

Installation of Derailleur & Shifter

Derailleur Installation

With the bike in a work stand, ensure the derailleur hanger is straight using a hanger alignment tool. (Hanger straightness is critical to the performance of the rear derailleur. As such, proper care must be taken to ensure it is within the tolerance specified by the frame manufacturer.)

Mount the derailleur to the hanger using a 5mm allen key. While tightening the main bolt to the hanger, ensure that the b plate is placed firmly up against the hanger. Fig. 1 There should be no gap between the b plate and the hanger. Torque the derailleur to 10-12 Nm. Fig. 2

Cassette compatibility

Model	Max tooth
RD-M5100-L	50T
RD-T5100-S	42T

Chain Sizing and Installation

For full suspension bikes, check the length of the chain when the suspension is in its fully extended position (bottom out position). Fig.3 Wrap the chain around the chainring and largest cog of the cassette. Fig. 4 Use the chart to determine the proper chain length for your drivetrain. Add the number of inner and outer links as specified from where the chain starts to overlap. Find the two inner links that will be used with the master link and shorten the chain using a chain breaking tool. Shift the chain to the smallest cog and route the chain through the derailleur pulleys. Connect the two ends of the chain using the included master link. Fig. 5 Confirm the chain is not too short by shifting into the largest cog of the cassette and bottoming out the shock.

Derailleur High Limit Adjustment

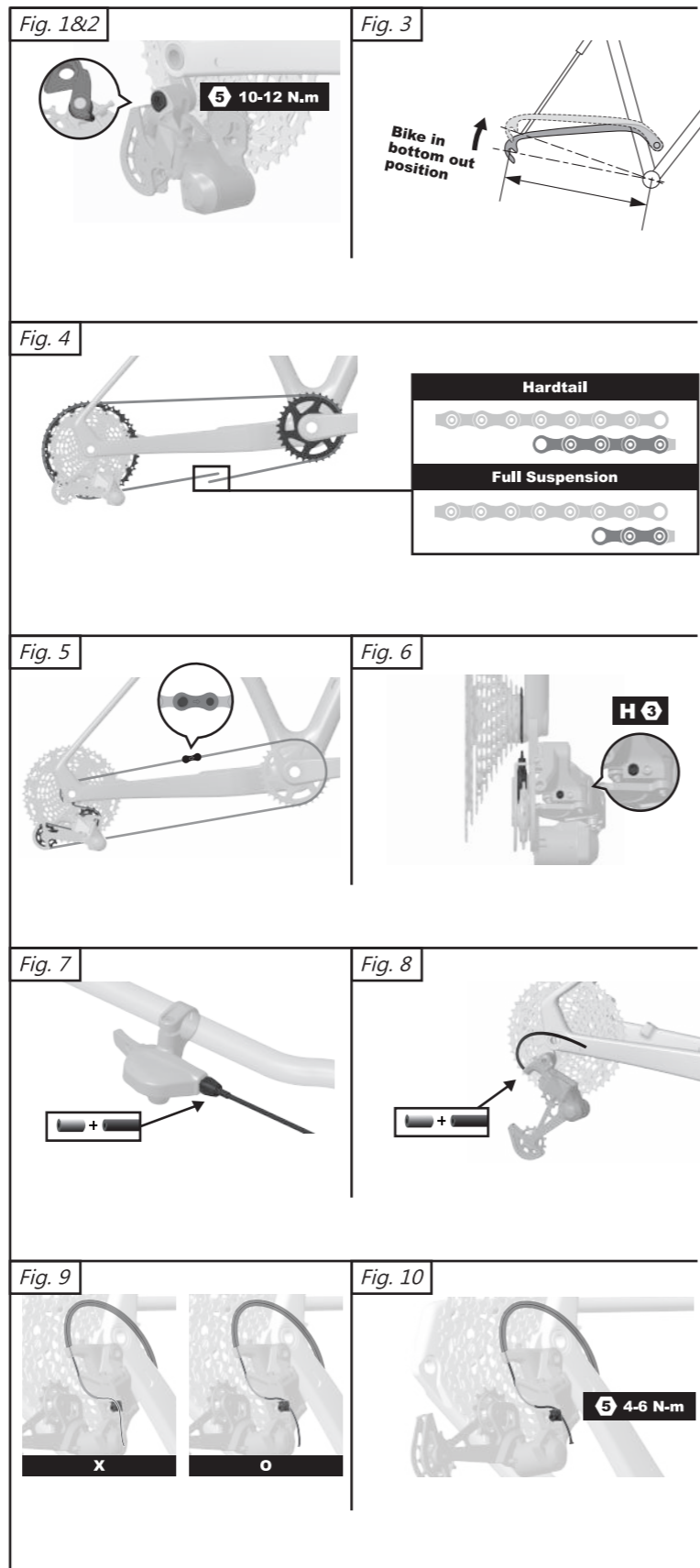
With the chain on the smallest cog, pedal the bike and turn the H Limit screw clockwise. This will push the chain onto the second smallest cog. After the chain has settled onto the second smallest cog, turn the H Limit screw counter clockwise to allow the chain to fall onto the smallest cog. Ensure there is no noise from the chain rubbing the frame or second smallest cog of the cassette. Fig. 6

Shift Housing Installation

Install shift housing from the handlebars to the rear derailleur following your frame manufacturers routing. (Ensure there is enough housing to allow full rotation of the handlebars without restricting its movement.) Cut housing to the appropriate length and install a metal shift housing ferrule at each end of the housing. Fig. 7 & 8

Cable Routing

Route the shift cable through the shift housing. Ensure the cable head is properly seated in the shifter mechanism and that the shifter is in the lowest gearing possible by pressing the release lever several times. Run the cable through the shifter housing and out to the rear derailleur. Thread the barrel adjuster all the way in and then rotate back two full turns to ensure proper indexing can be achieved. Loosen the cable pinch bolt to make sure the pinch plate drops down so that the cable passes above the pinch plate. Fig. 9 Route the cable through the derailleur and clamp groove. Pull the cable tight and tighten the bolt using 5mm allen wrench to 4-6 Nm. Trim any excess cable to 30-40mm and install a cable crimp end. Fig. 10



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Derailleur Low Limit Adjustment

Slowly shift the derailleur into the largest cog and be careful not to overshift. Using a 3mm allen wrench, tighten the L Limit screw until the bolt contacts the derailleur. (This will prevent the derailleur from pushing the chain into the spokes.) Fig. 11

B Gap Adjustment

Adjust the b tension using a 3mm allen wrench. Thread the b tension screw clockwise to increase the gap between the upper pulley and the cassette. Thread the b tension screw counter-clockwise to decrease the gap between the upper pulley and the cassette. Measure the gap between the upper pulley and the largest cog of the cassette while the bike is in sag position. Fig. 12

Largest cog on the cassette	B Adjustment Clearance
50T	13-15 mm
42T	12-14 mm

Shifter Installation

Install the shifter on the bar using the supplied clamp and hardware. Using a 4mm allen wrench, tighten the clamp bolt to 2 Nm. (If using carbon handlebars, lightly apply carbon paste to prevent rotation without overtightening.) Fig. 13

Shift Cable Installation

When installing a new cable, remove the cable entry plug from the shifter and thread the cable through the shifter. Ensure the cable head is properly seated in the shifter mechanism. Re-install the cable entry plug. Fig. 14

Shifting Adjustment

With the high and low limits set and the b tension properly adjusted, index the shifter to ensure the derailleur functions properly. If the derailleur hesitates when shifting from the large cogs to the small cogs of the cassette, thread the barrel adjuster clockwise to decrease cable tension. Fig. 15 If the derailleur hesitates when shifting from the small cogs to the large cogs of the cassette, thread the barrel adjuster counter-clockwise to increase cable tension. Adjust as needed. Fig. 16

Shifter Operation

Shift from the smallest cog to the largest cog by pushing onto the lower lever. Fig. 17

Shift from the largest cog to the smallest cog by pushing onto the upper lever. Fig. 18

Caution: Operating the lever in the wrong direction may cause damage to the shifter. Don't push both shifting levers at the same time. Fig. 19

