

2. Maintenance and adjustments

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2.1. Pre-delivery check

Before delivery of the vehicle, carry out the following checks:

- Brake performance: check on a brief inspection that the brakes are working properly without spongy feel or leakage.
- Steering check
- Check the side kickstand switch: the bike should not be able to move off while the side kickstand is down.
- Tyre pressure and visual condition of tyres → Tyre check 2.3.5.
- Lighting: dipped beam, main beam, position light, indicators, hazard warning flashers, brake light, rear light and number plate light
- Suspension check → Checking front/rear suspensions 2.3.3./2.3.4.
- instrument cluster check
- Adjustment of mirrors → Adjustment of mirrors 2.3.7.
- Opening and closing the seat and charging connector cover → Adjusting the seat opening cables and charging connector cover 2.3.8.

2.2. Periodic maintenance plan

The first service of the vehicle at 500 km (or 2 months of use, whichever comes first) is essential to correct adjustments of the new vehicle and to ensure its smooth operation over a long period of time.

The following table summarises the operations to be carried out during maintenance checks on the NERVA LIFT electric scooter.

ELEMENT	DISTANCE RUN/TIME SPENT (Whichever comes first)					
	500 km/2 months	5,000 km/12 months	10,000 km/24 months	15,000 km/36 months	20,000 km/48 months	Following
Gearbox transmission oil (→4.10.) (80W90, 120 cc)	C		R		C	Every 15,000 km/2 years
Belt tensioning (→4.7.)		R	R	R	R	Every 15,000 km/2 years
Tighten screws and nuts (→2.3.1.)	R	R	R	R	R	Every 5,000 km/1 year
Steering and bearings (→7.12.-14.)	R	R	R	R	R	Every 15,000 km/2 years
Front suspension (→2.3.3.)	R	R	R	R	R	Every 15,000 km/2 years
Rear suspension (→2.3.4.)	R	R	R	R	R	Every 15,000 km/2 years

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Brakes: pads and discs (→7.5.-7.6.)	R	R	R	R	R	Every 5,000 km/1 year
Brake fluid (→2.3.2.)	R	R	R	R	R	Overhaul every 5,000 km and change every 15,000 km/2 years after last change

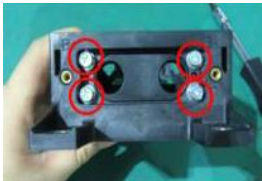
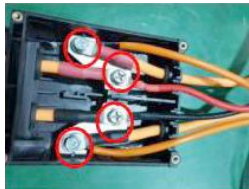
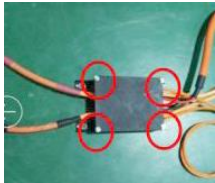
KEY: **C:** Change **R:** Review, Change and/or Adjust if necessary

2.3. Settings

2.3.1. Tightening of screws and nuts

Carry out a general tightening of the main frame screws and nuts. The most important frame connections are listed below.

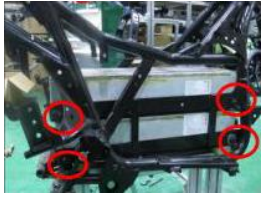
Code	Screw	Thread	Tighten	Image
1	Staggered front/rear disc fixing screws	M8x25	25 ± 5 Nm	
2	Front/rear phonic wheel fixing screws	M5x10	3 ± 0.6 Nm	
3	Screws for left/right front mudguard covers	4.2x10	1 ± 0.2 Nm	
4	Front speed sensor fixing screw	M6x12	5 ± 1 Nm	
5	Front axle nut	M12	55 ± 5 Nm	
6	Front mudguard mounting screws, front right side	M6x15	7 ± 2 Nm	

Code	Screw	Thread	Tighten	Image
7	Front mudguard fixing screws, front left side	M6x15	7 ± 2 Nm	
8	Front mudguard mounting screws, rear right side	M6x12	7 ± 2 Nm	
9	Front mudguard fixing screws, rear left side	M6x12	7 ± 2 Nm	
10	Front panel screws and junction box	M4x10	2 ± 0.4 Nm	
11	Screws for securing cables in junction boxes	M6x16	9 ± 1 Nm	
12	Screws for junction box cover	M4x10	2 ± 0.4 Nm	
13	BDU unit fixing screws	M6x16	10 ± 2 Nm	
14	Left-hand switch housing fixing screws	M5x18	2 ± 0.5 Nm	

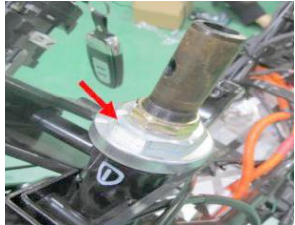
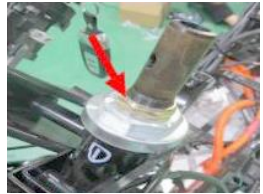
2. MAINTENANCE AND ADJUSTMENTS

Code	Screw	Thread	Tighten	Image
15	Right-hand switch housing fixing screws	M5x18 y M5x25 M5x30	2±0.5 Nm 2±0.5 Nm	
16	Seat locking screws	M4x20	3±0.6 Nm	
17	Seat hinge nuts	M10	45±5 Nm	
18	ABS unit fixing screws	M6x16	8±1 Nm	
19	Rear speed sensor fixing screw	M6x12	5±1 Nm	
20	Number plate support fixing screw	M6x16	5±1 Nm	
21	Headlamp support screws	M8x55	25±5 Nm	
22	ABS unit fixing screws	M6x12	10±2 Nm	

2. MAINTENANCE AND ADJUSTMENTS

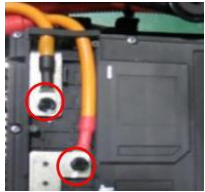
Code	Screw	Thread	Tighten	Image
23	Battery-to-frame fixing screw	M8x20	25±5 Nm	
24	Battery retaining support	M6x12	10±2 Nm	
25	Battery supply line fixing screws	M6x12	7±1 Nm	
26	Battery connection fixing screws	M6x12	7±1 Nm	
27	Main wiring earth connection fixing screw	M6x12	10±2 Nm	
28	Seat locking support fixing screws	M6x12	10±2 Nm	
29	ECU fixing screws	M5x16	3±0.6 Nm	
30	Engine block axle nut	M10	45±5 Nm	

Code	Screw	Thread	Tighten	Image
31	Centre kickstand screw	M10x55	45±5 Nm	
32	Left and right lever screws	M10x55	45±5 Nm	
33	Rear wheel axle nut	M16	95±5 Nm	
34	Right swingarm fixing screws	M8x35	20±4 Nm	
35	Lower left shock absorber support screws	M8x50	25±5 Nm	
36	Lower right shock absorber fixing screws	M8x30	20±4 Nm	
37	Upper mounting nut for left/right shock absorbers	M10	40±3 Nm	
38	Side kickstand axle screw	M8	20±4 Nm	

Code	Screw	Thread	Tighten	Image
39	Horn fixing screw	M6x12	10±2 Nm	
40	Steering axle nut		70±5 Nm Loosen ½ turn	
41	Steering axle locknut		45±5 Nm	
42	Fork post screws	M10x40	55±5 Nm	
43	Steering axle pin screw with handlebar base	M10x55	55±5 Nm	
44	Handlebar fixing screws	M8x30	25±5 Nm	
45	Brake pump fixing screws	M6x16	5±1 Nm	
46	Front caliper fixing screws	M8x30	25±5 Nm	

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Code	Screw	Thread	Tighten	Image
47	Rear caliper fixing screws	M8x30	25±5 Nm	
48	Side kickstand switch fixing screws	M5x16	3±0.6 Nm	
49	Fastening screws for Type 2 charging connector	M6x12	3±0.6 Nm	
50	Fixing screws for DC-DC converter support	M6x12	9±2 Nm	
51	DC-DC converter fixing screws	M6x25	9±2 Nm	
52	Junction box fixing screws	M6x16	9±2 Nm	
53	Charger fixing screws	M6x12	9±2 Nm	
54	Controller cable fixing screws	M6x12	4.8±0.2 Nm	

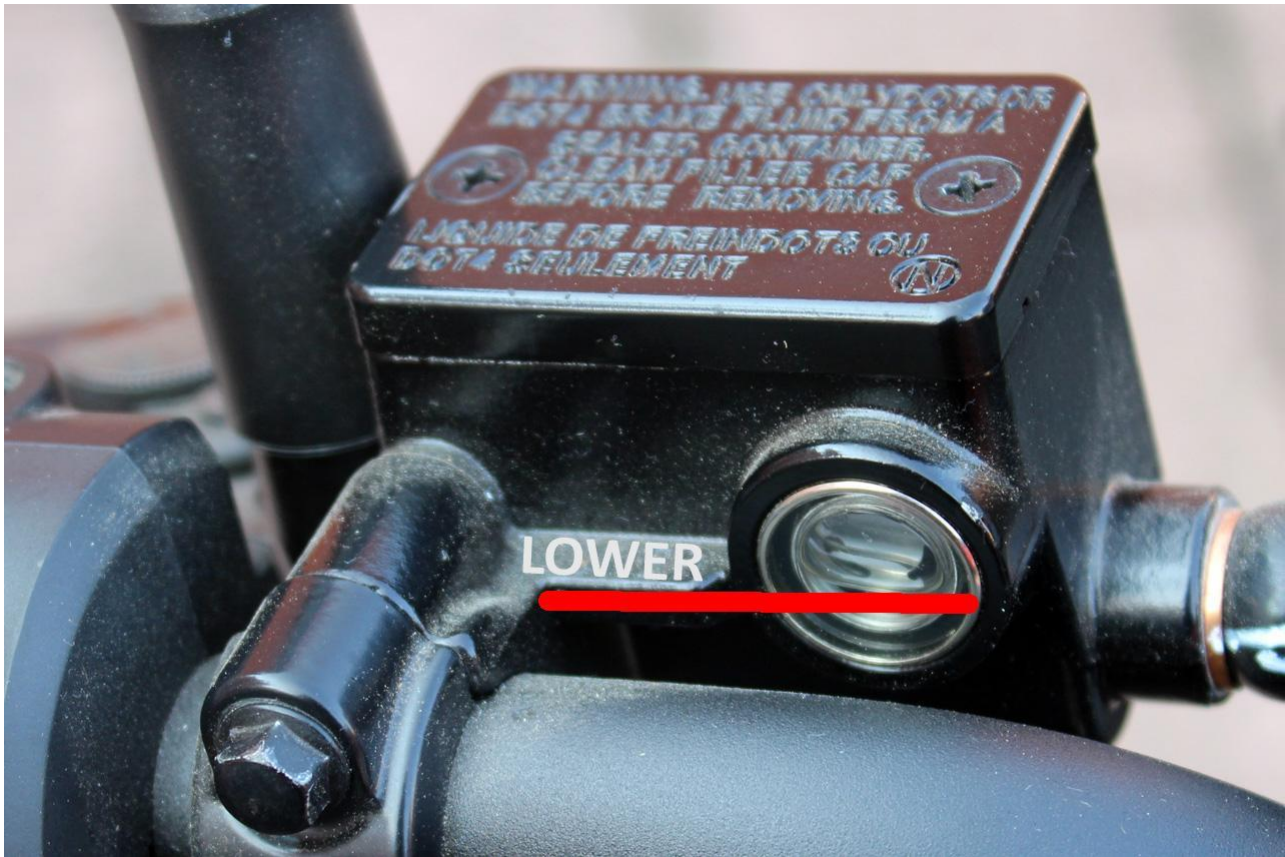
Code	Screw	Thread	Tighten	Image
55	Controller cover screws		1 ± 0.4 Nm	
56	VCU unit fixing screws	M6x16	8 ± 1 Nm	
57	BDU unit support fixing screws	M6x12	9 ± 2 Nm	
58	BDU cable fixing screws	M6x12	9 ± 2 Nm	
59	Battery cable connector-to-BDU fixing screws		3 ± 0.6 Nm	
60	BDU unit cover screws	ST2.2x9.5	0.2 ± 0.1 Nm	
61	Hook fixing screws	M6x16	3 ± 0.6 Nm	
62	instrument cluster support fixing screws	M6x12	10 ± 2 Nm	

Code	Screw	Thread	Tighten	Image
63	Headlamp support fixing screws	M6x12	5±1 Nm	
64	Left footrest fixing screws	M8x16	20±4 Nm	
65	Right footrest fixing screws	M8x16	20±4 Nm	
66	Rear right-hand side fixing screw	M6x15	5±1 Nm	
67	Rear left-hand side fixing screw	M6x15	5±1 Nm	
68	Rear mudguard support fixing screws	M6x12	5±1 Nm	
69	Rear charging compartment fastening screws	M6x12	3±0.6 Nm	
70	Windscreen mounting plate screws	M6x15	5±1 Nm	

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Code	Screw	Thread	Tighten	Image
71	Side handle fixing screws	M8x40	25±5 Nm	
72	Seat hinge fixing screws	M6x16	10±2 Nm	
73	Charging compartment fixing screws	M6x16	3±0.6 Nm	
74	Auxiliary battery terminal screws		2±0.5 Nm	
75	Screws for fastening left and right-hand side platforms	M6x15	5±0.6 Nm	

2.3.2. Brake fluid level



Raise the scooter onto its centre kickstand and turn the handlebars so that the reservoir of the brake pump whose level you want to check is horizontal. Check each level through the sight glass, verifying that the brake fluid level is above the LOWER level mark.

If the level is close to the LOWER mark, it indicates that the brake pads of the caliper(s) associated with that pump are close to the wear limit and should be replaced. Another symptom is brake fluid leakage, which needs to be rectified.

The brake fluid must not drop below the LOWER mark, because air will enter the hydraulic system and reduce braking power. Fill with DOT-4 brake fluid from a sealed container and follow the instructions in section 7.16. Brake fluid refill.

2.3.3. Checking the front suspension



Lower the scooter from its centre kickstand, fully apply the front brake and apply pressure on the handlebars to compress the front fork and release the pressure to check that it recovers correctly.

Check the tightness of the fork seals by checking that there are no oil leaks from the upper parts of the cylinders.

2.3.4. Checking the rear suspension



Lower the scooter from its centre kickstand, fully apply the rear brake, apply pressure on the passenger seat to compress both rear shock absorbers, then release the pressure to check that the shock absorbers recover correctly.

Check the seals of the shock absorber seals for leakage of oil.

2.3.5. Checking the tyres

Tyres are the most critical element of the vehicle, as they are the only point of contact with the road and the safety of the scooter driver depends on their condition.

Visually check the tyre tread and sidewalls for cracks, irregular wear and damage, as well as for embedded objects such as gravel, glass or nails.



Check the running surface for wear by checking the wear indicator located in some of its grooves. If there are indeed signs of wear, replace the tyres with new tubeless tyres maintaining the following dimensions, load code and speed code.

	Measurements
Front	110/70-14 M/C 50P
Rear	140/70-14 M/C 62P or 68S

Another way to detect a worn tyre – if it does not have a wear indicator – is to insert a 1 Euro coin into several of its grooves and check that the surface comes to above the circular crown of the coin (approximately 2 mm).



When tyres are used for the first time, please note that they need to be run-in, as they have a coating varnish on the outside which can be very slippery. During the first 100~120 km of tyre service life, avoid hard braking, hard acceleration or hard leaning.

It is also essential to check and maintain tyre pressure when the tyres are cold — that is, before the scooter has been ridden. A tyre with too much pressure minimises the tread contact patch, reducing tyre grip, leading to skidding and loss of control, and causing the tyre to wear faster in its centre area.

Conversely, a tyre with low pressure increases the tread contact area, increasing rolling resistance (braking) and making the tyre profile more uneven on inclines.

The pressurised air contained in a tyre tends to escape over time and it is therefore recommended that you check the pressure every 2 to 3 weeks.

The following table shows the recommended pressures for the Nerva Lift when riding alone or with a passenger.

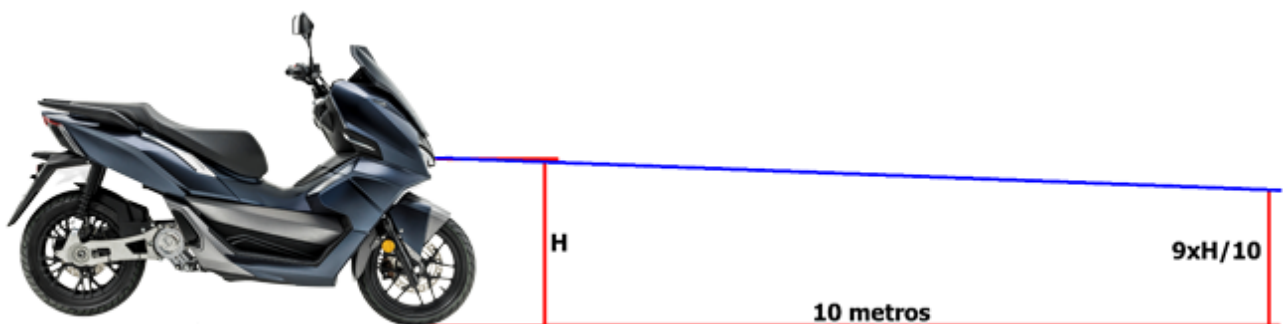
	Driver only	Driver and passenger
Front	2.50 atm	2.50 atm
Rear	2.50 atm	2.50 atm



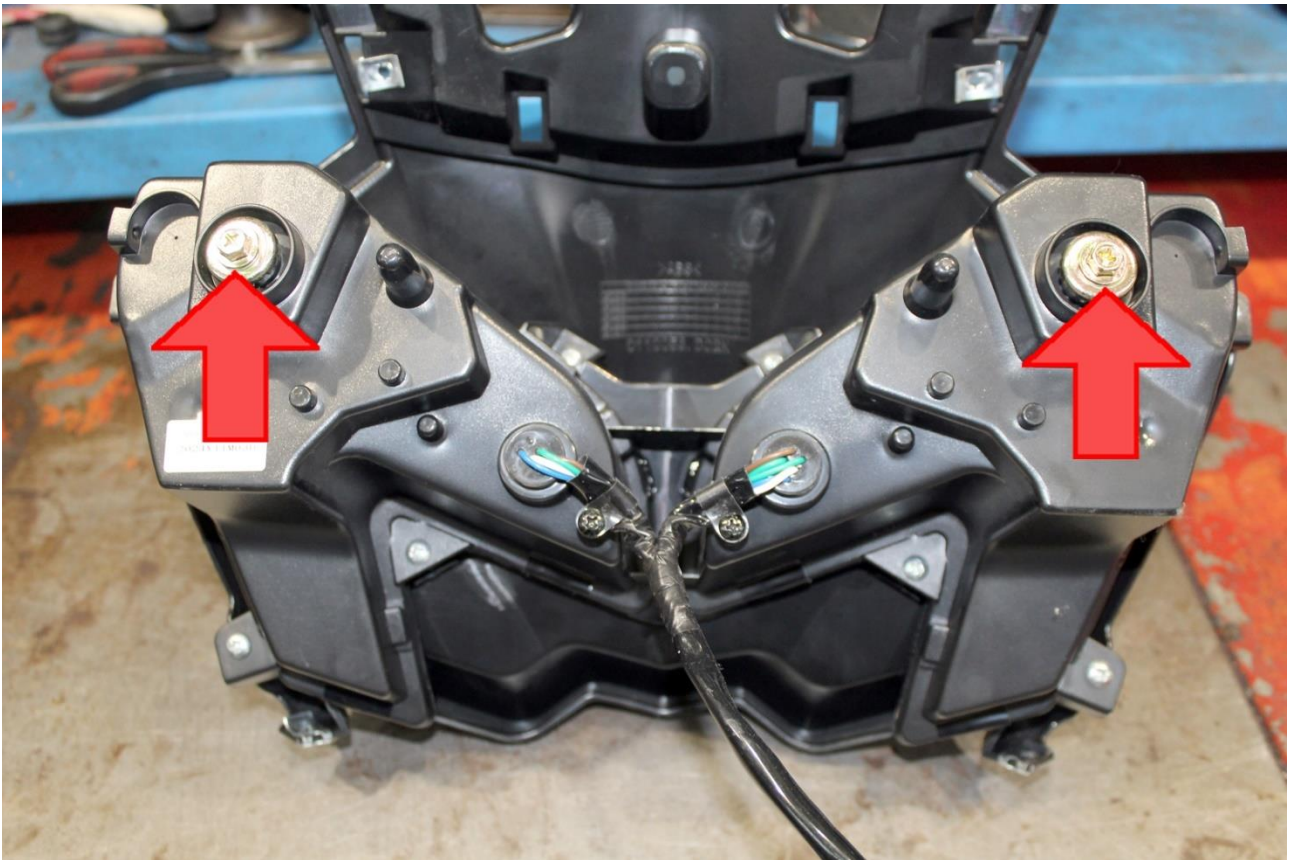
2.3.6. Headlamp beam adjustment

Locate a white wall in a dimly lit area (a garage wall) and move the scooter perpendicular to the wall until the front wheel touches the wall. The scooter must have the kickstands retracted with the weight of one person on the seat and one foot resting on the ground.

Turn on the headlights by selecting the dipped beam, and ask someone to mark the upper area of the beam on the wall (with a piece of electrical tape, or similar). The height between the wall mark and the floor is referred to as H.



Make another mark just below at a height of $9xH/10$ and move the scooter back 10 metres from the wall. Adjust the headlamp so that the upper area of the dipped-beam headlamp is at the height of the second mark.



The headlamp may be adjusted separately for the right and left optics by manipulating the screws marked with red arrows on the back of the headlamp with a small Phillips screwdriver with a No. 2 tip or a 10 mm open-end spanner. To do this, the screws must be accessed through the front wheel arch.

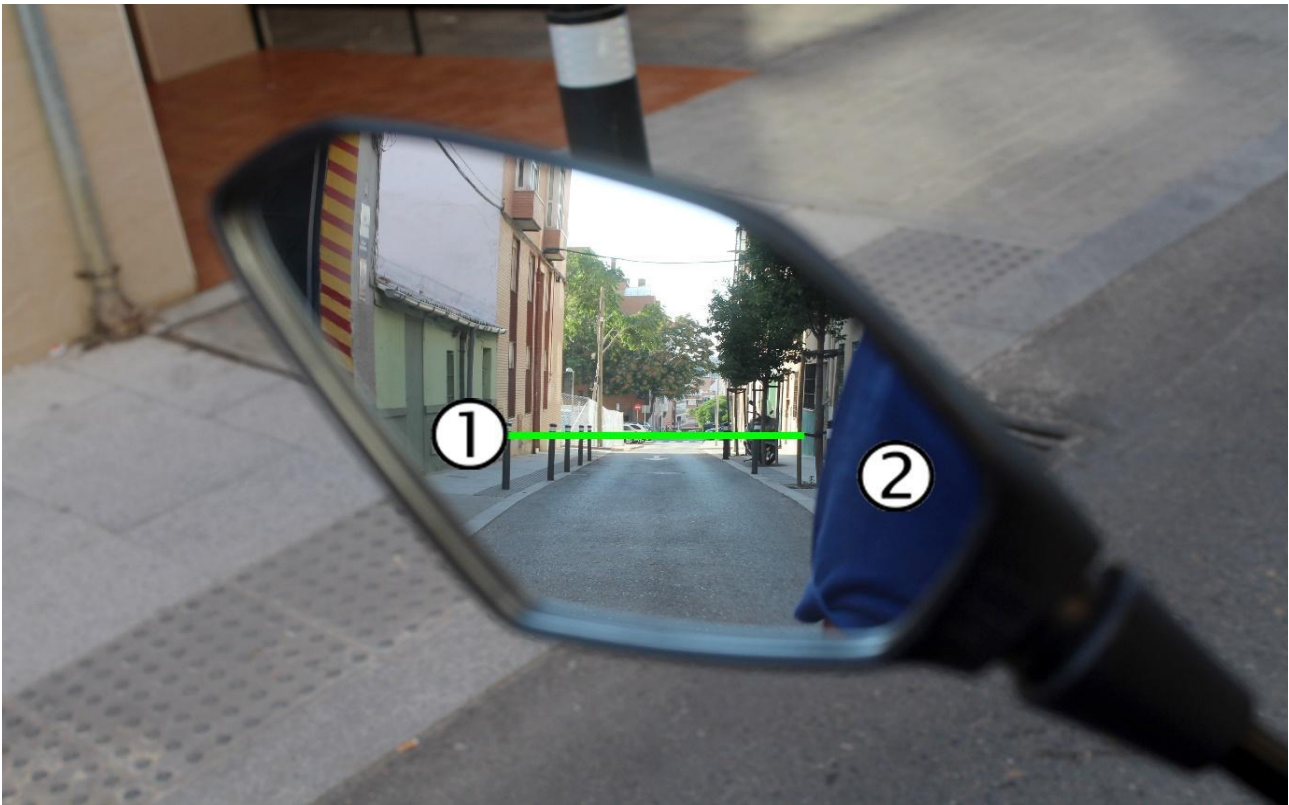
The scooter must support the weight of a person of a similar build to the regular rider in order to achieve the best fit with the suspensions compressed to the required load.

2.3.7. Adjustment of mirrors

Loosen the upper locknut at the base of each mirror mast with a 14 mm open-end spanner, then align the mirror masts perpendicular to the longitudinal axle of the scooter to position the mirror at the furthest point.

Once the mirror masts have been aligned, re-tighten the locknut to secure them in that position.





Adjust the mirrors to get the best possible rear view, so that the horizon in mirror ① appears in the middle of the mirror, and part of your arm is visible on the inside edge ②—this helps you judge the position of vehicles behind you.

2.3.8. Adjustment of seat release cables and charging connector cover

The control cables for the seat and charging connector cover openings are fitted with a tensioner that allows the length of the cable to be adjusted in the event of any problem with either latch, such as difficulty in opening them or a failure to close properly.



The cable tensioner is located for the seat lock at the height of the pilot's seat backrest on the right-hand side of the vehicle, and can be accessed by disassembly of the seat, auxiliary battery and charging compartment (→ 1.3.1. Removal of seat, auxiliary battery and charging compartment).

The tensioner for the charging connector cover release cable is located behind the counter shield, and can be accessed by disassembly of the counter shield (→ 1.5.4).

Disassembly of the counter-shield).

Two 8 mm open-end spanners are required for adjustment.



Once the corresponding tensioner has been located, slide the rubber dust covers on both sides to gain access to the tensioner.



Use one spanner to lock the tensioner (elongated nut) and the other wrench to release the lock on the locknut. Manipulate the tensioner to achieve the appropriate cable length to allow the opening and closing of the corresponding seat/load connector cover lock.

Once the adjustment has been achieved, lock the tensioner locknut by immobilising the tensioner with a spanner and tightening the locknut.