

Dealer's Manual

ROAD	GRAVEL	MTB
E-BIKE	LIFESTYLE	GENERAL

One-Sided SPD / One-Sided Flat Pedals

SHIMANO

PD-EH510

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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 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.**
Only use SHIMANO genuine parts. If a component or replacement part is incorrectly assembled or adjusted, it can lead to component failure and cause the rider to lose control and crash.
-  Wear approved eye protection while performing maintenance tasks such as replacing components.

Be sure to also inform users of the following:

- In order to ensure child safety for children using this product, children should be given instruction on the correct use after both guardians and children have fully understood the following information. Failure to follow this instruction may lead to serious injury.

<Descriptions regarding SPD pedals>

- Before attempting to ride with these pedals and cleats (shoes), make sure you understand the operation of the engagement and release mechanism. SPD 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 cleats, apply the brakes, then place one foot on the ground and practice engaging and releasing each cleat 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 cleats from the pedals.
- Before riding, adjust the cleat retention force of the pedals to your liking. If the cleat retention force of the pedals is low, the cleats may become accidentally released and you may lose balance and fall off the bicycle. If the cleat retention force 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 cleats from the pedals beforehand so that you can quickly put your feet onto the ground at any time.
- Use a lighter cleat retention force 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 adjust the cleat retention force before riding and after replacing the pedal cleats.
- Use only SPD-compatible shoes with this product. Other types of shoes may not release from the pedals, or may release unexpectedly.
- Use only SHIMANO cleats (SM-SH51 / SM-SH56)* and make sure that the fixing bolts are tightened securely to the shoes. Failure to securely tighten the bolts may result in a fall in which the cleats do not release.

* Compatible cleats vary depending on pedals. For details, refer to "[Product Info](#)" section.

If the warnings above 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.

- Be sure to attach reflectors to the bicycle when traveling on roads.
Reflectors are sold separately for models that do not come with reflectors equipped as standard. For information on compatible reflectors, contact the place of purchase or a distributor.

- Do not continue riding the bicycle if the reflectors are dirty or damaged. Otherwise, it becomes more difficult for oncoming vehicles to see you.

<Descriptions regarding flat pedals>

- Raise your feet from the pedals then slide them sideways to disengage your feet from the pedals. With one foot firmly on the ground, practice engaging and disengaging the other foot from the pedal repeatedly until you become used to the operation, otherwise, you may fall and be seriously injured.
- Be sure to wear clothing and protective gear which is suitable for the way in which the bicycle is to be used. Because the pins are long, they may cause injury if they come into direct contact with your skin.

NOTICE

Be sure to also inform users of the following:

- Check that there is no excess play or looseness in any fastening sections before riding the bicycle.
- Check that there is no excess play or looseness in the cleats or spacers before riding the bicycle.
- If pedaling performance does not feel normal, contact your place of purchase.
- If you experience any trouble with the rotating parts of the pedal, the pedal may require adjustment. Consult your place of purchase or a distributor.
- Be sure to retighten the crank arms and pedals at periodic intervals at the place of purchase or a distributor.
- 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

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

Tool	
	2.5 mm hexagon wrench
	3 mm hexagon wrench
	4 mm hexagon wrench
	6 mm hexagon wrench
	5.5 mm spanner
	Cross head screwdriver[#2]

Installation / removal

Installing the cleats

Types of cleats

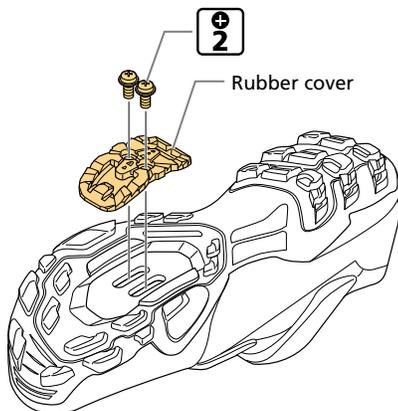
The release mode varies depending on the type of cleats being used.

Type of cleats being used	Release mode
Single release mode cleats	SM-SH51 (black) Only release when the heel is moved outward.
Multiple release mode cleats	SM-SH56 (silver, gold) Can be released by twisting in any direction.

Temporarily installing cleats

1. Remove the rubber cover for the cleat mounting holes.

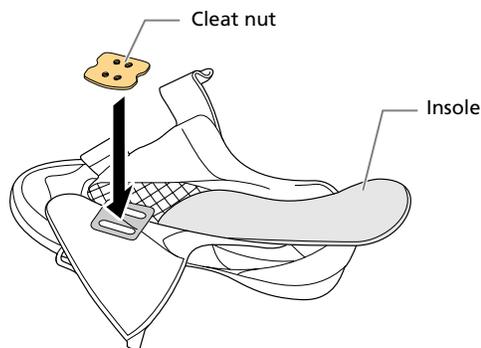
* This step may not be necessary depending on the type of shoe.



2. Set the cleat nut.

Remove the insole, then set along the elongated holes.

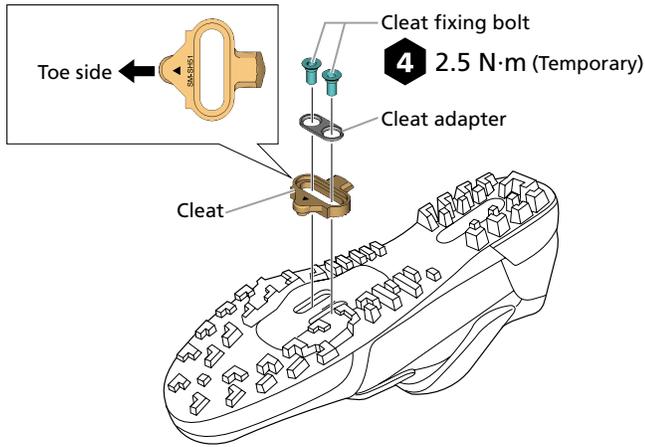
* This step may not be necessary depending on the type of shoe.



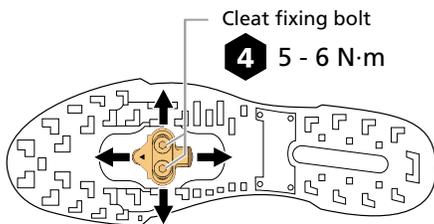
3. Temporarily install the cleats.

Temporarily tighten the cleat assembly as shown in the figure.

The cleats are not specific to the left or right pedals. They can be used interchangeably.



Adjusting and securing the cleats



1. Confirm the optimal cleat positions.

Repeatedly adjust and confirm for each foot to determine the optimal cleat positions.

* The cleat has an adjustment range of 20 mm front to back and 5 mm right to left.

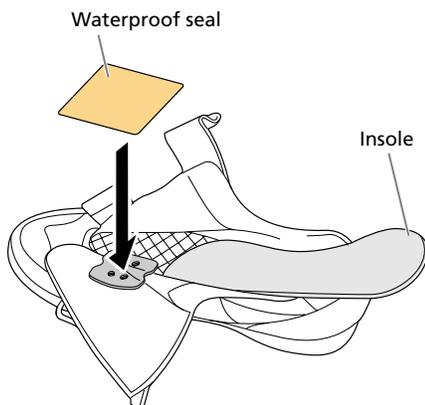
2. Securely tighten the cleats.

Tighten the two cleat fixing bolts alternately until they are both confirmed to be at the specified torque.

Installing waterproof seals

1. If your SHIMANO shoes came packaged with waterproof seals, attach the waterproof seals after securely tightening the cleats.

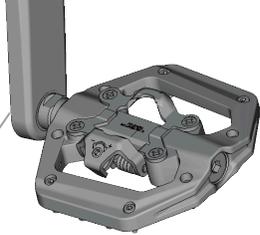
Remove the insole and attach the waterproof seal.



Installing to the crank

1. Apply a small amount of grease to the threads.
2. Install the pedals.

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



6 35 - 55 N·m

NOTICE

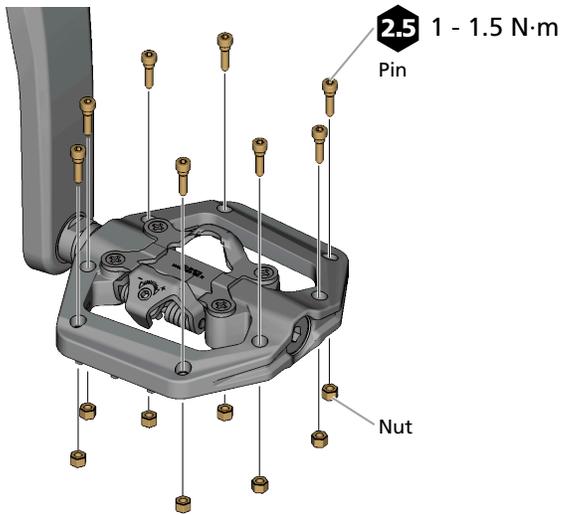
- Pay attention to the left (L) and right (R) markings.

Right pedal	Left pedal
	
Right-hand thread	Left-hand thread

Adjustment

Using pins to adjust the gripping force

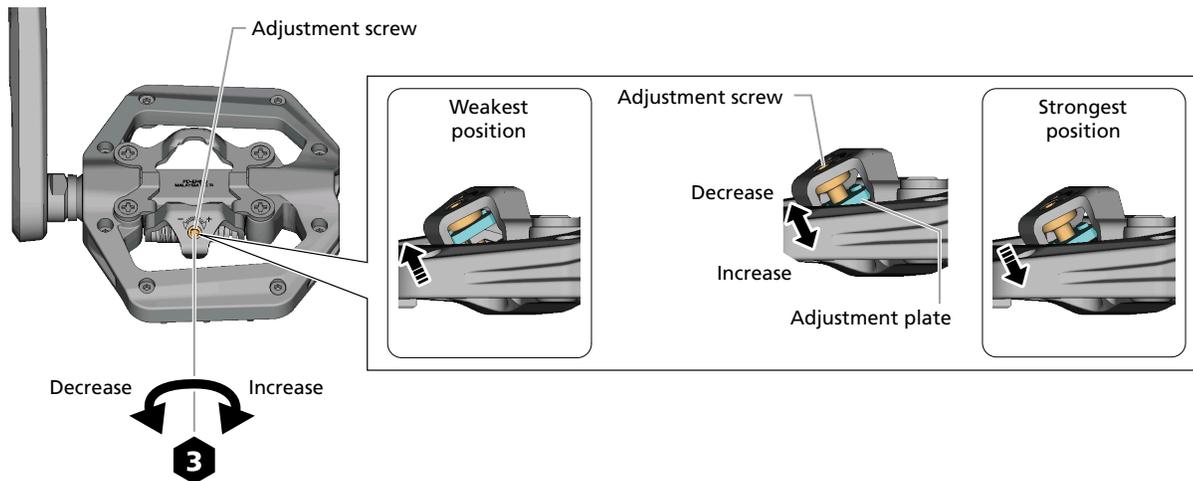
Remove or install the pins to adjust the gripping force between the shoe and pedal.



Maintenance

Adjusting the cleat retention force of the pedals

1. Turn the adjustment screw and adjust to the optimal cleat retention force when releasing the cleats from the bindings.
 - Turning the adjustment screw clockwise increases the cleat retention force, and turning it counterclockwise decreases it.
 - Clicking the adjustment screw once changes the tension one step. There are four clicks per turn.
 - The adjustment screw is located at the rear of each binding, resulting in two positions in total.
 - Equalize the cleat retention forces at all positions by checking the adjustment plate position and counting the number of turns of the adjustment screws.



NOTICE

- In order to prevent accidental cleat release and ensure that release is possible when needed, make sure that the cleat retention force is properly adjusted.
- If the cleats are not adjusted equally, it can cause the rider difficulty in engaging or releasing the cleats. The cleat retention force for the right and left pedals should be adjusted so they are equal.

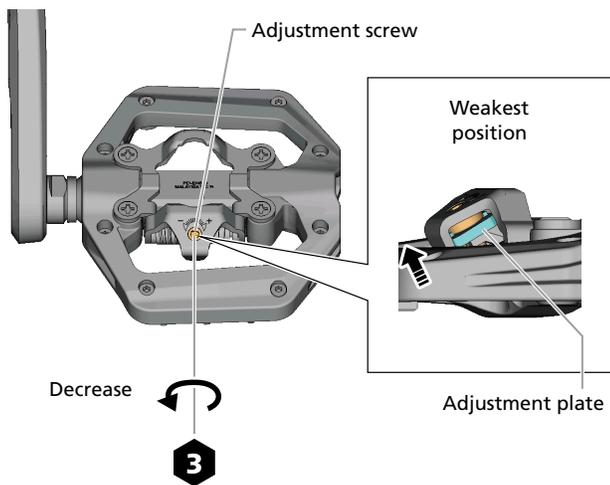
Replacing the SPD unit

NOTICE

- Cleats and body covers become worn and need to be replaced periodically.
When, due to wear, the cleat release starts to become too tight or too loose, immediately replace the cleats and body covers with new ones.
When replacing the body cover, follow the procedures shown below to replace it together with the SPD unit.

1. Set the spring tension of the pedals to the weakest setting.

Adjust by turning the adjustment screw on the pedal body.

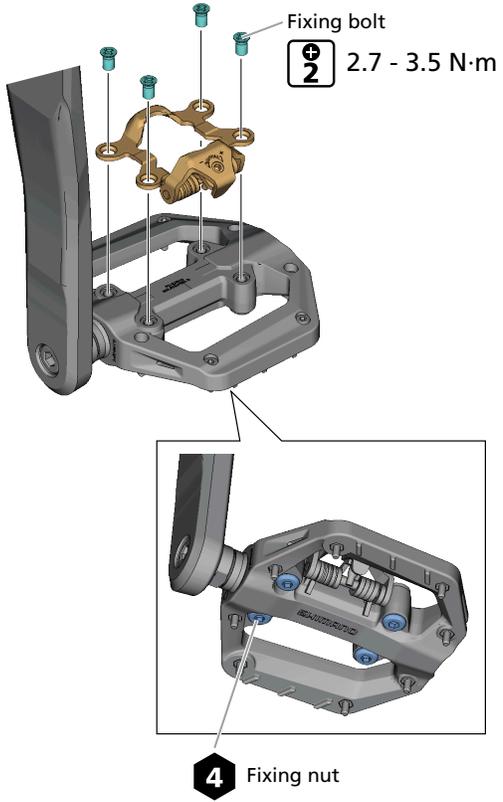


2. Replace the SPD unit as shown in the figure.

Secure fixing nuts with a hexagon wrench and loosen (or tighten) fixing bolts.
Tighten the four bolts uniformly using equal torque.

Maintenance

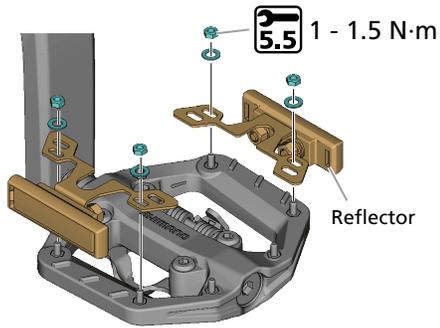
Replacing the SPD unit



Installing / removing the reflectors

1. Install the reflectors as shown in the figure.

Reflector: SM-PD70B



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