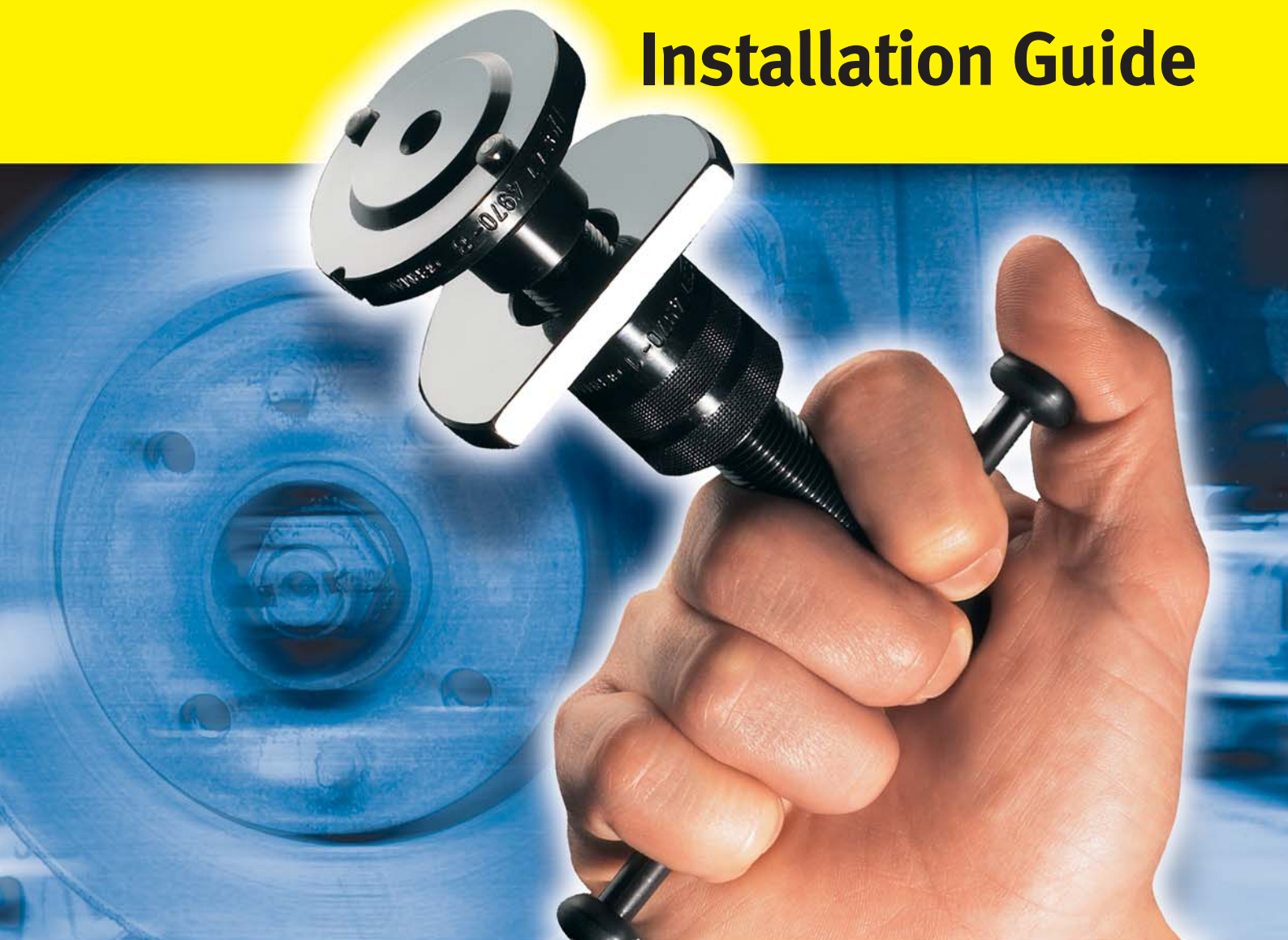
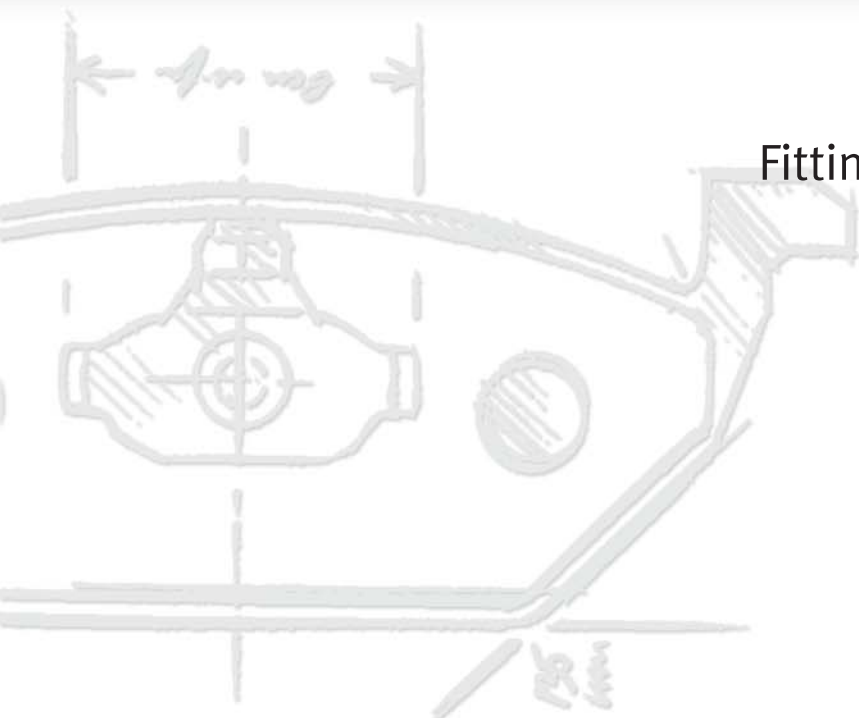


Installation Guide



Brake system:
Fitting instructions and check list



TEXTAR®

Advice

Brake checklist®



Requirements for all maintenance work

All components must be cleaned and a non-conductive, high temperature-resistant, solids-free (non-metal) grease, which is suitable for ABS vehicles (TEXTAR CERA TEC®), must be applied to the required points in the guide shaft area for the brake pad and at the bearing points on the brake shoes.

► Do not use copper grease paste

It is essential that all components classed as defective are replaced according to the guidelines provided by the vehicle and brake system manufacturers.

You are advised to observe the instructions in order to avoid technical problems and any future come back .

Important

You must read the instructions enclosed with our disc brake pad packaging. These contain instructions relating to specialized installation requirements, such as

- Direction of movement-based disc brake pads.
- Coloured markings on the backplate and their meaning.
- Warning of potential hazards when carrying out work on electro-hydraulic brake systems.
- Disc brake pads with a removable bonding film on the backplate etc.

► **Caution. Vehicles with electrohydraulic brakes (e.g. SBS-Sensotronic-Brake-Control) – Never replace the pad and the brake fluid at the same time. Work on these electronic brake systems may only be carried out by trained personnel.**

Please note:

It is important to follow the installation and maintenance instructions issued by manufacturers of the vehicle and brake system.

Explanation of individual points in the brake checklist®

1. The test drive is primarily intended to determine any existing defects relating to the brakes and chassis which may lead to problems if the repairs are completed but the check not carried out. e.g. existing steering wheel rotary vibrations, pulsating brake pedal, brakes pulling to one side, wheels not balanced, rattling chassis, incorrectly adjusted tracking or the vehicle pulling to one side when accelerating.

2. A defective shock absorber results in poor braking (increased braking distance, reduced smooth braking).

3. A function test is designed to check the distribution of the braking force and the braking effect. The amount of wear must be determined by carrying out a visual check.

4. Brake fluid: Check the condition (water content, boiling point, age).

5. Defective rims affect the braking performance. Here it is important to check for any damage to the rim flange and the contact surfaces of the wheel bolts/nuts. Check the tires for cracking on the walls (porosity), depth of tread and correct balance. Imbalanced tires reduce smooth braking permanently.

6. A defective wheel bearing and excessive bearing play will lead to poor smooth braking.

7. Even a successfully tested shock absorber may already show signs of oil leakage which will soon lead to poor operation. It should also be noted that air shock absorbers also contain oil.

8. Defective drive shafts have a negative effect on the wheel brake.

9./10./11. Defective axle bearings, stabilizers, rocker bearing posts and steering components transfer stronger vibrations and therefore affect the smooth operation of the brakes.

12. The amount of wear on the individual components indicates any potential brake defects (e.g. tapered wear, differential wear – left/right and inside/outside).

13. The piston must be able to move freely to achieve the correct amount of play. Different brake models require specific basic settings (piston displacement, double calipers).

14. Check the maximum/ minimum pressures.

15. Also check all hydraulic components for leaks (visual check).

16 Load controller: Check the play and smooth operating of the transmission components. Check the setting (especially after modifying the chassis).

17 Brake hoses: Carry out a visual check to determine any damage or porosity and to verify both correct routing and manufacturing date.

18 Check the brake pipes (hoses) for corrosion and damage (kinks, damage caused by foreign bodies, twisting).

19. The slide elements on the calipers must be checked for wear, smooth operation and leaks. In order for the slide element to be able to function properly it is essential to keep to the specified torque setting when assembled.

20. Accessories/Mounting kit: It is advisable to replace the accessories/mounting kit whenever maintenance is carried out. Here the clamps, springs and retaining springs are subject to fatigue, i.e. a spring or a bracket may look OK but the tension may already have been lost resulting in reduced smooth operation. e.g. squealing.

21. Hub: It is advisable to check the cleaned hub for axial run-out. Increased run-out at the hub

affects the diameter of the brake disc and leads to juddering during operation. Excessive radial run-out can only be eliminated by replacing the hub.

22./23. Wheel mounting and caliper threads: Stiff wheel bolts and threads result in uneven torque. If the torque is not constant when tightening this produces tension which leads to problems inside the brake. Defective wheel bolts must be replaced immediately. Replace the wheel mounting/hub if new threads are required.

24. Accurate measurement of the axial run-out of the brake disc can only be carried out on the inside provided the wheel is correctly mounted. The gauge must be properly attached so as to be able to obtain a reliable µm measurement.

25./26. A final brake check should always be carried out on the vehicle test stand and during the test drive.

Should you have any product or technical queries please contact:

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assistance



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Instructions

Disc brake maintenance/installation procedure



1



Repair procedure

Brake discs and/or pads have reached the minimum wear tolerances.

Before beginning the brake replacement procedure it is necessary to check all the relevant components around the axle and the hydraulics.

► **Any defective parts must be replaced immediately**

2



To remove rust from the contact surface and hub

Take off the old brake disc and clean the contact surface and the edge of the hub using suitable tools (wire brush, emery paper, pan brush).

► **Be careful not to damage the hubs**

The caliper is still connected to the hydraulics and must be positioned so that no tension is exerted on the brake hose.

3



To clean the contact surface and hub

Clean the rust free metallic polished contact surface with brake cleaner (TEXTAR Formula XT).

We recommend you check the cleaned hub for any axial run-out using the proper measuring tool (gauge and support).

4



To remove the rust on the guide shaft and caliper support

Remove the rust and deposits from the guide shafts on the disassembled caliper support using a wire brush and caliper file, dependent upon the design.

► **Be careful not to damage the caliper support.**

Make a check for any damage to the caliper.



To grease the guide surfaces and caliper support

Grease the cleaned guide surfaces on the caliper support using a non-conductive, heat-resistant and solids-free no metal content substance (TEXTAR CERA TEC®).

► Do not use copper grease.

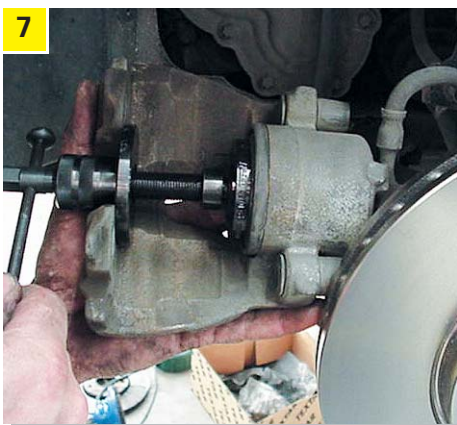


To mount the brake disc

Attach the new brake disc to the hub – dependent upon the design and system – with mounting bolts.

We recommend you check the new brake discs for axial run-out on the vehicle by placing a gauge approx. 1 mm below the largest radius.

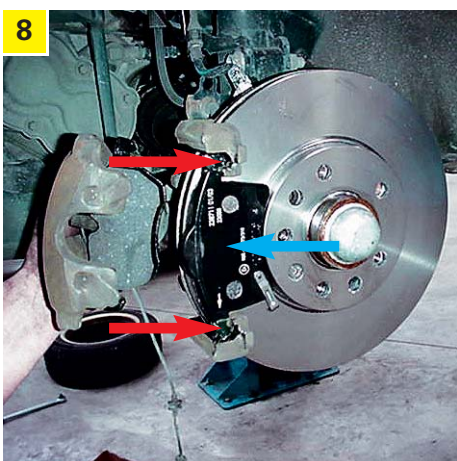
This is best done using a standard mounted wheel.



To move back the brake piston

The brake piston should always be moved back using suitable readjustment tools in order to avoid jamming or twisting the piston.

It is important to note that there are various caliper models and brake systems and specific instructions issued by individual manufacturers. Special tooling may be required.



To grease the contact points

Non-metal permanent lubricant (TEXTAR CERA TEC®) is not needed on the backplate where pads have some type of secondary measure, e.g. **sound-absorbing coatings** or **shims**.


In this case only the area around the **contact points** in the guide shafts will require greasing.


It is essential that the torques and specifications / guidelines issued by the vehicle and system manufacturers are observed in the installation procedure.


Fault diagnosis and avoiding problems





Checking, identifying and then replacing where necessary:


I		<ul style="list-style-type: none"> ▶ Wheel bearing <ul style="list-style-type: none"> ✓ Play / Check for damage ▶ Hub <ul style="list-style-type: none"> ✓ Clean (metal polish) ✓ Use gauge to check axial run-out ✓ Check for any noticeable damage ✓ Apply corrosion protection (solids-free) 	<ul style="list-style-type: none"> ▶ Axle nut <ul style="list-style-type: none"> ✓ Tight and secured ▶ Wheel bolt thread <ul style="list-style-type: none"> ✓ Check for damage ✓ Bolts must be gently screwed in by hand
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II		<ul style="list-style-type: none"> ▶ Track control arm bearing <ul style="list-style-type: none"> ✓ Replace if play and/or leakage (porosity) is increased 	<p>Attention!</p> <p>The axis design may make it difficult to determine any excessive play.</p>
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III		<ul style="list-style-type: none"> ▶ Supporting ball joint ▶ Tie rod head <ul style="list-style-type: none"> ✓ Play at ball joint ✓ Check seals for (damage) porosity and leaks ✓ Check the joint mountings (locking bolts) 	
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IV		<ul style="list-style-type: none"> ▶ Caliper <table border="0" style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 30%;">Piston</td> <td style="width: 30%;">✓ Sealed, smooth-running</td> <td style="width: 30%;">Slide piece</td> <td style="width: 10%;">✓ Play, smooth-running</td> </tr> <tr> <td>Dust sleeve</td> <td>✓ Sealed, not porous</td> <td>Caliper housing</td> <td>✓ Seal</td> </tr> <tr> <td></td> <td></td> <td></td> <td>✓ Check for damage</td> </tr> </table> 	Piston	✓ Sealed, smooth-running	Slide piece	✓ Play, smooth-running	Dust sleeve	✓ Sealed, not porous	Caliper housing	✓ Seal				✓ Check for damage
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			✓ Check for damage											

V		<ul style="list-style-type: none"> ▶ Brake hose <ul style="list-style-type: none"> ✓ Check for damage/wear ✓ Inside diameter (swollen) ✓ Screw connection ✓ Note maximum service life 	
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VI		<ul style="list-style-type: none"> ▶ Suspension leg <ul style="list-style-type: none"> ✓ Sealed (no noticeable oil leakage) ✓ Initial damper performance test ✓ Spring broken ✓ Damper bearing ✓ Mounting 	<p>Attention!</p> <p>Modifications to the chassis influence the effectiveness and smooth operation of the brake system</p>
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VII		<ul style="list-style-type: none"> ▶ Drive shaft sleeve <ul style="list-style-type: none"> ✓ Sealed, not porous 	
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Brake checklist[®]

for service brakes and handbrakes (please copy)



Measure	OK	Defective	Comments / notes
1. Test drive before carrying out any maintenance	<input type="checkbox"/>	<input type="checkbox"/>	
2. Shock absorber function test before carrying out repairs	<input type="checkbox"/>	<input type="checkbox"/>	
3. Brake function test on roller test bench	Fr. axle <input type="checkbox"/>	<input type="checkbox"/>	
	Re. axle <input type="checkbox"/>	<input type="checkbox"/>	
4. Brake fluid test before carrying out any maintenance	<input type="checkbox"/>	<input type="checkbox"/>	
5. Visual check: Rims / Tires	<input type="checkbox"/>	<input type="checkbox"/>	
6. Check wheel bearing for play	<input type="checkbox"/>	<input type="checkbox"/>	
7. Chassis visual check	<input type="checkbox"/>	<input type="checkbox"/>	
8. Check drive / half shafts for joint play and leakage (sleeves)	<input type="checkbox"/>	<input type="checkbox"/>	
9. Check axle bearing (suspension ball joints, traverse link bearings)	<input type="checkbox"/>	<input type="checkbox"/>	
10. Check stabilizer bars and rocker posts	<input type="checkbox"/>	<input type="checkbox"/>	
11. Check steering	<input type="checkbox"/>	<input type="checkbox"/>	
12. Check entire wheel brake and service brake for wear	<input type="checkbox"/>	<input type="checkbox"/>	
13. Brake calipers: Check operation and check for leakage	<input type="checkbox"/>	<input type="checkbox"/>	
14. Master brake cylinder: Check operation and check for leakage	<input type="checkbox"/>	<input type="checkbox"/>	
15. Wheel cylinder: Check operation and check for leakage	<input type="checkbox"/>	<input type="checkbox"/>	
16. Check the load sensing valve (load-dependent brake) check for leakage and test the handbrake cables	<input type="checkbox"/>	<input type="checkbox"/>	
17. Brake hoses: Check for holes and leakage	<input type="checkbox"/>	<input type="checkbox"/>	
18. Brake pipes: Check for rust and leakage	<input type="checkbox"/>	<input type="checkbox"/>	
19. Brake caliper slide : Check for wear and smooth operation	<input type="checkbox"/>	<input type="checkbox"/>	
20. Check accessories / Mounting sets replaced?	<input type="checkbox"/>	<input type="checkbox"/>	
21. Check the cleaned hub for damage / axial run-out	<input type="checkbox"/>	<input type="checkbox"/>	
22. Check the wheel bolt threads / nuts for damage / tightness	<input type="checkbox"/>	<input type="checkbox"/>	
23. Check the brake caliper supports / guide elements	<input type="checkbox"/>	<input type="checkbox"/>	
24. Finally check the newly mounted and centred brake disc and check for axial run-out	<input type="checkbox"/>	<input type="checkbox"/>	
25. Test on the roller test bench	<input type="checkbox"/>	<input type="checkbox"/>	
26. Test drive after completion of installation repairs	<input type="checkbox"/>	<input type="checkbox"/>	

► Any other defaults / notes: _____

