS	2011-2015	over 23k lb GVW; DANA 17060S Rear Axle	WPD0786Ax	D786A	WPD0786Ax	D786A
F53	RV MOTOR HOME AND STRIPPED CHASSIS	2011-2015	Under 23k lb GVW; DANA 80, 110, & 130 Rear Axles	WPD1066x	D1066	WPD0777x	D777
F550	2WD AND 4WD SUPER DUTY	1988-1998		WPD0411x	D411	WPD0411x	D411
F550	2WD AND 4WD SUPER DUTY	1999-2004		WPD0777x	D777	WPD0777x	D777
F550	2WD AND 4WD SUPER DUTY	2005-2014		WPD1066x	D1066	WPD1066x	D1066
F-550 SUPER DUTY PICKUP		2001-2004		WPD0777x	D777	WPD0777x	D777
F-550 SUPER DUTY PICKUP		2005-2011		WPD1066x	D1066	WPD1066x	D1066
F59		1988-1998		WPD0411x	D411	WPD0411x	D411
F59		1999-2004		WPD0777x	D777	WPD0777x	D777
F59		2005-2007	To 10/2007.	WPD1066x	D1066	WPD1066x	D1066
F59		2007-2010	From 11/2007. Except 24K/26K GVW	WPD1066x	D1066	WPD1066x	D1066
F59		2007-2010	From 11/2007. 124K/26K GVW	WPD0786x	D786	WPD0786x	D786
F600	CONVENTIONAL	1984-1998	2.50" caliper	WPD0224x	D224		
F600	CONVENTIONAL	1984-1998	2.88" caliper	WPD0236x	D236		
F-600		1983-1999	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
F-600		1983-1999	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
F650	CONVENTIONAL	2009-2014		WPD0769x	D769	WPD0769x	D769
F-650		1999-2002		WPD0769x	D769	WPD0769x	D769
F-650		2000-2003	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224	WPD0224x	D224
F-650		2000-2003	w/Dayton 4-Piston Caliper	WPD0769x	D769	WPD0769x	D769
F-650		2003-2003		WPD0224x	D224		
F-650		2003-2008	w/2.6 In. 2-Piston Caliper (66mm #4153269)	WPD0786Ax	D786	WPD0786Ax	D786
F-650		2004-2008	w/2.88 In. 2-Piston Caliper (73mm #4153222)	WPD0786x	D786	WPD0786x	D786

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>FORD (CONTINUED)</b>							
F-650		2009-2010		WPD0769x	D769	WPD0769x	D769
F-650 SUPER DUTY		2007-2008		WPD0786x	D786	WPD0786Ax	D786
F-700		1983-1999	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
F-700		1983-1999	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
F-700		1995-1996	6000-7000 Front Axle	WPD0224x	D224		
F-700		1995-1996	8000-12000 Front Axle	WPD0236x	D236		
F750	CONVENTIONAL	2009-2014		WPD0769x	D769	WPD0769x	D769
F-750		2000-2003	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224	WPD0224x	D224
F-750		2000-2003	w/Dayton 4-Piston Caliper	WPD0769x	D769	WPD0769x	D769
F-750		2001-2003		WPD0224x	D224		
F-750		2003-2008	w/2.6 In. 2-Piston Caliper (66mm 4513269)	WPD0786Ax	D786	WPD0786Ax	D786
F-750		2004-2008	w/2.88 In. 2-Piston Caliper (73mm #4153222)	WPD0786x	D786	WPD0786x	D786
F-750		2009-2010		WPD0769x	D769	WPD0769x	D769
F800		1983-1999	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
F800		1983-1999	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
F800	CONVENTIONAL	1983-1999	2.50" caliper	WPD0224x	D224		
F800	CONVENTIONAL	1983-1999	2.88" caliper	WPD0236x	D236		
F900	CONVENTIONAL	1983-1989		WPD0236x	D236		
F900		1983-1999	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
F900		1983-1999	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
FLEX		2009-2011		WPD1508x	D1376		
FLEX		2012-2014	STANDARD BRAKES; FRONT ROTORS	WPD1508x	D1508		
FOCUS		2005-2007		WPD1044x	D1044		
FOCUS		2012-2014		WPD1044x	D1044		
FT800		1983-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
FT800		1983-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
FT800	CONVENTIONAL	1983-1998	2.50" caliper	WPD0224x	D224		
FT800	CONVENTIONAL	1983-1998	2.88" caliper	WPD0236x	D236		
FT900		1983-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
FT900	CONVENTIONAL	1983-1994		WPD0236x	D236		
L800		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
L800		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
L900		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
L900		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LCF SERIES		2006-2010		WPD1066x	D1066	WPD1066x	D1066
LCF450		2006-2007		WPD1066x	D1066	WPD1066x	D1066
LCF550		2006-2007		WPD1066x	D1066	WPD1066x	D1066
LN600		1984-1988	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LN600		1984-1988	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LN700		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LN700		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LN800		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LN800		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LN900		1984-1998	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LN900		1984-1998	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LNT800		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LNT800		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LNT900		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LNT900		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LT800		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>FORD (CONTINUED)</b>							
LT800		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LT900		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LT900		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LTL900		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LTS800		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LTS800		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
LTS900		1984-1994	w/Dayton 2.5 In. 2-Piston Caliper	WPD0224x	D224		
LTS900		1984-1994	w/Dayton 2.88 In. 2-Piston Caliper	WPD0236x	D236		
RANGER		1995-2002		WPD0652x	D652		
RANGER		2003-2011		WPD0833x	D833		
TAURUS		2010-2011	All	WPD1158x	D1158	WPD1377x	D1377
TAURUS		2010-2014		WPD1508x	D1508		
TRANSIT		2000-2005		WPD7024x			
TRANSIT		2006-2009	w/Electronic Wear Sensor.	WPD6000x			
TRANSIT		2006-2009	w/o Electronic Wear Sensor.	WPD6000x			
TRANSIT CONNECT		2010-2013		WPD0970x	D970		
TRANSIT CONNECT		2014-2014		WPD1044x	D1044		
ESCAPE		2004-2008				WPD1055x	D1055
F-150		2004-2004		WPD1011x	D1011		
F-250		1997-1999	UNDER GVW 8500	WPD0966x	D702		
<b>FREIGHTLINER</b>							
C2		2004-2013	73mm caliper	WPD0786x	D786	WPD0786x	D786
FL50		1992-2004	w/Bendix 2.6 In. 2-Piston Calipers.	WPD0184x	D184	WPD0184x	D184
FL50		1992-2004	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
FL60		1992-2004	w/Bendix 2.6 In. 2-Piston Calipers.	WPD0184x	D184	WPD0184x	D184
FL60		1992-2004	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
FL70		1992-2004	w/Bendix 2.6 In. 2-Piston Calipers.	WPD0184x	D184	WPD0184x	D184
FL70		1992-2004	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
FL80		1992-2004	w/Bendix 2.6 In. 2-Piston Calipers.	WPD0184x	D184	WPD0184x	D184
FL80		1992-2004	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
FRED		2006-2009	Bosch w/2.6" piston (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
FRED		2006-2009	Bosch w/2.87" piston (73mm)	WPD0786x	D786	WPD0786x	D786
FRED CHASSIS	MOTORHOME	2006-2013	66mm caliper	WPD0786Ax	D786Ax	WPD0786Ax	D786Ax
FRED CHASSIS	MOTORHOME	2006-2013	73 mm caliper	WPD0786x	D786	WPD0786x	D786
FS65		1996-1998	2.60" caliper	WPD0184x	D184	WPD0184x	D184
FS65		1996-1998	2.88" caliper	WPD0225x	D225	WPD0225x	D225
FS65		1999-2007	66mm caliper	WPD0786Ax	D786Ax	WPD0786Ax	D786Ax
FS65		1999-2007	73mm caliper	WPD0786x	D786	WPD0786x	D786
FW700		1996-1998	2.60" caliper	WPD0184x	D184	WPD0184x	D184
FW700		1996-1998	2.88" caliper	WPD0225x	D225	WPD0225x	D225
FW700		1999-2007	66mm caliper	WPD0786Ax	D786Ax	WPD0786Ax	D786Ax
FW700		1999-2007	73mm caliper	WPD0786x	D786	WPD0786x	D786
M2 100		2004-2006	w/Bosch 2.6 In. Pistons (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
M2 100		2004-2006	w/Bosch 2.87 In. Pistons (73mm)	WPD0786x	D786	WPD0786x	D786
M2 106	BUSINESS CLASS	2004-2008	w/Bosch 2.6 In. Pistons (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
M2 106	BUSINESS CLASS	2004-2008	w/Bosch 2.87 In. Pistons (73mm)	WPD0786x	D786	WPD0786x	D786
MB50		1992-1996	Bosch w/2.6" piston (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
MB50		1992-1996	Bosch w/2.87" piston (73mm)	WPD0786x	D786	WPD0786x	D786
MB50		1992-1998	w/Bendix 2.6 In. 2-Piston Calipers.	WPD0184x	D184	WPD0184x	D184
MB50		1992-1998	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

WPD0702x  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
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Wet Friction  
On-HWY Brake Pads  
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Park Brakes  
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Table with columns: MAKE/MODEL, SUBMODEL, ENGINE YEARS (LITER), NOTES, FRONT (VT #, FMSI), REAR (VT #, FMSI). Includes rows for Freightliner (Continued), MC, MT, and S2.

Table with columns: MAKE/MODEL, SUBMODEL, ENGINE YEARS (LITER), NOTES, FRONT (VT #, FMSI), REAR (VT #, FMSI). Includes rows for Freightliner (Continued), GMC, and C4.

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>GMC (CONTINUED)</b>							
C4500	TOPKICK	2003-2010	w/6.25mm Front Axle	WPD1010x	D1010	WPD1010x	D1010
C4500	TOPKICK	2003-2010	w/7.8mm Front Axle	WPD0769x	D769	WPD0769x	D769
C5		2003-2004		WPD1010x	D1010	WPD1010x	D1010
C5500		1996-1996		WPD0225x	D225	WPD0225x	D225
C5500	TOPKICK	2003-2010	w/6.25mm Front Axle	WPD1010x	D1010	WPD1010x	D1010
C5500	TOPKICK	2003-2010	w/7.8mm Front Axle	WPD0769x	D769	WPD0769x	D769
C5D042		1988-1990		WPD0184x	D184	WPD0224x	D224
C5D064		1988-1990		WPD0184x	D184	WPD0224x	D224
C5H042		1990-2002	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C6		2003-2004		WPD1010x	D1010		
C6500		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C6500		1990-1994	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C6500		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C6500	TOPKICK	2003-2010		WPD0769x	D769	WPD0769x	D769
C6D042		1983-1990		WPD0224x	D224	WPD0224x	D224
C6D042		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
C6D042		1988-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C6H042		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C6H042		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C6H042		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C6H042		2003-2007		WPD0769x	D769	WPD0769x	D769
C6H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 2 Piston Calipers	WPD0224x	D224	WPD0224x	D224
C6H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 4 Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7500		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7500		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7500		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7500	TOPKICK	2003-2010		WPD0769x	D769	WPD0769x	D769
C7D042		1983-1990	w/Dayton Calipers	WPD0224x	D224	WPD0225x	D225
C7D042		1983-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C7D042		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
C7D044		1983-1987	bendix calipers- 2 piston	WPD0225x	D225	WPD0225x	D225
C7D044		1983-1987	dayton calipers	WPD0224x	D224	WPD0224x	D224
C7D044		1988-1990	bendix calipers - single piston	WPD0184x	D184	WPD0184x	D184
C7D044		1988-1990	bendix calipers- 2 piston	WPD0225x	D225	WPD0225x	D225
C7D044		1998-1990	dayton calipers	WPD0224x	D224	WPD0224x	D224
C7D064		1983-1987	w/Dayton Calipers	WPD0224x	D224	WPD0225x	D225
C7D064		1983-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
C7D064		1988-1990	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H042		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H042		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7H042		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7H042		2003-2007		WPD0769x	D769	WPD0769x	D769
C7H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 2 Piston Calipers	WPD0224x	D224	WPD0224x	D224
C7H042 KODIAK		1995-1997	Front Dayton Calipers. Rear 4 Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7H064		1990-1994	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
C7H064		1990-2002	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
C7H064		1995-2002	w/Dayton Calipers. Rear 2-Piston Calipers	WPD0224x	D224	WPD0224x	D224
C7H064		1995-2002	w/Dayton Calipers. Rear 4-Piston Calipers	WPD0224x	D224	WPD0769x	D769
C7H064		2003-2007		WPD0769x	D769	WPD0769x	D769
CANYON		2004-2008		WPD1039x	D1039		

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>GMC (CONTINUED)</b>							
CANYON		2009-2012		WPD1169x	D1169		
ENVOY		2002-2009				WPD0883x	D883
F6B042		1997-1997		WPD0224x	D224	WPD0224x	D224
F7B042		1997-1997		WPD0224x	D224	WPD0224x	D224
G15/G1500 VAN		1995-1995		WPD0052x	D52		
G25/G2500 VAN		1995-1995		WPD0052x	D52		
G35/G3500 VAN		1995-1995	5.7 w/13 in. Drums	WPD0149x	D149		
G35/G3500 VAN		1995-1995	6.5 w/13 in. Drums	WPD0149x	D149		
G35/G3500 VAN		1995-1995	7.4 w/13 in. Drums	WPD0149x	D149		
G35/G3500 VAN		1995-1995	SRW; 13"x2.5" Rear shoe	WPD0153x	D614		
G3500 VAN		1996-1996		WPD0153x	D614		
G4500	COM'L CUTAWAY CHASSIS	2009-2014		WPD0784x	D784	WPD1411x	D1411
JIMMY		1995-1999	4.3	WPD0154x	D154		
JIMMY	ENVOY	1998-1999	4.3	WPD0154x	D154		
K1500 PICKUP	SIERRA	1995-1996	6.5	WPD0369x	D369		
K1500 PICKUP		1995-1998		WPD0369x	D369		
K1500 SUBURBAN		1995-1999	11' rear drum; 6 lug	WPD0369x	D369		
K1500 SUBURBAN		1995-1999		WPD0370x	D370		
K2500 PICKUP		1995-1998	w/11 in. Drums; 6 lug	WPD0369x	D369		
K2500 PICKUP		1995-2003	w/13 in. Drums; 8 lug	WPD0370x	D370		
K2500 PICKUP		2000-2000		WPD0370x	D370		
K2500 SUBURBAN		1995-1999		WPD0370x	D370		
K3500 PICKUP	SIERRA	1995-1997	5.7 Single Rear Wheels	WPD0370x	D370		
K3500 PICKUP		1995-2000	Single Rear Wheels	WPD0370x	D370		
K3500 PICKUP		1995-2000	Dual Rear Wheels	WPD0459x	D459		
P4T042		1988-1996	w/Bendix Calipers	WPD0184x	D184	WPD0184x	D184
P4T042		1988-1996	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
P6S		1992-1996	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
P6S		1992-1996	w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
P6S042		1995-1996		WPD0224x	D224		
P6T042		1983-1987	w/Dayton Calipers	WPD0224x	D224		
P6T042		1983-1987	w/Bendix Calipers	WPD0225x	D225		
P6T042		1988-1990	w/Bendix Single Piston Calipers	WPD0184x	D184	WPD0184x	D184
P6T042		1988-1990	w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
P6T042		1988-1990	w/Bendix 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
S7T042 FORWARD CONTROL		1983-1996		WPD0225x	D225	WPD0225x	D225
SAFARI		1995-2002	AWD	WPD0369x	D369		
SAFARI		1995-2002	4.3 RWD	WPD0052x	D52		
SAFARI		2003-2005	4.3	WPD0785x	D785	WPD0792x	D792
SAVANA 1500		1996-2002		WPD0369x	D369		
SAVANA 1500		2003-2005		WPD0785x	D785	WPD0974x	D974
SAVANA 1500		2008-2008		WPD0785x	D785	WPD0974x	D974
SAVANA 2500		1999-2002	6 lug	WPD0369x	D369		
SAVANA 2500		1999-2002	8 lug	WPD0370x	D370		
SAVANA 2500		2003-2005	8600 lbs. GVWR; 8 lug	WPD0784x	D784	WPD0974x	D974
SAVANA 2500		2003-2005	7200 lbs. GVWR; 6 lug	WPD0785x	D785	WPD0974x	D974
SAVANA 2500		2006-2014		WPD0784x	D784	WPD0974x	D974
SAVANA 3500		1996-2000	7.4 SRW	WPD0370x	D370		
SAVANA 3500		1999-2001	SRW	WPD0370x	D370		
SAVANA 3500		1999-2001	DRW	WPD0459x	D459		

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control



# ON-HIGHWAY APPLICATIONS

# ON-HIGHWAY APPLICATIONS

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>GMC (CONTINUED)</b>							
SAVANA 3500		2002-2002		WPD0459x	D459		
SAVANA 3500		2003-2008	6.0 DRW	WPD0784x	D784	WPD0989x	D989
SAVANA 3500		2003-2008	6.0 SRW	WPD0784x	D784	WPD0974x	D974
SAVANA 3500		2013-2014	SRW- passenger	WPD0784x	D784	WPD0974x	D974
SAVANA 3500		2013-2014	DRW	WPD0784x	D784	WPD1411x	D1411
SAVANA 4500 VAN		1996-2001	SRW	WPD0370x	D9370		
SAVANA 4500 VAN		1996-2001	DRW	WPD0459x	D459		
SAVANA 4500 VAN		2002		WPD0459x	D459		
SAVANA 4500 VAN		2003-2008	DRW	WPD0784x	D784	WPD0989x	D989
SAVANA 4500 VAN		2003-2014	SRW	WPD0784x	D784	WPD0974x	D974
SAVANA 4500 VAN		2009-2014	DRW	WPD0784x	D784	WPD1411x	D1411
SIERRA 1500		1999-2001		WPD0785x	D785	WPD0792x	D792
SIERRA 1500		2001-2002	4 Door	WPD0784x	D784	WPD0785x	D785
SIERRA 1500		2002-2006		WPD0785x	D785	WPD0792x	D792
SIERRA 1500		2002-2006		WPD0785x	D785	WPD0834x	D834
SIERRA 1500		2003-2003	4.3 4 Door Heavy Duty, 2 Wheel Steering.	WPD0784x	D784	WPD0785x	D785
SIERRA 1500		2005-2007	Rear Drum Brakes	WPD1092x	D1092		
SIERRA 1500		2005-2007	4.3 Extended Cab, Hybrid, Rear Disc	WPD1092x	D1092	WPD0792x	D792
SIERRA 1500		2005-2007	4.3 7200 lb. GVW, Crew Cab, Rear Disc w/Hyd. Pwr. Brakes	WPD1092x	D1092	WPD0785x	D785
SIERRA 1500		2005-2007	4.3 AWD, Extended Cab, Rear Disc, exc Hybrid	WPD1092x	D1092	WPD0834x	D834
SIERRA 1500		2008-2011	Rear Disc	WPD1363x	D1363	WPD1194x	D1194
SIERRA 1500 HD		2001-2007		WPD0784x	D784	WPD0785x	D785
SIERRA 2500		1999-2008		WPD0784x	D784	WPD0785x	D785
SIERRA 2500 HD		2001-2009		WPD0784x	D784	WPD0785x	D785
SIERRA 2500 HD		2012-2013		WPD1565x	D1565		
SIERRA 3500		2001-2007		WPD0784x	D784	WPD0909x	D909
SIERRA 3500		2004-2007	Single Rear Wheels	WPD0784x	D784	WPD0785x	D785
SIERRA 3500 HD		2007-2009	GVW 9,900 lbs.; DRW	WPD0784x	D784	WPD0785x	D785
SIERRA 3500 HD		2007-2010	GVW 12,000 lbs.; SRW	WPD0784x	D784	WPD0909x	D909
SIERRA 3500 HD		2012-2013		WPD1565x	D1565		
SIERRA C3		2001-2001	6.0	WPD0785x	D785		
SIERRA DENALI		2002-2002	6.0	WPD0785x	D785	WPD0785x	D785
SIERRA DENALI		2004-2005	6.0	WPD0785x	D785	WPD0785x	D785
SIERRA DENALI		2006-2006	6.0	WPD0785x	D785	WPD0975x	D975
SIERRA DENALI	CLASSIC	2007-2007	6.0	WPD1092x	D1092	WPD1194x	D1194
SIERRA DENALI		2007-2007	6.2	WPD1092x	D1092	WPD1194x	D1194
SIERRA DENALI		2007-2008	6.2	WPD1092x	D1092	WPD1194x	D1194
SIERRA DENALI		2008-2008	6.2	WPD1092x	D1092	WPD1194x	D1194
SIERRA DENALI		2009-2011	6.2	WPD1363x	D1363	WPD1194x	D1194
SIERRA DENALI		2009-2011	6.2	WPD1363x	D1363	WPD1194x	D1194
SONOMA		1996-1996	2.2	WPD0154x	D154		
SONOMA		1996-1996	4.3	WPD0154x	D154		
T5500		1996-2002	From 3/1996. w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
T5500		1996-2002	From 3/1996. w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
T5500		2004-2010		WPD0769x	D769	WPD0769x	D769
T6500		1996-2002	From 3/1996. w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
T6500		1996-2002	From 3/1996. w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
T6500		2004-2010		WPD0769x	D769	WPD0769x	D769
T7500		1996-2002	From 3/1996. w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
T7500		1996-2002	From 3/1996. w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>GMC (CONTINUED)</b>							
T7500		2004-2010		WPD0769x	D769	WPD0769x	D769
T8500		1996-2002	From 3/1996. w/Dayton Calipers	WPD0224x	D224	WPD0224x	D224
T8500		1996-2002	From 3/1996. w/Bendix Calipers	WPD0225x	D225	WPD0225x	D225
T8500		2004-2010		WPD0769x	D769	WPD0769x	D769
W3500		1995-1997		WPD0546x	D546		
W3500		1997-2009		WPD0825x	D825		
W3500		1997-2009		WPD0827x	D827		
W4		1995-1997		WPD0546x	D546		
W4	DIESEL ENGINE	1998-2007		WPD0825x	D825		
W4	GAS ENGINE	1999-2005	From 7/1999	WPD0827x	D827		
W4500		1995-1997		WPD0546x	D546		
W4500	GAS ENGINE	1999-2009		WPD0825x	D825		
W4500		1999-2009		WPD0827x	D827		
W5500		1999-2009		WPD0827x	D827		
W5500HD		2005-2010		WPD0827x	D827		
YUKON		1995-1995		WPD0784x	D784		
YUKON		2000-2000		WPD0785x	D785		
YUKON		2001-2002	4WD. w/o Limited Slip	WPD0785x	D785	WPD0792x	D792
YUKON		2001-2006	4WD;AWD; limited slip axle	WPD0785x	D785	WPD0834x	D834
YUKON		2003-2006		WPD0785x	D785	WPD0975x	D975
YUKON		2003-2006	RWD	WPD0785x	D785	WPD0974x	D974
YUKON		2007-2008	Front Cast Bracket #285C/286C	WPD1092x	D1092	WPD1194x	D1194
YUKON		2009-2011		WPD1363x	D1363	WPD1194x	D1194
YUKON XL 1500		2000-2002	w/Limited Slip	WPD0785x	D785	WPD0834x	D834
YUKON XL 1500		2000-2002	w/o Limited Slip	WPD0785x	D785	WPD0792x	D792
YUKON XL 1500		2003-2006	RWD	WPD0785x	D785	WPD0974x	D974
YUKON XL 1500		2003-2006	4WD/AWD	WPD0785x	D785	WPD0834x	D834
YUKON XL 1500		2005-2006		WPD0785x	D785	WPD0975x	D975
YUKON XL 1500		2007-2008		WPD1092x	D1092	WPD1194x	D1194
YUKON XL 1500		2009-2011		WPD1363x	D1363	WPD1194x	D1194
YUKON XL 2500		2001-2009		WPD0784x	D784	WPD0785x	D785
<b>GRUMMAN - OLSEN</b>							
L10	S10 CHASSIS	1990-1997		WPD0154x	D154		
MT35	FREIGHTLINER CHASSIS	1990-up		WPD0184x	D184	WPD0184x	D184
MT55		2000-2001		WPD0786Ax	D786	WPD0786Ax	D786
P42	F450 CHASSIS	2000-2001		WPD0777x	D777	WPD0777x	D777
<b>HINO</b>							
155		2012-2014	14,500 GVW, CANADA		1695		1695
258ALP		2005-2014	23,000, 25,000 GVW	WPD0769x	D769	WPD0769x	D769
258LP		2005-2014	23,000, 25,000 GVW	WPD0769x	D769	WPD0769x	D769
145		2003-2008	4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
145		2005-2010	2 Piston Calipers	WPD1062x	D1062	WPD1062x	D1062
165		2003-2008	4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
165		2005-2010	2 Piston Calipers	WPD1062x	D1062	WPD1062x	D1062
185		2003-2008	4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
185		2005-2010	2 Piston Calipers	WPD1062x	D1062	WPD1062x	D1062
238		2003-2014	4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
268		2003-2014	4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
<b>HUMMER</b>							
H2		2003-2009	6.0	WPD0784x	D784	WPD0785x	D785

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>HYUNDAI</b>							
H100		1993-2000	2.5 Diesel	WPD6001x			
H100		1993-2000		WPD6001x			
<b>IC BUS</b>							
AE		2011-2013		WPD1066x	D1066	WPD1066x	D1066
BE		2002-2009	66 mm caliper	WPD0786Ax	D786A	WPD0786Ax	D786A
BE		2002-2009	73mm caliper	WPD0786x	D786	WPD0786x	D786
BE		2009-2012	4 piston meritor caliper	WPD0769x	D769	WPD0769x	D769
CE		2002-2009	66mm caliper	WPD0786Ax	D786A	WPD0786Ax	D786A
CE		2002-2009	73mm caliper	WPD0786x	D786	WPD0786x	D786
CE		2009-2012	4 piston meritor caliper	WPD0769x	D769	WPD0769x	D769
HC		2002-2009	66 mm caliper	WPD0786Ax	D786A	WPD0786Ax	D786
HC		2002-2009	73mm caliper	WPD0786x	D786	WPD0786x	D786
HC		2009-2012	4 piston meritor caliper	WPD0769x	D769	WPD0769x	D769
LC		2002-2009	66 mm caliper	WPD0786Ax	D786A	WPD0786Ax	D786A
LC		2002-2009	73mm caliper	WPD0786x	D786	WPD0786x	D786
LC		2009-2012	4 piston meritor caliper	WPD0769x	D769	WPD0769x	D769
<b>INTERNATIONAL</b>							
140/1400 SERIES		1984-1998	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
140/1400 SERIES		1984-1998	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
160/1600 SERIES		1973-1997	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
160/1600 SERIES		1983-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
160/1600 SERIES		1998-2004	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
160/1600 SERIES		1998-2004	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
170/1700 SERIES		1973-1998		WPD0184x	D184	WPD0184x	D184
170/1700 SERIES		1983-1998	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
180/1800 SERIES		1973-1999		WPD0184x	D184	WPD0184x	D184
180/1800 SERIES		1983-1999	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
190/1900 SERIES		1973-1989		WPD0184x	D184	WPD0184x	D184
190/1900 SERIES		1983-1989	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
2000 SERIES		1979-1986	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
2000 SERIES	S MODELS	1979-1986	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
3000 SERIES		1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
3000 SERIES		1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
3000 SERIES		1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
3000 SERIES		1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
3000 SERIES		2009-2010	4-Piston Meritor Caliper	WPD0769x	D769	WPD0769x	D769
4000 SERIES		1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
4000 SERIES		1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
4000 SERIES		1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
4000 SERIES		1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
4000 SERIES		2009-2009	w/4 Piston Meritor Calipers	WPD0827x	D827	WPD0769x	D769
4000 SERIES		2010-2014		WPD0769x	D769	WPD0769x	D769
7000 SERIES	7100 CONVENTIONAL	1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
7000 SERIES	7100 CONVENTIONAL	1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
7000 SERIES	7100 CONVENTIONAL	1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
7000 SERIES	7100 CONVENTIONAL	1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
7000 SERIES	7100	2009-2009	w/4 Piston Meritor Calipers	WPD0827x	D827	WPD0769x	D769
CF500		2006-2010		WPD1066x	D1066	WPD1066x	D1066
CF600		2006-2010		WPD1066x	D1066	WPD1066x	D1066
LFE SERIES	MXT, RXT	2006-2009		WPD0786Ax	D786	WPD0786Ax	D786

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>INTERNATIONAL (CONTINUED)</b>							
LFE SERIES	TERRA STAR	2010-2013		WPD1066x	D1066	WPD1066x	D1066
<b>ISUZU</b>							
ASCENDER		2003-2008				WPD0883x	D883
FSR		1996-2002	8,100 lb Front Axle. w/Dayton 2.5 In. 2-Piston Calipers.	WPD0224x	D224	WPD0224x	D224
FSR		1996-2002	11,000/12,000 lb Front Axle. w/Bendix 2.88 In. 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
FTR		1996-2002	8,100 lb Front Axle. w/Dayton 2.5 In. 2-Piston Calipers.	WPD0224x	D224	WPD0224x	D224
FTR		1996-2002	11,000/12,000 lb Front Axle. w/Bendix 2.88 In. 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
FTR		2003-2009	11,000/12,000 lb Front Axle. w/4-Piston Calipers	WPD0769x	D769		
FVR		1996-2002	8,100 lb Front Axle. w/Dayton 2.5 In. 2-Piston Calipers.	WPD0224x	D224	WPD0224x	D224
FVR		1996-2002	11,000/12,000 lb Front Axle. w/Bendix 2.88 In. 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
FVR		2003-2009	11,000/12,000 lb Front Axle. w/4-Piston Calipers	WPD0769x	D769		
FXR		1996-2002	8,100 lb Front Axle. w/Dayton 2.5 In. 2-Piston Calipers.	WPD0224x	D224	WPD0224x	D224
FXR		1996-2002	11,000/12,000 lb Front Axle. w/Bendix 2.88 In. 2-Piston Calipers	WPD0225x	D225	WPD0225x	D225
FXR		2003-2009	11,000/12,000 lb Front Axle. w/4-Piston Calipers	WPD0769x	D769		
HOMBRE		1996-2000	2.2 2WD	WPD0154x	D154		
H-SERIES		2005-2008		WPD0769x	D769	WPD0769x	D769
H-SERIES		2005-2008	HTR&HVR	WPD0769x	D769	WPD0769x	D769
NPR		1987-1997		WPD0546x	D546		
NPR		1997-1999	caliper casting #AD54T	WPD0825x	D825		
NPR		1997-2010	Gas Engine.	WPD0825x	D825		
NPR		1998-2010	Gas Engine.	WPD0827x	D827		
NPR		1999-1999	caliper casting #AD54T	WPD0825x	D825		
NPR		1999-2014	under 14,000 GVW	WPD0825x	D825		
NPR-HD		1987-1997	caliper casting #AD76T/35-16	WPD0546x	D546		
NPR-HD		1999-1999	caliper casting #AD57T/5702, ABS	WPD0827x	D827		
NPR-HD		1999-2014		WPD0827x	D827		
NQR		1999-2007		WPD0825x	D825		
NQR		1999-2014		WPD0827x	D827		
NQR		2008-2010		WPD0827x	D827		
NRR		2004-2010		WPD0827x	D827		
NRR		2004-2014		WPD0827x	D827		
REACH VAN		2012-2014		WPD0825x	D825		
<b>JEEP</b>							
CHEROKEE (XJ)		1995-2001		WPD0477x	D477		
GRAND CHEROKEE		2011-2014				WPD1498x	D1498
GRAND CHEROKEE (ZJ)		1995-1998		WPD0477x	D477		
J8		2008-2011				WPD0898x	D898
LIBERTY (KJ)		2002-2007		WPD0856x	D844		
LIBERTY (KJ)		2008-2009	w/Heavy Duty Brakes.	WPD1327x	D1327		
WRANGLER (87-95VJ)		1995-2007		WPD0477x	D477		
<b>KENWORTH</b>							
T170		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
T170		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
T270		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
T270		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
T300		2008-2012	66 mm caliper	WPD0786Ax	D786A	WPD0786Ax	D786A
T300		2008-2012	73mm caliper	WPD0786x	D786	WPD0786x	D786
T370		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
T370		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A

# ON-HIGHWAY APPLICATIONS

# ON-HIGHWAY APPLICATIONS

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>LEXUS</b>							
GS300		2006-2006		WPD0908x	D908		
IS250		2009-2013		WPD0908x	D908		
<b>LINCOLN</b>							
BLACKWOOD		2002-2002	5.4	WPD0679x	D679	WPD0711x	D711
MARK LT		2006-2008		WPD0908x	D908		
MKS		2009-2012		WPD1508x	D1508		
MKS		2011-2013	STANDARD BRAKES	WPD1508x	D1376		
MKT		2010-2014		WPD1508x	D1508		
MKT		2012-2014	STANDARD BRAKES	WPD1508x	D1376		
NAVIGATOR		1998-2002	5.4	WPD0702x	D702	WPD0711x	D711
NAVIGATOR		1998-2002		WPD0758x	D702		
NAVIGATOR		1998-2002		WPD0966x	D702		
NAVIGATOR		2003-2006				WPD0935x	D935
NAVIGATOR		2007-2010		WPD1278x	D1278	WPD1279x	D1279
TOWN CAR		1998-2002		WPD0748x	D748		
TOWN CAR	CARTIER	2003-2011	exc limo	WPD0931x	D997	WPD0932x	D932
TOWN CAR	DESIGNER SERIES	2003-2011	limo, rear disc	WPD0931x	D997	WPD0711x	D711
TOWN CAR	LIMOUSINE	2008-2011		WPD0931x	D931		
<b>LUXOR</b>							
MOTOR HOME		1992-1998	w/Bendix One or Two Piston Calipers.	WPD0184x	D184	WPD0184x	D184
<b>MACK</b>							
CS200	TRUCK	1986-2001		WPD0225x	D225		
CS250	TRUCK	1986-2001		WPD0225x	D225		
CS300	TRUCK	1986-2001		WPD0225x	D225		
FREEDOM		2002	17" wheels		D1518		D1518
FREEDOM		2002	19" Wheels		D1517		D1517
MS200	TILT CAB	1986-2001		WPD0225x	D225		
MS250	TILT CAB	1986-2001		WPD0225x	D225		
MS300	TILT CAB	1986-2001		WPD0225x	D225		
<b>MAZDA</b>							
3		2003-2013		WPD1044x	D1044		
5		2006-2014		WPD1044x	D1044		
B2300		1995-1997	2.3	WPD0652x	D652		
B2300		2003-2008	2.3	WPD0833x	D833		
B2500		1998-2001	2.5	WPD0652x	D652		
B3000		1995-1996	3.0	WPD0652x	D652		
B3000		1998-2002	3.0	WPD0652x	D652		
B3000		2003-2007		WPD0833x	D833		
B4000		1995-2002	4.0	WPD0652x	D652		
B4000		2003-2008		WPD0833x	D833		
MARINER		2005-2009				WPD1055x	D1055
TRIBUTE		2005-2006	6 CYLINDER			WPD1055x	D1055
TRIBUTE		2008-2008	HYBRID			WPD1055x	D1055
TRIBUTE		2008-2011		WPD1047x			
<b>MERCEDES</b>							
SPRINTER 2500	COMMERCIAL	2010-2014	with electronic wear sensor	WPD1316x	D1316	WPD1317x	D1317
SPRINTER 2500	COMMERCIAL	2010-2014	w/o electronic wear sensor	WPD1316x	D1316	WPD1317x	D1317
SPRINTER 3500	COMMERCIAL	2010-2014	with electronic wear sensor-SRW	WPD1268x	D12687	WPD1317x	D1317
SPRINTER 3500	COMMERCIAL	2010-2014	w/o electronic wear sensor-SRW	WPD1268x	D1268	WPD1317x	D1317

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>MERCEDES (CONTINUED)</b>							
SPRINTER 3500	COMMERCIAL	2010-2014	with electronic wear sensor - DRW	WPD1268x	D1268	WPD1318x	D1318
SPRINTER 3500	COMMERCIAL	2010-2014	w/o electronic wear sensor - DRW	WPD1268x	D1268	WPD1318x	D1318
<b>MERCURY</b>							
GRAND MARQUIS		1998-2002	4.6	WPD0748x	D748		
GRAND MARQUIS		2006-2011		WPD0931x	D931		
MARAUDER		2003-2004	4.6	WPD0931x	D997	WPD0932x	D932
MOUNTAINEER		1997-2001		WPD0652x	D652	WPD0667x	D667
MOUNTAINEER		2002-2005		WPD0833x	D833		
MOUNTAINEER		2005-2005	4.0	WPD0833x	D833	WPD1109x	D1109
MOUNTAINEER		2006-2010		WPD1158x	D1158	WPD1109x	D1109
MARINER		2008-2011		WPD1047x			
<b>MINI</b>							
RAIDER		2006-2010		WPD1084x	D1084		
<b>NAVISTAR</b>							
140/1400 SERIES		1984-1989	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
140/1400 SERIES	M1400	1984-1989	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
140/1400 SERIES		1984-1989	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
160/1600 SERIES		1973-1997	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
160/1600 SERIES		1983-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
160/1600 SERIES		1998-2004	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
160/1600 SERIES		1998-2004	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
170/1700 SERIES		1973-1998		WPD0184x	D184	WPD0184x	D184
170/1700 SERIES	1723 BUS	1983-1985	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
170/1700 SERIES		1983-1998	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
180/1800 SERIES		1973-1982		WPD0184x	D184	WPD0184x	D184
180/1800 SERIES		1973-1999	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
180/1800 SERIES		1983-1999	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
190/1900 SERIES		1983-1989	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
2000 SERIES	S MODELS	1979-1986	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
2000 SERIES	S MODELS	1979-1986	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
3000 SERIES		1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
3000 SERIES		1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
3000 SERIES		1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
3000 SERIES		1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
3000 SERIES		2009-2010	4-Piston Meritor Caliper	WPD0769x	D769	WPD0769x	D769
4000 SERIES		1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
4000 SERIES		1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
4000 SERIES		1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
4000 SERIES		1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
4000 SERIES	4100	2009-2009	w/4 Piston Meritor Calipers	WPD0827x	D827	WPD0769x	D769
4000 SERIES		2009-2009	w/4 Piston Meritor Calipers	WPD0827x	D827	WPD0769x	D769
7000 SERIES	7100 CONVENTIONAL	1990-1997	w/Bendix 2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
7000 SERIES	7100 CONVENTIONAL	1990-1997	w/Bendix 2.88 In. 2-Piston Calipers.	WPD0225x	D225	WPD0225x	D225
7000 SERIES	7100 CONVENTIONAL	1998-2008	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
7000 SERIES	7100 CONVENTIONAL	1998-2008	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
7000 SERIES	7100	2009-2009	w/4 Piston Meritor Calipers	WPD0827x	D827	WPD0769x	D769
CF500		2006-2010		WPD1066x	D1066	WPD1066x	D1066
CF600		2006-2010		WPD1066x	D1066	WPD1066x	D1066
LFE SERIES		2008-2009		WPD0786Ax	D786	WPD0786Ax	D786

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>NISSAN</b>							
NV1500		2012-2013			D1565		D1565
NV1500		2012-2013		WPD1565x	D1565		
NV1500		2012-2013				WPD1565xA	D1565A
NV2500		2012-2013			D1565		D1565
NV2500		2012-2013		WPD1565x	D1565		
NV3500		2012-2013			D1565		D1565
NV3500		2012-2013				WPD1565xA	D1565A
PATHFINDER		1995-1995		WPD0333x	D333		
PICKUP D21 (HARD BODY)		1995-1995		WPD0333x	D333		
PICKUP D21 (HARD BODY)		1996-1997	exc 4 cyl	WPD0333x	D333		
NV2500		2012-2013				WPD1565xA	D1565A
<b>OLDSMOBILE</b>							
ACHIEVA		1995-1997		WPD0506x	D506		
ALERO		1999-2001	2.4			WPD0508x	D814
ALERO		2002-2004	2.2 rear disc			WPD0508x	D814
AURORA		1997-1999				WPD0508x	D814
AURORA		2001-2002				WPD0508x	D814
BAVADA		2002-2004				WPD0883x	D883
BRAVADA		1996-1996	4.3	WPD0154x	D154		
CUTLASS SUPREME		1995-1997		WPD0376x	D376	WPD0508x	D814
INTRIGUE		1998-2002				WPD0508x	D814
<b>PETERBILT</b>							
325		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
325		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
330		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
330		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
335		2008-2012	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
335		2008-2012	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
<b>PEUGEOT</b>							
MANAGER		2008-2010	LATIN AMERICA	WPD1540x	D1540		
<b>PLYMOUTH</b>							
GRAND VOYAGER		1996-2000		WPD0642x	D642		
GRAND VOYAGER		1997-2000		WPD0591x	D591		
NEON	HIGHLINE	1995-1997		WPD0642x	D642	WPD0782x	D641
NEON		1995-1999	rear disc	WPD0642x	D642	WPD0782x	D641
PROWLER		1997-1997	3.5			WPD0730x	D730
PROWLER		1997-2001		WPD0591x	D591		
PROWLER		1999-2001	3.5			WPD0730x	D730
VOYAGER		1996-2000		WPD0642x	D642		
VOYAGER		1997-2000		WPD0591x	D591		
<b>PONTIAC</b>							
AZTEK		2001-2005	AWD; rear disc	WPD0856x	D844	WPD0508x	D814
BONNEVILLE		2000-2005	except GXP			WPD0508x	D814
G5		2007-2010	w/ Rear Disc Brakes	WPD1160x	D1028	WPD1033x	D1033
G6		2005-2010		WPD1160x	D1028	WPD1033x	D1033
GRAND AM		1995-1997		WPD0506x	D506		
GRAND AM		1999-2005	rear disc			WPD0508x	D814
GRAND PRIX		1995-1996		WPD0376x	D376	WPD0508x	D814
GRAND PRIX		1997-2003				WPD0508x	D814

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>PONTIAC (CONTINUED)</b>							
MONTANA		2002-2005	FWD			WPD0508x	D814
MONTANA		2002-2005	AWD	WPD0856x	D844	WPD0508x	D814
SOLSTICE		2006-2010	2.4	WPD1160x	D1028		
SOLSTICE	GXP	2007-2007	2.0	WPD1160x	D1028		
SUNFIRE		1998-2005		WPD0506x	D506		
TORRENT		2006-2006	3.4			WPD0833x	D833
WAVE		2006-2006				WPD1035x	D1035
<b>RAM</b>							
PROMASTER 1500		2014-2015					WPD1490x D1490
PROMASTER 1500		2014-2015		WPD1540x	D1540		
PROMASTER 2500		2014-2015		WPD1540x	D1540		
PROMASTER 3500		2014-2015		WPD1540x	D1540		
<b>SAAB</b>							
9-7X		2005-2009				WPD0883x	D883
<b>SATURN</b>							
ION	RED LINE	2004-2007	2.0			WPD1160x D1028	WPD1033x D1033
OUTLOOK		2007-2010					WPD0883x D883
SKY		2007-2010				WPD1160x D1028	
VUE		2002-2007				WPD0833x D833	
<b>SPARTAN</b>							
340	MOTOR HOME	2000				WPD0224x D224	WPD0224x D224
<b>STERLING</b>							
360 SERIES		2006-2009					D1265 D1265
ACTERRA		1998-2008	Bendix w/3.36 In. Piston	WPD0184x	D184	WPD0184x	D184
ACTERRA		1998-2008	Bendix w/2.88 In. Piston	WPD0225x	D225	WPD0225x	D225
ACTERRA		1998-2008	Bosch w.2.6 In. Piston (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
ACTERRA		1998-2008	Bosch w/2.87 In. Piston (73mm)	WPD0786x	D786	WPD0786x	D786
BULLET		2008-2009		WPD1335x	D1335	WPD1335x	D1335
M6500		2002-2006		WPD0225x	D225	WPD0225x	D225
<b>SUZUKI</b>							
FORENZA		2004-2006		WPD1035x	D1035	WPD1036x	D1036
FORENZA		2007-2007		WPD1035x	D1035		
RENO		2005-2006		WPD1035x	D1035	WPD1036x	D1036
RENO		2007-2007		WPD1035x	D1035		
<b>THOMAS</b>							
BUS		1995-1998		WPD0769x	D769	WPD0769x	D769
BUS		1999-2005		WPD0786Ax	D786	WPD0786Ax	D786
BUS		2002-2005	w/4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
BUS	FREIGHTLINER CHASSIS	to 1998	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184
BUS	FORD CHASSIS	to 1998	w/Dayton 2.60 In. Calipers.	WPD0224x	D224	WPD0224x	D224
BUS	NAVISTAR CHASSIS	to 1998	w/Bendix 2.88 In. Piston Caliper.	WPD0225x	D225	WPD0225x	D225
BUS	FORD CHASSIS	to 1998	w/Dayton 2.88 In. Calipers.	WPD0236x	D236	WPD0236x	D236
MINOTOUR	GM CHASSIS	1979-1997		WPD0149x	D149		
MINOTOUR	FORD CHASSIS	1988-1998	w/Rear Disc Brakes	WPD0411x	D411	WPD0411x	D411
MINOTOUR	FORD CHASSIS	1995-2000	w/Rear Drum Brakes	WPD0655x	D655		
MINOTOUR	FORD CHASSIS	2000-2001	w/Rear Disc Brakes	WPD0655x	D655	WPD0655x	D655
MINOTOUR		2002-2005	w/4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
MINOTOUR		2002-2005		WPD0786Ax	D786	WPD0786Ax	D786
MINOTOUR	FORD CHASSIS	up to 1991	w/Rear Drum Brakes	WPD0450x	D450		
TRANSIT LINER EF		1982-1997	w/Bendix 3.38/2.60 In. Piston Caliper.	WPD0184x	D184	WPD0184x	D184

Wet Friction  
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Hydraulic Control

# ON-HIGHWAY APPLICATIONS

# ON-HIGHWAY APPLICATIONS

**WPD0702x**  
INSERT COMPOUND CODE

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T



MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>THOMAS (CONTINUED)</b>							
TRANSIT LINER EF		1982-1997	w/Bendix 2.88 In. Piston Caliper.	WPD0225x	D225	WPD0225x	D225
VISTA		1979-1997		WPD0225x	D225	WPD0225x	D225
WESTPORT	GM CHASSIS	1979-1997		WPD0149x	D149		
WESTPORT	FORD CHASSIS	1988-1998	w/Rear Disc Brakes	WPD0411x	D411	WPD0411x	D411
WESTPORT	FORD CHASSIS	1995-2000	w/Rear Drum Brakes	WPD0655x	D655		
WESTPORT	FORD CHASSIS	2000-2001	w/Rear Disc Brakes	WPD0655x	D655	WPD0655x	D655
WESTPORT		2002-2005	w/4 Piston Calipers	WPD0769x	D769	WPD0769x	D769
WESTPORT		2002-2005		WPD0786Ax	D786	WPD0786Ax	D786
WESTPORT	FORD CHASSIS	up to 1991	w/Rear Drum Brakes	WPD0450x	D450		
<b>THOMAS BUILT</b>							
C2		2004-2012	meritor- 4 piston calipers	WPD0769x	D769	WPD0769x	D769
C2		2004-2012	bosch- 2 piston calipers	WPD0786x	D786	WPD0786x	D786
<b>TOYOTA</b>							
CAMRY		2002-2006		WPD0908x	D908		
CAMRY	HYBRID	2007-2007		WPD1293x	D1222	WPD1212x	D1212
CAMRY		2007-2011		WPD1293x	D1293	WPD1212x	D1212
HIACE	LATIN AMERICA	1985-1999		WPD0438x	D303		
HIACE	LATIN AMERICA	2000-2009		WPD7026x			
HILUX	LATIN AMERICA	1995-2008		WPD0436x	D436		
PICKUP		1995-1995	4WD	WPD0436x	D436		
TACOMA		1995-2004	4WD, 6 lug	WPD0436x	D436		
YARIS		2007-2010		WPD1184x	D1184		
<b>VOLKSWAGEN</b>							
BEETLE		1998-2010		WPD0768x	D768		
GOLF		1999-2010		WPD0768x	D768		
JETTA		1998-2004		WPD0768x	D768		
JETTA		2011-2012		WPD0768x	D768		
ROUTAN		2009-2009		WPD1327x	D1327	WPD1326x	D1326
<b>VOLVO</b>							
C30		2008-2012		WPD1044x	D1044		
C70		2006-2012	300 MM FRONT DISC	WPD1044x	D1044		
S40		2004-2012	300MM FRONT DISC	WPD1044x	D1044		
V50		2005-2012	300MM FRONT DISC	WPD1044x	D1044		
<b>WINNEBAGO</b>							
CHIEFTAN ADVENTURE	GM CHASSIS	1998-1998	w/Delco Calipers	WPD0149x	D149	WPD0149x	D149
CHIEFTAN ADVENTURE		1998-1998		WPD0184x	D184	WPD0184x	D184
CHIEFTAN ADVENTURE	FORD CHASSIS	1998-1998	w/Dayton 2.50 In. Calipers.	WPD0224x	D224	WPD0224x	D224
CHIEFTAN ADVENTURE	FORD CHASSIS	1998-1998	w/Dayton 2.88 In. Calipers.	WPD0236x	D236	WPD0236x	D236
CHIEFTAN ADVENTURE	FREIGHTLINER CHASSIS	1999-2001	w/Bosch 2.6 In. Pistons (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
COMMERCIAL CHASSIS		1995-1998		WPD0184x	D184	WPD0184x	D184
COMMERCIAL CHASSIS	FORD CHASSIS	1995-1998	w/Dayton 2.50 In. Calipers.	WPD0224x	D224	WPD0224x	D224
COMMERCIAL CHASSIS	FORD CHASSIS	1995-1998	w/Dayton 2.88 In. Calipers.	WPD0236x	D236	WPD0236x	D236
COMMERCIAL CHASSIS	SF 324RS	1995-2001		WPD0655x	D655	WPD0655x	D655
COMMERCIAL CHASSIS	GM CHASSIS	1998-1998	w/Delco Calipers	WPD0149x	D149	WPD0149x	D149
COMMERCIAL CHASSIS	FREIGHTLINER CHASSIS	1999-2001	w/Bosch 2.6 In. Pistons (66mm)	WPD0786Ax	D786	WPD0786Ax	D786
MINNIE		1995-2001	Ford Chassis, E350 DRW	WPD0655x	D655	WPD0702x	D702
MINNIE WINNIE		1995-2001	Ford Chassis, E350 DRW	WPD0655x	D655	WPD0702x	D702
<b>WORKHORSE</b>							
LF72 BUS	19K GVWR	2005-2009	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
LF72 BUS	19K GVWR	2005-2009	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A

MAKE/MODEL	SUBMODEL	ENGINE YEARS (LITER)	NOTES	FRONT		REAR	
				VT #	FMSI	VT #	FMSI
<b>WORKHORSE (CONTINUED)</b>							
P32		1985-1994	13 x 3 1/2 In. Rear Shoes	WPD0149x	D149		
P32		1985-1994	13 x 2 1/2 In. Rear Shoes	WPD0153x	D153		
P32		1995-2004	Single Piston Caliper	WPD0149x	D149	WPD0149x	D149
P32		1995-2004	Dual Piston Caliper, Casting #4152828	WPD0184x	D184	WPD0184x	D184
P32		2005-2007	w/68mm Pistons	WPD1027x	D1027	WPD1027x	D1027
P32		2005-2007	w/52mm Pistons	WPD1268x	D1268	WPD1268x	D1268
P32		2005-2007	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
P42		1985-1994	13 x 3 1/2 In. Rear Shoes	WPD0149x	D149		
P42		1985-1994	13 x 2 1/2 In. Rear Shoes	WPD0153x	D153		
P42		1995-2004	Single Piston Caliper	WPD0149x	D149	WPD0149x	D149
P42		1995-2004	Dual Piston Caliper, Casting #4152828	WPD0184x	D184	WPD0184x	D184
P42		2005-2007	w/68mm Pistons	WPD1027x	D1027	WPD1027x	D1027
P42		2005-2007	w/52mm Pistons	WPD1268x	D1268	WPD1268x	D1268
P42		2005-2007	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
P500		2004-2005	FedEx Delivery Truck	WPD0184x	D184	WPD0184x	D184
P500		2005-2009	FedEx Delivery Truck	WPD1027x	D1027	WPD1027x	D1027
R26 UFO		2006-2012	26K GVW	WPD0769x	D769	WPD0769x	D769
UFO	23.5K GVWR	2001-2009		WPD0769x	D769	WPD0769x	D769
W16		2001-2009		WPD1027x	D1027	WPD1027x	D1027
W18		2001-2009		WPD1027x	D1027	WPD1027x	D1027
W20		2001-2009	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
W20		2001-2009	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
W21		2001-2009	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
W21		2001-2009	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
W22		2001-2009	w/73 mm Caliper - Casting #4153222	WPD0786x	D786	WPD0786x	D786
W22		2001-2009	w/66 mm Caliper - Casting #4153269	WPD0786Ax	D786A	WPD0786Ax	D786A
W24		2001-2009		WPD0769x	D769	WPD0769x	D769
W25.5		2001-2009		WPD0769x	D769	WPD0769x	D769
W42		2004-2007	w/68mm Pistons	WPD1027x	D1027	WPD1027x	D1027
W42		2005-2007	10,000lbs GVW. w/Electronic Wear Sensor.	WPD1268xA	D1268		
W42		2005-2007	10,000lbs GVW. w/o Electronic Wear Sensor	WPD1268x	D1268		
W52		2001-2006	19.5K GVW	WPD0786Ax	D786A	WPD0786Ax	D786A
W62		2001-2009		WPD0769x	D769	WPD0769x	D769

Wet Friction

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Hydraulic Control

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On-HWY Brake Pads

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Service Brakes

Combo Brakes

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# FMSI CROSS REFERENCE

# FMSI CROSS REFERENCE

FMSI NUMBER	VELVETOUCH NUMBER
D0120	WPD0120x
D0122	WPD0052x
D0138	WPD0154x
D0149	WPD0149x
D0153	WPD0153x
D0154	WPD0154x
D0184	WPD0184x
D0199	WPD0199x
D0202	WPD0154x
D0205	WPD0387x
D0224	WPD0224x
D0225	WPD0225x
D0236	WPD0236x
D0249	WPD0387x
D0269	WPD0269x
D0313	WPD0052x
D0333	WPD0333x
D0352	WPD0352x
D0369	WPD0369x
D0370	WPD0370x
D0376	WPD0376x
D0380	WPD0184x
D0387	WPD0387x
D0392	WPD0153x
D0411	WPD0411x
D0415	WPD0782x
D0436	WPD0436x
D0438	WPD0438x
D0450	WPD0450x
D0459	WPD0459x
D0477	WPD0477x
D0499	WPD0499x
D0505	WPD0505x
D0506	WPD0506x
D0508	WPD0508x
D0512	WPD0782x
D0543	WPD0149x
D0546	WPD0546x
D0559	WPD0782x
D0591	WPD0591x
D0607	WPD0387x
D0614	WPD0153x
D0614	WPD0614x
D0614A	WPD0614Ax
D0626	WPD0632x
D0632	WPD0632x
D0641	WPD0782x
D0642	WPD0642x
D0642	WPD0642x
D0652	WPD0652x
D0654	WPD0387x
D0655	WPD0655x
D0655	WPD0655x
D0658	WPD0782x
D0667	WPD0667x
D0673	WPD0506x
D0679	WPD0679x
D0698	WPD0508x

FMSI NUMBER	VELVETOUCH NUMBER
D0702	WPD0702x
D0702	WPD0897x
D0702	WPD0966x
D0711	WPD0711x
D0712	WPD0477x
D0714	WPD0508x
D0717	WPD0184x
D0726	WPD0726x
D0729	WPD0729x
D0748	WPD0748x
D0754	WPD0508x
D0756	WPD0756x
D0756	WPD0824x
D0756A	WPD0756xA
D0757	WPD0757x
D0758	WPD0758x
D0759	WPD0782x
D0768	WPD0768x
D0769	WPD0769x
D0777	WPD0777x
D0782	WPD0782x
D0784	WPD0784x
D0785	WPD0785x
D0786	WPD0786Ax
D0786	WPD0786x
D0789	WPD0369x
D0792	WPD0792x
D0802	WPD0802x
D0814	WPD0508x
D0820	WPD0820x
D0821	WPD0821x
D0824	WPD0756x
D0825	WPD0825x
D0827	WPD0827x
D0833	WPD0833x
D0834	WPD0834x
D0844	WPD0856x
D0845	WPD0370x
D0856	WPD0856x
D0857	WPD0857x
D0858	WPD0858x
D0859	WPD0821x
D0879	WPD0711x
D0883	WPD0883x
D0898	WPD0898x
D0908	WPD0908x
D0909	WPD0909x
D0913	WPD0833x
D0928	WPD0928x
D0928A	WPD0928xA
D0931	WPD0931x
D0932	WPD0932x
D0935	WPD0935x
D0949	WPD0949x
D0949A	WPD0949xA
D0965	WPD0965x
D0967	WPD0967x
D0970	WPD0970x

FMSI NUMBER	VELVETOUCH NUMBER
D0974	WPD0974x
D0975	WPD0975x
D0989	WPD0989x
D0997	WPD0931x
D1006	WPD1006x
D1006A	WPD1006xA
D1010	WPD1010x
D1011	WPD1011x
D1012	WPD1012x
D1027	WPD1027x
D1028	WPD1160x
D1033	WPD1033x
D1035	WPD1035x
D1036	WPD1036x
D1039	WPD1039x
D1044	WPD1044x
D1047	WPD1047x
D1055	WPD1055x
D1057	WPD1057Ax
D1057	WPD1057x
D1058	WPD1058x
D1062	WPD1062x
D1066	WPD1066x
D1067	WPD1067x
D1068	WPD1068x
D1068	WPD1068x
D1069	WPD1069x
D1076	WPD1076x
D1077	WPD0702x
D1083	WPD1083x
D1084	WPD1084x
D1092	WPD1092x
D1096	WPD0702x
D1109	WPD1109x
D1136	WPD1136x
D1158	WPD1158x
D1159	WPD1159x
D1160	WPD1160x
D1169	WPD1169x
D1184	WPD1184x
D1194	WPD1194x
D1212	WPD1212x
D1222	WPD1293x
D1230	WPD1044x
D1265	WPD1265x
D1268	WPD1268x
D1268A	WPD1268xA
D1278	WPD1278x
D1279	WPD1279x
D1293	WPD1293x
D1316	WPD1316x
D1316A	WPD1316xA
D1317	WPD1317x
D1317A	WPD1317xA
D1318	WPD1318x
D1318A	WPD1318xA
D1326	WPD1326x
D1327	WPD1327x

FMSI NUMBER	VELVETOUCH NUMBER
D1328	WPD1328x
D1329	WPD1329x
D1330	WPD1330x
D1333	WPD1333x
D1334	WPD1334x
D1335	WPD1335x
D1363	WPD1092x
D1363	WPD1363x
D1367	WPD1092x
D1376	WPD1508x
D1377	WPD1377x
D1380	WPD1092x
D1392	WPD1392x
D1399	WPD1399x
D1400	WPD1400x
D1411	WPD1411x
D1414	WPD1414x
D1455	WPD1455x
D1490	WPD1490x
D1498	WPD1498x
D1507	WPD0883x
D1508	WPD1508x
D1540	WPD1540x
D1563	WPD1044x
D1565	WPD1565x
D1565A	WPD1565xA
D1629	WPD1455x
D1680	WPD1680x
D1691	WPD1691x
D7027	WPD7027x
	WPD6000x
	WPD6000xA
	WPD6001x
	WPD7024x
	WPD7026x

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

Pad thickness in inches (and millimeters) to include core and friction material

Carry-over column for industry reference numbers and pad thickness

VelveTouch Part Number

VelveTouch Compound Codes

Industry Reference Numbers (FMSI)

Length in inches (and millimeters)

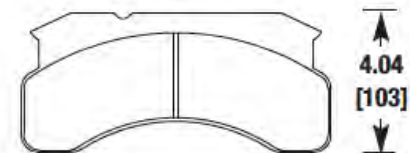
Original equipment and/or aftermarket caliper manufacturer

Width in inches (and millimeters)

## PART NUMBER

T FMSI D236 1.000 [25]

8.99 [228]



FORD MEDIUM DUTY

## COMPOUND CODES

CARBON SEMI-METALLIC F1.....K  
CARBON SEMI-METALLIC F3.....T

## CODE BREAKDOWN

**WPD0702x**

INSERT COMPOUND CODE

**WPD 0702 K**

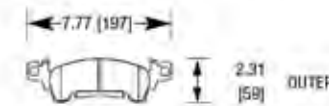
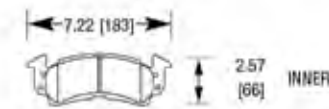
VELVETOUCH  
BRAKE PAD

VELVETOUCH  
PAD SHAPE

COMPOUND  
LETTER CODE

## WPD0052

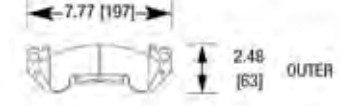
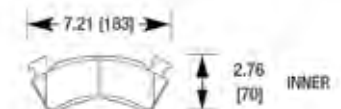
K, T FMSI D52 .590 [15]  
FMSI D122  
FMSI D313



GM INTERMEDIATE

## WPD0153

K FMSI D153 .595 [15]  
FMSI D392  
FMSI D614

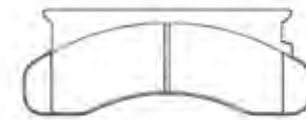


CHEVROLET IMPALA. CAPRICE. POLICE & HD

## WPD0120

K FMSI D120 .655 [17]

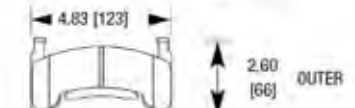
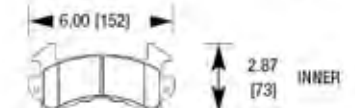
7.50 [191]



FORD TRUCK

## WPD0154

K, T FMSI D138 .594 [15]  
FMSI D154  
FMSI D202



GM METRIC

## WPD0149

K, T FMSI D601 .689 [18]  
FMSI D656

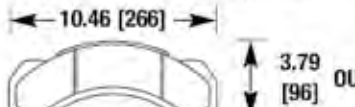
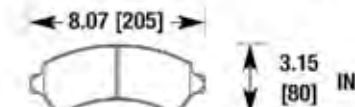
4.87 [124]



FORD. LINCOLN. MERCURY

## WPD0184

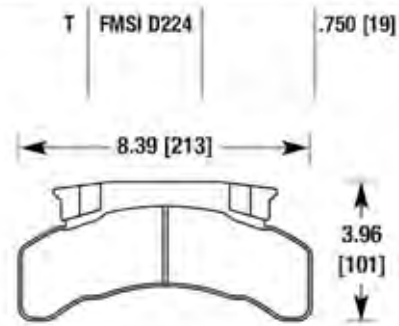
T FMSI D184 .860 [22]  
FMSI D380  
FMSI D717



CHEVY/GMC TRUCK,  
FREIGHTLINER. INTERNATIONAL

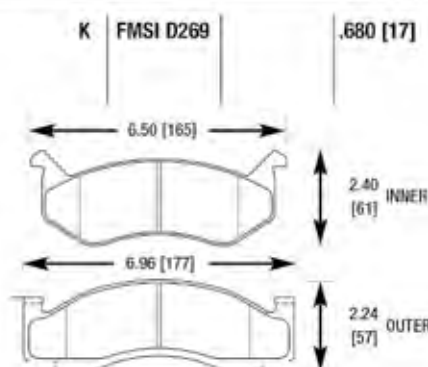
Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

## WPD0224



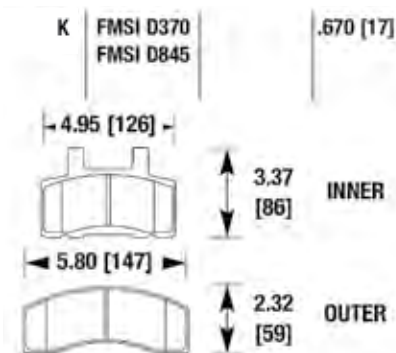
CHEVY/GMC TRUCK, FORD TRUCK

## WPD0269



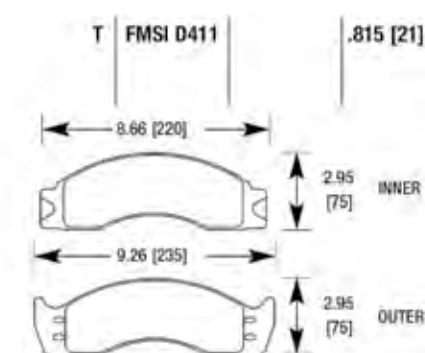
DODGE TRUCK

## WPD0370



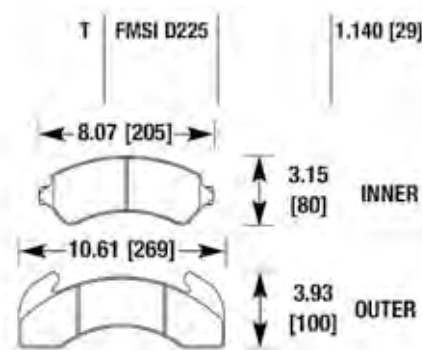
CHEVY/GMC TRUCK, DODGE TRUCK

## WPD0411



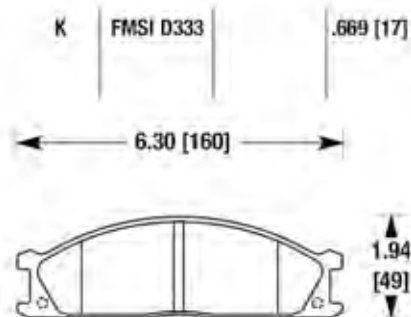
FORD TRUCK

## WPD0225



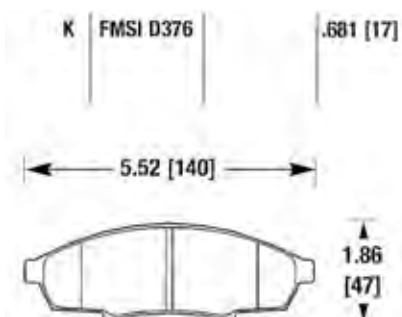
CHEVY/GMC TRUCK, FREIGHTLINER, INTERNATIONAL

## WPD0333



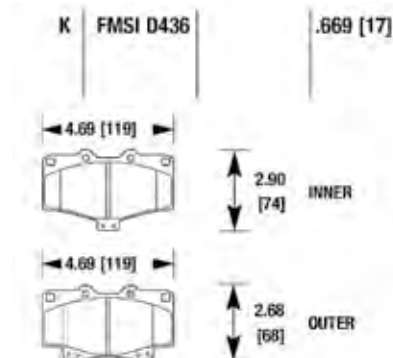
NISSAN TRUCK, SUBARU

## WPD0376



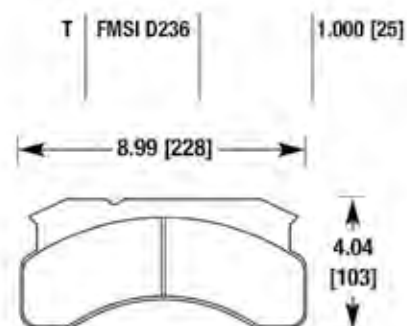
BUICK, CHEVY, OLDS, PONTIAC

## WPD0436



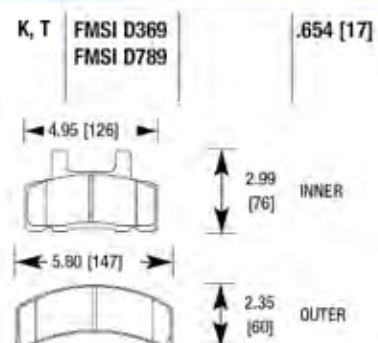
TOYOTA

## WPD0236



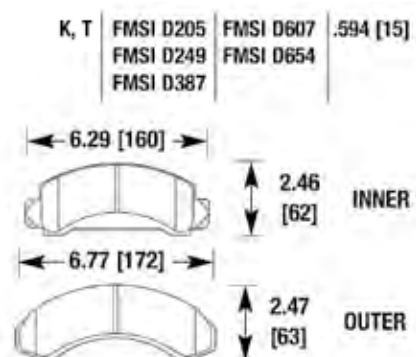
FORD MEDIUM DUTY

## WPD0369



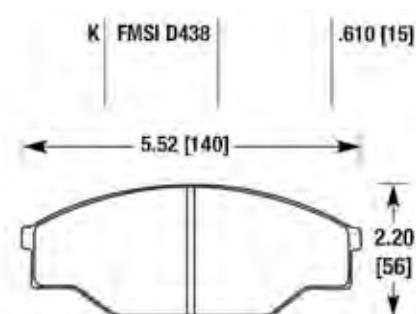
CADILLAC, CHEVY/GMC TRUCK, DODGE TRUCK

## WPD0387



FORD RANGER

## WPD0438



TOYOTA PICKUP

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

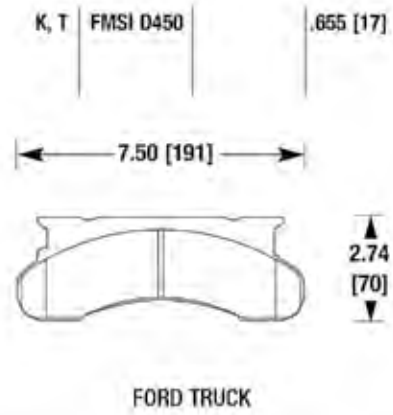
Service Brakes

Combo Brakes

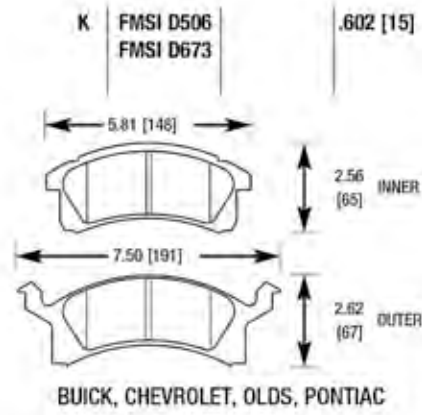
Hydraulic Control



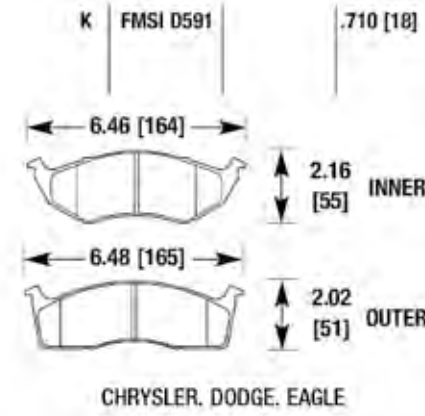
WPD0450



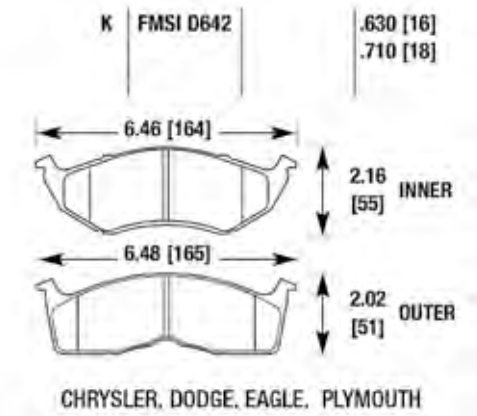
WPD0506



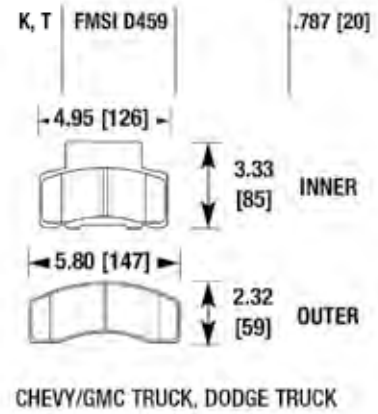
WPD0591



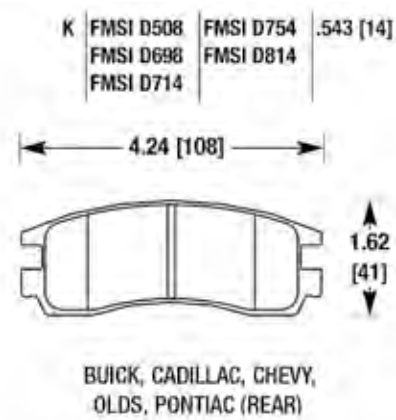
WPD0642



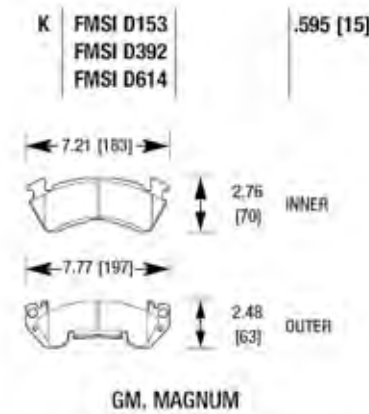
WPD0459



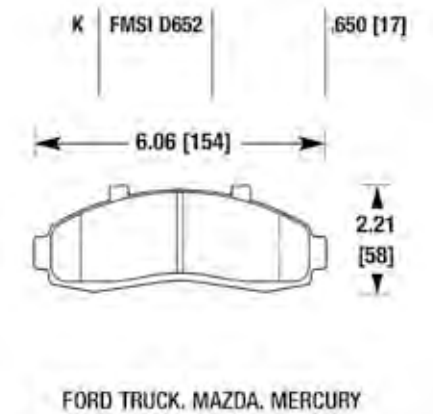
WPD0508



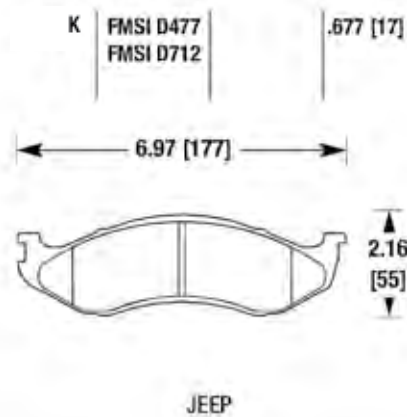
WPD0614



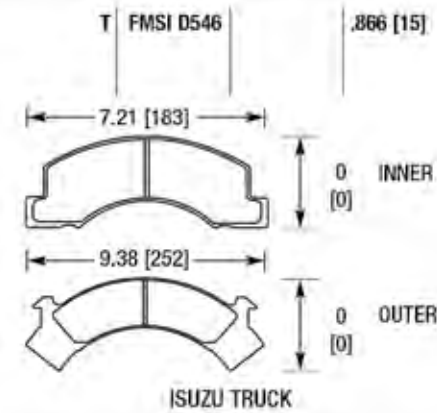
WPD0652



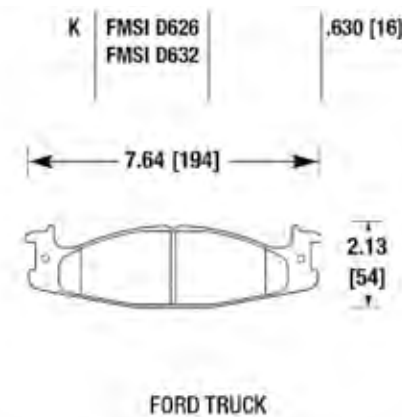
WPD0477



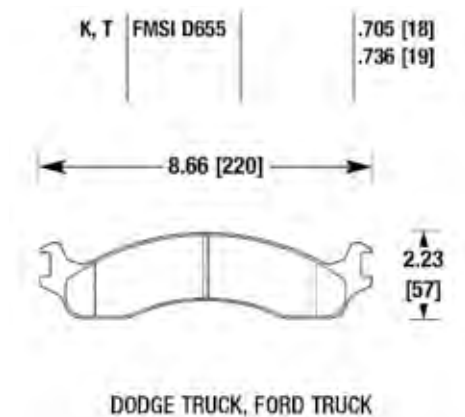
WPD0546



WPD0632



WPD0655



Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

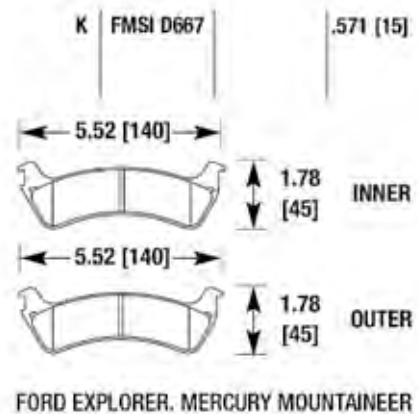
Park Brakes

Service Brakes

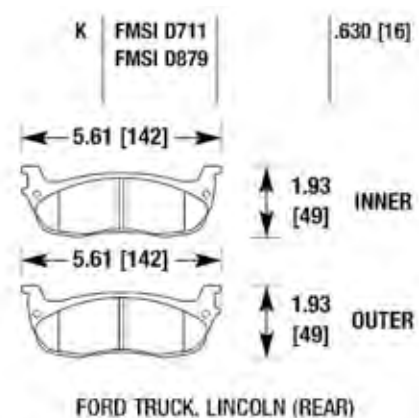
Combo Brakes

Hydraulic Control

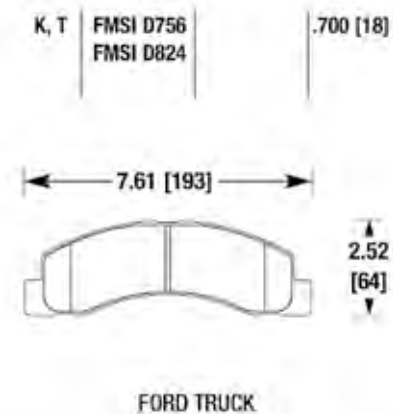
## WPD0667



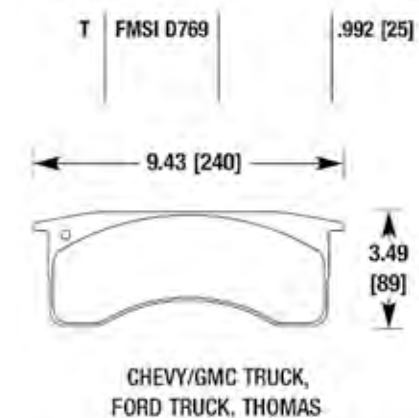
## WPD0711



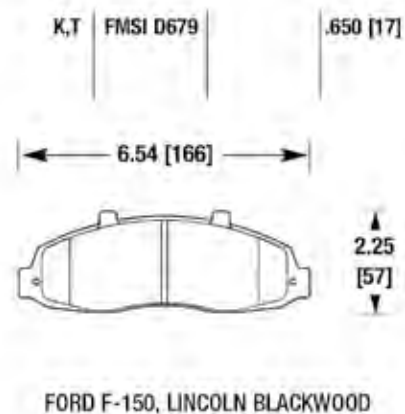
## WPD0756



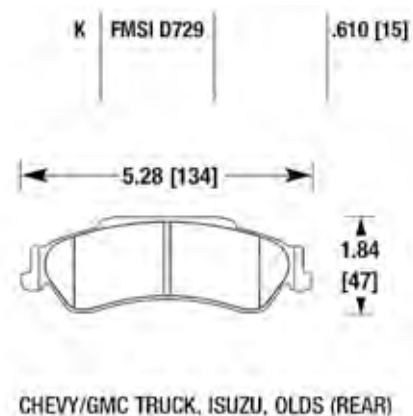
## WPD0769



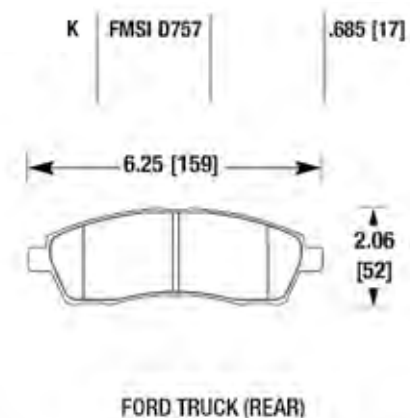
## WPD0679



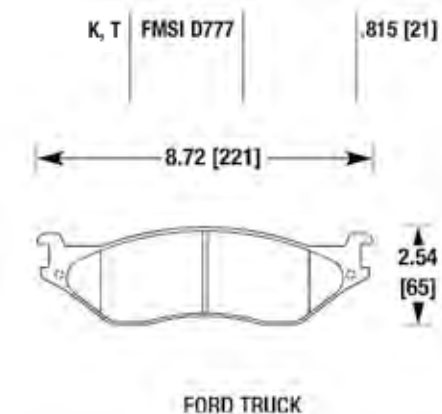
## WPD0729



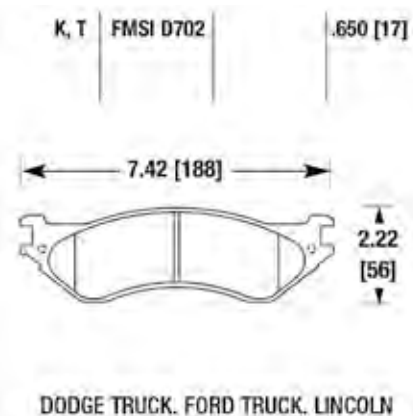
## WPD0757



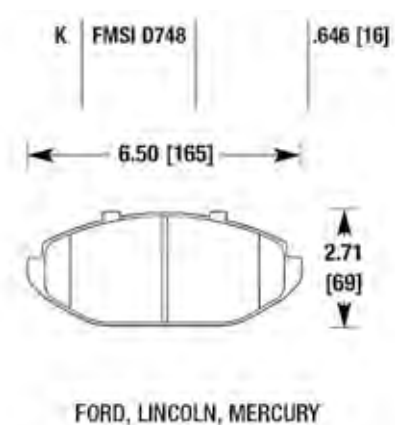
## WPD0777



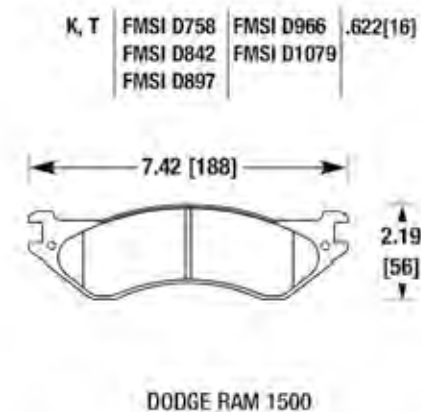
## WPD0702



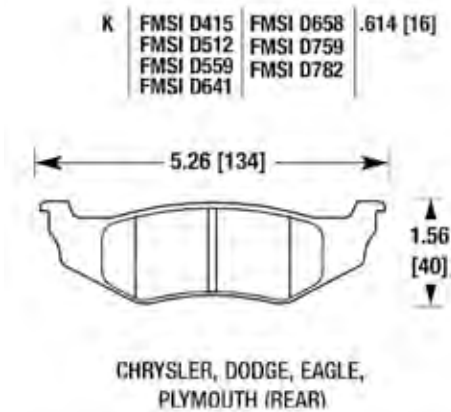
## WPD0748



## WPD0758



## WPD0782



Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

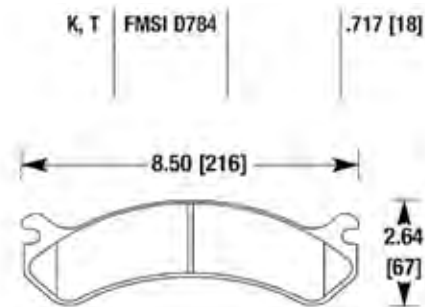
Park Brakes

Service Brakes

Combo Brakes

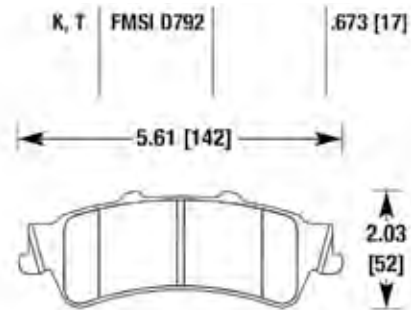
Hydraulic Control

WPD0784



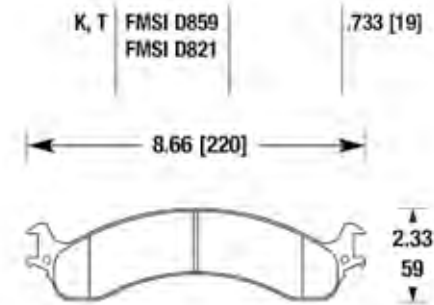
CADILLAC, CHEVY/GMC TRUCK,

WPD0792



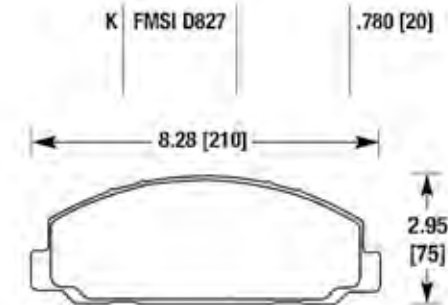
CADILLAC,  
CHEVY/GMC TRUCK (REAR)

WPD0821



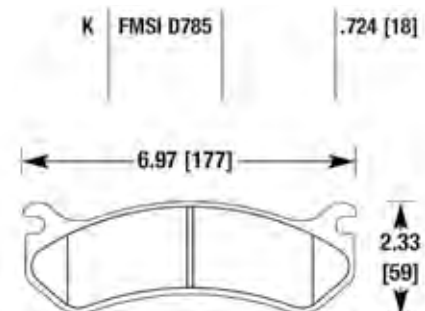
DODGE TRUCK

WPD0827



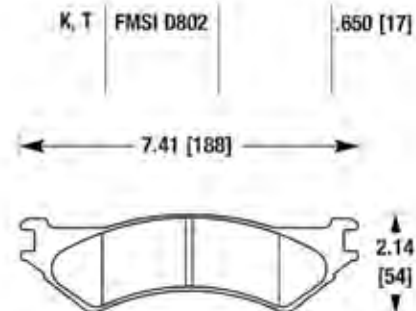
ISUZU TRUCK

WPD0785



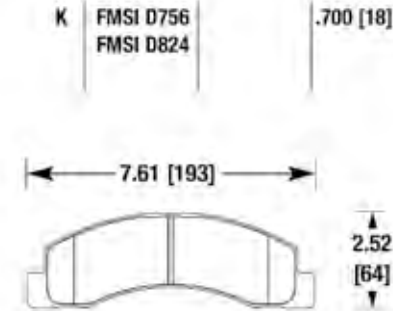
CADILLAC, CHEVY/GMC TRUCK,  
HUMMER H2

WPD0802



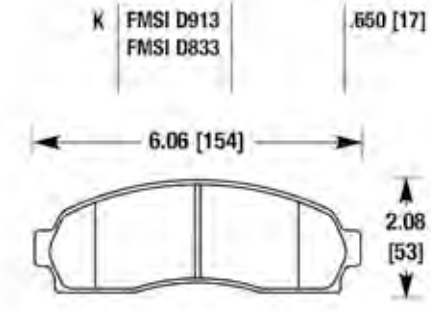
FORD TRUCK  
E250 & E350 (REAR)

WPD0824



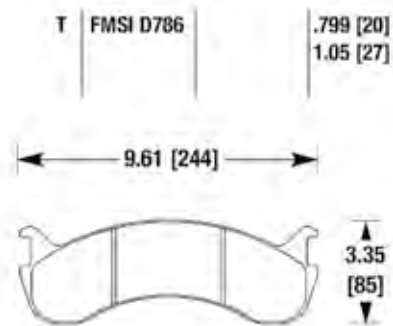
FORD TRUCK

WPD0833



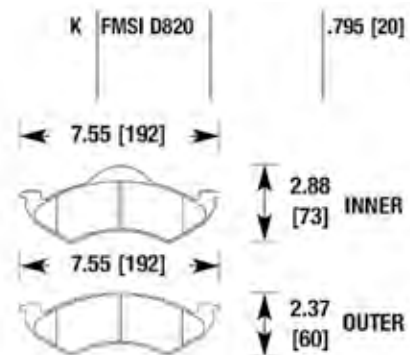
CHEVY TRUCK, FORD TRUCK, MAZDA TRUCK,  
MERCURY, SATURN

WPD0786



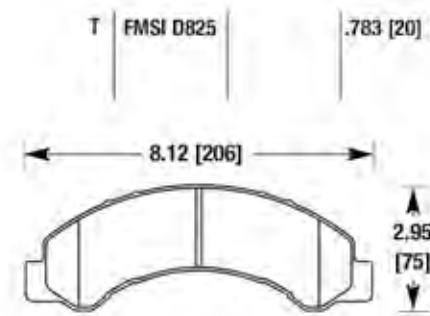
INTERNATIONAL

WPD0820



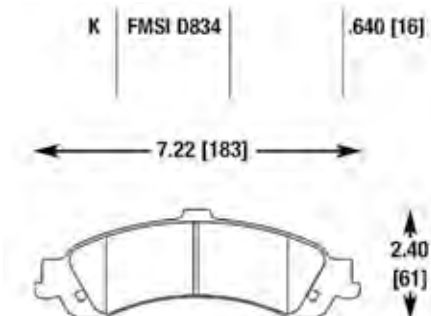
DODGE DAKOTA/DURANGO

WPD0825



CHEVY GMC / ISUZU TRUCK

WPD0834



CADILLAC, CHEVY/GMC TRUCK (REAR)

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

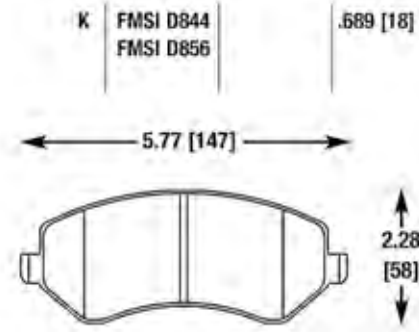
Park Brakes

Service Brakes

Combo Brakes

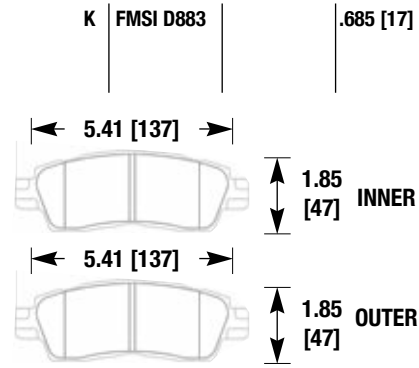
Hydraulic Control

**WPD0856**



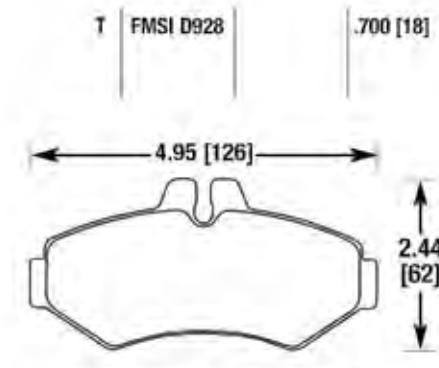
BUICK, CHRYSLER, DODGE TRUCK, JEEP

**WPD0883**



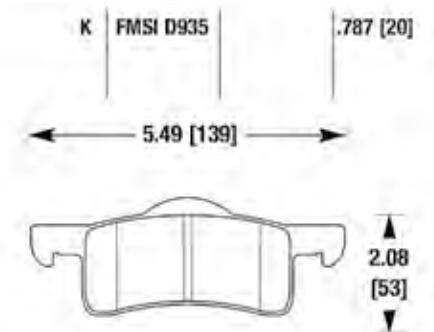
BUICK, CHEVY, GMC (REAR)

**WPD0928**



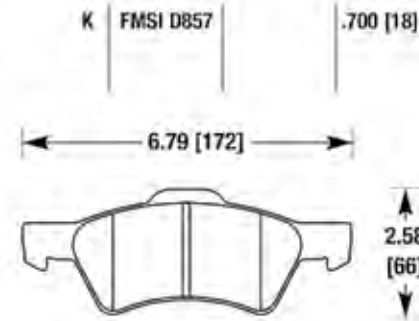
DODGE TRUCK, FREIGHTLINER (REAR)

**WPD0935**



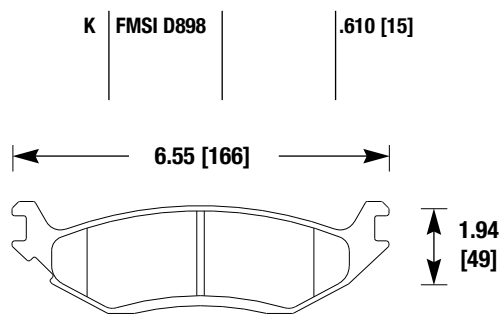
FORD TRUCK, LINCOLN (REAR)

**WPD0857**



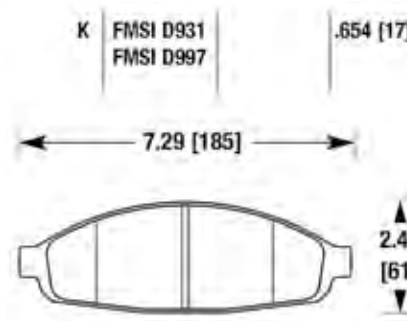
CHRYSLER, DODGE TRUCK

**WPD0898**



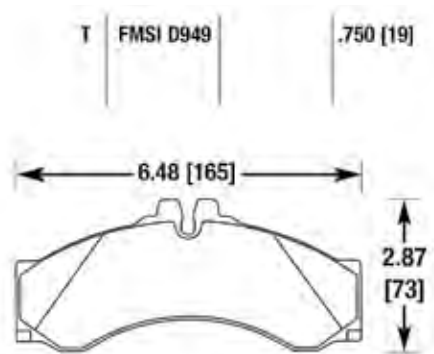
CHRYSLER, DODGE, JEEP (REAR)

**WPD0931**



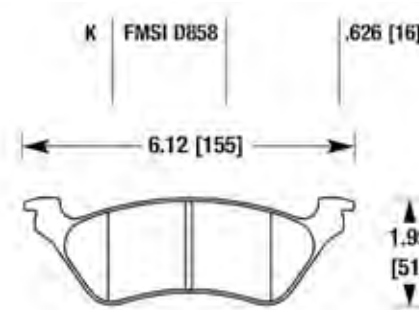
CHRYSLER, FORD, LINCOLN, MERCURY

**WPD0949**



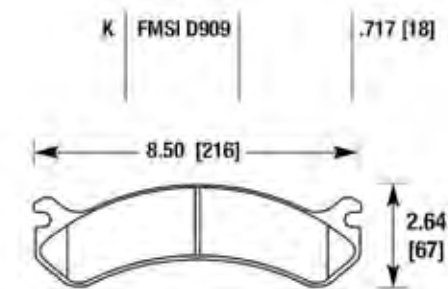
DODGE TRUCK, FREIGHTLINER

**WPD0858**



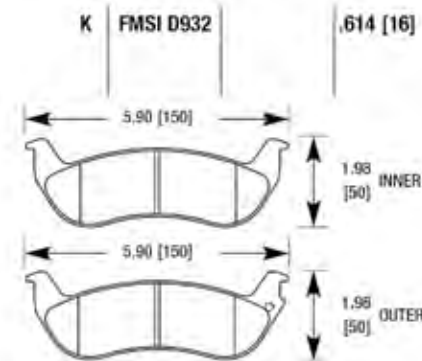
CHRYSLER, DODGE TRUCK (REAR)

**WPD0909**



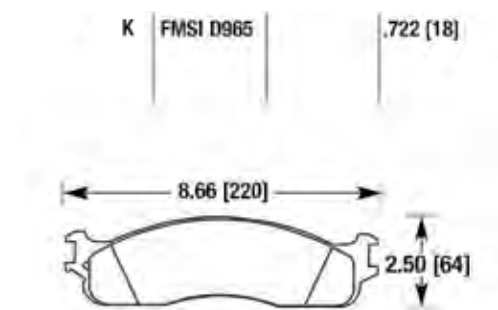
CHEVY/GMC TRUCK (REAR)

**WPD0932**



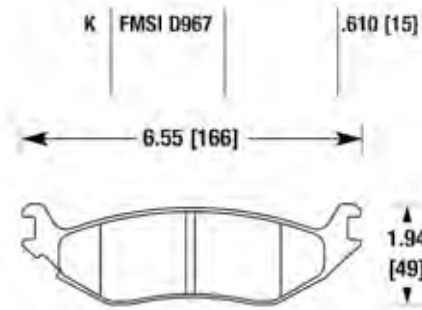
FORD, LINCOLN, MERCURY (REAR)

**WPD0965**



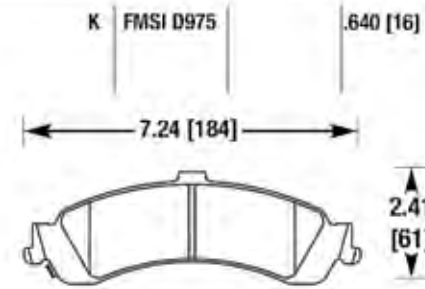
DODGE RAM PICKUP (FRONT)

## WPD0967



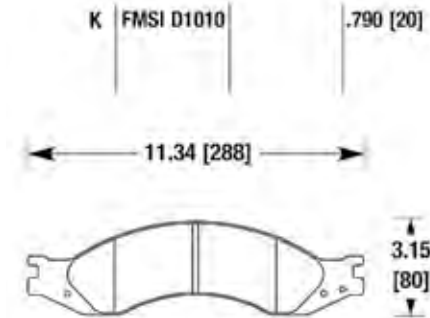
DODGE TRUCK (REAR)

## WPD0975



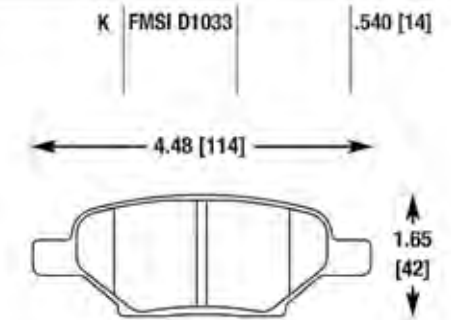
GM TRUCK (REAR)

## WPD1010



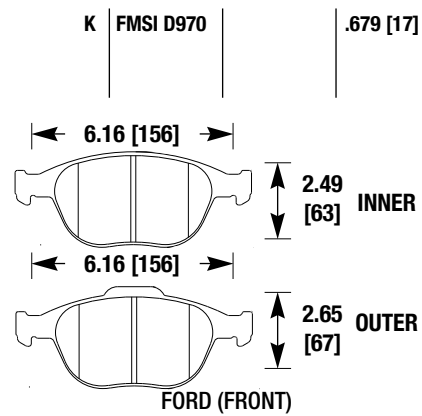
GMC TRUCK

## WPD1033

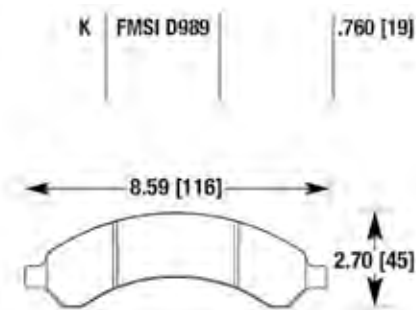


COBALT (REAR)

## WPD0970

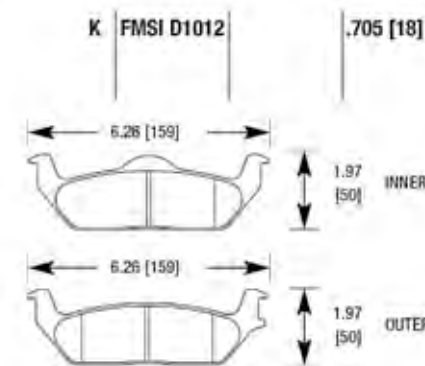


## WPD0989

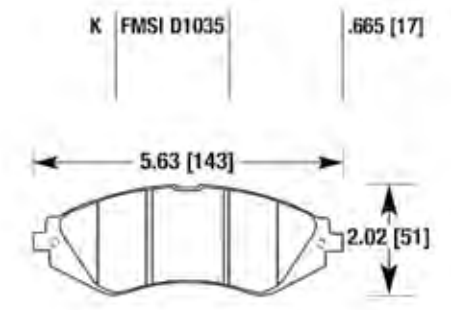


CHEVY/GMC 3500 VAN DRW (REAR)

## WPD1012

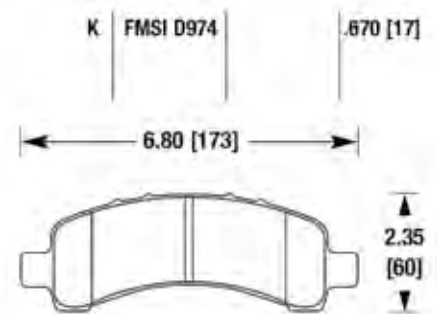


## WPD1035



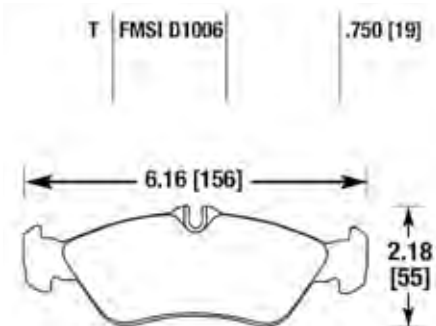
CHEVY OPTRA, AVEO (FRONT)  
LATIN AMERICA

## WPD0974



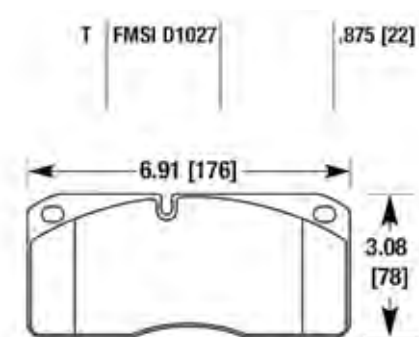
CADILLAC, CHEVY TRUCK, GMC TRUCK (REAR)

## WPD1006



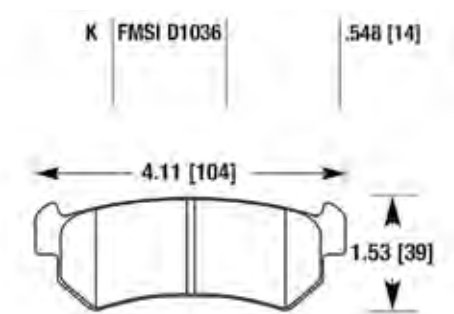
DODGE TRUCK, FREIGHTLINER (REAR)

## WPD1027



WORKHORSE W42

## WPD1036



CHEVY OPTRA (REAR)  
LATIN AMERICA

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

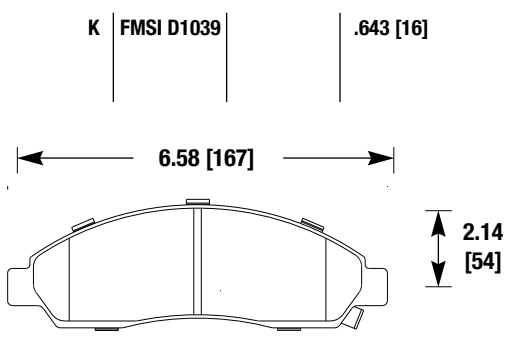
Park Brakes

Service Brakes

Combo Brakes

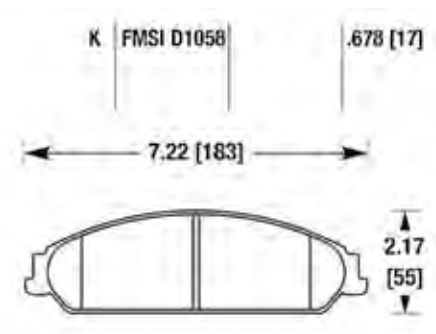
Hydraulic Control

WPD1039



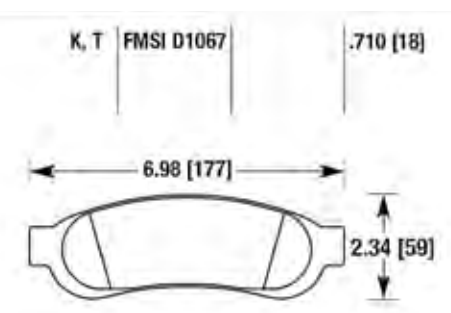
CHEVY, GMC (FRONT)

WPD1058



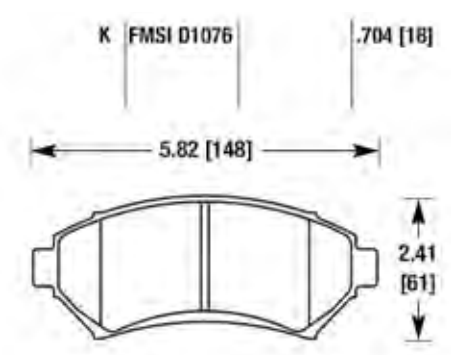
CHRYSLER, DODGE

WPD1067



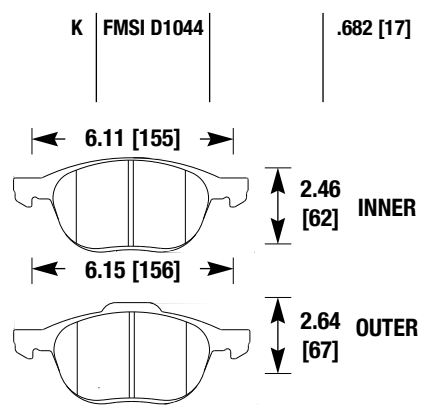
FORD F-350 SUPER DUTY PICKUP

WPD1076



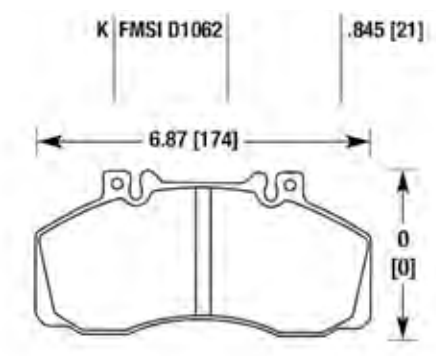
CADILLAC, CHEVY

WPD1044



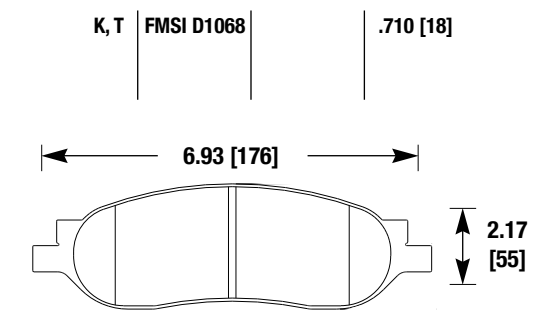
FORD, MAZDA (FRONT)

WPD1062



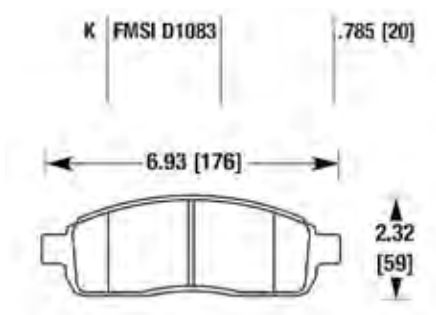
HINO

WPD1068



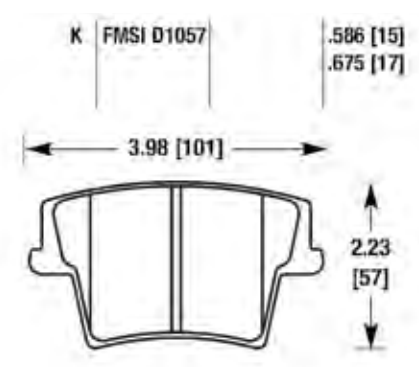
FORD TRUCK (REAR)

WPD1083



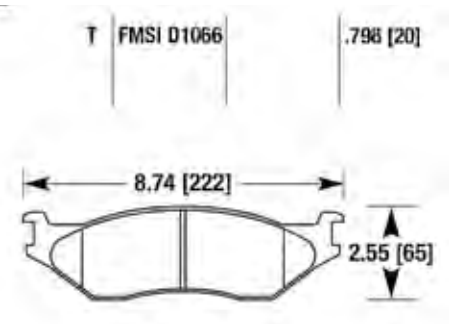
FORD TRUCK

WPD1057



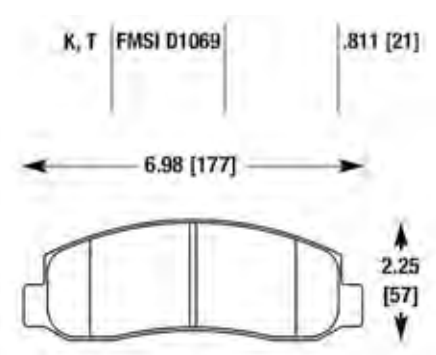
CHRYSLER, DODGE (REAR)

WPD1066



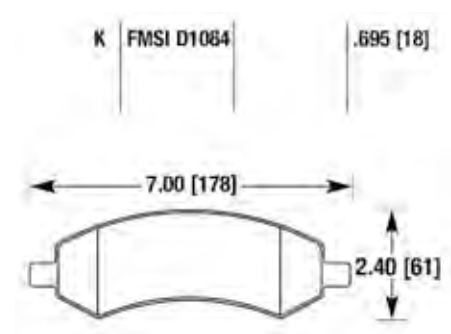
FORD F-450

WPD1069



FORD F250/F350 SUPER DUTY

WPD1084

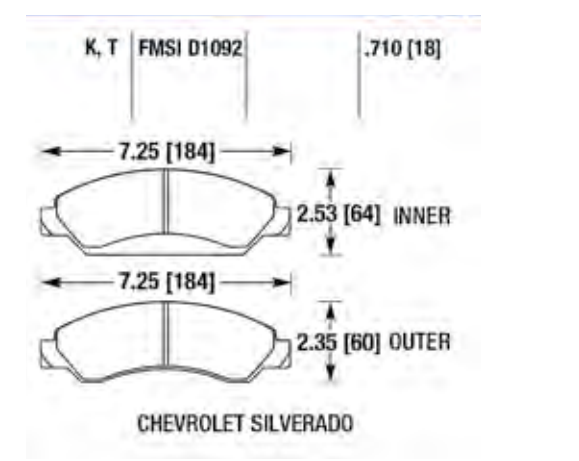


DODGE DAKOTA

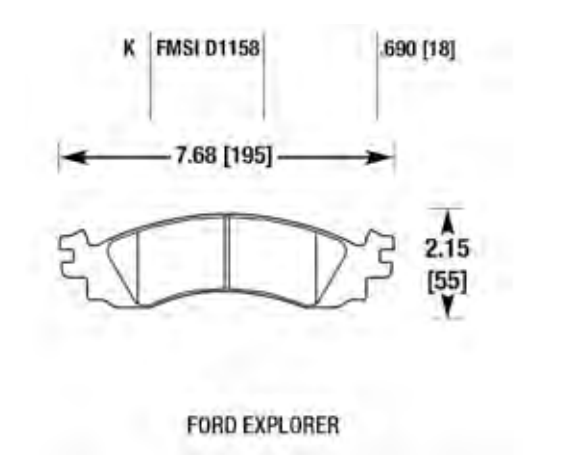
Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

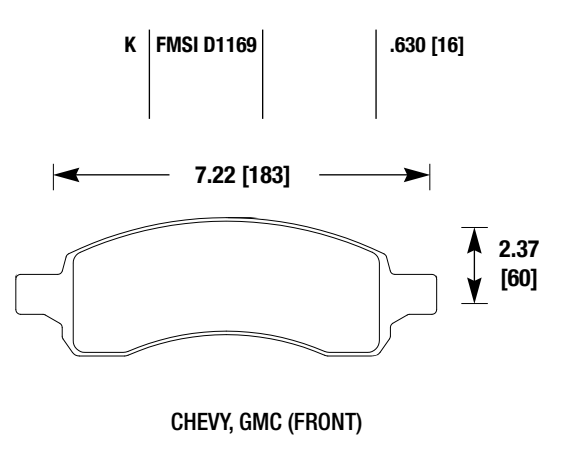
**WPD1092**



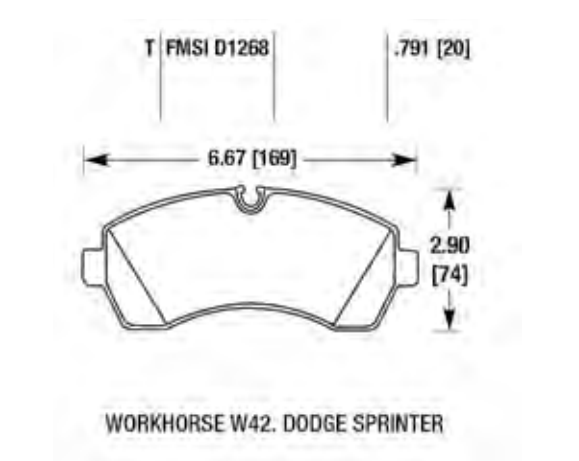
**WPD1158**



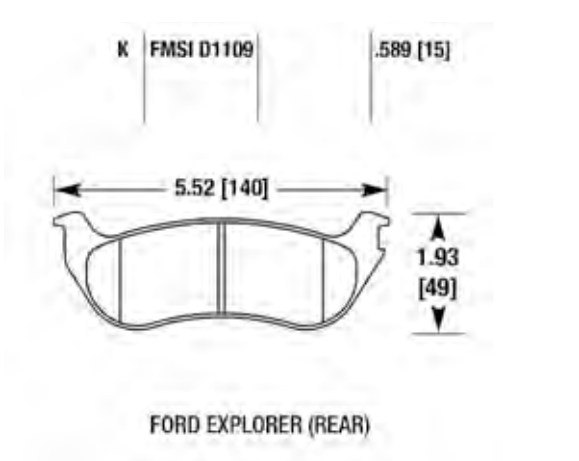
**WPD1169**



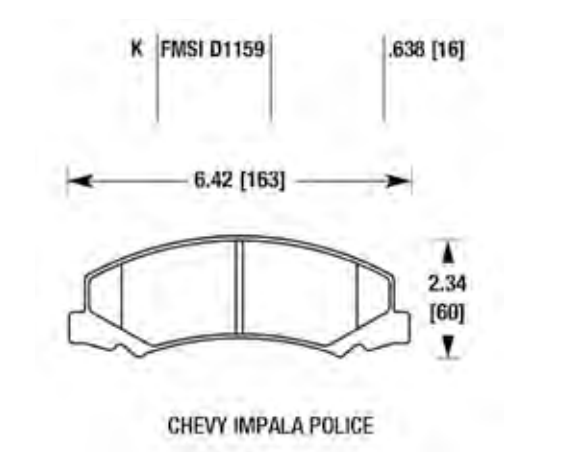
**WPD1268**



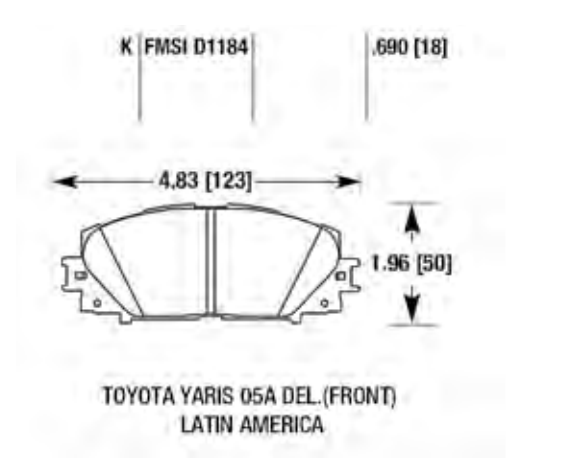
**WPD1109**



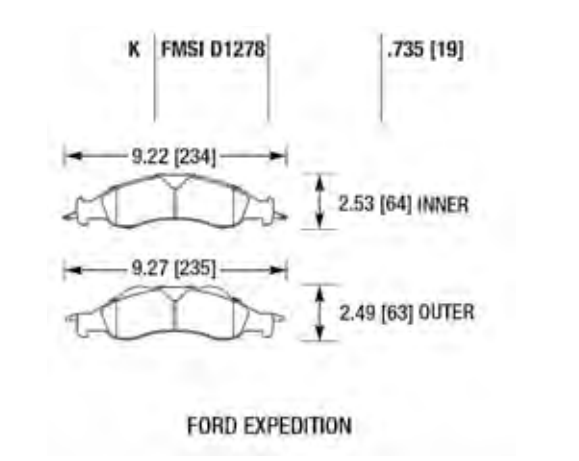
**WPD1159**



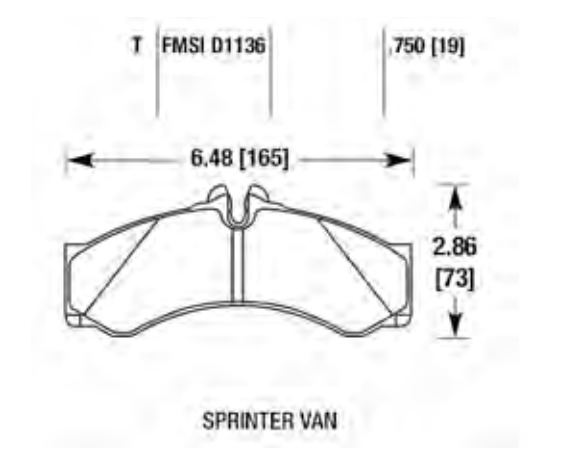
**WPD1184**



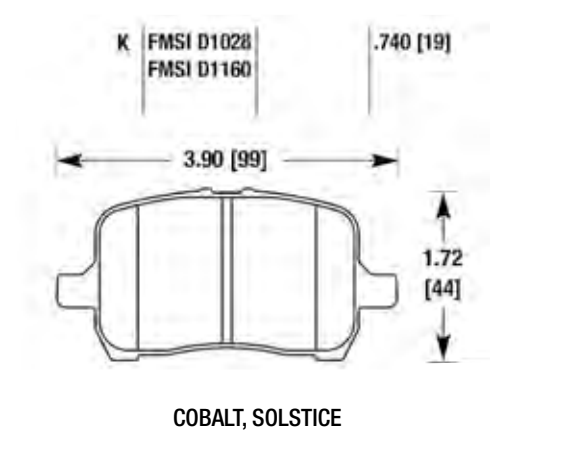
**WPD1278**



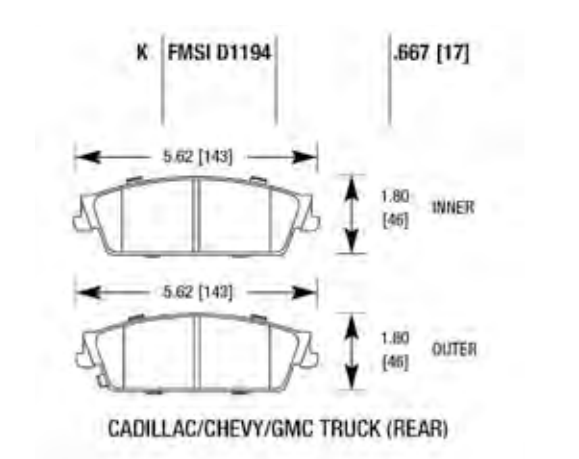
**WPD1136**



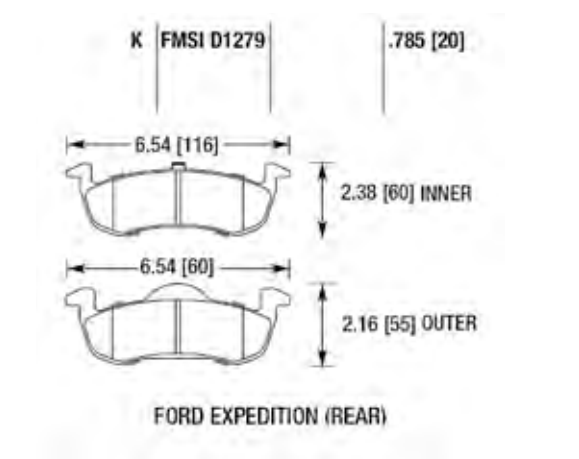
**WPD1160**



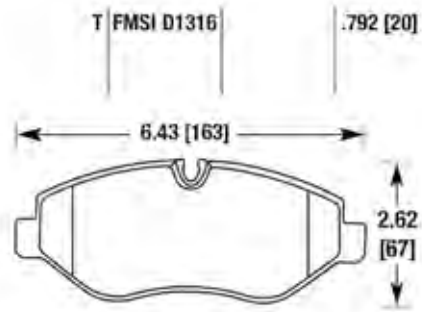
**WPD1194**



**WPD1279**

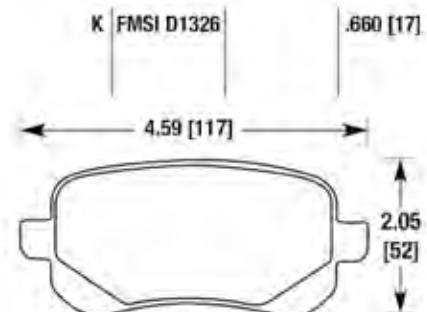


**WPD1316**



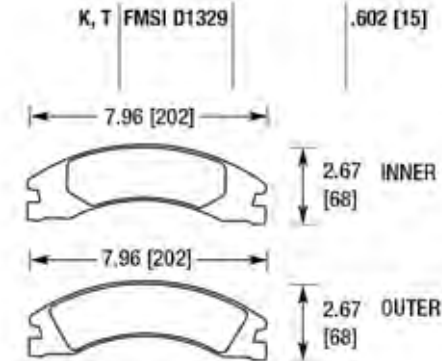
DODGE SPRINTER

**WPD1326**



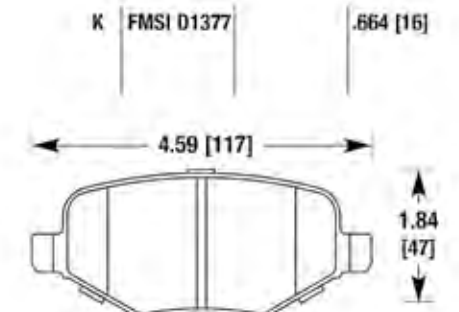
DODGE GRAND CARAVAN (REAR)

**WPD1329**



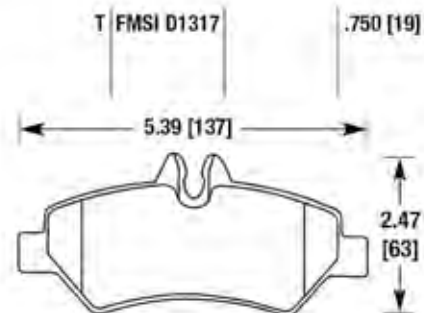
FORD VAN (REAR)

**WPD1377**



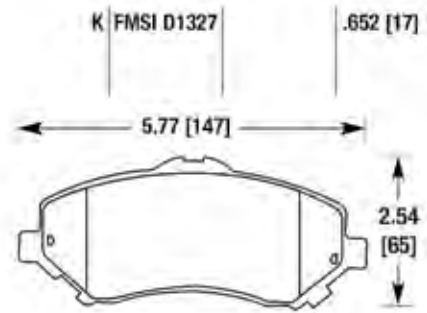
FORD TAURUS/EXPLORER (REAR)

**WPD1317**



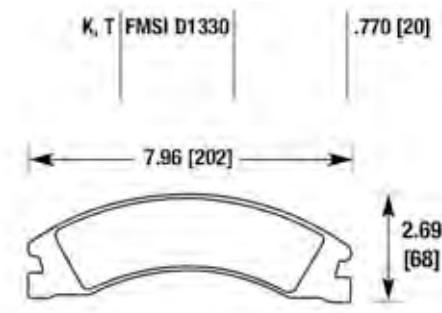
DODGE SPRINTER (REAR)

**WPD1327**



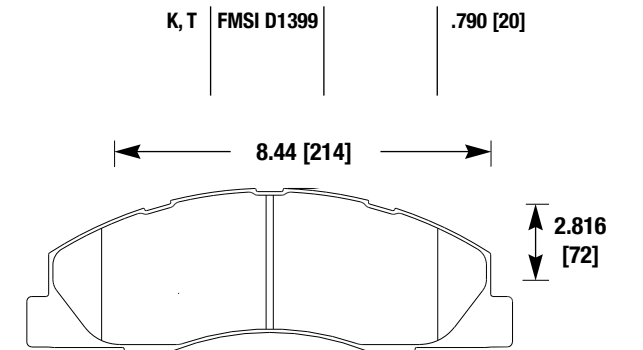
DODGE GRAND CARAVAN

**WPD1330**



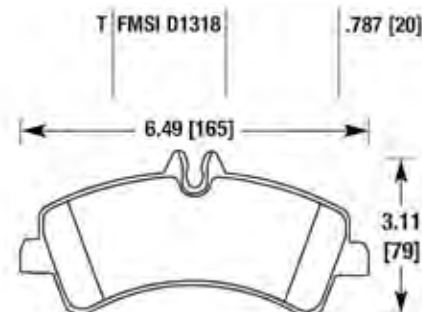
FORD VAN (REAR)

**WPD1399**



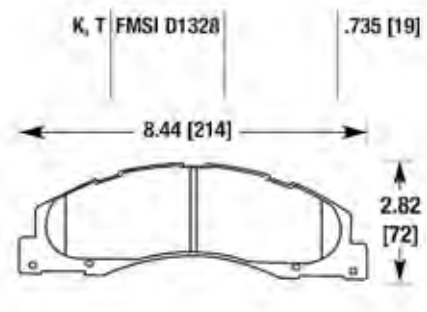
DODGE (FRONT)

**WPD1318**



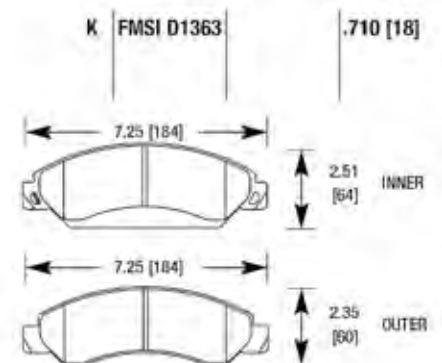
DODGE SPRINTER (REAR)

**WPD1328**



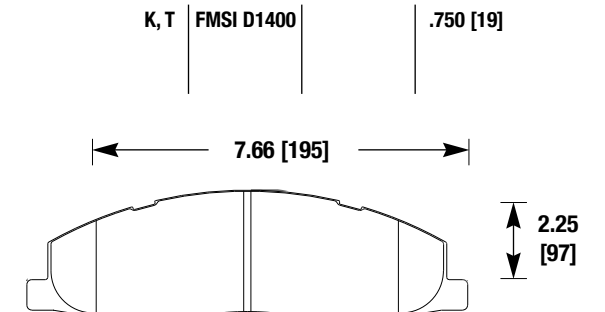
FORD VAN

**WPD1363**



CADILLAC/CHEVY/GMC TRUCK

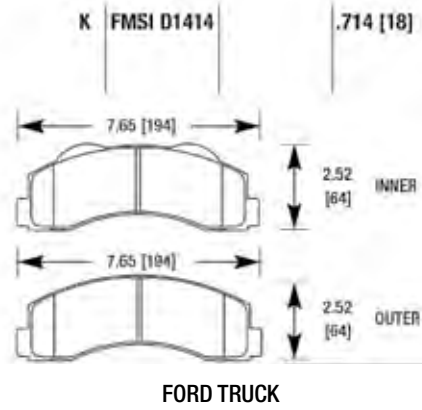
**WPD1400**



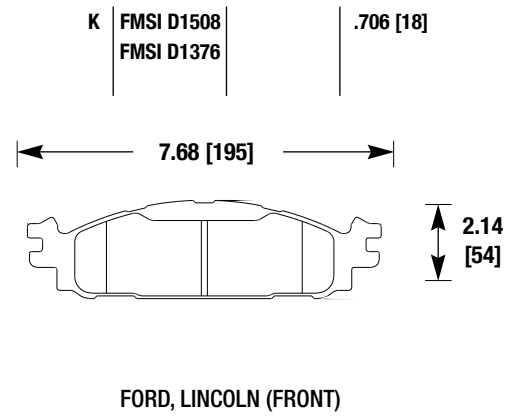
DODGE (REAR)



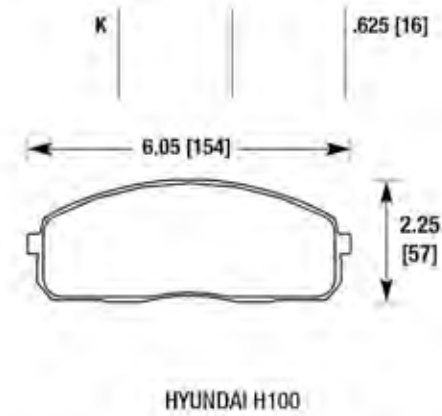
WPD1414



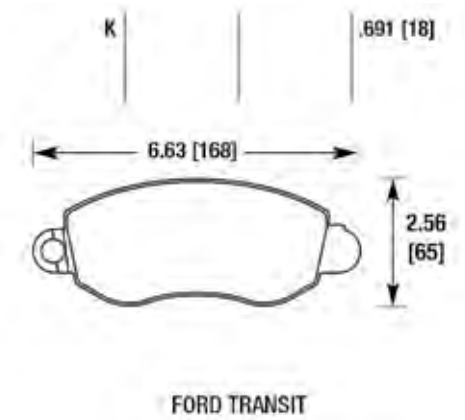
WPD1508



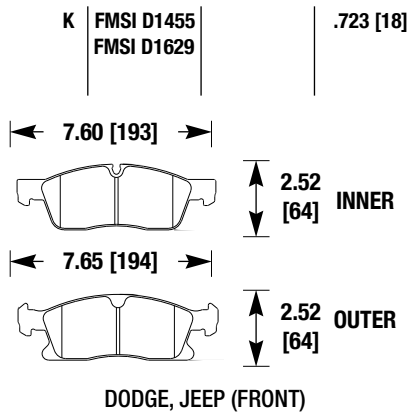
WPD6001



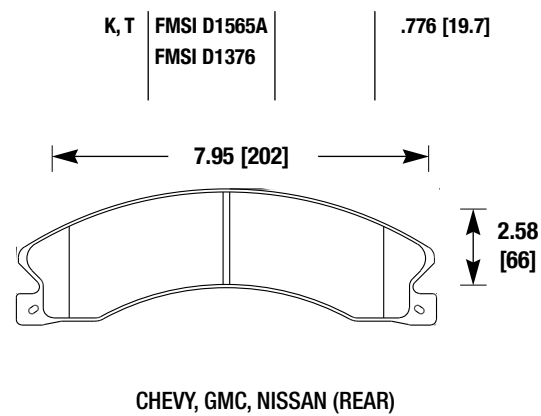
WPD7024



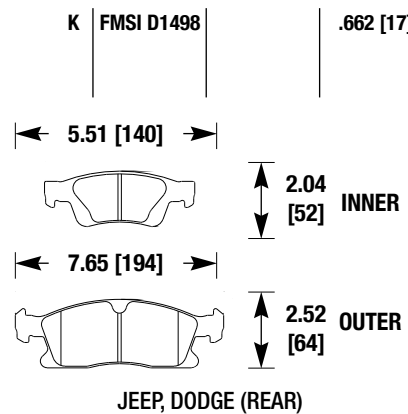
WPD1455



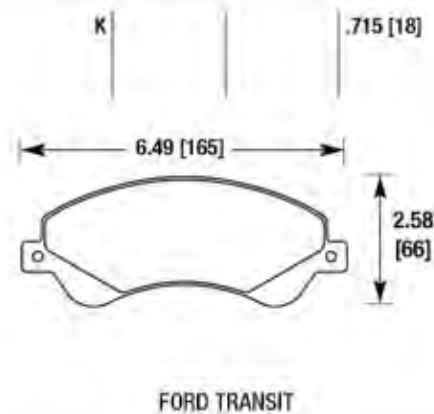
WPD1565A



WPD1498



WPD6000



TECHNOLOGY TIPS

**BRAKE NOISE**

It is important to understand that brake noise (squeal, groan, howl, etc) is generated by the brake system as a whole and can be greatly influenced by the installation.

- **Rotor type** - Make sure an OE or high quality replacement rotor is used.
- **Rotor finish** - insure the surface is clean, smooth and flat. If turned, apply a non-directional finish using a bead brush or 120 grit sand paper.
- **Pad fitment** - When installed the pad should fit snug with no rattle or movement. If this is not the case, inspect and replace hardware and abutment clips as necessary.

Below is a checklist of some key items to keep in mind when installing your VelveTouch brake pads.

- **Lubrication** - Noise is typically a result of vibration being transferred between components of the brake system. Proper lubrication of these contact points can greatly reduce this from occurring. High temperature synthetic lubricant containing moly should be applied at all contact points of the pad and the brake system, making sure not to get any lubricant on the friction surface.
- **Break-in** - proper break-in of anew set of brake pads will deposit a transfer layer onto the rotor surface. This layer aides in creating a smooth contact between the pad and rotor eliminating potential vibrations.

BUTTONS AND RIVETS

82-85 | CLUTCH BUTTONS

86 | RIVETS

SERIES	VELVETOUCH PART NO.	MATERIAL	THICK (IN)	THICK (MM)	COLOR CODE	RIVET SERIES	REFERENCE DRAWING	
<b>CLUTCH BUTTONS</b>								
1H	1H110	CERAMIC	0.110	2.794	YELLOW	G		
1H	1H118	CERAMIC	0.118	3.000		G		
1H	1H125	CERAMIC	0.125	3.175	RED	G		
1H	1H140	CERAMIC	0.140	3.556	BLUE	G		
1H	1H156	CERAMIC	0.156	3.962	VIOLET	G		
1H	1HC125	CARBOTIC	0.125	3.175	RED	G		
1H	1HC140	CARBOTIC	0.140	3.556	BLUE	G		
1H	1HC156	CARBOTIC	0.156	3.962	VIOLET	G		
1H	1HC173	CARBOTIC	0.173	4.394	GREEN	G		
1H	1HC187	CARBOTIC	0.187	4.750	ORANGE	G		
1H	1H110-HD	CERAMIC HD	0.110	2.794	YELLOW	G		
1H	1H118-HD	CERAMIC HD	0.118	3.000		G		
1H	1H125-HD	CERAMIC HD	0.125	3.175	RED	G		
1H	1H140-HD	CERAMIC HD	0.140	3.556	BLUE	G		
1H	1H125-HP	700 HIGH PERF	0.125	3.175	RED	G		
EVT	CEVT2	CARBOTIC	0.125	3.175	RED	G		
EVT	CEVT4	CARBOTIC	0.140	3.556	BLUE	G		
EVT	CEVT5	CARBOTIC	0.156	3.962	VIOLET	G		
EVT	CEVT7	CARBOTIC	0.175	4.445	GREEN	G		
EVT	CEVT8	CARBOTIC	0.187	4.750	ORANGE	G		
EVT	CEVT9	CARBOTIC	0.218	5.537	SILVER	G		
EVT	EVT2	CERAMIC	0.125	3.175	RED	G		
EVT	EVT4	CERAMIC	0.140	3.556	BLUE	G		
EVT	EVT5	CERAMIC	0.156	3.962	VIOLET	G		
EVT	EVT7	CERAMIC	0.175	4.445	GREEN	G		
EVT	EVT8	CERAMIC	0.187	4.750	ORANGE	G		
EVT	EVT9	CERAMIC	0.218	5.537	SILVER	G		
RVSR	CRVSR10	CARBOTIC	0.134	3.404	BLUE	G		
RVSR	CRVSR12	CARBOTIC	0.174	4.420	GREEN	G		

\* Subject to minimum quantity and or lead time requirement (N) New Part

SERIES	VELVETOUCH PART NO.	MATERIAL	THICK (IN)	THICK (MM)	COLOR CODE	RIVET SERIES	REFERENCE DRAWING
<b>CLUTCH BUTTONS</b>							
VSR	CVSR20	CARBOTIC	0.133	3.378	BLUE	G	
VSR	CVSR21	CARBOTIC	0.156	3.962	VIOLET	G	
VSR	CVSR22	CARBOTIC	0.178	4.521	GREEN	G	
VSR	CVSR23	CARBOTIC	0.187	4.750	ORANGE	G	
VSR	CVSR24	CARBOTIC	0.199	5.055	SILVER	G	
VSR	VSR20	CERAMIC	0.133	3.378	BLUE	G	
VSR	VSR21	CERAMIC	0.156	3.962	VIOLET	G	
VSR	VSR22	CERAMIC	0.178	4.521	GREEN	G	
VSR	VSR23	CERAMIC	0.187	4.750	ORANGE	G	
VSR-S	VSR10	CERAMIC	0.133	3.378	BLUE	G	
VSR-S	VSR11	CERAMIC	0.156	3.962	VIOLET	G	
VSR-S	VSR12	CERAMIC	0.178	4.521	GREEN	G	
VSR-S	VSR13	CERAMIC	0.187	4.750	ORANGE	G	
VT	CVT2	CARBOTIC	0.125	3.175	RED	G	
VT	CVT4	CARBOTIC	0.140	3.556	BLUE	G	
VT	CVT5	CARBOTIC	0.156	3.962	VIOLET	G	
VT	CVT7	CARBOTIC	0.175	4.445	GREEN	G	
VT	CVT8	CARBOTIC	0.187	4.750	ORANGE	G	
VT	CVT9	CARBOTIC	0.218	5.537	SILVER	G	
VT	VT2	CERAMIC	0.125	3.175	RED	G	
VT	VT4	CERAMIC	0.140	3.556	BLUE	G	
VT	VT4.5	CERAMIC	0.150	3.800		G	
VT	VT5	CERAMIC	0.156	3.962	VIOLET	G	
VT	VT7	CERAMIC	0.175	4.445	GREEN	G	
VT	VT8	CERAMIC	0.187	4.750	ORANGE	G	
VT	VT9	CERAMIC	0.218	5.537	SILVER	G	
VTD	VTD4	CERAMIC	0.142	3.600	BLUE	G	
VTD	VTD5	CERAMIC	0.157	3.988	VIOLET	G	
VTD	VTD7	CERAMIC	0.177	4.500	GREEN	G	
VTD	VTD8	CERAMIC	0.189	4.800	ORANGE	G	
VTD-R	VTD4R	CERAMIC	0.142	3.600	BLUE	G	
VTD-R	VTD5R	CERAMIC	0.157	4.000	VIOLET	G	
VTD-R	VTD7R	CERAMIC	0.177	4.500	GREEN	G	
VTD-R	VTD8R	CERAMIC	0.189	4.800	ORANGE	G	
VTDS	VTDSR	CERAMIC	0.158	4.013			
VTDS	VTDSR	CERAMIC	0.168	4.267			

\* Subject to minimum quantity and or lead time requirement (N) New Part

# CLUTCH BUTTONS

# CLUTCH BUTTONS

SERIES	VELVETOUCH PART NO.	MATERIAL	THICK (IN)	THICK (MM)	COLOR CODE	RIVET SERIES	REFERENCE DRAWING
<b>CLUTCH BUTTONS</b>							
VTJ	CVTJ5	CARBOTIC	0.156	3.962	VIOLET	G	
VTJ	CVTJ7	CARBOTIC	0.175	4.445	GREEN	G	
VTJ	CVTJ8	CARBOTIC	0.187	4.750	ORANGE	G	
VTJ	VTJ5	CERAMIC	0.156	3.962	VIOLET	G	
VTJ	VTJ7	CERAMIC	0.175	4.445	GREEN	G	
VTJ	VTJ8	CERAMIC	0.189	4.800	ORANGE	G	
VTJ	VTJ8.5	CERAMIC	0.197	5.004	SILVER	G	
VTJE	VTJE5	CERAMIC	0.157	3.988	VIOLET	H	
VTJE	VTJE7	CERAMIC	0.177	4.500	GREEN	H	
VTJE	VTJE8	CERAMIC	0.189	4.800	ORANGE	H	
VTJB	VTJB1	CERAMIC	0.197	5.004			
VTL	CVTL2	CARBOTIC	0.125	3.175	RED	H	
VTL	CVTL4	CARBOTIC	0.140	3.556	BLUE	H	
VTL	CVTL5	CARBOTIC	0.156	3.962	VIOLET	H	
VTL	CVTL7	CARBOTIC	0.175	4.445	GREEN	H	
VTL	CVTL7.5	CARBOTIC	0.181	4.600		H	
VTL	CVTL8	CARBOTIC	0.187	4.750	ORANGE	H	
VTL	CVTL9	CARBOTIC	0.218	5.537	SILVER	H	
VTL	CVTL9.5	CARBOTIC	0.226	5.740		H	
VTL	VTL2	CERAMIC	0.125	3.175	RED	H	
VTL	VTL4	CERAMIC	0.140	3.556	BLUE	H	
VTL	VTL5	CERAMIC	0.156	3.962	VIOLET	H	
VTL	VTL7	CERAMIC	0.175	4.445	GREEN	H	
VTL	VTL8	CERAMIC	0.187	4.750	ORANGE	H	
VTL	VTL9	CERAMIC	0.218	5.537	SILVER	H	
VTLJ	VTLJ8	CERAMIC	0.187	4.750	ORANGE	G	
VTLJ	VTLJ8.5	CERAMIC	0.197	5.004		G	
VTLD	VTLD4	CERAMIC	0.142	3.600		H	
VTLD	VTLD4.5	CERAMIC	0.150	3.800		H	
VTLD	VTLD5	CERAMIC	0.156	3.962		H	
VTLD	VTLD7	CERAMIC	0.175	4.445		H	
VTLD	VTLD8	CERAMIC	0.187	4.750		H	

\* Subject to minimum quantity and or lead time requirement (N) New Part

SERIES	VELVETOUCH PART NO.	MATERIAL	THICK (IN)	THICK (MM)	COLOR CODE	RIVET SERIES	REFERENCE DRAWING
<b>CLUTCH BUTTONS</b>							
VTLD-R	VTLD6R	CERAMIC	0.156	3.962		G	
VTLD-R	VTLD7R	CERAMIC	0.175	4.445		G	
VTLD-R	VTLD8R	CERAMIC	0.187	4.750		G	
VTS	VTS1	CERAMIC	0.118	3.000	YELLOW	G	
VTS	VTS2	CERAMIC	0.125	3.175	RED	G	
VTS	VTS4	CERAMIC	0.140	3.556	BLUE	G	
VTS	VTS5	CERAMIC	0.156	3.962	VIOLET	G	

\* Subject to minimum quantity and or lead time requirement (N) New Part

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

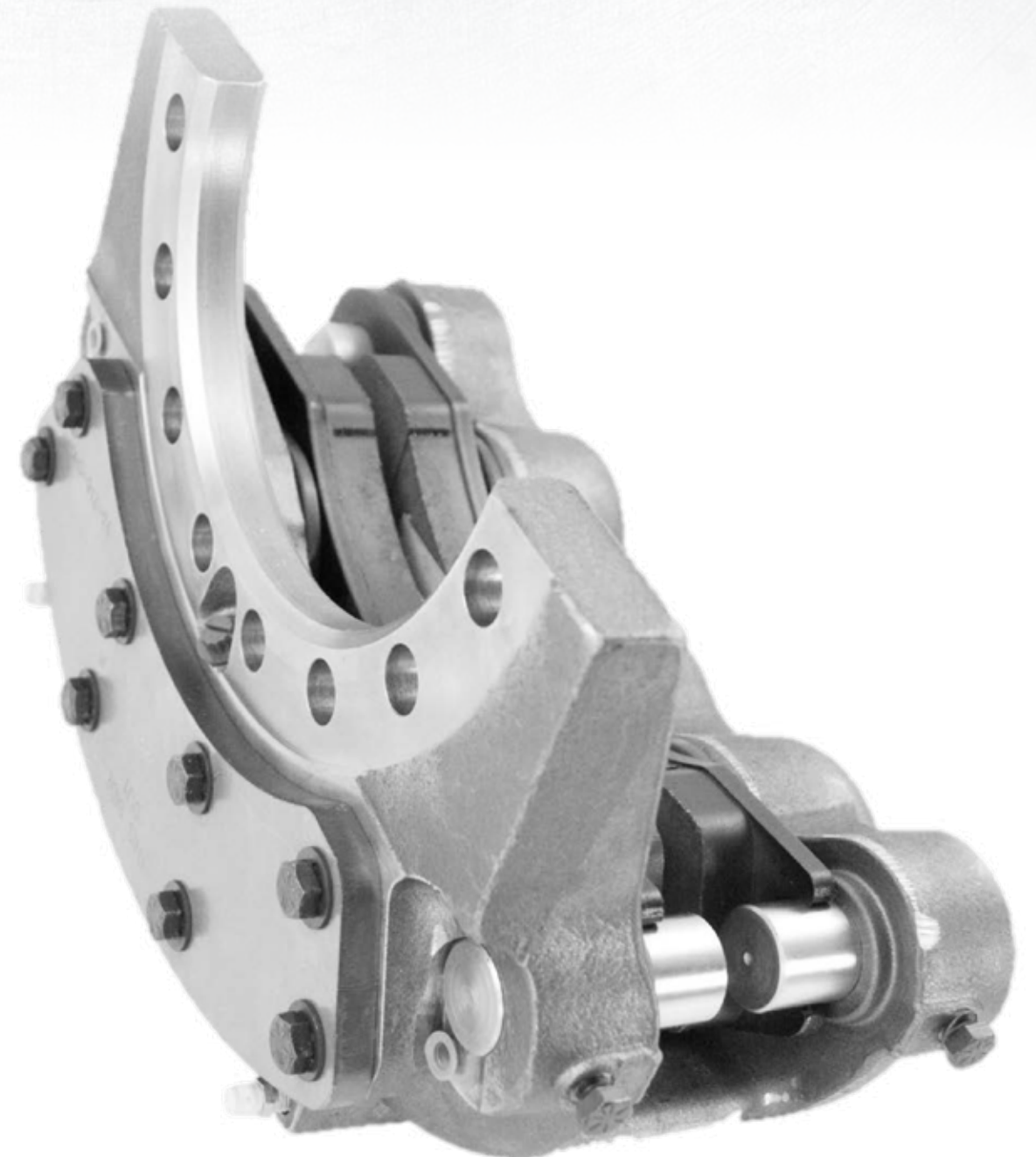
RIVETS

VELVETOUCH PART NO.	RIVET HEAD DIAMETER (IN)	BODY DIAMETER (IN)	LENGTH THICKNESS (IN)	CARRIER PLATE THICKNESS (IN)	UNIT TYPE	RIVETS PER UNIT
<b>RIVETS</b>						
G1	0.485	0.369	0.331	0.080	BOX	500
G1KEG	0.485	0.369	0.331	0.080	KEG	5000
G2	0.485	0.369	0.395	0.125	BOX	500
G2KEG	0.485	0.369	0.395	0.125	KEG	5000
G3	0.485	0.369	0.361	0.090	BOX	500
G3KEG	0.485	0.369	0.361	0.090	KEG	5000
G5	0.485	0.369	0.295	0.025	BOX	500
G5KEG	0.485	0.369	0.295	0.025	KEG	5000
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H0	0.635	0.497	0.250	0.025	BOX	500
H1	0.635	0.497	0.305	0.060	BOX	500
H1KEG	0.635	0.497	0.305	0.060	KEG	2500
H2	0.635	0.497	0.335	0.080	BOX	500
H2KEG	0.635	0.497	0.335	0.080	KEG	2500
H3	0.635	0.497	0.365	0.110	BOX	500
H3KEG	0.635	0.497	0.365	0.110	KEG	2500
H4	0.635	0.497	0.495	0.240	BOX	500
* Subject to minimum quantity and or lead time requirement (N) New Part						

\*\*IMPORTANT NOTE: CONTACT CUSTOMER SERVICE FOR AVAILABILITY AND LEAD TIME FOR ALL KEG ORDERS.

VELVETOUCH PART NO.	RIVET HEAD DIAMETER (MM)	BODY DIAMETER (MM)	LENGTH THICKNESS (MM)	CARRIER PLATE THICKNESS (MM)
<b>RIVETS</b>				
G1	12.319	9.373	8.407	2.032
G2	12.319	9.373	10.033	3.175
G3	12.319	9.373	9.169	2.286
G5	12.319	9.373	7.493	0.635
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H0	16.129	12.624	6.350	0.635
H1	16.129	12.624	7.747	1.524
H2	16.129	12.624	8.509	2.032
H3	16.129	12.624	9.271	2.794
H4	16.129	12.624	12.573	6.096
* Subject to minimum quantity and or lead time requirement (N) New Part				

# BRAKE ASSEMBLIES



Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

PARK BRAKE

CONSTRUCTION, AG & INDUSTRIAL PARK BRAKES

SAHR

- 89 | PD1591
- 89 | SA2500
- 89 | SA7000
- 89 | SA14000

FOUR PISTON BRAKE

- 89-90 | SCL25

MECHANICAL PARK BRAKE

- 90 | RT

WEDGE BRAKE - SINGLE WEDGE

- 90 | RS

MINING HAULAGE PARK BRAKES

SAHR

- 90 | G1
- 91 | G2
- 91-92 | G6
- 92 | SCL70

INDUSTRIAL PARK BRAKE

MECHANICAL DRUM BRAKE

- 92 | DLM

**FEATURED PRODUCT**  
PD1591 PARK BRAKE ASSEMBLY AND SEAL KIT



BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>CONSTRUCTION, AG &amp; INDUSTRIAL PARK BRAKES</b>				
SAHR	PD1591	PD1591151	9680391	SEAL KIT
			9680578	LINING KIT
			304-7253	OVERHAUL KIT
			MPS4009	PISTON & RET
			MPS4011	BRK KIT
		PD1591153	9680578	LINING KIT
			304-7253	OVERHAUL KIT
			MPS4009	PISTON & RET
			MPS4011	BRK HSG KIT
			9640227	LINING ASSY
		PD1591155	9680391	SEAL KIT
			9680707	HARDWARE KIT
			MPS4009	PISTON & RET
		PD1591161	MPS4009	PISTON & RET
			MPS4009	PISTON & RET
	PD1591163	9680578	LINING KIT	
		304-7253	OVERHAUL KIT	
		MPS3975	SEAL KIT	
		MPS4009	PISTON & RET	
	PD1591164	9680391	SEAL KIT	
		MPS4009	PISTON & RET	
	PD1591171	9680391	SEAL KIT	
		9680578	LINING KIT	
		304-7253	OVERHAUL KIT	
		MPS4051	PISTON KIT	
		9680391	SEAL KIT	
	PD1591191	9680391	SEAL KIT	
	SA2500	419-8965	305-7061	KIT SPRING URETHANE
			328-7911	LINING KIT
	SA7000	419-9022	244-7852	LINING ASSY
			304-7085	OVERHAUL KIT
			304-7170	SPRING KIT DISC SA7
			304-7179	OVERHAUL KIT
			304-7180	OVERHAUL KIT
			304-7221	CAM OVERHAUL KIT
			305-7061	SPRING KIT URETHANE
			306-7090	SEAL KIT
			306-7145	SEAL KIT
			328-7849	LINING KIT
		419-9054	244-7852	LINING ASSY
304-7204			OVERHAUL KIT	
306-7144			SEAL KIT & CURE DATE	
328-7849			LINING KIT	
328-7906			LINING KIT	
SA14000	419-8910	304-7207	OVERHAUL KIT	
		304-7208	DISC SPRING KIT SA14000	
		304-7209	CENTERING SPRING KIT	
		304-7217	PARTS KIT	
		304-7271	EF DT 1/12/10 KIT	
	419-9098	328-7914	LINING KIT	
		304-7208	DISC SPRING KIT SA14000	
		304-7209	CENTERING SPRING KIT	
		304-7217	PARTS KIT	
		328-7914	LINING KIT	
419-9308	304-7208	DISC SPRING KIT SA14000		
	304-7209	CENTERING SPRING KIT		
	304-7271	EF DT 1/12/10 KIT		
Four Piston Brake	SCL25	SCL25122	9680584	LINING KIT
			MPS3974	BRK KIT
			MPS3975	SEAL KIT

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>CONSTRUCTION, AG &amp; INDUSTRIAL PARK BRAKES</b>				
Four Piston Brake	SCL25	SCL25122	9680584	LINING KIT
			MPS3974	BRK KIT
			MPS3975	SEAL KIT
			MPS4009	PISTON & RET
			MPS4030	BRK HSG KIT
			MPS4030	BRK HSG KIT
		SCL25124	9680584	LINING KIT
			MPS3936	SEAL KIT
			MPS3974	HARDWARE KIT
			MPS4009	PISTON & RET
			MPS4030	BRK HSG KIT
			MPS4030	BRK HSG KIT
		SCL25128	9680391	SEAL KIT
			9680578	LINING KIT
			MPS3936	SEAL KIT
			MPS4009	PISTON & RET
			MPS4030	BRK HSG KIT
			MPS4030	BRK HSG KIT
		SCL25131	9680391	SEAL KIT
			9680584	LINING KIT
			MPS3936	SEAL KIT
MPS3974	BRK KIT			
MPS4009	PISTON & RET			
MPS4031	BRK HSG KIT			
Mechanical Park Brake	RT	419-8793	304-7102	HARDWARE KIT
		419-8796	304-7106	BRK KIT ASSY RT
		419-8798	304-7023	OVERHAUL KIT
Wedge Brake - Single Wedge	RS	RSH20205130	2000U1269	LINING KIT
			A11705U229	SEAL
			A13261M299	WHL CYLINDER ASSY
			A2247Q17	WEDGE ASSY
			A2297C4839	GUIDE PAWL ASSY
			A2297J4846	ACTUATOR ASSY
			A3222U1373	BRK SHOE ASSY - FIN
			A3222U1373	BRK SHOE
			MPS2681	ANCHOR PIN KIT
			MPS2828	BRK WEDGE KIT
			MPS3668	ADJ KIT
			MPS3670	ACTUATOR & PAWL KIT
			<b>MINING HAULAGE PARK BRAKES</b>	
SAHR	G1	419W2598	107W314	SLACK ADJ
			244-2516	LINING ASSY
			444W7000	BRACKET ASSY KIT
		419W426-7	107W314	SLACK ADJ
			304W203	OVERHAUL KIT
			328W751	LINING KIT
		419W7943-1	107W314	SLACK ADJ
			107W314	SLACK ADJ
			107W314	SLACK ADJ
		419W7945	107W314	SLACK ADJ
			107W314	SLACK ADJ
			107W314	SLACK ADJ
		419W7979	107W314	SLACK ADJ
			107W314	SLACK ADJ
			107W314	SLACK ADJ
		419W8074	107W314	SLACK ADJ
			107W314	SLACK ADJ
			107W314	SLACK ADJ
		419W809-1	107W314	SLACK ADJ
			107W314	SLACK ADJ
			107W314	SLACK ADJ
419W8122	444W7002	BRACKET KIT G1		
	60W6459	SPACER BACKPLATE		
	444W7000	BRACKET ASSY KIT		
419W8123	444W7000	BRACKET ASSY KIT		
	444W7002	BRACKET KIT G1		
	444W7000	BRACKET ASSY KIT		
419W8124	444W7002	BRACKET KIT G1		
	107W314	SLACK ADJ		
	444W7000	BRACKET ASSY KIT		
419W8156	107W314	SLACK ADJ		
	444W7000	BRACKET ASSY KIT		
	107W314	SLACK ADJ		
419W8173	444W7000	BRACKET ASSY KIT		
	107W314	SLACK ADJ		
	444W7000	BRACKET ASSY KIT		
419W8787	107W314	SLACK ADJ		
	244W7896	LINING ASSY		
	60W6459	SPACER BACKPLATE		
419W9084	107W314	SLACK ADJ		
	107W314	SLACK ADJ		
	60W6459	SPACER BACKPLATE		

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MINING HAULAGE PARK BRAKES</b>				
SAHR	G2	419-619	244-549	BRONZE SEGMENT
			304-250	OVERHAUL KIT
			304-252	OVERHAUL KIT
			304-253	SPRING KIT G2-5
			306-219	SEAL KIT
			32-507	CAP PISTON
			380-54	SHIM PACK KIT G2
			380-57	SHIM PACK KIT G2
			74-741B	PISTON KIT
			74-741F	PISTON KIT
			306-350	SEAL KIT
			306-350E	SEAL KIT
			32-627	CAP PISTON
			328-7926	LINING KIT
			380-54	KIT SHIM PACK G2
		380-57	KIT SHIM PACK G2	
		74-938B	PISTON KIT	
		74-938F	PISTON KIT	
		419-7959	244-549	BRONZE SEGMENT
			304-250	OVERHAUL KIT
			304-253	KIT SPRING G2-5
			306-176	SEAL KIT
			306-176E	SEAL KIT
			32-507	CAP PISTON
			380-54	KIT SHIM PACK G2
			380-57	KIT SHIM PACK G2
			74-938B	PISTON KIT
	74-938F		PISTON KIT	
	419-801		244-549	BRONZE SEGMENT
			304-250	OVERHAUL KIT
			304-253	KIT SPRING G2-5
			306-176	SEAL KIT
			306-176E	SEAL KIT
		32-507	CAP PISTON	
		380-54	KIT SHIM PACK G2	
		380-57	KIT SHIM PACK G2	
		74-938B	PISTON KIT	
		74-938F	PISTON KIT	
		419-8176	244-549	BRONZE SEGMENT
			304-250	OVERHAUL KIT
			304-253	KIT SPRING G2-5
			306-176	SEAL KIT
			306-176E	SEAL KIT
	380-54		KIT SHIM PACK G2	
	380-57		KIT SHIM PACK G2	
	74-938B		PISTON KIT	
	74-938F		PISTON KIT	
	419-819		305-7013	SPRING KIT G2-6
			306-350	SEAL KIT
			306-350E	SEAL KIT
			32-627	CAP PISTON
			328-7926	LINING KIT
			380-54	KIT SHIM PACK G2
		380-57	KIT SHIM PACK G2	
74-938B		PISTON KIT		
74-938F		PISTON KIT		
419-878		305-7014	SPRING KIT G2-7	
		306-350	SEAL KIT	
		306-350E	SEAL KIT	
		32-627	CAP PISTON	
		328-7926	LINING KIT	
		380-54	KIT SHIM PACK G2	
	380-57	KIT SHIM PACK G2		
	74-938B	PISTON KIT		
	74-938F	PISTON KIT		
	419-7903	306-154	SEAL KIT	
		32-411	CAP PISTON	
		74-617B	PISTON KIT	
		G6	306-154	SEAL KIT
			32-411	CAP PISTON
			74-617B	PISTON KIT

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION	
<b>MINING HAULAGE PARK BRAKES</b>					
SAHR	G6	419-7905	306-152	SEAL KIT	
			306-152E	SEAL KIT	
			32-411	CAP PISTON	
		419-7906	74-617B	PISTON KIT	
			306-152	SEAL KIT	
			306-152E	SEAL KIT	
		419-8048	32-411	CAP PISTON	
			74-617B	PISTON KIT	
			306-7112	SEAL KIT	
			74-617F	PISTON KIT	
	SCL70	SCL703	2000N1470	LINING KIT	
			MPS3759	SEAL KIT	
			MPS3760	MAJ OVERHAUL REPAIR KIT	
		SCL704	MPS3909	OVERHAUL KIT	
			MPS4114	OVERHAUL KIT	
			MPS4115	MPS KIT	
	MPS4116	MPS KIT			
	<b>INDUSTRIAL PARK BRAKE</b>				
	Mechanical Drum Brake	DLM	DLM10104	A13236T2308	BACKING PLATE
				A3722L194	SHOE ASSY
DLM10105			A3722L194	SHOE ASSY	
			A53236R2228	BACKING PLATE	
DLM10107			A3722L194	SHOE ASSY	
			A73236R2228	BACKING PLATE	
DLM10115			A13736M455	BACKING PLATE	
			A3722L194	SHOE ASSY	
DLM1099			A13736P952	BACKING PLATE	
			A3722L194	SHOE ASSY	
DLM13125			A2297B4552	LEVER DLM	
			A83722X180	LINING ASSY	
DLM13208			A2297B4552	LEVER DLM	
			A73736D186	BACKING PLATE ASSY	
DLM13210			A83722X180	LINING ASSY	
			A2297B4552	LEVER DLM	
DLM13211			A33736M637	BACKING PLATE ASSY	
			A83722X180	LINING ASSY	
DLM13213			A2297B4552	LEVER DLM	
			A23736S773	BACKING PLATE	
DLM13214			A83722X180	LINING ASSY	
			A2297B4552	LEVER DLM	
DLM13215			A93736M819	BACKING PLATE ASSY	
			A43736Z1014	BACKING PLATE ASSY	
DLM13216			A83722X180	LINING ASSY	
			A2297B4552	LEVER DLM	
DLM13217			A3236Q2461	BACKING PLATE	
			A83722X180	LINING ASSY	
DLM13227			A2297B4552	LEVER DLM	
			A3236X2260	BACKING PLATE	
DLM13227	A83722X180	LINING ASSY			
	A24736Z78	BACKING PLATE			
DLM13227	A83722X180	LINING ASSY			

## SERVICE BRAKE

### MEDIUM DUTY CONSTRUCTION SERVICE BRAKE

#### TWO PISTON BRAKE

- 95 | A2
- 95 | AA2
- 95 | B2
- 95 | C2
- 95 | SCL13

#### FOUR PISTON BRAKE

- 95-96 | A4
- 96-97 | AA4
- 97 | H4
- 97 | K4
- 97 | M4
- 97-99 | SCL2
- 99 | SCL33
- 99 | SCL34
- 99 | SCL46

#### SIX PISTON BRAKE

- 99-100 | H6
- 100 | HDB640
- 100-101 | HH6
- 101 | MHH6

#### DRUM BRAKE

- 101 | P Series

### HEAVY DUTY MINING HAULAGE SERVICE BRAKES

#### FOUR PISTON BRAKE

- 101-102 | F4
- 102 | FF4
- 102 | PD1425
- 102 | SCL53
- 102-103 | SCL59
- 103 | SCL62

#### SIX PISTON BRAKE

- 103 | FF6
- 103 | J6
- 103-104 | M6
- 104 | SCL19
- 104 | SCL56

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

SERVICE BRAKE (CONTINUED)

INDUSTRIAL SERVICE BRAKE

SINGLE PISTON BRAKE

105 | PD1019

TWO PISTON BRAKE

105 | PD1105

105 | PD1182

105 | PD1314

105 | PD1344

105 | PD1428

105 | PD1433

105 | PD1473

MECHANICAL PARK BRAKE

105 | Lever

HYDRAULIC DRUM BRAKE

105 | DSH

BACKING PLATE

105 | FSH

**FEATURED PRODUCT**  
H6 SERIES, SIX PISTON CALIPER SERVICE BRAKE  
AND OVERHAUL KIT



BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Two Piston Brake	A2	419-154-1	244-736	LINING ASSY
			306-142	SEAL KIT
			306-142E	SEAL KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
	AA2	419-7997	244-736	LINING ASSY
			306-7027	SEAL KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
			244-736	LINING ASSY
	B2	419-8052	306-143	SEAL KIT
			306-143E	SEAL KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
			244-736	LINING ASSY
	C2	419-182-1	306-145	SEAL KIT
			306-145E	SEAL KIT
			74-550B	PISTON KIT
			244-736	LINING ASSY
			306-345	SEAL KIT
			74-550B	PISTON KIT
SCL13	419-7922	244-736	LINING ASSY	
		306-345	SEAL KIT	
		74-550B	PISTON KIT	
		244-736	LINING ASSY	
		306-345	SEAL KIT	
		32-378	CAP INLET B2 7/16-20	
A4	419-7933	74-550B	PISTON KIT	
		244-736	LINING ASSY	
		306-145	SEAL KIT	
		306-145E	SEAL KIT	
		32-378	CAP INLET B2 7/16-20	
		74-550B	PISTON KIT	
A4	419-7935	244-8126	LINING ASSY	
		306-106	SEAL KIT	
		74-425B	PISTON KIT	
		244-8126	LINING ASSY	
		306-96	SEAL KIT	
		74-425B	PISTON KIT	
Four Piston Brake	A4	419-151-3	KIT10119	KIT-ORING-HVD
			306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
	A4	419-151-4	306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
A4	419-186-3	306-142	SEAL KIT	
		306-142E	SEAL KIT	
		328-737	LINING KIT	
		74-548B	PISTON KIT	
		74-548E	PISTON KIT	
		74-548F	PISTON KIT	

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control



# SERVICE BRAKES

# SERVICE BRAKES

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Four Piston Brake	A4	419-186-4	306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
		419-327-4	74-548F	PISTON KIT
			306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
		419-486-1	74-548E	PISTON KIT
			74-548F	PISTON KIT
			306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
		419-7894	74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
			306-142	SEAL KIT
			306-142E	SEAL KIT
		419-7921	328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
			306-143	SEAL KIT
		419-7950	306-143E	SEAL KIT
			306-345	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
		419-832	74-548F	PISTON KIT
			306-142	SEAL KIT
			306-142E	SEAL KIT
			328-737	LINING KIT
			74-548B	PISTON KIT
		419-833	74-548E	PISTON KIT
			74-548F	PISTON KIT
			306-143	SEAL KIT
			306-143E	SEAL KIT
			328-737	LINING KIT
		419-7913-1	419-832	PISTON KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
			74-548F	PISTON KIT
			306-7384	SEAL KIT
		419-7982	328-737	LINING KIT
			74-548B	PISTON KIT
			74-548E	PISTON KIT
	74-548F		PISTON KIT	
	306-7020		SEAL KIT	
419-7982	328-737	LINING KIT		
	328-737-1	LINING KIT		
	74-548B	PISTON KIT		

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Four Piston Brake	AA4	419-7982	74-548E	PISTON KIT
			74-548F	PISTON KIT
		419-386-2	244-731-1	LINING ASSY
			244-731-2	LINING ASSY
			306-161	SEAL KIT
			306-161E	SEAL KIT
			74-694B	PISTON KIT
			74-694F	PISTON KIT
			244-731-1	LINING ASSY
			244-731-2	LINING ASSY
	419-8080	306-161	SEAL KIT	
		306-161E	SEAL KIT	
		74-694B	PISTON KIT	
		74-694F	PISTON KIT	
		244-779	LINING ASSY	
		306-169	SEAL KIT	
		306-169E	SEAL KIT	
		74-715B	PISTON KIT	
	419-350	74-715F	PISTON KIT	
		244-779	LINING ASSY	
		306-201	SEAL KIT	
		74-715B	PISTON KIT	
		74-715F	PISTON KIT	
		244-779	LINING ASSY	
		306-169	SEAL KIT	
		306-169E	SEAL KIT	
	419-501	74-715B	PISTON KIT	
		74-715F	PISTON KIT	
		244-779	LINING ASSY	
		306-169	SEAL KIT	
		306-169E	SEAL KIT	
		74-715B	PISTON KIT	
		74-715F	PISTON KIT	
		244-779	LINING ASSY	
	419-8262	306-169	SEAL KIT	
		306-169E	SEAL KIT	
		74-715B	PISTON KIT	
		74-715F	PISTON KIT	
		304-7280	OVERHAUL KIT	
		306-7073	SEAL KIT	
		328-741	LINING KIT	
		74-927B	PISTON KIT	
	419-856	74-927F	PISTON KIT	
		304-7280	OVERHAUL KIT	
		306-7072	SEAL KIT	
		306-7072E	SEAL KIT	
		328-7893	LINING KIT	
		74-927B	PISTON KIT	
		74-927F	PISTON KIT	
		306-340	SEAL KIT	
419-8785	306-340E	SEAL KIT		
	328-741	LINING KIT		
	74-927B	PISTON KIT		
	74-927F	PISTON KIT		
	306-7072	SEAL KIT		
	328-741	LINING KIT		
	74-927B	PISTON KIT		
	74-927F	PISTON KIT		
419-887	306-7072	SEAL KIT		
	328-741	LINING KIT		
	74-927B	PISTON KIT		
	74-927F	PISTON KIT		
	306-7072	SEAL KIT		
	328-741	LINING KIT		
	74-927B	PISTON KIT		
	74-927F	PISTON KIT		
419-888	9680648	SEAL KIT		
	9640138B	PISTON KIT		
	9640138F	PISTON KIT		
	KIT10113	LINING KIT		
	MPS3717	SEAL KIT		
	9680181	SEAL KIT		
	9640138B	PISTON KIT		
	9640138F	PISTON KIT		
419-887	KIT10113	LINING KIT		
	9650252	SEAL KIT		
	9680181	SEAL KIT		
	9640138B	PISTON KIT		
	9640138F	PISTON KIT		
	KIT10113	LINING KIT		
	MPS3716	SEAL KIT		
	419-887	9650318	SEAL KIT	
9680181		SEAL KIT		
9640138B		PISTON KIT		
9640138F		PISTON KIT		
KIT10113		LINING KIT		
MPS3716		SEAL KIT		
9650318		SEAL KIT		
9680181		SEAL KIT		

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

Wet Friction  
On-HWY Brake Pads  
On-HWY Buttons  
Park Brakes  
Service Brakes  
Combo Brakes  
Hydraulic Control

# SERVICE BRAKES

# SERVICE BRAKES

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Four Piston Brake	SCL2	9650414	9680648	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3717	SEAL KIT
		9650415	9680181	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3716	SEAL KIT
		9650421	9680181	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
		9650447	MPS3716	SEAL KIT
			9680181	SEAL KIT
			9680436	LINING KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
		419-9053	KIT10113	LINING KIT
			MPS3716	SEAL KIT
			328-7804	LINING KIT
		SCL21312	9680181	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
		SCL2135	MPS3716	SEAL KIT
			9680648	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
		SCL22211	KIT10113	LINING KIT
			MPS3717	SEAL KIT
			328-7958	LINING KIT ASSY
			96401388	PISTON KIT
			9640138F	PISTON KIT
		SCL22216	KIT10113	LINING KIT
			MPS3716	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
		SCL22217	KIT10113	LINING KIT
			MPS3717	SEAL KIT
			328-7958	LINING KIT ASSY
			96401388	PISTON KIT
		SCL2225	9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3717	SEAL KIT
			9680648	SEAL KIT
			328-7958	LINING KIT ASSY
		SCL2241	96401388	PISTON KIT
			328-7958	LINING KIT ASSY
96401388	PISTON KIT			

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Four Piston Brake	SCL2	SCL2241	9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3717	SEAL KIT
		SCL2242	9680181	SEAL KIT
			328-7958	LINING KIT ASSY
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
		SCL2244	MPS3716	SEAL KIT
			9680648	SEAL KIT
			2000Y1533	LINING KIT
			96401388	PISTON KIT
		SCL2261	9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3717	SEAL KIT
			9680436	LINING KIT
			9680648	SEAL KIT
		SCL2305	96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
			MPS3716	SEAL KIT
		SCL2307	MPS3717	SEAL KIT
			9680648	SEAL KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
			KIT10113	LINING KIT
		SCL2312	MPS3717	SEAL KIT
			9680436	LINING KIT
			96401388	PISTON KIT
			9640138F	PISTON KIT
SCL2313	MPS3716	SEAL KIT		
	9680436	LINING KIT		
	96401388	PISTON KIT		
	9640138F	PISTON KIT		
SCL2314	MPS3717	SEAL KIT		
	328-7958	LINING KIT ASSY		
	96401388	PISTON KIT		
	9640138F	PISTON KIT		
SCL2322	9640148	PISTON ASSY		
	A93222X2104	ASSY SHOE AND LINING		
SCL33	KIT10134	SEAL KIT		
	9680195	SEAL KIT		
SCL34	9680637	LINING KIT		
	9680622	SEAL KIT		
SCL46	9680675	LINING KIT		
	96401388	PISTON KIT		
	9640138F	PISTON KIT		
Six Piston Brake	H6	419-457-1	MPS3606	SEAL KIT
			306-160	SEAL KIT
			306-160E	SEAL KIT
			328-730	LINING KIT
			74-694B	PISTON KIT
419-496-2	306-166	SEAL KIT		
	306-166E	SEAL KIT		

# SERVICE BRAKES

# SERVICE BRAKES

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Six Piston Brake	H6	419-496-2	328-730	LINING KIT
			74-694B	PISTON KIT
		419-658-1	148-525	BRACKET MTG H6
			306-160	SEAL KIT
			306-160E	SEAL KIT
			328-730	LINING KIT
		419-8086	306-7045	SEAL KIT
			328-730	LINING KIT
			74-694B	PISTON KIT
		419-8152	74-694F	PISTON KIT
			306-160	SEAL KIT
			306-160E	SEAL KIT
		419-8999	328-730	LINING KIT
			74-694B	PISTON KIT
			74-694F	PISTON KIT
			906G-8619	SEAL KIT
			9680675	LINING KIT
			9640138B	PISTON KIT
		HDB64011	9640138F	PISTON KIT
			KIT10134	SEAL KIT
	306-7157		SEAL KIT	
	328-7959		LINING KIT	
	HDB64014	9640138B	PISTON KIT	
		9640138F	PISTON KIT	
		KIT10136	MAJ OVERHAUL KIT	
	HDB64016	328-7959	LINING KIT	
		9640138B	PISTON KIT	
		9640138F	PISTON KIT	
	419-402-1	HDB640	MPS3743	SEAL KIT
			306-158	SEAL KIT
			328-730	LINING KIT
			74-694B	PISTON KIT
		419-403-1	74-694F	PISTON KIT
			306-180	SEAL KIT
			328-730	LINING KIT
			74-694B	PISTON KIT
		419-477-1	74-694F	PISTON KIT
			306-159	SEAL KIT
			306-159E	SEAL KIT
			328-730	LINING KIT
	419-664-1	HH6	74-694B	PISTON KIT
			74-694F	PISTON KIT
			306-232	SEAL KIT
		419-7896	306-232E	SEAL KIT
			306-7015	SEAL KIT
			328-730	LINING KIT
	419-7896	74-694B	PISTON KIT	
		74-694F	PISTON KIT	
		306-7015	SEAL KIT	

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>				
Six Piston Brake	HH6	419-7897	306-7015	SEAL KIT
			328-730	LINING KIT
			74-694B	PISTON KIT
		419-8127	74-694F	PISTON KIT
			306-7045	SEAL KIT
			328-730	LINING KIT
		419-8154	74-694B	PISTON KIT
			74-694F	PISTON KIT
			306-158	SEAL KIT
		419-8166	328-730	LINING KIT
	74-694B		PISTON KIT	
	74-694F		PISTON KIT	
	419-9071-1	306-7151	SEAL KIT	
		328-730	LINING KIT	
		74-694B	PISTON KIT	
		74-694F	PISTON KIT	
	419-2090-4	306-2050	SEAL KIT	
		328-730	LINING KIT	
		74-694B	PISTON KIT	
		74-694F	PISTON KIT	
419-665-1	306-233	SEAL KIT		
	306-233E	SEAL KIT		
	328-730	LINING KIT		
	74-694B	PISTON KIT		
Drum Brake	P Series	BG202410	74-694F	PISTON KIT
			A63722E603	LINING ASSY
<b>HEAVY DUTY MINING HAULAGE SERVICE BRAKES</b>				
Four Piston Brake	F4	419-7984	116-128B	PISTON ASSY KIT
			244-7806	LINING ASSY
			295-7011	PISTON HSG ASSY
			304-7071	OVERHAUL KIT
			306-197	SEAL KIT
		380-50	KIT SHIM PACK F4	
		419-7985	60-583	SPACER
			60-7888	SPACER
			116-128B	PISTON ASSY KIT
			244-7806	LINING ASSY
	295-7004		PISTON HSG ASSY	
	419-7986	306-167	SEAL KIT	
		380-50	KIT SHIM PACK F4	
		60-583	SPACER	
		60-7888	SPACER	
		116-128B	PISTON ASSY KIT	
	419-7989	295-7012	PISTON HSG ASSY	
		306-197	SEAL KIT	
		306-197E	SEAL KIT	
		328-7931	LINING KIT	
380-50		KIT SHIM PACK F4		
419-7989	60-583	SPACER		
	60-7888	SPACER		
	116-128B	PISTON KIT		
	306-167	SEAL KIT		
	328-7931	LINING KIT		
380-50	KIT SHIM PACK F4			

# SERVICE BRAKES

# SERVICE BRAKES

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>HEAVY DUTY MINING HAULAGE SERVICE BRAKES</b>				
Four Piston Brake	F4	419-7989	60-583	SPACER
			60-7888	SPACER
		419-8184	244-7806	LINING ASSY
			295-7011	PISTON HSG ASSY
			306-197	SEAL KIT
			306-197E	SEAL KIT
			380-50	KIT SHIM PACK F4
			60-583	SPACER
		419-8185	60-7888	SPACER
			295-7012	PISTON HSG ASSY
			304-7072	OVERHAUL KIT
			306-197	SEAL KIT
			306-197E	SEAL KIT
			328-7931	LINING KIT
	380-50		KIT SHIM PACK F4	
	FF4	419-7981	60-583	SPACER
			60-7888	SPACER
			116-128B	PISTON ASSY KIT
			304-7013	OVERHAUL KIT
			306-7026	SEAL KIT
	PD1425	PD1425911	328-7931	LINING KIT
			380-50	SHIM PACK KIT F4
			60-7888	SPACER
		PD1425912	9604874	PIN ASSY RETAINER
			A2230E1175B	PISTON KIT
		PD1425914	MPS3445	LINING KIT
			MPS3615	SEAL KIT
		PD1425916	9604874	PIN ASSY RETAINER
			A2230E1175B	PISTON KIT
			MPS3615	SEAL KIT
	9604874		PIN ASSY RETAINER	
	9640391		SHOE ASSY	
	A2230E1175B		PISTON KIT	
	MPS3615		SEAL KIT	
	PD1425917	MPS3813	PISTON ASSY KIT	
		9604874	PIN ASSY RETAINER	
		2000Q1525	LINING KIT	
	PD1425918	A2230E1175B	PISTON KIT	
		MPS3962	SEAL KIT	
		MPS3963	OVERHAUL KIT	
	SCL53	SCL5321	9604874	PIN ASSY RETAINER
			9640391	SHOE ASSY
			A2230E1175B	PISTON KIT
			2000Q1525	LINING KIT
	SCL59	9650364	A2230E1175B	PISTON KIT
			MPS3962	SEAL KIT
			MPS3963	OVERHAUL KIT
9640312F			PISTON KIT	
419-9384		MPS3915	OVERHAUL KIT	
		306-7198	SEAL KIT	
SCL593		9680566	LINING KIT	
		9680181	SEAL KIT	
		2000P1472	LINING KIT	
		9640312F	PISTON KIT	
		MPS3915	OVERHAUL KIT	

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION
<b>HEAVY DUTY MINING HAULAGE SERVICE BRAKES</b>				
Four Piston Brake	SCL59	SCL594	9680648	SEAL KIT
			2000P1472	LINING KIT
Six Piston Brake	SCL62	9650371	9640312F	PISTON KIT
			2000T1502	LINING KIT
	FF6	419-8159	304-7069	OVERHAUL KIT
			306-7139	SEAL KIT
			380-7214	PARTS KIT
			306-336	SEAL KIT
			32-7630	CAP PISTON
			328-761	LINING KIT
	419-8868	419-8868	74-710B	PISTON KIT
			74-710F	PISTON KIT
			244-7842	LINING ASSY
			306-231	SEAL KIT
			32-7630	CAP PISTON
			74-710B	PISTON KIT
			74-710F	PISTON KIT
	419-8870	419-8870	306-7087	SEAL KIT
			32-7630	CAP PISTON
			74-710B	PISTON KIT
			74-710F	PISTON KIT
			306-7060	SEAL KIT
	419-8871	419-8871	306-7060E	SEAL KIT
			32-7630	CAP PISTON
			328-761	LINING KIT
			74-710B	PISTON KIT
			74-710F	PISTON KIT
	419-8873	419-8873	306-231	SEAL KIT
			306-231E	SEAL KIT
			32-7630	CAP PISTON
			328-761	LINING KIT
			74-710B	PISTON KIT
	419-8942	419-8942	74-710F	PISTON KIT
			244-7842	LINING ASSY
			306-7127	SEAL KIT
			32-7630	CAP PISTON
			74-710B	PISTON KIT
	419-787-3	419-787-3	74-710F	PISTON KIT
			304-7059	OVERHAUL KIT
			306-7055	SEAL KIT
			306-7055E	SEAL KIT
			328-733	LINING KIT
			74-927B	PISTON KIT
			306-339	SEAL KIT
	419-787-4	419-787-4	306-339E	SEAL KIT
			328-733	LINING KIT
			74-927B	PISTON KIT
	419-7975-1	419-7975-1	306-339	SEAL KIT
			306-339E	SEAL KIT
328-742			LINING KIT	
419-7975-2	419-7975-2	74-927B	PISTON KIT	
		306-339	SEAL KIT	
		306-339E	SEAL KIT	
419-8002	419-8002	328-742	LINING KIT	
		74-927B	PISTON KIT	
		304-7059	OVERHAUL KIT	
		306-7055	SEAL KIT	
			306-7055E	SEAL KIT

# SERVICE BRAKES

# SERVICE BRAKES

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION		
<b>HEAVY DUTY MINING HAULAGE SERVICE BRAKES</b>						
Six Piston Brake	M6	419-8002	328-733	LINING KIT		
			74-927B	PISTON KIT		
		419-8081	306-7044	SEAL KIT		
			328-742	LINING KIT		
			74-927B	PISTON KIT		
		419-8094	74-927F	PISTON KIT		
			244-7850-1	LINING ASSY		
			244-7850-2	LINING ASSY		
			306-7052	SEAL KIT		
			74-927B	PISTON KIT		
		419-8102	74-927F	PISTON KIT		
			306-7054	SEAL KIT		
			328-733	LINING KIT		
			74-927B	PISTON KIT		
		419-8117	74-927F	PISTON KIT		
			304-7037	OVERHAUL KIT		
			306-7055	SEAL KIT		
			306-7055E	SEAL KIT		
			328-742	LINING KIT		
		419-8164	74-927B	PISTON KIT		
			74-927F	PISTON KIT		
			304-7059	OVERHAUL KIT		
			306-7055	SEAL KIT		
		419-8248	306-7055E	SEAL KIT		
			328-733	LINING KIT		
			74-927B	PISTON KIT		
			74-927F	PISTON KIT		
		419-9087	SCL19	2000Q1525	LINING KIT	
				304-7165	CROSSOVER TUBE KIT	
				96402058	PISTON KIT	
				MPS3603	BRK KIT	
				9680176	SEAL KIT	
				SCL1925	2000Q1525	LINING KIT
					96402058	PISTON KIT
				SCL1926	9680176	SEAL KIT
					9680177	HARDWARE KIT
				SCL1927	96402058	PISTON KIT
		2000Q1525	LINING KIT			
		96402058	PISTON KIT			
		MPS3603	BRK KIT			
		419-9185	SCL56	9680176	SEAL KIT	
				304-7290	OVERHAUL KIT	
328-7933	LINING KIT					
96402058	PISTON KIT					
SCL5625	9680176			SEAL KIT		
	96402058			PISTON KIT		
SCL5628	MPS4069			OVERHAUL KIT		
	MPS4070			BRK KIT		
SCL5631	2000Q1525			LINING KIT		
	96402058			PISTON KIT		
	KIT10147	SEAL KIT				
	9604874	PIN ASSY RETAINER				
A2230W1219	9680176	SEAL KIT				
	2000Q1525	LINING KIT				
		PISTON ASSY				

BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION	
<b>INDUSTRIAL SERVICE BRAKE</b>					
Single Piston Brake	PD1019	9630017	2000H1516	LINING KIT	
			9630083	PISTON ASSY	
	PD1105	9640023	2000K1519	LINING KIT	
			9630077	PISTON ASSY	
			2000K1519	LINING KIT	
			9620798	PISTON ASSY	
	PD1182	9640394	2000M1521	LINING KIT	
			MPS3939	SEAL KIT	
			2000M1521	KIT LINING	
	PD1314	9630433	MPS3463	KIT LINING	
			2000U1503	LINING KIT	
	PD1344	9640332	MPS3905	OVERHAUL KIT	
			9604874	PIN ASSY RETAINER	
	PD1428	9630631	MPS3902	OVERHAUL KIT	
			2000R1526	LINING KIT	
	PD1433	419-9267	2264U1009	DUST SHIELD	
			2000R1526	LINING KIT	
			2264U1009	DUST SHIELD	
	PD1473	9640744	9604874	PIN ASSY RETAINER	
			9630905	PISTON	
9680213			HARDWARE KIT		
9604874			PIN ASSY RETAINER		
PD147351	9630905	9630905	PISTON		
		112-7007	CAM		
Mechanical Park Brake	Lever	419-7993	306-7030	SEAL KIT	
			328-7841	LINING KIT	
Hydraulic Drum Brake	DSH	DSH1252537	DSH1252523	A3236M2353	BACKING PLATE ASSY
			DSH1252524	A3236M2353	BACKING PLATE ASSY
			DSH1252527	A3236M2353	BACKING PLATE ASSY
			DSH1252528	A3236M2353	BACKING PLATE ASSY
			304-7296		KIT LEVER ASSY LH
	DSH1252538	A3236M2353		BACKING PLATE ASSY	
		MPS2867		WHL KIT LH STAR	
		MPS2960		SPRING KIT - RETURN	
		304-7297		KIT LEVER ASSY LH	
		A3236M2353		BACKING PLATE ASSY	
Backing Plate	FSH	FSH12258	MPS2868		WHL KIT RH STAR
			MPS2960		SPRING KIT - RETURN
			A43722D134		BRK SHOE ASSY
			A83736H112		BACKING PLATE
FSH12263	KIT9112	KIT9112			BRK KIT
			A43722D134		BRK SHOE ASSY
			KIT9112		BRK KIT

## COMBO BRAKE

### MEDIUM DUTY CONSTRUCTION SERVICE BRAKE

COMBINATION PARK AND SERVICE BRAKE

107 | SCL8

### HEAVY DUTY MINING HAULAGE SERVICE BRAKES

COMBINATION PARK AND SERVICE BRAKE

107 | HDHC4225

## EXPANDER TUBE

### INDUSTRIAL SERVICE BRAKE

EXPANDER TUBE BRAKE

107 | Drum

### FEATURED PRODUCT

HDHC4225 SERIES COMBINATION PARK AND SERVICE CALIPER BRAKE AND OVERHAUL KIT



BRAKE DESCRIPTION	BRAKE FAMILY	BRAKE ASSEMBLY PART #	KIT & COMPONENT PART #	DESCRIPTION		
<b>MEDIUM DUTY CONSTRUCTION SERVICE BRAKE</b>						
Combination Park and Service Brake	SCL8	SCL852	9630256	LINING ASSY		
			MPS3945	SEAL KIT		
		SCL861	9604874	PIN ASSY RETAINER		
			9630054	PISTON SUB-ASSY		
			9630055	CAP SUB-ASSY SPRING RET		
			9630234	LINING ASSY		
9630905	PISTON					
9640202	LINING ASSY					
<b>HEAVY DUTY MINING HAULAGE SERVICE BRAKES</b>						
Combination Park and Service Brake	HDHC4225	419-9109	9604874	PIN ASSY RETAINER		
			304-7163	KIT PARTS CROSSOVER TUBE		
			304-7192	HDHC4225 PARK, PISTON		
			304-7252	SPRING KIT HDHC		
			304-7255	BRK KIT		
			3107S1189	COLLAR FIN		
			328-7901	LINING KIT		
			A2230E1227	PISTON ASSY		
			A2230E1227B	PISTON ASSY KIT		
			A3196Q1109	TUBE ASSY		
			KIT10135	SEAL KIT		
			9604874	PIN ASSY RETAINER		
		304-7163	KIT PARTS CROSSOVER TUBE			
		306-7159	SEAL KIT			
		3107S1189	COLLAR FIN			
		328-7901	LINING KIT			
		A2230E1227B	PISTON ASSY KIT			
		A3196Q1109	TUBE ASSY			
		9604874	PIN ASSY RETAINER			
		304-7163	KIT PARTS CROSSOVER TUBE			
		304-7286	PISTON KIT			
		304-7287	BRK KIT			
		306-7162	SEAL KIT			
		3107S1189	COLLAR FIN			
		328-7932	LINING KIT			
		A2230E1227	PISTON ASSY			
		A3196Q1109	TUBE ASSY			
		9604874	PIN ASSY RETAINER			
		2000Q1525	LINING KIT			
		304-7164	CROSSOVER TUBE KIT			
		A2230E1227	PISTON ASSY			
		A2230E1227B	PISTON KIT			
		419-9152	HDHC4225	419-9186	9604874	PIN ASSY RETAINER
					304-7163	KIT PARTS CROSSOVER TUBE
					304-7286	PISTON KIT
					304-7287	BRK KIT
306-7162	SEAL KIT					
3107S1189	COLLAR FIN					
328-7932	LINING KIT					
A2230E1227	PISTON ASSY					
A3196Q1109	TUBE ASSY					
9604874	PIN ASSY RETAINER					
2000Q1525	LINING KIT					
304-7164	CROSSOVER TUBE KIT					
A2230E1227	PISTON ASSY					
A2230E1227B	PISTON KIT					
HDHC422515	HDHC4225	HDHC422515	9604874	PIN ASSY RETAINER		
			2000Q1525	LINING KIT		
			304-7164	CROSSOVER TUBE KIT		
			A2230E1227	PISTON ASSY		
			A2230E1227B	PISTON KIT		

### EXPANDER TUBE

<b>INDUSTRIAL SERVICE BRAKE</b>					
Expander Tube Brake	Drum	2-1229-1	328-71-1	LINING KIT	
			397-5	ET & SHIELD ASSY 20	
			59-52-1	FRAME ASSY 20 1/4X5	
		2-1341-1	Drum	598-5	PACK LINING
				397-16	ET & SHIELD ASSY 22x5
				598-1	PACK LINING
		2-1374-1	59-90	FRAME ASSY 22X5	
			397-4	ET & SHIELD ASSY 26x5	
			59-135	FRAME ASSY 26X5	
			598-11	PACK LINING	

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

Hydraulic Control

# HYDRAULICS



## CARLISLE HYDRAULIC CONTROL PRODUCTS

- 110-112 | Standard & Boosted Master Cylinders
- 112 | Booster Benefits
- 113 | Compact Twin Booster
- 114 | Compact Single Booster
- 115 | Midi Twin Booster
- 116 | Tandem Twin Booster
- 117 | Tandem Single Booster
- 118 | Master Cylinder
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- 122 | 1100 Series
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- 124 | Dual Circuit Adjusters
- 125 | Single Circuit Adjusters

Wet Friction

On-HWY Brake Pads

On-HWY Buttons

Park Brakes

Service Brakes

Combo Brakes

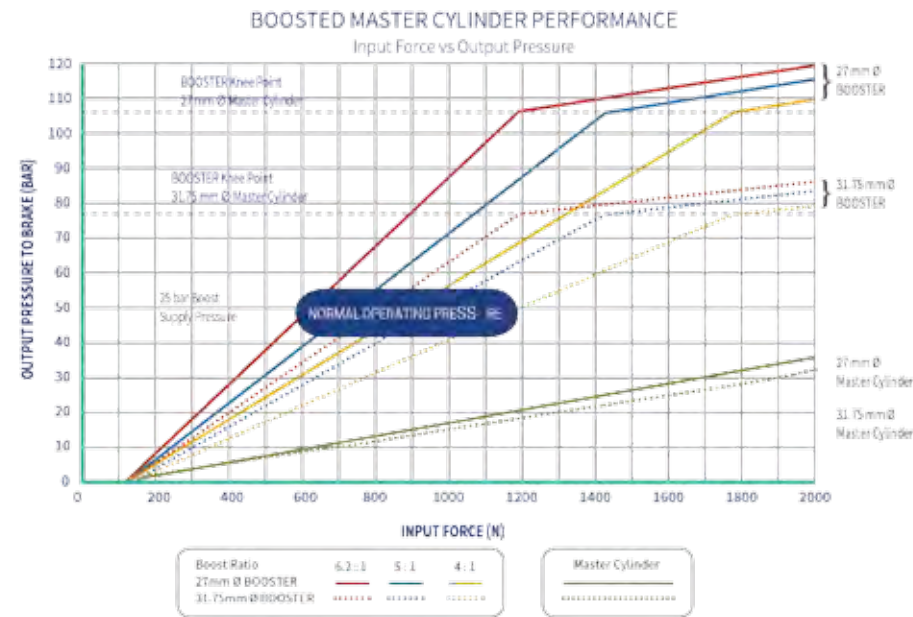
Hydraulic Control

## WHY USE A BOOSTED MASTER CYLINDER (BOOSTER) INSTEAD OF A STANDARD MASTER CYLINDER?

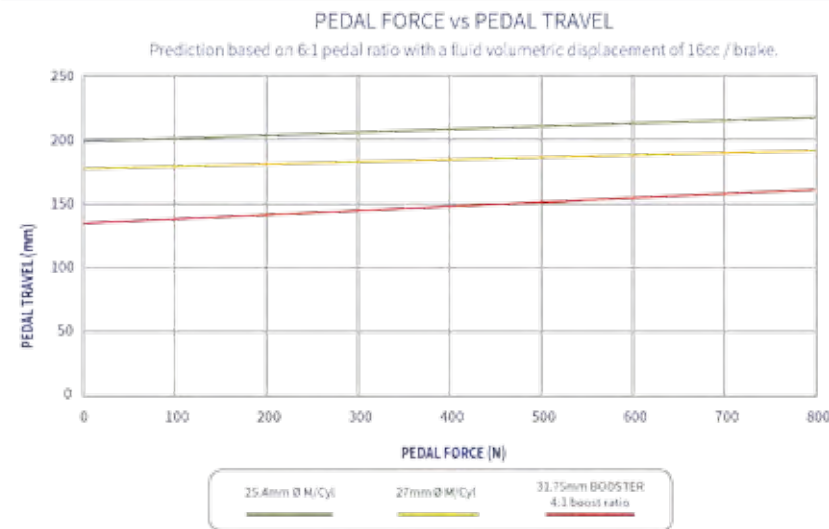
Boosters Provide Higher Output Pressure to the Brake System, Resulting in...

- A significant reduction in pedal effort and pedal travel to achieve the required operating pressure at the brake
- A progressive and controllable braking response offering improved cabin ergonomics and enhanced operator comfort
- A more efficient method of applying the brakes on Off-Highway vehicles

### BOOSTERS require much less input force to achieve Normal Operating Pressure



### To achieve the same Pedal Force a Carlisle BOOSTER requires much less pedal travel than a standard master cylinder



### EXPORT PRODUCT AND TECHNOLOGY TRENDS



MIDI TWIN BOOSTER

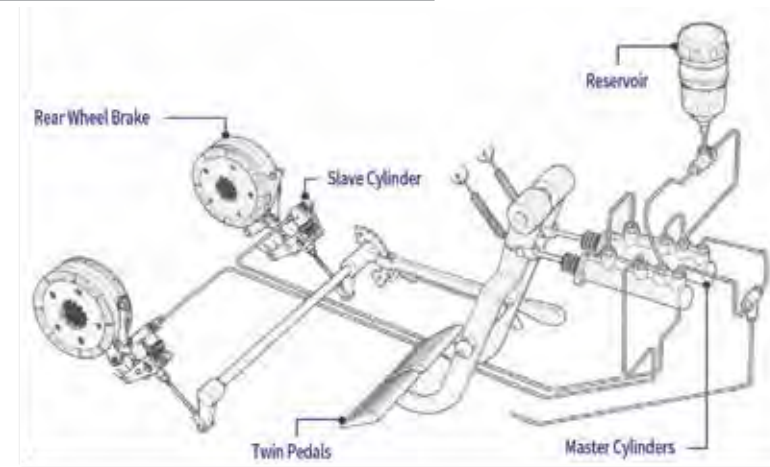


COMPACT TWIN BOOSTER

- Drivers demand 'Luxury Car' performance from brake & clutch systems for Off-Highway vehicles
- Increasing horsepower, speed and weight requirements in Europe & North America have led to:
- Truck legislation imposed on vehicles operating at > 50kph
- Increasing brake running clearance reduces brake drag, resulting in improved fuel efficiency and lower operating costs
- Braking required on all four wheels
- Balanced braking across axles

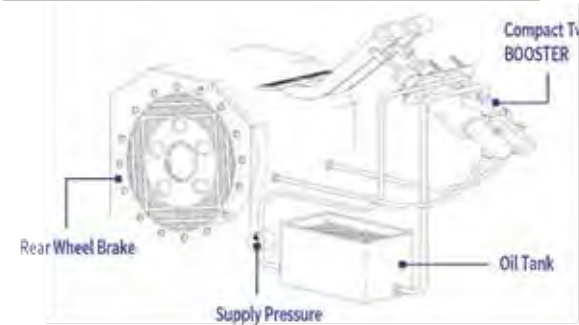
## BRAKE SYSTEM DIAGRAMS

TYPICAL TRACTOR BRAKING SYSTEM

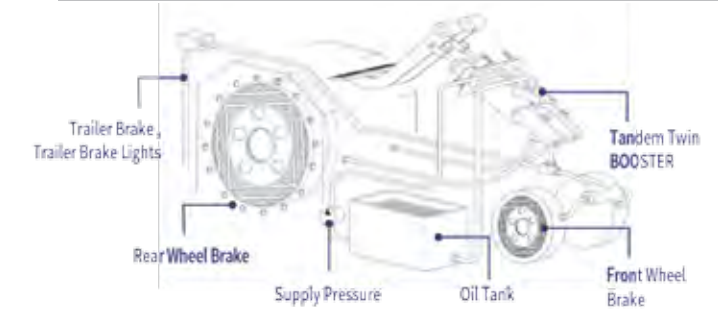


Most tractor brake systems use MINERAL oil, but some use VEGETABLE (Glycol) synthetic fluid as used by passenger cars — it is very important that the seals of either are not mixed.

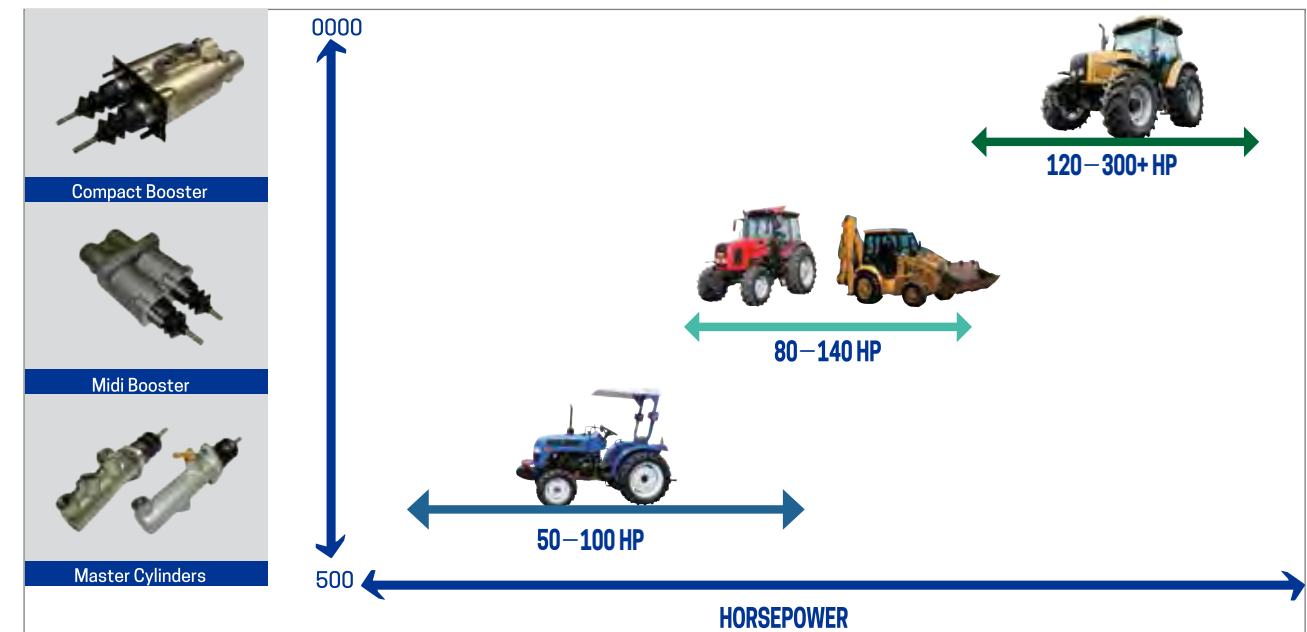
CARLISLE TWIN BOOSTER APPLICATION



CARLISLE TANDEM TWIN BOOSTER APPLICATION



## APPLICATION RANGES





## BENEFITS OF A CARLISLE BOOSTER

Comfort & Safety 

- A wide range of boost ratios and master cylinder diameters can be used to tailor the performance to meet the customer's exact requirements
- Provide a progressive and controllable braking response by optimising the "pedal feel" and improving driver comfort and cabin ergonomics
- Use of **PTFE seal technology** provides high wear resistance and extended durability life. One million cycles achieved with no deterioration of product
- Self-bleed feature allows any air ingress in the master cylinders to be vented to the tank chamber during normal operation
- No additional reservoir required: The master cylinder and BOOSTER use a common oil supply thus preventing the cross contamination of fluids or potential ingress of debris
- Significant reduction in warranty issues
- Closed center BOOSTER design minimizes oil usage
- Uses the existing vehicle power hydraulic system to provide servo assist to the master cylinder
- Patented design for twin or single pedal brake systems
- Significant cost advantage compared to Power Valve products
- Ease of installation — only four hydraulic connections required
- Various mounting plate and push rod options available



COMPACT TWIN BOOSTER



COMPACT SINGLE BOOSTER



MIDI TWIN BOOSTER



TANDEM TWIN BOOSTER



TANDEM SINGLE BOOSTER



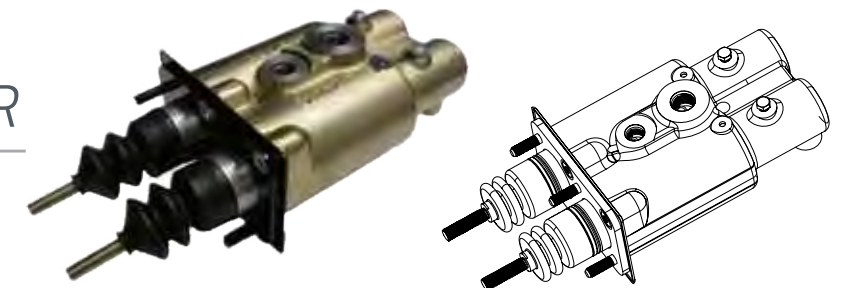
MASTER CYLINDER

# COMPACT TWIN BOOSTER

Patented closed circuit design with integrated master cylinder BOOSTER and reservoir in a single component

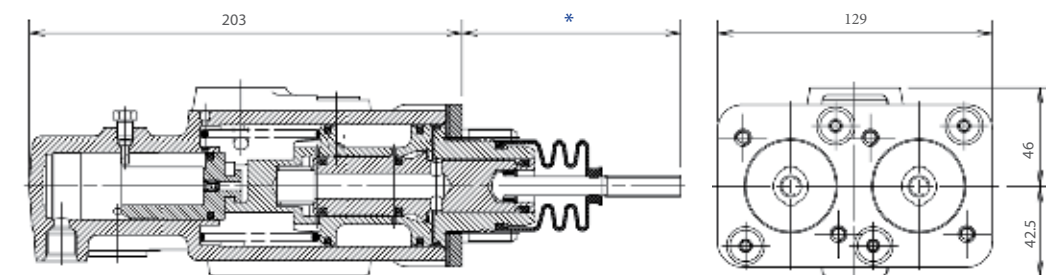
- Patented design for mineral oil twin pedal braking systems providing a boosted, progressive pedal feel
- Generic design enables performance to be easily matched to most agricultural and industrial vehicle applications
- Self-bleed design keeps BOOSTER purged of any ingressed air
- **PTFE seal technology** ensures extended service life
- No reservoir required — uses supply oil for braking systems
- Range of metric or imperial ports — to international standards — available
- Large variety of pushrod lengths and thread sizes available \*
- Clevis options available to suit customer requirements

## COMPACT TWIN BOOSTER



### Specifications

Body Length	Less than 205 mm	Range of Diameters	25.4 mm to 57 mm
Oil	Mineral Oil	Supply Pressure	15 bar to 40 bar
Tested to	1,000,000 Cycles	Minimum Flow Rate	10 L/min
BOOSTER Ratio	2.65, 4, 5 and 6.2:1	Operation Temperature	-30°C to 100°C



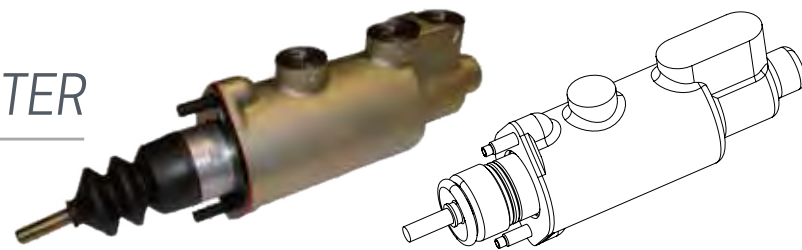
# COMPACT SINGLE BOOSTER

# MIDI TWIN BOOSTER

Patented closed circuit design with integrated master cylinder, BOOSTER and reservoir in a single component

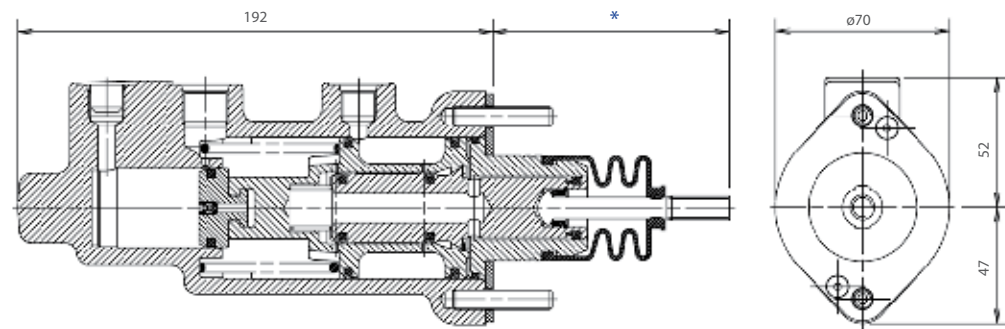
- Patented design for mineral oil single pedal braking systems, providing a boosted, progressive pedal feel
- Ideal for clutch applications
- Generic design enables performance to be easily matched to most agricultural and industrial vehicle applications
- Self-bleed design keeps BOOSTER purged of any ingressed air
- **PTFE seal technology** ensures extended service life
- No reservoir required — uses supply oil for braking or clutch systems
- Range of metric or imperial ports — to international standards — available
- Large variety of pushrod lengths and thread sizes available \*
- Clevis options available to suit customer requirements

## COMPACT SINGLE BOOSTER



### Specifications

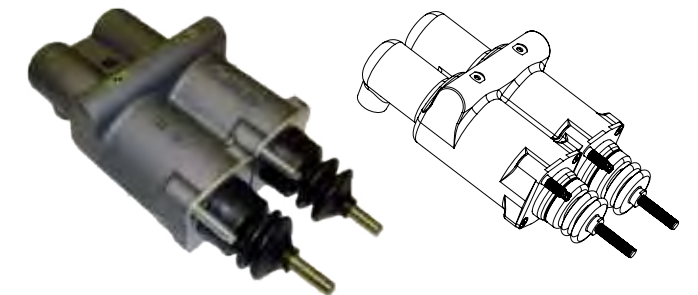
Body Length	Less than 200 mm	Range of Diameters	25.4 mm to 41 mm
Oil	Mineral Oil	Supply Pressure	15 bar to 40 bar
Tested to	1,000,000 Cycles	Minimum Flow Rate	10 L/min
BOOSTER Ratio	2.65, 4, 5 and 6.2:1	Operation Temperature	-30°C to 100°C



Simplified design reduced weight and smaller size give cost advantages over larger BOOSTERS in the Carlisle BOOSTER family

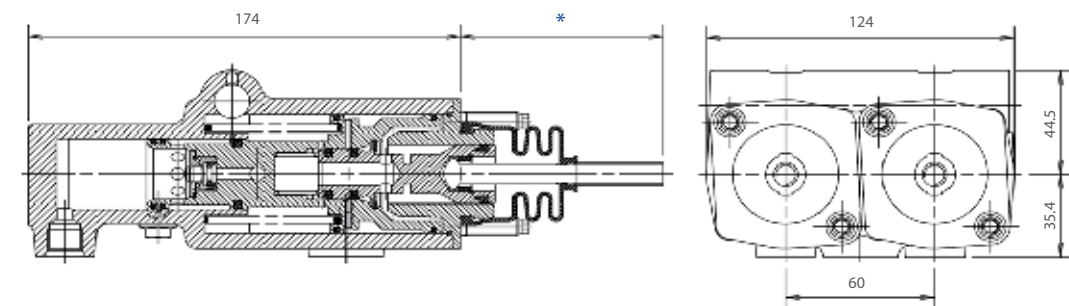
- Patented design for mineral oil twin pedal braking systems providing a boosted, progressive pedal feel
- Generic design enables performance to be easily matched to most agricultural and industrial applications
- Self-bleed design keeps BOOSTER purged of any ingressed air
- **PTFE seal technology** ensures extended service life
- No reservoir required — uses supply oil for braking systems
- Range of metric or imperial ports — to international standards — available
- Large variety of pushrod lengths and thread sizes available \*
- Clevis options available to suit customer requirements

## MIDI TWIN BOOSTER



### Specifications

Body Length	Less than 175 mm	Supply Pressure	15 bar to 40 bar
Oil	Mineral Oil	Minimum Flow Rate	10 L/min
Tested to	1,000,000 Cycles	Operation Temperature	-30°C to 100°C
BOOSTER Ratio	3, 4 and 5:1	Vehicle Horsepower*	80 HP to 130 HP
Range of Diameters	25.4 mm to 30 mm		



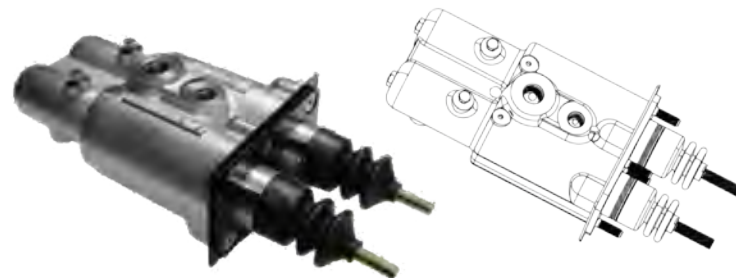
# TANDEM TWIN BOOSTER

## BRAKING CAPABILITIES:

- Pressure Balanced
- Independent
- Dual-circuit
- Designed for twin pedal vehicles with four independent brakes
- Trailer brake option

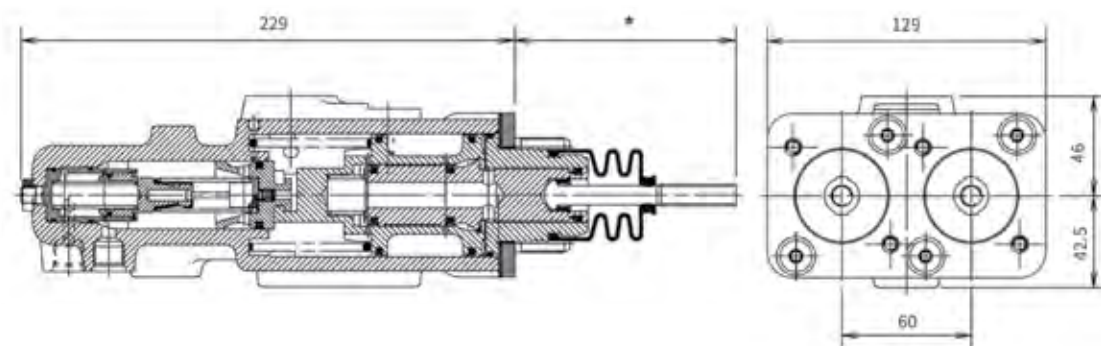
- Patented design for mineral oil twin pedal braking systems providing a boosted, progressive pedal feel
- Generic design enables performance to be easily matched to most agricultural and industrial applications
- Self-bleed design keeps BOOSTER purged of any ingressed air
- **PTFE seal technology** ensures extended service life
- No reservoir required — uses supply oil for braking systems
- Range of metric or imperial ports — to international standards — available
- Large variety of pushrod lengths and thread sizes available \*
- Clevis options available to suit customer requirements

## TANDEM TWIN BOOSTER



### Specifications

Body Length	Less than 230 mm	Range of Diameters	25.4 mm to 35 mm
Oil	Mineral Oil	Supply Pressure	15 bar to 40 bar
Tested to	1,000,000 Cycles	Minimum Flow Rate	10 L/min
BOOSTER Ratio	2.65, 4.5 and 6.1	Operation Temperature	-30°C to 100°C



# TANDEM SINGLE BOOSTER

## BRAKING CAPABILITIES:

- Independent
- Dual-circuit
- Designed for single pedal vehicles with split circuit braking

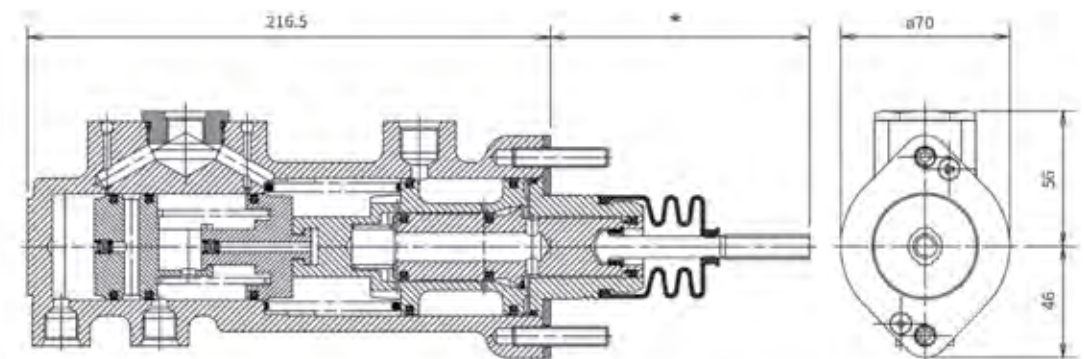
- Patented design for mineral oil single pedal braking systems providing a boosted, progressive pedal feel
- Generic design enables performance to be easily matched to most agricultural and industrial applications
- Self-bleed design keeps BOOSTER purged of any ingressed air
- **PTFE seal technology** ensures extended service life
- No reservoir required — uses supply oil for braking systems
- Range of metric or imperial ports — to international standards — available
- Large variety of pushrod lengths and thread sizes available \*
- Clevis options available to suit customer requirements

## TANDEM SINGLE BOOSTER



### Specifications

Body Length	Less than 220 mm	Range of Diameters	25.4 mm to 44 mm
Oil	Mineral Oil	Supply Pressure	15 bar to 40 bar
Tested to	1,000,000 Cycles	Minimum Flow Rate	10 L/min
BOOSTER Ratio	3, 4 and 5:1	Operation Temperature	-30°C to 100°C



# MASTER CYLINDERS

## FEATURES:

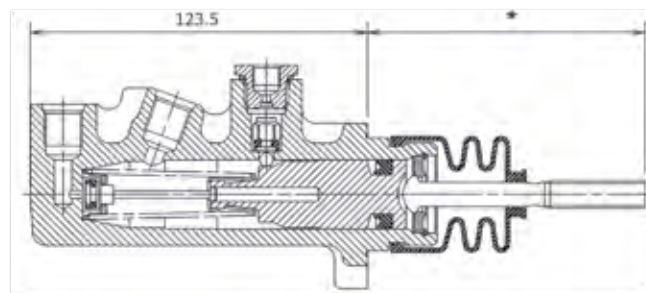
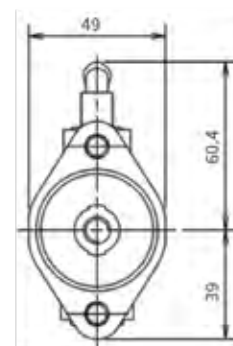
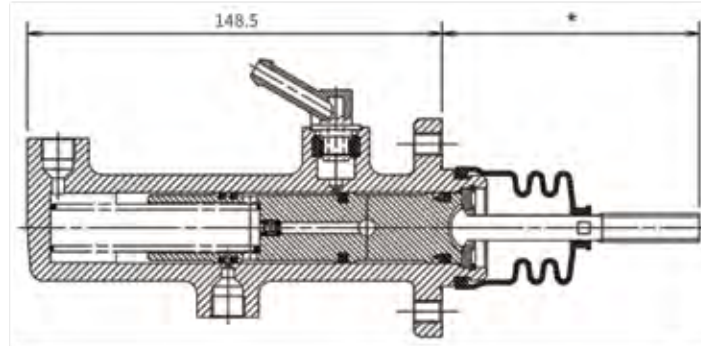
- Designs for single and twin pedal applications
- Twin pedal cylinders feature proven compensation design for dual circuit pressure balance
- New self-bleed design features PTFE sealing for improved life and continuous air expulsion
- Designed to meet a range of operating pressures and temperatures
- Large variety of pushrod lengths and thread sizes \*
- Range of metric or imperial ports — to international standards — available
- Clevis options available to suit customer requirements

## MASTER CYLINDERS



### Specifications

Oil	Mineral and Glycol (DOT3, 4)	Range of Diameters	15.8 mm to 31.75 mm
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	COMPACT TWIN BOOSTER	COMPACT SNGL BOOSTER	MIDI TWIN BOOSTER	TANDEM TWIN BOOSTER	TANDEM SNGL BOOSTER	MASTER CYLINDER
<b>BOOSTER Capability</b>	Integrated	Integrated	Integrated	Integrated	Integrated	Requires separate system
<b>Boost Ratio Available</b>	2.6, 4.0, 5.0 and 6.2:1	2.6, 4.0, 5.0 and 6.2:1	3.2, 4.0 and 5.2:1	2.6, 4.0, 5.0 and 6.2:1	3, 4 and 5:1	Not Applicable
<b>Master Cyl Diameter</b>	27.0, 31.75 and 57.0	31.75, 35.0 and 41.0	25.4, 27.0 and 30.0	35	25.4 and 44	15.8, 19.0, 22.2, 25.4 and 27.0
<b>Master Cyl Stroke</b>	35.0 and 30.0	35	35	35	17.5 / 17.5	35
<b>Master Cyl Displacement Available (cc)</b>	20.0, 27.0 and 76.0	27.0, 33.0 and 45.0	15.1, 17.1 and 21.1	Variable, dependant on Front / Rear requirements	24.3 / 24.3	6.85, 9.91, 13.05, 17.75 and 20.02
<b>Compensation Available (%)</b>	25% to 50% and 100%	N/A	100% only	Variable, dependant on Front / Rear requirements	N/A	N/A
<b>Length mm</b>	202	192	175	230	220	Various
<b>Closed Circuit</b>	✓	✓	✓	✓	✓	✗
<b>Reservoir Required</b>	✗	✗	✗	✗	✗	✓
<b>Closed Center</b>	✓	✓	✓	✓	✓	✗
<b>Simple Installation</b>	✓	✓	✓	✓	✓	✓
<b>Steer Turn Facility</b>	✓	✗	✓	✓	✗	✗
<b>Modular Design</b>	✓	✓	✓	✓	✓	✗
<b>Reduced System Complexity</b>	✓	✓	✓	✓	✓	✗
<b>Self-Bleed</b>	✓	✓	✓	✓	✓	✗
<b>Glycol (DOT4) / Mineral Oil</b>	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral / Glycol (DOT4)

# 1100 SERIES VALVE

# 1100 SERIES VALVE

## DESCRIPTION

The Carlisle single and tandem circuit modulating hydraulic control valves are made of ductile cast iron bodies. The valves are capable of providing modulating output pressures to a maximum 3,500 psi (24,133 kPa).

## FEATURES

- Flow capabilities exceed competitive designs
- Spool design provides smooth modulation at all output pressures
- Externally adjustable to provide precise pressure settings
- Rugged construction for most severe job applications
- Thoroughly tested to ensure superior performance and durability

## APPLICATION

- Hydraulically actuated, single and tandem circuit braking and industrial systems where high quality, precise modulation is required



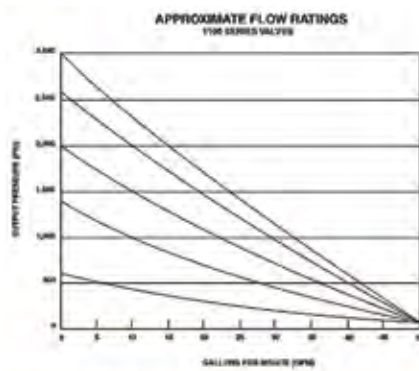
## Options

- Vertical and horizontal treadle actuator with adjustable pedal angle and pedal travel
- Horizontally mounted suspended pedal actuator
- 90° porting orientation intervals for vertically mounted valves
- 180° porting orientation intervals for horizontally mounted treadle valves
- Hydraulic pilot apply
- Pressure-adjustable stoplight switch for mobile applications
- Heavy or medium pedal force selection
- SAE porting
- Staged pressure rise for precise control

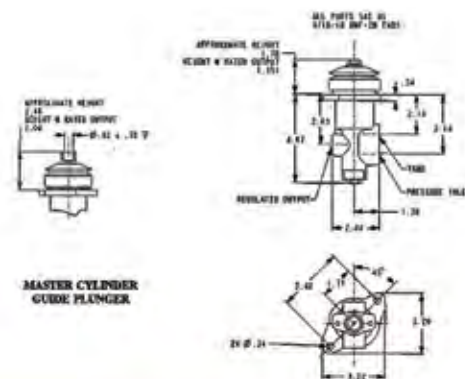
## Specifications

- Body Material: Ductile iron
- Seal Material: Nitroxile® compound
- Maximum Input Pressure: 3,500 psi (24,133 kPa)
- Maximum Output Pressure: 3,500 psi (24,133 kPa)

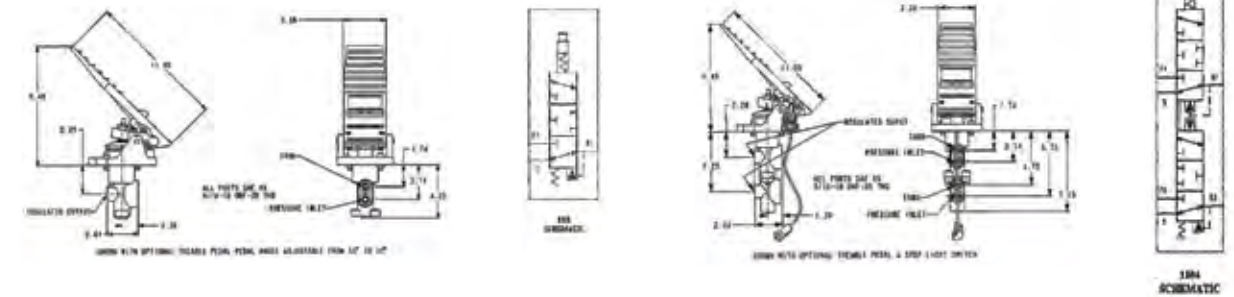
## DRAWINGS



Input / Output Performance Curve



Master Cylinder Guide Plunger

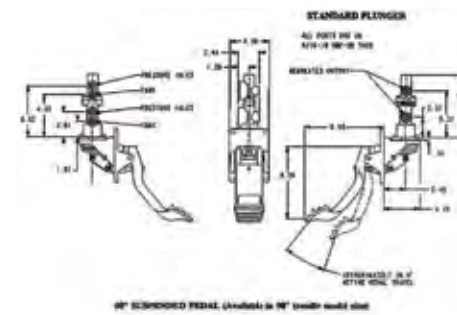


1101 Valve Series

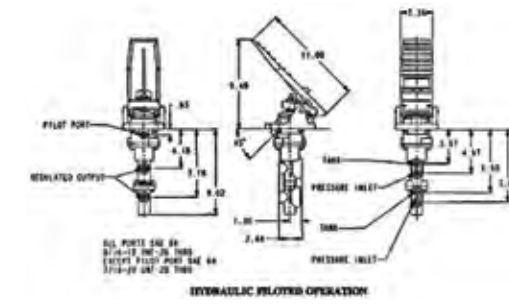
1101 Valve Schematic

1104 Valve Series

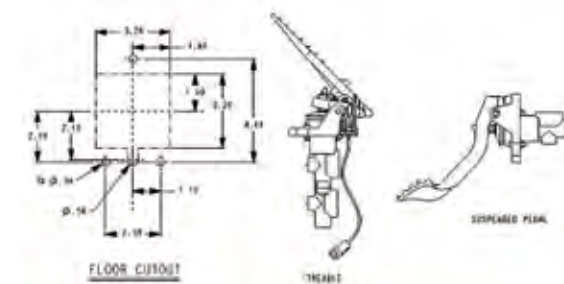
1104 Valve Schematic



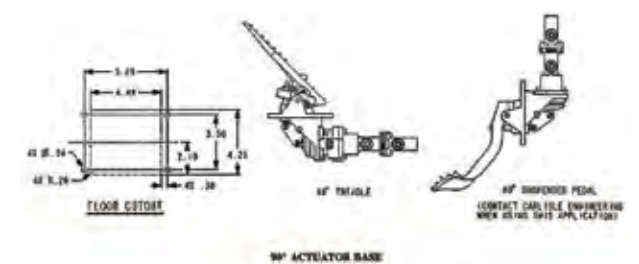
90° Suspended Pedal



Hydraulic-Piloted Operation



Standard Actuator Base Floor Cutout



90° Actuator Base Floor Cutout

# 2100 SERIES VALVE

# 2100 SERIES VALVE

## DESCRIPTION

The Carlisle single circuit (2101) and parallel (2102) circuit, modulating hydraulic control valves are capable of providing modulating output pressures in a range of 600 psi - 3,500 psi (4,137 kPa to 24,133 kPa).

## FEATURES

- Spool sleeve design allows for easy serviceability and reduced maintenance costs
- Spool design provides smooth modulation at all output pressures
- Valve is externally adjustable to provide precise pressure settings
- Large supply and return ports provide high flow capabilities
- Standard pilot apply (optional on the 2101 series)
- Rugged construction and thorough testing ensure superior performance
- Pedal angle fully adjustable
- Dampened spools for stable noise control



## APPLICATION

- Hydraulically actuated, single and tandem circuit braking and industrial systems where high quality, precise modulation is required

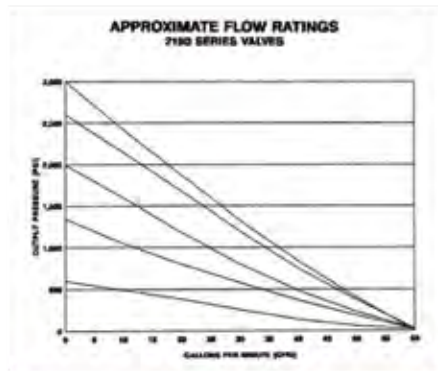
## Options

- Treadle actuator with adjustable pedal angle
- Circuit staging to provide non-linear output pressure
- Unequal output pressure on "B1" and "B2" (2102 series)
- Adjustable stoplight switch
- Available with or without pedal/actuator, or lever actuator with friction detent option (2101 series)
- Firewall mounted, suspended pedal
- Dual pilots for separate circuit control
- Externally adjustable differential pressure warning switch
- SAE or metric ports

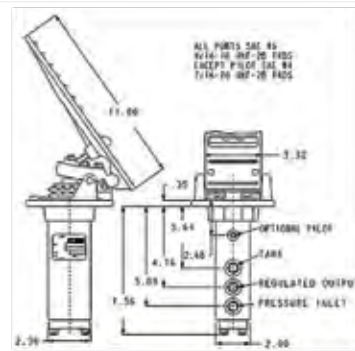
## Specifications

- Body Material: High strength aluminum
- Seal Material: Nitroxile® compound
- Maximum Input Pressure: 3,500 psi (24,133 kPa)
- Maximum Output Pressure: 600 psi - 3,500 psi (4,137kPa - 24,133 kPa)

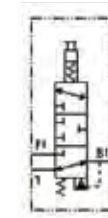
## DRAWINGS



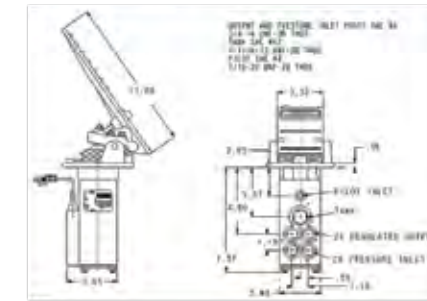
Input / Output Performance Curve



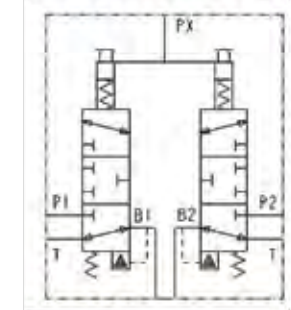
2101 Valve Series



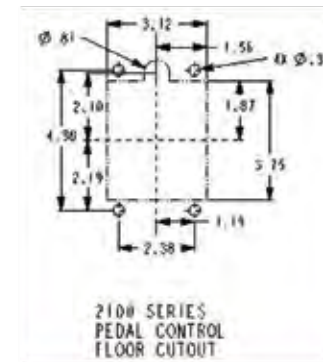
2101 Valve Schematic



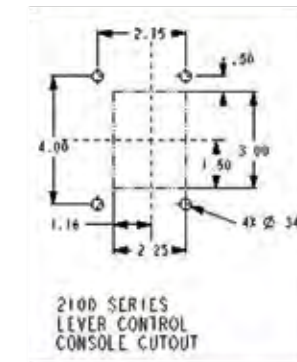
2102 Valve Series



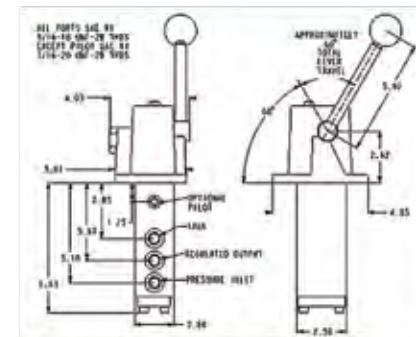
2102 Valve Schematic



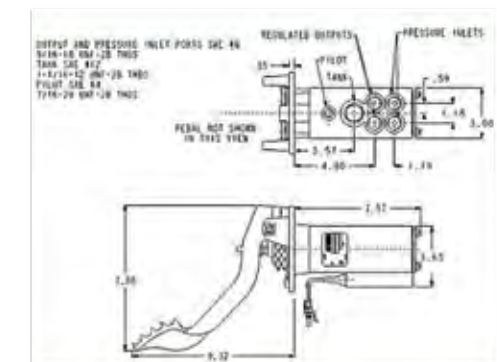
2100 Series Pedal Control Floor Cutout



2100 Series Lever Control Console Cutout



2100 Lever Valve Series



2100 Suspended Pedal Series

# DUAL CIRCUIT ADJUSTER

# SINGLE CIRCUIT ADJUSTER

Contact Carlisle for information about other available displacements.

Contact Carlisle for information about other available displacements.

## DESCRIPTION

The automatic adjusters are used for in-line adjustment of high displacement hydraulic brakes. The adjuster functions to provide running clearance at each brake application. In drum brake applications the adjuster also compensates for clearance reduction due to thermal contraction of the brake.

## DESCRIPTION

The automatic adjusters are used for in-line adjustment of high displacement hydraulic brakes. The adjuster functions to provide running clearance at each brake application. In drum brake applications, the adjuster also compensates for clearance reduction due to thermal contraction of the brake.

### FEATURES

- Rugged cast iron construction for lasting performance and durability
- Adjuster assembly can be easily retrofit to an existing hydraulic brake system
- Available in both single or dual circuit configurations
- Capacities range from 3.5 to 15.0 cu in
- Piston replacement kits are available

### APPLICATION

- Mining Applications intended for wet or dry hydraulic brake systems

### FEATURES

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- Adjuster assembly can be easily retrofit to an existing hydraulic brake system
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### APPLICATION

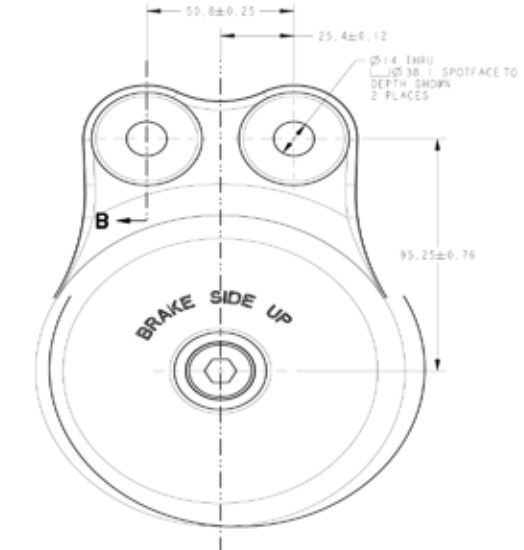
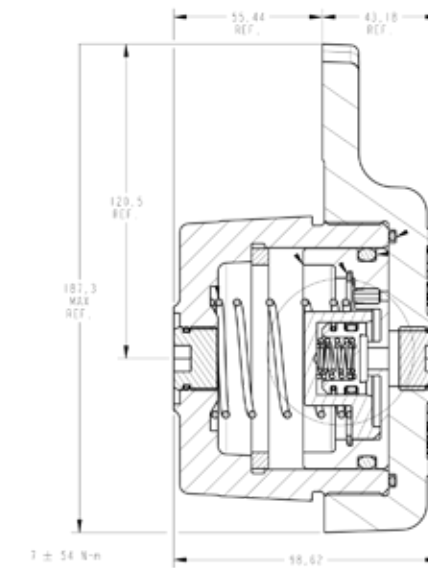
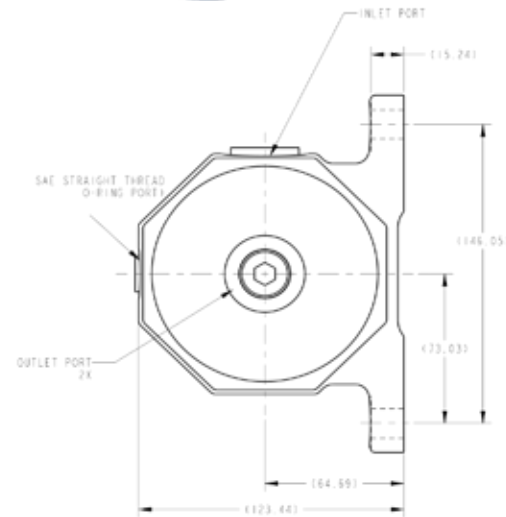
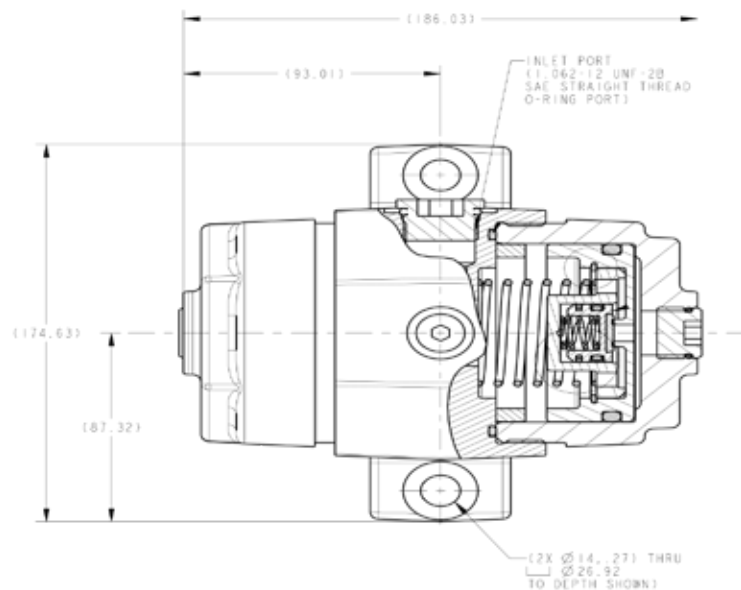
- Mining Applications intended for wet or dry hydraulic brake systems

## DUAL CIRCUIT ADJUSTER

## SINGLE CIRCUIT ADJUSTER

Capacity		A	
IN <sup>3</sup>	CM <sup>3</sup>	IN	CM
3.5-3.5	57-57	6.8	173
6.0-6.0	98-98	7.3	185
10.0-10.0	164-164	8.2	208
12.0-12.0	197-197	8.3	211
15.7-15.7	257-257	9.7	246

Capacity		A	
IN <sup>3</sup>	CM <sup>3</sup>	IN	CM
3.5	57	3.7	94
6.0	98	3.7	94
10.0	164	3.7	94
16.0	262	5.2	132
19.0	311	12.4	315



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**VISIT: [www.CarlisleCBF.com](http://www.CarlisleCBF.com)**

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