

Dealer's Manual

ROAD	GRAVEL	MTB
E-BIKE	LIFESTYLE	GENERAL

Torque Chart

- DURA-ACE Di2
- DURA-ACE
- ULTEGRA Di2
- ULTEGRA
- SHIMANO 105 Di2
- SHIMANO 105
- SHIMANO
- XTR Di2
- XTR
- DEORE XT
- SLX

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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

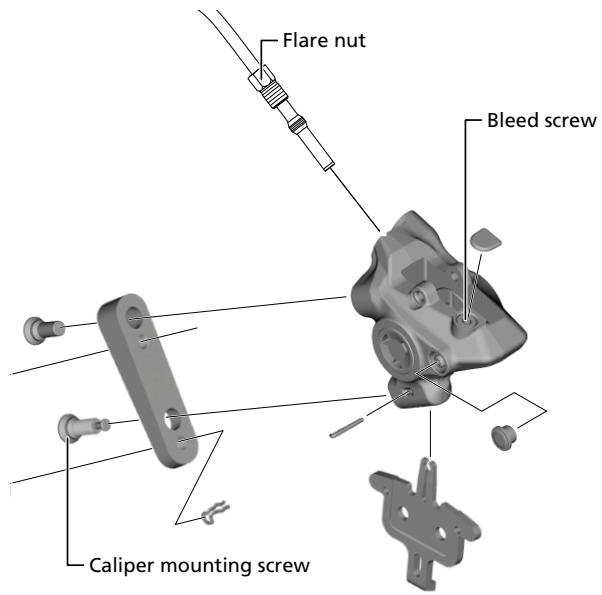
BR-R9270, BR-R9170, BR-R8170, BR-R8070, BR-R7170, BR-R7070

Parts Name	Model	Torque (N·m)	Tools	
Flare nut	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
Caliper mounting screw	All	6 - 8		4 mm hexagon wrench
Bleed screw	BR-R9270, BR-R8170, BR-R7170	4 - 6		3 mm hexagon wrench
Bleed nipple	BR-R9170, BR-R8070, BR-R7070	4 - 7		7 mm box wrench

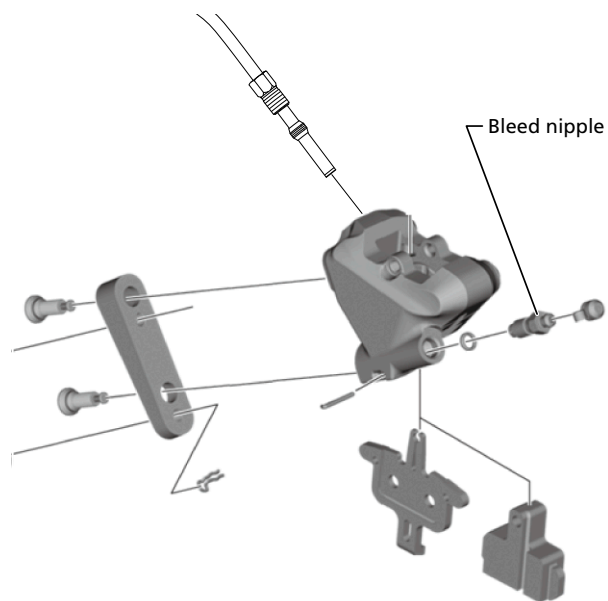
Reference image

- Example) BR-R9270

Hydraulic Disc Brake Caliper



- Example) BR-R9170



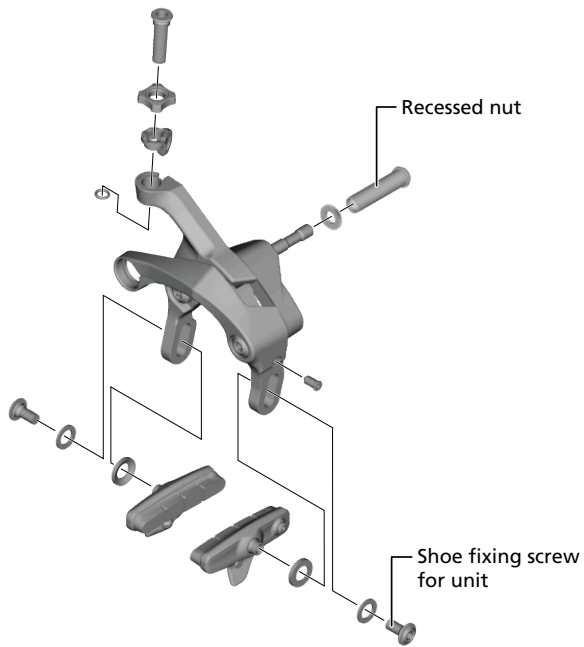
Dual Pivot Caliper Brake

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	4 mm hexagon wrench
Recessed nut	BR-R9200, BR-R9100, BR-R8100, BR-R8000, BR-R7000	8 - 10	5	5 mm hexagon wrench
Inner cable fixing screw	All	6 - 8	4	4 mm hexagon wrench
Shoe fixing screw for unit	All	5 - 7	4	4 mm hexagon wrench
Shoe fixing screw	All	1 - 1.5	2	2 mm hexagon wrench





Reference image

- Example) BR-R9200



DUAL CONTROL LEVER

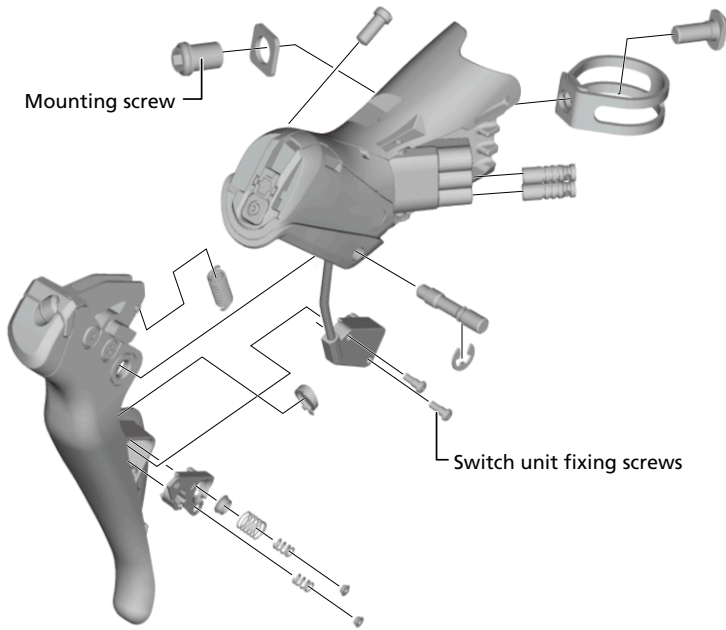
ST-R9250, ST-R9150, ST-R9100, ST-R8150, ST-R8050, ST-R8000, ST-R7000

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

Reference image

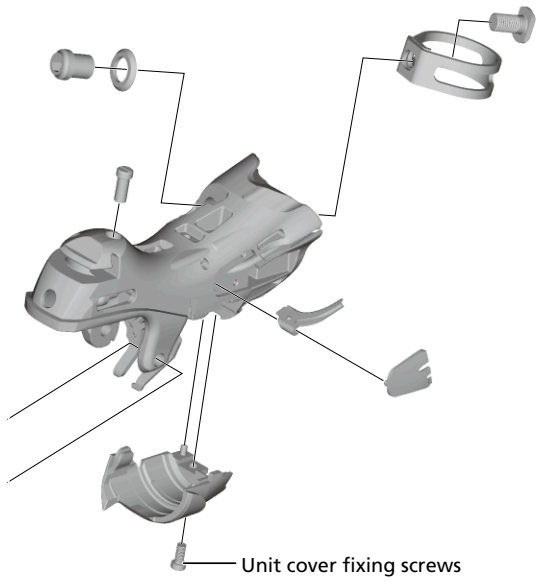
- Example) ST-R9150

ROAD
DUAL CONTROL LEVER











- Example) ST-R9100

ROAD
DUAL CONTROL LEVER



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

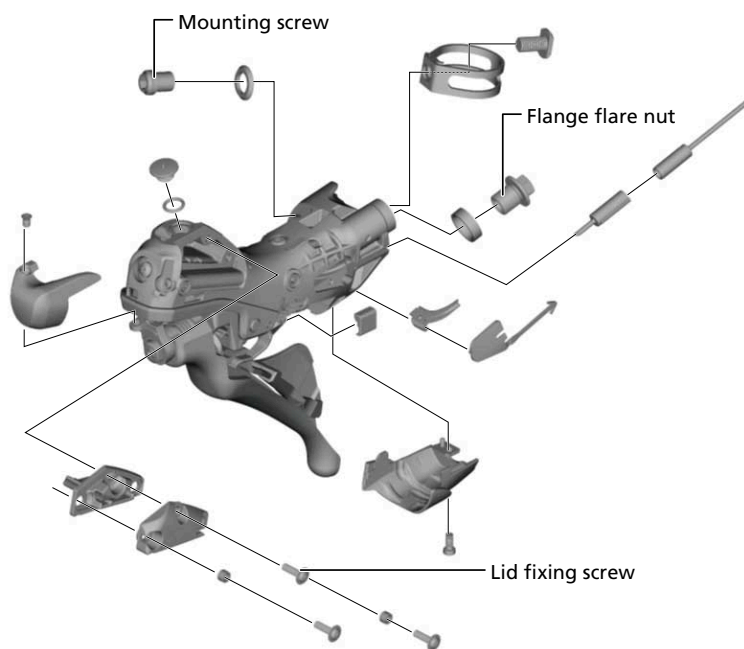
Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	All	6 - 8		5 mm hexagon wrench
Flange flare nut	All	5 - 6		8 mm spanner
Bleed screw	ST-R9270, ST-R8170, ST-R7170	0.5 - 0.7		2.5 mm hexagon wrench
	ST-R9170, ST-R9120, ST-R8070, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.5 - 0.7		2 mm hexagon wrench
Battery 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]
Unit cover fixing screws	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.2 - 0.25		Screwdriver[#1]
Lid fixing screw	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.8		Hexalobular [#8]

Reference image






- Example) ST-R9120

ROAD

DUAL CONTROL LEVER



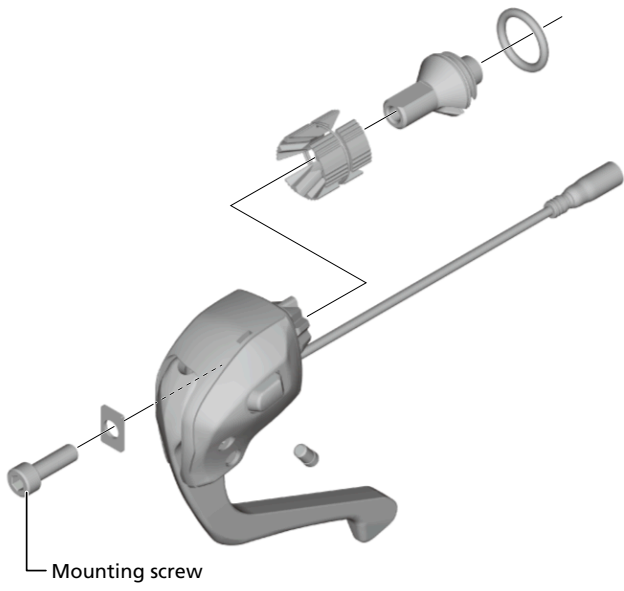
ST-R9180, ST-R9160, ST-R8060

Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	ST-R9160, ST-R8060	6 - 8		4 mm hexagon wrench
	ST-R9180	1 - 1.3		2 mm hexagon wrench
Flare nut	ST-R9180	5 - 6		8 mm spanner
Bleed screw	ST-R9180	0.5 - 0.7		2 mm hexagon wrench
Shoe screw	ST-R9180	0.3 - 0.5		1.5 mm hexagon wrench

Reference image

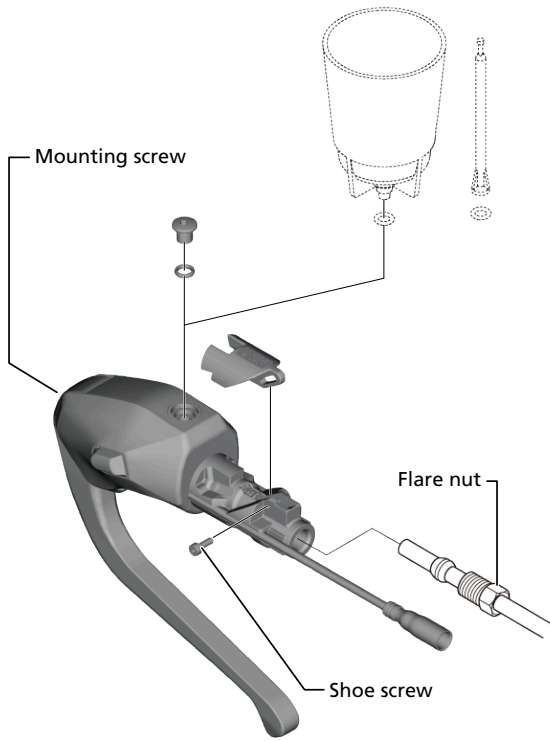
- Example) ST-R9160

ROAD
DUAL CONTROL LEVER









- Example) ST-R9180

ROAD
DUAL CONTROL LEVER



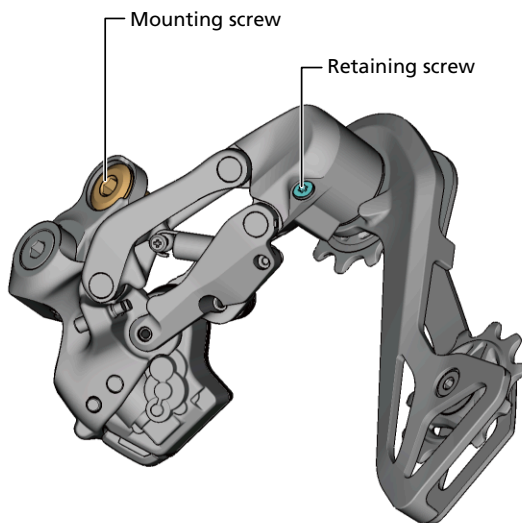
Rear Derailleur

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

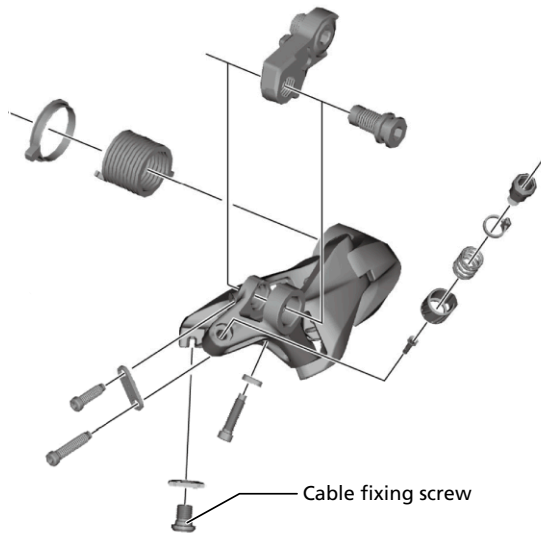
Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	All	8 - 10		5 mm hexagon wrench
Bracket axle (Direct mount type)	All	8 - 10		5 mm hexagon wrench
Cable fixing screw	RD-R9100, RD-R8000, RD-R7000	6 - 7		4 mm hexagon wrench
Pulley screw	All	2.5 - 5		3 mm hexagon wrench
Retaining screw	RD-R9250, RD-R8150, 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



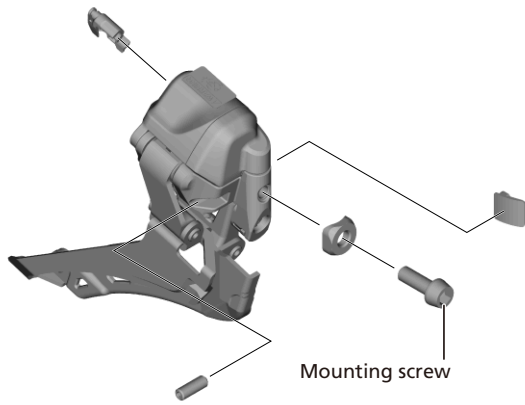
Front Derailleur

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

Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	All	5 - 7	5	5 mm hexagon wrench
Inner cable fixing screw	FD-R9100, FD-R8000, FD-R7000	6 - 7	4	4 mm hexagon wrench

Reference image

- Example) FD-R9250



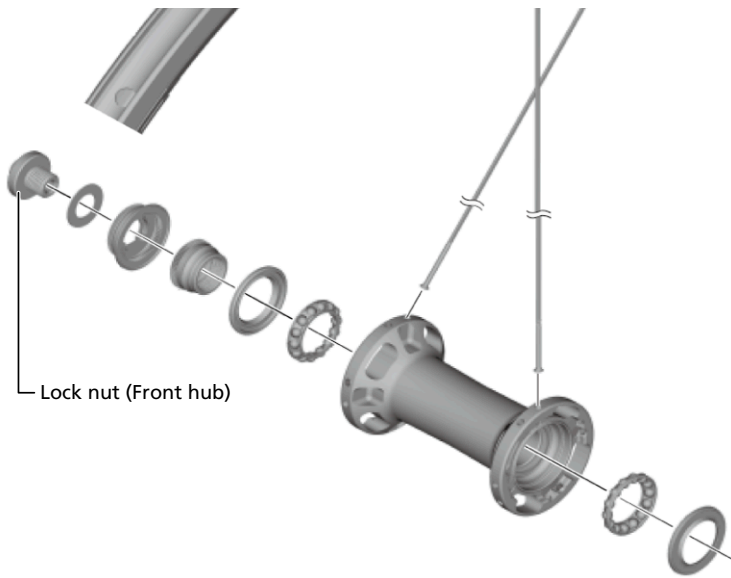
Wheel Set (Rim Brake)

WH-R9200, WH-R9100

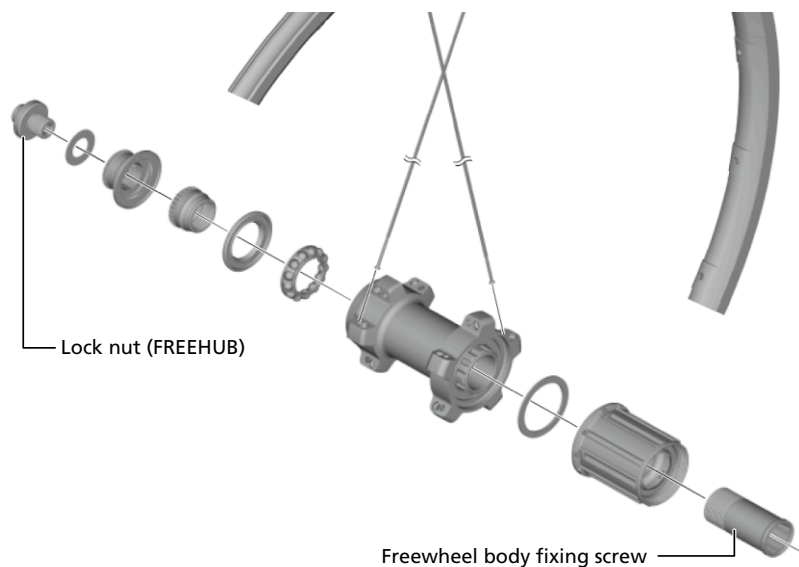
Parts Name	Model	Torque (N·m)	Tools	
Lock nut (Front hub)	WH-R9200	15 - 17	 + 	5 mm hexagon wrench + 22 mm hub spanner
	WH-R9100		 + 	5 mm hexagon wrench x 2
Lock nut (FREEHUB)	WH-R9200	16 - 20	 + 	5 mm hexagon wrench + 17 mm hub spanner
	WH-R9100	15 - 17	 + 	5 mm hexagon wrench x 2
Freewheel body fixing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

Reference image

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




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



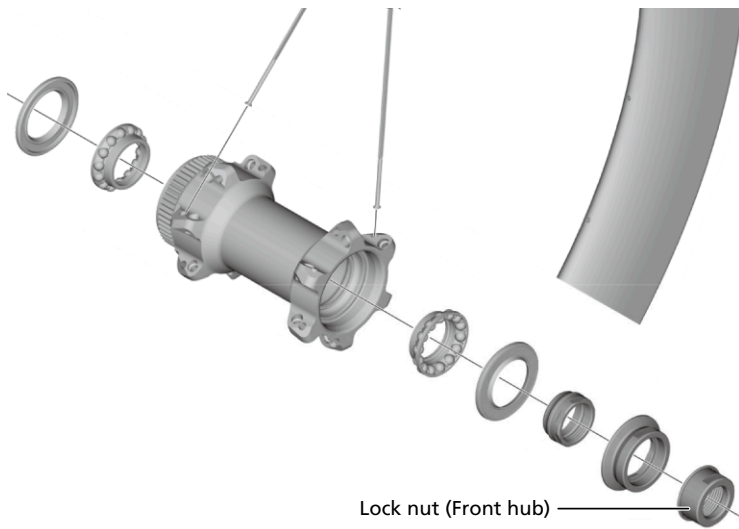
Wheel Set (Disc Brake)

WH-R9270, WH-R9170, WH-R8170

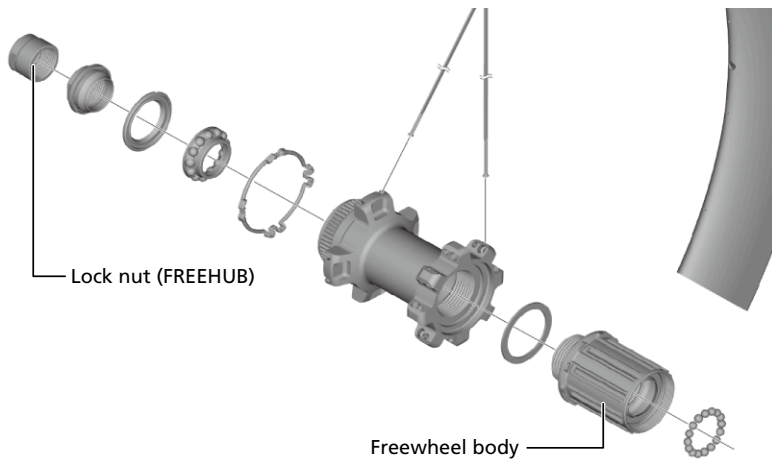
Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	WH-R9270, WH-R8170	40	TL-LR15 + 24 / 
	WH-R9170		TL-FC36
Lock nut (Front hub)	All	18 - 20	 + 
Lock nut (FREEHUB)	WH-R9270	16 - 20	 + 
	WH-R9170, WH-R8170	17 - 22	
Freewheel body	WH-R9170, WH-R8170	147 - 200	TL-FH15

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 +  TL-LR10 / TL-LR15 + adjustable wrench
	CS-R9100, CS-R8000, CS-HG800-11, CS-R7000, CS-HG700-11		TL-LR15 /  TL-LR15 + adjustable wrench

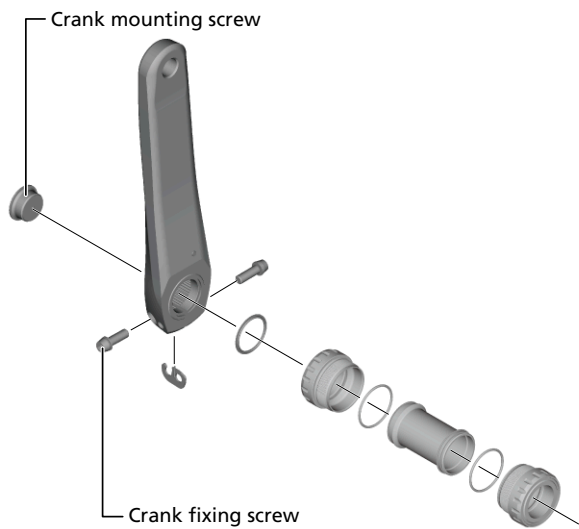
Crankset

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

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




Reference image

- Example) FC-R9200



Crankset with Power Meter

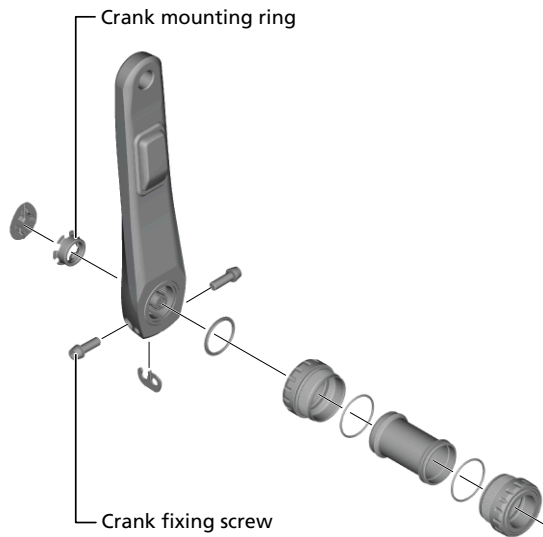
FC-R9200-P, FC-R9100-P, FC-R8100-P

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

Reference image

- Example) FC-R9200-P

Threaded Bottom Bracket




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-FC32
			TL-FC24 + TL-FC33	TL-FC24 + TL-FC33
			TL-FC24 + TL-FC36	TL-FC24 + TL-FC36
			TL-FC34	TL-FC34
	SM-BBR60		TL-FC25 + TL-FC32	TL-FC25 + TL-FC32
			TL-FC25 + TL-FC33	TL-FC25 + TL-FC33
			TL-FC25 + TL-FC36	TL-FC25 + TL-FC36
			TL-FC37	TL-FC37





Rotor

SM-RT900, SM-RT800, SM-RT70

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

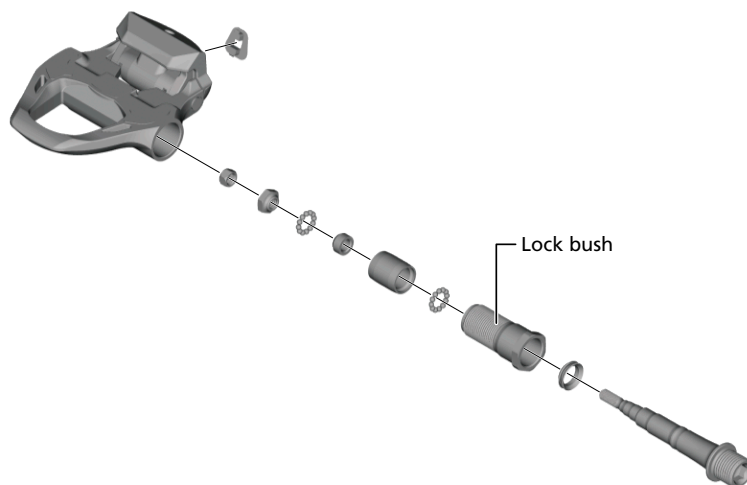
Pedal

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
Lock bush	PD-R8000	10 - 12		17 mm spanner
	PD-R7000	8 - 10	TL-PD40	TL-PD40

Reference image


- Example) PD-R8000



MTB

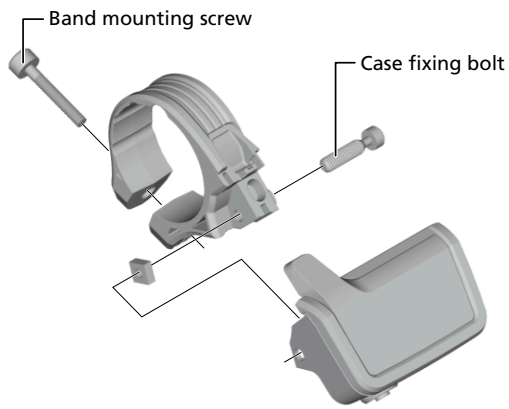
System Information Display

SC-M9051

Parts Name	Model	Torque (N·m)	Tools	
Case fixing bolt	All	0.6		2.5 mm hexagon wrench
Band mounting screw	All	0.8		3 mm hexagon wrench

Reference image

- Example) SC-M9051



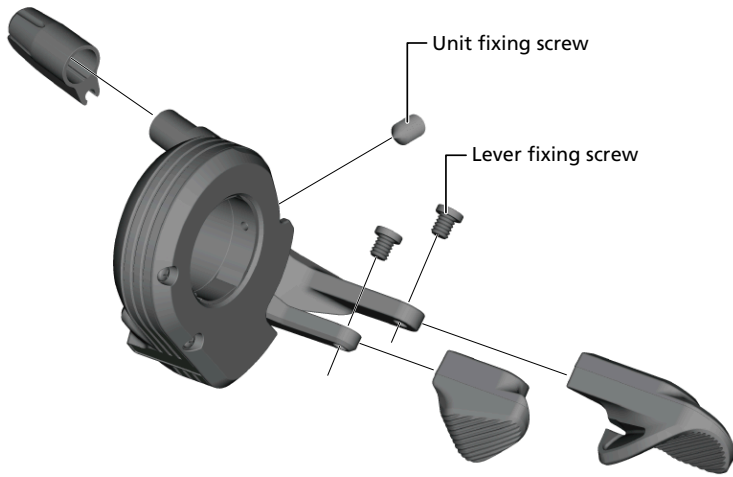
Shift Switch

SW-M9050

Parts Name	Model	Torque (N·m)	Tools	
Unit fixing screw	All	0.9		2 mm hexagon wrench
Lever fixing screw	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	3 mm hexagon wrench
Cable fixing screw	All	6 - 7	4	4 mm hexagon wrench

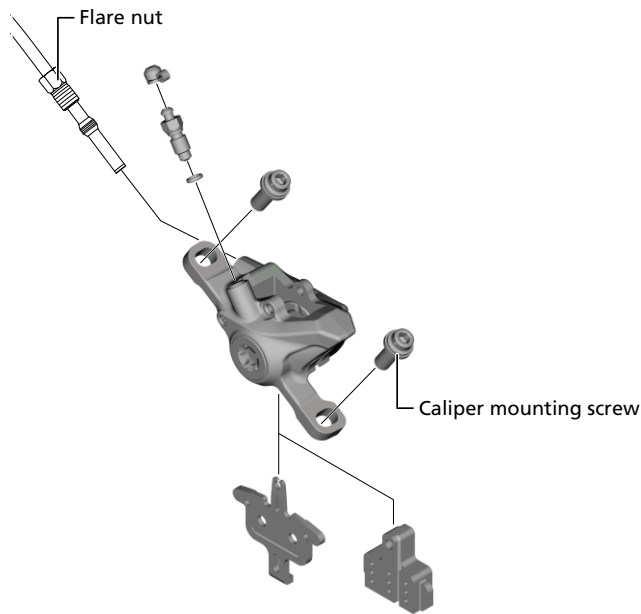
Hydraulic Disc Brake Caliper

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	
Flare nut	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		
Caliper mounting screw	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
	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



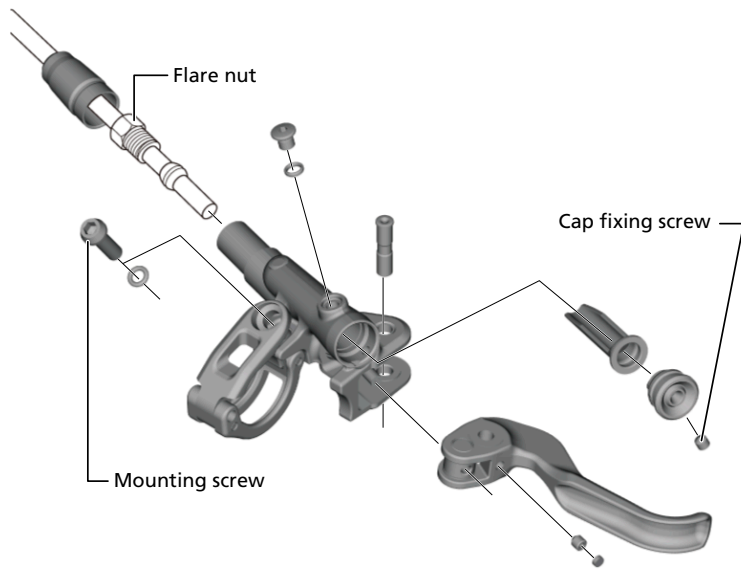
Hydraulic Disc Brake Lever

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	
Mounting screw	All	4 - 6		4 mm hexagon wrench
Flare nut	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		
Cap fixing screw	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

MTB
Shifter

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		
Integration bolt	SL-M8000 (I-SPEC B)	4		3 mm hexagon wrench
	SL-M7000 (I-SPEC B)	4 - 5		
Integration bolt (small)	SL-M8000 (I-SPEC B)	1		2 mm hexagon wrench
	SL-M7000 (I-SPEC B)	1 - 1.5		
Lever cap fixing screw	SL-M9100, SL-M8100, SL-M7100 (MONO lever)	0.3		Cross head screwdriver [#2]
Unit fixing screw	SL-M9100, SL-M9000, SL-M8000	2.5		4 mm hexagon wrench
	SL-M9100, SL-M9000, SL-M8000 (I-SPEC EV / I-SPEC II)			3 mm hexagon wrench
	SL-M8100, SL-M8130, SL-M7100	2.5 - 3.5		4 mm hexagon wrench
	SL-M7000			
Base cover fixing screw (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]
Base cover fixing screw (B)	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]

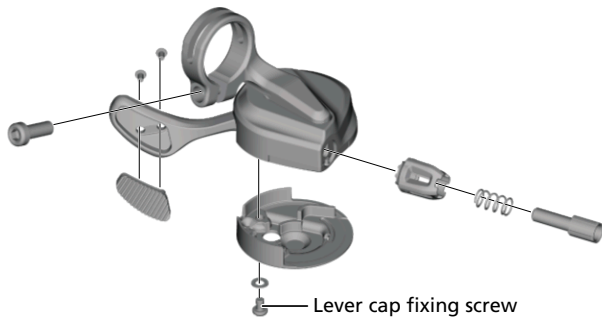
MTB Shifter

Parts Name	Model	Torque (N·m)	Tools	
	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]
Base cover fixing screw (C)	SL-M9000, SL-M8000	0.08		Cross head screwdriver [#1]
	SL-M7000	0.08 - 0.1		Cross head screwdriver [#1]
Lever pad fixing screw	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		

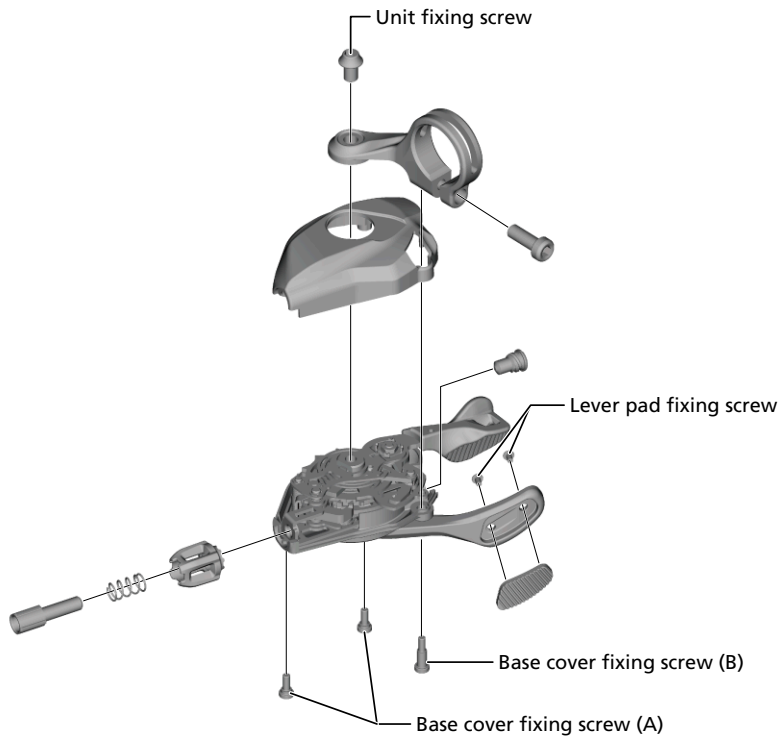
Reference image

- Example) SL-M9100

For Left Hand

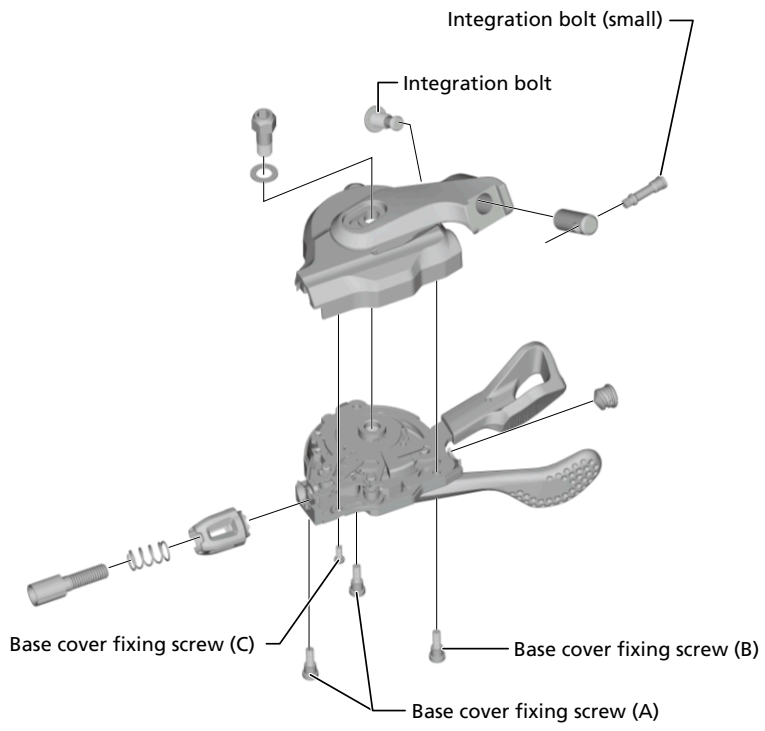


For Right Hand









- Example) SL-M8000-B-I

MTB
Shifter



Rear Derailleur

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

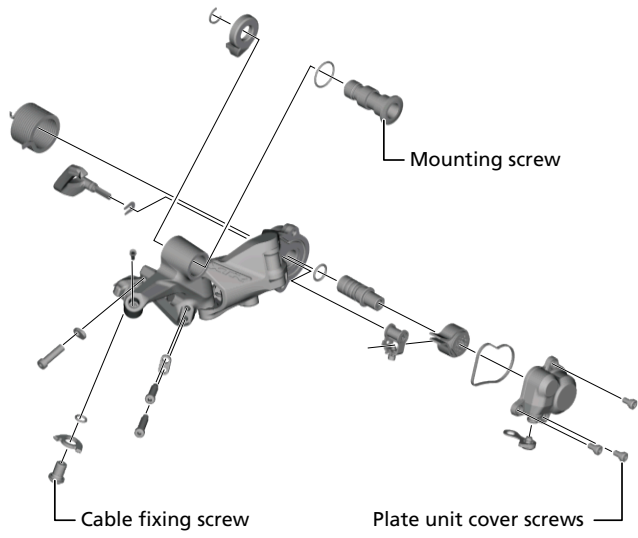
Parts Name	Model	Torque (N·m)	Tools	
Mounting screw	All	8 - 10		5 mm hexagon wrench
Cable fixing screw	RD-M9100, RD-M9120, RD-M9000, RD-M8100, RD-M8120, RD-M8130, RD-M8000, RD-M7100, RD-M7120, RD-M7000	6 - 7		4 mm hexagon wrench
Pulley screws	All	2.5 - 5		3 mm hexagon wrench
Plate axle	RD-M9100, RD-M9120,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

Reference image

- Example) RD-M9100









MTB

Rear Derailleur



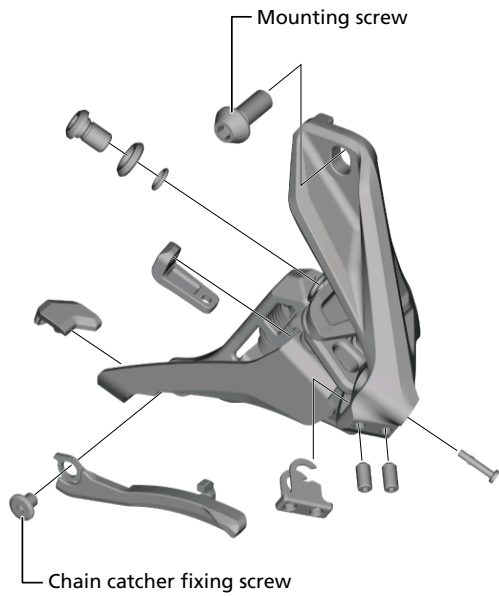
Front Derailleur

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	
Mounting screw	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
Chain catcher 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	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

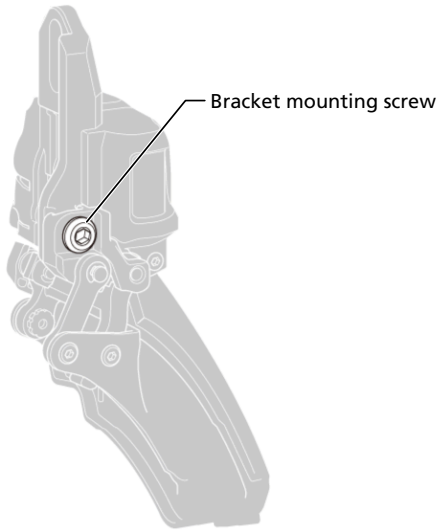
SM-FD905

Parts Name	Model	Torque (N·m)	Tools	
Bracket mounting screw	All	5 - 7		4 mm hexagon wrench

Reference image

- Example) SM-FD905

MTB Mount Adapter



























MTB

Hub set (Disc brake)

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

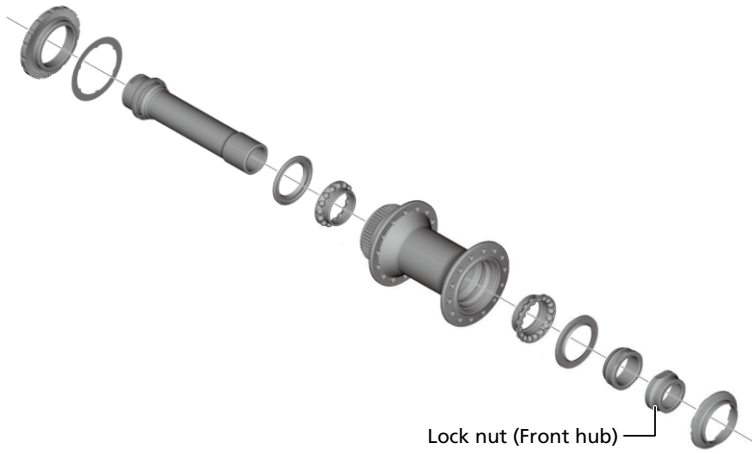
Parts Name	Model	Torque (N·m)	Tools
Rotor lock ring	All	40	 /  +  TL-FC36 / TL-LR15 + Adjustable wrench
Lock nut (Front hub)	HB-M9110, HB-MT900, HB-M9010, HB-M8110, HB-M8010, HB-M7110	21 - 26	 +  22 mm hub spanner x 2
	HB-M8000	15 - 17	 +  5 mm hexagon wrench + TL-HS22
	HB-M7000	10 - 15	 +  13 mm hub spanner + 17 mm hub spanner
	HB-M7010	21 - 26	 +  22 mm hub spanner x 2
Lock nut (FREEHUB)	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
Freewheel body	FH-M9000, FH-M9010, FH-M8010, FH-M7010	150	 TL-FH15
Freewheel body fixing screw	FH-M8000	45 - 50	 14 mm hexagon wrench
	FH-M7000	35 - 50	 10 mm hexagon wrench (TL-WR37)

MTB

Hub set (Disc brake)

Reference image

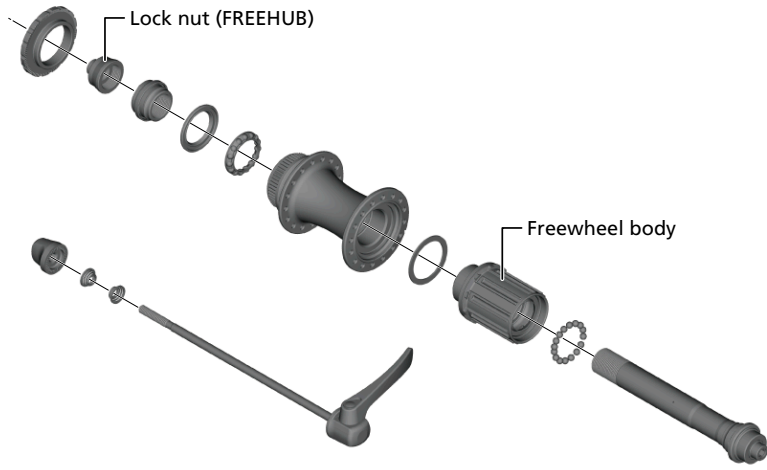
- Example) HB-M9110



- Example) FH-M9000

















MTB

Hub set (Disc brake)



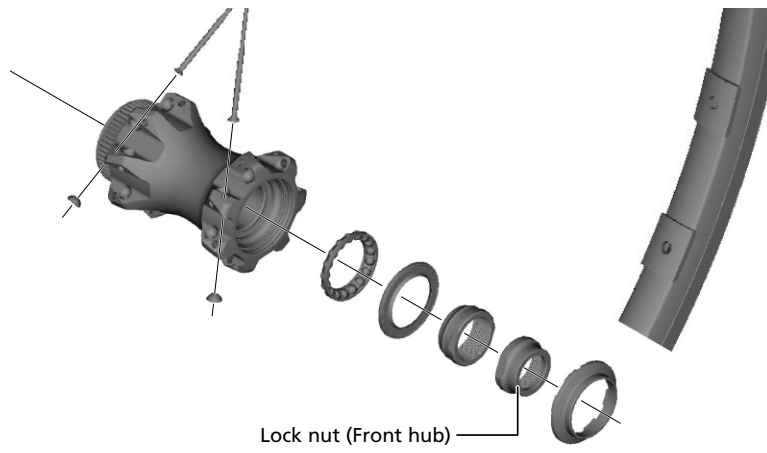
Wheel Set (Disc Brake)

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

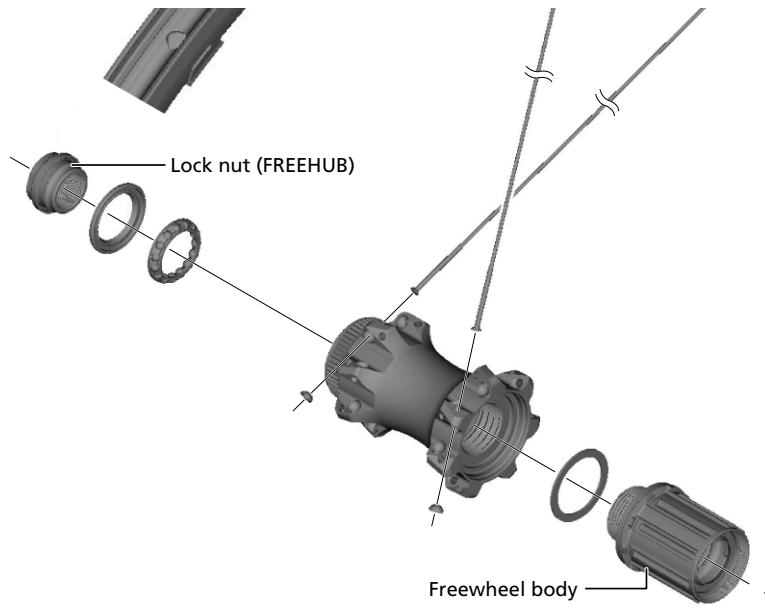
Parts Name	Model	Torque (N·m)	Tools	
Lock ring	WH-M9000, WH-M9020, WH-M8000, WH-M8020	30 - 50	 / 	TL-LR15 + Adjustable wrench
Rotor lock ring	All	40	 /  + 	TL-FC36 / TL-LR15 + Adjustable wrench
Lock nut (Front hub)	WH-M9000 (E-THRU), WH-M9020, WH-M8000 (E-THRU), WH-M8020, WH-M8100, WH-M8120	21 - 26	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

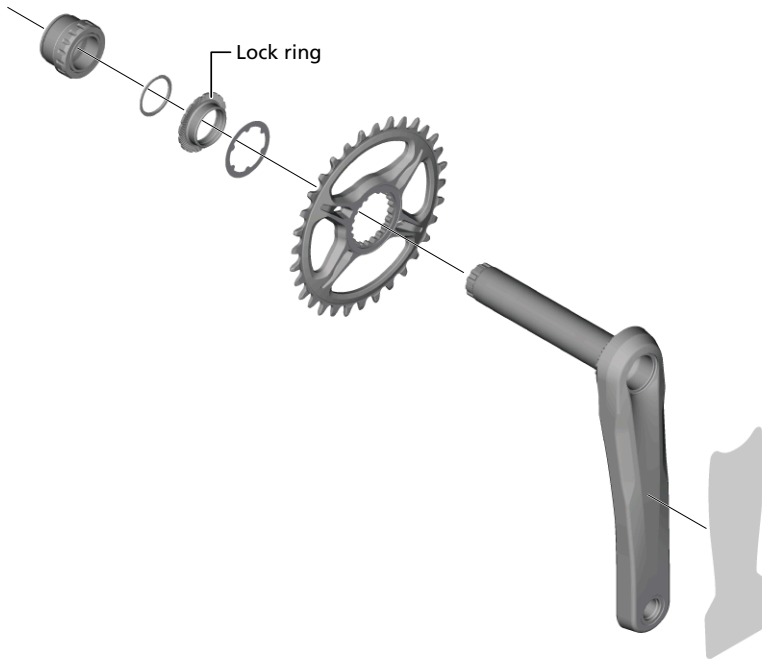
FC-M9100, FC-M9120, FC-M9125, FC-M9130, FC-M9000, FC-M9020, FC-M8100, FC-M8120, FC-M8130, FC-M8000, FC-M7100, FC-M7120, FC-M7130, FC-M7000

Parts Name	Model	Torque (N·m)	Tools	
Crank mounting screw	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
Crank fixing screw	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
Lock ring	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
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]

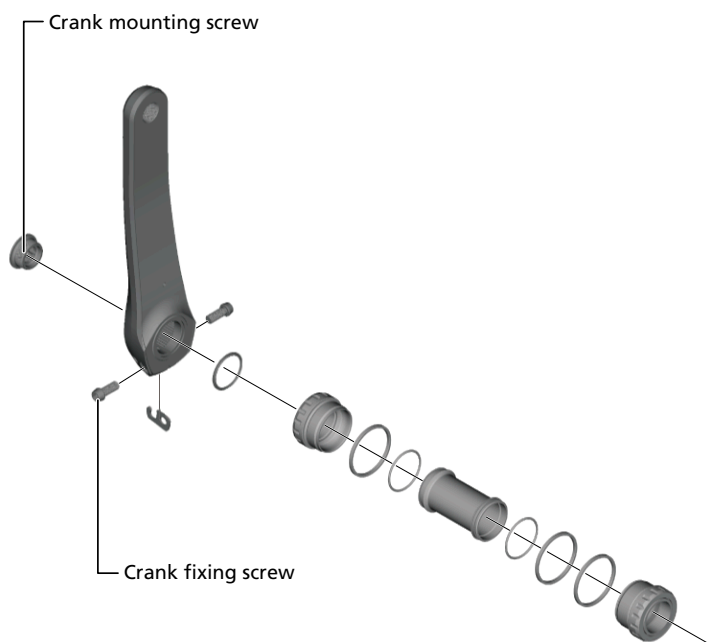
Reference image

- Example) FC-M9100

MTB Crankset



- 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-FC32
			TL-FC25 + TL-FC33	TL-FC25 + TL-FC33
			TL-FC25 + TL-FC36	TL-FC25 + TL-FC36
			TL-FC37	TL-FC37
	SM-BB93		TL-FC24 + TL-FC32	TL-FC24 + TL-FC32
			TL-FC24 + TL-FC33	TL-FC24 + TL-FC33
			TL-FC24 + TL-FC36	TL-FC24 + TL-FC36
			TL-FC34	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

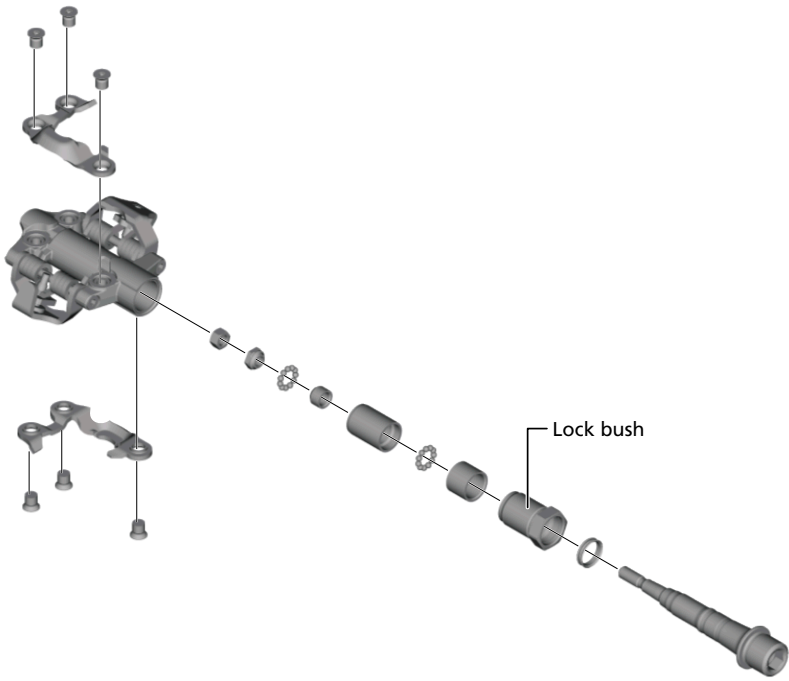
Pedal

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
Lock bush	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



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