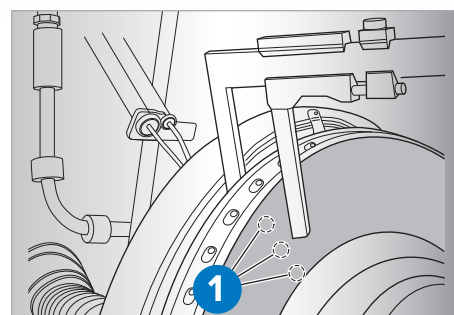


BRAKE DISCS

REMOVAL

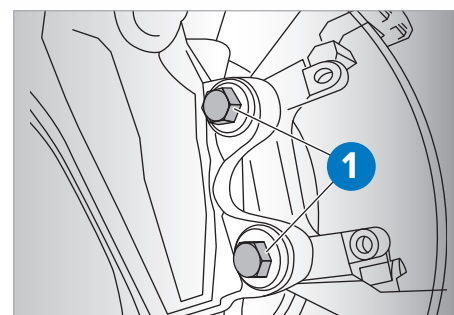
- Remove rear wheels.
- Release screws (PICTURE 10, 1). Detach brake-caliper support.
- Installation note:
 - Release both screws on disc and remove the disc.



PICTURE 10 - Detach brake-caliper support

ASSEMBLY

- Clean contact surface of brake disc at wheel hub and remove corrosion. Unevenness on contact surface may result in distortion of brake disc.
- Replace screws from anchor plate (tightening torque 110 Nm).
- Replace both the disc and the screws that hold it (tightening torque 16 Nm).



PICTURE 11 - Thickness difference

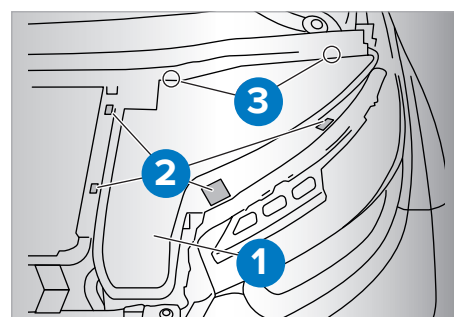
! WARNING

- Replace brake discs when:
 - Drop below the minimum brake disc thickness
 - Scoring
 - Heat cracks
 - Thickness difference (PICTURE 11, 1)
- Do not strike friction ring with a hammer or similar to release brake disc! If necessary, carefully tap on the base of brake disc chamber with a rubber mallet.
- After completing work: Carry out test braking while driving at low speed.
- Advise the customer to try to avoid drastic braking during the first 200 km after brake replacement.

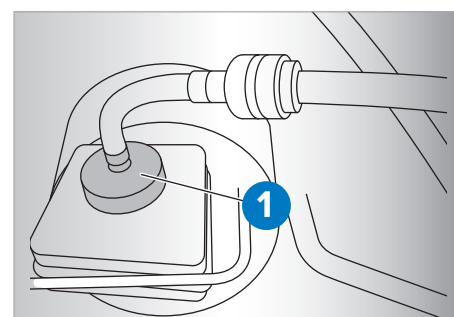
HYDRAULIC CIRCUIT

SYSTEM FILLING AND BLEEDING

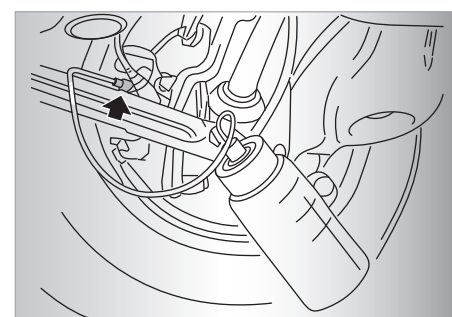
- Remove cover in the luggage compartment (PICTURE 12, 1 2 3)
- Connect bleeder unit with max. 2 bar filling pressure. A second person is needed for this repair work.
- Check relevant equipment manufacturer's operating instructions for each device.
- Charging pressure should not exceed 2 bar.
- Connect bleeder unit (PICTURE 13, 1) on expansion tank and switch it on.
- Connect diagnostic equipment to vehicle and select brake bleeding procedure.
- Connect vent hose with collecting vessel (PICTURE 14) to vent valve on rear right brake caliper.
- Open vent valve and purge until clear, bubble-free brake fluid emerges.



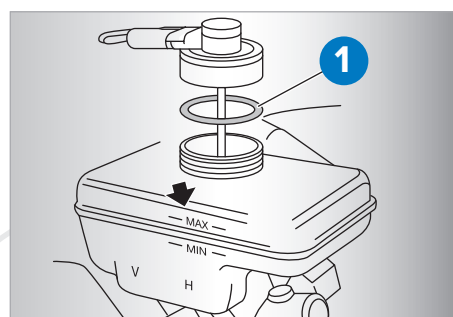
PICTURE 12 - Remove cover



PICTURE 13 - Connect bleeder unit



PICTURE 14 - Connect vent hose

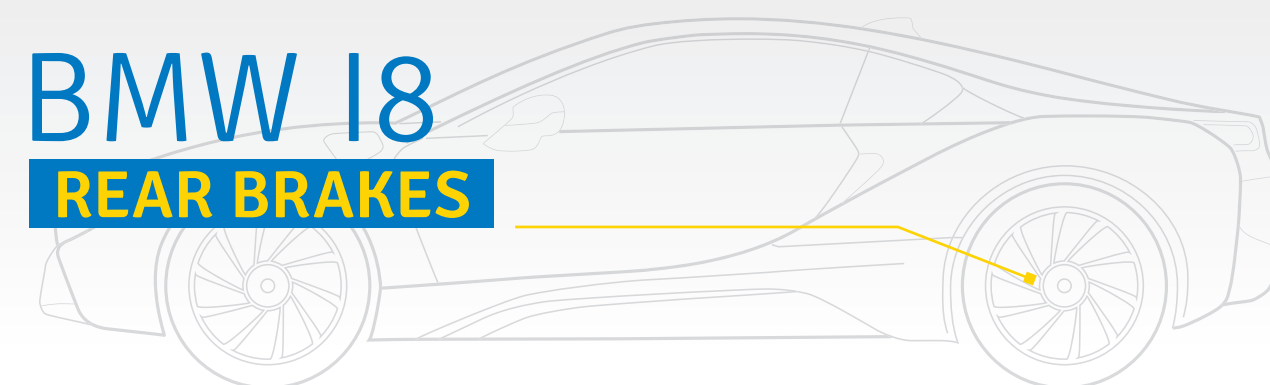


PICTURE 15 - Pay attention to seal in sealing cap

- Close vent valve; (torque front brake 10Nm, rear brake 15Nm). When bleeding all wheels, start at the rear right. Follow same procedure on rear left, front right and front left wheel brake.
 - Switch off bleeder unit and remove from expansion tank.
- Check brake fluid level. If necessary, top up/draw off to "MAX" level.
- Close expansion tank.
- Pay attention to seal (PICTURE 15, 1) in sealing cap.



BMW I8
REAR BRAKES



BRAKE FLUIDS

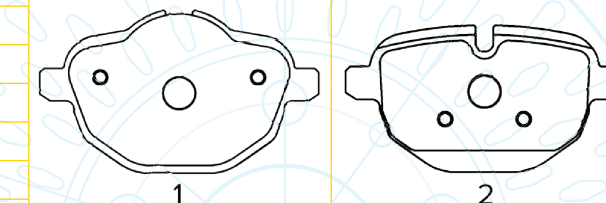
BRAKE FLUID	
Product	DOT 4, Low viscosity
Capacity	1.0 litre
Maintenance intervals	Every 2 years

BRAKE FLUID DOT4 LOW VISCOSITY	
151071J	250 ml
151072J	500 ml
151073J	1 lt
151075J	20 lt
151472J	500 ml
151774J	5 lt



JURID PART NUMBERS, REAR BRAKE PAD SET

Part number	Brake pad	mm
573352J	Length	106.1
	Height 1	56.3
	Height 2	63.3
	Thickness	17.8
573352JC (White)	Length	106
	Height 1	56
	Height 2	63
	Thickness	17.8



SAFETY INFORMATION FOR HANDLING ELECTRIC / HYBRID VEHICLES

HIGH-VOLTAGE SYSTEM - DANGER TO LIFE
Each job on the vehicle must be assigned by properly trained personnel. Before work is started, this person must place the vehicle in the operating condition required to perform the relevant activity. The instructions and directions given by this person must be followed. No work may be carried out without this qualified person being consulted first.

The content contained in this article is for informational purposes only and should not be used in lieu of seeking professional advice from a certified technician or mechanic. We are not liable for any damages resulting from your reliance on this content.

JURID[®] is a registered trademark of Federal-Mogul LLC or one or more of its subsidiaries in one or more countries. **FEDERAL-MOGUL MOTORPARTS**

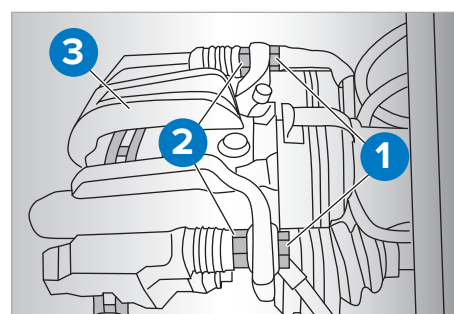
BRAKE PADS

REMOVAL

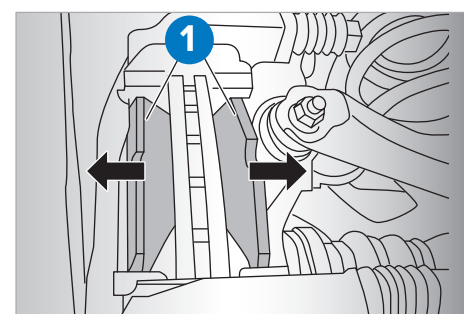
- Position vehicle onto a lift.
- Release the handbrake.
- Remove the rear wheels.
- Remove brake pad wear sensor.
- Unscrew guide bolts (PICTURE 1, 1).
- If necessary, grip at hexagon head (PICTURE 1, 2).
- Remove brake caliper (PICTURE 1, 3).
- Remove brake pads (PICTURE 2, 1) in direction of arrow from caliper carrier.
- Check the thickness of the pads and of the disc.
- Use a brake caliper tool to wind back the brake piston up to the limit.

ASSEMBLY

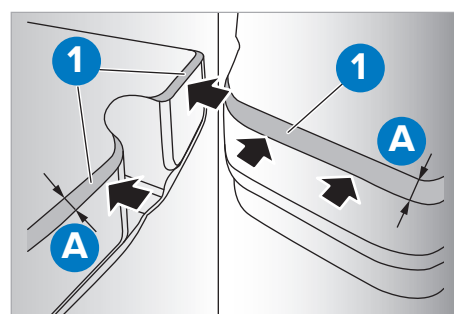
- When installing new pads, slightly bevel edges of the pad (PICTURE 3, 1). (Dimension A must not exceed maximum 1 mm).
- Check dust boot for damage and renew if necessary.
- Clean contact surface (PICTURE 4, 1) of brake piston with brake cleaner and apply a thin coating of brake pad paste (Dust boot must not come into contact with brake pad paste as this may cause the dust boot to swell).
- Clean the following contact surfaces with brake cleaner and apply a thin coating of brake pad paste:
 - Contact surface of the caliper (5, 1)
 - Guide surface for the brake pads (PICTURE 6, 1) on the brake caliper mounting.
- Both sides of T-head of brake pad (PICTURE 7, 1)
- Brake pad with bulge (PICTURE 8, 1) is intended for accommodating the brake pad wear sensor and must be fitted on the piston side.
- Remove lining springs (PICTURE 9, 1) and replace them.
- Replace guide bolts (torque 35 Nm).
- Install new brake pad sensor.
- Finally, switch on ignition and, using electrical parking brake operating element, open parking brake once, close once and open again.



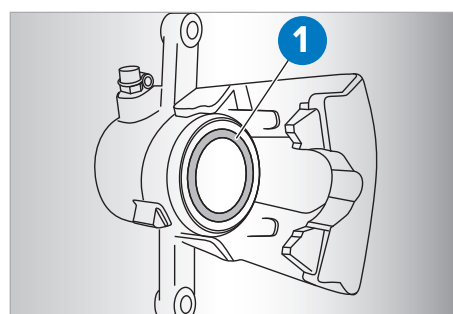
PICTURE 1 - Unscrew guide bolts



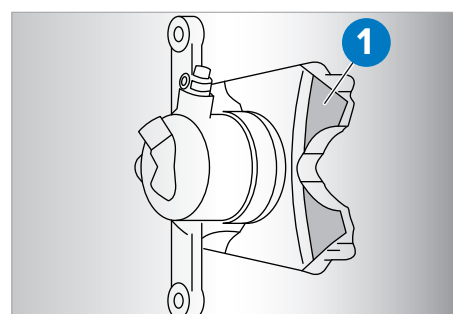
PICTURE 2 - Remove brake pads



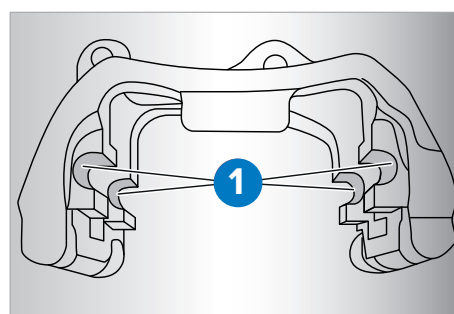
PICTURE 3 - Slightly bevel edges of the pad



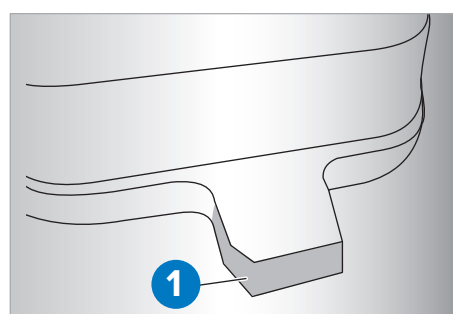
PICTURE 4 - Clean contact surface



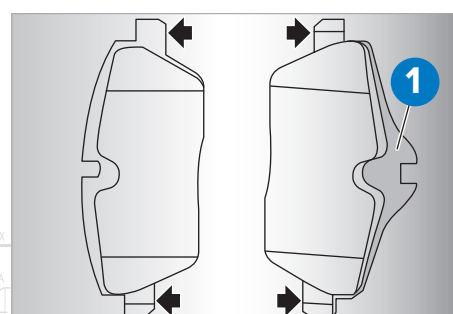
PICTURE 5 - Clean the contact surface and apply brake pad paste



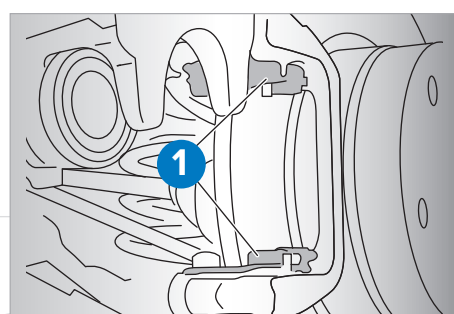
PICTURE 6 - Clean the guide surface and apply brake pad paste



PICTURE 7 - Clean both sides of T-head and apply brake pad paste



PICTURE 8 - Brake pad with bulge fitted on the piston side



PICTURE 9 - Replace lining springs

WARNING

- When working on rear brakes, ensure that the push button for the electrical parking brake cannot be activated. To be completely sure that the handbrake cannot be activated, the service function 'workshop mode' must be run with diagnostic equipment. This opens the handbrake and disables it temporarily.
- Tie brake caliper and do not allow it to hang from brake hose.
- Retaining pins and expanding spring: for vehicles older than 48 months it is recommended to replace the retaining spring.
- The Brake pad wear sensor must be replaced after removal (it loses its retention capability).
- If the vehicle has a warning displayed for the brake pads, this can be reset with diagnostic equipment.
- When pressing piston back, note brake fluid level in expansion tank. Overflowing brake fluid will damage the paintwork.
- The brake discs must also be renewed upon each brake pad exchange.
- When installing new brake pads, the brake fluid level must be brought up to max marking.
- Read and comply with notes on braking in new brake discs / brake pads; Carry out test braking while driving at low speed. Advise the customer to try to avoid drastic braking during the first 200 km after brake replacement.
- Switch on ignition and, using electrical parking brake operating element, apply parking brake once, release once and apply again.

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Want to arm yourself with all the right tools & on trend information to keep up with the latest developments? Garage Gurus provides you with the most comprehensive program of support tools in the industry. Why? We believe that well-trained techs are at the heart of our rapidly changing vehicle repair industry. Join our technical community at www.fmgaragegurus.eu and find out everything you need to know through insightful video tutorials, tech tips, interviews, articles and courses. Ready for some fine-tuning?

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Gurus Onsite: Garage Gurus has developed a range of professional lessons and courses that are hosted at the Garage Gurus' purpose-built, high-tech facility in the Netherlands, or at regional hubs. This enables workshop technicians to continually develop their career and keep up to date with the automotive market's increasingly complex technologies.

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Gurus On-Call: Technical specialists are available by phone to provide fast answers for product and diagnostic questions, whenever you need them. The team speaks six languages and covers 30 countries.

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Gurus On-the-Go: A fleet of technology-equipped vans that will tour workshops to provide interactive demonstrations and teach workshop personnel about the latest tools, part solutions and technologies. This service will initially launch in seven countries (France, Germany, Italy, Russia, Poland, Serbia, Romania) with additional countries to be added as the program develops.

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Gurus Online: A technical training online platform that can be accessed 24/7 to help educate and develop knowledge of automotive systems, components and maintenance. The website includes interactive learning modules, technical tips and troubleshooting video guides. As well as access to Garage Gurus' technical team, it provides a platform where all users can communicate with each other in a forum to receive first hand advice.

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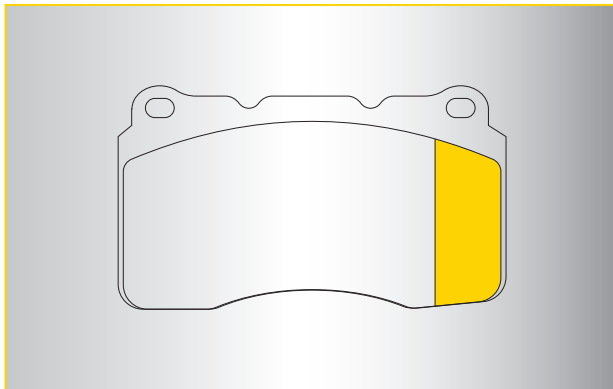
DIRECTIONAL BRAKE PADS

INTRODUCTION

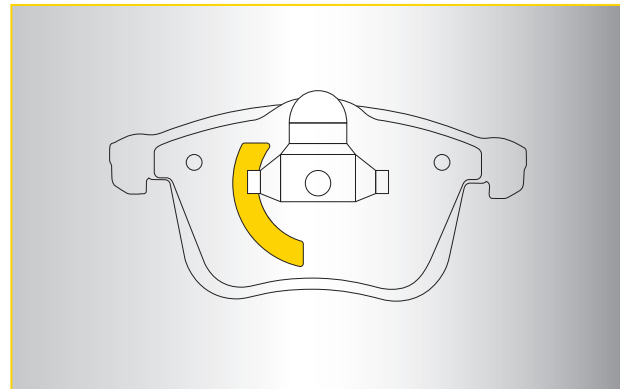
One of the biggest challenges presented to brake pad manufacturers by vehicle manufacturers is to control and reduce brake noise.

To solve the problem, with some specific brake systems, there has been the development of the asymmetrical brake pad designs which introduce the brake pad to the disc at an angle. In doing so, the

potential for vibration and noise is significantly reduced. Jurid deploys two methods to achieve the angle of introduction. One is the use of a chamfer on the friction surface and the second is a cut-out of the noise reduction shim on the backing plate. Both are easy for the technician to see and understand that the pads need to be positioned in a specific way.



CHAMFERS ON FRICTION SURFACE OF THE BRAKE PAD

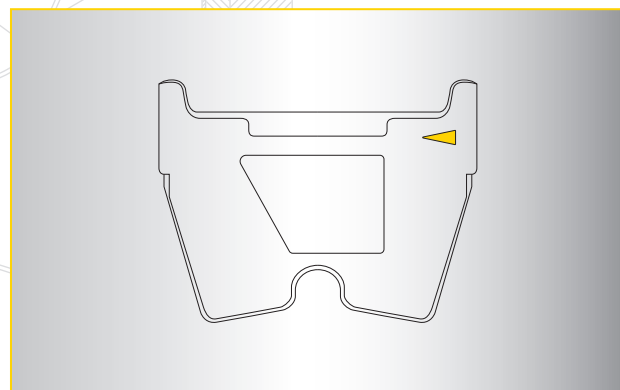
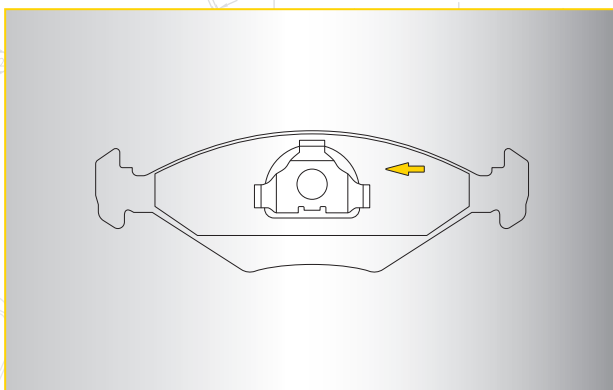


CUT-OUT OF THE NOISE REDUCTION SHIM

FITTING DIRECTIONAL BRAKE PADS

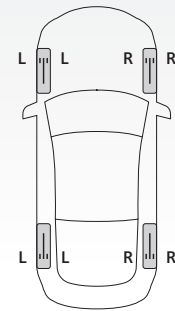
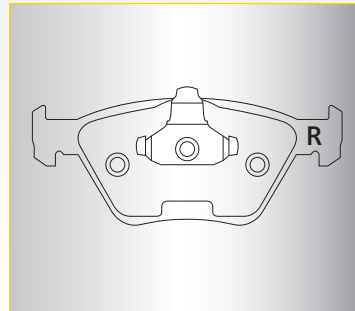
Many directional pads have an arrow on the back plate to indicate the rotational direction of the brake disc. When fitting these brake pads, make sure the

arrow points in the same direction as the wheels turn during forward driving.



Some directional pads do not use an arrow but instead include a letter. The letter indicates to which side of the vehicle the brake pad should be fitted.

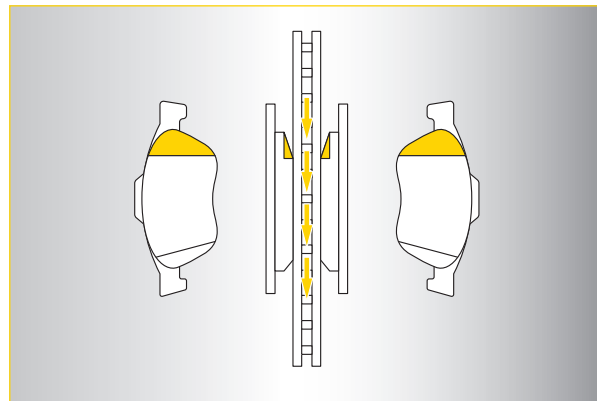
When the letter R is used, the brake pad should be fitted to the right-hand side of the vehicle.
When an L is used, fit it to the left-hand side.



FITTING BRAKE PADS WITH A CHAMFER ON THE FRICTION SURFACE

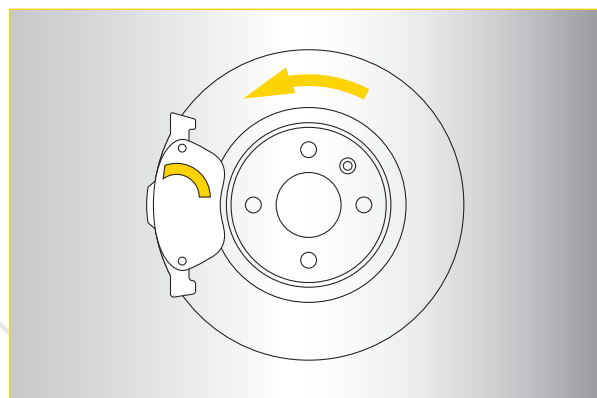
If no arrow or letter is used but the Jurid pads are equipped with a chamfer, the chamfer needs to be presented at the leading edge where the pad first contacts the brake disc when fitting the brake pads.

Where the pads are equipped with a chamfer on both edges, the edge with the bigger chamfer area should be presented to the leading edge where the pad first contacts the brake disc.



FITTING BRAKE PADS WITH A CRESCENT CUT-OUT TO THE NOISE REDUCTION SHIM

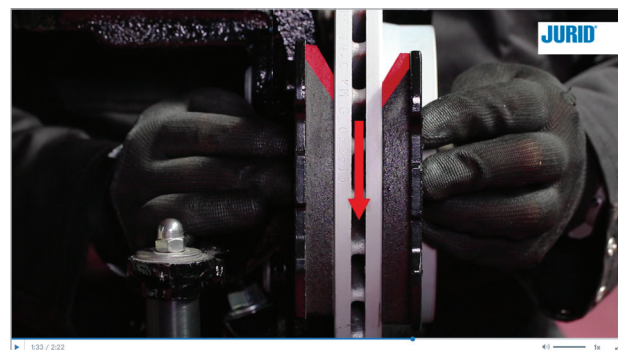
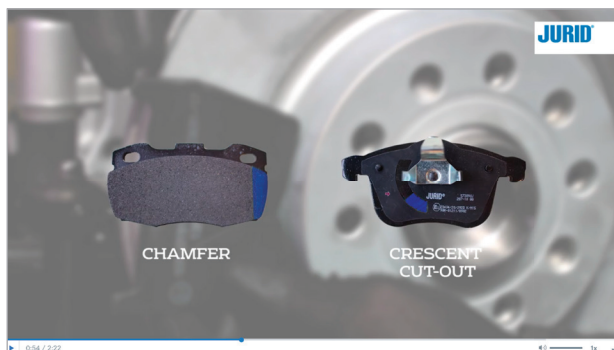
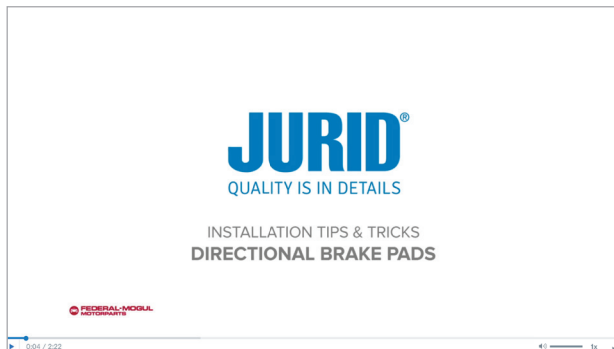
If no arrow or letter is used but the Jurid pads are equipped with a crescent or half-moon cut-out from the noise reduction shim, the crescent or half-moon needs to be presented at the leading edge where the pad first contacts the brake disc.



BROWSE THROUGH OUR RANGE OF DIRECTIONAL BRAKE PADS:

572494J	573017J	571921J	573723J
573644J	573025J	573045J	573089J
571975J	573245J	573206J	573257J
573153J	573204J	573037J	573268J
573159J	572600J	573178J	573606J
573391J	573674J	573090J	573657J
572480J	573621J	573052J	573688J
573180J	571982J	573257J	573418J
573145J	571984J	573291J	573390J

DISCOVER OUR DETAILED INSTALLATION VIDEOS ON  **YouTube**



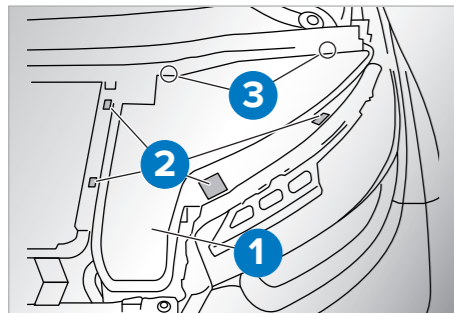
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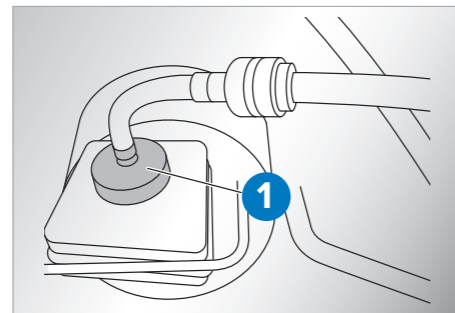
HYDRAULIC CIRCUIT

SYSTEM FILLING AND BLEEDING

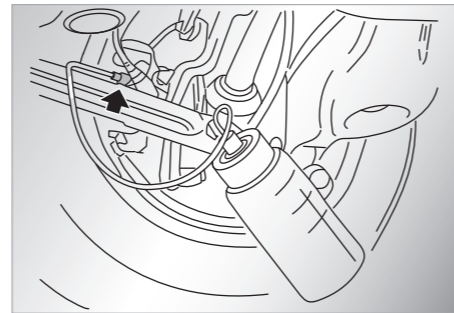
- Remove cover in the luggage compartment (PICTURE 7 1 2 3).
- Connect bleeder unit with max. 2 bar filling pressure. A second person is needed for this repair work.
- Check relevant equipment manufacturer's operating instructions for bleeder unit that will be used.
- Charging pressure should not exceed 2 bar.
- Connect bleeder unit (PICTURE 8 1) on expansion tank and switch on.
- Connect diagnostic equipment to vehicle and select brake bleeding procedure. Connect vent hose with collecting vessel (PICTURE 9) to vent valve on rear right brake caliper. For all wheels the bleeding order is to start at the rear right, next rear left, front right and finally front left wheel.
- Open vent valve and purge until clear, bubble-free brake fluid emerges.
- Close vent valve; (torque front brake 10Nm, rear brake 15Nm).
- Switch off bleeder unit and remove from expansion tank.
- Check brake fluid level. If necessary, top up/draw off to "MAX" level.
- Close expansion tank.
- Pay attention to seal (PICTURE 10 1) in sealing cap.



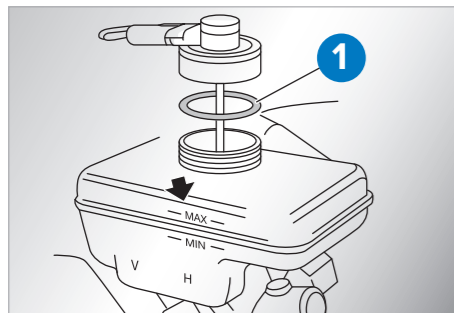
PICTURE 7 - Remove cover



PICTURE 8 - Connect bleeder unit



PICTURE 9 - Connect vent hose



PICTURE 10 - Pay attention to seal in sealing cap



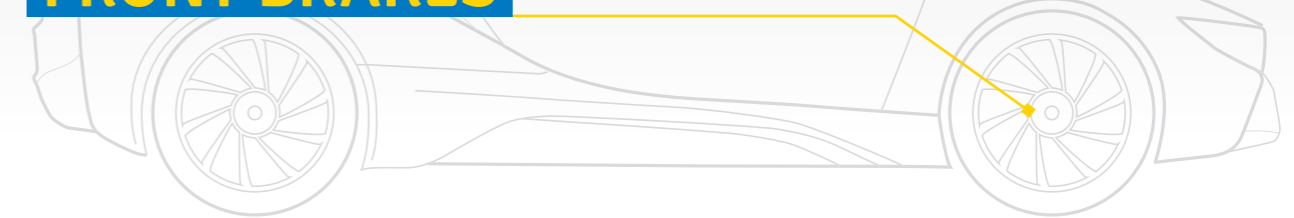
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BMW i8 FRONT BRAKES



BRAKE FLUIDS

BRAKE FLUID

Product	DOT 4, Low viscosity
Capacity	1.0 litre
Maintenance intervals	Every 2 years

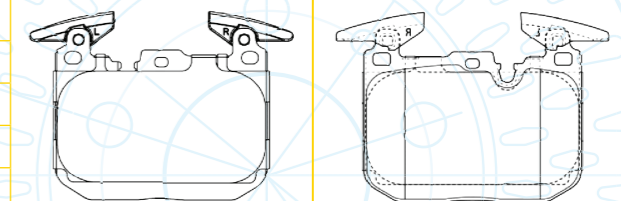
BRAKE FLUID DOT4 LOW VISCOSITY

151071J	250 ml
151072J	500 ml
151073J	1 lt
151075J	20 lt
151472J	500 ml
151774J	5 lt



JURID PART NUMBERS, FRONT BRAKE PAD SET

Part number	Brake pad	mm
573355J	Length	114.6
	Height	91.3
	Thickness	18
573355JC (White)	Length	114.6
	Height	91.3
	Thickness	18



SAFETY INFORMATION FOR HANDLING ELECTRIC / HYBRID VEHICLES

HIGH-VOLTAGE SYSTEM - DANGER TO LIFE

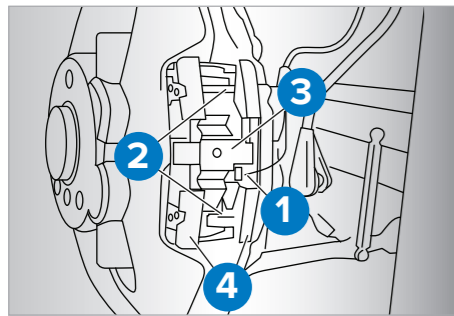
Each job on the vehicle must be assigned by properly trained personnel. Before work is started, this person must place the vehicle in the operating condition required to perform the relevant activity. The instructions and directions given by this person must be followed. No work may be carried out without this qualified person being consulted first.

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BRAKE PADS

REMOVAL

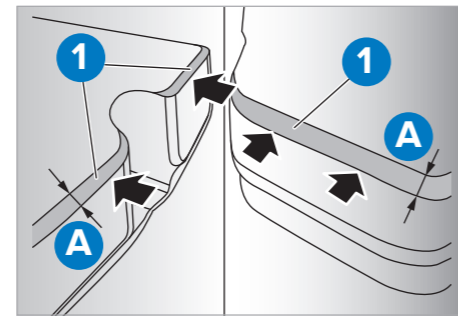
- Position vehicle onto a lift.
- Remove the front wheels.
- Remove brake pad wear sensor, pull it out forward of the brake pad (left side only).
- Drive out retaining pins (PICTURE 1 ① ②).
- Remove expanding spring (PICTURE 1 ③).
- Remove brake pads (PICTURE 1 ④).



PICTURE 1 - Remove brake pads

ASSEMBLY

- Check minimum brake thickness (written on disc, 18,4 mm minimum)
- Slightly bevel edges in the area shown in PICTURE 2 ①. (Dimension A must not exceed maximum 1 mm)

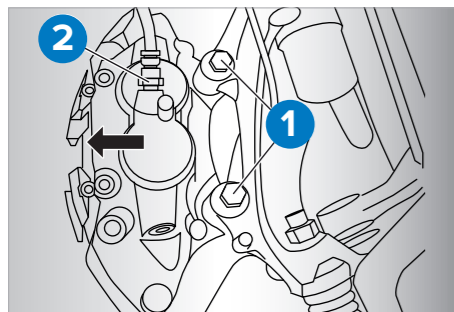


PICTURE 2 - Slightly bevel edges of the pad

BRAKE DISCS

REMOVAL

- Remove front wheels
- Release screws (PICTURE 6 ① ②) and remove brake calliper towards rear and tie it up.
- Remove and clean brake pads.
- Check the thickness of the brake disc, this should be at least 18.4 mm
- Release both screws and remove brake disc.



PICTURE 6 - Remove brake calliper

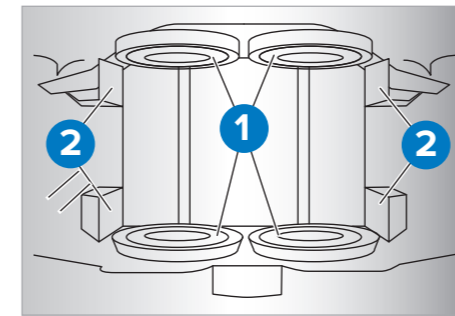
ASSEMBLY

- Clean contact surface of brake disc at wheel hub and remove corrosion. Unevenness on contact surface may result in distortion of brake disc.
- Replace screws from anchor plate (30NM plus 90 °).
- Replace screws that holds the disc (tightening torque 16 Nm).

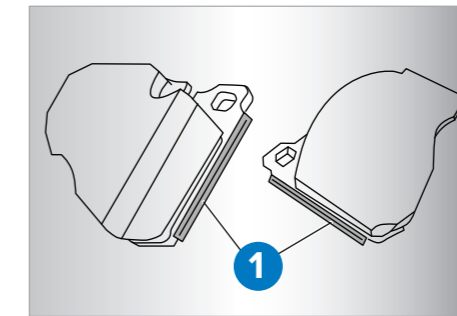
! WARNING

- To release brake disc: Do not strike friction ring with a hammer or similar! If necessary, carefully tap on the base of brake disc chamber with a rubber mallet.
- After completing work: Carry out test braking while driving at low speed.
- Advise the customer to try to avoid drastic braking during the first 200 km after brake replacement.
- If the brake discs are replaced, you must also fit new brake pads.
- Brake discs may only be replaced in pairs (on each axle).

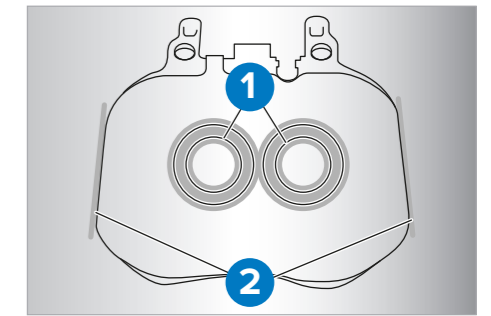
- Press brake piston fully back with the right caliper tool. (Note brake fluid level in expansion tank)
- Check dust boot for damage and renew if necessary.
- Clean the following surfaces and apply a thin coating of brake paste on:
 - contact surface (PICTURE 3 ① ② ③) of brake piston.
 - both sides of the contact surface of the pads in area 1 and 2 (PICTURE 4 ①).
 - the brake pad contact surface on both sides as shown in PICTURE 5 ① ②.



PICTURE 3 - Clean the contact surface and apply brake pad paste



PICTURE 4 - Clean the contact surface and apply brake pad paste

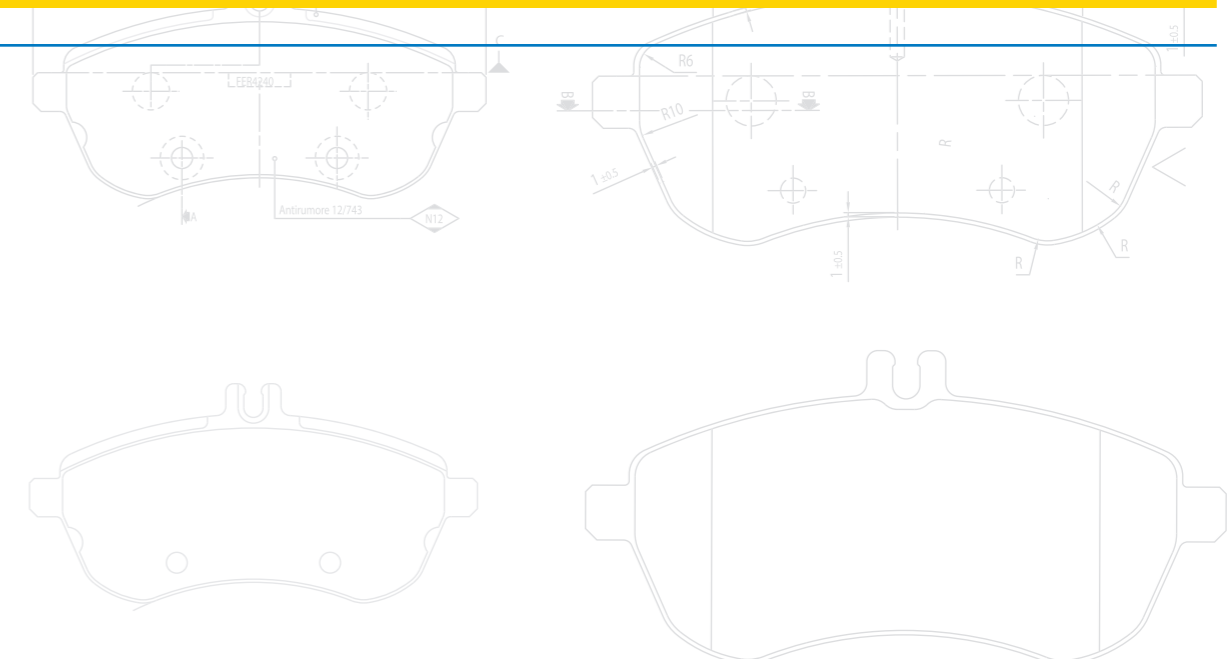


PICTURE 5 - Clean the contact surface and apply brake pad paste

- Install new brake pads.
- Align brake pads with the retaining pins in the brake caliper.
- Fully depress brake pedal several times so that brake pads contact brake discs.
- Fit retaining pins and expanding spring.

! WARNING

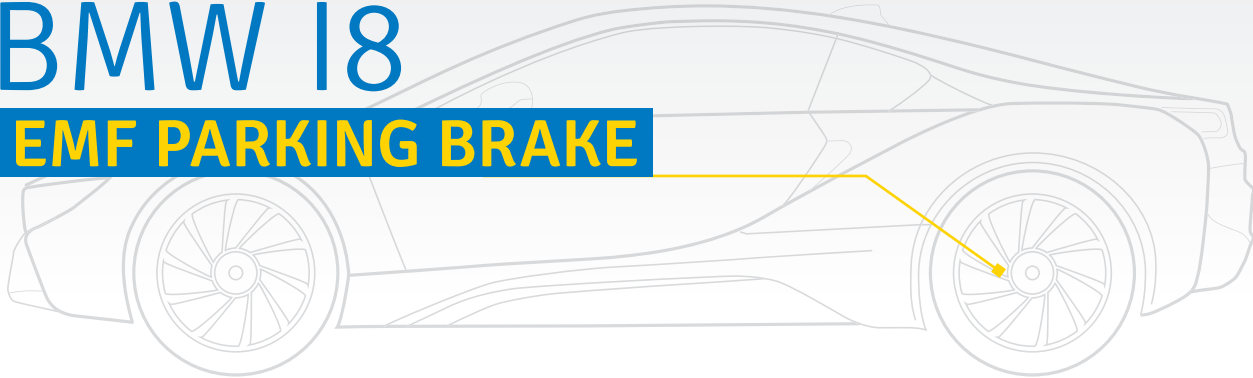
- Retaining pins and expanding spring: for vehicles older than 48 months it is recommended to replace the retaining spring!
- Brake pad wear sensor: After removal it must be replaced (brake pad wear sensor loses its retention capability in the brake pad).
- Tie brake caliper and do not allow it to hang from brake hose.
- When pressing piston back, note brake fluid level in expansion tank. Overflowing brake fluid will damage the paintwork.
- When installing new brake pads, the brake fluid level must be brought up to max. mark.
- Carry out test braking while driving at low speed.
- Advise the customer to try to avoid drastic braking during the first 200 km after brake replacement.





BMW i8

EMF PARKING BRAKE



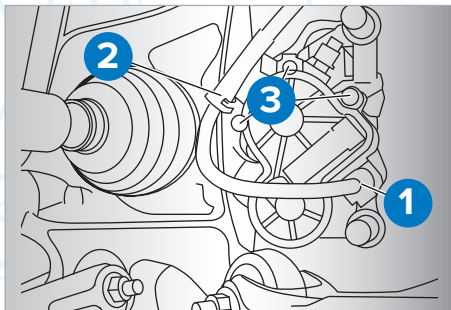
SAFETY INFORMATION FOR HANDLING ELECTRIC / HYBRID VEHICLES

HIGH-VOLTAGE SYSTEM - DANGER TO LIFE

Each job on the vehicle must be assigned by properly trained personnel. Before work is started, this person must place the vehicle in the operating condition required to perform the relevant activity. The instructions and directions given by this person must be followed. No work may be carried out without this qualified person being consulted first.

REMOVAL

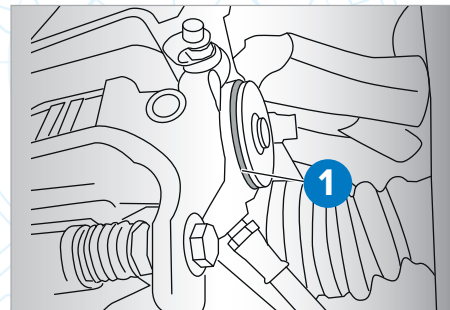
- Position vehicle onto a lift.
- Release the handbrake.
- Switch off ignition at least 30 seconds before disconnecting the electric plug.
- Remove the rear wheels.
- Disconnect the electric plug (PICTURE 1, 1).
- Detach cable from cable clip (PICTURE 1, 2).
- Release screws (PICTURE 1, 3).
- Take off holder.
- Pull off actuator drive from brake caliper.



PICTURE 1 - Disconnect the electric plug

ASSEMBLY

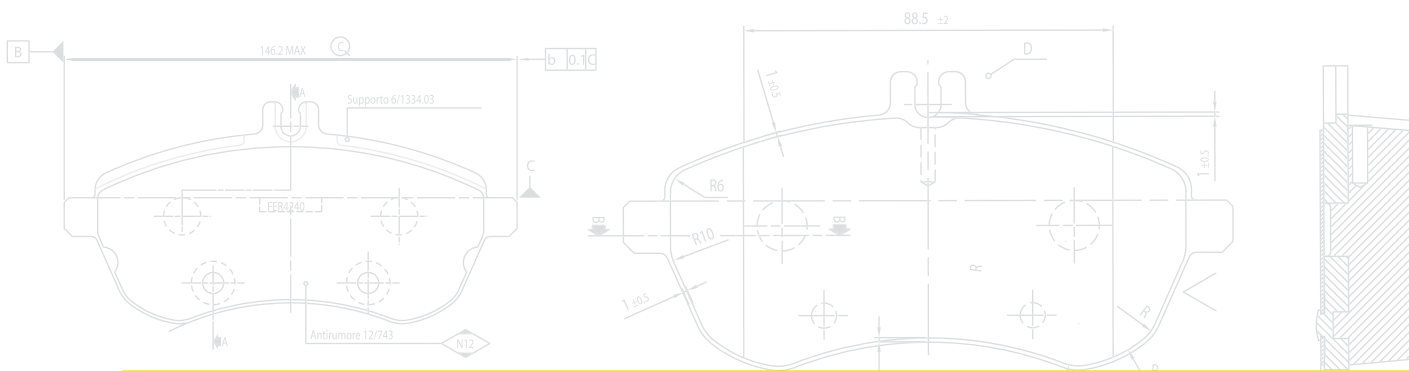
- Check sealing ring (PICTURE 2, 1), replace if necessary. Apply a light coating of brake fluid to sealing ring (PICTURE 2, 1) before fitting.
- Carefully fit actuator drive until teeth engage and actuator drive fits tightly on brake caliper.
- If necessary, turn actuator drive slightly until bore hole and thread engage completely.
- Tighten screws on caliper and cable clip, Use new screws. Tightening torques:
 - EMF actuator to brake caliper, 8Nm.
 - Reconnect plug connection and cable clip. Use new screws. Torque: Cable clip to brake caliper 14Nm.
- After installation, switch on ignition and, using parking brake operating element, open parking brake once, close once and open again.



PICTURE 2 - Check sealing ring

WARNING

- Switch off ignition at least 30 seconds before disconnecting the plug connection!
- When working on rear brakes, ensure that the push button for the electrical parking brake cannot be activated. To be completely sure the handbrake cannot be activated, the service function 'workshop mode' must be run with diagnostic equipment. This opens the handbrake and disables it temporarily.



For more information on Garage Gurus, to further your automotive education, or to join the growing community, visit www.fmgaragegurus.eu or send an e-mail to garage-gurus@fmmotorparts.eu

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