

Dealer's Manual

Pedal

- PD-9000
- PD-6800
- PD-5800
- PD-5700-C
- PD-R550
- PD-R540-LA
- PD-M9000
- PD-M9020
- PD-M8000
- PD-M8020
- PD-M990
- PD-M995
- PD-T700
- PD-T420
- PD-T400
- PD-MT50

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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 local bicycle dealer for their assistance.

- Make sure to read all instruction manuals included with the product.
- Do not disassemble or modify the product other than as stated in the information contained in this dealer's manual.
- All dealer's manuals and instruction manuals can be viewed on-line on our website (<http://si.shimano.com>).
- 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 TO PARENT/GUARDIAN

- For child safety, make sure the child uses this product correctly by following the instructions below. Both guardians and children should gain an adequate understanding of the content of this manual. Failure to follow the provided instructions may lead to serious injury.

WARNING

- **Be sure to follow the instructions provided in the manuals when installing the product.**

It is recommended to use genuine Shimano parts only. If parts such as bolts and nuts become loose or damaged, the bicycle may suddenly fall over, which may cause serious injury.

In addition, if adjustments are not carried out correctly, problems may occur, and the bicycle may suddenly fall over, which may cause serious injury.

-  Be sure to wear safety glasses or goggles to protect your eyes while performing maintenance tasks such as replacing parts.
- After reading the dealer's manual thoroughly, keep it in a safe place for later reference.

Be sure to also inform users of the following:

If the warnings below are not followed, your shoes may not come out of the pedals when you intend or they may come out unexpectedly or accidentally, and severe injury may result.

Common descriptions regarding SPD-SL/SPD/Click'R pedals

- SPD-SL/SPD/Click'R pedals are designed to be released only when intended. They are not designed to be released automatically when you have fallen off the bicycle.
- Before attempting to ride with these pedals and shoes, make sure you understand the operation of the engagement/release mechanism for the pedals and cleats (shoes).
- Before you attempt to ride with these pedals and shoes, apply the brakes, then place one foot on the ground and practice engaging and releasing each shoe from its pedal until you can do so naturally and with minimal effort.

- Ride on level ground first until you become accustomed to engaging and releasing your shoes from the pedals.
- Before riding, adjust the spring tension of the pedals to your liking. If the spring tension of the pedals is low, the cleats may become accidentally released and you may lose balance and fall off the bicycle. If the spring tension of the pedals is high, the cleats cannot be easily released.
- When riding at low speed or when there is a possibility that you might need to stop riding, (for example, when doing a U-turn, nearing an intersection, riding uphill or turning a blind curve), release your shoes from the pedal beforehand so that you can quickly put your feet onto the ground at any time.
- Use a lighter spring tension for attaching the pedal cleats when riding in adverse conditions.
- Keep cleats and bindings out of dirt and debris to ensure proper engagement and release.
- Remember to check the cleats periodically for wear. When the cleats are worn, replace them, and always check the spring tension before riding and after replacing the pedal cleats.
- Do not continue riding the bicycle if the reflectors are dirty or damaged. Otherwise, it becomes more difficult for others to see you.

Descriptions regarding SPD-SL pedals

- Use only SPD-SL shoes with this product. Other types of shoe may not release from the pedals, or may release unexpectedly.
- Use only Shimano cleats (SM-SH10/SM-SH11/SM-SH12) and make sure that the mounting bolts are tightened securely to the shoes.
- Be sure to attach reflectors to the bicycle when traveling on public roads.

PD-R550

- These pedals have a wide adjustment range allowing cleats to be fixed to them with weaker force than required for SPD-SL pedals; therefore, they can be engaged with and released from the cleats easily.
- * If the cleat holding force is adjusted to be weak, using the pedals for aggressive movement or competition may cause the cleats to be accidentally released from the pedals and you may fall off the bicycle.

PD-R540-LA

- These pedals are for on-road recreation and so are designed to be engaged with and released from the cleats more easily than SPD-SL pedals. If these pedals are used in competition or aggressively, the cleats may become accidentally released from the pedals and you may fall off the bicycle.

SM-SH20 Cleat spacer

- This cleat spacer is designed to adjust the lengths of both the left and right legs when Shimano cleats are installed to Shimano road racing shoes. Never use other combinations.
- The cleats that are compatible with this cleat spacer are SM-SH10, SM-SH11, and SM-SH12.
- Also refer to the user's manuals for the applicable shoes and pedal before installing this cleat spacer to a shoe.

Descriptions regarding SPD pedals

- Use only SPD shoes with this product. Other types of shoe may not release from the pedals, or may release unexpectedly.
- Use only Shimano cleats (SM-SH51/SM-SH56) and make sure that the mounting bolts are tightened securely to the shoes.
- Reflectors (SM-PD60) are available for this pedal sold separately.
- Be sure to attach reflectors to the bicycle when traveling on public roads.

Descriptions regarding Click'R pedals

- These pedals are for recreation and so are designed to be engaged with and released from the cleats more easily than SPD pedals. If these pedals are used in competition or aggressively, the cleats may become accidentally released from the pedals and you may fall off the bicycle.
- Use only SPD shoes with this product. Other types of shoe may not release from the pedals, or may release unexpectedly.
- Use only Shimano cleats (SM-SH51/SM-SH56) and make sure that the mounting bolts are tightened securely to the shoes.

PD-MT50

- Reflectors (SM-PD60) are available for this pedal sold separately.
- Be sure to attach reflectors to the bicycle when traveling on public roads.

NOTE

Be sure to also inform users of the following:

- Check that there is no looseness in any joints or connections before riding the bicycle.
- Check that there is no looseness in the cleats or spacers before riding the bicycle.
- If pedaling performance does not feel normal, check the bicycle once more.
- If you experience any trouble with the rotating parts of the pedal, the pedal may require adjustment. Consult a dealer or an agency.
- Be sure to retighten the crank arms and pedals at periodic intervals at the place of purchase or a bicycle dealer.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

The actual product may differ from the illustration because this manual is intended mainly to explain the procedures for using the product.

LIST OF TOOLS TO BE USED

LIST OF TOOLS TO BE USED

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

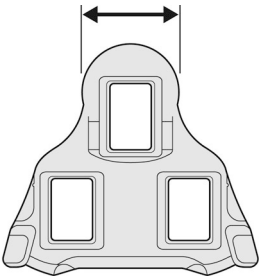
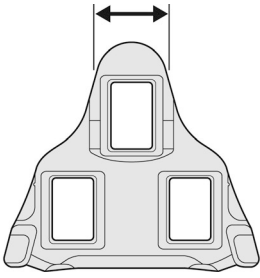
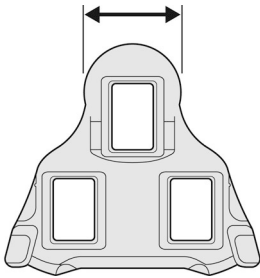
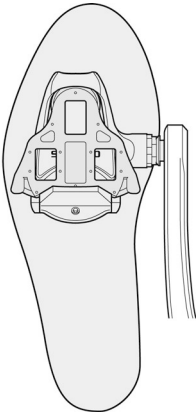
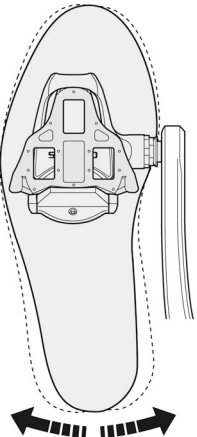
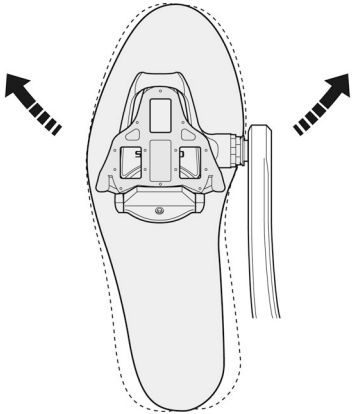
Tool		Tool		Tool	
	2.5mm Allen key		8mm spanner		Hexalobular[#10]
	3mm Allen key		10mm spanner		TL-PD33
	4mm Allen key		15mm spanner		TL-PD40
	5mm Allen key		17mm spanner		TL-PD63
	8mm Allen key		20mm spanner		
	7mm spanner		Screwdriver[#2]		

INSTALLATION

INSTALLATION

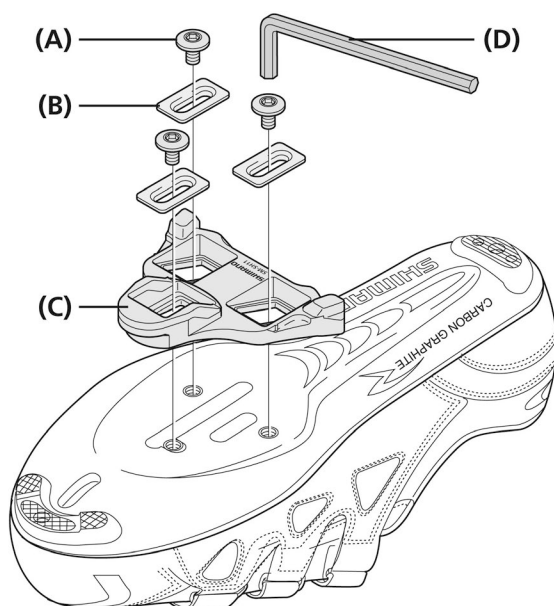
SPD-SL pedals (PD-9000/PD-6800/PD-5800/PD-5700-C/PD-R550/PD-R540-LA)

■ Cleat types

SM-SH10	SM-SH11 (PD-6800/5800/5700-C/R550/R540-LA: stand- ard)	SM-SH12 (PD-9000: standard)
Red	Yellow	Blue
Wide 	Narrow 	Wide 
Fixed mode There is no looseness when the shoes are firmly engaged with the pedals. There is no looseness. 	Self-aligning mode There is some sideways looseness when the shoes are engaged with the pedals. 	Front center pivot mode There is some sideways looseness centered on the front of the shoes. 

■ Attaching the cleats

Set the cleat on the bottom of each shoe as shown in the illustration, and then tighten the cleat mounting bolts, temporarily.



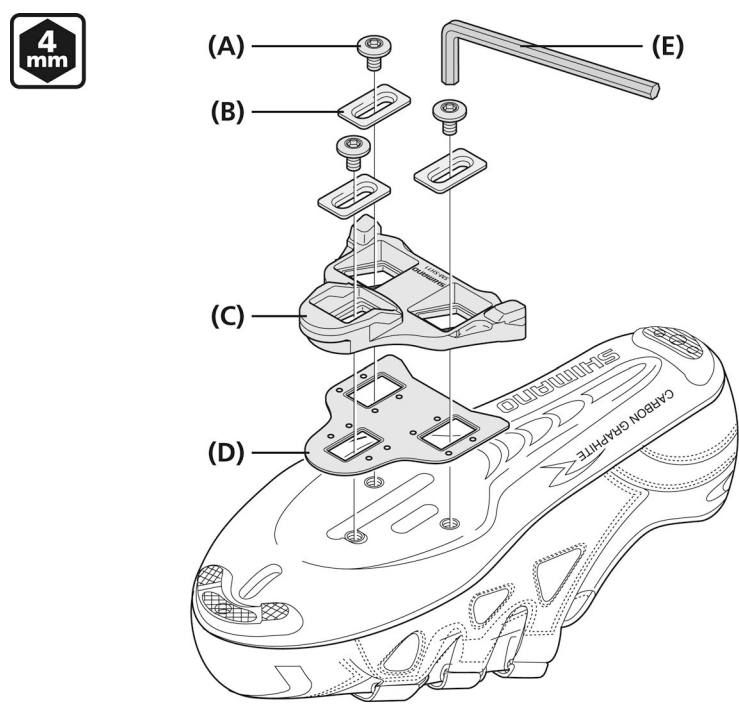
- (A) Cleat mounting bolt
- (B) Cleat washer
- (C) Cleat
- (D) 4mm Allen key

NOTE

When installing the cleat, use the cleat washer and the cleat mounting bolt included with the Shimano pedal. If other cleat mounting bolts are used, the cleat mounting section may become damaged.

■ When using the SM-SH20 cleat spacer (not included)

Temporarily attach the cleat spacer and the cleat from the back side of the shoe in the order indicated in the illustration.



- (A) Cleat mounting bolt
- (B) Cleat washer
- (C) Cleat
- (D) Cleat spacer
- (E) 4mm Allen key

NOTE

When installing the cleat, use the dedicated cleat mounting bolt (standard bolt included with the pedal or the medium or long bolt included with SM-SH20) and the cleat washer included with the pedal.

Different adjustment ranges have their own appropriate bolt lengths. Use the bolt of appropriate length according to the following table.

Adjustment range	1mm Cleat spacer	2mm Cleat spacer	Proper bolt
1mm	1	-	Standard or M
2mm	-	1	M
3mm	1	1	M or L
4mm	-	2	L
5mm	1	2	L

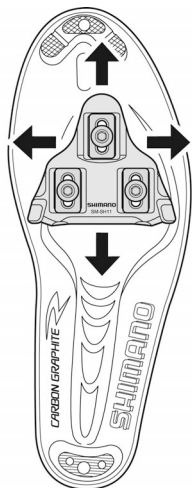
NOTE

If a bolt of inappropriate length is used, the bolt may not reach the nut or the mounting section of the cleat may become damaged.

- * Use repeatedly Adjust to 1 - 5mm
- * **Reference**
Standard: 8mm M: 10mm L: 13.5mm

■ Adjusting cleat position

1. The cleat has an adjustment range of 15mm front to back and 5mm right to left.
After temporarily fixing the cleats, adjust them by repeatedly engaging and releasing the cleats, one by one, to determine the optimal necessary cleat positions.



2. After the optimal cleat positions have been determined, firmly tighten the cleat mounting bolts with a 4mm Allen key.

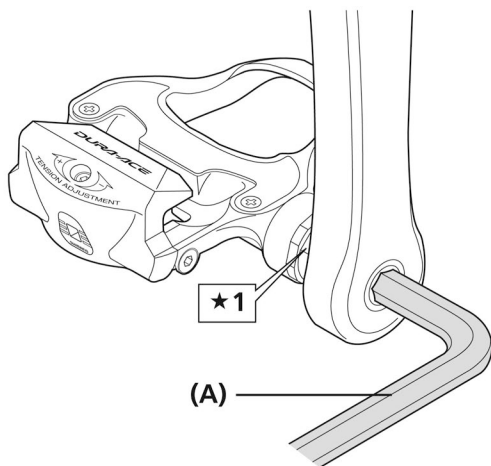
Tightening torque
4mm Allen key
5 - 6 N·m
{44 - 52 in. lbs.}

■ Mounting the pedals on the crank arms

1. Apply a small amount of grease to the thread to prevent sticking.
2. Use an 8mm Allen key or a 15mm spanner to install the pedals to the cranks.
 - The right pedal has a right-hand thread; the left pedal has a left-hand thread.



PD-9000/PD-6800/PD-5800/PD-5700-C



- ★1 Note the markings
R: Right pedal, L: Left pedal

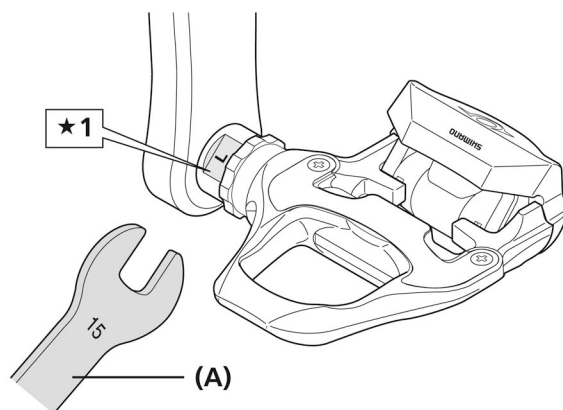
(A) 8mm Allen key

Tightening torque

8mm Allen key
35 - 55 N·m
{306 - 480 in. lbs.}



PD-R550/PD-R540-LA



- ★1 Note the markings
R: Right pedal, L: Left pedal

(A) 15mm spanner

Tightening torque

15mm spanner
35 - 55 N·m
{306 - 480 in. lbs.}

NOTE

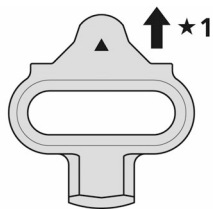
A 6mm Allen key cannot provide sufficient tightening torque.
Always be sure to use a 15mm spanner.

3. Remove any roughness or bumps on the joint, if detected.

SPD pedals/Click'R (Single release mode cleats: SM-SH51/Multiple release mode cleats: SM-SH56)

Cleat types

Single release mode cleats	SM-SH51 (black)
Multiple release mode cleats	SM-SH56 (silver, gold)

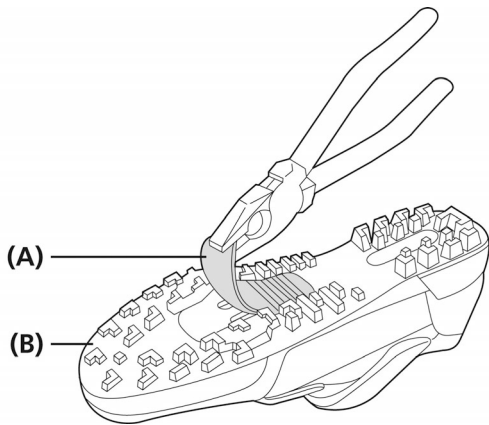


★1 Front

Attaching the cleats

Set the cleat on the bottom of each shoe as shown in the illustration, and then tighten the cleat mounting bolts, temporarily.

1. With a pair of pliers or a similar tool, pull off the rubber cover to expose the cleat mounting holes.

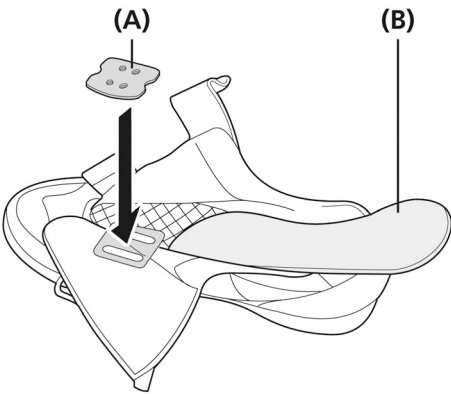


(A) Rubber cover for cleat mounting holes
(B) SPD shoe

NOTE

This step may not be necessary depending on the type of shoe.

2. Remove the sockliner and position a cleat nut over the oval holes.

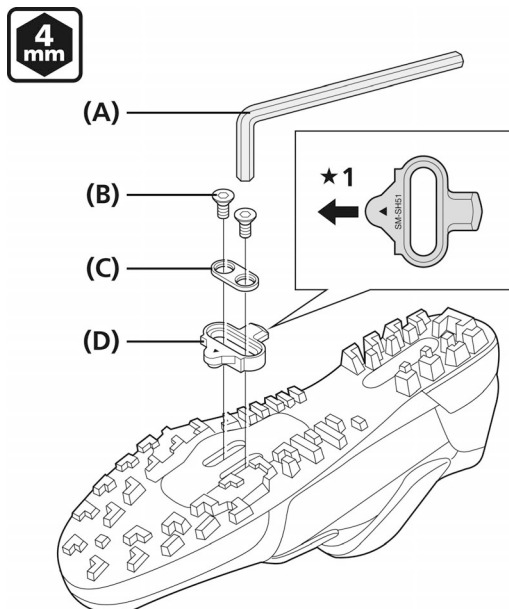


(A) Cleat nut
(B) Sockliner

NOTE

This step may not be necessary depending on the type of shoe.

3. Position the cleat followed by the cleat adapter on to the sole of the shoe and then temporarily tighten them with the cleat mounting bolts. The cleats are compatible with both left and right pedals.



★1 Position the triangular portion of the cleat toward the front of the shoe.

- (A) 4mm Allen key
- (B) Cleat mounting bolt
- (C) Cleat adapter
- (D) Cleat

Provisional tightening torque for cleat mounting bolts

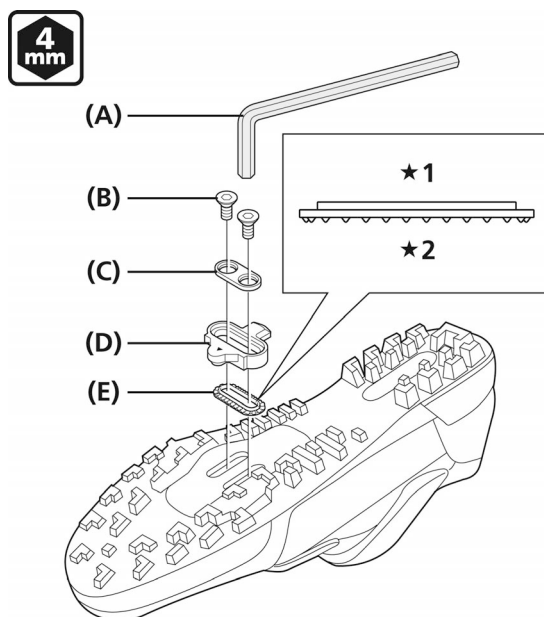
4mm Allen key

2.5 N·m

{22 in. lbs.}

■ When using cleat spacers

Position the cleat spacer, followed by the cleat, and then cleat adapter on to the sole of the shoe and then temporarily tighten them with the cleat fixing bolts.



★1 Side to be inserted into cleat

★2 Side to be inserted into sole (side with small protrusions)

- (A) 4mm Allen key
- (B) Cleat mounting bolt
- (C) Cleat adapter
- (D) Cleat
- (E) Cleat spacer

Provisional tightening torque for cleat mounting bolts

4mm Allen key
2.5 N·m
{22 in. lbs.}

NOTE

Only use cleat spacers in the following cases. When using spacers, use only one per SPD compatible shoe.

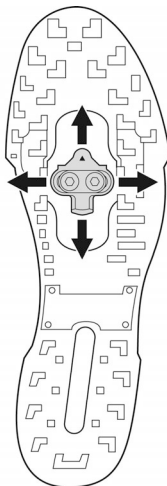
- If blocks on the shoe soles are high, causing them to get caught on the pedals, preventing smooth engagement of the shoes with the pedals.
- If dirt and debris builds up on the shoe soles or pedals, preventing smooth engagement of the shoes with the pedals.

TECH TIPS

The cleat spacer is only compatible with Shimano cleats (SM-SH51/SM-SH56).

■ Adjusting cleat position

1. The cleat has an adjustment range of 20mm front to back and 5mm right to left.
After temporarily fixing the cleats, adjust them by repeatedly engaging and releasing the cleats, one by one, to determine the optimal necessary cleat positions.



2. After the optimal cleat positions have been determined, firmly tighten the cleat mounting bolts with a 4mm Allen key.

Tightening torque

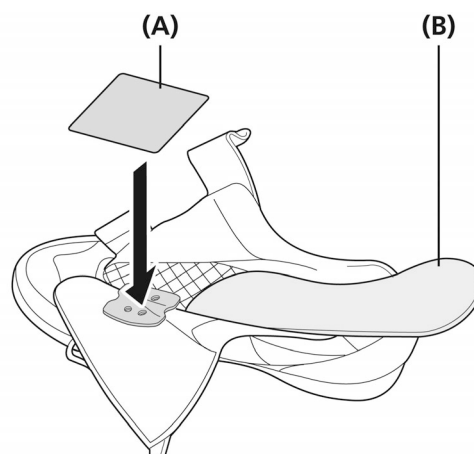
4mm Allen key

5 - 6 N·m

{44 - 52 in. lbs.}

■ Waterproof seal

1. Remove the sockliner and attach the waterproof seal.



(A) Waterproof seal

(B) Sockliner

NOTE

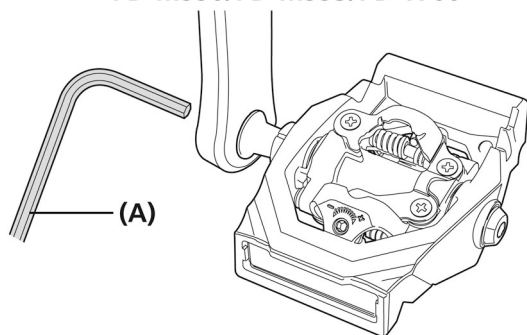
The waterproof seal is supplied with Shimano shoes that require this step to be carried out.

■ Mounting the pedals on the crank arms

1. Apply a small amount of grease to the thread to prevent sticking.
2. Use an 8mm Allen key or a 15mm spanner to install the pedals to the cranks.
 - The right pedal has a right-hand thread; the left pedal has a left-hand thread.



PD-M9000/PD-M9020/
PD-M8000/PD-M8020/
PD-M990/PD-M995/PD-T700



(A) 8mm Allen key

Tightening torque

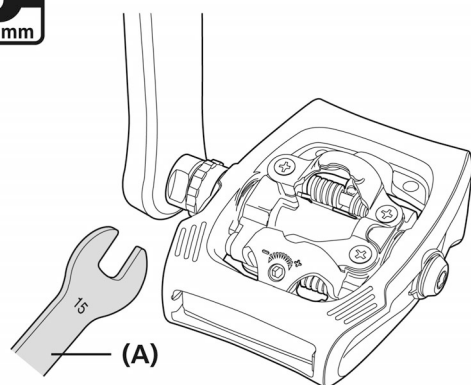
8mm Allen key

35 - 55 N·m

{306 - 480 in. lbs.}



PD-T420/PD-T400/PD-MT50



(A) 15mm spanner

Tightening torque

15mm spanner

35 - 55 N·m

{306 - 480 in. lbs.}

NOTE

A 6mm Allen key cannot provide sufficient tightening torque.

Always be sure to use a 15mm spanner.

3. Remove any roughness or bumps on the joint, if detected.

MAINTENANCE

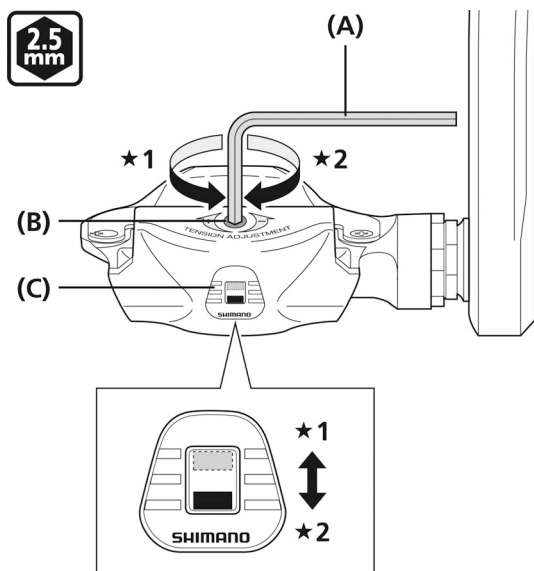
MAINTENANCE

SPD-SL pedals

(PD-9000/PD-6800/PD-5800/PD-5700-C/
PD-R550/PD-R540-LA)

■ Adjusting the spring tension of the pedals

- The spring tension of the pedals can be adjusted by turning the adjustment bolt.
- Clicking the adjustment bolt changes the tension one step. There are four clicks per turn.
- The adjustment bolt is located at the rear of each binding.
- Adjust the spring force to the optimal cleat holding force as needed when releasing the cleats from the bindings.
- Equalize the spring tensions for both pedals by referring to the tension indicators and by counting the number of turns of the adjustment bolts.
- Turning the adjustment bolt clockwise increases the spring tension, and turning it counterclockwise decreases it.



★1 Decrease

★2 Increase

(A) 2.5mm Allen key

(B) Adjustment bolt

(C) Indicator

NOTE

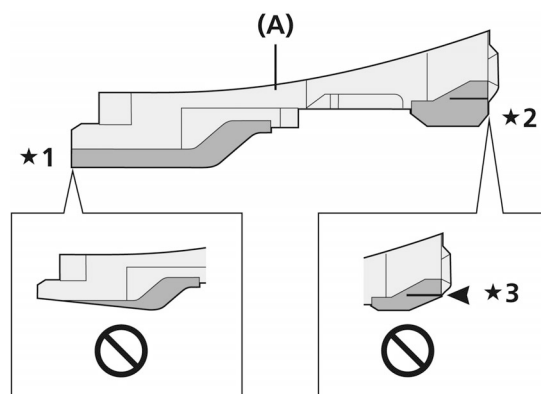
- Do not turn the bolt past the point at which the indicator shows the maximum or minimum tension.
- In order to prevent accidental shoe release and ensure that release is possible when needed, make sure all spring tensions are properly adjusted.
- If the cleats are not adjusted equally, it can cause the rider difficulty in engaging or releasing the pedals. The spring tensions for the right and left pedals should be adjusted so they are equal.

■ Cleat replacement

Cleats become worn and need to be replaced periodically. Cleats should be replaced when it becomes heavy for the rider to release, or it starts to release with much less effort than that when it was in new condition.

NOTE

If the colored portion of the cleat becomes worn, replace it with a new one.



★1 Front:

Replace the cleats when the black layer underneath the cleats is visible.

★2 Rear:

Replacement is required once the cleat has worn down to the level of the replacement reference line.

★3 Replacement reference line

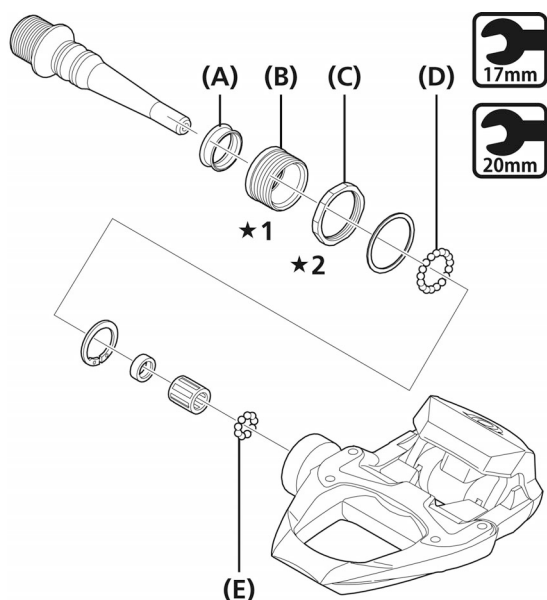
(A) Cleat

Axle unit (PD-9000)

Adjustment is required if the rotating parts are not functioning properly. Follow the procedure shown below.

Removing the axle

1. Loosen the lock nut using a 20mm spanner such as TL-HS40.
2. Loosen the threaded cone using a 17mm spanner such as TL-HS37 and remove the axle.
3. Remove the needle bearing and the balls (9 pcs.) in the hole of the pedal body.



- ★1 17mm spanner
★2 20mm spanner

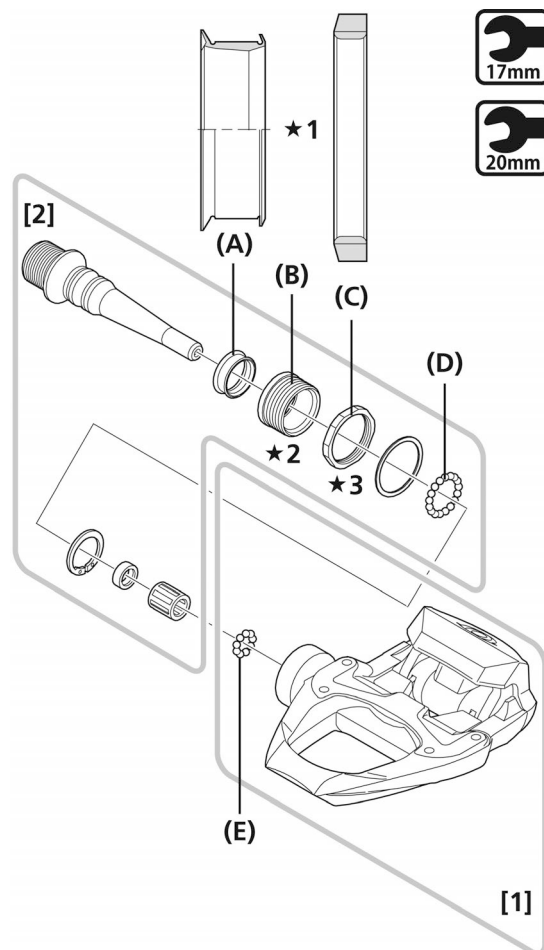
- (A) Rubber seal
(B) Threaded cone
(C) Lock nut
(D) Balls (17 pcs.)
(E) Balls (9 pcs.)

NOTE

Both the lock nut and the threaded cone are threaded left-hand for the right pedal and right-hand for the left pedal.

Assembling the axle

1. Put the balls (9 pcs.) into the holes of the pedal body, and then inject about 0.9 g of grease.
2. Install the parts to the axle as shown in the figure, and apply grease on the tip of the axle and the threaded cone.
3. Combine [1] and [2].



- ★1 When assembling the rubber seal and lock nut, please note the direction of the parts.
★2 17mm spanner
★3 20mm spanner

- (A) Rubber seal
(B) Threaded cone
(C) Lock nut
(D) Balls (17 pcs.)
(E) Balls (9 pcs.)

NOTE

- Clean off old grease.
- Both the lock nut and the threaded cone are threaded left-hand for the right pedal and right-hand for the left pedal.

Adjustment of axle rotation

1. Turn the threaded cone by using a 17mm spanner to adjust rotation.
2. With the threaded cone fixed, tighten the lock nut (20mm).

Tightening torque

20mm spanner

10 - 15 N·m

{88 - 131 in. lbs.}

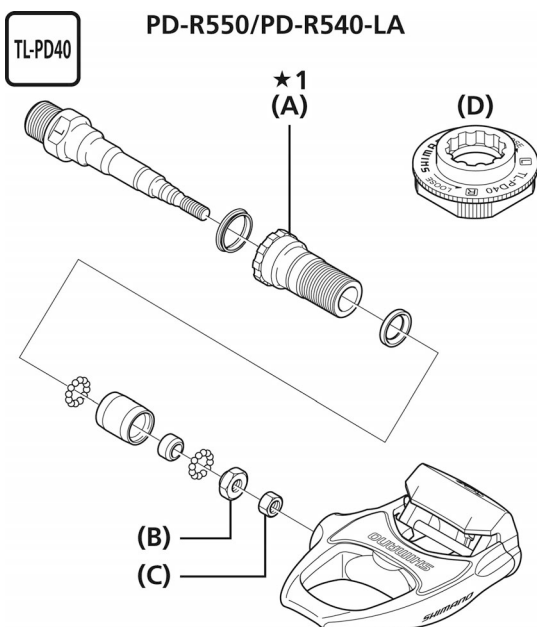
NOTE

Adjust so as to achieve a smooth rotation without looseness when the axle unit is set into the pedal.

■ Axle unit (PD-6800/PD-5800/PD-5700-C/PD-R550/ PD-R540-LA)

Adjustment is required if the rotating parts are not functioning properly. Follow the procedure shown below.

1. Loosen the lock bushing and remove the axle unit.

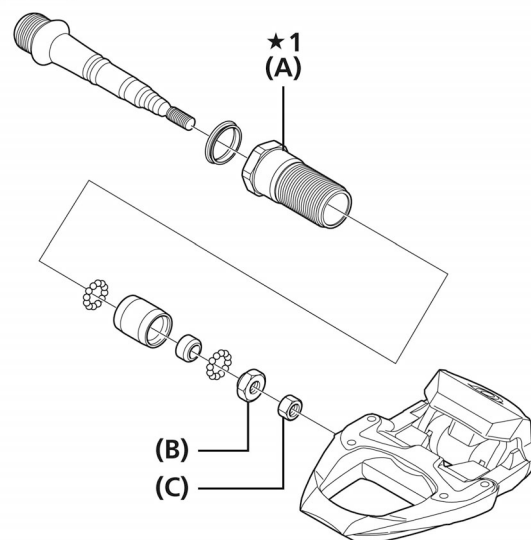


★1 Use TL-PD40 to remove the lock bushing of PD-R550/PD-R540-LA.

- (A) Lock bush
(B) Cone
(C) Lock nut
(D) TL-PD40



PD-6800/PD-5800/
PD-5700-C



★1 Use a 17mm spanner to remove the lock bushing of PD-6800/PD-5800/PD-5700-C.

- (A) Lock bush
(B) Cone
(C) Lock nut

NOTE

The lock bush of the right pedal has a left-hand thread; the lock bush of the left pedal has a right-hand thread.

2. Use TL-PD63 or TL-PD33 Shimano original tool, or a 7mm or 10mm open wrench to turn the cone (10mm) to adjust the rotation.
3. With the cone locked, tighten the lock nut (7mm).

Tightening torque

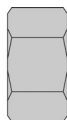
17mm spanner

5 - 7 N·m

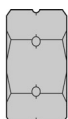
{44 - 61 in. lbs.}

NOTE

- Right-hand thread: Black-colored (without slit)
If the fitted lock nut is black-colored (without slit), the cone and the lock nut have a right-hand thread.



- Left-hand thread: Black-colored (with slit), Silver-colored
If the fitted lock nut is silver-colored or black-colored (with slit), the cone and the lock nut have a left-hand thread.



- Adjust the cone so as to achieve a smooth rotation without looseness when the axle unit is set into the pedal.

TECH TIPS

The rotating parts are fastened when the axle unit is set into the pedal. Adjust them slightly loosely before setup.

- Remove old grease and apply an appropriate amount of new grease to the bottom of the pedal linkage.

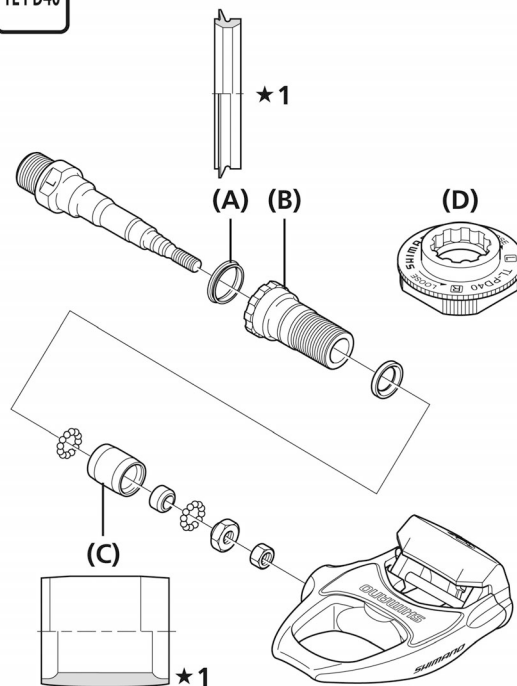
TECH TIPS

Apply grease to the extent that it does not flow out when the axle is set into the pedal (about 1.5g).

- Tighten the lock bush and insert the axle unit.

TL-PD40

PD-R550/PD-R540-LA



★1 When assembling the rubber seal and body cup, please note the direction of the parts.

- (A) Rubber seal
- (B) Lock bush
- (C) Body cup
- (D) TL-PD40

Tightening torque

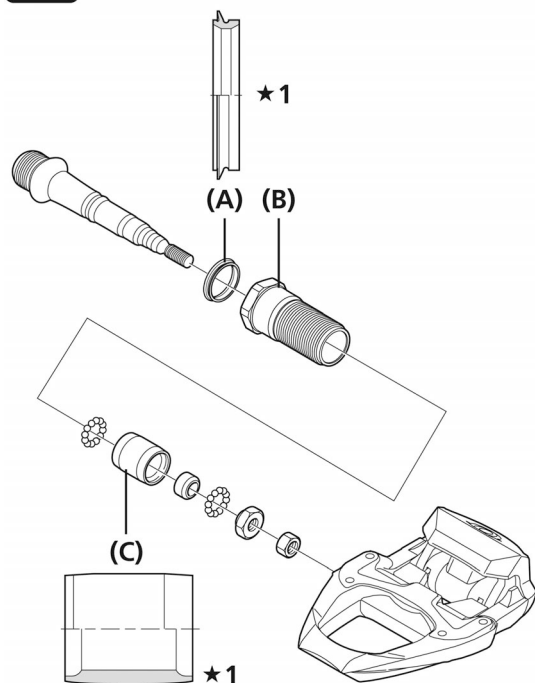
TL-PD40

10 - 12 N·m

{88 - 104 in. lbs.}



PD-6800/PD-5800/
PD-5700-C



★1 When assembling the rubber seal and body cup, please note the direction of the parts.

(A) Rubber seal

(B) Lock bush

(C) Body cup

Tightening torque

17mm spanner

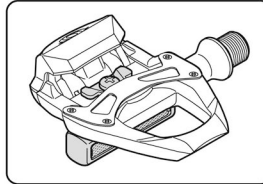
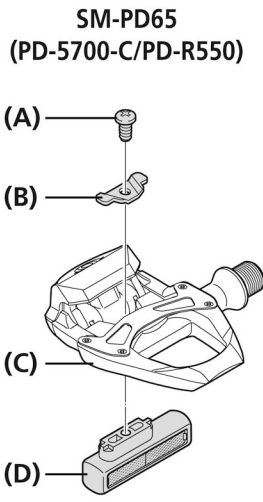
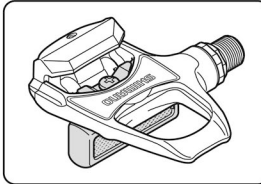
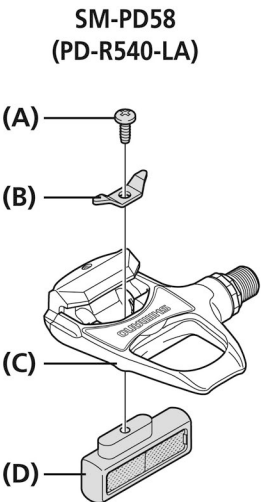
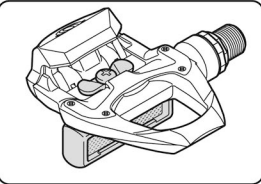
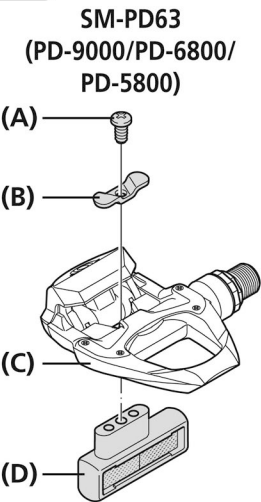
10 - 12 N·m

{88 - 104 in. lbs.}

■ Mounting the reflectors

Position the reflector on the pedal and secure it with the bolt and plate provided.

* The illustration shows the right pedal.



- (A) Bolt
- (B) Plate
- (C) Pedal
- (D) Reflector

Tightening torque

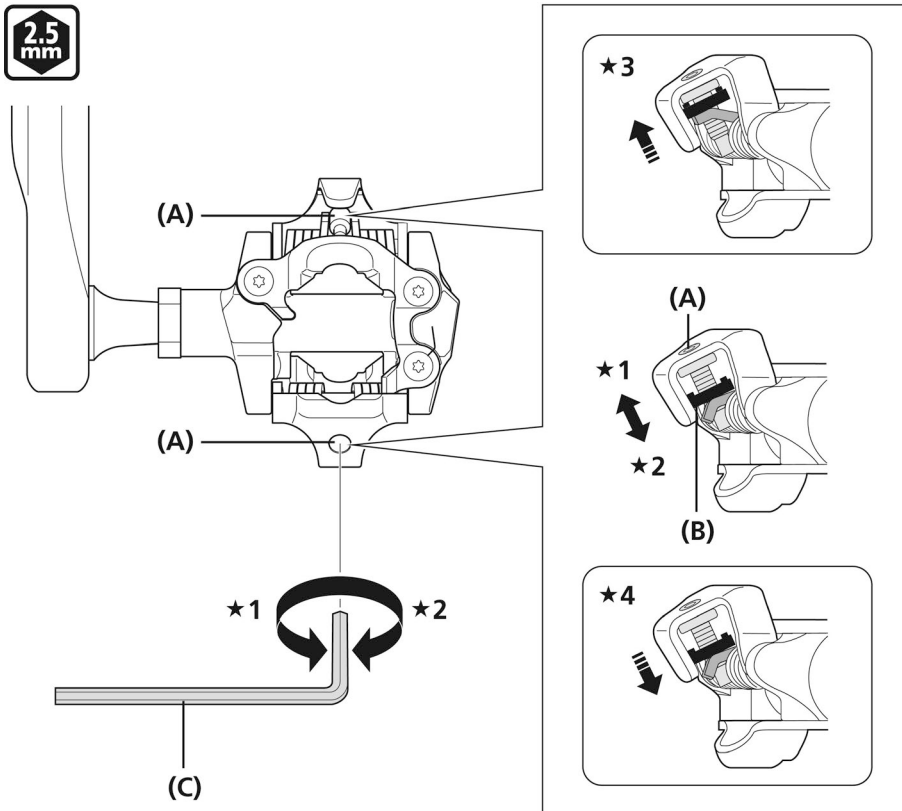
Screwdriver[#2]

2 N·m
{18 in. lbs.}

SPD pedals (Single release mode cleats: SM-SH51/Multiple release mode cleats: SM-SH56)

■ Adjusting the spring tension of the pedals

- The spring tension of the pedals can be adjusted by turning the adjustment bolt.
- Clicking the adjustment bolt changes the tension one step. There are four clicks per turn.
- The adjustment bolt is located at the rear of each binding, resulting in four positions in total.
- Adjust the spring force to the optimal cleat holding force as needed when releasing the cleats from the bindings.
- Equalize the cleat holding forces at all positions by checking the adjustment plate position and counting the number of turns of the adjustment bolts.
- Turning the adjustment bolt clockwise increases the spring tension, and turning it counterclockwise decreases it.



- ★1 Decrease
- ★2 Increase
- ★3 Weakest position
- ★4 Strongest position

- (A) Adjustment bolt
- (B) Adjustment plate
- (C) 2.5mm Allen key

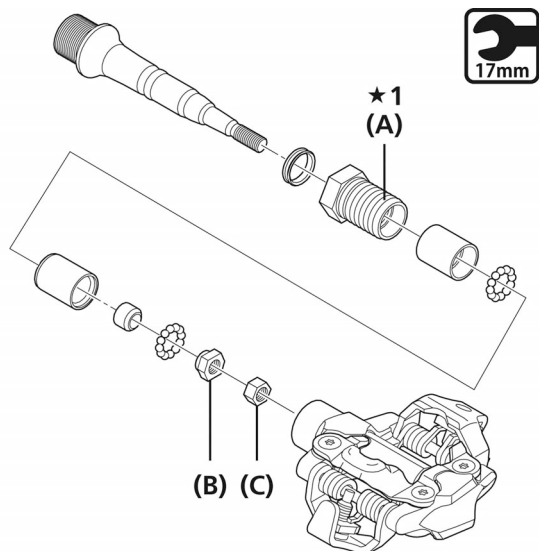
NOTE

- In order to prevent accidental shoe release and ensure that release is possible when needed, make sure all spring tensions are properly adjusted.
- If the cleats are not adjusted equally, it can cause the rider difficulty in engaging or releasing the pedals. The spring tensions for the right and left pedals should be adjusted so they are equal.
- If the adjustment plate is at the strongest or the weakest position, do not turn the adjustment bolt any further.

■ Axle unit (PD-M9000/PD-M9020/PD-M8000/PD-M8020/PD-M990/PD-M995)

Adjustment is required if the rotating parts are not functioning properly. Follow the procedure shown below.

1. Loosen the lock bushing and remove the axle unit.



★1 Use a 17mm spanner to remove the lock bushing.

- | | |
|-----|-----------|
| (A) | Lock bush |
| (B) | Cone |
| (C) | Lock nut |

NOTE

The lock bush of the right pedal has a left-hand thread; the lock bush of the left pedal has a right-hand thread.

2. Use a 7mm and 8mm open wrench to turn the cone (8mm) to adjust the rotation.
 - In the case of PD-M8000/PD-M8020, use a 7mm and 10mm wrench to turn the cone (10mm) and adjust the rotation.

3. With the cone locked, tighten the lock nut (7mm).

Tightening torque

17mm spanner

5 - 7 N·m

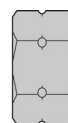
{44 - 61 in. lbs.}

NOTE

- Right-hand thread: Black-colored (without slit)
If the fitted lock nut is black-colored (without slit), the cone and the lock nut have a right-hand thread.



- Left-hand thread: Black-colored (with slit), Silver-colored
If the fitted lock nut is silver-colored or black-colored (with slit), the cone and the lock nut have a left-hand thread.



- Adjust the cone so as to achieve a smooth rotation without looseness when the axle unit is set into the pedal.

TECH TIPS

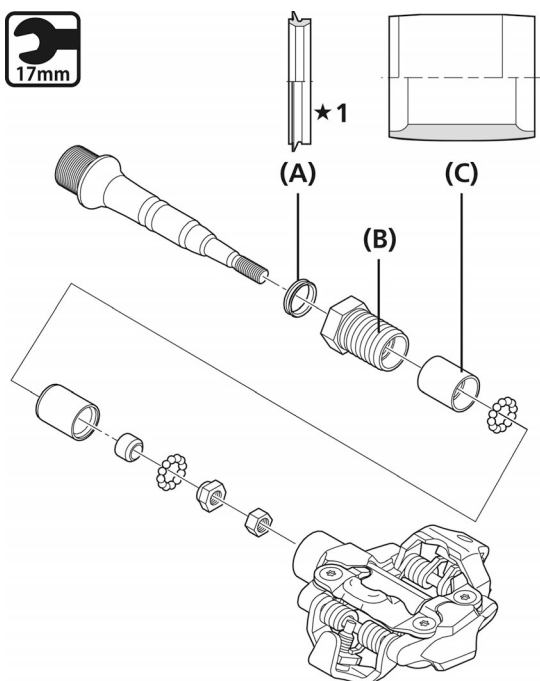
The rotating parts are fastened when the axle unit is set into the pedal. Adjust them slightly loosely before setup.

4. Remove old grease and apply an appropriate amount of new grease to the bottom of the pedal linkage.

TECH TIPS

Apply grease to the extent that it does not flow out when the axle is set into the pedal (about 1.5g).

5. Tighten the lock bush and insert the axle unit.



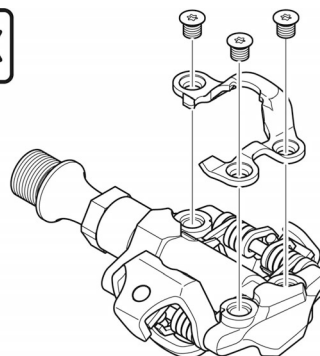
★1 When assembling the rubber seal and body cup, please note the direction of the parts.

- (A) Rubber seal
- (B) Lock bush
- (C) Body cup

Tightening torque

17mm spanner
10 - 12 N·m
{88 - 104 in. lbs.}

■ Replacement of the body cover



Tightening torque

Hexalobular[#10]
2.5 - 3.5 N·m
{22 - 30 in. lbs.}

NOTE

Tighten the three screws equally.

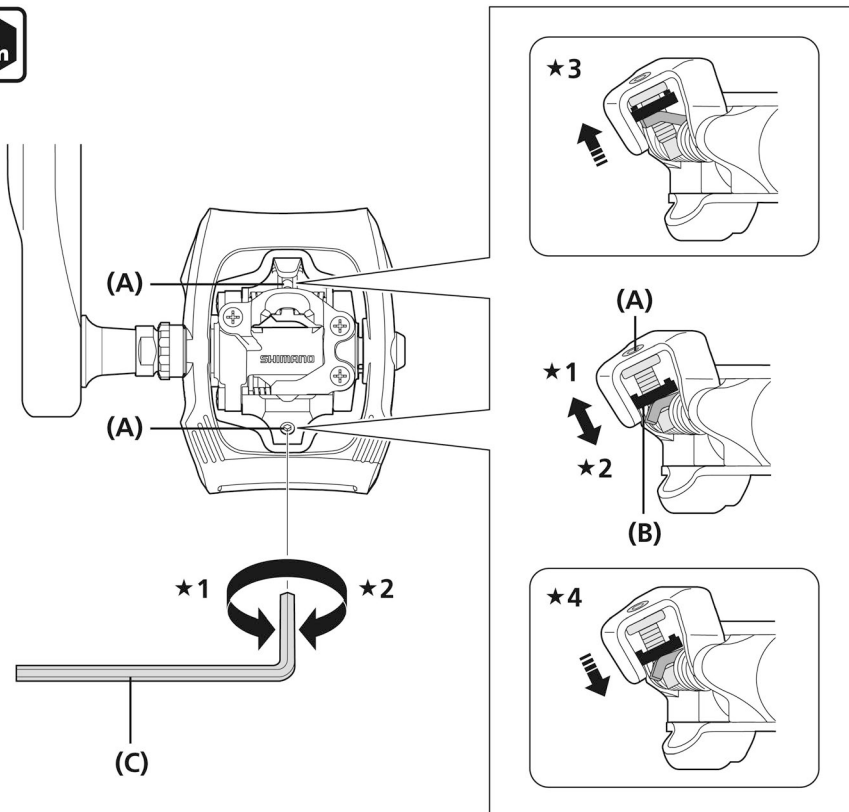
■ Mounting the reflectors

Please refer to Click'R pedal when attaching the reflector.

Click'R (Single release mode cleats: SM-SH51/Multiple release mode cleats: SM-SH56)

■ Adjusting the spring tension of the pedals

- The spring tension of the pedals can be adjusted by turning the adjustment bolt.
- Clicking the adjustment bolt changes the tension one step. There are four clicks per turn.
- The adjustment bolt is located at the rear of each binding, resulting in four positions in total. (A total of two points on the pedals for PD-T420)
- Adjust the spring force to the optimal cleat holding force as needed when releasing the cleats from the bindings.
- Equalize the cleat holding forces at all positions by checking the adjustment plate position and counting the number of turns of the adjustment bolts.
- Turning the adjustment bolt clockwise increases the spring tension, and turning it counterclockwise decreases it.



- ★1 Decrease
- ★2 Increase
- ★3 Weakest position
- ★4 Strongest position

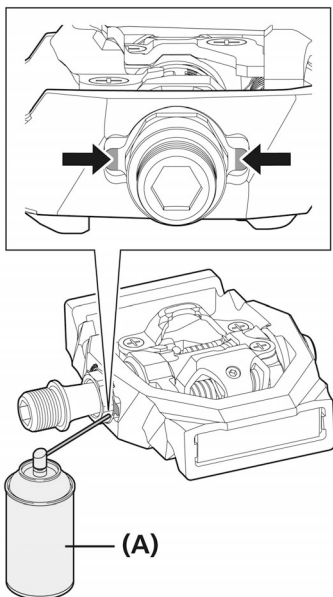
- (A) Adjustment bolt
- (B) Adjustment plate
- (C) 3mm Allen key

NOTE

- In order to prevent accidental shoe release and ensure that release is possible when needed, make sure all spring tensions are properly adjusted.
- If the cleats are not adjusted equally, it can cause the rider difficulty in engaging or releasing the pedals. The spring tensions for the right and left pedals should be adjusted so they are equal.
- If the adjustment plate is at the strongest or the weakest position, do not turn the adjustment bolt any further.

Maintenance of the pop-up function

The pedals are equipped with a pop-up function that keeps the binding raised so that cleats can be caught easily. The pop-up function can become impaired by mud or lack of oil; therefore, in order to maintain best performance, periodically remove any mud and lubricate the parts shown with oil.

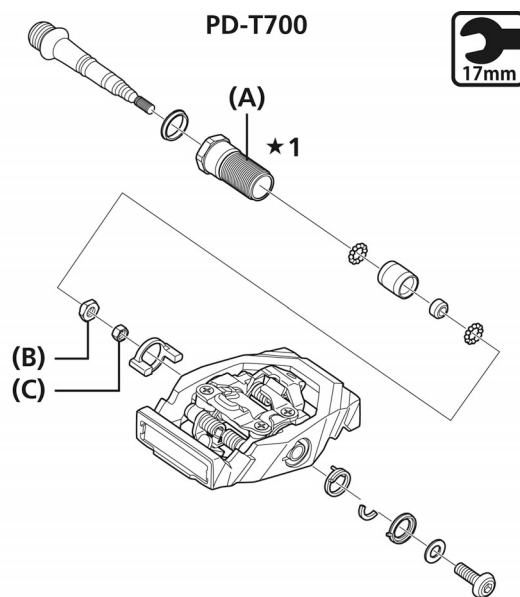


(A) Oil

Axle unit (PD-T700/PD-T420/PD-T400/PD-MT50)

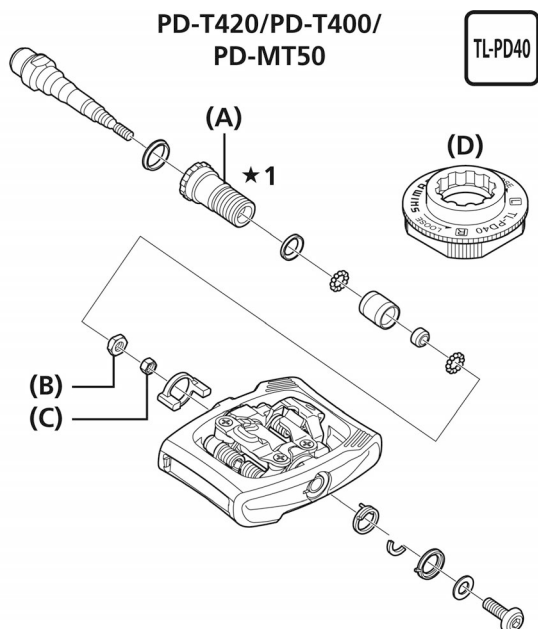
Adjustment is required if the rotating parts are not functioning properly. Follow the procedure shown below.

- Loosen the lock bushing and remove the axle unit.



★1 Use a 17mm spanner to remove the lock bushing of PD-T700.

- (A) Lock bush
- (B) Cone
- (C) Lock nut



★1 Use TL-PD40 to remove the lock bushing of PD-T420/PD-T400/PD-MT50.

- (A) Lock bush
(B) Cone
(C) Lock nut
(D) TL-PD40

NOTE

The lock bush of the right pedal has a left-hand thread; the lock bush of the left pedal has a right-hand thread.

2. Use TL-PD63 or TL-PD33 Shimano original tool, or a 7mm or 10mm open wrench to turn the cone (10mm) to adjust the rotation.

3. With the cone locked, tighten the lock nut (7mm).

Tightening torque

7mm spanner

5 - 7 N·m

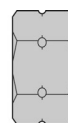
{44 - 61 in. lbs.}

NOTE

- Right-hand thread: Black-colored (without slit)
If the fitted lock nut is black-colored (without slit), the cone and the lock nut have a right-hand thread.



- Left-hand thread: Black-colored (with slit), Silver-colored
If the fitted lock nut is silver-colored or black-colored (with slit), the cone and the lock nut have a left-hand thread.



- Adjust the cone so as to achieve a smooth rotation without looseness when the axle unit is set into the pedal.

TECH TIPS

The rotating parts are fastened when the axle unit is set into the pedal. Adjust them slightly loosely before setup.

4. Remove old grease and apply an appropriate amount of new grease to the bottom of the pedal linkage.

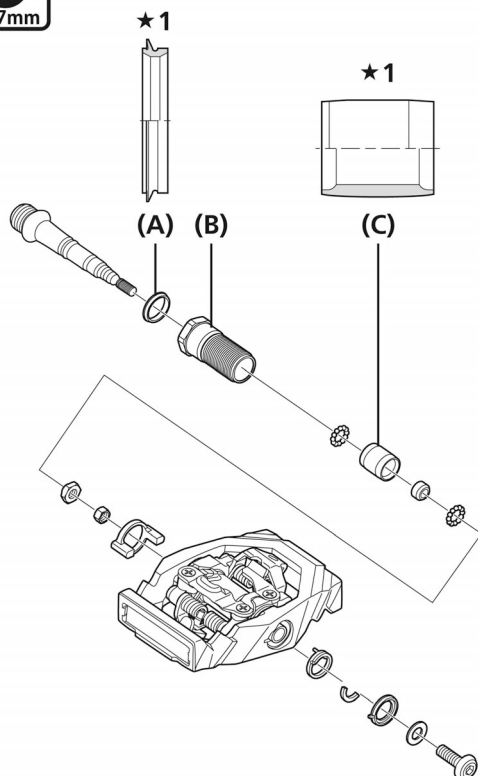
TECH TIPS

Apply grease to the extent that it does not flow out when the axle is set into the pedal (about 1.5g).

5. Tighten the lock bush and insert the axle unit.



PD-T700



★1 When assembling the rubber seal and body cup, please note the direction of the parts.

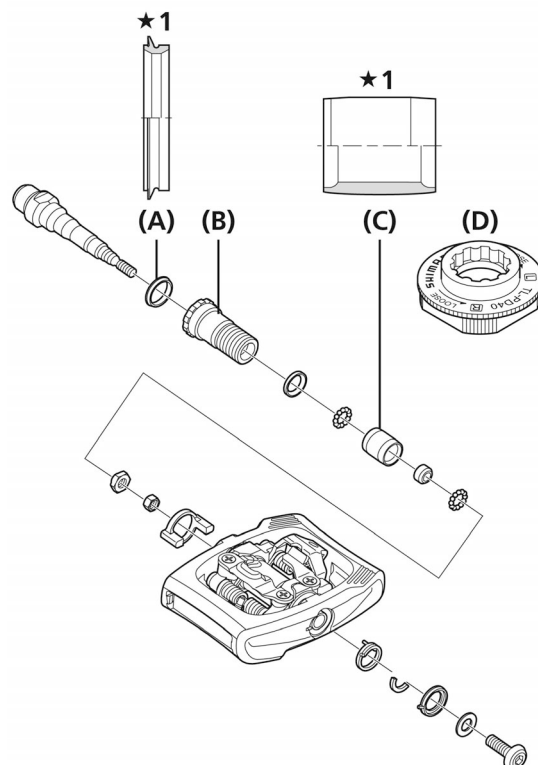
- (A) Rubber seal
- (B) Lock bush
- (C) Body cup

Tightening torque

17mm spanner
10 - 12 N·m
{88 - 104 in. lbs.}

TL-PD40

PD-T420/PD-T400/
PD-MT50



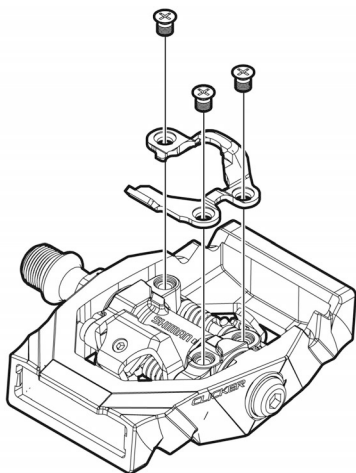
★1 When assembling the rubber seal and body cup, please note the direction of the parts.

- (A) Rubber seal
- (B) Lock bush
- (C) Body cup
- (D) TL-PD40

Tightening torque

TL-PD40
10 - 12 N·m
{88 - 104 in. lbs.}

■ Replacement of the body cover



Tightening torque

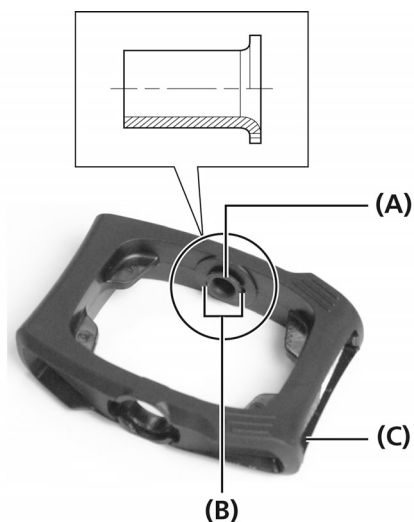
Screwdriver[#2]
2.5 - 3.5 N·m
{22 - 30 in. lbs.}

NOTE

Tighten the three screws equally.

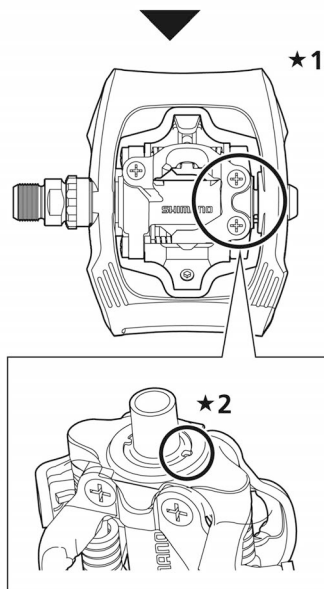
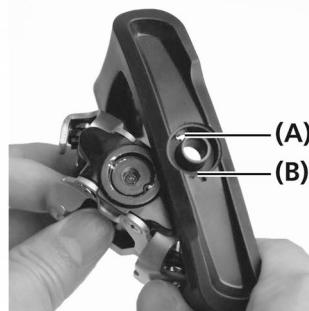
■ Replacing the cage

1. Insert sleeve to the cage as illustrated in the figure.



(A) Sleeve
(B) Sleeve hole
(C) Cage

2. Align the hole of the sleeve with the groove on the pedal body and set the pedal body to the cage.

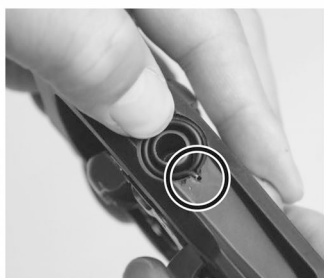
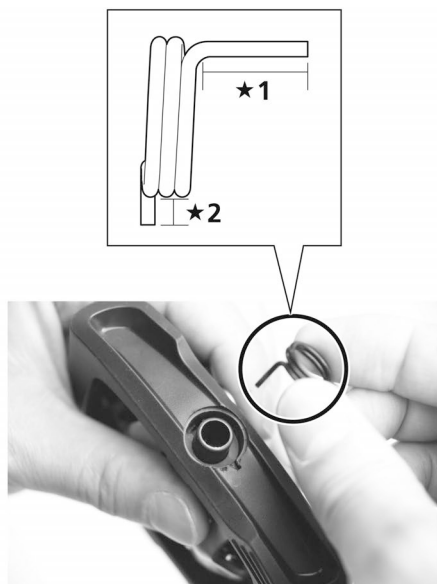


★1 Pedal body after sub-assembly

★2 Groove on pedal body for positioning the sleeve

(A) Sleeve hole
(B) Cage groove

- 3.** Install the cage spring to the cage.
Insert the longer side of the spring into the holes in the sleeve and the pedal body, and pull out the shorter side of the spring to the groove of the cage.

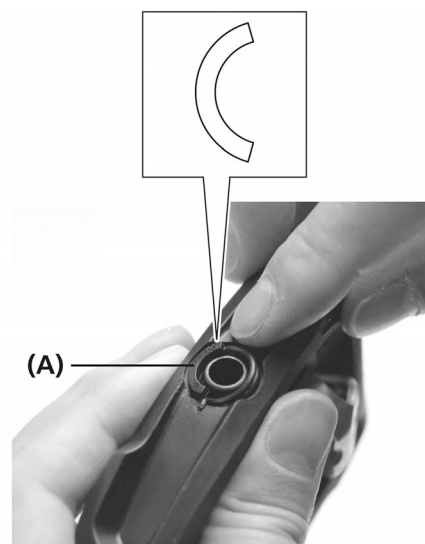


- ★1 Long
★2 Short

NOTE

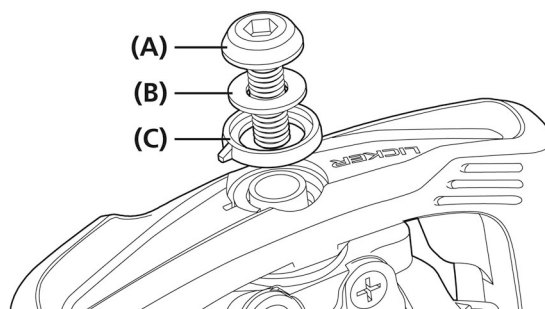
Apply grease to the spring.

- 4.** Install the spring pusher as shown in the figure.



(A) Spring pusher

5. Install the resin cap and the cap washer, and then tighten them with the cage-fixing bolt.



- (A) Cage-fixing bolt
(B) Cap washer
(C) Resin cap

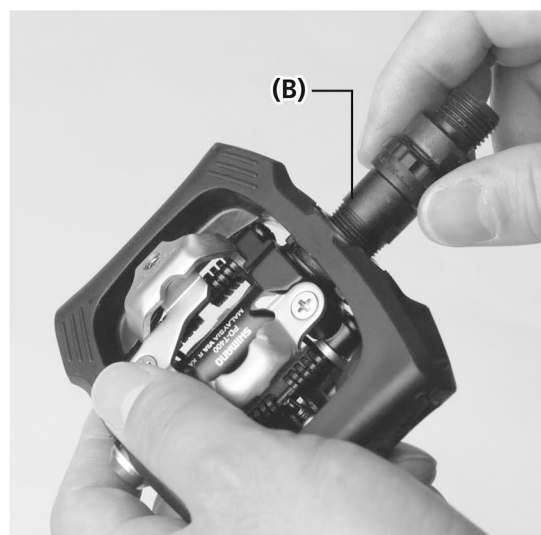
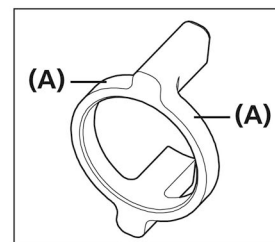
Tightening torque

5mm Allen key
7 - 8 N·m
{62 - 69 in. lbs.}

NOTE

A locking agent is applied onto the cage-fixing bolt.
Do not reuse used bolts as they can cause looseness.

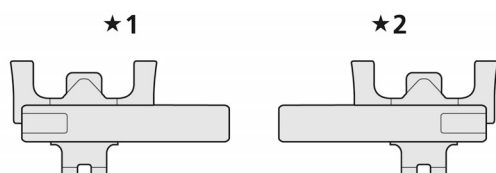
6. As shown in the figure, apply grease to the sleeve and install the axle unit.



- (A) Grease
(B) Axle unit

■ Mounting the reflectors

SM-PD60 (PD-MT50)



- ★1 For left
- ★2 For right

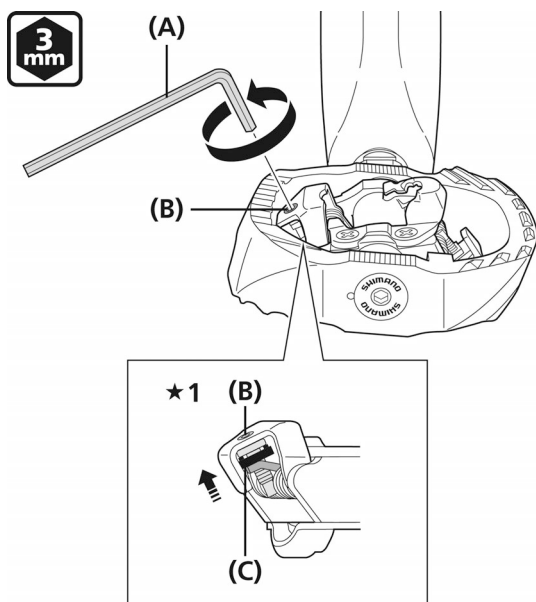
NOTE

The reflectors for the left and right pedals are different.

Installation

The illustration shows the right pedal.

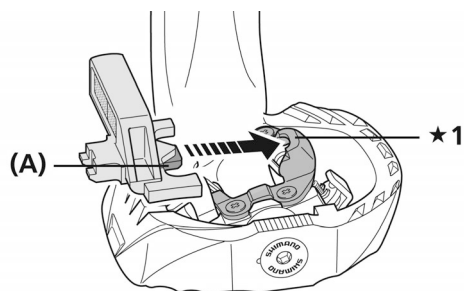
1. Turn the adjustment bolt on the pedal to adjust the spring tension to the weakest setting.



★1 Weakest position

- (A) 3mm Allen key
- (B) Adjustment bolt
- (C) Adjustment plate

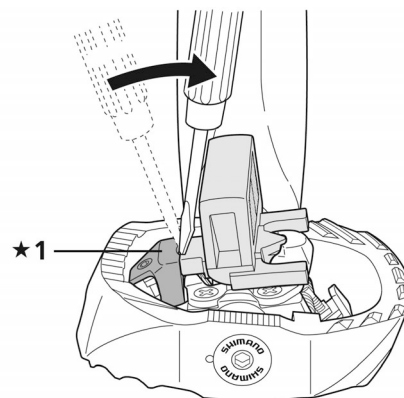
2. Insert the reflector tab at A on the pedal.



★1 A

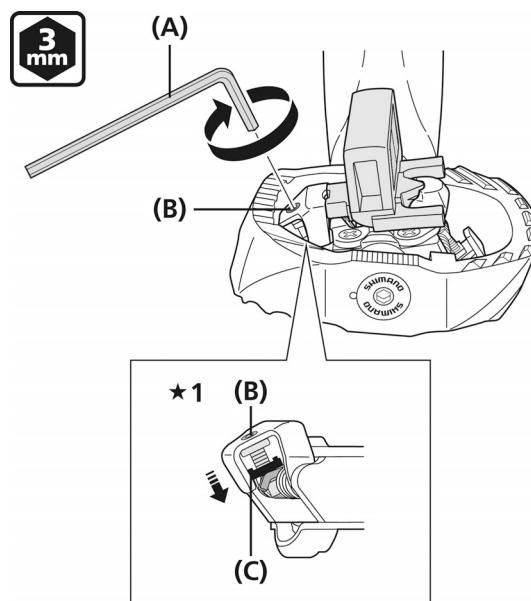
(A) Tab

3. Use a blunt instrument to fit the tab on the other end of the reflector in at B on the pedal.



★1 B

4. Turn the adjustment bolt on the pedal to adjust the spring tension to the strongest setting.

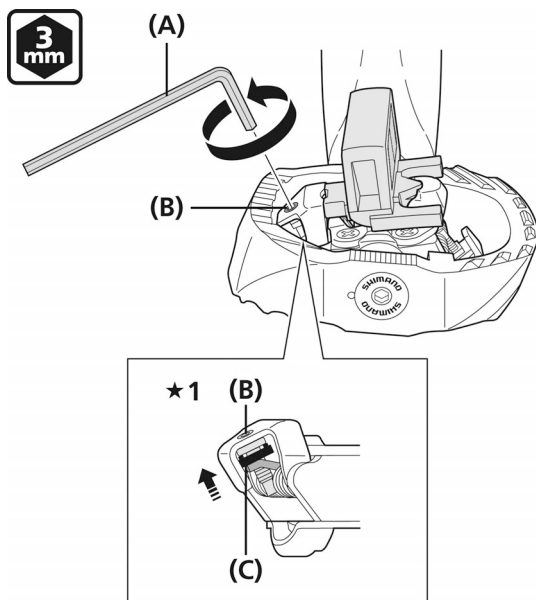


★1 Strongest position

- (A) 3mm Allen key
- (B) Adjustment bolt
- (C) Adjustment plate

Removal

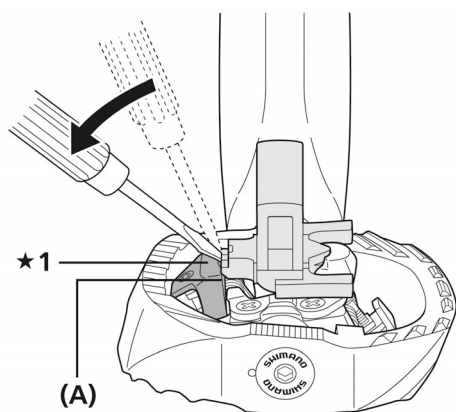
1. Turn the adjustment bolt on the pedal to adjust the spring tension to the weakest setting.



★1 Weakest position

- (A) 3mm Allen key
(B) Adjustment bolt
(C) Adjustment plate

2. Use a blunt instrument to pry the reflector tab out from section B of the pedal.



★1 B

- (A) Tab

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

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