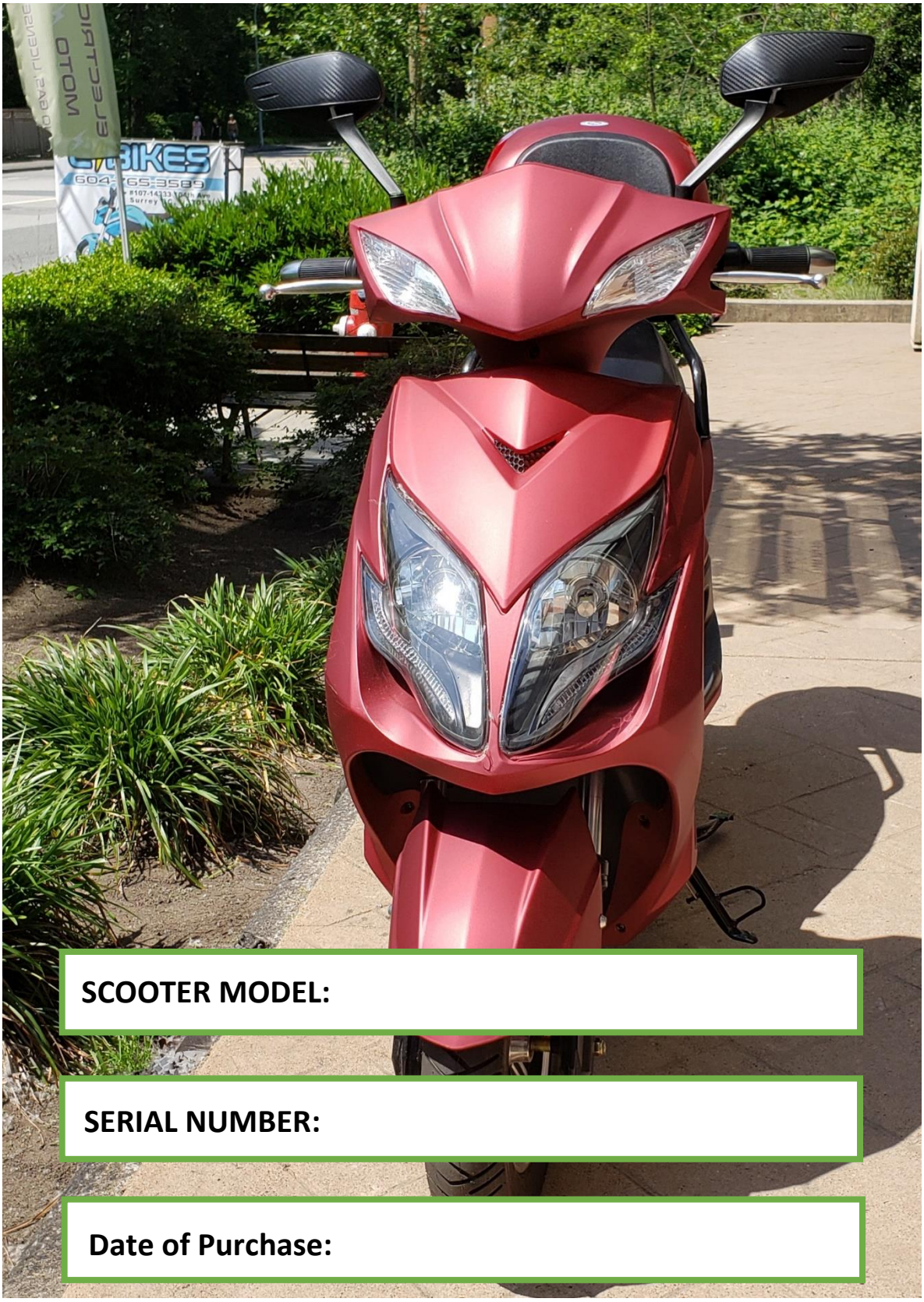
ARMADA scooters Ltd.

ELECTRIC SCOOTER
INSTUCTIONAL MANUAL



SCOOTER MODEL:

SERIAL NUMBER:

Date of Purchase:

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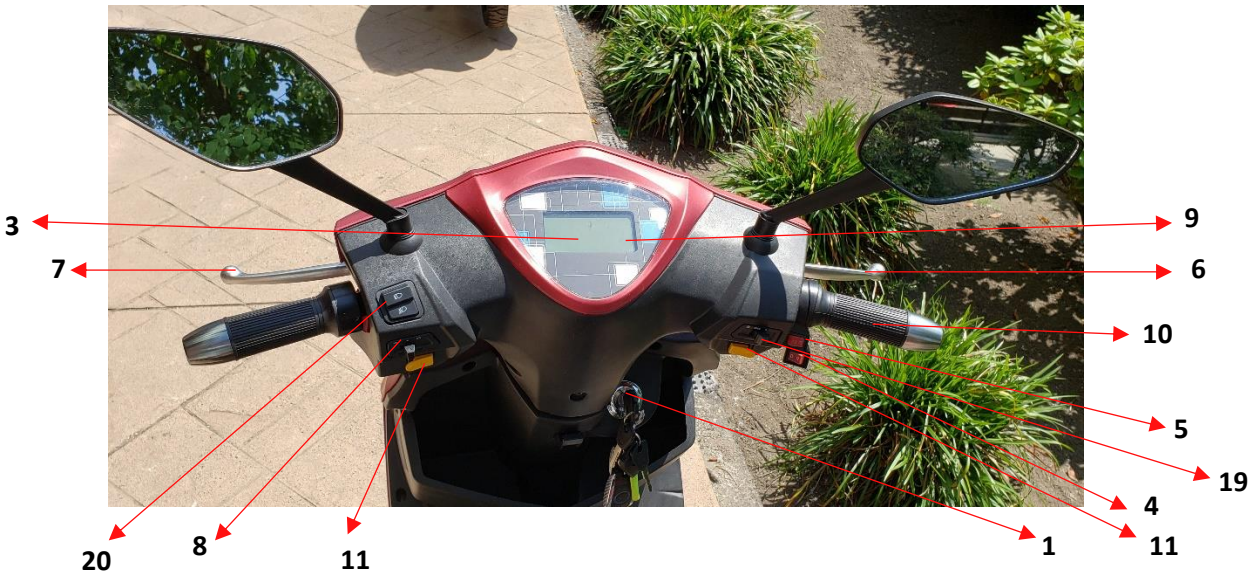

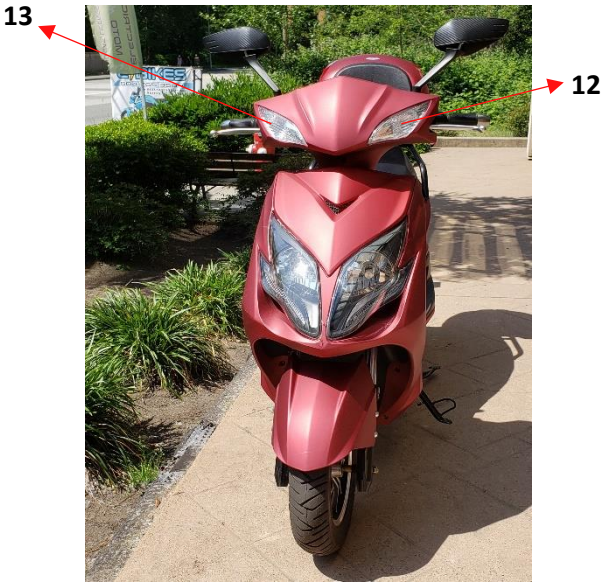

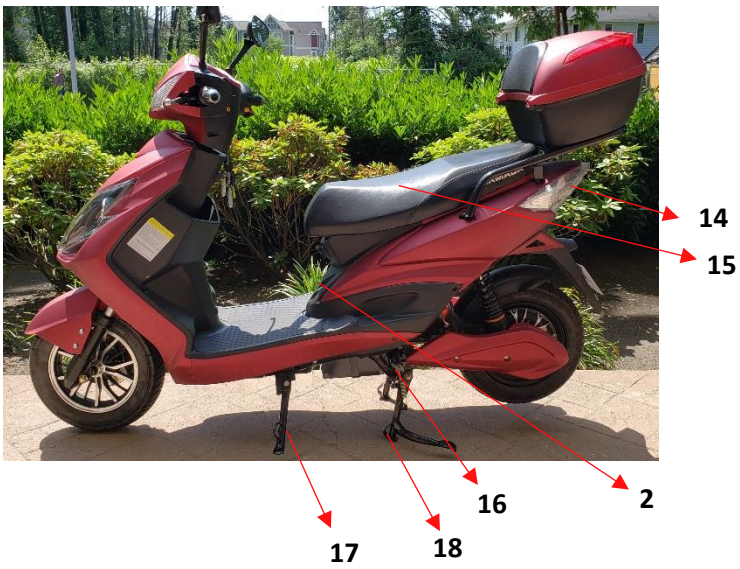

1. On/Off key ignition
2. Battery charger port
3. Battery indicator (display gage)
4. Forward/Reverse lever
5. Three speed switch
6. Rt. brake lever (Front brake)
7. Lf. brake lever (Rear brake)
8. Rt/Lt turn signal switch
9. Digital speedometer display
10. Throttle
11. Horn
12. Ft Lf. Turn signal light
13. Ft Rt. Turn signal light
14. Back Turn signal light
15. Seat
16. Peddles
17. Kickstand
18. Middle kickstand
19. On/off Front Headlight switch
20. High beam/low beam

2. ESSENTIALS OF SAFELY DRIVING AN E-SCOOTER:

Before embarking on your E-scooter, it's important to check the following for safety:

2.1 BATTERY: Check the battery level on the LCD digital display monitor before going on a long ride (30-60km). The battery level is indicated by the filled in bar levels. Consider taking the charger with you.

2.2 HELMET: Always wear a helmet to prevent head injuries. It's the law in most provinces to wear a helmet while riding on a E-Scooter.

2.3 LIGHTS: Check headlight, brake lights and both right and left turn signals are working properly before riding. Use hand signals if your signaling lights stop working. Always use your headlight so cars and pedestrians can see you.

2.4 BRAKES: Squeeze the right and left brake levers on the E-scooter to ensure they engage. Visually inspect the brake pads for wear.

2.5 TIRES: Typically, rear tires should be kept closer to 35-40psi for less rolling resistance although the front tire bears less weight , it can be set at a bit lower, closer to 30-35psi. Inflate your tires on a regular basis to the recommended pressure as shown on the tires. keep a tire plug kit handy to plug a hole once you find it. Inner tire coating also known as "slime" also works. If you have a tire with an inner tube in it, either repair the tube with a patch kit or better yet, replace it. Most ARMADA ELECTRONIC VEHICLES have tubeless tires.

2.6 CARRYING CAPACITY: Typical carrying capacity for most E-scooters is 330lbs. Do not over-load max carrying weight of the scooter. Doing so will affect performance and may cause damage to components on the scooter. Securely fix cargo on the vehicle to ensure safe drive and do not hang anything on handlebars, so as not to affect normal driving.

2.7 APPROPRIATE RIDING GEAR: Wear appropriate clothing for all riding conditions such as; a long sleeve shirt, long pants, boots/shoes, reflective gear or bright clothing, gloves, waterproof outerwear/poncho. Avoid wearing loose clothing that might get caught while riding.

2.8 ELECTRICAL CARE: To prevent water from getting on electrical components keep the E-scooter covered when not in use. Avoid riding in deep water that could submerge your wheels above the axle. The rear axle is where the wiring goes into your motor so you should not get water inside. Electric components can get over heated if the scooter is driven for long periods of time in hot weather or driving it up steep hills (more then a 20 degree incline).

2.9 SECURITY: Set your alarm when parked for a period of time. Consider using the left wheel lock position to make it more difficult for thieves to roll it away. Use an additional lock for extra security to secure your E-scooter or use a wheel lock to make it immobile.

3. OPERATION INSTRUCTION:

3.1 STARTING UP: Drive in ideal conditions for optimal scooter performance.

a. Make all safety checks on battery level, both break levers, both right and left turn signals, horn, and headlight. Check and tighten any bolts and nuts. Adjust mirrors for proper visibility.

b. Check air pressure in tires. Make sure air in tires are holding and there are no leaks.

c. Turn alarm off. If alarm is on when the E-scooter ignition is turned on the scooter will jolt forward, then stop.

d. Retract main kickstand or side kickstand.

e. Ensure forward drive is switched on and not reverse drive.

f. Driver sits on seat, insert the key in ignition, turn key clockwise to ON position. The dash display will be visible but there will be no engine sound.

g. Place hands on both Rt and Lt brake leaver for safety when you are ready to drive. Turn the throttle towards you slowly to start accelerating.

3.2 OPENING UNDER SEAT AND TRUNK: Do not forcefully turn key. When the key is in the right position it will open properly.

- Put key in ignition and turn slightly to the left. The under-seat storage compartment will pop open. Push down seat to lock into position.
- Use the smaller key to open the trunk. Insert key into trunk lock and turn to the left.

3.3 PARKING: Park in designated public areas using the alarm and a good heavy-duty lock.

- Turn off ignition by turning the key left counter clockwise before parking.
- Use the front wheel lock by turning the handlebars fully to the left; turn the key in the ignition to left again counter clockwise.
- It is recommended to use a heavy duty bike lock or chain looped through the wheel to secure the bike when parked.

3.4 CHARGING:

- Turn off ignition before using the charger.
- On the E-scooter, plug the charger to the output socket then to a standard wall power outlet. Disconnect the battery charger and unplug from E-scooter when not in use.
- Completely empty batteries will take 6-8 hours to charge with a standard charger. Chargers will stop charging when the battery is fully charged. Do not charge more than 8-10 hours or it will damage the batteries.
- The red light on the charger indicates that the E-scooter is being charged and the fan inside the charger will be on. Once it's fully charged the green light will turn on. Place the charger back inside the seat storage.
- Charging should proceed in condition of good ventilation not in an environment with corrosive gas or flammable condition.
- Avoid dropping the charger. The battery charger should be regularly examined for damage to the cord, plug, enclosure and other parts. In the event of such damage, if any is found, the scooter should not be charged until the battery charger has been repaired or replaced.
- During winter or any long-time storage of the electric vehicle, the battery should be recharged every month to maintain functionality.
- If the charger becomes too hot, the charger lights will flash indicating a malfunction of the charger or charging circuit. Disconnect charger immediately to prevent any damage. If the lights continue to blink and there is no more fan noise, the charger will not charge the E-Scooter.
- Charge the E-scooter after each use if possible, to condition the battery cycle.

4. MAINTENANCE AND CARE:

4.1 BATTERY TYPE AND CARE: 12v 20AH Lead acid non spill-able batteries; weight 15lbs.
The typical life cycle of these batteries are 1 ½ to 2 years. After approximately 300 charges, a lead-acid battery will need to be replaced, you will notice that your battery cannot carry as much of a charge as it could initially. Contact your local ARMADA Scooter shop to purchase a new battery. Replace battery with an identical or similar battery. When replacing your battery, dispose of it at a proper battery recycling facility or return to an ARMADA Scooter Shop.

4.2 HANDLING THE BATTERY: The battery contains large amounts of electrical power. You must use caution and respect when handling it. Not following these instructions can result in serious injury.

- DO NOT place your lead acid battery on concrete. Concrete drains the batter's power and will neutralize the lead-acid. Placing the battery on concrete for any length of time will likely result in the battery being drained of power and possibly losing its ability to store electricity.
- Always lift the battery with both hands and carry it with care. Never drop the battery. If the case is damaged, the contents may leak out.
- Never puncture or open the battery case. The contents are dangerous and may cause injury. Do not touch the contents of a leaking battery.
- Do not touch the two metal poles on the battery box at the same time. This can cause a short-circuit. It could cause injury to you or others and can cause serious damage to the electrical system of the e-bike.
- Do not handle your battery if either you or the battery are wet. Water is an excellent conductor of electricity. You may experience an electrical shock and serious injury.

4.3 DISTANCE AND POWER: The e-bike can go up to a distance of 35 to 50km before it must be recharged. The ability of your battery to power your e-bike depends on many variables. These variables include the weight of the rider and cargo, the prevailing wind resistance, steep hills and inclines, and tire pressure.

4.4 EFFECTS OF TEMPURATURE:

Temperature plays a critical role in the battery performance and life cycle. At higher temperatures, battery capacity generally increases; as the temperature drops, so does the capacity. This is why riding your scooter at 20 degrees Celsius will give you better performance and range than riding at 5 degrees Celsius. While keeping the batteries cold may seem like a great idea in theory, you need to make sure that they do not get too cold. In our climate here in Canada, storing E-bike batteries in an unheated garage, garden shed or outdoors will most likely cause them to freeze. This results in permanent damage to the internal lead plates or plastic casings. Make sure you store your batteries where it wont freeze.

4.2 REGULAR MAINTENANCE TIME TABLE:

	A-check, adjust, replace when necessary, **L**-Lubricate, **C**-Clean						
Items	Travel Mileage (KM)						
	200km	**1000km**	**3000km**	**5000km**	**8000km**	**10,000km**	**12,000km**
All bolts & nuts	A	A	A	A	A	A	A
Tires	A	A	A	A	A	A	A
Wheel bearing		A	C	A	C	C	A
Lubrication of all position		L		L		L	L
Motor bearing		A		C			C
Ft & Bk braking block		A		A			A
Ft & Bk shock absorber		A		A			A
Front fork bearing		A		A			A
Main & side kickstand		A		A			A
Charger				A			A
Controller				A			A

5. GENERAL TECHNICAL INFO – TROUBLE SHOOTING:

Q. Why won't my Electronic Vehicle turn on? There is no lights or power when I turn the key switch?

- Check the main power switch also known as circuit breaker or main breaker.
- Make sure the power wires are securely tightened inside the main power breaker switch.
- Make sure all your battery wires are tightly connected and all power connections are not loose or not attached.

Q. My lights work but my Electronic Vehicle will not move?

- Make sure it is charged. If it is not, once voltage reaches a low level the controller will not turn on and as a result the bike will not move even if the low voltage can power the lights. For example, a 48v battery will go down to 42v and it is considered empty because the controller turns off to protect the batteries from low voltage. It is also known as an LVC which is an acronym for Low Voltage Cut Off.
- Check the brake handle switch wire as it could activate the motor cut off if not fully released.
- Check all connections of the only 3 other parts that would cause this. They are the throttle, controller or motor. It is rare that the motor has any issues because it is the most robust component of the vehicle. However, there are hall sensors inside the motor that could go bad

- on rare occasion. A remedy for this is using a sensor less controller. It may be a better alternative to replacing the hall sensor or motor completely.
- To recap, this issue can be due to a number of reasons, but we will start with the most likely and simple fix.
- 1. The brake switch is stuck on. Check your rear stop lamp to see if the light is activated by your brakes.
- 2. The kill switch or kickstand switch (if equipped) is stuck on.
- 3. The controller needs to be replaced.
- 4. The throttle wire has a loose connection or needs to be replaced.
- It is not common to be a motor issue because it is typically the most robust electrical component on the vehicle.

Q. The battery voltage/gauge/meter drops when I ride. Why does it do that?

- As you draw power from the battery you will get some voltage drop that will settle up once you stop. It is recommended that you charge the bike as frequently as possible to maintain battery capacity for both speed and range. As your voltage is depleted the Electronic Vehicle speed will lower incrementally.

Q. What should my battery voltage reading be when it is full?

- It is recommended for all Electronic Vehicle owners to have a multimeter to read the voltage.
- For 48V bikes the voltage range when full is typically around 52V-53V
- For 60V bikes the voltage range when full should be around 64V-67V
- For 72V bikes the voltage range when full should be around 77V-80V
- Lithium batteries have a similar but slightly different total cell voltage.
- If you want to do a voltage check you must own a multimeter and put it on the voltage setting if the bike does not have a factory voltage display as a feature already.

Q. Is there a way to condition the batteries? How do I take care of my batteries?

- We suggest that brand new batteries should be charged fully then discharged fully for 3-5X to condition the batteries for full range. It's best to keep your batteries power level stay closer to the fully charged status rather than in a depleted status. Batteries won't perform as well in really cold temperatures. We recommend charging wherever you go whether it is at work or wherever you go if possible. Freezing your batteries will damage them. Over-charging or leaving them in a state of discharge will also harm them. Battery set should never charge more than 8-10 hours max.

Q. What should I set my tire pressure at?

- Typically, rear tires should be kept closer to 35-40psi for less rolling resistance although the front tire bears less weight so it can be set at a bit lower, closer to 30-35psi.

Q. What should I do if I get a flat tire due to puncture?

- You should keep a tire plug kit handy to plug the hole once you find it. Inner tire coating also known as "slime" also works. If you have a tire with an inner tube in it, you need to either repair the tube with a patch kit or better yet, replace it. Most ARMADA ELECTRONIC VEHICLES have tubeless tires.

7. WARRANTY:

No Refunds-Exchange Only if item(s) unused within 7 days.
Bike warranty is for 1 year parts replacement only. (Batteries & chargers are 3 months.)
All warranty claims will be examined for failure analysis in case of customer misuse or damage. Normal scratches or wear & tear & wearable products such as tires & bulbs are excluded. Warranty does not include delivery or installation of parts which could cost extra. The persons stated on this warranty form is fully aware and understands that only they are responsible for any and all damage to any property involving the vehicle on this invoice and/or injury to themselves or other people/property and/or penalties from contravening any laws of Canada or any nation outside of Canada. Armada Trading Ltd. is not liable or responsible for any actions or consequences of the end users of its products. Usage of products on this invoice are completely at your own risk. All conditions of sale are understood & product(s) received are in good condition.

Name: _____ **Date:** _____

SCOOTER MODEL:

SERIAL NUMBER:

Date of Purchase:

For more information on all ARMADA Electric Vehicles and Frequently Asked Questions go to

www.armadascooters.com

Parts and Accessories available for all models of scooters