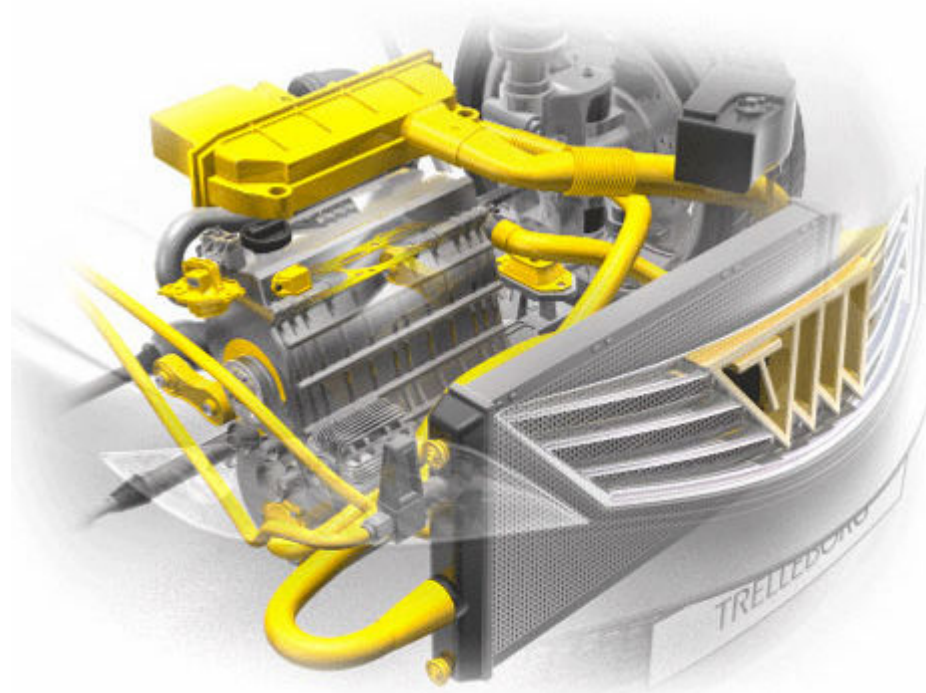


Powertrain and Driveline





Engine Mounting Systems

Engine mounts come in many configurations depending on the particular problem to be solved, the type of powertrain, the power of the vehicle and the space envelope provided. We supply a complete range of existing and new generation engine mounting solutions designed in-house to meet the bespoke requirements of our global automotive clientele.

Trelleborg Automotive has global design facilities offering conventional and active mounting systems.



Engine Mounts



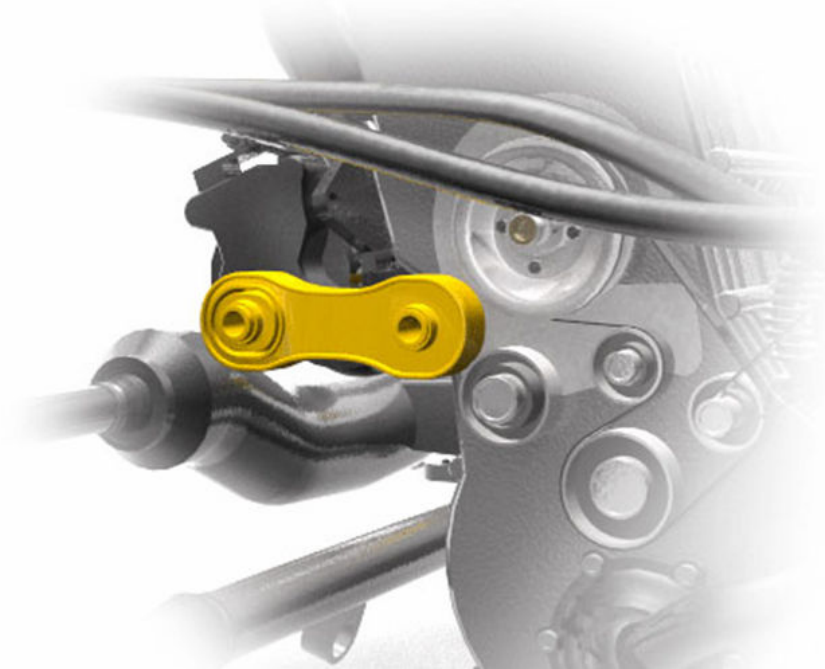
Powertrain and Driveline

Torque Roll Restrictor

Most engines these days are mounted transversely. In these instances it is necessary to use a roll restrictor in addition to the engine mounts in order to cushion the impact of the torque. When engine load is transferred the engine can adopt a rolling movement and the torque restrictor limits this movement. As a secondary but equally important function they help to isolate the vehicle occupants from vibration caused by the acceleration, deceleration and idling of the engine.



Torque Roll Restrictor



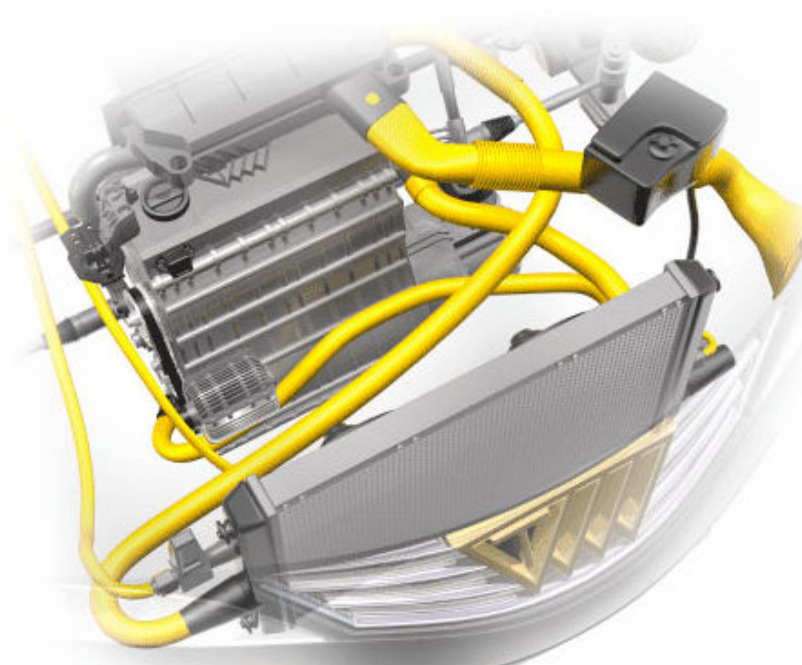
Powertrain and Driveline

Engine Cooling & Thermal Management

Most of the energy in gasoline is converted into heat. The primary job of the cooling system is to keep the engine from overheating by transferring this heat into the air, but the cooling system also has several other important jobs. A car engine runs best at a fairly high temperature. When the engine is cold, components wear out faster, and the engine is less efficient and emits more pollution. So another important job of the cooling system is to allow the engine to heat up as quickly as possible, and then to keep the engine at a constant temperature. We produce a complete range of rubber and plastic hose designed to meet customer demands for burst integrity and ensure optimum performance. In addition we design and manufacture a range of complementary products such as degassing bottles, water tanks, flow regulators and connectors.



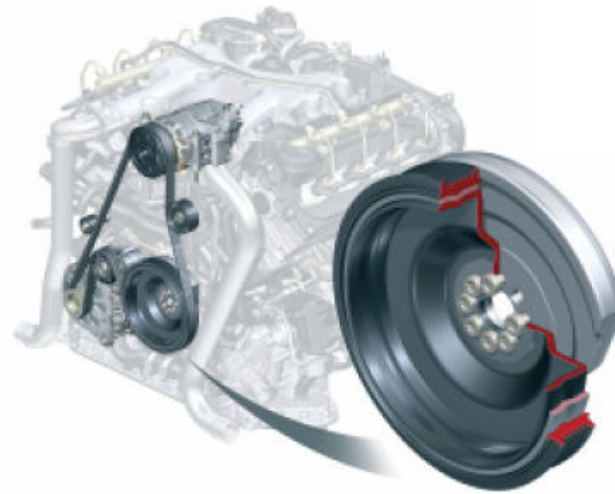
Engine Cooling
Hose





TVD

**Torsional
Vibration
Damper**



Chassis and Suspension



Chassis and Suspension

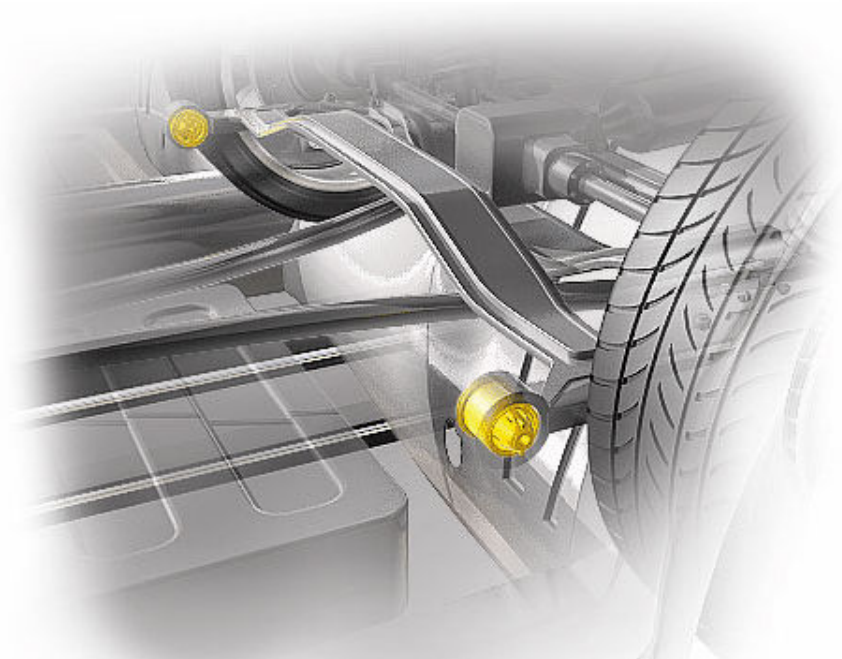
Trailing Arm Bush

The suspension system forms the link between the car body and the road and must ensure optimum driving safety. Aside from guiding the car forward it must be able to provide maximum isolation from tyre and road noise. Multi link suspensions are becoming increasingly common. Rubber to metal bonded bushings are used as joints between the actual links and the body. These elastic joints help to reduce tyre and road noise and improve vehicle ride and handling. Rubber bushings provide a durable and cost efficient solution.

We can also design PU and friction free rubber bushings.



Trailing Arm Bush

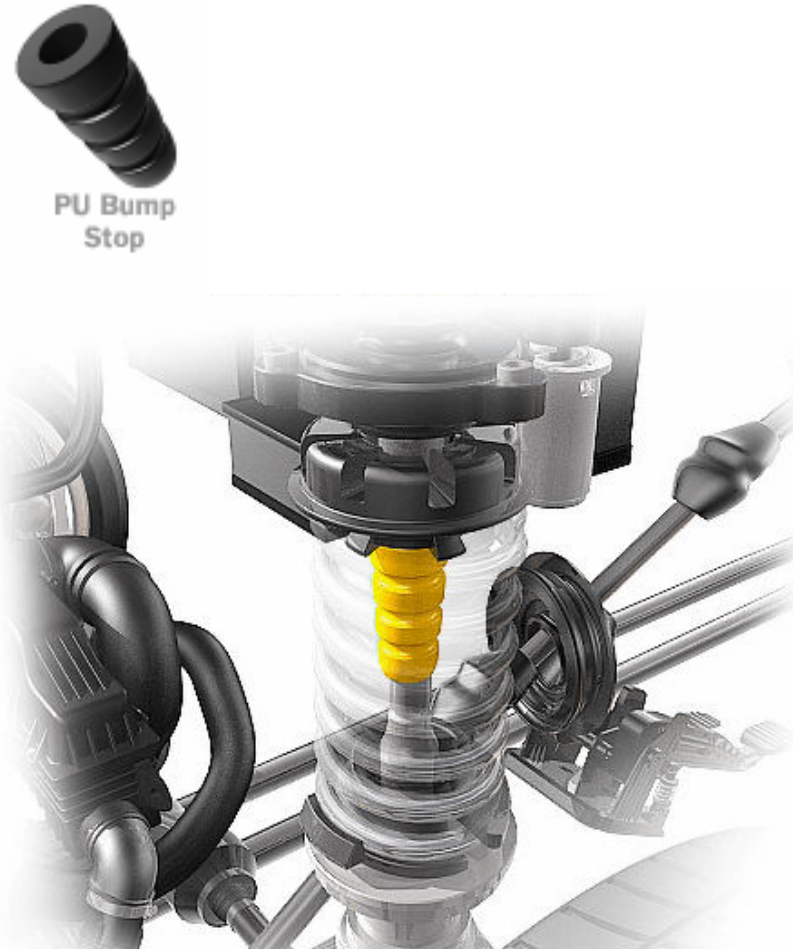


Chassis and Suspension

PU Bump Stop

Polyurethane elastomers are a useful and cost effective alternative to rubber in several applications. Elastomeric properties are determined by the material mix. Polyurethane can offer strength, rigidity, softness and flexibility. PU can perform better than rubber in terms of abrasion resistance and the injection moulding process makes the component easier to shape.

Its true strength lies in its damping abilities, absorbing and isolating extreme shock, noise and vibration. Trelleborg Automotive uses PU materials for bushing and bump stop applications.



Chassis and Suspension



Anti Roll Bar
Bushing

Anti Roll Bar Bushing

Anti roll bars improve vehicle roll performance by reducing the roll angle during cornering and other manoeuvres. They provide stability and comfort. Stabiliser mounts attach the bar to the vehicle body. They need to be connected as stiffly as possible but also allowing the rod to move. Although movement is desirable it creates friction and subsequently noise. Trelleborg Automotive's portfolio of solutions is designed to provide damping, freedom of movement and reduce friction related noise. Recent innovations include friction free or slippery rubber.



Chassis and Suspension

Subframe Bush

Subframe bushes connect the subframe structure to the vehicle body. They are designed to isolate the body from the structure borne noise and vibration which is transmitted by the engine. They are essential for driver and passenger comfort. As with other applications the bushing needs to be designed so that it is softer in the axial direction and stiffer in the longitudinal and lateral direction. Trelleborg Automotive works closely with its global customer base to ensure the optimal solution every time.



Subframe Bush



Chassis and Suspension



Top Strut
Mount



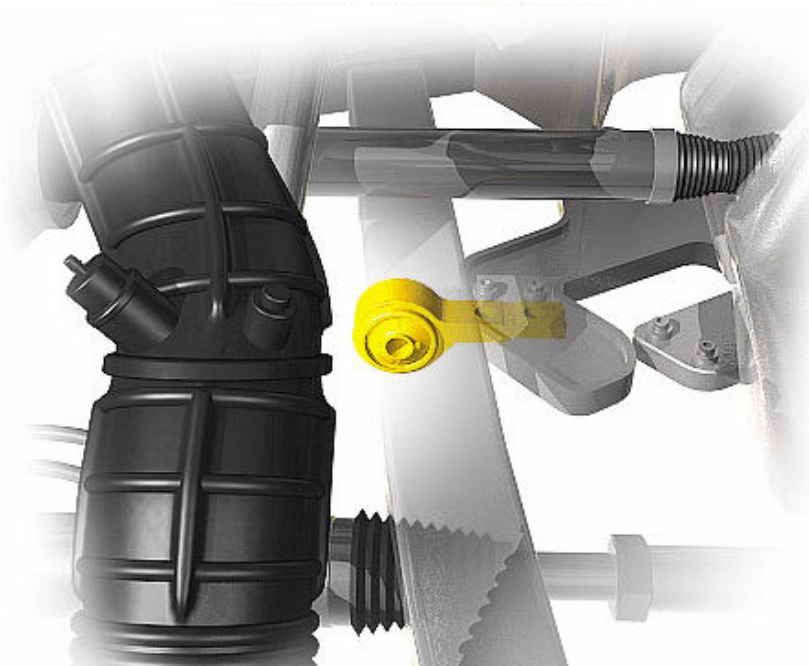
Chassis and Suspension

Front Link Arm Bush

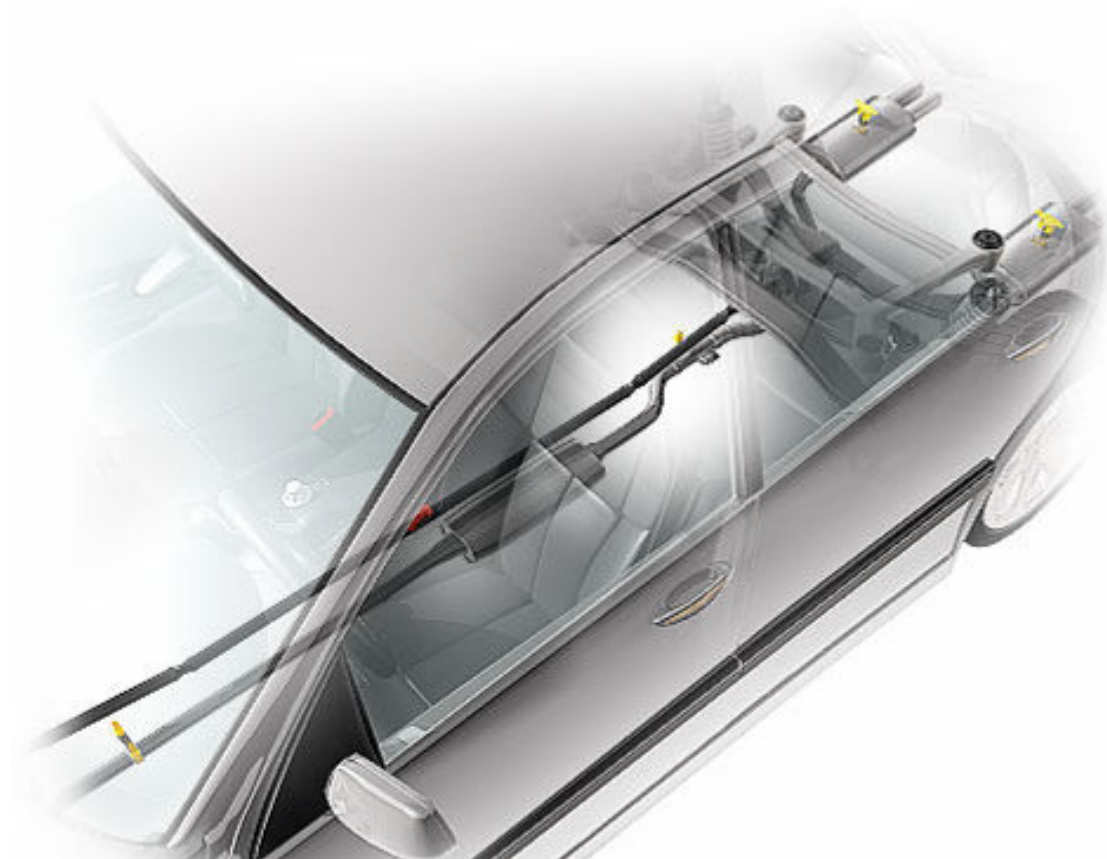
With the large variety of suspension systems on the market, twist beam, trailing link, semi trailing link, wishbone, the design and choice of bushing is very important. For each application Trelleborg AVS works closely with the customer to ensure that their elastokinematic requirements are met. The optimum solution should offer the best compromise between damping and comfort. Trelleborg supplies both conventional and hydraulic solutions. Your needs are simple, good comfort and secure handling. Our solutions are slightly more complex than they look, designed to deliver different stiffnesses in different directions and provide the best quality ride.



Front Link Arm
Bush



Exhaust Systems



Exhaust Systems



Front Exhaust Mount

Front Mount

A good exhaust system is essential for fuel efficiency and acoustic performance. We can offer a robust three point mounting system to help improve acoustics and to increase system durability.



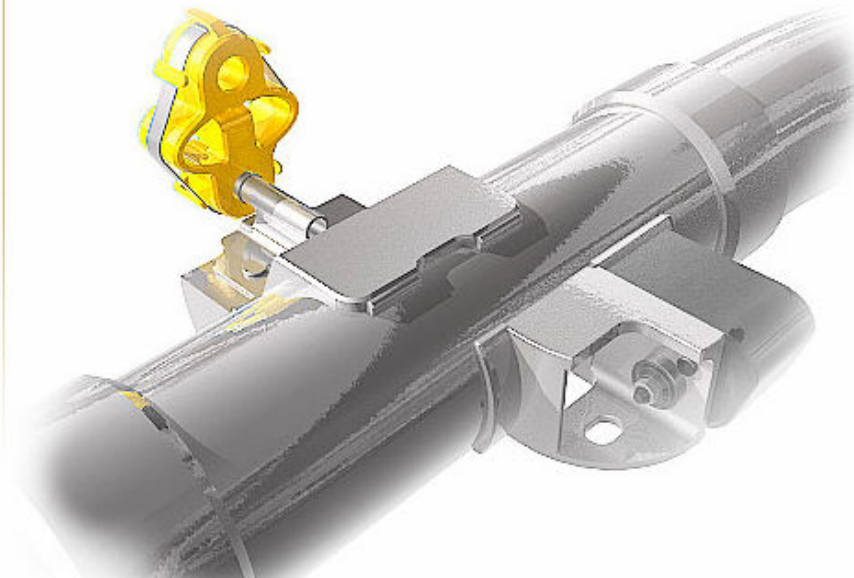
Exhaust Systems

Mid Mount

A good exhaust system is essential for fuel efficiency and acoustic performance. We can offer a robust three point mounting system to help improve acoustics and to increase system durability.



Mid Exhaust Mount



Exhaust Systems

Rear Mount

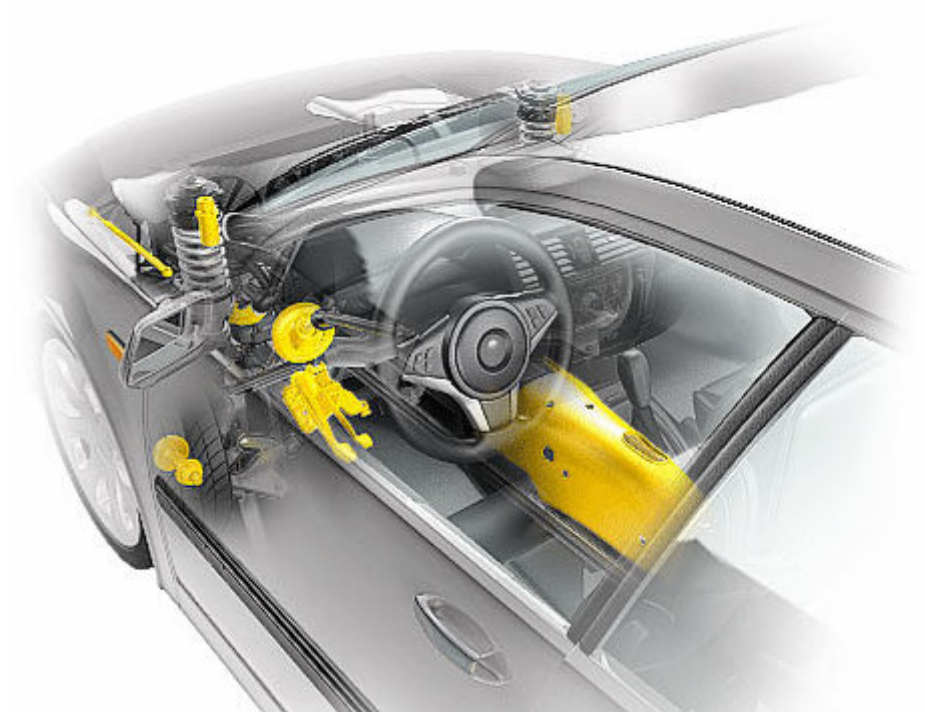
A good exhaust system is essential for fuel efficiency and acoustic performance. We can offer a robust three point mounting system to help improve acoustics and to increase system durability.



Rear Exhaust Mount



Car Body



Car Body

Steering Column Gasket

Sealing gaskets perform a very important function in any vehicle system, they protect vehicle components and occupants from contamination of grease, dirt, oil, fuel, lubricants, salt, water and other potential hazards. In addition gaskets can act as noise insulation, isolating the driver and passenger from road and engine noise.



Steering Column Gasket



Car Body

Door Cover Wiring Harness

With the growing integration of electronic systems protection of wiring harnesses is increasingly an issue. In areas of high mobility (such as doors) durability, seal integrity and appearance are all important features. Trelleborg Car Body designs and manufactures wiring harness covers designed to protect and seal electronic systems, even in the most extreme conditions, ensuring consistently smooth operation.



Door Cover
Wiring Harness



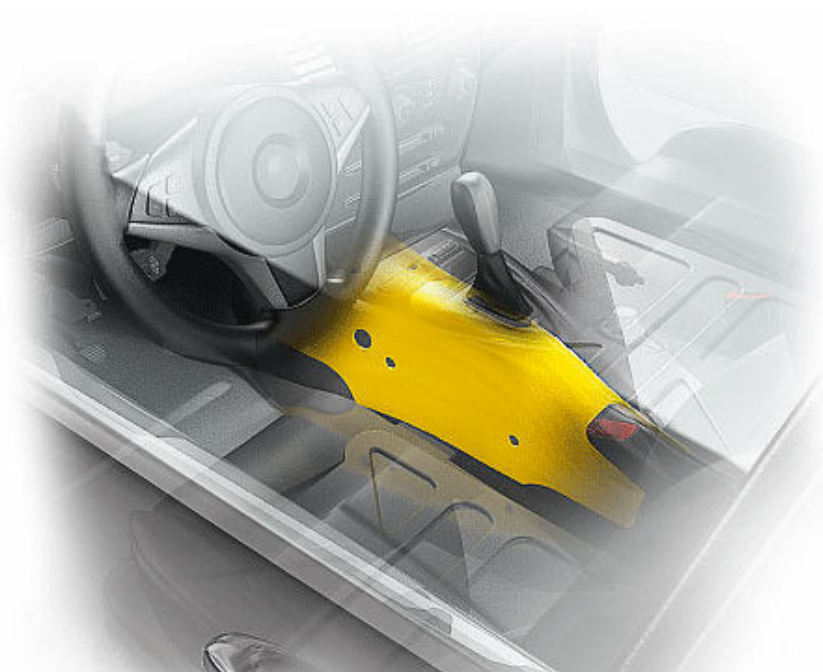
Car Body



Car Body Insulation

Car Body Insulation

Trelleborg's extensive materials expertise enables us to design and manufacture a complete range of polymer based solutions aimed at insulating vehicle systems from water, oil, grease, dirt and salt degradation and improving acoustic performance by providing noise and vibration isolation. Depending on your application we know we have a material to suit, whatever your need: high performance, weight saving or heat resistance. We employ both fibre and foam solutions and offer a variety of finishes.



Car Body



**Air Intake
Duct**

Air Intake Duct

Trelleborg's extensive polymer knowledge means it produces a wide range of compounds ideally suited for air intake applications. Our air intake ducts are produced from specific compounds designed to be highly temperature and fluid resistant.

We design our intake systems in line with customer specifications, identifying the correct material for a bespoke application. Resistant to a range of temperatures from 90 to 225°C, we use EPDM, CM, AEM Vamac, ACM, VMQ Silicone, PVC/NBR

Our global technical centres use advanced FMEA and simulation software to ensure the end product performs at optimum levels. We can also incorporate acoustic resonators to help absorb engine vibration.

