

Dealer's Manual

ROAD	MTB	Trekking
City Touring/ Comfort Bike	URBAN SPORT	E-BIKE

Mount Adapter

SM-MA-F180P/P2
SM-MA-F203P/P
SM-MA-F203P/PM
SM-MA-F203P/L2
SM-MA-F220P/PM
SM-MA-F220P/PL
SM-MA-F220P/PL2
SM-MA90-F180P/P
SM-MA90-F203P/PM

SM-MA-F140P/D
SM-MA-F160P/D
SM-MA-R140P/D
SM-MA-R160P/D
SM-MA-R160D/D

SM-MA-F160P/S
SM-MA-F180P/S
SM-MA-F203P/S
SM-MA90-F160P/S
SM-MA-R160P/S
SM-MA-R180P/S
SM-MA-R203P/S
SM-MA90-R140P/S
SM-MA90-R160P/S
SM-MA90-R180P/S

Contents

Contents	2
IMPORTANT NOTICE	3
TO ENSURE SAFETY	4
List of tools to be used.....	5
Installation/removal	6
Post mount type.....	6
• SM-MA-F180P/P2, SM-MA-F203P/PM, SM-MA-F220P/PL, SM-MA-F220P/PL2, SM-MA90-F180P/P, SM-MA90-F203P/PM.....	7
• SM-MA-F203P/PL2.....	8
• SM-MA-F203P/P, SM-MA-F220P/PM	9
International-standard mount type.....	11
Flat mount type.....	14
• SM-MA-F140P/D, SM-MA-F160P/D	15
• SM-MA-R140P/D, SM-MA-R160P/D	16
• SM-MA-R160D/D	18




IMPORTANT NOTICE

- **This dealer's manual is intended primarily for use by professional bicycle mechanics.** Users who are not professionally trained for bicycle assembly should not attempt to install the components themselves using the dealer's manuals. If any part of the information on the manual is unclear to you, do not proceed with the installation. Instead, contact your place of purchase or a distributor for assistance.
- Make sure to read all manuals included with each product.
- Do not disassemble or modify the product other than as stated in the information contained in this dealer's manual.
- All manuals and technical documents are accessible online at <https://si.shimano.com>.
- For consumers who do not have easy access to the internet, please contact a SHIMANO distributor or any of the SHIMANO offices to obtain a hardcopy of the User's Manual.
- Please observe the appropriate rules and regulations of the country, state or region in which you conduct your business as a dealer.

For safety, be sure to read this dealer's manual thoroughly before use, and follow it for correct use.


The following instructions must be observed at all times in order to prevent personal injury and physical damage to equipment and surroundings.

The instructions are classified according to the degree of danger or damage which may occur if the product is used incorrectly.

 DANGER	Failure to follow the instructions will result in death or serious injury.
 WARNING	Failure to follow the instructions could result in death or serious injury.
 CAUTION	Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

TO ENSURE SAFETY

WARNING



- **Be sure to follow the instructions provided in the manuals when installing the product.** It is recommended that you use SHIMANO genuine parts. If bolts and nuts become loose or damaged, the bicycle may suddenly fall over, result in a serious injury.
-  Wear approved eye protection while performing maintenance tasks such as replacing components.

NOTICE

- Check the dealer's manual for the brake caliper to install.

List of tools to be used

The following tools are needed for installation/removal, adjustment, and maintenance purposes.

Tool	
	4 mm hexagon wrench
	5 mm hexagon wrench

Installation/removal

Post mount type

Select the mount adapter to install based on the combination of the mount size of the frame to use and the disc brake rotor.

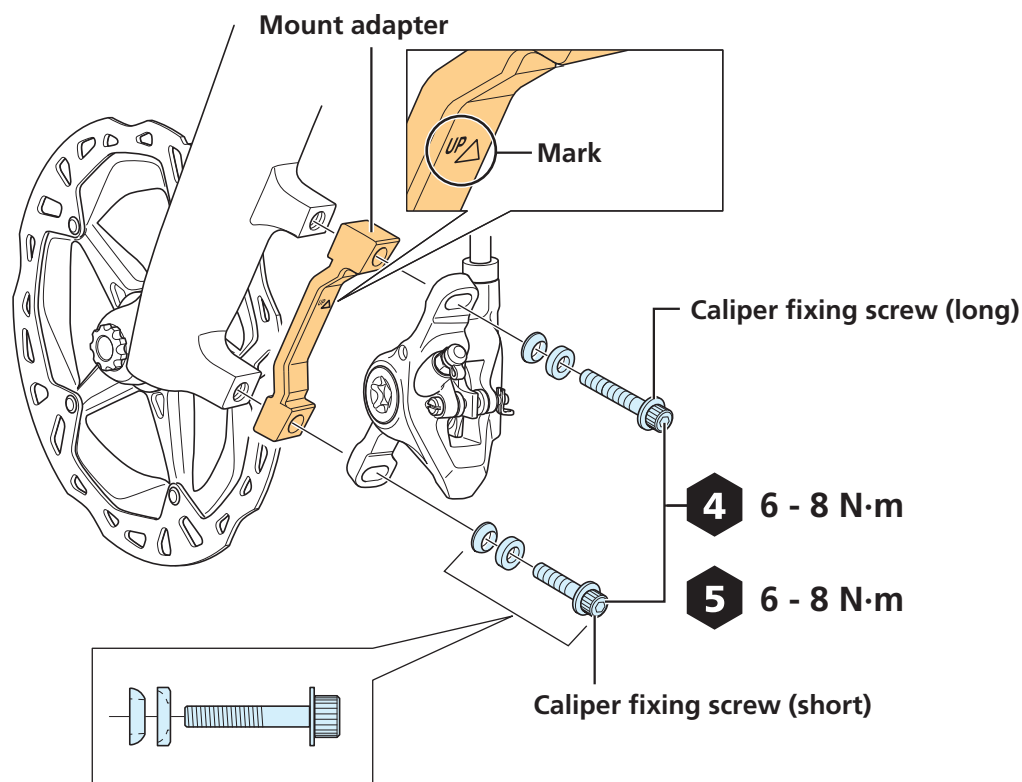
For both front and rear		Disc brake rotor size		
		140 mm	160 mm	180 mm
Mount size	140 mm	Direct	SM-MA-F180P/P2 SM-MA90-F180P/P	-
	160 mm	-	Direct	SM-MA-F180P/P2 SM-MA90-F180P/P
	180 mm	-	-	Direct
	200 mm	-	-	-
	203 mm	-	-	-
	220 mm	-	-	-

For both front and rear		Disc brake rotor size	
		203 mm	220 mm
Mount size	140 mm	-	-
	160 mm	SM-MA-F203P/P	-
	180 mm	SM-MA-F203P/PM SM-MA90-F203P/PM	SM-MA-F220P/PM
	200 mm	SM-MA-F203P/PL2	SM-MA-F220P/PL2
	203 mm	Direct	SM-MA-F220P/PL
	220 mm	-	Direct

SM-MA-F180P/P2, SM-MA-F203P/PM, SM-MA-F220P/PL, SM-MA-F220P/PL2, SM-MA90-F180P/P, SM-MA90-F203P/PM

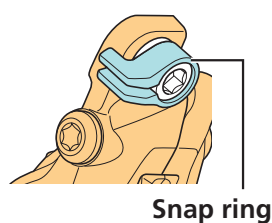
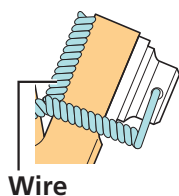
1. Set the mount adapter onto the brake caliper, then install it to the frame.

Check the dealer's manual for the brake caliper to install for information on the tool used for the caliper fixing screws.



NOTICE

- Secure the caliper fixing screw, then retain it. Refer to the dealer's manual of the brake caliper and retain it by installing a snap ring or by winding wire around it.

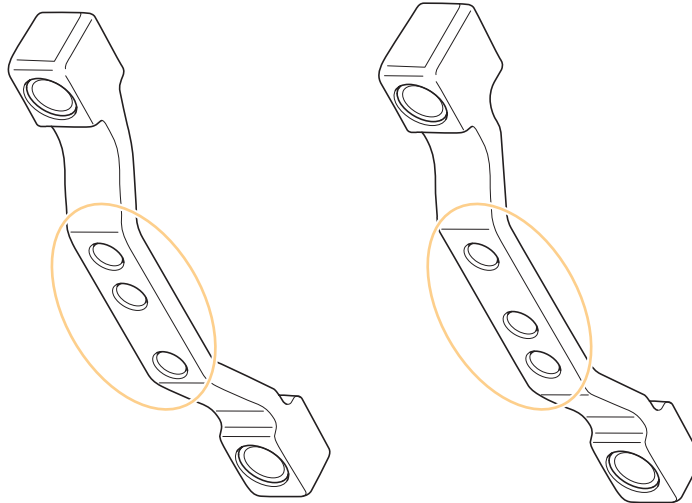


TECH TIPS

- The SM-MA-F220P/PL and SM-MA-F220P/PL2 can be identified by the recessed area on the reverse side.

SM-MA-F220P/PL

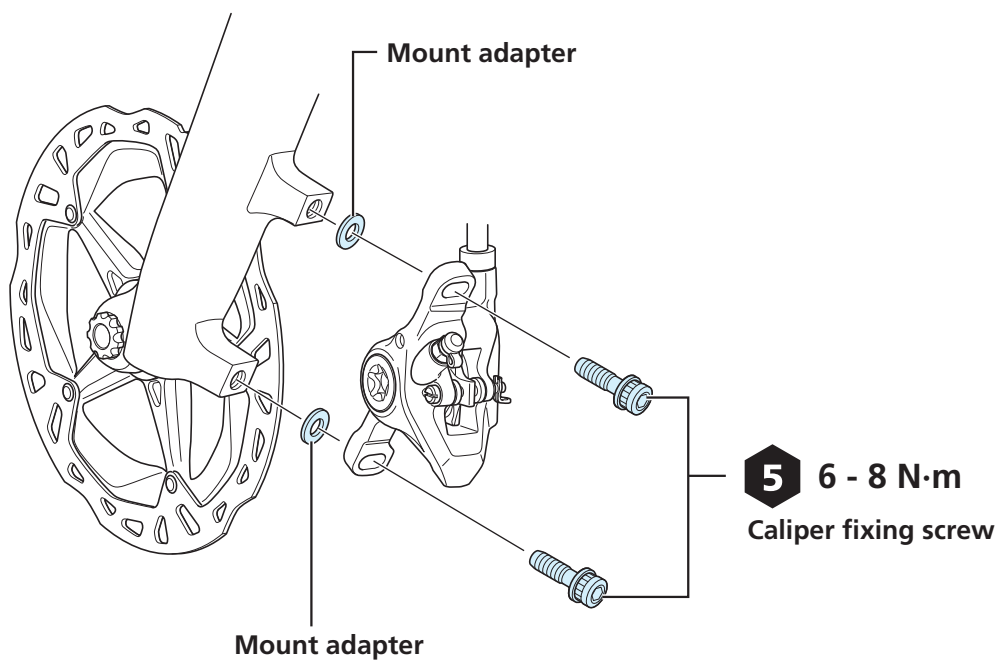
SM-MA-F220P/PL2



SM-MA-F203P/PL2

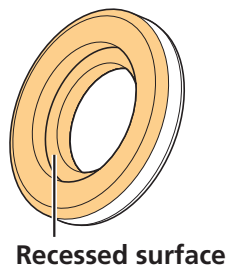
1. Set the mount adapters onto the brake caliper, then install it to the frame.

Use the caliper fixing screws included with the mount adapter.

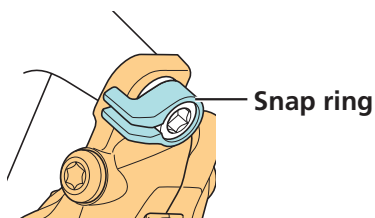


NOTICE

- Install the mount adapter with the recessed surface on the frame side.

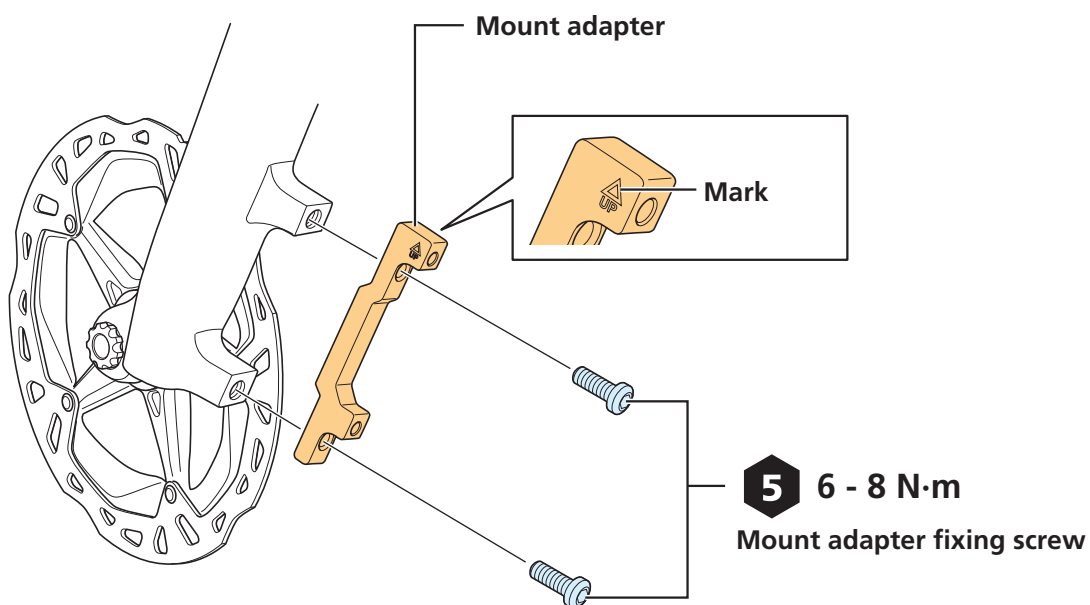


- Secure the caliper fixing screw, then retain it using the snap ring included with the mount adapter.



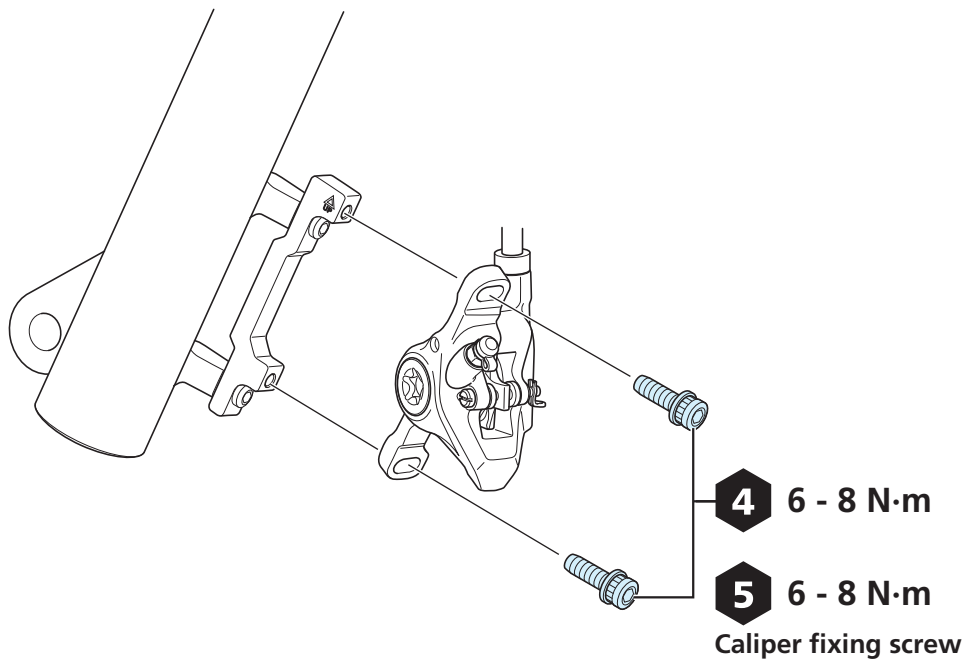
SM-MA-F203P/P, SM-MA-F220P/PM

1. Install the mount adapter to the frame.



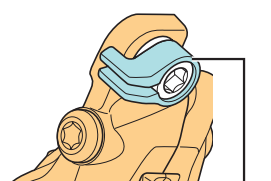
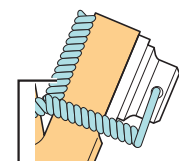
2. Install the brake caliper to the mount adapter.

Check the dealer's manual for the brake caliper to install for information on the tool used for the caliper fixing screws.



NOTICE

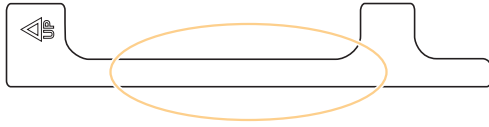
- Secure the caliper fixing screw, then retain it. Refer to the dealer's manual of the brake caliper and retain it by installing a snap ring or by winding wire around it.



TECH TIPS

- The SM-MA-F203P/P and SM-MA-F220P/PM can be identified by the presence or absence of an uneven side.

SM-MA-F203P/P



SM-MA-F220P/PM



International-standard mount type

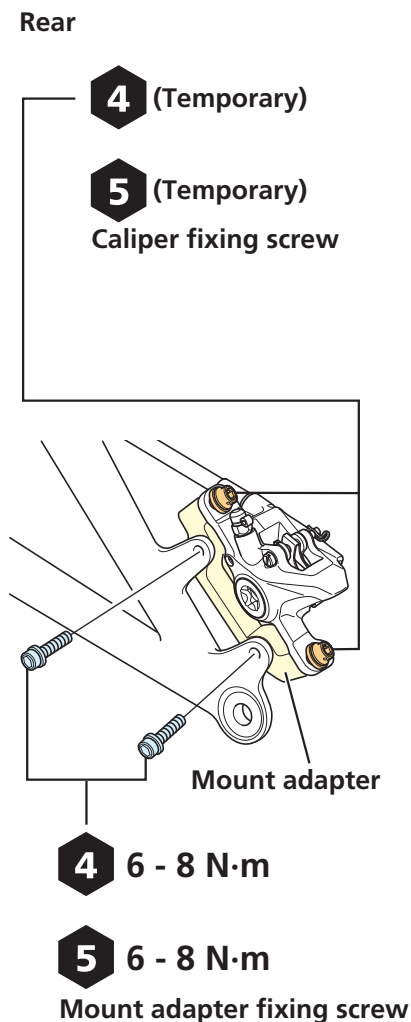
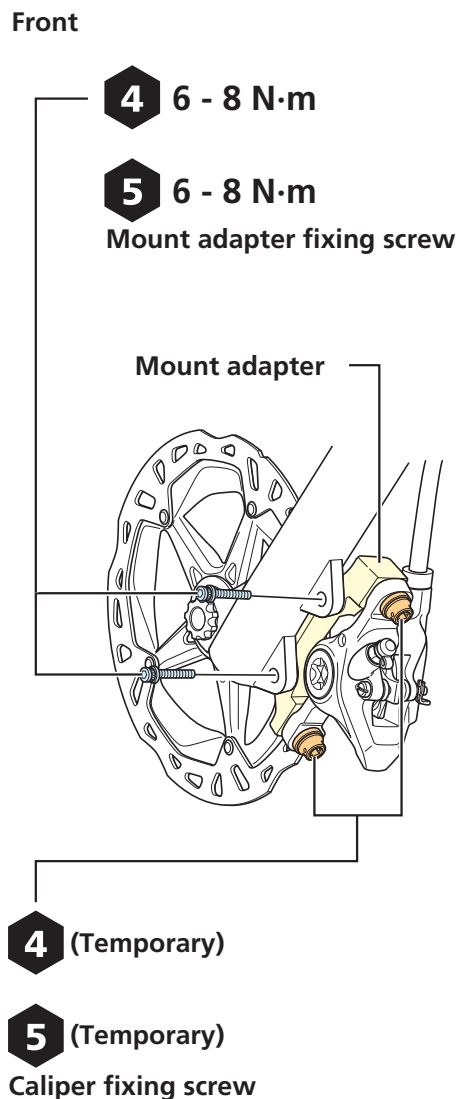
Select the mount adapter to install based on the combination of the location to use (front / rear) and the disc brake rotor.

Location to use	Disc brake rotor size			
	140 mm	160 mm	180 mm	203 mm
Front	-	SM-MA-F160P/S SM-MA90-F160P/S	SM-MA-F180P/S	SM-MA-F203P/S
Rear	SM-MA90-R140P/S	SM-MA-R160P/S SM-MA90-R160P/S	SM-MA-R180P/S SM-MA90-R180P/S	SM-MA-R203P/S

1. Temporarily install the brake caliper on the mount adapter, then install it onto the frame.

Tighten with the mount adapter fixing screws.

* Leave enough slack so that the brake caliper can still move horizontally.

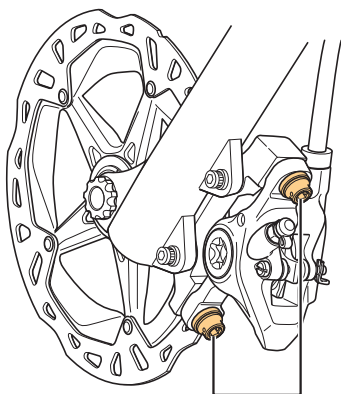


2. Depress the brake lever so that the disc brake rotor is held between the pads, then tighten the caliper fixing screws.

Check the dealer's manual for the brake caliper to install for information on the tool used for the caliper fixing screws.

If the brake hose is not already installed in the caliper, install the brake hose then perform the step.

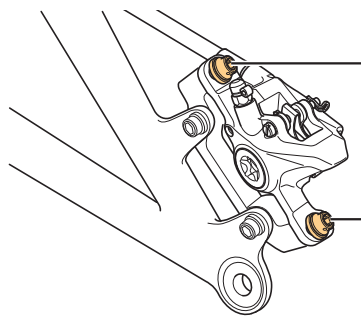
Front



4 6 - 8 N·m

5 6 - 8 N·m
Caliper fixing screw

Rear



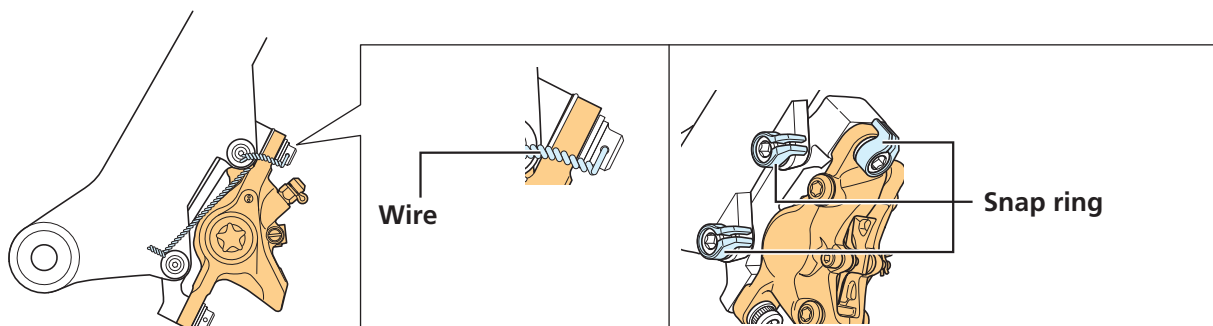
4 6 - 8 N·m

5 6 - 8 N·m
Caliper fixing screw

3. Secure the caliper fixing screw.

In order to prevent the screws from loosening, secure the caliper fixing screws and mount adapter fixing screws with snap rings or a wire.

* Install the snap rings or pass the wire through the holes in the heads of the fixing screws and twist as shown in the figure.



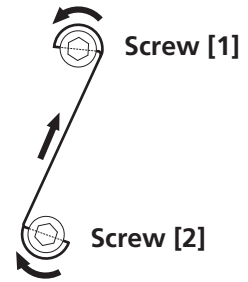
NOTICE

- Use the supplied snap rings. Other models of snap rings cannot be installed.



TECH TIPS

- If screw [1] loosens (turns counterclockwise), force is applied via the wire to turn screw [2] in the tightening direction (clockwise). However, screw [2] cannot turn any further in the tightening direction. Accordingly, this prevents screw [1] from turning in the loosening direction because it is also connected via the wire. If either screw begins to loosen, force will be applied to the other screw, thereby turning the loosened screw in the tightening direction. In other words, this system prevents the screws from loosening.



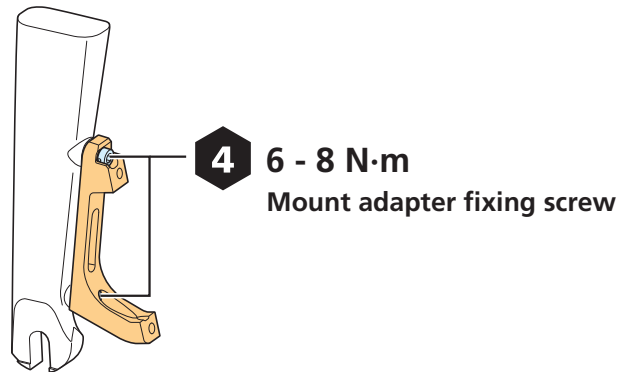
Flat mount type

Select the mount adapter to install based on the combination of the location to use (front / rear) and the disc brake rotor.

Location to use	Disc brake rotor size	
	140 mm	160 mm
Front	SM-MA-F140P/D	SM-MA-F160P/D
Rear	SM-MA-R140P/D	SM-MA-R160P/D SM-MA-R160D/D

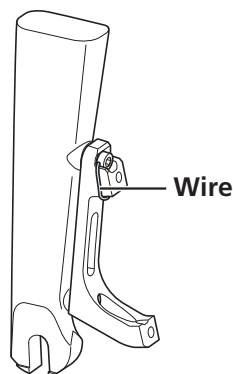
SM-MA-F140P/D, SM-MA-F160P/D

1. Install the mount adapter to the frame.



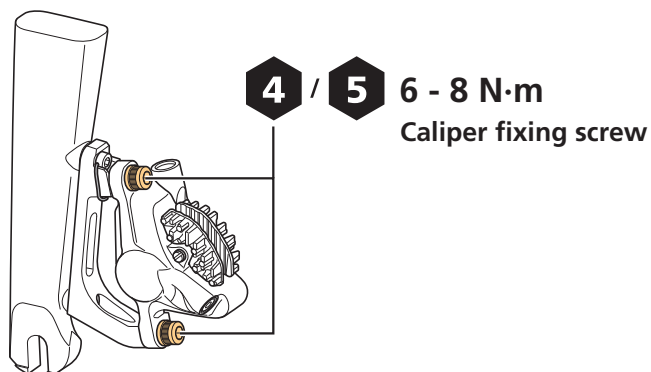
2. Secure the mount adapter fixing screws.

Secure the screws with a wire to prevent the screws from coming loose.



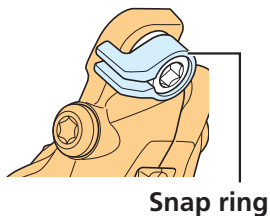
3. Depress the brake lever so that the disc brake rotor is held between the pads, then tighten the caliper fixing screws.

Check the dealer's manual for the brake caliper to install for information on the tool used for the caliper fixing screws. If the brake hose is not already installed in the caliper, install the brake hose then perform the step.



NOTICE

- Secure the caliper fixing screw, then retain it. Refer to the dealer's manual of the brake caliper for installation, and install a snap ring.



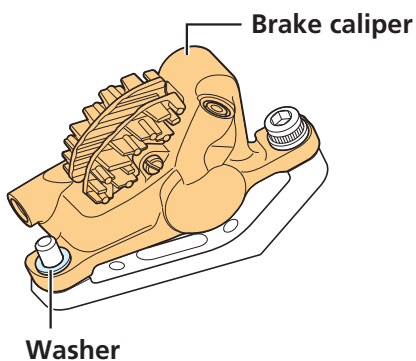
Snap ring

SM-MA-R140P/D, SM-MA-R160P/D

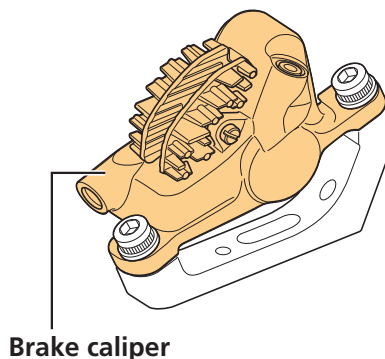
1. Set the brake caliper onto the mount adapter.

Insert the caliper fixing bolt to the SM-MA-R140P/D from the reverse side, and also set the washer.

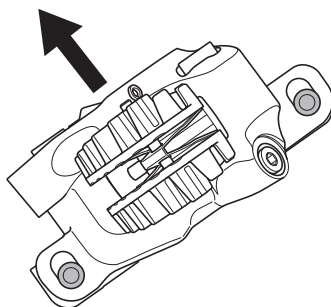
SM-MA-R140P/D



SM-MA-R160P/D

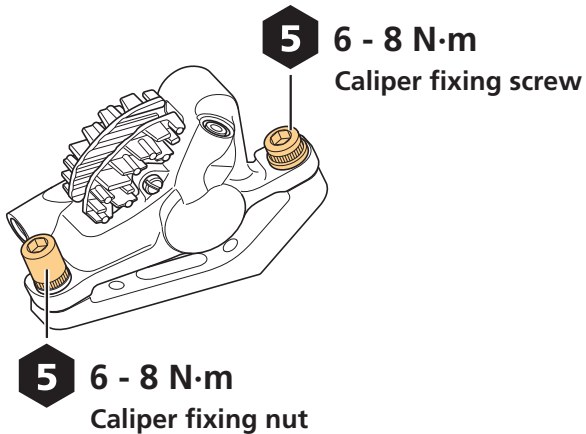


2. Pull the brake caliper to the inboard side.

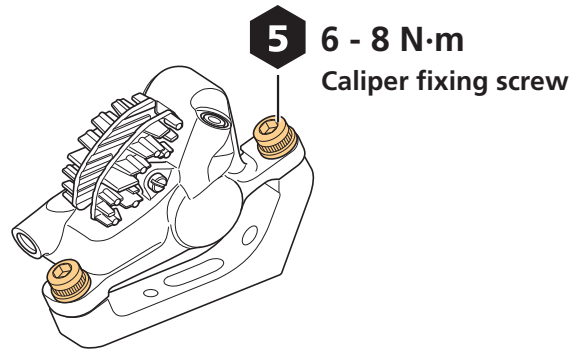


3. Secure the brake caliper.

SM-MA-R140P/D

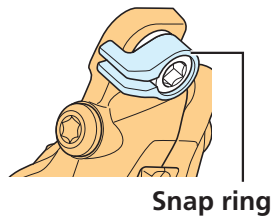


SM-MA-R160P/D

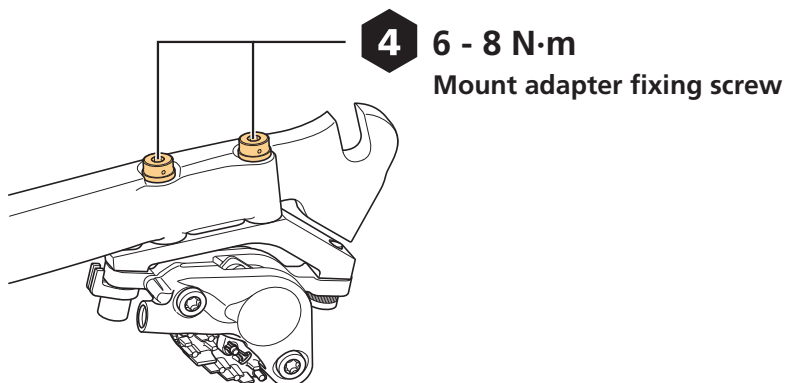


NOTICE

- Secure the caliper fixing screw, then retain it. Refer to the dealer's manual of the brake caliper for installation, and install a snap ring.

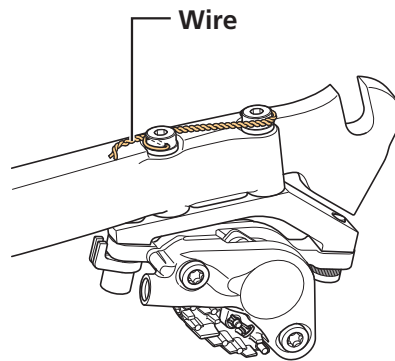


4. Depress the brake lever so that the disc brake rotor is held between the pads, then tighten the mount adapter fixing screws.



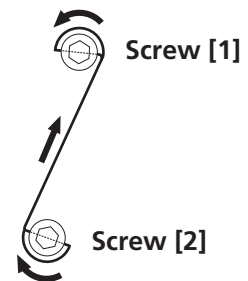
5. Secure the mount adapter fixing screws.

Secure the screws with a wire to prevent the screws from coming loose.



TECH TIPS

- If screw [1] loosens (turns counterclockwise), force is applied via the wire to turn screw [2] in the tightening direction (clockwise). However, screw [2] cannot turn any further in the tightening direction. Accordingly, this prevents screw [1] from turning in the loosening direction because it is also connected via the wire. If either screw begins to loosen, force will be applied to the other screw, thereby turning the loosened screw in the tightening direction. In other words, this system prevents the screws from loosening.



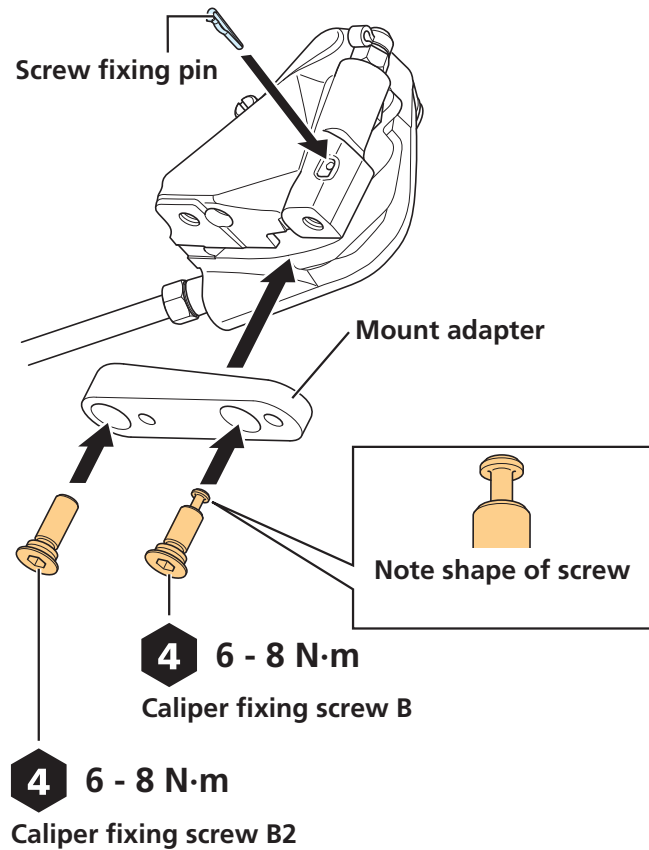
SM-MA-R160D/D

1. Attach the mount adapter to the brake caliper.

- (1) Tighten it using caliper fixing screws B/B2.

(2) Install the screw fixing pin.

* Check that the screw fixing pin is fully inserted all the way to the back.

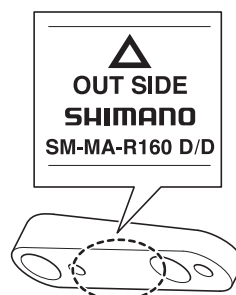


CAUTION

- Correctly install caliper fixing screw B. There are two types of caliper fixing screws, and only caliper fixing screw B can be retained using a screw fixing pin. Failing to install correctly may cause the caliper fixing screws to fall out or lead to insufficient force for holding the brake caliper.

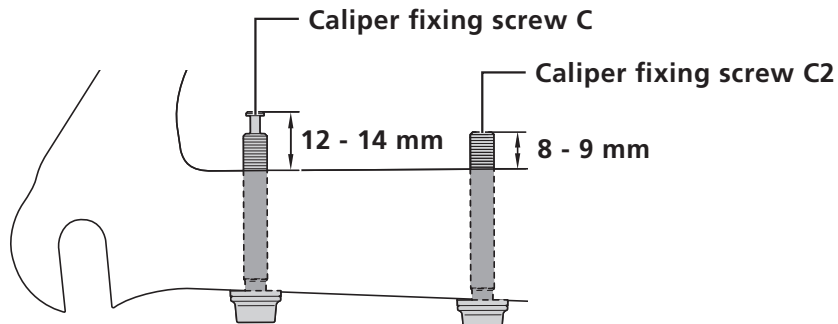
NOTICE

- Pay attention to the marking on the mount adapter when attaching it.



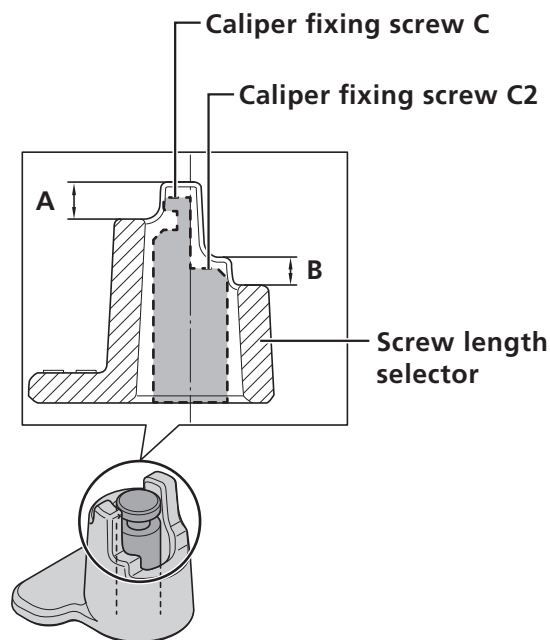
2. Insert the caliper fixing screws C/C2 into the frame mount area.

Make sure that the length of the protruding section of the caliper fixing screws C/C2 is the specified length.



NOTICE

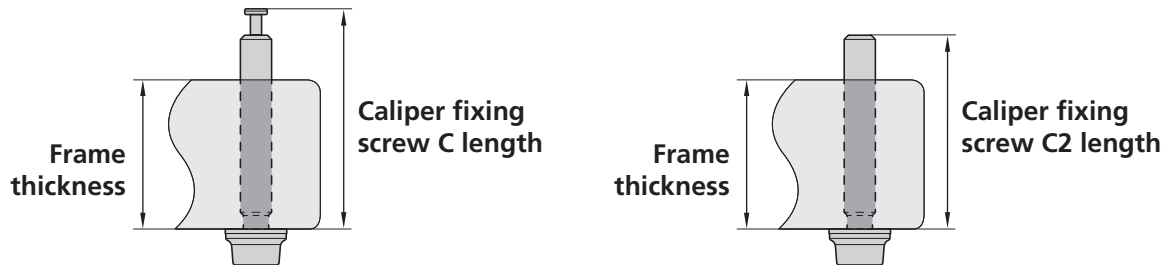
- When using a screw length selector:
 - Ensure the tip of caliper fixing screw C is within the range of dimension A.
 - Ensure the tip of caliper fixing screw C2 is within the range of dimension B.



- Do not add any additional spacers to caliper fixing screws C/C2 when checking the length.

NOTICE

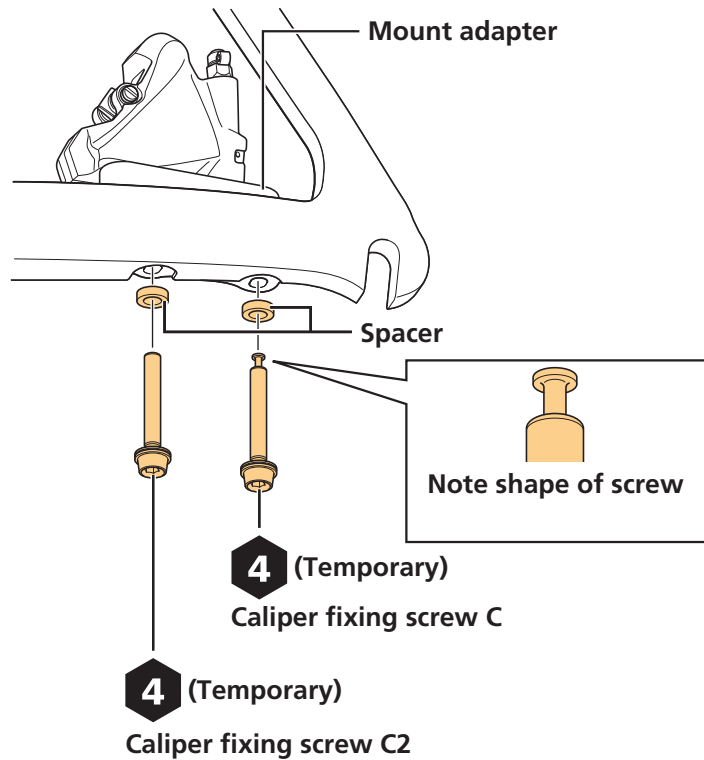
- The length of caliper fixing screws C/C2 to be used varies depending on the thickness of the frame. Use the caliper fixing screws C/C2 that is appropriate for the thickness of the frame.



Frame thickness	Caliper fixing screw C length	Caliper fixing screw C2 length
10 mm	23 mm (Y8N208000)	19 mm (Y2J708000)
15 mm	28 mm (Y8N208050)	24 mm (Y2J708050)
20 mm	33 mm (Y8PU08010)	29 mm (Y2HW08010)
25 mm	38 mm (Y8PU08020)	34 mm (Y2HW08020)
30 mm	43 mm (Y8PU08030)	39 mm (Y2HW08030)
35 mm	48 mm (Y8N208040)	44 mm (Y2J708040)

3. Temporarily install the mount adapter to the frame so that it can move left and right.

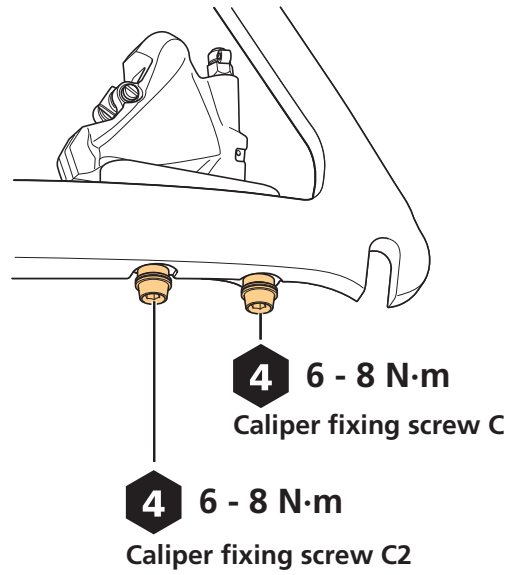
Temporarily install it using caliper fixing screws C/C2 with an additional spacer under each screw head.



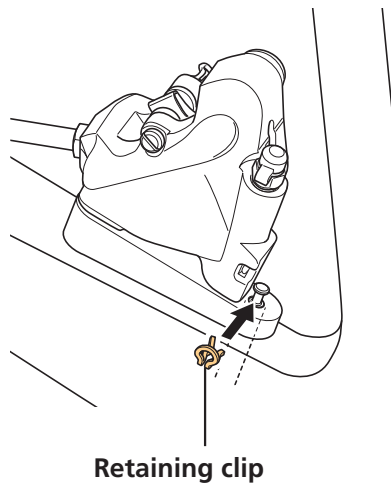
⚠ CAUTION

- Correctly install caliper fixing screw C. There are two types of caliper fixing screws, and only caliper fixing screw C can be retained using a screw fixing pin. Failing to install correctly may cause the caliper fixing screws to fall out or lead to insufficient force for holding the brake caliper.

4. Depress the brake lever so that the disc brake rotor is held between the pads, then tighten the caliper fixing screws C/C2.



5. Install the retaining clip.



SHIMANO

SHIMANO NORTH AMERICA BICYCLE, INC.

One Holland, Irvine, California 92618, U.S.A. Phone: +1-949-951-5003

SHIMANO EUROPE B.V.

High Tech Campus 92, 5656 AG Eindhoven, The Netherlands Phone: +31-402-612222

SHIMANO INC.

3-77 Oimatsu-cho, Sakai-ku, Sakai City, Osaka 590-8577, Japan

Please note: specifications are subject to change for improvement without notice. (English)

© Jun. 2021 by SHIMANO INC. ITP