



JOST Axle Systems Axle series DCA / DBA / DMA / CSA

EN Guidelines for operation and maintenance



1 Explanation of symbols



WARNING!

Means that death, serious bodily harm or significant material damage may result from non-compliance with the corresponding safety notes



ATTENTION!

Means that minor injuries or material damage may result from non-compliance with the corresponding safety notes.



NOTE!

Includes additional important information.



Environmental notes



Instruction



Continuation symbol



Link to JOST online information



Page reference



Simplified tightening torque method



Tightening torque/angle tightening method



Tightening torque/angle loosen method



Safety-relevant threaded connection

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3 Welcome to the world of JOST Axle Systems

Before you use the trailer, familiarize yourself with your JOST Axle Systems. Read these guidelines, in particular the safety information and warnings before you start driving. By doing so, you will avoid hazards both to yourself and to others.

JOST Axle Systems is constantly adapting components and parts so that they correspond to the latest state-of-the-art in science and technology and therefore reserves the right to modify shape, equipment and technology.

Always carry these documents along in the vehicle. Store a copy of this document in the trailer if the trailer is driven in alternating operation. Pass these documents along to the new owner when you sell the vehicle.

Have a safe trip!



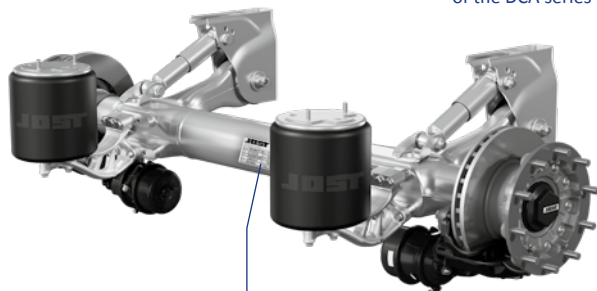
➤ JOST Homepage

4 This is how you identify your axle!

Identify your axle and important components with the data on the identification plate. **You can find the identification plate on the centre of the axle housing.** This data will help you:

- To identify spare parts with the ► JOST Part Finder
- Purchasing replacement parts
- Searching on the ► JOST Homepage
- When contacting the Technical Service of JOST Axle Systems:
► JOST Contact Information

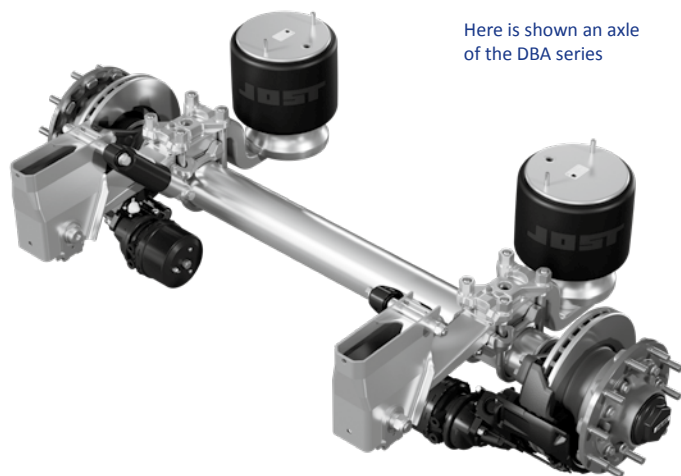
Here is shown an axle
of the DCA series



Classification of the identification plate of DCA series

1	TZ = Rigid axle, offset 0 TE = Rigid axle, offset 120 TL = Steering axle, offset 120
2	8 = Series DCA – 9t compact bearing
3	D749324 D749325 D749334 D749349 } DCA WEIGHTMASTER, DCA MEGAMASTER, DCA PAVEMASTER, DCA RAILMASTER
	D749368 D749369 } Version with tyre inflation system
	D749360 D749361 } DCA AIRMASTER
	D749310 D749311 } DCA STEERMASTER 21
	D749312 D749313 } DCA STEERMASTER 21 with tyre inflation system
4	TDB 0874 = Brake DCA-U6-19,5" TDB 0875 = Brake SK7-22,5" TDB 0876 = Brake SN7-22,5" TDB 0877 = Brake DCA-L7-22,5" TDB 0883 = Brake DCA-T7-22,5"

4 This is how you identify your axle!



Classification of the identification plate of DBA series

1	TZ = Rigid axle, offset 0 TE = Rigid axle, offset 120 TL = Steering axle, offset 120
2	1, 2, 3 = Series DBA
3	D749320 } 10,5t–conventional bearing D749330 }
	D749321 } 10t–compact bearing D749331 }
	D749323 } 9t –compact bearing D749337 } D749347 }
	D749340 } 9t–compact bearing with D749350 } tyre inflation system
	D749306 } Steering axle } (Version from 12/2022) D749307 } } D749314 } } (Version until 01/2023) D749315 }
4	TDB 0874 = Brake DCA-U6-19,5" TDB 0875 = Brake SK7-22,5" TDB 0876 = Brake SN7-22,5" TDB 0877 = Brake DCA-L7-22,5" TDB 0883 = Brake DCA-T7-22,5"

4 This is how you identify your axle!



Here is shown an axle of the DMA series



Here is shown an axle of the CSA series

Classification of the identification plate of DMA series

1	TZ = Rigid axle, offset 0
2	6, 7 = Series DMA
3	D749500 = 9t-conventional bearing
4	D749501 = 10t-conventional bearing
	TDB 0887 = Brake DMA-J4

Classification of the identification plate of CSA series

1	TL = Steering axle, offset 120
2	4, 5 = Series CSA
3	D749400 = 9t-compact bearing
4	D749401 = 10t-compact bearing
	TDB 0875 = Brake SK7-22,5"
	TDB 0876 = Brake SN7-22,5"
	TDB 0883 = Brake DCA-T7-22,5"

4 This is how you identify your axle!



NOTE!

Transfer the serial no./axle numbers (SN) 5 from the identification plates of your axles into this table.

5 Serial no./axle numbers (SN):

Axle 1

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Axle 2

--	--	--	--	--	--	--	--	--

Axle 3

--	--	--	--	--	--	--	--	--

5 Read prior to initial startup, repair and maintenance

This booklet serves as a guideline for operation and is designed for drivers and vehicle fleet operators (trailer users). Additionally, this booklet is intended as a guideline for maintenance for qualified workshops personnel/qualified workshops. This booklet is not intended for use as an instruction manual for the repair or maintenance of JOST axle systems by drivers and vehicle fleet operators. This booklet is not intended for use as an instruction manual for the installation or conversion of JOST axle systems in the vehicle/in vehicles as well as the removal from vehicles.

The following minimum requirements must be met in order to perform maintenance and repair work:

- Qualified expert knowledge
(qualified workshop personnel for commercial vehicles)
- Extensive experience with axle systems for heavy commercial vehicles
- Professional commercial vehicle workshop equipment
- Access to all special tools required
- Access to sources of electronic workshop specialized information from JOST Axle Systems

Recommendation:

Always have a qualified workshop carry out any maintenance and repair work

Recommendation to receive instructions

JOST Axle Systems recommends that drivers be given instructions on the topic of axles before starting to drive for the first time. A person is considered instructed in the topic of axles, if he/she has at least ...

- Read all of the following instructions for drivers and vehicle fleet operators before starting to drive **and**
- Verifiably attended an instruction session (e. g. by the vehicle manufacturer or the vehicle fleet operator) on the topic “Loads” and “Permissible axle loads” **and**
- Has a valid driving license for these vehicles when starting to drive.

Drivers or vehicle fleet operators should read the following sections before starting to drive for the first time:

- **Important safety information** (▷ Page 11)
- **Observe during operation** (▷ Page 17)

Note for maintenance

Please observe the following additional information for maintenance in addition to these guidelines:

- ▷ JOST Homepage
- ▷ JOST Part Finder

Observe the notes in these guidelines regarding the proper operation of your axle system as well as possible vehicle damage.

6 Important safety information

Your JOST axle systems were manufactured corresponding to the latest state-of-the-art in science and technology. Nonetheless, not all hazards to life and limb of the user or others can be ruled out due to the functional properties. Furthermore, the vehicle and other material assets can be damaged.

The following safety information will provide you with **precautionary information, so that you,**

- Know major sources of hazards
 - Can prevent hazards and thus any resulting consequences from occurring
 - Can recognize hazards that arise as early as possible.
- Drivers should read and observe the following safety information before they drive with this vehicle for the first time.
We recommend that you refresh your knowledge from time to time and to read this safety information repeatedly during the operation period.
- Vehicle fleet operators should read and observe the following safety information before starting to operate the vehicle.
- Please observe the general warnings and hazard warnings as well as the instructions on the other pages of this publication during operation.
- Please note that there can be additional hazards that are not known or that have never occurred before. This is why we ask you to act responsibly and with the adequate level of care!

Overview of topics

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6 Important safety information

Intended use

Your vehicle with JOST axle systems was built for a defined purpose and for defined operating conditions. Using it differently can pose a hazard to yourself and other road users.

- ▶ Please observe all trailer manufacturer specifications.
- ▶ Please observe the specifications in official vehicle documents (e. g. permissible axle load, permissible overall mass).
- ▶ Please observe all specifications in this booklet as well as the specifications on the operating conditions for axles (► Page 28).

Misuse of the vehicle and consequences

If you do not observe specifications by the trailer manufacturer or axle manufacturer or the statutory specifications, you run substantial risks. You endanger your life and your safety as well as the life and the safety of others.

General warnings and hazard warnings

General warnings and hazard warnings are marked with the ,  symbol as well as with the signal words WARNING! or ATTENTION!. General warnings and hazard warnings are provided for your safety, the safety of others and the safety of your vehicle. The notes contain specific instructions on how you prevent hazards from occurring altogether or in part. You can understand and potentially reduce the consequences of the hazard.

- ▶ Read and observe the general warnings and hazard warnings. Use it to protect yourself and others.
- ▶ Drivers should check prior to performing an activity, whether these guidelines contain general warnings and hazard warnings on this activity.
- ▶ Specialists from a qualified workshop should check prior to performing an activity, whether these guidelines contain general warnings and hazard warnings on this activity. Please also check whether the additional information contains general warnings and hazard warnings.

Please observe the additional information at:

- ► JOST Homepage
- ► JOST Part Finder

6 Important safety information

Instructions

Instructions are marked with the ► symbol.

- Please read and observe the instructions before you carry out an activity. Carry out the activity as described in the respective instructions.

Product modifications/structural changes

Structural changes on the axle system will result in the immediate expiration of the operating permit and will negatively affect road safety.

- Please do not make any structural changes to the axle systems.
- Please exclusively have the vehicle manufacturer make possible structural changes to the axle systems.
- Please have the vehicle manufacturer exclusively install high quality replacement parts (e. g. JOST original parts).

Maintenance and repair work

Improperly performed maintenance and repair work can pose a hazard to your life as well as to the life of other road users. Please exclusively have qualified workshops perform maintenance and repair work on the axle systems and the associated components.

Welding on the axle housing

Welding can damage the axle housing or components and negatively affect road safety.

- Never perform any welding work on JOST axle systems.
- Never have any welding work performed on JOST axle systems.

Threaded connections

Please exclusively have qualified workshops loosen any threaded connections and create new ones.

Exception: If drivers must loosen wheel nuts and screw them on again in case of emergency (e. g. flat tyre), they need a torque wrench to reliably tighten wheel nuts (► Page 26). Have a qualified workshop check the wheel nuts as soon as possible.

Ride height and ride height level control

The ride heights of tractor and trailer must be coordinated with each other.

- Please observe the trailer manufacturer specifications.
- There is a danger of crushing during lowering/lifting. Keep a safe distance from all moving parts.
- Make sure before starting to drive that tractor and trailer are at the proper "driving level".
- Observe the warning indications in the instrument cluster of your tractor. Observe any acoustic warnings.

6 Important safety information

Suspension connection, suspension and damping

Damper, air bellows, bushings and wear plates are put under severe strain due to their function. The more demanding the operating conditions, the higher the wear. Severe or complete wear leads to an increased accident hazard and can damage the axle system completely.

- Observe the handling characteristics of the trailer. If you notice any unstable handling characteristics or a loose nut/screw connection, contact a qualified workshop before driving/continuing to drive and ask for instructions.
- Have test and maintenance work performed in due time by a qualified workshop in accordance with the test and maintenance schedule.



WARNING!

Adjustment operations on the air suspension can cause the vehicle to rise and fall, thus creating a constantly changing hazard area. If the air suspension system is defective, sudden pressure loss may cause the vehicle to lower quickly on its own. There is a risk of death. Testing and adjustment work must not be carried out between the wheel and wheel arch or in the wheel well, but rather only from below the vehicle. Secure vehicle frame or vehicle axles with suitable support fixtures.



ATTENTION!

Reaching into the area of the axle suspension or level control system during adjustment operations or with a defective compressed air system can cause serious injuries. Secure blind hazard areas against unauthorized access using appropriate shielding (e.g. barriers, safety guards).

Wheel end with wheel and wheel hub

Damage, wear and corrosion on tyre, rim, wheel hub, wheel stud or wheel nuts can negatively affect the vehicle's road safety. There is a risk of accident.

- Observe the condition and the wear on these parts.
- Have test and maintenance work performed in due time by a qualified workshop in accordance with the test and maintenance schedule.

Brakes

Friction is generated during braking. Friction causes heat. The brake system, in particular brake disc, brake caliper, brake drum, wheel hub, wheel flange and rim can become so hot during operation that there is a risk of burn injuries.

- Keep an adequate safe distance from heated up components of the axle system.
- Never touch heated up components with bare hands or other body parts.

6 Important safety information

In the event of wear/faults/malfunctions on the brake system, brake power decreases, becomes irregular or fails completely. There is a risk of accident.

- ▶ Have test and maintenance work performed by a qualified workshop in accordance with the test and maintenance schedule.

Axle with compressed air reservoir (DCA Airmaster)

Axles with compressed air reservoir (DCA Airmaster) are under high pressure. There is a risk of injury.

- ▶ Please observe the notes on draining the axle housings before starting to drive (▶ Page 20).

Axle with tyre inflation system (RFS)

Axles with RFS preparation are under high pressure. There is a risk of injury. You can identify the RFS by an information label on the axle housing and by RFS Connection pipe on the hub cap.

- ▶ Never use the compressed air connections of the RFS preparation for other purposes (e.g. brake system, air suspension system, other compressed air-operated equipment).
- ▶ Please observe the instructions and maintenance procedures of the RFS system provider/trailer manufacturer.

Axle lifting

There is a danger of crushing when you lift/lower an axle.

- ▶ Keep a safe distance to the axles during lowering/lifting.

Straightening work due to accident damage

Straightening work on JOST axle systems negatively affects road safety.

- ▶ Drivers or vehicle fleet operators should never perform any straightening work on an axle. Never exchange an axle.
- ▶ Always have a qualified workshop exchange the axle

Replacement parts and components

JOST axle systems are based on high-quality components. This is the foundation for high road safety. Faulty replacement parts or threaded connections or those with inadequate load ratings increase the risk of accident.

- ▶ Recommendation: Use JOST original replacement parts. JOST axle systems can't assess replacement parts from external sources. JOST axle systems does not know the torque values permissible or required for replacement parts from external sources and permissible load limits. Significant deviations from JOST original replacement parts are possible. If you don't know the permissible or required tightening processes and torque values as well as the permissible load limits, you run high risks for life and limb.
- ▶ Always have a qualified workshop order replacement parts and perform repair work.

6 Important safety information

Accessories

Improper accessories can compromise the road safety of the vehicle (e.g. non-approved tyres, rims, wheel hub covers, lifts). There is a risk of accident.

- ▶ Please observe the vehicle manufacturer's recommendation/list of approved components.

Your reaction can make a difference

Even if you observe all specifications, all general warnings and hazard warnings as well as all safety information, there can be residual risks. This is why your reaction can make a difference.

- ▶ Remember when driving and when working on the vehicle, that technology and safety systems are subject to physical limits.
- ▶ Please be careful and act responsibly. Please be considerate towards others.

7 Observe during operation



WARNING!

There is a risk of accident when working on the vehicle. If you do not observe the following measures, you endanger your life and the life of other road users. Pay attention to traffic and take precautions. Before you start with tests or work on the vehicle: Secure your vehicle with the parking brake and with wheel chocks to prevent it from rolling off inadvertently. Always wear a safety vest and suitable protective/safety clothing while performing work/inspections/tests on the vehicle and under the vehicle.



WARNING!

Vehicles with safety defects endanger your life and the life of other road users. Never use any vehicles in road traffic if these vehicles have defective or damaged safety-relevant parts. In case of doubt: Do not drive the vehicle!

Always keep the guidelines at hand

- ▶ Always carry these documents along in the vehicle.
- ▶ Store a copy of this document in the trailer if the trailer is driven in alternating operation.



NOTE!

These guidelines in the most recent version can be found at:
– ➤ JOST Homepage
– ➤ JOST Part Finder

Observe the manufacturer instructions

- ▶ Observe the specifications/the instructions of the trailer manufacturer. If you have questions about the trailer or if you are unsure, please contact your trailer manufacturer.
- ▶ When dealing with axle systems, please also observe specifications/the instructions on JOST axle systems in these guidelines. If you have questions about your JOST axle systems, please contact the JOST Axle Systems Technical Service at:
– ➤ JOST Contact Information.

Departure check routine

- ▶ Prior to each trip, perform a proper departure check routine.
- ▶ While doing so, please observe the operating instructions/directions of the tractor, trailer manufacturers and, if necessary, of RFS/steering system manufacturers.
- ▶ Additionally, please observe the following instructions regarding tests on the vehicle and on the axle system.
- ▶ Prevent consequential damage. Make sure that
 - Tractor and trailer fit together (brake matching of tractor/trailer combination, driving level)
 - Chassis, suspension, brake system or wheels of the trailer do not show any externally visible signs of damage (e.g. from an accident, damage to property, manipulation)
 - Your ride height regulation is set to “driving level”
 - The electrical connectors are suitable for the trailer, correctly plugged in and not damaged
 - The compressed air connections are suitable for the trailer and correctly connected.

7 Observe during operation

- Statutory inspection deadlines have not been exceeded
- The permissible gross vehicle weight as well as the permissible axle load have not been exceeded
- Wheels/tyres are suitable for this trailer based on the information of the trailer manufacturer and are in proper condition (adequate profile, tyres not damaged, correct tyre pressure)
- Wheel nuts are not loose or missing (simple visual inspection without tools)
- Wheel nuts and wheel studs are not damaged
- Other threaded connections are not loose or missing (simple visual inspection without tools)
- Wheels are not at an unusual incline (e.g. by looking along the side of vehicle from the end of the vehicle). Wheels must be virtually vertical.
- No leaking grease is visible from the outside at the wheel hub
- Air bellows are not damaged and, on the special version with separated air bellows piston (piggyback), they are threaded correctly.
- You do not notice any unusual noises caused by escaping compressed air while the engine is running and with proper compressed

If one or several of the problems above occurs:

- ▶ Contact the vehicle fleet management and a qualified workshop before driving/continuing to drive. Ask them for further instructions.

Tests during the trip



WARNING!

Visual warning signals or chimes, extraordinary driving noise, uneven or reduced brake power, unstable handling characteristics of the trailer or the complete tractor/trailer combination, unusual wheel position, smoke development or loose parts can be an indicator for imminent or already existing damage to the trailer. There is a risk of accident. Interrupt your trip. Contact a qualified workshop before continuing to drive and ask for instructions.

Limit damage and their consequences by detecting them early on. You can detect an imminent or already existing damage to the trailer while driving e. g. by

- Warning indications in the instrument cluster
- Chimes
- Extraordinary driving noise (e. g. indication of defects on the wheel hub or the suspension connection or of loose parts)
- Uneven or reduced brake power (e. g. indication of wear or defects on the brake system)
- Unstable handling characteristics of the trailer or the complete tractor/trailer combination (e. g. indication of defects on the wheel)
- Regularly looking into the rearview mirror (unusual wheel position, smoke development, loose parts).

7 Observe during operation

If one or several of the problems above occurs:

- ▶ Interrupt your trip.
- ▶ Please observe the notes of the trailer manufacturer, the notes in these guidelines and, if necessary, of RFS/steering system manufacturers.
- ▶ Contact the vehicle fleet management and a qualified workshop before continuing to drive. Ask them for further instructions.

Tests while the trip is interrupted and at the end of the trip



WARNING!

Tyres, rims, wheel hub, brakes and other components can become very hot during driving operation. When you touch heated up vehicle parts directly with hands or other body parts, there is a risk of burn injuries. This is why you should wear suitable protective/safety clothing when working on the vehicle. Keep an adequate safe distance.



WARNING!

Strongly heated rims/wheel hubs/wheel flange/brake drums or strongly and unevenly heated rims/wheel hubs/wheel flange/brake drums or excessive grease leakage can be an indication for imminent bearing damage. Bearing damage can lead to a loss of wheels. Overheated brakes can lead to a loss of the braking effect, to wheel end damage down to a broken axle. There is a risk of accident. Before you continue to drive: Ask a qualified workshop for further instructions.

- ▶ The rim/wheel/wheel flange/brake drum hub can be very hot. Do not touch hot rims/wheel hubs/wheel flange/brake drums directly with bare hands. Keep a safe distance.
- ▶ From a safe distance of a few centimeters, check for each wheel whether your rims/wheel hubs/wheel flange/brake drums have become unusually hot or have heated up unevenly.

If one rim/wheel hub/wheel flange/brake drum is unusually hot or if your rims/wheel hubs/wheel flange/brake drum have noticeably heated up unevenly:

- ▶ Contact the vehicle fleet management and a qualified workshop before driving/continuing to drive. Ask them for further instructions.

7 Observe during operation

Draining the axle housing before starting to drive

(only for the axle system with compressed air reservoir/energy reservoir/ DCA Airmaster with the identifier "Type des." D749360 or D749361 on the identification plate)



WARNING!

This axle housing is also used as a compressed air reservoir for the air spring and brake system. The axle housing is therefore directly connected to the compressed air supply of the trailer. If the supplied compressed air contains moisture, this moisture can collect in the axle housing. As a result, the brake pressure can decrease. The brake system can fail partially or completely. There is a risk of accident and death for you and other road users. For safety reasons, drain the axle before starting to drive (once a day). If moisture is coming out while draining the axle, this can be an indication for poor air dehumidification in the compressed air system of the tractor.



WARNING!

The axle housing is under pressure. In particular on the axle system with compressed air reservoir (DCA Airmaster), welding can cause irreparable damage to the internal coating of the system. Operational safety is no longer ensured in this case. Improperly performed work on the axle housing can pose a hazard to your life and the life of others. There is a risk of accident. Please exclusively have a qualified workshop perform assembly work on the axle housing. Do not perform any welding on the axle housing. Do not have any welding performed on the axle housing. In case of doubt, contact the trailer manufacturer.



WARNING!

The axle housing is under pressure. There is a risk of accident and injury. Protect yourself when draining the axle. Wear a safety vest and suitable protective/safety clothing. Be especially carefully when moving under the vehicle. Pay special attention to obstacles and edges to protect yourself from injury. Keep a safe distance of approximately one arm's length between your head and the axle during draining.

Axles with compressed air reservoir must be drained before starting to drive (once a day).

7 Observe during operation

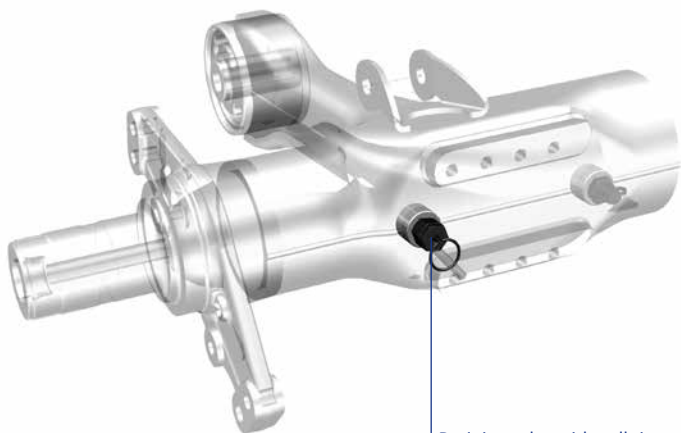
- ▶ Secure the standing vehicle with the parking brake before starting to work. Additionally, secure the vehicle properly with wheel chocks to prevent it from rolling off inadvertently.
- ▶ Familiarize yourself with the position of the drain valves.
- ▶ Remember that compressed air will flow out when the drain valve is opened. This is why you should keep a distance from the drain valve. Work with the arm extended.
- ▶ Carefully pull on the ring of the drain valve until you feel the end stop.
- ▶ If you do not see any water coming out and only compressed air escapes, you can let go of the ring again. The valve closes automatically.

- ▶ If you see water coming out, let the water flow out completely. If there is no more water coming out and only compressed air escapes, you can let go of the ring again. The valve closes automatically.



NOTE!

Typically, little or no moisture is escaping. If moisture escapes regularly: Have air drier of tractor checked/repared in the qualified workshop. If moisture continues to escape: Have entire compressed air system as well as axles checked in a qualified workshop.



Draining valve with pull ring
(Mounting example)

7 Observe during operation

Brake system

The following information on the topic of brakes relates to the disc brakes by Knorr-Bremse in model series DCA-U6 TDB 0874, SN7 TDB 0876, SK7 TDB 0875, DCA-T7 TDB 0883, Haldex disc brake in model series DCA-L7 TDB 0877 and JOST drum brakes TDB 0887.



WARNING!

Poor or irregular maintenance as well as improperly performed work on the brake system negatively affect the functional capability of the entire brake system. The entire brake system can fail. There is a risk of accident. Please make sure that test and maintenance work is performed and observe the maintenance intervals as per the test and maintenance schedule. Always have a qualified workshop perform any maintenance and assembly work on the brake system. After any maintenance or assembly work, check the brake function and the system behavior before starting to operate the vehicle.



WARNING!

Strongly heated rims/wheel hubs/brake drums or strongly and unevenly heated rims/wheel hubs/brake drums or excessive grease leakage can be an indication for imminent bearing damage. Bearing damage can lead to a loss of wheels. Overheated brakes can lead to a loss of the braking effect, to wheel end damage down to a broken axle. There is a risk of accident. Before you continue to drive: Ask a qualified workshop for further instructions.



WARNING!

The brake system is under pressure. High forces are acting on the components of the brake system. There is a risk of accident and injury. There is the risk of death if work on the brake system is not performed properly. Exclusively have a qualified workshop perform any maintenance and assembly work on the brake system. Keep a safe distance, in particular to the moving parts of the brake system.



WARNING!

There is a risk of accident during the visual inspection on the brake system if the vehicle is not secured as well as possible from traffic. Pay attention to traffic and take precautions. Wear a safety vest and suitable protective/safety clothing. Before you start with tests on the brake system: Apply the parking brake and carefully secure the vehicle with several wheel chocks to prevent it from rolling off inadvertently. After the test, remove the wheel chocks only while the parking brake is applied.

7 Observe during operation

Manually releasing the spring brake in an emergency or in the workshop

Typically, you can release the spring-loaded parking brake pneumatically. Please observe the trailer manufacturer specifications on this.

A qualified workshop can manually release the spring-loaded parking brake in an emergency if there is no reservoir pressure.

- Contact a qualified workshop and ask for the mobile service or ask them for further instructions.

Brake pads, brake discs or brake drums



WARNING!

If the brake pads are too worn, the braking effect is reduced or the brakes fail completely. There is a risk of accident. For your own safety, please make sure that your brake pads are within the permissible wear limits. Have a qualified workshop check the brake lining thickness in regular intervals in accordance with the test and maintenance schedule, however, at least every 3 months. For safety reasons, check the brake wear once a week with the wheels installed. Please observe the following instructions on how to do this.



WARNING!

If the brake discs or brake drums are too worn, the braking effect is reduced or the brakes fail completely. There is a risk of accident. For your own safety, please make sure that your brake discs or brake drums are within the permissible wear limits. Have a qualified workshop check the brake discs or brake drums in regular intervals in accordance with the test and maintenance schedule. Additionally, have the brake discs or brake drums checked whenever the brake linings are replaced.

Check wear with the wheels installed

For rough orientation, you can check the wear of brake lining and brake disc or brake drum from time to time with the wheels and the brake installed.



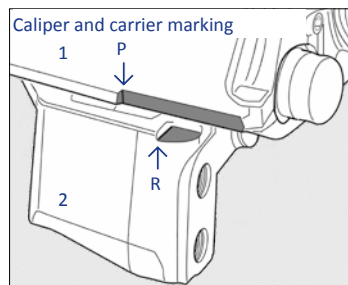
WARNING!

If the brake pads/brake discs/brake drums are too worn, the braking effect is reduced or the brake fails completely. There is a risk of accident. The quick wear test of brake lining, brake disc and brake drum with the wheels installed is only used to provide a rough orientation. In no case is this method a substitute for the test and maintenance intervals in accordance with the test and maintenance schedule in a qualified workshop.

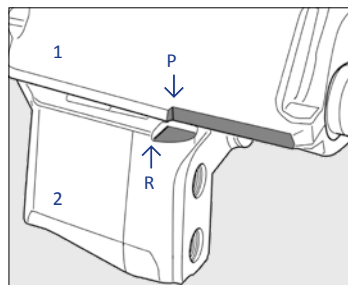
7 Observe during operation

Quick wear test for Knorr brakes DCA-U6/SN7/SK7/DCA-T7

1 = Brake caliper 2 = Brake carrier R = Test point



Position P and R for new linings and new brake disc



Position P and R for worn linings and worn brake disc. Brake lining and brake disc test is imperative with the wheels removed.

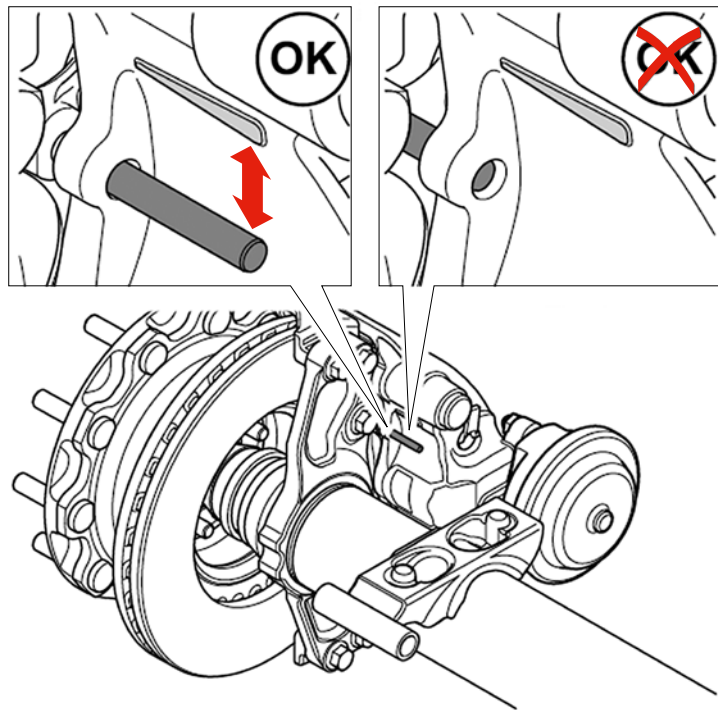
In disc brakes with caliper and carrier marking (brake caliper marking **P** and brake carrier marking **R**), pay attention to the position of the **P** and **R** markings relative to each other. If **P** and **R** are nearly on top of each other, have a qualified workshop check brake linings and brake disc with the wheels removed.

Please note: Always have all the brake pads on the same axle replaced at the same time.

7 Observe during operation

Quick wear test for DCA-L7 brakes

- Inspect the position of the visual pad wear indicator.



Sensor for indication of brake pad wear

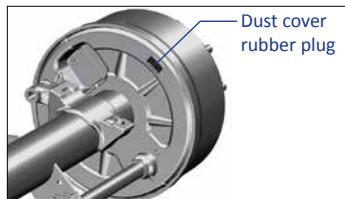
If an electronic wear indicator was installed in your trailer: This indicator can let a warning light come on in your instrument cluster when the brake linings/brake discs are too worn (or you hear an acoustic warning). In no case is this type of wear indicator a substitute for the specified regular tests in accordance with the test and maintenance schedule.

- Please observe the trailer manufacturer information on this.
- Check when you take over the trailer whether this type of electronic wear indicator was installed. If it is not available: A warning lamp will not come on/you will not hear an acoustic warning when the brake linings/brake discs are too worn.

7 Observe during operation

Quick wear test for JOST drum brakes (DMA).

- ▶ Remove the dust cover rubber plug.
- ▶ Check brake lining thickness.
- ▶ Install the dust cover rubber plug.



Tractor/trailer combination brake matching

Tractor/trailer combination brake matching helps to appropriately distribute braking work to all brakes/axles in the tractor/trailer combination.

If your tractor vehicle is not EBS-controlled:

- ▶ Have a tractor/trailer combination brake matching performed within the first 5,000 km after the initial startup of the vehicle.

In EBS-controlled tractor vehicles, conventional tractor/trailer combination matching is typically not possible. If you use an EBS-controlled tractor vehicle:

- ▶ Have someone check whether the braking characteristics of your trailer are within the specified EC band,
 - If you notice particularly severe or uneven wear of the brake pads on the trailer brakes
 - If individual axles tend to lock during braking
 - If your trailer tends to push.

- ▶ If the braking characteristics of your trailer are within the specified EC band: Have someone check whether the braking characteristics of your tractor vehicle is within the EC band.
- ▶ If necessary, have the EBS parameters adapted in order to improve the distribution of the braking work to all brakes/axles of the complete tractor/trailer combination. Recommendation: Avoid a positive-tolerance calibration of the tractor for your JOST axle systems.

Wheel replacement



WARNING!

Jacking up using the in-car vehicle jack leads to a high point load at the respective axle housing. If the vehicle is not properly loaded or if you do not use the specified jacking point for the vehicle jack, the axle system can be damaged. The vehicle jack can give in. The vehicle can drop. There is a risk of accident and injury. Ask the mobile workshop service to perform the wheel replacement. Have the vehicle jacked up with professional jacking tools. If you have to jack it up yourself in an emergency: Please observe the specified jacking points for the vehicle jack. To do this, use a vehicle jack suitable for heavy commercial vehicles. Jack up the vehicle exclusively on one side. Do not work under the vehicle.

- ▶ Have your wheel replacements performed at a qualified workshop or by the mobile service of the workshop.

7 Observe during operation

If you experience an emergency and have to replace a wheel without the help of a qualified workshop, you will need a torque wrench.

If a torque wrench is not available:

- ▶ Contact the vehicle fleet management and a qualified workshop before replacing the wheel. Ask them for further instructions.

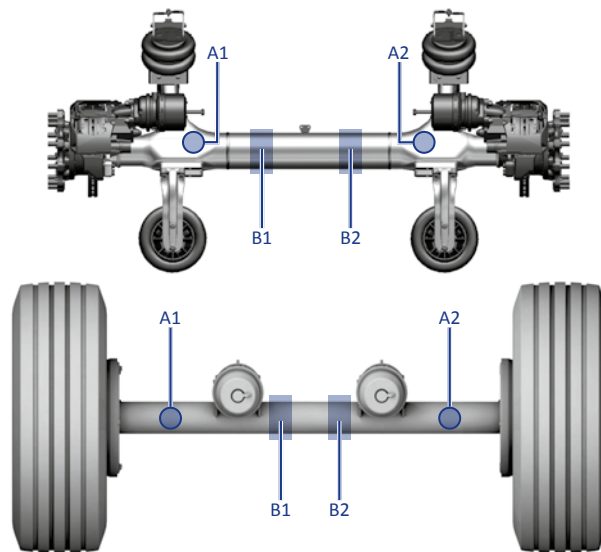
During an emergency wheel replacement, please do the following:

- ▶ Wear a safety vest and suitable protective/safety clothing. Secure any traffic.
- ▶ Secure the standing vehicle with the parking brake before starting to work. Additionally, properly secure the vehicle with several wheel chocks on the other side of vehicle to prevent it from rolling off inadvertently.
- ▶ Before you jack up the vehicle, observe the specifications of the vehicle manufacturer. Also observe the permissible jacking points for the vehicle jack shown in the illustration below.

For jacking up **on one side**: Position vehicle jack at point **A1** or **A2** marked in blue, but not on a weld seam.

For jacking up **on both sides**: Position vehicle jack at both blue areas **B1** and **B2**, but not on a weld seam.

- ▶ Jack up the vehicle using a vehicle jack suitable for heavy commercial vehicles.
- ▶ Loosen the wheel nuts. Pay attention to any remaining tension between wheel and wheel stud. Carefully pull off the defective wheel.
- ▶ Clean wheel hub, wheel flange, wheel studs, brake drum, wheel nuts and the spare wheel. The contact surface of wheel hub, wheel flange,



wheel studs, brake drum, wheel nuts, wheel nut thread and rim must be free of paint/lacquer, corrosion and dirt.

- ▶ Carefully slide the spare wheel onto the wheel studs.
- ▶ Tighten the wheel nuts (M22 x 1.5) with a torque wrench crosswise. Tightening torque: 600 Nm.
- ▶ Slowly lower the vehicle in a controlled manner.
- ▶ Properly stow and secure your defective wheel.
- ▶ Immediately check the tyre inflation pressure of the newly installed wheel.
- ▶ Tighten the wheel nuts crosswise after driving for 50 km. Tightening torque: 600 Nm.
- ▶ Have a qualified workshop check the wheel installation as soon as possible.

7 Observe during operation

Unstable handling characteristics



WARNING!

Unstable handling characteristics of the trailer or the complete tractor/trailer combination can indicate an imminent or already existing damage to the suspension/to the suspension connection of the trailer. There is a risk of accident. Interrupt your trip. Contact a qualified workshop before continuing to drive and ask for instructions.

Test and maintenance work

Observe the specified test and maintenance work and deadlines (► Page 30). Have all required work performed at a qualified workshop in accordance with the test and maintenance schedule (e.g. at a JOST Axle Systems service partner).

Operating conditions in normal operation

The vehicle manufacturer defines the application purpose and the permissible operating conditions of your trailer. Please observe the trailer manufacturer specifications. Unless defined otherwise by the trailer manufacturer, operation on asphalt/concrete roads is considered normal operation.

Environmental protection



ENVIRONMENTAL INFORMATION!

JOST Axle Systems is committed to comprehensive environmental protection.

Objectives are frugal use of resources and sustainable management of the natural basis of existence that serves the preservation of humans and nature.

By operating your vehicle in an environmentally friendly way, you too can make a contribution to environmental protection.

The wear of your JOST axle systems as well as the brake and other axle components depends on the following factors:

- Operating conditions of your vehicle.
- Your personal driving style.

You can influence both factors. Therefore, please observe the following notes:

- Make sure that the tyre inflation pressure is correct.
- Observe the test and maintenance intervals.
- Always have a qualified workshop perform any service work.
- Drive with foresight and keep an adequate distance.
- Adjust your driving behavior appropriately if the road conditions are difficult (e. g. rough terrain, rough road surface test track, unsurfaced road).

8 Overview of repair and maintenance

Recommendation: Always have a qualified workshop carry out any replacement part research and replacement part ordering. Observe the minimum requirements for the safe performance of maintenance and repair work (► Page 10).

Repair instructions and maintenance notes for qualified workshops:

To ensure safe operation of the vehicle and the axles, JOST recommends regular inspection and maintenance. This routine check of the axles allows any wear to be detected at an early stage and counteracted. This avoids long downtimes and the trailer remains ready for use.

Depending on the axle series (DCA, DBA, CSA, DMA), the inspection and maintenance intervals and the components to be inspected differ.

- Separate test and maintenance schedules in checklist format are available for each axle series on the JOST homepage for printing out, filling in and filing away:



► JOST Homepage

Alternatively, you can also find the test and maintenance schedules in the following section of these instructions

- Observe the repair instruction on the website:



► JOST Homepage

- If you have any questions, please contact JOST Axle Systems Technical Service directly:



► JOST Contact Information

- Please observe the notes of the trailer manufacturer and, if necessary, of RFS/steering system manufacturers.

9.1 Test and maintenance schedule for DCA series

For JOST axle systems, version: compact bearing (DCA), 9t,
use in normal operation*,

Model designation (Type des.): 749.310, 749.311, 749.312, 749.313,
749.324, 749.325, 749.334, 749.349, 749.360, 749.361, 749.368,
749.369 (As at: July 2023)

Vehicle Checks	A every three months*, or every 25.000 km	B annually*, or every 100.000 km
Brake		
Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections		
Brake lining thickness	•	
Brake disc	•	
Unobstructed movement of brake caliper		•
Clearance of brake caliper		•
Bearing play of brake caliper		•
Brake caliper seals		•
Brake caliper threaded connection 		•
Threaded connection of hub/brake disc 		•
Threaded connection of brake cylinder 		•
Suspension		
Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections		
Retaining bracket at frame**		•
Retaining bracket threaded connection 		•
Plastic wearing washers at retaining bracket		•
3D bushing		The first time after 4 years, then annually.
Shock absorber		•

9.1 Test and maintenance schedule for DCA series

Vehicle Checks	A every three months*, or every 25.000 km	B annually*, or every 100.000 km
Air bellows		•
Air bellows threaded connection at axle housing		•
Wheel end and tyre inflation system (RFS) Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections. Please observe the instructions and maintenance procedures of the RFS system provider/trailer manufacturer		
Retainer of hexagon nut with collar ⓘ		•
Hub assembly		•
Wheel nuts After the first drive with load (approx. 50 km) and after every wheel change, check the specified tightening torque and tighten if necessary. ⓘ		
Steering axle Visual inspection of the components for damage, wear and function		
Steering knuckle bearing, steering damper		•
Locking mechanism	•	
Lubrication of the plain bearing lubrication points (axle unloaded/raised) ***	•	

* Required intervals and work depend on the type of vehicle, individual usage and operating conditions. This test and maintenance schedule was created for the use in normal operation (asphalt/concrete roads). Test and maintenance schedules for vehicles that are operated under different operating conditions can be found at ➤ JOST Homepage.

** If necessary, observe the trailer manufacturer's specifications for hanger brackets that can be bolted.

*** With use under extreme conditions (e.g. extreme Off-Road use) more frequent lubrication with high pressure grease is necessary.

9.2 Test and maintenance schedule for DBA series

For JOST axle systems, version: DBA 9t, 10t und 10,5t,
use in normal operation*,

Model designation (Type des.): 749.306, 749.307, 749.314, 749.315,
749.320, 749.321, 749.323, 749.330, 749.331, 749.337, 749.340,
749.347, 749.350 (As at: July 2023)

Vehicle Checks	A every three months*	B every six months*	C annually*	D every two years*	E every five years*
Brake					
Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections					
Brake lining thickness	•				
Brake disc	•				
Unobstructed movement of brake caliper			•		
Clearance of brake caliper			•		
Bearing play of brake caliper			•		
Brake caliper seals			•		
Brake caliper threaded connection ⓘ			•		
Threaded connection of hub/brake disc ⓘ			•		
Threaded connection of brake cylinder ⓘ			•		
Suspension					
Please observe the requirements in the test and maintenance schedule for DLS suspension connections.					
Wheel end with compact bearing and tyre inflation system (RFS)					
Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections. Please observe the instructions and maintenance procedures of the RFS system provider/trailer manufacturer					
Retainer of hexagon nut with collar ⓘ			•		
Hub assembly			•		

9.2 Test and maintenance schedule for DBA series

Vehicle Checks	A every three months*	B every six months*	C annually*	D every two years*	E every five years*
Wheel end with conventional bearing					
Check overall condition of hub (damage, wear).			•		
Check wheel bearings for noise while rotating in both directions. Check for excessive play in wheel bearings and grease escaping from the hub cap.		•			
Replace hub cap O-ring, cassette seal and grease of wheel bearings.				•	
Wheel nuts After the first drive with load (approx. 50 km) and after every wheel change, check the specified tightening torque and tighten if necessary. 					
Steering axle					
Visual inspection of the components for damage, wear and function					
Steering knuckle bearing, steering damper			•		
Locking mechanism	•				
Lubrication of the plain bearing lubrication points (axle unloaded/raised) **	•				

* Required intervals and work depend on the type of vehicle, individual usage and operating conditions. This test and maintenance schedule was created for the use in normal operation (asphalt/concrete roads).

** With use under extreme conditions (e.g. extreme Off-Road use) more frequent lubrication with high pressure grease is necessary.

9.3 Test and maintenance schedule for DMA series

For JOST axle systems, version:
conventional bearing (DMA), 9t, use in normal operation*,

Model designation (Type des.): 749.500 (As at: July 2023)

Vehicle Checks	A every three months*	B every six months*	C annually*	D every five years*
Brake				
Check the thickness of the brake linings.	•			
Check the brake drum for cracks, heat damage and wear. Dust covers removed.			• **	
Check condition and function of automatic slack adjuster. Lubricate one grease nipple per slack adjuster. ****		•		
Lubricate the inside and outside of the camshaft bearings via the grease nipples. Two grease nipples per side. ****		•		
Check the camshaft for excessive play of the inner and outer camshaft bearings. ****			•	
Check overall condition, tightness and corrosion of brake chambers. Check yokes, push rods and vent holes.	•			
Suspension				
Please observe the requirements in the test and maintenance schedule for DLS suspension connections.				

9.3 Test and maintenance schedule for DMA series

Vehicle Checks	A every three months*	B every six months*	C annually*	D every five years*
Wheel circumference				
Check overall condition of hub (damage, wear).			•	
Check wheel bearings for noise while rotating in both directions. Check for excessive play in wheel bearings and grease escaping from the hub cap.		•		
Replace hub cap O-ring, cassette seal and grease of wheel bearings.				• ***
Wheel nuts After the first drive with load (approx. 50 km) and after every wheel change, check the specified tightening torque and tighten if necessary. ⓘ			•	
Axle body Check the condition and for any abnormalities in the brake chamber and camshaft supports.			•	

* Required intervals and work depend on the type of vehicle, individual usage and operating conditions. This test and maintenance schedule was created for the use in normal operation (asphalt/concrete roads). Test and maintenance schedules for vehicles that are operated under different operating conditions can be found at
➔ JOST Homepage.

** Check when replacing brake shoes.

*** Every three years thereafter.

**** Lubricate axles with the brake released but with the vehicle secured so it cannot roll away.

9.4 Test and maintenance schedule for CSA series

For JOST axle systems, version:
CSA 9t and 10t, use in normal operation*,

Model designation (Type des.): 749.400, 749.401
(As at: July 2023)

Vehicle Checks	A every three months*, or every 25,000 km	B annually*, or every 100,000 km
Brake Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections		
Brake lining thickness	•	
Brake disc	•	
Unobstructed movement of brake caliper		•
Clearance of brake caliper		•
Bearing play of brake caliper		•
Brake caliper seals		•
Brake caliper threaded connection 		•
Threaded connection of hub/brake disc 		•
Threaded connection of brake cylinder 		•
Suspension Please observe the requirements in the test and maintenance schedule for DLS suspension connections.		
Wheel end Visual inspection of the components for damage/wear, especially the safety-relevant threaded connections.		
Retainer of hexagon nut with collar 		•
Hub assembly		•

9.4 Test and maintenance schedule for CSA series

Vehicle Checks	A every three months*, or every 25,000 km	B annually*, or every 100,000 km
Wheel nuts After the first drive with load (approx. 50 km) and after every wheel change, check the specified tightening torque and tighten if necessary. ⓘ		
Steering Visual inspection of the components for damage, wear and function		
Steering knuckle bearing		•
Track rod		•
Lubrication of the steering knuckle bearing (axle unloaded/raised) **	•	

* Required intervals and work depend on the type of vehicle, individual usage and operating conditions. This test and maintenance schedule was created for the use in normal operation (asphalt/concrete roads).

** With use under extreme conditions (e.g. extreme Off-Road use) more frequent lubrication with high pressure grease is necessary.

9.5 Test and maintenance schedule for DLS suspension connections

For DLS suspension connections 74x/75x/77x,
use in **normal operation***,

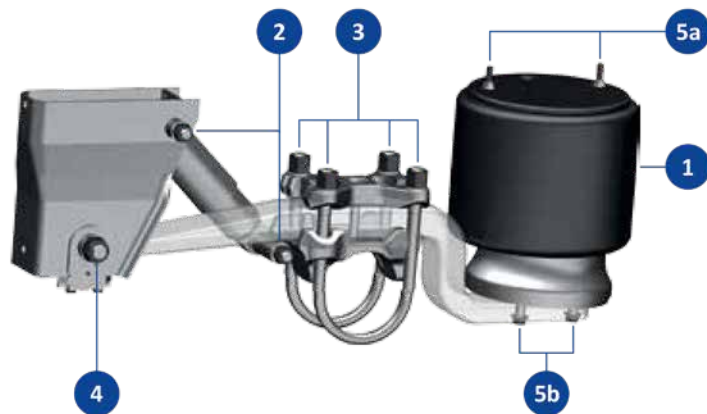
Model designation (Type des.): 749.306, 749.307, 749.314, 749.315,
749.320, 749.321, 749.330, 749.331, 749.337, 749.340, 749.347,
749.350, 749.400, 749.401, 749.500 (As at: July 2023)

Vehicle Checks		A initially after two weeks*	B every six months*	C annually*
	Visual inspection. Check all components and welding seams for damage and wear.		•	
1.	Check the condition of the air bellows.		•	
2.	Check the shock absorber condition. Check the shock absorber mountings with the correct check torque: M20 (A/F 30 – nut) 550 Nm**	•		•
3.	Check the axle U-bolts with the correct check torque: M22 (A/F 32) 600 Nm ⓘ M24 (A/F 36) 800 Nm ⓘ	•		•
4.	Check the pivot bolts with the correct check torque: M27 (A/F 41) 1.000 Nm** ⓘ	•		•
5.	Check air bellow, offset plate fastening with the correct check torque: a: Air bellow top: M12 (A/F 19) 60 Nm b: Air bellow bottom & Offset plate: M12 (A/F 19) 65 Nm b: Air bellow bottom & Offset plate: M16 (A/F 21/24) 200 Nm	•		•
	Check the condition of axle lift, air bellows and brackets, check with correct check torques. Multiply variants, see axle lift data sheets for the correct torque settings.	•		•

9.5 Test and maintenance schedule for DLS suspension connections

Checks prior to each journey:

- ▶ Check air tanks for any water or condensation.
- ▶ Ensure the air system of the braking and suspension have reached correct operating pressure.
- ▶ Visually check the air suspension has reached the correct ride height and all air bellows are correctly seated, this also applies after loading and unloading.
- ▶ Visually check the air bellows for any signs of damage or incorrect seating.



* Required intervals and work depend on the type of vehicle, individual usage and operating conditions. This test and maintenance schedule was created for the use in normal operation (asphalt/concrete roads).

** If screw turns before reaching the check torque, use new parts and tighten acc. to service literature on:

- ➤ JOST Homepage
- ➤ JOST Part Finder

10 Warranty

Prerequisites for warranty

Please observe the notes in these guidelines as well as the notes of the trailer manufacturer on the proper operation of your axle system as well as on possible vehicle damage.

Your warranty claims can be further limited,

- If you use faulty/low-quality replacement parts.
- If you use special additives. Special lubricant additives are not required for axle systems.
- If you use cleaning agents that do not have a neutral pH value that might destroy the corrosion protection.

Warranty processing

Make sure to submit your **warranty claim prior to the repair**.

You can submit your warranty claim directly to JOST Axle Systems. For additional questions regarding warranties, contact one of the country specific points of contact that are listed on ► Page 43 of this Guideline.

Observe the guideline for warranty processing on the website

- ► JOST Homepage.

Observe the link to the download area. This is where you will find claim forms and claim conditions.

11 Notice

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11

[illegible]

12 JOST Service Contact and Service Partner

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➤ JOST Homepage

You can find our locations at:



➤ JOST Contact Information

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