

karma

User manual
KS-343.2S



A Better Wheelchair, A Better Fit

GENERAL WARNING

IMPORTANT

Do not attempt to use the scooter before a dealer, healthcare professional, or technical personnel has explained how to operate it without any risk to yourself or others.

The information contained in this document is subject to change without notice.



WARNING

- Do not operate this equipment without first reading and understanding this manual. If you are unable to understand the warnings, cautions and, instructions, contact a dealer, healthcare professional, or technical personnel if applicable before attempting to use this equipment. Otherwise, injury or damage may occur. Procedures other than those described in this manual must be performed by a qualified technician.



WARNING

- As a manufacturer of powered scooters, KARMA endeavors to supply a wide variety of powered scooters to meet the many needs of the user. However, the responsibility of final selection of the type of powered scooter to be used by an individual rests solely with the user and his/her healthcare professional capable of making such a selection.

DO NOT be transported in vehicles of any kind while in a powered scooter. It is the position of KARMA that users of powered scooters should be transferred into appropriate seating in vehicles for transportation and apply the restraints made available by the auto industry. KARMA cannot and does not recommend any powered scooter transportation systems. It is the responsibility of the Durable Medical Equipment (DME) Dealer, therapists and other healthcare professionals to determine if a seat positioning strap is required to ensure the safe operation of this equipment by the user. Serious injury can occur in the event of a fall from a powered scooter.

Operating Information

- Performance adjustments should **ONLY** be made by a dealer, healthcare professional, or technical personnel. Incorrect settings could cause injury to the driver or bystanders and damage to the powered scooter and surrounding property.
- To determine and establish your particular safety limits, practice bending, reaching, mounting and dismounting activities in several combinations in the presence of a qualified healthcare professional **BEFORE** attempting active use of the powered scooter.
- For individuals with balance problems, practice mounting and dismounting activities **WITH AN ASSISTANT** in the presence of a qualified healthcare professional. If so equipped, **DO NOT** operate the scooter without anti-tippers being installed. Anti-tippers **MUST BE** attached at all times.
- **DO NOT** attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees as this may cause loss of balance.
- **DO NOT** lean over the back of the chair to reach objects behind you as this may cause the powered scooter to tip over.
- **DO NOT** shift your weight or sitting position toward the direction you are reaching as the powered scooter may tip over.
- **DO NOT** use an escalator to move a powered scooter between floors. Serious bodily injury may occur.
- **DO NOT** operate in car lanes on roads, streets, highways, etc.
- **DO NOT** attempt to move up or down an incline with a water, ice or oil film.
- **DO NOT** attempt to ride over curbs or obstacles. Doing so may cause your powered scooter to turn over and cause bodily harm and/or damage to the powered scooter.
- **DO NOT** make sharp turns, in forward or reverse, at excessive speeds.

- DO NOT attempt to lift the powered scooter by its casings and seat.
- DO NOT attempt to lift the powered scooter by any detachable parts. Lifting by means of any detachable parts of a powered scooter may result in injury to the user or damage to the powered scooter. Please hold onto the frame when lifting your scooter.
- DO NOT operate the powered scooter until you have checked that the surroundings are clear and that the area is safe for travel.
- Please pay attention to the environment, and to keep away from the hazard of external flame. When the user is smoking, pay attention to safety and make sure to extinguish the fire when finished. Be alert to the environment when someone nearby is smoking or using a cigarette lighter, keep away from the hazard and use fire-proof cloth.
- DO NOT use parts, accessories or adapters other than those authorized by KARMA.
- Before attempting to sit in or exit the powered scooter, turn the power OFF. This will ensure that the powered scooter will not drive. Turn the power OFF while the scooter is not in use. Otherwise, injury and/or damage to the scooter and surrounding property may occur.
- DO NOT connect any medical device (i.e., a ventilator, life support machine, et cetera) to the battery. This could cause unexpected failure of the device and the powered scooter.
- KARMA specifically disclaims responsibility to all personal injury and property damage that may occur during use which does not comply with applicable federal, state and local laws and ordinances.
- DO NOT stand on the footplates of the powered scooter.
- DO NOT use the scooter when the back is folded. This alters the centre of gravity and may cause the scooter to tip backwards. The back should only be folded for storage or transport of the scooter.
- DO NOT hang anything on the backjoints that could cause the backrest to fold suddenly and may cause injury.
- DO NOT tow the scooter by other vehicles (cars, motorcycles or bicycles, etc.). Only use freewheel mode on flat surfaces since your electromagnetic brakes are not engaged in this mode, without these brakes it will roll down a hill causing injury or damage. Never drive under the influence of alcohol or medication.
- DO NOT sit in the powered scooter within a moving vehicle.



WARNING

- **KS-343.2S can NOT be used as seats in any vehicles. That is, KARMA recommends that users are NOT transported in any vehicle while seated in the scooter. In the case of accident or a sudden stop, the user or passengers may be at risk of getting injury. The suggested solution is to transfer the user from the scooter into a vehicle seat and to securely stow the scooter in a separate compartment.**

RAMPS

- DO NOT climb, go up or down ramps or traverse slopes greater than the "Dynamic stability" angle for your model specified in Section 12.
- When negotiating ramps, if the accelerator is released while moving forward, the powered scooter will roll backwards approximately one foot before the brake engages. If the accelerator is released while in reverse, the powered scooter will roll backwards approximately two and a half feet before the brake engages.
- Be sure to reduce your speed when driving on curved roads or making a turn; do not drive at full speed. Please drive at a slower speed so you have complete control of the scooter.

ELECTRICAL

- Check to ensure that all electrical connections are secure at all times.
- Grounding Instructions: DO NOT, under any circumstances, cut or remove the round grounding prong from any plug. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle/outlet in accordance with the National Electrical Code and local laws.
- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.

BATTERIES

- The warranty and performance specifications contained in this manual are based on the use of deep cycle sealed lead acid batteries.
- KARMA strongly recommends their use as the power source for this unit. (Refer to Section 8)
- Carefully read the battery and charger information prior to installing, servicing or operating your scooter.

RAIN TEST

- KARMA has tested its powered scooter in accordance with ISO-7176 Part 9 Rain Test. This test provides the end user or his/her attendant sufficient time to remove his/her powered scooter from a rainstorm and retain operation.
- DO NOT leave your powered scooter in a rain storm of any kind.
- DO NOT use your powered scooter in a shower or leave it in a damp bathroom while taking a shower.
- DO NOT leave your powered scooter in a damp area for any length of time. Direct exposure to rain or dampness could cause the powered scooter to malfunction electrically and mechanically and may cause the powered scooter to prematurely rust.

WEIGHT LIMITATION

- The maximum weight that can be carried, including any items carried on the scooter, is stated beside "Maximum User Weight " in Section 12. SPECIFICATIONS.

STAIRWAYS

- DO NOT attempt to move an occupied powered scooter between floors using a stairway. (See Figure 1)
- Use an elevator to move an occupied powered scooter between floors. If moving a powered scooter between floors by means of a stairway, the occupant MUST be removed and transported independently of the powered scooter. Extreme caution is advised when it is necessary to move an UNOCCUPIED powered scooter up or down stairs.
- KARMA recommends disassembling the scooter and transporting the components independently up or down stairs. Make sure to use ONLY secure, non-detachable parts on each component for hand-hold supports.
- DO NOT attempt to lift a powered scooter by any removable (detachable) parts. Lifting by means of removable (detachable) parts may result in injury to the user or assistants or damage to the scooter.



(Figure 1)

ESCALATORS

- DO NOT use an escalator to move a powered scooter between floors. Serious bodily injury and damage to the scooter may occur.

YOU AND YOUR KARMA SERVICE PROVIDER

- No tools are required for assembly. Your scooter should be assembled by your authorized KARMA dealer. Your authorized KARMA dealer is also your service provider. Unauthorized repairs, upgrades and add-ons will void your warranty.
- Anything scooter related that requires tools should be done by your authorized KARMA service provider. Your KARMA service provider has the necessary service manual for your scooter.
- If you have any defective parts or lose any parts, please contact your dealer for repair and/or replacement. Please only use parts authorized by KARMA. Use of parts that are not authorized by KARMA will void your warranty.
- Part numbers are listed on our bill of materials (explosion drawings), which we give to our authorized dealers and service providers. Customers should order parts through their dealer as well as all repairs and scheduled maintenance.
- Customers should go to their dealership for all service needs to guarantee their warranty is not void. Always go to an authorized service provider. Unauthorized repairs will void your warranty. Procedures other than those described in this manual must be performed by a qualified technician. They also have the service manual with a complete list of maintenance required to keep your KARMA scooter in top performance.
- Check the warranty section of this manual to find out what KARMA guarantees and the maintenance service and parts that are not covered by the warranty.

CLASSIFICATION & INTENDED USE

- KS-343.2S is classified as **Class B** mobility product for indoor and outdoor use. Check with your local government as to legislation pertaining to mobility vehicles to assure that the legal requirements to drive on public roads have been met, i.e. a pelvic belt, lighting or registration/licensing.
- Check with your local government as to legislation pertaining to mobility vehicles to assure your legal requirements to drive on public roads have been met, i.e. lighting, registration or licensing.
- KS-343.2S is not intended for use by a visually impaired persons.
- KS-343.2S is not intended to be transported in an airplane.

CE MARKING

- This powered scooter complies with the requirements of the Medical Devices Regulation (EU) 2017/745.



CAUTION

- When prescribing scooters for use by full or partial amputees (above or below knee, single or double) or other conditions that affects the user's natural center of gravity and might cause the scooter to tip or the person on the scooter to fall off, we suggest contacting your therapist or dealer as well as attaching anti-tippers, pelvic belt or other additional safety accessories.
- When using the scooter, ALWAYS follow the Highway Code or your local traffic regulations when outdoors and the guidelines written in this manual.

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1. How to contact KARMA



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2. Declaration of conformity



Document No.: DOC-KS-3-02

EU Declaration of Conformity

We, with the information specified in the below,

Our information as the manufacturer:

Manufacturer's Name: KARMA MEDICAL PRODUCTS CO., LTD

Manufacturer's Address: NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan

SRN (Single Registration Number): TW-MF-000013206

Our authorized representative:

Name: KARMA MOBILITY, S.L.

SRN (Single Registration Number): SRN: ES-AR-000004852

Address: C/ PERIODISTA FRANCISCO CARANTOÑA DUBERT, 23 Bajo 33209 GIJÓN – ASTURIAS, SPAIN

Contact Person: Raquel Yuste

Contact Information: (+34) 984 390 907

in accordance with

Regulation (EU) 2017/745 of the European Parliament and of the council Annex I, II, III, IV and IX

hereby declare that the medical device specified below:

Basic UDI-DI of Annex VI:	471987385KS-3LT
Device:	Electrically powered scooter
Trade Name or Mark:	KS-3 series
Model Number:	KS-343, KS-343.2S
Product Code according to EMDN:	Y122124
Product Code according to GMDN:	45684
Classification:	Rule 1 of Class 1
UDI-DI:	(01)04719892870313

is in conformity with the applicable requirements of the following documents:

Ref. No.	Title	Edition date
ISO 13485	Medical devices - Quality management systems - Requirements for regulatory purposes	2016
ISO 14971	Medical devices - Application of risk management to medical devices	2019
EN 12182	Assistive products for persons with disability - General requirements and test methods	2012
EN 12184	Electrically powered wheelchairs, scooters and their chargers - Requirements and test methods	2014
EN 62366	Medical devices - Application of usability engineering to medical devices	2015
ISO 7176-21	Requirements and test methods for electromagnetic compatibility of electrically powered wheelchairs and scooters, and battery chargers	2009
ISO 7176-25	Lead-acid batteries and chargers for powered wheelchairs - Requirements and test methods	2013
EN ISO 10993-1	Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process	2009
EN ISO 10993-5	Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity	2009
EN ISO 15223-1	Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied - Part 1: General requirements	2016
MEDDEV. 2.7/1 Rev. 4	CLINICAL EVALUATION: A GUIDE FOR MANUFACTURERS	2016
MEDDEV 2.12/1 Rev. 8	GUIDELINES ON A MEDICAL DEVICES VIGILANCE SYSTEM	2013

The information on this declaration has been stated on the sole responsibility of KARMA MEDICAL PRODUCTS CO., LTD.

We hereby declare that the device named above has been designed to comply with the relevant sections of the above referenced specifications. The device complies with all General Safety and Performance Requirements.

Date of issue: 03 July 2023

Place of issue: NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144,
Taiwan


CHEN, YING-CHUN CEO




3. PREFACE

You MUST read this owner's manual before using the scooter. Improper use of the scooter could result in harm, injury or traffic accidents.

Therefore, for safe and enjoyable use of the scooter, please read this owner's manual.

3.1 This owner's manual includes operation instructions, assembly instructions, and instructions on how to deal with possible accidents. This owner's manual is written for KARMA powered scooter.

3.2 The symbols used in this manual are explained below. Pay special attention to the parts marked with these symbols.

 WARNING	Improper use could lead the user to severe injury or death.
 CAUTION	Improper use could lead the user to severe injury and/or damage to your scooter.
 SUGGESTION	Follow these instructions to keep the scooter in good condition.

3.3 This manual includes the repair and maintenance chart as well as the Warranty. Please keep it in a safe place or with the scooter.

3.4 If someone else uses the scooter, make sure that you give them this owner's manual for his or her reference.

3.5 As product designs change, some illustrations and pictures in this manual may not correspond to the vehicle that you purchased. We reserve the right to make design modifications without further notice.

4. SAFETY

4.1 Before Driving

4.1.1 The user must be familiar with the use and operation of this scooter before driving. Therefore, please always keep these safety guidelines in mind.

4.2 Traffic Rules

4.2.1 Pedestrian traffic rules apply to this scooter. Please drive safely.

4.2.2 Drive only on pedestrian areas such as the sidewalk. Never drive the scooter on the highway.

4.2.3 Be aware of other vehicles when crossing all roads.

4.2.4 Be extremely cautious when driving your scooter in heavy traffic or shopping malls.

4.2.5 DO NOT drive your scooter when you feel tired or consume alcohol.

4.2.6 Please follow pedestrian traffic lights.

4.3 Practice Driving

4.3.1 Before you are familiar with the operation of your scooter please practice in a wide and open area, like a park.

4.3.2 To avoid falling off your scooter please practice all kinds of driving motions, such as accelerating, stopping, turning, reversing and going up and down ramps.

4.3.3 Please turn the speed dial to slow speed when you start practicing for the first time.

4.3.4 Be sure you are able to control and operate your scooter easily and confidently before you adjust the speed higher.

4.4 No Passengers

KARMA scooter is limited to one driver. Do not carry passengers (including children) on your scooter.

4.5 No Hauling Heavy Goods

Do not use this scooter to carry or haul heavy goods. The maximum weight that can be carried, including any items carried on the scooter, is specified in Section 12. SPECIFICATIONS "Maximum User Weight". Maximum loading weight for the basket is 3 kg (6.6 lbs).

4.6 Rain/Snow

This product is not guaranteed to be water resistant. Do not drive in the rain, through puddles or spray water to clean this product.

4.7 While Driving

Please carry out daily inspections. Refer to Section 9.1 DAILY CHECK.

4.8 General Warning

Do not lean over the side of the scooter as such an action may cause you to lose balance and fall.

Use caution to assure your clothing doesn't get tangled with the wheels.

DO NOT tow the scooter by other vehicles (cars, motorcycles or bicycles, etc.)

4.9 Railroad Crossing

Before crossing the tracks, please stop completely and look both ways.

Cross the tracks perpendicularly to avoid your wheels getting stuck.

Do not drive at full speed over railroad tracks.

4.10 Circumstances to Avoid

4.10.1 Avoid roads with heavy traffic, mud, excessive gravel or bumps, snow and ice. These conditions may damage your scooter.

4.10.2 Avoid roads that are too narrow or by a canal/waterway without any fence/hedge.

4.10.3 Also avoid places where your wheels might get stuck, slip or not have traction.

4.10.4 Do not drive in a gale or rainy/snowy/foggy/misty weather. These conditions may cause your scooter to rust.

4.10.5 Do not drive in a S curve, do doughnuts or make sudden turns.

4.10.6 Do not take an escalator.

4.11 Mobile Phones and Other Electric Equipment

4.11.1 Do not use a mobile phone or other wireless communication devices while driving. (See Section 5. EMI/RFI)

4.11.2 Do not charge the mobile phone or other electric devices from your scooter's batteries.

4.12 Ramps, Inclines and Drops

- 4.12.1 When driving at night, please turn on the headlight and always use the turning signal for your safety.
- 4.12.2 Do not drive onto a steep ramp. Refer to "Dynamic stability Angle" in Section 12. SPECIFICATIONS for your scooter's safe climbing angle.
- 4.12.3 When climbing up to an incline, please set the speed dial higher than the center mark and drive carefully.
- 4.12.4 When going down an incline, set the low speed and never use reverse.
- 4.12.5 Do not drive on a road with many bumps and holes close to each other, such as potholes or washboard roads. Refer to "Ground Clearance" in Section 12. SPECIFICATIONS.
- 4.12.6 Do not cross a ditch wider than 100 mm (3.9 in) as the wheels might get stuck.
- 4.12.7 Please lower your speed when driving down a hill.
- 4.12.8 Do not make sudden turns when driving on gravel roads or ramps.
- 4.12.9 The maximum surmountable obstacle height is 75 mm for KS-343.2S scooters with approach distance of 500 mm. Exceeding this obstacle height will damage your scooter and void your warranty.
- 4.12.10 When negotiating an obstacle slow down, put your seat into the full upright position, and approach it head-on (perpendicular). Negotiating an obstacle at an angle may cause your scooter to tip over.
- 4.12.11 When climbing down a curb, slow down just before you get to it and only speed up after the entire scooter has lowered to the road.
- 4.12.12 The maximum height of the curb that can be descended safely is 75 mm. Descending obstacles should be done perpendicularly.
- 4.12.13 DO NOT drive the scooter to take jumps over or off obstacles. Doing so will void your warranty.



WARNING

- Do not set the scooter in freewheel mode when on an incline or decline.
- If you breakdown on railroad tracks, first, check for an oncoming train. If a train is coming, get out of its way immediately! If no train is coming, set the scooter in freewheel mode and push the scooter off the tracks.
- When driving down a slope, the stopping distance can be significantly greater than on level ground.

4.13 Maximum User Weight Limit

4.13.1 Refer to "Maximum user weight" in Section 12. SPECIFICATIONS.

4.13.2 Loading exceeding max. user weight can damage your scooter and cause malfunctions yielding a safety hazard. The warranty does not cover damage caused by improper operation of the scooter.

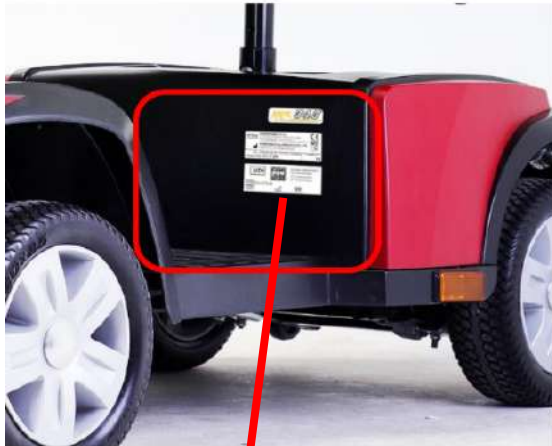
4.14 Service Life

The expected service life of the product is **three years**, presuming that the product is used daily in accordance with the safety operation instructions, inspection and maintenance instructions, and intended use, which described in this manual.

4.15 KS-343.2S Series Labeling

Please carefully read all the labeling on the scooter before driving it. Do not remove them. Protect them for future reference.

Please refer to Section 6. Parts for the name and the position of each parts. (ex. circuit breaker) And you can find the below labels at the position specified.



- NEVER LIFT SCOOTER UP BY THE FRONT OR REAR CASING

NOTICE:

- Make sure that the freewheel lever is secure before starting the electric vehicle.
- In order to avoid damage or injury, do not disengage the freewheel lever while going up or down an incline.
- The manufacturer is not responsible for damage to persons or property caused by improper use of the scooter.



WARNING

- Do not operate the scooter unless the steering column is locked into position. Do not lean against or pull forward on the handlebars while mounting or dismounting the scooter. Serious harm or injury may occur.

5. EMI/RFI

This section provides the user with basic information about the problems with EMI, known sources of EMI and protective measures either to reduce the possibility of exposure or to minimize the degree of exposure. This section also shows some conditions in which unexpected or erratic scooter movements may occur.



CAUTION

- It is very important that you read this information regarding the possible effects of electromagnetic interference on your electric KARMA Scooter.

5.1 Electromagnetic Interference From Radio Wave Sources

5.1.1 Powered vehicles may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the powered vehicle to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered vehicle's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered vehicle can resist EMI up to certain intensity. This amount of resistance is called its immunity level. The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. This powered vehicle model, with no further modification, has an immunity level of 20 V/m without any accessories.

5.1.2 There are a number of sources of relatively intense electromagnetic fields in our everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure could be unavoidable. However, we believe that by following the warnings listed below, your risk to EMI can be greatly minimized.



WARNING

- Radio waves can influence the operation of motor driven vehicles.
- Radio wave sources: Broadcasting/TV stations and personal wireless telecommunication equipment that transmit waves can affect the normal operation of the vehicle. Therefore, follow the following passages to lower the chance of abnormal vehicle operating conditions or brake system failure, which may lead to injury.
- Do not use personal telecommunication devices (for example, mobile phones or walkie-talkies) when the power source of the electric powered vehicle has been turned on.
- Try to avoid locations that broadcast radio waves, such as TV stations or radio stations.
- If the electric vehicle acts abnormally or the brake system fails, turn off the power source as soon as safely possible.
- Remember that the installation of non-genuine KARMA parts makes it difficult to predict what effects radio waves will have on the vehicle. (Note: it is not possible to make a direct calculation how radio waves will influence the vehicle).
- If the vehicle moves abnormally or the brake system fails after turning on the power source under normal operating conditions, notify the manufacturer immediately.

5.2 The three sources of radiated EMI

5.2.1 Hand-held portable transceivers (transmitter-receivers) with the antenna mounted directly on the transmitting unit, such as citizens band (CB) radios, walkie-talkies, security and fire or police transceivers, cellular telephones and other personal communication devices;



SUGGESTION

- Some cellular telephones or similar devices transmit signals while they are ON, even though they are not in use.

5.2.2 Medium-range mobile transceivers used in police cars, fire trucks, ambulances and taxis usually having the antenna mounted on the outside of the vehicle; and

5.2.3 Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.



SUGGESTION

- Other types of hand-held devices (cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances such as electric shavers and hair dryers, et cetera) so far as we know, are not likely to cause EMI problems.

5.3 Powered Vehicle Electromagnetic Interference (EMI)

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy too close to the powered vehicle's control system while using these devices. This can affect your powered vehicle's movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered vehicle.

5.4 Warnings

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones can affect powered vehicles and motorized scooters.

Following the warnings listed below should reduce the chance of unintended brake release or powered vehicle movement which could result in serious injury.

5.4.1 Do not operate hand-held transceivers-receivers such as citizens band (CB) radios or turn ON personal communication devices such as cellular phones, while the powered vehicle is turned ON.

5.4.2 Avoid the nearby transmitters, such as radio or TV stations, and try to stay away from them.

5.4.3 If unintended movement or brake release occurs, turn the powered vehicle OFF as soon as it is safe.



CAUTION

- Some stores may have automatic (sensor) doors and alarm systems set at certain frequencies that might affect your powered scooter.

5.4.4 Adding accessories/components or modifying the powered vehicle may make it more susceptible to EMI.

5.4.5 Report all incidents of unintended movement or brake release to your powered vehicle dealer or KARMA, and note whether there was a source of EMI nearby.

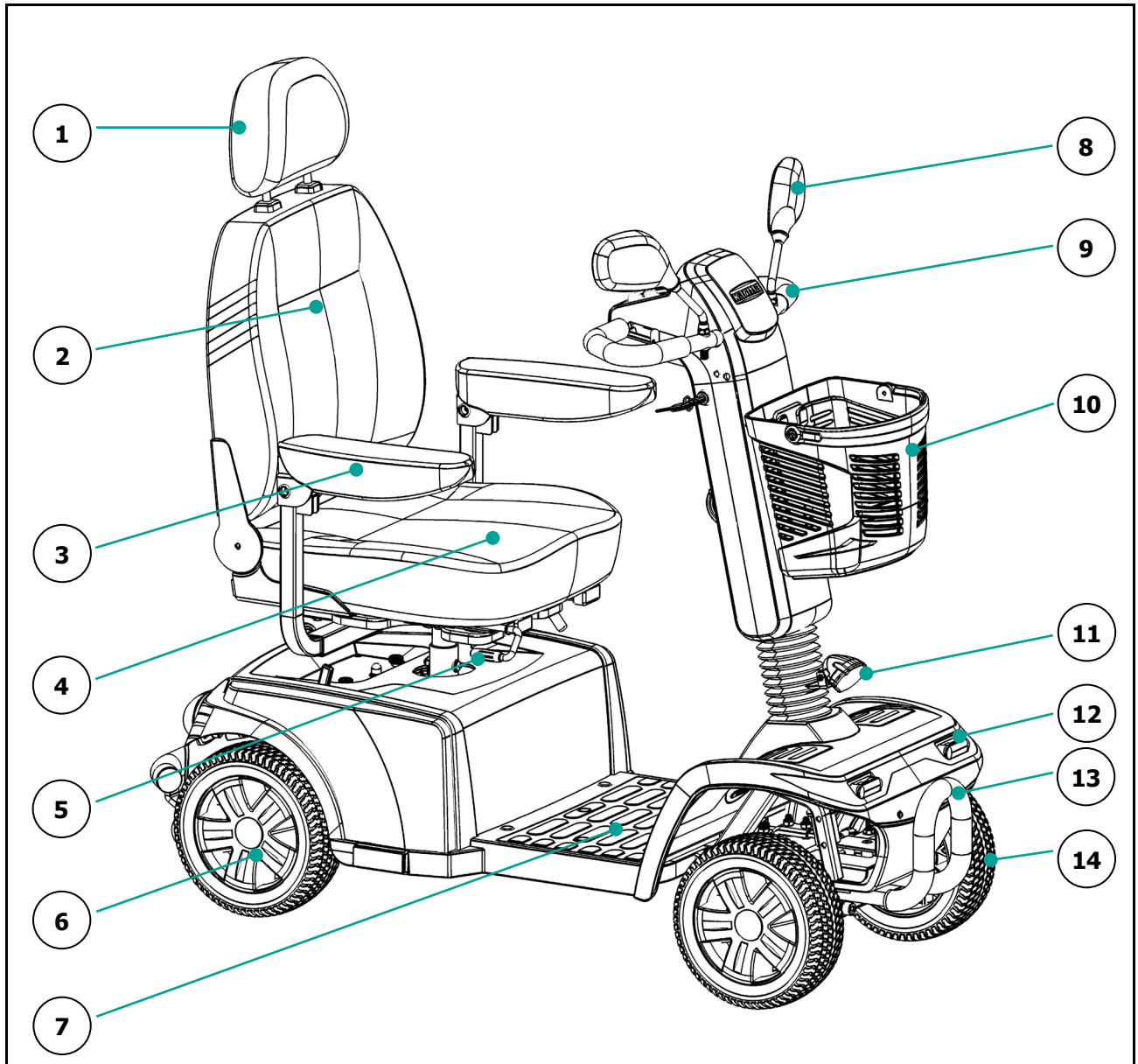
5.5 Important Information

20 volts per meter (V/m) is a generally achievable and useful immunity level against EMI (the higher the level, the greater the protection).

KARMA KS-343.2S scooters have an immunity level of 20 V/m without any accessories connected to it.

6. PARTS

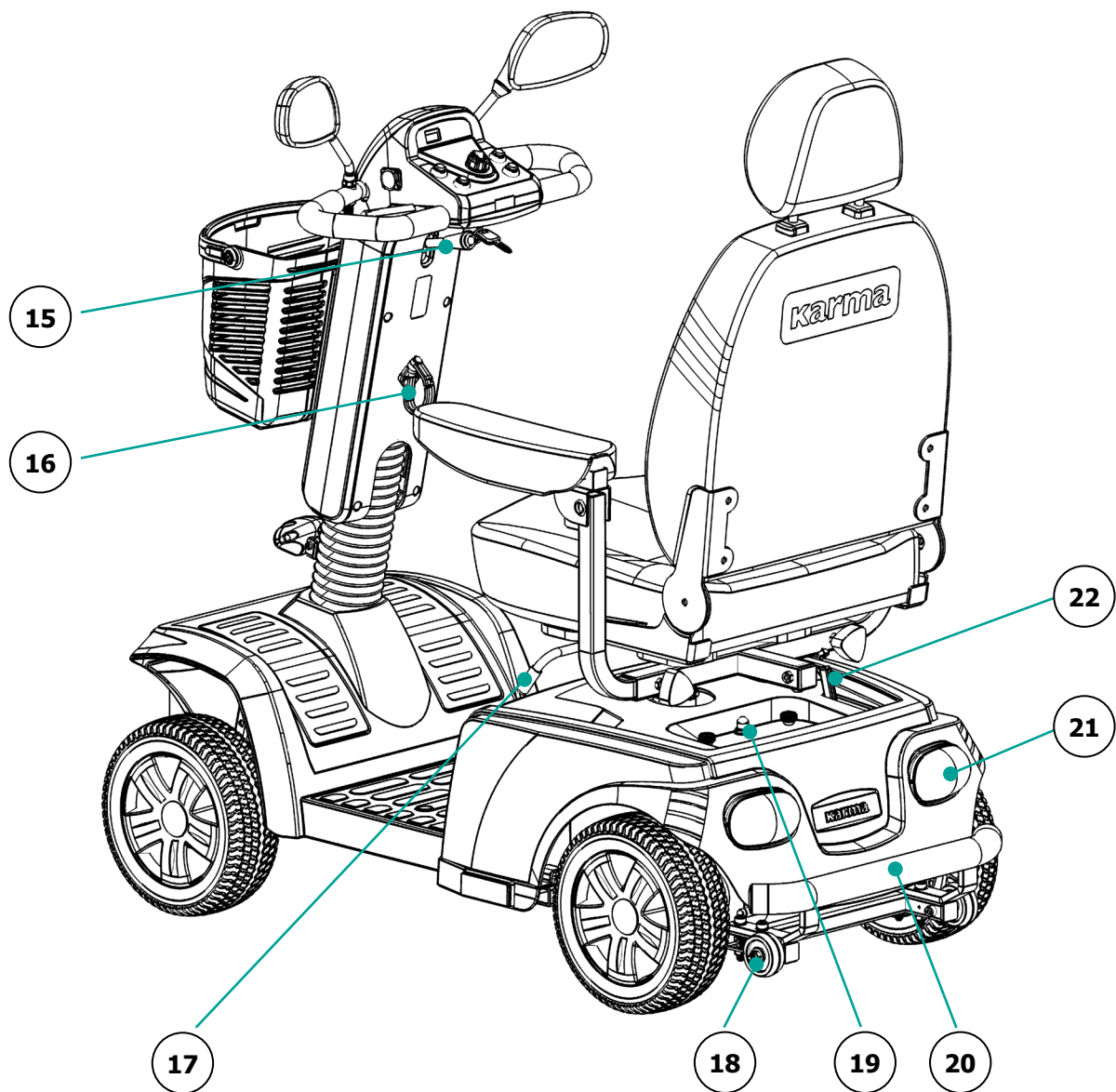
Parts Description



- 1. Headrest
- 2. Backrest
- 3. Armrests
- 4. Driver's Seat
- 5. Slide Lever
- 6. Drive Wheel

- 7. Floorboard
- 8. Rear View Mirror
- 9. Handlebar
- 10. Basket
- 11. Headlight
- 12. Turn Signal

- 13. Front Bumper
(Optional)
- 14. Front Caster

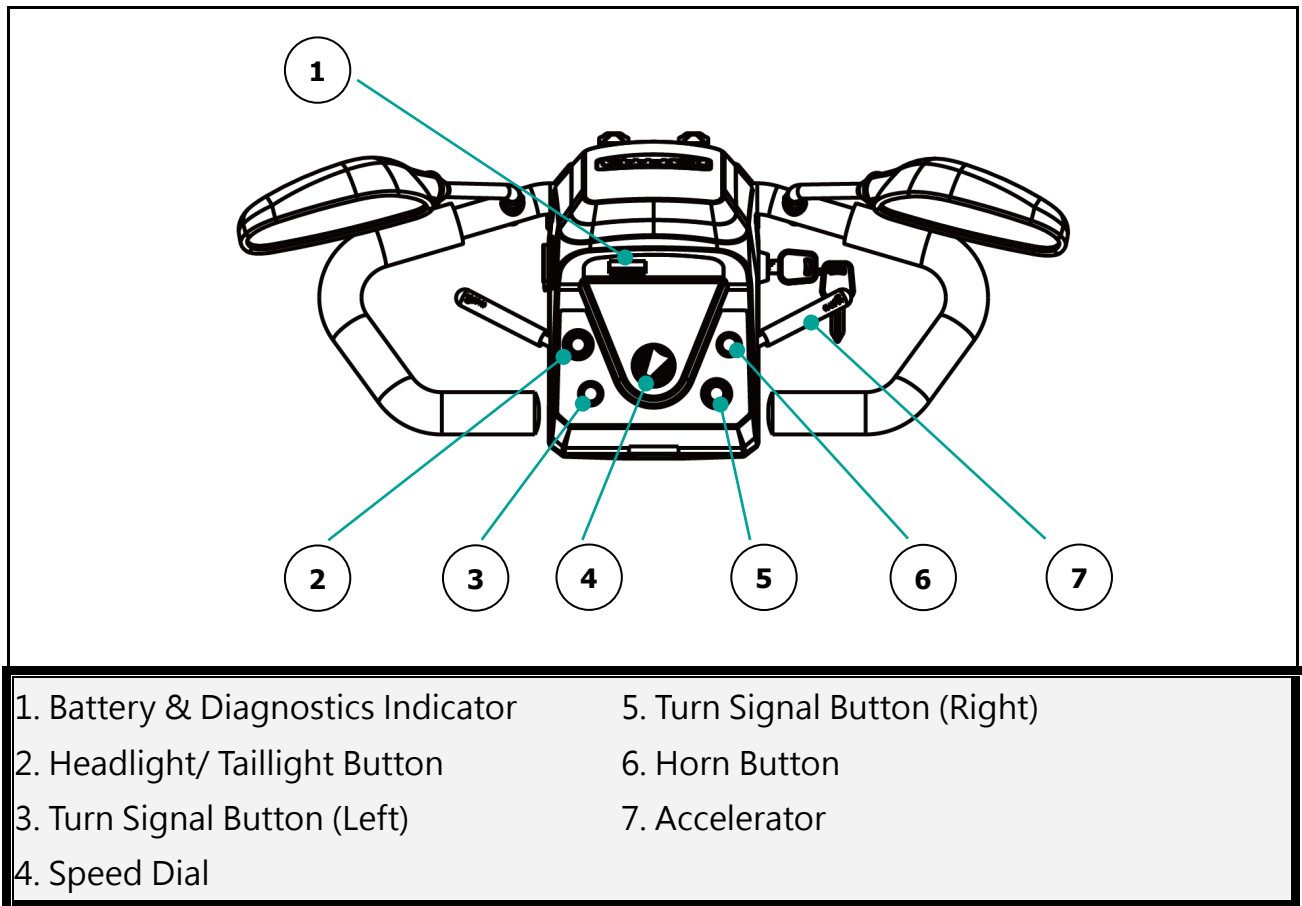


- 15. Adjustment lever for steering column
- 16. Bag Hook (Optional)
- 17. Swivel Lever
- 18. Anti-Tippers

- 19. Circuit Breaker
- 20. Rear Bumper (Optional)
- 21. Turn Signal/ Taillight
- 22. Freewheel Lever

7. OPERATION

7.1 Control Panel



7.2 How to Operate Your Scooter

7.2.1 Ignition

Insert the key and turn the key clockwise to switch your scooter ON. Turn the key counter-clockwise to switch the scooter OFF. Make sure you come to a complete stop before you turn the scooter OFF. (See Figure 7.1)

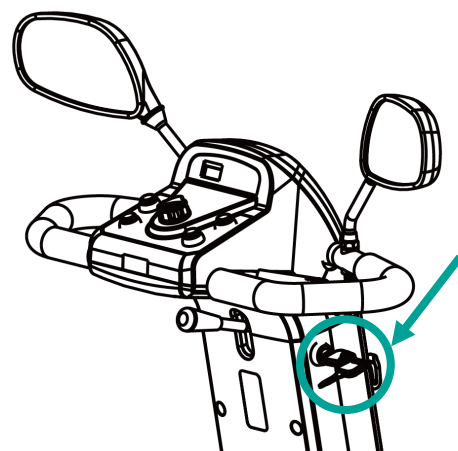


Figure 7.1

7.3 Speed Dial

7.3.1 Speed dial allows you to set various forward and reverse speeds. (See Figure 7.2) Turn the dial counter-clockwise to slow for very gentle operation. Turn it clockwise to increase your speed to maximum.

7.3.2 The settings of speed are not set with traditional gears.

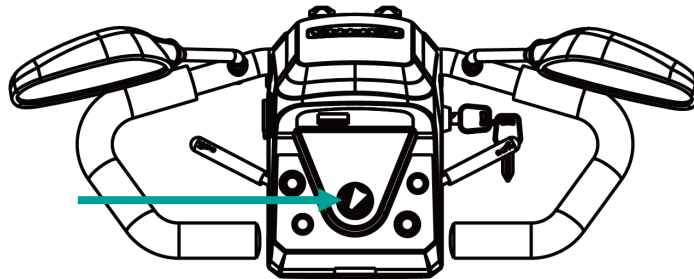


Figure 7.2

7.4 Forward, Reverse and Brake

7.4.1 Pull the right accelerator backward with your right hand to make the scooter move forward.

7.4.2. Pull the left accelerator backward with your left hand for the scooter to move backward.

7.4.3. There is a small beep sound when the scooter is driving in reverse, and such beep sound can be turned off or turned on when the scooter is delivered.

7.4.4 If you release the accelerator while in forward or reverse, the electromagnetic brake will be activated to stop the vehicle.



CAUTION

- Pulling the accelerator fully from a standstill may cause a whiplash injury to the user's head. This scooter has the potential for sudden acceleration that may lead to injuries or accidents. Please accelerate slowly while driving carefully
- Due to the higher speeds of KS-343.2S scooter, be careful not to make too tight of a turn. Hard turns at high speeds may cause your scooter to roll or tip. KARMA is not responsible or liable for reckless driving by users.

7.5 Turn Signal Buttons

7.5.1 The signal light will flash and a small speaker will make a "beep-beep" sound if you press either the right or left button.

7.5.2 Press the button again to turn off the turn signal.

7.6 Horn Button

7.6.1 The horn will sound for the duration of time when the button is pressed.

7.7 Headlight/Taillight Button

7.7.1 The headlight and taillight will be turned on when this button is pressed.

Push the button again and the lights will turn off.

7.8 Electromagnetic Brake

7.8.1 Release the accelerator completely and the electromagnetic brake will automatically activate.



WARNING

- NEVER use the freewheel mode when going down an incline.
- The electromagnetic brake won't function in freewheel mode.

7.9 Driver's Seat

7.9.1 Lift up the swivel lever (A) to rotate the seat up to 90 degrees to either side.

(See Figure 7.3)

7.9.2 Lift up the slide lever (B) to move the seat forward or backward. (See Figure 7.4)

7.9.3 Push the backrest forwards to fold the backrest. (See Figure 7.7)

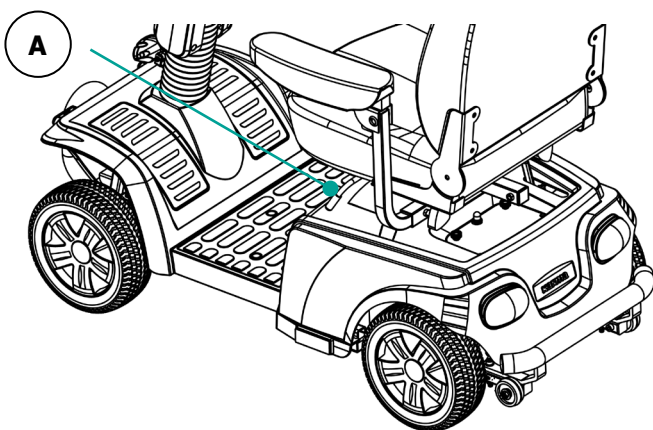


Figure 7.3

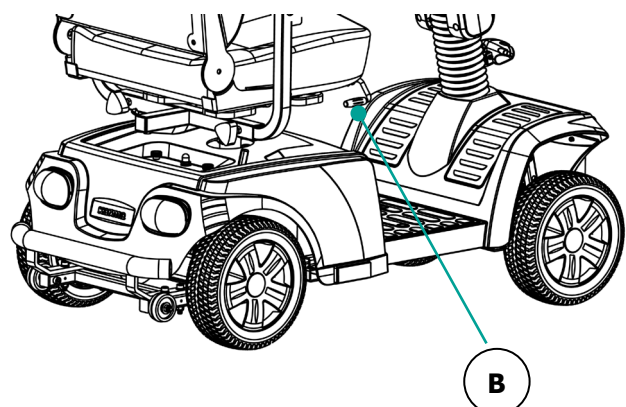


Figure 7.4

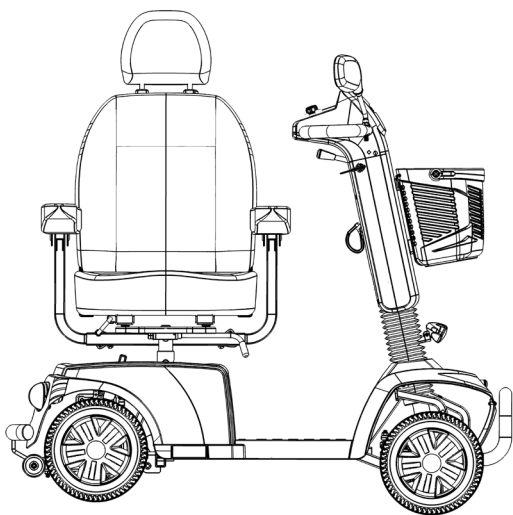


Figure 7.5



CAUTION

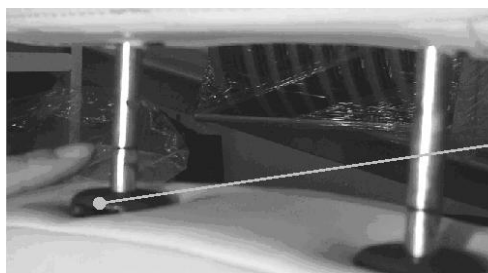
- Be sure to rotate the seat to the forward position and the seat locks into place before driving.

7.10 Headrest Adjustment

7.10.1 To raise the headrest, lift the headrest up to the desired position.

7.10.2 To lower the headrest, push the release button and lower the headrest to the desired position. (See Figure 7.6)

The headrest is locked in position when an audible "click" is heard. If the "click" cannot be heard, consult an authorized technician for the user's safety.



Headrest Lock
Release Button

Figure 7.6



WARNING

- When raising the headrest, never exceed the marked line to ensure safety.

7.11 Battery Indicator

7.11.1 When the ignition is turned on, the battery indicator will light up with a possible total of three red, four orange and three green lines indicating the remaining power of the batteries. (See Figure 7.7.) The positive (+) sign under the green lines indicates that the batteries are fully charged. The negative (-) sign under the red lines indicates that the batteries are (nearly or) out of power.

7.11.2 The remaining power shown by the battery indicator will vary according to the actual driving time and how you drive. Repeated starting, stopping and climbing will consume more power and drain your batteries faster than steady, conservative driving.

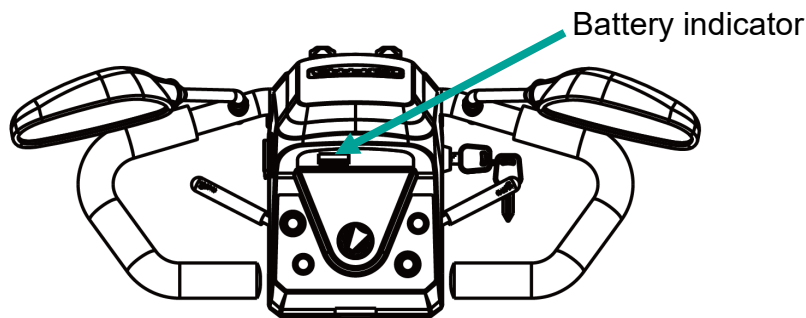


Figure 7.7



SUGGESTION

- It is recommended that you charge the batteries immediately when the battery indicator shows only three or less red lines. After charging or replacing new batteries, drive the vehicle for 2-3 minutes to make sure the batteries are fully charged.
- In wintertime, the batteries may respond slowly and the drive range (maximum distance traveled per full charge) may also be reduced. You must store your scooter indoors above freezing temperatures.
- When driving on an incline, the battery indicator light might move up and down. This is normal.
- Even if the batteries are used properly their capacity will decay over time, thereby reducing the drive range. Thus, when the drive range reduces to about 50% of what brand new batteries would offer, it's time to replace them with new batteries. Otherwise, the batteries may die unexpectedly leaving you in a possibly precarious situation.



SUGGESTION

- The drive range will be shortened when driving frequently on slopes or uneven ground, as this consumes more battery power.
- Please take the operating situations and environment into consideration. For your safety, do follow the instructions.

7.12 How to Set the Freewheel Mode

7.12.1 Drive Mode: pull the lever completely towards the rear of the scooter and the scooter can be driven by motor power. (See Figure 7.8)

7.12.2 Freewheel Mode: pull the lever completely towards the front of the scooter and the scooter can be pushed manually. Again, the electromagnetic brake does not work in freewheel mode. (See Figure 7.9)

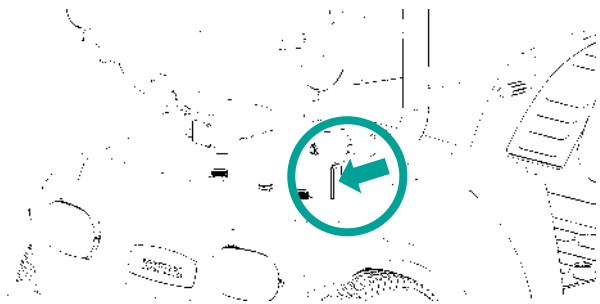


Figure 7.8 Drive Mode

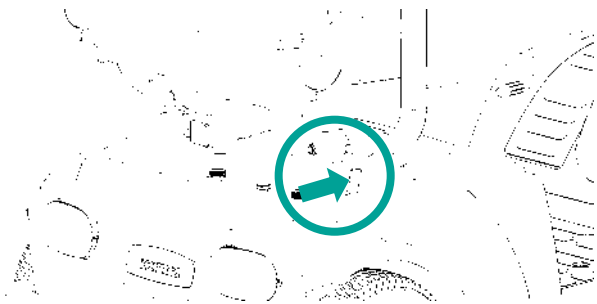


Figure 7.9 Freewheel Mode



WARNING

- In order to avoid damage or injury, DO NOT disengage the freewheel lever while going up or down an incline.

7.13 Steering Column Adjustment

7.13.1 Pull down the lever until its locking mechanism releases.

7.13.2 While holding the adjustment lever, you can raise or lower the steering column to the desired position. (See Figure 7.10)

7.13.3 When you release the adjustment lever, the steering column will lock in place. (See Figure 7.11)

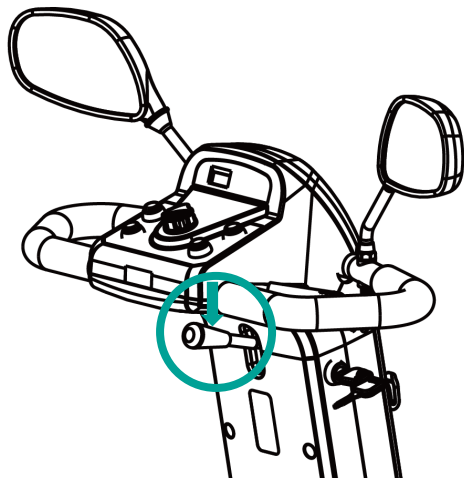


Figure 7.10

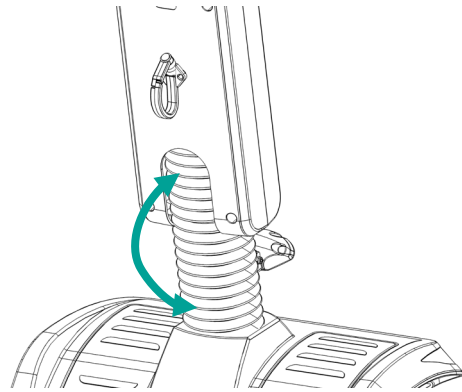


Figure 7.11

7.14 Starting and Driving

7.14.1 Make sure the driver's seat is installed properly.

7.14.2 Make sure the steering column has been secured properly.

7.14.3 Make sure the armrests have been returned to the proper down position.

7.14.4 Turn the ignition ON. If necessary, turn on the headlight and taillight.

7.14.5 Check the battery indicator and make sure there is enough power for your trip(s).

7.14.6 Set the speed dial to the proper level.

7.14.7 Be sure the accelerators are in good condition.

7.14.8 Make sure the electromagnetic brake is in good working order.

7.14.9 Always make sure that your surroundings are safe to operate the scooter.



CAUTION

- Do not pull both accelerators simultaneously, since you might not be able to control your scooter and may cause permanent damage.
- Do not turn the ignition OFF while driving, as this will lead to an abrupt stop and possible injury.
- Do not set the speed dial on high while driving indoors.
- Do not adjust the speed dial while driving. A sudden change to the highest speed may endanger you and cause failure to your scooter.
- Do not place magnetic devices near the control panel as this may affect the operation of your scooter.
- Be careful while driving in heavy traffic and crowded areas.
- While reversing the vehicle be aware of people and objects behind you.

7.15 To Stop

7.15.1 Release the accelerator completely and the electromagnetic brake will stop the vehicle.

7.15.2 Come to a complete stop before turning the ignition OFF.

7.15.3 Remove the key from the ignition for safety reasons.



CAUTION

- The stopping distance will vary with your forward/reverse speed. Therefore, please gradually slow down and come to a complete stop well before any obstacles or danger.
- To park the scooter, be sure to park on flat ground and then turn the ignition to OFF and remove the key before you exit the scooter.

7.16 Manual Emergency Brake (Optional)

7.16.1 KS-343.2S has an emergency brake (optional) mounted on the left handlebar. (See Figure 7.12) If the electromagnetic brake malfunctions, you may use the manual emergency brake to stop your scooter.

7.16.2 To operate the manual emergency brake, simply pull the brake lever on the left handlebar. The emergency brake will engage and then slow your scooter down to a complete stop.

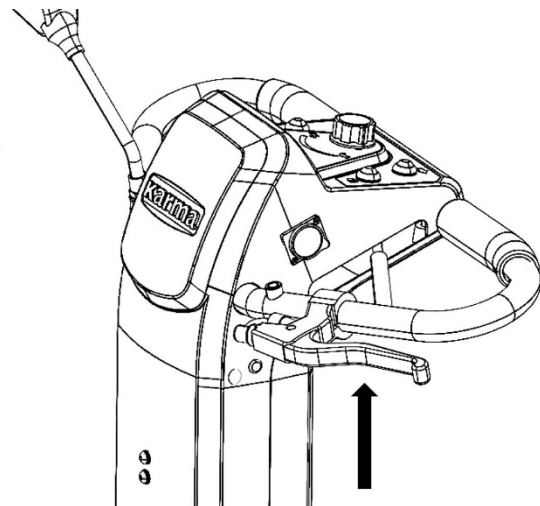


Figure 7.12



CAUTION

- The manual emergency brake is for emergencies only. Do not use the emergency brake instead of the electromagnetic brake.
- Do not use the manual emergency brake to stop the scooter while in the freewheel mode on a slope.

8. BATTERIES AND CHARGER

8.1 Charging the Batteries

Before you attempt charging, ensure you read and understand the instruction manual supplied with the battery charger, and you choose the correct input voltage for battery charger.

8.2 The Conditions of Battery Charging

8.2.1 If you have used your scooter for more than an hour continuously. We recommend you charge the batteries after your use.

8.2.2 You've used more than one third of the total charge.

8.2.3 When you haven't used the scooter for more than two weeks.

8.2.4 If the current charge is not enough to reach your final destination.

8.3 The Procedures of Battery Charging

8.3.1 Turn the scooter OFF and remove the key.

8.3.2 Connect the charger's cord to a power outlet. (See Figure 8.1)

8.3.3 Open the charging socket cap on the steering column. Then connect the charger's round plug to the charging socket. (See Figure 8.2)

8.3.4 Turn on the charger with the power switch. The charger's red LED will light up when the charger is on.

8.3.5 The charger's orange LED will light up as soon as the charging starts. The charging time is at least 6 hours, but it could be as long as 10 hours, depending on the status of the batteries and the temperature.

8.3.6 The orange LED will change to green when the charging is completed.

8.3.7 Turn off the charger, disconnect the cord and pull out the round plug from the charging socket.

Charger



Figure 8.1

Charging socket

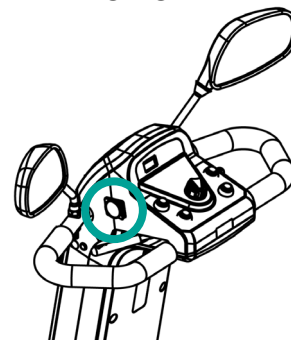


Figure 8.2



SUGGESTION

- Do not disconnect the charger cord if the charging is not completed. The battery life will be seriously shortened or decayed if the batteries are repeatedly used without being fully charged. Therefore, be sure to always charge the batteries fully.
- Always complete the charging by letting the charge LED light turn green. NEVER stop charging before it is complete.
- When finished charging, disconnect the charger plug from the charging socket as soon as possible. Even when the charger is turned OFF, the electric power will slowly discharge if the cord is not disconnected. DO NOT leave the charger ON connected to the scooter for more than 24 hours.
- Charging time depends on the surrounding temperature; it takes longer in the winter.



CAUTION

- New batteries MUST be fully charged prior to initial use of the powered scooter.
- Always charge new batteries before initial use or battery life will be reduced.
- As a general rule, recharge batteries as frequently as possible to assure the longest possible life and to minimize required charging time. Plan to recharge them when use of the powered scooter is not anticipated.
- Please follow the guidelines below to avoid accidents while charging.
 1. Be sure to only use a KARMA Scooter charger and charge the battery completely every time. The battery can be damaged if a non-genuine charger is used.
 2. Never disassemble or modify the charger. This will void the warranty.
 3. Please charge in a well-ventilated area where the battery is not directly exposed to sunlight. Do not charge the battery under rainfall, in morning dew or in an area where the humidity is high.
 4. Do not cover the scooter with any waterproof cloth or other objects while charging. Don't charge in temperatures less than 0°C (32°F) or higher than 40°C (104°F) as the charger may not work well and the battery may become damaged.
 5. The charger is not guaranteed to be water resistant.
 6. Valve Regulated Lead-Acid batteries do not have a memory function like cell phone batteries have. Please get in the habit of recharging your VRLA batteries frequently.



WARNING

- Keep your scooter away from flammable objects while charging, as it may lead to fire or explosion of the battery.
- Since the battery may produce hydrogen, do not smoke while charging and charge in a well-ventilated area.
- Never connect or disconnect the plug (cord) with wet hands or if the plug (cord) is wet to avoid possible electric shock.
- Never attempt to recharge the batteries by attaching cables directly to the battery terminals or clamps. **DO NOT** jump start your scooter!
- **DO NOT** attempt to recharge the batteries while the powered scooter is in operation.

8.4 Charger

When the power is on, the charger's red LED will be on, and the orange LED will be on during charging. The orange LED will turn green when the charging is completed.



WARNING

- The fan inside the charger will be activated when you turn on the charger. If you find that the fan does not function properly, **DO NOT** use it. Otherwise, the charger may overheat and start a fire.

Charger Indicator and Status

POWER LED :

LED (red) turn on: power on

INDICATOR LED :

LED (orange) turn on: charging

LED (green) turn on: full charged

LED (orange) flash: Error

8.5 Batteries

- 8.5.1 Do not expose the batteries to temperatures below -10°C(14°F) or above 50°C (122°F) when charging or storing the vehicle.
- 8.5.2 Exceeding the specified temperature range can lead to either freezing or overheating of the batteries. This will damage the batteries and shorten their lives.
- 8.5.3 The batteries used on your scooter are maintenance free sealed lead acid batteries. Thus, it is not necessary to change or refill the battery liquid.



WARNING

- Do not open the battery seal cap at any time.
- After ANY adjustments, repair or service and BEFORE use, make sure that all hardware is tightened securely. Otherwise, injury or damage may occur.
- When removing/installing the batteries, keep all foreign objects, especially metal, away from battery terminals.

8.6 Removing/ Installing the Batteries

Always have a KARMA provider install new batteries. When moving a battery, ALWAYS hold it by its handle. It is the most convenient method and also helps to prolong the life of the battery. DO NOT tip the batteries. Keep the batteries in an upright position. The use of rubber gloves and chemical goggles is recommended when working with batteries.

- 8.6.1 Turn your scooter OFF and remove the key from the ignition.
- 8.6.2 Remove the driver's seat from the scooter.
- 8.6.3 Remove the rear casing.
- 8.6.4 Disconnect top battery harness.
- 8.6.5 Disconnect the connectors of the battery from the connectors of the central relay box. (See Figures 8.3 and 8.4)

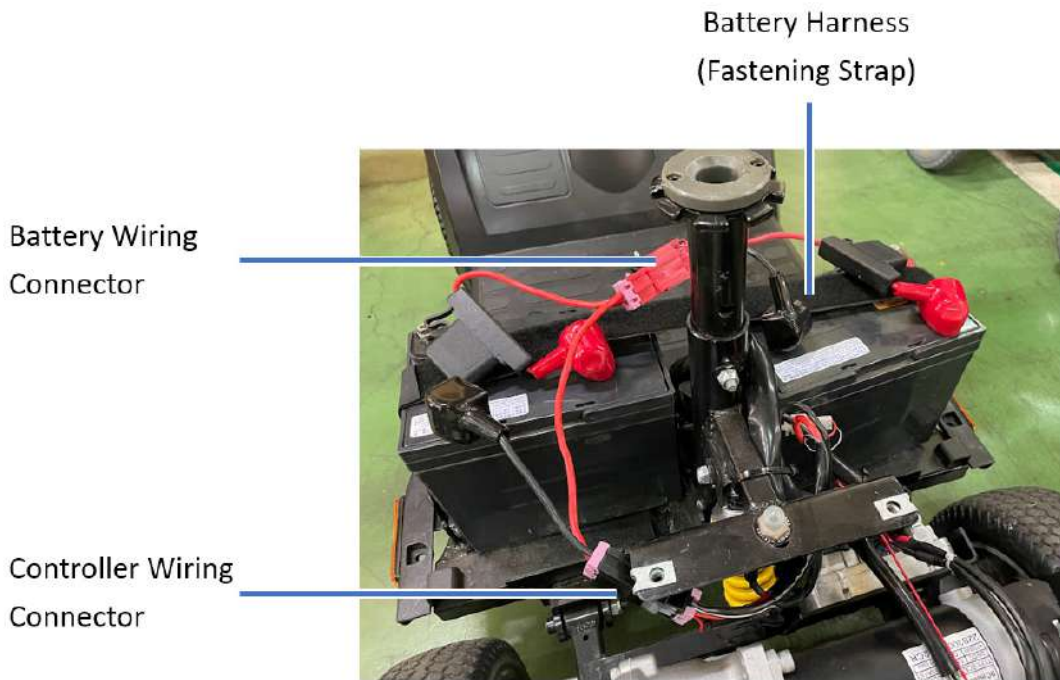


Figure 8.3



CAUTION

- Place the powered scooter in a well-ventilated area where work can be performed without risking damage to carpeting or floor covering.
- Failure to use the correct battery size and/or voltage may cause damage to the powered scooter and give unsatisfactory performance.
- When tightening the clamps, always use a box or crescent wrench. Pliers will round off (strip) the nuts. NEVER wiggle the terminal when tightening as the battery may be damaged.



WARNING

- The warranty and performance specifications contained in this manual are based on the use of deep cycle sealed lead acid batteries. KARMA strongly recommends their use as the power source for this unit. We also recommend you go to an authorized KARMA dealer to have a qualified technician perform this work.
- NEVER allow any of your tools and/or battery cables to contact BOTH terminal posts at the same time. An electrical short may occur and injury or damage may occur.

8.6.6 Remove the batteries and cable assemblies from the scooter.

Scooter Model No.	Quantity	Volts	Ah(Ampere-hour)
KS-343.2S	2	12	36 50 (Optional)

NOTE: Charge the batteries daily. It is critical not to let them run low at any time.

NOTE: KARMA recommends that both batteries be replaced if one battery is defective.

8.6.7 If necessary, lift the battery terminal insulator/ boot off the battery terminal (you will need a crescent wrench).

8.6.8 Position and secure battery cables onto new battery terminals. Connect the black cable to the negative (-) terminal. Connect the red cable to the positive (+) terminal.



WARNING

- Always connect the black cable to the negative (-) terminal first. Otherwise, injury may occur.
- Dispose of unwanted batteries according to federal, state, and local regulations. Do not burn the batteries. Batteries should be recycled. Contact authorized dealers for more information.
- DO NOT improperly dispose of unwanted batteries or injuries may occur. Contact with battery acid causes injuries or damage to skin. Mishandling can result in 2nd or 3rd degree burns or blindness. Swallowing battery acid will cause fatal burns to internal organs. Breathing fumes from a battery may cause discomfort and damage your respiratory system. Remove clothes immediately if they have been contaminated with acid.



CAUTION

- The positive (+) connector **MUST** be connected to the positive (+) terminal/post. Otherwise, serious damage will occur to the electrical system.
- Connect the battery wiring connector to the central relay box wiring connector.

8.6.9 Repeat steps 7-8 for the other battery.

8.6.10 Verify that all connections are correct and terminals are secure. (See Figure 8.5)

8.6.11 Install the new batteries with cable assemblies onto the scooter.

8.6.12 Charge the batteries.

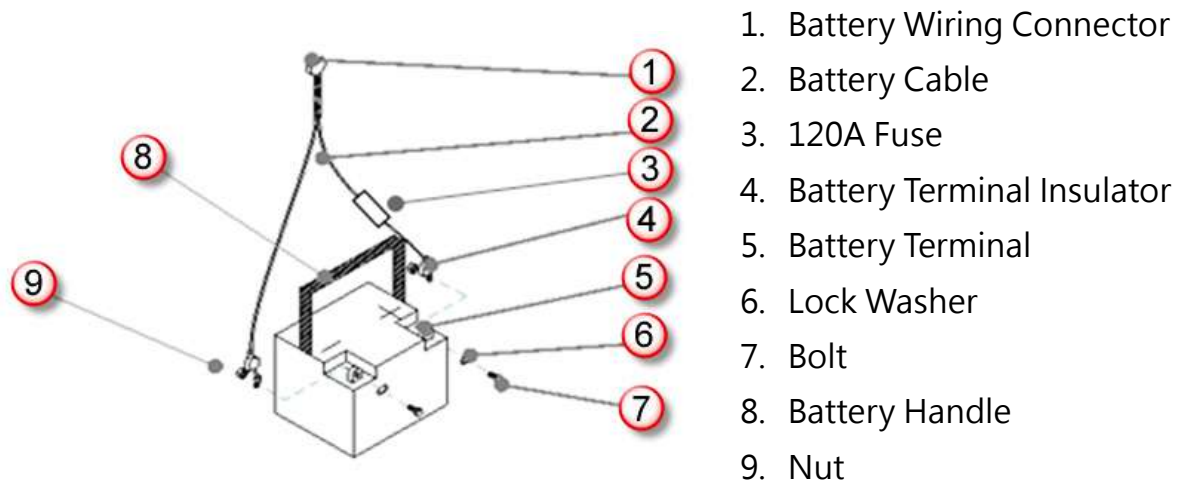


Figure 8.4

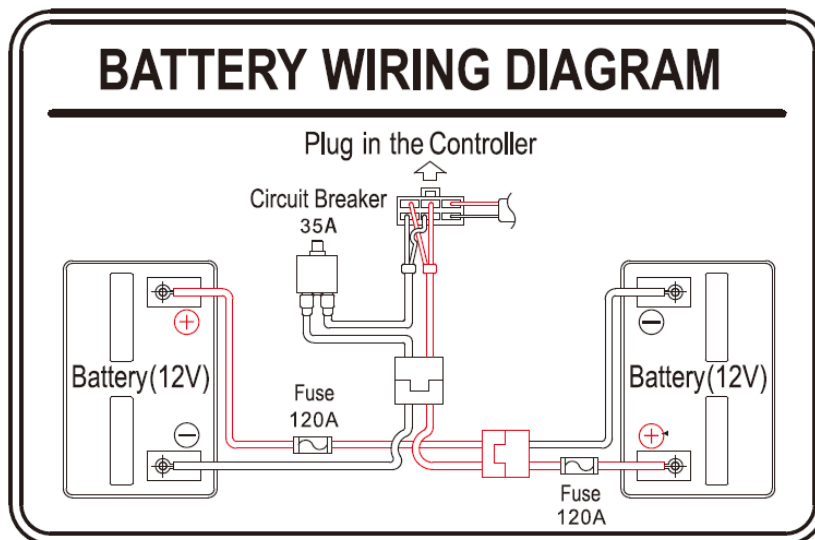


Figure 8.5

8.7 Cleaning the Batteries

If a battery is contaminated by dirty water, battery acid, dust or other soil, the battery will discharge quickly. Therefore, please follow the following steps to clean the battery:

8.7.1 Turn the power OFF.

8.7.2 Remove the driver's seat.

8.7.3 Remove the rear casing and unplug the taillight and signal lights from the electrical system.

8.7.4 Use a clean cloth to wipe off the soiled area.

8.7.5 Take out the battery.

8.7.6 Clean the battery with a clean cloth.



SUGGESTION

- If necessary, ask for help from your KARMA scooter dealer for cleaning and replacing the batteries.
- Using the battery of this wheelchair to charge mobile devices or any other devices will reduce the drive range. When the battery capacity is low, do not charge any device except in an emergency. When the battery capacity is full, please use it with discretion. Please use the original adapter when charging other devices.
- Battery capacity will vary with outside conditions; the maximum drive range will decrease in the winter. If the vehicle is not going to be used for a long time, please remember to charge the batteries at least once every two weeks.
- Replace both batteries simultaneously.



WARNING

- Do NOT allow conductive material such as a wrench to join the two battery terminals. This will result in a short that can cause burns to you and damage the battery.
- Most batteries are not sold with instructions. However, warnings are frequently noted on top of the batteries. Read them carefully.
- Do NOT allow the liquid in the battery to come in contact with skin, clothes or other items. It is a form of acid and may cause harmful or damaging burns. Should the liquid come into contact with skin, rinse the area immediately and thoroughly with cool water. If liquid comes into contact with eyes, flush eyes immediately and seek medical attention as soon as possible.
- The use of rubber gloves and chemical goggles are recommended when working with batteries.
- NEVER smoke or strike a match near batteries.

8.7.7 Examine the battery clamps/terminals for corrosion, if the terminal is covered by white powder, please stop using the battery due to it indicates that there's possible leakage of the battery. Please replace the batteries.



WARNING

- If there are any cracks or leaks, replace the batteries **IMMEDIATELY**.

8.7.8 Clean the terminals and the inside of the battery clamps by using a battery cleaning tool, wire brush or medium grade sandpaper. Upon completion, these areas should be shiny, not dull.

8.7.9 Carefully dust off all metal particles.



WARNING

- There are many risks involved with improper disposal of batteries, whether damaged or not. Batteries may contain heavy metals and be considered hazardous waste.
- Many regions around the world now strictly enforce laws to help protect our environment. By not disposing of batteries properly, you may be liable for fines from your local through national government.
- By not recycling batteries, they end up in landfills that are already low on space. From these land fills, lead and other chemicals may leach into streams and rivers destroying ecosystems and poisoning local water resources.
- Improper disposal of batteries may also cause injury to unsuspecting others that come in contact with them. If you come in contact with fluids or corroded powder from a battery, rinse with water and contact a physician if necessary. If contact with eyes occurs, rinse for 15 minutes and then visit a physician.
- Incinerating or burning a battery will cause it to explode.
- Please see the end of Section 13. Cleaning & Recycling for more information.
- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.

9. INSPECTION AND MAINTENANCE

9.1 Daily Check

Check the following items before driving. If you find anything abnormal, visit your KARMA scooter dealer for further inspection before using it.

Item	Inspection Content
Handlebars	Are they loose and/or making noise? Can they be turned left and right smoothly?
Speed Dial	Can it be adjusted freely and does it function well?
Accelerators	Does the scooter move when a lever is pressed? Does the scooter stop when the lever is released completely?
Motor	Is there any abnormal motor noise? Does the electromagnetic brake work properly?
Freewheel Mode	Does the freewheel lever work properly?
Battery Indicator	Does it light up when the power is ON? Is there enough power for your trip?
Horn	Does the horn work well?
Turn Signals	Do the turn signals work?
Headlight	Does the headlight work?
Taillight	Does the taillight work?
Driver's Seat	Does the driver's seat, slide and swivel smoothly?
Reflectors	Are they broken?
Rear View Mirrors	Are they broken?
Tires	Are there any cracks or other damage to the tires? Check the tire tread depth and air pressure.
Other	Is there any abnormal noise? Is there any oil leakage from the transmission box?



CAUTION

- Visit a KARMA scooter dealer for inspection and maintenance if you find anything abnormal.

9.2 Regular Maintenance Record

In order to ensure that your scooter is in good condition, please contact KARMA authorized dealers regularly and make further scooter inspection and maintenance records. We recommend that you inspect and maintain your scooter **every six months**. A maintenance/service fee may apply.



SUGGESTION

- Even if you don't use the scooter for a long time, the scooter should still be maintained regularly.
- You should clean your scooter, inside and out, regularly to keep it in good condition and safe.

I - Inspection

A - Adjustment

M - Maintenance

R - Replacement

T - Tightening

L - Add Oil

Item/Period		1 mth	6 mth	12 mth	18 mth	24 mth	30 mth
Control Panel	Accelerators		I	I	I	I/A	I/A
	Speed Dial and Other Buttons		I	I	I	I/R	I/R
	Connection to the Electrical System			I		I	I/A
Motor	Operation and Noise		I	I	I/A	I/A	I/M
	Electromagnetic Brakes		I	I	I	I	I/R
	Connection to the Electrical System			I		I	
Transmission	Freewheel Mode Lever			I		I/A	
Batteries	Loose or Corroded Terminals			I		I	
	Connection to the Electrical System			I		I	
	Damage to the Electrical Cord/Cable			I		I	

Item/Period		1 mth	6 mth	12 mth	18 mth	24 mth	30 mth
Charger	Charging Function and LED Lights	I	I	I	I/M	I/M	I/R
	Socket, Plug and Cords			I		I	
	Fan Functions Properly			I		I/M	
Driver's Seat	Slide, and Swivel Levers		I		I		
Steering Column	Turns Smoothly			I	I	I/A	I/A
Tires	Cracks/Surface Damage	I	I	I	I	I/R	I/R
	Tread Depth		I	I/R	I	I/R	I
	Abnormal Wear Pattern			I/R		I/R	
Wheel Rim	Tightness of Bolts and Nuts			T		T	
	Wear or Deformation Around Tires			I		I	
Shock Absorbers	Tightness of Bolts and Nuts			I		I/T	
	Damage to Shock Absorbers			I		I/A	I/R

9.3 Batteries, Fuses and Tires

9.3.1 Batteries

Refer to Section 8. BATTERIES AND CHARGER.

9.3.2 Fuses

9.3.2.1 There are five fuses on your scooter.

9.3.2.2 Two are located inside of the control panel (1A & 3A on the PCBA), and one is near the batteries (10A). There are also two 120A fuses at the battery cables as there's one fuse at each of the battery cables.

9.3.2.3 If the ignition is turned ON and the battery indicator does not work, the light bulbs do not light up or your scooter won't work, have your KARMA dealer check the fuses as one of them may be broken.



CAUTION

- Ask for help from your KARMA Scooter dealer for inspecting or replacing the fuse(s), since the rear casing or control panel cover must be removed to replace a fuse. An electrical system check must also be performed to assure no damage has occurred.

9.3.3 Tires

9.3.3.1 KS-343.2S is fitted with PU solid tires, and it can be fitted with air tires as options. The type of tire, tire size, recommended pressure of the tire, and maximum pressure of the tire are shown in the table below:

Mounting Positions of the tire	Tire type	Tire Size	Recommended pressure	Maximum pressure
Front castor	PU	260 x 85 (10")	N/A	N/A
Drive wheel				
Front castor	Air	3.00-4 (10")	30±2 PSI	32 PSI
Drive wheel	Air	3.00-4 (10")	35±2 PSI	37 PSI
Front castor	Air	3.00-5 (11")	30±2 PSI	32 PSI
Drive wheel	Air	3.00-5 (11")	35±2 PSI	37 PSI

9.3.3.2 The condition of the tires is affected by the way you drive and use your scooter. Please check the tread depth regularly.

9.3.3.3 Replace the tires when the tread depth is less than 0.5 mm.

9.3.3.4 In case of a tire puncture, consult a suitable bike repair shop to have the tube replaced by a skilled artisan.



CAUTION

- When the tread depth is below 0.5 mm, the tire does not have good traction. This may lead to vehicle slippage and makes braking distances much longer. Go to your KARMA dealer to replace the tire as soon as possible if it has less than a 0.5 mm treads depth.
- The tire pressure must be kept at the recommended pressure for the best drive range (maximum distance traveled per charge) and usage/handling.

9.4 General Maintenance

9.4.1 You must maintain the vehicle more frequently if you often drive on grass, sand or gravel roads.

9.4.2 Do not use water, oil or other chemical solutions to clean your scooter. Be sure NOT to spray the vehicle with water, as not to damage the electronic components and PC circuit board. Please clean the vehicle by wiping it with either a dry or moist cloth.

9.4.3 Please take the vehicle to an authorized KARMA Scooter dealer for repairs and adjustments. Improper adjustments could lead to scooter malfunction or an accident.

9.4.4 Please use a soft and dry cloth to keep your scooter clean. Use moderate or mild detergent to clean the scooter, if necessary.



CAUTION

- Before performing any maintenance, be sure to turn the ignition OFF and unplug the charger if connected.
- DO NOT over-tighten any hardware. This could cause damage to the frame and hardware.



SUGGESTION

- Do not directly spray water on your scooter to wash it as this could lead to a malfunction in the electric system.
- Do not use gasoline, solvents or other abrasive solutions; the casing may become deformed or damaged.



WARNING

- After ANY adjustments, repair or service and BEFORE use, make sure that all hardware is tightened securely, otherwise injury or damage may occur.

9.5 Maintenance Procedures

9.5.1 Before using the powered scooter, make sure all nuts and bolts are tight.

Check all parts for damage or wear and have a qualified technician replace it if necessary. Check all parts for proper adjustment.

9.5.2 Ensure that the batteries are properly maintained and charged as required.

9.5.3 Inspect the brake for proper operation.

9.5.4 The wheels and tires should be checked periodically for cracks and wear, and should be replaced by a qualified technician.

9.5.5 Regularly check for loose nuts and/or bolts in the front casters and drive wheels. If they are loose, have them adjusted by a qualified technician.

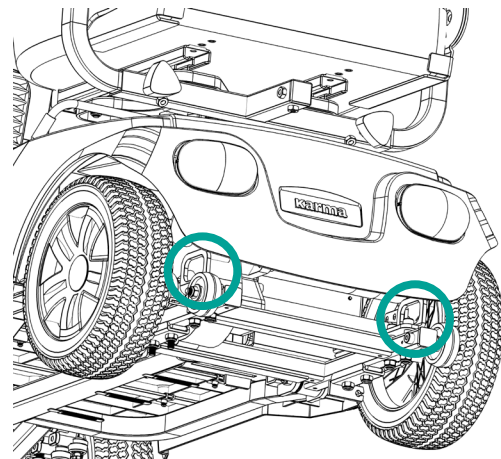
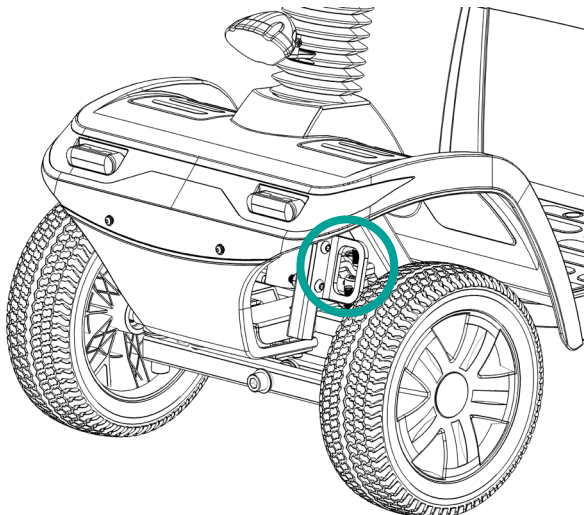
9.5.6 Clean the dirt, dust and grease from exposed components.

9.5.7 A qualified technician can be found with an authorized distributor/dealer.

9.6 Transporting and Storing

9.6.1 Make sure the vehicle is stored with the seat set to the forward position, with the ignition turned OFF and the key removed.

9.6.2 If you need to fix the scooter (without occupants) in the vehicle, you can install the traffic hooks (optional) on the scooter and fix them with a four-point seat belt restraint system to keep the stability of the scooter.



SUGGESTION

- Please store the scooter in a location where it is out of direct sunlight, rain and dew. When stored for a long time, please charge the batteries to full and then disconnect the battery terminals. For more details, consult your KARMA Scooter dealer.



WARNING

- KS-343.2S can NOT be used as seats in any vehicles. The users are NOT transported in any vehicle while seated in the scooter. In the case of accident or a sudden stop, the user or passengers may be at risk of getting injury. Transfer the user from the scooter into a vehicle seat and to securely stow the scooter in a separate compartment.

9.7 Removing the Seat

9.7.1 Lift the swivel lever all the way up. (See Figure 9.1.)

9.7.2 Place hands on either side of seat base, pull up on the swivel lever and lift the seat vertically keeping back posture upright.

9.7.3 Lift the seat until it detaches from the frame post.

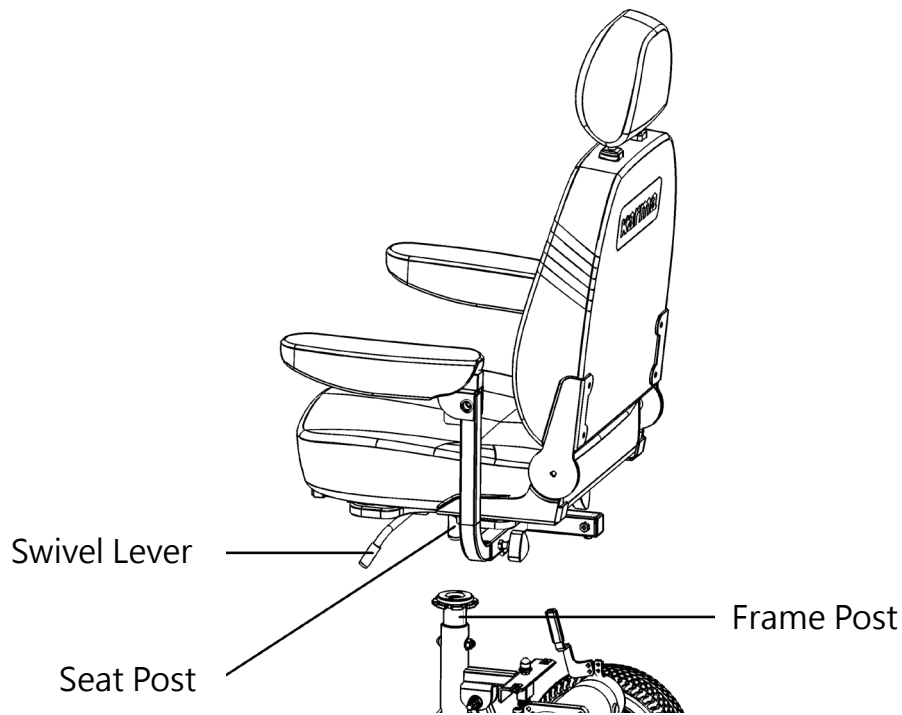


Figure 9.1

9.8 Installing a Pelvic Belt and Maintenance

9.8.1 After market pelvic belts are a great idea for all users of powered scooters. Scooters are motorized vehicles. Some local or regional laws may require drivers to wear pelvic belts. Contact your local government center for more information to ensure that you use your scooter within the laws of your region.

9.8.2 Figure 9.2 shows the location where a pelvic belt can be attached by your Karma service provider. They have all the tools, service manuals and technical know-how to assure your safety through a proper installation. Karma does

NOT recommend installation of a pelvic belt by anyone other than an authorized Karma service provider.



Figure 9.2

9.8.3 When you don't use the pelvic belt, please fasten the belt to avoid the belt from dropping into the rear wheels during motion.

9.8.4 Maintenance

The pelvic belt does not require any maintenance, but it should be inspected every month to ensure that the edges are not frayed and weekly to make sure that it correctly fits the user.



CAUTION

- **Maintenance:** There is no specific maintenance for the pelvic belt; however, please check if the edge of the pelvic belt is worn or torn before you use it. Meanwhile, please adjust the pelvic belt properly to fit the user. If the pelvic belt is damaged, please replace a new one immediately.

9.9 Adjusting the Seat Height

Please see figures 9.3 and 9.4 and the description in the follows.

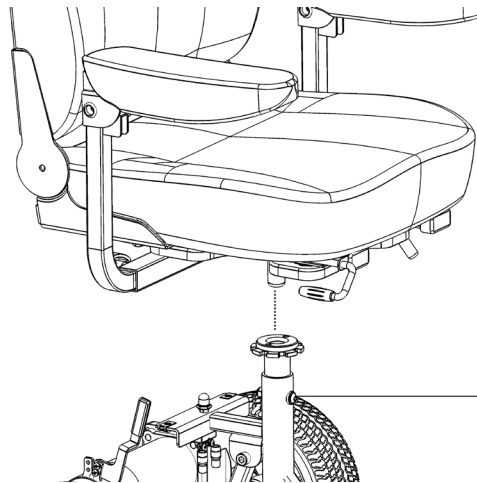
9.9.1 The seat post rests on a seat height adjustment bolt that runs through the center of the frame post. There are three holes in the frame post that allow you to adjust the seat height. Please see "Seat surface height at front edge

with cushion” in Section 10. SPECIFICATIONS for the seat height values.

9.9.2 To adjust the seat height, remove the seat by following the previous instructions. Then remove the rear casing.

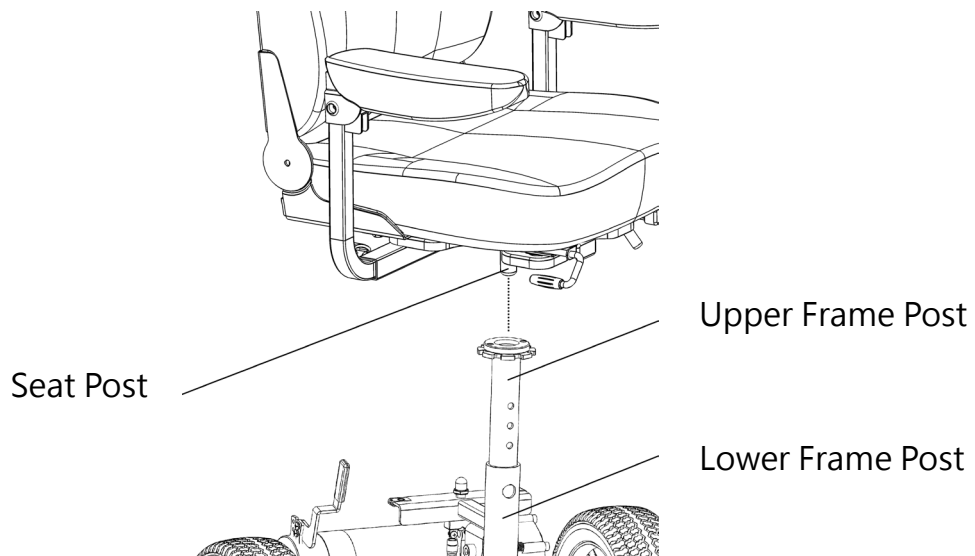
9.9.3 Next, remove the bolt from the frame post. (You might want to disconnect the batteries to allow more room to work). Slide the upper frame post up or down to the desired position, and then tighten the bolt.

9.9.4 Now you can mount the rear casing back and install the seat following the previous instructions.



Seat height adjustment bolt

Figure 9.3



Seat Post

Upper Frame Post

Lower Frame Post

Figure 9.4

10. OPTIONAL ACCESSORIES

10.1 Crutch Holder (Figure 10.1)

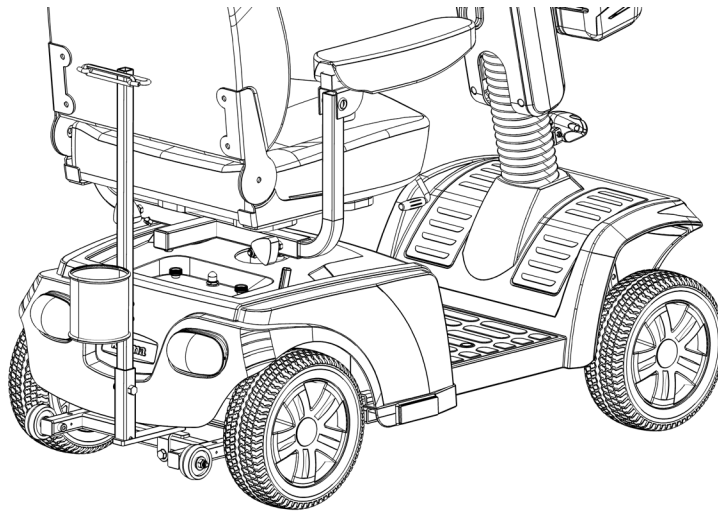


Figure 10.1



WARNING

- Make sure all screws are fully tightened to avoid damage.
- Accessories add to the total weight and lower the aerodynamics of your scooter, thus reducing the maximum range per charge.

11. TROUBLE SHOOTING

When there's any problem with your scooter, you can inspect the following before taking your scooter to a KARMA scooter dealer.

Problem	Checking Points and Corrective Action
My scooter does not start	Is the power turned OFF? ↓ Turn ON the ignition.
	Do the batteries still have power? Is the battery indicator light not on? ↓ Charge the batteries.
	Is the charger plugged into the scooter? ↓ Unplug the charger and put it away.











If you cannot solve the problem by yourself, contact your KARMA dealer for help.

11.1 Status Indicator (LED) and Battery & Diagnostics Indicator

11.1.1 During the first half-second after the scooter is switched on, the central relay box (controller) is performing important safety checks within itself and the rest of the scooter's electrical system. Therefore, if you push the accelerator during this time, you will not be able to drive until you have returned the accelerator to the rest position. This condition is indicated by a rapid flashing.

11.1.2 If you do not push the accelerator as you switch the scooter on and the status indicator flashes rapidly, then there may be a fault.

11.1.3 If a fault occurs and you have a scooter model fitted with a TruCharge (Battery & Diagnostics Indicator) display, you can find out what has happened by counting the number of bars that are flashing on the battery gauge. The information below gives an overview of the fault types and a list of self-help actions. Try to use this list before you contact your service agent. Go to the number in the list, which matches the number of flashing bars, and follow the instructions.

Number of Bars	Battery & Diagnostics Indicator
	<p>Battery Voltage</p> <p>The batteries need charging or there is a bad connection to the batteries. Check the connections between the central relay box and the batteries. If the connections are good, try charging the batteries.</p>
	<p>Motor Disconnected</p> <p>There is a bad connection to the motor. Check all connections between the motor and the central relay box.</p>
	<p>Motor Wiring Trip</p> <p>The motor has a short circuit to a battery connection. Contact your service agent</p>
	<p>Freewheel Mode</p> <p>The freewheel switch is activated or the manual brake disengagement mechanism is operated. Check the position of the switch or lever.</p>
	<p>Not used.</p>
	<p>The central relay box is being inhibited from driving.</p>
	<p>Throttle Fault</p> <p>A throttle fault is indicated. Make sure that the throttle is in the rest position before switching.</p>
	<p>Possible Control System</p> <p>A controller fault is indicated. Make sure that all connections are secure.</p>
	<p>Brake Bad Connection</p> <p>The parking brakes have a bad connection. Check the parking brake and motor connections. Make sure the controller connections are secure.</p>
	<p>Battery Connection</p> <p>An excessive voltage has been applied to the controller. This is usually caused by a poor battery connection. Check the battery connections.</p>

12. SPECIFICATIONS

Product Model	KS-343.2S	
Nominal seat width (mm/in) ¹	425 / 17	425 / 17
Nominal seat depth (mm/in) ²	420 / 17	420 / 17
Front caster / Drive wheel size (in)	10 / 10	11 / 11
Backrest height (mm)	490	490
Headrest height above seat (mm)	585-653	585-653
Armrest to seat distance (mm)	190	190
Front location of armrest structure (mm)	760-1070	760-1070
Seat surface height at front edge (mm)	592-642	600-650
Footrest to seat distance (mm)	400-450	400-450
Effective seat width (mm)	N/A	N/A
Effective seat depth (mm)	420	420
Seat plane angle (X°)	7.5	7.5
Backrest angle (X°)	19	19
Seat to backrest angle (X°)	101.5	101.5
Leg to seat angle (X°)	90	90
Overall length with legrest (mm)	1180-1280	1180-1280
Overall width (mm)	600-680	600-680
Overall height (mm)	1192-1312	1200-1320
Folded length (mm)	1180	1180
Folded width (mm)	600	600
Folded height (mm)	672	680
Total mass (kg)	91.1 (36Ah)	93.7 (36Ah)
	99.1 (50Ah)	101.7 (50Ah)
Total mass without batteries (kg)	68.5	71.1
Mass of the heaviest part (kg)	49.4	52
Maximum user weight (kg)	136	136
Motor power (W)	470	470
Battery capacity (Ah)	36 * 2	36 * 2
	50 * 2 (optional)	50 * 2 (optional)
Charger output current (A)	5	5
Drive range with 100 kg occupant (km) ³	25 (36Ah)	28 (36Ah)
	32 (50Ah)	37 (50Ah)

Product Model	KS-343.2S	
Drive range with 136 kg occupant (km) ³	21.4 (36Ah) 27.6 (50Ah)	26.8 (36Ah) 34.5 (50Ah)
Battery Compartment (L x W x H) (mm)	210 x 170 x 180 (Single Compartment)	
Maximum speed forward (km/h)	9	10
Minimum braking distance from max speed (mm)	1800	2100
Obstacle climbing (mm)	75	75
Ground clearance (mm)	45	45
Minimum turning radius (mm)	1600	1600
Reversing width (mm)	1800	1800
Static stability downhill (X°)	15	15
Static stability uphill (X°)	15	15
Static stability sideways (X°)	14	14
Dynamic stability (X°)	6	6
Ability to climb rated slope (X°) ⁴	10	10

1 **Nominal seat width** is measured the width of seat cushion at 120 mm in front of the backrest. This value is mainly used in the product ordering process.

2 **Nominal seat depth** is measured from the front end of the seat cushion to the back cushion. This value is mainly used in the product ordering process.

3 **Drive range** are estimated based on the following conditions: 20°C-35°C, 100 kg or 136 kg occupant, brand new fully charged batteries and driving on the flat road. According to EN 12184: 2014 standard, KS-343.2S meets the drive range requirement of Class B scooter when tested with one 100 kg occupant.

4 **Ability to climb rated slope** is estimated based on the following conditions: 20°C-35°C, 136 kg occupant, and brand new fully charged batteries.

- The actual product specifications differ from the data in the table by ± 10 mm ± 0.5 kg.

- The actual product specifications may vary according to different configurations.

- KARMA reserves the right to modify information herein without further notice.

- If you want to know more about the measurement methods of scooter specifications, please scan the QR code to watch the instructions on the KARMA website.



13. CLEANING & RECYCLING

13.1 Cleaning

- 13.1.1 In order to lengthen the life of your scooter, it is suggested that you clean the scooter periodically (if not daily), especially after it is used in the rain or snow.
- 13.1.2 We suggest not to use your scooter in the rain or snow.
- 13.1.3 If you are traveling and get caught in the rain, we suggest you try to find shelter and turn OFF your scooter while waiting it out.
- 13.1.4 If you can't find shelter, proceed to your destination.
- 13.1.5 However we suggest that recommend you do not do this often as it may shorten the life of your scooter or cause damage.
- 13.1.6 Driver's seat upholstery: use soapy water. Wring out the sponge/ cloth before scrubbing. Do not use the scooter until it is dry.
- 13.1.7 Frame: wipe with a damp cloth, but be sure not to splash/spray the scooter with water, as doing so may damage the motor, electrical wiring and battery.
- 13.1.8 If compressed air is available, you can use the compressed air to clean your scooter (Keep the nozzle at least 100 mm away from your scooter).
- 13.1.9 Casing: wipe with a damp cloth. After it is dry, coat the casing with a light layer of wax, if desired.

13.2 Post-Consumer Recycling

- 13.2.1 A post-consumer recycling plan should follow the Environmental Protection Administration's regulations.
- 13.2.2 The items listed below are for reference only as local law and regulation may vary.

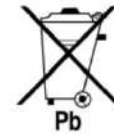
Part Name	Material	Type
Frame	Steel	Recyclable
Casing	ABS	Recyclable
Battery	Various	Recyclable
Motor/Reduction Gear	Various	Recyclable
Electric Parts	Various	Recyclable

- 13.2.3 There are many organizations in many countries you can find on the internet that will accept used goods for charity or disassemble electronic equipment and batteries to recycle them.

13.2.4 Please search the information highway to help less fortunate individuals and protect our planet for future generations.

13.2.5 Various parts of this scooter should be recycled to the collection and recycling location nearest to you.

Check with your local recycling center on where and how to recycle used batteries as this information varies from region to region.



14. WARRANTY

14.1 Serial Number

To ensure after-sale service and warranty, please record and fill in the vehicle identification number. The serial number can be found on the rear casing at the left side.

Model	KS-343.2S
Serial Number	

14.2 Contents of Warranty

- 14.2.1 Repair will be provided free of charge if the problems are due to manufacturing or defective components within the warranty period (a repair of this kind will hereafter be called warranty repair).
- 14.2.2 The warranty repair can be performed by authorized KARMA scooter dealers only.
- 14.2.3 KARMA is not responsible for the transportation costs for repair and replacement.
- 14.2.4 Defective parts repair under the warranty period will be the property of KARMA.

14.3 Warranty Duration and Parts Covered by the Warranty

Items	Warranty Duration
Electronic Items (Motor, Controller, Charger)	One year from the date of purchase.
Frame	Five years from the date of purchase.
Batteries	Please contact your local dealer for detailed information.

14.4 Items Not Covered

The items listed below are not covered:

- 14.4.1 Consumable parts such as brake shoes or pads, clutch shoe and lining, light bulbs, fuses, upholstery and seating, brake cable, oil seal packing and gasket, screws/bolts and washers, lubricant oil and grease, carbon brush inside the motor, battery liquid, footrest carpet, etc.;
- 14.4.2 Those that do not affect the quality and functioning of the scooter such as noise or vibration;
- 14.4.3 Wear and tear resulting from usage as well as conditions resulting from lapse of time (e.g., normal aging and deterioration of paint, electroplating, plastic parts, etc.);
- 14.4.4 Damage due to a lack of maintenance or improper operation and storage;
- 14.4.5 Fees for routine inspections, adjustments, adding oil, cleaning and other maintenance;
- 14.4.6 Fees for regular inspections and maintenance; and
- 14.4.7 Any fees incurred as a result of warranty repair, loss or compensation because of the unavailability of the scooter (telephone use, shipping, car rental, travel costs, etc.).

14.5 Problems Not Covered

Problems caused by the following reasons are not covered:

- 14.5.1 Failure to carry out the regular inspection and maintenance recommended by this owner's manual;
- 14.5.2 Improper storage;
- 14.5.3 Tampering by changing or adding components to the vehicle, which are not approved by KARMA;

- 14.5.4 Damage caused by using non-KARMA genuine parts or other parts not recommended by KARMA;
- 14.5.5 Abuse or misuse of the vehicle such as driving over curbs and overloading the scooter with passengers or goods;
- 14.5.6 Driving in places where the vehicle should not normally be driven or used;
- 14.5.7 Damage or surface corrosion from environmental factors such as airborne fallout (chemicals, tree sap, et cetera), stones, hail, windstorms, lightning, floods and so on;
- 14.5.8 Change of any material or component parts not authorized by KARMA (Don't carry objects that may lead to the scooter being unbalanced) ;
- 14.5.9 The scooter shall not be pulled or pushed by another vehicle when there is a person on the scooter or the drive wheels are not set to the freewheel mode; and having its structure inspected.
- 14.5.10 Do not drive a scooter that is older than 10 years without having the structure inspected.

14.6 The Responsibilities of the User

The following items are the responsibility of the user:

- 14.6.1 Proper use of the vehicle in accordance with this Owner's Manual;
- 14.6.2 Performance of the daily inspections;
- 14.6.3 Performance of the regular maintenance recommended by KARMA; and
- 14.6.4 Keep a record of vehicle inspection and maintenance in the back of this Owner's Manual.

14.7 Warranty Effectiveness

The warranty form must be completely filled out and stamped by the KARMA dealership where the scooter was purchased.

14.8 Transfer of Warranty Rights

If you purchase a second-hand KARMA scooter while it is still within the warranty period, bring the Owner's Manual and the vehicle to the dealership where the scooter was purchased for registration.

Warranty Form (You may photocopy this from)

Full Name	
Gender	
Date of Birth	Year Month Day
Address	
Model No.	KS-343.2S
Serial Number	
Date of Purchase	Year Month Day
Purchaser Signature	

Dealer's Data

Name of the Store	
Phone No. and Address	

If you have any suggestions on how to improve our products, please don't hesitate to contact your local dealer to let us know what you think of your scooter. Thank you and enjoy.

karma

A Better Wheelchair, A Better Fit



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