

FUTURE-PROOF VEHICLE REPAIR: ADAPTIVE SUSPENSION SHOCKS & STRUTS



MONROE INTELLIGENT SLISPENSION



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Be ready for the road ahead with Monroe - Original equipment quality Monroe® Intelligent Suspension RideSense™ electronic dampers

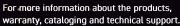
Now available for dozens of popular vehicle models

Adaptive, or semi-active, suspensions have become a popular choice of millions of vehicle buyers. Unlike passive suspensions, which utilize mechanical shock absorbers and springs to control suspension movement, adaptive suspensions feature electronic dampers that adjust a vehicle's ride and handling characteristics based on driver preference and changes in the driving environment.

Many popular passenger vehicle brands – Audi, BMW, Ford, Infiniti, Land Rover, Mercedes-Benz, Nissan, Renault, Seat, Skoda, Toyota, Volkswagen, and Volvo – offer models equipped with adaptive suspensions from the Monroe® Intelligent Suspension product portfolio. These factory-installed systems are often marketed under the vehicle manufacturer's suspension brand, such as Audi's Drive Select System, BMW's Variable Damper Control and Adaptive M suspensions, Infiniti's Digital Dynamic Suspension, Seat's Dynamic Chassis Control, and Volvo's Four-C (Continuously Controlled Chassis Concept) – but they were designed and manufactured with the help of Monroe engineers.







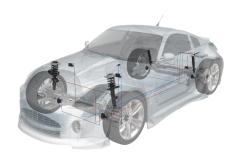






The design behind the ride.

What each of these models have in common is a Monroe Intelligent Suspension technology known as CVSAe (Continuously Variable Semi-Active). This system enables drivers to switch on-demand between different driving modes ranging from comfortable and refined to sporty. CVSAe technology and other Monroe Intelligent Suspension solutions have helped transform the driving experience for an entire generation of vehicle owners.



Now available for the aftermarket

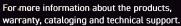
The benefits of adaptive suspension technology are obvious. But what happens when replacement dampers are needed for these sophisticated electronic suspensions? Do owners have to return to their dealerships for more extensive, and costly, repairs?

All good questions. Here's an answer that might surprise you:

Monroe, the manufacturer of Monroe Intelligent Suspension products for the original equipment market, now offers a broad range of premium-quality adaptive shock absorbers for the replacement market. These shocks – marketed under the Monroe Intelligent Suspension RideSense name – feature the same technology as the original equipment electronic shocks found on each of dozens of popular vehicle models.













Plug-and-play repair

Available through the same leading parts and service providers that carry and install Monroe Shocks & Struts passive shock absorbers, Monroe Intelligent Suspension RideSense electronic shocks provide seamless, "plug-and-play" integration with the corresponding vehicle's Monroe Intelligent Suspension electronic control unit. This ECU manages a variety of sensor inputs to adapt the shocks' damping characteristics to driver preference and changing road conditions. This process occurs in as little as 10 milliseconds, providing exceptional ride quality in a full range of driving situations.

Following the installation of new Monroe Intelligent Suspension RideSense shocks, drivers can count on their adaptive suspensions to perform much as they did when their vehicles were brand new. But, as with any shock replacement, Monroe Intelligent Suspension RideSense electronic shocks should always be installed in pairs to ensure original equipment (OE) style ride and handling performance.



Durability Guaranteed: 5-year warranty*

When it comes to choosing the right shocks and struts for replacement, durability is crucial. That's why we offer an industry-leading 5-year warranty on all qualifying Monroe products.

We're committed to providing you with durable and reliable shock absorbers that will keep your clients' vehicle running smoothly for years to come. Each Monroe shock absorber and strut is engineered and manufactured to contain unique features that reduce leakages to make shocks last longer.

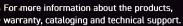
Choosing Monroe isn't just about a product; it's about securing your future. Our dedicated product teams are committed to maintaining our #1 marketing-leading



position**. Our strategic investments guarantee that we continue to provide the most comprehensive, durable and safe range of shocks & struts, mounting kits, protection kits and springs. Backed by Monroe's best-in-class 5-year warranty, you're not just getting a product; you're gaining peace of mind, knowing that you're equipped to handle any vehicle that comes your way.

Choose quality that endures and be ready for the road ahead. Your journey to durable and safe shock & struts replacements starts with Monroe.











MONROE IS THE OFFICIAL INTELLIGENT SUSPENSION SUPPLIER FOR MCLAREN **AUTOMOTIVE**

A dynamic partnership between industry innovators, McLaren Automotive and Monroe Intelligent Suspension are redefining automotive performance and precision.



With over a decade of shared history, together we are uniting cutting-edge technology with unparalleled expertise to set new benchmarks in driving excellence.

Coming together in 2011

Monroe Intelligent Suspension's partnership with McLaren builds on 12 years of collaboration, originating with its introduction in the McLaren 12C. Since then, both organizations have worked to develop technologies that continue to revolutionize the suspension category.

Announcing our partnership

As Official Intelligent Suspension Supplier of McLaren, our CVSA2 and Kinetic systems are featured in McLaren's iconic models, including the 540C, 650S, Senna, Speedtail and P1. Our partnership forms a foundation for continued innovation, driving us toward new and exciting horizons.



Introducing the 750S

Defined by the relentless pursuit of lightness, the new McLaren 750S features the third generation of McLaren's Proactive Chassis Control System, with our Kinetic system as its centerpiece.

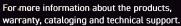
Anticipating the road ahead

Monroe Intelligent Suspension technologies plays a vital role in McLaren's ability to deliver a superior driving experience. Our partnership has helped ensure that they remain the global benchmark for precision and performance, and we are committed to upholding that standard going forward.

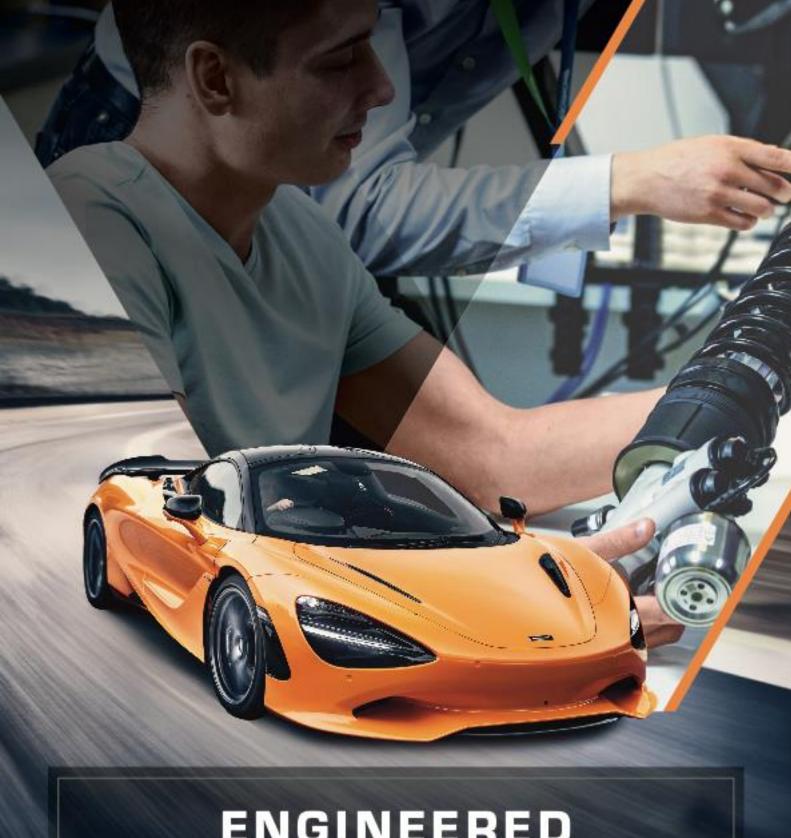


INTELLIGENT SUSPENSION









ENGINEERED EXHILARATION







Extensive OE pedigree for passive and electronic suspension

Audi A1 - A3 - A4 - A5 - A6 - A6L - A7 - Q3 - Q5 - TT BAIC Motor Cherokee - D60 - Shenbao - Shenbao D50 - Shenbao D70 BMW 1-series - 2-series - 3-series - 4-series - X3- X4 BPW Axle for trailers Buick Lacrosse - Park Avenue - Regal Cadillac ATS-L - XTS Chery Tiggo Chevrolet 400 - Apache - Chevy - Enjoy - Malibu - Sail - Sail-Uva - Spark Chrysler Grand Cherokee - Grand Voyager - Valiant 4 Citroën 12V - 13V - Ami 8 - C2 - C3 - Elysee - Fukang - Pluriel Claas Agriculture CNH Agriculture and construction - CCM - APH Dacia Duster - Logan - Logan MCV - Logan Pick-up - Logan Stepway -Logan SUV - Logan Wagon - New Logan - New Logan Stepway - Sandero Daf Trucks CF - LF -XF Daimler Trucks Actros - Arocs Datsun Go Dennis Dart - Javelin - Niche market truck OEM - Rseries - Rapier - Sabre - Specialty Trucks - Trident 2 Fiat 125 - 128 - 133 - 600 - Ducato - Duna - Fiorino - Multipla - Panda - Regata - Uno Foden Alfa series Ford B-MAX - Bantam LCV - C-MAX - Classic -Commodore - Ecosport - Escort - Fairlane - Falcon - Fiesta - Fiesta Connected - Figo - Focus - Focus C-MAX - Focus RS - Focus ST - Fusion - Galaxy - Kuga - Mondeo - Orion - Ranger - S-MAX - Sierra -Territory - Transit - Transit Connect GAZ Gazon Next Hendrickson Axle for trailers and OEMs Hyundai ix25 Infinit G Coupé Q50 Q60 ISRI Seat supplier Isuzu KB Iveco Massif Jaguar E-PACE SUV - I-PACE SUV Land Rover Defender - Freelander Leyland Trucks CF - LF Li Auto Li L7 Lynk & Co 09 Mahindra Maximo - Scorpio - Xylo - Xylo Pick Up Mazda 2 - 3 - 5 - Bongo Friendee - CX-5 McLaren Automotive 12C - 640C - 650S -750S- Senna - Speedtail - P1 Mercedes-Benz Actros - C-Class - CLS - CLS AMG - E coupé - E-Class - E-Class AMG - E-Class Coupé - G-Class - SLK - SLK AMG - Sprinter - Unimog Mercedes-AMG C63SE - SL Mercedes-Benz (EvoBus) CapacityPlus - Citaro - Tourismo MG Rover Rover TF Nissan Almera - Almera Tino - Alteon - Bluebird - Cabstar - Evalia - F91 - Logan - Micra - Navara -Note - NV200 - NV200-Evalia - Pathfinder - Primera - Pulsar - Pulsar (Sport) - Qashqai - Sunny - Skyline - Terrano - X-Trail OPEL Agila - Astra - Corsa - Insignia - Zafira Peugeot 307 - 404 - 504 - 505 - 508 -1007 - 3008 - 5008 Polestar Polestar 2 Electric Performance Fastback Renault 9 - 11 - 12 - 18 - 19 -Clio - Clio LAC - Espace - Espace Concept - Express - Fuego - Grand Scenic - Kangoo - Megane -Megane Break - Scenic - Symbol - Talisman - Torino - Trafic - Twingo Renault Trucks C - D - K - Kerax - Magnum - Midlum - Premium - T Roewe 950 RVI Premium/Magnum - Midlum - Mascot -Kerax Saab 95 Scania Galaxy - G, P, R & T, R & P Series Seat Alhambra - Altea - Arosa - Cordoba -Exeo - Ibiza - Leon - Toledo Setra (EvoBus) S415 - S416 - S417 - S418 Skoda Fabia - Octavia -Roomster - Snowman - Superb - Yeti Suzuki Ciaz - Ertiga - Gypsy - Ignis - Omni - Ritz - Splash - Swift - Swift Dzire - Swift Sport - YN2 GTI TATA Indica - Indigo CS - Manza - Vista - Zest Toyota Camry -Conquest - Corolla - Etios - GR Supra Sports Coupe - HiAce Minibus - Hilux - Hilux LCV -Liva Vauxhall Agila - Astra - Corsa - Insignia - Zafira Volvo C30 - C70 - S40 - S60 - S60R - S80 - S90 - V40 - V40CC - V50 - V60 - V70 - V90 - V70R - XC40 - XC60 - XC70 - XC90 Volvo Trucks FE - FH -FL - FM - KERAX - Midlum - VM VOLKSWAGEN Amarok - Bora - Bora Sportline - Caddy - Carat -Crafter - Eos - Golf - ID.4 - Jetta - LT3 - Lupo - Multivan - Passat - Passat CC - Pointer - Polo - Polo Crossover - Polo GTI - Sagitta - Scirocco - Sharan - T5 - Tiguan - Touareg - Touran - Transporter -Up ZEEKR 001 Zetor Agricultural



NEW OE TECHNOLOGY FROM MONROE: KINETIC® X: Revolutionizing Vehicle Dynamics

Monroe® Intelligent Suspension announces the serial production of Monroe Intelligent Suspension Kinetic® X system. Introduced in several of the best performance vehicles in the world, Kinetic X is, a revolutionary suspension technology that replaces conventional mechanical anti-roll bars through a hydraulic interconnection of a vehicle's four dampers for precise control of damping and roll and pitch motions.



Kinetic X, in fact, adds pitch control to the existing damping and roll control capabilities of the successful Kinetic H2 system. The Kinetic H2 system was the first suspension system introduced by Monroe, offering roll control, and eliminating the need for a mechanical roll bar. By adding pitch control, the Kinetic X system further raises handling, safety and ride experience to levels never achieved before- by brining pitch movements of the vehicle to a standstill.

Exhilaration, precision, and comfort for drivers

KINETIC® X makes a heavy SUV feel like an agile sports car with a new world of driver and passenger comfort. The system maximizes tire-to-road contact, keeping vehicles flat to the road during dynamic driving conditions like cornering, reducing nosedive when braking and squat movement when accelerating. Besides excellent dynamics and agility, vehicles with KINETIC® X suspension boast enhanced safety features: higher levels of roll and pitch stability and remarkably precise steering, thereby instilling a sense of security and natural responsiveness for drivers.



High wheel articulation and better wheel load distribution give the car more stability and much higher traction on rough terrain. The system's ability to completely disconnect the roll stiffness of the system allows the wheels to travel independently to maintain contact with the ground even in the most extreme conditions. Overcoming challenging obstacles is all in a day's work for this suspension system.



For more information about the products, warranty, cataloging and technical support.







Not only is the ride experience exhilarating, it's also incredibly smooth and comfortable. Maximally improved road isolation lowers levels of noise, vibration, and harshness (NVH). Electronic independent rebound and compression control inside the 2-valve electronic CVSA2 damper provides premium road filtering, body motion control and a wide tuning range. The system can also switch off roll-stiffness in straight-line driving to improve comfort in all road conditions.

Powerful potential for OEMs

The KINETIC® X system is used in the world's most demanding, advanced vehicles. Its super high-tech configuration provides multiple advantages for engineers and manufacturers. The KINETIC® portfolio builds on a modular hardware architecture comprising lightweight aluminum damper modules, hydraulic manifolds, and power packs. Vehicle manufacturers can apply three levels of functionality: CVSA2 damping, CVSA2 damping with KINETIC® H roll control or CVSA2 with KINETIC® X roll and pitch control. Its adaptability and tunability are visible through a variety of hardware elements: accumulator tuning and damper sizing; damping control of the electronic valve configurations; and control software.

Widely adaptable, KINETIC® X features integration capabilities with different lift and air springs systems. The same technology can be tuned to sports cars, SUVs, SAVs, and most suspension architectures; the system design features flexible packaging and low damper dead length to optimize corner packaging space. To top off it, the cost of KINETIC® systems compares very favorably to fully active systems.

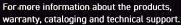


Energy efficient

Several factors contribute to the system's energy efficiency. First, the integrated aluminum design of KINETIC® dampers and absence of anti-roll bars make this a class-leading lightweight technology for performance cars and SUVs. Next, energy consumption is low. KINETIC® requires little power to change system pressure relevant to the selected drive mode; the roll moment of the KINETIC® system is substantially higher than other active roll control systems on the market; and it has lower average and peak energy demands than other active suspension systems. These attributes translate into extended electric range for BEV's, making the system an ideal solution for heavy electric vehicles.









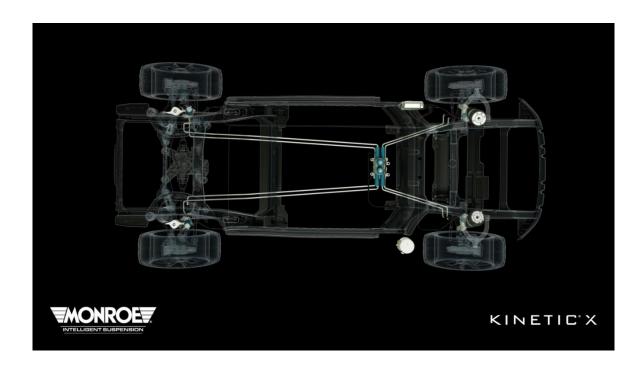
Engineering Excellence and Global Reach

Monroe Intelligent Suspension produces KINETIC®, together with CVSA2 and CVSAe dampers at its plants in Europe and offer shipping solutions to manufacturers worldwide. Collaborating extensively with OEMs, Monroe Intelligent Solutions leverages its full engineering force to seamlessly integrate suspension solution systems into the new automotive platforms. Its dedicated team works hand in hand with manufacturers to ensure tailored integration and final tuning of this cutting-edge suspension system.

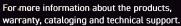
Conclusion

With its precision handling, enhanced safety features, unparalleled comfort, and optimized production profile, Monroe Intelligent Suspension System KINETIC® X stands as the unequivocal choice for high-performance vehicles both on and off-road, catering to premium brands seeking to redefine driving experiences.

To learn more about Kinetic technology and Tenneco's complete Monroe Intelligent Suspension portfolio, visit www.monroeintelligentsuspension.com.









NEW WARRANTY.

DO THE COMPLETE JOB, GET THE 5 YEAR WARRANTY.



Enjoy the assurance of a **5 year warranty** on any qualifying Monroe product when completing a full replacement of shocks and struts in pairs, including protection and if applicable mounting kits. **5*** Years of world-class comfort, control and safety. **5** Years of superior confidence.

At Monroe, we're investing more than ever in our business... and your satisfaction. Learn more today at www.monroe.com