

# Dealer's Manual

ROAD	GRAVEL	MTB
E-BIKE	LIFESTYLE	GENERAL

## Torque Chart

### DURA-ACE

- BR-R9270
- BR-R9170
- BR-R9200
- BR-R9210
- BR-R9100
- BR-R9110
- ST-R9100
- RD-R9100
- FD-R9100
- WH-R9200
- WH-R9100
- WH-R9270
- WH-R9170
- CS-R9200-12
- CS-R9100
- FC-R9200
- FC-R9100
- FC-R9200-P

- FC-R9100-P
- BB-R9100
- SM-RT900
- ST-R9120

### ULTEGRA

- BR-R8170
- BR-R8070
- BR-R8100
- BR-R8110
- BR-R8000
- BR-R8010
- ST-R8000
- RD-R8000
- FD-R8000
- WH-R8170
- CS-R8100-12
- CS-R8000
- CS-HG800-11
- FC-R8100
- FC-R8000
- FC-R8100-P
- SM-BBR60
- SM-RT800

- ST-R8020
- ST-R8025

### SHIMANO

- SM-RT70

### SHIMANO 105

- BR-R7170
- BR-R7070
- BR-R7000
- BR-R7010
- ST-R7000
- RD-R7000
- FD-R7000
- CS-R7100-12
- CS-R7000
- CS-HG700-11
- FC-R7100
- FC-R7000
- ST-R7020
- ST-R7025

### DURA-ACE Di2

- ST-R9250
- RD-R9250
- FD-R9250
- ST-R9270

### ULTEGRA Di2

- ST-R8150
- RD-R8150
- FD-R8150
- ST-R8170

### SHIMANO 105 Di2

- RD-R7150
- FD-R7150
- ST-R7170

### General (Torque)

Torque Chart

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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	
Bleed nipple	BR-R9170, BR-R8070, BR-R7070	4 - 7		7 mm box wrench
Bleed screw	BR-R9270, BR-R8170, BR-R7170	4 - 6		3 mm hexagon wrench
Caliper fixing screw	All	6 - 8		4 mm hexagon wrench
Flare nut	BR-R9270, BR-R8170, BR-R7170	5 - 6		8 mm spanner
	BR-R9170, BR-R8070, BR-R7070	5 - 7		8 mm hexagon wrench
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




# 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	
Inner cable fixing screw	All	6 - 8		4 mm hexagon wrench
Mounting screw	BR-R9210, BR-R9110, BR-R8110, BR-R8010, BR-R7010	5 - 7		4 mm hexagon wrench
Recessed nut	BR-R9200, BR-R9100, BR-R8100, BR-R8000, BR-R7000	8 - 10		5 mm hexagon wrench
Shoe fixing screw	All	1 - 1.5		2 mm hexagon wrench
Shoe fixing screw unit	All	5 - 7		4 mm hexagon wrench

# DUAL CONTROL LEVER

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











Parts Name	Model	Torque (N·m)	Tools	
Clamp screw	All	6 - 8		5 mm hexagon wrench
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]

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

Parts Name	Model	Torque (N·m)	Tools	
Battery holder fixing screw	ST-R9270, ST-R8170, ST-R7170	0.4		Slotted screwdriver 0.8 x 4
Bleed screw	ST-R9270, ST-R8170, ST-R7170	0.5 - 0.7		2.5 mm hexagon wrench
	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.5 - 0.7		2 mm hexagon wrench
Clamp screw	All	6 - 8		5 mm hexagon wrench
Flange flare nut	All	5 - 6		8 mm spanner
Lid fixing screw	ST-R9120, ST-R8020, ST-R8025, ST-R7020, ST-R7025	0.8		Hexalobular [#8]
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]

## Rear Derailleur

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

Parts Name	Model	Torque (N·m)	Tools	
Bracket axle (Direct mount type)	All	8 - 10		5 mm hexagon wrench
Inner cable fixing screw	RD-R9100, RD-R8000, RD-R7000	6 - 7		4 mm hexagon wrench
Mounting screw	All	8 - 10		5 mm hexagon wrench
Plate stopper pin	RD-R8150, RD-R7150	1 - 1.1		Cross head screwdriver [#2]
Pulley screw	RD-R9250	2.5 - 5		3 mm hexagon wrench
Pulley set	RD-R8150	2.5 - 5		3 mm hexagon wrench
Retaining screw	RD-R9250, RD-R8150, RD-R7150	0.9 - 1.2		Hexalobular [#10]
	RD-R9100, RD-R8000, RD-R7000	1		Hexalobular [#10]
Tension & Guide Pulley Set	RD-R9100, RD-R8000, RD-R7150, RD-R7000	2.5 - 5		3 mm hexagon wrench
Tension pulley	All	2.5 - 5		3 mm hexagon wrench

## Front Derailleur

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

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

# Wheel Set

WH-R9200, WH-R9100

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

# Wheel Set (Disc Brake)

WH-R9270, WH-R9170, WH-R8170






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

# 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
Chainring fixing screws	All	12 - 16	 Hexalobular [#30]
Crank mounting screw	All	0.7 - 1.5	 /  TL-FC16 / TL-FC18
Left crank arm mounting screws	All	12 - 14	 5 mm hexagon wrench















## Crankset with Power Meter

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

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



# 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

# Disc Brake Rotor

SM-RT900, SM-RT800, SM-RT70

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

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