YAMAHA 2020

ASSEMBLY MANUAL

YDX-MORO Pro
YDX-MORO

PB65MPL
PB65MPM
PB65MPS
PB65ML
PB65MM
PB65MS

LIT-15666-00-11 **X1V-28107-10**

FOREWORD

This Assembly Manual contains the information required for the correct assembly of this Yamaha bicycle prior to delivery to the customer. Since some external parts of the bicycle have been removed at the Yamaha factory for the convenience of packing, assembly by the Yamaha dealer is required. No adjustment of the power unit mechanism, which plays the most important part in riding, is necessary because it has been adjusted at the factory before shipping. It should be noted that the assembled bicycle should be thoroughly cleaned, checked, and adjusted prior to delivery to the customer.

IMPORTANT

The service specifications given in this assembly manual are based on the model as manufactured. Yamaha Motor Company, Ltd. is continually striving to improve all of its models. Modifications and significant changes in specifications or procedures will be forwarded to all authorized Yamaha dealers and will appear in future editions of this manual where applicable.
The procedures below are described in the order that the procedures are carried out correctly and completely. Failure to do so can result in poor performance and possible harm to the bicycle and/or rider.

CONCERNING CRATE DAMAGE:
Follow the instructions in the Dealer Warranty Handbook, Procedure Section.

Particularly important information is distinguished in this manual by the following notations.

⚠	**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**

⚠ WARNING	**A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

NOTICE	**A NOTICE indicates special precautions that must be taken to avoid damage to the bicycle or other property.**

TIP	A TIP provides key information to make procedures easier or clearer.

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ASSEMBLY MANUAL

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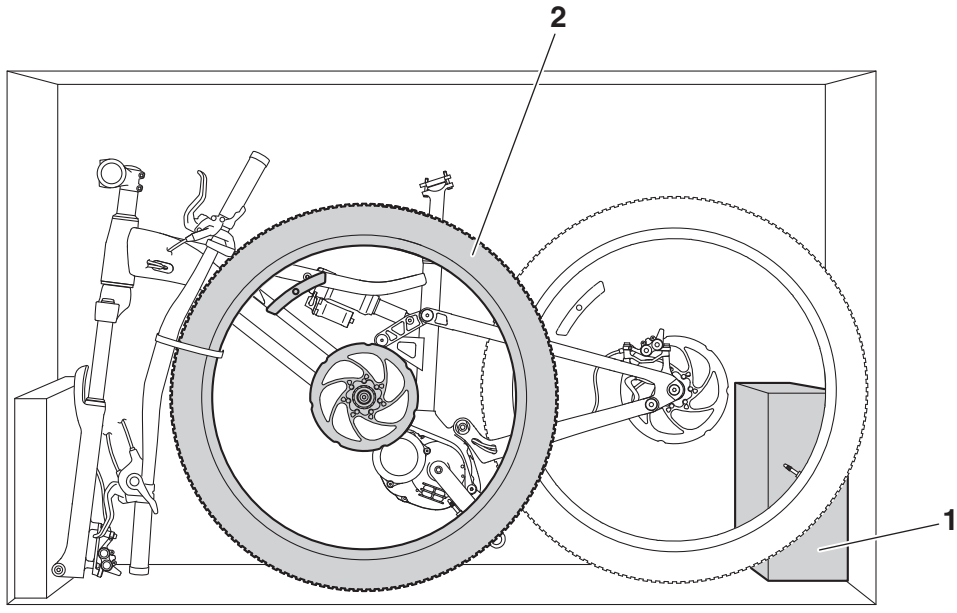
P/N LIT-15666-00-11

PARTS LOCATION

NOTICE

- **Do not use a cutter, scissors, or other sharp object to open the part boxes; otherwise, the included parts could be damaged.**
- **Wear suitable protective gear such as gloves when handling and opening the part boxes.**



1. Part box 1
2. Front wheel

INCLUDED PARTS

The parts listed as follows are included*. Check the parts and their quantities before starting assembly.

No.	Part names	Q'ty	Remarks
①	Front wheel	1	
②	Part box 1	1	
③	Part box 2	1	
④	Part box 3	1	

Part box 1 details

⑤	Front axle	1	YDX-MORO Pro only
⑥	Front axle	1	YDX-MORO only
⑦	Saddle	1	
⑧	Pedals	2	1 each for left and right
⑨	Bell	1	
⑩	Front reflector	1	
⑪	Rear reflector	1	
⑫	Battery end cap	1	
⑬	Button cell battery	1	⑭ in owner's manual pouch Standard CR2032
⑭	Owner's manual	1	

Part box 2 details

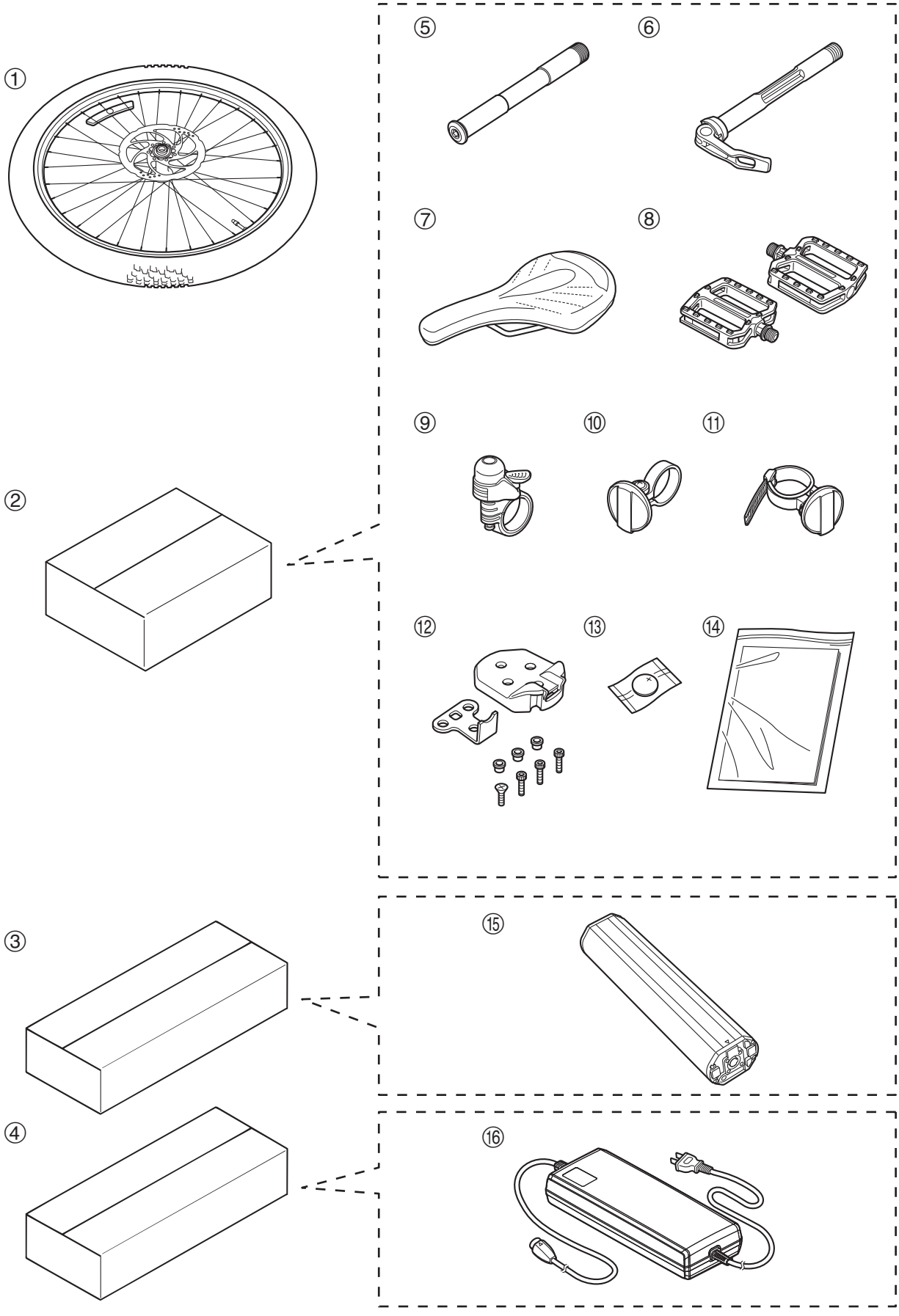
⑮	Battery pack	1	

Part box 3 details

⑯	Battery charger	1	

* The form of the package is subject to change without notice.

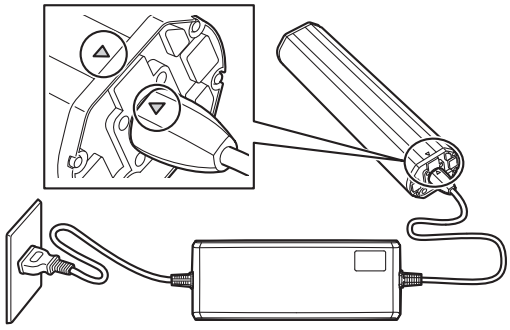
INCLUDED PARTS



INSTALLING THE INCLUDED PARTS

⚠ WARNING

Tighten the bolts and nuts to the specified torques. Failure to tighten the bolts and nuts to the specified torques could prevent proper operation of the bicycle and make it unsafe to operate.



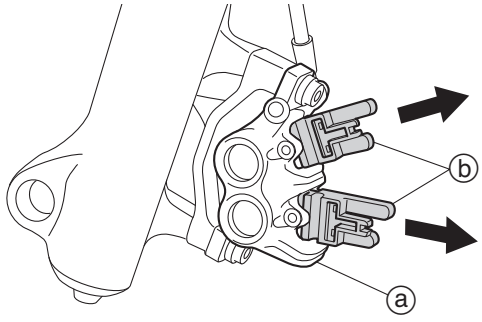
TIP

- Charge the battery pack following the instructions in the owner's manual before starting installation.
- The letters inside the parts list boxes in the assembly procedures indicate the following:
  A: Part in part box 1
  B: Part in part box 2

1. Installing the front wheel and fork end

Remove the spacers ⓑ from the front disc caliper ⓐ.

Give the removed spacers ⓑ to the customer, explaining how it is used.

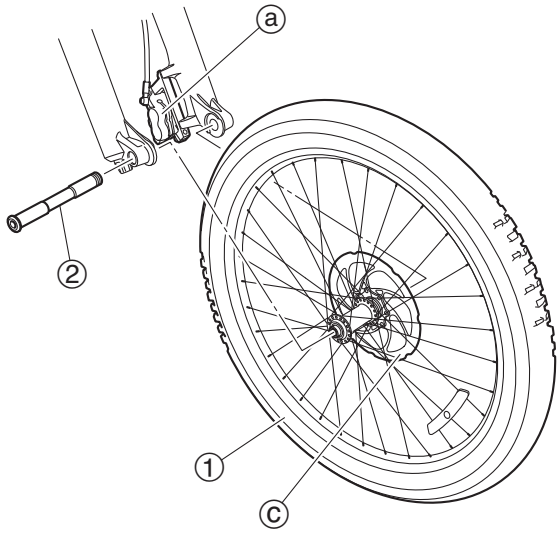


(For YDX-MORO Pro)

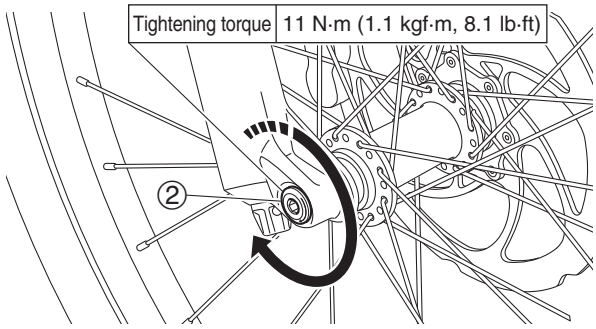
Align the holes in the front wheel ① with the holes in the fork end and install the front wheel ①.

Install it in such a way that the disc rotor ⓒ does not touch the disc pad.

Install the front axle ② to the fork end holes from the right side of the bicycle.



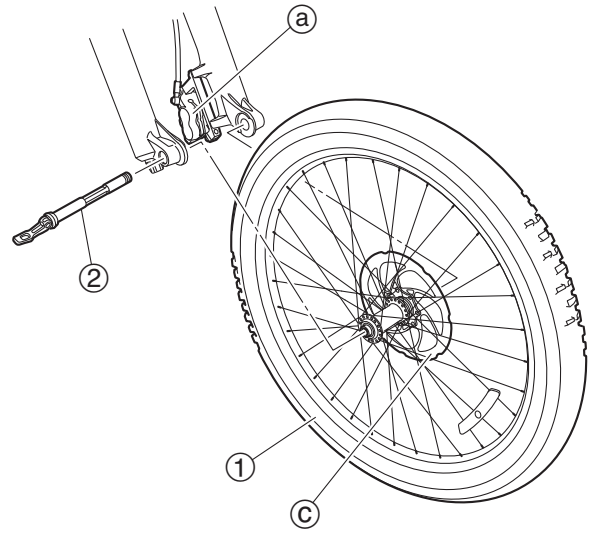
①	Front wheel	1	
②	Front axle	1	A



Tighten the front axle ② to the specified torque.

⚠ WARNING

Tighten the front axle ② to the specified torque and install it securely. Otherwise, the front wheel could come off.



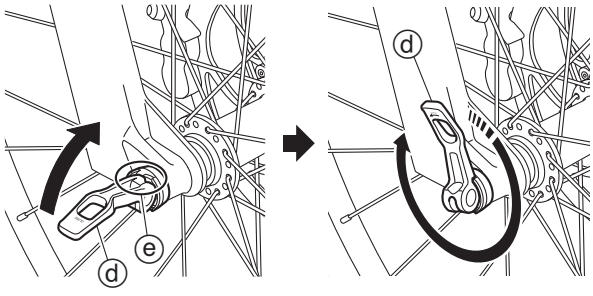
(For YDX-MORO)

Align the holes in the front wheel ① with the holes in the fork end and install the front wheel ①.

Install it in such a way that the disc rotor ⓒ does not touch the disc pad.

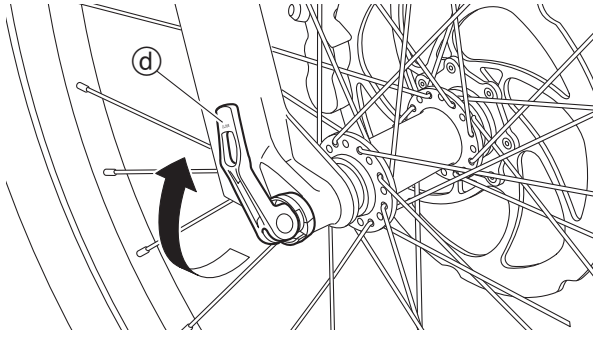
Install the front axle ② to the fork end holes from the right side of the bicycle.

①	Front wheel	1	
②	Front axle	1	A



Move the lever ⓓ of the front axle ② to “OPEN” facing the notch ⓔ.

With the lever ⓓ caught in the notch ⓔ, turn and tighten until there is a little resistance in the lever.



Free the lever ⓓ.

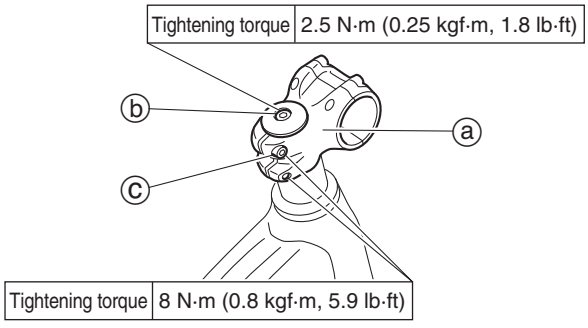
Determine the position to secure the lever ⓓ and fasten it at “CLOSE”.

⚠ WARNING

- **Position the lever when it cannot touch obstacles while the bicycle is moving. If not, the lever could be unlocked unexpectedly, causing the front wheel to come off, resulting in an accident with severe injury or death.**
- **Fasten the lever ⓓ at position where the tip does not touch other parts when the lever ⓓ is lowered.**
- **Fasten the lever ⓓ facing backward from the direction of travel in such a way that it cannot easily touch obstacles that might be encountered while riding.**

TIP

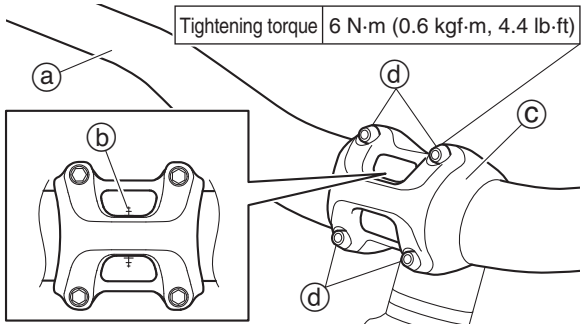
If the lever ⓓ of the front axle ② is too hard and cannot be lowered, or if it is too loose and cannot be lowered for it to be locked, turn the lever ⓓ again to loosen or tighten it, adjusting so that it can be fastened securely.



2. Installing the handlebar stem

Position the handlebar stem ⓐ in a straight line with the front wheel.

Tighten the bolts ⓑ and ⓒ, in that order, to the specified torques.

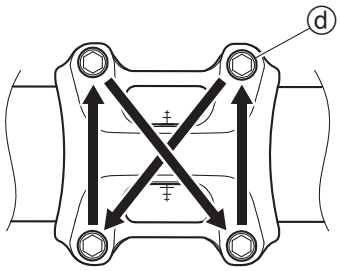


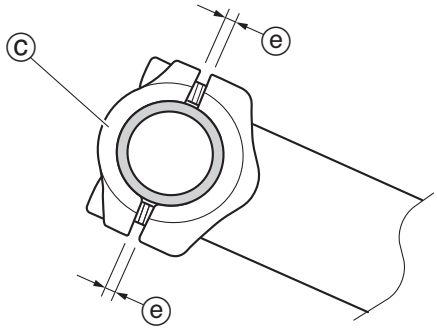
3. Installing the handlebar

Install the handlebar ⓐ so that the 3rd horizontal line from the top of the alignment mark ⓑ shown is positioned at the lower end of the hole in the upper handlebar holder ⓒ, and then tighten the 4 bolts ⓓ of the handlebar holder ⓒ to the specified torque.

NOTICE

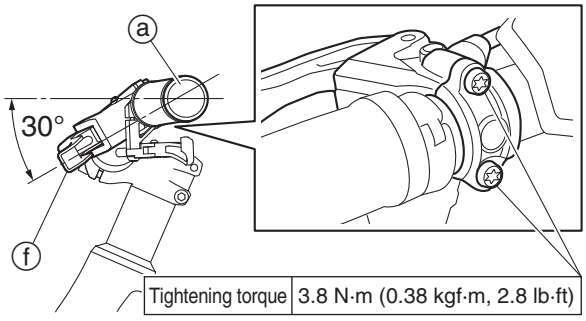
The handlebar ⓐ should not touch the frame when it is turned fully to the left or right.





TIP

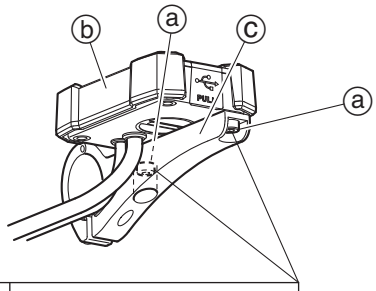
- Tighten bolts ⓓ evenly in stages, in the order shown in the illustration.
- Tighten in such a way that the gaps ⓔ above and below the handlebar holder ⓒ are equal.



Tightening torque	3.8 N·m (0.38 kgf·m, 2.8 lb·ft)

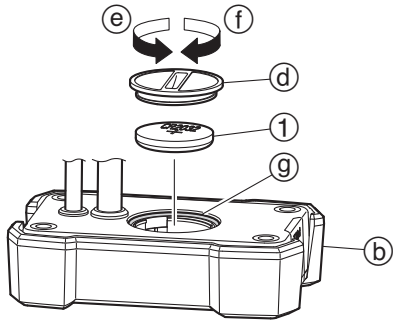
Install the handlebar ⓐ so that the brake lever ⓕ is at a 30° angle to the handlebar, as shown in the illustration.

4. Installing the display unit's button cell battery



Tightening torque	2.0 N·m (0.20 kgf·m, 1.5 lb·ft)

Loosen the bolts (Torx) ⓐ and remove the display unit ⓑ from the bracket ⓒ.



Turn the button cell battery cover ⓓ on the back of the display unit ⓑ in direction ⓔ, remove it, then install the button cell battery ①.
Mount the button cell battery cover ⓓ, then turn it in direction ⓕ until it locks.

①	Button cell battery	1	A

NOTICE

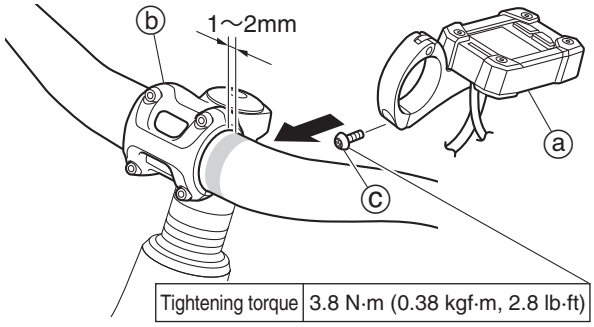
- **Install the button cell battery with the plus (+) mark facing upward.**
- **Check that the O-ring ⓖ is properly installed.**

After installing the button cell battery, install the display unit onto the bracket following the removal procedure in reverse order.

5. Installing the display unit's

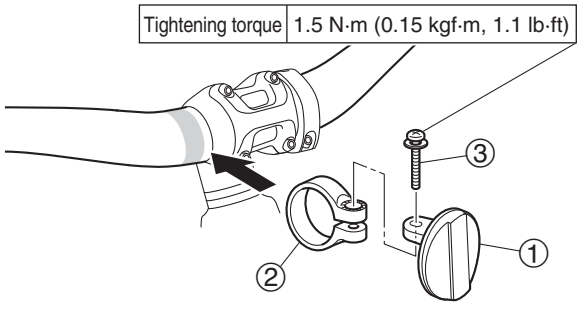
Maintain a clearance of 1 to 2 mm between the bracket of the compact multifunction meter set ⓐ and the handlebar holder ⓑ as shown, install the set, and then tighten the bolt ⓒ to the specified torque.

After installing, remove the protective film.



6. Installing the front reflector

Install the front reflector ①, stay ②, and screw ③ as shown, and then tighten them together to the specified torque.



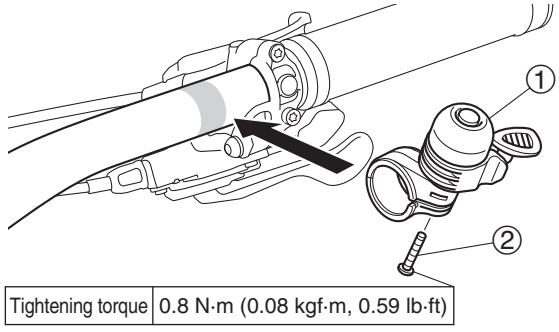
①	Front reflector	1	A
②	Stay	1	A
③	Screw	1	A

TIP

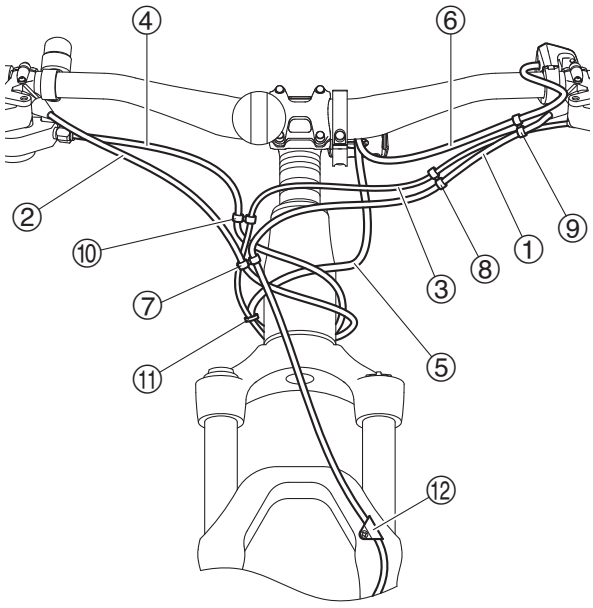
Adjust so that the front reflector ① faces straight ahead, then tighten the screw.

7. Installing the bell

Install the bell ① in the shown, then tighten it with the screw ②.



①	Bell	1	A
②	Screw	1	A



8. Routing the wires

⚠ WARNING

Be sure to route the wires as shown in the illustration. If not, they could interfere with handlebar operation which could cause loss of control.

Confirm that hoses and wires are routed in order starting from front to back
front brake hose ①
rear brake hose ②
dropper seat wire ③
shift wire ④
compact multifunction meter lead ⑤
switch unit lead ⑥

Clamp the front brake hose ① and rear brake hose ② with the wire clip ⑦ at the position shown in the illustration.

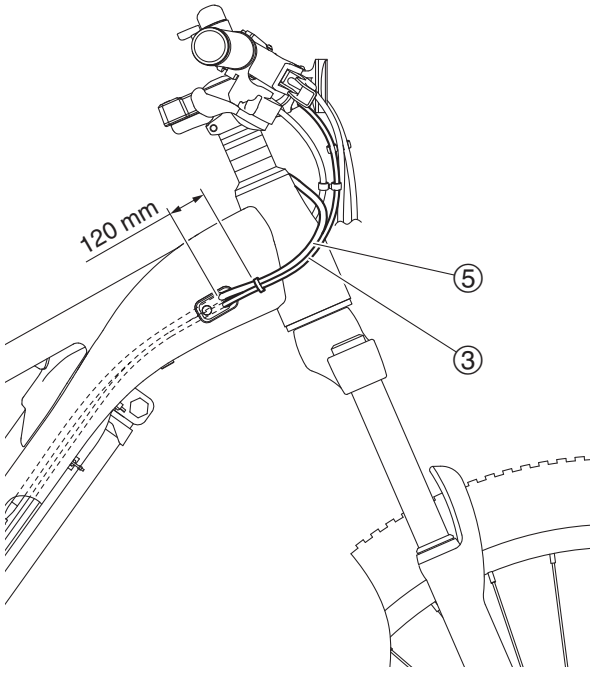
Clamp the front brake hose ① and dropper seat wire ③ with the wire clip ⑧ at the position shown in the illustration.

Clamp the front brake hose ① and switch unit lead ⑥ with the wire clip ⑨ at the position shown in the illustration.

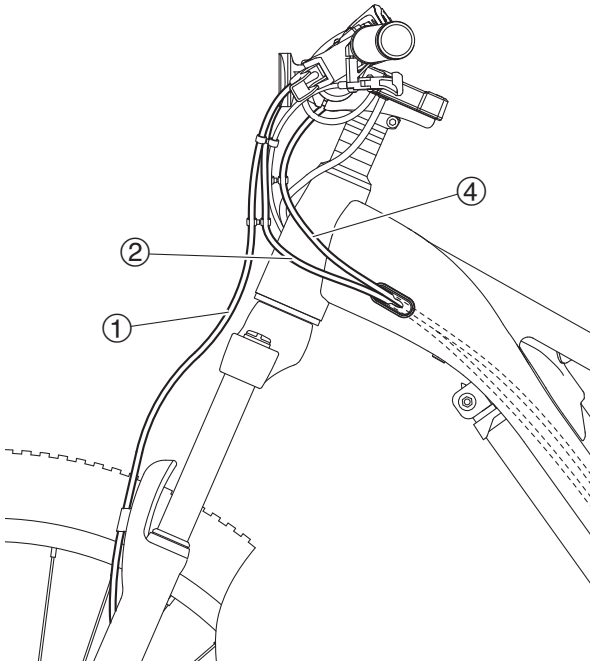
Clamp the dropper seat wire ③ and shift wire ④ with the wire clip ⑩ at the position shown in the illustration.

Clamp the dropper seat wire ③ and compact multifunction meter lead ⑤ with the plastic locking ties ⑪ at the position shown in the illustration.

Secure the front brake hose ① with the wire clamp ⑫ at the position shown in the illustration.

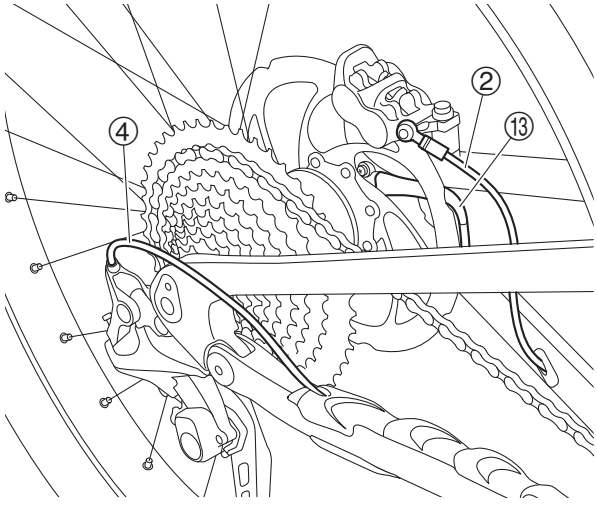


Make sure that the dropper seat wire ③ and compact multifunction meter lead ⑤ are routed as shown.



Make sure that the front brake hose ①, rear brake hose ②, and shift wire ④ are routed as shown.

Check that the rear brake hose ②, shift wire ④, and speed sensor lead ⑬ are routed as shown in the illustration.



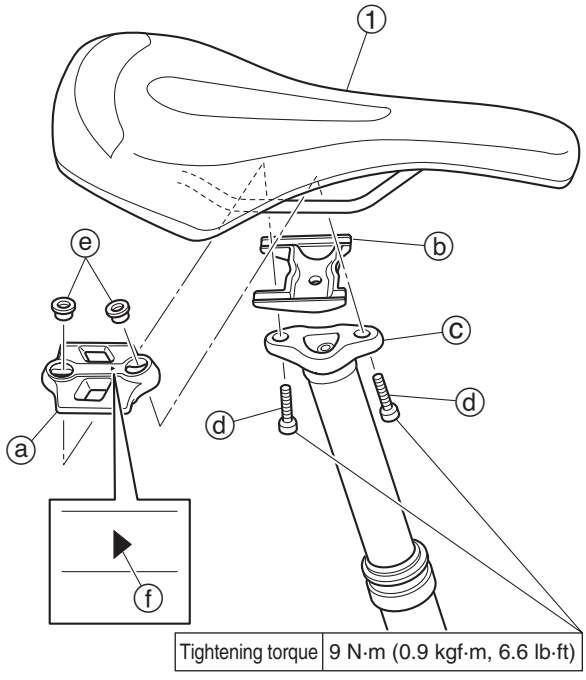
9. Installing the saddle

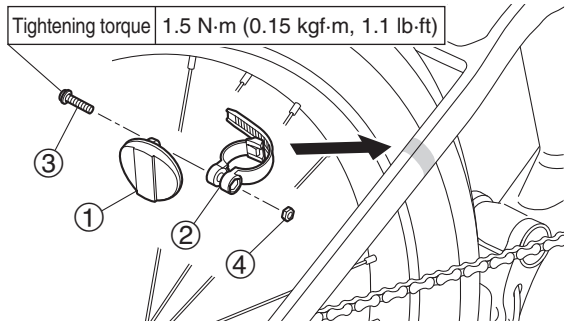
Pinch the rail of the saddle ① with the saddle clamps ⓐ and ⓑ, and then tighten the seat post ⓒ, bolts ⓓ, and nuts ⓔ to the specified torque.

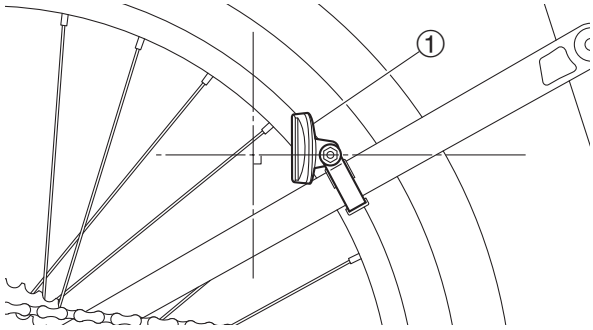
①	Saddle	1	A

TIP

Face the mark "▲" ⓕ of the saddle clamp ⓐ toward the front, and then install the saddle.







10. Installing the rear reflector

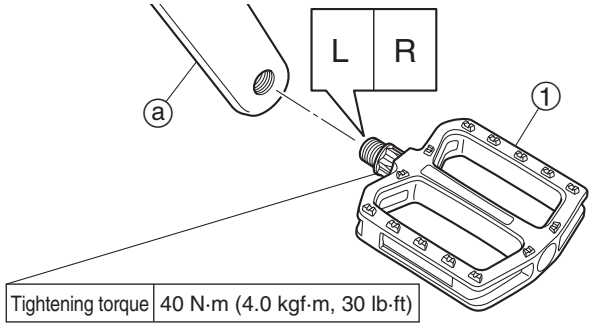
Install the rear reflector ①, band ②, screw ③, and nut ④ as shown, and then tighten them together to the specified torque.

Secure them to the frame with the band ②.

①	Rear reflector	1	A
②	Band	1	A
③	Screw	1	A
④	Nut	1	A

TIP

- Adjust the rear reflector ① so that it is facing straight backward, then tighten it.
- When assembling the rear reflector ① to the frame, adjust the length by cutting the adjustment pad inside the band to fit the frame.



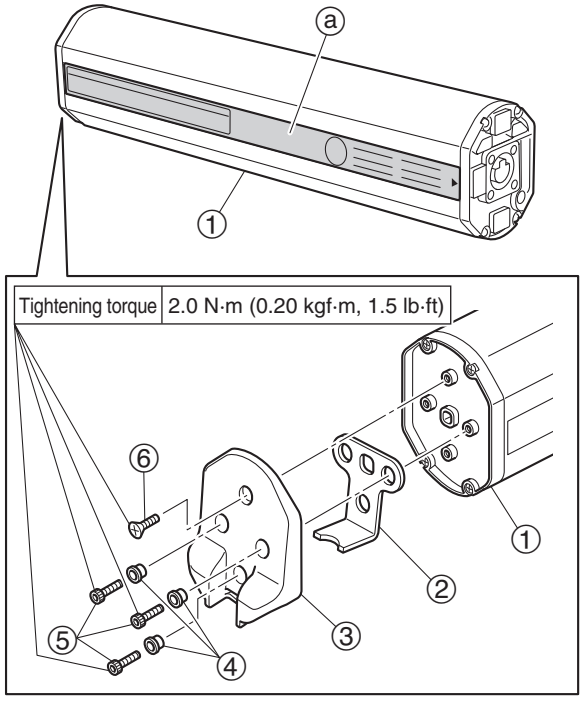
11. Installing the pedals

Install the pedals ① to the crank ⓐ, then tighten to the specified torque.

①	Pedals (left and right)	1 each	A

TIP

- Right-hand screw (marked R) for right pedal
- Left-hand screw (marked L) for left pedal

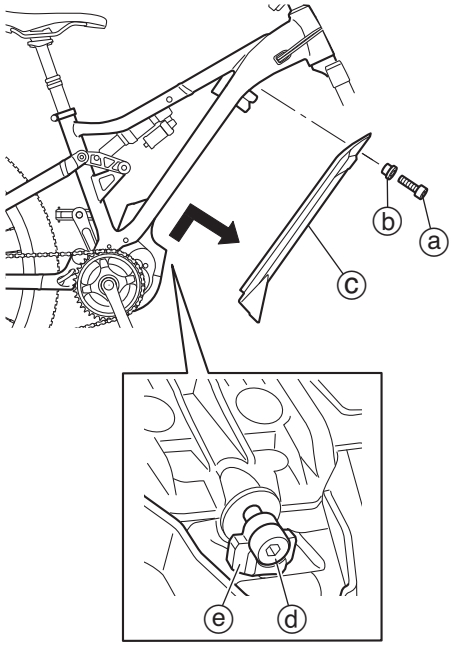


12. Installing the battery end cap

Make sure that charging of the battery pack ① is complete.

As shown, arrange the battery pack ① so that the label ⓐ can be read, position the L-shaped portion of the plate ② downward, and then install the plate to the battery. Install the battery end cap ③ and collars ④, and then tighten the bolts ⑤ and screw ⑥ to the specified torque.

①	Battery pack	1	B
②	Plate	1	A
③	Battery end cap	1	A
④	Collar	3	A
⑤	Bolt	3	A
⑥	Screw	1	A

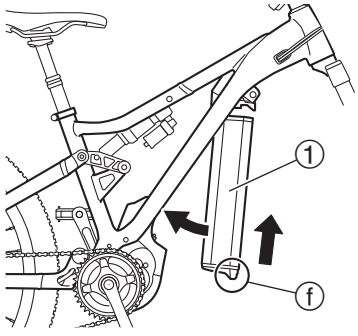


13. Installing the battery pack

⚠ WARNING

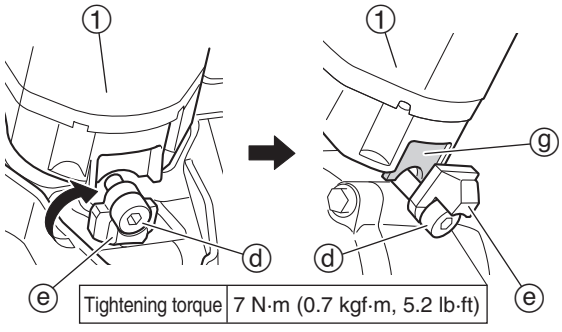
Before installing the battery, make sure that there are neither foreign materials nor water at the connection portion between the battery and the bicycle, or charging connector. Otherwise, it could lead to heat generation, smoke and/or a fire.

Loosen the bolts ⓐ (2 pcs), and then remove the collars ⓑ (2 pcs) and battery cover ⓒ.
Loosen the bolts ⓓ, and then make sure that the collar ⓔ faces downward as shown.



Insert the battery pack ① into the frame slowly so that the protrusion ⓕ on the battery faces toward the front of the bicycle as shown.

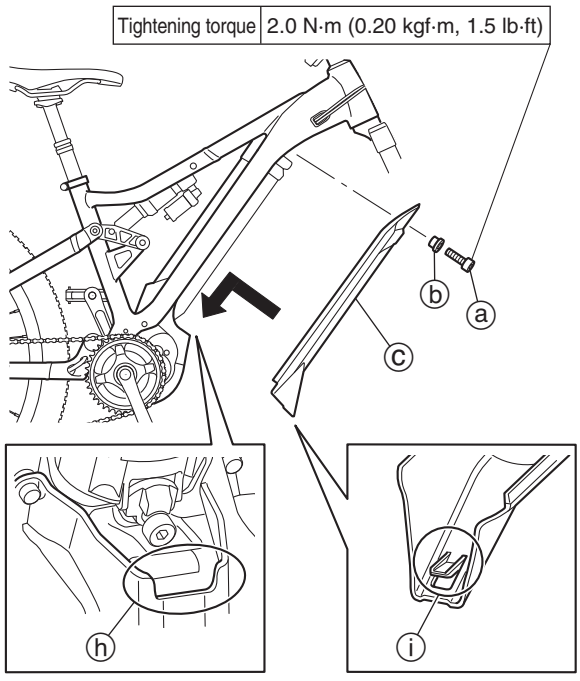
①	Battery pack	1	B



Insert the battery pack ① all the way into the frame, turn the collar ⓔ 180° with the collar pointing upward while holding the battery pack ① with your hand, and then insert the collar ⓔ into the recess ⓖ in the battery.
Tighten the bolt ⓓ to the specified torque, and then secure the battery pack ①.

TIP

Because the collar ⓔ is equipped with a magnet, it will attach to the recess ⓖ in the battery to prevent the collar from coming loose.

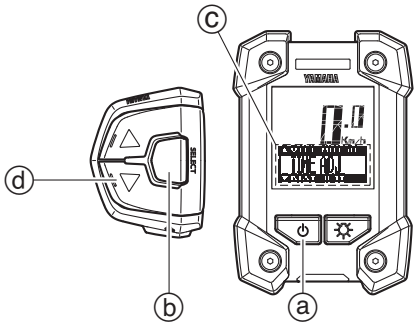


Hook the claw ⓘ of the battery cover to the hook part ⓗ of the motor cover, and then install the battery cover ⓒ along the frame.
Install the collars ⓑ (2 pcs), and then tighten the bolts ⓐ (2 pcs) to the specified torque.

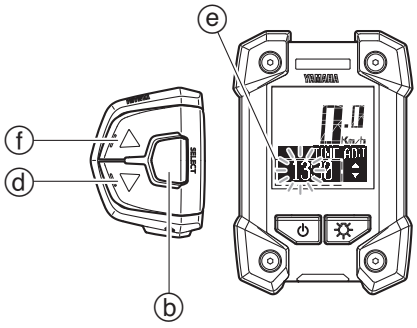
14. Adjusting the display unit's time

TIP

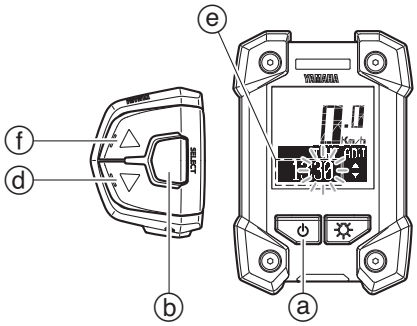
Adjust the time with the button cell battery installed. If the time is adjusted without a battery installed, the time set will not be kept.



A. Press the power switch ⓐ to turn on the power.
B. Press and hold the function select switch ⓑ (2 seconds or longer) until the function display ⓒ switches to the main menu display.
C. Press the "▼" assist mode switch ⓓ, display "TIME ADJ" on the main menu display, then press the function select switch ⓑ to set.



D. The hours value increases when the "▲" assist mode switch ⓕ is pressed while the "Hour" section of the clock ⓔ is flashing.
The hours value decreases when the "▼" assist mode switch ⓓ is pressed.
Press the function select switch ⓑ to set the hours.



E. The minutes value increases when the "▲" assist mode switch ⓕ is pressed while the "Minute" section of the clock ⓔ is flashing.
The minutes value decreases when the "▼" assist mode switch ⓓ is pressed.
Press the function select switch ⓑ to set the minutes.
F. The time is set and the mode returns to the normal mode.

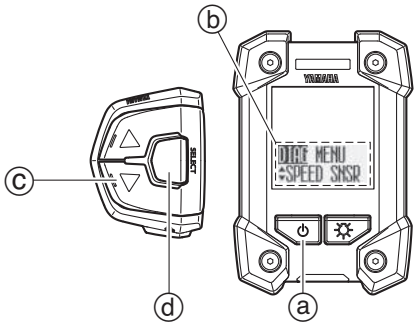
TIP

If you make a mistake adjusting the time, start over from step B.

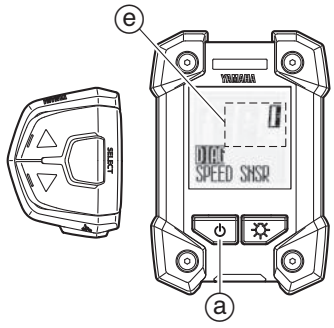
G. Press the power switch ⓐ to complete adjustment of the time.

15. Checking the operation of the speed sensor

A. Press the power switch ⓐ to turn on the power.
B. Long-press the power switch ⓐ (approximately 10 seconds) within 30 seconds after turning on the power, check that the display switches to the diagnosis function selection screen ⓑ, then release the power switch ⓐ.
C. Press the "▼" assist mode switch ⓒ, display "SPEED SNSR" on the diagnosis function selection screen ⓑ, then press the function select switch ⓓ to set.



D. Check that the speedometer ⓔ is displayed and that the speed sensor checking mode has been set.
E. The number displayed on the speedometer ⓔ counts up when the rear wheel is lifted off the ground and turned.
The number increases by 1 for 1 turn. Check that the position of the wheel at which the display counts up is stable.
F. After checking the operation, press the power switch ⓐ to quit.

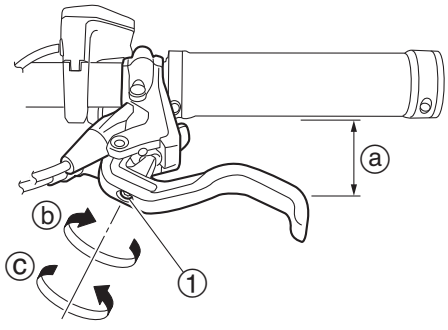


TIP

Turn the rear wheel at least 3 revolutions and check that the display reads "3".

16. Adjusting the opening of the front and rear brake levers

Before adjusting the opening of the brake levers, grip the brake levers approximately 10 times to pump them.
Turn the adjusting screw ① to adjust the opening of the tip of the brake lever ⓐ from the tip of the grip.



ⓑ direction	Opening gets larger.
ⓒ direction	Opening gets smaller.

NOTICE

After adjusting the brake lever opening, check that the rotation of the front and rear wheels is not heavy.

TIP

Adjust to a position at which it is easy for the customer to operate the front and rear brake levers and within the range of play of the brake levers.

PREDELIVERY INSPECTION

⚠ WARNING

After completing the installation, inspect the items as follows and check that there are no problems before delivering the bicycle. Adjust controls and saddle height to the customer's satisfaction according to this manual.

- Handlebar orientation, height, angle, and tightening
- Saddle orientation, height, angle, and tightening
  * Check that the saddle is firmly fastened.
- Various fittings adjusted to the customer's riding posture
  * Including brake lever angle, fork suspension air pressure, etc.
- Inspection of the wheels, hubs, and spokes
- Tightening of the pedals
- Tightening of the screws of each part
- Brake performance
- Shift changing operation
- Looseness of the chain
- Bell sound
- Battery pack locking operation
  * Check that the battery pack locks securely.
- Check of battery pack and battery charger operation
- Operation of the meter, switches, and drive unit
- Installation state of the reflectors
- Maximum tire air pressure
  Front tire: 450 kPa (4.5 kgf/cm^2, 65 psi)
  Rear tire: 450 kPa (4.5 kgf/cm^2, 65 psi)