

EW-7973 / EW-7974

Electric Cables (Internal Specifications)

WARNING

When the shifting switch is operated, the motor which drives the front derailleur will operate without stopping at the shifting lever position. Always be sure to remove the battery before carrying out installation and adjustment, otherwise your fingers may become stuck.

CAUTION

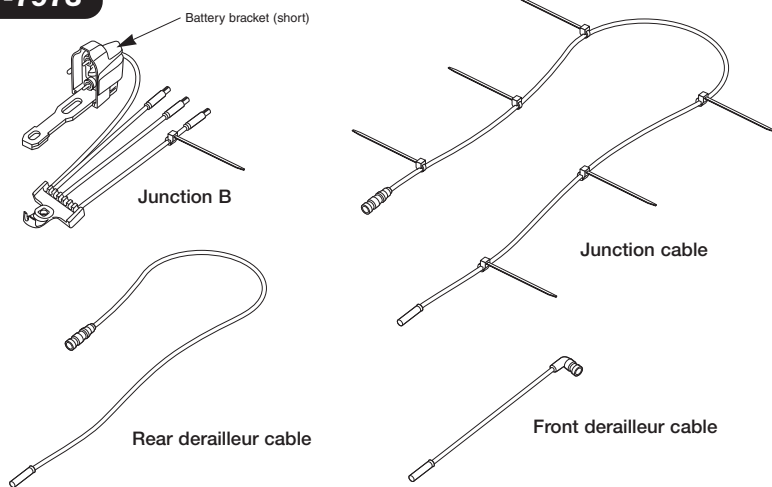
If using an industrial-use dryer, make sure that no burning from the hot air occurs.

Note

- Do not remove the cable ties which are secured to the cables. They are used to stop the cables from moving inside the frame.
- Always be sure to use the TL-EW01 special tool to remove the cable.
- Be careful not to let water get into the terminal.
- Be sure to read these service instructions in conjunction with the service instructions for the SM-EW79A before use.

Components

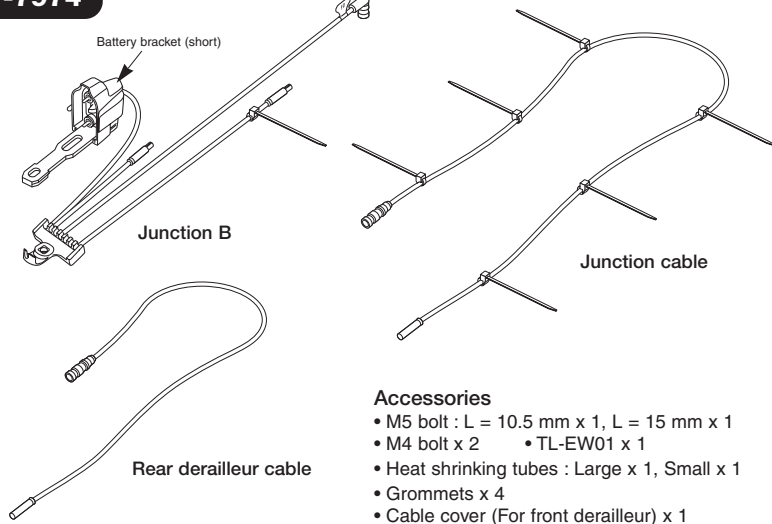
EW-7973



Accessories

- M5 bolt : L = 10.5 mm x 1, L = 15 mm x 1
- M4 bolt x 2
- TL-EW01 x 1
- Heat shrinking tubes : Large x 1, Small x 2
- Grommets x 2

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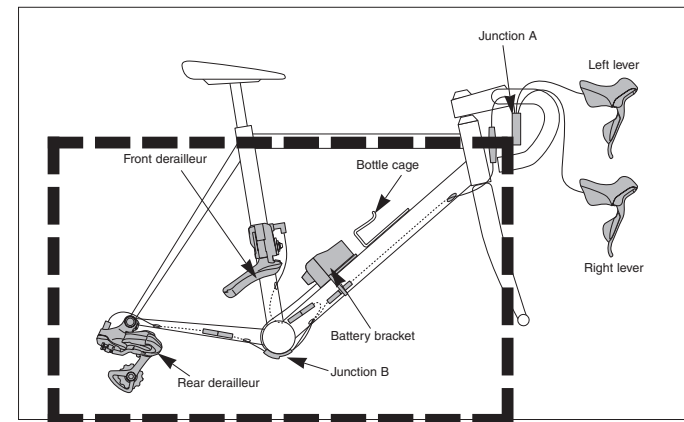


Accessories

- M5 bolt : L = 10.5 mm x 1, L = 15 mm x 1
- M4 bolt x 2
- TL-EW01 x 1
- Heat shrinking tubes : Large x 1, Small x 1
- Grommets x 4
- Cable cover (For front derailleur) x 1

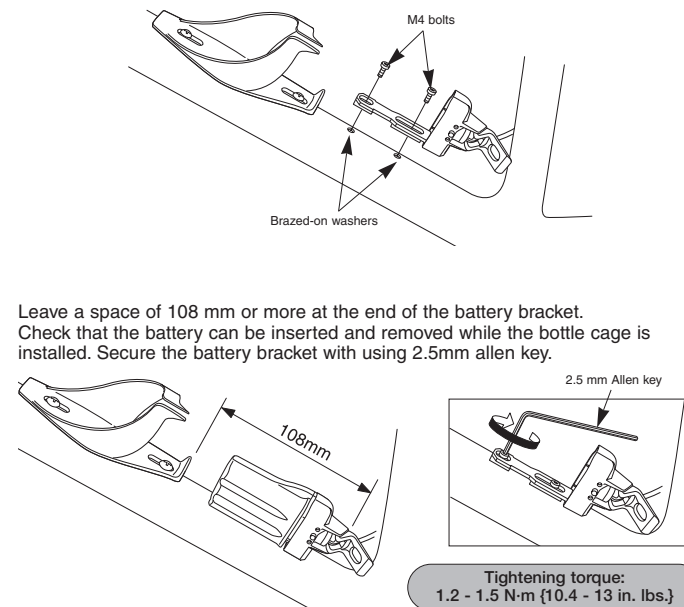
Routing Map

Names and locations of each part



Installation of the battery bracket

Install the battery bracket. Use M4 bolts to provisionally install it to the special brazed-on washers.

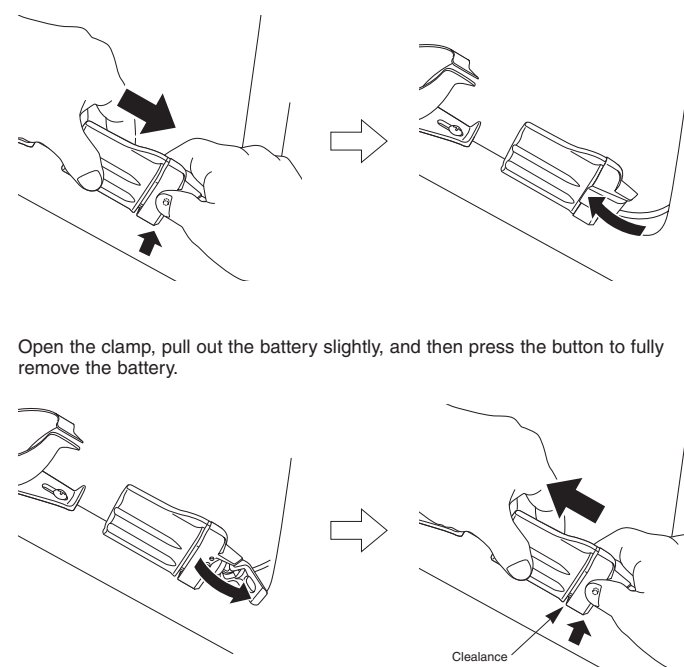


Leave a space of 108 mm or more at the end of the battery bracket. Check that the battery can be inserted and removed while the bottle cage is installed. Secure the battery bracket with using 2.5mm allen key.

Tightening torque:
 1.2 - 1.5 N·m {10.4 - 13 in. lbs.}

<Battery installation and removal>

Open the clamp, and then install the battery so that it follows the groove in the battery bracket. Close the clamp until it clicks into place.

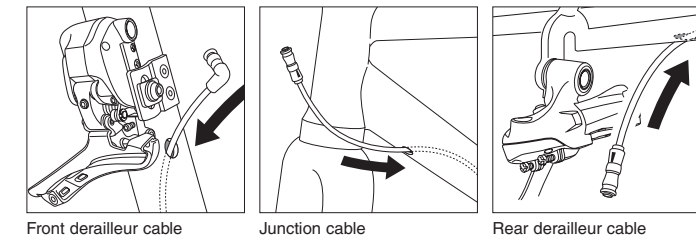


Open the clamp, pull out the battery slightly, and then press the button to fully remove the battery.

When the shifting switch is operated, the motor which drives the front derailleur will operate without stopping at the shifting lever position. Always be sure to remove the battery before carrying out installation and adjustment, otherwise your fingers may become stuck.

Connection of the electric cables

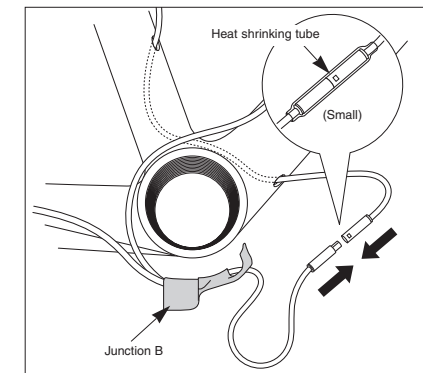
First, pass the cables for the junction, front derailleur and rear derailleur through the hole in the frame.



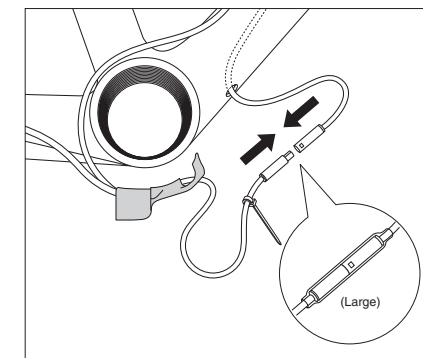
Connection of cables to junction B

Insert the connectors into the heat shrinking tube when connecting them. Place the tube against the cable tie on the junction side so that the connectors are in the middles of the tube.

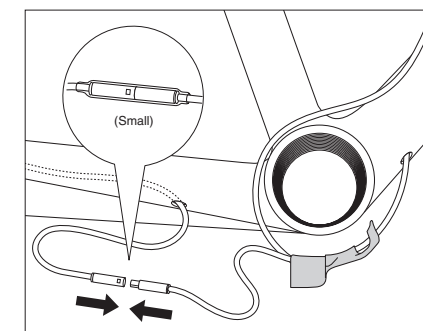
Front derailleur cable



Junction cable



Rear derailleur cable



Attaching the heat shrinking tubes

Use an industrial-use dryer to shrink the tubes from the middles toward the ends, while trying to expel as much air as possible. Check that melted adhesive is protruding from both ends of the heat shrinking tubes.

CAUTION

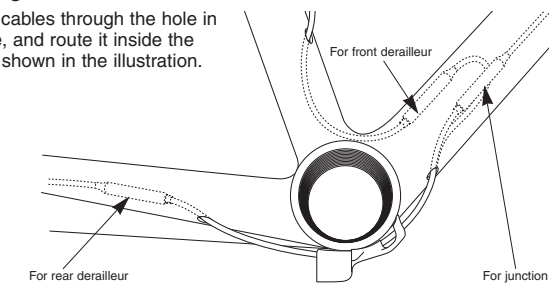
If using an industrial-use dryer, make sure that no burning from the hot air occurs.

Note

- Do not heat the tubes any more than necessary.
- The heat shrinking tubes are important components for waterproofing, preventing the connectors from pulling out and strengthening the housing openings, so do not use anything other than genuine parts.
- Because the tubes contain adhesive, do not reuse the electric cables after this process has been carried out. Use new cables if carrying out any replacements.

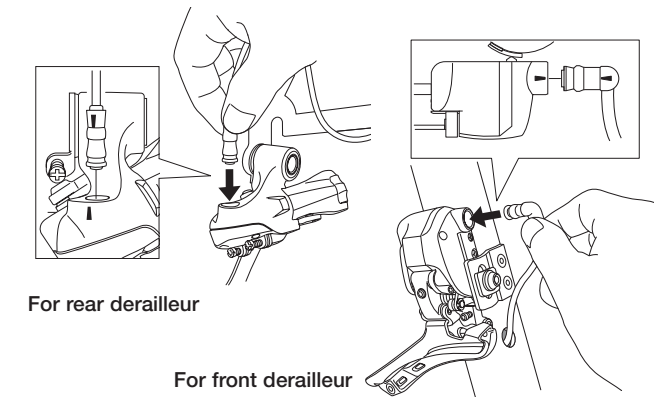
Routing the cables inside the frame

Pass the cables through the hole in the frame, and route it inside the frame as shown in the illustration.

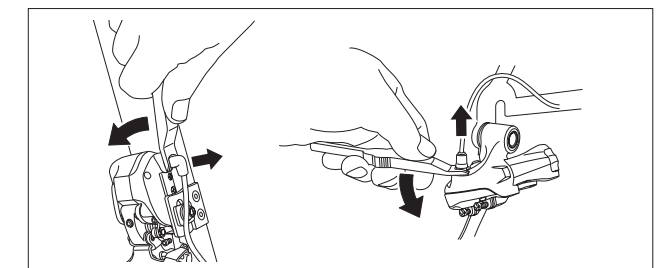


Connection to the derailleurs

Connect the electric cable connectors to the terminals of the derailleurs. Insert the connectors so that the triangular marks (▲) on the connectors and the derailleur terminals are aligned with each other. Because of the waterproof structure of the connectors and terminals, they do not fit together rigidly. Be sure to push them together until they connect with a click.



<Removal of the connectors>



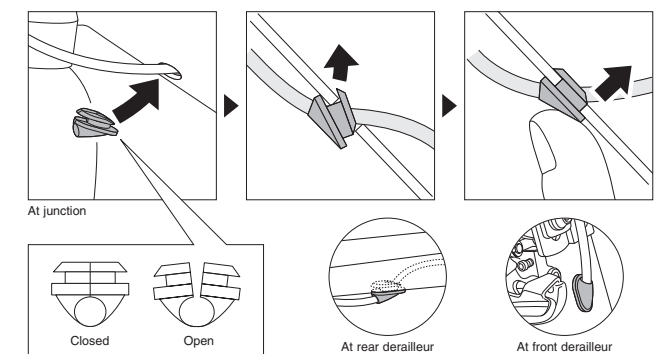
Routing of the electric cables

Once the electric cable has been routed, secure junction (B) to the bottom of the bottom bracket shell with a bolt (length 10.5 mm or 15 mm).

Tightening torque:
 1.5 - 2.0 N·m {13 - 18 in. lbs.}

Installation of the grommet

Attach a grommet to the cables at a suitable position, insert the rear part of the grommet into the hole in the frame, and then push the front part of the grommet to set it into place.



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* Service Instructions in further languages are available at :<http://techdocs.shimano.com>

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