AIC Germany Automotive Components

DUNLOP

ORIGINAL RIDE COMFORT FROM EUROPE

Air suspension components from original equipment manufacturer **Dunlop Suspension Systems**

5 YEARS WARRANTY up to 75,000 km

*FROM COMPETENCE **TO EXCELLENCE***

EDITORIAL

Dear customers,

The automotive industry is in a state of constant change. This is not surprising, as it needs to keep pace with new mobility concepts and, above all, the ever faster-moving world.

In this respect, a new trend is becoming increasingly apparent in Europe. The number of vehicles with air suspension systems is growing significantly. This is not least due to the greater demand for SUVs and commercial vehicles. After all, air suspension systems can provide a more comfortable and, above all, safer ride, so that uneven road surfaces are not felt in the vehicles. Furthermore, greater consumer interest in the latest technologies for ensuring higher-quality driving is particularly evident, which shows there is a growing demand for quality.

Several specialists and manufacturers of air suspension components exist. However, there is only one in Europe. Dunlop Suspension Systems, with over 70 years of experience in air suspension systems, is the leading manufacturer – and is now also present in the aftermarket.

As a dynamic solver of problems and a supplier of great value spare parts, we are delighted to have a new strong partner for original equipment quality air suspension components from Europe at our side. But most of all, we are pleased to now be able to offer you Dunlop Suspension Systems original quality components in the aftermarket. Learn more about this on the following pages.

Guido Berkefeld
Managing Director, Jürgen Liebisch GmbH

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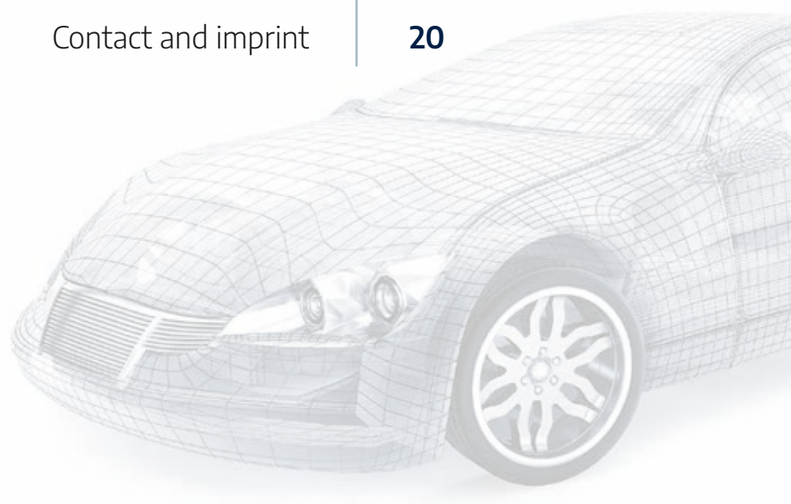
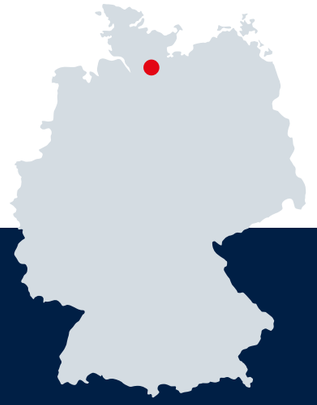


FROM COMPETENCE TO EXCELLENCE



High quality products for the independent automotive aftermarket for five decades.

A brand with five decades of experience

Since the establishment of Jürgen Liebisch GmbH in 1975, automotive spare parts have been the core competence of the Hamburg-based company. In 2004, the decision was made to market the products under its own brand, AIC Germany.

In the course of the changes of the last 45 years, AIC has developed into a dynamic problem solver, committed to excellence in all areas of the aftermarket business. In its new administration complex and distribution centre built in 2016 in Glinde, just outside Hamburg, AIC stocks more than 13,000 automotive spare parts components in over 100 product groups. The wide range of parts includes not only the AIC product portfolio. AIC also maintains trade cooperations with original manufacturers enabling it to offer spare parts in original quality in the independent aftermarket. The top priority is and remains the combination of high-quality products and fair prices, so that even older vehicles can remain operational.

DUNLOP SUSPENSION SYSTEMS

More than just tires. Dunlop Suspension Systems has been an expert in air suspension systems for over 70 years.

Ride comfort made in Europe

Starting as the Dunlop Pneumatic Tyre Company in 1890, Dunlop has grown into an innovative industry leader with a commitment to the highest standards of quality. But Dunlop is more than just tyres. Starting in the 1950s, the company became one of the first manufacturers of air springs and air suspension systems. Given its success, the decision was made in 2007 to found Dunlop Suspension Systems. In 2014, the company moved to a new purpose-built facility at Prologis Park in Coventry, England, where air suspension systems are specifically designed, validated and manufactured.

In its role as an expert and leading manufacturer of air suspension and control systems, Dunlop Suspension Systems specialises in supplying the automotive and component industries with high-quality products. The focus is always on reliability, performance, sustainability and innovation.

QUALITY, RELIABILITY AND PERFORMANCE IN ALL AREAS

ORIGINAL RIDE COMFORT FROM EUROPE

When it comes to ride comfort, Dunlop air springs are a natural choice for your SUV or passenger car. With their perfectly aligned air spring components, they cushion every bump in the road to ensure you get to your destination in complete comfort. And besides the superior ride, air suspension also delivers a high level of driving safety thanks to the automatically adjustable function, which always ensures an even grip on the road surface.

Characteristic of Dunlop air springs is the unique Plug&Play principle. No manual adjustment is necessary after installation, as the air spring is actively controlled by the system.

In an extensive testing and validation procedure, the air springs are thoroughly tested under real conditions to guarantee the high quality of the air suspension system and its long service life.

The benefits of Dunlop Suspension Systems air springs at a glance:

- Over 70 years of experience in the field of air suspension
- Air bellows design made of nylon or aramid
- Easy diagnosis and Plug&Play simplicity thanks to the active system
- Original parts
- Only new parts, no reconditioned components
- Dunlop products are globally recognised as being high-tech and of high quality
- 
- Pistons and cover plates made of aluminium, steel or partly plastic
- Manufactured in Europe
- Reliable supply chain with IATF 16949 suppliers
- Cross-ply rubber technology
- Rigorous, in-depth testing and validation procedures ensure quality

A BRIEF LOOK AT THE EUROPEAN MARKET

Air suspension components are gaining momentum. Dunlop is the only manufacturer in Europe offering air suspension components.

Cars in the EU with an air suspension system

4-6%

and rising

Market coverage in the automotive aftermarket (EU 2020)

50-70%

OE parts market coverage for air suspension parts worldwide

98%

Sales in the independent spare parts market 2020 in Europe

€ 40 – 55 million

BECAUSE QUALITY IS KEY

The three test procedures at Dunlop Suspension Systems

All products, especially those fitted to motor vehicles, are subject to wear and tear as a result of their operating environments. Dunlop Suspension Systems specialises in understanding how products perform over time in these environments.

For over 50 years, its testing laboratory has been conducting environmental validation and performance testing. The Dunlop Suspension Systems team is able to capture and replicate virtually any environment to simulate accelerated real-world conditions such as corrosion, humidity, temperature, thermal shock, vibration and vehicle loads. With the knowledge gained from the tests, Dunlop works to further improve the quality of each component.

For more details on the individual test procedures, please visit **www.dunlopsystems.com.**

Or scan the QR code.

Dynamic test

Real environmental conditions are simulated with special test equipment that can operate with loads up to 100 kN and at frequencies up to 100 Hz for displacement tests and 3500 Hz for vibration simulations. Such environmental conditions can include, for example, cyclic tests with high and low load frequencies or tests in hot and cold temperature environments.

Vibration test

By performing vibration tests, it is possible to check how robust the air spring components are in the face of shocks and vibrations. Special test equipment is used to simulate sinusoidal and random vibrations. These represent the real environment to which the components are exposed to in daily use. Other testing equipment deployed includes environmental chambers where the simulation of vibrations can be combined with temperature and humidity control to create a fully representative environment.

Salt spray test

When components are used in a corrosive environment, performance, aesthetics and service life can be affected to varying degrees. Regardless of the material they are composed of, all components are susceptible to corrosion over time.

With its spray tests, Dunlop Suspension Systems can simulate corrosive environments and depict corrosion that might normally have developed over several years, within just a matter of days.

A UNIFIED SYSTEM

As the interplay of the individual air spring components comprises a unified system, it is often not always sufficient to look at just one component on its own. Therefore, it is usually not enough to look at just one component. To avoid having to potentially schedule another appointment for another repair immediately after the first one, it's a good idea to check the entire air suspension system. Doing so will ensure that everything is working just as it should.

Gain a small overview of the range of air suspension components offered by AIC Germany, here, including air springs, struts, compressors and relays.

Visit our website or take a look at the spare parts catalogue. We already have more than 250 items listed for you in our portfolio. And many more are set to follow.

AIR SPRING

AIC item no.:
70931

OE ref.no.:
3710 6 784 381

Suitable for:
BMW 5 Gran Turismo, Touring

AIC item no.:
71226

OE ref.no.:
251 320 0025

Suitable for:
Mercedes Benz R Klasse

AIR SPRING STRUT

AIC item no.:
71046

OE ref.no.:
4Z7 616 051A

Suitable for:
Audi Allroad C5

AIC item no.:
71232

OE ref.no.:
6006351-00-C

Suitable for:
Tesla Model S

COMPRESSOR

AIC item no.:
71289

OE ref.no.:
3720 6 875 176

Suitable for:
BMW 5 Gran Turismo, Touring

AIC item no.:
71294

OE ref.no.:
212 320 0104

Suitable for:
Mercedes Benz CLS, E-Klasse

RELAY

AIC item no.:
56681 (Original AIC-Product)

OE ref.no.:
7M0 951 253A

Suitable for:
Audi A2, A3, A4, A6, V8, Q7, TT, Coupe, Quattro, Skoda Felicia, Superb, Seat Alhambra, Altea, Arosa, Cordoba, Ibiza, Leon, Toledo, VW Bora, Caddy, Golf, Jetta, Lupo, Passat, Polo, Tiguan, Touareg, Touran, Vento, Crafter, Transporter

Suitable for following compressors
71289 bis 71292 und 71301 bis 71304

AIC item no.:
54935 (Original AIC-Product)

OE ref.no.:
002 542 7619

Suitable for:
Mercedes Benz A-Klasse, B-Klasse, C-Klasse, CLS, E-Klasse, S-Klasse, SL, SLK, SLC, SLS AMG, M-Klasse, R-Klasse, G-Klasse, GL-Klasse, GLK-Klasse, Maybach 57

Suitable for following compressors
71293 bis 71300

TIME TO CLEAR THE AIR

Problems, their causes and other indicators of defects in the air suspension system

Like every component installed in a vehicle, air suspension systems are not immune to defects. Should you notice any irregularities, visit a workshop. In this section, you will find general information on symptoms and causes of defects, as well as important installation advice.

PROBLEMS

- Blinking warning light for the air compressor
- The chassis can no longer be raised or lowered
- Shock absorber setting adjustment on the MMI terminal not responding
- Raising and lowering of the vehicle is haphazard

CAUSES

- Natural wear and tear leading to material fatigue
- Incorrectly adjusted ride height
- Incorrect installation
- Defective compressor
- Defective relay
- Dirt, salt, oil and brake fluid residues
- Leaky pipe or cracked air bellows
- Poor shock absorbers > Bellows absorbing all shocks
- Clogged air filter

Important notes

- Do not check the air bellows by opening them
- The system must be pre-filled before the vehicle is lowered and leaves the hoist. Failure to do so will cause the bellows to burst.
- When replacing the compressor, the relay must also be replaced. If this step is omitted, the compressor may be damaged.
- Never unroll the diaphragm from the piston during installation, otherwise the bellows will not inflate properly after installation. If the air bellows is unrolled or folded, there is a high risk that it will not inflate properly and potentially damage the air bellows wall.

GENERAL INSTALLATION INSTRUCTIONS, AIR SUSPENSION AND COMPRESSOR

Removal of the old components

Before placing the vehicle on the lift, make sure that the air pressure has been completely released according to the manufacturer's specifications and that the vehicle's ignition is switched off and the battery is disconnected. It is strongly recommended that the components are fitted by qualified automotive technicians at an automotive workshop. For safety, the use of protective eyewear and gloves throughout the procedure is advised. If required to work beneath the vehicle, support it on axle stands.

AIR SUSPENSION IMPORTANT NOTES

1. The system must be pre-filled before the vehicle is lowered and leaves the platform, otherwise the spring will burst.

2. In any case, it is recommended to replace air springs and struts per axle.

3. If a new air suspension is fitted, make sure that the car is always lifted out of the suspension when starting. The car should therefore not stand on the so-called bump stops.

For struts with an exposed rubber part take care to avoid damage to the rubber during fitting. On completion of fitting and before the vehicle is driven, ensure that all fastenings are securely tightened.

It is recommended that air spring modules are fitted to a new shock absorber. If fitting to a used item, however, thoroughly clean the shock absorber beforehand. Surface debris may cause inadequate sealing and lead to air leakage.

NEW AIR FITTING

Screw the new air fitting into replacement air spring / strut **BEFORE** removing the white plastic cap that retains the collet.

Torque Settings:
- Plastic Part: 1,5 – 2.0 Nm
- Metal Part: 3.0 – 3.5 Nm

Figure 01

The air spring is supplied with the diaphragm rolled over the piston. When installing, please either lower the vehicle chassis or raise the axle. **DO NOT** roll the diaphragm off the piston during installation.

A correctly fitted air spring will inflates with walss straight and true, showing no folds or creases. An air spring with the diaphragm either unrolled from the piston or folded is very likely to inflate incorrectly, resulting in damage to the spring wall. Do not check the air spring length by pulling it apart! This will damage the spring and it will no longer function properly.

COMPRESSOR IMPORTANT NOTES

REMOVAL

1. With the help of the vehicle workshop manual, locate the air suspension system compressor. Remove covers (if fitted) in order to expose the compressor itself, and all of its electrical and pneumatic fittings and mounting fasteners.

2. Pull-out all compressor electrical connectors.

3. Pull-out all pneumatic pipework from the connector. In most instances the fitting will have a metal 'collet', which is pushed inwards with a thumbnail whilst the pipe is pulled outwards to release.

4. Remove all compressor mounting bolts and nuts, and carefully remove the compressor. Note that if new mounting fastenings are to be used when fitting the new compressor, then be sure to use like-for-like parts.

Photographing or labelling before removal will help on refit.

Please pay attention to all these instructions, otherwise no warranty will be granted for blown compressors.

FITTING

Important notes when replacing Dunlop air compressors

- When replacing a defective air compressor, make sure to also replace the relay.
- At the same time, check the air filter and replace it if necessary. It is possible that the air filter is dirty if the old compressor fails due to dirt or water inside.
- Once you have replaced the compressor, always check the condition of the inlet and suction hoses. The suction hose can become porous or dry out.
- If the condition of the inlet and suction hoses is not checked, the new compressor will also be irreparably damaged.

Additional notice:
During operation, the air compressor may vibrate, causing wear to the wiring. Therefore, check the compressor wiring harness for broken or cracked wires.

Fit the new compressor by following the steps overleaf in reverse and also observing the following:

- If your compressor has been supplied with new rubber isolation mounts, replace the existing parts with the new ones when mounting the new compressor.
- Using a torque spanner or torque wrench, tighten all mounting fastenings to the recommended torque.
- Screw the new air fitting into replacement air spring / strut **BEFORE** removing the white plastic cap that retains the collet. **(Figure 01)**
- To fit pipes, push-in squarely as far as the pipe will travel and then pull-back lightly in order to confirm secure connection.
- If a relay has been provided with your compressor, consult the vehicle workshop manual in order to locate the existing compressor relay and replace with the supplied part. **The warranty claim expires if the relay is not replaced at the same time. You will also find relays in the AIC range**.

Turn on the ignition. The Air Suspension Warning lamp on the vehicle dashboard may be illuminated. This will have been caused by the original faulty compressor. Any fault codes present must be cleared before the air suspension system will function correctly. Clear these codes according to the manufacturer's instructions. Note This may require a visit to a vehicle dealership and the use of bespoke diagnostic equipment.

Important note when filling the system for the first time after installing the new compressor.

Before lowering the vehicle completely from the lift, perform a system fill using a diagnostic device or get into the vehicle, close all doors and start the engine. After starting the engine, it may take a few minutes before the system is completely filled with air again.

CAUTION: DO NOT ALLOW THE COMPRESSOR TO RUN CONTINUOUSLY FOR MORE THAN 5 MINUTES AT A TIME.

Allow the compressor to cool for at least 10 minutes before restarting the engine to reinitialise charging. Continue this cycle until the system is fully charged. Remove the vehicle from the stage pre-filled.

AIC Germany Automotive Components

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5 YEARS WARRANTY