

**CHAPTER 4**MAIN ASSEMBLIES

# **4.1 IDENTIFICATION OF MAIN ASSEMBLIES**

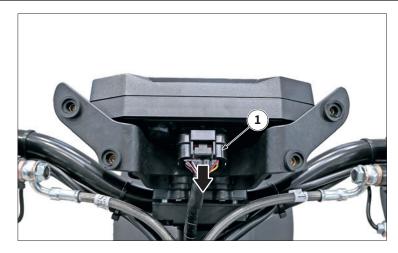
This section presents the main assemblies that make up the electric moped.



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5	Handlebar	34
6	Front fairings	39
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9	Front brake	53
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CHAPTER 5
HANDLEBAR ASSEMBLY



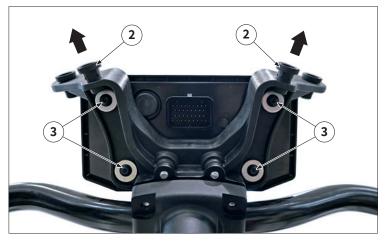
#### 5.1 DASHBOARD AND SUPPORT BRACKET

Preliminary operation:

- Remove windshield and front cover (come descritto a pagina 34).

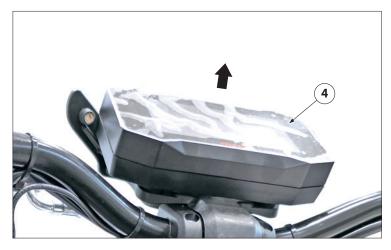
Handle the cables and connectors of electronic devices with extreme caution.

Disconnect the dashboard connector "1".



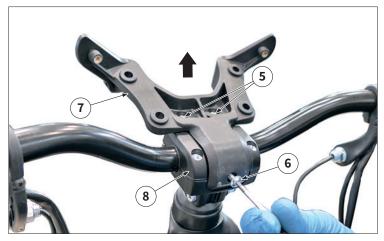
Slightly move the rubber grommets "2" on the fairing. Remove the four self-tapping screws "3", together with their

Tightening torque
Self-tapping screws Ø4x16 "3": 2.5 Nm (0.25 m•kgf, 1.8 ft•lbf)



Remove dashboard "4".

washers.



Remove the two screws "5".
Remove the screw "6".

Remove the support bracket "7".

i For the reassembly procedure, proceed in the reverse direction, making sure that screw "6" is correctly inserted into the nut on the inside of handlebar mount "8".

Tightening torque Screws M6x16 (8.8) TBB "5": 7.5 Nm (0.76 m-kgf, 5.5 ft-lbf) Screw M5x16 (8.8) TBB "6": 3.5 Nm (0.36 m•kgf, 2.6 ft•lbf)







# 5



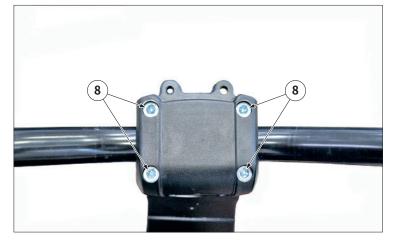
Preliminary operations:

- Remove the mirrors (as described on page 38);
- Remove the front shield (come descritto a pagina 35);
- Remove the dashboard and support bracket (as described on page 34).



Disconnect the following connectors:

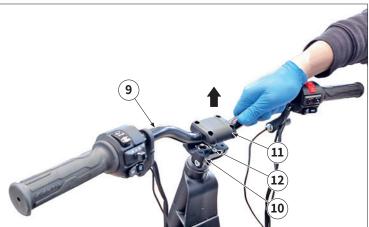
- Right front turn signal "1";
- Front brake switch "2";
- Gas throttle "3";
- Right steering switch "4";
- Left front turn signal "5";
- Rear brake switch "6";
- Left steering switch "7".



Remove the four screws "8".

Tightening torque

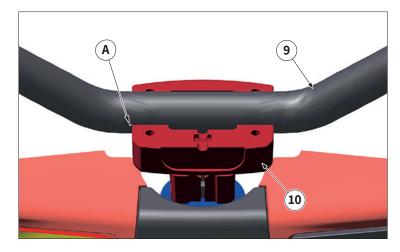
M6x20 (8.8) Hexagon socket head cap screws "8": 10.5 Nm
(1.1 m•kgf, 7.7 ft•lbf)



Remove handlebar "9" from lower support "10" together with upper support "11".

(i) Once the handlebar has been removed, it is advisable to reposition only the upper handlebar mount "10" on the lower handlebar mount "11", to avoid losing the nut "12".

CHAPTER 5
HANDLEBAR ASSEMBLY



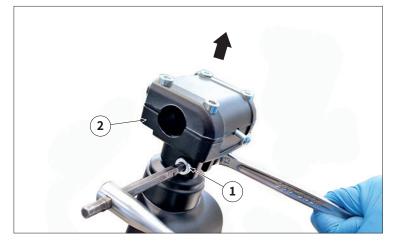
In the reassembly procedure, place handlebar "9" on the lower handlebar mount "10".

(i) Ensure that the indicator "A" is positioned in line with the left edge of the bottom mount "10" (as shown).



Position the nut "12" correctly in its seat on the lower handlebar mount "10".

i For subsequent reassembly procedures, proceed in the reverse direction.



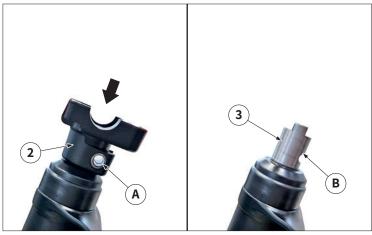
# **5.3 HANDLEBAR MOUNT**

Preliminary operation:

- Remove the complete handlebar (as described on page 35).

Remove screw "1" together with the nut and washer.

Slide upwards the lower handlebar mount "2" from the steering head.



In the reassembly procedure, place the lower handlebar mount "2" on the steering head "3".

(i) Hole "A" of the lower handlebar mount "2" must be aligned with recess "B" of the steering head "3".

Position screw "1" together with the nut and washer and tighten to the following torque:

Tightening torque
Screw M8x40 (8.8) Hexagon socket head cap screw "1": 25
Nm (2.5 m•kgf, 18 ft•lbf)



# CHAPTER 5 HANDLEBAR ASSEMBLY



#### 5.4 HANDLEBAR COMPONENTS

#### 5.4.1 Gas throttle - Right steering switch

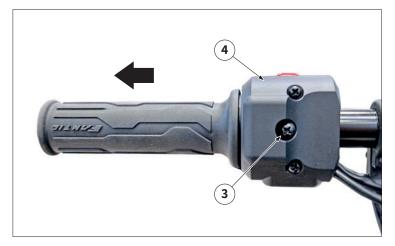
Preliminary operation:

- Remove the front shield (come descritto a pagina 37).

Handle the cables and connectors of electronic devices with extreme caution.

Disconnect the gas throttle connector "1".

Disconnect the right steering switch connector "2".



Remove the screw "3".

Remove the gas throttle - right steering switch "4" from the handlebar.

Tightening torque Screw M5x25 "3": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

(i) For the reassembly procedure, proceed in the reverse order.



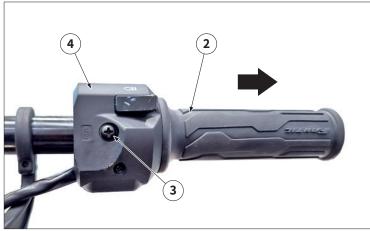
#### 5.4.2 Left steering switch

Preliminary operation:

- Remove the front shield (come descritto a pagina 37).

Handle the cables and connectors of electronic devices inside the handlebar with extreme caution.

Disconnect the left steering switch connector "1".



Remove the left grip "2".

Remove the screw "3".

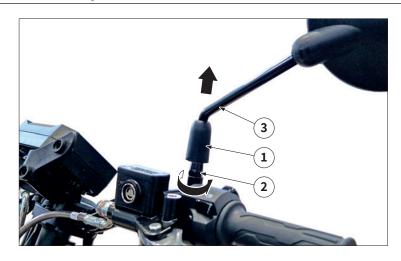
Pull the left steering switch "4" off the handlebar.

Tightening torque Screw M5x25 "3": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

 $oxed{i}$  For the reassembly procedure, proceed in the reverse order.



**CHAPTER 5**HANDLEBAR ASSEMBLY



#### 5.4.3 Mirrors

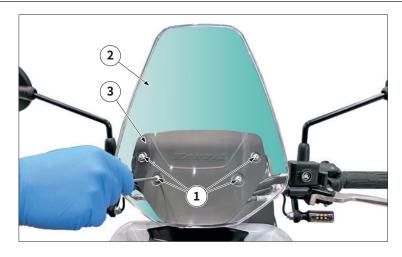
Lift the protective grommet "1". Loosen the adjusting locknut "2". Unscrew the mirror rod "3" and remove it from the vehicle.

Repeat the operation for the mirror on the opposite side.

- (i) To remove the left mirror, unscrew anticlockwise, and to remove the right mirror, unscrew clockwise.
- ig(i) For the reassembly procedure, proceed in the reverse order.



# CHAPTER 6 FRONT FAIRING ASSEMBLY



#### **6.1 WINDSHIELD AND FRONT COVER**

Remove the four screws "1" together with the plastic washers. Remove windshield "2" together with the front cover "3".

Tightening torque Screws M5x25 TBB "1": 4 Nm (0.41 m•kgf, 3 ft•lbf)

(i) For the reassembly procedure, proceed in the reverse order.



#### **6.2 FRONT SHIELD ASSEMBLY**

#### 6.2.1 Front bonnet

Remove the two self-tapping screws "1".

Tightening torque
Self-tapping screws Ø4x16 "1": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Move the upper part of the front bonnet "2", upwards (direction "A" ), in order to release the two tabs "C" at the rear of the component. Move the front bonnet "2" towards yourself (direction "B") until it is removed.

(i) For the reassembly procedure, proceed in the reverse order.



(i) Do not use excessive force when removing the front bonnet, so that the two "C" tabs are not damaged.

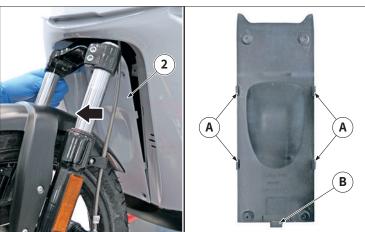
# CHAPTER 6 FRONT FAIRING ASSEMBLY



## 6.2.2 Front shield closing

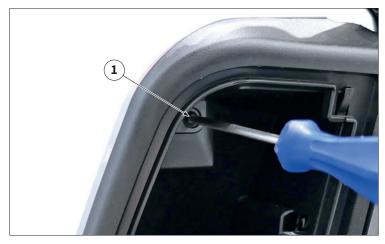
Remove the four self-tapping screws "1".

Tightening torque
Self-tapping screws Ø4x16 "1": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Pull the front shield latch "2" so that the four side flaps "A" and the lower flap "B" are released.

- i Do not use excessive force when removing the front shield latch, so that the tabs are not damaged.
- (i) For the reassembly procedure, proceed in the reverse direction, making sure to insert first the lower fin "B" and then the side fins "A", until you hear a click.



#### 6.2.3 Front shield

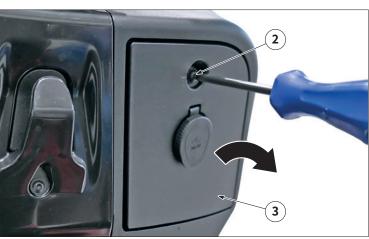
Preliminary operations:

- Remove the windshield and front cover (as described on page 39);
- Remove the front bonnet (as described on page 39);
- Remove the front shield latch (as described on page 40),
- Remove the headlight and cover (as described on page 40);
- Remove the right and left footboard (as described on page 45).

Open the left flap.

Remove self-tapping screw "1".

Tightening torque
Self-tapping screws Ø4x16 "1": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Remove self-tapping screw "2".

Tightening torque
Self-tapping screws Ø4x16 "2": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

Open the right flap "3".

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Remove self-tapping screw "4".

Tightening torque Self-tapping screws Ø4x16 "4": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Remove the two self-tapping screws "5".

Tightening torque
Self-tapping screws Ø4x45 "5": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

Remove the two self-tapping screws "6".

Tightening torque
Self-tapping screws Ø4x16 "6": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Remove the self-tapping screw "7" from both sides.

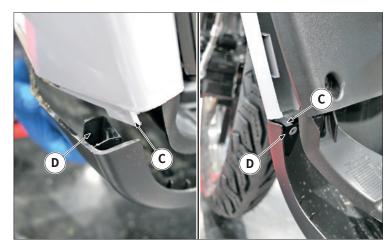
Tightening torque
Self-tapping screws Ø4x16 "7": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



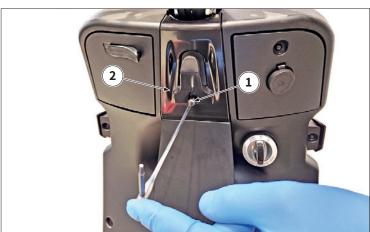
Remove the front shield "8", ensuring that the two tabs "A" are correctly released and the two lower ends "B" are slightly widened, so that the front shield can be easily removed from the front fork.

Be careful when removing the front shield as it could be damaged.





i For the reassembly procedure, proceed in the reverse direction, making sure to correctly engage the lower tab "C" (one on each side) of the front shield, with the slots "D" of the underbody.



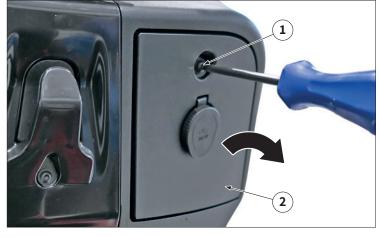
#### **6.3 INNER SHIELD ASSEMBLY**

#### 6.3.1 Bag hook

Unscrew screw "1" and remove the bag hook "2".



(i) For the reassembly procedure, proceed in the reverse order.



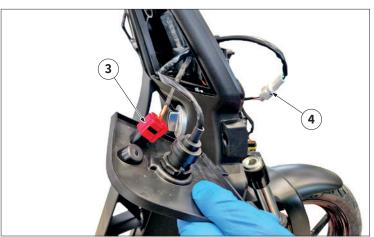
#### 6.3.2 Inner shield

Preliminary operations:

- Remove the bag hook (as described on page 42);
- Remove the front shield (as described on page 40);
- Handle the cables and connectors of electronic devices with extreme caution.

Remove self-tapping screw "1". Open the right flap "2".

Tightening torque
Self-tapping screws Ø4x16 "2": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

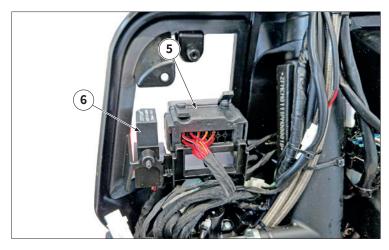


Disconnect the OBD connector "3".

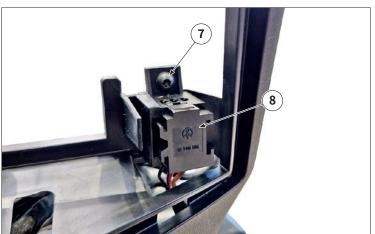
Disconnect the USB socket connector "4".

Remove the right flap "2".

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Release fuse box "5". Remove the Keyless Relay "6".

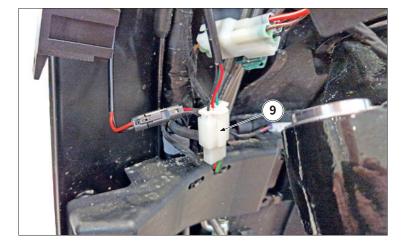


Remove the screw "7".

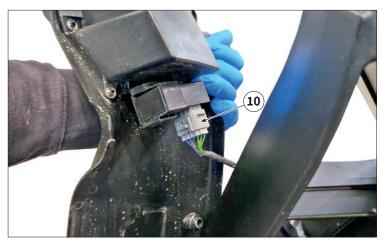
Tightening torque
Self-tapping screws Ø4x16 "2": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

Remove the relay holder "8".

Care must be taken when removing the relay holder as it may be damaged.



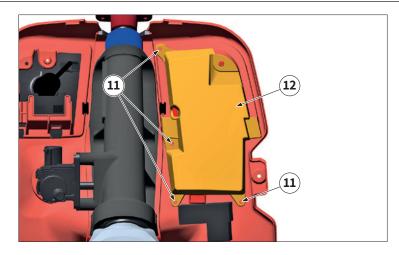
Disconnect the main switch connector "9".



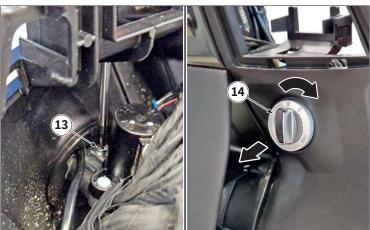
Disconnect the flasher connector "10".



CHAPTER 6 FRONT FAIRING ASSEMBLY



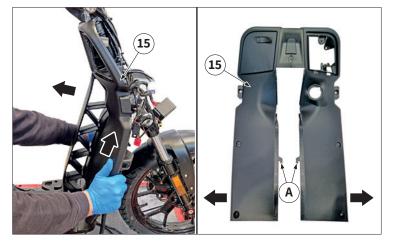
Cut the four safety washers "11" to avoid damaging the pins. Remove stowage pocket "12" from the projections at the rear.



Loosen screw "13".

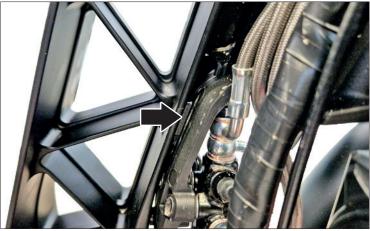
Remove the main switch "14" by carrying out the following procedure:

- 1. Apply pressure to the outer ring nut, and turn it clockwise one eighth of a turn;
- 2. Pull the main switch out from the inner shield.
- (i) It is recommended not to remove screw "13" from the switch, to avoid losing it.



Remove the inner shield "15" by carrying out the following procedure:

- 1. Grasp the lateral ends;
- 2. Move the inner shield slightly upwards and spread the side ends to release the two tabs "A";
- 3. Move the inner shield towards the seat and remove it.
- i Do not use excessive force when removing the inner shield, so that the tabs or other parts are not damaged.



(i) For the reassembly procedure, proceed in the reverse direction, ensuring that the two tabs "A" are correctly inserted into the inserts between the frame and front shield support.

## **CHAPTER 6** FRONT FAIRING ASSEMBLY



#### **6.4 FRONT MUDGUARD**

Remove the two screws "1".

Remove screw "2" together with the nut.

**™** Tightening torque

Screws M6x16 (8.8) TBB "1": 3 Nm (0.31 m•kgf, 2.2 ft•lbf) Screw M6x30 (8.8) Crowned head "2": 3 Nm (0.31 m•kgf,



Remove the two screws "3".

Remove screw "4" together with the nut.

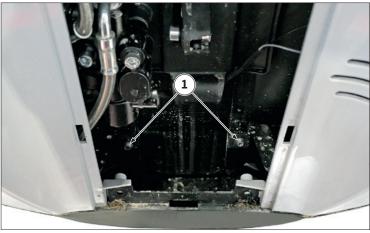
> Tightening torque

Screws M6x16 (8.8) TBB "3": 3 Nm (0.31 m-kgf, 2.2 ft-lbf) Screw M6x25 (8.8) TBB "4": 3 Nm (0.31 m•kgf, 2.2 ft•lbf)



Remove the front mudguard "5".

(i) For the reassembly procedure, proceed in the reverse order.



# **6.5 FOOTBOARD ASSEMBLY**

#### 6.5.1 Left and right footboard

Preliminary operation:

- Remove the front shield latch (as described on page 40).

Remove the two self-tapping screws "1".

Tightening torque

Self-tapping screws Ø4X16 "1": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



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Remove the two self-tapping screws "2".

Tightening torque
Self-tapping screws Ø4X45 "2": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

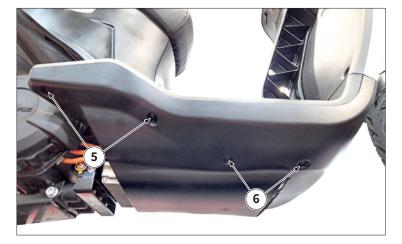
Remove the two self-tapping screws "3".

Tightening torque
Self-tapping screws Ø4X16 "3": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Remove the two screws "4".

Tightening torque
Screws M6x16 (8.8) TBFL "4": 5 Nm (0.51 m•kgf, 3.7 ft•lbf)



Remove the four self-tapping screws "5" (two on each side).

Tightening torque Self-tapping screws Ø4X16 "5": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)

Remove the four self-tapping screws "6" (two on each side).

Tightening torque
Self-tapping screws Ø4X45 "6": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Release and remove the two footboards "7".

- i In the procedure for removing the left and right footboards, first remove the rear parts and then release the inner tabs, taking care not to exert great force so that they are not damaged.
- (i) For the reassembly procedure, proceed in the reverse order.



# CHAPTER 6 FRONT FAIRING ASSEMBLY



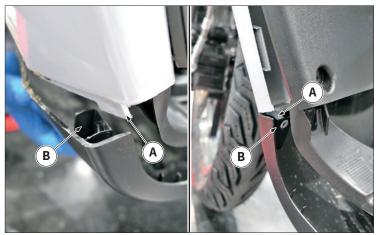
#### 6.5.2 Underbody

Preliminary operations:

- Remove the Right and Left footboard (as described on page 45).

Remove the two self-tapping screws "1".

Tightening torque Self-tapping screws Ø4x16 "1": 1.2 Nm (0.12 m•kgf, 0.9 ft•lbf)



Release the two lower tabs "A" (one on each side) of the front shield from the slots "B" of the underbody.

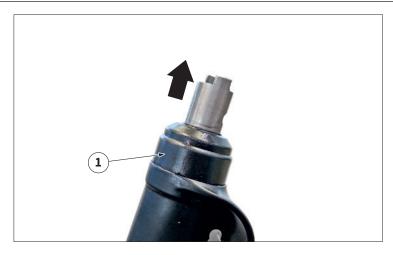


Remove the underbody "2".

- (i) When removing the underbody, do not exert high force, so that the tabs or other parts are not damaged.
- i For the reassembly procedure, proceed in the reverse direction, making sure to correctly engage the lower tab "A" (one on each side) of the front shield, with the slots "B" of the underbody.



# CHAPTER 7 FRONT FORK ASSEMBLY

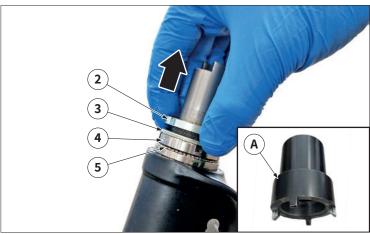


#### 7.1 COMPLETE FORK

Preliminary operations:

- Remove the front shield (as described on page 40);
- Remove the complete handlebar (as described on page 35);
- Remove the handlebar support (as described on page 36);
- Remove the front brake calliper (as described on page 53);
- Remove the front wheel (as described on page 52).

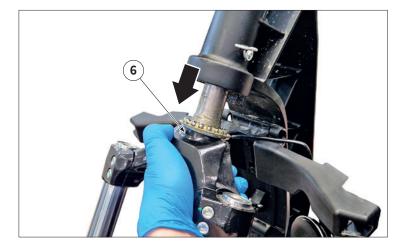
Remove the steering protection cup "1".



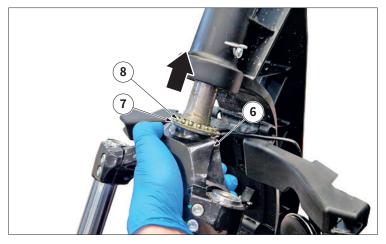
#### Remove:

- Upper ring nut "2";
- Notched ring "3";
- Lower ring nut "4";
- Upper cage "5".

X Use special spanner V1048001 "A" to remove the ring nuts.



Remove complete fork "6" from the vehicle.



In the reassembly procedure, insert the complete fork "6" into the steering head, making sure to have previously applied bearing grease to dust cover "7" and lower cage "8".



CHAPTER 7 FRONT FORK ASSEMBLY



Insert upper cage "5", making sure that bearing grease has been applied beforehand.

Insert the lower ring nut "4" and tighten, then unscrew the lower ring nut by one turn, so that the lower cage "5" settles, and then tighten finally.

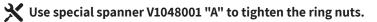
Pre-tightening torque
Lower ring nut M30 "4": 20 Nm (2 m•kgf, 15 ft•lbf)

Final tightening torque
Lower ring nut M30 "4": 13 Nm ± 1 (1.3 m•kgf, 9.6 ft•lbf)

Insert notched ring "3", upper ring nut "2" and tighten.

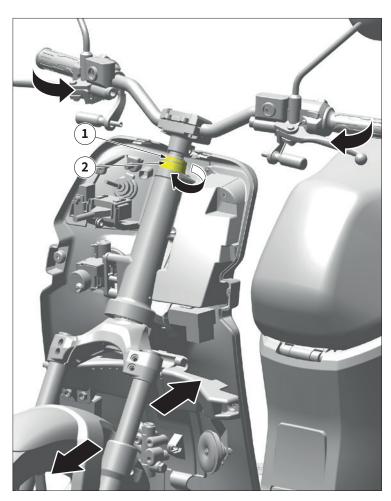






Do not over-tighten the two ring nuts, as the steering bearings could be damaged and steering rotation could be difficult or even blocked.

Insert steering protection cup "1".



# 7.2 STEERING BEARING CLEARANCE CHECK

To check the clearance of the steering bearings, proceed as follows: Place the vehicle on the central kickstand. Make sure that the front wheel remains off the ground and can move freely. If necessary, enlist the help of an employee to hold the vehicle in place.

With the handlebars in the central position, grasp the fork stems firmly and move them back and forth. NO clearance must be present. If clearance is detected, adjust as described below.

#### Preliminary operations:

- Remove the front shield (as described on page 40):
- Remove the complete handlebar (as described on page 35);
- Remove the handlebar support (as described on page 36).

Tighten upper ring nut "1" and lower ring nut "2" as shown in section "7.1 Complete fork" on page 48.

Check the clearance of the steering bearings.

Install the handlebar.

Check the correct steering movement from left to right and vice versa so that the handlebar rotation is free and even.

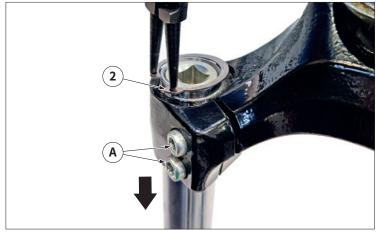
Check the clearance again; if it is incorrect, repeat the adjustment procedure again.

# **CHAPTER 7** FRONT FORK ASSEMBLY



#### 7.3 OVERHAUL OF FORK LEGS

Sequence	Components	Quantity
1	Stem cap and sealing ring	1
2	Complete fork stem	1
3	Fork dust cover	1
4	Fork snap ring	1
5	Fork oil seal	1
6	Fork cover	1
7	Washer	1
8	Hexagon socket head cap screw M8x30	1



### 7.3.1 Replacement of dust cover and fork oil seal Preliminary operation:

- Remove the complete fork" (as described on page 48).

Remove the fork leg by removing seeger "2" and the two screws "A".

Tightening torque Screws M8x25 (8.8) TCEI "A": 30 Nm (3.1 m•kgf, 22 ft•lbf)



Remove stem cap including sealing ring "1".

Turn the leg close to a suitable pan and wait until the oil is completely drained.

Remove complete fork stem "2".





Remove fork dust cover "3".



Remove fork snap ring "4". Remove fork oil seal "5" and replace it with a new one.

(i) For the reassembly procedure, proceed in the reverse direction and carry out the oil change.



## 7.3.2 Fork leg oil change

Preliminary operation:

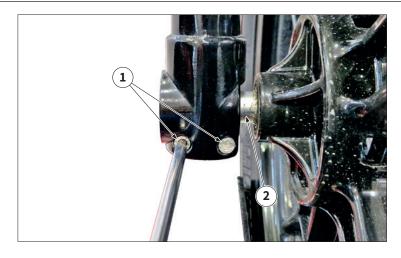
 Remove and replace the dust cover and fork oil seal" (as described on page 50).

Remove the stem cap including sealing ring "1", rotate the stem to a suitable pan and wait until the oil is completely drained. Fill with new oil.

Quantity of oil each suspension: 87 ml.

(i) For the reassembly procedure, proceed in the reverse order.

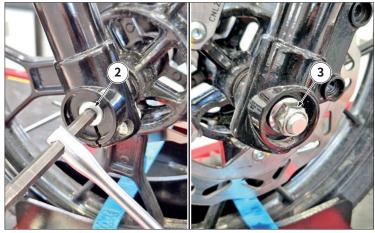
# CHAPTER 8 FRONT WHEEL ASSEMBLY



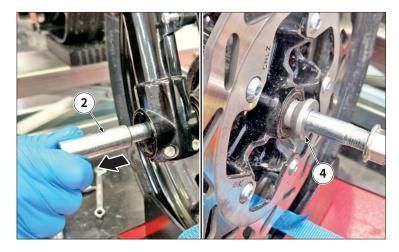
#### **8.1 FRONT WHEEL**

Loosen the two screws "1" to allow release of the front wheel axle "2".

Tightening torque Screws M6 (10.9) "1": 16 Nm (1.6 m•kgf, 12 ft•lbf)



Lock the front wheel axle "2" and remove the locking nut "3".



Remove the front wheel axle "2".

Tightening torque Pin M14 (8.8) "3": 60 Nm (6.1 m•kgf, 44 ft•lbf)

Remove the front wheel and front wheel axle spacer "4" from the vehicle.

 $oxed{(i)}$  For the reassembly procedure, proceed in the reverse order.



#### **8.2 FRONT BRAKE DISC**

Preliminary operation:

- Remove the front wheel (as described on page 52).

Remove the five screws "1" fastening the front brake disc "2".

Apply threadlock (LOCTITE®) to the M8 screws "1" .

Tightening torque
Screws M8x20 TBB "1": 23 Nm (2.3 m•kgf, 17 ft•lbf)

(i) For the reassembly procedure, proceed in the reverse order.

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#### 9.1 FRONT BRAKE LEVER

Remove the brake lever pin nut "1".

Remove pin "2", then remove brake lever "3" from the vehicle.



(i) For the reassembly procedure, proceed in the reverse order.



#### 9.2 FRONT BRAKE MASTER CYLINDER

Preliminary operation:

- Remove the right mirror (as described on page 38).

Drain the oil from the brake system beforehand through the purge

Remove screw "1" of the front brake tube connection and retrieve the two sealing washers.

When reassembling, replace the sealing washers.

Remove screw "2" and "3" securing the upper collar.

Marganing torque Screw M6x35 (8.8) "2": 10.5 Nm (1.1 m•kgf, 7.7 ft•lbf) Screw M6x22 (8.8) "3": 10.5 Nm (1.1 m•kgf, 7.7 ft•lbf)

Remove the front brake master cylinder "4" from the handlebar.

Recover the oil in a container and dispose of it properly.

(i) For the reassembly procedure, proceed in the reverse order.

After reassembly, purge the brake system.



#### 9.3 FRONT BRAKE CALLIPER

Check that brake tube "1" is in good condition.

If it is worn out/damaged or leaks, check the source and replace the defective component.

Drain the oil from the brake system beforehand through the dedicated purging screw "2".

Remove screw "3" of the tube /brake calliper connection and retrieve the two sealing washers.

When reassembling, replace the sealing washers.

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Remove the two screws "4" fastening the brake calliper to the fork stem.

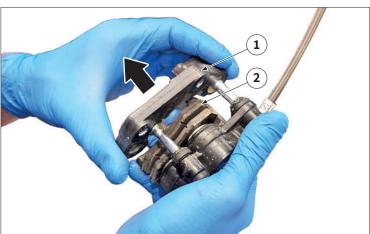
Remove the brake calliper from the vehicle.

(i) For the reassembly procedure, proceed in the reverse order.

Apply threadlock (LOCTITE®) to the M8 screws "3".

Tightening torque Screws M8x25 (8.8) TCEI "3": 25 Nm (2.5 m•kgf, 18 ft•lbf)

After reassembly, purge the brake system.



#### 9.3.1 Front brake pads

(i) Perform the check following the times indicated in the scheduled maintenance table.

Minimum friction material thickness = 1.5 mm. Always replace pads in pairs and ensure they are correctly positioned inside the brake calliper. In the case of uneven wear of the pads, replace them when the difference in friction material thickness is 0.5 mm.

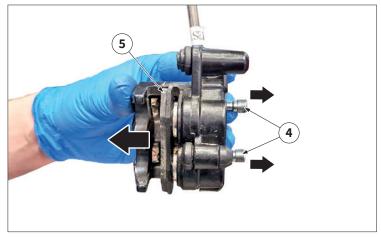
Remove the front brake calliper without disconnecting the brake system tube connection.

Slide back the brake calliper fastening plate "1".

Remove the outer pad "2".



Remove the two screws "3". Loosen the two pins "4".



Remove inner pad "2" by pulling back the two pins "4".

Once the pads have been removed, DO NOT operate the front brake lever. When acting on the brake lever, the brake calliper pistons could come out of their seat, resulting in brake fluid leakage.

 $oxed{(i)}$  For the reassembly procedure, proceed in the reverse order.



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#### 9.4 FRONT BRAKE TUBES

Preliminary operations:

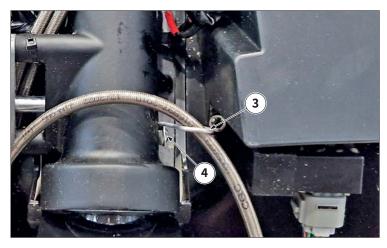
- Remove the windshield and front cover (as described on page 55);
- Remove the front shield (as described on page 55).

Drain the oil from the brake system beforehand through the dedicated purging screw "1".

Remove screw "2" of the tube /calliper connection and retrieve the two sealing washers.



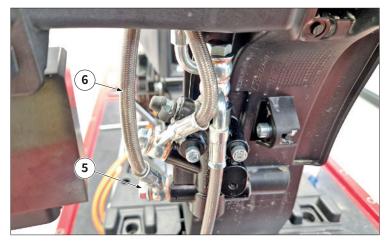
When reassembling, replace the sealing washers.



If necessary, remove cable gland "3" by removing screw "4".

**Tightening torque** 

Screw M6x10 (8.8) TBEI "4": 10.5 Nm (1.1 m•kgf, 7.7 ft•lbf)

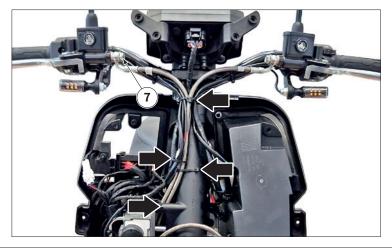


Remove screw "5" of the tube /braking distributor and retrieve the two sealing washers.

When reassembling, replace the sealing washers. Remove the plastic clamps, if any.

Remove tube "6" from the vehicle.

Recover the oil in a container and dispose of it properly.



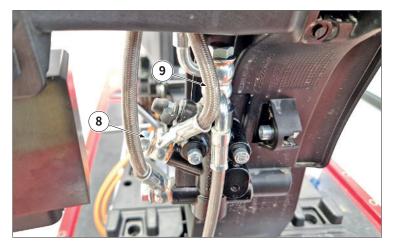
Remove screw "7" from the tube /pump connection and retrieve the two sealing washers.

When reassembling, replace the sealing washers.

Remove the plastic clamps.



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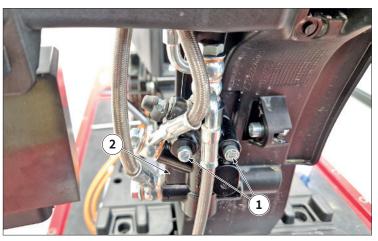
Remove screw "8" of the tube /braking distributor and retrieve the two sealing washers.

When reassembling, replace the sealing washers.

Remove the plastic clamps, if any. Remove tube "9" from the vehicle.

ig(i) For the reassembly procedure, proceed in the reverse order.

After reassembly, purge the brake system.



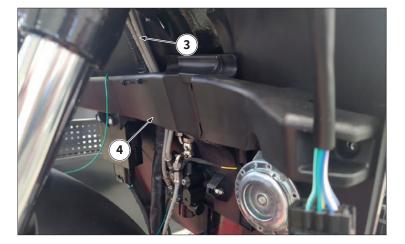
#### 9.5 BRAKING DISTRIBUTOR

Preliminary operations:

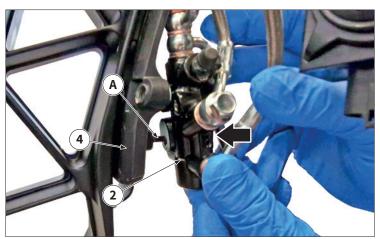
- Remove the windshield and front cover (as described on page 56);
- Remove the front shield (as described on page 56);
- Remove the front brake tube(as described on page 55);
- Remove the rear brake tube(as described on page 56).

Remove the two screws "1".

Remove the braking distributor "2".



In the reassembly procedure, after installing the brake tubes "3", run them inside the front shield support "4".



Position the braking distributor "2" on pin "A" of the front shield support "4".

Insert the two screws "1" and tighten them.

Tightening torque Screws M5 (8.8) TCEI "1": 5 Nm (0.51 m•kgf, 3.7 ft•lbf)

After reassembly, purge the brake system.



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#### 9.6 FRONT BRAKE FLUID LEVEL CHECK

The front brake fluid reservoir is equipped with inspection windows to check the fluid level inside the reservoir.

If the brake fluid level is low or insufficient, **NEVER** top up the reservoir but check the wear condition of the brake pads and brake disc and check the brake circuit for leaks.

The brake fluid is hygroscopic, i.e. It absorbs moisture from the surrounding air. If the moisture in the fluid exceeds a certain value, braking will be inefficient.

It is advisable to have the fluid replaced every 2 years, never use brake fluid contained in already opened or partially used containers.

Make sure that only DOT 4-rated brake fluid is used.

Brake circuit fluid has a high corrosive power. Avoid contact with skin or painted parts. In case of contact with the skin, wash thoroughly with water.

# 9.7 PURGING THE BRAKE SYSTEM

This vehicle is equipped with a combined braking system. When only the rear brake is applied, the system also automatically acts on the front brake.

- (i) This procedure must be carried out whenever a hydraulic component belonging to the front brake assembly or the rear brake assembly is replaced.
- (i) The brake fluid is hygroscopic, i.e. It absorbs moisture from the surrounding air. If the moisture contained in the brake fluid exceeds a certain value, an inefficient braking results. It is therefore appropriate to take the liquid from sealed containers. Under normal riding and climatic conditions it is advisable to replace this liquid every two years. If the brakes are subjected to heavy stress, replace the liquid more frequently.
- Avoid contact of brake fluid with eyes, skin and clothing. In case of accidental contact, wash with water.
- The brake fluid has a high corrosive power, avoid it from coming into contact with the painted parts.
- Mhen purging, ensure that the vehicle remains upright and is placed on a stable stand.
- Mhen purging, keep the oil levels constantly under control to prevent air from entering the system through the pumps.
- (i) If during the draining operation air continues to go out, examine all the fittings, if they do not show any anomaly, search for air entering from the various seals of the pump and from the calliper pistons.
- When topping up and purging, oil may leak between the purging screw and the seat on the calliper. Dry the calliper thoroughly and degrease the disc of any traces of oil on it.



# CHAPTER 9 FRONT BRAKE ASSEMBLY



# 9.7.1 Procedure for checking and topping up brake fluid

Open the brake fluid reservoir cover "1" and check the level. Make sure the level is sufficient and, if necessary, add recommended brake fluid.

- Avoid dropping dirt particles or water inside the brake pump reservoir.
- i This procedure can also be carried out in the same way for the rear brake oil reservoir, located on the left side of the handlebar.



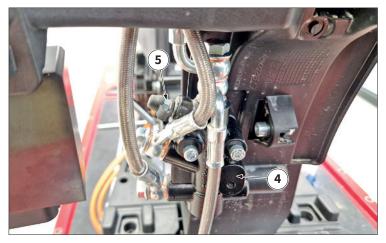
#### 9.7.2 System filling procedure

- A. Connect a purging tube to the purging valve "2";
- B. Place the other end of the tube in an empty container;
- C. Open purging valve "2" slightly;
- D. Add fresh brake fluid to the brake fluid reservoir "1" until fluid begins to flow into the purging tube and container;
- (i) Always keep the tank full to avoid air intake.
- E. Close the purging valve "2".



# 9.7.3 System purging procedure

- $oxed{(i)}$  Two operators are required to carry out this procedure.
- A. Ask the second operator to operate brake lever "3" repeatedly and keep it depressed;
- B. While the brake lever is held down, open purging valve "2" slightly to allow air to escape along with the excess fluid;
- C. Close purging valve "2" while the brake lever is still depressed;
- D. Repeat steps "A" and "B" until air bubbles come out of the purging tube;



- E. Also purge the braking distributor "4" using the purging valve "5".
- (i) Make sure that the assistant keeps the liquid level in the reservoir above the minimum throughout the process

Check the oil level in the brake fluid reservoir and adjust if necessary.

Make sure that all purging valves are securely closed.

Carry out a brake function test on a safe surface and check for problems and oil leaks.