
MEYLE
Germany

Wulf Gaertner Autoparts AG – How it all began

- Founded 50 years ago by Wulf Gaertner alias “Mr. Autoparts“
- The founder lived in central America from 1955-57.
- In the beginning he exported cars into this part of the world.
- Driven by his passion – *Porsche* and car races – he had the idea to sell the needed spare parts of German producers into this market.

His ideas soon travelled around the world....

HD Autoparts for friends.

Organisation

Wulf Gaertner AutoParts AG

MEYLE Products

Asia

Wulf Gaertner AutoParts AG

- Singapore
- Malaysia
- Thailand

IMC

Interamerican Motor Corporation IMC / USA

Worldwide production locations and representatives

Our brand since 1995

Our headquarters today:

- **230 employees**
- **Approx. 17.000 square meters area**
- **25.000 pallet spaces**
- **Modern warehouse with movable shelves, picking-unit for bulk goods, barcode-registration**

MEYLE is investing in logistics

- 9,000 pallets will be handled fully automatically
- Modern logistics with radio-controlled warehouse (WLAN) gives faster access to fastmovers and makes express deliveries possible

MEYLE catalogue and data

- Modern IT system
- Data supplier of TecDoc
- Faster overview of our products in informative catalogues
- Order and inquiry processing via TecCom. TecLocal since July 2007. More clarity with the prices.
- Weekly updated internet catalogues

MEYLE Products - Overview

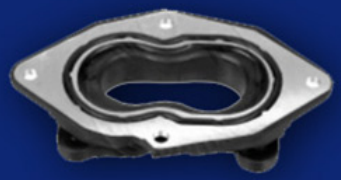
MEYLE has about 9.500 Product

Separated in the following product groups:

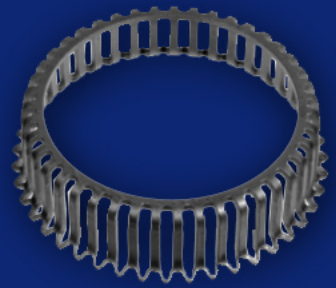
- Steering & suspension
- Rubber / Metal
- Axle parts
- Damping
- Cooling
- Electrical parts
- Brake parts
- Filter (Fuel, Oil, Air & Cabin air)
- Belts, tensioner, pumps
- Repair kits
- MEYLE Specials

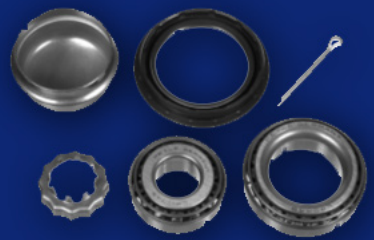
Steering & suspension

Rubber / Metal

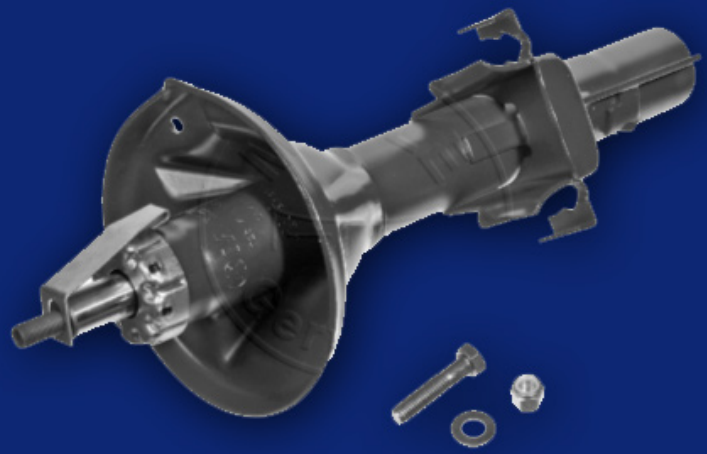


Axle parts

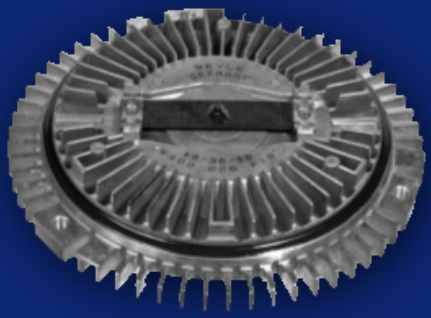


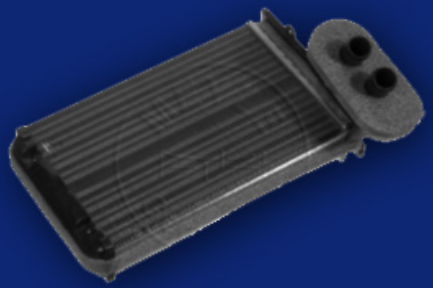


Damping

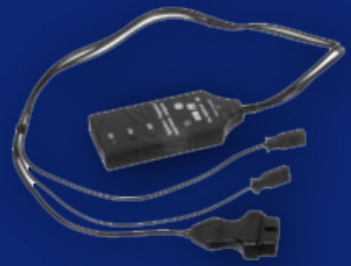


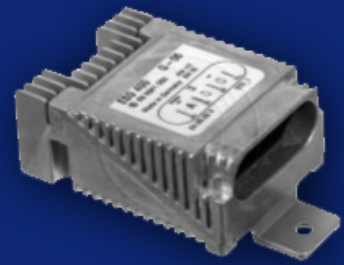
Cooling



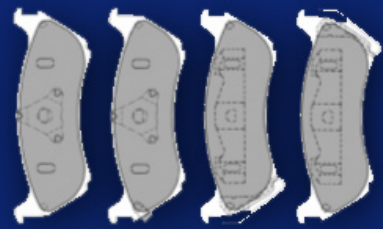


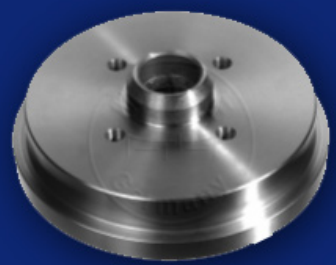
Electrical parts





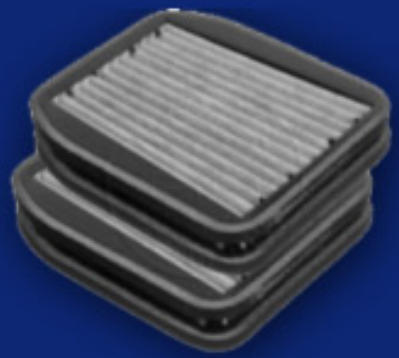
Brake parts

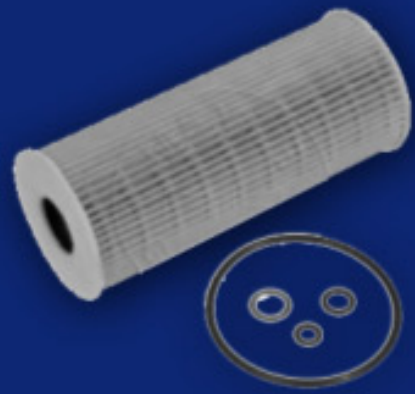




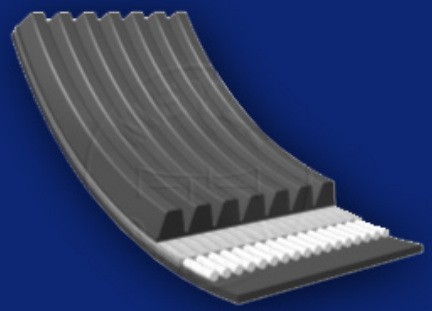
Filter

(Fuel, Oil, Air & Cabin air)

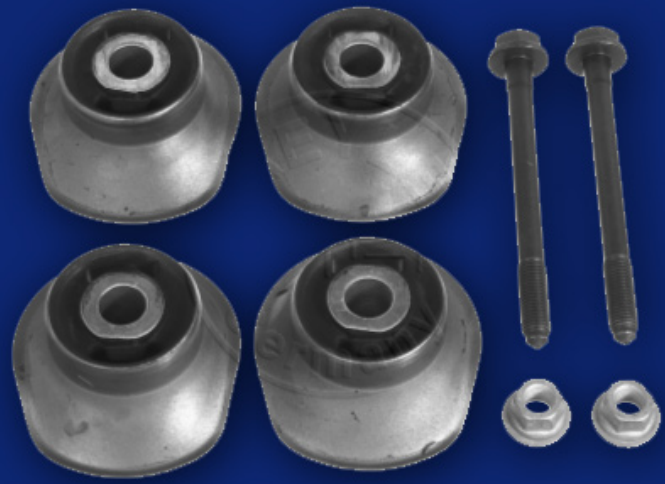


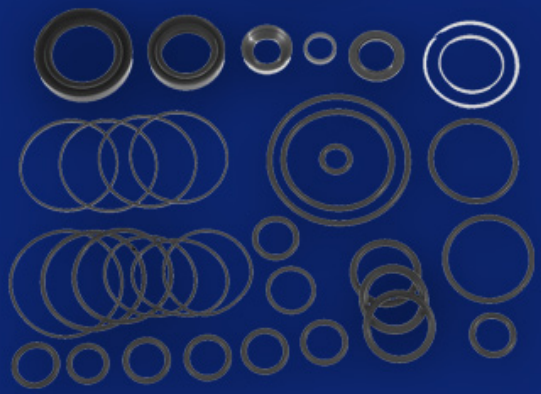


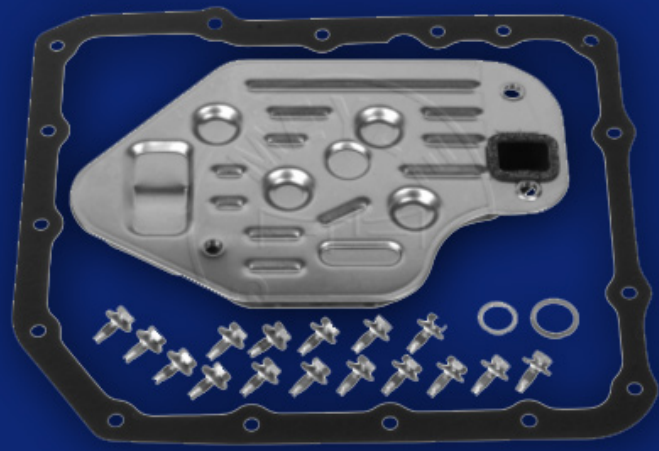
Belts, tensioner, pumps



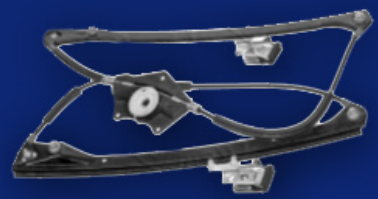
Repair kits







MEYLE Specials



MEYLE Production Competence

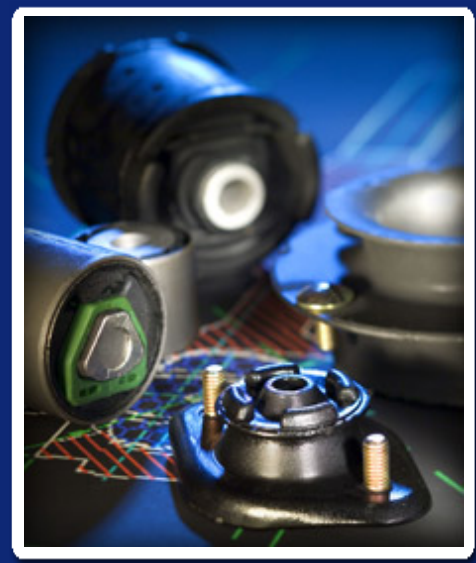
MEYLE production competence

MEYLE ...

- has strategically been extending production joint ventures for many years
- has its own production plants for

Suspension and steering parts

Rubber-metal parts



MEYLE production competence

Steering and suspension parts

- Plant founded in 1969
- Production area 12.100 m^2
- ISO 9001: 2000 certification
- about 300 employees

MEYLE production competence

Steering and suspension parts

Hot forging

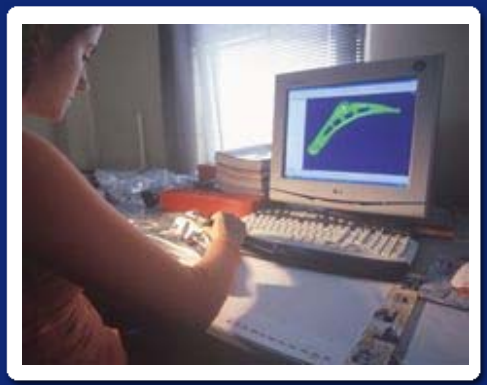
Machining operation

Assembly cells

MEYLE production competence

Steering and suspension parts

Engineering &
CAD lab



Quality assurance
and quality lab

MEYLE production competence

Rubber – metal parts

- Plant founded in 1956
- Production area 7.300 m^2
- ISO 9001: 2000 certification
- about 200 employees

MEYLE production competence

Rubber – metal parts

- **Rubber production** (compression, injection and transfer molding)
- **Tool shop**
- **Rubber mixing facility**

MEYLE production competence

Rubber – metal parts

Stamping and shaping facilities and surface treatment technology

Metal stamping plant

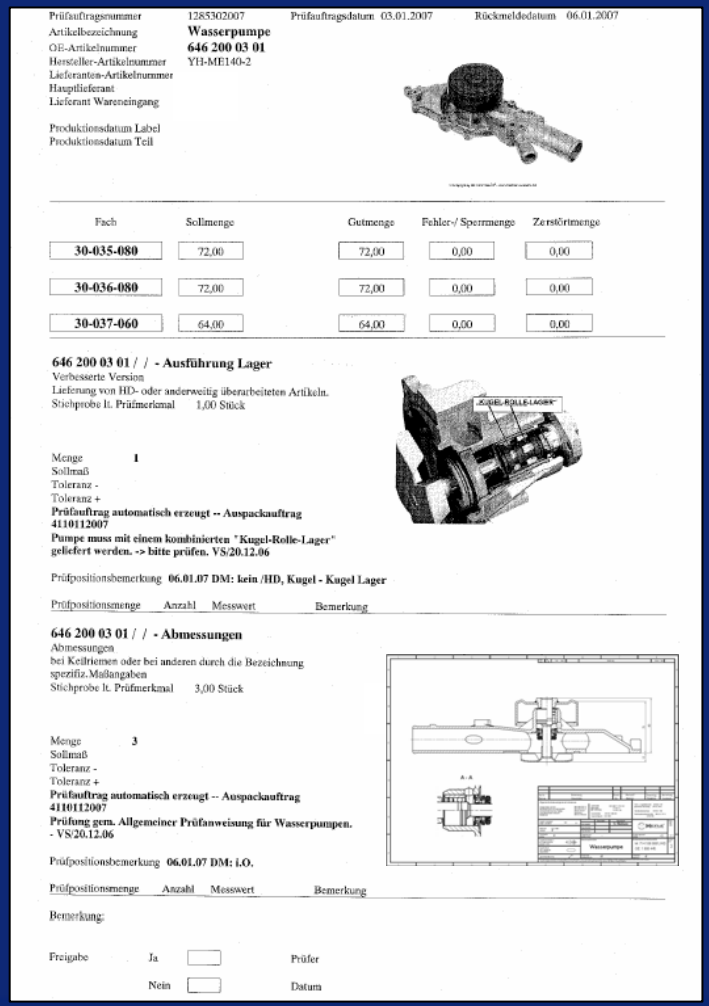
Surface treatment

MEYLE Quality

Quality – our strength

Testing and checking facilities

Quality – our strength



Prüfauftragsnummer 1285302007 Prüfauftragsdatum 03.01.2007 Rückmeldedatum 06.01.2007
Artikelbezeichnung **Wasserpumpe**
OE-Artikelnummer **646 200 03 01**
Hersteller-Artikelnummer YH-ME140-2
Lieferanten-Artikelnummer
Hauptlieferant
Lieferant Wareneingang
Produktionsdatum Label
Produktionsdatum Teil

Fach	Sollmenge	Gutmenge	Fehler-/ Sperrmenge	Zerstörtmenge
30-035-080	72,00	72,00	0,00	0,00
30-036-080	72,00	72,00	0,00	0,00
30-037-060	64,00	64,00	0,00	0,00

646 200 03 01 / / - Ausführung Lager
Verbesserte Version
Lieferung von HD- oder anderweitig überarbeiteten Artikeln.
Stichprobe lt. Prüfmerkmal 1,00 Stück

Menge 1
Sollmaß
Toleranz -
Toleranz +
Prüfauftrag automatisch erzeugt -- Auspackauftrag 4110112007
Pumpe muss mit einem kombinierten "Kugel-Rolle-Lager" geliefert werden. -> bitte prüfen. VS/20.12.06

Prüfpositionsbemerkung **06.01.07 DM: kein /HD, Kugel - Kugel Lager**

Prüfpositionsmenge Anzahl Messwert Bemerkung

646 200 03 01 / / - Abmessungen
Abmessungen
bei Keilriemen oder bei anderen durch die Bezeichnung spezifiz. Maßangaben
Stichprobe lt. Prüfmerkmal 3,00 Stück

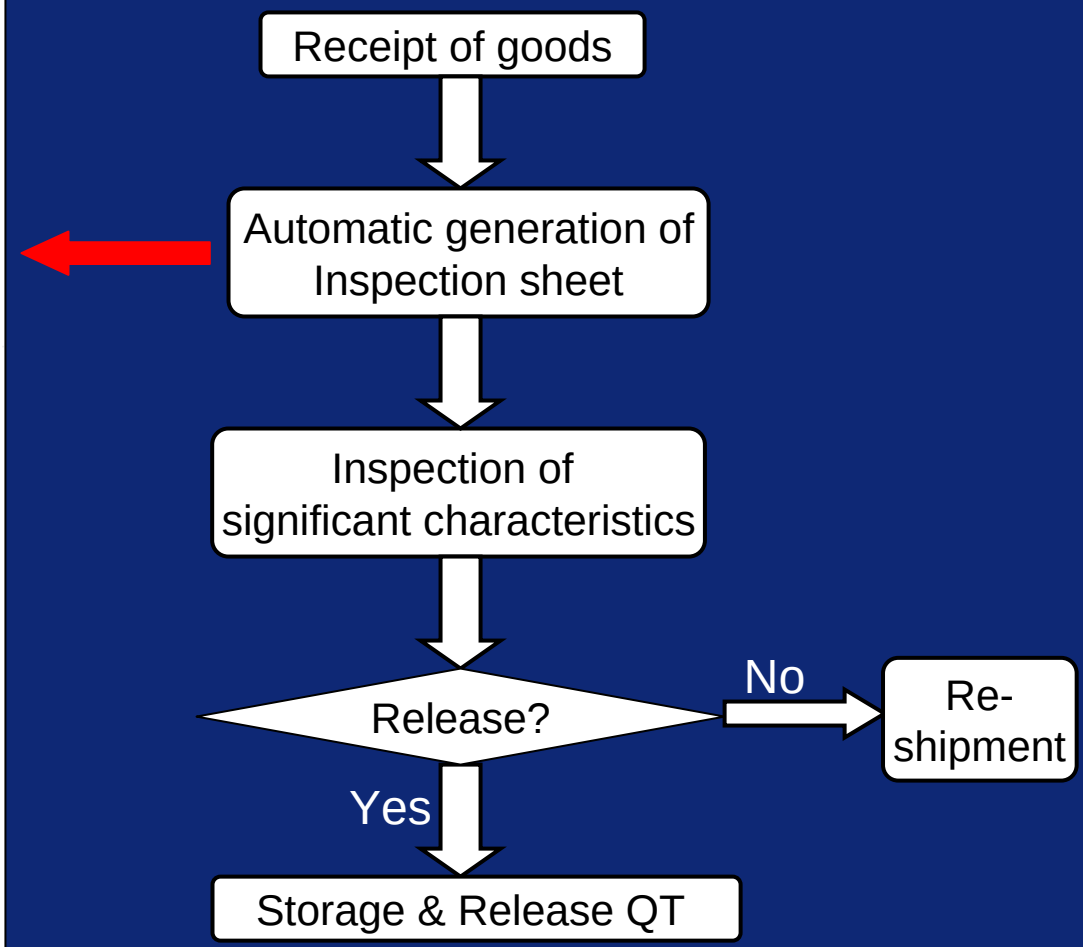
Menge 3
Sollmaß
Toleranz -
Toleranz +
Prüfauftrag automatisch erzeugt -- Auspackauftrag 4110112007
Prüfung gem. Allgemeiner Prüfanweisung für Wasserpumpen. - VS/20.12.06

Prüfpositionsbemerkung **06.01.07 DM: i.O.**

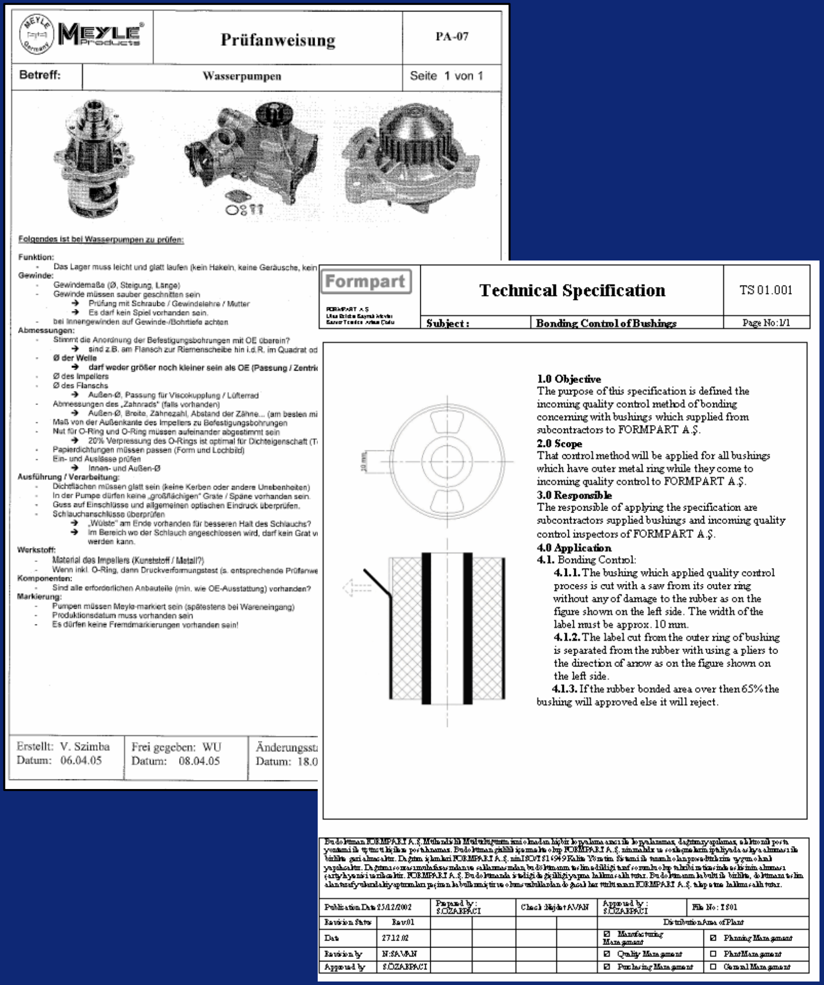
Prüfpositionsmenge Anzahl Messwert Bemerkung

Bemerkung:

Freigabe Ja ☐ Prüfer
Nein ☐ Datum



Quality – our strength



Prüfanweisung PA-07

Betreff: Wasserpumpen — Seite 1 von 1

Folgendes ist bei Wasserpumpen zu prüfen:

Funktion:
- Das Lager muss leicht und glatt laufen (kein Haken, keine Geräusche, kein

Gewinde:
- Gewindemaße (Ø, Steigung, Länge)
- Gewinde müssen sauber geschnitten sein
  - Prüfung mit Schraube / Gewindelehre / Mutter
  - Es darf kein Spiel vorhanden sein.
- bei Innengewinden auf Gewinde-/Bohrtiefe achten

Abmessungen:
- Stimmt die Anordnung der Befestigungsbohrungen mit OE überein?
  - sind z.B. am Flansch zur Riemenscheibe hin i.d.R. im Quadrat od
- Ø der Welle
  - darf weder größer noch kleiner sein als OE (Passung / Zentri
- Ø des Impellers
- Ø des Flanschs
  - Außen-Ø, Passung für Viscokupplung / Lüfterrad
- Abmessungen des „Zahnrads" (falls vorhanden)
  - Außen-Ø, Breite, Zahnezahl, Abstand der Zähne... (am besten mi
- Maß von der Außenkante des Impellers zu Befestigungsbohrungen
- Nut für O-Ring und O-Ring müssen aufeinander abgestimmt sein
  - 20% Verpressung des O-Rings ist optimal für Dichteigenschaft (T
- Papierdichtungen müssen passen (Form und Lochbild)
- Ein- und Auslässe prüfen
  - Innen- und Außen-Ø

Ausführung / Verarbeitung:
- Dichtflächen müssen glatt sein (keine Kerben oder andere Unebenheiten)
- In der Pumpe dürfen keine „großflächigen" Grate / Späne vorhanden sein.
- Guss auf Einschlüsse und allgemeinen optischen Eindruck überprüfen.
- Schlauchanschlüsse überprüfen
  - „Wülste" am Ende vorhanden für besseren Halt des Schlauchs?
  - Im Bereich wo der Schlauch angeschlossen wird, darf kein Grat v werden kann.

Werkstoff:
- Material des Impellers (Kunststoff / Metall?)
- Wenn inkl. O-Ring, dann Druckverformungstest (s. entsprechende Prüfanwe

Komponenten:
- Sind alle erforderlichen Anbauteile (min. wie OE-Ausstattung) vorhanden?

Markierung:
- Pumpen müssen Meyle-markiert sein (spätestens bei Wareneingang)
- Produktionsdatum muss vorhanden sein
- Es dürfen keine Fremdmarkierungen vorhanden sein!

Erstellt: V. Szimba Datum: 06.04.05 — Frei gegeben: WU Datum: 08.04.05 — Änderungsst Datum: 18.0

Formpart — **Technical Specification** — TS 01.001

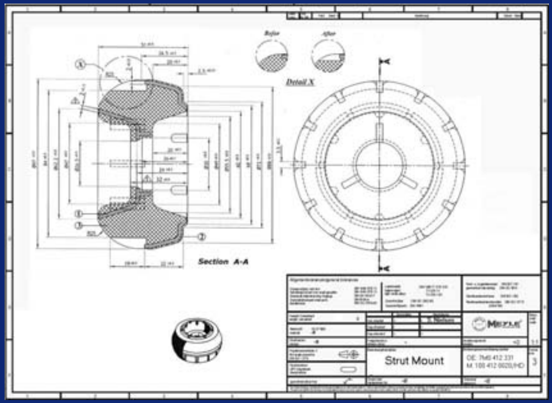
Subject: Bonding Control of Bushings — Page No: 1/1

1.0 Objective
The purpose of this specification is defined the incoming quality control method of bonding concerning with bushings which supplied from subcontractors to FORMPART A.Ş.

2.0 Scope
That control method will be applied for all bushings which have outer metal ring while they come to incoming quality control to FORMPART A.Ş.

3.0 Responsible
The responsible of applying the specification are subcontractors supplied bushings and incoming quality control inspectors of FORMPART A.Ş.

4.0 Application
4.1. Bonding Control:
4.1.1. The bushing which applied quality control process is cut with a saw from its outer ring without any of damage to the rubber as on the figure shown on the left side. The width of the label must be approx. 10 mm.
4.1.2. The label cut from the outer ring of bushing is separated from the rubber with using a pliers to the direction of arrow as on the figure shown on the left side.
4.1.3. If the rubber bonded area over then 65% the bushing will approved else it will reject.

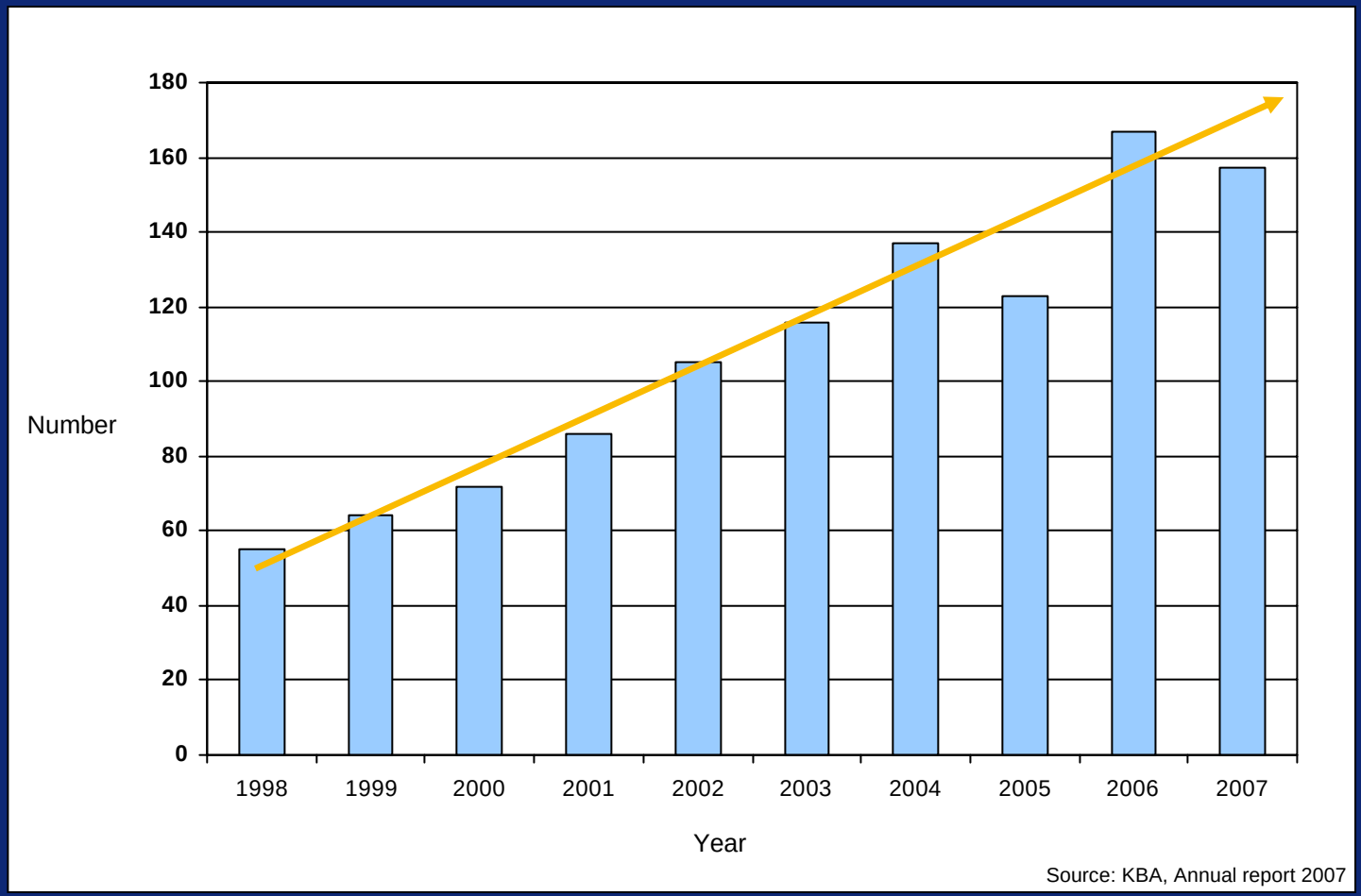


Definition und Implementation of:

- Drawings
- Significant characters
- Inspection instructions
- Inspection sheets
- Technical Specification
- etc.

MEYLE
Technical Information

Official Recalls in Germany 1998-2007



Source: KBA, Annual report 2007

Example:
Product recall of Volkswagen Sharan

Druckversion Rückruf Mai 06 - Microsoft Internet Explorer

Rückrufe

Marke:	VW
Modelle:	Sharan
Produktionszeitraum:	k.A.
Gründe/Maßnahmen:	ausgeschlagenes Gummilager an der Koppelstange der VA / Erneuerung der Koppelstange
Fahrzeuge (D):	insgesamt rund 30.000 (Koppelstange, Druckrohr und Xenonlicht)
Veröffentlicht im:	Mai 2006

auto motor und sport
auto-motor-und-sport.de

Druckversion

VW Sharan: Dreier-Rückruf

Volkswagen ruft den Sharan wegen diverser Mängel in die Werkstätten zurück. Wie VW auf Anfrage von auto-motor-und-sport.de mitteilt, sind europaweit 69.000 Fahrzeuge aus dem Bauzeitraum 2001 bis 2005 betroffen. In Deutschland müssen rund 30.000 Modelle in die Werkstatt.

Im Rahmen einer Serviceaktion - es handelt sich nicht um einen offiziellen Rückruf über das Kraftfahrtbundesamt in Flensburg - werden folgende Mängel behoben:

- Die vorderen Koppelstangen, zwischen Stabilisator und Federbein, werden ersetzt. Hier hatten Kunden Geräuschentwicklungen bemängelt.
- Das Druckrohr des Abgasturboladers bei Automatik-Modellen mit dem 115 PS starken Pumpe-Düse-Dieselmotor muss ersetzt werden
- Das Steuergerät des Xenon-Lichts wird ausgetauscht. Es konnte zu einem Ausfall des Lichts links oder rechts kommen.

Den Werkstattaufenthalt beziffert Volkswagen mit maximal zwei Stunden, sofern alle drei Mängel gleichzeitig auftreten. Die Reparatur ist kostenlos, die Halter der Sharan-Modelle werden schriftlich benachrichtigt. Unfälle seien nicht bekannt, so Volkswagen.

Datum:	27.04.2006
Text:	hwi
Foto:	VW

What is MEYLE doing?

- ✓ Watching new launched car models in the first 2 jears
- ✓ Analysing systematically weak points of automobiles

  - Costumer
  - TÜV
  - AutoBild
  - Recall and Service information

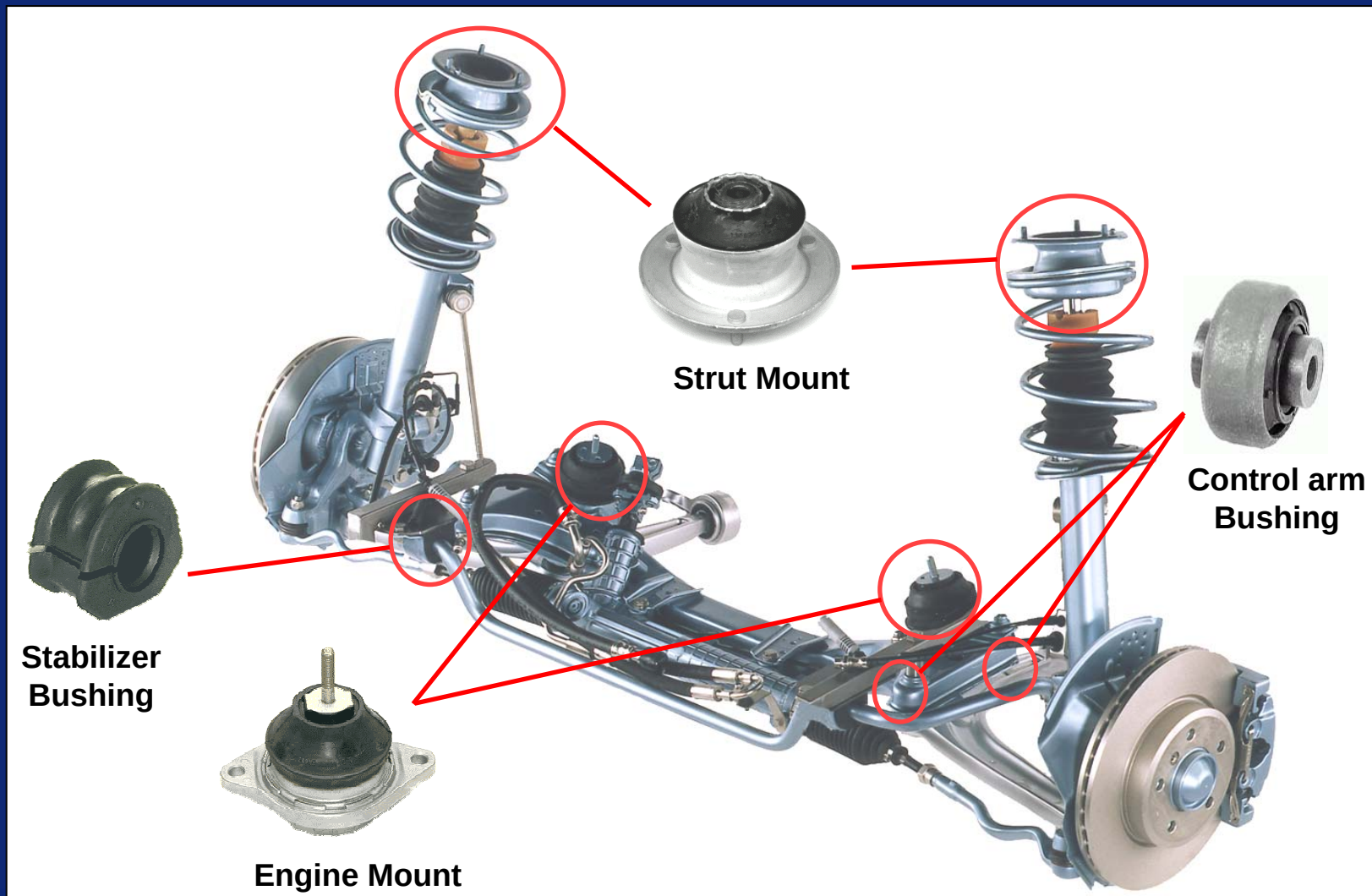
- ✓ Use of well known technical solutions
- ✓ Development of technical challenging solutions if necassary

MEYLE HD QUALITY

MEYLE HD QUALITY

Simply lasts longer.

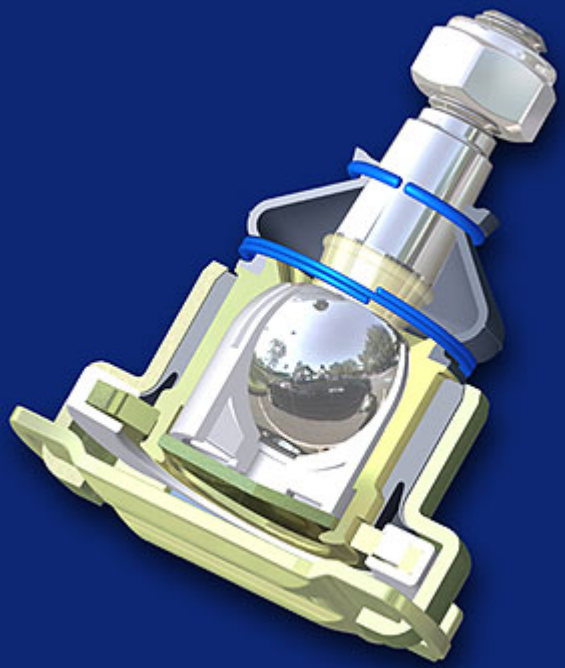
Example: Front axle



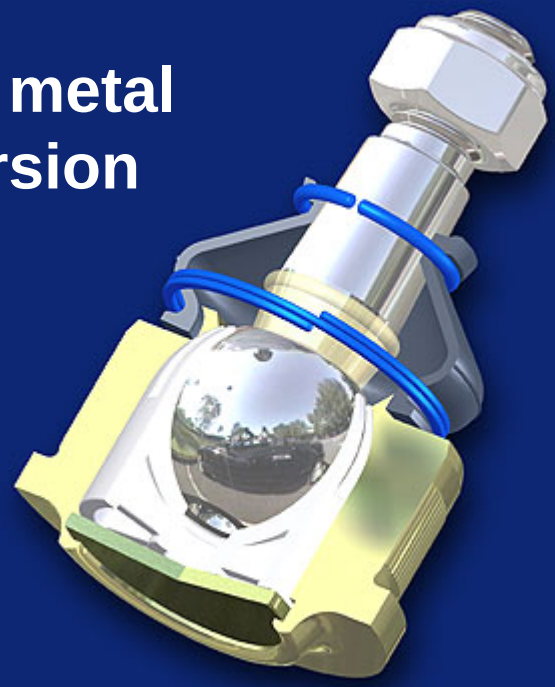
Ball joint
to fit
BMW E36, E46

MEYLE HD QUALITY

As OE



Full metal version



Control arm
to fit
BMW E46

Both ball joints can be replaced

With reinforced control arm bushings and aluminium brackets

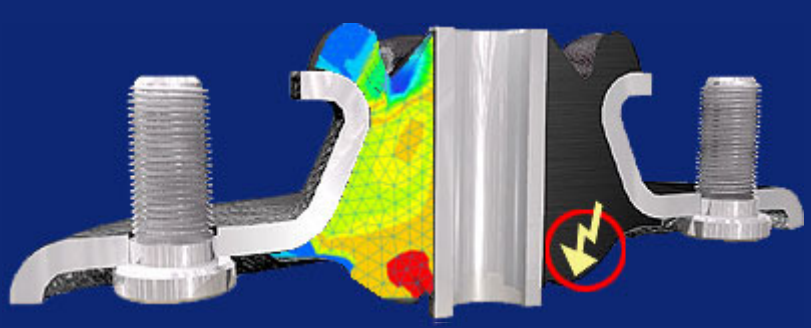
Strut mount

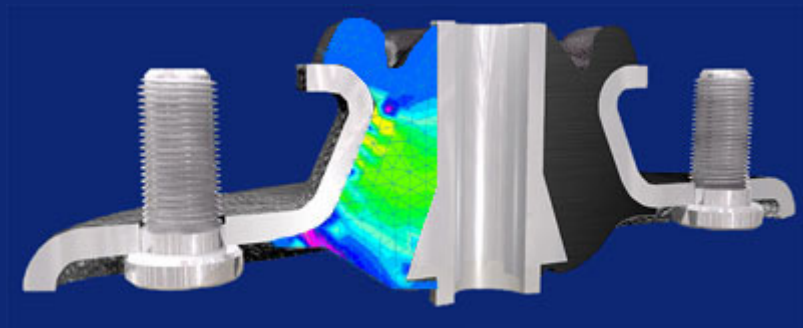
to fit

BMW E30, E32, E34, E36, E46, Z1, Z3, Z4

As OE

MEYLE HD QUALITY

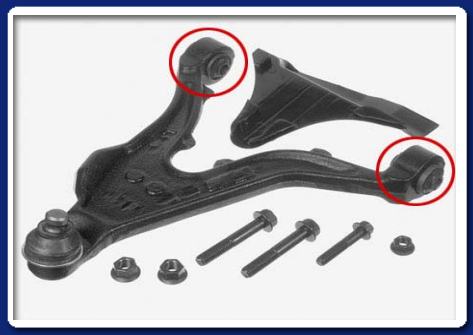




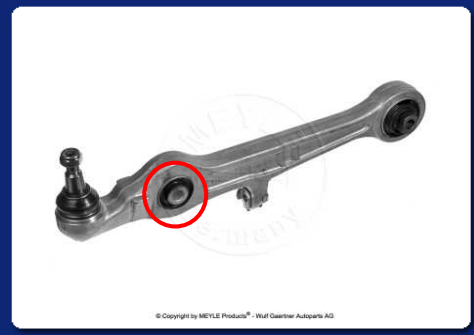
F

Impulse loading from the chassis

F



Control arm bushing
Audi, Volvo etc.



wie OE

MEYLE HD QUALITY

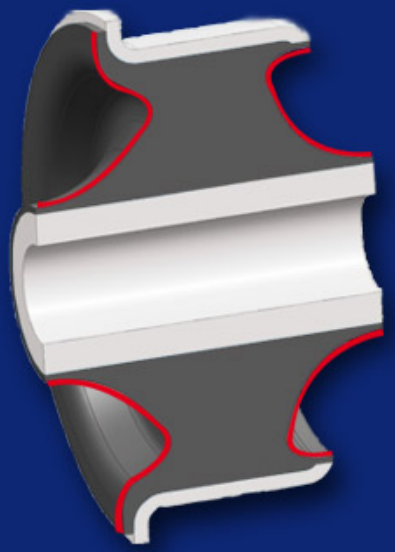
Control arm bushing

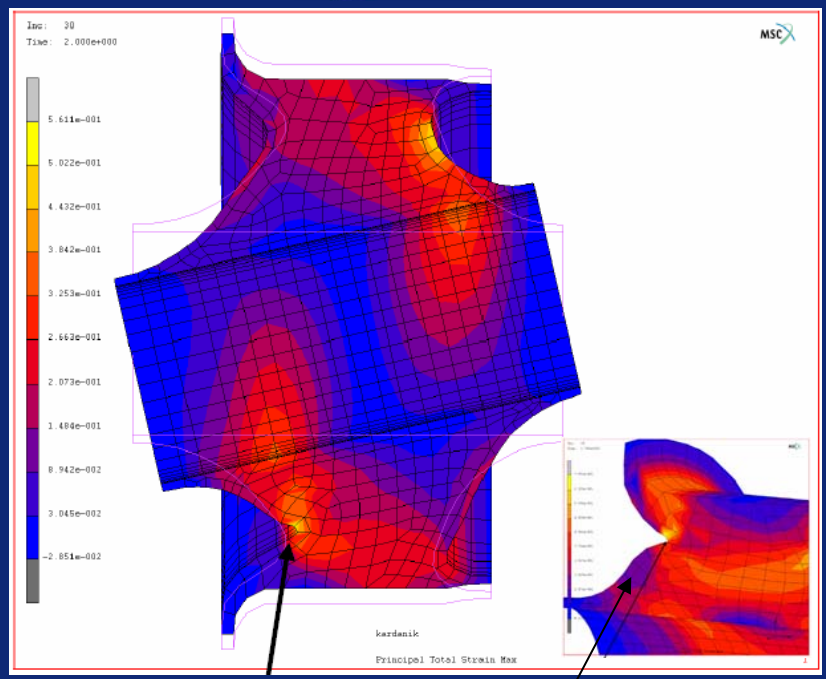
for Ford Ka, Fiesta, Courier, Escort

Claimed parts

Serial design Ford:

- **Folding at radial and cardanical loads**

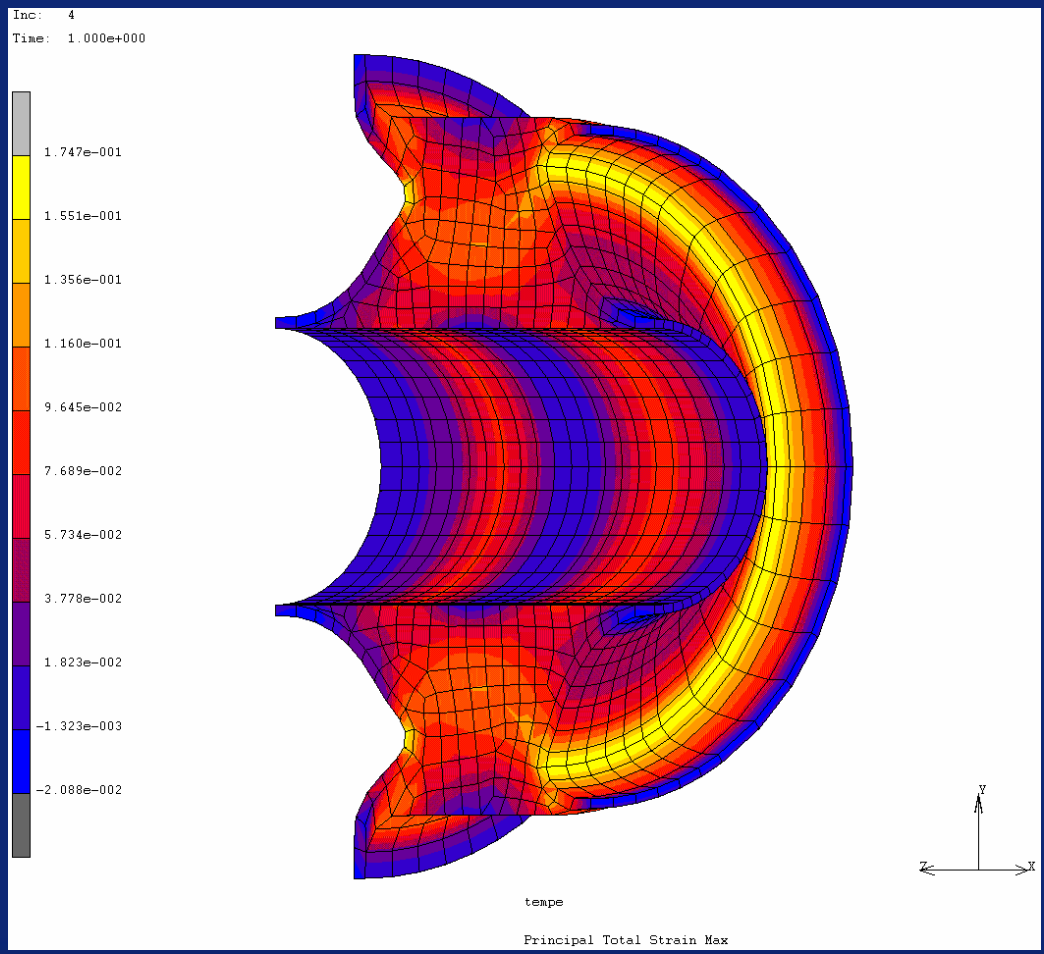




crinkles (damage of rubber)

Serial design Ford:

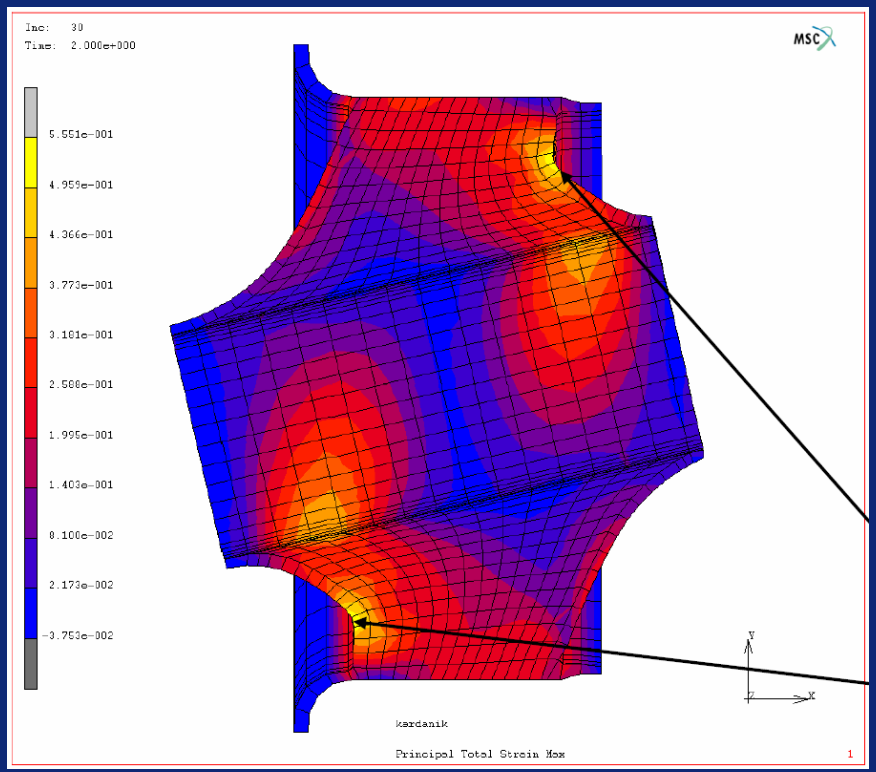
- **Formation of crinkles at radial strain**

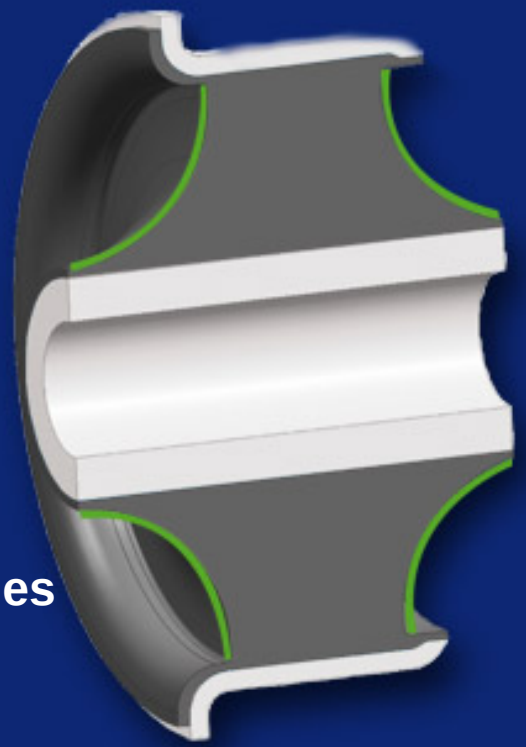


Animation

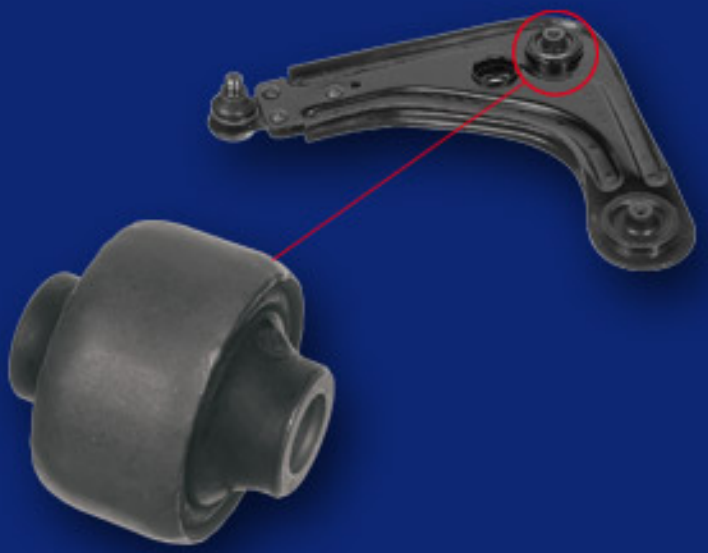
New MEYLE-design:

- no formation of crinkles in every situation



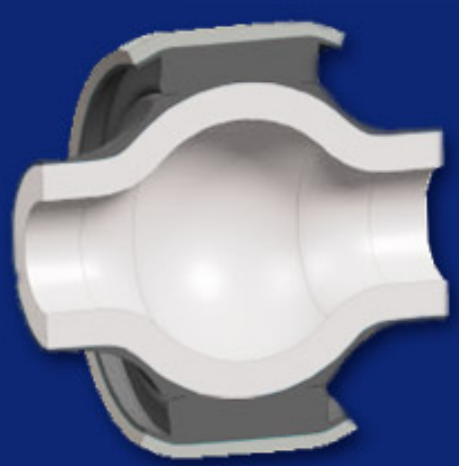


Free of crinkles

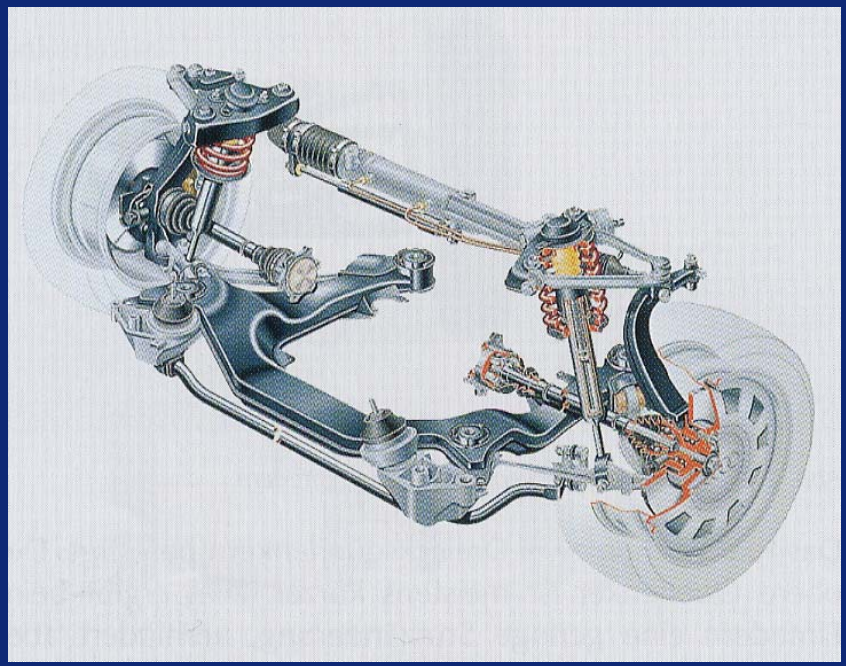


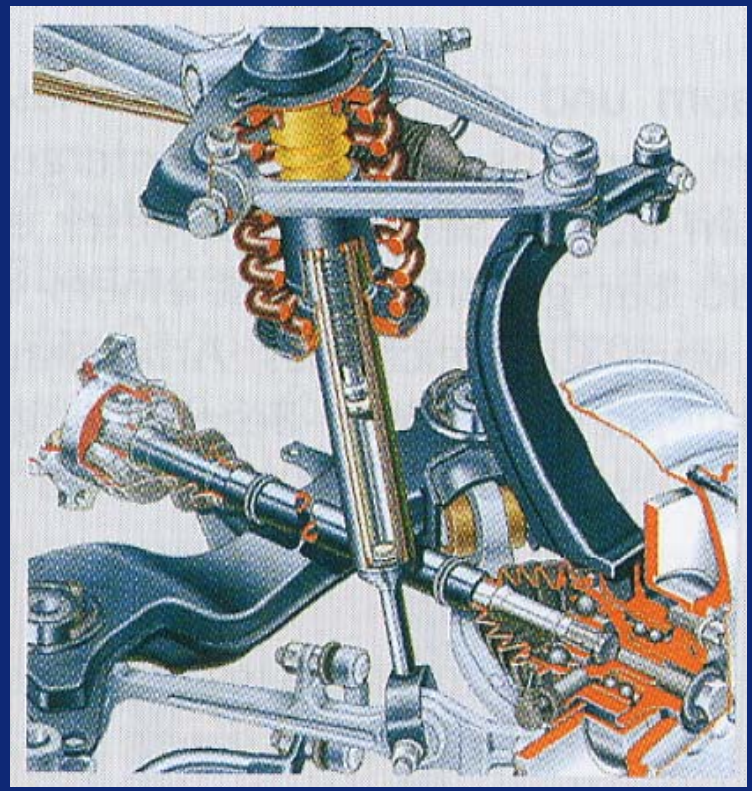
Control arm bushing

to fit Ford Ka, Fiesta, Escort, Orion

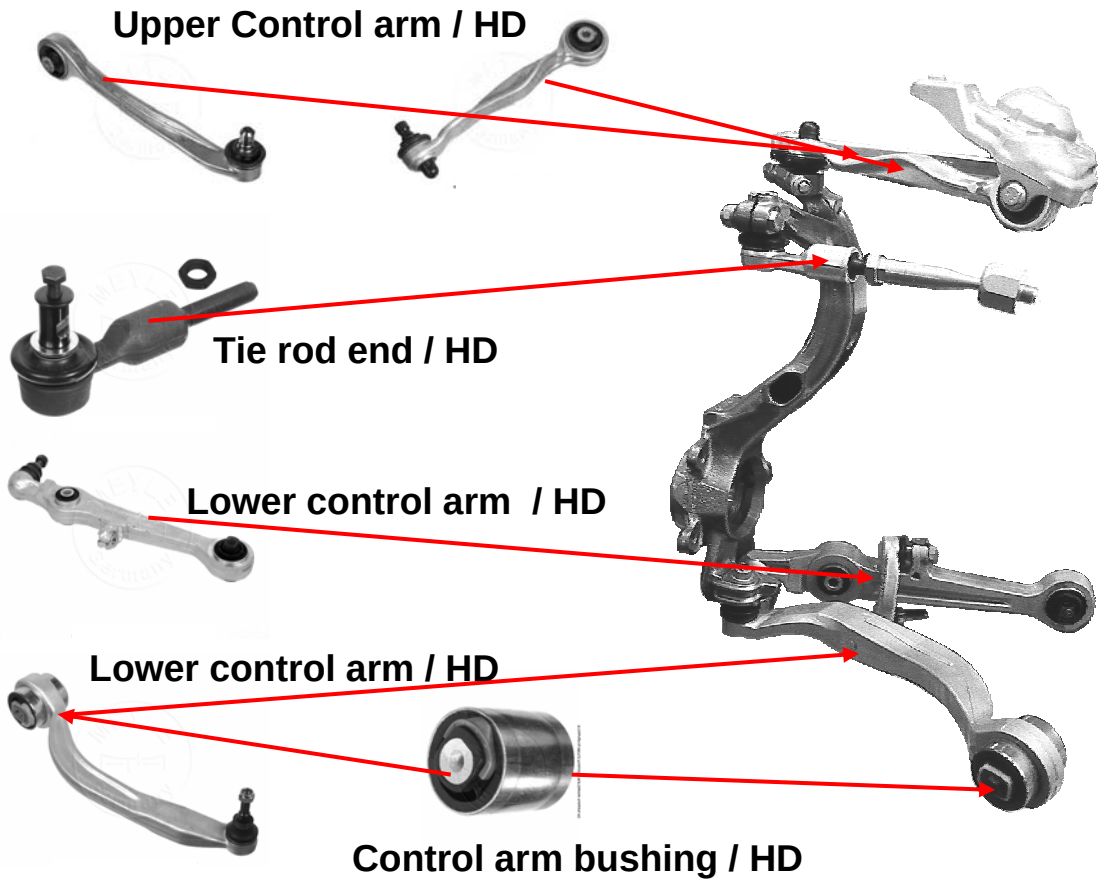


VW Passat / Audi A4

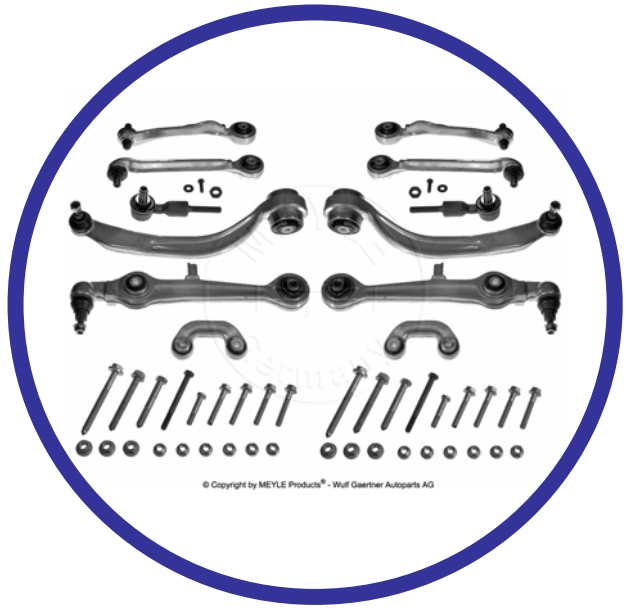




VW Passat / Audi A4



Repair set / HD

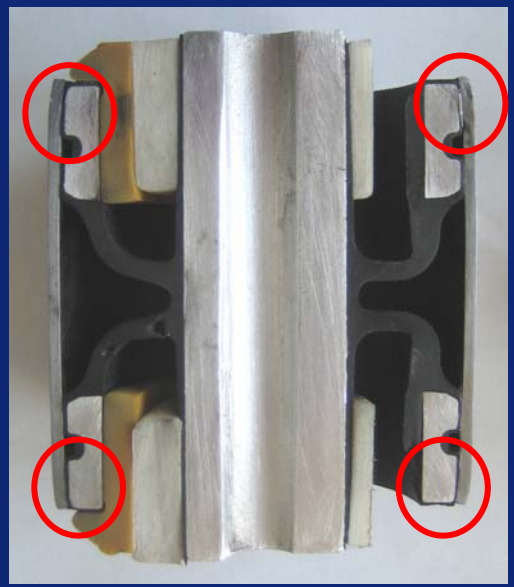


Tie rod end

for Audi A4/A6/A8 / VW Passat

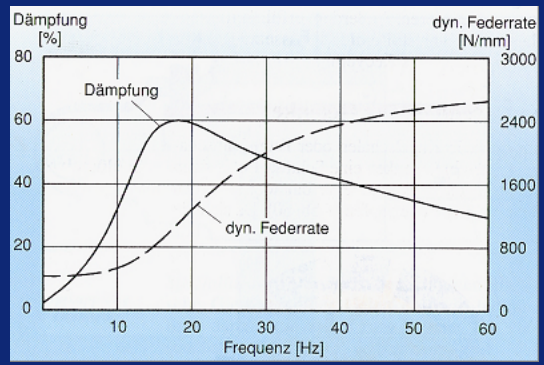
As OE

MEYLE HD QUALITY



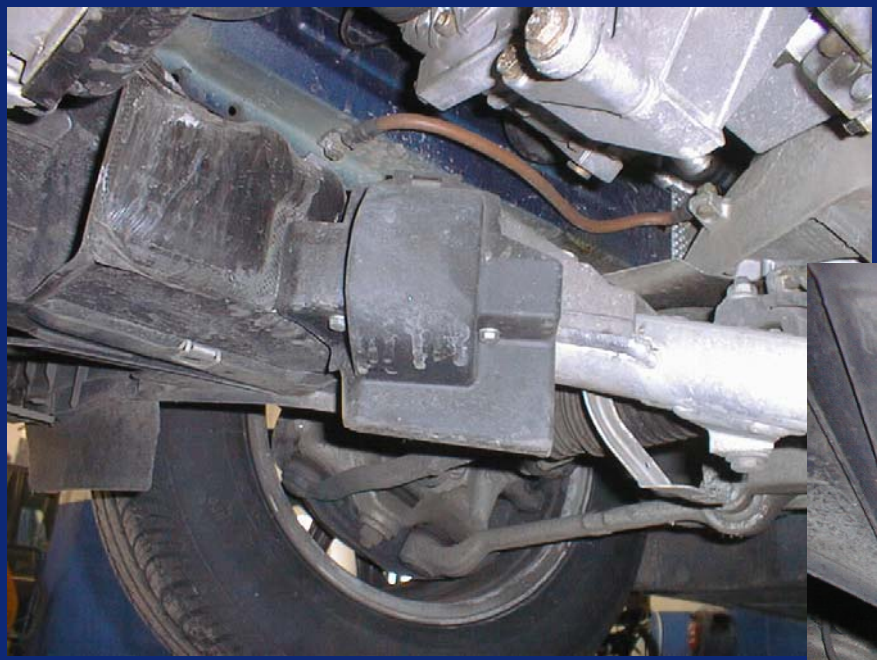
OE Hydro-Version

Consideration for specific damping properties



MEYLE Vollgummi-Version

Assembly-situation



Without protection cap

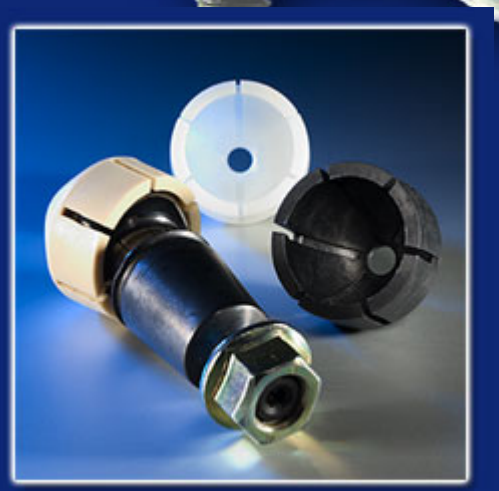
Ball joint

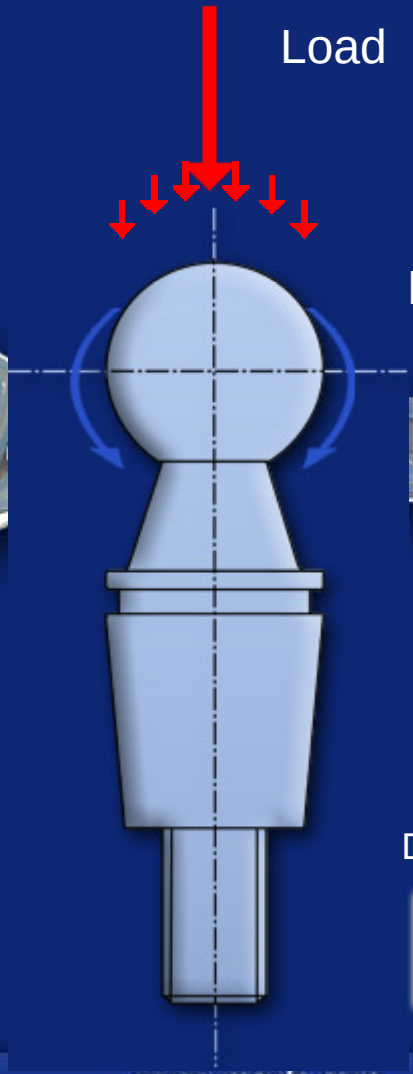
to fit

VW Passat, Audi A4, A6, A8

Load

Solution:
Plastic seats
from MEYLE





Problem:
Lubricant floating
from surface

Developed in cooperation with

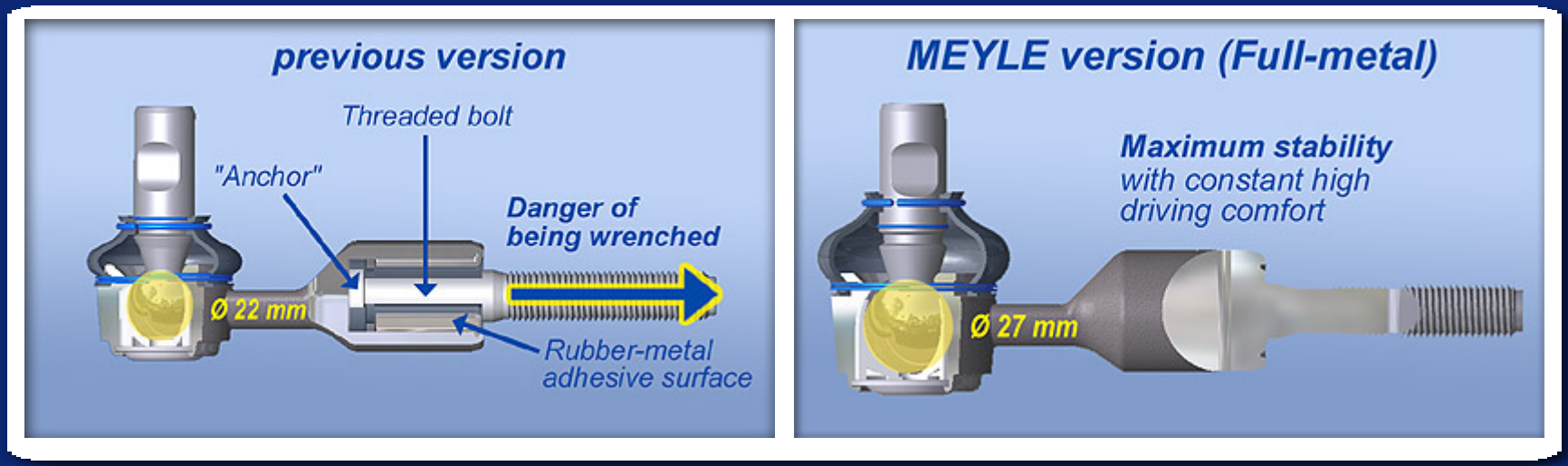
Lufthansa Technik
Intercoat

MEYLE & FUCHS LUBRITECH

Successful partnership

High-tech-grease

VW Passat / Audi A4 (B5)



As OE

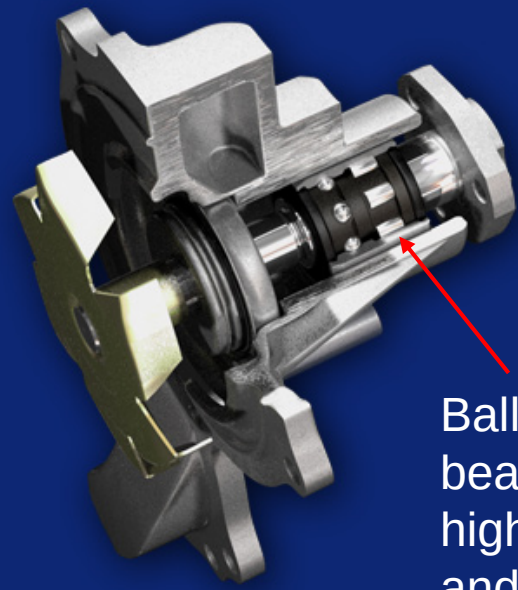
MEYLE HD QUALITY

MEYLE - HD Parts to fit
Mercedes 200, 220, 270 CDI-engines

AS OE

Ball / ball bearing

MEYLE HD QUALITY



Ball / roller bearing for highest loads and longer lifetime

Light truck - ball joints

MEYLE HD QUALITY

VW LT

Ford Transit

Mercedes Sprinter

VW T4 / T5

Opel Movano

Transporter - ball joints

- High-strength, self-locking nut
- High quality rubber-boot with blue clamp rings
- Steel-distance-ring
- Precision-ballpin, greased with MEYLE High-Tech grease from sea- and windenergy-research
- Innovative plastic seat made out of wear-resistant plastic (developed with Lufthansa Technik Intercoat)
- Robust steelhousing with black-passivation against corrosion
- Self locking groove nut with microencapsulation


MEYLE HD QUALITY
MEYLE Germany
MEYLE Products
マイレ品番 純正品番
ブッシュ 300 311 2104/HD 31 12 6 769 715
コントロールアーム 右 316 050 0008/HD 31 12 6 769 718
コントロールアーム 左 316 050 0007/HD 31 12 6 769 717
コントロール アーム ブッシュ
適応車種
BMW E53 (X5)
as OE
問題点
ブッシュに発生する過大な動的歪みによる早期劣化
解決法
フル ラバータイプ マウントの採用
症状
• ハンドルのブレや振動の発生
• 乗り心地の悪化
アドバンテージ
封入オイル漏れの心配が解消。耐久性が格段に向上したことによって長期間に渡り快適な乗り心地が持続します
コントロールアーム 右 - マイレ品番: 316 050 0008/HD
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Merkurring 111 • 22143 Hamburg • Germany
contact@meyle.com • www.meyle.com

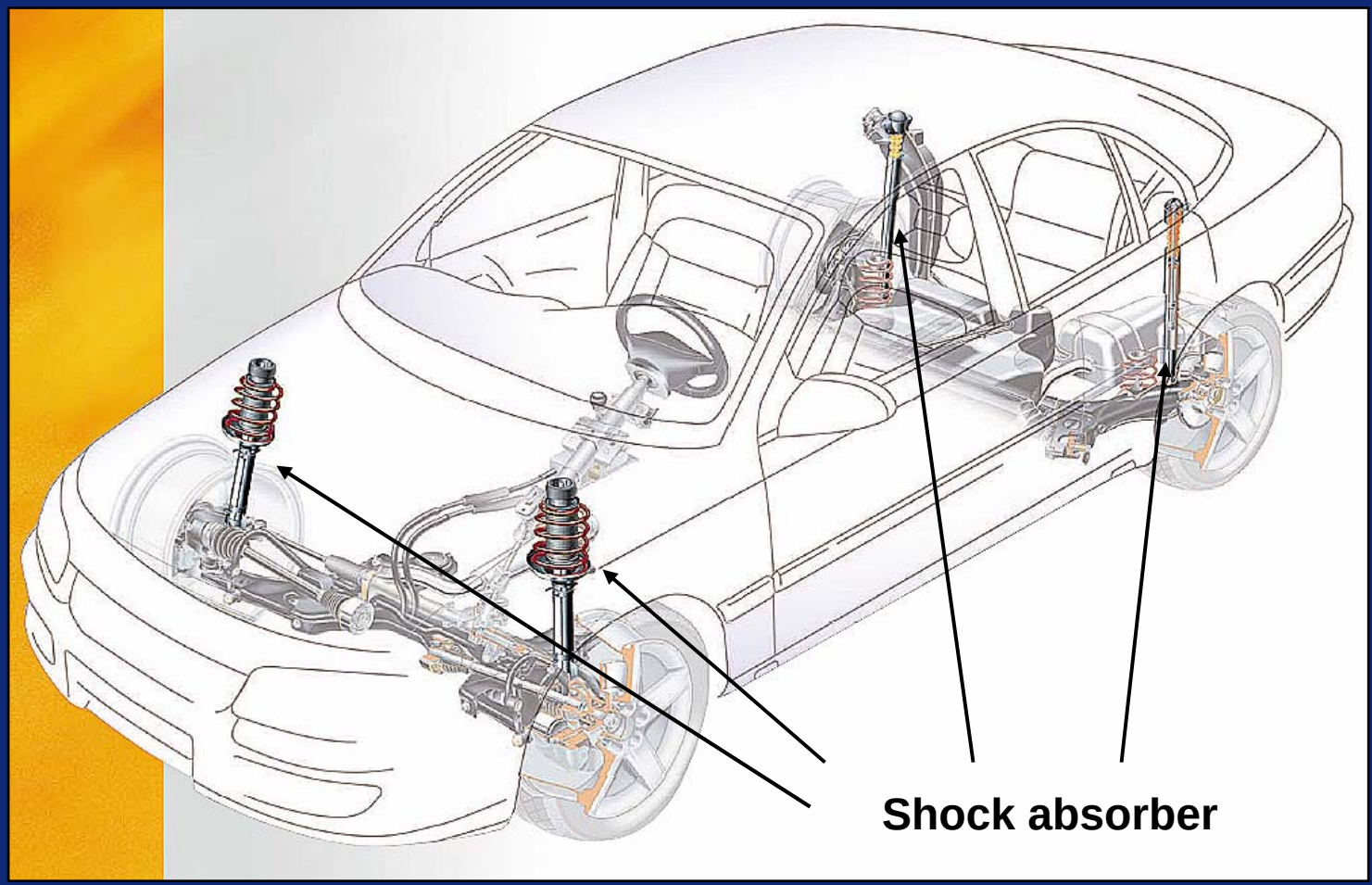
MEYLE - HD Parts

We are open for your recommendations, ideas, proposales...

Please contact us !

Product information about shock absorber

Basic information about shock absorber

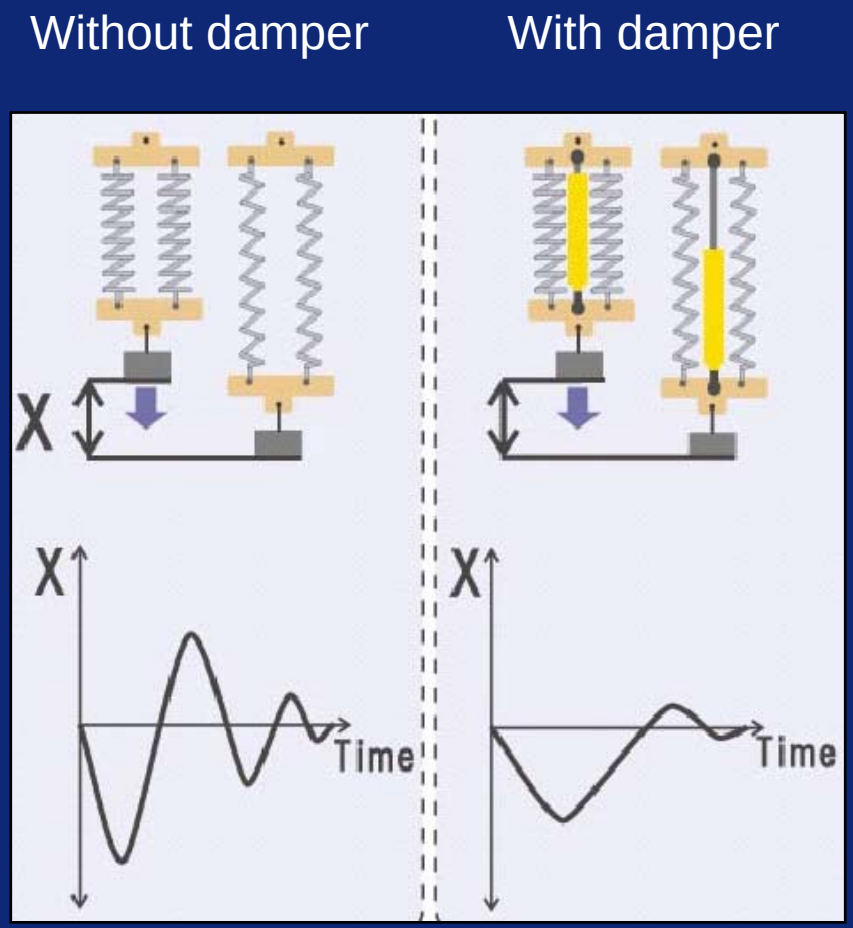


Shock absorber

Definition:

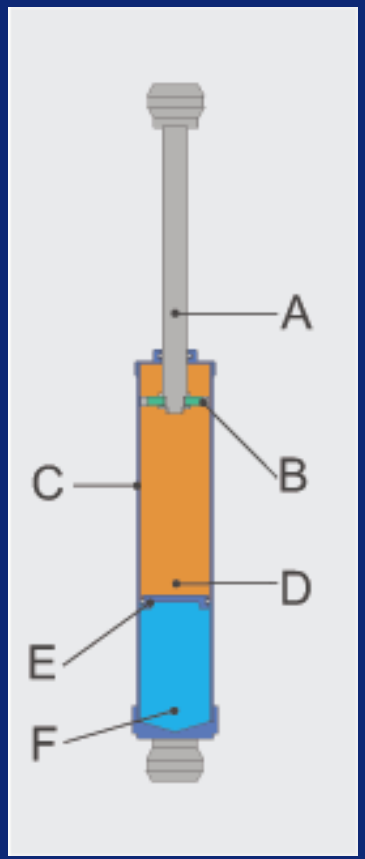
A **shock absorber** is a mechanical device designed to smooth out or damp a sudden shock impulse and dissipate kinetic energy to heat energy

In a vehicle, it reduces the effect of travelling over rough ground. Without shock absorbers, the vehicle would have a bouncing ride.

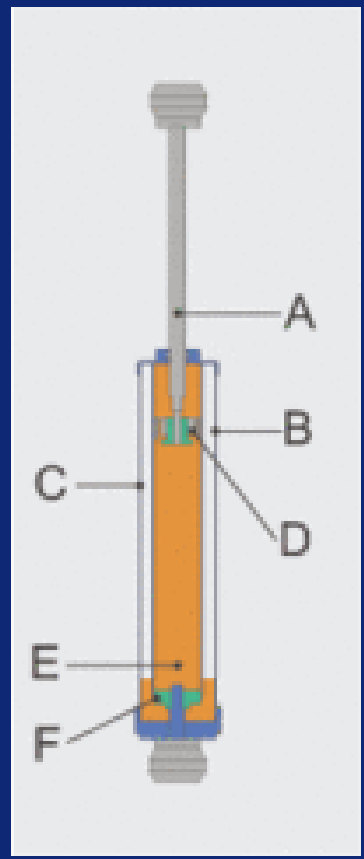


Types of telescopic shock absorber

A: Piston rod
B: Piston Valve
C: Working cylinder
D: Oil
E: Separation piston
F: Gas



Monotube gas pressurized shock absorber



Twin tube shock absorber

A: Piston rod
B: Reservoir tube
C: Gas
D: Piston valve
E: Working cylinder with oil
F: Bottom valve

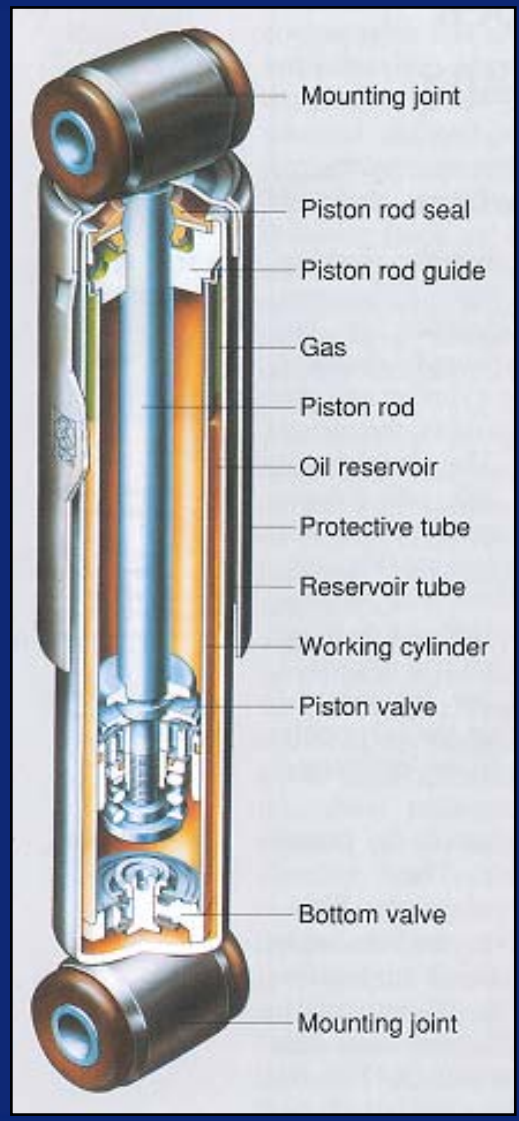
Twin tube shock absorber

Design:

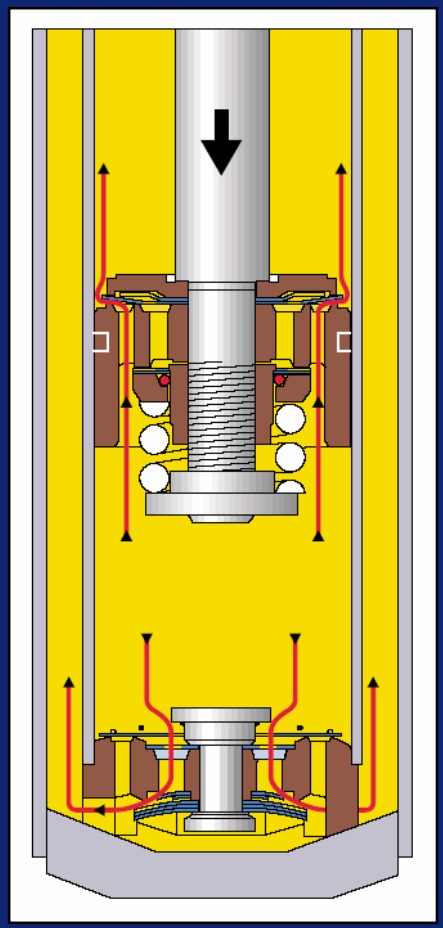
- Inner Tube / working cylinder totally filled with oil
- Outer tube / reservoir tube filled with oil & gas
- Connection of both tubes through bottom valve
- Damping is realizied by piston and bottom valve

Characteristics:

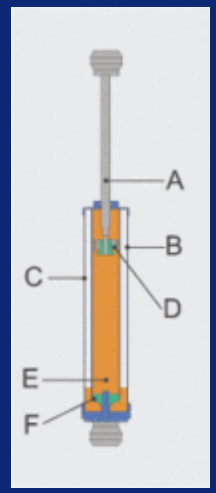
- Small hight
- Difficulties in heat offtaking
- Danger in bubbling during fast movements
- Reduction of damping effect at bubbling
- Good cost - performance ratio
- Only upright assembly in car possible
- Heavier than mono tube shock absorber

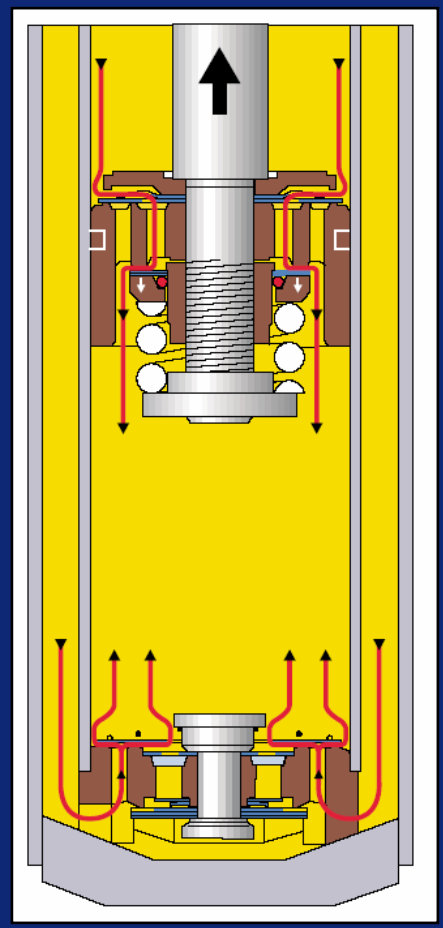


Working stages in a twin tube shock absorber



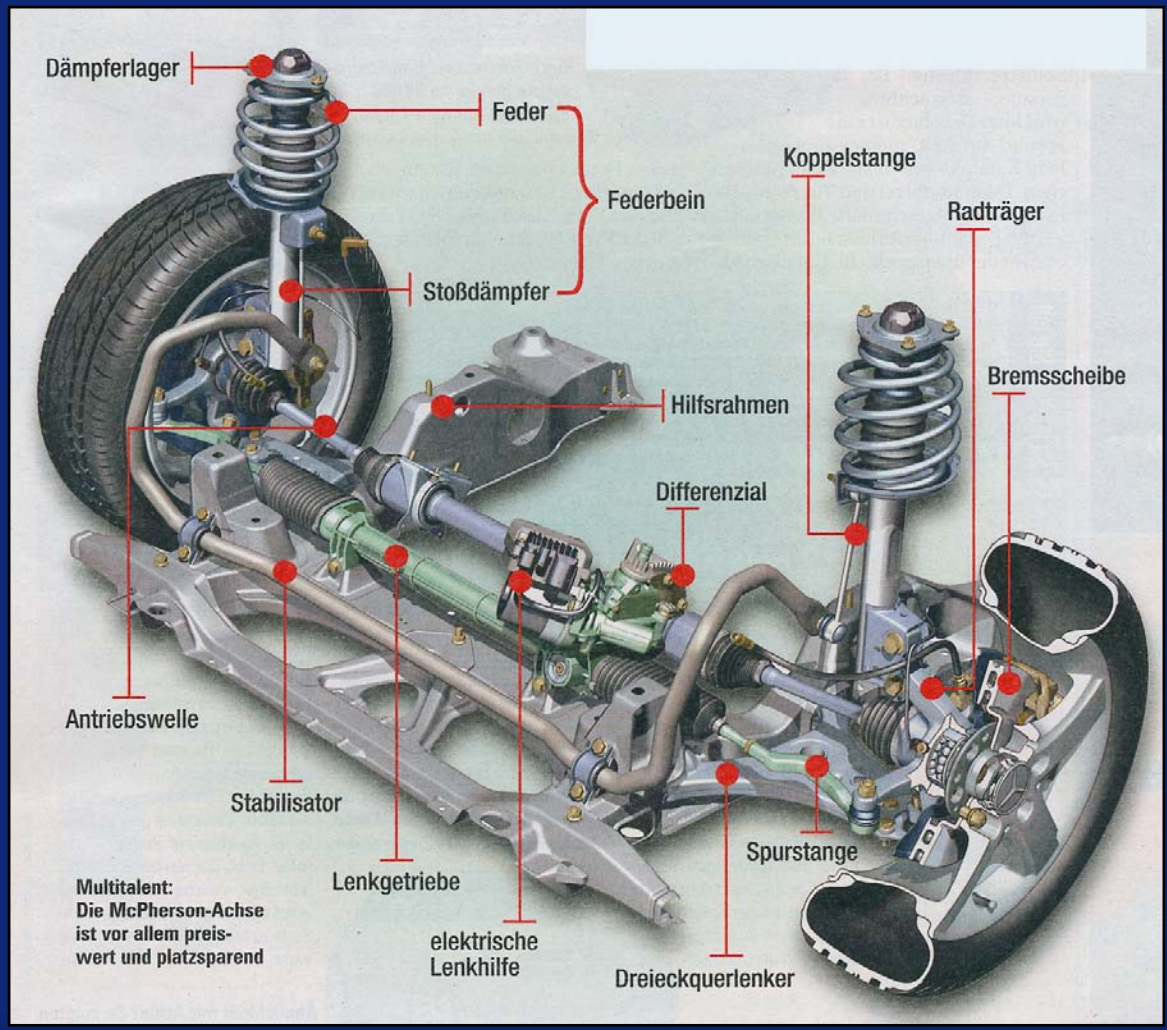
Compression





Zugstufe

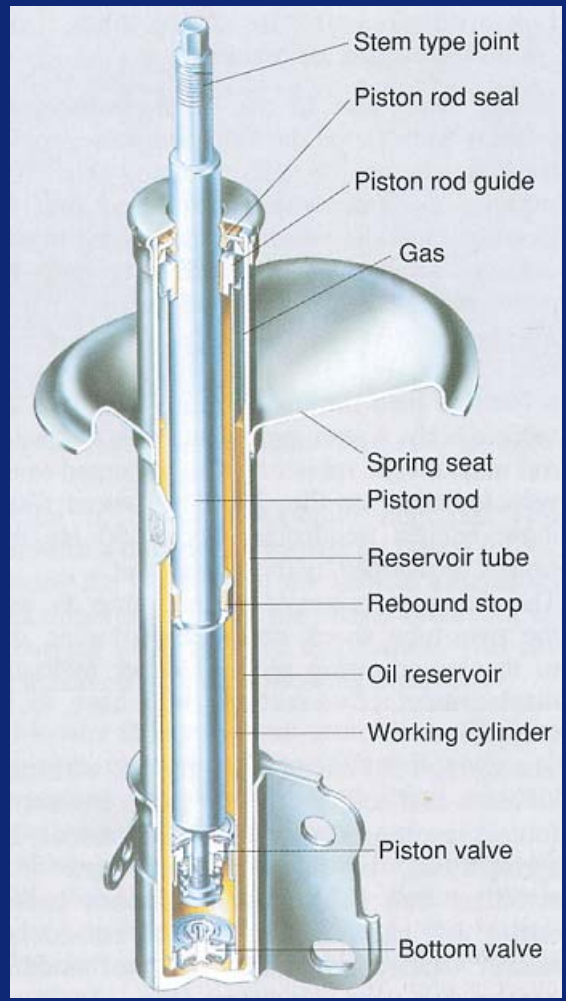
McPherson - Axle



Twin tube spring strut (McPherson strut)

Characteristics:

- Basic design is identical to twin tube shock absorber
- Support of the helical spring forces through a spring seat (McPherson solution)
- Wheel positioning of the axle together with control arms
- Transfer of wheel steering
- Supporting the braking torques
- Piston rod diameter, piston rod guide and piston are especially sized for higher loads



Design of a twin tube spring strut

Thank you for your attention

Your MEYLE Team