

report

Services



1.2010



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Dear readers,

In the name of the entire ZF Services team, I wish you a successful, healthy, and happy New Year. Following the eventful months of the past and their associated workload, that is something we all have earned.

ZF Services is starting the year 2010 full of action and optimism as an expanded corporate division, as you have already noticed by our cheerful and unusual cover. It was one of the submissions to a drawing contest sponsored by our ZF South East Asia subsidiary, and shows all the fields in which we are active: automotive – on and offroad – as well as non-automotive with boats, trains, and much more.

This drawing, plus eleven more, form the 2010 calendar for our southeast Asian site. We are sure that it will be met with much goodwill by our customers in the region. For our strategy is and will remain one of working in a customer-oriented way throughout the world.

Our long-term employees ensure continuity and expertise in looking after our customers, and as a result are always there for you – our partners – and your needs. We therefore promise you some pleasant surprises along these lines during the Automechanika year 2010; they're something else to be happy about.

Alois Ludwig
ZF Services
Chairman of the Board

ZF Services sees favorable winds

ZF Services is greatly expanding its activities in the field of repairing transmissions for wind energy worldwide. The international coordinating site will be Dortmund with its new Service Competence Center. Plans call for more than 200 transmissions of different makes and types to be repaired there every year.

Photo: Pixelio / Gabi Schoenemann

After entering the wind energy business just two years ago, ZF Services is already on the best path to becoming a leading independent repair service in this growth market. For the next five years, it predicts a growth in worldwide sales to 50 million euros. For Matthias Benz, the member of the ZF Services Board in charge of this field, this is a realistic goal. As he notes, "There are currently no comparable suppliers who can provide this degree of technical expertise combined with unparalleled reliability and punctuality. This is the constant feedback we get from our customers, for whom short repair and replacement times, more so than attractive prices, remain the major criteria for selecting providers."



Milling machine for toothed gears

A load testing rig with four megawatts of power is currently being built in Dortmund. By the fall of 2010 at the latest, it will be able to run transmissions under simulated loads, measure structure and air-borne sound, and test contact patterns under loads as well. ZF Services is the only independent multi-make service provider to have this type of test rig.

To minimize production down-times during repairs, ZF Services will also offer to replace transmissions. Moreover, company specialists can perform video-endoscopic damage analyses on-site at wind energy facilities and replace individual components. This service will be offered both onshore and offshore. More than one percent of the world's energy already comes from wind power. As a renewable energy source, wind power will also show considerable growth rates in the future.



Replacing the main rotor bearing

This is confirmed by managing director Matthias Benz, who states that "the market as such will grow over the long term and we will grow with it. We have the technical expertise, quality approach, cost consciousness, and requisite flexibility – or in other words, everything that customers ask for."

Additional wind energy service centers are currently being built in Great Britain, Spain, Italy, and North America. As a second step, ZF Services also seeks to become active as a service provider in the continuously growing wind energy markets of China and India. According to Benz, "By offering repair services for wind power transmissions, ZF Services is developing targeted new chances of revenue related to its original areas of expertise, and is rapidly expanding them into profitable business units."



Assembling the rotor wheel

ZF Services active in Qatar

High-ranking representatives of ZF Services and Mowasalat Karwa, Qatar's state-owned public transportation company, signed an agency agreement in Friedrichshafen in early December which means that ZF Services will now have service points in the country.

Mowasalat Karwa currently operates more than 2,000 buses – of which 1,700 are equipped with automatic transmissions from ZF – for municipal transportation, schools, and businesses. Jassim Al Sulaiti, the president of Mowasalat, welcomed the joint agreement, explaining that “in order to keep pace with the high level of growth in our country, we will be expanding our passenger transportation and long-distance transport systems in the coming years. To do so we need expert and experienced partners like ZF Services.” With ZF Services as a partner, Mowasalat will now be able to expand its own network of workshops even faster because it can rely on the technical expertise of one of the world's leading powertrain and suspension specialists. Matthias Benz, one of the managing directors at ZF Services, views the agreement as the start of a successful partnership. As he noted, “The market in Qatar offers us great potential in terms of both sales and service. Within the next five years, we expect sales in the Middle East region to grow by more than 20 percent a year.”



At the signing ceremony (from left): Wolfgang Schilha (member of the ZF divisional management for commercial vehicles and special driveline technology), Jassim Al Sulaiti, and Matthias Benz.



Digital invoicing

Electronic order processing between component manufacturers and dealers via TecOrder has proven itself well. ZF Services is one of the first companies to offer its customers an additional e-business solution, which it also helped to develop – TecInvoice, an electronic invoicing system with digital signatures. It gives dealers considerable potential to save costs: no manual pro-

cessing of invoices or credits, fewer errors, shorter processing and auditing times, and more convenient archiving. Paperless invoicing not only enables considerable reductions in cost, it also makes a significant contribution to protecting the environment. The first customers in Germany are already using this service, with further conversions now underway both in the country and abroad.

Supplier of the year

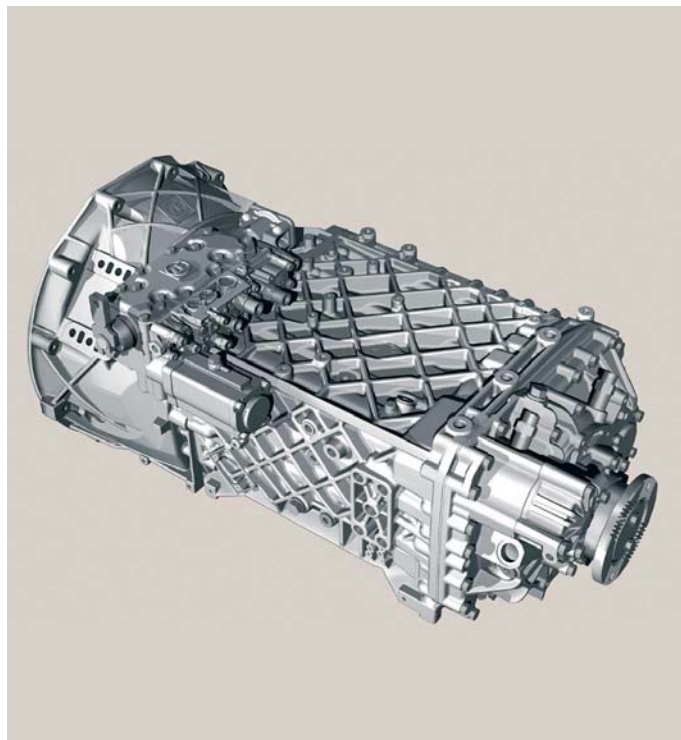
ZF Friedrichshafen AG was voted the 2009 Supplier of the Year. This honor from the British automotive journal Vehicle Dynamics International is given for **the best performance in the field of vehicle technology**. A major reason why the international jury selected ZF was the large number of innovations that the company has produced over the past years to make passenger cars both safer and more dynamic. Prominent examples include new developments like the Vector Drive rear axle drive, Active Steering, lightweight components



in the suspension system, and the CDC electronic damping system. Jury member and automotive journalist Jim McCraw explained the selection as follows: “ZF is a superb example of a company that makes large-scale series products from its own developments, and thus also benefits the entire industry.”

Unparalleled flexibility, speed, and convenience

It costs time and money to replace a broken transmission. Because there are well over 1,000 different versions of Ecosplit transmissions for heavy-duty commercial vehicles, no one can have all of them in stock. That's why in many cases it can be just as expensive to order a replacement transmission for an end customer as to repair it, which generally means several working days of down time and is often associated with follow-up costs. Help is at hand from **the new Flex system** developed by ZF Belgium, which enables all desired Ecosplit transmission variants to be repaired or delivered directly from ZF within 24 hours. In most cases the replacement transmissions are even delivered on the same day. All transmissions have been one hundred-percent remanufactured, and meet the standards for the latest series. This type of **24-hour service** for any given Ecosplit item list number is unique on the market. ZF scores points once again here with its perfect logistics structure and with the expertise it has accumulated over many decades. For customers, the fact that they don't have to maintain their own stock of replacement transmissions anymore means considerable savings in terms of both warehouse capacity and 'dead capital'.



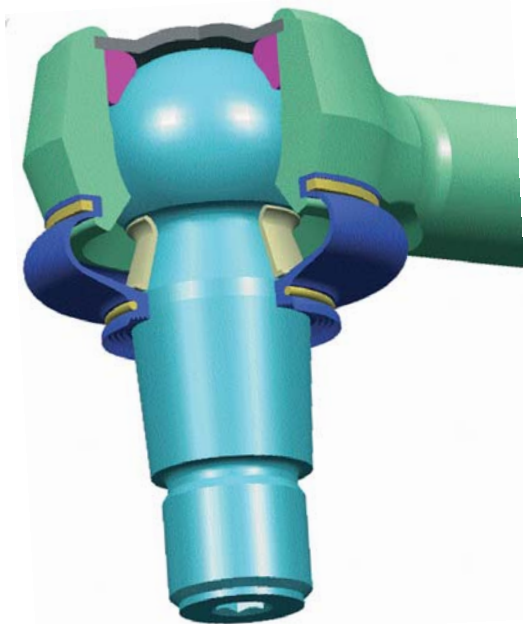
Promoting the next generation

ZF Services will be supporting further education in the vehicle repair industry in 2010 as well. For the fourth time already, the company and the automotive journal AutoServicePraxis will be holding the "AutoServiceMeister" contest to find **the best students working toward their master mechanic qualification**. Last year, André Rohland, Danny Sauerbrey, and Christian Bauer (from right) were honored for their outstanding professional knowledge. They were presented with "Meister" trophies and award money at the ZF stand at the

IAA trade fair in Frankfurt. With every new generation of vehicles and products, the demands on workshop personnel rise. It's all the more important, therefore, for personnel to have a high level of training and education, and ZF Services makes a significant contribution in this regard with its training and workshop programs. It will be expanding its range of services for workshops once again this year. ZF Services will now be offering repair and installation instructions, a technical hotline, and sales campaigns for all core product groups.



Design of Lemförder joints moving ahead



Ten years ago ZF Lemförder's design for commercial vehicle tie and track rods entered large-scale series production. And recently **the fifteen-millionth joint** left the factory in Dielingen. The product sets new standards with its low weight and space-saving dimensions, and impresses customers with improved wheel control performance and lower noise levels.

When a vehicle is steered, the track and tie-rod joints transmit the forces from the steering wheel to the wheels. Until the late 1990s, these track and tie-rod joints were relatively large on account of their many components. This prompted ZF Lemförder to optimize their design and operations. Thanks to hardened housings, the bearing shells are no longer needed, and rubber replaces the spiral springs. An impetus for development also came from the bus market. There, noise insulation in the vehicle was so far advanced that it effectively cut out engine and street sounds. But that in turn made the soft steering noises more audible. The solution was **the new Lemförder joint design for tie and track rods**. It is now manufactured at all the division's sites for the market worldwide.

ZF Parts hydraulic pumps for French makes

Four **new hydraulic pumps** for vehicles from the PSA Group have been added to the ZF Parts product range. ZF Services anticipates that this will yield a considerable rise in sales, especially in France as the home country of Peugeot and Citroën.

The steering pumps that generate the necessary pressure to drive hydraulic power-steering systems are available for the Peugeot 206 gasoline and diesel models as well as the Citroën Xsara diesel models.



Sachs shock absorbers for the Scirocco Cup



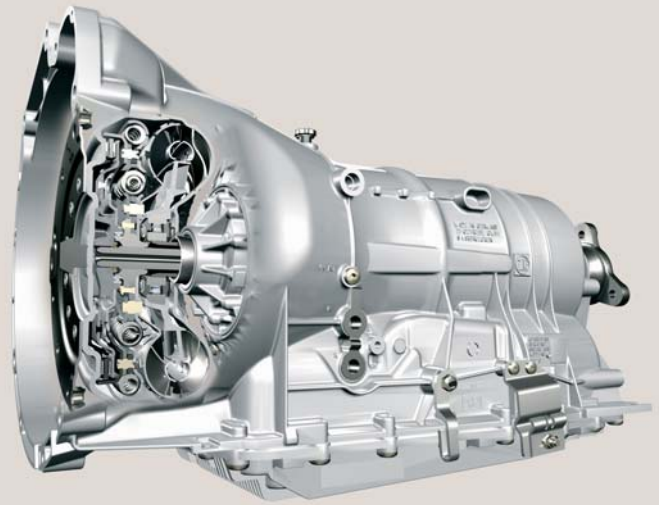
The starting gun will fire in 2010 for the Volkswagen Motorsport **Scirocco Cup**. It will be the first manufacturer's cup worldwide to use environmentally friendly biogas as fuel. This new racing series will be held as part of the auxiliary program on weekends of the German Touring Car Masters (DTM). ZF Sachs is also on board – Volkswagen Motorsport relies on **shock absorbers from Schweinfurt** in all the vehicles.

Remanufacturing pays off

Remanufacturing and reuse can considerably extend a product's service life. This benefits customers as much as suppliers, and ultimately the environment as well. The British Centre for Remanufacturing and Reuse recently conducted a study at ZF Nottingham on potential savings in the remanufacturing of 6-speed automatic transmissions. In addition to material, energy, and transport costs, the analysis also included the returns from remanufacturing or an alternative form of disposal.

The results were clear: **The carbon impact on the environment made by remanufactured transmissions is one third lower than that made by new productions.**

Based on the 2008 figure for components remanufactured at ZF Nottingham, the study showed that up to 335 tons of CO₂ equivalent per year are saved for 6-speed automatic transmissions alone.



ZF EcoLife for Australia

ZF EcoLife, the world's most modern bus transmission, will now also be used on the Australian continent. ZF Australia Pacific presented the commercial vehicle transmission at the 2009 Australian Bus & Coach Show in Sydney.



David Mead, managing director of Volvo Bus Australia (center) with Peter Duncan (left) and Gary Bain (right) from ZF Australia Pacific.

Volvo Bus Australia will be the first company to use the new transmission. Ever greater numbers of people will be requiring transportation in the future. As a result, municipal buses are becoming larger, vehicle combination weights are rising, and engines are becoming more powerful. ZF is supplying the corresponding automatic transmissions: The 6-speed EcoLife transmission can transmit torque of up to 2,000 Newtonmeters, and its completely newly developed, highly efficient cooling system easily withstands the operating temperatures of modern engines which can be up to 15 percent higher than before. ZF has specially developed the EcoFluid Life transmission oil for this purpose, which can extend oil-change intervals to more than 180,000 kilometers. Additional advantages include the fact that EcoLife will also be available as a hybrid version, and that it reduces fuel consumption despite greater horsepower levels. This effect is increased all the more for bus line traffic thanks to ZF's TopoDyn, a series-integrated driving program that switches during operation to the best fuel consumption-oriented shifting strategy independently of the terrain. Passengers and passersby have reason to be pleased as well, for the new transmission produces significantly less noise.

new in the ZF Services product range

We have added these and many other new components to our product range for you. They can be ordered from ZF Services effective immediately. For more information on new product acquisitions, see WebCat at www.zf.com or contact your sales representative.



Manufacturer	Model	Sachs original parts
Audi	A3 (8P1)	Shock absorber Advantage
Audi	TT Roadster (8J9)	Clutch kit XTend
Kia	CEE'D Estate	Shock absorber Super Touring
MAN	TGS	Pilot bearing, clutch
Mazda	5 (CR19)	Shock absorber Advantage
Mercedes-Benz	E Class (W211)	Dual-mass flywheel
Neoplan	Starliner	Dual-mass flywheel
Skoda	Superb (3U4)	Clutch kit ZMS
Volkswagen	Tiguan	Clutch kit XTend Kit plus CSC
Volkswagen	Passat (3C2)	Shock absorber Super Touring



Manufacturer	Model	Lemförder original parts
Alfa Romeo	Mito	Suspension strut support bearing
BMW	X5 (E53)	Suspension, Drive shaft
DAF	CF 85	Link Stabiliser
Fiat	Strada (178E)	Bellow, Steering
Ford	Fusion (JU_)	Mounting, Manual transmission
Jaguar	XF	Tie-rod end
Lancia	Musa	Track control arm
Mercedes-Benz	Actros 4140 - 4160	Tie-rod end
Opel	Signum	Control arm-/Trailing arm brush
Seat	Ibiza IV (6L1)	Support-/Steering link



Manufacturer	Model	Boge original parts
Alfa Romeo	147 (937)	Shock absorber turbo
BMW	X3 (E83)	Shock absorber turbo
Citroën	Xsara (N1)	Shock absorber turbo
Hyundai	Getz (TB)	Shock absorber automatic
Kia	Shuma II (FB)	Suspension strut support bearing
Lexus	Lexus - IS300 (Sedan)	Suspension strut support bearing
Mazda	3 (BK14)	Shock absorber turbo
Nissan	Primera (P12)	Dust cover kit, Shock absorber
Smart	Fortwo Coupé	Repair Kit, Suspension strut support bearing
Ssangyong	Rexton (GAB_)	Shock absorber automatic

ZF Parts

Manufacturer	Model	ZF Parts original parts
Audi	A6 (4F2)	Hydraulic pump, Steering system
Ford	Galaxy (WGR)	Steering gear
Mercedes-Benz	E Class (W211)	Hydraulic pump, Steering system
Mercedes-Benz	SL (R230)	Hydraulic pump, Steering system
Nissan	Interstar Bus (X70)	Hydraulic pump, Steering system
Opel	Astra H	Hydraulic pump, Steering system
Peugeot	607 (9D, 9U)	Hydraulic pump, Steering system
Renault	Master II Box (FD)	Hydraulic pump, Steering system
Skoda	Octavia (1Z3)	Steering gear
Volvo	XC 90	Steering gear



Lighter Passenger Car Chassis

ZF has two concepts for passenger car rear axles and shows the potential which arises by using lightweight construction and functional integration. In the crosshairs: improving the economy and going easy on resources – without trade-offs in driving dynamics, safety, or comfort.

Weight reduction is also possible in the chassis – and this is where it particularly makes sense. If the chassis weight is reduced, lower engine power suffices to attain the same performance as a car with a conventional chassis. Moreover, fewer unsprung masses considerably improve the vehicle's dynamic and comfort characteristics. Costs also play a part: With the complexity and number of structural components in passenger car chassis, there has also been an increase in material and assembly costs in the past few years. With its two concept studies for passenger car rear axles, ZF has embarked on a new path in chassis technology, less weight and less complexity. Without having to make a compromise in driving dynamics or safety compared to conventional twist beam rear axles.

Same performance with less effort

One of the main targets when developing the axle study with wheel-controlling transversal leaf spring was to improve the economy. It has been possible to reduce the number of components by using new materials and functional integration – without any trade-off in terms of driving characteristics. One substantial feature of the new ZF axle design is a transversal leaf spring made of fiber-glass reinforced plastic. In addition to suspension-related and stabilizing functions, this individual component also takes over wheel guidance – and thus also essential tasks for the vehicle's tracking stability and safety. By using this central component, the previously needed stabilizers with bearings and two tie rods, transverse control arms, and conventional helical springs each, are no longer required. As a result, the assembly and integration effort is reduced – without any compromise regarding driving behavior or specific design/setup possibilities by the vehicle manufacturer.

Alternative to the multilink rear suspension

The MCT (“Multi Compliance Twist Beam”) axle by ZF pursues another development approach. The study aimed at developing an innovative and economical rear axle design on the basis of a twist-beam rear axle, which nearly renders the performance of a multilink rear suspension - but without considerable additional cost. In order to achieve the kinematic and elastokinematic properties of a multilink rear suspension, it is usually necessary to separate the functions and thus have



Upper photo:

The ZF rear-axle study with wheel-controlling transversal leaf spring

Lower photo: The MCT axle by ZF

a targeted design for the chassis-specific properties. What's different about the MCT axle by ZF? A new, innovative suspension of the wheel carrier generates a virtual pivot which moves the wheel in toe-in, both for transverse and longitudinal forces. This principle of a multi-compliance twist beam axle presents driving properties which were previously only possible with multilink rear suspensions: lateral force understeering, toe-in under brake force and an optimized bump toe-in with reciprocal spring compression. The suspended wheel carriers also have a positive effect on vibration decoupling. The elastokinematic axle parameters offer automotive developers and manufacturers additional leeway for design. The MCT axle can thus bridge the gap between the classical twist-beam rear axle and multilink rear suspension.





New vehicles ...

Tug boats

The Royal Thai Marine Corps has built a tug boat for its own fleet at its shipyard in Saatahip near Pattaya. Measuring 27.5 meters in length and with a fuel tank capacity of 107,000 liters, this vessel features a total engine power of 2,400 HP. The power is transferred to the propellers by two type W4610 marine reversing gears from ZF with a speed-reduction ratio of 5,630:1. This gives the tug a bollard pull of 27.5 tons. Its chrome-plated control lever is also supplied by ZF.

Xerion 4500

The Xerion 4500 tractor with a maximum of 500 HP is equipped with the ZF Eccom 4.5 continuous hydrostatic power-split transmission. These types of articulated vehicles can be used in the field at speeds of up to 15 km/h. Specially developed for these vehicles, Eccom 4.5/5.0 features especially good transmission efficiency and fuel consumption. Integrated into overarching ZF vehicle control systems, ZF Eccom transmissions yield maximum productivity for covering large field areas.

Jaguar XJ

The Jaguar XJ demonstrates that comfort and sportiness need not be mutually exclusive. This new luxury sedan has powertrain and suspension technology from ZF as standard features, such as the second-generation, 6-speed automatic transmission, and the speed-sensitive Servotronic that ensures a high degree of steering precision and reliability with optimum steering comfort. In addition, the steering pump for the V8 gasoline engines and the electrically adjustable steering column come from ZF Lenksysteme.



... with
ZF technology



Mercedes E Class

The new T model in the Mercedes-Benz E Class has the amplitude-selective dampers from ZF Sachs as standard equipment that are also found in the C Class. Split damper characteristics allow for best-in-class comfort as well as highly dynamic driving.

In the all-wheel version this is enhanced by rack-and-pinion power steering or the speed-sensitive Servotronic, and – depending on the motorization – a steering pump from ZF Lenksysteme.

Opel Astra

An optional feature of the Opel Astra is the FlexRide suspension which is based on the CDC damper system from ZF Sachs. The FlexRide function was also implemented in the Servoelectric steering system from ZF Lenksysteme. In this system, the steering behavior of the dual-pinion version adapts not only to the speed but also to the vehicle response characteristics selected. With the steering column and intermediate steering shaft also on offer, the entire 'wheel-to-wheel' steering system is available from a single source.

MAN TGX

The MAN TGX truck series is on the road with a large number of ZF components, including the AS-Tronic automatic transmission system or the Ecosplit manual transmission, clutches, axle dampers and steel spring carriers, the CDC active damping system, and the CALM air-spring module from ZF Sachs. ZF Lemförder supplies the stabilizer for the driver's cab, the 4-point steering link, axle struts, and the tie and track rod. And ZF Lenksysteme contributes the steering column, steering shaft, Servocom steering gear, and steering pump.

corner technology

trainer's



Alexander Erhart is an engineer at ZF Services.

Vehicles in the VW Group's B5 platform such as the Audi A4, A6, and A8, the VW Passat, Skoda Superb, Seat Exeo, and others are equipped with four-link axles. These are double-wishbone axles, which have a separate link level that improves driving properties significantly. If components are replaced or even just removed, the toe-in curve also has to be checked and if necessary ad-



justed. The most important feature of the four-link axle is the higher placement of the steering gear with very short tie rods. Thanks to this design, a defined bump toe-in arises when the axle compresses or rebounds. When the wheel suspension compresses on braking or rebounds on accelerating, the track changes as a function of the compression or rebound path. The resulting track values are known as the 'toe-in curve'.

It's all a matter of adjustment

When aligning four-link axles, the toe-in curve also has to be adjusted under certain conditions.

If this is correctly adjusted, toe-in increases during rebound – i.e. when accelerating – which stabilizes the vehicle. During compression – i.e. when braking – toe-out increases which supports braking performance. If the toe-in curve is incorrectly adjusted, the vehicle skids when accelerating and becomes unstable. When braking it pulls off to side, even if the braking system is equally adjusted.

Alexander Erhart, an engineer at ZF Services, lists the following cases for which the toe-in curve needs to be checked: > when axle components and/or the vehicle body have suffered accident damage, > when customers complain that the steering pulls when driving over uneven road surfaces or when braking, > when front-axle components such as the knuckle housing, steering gear, sub-frame, tie rod, control arm, etc. are removed or installed, > when wear is present on these components, and when track control arms or tie rods are removed.

To check and/or adjust the toe-in curve, the front axle needs to be raised. Here you will need the V.A.G 1925 distance caliber for the chassis as well as the V.A.G 1925/1 to /6 adapter depending on the vehicle and lift platform. The two jackscrews have to be rotated until they contact the front screws of the sub-frame. Pay attention not to raise the vehicle during the check. The vehicle is in the start position (no load B1). Now place the axle lift on the front mount of the vehicle lift and raise the vehicle about 60 millimeters (position B2). Then

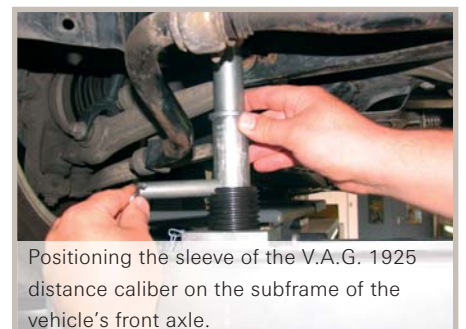
extend the sleeve from the jackscrews and make sure that the securing bolts are in the right place and securely positioned.

To adjust, loosen the wrench size 16 clamp bolt, screw the adjusting screw out about 4 millimeters, and push the tie-rod joint down to the stop. Now screw in the adjusting screw until you reach the set-point value.

After tightening the clamp bolt with 45 Nm check again value set point. Then tighten the adjustment screw with 7 Nm. Now the vehicle can be lowered and the jackscrew rotated down. The axle-alignment analyzer now checks the toe-in curve once again. If the measurement values are within the 2nd check, the alignment is alright. If the measurement values within the limits are not met, you have to repeat the adjustment in position B2 (+60 mm) again.



Tightening the pinch bolt on the axle link to secure the tie-rod joint.



Positioning the sleeve of the V.A.G. 1925 distance caliber on the subframe of the vehicle's front axle.



Upswing in Paris

The „Equip Auto“ trade fair in Paris, an important meeting point for the independent replacement parts sector, was more than ever a hub for business and contacts during the crisis-ridden year of 2009, as well as a harbinger of the upswing. The ZF Group was very satisfied with how it proceeded. The many visitors from the industry who visited the stand received information from the ZF Trading France team about technical innovations as well as about the OSS workshop program which some customers will soon be joining as new partners.

Technology for agricultural machinery

At the Agritechnica in Hanover, the world's largest exhibition of agricultural technology, ZF presented highlights from its farm machine division. The comprehensive ZF portfolio for tractors also included Sachs products such as cabin dampers and clutches. ZF Services also presented its wide array of services. With 350,000 visitors from the industry, including more than 77,000 from abroad, the fair provided ideal conditions for making contacts.



Visit from Italy

Bertolotti, a large-scale Sachs importer in Italy, used the occasion of its annual meeting in Bad Kissingen to visit its largest supplier ZF Services in nearby Schweinfurt. As part of the visit, 50 of the company's sales staff learned everything essential about Sachs shock absorbers and clutches at a comprehensive product seminar and a tour of the production facilities.

Truck sensation in the South Cone

In South America the Formula Truck is thrilling the masses. ZF is one of the main sponsors of this racing sensation, and equips a large percentage of the trucks with its components. Some 200 customers were pleased to receive an invitation from ZF to experience the last race of the season in Brazil up close with vehicles that commands up to 1,200 horsepower. Before the contest started, some guests had a chance to take a ride over the race course. ZF supports various MAN/VW, Iveco, and Scania teams of its customers, which means that ZF engineers are on site for all the races.



Innovation Days in the Ukraine

ZF Services once again invited its workshop customers from the Ukraine, Belarus, and Moldova to the Innovation Days in Kiev, this year for the first time together with Bosch. The seminars focused on topics such as automatic drives and direct injection. Common Rail technology was explained as well as ZF's innovative solutions to actively control the suspension and steering, using the example of a VW Touareg 2.5 TDI that was equipped with air suspension and CDC dampers.

Fifty years of strong partnership

The successful and dependable partnership with the Jordanian **M. Sabbagh Company W.L.L.** has now gone on for half a century. Adeb Sabbagh Sr. founded the replacement parts business in the Jordanian capital of Amman in 1939, with branch offices in Syria, Iraq, Lebanon, Palestine, and Libya set up in subsequent years. The Sachs brand, for example,



was taken up in 1957. The founder's grandson **Adeb Sabbagh Jr.** (center) now leads the company and its 90 superbly qualified employees. This success story began when the grandfather, who owned a repair shop in Amman, bought vehicles all over the Near East from the British Army, and had them brought to Amman to be overhauled. That is why many Jordanians associate his name with the introduction of automobiles in the kingdom. The rapidly growing demand for replacement parts opened a new area of business activity for Sabbagh. Today the company has more than 300 customers in Jordan – wholesalers and retailers as well as large gas stations and government organizations. Its philosophy places the highest priority on service. The company holds customer seminars every year, for example. The two workshops that it currently runs in Amman will be joined by a third in late 2010. Thanks to its cooperation with Sabbagh, ZF covers the market nearly completely, in particular for commercial vehicles. The company also played a major role in the contract for having well over 100 buses in Amman's public transportation system equipped with Ecomat transmissions from ZF. Thus the Sabbagh company was already operating in the spirit of ZF Services before this division even existed.

Top sales partner of ZF Services



When **Sukhpal Singh** (on the right with Addy Doodt, Director of ZF Trading UK) opened a business called Highway Autos in London in 1978 at the age of 18, he probably never dreamed that it would become the largest aftermarket specialist for German, Scandinavian, and French vehicles in Great Britain. In 1984 the company began to import and sell German replacement

parts, and the concept of **Euro Car Parts Limited (ECP)** was born. The company's headquarters and central warehouse are in Wembley, where the inventory includes more than 100,000 different replacement parts. ECP currently has more than 2,000 employees at 71 offices throughout the country, who serve 17,000 independent workshops as customers. "Very close to customers" is Singh's slogan. This means that the company's fleet of 450 trucks makes several deliveries a day as a matter of course. ECP considers farsighted thinking and acting to be among its strengths, as well as valuing its customers and suppliers. ECP has been a member of ATR International AG, the association of leading trading companies in the independent automotive parts sector, since 2008 and will be offering its concept as of 2010. ECP supports the welfare organization BEN, which provides support to auto industry workers who run into hard times. The company's sales have increased by 25 percent in each of the past three years, and will reach 180 million pounds in 2009. These represent good prospects for both the company and ZF Services, which anticipates further growth together with ECP, a 27-year associate and one of its top 10 sales partners.

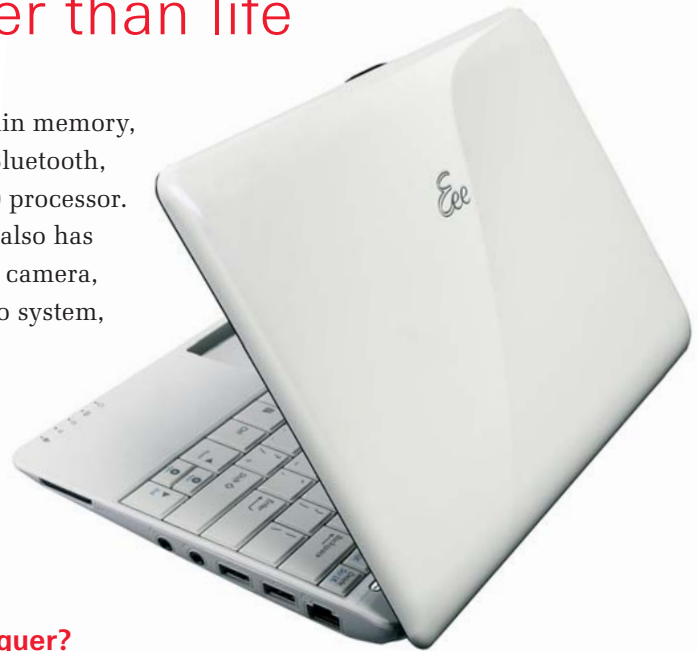
by fax

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Miniature product – Bigger than life

Whether on the train, at a cafe, or in a hotel foyer, the Eee PC 1005HA-H with its stylish shell design is just the right thing to have at hand. At only 1,270 grams, this Netbook from Asus with the new Windows 7 has not only impressive visuals but also a battery life of up to 10.5 hours. This mini-notebook scores points with a 10.1-inch

screen, 1,024-MB main memory, 250-GB hard drive, Bluetooth, and Intel Atom N270 processor. But that's not all – it also has a 0.3-megapixel Web camera, high-definition audio system, stereo loudspeakers and a microphone on board.



If you'd like to win this chic Netbook, all you need is a little luck and the right answer to the following question: The world's most modern bus transmission – which continent is it about to conquer?

answer

Send us your answer before April 4th 2010 by fax to +49 (0)97 21 47 55-658, or by e-mail to fabiola.wagner@zf.com, or by post to ZF Services GmbH, „report“ editorial office, Obere Weiden 12, D-97424 Schweinfurt.

Senders please note: The winner will be chosen by raffle. All decisions are final.

Employees of ZF and their relatives may not participate. Don't forget to include your return address!

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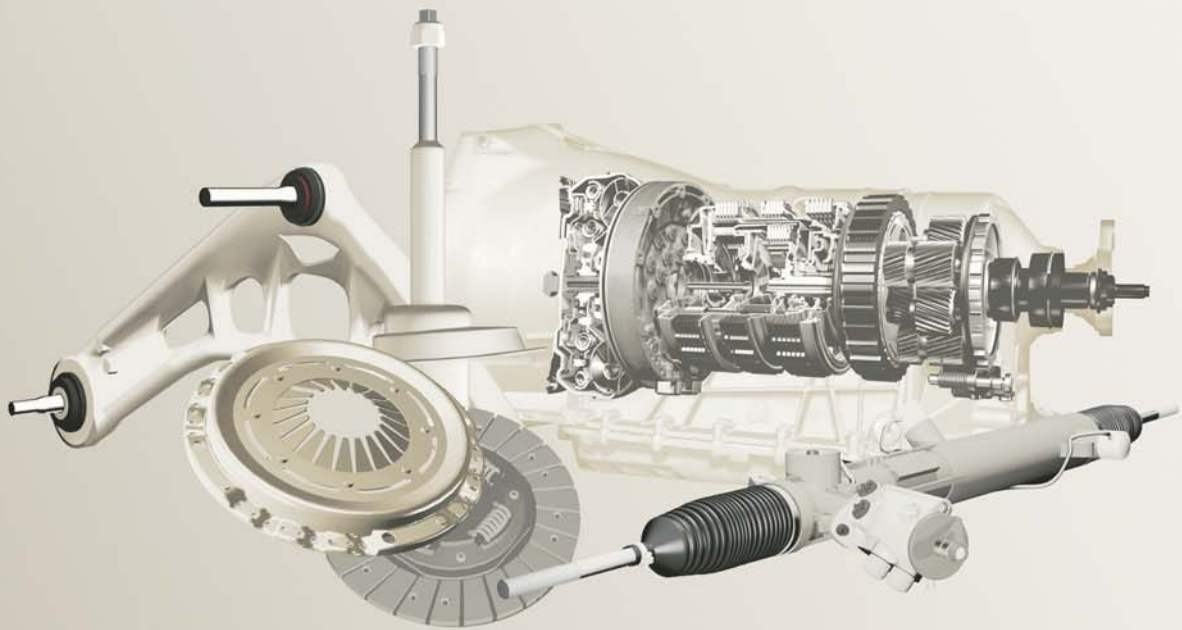
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