



QARGO 4EV

Operating Instructions



Empower the Future

Preface

We'd like to extend our appreciation to you for using Quantron vehicles.

Achieving the best benefits for your newly purchased Quantron vehicle is the commonly pursuing goal of you and us. Therefore, we sincerely hope that you can carefully read this manual and master all operation procedures described before operating this vehicle.

This manual is suitable for the QARGO 4EV.

This manual is attached in the vehicle and is not for sale. Please verify this manual with your purchased vehicle. In event of any mistake or omission, please request from or replace with a dealership and take cautions to the preservation. The graphics and descriptions contained in this manual are correct at the time of publication. However, due to continuous improvement and perfection of our product structure, the descriptions contained in this manual may differ from the actual structure of the vehicle. In such case, please consult with a dealership. At the transfer of your vehicle, please hand over this manual to new owner as well.

Without written consent of our company, it's prohibited to duplicate, translate, or abstract this operation manual. Our company reserves all legal copyright rights and the change rights. Due to our improvements on all vehicle models, the relevant equipment and technologies are subject to changes without further notice.

For the sales, quality warranty, and spare part purchase of the products of Quantron AG, please contact an [authorized service station](#)

This manual adopts legal units of measurement.

Quantron AG.

September, 2023

Before Reading

This manual is one part of the vehicle and shall be preserved and used along with the vehicle

Operational instruction

Content

The contents lists in consequence the main titles of all contents in this manual.

Direction

The orientation description (front, rear, left, and right) used in this manual is based on the forward driving direction of the vehicle, unless otherwise specified.

Figures

The figures used in this manual are only intended to ease the understanding of the contents and operation methods of this manual and may differ from the actual articles. In event of discrepancy, the actual articles shall prevail.

Warning Description

Notice

The failure to abide by the descriptions specified under the heading Notice will lead to personal injuries or damage of assemblies and vehicle. For instance:

NOTE

After the closing of doors, please check once again to ensure that the doors are closed tightly. Driving with doors half-closed may cause accident.

Warning

The failure to abide by the descriptions specified under the heading Warning will lead to personal casualty. For example:

⚠ WARNING

Do not adjust the driver seat longitudinally during the driving of the vehicle.

Danger

The failure to abide by the descriptions specified under the heading Danger will lead to serious personal injuries or damage of assemblies and vehicle. For instance:

⚠ DANGER

Do not attempt to open or dismantle any of the batteries.

User Attention

Respected user:

To better protect your rights and interests, please read the following requirements carefully and strictly follow them in use. Thank you very much for your support! Quantron will not bear cost of repairs incurred as a result of failure to follow related operational procedure.

The Quantron QARGO is a Zero Emissions Vehicle during usage because it does not emit exhaust gases, such as carbon dioxide and nitrogen oxide.

This is a high-voltage, purely electric vehicle. Some of the vehicle's systems operate differently and have different operating characteristics than vehicles equipped with an internal combustion engine.

Please carefully read the Operation Manual of this vehicle and operate and maintain the vehicle strictly as per the requirements of this Operation Manual, in order to prolong the life of vehicle and promote the power performance and economy of vehicle.

This vehicle uses electric energy stored in the lithium ion (Li-ion) battery. Prior to being driven, the vehicle high voltage battery must be charged with electricity, using one of the many compatible chargers.

As the vehicle operates, the high voltage battery will gradually discharge. As it does so, some limits may be applied to the powertrains, this is considered normal operation.

Additionally, climatic conditions such as extreme heat or extreme cold may lead the vehicle to automatically restrict some of its functionalities to preserve its components from undue damage.

The vehicle can be charged on compatible AC (alternating current) and DC (direct current) chargers.

Due to the current diversity of the chargers' infrastructure, it is recommended to the driver to check for an alternative compatible charging source near their destination, prior to departure.

DANGER

Both high voltage and low voltage batteries are based on lithium-ion chemistry, offering high energy density in a lightweight package. If a Li-ion battery is disposed of improperly, there is a risk of severe burns and electrical shock that may result in serious injury or death and there is also a risk of environmental damage.

DANGER

Do not attempt to open or dismantle any of the batteries.

DANGER

In case of visual damage to any of the batteries, immediately contact a customer service center for a safety assessment.

⚠ DANGER

After any impact or excessive water wading in the process of running, power battery pack or high-voltage system may be damaged, and therefore, please contact with our service department and our authorized service station nearby to avoid any electric shock.

⚠ DANGER

If vehicle catches fire, immediately turn off the complete-vehicle power supply. Besides, all persons shall be evacuated to a safe site as soon as possible. Then, call the fire telephone of your Country and contact our customer service center or nearly service station. For fire extinguishing, please use the special extinguishing agent (CO² and dry chemical power) for electricity, instead of water; otherwise, electric shock may occur, enlarging the loss.

⚠ DANGER

If power battery is found to leak fluid or smoke or to be damaged, please do not touch it, but run to safety site immediately, and then call our customer service center or our authorized service station. If you accidentally touch the electrolyte, please rinse thoroughly with water; if your eyes accidentally touch it, please immediately, rinse thoroughly with boric acid solution and consult a doctor as soon as possible.

⚠ DANGER

Without professional training or authorization by our company, it is prohibited to repair or change the original electrical circuits and facilities; otherwise, our company does not take any legal responsibility for the vehicle accidents and personal casualty.

⚠ DANGER

Charge the vehicle with the special charging equipment. It's prohibited to touch the charging coupler by hands or touch the pins of charging coupler or holes of electric vehicle charging socket. It's prohibited to store or use charging equipment under any >55°C environment.

⚠ DANGER

In case of a collision:

- Check your vehicle to see if there are exposed high-voltage parts or cables. To avoid personal injury, never touch high-voltage wiring, connectors, and other high-voltage parts, such as inverter unit and Li-ion battery. An electric shock may occur if exposed electric wires are visible when viewed from inside or outside of your vehicle. Therefore, never touch exposed electric wires.
- If the vehicle receives a strong impact to the floor while driving, stop the vehicle in a safe location and check the floor. Leaks or damage to the Li-ion battery may result in a fire. If you discover them, contact emergency services immediately. Since the fluid leak may be lithium manganese from the Li-ion battery, never touch the fluid leak inside or outside the vehicle. If the fluid contacts your skin or eyes, wash it off immediately with a large amount of water and receive immediate medical attention to help avoid serious injury.

⚠ WARNING

It's prohibited to coast the vehicle in Neutral, otherwise it will result in out-of-control of electronic control system (Such as drive motor, electronic steering pump, and electric inflation pump).

⚠ WARNING

When indicators light up or alarm sounds (such as insulation alarm, motor over-heating alarm, motor over-speed alarm), please immediately pull vehicle over to a safety site; put the warning signs in place; turn off the complete-vehicle power supply; carefully check the vehicle. After that, contact our technical service department or local service station.

⚠ WARNING

In following cases, please timely contact the after-sale service center of QUANTRON or recycling station service stations: battery pack or single cell is damaged; battery pack capacity drops below 80%, which severely affect the normal running; battery pack is damaged or vehicle is disposed in traffic accident. It is prohibited for users to send the battery pack to other units and persons for dismantling, which otherwise may lead to severe safety accidents.

⚠ WARNING

Do not attempt to operate the vehicle with temperatures below -20°C.

⚠ WARNING

If the vehicle needs to be towed due to some failures, the towing speed should be limited to 30km/h, in case the counter EMF of motor may impact the electric-control IGBT. Besides, our company takes no responsibilities for the three-warranty of electric-control IGBT damage due to towing speed higher than 30km/h.

⚠ NOTE

The malfunctions arising from force majeure or severe environments (Such as flood, earthquake, fire accident, typhoon, acid rain, high humidity, and low temperature) will not be covered by warranty scope.

To prevent damage to the Li-ion batteries:

- At less than 20% of SOC, the vehicle needs to be charged, as long-term low SOC may shorten the life span of power battery.
- During the storage and transport of vehicle, maintain the state of charge (SOC) within 40%~70%. The long-time storage under <40% SOC is prohibited. After the storage and transport of vehicle, immediately charge the vehicle.
- During the long-time storage, ensure to fulfill one medium charging/discharging operation (Namely charge the vehicle when the SOC is <20% and ensure that the vehicle SOC is within 40%~70%.) once a month, in order to guarantee the normal performance and life of battery.
- Before storage for a long time, unplug the key from the ignition switch, lock the door, and disconnect wire from the negative terminal of the battery.

WARNING

To ensure the safety of vehicle, passengers and goods, please use the genuine spare Parts from the regular channels and perform the maintenance at our authorized service station.

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Vehicle Identification

Location of model nameplate



It is riveted in the middle of the rear wall of the cab, visible after the middle seat is folded, as shown in the figure.

Drive motor serial number



It is engraved and riveted on the drive motor, as shown in the figure.

VIN location



It is engraved on the right-side in the overhang of the frame, as shown in the figure.

Vehicle Identification

Checking and Adjusting before Driving

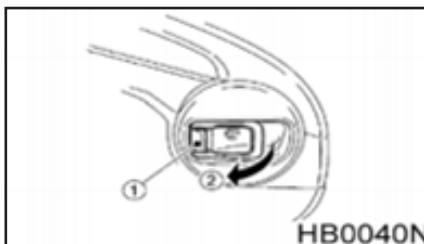
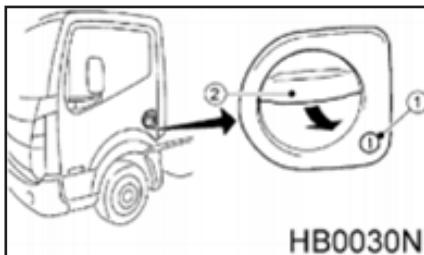


Careful inspection of vehicle by the driver is crucial for driving safety. The driver shall inspect the vehicle carefully and personally every day before driving in order to prevent accidents, ensure safe driving and understand vehicle failures.

Observe the instrument panel to confirm that the battery system is in normal state, with no abnormal alarm.

At less than 30% of SOC, the vehicle shall be charged in time.

Door lock



Locking/unlocking of doors by key

To lock the doors, insert the key into door keyhole (1) and rotate towards the forward direction of the vehicle.

To unlock the doors, rotate the key towards the backward direction of the vehicle and pull up the door outer handle (2) to open door.

Both driver door and front passenger door are fitted with keyholes, which are used to lock/unlock the corresponding door separately.

Locking / unlocking of doors by inner handle



⚠️ WARNING

Push down or pull up the door inner lock button (1) to “Lock” or “Unlock” position to lock/ unlock corresponding door.

To open the door from inside, pull up the knob (1) to “Unlock” position and then pull the handle (2) along the arrow direction.

Checking and Adjusting before Driving

Locking of doors from outside

Using the door inner locking button can lock the doors from the outside without the key.

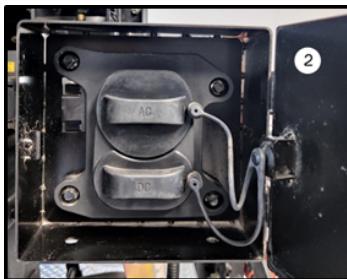
NOTE

To lock the doors without using the key, ensure not to leave the key within the vehicle.

NOTE

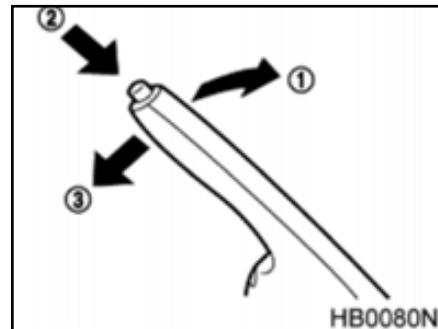
Never leave a child unattended within the vehicle. Ensure to carry the key with you while leaving the vehicle. Otherwise, it's probably difficult to help the child within the vehicle in event of emergency.

Charging coupler cap



The charging cover should be closed while driving or when the port is not being used, as shown in (1). Besides, it is opened only for vehicle charging, as shown in (2).

Parking Brake



Pull up the parking brake handle (See 1) to apply the parking brake.

Release of parking brake: Depress the brake pedal, hold tightly the parking brake handle, pull up slightly and at the same time push down the button (See 2), and then completely lower the parking brake handle (See 3).

Before driving, ensure that the parking brake warning lamp is off.

NOTE

- Be sure the parking indicator is ON, otherwise it means the system fails. At this time, manually pull the handle again to activate the parking brake. In case of failure again, contact professional maintenance personnel.
- Before leaving, check the vehicle does not slide backwards after parking. In order to prevent the vehicle from slipping backwards while parking on a relatively steep slope, wedge the wheels or fix them with the similar obstacles.

ESC (for hydraulic brake, If Equipped)

The system has five basic functions: Anti-lock braking function - ABS, electric brake-force distribution - EBD, acceleration slip regulation - ASR (also called as traction control system - TCS), electronic stability control - ESC, hill-start assist control - HAC; all of them work together with EPB (If Equipped), realizing the Auto Hold function. For specific requirements of Auto Hold, see Auto Hold in EPB section of cable-type electronic parking.

ESC processor has a self-test function: each time the vehicle is started (powered on) or moves forwards or backwards at low speed, it will perform the self-test, during which you may hear the sound made by ESC assembly, which is normal and does not indicate a fault. If a fault is detected, it can issue corresponding warning according to the fault location: If ESC indicator  lights up, it means ESC or ASR (TCS) fails; if ABS indicator  lights up, it means ABS or EBD fails and all four or rear wheels cannot be stopped from locking. The braking system will still work normally even if ABS, EBD, TSC, ESC, HAC, AUTOHOLD and other functions fail, but the vehicle is apt to become out of control, so it is forbidden to brake sharply and drive on rainy, snowy, iced or other slippery roads.

When during self-inspection or driving, ABS malfunction indicator is lit, please drive the vehicle to after-sale service network station for a check-up as soon as possible.

Checking and Adjusting before Driving

Anti-Lock Brake System (ABS)

Anti-lock brake system (ABS) controls brakes and prevent wheels from locking when vehicle suffers emergency brake or travels on wet road surface. The system will detect the rotational speed of each wheel and prevents it from locking or sliding by changing the pressure of the hydraulic brakes system. ABS assists a driver to control the steering system by preventing the locking of wheels and minimizing the slippage, aiming to keep the vehicle safe and under control.

DANGER

- Anti-lock brake system (ABS) is one complex device but may not prevent accident resulting from carelessness or reckless driving. When braking vehicle on wet road surface, it may help you control your vehicle, but remember that the braking distance will be longer when on rough, gravel or snowy road surface or using nonskid chain, do keep safe distance with front vehicle. In short, safety responsibility lies at the driver.
- Tire type and condition may also affect brake effect.

⚠ DANGER

- When replacing tyre, it is required to install at all the four wheels the tyres of specified size.
- When installing spare tyre, do confirm that the size and model of spare tyre is consistent with the specification on tyre pressure label.
- Drive carefully, regardless of the road conditions. Take cautions during acceleration and deceleration. During quick acceleration or deceleration, the drive wheels will easily lose traction force.
- Please maintain longer brake distance when driving in cold weather. Braking time shall be earlier than that for dry surface.
- Maintain safe distance from vehicle ahead on wet and slippery roads. On the wet and slippery roads (0°C, 32°C, and freezing rainwater), frozen snow, or ice, driving is difficult. The traction force or ground adhesion of the vehicle will be remarkably reduced under such condition. Do no drive the vehicle on moist ice, unless the road is scattered with salt or sand.

⚠ DANGER

- Please pay attention to slippery place (thin ice). It may appear on road surface which seems like clean at dark place. If brash ice before vehicle is visible, please brake the vehicle before reach. Never step on the brake when reaches the icy place and avoid sudden turn of steering wheel.

Electric brake-force distribution system (EBD)

As an effective compensation to ABS, it works together with ABS. In case of emergency braking, EBD acts before ABS: EBD automatically compares the sliding rate of rear wheels with that of the front wheels as a reference; EBD can automatically adjust the oil pressure of rear brakes if needed, so as to distribute the braking force in a more balanced and closer way.

Acceleration slip regulation - ASR (also called as traction control system - TCS),

The acceleration slip regulation system (ASR) can increase the vehicle traction force and safety via the motor torque and braking: if ASR detects that driving wheels

skid, it could reduce the motor torque and control the brakes to avoid losing traction. In case of system failure, ESC indicator will light up, and please ask professional servicemen for solution.



ASR could be turned off with ESC OFF switch on the dashboard and then the ESC OFF indicator will light up. Each time ESC is powered on, ASR will be activated.



⚠ DANGER

ASR cannot provide protection under improper driving types: unsafe and reckless driving, over-speed, rear-end collision, skidding or reckless driving. In other words, you may be involved in accidents .

NOTE

Before drum test, ASR system should be deactivated, in case wheels might slip and tests fail.

Electronic stability control - ESC (ESP)

With ABS wheel speed sensor, steering angle sensor, yaw sensor and others, ESC can keep monitoring the vehicle status, and actively reduce the motor output power or brake some wheels in case of over-steering, under-steering or rollover risk, so as to avoid the vehicle from going out of control. While ESC is working, its indicator keeps flashing.



ESC could be turned off with ESC OFF switch on the dashboard and then the ESC OFF indicator will light up. Each time ESC is powered on, ESC will be activated.



⚠ DANGER

Merely as an auxiliary function ESC cannot avoid accidents caused by over-speed or unreasonable driving or by sharp steering on express way or rainy, snowy, iced or other slippery roads.

⚠ DANGER

Always keep a safe distance from the vehicle in front of you and reduce your speed when entering a curve.

Checking and Adjusting before Driving

ABS+ASR (pneumatic brake, If Equipped)

The system has three basic functions: Anti-lock braking function - ABS, acceleration slip regulation - ASR (also called as traction control system - TCS), hill-start assist control - HAC ABS+ASR processor has a self-test function: each time the vehicle is started (powered on) or moves forwards or backwards at low speed, it will perform the self-test, during which you may hear the air flow or mechanical opening sounds made by each part of ABS+ASR, which is normal and does not indicate any fault. If the processor detects any fault, it will turn off the ABS system, lighting up its indicator on the instrument panel, and ABS, ASR and HAC will fail. At this time, the braking system can still work normally, but with ABS, ASR and HAC inactive. There is no anti-lock function, Traction control and ramp auxiliary function. At this time, the vehicle is prone to become out of control, so it is forbidden to brake sharply, drive on rainy, snowy, iced or other slippery roads.

When during self-inspection or driving, ABS malfunction indicator is lit, please drive the vehicle to after-sale service network station for check as soon as possible.

Checking and Adjusting before Driving

Hill-start assist control (HAC)

To start on a slope, a driver shifts to a gear and depresses the accelerator pedal or performs other series of moving-away actions. In such case, the parking brake will be automatically released, and its indicator will go out. In case of system failure, ABS indicator will light up, and please ask professional servicemen for solution.

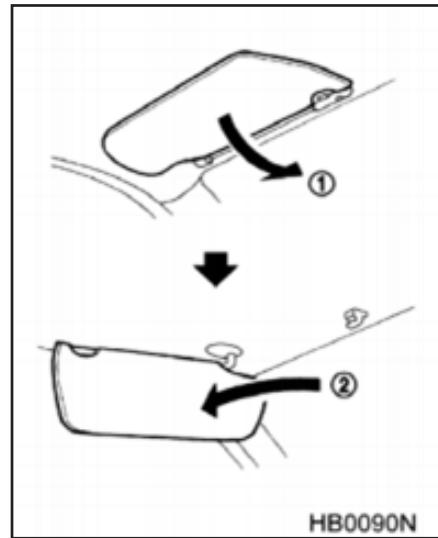


ASR could be turned off with ASR OFF switch on the workbench and then the ASR indicator will light up. Each time ABS+ASR is powered on, ASR will be activated.



As HAC is only an auxiliary function, a driver needs to perform the proper control according to actual situation to prevent the vehicle from sliding backwards.

Sun visor



HB0090N

To shield the dazzling sunshine, unfold the sun shield, as shown in (1). To block the sunlight from the side, take down the sun visor from the middle fixing point and rotate to the side face (See 2).

Rearview mirror

Interior rearview mirror



Adjust the angle of interior rearview mirror to achieve the best visual field.

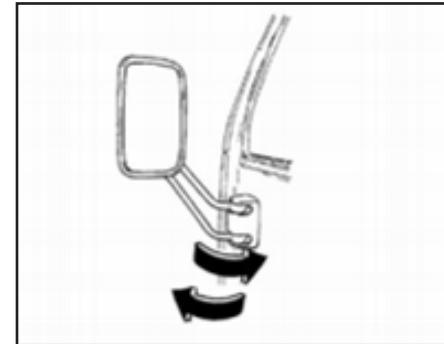
Exterior rearview mirror



Exterior rearview mirrors can be adjusted to appropriate angles manually or with the button (with power adjusting function) in cab, so as to obtain the optimal visual field.

Checking and Adjusting before Driving

Folding



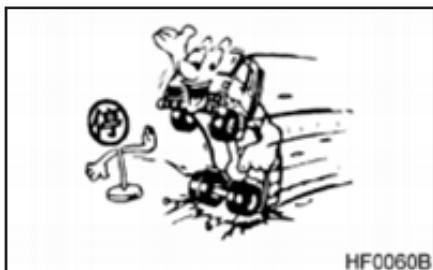
Push the mirror levers or fold the mirrors forwards or backwards.

Checking and Adjusting before Driving

Inspection of brake pipeline

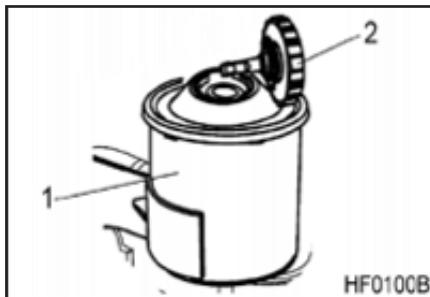
Check the brake line for leakage.

Inspection of brake



Depress the brake pedal to check response time and efficiency of brake.

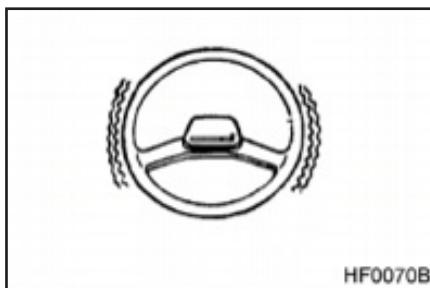
Inspect steering system



1. Steering fluid tank
2. Steering fluid tank cap with scale

Inspect tightening conditions of bolts and nuts.

Check the steering line for leakage.



During the test run, inspect the steering

wheel for any abnormality (shaking, retardation and deviation).

Inspection of vehicle suspension system

Check if front and rear leaf springs are damaged and bolts and nuts are tightened.

For the tightening torque of bolts and nuts in suspension system, refer to the section "Tightening Torque".

Checking and Adjusting before Driving

Inspect tire pressure and condition

Inspect the tire for any damage or scratch. Inspect the tire for excessive wear at a regular interval.

Inspect electric harness

Inspect if the electric harness rubs with other components and broken or connected to frame.

Inspection of instruments

- The pointer of water temperature gauge must be in the range of dial scale;
- Check if the tachometer is working properly;
- Check whether the battery charge/discharge indicator lamp is off.

Inspect the horn

Press horn button and check if it is working.

Inspect the lighting

When the ignition switch at ACC or ON gears, check if all the illuminators and signal lamps work normally.

Inspection of windscreen wiper and washer

Before inspection, clean the windshield. Then check if the cleaning agent is sprayed on the windows normally, and at last check if the wiper works normally at each gear.

Inspection after test run

Run the vehicle, stop and walk around the vehicle to inspect for leak of oil, water or gas.

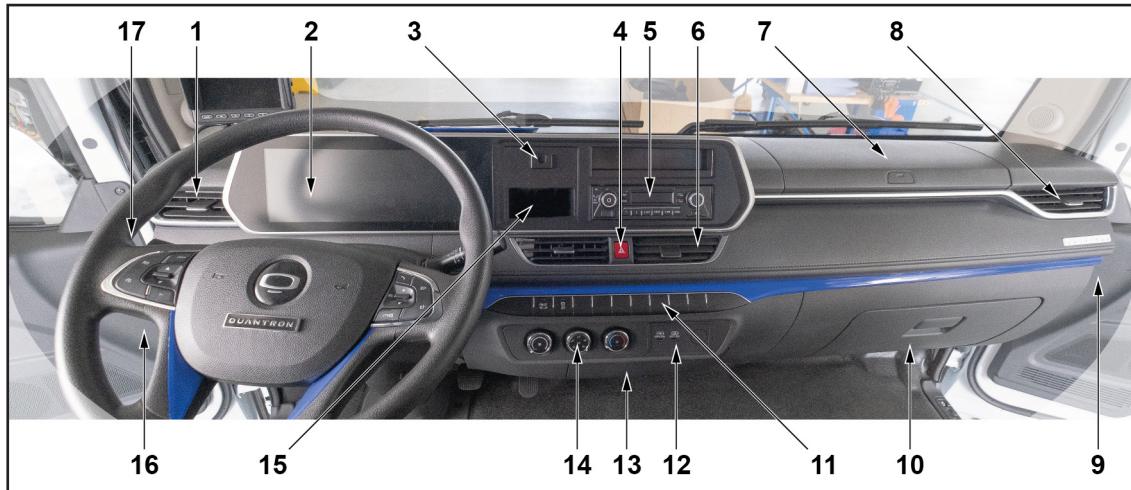
Others

Above are all inspection items before driving. In case of any abnormality during inspection, please visit authorized service station of QUANTRON for adjustment or repairing.

Checking and Adjusting before Driving

Structure Descriptions and Operations

Arrangement of driver zone (Standard version)



- | | | |
|---------------------------|----------------------------|-------------------------|
| 1. Left air outlet | 8. Right air outlet | 15. Small storage box |
| 2. Combination instrument | 9. Washer cap | 16. Left switch console |
| 3. Cellphone bracket base | 10. Glovebox | 17. Oil pot cap |
| 4. Hazard light switch | 11. Central Switch Console | |
| 5. Radio (MP3) | 12. USB power outlet | |
| 6. Middle air vent | 13. Fuse box cover | |
| 7. Storage box | 14. A/C settings switch | |

NOTE

With technical improvement, the specific locations may differ on different vehicles.

Combination instrument



1. Barometer
(If Pneumatic brakes equipped)
2. Speedometer
3. Gear layout display
4. Total mileage/subtotal mileage
5. Total voltage/current
6. Electricity consumption per 100km
7. Instantaneous power
8. Motor RPM
9. Range
10. Instantaneous powermeter

Speedometer



The speedometer indicates the driving speed of the vehicle.

The speedometer ranges from 0 to 160km/h.

Keep the vehicle speed below the max. value. Namely keep its pointer within the max. scale.

Powermeter



The powermeter is divided into two parts: instantaneous power and instantaneous power percentage.

Instantaneous powermeter displays the instantaneous power of the motor;

Power percentage represents the percentage of instantaneous power to peak power.



1. Barometer - 2. Barometer

For pneumatic brakes, the barometer displays the air pressures of the front and rear air reservoirs. The normal air pressure value is 850kPa. The brake system will emit the warning of failure if the air pressure is below 450kPa.

Structure Descriptions and Operations

State of charge (SOC)



It displays remaining power (range 0 ~ 100%, with SOC at 20% or above, it shows green; with SOC at 20% or below, it turns yellow; with SOC at 10% or below, it becomes red. In such case, charge it in time.)

RPM Meter



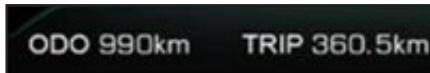
The tachometer displays the motor speed: at 9000r/min or above, the tachometer reading is shown in red.

Gear layout display



It displays the current gear: D (forward gear), N (neutral gear), R (reverse gear)

Total mileage/subtotal mileage



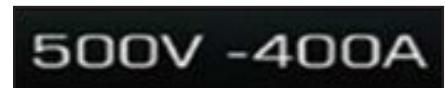
On the traveling interface, press the "OK" button on the steering wheel to zero the subtotal mileage.

Range



It shows the SOC-supported mileage. Thus, the vehicle should be charged in time.

Total voltage/current



Electricity consumption per 100km



Indicator and alarm lamp

 Coolant level low	 Heating indicator of power battery	 Power battery failure warning indicator
 Heater Indicator	 Indicator of charger connector	 Door open warning lamp
 Battery charging failure	 Power system malfunction indicator lamp	 Ready indicator lamp
 DRL Daytime driving light	 ACC error status indicator	 Drive motor over-speed warning indicator
 Position indicator lamp	 Driver leave-away alarm indicator	 Drive motor over-heating warning indicator
 Low beam indicator lamp	 Cruise indicator	 Filament check warning lamp
 High-beam indicator lamp	 Tire pressure warning indicator	 Pre-collision system OFF indicator
 Front fog lamp indicator lamp	 ABS malfunction indicator lamp	 Lane departure alarm OFF indicator
 Power battery temperature high	 ESC malfunction indicator lamp	 Left / right turn signal indicator lamps
 Rear fog lamp indicator lamp	 ESC OFF indicator lamp	 Lane keeping assist OFF indicator
 Warning indicator of brake shoe wearing	 EBD malfunction indicator lamp	 Auto Hold work indicator
 Brake system malfunction indicator lamp	 Low SOC warning indicator	 ASR malfunction indicator lamp
 Parking brake indicator lamp	 Warning lamp of driver's seat belt unbuckled	 Drive motor malfunction
 Power outlet indicator	 Insulation monitor warning indicator	 Drive power limitation
 Charging status indicator lamp	 ACC working indicator	

Structure Descriptions and Operations

Coolant level low

If the coolant runs low, its indicator will light up, so please replenish the coolant in time.

PTC heater

Once PTC heater is turned on, its indicator lights up.

Battery charging failure

If the battery voltage is lower than 11V, the indicator will light up, and if the battery voltage is higher than 12V, the indicator will go out.

Daytime driving light

With the key at Start gear and the position lamp OFF, the indicator lights up; however, with the position lamp ON, the indicator goes out.

Position indicator lamp

This indicator lamp turns on when the position lamp is turned on.

Low beam lamp

This indicator lamp turns on when the low beam lamp is turned on.

High beam lamp

This indicator lamp turns on when the high beam lamp is turned on.

Front fog lamp

The indicator is illuminated when the front fog lamp is turned on.

Power battery temperature high

When this indicator lights up, please check the power battery.

Drive motor malfunction

When the motor fails, the indicator lights up.

Drive power limitation

In case of class-II faults and low SOC, the output power of the drive motor will be limited, accompanied with the indicator lighting up.

Rear fog lamp

The indicator is illuminated when the rear fog lamp is turned on.

Warning of brake shoe worn

After brake pads are excessively worn, the indicator lights up, and they should be replaced in time.

Brake system malfunction

If the indicator lights up after the ignition switch is turned to START position and the drive motor is started, check if the brake fluid is below MIN and if so, replenish it.

Parking brake

When the parking brake handle is pulled up, this indicator lamp turns on to alert the driver that the parking brake of the vehicle is applied. This indicator lamp turns off when the parking brake handle is released. Ensure that this indicator lamp is off before starting up the vehicle .

DANGER

Driving a vehicle with the red brake light on can be very dangerous. Part of the brake system may have failed, resulting in increased braking distances and the risk of an accident. Have the braking system checked as soon as possible.

Power outlet indicator

When the power outlet switch is turned on, the indicator lights up.

Charging status indicator lamp

With the vehicle being charged, the indicator is kept ON.

Power battery heater

If the power battery heater fails, the indicator will light up.

Connection of charger

When the charging gun is connected, the indicator lights up.

Power system malfunction

If the driver system fails to severe extent, the indicator will light up.

Adaptive cruise control (ACC) error (If Equipped)

If ACC fails, the indicator will light up.

Driver leave-away

If a driver leaves away with the vehicle able to run away, this indicator will light up.

Cruise at constant speed

After the cruise control system is turned on, the indicator lights up.

Tire pressure warning indicator (If Equipped)

If a tire pressure becomes abnormal or a tire pressure monitor fails for the vehicles with tire pressure warning function, the indicator will light up.

NOTE

A tire pressure sensor is of a built-in valve type, and is only installed at front wheels or right-front wheel.

NOTE

A tire pressure sensor, being of built-in type, is installed inside of wheels and responds to one single tire: if right-front and left-front wheels are replaced or interchanged or a tire pressure sensor is replaced with a new one, the tire pressure sensors should be re-matched by professional servicemen.

ABS malfunction

When the ignition switch is rotated to position ON, the ABS indicator lamp turns on for 3s and then off, which indicates that the ABS functions normally.

ESC malfunction

When the ignition switch is rotated to position ON, the ESC indicator lamp turns on for 3s and then off, which indicates that the ESC functions normally.

ESC OFF indicator lamp

If ESC is switched off, the indicator will light up.

EBD malfunction

If the EBD fails, the indicator will light up.

Power battery SOC low

At SOC less than 20%, the indicator lights up, alerting operators to charge in time.

Driver seatbelt unbuckled.

This warning lamp reminds the driver of fastening the seat belt. This warning lamp turns on when the ignition switch is rotated to position ON and turns off after the driver fastens the seat belt .

DANGER

Use the seat belts correctly fastened and adjusted at all times. Correct use of the seat belts can help reduce the risk of serious injury in the event of an accident. Do not pass seat belts over sharp edges: they could tear. Do not pin anything to the seat belts. This could reduce their initial strength and cause them to tear in the event of a crash.

Filament check

This warning lamp turns on in event of malfunction in any rear lamp of the vehicle.

Insulation detection

When the indicator lights up, it means the vehicle is in a serious fault status, and the charging and discharging are limited.

ACC operating state (If Equipped)

As ACC is working after turned on, the indicator is kept ON.

Power battery malfunction indicator lamp

When the power battery system fails, the indicator lights up.

Doors unclosed

With any door unclosed, the indicator lights up; with all doors closed up, the indicator goes out.

Ready to go

With the ignition switch at START gear and the vehicle in "Ready to Go" state, the indicator is kept ON.

Driver motor over-speeding

If the motor runs abnormally, the indicator will light up and be kept ON.

Driver motor over-heating

If the temperature of both motor and controller exceeds the set safety value, the indicator will light up.

Pre-collision system OFF

If pre-collision alarm (if mounted) function is deactivated, the indicator will light up.

Lane departure warning system (LDWS)

If LDWS function is deactivated, the indicator will light up.

Left turn signal lamp

This indicator lamp flashes when the left turn signal lamp switch or hazard warning switch is turned on.

Right turn signal lamp

This indicator lamp flashes when the right turn signal lamp switch or hazard warning switch is turned on.

Lane keeping assist system (LKAS) OFF (If Equipped)

If LKAS (if mounted) function is deactivated, the indicator will light up.

AUTO HOLD working indicator lamp (If Equipped)

If Auto Hold (if mounted) function deactivated, the indicator will light up.

ASR malfunction indicator lamp (If Equipped)

If acceleration slip regulation (ASR) fails, the indicator will light up.

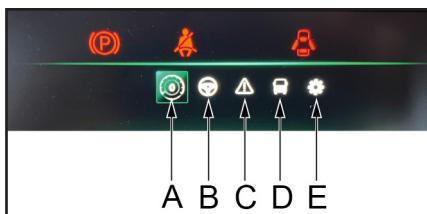
Setting of instrument buttons

The instrument menu can be set with the buttons at left of steering wheel.

- Press OK for confirmation, and press and hold it to return.
- Δ / ∇ buttons: Select menu and set parameters



1. On the traveling information: Click ∇ to sequentially switch to tire pressure monitor (if equipped) → driving assist (if equipped) → fault code information → battery information → instrument brightness/style setting.



A: Traveling information - B: Driving assist
C: Fault code - D: Battery information
E: Instrument brightness/style setting

Structure Descriptions and Operations

2. If a fault pops up on the instrument cluster, click OK to shield the fault and swap the displayed interfaces in order by pressing Δ / ∇ .
3. On the driving assist interface: click OK to set the driving assistance functions: select the corresponding function by pressing Δ / ∇ ; click OK to activate / deactivate the driving assist warning function. Each time the vehicle is powered on, the warning function is activated by default.
4. On the interface of instrument brightness / style setting: click Δ / ∇ to set the instrument brightness / style setting: at high brightness, click OK and then Δ / ∇ to increase/decrease instrument brightness, and then click OK again to exit brightness setting.
5. Press Δ / ∇ to select the instrument style (sports, economy and comfortable) and click OK for confirmation.

NOTE

If there is no action for 30s on any displayed interface, the current interface will be returned to the traveling interface automatically.

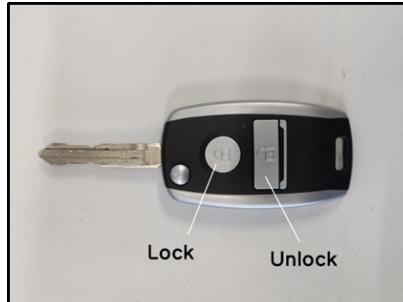
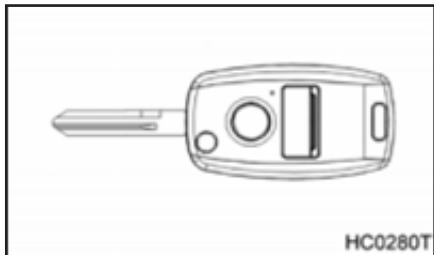
NOTE

If the tire pressure monitor icon on the instrument interface lights up, it will display that the left-front and right-front wheel pressures and temperatures or faults.

NOTE

If left-front and right-front wheel pressures and temperatures become abnormal, the tire pressure warning indicator will light up on the instrument, alerting operators of high and low pressures, high-temperature or leakage.

Vehicle key



Remote locked

If you press the lock button on the remote after all doors are closed, the vehicle is locked successfully and the turn signal lamps will flash once.

Remote lock fails

If the vehicle fails to lock after you press the lock button on the remote one door is not closed, the turn signal lamps will flash five times.

Remote unlocked

If you press the unlock button on the remote and the vehicle is unlocked successfully, the turn signal lamps will flash twice.

Door unlocked

With the key switch at OFF and the key unplugged, doors are changed to be fully closed and kept unlocked for 10s or longer. Moreover, turn lamps flash three times.

Remote finding of vehicle

1. With the key switch at OFF, the key unplugged and doors locked, press the remote lock button twice within 1s, then the horn will start sounding and turn signal lamps will flash for 30s.
2. After locating vehicle, press the unlock/lock button to disable the above prompts, and meanwhile doors are unlocked and locked.

NOTE

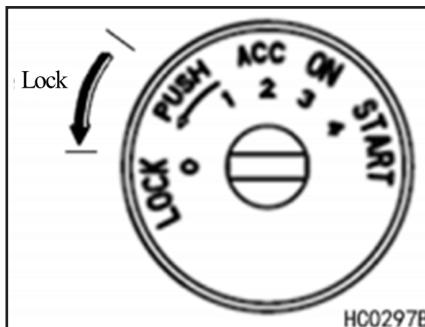
The electronic components inside the key fob may be damaged if the key fob is subjected to strong shocks. In order to ensure complete efficiency of the electronic devices inside the key fob, it should never be exposed to direct sunlight.

▲ DANGER

- When leaving the vehicle, always remove the key fob and lock your vehicle.
- Never leave children alone in a vehicle, or with access to an unlocked vehicle.
- Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child could be seriously or fatally injured. Children should be warned not to touch the parking brake switch or the brake pedal.
- Before leaving the vehicle, ALWAYS engage the parking brake. When leaving the vehicle, always lock all the doors by pressing the button on the key fob.
- Do not leave the key fob in or near the vehicle, and do not leave the ignition device on. A child could operate power windows, other controls, or move the vehicle.

▲ DANGER

- Do not leave children or animals inside parked vehicles in hot weather. Interior heat build-up may cause serious injury or death.
- An unlocked car is an invitation to thieves. Always remove the key fob from vehicle, switch off the ignition device and lock all doors when leaving the vehicle unattended.

Ignition switch**Steering lock****Locking of steering wheel**

- At the position "PUSH", push down the key and rotate to position "LOCK".
- Withdraw the key from the ignition switch.
- Rotate the steering wheel leftward and rightward, till a locking sound is heard.

Unlocking of steering wheel

- Insert the key into ignition switch.
- Rotate the steering wheel lightly leftward and rightward and at the same time rotate the key slowly.

Key positions**LOCK (normal parking position) (0)**

The ignition key can be withdrawn at this position.

The steering lock can be locked only at this position.

PUSH (1)

The drive motor stops, but the steering wheel is not locked. During the driving, this position is intended to prevent the accidental locking of steering wheel.

Structure Descriptions and Operations

ACC (accessory) (2)

At this position, the electric accessories (such as radio) can be turned on without running the driving motor.

ON (normal operation position) (3)

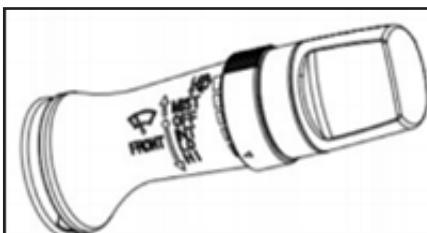
At this position the ignition system and the electric accessories can be started.

START (4)

The drive motor will be started. Once the driving motor is started, immediately release the ignition key. The key will automatically return to position ON.

Combination switch

Wiper and washer switch



The wiper and washer are operational when the ignition switch is at position ACC or ON.

Shift the lever to wipe:

1. Position OFF: Initial position
2. Position MIST: Pull upward the control lever to operate the wiper once. After the wiping, the control lever automatically returns upon release.
3. INT gear: Push down the handle to have the wiper motor work intermittently, with 2s, 4s, 6s, 8s to 10s (five gears) of stopping times depending on the knob position on the handle. With no intermittent time adjustable, intermittent time is 6s by default.
4. Position LO: Pull downward the control lever twice continuously to run the wiper motor at low speed.
5. Position HI: Pull downward the control lever thrice continuously to run the wiper motor at high speed.
6. Pull the control lever forward to start the washer. After operation, the control level will return automatically upon release.

DANGER

When the air temperature is below 0°C, the washing fluid will be frozen probably on the windscreen to obstruct the visual field. Before operating the windscreen washer, please turn on the heater control switch to heat up the windscreen.

NOTE

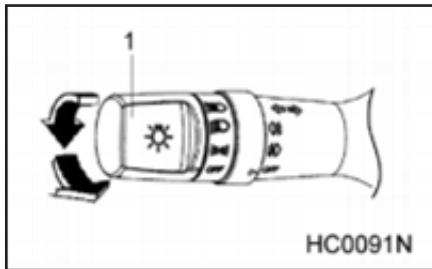
Do not run the washer continuously for more than 30s.

NOTE

Do not use when the washing fluid reservoir is empty or frozen.

NOTE

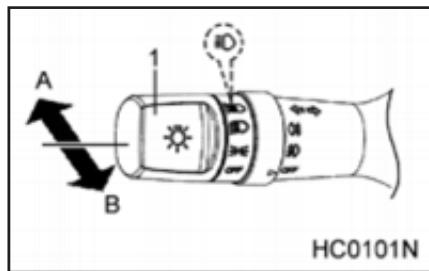
Under cold weathers, generally remove the ice from the windscreen before operating the wiper.

Lamplight switch**NOTE**

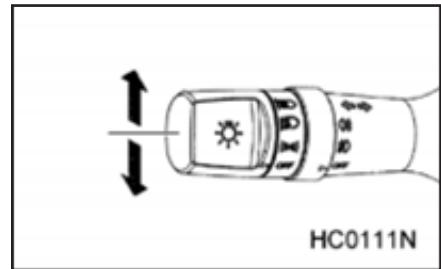
With the drive motor not running, don't keep various lamps ON for a long time.

Rotate the control lever 1 to turn off the following lamps in turn:

1. Position lamp: Front position lamp, rear position lamp, clearance lamp, marker lamp, license plate lamp, and instrument lamp will turn on.
2. Low beam: Both the low beam and the low beam indicator lamp will turn on.



3. High beam: Rotate the lever 1 to position "Low beam" and operate the lever 1 along direction B to turn on high beam and high beam indicator lamp.
4. Dimmer switch: When the lever 1 is at position "High beam", operate the lever 1 along the directions A-B back and forth to switch between low beam and high beam. Operate the lever 1 along direction A to turn on the high beam and release it to allow automatic return of lever and turn off high beam.

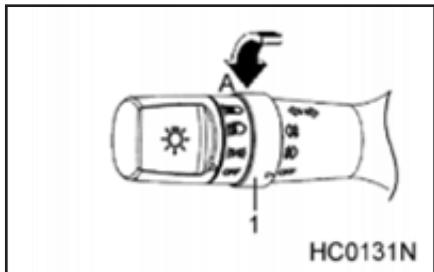
Turn signal lamp switch**Turn signal lamp**

Pull up the lever along arrow direction to turn on right turn signal lamp and pull down the lever along arrow direction to turn on left turn signal lamp.

The control lever will return automatically after completion of the turn.

Fog lamp switch

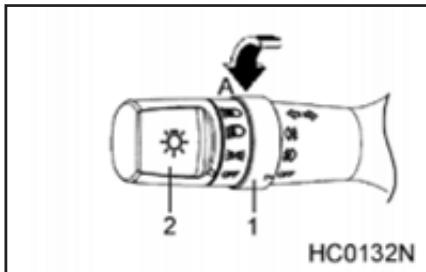
Front fog lamp switch



Rotate the slide ring 1 along direction A to position “Front fog lamp” to turn on both front fog lamp and front fog lamp indicator lamp. Use this switch while driving in thick foggy weathers.

To turn off front fog lamp, rotate the slide ring to position OFF.

Rear fog lamp switch



To turn on rear fog lamp:

After the front fog lamp is turned on, rotate the slide ring to position “Rear fog lamp” to turn on rear fog lamp. In such case, the position lamp is turned on automatically.

The rear fog lamp indicator lamp turns on.

To turn off rear fog lamp:

1. Rotate the slide ring 1 to position “Front fog lamp” to turn off the rear fog lamp.

NOTE

When the lighting switch is rotated from the position “Position lamp” to OFF, both position lamp and rear fog lamp will be turned off automatically.

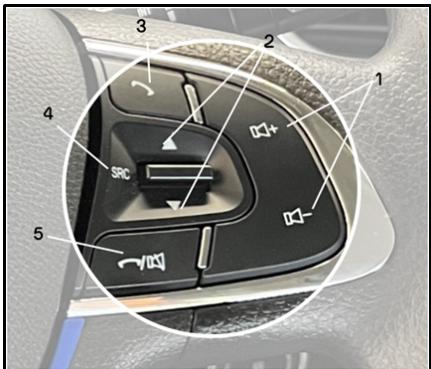
NOTE

The position lamp remains on after the turn-off of the rear fog lamp. To turn off the position lamp, rotate the lever 2 to position OFF.

Multi-functional steering wheel



Volume adjustment of multimedia



1. Multimedia volume change
2. Multimedia channel/music change
3. Answer button of bluetooth telephone

4. Changeover of multimedia sound source mode
5. Bluetooth telephone hang-up/mute

Volume adjustment of multimedia

Click +/- to turn up / down the volume by one gear.

Press +/- to continuously turn up/down the volume, and release it to stop the volume turning-up/-down.

Short press mute key 5 to mute the multimedia.

Multimedia channel/music change

Click ▽ with the switch at the front, selecting the next song at MP3 mode and the next channel at the radio mode.

Press ▽ with the switch at the front and hold it, increasing the frequency continuously at the radio mode; release it, stopping at the current frequency.

Click △ with the switch at the front, selecting the previous song at MP3 mode and the previous channel at the radio mode.

Press △ with the switch at the front and hold it, decreasing the frequency continuously at the radio mode; release it, stopping at the current frequency.

Structure Descriptions and Operations

Changeover of multimedia sound source mode

Click the SRC button down to switch the multimedia between radio- USB music-Bluetooth music.

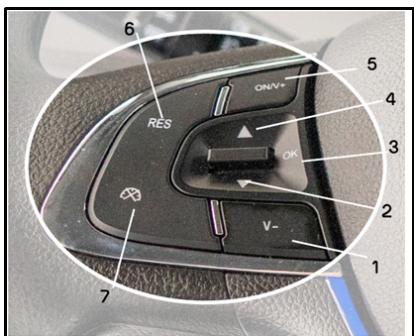
1. With USB unplugged and Bluetooth unconnected, you can switch to the USB; if USB cannot play, there would be a prompt. You cannot switch to Bluetooth;
2. With USB plugged and playing music but with Bluetooth unconnected, you can switch between radio and USB music, but not to Bluetooth music;
3. With USB plugged and playing music and with Bluetooth connected, you can switch among the three modes.
4. With USB unplugged and Bluetooth connected, you can switch between radio and Bluetooth music.
5. SRC key is invalid if you press it for a long time.

Bluetooth phone

In case of incoming call, click the bluetooth phone to answer it.

Click the hang up button to hang up the phone at the phone call mode and to mute the phone at the multimedia mode.

Cruise at constant speed



1. Cruise deceleration;
2. Instrument page down;
3. Instrument option confirmation;
4. Instrument page up;
5. Cruise On/acceleration
6. Cruise resetting
7. Cruise quitting

Conditions to activate the cruise

1. For regular driving, the speed is calibrated to proper range (40- 90km/h);
2. Vehicle is in "D" gear;
3. VCU does not detect any brake pedal signal.
4. The brake switch signals are free from failure.
5. No failure of cruise control switch

Cruise activated

Click the button 5, activating cruise function and its indicator lighting up.

Cruise acceleration

After cruise function is activated click the button 5 to increase up at the 2km/h of speed each time.

Cruise deceleration

After cruise function is activated, click the button 1 to slow down at the 2km/h of speed each time.

Cruise resumed

Depress brake pedal to quit cruise and then short press button 6 to recover and drive at last set speed.

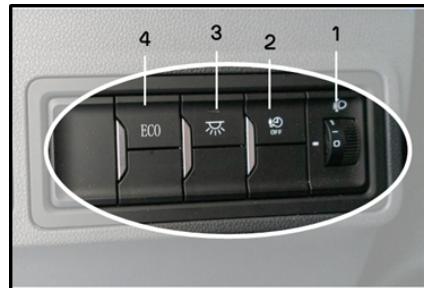
Cruise off

Click the button 7, to deactivate the cruise function and the instrument indicator going out.

How to quit cruise

1. Depress the brake;
2. Press cruise stop button;
3. VCU detects that the transmission is at other gears than "D".
4. Class-II or above failure occurs .

Left guard control switch



1. Headlamp dimming control switch;
2. Unlocking button of slow-charge electronic lock (for slow-charging configuration);
3. Compartment lamp switch
4. Economic mode switch

The horizontal optic axis of the headlamp can be adjusted depending on the load of passengers and cargos.

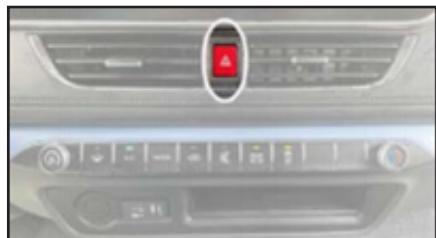
While the vehicle is driving on a slope, the headlamp may directly illuminate to the rearview mirrors of vehicle ahead and to the windscreens of incoming vehicle

Corresponding load conditions of control positions:

- (0) No load
- (-) Light duty
- (1) Medium load
- (2) Full load

Please choose position 0 while the vehicle is driving on a level road with low load.

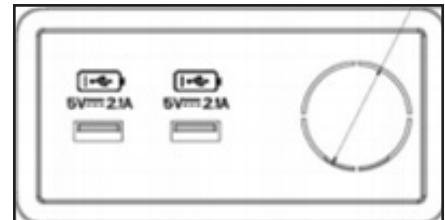
Hazard warning lamp switch



When your vehicle is malfunctioned during the driving, which might lead to traffic accidents and impair the driving safety of others, use this switch to turn on the hazard warning lamps to alert the drivers of other vehicles. When the hazard warning lamp switch is pressed, all turn signal lamps (front, rear, left, and right) will turn on and at the same time the left and right turn signal indicator lamps will flash.

NOTE

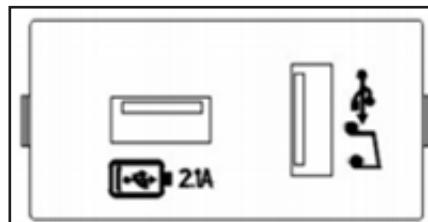
Do not turn on hazard warning lamp during normal driving, unless the vehicle is driving at low speed and there is probable danger to other vehicles.



Left and right ports: charging cellphones or tablets.

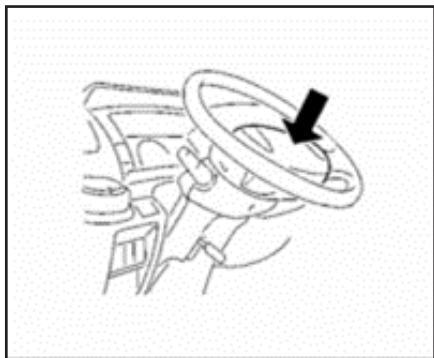
USB charger port

With cellphone interconnection function



1. Left port: charging cellphones or tablets;
2. Right port: connected to console screen, or to cellphones and USB for playing.

Horn



Press the central area of steering wheel to sound the horn.

NOTE

It's prohibited to disassemble the steering wheel or combination switch.

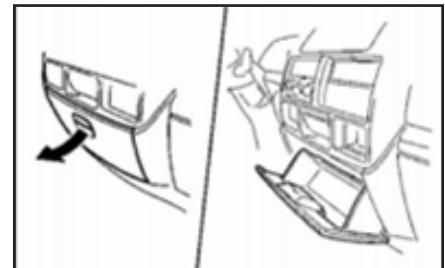
Storage cell

Storage box



It is of button-type: press the button and immediately release it, and the storage box pops open by itself.

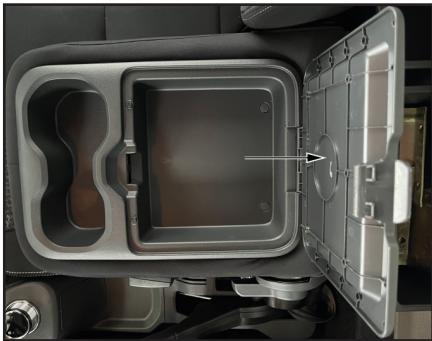
Central glovebox



Pull the button downwards, opening the central glove box.

Storage box at passengers' side (If Equipped)





It is for dual seats: uplift its cover to have it stay at any position.

NOTE

Do not use any storage cell during driving to avoid any distraction to the driver.

NOTE

To prevent the harm in event of accident or emergency braking, please close the storage cell cover during driving.

NOTE

Never place any heavy object in any storage cell, otherwise it will probably cause harm in event of accident or emergency braking

Cup holder

Cup holder for dual seats



They are at the rear end of the console and above the storage box on the passengers' side.

NOTE

When the cup holder is in use, avoid the sudden startup or braking to prevent splashing. If the splashed liquid temperature is high, it will probably scald you or passenger.

NOTE

Only place soft cups in the cup holders. A hard object may cause harms in event of accident.

NOTE

Never place any meltable object in the cup holder, otherwise it may damage the inner walls of the cup holder.

NOTE

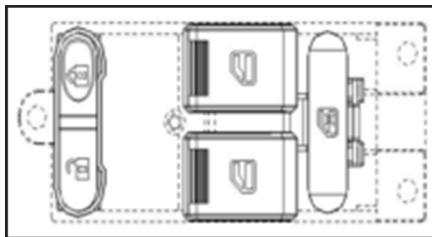
Do not place any plastic product in the cup holder, otherwise it will cause deformation to the plastic product.

NOTE

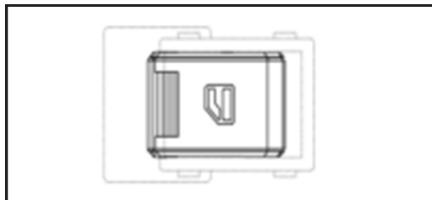
Do not place any jewelry (such as ring and earring) in the cup holder, otherwise the jewelry will probably be deformed by the heat.

Power window

Driver Side:



At passenger Side:



With the key switch at ACC or ON, pull up the power window switch to raise its glass, during which you can release the switch to stop the glass lifting; gently press the power window switch to lower down its glass, during which you can release the button to stop the glass lowering.

Press and hold a power window switch to lower its glass to the end, during which you can stop the glass lowering with the window lifter button at driver's side.

NOTE

Operate the switch to rise or drop the glass. If the glass has moved to the limit, never operate the switch; otherwise the motor may be damaged.

NOTE

If a glass raising or lowering lasts 8s or longer or a glass is stuck and does not rise or lower after you pull up or press the power window switch, you need to toggle the button in the reversed direction to resume the functions.

Interior lamp



The interior lamp switch has three positions:

- ON: The interior lamp keeps on constantly.
- DOOR gear: With a door opened, it is kept ON.
- OFF: The interior lamp keeps off constantly.

NOTE

The interior lamp will turn off approximately 30s after the ignition switch is rotated to position LOCK or OFF.

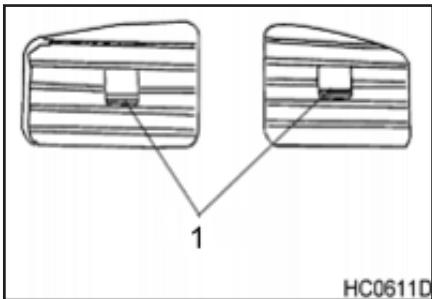
NOTE

Ensure that the interior lamp is turned off before leaving the cab.

NOTE

Do not turn on interior lamp for a long time with the driving motor stopped. Otherwise it will probably lead to depletion of battery.

Air outlet

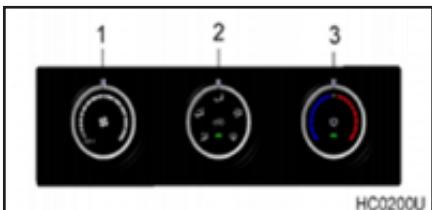


1 - Operate the adjuster

You can toggle the button leftwards / rightwards or upwards/downwards to adjust the air flow direction.

Heater and A/C

Control switches (Standard version)



1. Blower speed control knob;
2. Vent mode knob (integrated internal and external circulation buttons);
3. Temperature control knob (Integrated A/C ON/OFF).

Blower speed control

Use the blower speed control knob to turn on or off the fan and adjust the fan speed. Rotate clockwise to increase blower speed and counter-clockwise to reduce fan speed. (For technology, smart, flagship versions, you needed to press OFF to turn off the fan.)

Vent mode

- Face Level
- Floor Level
- Bi-level
- Floor level and defrost
- Door/window defrosting

Temperature control

For cooling down, turn the knob to the blue marker; for warming up, turn the knob to the red marker.

Internal/external circulation

Internal and external circulation indicator lights up, meaning the internal circulation mode is active (internal circulation is active by default at starting); press the button of internal and external circulation to bring outside air into the cab.

NOTE

Do not run the internal recirculation mode for a long time, otherwise it will lead to low quality internal air and mist formation on windows.

A/C switch (A/C button)

After normal power-on or vehicle is powered ON, the key is in ON position, you can press A/C button, its indicator lights up and indicating A/C is turned on.

Operations of heater

After normal power-on or vehicle is powered ON, the key is in ON position, you can turn on the blower and turn the A/C temperature knob to the red zone..At this time,yellow indicator (PTC working) will light up on the instrument panel.

Heating

This mode is for warming up.

1. Shift the vent mode to ;
2. Adjust the blower speed control knob to the required blower speed.
3. Adjust the temperature control knob to a desired position between the center position and the hottest position.

For rapid climate control, the internal recirculation mode can be selected. To prevent the mist formation on windows and the low quality internal air, ensure to return to external recirculation mode.

Ventilation

This mode is for ventilation.

1. Shift to external circulation mode; 
2. Shift the vent mode to ;
3. Adjust the blower speed control knob to the required blower speed.
4. Adjust the temperature control knob to the required position.

Defrosting/demisting

This mode is used to remove the frost/ mist from the windscreens.

1. Shift to internal circulation mode;
2. Set the vent mode to .
3. Adjust the blower speed control knob to position 2 or higher.
4. Adjust the temperature control knob to a desired position between center position and the hottest position.

For rapid demisting/defrosting for the windscreens, adjust the blower speed to highest speed and adjust the temperature control knob to the rightmost position "HOT".

For technology, smart, flagship versions, just press the defroster button quickly.

Heating/defrosting

This mode is used for internal heating and defrosting for windscreens.

1. Shift to internal circulation mode;
2. Shift the vent mode to ;
3. Adjust the blower speed control knob to position 2 or higher.

4. Adjust the temperature control knob to a desired position between center position and the hottest position.

Tips for better functioning

To improve the heating or defrosting effect, please timely remove the deposited snow and ice from the wiper blades on the front of windscreens and from the air intake grill.

A/C control

Adjust the fan speed control knob to a desired position, and press the A/C button to turn on the A/C. When the A/C switch is turned on, the A/C can provide the cooling and dehumidifying functions. To turn off the A/C, press the A/C switch (A/C button) again.

Cooling

This mode is used for Cooling and dehumidifying.

1. Shift to internal circulation mode;
2. Shift the vent mode to ;
3. Adjust the blower speed control knob to the required blower speed.

4. Press the A/C switch (A/C button). The A/C indicator lamp turns on.
5. Adjust the temperature control knob to the required temperature.

NOTE

Thin mist at the air outlet does not mean there is something wrong, and it is generated by rapid cooling of hot and humid . To cool down fast when hot outside, you can select internal circulation mode; however, to avoid windows from being foggy and internal air from being dirty, timely return to the external circulation mode.

Dehumidifying and heating

This mode is used for heating and dehumidifying.

1. Shift to internal circulation mode;
2. Shift the vent mode to ;
3. Adjust the blower speed control knob to the required blower speed.
4. Press the A/C switch (A/C button). The A/C indicator lamp turns on.
5. Adjust the temperature control knob to the required temperature.

Dehumidifying and defrosting

This mode is used for dehumidifying and defrosting.

1. Shift to internal circulation mode;
2. Shift the vent mode to ;
3. Adjust the blower speed control knob to the required blower speed.
4. Press the A/C switch (A/C button). The A/C indicator lamp turns on.
5. Adjust the temperature control knob to the required temperature.

A/C control tips

- If vehicle is parked in direct sunlight in hot, drive the vehicle with windows opened for 2-3min to let the hot air from the cab escape and then close the windows.
- Close all windows while the A/C is running.
- Turn on the A/C for at least 10min once every month, in order to prevent the damage of A/C system due to poor lubrication.

Structure Descriptions and Operations

A/C filter

The A/C system is fitted with a filter to filter away dirt, pollen, and dust. To ensure effective heating, defrosting, and ventilation of A/C system, please contact an authorized service station for the replacement of filter.

Upon detection of reduced outlet airflow or the easy misting of windows during running of A/C, please replace the filter.

Audio system

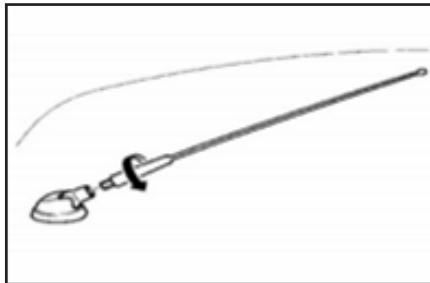
Radio

The transmission effect of the radio is subject to signal intensity, distance from transfer station, buildings, bridges, mountains, and other external interference. The unstable transmission quality is commonly caused by above-mentioned external factors.

Using a mobile phone within or near the vehicle may disturb the transmission quality.

Use the antenna to achieve best transmission effect.

Antenna (if available)



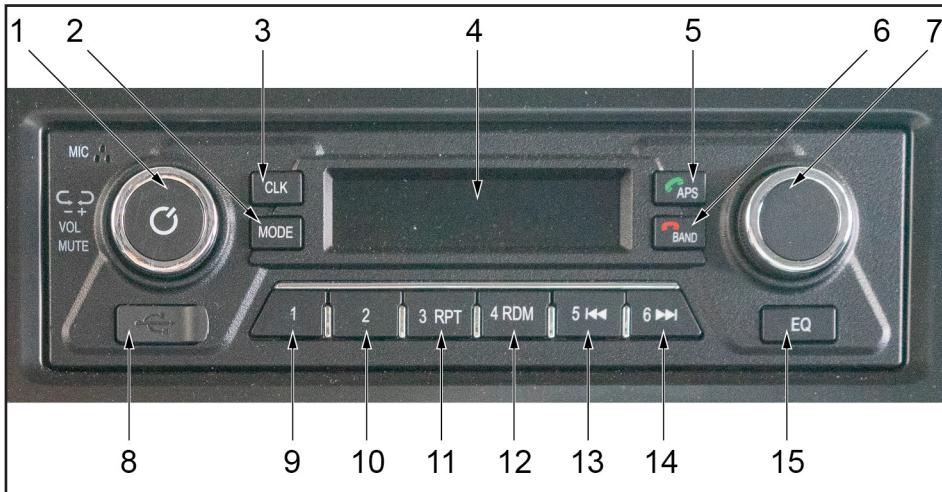
Adjust the angle of the antenna to achieve best transmission effect.

Disassembling of antenna

Hold the antenna base and rotate the antenna rod counter-clockwise to disassemble the antenna.

NOTE

Before driving the vehicle into a garage with low ceiling height or into a full-automatic vehicle washing machine, ensure to disassemble the antenna, otherwise the antenna would be broken.

MP3 radio

1. Power+Vol knob
2. MODE button;
3. CLK button;
4. LCD screen;
5. Phone;
6. Phone hanging;
7. Radio adjusting knob;
8. USB port;

9. "1" button;
10. "2" button;
11. "3" button /RPT;
12. "4" button /RDM; answering/APS;
13. "5" button / upwards;
14. "6" button / up downwards
15. EQ button;

Power+Vol knob

1. Standby status: Click it for startup;
2. Radio and radio-station-frequency adjustment interface: Click it to mute and click it again to resume; press and hold it to shut it down; rotate it leftwards to volume down and rotate it rightwards to volume up.
3. Bluetooth music interface: Click it to mute and click it again to resume; press and hold it to shut it down; rotate it leftwards to volume down and rotate it rightwards to volume up.
4. Clock setting interface: Click it to mute and click it again to resume; press and hold it to shut it down.
5. Sound effect setting interface: Press and hold it to shut it down;
6. Incoming call: Click it to mute the speaker and re-click it to resume the call.
7. In Bluetooth calling: Click it to mute mic and click it again to resume; press and hold it to shut it down; rotate it leftwards to volume down and rotate it rightwards to volume up.

Radio adjusting knob

1. Radio and radio-station-frequency adjustment interface: rotate it leftwards to decrease the station frequency by 0.1MHZ; rotate it rightward to increase the station frequency by 0.1HMZ. The adjusted frequency is not saved.
2. MP3 interface: press and hold it to enter the audio setting menu.
3. Bluetooth music interface: press and hold it to enter the radio setting menu.
4. Clock setting interface: turn it leftwards to adjust the hour and turn it rightwards to adjust the minute.
5. Sound effect setting: click it to sequentially change between BAS (bass)/TRE (treble) /BAL (left and right offsets); at the BAS and TRE; turn it leftwards for adjustment from 0 to -7 and turn it rightwards from 0 to +7; at BAL status, turn it leftwards to the left sound channel and turn it rightwards to the right sound channel; long press it to save the current setting and then exit it.

“1” button

Radio and radio-station-frequency adjustment interface: click it to change to No. 1 preset channel frequency at the current band; long press it to store the current frequency into the No. 1 station of current band.

“2” button

Radio and radio-station-frequency adjustment interface: click it to change to No. 2 preset channel frequency at the current band; long press it to store the current frequency into the No. 2 station of current band.

“3” button /RPT

1. Radio and radio-station-frequency adjustment interface: click it to change to No. 3 preset channel frequency at the current band; long press it to store the current frequency into the No. 3 station of current band;
2. MP3 interface: Press it to repeatedly play the current song and re-press it to resume the circular play.

“4” button /RDM

1. Radio and radio-station-frequency adjustment interface: click it to change to No. 4 preset channel frequency at the current band; long press it to store the current frequency into the No. 4 station of current band;
2. MP3 interface: Press it to play songs randomly from the list and re-press it for circular play.

“5” button / upwards

1. Radio and radio-station-frequency adjustment interface: click it to change to No. 5 preset channel frequency at the current band; long press it to store the current frequency into the No. 5 station of current band;
2. MP3 interface: Select the current song.

“6” button / downwards

1. Radio and radio-station-frequency adjustment interface: click it to change to No. 6 preset channel frequency at the current band; long press it to store the current frequency into the No. 6 station of current band;
2. MP3 interface: Select the next song.

“EQ” button

1. Radio and radio-station-frequency adjustment interface: Click it to cycle the sound effect: CLASS, POP, ROCK, VOCAL, JAZZ.
2. MP3 interface: Click it to cycle the sound effect: CLASS, POP, ROCK, VOCAL, JAZZ.
3. Bluetooth music: Click it to cycle the sound effect: CLASS, POP, ROCK, VOCAL, JAZZ.

“CLK” button

1. Radio and radio-station-frequency adjustment interface: press it to display the clock for 5s; re-press it to display the clock setting interface and re-click it to quit the setting interface.
2. MP3 interface: press it to display the clock for 5s; re-press it to display the clock setting interface and re-click it to quit the setting interface.
3. Bluetooth music: press it to display the clock for 5s; re-press it to display the clock setting interface and re-click it to quit the setting interface.
4. Clock setting interface: click it to quit the clock setting interface.

“MODE” button

1. Radio and radio-station-frequency adjustment interface: Mode switching (radio /MP3/ Bluetooth music);
2. MP3 interface: Mode switching (radio /MP3/ Bluetooth music);

“Phone Answering” button /APS

1. Standby status: Answering when a phone comes in.
2. Radio and radio-station-frequency adjustment interface: Click it to dial the most recent call; press and hold it to automatically scan and save stations into 1-6 button addresses of FM1, FM2 and FM3 bands, amounting 18 stations; after completion of channel search, No.1 station of FM1 band plays by default.
3. MP3 interface: Click it to dial the last the most recent call;
4. Bluetooth music: Click it to dial the most recent call;
5. Incoming call: Click it to answer the phone.

“Phone hanging up ” button /BAND

1. Standby status: phone hanging-up.
2. Radio and radio-station-frequency adjustment interface: Click it to switch among FM1, FM2 and FM3.
3. Incoming call: phone hanging-up.
4. In Bluetooth calling: phone hanging- up.

USB port

1. Standby status: Charging of cellphones;
2. Radio and radio-station-frequency adjustment interface: Charging of cellphones;
3. MP3 interface: Charge your cellphones or play the music in USB.
4. Bluetooth music: Charging of cellphones;
5. Clock setting interface: Charging of cellphones;
6. Sound effect setting: Charging of cellphones;
7. Incoming call: Charging of cellphones;
8. In Bluetooth calling: Charging of cellphones.

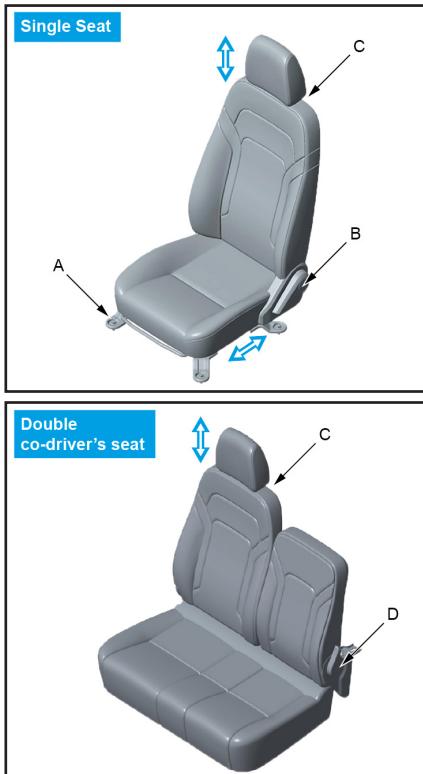
LCD screen

1. Standby status: Display clock;
2. Radio and radio-station-frequency adjustment interface: Display functions;
3. MP3 interface: Display functions;
4. Bluetooth music: Display functions;
5. Clock setting interface: Display functions;
6. Sound effect setting: Display functions;
7. Incoming call: Display functions;
8. In Bluetooth calling: Display functions

NOTE

Do not adjust the audio system during driving, in order not to distract the driver's attention.

Seat



A: Slide rail handle - B: Adjustment of backrest angle
C: Headrest adjustment (Lift to unlock backrest)
D: Backrest handle

Manual adjustment of seat

Forward and backward

While lifting the slide rail handle "A", slide the seat forward or backward to the required position. Release the handle to lock the seat at the required position.

Adjustment of driver's seat backrest

To adjust the backrest angle, lift up the adjusting handle "B" and lean backwards. To pull the backrest forward, while lifting the adjusting handle, lean forward and the backrest inclines forwards by itself. As backrest resilience force is relatively high, keep proper distance to the backrest during adjustment.

Headrest adjustment

While pressing the headrest adjustment button "C", lift the headrest to a comfortable position and then release the button. To resume the headrest, press the headrest adjustment button "C", the headrest lowering.

Passenger seat backrest lining forwards

Lift the backrest strap "D" to tilt forward the passenger's backrest. To resume the backrest, while uplifting the backrest strap "D", move the backrest upwards.

Backrest of foldable middle seat (If Equipped)

To flatten the middle seatback, rotate the middle backrest handle 3 towards the vehicle back. To resume the backrest, while rotating the middle backrest handle 3 to the vehicle back, uplift the backrest.

⚠ DANGER

Never adjust the driver's seat while driving, because the seat may suddenly move, causing the vehicle to go out of control.

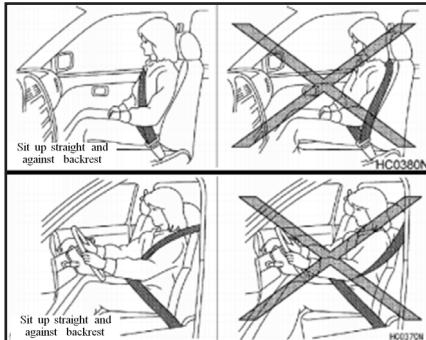
NOTE

After adjustment, shake lightly to ensure that the seat is completely locked.

NOTE

Backrests cannot be over-adjusted to pursue comfort, because only when passengers sit straight against backrests, can the seatbelt provide best protection. If a backrest leans back excessively, its occupant may slide out of seatbelt, increasing the personal injury.

Seatbelt



Precautions for operations of seat belt

The correct fastening and proper adjustment of seat belt can remarkably reduce your injury probability and severity in event of accident.

NOTE

The following dangers must be observed, which otherwise may increase risks of personal casualty.

⚠ DANGER

Seatbelt straps cannot be twisted.

⚠ DANGER

Seatbelts are designed based on bearing capacities of human skeleton structures. A seatbelt should cross the front-bottom side of pelvis (for two-point central seatbelt), or the pelvis, chest and shoulder (for three-point seatbelt). Remember that a seatbelt cannot cross abdominal part. If a seatbelt is not used correctly, serious personal injury may occur.

⚠ DANGER

Users cannot modify any seatbelt or mount any accessory; otherwise, seatbelt adjusters may not work normally or seatbelt assemblies cannot be tightened up again.

⚠ DANGER

Seatbelts should be tightened while comfortably being able to reach the protection purpose. Seatbelts, if loosened, may give less protection to occupants.

⚠ DANGER

Seatbelts cannot be stained by wax, oil and chemicals, especially battery electrolyte. Seatbelts could be cleaned with neutral soap solution. If stained, damaged or have burr, seatbelts should be replaced in time.

⚠ DANGER

If severely impacted, seatbelt assemblies must be replaced, even though they are not damaged severely.

⚠ DANGER

One seatbelt assembly is only for one occupant. It is very dangerous to share one seatbelt, for example passengers holding children on their knees.

⚠ DANGER

Every passenger in vehicles should always wear a seatbelt.

⚠ DANGER

Keep your seatbelt as low as possible, and pass around your hip instead of your waist.

⚠ DANGER

For single-row vehicles, seats and seatbelts are for three occupants. In addition, the number of on-board occupants shall not exceed the number of seatbelts.

⚠ DANGER

It is a must to have a seatbelt cross over your shoulder and chest. Do not press your seatbelt under your underarm. If a seatbelt is not buckled correctly, serious personal injury may occur.

⚠ DANGER

With the key switch at ON, all doors closed and seatbelts buckled up, if the seatbelt warning indicator lights up, it means the seatbelt system has failed.

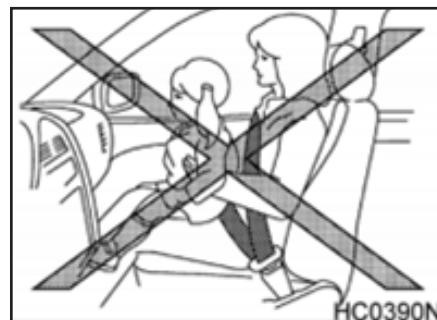
⚠ DANGER

- It is forbidden and dangerous to travel in a cargo area. In an accident, people travelling in these areas are more likely to be seriously injured or killed.

⚠ DANGER

- A belt that is buckled up into the wrong buckle will not protect you properly. The lap portion of the belt could ride too high on your body, possibly causing internal injuries. Always buckle up your belt into the corresponding buckle.

Child Safety



Children: Children who are not suitable for any child safety seat should use seatbelts. Auxiliary cushions (available in market) can avoid seatbelts passing over their faces or necks. In other words, auxiliary cushions can raise children, so that shoulder straps can be positioned correctly (seatbelt could pass over the middle of children

shoulder) and the waist belt could pass around children hip. If the shoulder strap does not pass over a child's face and neck, the seatbelt can be used normally with no auxiliary cushion.

DANGER

During the driving of the vehicle, it's prohibited for a child to stand or kneel on any seat or to remain in the cargo area.

Pregnant women

The use of seat belt is recommended for pregnant women. Please consult with your doctor for specific recommendations.

The seat belt must be fastened comfortably so that the shoulder belt stretches across the shoulder and chest and the waist belt stretches across the hip area as low as possible. It's prohibited to stretch the shoulder belt or waist belt across the abdomen.

Wounded passenger

A wounded passenger is recommended to use the seat belt depending on the wound status. Please consult with your doctor for specific recommendations.

Three-point seat belt

The driver and passenger shall always fasten the seat belt.

Fastening of seat belt

1. Adjust the seat.



NOTE

Do not excessively tilt the seat backrest for the purpose of comfort. The seat belt can play the role of maximum protection only when the passenger is sitting upright against the seat backrest. If the backrest is excessively tilted, the injury danger arising from the slipping beneath the waist belt will be increased.

Structure Descriptions and Operations

2. Slowly pull out the seat belt from the retractor and insert the tab into the buckle, till the tab is locked securely.



NOTE

Seatbelt retractors are designed to lock seatbelts in case of sudden collision. You should pull the seatbelt slowly to make it move, and at the same time, you can move freely on the seat.

3. As shown in the figure, stretch the waist belt across the hip.
4. Pull the shoulder belt towards the retractor to eliminate the excessive looseness. Ensure that the shoulder belt passes across the chest via the shoulder.

NOTE

The seat belt shall be placed over the shoulder, to the neck.

NOTE

Ensure that the seat belt is free of distortion.

Release of seat belt

To release the seat belt, push down the button on the buckle. The seat belt will retract automatically.

Inspection of seatbelts

In the following two cases, seatbelt retractors will be locked, limiting seatbelts from moving.

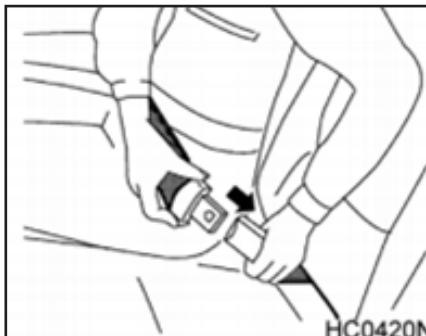
1. If you swiftly pull a seatbelt out of its retractor.
2. If a vehicle decelerates rapidly.

For safety, please check seatbelts according to the following steps:

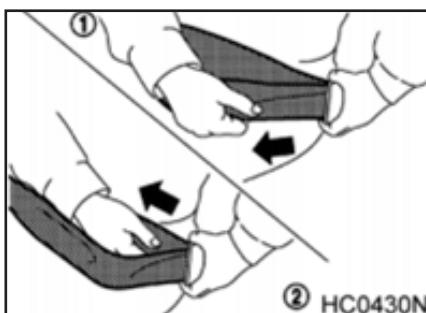
Check if the seatbelt to be buckled works normally: pull it forward swiftly, and its retractor will be locked, limiting the seatbelt from moving.

Two-point seat belt

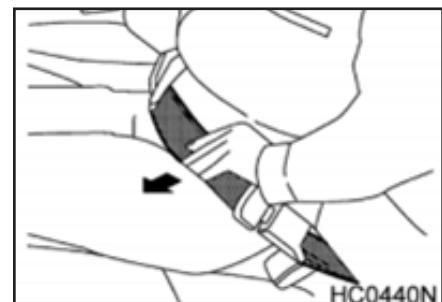
Fastening of seat belt



1. Insert its tongue into its latch in place.



2. Adjust the length of seat belt. To reduce the length, hold the tab and pull the belt above, as shown in figure (1). To increase the length, hold the tab and pull the belt below, as shown in figure (2).

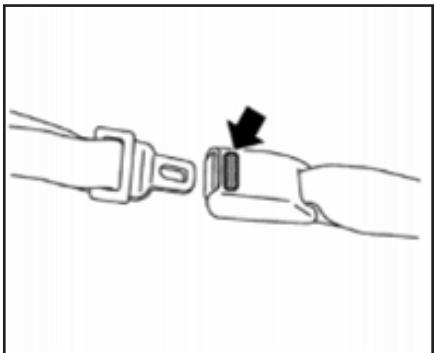


3. As shown in the figure, stretch the waist belt across the hip as low as possible.

Release of seat belt

To release the seatbelt, just press the button.

Correct choice of seat belt



On middle seats, their seatbelts are marked: its tongue can only be inserted into the middle latch.

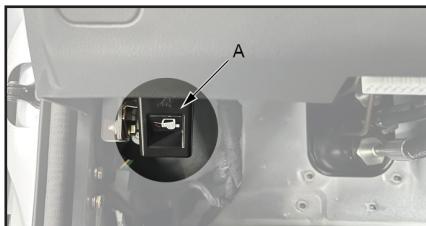
Maintenance of seat belt

1. Clean the seat belt with soapy water or other detergent suitable for cleaning of automotive interior trim parts and carpet. After scrubbing, wipe with cloth and air dry. Do not retract the seat belt before it's completely dried.
2. If there is dust on the shoulder belt slideways of seat belt fixing plate, the retraction speed of the seat belt will be probably reduced. Wipe the shoulder belt slideways with a dry cloth.

3. Periodically check the seat belt and metal parts, including buckle, tab, retractor, flexible harness, and fixing plate, for normal functioning. Upon detection of looseness, aging, cut, or other damage on seat belt, ensure to replace the seat belt assembly.

Front Bonnet

Opening front bonnet/hood



A: Hood Latch - 1. Support Rod - 2. Front-wall bracket

Structure Descriptions and Operations

1. Lift hood latch below the left instrument panel to open the front bonnet through a cable.
2. Raise up the front hood and place the support rod (1) into the front-wall bracket (2).

Closing front bonnet/hood



3. Buckle - 4. Front hood locks

1. Lift up the front hood to remove the support rod from its bracket and then fix the support rod in its holding clip (3) in the middle of front hood.
2. Gently put down the front hood and then push on the left-lower and right-lower area of the hood (4) to lock it in place.

Structure Descriptions and Operations

Driving of Vehicle

Run-in period

Within the first 2,500km mileage, please abide by the following recommendations, in order to guarantee extended reliability and economy of the new vehicle.

- Don't start or stop sharply.
- Avoid sudden braking.

Before starting the drive motor

NOTE

The driving characteristics of your vehicle will be affected due to the additional load, the load distribution, and additional equipment. Your driving mode and speed must be adjusted as per these conditions. Especially under heavy load, your driving speed must be reduced appropriately.

- Ensure there are no obstacles around your vehicle.
- Check the coolant, brake fluid, washer fluid, steering fluid and others.

- For wheels, visually check if their appearances, states and air pressure are normal.
- Periodically check the maintenance items.
- Check if all windows and mirrors are clean;
- Check if all doors are closed;
- Adjust seats to the proper positions;
- Adjust the internal and external rearview mirrors.
- Buckle up your seatbelt and ensure all passengers have also buckled up their seatbelts.
- Turn the key switch to "ON" to check if the warning indicators are working normally.
- Don't leave any hard or heavy object on the instrument panel, so as to avoid personal injury while braking.
- Avoid cornering or sharp changing of lanes.
- Keep a safe distance from the vehicle in front.
- On wet roads, slow down to avoid skidding and going out of control, especially if tires are worn.

Startup of drive motor

1. Pull up the parking brake handle.
2. Shift the gear lever to "N".
3. Turn the ignition switch to ON and hold it for approx. 1s, lighting up the instrument panel.
4. While depressing the brake pedal, turn the ignition switch from ON to START (and hold it for 2s or longer), lighting up the READY indicator and meaning that the high-voltage system is turned on. Then, shift to gear D and release the parking brake to drive away. Before the high-voltage system is turned on, don't depress the accelerator pedal.

Precautions during Driving

On wet roads and in winter:

- Avoid startup, rapid acceleration and deceleration.

Gear layout



The auxiliary power supply is available to start engine when the battery electricity is too low to start it up. Connection steps:

1. Before shifting to R (reverse) gear, stop your vehicle completely. In other words, don't shift to gear R while driving in D.

2. For safety purpose, avoid sudden acceleration.

NOTE

Before shifting to a gear, depress the brake pedal firstly.

Startup of vehicle

1. Shift the gear lever to D (forward) or R (reverse) gears.
2. Slowly depress the accelerator pedal and meanwhile release the parking brake (for concrete releasing method, refer to the parking brake section.).

Gear-shifting logics

1. At "N" (neutral) gear, rotate the knob clockwise by one step to "D" (forward) gear; rotate the knob counter-clockwise by one step to R (reverse) gear.
2. At "D" (forward) gear, rotate the knob counter-clockwise by one step to "N" (neutral) or by two steps to "R" (reverse) gear.
3. At "R" (reverse) gear, rotate the knob clockwise by one step to "N" (neutral) gear or by two steps to "D" (forward) gear.

Acoustic vehicle alert system (AVAS)

At 1-30km/h of traveling speed, AVAS emits a "EN EN" alert tone simulating the engine. The alert tone changes as the vehicle speed: at 1km/h, the alert tone is low; at 1km/h to 20km/h, the alert tone gets louder and louder, loudest at 20km/h; at more than 20km/h, the alert tone starts to decrease and quiets down at 30km/h.

Vehicle anti-theft

- The key must be unplugged and carried with you, even if your vehicle is in your own garage.
- Completely close all windows and lock all doors.
- Do not leave children and pets unattended in the vehicle.
- Do not leave valuables in visible locations in the vehicle which may attract thefts. However, if you have to, please hide them.
- Don't leave vehicle files in the vehicle, because if the vehicle is stolen, these files may help the thief sell the vehicle;
- Spare keys cannot be left in the vehicle, but saved at safe place.

Brake system

In general, electric vehicles have a main drive motor for auxiliary braking: after depressing the brake pedal, the drive motor can output a reversed braking torque and the current is shown negative on the instrument. Besides, the torque is determined by the real-time working condition of the vehicle.

After high-voltage system is turned on (the READY indicator lights up), depress the brake pedal for 5- 10S to observe if the brake booster is active and stable. (For hydraulic booster)

Vacuum brake booster

Brake booster makes use of vacuum generated by vacuum pump to assist braking. If the electric brake in drive motor fails, depressing the brake pedal can stop your vehicle, but you have to forcefully do so, and the braking distance will prolong.

Wet braking

After going through a car wash or driving through a water logged road, the brakes will be wet and this may increase the braking distance and probably cause sideslip during braking.

To dry the brake, lightly depress the brake pedal under a safe driving speed to heat up the brakes, until the brake restores normal functioning. Avoid driving at high speed before the brake restores to normal functioning.

Use of brake

While driving, don't rest your foot on the brake pedal, this may lead to overheating of brakes and friction pad will wear prematurely, and endurance mileage of brakes will be shortened.

Before going down/up a steep slope, please slow down to avoid brake overheating and prevent the friction pad from wearing out, because the braking performance may drop at high temperature and thus the vehicle may be out of control.

NOTE

On wet roads, be careful while braking and accelerating the vehicle, as sudden braking and acceleration may cause wheels to lose traction, resulting in accidents. Note that if you depress the brake pedal frequently and forcefully, the braking performance will deteriorate.

Uphill driving: To move away on a steep slope, slowly release the parking brake and meanwhile depress the accelerator pedal.

Downhill driving: On a downhill, do not use the brake continuously, otherwise it will overheat and deteriorate

DANGER

It is prohibited to turn off the key or engage N gear while driving.

Driving in cold and hot days

- Drive carefully, regardless of the road conditions. Take caution during acceleration and deceleration. During quick acceleration or deceleration, the drive wheels could easily lose traction.
- Maintain a safe braking distance when driving in cold weather. Braking time shall be earlier than in hot weather.
- Maintain a safe distance with the vehicle in front on wet and slippery surface.
- Wet and slippery ice surface (0°C, 32°F and frozen rainwater), frozen snow or ice are very smooth and hard to drive on. Traction force of vehicle under such conditions will decrease dramatically. Unless salt or sand have been sprinkled on road, do not drive on wet icy surface.

Driving of Vehicle

- Please pay attention to slippery place (thin ice). They may appear on road surface which seems clean at dark place. If black ice is visible on the road, please brake the vehicle before reaching this spot. Never step on the brake when vehicle reaches the icy place and avoid sudden turn of steering wheel.
- In driving, it is forbidden to turn off the ignition switch.

Battery

If the lead-acid battery is not fully charged under extremely cold weathers, the battery electrolyte may freeze and cause damage to the battery. Before welding on the frame, please unplug the negative wire of battery.

In normal use, the high-voltage DC converter (DCDC) converts high voltage of power battery to low voltage, so as to charge the battery. With the key switch at ON or in charging, DCDC works automatically. To prevent drain of battery, don't leave the key in ACC mode for a long time; at power-off, turn the key to OFF position and retrieve the key.

Coolant

If the vehicle without antifreeze must be parked outdoors, ensure to fully drain the coolant and then add coolant once again before reuse. In hot weather, the evaporation of the coolant will increase remarkably. Therefore, ensure to periodically check the coolant level and cleanliness to prevent damage to driving motor and motor controller.

Radiator

Dust and dirt, if accumulated in the front of radiator or inside the radiator core, may hinder air from flowing normally. Therefore, the drive motor and motor controller may overheat. It is must to keep the front of the radiator and the radiator core clean and free of any dust. When the antifreeze is not in use (under hot weathers), the coolant must be added with high quality anti-corrosive agent. The validity period for the anti-corrosive agent is only 6 months.

Lubricating oil

The viscosity of the lubricating oils for the steering gear and rear axle will reduce following the increasing of temperature.

Ensure to use the lubricating oil suitable for the current season.

Tire equipment

- The tread of summer tires is designed to provide outstanding performances on dry roads. However, the performances of these tires will be reduced remarkably under snowy or icy conditions. If your vehicle is driving on snowy or icy roads, it's recommended to use winter/snow tires or all-season tires for four wheels.
- The use of studded tires can increase the drive force on icy roads. However, the use of studded tires is prohibited in some regions. Therefore, please consult with local laws before installation of studded tires.

NOTE

The antiskid performance of studded tires on moist or dry roads is probably worse than that of conventional tires.

- If necessary, the tire chain can be used. However, the use of tire chains is probably prohibited in some regions. Therefore, please consult with local laws before installation of tire chains.
- During the installation of tire chains, ensure that the specification of tire chains is suitable for your tires and install the tire chains as per the recommendations of the tire chain

manufacturer. If recommended by the tire chain manufacturer, use the chain tensioner to maintain the installation tension. The connecting plate on the loose end of tire chain must be fixed or disassembled to prevent damage fender or chassis during driving. In addition, please drive at low speed, otherwise it may damage your vehicle and/or impair the maneuverability and performance of your vehicle.

Parking brake

At 0°C of extrenal temperature, do not use the parking brake, as it may be frozen.

For safety, wedge the wheels or block them with the similar obstacles.

Rust protection

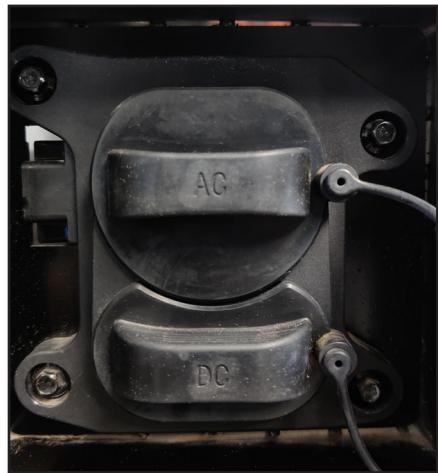
Chemicals for de-icing roads are corrosive and may affect chassis components and accelerate their corrosion (such as brake pipe, parking cable, floor and power battery). In winter, the chassis must be cleaned regularly.

Charger system

On the vehicles, charging interfaces should be in compliance with GB/T20234.2-2015 7 -Pin AC Charging Socket and GB/T20234.3- 2015 Standard 9-Pin DC Charging Socket. Communication protocol between no- vehicular conductive charger and battery management system should in compliance with GB/T27930-2011 and GB/T27930- 2015. For charging, strictly abide by relevant national laws and regulations.

Vehicle charging instruction

1. Ensure that the vehicle is free of any fault, that low and high voltages are cut off and that the key switch is at OFF, insert the charging gun into the charging socket.
2. Turn on the charger for charging.
3. If you want to pause DC charging, click the Stop button on the display of DC charging unit, wait 5s and then unplug the charging gun. If you want to pause AC charging for a vehicle equipped with an on-board charger, press the Unlock button on the instrument panel (on the left side of instrument panel and below steering wheel), and then pull out the charging gun. In case of failure, mechanical unlocking can be adopted by pulling the cable behind the AC



Fast charging position (Lower socket)

Slow charging position (upper socket, if Equipped)

Driving of Vehicle

4. The fast and slow charging sockets are on the left of vehicle and between the driver cab and compartment, as shown in the above figure;
5. Soon after charging is over, close the charging socket cap and its protective cover; otherwise the charging port may be contaminated by water or dirt/sand, resulting in the vehicle faults that should be borne by users.
6. Before turning on high voltage again, it is a must to turn the key switch to OFF.
7. Before driving when charging is completed, it is a must to unplug the charging gun.

Precautions

DANGER

- Although it could be unattended under normal conditions as it has suitable protective measures, any abnormality may result in major accidents. Therefore, for safety, designated personnel should be on duty or perform regular inspection.
- On-duty operators should be subject to theoretical and practical trainings to be familiar with relevant charging procedures. The ones who pass trainings will be granted the charging work certificates before work.

DANGER

- Both output interface of a charger and charging interface of an electric vehicle are at dangerous voltages. Before touching a charging interface, ensure your hands are dry. Moreover, the charging interfaces cannot have any water stain: during the whole process of charging, ensure that the charger, cable and charging port do not come in contact with water.
- Before using a charger, carefully read the instruction provided by its manufacturer in detail and check if input and output cables or charging connectors are damaged. Ensure the settings are correct, then connect the communication interfaces between charger and vehicle battery management system, and then connect the charger to the vehicle. Only then start charging process.
- In the process of charging, all parameters of charging equipment should be monitored in real time, and all records should be made as required.

⚠ DANGER

- Non-professionals cannot open the front and back doors of the charger at will; users are not allowed to disassemble / assemble the display screen without permission, or to write on the display with sharp objects instead of the handwriting pen.
- While the charger is still working, it is forbidden to disconnect or connect the charging plug.
- In case of any abnormality in charging, stop charging immediately, cut off power supply to charging equipment, and while keeping the equipment faults unchanged, report to related departments and service personnel so that professionals could solve them:
 - Abnormal noise from inside the charger;
 - Abnormal smell or smoke comes from the charger;
 - Charger display shows nothing;
 - Charger touchscreen does not respond;
 - Charger issues the warning of irreparable faults.

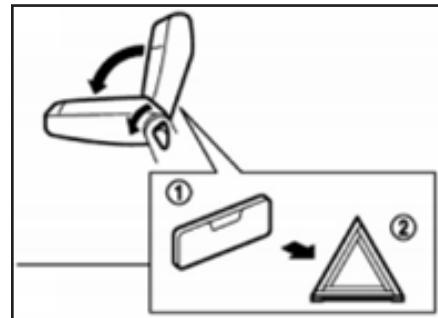
Emergency Measures

Tire pressure is zero.

In event of flat tire, please operate as per the following instructions:

1. Drive the vehicle safely off the road;
2. Turn on the hazard warning lamp;
3. Park the vehicle on a level ground;
4. Pull up the parking brake handle;
5. Switch the engine off;
6. Place the warning triangle.
7. Ask all passengers to leave the vehicle and stand in a safe place away from the traffic vehicles.

Warning triangle



The warning triangle storage box (1) is located beneath the front row seat. Please take out the warning triangle (2) from the storage box.

⚠ DANGER

In the event of a collision:

- If your vehicle is still drivable, pull off to the side of the road, when safe to do so, and place the transmission in the PARK position, apply the parking brake, and turn the vehicle off.
- In the event of an accident that requires bodywork, refer to an authorized dealership.

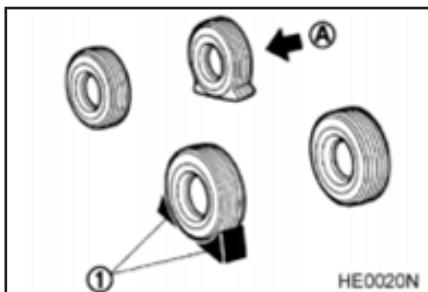
▲ DANGER

- Beware of any exposed high-voltage parts or cables. To avoid electrical shock which can result in serious injury or death, never touch wiring, connectors, and other high-voltage parts, such as the inverter unit and the Lithium-ion battery.
- Leaks or damage to the Lithium-ion battery may result in a fire and toxic emissions which can cause severe burns, respiratory injuries, and other serious injuries or death. If you discover these leaks, contact emergency services immediately. Since the fluid leak may be Lithium Manganate from the Lithium-ion battery, never touch the fluid leak inside or outside of the vehicle. If the fluid contacts your skin or eyes, wash these areas immediately with a large amount of water and obtain immediate medical attention to help avoid serious injury.
- If you are not able to safely assess the vehicle due to vehicle damage, do not touch the vehicle. Leave the vehicle and contact emergency services. Advise first responders that this is a electric vehicle.

▲ DANGER

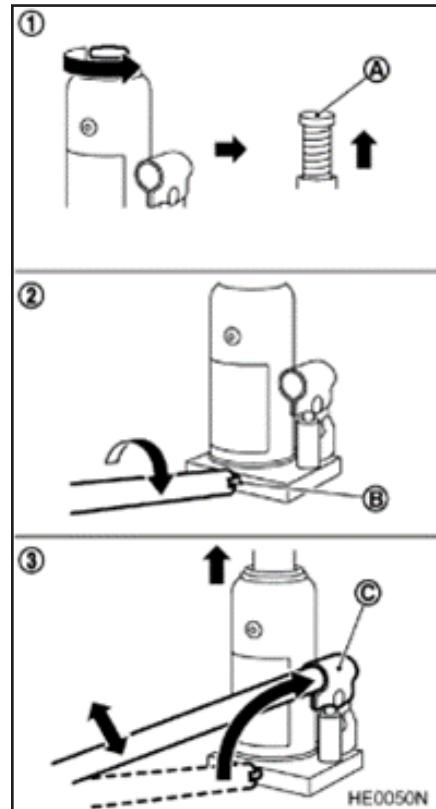
- If a fire occurs inside your vehicle, leave the vehicle as soon as possible. Only use a type ABC, BC, or C fire extinguisher that is meant for use on electrical fires. Using a small amount of water, or the incorrect fire extinguisher can result in serious injury or death from electrical shock.

Block the wheels

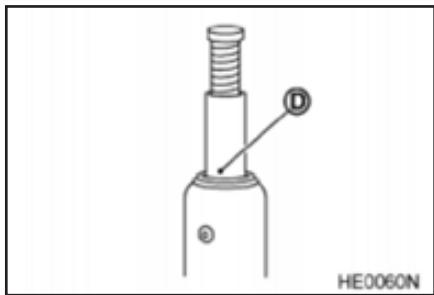


1. Ensure to block the appropriate wheels to prevent vehicle movement and personal injuries.
2. Wedge (1) the flat tire.

Lifting the vehicle with jack

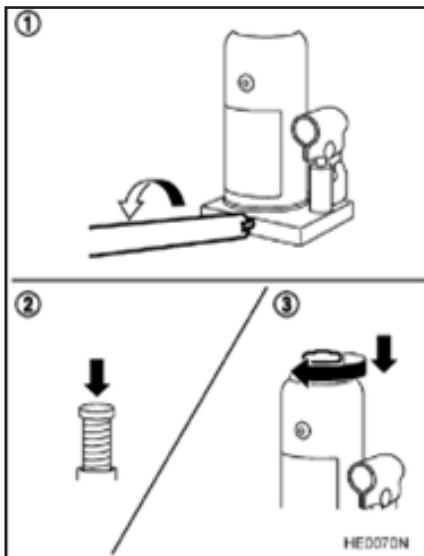


- Manually rotate the jack head A counterclockwise, and if necessary, rotate the adjusting bolt to the top.
- Tighten oil return valve B by turning clockwise with the jack handle.
- Insert the jack handle into the adjuster C and pump the handle up and down to raise the jack piston rod.



The jack piston rod shall not lift higher than the yellow marking D indicated on the cylinder wall.

Lowering vehicle by a jack



- Slowly turn the oil return valve counterclockwise to lower the jack piston rod. If the jacked vehicle is loaded, it is better to loosen the oil return valve by one cycle each time.
- Use force to push the head of the jack to fully retract the piston rod into the jack.
- Rotate the adjusting screw of jack clockwise into the jack.

Wheel Repair Kit

A wheel repair kit is provided in the glove compartment of the QARGO. Please refer to the user manual of the kit for instructions regarding its usage.

Towing of vehicle

1. Flatbed semi-trailers are given priority to tow away breakdown vehicles, as it is the safest and fastest way.
2. If a flatbed truck is not available but the breakdown vehicle must be towed away, the drive shafts have to be removed so that counter electromotive force cannot be generated by the motor and helps to protect the motor controller.
3. If drive shafts cannot be removed then:

Firstly, power off the breakdown vehicle (cut off the main power supply) and then turn the key switch to ON gear: if there is no faults related to the transmission, towing scheme can be adopted, but towing speed must be less than < 10km/h.

4. Remove the three-phase wires from the motor, and protect the wiring harness and connectors. (Mis-handling may damage the sealing and cause insulation issues. Thus, this procedure is not recommended without professionals around).

Ensure to abide by local towing regulations during the towing of the vehicle. Incorrect towing equipment may damage your vehicle. To ensure correct towing and prevent accidental damages of vehicle,

the service and operation personnel are recommended to carefully read the following precautions.

DANGER

Do not allow any passenger to stay in the vehicle during towing.

DANGER

Do not work beneath the vehicle when the vehicle is hoisted by a crane.

DANGER

Before towing, ensure the drive motor, drive shaft, steering system and power system are working normally, and no faults are displayed. In case of severe faults (for example, drive system hardware fails, class-one faults develop in high-voltage insulation), the vehicle must be powered off and towed at full load.

DANGER

Release the parking brake before towing (for vehicles with electronic parking function, please shift to towing mode).

DANGER

Towing with front wheels off the ground, shift the gear to position N (neutral gear), turn the key to "OFF" position, and fix the steering wheel pointing straight using a rope or similar object. Do not turn the key to position LOCK, otherwise the steering lock mechanism will be damaged.

NOTE

Ensure to install the safety rope before towing.

NOTE

For transport on a tractor vehicle, observe the permissible traffic height before driving through a bridge or into a tunnel.

Recovery of stuck vehicle

1. During the towing of vehicle, keep all personnel away from the towing rope.
2. Prevent dragging the tires at a high-speed. This may lead to tire burst and cause serious injuries to the personnel. The vehicle parts may also get overheated and damaged.
3. If one or more tires are stuck in sand, snow, or mud pit and the vehicle is unable to drive out, the towing hook must be used to tow the vehicle.
4. Hook the rope only to the towing hook and never to any other position of the vehicle. Otherwise the vehicle may be damaged.
5. The towing hook can be used only to pull the vehicle out in case it is stuck.
6. Do not tow the vehicle for a long distance using the towing hook.
7. When in use, the towing hook may be subject to remarkably high forces. Avoid pulling the vehicle from a lateral or diagonal direction.

Driving of Vehicle

Vehicle Maintenance and Mileage

Exterior cleaning

To maintain the appearance of your vehicle, the adoption of correct maintenance measures is really important. Park your vehicle within a garage or a shaded area whenever possible, in order to minimize the damage to the vehicle paint.

When it's necessary to park the vehicle outdoors, please park the vehicle under a shade or cover the vehicle with a vehicle cover. Carefully cover or uncover the vehicle, in order not to damage the paint.

Car washing

Please wash your vehicle as soon as possible to protect the paint in event of following conditions:

- After rain (in order to prevent possible damages caused by acid rain).
- After driving on seaside roads.
- When the paint is contaminated by soot, birds droppings, sap, metallic particles, or insects.
- When the paints are adhered by dusts or muds:

1. Clean the vehicle surfaces with a wet sponge and water
2. Thoroughly clean the vehicle surfaces by mixture of neutral soap or special automotive detergent and clean warm water (do not use hot water).
3. Flush the vehicle thoroughly by large volume of water.
4. Wipe dry the paints with a wet chamois leather and avoid leaving water stains.

NOTE

- Ensure that the drainage holes at the lower edge of the doors are not blocked.
- In washing, don't directly spray water onto any electronic element (battery pack, motor controller and central electrical box).
- Do not use strong household detergent, strong chemical, gasoline, or solvent salt. to clean the vehicle body.
- Avoid using a tight lint or rough cloth (such as car washing gloves). Take cautions while removing caked dirt or other impurity, in order to prevent scratching or damaging the paint.

NOTE

- The flanges and connector of doors and the inner sides and openings at the folds are easily subject to the harm of salt on the roads. Therefore, ensure to periodically clean these areas.
- Flush the underbody and wheel loosen the dirt and/or flush the road salt.
- Do not wash the vehicle under direct exposure to sunshine or under high vehicle body temperature, otherwise the water stains will probably be left on the paints.
- Upon detection of damaged area onthe water stains will probably be left on the paints vehicle (such as painted bumper and front combination lamp), it's not recommended to flush by high pressure spray. Ensure to clean carefully by hand.
- Prevent the water ingress into door lock.

Remove the spots

Please remove the adhered asphalt, oil dirt, industrial dust, dead insects, and plant sap from the body paint in order to prevent causing permanent damage or stain.

Waxing

Periodic waxing can protect the paint and maintain new appearance.

After waxing, it's recommended to polish the vehicle to remove residual wax.

NOTE

- Please thoroughly clean the vehicle before waxing.
- Please use the wax as per the instructions of the wax manufacturer.
- Do not use a detergent with abrasive content or with compound which may damage the paint.
- If it's difficult to polish the vehicle surface, use the asphalt detergent before waxing the vehicle.
- Using mechanical waxing machine or excessive grinding on primer/transparent finish paint will wear the paint and leave stains.

Cleaning of window glass

Use a glass detergent to remove the dust and dust film from the windows. A dust film will be formed on the glass surface when the vehicle is parked under strong sunshine. Using a glass detergent and a soft cloth can easily remove this film.

Cleaning of chassis

Some roads will be sprinkled with salt in winter. Therefore, ensure to periodically clean the chassis of the vehicle. This can avoid the accumulation of dirt and salt content and prevent the rusting of chassis and suspension system.

In winter and spring, ensure to check the sealing performance of underbody and when necessary recoat it again.

Chromeplated parts: Please use a non-corrosive chrome-plating polishing agent to wipe all chrome-plated parts to keep them shiny.

Interior cleaning

Please periodically remove the accumulated dust from interior trim panels, plastic parts, and seats with a vacuum cleaner or soft brush. Wipe the surfaces of plastic and rubber parts with a clean soft cloth dipped with neutral soapy water and then wipe dry by a dry soft cloth.

Before using any fiber cloth protective agent, please carefully read the product instructions of the manufacturer. Some fiber cloth protective agents contain some chemical that may lead to formation of stains and damage the seat fabric. Clean the cover of combination instrument screen with a water-dipped wet soft cloth.

NOTE

- Do not use volatile oil, thinner, or other similar solvent.
- Do not use fiber cloth protective agent, unless recommended by the manufacturer.
- Do not use a glass or plastic detergent to clean the screen of the combination instrument cluster, otherwise the screen may be damaged.

Floor mat

The use of floor mat can prolong the service life of carpet and ease the cleaning of vehicle interior trim parts. No matter which type of floor mat is used, please ensure that the floor mat is of appropriate size and is fixed on the pedal area to prevent impairing the operations of the pedals. The floor mat must be cleaned periodically. Upon detection of serious wear, ensure to replace with new one.

Cleaning of window glass

Use a glass detergent to remove the dusts and dust film from the windows. A dust film will be formed on the glass surface when the vehicle is parked under strong sunshine. Using a glass detergent and a soft cloth can easily remove this film.

Plastic parts

The plastic parts can be cleaned with warm soapy water. If it's difficult to remove the dirt, use a plastic detergent, but do not use any solvent.

Seat belts:

NOTE

- The retraction of a wet seat belt into the retractor is prohibited.
- Do not use a whitener, dye, or chemical solvent to clean the seat belt, as such substances may deteriorate the strength of the seat belt remarkably. The seat belt can be wiped and cleaned with a sponge dipped in warm soapy water.
- Before the use of seat belt, ensure to dry it fully.

Rust protection

The main causes for the rusting of vehicle:

- Accumulation of dirt or chippings with water content in the cross section, cavity, or other location of the vehicle body.
- The damage of paint or other protective layer caused by the gravel, stone, or minor traffic accidents.

Environmental factors influencing the rusting speed

Moisture: The sand, dust, and water accumulated on the chassis will accelerate the rusting of vehicle body. A moist floor mat can't be completely dried within the vehicle and must be placed outside to be dried completely in order to prevent the rusting of floor.

Relative humidity: In the regions with high relative humidity, the rusting will be more serious, especially in the regions with atmospheric pollution, salt-sprinkled roads, and temperature constantly above 0°C.

Temperature: The increased temperature will accelerate the rusting sped for the parts in the poor ventilated positions. In regions above 0 C, corrosion may be accelerated.

Air pollution: The industrial pollution, the salt content in the air in the coastal regions, and the salt sprinkled on the roads will accelerate the rusting. The salt sprinkled on the roads will also accelerate the aging of paint.

Guarding vehicle against rusting

1. Wash and wax the vehicle occasionally to keep the vehicle clean.
2. Ensure to check the paints for minor damages. Upon detection of any damage, repair as soon as possible.
3. Keep the drainage holes beneath the doors non-obstructed, in order to prevent water accumulation.
4. Check the underbody for accumulation of sand, dust, and salt. Upon detection of sand, dust, or salt, flush with water as soon as possible.

⚠ DANGER

- Do not remove the smudge, sand, and other dirt from the cab by flushing method. Please use a vacuum cleaner or broom to remove the dust.
- The power battery, high-voltage harness and high-voltage electrical elements cannot be flushed with water for cleaning.
- Keep the water and other liquids from coming in contact with internal electronic parts, otherwise they may be damaged.

⚠ DANGER

- Ensure to clean the underbody periodically in winter. For additional rust protection measures in some regions, please deliver your vehicle to an authorized service station for treatment.

Maintenance requirements

It is necessary to perform routine and periodic maintenance to keep your vehicle in good condition and maintain power performance. It is the owner's responsibility to perform required maintenance and general maintenance.

Periodic maintenance schedule

In each item, service mileage and time (months) shall be used to decide the inspection interval, and the one which comes first (distance or time) prevails for maintenance.

☆ — Check the fluid level, tighten and adjust it.

+ - Replace or lubricate it.

Item	Inspection interval (odometer reading and months, whichever comes first)												
	Month		--	6	12	18	24	30	36	42	48	54	60
	Odometer reading *1000km		1	10	20	30	40	50	60	70	80	90	100
Inspection inside the cab or at bottom of the cab													
Check the hoses of radiator and cooling system for damage and normal connection	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Check the coolant level in its tank	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Change the coolant (Refer Pg : 5-21)	☆				+					+			
Check the fluid level in the brake oil reservoir	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Replace the brake oil (Refer Pg : 5-21)					+					+			
Check if the brake pedal clearance is normal	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Check the power steering fluid in its tank	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Change the power steering fluid (Refer Pg : 5-21)			+		+		+		+		+		
Check the output voltage of High Voltage and Low Voltage battery	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Check wiper washer fluid level	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Underbody inspection													
Check the suspension system for damage and looseness	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
On suspensions, check if ball heads have clearance and if dust covers are damaged			☆		☆		☆		☆		☆		
Grease the suspension arm, steering rod system and drive shaft			+		+		+		+		+		
Check the drive shaft dust boot for damage	General operation conditions			☆		☆		☆		☆		☆	
	Severe operation conditions		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Check the steering rod system for damage and loose joints (including seals and dust boot)					☆				☆				
Check the gear oil level of rear axle			☆		☆		☆		☆		☆		

Vehicle Maintenance and Mileage

		Inspection interval (odometer reading and months, whichever comes first)											
Item	Month	--	6	12	18	24	30	36	42	48	54	60	
	Odometer reading *1000km	1	10	20	30	40	50	60	70	80	90	100	
Replace the rear axle gear oil	General operation conditions										+		
	Severe operation conditions										+		
Check the parking brake rod travel and clearance		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Check if the power battery frame is connected reliably to the frame and the power battery, free of any damage		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
Exterior inspection													
Check the wheel alignment status			☆		☆		☆		☆		☆		☆
Check the front wheel bearing for clearance									☆				
Check brake hose and pipe for leakage of oil			☆		☆		☆		☆		☆		☆
Check the front brake pad and disc for wear	General operation conditions		☆		☆		☆		☆		☆		☆
	Severe operation conditions												
Check the rear brake shoe lining and drum for wear	General operation conditions					☆				☆			
	Severe operation conditions												
Check the body for damage													Every year
Road Test		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆

NOTE

- In “General operation conditions”, replacement is not needed.
- “Severe operation conditions” is only applicable to vehicles serviced in severe conditions, including the following items:
 - In dusty areas, or in salt air or seaside.
 - On uneven roads, hills, or over puddles.
 - In cold areas.
 - Short-distance traveling in winter.
 - Frequently and sudden use of brakes.
 - Towing another vehicle.
 - Uses such as found in taxi or rental vehicle.
 - In heavy city traffic where the outside temperature reaches 23°C or higher with the driving time accounting for 50% of the total driving time.
 - At 30°C or above, traveling speed is higher than 80km/h.
 - Traveling time accounts for 50% of total mileage.
 - Overloading

General maintenance

General maintenances refer to the general checking items during daily operations of the vehicle. These items are absolutely necessary for the correct operations of the vehicle. It's your responsibility to periodically fulfill these procedures.

The fulfillment of general maintenance and checking only requires general mechanical knowledge and some common tools. These checking items can be fulfilled by yourself, a qualified technician, or an authorized service station.

When the maintenance service is required or your vehicle is malfunctioning, please get the vehicle checked at an authorized service station.

NOTE

During the daily operations of the vehicle, periodically fulfill the maintenance requirements specified. Upon detection any abnormal sound, vibration, or smell, ensure to check and find out the cause or drive to an authorized service station for checking.

Door

Check all doors for normal functioning. Ensure that all door latches can be locked securely. If necessary, lubricate the hinges and door latches. While driving on roads splashed with salt or other corrosive materials, periodically check the lubrication status.

Battery

If the vehicle is fitted with a maintenance-free battery, check whether the charging indicator lamp on the battery indicates green. If not green, ensure to replace the battery as soon as possible.

Lighting

Ensure that the headlamp, brake lamp, position lamp, turn signal lamp, and other lamps can be operated correctly and are fixed securely. In addition, the checking and calibration of headlamp beam are required.

Tire rotation

Ensure to perform the tire rotation once every 15,000km. However, the interval of tire rotation may differ slightly depending on your driving habits and road conditions.

Tires

Periodically check the tire pressure (including spare tire) with a pressure gauge at a service station and when necessary adjust to the specified pressure. Carefully check for damage, cracks and excessive wear.

Spare tires

Check and ensure that the spare wheel is correctly fixed at appropriate position.

Wiper and washer

Check and ensure that the wiper and washer can work normally and the wiper is free of damage.

Wiper blades

Upon detection of abnormally functioning wiper, check the wiper blades for rupture and wear.

Coolant capacity

After the drive motor cools down, check the coolant level.

Power steering fluid

Under cold state of vehicle, check and ensure that the power steering fluid level is between the markings MAX and MIN of the fluid reservoir.

Accelerator pedal

Check and ensure that the accelerator pedal can work smoothly and there is a sufficient space between carpet and pedal.

Brake pedal

Check and ensure that the brake pedal can work smoothly and there is a sufficient space between carpet and pedal.

Brake fluid

Ensure that the brake fluid level is between markings MAX and MIN of the fluid reservoir.

Parking brake

On a slope, ensure that the your vehicle can remain stationary safely only with the use of the parking brake.

Seat

Check the seat adjusters, including seat slide controller and backrest adjuster, and ensure that they work normally and all locking mechanisms are functioning properly at any position.

Seat belts

Check and ensure that all parts of the seat belt system are working normally and smoothly and are fixed securely. Check the seat belt for presence of cut, wear, abrasion, and damage.

Steering wheel

Check for presence of abnormalities such as excessive free play, difficult steering, and noise, during steering.

Warning lamps, indicator lamps, and alarms

Check and ensure that all warning lamps, indicator lamps, and alarms can work normally.

Windscreen washing fluid

Check if the washing fluid reservoir has sufficient washing fluid.

Maintenance Precautions

DANGER

During the checking or repair of your vehicle, take cautions to guard yourself against accidental and serious injuries and prevent vehicle damage. The general precautions that must be taken are as below.

- On the flat ground, engage the parking brake and wedge the wheels from moving, and the shift the gear into P (parking) gear.
- Ensure that the ignition switch is rotated to position OFF or LOCK.
- When the ignition switch is at position ON or ACC, the cooling fan may start rotation suddenly, even when the driving motor is not running. To prevent injuries, always disconnect the negative cable of battery while working near the radiator.

⚠ DANGER

- If it's necessary to work while the driving motor is running, ensure to keep your hands, clothes, hair, and tools away from the rotating fan and other running parts.
- Do not work beneath the vehicle when the vehicle is supported only by the jack. If it's necessary to work beneath the vehicle, ensure to support the vehicle using a safe stand.
- Ensure to keep smoking objects, flame, and sparks away from power cell and battery.
- When the ignition switch is in ON position, do not connect or disconnect the battery or transistor subassembly.
- If the installation of wireless transmitter of any type or mobile phone is desired, ensure to install the hand-free suite and corresponding antenna.
- Auxiliary battery and power battery pack have high current or high voltage, so take care to avoid unexpected short circuit.

⚠ DANGER

- The incorrect disposal of engine oil or other oil will endanger the environment. Please abide by the local regulations on the disposal of automotive oils.
- Don't directly touch brake fluid.

Coolant in cooling system

⚠ DANGER

With cooling system at high temperature, don't open the expansion tank cap, because the coolant overflowed from the radiator may cause skin burns. Therefore, before operations, wait until the cooling system cools down.

⚠ DANGER

The coolant is a toxic substance. Make sure to store in a labeled container inaccessible to children.

NOTE

Coolant to be replenished should be of the same brand as original one. Besides, freezing point of the selected coolant should be lower than the lowest temperature in operating area by 10°C.

Check coolant capacity

With the key switch at "ON" gear, open the access opening at co-driver' seat to visually check the coolant level in the expansion tank. If the coolant level is lower than the "min" line, please add coolant between "min" and "max" scales.

Replacement of coolant

1. Power off the vehicle.
2. Open the access opening at co-driver' seat.
3. Open the expansion tank cap.
4. Disconnect the rubber hose from the water inlet of electric water pump.
5. Drain out the coolant.
6. Re-connect the rubber hose to the water inlet of electric water pump (the rubber hose is fitted till the end, and the clamp is tightened to 3~5N.m)
7. Slowly add coolant into the cooling system from the filler port of expansion tank until "max" scale.
8. Put the expansion tank cap back on.
9. After the key switch is shifted to "ON", the coolant level will drop. Therefore, after approx. 30s (coolant level stays still),

check if the coolant level in expansion tank is below 1/2 of the “min” - “max” line, and if so, replenish the coolant to 2/3 of the “min” - “max” line. Repeat the above steps until the coolant level stays above 1/2 of the “min” - “max” line and below the “max” line.

10. Re-start the drive motor to observe if the comprehensive temperature warning indicator (for motor and its controller) on the instrument is normal.

11. Check if the cooling pipeline leaks.

12. Close the access opening of the co-driver's seat.

Power steering fluid

DANGER

The power steering fluid is a toxic substance and must be stored in a container inaccessible to children.

Replenish the power steering fluid.

1. Power off the vehicle.
2. Open the co-driver's floor.
3. Screw off the steering fluid tank cap to check if the fluid level is below MIN, and if so, replenish the fluid to MAX.

4. Only use recommended power steering fluid for replenishment.
5. Over-filling is prohibited.
6. While adding steering fluid, ensure that there is no ingress of dust or dirt into the oil reservoir.
7. Put down the co-driver's floor and tighten the locking buckle.

Brake system

Checking of brake pedal

If the brake pedal drops suddenly in normal state, or it feels soft to depress the brake pedal, or the braking distance of the vehicle becomes longer, please contact an authorized service station.

Checking of parking brake

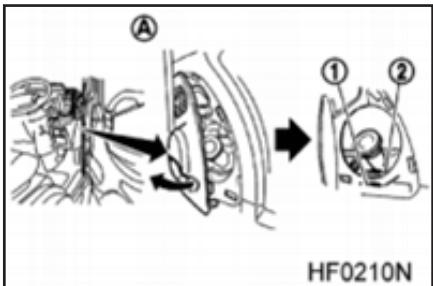
Park the vehicle on a steep slope and check if the vehicle can be held stationary with the use of parking brake. Periodically check the parking performance of the parking brake. In event of low braking performance, please contact an authorized service station.

Hydraulic booster (If Equipped)

Check the function of vacuum booster as per following procedure:

1. Stop the vehicle, depress the brake pedal several times, and ensure that the travel of brake pedal remains unchanged.
2. Depress the brake pedal and start the driving motor. The pedal height shall drop slightly.
3. Depress the brake pedal and stop the vehicle. Depress and hold the pedal for approximately 30s. The pedal height shall remain unchanged.
4. Without depressing the brake pedal, run the drive motor for 1min, and then shut down the engine. After that, depress the brake pedal several times: each time you do so, the pedal travel gradually decreases with the decreasing booster oil pressure.

Brake fluid



⚠ DANGER

- Only use new brake fluid from a sealed container. Used, low quality, and contaminated brake fluid may damage the braking system. The use of incorrect brake fluid will damage the brake system and impair the braking performance of the vehicle.
- Clean the fluid reservoir cap before opening it.
- The brake fluid is a toxic substance and must be stored in a container inaccessible to children.

⚠ DANGER

- Do not splash brake fluid onto the paints. In event of splash of brake fluid onto the paints, ensure to clean with water immediately.
- The brake fluid reservoir is fixed on the left side of the instrument panel. Open the guard cap A and check the level in the fluid reservoir. If the level is below marking MIN (1), the brake warning lamp turns on. Please add fluid upto the MAX mark (2).
- If the frequent adding of brake fluid is required, please have the system thoroughly checked by an authorized service station.

Windscreen washing fluid



⚠ DANGER

The windscreen washing fluid is a toxic substance and must be stored in a container inaccessible to children.

Open the passenger's door to check if the washer liquid level is too low, and if so, replenish the fluid until the washer port.

When the driving condition requires increased consumption of washing fluid, please add washing fluid into the fluid reservoir more frequently.

Adding the washing fluid additive can enhance the cleaning performance. In winter, please add the windscreen washing fluid antifreeze. Please adjust as per the mixing ratio specified by the antifreeze manufacturer.

Do not close the door before the washing fluid reservoir port is completely retracted to closing position.

Do not use the engine antifreeze coolant as windscreen washing fluid. Otherwise the paint will be damaged.

Operation and maintenance of maintenance-free lead-acid battery

While assembling the battery power wires, apply a film of lubricating grease (Vaseline) to the post surfaces of battery to prevent the oxidization and corrosion of posts.

Do not knock or bend the battery posts during the assembling and disassembling of battery cables. While assembling the bolts, tighten the bolts appropriately with a pneumatic wrench to prevent looseness of battery posts.

While assembling the battery, fix the pull rods and pressure bars on the battery frame appropriately, inadequate fixing may lead to insecure fixing of battery and the excessive fixing will lead to mechanical damages including deformation of battery casing, cracking of sealant, and leakage of electrolyte.

While disassembling the battery, disassemble the negative post of battery cable before the positive post. The installation procedure is in reverse sequence.

Storage and transport of vehicle

- During the storage and transport of the vehicle, check and ensure that the doors are closed, turn off the electric devices (such as lamps), and cut off the power master switch.
- If the vehicle is unused for a long time (more than half a month), disconnect the mechanical power-off switch (on the right side of the vehicle, between the cab and the compartment) to prevent the battery from losing power due to electrical discharge. It is best to run the drive motor regularly each month for 10~15min to charge the battery.
- Avoid frequent starting, which may cause the battery to drain power or even be damaged.

- Upon detection of corroded wiring posts due to oil dirt or dust, clean the post surfaces with cotton cloth, in order to prevent the ablation of wiring posts and poor start due to high contact resistance during the cold start of the engine.

Operation Method

- Before using the battery, measure the terminal voltage of battery. If the measurement is above 12.6V, the battery can be used directly. If the voltage is low, charge the battery before use.
- A sealed filled battery is fitted with charge state indicator (common referred to as “electric eye”). Green: Normal charge; Black: Require charging; White: Require replacement.
If the charge status is insufficient, timely charge the battery before use.
- Connect securely the terminals “+” and “-“ of battery to the positive and negative cables of the vehicle respectively and never connect reversely, otherwise the electric devices on the vehicle will be damaged. In addition, to prevent damaging the driving motor do not run the vehicle before the connection of the battery charging circuit.

Vehicle Maintenance and Mileage

- Do not tilt or overturn a sealed filled battery for transport or use.

Maintenances

- Recharge a sealed filled maintenance battery whenever it's stored for more than 3 months.
- Frequently check the ventilation holes on both sides of the battery cover and prevent them against blockage with dusts and icy water, in order to prevent deformation and explosion of housing.
- Keep the battery away from heat sources and open fire. Keep it ventilated during charging and operation. Guard against the personal injuries caused by explosion.
- When the battery or the vehicle is to stay unused for a long time, fully charge the battery before storage, otherwise the service life of the battery will be impaired.

Charging

The constant voltage charging is preferred.

- Constant voltage charging: Charge the sealed filled maintenance-free battery by constant voltage charging method, with charging voltage at $14.4 \pm 0.2V$ and the

maximum permissible current at $0.5C20$ ($C20$ is the 20-hour rate capacity of battery), till the charging current closes to zero for 2~3 hours.

- Constant current charging: Charge the battery by $0.1C20A$ current. When the battery voltage variation is $\leq 0.05V/h$ at the end of the charging, it's considered that the battery is fully charged.

Wiper

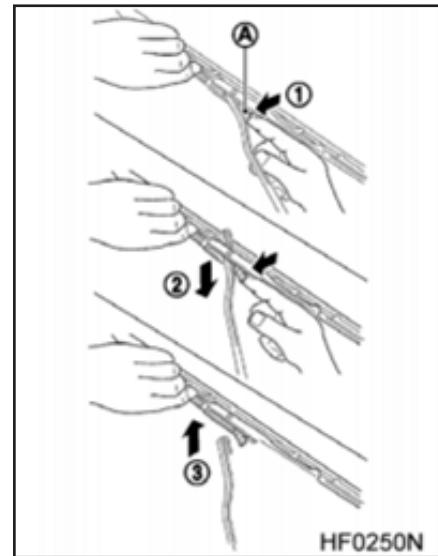
Cleaning

If the windscreen is unclear after being cleaned with windscreen washing fluid or there is a noise during working of wiper blades, it's probably caused by the wax or other material adhered on the wiper blades or windscreen.

Clean the outer surface of windscreen by wiper detergent or neutral detergent. If no water bead forms during the flushing with clean water, it indicates that the windscreen is already clean.

To clean the wiper blades, wipe with a cloth dipped with wiper detergent or neutral detergent and then flush with clean water. If the windscreen is still unclear after being wiped by the cleaned wiper blades, replace the wiper blades.

Replacement of wiper



1: Pull up the wiper arm.

2: Push down the locking pin (A) and disassemble the wiper blade as shown in the figure.

3: Install new wiper blade in reverse sequence of the disassembly procedure.

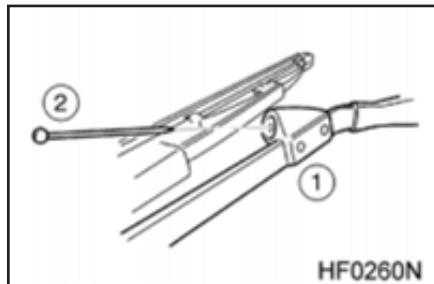
4: Restore the wiper arm to its original position.

NOTE

After the replacement of wiper blades, restore the wiper arms to original positions.

NOTE

Ensure that the wiper blades comes into contact with the windscreens. Otherwise, the wiper blades may be damaged by blowing wind.

Windscreen washer nozzles

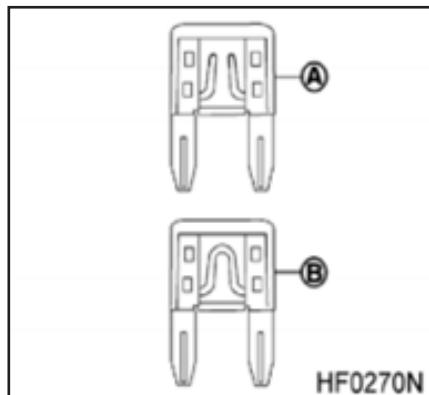
During the waxing on the front of vehicle, take caution to prevent the ingress of wax into washer nozzles (1). Otherwise it may lead to blockage or working failure of windscreen washer. In event of ingress of wax into nozzles, remove the wax using a needle or thin tool (2).

Fuses**Checking and replacement of fuses****NOTE**

Do not use a fuse with amperage higher or lower than the value specified on the fuse case cover. Otherwise it may damage the electric system or cause fire.

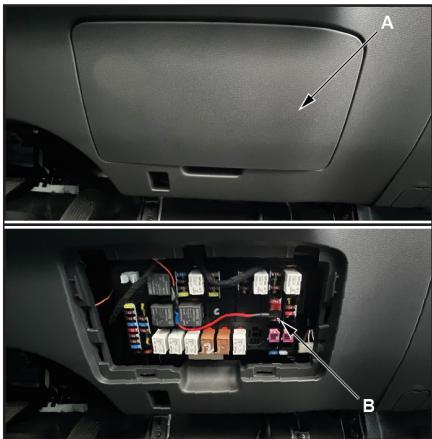
NOTE

If any electric device fails to work, please check the fuse for burnout.



1. Ensure that the ignition switch is at "OFF" position.
2. Ensure that the lighting switch is at "OFF" position.
3. Ensure that the power supply master switch is at "OFF" position.
4. Disassemble the fuse case cover.
5. Identify the fuse to be replaced.
6. Unplug the fuse to be replaced.
7. If the fuse is already burnt (A), replace with a new fuse (B).

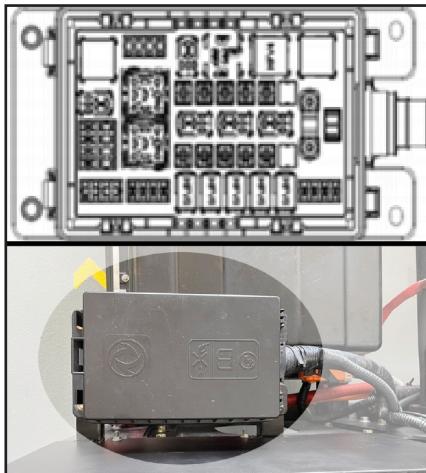
Cab fuse case



The fuse box is behind the lower baffle in the middle of the instrument panel.

- Lower baffle in the middle of instrument panel (A)
- The fuse puller (B) is located in the fuse case. After the checking or replacement of fuse, close the fuse case cover and close the glovebox.

Frame distribution box



Fuse box of frame distribution box is behind rear suspension bracket of cab on right side of frame.

- Open the fuse case cover.
- After the checking or replacement of fuse, reinstall the fuse case cover.

Wheels and tires

Inflation pressure of tires

Periodically check the tire pressure (including spare tire). Incorrect tire pressure may influence the tire life and vehicle operations.

NOTE

An incorrect inflation pressure will lead to poor steering function and may also cause steering malfunction. Ensure that the tires are inflated to normal pressure at all times.

NOTE

Ensure to check the tire pressure under cold state. It can be considered as cold tire if the vehicle is parked for 3 hours or longer or the driving distance is less than 1.6km (1 mile). Insufficient tire pressure may lead to overheating and internal damage of the tire. It will probably lead to tread separation or even burst during high-speed driving.

Type of tires

NOTE

At the replacement or renewal of tires, ensure that all tires are of same type (namely, summer tire, all-season tire, or snow tire) and structure.

All-season tires

Some vehicle models designate the use of all-weather tires to provide good operation performance throughout the year, including the snowy and icy road conditions. The ALLSEASON or M&S is indicated on the sidewall of all-season tires. The snow tires provide better snow traction than all-season tires, but their use is limited in some regions.

Summer tires

The summer tires are of standard configuration. This tire can provide outstanding driving performance under general weather conditions. To drive under snowy or icy condition, it's recommended to use snow tires or all-season tires on all four wheels.

Snow tire

If it's necessary to use snow tire, ensure to select the tires of equivalent size and load rating with original tires. Otherwise the

safety and maneuverability of your vehicle will be affected.

Generally, the snow tires feature lower speed rating than the original tires and can't match with the potential maximum speed of the vehicle. Do not exceed the maximum speed rating of tires.

To increase the traction on icy road, studded tires can be used. However, the use of studded tires is prohibited in some countries or regions. Please consult with local laws before installation of studded tires. Using studded tires on moist or dry roads will probably have worse skid-proof and tracking performance than conventional tires.

Tire chain

The use of tire chains is probably prohibited in some regions. Therefore, please consult with local laws before installation of tire chains. During the installation of tire chains, ensure that the specification of tire chains is suitable for your tires and install the tire chains as per the recommendations of the tire chain manufacturer. If recommended by the tire chain manufacturer, use the chain tensioner to maintain the installation tension. The connecting plate on the loose end of tire chain must be fixed or disassembled to prevent damaging fender or chassis during vehicle movement.

In addition, please drive at low speed, otherwise it may damage your vehicle and/or impair the maneuverability and performance of your vehicle.

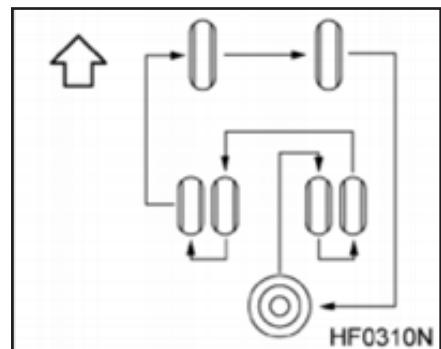
The tire chain must be installed only on rear wheels, instead of the front wheels.

NOTE

Do not drive the vehicle with tire chains on roads without snow. Driving with tire chains on such road condition will lead to damage of various vehicle mechanisms due to stress.

Tire rotation

Vehicle with double-tire rear axle



Vehicle Maintenance and Mileage

It's recommended to perform the tire rotation once every 15,000km.

NOTE

After the tire rotation, adjust the tire pressure, and re-tighten the wheel nuts after driving for 1,000km (including flat tire situation).

NOTE

In removing a tire, do not damage its pressure sensor (installed in the wheel rim); otherwise, a warning of tire pressure abnormal may occur.

NOTE

For the vehicle with double-tire rear axle, the wear must be same for two tires on one side.

NOTE

Avoid changing the rotational direction of an old tire. It's recommended to disassemble the wheel hub, adjust its direction, and reassemble with the tire.

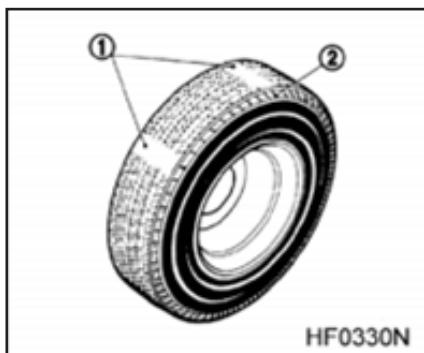
NOTE

The incorrect choice, installation, or bad maintenance of tire will impair the safety against accidental risks and injuries of vehicle.

NOTE

For wheel rotation, only tires are exchanged and wheel rims are not.

Wear and damage of tires



Ensure to periodically check the tires for presence of wear, cracking, swelling, or inclusion in tread. Upon detection of excessive wear, cracking, swelling, and deep cut, replace the tire.

The original tires are fitted with a wear indicator (①) on the tread. When the wear indicator is visible, ensure to replace the tire. The location of the wear indicator is indicated by the position marking (②).

Aging of tire

Please bear in mind that the tires will age. The tires in excess of 6 years can't be used, no matter they are new ones or used ones.

Replacement of tire and wheel hub

Do not install a deformed wheel hub or tire, even a repaired one. Such wheel hub or tire structure may already be damaged and may cause a malfunction without early warning.

After a wheel hub is removed, replace any damaged oil seal with a new one, and the lip of new oil seal should be coated with a little grease before installation of the wheel hub.

At the time replacement of tires, please use the tires of same size, speed rating, and loading capacity with the original tires.

The use of tires other than those recommended in this chapter or the mixed use of tires of different brands, structures (bias-ply or radial), or treads will influence

the driving, braking, maneuverability, ground clearance, body and tire clearance, tire chain clearance, speedometer calibration, headlamp beam angle, and bumper height.

NOTE

To replace the wheel for no matter whichever cause, ensure to replace with the wheel of same offset. The wheels of different offset will lead to earlier wear of tires, reduce the maneuverability of vehicle, and/or cause interference with brake. The interference with the brake will cause reduced braking efficiency and/or earlier wear of brake pads.

Wheel balance

Unbalanced wheels will impair the maneuverability of vehicle and life of tires. The tires may become unbalanced even under normal operations. Therefore, the periodical dynamic balancing is required for the wheels.

To perform the dynamic balancing, the wheel must be disassembled from the vehicle. Performing the dynamic balance by idling the front wheel on the vehicle will lead to damage of transmission.

Maintenances of wheels

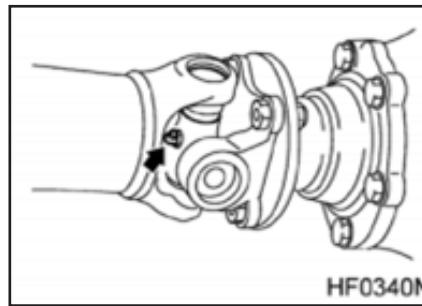
During car washing, ensure to clean the wheels to keep them clean.

At the time of replacement of wheel or cleaning of vehicle chassis, clean the inner side of the wheels as well.

While cleaning the wheels, do not use an abrasive detergent.

Periodically check the wheel rims for presence of indentation and corrosion. Such defects on the wheels will cause pressure loss or damage of tire bead.

Transmission shaft



It is necessary to lubricate the drive shaft regularly.

Locations and intervals for adding of lubricating grease

Periodically add lubricating grease to all locations of the vehicle.

Before adding the lubricating grease, clean the lubrication nozzle and the location to be lubricated and then add the lubricating grease.

After adding the lubricating grease, remove the excessive grease. If a grease cap is fitted, please place the cap back in its original position. The table below only lists the lubrication for first 50,000km mileage. Afterwards, please lubricate as per the interval mileages of this table.

☆ - Lubrication items for run-in maintenance

The run-in maintenance mileage is 2000-2500km.

+ - Maintenance items for normal driving

Lubrication locations	Lubrication interval mileage (x1000km)										
	△	5	10	15	20	25	30	35	40	45	50
Drive shaft spider bearing	☆	+	+	+	+	+	+	+	+	+	+
Drive shaft sliding yoke	☆	+	+	+	+	+	+	+	+	+	+
Front and rear leaf spring pins	☆	+	+	+	+	+	+	+	+	+	+
Steering knuckle kingpin	☆	+	+	+	+	+	+	+	+	+	+
Tie rod ball pin	☆	+	+	+	+	+	+	+	+	+	+
Drag link ball pin	☆	+	+	+	+	+	+	+	+	+	+
Steering drive shaft sliding yoke and spider bearing	☆	+	+	+	+	+	+	+	+	+	+
Wheel hub bearing			+		+		+		+		+
Driving motor	☆		+		+		+		+		+
Door hinge			+		+		+		+		+
Cab tilting locking mechanism	☆		+		+		+		+		+
Support point for cab tilting handle	☆		+		+		+		+		+

Lubricant and coolant specifications

Lubrication location	Name	Model	Level	Quantity
Motor AMT reducer	Transmission oil	75W/85	APIGL-4	1.2L
Motor single-stage reducer	Transmission oil	75W/85	APIGL-4	0.7L
Electric drive axle	Transmission oil	75W/85	APIGL-4	4.5L
Rear axle assembly	Rear axle gear oil	85W/90	APIGL-5	3.6L
Electric air compressor	Diesel and engine oil	15W/40 and above	API CD level (above -20C)	To the required scale
Brake fluid reservoir	Brake fluid	DOT4	—	1. 1L
Steering oil reservoir	Power steering fluid	Pentosin	—	—
Radiator	Anti-rust antifreeze (-20C)	AG13	Freezing point: -20C	5.5L
Windshield Washer tank	Washer fluid	FQ-1 cleaning agent for vehicle windshields	—	1L
A/C system	Refrigerant	R134a	—	350 ± 20(g)
Bearings and ball pins	Lithium-base lubricating grease	2#	—	0.5L
Wheel hub bearing	Extreme-pressure composite lithium-base grease	DDAC-B	—	0.5L

NOTE

It is prohibited to mix lubricants and coolants with different models or from different manufacturers. The above table represents the ex-factory requirements, and for special cold regions, it is needed to add the anti-rust and anti-freezing solution rated at lower than local area temperature by 10°C.

NOTE

Regularly check the oil level to ensure the reducer does not leak oil. Besides, insufficient oil may cause the reducer to be poorly lubricated, in mountainous areas; however, excessive oil may result in oil loss and breather pipe leakage. (To check the oil level, park the vehicle on the flat ground and stay still until the oil level is steady and the reducer cools down.).

Usage and precautions for power lithium battery.

Characteristics and structures of power lithium battery

- Power lithium battery does not need to be re-filled with electrolyte after ex-factory and during normal use.
- It can be charged and discharged with high current and suitable for wide ambient temperatures: -20 ~ 55°C for discharging and 0 ~ 45°C for charging.
- With no memory effect, it can be recharged after incomplete discharging.
- It is non-toxic and friendly to environment, without precious metal or heavy metals such as Cd, Hg and Pb.
- The battery pack is divided into two boxes of which cells are rigidly connected by metal sheets, and the two boxes are connected by cables.

Precautions for transportation, installation, usage, storage and maintenance

Transportation requirements

- For transportation, ensure that the battery charge does not exceed 60% of the total capacity.

- While loading and unloading, the battery should be handled carefully against being thrown, heavily stressed or rolled.
- In transportation and usage, the battery can neither be impacted nor squeezed, which otherwise may damage the battery case or its internal structure.
- For its layout and installation, the battery should be ventilated for heat dissipation and then protected against dust and rain.
- On bumpy roads, ensure that the battery pack is reliably clamped.

Installation requirements

- Due to risk of high voltage, only designated personnel can operate on the battery.
- Be careful while assembling and using the battery and avoid short circuit. For example:
 - After the battery box is opened, don't transfer any tool above the battery box to avoid short circuit caused by falling tools.
 - Near the opened battery box, don't perform any operations such as cutting wires, in case debris (metal sparks) may enter the battery box, causing short circuit.
 - Installation tools shall have insulated handles.
- After installation, check if wires are tight and measure the total voltage to verify the installation is correct.

Operational requirements

- As the battery pack voltage is much higher than 36V (safe voltage), only designated professionals can open the battery and its management module cover. Besides, it is forbidden to disassemble the wires.
- In use, it is forbidden to over-charge or over-discharge the battery, and thus carefully read the battery instruction provided by the manufacturer before use.
- Please charge the battery as it is in use. It is recommended not to wait until SOC (State of Charge) is low, as partial charging & discharging is beneficial to prolong the service life of the battery pack. Allowable SOC of battery pack ranges from 20% to 100%, and the best service range is 40%-80%. For the iron-phosphate lithium battery used in this vehicle, the SOC should be kept between 20% and 95 and not less than 10% in extreme cases, so as to give full play to the battery and prolong its service life.

- Remove dust and dirt off the battery surface regularly for proper heat dissipation of the battery.
 - While washing the vehicle, avoid water contact with high-voltage components, which otherwise will result in adverse consequences.
 - In order to keep the battery pack insulated, the battery box, battery management module box and surrounding environment should be always clean and dry, free of any water or other conductive liquid penetrating into the battery box and battery management module box.
 - The battery pack cannot be exposed to acidic, alkaline, oily objects (including gas, liquid and solid) and inflammable or explosive substances.
 - The best working temperature range of the battery pack is -20°C to 55°C: at below -20°C, its discharge capacity will greatly decrease; at above 45°C, its charging capacity will obviously decrease and its service life span will be shortened also.
 - Generally, iron-phosphate lithium battery is required to be above 0°C for charging. In winter, it is suggested to charge the vehicle soon after it stops running and before the battery box cools down.
 - If out of control by BMS, the vehicle battery pack cannot be charged.
 - At 0°C or below, business vehicles should be charged soon after they stop running, in case the charging may take longer after the battery cools down, affecting normal business.
 - Warning signs on the battery cannot be torn or damaged.
 - Don't knock, throw or step on the battery, or weld directly on the battery or penetrate it with nails or sharp tools.
 - While loading and unloading, the battery pack should be handled carefully against being thrown, heavily stressed or rolled. For storage, the battery pack cannot be put upside down and should be free of any heavy pressure. Energy storage device of the battery system cannot be exposed to sunshine, heat source or rain.
 - Slings should be used to hoist the battery box, with its top cover at 1m of distance or longer to the hook.
 - In case of fire while driving, please stop the vehicle, unplug the key and cut off the main power supply. On account of personal safety and if conditions permit, professionals could manually disconnect the service switch (in the front end of the
- battery box), put out the fire and sand the battery pack. Remember to never use water for fire-fighting.
- In case of fire while charging, power off the charging equipment before performing next steps.
 - If immersed in accumulated water due to weather or other special reasons, it is prohibited to power on the vehicle, which otherwise may cause secondary damage.
- Storage and maintenance requirements (also applicable to batteries loaded on vehicles)**
- When not in use, the battery should be stored in a dry, clean and well-ventilated warehouse with 5°C -40°C of temperature range.
 - For storage, the battery cannot be put upside down, there should be no mechanical impact or heavy pressure, or exposure to direct sunshine and rain.
 - When in storage and in use, the battery cannot be exposed to direct sunshine, and should be at 2m of distance from hot source.
 - Voltage tracking table should be profiled for stored batteries: check the voltage once every 15 days and record the checked value.

Vehicle Maintenance and Mileage

- If not used for long term, the cells or ones loaded on vehicles are recommended to complete one charging and discharging cycle once each month (namely, SOC100%-20% of discharging and 20%- 100% of charging). For discharging, road trial can be carried out by designated drivers.
- If the vehicle is used frequently or partially charged and discharged, its battery should be fully charged every three days or 500km (namely, SOC should reach 100%).
- Please use the “automatic charging”, instead of “manual charging” . It is prohibited to unplug the charging gun in live status.

Simple troubleshooting

Battery packs (including cells) and its management module boxes should be inspected and repaired by professionals!

Usage and precautions for drive motor

Safety declaration

- Before installation, operation and maintenance, please carefully read and abide by the safety precautions!

- For safety of both personnel and equipment, please observe all the safety precaution signs on the product and stipulated in manuals for the product installation, operation and maintenance.
- In manuals, “Notice”, “Warning” and “Danger” don’t represent all the safety notices, but serve as supplement to all safety notices.
- Product service environment should be in compliance with the design specifications, which otherwise may cause failure; abnormal function or component damage arising from failure to comply with relevant regulations are not covered by the quality assurance.
- Quantron AG will take no responsibilities for personal injury or property loss caused by rule-breaking operations

Note:

“Note” indicates failure to follow the regulations may cause minor physical injury or equipment damage.

Safety precautions

Unpacking and inspection

NOTE

Before unpacking, please check if the product packing is intact, free of any damage, moisture, damp or deformation.

NOTE

Open the package layer by layer, and do not damage it!

NOTE

After unpacking, check if the product and attachments are free of any damage, corrosion and collision.

NOTE

After unpacking, carefully check if the quantity and documents of products and accessories are complete according to the packing list.

During transportation

DANGER

Large or heavy equipment and products must be handled with professional loading & unloading equipment.

DANGER

While using crane to lift the equipment, it is not allowed to stand or stay below it.

DANGER

It is prohibited to modify this product!

DANGER

Don't fasten the fixing bolts and red-marked bolts on product!

DANGER

Product mounting site should be free of any strong electric field or electromagnetic interference!

WARNING

Only professionals can install, wire, maintain, inspect or replace product!

WARNING

Equipment installation, wiring, maintenance, inspection or component replacement can be carried out only by professionals who have received relevant training on electrical equipment and have sufficient electrical knowledge

WARNING

Installers must be familiar with product installation requirements and relevant technical data

WARNING

A transformer and others with strong electromagnetic interference should be mounted with shields, in case they may work abnormally!

While wiring

⚠ DANGER

The input power supply cannot be connected to the output ends of equipment, which otherwise may damage the equipment and even trigger a fire.

⚠ DANGER

In connection, the driver and motor terminals must have consistent phase sequence, otherwise the motor may rotate reversely.

⚠ DANGER

For wiring, cables must have qualified wire diameter and shielding measure, and the shielding layer of shielded cables should be grounded reliably at one end!

⚠ DANGER

After wiring, confirm there are no screws or exposed cables inside the equipment.

⚠ WARNING

With the power supply ON, don't perform any wiring, which otherwise may cause electric shock.

⚠ WARNING

Before wiring, please power off all equipment. If 10min after the power-off, there is residual voltage in internal capacitors of the equipment, please wait before wiring.

⚠ WARNING

Ensure the equipment and product are well grounded, which otherwise may cause electric shock.

⚠ WARNING

Please follow the procedures specified in ESD (electro static discharge): wear electrostatic bracelets for wiring and don't damage the internal circuits.

Safety signs

For safe operation and maintenance, please observe the safety signs on equipment and don't damage or remove the safety signs. Illustration of safety signs:



- As it is at high voltage after powered on, please do not touch it, which otherwise may cause electric shock!
- As there is residual voltage at the input U/V/W terminals of the motor after powered off, wait 2min and measure if terminal voltages drops below 36V with a multimeter before further operation, which otherwise may cause electric shock!

Usage and precautions for motor controller

Safety precautions

In storage and transportation

NOTE

Please observe the equipment storage and transportation conditions, with storage temperature and humidity meeting requirements.

NOTE

For storage and transportation, the equipment cannot be exposed to water splashing, direct sunlight, strong electric field, strong magnetic field and strong vibration.

NOTE

If equipment is stored for 3 months or longer, please carry out stricter protection and necessary inspection.

NOTE

Before transportation, the equipment should be properly packed. For long-distance transportation, a concealed container must be used.

NOTE

It is strictly prohibited to connect this equipment with ones that may affect or damage the equipment.

⚠ DANGER

Large or heavy equipment must be handled with professional loading & unloading equipment

Daily maintenance and inspection items

⚠ WARNING

As the controller is still at high voltage inside and at its control terminals, the following maintenance can be carried out only by trained professionals, which otherwise may cause personal casualty or equipment damage.

⚠ WARNING

On the drive motor and its controller, periodically check if bolts are loosened.

⚠ WARNING

Periodically check if harness connectors are loosened.

⚠ WARNING

Flushing with water is prohibited to avoid electric shock.

⚠ WARNING

Before opening the controller cover for further operations, do unplug the high-voltage power supply, wait 2min to completely discharge the capacitor, in case electric shock may happen.

⚠ WARNING

Two operators are needed to carry out repair and maintenance: without a helper, don't perform any operation alone.

⚠ WARNING

Flushing with water is prohibited to avoid electric shock.

⚠ WARNING

Take care not to damage the system and related electrical elements.

⚠ WARNING

Incorrect connection will result in irreparable damage.

⚠ WARNING

Failure to observe safety guidance may cause personal casualty or equipment accidents.

⚠ WARNING

In case of unsolved faults, contact Quantron service stations for solution.

⚠ WARNING

If the vehicle breaks down and needs to be towed, check if the drive system has serious hardware faults according to fault codes shown on the instrument panel, and if so, full-load towing will be needed.

Removal and installation of high-voltage connectors

High-voltage connectors should be selected according to different terminal functions and routing modes, and may be operated differently according to manufacturers, as improper installation or mis-operation may fail the equipment or even cause severe consequences. Therefore, before installation and operation, carefully read the operation instructions.

Precautions

NOTE

Before plugging & unplugging, cut off the power supply.

NOTE

The high-voltage interlock can protect the whole system, and thus should be mounted correctly and work normally.

NOTE

While installing, ensure wired terminals and wires are free. of any stress or twist.

NOTE

After installation, confirm that CPA is pressed in, if CPA is not pressed in or pressed halfway, it may impact the equipment function.

NOTE

According to sealing requirements, diameter of 35mm² shielded cable: 14.5 ~ 15.5 mm; diameter of 50 mm² shielded cable: <16.5mm; wires at tail of connector should be reserved upto 10cm long before bending.

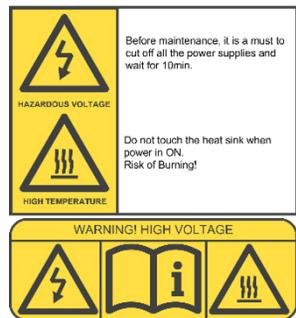
NOTE

It is prohibited to carry out equipment disassembly, re-installation or other actions that may cause malfunction in the equipment.

Vehicle Maintenance and Mileage

Safety signs

For safe operation and maintenance, please observe the safety signs on equipment and don't damage or remove the safety signs.
Illustration of safety signs:



- Before maintenance, it is a must to cut off all the power supplies and wait for 10min.
- Do not touch the radiator after powered on, which otherwise may cause skin burn.
- If "high voltage inside" warning is present, don't touch it, otherwise it may cause electric shock!

Key Torque Sheet

Main assemblies	Connection positions (model)	Standard parts	Torque (Nm)	Process value (Nm)
Motor mounting	Front cushion of drive motor and end support of connecting bracket (DH21/ DH22)	Q1841025 Q32010	35–47	41
	Drive motor bracket and support (DH21/ DH22)	Q1841025-0ZD Q32010-0ZD	43-53	48
	Dual spare nuts for front beam of drive motor (DH21/ DH22)	Q150B12110/Q40212 Q340B12/Q40112	64 -81 (inside) 80 -101 (outside)	73 (inside) 91 (outside)
	Front beam of drive motor (DH21/ DH22)	Q1851230-0ZD	94-114	104
	Rear beam of drive motor (at the bottom) (DH21/ DH22)		59-71	65
	Rear cushion and bracket of drive motor (DH21/ DH22)	Q32010	35-47	41
	Rear cushion of drive motor and its end support (DH21/ DH22)	Q1841020		
	End supports of both connecting cushion and connecting frame for rear mounting of drive motor (DH21/ DH22)	Q1841025-0ZD Q32010-0ZD	43-53	48
	Front mounting cushion and bracket of drive motor (Connected to motor bracket end) (DH13)	Q32012	60-72	66
	Front mounting cushion and bracket of drive motor (connected to the bracket end of the motor) (DH13)	Q150B1225-0ZD Q40212/Q40312	80-101	91
	Rear mounting cushion and bracket of drive motor (connected to the bracket end of the motor) (DH13)	Q1841035-0ZD Q32010-0ZD	43-53	48
	Rear mounting cushion and bracket of drive motor (connected to the bracket end of the motor) (DH13)	Q1841090-0ZD Q32210-0ZD		
	Front mounting bracket of drive motor and frame (DH13)	Q1841045-0ZD Q32010-0ZD		
	Drive motor and its front mounting bracket (DH13)	Q1841035-0ZD		

Key Torque Sheet

Main assemblies	Connection positions (model)	Standard parts	Torque (Nm)	Process value (Nm)
Battery frame	Battery pack connected to battery frame	Q1841240-0H1 [DH1101/DH1201/DH1301] Q1841255 (DH1102)	80-85	80
	Battery frame connected to side member	Q1841225-0H1/ Q1841235-0H1	100-120	110
	Front and rear beams of battery frame	Q1841225-0H1		
	Battery frame connected to side member	Q1840820-0H1		
	Battery management module support and battery frame	Q1840820-0H1	25-35	30
	Battery management module and its support	Q1840816-0H1		
Single-stage reducer motor	Oil drainage plug	With magnet - M22x1.5x18-6h	50 ± 5	50
	Reducer breather plug	M20X1.5	3 ± 1	3
	Oil-filling plug	M22x1.5x18-6h	50 ± 5	50
	Three-phase wire bolt	Q1840816-OH1	23 ± 2	23
	Bolts at the top cover of three-phase junction box	M6x0.75x16-8.8 level	9 ± 1	9
Drive axle motor	Three-phase wire bolt	Q1840816	17-24	21
	Bolts at the top cover of three-phase junction box	Q1840512	5-8	8
	Fixing bolts of three-phase connectors	Q1840620	8-10	9
Transmission shaft	Assembly of drive shaft and motor	Q341B10-0ZD	62-68	68
	Assembly of drive shaft and rear axle	Q151B1450-0ZD	162-178	170
Front suspension	Assembly of front leaf spring fixing end	Q341B10	42-56	48
	Assembly of front leaf spring lug end	Q33516	137-167	152
	Front-axle U-shaped bolts and nuts	Q363B16	200-250	275
	Assembly of front shock-absorber upper-pin nut	Q395B10	35-47	37
	Assembly of front shock-absorber lower-pin nut	Q33512	72-85	79

Main assemblies	Connection positions (model)	Standard parts	Torque (Nm)	Process value (Nm)
Rear suspension	Assembly of rear leaf spring fixing end	Q340B12	72-85	79
	Assembly of rear leaf spring lug end	Q33516	137-167	152
	Rear-axle U-shaped bolts and nuts	Q363B16	200-250	360
	Assembly of rear shock-absorber upper-pin nut and lower- pin nut	Q341B14	72-85	79
	Assembly of rear shock-absorber upper-frame	Q341B12		
Steering	Assembly of steering gear bracket and frame	Q341B14-02D	144-175	160
	Steering gear and bracket	Q151B1660-02D Q151B1655-02D	200-270	250
	Fixing bolt of universal joint yoke of steering drive shaft	Q151B0832	19-24	22
	Fixing nut of drag-link ball pin	RQ38716	130-160	145
	Assembly of steering column bracket	Q32008 Q150B0820	14-20	17
	Steering wheel locknut	Q351B14	29-39	34
	Fixing bolt of universal joint yoke of steering drive shaft	Q151B0835	19-24	22
	Fixing nut of drag-link ball pin	RQ38716	130-160	145
Driver' seat	Assembly of driver's seat and floor	Q1841025 [10.9 level]	64.0-86.0	75.0
Passenger seat	Assembly of backrest and rear beam	Q1841025 [10.9 level]	64.0-86.0	75.0
	Assembly of seat cushion and floor	Q32208 [8.8 level]	51.0-69.0	60.0

Key Torque Sheet

Main Technical Features

Whole-vehicle technical parameters

	Item	Parameter QARGO	
Dimensions	Overall dimensions (mm)	Length Width Height	5995 2180/2380 2940
	Wheelbase (mm)		3308
	Front wheels tread (tire contact center)		1613/1629
	Rear wheels tread (center of double wheels)		1700
	Front overhang (mm)		1045
	Rear overhang (mm)		1517
	Complete vehicle curb mass (kg)		2445
	Rated carrying capacity (kg)		tbd
	Maximum total weight (kg)		4250
	Number of persons (including a driver) (persons)		2/3
Quality parameter	Maximum speed (km/h)		90
	Gradeability (%)		25
	Parking gradeability (unloaded) (%)		≥20
	Minimum turning diameter (m)		14.5
	Minimum ground clearance (mm)		tbd
	Endurance mileage (uniform velocity method) (km)		250
	Rated voltage(v)		420V-613.2V
	Total energy (kwh)		81.144
Power battery parameters			

Main Technical Features

	Item	Parameter QARGO
Drive motor parameters	Rated /peak power (kW)	60/120
	Rated/ peak torque (N .m)	150/320
	Rated/ max. speed (r/min)	tbd
Front wheel alignment	Front wheel camber angle (°)	1
	Kingpin inclination angle (°)	10
	Kingpin caster angle (°)	1.9
	Toe-in (mm)	2-4
	Max. steering angle of front-inner/front-outer wheel [°]	37/28

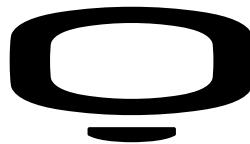
Tire pressure

Tyre model/tyre pressure: 6.50R16 12PR/7.00R16 12PR; combined with actual use, the recommended inflation pressure is: 530-560 kpa/560- 590kpa.

Appendix I

List of attached accessories

No.	Code	Part name	Quantity
1	3105042-E53531-B	Spare tire crank (shared with the jack, wheel nut wrench)	1
2	3901033-C18018	Double-ended wrench -13X15	1
3	3901056-C48742	Wheel nut spanner -34	1
4	3901121-C18018	Double-ended screwdriver assembly	1
5	3901140-C18018	Slip-joint pliers assembly-8	1
6	3910DM01-010	Fire extinguisher assembly	1
7	3915010-C18018	Small adjustable wrench assembly-200X24	1
8	3919310-E38021	Special tool bag assembly	1
9	39QA-01010-A	Warning sign	1
10	3913051-LF0301	Parking wedge	2
11	3926020-CA0101	Reflective vest	1
12	3913010-VA0101	Jack	1



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