SpeedBox 1.2 B.Tuning for Bosch

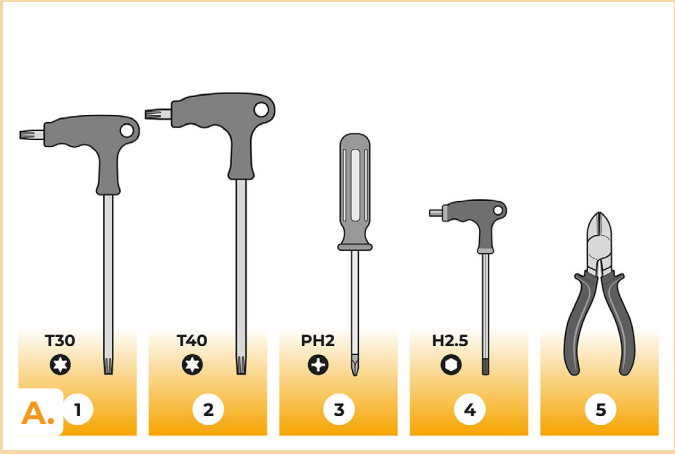
STEP 1: Preparation for installation

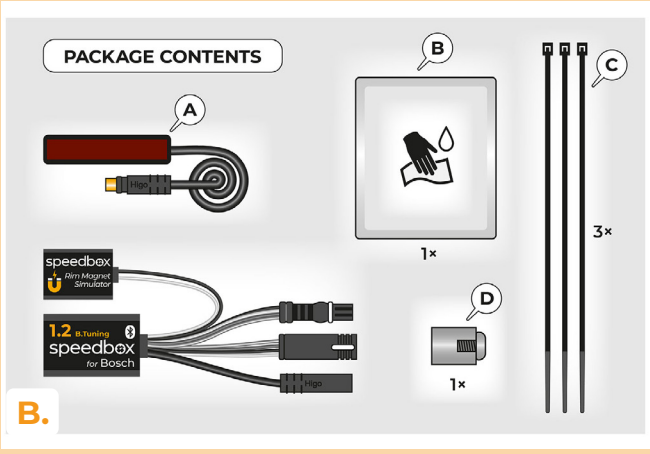
We recommend using bike repair stand during tuning installation.

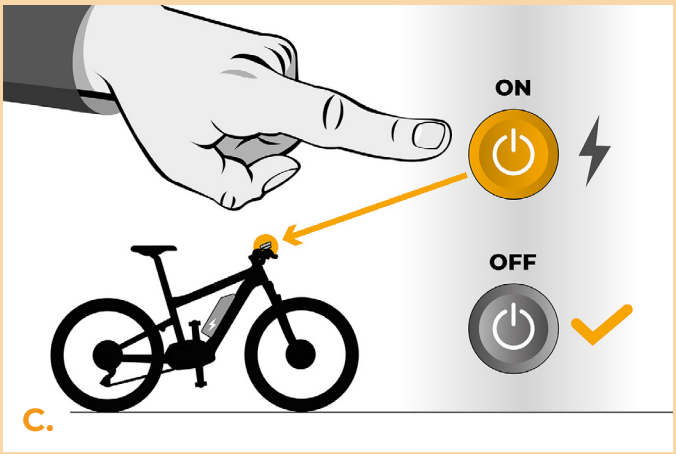
A. Prepare the following tools:
(tools may vary depending on the type of e-bike)
1. T30 Torx screwdriver
2. T40 Torx screwdriver
3. Phillips screwdriver PH2
4. Hex Key H2.5
5. Side cutting pliers

B. Check the contents of the package according to the picture.

C. Turn off the e-bike.



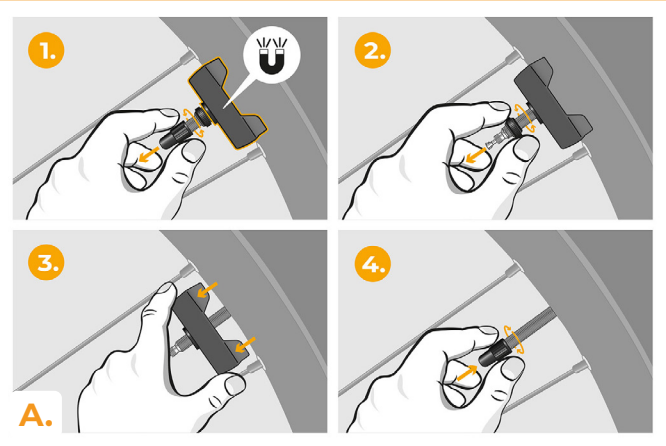


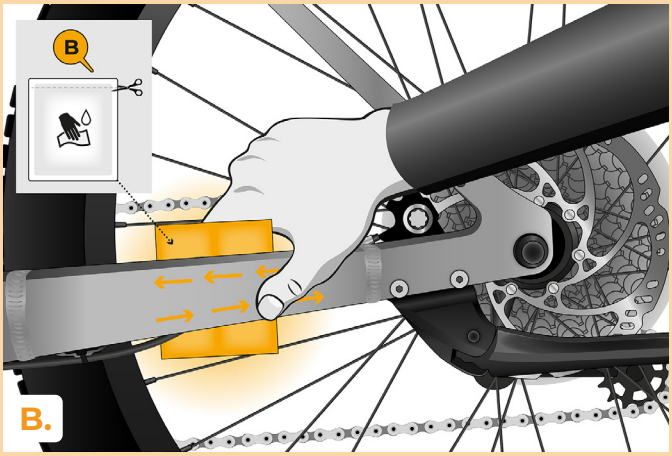


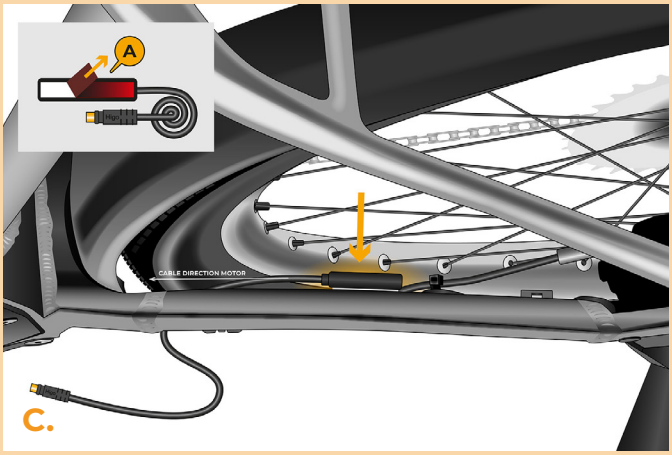
speedbox
break the limits

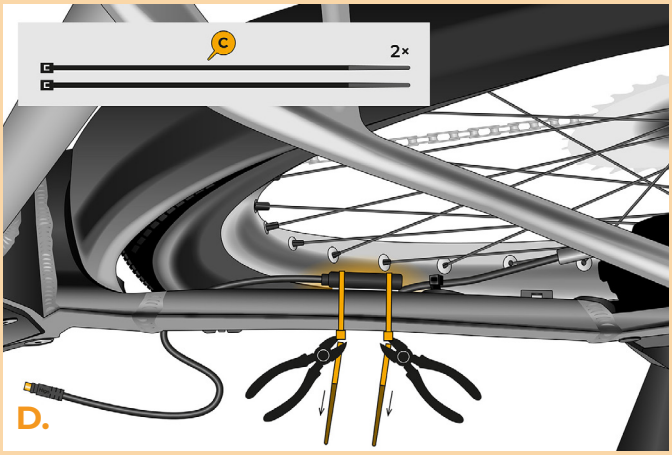
STEP 2: Rim Magnet removal and installation of the speed sensor

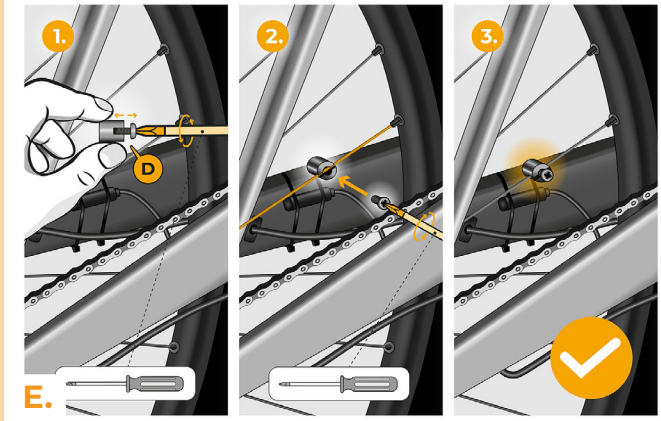
A. Remove the original Rim Magnet from the rear wheel valve. Keep it for the reinstallation (step 10).
B. Clean the inner side of the chainstay with a wet wipe (B).
C. Using double-sided tape, attach the speed sensor cable (A) to the cleaned inner side of the chainstay. The other end of the cable with the connector should point towards the motor.
D. Fix the speed sensor (A) firmly with two plastic tightening tapes (C). Trim off any overhanging remnants of the tape with side cutting pliers.
E. Using the Phillips screwdriver PH2, attach the magnet (D) to one of the spokes of the rear wheel. Place the magnet with the smooth side facing the end of the speed sensor.
F. Check the position of the speed sensor and the magnet relative to each other.
G. Secure the speed sensor with a plastic tightening tape (C) to the inner side of the chainstay, closer to the motor, to prevent any unwanted contact of the cable with the rotating rear wheel. Trim off any overhanging remnants of the tape with side cutting pliers.







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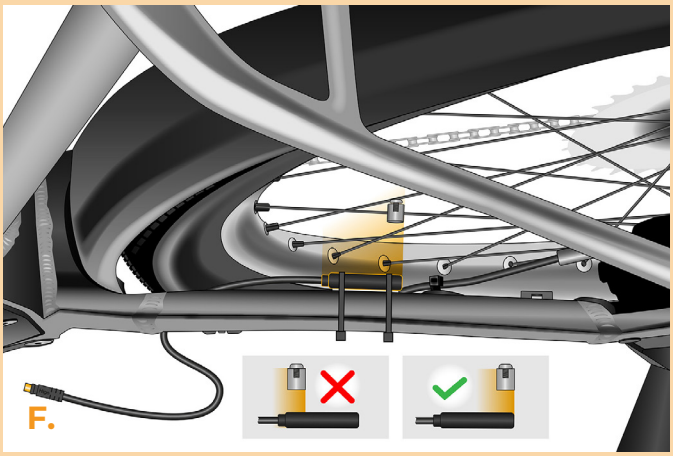
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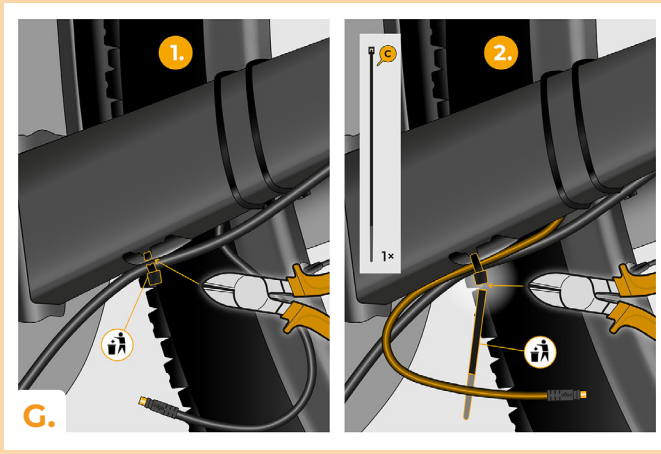
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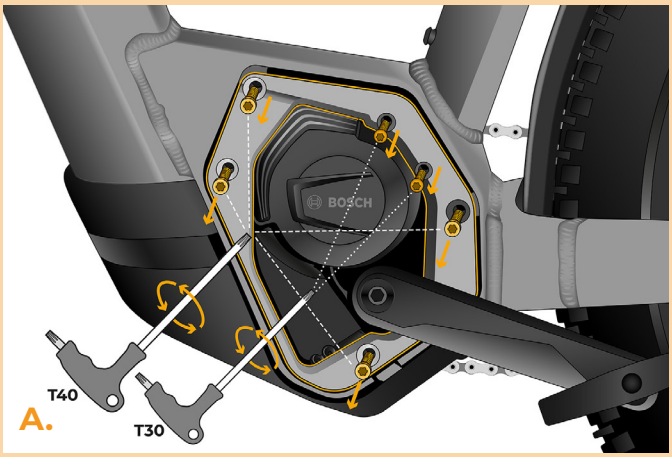
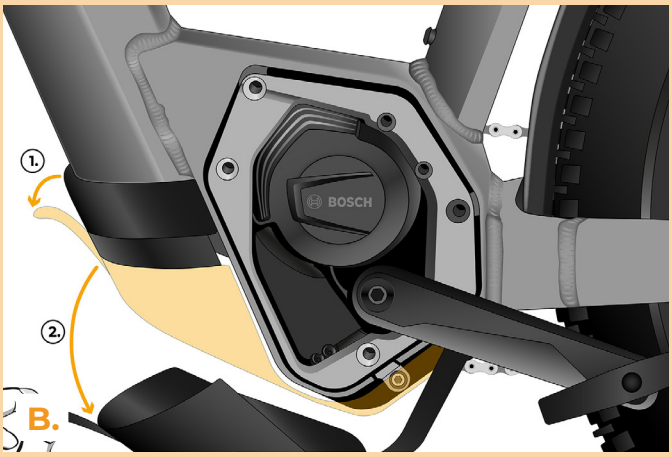
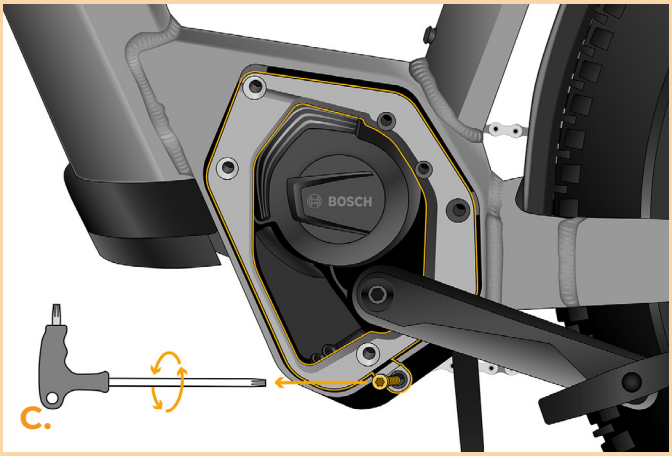
STEP 3: Motor cover removal

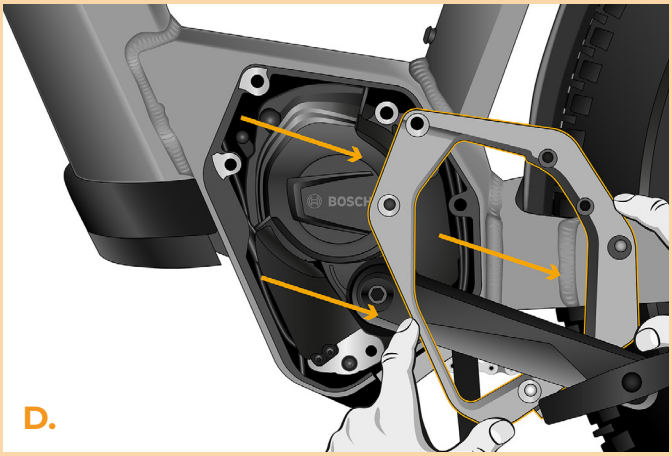
The process of removing the motor cover may differ depending on the e-bike design.

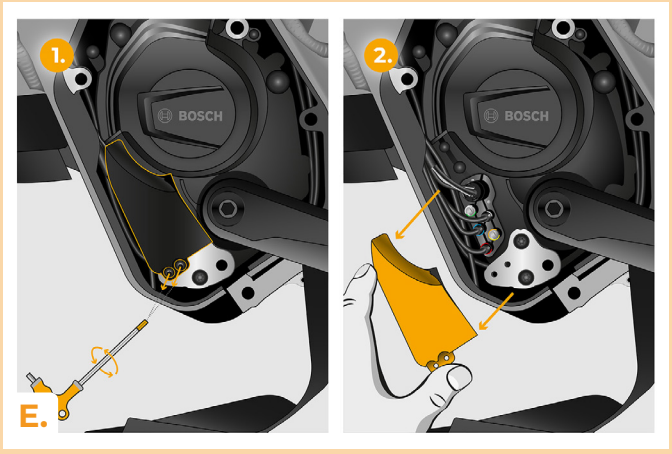
A. Unscrew all the screws holding the motor cover with the T30 and T40 Torx screwdrivers.
B. Flip off the lower plastic motor cover to access the last screw securing the motor cover.
C. Unscrew the last screw with the T40 Torx screwdriver.
D. Remove the motor cover.
E. Using the hex key H2.5, unscrew the 2 screws holding the side connector cover and remove it.





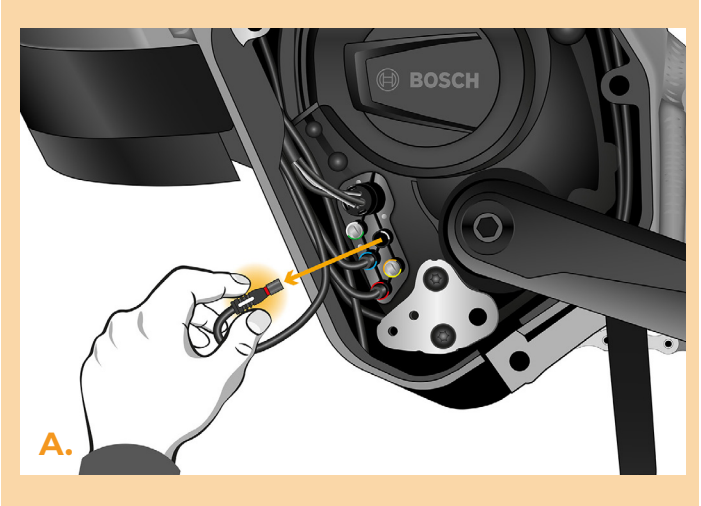






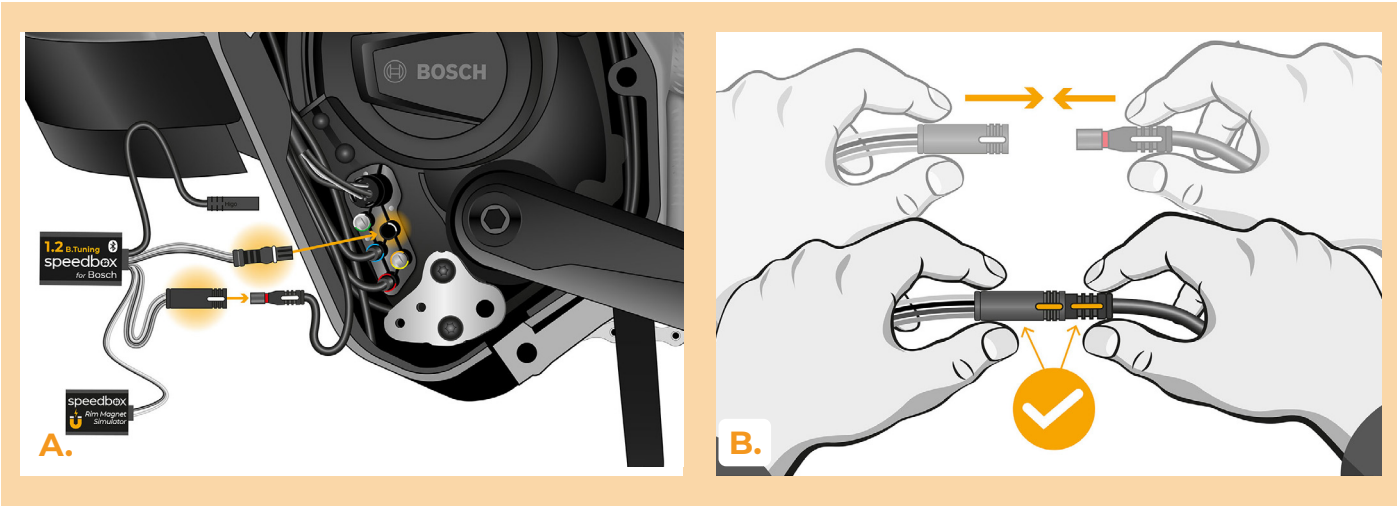
STEP 4: Disconnecting the connector from the motor

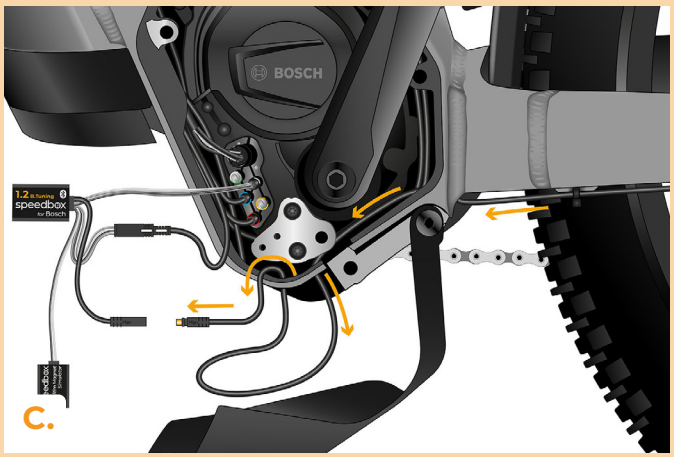
A. Disconnect the cable connector leading from the motor to the display.

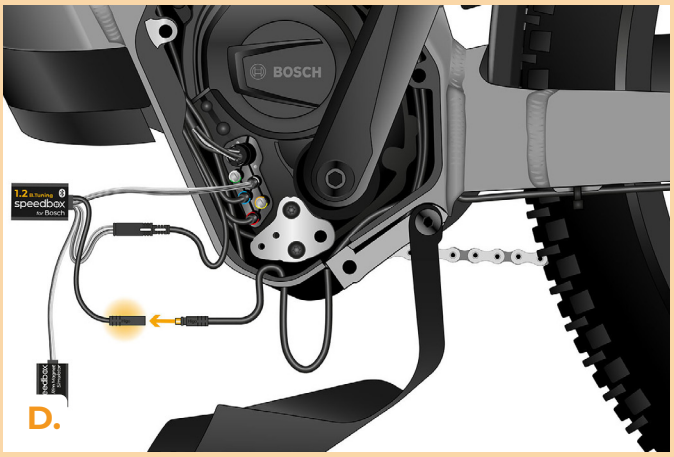


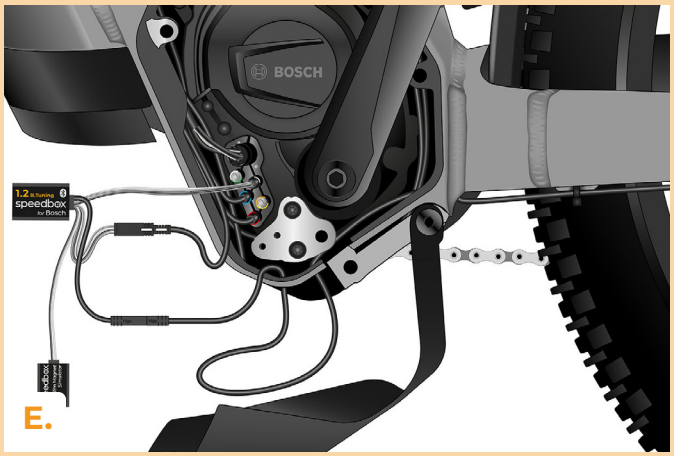
STEP 5: SpeedBox tuning installation

A. Replace the original connector with the SpeedBox connector.
B. Plug the e-bike connector, disconnected from the motor (step 4), into the SpeedBox connector. Make sure that the locks on the connector are seated properly.
C. Thread the speed sensor cable to the motor.
D. Connect the speed sensor cable to the SpeedBox.
E. Check the correct wiring as shown in the figure.









STEP 6: Rim Magnet installation and activation of SpeedBox

A. Turn the e-bike on.

B. Now test the signal of the box labeled Rim Magnet Simulator. Place the box under the lower part of the motor as close to the chainstay as possible.

Please note:

1. During installation, metal parts in the motor frame area, cables, or internal fillings of the e-bike frame might interfere with the signal of the Rim Magnet Simulator. In some cases, removing the frame filler may be necessary.
2. When searching for the signal, it is recommended to set the derailleur to a medium gear.

C. Image illustrating the suitable location of the Rim Magnet Simulator. The signal range extends up to 30 mm from the motor.

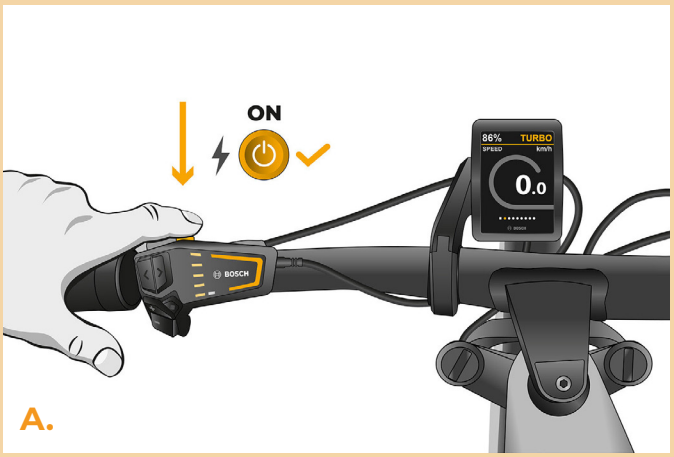
D. Wait for 20 seconds and then turn the rear wheel. If the real speed appears on the display, you can attach the Rim Magnet Simulator. If no speed appears on the display (0.0 km/h), slightly move the box and repeat the test by turning the rear wheel until the signal is all right.

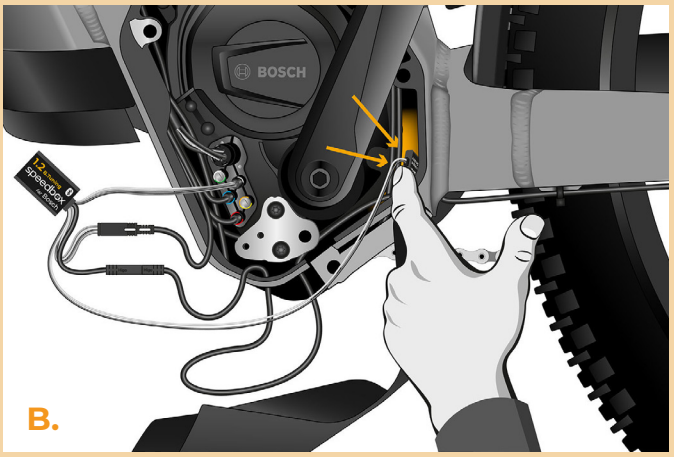
If an error occurs, please follow these steps:

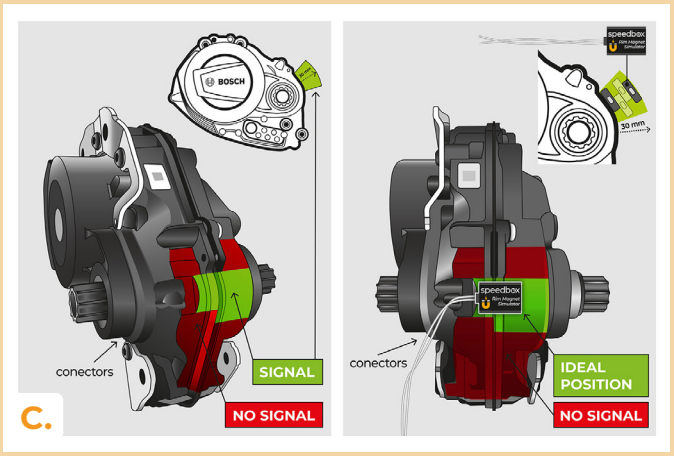
1. Leave the Rim Magnet Simulator in the same position or adjust it as needed. Refer to the provided picture for the ideal signal position.
2. Switch the e-bike off and on.
3. Turn the crank with the gearshift set to medium speed. Repeat this process until you find the correct position for the Rim Magnet Simulator.

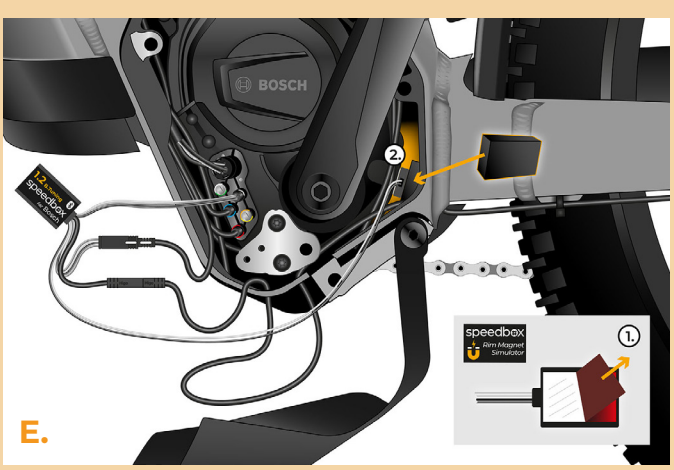
E. Attach the Rim Magnet Simulator with double-sided tape to the proper place. If necessary, use padding to secure the Rim Magnet Simulator in place and prevent it from shifting.

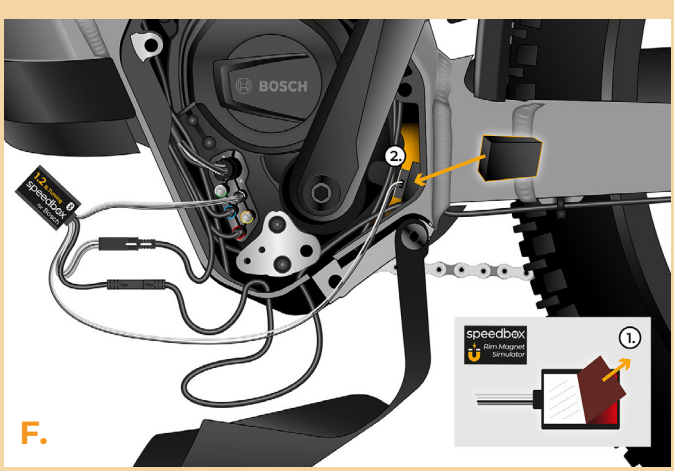
F. Turn the e-bike off.





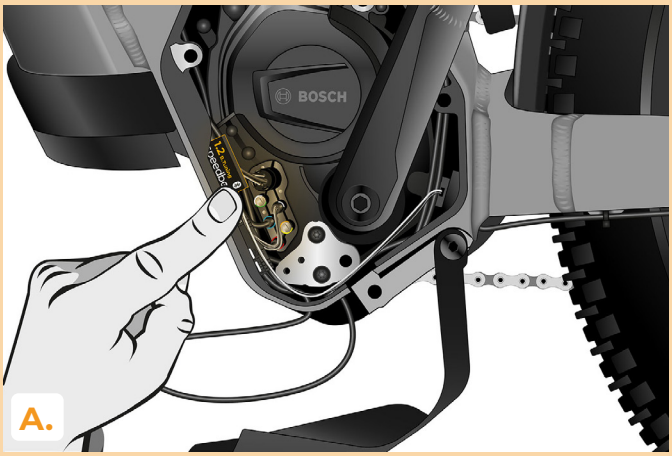


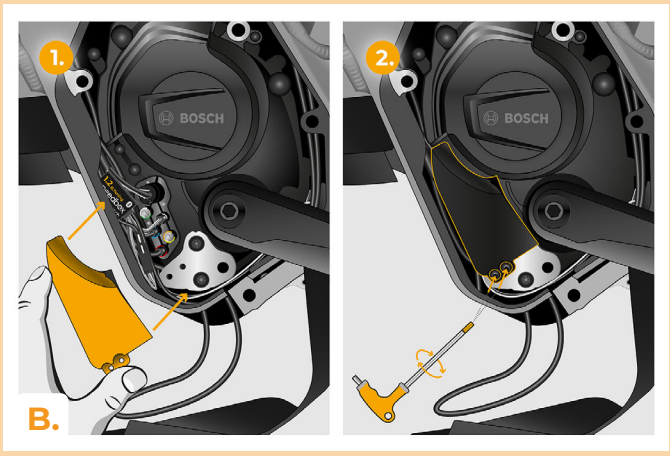


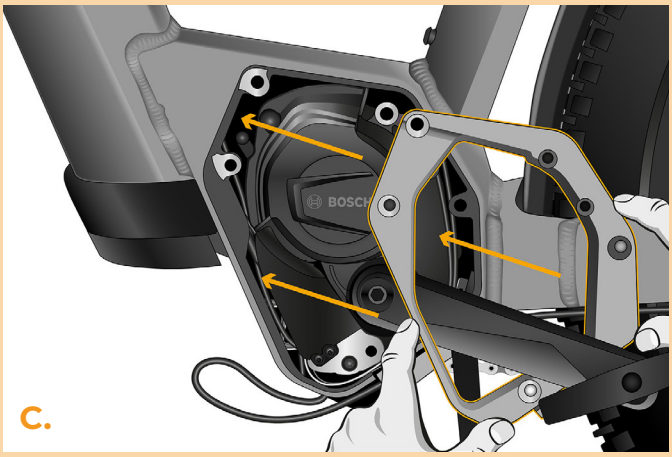


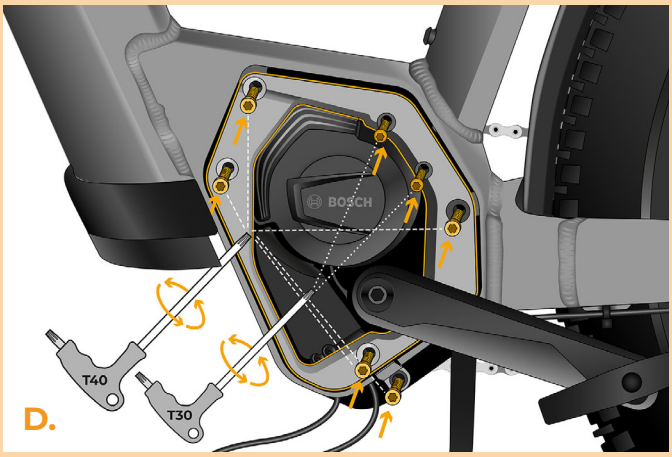
SPET 7: Motor cover assembly

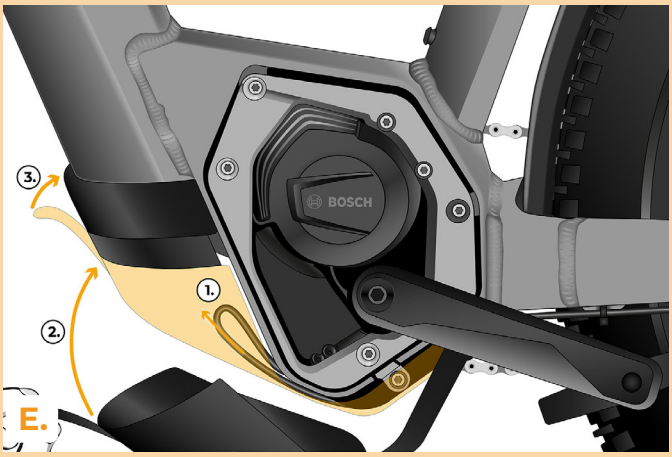
A. Fit the SpeedBox and all connectors and wires leading from the motor into the free space in the motor.
B. Place the side connector cover in its original place and fasten it with two screws using the hex key H2.5.
C. Place the motor cover back.
D. Tighten all the screws holding the motor cover back in using the T30 and T40 Torx screwdrivers. Check that all screws are tight.
E. Pull the speed sensor cable under the lower plastic cover of the motor, place the motor cover into its original place and secure it.











STEP 8: Tuning function check

A. Turn the e-bike on.

B. Before the first SpeedBox activation, it is necessary to enter the menu and check the wheel circumference: “Settings” > “My Bike” > “Wheel circumference”. Then return to the home screen.

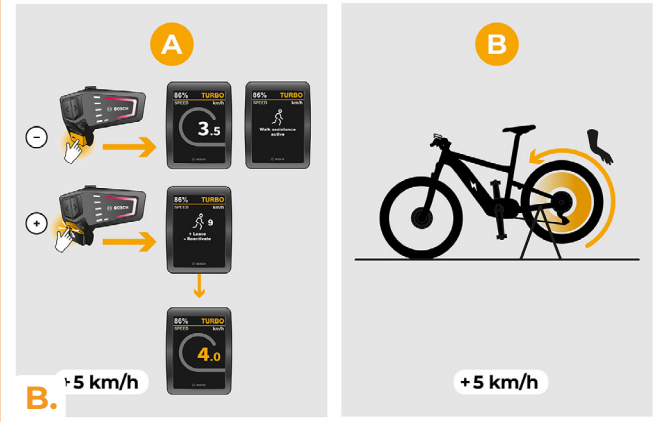
C. Activate/deactivate tuning by brief activation of the WALK function or by switching between two assistance modes twice (+-+-). The value of 3.5 or 2.5 indicating the maximum speed in km/h will be displayed. Warning: Activate/deactivate the tuning before the ride (when the e-bike is standing still), not during riding.

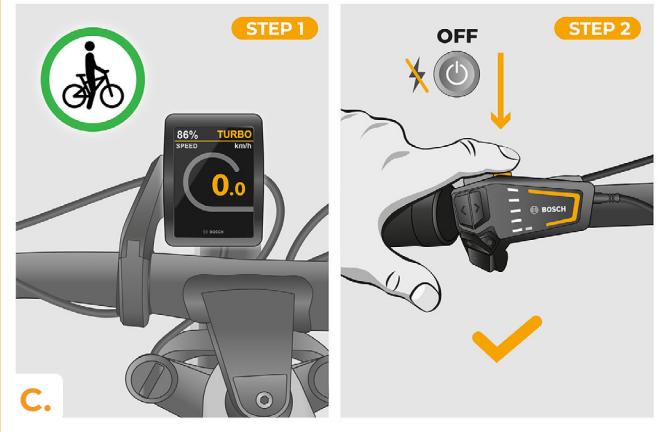
STEP 9: Setting the speed limit

A. You can set the maximum speed limit by changing modes from TURBO to eMTB - TOUR+ - ECO - TOUR+ - EMTB - TURBO (- - - + + +). An actual speed limit will be displayed after that.

B. The maximum speed can be changed by activating/deactivating the WALK assist function (in this case by pressing „-“ and „+“) or by turning the rear wheel 360°. The last displayed limit will be saved after 15 seconds of inactivity.

C. To prevent tuning detection on your e-bike, it is necessary to leave the e-bike on after finishing the ride until a value of 0.0 km/h is displayed.

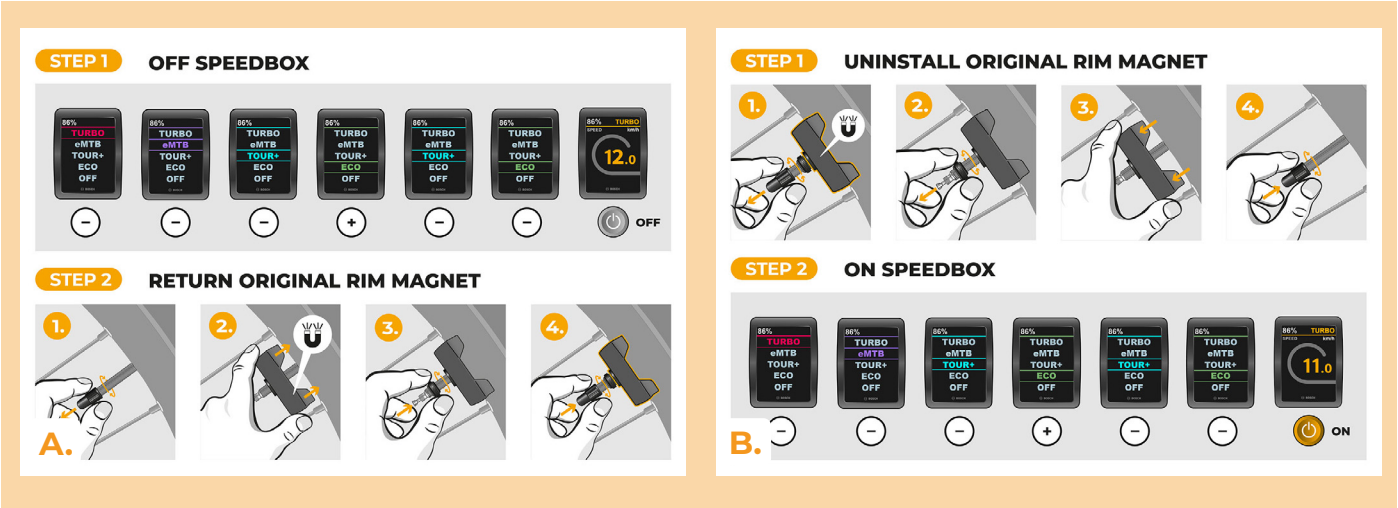




STEP 10: Deactivation and reassembly of Rim Magnet on the wheel valve

A. In case you want to reinstall the original Rim Magnet, first deactivate the SpeedBox by switching the modes from TURBO to eMTB – TOUR+ – ECO – TOUR+ – ECO – OFF (- - - + - -). The display will show a speed of 12.0 km/h. Turn off the e-bike and return the original Rim Magnet to the rear wheel valve. Then turn on the e-bike and take a short ride. While riding, change gears until the real speed is shown on the display.

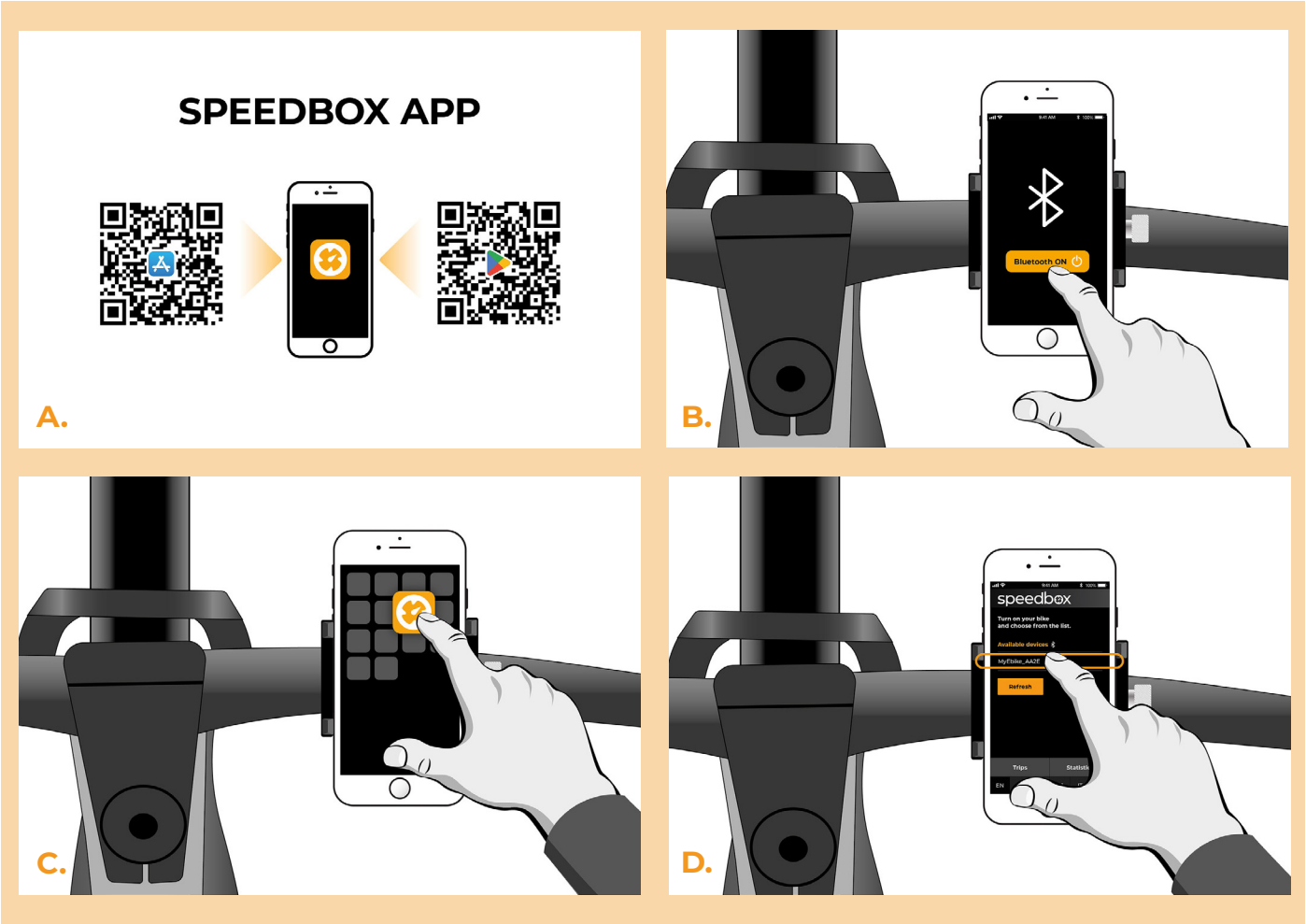
B. To reactivate SpeedBox, uninstall the Rim Magnet and then switch the modes again from TURBO to eMTB – TOUR+ – ECO – TOUR+ – ECO – OFF (- - - + - -). The display will show a speed of 11.0 km/h which indicates that SpeedBox is activated again.

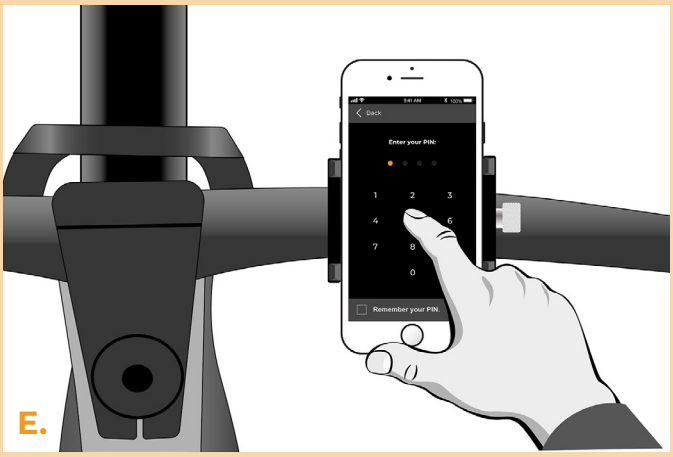


STEP 11: Pairing SpeedBox with the SpeedBox App

A. Install the SpeedBox App from Google Play or App Store.
B. Turn on Bluetooth on your phone.
C. Open the SpeedBox App. Enable location services if prompted.
D. Select the device MyEbike_xxxx. If you do not see it in the list, click on the “Refresh” button and, if necessary, make sure that:
1. Your e-bike is switched on.
2. You are not further than 5 m from your e-bike.
3. You have Bluetooth turned on on your mobile phone.
4. You have enabled location services for the SpeedBox App.

E. Choose and confirm your PIN and service password.
F. Now you can fully enjoy the SpeedBox App (control tuning, monitor riding data, and information about motor performance and energy consumption, you can set the speed limit, etc.).





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F.

www.speedbox-tuning.com

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