Bremspunkt

THE CUSTOMER MAGAZINE FROM KNORR-BREMSE COMMERCIAL VEHICLE SYSTEMS

ISSUE 2 | SEPTEMBER 2012

KNORR-BREMSE AT THE TOP TRADE FAIRS

TECHNOLOGY/SERVICE:
Trailer EBS diagram with product portfolio
Software Update Information Service

GROUP:
Growing with Values

KNORR-BREMSE

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IMPRINT:

Published by:
Knorr-Bremse Systeme für Nutzfahrzeuge GmbH
September 2012

Design and creation:
ETMservices & KB MEDIA GmbH, Marketing und Werbung, München

Collaborators on this issue:
Petra Dietrich, Annette Dönitz, Brigitte Hoppe, Anja Semler, Markus Bauer, Frank Jörger, Martin Häußermann, Christoph Günter, Horst Hacker, Fritz Messerli, Konstantin Anders, Hugh Keith

Photos:
Knorr-Bremse, Thomas Küppers, Getty Images/Sylvain Sonnet, Deutsche Messe Hannover, Formula Truck

Graphics:
Simone Strobel

Publisher:
ETM Verlag
Handwerkstraße 15
D-70565 Stuttgart
www.etmservices.de

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Contact:
bremspunkt@knorr-bremse.com

KNORR-BREMSE AT THE TRUCK GRAND PRIX

THINGS ARE GOING WELL FOR JOCHEN HAHN. After eight out of eleven races, the reigning European truck racing champion is ahead of his arch rival Antonio Albacete. Needless to say, Hahn's current race truck is fitted with a Knorr-Bremse braking system.

The sixth race of the European Truck Racing Championship, which takes place at the Nürburgring in Germany's Eifel Mountains, is the highlight of the season. Every year 200,000 fans make the pilgrimage to this legendary event from far and wide – as does Knorr-Bremse. The action starts on the Friday with the Knorr-Bremse Go & Stop competition – a rare opportunity for regular truck drivers to experience the thrill of driving on a real racetrack. There's more to this race than just speed: Go & Stop is all about precision. Drivers must accelerate to maximum speed and then slow down again to stop exactly on the finish line, which takes the form of three posts positioned in close proximity to one another. The truck must knock over just one of the posts – if more than one falls, penalty points are awarded. To keep spirits high, Knorr-Bremse distributed thousands of inflatable clappers to spectators.

FOUR RACES PER WEEKEND

The races proper were spread over the Saturday and Sunday: four European Championship races in total, as well as two Mittelrhein Cup races. In between the races, guests were able to visit the Knorr-Bremse hospitality area in the Castrol Team Hahn Racing tent. Even Jochen Hahn himself made an appearance. This concept had already proved very popular at the second race of the season, at Misano in Italy and also in Donington, England.

RACE TRUCKS

The 26 winners of the Knorr-Bremse raffle lived it up in similar style, having all been invited to a drinks reception on the Saturday morning. The first prize was particularly prestigious: a luxury weekend at the Nürburgring for the winner and his guest – naturally including full board and lodging – all courtesy of Knorr-Bremse. Their weekend also included a very special encounter with Jochen Hahn, who took time out to chat at length with them and sign autographs in between races. The lucky winners were Rudolf P. from Altensteig and his guest, both longstanding truck race fans.

TALKING SHOP WITH THE EUROPEAN CHAMPION

"It was a great experience to get up close and personal with the trucks and with Jochen Hahn himself. What a great guy," said Rudolf P. There must have been plenty of subject matter for conversation too – Jochen Hahn's current race truck is new this season, though it features some tried-and-tested technologies. Take the superb six-cylinder engine for example. As in the case of Hahn's previous vehicle, it was built by MAN and delivers a mighty 1,100 horsepower and 5,000 Newton meters of torque to the crankshaft. Its excellent driveability is arguably the crucial factor that makes this power plant fit for a champion. The rules state that the trucks' top speed must be limited to 160 kilometers per hour, so acceleration is the key. It all comes down to who can accelerate fastest at the start of the race, and also out of the corners. But in truck racing, like in all motor sports, the bends come thick and fast. So speed counts for nothing unless it is paired with a powerful set of brakes – in this sport more than anywhere. "The brakes account for around a third of total performance," says Jochen Hahn. The driver with the best brakes can start braking later and so keep traveling at top speed for longer. On the track that can make all the difference between victory and defeat. "The braking system in our truck gives us a serious advantage on narrow sections," says Hahn.

European champion Jochen Hahn, Board Member Walter Sauter and the winners

Particularly on a track like the Nürburgring, good brakes are hugely important. Shortly after the start, the massive race trucks come to a narrow hairpin bend where they need to decelerate from 160 km/h to what seems like walking pace. They then take the short-cut route, which once again requires them to slam on the brakes. And in the final third of the circuit, they face a narrow chicane.

Braking generates heat. This is not a problem for the brake discs themselves, but the brake pads are less resilient, and become considerably less effective at high temperatures – a phenomenon known as "fading". To counteract this loss of braking power, the brake discs are sprayed with a jet of water, which hisses off in a cloud of steam. Knorr-Bremse clearly has "fading" very nicely under control – as demonstrated by Jochen Hahn's lead position in the tables so far this season.

More than 5,000 fans were there to support participants in the Go & Stop competition

FORMULA TRUCK

It is not just in Europe that Knorr-Bremse has a stake in motor sports. Further afield too, race trucks bearing the Knorr-Bremse logo battle it out for coveted championship points. Take for example Scania pilot Roberval Andrade, who is currently heading the field in the Brazilian Fórmula Truck championship. Andrade was Fórmula Truck champion in 2002 and 2010, came second in 2005 and 2007, and holds third place in the all-time table, with 20 victories overall. He is an old hand on the South American truck racing scene and has been taking part in Fórmula Truck since 2000. For many years he has received advice and practical support from Knorr-Bremse. Other teams also use Knorr-Bremse brakes, including Volkswagen, Ford and Iveco.
At first glance the two race series are not so different from one another: both have a season highlight that attracts almost as many spectators as a Formula 1 race, and both feature 1,100 horsepower-plus trucks. But the Brazilian trucks tend to look considerably more menacing than their European counterparts. In Brazil, like in Europe, water-cooled brakes are used. But in Brazil the 160 km/h speed restriction is applied a little less strictly than in Europe. Another difference is that whereas in Europe the trucks are fitted with GPS tracking devices that detect even the smallest infringement of the rules, Brazilian race officials use radar to measure the vehicles' speed, but only at selected points on the track. In theory this means it is possible to drive substantially over the speed limit between these points. With their powerful engines, these trucks could easily manage 200 km/h – putting even more strain on the brakes. Drivers therefore need brakes they can rely on under the very toughest conditions.

Klaus Deller,
Executive Board Member,
Knorr-Bremse AG

EDITORIAL

Dear reader,

This issue of "Braking Point" with its new layout is being published in time for two important events in the commercial vehicle sector. Over no fewer than eight pages, starting on page 10, it takes an in-depth look at the new concepts and innovations that Knorr-Bremse will be presenting at the Automechanika trade fair in Frankfurt and the 64th IAA Commercial Vehicles in Hanover.

When Automechanika opens its doors on September 11, Knorr-Bremse will be found in a new location on Stand E91 in Hall 3.0, where we will be showcasing innovative service concepts and optimized aftermarket products. The IAA in Hanover is the most important trade fair of the entire year for the commercial vehicle industry, and it goes without saying that Knorr-Bremse will once again have a strong presence at its usual location. As well as being able to inspect the products on display and discuss their functions and advantages with our staff, you will also be able to see some of the systems in action – installed in the trucks being put through their paces in the presentation area. We look forward to welcoming you to our stands in Frankfurt or Hanover.

But Knorr-Bremse also flies the flag at smaller-scale events – and you can read in our news reports about the exhibitions we have already taken part in during 2012.

In addition to attending trade fairs, we are also involved in motorsport. When this issue is published, the European Truck Race championship will be drawing to a close. This year, 26 winners of our special competition were able to attend the climax of the year – the Truck Grand Prix at the Nürburgring. As well as carrying a report on this, we also look at the Brazilian Formula Truck competition, an event that is not so well known over here, but which Knorr-Bremse is also involved in.

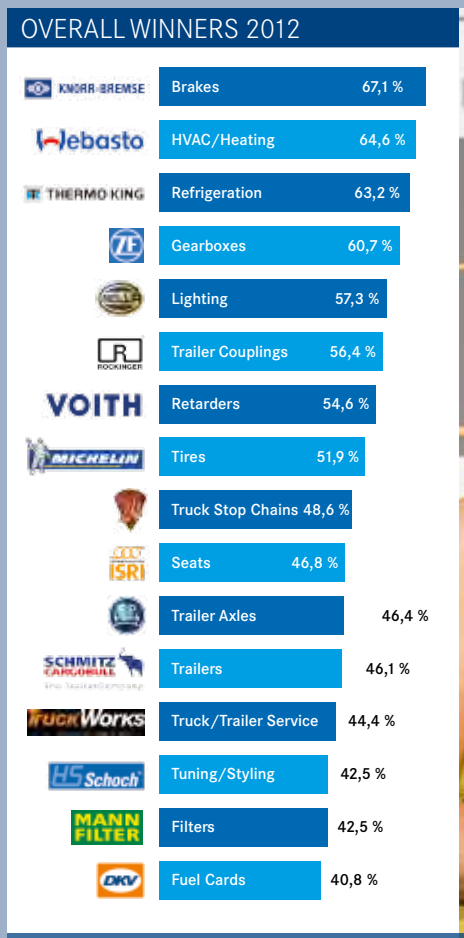
We also focus on another topic that is particularly close to our hearts. This year, an international team of colleagues worked very hard on formulating and communicating our corporate values. On Values Day we discussed these within the Group and considered how they could be applied. You can read more about this at the end of this issue.

We hope you find it an enjoyable read!

Kind regards

Klaus Deller

» NEWS



Award ceremony at the Staatsgalerie in Stuttgart: Knorr-Bremse wins the title of "Best Brand in the Commercial Vehicle Sector" for the seventh year running. Presenter Birte Karalus with Klaus Deller

KNORR-BREMSE AT MERCEDES-BENZ SERVICE SUMMIT

Mercedes-Benz Sales Germany held its 2012 Service Summit in Hanover from June 14 to 16. The event was attended by some 8,000 members of the Mercedes-Benz service organization, and also attracted 135 suppliers of products for Daimler's truck and car brands. Knorr-Bremse exhibited tools for the professional maintenance of SM and SL disc brakes in the new generation of Actros: the new service tool kit, and the test device for wear indicator potentiometers. With the help of the NEO | Green vehicle diagnostics system, Knorr-Bremse reminded visitors that its expertise is not limited to trucks; it also supplied evidence of its trailer know-how in the form of the Trailer Electronic Brake System (TEBS) and the ECU*talk*® trailer-specific diagnostic tool. Although Mercedes-Benz does not build trailers itself, every TruckWorks center is also a Knorr-Bremse Trailer Service Center.

WEKA CENTER-AXLE TRAILERS

Mercedes-Benz chose to unveil its new Actros truck in combination with a Weka two-axle center-axle trailer equipped with TPMS tire pressure monitoring and SK 7 disc brakes, both from Knorr-Bremse. Following the truck's premiere the long-distance freight company Wagenstetter from Forsting, Bavaria (whose fleet comprises some 40 vehicles), started a six-month road test of the truck-trailer combination as part of its normal operations. During this period it was monitored and serviced by Daimler's road testing department.

"BEST BRAND" – FOR THE SEVENTH YEAR RUNNING!

Not just once, but year after year Knorr-Bremse has been voted "Best Brand" in the commercial vehicle industry. And 2012 was no exception. When publishers ETM and vehicle inspection experts DEKRA asked readers of trade journals "trans aktuel", "lastauto omnibus" and "FERNFAHRER" to vote for the best brands in 22 different categories, 8,000 of them chose Knorr-Bremse as the clear winner in the "Brakes" category for the seventh year in succession – underlining its position as industry leader. Klaus Deller, Executive Board Member of Knorr-Bremse AG responsible for the Commercial Vehicle Systems division, received the award at a ceremony attended by many representatives of the industry. "We are very pleased that we have once again been able to impress readers with our products and services", he commented.

The Knorr-Bremse team at B2Run

FIT FOR THE JOB

On July 19, an astonishing 30,000 runners registered for the ninth "B2Run Firmenlauf" – Germany's biggest timed corporate running event. B2Run is held in Munich's Olympiapark, and the entry fees collected from participants go to charity. This year, once again, almost 100 Knorr-Bremse employees took part, picking up their running shirts from the team stand in the stadium on their way in. The fastest Knorr-Bremse employee was Christoph Rahmann, who came 53rd overall with a time of 21 minutes and 54 seconds.

CYCLING FOR A GOOD CAUSE

On June 6, Chariteam München embarked on a four-day cycle tour from Munich to Berlin – some 700 kilometers in all. The 30 racing enthusiasts taking part were collecting donations for the ZNS – Hannelore Kohl Foundation, which provides support to brain injury victims and their families. Every year, some 270,000 people suffer such injuries in Germany. Knorr-Bremse employee Dave Rumary was amongst those taking part, and at the finish was able to present the Foundation with a check for 1,000 euros on behalf of Knorr-Bremse AG.

Dave Rumary and family with the Vice-President Corporate Communications, Christoph Günter

» NEWS

Dr. Volker Zimmermann (left) and Dr. Stephan Weng

CHANGES AT THE TOP

Since August Dr. Stephan Weng has been Member of the Board of Management of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH with responsibility for Air Treatment and Controls. A graduate in industrial engineering with a doctorate in mechanical engineering, Dr. Weng spent 14 highly successful years working for the Robert Bosch Group. He has extensive experience in the field of sales & marketing in the Asian region and a detailed knowledge of the automotive industry.

Dr. Volker Zimmermann is taking over the post of Chairman of the Board of Management of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, which hitherto was held simultaneously by the member of the Executive Board of Knorr-Bremse AG. Dr. Zimmermann holds a doctorate in mechanical engineering and is a proven expert in powertrain systems. He has had a successful management career with the Voith Group, where he was latterly Managing Director of Voith Turbo responsible for engineering services road at home and abroad and a member of the Executive Team of Voith GmbH.

TRADE FAIR MARATHON

From Amsterd off its 2012 tr

Knorr-Bremse's 2012 trade fair season kicked off with one German and one international fair in April, and then the same again in May. Or to put it another way: the trade fair team organized an impressive four fairs in just six weeks. After a five-year hiatus, the Netherlands' leading trade fair for sustainable road haulage, BedrijfsautoRAI, was relaunched between April 17-21 this year with a brand new concept. And with almost 46,700 visitors attending, the 180 exhibitors of trucks, vans, minibuses, special-purpose vehicles, parts and accessories who came to Amsterdam's RAI conference center to take part were not disappointed. Knorr-Bremse was represented there with a stand in the Europa Complex. April 21 and 22 – the weekend after BedrijfsautoRAI – then marked the fifteenth jubilee of Trost-Schau, one of the biggest specialist fairs for workshop equipment, tooling, passenger car and commercial vehicle components, and workshop concepts. This year's fair, themed "Super Action, Super Show", was held at the Stuttgart trade fair site and attracted 275 exhibitors. Of course Knorr-Bremse was there too, exhibiting both tried-and-tested and new products in Hall 1. It has become something of a tradition for Wütschner Fahrzeugteile GmbH to invite companies to take part in its own "Workshop Olympics" every Olympic Games year. 2012 was no exception and so, for the fourth time, participants came together in Dettelbach, Bavaria, on the third weekend of May to show off their skills in contests covering all aspects of cars and commercial vehicles. The competition ran parallel to a two-day specialist trade fair where visitors could find out what products were on offer – including those of Knorr-Bremse, of course. This was closely followed by the final leg – for the time being – of Knorr-Bremse's trade fair marathon: Automechanika Middle East, the region's biggest automotive trade fair, which is held at Dubai International Convention & Exhibition Centre. Here Knorr-Bremse had the opportunity for the first time to present its products at a 54 m^2 stand in the German Pavilion run jointly by the Federal Ministry of Economics and Technology (BMWi) and the Association of the German Trade Fair Industry (AUMA). 87 German companies were represented in the Pavilion overall. Knorr-Bremse used the opportunity to make a large number of useful new contacts.

dam to the Middle East – Knorr-Bremse successfully kicks ade fair season with four fairs in just six weeks

NEW LOGISTICS CENTER IN MOSCOW

Following the conversion of Knorr-Bremse's Moscow sales office to a subsidiary in 2007, it has now commenced logistics operations for Knorr-Bremse's Russian and Belarusian aftermarket customers. Knorr-Bremse first set up a sales office in Moscow back in 1997 to coordinate the company's local activities. Since then, the company has steadily and systematically built up its business in the region with a portfolio of products and services appropriate to the Eastern European market, and has established a successful joint venture with the Russian automotive manufacturer Kamaz. In 2005 Knorr-Bremse opened its production plant in Nizhny Novgorod, and two years later founded Knorr-Bremse Commercial Vehicle Systems Moscow, which started performing outbound logistics tasks in April 2012. Since that time the 20 employees of Knorr-Bremse Moscow have been efficiently supplying dealers, trailer manufacturers and original equipment manufacturers in Russia and Belarus with genuine Knorr-Bremse parts. The company's ordering, order processing and billing systems are smooth and unbureaucratic. In warehousing, logistics and customs clearance the team is supported by service partners to ensure that all orders leave the warehouse – located conveniently close to Moscow Sheremetyevo airport – on time.

While athletes at the Olympic Games were setting new records and competing for medals, Transport for London was facing up to a rather different, but no less challenging task – coping with some ten million passengers every day rather than the usual (impressive) nine million. Knorr-Bremse played an important role in ensuring that everyone reached their destination safely – all London Underground trains are equipped with KB braking systems, and subsidiary Westinghouse supplied new, safer doors for the Jubilee Line. Most buses also have Knorr-Bremse systems on board.

KNORR-BREMSE SUPPORTS LONDON OLYMPICS

Public transport systems in London rely on Knorr-Bremse

INNOVATIVE AND EFFICIENT

KNORR-BREMSE HAS AN INTERNATIONAL REPUTATION FOR ITS **EXPERTISE IN THE FIELD OF COMMERCIAL VEHICLE SAFETY.**

But its current product portfolio goes well beyond this, catering for changing requirements in terms of fuel consumption and emissions as well. So it is not just vehicle builders and fleet operators who benefit from Knorr-Bremse systems, but society as a whole. You can see this for yourself at the company's stand at the 64th IAA Commercial Vehicles in Hanover.

The image projected by Knorr-Bremse at the exhibition is that of an innovative and efficient company that is open to future challenges and responsive to customer needs. The Knorr-Bremse stand at the 64th IAA Commercial Vehicles in Hanover is likely to prove a magnet even to casual visitors who want to see for themselves how innovative the company is. And it certainly has a lot to offer.

The main focus is on the company's products and core competences. Intelligent use of compressed air management systems and mechatronics enables fuel to be saved and emissions reduced – to the benefit not just of vehicle builders and fleet operators but also of the environment.

The innovative solutions presented by Knorr-Bremse can be divided into three modules according to function and application. The chassis module mainly contains new products from the fields of safety and driver assistance systems. The powertrain module shows how compressed air and mechatronics can be intelligently used to reduce emissions. And in the case of the trailer module, the main focus is on safety – but also on how lightweight design can enhance efficiency.

The "Technology Center" looks at region-specific product requirements and Knorr-Bremse solutions that draw on the company's global systems competence. Here are details of what awaits you:

THE CHASSIS MODULE

EBS 7, the successor to the tried-and-tested EBS 5, will be available from 2013 onwards. This latest driver assistance system reproduces all the functions of EBS 5 but is located in the chassis rather than the cab, making installation much easier. It combines the antilock braking system (ABS), traction control system (ASR) and electronic stability program (ESP) into a single electronic system. The great advantage compared with traditional, purely pneumatic systems is the extremely rapid response – resulting in a shorter braking distance.

Safety Direct is a kind of "black box" that records driving and vehicle data. It does not do so continuously, but rather only when the system is activated by a sudden application of the brakes. The data captured can be used for driver training but also as a source of information following an accident.

Field-testing has demonstrated that the use of EAC2 can save up to 300 liters of diesel per vehicle per year. The modular air management system for trucks uses electronics to support the tried-and-tested pneumatic system at crucial points. Vehicle builders, fleet operators and drivers all benefit from its ease of installation and its integration of the air dryer and multi circuit protection valve together with other systems such as an optional electronic parking brake. Fleet operators in particular benefit from the reduction in fuel consumption achieved by optimum control of air supply and treatment.

As they are considerably lighter than their predecessors, the SM7 and SL7 disc brakeshelp improve energy efficiency as well as safety. The SM7 generates braking forces of up 30kNm per wheel on the front axle, and the smaller SL7 on the rear axle generates 25kNm. The package also in-

The SL7 disc brake is considerably lighter than its predecessor and generates braking forces of up to 25kNm

The EAC2 electronic air control system offers optimum compressed air management in commercial vehicles

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NNOVER, GERMANY

TECHNOLOGY

cludes the ProTecS® pad retaining system, which optimizes pad guidance and thus further improves safety and economy of operation.

Electronic Level Control adapts the pneumatic suspension system to the vehicle load. It also makes "kneeling" possible for buses so that passengers can enter and alight more easily.

Maintaining the right tire pressure is not only crucial for safety but also saves fuel and operating costs. The TPMS electronic tire pressure monitoring system uses sensors in the rim well to monitor pressure and temperature within the tire and if necessary alerts the driver.

THE POWERTRAIN MODULE

The compressor with clutch makes intelligent control of the air supply system possible. Unlike conventional systems, the compressor with clutch disengages from the engine in situations where this makes sense – for example when more power is needed for the vehicle itself on uphill gradients or during overtaking. When the vehicle is driving downhill, on the other hand, the system uses the surplus energy to produce compressed air. It is controlled by the EAC2 system described above. The two systems together can save fuel and reduce CO2 emissions by up to 2.5 tons per year.

Used on semi- or fully automatic transmissions, the clutch actuator, to put it simply, gives the driver's left foot a rest, operating the clutch itself according to the driving situation.

Transmission control unit: Here Knorr-Bremse has used its mechatronic expertise to supply manufacturers of automated manual transmissions with an electronic control unit that includes the mechanical link to the transmission.

The Pneumatic Booster System (PBS) is a real source of fuel savings. It blows compressed air into the engine's inlet manifold, helping to avoid so-called "turbo-lag". Knorr-Bremse claims the system delivers fuel savings of between 3 and 5 percent, but the trade journal "lastauto omnibus" achieved up to 6.9 percent savings in field tests. Knorr-Bremse is not only showcasing this system on its stand but also, like the emergency braking systems, demonstrating its use in the open-air area to the north of Hall 26.

A central focus of Knorr-Bremse's subsidiary Hasse & Wrede is on reducing noise and damaging vibrations generated by moving engine parts such as the crankshaft, camshaft or fuel pump. At the IAA you can find

The SM7 disc brake applies up to 30kNm to the truck's front axle

INNOVATIVE AND EFFICIENT

out about the latest leading-edge technologies in this field – for example visco-dampers.

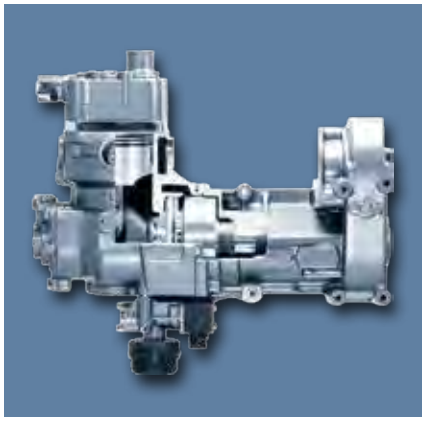
THE TRAILER MODULE

Trailer EBS lies at the heart of the trailer braking system – a central module incorporating the electronic control, pneumatic unit and part of the sensor system. Integration of the electronically controlled pneumatic suspension means the new generation TEBS G2.2 offers additional functionality. Incorporation of a second internal trailer CAN bus system significantly reduces the complexity of the system.

ST7-430: This is the lightest available 22.5 inch two piston disc brake for trailer applications. Designed for 9-ton axle assemblies, the brake caliper and disk reduce overall weight by 5 kg compared with previous models.

Trainees at the Knorr-Bremse plant in Aldersbach have specially prepared models of all the technical components for the exhibition. Six of these trainees will also accompany the exhibition crew to Hanover and be on hand to speak to visitors. Vocational training is one of the ways that Knorr-Bremse encourages young recruits to join the company. Activities range from the "Knorr-Bremse for Kids" campaign, which aims to awaken interest in technical occupations amongst the children of employees, to the "GoIng" campaign launched by the German Automotive Association VDA to encourage young people to train as engineers.

The IAA is the leading trade fair for truck technology, transport and logistics



Twin fuel-savers: The PBS Pneumatic Booster System (left) uses compressed air to reduce turbo-lag in truck engines. The Compressor with Clutch (right) uses surplus energy to fill the compressed air system

Small but highly effective: ProTecS® *uses a spring to ensure optimum guidance of the brake pad, ensuring greater safety and economy*

So there will be plenty to see at the Knorr-Bremse stand. We would recommend anyone who already knows they will require a lengthy dialogue/advice session to make an appointment in advance. But there will also be specialized staff available at all times on the stand to speak to drop-in visitors about topics such as road safety, fuel economy and environmental protection.

Konstantin Anders

WORLDWIDE APPLICATIONS AND SCALABLE SYSTEMS

The ability to tailor technologies precisely to customers' needs is an indicator of genuine technical competence in a company. Being customer-facing at Knorr-Bremse means adapting to the requirements of different manufacturers, repair shops and vehicle operators. The company utilizes all its technological capabilities around the globe and adjusts its products to fit local conditions. Examples include the clutch booster, the APU air treatment system – a combination of air dryer and four-circuit protection valve – and the drum brake that is still the most popular wheel brake in all regions of the world.

KNORR-BREMSE AT IAA COMMERCIAL VEHICLES

In September 2012, the 64th International Automobile Exhibition for Commercial Vehicles – the world's biggest trade fair for the commercial vehicle industry– will take place in Hanover. As always, Knorr-Bremse will be present in Hall 17 on Stand A 30. On a floor space measuring almost 500 m², the company will be presenting its latest products in the commercial vehicle industry, focusing on its global systems competence for trucks, buses, trailers and aftermarket service.

- Location: Messegelände Hermesallee 30521 Hanover, Hall 17, Stand A30
- Open to the general public: September 20 to 27
- Press Day: September 19
- Press conference: September 19, 10.30 at the Knorr-Bremse stand

PROF. DR. LASZLO PALKOVICS

Head of the CoC Valves

RESEARCHER, BUSINESSMAN AND VALVE EXPERT

PROFESSOR DR. LASZLO PALKOVICS IS A MAN OF MANY TALENTS. After completing a doctorate in engineering, he became a university professor at an early age and then built up a research center for Knorr-Bremse in Budapest. Today he is in charge of the CoC Valves.

Vehicle design is clearly one of Professor Laszlo Palkovics' passions – otherwise it would be difficult to account for his rapid rise to the top of his profession. Born in Hungary in 1965, he completed his degree in engineering at Budapest Technical University at the tender age of 24 and by the age of 30 was working as a university teacher. This was when he first came into contact with Knorr-Bremse: "It was in 1994, after a lecture I had delivered, that Knorr-Bremse approached me with a research commission." He was asked to carry out a study of "one-sided braking". The company was impressed by the approach taken by the dynamic young Hungarian, and a year later asked him to develop a new research center for Knorr-Bremse Commercial Vehicle Systems. From then onwards, Palkovics operated in two spheres: on the one hand carrying out industrial research for Knorr-Bremse and on the other teaching at Budapest Technical University, where he was appointed to a chair in 2000. "It is a highly unusual set-up", admits Professor Palkovics, "but ultimately everyone benefits from it." As he points out, the university gains an insight into the needs of industry, and the company benefits from being close to a center of basic research and a potential source of excellently qualified staff.

RESEARCHER IN MUNICH, TEACHER IN BUDAPEST

Laszlo Palkovics is a man who thinks and works internationally. From 2001 to 2003 he worked as head of platform development at Knorr-Bremse in Schwieberdingen. Looking back, he describes this period as "the best two years of my professional life". Now he has largely transferred his activities from Budapest to Arcore in Italy, where he was appointed Head of the Center of Competence (CoC) Valves at the end of 2011 – a new challenge for this versatile engineer. "As an academic I never had anything to do with the business side of things. But I didn't find it too difficult to adapt." Today, in addition to research and development, he is also responsible for quality assurance, procurement, sales and controlling.

The product that Palkovics is now responsible for cannot be called high-tech, as he freely admits. "The basic principle of a valve has remained unchanged for the past 50 years, but the design has been modified over the years." One important driver of change has been the issue of reliability. "We are determined to find new technical solutions and an intelligent design that enables these products to meet changing requirements in terms of quality, durability and ease of manufacture and servicing."

TALENTED DEVELOPMENT BOSS

RALPH LAUXMANN HAS BEEN IN CHARGE OF "Global Research & Development" and "Central Engineering" at Knorr-Bremse since last September. An engineer by training, he previously held various positions at Bosch, where he was involved in developing a number of patented products.

RALPH LAUXMANN

- Head of Global Research & Development
- Head of Central Engineering

48-year-old Ralph Lauxmann enjoys driving fast cars – both for his work and in his free time. Born in 1964 in Swabia, his hobby is racing touring cars, but he also makes use of the racetrack during the course of his work. "When I was at Bosch I was involved in developing ABS and ESP, and we used to carry out practical testing of our developments – as often as not on the Nürburgring".

AN ENGINEER WITH RACING IN HIS BLOOD

Lauxmann started his career by studying engineering at Stuttgart University. "I had written my diploma dissertation on braking technology and that soon got me a job at Bosch," he remembers. From 1994 onwards he held various posts at the Stuttgart-based company, including one in the field of petrol injection. He also worked as a development engineer on driver assistance systems and radar technology and was involved in various patent projects. Later on he was put in charge of customer projects in the field of assistance systems, during which time he was responsible for the introduction of ACC to the BMW 7 series.

Nowadays, though, he has to deal with considerably heavier vehicles. Since moving to Knorr-Bremse in September 2011, Lauxman has headed up "Global Research & Development" and "Central Engineering", with responsibility for co-ordinating commercial vehicle system development activities. "Every Knorr-Bremse site has its own development tasks and areas of focus, but I am where the various threads come together. What I try to do is to ensure that the customers' main concerns – safety and emissions – are taken into account when systems and components are being developed. Reducing complexity is another aim – to make it easier for customers to incorporate our systems into their vehicles. Another task is opening up new market segments for the company, for example by adapting products like ABS/ESP for agricultural vehicles and developing them to the point of volume production for the first customers." The global nature of Knorr-Bremse's corporate structures means Lauxman regularly finds himself flying overseas to exchange ideas with colleagues in India, China or the USA.

TAILOR-MADE SERVICE

THIS YEAR, KNORR-BREMSE WILL BE SHOWCASING ITS PRODUCTS AND SERVICES AMIDST **NEW SURROUNDINGS AT AUTOMECHANIKA IN FRANKFURT,** the major automotive after market trade fair. Now relocated to Hall 3.0, Stand E91, the company will be focusing on its aftermarket portfolio and associated services.

First things first: Knorr-Bremse has moved. The company will now be exhibiting its products and services in the OEM Hall 3.0, Stand E91. "We feel this is a much better location than before", comments Fritz Messerli, responsible for Knorr-Bremse's aftermarket business in Europe.

TARGETED AT WORKSHOPS AND SPARE PARTS BUSINESSES

Automechanika in Frankfurt is mainly attended by employees and decision-makers from workshops and spare parts businesses, and the Knorr-Bremse stand reflects this. As Fritz Messerli puts it: "Automechanika offers an excellent platform for communication – an opportunity to talk to people face to face and discuss their problems in detail. Workshops are interested in other issues from aftermarket dealerships." As usual, Knorr-Bremse will be showcasing its service concepts with the help of appropriate exhibits.

One focus, for example, will be on the company's service strategy for the compressor with clutch. "This has only been in volume production for two years now, but we want to prepare workshops for future servicing tasks", says Fritz Messerli. Workshops and distributors are very interested in receiving information on new service concepts. The same goes for the Electronic Air Control system EAC 2, which has also been on the market for around two years. The modular design of the EAC 2 enables Knorr-Bremse to offer individual modules as spares rather than entire units. Currently on offer are the air drying cartridge and drain valve. "With a complex product like this, diagnostics is also an issue," explains Messerli. In this particular case Knorr-Bremse offers an update for the well-known NEO System Diagnostics software.

The tried-and-tested conventional APU also has a modular design like its electronic sister, the EAC2. "So we have developed a new service concept that is modular like the product itself," reports Messerli. This means that, instead of selling the entire unit, Knorr-Bremse now offers the individual modules to workshops. According to

YOU CAN FIND KNORR-BREMSE HERE:

September 11 to 16: Automechanika, Frankfurt Trade Fair, Hall 3.0, Stand E91

Messerli this has a number of advantages for the customer: surprisingly enough it reduces the sheer number of parts involved and minimizes capital tie-up for dealers; and it also increases operational availability.

Fritz Messerli describes the new SM/SL generation of disc brakes as a "rather more complex service issue. What is needed here is a revised range of service products. But the basic service philosophy remains unchanged." As he points out, the new disc brakes are not compatible with their predecessors. As usual, Knorr-Bremse delivers the new service tool kit for the SM/SL disc brakes in a hard protective suitcase that also contains the tools required and a revised service manual offering practical tips and tricks for servicing commercial vehicle disc brakes.

Konstantin Anders

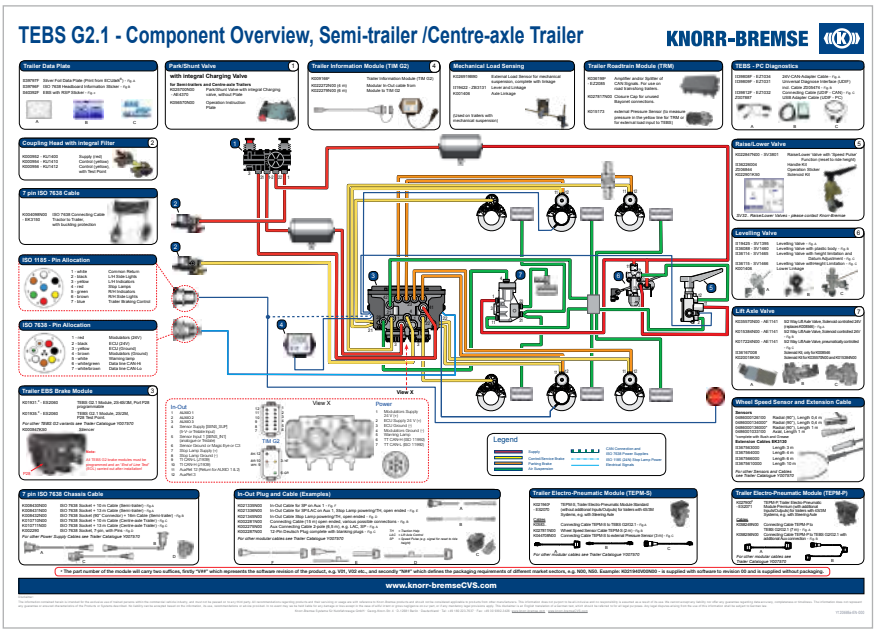
The open design of the stand invites visitors to come in and talk to the Knorr-Bremse experts

TEBS DIAGRAM WITH PRODUCT PORTFOLIO

To make the work of workshop staff easier, Knorr-Bremse has created large-scale diagrams showing all the components of the TEBS electronic braking system for trailers. Available in A1 poster format in various languages, the diagrams should save technicians having to search for circuit diagrams and connections in the systems architecture of standard trailers.

OVERVIEW

Technicians are provided with a rapid overview of the connections for the TEBS G2.1. The posters also list the most frequently required spares – complete with their part number. The two posters are divided into semi-trailers/center axle trailers and drawbar trailers with TEPM-S/P as a 4S/3M system. Workshops can order them direct from Knorr-Bremse or from a distributor.



Everything at a glance: the TEBS poster diagrams show how the components fit together

STANDARD REFERENCE WORK ON TRUCKS

LKW – EIN LEHRBUCH UND NACHSCHLAGEWERK

the 11th edition of a classic reference work in German on trucks.

The red handbook on trucks – now available in its eleventh edition – has long since become a classic. It contains up-to-date information on regulations, instructions on truck care and maintenance, detailed descriptions of the latest technologies and tips on how drivers can save fuel and reduce wear and tear.

TECHNOLOGY, LEGISLATION AND DIRECTIVES IN A SINGLE VOLUME

With its wealth of illustrations, tables and checklists the book is not only a training aid but also an indispensable companion for experienced mechanics, truck drivers and parts dealers in their daily work. The latest edition contains four completely new chapters on technical innovations, energy efficiency and emissions. Topics covered include driver assistance systems, Euro 6 engines, turbochargers, fully automatic transmission systems and selectable front axle drives. The section on regulations includes emission standards and the EU Directive on particulate matter. Some 660 pages in length, the book also includes all the examination questions for candidates wishing to qualify for Class C, C1 and CE driving licenses.

ABS SUPPLY CABLE WITH INTEGRATED PROTECTION

SAFE – NEW CROSS-SECTION AND INTEGRATED FUSE. The new cable ensures a safe power supply for Trailer EBS.

Knorr-Bremse now supplies a protected power supply cable for TEBS G2 and G2.1 that complies with ISO 7638. It was developed following an amendment to the ECE Directive permitting the use of cables with a reduced conductor cross-section and integrated fuse for trailer EBS systems in line with the requirements for trailer ABS systems. The 13-meter cable is recognizable on account of its reduced diameter and the green covering cap on the ISO 7638 socket with its integrated 15-amp fuse. The advantages of the new cable are obvious: the reduced diameter makes it lighter and more flexible, and considerably easier to install. But the biggest advantage is the new socket with its replaceable fuse. The power supply cable can be used on semi-trailers and central axle trailers with 2S/2M or 4S/2M brake configurations and 24 volt power supply.

SERVICE AND PRODUCT NEWS

- New Air Disc Brake Type: SL7 and SM7 for Daimler Actros Application
  Doc. No.: Y131937_EN_000
- Kongsberg Hydraulic Gear Shift System (HGS)
  Doc. No.:Y119237_EN _001
- Remanufactured EAC1
  Doc. No.:Y119461_EN _000

The documents are available to download at www.knorr-bremseCVS.com

SOFTWARE UPDATE INFORMATION SERVICE

SOFTWARE UPDATES EASILY AVAILABLE ON-LINE

With immediate effect, customers can use Knorr-Bremse's free update information service, which enables them to receive an update message as soon as a new software version of ECU*talk*® or NEO System Diagnostics is available. Registration can be carried out directly at the software download or PIN Code request on the website www.knorr-bremseCVS.com under "Download Software". You can also register for the information service via NEO registration at www.knorr-bremseCVS.com/neo. NEO Registration is a pure registration process and can be used by all existing NEO users of any version, independently of any download.

GROWING WITH VALUES

ENTREPRENEURSHIP, TECHNOLOGICAL EXCELLENCE, RELIABILITY, PASSION AND RESPONSIBILITY

– these are the corporate values of Knorr-Bremse.

In an age of advancing globalization and increasingly intense competition, one of the key success factors for any company is a motivational corporate culture. One central element here with a strong bonding impact is a common understanding of values. With this in mind, Knorr-Bremse launched a "Corporate DNA" project to study our corporate culture and take it forward to help master the challenges of the future.

CORPORATE VALUES BECOME PART OF GROUP'S DNA

Within the Corporate DNA project, Knorr-Bremse took a close and detailed look at its own genetic makeup. In all, over 100 employees from more than 20 countries around the world were involved in defining our DNA. The new Knorr-Bremse corporate values that resulted from this initiative stand for clear characteristics and strengths of the company. Just like personal values, corporate values are intended to provide a framework for our daily activities and decision-making.

Courageous entrepreneurship focused on technological excellence, outstanding reliability, personal passion and responsibility, these are the values that set Knorr-Bremse apart from the crowd. Now it is up to the company and each individual employee to ensure that, in line with the "Growing with Values" concept, we grow to match the challenges of the future.

The new corporate values, drawn up over the space of one year, were presented to the company's management team in the spring of 2012. Then, on June 12, a Values Day was held at which all Knorr-Bremse employees had an opportunity to discuss the values and their meaning for each individual and their work.

VALUES DAY

Today the corporate values provide us with a platform for further growth and a basis on which to write the next chapter in the over 100-year success story of this high-tech company.

Christoph Günter

Be it challenges, cup cakes or creativity, on Values Day every Knorr-Bremse plant found its own way of expressing the values.

In addition to discussing corporate values, employees used the opportunity to strengthen team spirit. China and Russia opted for sporting events, whereas in India, France and Italy the emphasis was on artistic activities.

EFFICIENT. TECHNOLOGY. WORLDWIDE.

YEARS AS **BEST BRAND** WINNER. For the seventh year running, more than 8,000 readers of three industry journals selected Knorr-Bremse as "Best Brand in the Commercial Vehicle Sector" in 2012. We would like to say a big "thank you" to our customers for the faith they have shown in us. It inspires us to continue to respond to the challenges of the market with high-quality, innovative and competitively priced products and services.
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