

# Dealer's Manual



# Torque Chart

## ROAD

DURA-ACE Di2  
DURA-ACE  
ULTEGRA Di2  
ULTEGRA  
SHIMANO 105 Di2  
SHIMANO 105  
SHIMANO

## MTB

XTR Di2  
XTR  
DEORE XT  
SLX

## E-BIKE

EP8  
EP6  
E8000  
E8080 (Japan)  
E7000  
E6100  
E6180 (Japan)  
E6000  
E5000  
E5080 (Japan)  
SHIMANO (E-BIKE)

## LIFESTYLE

CUES

## GRAVEL

GRX Di2  
GRX

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# Notice







- This content has been compiled for the higher-end models in each series.
- Although every effort has been made to keep the content as up-to-date as possible, we cannot guarantee that the contents are the most current available.

For the latest information and other details, refer to the dealer's manual for each product.

# ROAD

## Hydraulic Disc Brake Caliper

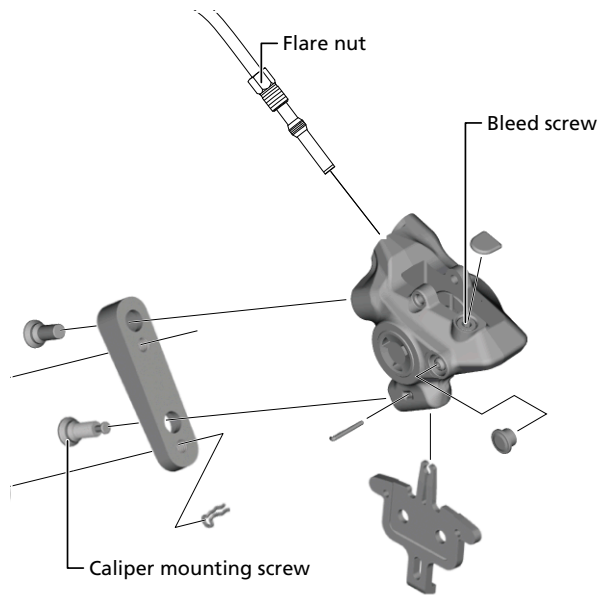
BR-R9270, BR-R9170, BR-R8170, BR-R8070, BR-R7170, BR-R7070

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Flare nut</a>	BR-R9270, BR-R8170, BR-R7170	5 - 6		8 mm spanner
	BR-R9170, BR-R8070, BR-R7070	5 - 7		
Pad axle	BR-R9270, BR-R9170, BR-R8070, BR-R7070	0.2 - 0.4		Slotted screwdriver 0.8 x 4
	BR-R8170, BR-R7170	2 - 4		3 mm hexagon wrench
<a href="#">Caliper mounting screw</a>	All	6 - 8		4 mm hexagon wrench
<a href="#">Bleed screw</a>	BR-R9270, BR-R8170, BR-R7170	4 - 6		3 mm hexagon wrench
<a href="#">Bleed nipple</a>	BR-R9170, BR-R8070, BR-R7070	4 - 7		7 mm box wrench

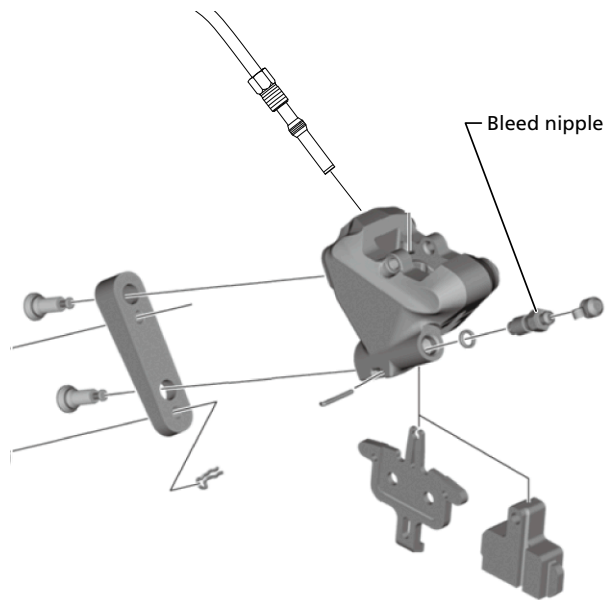


### Reference image

- Example) BR-R9270








- Example) BR-R9170



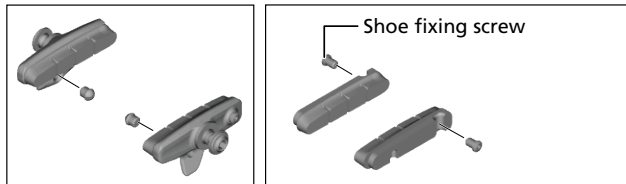
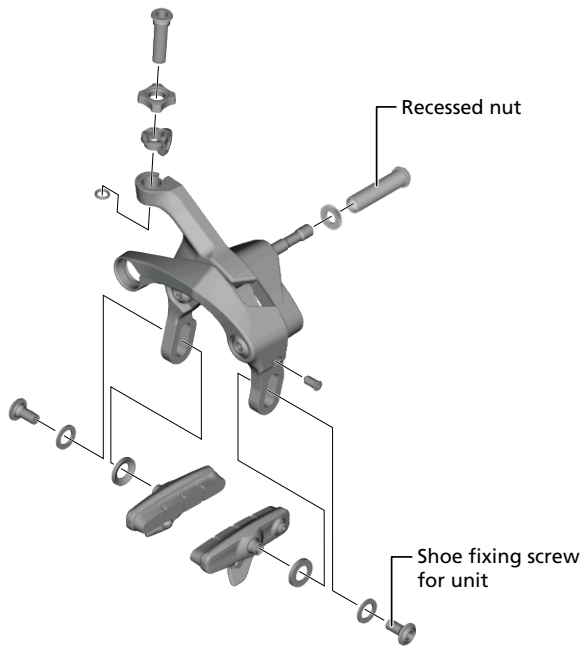
# Dual Pivot Caliper Brake

**BR-R9200, BR-R9210, BR-R9100, BR-R9110, BR-R8100, BR-R8110, BR-R8000, BR-R8010, BR-R7000, BR-R7010**

Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	BR-R9210, BR-R9110, BR-R8110, BR-R8010, BR-R7010	5 - 7		4 mm hexagon wrench
<a href="#">Recessed nut</a>	BR-R9200, BR-R9100, BR-R8100, BR-R8000, BR-R7000	8 - 10		5 mm hexagon wrench
Inner cable fixing screw	All	6 - 8		4 mm hexagon wrench
<a href="#">Shoe fixing screw for unit</a>	All	5 - 7		4 mm hexagon wrench
<a href="#">Shoe fixing screw</a>	All	1 - 1.5		2 mm hexagon wrench





## Reference image

- Example) BR-R9200



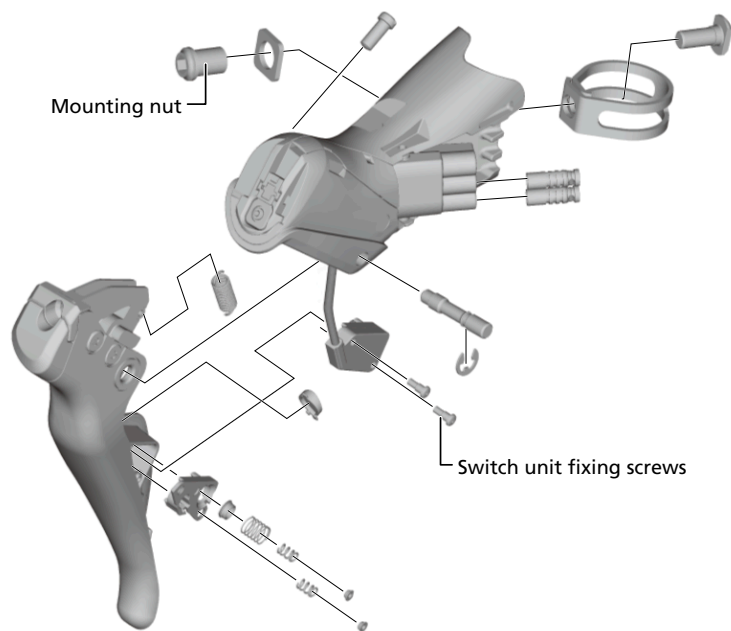
# DUAL CONTROL LEVER

ST-R9250, ST-R9150, ST-R9100, ST-R8150, ST-R8050, ST-R8000, ST-R7000

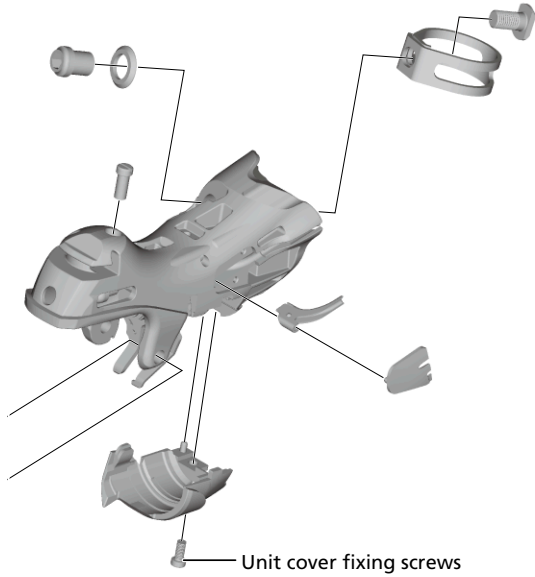
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting nut</a>	All	6 - 8		5 mm hexagon wrench
<a href="#">Switch unit fixing screws</a>	ST-R9150, ST-R8050	0.1		Hexalobular [#5]
Name plate fixing screws	ST-R9100, ST-R8000, ST-R7000	0.15 - 0.2		Screwdriver[#1]
<a href="#">Unit cover fixing screws</a>	ST-R9100, ST-R8000, ST-R7000	0.2 - 0.25		Screwdriver[#1]

## Reference image

- Example) ST-R9150





- Example) ST-R9100



## ST-R9270, ST-R9170, ST-R9120, ST-R8170, ST-R8070, ST-R8020, ST-R8025, ST-R7170, ST-R7020, ST-R7025

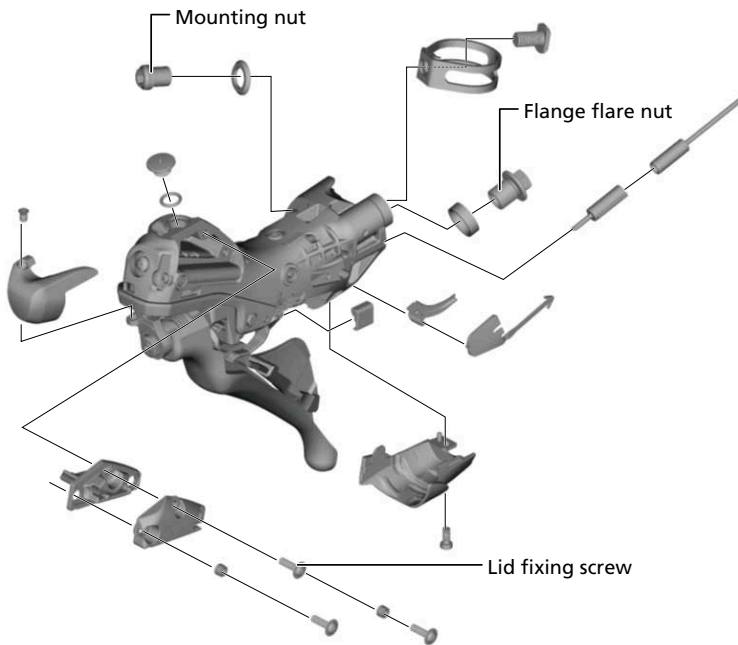
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting nut</a>	All	6 - 8		5 mm hexagon wrench
<a href="#">Flange flare nut</a>	All	5 - 6		8 mm spanner
Bleed screw	ST-R9270, ST-R8170, ST-R7170	0.5 - 0.7		2.5 mm hexagon wrench
	ST-R9170, ST-R9120, ST-R8070, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.5 - 0.7		2 mm hexagon wrench
Battery holder fixing screw	ST-R9270, ST-R8170, ST-R7170	0.4		Slotted screwdriver 0.8 x 4
Name plate fixing screws	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.15 - 0.2		Screwdriver[#1]

ROAD  
DUAL CONTROL LEVER




Parts Name	Model	Torque (N·m)	Tools	
Unit cover fixing screws	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.2 - 0.25		Screwdriver[#1]
<a href="#">Lid fixing screw</a>	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.8		Hexalobular [#8]

Reference image

- Example) ST-R9120





ST-R9180, ST-R9160, ST-R8060

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	ST-R9160, ST-R8060	6 - 8		4 mm hexagon wrench
	ST-R9180	1 - 1.3		2 mm hexagon wrench
<a href="#">Flare nut</a>	ST-R9180	5 - 6		8 mm spanner

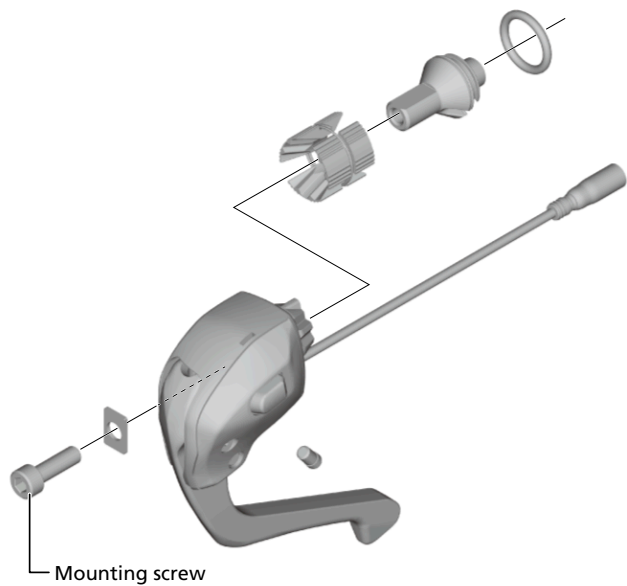
# ROAD

## DUAL CONTROL LEVER

Parts Name	Model	Torque (N·m)	Tools	
Bleed screw	ST-R9180	0.5 - 0.7		2 mm hexagon wrench
<a href="#">Shoe screw</a>	ST-R9180	0.3 - 0.5		1.5 mm hexagon wrench

### Reference image

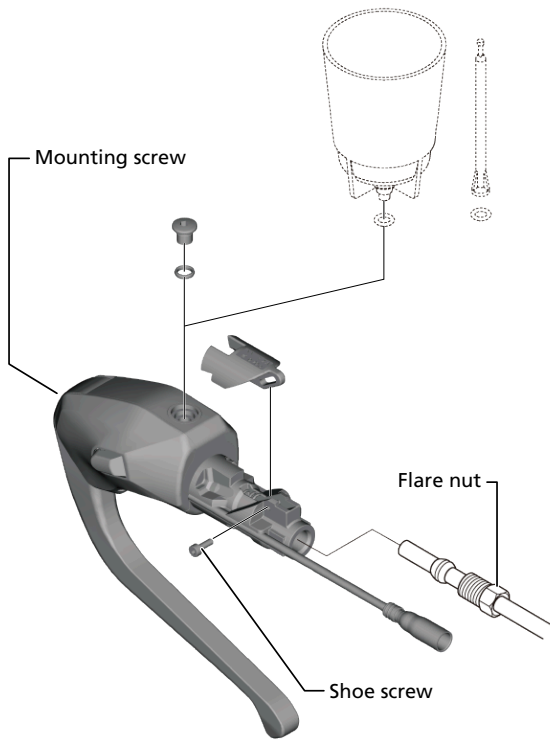
- Example) ST-R9160



# ROAD DUAL CONTROL LEVER

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- Example) ST-R9180





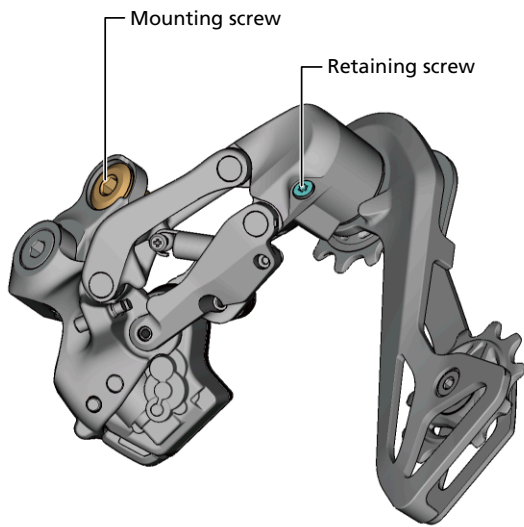
# Rear Derailleur

RD-R9250, RD-R9150, RD-R9100, RD-R8150, RD-R8050, RD-R8000, RD-R7150, RD-R7000

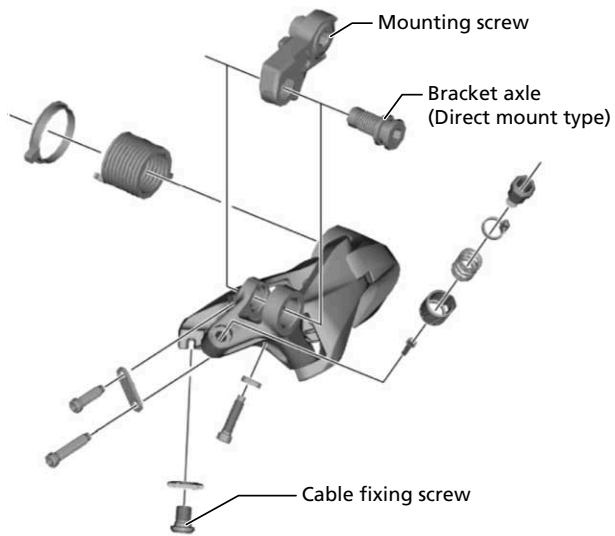
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Bracket axle (Direct mount type)</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	RD-R9100, RD-R8000, RD-R7000	6 - 7		4 mm hexagon wrench
Pulley screw	All	2.5 - 5		3 mm hexagon wrench
<a href="#">Retaining screw</a>	RD-R9250, RD-R8150, RD-R7150	0.9 - 1.2		Hexalobular [#10]
	RD-R9150, RD-R8050	1		
Plate stopper pin	RD-R8150, RD-R7150	1 - 1.1		Cross head screwdriver [#2]
	RD-R9150, RD-R9100, RD-R8050, RD-R8000, RD-R7000	1		

## Reference image

- Example) RD-R9250



- Example) RD-R9100



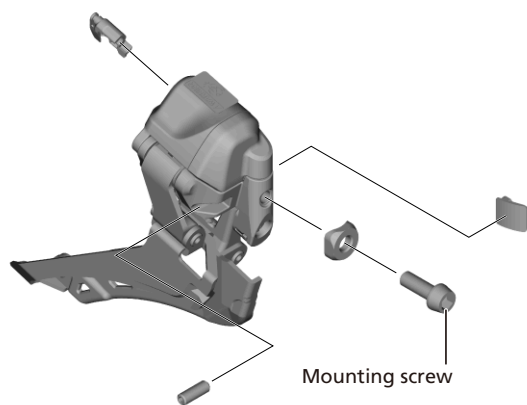
# Front Derailleur

FD-R9250, FD-R9150, FD-R9100, FD-R8150, FD-R8050, FD-R8000, FD-R7150, FD-R7000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	5 - 7		5 mm hexagon wrench
Inner cable fixing screw	FD-R9100, FD-R8000, FD-R7000	6 - 7		4 mm hexagon wrench










## Reference image

- Example) FD-R9250



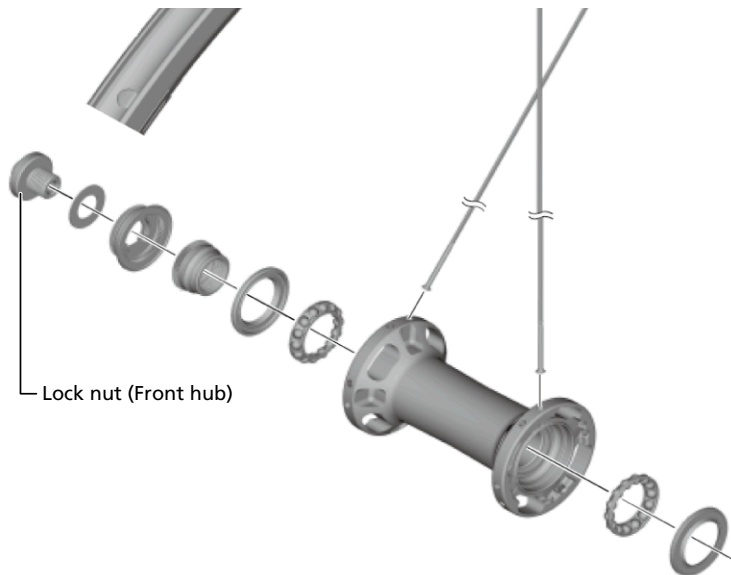
# Wheel Set (Rim Brake)

## WH-R9200, WH-R9100

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Lock nut (Front hub)</a>	WH-R9200	15 - 17	 + 	5 mm hexagon wrench + 22 mm hub spanner
	WH-R9100		 + 	5 mm hexagon wrench x 2
<a href="#">Lock nut (FREEHUB)</a>	WH-R9200	16 - 20	 + 	5 mm hexagon wrench + 17 mm hub spanner
	WH-R9100	15 - 17	 + 	5 mm hexagon wrench x 2
<a href="#">Freewheel body fixing screw</a>	WH-R9100	45 - 50		14 mm hexagon wrench

### Reference image

- Example) WH-R9100-C24-CL-F

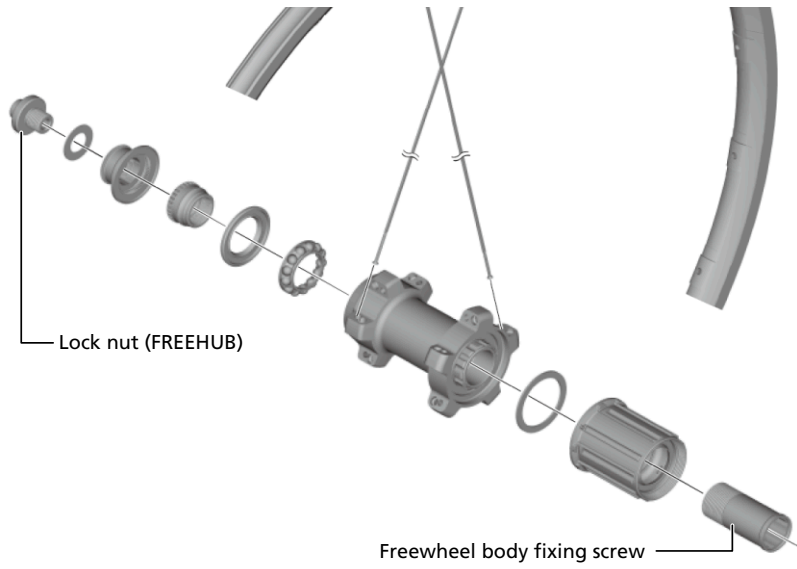


# ROAD

## Wheel Set (Rim Brake)






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- Example) WH-R9100-C24-CL-R



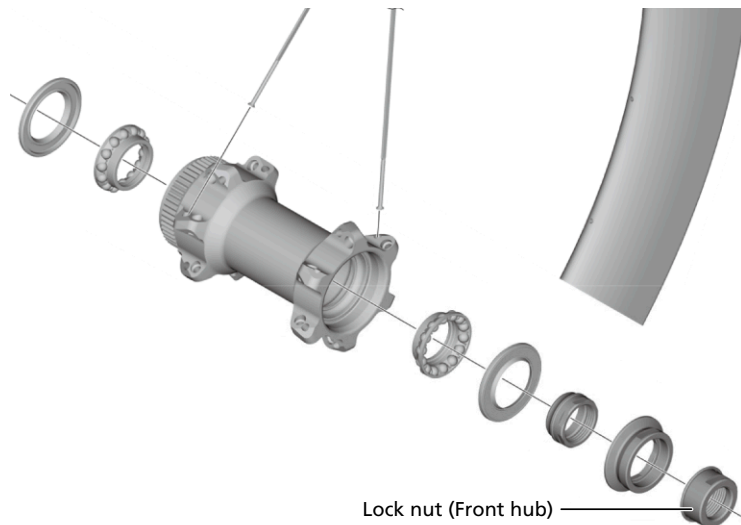
# Wheel Set (Disc Brake)

## WH-R9270, WH-R9170, WH-R8170

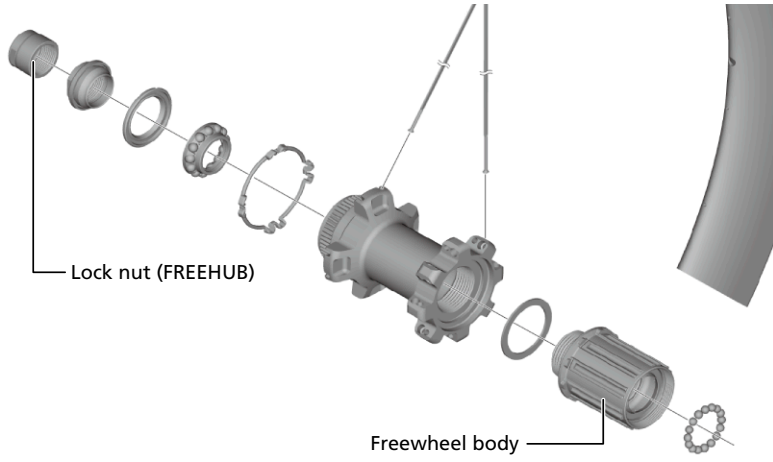
Parts Name	Model	Torque (N·m)	Tools	
Rotor lock ring	WH-R9270, WH-R8170	40	TL-LR15 + 24 / 	TL-LR15 + 24 mm hub spanner / adjustable wrench
	WH-R9170		TL-FC36	
<a href="#">Lock nut (Front hub)</a>	All	18 - 20	 + 	17 mm hub spanner + 22 mm hub spanner
<a href="#">Lock nut (FREEHUB)</a>	WH-R9270	16 - 20	 + 	17 mm hub spanner x 2
	WH-R9170, WH-R8170	17 - 22		
<a href="#">Freewheel body</a>	WH-R9170, WH-R8170	147 - 200	TL-FH15	TL-FH15

### Reference image

- Example) WH-R9170-C60-TU-F12








- Example) WH-R9170-C60-TU-R12



# Cassette




**CS-R9200-12, CS-R9100, CS-R8100-12, CS-R8000, CS-HG800-11, CS-R7100-12, CS-R7000, CS-HG700-11**

Parts Name	Model	Torque (N·m)	Tools	
Lock ring	CS-R9200-12, CS-R8100-12, CS-R7100-12	30 - 50	 /  + 	TL-LR10 / TL-LR15 + adjustable wrench
	CS-R9100, CS-R8000, CS-HG800-11, CS-R7000, CS-HG700-11		 / 	TL-LR15 + adjustable wrench



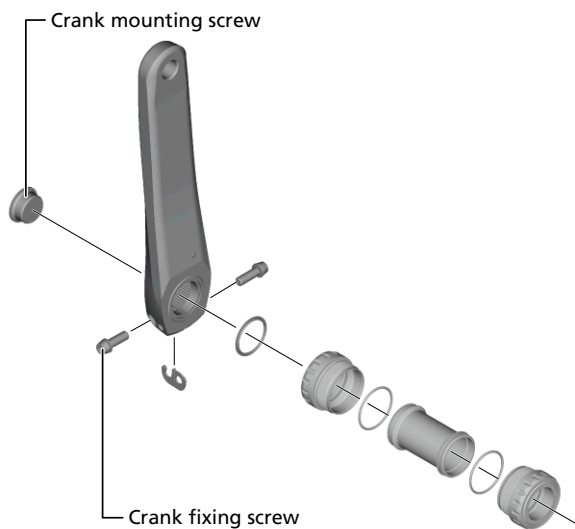
# Crankset

## FC-R9200, FC-R9100, FC-R8100, FC-R8000, FC-R7100, FC-R7000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting screw</a>	All	0.7 - 1.5		TL-FC16 / TL-FC18
<a href="#">Crank fixing screw</a>	All	12 - 14		5 mm hexagon wrench
Chainring fixing screws	All	12 - 16		Hexalobular [#30]




### Reference image

- Example) FC-R9200



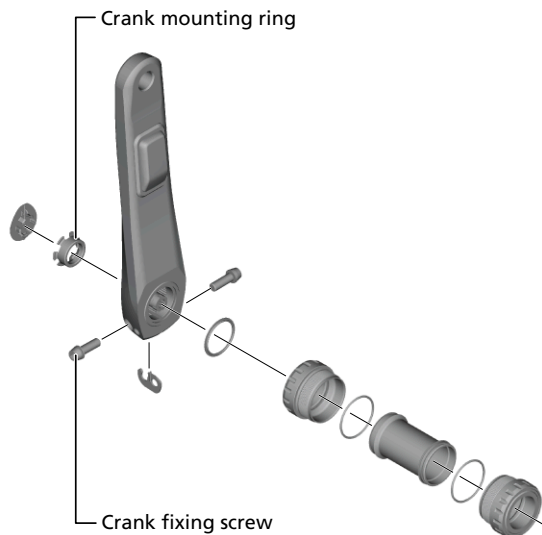
# Crankset with Power Meter

## FC-R9200-P, FC-R9100-P, FC-R8100-P

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting ring</a>	All	0.7 - 1.5		TL-FC40
<a href="#">Crank fixing screw</a>	All	12 - 14		5 mm hexagon wrench
Chainring fixing screws	All	12 - 16		Hexalobular [#30]















### Reference image

- Example) FC-R9200-P





# Threaded Bottom Bracket

## BB-R9100, SM-BBR60

Parts Name	Model	Torque (N·m)	Tools	
Left- and right-hand cups	BB-R9100	35 - 50	 + 	TL-FC24 + TL-FC32
			 + 	TL-FC24 + TL-FC33
			 + 	TL-FC24 + TL-FC36
				TL-FC34
	SM-BBR60		 + 	TL-FC25 + TL-FC32
			 + 	TL-FC25 + TL-FC33
			 + 	TL-FC25 + TL-FC36
				TL-FC37






# Rotor

## SM-RT900, SM-RT800, SM-RT70

Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	All	40	 /  TL-LR15 + adjustable wrench

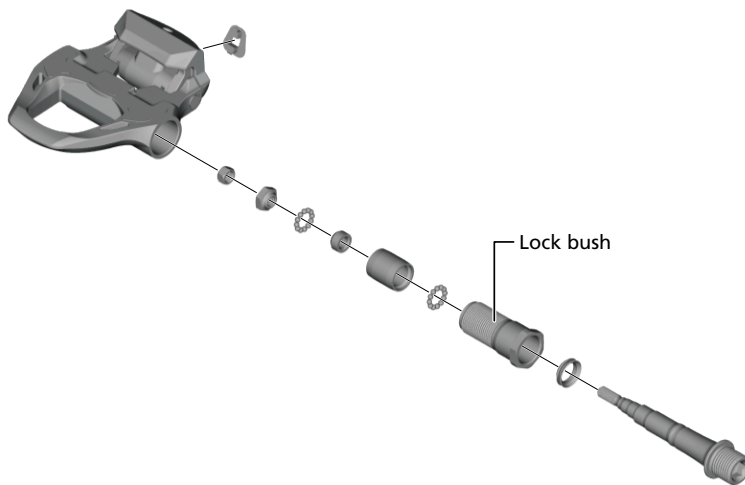
# Pedal

## PD-R9100, PD-R8000, PD-R7000

Parts Name	Model	Torque (N·m)	Tools	
Pedal axle	All	35 - 55		8 mm hexagon wrench
Lock nut	PD-R9100	10 - 15		20 mm spanner
	PD-R8000, PD-R7000	5 - 7		7 mm spanner
<a href="#">Lock bush</a>	PD-R8000	10 - 12		17 mm spanner
	PD-R7000	8 - 10		TL-PD40

### Reference image


- Example) PD-R8000



# MTB

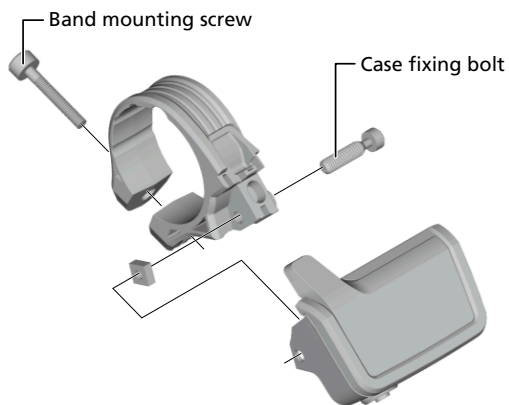
## System Information Display

### SC-M9051

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Case fixing bolt</a>	All	0.6		2.5 mm hexagon wrench
<a href="#">Band mounting screw</a>	All	0.8		3 mm hexagon wrench



### Reference image

- Example) SC-M9051



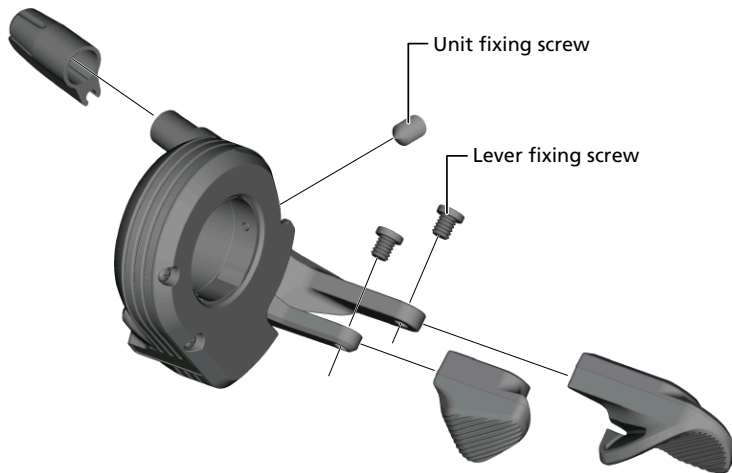
# Shift Switch

## SW-M9050

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Unit fixing screw</a>	All	0.9		2 mm hexagon wrench
<a href="#">Lever fixing screw</a>	All	0.5 - 0.7		2 mm hexagon wrench

### Reference image

- Example) SW-M9050



# Seat Post Lever








## SL-MT800

Parts Name	Model	Torque (N·m)	Tools	
Unit position adjustment bolt	All	4		3 mm hexagon wrench
Cable fixing screw	All	6 - 7		4 mm hexagon wrench





# Hydraulic Disc Brake Caliper

BR-M9100, BR-M9110, BR-M9120, BR-M9000, BR-M9020, BR-M8100, BR-M8110, BR-M8120, BR-M8000, BR-M8020, BR-M7100, BR-M7110, BR-M7120, BR-M7000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Flare nut</a>	BR-M9100, BR-M9110, BR-M8110, BR-M7110	5 - 7		8 mm spanner
Banjo	BR-M9120, BR-M9000, BR-M9020, BR-M8120, BR-M8000, BR-M7120, BR-M7000	8 - 10		4 mm hexagon wrench
	BR-M8100, BR-M8020, BR-M7100	4 - 6		3 mm hexagon wrench
Pad axle	BR-M9100, BR-M9110, BR-M9120	0.2 - 0.4		Slotted screwdriver
	BR-M8100, BR-M8110, BR-M8120, BR-M7100, BR-M7110, BR-M7120	1 - 1.5		3 mm hexagon wrench
	BR-M7000	2 - 4		
<a href="#">Caliper mounting screw</a>	BR-M9100, BR-M9110, BR-M9120, BR-M8110, BR-M7110	6 - 8		4 mm hexagon wrench
	BR-M8100, BR-M8120, BR-M7100, BR-M7120, BR-M7000			5 mm hexagon wrench

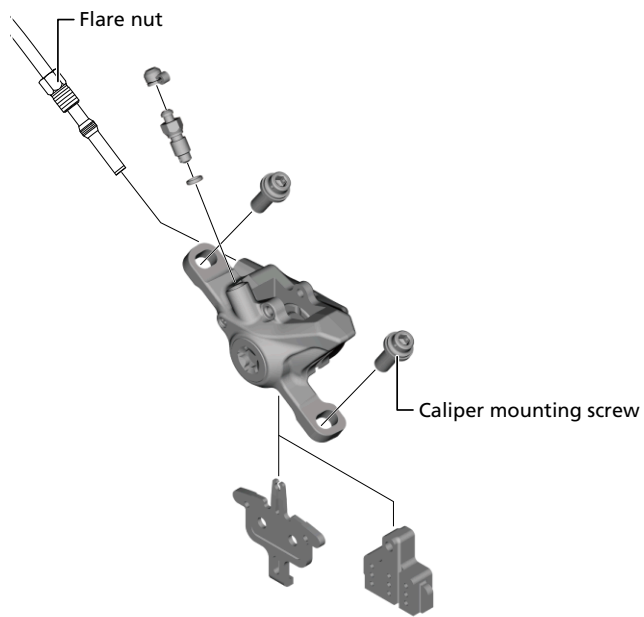
# MTB

## Hydraulic Disc Brake Caliper

Parts Name	Model	Torque (N·m)	Tools	
	BR-M9000, BR-M9020, BR-M8000, BR-M8020	8 - 10		4 mm hexagon wrench
Bleed nipple	All	4 - 6		7 mm box wrench





### Reference image

- Example) BR-M9100



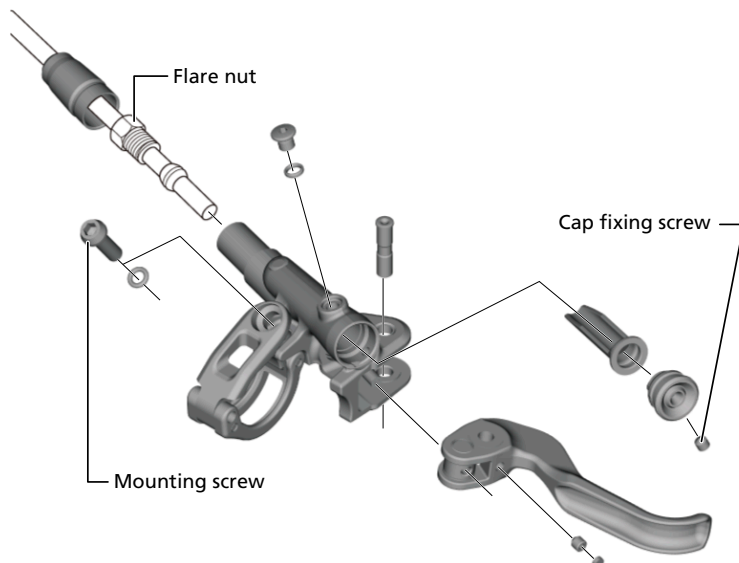
# Hydraulic Disc Brake Lever

BL-M9100, BL-M9120, BL-M9000, BL-M9020, BL-M8100, BL-T8100, BL-M8000, BL-M7100, BL-M7000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	4 - 6		4 mm hexagon wrench
<a href="#">Flare nut</a>	All	5 - 7		8 mm spanner
Bleed screw	BL-M9100, BL-M9120, BL-M8100, BL-T8100, BL-M7100	0.5 - 1		2.5 mm hexagon wrench
	BL-M9000, BL-M9020, BL-M8000, BL-M7000	0.5 - 0.7		
<a href="#">Cap fixing screw</a>	BL-M9100, BL-M9120, BL-M8100, BL-T8100, BL-M7100	0.2 - 0.3		2 mm hexagon wrench









## Reference image

- Example) BL-M9100


















# Shifter

## SL-M9100, SL-M9000, SL-M8100, SL-M8130, SL-M8000, SL-M7100, SL-M7000

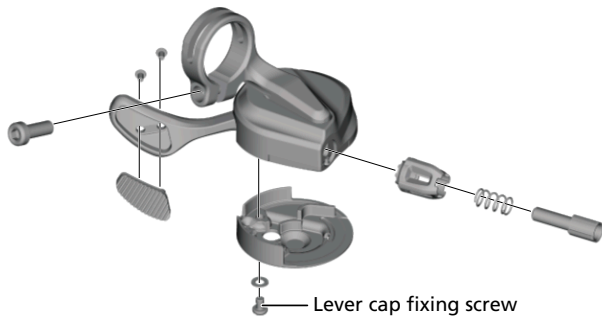
Parts Name	Model	Torque (N·m)	Tools	
Shifter mounting screw	SL-M9100, SL-M9000, SL-M8100, SL-M8130, SL-M8000, SL-M7100	3		4 mm hexagon wrench
	SL-M7000	3 - 4		
Unit position adjustment bolt	SL-M9000, SL-M8000 (I-SPEC EV / I-SPEC II)	4		3 mm hexagon wrench
	SL-M8100, SL-M8130, SL-M7100 (I-SPEC EV)	3		
	SL-M8000 (I-SPEC B)	2.5	 / 	4 mm hexagon wrench / 7 mm spanner
	SL-M7000 (I-SPEC II / I-SPEC B)	2.5 - 3.5		
<a href="#">Integration bolt</a>	SL-M8000 (I-SPEC B)	4		3 mm hexagon wrench
	SL-M7000 (I-SPEC B)	4 - 5		
<a href="#">Integration bolt (small)</a>	SL-M8000 (I-SPEC B)	1		2 mm hexagon wrench
	SL-M7000 (I-SPEC B)	1 - 1.5		
<a href="#">Lever cap fixing screw</a>	SL-M9100, SL-M8100, SL-M7100 (MONO lever)	0.3		Cross head screwdriver [#2]
<a href="#">Unit fixing screw</a>	SL-M9100, SL-M9000, SL-M8000	2.5		4 mm hexagon wrench

MTB  
Shifter

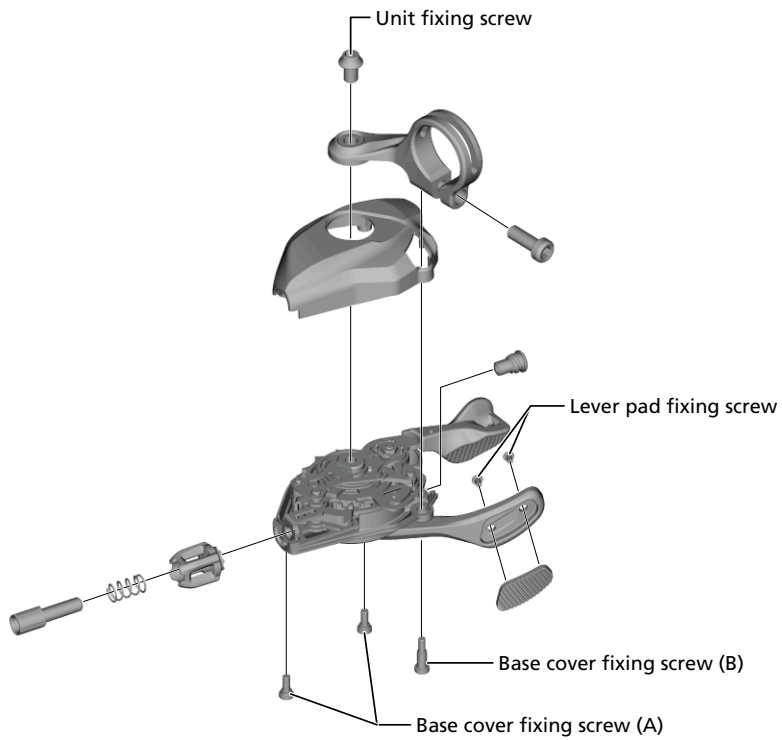
Parts Name	Model	Torque (N·m)	Tools	
	SL-M9100, SL-M9000, SL-M8000 (I-SPEC EV / I-SPEC II)			3 mm hexagon wrench
	SL-M8100, SL-M8130, SL-M7100			
	SL-M7000	2.5 - 3.5		4 mm hexagon wrench
<a href="#">Base cover fixing screw (A)</a>	SL-M9100, SL-M8100, SL-M8130	0.15		2 mm hexagon wrench
	SL-M9000, SL-M8000, SL-M7100			Cross head screwdriver [#1]
	SL-M7000	0.5 - 0.7		Cross head screwdriver [#2]
	SL-M7000 (I-SPEC II / I-SPEC B)	0.15 - 0.2		Cross head screwdriver [#1]
<a href="#">Base cover fixing screw (B)</a>	SL-M9100, SL-M8100, SL-M8130	0.5		2.5 mm hexagon wrench
	SL-M7100 (I-SPEC II / I-SPEC B)			Cross head screwdriver [#1]
	SL-M9000, SL-M8000			Cross head screwdriver [#2]
	SL-M8100, SL-M8130 (I-SPEC II / I-SPEC B)	0.15		2 mm hexagon wrench
	SL-M7000	0.15 - 0.2		Cross head screwdriver [#1]
<a href="#">Base cover fixing screw (C)</a>	SL-M9000, SL-M8000	0.08		Cross head screwdriver [#1]
	SL-M7000	0.08 - 0.1		Cross head screwdriver [#1]
<a href="#">Lever pad fixing screw</a>	SL-M9100	0.10		Cross head screwdriver [#0]
Indicator fixing screw / Cover fixing screw	SL-M8000	0.15		Cross head screwdriver [#1]
	SL-M7000	0.15 - 0.2		

## Reference image

- Example) SL-M9100  
For Left Hand

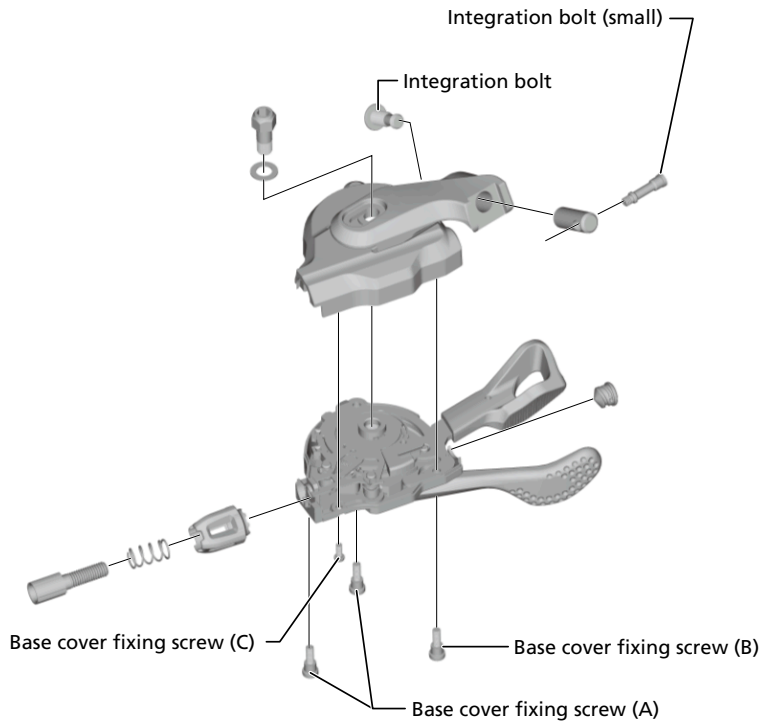


For Right Hand









# MTB Shifter

- Example) SL-M8000-B-I



# Rear Derailleur

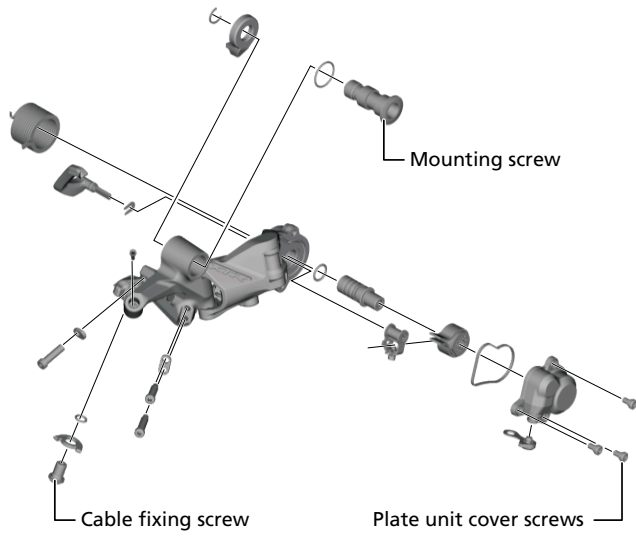
RD-M9100, RD-M9120, RD-M9050, RD-M9000, RD-M8100, RD-M8120, RD-M8130, RD-M8000, RD-M7100, RD-M7120, RD-M7000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	RD-M9100, RD-M9120, RD-M9000, RD-M8100, RD-M8120, RD-M8130, RD-M8000, RD-M7100, RD-M7120, RD-M7000	6 - 7		4 mm hexagon wrench
Pulley screws	All	2.5 - 5		3 mm hexagon wrench
Plate axle	RD-M9100, RD-M9120, RD-M8100, RD-M8120, RD-M8130, RD-M7100, RD-M7120	7.8 - 9.8		4 mm hexagon wrench
	RD-M9050, RD-M9000, RD-M8000, RD-M7000	8 - 10		
<a href="#">Plate unit cover screws</a>	All	1 - 1.5		2 mm hexagon wrench
Plate stopper pin	All	1		Cross head screwdriver [#2]











## Reference image

- Example) RD-M9100



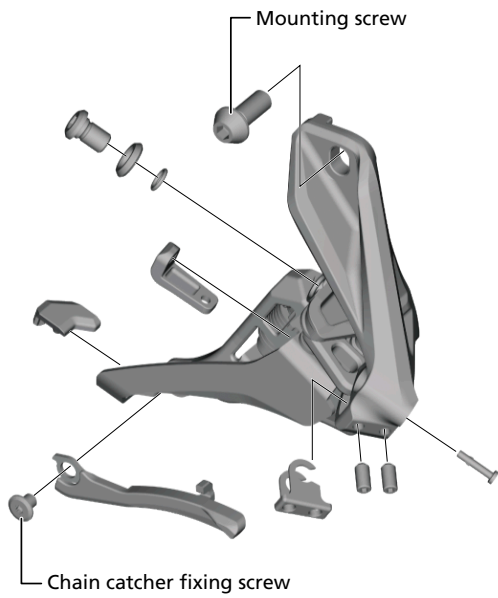
# Front Derailleur

FD-M9100, FD-M9050, FD-M9070, FD-M9000, FD-M9020, FD-M9025,  
FD-M8100, FD-M8000, FD-M8020, FD-M8025, FD-M7100, FD-M7000,  
FD-M7005, FD-M7020, FD-M7025

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	5 - 7		4 mm hexagon wrench
Cable fixing screw	FD-M9100, FD-M9000, FD-M9020, FD-M9025, FD-M8100, FD-M8000, FD-M8020, FD-M8025, FD-M7100, FD-M7000, FD-M7005, FD-M7020, FD-M7025	6 - 7		4 mm hexagon wrench
<a href="#">Chain catcher fixing screw</a>	FD-M9100, FD-M9000, FD-M9020, FD-M9025, FD-M8100, FD-M8000, FD-M8020, FD-M8025, FD-M7100, FD-M7000, FD-M7005, FD-M7020, FD-M7025	1 - 2		Hexalobular [#10]
Stroke fixing bolt	FD-M9050, FD-M9070	0.5		2 mm hexagon wrench
Chain guide bolt and nut	FD-M9050, FD-M9070	0.7	 + 	Hexalobular [#8] + 2.5 mm hexagon wrench
			 + 	Hexalobular [#8] + TL-FDM905


## Reference image

- Example) FD-M9100



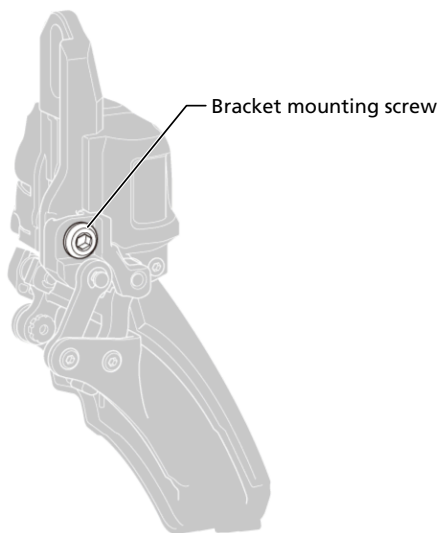
# Mount Adapter

## SM-FD905

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Bracket mounting screw</a>	All	5 - 7		4 mm hexagon wrench























### Reference image

- Example) SM-FD905



## Hub set (Disc brake)

HB-M9110, HB-MT900, FH-M9111, HB-M9010, FH-M9000, FH-M9010, HB-M8110, FH-M8110, FH-M8130, HB-M8000, HB-M8010, FH-M8000, FH-M8010, HB-M7110, FH-M7130, HB-M7000, HB-M7010, FH-M7000, FH-M7010

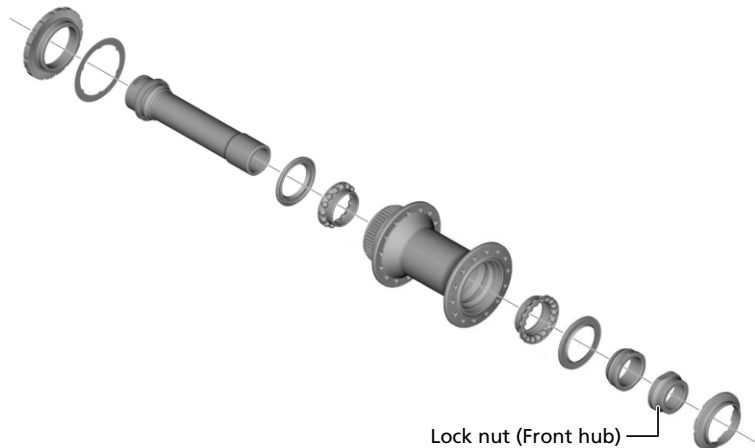
Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	All	40	 /  +  TL-FC36 / TL-LR15 + Adjustable wrench
<a href="#">Lock nut (Front hub)</a>	HB-M9110, HB-MT900, HB-M9010, HB-M8110, HB-M8010, HB-M7110	21 - 26	 +  22 mm hub spanner x 2
	HB-M8000	15 - 17	 +  5 mm hexagon wrench + TL-HS22
	HB-M7000	10 - 15	 +  13 mm hub spanner + 17 mm hub spanner
	HB-M7010	21 - 26	 +  22 mm hub spanner x 2
<a href="#">Lock nut (FREEHUB)</a>	FH-M9111, FH-M8110, FH-M8130, FH-M7110, FH-M7130	16 - 21	 +  17 mm hub spanner + 18 mm hub spanner
	FH-M9010	16.7 - 22.1	 +  17 mm hub spanner + 20 mm hub spanner
	FH-M9000		 +  5 mm hexagon wrench + 20 mm hub spanner
	FH-M8000		 +  5 mm hexagon wrench + 17 mm hub spanner
	FH-M8010, FH-M7010, FH-M7000	15 - 20	 +  17 mm hub spanner x 2
<a href="#">Freewheel body</a>	FH-M9000, FH-M9010, FH-M8010, FH-M7010	150	 TL-FH15

MTB  
Hub set (Disc brake)

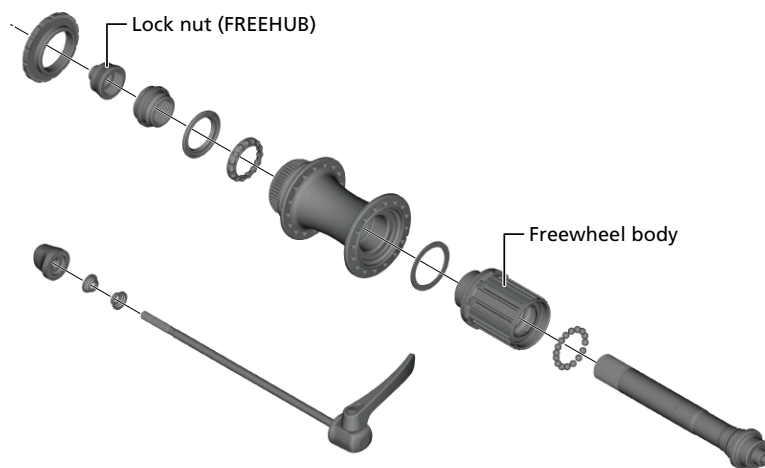
Parts Name	Model	Torque (N·m)	Tools	
Freewheel body fixing screw	FH-M8000	45 - 50	<b>14</b>	14 mm hexagon wrench
	FH-M7000	35 - 50	<b>10</b>	10 mm hexagon wrench (TL-WR37)

Reference image

- Example) HB-M9110



















- Example) FH-M9000



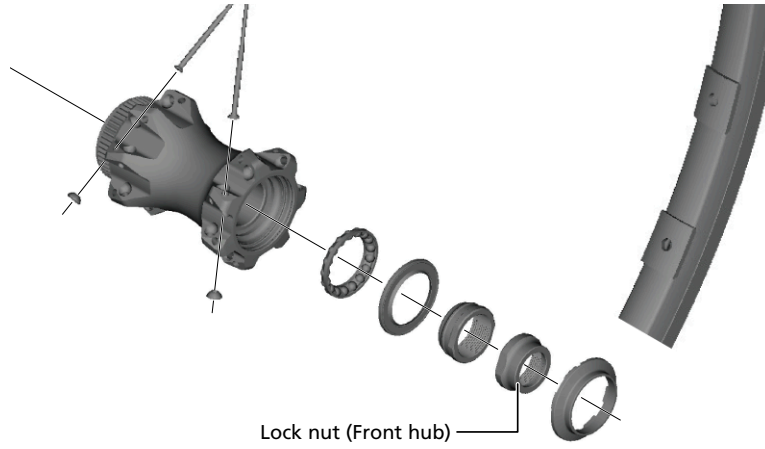
# Wheel Set (Disc Brake)

## WH-M9000, WH-M9020, WH-M8100, WH-M8120, WH-M8000, WH-M8020

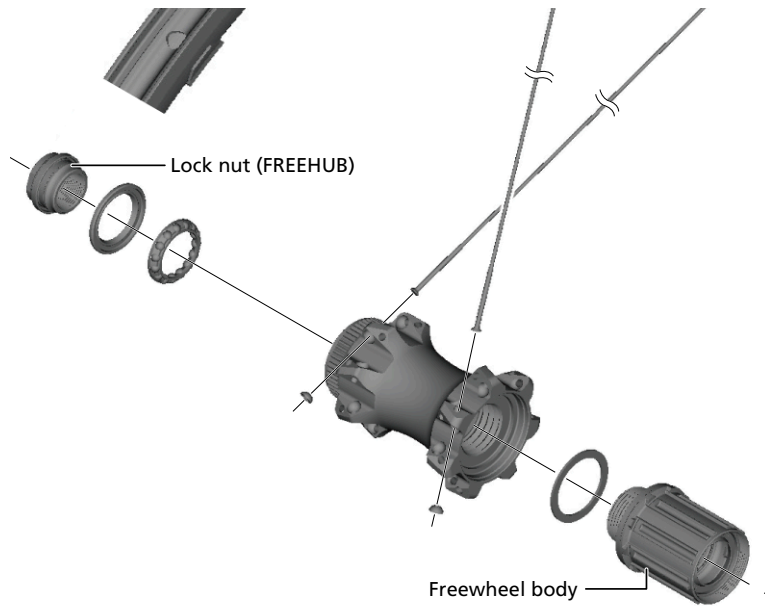
Parts Name	Model	Torque (N·m)	Tools	
Lock ring	WH-M9000, WH-M9020, WH-M8000, WH-M8020	30 - 50	 / 	TL-LR15 + Adjustable wrench
Rotor lock ring	All	40	 /  + 	TL-FC36 / TL-LR15 + Adjustable wrench
<a href="#">Lock nut (Front hub)</a>	WH-M9000 (E-THRU), WH-M9020, WH-M8000 (E-THRU), WH-M8020, WH-M8100, WH-M8120	21 - 26	 + 	22 mm hub spanner x 2
	WH-M8000 (QR)	15 - 17	 + 	5 mm hexagon wrench + 17 mm Hub spanner
<a href="#">Lock nut (FREEHUB)</a>	WH-M8100, WH-M8120	16 - 21	 + 	17 mm hub spanner + 18 mm hub spanner
	WH-M9000 (E-THRU), WH-M9020, WH-M8000 (E-THRU), WH-M8020	17 - 22	 + 	17 mm hub spanner + 20 mm Hub spanner
	WH-M9000 (QR), WH-M8000 (QR)	17 - 22	 + 	5 mm hexagon wrench + 20 mm Hub spanner
<a href="#">Freewheel body</a>	WH-M9000, WH-M9020, WH-M8000, WH-M8020	150		TL-FH15

## Reference image

- Example) WH-M9000-TL-F15-275






- Example) WH-M9000-TL-R12-275















# Cassette

CS-M9100, CS-M9101, CS-M9000, CS-M9001, CS-M8100, CS-M8000,  
CS-M7100, CS-M7000

Parts Name	Model	Torque (N·m)	Tools
Lock ring	All	30 - 50	 /  +  TL-LR10 / TL-LR15 + adjustable wrench

# Crankset

FC-M9100, FC-M9120, FC-M9125, FC-M9130, FC-M9000, FC-M9020, FC-M8100, FC-M8120, FC-M8130, FC-M8000, FC-M7100, FC-M7120, FC-M7130, FC-M7000

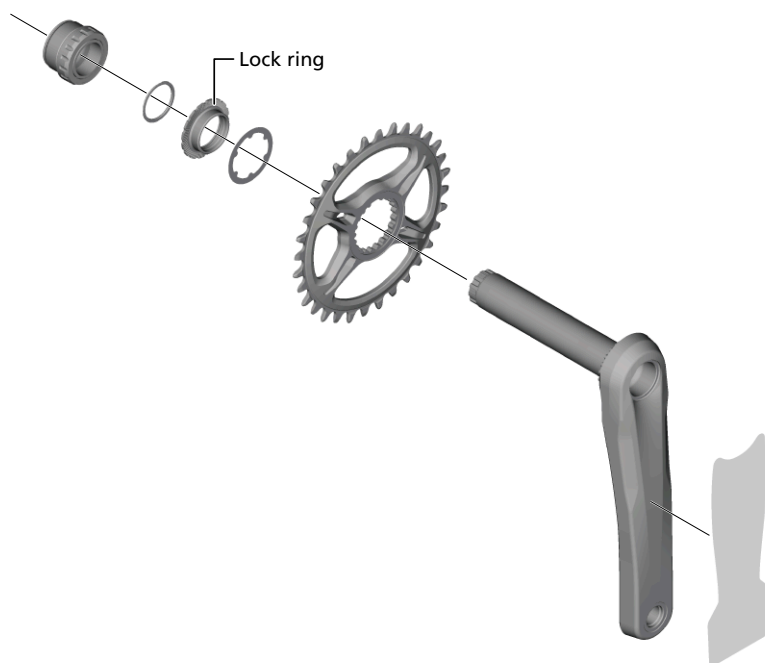
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting screw</a>	FC-M9100, FC-M9120, FC-M9125, FC-M9130	45 - 55		8 mm hexagon wrench
	FC-M9000, FC-M9020, FC-M8100, FC-M8120, FC-M8130, FC-M8000, FC-M7100, FC-M7120, FC-M7130, FC-M7000	0.7 - 1.5	 / 	TL-FC16 / TL-FC18
<a href="#">Crank fixing screw</a>	FC-M9000, FC-M9020, FC-M8100, FC-M8120, FC-M8130, FC-M8000, FC-M7100, FC-M7120, FC-M7130, FC-M7000	12 - 14		5 mm hexagon wrench
<a href="#">Lock ring</a>	FC-M9100, FC-M9120, FC-M9125, FC-M9130, FC-M8100, FC-M8120, FC-M8130	35 - 50	 + 	TL-FC41 + TL-FC32
			 + 	TL-FC41 + TL-FC36
			 + 	TL-FC41 + 32 mm spanner

# MTB Crankset

Parts Name	Model	Torque (N·m)	Tools	
Chainring fixing screws	FC-M9100, FC-M9120, FC-M8100, FC-M8120, FC-M7100, FC-M7120	16 - 17		Hexalobular [#30]
	FC-M9000, FC-M9020	8 - 10		Hexalobular [#27]
	FC-M8000, FC-M7000 (single gear / double gear)	12 - 14		Hexalobular [#30]
Chainring fixing screws (largest chainring / middle chainring)	FC-M8000, FC-M7000 (triple gear)	10 - 12		Hexalobular [#30]
Chainring fixing screws (smallest chainring)	FC-M8000, FC-M7000 (double gear / triple gear)	16 - 17		Hexalobular [#30]

## Reference image

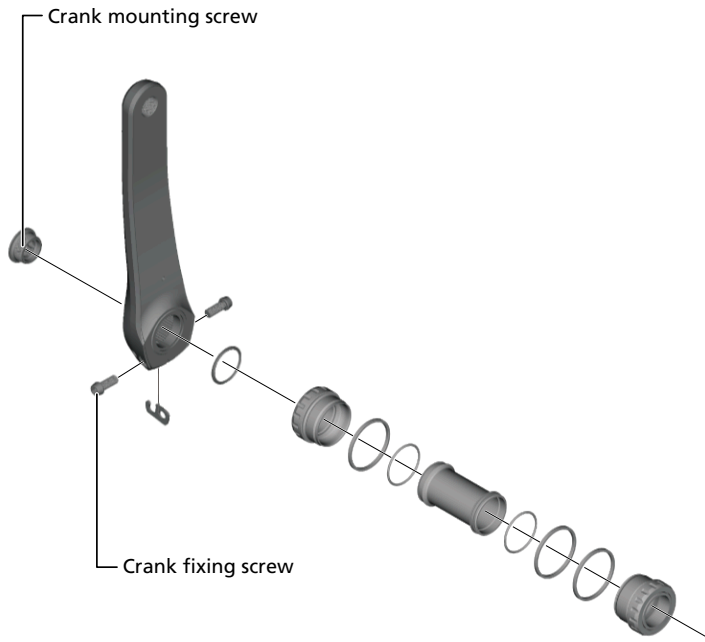
- Example) FC-M9100



# MTB Crankset















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- Example) FC-M9000






# Threaded Bottom Bracket

## BB-MT800, SM-BB93

Parts Name	Model	Torque (N·m)	Tools	
Left- and right-hand cups	BB-MT800	35 - 50	 + 	TL-FC25 + TL-FC32
			 + 	TL-FC25 + TL-FC33
			 + 	TL-FC25 + TL-FC36
				TL-FC37
	SM-BB93		 + 	TL-FC24 + TL-FC32
			 + 	TL-FC24 + TL-FC33
			 + 	TL-FC24 + TL-FC36
				TL-FC34










# Rotor

## RT-MT900, RT-MT800

Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	All	40	 +  /  TL-LR15 + Adjustable wrench / TL-FC36

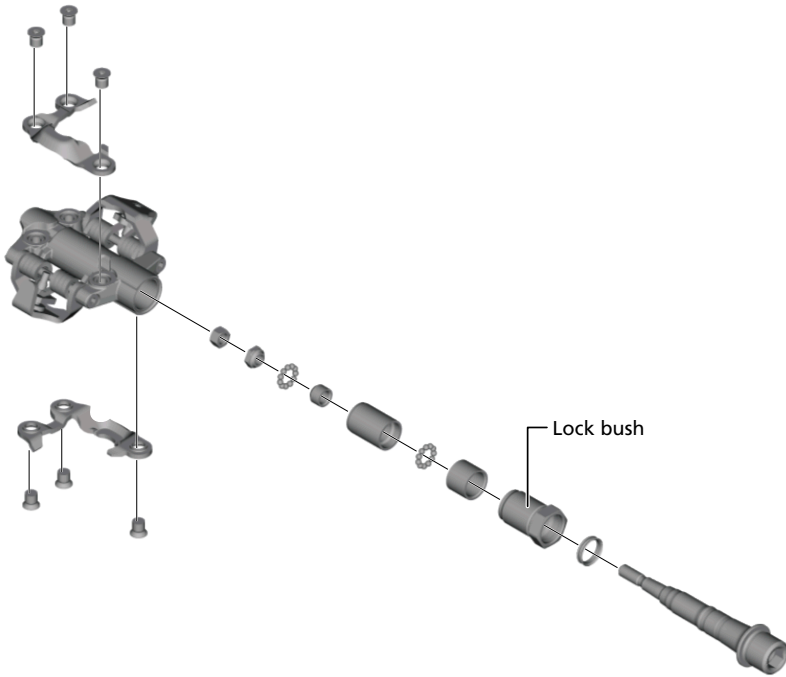
# Pedal

PD-M9100, PD-M9120, PD-M9000, PD-M9020, PD-M8100, PD-M8120,  
PD-M8000, PD-M8020

Parts Name	Model	Torque (N·m)	Tools	
Pedal axle	All	35 - 55		8 mm hexagon wrench
Lock nut	PD-M9100, PD-M9120, PD-M8100, PD-M8120	5 - 7		7 mm spanner
	PD-M9000, PD-M9020		 + 	7 mm spanner + 8 mm spanner
	PD-M8000, PD-M8020		 + 	7 mm spanner + 10 mm spanner
<a href="#">Lock bush</a>	PD-M9100, PD-M9120	9 - 12		15 mm spanner
	PD-M9000, PD-M9020, PD-M8000, PD-M8020			17 mm spanner
	PD-M8100, PD-M8120	10 - 12		
Body cover fixing screw	PD-M9100, PD-M9120, PD-M8100, PD-M8120	2.7 - 3.5		Hexalobular [#10]
	PD-M9000, PD-M9020, PD-M8000, PD-M8020	2.5 - 3.5		

## Reference image

- Example) PD-M9100









# E-BIKE

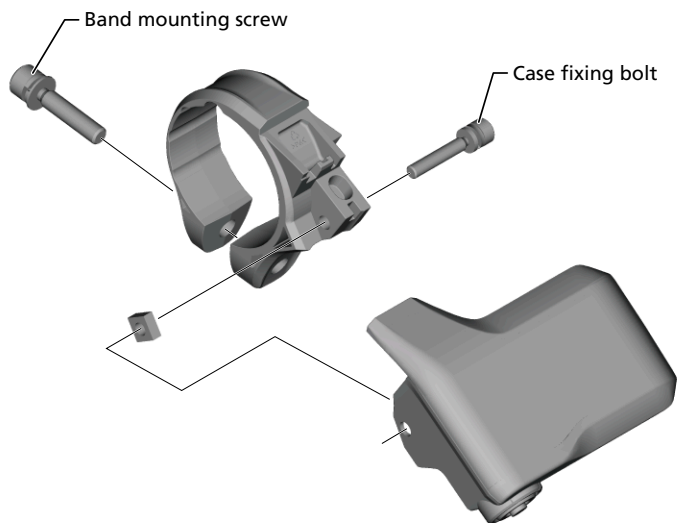
## Cycle Computer

SC-EM800, SC-EN600, SC-EN500, SC-E8000, SC-E7000, SC-E5003, SC-E5000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Band mounting screw</a>	All	0.8		3 mm hexagon wrench
<a href="#">Case fixing bolt</a>	SC-EM800, SC-E8000, SC-E7000	0.6		2.5 mm hexagon wrench
	SC-EN500, SC-E5003, SC-E5000	0.6		2 mm hexagon wrench
<a href="#">Case fixing screw</a>	SC-EN600	0.6		2.5 mm hexagon wrench

### Reference image

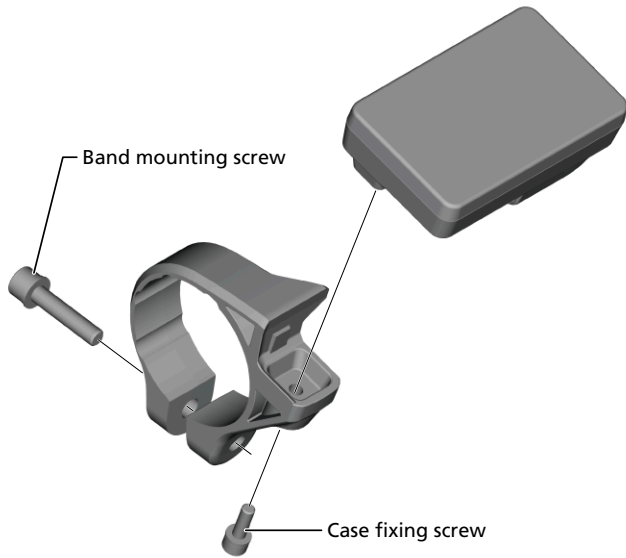
- Example) SC-EM800






# E-BIKE

## Cycle Computer

- Example) SC-EN600

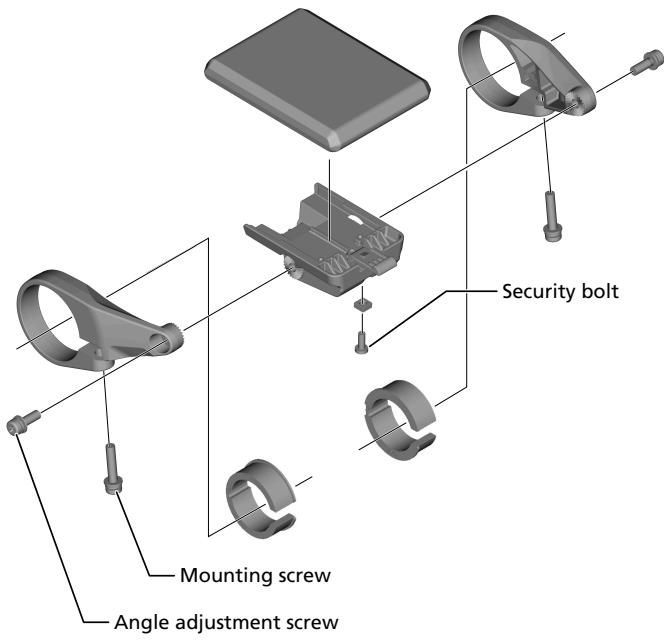


## SC-EN610, SC-E6100, SC-E6010

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	0.8 - 1		Cross head screwdriver [#2]
<a href="#">Angle adjustment screw</a>	All	0.5		Cross head screwdriver [#2]
<a href="#">Security bolt</a>	All	0.4 - 0.5		Cross head screwdriver [#2]





## Reference image

- Example) SC-EN610



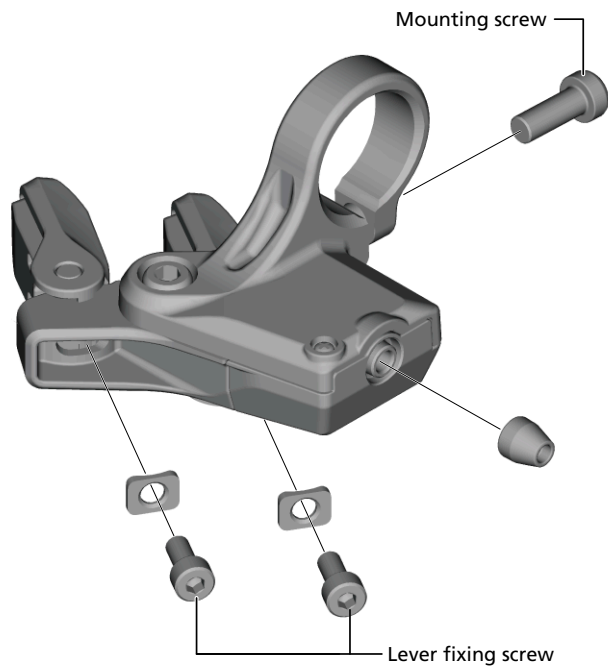
# Switch Unit

## SW-M8150, SW-E8000-L

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	SW-M8150	3		4 mm hexagon wrench
<a href="#">Mounting bolt</a>	SW-E8000-L	2 - 2.2		3 mm hexagon wrench
<a href="#">Lever fixing screw</a>	SW-M8150	2		3 mm hexagon wrench
	SW-E8000-L	0.5 - 0.7		2 mm hexagon wrench
<a href="#">Unit position adjustment bolt</a>	SW-M8150	3		3 mm hexagon wrench

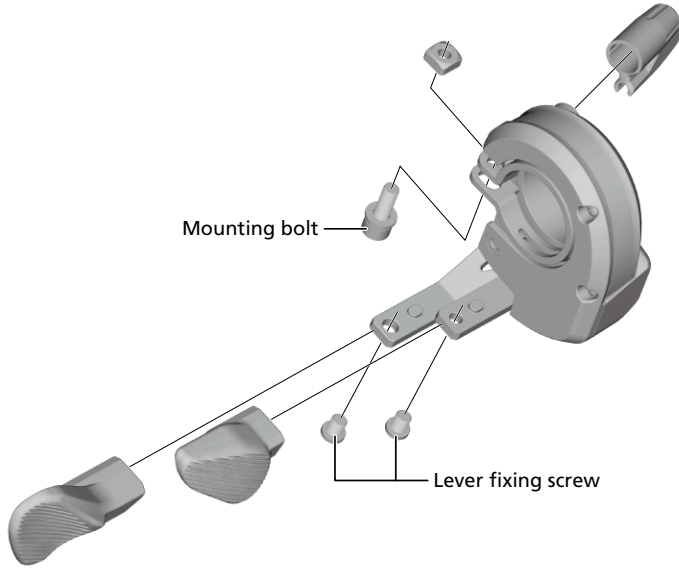
### Reference image

- Example) SW-M8150-R

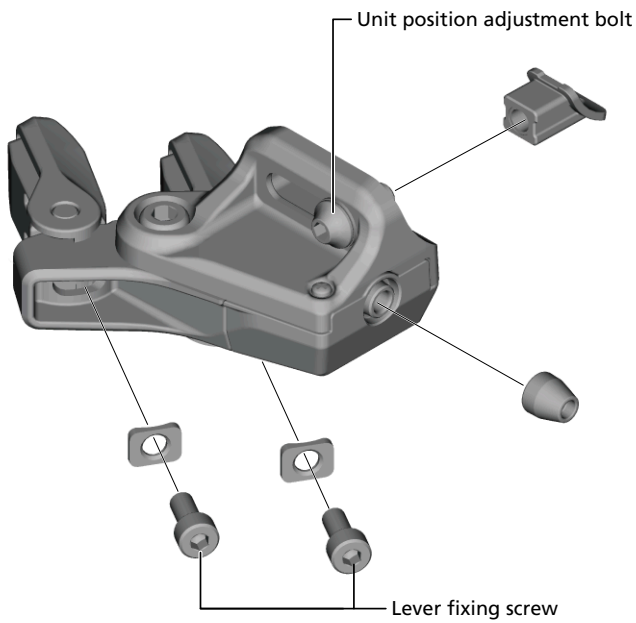


E-BIKE  
Switch Unit

- Example) SW-E8000-L



- Example) SW-M8150-IR





**SW-EN600-R, SW-EN600-L, SW-EM800-L, SW-E7000, SW-E6010, SW-E6000**

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	SW-EN600-L, SW-EN600-R	0.8	<b>3</b>	3 mm hexagon wrench
	SW-EM800-L	1.5	<b>2.5</b>	2.5 mm hexagon wrench

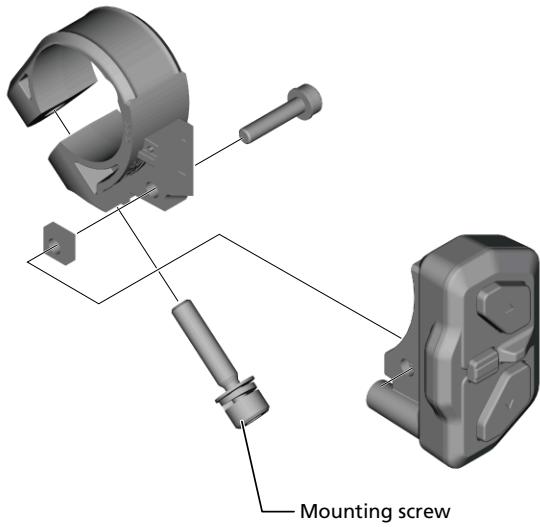
# E-BIKE

## Switch Unit

Parts Name	Model	Torque (N·m)	Tools	
	SW-E7000, SW-E6010	1.5		3 mm hexagon wrench
	SW-E6000	1.5		Cross head screwdriver [#2]













### Reference image

- Example) SW-EN600



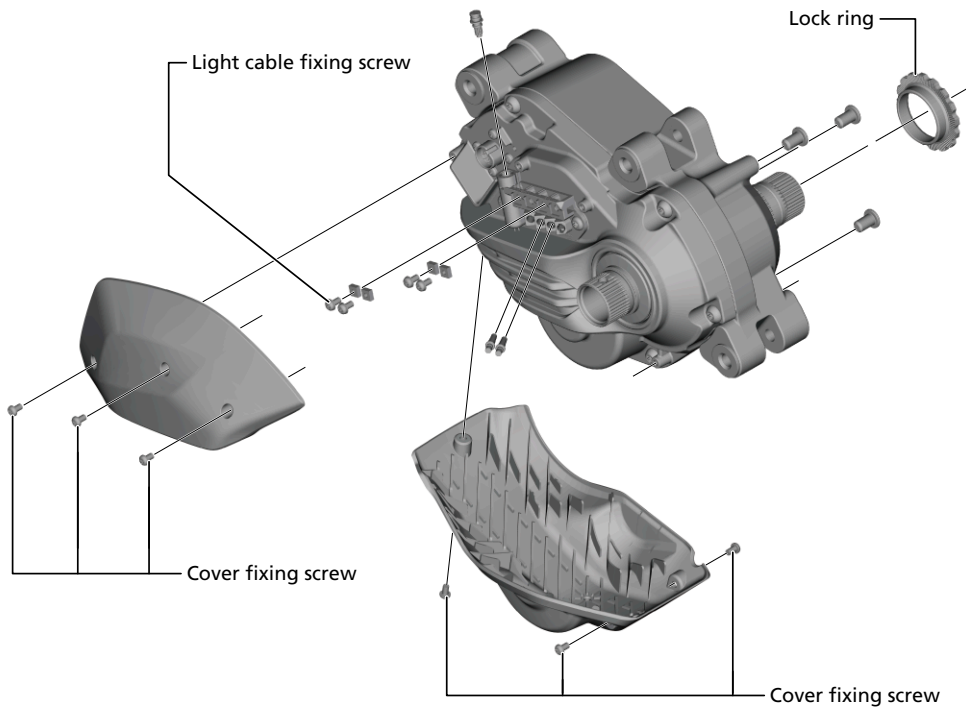
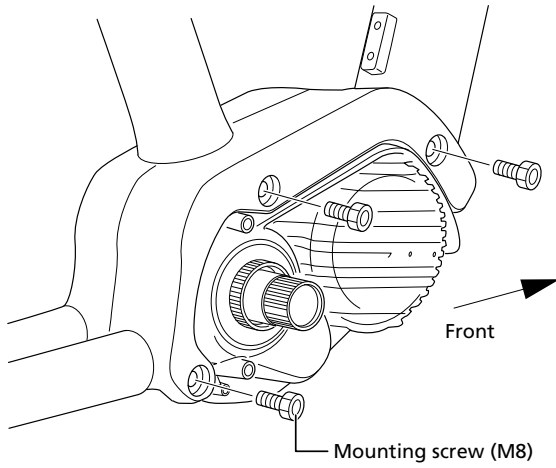
# Drive Unit

**DU-EP801, DU-EP800, DU-EP600, DU-E8000, DU-E8080, DU-E7000, DU-E6100, DU-E6180, DU-E5000, DU-E5080**

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw (M8)</a>	All	10 - 12.5 (Reference)	Depending on bicycle frame specification. Contact the bicycle manufacturer.	
<a href="#">Cover fixing screw</a>	All	0.6		Cross head screwdriver [#2]
<a href="#">Lock ring (for Chainring)</a>	DU-EP801, DU-EP600	35 - 45	 + 	TL-FC430 + TL-FC32
			 + 	TL-FC430 + TL-FC33
			 + 	TL-FC430 + TL-FC36
	DU-EP800, DU-E8000, DU-E7000, DU-E6100, DU-E6180, DU-E5000, DU-E5080		 + 	TL-FC39 + TL-FC33
			 + 	TL-FC39 + TL-FC36
<a href="#">Light cable mounting screw</a>	All	0.6		Cross head screwdriver [#2]

## Reference image



- Example) DU-EP801





# Chain Device

## CD-EM800, SM-CDE80, SM-CDE70, SM-DUE61-FB

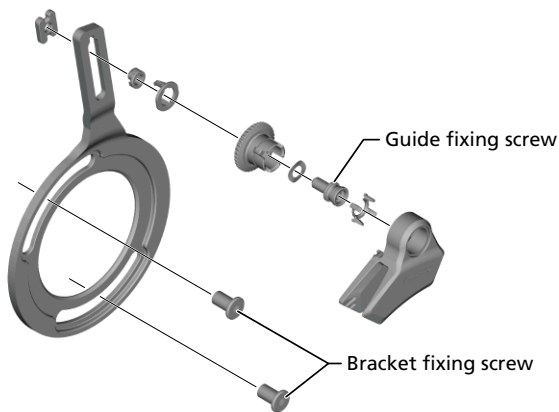
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Bracket fixing screw</a> * 1	CD-EM800	3 - 4		3 mm hexagon wrench
<a href="#">Back plate fixing screw</a> * 2	SM-CDE80, SM-CDE70	3 - 4		3 mm hexagon wrench
<a href="#">Guide fixing screw</a>	CD-EM800	2 - 3		4 mm hexagon wrench
	SM-CDE80, SM-CDE70	4	 / 	3 mm hexagon wrench / 4 mm hexagon wrench
<a href="#">Chain case stay fixing screw</a>	SM-DUE61-FB	1.2		2 mm hexagon wrench

\* 1 Also for chain case stay (DU-EP801, DU-EP600)

\* 2 For DU-E6100, DU-E6180 only

### Reference image

- Example) CD-EM800

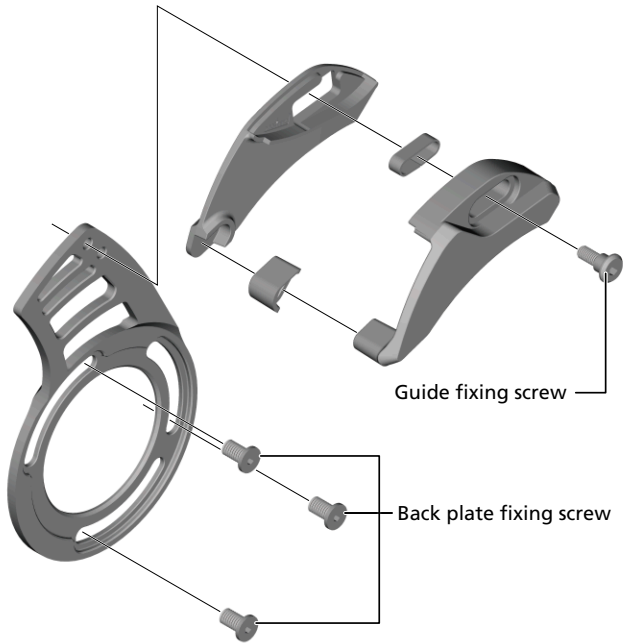


# E-BIKE

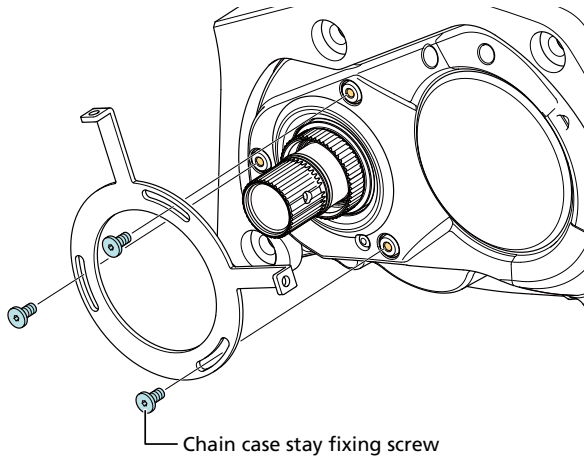
## Chain Device

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- Example) SM-CDE80








- Example) SM-DUE61-FB



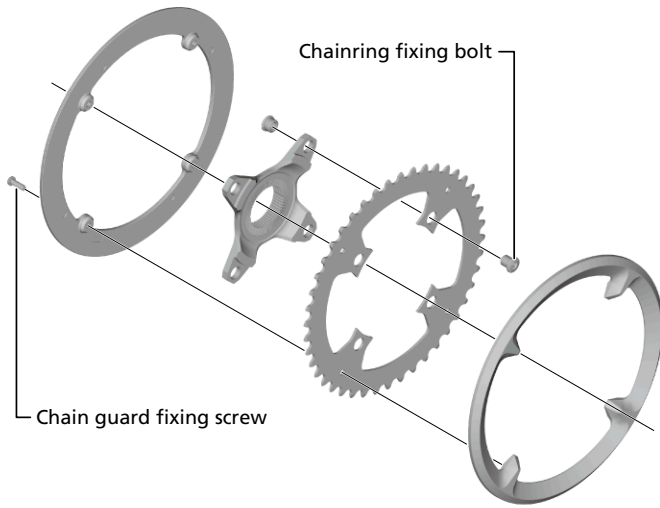
# Chainring

**CR-EM800, CR-ET600, SM-CRE80-12-B, SM-CRE80-12-SB, SM-CRE80-B, SM-CRE80-R, SM-CRE80, SM-CRE70-12-B, SM-CRE70-12, SM-CRE70-B, SM-CRE70, SM-CRE61, SM-CRE50**

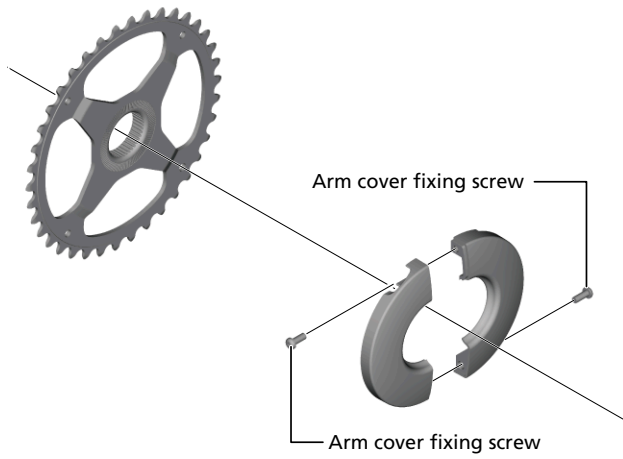
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Chainring fixing bolt</a>	CR-EM800, SM-CRE80-12-B, SM-CRE80-12-SB, SM-CRE80-B, SM-CRE80-R, SM-CRE80, SM-CRE70-12-B, SM-CRE70-12, SM-CRE70-B, SM-CRE70	12 - 14	 +  / 	TL-FC22 + 5 mm hexagon wrench / Hexalobular [#10]
<a href="#">Chain guard fixing screw</a>	CR-ET600, SM-CRE80, SM-CRE70-12, SM-CRE70, SM-CRE61, SM-CRE50	0.7		Cross head screwdriver [#2]
<a href="#">Arm cover fixing screw</a>	SM-CRE61, SM-CRE50	0.8		Cross head screwdriver [#2]

## Reference image

- Example) SM-CRE80







- Example) SM-CRE50



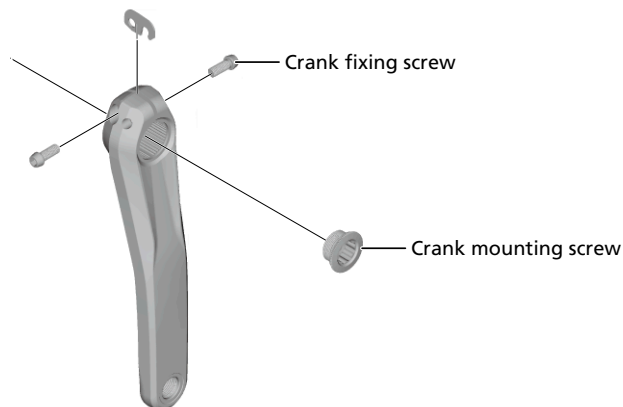
# Crank Arm

FC-EM900, FC-EM600, FC-M8150, FC-M8050, FC-E8050, FC-E8000, FC-E6100, FC-E6010, FC-E5000, FC-E5010

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting screw</a>	FC-EM900, FC-EM600, FC-M8150, FC-M8050, FC-E8050, FC-E8000, FC-E6100, FC-E6010	0.7 - 1.5	 / 	TL-FC16 / TL-FC18
	FC-E5000, FC-E5010	35		8 mm hexagon wrench
<a href="#">Crank fixing screw</a>	FC-EM900, FC-EM600, FC-M8150, FC-M8050, FC-E8050, FC-E8000, FC-E6100, FC-E6010	12 - 14		5 mm hexagon wrench

## Reference image

- Example) FC-E8050

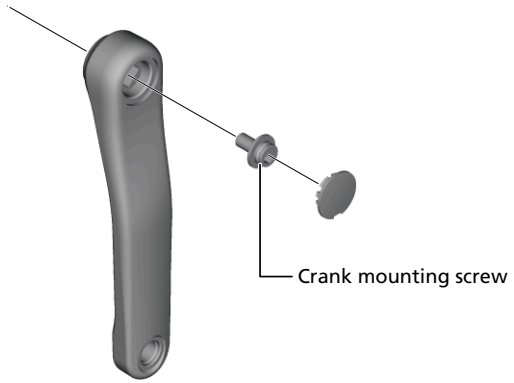


# E-BIKE

## Crank Arm


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- Example) FC-E5000



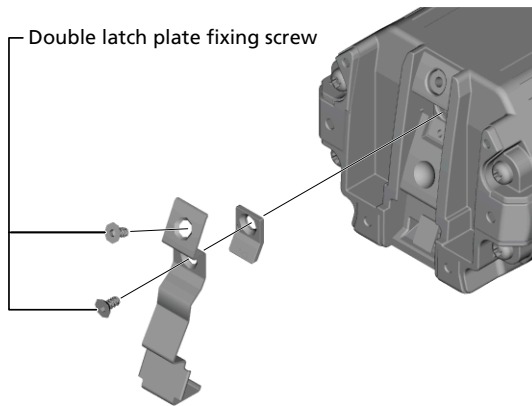
# Battery

## BT-EN805, BT-EN805-L, BT-EN806, BT-E8035, BT-E8035-L, BT-E8036

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Double latch plate fixing screw</a>	All	0.6		2 mm hexagon wrench

### Reference image

- Example) BT-EN806



# Battery Mount

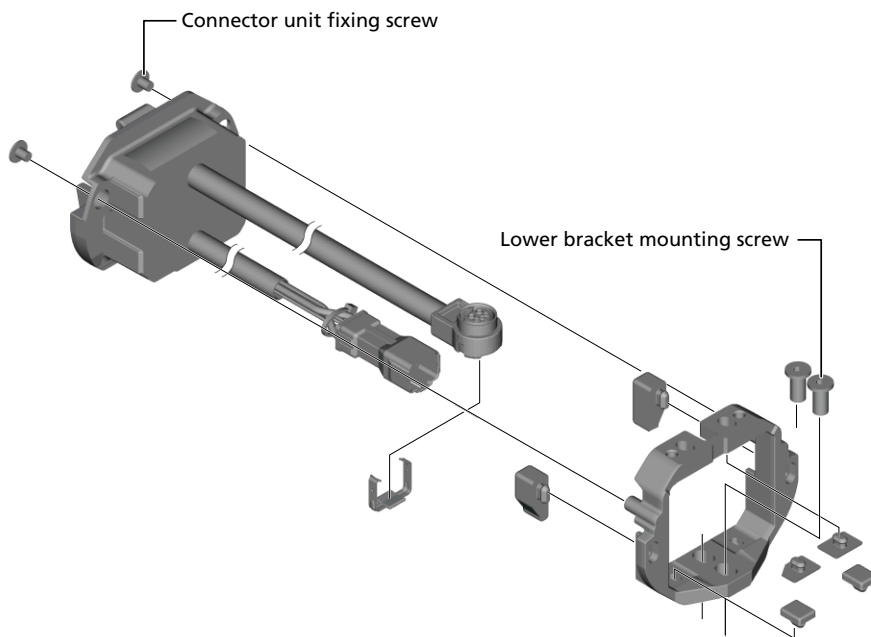
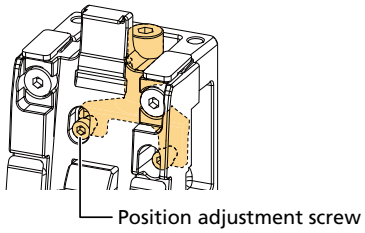
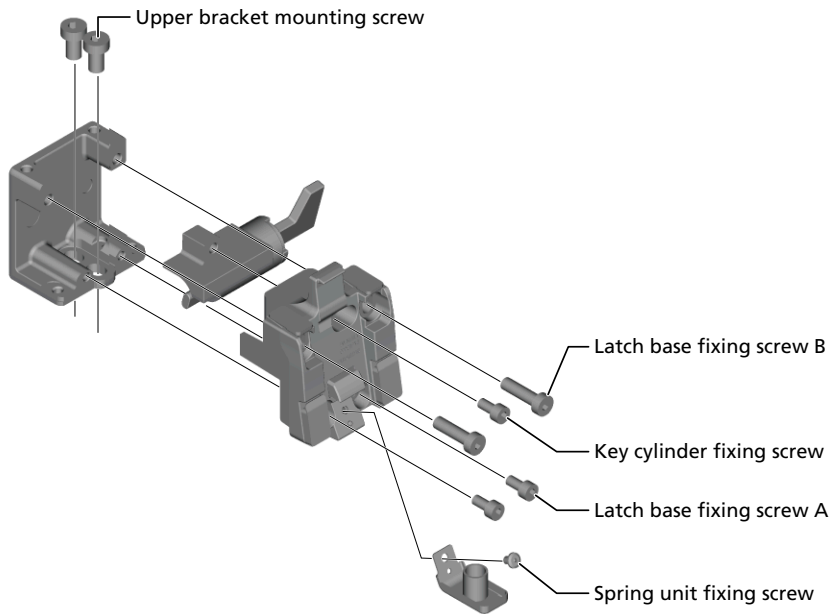
## BM-EN800, BM-EN801, BM-E8030, BM-E8031, BM-E8020

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Upper bracket mounting screw</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	4.5		3 mm hexagon wrench
<a href="#">Position adjustment screw</a>	BM-EN801, BM-E8031	0.8		2.5 mm hexagon wrench
<a href="#">Latch base fixing screw A</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	3		3 mm hexagon wrench
<a href="#">Latch base fixing screw B</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	3		3 mm hexagon wrench
<a href="#">Key cylinder fixing screw</a>	BM-EN800, BM-E8030	1		3 mm hexagon wrench
<a href="#">Spring unit fixing screw</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	0.5		1.5 mm hexagon wrench
<a href="#">Lower bracket mounting screw</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	6		4 mm hexagon wrench
<a href="#">Connector unit fixing screw</a>	BM-EN800, BM-EN801, BM-E8030, BM-E8031	1		3 mm hexagon wrench
<a href="#">Upper case fixing screw</a>	BM-E8020	0.6		Cross head screwdriver [#2]
<a href="#">Lower case mounting screw</a>	BM-E8020	10		5 mm hexagon wrench
<a href="#">Key unit mounting screw</a>	BM-E8020	10		5 mm hexagon wrench
<a href="#">Key unit cover fixing screw</a>	BM-E8020	0.6		Cross head screwdriver [#2]
<a href="#">Key cylinder fixing screw</a>	BM-E8020	0.6		2 mm hexagon wrench



## Reference image

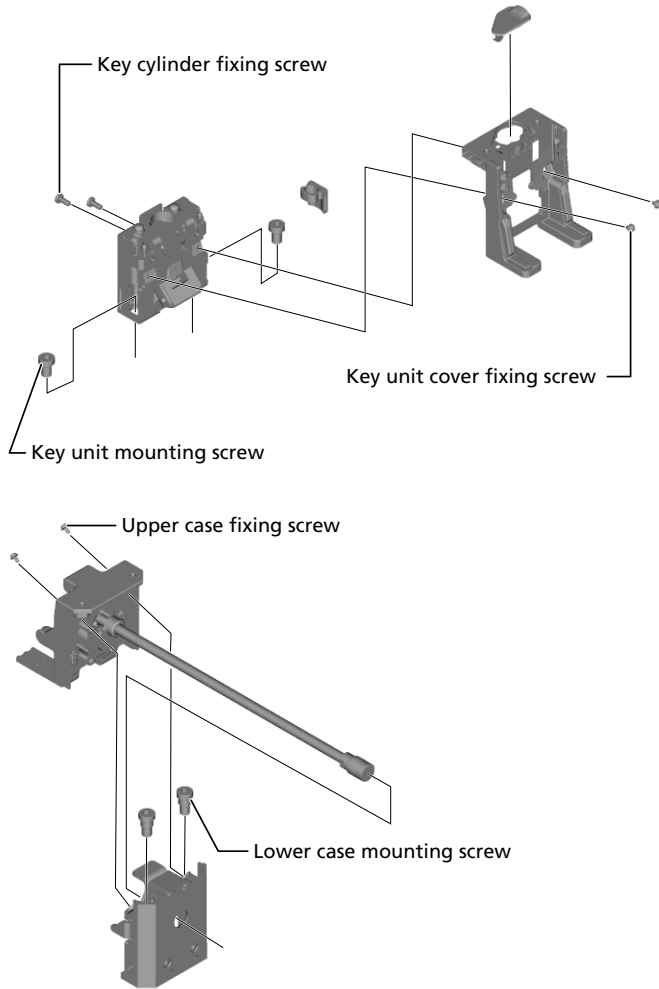
- Example) BM-EN800










# E-BIKE

## Battery Mount

- Example) BT-E8020

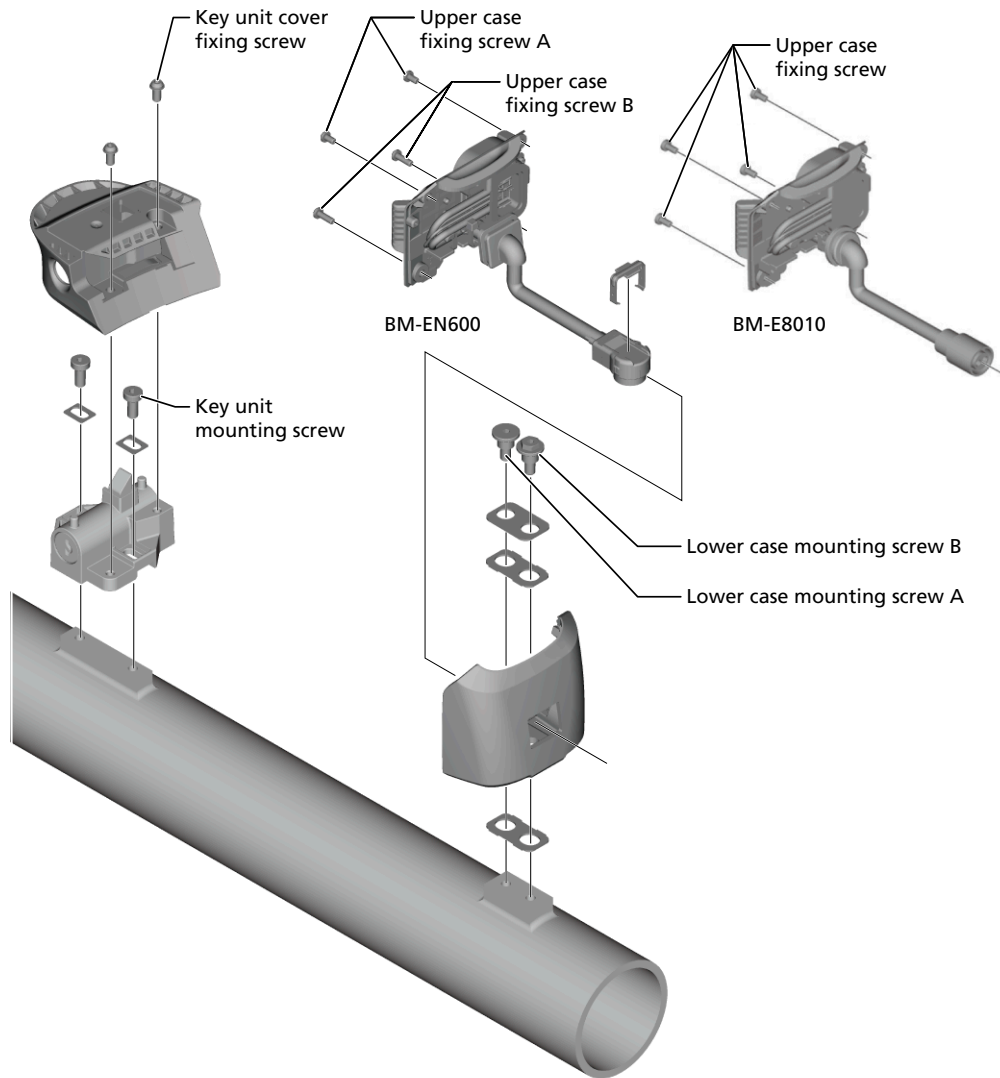


## BM-EN600, BM-E8016, BM-E8010





Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Lower case mounting screw A</a>	All	3		3 mm hexagon wrench
<a href="#">Lower case mounting screw B</a>	All	3		8 mm spanner
<a href="#">Key unit mounting screw</a>	All	3		3 mm hexagon wrench
<a href="#">Key unit cover fixing screw</a>	All	0.6		2.5 mm hexagon wrench
<a href="#">Upper case fixing screw A</a>	BM-EN600, BM-E8016	0.6		2.5 mm hexagon wrench
<a href="#">Upper case fixing screw B</a>	BM-EN600, BM-E8016	0.6		2.5 mm hexagon wrench
<a href="#">Upper case fixing screw</a>	BM-E8010	0.6		2.5 mm hexagon wrench

## Reference image

- Example) BM-EN600, BM-E8010

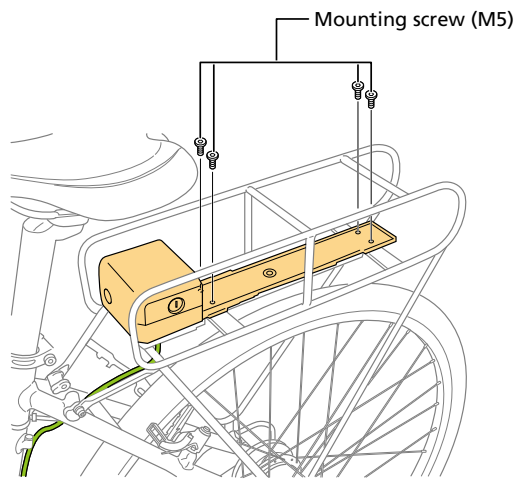
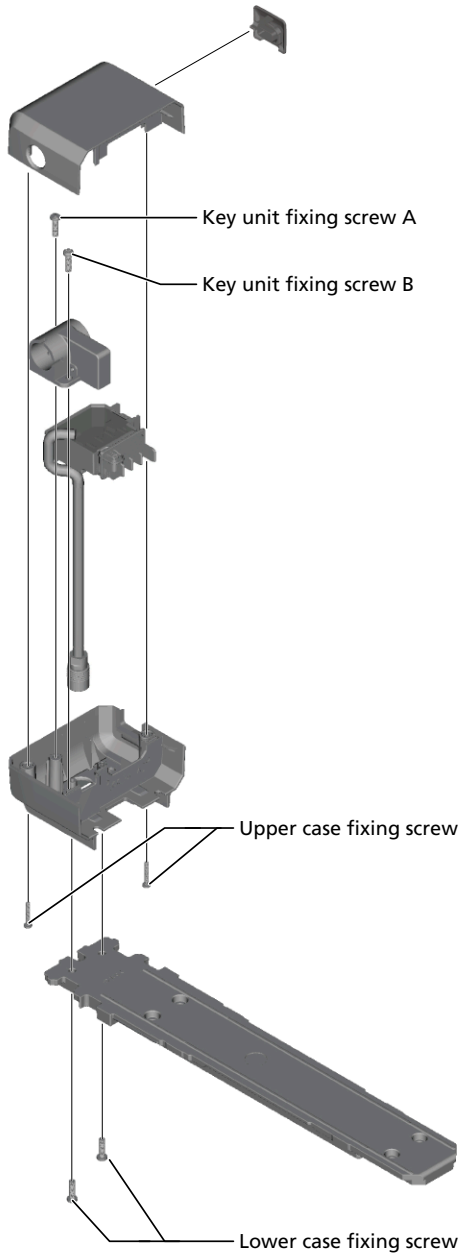


## BM-EN400

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Key unit fixing screw A</a>	BM-EN400	1.6 - 1.8		Slotted screwdriver (6.5 mm)
<a href="#">Key unit fixing screw B</a>	BM-EN400	1.6 - 1.8		Cross head screwdriver [#2]
<a href="#">Upper case fixing screw</a>	BM-EN400	1.1 - 1.3		Hexalobular [#10]
<a href="#">Lower case fixing screw</a>	BM-EN400	1.6 - 1.8		Cross head screwdriver [#2]
<a href="#">Mounting screw (M5)</a>	BM-EN400	-	Depending on bicycle frame specification. Contact the bicycle manufacturer.	


## Reference image

- Example) BM-E6000



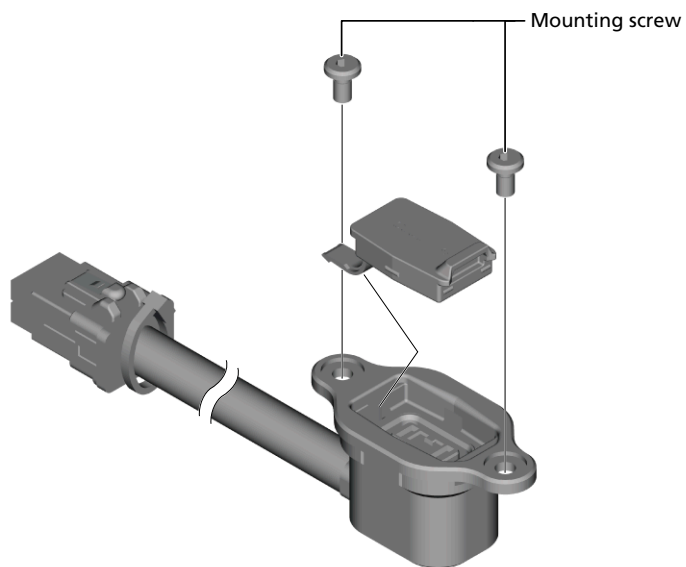
# Satellite Charging Port

## EW-CP100

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	EW-CP100	0.6		2 mm hexagon wrench


### Reference image

- Example) EW-CP100



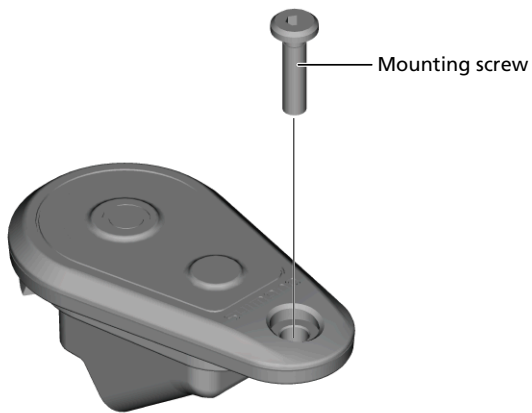
# Satellite System ON/OFF Switch

## EW-SW100, EW-SW300, EW-SW310

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	0.6		2 mm hexagon wrench





### Reference image

- Example) EW-SW310



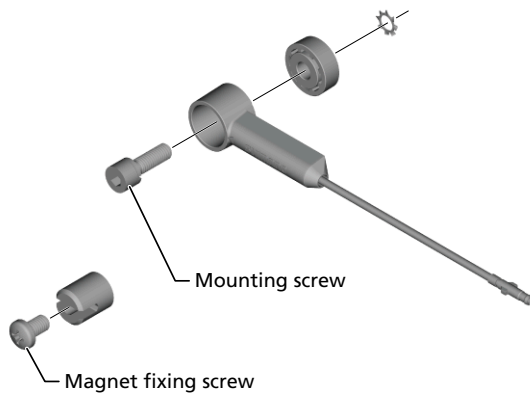
# Speed Sensor

## EW-SS300, EW-SS301, EW-SS302, SM-DUE10, SM-DUE11

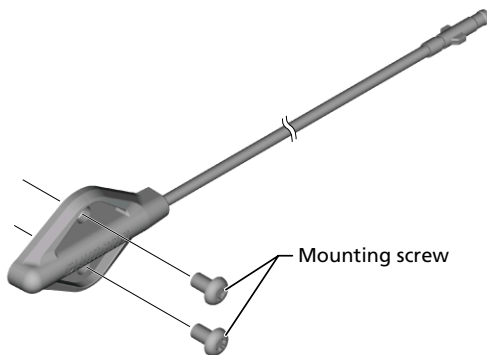
Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	EW-SS300, SM-DUE10	1.5 - 2		4 mm hexagon wrench / hexalobular [#25]
	EW-SS301, SM-DUE11	0.6		Hexalobular [#10]
	EW-SS302	0.8 - 1.3		Hexalobular [#10]
<a href="#">Magnet fixing screw</a>	EW-SS300, SM-DUE10	1.5 - 2		Cross head screwdriver [#2]

### Reference image

- Example) EW-SS300



- Example) EW-SS301

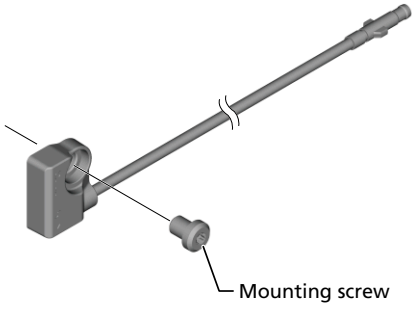


# E-BIKE

## Speed Sensor

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- Example) EW-SS302







# LIFESTYLE

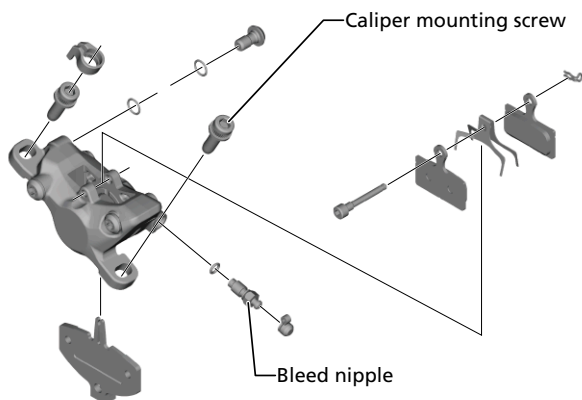
## Hydraulic Disc Brake Caliper

BR-U8000, BR-U8020

Parts Name	Model	Torque (N·m)	Tools	
Banjo	All	4 - 6		3 mm hexagon wrench
Pad axle	All	1 - 1.5		3 mm hexagon wrench
<a href="#">Caliper mounting screw</a>	All	6 - 8		5 mm hexagon wrench
<a href="#">Bleed nipple</a>	All	4 - 6		7 mm box wrench





### Reference image

- Example) BR-U8000



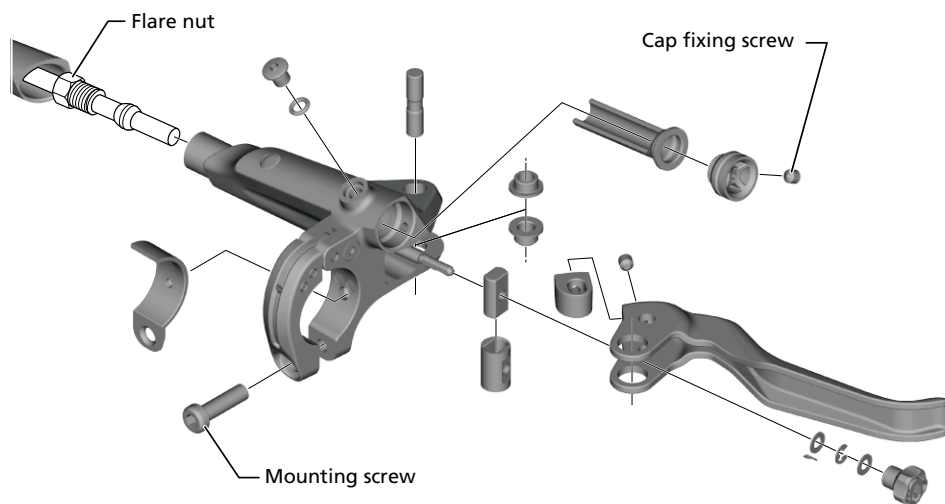
# Hydraulic Disc Brake Lever

## BL-U8000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	BL-U8000	4 - 6		4 mm hexagon wrench
<a href="#">Flare nut</a>	BL-U8000	5 - 7		8 mm spanner
Bleed screw	BL-U8000	0.5 - 1		2.5 mm hexagon wrench
<a href="#">Cap fixing screw</a>	BL-U8000	0.2 - 0.3		2 mm hexagon wrench





### Reference image

- Example) BL-U8000



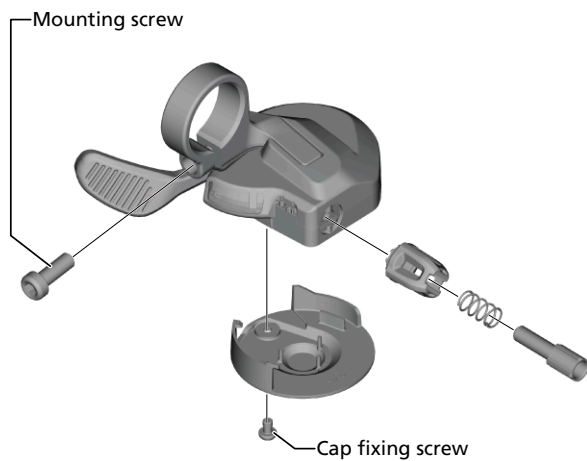
# Shifter

## SL-U8000-IL, SL-U8000-11IR, SL-U8000-L, SL-U8000, SL-U6000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	SL-U8000	3		4 mm hexagon wrench
	SL-U8000-IL, SL-U8000-11IR	4 - 6		
	SL-U6000	5		5 mm hexagon wrench
<a href="#">Cap fixing screw</a>	SL-U8000-L, SL-U8000-IL	0.3		Cross head screwdriver [#2]
	SL-U8000	1.5		2.5 mm hexagon wrench








### Reference image

- Example) SL-U8000



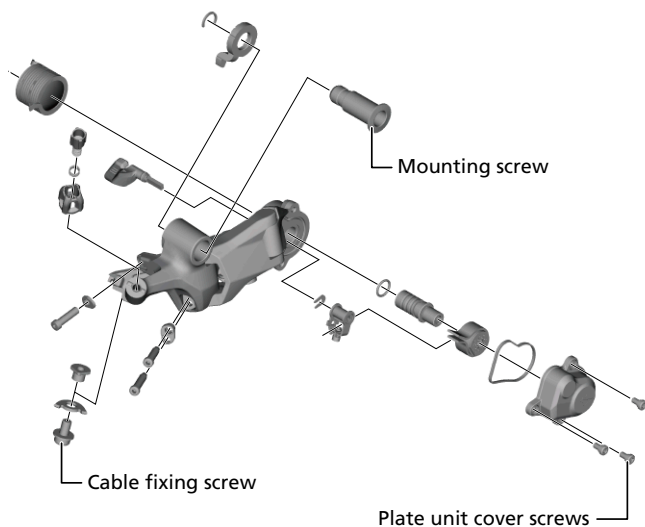
# Rear Derailleur

## RD-U8020, RD-U8000, RD-U6050, RD-U6070, RD-U6020, RD-U6000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	RD-U8000, RD-U8020	6 - 7		4 mm hexagon wrench
	RD-U6000, RD-U6020			5 mm hexagon wrench
Pulley screws	All	2.5 - 5		3 mm hexagon wrench
Plate axle	RD-U8020, RD-U8000, RD-U6020, RD-U6000	7.8 - 9.8		4 mm hexagon wrench
<a href="#">Plate unit cover screws</a>	RD-U8020, RD-U8000, RD-U6020, RD-U6000	1 - 1.5		2 mm hexagon wrench
Plate stopper pin	RD-U8020, RD-U8000, RD-U6020, RD-U6000	1		Cross head screwdriver [#2]

### Reference image

- Example) RD-U8000



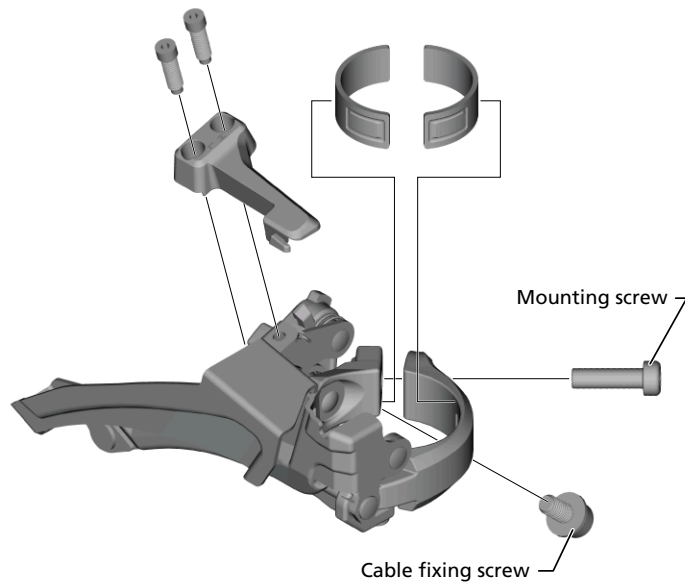
# Front Derailleur

## FD-U8010, FD-U6010, FD-U6000

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	5 - 7	<b>5</b>	5 mm hexagon wrench
	FD-U8010, FD-U6010		<b>4</b>	4 mm hexagon wrench
<a href="#">Cable fixing screw</a>	All	5 - 7	<b>5</b>	5 mm hexagon wrench
	FD-U8010, FD-U6010		<b>4</b>	4 mm hexagon wrench





### Reference image

- Example) FD-U8010



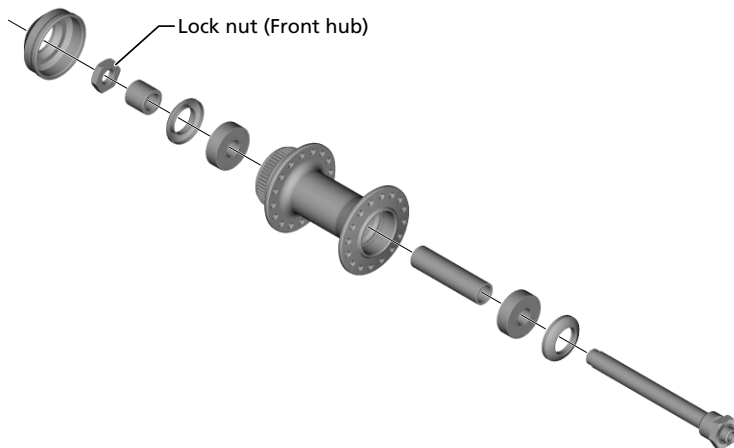
# Hub set (Disc brake)

## FH-TC500, HB-QC400, FH-QC400

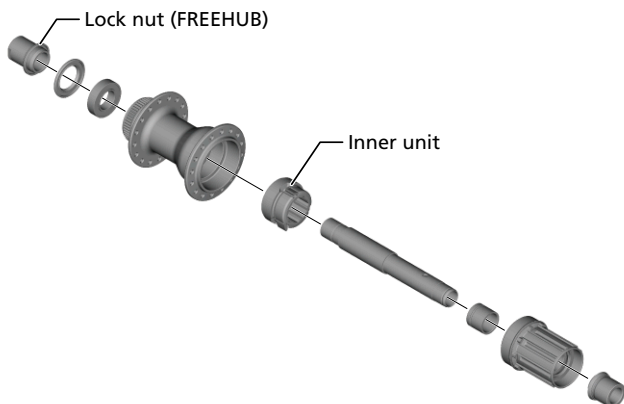
Parts Name	Model	Torque (N·m)	Tools	
Rotor lock ring	ALL	40	TL-FC36 / TL-LR15 + 	TL-FC36 / TL-LR15 + Adjustable wrench
<a href="#">Lock nut (Front hub)</a>	HB-QC400	6 - 8	TL-HS37	TL-HS37
<a href="#">Lock nut (FREEHUB)</a>	FH-TC500	3 - 5		17 mm hub spanner
<a href="#">Inner unit</a>	FH-TC500	180 - 200		19 mm hexagon wrench
<a href="#">Freewheel body</a>	FH-QC400	147 - 200		12 mm hexagon wrench

### Reference image

- Example) HB-QC400






- Example) FH-TC500





# Cassette






## CS-LG700-11, CS-LG400-11, CS-LG400-10, CS-LG300-10

Parts Name	Model	Torque (N·m)	Tools
Lock ring	All	30 - 50	 /  + 



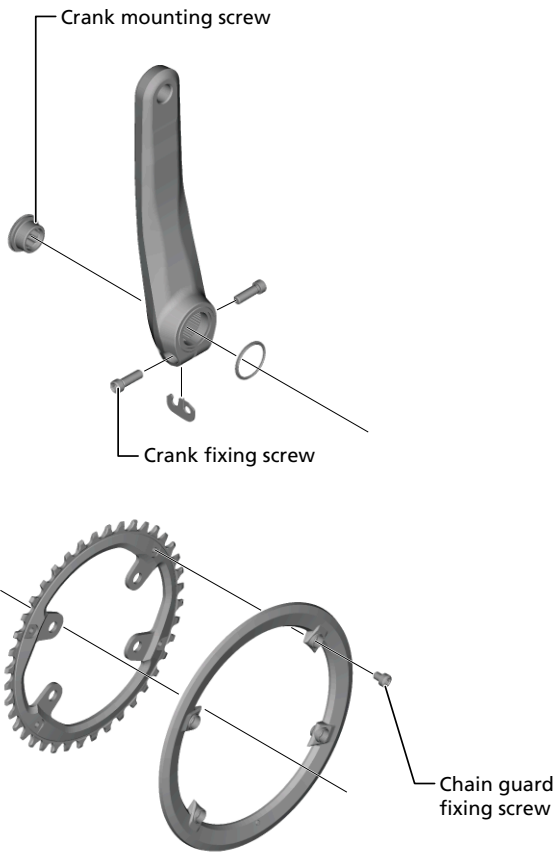
# Crankset

## FC-U8000-2, FC-U8000-1, FC-U6000-1, FC-U6000-2, FC-U6000-2B, FC-U6010-2

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting screw</a>	FC-U6000-1 / FC-U6000-2 / FC-U6000-2B	35 - 50		8 mm hexagon wrench
	FC-U8000-1 / FC-U8000-2 / FC-U6010-2	0.7 - 1.5	 / 	TL-FC16 / TL-FC18
<a href="#">Crank fixing screw</a>	FC-U8000-1 / FC-U8000-2 / FC-U6010-2	12 - 14		5 mm hexagon wrench
Chainring fixing screw	FC-U8000-1 / FC-U8000-2 / FC-U6010-2 / FC-U6000-2 / FC-U6000-2B	16 - 17		5 mm hexagon wrench
	FC-U6000-1	12 - 14		5 mm hexagon wrench
<a href="#">Chain guard fixing screw</a>	FC-U8000-2 / FC-U6000-1 / FC-U6000-2 / FC-U6000-2B / FC-U6010-2	1.5 - 2		Cross head screwdriver [#2]
	FC-U8000-1	1.5 - 2		4 mm hexagon wrench






## Reference image

- Example) FC-U8000-1






# Threaded Bottom Bracket

## BB-MT801

Parts Name	Model	Torque (N·m)	Tools	
Left- and right-hand cups	BB-MT801	35 - 50	 + 	TL-FC25 + TL-FC32
			 + 	TL-FC25 + TL-FC36
				TL-FC37

# Rotor





## RT-MT800

Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	RT-MT800	40	 +  / 

# GRAVEL

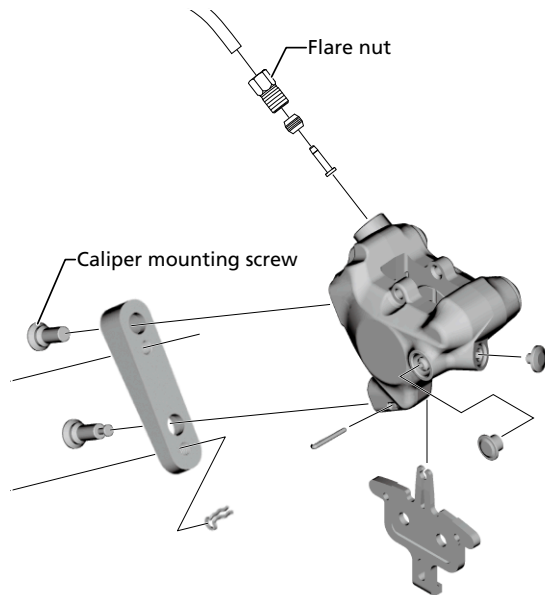
## Hydraulic Disc Brake Caliper

### BR-RX820, BR-RX810, BR-RX400

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Flare nut</a>	All	5 - 7		8 mm spanner
Pad axle	BR-RX820	1 - 1.5		3 mm hexagon wrench
	BR-RX810, BR-RX400	0.2 - 0.4		Slotted screwdriver
<a href="#">Caliper mounting screw</a>	All	6 - 8		4 mm hexagon wrench





### Reference image

- Example) BR-RX820



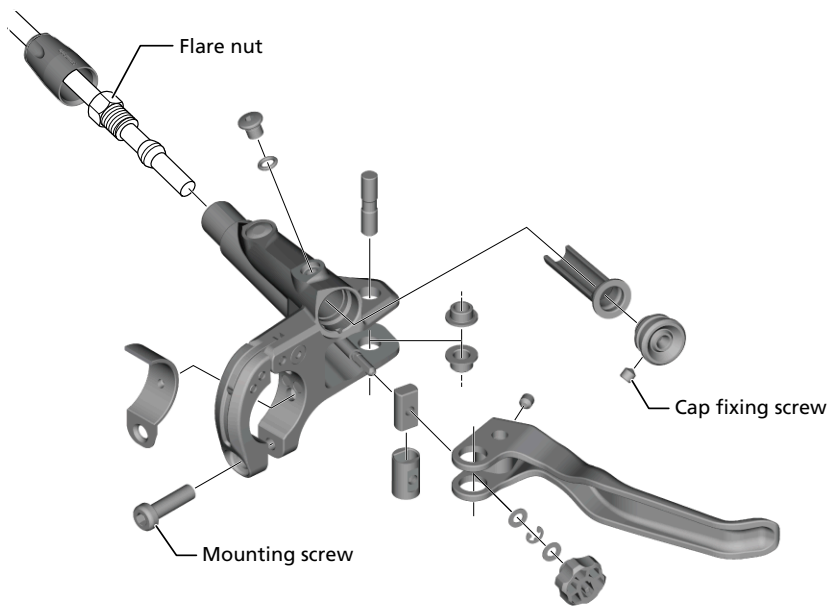
# Hydraulic Disc Brake Lever

## BL-T8100-LE

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	BL-T8100-LE	4 - 6		4 mm hexagon wrench
<a href="#">Flare nut</a>	BL-T8100-LE	5 - 7		8 mm spanner
Bleed screw	BL-T8100-LE	0.5 - 1		2.5 mm hexagon wrench
<a href="#">Cap fixing screw</a>	BL-T8100-LE	0.2 - 0.3		2 mm hexagon wrench


### Reference image

- Example) BL-T8100-LE



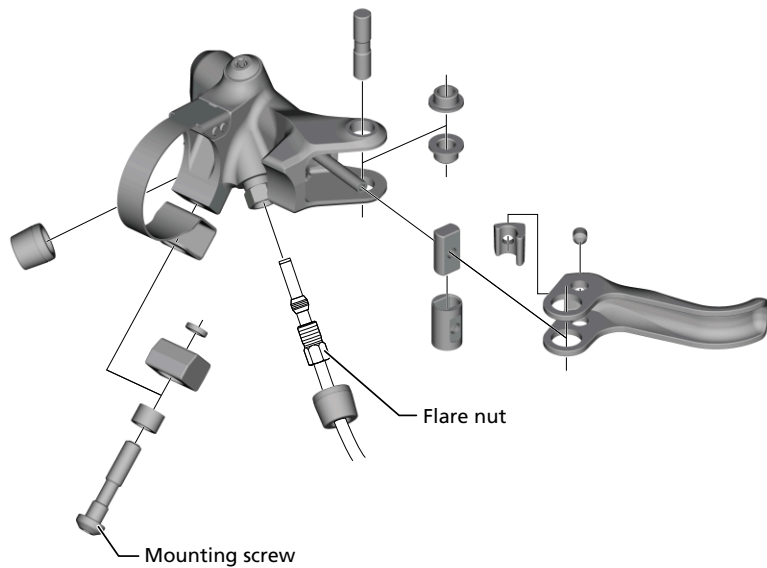
# Sub Brake Lever

## BL-RX812

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	BL-RX812	2 - 4		3 mm hexagon wrench
<a href="#">Flare nut</a>	BL-RX812	5 - 7		8 mm spanner







### Reference image

- Example) BL-RX812



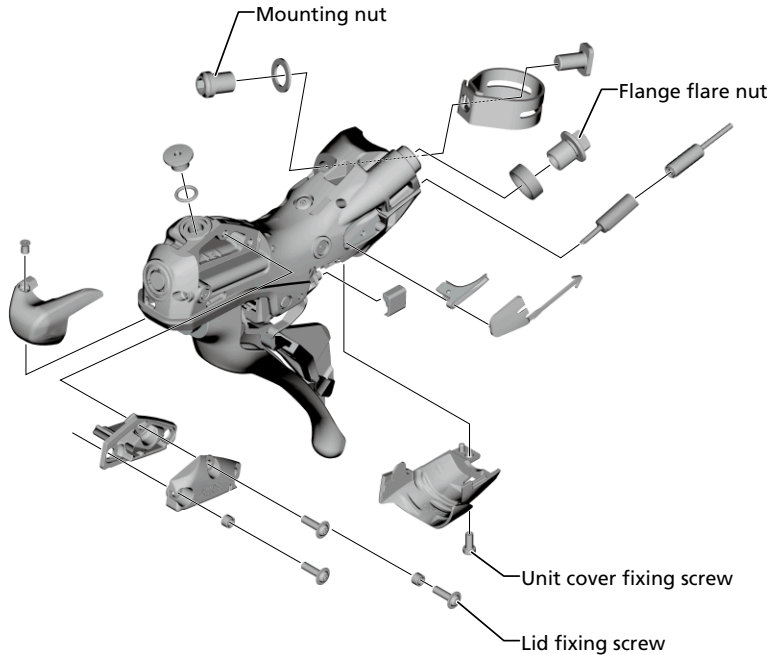
# DUAL CONTROL LEVER

ST-RX820, ST-RX820-LA, ST-RX810, ST-RX810-LA, ST-RX610, ST-RX600,  
ST-RX400, BL-RX820, BL-RX810, BL-RX812, BL-RX610, BL-RX600

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting nut</a>	All	6 - 8		5 mm hexagon wrench
<a href="#">Flange flare nut</a>	All	5 - 6		8 mm spanner
Bleed screw	All	0.5 - 0.7		2 mm hexagon wrench
Name plate fixing screw	All	0.15 - 0.2		Cross head screwdriver [#1]
<a href="#">Unit cover fixing screw</a>	All	0.2 - 0.25		Cross head screwdriver [#1]
<a href="#">Lid fixing screw</a>	All	0.8		Hexalobular [#8]




## Reference image

- Example) ST-RX820



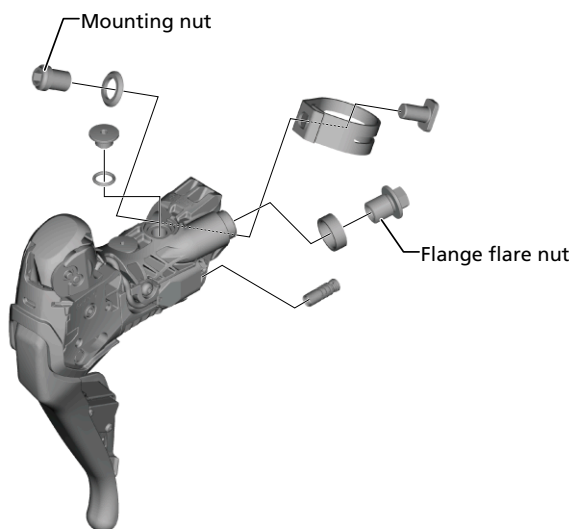


## ST-RX815

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting nut</a>	ST-RX815	6 - 8		5 mm hexagon wrench
Bleed screw	ST-RX815	0.5 - 0.7		2.5 mm hexagon wrench
<a href="#">Flange flare nut</a>	ST-RX815	5 - 6		8 mm spanner





### Reference image

- Example) ST-RX815



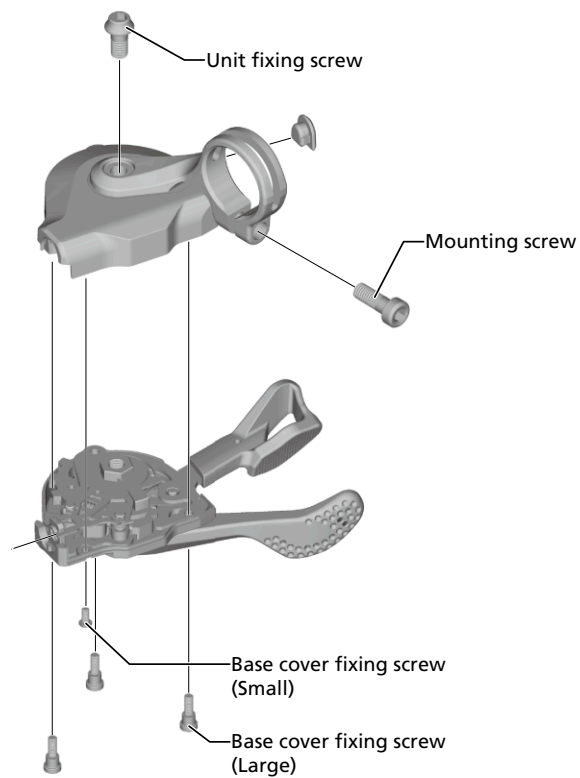
# Shifter

## SL-RS700

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	SL-RS700	3		4 mm hexagon wrench
<a href="#">Unit fixing screw</a>	SL-RS700	2.5		4 mm hexagon wrench
<a href="#">Base cover fixing screw (Large)</a>	SL-RS700	0.15		Cross head screwdriver [#1]
<a href="#">Base cover fixing screw (Small)</a>	SL-RS700	0.08		Cross head screwdriver [#1]





### Reference image

- Example) SL-RS700



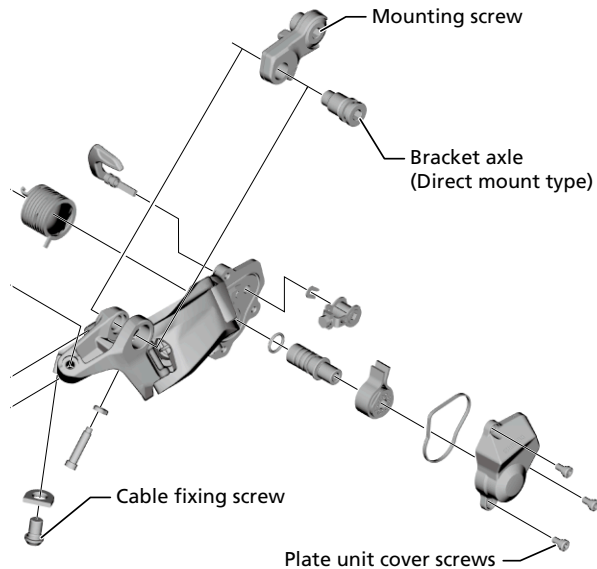
# Rear Derailleur

## RD-RX820, RD-RX822




Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Bracket axle (Direct mount type)</a>	RD-RX820	8 - 10		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	All	6 - 7		4 mm hexagon wrench
Pulley screw	All	2.5 - 5		3 mm hexagon wrench
<a href="#">Plate unit cover screws</a>	All	1 - 1.5		2 mm hexagon wrench

### Reference image

- Example) RD-RX820






## RD-RX815, RD-RX817

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Bracket axle (Direct mount type)</a>	All	8 - 10		5 mm hexagon wrench
Pulley screw	All	2.5 - 5		3 mm hexagon wrench

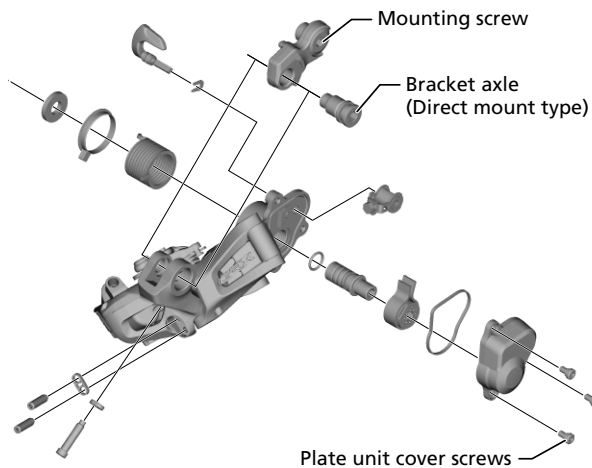
# GRAVEL

## Rear Derailleur








Parts Name	Model	Torque (N·m)	Tools	
Plate axle	All	8 - 10		4 mm hexagon wrench
<a href="#">Plate unit cover screws</a>	All	1 - 1.5		2 mm hexagon wrench
Plate stopper pin	All	1		Cross head screwdriver [#2]

### Reference image

- Example) RD-RX815

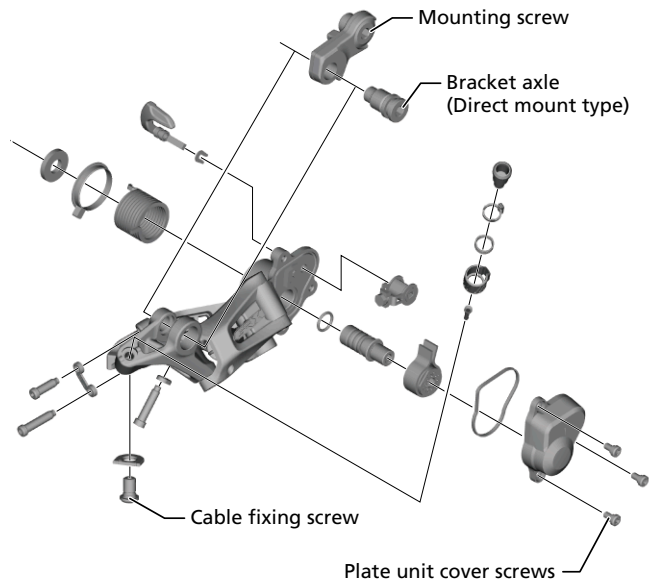


### RD-RX810, RD-RX812, RD-RX400

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Bracket axle (Direct mount type)</a>	All	8 - 10		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	All	6 - 7		4 mm hexagon wrench
Pulley screw	All	2.5 - 5		3 mm hexagon wrench
Plate axle	All	8 - 10		4 mm hexagon wrench
<a href="#">Plate unit cover screws</a>	All	1 - 1.5		2 mm hexagon wrench
Plate stopper pin	All	1		Cross head screwdriver [#2]

## Reference image

- Example) RD-RX810



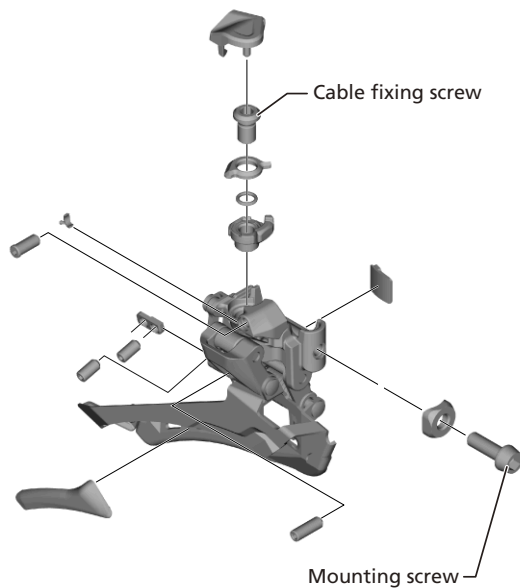
# Front Derailleur

## FD-RX820


Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	FD-RX820	5 - 7		5 mm hexagon wrench
<a href="#">Cable fixing screw</a>	FD-RX820	6 - 7		4 mm hexagon wrench

## Reference image

- Example) FD-RX820

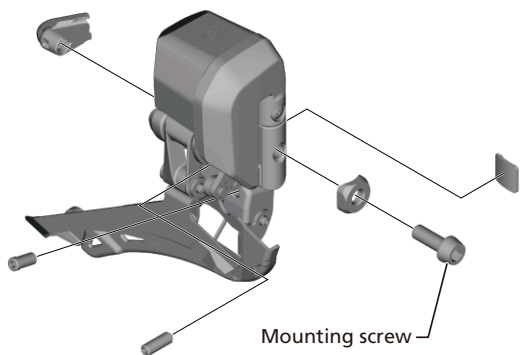


## FD-RX815

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	FD-RX815	5 - 7		5 mm hexagon wrench

## Reference image

- Example) FD-RX815

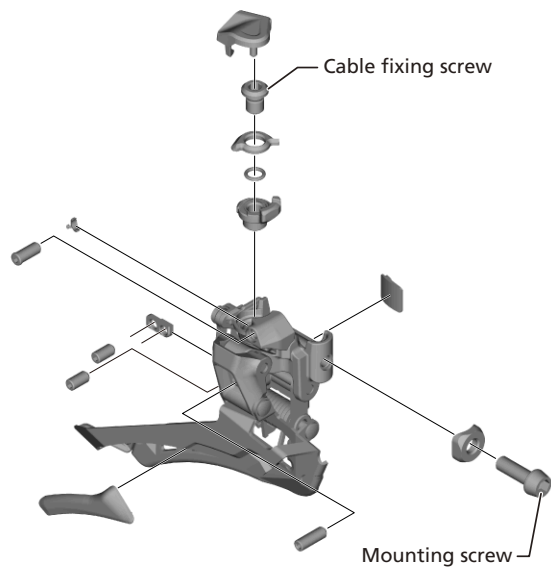


## FD-RX810, FD-RX400

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Mounting screw</a>	All	5 - 7		5 mm hexagon wrench
Cable fixing screw	All	6 - 7		4 mm hexagon wrench







## Reference image

- Example) FD-RX810



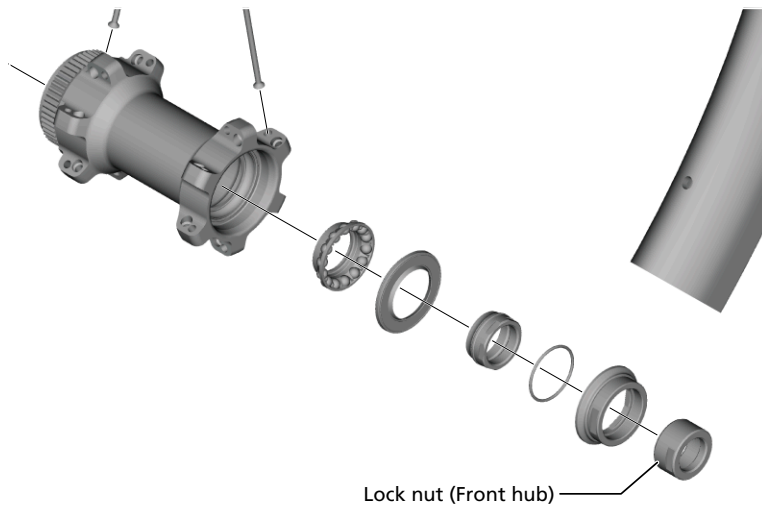
# Wheel Set

## WH-RX880, WH-RX870, WH-RX570

Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	All	40	TL-LR15 + 24 / 
<a href="#">Lock nut (Front hub)</a>	All	18 - 20	 + 
<a href="#">Lock nut (FREEHUB)</a>	All	16 - 20	 + 
<a href="#">Freewheel body unit</a>	WH-RX870, WH-RX570	147 - 200	

### Reference image

- Example) WH-RX870-TL-F12



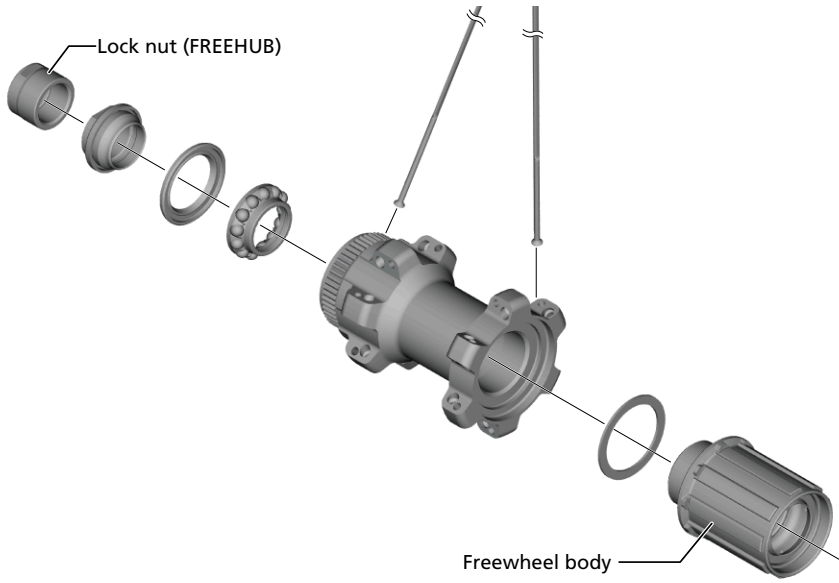


# GRAVEL

## Wheel Set





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- Example) WH-RX870-TL-R12



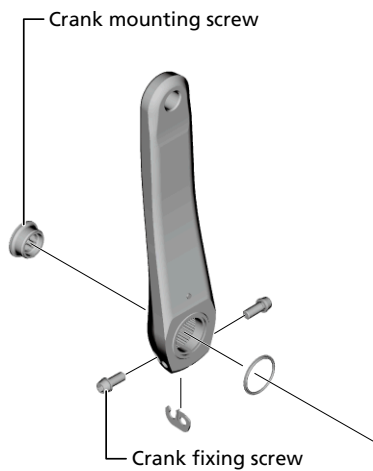
# Crankset

## FC-RX820, FC-RX810, FC-RX610, FC-RX600

Parts Name	Model	Torque (N·m)	Tools	
<a href="#">Crank mounting screw</a>	All	0.7 - 1.5		TL-FC16 / TL-FC18
<a href="#">Crank fixing screw</a>	All	12 - 14		5 mm hexagon wrench
Chainring fixing screw	FC-RX820, FC-RX810	12 - 16		Hexalobular [#30]
	FC-RX610, FC-RX600	16 - 17		5 mm hexagon wrench











### Reference image

- Example) FC-RX820



# Threaded Bottom Bracket

## BB-RS501, BB-RS500, SM-BBR60

Parts Name	Model	Torque (N·m)	Tools	
Left- and right-hand cups	BB-RS501, BB-RS500	35 - 50		TL-FC32
				TL-FC33
				TL-FC36
	 + 		TL-FC25 + TL-FC32	
	 + 		TL-FC25 + TL-FC33	
	 + 		TL-FC25 + TL-FC36	
			TL-FC37	
	SM-BBR60			

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