Parts Fact Files

CONTENT

SCANIA PARTS

Increasing competition in the transportation industry means that our customers are increasingly having to consider vehicle uptime and overall operating costs, while at the same time having to cope with increasingly tough environmental legislation. Fleet maintenance is becoming more important, and the choice of supplier for inspection is taking on greater significance.

Scania Parts and our strong service organisation are helping to improve customers' operating economy and increase vehicle uptime. With Scania as a supplier of services and spare parts, customers are able to focus on transport assignments instead of repairs and maintenance. Scania's spare parts have been developed in order to fulfil stringent requirements in terms of function and quality, as well as service life and reliability. We have to communicate this to our customers.

In this publication, we will be explaining why customers should choose Scania Parts, mainly on the basis of technical quality. This will support you in your argument in favour of the vital qualities that allow Scania Parts to help improve the operating economy of our customers.

CUSTOMER COMMUNICATION ON SPARE PARTS

Our communication with customers is based on four principal values: availability, professionalism, customer value and quality. These values indicate how we support our customers' operations and so build trust and loyalty. In this publication, we have opted to focus on arguments relating to quality and professionalism.

Quality
Customers must feel secure in the knowledge that Scania Parts give them value for money. They must be told that Scania invests a lot of money in technical development and product testing in order to ensure service life and reliability.

Professionalism
Customers must be made fully aware that the professional skills and experience of Scania's workshop personnel, in combination with high levels of availability for Scania Parts, help to increase productivity and profit in their businesses.

SCANIA CYLINDER HEAD

Able to withstand the toughest operating conditions

Scania cylinder heads are optimised to give maximum engine performance and to allow vehicles to fulfil applicable emission requirements throughout the entire service life of the engine.

CYLINDER HEAD FACTS

Material selection and precision
The cylinder head is subject to major stresses when the engine is running in the form of high pressures and temperatures that occur during combustion. These components also have to withstand stresses when the valves open and close several hundred million times during the service life of the cylinder head. Valves and valve seats must maintain their sealing integrity, and valve guides and valve stem seals must ensure lubrication. Therefore, the right material and precision are important during manufacture.

WHAT WE HAVE DONE

1. Maintain their shape
Scania cylinder heads are of a design and use materials which are capable of withstanding the thermal and mechanical stresses that occur during combustion and in a broad range of difficult operating conditions.

2. Maintain their sealing integrity
Scania valves and valve seats are designed to minimise wear and maintain sealing integrity, with carefully selected materials and a high degree of machining accuracy. The valve stem seal also maintains its sealing integrity in the high pressure that occurs in the exhaust and intake ports, while at the same time assisting with lubrication between the valve and the valve guide.

3. Exchange cylinder heads
The cylinder head is included in the Scania Service Exchange system and is supplied complete with valves in order to facilitate fitting and minimise downtime. Exchange cylinder heads always come with valves suitable for difficult operating conditions in order to safeguard engine service life.

SCANIA CYLINDER SYSTEM

Long service life with optimum lubrication

The Scania cylinder system gives the best possible performance and service life thanks to optimum lubrication. A new set of pistons and liners gives the engine new life.

CYLINDER SYSTEM FACTS

Interaction between various components
The cylinder system is subject to major stresses. When the fuel-air mix is compressed and ignited, the load on the piston increases up to 18 tons. This takes place thousands of times a minute. Even though it is cooled, the temperature of the piston rises to around 400 degrees. So it is important to ensure that the cylinder liners, pistons and piston rings have the right properties and work perfectly together. Effective lubrication extends their service life, and the design and surface properties of the cylinder liner are crucial in this regard.

WHAT WE HAVE DONE

1. Long service life
The Scania cylinder system has a long service life thanks to careful material selection and optimum surface structure. The cylinder liner is plateau honed to ensure low friction and optimum lubrication. This in turn reduces oil consumption and increases service life. High-power engines use cylinder liners which have been honed and plasma sprayed, which also reduces the risk of corrosion.

2. High performance
The standard steel piston has a geometrically optimised combustion chamber which results in high performance and low emissions. Aluminum pistons are used for lower-power engines. Both designs provide high strength and are able to withstand extreme loads.

3. Tests and environmental impact
The Scania cylinder system has undergone extensive testing in vehicles and under different operating conditions, such as with various loads and different oil and fuel grades. This is to ensure that the components are able to fulfil applicable environmental requirements and offer long service life even under tough conditions.

SCANIA ENGINE OIL FILTER

Insurance against engine failure

Scania oil filters have a high dirt absorption capacity, which is a requirement in order for them to comply with the recommended service intervals. Scania oil filters help you prevent unnecessary engine wear and minimise the risk of breakdown, thereby reducing maintenance costs and downtime.

ENGINE OIL FILTER FACTS

Clean oil means long service life
The function of the oil filter is to intercept impurities such as metal particles and soot, while at the same time allowing oil through in order to lubricate and cool the engine components. If the filter medium is not effective enough, filtration will be poor and impurities will reach the engine. If it is too dense, however, the pressure drop will be too great, resulting in the bypass valve opening and allowing unfiltered oil into the engine. Using filters of an incorrect specification may allow contaminated oil to pass through, which will eventually result in engine failure.

WHAT WE HAVE DONE

1. Tested for Scania engines
The Scania engine oil filter is tested for Scania oil pressures and flows. The filter is tested on all Scania engine types as the oil is degraded differently depending on engine type. For example, engines with EGR can make the oil acidic. Therefore, Scania carries out tests using acidic oil in order to ensure that the filter is able to withstand this pollution and stress.

2. The right material in the filter medium
The filter medium is made from synthetic and cellulose fibre in order to provide optimum resistance against degraded oil. With the wrong material, the filter may become brittle and crack, resulting in increased wear and the risk of engine failure.

3. Withstands high pressures
The Scania engine oil filter has high mechanical stability and temperature resistance, so allowing it to withstand high pressures. This is particularly important in modern lubrication systems.

SCANIA TURBO

An investment in economy and reliability

Scania turbochargers are thoroughly tried and tested, and they are adapted for Scania engines in order to ensure that they deliver the performance and emission levels for which they are specified. Scania exchange turbochargers are reconditioned in order to fulfil the same requirements as newly manufactured units and come with warranties that are just as extensive.

TURBO FACTS

Low fuel consumption maintained
The turbine shaft in a turbocharger rotates at up to 130 000 rpm, with very tight tolerances between the turbine blade and the housing. Fuel consumption increases if the clearance is too great, while too little clearance can cause the blades to come into contact with the housing. This can cause major damage, reduce efficiency and lead to oil entering the combustion chamber, which can result in engine failure.

WHAT WE HAVE DONE

1. Advanced balancing
Scania turbochargers are manufactured with high precision. The balancing of the turbine wheel, compressor impeller and turbine shaft is a process involving tight tolerances. Scania turbochargers are developed and tested for Scania's range of engines in order to provide optimum performance and the lowest possible emissions.

2. Maintain their sealing integrity
Very high pressures occur at the turbine outlet during exhaust braking. The Scania turbo is designed to withstand this pressure and to minimise exhaust gas leakage (blow-by) during exhaust braking, which results in minimal oil leakage via the crankcase ventilation.

3. Exchange turbo
Most turbo models are included in the Scania Service Exchange system, which means that reconditioned turbochargers are available as an alternative to newly manufactured ones. Exchange parts are reconditioned with precision in order to fulfil the same stringent requirements as new ones, and so they come with exactly the same warranties as a new turbo.

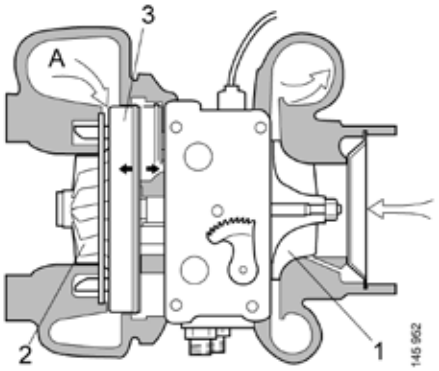
SCANIA VG TURBO

Optimised output and environmental performance

The Scania turbo with variable geometry (VG) has been designed to fulfil stringent emission requirements, while at the same time offering good performance directly from low speeds. The exchange turbochargers are reconditioned and tested in order to fulfil the same stringent requirements as newly manufactured ones.

VG TURBO FACTS

High performance and low environmental impact
Today's diesel engines have to meet ever more stringent emissions requirements. The turbo with variable geometry (VG) is a sophisticated solution which constantly adjusts the intake area to the turbine. This is done electronically by attaching a control unit to the turbo. This provides a broader usable speed range compared with a turbo with a standard turbine geometry. The VG turbo is able to meet strict emissions requirements and at the same time provide good performance at both low and high speeds.



WHAT WE HAVE DONE

1. Improved performance
The Scania VG turbo has been developed in order to meet stringent emissions requirements while maintaining performance. The VG turbo provides improved performance throughout the entire speed range without increasing environmental impact.

2. Power from low speeds
The Scania VG turbo quickly and efficiently varies the turbo effect irrespective of engine speed. This provides plenty of power even from low speeds and optimum fuel consumption at high speeds.

3. Exchange VG turbo
The VG turbo is included in the Scania Service Exchange system, which means that reconditioned turbochargers are available as an alternative to newly manufactured ones. The exchange parts are reconditioned in order to meet the same strict requirements as a new VG turbo.

‹ By adjusting the width in the turbine intake, the speed of the exhaust gases is varied and therefore so is the volume of air going into the engine.
A – Exhaust gases, 1 – Compressor , 2 – Turbine, 3 – Axially moveable nozzle ring

SCANIA AIR FILTER

Provides the engine with clean air

Scania air filters efficiently clean the air to the engine by more than 99.9 per cent. Using Scania air filters ensures good fuel economy and a long engine service life thanks to an optimally designed air filter and air intake.

AIR FILTER FACTS

Handles large quantities of air
The trucks of today use around 36 cubic metres of air per minute to supply the combustion process in the diesel engine. The air filter must be able to clean the air regardless of the operating environment. If particles pass through the air filter, the service life of the engine will be reduced. Dust which reaches the engine will wear out parts such as slide bearings, pistons, cylinder liners and turbo compressors. Air filters must never be cleaned as this poses a major risk of causing damage which cannot be detected.

WHAT WE HAVE DONE

1. Developed for Scania vehicles
The Scania air filter is unique and has been developed especially for Scania vehicles. Thousands of hours of testing ensure the best possible performance for each application.

2. Lower fuel consumption
The Scania air filter is optimised to give a low pressure drop. This means that less power is used to suck air into the engine, which in turn leads to lower fuel consumption.

3. Precise fit
Not even the best filter can work unless it provides a complete seal against the filter housing. If contaminated air passes the filter, this can damage the engine. The Scania air filter with patented seals ensures that no uncleaned air passes the filter. Scania has carefully adjusted the dimensions and tolerances of the filter housing, filter cover and filter in order to achieve a precise fit.

SCANIA RADIATOR

Maximum engine output

Scania radiators are designed to give the best possible engine performance and maintain low fuel consumption.

RADIATOR FACTS

Gives the correct operating temperature
Modern trucks with powerful engines make stringent demands of the cooling system. To be able to deliver maximum output, the engine has to work at the correct operating temperature. The coolant also has to be at the right temperature in order to ensure long service life and good operating economy. Under extreme conditions such as long, steep hills on hot summer days, there is a risk of the engine overheating, which can lead to engine damage and costly repairs.

WHAT WE HAVE DONE

1. Maximum cooling
Scania radiators are developed to provide maximum cooling no matter what the operating conditions or climate. This increases the performance of the engine, gearbox and retarder. Scania radiators are able to operate in both hot and cold climates, so extending the service life of the engine.

2. Optimum fuel consumption
The right operating temperature optimises fuel consumption and hence operating economy.

3. Thorough tests
Scania radiators undergo extensive tests such as engine tests, long-term tests and field tests. In the field, radiators are tested under actual operating conditions which are difficult to simulate in a test cell.

SCANIA COOLANT HOSE

Durability and fit

Scania coolant hoses are designed for optimum cooling system function even at high temperatures and pressures.

COOLANT HOSE FACTS

Subject to major stresses

The coolant hoses transport fluid in the cooling system. There are major stresses on these hoses as they are situated in an exposed environment with high temperatures and pressures. Therefore, it is particularly important to ensure that the connections are designed to prevent leaks, which places considerable demands on tolerance for various wall thicknesses in the hoses. The hoses also have to be able to withstand the aggressive properties of the coolant.

WHAT WE HAVE DONE

1. Correct fit

Scania coolant hoses provide optimum function throughout the entire cooling system. The hose attachments are carefully designed to offer an extremely accurate fit with the least possible leakage when the hoses are exposed to coolant at high temperatures and pressures.

2. Correct material

The choice of material is important so that the hoses can withstand the major stresses. Scania coolant hoses are made of materials which are able to withstand both high pressures and high temperatures as well as coping with the effects of the engine antifreeze and coolant.

3. Thoroughly tested

Scania coolant hoses have been developed to withstand the stresses to which they are subjected, while maintaining their performance and long service life.

SCANIA BELT TRANSMISSION

Long service life and optimum torque transfer

Scania belt transmission is thoroughly tested to ensure a long service life and to provide efficient driving of the engine's peripheral systems. This leads to safe transport, with fewer unwanted stoppages.

BELT TRANSMISSION FACTS

Interaction between various components
The belt transmission drives the water pump, the alternator, the AC compressor and, where appropriate, the engine fan as well. The idler roller and belt tensioner are important in order to maintain the correct pretension in the circuit and provide optimum torque transfer. Vibration and noise must also be minimised.

WHAT WE HAVE DONE

1. Constant improvements
The idler roller in the circuit is subject to major forces. To be able to meet current service life requirements, Scania has used constant improvements to develop an idler roller made of a hardwearing material with a double row of ball bearings and improved lubrication.

2. Correct pretension means a long service life
The pretension in the belt circuit is influenced by all interacting components, but above all the quality of the drive belt and belt tensioner. The drive belt must be of the correct length and rigidity for the belt circuit components to operate optimally and last a long time.

3. Preventative replacements
Scania recommends inspection of the belt transmission at regular intervals together with the alternator and that these should be replaced for prevention purposes. This greatly reduces the risk of breaking down at the roadside.

SCANIA INJECTOR

High engine performance throughout the entire service life

Scania injectors are designed to provide the best possible performance and reliable with the lowest possible fuel consumption and environmental impact. Exchange injectors meet the same strict quality requirements specified for newly manufactured parts.

UNIT INJECTOR FACTS

Supply the combustion chamber with fuel
The unit injector has a major influence on engine output, torque and fuel consumption. The job of the injector is to supply the combustion chamber with the correct amount of fuel at the correct pressure. The nozzles differ from injector to injector. Even though they look the same to the untrained eye, they often differ in terms of materials and heat treatment. Using the wrong injectors can result in the engine failing to deliver the promised performance.

WHAT WE HAVE DONE

1. Service life
Scania injectors have an optimised service life by selecting the correct surface treatment and thickness for the piston in the injector.

2. Lower fuel consumption
The injector has been developed to provide the lowest possible fuel consumption, thereby improving operating economy and also reducing environmental impact.

3. Exchange injectors
Injectors are included in the Scania Service Exchange system, which means that reconditioned injectors are available as an alternative to newly manufactured ones. Exchange injectors meet the same strict quality requirements as new ones. Injectors are always supplied with new nozzles.

SCANIA FUEL FILTER

Do you have clean fuel in your tank?

Scania fuel filters are designed to meet Scania's uniquely stringent performance requirements. They are developed and tested for different fuel systems, fuel qualities and operating conditions.

FUEL FILTER FACTS

An efficient fuel filter provides security
The fuel filter is a central component in modern, heavy trucks. The extreme precision in today's injection systems means that components must be protected from contamination. The combination of high pressure and extremely small tolerances also means that very small particles which cannot be filtered out may give rise to serious damage. Therefore, the fuel filter needs to have the correct degree of filtration and be suitable for the fuel used, and for the pressures and flows occurring in every engine type. If the fuel filter is not working or is of the wrong specification, the engine may sustain serious damage.

WHAT WE HAVE DONE

1. Suitable for various fuel systems
Scania fuel filters are developed and tested for many different operating conditions. Every fuel system has its own combination of flow, pressure and temperature, and Scania fuel filters are suited to these. The requirements for service life, degree of filtration, water separation, fuel compatibility and vibration resistance are unique for every Scania engine.

2. Tried and tested for different fuels
The filters are tested together with other injection components and post treatment systems and are adapted to suit different fuel qualities. On some markets, Scania uses pre filters to be able to handle fuels containing large volumes of contaminants and with a high water content.

3. Binds particles
Scania fuel filters are very capable of binding particles and are capable of handling extended service intervals. This helps to keep maintenance costs and downtime low.

SCANIA SILENCER

Low fuel consumption maintained

Scania silencers not only ensure acoustic comfort in the cab, they can also result in up to 5 per cent lower fuel consumption compared with alternative silencers.

SILENCER FACTS

More complex than it seems
To achieve optimum engine performance, all exhaust components must interact. Many alternative silencers are designed with no regard for other components. Unless the exhaust system is viewed as a whole, unwanted consequences may result such as higher noise levels and emissions so that the vehicle fails to meet applicable legal requirements. The service life of engine components such as valves and turbochargers may also be reduced. This may also result in fuel consumption up to 5 per cent higher.

WHAT WE HAVE DONE

1. Improved operating economy
Scania silencers are constantly being improved in terms of the balance between sound reduction and backpressure in relation to other engine components, for example. Thanks to the fact that Scania has been able to reduce the backpressure in the system, fuel consumption has been reduced by 1 per cent, while at the same time increasing the service life of other interacting components.

2. Improved driver comfort
Scania silencers are carefully designed to give as much noise reduction as possible. Troublesome, low frequency noise from the engine, which can be so tiring for the driver, has been halved compared with earlier silencers, so helping to improve road safety.

3. Thorough testing
Scania silencers undergo extensive testing in order to ensure their strength, function and performance throughout the service life of the product.

SCANIA CLUTCH

Controlled torque transfer

The Scania clutch provides optimum control over torque transfer and maintains comfort throughout its entire service life.

CLUTCH FACTS

More than just torque transfer

Enormous forces are transferred from the engine via the gearbox to the rear axle and on to the road surface. Between these is the clutch, with its two friction surfaces which have to set everything in motion. Not only does a clutch transfer torque; it also acts as a damper which minimises powertrain vibration. Every combination of engine and gearbox has its own unique torsional forces and vibration patterns. Only a perfectly suited clutch system ensures optimum control of torque transfer and maintains comfort throughout its entire service life.

WHAT WE HAVE DONE

1. Suitable for Scania vehicles

Scania clutches are suitable for different Scania vehicle types. All subcomponents, from the tiniest rivet to the strong diaphragm spring, are assembled to form a system which delivers maximum torque with a minimum of vibration in the powertrain.

2. Increased service life

The wear surface for Scania clutch linings has increased from 3.6 to 5 mm, which combined with the latest generation of gearboxes increases their service life by up to 40%.

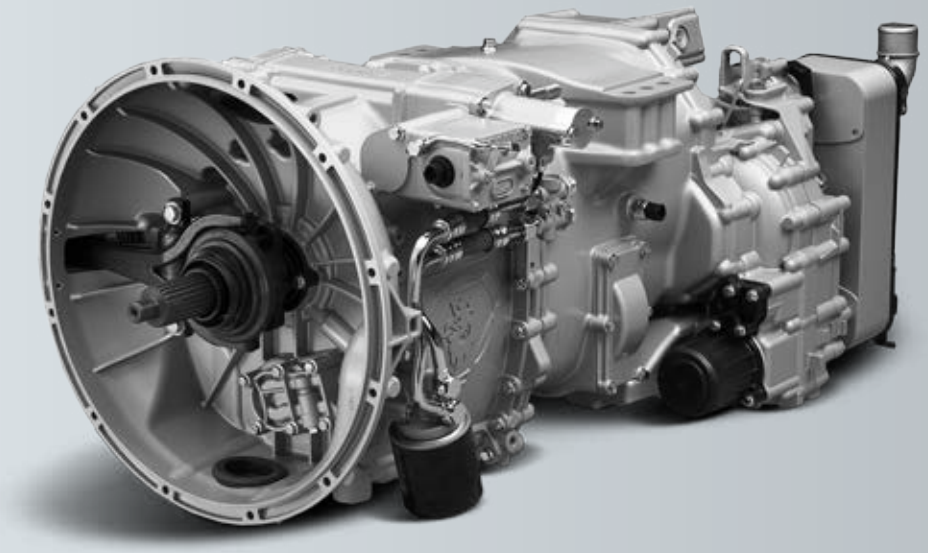
3. Exchange clutch

Most clutch covers and discs are included in the Scania Service Exchange system, which means that factory-reconditioned clutches are available as an alternative to newly manufactured ones. Factory-reconditioned parts meet the same strict requirements as new ones.

SCANIA TRANSMISSION OIL FILTER

Protects the gearbox and central gear

Scania transmission oil filters extend the service life of expensive and delicate parts in the gearbox and central gear, while at the same time enhancing performance.



TRANSMISSION OIL FILTER FACTS

Oil filters which reduce gear wear

The job of the transmission oil filter is to remove metal particles from the oil, to prevent unnecessary wear on gears and bearings in the gearbox and central gear. Gears, crown wheels, pinions, bearings and synchromesh in the gearbox are subjected to extremely high surface pressure, and here the oil must provide full protection against direct metal contact. The tiniest particle that breaks the film of oil considerably shortens the service life of components. Therefore, the filter has to be able to deal with very small particles regardless of whether the oil is hot or cold, and it must be able to handle the pressure peaks occurring during cold starting.

WHAT WE HAVE DONE

1. Clean oil improves service life

The filter medium in Scania transmission oil filters is made of glass fibre, which filters out small particles more effectively than cellulose, for example, and it is very capable of binding dirt particles. This results in extremely clean oil, which enhances service life, particularly for roller bearings in the gearbox and central gear.

2. Crucial protection for the central gear

The position of the central gear means that the oil filter is very exposed to slush, gravel, sand and salt. To be able to handle tough operating environments, hot dip galvanised steel is used for the filter casing, which provides excellent corrosion protection.

3. Can withstand high temperatures

The development of gearboxes demands components which are heat resistant to an ever greater extent. This is why the oil filter gasket is made of a heat-resistant material. This reduces the risk of it deforming or stiffening and so starting to leak.

SCANIA BALL JOINT

Maintained control and reduced vibration

Scania ball joints have been developed to minimise vibration and tyre wear. Service life is extended with an effective seal.

BALL JOINT FACTS

Perfectly suited ball joints maintain safety
The steering system is made up of many safety-critical components. All of these must be perfectly suited to one another. The ball joints hold together the various system components, and steering capability is lost if a ball joint is fractured. Not all ball joints on the market are of the same quality, even though they all look the same. Safe steering is based on perfectly fitted and pretensioned ball joints.

WHAT WE HAVE DONE

1. Reliability
Scania ball joints are thoroughly tested in order to meet Scania's strict requirements and high quality levels. They are effectively sealed, protecting them from dirt and ensuring a long service life.

2. Good driver comfort
Scania ball joints effectively counteract vibration in the steering system, so ensuring good driver comfort.

3. Minimum tyre wear
A perfectly adjusted and pretensioned ball joint maintains steering precision and minimises tyre wear.

SCANIA DISC BRAKE

Safety takes top priority

The Scania disc brake system has been developed for maximum safety. The components have been developed together in order to ensure a long service life and optimum performance in an exposed environment.

DISC BRAKE FACTS

Developed for tough operating environments
The brake system is the most important safety system in any vehicle, and its critical components are the brake calipers, brake discs and brake pads. These have to work together, in an exposed environment which contains dirt, moisture and vibration. The brake caliper is a complicated component which is crucial to braking effect. The brake disc has to be able to withstand temperatures of up to 900 degrees. The brake pads need to have correctly positioned wear sensors and expansion grooves. The brake chamber has to have the correct force and stroke length.

WHAT WE HAVE DONE

1. Extreme safety
Scania brake calipers are developed with safety as the top priority. No matter what the operating conditions, the caliper must provide full braking effect when required to do so.

2. Selected materials
Scania brake discs and brake pads are made from materials offering good thermal dissipation which are able to withstand high temperatures, thereby reducing the risk of cracking and extending the service life. Using the wrong material in any component will reduce the service life of the brake system and result in higher operating costs.

3. Extensive tests
All Scania disc brake components are developed and suited to one another so that they work perfectly together, with maximum braking effect in a very exposed environment. The brakes have to be able to withstand the stress of being applied countless times over many years, which makes stringent demands of the components. Scania carries out extensive tests such as fatigue tests in order to ensure compliance with the requirements.

SCANIA DRUM BRAKE

Safety takes top priority

The Scania drum brake system has been developed for maximum safety. The components are developed together in order to ensure a long service life and maximum performance in an exposed environment.

DRUM BRAKE FACTS

Focus on safety
The most important components in the drum brake system are brake drums, brake slack adjusters, brake chambers and brake shoes. In Scania drum brake systems, these components are developed so that they operate together as effectively as possible. The brake drum must have good dimensional stability to be able to function optimally, even at the start of braking when the inside of the drum is hot and the outside is cold. The brake slack adjuster has to compensate for brake shoe wear by means of an adjusting mechanism.

WHAT WE HAVE DONE

1. Safety
The Scania brake slack adjuster has an adjusting mechanism which controls the clearance between the brake drum and brake shoes, ensuring a set distance which is suitable for Scania drum brake geometries. This ensures safe braking effect whenever the vehicle is braked throughout the entire service life.

2. Maintain their shape
Scania brake drums are developed to result in minimal wear and counteract cracking. The material in the brake drum is dimensionally stable, providing consistent performance throughout the entire service life of the brake drum.

3. Tried and tested
Scania brake shoes are designed and tested thoroughly in terms of shape and friction in order to prevent vibration and screeching.

SCANIA AIR DRYER FILTER

Provide effective filtration in the compressed air system

Scania air dryer filters stop up to 99.95 per cent of all particles from reaching the air filter cartridge, so providing excellent protection for the compressed air system. With stable function and high reliability, Scania air dryer filters ensure that service intervals can be maintained.

AIR DRYER FILTER FACTS

Stop moisture and oil
Engine oils contain more and more additives. When the oil heats up, degradation particles are formed in the form of aerosols (tiny drops of oil). These are transported on into the compressed air system and can destroy seals in valves and other components. The job of the air dryer filter, therefore, is to separate out both oil and other foreign particles and moisture from the air. Costly downtime may ensue if these are not filtered out.

WHAT WE HAVE DONE

1. Correct desiccant volume
Scania air dryer filters contain more desiccant than many other solutions on the market, so ensuring a high drying capacity throughout the entire filter service life. This reduces the risk of corrosion damage and freezing damage to vehicle components which use compressed air.

2. Effective oil separation
At the bottom of the air dryer filter is an oil separating filter which effectively absorbs aerosols in the air, thereby further reducing wear on the components in the vehicle which use compressed air.

3. Thoroughly tested for Scania vehicles
Scania air dryer filters are developed especially for Scania vehicles. Extensive tests are carried out in order to ensure the performance of the air dryer filter under various operating conditions.

SCANIA AIR BELLOW

Greatest possible comfort

Scania air bellows are developed specifically for every vehicle model in order to provide maximum driving comfort, safety and service life under all conditions, both on-road and off-road.

AIR BELLOWS FACTS

Suspension suitable for the application
The air bellows help to enhance the vehicle's suspension comfort. An incorrect suspension specification will rapidly wear out the wheel suspension and other vehicle components and subject the driver and cargo to harmful shocks and vibration. To prevent vibration, it is important for the suspension to be suited to the intended applications of the truck.

WHAT WE HAVE DONE

1. Durability and strength
Scania air bellows offer a long service life as they are made of two thick layers of rubber with two reinforcement layers for stability and strength. The top plate is painted in the same colour as the frame, which provides good protection against corrosion.

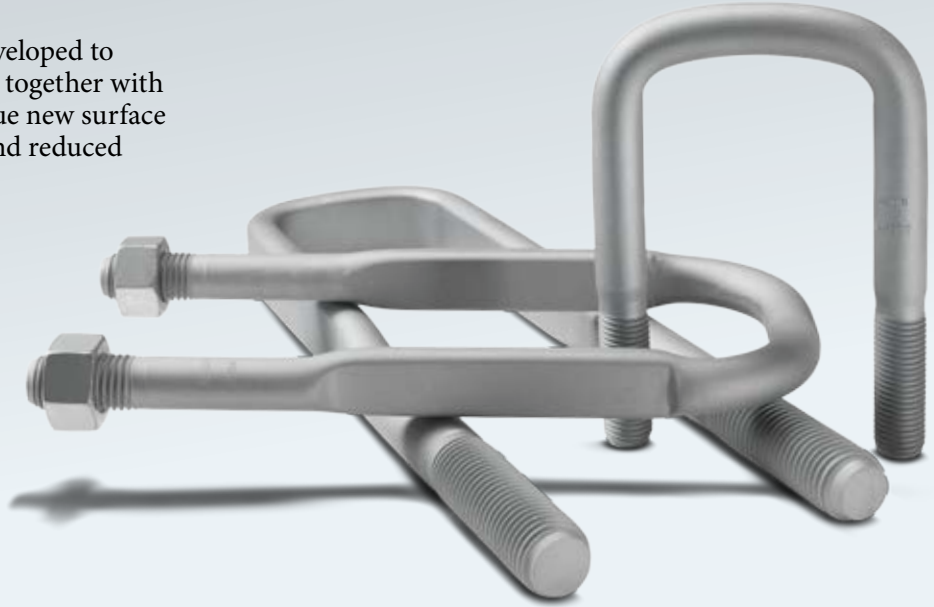
2. Comfortable loading and unloading
The air bellows react quickly and safely to load changes and permit precise level adjustments during loading and unloading. When passengers board and alight from buses, they also allow the vehicle to be raised and lowered quickly, so facilitating easier entry and exit to and from the vehicle, increasing passenger safety and reducing risk of accident.

3. Scania long-term testing
When a truck is used normally, the air bellows are subject to millions of suspension movements every year. They must to work equally well in hot and cold, damp and dry conditions. Such conditions are recreated and tested constantly during Scania field and long-term tests.

SCANIA U-BOLT AND SPRING BOLT

Unique surface treatment ensures long service life

Scania U-bolts and spring bolts are developed to provide optimum suspension function together with other suspension components. A unique new surface treatment ensures longer service life and reduced operating costs.



U-BOLT AND SPRING BOLT FACTS

Important parts of the suspension system
To hold axles and suspension packages in place, a few tiny, inconspicuous components are required which are of major importance to safety. The U-bolts, which hold the entire spring package in place in the chassis, are subject to major forces as part of the suspension and so need to be of good quality and be tightened to the correct torque. To prevent spring rupture, it is important to comply with the recommended intervals for lubrication of the spring bolts.

WHAT WE HAVE DONE

1. Unique surface treatment
The surface treatment of U-bolts and spring bolts is extremely important as these components are located in a very aggressive environment. Scania U-bolts and spring bolts are surface-treated using a new method (inorganic surface treatment with flake) which extends their service life. You can recognise the new Scania surface treatment because it is black for spring bolts and silver for U-bolts.

2. Safety
U-bolts are a safety item, and they must always be replaced when they have come loose. When installed using the high recommended tightening torque, the bolt and nut are deformed so that they hold as effectively as possible. To facilitate handling, Scania sells the U-bolts in kits which include nuts and mounting parts.

3. Thoroughly tested
Scania U-bolts and spring bolts are tried and tested together with other components such as air bellows, spring links and leaf springs in order to create a harmonious suspension system.

SCANIA SHOCK ABSORBER

Tested for and suited to Scania vehicles

Scania shock absorbers are specially developed and tested for different Scania vehicle types Tried and tested shock absorbers provide benefits such as good operating economy, safety and driver comfort.

SHOCK ABSORBER FACTS

Developed for tough environments
Shock absorbers for heavy vehicles must be able to withstand difficult operating conditions. Depending on operation, shock absorbers must be replaced every 200 000–400 000 kilometres. Worn shock absorbers increase wear on other components, including the cab suspension and seat suspension, which impairs driver comfort and increases costs. Worn shock absorbers can also increase the risk of powertrain judder and so impair accessibility, especially for construction vehicles as they often operate on soft ground such as sand or soil. Moreover, worn shock absorbers result in poorer road holding, which poses a risk to safety.

WHAT WE HAVE DONE

1. Suitable for Scania
Scania shock absorbers are specially developed for different Scania vehicle types. This means that these shock absorbers are of the correct length and have the correct attachment type, and are well matched to the respective vehicle types. Wrong length of shock absorbers can cause broken propeller shafts.

2. Thoroughly tested
Scania shock absorbers are tested over millions of kilometres so as to safeguard their function and service life, both on test vehicles in actual use and on test rigs.

3. Time for replacement
Shock absorbers wear and should be replaced on time as fresh shock absorbers reduce stresses on the load, the driver and the chassis components, thereby helping to reduce operating costs.

SCANIA ALTERNATOR

Controls the power supply

Scania alternators are developed to provide high output and efficiency, as well as having a long service life. This results in greater uptime and hence better operating economy.

ALTERNATOR FACTS

The vehicle's power plant
The alternator must be able to charge the battery bank quietly and quickly and supply electricity to the vehicle's equipment and components. A generous alternator output for every application and controlled charge regulation result in safer starts and extend battery service life. Driving cycles involving a lot of idling and lots of stops demand even more of the alternator. This is why it is important for it to provide a high output even at low speeds.

WHAT WE HAVE DONE

1. Optimised design
Scania alternators are available in several different versions to fit different vehicles and operating conditions. They are designed to provide optimum balance between physical size, output and service life, among other things.

2. Constant improvements
These alternators are undergoing constant improvement in order to provide greater efficiency, lower noise levels and extended service life. One result of the constant improvements is what is known as the brushless 150A alternator, which has an even longer service life and minimal maintenance requirements.

3. Exchange alternator
Most alternator models are included in the Scania Service Exchange system, which means that factory-reconditioned alternators are available as an alternative to newly manufactured ones. A number of Scania alternators also come with spare parts for the most common repairs.

SCANIA STARTER MOTOR

For trouble-free starting every day

A robust starter motor with high torque and good cold starting properties allows the vehicle to start safely every time. The starter motors are suitable and tested for Scania vehicles.

STARTER MOTOR FACTS

It all starts with the starter motor
The starter motor has the onerous task of getting the engine started – all year round, over and over again. To start a large diesel engine, a powerful starter motor is required with high output and high torque. In an emergency, a vehicle with a manual gearbox must be able to run on the starter motor at least 30 seconds so that it can be moved to a safer place if it is disabled.

WHAT WE HAVE DONE

1. Optimum balance
Scania starter motors have been developed to provide optimum balance between output, torque, weight and service life.

2. Constant improvements
Starter motors are undergoing constant improvement, mainly to improve reliability and service life. The starter motor for Scania straight engines has a new electric motor with improved cold starting properties, improved reliability and longer service life.

3. Exchange starter motor
Most starter motors are included in the Scania Service Exchange system, which means that factory-reconditioned starter motors are available as alternatives to newly manufactured ones. A number of Scania starter motors also come with spare parts for the most common repairs.

SCANIA BULB

Models for all applications

Scania has a broad range of high-quality bulbs for different applications. These are adapted to suit Scania vehicles to ensure the best possible performance and service life.

BULB FACTS

Different models
An efficient lighting system is required to allow the driver of a truck or bus to observe obstacles and to allow the vehicle to be seen by other road users. A truck has many different types of lamp with different performance levels, such as traditional bulbs, halogen lamps and Xenon lamps. Scania is constantly developing its range in order to improve performance and durability.

WHAT WE HAVE DONE

1. Standard bulbs
Scania provides a broad range of high-quality standard bulbs, with both traditional bulbs and halogen lamps.

2. HD/HD Premium bulbs
Scania HD and HD Premium bulbs (Heavy Duty) are suitable for tougher applications, such as off-road or on poorer roads. These are designed to withstand shaking and powerful vibration. HD Premium bulbs offer the very best performance and service life available. They also provide better light distribution for some applications, so enhancing safety and driver comfort.

3. Xenon lamps
Scania Xenon lamps give off an intensely bright anti glare light and have a long service life. Xenon lamps are available for all applications.

SCANIA BATTERY

Reliable even at extreme temperatures

Scania batteries offer high reliability and a long service life and are tested to ensure that they can handle difficult operating conditions.

BATTERY FACTS

Power source for modern vehicles
The trucks and buses of today contain lots of electronics and so require a lot of electricity to start. When running, it is important for the battery to be charged quickly, and it must be able to withstand major physical stresses. The battery also has to be able to withstand lots of discharge cycles while maintaining its capacity.

WHAT WE HAVE DONE

1. SHD batteries
Scania batteries are of SHD type (Super Heavy Duty), which means that they are specially designed for heavy vehicles under tough operating conditions. These batteries consist of thick plates, separators made of polyethylene and glass fibre mats, and a combination of glue and plastic for robust anchoring of the plates.

2. High capacity
Scania batteries have high capacity and starting output and are highly resistant to shaking. This makes them suitable for even the most demanding applications, in trucks or buses, on-road or off-road.

3. Thoroughly tested
Scania tests its batteries thoroughly to ensure that they are able to withstand different operating conditions. Among other things, they undergo 100-hours testing on a vibration table in order to check that they can withstand uneven terrain.

SCANIA COILED ELECTRICAL CABLE

Trailer cables and connectors that maintain contact

Scania coiled cables and connectors ensure contact with your trailer. The effective seal against moisture means that high-pressure washing is no problem. A change in coil diameter with more built-in cables improves electrical mechanical performance and simplifies connection, with fewer tangled cables.

COILED CABLE FACTS

Good connection
The electrical connection between the vehicle and the trailer must always be in good condition so that the vehicle is safe to drive and compliant with applicable rules. The coiled cables must safeguard the connection at all times of year and under all driving conditions. These cables are sited in a very demanding environment and are exposed to dirt, salt and fluids from the engine and transmission. They have to be able to withstand both low and high temperatures and be watertight. Many customers appreciate having the opportunity to repair the connectors.

WHAT WE HAVE DONE

1. Watertight and not temperature-sensitive
Scania coiled cables are developed to work over a wide range of temperatures, from –40 to +105 degrees. The connectors are sealed well against moisture and are compliant with IP class XPX9K. Scania also offers cost-effective repair kits.

2. Hardwearing but flexible
Scania coiled cables have a small coil diameter so as to enhance mechanical strength and increase flexibility. The cable connections are reinforced with glass fibre to improve their strength.

3. ADR approval
Scania coiled cables with connectors for ABS, EBS and 15-pole contact are ADR-approved.

SCANIA WINDSCREEN

For safety and comfort

A Scania windscreen fitted by skilled staff is of the same high quality and meets the same requirements for safety as the original factory-fitted windscreen.

WINDSCREEN FACTS

The windscreen is more than just a pane of glass
The windscreen is an important part of the vehicle as it helps to provide both safety and driving comfort. This makes the cab frame more torsionally rigid, which protects the driver more effectively in the event of a collision. The windscreen has to withstand wind and weather and withstand the varying pressure occurring due to the flow of air. It also has to be scratch-resistant and resistant to stone chips and collision forces.

WHAT WE HAVE DONE

1. Driving comfort
The Scania windscreen has been developed to provide the best possible driving comfort. It has been specifically designed to maintain its shape, size and tone.

2. Impact safety
Many hours of design effort have been invested in developing the windscreen to be able to withstand the forces occurring in the event of a collision. The entire cab structure, including the windscreen, has been tested to ensure that it meets the strict requirements laid down for cab impact testing.

3. Safety maintained with new windscreen
Scania windscreens are manufactured in a certified process, with strict quality controls, so that they fit Scania vehicles precisely. When a new windscreen is fitted, it is important to use the correct method and glue quality. A Scania windscreen fitted by skilled staff is of the same high quality and meets the same requirements for safety as the original factory-fitted windscreen.

SCANIA WIPER BLADE

Suitable for various climates

Scania wiper blades use advanced rubber technology to provide the best possible performance. Replacing them every year maintains safety and comfort even under extreme weather conditions.

WIPER BLADES FACTS

Important for safety
Keeping wiper blades in good condition so that they remove rain, dirt and snow effectively from your line of vision is important for safety and driver comfort. The rubber is exposed to sunlight, extreme weather conditions and contamination, which reduces their wiping ability over time. Noise, water left behind or a film of water on the windscreen are all signs that the wiper blades are starting to lose their wiping ability. This impairs visibility and so compromises safety.

WHAT WE HAVE DONE

1. Material in the core
Scania wiper blades are made from a combination of synthetic rubber and natural rubber which are extruded together. The upper part of the wiper blade, the core, is made of synthetic rubber so as to reduce the risk of vibration and cracks.

2. Material in the lip
The lower part of the wiper blade, the lip, is made of natural rubber, which ensures outstanding wiping quality on long wiper blades. This material effectively reduces noise, vibration, coatings and windscreen wear. Another advantage of natural rubber is that it remains soft even in very cold climates.

3. Works in different climates
The mix of materials in Scania wiper blades has been tested to ensure that it can withstand both cold and hot climates. Wiper blades should be replaced every year in order to maintain safety and comfort and to prevent damage to the windscreen.

SCANIA CAB SUSPENSION

The best comfort imaginable

Scania cab suspensions are suitable for different Scania cab types. The option of switching individual parts instead of entire systems allows cost-effective repairs to be made.

CAB SUSPENSION FACTS

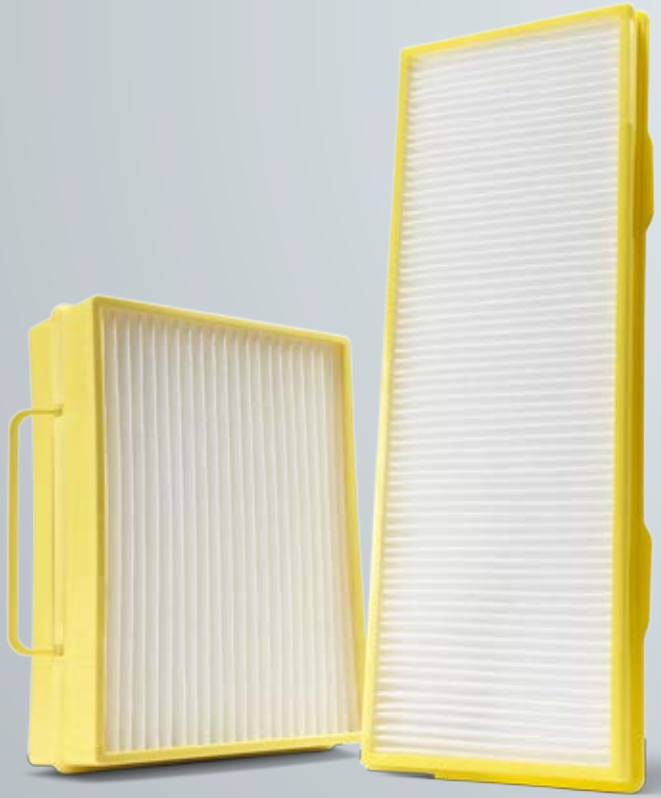
Different cab types
A suspension which is not adapted to the cab type in question results in unnecessarily large amounts of vibration. As a result the driver becomes fatigue and he may make mistakes. Incorrect damping properties in cab shock absorbers lead to increased wear on other parts of the cab suspension. The interaction between the air bellows and shock absorbers and the springs and shock absorbers must be carefully suited to every cab type.

WHAT WE HAVE DONE

1. Unique combinations
The shock absorbers and suspension bellows in Scania cab suspensions are developed to provide the best possible comfort. Different cabs are of different weights and heights, resulting in different movement patterns. This is why appropriate combinations of shock absorbers, springs and air bellows are required.

2. Separate parts
The various components in the cab suspension – the air bellows, springs, shock absorbers and link yokes – can be replaced and fitted separately, so permitting cost-effective repairs to be made.

3. Thorough testing
In normal use, the cab suspension on a truck is subject to millions of suspension movements each year. It has to work well in both hot and cold climates, as well as in dry and damp environments. This is why Scania recreates these conditions during testing. All components in the cab suspension are adapted to minimise noise and vibration in the cab.



SCANIA CAB AIR FILTER

Clean, fresh air in the cab

Scania cab air filters provide a healthier driver environment. Dirt, dust, pollen and other small particles are effectively filtered out. The filter is designed to provide effective filtration without obstructing the flow of air. The heating and cooling performance are optimised at the correct air flow.

CAB AIR FILTER FACTS

Filtration of smaller particles
Fresh air in the cab is a must for the driver to be able to concentrate on long journeys. A pre filter removes leaves, insects and other larger objects, while the cab air filter stops smaller particles such as dust, pollen and soot. The cab air filter is located in the intake port for the cab fan. The geometry and material of the filter are crucial to allow the fan to be able to supply the correct air volume to the cab and to optimise heating and cooling performance.

WHAT WE HAVE DONE

1. Correct density
The Scania cab air filter has a thoroughly tested density. If the filter is too dense or not enough dense it will result in an incorrect air flow to the cab, thereby impairing climate regulation.

2. High dimensional stability
The filter has high dimensional stability. A filter of poorer quality may collapse, in either the filter frame or the filter medium, and allow unfiltered air through to the climate system. This may cause the cab fan to malfunction and mould on the evaporator.

3. Does not bind moisture
Scania uses polypropylene as its filter medium as it does not bind moisture to the same extent as cellulose. A filter which absorbs moisture provides impaired heating and cooling performance and may, in a worst-case scenario, cause misting or ice on the windows.

SCANIA OIL

Protects the engine, gearbox and axles

Scania oil provides maximum protection against wear, is able to withstand long oil replacement intervals and helps to bring about improved operating economy. Scania oil is selected and thoroughly tested so as to ensure the best possible effect in your Scania vehicle.

OIL FACTS

Protects against wear
The oil in modern vehicles must be of high quality. It has to lubricate at both high and low temperatures and at the same time maintain stable properties. It must have a cleaning effect and bind harmful particles so that these can be transported to the oil filter. The oil must also maintain its properties for a long time as the vehicle owners of today require long inspection intervals.

WHAT WE HAVE DONE

1. Minimal wear
Scania oil provides the best possible protection and minimises wear by binding dirt, thereby preventing deposits which may lead to engine damage. The oil provides optimum lubrication even at extreme temperatures.

2. Lower maintenance costs
Scania oil is thoroughly tested to ensure that it is of the correct quality for Scania engines. Thanks to its long service life, Scania oil permits longer replacement intervals, thereby reducing maintenance costs.

3. Lower fuel consumption
Scania oil also has fuel-saving properties which help to reduce consumption.

SCANIA COOLANT

Optimised for various Scania cooling systems

Scania coolant provides protection against boiling, freezing and corrosion, so helping to avoid costly damage and downtime. It is selected and thoroughly tested so as to ensure the best possible performance in all Scania vehicles.

COOLANT FACTS

Cooling is just one of its tasks
Aluminum radiators are normally used in modern trucks in order to reduce the weight. This material requires good protection from precipitations and corrosion. Damage occurring can be difficult to detect and remains concealed until it is no longer possible to rectify it. This leads to expensive repairs and downtime. This is why it is important for the coolant not only to be capable of cooling the engine, but also for it to counteract precipitations and corrosion.

WHAT WE HAVE DONE

1. Reduced corrosion
Scania coolant ensures minimal corrosion in the radiator, thereby reducing the risk of unplanned stops due to leaks from cylinder head gaskets and other seals, for example.

2. The cab's climate system
The climate system in Scania vehicles uses very thin tubes to optimise regulation of the cab climate. Normal antifreeze causes precipitations which rapidly block the system, leading to a complete loss of temperature regulation in the cab. Scania coolant counteracts this.

3. A global solution
Scania coolant is adapted to prevent boiling and freezing. It works equally well all over the world as it is stable regardless of climate, works all year round and maintains its high quality throughout its entire service life.

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