

Installation Instructions

Periscope - Version A.3

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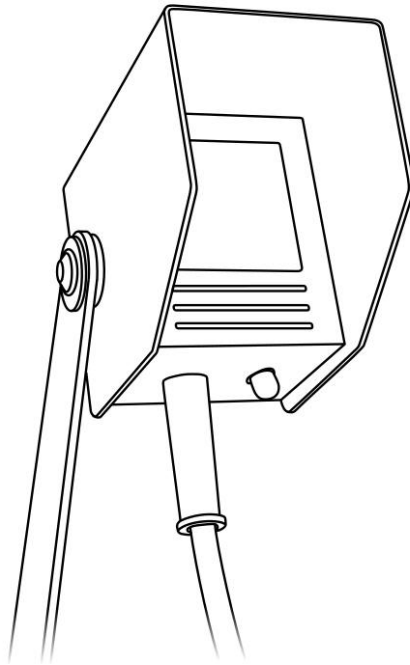


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Introduction

Before you start

1. Be sure that the engine is cold.
2. Put the motorcycle on the central stand.
3. PUT YOUR IGNITION KEY ON THE 'OFF' POSITION.

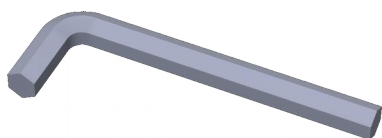
NOTE:

Even if this instructions are quite simple and linear, you should have a minimal experience/practice in using tools and mounting motorcycle parts. If you're not sure then it is recommended to entrust the assembly to a workshop.

GIMPO GARAGE UG IS NOT LIABLE FOR ANY MOUNTING DAMAGES.

Tools you need

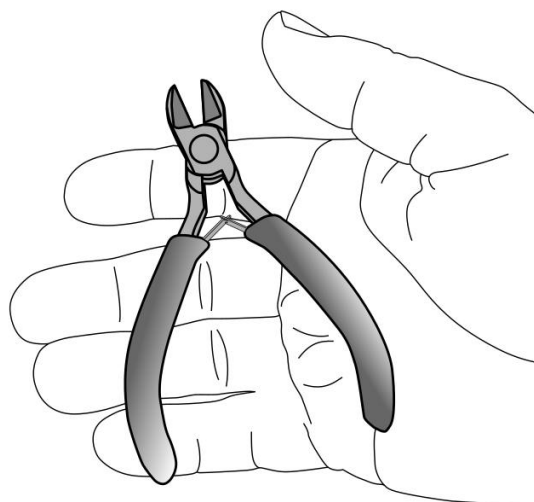
1. An hex key M4 (4mm).



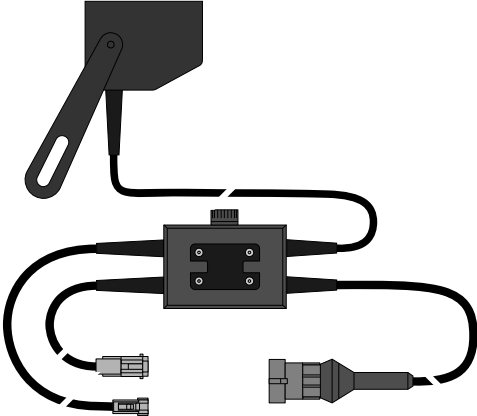


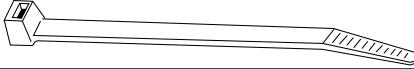


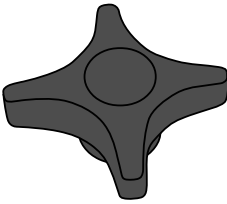

2. Small scissors



3. A small sidecutter.



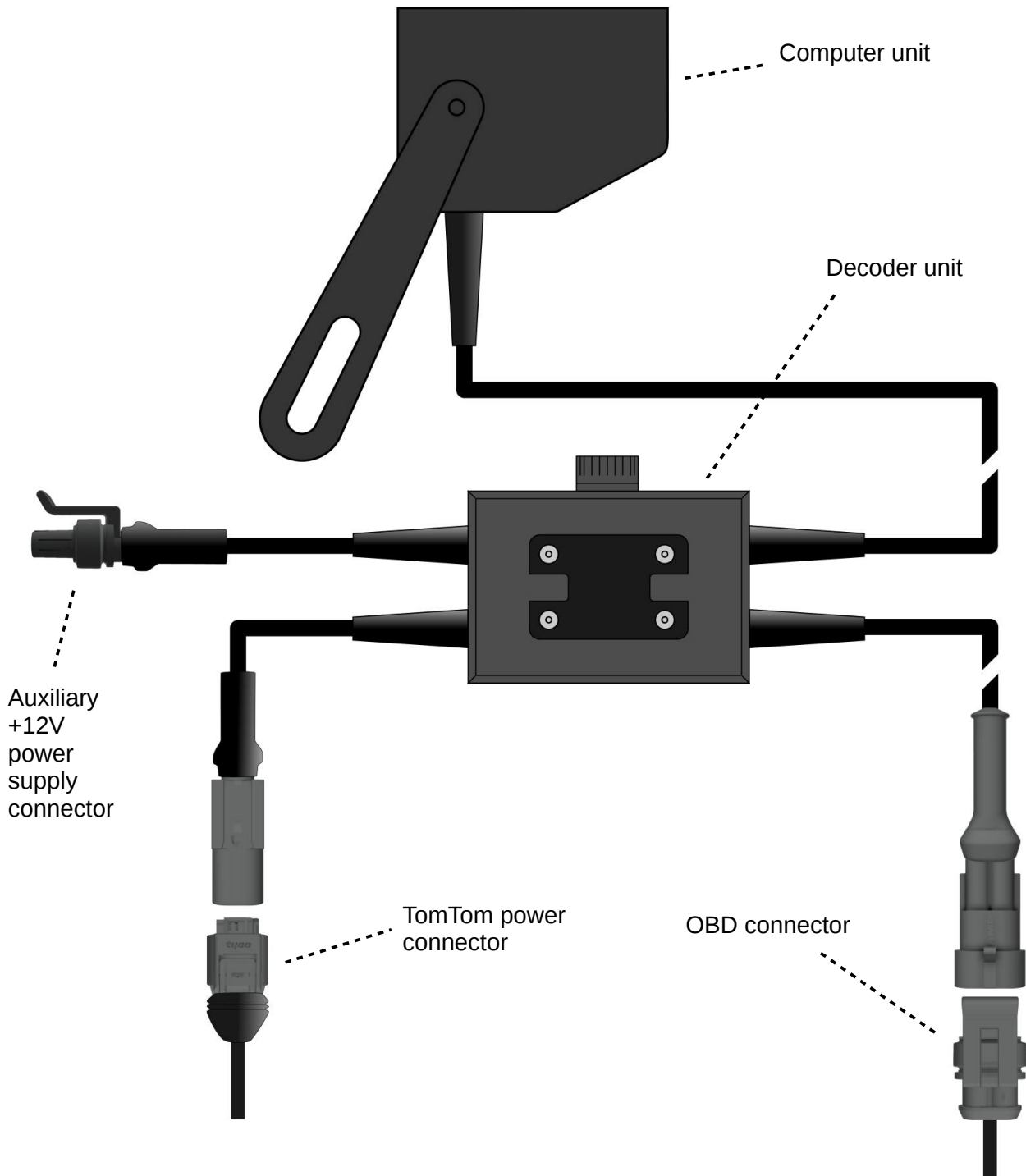
Parts you need

Item	#	Description
	1	Periscope
	2	Rubber washer
	1	Metal washer
	2	Short cable tie (6.8 x 180 mm)
	6	Long cable tie (2.6 x 260 mm)
	1	Adhesive rubber pad (around 12 x 33 mm)
	2	Knob nut (Note: this type of knob is easier to grab and tight than the original one due to his shape.)
	1	Knob spacer

Wiring (diagram)

Basically, in order to work, Periscope needs to be connected to

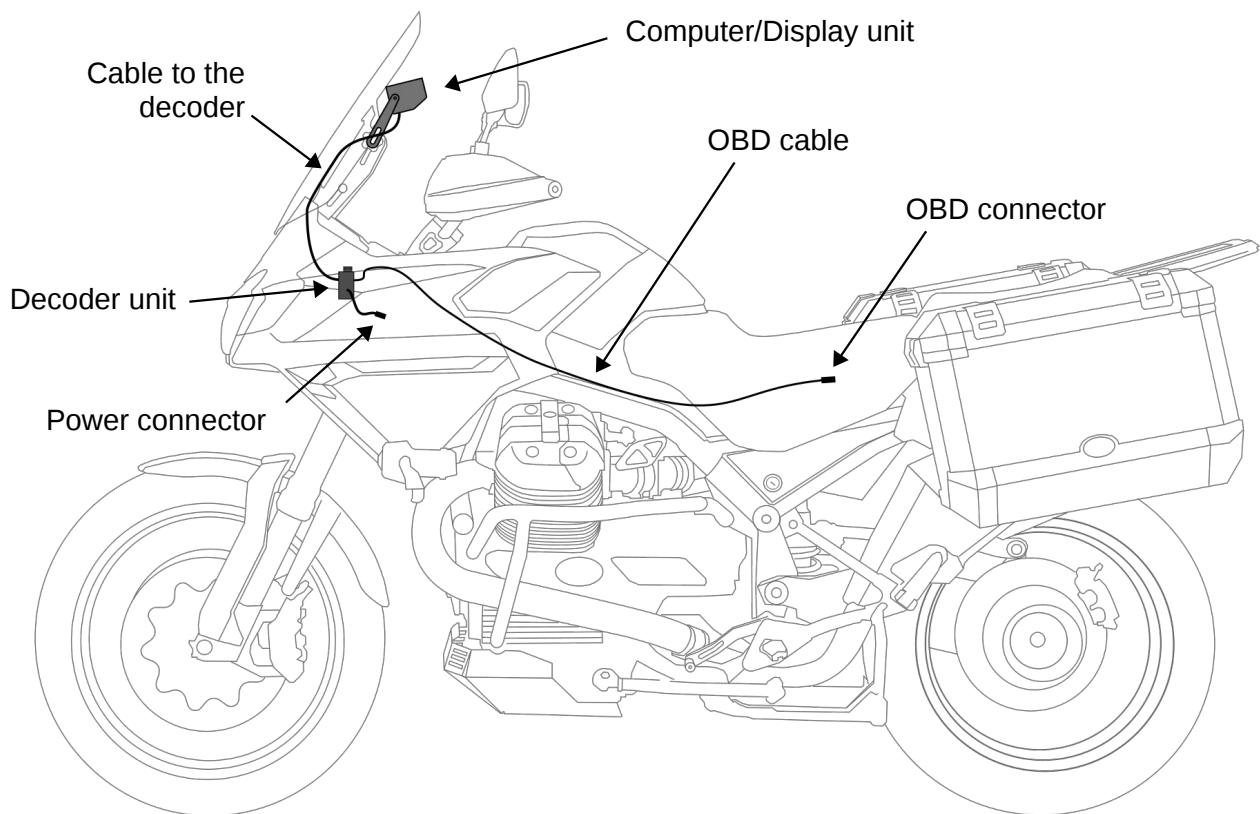
- a power source (+ 12V),
- the OBD interface of the motorcycle (ISO14230 / KWP2000).



Mounting diagram

For mounting you will have to access to the following areas/zones of the motorcycle:

- the windscreen bracket (to mount the computer unit),
- behind the dashboard (to route the cable going at the decoder unit),
- between the fork and the headlamps (to fasten the decoder unit),
- between the fork and the left fairing (to plug the power connector),
- below the seat (to plug the OBD connector).

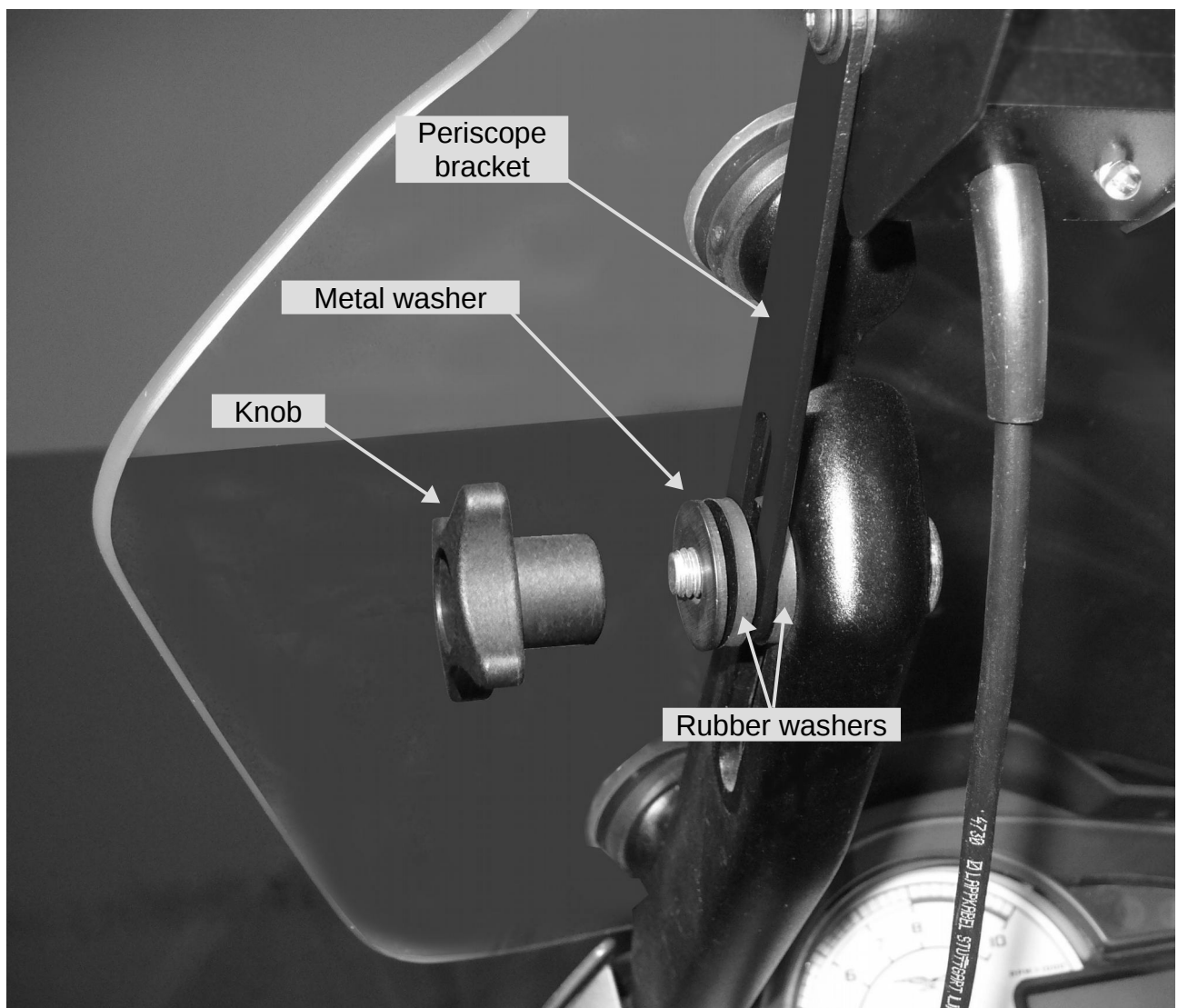


Mounting

Step 1/12: mount the computer/display unit

To mount the computer/display unit you can use either the new knob-nut or the old ones.

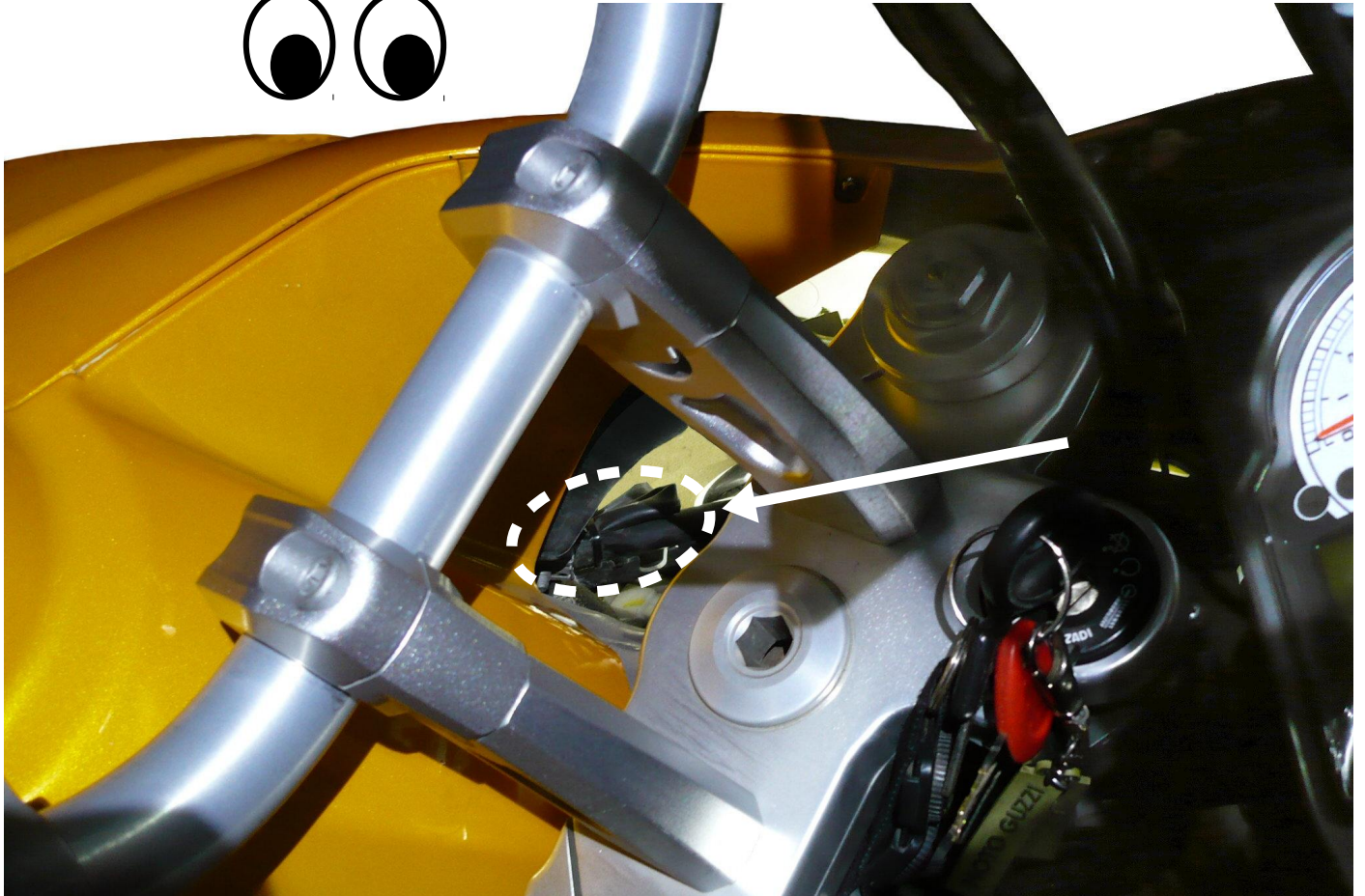
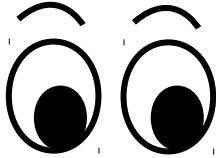
- a) Tighten the right knob-nut in order to hold the windscreen firmly in position.
- b) Remove completely the left knob-nut by unscrewing it.
- c) Insert the Periscope bracket between the two gummy washers.
- d) Insert the metal washer.
- e) Remount the knob and tight it firmly.
- f) (Optional) unscrew the original right-knob and replace it with the new one - use the provided spacer.



Fix the computer/display unit to windscreen left bracket.

Step 2/12: get the GPS power cable

- a) PUT YOUR IGNITION KEY ON THE 'OFF' POSITION.
- b) Turn the handlebar completely to the right to get more working space for your hands.
- c) Locate the GPS power connector inside the left side of the fairing.

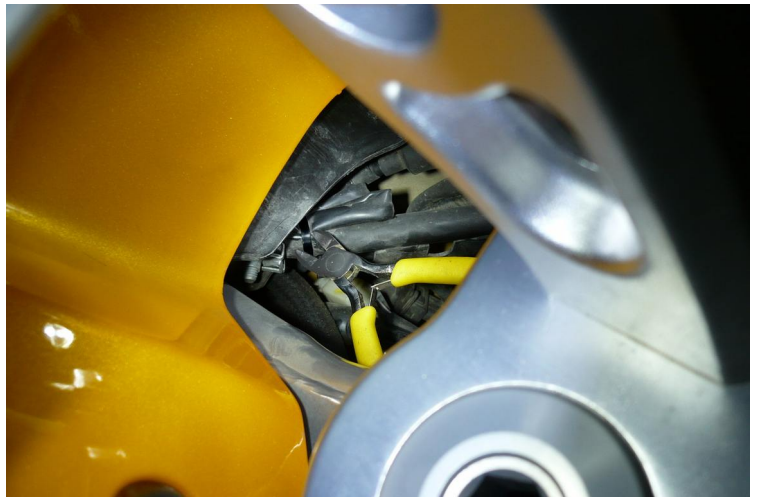


The hidden position of the power cable. It is hold in place by a plastic tie.

d) Take the sidecutter and, slowly, place it inside the fairing in such way that the black plastic tie lies between the two blades. Leave it in such position.

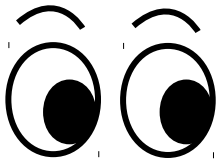


DOUBLE CHECK THAT YOU'RE NOT CUTTING ANYTHING ELSE BUT THE TIE!



Placing the sidecutter in the "cut-position".

e) Once that the cutter is correctly positioned you don't need to check the cut operation with your eyes. So take a comfortable position for your arm and your hand, then grab the sidecutter and cut the tie. Eventually, help the cutter with small torsions of the wrist.



Cut of the plastic tie.

- f) Get out the cable from the fairing.



The Tomtom-GPS power connector.

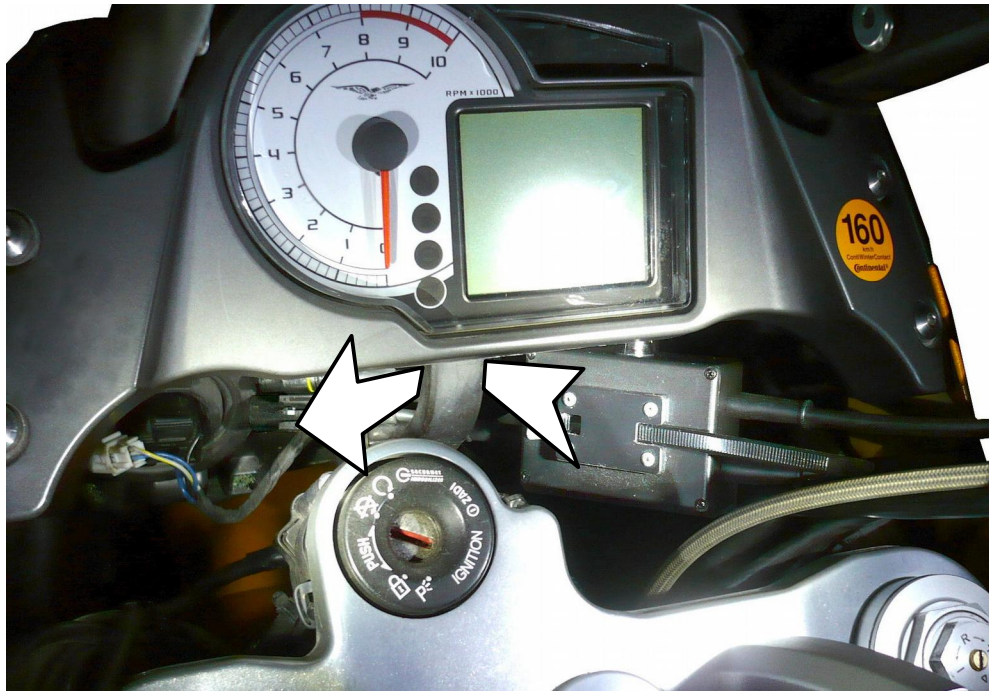
- g) Route the cable behind the left pipe of the frame.



Routing of the power cable.

Step 3/12: power up the decoder unit

a) Slide the decoder unit behind the vertical pipe of the front frame, from right to left.



Routing the power cables.

b) Plug the female Tomtom connector into the male one coming from the decoder unit.



Plugging the power connector.

Step 4/12: route the OBD cable

It is strongly recommended to keep the OBD cable away from the fork head as far as possible.

- a) Route the OBD cable in the space between the fairing and the pipes of the metal frame.
- b) Locate a free path on the right inner-side of the fairing. The cable should be routed close to the frame pipe located above the right cylinder.
- c) Don't fix the cable in position yet, you have to test the Periscope before! (See next steps.)



Use the frame pipes to keep the OBD cable away from the fork.



Pull the connector through the fairing



Route the OBD cable through the fairing.

Step 5/12: plug the OBD connector

a. Locate the motorcycle OBD connector.



b. Get out the cap by unsnapping it.



c. Plug the Periscope male connector into the OBD receptacle by snapping it in.



Step 6/12: test Periscope

It is recommended to test the Periscope before going further with the installation.

- a. Switch the ignition key to the 'ON' position.
- b. The display of the computer unit should turn on immediately. It should then show in the following order:
 1. The "DECODER READY" message.
 2. The "DECODER CONNECTED" message.
 3. Then the main screen should appear with the indication of the current gear ('0' if in neutral or '—' if you parked the motorcycle with the gear engaged).
- c. If the test is successful then switch the ignition key to the 'OFF' position.
- d. If the message "DECODER NOT READY" is displayed then there is a communication problem between the computer/display box and the decoder. Check the cable and look for evident damages. Contact *Gimpo Garage*.
- e. If the message "DECODER NOT CONNECTED" is displayed then check:
 1. if the OBD connector under the seat is properly connected,
 2. if the OBD cable is damaged.



The typical Periscope welcome screen.

Contact *Gimpo Garage* if the problem persists.



Do not start the engine during this test, or starts it just for few seconds. The OBD cable is still not fixed and could be damaged by the hot surface of the right cylinder!!! Be aware!!!

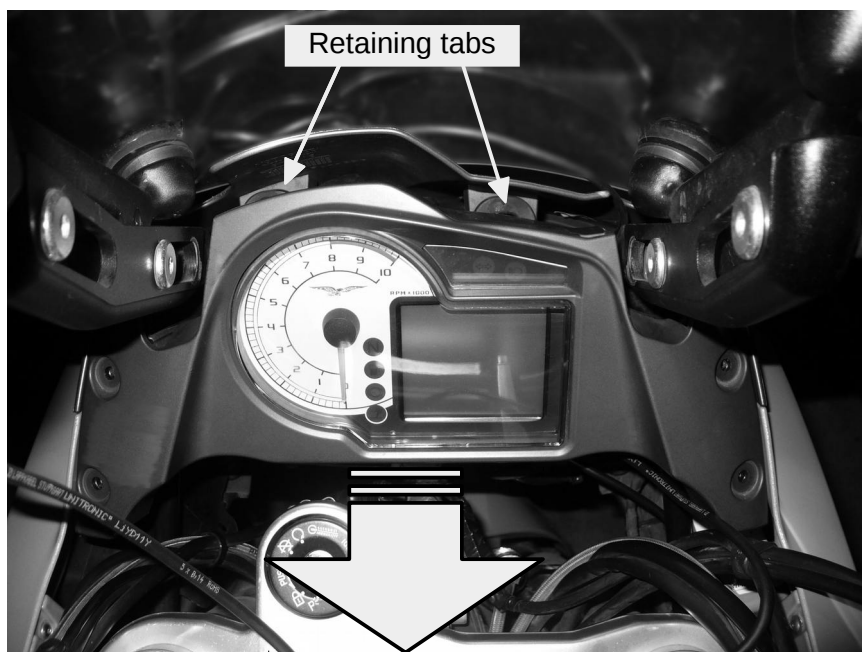
Step 7/12: unmount the dashboard

To properly route the cable between the computer/display and the decoder is necessary slide it behind the dashboard.

- a) Unscrew the four hexagonal-socket screws holding the dashboard
- b) Note that there are two plastic tabs in front of the dashboard used to join it with the fairing. Gently pull the dashboard slightly upward and toward the tank to unsnap those tabs.



Unscrew the dashboard.



Pull gently the dashboard upward and toward the tank.



There is no real need to remove the dashboard completely. Just slide it until you have 2-3 centimeters of free space between it and the fairing (i.e. around 1 inch).



Put attention to not pull out the big multi-pin connector located on the rear side of the Dashboard! It is very delicate.

Also try to keep/leave the rubber sleeve (the one protecting the connector from water) in correct position.

Step 8/12: fasten the decoder unit

The decoder is to be placed in the frontal part of the fairing. This is a well ventilated area where the temperature rarely gets high.

- a) Fit the cable tie in the holder attached on the side of the decoder unit (if you have not yet done this).
- b) Tighten the cable tie to hold the unit firmly in position (a little movement of the unit is allowed, this will not damage it).



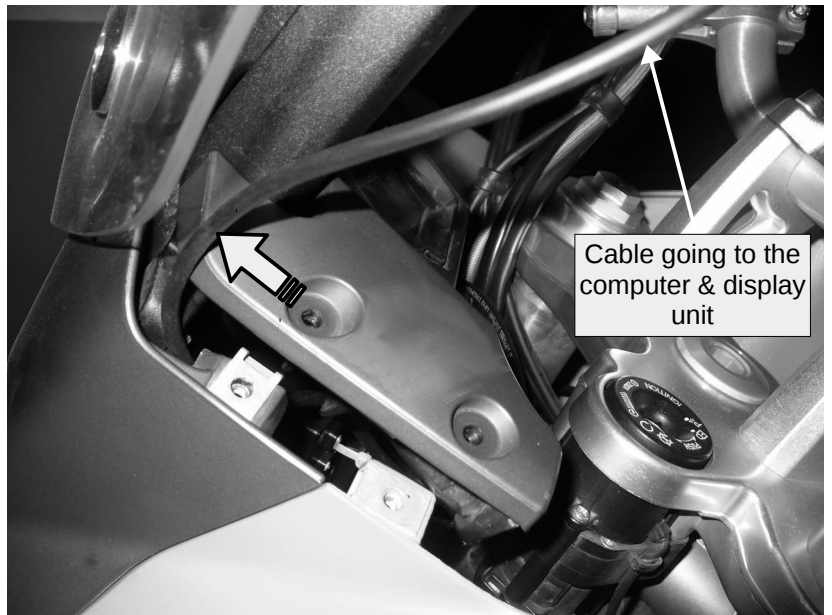
*Fasten the decoder unit to the vertical bar.
(A white plastic tie was used in this photo.)*

Step 9/12: remount the dashboard

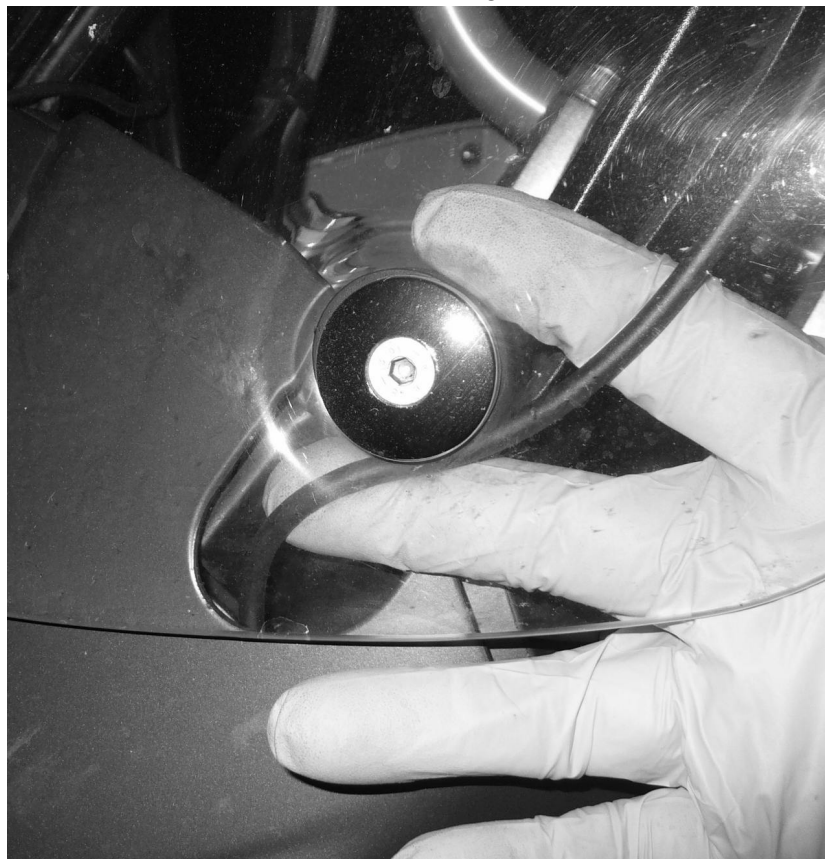
- a) Gently slide the cable leading to the computer unit between the dashboard and the fairing until it reaches the base of the windscreen bracket.

In that position there should be enough space to holding it after the dashboard is remounted.

- b) Slide back the dashboard until the two frontal tabs snaps in the fairing.
- c) Remount the four screws to keep the dashboard firmly in place.



Insert the cable between the fairing and the dashboard border.



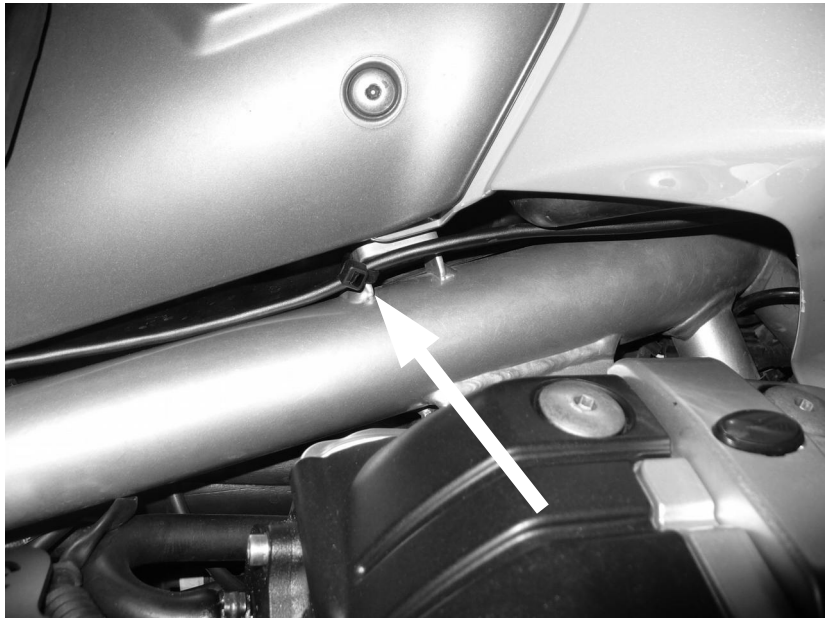
Route the cable through the cavity at the base of the windscreen bracket.

Step 10/12: fasten the OBD cable

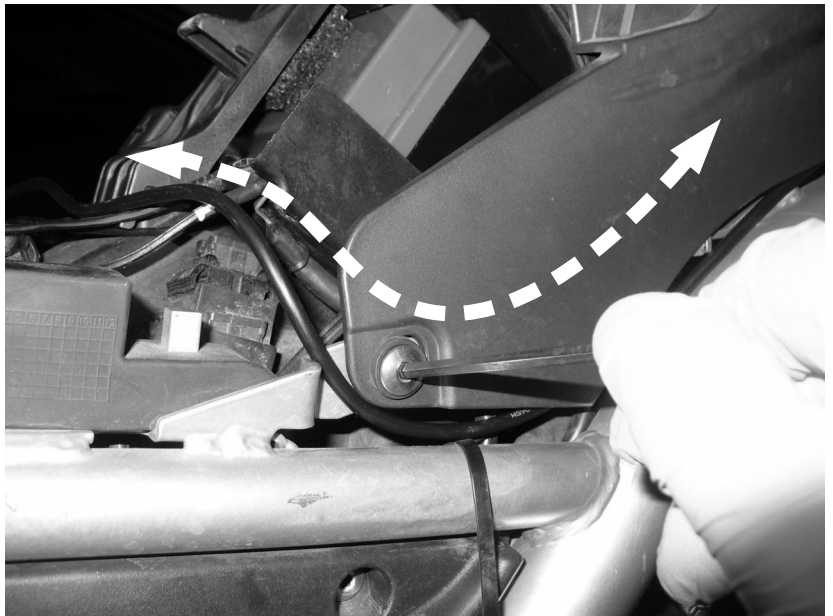
It is strongly recommended to keep the OBD cable away from the fork head as far as possible.

Keep it away from hot surfaces!

- a) Fix the cable away from the head of the right cylinder by using the frame pipe.
- b) Use other ties to firmly fix the cable on his path.
- c) Accommodate the cable under the seat if it is too long.



Use the frame pipe to keep the OBD cable away from the cylinder head.



Hint: route the OBD cable behind the plastic fairing close to the seat.

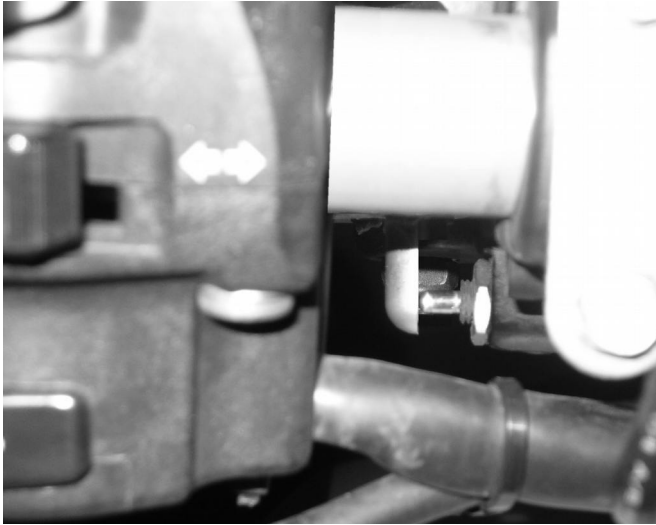
Step 11/12: check cables!

All Periscope cables must not disturb the free movement of the handlebar and/or of the fork, so double-check them!

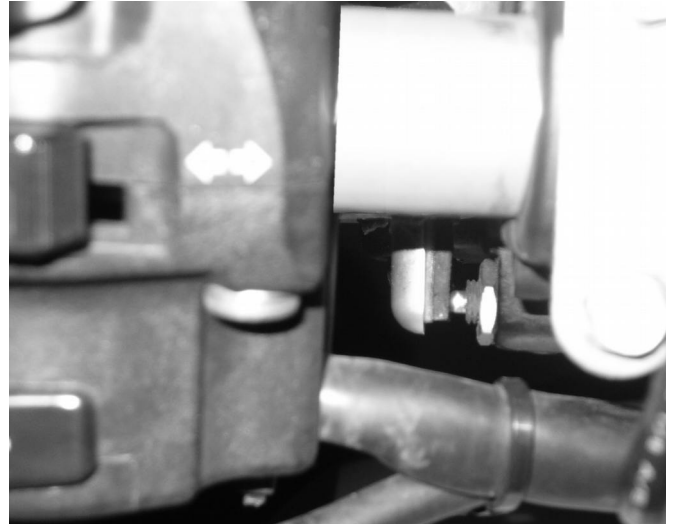
- a) Group together all cable sections that are too long by using one or more zip-ties.
- b) Use the pipes of the metal frame to hold cables in their position.
- c) Check if the handlebar can rotate freely from left to right and vice versa.

Step 12/12: apply a rubber pad on the pin of the clutch lever

The micro-switch used to detect the clutch position switches only when the lever is almost completely pulled. This results in a noticeable delay of the Periscope feedback.



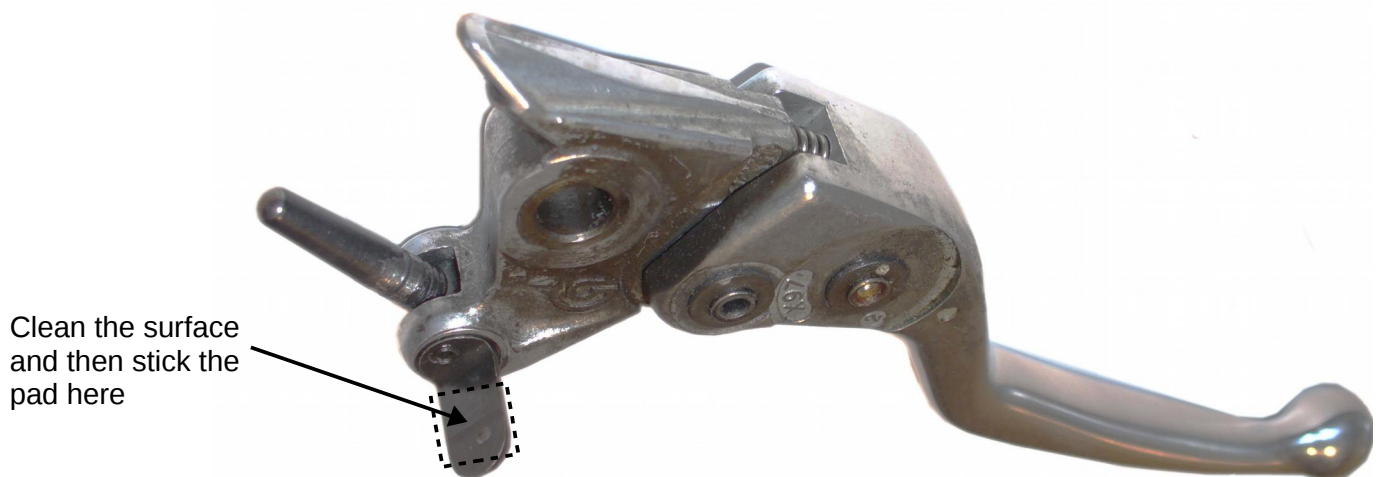
The pin of the clutch lever barely touch the micro-switch, even when the lever is fully pulled.



After attaching the pad the micro-switch is activated more promptly and securely.

To eliminate this delay is highly recommended to stick a rubber pad on the pin surface.

- a) Eliminate any trace of grease or dirt from the flat pin surface.
Use alcohol or any alcohol-based cleaning product
- b) Cut a rectangular shape from the gummy pad (approximately 9x12mm) by using a scissor.
- c) Remove the protective film on the shape using your finger nail.
- d) Firmly press it on the lever pin surface.



Appendix

Mount the display on the right side

You can mount the display unit on the right by simply switching the position of the bracket. All you need is an M4 hex-key.

- a) Unscrew completely the screw holding the display case.

Note: don't lose the little rubber washer placed between the bracket and the metal suncover.

- b) Unscrew the screw on the right (the suncover will get loose).

Note: the screw on the right is shorter than the one on the left.

- c) By using the longer screw, reassemble the display unit, the cover and the bracket (now on the right side).

Note: it is not necessary to tighten the longer screw too much. One should be able to move/regulate the inclination of the display by applying a small force. The rubber washer will prevent the screw from getting loose by vibrations.

- d) Tighten the shorter screw on the left side to firmly fix the cover.