

WEBB ULTRA GRIP™

High performance heavy-duty calipers, carriers and assemblies from **the brand you know and trust**



Your Wheel-End Experts

www.WebbADB.com



A Marmon | Berkshire Hathaway Company

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Twin return springs with a unique actuation block helps eliminate caliper or lever binding.



Durable ductile iron housing with special formulation provides increased strength and durability under punishing conditions.



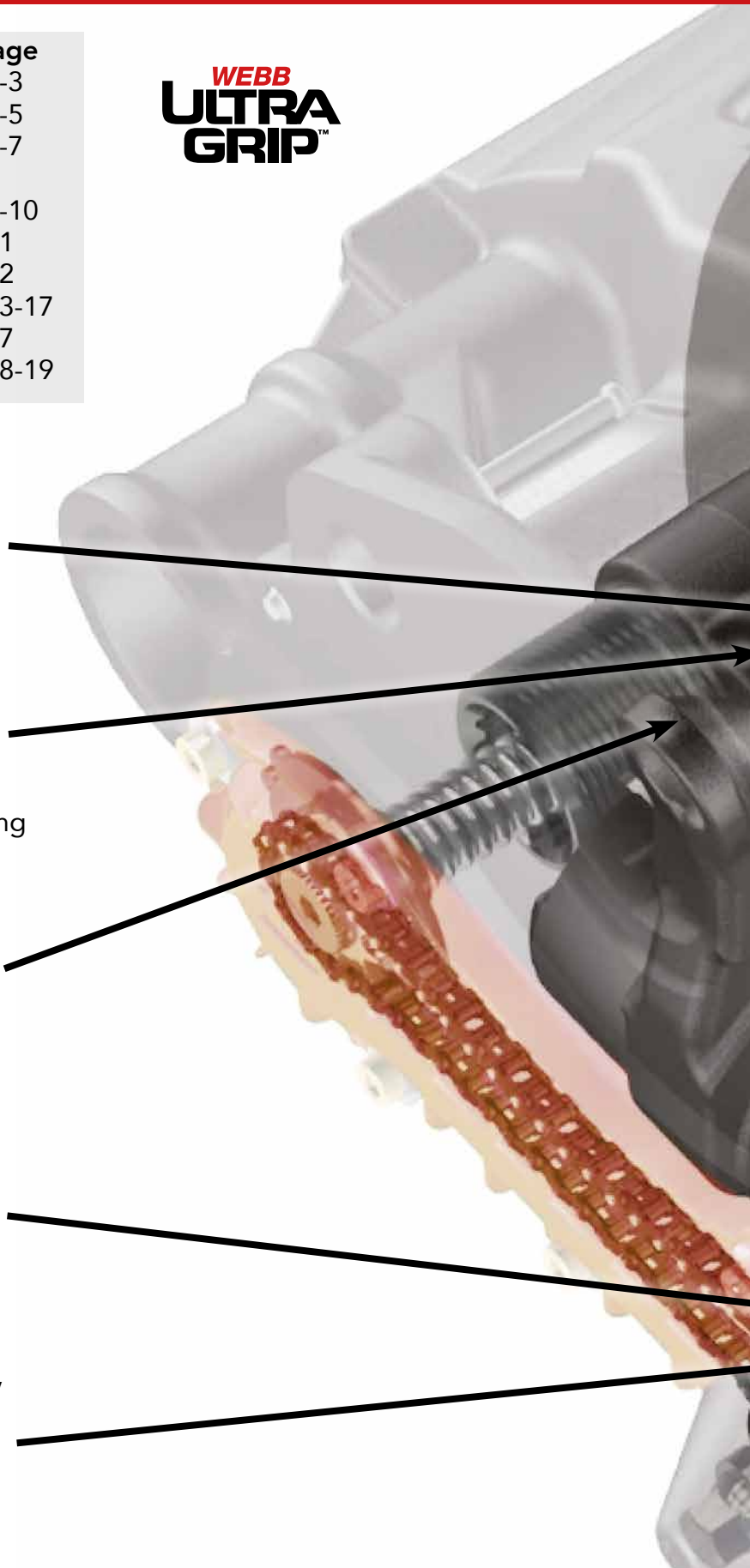
Lever profile precision machined to ensure correct brake performance.



Improved sealing gives better protection against water ingress providing longer product life.



Adjustment mechanism, unique to Webb ADB, improves efficiency and helps prevent over-adjustment to reduce pad and rotor wear.

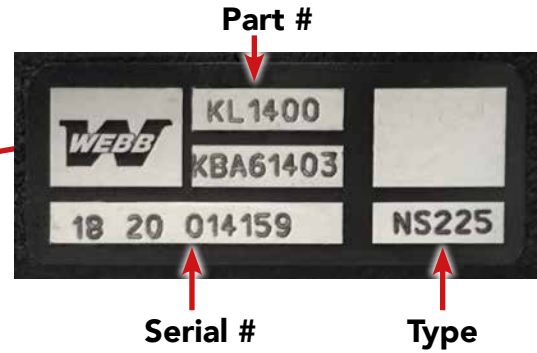




Webb Wheel Products, Inc. is part of Marmon Holdings, Inc., which is a Berkshire Hathaway company consisting of 13 diverse, stand-alone business sectors and about 100 autonomous manufacturing and service businesses worldwide. Revenues totaled approximately \$7.7 billion in 2017. Marmon Transportation Products Sector is the organization supporting the heavy-duty highway transportation industry, and Webb Wheel Products, Inc. is a business leader within this sector that focuses on serving its customers with world-class brake solutions.

IDENTIFICATION

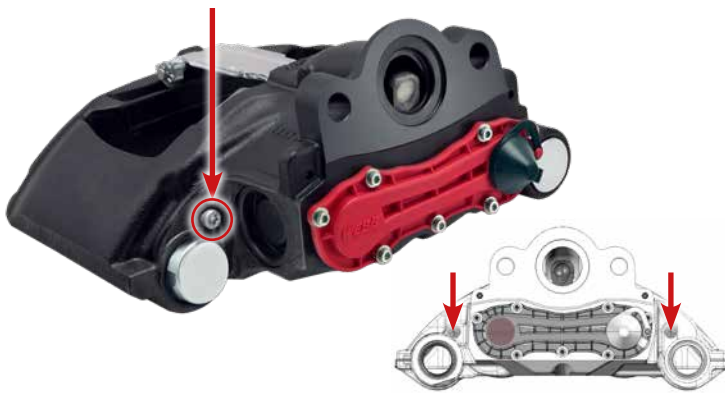
WEBB Air Disc Brake Calipers are identified by the part number which is marked on the ID plate.



After a long life in service or while still on the vehicle it can be difficult to read the information on the ID plate. Therefore the following can be useful in assisting identification.

- Looking from the air chamber side (rear), if there are bolts visible as shown, the brake is an MC225 typically used on trucks, trailers and some motor coach vehicles. If there are no bolts the brake is a NS225 typically used on transit buses and other specialized applications.

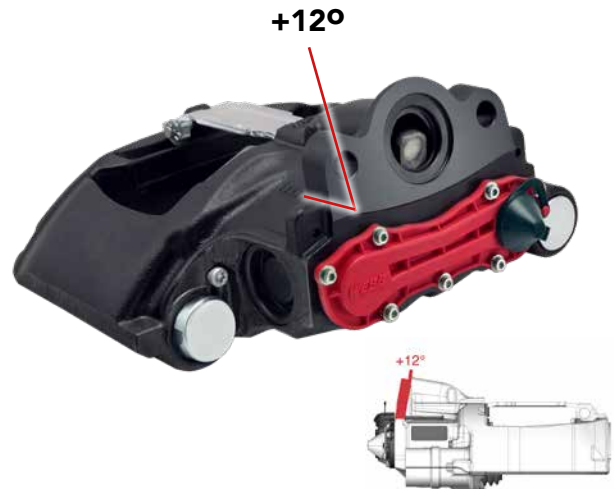
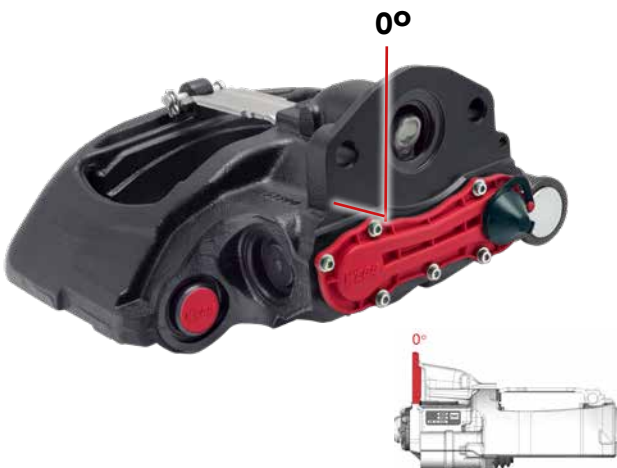
MC225 - two visible bolts near short and long guide sleeve ports



NS225 - no bolts visible



- Next, check the air chamber mounting angle. This ranges from "0" degree to "+12" degree.

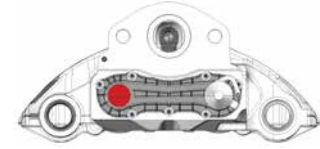
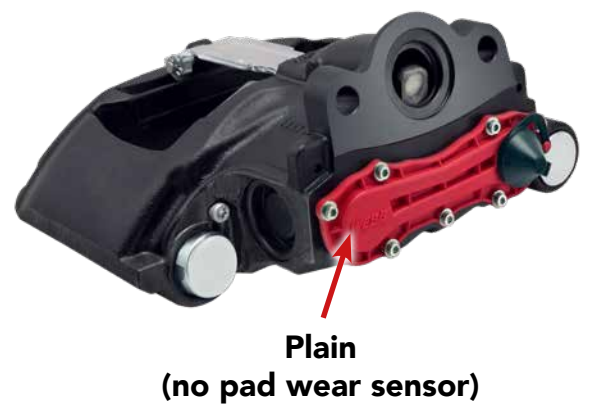
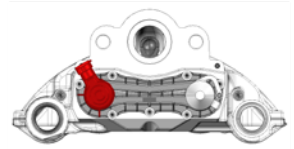


IDENTIFICATION

3 Next, check if the Long Guide Sleeve is on Left or Right as shown.



4 Check the chain cover to determine if it is plain or includes a sensor.

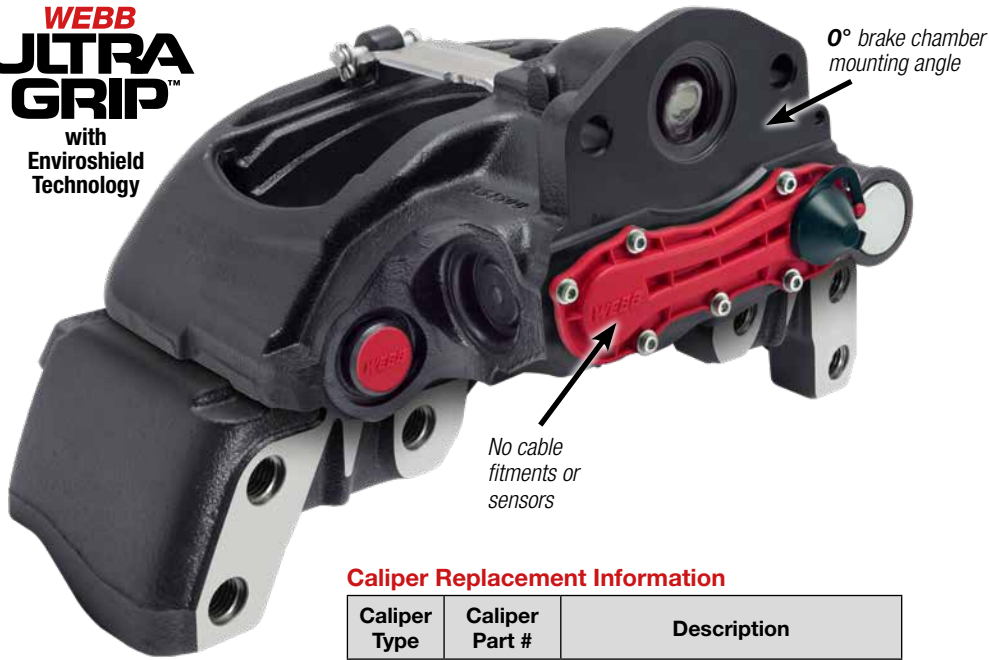


Caliper Type: NS225

Caliper and Caliper Assemblies

Typically used on transit buses and other specialized applications.

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with
Enviroshield
Technology



Caliper Replacement Information

Caliper Type	Caliper Part #	Description
NS225	KL1400	Left long guide sleeve
	KR1400	Right long guide sleeve

Product Information

Applications:	Van Hool / New Flyer
Brake chamber mounting angle:	0°
Sensor Type:	None

Caliper/Carrier Replacement Information

NS225	KL1400-01	LH long guide sleeve / 0° mounting angle / no sensor / carrier attached
	KR1400-01	RH long guide sleeve / 0° mounting angle / No sensor / carrier attached

Carrier Replacement Information

NS225	KT1001	Both right and left long guide sleeves
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Installation Kits Include



Available Service Kits



Caliper/Carrier Assemblies



Calipers



Carrier



For additional service kits refer to page 11.

Manufacturers' and other wholesaler's part numbers used in this catalog are for cross reference purposes only and do not imply anything about the origin or manufacturer of the product.

Caliper Type: NS225

Caliper and Caliper Assemblies

Typically used on transit buses and other specialized applications.

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with
Enviroshield
Technology

Sensor type: **stepped**



Caliper/Carrier Assemblies



Caliper Replacement Information

Caliper Type	Caliper Part #	Description
NS225	KL1400A	Left long guide sleeve with stepped sensor
	KR1400A	Right long guide sleeve with stepped sensor

Caliper/Carrier Replacement Information

NS225	KL1400A-01	LH long guide sleeve / 0° mounting angle / stepped sensor / carrier attached
	KR1400A-01	RH long guide sleeve / 0° mounting angle / stepped sensor / carrier attached

Carrier Replacement Information

NS225	KT1001	Both right and left long guide sleeves
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Product Information

Applications:	New Flyer
Brake chamber mounting angle:	0°
Sensor Type:	Stepped

Calipers



Installation Kits Include



Available Service Kits



Carrier



For additional service kits refer to page 11.

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Caliper Type: MC225

Caliper and Caliper Assemblies

Typically used on standard trailer applications.

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Caliper Replacement Information

Caliper Type	Caliper Part #	Description
MC225	BL4400	Left long guide sleeve
	BR4400	Right long guide sleeve

Product Information

Applications:	Standard Trailer
Brake chamber mounting angle:	0°
Sensor Type:	None

Caliper/Carrier Replacement Information

MC225	BL4400-40	LH long guide sleeve / 0° mounting angle / no sensor / carrier attached
	BR4400-40	RH long guide sleeve / 0° mounting angle / no sensor / carrier attached

Carrier Replacement Information

MC225	BT4040	Both right and left long guide sleeves
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Installation Kits Include



Available Service Kits



Caliper/Carrier Assemblies



Calipers



Carrier



For additional service kits refer to page 11.

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Caliper Type: MC225

Caliper and Caliper Assemblies

Typically used on truck applications.

Caliper/Carrier Assemblies



Part #: **BL4700-41**
Left long guide sleeve



Part #: **BR4700-41**
Right long guide sleeve



No cable fittings or sensors

12° brake chamber mounting angle

PACCAR/Volvo/Navistar style carrier

Calipers



Part #: **BL4700**
Left long guide sleeve



Part #: **BR4700**
Right long guide sleeve

Carrier



Part #: **BT4041**

Caliper Replacement Information

Caliper Type	Caliper Part #	Description
MC225	BL4700	Left long guide sleeve
	BR4700	Right long guide sleeve

Caliper/Carrier Replacement Information

MC225	BL4700-41	LH long guide sleeve / 12° mounting angle / no sensor / carrier attached
	BR4700-41	RH long guide sleeve / 12° mounting angle / no sensor / carrier attached

Carrier Replacement Information

MC225	BT4041	Both right and left long guide sleeves
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Product Information

Applications:	PACCAR, Volvo, Navistar
Brake chamber mounting angle:	12°
Sensor Type:	None

Installation Kits Include



Available Service Kits



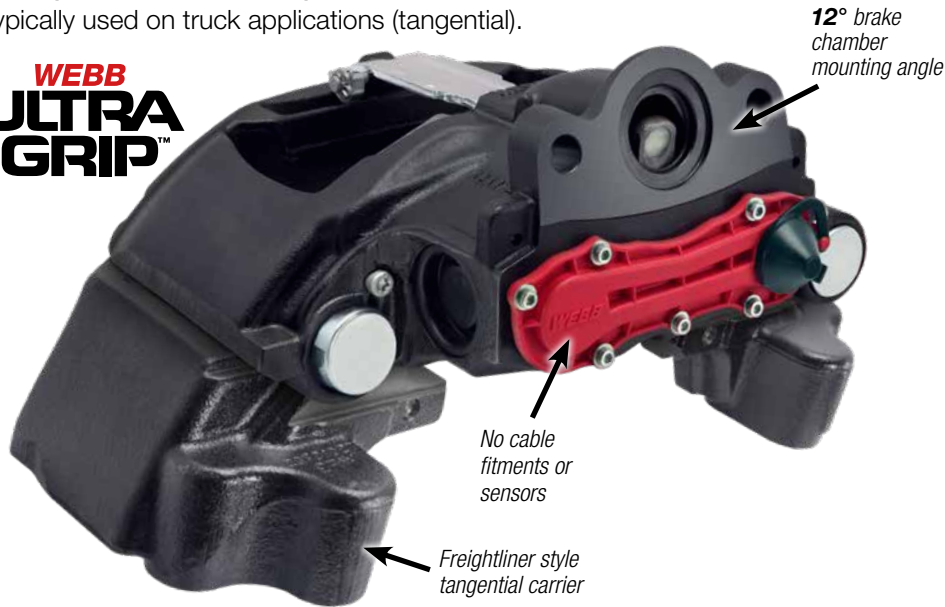
For additional service kits refer to page 11. Manufacturers' and other wholesaler's part numbers used in this catalog are for cross reference purposes only and do not imply anything about the origin or manufacturer of the product.

Caliper Type: MC225

Caliper and Caliper Assemblies

Typically used on truck applications (tangential).

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Caliper Replacement Information

Caliper Type	Caliper Part #	Description
MC225	BL4700	Left long guide sleeve
	BR4700	Right long guide sleeve

Caliper/Carrier Replacement Information

MC225	BL4700-42	LH long guide sleeve / 12° mounting angle / no sensor / carrier attached
	BR4700-42	RH long guide sleeve / 12° mounting angle / no sensor / carrier attached

Carrier Replacement Information

MC225	BT4042	Both right and left long guide sleeves
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Product Information

Applications:	Freightliner
Brake chamber mounting angle:	12°
Sensor Type:	None

Installation Kits Include



Available Service Kits



Caliper/Carrier Assemblies



Part #: **BL4700-42**
Left long guide sleeve



Part #: **BR4700-42**
Right long guide sleeve

Calipers

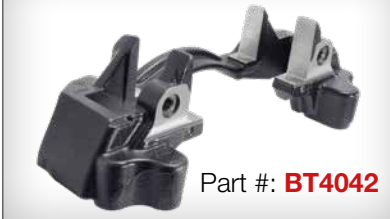


Part #: **BL4700**
Left long guide sleeve



Part #: **BR4700**
Right long guide sleeve

Carrier



Part #: **BT4042**

For additional service kits refer to page 11.

Manufacturers' and other wholesaler's part numbers used in this catalog are for cross reference purposes only and do not imply anything about the origin or manufacturer of the product.

KITS AND ACCESSORIES

KS0200 Guide Sleeve Kit

NS225



KS0215 Guide Sleeve Kit

NS225

Enviroshield Technology



KS0205 Guide Sleeve Kit

MC225



KS0400 Tappet Boot Kit

MC225, NS225



KS0130 Pad Retainer Kit

MC225



KS0120 Pad Retainer Kit

NS225



KS0140 PWVI Pin

NS225



KS0300 Plain Chain Cover Kit

NS225, MC225



KS0340 Stepped Sensor Fitted

NS225

(Use with screw-on or clip-on connectors)



KS0350 Adjuster Cap Kit

MC225, NS225



KS0500 Cap & Grease Kit

NS225



KS0505 Cap & Grease Kit

MC225

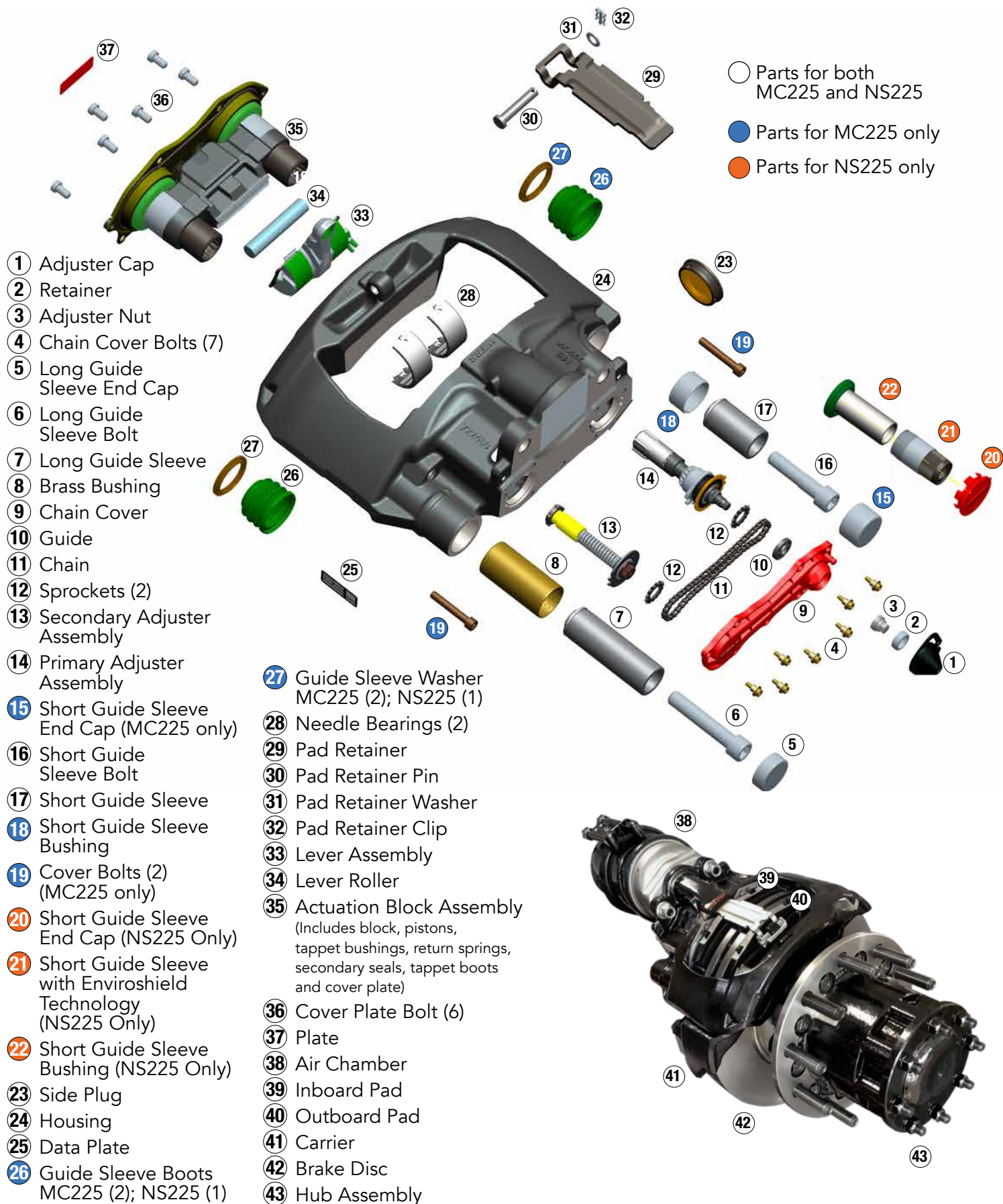


KS0010 Caliper Service Tool Kit

MC225, NS225



GLOSSARY



FITTING INSTRUCTIONS FOR MC225 & NS225 CALIPERS

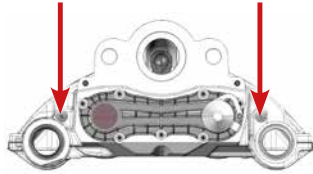
Symbol Legend

Warning	Important Hint	Important Specification	Visual Inspection Required	Take Notes	Use suitable lifting equipment	Read Carefully	Important Torque Spec	Listen for Clicks

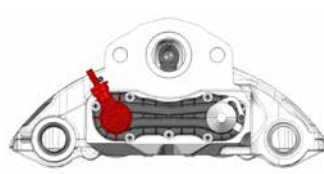
Please pay special attention to instructions in RED.

Caliper Identification

MC225 both bolts visible

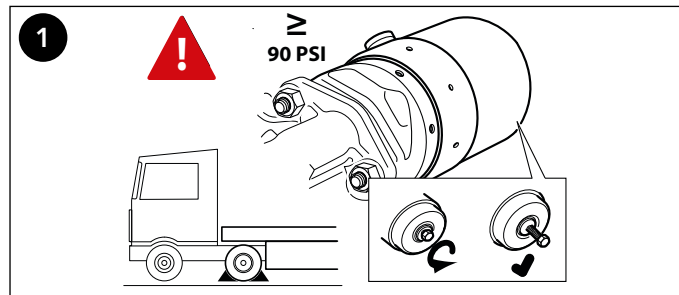


NS225: No bolts

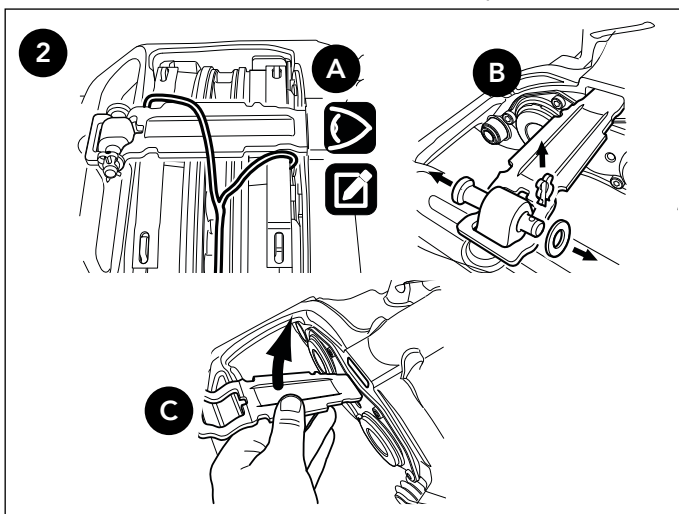


Fitting Instructions Intro for MC225 & NS225

DO NOT use air wrenches or hammers. Their use will damage the product, prevent correct function and will void the warranty.



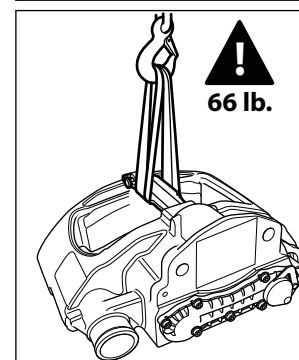
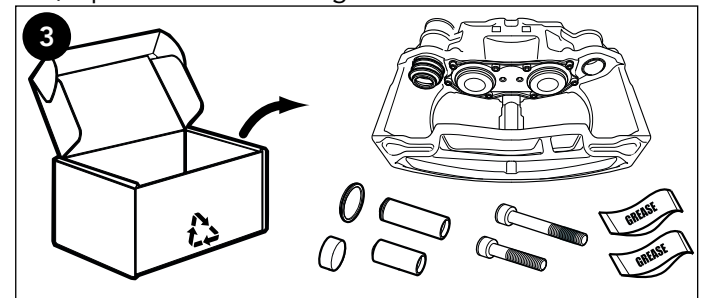
1 Ensure the vehicle is securely chocked before releasing the parking brake. Remove the wheel as recommended by the manufacturer. Cage the spring brake or use a minimum hold off pressure of 90 psi (6 bar). Remove the air chamber and disconnect the pad wear sensor cable (if fitted) from the caliper.



2 Make note of the pad wear warning indicator (PWWI) cable arrangement (if fitted) **A** and remove the pads and retainer. Remove the pad retainer by removing the clip, washer and pin. **B** Replace used parts with the new ones provided. Remove both pads and springs and visually inspect; replace if worn or damaged. Remove the guide sleeve protective caps, guide sleeves and bolts. **C**

! Before removing the guide sleeve bolts, ensure that the caliper cannot move or fall to avoid injury.

Replace used parts with the new ones provided. Remove the old caliper assembly using suitable lifting equipment for the caliper. Visually inspect and, if necessary, clean the carrier and disc; replace if worn or damaged.

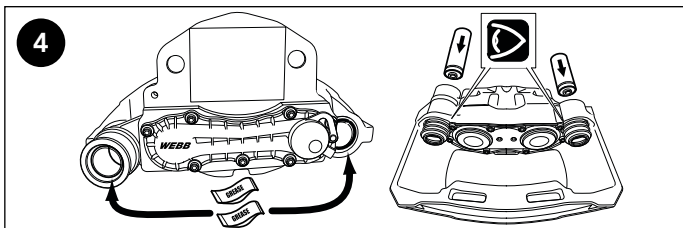


3 Remove the new caliper and guide sleeve kit from the packaging. Use suitable lifting equipment for the caliper.

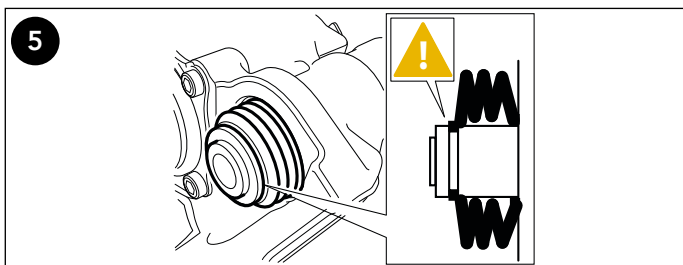
For MC225 see next page.
For NS225 see page 15

FITTING INSTRUCTIONS FOR MC225 & NS225 CALIPERS

Fitting Instructions For MC225 Only (For NS225 see page 15)

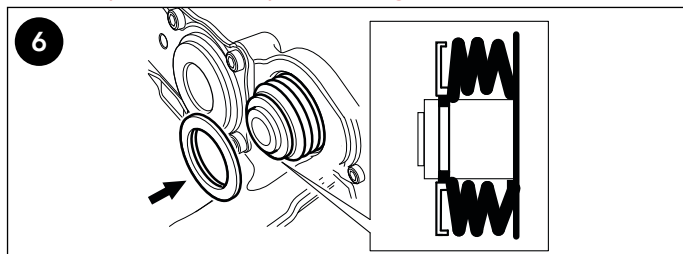


4 Grease both guide sleeves using the grease packets provided. Slide the guide sleeves in to the bushings in the directions indicated above.

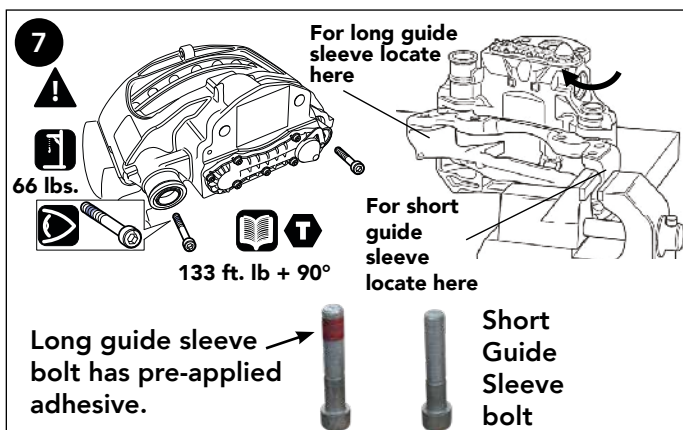


5 Insert the boots into the sealing groove in the guide sleeves ensuring they seal correctly all around the sleeves.

! Apply a small amount of grease to help the boot slip into the groove.



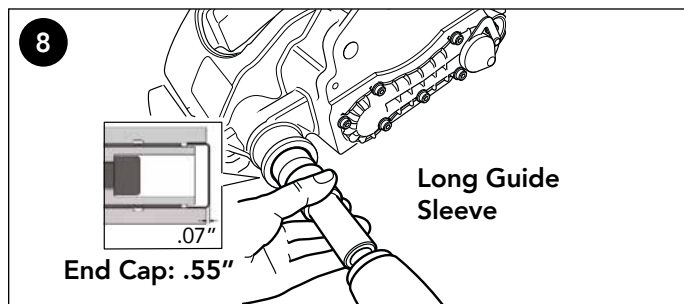
6 Position the plastic washer over the boots to retain them in the sealing groove in the guide sleeves. Ensure that the washer is in the correct orientation.



7 Ensure the carrier threads are clean, dry and free of lubrication and/or residuals of pre-applied adhesive (the long guide sleeve bolt has a pre-applied adhesive).

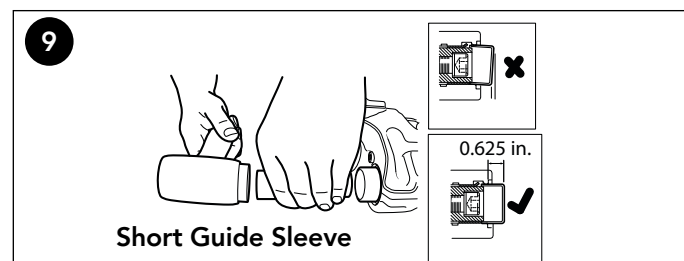
If the caliper is being fitted on the vehicle, lift the caliper over the carrier and insert the bolts into the carrier. Use suitable lifting equipment for the caliper. Ensure the correct new bolts are used for each guide sleeve. If the caliper is being fitted away from the vehicle, attach the carrier to the caliper by hand tightening each bolt into the carrier. Then, move the assembly to a vice and ensure the carrier is securely located to resist the bolt torque. Tighten both bolts to 133 ft. lb., then tighten by a further 90 degrees. Check that the caliper slides easily on the guide sleeves.

! The pre-assembled pad retainer can be used to lift the caliper if done with care. Never hold the caliper with your fingers between the caliper and the carrier - there is a risk of injury.



8 Insert the protective cap for the long guide sleeve into the caliper bore – protective cap and bore must be clean and free from lubrication. Press the metal protective cap into the long guide sleeve bore ensuring it is seated squarely until the cap is flush with the cast boss.

! Fitting the protective cap(s) can only be done after the caliper has been fully bolted to the carrier. The guide sleeve boot(s) must be in a compressed condition or the caliper's freedom of movement will be limited.

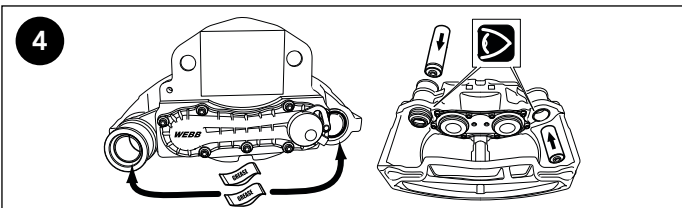


9 Insert the protective cap for the short guide sleeve into the caliper bore – protective cap and bore must be clean and free from lubrication. Press the protective cap into the bore until the cap protrudes .625" from the cast boss, ensuring it is seated squarely.

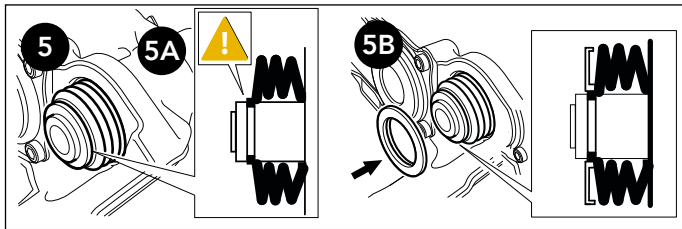
This completes steps for MC225, skip to step 10 on page 16 to continue.

FITTING INSTRUCTIONS FOR MC225 & NS225 CALIPERS

Fitting Instructions For NS225 Only (For MC225 see page 14)



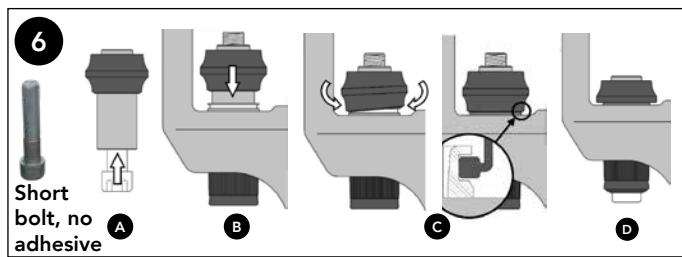
4 Grease both guide sleeves using the grease packets provided. Slide the guide sleeves into the brass bushing in the directions indicated above



5 Insert the boot into the sealing groove in the long guide sleeve ensuring it seals correctly all around the sleeve.

! Apply a small amount of grease to help the boot slip into the groove.

5B Position the plastic washer over the boot to retain it in the sealing groove in the long guide sleeve. Ensure that the washer is in the correct orientation.

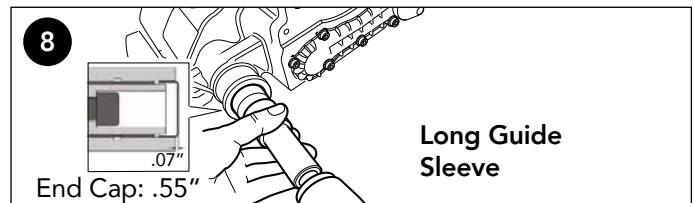


6 **A** Fit the short bolt into the guide sleeve with pre-assembled rubber boot in the direction indicated.
B Slide the guide sleeve and bolt into the rubber bushing in the direction indicated.
C Insert the boot into the sealing groove in the housing retainer ensuring it seals correctly all round the groove.
D Roll the guide sleeve boot bellows back against the housing and push the bolt back into the rubber bushing to provide clearance with the carrier during assembly.



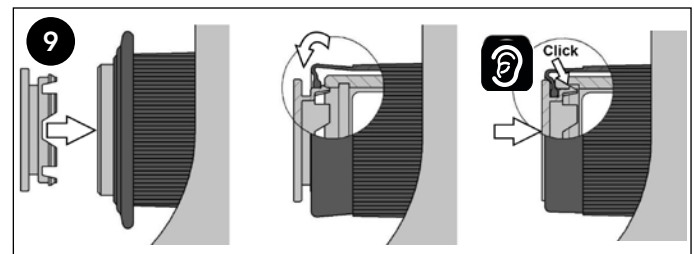
7 Ensure the carrier threads are clean, dry and free of lubrication and/or residuals of pre-applied adhesive (the long guide sleeve bolt has a pre-applied adhesive). If the caliper is being fitted on the vehicle, lift the caliper over the carrier and insert the bolts into the carrier. Use suitable lifting equipment for the caliper. Ensure the correct new bolts are used for each guide sleeve. If the caliper is being fitted away from the vehicle, attach the carrier to the caliper by hand tightening each bolt into the carrier. Then, move the assembly to a vice and ensure the carrier is securely located to resist the bolt torque. Tighten both bolts to 133 ft. lb., then tighten by a further 90 degrees. Check that the caliper slides easily on the guide sleeves.

! The pre-assembled pad retainer can be used to lift the caliper if done with care. Never hold the caliper with your fingers between the caliper and the carrier - there is a risk of injury.



8 Insert the protective cap for the long guide sleeve into the caliper bore – protective cap and bore must be clean and free from lubrication. Press the metal protective cap into the long guide sleeve bore ensuring it is seated squarely until the cap is flush with the cast boss.

! Fitting the protective cap(s) can only be done after the caliper has been fully bolted to the carrier. The guide sleeve boot(s) must be in a compressed condition or the caliper's freedom of movement will be limited.

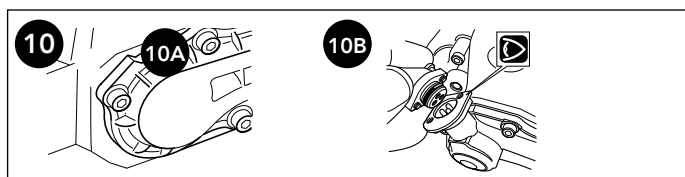


9 Stretch the rubber bushing bellows over the short guide sleeve and position the plastic cap in the end of the guide sleeve bore – do not push into the bore yet. Slide the bellows back over the plastic cap, ensuring it locates correctly all around the groove, and then push the cap firmly into the guide sleeve so that it clicks into place.

This completes steps for NS225, skip to step 10 on page 16 to continue.

FITTING INSTRUCTIONS FOR MC225 & NS225 CALIPERS

Fitting Instructions Finish for MC225 & NS225

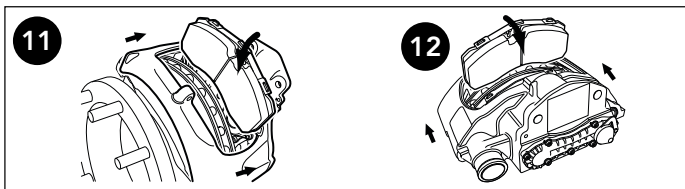


10 If the carrier was removed from the vehicle, reinstall the caliper and carrier assembly in accordance with the vehicle manufacturer's recommendations. Reconnect the pad wear sensor cable connector (where applicable).

10A Chain cover without pad wear sensor - no action necessary.

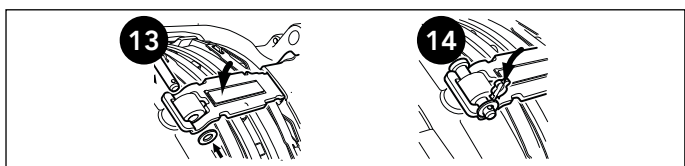
10B Chain cover with screw/clip type connector - engage the connector and then clip or tighten the 2 screws.

! Ensure the pad wear sensor cable connector is clean and free from grease, dirt and moisture.



11 Slide caliper inboard and insert inner brake pad and spring.

12 Slide caliper outboard and insert outer brake pad and spring.



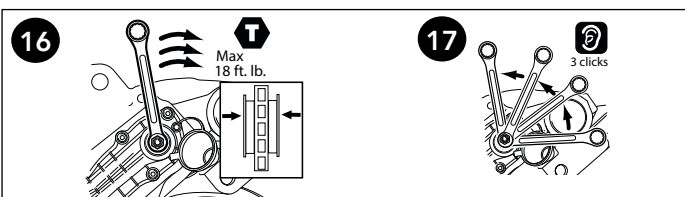
13 Insert the new pad retainer in the slot in the caliper and depress to enable the insertion of the pad retainer pin. Position the washer over the pad retainer pin.

14 Press the clip through the pad retainer pin to secure.

! It is recommended that the pad retainer pin, where possible, is installed with pin head uppermost.

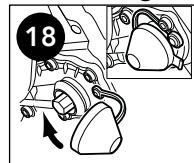


15 Refit the pad wear warning indicator (PWWI) cable and clips in the same orientation as when removed. Reconnect the pad wear sensor cable connector (where applicable).



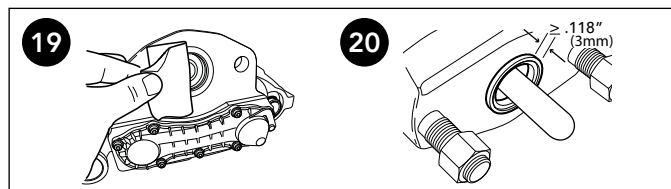
16 Turn the adjuster clockwise until the pads come into contact with the disc - do not exceed 18 ft. lb. torque.

17 Turn back the adjuster 3 clicks and check the pad-to-disc running clearance.



18 Check for free rotation of the disc. Refit the adjuster cap.

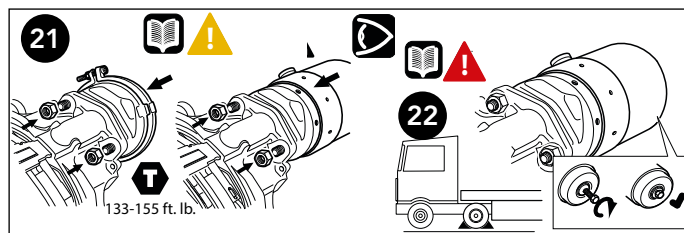
! Opening or dismantling of the caliper is not authorized and will void your warranty.



19 Remove the adhesive tape in the area of the air chamber attachment. Take care that no dirt enters the brake caliper.

20 Visually inspect and, if necessary, clean the air chamber mounting and sealing surface. Replace if damaged.

! If the air chamber seal protrudes less than .118" (3 mm) the brake chamber must be replaced.



21 Reinstall the air chamber in the same orientation as when removed, in accordance with the vehicle manufacturer's recommendations. Tighten the nuts to 133-155 ft. lb. (unless specified differently in the vehicle manufacturer's recommendations).

! In order not to tilt the air chamber during its attachment, the nuts must be gradually tightened symmetrically with a suitable tool.

22 Replace the wheel as recommended by the vehicle manufacturer. Uncage the spring brake and apply the parking brake prior to removing the chocks from the vehicle. After releasing the parking brake, apply the brake 10 times and then road test the vehicle.

For additional information, please visit us at WebbADB.com



Quality Assurance

The end of the line test station shown above ensures correct performance of every caliper we produce. All information generated by our test station is recorded and traceable via the ID tag placed onto every Webb caliper (shown right). The ID tag will only be produced if the caliper passes all internal performance criteria.

Warranty

Webb Air Disc Brake Calipers cannot compensate for other deficiencies in the brake system, therefore, please ensure all other components of the air disc brake system are functioning properly before contacting Webb Wheel Products for warranty consideration. Webb Wheel Products, Inc. ("Webb Wheel") warrants to the original retail purchaser of Webb Air Disc Brake calipers, that when installed and maintained on vehicles in accordance with Webb Air Disc Brake installation and maintenance instructions, the Webb Air Disc Brake calipers will be free of defects in material or workmanship under normal use for a specified period as outlined in: <http://webbairdiscbrakes.com/test/warranty.html>.

The warranty period begins from the date of purchase from an authorized Webb distributor and should be registered online at <http://webbairdiscbrakes.com/test/register.php>. If proof of purchase is not provided when filing a warranty claim, the start of the warranty period defaults back to the caliper's original date of manufacture.



WEBB TO KNORR-BREMSE/BENDIX CROSS REFERENCE

Knorr-Bremse/ Bendix Part #	Webb Part #	Knorr-Bremse/ Bendix Part #	Webb Part #	Knorr-Bremse/ Bendix Part #	Webb Part #	Knorr-Bremse/ Bendix Part #	Webb Part #
802090	BR4700-41	K097846	BR4700-42	K029101	KL1400	K109957X	BR4700
802091	BL4700-41	K097846SC	BR4700-42	K034699	KR1400	K109958X	BL4700
802984	BR4400-40	K097847	BL4700-42	K034700	KL1400	K109961X	BR4700
802985	BL4400-40	K097847SC	BL4700-42	K035432	KR1400	K109962X	BL4700
K001278	KT1001	K097848	BR4700	K035433	KL1400	K110105	KR1400
K003783	KL1400	K097848	BR4700	K045790	KL1400	K110106	KL1400
K003784	KR1400	K097849	BL4700	K045791	KR1400	K110269	KR1400
K003803	KL1400	K097849	BL4700	K045792	KL1400	K110270	KL1400
K003804	KR1400	K097850	BR4700-41	K045793	KR1400	K110285	KR1400
K003811	KL1400A	K097850SC	BR4700-41	K045794	KL1400	K110286	KL1400
K003812	KR1400A	K097851	BL4700-41	K045795	KR1400	K113887X	BR4400
K014989	KR1400A-01	K097851SC	BL4700-41	K048681	KR1400	K113888X	BL4400
K014990	KL1400A-01	K109957X	BR4700-42	K048682	KL1400	K114142	KR1400
K015013	KR1400-01	K109958X	BL4700-42	K051223	KR1400	K114143	KL1400
K015014	KL1400-01	K109959	BR4700	K051224	KL1400	K124524	KR1400
K015015	KR1400-01	K109960	BL4700	K053667	KR1400	K125625	KR1400
K019174	BR4700	K109961X	BR4700-41	K053668	KL1400	K125627	KR1400
K019175	BL4700	K109962X	BL4700-41	K081142	BR4700	K125628	KR1400
K019180	BR4400	K113887X	BR4400-40	K081143	BL4700	K125629	KR1400
K019181	BL4400	K113888X	BL4400-40	K081256	BR4700	K125630	KR1400
K021299	BR4700-42	K129298	BR4400	K081257	BL4700	K125631	KL1400
K021300	BL4700-42	K129299	BL4400	K081258	BR4700	K125632	KL1400
K043288	BT4040	K147135	BL4700-42	K081259	BL4700	K125633	KL1400
K051853	BT4041	K147136	BR4700-42	K097198	KR1400	K125665	KL1400
K056559	BT4042	K147429	BL4700-41	K097199	KL1400	K125666	KL1400
K081142	BR4700-41	K147430	BR4700-41	K097844	BR4700	K125667	KR1400
K081143	BL4700-41	K021299	BR4700	K097845	BL4700	K125668	KR1400
K081256	BR4700-42	K021300	BL4700	K097846	BR4700	K125672	KL1400
K081257	BL4700-42	K029092	KR1400	K097847	BL4700	K128340	KL1400
K081258	BR4700	K029093	KL1400	K097848	BR4700	K128341	KR1400
K081259	BL4700	K029094	KR1400	K097849	BL4700	K129298	BR4400
K097844	BR4700	K029095	KL1400	K097850	BR4700	K129299	BL4400
K097844SC	BR4700	K029098	KR1400	K097851	BL4700	K12AT	KL1400
K097845	BL4700	K029099	KL1400	K108189	KR1400		
K097845SC	BL4700	K029100	KR1400	K108190	KL1400		

Get the Caliper Service Tool Kit

Part Number: KS0010

Webb MC225 and NS225 Caliper Service Kit

Tools and instructions for proper service and replacement

Includes the service tools you need to replace ...

- Tappet head, seal, and boot
- Short and Long Guide sleeve bushing and boot
- Short and Long Guide sleeve cover cap

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