

triscan•news

TRISCAN NEWS VOLUME 11 . 2020

WATER PUMP FOR VAG 1.4 GASOLINE ENGINES

New and improved design

NEW: TRISCAN SHOCK ABSORBER PROGRAMME

More than 110 references

ELECTRIC GAS SPRINGS

Expansion in the programme



NEW: DIFFERENTIAL PRESSURE SENSORS

More than 60 references in stock

Much **more** than just a spare part



OE quality

Wide covering programmes



Who are we - and what can we do?

Triscan is a 100% Danish company that has gained a strong position in the Scandinavian market and achieved heavily increasing sales in the rest of Europe. This position has been reached through creation of concepts, marketing and distribution of automotive spare parts for the professional free aftermarket.

- Fast delivery of the right parts
- Online ordering via TriWeb/TecCom
- High order fill
- More than 45,000 references
- 48 product groups
- Extensive quality assurance

Every day goods are delivered from Triscan's 3 distribution centers in Brabrand, Glostrup as well as Iserlohn in Germany - to 39 markets in Europe.



Brabrand, DK



Glostrup, DK



Iserlohn, D

content

NEW: TRISCAN SHOCK ABSORBER PROGRAMME • 8

For the older but high-frequency part of the car park, we are now introducing an inexpensive alternative in OE quality. The shock absorber programme of more than 110 references consists solely of gas dampers.



20 • NEW: DIFFERENTIAL PRESSURE SENSORS

Triscan's very comprehensive sensor programme has yet again been extended with a new member. With its more than 60 references in OE quality, differential pressure sensors for diesel particulate filters become the 14th product group in the sensor family.

FORD: REP. KIT FOR THE CONNECTION BETWEEN EGR-VALVE AND COOLER • 26

A not entirely uncommon problem on many of the FORD models with 1.8 TDCi engines - produced in the years 2002-2015 - is, that the flex pipe connection between the EGR-valve and the EGR-cooler breaks. We have developed two rep set for our programme - 8811 16000 and 8811 16001 - which contain all the necessary parts.



4 COVID-19

The business community is affected - but it's time to go from "Stand by" to "Drive" mode

6 FUTURE SCENARIO - 1

The future scenario for spare part wholesalers

8 NEW: TRISCAN SHOCK ABSORBERS

For the older but high-frequency part of the car park - an inexpensive alternative in OE quality

10 FUTURE SCENARIO - 2

The future scenario for the independent workshops

12 TRISYS CUSTOMER CASE

Visiting eCAR

16 COIL SPRINGS

Astonishing test results

18 WATER PUMP - VAG 1.4 GASOLINE

New and improved design

20 DIFFERENTIAL PRESSURE SENSORS

More than 60 references in the programme

22 EGR-PIPES FOR VAG AND MERCEDES

For connection between EGR-valve and EGR-cooler

24 ELECTRIC GAS SPRINGS

Expansion in the programme - 21 new references

25 A LITTLE TIP...

Adjustment options on Volvo's electric tailgate

26 FORD: EGR-VALVE REP. KIT

For the connection between EGR-valve and cooler

27 TIMING BELT KIT

Efforts to reduce complaints have performed beyond expectations

28 ENVIRONMENTAL INVESTMENTS

Of benefit to the environment and the operating budget



IT'S TIME TO GO FROM "STAND BY" TO "DRIVE" MODE

The media is flooded worldwide with gloomy news about the consequences of COVID-19 - the human, social and not least the socio-economic. The business community is affected, including the automotive aftermarket, and it has also been felt at Triscan. Despite the fact that the expected second wave of the pandemic is rolling right now, and the spread of infection in many countries is unfortunately worrying, our industry has stabilized again. We therefore believe in progress again and a return to more normal market conditions.

After a satisfactory first quarter of the year, we, like most, experienced a declining level of turnover at the beginning of the second quarter. The uncertainty regarding the consequences of the COVID-19 situation led to a great deal of uncertainty for future market developments. Against this background - and with great support from the entire Triscan team - we quickly implemented necessary cost savings widely throughout the company. 30% of the Danish workforce was sent home on the Danish "wage compensation scheme" and among our German colleagues we introduced "Kurzzeit" (reduced working hours). Despite the above, we were unfortunately forced to adjust the number of employees just before the summer holidays.

After a quarter with a reduced workforce, we are pleased to see that we have

managed to maintain a high level of service, a high delivery capacity and even introduce a considerable number of new references.

As we have also experienced a steady increase in turnover after the summer holidays - and are back to a normal level - we are again optimistic about the future. As a consequence thereof, we have decided to increase our stocks in Denmark and Germany and prepare for the launch of even more product groups and digital solutions.

We have just recruited two new employees. Morten Kjeldahl Vammen is employed as commercial director and Kristoffer Drejer, who returns to Triscan after 1½ years at slimstock, is employed as a systems specialist in our IT department.

With these recruitments we have, strengthened our platform to continue the journey towards increased digitalisation, strengthen our team and our ability to develop IT solutions for our customers. Moreover, we want to improve quality, know-how and service when it comes to our traditional products and - and remain being a leader in this field.

We hope that the COVID-19 situation remains under control - and believe that the market situation in the future will be characterized by stabilization and growth. We also hope that this development will benefit all our customers, suppliers and partners, so that we all come out well on the other side ■



COVID-19

“The media is flooded worldwide with gloomy news about the consequences of COVID-19 - the human, social and not least the socio-economic,”



THE AUTO INDUSTRY IS CHANGING: THE FUTURE SCENARIO FOR SPARE PART WHOLESALERS

In the series of articles under the theme "The auto industry is changing rapidly" we have reached the second to last article. We give our bid on how the future will look like for spare part wholesalers in the automotive aftermarket.

Even though many operators in the automotive aftermarket sense a declining activity, an analysis from McKinsey shows that until 2030 the business worldwide expect an average growth of approx. 3% p.a. However, growth will be greatest in China and Asia, whereas in Europe we must settle for 1.5% p.a. If McKinsey's analysis keeps up - and the market continues to develop favorably - how come many wholesalers are left with a different experience - and what circumstances have led to this?

New business models

The aftermarket business models, as we know them today, are being challenged. New business models aiming at direct distribution and partnerships with e-commerce companies or repair shops are heading forward. Many experts predict that the last-mentioned business

models will gain significantly in relative short term.

New products and services

Regarding products, half of the earnings today still comes from the sale of wear parts, followed by crash relevant parts, diagnostic equipment and services as the largest product groups. In the future it is expected that the share in both numbers and turnover of wear parts will decrease due to increasing spare part quality and pricing pressure. The same applies to crash relevant parts that are also expected to decrease as a result of various safety systems in the vehicles gradually becoming standard. On the contrary, sales of diagnostic equipment and services are expected to grow due to the increased digitalization, new advanced technology and online access to car data. And exactly the last-

mentioned digitally-driven products and services' share of turnover is expected to triple from 6% to almost 20% by 2030.



The circumstances above necessitate that, as a wholesaler in the automotive aftermarket, one must think carefully about the future strategy and business model. Especially 6 trends are essential to keep in mind.

Consolidation among spare part distributors

In the efforts to achieve critical mass and economies of scale, we will still see consolidations among spare part distributors and purchasing groups. Does it make sense to buy, sell or join a purchasing group?

OEM's expansion in the automotive aftermarket

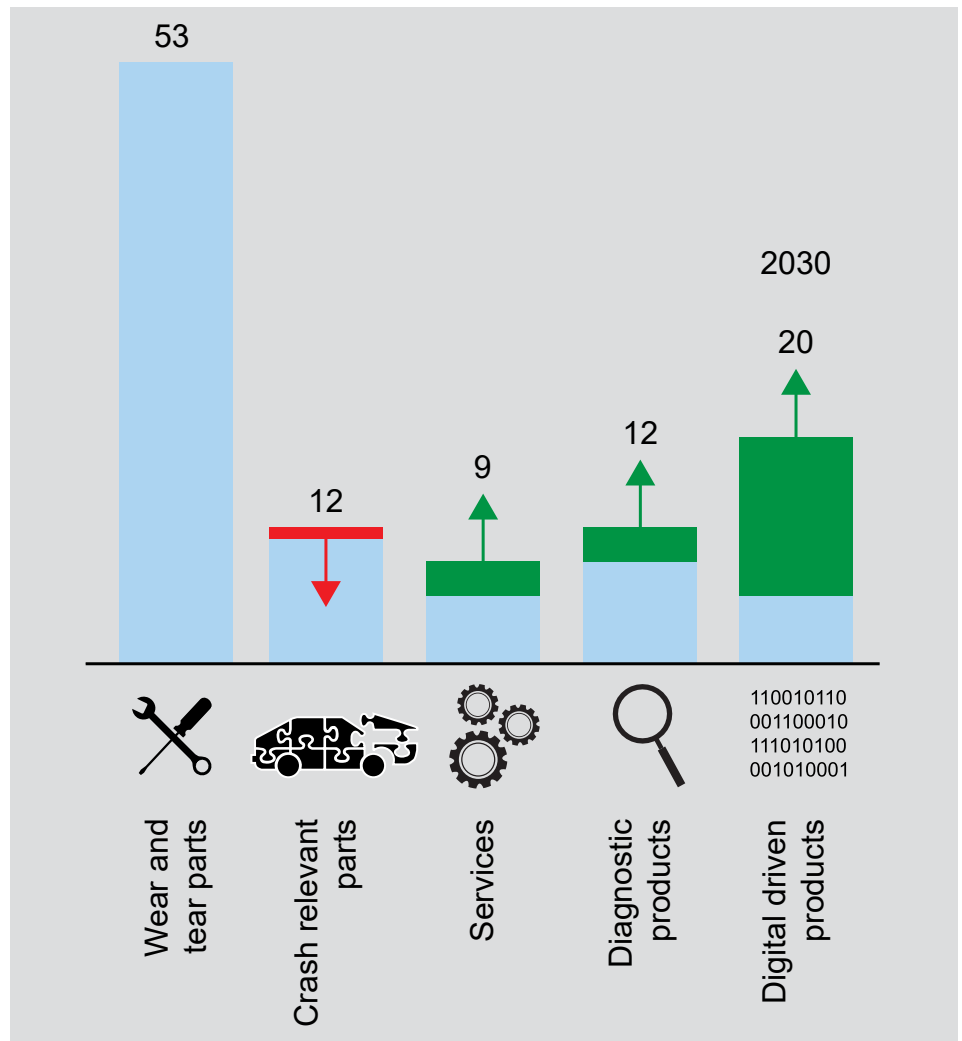
As the average age of the car park globally has risen, the authorized part of the aftermarket has been forced to develop initiatives that either ensure that the car owners do not leave the authorized repair shop after 3-4 years or initiatives that ensure deliveries of spare parts to repair shops in the free aftermarket. The initiatives cover e.g. distribution of own spare parts via new channels - e.g. VW Direct Express or PSA's Distrigo and Mister Auto. But also the establishment of brand-neutral workshop chains (PSA's Euro Repair) or favorable services for older cars at the authorized repair shop (Opel Service Care 5+ & 10+). Another initiative is the offer of "connectivity" - typically the retro fitting of OBD dongles - Semler (VAG import Denmark), which links the car owner to the authorized repair shop.

Digitization

Consumers are increasingly doing research on the Internet prior to a purchase. Be it through product reviews, blogs and other digital platforms. Therefore, it is extremely important to work focused and professionally with ones digital presence. Especially through solutions based on connectivity, the possibilities become many, but also complex. As a spare part wholesaler, you will probably need to expand your IT skills or find a suitable partner with the necessary know-how.

Connectivity

As mentioned in several of the sections above, access to the data of vehicles and their owners can open up a whole lot of possibilities. Therefore, for most people it will be essential to have a digital strategy that includes connectivity. With access to data and the right analysis tools, you will gain important knowledge that can be turned into business opportunities. Of particular interest



AM revenue share (%) - Current and predictive

to spare part wholesalers and their repair shop customers is for example repair predictable maintenance - service and repair through the collection and analysis of data on eg. vehicle mileage, battery voltage, fault codes and similar. But also leasing, car rental, transport, car sharing companies etc. will have a great interest in having access to this kind of data as well as geo-data.

Greater influence from digital intermediaries

Exactly the aforementioned intermediaries will through access to vehicle data be able to manage and optimize service and repair of a whole fleet of vehicles. It is not difficult to imagine how a partnership between a spare part wholesaler and one of these intermediaries could be of mutual benefit.

Greater transparency on prices and greater supply

As mentioned under the section "Digitization", consumers are increasingly keeping themselves orientated digitally. Of course, this development also lead

to greater transparency in prices and supply. It places high demands on pricing and makes it almost impossible to differentiate prices. The gross margin is under pressure and cross-border e-commerce is on the rise.

Although there is no indication that the future need for transport will be less - on the contrary - and analyzes show that the automotive aftermarket continues to grow, it is a market in which, as described in this article, new winds are blowing. New opportunities, but also new threats, make it imperative that you, as a spare part wholesaler, think carefully when discussing the plans for the future strategy and business development ■



“ With our new programme of Triscan shock absorbers, the repair shops will have the opportunity to offer an alternative to the expensive premium brands ”



NEW: TRISCAN SHOCK ABSORBER PROGRAMME

For the older but high-frequency part of the car park, we are now introducing an inexpensive alternative in OE quality. The shock absorber programme of more than 90 references consists solely of gas dampers.

Shock absorbers are a safety component and has great impact on the braking distance of a vehicle. It is therefore also very important for the shock absorbers to function properly. The replacement of shock absorbers, especially for owners of older cars, can become a rather expensive affair if the repair shop chooses to offer shock absorbers from premium brands. Unfortunately, this all too often means that car owners choose not to get the job done.

With our new programme of Triscan shock absorbers, which target the popular models in the older part of the car park, the repair shops will have the opportunity to offer an alternative to the expensive premium brands. And this without compromising on quality. Our production of shock absorbers is subject to the strict quality standard of the automotive industry IATF 16949 and are all gas dampers ■



Triscan shock absorber programme is among other for cars like the Skoda Fabia Combi II

DID YOU KNOW...?

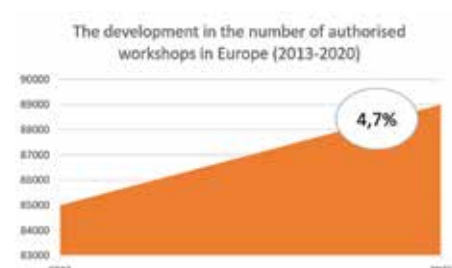
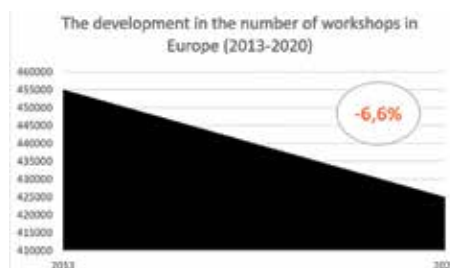
that we recently also have introduced a programme of air bellows and compressors for vehicles with air suspension?



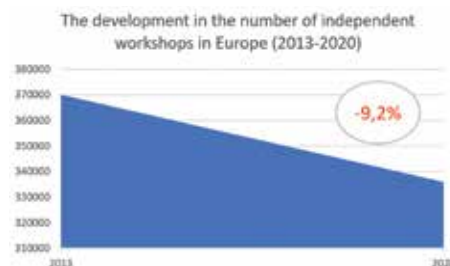
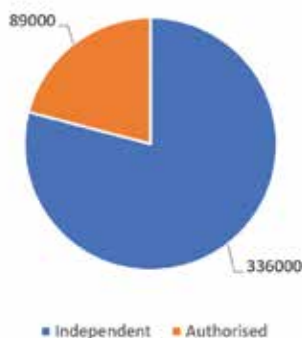
THE AUTO INDUSTRY IS CHANGING: THE FUTURE SCENARIO FOR THE INDEPENDENT WORKSHOPS

It is not only the technology, but also the behavior of consumers that in recent years is changing significantly in the automotive aftermarket. As an independent workshop, you will inevitably have to deal with a new reality with changed market conditions. With new times come new opportunities, but also the necessity of having to make some choices. In the article series "The auto industry is changing rapidly - are you keeping up?" we focus, in this fourth and final article, on the future scenario for the independent workshops and significant factors that should be included in one's considerations when the business is to be future-proofed.

The speed at which market conditions for workshops are changing is not necessarily the same in all countries. It is therefore important to know the national conditions in order to be able to make the right choices as an independent workshop. The most important things to know and keep an eye on are described here.



Number of workshops in Europe (2019)



but in most Nordic countries an equal division is seen between independent and authorised workshops. In general, there is a clear tendency for more small workshops to close and this often happens at the time where a generational handover or a sale becomes relevant.

Development of technology

With the use of increasingly advanced technology, it has become far more complex to service and repair the newer cars. Continuous training and investment in car brand-specific workshop equipment - both tools, diagnostics and calibration equipment - has therefore become almost inevitable. Since the introduction

Workshops in Europe

The number of workshops in Europe has been declining since 2013. With a decrease of approx. 7% there are today (2020) approx. 425,000 workshops. Of this, approx. 336,000 are independent and 89,000 are authorised workshops,

of connectivity technology, which is standard in cars produced from mid-2018, car manufacturers and authorised workshops have the advantage of being in constant dialogue with both the car and the driver. At the same time, with the introduction of this technology, car manufacturers are trying to cut off the independent workshops from being able to diagnose and service the vehicle.

The maintenance/workshop needs

The need for service and maintenance on conventional cars with internal combustion engines has been declining over time as service intervals become longer. Another trend seen in the market is the prevalence of service agreements/subscriptions, where car owners are offered service and repair of their vehicle for a monthly fixed fee. With the prevalence of electric and hydrogen cars, the need for service and repair will decrease further because the technology is far more simple. The number of parts in the driveline on an electric/hydrogen

i.e. by an increased tendency to orientate oneself online. This applies to information on obtaining offers, spare part prices, repair costs and booking workshop times.

Composition and age of the fleet of cars

The speed at which market conditions for workshops are changing depends to a large extent on how far the development has come - in the above areas. A direct

but also local conditions. The age and composition of the fleet is a good place to start, because it provides the answer to what extent the market conditions are affected by changed technological and consumer behavioral conditions.

Generally seen, the lower the average age of the fleet is, the more important it is - here and now - to consider which



initiatives should secure the business for the future.

Another important area to focus on is your network of suppliers and in particular the initiatives and services the suppliers can contribute in relation to creating value and securing the business for the future. In Europe today, there are over 800 workshop concepts with over 110,000 affiliated workshops and the number is increasing. Maybe it's time to join a workshop concept or switch to something else and check out whether a concept includes a modern workshop management system with online bidding, booking and connectivity module, training, etc.?

When market conditions change, you must adapt and take advantage of the new opportunities that arise. With insight and consideration, you can make the right choices and secure a place in the future ■



*Sources: HSH Nordbank, Roland Berger, TecAlliance



Consumer behavior among traditional car owners is changing. It is seen i.a. by an increased tendency to orientate oneself online

car is only approx. 200 in relation to approx. 1,400 on a conventional car. Fewer parts - less work.

Consumer behavior

Overall, the need for transportation in Europe is increasing and especially among the younger generation, there is a clear trend in relation to changing consumer behavior. Ownership is no longer ascribed the same meaning as it is among the older generation. Flexibility and predictability are given much higher value which leads to that consumers are more tempted to cover their need for transportation by purchasing services, which provides wind up in the sails for e.g. leasing and car-sharing companies.

But consumer behavior among traditional car owners is also changing. It is seen

indicator of this is the composition of the car fleet and especially age. In recent years, the average age of Europe's fleet has increased to almost 13 years in 2019 and towards 2023, the fleet is expected to increase by almost 4.5% from approx. 375 to 392 million vehicles. But also, here great individual differences are seen from country to country. In countries with declining average age of the fleet, the development can i.e. be attributed to good social economy, widespread use of both business and private leasing and the possibility of subsidized purchases of electric, hydrogen and hybrid cars due to increased focus on the environment.

What should you, as the owner of an independent workshop, consider?

As previously mentioned, you should get thoroughly acquainted with the national,



*“ We are also very pleased,
that there are so many ways to navigate around TriSys/G-plan with just a few clicks ”*



TRISYS CUSTOMER CASE - ECAR

The Danish RAM and Dodge dealer eCAR, chose in the summer of 2019 to switch to TriSys car repair shop and customer management system, which in Denmark is marketed under the name G-plan by the GROUPAUTO International member Auto-G Denmark. Now more than a year later we have visited eCAR to talk to them about their experiences.

E CAR is managed daily by marianne and Allan Simonsen. The company is involved in the sale of new and used cars, but work is also carried out on special/customer cars in the workshop, which includes four mechanics and four lifts. Marianne, who primarily takes care of accounting, tax calculations and registrations, was not entirely satisfied with the way in which updates worked in eCAR's previous workshop and customer management system. "We all too often saw that updates led to new errors in the old system. Therefore, we decided to look for a new partner and this led to us switching to TriSys/G-plan just over a year ago – and we have been very happy about that", says Marianne.



Unproblematic shift

Both customer and vehicle data had to be migrated from the old system and Marianne describes the switch to TriSys/G-plan as completely unproblematic. "The shift was very easy. All data from our previous system was imported completely seamlessly and we could therefore focus 100% on getting started using TriSys/G-plan from day one. As responsible for the accounting, I was of course also excited to see if the integration into our financial system e-economic worked as it should – and fortunately it did".

Easy to use for everyone

Where it used to be only Marianne who used the system, everyday life today looks

completely different. "Before, it was only me who used the system, but now it's everyone. In the workshop, the mechanics operate TriSys/G-plan via tablets. The system works fast and is good at making



suggestions when using the search features. We are also very pleased, that there are so many ways to navigate around TriSys/G-plan with just a few clicks".

Integration to several suppliers' catalogues

A workshop can rarely settle for deliveries from only one wholesaler. In cases where a workshop's preferred supplier does not carry a specific product/brand or an item is backordered, it may be necessary to order it elsewhere. The workshop therefore typically has access to several catalogues/ordering systems, which are usually not integrated into the workshop management system and therefore become cumbersome and time-consuming to use – this is not the case in TriSys/G-plan. "We are very pleased with the catalogue integration in TriSys/G-plan and in particular the possibility of transferring the spare parts directly to the job card. Where this task was previously only carried out by me, it is now also carried out by the mechanics in the workshop via their tablets".



Warehouse management with photos and the possibility of barcode scanning

At eCAR, as in most major workshops, a warehouse is arranged for not only consumables, but also styling parts. In TriSys/G-plan, Marianne has created item numbers, text, images, locations, and specified max/min inventory. "I like things are under control and I am therefore very happy with the inventory module and the ability to print inventory reports". TriSys/G-plan of course also supports barcode scanning.

Costing on sales cars

Two of eCAR's mechanics work primarily with car preparation. To get a true picture of how many resources are spent on each vehicle made ready for sale, sales cars are registered in TriSys/G-plan with eCAR as the customer. "In this way, I have the full overview of how much time, what consumables and how many parts that have been used to prepare each car for sale. When a car is sold, I can then easily calculate the net profit", says Marianne.

Work time registration via tablet

With TriSys/G-plan it is also easy to manage employees' working hours. At eCAR a tablet has been installed for this purpose only, which all employees use register their working hours. The tablet is set up so that it can only be used for this purpose and is located right at the staff entrance.

News coverage and support

TriSys/G-plan is continuously developed and users are notified via the system of new functionality and possible fixes. "Many new features have been added in the time we have applied TriSys/G-plan, and I think it has been easy to stay up to date. When there's news, I see it immediately, when I log on to the system. The news is extensively described with text and images, so it's easy to understand them. In this way, it will also be easy for me to determine, whether the news is relevant to our use of TriSys/G-plan – or whether it is a new feature that can be advantageous for us".

eCAR look towards a brighter future

With a steadily increasing number of customers and increasing revenue, eCAR looks forward to the future. "I believe that TriSys/G-plan has contributed to our growth by freeing up administrative time. With TriSys/G-plan, we have an even better opportunity to see exactly what we spend our time on. Our workshop operation has become more efficient and we have been given more time to take care of what is closest to us – namely our customers", says Marianne in conclusion ■

ABOUT eCAR

eCAR was established just outside Randers in Denmark in 2004 by Allan Simonsen. Initially, the main business was sales of used vans and it went so well that in 2013 eCAR moved to a new address to get better space for expansion.

In 2014, eCAR was contacted by one of the European importers of Dodge and RAM, after which the first American pickup truck was purchased. In 2018, eCAR became the official dealer and service center of Dodge and RAM and is now 99% in line to meet the supplier's interior design requirements for a dealer. In addition, eCAR has over the years accumulated a wide network of suppliers of new and used pickup trucks and U.S. specialty cars in Europe, the United States and Canada.

eCAR's 8 employees are divided into workshop, preparation, sales and administration. In addition to the organisation of "Cars & Coffee" events, eCAR is also represented at relevant exhibitions, fairs and charity events.

WORKSHOP



eCAR's employees are all trained mechanics/auto technicians, but on a daily basis there are 4 mechanics in the workshop, 2 of whom work with preparation.

The workshop has 4 lifts and carries out all kinds of work on vans and special cars. eCAR has extensive experience in advanced troubleshooting, especially american-built vehicles, and has original OEM Mopar (Witech), GM (MDI/GDS/Tech2) and Ford testers. The workshop has access to ac delco software updates and programming used in connection with software updates on RAM and Dodge vehicles.

In the workshop, Dodge and RAM campaigns and recalls and the conversion of lights and navigation etc. on American cars are also carried out so that they meet european, and thus Danish, standards and requirements.

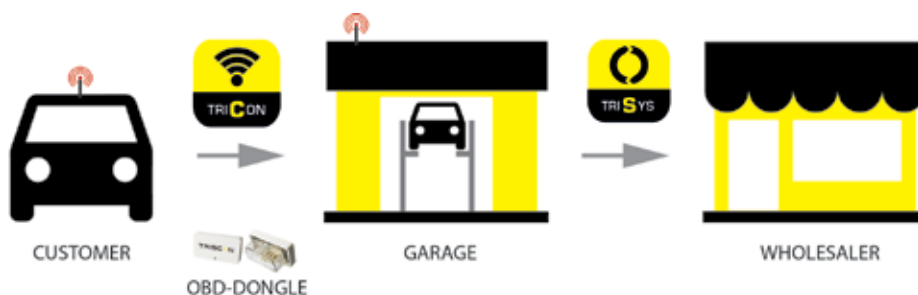


FREE WEBINAR: EFFICIENT CUSTOMER MANAGEMENT PROGRAMME - DIGITIZATION AND CONNECTIVITY

Everywhere there is talk of digitization and connectivity and to what extent the aftermarket will lose market share due to developments in this area.

In this webinar, we introduce you to TRISYS - a cloud-based workshop planning system that has already set new standards in terms of added value and user-friendliness in several European countries. Attend a webinar if you work in a wholesale company or in a car repair shop and let yourself be surprised and convinced.

MORE INFORMATION . ☎ +45 8743 3333 . INFO@TRISYS.DK



WWW.TRISYS.DK



COIL SPRINGS: ASTONISHING RESULTS IN COIL SPRING TESTS

The coil spring, together with the shock absorber and the strut bearings, are all classified as safety components in the strut. This is exactly why the quality of the coil spring is important and especially in the winter time where low temperatures often are a contributing factor that causes coil springs to crack. After Triscan - by several of the company's customers - was presented with a competing product at an incredibly low price, an investigation was initiated. The results of the tests performed proved to be astonishing.

Two specimen of the competing company's coil spring for the front axle, suitable on selected models of Citroën C4 and Peugeot 307 in the years 2000-2008, were subjected to two common tests.

The purpose of the first test was to check the coil spring's conformity - ie the coil spring's ability to maintain its original shape. The test was performed by measuring the height of the spring, after which the spring was compressed, and the height again measured. The measurement for the two springs tested revealed that the height had been reduced by 10 mm. Generally, the spring must of course return to its starting point and thus have the same length. The inability to return to the starting point can

be attributed to the use of low-quality spring steel.

The second test was a durability test. During this cyclic test, the springs are continuously pressed together 1 million times or until the springs crack. In this case, 180 mm compression from a starting point of 875N-3833N. As can be seen from the table

below, the springs cracked after approx. 95,000 and 612,000 compressions. The tests performed are done at 20 degrees and it is worth noting that the probability of coil spring cracking increases the lower the ambient temperature is. As with the first test, the inability of the springs to pass the test can be attributed to the use of low-quality spring steel.

Test spring	Length of spring [mm]	Compression [mm]	F start [N]	F stop [N]	Cracking by [Compression no.]	OE demand
1	441	180	875	3833	95.027	>1.000.000
2	440	180	875	3833	612.781	>1.000.000

The poor results can be attributed to the use of low quality spring steel

TEST SPRING 1



TEST SPRING 2



Product Coordinator Lars Berthelsen

"The durability test performed confirms that there often is a clear connection between price and quality", explains Lars Berthelsen, product coordinator at Triscan a/s and continues: "It is therefore also particularly important for safety components to ensure, that the quality meets the current standards - it is absolutely crucial and especially important in cases, where defects can have very large safety consequences".

All of Triscan's coil springs are manufactured by the Swedish manufacturer Lesjöfors and comply with the OE requirements specification of min. 1 million compressions. Depending on the type of spring, either spring steel EN 10270-2 FDSiCr or EN 10089 is used. The springs' corrosion protection consists of a zinc phosphating and after that a powder lacquering which is regularly checked to withstand 1000 hours in a salt spray chamber. Lesjöfors has a high-tech production and over 150 years of experience in the production of springs. All manufacturing and development take place in Sweden. The coil springs are made of high-quality steel and are cold wound on CNC machines, ensuring a continuous high and uniform quality. Lesjöfors is certified according to ISO/IATF 16949: 2016, ISO9001: 2008 and ISO14001: 2004. The coil springs are manufactured according to "Matching quality" and can therefore be used by repair shops without affecting the vehicle's warranty ■

DID YOU KNOW...?

- Coil springs from Triscan are original mounted on a wide range of car models. With more than 2,600 references the programme covers the European car parc widely.
- The programme includes seven different types of springs; cylindrical, narrowed at one end, the last turn unfolded, mini-bloc, narrowed at both ends, conical and cylindrical progressive.
- Our coil spring programme also includes coil springs for light commercial vehicles.



“The problem with annoying noises from the water pump on some VAG engines is solved after we made design changes.”



WATER PUMP FOR VAG 1.4 GASOLINE ENGINES IN NEW AND IMPROVED DESIGN

Previously we have reported on the challenges of sporadic noise encountered by repair shops and car owners in connection with a special water pump used on a wide range of 1.4 gasoline engines from VAG. With several design changes, we have now succeeded in solving the problems.

As previously reported in the article - Cars with VAG 1.4 gasoline engine: Do you experience noise from the water pump? - the source of the noise is vibration from the belt drive which spreads into a spring-loaded flange in the outer pulley of the water pump. At certain rpm, this results in the spring-loaded flange being put into vibrations and thereby accidentally striking an opposite flange in the inner pulley of the water pump, causing the noise to occur.

In our new and improved edition, we have changed the design in four areas. We have:

1. Increased the clearance between the two flanges
2. Increased the diameter of the outer pulley flange
3. Increased the thickness of the outer pulley flange
4. Changed the material of the outer flange from steel to aluminum

It is more than six months since we have implemented the above changes and since then according to our knowledge no repair shops have experienced problems with noise from the water pump.

The noise can occur on cars with the following engine type (11.2005 - 08.2015):

MODEL	ENGINE TYPES
1.4 FSI	CAVB, BLG
1.4 TSI	CAVA, CNWB, CTHA, CAVF, CNUB, CTHF, CTJB, CAVD, CNWA, CTHD, CTKA, CAVC, CTHC, CTHB, BMY, BLG, BWK
1.4 TFSI	CAVG, CTHG, CTJA
1.4 TSI RS	CAVE, CTHE
1.4 GTi	CAVE, CTHE

within the brands Audi, Seat, Skoda and VW. For more information about the car models and specific years: Enter 8600 29062 in Triscan's TriWeb and go to "Ref. List" ■



The new and improved design at 8600 29062

Top: Among others the water pump 8600 29062 fits on the VW Touran



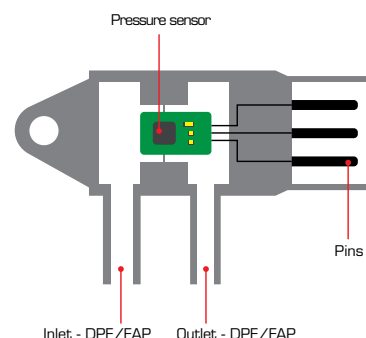
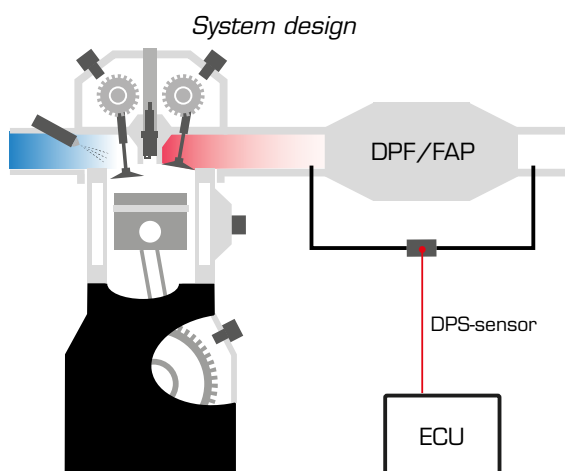
NEW: DIFFERENTIAL PRESSURE SENSORS FOR DIESEL PARTICULATE FILTERS

Triscan's very comprehensive sensor programme has yet again been extended with a new member. With its more than 60 references in OE quality, differential pressure sensors for diesel particulate filters become the 14th product group in the sensor family.

Differential pressure sensors are used on diesel engines with diesel particulate filters to determine the pressure difference between the exhaust gas inlet and the diesel particulate filter outlet. Combined with information about exhaust temperature, engine speed and airflow the vehicle's engine control determine (ECU), when to start a regeneration process of the filter where the accumulated soot is burned off.

The systems in which the differential pressure sensors are included are named differently depending on who the car manufacturer is. German manufacturers use the term DPS (Diesel Particulate Filter), among French manufacturers FAP (Filters à Particules) and among Japanese manufacturers DPD (Diesel Particulate Defuser).

The differential pressure sensor's electronic circuit is fitted with a pressure sensor that separates two chambers inside the DPS-sensor



Cross section of differential pressure sensor

Top: DPS are the latest type of sensor from Triscan

housing. The pressure sensor generates a voltage signal between 0 and 5 volts. The output voltage increases as the pressure difference increases.

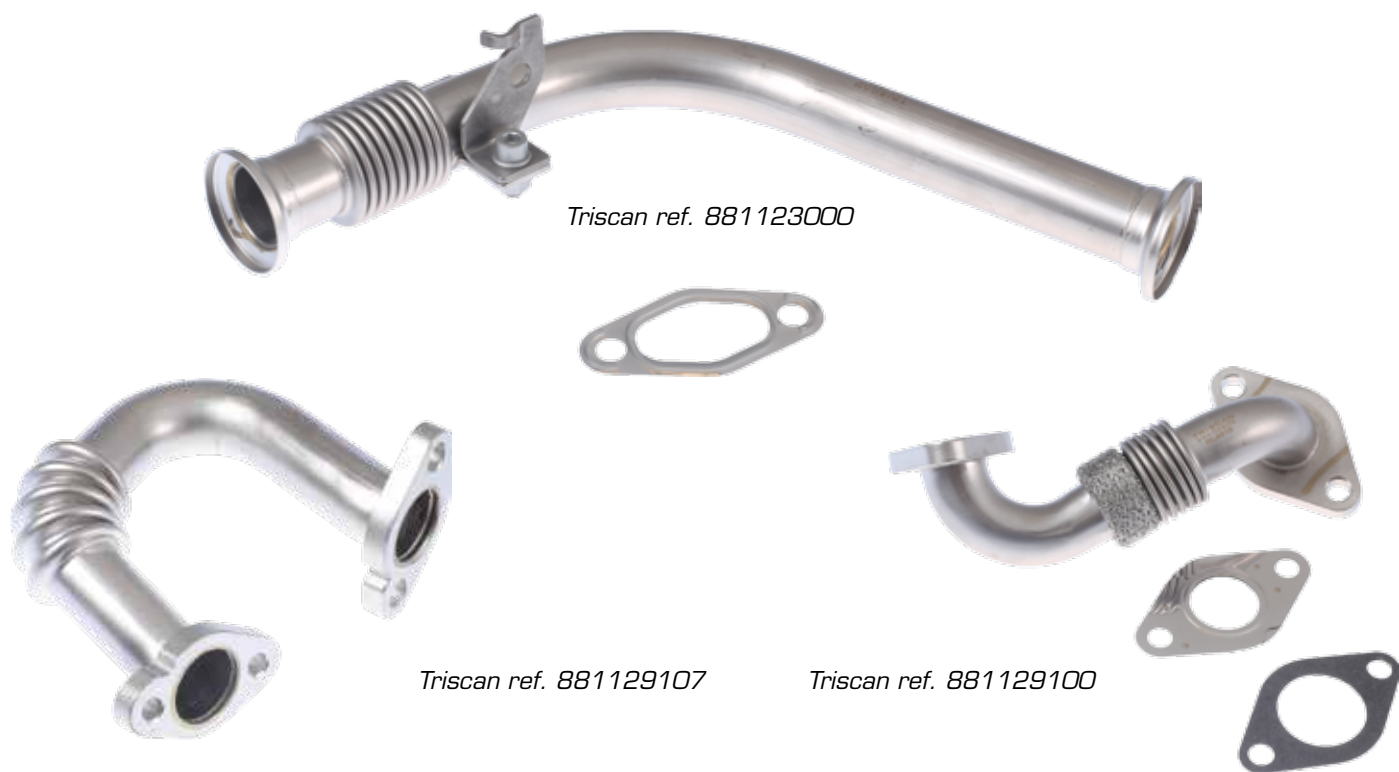
On all types of differential pressure sensors, the input pressure is always measured via a hose connecting the sensor to the filter inlet. The outlet pressure is measured either as the ambient pressure via a hole in the sensor housing or via a hose connected to the filter outlet ■



“Differential pressure sensors are used on diesel engines with diesel particulate filters to determine the pressure difference between the exhaust gas inlet and the diesel particulate filter outlet.”



“ It is not uncommon for the connecting pipe between the EGR-valve and the EGR-cooler to crack or break. We have therefore launched a programme of EGR-pipes for the affected car models ”



VAG AND MERCEDES: EGR-PIPES FOR CONNECTION BETWEEN EGR-VALVE AND EGR-COOLER

To our comprehensive programme of EGR-valves and EGR-coolers, we have now also added a programme of EGR-pipes for especially VAG and MERCEDES. It is not uncommon for the connecting pipe between the EGR-valve and the EGR-cooler to crack or break. We have therefore launched a programme of EGR-pipes for the affected car models.

TRISCAN REF.	MAKE	MODEL	ENGINE
881123000	Mercedes	G-Class (W461), Sprinter (901, 902, 903, 904), V-Class (638/2), Vito (638)	
881129100	VAG	A3, Altea, Altea XL, Leon, Toledo III, Octavia I/II, Superb II, Bora, Golf Plus, Golf V, Jetta III, New Beetle, Passat, Touran	1.9 TDI
881129101	VAG	A4, A6, Superb I, Passat	1.9 TDI/2.0 TDI
881129102	VAG	Cordoba, Ibiza III, Fabia I/II, Roomster, Polo	1.9 TDI
881129103	VAG	A4, A6, A8, Allroad, Superb I, Passat	2.5 TDI
881129104	VAG	A4, A6, Superb I, Passat	1.9 TDI
881129105	VAG	A4, A6, A8, Allroad, Superb I, Passat	2.5 TDI
881129106	VAG	A4, A6, Superb I, Passat	1.9 TDI
881129107	VAG	A1, A3, Q3, TT, Alhambra, Altea, Altea XL, Ibiza IV, Leon Toledo IV, Fabia II, Octavia II, Rapid, Roomster, Superb II, Yeti, Beetle, Caddy III/IV, CC, EOS, Golf Plus/V, Jetta III/IV, Passat, Polo, Scirocco, Sharan II, Tiguan, Touran	1.6 TDI/2.0 TDI
881129108	VAG	A1, A3, Altea, Altea XL, Ibiza IV, Leon Toledo IV, Fabia II, Octavia II, Rapid, Roomster, Superb II, Yeti, Beetle, Caddy III/IV, Golf Plus/V, Jetta III/IV, Passat, Polo, Touran	1.6 TDI
881129109	VAG	A1, A3, Q3, TT, Beetle, Caddy III/IV, CC, EOS, Golf Plus/VI, Jetta IV, Passat CC, Passat, Scirocco, Sharan II, Tiguan, Touran	2.0 TDI
881129110	VW	Jetta IV	2.0 TDI
881129111	VAG	Ibiza IV, Fabia II, Roomster, Polo	1.2 TDI
881129112	VAG	A3, Altea, Altea XL, Cordoba, Ibiza III/IV, Leon Toledo III, Fabia II, Octavia II, Roomster, Superb II, Caddy III, EOS, Golf Plus/V, Jetta III, Passat, Polo, Touran	1.4 / 1.9 / 2.0 TDI



EXPANSION IN THE PROGRAMME OF ELECTRIC GAS SPRINGS

The introduction of our electric gas spring programme back in 2019 has been a huge success and the demand is increasing. We have therefore chosen to extend the programme with as many as 21 references. The new references extend the coverage to also include several popular car models in the middle class such as Audi Q3, BMW X3, Hyundai iX35, Skoda Superb and VW Tiguan.



Triscan ref. 871029302

See the complete list of references here:

TRISCAN REF.	MAKE	MODEL
871029302	Audi	Q3 (8U)
871011301	BMW	X6 (E71, E72)
871011302	BMW	X6 (E71, E72)
871011303	BMW	X5 (E70)
871011304	BMW	X5 (E70)
871011305	BMW	X3
871011306	BMW	X3

TRISCAN REF.	MAKE	MODEL
871011307	BMW	X5 (F15)
871011308	BMW	X5 (F15)
871011309	BMW	5 (F10)
871011310	BMW	5 (F10)
871011311	BMW	X4 (F26)
871011312	BMW	X4 (F26)
871011313	BMW	5 (F07)
871043301	Hyundai	iX35 (LM, EK, ELH)/Tucson (TL, TLE)
871043302	Hyundai	iX35 (LM, EK, ELH)/Tucson (TL, TLE)
871017302	Land Rover	Discovery Sport (L550)
871020301	Porsche	Cayenne (92A)
871020302	Porsche	Panamera (970)
871020303	Porsche	Cayenne (92A)
871020304	Porsche	Macan (95B)
871017301	Range Rover	Evoque (L538)
871017303	Range Rover	IV (L405)
871017304	Range Rover	Sport (L494)
871017305	Range Rover	Sport (L320)
871029303	Seat	Alhambra (710, 711)
871029304	Seat/VW	Tarraco (KN2_)/Tiguan (AD1)/Tiguan Allspace (BW2)
871029306	Skoda	Superb III (3V3)
871029307	Skoda	Superb III kombi (3V5)
871029308	Skoda	Superb III kombi (3V5)
871027301	Volvo	XC 60 (156)
871027302	Volvo	XC 60 (156)
871027303	Volvo	XC 90 II
871029301	VW	Touareg (7P5, 7P6)
871029305	VW	Passat Alltrack/Passat Variant (3G5, CB5)

A LITTLE TIP...

Cars with electric tailgate often have several adjustment options for operation. Something many car owners may not be aware of at all. If you as a workshop have replaced the electric gas springs, there may be a few extra bonus points to pick up from the customer if you draw attention to this - and maybe even help the customer.

There is a video showing how the adjustment is made for VOLVO car models. Watch it on https://www.youtube.com/watch?v=iaak_JI-40cE





FORD: REP. KIT FOR THE CONNECTION BETWEEN EGR-VALVE AND COOLER

A not entirely uncommon problem on many of the FORD models with 1.8 TDCi engines - produced in the years 2002-2015 - is, that the flex pipe connection between the EGR-valve and the EGR-cooler breaks. The replacement is uncomplicated, but at the same time requires replacement of both gaskets and pipe clamp - and each part has its own reference number. To make purchasing much easier for both wholesalers and workshops, we have developed two rep set for our programme - 8811 16000 and 8811 16001 - which contain all the necessary parts.

TRISCAN REF.	FORD MODEL	ENGINE	YEAR FROM	YEAR TO
881116000	C-MAX	1.8 TDCi	02/2007	09/2010
881116000	FOCUS C-MAX	1.8 TDCi	01/2005	03/2007
881116000	FOCUS II	1.8 TDCi	01/2005	09/2012
881116000	FOCUS II Sedan	1.8 TDCi	04/2005	09/2012
881116000	FOCUS II Turnier	1.8 TDCi	07/2004	09/2012
881116000	GALAXY	1.8 TDCi	05/2006	06/2015
881116000	GALAXY	1.8 TDCi	05/2006	06/2015
881116000	MONDEO IV Hatchback	1.8 TDCi	03/2007	01/2015
881116000	MONDEO IV Hatchback	1.8 TDCi	06/2007	01/2015
881116000	MONDEO IV Kombi	1.8 TDCi	03/2007	12/2012
881116000	MONDEO IV Kombi	1.8 TDCi	06/2007	12/2012
881116000	MONDEO IV Sedan	1.8 TDCi	06/2007	01/2015
881116000	MONDEO IV Sedan	1.8 TDCi	03/2007	01/2015
881116000	S-MAX	1.8 TDCi	05/2006	12/2014
881116000	S-MAX	1.8 TDCi	01/2007	12/2010
881116000	TOURNEO CONNECT	1.8 TDCi	06/2002	12/2013
881116000	TOURNEO CONNECT	1.8 TDCi	08/2006	12/2013
881116000	TOURNEO CONNECT	1.8 TDCi/TDDi/DI	06/2002	12/2013
881116000	TRANSIT CONNECT	1.8 Di	06/2002	12/2013
881116000	TRANSIT CONNECT	1.8 TDCi	06/2002	12/2013
881116000	TRANSIT CONNECT	1.8 TDCi	08/2006	12/2013
881116001	TOURNEO CONNECT	1.8 TDCi	06/2002	12/2013
881116001	TOURNEO CONNECT	1.8 TDCi	08/2006	12/2013
881116001	TOURNEO CONNECT	1.8 TDCi/TDDi/DI	06/2002	12/2013
881116001	TOURNEO CONNECT	1.8 Di	06/2002	12/2013
881116001	TOURNEO CONNECT	1.8 TDCi	06/2002	12/2013
881116001	TOURNEO CONNECT	1.8 TDCi	08/2006	12/2013



TIMING BELT KIT: EFFORTS TO REDUCE COMPLAINTS HAVE PERFORMED BEYOND EXPECTATIONS

Today, when we - almost 7 years after the launch - look at the results of what was originally started as an experiment in Denmark and has since been further developed into our smartrep.info concept, it is hard not to be satisfied. And the feeling of satisfaction naturally does not diminish when you know that the effort has also benefited both wholesalers, workshops and car owners.

In round figures, the complaint rate has fallen to almost a fifth and has averaged 0.37% since 2014. Especially within timing belt kits, the gain is extra-large. The timing belt system is a vital and vulnerable part of the internal combustion engine and breakdowns are often a costly affair.

In relation to the first three items, you are well on your way by choosing a timing belt kit from Triscan. Firstly, you are guaranteed quality parts from the world's largest manufacturers - Gates, INA, Litens, GMB and others. Secondly, you are guaranteed clear marking of timing belt kits, which requires special attention when mounting - and mounting

instructions, videos, tips and tricks are at your hand. And thirdly, clear marking of timing belt kits is also ensured, where correct installation requires the use of special tools ■

IT IS THEREFORE IMPORTANT TO:

Use quality parts ✓

Ensure correct installation ✓

Use special tools when required ✓

Respect the service intervals ✓









INVESTMENTS OF BENEFIT TO THE ENVIRONMENT AND THE OPERATING BUDGET

The environment is on everyone's lips with both demands, but also a request to change behavior, to reflect and consider. At Triscan, we have implemented several initiatives in recent years that not only benefit the environment, but also the operating budget.

Most of the initiatives have been coordinated by Jørn K. Jensen, who is responsible for the operation and maintenance of the buildings. The initiatives alone that have focused on reducing Triscan's electricity consumption have, in rounded numbers, reduced this by over 100,000 kWh/year. According to a calculation model on the EPA website (United States Environmental Protection Agency), the savings achieved in kWh correspond to a reduction in CO2 emissions of 73,264 kilos. According to the EPA, this corresponds to:

-  15.6 passenger cars annual greenhouse gas emissions
-  31,206 liters of gasoline's CO2 emissions
-  27,243 liters of diesel's CO2 emissions
-  8.8 households' CO2 emissions

Lighting

Regarding lighting, the savings are achieved by switching to LED lighting in all lighting sources inside the warehouses, in the administration as well as outdoor areas. The annual saving is over 40,000 kWh/year.

Heating

The replacement of an older heating circulator pump alone has saved 12,000 kWh/year. In that connection, the heating control system was replaced with an ultramodern version with night reduction which is controlled via outdoor and indoor sensors and monitored via app and PC. The new warehouse, which was put into service at the end of 2018, is built on the passive principle. The large thermal mass of both the concrete floor as well as the wall elements and the well-insulated roof construction means that the warehouse does not use energy for heating. In the old part of the warehouse, we are in the process of replacing the large 2.5 * 4.0m skylights to modern

9-layer windows. With this initiative, we expect the total heat consumption to be reduced to the same level as before the nearly 40% stock expansion.

Servers

At Triscan, we host all the most important IT systems on our own servers - including our e-commerce solution. In addition to a far better performance, the replacement of our old servers and storage environment for new ones has resulted in a saving of 50,000 kWh / year on our server operation. Approx. 60% of the savings are on the server's energy consumption, which with reduced consumption also develops much less heat. The reduced heat generation has led to a reduced need for cooling, which is where the rest of the savings are achieved.

Waste

Although not required, we have implemented plastic waste management.



Investments have been made in new high-speed stackers, which ease the workflow

We sort plastic waste into transparent plastic, colored plastic and straps. In addition, waste is sorted into cardboard, iron, wood and small combustibles in four different containers. Furthermore, we recycle packaging extensively when possible. Waste management is a cost, but a necessity that makes good sense in relation to recycling and with it a reduction in the amount of waste incinerated.



Jørn K. Jensen is switching to LED lighting, which has resulted in an annual saving of more than 40,000 kWh

REDUCTION (KWH)	
Lighting	41.316
Heating pump	12.264
Server	50.024
Total	103.604

We have not only been able to protect the environment, but we have also achieved great savings through thoughtfulness. Of course, we do not stop here - and would like to encourage everyone to

look for initiatives that contributes to the protection of the environment and our common future ■

TRISCAN ENSURES FAST DELIVERY OF THE RIGHT PARTS

When buying spare parts from Triscan, you do not only receive a product of high and uniform quality, but also a complete item with all the necessary parts in user-friendly packaging with mounting tips, reference numbers, list of application etc.



TRISCAN'S WIDE PRODUCT PROGRAMME

All Triscan's products are manufactured in OE quality. Our product programme covers more than 97% of the European car parc. If you choose a product group from Triscan, you can do with just one supplier.

ENGINE

- Air flow meters
- Camshaft position sensors
- Crankshaft position sensors
- Diesel
- EGR valves
- Engine gaskets
 - Cylinder head gaskets
 - Gasket kits
 - Gasket kits w/o cyl. head gasket
 - Oil-pan gaskets
 - Valve cover gaskets
- Engine parts
 - Lifters
 - Top bolts
- Exhaust
 - Clamps
 - Flexible connectors
- Fuel hoses
- Ignition coils
- Ignition wire sets
- Micro-V belts, kits
 - Alternator pulleys
 - Belt tensioner units
 - Idlers
 - Micro-V belts
 - Pulleys
 - Stretch fit V-belts
 - V-belts
 - Vibration dampers
- Oil plugs & gaskets
- Oxygen sensors
- Timing belt kits
 - Belt tensioners
 - Idlers
 - Micro-V belts
 - Oil seals
 - Timing belts
 - Vibration dampers
- Timing belts, Water pump kits
- Timing chain kits
- Throttle bodies
- Vacuum hoses
- Waterpumps + Timing belt kits

TRANSMISSION

- Accelerator cables
- Anti-friction spray
- Bolt kits, flywheels
- Bonnet cables
- Boot kits
- Choke cables
- Clutches/clutch kits
 - Clutch cylinders
 - Clutch grease
 - Clutch hoses
 - Clutch release bearings
- Guide bearings
- Guide bushings, clutch bearings
- Hydraulic release bearings
- Oil seals
- Clutch cables
- Clutches, various
- C.V. joints
- Drive shafts
- Grease
- Oetiker clamps
- Propeller shaft support
- Shift cable
- Speedometer cables
- Trailer cables
- Tripod joints
- Tools
- U-joint
- Universal clamps

BODY

- Gas springs
- Parking sensors
- Refills for BOSCH flatblade
- Steering dampers
- Universal gas springs
- Universal wiper refills
- Washer pumps
- Wiper blades

COOLING SYSTEM

- ALU-flex duct hoses
- Flushing tools - cooling system
- Heater hoses
- Radiator caps
- Radiator hoses
- Thermostats
- Waterpumps
- Water temperature sensors

STEERING & SUSPENSION

- Boots
- Bushings
- Coil springs
- Leaf springs
- Power steering pumps
- Rack and pinions
 - Mounting kits
 - Protection kits
- Spheres - suspension
- Stabilizer rods
- Standard bearings
- Steering columns
- Steering parts
- Strut bearing kits
- Strut bearings
- U-bolts
- Wheel bearing kits
- Wheel hubs

BRAKE SYSTEM

- Accessory kits
- ABS-rings
- ABS sensors
- Bleed screws
- Brake cables
- Brake calipers
 - Guide tube kits, brake calipers
 - Pistons
 - Rep. kits
- Brake discs
- Brake drums
- Brake hoses
 - Banjo bolts
 - Clips for brake hoses
- Brake pads
- Brake pipes
 - Idlers
- Brake shoes
- Pressure regulators
- Wear indicators
- Wheel cylinders

MISCELLANEOUS

- Ear clamps
- Flashers
- Hose clamps
- Standard bearings
- Trailer cables
- Universal gas springs

TRISCAN
s m a r t p a r t s

Triscan a/s
Engmarken 11, DK-8220 Brabrand
Tel.: +45 87 43 33 33
E-mail: auto@triscan.dk
www.triscan.com

