

# **Owner's Manual**

Thanks for choosing the vehicle manufactured by GAC MOTOR CO., LTD. (hereinafter referred to as "GAC Motor"). For a better driving pleasure, please read the *Owner's Manual* carefully. This manual allows you to fully understand the operation methods and precautions of the vehicle. Proper operation of the vehicle can improve driving safety and prolong the service life of the vehicle.

The Warranty Manual supplied with the vehicle clearly describes the warranty services provided by GAC Motor and the regular maintenance of the vehicle. Please read this manual carefully to know your rights and responsibilities.

After reading this manual, please keep it in the vehicle for future reference.

In case of any doubts about this manual, please contact a GAC Motor authorized shop for detailed explanation.

If you have any suggestions or opinions, please contact GAC Motor through the customer service hotline: 400-158-9999.

We are grateful for your support and love for GAC Motor. Have a nice drive!

GAC MOTOR CO., LTD.

## **Safety Instructions**

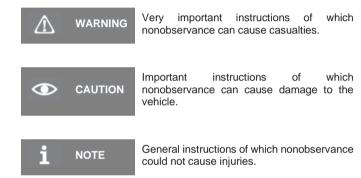
The safety of you and the passengers is crucial, so driving safely is an important responsibility of the driver.

In order to make clear the safety precautions, we provide operation steps and precautions through various signs on the vehicle and in this manual, reminding you to pay attention to potential dangers that will hurt you or the passengers.

It is impossible to list all the precautions for dangers related to operation and maintenance of the vehicle in the manual, so it is up to you to make the correct judgment in time.

Safety instructions are available in many forms, including:

- · Safety signs pasted on the vehicle.
- Safety notes the texts marked with the symbols  $\triangle$ ,  $\bigcirc$ , 1 and one of the three words "WARNING", "CAUTION", or "NOTE" in front.



- Some paragraphs of this manual do not apply to all vehicle models. For the description
  of options, the title of them is followed by the symbol "\*".
- Unless otherwise specified, the directions of the vehicle (front, rear, left and right) referred to in this manual are based on the traveling direction of the vehicle.

# **Table of Contents**

1. Important Safety Precautions1	4.1 Cab	
	4.1.1 Steering wheel	37
2. Picture Index5	4.1.2 Instrument cluster	39
2.1 Exterior5	4.1.3 Indicator lamps	52
2.2 Interior8	4.2 Vehicle locking and unlocking	56
2 Instructions for Sofo Operation 11	4.2.1 Intelligent remote control key	56
3. Instructions for Safe Operation	4.2.2 Emergency mechanical key	60
3.1 Safe driving	4.2.3 Door lock system	61
3.1.1 General description	4.2.4 Door	68
3.1.2 Correct sitting posture of the driver and	4.2.5 Liftgate	
passengers	4.2.6 Engine hood	
3.2 Seat belt	4.2.7 Power window	
3.2.1 Why must you fasten the seat belt13	4.2.8 Electric sunroof*	
3.2.2 Seat belt 14	4.2.9 Basic operation of body anti-theft	
3.3 Supplemental restraint system (SRS)20	4.3 Lamps and vision	
3.3.1 Cases where the airbags may deploy25	4.3.1 Exterior lamps	
3.3.2 Cases where the airbags might not deploy	4.3.2 Interior lamps	
	4.3.3 Wiper combination switch	
3.4.1 General description27	4.3.4 Rearview mirror	
3.4.2 Child safety seat28	4.3.5 Sun visor	
3.4.3 Information about child safety seats29	4.4 Seats and storage facilities	
3.4.4 Correctly installing the child safety seat31	4.4.1 Headrest	
3.5 Exhaust gas hazard35	4.4.2 Front seats	
3.6 Safety labels	4.4.3 2nd/3rd-row seats	
3.0 Salety labels	4.4.4 Storage facilities	
4. Operation of Systems and Equipment 37	4.4.5 USB port/power outlet	108

# **Table of Contents**

<b>4.4.6 Trunk</b> 110	5.3 Electronic service brake system156
4.4.7 Accessories and modifications112	5.3.1 Electronic stability program (ESP)156
4.5 A/C system114	5.3.2 Anti-lock braking system (ABS)157
4.5.1 General description114	5.3.3 Hill-start hold control (HHC)158
4.5.2 A/C system115	5.3.4 Hill descent control (HDC)159
4.5.3 A/C air outlet124	5.4 Driver assistance systems160
4.6 AV system125	5.4.1 Cruise control system (CCS)*160
4.6.1 Control buttons on the right of steering	5.4.2 Adaptive cruise control (ACC) system* 161
wheel125	5.4.3 Integrated cruise assist (ICA) system*172
4.6.2 Basic operation127	5.4.4 Forward collision warning system (FCWS)*
4.6.3 Radio	177
4.6.4 Local music133	5.4.5 Autonomous emergency braking (AEB)
4.6.5 Bluetooth function134	179
4.6.6 System Settings136	5.4.6 Pedestrian detection system (PDS)*182
4.7 Microwave window140	5.4.7 Lane departure warning (LDW)*185
4.8 GPS locator (for operating version)140	5.4.8 Intelligent headlight control*191
5 Debute of Catalon	5.4.9 Traffic sign recognition (TSR)*193
5. Driving Guide141	5.4.10 Radar and IFC sensor195
5.1 Starting and driving141	5.4.11 Cab monitoring system*198
5.1.1 ENGINE START/STOP button141	5.4.12 Tire pressure monitoring system (TPMS)
5.1.2 Engine start	203
5.1.3 Engine shutdown144	5.5 Parking assist system (PAS)205
5.1.4 Gear description145	5.5.1 Reversing parking aid (RPA)205
5.2 Brake system148	5.5.2 Reverse image system*208
5.2.1 Service brake148	5.5.3 Around view parking system (AVPS)*210
5.2.2 Electronic parking brake (EPB)151	5.6 Electric power steering (EPS)217

# **Table of Contents**

5.7 Driving skills	218
5.7.1 Pre-driving safety inspection	
5.7.2 Driving during running-in period	
5.7.3 Driving essentials	
5.7.4 Efficient operation of vehicle	
5.7.5 Fire prevention	
6. In-service Maintenance	225
6.1 Maintenance instructions	
6.2 Interior maintenance	
6.3 Exterior maintenance	
6.4 Inspecting and adding of fluids	
6.4.1 Fuel	
6.4.2 Engine oil	
6.4.3 Coolant	
6.4.4 Windshield washer fluid and wiper b	
6.4.5 Brake fluid	240
6.4.6 Battery	242
6.5 A/C filter	244
6.6 Replacing of bulbs	
6.7 Wheels	251
6.8 Tire chains	256
7. Technical Data	257
7.1 VIN	

	7.2 Dimensions & parameters of vehicle	and
8.	Accident Handling	267 269 269 270
	8.5.1 Fuse in instrument panel electrical box 8.5.2 Fuse in engine compartment electrical	275 box
	8.6 Emergency start	281 283
9.	Environmental Protection Information 9.1 Environmental protection information nur	nber
	9.2 Environmental Protection Information	

#### ♦ Be sure to fasten the seat belt properly

The seat belt is the best protection device in the event of a collision. Airbags are only designed as auxiliaries, rather than replacements, of the seat belts, so even if the vehicle is equipped with airbags, make sure that you and the passengers always fasten the seat belts correctly.

#### Do not leave children unattended in the vehicle

Do not leave children in an unattended vehicle, as injury or even death may occur when they trigger one or multiple control devices accidentally, when the vehicle is moved accidentally and collides with another object due to their mis-operation, or when the ambient temperature makes the temperature inside the vehicle become extreme.

#### Protect all children

Children aged 12 or under should be properly restrained in the rear seats rather than the front seats. Child safety seats shall be used for infants and toddlers, while child safety seats and three-point seat belts shall be used for older children.

#### **♦** Beware of the danger of airbags

Airbags can save lives, but they can also cause serious or fatal injuries to passengers of vehicles who are too close to the airbags or improperly restrained.

Airbags pose the greatest risk to infants, toddlers and short adults, so please follow all instructions and warnings in this manual.

#### ◆ Never drive after drinking

Drinking alcohol, even a little, will reduce your response capability, and your reaction time after drinking will become longer. So, driving after drinking is strictly prohibited.

- During driving, please abide by laws on road traffic safety and yield to pedestrians.
- ♦ Be sure to pay attention to driving safety.

Traffic accident may occur if you are busy answering the phone or handling other things so that you can not pay attention to road conditions, other vehicles and pedestrians during driving. Please avoid distraction during driving.

#### ◆ Control the vehicle speed

An excessive vehicle speed is one of the main causes of traffic accidents. The faster the speed is, the greater the risk will be. Therefore, please choose an appropriate speed for safe driving according to the actual road conditions.

### ◆ Perform regular maintenance

Tire burst or mechanical failure is very dangerous. In order to reduce the possibility of such problems, please check the pressure and status of tires frequently, and carry out regular maintenance as specified in the *Warranty Manual*.

## 1. Important Safety Precautions

#### Event data recorder (EDR)

This vehicle is equipped with an event data recorder (EDR). An EDR is mainly designed to record data in the event of certain collision scenarios (such as airbag deployment or collision with a barrier), so as to help understand the operation of the vehicle system. Specifically, the EDR is used to record data related to the dynamic control and the safety system of a vehicle in a short period, as well as to assist in accident analysis.

## **i** NOTE

The EDR will record data only when a certain degree of collision occurs to the vehicle, and will not record data during normal driving.

### Data recorded by the EDR

Data name	Data meaning	
Longitudinal delta-V	The longitudinal velocity change of the vehicle.	
Max recorded longitudinal delta-V	The maximum x-wise (in the direction of the x axis) velocity change of the vehicle recorded by the EDR.	
Time for reaching the max recorded longitudinal delta-V	The time from the zero time to when the x-wise velocity change of the vehicle recorded by the EDR reaches the maximum.	
Clip marking	The time point when the (latitudinal or longitudinal) acceleration reaches the upper bound of the measuring range of the sensor for the first time.	
Vehicle speed	Vehicle speed is the speed of the main driving wheels.	
Service brake, on/off	It is used to check if the driver lets off the brake pedal.	
Driver seat belt status	The status of the switch of the driver's seat belt.	
Accelerator pedal position, percentage of full accelerator position	The proportion (in percentage) of the distance from the starting point to the actual position of the accelerator pedal to the distance from the starting point to the position of the accelerator pedal when fully pressed by the driver.	

# 1. Important Safety Precautions

Data name	Data meaning	
RPM (r/min)	The revolutions of the main crankshaft of the vehicle engine per minute, which need not to be recorded for battery electric vehicles and plug-in hybrid electric vehicles.	
Event ignition cycle	The times of cycles of the ENGINE START/STOP button between the "off" mode and the "on" mode from when the electronic control unit (ECU) for recording the EDR data is first used to when the even occurs.	
Reading ignition cycle	The times of cycles of the ENGINI START/STOP button between the "off" mod and the "on" mode from when the ECU for recording the EDR data is first used to when the even data is read.	
Event data record completeness	The status indicator for whether the event data is completely recorded and stored in the ECU for recording the EDR data.	
Time from previous event to current event	The time from the start of the previous event (Event X-1) to the start of the current event (Event X) if Event X occurs within 5s after Event X-1.	

Data name	Data meaning	
VIN	The manufacturer-designated vehicle identification number (VIN) of the vehicle.	
Hardware ID number of the ECU recording EDR data	The hardware ID number of the ECU that enables the recording function of the EDR in a vehicle.	
Serial number of the ECU recording EDR data	The serial number of the ECU that enables the recording function of the EDR in a vehicle.	
Software ID number of the ECU recording EDR data	The software ID number of the ECU that enables the recording function of the EDR in a vehicle.	

Note: The actual data recorded by the EDR is subject to the relevant information released for the vehicle.

## 1. Important Safety Precautions

#### Potential usage of the EDR data

The data recorded by the EDR conduces to a better understanding of a collision event and the injuries to the vehicle occupants, and can be used to assist in accident analysis.

GAC MOTOR CO., LTD. will not disclose the data recorded in the EDR to third parties except:

- Reaching an agreement with the owner (or the lessee when the vehicle is rent).
- At the official request of the police, courts or government agencies.
- If necessary, the data will be used for research on the safety performance of vehicles.

#### How to obtain an EDR data reading tool

Special technical equipment is required to read EDR data. For more information, please contact a GAC Motor authorized shop.

#### How to extract data from the EDR control unit

To read the data in an EDR, you must be the owner of the vehicle, use a special reading tool that meets the national standard "GB39732-2020 Vehicle Event Data Recorder" or other applicable national standards, and operate the tool in accordance with the instructions in the user guide for the tool.

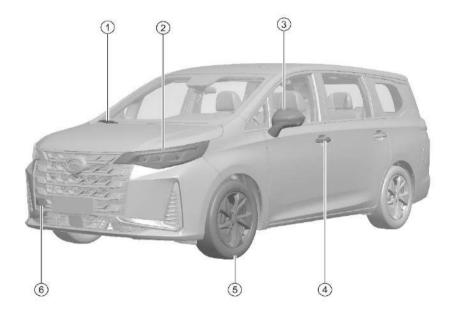
# Unlocked event storage overwriting mechanism and overwritable event types

The current event data can overwrite the preceding unlocked event data, but cannot overwrite any locked event data.

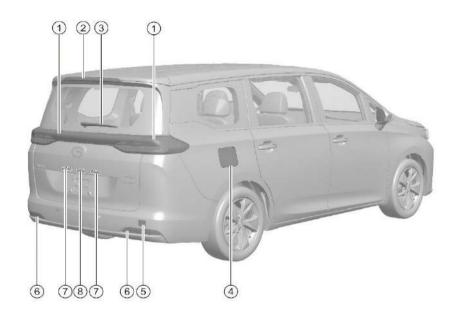
Over-writable events (unlocked events) include:

- Non-deployment of the irreversible restraint device.
- The vehicle speed change in the direction of the x axis within 150ms is less than 25km/h.

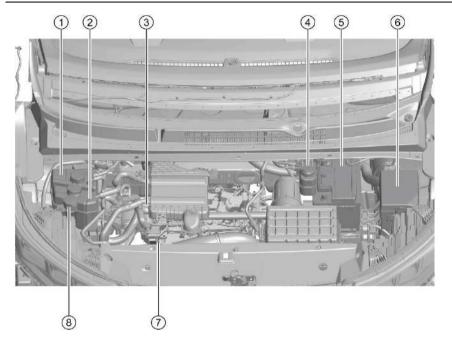
### 2.1 Exterior



- ① Wiper
- Replacing front windshield wiper blade => See page 238
- 2 Front combination lamp
- Turning on the lamp => See page 81
- Replacing the bulbs => See page 245
- Specifications of the bulbs of the front combination lamp => See page 265
- ③ Exterior rearview mirror => See page 95
- Side turn signal lamp => See page 82
- Specifications of the side turn signal lamp
   See page 265
- 4 Passive unlocking \* => See page 66
- Door lock hole => See page 62
- ⑤ Wheel => See page 251
- 6 Front towing hook => See page 284



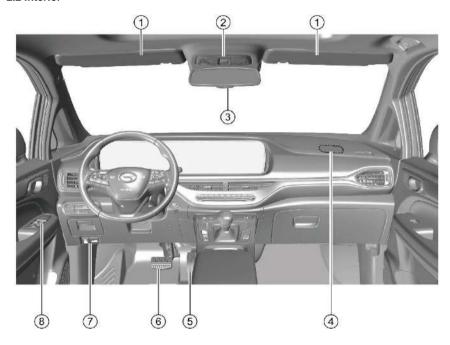
- (1) Rear combination lamp
- Specifications of the bulbs of the rear combination lamp => See page 265
- 2 High-mounted stop lamp
- Specifications of the high-mounted stop lamp => <u>See page 265</u>
- 3 Wiper
- Replacing rear windshield wiper blade => See page 238
- 4 Fuel tank flap=> See page 231
- ⑤ Rear towing hook => See page 284
- 6 Rear fog lamp => See page 86
- Specifications of the rear fog lamp => <u>See</u> page 265
- 7 License plate lamp
- Replacing the bulb => See page 248
- Specifications of the license plate lamp => See page 265
- 8 Liftgate opening button => See page 69



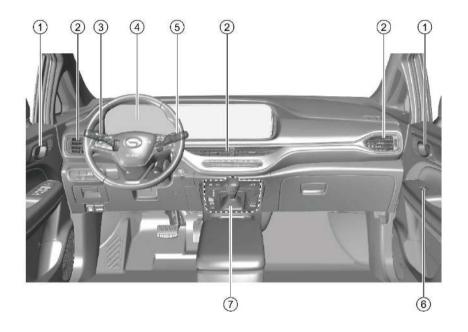
## **Engine compartment**

- ① Coolant expansion tank for the engine => See page 236
- ② Coolant reservoir for the intercooler => See page 236
- ③ Oil filler cap => See page 233
- 4 Brake fluid reservoir => See page 240
- ⑤ Storage battery => See page 242
- 6 Engine compartment electrical box =>  $\underbrace{\text{See}}_{\text{page }273}$
- 7 Oil dipstick => See page 234
- ⊗ Windshield washer fluid reservoir => See page 238

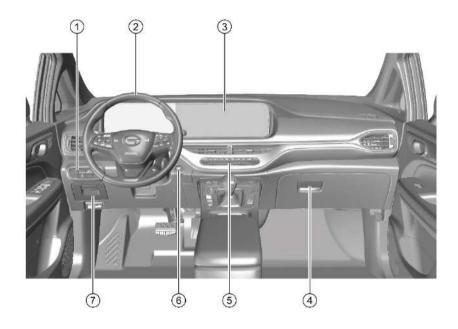
#### 2.2 Interior



- 1 Sun visor => See page 97
- 2 Front dome lamp => See page 87
- Electric sunroof control button\* => <u>See</u>
   page 78
- Electric sunshade control button\* => <u>See</u>
   <u>page 77</u>
- Emergency rescue service button\* => See page 151
- Spectacle case => See page 106
- ③ Interior rearview mirror => See page 94
- 4 Front passenger's frontal airbag =>  $\underbrace{\text{See}}_{\text{page }22}$
- ⑤ Accelerator pedal
- 6 Brake pedal
- $\bigcirc$  Engine hood release handle => See page 74
- Fuel tank flap opening handle => <u>See page</u>
   231
- $\ensuremath{\textcircled{\$}} \ensuremath{\text{ Driver's side power window control button}}$
- => See page 75
- Central locking button => See page 61
- Exterior rearview mirror adjusting button => See page 95



- 1) Inside handle => See page 62
- ② A/C air outlet => See page 124
- 3 Lamplight combination switch => See page 81
- 4 Instrument cluster => See page 39
- Indicator lamp => See page 52
- ⑤ Wiper combination switch => See page 90
- @ Passenger's power window control button=> See page 76
- (7) Central console:
- AV system USB port => See page 108
- Hazard warning lamp switch button => <u>See</u> <u>page 86</u>
- Driving mode button => <u>See page 147</u>
- Electronic parking brake (EPB) button => See page 151
- Gearshift lever => See page 146



- ① Instrument left switch group:
- Manual headlamp leveling knob\* => <u>See</u> page 85
- Hill descent control (HDC) button => <u>See</u> page 159
- Around view parking system (AVPS) button\* => See page 210
- ESP OFF button => See page 156
- 2 Steering wheel => See page 37
- Buttons on the steering wheel =>  $\frac{\text{See page}}{38}$
- Driver's frontal airbag => See page 21
- 3 AV system => See page 125
- ④ Glove box opening handle => <u>See page</u> 107
- ⑤ A/C control panel => See page 115
- ⑥ ENGINE START/STOP button\* ⇒ See page 141
- ⑦ Storage compartment of cab's lower guard⇒ See page 104
- Electrical box under the instrument panel
   See page 273

#### 3.1 Safe driving

#### 3.1.1 General description

section introduces This important information. operating essentials. recommendations and safety precautions for safe driving. For the safety of you and the passengers, please read this section carefully and follow the relevant regulations.

## i NOTE

Please always keep the *Owner's Manual* in the vehicle. If you lend or resell the vehicle to someone else, be sure to hand the complete set of the accompanying documents over to the new owner.

# The following inspections must be carried out before driving:

- Check that all lamps are working properly.
- Check that the fuel level is normal.
- Check that the engine oil level is normal.
- Check that the coolant level is normal.
- Check that the brake fluid level is normal.
- Check that the windshield washer fluid level is normal.
- Check that the tire pressure is normal.
- Check that all windows are clear and have a good view.
- Check that no objects obstruct the movement of the driver's foot pedals.
- Adjust the seat, headrest and rearview mirror according to your height and shape.
- Use appropriate child safety seats to protect children and help them fasten the seat belts correctly.
- Fasten the seat belt correctly and remind all passengers in the vehicle to fasten the seat belts correctly.
- Check that the ambient environment is safe.

## **↑** WARNING

When installing the driver's floor mat, please observe the following precautions:

- Do not overlap two or more floor mats.
- Do not make the floor mat upsidedown or back-to-front.
- Do not use a floor mat that is incompatible with this model.

#### **©**CAUTION

- Do not let external factors distract your attention during driving.
- Do not drive when your response capability is reduced by medicines, alcohol, drugs, etc.
- Strictly abide by traffic laws and regulations.

# 3.1.2 Correct sitting posture of the driver and passengers

### Correct sitting posture of the driver

The driver's sitting posture directly affects his/her fatigue level and driving safety. Before driving, the driver should:

- Sit up straight and adjust the seat back to a suitable position so that the back fits the seat back completely.
- Adjust the seat position so that all pedals can be operated effectively with slightly-bent legs.
- Correctly adjust the seat headrest. => <u>See page 97</u>
- Fasten the seat belt correctly. => <u>See</u>
   <u>page 16</u>
- Adjust the position of the steering wheel. => <u>See page 37</u>

### **↑** WARNING

The driver must not adjust the seat, headrest or steering wheel during driving, otherwise the vehicle may be out of control, leading to an accident.

# Correct sitting posture of the passengers

To guarantee the safety of the passengers and reduce the risk of casualties, the passengers should:

- Sit up straightly and adjust the headrest of the seat correctly. => See page 97
- The front passenger should adjust the distance between the seat and the instrument panel as desired.
- The front passenger should adjust the seat back to a suitable position so that the back fits the seat back completely.
- Fasten the seat belt correctly. => <u>See</u>
   <u>page 16</u>
- Every passenger should place both feet on the floor.
- Be sure to use appropriate child safety seat for any child in the vehicle as required. => See page 28

## MARNING

- If the front passenger is too close to the instrument panel, the supplemental restrain system (SRS) will not provide effective protection.
- When the vehicle is running, be sure to maintain a correct sitting posture and fasten the seat belt correctly, so as to avoid unexpected injuries in case of emergency braking or accidents.
- It is forbidden to install a child safety seat in the front passenger's seat.

#### 3.2 Seat belt

#### 3.2.1 Why must you fasten the seat belt

# Protection for the driver and passengers from seat belts



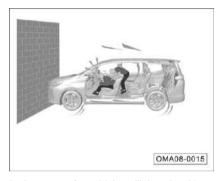
In the event of a vehicle collision, seat belts, if fastened correctly, can restrain the driver and the passengers in a proper position and mitigate the inertia of their forward movement, thereby preventing them from being thrown forward, and at the same time allowing airbags to give them best protection, so as to reduce the impacts and injuries they suffer as much as possible.

In the event of a vehicle collision, seat belts will assist other safety systems in simultaneously absorbing the energy generated by the collision, further reducing the injuries suffered by the driver and passengers.

## **MARNING**

Airbags cannot replace seat belts. Regardless of whether the car is equipped with airbags, the seat belts should be fastened correctly.

# Consequences of not fastening the seat belt



In the event of a vehicle collision, the driver or any passengers who does not fasten the seat belt will be thrown forward due to inertia and get injured.



Even if the vehicle speed is very low, the force acting on the human body in the event of a collision is so great that no passenger could control his or her body with hands at all. In that case, a passenger who does not fasten the seat belt will be thrown forward, and get injured if colliding with any interior objects.



Rear seat passengers must also fasten the seat belts correctly, otherwise they will be thrown forward when an accident occurs. Any passenger who does not fasten the seat belt will not only hurt himself or herself, but also endanger other vehicle occupants.

#### 3.2.2 Seat belt

#### Seat belt indicator lamp

A: Driver's seat belt indicator lamp

Front passenger's seat belt indicator lamp

The following alarms will be triggered when the ENGINE START/STOP button is set to the "ON" position:

- When the vehicle speed is lower than 20km/h, if the driver or front passenger does not fasten the seat belt, the corresponding indicator lamp in the instrument cluster will flash for several seconds and stay on, accompanied by an alarm message.
- When the vehicle speed is 20km/h or higher, if the driver or front passenger does not fasten the seat belt, the corresponding indicator lamp in the instrument cluster will flash for a while and stay on, accompanied by an alarm message and a continuous audible alarm.

#### **CAUTION**

- Before driving, please check whether there are any heavy objects on the front passenger's seat to prevent the system from mistakenly determining that the seat is occupied and issuing a false alarm.
- If the alarm remains on after the seat belt is fastened correctly, it means that the seat belt doesn't work properly. In that case, please go to a GAC Motor authorized shop for inspection in time.

# \*: 2nd-row seat belt indicator lamp\*

If a 2nd-row seat belt indicator lamp is on in white, it indicates that the seat belt is fastened, and if the indicator lamp is on in red, it indicates that the seat belt is not fastened or the seat belt system doesn't work properly. If the indicator lamp remains on in red after the seat belt is fastened correctly, it means that the seat belt may not work properly. In that case, please go to a GAC Motor authorized shop for inspection in time.

The 2nd-row seat belt indicator lamp will be turned on for a while and then turned off. However, it will light up again under the following conditions:

- The 2nd-row passenger does not fasten the seat belt when the engine starts.
- The 2nd-row passenger does not fasten the seat belt when the rear door is opened/closed.
- The 2nd-row passenger fastens or unfastens the seat belt.

#### Seat belt pretensioner and load limiter\*



The seat belt pretensioner and load limiter can reduce the pressure of the seat belt on the chest of the driver or passenger and improve the protection performance.

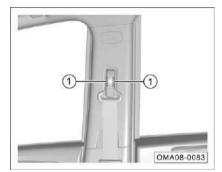
- Before a collision occurs, the seat belt pretensioner and load limiter can restrain the driver or passenger, enabling him or her to maintain a correct sitting posture, so as to prevent his or her body from leaning forward.
- In the event of a severe collision that meets the triggering conditions, the seat belt pretensioner and load limiter will deploy, driving the webbing of the seat belt to quickly get retracted and tensioned.

When a vehicle collision occurs, the body of the driver or passenger will move forward, and the seat belt pretensioner and load limiter will deploy, so that the restraint force of the seat belt on the body will stay within a certain range to prevent further injury due to the excessive force.

### i NOTE

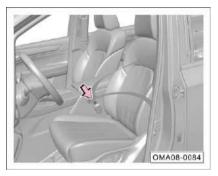
- During the deployment of the seat belt pretensioner and load limiter, a little harmless smoke together with a sound will be produced, which is normal.
- After the seat belt pretensioner and load limiter is deployed, it cannot be deployed again, and the SRS indicator lamp will stay on. In that case, please contact a GAC Motor authorized shop for replacement.

# Adjusting the height of the shoulder seat belt



- Move upward: Grip the guide and move it upward to adjust the shoulder seat belt to an appropriate height.
- Move downward: Press the guide to unlock switch ① and move it downward to adjust the shoulder seat belt to an appropriate height.
- After the adjustment, pull down the guide to check if the guide is firmly locked.

### Fastening the front seat belt



- Keep a correct sitting posture. => <u>See</u> page 12
- Pull out the seat belt slowly at a uniform speed, and insert the tongue into the corresponding buckle until a click is heard.
- Pull the seat belt and confirm that the tongue is properly locked.

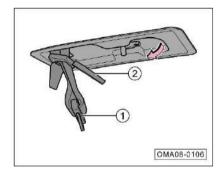
## i NOTE

The fastening methods for the 2nd-row and 3rd-row seat belts are the same.



When fastening a 2nd-row or 3rd-row seat belt, pull out the tongue from the holder in the trim panel before moving out the webbing, and then pulling the seat belt for fastening, so as to avoid damaging the holder when pulling the seat belt.

## Fastening the middle 3rd-row seat belt\*



1. Pull out Tongue ① and Tongue ② from the dome slot.



 Align Tongue ① with the triangle mark on the buckle, and then insert Tongue ① into the buckle until a click is heard.



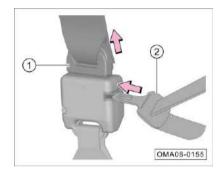
- 3. Insert Tongue ② into the buckle until a click is heard.
- 4. Pull the seat belt and confirm that the tongue is properly locked.

## Unfastening the seat belt



- Press the red button on the buckle. The tongue will pop out automatically.
- Hold the seat belt to make it retract slowly.

# Unfastening the middle 3rd-row seat belt\*



- Press the red button on the buckle to detach Tongue ②, and then insert Tongue ② into the side slot on the buckle to detach Tongue ①.
- Hold the seat belt to make it retract slowly, and then fasten Tongue ① and Tongue ② in the dome slot.

# Pregnant women must fasten the seat belts correctly



How does a pregnant woman correctly fasten the seat belt?

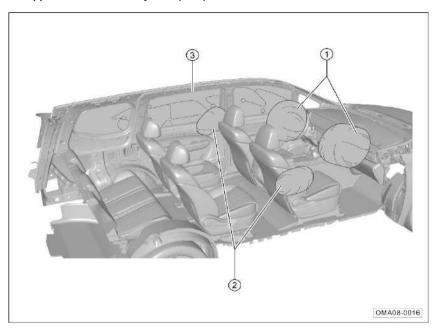
- Adjust the seat and the headrest to a proper position.
- Grasp the tongue, slowly pull the seat belt over the shoulder, and ensure that the lap belt is as low as possible and not pressed against the abdomen.
- Insert the tongue into the corresponding buckle until a click sound is heard.
- Pull the shoulder belt upward while it is parallel to the upper body, tension the lap belt, and ensure that the tongue is properly locked.

### **↑** WARNING

To reduce the risk of injury during emergency braking or in accidents, please observe the following precautions:

- Before driving, make sure that all vehicle occupants have properly fastened the seat belts.
- Each seat belt is for one person only. Do not share the seat belt with other persons (including children).
- Do not recline the front seat back excessively for comfort.
- Do not put the shoulder belt under or behind your arm.
- Be sure to insert the tongue of seat belt into the buckle at the corresponding side, rather than the other side.
- Do not unfasten the seat belt before the vehicle comes to a complete stop.

### 3.3 Supplemental restraint system (SRS)



Depending on vehicle configurations, the deployment positions of the SRS are as follows:

- ① Front seat frontal airbag.
- ② Front seat side airbag\*.
- ③ Side curtain airbag\*.

## i NOTE

Airbags will produce a little harmless smoke when deployed, which is normal.

#### **SRS** indicator lamp

With the ENGINE START/STOP button set to the "ON" position, the indicator lamp will be on for a few seconds and turned off after the system completes self-test.

A system fault is indicated when the indicator lamp is in the following conditions:

- The indicator lamp is not turned on after the ENGINE START/STOP button is set to the "ON" position.
- With the ENGINE START/STOP button set to the "ON" position, the indicator lamp fails to be turned off after the system completes self-test.
- With the ENGINE START/STOP button set to the "ON" position, the indicator lamp is turned on again after the system completes self-test and the indicator lamp is turned off.
- 4. The indicator lamp is turned on or flashing while the vehicle is running.

## **↑** WARNING

- Never attempt to repair, adjust or modify the airbags.
- Every airbag can be deployed once only, and thus, if it is deployed due to an accident, please contact a GAC Motor authorized shop for replacement.
- When the SRS is faulty, please contact a GAC Motor authorized shop for inspection and repair. Otherwise, the system will not trigger or the airbag will be abnormally triggered in the event of a vehicle collision.

•

### Front seat frontal airbag



The driver's frontal airbag is installed inside the steering wheel (the shaded area) marked with "SRS AIRBAG".



The front passenger's frontal airbag is installed inside the instrument panel (as indicated by the dotted dash) marked with "AIRBAG".

In the event of a frontal collision which is severe enough to meet the conditions for triggering the frontal airbags, the frontal airbags will be triggered by the system and deploy rapidly to assist the seat belt in protecting the driver and the front passenger.

In certain collision accidents, the system may simultaneously trigger other airbags.

### **↑** WARNING

Do not attach any decorative object to, or place it on, the surface of the instrument panel. Otherwise, when the vehicle is running or the airbag deploys, such objects will fall, be knocked over, or roll around in the vehicle, affecting the driver and hurting passengers in the vehicle.

Front seat frontal airbags might not be triggered in the following cases:

- The ENGINE START/STOP button is at the "ACC" or "OFF" position.
- A minor frontal collision occurs.
- A side collision occurs.
- A rear-end collision occurs.
- A rollover occurs.
- Any other special circumstance.

## i NOTE

The word "minor" implies the severity of a collision sensed by the SRS controller and has nothing to do with the damage of the vehicle.

### Front seat side airbag\*



Front seat side airbags are installed at the outboard side of the driver's seat back and that of the front passenger's seat back (as indicated by the dotted dash) marked with "AIRBAG".

In the event of a side collision which is severe enough to meet the conditions for triggering the side airbags, the side airbags will be triggered by the system and deploy rapidly to assist the seat belt in protecting the driver and the front passenger.

In certain collision accidents, the system may simultaneously trigger other airbags.

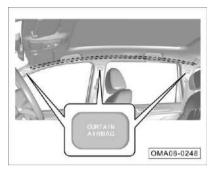
The front seat side airbags might not be triggered in the following cases:

- The ENGINE START/STOP button is at the "ACC" or "OFF" position.
- A 100% frontal collision occurs.
- A minor side collision occurs.
- A rear-end collision occurs.
- Any other special circumstance.

## i NOTE

The word "minor" implies the severity of a collision sensed by the SRS controller and has nothing to do with the damage of the vehicle.

#### Side curtain airbag\*



Side curtain airbags are installed at the left and right sides of the roof respectively (as indicated by the dotted dash) marked with "CURTAIN AIRBAG".

In the event of a severe side collision, the side curtain airbags at the collided side will be triggered by the system and deploy rapidly to assist the seat belts in protecting the driver and passengers.

In certain collision accidents, the system may simultaneously trigger other airbags.

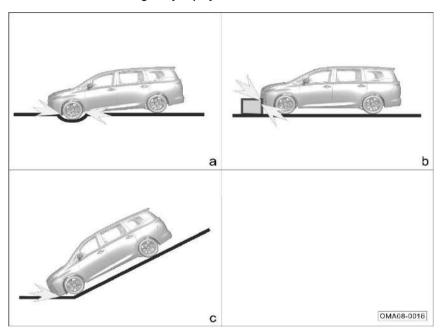
The side curtain airbags might not be triggered in the following cases:

- The ENGINE START/STOP button is at the "ACC" or "OFF" position.
- A 100% frontal collision occurs.
- A minor side collision occurs.
- A rear-end collision occurs.
- Any other special circumstance.

## i NOTE

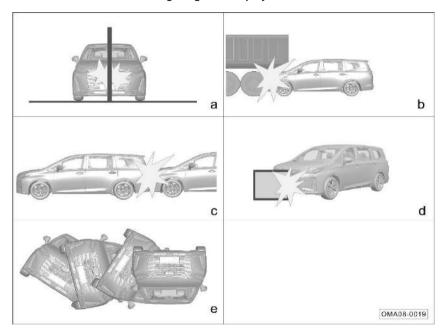
The word "minor" implies the severity of a collision sensed by the SRS controller and has nothing to do with the damage of the vehicle.

## 3.3.1 Cases where the airbags may deploy



- a: The nose hits the ground when the vehicle is crossing a deep groove.
- b: Collision with roadside protrusions, curbs, etc.
- c: The nose hits the ground when the vehicle is running down a steep slope.

## 3.3.2 Cases where the airbags might not deploy



- a: Collision with concrete pillars, trees or other elongated objects.
- b: Rear-end collision with the lower rear end of a large truck.
- c: Rear-end collision by another vehicle.
- d: Collision with a wall or another vehicle, which is not a frontal one.
- e: A rollover or a side roll.

#### 3.4 Safe ride of children

#### 3.4.1 General description

A child must take a 2nd-row seat, and a suitable child safety seat should be selected for protection according to the body size of the child.



Warning labels are pasted on the front, and at the back, of the right sun visor to remind the front passenger of the danger of the frontal airbag. Be sure to read and follow the instructions on the labels.

## **↑** WARNING

- Do not install any rear-facing child restraint system on seats with frontal airbags!
- Even if a child has been put in a child safety seat, do not let any part of his/her head or body rest on the door area (the deployment area of the front seat side airbag\* or side curtain airbag\*), otherwise the impact force of the deployed front seat side airbag\* or side curtain airbag\* can cause serious injury or even death of the child.
- Do not let a child stand or kneel on the seat.
- Do not allow children to operate devices that may hurt themselves by jamming (e.g., the power windows and the sunroof\*).

### **↑** WARNING

- Never leave a child alone in the vehicle!
- Never hold an infant or toddler on your knees!
- Seat belts are not suitable for infants and toddlers as they can cause injuries in the event of an accident.
- Ensure that in the event of a collision or emergency braking, children are less likely to be injured when hitting any hard objects in the vehicle.
- Lock the child safety lock of the door at the side where any child sits.

### 3.4.2 Child safety seat



a. Group 0/0+ child safety seat



b. Group I child safety seat



c. Group II child safety seat



d. Group III child safety seat

8800-80AMO

# Classification of child safety seats (for reference only):

- a. Group 0/0+ child safety seat:
- Suitable for infants weighing less than 13 kg.
- b. Group I child safety seat:
- Suitable for toddlers weighing between 9kg and 18kg.
- c. Group II child safety seat:
- Suitable for children weighing between 15kg and 25kg.
- d. Group III child safety seat:
- Suitable for children weighing between 22kg and 36kg.

### 3.4.3 Information about child safety seats

Information about the applicability of different seating positions for child restraint systems:

Weight group	Mounting position		
weight group	Front passenger's seat	2nd-row seats	3rd-row seats
Group 0: <10 kg	Х	U	Х
Group 0+: <13 kg	Х	U	Х
Group I: 9~18 kg	Х	U/UF	Х
Group II: 15~25 kg	Х	UF	Х
Group III: 22~36 kg	Х	UF	Х

Note: The letters in the table are defined as follows:

U = The "universal" child safety seats approved for this weight group are suitable.

UF = The forward-facing "universal" child safety seats approved for this weight group are suitable.

X = Not suitable for the child safety seats for this weight group.

For some child safety seats, a size class is specified. Be sure to check the size class according to the manufacturer's instructions, packaging, and the child safety seat label. For guidance on proper installation, please refer to the user guide for the child safety seat.

#### ISOFIX mounting positions for ISOFIX child safety seats

Weight group	Size class	Fixture module	Mounting position		
Weight group	Oize diass	Trature module	Front passenger's seat	2nd-row seats	3rd-row seats
Portable crib	F	ISO/L1	х	Х	Х
Group 0: <10 kg	G	ISO/L2	х	х	Х
Sloup of the kg	E	ISO/R1	Х	IL	х
	Е	ISO/R1	Х	IL	х
Group 0+: <13 kg	D	ISO/R2	Х	IL	Х
	С	ISO/R3	Х	IL	х
	D	ISO/R2	Х	IL	Х
	С	ISO/R3	Х	IL	х
Group I: 9-18 kg	В	ISO/F2	Х	IUF	Х
	B1	ISO/F2X	Х	IL	Х
	А	ISO/F3	х	IUF	Х
Group II: 15-25 kg	_	-	Х	-	Х
Group III: 22-36 kg	=	-	Х	-	Х

Note: The letters in the table are defined as follows:

IUF - Suitable for "forward-facing" general ISOFIX child safety seats for this weight group that are fixed with top tether.

IL - Suitable for the listed special ISOFIX child restraint systems, which may be for special vehicles, or of restricted or semi-general categories. X - Not suitable for the child safety seats for this weight group.

For some child safety seats, a size class is specified. Be sure to check the size class according to the manufacturer's instructions, packaging, and the child safety seat label. For guidance on proper installation, please refer to the user guide for the child safety seat.

# 3.4.4 Correctly installing the child safety seat

The child safety seat is generally installed with a three-point seat belt, an ISOFIX system, or a LATCH system.

To ensure a better protection effect and prevent the headrest from affecting the performance of the child safety seat during use, it is recommended to remove the headrest of the seat on which the child safety seat is installed.

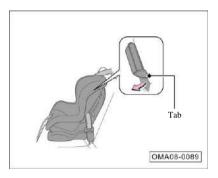
### i NOTE

During the actual installation of the child safety seat, be sure to refer to the user guide for the child safety seat for correct installation.

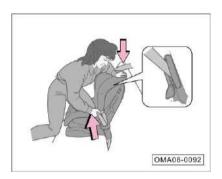
# Installing the child safety seat with a three-point seat belt



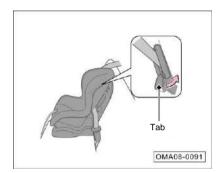
- 1. Place the child safety seat on a 2nd-row seat.
- Pass the seat belt through the child safety seat and fully insert the tongue into the buckle until a click is heard.



Push the tab down and pass the shoulder belt through the slit at the edge of the child safety seat.



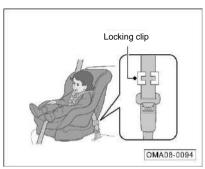
 Grasp the shoulder belt near the buckle and pull it upward to tension the lap belt. At this point, press the child safety seat with your own weight and push it into the vehicle seat.



 Correctly place the seat belt and push the tab upward. Make sure the seat belt is not twisted. When pushing the tab upward, pull the upper part of the shoulder belt upward to tension the belt.



- Shake the child safety seat back and forth, as well as left and right, to make sure it is firmly fixed.
- Make sure that all unused seat belts within the reach of the seated child are locked.



If no device are provided on the child safety seat for fixing the seat belt, please install a locking clip on the seat belt.

- After Step 1 and Step 2, pull the shoulder belt upward to make sure the lap belt is tensioned.
- Firmly grasp the seat belt near the tongue. Pinch the two parts of the seat belt and pull them together so that they do not slip out of the tongue. Unbuckle the seat belt.

Install the locking clip as shown in the picture above. Place the clip as close as possible to the locking tab and insert the locking tab into the buckle. Implement Step 6 and Step 7.

# Installing a LATCH system or ISOFIX system

The 2nd-row seats are equipped with a LATCH system, and thus suitable for child safety seats that are installed with a LATCH system or ISOFIX system. The following describes the installation of a LATCH child safety seat.

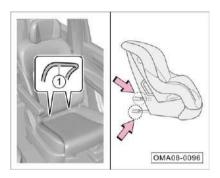
### / WARNING

- The child safety seat anchorages installed in this vehicle can be used to fix the child safety seats only.
- Do not connect straps, hard and sharp objects or any objects other than child safety seats to the anchorages, otherwise children may face life-threatening dangers in the event of an accident.

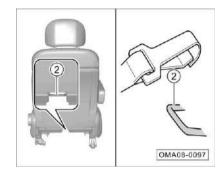


## i NOTE

For a 2nd-row seat, the lower anchorage ① is hidden in the gap between the seat back and the cushion, and the upper anchorage ② is at the bottom of the seat back.



 Put the child safety seat on the vehicle seat, find the lower anchorage ①, and insert the lower guide groove of the child safety seat as arrowed into the lower anchorage ① until a click is heard.



- 2. Thread the strap through the top of the seat back, open the cover of the upper anchorage ②, and attach the strap hook to the upper anchorage ② to ensure that the strap is not twisted.
- 3. Tension the strap and shake the child safety seat to ensure it is firmly fixed.

#### 3.5 Exhaust gas hazard

#### Carbon monoxide gas

The exhaust gas emitted by the engine contains the toxic carbon monoxide gas. Please use the vehicle correctly to prevent the carbon monoxide gas from entering the vehicle.

Please contact a GAC Motor authorized shop to check whether the exhaust system is normal in the following cases:

- The exhaust system makes abnormal noises.
- The exhaust system is in an abnormal color (e.g., blue).

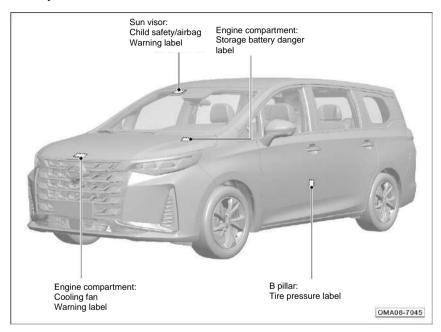
If the engine is idling during parking, please open all the windows and turn on the A/C system:

- 1. Select the fresh air mode.
- 2. Select '~' mode.
- 3. Set the blower speed to the highest.

### **↑** WARNING

- The carbon monoxide gas is toxic, and inhaling a great quantity of it will cause loss of consciousness and even death.
- When the engine is started for a long time in a confined space (such as a garage), carbon monoxide will quickly accumulate, resulting in excessive carbon monoxide in the vehicle. Therefore, after starting the vehicle, drive it away from the confined space immediately.

#### 3.6 Safety labels



The labels are located as shown to remind you of the potential danger that can cause serious injury or death. Please read these labels carefully.

If any label comes off or is difficult to read, please go to a GAC Motor authorized shop in time for replacement.

## i NOTE

In case of any discrepancy in the illustrated locations or quantity of the labels, the actual vehicle shall prevail.

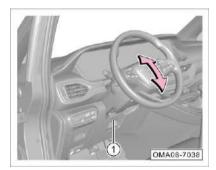
#### 4.1 Cab

#### 4.1.1 Steering wheel

# Adjustment of the steering wheel position



 Adjust the driver's seat until the distance between the steering wheel and your chest is not less than 25cm.



- $-\,$  Pull up the locking handle  $\, \widehat{ \mathbb } \,$  to unlock the steering wheel.
- Adjust the steering wheel to the appropriate position up, down, front, and back as required to ensure that the steering wheel is level with your chest and that you can see the instrument cluster and all the indicator lamps.

#### **CAUTION**

- During driving, the driver's hands should always grasp the outer ring of the steering wheel (9 o'clock and 3'clock positions).
- After adjustment, the steering wheel must be locked to prevent shifting while the vehicle is running.
- Only when the vehicle is stopped can the steering wheel be adjusted to avoid traffic accidents.
- To ensure safety, the steering wheel should face your chest, otherwise the airbag will not provide effective protection in the event of an accident.

#### Buttons on steering wheel



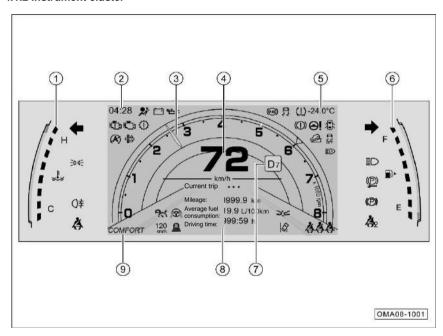
- ① AV system control button =>  $\underline{\text{See page}}$   $\underline{125}$
- ② Horn button: Press the 🔰 button to sound the horn; release the button to stop sounding the horn.

### **↑** WARNING

Do not press and hold the button for a long time, otherwise the horn is highly prone to be damaged.

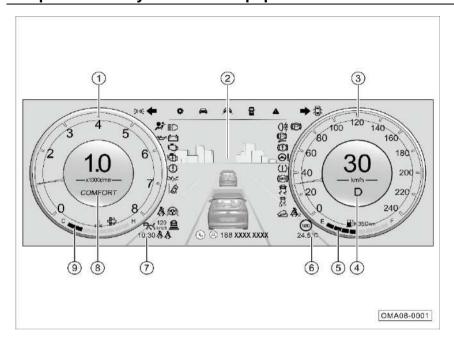
- ③ The right buttons include the control buttons of the instrument cluster display and the cruise control buttons:
- Control buttons of the instrument cluster display:
- Driving information => See page 44
- Menu setting => See page 47
- Alarm message => See page 49
- Cruise control buttons:
- Cruise control system (SCS) button\*=> <u>See page 160</u>
- Adaptive cruise control (ACC)
   button\*=> See page 161

#### 4.1.2 Instrument cluster



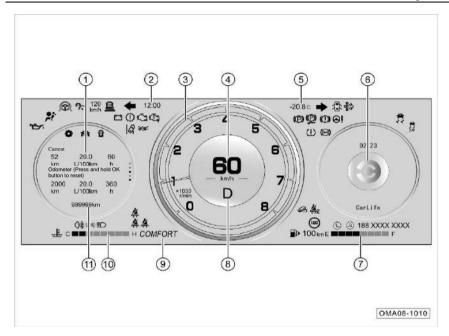
#### Instrument cluster with 7-inch display\*

- ① Engine coolant temperature gauge
- ② Time display
- ③ Tachometer
- 4 Speedometer
- ⑤ Outside temperature
- 6 Fuel gauge
- 7 Gear display
- Instrument cluster display
- Driving mode



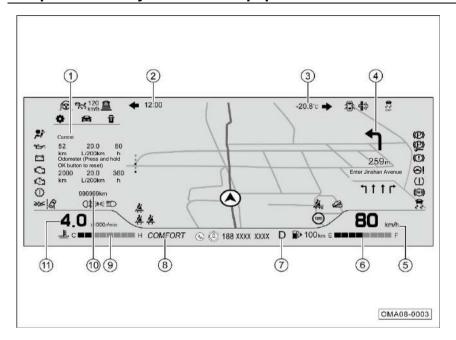
# Instrument cluster with 12.3-inch display (classic theme)\*

- 1 Tachometer
- 2 Instrument cluster display
- ③ Speedometer
- 4 Gear display
- 5 Fuel gauge
- 6 Outside temperature
- 7 Time display
- ® Driving mode
- 9 Engine coolant temperature gauge



# Instrument cluster with 12.3-inch display (organic theme)\*

- 1 Instrument cluster display
- (2) Time display
- (3) Engine tachometer
- 4 Speedometer
- (5) Outside temperature
- (6) Entertainment information
- 7 Fuel gauge
- (8) Gear display
- 9 Driving mode
- (10) Engine coolant temperature gauge
- (11)Total distance



# Instrument cluster with 12.3-inch display (navigation theme)\*

- 1 Instrument cluster display
- ② Time display
- ③ Outside temperature
- 4 Navigation information
- (5) Speedometer
- 6 Fuel gauge
- (7) Gear display
- (8) Driving mode
- 9 Engine coolant temperature gauge
- (10) Total distance
- (1) Engine tachometer

#### **Engine tachometer**

The engine tachometer is used to indicate the current engine speed, in x1000r/min, in the indication range of 0 to 8000r/min.

#### **CAUTION**

The area of 6000 to 8000r/min represents the high load area of the vehicle. Avoid running the vehicle with the pointer of the tachometer within this area; otherwise, fuel shut-off and loss of power will occur due to self-protection of the engine.

### Instrument cluster display

The display information includes: Driving information => See page 44, menu setting => See page 47, navigation information\* => See page 51, AV and entertainment information => See page 50, call information => See page 49, alarm center => See page 49, ADAS (advanced driver assistance systems)\* => See page 51.

#### **CAUTION**

If the instrument cluster display is abnormal, stop the vehicle immediately for the sake of safety, and contact the GAC Motor authorized shop for inspection.

#### Engine coolant temperature gauge

The engine coolant temperature gauge (liquid temperature gauge) is used to indicate the current temperature of the engine coolant.

 The indication range is C to H, where "C" indicates low temperature and "H" indicates high temperature.

After the engine the is started. corresponding scale divisions are illuminated according to the liauid temperatures. The operating temperature of the engine will change in various ways according to the temperature and engine load.

- Scenarios when the liquid temperature is too high: Climbing long distances in hot weather conditions; reducing the speed or parking after driving at high speed; using the A/C system and letting the engine idle for a long time in busy traffic areas; towing a tail vehicle, etc.
- Scenarios when the liquid temperature is too low: The vehicle is not fully heated after a cold start in cold weather conditions; the heating setting/heating air volume is too high in cold weather conditions, etc.

#### Fuel gauge

The fuel gauge is used to indicate the current amount of fuel remaining in the fuel tank.

- The indication range is E to F, where "E" means the fuel tank is empty, and "F" means the fuel tank is full.

### Gear display

 The current gear information of the vehicle such as "P", "R", "N" or "D" is displayed according to the received signal.

#### **Driving mode**

 The current driving mode of the vehicle is displayed according to the received signal.

#### **Total distance**

- The odometer indicates the traveled distance of the vehicle on the driving information screen.
- The indication range is 0 to 9999999km.

### Speedometer

The speedometer indicates the current speed of the vehicle in km/h, in the range of 0 to 240km/h.

### **MARNING**

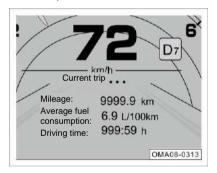
For driving safety, please strictly abide by the traffic rules, and never speed the vehicle.

# Driving information (instrument cluster with 7-inch display)

With the ENGINE START/STOP button set to "ON" position, press the ▲ or ▼ button on the right of the steering wheel to switch to the driving information screen, and then press the ◀ or ▶ button to switch to the display information screen.

 On the driving information screen, current trip, odometer, vehicle status and total distance are displayed.

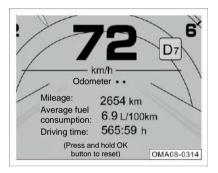
#### Current trip



Current trip: It indicates the driving information (mileage/average fuel consumption/driving time) of the vehicle in

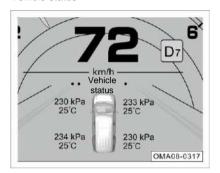
a single drive after the ENGINE START/STOP button is set to "ON" position, where the vehicle parameters cannot be reset.

#### Odometer



Cumulative driving: It indicates the driving information (mileage/average fuel consumption/driving time) of the vehicle since the last reset, where the vehicle parameters can be reset by pressing and holding "OK" button.

#### Vehicle status



Vehicle status: The displayed information includes tire pressure, temperature and door state.

## i NOTE

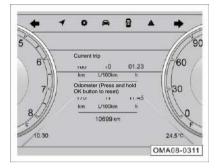
There will be no display of effective data on driving information when no effective information is received.

#### Total distance



Total distance: It indicates the mileage of the vehicle, which cannot be reset.

# Driving information (instrument cluster with 12.37-inch display)



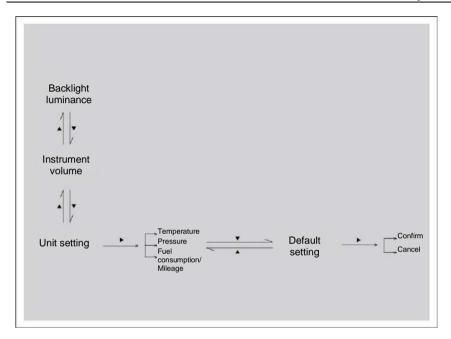
With the ENGINE START/STOP button set to "ON" position, press the ◀ or ▶ button on the right of the steering wheel to switch to the driving information screen.

- On the driving information screen, current trip, odometer, and total distance are displayed.
- Current trip: It indicates the driving information (trip distance/ average fuel consumption/ driving time) of the vehicle in a single drive after the ENGINE START/STOP button is set to "ON" position, where the vehicle parameters cannot be reset.

- Odometer: It indicates the driving information (cumulative distance/ average fuel consumption/ driving time) of the vehicle since the last reset, where the vehicle parameters can be reset by pressing and holding "OK" button.
- Total distance: It indicates the mileage of the vehicle, which cannot be reset.

## i NOTE

There will be no display of effective data on driving information when no effective information is received.

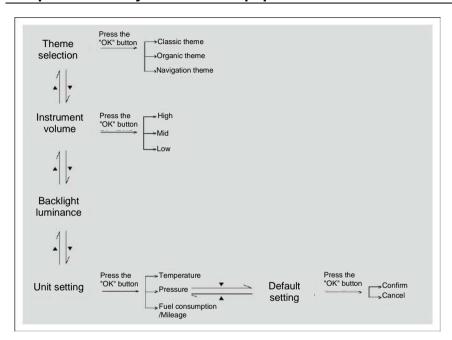


# Menu setting (instrument cluster with 7-inch display)

With the ENGINE START/STOP button set to "ON" position and when the vehicle speed is 0, press the ▲ or ▼ button on the right of the steering wheel to switch to the menu setting screen, and then press the ▶ button to enter the menu setting screen. Then, press the ▲ or ▼ button to move the cursor and press the ▶ or "OK" button to enter the next menu. Next, press the ▼ button to return to the previous menu after entering the secondary menu.

### i NOTE

- If the menu setting is operated when the vehicle speed is not 0, the alarm message "Safe Driving Tips: If settings are required, please stop the vehicle first" will be displayed; if the alarm message is displayed for more than 5 seconds, the instrument cluster will automatically switch to driving information.
- If you need to set the backlight luminance, please turn on the interior lamp to set the luminance.
- In case of any discrepancy between the picture and actual menu setting, the actual vehicle shall prevail.



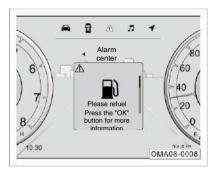
# Menu setting (instrument cluster with 12.37-inch display)

With the ENGINE START/STOP button set to "ON" position and when the vehicle speed is 0, press the ◀ or ▶ button on the right of the steering wheel to switch to the menu setting screen, and then move the "OK" button to move the cursor and press the "OK" button to enter the next menu. Next, press the "OK" button to return to the previous menu after entering the secondary menu.

### i NOTE

- If the menu setting is operated when the vehicle speed is not 0, the alarm message "Safe Driving Tips: If settings are required, please stop the vehicle first" will be displayed; if the alarm message is displayed for more than 5 seconds, the instrument cluster will automatically switch to driving information.
- If you need to set the backlight luminance, please turn on the interior lamp to set the luminance.
- In case of any discrepancy between the picture and actual menu setting, the actual vehicle shall prevail.

#### Alarm center



On the alarm center screen, the current state of the vehicle is displayed in the form of texts or pictures. The driver should always pay attention to checking for alarm message.

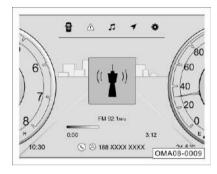
- If the vehicle is in normal condition, no alarm center is displayed.
- If the vehicle is faulty or certain function is activated/deactivated, corresponding text or picture message will appear at the upper part of the screen of the instrument cluster, reminding the driver about the current state of the vehicle.

If any alarm message appears, press the "OK" button on the left of the steering wheel to confirm the message. Then the message will be displayed on the alarm center screen. If there is no operation, the messaged will be displayed again after 5s.

## i NOTE

- The classic theme of instrument cluster with 12.3-inch display is illustrated here and for reference only. Please refer to the actual vehicle.
- When the alarm message is present, if you need to use the "OK" button on the right of the steering wheel to perform other functions, you must read and confirm the alarm message on the top of the instrument display before using the "OK" button on the right of the steering wheel to perform other functions.

#### Call information

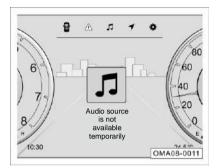


- When the AV system is connected to the Bluetooth of the mobile phone and there is an incoming call, the call information will be displayed at the lower right of the instrument cluster display.
- When the B-CALL\* or E-CALL\* is used, the call information screen will display B-CALL\* or E-CALL\* status.

## i NOTE

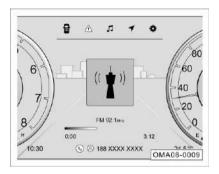
The classic theme of instrument cluster with 12.3-inch display is illustrated here and for reference only. Please refer to the actual vehicle.

#### AV and entertainment information



- With the ENGINE START/STOP button in "ON" position, press the 

or button on the right of the steering wheel to switch to the AV and entertainment information screen. When the AV system is not turned on, the prompt message "Audio source is not available temporarily" is displayed on the AV and entertainment information screen.

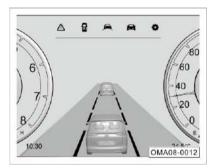


 When the AV system is turned on, the current playback information will be displayed on the AV and entertainment information screen.

## i NOTE

- The classic theme of instrument cluster with 12.3-inch display is illustrated here and for reference only. Please refer to the actual vehicle.
- When the AV system activates the mobile phone connection function through CarPlay, the AV and entertainment information screen will display the CarPlay connection status and corresponding entertainment function screens of CarPlay will not be accessed.

#### ADAS\*



 This screen is displayed when ADAS is activated on the vehicle, and is not displayed under any other circumstances.

## i NOTE

ACC system, forward collision warning system (FCWS), lane departure warning (LDW), and integrated cruise assist (ICA) system are displayed on this screen.

### Navigation information\*



With the ENGINE START/STOP button set to "ON" position, press the ◀ or ▶ button on the right of the steering wheel to switch to the navigation information screen (except for navigation theme).

 When the navigation function of the AV system is turned on, the current navigation information will be displayed on the AV and entertainment information screen according to the navigation function status of the AV system.

### i NOTE

The classic theme of instrument cluster with 12.3-inch display is illustrated here and for reference only. Please refer to the actual vehicle.

## 4.1.3 Indicator lamps

Index	Icon	Name	Color	Function
1	念	Door ajar indicator lamp	Red	If the indicator lamp is on in red, it indicates that any door has not been closed.
2	2	Charging system warning lamp	Red -	The warning lamp will come on when the vehicle is not started with the ENGINE START/STOP button in "ON" position, and will go out after the vehicle is started.
2				If this warning lamp comes on after the vehicle is started, it indicates that the charging system is faulty.
3 ₭∰		Engine fault indicator lamp	Yellow	If there is no fault, this indicator lamp will come on and stay on for a few seconds when the engine is not started with the ENGINE START/STOP button set to "ON" position, and then will go out after the system self-test.
			,	If this indicator lamp comes on after the vehicle is started, it indicates that the engine system is faulty.
4	4	Low oil pressure warning lamp	Red	The warning lamp will come on when the vehicle is not started with the ENGINE START/STOP button in "ON" position, and will go out after the vehicle is started.
4				If this warning lamp comes on after the vehicle is started, it indicates that the engine oil pressure is low.
5	ğ	Emission fault indicator lamp	Yellow	The indicator lamp will come on when the vehicle is not started with the ENGINE START/STOP button set to "ON" position, and will go out after the vehicle is started.
				If this indicator lamp comes on after the engine is started, it indicates that the exhaust system is faulty.
6	•	Left turn signal indicator lamp and hazard warning lamp	Green	When the left turn signal indicator lamp flashes alone, it indicates that the left turn signal lamp of the vehicle is on. When the hazard warning lamp switch is pressed, the left/right turn signal indicator lamps and all turn signal lamps will flash simultaneously.
7	<u>.</u>	High engine coolant temperature indicator lamp	Red	If the red indicator lamp comes on, it indicates that the engine coolant temperature is too high.
8	**	SRS indicator lamp	Red	If the red indicator lamp comes on, it indicates that the SRS is faulty.
9		Low fuel level indicator lamp	Yellow	If the yellow indicator lamp flashes, it indicates that the fuel level of the fuel tank is low.
3	<b></b> U	Low ider level indicator lamp		If the yellow indicator lamp comes on, it indicates that the fuel pump may be faulty.

Index	Icon	Name	Color	Function
10	•	Right turn signal indicator lamp and hazard warning lamp	Green	If the right turn signal indicator lamp flashes alone, it indicates that the right turn signal lamp of the vehicle is on. When the hazard warning lamp switch is pressed, the left/right turn signal indicator lamps and all turn signal lamps will flash simultaneously.
		EPB status indicator lamp	Red	If the red indicator lamp comes on, it indicates that the EPB is applied.
11	(P)			If the red indicator lamp flashes, it indicates that the EPB is engaged partially or faulty.
			Green	If the green indicator lamp comes on, it indicates that the EPB is activated.
12	<b>(P)</b>	EPB fault indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the EPB is faulty.
12	<u>~</u>			If the yellow indicator lamp flashes, it indicates that the EPB is in the service mode.
13	( <u>()</u> )	Parking brake and brake system indicator lamp	Red	If the red indicator lamp comes on, it indicates that the brake fluid level is low or the electronic brake force distribution (EBD) system is faulty.
44	£	Electronic stability program (ESP) indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the ESP is faulty.
14	14			If the yellow indicator lamp flashes, it indicates that the ESP is working.
15	₽ OFF	ESP OFF indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the ESP is off.
16	((-())	Anti-lock braking system (ABS) indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the ABS is faulty.
17	O	Transmission fault indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the transmission is faulty.
17	17			If the yellow indicator lamp flashes, it indicates that the transmission oil temperature is too high.
18	(!)	Tire pressure monitoring system (TPMS) indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the TPMS is faulty or the tire status is abnormal.
19	⊕!	Electric power steering (EPS) indicator lamp	Red	If the red indicator lamp comes on, it indicates that the EPS is faulty.
20	***	Cruise control system (CCS) indicator lamp*	White	If the white indicator lamp comes on, it indicates that the CCS is in the ready state.
20	<b>(5)</b>		Green	If the green indicator lamp comes on, it indicates that the CCS is working.

Index	Icon	Name	Color	Function
21 57	ACC indicator lamp (no vehicle ahead)*	White	If the white indicator lamp comes on, it indicates that the ACC system is in the ready state, and there is no target vehicle ahead.	
		Green	If the green indicator lamp comes on, it indicates that the ACC system is working, and there is no target vehicle ahead.	
9.4	<b>ී</b> ග්	ACC indicator lamp (a vehicle ahead)	White	If the white indicator lamp comes on, it indicates that the ACC system is in the ready state, and there is a target vehicle ahead.
22	22		Green	If the blue indicator lamp comes on, it indicates that the ACC system is working, and there is a target vehicle ahead.
23	<b>₽</b>	ACC fault indicator lamp*	Yellow	If the yellow indicator lamp comes on, it indicates that the ACC system is faulty.
		LDW status indicator lamp*	White	If the white indicator lamp comes on, it indicates that the LDW is activated
24	Ø		Red	If the red indicator lamp comes on, it indicates that the LDW is faulty. In that case, please go to the GAC Motor authorized shop for inspection and repair in time.
			Green	If the green indicator lamp comes on, it indicates that the LDW is working normally.
	,	FCM status indicator lamp*	Red	If the red indicator lamp flashes, it indicates that the FCM is being triggered and activated.
25	25 పోట్జ		Yellow	If the yellow indicator lamp comes on, it indicates that the FCM is faulty. In that case, please go to the GAC Motor authorized shop for inspection and repair in time.
26	98	Hands-on indicator lamp*	Green	If the green indicator lamp comes on, it indicates that hands on steering wheel is detected by ICA.
20	26		Yellow	If the yellow indicator lamp comes on, it indicates that hands off steering wheel is detected by ICA.
			White	If the white indicator lamp comes on, it indicates that the ICA lateral control is in the standby state.
27	Lateral control status indicator lamp*	Green	If the green indicator lamp comes on, it indicates that the ICA lateral control is activated.	
			Yellow	If the yellow indicator lamp comes on, it indicates that the ICA lateral control is faulty.
28	<b>♣</b> 2	Front seat belt indicator lamp	Red	If the red indicator lamp comes on, it indicates that the front passenger's seat belt is not fastened or the system is faulty.
29	*	Driver's seat belt indicator lamp	Red	If the red indicator lamp comes on, it indicates that the driver's seat belt is not fastened or the seat belt system is faulty.

Index	Icon	Name	Color	Function
		White	If the white indicator lamp comes on, it indicates that the corresponding rear seat belt is fastened.	
30	30	Rear seat belt indicator lamp*	Red	If the red indicator lamp comes on, it indicates that the corresponding rear seat belt is not fastened or the seat belt system is faulty.
31	≣(A)	Intelligent headlight control (IHC) indicator lamp*	White	If the white indicator lamp comes on, it indicates that the IHC is in the standby state.
31	≣છ		Blue	If the blue indicator lamp comes on, it indicates that the IHC is activated.
32		High beam indicator lamp	Blue	If the blue indicator lamp comes on, it indicates that the high beam is on.
33	<u>;</u> D0;	Position lamp indicator lamp	Green	If the green indicator lamp comes on, it indicates that the position lamp, instrument panel lamp, license plate lamp, ambient light*, etc. are on.
34	€	Rear fog lamp indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the rear fog lamp is on.
35	6	Hill descent control (HDC) indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the HDC is activated.
36	(120)	Navigation speed limit sign*	_	It indicates that the driving speed cannot be higher than the speed on the speed limit sign.
37		0 1 0 0 0 0 0 0 0	White	If the white indicator lamp comes on, it indicates that the accumulated carbon of the GPF exceeds a certain limit, and it is necessary to run at a high speed for more than 40 minutes to clean the carbon.
37	Gasoline particulate filter (GPF) indicator lamp	Yellow	If the yellow indicator lamp comes on, it indicates that the accumulated carbon of the GPF is excessive, and it is necessary to run at a high speed for more than 40 minutes to clean the carbon.	
38 (A)	START/STOP system fault indicator lamp*	White	If the white indicator lamp comes on, it indicates that the vehicle does not satisfy the START/STOP conditions.	
		· · · · · · · · · · · · · · · · · · ·	Yellow	If the yellow indicator lamp comes on, it indicates that the START/STOP system is faulty.
39	(Ā)	START/STOP system working indicator lamp*	Green	If the green indicator lamp comes on, it indicates that the START/STOP system is activated.

Note: If the indicator lamp or warning lamp message appears on the instrument cluster after the vehicle is started or during driving, it indicates that the relevant system or function is in a certain working state or faulty. Please read and understand the meaning of all the indicator lamps and warning lamps in detail. If a fault occurs, please visit or contact the GAC Motor authorized shop for inspection in time.

#### 4.2 Vehicle locking and unlocking

#### 4.2.1 Intelligent remote control key

Vehicles equipped with ENGINE START/STOP button\* are equipped with intelligent remote control keys (including emergency mechanical key) and the corresponding key barcodes. If the key needs to be re-customized or the key barcode is missing, please contact the GAC Motor authorized shop.

#### **CAUTION**

After the vehicle is started, do not place the remote control key on the instrument panel under the front windshield, otherwise the prompt "No key detected" may appear.

# Poor signal strength of intelligent remote control key

The operation of the intelligent remote control key button may be interfered or unstable in the following cases:

- Nearby equipment is emitting strong radio waves.
- The intelligent remote control key is

carried together with telecommunication equipment, laptop, mobile phone, or wireless signal transmitter.

- The intelligent remote control key is put together with magnetic cards (such as bank card and bus card).
- Metal objects are in contact with or cover the intelligent remote control key.

#### **CAUTION**

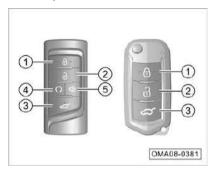
The intelligent remote control key contains an electronic circuit that can trigger the engine immobilizer system. If the circuit is damaged, the vehicle may not be started. Therefore.

- Avoid placing the intelligent remote control key in direct sunlight or in a high-temperature or humid place.
- Avoid dropping the intelligent remote control key from a high place or crushing it by heavy objects.
- Avoid exposing the intelligent remote control key to any liquid. If the key gets wet accidentally, dry it immediately.

## i NOTE

- The standard remote control range is 15m and the maximum remote control range is 50m.
- The buttons of the remote control key do not work when the ENGINE START/STOP button is set to "ACC" or "ON" position.
- If the unlocking or locking function of the remote control key is deactivated, you can try to press the buttons on the remote control key three times continuously to activate the function.

#### **Button operations**



- 10: Locking button
- 20: Unlocking button
- ③ ★ : Liftgate unlocking button
- 4) : ENGINE START/STOP button\*
- ⑤烒≒: Anti-theft alarm button\*

# ① Button operations

- If the button is pressed once within the effective range of the remote control key, all doors will be locked; if the button is pressed and held for 2s, only the driver's door window will be automatically closed; if the button is pressed and held for 3s, the sunroof\* will automatically close. During the automatic closing process of the window or sunroof\*, if you release this button, the window or sunroof\* will stop closing.
- If this button is pressed twice continuously within 0.5s, the vehicle locating function will be activated and the turn signal lamps will flash three times quickly.
- ② Button operations
- If the button is pressed once within the effective range of the remote control key, all doors will be unlocked; if the button is pressed and held for 2s, only the driver's door window will automatically open; if the button is pressed and held for 3s, the sunroof\* will automatically open. During the automatic opening process of the window or sunroof\*, if you release this

button, the window or sunroof\* will stop opening.

#### **CAUTION**

When the window or sunroof\* is closed remotely, no body parts (such as head, hands, etc.) should be within the closing trajectory of the window or sunroof\*, otherwise there is a risk of pinching.

## i NOTE

- The intelligent remote control key cannot control the sunroof\* to raise.
- When the doors are locked, the turn signal lamps will flash once and the horn will sound once. When the doors are unlocked, the turn signal lamps will flash twice and the horn will sound twice. The horn prompt can be activated or deactivated via "System Settings → Sound Effect Settings → System Sound Effect → Unlocking/Locking Horn" in the AV system.
- All the four doors or the driver's door can be unlocked by pressing the button after setting via "System Settings → Body Accessories → Lock and Unlock → Remote Unlocking" in the AV system.
- If the door is not opened within 30s after being unlocked by pressing the button on the intelligent remote control key, the system will lock the door again.

## ③ ★ Button operations

If the vehicle has the power liftgate (PLG) function, pressing and holding the button within the effective range can open the liftgate electrically. During the opening process, if the button is pressed again, the liftgate will stop at the current position.

## ④ ○Button operations\*

- Within the effective range, when the ⊕ button is pressed, and the ○ button is pressed and held within 2s, the turn signal lamp will flash, and the vehicle is started
- When the vehicle has been started remotely, press and hold the ○ button for about 3s, the turn signal lamp will flash, and the vehicle is shut down.

## ⑤ ◁≒Button operations\*

- Press and hold the button for 3s to trigger the anti-theft alarm, sound the horn and flash the turn signal lamp for 30s; press the or or to stop the anti-theft alarm.

## **i** NOTE

- Before remotely stopping the vehicle, make sure that the vehicle is locked. If you are not sure about it, press the ⊕ button once, and then press and hold the ∩ button to remotely stop the vehicle.
- To remotely stop the vehicle, keep the key within the effective range, otherwise the unlocking function may be triggered and then the engine cannot be started.

# Switch between "horn and light" alarm and "light" alarm

The "light" alarm means that the vehicle only flashes the turn signal lamp to prompt the owner when the alarm is issued; the "horn and light" alarm means that the vehicle flashes the turn signal lamp and sounds the horn at the same time to prompt the owner when the alarm is issued.

When the ENGINE START/STOP button set to "OFF" position, press the button and the button on the remote control key at the same time for 2s to switch between the "light" alarm and "horn and light" alarm modes. After the switch is successful, the turn signal lamp flashes three times (only applicable to electronic anti-theft alarm).

## i NOTE

The switching effect will only occur when the anti-theft alarm is activated. For specific operations, please refer to the chapter on basic operations of vehicle anti-theft. => See page 80

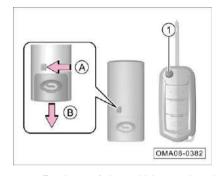
#### **Battery replacement**

Each time you press the buttons on the intelligent remote control key, the indicator lamp of the key will flash once. If the indicator lamp fails to flash, or you need to press the buttons several times to lock or unlock the doors, the battery may be exhausted or about to run out. It is recommended to go to GAC Motor authorized shop for the battery replacement.

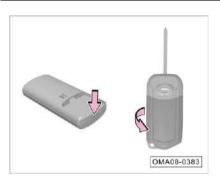
### **CAUTION**

- Be sure to replace the battery with a new one of the same model.
- An inappropriate battery may damage the intelligent remote control key.
- Always comply with environmental regulations to dispose of the exhausted battery.

### **Battery replacement steps**



- For keys of the vehicles equipped with ENGINE START/STOP button\*: Press the switch in the direction of arrow A and pull out the emergency mechanical key in the direction of arrow B.
- For keys of the vehicles equipped with traditional ENGINE START/STOP button\*: Press button ① and pull out the emergency mechanical key.

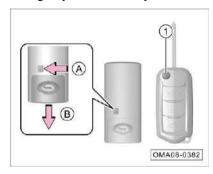


- For keys of the vehicles equipped with ENGINE START/STOP button\*: Use emergency mechanical key to take off the cover of the remote control key at the position indicated by the arrow
- For keys of the vehicles equipped with traditional ENGINE START/STOP button\*: Take off the cover of the remote control key at the position indicated by the arrow



- Take out the battery ②.
- Assemble the remote control key in the reverse steps mentioned above.

# 4.2.2 Emergency mechanical key Emergency mechanical key



- For keys of the vehicles equipped with ENGINE START/STOP button\*: Press the switch in the direction of arrow A and pull out the emergency mechanical key in the direction of arrow B to lock all the doors or driver's door, which cannot start the engine.
- For keys of the vehicles equipped with traditional ENGINE START/STOP button\*: Press button ① to pop up the mechanical key and lock all the doors or driver's door or start the engine.

### Backup mechanical key\*



 Backup mechanical key can be used to lock all the doors or driver's door or start the engine.

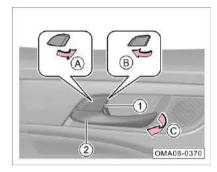
# 4.2.3 Door lock system Central locking button



- Lock all the doors: Press the  $\widehat{\mathbf{U}}$  end of the central locking button  $\widehat{\mathbf{U}}$ .
- Unlock all the doors: Press the dend of the central locking button ①.

#### Door inside handle

Type 1:



- Push the inside handle of any door in the direction of arrow A to lock that door only.
- Pull the inside handle of any door in the direction of arrow A to unlock that door only; pull the inside handle of any door in the direction of arrow C to open corresponding door.

Type 2:

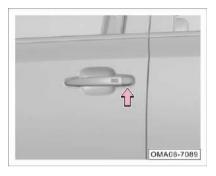


- If the vehicle is locked, pull the inside handle of any door once to unlock that door only; pull the door inside handle again to open the door.
- If the vehicle is unlocked, pull any door handle once to directly open the door.

#### **CAUTION**

- When the child safety lock is activated => See page 63, even if the rear door latch is unlocked, the rear door cannot be opened by the inside handle. In this case, the rear door shall be opened from outside. And do not pull the inside handle with force to avoid damages.
- Before driving the vehicle, make sure that all doors are properly closed and locked.
- Do not pull the inside handle during driving to avoid accidents due to opening of door.
- When opening or closing the door, check the surroundings of the vehicle, for example, check whether the vehicle is on a slope, check whether there is enough space to open the door or check whether there is strong wind. When opening or closing the door, hold the door handle tightly for any unpredictable movement.

#### Door lock hole



- Take out the emergency mechanical key. => <u>See page 60</u>
- Insert the emergency mechanical key into the decorative cover of the mechanical lock at the left front door. Pop up the decorative cover gently upwards, pull up the door handle and take off the decorative cover.



- Insert the emergency mechanical key into the driver's door lock hole.
- Pull the mechanical key handle counterclockwise to lock all the doors.
- Pull the mechanical key handle clockwise to unlock the driver's door.

## Child safety lock



- Activation: Pull the child safety lock switch ① from position to position to turn on the child safety lock.
- Deactivation: Pull the child safety lock switch ① from ① position to position to turn off the child safety lock.

#### **OCAUTION**

When the child safety lock is activated, the rear door cannot be opened by operating the inside handle. In this case, the rear door shall be opened from outside. And do not pull the inside handle with force to avoid damages.

## **∴** WARNING

- Child safety lock can prevent children inside the vehicle from accidentally opening the rear door and reduce the risk of accidents during driving.
- When the child safety lock is activated, never leave children or disabled persons in the vehicle alone. Once the doors are locked, it is difficult for children or disabled persons to leave the vehicle in an emergency; locked doors in an accident will make it more difficult to rescue persons inside the vehicle.

#### Speed sensing door lock

If this function is activated with all doors closed, the vehicle will be automatically locked at certain vehicle speed or after certain driving time.

With the ENGINE START/STOP button set to "ON" position, whether locked automatically or manually, all doors will be automatically unlocked if the system detects that the vehicle has suffered a severe collision. Depending on the impact force and impact range, the system may not work under extreme conditions.

## i NOTE

- Please read the above related content before activating this function.
- This function is deactivated by default. It can be activated or deactivated via "System Settings → Body Accessories → Lock and Unlock → Speed Sensing Door Lock" in the AV system.

#### Collision unlock function

With doors locked and the vehicle ENGINE START/STOP button set to "ON" position, when the system detects that the vehicle has suffered a severe collision, all doors will be automatically unlocked. Depending on the impact force and impact range, the system may not work under extreme conditions.

#### Auto unlock function

If the vehicle stops with the doors locked and the vehicle ENGINE START/STOP button set to "OFF" position, the four doors will be automatically unlocked.

## i NOTE

It can be activated or deactivated via "System Settings  $\rightarrow$  Body Accessories  $\rightarrow$  Lock and Unlock  $\rightarrow$  Auto Unlock" in the AV system.

#### Intelligent active unlocking\*

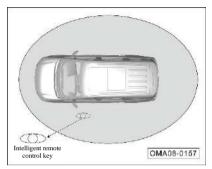


 When the intelligent active unlock function is activated and the intelligent remote control key is brought to the area within 1m of the vehicle, the vehicle will be automatically unlocked.

## i NOTE

- It can be activated or deactivated via "System Settings → Body Accessories → Lock and Unlock → Intelligent Active Unlocking" in the AV system.
- After the intelligent active unlocking is successful, the turn signal lamps will flash twice and the horn will sound twice.
- When the vehicle has been not in use for more than seven days, the intelligent active unlock function will be automatically deactivated in order to reduce the power consumption of the vehicle. In this case, you need to use the intelligent remote control key or touch the door handle to unlock the doors, and after the vehicle is started, the intelligent active unlock function will be restored.

## Intelligent active locking\*



With the intelligent active lock function activated and the ENGINE START/STOP button set to "OFF" position, after all doors are closed, if the intelligent remote control key is taken away from the vehicle to an area within 2m from the vehicle for more than 2 minutes or to an area more than 2m away from the vehicle, the vehicle will be automatically locked. If the key remains in an area within 2m from the vehicle for more than 2 minutes, the system will temporarily deactivate the intelligent active lock function for the purpose of power saving; if it is for more than 4 minutes, the system will temporarily deactivate the intelligent active unlock function. The user needs to open and then close one of the doors to reactivate the intelligent active lock function.

## i NOTE

- It can be activated or deactivated via "System Settings → Body Accessories → Lock and Unlock → Intelligent Active Locking" in the AV system.
- If the intelligent active unlock is successful, the turn signal lamps will flash once and the horn will sound once.
- If the key remains in an area within 2m from the vehicle, the indicator lamp of the intelligent remote control key will flash until the doors are locked.
- If the intelligent active locking is activated successfully but the liftgate is ajar, the audible and visual alarms will be triggered to remind you.

### i NOTE

- If any door is not closed, the instrument cluster will prompt you that the corresponding door is not closed.
- With the intelligent active lock function activated, if the user approaches the vehicle within 3s, the system will consider that the user wants to confirm whether the vehicle has been locked and will not trigger intelligent active unlock function. The user can confirm whether the doors are locked by pulling the rear door handle.
- With the ENGINE START/STOP button set to "OFF" position, when the liftgate is opened, and the intelligent remote control key is in the car, if the liftgate is not closed within 10 minutes, the vehicle will automatically lock the doors and sound the horn to indicate that the liftgate is ajar. If the liftgate is then closed, the vehicle will unlock the door to prevent the intelligent remote control key from being locked in the vehicle.

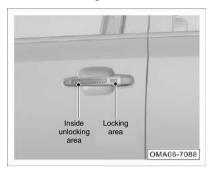
The intelligent active locking function will not work when one of the following conditions occurs:

- The ENGINE START/STOP button is set to "ACC" or "ON" position.
- The intelligent remote control key is in the car.
- No intelligent remote control key is detected within 2m from the vehicle.
- Any door is ajar (excluding liftgate or engine hood).
- The intelligent remote control key is thrown into the vehicle from the door window.
- The intelligent remote control key is too close to the vehicle.

#### **CAUTION**

- The intelligent active lock function cannot automatically close the windows or sunroof\*. When leaving the vehicle, you should ensure that all windows and sunroof\* are closed.
- Do not leave children or disabled persons in the vehicle alone when using the intelligent active lock function.

### Passive unlocking\*



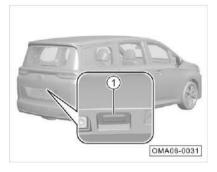
- With the ENGINE START/STOP button set to "OFF" position, if you carry the intelligent remote control key to approach the driver's door, and reach into the inside unlocking area of the door handle, all the doors will be unlocked through effective sensing.
- With the ENGINE START/STOP button set to "OFF" position, if you carry the intelligent remote control key and leave the vehicle, and touch the locking area after all doors are closed, all the doors will be locked through effective sensing.

#### **CAUTION**

- After the doors are locked by passive unlocking function, it will take 5s before the passive unlocking function can be used again to unlock the doors.
- If you touch the unlocking area and the locking area at the same time, priority will be given to unlocking function. So, do not touch them at the same time.
- Any snow or ice on the driver's door handle will affect the passive unlocking function. The snow or ice should be removed as soon as possible.
- If you touch the locking area when closing the doors, anti-theft alarm will be triggered.
- If the driver's door handle is covered in water during heavy rain or during a car wash and the intelligent remote control key is within the effective range, the door may be unlocked.

#### **CAUTION**

- If you grab the driver's door handle while wearing gloves, the door sensors may respond slowly or not to unlock the door.
- If you grab the driver's door handle and then pull it immediately, the door may not open. Please grab the handle again and confirm that the door is unlocked before pulling the handle.
- Even within a range of 1m, if the intelligent key remote control is higher or lower than the driver's door handle, the system may be unable to lock/unlock the door.
- If the intelligent remote control key is too close to the door and window, the system may not work properly; if the working distance of the remote control transmitter changes, the battery power may be insufficient.



- With the ENGINE START/STOP button set to "OFF" position, if you carry the intelligent remote control key to approach the liftgate, and press the liftgate opening button ①, the liftgate will be unlocked and opened.
- If the vehicle is unlocked and stationary, you do not need the intelligent remote control key to unlock and open the liftgate. Instead, you may press the liftgate opening button ① to unlock and open the liftgate.

#### 4.2.4 Door



- To close the door in the vehicle, grab the door handle and pull it inward.
- To close the door from outside, directly push the door toward the vehicle.

### **CAUTION**

Before opening the door, always pay attention to other vehicles or pedestrians outside the vehicle to avoid accidents caused by collision.

### **↑** WARNING

- Make sure all doors are closed before driving, otherwise unclosed doors will open and cause accidents or injuries.
- Open or close the doors only when the vehicle is stationary.
- Do not put your hands on the edge of the door when closing the door, otherwise there will be a risk of pinching.

### i NOTE

- If the door is not closed properly, please re-open the door and close it again.
- If the door is not closed properly, there will be a corresponding indication on the instrument cluster display. When the driving speed is higher than 5km/h, there will be a buzzer prompt.

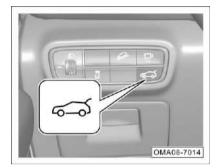
#### 4.2.5 Liftgate

# Unlocking liftgate with remote control key

If the vehicle has the PLG function, pressing and holding on the button of the remote control key within the effective range will make the liftgage automatically open to the set position. During opening, if you press this button again, the liftgate will stop opening.

If the vehicle does not have the PLG function, pressing and holding on the button of the remote control key within the effective range will unlock the liftgate with the need of manual opening of the liftgate.

# Unlocking liftgate with button on instrument panel\*



Press and hold the liftgate button on the instrument panel to unlock the liftgate. During opening, if you press this button, the liftgate will stop opening.

### Operation of inside switch of liftgate\*



- Press the inside switch of the liftgate to electrically open/close the liftgate.
- In this process, press the inside switch again to suspend opening/closing of the liftgate.

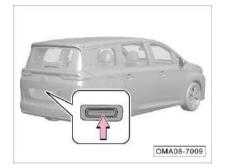
Setting of second height of liftgate:

When the height of opening of liftgate is 55% to 98%, press and hold the inside switch of liftgate for about 2s to set the second height of liftgate successfully.

#### **CAUTION**

As the inside switch of liftgate sends an action signal that does not identify opening or closing, the liftgate will confirm the relevant action according to the current state and the last action. If the opening action was previously suspended, pressing the inside switch will close the liftgate; if the closing action was previously suspended, pressing the inside switch will open the liftgate.

# Unlocking liftgate with keyless entry function\*



If you carry the intelligent remote control key to approach the liftgate and press the liftgate opening button within the effective range, the liftgate will be unlocked and opened.

- If the vehicle does not have the PLG function, you need to open the liftgate manually.
- If the vehicle has the PLG function, the liftgage will automatically open to the set position. During opening, if you press this button again, the liftgate will stop opening.

#### **CAUTION**

If the vehicle is unlocked and stationary, you do not need the intelligent remote control key to unlock and open the liftgate. Instead, you may press the liftgate opening button to unlock and open the liftgate.

# PLG module control by central control display\*

After the AV system is turned on and working normally, click the "Intelligent Scene Module" on the main screen or the "My Car" soft key on the application menu screen to enter the My Car function screen.

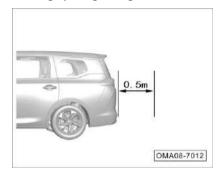
- Click the "Open Liftgate" or "Close Liftgate" button to open or close the liftgate electrically.
- Set the 20%, 40%, 60%, 80% and 100% target positions by dragging the liftgate, and then release the liftgate to move to the set target position.
- In this process, drag the liftgate icon to suspend opening/closing of the liftgate.
- When the height of opening of liftgate is 55% to 98%, click the "Remember Current Position" button to set the second height of liftgate successfully.
- Click the "Clear Memory Positions" button to clear the second height of liftgate successfully.

# Voice-controlled opening and closing of PLG\*

Voice control operation of PLG is not available until you wake up the voice system and hear a beep.

- The driver issues the voice command "Open Liftgate" and the liftgate opens electrically.
- The driver issues the voice command "Close Liftgate" and the liftgate closes electrically.

### Sensing opening of liftgate\*

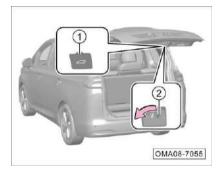


- With the ENGINE START/STOP button set to "OFF" position and the four doors and liftgate closed, the user carries the intelligent remote control key and approaches the liftgate sensing area. When the user is about 0.5m away from the liftgate, the horn sounds once and the turn signal lamp flashes. If you stay still or take a step back, the liftgate will open automatically. If you leave the liftgate sensing area while the high-mounted stop lamp flashes (four times), the liftgate will not open.

### i NOTE

Opening and horning, opening but no horning and closing can be set via "Settings  $\rightarrow$  Body Accessories  $\rightarrow$  Other Accessories  $\rightarrow$  Sensing Opening of Liftgate" in the AV system.

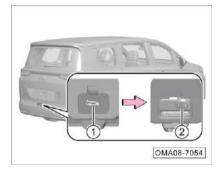
### **Emergency opening of PLG\***



When the battery is depleted or the liftgate fails to open normally, you can try to open the liftgate from inside the vehicle:

- Lower the 3rd-row seats.
- Open the decorative cover ①.
- Move the liftgate emergency switch
   in the direction of the arrow to emergency unlock and open the liftgate.

### Emergency opening of liftgate\*



When the battery is depleted or the liftgate fails to open normally, you can try to open the liftgate from inside the vehicle:

- Lower the 3rd-row seats.
- Open the decorative cover ①.
- Take out the emergency mechanical kev.
- Insert the mechanical key into the unlocking mechanism groove ②, turn the mechanical key to unlock and open the liftgate.

### Closing of liftgate



### Electric closing

- If you press the liftgate closing button, the PLG will be automatically lowered until it is closed. In this case, if you press this button again during the closing process, the PLG will stop at the current position.
- If you press and hold the remote control key button within effective range, the PLG will be automatically lowered until it is closed. During closing, if you press this button again, the PLG will stop closing.

If you press and hold the liftgate button on instrument panel, the PLG will be automatically lowered until it is closed. During closing, if you press this button again, the PLG will stop closing.

### Manual closing

If the vehicle does not have the PLG function, the liftgate may be closed manually:

 Lower the liftgate close to the rear bumper cover, and then press down the liftgate firmly by both hands to close it.

## i NOTE

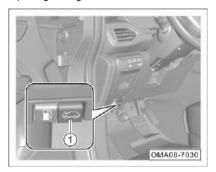
 If the liftgate is ajar, the instrument cluster display will display an alarm message.

#### **CAUTION**

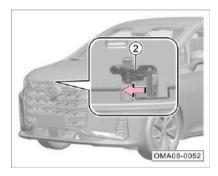
- Be careful when closing the liftgate to ensure that no person or obstacle is within the movement range of the liftgate.
- Always ensure that the closed PLG is locked to prevent suddenly opening during driving.
- Since the PLG does not have an antipinch function and is not equipped with an anti-pinch strip, when the PLG is closing, always ensure that person or obstacle is within the movement range of the liftgate to avoid pinching or damaging the liftgate.

### 4.2.6 Engine hood

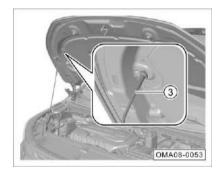
Opening of engine hood



 $-\,$  If the engine hood release handle  $\ensuremath{\mathbb{1}}$  is pulled, the engine hood will be unlocked and pop up slightly.



- Push the locking mechanism ② as arrowed to unlock the engine hood fully.
- Lift the engine hood to the limit position.



 ${\color{black} -}$  Use the stay bar bracket  ${\color{black} @}$  to support the engine hood in the limit position.

### Closing of engine hood

 Take out the stay bar bracket and lower the engine hood to a height of about 30cm away from the lock body, and then let it go, so the engine hood falls freely and then is locked.

## i NOTE

If the engine hood is ajar, the instrument cluster display will display an alarm message. When the driving speed is higher than 5km/h, there will be a buzzer prompt.

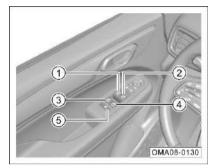
#### 4.2.7 Power window

The power window can be operated when the ENGINE START/STOP button is in "ON" position, and stays operable within about 40s after the ENGINE START/STOP button is turned from "ON" position to "ACC" or "OFF" position, but will become inoperable if any door is opened within this 40s.

#### **CAUTION**

- Please close all windows before leaving the vehicle.
- Do not put your hands on the edges of the windows when closing the windows, otherwise there will be a risk of pinching.

### Driver's power window control button



- ① Left front power window control button
- ② Right front power window control button
- 3 Left rear power window control button
- (4) Right rear power window control button
- 5 Passenger's window lock button

- If the button ① is pulled up to the first stop position, the power window will be lifted for closing until the button is released or the window reaches the highest position.
- If the button ① is pulled up to the limit position, the power window will be lifted automatically for closing until the window reaches the highest position.
- Press the lower end of button ① to the first stop position, and the power window will be lowered for opening until the button is released or the window reaches the lowest position.
- If the button ① is pressed down to the limit position, the power window will be lowered automatically for opening until the window reaches the lowest position.

### i NOTE

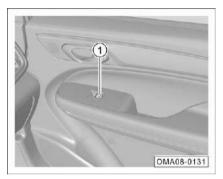
- If you want to stop the window during the automatic lifting or lowering, just press down/pull up the button ①.
- The operation methods of the buttons
   ②, ③ and ④ are the same as that of the button ①, only corresponding to the respective windows.

## i NOTE

Only the left front power window equipped with the anti-pinch function has an express-up function.

If you press the passenger's window lock button ⑤, the button indicator lamp will come on and the front/rear power window control buttons cannot work anymore. To unlock, press the button again and the button indicator lamp goes out.

# Passenger's power window control button



 The passenger's power window control button ① may be operated by reference to the driver's power window control button.

### Initialization of anti-pinch function

If the express-up function is not available on the left front power window, the power window needs to be initialized again.

- Pull up the left front power window control button, and then the window is lifted in steps until it is completely closed.
- After the window is completely closed, continue to pull up the left front power window control button and hold it for about 2-3s to complete the initialization.

### **↑** WARNING

- The window has no anti-pinch function during the initialization learning process. Therefore, please do not use any part of your body or other objects to hinder the closing of the window, otherwise it will cause personal injury and affect the result of the initialization learning.
- If the power window system fails, please go to the GAC Motor authorized shop for inspection in time.

#### 4.2.8 Electric sunroof\*

The electric sunroof can be operated when the ENGINE START/STOP button is in "ON" position, and stays operable within about 40s after the ENGINE START/STOP button is turned from "ON" position to "ACC" or "OFF" position, but will become inoperable if any door is opened within this 40s.

### i NOTE

With the ENGINE START/STOP button set to "OFF" position and when the electric sunroof is not closed and the driver's door is opened, the instrument cluster will display the text "Sunroof Not Closed" accompanied by a buzzer. You should check whether the sunroof is closed in time.

### **CAUTION**

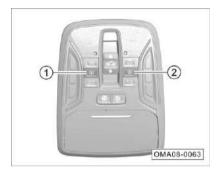
Please close the sunroof, otherwise there is a risk of water entering when it rains.

#### Sun visor\*



- Automatic opening: Sun visor will automatically open when the sunroof is opened smoothly.
- Manual opening: Push the sun visor backwards to open the sun visor.
- Manual closing: Push the sun visor forward to close the sun visor when the electric sunroof is closed.

#### Electric sunshade\*



- To slightly open the electric sunshade, if you short press switch ①, the electric sunshade will move a short distance for slight opening and then stop.
- To slightly close the electric sunshade, if you short press switch ②, the electric sunshade will move a short distance for slight closing and then stop.
- To fully open the electric sunshade, press and hold the switch ① for several seconds, and then the electric sunshade will automatically move to the fully opened position.

 To fully close the electric sunshade, press and hold the switch ② for several seconds, and then the electric sunshade will automatically move to the fully closed position.

### i NOTE

- When the sunroof is opened, the electric sunshade will open as well.
- When the electric sunshade is closed, the sunroof will close as well.
- If the switch ①or ② is pressed during the automatic opening or closing of the electric sunshade, the electric sunshade will stop at the current position.

### Opening or closing of sunroof



- $^{\rm -}$  To slightly open the sunroof, if you short push sunroof switch  ${\Large \textcircled{1}}$  backwards, the sunroof will move a short distance for slight opening and then stop.
- To slightly close the sunroof, if you short push sunroof switch ① forward, the sunroof will move a short distance for slight closing and then stop.

- Push the sunroof switch ①
   backwards and hold for a certain time so that the sunroof will automatically move to the fully opened position (applicable to common sunroof).
- Push the sunroof switch ① backwards and hold for a certain time so that the sunroof will automatically move to the comfortable position; push the sunroof switch ① backwards again and hold for a certain time so that the sunroof will automatically move to the fully opened position (applicable to panoramic sunroof).
- Push the sunroof switch ① forward and hold for a certain time so that the sunroof will automatically move to the fully closed position (applicable to common sunroof).

### i NOTE

- If the sunroof switch ① is pressed during the automatic opening or closing of the sunroof, the sunroof will stop at the current position.
- The comfortable position is set to balance the wind noise generated by the sunroof during driving (applicable to panoramic sunroof).

### Popping-up of sunroof



— When the sunroof is fully closed, manually open the sun visor (applicable to common sunroof), press the sunroof switch ① ⇐⇒, and the sunroof will pop up outward. To close the sunroof, push the sunroof switch ① forward.

### Sunroof anti-pinch function

The sunroof has anti-pinch function when closed.

- When the sunroof is in the sliding area, if the anti-pinch function is triggered, the sunroof will move a certain distance in the direction of opening and then stop moving.
- When the sunroof is closing, if the anti-pinch function is triggered, the sunroof will move in the popping-up direction until it reaches the maximum popping-up position.

### **CAUTION**

Do not operate the sunroof when the ambient temperature is below -20  $^{\circ}\mathbb{C}$ , as at this temperature the anti-pinch function of the sunroof may not be activated, resulting in accidents. In addition, low temperature will also damage the motor to a certain extent.

### **MARNING**

- The anti-pinch function of the sunroof cannot prevent pinching of light or thin objects.
- Make sure that no one is within the range of motion of the sunroof closing to avoid being pinched.
- The sunroof will stop detecting obstacles at a position where the sunroof is about to be closed fully, so the anti-pinch function will be deactivated at this time.
- Do not try to activate the anti-pinch function by your hand or any part of your body, otherwise there will be a risk of pinching.

# Manual initialization and self-learning of sunroof

Common sunroof\*



Press the sunroof upward when the sunroof is popped up.

Press and hold the sunroof closing switch ① 🖘 for 10s so that the sunroof will begin initialization.

Press and hold the sunroof switch ①

 wipward (or push the sunroof switch ①

 forward) so that the sunroof will perform the "sinking closing → sliding opening → fully closing" action and then stop. Then, the sunroof self-learning is completed.

Panoramic sunroof\*



- When the sunroof is closed, press and hold the sunroof closing switch ① for 10s so that the sunroof will begin initialization.
- Push and hold the sunroof switch ① forward so that the sunroof will perform the "popping up→ opening → closing" action and then stop. Then, the sunroof self-learning is completed.

### **CAUTION**

If the electric sunroof system fails, please go to the GAC Motor authorized shop for inspection in time.

# 4.2.9 Basic operation of body anti-theft system

#### Body anti-theft function - unlocking

When the ENGINE START/STOP button is in the "OFF" position and the vehicle is in the anti-theft state, if you bring the intelligent remote control key to approach the doors and press the unlocking button on the intelligent remote control key, all doors will be unlocked to release the vehicle from the anti-theft state, and the turn signal lamps will flash twice.

#### Body anti-theft function - locking

When the ENGINE START/STOP button is in the "OFF" position and the four doors, engine hood and liftgate are closed, if you take the intelligent remote control key away from the vehicle and press the locking button on the intelligent remote control key, all doors will be locked to enable the vehicle to enter the anti-theft state, and the turn signal lamps will flash once.

### Activation of body anti-theft function

When the ENGINE START/STOP button is in "OFF" position and the vehicle is armed, if the door is unlocked by an illegal key or is forcibly unlocked, the anti-theft system will be activated, the anti-theft horn will sound and the turn signal lamps will flash for about 30s.

When the vehicle is locked by remote control and enters the anti-theft state, if the driver's door is unlocked with the emergency mechanical key, the anti-theft system will trigger the horn to sound and the turn signal lamps will flash.

### i NOTE

Before or during the anti-theft alarm, if you press the to button on the remote control key or switch the ENGINE START/STOP button to the "ON" position, the anti-theft alarm will be disabled and the vehicle will be released from the anti-theft state; the alarm can be triggered up to 10 times in one alarm cycle.

### Anti-theft function of engine

When the ENGINE START/STOP button is in the "OFF" position, with the body antitheft state released and the legal key in the vehicle, if the engine anti-theft system passes the verification, it will be deactivated.

If the engine anti-theft system does not pass the verification, the engine cannot be started and an anti-theft alarm will be triggered.

# Body anti-theft maintenance instructions

No maintenance is required during normal use. If you have any doubt, please contact the GAC Motor authorized shop.

### 4.3 Lamps and vision

#### 4.3.1 Exterior lamps

Lamplight combination switch

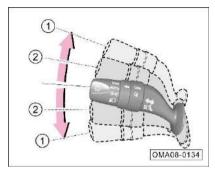


- 1 Light switch
- ① Fog lamp switch

### i NOTE

- Water vapors or even water drops may appear on the inner surfaces of the lamps under certain conditions (such as high air humidity and after vehicle washing), which is similar to the fogging phenomenon on the windows when the vehicle is traveling in the rain, and does not constitute a malfunction.
- This fogging phenomenon can be eliminated by parking the vehicle in adry environment, turning on the lamps or driving the vehicle, but may recur.
- If there are a lot of water drops or water ingress in the lamps, please contact the GAC Motor authorized shop for inspection.

### Turn signal lamp



- When the ENGINE START/STOP button is in "ON" position, if you turn the lamplight combination switch up or down to the limit position ① and turn on the right or left turn signal lamp, the corresponding indicator lamp → or ← on the instrument cluster will flash.

Turn signal lamp flashing for lane change

— In case of lane change or overtaking, if you turn the lamplight combination switch up or down quickly to the position ② and then release it to the original position, the corresponding turn signal lamp and the indicator lamp → or ← on the instrument cluster will flash three times.

— If you turn the lamplight combination switch up or down and hold it at the position ②, the corresponding turn signal lamp and the indicator lamp → or ← on the instrument cluster will flash continuously. Releasing the switch to the original position can stop the flashing.

### **CAUTION**

If the corresponding indicator lamp or on the instrument cluster flashes faster, one of the turn signal lamps may be faulty, please go to the GAC Motor authorized shop for inspection and repair in time.

### Light switch



When the ENGINE START/STOP button is in "ON" position, turn the light switch ① to activate or deactivate AUTO (automatic headlamp)\*, ▷○ (position lamp), ﷺ (low beam).

When the lamplight switch is turned to the "OFF" position, all lamps will go out.

AUTO (automatic headlamp)\*

 Turn the lamplight control switch to the AUTO position to activate the automatic headlamp function.

### i NOTE

If the automatic headlamp function is activated, the vehicle will automatically turn on or off the headlamp according to the ambient light. When the external natural light gradually becomes dark, the position lamps and the low beam will be turned on simultaneously; when the external natural light gradually becomes bright, the position lamps and the low beam will be turned off simultaneously.

#### **©**CAUTION

- If the message "Sensor failure; please manually control light" appears on the instrument cluster display, the system will keep the low beam on for the sake of safety. In that case, you should manually control the light and go to the GAC Motor authorized shop for inspection in time.
- The automatic headlamp function may be affected in the haze environment, so please manually turn on the headlamp in this case.

### Daytime running lamp\*

When the vehicle is started and the low beams are off, the daytime running lamps will be automatically turned on; when the low beams are turned on or the engine is shutdown, the daytime running lamps will be automatically turned off.

#### Position lamp

- If you turn the light switch to the ⇒oς position, the rear position lamps, instrument panel lamps, license plate lamps and other lamps will be turned on, and corresponding indicator lamp ⇒oo on the instrument cluster will come on.

### i NOTE

If you forget to turn off the position lamps when the ENGINE START/STOP button is turned to "OFF" position and the vehicle is not locked, the position lamps will stay on for about 15 minutes and then go out automatically in order to save the battery power; when the ENGINE START/STOP button is turned to "OFF" position and the vehicle is locked, the position lamps will go out immediately.

### **↑** WARNING

- When driving at night or on a road with poor visibility, also use other lamps in addition to the position lamps. Otherwise, accidents may easily occur.
- At night or in poor visibility road environment, when the vehicle is shut down and pulled over for a short time, it is necessary to indicate the position of the vehicle by lamps. As the position lamps feature the electricity-saving function, do not use the position lamps as parking lamps. Please turn on the hazard warning lamps for warning.

#### I ow beam

Turn the light switch to the 

position to turn on the low beam.

#### High beam

- After turning on the low beam, if you push the lamplight combination switch forward to the limit position, the high beam will be turned on and the corresponding indicator lamp 

   on the instrument cluster will come on.
- If you pull the lamplight combination switch backward to the original position, the high beam will be turned off.

### Headlamp flashing

- If you pull the lamplight combination switch backward to the limit position, the high and low beams will be turned on.
- If you release the switch, the lamplight combination switch will automatically return to its original position and the high and low beams will be turned off.

### i NOTE

- The high beam may cause dazzling to drivers of oncoming vehicles at close range, which may easily cause accidents. Therefore, please use the high beam reasonably.
- When all the lamps are turned off, if you pull and hold the lamplight combination switch backward, the high and low beams will stay on, and the corresponding indicator lamp 

  On the instrument cluster will come on.

### Manual headlamp leveling\*



Rotate the knob ① to manually level the headlamp (low beam) at 0, 1, 2 and 3 positions. The level of the headlamp will decrease as the adjustment value increases.

#### Lamp on warning

When the ENGINE START/STOP button is set to "OFF" position with headlamps or position lamps on, if you open the driver's door, the system will send a buzzer sound and the instrument cluster display will display the warning message "Lamp on".

#### **Follow Me Home**

Within 10 minutes after the ENGINE START/STOP button is set to "OFF" position, if the light switch is rotated from "OFF" position to other positions and then back to "OFF" position in 2s, the Follow Me Home function will be activated. The low beam will be turned on for 30s. If any door (including four doors, engine hood, and liftgate) is opened within this 30s, the low beam will be turned on for another 80s. If all doors are closed within this 80s, the low beam will be turned on for another 30s. This cycle repeats.

### Fog lamp switch



When the ENGINE START/STOP button is in "ON" position with the low beam on, turn the fog lamp switch ② to turn on or off the Cl≨ (rear fog lamp).

- After the fog lamp switch 2 is turned to the 0 position and then released to the "OFF" position, the rear fog lamp will come on.

## i NOTE

When the position lamp is off, the rear fog lamp will be automatically off.

### Hazard warning lamp



If you press the <u>A</u> switch with the ENGINE START/STOP button in any position, the red indicator lamp on the switch will flash and the hazard warning lamp will be turned on. Press the switch again to turn off the hazard warning lamp.

If the hazard warning lamp is turned on, all turn signal lamps and the indicator lamps or — on the instrument cluster will flash simultaneously.

The hazard warning lamp shall be turned on in the following cases so as to attract the attention of other road users and reduce the risk of traffic accidents:

- When the vehicle is faulty.
- The vehicle is at the tail end of a traffic jam.
- The vehicle tows another vehicle or is towed.
- The vehicle is temporarily parked due to poor visibility.

### i NOTE

- The use of the hazard warning lamp will consume the battery power, so please turn it off when not in use.
- Be sure to strictly abide by the relevant regulations when using the hazard warning lamp.
- In case of emergency, if the hazard warning lamp is faulty, other methods that comply with relevant traffic regulations must be taken to attract the attention of other people on the road.

### **Emergency brake warning lamp**

 When the vehicle is traveling at high speed and brakes in an emergency, the brake lamp comes on and the turn signal lamp flashes at the same time.

### Vehicle assisted lighting

— If you press the unlock button ☐ on the intelligent remote control key within the effective range, the position lamps will stay on for auxiliary lighting for 25s. If you press the unlock button ☐ on the intelligent remote control key again, the position lamps can stay on for 25s. When you get in the vehicle and switch the ENGINE START/STOP button to the "ON" position, the position lamps will go out.

### Vehicle locating lighting

 Press the lock button on the remote control key quickly twice within 0.5s so that the position lamps come on for 8s and the turn signal lamps flash three times for the purpose of helping you locate your vehicle.

#### 4.3.2 Interior lamps

# Automatic light-on function of dome lamps



Press the switch ① to turn on the button indicator lamp and activate the automatic light-on function of dome lamps; press the switch ① again to turn off the button indicator lamp and deactivate the automatic light-on function of dome lamps.

### Interior light delay off function

When the dome lamps are off and the automatic light-on function of dome lamps is activated:

- With the ENGINE START/STOP button in "OFF" position, the dome lamps will come on automatically if any door is opened, and go out about 30s after the doors are closed.
- With the ENGINE START/STOP button in "OFF" position, if any door is unlocked by remote control, the dome lamps will come on automatically and then go out after about 30s.
- If the ENGINE START/STOP button is switched from the "ON" position to the "OFF" position, the dome lamps will come on automatically and then go out after about 30s.

### i NOTE

When all the doors are closed and the dome lamps are on as mentioned above, if the car is locked remotely or the ENGINE START/STOP button is switched to the "ON" position, the dome lamps will go out automatically.

### Dome lamp



 $-\,$  When the dome lamps are off and the switch  $\odot$  is pressed, the dome lamps will come on and all dome lamps will come on; when the switch  $\odot$  is pressed again, all dome lamps will go out.

## i NOTE

The switch ① will be ineffective if it is not used to turn on the dome lamps.





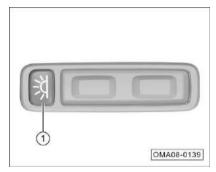


When the front dome lamps are off and the switch ② is pressed, the corresponding front lamps will come on; when the switch ② is pressed again, all corresponding front lamps will go out.

### i NOTE

The switch ② will be ineffective if it is not used to turn on the front dome lamps.

### 2nd/3rd-row dome lamp



When the 2nd/3rd-row dome lamps are off and the switch ① is pressed, the corresponding lamps will come on; when the switch ① is pressed again, all corresponding lamps will go out.

## i NOTE

The switch 1 will be ineffective if it is not used to turn on the 2nd/3rd-row dome lamps.

### Glove box lamp\*

- If the glove box is opened, the glove box lamp will come on automatically.
- If the glove box is closed, the glove box lamp will go out automatically.

#### Trunk lamp

- If the liftgate is opened, the trunk lamp will come on automatically.
- If the liftgate is closed, the trunk lamp will go out automatically.

#### Courtesy lamp\*

- If any door is opened, the courtesy lamp will come on automatically.
- If any door is closed, the courtesy lamp will go out automatically.

### Vanity mirror light\*

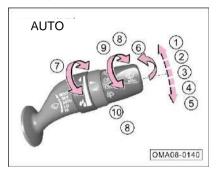
- If the vanity mirror cover is opened, the vanity mirror light will come on automatically.
- If the vanity mirror cover is closed, the vanity mirror light will go out automatically.

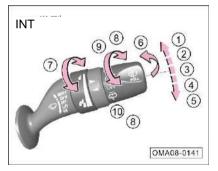
### Ambient light\*

When the ENGINE START/STOP button is set to "ON" position:

- If the position lamps are turned on, the ambient light will come on automatically.
- If the position lamps are turned off, the ambient light will go out automatically.

### 4.3.3 Wiper combination switch





When the ENGINE START/STOP button is in the "ON" position, the wiper combination switch can be operated as follows:

① MIST: Manual wiping

② OFF: Turning off the front windshield wiper

③ AUTO: Automatic wiping\*

INT: Intermittent wiping\*

4 LO: Low-speed wiping

5 HI: High-speed wiping

⑥ Turning on the front windshield washer system

7 Adjusting knob:

Adjust the automatic wiping sensitivity (AUTO)\*

Adjust the wiping interval (INT)\*

® Turning on the rear windshield washer system

(1) ON: Turning on the rear wiping

### MIST: Manual wiping

- If the wiper combination switch is turned to ① MIST position, the front wiper will start manual wiping.
- If the wiper combination switch automatically returns to the ② OFF position, the front wiper will stop working.

#### **OFF: Wiper off**

 If the wiper combination switch is turned to ② OFF position, the front wiper will stop wiping.

### **AUTO: Automatic wiping\***

- If the wiper combination switch is turned to the ③ AUTO position, the automatic wiping function will be activated, and the wiper system will adjust the wiper speed according to the current rainfall and the real-time vehicle speed.
- This function can be activated or deactivated by setting the AV system "System Settings → Body Accessories → Other Accessories → Auto Wiping". When it is deactivated, the function of wiper in the AUTO position is the same as that of wiper in the INT position.

#### **CAUTION**

- When the message "Sensor failure; please control the wiper manually" appears on the instrument cluster display, for the sake of safety, you should manually control the wiper and go to the GAC Motor authorized shop for inspection in time.
- Before activating the automatic wiping function in winter, please check whether the wiper blade is frozen.
- It is recommended to deactivate the automatic wiping function when washing the vehicle, in dusty weather and in rainless weather to avoid unintentional action of the wipers which may cause damage or personal injury.
- The automatic wiping function is an assist, so the driver should manually operate the wipers when necessary according to the driving situation to ensure driving safety.

### INT: Intermittent wiping\*

- $-\,$  If the wiper combination switch is turned to the  $\ensuremath{\Im}$  INT position, the front wiper will start automatic wiping at a certain interval.
- For vehicles equipped with automatic wiper, this function can activated by
- setting the AV system " System Settings  $\rightarrow$  Body Accessories  $\rightarrow$  Other Accessories  $\rightarrow$  Auto Wiping".
- Turn the knob ⑦ up/down to adjust the wiper sensitivity.

### LO: Low-speed wiping

 $-\,$  If the wiper combination switch is turned to 4 LO position, the front wiper will wipe at a low speed.

### HI: High-speed iwping

 If the wiper combination switch is turned to ⑤ HI position, the front wiper will wipe at a high speed.

#### Front windshield washer system on

- If the wiper combination switch is turned toward the rear of the vehicle to ® position, the front washer will start spraying water and then the front wiper will start wiping.
- If the wiper combination switch is released and returns to its original position, the front windshield washer system will be stopped and the front wiper will wipe twice after several seconds.
- After the front wiper stops for 6s, it will wipe once again so as to clear the residual water stains from the glass.

#### Rear windshield washer system on

- When the liftgate is closed, if the wiper combination switch is turned to ® position, the rear washer will start spraying water and then the rear wiper will start wiping.
- After the rear washer is turned off, the rear wiper will wipe twice and after 6s, it will wipe once again.

### ON: Turning on the rear wiper

 When the liftgate is closed, if the wiper combination switch is turned to <sup>(1)</sup> ON position, the rear wiper will start wiping.

# OFF: Turning off the rear windshield washer or wiper

#### Front wiper maintenance

Within about 10s after switching the ENGINE START/STOP button to the "OFF" position, if you turn the control lever of the wiper combination switch to ① MIST position and then quickly release it to return it to the original position, the front wiper will move to the highest position and then stop, so that the wiper maintenance mode is activated.

### i NOTE

 When the ENGINE START/STOP button is in the "ON" position, the wiper will automatically return to initial position.

#### Windshield



### Windshield glass

The front windshield is made of green heatinsulating and laminated anti-scattering glass, which can effectively reduce the degree of accident injuries.

### **↑** WARNING

- Always keep the glass surface clean.
- Please affix the necessary identifications according to local traffic laws, rules and regulations. Do not stick paper or hang objects on the surface of the front windshield, otherwise the front view will be obstructed, and a traffic accident is likely to be caused.

#### 4.3.4 Rearview mirror

#### Interior rearview mirror

Automatic anti-glare interior rearview mirror\*

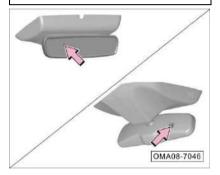


The automatic anti-glare interior rearview mirror monitors the intensity of lights behind the vehicle in real time, and automatically adjusts the reflective effect, so that strong lights it reflects to the driver's eyes turn dark and not glaring.

- Before driving, always adjust the interior rearview mirror to the appropriate angle.
- Hold the interior rearview mirror and adjust it up, down, left and right to the best rearview position.

### i NOTE

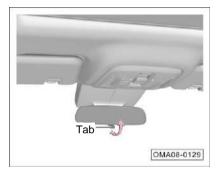
Do not adjust the interior rearview mirror during driving, as you will be distracted from driving, causing loss of control to vehicle and dangerous accident thereafter.



## i NOTE

To ensure the normal function of the anti-glare rearview mirror sensor, do not cover the sensor pointed by the arrow with your fingers or cloth.

Manual anti-glare interior rearview mirror\*



The interior rearview mirror can be adjusted manually to reduce the light reflected off the mirror surface, thus realizing the optimal rear view.

- As shown in the figure, the tab is at a normal rearview angle, which can be pulled forward to offset the reflective light coming from the rear to achieve the antiglare function.
- Push the tab backward to return to the normal rearview angle.

#### Exterior rearview mirror

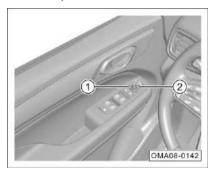
### **MARNING**

Although the curved (convex and spherical) rearview mirror can expand the field of view, the reflected object image is smaller and farther than the real object. Therefore, when changing the lanes, do not judge the distance between your vehicle and the following vehicle by the reflected image, otherwise accidents may occur due to wrong judgment.

### i NOTE

If the exterior rearview mirror malfunctions, please go to the GAC Motor authorized shop for inspection in time.

### Electric adjustment



- Press "L" or "R" end of the selector button ① to select the left or right exterior rearview mirror.
- Press the adjusting button ② to adjust the selected exterior rearview mirror to the appropriate rearview angle.
- After adjusting the exterior rearview mirror, restore the selector button 1 to its original state.

### Electric folding\*



- $-\hspace{0.5cm}$  Press the folding button  $\ensuremath{ \mathfrak{B}}$  to fold the exterior rearview mirror electrically.
- Press the folding button ③ again to unfold the exterior rearview mirror electrically.

#### Automatic folding\*

- If the vehicle is locked from outside, the exterior rearview mirror will be folded automatically.
- If the vehicle is unlocked from outside, the exterior rearview mirror will be unfolded automatically.

#### **CAUTION**

- If the electric folding function fails or the vehicle does not have the electric folding function, the exterior rearview mirror can be folded manually. After manual folding, please restore it manually. A click sound can be heard when the mirror is manually unfolded.
- Be careful when operating the electric folding function of the exterior rearview mirror to prevent fingers from being pinched by the rearview mirror and its base.

### Defrosting and defogging function\*

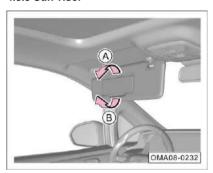


- If the was button is pushed up/pressed down, the button indicator lamp comes on and the heating function is turned on to clear the fog or frost on the exterior rearview mirror and rear windshield glass.
- This function is automatically turned off after about 15 minutes. Or, when this function is working, pull up/press down the button to manually turn off this function.
   After the heating function is turned off, the button indicator lamp will go out.

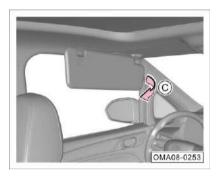
### **CAUTION**

- If there is still any residual fog or frost to be cleared after the defrosting and defogging function is deactivated automatically, just pull up/press down the wan button again.
- Do not use the defrosting and defogging function for a long time; otherwise the heater may be damaged due to overheating.
- If there is no need to use defrosting and defogging function, please turn off this function to avoid wasting battery power.

#### 4.3.5 Sun visor



- Turn down the sun visor on the driver's side or front passenger's side in the direction of arrow A to block the sunlight from the front windshield.
- To use the vanity mirror, just turn down the sun visor and pull open the vanity mirror cover in the direction of arrow B. The vanity mirror light\* will automatically come on.



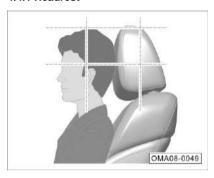
 After turning down the sun visor on the driver's side or front passenger's side, pull it out from the immovable mounting bracket in the direction of arrow C to shelter from the incoming sunlight from the side window

## **i** NOTE

When the ENGINE START/STOP button is set to "OFF" position or the vehicle has been locked for several minutes, the vanity mirror light\* will automatically go out.

### 4.4 Seats and storage facilities

#### 4.4.1 Headrest



Correct adjustment of the headrests is essential to protect the driver and passengers and reduce accidental casualties.

Always adjust the headrest to the correct position (as shown in the figure) according to their body shape.

#### **⚠ WARNING**

In order to reduce the risk of accidental casualties, please strictly observe the followings:

- Do not adjust the headrest while driving.
- Always keep the headrest in its mounting position. If the headrest is removed or installed improperly, the driver or passenger's head may be not effectively protected in an accident.

# Height adjustment of front seat headrests



- Downward adjustment: Press and hold the lock button ①, and press down the headrest to the desired position.
- Upward adjustment: Lift up the headrest directly to the desired position.

### i NOTE

The headrests of other seats are adjusted in the same way.

#### 4.4.2 Front seats

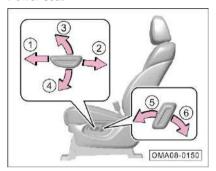
### i NOTE

When measuring the depth of the seat cushion, be sure to adjust the longitudinal position of the seat to the middle of the slider rail and the seat back to the normal operating state (25°).

### **M** WARNING

- Do not place objects under the front seat. The objects may be caught between the seat and the guide rail and hinder the seat locking.
- Do not adjust the front seats when the vehicle is running.
- When adjusting the seat forward and backward, please pay attention to the distance between the front and rear to prevent injury.
- Never leave children alone in the vehicle, because the power seat\* adjustment mechanism still works after the ENGINE START/STOP button is set to "OFF" position; if the children accidentally operate the power seat\*, an accident may occur.

#### Power seat\*



Forward and backward adjustment of seat:

Push the switch in the direction of arrow

or 2 to slide the seat forward or backward.

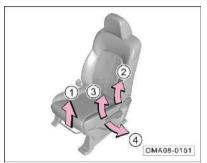
Upward and downward adjustment of seat:

Pull the switch in the direction of arrow
 or 4 to lift or lower the seat.

Forward and backward adjustment of seat back:

Pull the switch in the direction of arrow
 or (a) to recline the seat back forward
 or backward

#### Manual seat\*



Forward and backward adjustment of seat:

 Pull up the adjusting lever in the direction of arrow ① to slide the seat forward or backward. Then release the adjusting handle, and slide the seat forward or backward slightly until the seat is firmly locked.

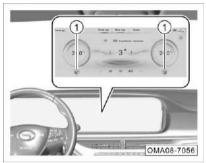
Forward and backward adjustment of seat back:

 Pull up the adjusting handle in the direction of arrow ② to adjust the seat back to a desired position, and then release the handle.

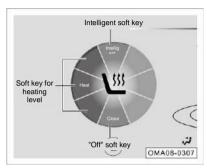
Upward and downward adjustment of seat (driver's seat only)\*:

Pull the switch in the direction of arrow 3 or 4 to lift or lower the seat.

### Seat heating\*



- Set the ENGINE START/STOP button to the "ON" position.
- Switch the AV system to the A/C control interface. Click the of or soft key
   , and the seat heating control interface will pop up.



- Click the soft key for heating level in the seat heating area to turn on the seat heating function.
- Click "Intelligence" soft key to turn on the auto heating mode.
- Click "Off" soft key to turn off the seat heating function.

The seat heating has three ventilation positions, among which the 3rd position has the highest temperature followed by the 2nd position, and the 1st position has the lowest temperature.

If the soft key for any seat heating level is clicked during auto heating, the auto seat heating will stop.

### i NOTE

 As there is no physical switch button for seat heating and it is not displayed in the AV system main interface, you need to click the A/C display area at the left/right bottom of the AV system interface to enter the A/C control interface for control.

### **MARNING**

Do not use the seat heating function if you are sensitive to temperature changes of seat heating to avoid burns from the heater.

#### **©**CAUTION

- Do not kneel on the seat or apply pressure to a point on the seat or seat back, in order to avoid damaging the electrical components in the seat.
- If it is found that the seat temperature does not change after the seat heating function is turned on, immediately turn off the seat heating function and go to the GAC Motor authorized shop for inspection and repair in time.

# 4.4.3 2nd/3rd-row seats



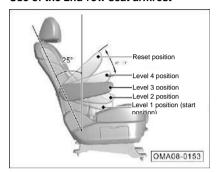
Forward and backward adjustment of seat:

 Pull up the adjusting lever in the direction of arrow ① to slide the seat forward or backward. Then release the adjusting handle, and slide the seat forward or backward slightly until the seat is firmly locked.

Forward and backward adjustment of seat back:

 Pull up the adjusting handle in the direction of arrow ② to adjust the seat back to a desired position, and then release the handle.

#### Use of the 2nd-row seat armrest



The 2nd-row seat armrests have the following positions:

- Positioning position: The armrests are positioned in a total of four levels. The start position is at the bottom, and every 10° up is one level.
- Reset position: Lift the armrest up by 28° from Level 4 to adjust the armrest to the lowest positioning position, so that the positioning adjustment function of the armrest can be implemented again.
- Storage position: Align with the seat back.

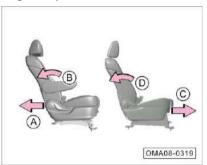
The method of use is as follows:

- Adjust the seat back backward about 25° (comfortable status).
- Move the armrest from the storage position (or reset position) to the start position (bottom).
- Adjust the armrest slowly upwards from the starting position for leveling.



 Adjusting the armrests downward directly from the storage position does not allow for positioning adjustment.

#### Magic sleep seat mode



- Adjust the 2nd-row seat to the limit position in the direction of arrow A.
- Adjust the 2nd-row seat back to the limit position in the direction of arrow B.
- Adjust the 2nd-row armrest to the proper position.
- Adjust the front seat to the limit position in the direction of arrow C.
- Adjust the front seat back to the limit position in the direction of arrow D.

 Remove the headrest from the front seat in the process of falling backward, and adjust the front seat back backward to the limit position.



 The figure shows the seat status of the magic sleep seat mode.

## **MARNING**

- Do not use your hands or objects to press down on the seat back when the front seat back is falling backward.
- Do not place heavy objects or sit on the front seat back when it is in the final position of falling backward.

#### Fold 3rd-row seats



- Unfasten the middle 3rd-row seat belt.
- Adjust the 3rd-row seat headrests\* downward to the lowest position.
- Pull the cable ① to unlock the 3rd-row seat backs and lower the seat backs forward.
- Optionally, pull the cable ① to unlock the 3rd-row seat backs and adjust the angle of the seat back.



 Pull the switch ② to unlock the 3rd-row seats, while pulling the cable ③ to flip the 3rd-row seats backward.

#### **CAUTION**

Before storing the 3rd-row seats, please empty the trunk, including the warning triangle and trailer hitch, otherwise the seats may not be secured after falling backward.



 Press and hold the 3rd-row seat, pull the cable (4) to hook the fixed hook on the 3rd-row seat.

## i NOTE

Recover the 3rd-row seats by following the steps in reverse.

## 4.4.4 Storage facilities

Storage compartment on door interior trim panel



 Place beverage bottles, map manuals and other articles here.

# Storage compartment of cab's lower guard



- Open the storage compartment of cab's lower guard in the direction of the arrow to place small articles.
- Push back to close the storage compartment until you hear a "click" sound.

## Front mobile phone slot



- Push the front cup holder flap to use the mobile phone slot.
- Place mobile phones, cards and other articles in the mobile phone slot.

## 2nd-row mobile phone slot



Place mobile phones, cards and other items here.

## Front cup holder

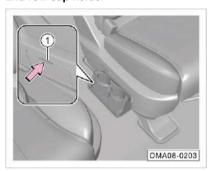


 Push the front cup holder flap to place beverage bottles in the cup holder.

## i NOTE

As this button area is not waterproof, beverage bottles placed in the front cup holders need to be kept secure to ensure that the beverage will not splash near the buttons and cause damage to the internal electronics.

#### 2nd-row cup holder



The 2nd-row cup holders are on the left seat in the 2nd row.

- Open: Press the cup holder switch ① to open the cup holder to place beverage bottles.
- Close: After snapping the cup holder, press the cup holder switch ① to lock.

## 3rd-row cup holder



 3rd-row cup holders are on either side of the 3rd row seats for beverage bottles.

## **↑** WARNING

Do not place hot beverages on the cup holder, or hot beverages may spill out during vehicle driving, scalding the driver or passengers.

## Spectacle case



- Press on the spectacle case to slowly open the case to hold small articles such as sunglasses.
- Push back to close the spectacle case until you hear a "click" sound.

## Front passenger's glove box



- Pull the opening handle to open the glove box to place items such as document bags.
- Push back to close the glove box until you hear a "click" sound.

## **↑** WARNING

The glove box must be closed when the vehicle is traveling, otherwise the articles in the glove box may fly out and cause personal injury to the passengers in case of an emergency braking or an accident.

#### Front central armrest box



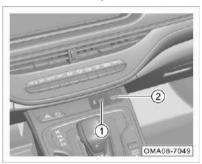
 Open the front seat central armrest box cover upward to place items such as wallets.

## Storage bag on the back of front seat



 Pull open the storage bag backwards to place books, foldable umbrellas and other articles.

# 4.4.5 USB port/power outlet Front TYPE-C/USB port



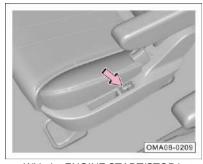
- With the ENGINE START/STOP button in the "ACC" or "ON" position, a mobile device can be connected directly for use.
- The TYPE-C port ① is only used for charging.
- USB port ② supports the charging, media source playback and OTG functions.

## Central armrest box rear USB port



- With the ENGINE START/STOP button in the "ACC" or "ON" position, a device to be charged can be connected directly for charging.
- The central armrest box rear USB port is only used for charging.

## 2nd-row right seat USB port



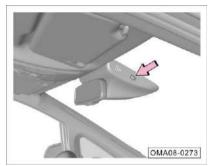
- With the ENGINE START/STOP button in the "ACC" or "ON" position, open the USB port cover and connect the device for use.
- The 2nd-row right seat USB port is only used for charging.

## 3rd-row USB port



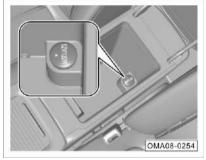
- With the ENGINE START/STOP button in the "ACC" or "ON" position, a device to be charged can be connected directly for charging.
- The 3rd-row USB port is only used for charging.

## USB port in interior rearview mirror



- With the ENGINE START/STOP button in the "ACC" or "ON" position, a device to be charged can be connected directly for charging.
- The USB port in interior rearview mirror is mainly used for powering the auto data recorder.

## Front power outlet socket



- Open the central armrest cover.
- With the ENGINE START/STOP button in the "ACC" or "ON" position, open the power outlet cover and connect a device directly to charge it (maximum power: 120W).

#### **CAUTION**

- To avoid damage to the vehicle's electrical system, do not connect power generating device to the power outlet.
- Only electrical devices in line with the national EMC standards may be used.
- When switching the ENGINE START/STOP button on or off, disconnect the charging device connected to the power outlet to avoid damage to the electrical device due to voltage fluctuations.

## **↑** WARNING

- Using the power outlet is prohibited when no one is in the vehicle. Improper use of the power outlet can easily cause fires.
- Do not allow children to operate and use.
- Do not use high-power electrical devices.

#### 4.4.6 Trunk

In order to ensure the maneuvering stability of the whole vehicle, the luggage shall be placed as evenly as possible, and the heavy objects shall be placed at the front of the trunk.

#### **↑** WARNING

- The center of gravity of the vehicle carrying heavy objects may change. If heavy objects in the trunk suddenly slip, the maneuvering stability of the vehicle will change.
- The items in the trunk must be fixed, otherwise the items may fly forward and injure the passengers in the vehicle in case of emergency braking or accident.
- Never place fragile, flammable and explosive articles in the trunk!

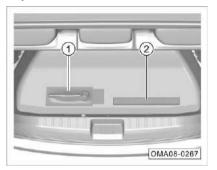
#### Trunk volume

 Fold down the rear seat back to increase the trunk capacity. => See page 101

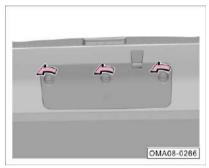
#### **CAUTION**

When fluids are to be loaded, ensure that the container is such sealed that no leakage will occur. Avoid placing liquids on the seat back folded down to prevent liquid leakage and thus wetting the seat.

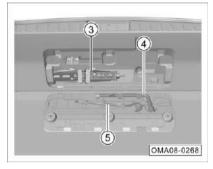
## Objects in trunk



 There is a towing hook ① and a warning triangle ② in the trunk.



Unlock the trim panel by rotating the 3 buckles to the UNLOCK position.



Remove the trim panel, which contains a jack ③, a wheel bolt removal wrench
 ④ and a special wrench for jack ⑤.

#### 4.4.7 Accessories and modifications

Data labels and signs indicating important data and information about the use of the vehicle are affixed to the fuel tank cap, engine hood latch and other components of the delivered vehicle. Do not remove or damage these labels and signs, and always keep the data and information on them legible.

The vehicle is designed with the latest safety technologies by GAC to ensure excellent active safety and passive safety. Therefore, in order to maintain the excellent characteristics of this vehicle, please be sure to consult the GAC Motor authorized shop before installing accessories or replacing parts.

It is recommended to use accessories and parts approved by GAC. Parts other than GAC ones are not covered by the warranty.

## **↑** WARNING

The installation of inappropriate accessories or the modification of the vehicle may affect the maneuvering stability and other performance of the vehicle, and even may cause serious casualties.

To install a car phone, alarm device, transceiver, low-power AV system, etc., ensure that they will not interfere with the electronic control unit such as the anti-lock braking system (ABS) and the tire pressure monitoring system (TPMS) of the vehicle.

Before installing the accessories, please ensure that:

- The accessories neither dim the lamps, nor affect the normal operation or performance of the car.
- For the vehicle equipped with side curtain airbags, the accessories must not be installed on the B pillar or across the rear door window. Because the installation in these areas will interfere with the normal function of the side curtain airbags.

## i NOTE

When additions (such as headrest, seat cover, floor mat, sun protection mat, etc.) are required, inferior additions may contain VOCs that do not meet national standards, and may emit unusual odors, causing hidden dangers that affect the air quality in the vehicle. Therefore, the genuine high-quality additions are recommended to ensure a comfortable driving environment.

#### Modification of vehicle

Dismantling the parts from the vehicle or replacing the genuine parts with non-GAC Motor parts will seriously damage the maneuvering stability and reliability of the vehicle. For example:

- If larger or smaller wheels and tires are installed, they will interfere with the normal operation of the anti-lock braking system (ABS) and other systems.
- The modification of the steering wheel and other safety devices may cause the system failure.

## **↑** WARNING

 Improper modification of the vehicle or installation of unsuitable accessories is likely to cause failures and accidents. The accessories and parts approved by GAC are always recommended, because the adaptability, reliability and safety of these accessories and parts have been strictly verified by GAC.

## **↑** WARNING

- Improper modification or maintenance of the vehicle may weaken the protective effect of the airbag, which results in system failure and causes fatal accidents.
   The accessories such as beverage cup holder and mobile phone holder shall not be installed or connected to the cover of the airbag assembly or within the working range of airbags.
- Improper operations or modifications of the vehicle (modification of the engine, brake system or components that affect the performance of wheels and tire) will affect the function of the SRS and cause serious casualties.
- Do not install wheels and tires that are not approved by GAC.
- The modifications of the front and the engine compartment of the vehicle may weaken the function of the pedestrian detection system and violate road traffic regulations.

## 4.5 A/C system 4.5.1 General description

The A/C filter can filter pollen and dust entering the air inlet of A/C system.

The A/C filter must be regularly cleaned and replaced according to the Regular Maintenance Schedule in the *Warranty Manual* 

If the vehicle often runs in areas with poor air quality, the replacement interval of the A/C filter should be shortened. If the airflow from the A/C air outlet is not as smooth as usual, it may be due to the dirty and clogged A/C filter. In this case, clean or replace the A/C filter as soon as possible.

## **↑** WARNING

If the air in the vehicle is foul, it will make the driver easily fatigued, lack of energy, and distracted, which is easy to cause an accident, resulting in personal injury or even death. Therefore, enable the air circulation mode according to the actual situation.

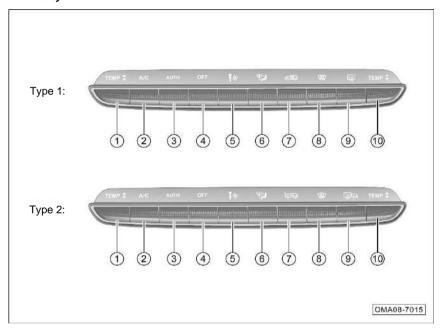
#### **CAUTION**

If the A/C system has failure (such as no cooling, odor, etc.), please go to the GAC Motor authorized shop for inspection.

## i NOTE

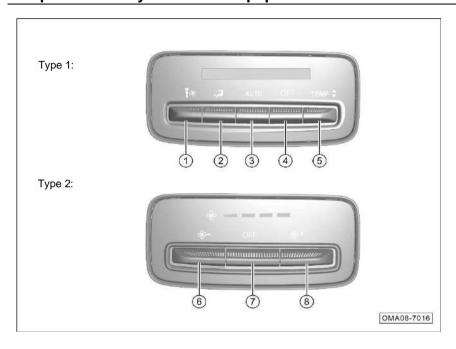
- The A/C system can be operated when the ENGINE START/STOP button is in "ON" position.
- When the A/C is turned on, there will be water dripped under the vehicle.
   Prolonged parking with the A/C on will cause accumulated water, which is normal
- Regularly clean the front windshield wiper cover and remove snow, ice, and leaves to avoid clogging the A/C air intake and ensure normal air intake.
- The A/C system can achieve its maximum effect with windows and sunroof\* closed. However, when the inside temperature is high under hot sun, open the windows briefly to dissipate the inside heat, and then enable the A/C for cooling.

## 4.5.2 A/C system



## Front A/C control panel

- ☐ TEMP Temperature adjustment button (left)
- 2 A/C button
- (3) AUTO mode
- 4 OFF button
- ⑤ ∰ Air speed control button
- 6 🔁 Air supply mode button
- ি ভৈ / ভে Recirculation/fresh air mode button
- 8 Front windshield defrost/defog button
- Rear windshield and exterior rearview mirror defrost/defog button
- TEMP 
   Temperature adjustment button (right)



## Rear A/C control panel

- Rear windspeed control button
- 2 Rear air supply mode button
- ③ AUTO mode
- (4) OFF button
- 5 TEMP Rear temperature adjustment button
- ⑥ %- Air speed down button
- 7 OFF button
- ⊗ 

  ♣ Air speed up button

## i NOTE

- The A/C system can also be controlled in the A/C control interface of the AV system by pushing up or pressing down any button on the A/C control panel.
- You can set some functions specific to the A/C system in the "System Settings 

  A/C Settings 

  Air Conditioning Settings" interface of the AV system.

### Temperature setting

Push up/press down the TEMP button to raise/lower the temperature at an increment/decrement of 0.5°C.

The value of the adjusted temperature is shown on the AV display, and the set temperature is adjustable within 18.5°C-31.5°C. When the set temperature is lower than 18.5°C, the display will show LO, and when the set temperature is higher than 31.5°C, the display will show HI.

In AUTO mode, when LO/HI is displayed, the system will keep high air volume.

In AUTO mode, in order to obtain the most satisfactory inside temperature, it is recommended to set the temperature to 25.0°C, and adjust the temperature if necessary.

#### **AUTO** mode

If the AUTO button is pushed up/pressed down, the button indicator lamp will come on and the A/C system will enter the AUTO mode. The following functions will be automatically controlled according to the set temperature:

- Outlet air temperature.
- Outlet air volume.
- Outlet air mode.
- Air circulation mode.
- Working state of the A/C cooling function.
- Working state of plasma purifier.

#### A/C button

If the A/C cooling button is pushed up/pressed down, the button indicator lamp will be on, and the A/C system will turn on the cooling function.

If the A/C cooling button is pushed up/pressed down again, the button indicator lamp will be off, and the A/C system will turn off the cooling function.

## Windspeed setting

Push up/press down the button to increase/decrease the wind speed by one level. The AV system display shows the corresponding wind speed level.

In AUTO mode, the A/C system automatically controls the wind speed to bring the interior temperature to the target value. Operate the \$\frac{1}{3}\theta\$ button to exit the AUTO mode of the A/C system.

## Turning off the A/C

Push up/press down the OFF button to close the A/C system.

After the A/C system is off, click the 🎏 button, ₩ button, and ₩ button with the A/C system off; the TEMP ♣ (right) button does not work; click AUTO button, A/C button, TEMP ♣ (left) button, ₩ button, and ₩ button to turn on the A/C system.

#### Air circulation

Auto air circulation (only for models with air quality sensor)

 Auto recirculation/fresh air mode: Push. up/press down कि button, and when the indicator lamp of the left button is on, the air circulation enters the auto internal and external air circulation control mode. This function automatically controls the air inlet mode according to the air quality outside the vehicle, set temperature, and reverse gear signal. When the outside air quality is poor, the recirculation mode will be set; when the outside air quality is good, the fresh air mode will be set.

- Recirculation mode: Push up/press down 语動 button, and when the indicator lamp of the right button is on, the air circulation enters the recirculation mode. This mode can prevent dirty air from the outside from entering the vehicle and realize air recirculation inside the vehicle.
- Fresh air mode: Push up/press down
   button, and when the indicator lamp of all buttons is off, the air circulation enters the fresh air mode.
   This mode allows outside air to enter the vehicle and keep the air inside fresh.

#### General air circulation\*

- Recirculation mode: Push up/press down s
   button, and when the indicator lamp of the button is on, the air circulation enters the recirculation mode.
- Fresh air mode: Push up/press down
   button, and when the indicator lamp is off, the air circulation enters the fresh air mode.

#### **CAUTION**

- Long-term recirculation will cause accumulation of carbon dioxide in the vehicle, which is not conducive to keeping driver clearheaded.
- The recirculation mode in cold or rainy days can easily cause the windows to mist up, affecting the driver's visibility and probably causing serious accidents

#### Front windshield defogging/defrosting

If the who button is pushed up/pressed down, the button indicator lamp lights up, and the front windshield defrosting and defogging functions are turned on.

The button indicator lamp will go out, the front windshield defrost/defog function will be turned off and the state before defrosting/defogging will be restored if the button is pushed up/pressed down again; or push up/press down the AUTO button to enter the AUTO mode or turn off the front windshield.

#### **CAUTION**

- When the temperature is set to the lowest, the defrost function will cause the outer surface of the windshield to mist up, affecting the driver's visibility and probably causing serious accidents. To use the defrost function, it is recommended to set the temperature close to the ambient temperature outside the vehicle.
- When using the defrost/defog function, if you manually turn off the A/C cooling function, it will cause the front windshield to mist up, affecting the driver's visibility and probably causing serious accidents.

## Rear windshield defrost/defog function

If the () button is pushed up/pressed down, the button indicator lamp lights up, the rear windshield defrost function will be activated, and the rear windshield and exterior rearview mirrors\* will be electrically heated.

During the windshield defrosting/defogging, if the (III) button is pulled up/pressed down again, the button indicator lamp will go off, and the rear windshield defrost/defog function will be deactivated. If you do not manually turn off the rear windshield defrost function, this function will be automatically deactivated after 15 minutes.

## i NOTE

With the engine shut down, using the rear windshield defrost function for a long time will cause low battery voltage, making it impossible to start the engine.

#### A/C scenario\*

Switch the AV system to the A/C control interface, and click the "Scenario" soft key to enter the A/C scenario interface.

- 1. Preset scenario 1
- Quick cooling: 18°C, AUTO: On; fast A/C curve, quick cooling to the target temperature.
- 2. Preset scenario 2
- Quick warming: 28°C, AUTO: On; fast A/C curve, quick warming and maintaining maximum power to the target temperature.

#### Unlock ventilation

With the ENGINE START/STOP button set to the "ON" position, enable or disable the function via "System Settings  $\rightarrow$  A/C Settings  $\rightarrow$  A/C  $\rightarrow$  Unlock Ventilation" in the AV system.

After this function is enabled, when the vehicle is unlocked via the remote key, the A/C system will automatically control the blower to produce air in three levels, and the air circulation will enter the fresh air mode for 15s to circulate the air in the vehicle and reduce the odor at the air outlet.

The following conditions need to be met for function activation:

- The vehicle needs to be in a dormant state.
- The vehicle is unlocked with the remote key.
- The battery is in normal condition and fully charged.
- When the vehicle is unlocked, the BCM and PEPS function properly, with no failure.
- It can only be triggered once in a cycle from dormancy to wake up.

#### A/C self-drying function

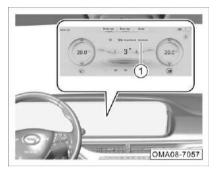
With the ENGINE START/STOP button set to the "ON" position, enable or disable the function via "System Settings  $\rightarrow$  A/C Settings  $\rightarrow$  A/C Self-drying" in the AV system.

After this function is enabled, after the vehicle stalled and is locked for 10min, the A/C system will automatically control the blower to produce air in five levels, and the air circulation will enter the fresh air mode for 3miin to blow away the condensate on the surface of the A/C evaporator and prevent the growth of mold.

The following conditions need to be met for function activation:

- The cooling function of the A/C system has been turned on before the vehicle is powered off and the evaporator temperature has reached the requirement for turning on (≤ 15°C).
- The vehicle has been in the locking and arming state for 10min.
- The vehicle is armed with a normal and fully charged battery.
- The BCM and gateway module (GWM) are not faulty when the vehicle is powered off.

#### Three-zone model



Switch the AV system to the A/C control interface, and click the "Synchronize" soft key ①. When the soft key lamp lights up, the synchronization mode is activated, the A/C system exits the three-zone control mode and enters the single-zone control mode, and the temperature of the whole vehicle is controlled at the same time

After clicking the "Synchronize" soft key ① again, the soft key lamp goes out, the A/C system enters the three-zone control mode, and the temperature in the left zone, the right zone and the rear zone is controlled separately.

#### Front air supply mode

Push up/press down the button to switch cyclically according to the following four air supply modes: Panel mode  $\rightarrow$  panel/floor mode  $\rightarrow$  floor/defrost mode.

In the AUTO mode, the A/C system will automatically control the air supply mode. When the outlet temperature is high, the floor mode is mainly used; when the outlet temperature is low, the panel mode is mainly used. When the soft key is pressed, the A/C system will exit the AUTO mode.

## Rear air supply mode

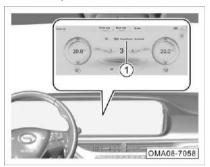
Press down the vi button to switch cyclically according to the following three air supply modes:

Panel mode → i→ panel/floor mode → i→ floor mode.

## i NOTE

- The panel/floor mode is mainly used when the outside temperature is slightly lower in spring and autumn.
   Therefore, the temperature of the upper outlets is slightly lower than that of the lower outlets, which is a normal phenomenon.
- The air supply mode, set temperature, and comfort curve can be adjusted for personal comfort.
- To ensure that the A/C system can effectively and automatically control all air supply modes, please keep all air outlets open.
- During cold start in winter, in the AUTO mode, the A/C system will start from the defrost mode and enable a gradual transition to other modes.

## Plasma air purifier\*



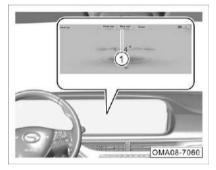
Switch the AV system to the A/C control interface, and click the "Plasma Purifier" soft key ①. When the soft key indicator lamp lights up, the A/C system will turn on the plasma air purifier. Then, the plasma air purifier will produce plasma to effectively decompose harmful gases such as formaldehyde and benzene in the vehicle and thereby purify the air in the vehicle.

Click the "Plasma Purifier" soft key ① again. When the soft key lamp goes off, the A/C system will turn off the plasma air purifier.

# Rear A/C control (cooling only manual electric A/C)\*

Press down %+ or %- button to increase or decrease the rear air supply volume.

Press down the OFF button down to turn off the rear A/C. Press &+ or &- button to turn on the rear A/C.



Switch the AV system to the A/C control interface, and click the "Rear Control" soft key ① to enter the rear A/C control interface. The A/C system enables the following functions in the front to control the rear:

- OFF soft key.
- Air volume adjustment function.

#### Rear A/C control (hot/cold A/C)\*

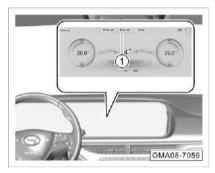
If the AUTO button is pressed down, the button indicator lamp will come on and the A/C system will enter the AUTO mode. The following functions will be automatically controlled according to the set temperature:

- Outlet air temperature.
- Outlet air volume.
- Outlet air mode.

Press down the 🔂 button to switch cyclically according to the following three air supply modes:

Panel mode → i→ panel/floor mode → i→ floor mode.

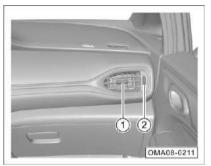
Push up/press down the ™ button to raise/lower the temperature.



Switch the AV system to the A/C control interface, and click the "Rear Control" soft key ① to enter the rear A/C control interface. The A/C system enables the following functions in the front to control the rear:

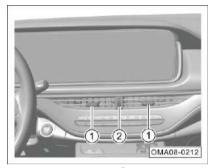
- OFF soft key.
- AUTO soft key.
- − → Soft key.
- Air volume adjustment.
- Temperature adjustment.

# 4.5.3 A/C air outlet Instrument panel side air outlet



- Toggle the paddle ① to adjust the air direction.
- Turn the knob ② to adjust the air volume or close the air outlet.

## Instrument panel central air outlet



- Toggle the paddle ① to adjust the air direction.
- Turn the knob ② to adjust the air volume or close the air outlet.

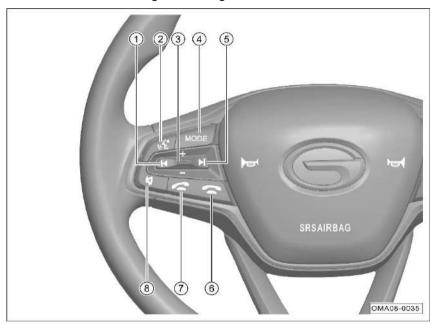
#### 2nd/3rd-row air outlet



Toggle the paddle ① to adjust the air direction or close the air outlet.

## 4.6 AV system

## 4.6.1 Control buttons on the right of steering wheel



## ① **d** button

- In radio mode, press this button to automatically search for a valid station with higher frequency. If a valid station is found, the automatic search will be stopped and the station will start playing.
- In media source playing mode, press this button to skip to the next track.

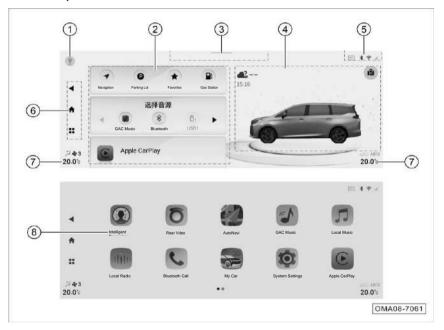
#### ② Voice button

- AV host model: Press this button to start or end CarPlay\* voice (after CarPlay\* has been connected).
- AV host model: Press and hold this button to enter the main interface of the system to check the connection code (when CarPlay\* is not connected).
- AVNT host model: Press this button to start or end local voice.

- AVNT host model: Press and hold this button to start CarPlay voice, press and hold/press this button again to end CarPlay voice.
- ③ Volume adjustment button
- Push up/press down this button to adjust the volume.
- 4 Audio source switching button
- Press this button repeatedly to switch as follows: FM → AM → USB Music → Bluetooth Music → Online Music\* → FM.
- Pressing this button will not actively switch to CarPlay music; if CarPlay music is currently playing, pressing this button will switch to radio mode.
- 5 button
- In radio mode, press this button to automatically search for a valid station with higher frequency. If a valid station is found, the automatic search will be stopped and the station will start playing.

- In media source playing mode, press this button to skip to the previous track.
- 6 Hang up button
- When there is an incoming call via the Bluetooth, you can press this button to reject the call.
- During a call, you can press this button end the current call.
- (7) Answer call button
- When there is an incoming call via the Bluetooth, you can press this button to answer the call.
- When there is no incoming call via the Bluetooth, you can press this button to enter the Bluetooth Dialing interface.
- When there is no incoming call via the Bluetooth and the Bluetooth device is not connected, press this button to enter the Bluetooth setting interface.
- Mute button
- Press this button to mute the media source.
- Press this button again to unmute it after muting.

## 4.6.2 Basic operation



# Description of function areas in main interface:

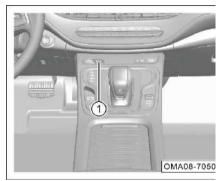
- ① Personal account portal\*
- Click to enter the Personal Center Settings interface.
- ② Smart card area
- Click the cards to quickly enter the corresponding function interfaces.
- You can customize the addition of other cards and ranking.
- ③ Drop-down menu bar area
- Pull down to enter the drop-down menu bar control interface.
- (4) Smart scene area
- Click the scene switch button to switch the display between the vehicle scene and the navigation map scene\*.
- In the vehicle scene interface, swipe left and right to rotate the car model; click the car model to enter the "My Car" application interface.
- In the navigation map scene\* interface, you can perform simple operations on the map interface.

- (5) System status bar
- This area indicates "Driving Record",
   "Bluetooth Connection", etc.
- Click an icon to enter the corresponding function interface.
- ® System navigation bar
- System control soft keys.
- 7 A/C information display/control bar
- Display the current A/C information, and click to enter the A/C control interface.
- Application menu interface
- Click the menu button on the system navigation bar to enter the system detailed application menu interface.

## i NOTE

The illustration takes the operation of AVNT host as an example, to which the operation of AV host is similar. For the specific functions and interface, the actual vehicle shall prevail.

## <sup>⊕</sup>Button operation\*



Under power-on condition, press <sup>()</sup> button <sup>()</sup>, and the AV system displays the interface. Press <sup>()</sup> button <sup>()</sup> again to turn on the AV system.

#### Time setting

- AVNT host model: Automatically synchronize the time as GPS refreshes. Manual setting is not required.
- AV host model: Set the time through "Settings → System settings → Basic Settings → Time and Date" of the AV system.

#### Drop-down menu bar



In any other interface, swipe down from the top of the screen (drop-down menu bar) to show the drop-down menu, except the voice and A/C interfaces. Click on or swipe up to hide the drop-down menu bar. In the drop-down menu bar interface, if there is no operation, the drop-down menu will be automatically hidden after 20s.

Click on the "Shortcut" and "Message" buttons to switch to the shortcut drop-down interface and message drop-down screen (for AVNT host models).

Click the function buttons in the drop-down menu bar to turn on/off the corresponding functions, or enter the corresponding function interfaces.

## i NOTE

The illustration takes the operation of AVNT host as an example, to which the operation of AV host is similar. For the specific functions and interface, the actual vehicle shall prevail.

## My Car

After the AV system is turned on and working normally, click the "Intelligent Scene Module" on the main screen or the "My Car" soft key on the application menu screen to enter the My Car function screen.

The "Sunroof\* Control" and "Liftgate\*
 Open" can be adjusted.

## i NOTE

The illustration takes the operation of AVNT host as an example, to which the operation of AV host is similar. For the specific functions and interface, the actual vehicle shall prevail.

## **Apple CarPlay**



Apple CarPlay allows you to use navigation, make calls, send and receive messages, and enjoy music while focusing on driving.

 Use a USB cable to connect the phone and the USB port of the main unit.
 Apple CarPlay can't be connected.

After successful connection, the system will automatically switch to the Apple CarPlay main interface, and the CarPlay soft key icon in the application menu interface will be highlighted.

 In other function interfaces, you can access Apple CarPlay by clicking on the Apple CarPlay icon in the main interface of the application menu.

## i NOTE

- For the functions and applications supported by CarPlay, refer to the Apple's official website. According to the information released by Apple in 2019, Apple CarPlay supports iPhone 5 and above.
- When using CarPlay, make sure that the CarPlay function is enabled via "Settings → General → Access Restriction" on the iPhone, otherwise the iPhone will only be used as an iPod and the Apple CarPlay will not be available.
- Please use the genuine iPhone data cable, otherwise connection failure may occur.

#### Voice

After the AV system is turned on for normal operation, the voice engine needs to be activated before non-wake-up free voice commands are given, and the voice function can be activated in the following ways:

- Press the f button on the left side of the steering wheel to start the voice engine.
- Click the voice image in the "Voice Assistant Card" in the main interface to start the voice engine.
- Speak out the wake-up word: The default wake-up word is "Hello, GAC", and another wake-up word can be defined by yourself.

The method of definition is as follows:

- Wake up the voice assistant by saying "Hello, GAC", and then say "Let's name you XXX" to complete the setting of the second voice wake-up word.
- Users can set the voice function through "System Settings → Voice Assistant".

Voice control operation is not available until you wake up the voice system and hear a beep.

## i NOTE

The success rate of speech recognition is affected by objective factors, such as environmental noise and network signal, as well as subjective factors, such as usage habits and pronunciation. For the specific use effect, the actual vehicle shall prevail.

#### Voice setting

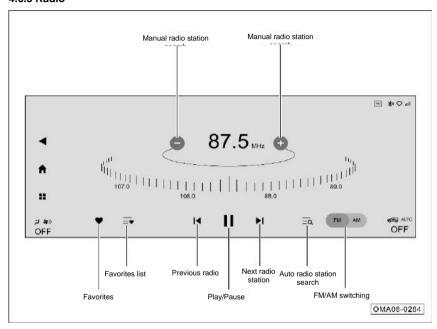


Enter the "System Settings → Voice Assistant" interface of the AV system to set the voice function.

- 1. Time of no wake-up
- It can be set to be off for 15s/30s/60s/90s.
- 2. Customized wake-up word
- You can modify the wake-up words of the voice assistant based on your own habits and preferences. After modifying the customized wake-up words, you may still wake up the voice assistant via "Hello, GAC" or "GAC, Hello".
- 3. Speech recognition engine

You can set your preferred input language based on your language habits, either "Mandarin" or "Cantonese".

#### 4.6.3 Radio



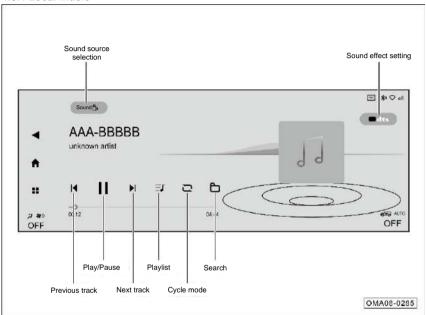
Enter the radio interface in the following ways:

- Enter the radio interface by clicking on the "Radio" card in the main interface.
- Press the "MODE" button on the left side of the steering wheel repeatedly to switch to the Radio interface.
- Click the "Local Radio Station" soft key in the application menu interface to enter the radio interface.

## i NOTE

Radio is divided into local radio and online radio, and only local radio is introduced here.

#### 4.6.4 Local music



Enter the local music playback interface in the following ways:

- Enter the local music interface by clicking on the "Music" card in the main interface.
- Press the "MODE" button on the left side of the steering wheel repeatedly to switch to the local music interface.
- Click the "Local Music" soft key in the application menu interface to enter the local music interface.

## i NOTE

- When the source is online music, click "Music" card in the main interface to enter the online music playback interface, rather than the local music interface.
- The AVNT host music application includes "GAC Music (online music) and local music", and only local music is introduced here.
- The AV system only supports the use of USB devices in FAT16/32.

#### 4.6.5 Bluetooth function

Enter the Bluetooth mode in the following ways:

- Click the "Phone" soft key in the application menu interface to enter the Bluetooth mode.
- In non-call mode, press the button on the left side of the steering wheel to enter the Bluetooth mode.
- Click the soft key in the drop-down menu bar to enter the Bluetooth mode.
- Click on the "Bluetooth" card in the main interface to enter the Bluetooth mode.



- If there is no Bluetooth device connected, enter the Bluetooth connection interface in the above way.
- After turning on the Bluetooth function by clicking the "Bluetooth ON/OFF" of soft key, the vehicle will automatically search for nearby Bluetooth devices. The Bluetooth connection interface has two display modes, "radar" and "list".

#### Radar display mode

- Bluetooth device: The names of nearby Bluetooth devices that can be connected will be displayed, and select the device to be connected and click to connect it.
- Switch to list display mode: Click the
   soft key to switch to the list mode,
   the number displayed in the list mode is
   the number of Bluetooth devices that
   can be connected around.

#### List display mode

- Bluetooth device: Bluetooth devices that can be connected around will be displayed in a list.
- Switch to radar display mode: Click the
   soft key to switch to the radar

display mode, the number of Bluetooth devices that can be connected around will be displayed.



After the Bluetooth connection, the status bar icon will be highlighted, and the connected Bluetooth device name will be displayed on the Bluetooth connection interface:

- Click system soft key to synchronize phone numbers, contacts and other information.
- Click the soft key to synchronize the song name, lyrics and other information of Bluetooth music.
- Click the Discounset soft key to disconnect the Bluetooth.

## i NOTE

The illustration takes the operation of AVNT host as an example, to which the operation of AV host is similar. For the specific functions and interface, the actual vehicle shall prevail.

## Bluetooth connection failure

Diactootii ooiiiicotioii ialiaic				
Possible cause	Action			
The device's Bluetooth function is set incorrectly	Set the device's Bluetooth so that it can be "Visible to Everyone" or can be searched or opened for detection			
The current device is not compatible with the in-car Bluetooth system	Confirm the compatibility of the device with the Bluetooth version, update the operating system of the mobile phone to the latest version and try again			
The mobile phone's Bluetooth was connected to other devices	It is recommended to delete the Bluetooth devices that were connected			

## 4.6.6 System Settings

Enter the system settings interface by pressing the soft key "Settings" in the application menu. In the settings interface, click on an option to select it, click on the slider to enable/disable the function, and drag the progress bar for adjustment.

Settings group	Function	Function	Options
Network interconnection (AVNT host) Device connection (AV host)	Bluetooth	Bluetooth name	/
		Bluetooth switch	On/Off
		Auto connection	On/Off
		Automatically sync contacts	On/Off
		List of connectable devices (AVNT host) List of paired devices (AV host)	1
	Networks and hot spots*	Mobile network switch	On/Off
		Personal hot spot switch	On/Off
		Restart the in-car communication module	Restart
	WLAN*	WLAN switch	On/Off
		List of connectable networks	/
Sound effect setting	System sound effect	Multimedia volume	/
		Intelligent voice volume*	/
		Bluetooth call volume	/
		Navigation volume*	/
		DTS sound effect setting	Off/Driver/All occupants
		Sound effect mode <sup>2)</sup>	Natural soundtrack/Clear voice/Subbass/Leisure mode
		Speed-sensitive volume control	On/Off
		Driving assist chime and media sound	Unchanged/Mute

Settings group	Function	Function	Options
		Unlock/lock prompt sound	On/Off
	Interactive sound effect	Touch tone	Modern/Retro/Off
		Interface sound effect	On/Off
	Driving warning	Safe speed warning (km/h)	Range: Off - 200
	Longitudinal driving assistance*	Traffic sign recognition*	On/Off
		Speed alarm tone*	On/Off
		FCW*	On/Off
		FCW distance setting*	Far/Medium/Near
Driver		Autonomous emergency braking*	On/Off
assistance	Lateral driving assist	Steering mode	Comfort/Standard/Sport
		Lane departure assist (LDA)*	On/Off
		LDA mode*	Steering/Warning/Steering and warning
	Driving settings (AVNT host) Driving mode (AV host)	Current driving mode memory	On/Off
Body accessories	Exterior lights*	Intelligent headlight control*	On/Off
	Lock and unlock	Remote unlock	All doors/Driver's door only
		Automatic unlocking	On/Off
		Vehicle speed lock	On/Off
		Intelligent active unlock	On/Off
		Intelligent active locking	On/Off
	Other accessories*	Auto folding of exterior rearview mirror*	On/Off
		Automatic wiper function*	On/Off

# 4. Operation of Systems and Equipment

Settings group	Function	Function		Options
		Sensitive opening of liftgate*		On with honk/On without honk/Off
		ETC*		On/Off
A/C setting	A/C setting (AVNT host) A/C (AV host)	Highest air volume in AUTO mode	AVNT host	Low air volume/Medium air volume/High air volume
			AV host	Low/Medium/High
		Intelligent control of recirculation/fresh air mode*		On/Off
		A/C comfort curve (AVNT host) A/C comfort (AV host)		Soft/Normal/Fast
		A/C quality sensor*		Low sensitivity/Medium sensitivity/High sensitivity
		Unlocking ventilation		On/Off
		A/C self-drying		On/Off
Display	Central screen (AVNT host) Central screen (AV host)	Brightness (AVNT host) Central screen brightness (AV host)		/
		A/C interface time		5s/10s/15s/30s
		Intelligent scene switch*		Automatic switch/Manual switch
System setting	Basic settings	Time and date	AVNT host	/
			AV host	Settings
		24-hour system		On/Off
		Message push notification*		On/Off
	Navigation signal*	Navigation signal mode		GSP/Beidou/GSP + Beidou
System setting	System information	Hardware version	AVNT host	/
		System update	AVNT host	Upgrade

# 4. Operation of Systems and Equipment

Settings group	Function	Function		Options
		View version features	AVNT host	Check
		Navigation software version - AutoNavi	AVNT host	/
		Software version	AVNT host	/
		System version	AV host	/
		Storage space		/
		Clearance and acceleration		Clearance
		Current language		Chinese
		Supported languages		Chinese
		Factory re	eset	Reset
		Manufacturer	/	
	Vehicle information	Model		/
		Serial number		/
Voice assistant*	Voice setting	Wake-up word		On/Off
		Voice wake-up		On/Off
		Time of no wake-up		15s/30s/60s/90s
		Customized wake-up word		/
		Speech recognition engine		Cantonese/Mandarin
		Voice control of body parts*		On/Off

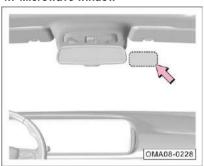
Note:

<sup>1)</sup> It can be selected when "Off" is selected for 3D sound effect.

<sup>2)</sup> It can be selected when "Driver/All occupants" is selected for 3D sound effect.

# 4. Operation of Systems and Equipment

### 4.7 Microwave window



 The microwave window is set to the right of the front windshield corresponding to the interior rearview mirror in the vehicle.

# i NOTE

The microwave window is available for installation of ETC debit electronic cards.

## 4.8 GPS locator (for operating version)



 The GPS locator is mounted on the left side of the instrument panel at the OBD port.

## 5.1 Starting and driving 5.1.1 ENGINE START/STOP button ENGINE START/STOP button\*



The ENGINE START/STOP button works only when the intelligent remote control key is detected in the vehicle.

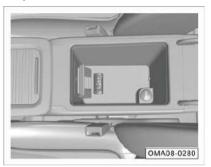
When the transmission gearshift lever is in "P" position and the brake pedal is depressed, press the ENGINE START/STOP button to start the vehicle after the indicator lamp of the ENGINE START/STOP button is in green.

When the transmission gearshift lever is moved to "P" position and the brake pedal is not depressed, press the ENGINE START/STOP button to switch the positions in the following order: "OFF  $\rightarrow$  ACC  $\rightarrow$  ON  $\rightarrow$  OFF"

- OFF: The indicator lamp is off, and the ENGINE START/STOP button is off.
- ACC: The indicator lamp is in orange, and accessories, such as power outlets, are powered.
- ON: The indicator lamp is in orange, the instrument cluster backlight is on, and all electrical devices are powered.

- If the ENGINE START/STOP button is in "ON" position, the transmission gearshift lever is moved to another position other than the "P" position, and the brake pedal is not depressed. press the ENGINE START/STOP button to switch the ENGINE START/STOP button from "ON" position to "ACC" position. If you continue to press the ENGINE START/STOP button, the position will be switched in the following order: "ON  $\rightarrow$  ACC  $\rightarrow$  ON". and will not return to the "OFF" position. If it is in "ACC" position and the transmission gearshift lever is moved from another position to "P" position, it can automatically return to "OFF" position without pressing the ENGINE START/STOP button.
- When the gearshift lever is in "P" position and the ENGINE START/STOP button switches from "OFF" position to "ACC" position and remains unchanged in "ACC" position for one hour, it will enter the power-saving mode and automatically return to "OFF" position.

### Limphome mode



When "No key detected" appears on the instrument cluster display due to low battery of the intelligent remote control key, you can try to place the key flatly at the bottom of the armrest box (the position as shown in the picture), and then press the ENGINE START/STOP button to switch it to "ACC" or "ON" position, or you can depress the brake pedal and press the ENGINE START/STOP button to start the engine after the indicator lamp of the ENGINE START/STOP button is in green.

This method is intended for emergency starting. Please replace the battery of the intelligent remote control key as soon as possible.

# Traditional ENGINE START/STOP button\*



# The ENGINE START/STOP button has four positions:

- LOCK (OFF): In this position, all electrical consumers are not powered; the key can only be pulled out in this position.
- ACC: In this position, accessories, such as power outlets, are powered.

- ON: In this position, the instrument cluster backlight is on, and all electrical devices are powered; the ENGINE START/STOP button will be switched to this position after starting the engine.
- START: This position is used only to start the engine.

### i NOTE

When the key cannot be turned from "LOCK" position to "ACC" position, the steering wheel can be slightly turned to detach the steering wheel locking mechanism until the key can be turned to switch the position of the ENGINE START/STOP button.

### 5.1.2 Engine start

Models equipped with traditional ENGINE START/STOP buttons

- Insert the mechanical key into the ENGINE START/STOP button.
- Make sure the gearshift lever is in "P" or "N" position.
- Press the brake pedal.
- Turn the mechanical key into "START" position, start the engine, and release the mechanical key.

Models equipped with ENGINE START/STOP buttons

- Enter the vehicle with the intelligent remote control key.
- Make sure the gearshift lever is in "P" or "N" position.
- Depress the brake pedal and make sure that the indicator lamp of the ENGINE START/STOP button is in green.
- Press the ENGINE START/STOP button to start the vehicle.

## i NOTE

In case of a cold start, run the engine at idle speed to warm up it before driving. At the same time, the valve tappet takes a few seconds to reach the normal working pressure, and operation noise will occur, which is a normal.

### **CAUTION**

- The engine start time shall not exceed 15 seconds. If the engine is not started successfully, you must wait about 30 seconds before next attempt.
- Do not depress the accelerator pedal hard to make the engine run at high speed or overload after starting. Otherwise, the engine is likely to be damaged.
- If the battery level is low and the engine cannot be started, try to start it by a jumper cable. => See page 281
- It is prohibited to start the engine by pushing or towing it.

## **∱** WARNING

- Do not keep starting the engine for a long time in a poorly ventilated place or an enclosed place. The engine exhaust contains harmful gases, which can make people comatose and even suffocate.
- Never let the engine idle unattended.
- Do not add a starting aid for starting the engine. Otherwise, it is easy to make the engine run at high speed or cause an explosion.

### 5.1.3 Engine shutdown

- Park the vehicle steady and apply the parking brake.
- Set the gearshift lever to "P" position.
- Turn the mechanical key to switch the ENGINE START/STOP button to "LOCK" position and shut down the engine. (For models with traditional ENGINE START/STOP buttons)
- Press the ENGINE START/STOP button to shut down the engine. (For models with ENGINE START/STOP buttons)

### i NOTE

After the engine is shut down, the radiator fan may still run for a while.

### **Emergency power-off**

When the vehicle is running, press and hold the ENGINE START/STOP button or quickly press it three times to switch it from "ON" to "ACC" position to shut down the engine for emergency power-off.

The engine can be restarted in a few seconds after emergency shutdown. Restart the engine as follows:

 After setting the gearshift lever to "P" or "N" position, press the ENGINE START/STOP button to start the vehicle.

### **↑** WARNING

Emergency power-off is forbidden during normal driving, as it is likely to lead to vehicle damage, safety and power steering failure, and traffic accidents.

### Precautions for parking

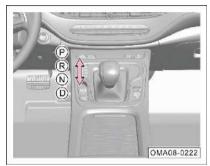
When parking, set the gearshift lever to "P" or "N" position and pay attention to the following:

- Pay attention to the direction in which the vehicle is parked, for fear of damage to the green belt with the exhaust gas spraying on the plants.
- Try to park on a flat and straight road, instead of a steep slope.
- When parking on a slope, regardless of whether the vehicle is facing the top or bottom of the slope, the front wheels should be turned towards to the curb.
- Apply the parking brake, shut down the engine, and turn of all lamps and electrical devices.
- Before leaving the vehicle, be sure to carry valuables and the key with you, and check that the sunroof\*, windows, doors, and liftgate are closed or locked.

### **MARNING**

- When leaving the vehicle, be sure to shut down the engine, apply the parking brake, and take away the key.
- Do not leave any person in the vehicle. Otherwise, suffocation, coma and even death can easily occur in the closed space.
- Do not park the vehicle near flammables or explosives.

# 5.1.4 Gear description Mechanical gearshift



The gearshift lever gear has "P, R, N, D" positions. When the ENGINE START/STOP button is in "ON" position and the gearshift lever is set to a position, the corresponding gear information will be displayed on the instrument cluster.

## **↑** WARNING

The "R" or "P" position can be engaged only when the vehicle is completely stationary, otherwise the transmission will be damaged.

### P: Parking gear

- When the vehicle is completely stationary, press the unlocking button at the front of the gearshift lever and set the gearshift lever to "P" position.
- Depress the brake pedal, press the unlocking button at the front of the gearshift lever and move the gearshift lever out of "P" position.

### R: Reverse gear

- When the vehicle is completely stationary, depress the brake pedal, press the unlocking button at the front of the gearshift lever and set the gearshift lever to "R" position.
- Release the brake pedal, slowly depress the accelerator pedal, and the vehicle will move backwards.

### N: Neutral gear

This position is to be engaged for temporary parking.

 From "P" position to "N" position, you need to depress the brake pedal, press the unlocking button at the front of the gearshift lever and set the gearshift lever to "N" position.

- From "R" or "D" position to "N" position, directly set the gearshift lever to "N" position.
- After setting the gearshift lever to "P" or "R" position from "N" position, you need to depress the brake pedal. There is no need to depress the brake pedal when "D" position is engaged.

### **↑** WARNING

Do not make the vehicle coast with the gearshift lever in "N" position. Otherwise, it is likely to cause an accident.

### D: Drive gear

This position is to be engaged for normal driving.

 From "P" position to "D" position, you need to depress the brake pedal and set the gearshift lever to "D" position.

### Electronic gearshift



### P: Parking gear

- When the vehicle is completely stationary, press the "P" position button to switch to "P" position.
- Depress the brake pedal and push the gearshift lever forward or backward to move the gearshift lever out of "P" position.

## i NOTE

When the gearshift system fails and "P" position cannot be moved out, please contact the GAC Motor authorized shop for inspection.

### R: Reverse gear

- When the vehicle is completely stationary, depress the brake pedal, set the gearshift lever to "R" position, and the reverse position prompt will sound once.
- Release the brake pedal, slowly depress the accelerator pedal, and the vehicle will move backwards.

### N: Neutral gear

- When the transmission is in P" position, step on the brake pedal and gently push the gearshift lever forward to the first resistance point position to shift to "N" position.
- The gearshift lever can be shifted directly from "R" or "D" position to "N" position.
- When moving the gearshift lever out of "N" position, you need to depress the brake pedal.

### **↑** WARNING

Do not make the vehicle coast with the gearshift lever in "N" position. Otherwise, it is likely to cause an accident.

### D: Drive gear

- When the vehicle is moving forward,
   "D" position is engaged, and the system will automatically upshift or downshift based on the engine load and vehicle speed.
- Depress the brake pedal and pull the gearshift lever backward to shift from "P", "N", or "R" position to "D" position.

### **Driving mode**

The gearshift system has COMFORT, ECO, SPORT, and MANUAL\* (for models with mechanical gearshift configuration) driving modes, where COMFORT/ECO/SPORT can be switched through the driving mode lever operation.

### **CAUTION**

"MANUAL" is only applicable to the model with mechanical gearshift configuration and needs to be triggered in "SPORT" mode. After triggering, the "+/-" button on the shift handle can be manually operated to realize manual shift up and down.



When the ENGINE START/STOP button is in "ON" position, push down the driving mode lever to switch the "ECO  $\rightarrow$  COMFORT  $\rightarrow$  SPORT" mode.

### **COMFORT: COMFORT mode**

In this mode, the dynamic response and fuel consumption are more balanced.

### ECO: ECO mode

In this mode, an economical shifting strategy is adopted by both the transmission control unit and the A/C system; the slight power hysteresis occurs and the fuel consumption is more economical.

ECO mode is the main mode of the vehicle. When the engine is shut down and restarted, the transmission is still in the ECO mode. If you want to memorize the current driving mode, you need to enable the memory through the AV system "System Settings → Driving Assistance → Driving Setting (AVNT host)/Driving Mode (AV host) → Current Driving Mode Memory".

### i NOTE

- In the ECO mode, the instrument cluster displays "ECO".
- When the memory function is turned off, the driving mode will default to ECO mode every time the vehicle is restarted. When the memory function is activated, the driving mode has a memory function. When the engine is shut down and restarted, the transmission remains in the current driving mode.

### SPORT: SPORT mode

"SPORT" mode can prevent frequent shifting, mainly for driving in the pursuit of power and mountainous road. In this mode, the dynamic response is rapid and the fuel consumption is high. When the vehicle is in this mode, the transmission will shift into a lower gear based on changes in resistance (such as traction and climbing long slopes), and the engine will run at a higher speed to provide greater power.

### i NOTE

In some cases, the driving mode may automatically change. For example, in "ECO" mode, when the vehicle is climbing a steep slope or is low on power, it will automatically switch to "COMFORT" mode.

# 5.2 Brake system 5.2.1 Service brake

Under some driving conditions and weather conditions, squeaks, screams or other noises may be heard from brakes when the brake pedal is depressed for the first time or lightly stepped on, or braking noise during light or moderate braking, especially for new vehicles (as their brakes have undergone running-in), which is normal, and does not constitute a failure symptom of brake system nor has effects on the braking safety and performance.

### **CAUTION**

- If there is metal friction rasp, the brake lining may be worn to the limit.
   Please go to the GAC Motor authorized shop for inspection as soon as possible.
- If the steering wheel vibrates or twitches continuously during braking, go to GAC Motor authorized shop for inspection and repair as soon as possible.

## i NOTE

- Do not rest your foot on the brake pedal during driving, otherwise the brake will heat up to an abnormally high temperature, and the brake linings and brake discs will wear excessively, increasing the braking distance.
- Continuous application of the brake will cause the brake overheat and result in a temporary loss of braking performance.

## i NOTE

- Under normal driving conditions, brake linings will wear, and dust will accumulate on wheels, which is inevitable but yet has no effect on the braking performance.
- If rust and corrosion exist because the brake linings and brake discs are not used or used rarely, noise may be heard from brakes for the first use. This is normal. It is recommended that braking be carried out several times in a safe area and under good road conditions to clean the brake linings and discs.

#### Brake booster

The brake booster is used to increase the pressure applied by the driver on the brake pedal, and it only works when the engine is running.

If the brake booster does not work properly due to a fault, or when the vehicle is towed, the force on the brake pedal must be increased to compensate for the assist power loss of the brake booster.

### **↑** WARNING

- Never make the vehicle coast with the engine shut down. Otherwise, it is likely to cause accidents!
   Because the brake booster does not work at this moment, the braking distance will be greatly increased.
- If the brake booster does not work (for example, when the vehicle is being towed), please depress the brake pedal with force much greater than that applied under normal condition.

### Braking effect and braking distance

The braking effect and braking distance are mainly depended on the driving environment, road conditions and driving style.

Worn brake linings do not provide effective braking. The wear rate of the brake linings mainly depends on the vehicle operation conditions and driving style. If the vehicle often runs for urban driving, short-distance driving, or as a racing vehicle, it is recommended that the driver checks the brake lining thickness more frequently based on the maintenance cycle specified in the *Warranty Manual*.

After wading, heavy rain or vehicle washing, brake linings may get wet or icy (in winter), resulting in a reduction in braking effect. In this case, be sure to depressed the brake pedal lightly to heat the brake by friction and evaporate the moisture to restore the braking effect.

### **↑** WARNING

A new tire and brake lining having not undergone running-in do not have the best adhesion and friction characteristics.

- The new tires do not have the best adhesion, so you must drive carefully within the first 500km to prevent accidents!
- New brake linings in the first 200km to 300km driving distance do not get the best friction characteristics, and the braking effects are not as good as expected, so new brake linings must be subject to running-in. Braking effects can be compensated by increasing the force applied to the brake pedal. New brake linings must also be subject to running-in.
- During driving, do not get too close to other vehicles or bring the vehicle to a situation where emergency braking is necessary. Take care especially when driving with a new tire and new brake lining having not undergone running-in, for fear of accidents!

## **∴** WARNING

When the brake is wet or icy or when the vehicle is running on a salted road, the braking lag may occur, resulting in a longer braking distance. Therefore, be careful to prevent accidents.

- A longer braking distance and a fault in the brake system will increase the accident rate.
- Lightly depress the brake pedal to check the brake.
- Lightly depress the brake pedal to dry the brakes or remove ice or anti-skid salt from brakes.

### **↑** WARNING

When the brake is overheated, braking effects will reduce, increasing the braking distance!

- Take care to avoid overheating brakes.
- When driving downhill, brakes are likely to be overheated as the load increases.
- Do not keep depressing the brake pedal. Otherwise, brakes will overheat and the braking distance will increase. Brake the vehicle intermittently according to road and traffic conditions.

### **↑** WARNING

- The brake fluid must be changed every two years. If the brake fluid stays in the brake system for a long period, air resistance may occur in the pipeline during braking, reducing the braking effect significantly and impair driving safety, and even causing failure of the brake system, resulting in an accident thereby!
- If the front spoiler is out of standard or damaged, it will block the cooling airflow to brakes, causing brakes to overheat and reducing the braking effect.

### 5.2.2 Electronic parking brake (EPB)

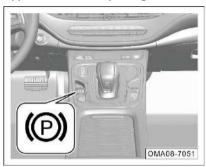
The driver can apply or release the parking brake by operating the EPB button. HSA can be applied for driving on a slope. When the accelerator pedal is depressed with the vehicle parked, the EPB will be automatically released to provide driving assistance for the driver.

### **CAUTION**

The EPB will choose a fixed brake force to park according to the slope:

- If the vehicle slides down after parking on a slope, the EPB will automatically increase the brake force.
- If the vehicle continues to slide down after the brake force is increased, please depress the brake pedal and drive the vehicle to a flat road. Please go to the GAC Motor authorized shop for inspection and repair in time.

### Application of static parking brake



- When the vehicle is stationary, pull up the EPB button. The button indicator lamp and the (P) indicator lamp on the instrument cluster will come on, indicating that the EPB has been applied.
- When the gearshift lever is moved to "P" position from other positions, the EPB will be applied automatically.

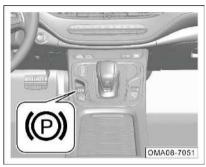
## i NOTE

- The EPB can also be applied when the ENGINE START/STOP button is in the "OFF" position.
- After the vehicle is parked steadily, the EPB should be applied first.
- When EPB is applied, running noise will be generated, which is normal.
- If there is a trailer or the vehicle is parked on a larger slope, the EPB button can be pulled up again after the first application of EPB is completed to ensure the maximum parking force.
- On the slope with a gradient of 17% to 30%, five minutes after the first application of EPB, it will be clamped again, and running noise will be generated at this moment, which is normal.

## **MARNING**

- Be sure to apply the EPB during parking.
- When the vehicle is running, do not apply the EPB for speed reduction unless necessary, as the EPB only applies brake force to rear wheels, which is likely to cause traffic accidents.

### Release static parking brake



- When the ENGINE START/STOP button is set to "ON" position, depress the brake pedal.
- Press the EPB button, and the button indicator lamp and the (P) indicator lamp on the instrument cluster will go out, indicating that the EPB has been released.

## i NOTE

- If the EPB button is pressed without depressing the brake pedal, the EPB will not be released, and the instrument cluster display will display an alarm message accompanied by a buzzer alarm.
- When the EPB is released, running noise will be generated, which is normal.
- When the battery is low, the system cannot release the EPB. If conditions permit, you can connect a jumper cable for emergency start (=> See page 281), and then release the EPB. Contact the GAC Motor authorized shop for inspection and repair.
- If the EPB has not been used for a long time, the system will perform automatic test, and operation noise will be heard.

# Application of dynamic emergency braking



 If the service brake fails during driving, try to continuously pull up the EPB button to achieve emergency braking.
 Release the EPB button or depress the accelerator pedal so that the system exits emergency braking.

### **CAUTION**

In the following cases, please operate the EPB button again. If the fault is not eliminated, please go to the GAC Motor authorized shop for inspection.

- If the (P) indicator lamp on the instrument cluster flashes red continuously, it indicates that the EPB is partially engaged/disengaged or the system is malfunctioning.
- If the (P) indicator lamp comes on in red when EPB is not applied, it indicates that the system is abnormal.
- If the pindicator lamp comes on in yellow, it indicates that a fault is detected in EPB and the EPB is degraded.

### **CAUTION**

- Do not use dynamic emergency braking unless necessary, as it is likely to cause traffic accidents. Moreover, the braking distance is longer than braking by depressing the brake pedal, and the service life of the EPB will be shortened.
- When the vehicle is running, if the EPB button is pulled up, the instrument cluster display will give an alarm message, together with a beep alarm.
- During the application of dynamic emergency braking, if the EPB is released or the accelerator pedal is depressed, the parking brake will be released again. If the EPB button is continuously pulled up until the vehicle stops, the parking brake will remain engaged.

### **AUTO HOLD**

AUTO HOLD can keep the vehicle still automatically based on the braking needs of the driver; when the system detects the starting intention of the driver (such as depressing the accelerator pedal), it will automatically release the brake; AUTO HOLD can facilitate vehicle starting according to the slope information when the brake is released automatically; AUTO HOLD can make the vehicle still by active pressurization when the brake force is insufficient.

### **Activation and deactivation**



When the driver's door is closed, the vehicle is started, and the driver's seat belt is fastened, press the AUTO HOLD button. The button indicator lamp comes on, and the AUTO HOLD function is enabled. Press the button again, so that the button indicator lamp goes out and the AUTO HOLD function is turned off.

### Activation

When this function is enabled, it supports automatic brake application and release under stop & go conditions. When the driver brakes the vehicle, the vehicle will be automatically parked to avoid slide at startup.

#### Exit

Under the following conditions, AUTO HOLD will be disabled and the parking brake will not be locked:

- 1. The accelerator pedal is depressed at startup.
- 2. The engine misses during driving.
- 3. The EPB is manually released.
- 4. The AUTO HOLD button is pressed when the brake pedal is depressed.

For the sake of safety, the AUTO HOLD will be disabled and the parking brake will be locked under one or more of the following conditions:

- 1. The engine is shut down.
- The driver's door is opened or the seat belt is unfastened when the vehicle is stopped.
- 3. The AUTO HOLD button is pressed to disable AUTO HOLD.

### CAUTION

When driving into a mechanism such as a vehicle washing device that transports the vehicle with a conveyor belt, be sure to disable the AUTO HOLD, otherwise the vehicle cannot move or may run off the path.

### **EPB** self-learning

In some cases (e.g., after a sudden power failure of the battery or a long period of nonuse of the vehicle), the (P) indicator lamp will flash in red and the EPB will not work when the EPB button is manually pulled up. At this moment, the driver needs to step on the brake pedal, press the EPB button, and then pull up the EPB button to make the indicator lamp of the EPB button stop flashing to complete the self-learning and make the EPB work normally.

# 5.3 Electronic service brake system 5.3.1 Electronic stability program (ESP)

ESP can effectively reduce the risk of sideslip.

### **Activation and deactivation**



ESP is on by default when the vehicle is running. The ESP can be turned off by pressing and holding the button continuously. The indicator lamp on the instrument cluster will come on and an alarm message will be displayed.

## i NOTE

- The ESP will be automatically activated when the vehicle speed is greater than 80km/h.
- If you press the state button for more than 10 seconds, the system identifies it as an incorrect operation and has no impact on the system operating status.

## **ESP** indicator lamp

- With the ENGINE START/STOP button set to the "ON" position, the and indicator lamps will be on for a few seconds and turned off after the system completes self-test.
- If the ESP works during driving, the indicator lamp flashes.
- When the ESP is turned off, the indicator lamp is on.
- When the ESP has a fault, the indicator lamp is on.

After starting the vehicle, if the spindicator lamp is on, it indicates that the ESP has been turned off, and the instrument cluster displays an alarm message. You can try to turn off the ENGINE START/STOP button, and then turn it on to restart the system. When the spindicator lamp is off, it indicates that the system has fully entered the working state.

If the battery connector is disconnected from the cable and then connected, the indicator lamp may come on when the ENGINE START/STOP button is turned on. After a short distance of driving, the indicator lamp will go off.

The ESP shall be activated for driving safety. The ESP can be disabled in the following special cases:

- When the vehicle runs with tire chains.
- When the vehicle travels on roads covered with deep snow or on soft grounds.
- When the vehicle is trapped on muddy roads, etc., and you need to move it back and forth.

### Traction control system (TCS)

TCS is a subsystem of ESP. TCS determines if the driving wheel slips based on the speed of the driving wheel and the drive wheel, and if the former exceeds the latter, it will limit the speed of the driving wheel to prevent vehicle slip.

When ESP is turned off or on, TCS is also turned off or on.

### 5.3.2 Anti-lock braking system (ABS)

ABS is a subsystem of ESP. When the driver brakes, ABS automatically monitors the slip rate of each front and rear wheel, and adjusts the hydraulic pressure of the wheel cylinder through the stages of pressure maintenance, pressure reduction and pressurization before the wheel lock, so that the wheel slip rate is in the specified range and the wheel lock is prevented.

When the brake pedal is depressed in an emergency and the ABS enters the working mode. The driver will feel the brake pedal vibrate, accompanied by the "rattling" sound when the brake master cylinder is running. When the brake pedal is depressed in the following cases, ABS work and vibration may be felt, which is normal:

- Gear shifting.
- Emergency braking.
- Sharp turns at high speed.
- Driving on a slippery road.
- Passing over bumps or ditches.
- Driving off immediately after the engine is started.

ABS indicator lamp

With the ENGINE START/STOP button set to the "ON" position, the ( indicator lamp of the instrument cluster will be on for a few seconds and turned off after the system completes self-test.

The following conditions indicate that the system has a fault:

- The ( indicator lamp of the instrument cluster is not turned on after the ENGINE START/STOP button is set to the "ON" position.
- With the ENGINE START/STOP button set to the "ON" position, the indicator lamp of the instrument cluster is on for a few seconds and does not turn off.
- The indicator lamp of the instrument cluster is on during driving.
- When the ABS has a fault, the ♣, ♠ and ♠ indicator lamps of the instrument cluster are on.

# Electronic brake force distribution (EBD)

As a part of ABS, EBD balances the distribution of brake force on the front and rear wheels according to the vehicle load during normal braking.

### Hydraulic brake assist (HBA)

HBA takes advantage of the rapidly generated pressure in the brake system to help you achieve a shorter braking distance in an emergency, and it takes full advantage of the characteristics of ABS. After the brake pedal is released, HBA will be deactivated automatically, and the brake system will be restored to its normal working state.

### **↑** WARNING

HBA can improve your driving safety, but it is still subject to the limitations of laws of physics. Please adjust your driving speed according to the road conditions and traffic regulations.

### 5.3.3 Hill-start hold control (HHC)

HHC can prevent accidents caused by sliding when the vehicle is started on a slope without using the parking brake.

### Starting conditions of HHC

- When the slope gradient is greater than 4%, the gearshift lever is not in "P" position or "N" position, and the EPB is not applied. The driver depresses the brake pedal to stop the vehicle and keep it at rest. At this moment, if the driver releases the brake pedal, the HHC will start, apply brake pressure to the vehicle, and the pressure will remain for one second.
- During HHC operation, when the engine torque exceeds the vehicle's resisting moment, the brake pressure will be released and the start can be completed smoothly.
- The HHC also works when the vehicle is going down the slope and the gear is shifted to "R".

- When the HHC starts on a steep slope or goes down the slope in reverse gear, it automatically brakes to prevent slipping.
- The HHC is integrated on the ESP. If the HHC fails, the ESP indicator lamp will be on and an alarm message will be displayed on the instrument cluster display.

### 5.3.4 Hill descent control (HDC)

HDC is a subsystem of ESP. During the downhill driving, when the driver does not step on the brake pedal, the HDC actively applies the brake force through the ESP to achieve deceleration.

### Activation and deactivation



When the vehicle speed is lower than 35km/h, press the button to activate the HDC, and the indicator lamp will be on. When the HDC is working, the brake lamp is on.  Press the button again to deactivate the HDC and the indicator lamp goes out.

If the HDC function has been activated and the driver does not step on the brake pedal, the vehicle runs and maintains at the speed of at least 8km/h while going downhill.

The driver can adjust the vehicle speed by depressing the accelerator pedal or the brake pedal.

- If the vehicle speed is within 8-35km/h when the pedal is released, HDC will be activated again to keep the vehicle going downhill at the current speed.
- When the vehicle speed is higher than 60km/h, HDC will be automatically deactivated.
- When the HDC is active, ESP automatically intervenes in driving if the wheels slip excessively.

- When the HDC has a fault, the function is deactivated and an alarm message is displayed on the instrument cluster display with an audible alarm lasting for about 5 seconds. In this case, HDC cannot work properly, and the driver should depress the brake pedal for deceleration to go down a steep slope. In addition, the driver should go to the GAC Motor authorized shop for inspection as soon as possible.
- In some special environments, the HDC enters the thermal protection mode due to too high braking temperature. For example, when the system operates at a high ambient temperature for a long time, the temperature of the brake system constantly increases due to friction. When the upper limit of temperature has been reached, the HDC enters the thermal protection mode (i.e., the HDC function is active but inoperative), and vehicle shows signs acceleration. When the temperature of the brake system drops to the level where the brake system can work effectively, HDC resumes normal operation.

### 5.4 Driver assistance systems 5.4.1 Cruise control system (CCS)\*

CCS can set the vehicle speed at 40 to 120km/h. After setting the stored vehicle speed, the driver does not need to depress the accelerator pedal, and the vehicle will run at the set speed.

### **↑** WARNING

- It is prohibited to use CCS when driving on high-density traffic sections, uphill, multi-curve sections or wet roads to prevent accidents.
- The CCS should be used with caution, and after setting the vehicle speed, a certain safe distance should be maintained from the vehicle ahead.

### **Control buttons**



- ① ※: Deactivating CCS
- ② Turning on/off CCS
- ③ SET/-: Activating CCS/deceleration
- 4 RES/+: Resuming CCS/acceleration

### **Turning on CCS**

- Press the button to turn on the CCS, and the white hindicator lamp on the instrument cluster will come on.
- Increase the speed to more than 40km/h.
- Press the button SET/- and the indicator lamp on the instrument cluster will turn green and the vehicle will enter the CCS status.

### **Deactivating CCS**

CCS can be deactivated by:

- Press the brake pedal.
- Pressing the button (after that, CCS will be deactivated, but the set speed will be kept).
- Pressing the button (after that, CCS will be deactivated, and the set speed will be cleared).
- Turning on the ESP.
- Setting the gearshift lever to the "N" position.

### **Resuming CCS**

When the CCS is turned on, after deactivating the CCS, the \(\cappa\_1\) indicator lamp on the instrument cluster will turn white, which can be resumed by pressing the button RES/+:

When the vehicle speed is higher than 40 km/h, press the button RES/+, the indicator lamp on the instrument cluster will change from white to green, and the speed will return to the speed set during the last cruise.

### Decreasing cruising speed

- Press the button SET/-; each time the button is pressed, the vehicle speed reduces by 1.6km/h.
- Press and hold the SET/- button to decrease the vehicle speed until the button is released.

### i NOTE

When the vehicle speed is lower than 40km/h, it can no longer be adjusted by the SET/- button.

## Increasing cruising speed

- Press the RES/+ button; each time the button is pressed, the vehicle speed increases by 1.6km/h.
- Press and hold the RES/+ button to increase the vehicle speed until the button is released.

### i NOTE

- The maximum settable cruising speed is 120km/h. When the speed is higher than 120km/h, it can no longer be adjusted by RES/+ button.
- When the accelerator pedal depressed for acceleration, the vehicle will temporarily exit the CCS and drive at the accelerated speed. After the accelerator pedal is released, the vehicle will resume the CCS.

# 5.4.2 Adaptive cruise control (ACC) system\*

The adaptive cruise control, abbreviated to ACC, can automatically adjust the distance from the vehicle ahead during the cruise. And the cruising speed can be 0 to 130km/h.

ACC detects the relative distance and speed with the vehicle ahead on the same path according to the MMW radar installed on the front of the vehicle and the intelligent front camera (IFC) installed on the windshield:

- When there is a lead vehicle and it stops, the ACC will stop the vehicle automatically; if the vehicle in front starts, ACC will control the vehicle to start and run automatically again under certain conditions. After stop for a period of time, the vehicle can be started by operating the +D button or the accelerator pedal as the vehicle ahead is started.
- When there is a vehicle in front and its speed is lower than the target speed set by the driver, ACC controls your vehicle at a safe distance from the vehicle ahead.
- When no vehicle is in front, ACC controls vehicle to travel at the target speed set by the driver.

# i NOTE

- Please comply with the requirements of laws and regulations, set the cruising speed reasonably, and do not exceed the speed limit when driving for safety.
- Precautions for use of radar and IFC sensors. => See page 195

### **MARNING**

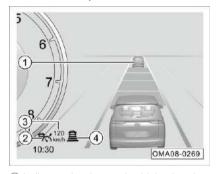
- The ACC is not a safety system, obstacle detector, or collision alarm system, but a comfort system, so the driver must always keep control of the vehicle and take full responsibility for the vehicle.
- ACC must be used cautiously according to the visibility, weather conditions, road and traffic conditions at the time.
- The driver must always keep control of the vehicle and take full responsibility for the speed of the vehicle and the distance from other vehicles.

### **Control buttons**



- 2 Turning on/off ACC
- ③ 皇: Controlling ACC distance
- 4 -: Setting ACC/deceleration
- ⑤ **♣**<sup>2</sup>: Resuming ACC/acceleration

### Interface description



- ① indicates the detected vehicle ahead.
- 2 ACC indicator lamp:
- If the white <sup>™</sup>√ ACC indicator lamp comes on, it indicates that the ACC is in the ready state, and there is a target vehicle ahead. If the green ACC indicator lamp comes on, it indicates that the ACC is working, and there is a target vehicle ahead.
- If the white of ACC indicator lamp comes on, it indicates that the ACC is in the ready state, and there is no target vehicle ahead. If the green ACC indicator lamp comes on, it indicates that the ACC is working, and there is no target vehicle ahead.

- If the yellow indicator lamp comes on, it indicates that ACC is faulty. In that case, go to the GAC Motor authorized shop for inspection and repair in time.
- ③ indicates the set cruising speed.
- ④ indicates the set cruising distance from the vehicle ahead.

When the ACC braking capacity is insufficient to maintain a proper distance between this vehicle and the vehicle in front, the system will send out the "driver takeover request", and the instrument cluster will display the alarm information and sound at the same time. At this time, the driver shall step on the brake pedal according to the system requirements to reduce the speed.

### **Activating ACC**

- Press the button, the ACC indicator lamp on the instrument cluster will change from white to green.
- The vehicle will enter ACC state and then release the accelerator pedal.

### **CAUTION**

When the vehicle enters the ACC state, the set initial cruising speed is the current vehicle speed. If the current vehicle speed is lower than 15km/h, the cruise function cannot be activated.

- The minimum settable cruising speed is 15km/h.
- When the transmission gearshift lever is in other positions than D, ACC cannot be activated.
- When the ACC is activated, the ♂ indicator lamp on the instrument cluster comes on (when the っ indicator lamp comes on, it indicates that there is a vehicle ahead), and the instrument cluster display will show the stored ACC speed and status.

### **Deactivating ACC**

ACC can be deactivated by:

- Opening the driver's door.
- Unfastening the driver's seat belt.
- Press the brake pedal.
- Setting the gearshift lever to a position other than D.
- Pressing the button (after that, the corresponding indicator lamp on the instrument cluster will turn white, ACC will be deactivated, but the set speed will be kept).
- Lifting the EPB button.
- Turning off the ESP.

### **Resuming ACC**

In this ignition cycle, when ACC is not activated for the first time, press the putton, the ACC indicator lamp turns from white to green, the vehicle enters the ACC state, and the cruising speed will return to the value set during the last cruise control.

### Increasing cruising speed

To increase the vehicle speed, please do the following:

- Depress the accelerator pedal to increase the vehicle speed to a target value and press the +2 button for cruising at a relatively high set speed.
- Press the +<sup>2</sup> button; each time the button is pressed, the vehicle speed increases by 5km/h.
- Press and hold the 
   <sup>1</sup> button to increase the cruising speed at an increment of 5km/h until the button is released.

- The maximum settable cruising speed is 130km/h.
- When the accelerator pedal is depressed for acceleration, the vehicle will temporarily exit the ACC and drive at the accelerated speed. After the accelerator pedal is released, the vehicle will resume the ACC.

### **Decreasing cruising speed**

To reduce the vehicle speed, do the following:

- Press the 

   button; each time the
   button is pressed, the vehicle speed
   reduces by 5km/h.
- Press and hold the button to reduce the cruising speed at a decrement of 5km/h until the button is released or the cruising speed is 15km/h. Release the button and the vehicle will remain at a relatively low speed.

### Controlling ACC distance

After the ENGINE START/STOP button is set to "ON" position, when ACC is activated, the default distance from the vehicle ahead is in the fourth range (the distance from the vehicle ahead in the fourth range is the longest).

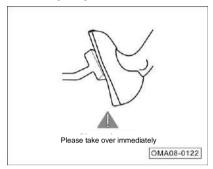
By pressing the  $\stackrel{\square}{=}$  button, the range of the distance from the vehicle ahead can be changed recurrently in the order of "fourth range  $\rightarrow$  third range  $\rightarrow$  second range  $\rightarrow$  first range  $\rightarrow$  fourth range...". At the same time, the cruising distance  $\stackrel{\square}{=}$  indicator lamp on the instrument cluster will display the same number of cross bars as the ordinal number of the range.

## **Activating ACC after following stop**

In the process of following a vehicle in front, the vehicle will also be stopped if that vehicle is stopped. ACC will keep the vehicle stationary through active pressurization via the ESP during a period of time after following stop. After a period of time, the ACC will keep the vehicle stationary by activating EPB. When the front vehicle is driving away, the ACC of the vehicle is activated in three situations:

- If the green ACC indicator lamp comes on, ACC can be reset actively and re-drive the vehicle after the vehicle ahead is driven off.
- If the white ACC indicator lamp comes on and EPB is not activated, the driver can press the Dutton or accelerator pedal to resume ACC and drive the vehicle again.
- 3. If the white ACC indicator lamp comes on and EPB is activated, the driver can press the accelerator pedal first and press the Dutton after the EPB is automatically released to resume ACC and drive the vehicle again.

### **Takeover prompt**



The ACC can only use the limited braking capability of the service brake system, and when the system requires the driver to intervene in the brake, the instrument cluster will display an alarm message and sound with a buzzer.

When the driver receives the takeover prompt, he/she should immediately step on the brake pedal for proper braking.

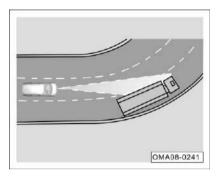
When the brake pedal is depressed, the ACC will be deactivated. If the emergency situation is eliminated and the ACC needs to be reactivated, the driver should operate to resume ACC or set the ACC button.

### Special driving environment

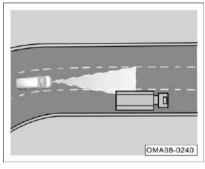
ACC is limited by physical laws and has certain system limitations. In some driving environments, the driver may feel that the ACC response is lagging or fails to control the vehicle as expected. Therefore, the driver must be ready to control the vehicle at any time.

The following conditions will affect the sensor function of the radar system, and the driver must be especially alert when encountering these conditions:

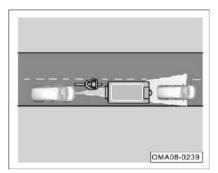
 Decelerating to stop. If the vehicle ahead stops by emergency braking, ACC will also decelerate your vehicle until the alarm exits. The driver should actively intervene in the brake as needed to stop your vehicle completely.



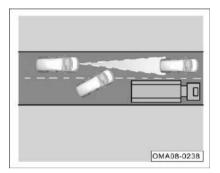
 Driving through a curve. When driving through a curve, the radar sensor or the IFC sensor may not catch the vehicle ahead or may not be able to react to the vehicle in the adjacent lane. In this case, ACC may have no reaction to the vehicle ahead, or apply the brake to reduce the vehicle speed. Depress the brake pedal or manually cancel ACC to exit the ACC system.



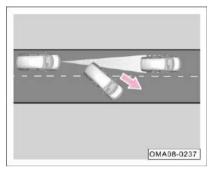
 Driving out of a curve. During driving out of a long curve, as ACC will calculate the lane in advance, the radar sensor may respond to the vehicles in adjacent lanes and apply the brake of your vehicle. This braking process can be interrupted by depressing the accelerator pedal.



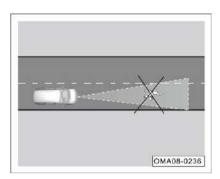
4. Narrow vehicles and Z-shaped traffic in front. The narrow vehicles and Zshaped traffic in front can be detected by the radar sensor and the IFC sensor only when they enter the detection range of the radar sensor and the IFC sensor. That is to say, the system cannot identify vehicles out of the detection range of the sensor. The ACC system is not easy to identify narrow vehicles such as motorcycles and electric bicycles. At the same time, there is a risk that the ACC system may not be able to accurately identify the distance from the front vehicle which are modified or with irregular transportation. It is not recommended that such vehicles are taken as the front target vehicle.



5. When another vehicle changes the lane. When a vehicle in the adjacent lane goes into the current lane, if it does not enter the detection range ahead, it could not be detected by the radar sensor, thus resulting in a response lag of ACC.



 If the target vehicle in front is driven out suddenly and a stationary or slowmoving vehicle appears at close range, the radar sensor and brake actuator will incur a response lag, causing delayed braking response.



7. The ACC should not be used in cities with traffic jams and poor visibility (night/backlighting/rain/snow/dense fog. etc.). ACC will not take braking measures in face of people or animals, and may not take braking measures in face of special vehicles such as oil tankers, dump trucks, and plate trailers. When the speed of the vehicle is higher than a certain value, the recognition probability of the stationary vehicle by the ACC will decrease with the increase of the speed, and no braking measures will be taken when the speed is higher than 60km/h. Therefore, the driver should be particularly alert and always be ready to take over the vehicle.

- 8. Influencing factors that may deteriorate the sensor function:
- a. Heavy rain, water mist, ice and snow or sludge may deteriorate the radar sensor function, causing the ACC to be temporarily deactivated, and cause display of following text messages on the instrument cluster: "Adaptive cruise is currently unavailable" or "Please check the FCM". At this time, FCWS, ACC and AEB are unable to play their roles.
- b. Frosting or fogging of front windshield due to temperature difference or frost in low-temperature and alpine areas, will obstruct the IFC sensor, and cause display of following text messages on the instrument cluster: "Adaptive cruise is currently unavailable" or "Please check the FCM". At this time, FCWS, ACC and AEB are unable to play their roles.
- 9. Brake overheating. If the brake is overheated due to emergency braking or driving down a steep slope, ACC will be temporarily deactivated automatically, and meanwhile the instrument cluster will display the following text message: "Adaptive cruise is currently unavailable". After that, ACC can no longer be activated. The ACC can only be reactivated when the brake temperature drops to a reasonable degree.

### **M** WARNING

- The driver must be ready to control the vehicle by himself at any time.
- The ACC function cannot address all driving scenarios and traffic, weather and road conditions.
- The ACC function is only a driver assist function, and cannot replace your attention and judgment. It is your responsibility to maintain a safe distance and speed, and you must be ready to intervene if the ACC fails to maintain a proper speed or distance from the vehicle ahead.
- For the sake of safety, it is not allowed to use ACC under conditions such as urban driving, traffic jams, multi-curve roads and poor road conditions (e.g., icing, fog, gravel, heavy rain, and phenomena prone to water skiing), because there is a danger of accident.

### **↑** WARNING

- Do not activate ACC during driving in roadless areas or on earth roads. ACC can only be activated on hard surfaces.
- The hands-on reminder of ACC only warns the driver of vehicles detected by its radar and IFC sensor, so ACC may not send an alarm, or may send an alarm after a certain delay. Never wait for an alarm to be given and step on the brake when the situation requires.
- The ACC is not a collision avoidance system. If your vehicle is getting closer and closer to the vehicle ahead at a speed higher than that of the vehicle ahead and the braking effect of ACC is unable to stop the vehicle safely before a collision with the vehicle ahead, the driver must depress the brake pedal to reduce the vehicle speed.

### **∱** WARNING

ACC does not respond or responds only to a limited extent to the followings:

- large speed difference with the vehicle ahead.
- driving in different lanes, lane changes or driving on curves with small radius.
- pedestrians, animals, bicycles, tricycles, stationary vehicles or unexpected obstacles.
- complex traffic conditions.
- oncoming traffic or cross traffic.
- low-bed trailers, trucks, highframe/high-body vans, trailers or vehicles with irregular or nonstandard characteristics.

Therefore, be sure to notice traffic conditions and respond accordingly. Do not wait for the system to identify the target or apply the brake, but apply the brake as needed.

### **CAUTION**

- ACC may not react under certain circumstances. For example, when vehicle approaches a stationary obstacle such as a broken-down vehicle or a vehicle stuck in traffic jams, or when a vehicle traveling in the same lane approaches vehicle.
- ACC may not respond to people, animals and vehicles crossing or approaching the vehicle in the same lane.
- When driving through crossroads, speed bumps, steep roads and zebra crossings, or at changing lanes, highway access, ramps or construction sections, it is required to exit ACC for manual driving, lest the vehicle should be automatically accelerated to the set speed, causing traffic accidents.

### **CAUTION**

- ACC can automatically drive the vehicle out after a short stop or confirmation from the driver (control of buttons or accelerator pedal).
   During this period, the driver must ensure that there are no obstacles or other traffic participants (e.g., pedestrians, bicycles, motorcycles, and tricycles) ahead of the vehicle.
- Do not bump the radar sensor and IFC sensor. If the sensor is misaligned due to bumping, the system performance will still deteriorate even after correction and even the system will be shut down.
- If the surface of the radar is dirty or covered by heavy rain, ice, snow, sludge, etc., ACC may not function, and the instrument cluster will display the message "MRR is blocked". After the dirt is cleaned off the sensor surface, ACC function will be reset and return to normal.

### **CAUTION**

- Do not spray the front bumper with car paint at will, as this may cause a decrease in MRR performance.
- Do not spray the logo or attach decorations at will, as this may cause a decrease in MRR performance.

## i NOTE

- ACC can only provide limited brake force, and thus cannot be used for emergency braking.
- Prevent unintentionally placing your foot on the accelerator pedal; otherwise, the ACC cannot function for braking, as the depressing of accelerator pedal will cause excessive control of vehicle speed and distance.
- If ACC fails to function as described in this chapter, do not continue to use it.
   It is recommended to go to the GAC Motor authorized shop for inspection and repair in time.
- When the vehicle is traveling in heavy rain or snow such that ACC is difficult or unable to identify the vehicle ahead, it is required to switch off the ACC.
- If your vehicle is getting closer and closer to the vehicle ahead at a speed higher than that of the vehicle ahead and the braking effect of ACC is unable to stop the vehicle safely, the driver must depress the brake pedal to reduce the vehicle speed.

## i NOTE

- When ACC is on, the ACC status displayed by the instrument cluster display may be overwritten by other functions (e.g., during a call).
- When ACC brakes the vehicle automatically after activation, there will be a sound different from manual braking sound or the brake pedal will be depressed automatically, which is normal. Such sound and pedal action are caused by the operation of the brake system, so there is no need to worry.
- For safety, the stored cruising speed will be deleted after the ENGINE START/STOP button in the "OFF" position.

- You can depress the accelerator pedal at any time to increase the vehicle speed. After the accelerator pedal is released, ACC will readjust the vehicle speed to the previously stored value.
- If the vehicle enters a tunnel, the radar and IFC may enter the blind mode, and ACC may be turned off temporarily.

# 5.4.3 Integrated cruise assist (ICA) system\*

The integrated cruise assist system is abbreviated as ICA. ICA can automatically adjust the distance from the vehicle ahead during cruise control and keep the vehicle traveling in the middle of the lane at the cruising speed of 0 to 130km/h.

ICA detects the relative distance and speed with the vehicle ahead on the same path according to the MMW radar installed on the front of the vehicle and the IFC installed on the front windshield, and detects the lane marking through the IFC.

ICA can improve driving comfort and provide a more relaxed driving experience, such as long-distance driving in smooth traffic on the highway.

### i NOTE

- Please comply with the requirements of laws and regulations, set the cruising speed reasonably, and do not exceed the speed limit when driving for safety.
- Precautions for use of radar and IFC sensors. => See page 195

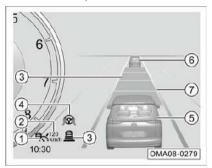
### **Operation Instructions**

- The driver can switch the cruise control mode to ICA by pressing the button ① on the steering wheel.
- After switching on ICA, follow the operation instructions of ACC to turn on or activate ICA. => See page 161



- The cruise control mode can be switched when ACC is turned off/on or activated.
- When ICA has a specific fault not affecting ACC, the cruise control mode will automatically jump back to ACC. At this time, the driver cannot choose to enter the ICA mode, but ACC can still work normally.
- ICA has a cruise control mode memory function. After the vehicle is started, the cruise control mode will be the same as that before vehicle power-off last time.

### Interface description



- ① indicates the longitudinal control status and whether the vehicle ahead is detected.
- The green is displayed when the longitudinal control function is activated, and the white is displayed when the function is in standby status.
- Icon is displayed when the vehicle ahead is detected and icon is displayed when the vehicle ahead is not detected.
- ② indicates the currently stored cruising speed.
- ③ indicates the set cruising distance from the vehicle ahead.

④ indicates the lateral control status and the status of the driver's hands on the steering wheel. A green steering wheel icon is displayed when the lateral control function is activated, and a white steering wheel icon is displayed when the function is in standby status. The hands icon on the steering wheel icon stays on when the driver's hands on steering wheel is detected. If it detects that the driver's hands are off the steering wheel, the hands icon will flash.

- (5) indicates your vehicle.
- ⑥ indicates the detected vehicle ahead.
- 7 indicates the lane marking.

#### Lateral control

When ICA is activated, the lateral control function will be automatically activated if an effective lane marking is detected on both sides.

Lateral control will keep the vehicle traveling in the middle between the lane markings on both sides.

The lateral control will be suppressed under the following conditions:

- Lane marking curvature is too high or missing.
- Under intense driving conditions.
- Turn signal lamp is turned on.
- Hazard warning lamp is turned on.
- Driver turns steering wheel.
- The takeover prompt is given by the system when driver's hands are off the steering wheel for a long time.
- ACC is deactivated. => See page 164

- The ICA can only use limited capability of steering system, so it cannot cover all driving conditions.
   The driver must keep his hands on the steering wheel all the time and drive with care.
- When ICA intervenes in the steering wheel for lateral assist control, the driver can still turn the steering wheel to control the vehicle. When the driver feels that the torque applied by the system is improper, he/she can control and drive the vehicle as his/her attention at any time.

## **Takeover prompt**



When detecting that the steering wheel is out of the driver's hands for a long time, the instrument cluster will prompt "Please hold the steering wheel with hands" and it will display an alarm message and sound with a buzzer.

The driver shall hold the steering wheel with hands immediately after receiving the takeover prompt. Do not panic and avoid turning the steering wheel sharply unnecessarily. When the ICA detects the hand torque applied to the steering wheel, it can recognize that the driver holds the steering wheel with hands, and the

Note that the lateral assist control function of ICA will be suppressed after the steering wheel takeover prompt is issued.

### i NOTE

The condition that the driver's hands are lightly holding the steering wheel may be misinterpreted by the ICA as the steering wheel out-of-hand. In this case, the driver only needs to hold the steering wheel tightly or shake the steering wheel slightly, so that the system can detect the torque applied to the steering wheel. Afterwards, the takeover prompt will be cancelled.

#### **Functional limitations**

Because ICA can only use the limited capacity of the steering system and brake system, ICA cannot maintain an appropriate distance between vehicles or keep the vehicle in the lane under all road conditions.

ICA may incorrectly detect lane markings or fail to detect lane markings, or may incorrectly detect target vehicles or fail to detect target vehicles ahead.

Under the following situations, the system may be affected, mistakenly function or not function even if the function is turned on and shows that it has been activated:

- Poor line of sight caused by, e.g., snow, rain, fog or water spots.
- Dirt or fog on the windshield, or obstruction in front of the IFC on the windshield.
- Too high temperature around the IFC due to direct sunlight.
- Light glare of due to direct sunlight, oncoming vehicles, reflected light from road water-logging, etc.
- Sudden changes in outdoor brightness, such as entering/exiting tunnels.

takeover prompt is canceled. The ICA automatically re-activate the lateral assist.

- Failure to turn on headlamps at night or in the dark tunnel.
- No lane marking, or difficulty in distinguishing the lane marking color from the road surface color.
- Unclear, too thin, worn, blurred or dirt/snow-covered lane markings.
- Too wide or narrow lanes.
- Increased or decreased number of lanes or complicated lane markings.
- More than two lane markings on the left and right sides of the vehicle.
- Marks or objects similar to lane markings on roads.
- Projections of isolation strips or other objects on lane markings.
- Short-term change of markings, such as at ramps or motorway exits.
- Driving on steep slopes or curved roads.
- Close distance from the vehicle ahead or lane markings blocked by the vehicle ahead.
- Severe shaking of the vehicle.

 Special lane markings such as deceleration markings, temporary construction lane markings.

Longitudinal control of ICA is based on ACC. For more limitations, please refer to the relevant sections of ACC. => See page 166

The lateral assist control performance of ICA may be affected under the following conditions:

- The vehicle is overloaded.
- The tire pressure is abnormal.
- The road is uneven.
- There is strong crosswind.
- The driver modifies the parts related to vehicle control.
- The parts related to vehicle control are replaced with non-genuine parts.
- The parts related to vehicle control are improperly assembled.

## **↑** WARNING

- The ICA is only an assistance system and cannot cope with all road, traffic and weather conditions. The driver is responsible for always paying attention to the road conditions and actively controlling the vehicle.
- The driver must always hold the steering wheel and actively control the vehicle. When ICA does not provide proper steering assist or appropriate distance between vehicles, the driver shall intervene timely.
- Before using the ICA, the driver must read through all chapters on this function in the user manual to understand the system limitations of this function. Before using this function, the driver shall be aware of these limitations.
- The ICA is not a collision avoidance system. When the system is not properly controlled, the driver must intervene in.

## **MARNING**

- Improper use or negligence of the ICA may cause accidents. Therefore, the driver should always bear the ultimate responsibility for controlling the vehicle, maintaining an appropriate vehicle speed and distance between vehicles, and keeping the vehicle running correctly in the lane, even if the ICA is being used.
- The ICA doesn't always identify lane markings. The system may fail to identify a lane marking due to bad weather, poor night lighting. water or snow on road, and damaged or blurry lane markings. The system may mistakenly identify certain objects and structures as lane markings due to road damage, road structures such as curb, water or snow on road, and shadows cast on the road. Therefore, ICA may not generate lateral assist torque when needed. or may generate unnecessary lateral assist torque mistake. The driver responsible for always paying attention to the road conditions and actively controlling the vehicle.

# **↑** WARNING

- The ICA can only use limited capability of steering system, so it cannot cover all driving conditions. The driver must keep his hands on the steering wheel all the time and drive with care. The driver must hold the steering wheel or reduce the vehicle speed appropriately on high-speed curves.
- The ICA should be turned on and used on the highway with less traffic. Do not use ICA in urban traffic, intersections, water-logged or snowy roads, bad weather, mountain roads, rough roads and motorway access, etc. Do not use ICA when a trailer is coupled.

# MARNING

- The ICA cannot apply brakes for pedestrians, animals, foreign objects, low-frame trailers or oncoming vehicles.
- ICA cannot address all traffic conditions. For example, the lateral assist control function may be suddenly deactivated under conditions such as high curvature of lane marking before a sharp curve, and roads without lane markings, and in these cases, the driver shall always hold the steering wheel to actively control the vehicle.

# 5.4.4 Forward collision warning system (FCWS)\*

The FCWS assesses the danger level of pre-collision by detecting the relative distance and speed with the vehicle ahead on the same path according to the MMW radar installed on the front of the vehicle and the IFC installed on the windshield and the driver's other operations (such as depressing the brake pedal or accelerator pedal), gives a warning if necessary to remind the driver to take measures to avoid or mitigate a collision in time in case of a collision risk.

# i NOTE

Precautions for use of radar and IFC sensors. => See page 195

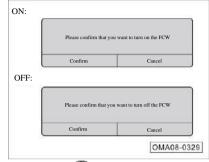
#### Activation and deactivation



When the ENGINE START/STOP button is in the "ON" position, the FCWS is activated by default.

To manually turn it on/off, do as follows:

- Enter the AV system and switch to the "System Settings → Driver Assistance
  → Longitudinal Driving Assistance" interface.
- Press the soft key on the right of "FCW".



- Press the soft key and the previous secondary confirmation window will pop up. Then press "Confirm" to enable or disable the function.
- If the FCWS is turned off separately, the instrument cluster will prompt "FCW function is off"; if the FCWS and the AEB function are turned off at the same time, the instrument cluster will prompt "FCM is off".

# i NOTE

After the FCW is turned off, the system will no longer warn for vehicles and pedestrians.

## Alarm prompt



When the FCWS alarms, there are three types of prompts:

#### 1. Distance alarm

The distance alarm is triggered when the distance from the vehicle ahead is too close, with a normal collision risk, and an icon will flash on the instrument cluster.

## 2. Approaching alarm

When the pre-warning alarm of the current FCW system is triggered, an icon will flash on the instrument cluster and an audible alarm will be issued.

## 3. Short braking

Short braking is triggered in case of a high collision risk, to better remind the driver that the brake shall be applied.

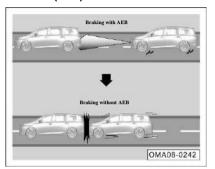
# i NOTE

- The applicable speed range of the FCW is 30 to 150km/h.
- Depressing the accelerator pedal or turning the steering wheel will terminate the FCWS alarm.

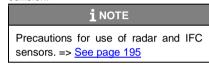
# **∴** WARNING

- The FCWS is impossible to violate the laws of physics. Do not use the convenient functions provided by FCWS to drive at risk.
- The FCWS cannot alert the driver to avoid a collision in all circumstances.
- In a complex driving environment (such as traveling on a circuitous road), the FCWS may give an unnecessary warning.
- If the FCWS issues an alarm, the driver must apply the brake to reduce the vehicle speed or avoid obstacles according to traffic conditions.
- The driver must be ready to control the vehicle by himself at any time.

# 5.4.5 Autonomous emergency braking (AEB)\*



The AEB assesses the danger level of precollision by detecting the relative distance and speed with the vehicle ahead on the same path according to the MMW radar installed on the front of the vehicle and the IFC installed on the windshield and the driver's other operations (such as depressing the brake pedal or accelerator pedal), and intervenes by braking your vehicle if necessary. When a collision risk is detected, the AEB will automatically brake the vehicle. When the driver is braking, while the brake force is insufficient to avoid a collision, the system will automatically increase the brake force to avoid or mitigate the collision.



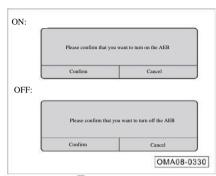
#### Activation and deactivation



When the ENGINE START/STOP button is in the "ON" position, the AEB is activated by default.

To manually turn it on/off, do as follows:

- Enter the AV system and switch to the "System Settings → Driver Assistance → Longitudinal Driving Assistance" interface.
- Press the soft key on the right of "AEB".

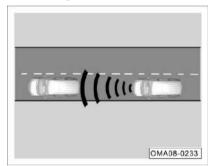


- Press the soft key and the previous secondary confirmation window will pop up. Then press "Confirm" to enable or disable the function.
- If the AEB is turned off separately, the instrument will prompt "AEB function is off"; if the FCWS and the AEB function are turned off at the same time, the instrument will prompt "FCM is off".

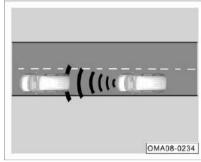
# ${f i}$ NOTE

After the AEB function is turned off, the system will no longer brake vehicles and pedestrians.

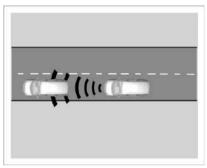
# **AEB** braking level



 Level 1 braking: Short braking is applied when approaching the vehicle ahead.



Level 2 braking: Slight automatic emergency braking is applied in the case of further approach.



 Level 3 braking: Full braking is applied automatically when a rear-end collision is inevitable.

## The AEB must be deactivated when:

- The vehicle is towed.
- The vehicle is on the hub test bench.
- The radar sensor is faulty.
- There is an external force (such as rear-end collision) acting on the radar sensor.

The AEB system may not work when:

- Driving through a sharp curve.
- Pressing the accelerator pedal to the bottom.
- Setting the gearshift lever to a position other than D.
- Turning off the ESP manually.
- The driver doesn't fasten the seat belt.
- The radar sensor is dirty or covered.
- The front windshield around the IFC is dirty or covered.
- Driving in snow, backlighting, or heavy rain.
- There is a narrow vehicle (e.g., a motorcycle) ahead.
- Encountering crossing traffic.
- There is a stationary obstacle ahead (e.g. a broken-down vehicle).
- Facing animals, oncoming and crossing vehicles.
- The detection will be interfered with and performance degraded when affected by the environment, such as under electromagnetic interference or due to the target itself.

# i NOTE

- Depressing the accelerator pedal or turning the steering wheel will terminate the AEB intervention.
- When the AEB is triggered, the vehicle will be braked, and the brake pedal may vibrate, which is a normal phenomenon.
- In a complex driving environment (such as traveling on a circuitous road), the AEB may brake the vehicle unnecessarily.
- When affected by factors such as electromagnetic field interference, the target's own reasons or the environment, detection will be interfered and the performance will be degraded.

## **M** WARNING

The AEB can improve your driving safety, but it is still subject to the limitations of laws of physics. Do not use the assist functions provided by AEB to drive at risk. The driver must always be ready to apply the brake to reduce the vehicle speed or avoid obstacles.

The AEB only provides the driver with limited braking to mitigate collision injuries, and cannot prevent a vehicle accident or injuries on its own. Therefore, when the AEB is working, the driver must apply the brake according to the situation.

The driver must always keep control of the vehicle and take full responsibility for the speed of the vehicle and the distance from other vehicles when the AEB is on.

## **↑** WARNING

The AEB only provides collision mitigation for vehicles/pedestrians detected by the radar and IFC sensor, so there may be no response or a certain delay in the response. Therefore, the driver shall apply the brake if necessary, instead of waiting for the AEB to operate.

AEB systems cannot always clearly identify objects and complex traffic situations. In this case, the AEB system may:

- warn or brake without cause.
- not warn or brake.

Therefore, always pay attention to traffic conditions and do not rely too much on AEB system. The AEB system is only a driving assistance tool and it is the driver's responsibility to maintain a proper distance from the vehicle ahead and to control the speed for timely braking. Prepare for braking or steering if necessary.

# 5.4.6 Pedestrian detection system (PDS)\*

The PDS detects the pedestrians ahead with an MMW radar on the front bumper and an IFC on the windshield glass. It actively helps the driver to avoid or mitigate the collision of pedestrians and correspondingly reduce the risk of accidents in the context of its capacity. When a collision is about to occur, the system will issue an alarm to alert the driver that the vehicle is ready to apply emergency braking, and then will assist in braking and activate the AEB function.

# i NOTE

Precautions for use of radar and IFC sensors. => See page 195

## **CAUTION**

The PDS function cannot replace the driver's subjective driving attention!

# Approaching alarm

If the PDS detects a potential pedestrian collision, it will alert the driver to apply braking through the alarm sound and the alarm lamp on the instrument cluster within the speed range of 30 to 64km/h. The time of alarm varies with the actual traffic condition and the driver's behavior. In the meantime, the vehicle is ready to apply emergency braking at any time.

The approaching alarm function of the PDS function contains the FCWS. For how to turn it on/off, please refer to FCWS. => See page 177

## **AEB**

If the driver responds nothing to the alarm issued by the system, the pedestrian protection system may automatically apply full braking within the speed range of 4 to 64km/h. In case of a potential collision risk, the system will apply braking to decelerate the vehicle and reduce the possibility of an accident.

The autonomous emergency braking function of the PDS function is contained in the AEB. For how to turn it on/off, please refer to AEB. => See page 179

This function can be accurately triggered only when accurate pedestrian information is detected.

# **↑** WARNING

This function cannot detect pedestrians in all situations and the driver shall be responsible for the safety of the vehicle.

# Fault warning of PDS function

 If the PDS function is faulty, the instrument cluster will display the text "PDS function is not available" to remind the driver.

## i NOTE

Because the PDS cannot overcome the limitations of some physical conditions, the its function can not be fully displayed in the speed range specified by the system. Therefore, it is the driver's responsibility to take timely and effective braking behavior. Whether the PDS emits an alarm or can brake or avoid pedestrians with the help of the brake pedal needs to be based on the actual situation.

- The PDS function cannot completely prevent accidents or serious injuries on its own.
- The PDS function may provide unwanted alarms and brake intervention in some complex conditions, such as facing a target similar in shape or size to a pedestrian on a curved main road.

# i NOTE

- When there is a functional failure in the PDS function, there may be unwanted alarm and brake intervention, such as due to misalignment of the angle of radar or IFC sensors.
- If the PDS function triggers the brake, the brake pedal will feel stiff.
- When the driver steps on the accelerator pedal or turns the steering wheel, the automatic brake triggered by the PDS function will be interrupted.
- When the system alerts, there may not be enough time to help the driver avoid a collision.
- If the PDS function has functional abnormalities beyond the above description, for example, the function has been triggered abnormally for several times, please turn off the PDS and go to the GAC Motor authorized shop for inspection and repair in time.

## **↑** WARNING

The driver must be ready to take over control of the vehicle by himself at any time.

Never ignore the warning lamp and the prompt displayed by the instrument cluster, or it may lead to a traffic accident and serious injury.

## **System limitations**

The PDS function is subject to physical and system limitations. For example, it may be unintentionally triggered or delayed due to the driver's interference in some cases. Therefore, the driver must always be alert and take over control if necessary.

The following conditions may cause delayed or non-triggered PDS:

- Driving on narrow curves.
- Full throttle acceleration or rapid vehicle acceleration.
- The assist function is turned off or abnormal.
- The ESP function is manually turned off.
- The vehicle enters ESP control state.

- The IFC or radar sensor is dirty or obscured by foreign objects.
- The vehicle is in reverse.
- The vehicle is in chaotic traffic conditions.
- The vehicle body tows other vehicles.
- A pedestrian stands on a traffic safety lane or curve.
- The pedestrian is completely or partially covered by another object (e.g., a worker holding a ladder).
- Pedestrians in fancy dress (e.g., carnival costumes).
- Poor visibility (e.g., sunset, night, snow and ice, heavy rain, fog).

## 5.4.7 Lane departure warning (LDW)\*

The LDW is designed to reduce accidents caused by unintentional lane departure.

The LDW detects lane markings and road edges on the road through the IFC installed on the front windshield, and detects road quardrail through the MMW radar on the front of the vehicle. At the same time, it analyzes the driver's driving behavior and vehicle movement status. When the driver unconsciously makes the vehicle deviate from the lane due to fatigue, distraction, or a phone call, the system issues a warning or intervenes in turning of steering wheel to assist in corrective steering adjustment. Generally, a warning will be issued or turning of steering wheel will be intervened in when the front wheels cross a lane marking or will cross/hit the road edges.

When the driver selects the assist mode as "Steering" or "Steering and Warning" and the operating conditions of the LDW are met, the system will monitor the torque on the steering wheel. When the driver takes his hands off the steering wheel for a long time, the system will send an alarm to the driver.

### **Activation and Deactivation**



With the ENGINE START/STOP button set to the "ON" position, enter the AV system, switch to the "System Settings → Driving Assistance → Lateral Driving Assistance" interface, and press the → soft key on the right of "LDA" to enable or disable the LDW.

When the system is turned on, the soft key switch on the interface of the AV system turns on, and the status indicator lamp i and on the instrument cluster is on; when the system is turned off, the soft key switch turns off and the status indicator lamp i and on the instrument cluster is off.

The system has a switch state memory function. After the vehicle is started, the switch state will be the same as that before vehicle power-off last time.

## Selecting LDW mode

With the ENGINE START/STOP button set to the "ON" position and the LDW on, select the LDA mode via "System Setting  $\rightarrow$  Driving Assistance  $\rightarrow$  Lateral Driving Assistance  $\rightarrow$  LDA mode" in the AV system.

## 1. Steering

 When "Steering" is selected, the system only intervenes in turning of steering wheel to assist in corrective steering adjustment.

### 2. Warning

 When "Warning" is selected, the system only issues a warning.

## 3. Steering and warning

 When "Steering and warning" is selected, the system will both issue a warning and intervene in turning of steering wheel to assist in corrective steering adjustment.

# i NOTE

The system has a LDW mode memory function. After the vehicle is started, the LDW mode will be the same as that before vehicle power-off last time.

## Alarm prompt

The LDW is triggered only when the assist mode is "Warning" or "Steering and warning".

When the instrument indicates a vehicle speed greater than 60km/h and the system detects at least one valid side of the lane markings, the green on the instrument cluster comes on. This indicates that the system may issue a lane departure warning at this time. When there is only one side of the lane markings, the system alarms only the side of the lane markings.

When the  $\mathcal{G}$  indicator lamp is green, the system will not issue a warning if the vehicle departs from the lane when:

- Depressing the accelerator pedal quickly for acceleration.
- Depressing the brake pedal with greater brake force.
- Turning on the turn signal lamp on the corresponding side.
- Turning on the hazard warning lamp.
- Turning the steering wheel quickly.
- This is a short time since the last alarm.
- Driving continuously on the line or riding the line.

When the A indicator lamp is green, if there is no action mentioned above, and the vehicle unexpectedly departs from the lane, the system will warn the driver, and the lane marking reminder will be displayed through the instrument cluster, accompanied by a beep.

## Steering assist

The departure correction assist prompt of the LDW is only triggered when the assist mode is "Steering assist" or "Steering and warning", and the steering assist is mainly the departure correction assist.

When the instrument indicates a vehicle speed greater than 60km/h and the system detects at least one valid side of the lane markings, the green on the instrument cluster comes on. This indicates that the system may intervene in turning of steering wheel to assist in corrective steering adjustment. When there is only one side of the lane markings, the system only assists in corrective steering adjustment for one side of the lane markings.

When the indicator lamp is green, the system will not intervene in turning of steering wheel to assist in corrective steering adjustment when:

- Depressing the accelerator pedal quickly for acceleration.
- Depressing the brake pedal with greater brake force.
- Turning on the turn signal lamp on the corresponding side.
- Turning on the hazard warning lamp.
- Turning the steering wheel quickly.
- This is a short time since the last alarm.
- Driving continuously on the line or riding the line.
- The system prompts the driver to take over if his/her hands are off the steering wheel.

When the system intervenes in turning of steering wheel to assist in corrective steering adjustment, the driver can feel the torque applied by the system on the steering wheel, and the instrument cluster will display the lane marking prompt.

# **Takeover prompt**



When the LDW detects that the steering wheel is out of the driver's hands for a long time, the system will issue a takeover prompt, and the instrument cluster will display an alarm message and sound with a buzzer.

The driver shall hold the steering wheel with hands immediately after receiving the takeover prompt. When the system recognizes that the driver holds the steering wheel with hands, the takeover prompt is canceled. The LDW will be automatically reactivated.

# i NOTE

The condition that the driver's hands are lightly holding the steering wheel may be misinterpreted by the system as the steering wheel out-of-hand. In this case, the driver only needs to hold the steering wheel tightly or shake the steering wheel slightly.

### Other prompts

When the system detects that the camera is blind, "LDW is temporarily unavailable" will pop up on the instrument cluster.

Usually, this is due to dirty front windshield or IFC exposed to low sunlight. The LDW will not be damaged due to this and needs not to be checked.

The driver can try to wipe the front windshield with water spray.

When a fault is detected, the message reading "Please check the LDW" will pop up on the instrument cluster, and the red id indicator lamp will come on.

# i NOTE

If the message reading "Please check the LDW" pops up on the instrument cluster, it indicates that the system is faulty, please go to the GAC Motor authorized shop for inspection and repair in time.

#### **Functional limitations**

Even if the LDW is turned on and working, it may detect lane marking incorrectly or does not detect it at all due to unavoidable environmental factors and conditions. The system may be affected or fail to work under the following conditions:

- Poor line of sight caused by, e.g., snow, rain, fog or water spots.
- Dirt or fog on the windshield, or obstruction in front of the IFC on the windshield.
- Too high temperature around the IFC due to direct sunlight.
- Light glare of due to direct sunlight, oncoming vehicles, reflected light from road water-logging, etc.
- Sudden changes in outdoor brightness, such as entering/exiting tunnels.
- Failure to turn on headlamps at night or in the dark tunnel.
- No lane marking, or difficulty in distinguishing the lane marking color from the road surface color.

- Unclear, too thin, worn, blurred or dirt/snow-covered lane markings.
- Too wide or narrow lanes.
- Increased or decreased number of lanes or complicated lane markings.
- More than two lane markings on the left and right sides of the vehicle.
- Marks or objects similar to lane markings on roads.
- Projections of isolation strips or other objects on lane markings.
- Short-term change of markings, such as at ramps or motorway exits.
- Driving on steep slopes or curved roads.
- Close distance from the vehicle ahead or lane markings blocked by the vehicle ahead.
- Severe shaking of the vehicle.

Under the following conditions, the performance of the system may be affected while it intervening in turning of steering wheel for corrective steering adjustment:

- The vehicle is overloaded.
- The tire pressure is abnormal.
- The road is uneven.
- There is strong crosswind.
- Parts related to vehicle control are modified or replaced with non-genuine parts.
- The parts related to vehicle control are improperly assembled.

## i NOTE

When the LDW intervenes in turning of the steering wheel for corrective steering adjustment, the driver may still turn the steering wheel to control the vehicle. When the driver feels that the correction torque applied by the system is improper, he/she can control and drive the vehicle according to his/her intention at any time.

#### **CAUTION**

- When the LDW detects an unintentional departure from the lane, it will issue a warning or intervene in turning of the steering wheel for corrective steering adjustment. Do not panic or turn the steering wheel fiercely if unnecessary.
- When the LDW detects that the driver's hands are off the steering wheel for a long time, it will issue a warning. Do not panic or turn the steering wheel fiercely if unnecessary. The driver can hold the steering wheel tightly with both hands for normal driving.
- When you select the LDW mode as "Warning", the system will not issue steering intervention, and when you select the mode as "Steering", the system will not issue a graphic and audible alarm.

# MARNING

- The LDW is just an assist system and cannot actively control the vehicle to change lanes or keep it in the lane. The driver must always check the road conditions, hold the steering wheel and actively control the vehicle.
- The improper use or negligence of LDW may cause accidents. Do not rely on LDW or try to drive dangerously with the help of LDW.
- Do not color the front windshield of the vehicle or add coatings that do not conform to the specifications.
   Any additional items that affect the detection range of the IFC may affect the normal operation of the system.
- If the system camera cannot detect the lane or the vehicle speed is less than 60km/h, even if the vehicle deviates or leaves the lane, the system will not issue a warning.

## **MARNING**

- When the LDW issues a warning, do not panic and do not suddenly turn the steering wheel to prevent the vehicle from losing control.
- Do not place objects that reflect light on the instrument panel, because these objects are not only easy to dazzle the driver, but also may reflect light into the IFC field of view of the system, affecting the normal operation of the function.
- Avoid strong impact, moisture and heat to the IFC, and prohibit disassembling and assembling the parts by yourself.
- Improper or negligent use of the LDW may cause accidents. The driver should concentrate on observing the road and traffic conditions and drive carefully.

# **↑** WARNING

- LDW with curb recognition also uses the signal from the MMW radar sensor to pay attention to bumpers or vehicle bodies to avoid collisions or modifications that may affect the normal operation of the LDW.
- Do not color the front windshield of the vehicle or add coatings that do not conform to the specifications.
   Any additional items that affect the detection range of the IFC may affect the normal operation of the system.
- The LDW can only adjust limited steering angle, so it can't promise that the vehicle will be driven back into the lane under any circumstances.

# **MARNING**

- The sound inside the vehicle or the noise outside the vehicle may prevent you from hearing the warning buzzer, so it cannot guarantee that you will be reminded of the LDW under any circumstances.
- The LDW does not always recognize lane markings or lane edges. Due to bad weather, poor night lighting, accumulated water and snow on the road surface, broken or blurred lane markings, etc., lane markings or lane edges may be missed or misidentified. This may cause missed and false triggering of the function, so the driver must concentrate on observing the road and traffic conditions and drive carefully

# 5.4.8 Intelligent headlight control\*

The IHC detects the traffic and environmental factors in real time via the IFC sensor installed on the windshield and automatically switches between the low beam and high beam. For example, if the driver activates the IHC during driving on a road with poor lighting at night, the IHC will switch on the high beam automatically when it is detected that the operating conditions of high beam are met, and switches the headlamp from high beam to low beam when an approaching vehicle or a following vehicle is detected close.

## i NOTE

Fog, heavy rain and other conditions that may be self-dazzling will request to turn on the low beam.

## **↑** WARNING

The IHC is a driver assistance function, which can help you select the lighting way best suitable for the actual condition. The driver shall always be responsible for manual switching between the high and low beams under the traffic and environmental conditions.

- The IHC may not be able to correctly identify all driving environments and cannot work normally in some environments.
- If the IFC is blocked by dirt, stickers, ice and snow, etc., the IHC may not work.
- If the vehicle lighting system is changed (for example, the headlamp is modified), the IHC performance may be degraded or the function may not be available.
- In the case of oncoming non-motor vehicles such as bicycles and electric bicycles or pedestrians, the IHC system shall be turned off in time to prevent dazzling.

## **Activating IHC**



When the ENGINE START/STOP button is in the "ON" position, enter the "System Settings → Body Accessories → Exterior Light" interface on the AV system, and press the soft key on the right side of "IHC" to enable or disable the IHC.

# i NOTE

The setting has the memory function, so that it will work in the state before last shutdown when the vehicle is restarted.

- After the IHC function is enabled, when the headlight switch is turned to the AUTO position, the IHC is in the ready state, and the indicator lamp on the instrument cluster will turn white.
- When the IHC automatically switch to the high beam, the indicator lamp on the instrument cluster will turn blue.
- When the driver forcibly turns on the high beam manually, the IHC will be in the suppressed state, and the ≣O indicator lamp on the instrument cluster will turn blue.
- When the driver turns off the IHC function, or turns the headlight switch to other positions than AUTO, the high beam indicator lamp on the instrument cluster will be the same as the ordinary high beam display scheme.

# **i** NOTE

- On the instrument cluster, the intelligent headlight control indicator lamp and the ordinary high beam indicator lamp use the same position.
- The high beam and high beam flash functions can be manually turned on/off at any time.

## **IHC** suppression conditions

The high beam will be suppressed in the following cases:

- The instrument cluster shows a vehicle speed value less than 15km/h.
- The fog lamps are turned on.
- The wiper is turned on to HI position for a period of time.
- The ambient light is bright.
- The street lamp, vehicle ahead or an oncoming vehicle is detected.

The IHC will disable the switching of high and low beams in the following cases:

- The lateral acceleration or yaw velocity is too high.
- High dynamic state (ABS or ESP activated).
- The instrument cluster shows a vehicle speed value less than 35km/h.
- Turn signal lamp is turned on.

#### **Functional limitations**

When the IHC is activated, the automatic switching of high beam and low beam may be delayed or even unavailable when:

- The windshield surface in front of the IFC is covered with ice, snow, fog, dirt, sticker or other objects.
- There is highly reflective object on a low-lit street.
- The vehicle encounters pedestrians or bicycles on a road or a roadside with poor lighting.
- The light of the front oncoming vehicle is blocked by a crash barrier, a high central road fence, a green belt, etc.
- The brightness of the tail lamps of the lead vehicle is low or does not comply with national standards when the vehicle is following the lead vehicle.
- The vehicle encounters another halfcovered incoming vehicle in case of sharp turns/mountain roads/low-lying ground.
- The vehicle is driven on a slope or bumpy road.
- The vehicle is driving in a heavily rainy, snowy or foggy day.
- The IFC is damaged or its power supply is cut off.

## 5.4.9 Traffic sign recognition (TSR)\*

Traffic sign recognition is abbreviated to TSR. TSR provides the driver with speed limit information by detecting speed limit signs ahead on the road through the IFC installed on the front windshield and according to data from the navigation of the AV system, and alerts the driver to overspeed when the speed limit is exceeded.

#### Activation and deactivation



Enter the AV system, switch to the "System Settings → Driving Assistance → Longitudinal Driving Assistance" interface, and press the ③ soft key on the right of "TSR" to enable or disable the TSR function.

After this function is turned on, when there is a speed limit sign on the road, the instrument cluster will display the speed limit sign, and when the actual speed of the vehicle is slightly higher than the speed limit sign value, the speed limit sign on the instrument cluster will keep flashing.

# i NOTE

The system has a switch state memory function. After the vehicle is started, the switch state will be the same as that before vehicle power-off last time.



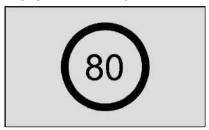
Enter the AV system, switch to the "System Settings → Driving Assistance → Longitudinal Driving Assistance" interface, and press the soft key on the right of "Speed alarm tone" to enable or disable the speed alarm tone function.

After the speed alarm tone function is turned on, when the actual speed of the vehicle is slightly greater than the speed limit value indicated by the instrument, the speed limit sign on the instrument cluster will keep flashing, accompanied by audible alarm.

# i NOTE

- The system has a switch state memory function. After the vehicle is started, the switch state will be the same as that before vehicle power-off last time
- The speed alarm tone function can be turned on only after the TSR function is turned on.

## Display interface description



A normal speed limit is identified, including but not limited to general speed limit sign, combined speed limit sign, divided lane speed limit sign, electronic eye speed limit, and interval speed limit.

### **Functional limitations**

The TSR, even activated, may involve wrong or failed detection of speed limit sign due to inevitable environmental factors and conditions. The system may be affected or fail to work under the following conditions:

- The IFC is blocked or interfered with bright light.
- At night or in the tunnel with weak light, the headlamp is not turned on or the headlamp cannot fully illuminate the speed limit sign.

- The speed limit sign is partially or completely obscured.
- The speed limit sign is worn, blurred or stained.
- The speed limit sign is not properly placed, such as twisted and tilted.
- The speed limit sign is obstructed by the vehicles in the adjacent lane or obstacles.
- The speed limit has been changed due to temporary road construction.
- Navigation data is not updated online in time or inaccurate.
- The road is not standardized, and other road signs are misidentified as speed limit signs.
- Road speed limit information for other vehicles is output due to inaccurate navigation and positioning.

# **MARNING**

- The TSR function can only recognize the speed-related signs, not other road signs.
- The TSR can only recognize the maximum speed limit for this road.
   Do not rely on the TSR to determine the appropriate driving speed, but always drive within the safe speed range according to the speed limit and road conditions.
- The TSR can not work under all conditions. The driver shall always assume the ultimate responsibility for safe driving and comply with applicable laws and road traffic rules.

# 5.4.10 Radar and IFC sensor MMW radar sensor

The MMW radar sensor is installed in the middle of the front bumper grille to monitor the traffic conditions and detect the front vehicles at a certain distance from the vehicle.

The radar sensor must be adjusted and calibrated under the following conditions:

- The mounting bracket of the MMW radar sensor has been removed and installed.
- The MMW radar sensor is removed and then refitted.
- The toe or rear wheel camber is adjusted during the four-wheel alignment.
- The vehicle has a collision.

# i NOTE

- Special tools and equipment are required in adjustment and calibration of the MMW radar sensor. If adjustment and calibration of the MMW radar sensor is required, please go to the GAC Motor authorized shop for relevant operation.
- When the MMW radar sensor fails or is misadjusted, it may affect the ACC, ICA, FCWS, AEB and PDS.

# Special instructions on MMW radar sensor

The MMW radar sensor is installed in the front of the vehicle. No obstacles shall be present within the detection range of the MMW radar sensor. Do not install obstacles such as license plate frame when installing the front license plate. Otherwise, the detection performance of the MMW radar sensor will be affected, causing the ACC, ICA, FCWS, AEB and PDS to be unable to function.

#### **CAUTION**

- If the MMW radar sensor is dirty, blocked by the license plate frame, or covered by heavy rain, ice, snow, and mud, the related functions of the radar sensor may not work and the instrument cluster will give disable/fault indication for these functions. To restore these functions to normal, clean the dirt.
- When there is a strong reflection on the MMW radar ultrasonic wave (e.g., in parking lot), the related functions of the MMW radar sensor may be affected.

#### **CAUTION**

- It is prohibited to paste or add stickers, driving assistant lights, license plate frames or other similar objects in front of and around the MMW radar; otherwise, it may affect the relevant functions of the MMW radar sensor.
- It is recommended that the snow on the sensor is removed with a brush and the ice on the surface is removed with an insoluble de-ice spray.
- Maintenance of the front body of the vehicle may cause change in the radar sensor direction and affect related functions of MMW radar (ACC/ICA/FCWS/AEB). Therefore, please go to the GAC Motor authorized shop for maintenance in time.

## **CAUTION**

- If the MMW radar sensor is damaged or the direction changes, please turn off MMW radar related functions (ACC/ICA/FCWS/AEB) and go to the GAC Motor authorized shop in time to recalibrate the MMW radar sensor.
- The direction of the MMW radar sensor may change due to vibration, for example, the part near the front bumper radar collides with the roadside/flower bed. Change of the direction of the sensor may affect the performance of MMW radar related functions or even cause abnormal deactivation of the system.

#### **IFC**

An IFC is installed on the upper part of the front windshield to detect the surrounding environment. It can identify pedestrians not blocked up to 80m away from the vehicle (in case that the environmental factors such as lighting are ideal) with a pedestrian detection height of not less than 0.8m. The IFC sensor must be calibrated under the following conditions:

- The front windshield or camera mounting bracket is removed and replaced.
- The IFC sensor is removed and replaced.

# i NOTE

If only the IFC fails, the ACC, ICA, LDW, FCWS, AEB and IHC will fail as well.

# i NOTE

- The calibration of the IFC sensor requires the use of special tools and equipment. If it is necessary to calibrate the IFC sensor, it is recommended to go to the GAC Motor authorized shop for related work.
- When the IFC sensor fails or is misadjusted or blocked, the normal use of the ACC, ICA, FCWS, AEB, LDW, IHC and other functions may be affected.

## **CAUTION**

 Poor lighting conditions, niaht. backlight, heavy rain, mist, ice, snow or sludge may affect the IFC, leading interruption/performance degradation and even failure of FCWS, ACC, AEB, LDW, IHC and PDS. In this case, the instrument cluster will display alarm messages to intelligent relevant drivina assistance such as "The MRR is blocked". "The sight of the front camera is blocked", "Please check the LDA". "Please check the cruise control system", "Please check the FCM", etc.

#### **CAUTION**

 Obstacles such as dust, sediment, mist, ice, snow, or sludge on the front windshield glass may block the sight of the IFC. If this occurs, the systems such as LDW, FCWS, AEB, ACC and IHC will be disabled. In this case, please wipe the area around the IFC on the front windshield or turn the A/C to the defrost mode. Thereafter, the system will return to normal.

#### **CAUTION**

- If the IFC interference factor disappears, the PDS function will work normally again.
- Low light conditions at sunset or night may affect the functioning of PDS. It is prohibited to block the sight around the IFC with stickers or opaque objects; otherwise, the PDS function may not work properly.
- Please confirm whether there is any obstruction in the IFC area before driving the vehicle.
- Keep a clear view of the IFC sensor on the front windshield.

## 5.4.11 Cab monitoring system\*

The cab monitoring system monitors the driver and passengers' facial features and behavioral actions through two cameras installed on the driver's left front (A pillar) and the cover of the interior rearview mirror. respectively, and achieves functions such as fatigue relief, distraction reminder, distraction reminder at highway intersections, intelligent ventilation, call volume reduction, song switching by gestures, map switching by gestures, mood music, collection by a heart gesture, and child care.

# i NOTE

Some vehicle models are equipped with intelligent cockpit configuration, except for the photos actively taken and saved by personnel in the vehicle, all the image information collected by the system will not be saved and uploaded.



### **Activation and deactivation**

When the vehicle power supply is in "ON" position or the engine is started, enter by clicking the "Intelligent Perception" APP on the multi-function display, and set the subdivision reminder of the corresponding monitoring function to open or close through the soft switch.

#### Reminder mode

## 1. Fatigue relief

The cab monitoring system can detect the fatigue of the driver as: Mild fatigue, moderate fatigue and severe fatigue.

- When mild fatigue is triggered, the system will send a voice message to remind the driver to drive safely.
- When moderate fatigue is triggered, the system will send a voice message to remind you "Master, I notice that you are already very tired. I'll play you a song to cheer you up, do you like it?" And it will pop up a box. If the user clicks "Yes" or fails to click the box within the time limit, it will play waking music; if the user clicks "No", it will not respond.
- When severe fatigue is triggered, the system will send a voice message to remind you "Master, you have dozed off. For your driving safety, may I turn on the awake mode for you?" And it will pop up a box. If the user taps "Yes" or fails to tap the box within the time limit, it will play waking music, and turn on the air conditioning and AC cooling; if the user clicks "No", it will not respond.

#### 2. Distraction reminder

 If the cab monitoring system detects that the driver is distracted, the system will send a voice message to the driver, "Master, please pay attention."

## i NOTE

The voice reminder will not be repeated, and the alarm will not be activated again within 6 minutes after the first reminder.

#### 3. Call volume reduction

- When the main driver calls but does not use the in-vehicle Bluetooth, the system will pop up a box and send a voice reminder "Do not make phone calls while driving, please use the invehicle Bluetooth for calling" (the box will disappear after 5s), and reduce the volume and air conditioning wind speed.
- When the co-driver calls but does not use the in-vehicle Bluetooth, the system will pop up a box to remind "Provide you with a comfortable conversation environment" (the box will disappear after 5s), and reduce the volume and air conditioning wind speed.

- After the call is over, if the media volume and air conditioner wind speed are reduced during the response, the volume and air conditioner wind speed will be restored to the state before the response. If manually adjusted, they will not be restored.
- 4. Distraction reminder at highway intersections
- When the driver is driving on the highway, the navigation information shows that the driver is about to go down the highway and exit the circular road, if the system detects that the driver is distracted, it will remind him.
- 5. Intelligent ventilation
- When it is triggered by smoking, the system will send a voice message to remind "Smoking is detected in the front row, so the system will automatically turn on ventilation" pop up a box. If the user taps "Yes" or fails to tap the box within the time limit, the air conditioner will be turned on and set to fresh air and the negative ion function will be turned on. If the user taps "No", it will not make any response.

 After the smoking ventilation is triggered, if no smoking is monitored for a period of time, the original state of the air conditioner will be restored.

#### 6. Mood music

When the driver or passenger wakes up the voice assistant and tells it that there is a need to listen to songs but no song information is specified, the cab monitoring system will analyze whether the driver or passenger's current mood is natural, happy or unhappy according to the facial state characteristics of the driver and passenger, and broadcast the following voice and play the corresponding type of songs:

- Natural: "OK, master. At the end of words is music, please listen to it."
- Happy: "OK, master. Music is our simplest happiness, please enjoy the ocean of music."
- Unhappy: "OK, master. Music is the cure for all unhappiness, please enjoy it."

## 7. Song switching by gestures

When the music is turned on, within the visual range of the surveillance camera in the vehicle, if the driver and passengers point five fingers to the front of the vehicle:

- Slide your hand from right to left and the music will automatically jump to the previous song.
- Slide your hand from left to right and the music will automatically skip to the next song.

## 8. Map switching by gestures

When the map is opened, within the visual range of the surveillance camera in the vehicle, if the driver and passengers point five fingers to the front of the vehicle:

- Slide your hand from right to left, and the map interface will switch from the multifunction display to the instrument screen.
- Slide your hand from left to right, and the map interface will switch from the will instrument screen to the multifunction display.
- 9. Collection by a heart gesture
- When the screen is in the music playing interface, you can make a heart gesture to automatically collect songs.

#### 10 Child care

- When the vehicle music is playing, if a child is identified in the vehicle, the system will recommend and play children's songs for the child.
- If the system recognizes a child sitting in the front row, a safety warning/advice will be given.
- Adults in the front row can open the camera to see the coverage of the rear screen, without looking back/adjusting the rearview mirror.

## Working conditions

- The face can be clearly detected by the system.
- The system is initialized.
- Power supply of the vehicle is normal.
- Fatigue, distraction reminder and main driver calling reminder need a vehicle speed of more than 30km/h.

# **i** NOTE

- When the cab monitoring system detects the face or behavior of the driver and passengers, it needs to operate within the effective range of the camera (that is, the camera can clearly identify the full-face features and the behavior above the waist of the driver and passengers).
- If it is not recognized due to invalid operating range, please adjust your position or posture.

#### False alarm

- Situations where false alarms can occur: The vehicle is on a curve; the driver is in the process of turning; the vehicle enters and exits the tunnel; the camera is blocked.
- In some cases, such as loss of face monitoring due to strong sunlight directly on the face, and seat or steering wheel adjustments, performance may degrade.
- The system uses an infrared camera, which may be interfered with by certain sunglasses and cause performance degradation.
- If the camera is interfered with, the performance of the system will degrade.

## i NOTE

If any of the following conditions are met, the system will automatically return to the normal working state:

- The camera re-identifies the driver's face.
- The driver turns off the power and restarts the vehicle.

## **CAUTION**

After the function enters the working mode, due to the characteristics of the fatigue algorithm, the fatigue monitoring takes 1min to complete the initialization, during which the function will not work.

## **↑** WARNING

- Even with a cab monitoring system, you still assume the responsibility to focus on driving the vehicle carefully.
- If you feel tired, take regular breaks as needed and don't wait for the system to warn you.
- Some special circumstances may cause the system to issue a warning even if you don't feel tired, such as closing your eyes for a certain amount of time.
- The system cannot guarantee that every driver can be accurately identified, and some drivers' facial features may not be accurately obtained.
- The system does not recognize the need for rest in all cases.

## **CAUTION**

- Please comply with the national laws on road traffic safety and relevant implementing regulations to drive safely.
- Do not block the driver surveillance camera on the left front (A pillar) and the in-vehicle surveillance camera above the interior rearview mirror.
- Do not use decorative pieces and other objects to cover the left front A pillar and the upper cover of the interior rearview mirror, or install any other parts on the left front A pillar and the upper cover of the interior rearview mirror. The left front A pillar and the upper cover of the interior rearview mirror contain sophisticated detectors that may be damaged or fail to correctly detect the driver's realtime status in case of above operations.

#### **CAUTION**

- The function of the cockpit monitoring system relies on a clear picture of the status of the driver and passengers, and in some cases (strong direct sunlight, seat or steering wheel adjustments, front seat occlusion of the rear passenger's face), the driver and passenger monitoring data will be incomplete and may result in performance degradation.
- After the driver response function opens the detection, it takes a certain amount of time to complete the initialization work, during which the monitoring function will not work.
- · Do not drive when tired.
- At present, only some functions of the intelligent cabin are displayed, and new functions will be added through OTA, and existing functions will be optimized and upgraded.
- If the camera does not work, power off the device and restart the vehicle. If the system still does not work normally, it is recommended to go to the GAC Motor authorized shop for inspection and repair in time.

# 5.4.12 Tire pressure monitoring system (TPMS)

The TPMS monitors the pressure and temperature of the tire and displays current pressure and temperature information on the instrument cluster. In case of tire anomalies such as low pressure, high pressure, rapid air leakage and high temperature, the instrument cluster will show warning messages.

If the vehicle has not been used for more than 7 days or the battery has been disconnected, when the ENGINE START/STOP button is in "ON" position, the tire pressure and temperature will be displayed as "---" on the instrument cluster, and after the vehicle speed reaches above 25km/h for several minutes, the real-time tire pressure and temperature will be displayed on the instrument cluster.

## Alarm description

- If the tire pressure is higher than 330kPa, the TPMS indicator lamp comes on, and the alarm message on the instrument cluster display indicates that the tire pressure is high; when the tire pressure drops below than 300kPa, the fault is eliminated and the TPMS indicator lamp goes out.
- If the tire pressure is lower than 75% of the normal set value, the TPMS indicator lamp comes on and the alarm message on the instrument cluster indicates that the tire pressure is low; when the tire pressure (cold tire pressure) rises to the normal set value, the fault is eliminated and the TPMS indicator lamp goes out.
- If the tire pressure keeps dropping at a rate more than 30kPa/min, the TPMS indicator lamp comes on and the alarm message on the instrument cluster display indicates that the tire has air leakage; when the vehicle is powered on again, the fault is eliminated and the TPMS indicator lamp goes out.
- If the tire temperature is higher than 85°C, the TPMS indicator lamp comes on, and a text alarm on the instrument cluster indicates that the tire temperature is high; when the tire temperature drops to 80°C, the fault is eliminated and the TPMS indicator lamp goes out.

# i NOTE

- Partial installed electronics may prevent the TPMS system from functioning properly.
- When the tire has high temperature, high pressure, low pressure, rapid air leakage failure, the instrument cluster will issue an early warning, and display the location of the corresponding faulty tire in a loop; when the TPMS system is faulty, the instrument cluster will issue an early warning, and the message "Please check the TPMS" will be displayed in a loop.
- When there is a high temperature alarm, it is recommended to stop and rest until the tire temperature is reduced before continuing to drive.
- If the driving alarm record has not been cleared when stopping the vehicle, during the next driving, the alarm will still exist, and the pressure and temperature are displayed as "---". However, when the speed exceeds 25km/h, the receiver will receive updated data and update, and the alarm will be eliminated.

# i NOTE

- If a spare tire or a new tire is used, because the tire pressure sensor is missing, the low tire pressure alarm does not disappear while you continue to drive. Please do not interpret that as abnormal tire pressure.
- After replacing the tire pressure sensor or rotating the tires, you do not need to go to the GAC Motor authorized shop to for re-learning and calibration, and the TPMS can automatically complete the learning and calibration in the next few driving cycles, provided that the tire pressure sensor is correctly installed for the model.

# 5.5 Parking assist system (PAS) 5.5.1 Reversing parking aid (RPA)

The RPA measures the distance between the vehicle and an obstacle via four ultrasonic sensors on the rear bumper, which send and receive ultrasonic waves reflected from obstacles.

### Activation and deactivation

 The RPA will work when the vehicle's EPB is released, the gearshift lever is set to "R" position, and reversing speed is slower than 10km/h.

The RPA will stop working when the vehicle runs at a speed faster than 12km/h, or the gearshift lever is moved out of "R" position.

# Dynamic view



The dynamic view on the display shows the distance between the vehicle and the obstacle. In the view, the outermost sector is yellow, the middle and innermost sectors gradually turn to orange and red. Radar sectors of colors corresponding to the ranges of distance signal values provided by the radar sensors are displayed, while the other radar sectors are not.

The change of the dynamic view is synchronized with that of the distance audible alarm.

\_

Distance to obstacle				Alarm laval
Rear left sensor	Rear right sensor	Middle sensor on rear left	Middle sensor on rear right	Alarm level message
-	-	90 to 150cm	90 to 150cm	Level 1
-	-	60 to 90cm	60 to 90cm	Level 2
30 to 60cm	30 to 60cm	30 to 60cm	30 to 60cm	Level 3
Less than 30cm	Less than 30cm	Less than 30cm	Less than 30cm	Level 4

#### Distance audible alarm

The audible alarm changes with the distance between the obstacle and the rear bumper, and, meanwhile, the color displayed on the AV system display also changes accordingly. The system will make audible alarm when the vehicle approaches any obstacle. The closer the vehicle is to the obstacle, the shorter and quicker the alarm will be. The system will sound a continuous audible alarm when the vehicle is very close to the obstacle. If the vehicle goes on approaching the obstacle in this case, the system cannot detect the obstacle any more.

#### Distribution of radar sensors



The radar sensors are installed on the rear bumper cover.

#### **CAUTION**

- Always keep the surfaces of the radar sensors clean and never cover the radar sensors.
- To ensure the function of the radar sensors, they should be kept clean and free from ice.
- When cleaning the radar sensor surface, use a soft wet cloth to avoid scratching the surface.

# MARNING

- The RPA cannot replace the driver's observation of the surrounding environment. The driver should concentrate and reverse the vehicle safely according to the actual situation.
- The radar sensor has a blind spot when detecting obstacles. When reversing, the driver must pay attention to observing to avoid accidents.
- When reversing in a narrow place or uphill, the radar sensors may not detect railings, trees, or slope surfaces, which is normal.
- When the reversing speed is fast, the detection accuracy of the radar sensors will decrease. It is recommended that the speed not exceed 10km/h. When the RPA sends the continuous audible alarms, it indicates that the vehicle is extremely close to the detected obstacle, and reversing shall be stopped immediately to prevent an accident.

## **M** WARNING

- When cleaning the radar sensors with the high-pressure cleaner, it shall be short-time and gentle, and the distance between the nozzle and the sensors shall be at least 30cm.
- If water drops are on the surface of the radar sensors, the sensitivity of the sensors will reduce. Wiping off them can restore the sensitivity of the sensors
- The surface of some subjects may not reflect the signal from the radar sensors, so the radar sensors cannot detect such subjects or people wearing such clothing.
- Noise sources outside the vehicle may interfere with the radar sensors, preventing it from detecting any target.
- The radar sensors are precision components. Do not disassemble or repair them without permission.
   Otherwise, GAC Motor will not assume any responsibility for the damage arising therefrom.

## 5.5.2 Reverse image system\*

The reverse image system can cover the video at a wide angle up to 130° and display a wide-range image behind the vehicle on the AV system display to allow the driver to know various complex road conditions behind the vehicle and improve the safety of reversing.

## **Activation and deactivation**

With the ENGINE START/STOP button set to the "ON" position and the gearshift lever shifted to the "R" position, the reverse image system will automatically start to work, and the AV system display will start to display the rear image and the dynamic trajectory.

When the gearshift lever is shifted out of "R" position, the reverse image system will exit and the AV system will exit the reverse image display.

## **↑** WARNING

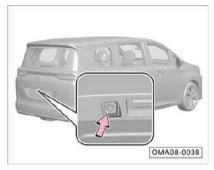
The reverse image system cannot take the place of the driver's observation of the surrounding environment. The driver shall focus on safe reversing and position adjustment according to the practical conditions.

## Dynamic trajectory



The display shows the wheel trajectory and the body driving trajectory.

# Charge-coupled device (CCD) camera



CCD camera is installed next to the license plate lamp.

## **↑** WARNING

 The CCD camera has blind spots, for example, it may not detect young children or small pets.
 Therefore, the driver is required to pay special attention to the young children or small pets around the vehicle during reversing.

# **∴** WARNING

 The CCD camera may also not be able to recognize the vertical objects at higher position, such as wall flange.

### **CAUTION**

- Always keep the CCD camera surface clean. Clean the CCD camera surface with a piece of soft wet cloth to avoid scratching it.
- Do not wash the CCD camera with high-pressure cleaner for a long time, and keep a distance of at least 30cm from the CCD camera during cleaning.
- Do not cover the CCD camera.

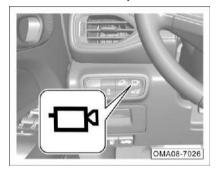
# 5.5.3 Around view parking system (AVPS)\*

The AVPS collects images of front, rear, left and right, of the vehicle, integrates the images into a 360° bird's eve view of environment around the vehicle, and shows the view on the AV system display, thereby providing the driver with information on the surrounding environment of the vehicle and reducing blind spots during driving. In addition, it can take the parameters such as steering wheel angle and vehicle dimensions into consideration to predict the vehicle's motion trajectory as well as superimpose the predicted track on the panoramic image to provide the driver with full information on the vehicle's direction of traveling, helping the driver to determine whether reversing is safe.

#### Activation and deactivation

- With the ENGINE START/STOP button in the "ON" position, the system can be activated/deactivated via the gearshift lever:
- When the gear is shifted to "R" position, the system will be activated automatically.

When the gear is shifted out of "R" position and the driver has no relevant operation, the system will automatically exit after about 30s by default.

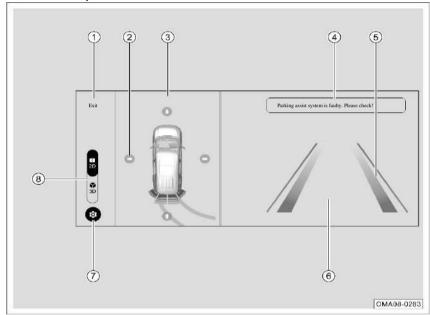


- With the ENGINE START/STOP button in the "ON" position, the system can be activated/deactivated by pressing the button:
- Press the button to turn on the button light and activate the system.

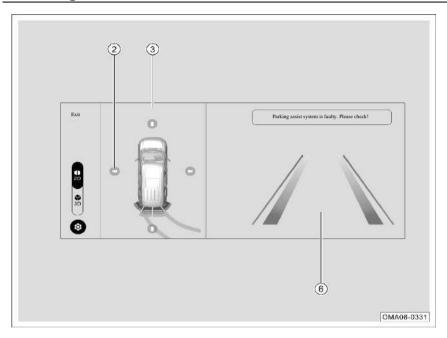
# i NOTE

- When the system is turned on, the AV system will display images taken around the vehicle and corresponding guide lines.
- If the forward speed is greater than 20km/h, the system will be automatically deactivated.
- The system will automatically switch off when the vehicle (running at a speed of zero) is in non- "R" position and the system is activated for more than 30s.
- If the AV system is not completely activated, the system cannot function properly.

### Interface description



- ① Exit soft key
- 2 Angle prompt
- ③ Mosaic image
- 4 Pop-up message window
- ⑤ Dynamic trajectory
- 6 Single view
- ⑦ Setting
- ® 2D/3D view switching

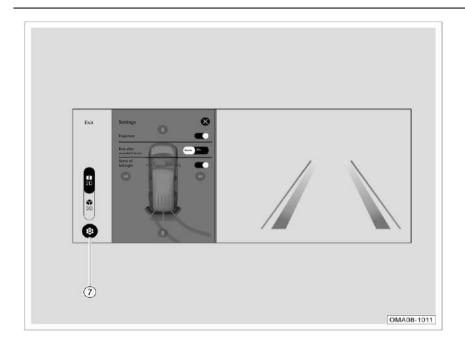


2D view will be accessed when the system is turned on:

 If you touch the front, rear, left and right of the vehicle in ③ Mosaic image or ② Angle prompt, ⑥ Single view will be switched to the display of single views of front, rear, left and right of the vehicle.

# i NOTE

- The description on display interface is for reference only. In case of any discrepancy, the actual vehicle shall prevail.
- When the gearshift lever is set to "R" position, the system displays rear view by default; when the gearshift lever is moved out of "R" position, the system displays front view by default.

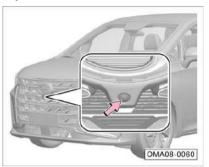


#### **Settings of AVPS**

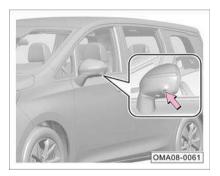
Press the Setting button ⑦ to enter the setting interface of AVPS and set the options as follows.

- Trajectory: The interface will display dynamic trajectory when the trajectory switch is turned on.
- Exit after gearshift lever in P position: A function used to set the time spent before interface exiting when the gearshift lever is moved out of "P" position.
- Servo of left/right steering: The dynamic trajectory will turn with the steering wheel when the servo of left/right steering is turned on.

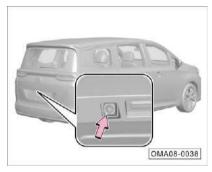
### Layout of cameras



The front camera is installed under the front logo.



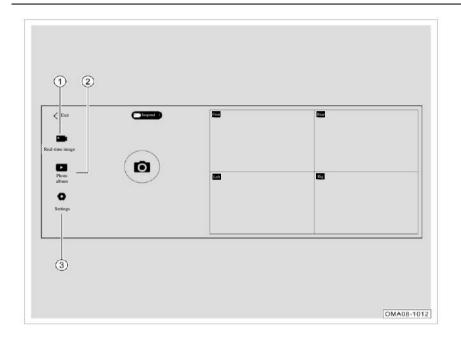
The left/right camera is installed on the left/right exterior rearview mirror respectively.



CCD camera is installed next to the license plate lamp.

### **CAUTION**

- Please keep the camera surface clean.
- Do not wash the camera with highpressure cleaner for a long time, and keep a distance of at least 30cm from the camera during cleaning.



#### **Driving record**

The system is equipped with the function of driving record. The real-time image, photo album and settings will be operable when a TF card is plugged in the driving record. The videos of front, rear, left and right of the vehicle are collected, processed and integrated. The processed and integrated videos are displayed and replayed on the display of AV system, and information related to the recorded videos is stored in the TF card of around view parking ECU.

- Click the soft key "Driving Record" in the interface of application menu to enter the main interface of the driving record function.
- Click the status bar on upper right of the AV system interface FECT to enter the main interface of the driving record function.

- 1. Real-time image
- Click the soft key 1 to enter the interface of real-time image.
- Click the soft key to take pictures of current environment and store the pictures in the TF card.
- 2. Photo album
- Click the soft key 2 to enter the menu interface of videos and photo album.
- The videos and pictures can be displayed and replayed one by one through the menu interface of videos and photo album. The files of videos or pictures can also be locked or deleted.

#### 3. Settings

- Click the see soft key 3 to enter the interface of setting menu.
- The video shooting time can be switched through the setting menu.
   Meanwhile, the TF card can be formatted through the soft key "Format".
- Video shooting: Click the Soft key to turn on or off the driving record function.

#### **CAUTION**

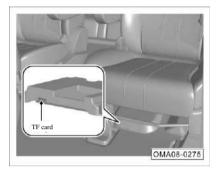
- The driving record is accomplished video by video, and each video takes 5min.
- The status of a video being shot is displayed in the menu bar: Recording
   REC and non-recording
- Since an original vehicle is not equipped with any TF card, a user cannot use the driving record function normally unless he/she installs one in his/her vehicle. It is prescribed that the TF card shall be more than 16G in memory and comply with Class 10 standard.
- The TF card shall not be pulled out when taking video. Cut off its power before the operation.

# Installation position of the TF card for driving record



The around view parking ECU and TF card are installed below the left seat in the 2nd row.

 Check the position by taking off the velcro ① on the rug.



 The TF card is installed in the position as shown in the picture.

#### 5.6 Electric power steering (EPS)

EPS system is a power steering system which directly relies on the motor to provide auxiliary torque. It is mainly composed of torque sensor, motor, deceleration mechanism, electronic control unit (ECU) and others.

The ECU controls the motor assist torque output in real time by detecting the driver's torque input, vehicle speed, engine speed and other vehicle status signals, providing the best steering assistance, ensuring the vehicle's low-speed steering agility and high-speed steering stability, and improving driving comfort and vehicle safety.

#### **EPS indicator lamp**

With the ENGINE START/STOP button in the "ON" position, the indicator lamp [] lights up for a few seconds and then goes out after the system completes the self-test, indicating that the EPS works normally.

If the indicator lamp  $\bigodot$ ! does not go out after the vehicle is started or running, it indicates that the EPS is faulty, and in the meantime, an alarm message will be displayed on the instrument cluster display. In this case, it is required to park the vehicle in a safe place, and shut down and restart the vehicle. If the indicator lamp does not go out or comes on again during driving, stop driving, and contact the GAC Motor authorized shop for inspection.

### Steering mode

There are three steering modes, namely Standard, Sport and Comfort. The hand force of the driver turning the steering wheel will be small, moderate and large in Comfort, Standard and Sport modes respectively. The system is in Standard mode by default. Enter the "System Settings → Driving Assistance → Lateral Driving Assistance → Steering Mode" interface in the AV system to set the steering mode.

#### **CAUTION**

To prevent an accident, never set the steering mode during driving.

# 5.7 Driving skills5.7.1 Pre-driving safety inspection

#### Routine inspection

- Check the tire for high/low pressure, cuts, bulges, damage or excessive wear.
- Check whether the wheel bolts are missing or loose.
- Check whether the front combination lamp, rear combination lamp, and other lamps work properly; check the lighting direction of the front combination lamp.
- Check that the seat belt is not worn or damaged; check that the seat belt is fastened securely after fastening the seat belt.
- Check that the free travel of the pedal is sufficient.
- Check whether the levels of coolant, engine oil, brake fluid and windshield washer fluid are normal.
- Check the battery terminals for corrosion or looseness, and check the battery case for cracks or deformation caused by expansion.
- Check for leakage of fuel, engine oil, water or other fluids under the vehicle, and pay attention that water drip found after A/C operation is normal.

### Inspections after starting/during driving

- Check whether the instrument cluster works properly; check whether any indicator lamp comes on or any alarm message is shown, etc.
- Check whether all controls (such as the lamplight combination switch, wiper combination switch and defroster switch) work properly.
- Check that the vehicle does not deviates to one side during braking on a road without safety risks.
- Check for other anomalies, such as part looseness, leakage and unusual noise.

## i NOTE

In case of any anomaly, please contact the GAC Motor authorized shop for inspection.

## 5.7.2 Driving during running-in period

In order to ensure the service life of the vehicle, the vehicle must be run in at the initial stage of use before it can be put into normal use. Please comply with the following rules in the running-in period:

- The mileage in the running-in period shall be 1,500km.
- Choose roads in good condition and drive it at reduced load and limited speed.
- Do not start the engine with full throttle or drive with harsh acceleration.
- Avoid emergency braking in first 300km.
- Strictly follow the operating procedures and make sure that the engine has reached normal operating temperature.
   Do not change the oil before regular maintenance.
- Carry out the daily maintenance of the vehicle carefully. Check and tighten the external bolts and nuts frequently. Pay attention to the sound and temperature changes of each assembly during operation and adjust them timely.

### Engine running-in

The mileage in the running-in period of a new engine shall be 1,500km. Do not perform the following operations within the first 1.000km of driving:

- Keep the vehicle speed no higher than 3/4 of the maximum allowable speed.
- Do not drive the vehicle with full throttle.
- Avoid running the engine at high speed.
- Do not tow any trailer.

Within 1,000km to 1,500km, it is allowed to increase the engine & vehicle speeds gradually to the maximum allowable range.

The internal frictional resistance of the engine at the beginning of running-in is much greater than that after running-in, and all the moving parts of the engine can have the best fitting after running-in.

After fully running in, both the service life and the fuel efficiency of the engine can be improved.

#### Running-in of tire and brake lining

Within the first 500km of driving, drive the vehicle at a moderate speed to get the new tires run in fully.

Within the mileage of 200km to 300km, the brake lining does not reach the best friction state, so the new vehicle shall be driven at a low speed and emergency braking shall be avoided as much as possible.

#### **↑** WARNING

- A new tire and brake lining will not have the best adhesion and friction characteristics without running-in.
   Therefore, drive the vehicle cautiously within the first 500km to get the tires fully run in to prevent accidents.
- The new brake lining after replacement must also be subject to run-in in accordance with the above requirements.
- When driving vehicle, keep a proper distance from other vehicle to prevent the occurrence of emergency braking, as the new tires and brake lining have not fully run in at this time. If an emergency braking is applied, a traffic accident is likely to occur.

## **MARNING**

- If the brake is damp, frozen or the vehicle is driven on a salted road, the braking effect will decrease.
- The brake shall be applied according to the road and traffic conditions. Do not depress the brake pedal unnecessarily, which will overheat the brake and lead to long braking distance and excessive brake wear.
- Do not switch off the vehicle for coasting. Otherwise, the brake booster does not work and the braking distance greatly increases, which is very easy to cause an accident.

### 5.7.3 Driving essentials

# Precautions under various road conditions:

- When the vehicle is driving on a road with crosswinds and gusts, please decelerate in advance and control the speed and steering wheel.
- Avoid driving on sharp objects or other road obstacle, otherwise it may cause serious damage such as tire burst.
- Reduce the speed and drive at a low speed while driving on a bumpy or uneven road; otherwise, the chassis may be scratched, which result in vehicle damage.
- When the vehicle is being driven downhill, decelerate in advance; avoid emergency braking, otherwise the brake system will overheat or be worn prematurely.
- When the vehicle is running on a slippery road, be careful during accelerating or braking; avoid sudden acceleration or emergency braking, otherwise it is likely to cause wheel slip.
- The vehicle shall be driven at a low and constant speed on an icy and snowy road; avoid sudden acceleration or emergency braking; and install tire chains for the wheels as needed.

### Precautions when driving over a waterlogged road section:

- Before driving over a water-logged road section, check the depth of water, which shall not be higher than the lower edge of the vehicle body.
- Before driving through water, switch off the A/C before starting, decelerate and then gently depress the accelerator pedal without release to drive over the water-logged road section at a stable and low speed.
- 3. Do not stop, reverse or shut down the vehicle in water.
- 4. After successfully driving through the water-logged road section, gently depress the brake pedal for several times to evaporate the moisture on the brake discs so as to restore the braking performance as soon as possible.

#### i NOTE

The brake linings and brake discs are soaked in water while the vehicle is washed or driven over a road with deep water logging, and the braking effect will be greatly reduced; the braking distance will be longer than usual and the vehicle may be deviated to one side, and the parking brake cannot hold the vehicle still. In this case, it is recommended to drive the vehicle at a low speed and constantly depress the brake pedal slightly to remove residual moisture in the brake to recover the braking effect to the normal level. And then, normal driving can be resumed.

#### Driving essentials in winter

- Check if the coolant is in good condition and if it has good anti-freeze effect as follows:
- Fill the cooling system with the coolant of the same type as the original one according to the ambient temperature.
- Adding unsuitable coolant may cause damage to the engine.
- Check the battery and cables as follows:
- A low temperature in chilly days will reduce the capacity of battery, and therefore, fully charge the battery for start-up in winter.
- 3. Prevent the door lock from being frozen by ice and snow as follows:
- Spray some de-icer spray or glycerin into the door lock hole to prevent the door lock from being frozen.

- 4. Use washer fluids containing antifreeze:
- These products are available at GAC Motor authorized shop.
- The mix ratio of water to antifreeze shall comply with the manufacturer's instructions.
- 5. Avoid accumulated ice and snow beneath the mudguard:
- Accumulated ice and snow beneath the mudguard may result in difficult steering. When driving in the cold winter, stop the vehicle regularly and check whether there is ice and snow under the mudguard.
- 6. It is recommended to bring some necessary emergency items according to the road conditions, such as:
- Tire chains, a window scraper, a bag of sand or salt, a flashing light, a ploughstaff, connecting cables, etc., which are recommended to be placed in the vehicle.

7. In cold winter (especially in northern China), avoid starting the engine frequently and shutting down the engine immediately after a short-time start. If the engine is often in an alternating heat & cold cycle, the condensed water is likely to form in the engine, and when the condensed water adheres to the engine oil, it may give an illusion of water-in-oil emulsion, and after the engine is restarted and warmed up, this illusion will be shattered; in addition, please change the oil regularly as required in the Warranty Manual.

#### 5.7.4 Efficient operation of vehicle

- Before driving, make sure that the parking brake is completely released and the parking brake indicator lamp is off.
- Maintain sufficient tire pressure, as a too low tire pressure can cause premature tire wear and higher fuel consumption.
- Ensure that the wheel alignment is accurate. Otherwise, it will cause premature tire wear, increased engine load and higher fuel consumption.
- Do not overload the vehicle, and unload unnecessary items from the vehicle, as excessive load will increase the engine load and the fuel consumption thereafter.
- Accelerate the vehicle slowly and smoothly to avoid rapid acceleration.
- Avoid roads with traffic jams as much as possible, as driving in traffic jam will increase the fuel consumption.
- Drive according to traffic lights, or keep a safe distance from other vehicle to avoid unnecessary parking or emergency braking, which can save fuel and reduce brake system wear.

- Do not step on the brake pedal when the vehicle is running, for fear of premature wear and overheating of brake linings and waste of fuel.
- When driving, select good road surface. If driving on uneven roads, control the vehicle speed to avoid collision or scratches.
- If the chassis is stained with objects such as excessive dirt, clean them in time to reduce the vehicle's weight and prevent corrosion.
- Perform regular maintenance on the vehicle to maintain its optimal working condition, as dirty air cleaner, spark plugs, oil, and grease will reduce the engine performance and increase fuel consumption.
- When starting the engine at a low temperature, drive slowly for a few minutes, and ensure the engine is warmed up before acceleration.
- Do not open windows when driving at high speed.
- Properly use the A/C, etc.
- In case of parking for a long time, please shut down the engine to avoid wasting fuel due to long-term idling of engine.

#### 5.7.5 Fire prevention

In order to prevent vehicle fires, pay attention to the followings during use:

- Never store flammables or explosives in the vehicle:
- In hot summer days, the inside temperature of vehicles parked in the sun can be as high as 70°C or more. If flammables or explosives such as lighters, cleaning agents and perfumes are stored in the vehicle, fire and even explosion will be likely to occur.
- Items with risk of fire such as lithium batteries or power banks left in the vehicle by passengers are also likely to cause fire.
- 2. Make sure the cigarette butts are completely extinguished after smoking:
- If the cigarette butts are not completely extinguished, fire may be caused.
- It is recommended to regularly drive to the GAC Motor authorized shop for inspections:
- Also subject all electric lines of the vehicle to regular inspections. Specifically speaking, check whether the connectors, insulation, and fixing positions of electrical components and harnesses are normal, and handle any problems found during inspection in a timely manner.

- 4. Never modify the electrical circuits or install additional electrical components:
- Installation of additional electrical consumers (such as high-power audio device and Xenon headlamp) will cause excessive load on the electrical line, causing overheating and even fire of harnesses.
- Never use fuses that exceed the rated specifications of the electrical consumer or other metal wires to replace the fuses.
- 5. Precautions for driving:
- During driving and parking, especially in summer, be sure to check if there are flammables such as hay, dry branches, leaves and wheat stalks under the vehicle, as they may be ignited by the components heated after long-time driving, such as engine exhaust pipe.
- Neither park the vehicle next to garbage dumps or in the other places severely plagued by rats, nor place anything that may attract rats, such as snacks, as rats tend to bite and damage the vehicle's harnesses, thus causing fire.

- Always place a lightweight fire extinguisher in the vehicle, and know its operation method:
- In order to ensure the safety of the vehicle, it shall be equipped with fire extinguisher, and shall be inspected and replaced regularly; at the same time, be familiar with the use of fire extinguisher, and be prepared to avoid being helpless in case of accidents.

# 6.1 Maintenance instructions Safety precautions

To avoid potential hazards, please read this section before work and confirm that you have the necessary tools and techniques.

- Make sure that the vehicle is parked on level ground, shut down the engine, and apply the parking brake.
- When cleaning parts and components, use the commercially available degreaser or parts cleaning agent, instead of gasoline.
- Keep lit cigarettes, sparks, and open flames away from batteries and all fuel system related components.
- When working on batteries or with compressed air, wear goggles and protective clothing.

### **↑** WARNING

Incorrect vehicle maintenance or driving the vehicle before the problem is solved may cause a traffic accident, resulting in serious injury or death.

#### Potential hazards of the vehicle

- Carbon monoxide: Since carbon monoxide in the exhaust gas of the engine is toxic, be sure to start the engine in a well-ventilated place.
- Burns: The engine and exhaust system are at high temperatures during operation, which can easily cause burns. Therefore, shut down the engine and exhaust system for 30 minutes to cool down before touching the related parts and components.

#### **©**CAUTION

This section lists some of important safety precautions. We cannot list all the dangers you may encounter during maintenance work.

#### 6.2 Interior maintenance

# Cleaning and maintenance of instruments and plastic parts

Clean the surface of instruments and plastic parts with a clean soft cloth and clean water.

If it cannot be cleaned, it is required to use a special solvent-free plastic cleaning agent for cleaning.

#### **CAUTION**

Solvent-based cleaning agents can damage plastic parts.

### MARNING

It is forbidden to use cab sprays and solvent-based cleaning agents to clean the surface of the instrument panel and airbag assembly. Otherwise, it may loosen the surface and trigger the airbag, which may cause serious injury to passengers.

#### Cleaning and maintenance of carpets

Vacuum the dust on the carpet frequently.

Scrub the carpet regularly with detergent to keep it clean.

#### **CAUTION**

Please perform the cleaning in strict accordance with the use instructions of cleaning agents.

### **MARNING**

It is forbidden to add water to the foam cleaning agent. The carpet shall be kept as dry as possible.

#### Cleaning and maintenance of leather\*

- Vacuum the dust.
- Clean the leather with a clean soft cloth and clean water.
- Wipe the leather dry with another dry soft cloth.
- If the cleaning methods described above are not enough to clean stains, please combine these methods with special leather cleaning soap or detergent.

#### **CAUTION**

If a leather stain remover is used, wipe it dry with a soft dry cloth as soon as possible.

### **↑** WARNING

Never leave a soft cloth wet with leather stain remover on any part of the interiors for a long time. Avoid discoloring or breaking the resin or fibers of interior fabrics.

#### Cleaning and maintenance of seat belts

- Pull the seat belt out slowly and keep it extracted.
- Pull the seat belt out slowly and keep it extracted.
- After seat belts dry completely, retract the seat belts.

#### **CAUTION**

- You must wait for the seat belt to dry completely before retracting it. Otherwise, seat belt retractors may be damaged.
- Check all seat belts in the vehicle regularly to ensure that the seat belts are clean so as not to hinder their normal operation.

#### **↑** WARNING

- If the seat belt webbing, connectors, retractor mechanism or buckles are damaged, please go to the GAC Motor authorized shop for replacement as soon as possible.
- For the overhaul of an accident vehicle, seat belts must be replaced, no matter whether they are damaged.
- Prevent foreign matter or liquid from entering the seat belt buckle, causing buckles and seat belts to fail to work normally.
- In any case, it is forbidden to disassemble and modify the seat belt without permission.
- It is forbidden to use chemical cleaning agents to clean the seat belt, so as not to cause damage to the seat belt base and affect its function.

#### Cleaning and replacement of filters

The vehicle is equipped with an air cleaner, an A/C filter, an oil filter, and a fuel filter. They aim to filter gases or fluids. If they are too dirty or clogged, the normal operation of corresponding systems will be affected. Therefore, it is recommended to regularly clean or replace the filters at the GAC Motor authorized shop according to the provisions of the *Warranty Manual*.

#### 6.3 Exterior maintenance

#### Vehicle washing

Washing the vehicle frequently helps to protect its appearance.

Vehicle washing shall be performed in a cool place, rather than under direct sunlight If the vehicle is left in the sun for a long time, wait till the vehicle's body surface cools down before washing the vehicle.

When using an automatic vehicle washer, be sure to follow the instructions of the operator of the automatic vehicle washer.

#### **∱** WARNING

The vehicle must be powered off before washing.

#### **CAUTION**

The paintwork of the vehicle body is strong enough to withstand the washing of the automatic vehicle washer. However, it is important to pay attention to the effects on the paintwork. The structure of the automatic vehicle washer, the cleaning agent, the filtering state of the clean water, and the type of wax solvent that does not meet the requirements may cause damage to the paintwork.

#### Manual vehicle washing

- Rinse the vehicle with plenty of clean water to remove floating dust.
- Prepare a bucket of water and add a special cleaning agent for car washing to it.
- Gently scrub the vehicle with a soft cloth, sponge, or soft brush, and rinse it several times from top to bottom.
- The wheels, door sills and other parts shall be washed finally, and sponges or soft cloth shall be replaced when washing the vehicle.
- After scrubbing, rinse the vehicle thoroughly with plenty of water.
- After cleaning, carefully dry the vehicle paintwork with a soft towel or antelope skin.

#### **CAUTION**

When the vehicle body has dirt such as asphalt, it needs to be cleaned with a special cleaning agent, and then rinsed with clean water to avoid damaging the surface finish of the vehicle body. Check the body for paint peeling and scratches while wiping the body. If any, drive to the GAC Motor authorized shop for touchup.

When using a steam cleaner or a high pressure cleaner to wash the vehicle, be sure to be very careful. Be sure to wash the vehicle in accordance with the operation instructions and requirements of the steam cleaner or high pressure cleaner. Pay attention to the working pressure, temperature and spraying distance:

 When using a steam cleaner or a high pressure cleaner to wash the vehicle, keep a sufficient water spray distance from the vehicle, and ensure the temperature does not exceed 60°C.

- If the vehicle is equipped with an electric sunroof\*, keep a water spray distance of more than 80cm. The vehicle may be damaged, if the highpressure cleaner is too close to the vehicle or its pressure or temperature is too high.
- Do not wash the radar sensor or parking assist camera with a highpressure cleaner for a long time; when washing the radar sensor or parking assist camera, keep a water spray distance of more than 30cm.

#### **↑** WARNING

- Pay attention to personal safety when washing the vehicle manually, and beware of vehicle bottom edges and corner parts to avoid scratches.
- When cleaning, pay special attention to the bottom of the vehicle and the inside of the wheel cover, and do not hurt your hands and arms by sharp parts.
- When cleaning the vehicle, do not directly flush water into the engine compartment. Otherwise, it will affect the service life of various parts and components in the engine compartment.

#### Waxing

Regular waxing can protect the paintwork of the vehicle body and keep the vehicle body clean. In order to effectively protect the paintwork of the vehicle body, it is recommended to apply high-quality hard wax once a year to protect the paintwork against corrosion by external bad environments and to resist light mechanical scratches.

Be sure to wipe the appearance of the entire vehicle dry before waxing. Before waxing the vehicle, please select a high-quality wax protectant. High-quality wax protectant generally falls into the following two types:

- Car body wax: A wax used to protect the paintwork against damage by external bad environments such as sun exposure and air pollution. This type of wax is generally used for new vehicles.
- Polishing wax: A wax that can restore the gloss of the paintwork that has been oxidized or tarnished. This type of wax is generally used to restore the gloss of paintwork.

# Cleaning and maintenance of external plastic parts

External plastic parts are generally washed with clean water, a soft cloth and soft brushes. If they cannot be cleaned, please use the special solvent-free plastic cleaner approved by our company.

#### CAUTION

Do not use solvent-based cleaning agents when washing plastic parts.

Otherwise, it is easy to damage the plastic parts.

# Washing of window glasses and rearview mirrors

Clean the window glasses and rearview mirrors with alcohol-based glass cleaning agent, and then wipe the glass surface dry with a clean, lint-free soft cloth or antelope skin.

After curing the surface of the vehicle body, remove the wax residue on the glasses with a special cleaning agent and cleaning cloth. Avoid scratching the wiper blades.

Remove snow from the windows and rearview mirrors using a small brush.

Remove accumulated ice using de-icer spray. An ice shovel can also be used, but special care must be taken to avoid damage to the components, and ice must be shaved in the same direction.

#### **CAUTION**

- It is forbidden to scrape the surface back and forth.
- It is forbidden to use warm or hot water to remove ice and snow from windshield and rearview mirror. Otherwise, the windshields may burst.
- If there are residual rubber, grease and silicone substances on the glass, they must be removed with special window cleaning agent or silicone cleaning agent.

# Cleaning and maintenance of wiper covers

Try to avoid parking the vehicle under a tree frequently or for a long time. In case of leaves or other debris on the surface of the wiper cover, please clean them in time.

#### Cleaning of wiper blades

- Raise the wiper arm and carefully wipe off the dust and dirt on the wiper blade with a soft cloth.
- After cleaning, gently lower the wiper arm back to the windshield.

#### CAUTION

- Be careful when lowering the wiper arm to prevent it from falling and hitting the windshield instantly.
- The wiper blade surface is coated with a layer of graphite, which can make the wiping smooth without scratching noise. Solvent-based cleaning agents, hard sponges and sharp objects can damage the graphite layer. The damage to the graphite layer will increase the wiping noise of the wiper, so it should be replaced in time.
- In winter or cold conditions, be sure to check that the wiper blades are not frozen to the windshield before using the wiper. If so, perform de-icing first. Otherwise, the wiper blade and wiper motor will be damaged.

#### Maintenance of sealing strips

Frequent and proper protection of the rubber sealing strips of the doors, windows and other parts of the vehicle is intended to maintain their flexibility and prolong their service life. Such protection can also improve the tightness, make the door easy to open, reduce the impact sound of closing the door, and prevent freezing in winter.

When performing maintenance on sealing strips, remove dust and dirt from surfaces using a soft cloth. Apply the special protective agent to rubber sealing strips regularly.

### Cleaning and maintenance of wheels

Regularly remove anti-skid salts on the wheels and debris on the brake linings, keep the wheels aesthetic, maintain the surface smooth and prolong the service life of wheels. It is recommended to perform the following operations regularly:

- Remove anti-skid salts on the wheels and debris on the brake linings using acid-free cleaning agents every two weeks.
- Apply high-quality hard wax to the alloy wheels every three months.

#### **CAUTION**

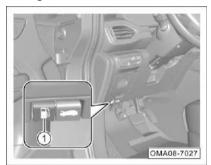
- It is prohibited to maintain the wheel surface with vehicle polish or other abrasives.
- The wheels with damaged protective coating on surface must be repaired in time.
- Using a high-pressure cleaner may cause permanent visible or invisible damage to the wheels, resulting in serious injury or death.
- It is forbidden to spray the tire with cluster nozzles, otherwise, it will cause damage to the tire and cause traffic accidents.

# 6.4 Inspecting and adding of fluids 6.4.1 Fuel

As the amount of fuel decreases when the vehicle is running, the fuel gauge scale will gradually decrease. => See page 43

When the fuel level is too low, the velow indicator lamp flashes, and the instrument cluster will give an alarm message.

## Adding fuel



Pull the fuel tank flap opening handle ①
 to make the fuel tank flap pop up.



Open the fuel tank flap completely, and slowly unscrew the fuel filler cap ② counterclockwise as arrowed. Keep the fuel filler cap ② at the original place for a while before it is unscrewed completely to allow the fuel tank to release the fuel vapor inside, and then remove it.



- Hang the filler cap ② on the inside of the fuel tank flap plate and start to add the fuel.
- After refueling, tighten the filler cap ②
   clockwise until a "click" sound is heard,
   indicating that the filler cap is fully
   tightened.

### i NOTE

Fuel grade: 92# and above high-quality unleaded gasoline.

# i NOTE

This model conforms to the China VI emission standards. The China VI fuel supply system design adopts a closed oil and gas recovery system. When refueling, the refueling gun switch may be triggered and the refueling gun may jump even the refueling is not enough due to high ambient temperature or too fast refueling, which is a normal phenomenon. In this case, the refueling should be slowed down.

#### **CAUTION**

Using low-grade fuel or substandard fuel may damage the engine or make the engine fail to meet performance requirements.

# **MARNING**

- At any time, be sure to shut down the engine when refueling, and pay attention to open flames and fire.
- Please avoid contact of fuel with skin or clothing.
- Please refuel the vehicle according to the vehicle fuel grade. If fuel not complying with the regulations is added accidentally, do not start the engine. Please contact the GAC Motor authorized shop immediately for treatment.

#### 6.4.2 Engine oil

#### Function of engine oil

Engine oil has functions such as lubrication, sealing, cooling, anti-rusting and cleaning.

#### Specifications of engine oil

The engine has been filled with high-quality engine oil, which can be used in the year-round climate except for extreme cold weather before delivery.

When purchasing engine oil, please check whether the specifications indicated on the outer packaging of the engine oil are suitable for the engine of this vehicle.

## i NOTE

- Engine oil grade: API SN/ILSAC GF-5.
- Engine oil viscosity: SAE 0W-20.

#### **↑** WARNING

Always use the engine oil approved by our company. If oil of other grades is used, the engine damage caused by this will not be covered under the quality warranty.

#### i NOTE

- Be sure to go to the GAC Motor authorized shop to change the engine oil according to the period specified in the Warranty Manual.
- If the vehicle is running under severe conditions, fuel with high sulfur content is used, the engine idles for a long time (e.g., a taxi), the vehicle is driven in a high-dust area, the vehicle often tows a trailer, or the vehicle is used in an alpine area, the maintenance cycle shall be shortened and the maintenance times shall be increased.

### Low oil pressure warning lamp

When driving, if the warning lamp comes on, be sure to stop the vehicle in a safe place and shut down the engine. After the engine cools down, check the oil level.

If the engine oil level is normal, but the warning lamp is still on after the engine is started, do not continue to start the engine. In this case, contact the GAC Motor authorized shop timely for inspection.

### **↑** WARNING

- Ignoring the warning lamp and related warning instructions may damage the engine.
- Low oil pressure warning lamp cannot indicate the oil level, so the oil level must be checked regularly.

### Inspecting the oil level

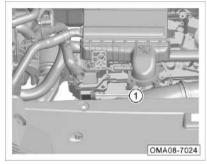
Be sure to check the oil level regularly. Park the vehicle on a level ground, apply the parking brake, and shut down the engine. After the engine cools down, open the engine hood and check the oil level.

#### **↑** WARNING

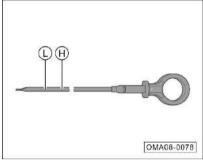
- Be careful when working in the engine compartment.
- The front engine compartment is a high-risk area. Be sure to carefully read and observe the relevant instructions before opening the engine hood.

# i NOTE

While checking the oil level, ensure the engine is cold.

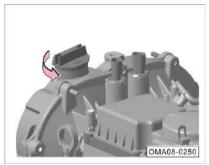


Pull out the oil dipstick ①.



- Wipe off the oil stains on the dipstick using a clean cloth, and then insert the oil dipstick into the end.
- Pull out the dipstick again and read the measured oil level: The oil level shall be between the lower limit mark "L" and the upper limit mark "H".
- If there is too little engine oil, please add engine oil in time. Otherwise, poor lubrication will damage the engine.

### Adding engine oil



- Unscrew the oil filler cap counterclockwise.
- Add the engine oil in small quantities several times, and check the oil level after each filling.
- When the oil level is close to the upper limit mark "H", indicating the engine oil is sufficient, stop adding oil, refit the oil filler cap and tighten it clockwise.

#### **↑** WARNING

- Be careful when adding the engine oil. Do not spill it. If the engine oil gets on your skin, be sure to rinse the skin thoroughly.
- If too much oil is added, do not start the engine. In this case, please contact the GAC Motor authorized shop as soon as possible. Otherwise, the three-way catalytic converter may be damaged.
- After the filling is completed, the oil filler cap must be tightened to prevent oil splashing when the engine starts and causes a fire.
- The engine oil is a toxic substance. Store the engine oil in the original container and keep out of reach of children to avoid poisoning by accidental ingestion.
- Do not add other lubricants to the engine oil, otherwise, the engine will be damaged, and the fault caused by adding lubricant is not within the scope of warranty.

#### 6.4.3 Coolant

#### Function of coolant

Coolant has functions such as cooling, antifreezing and anti-corrosion.

#### Specifications of coolant

When the vehicle leaves the factory, the cooling system has been filled with coolant. Except for extremely cold weather, coolant can be used throughout the year. Meanwhile, it can prevent the cooling system's alloy components from corrosion and the scale of the cooling system.

### i NOTE

- Coolant specifications: DF-6, -35°C coolant.
- Be sure to go to the GAC Motor authorized shop to change coolant according to the period specified in the Warranty Manual.
- If coolant changes color, shorten the maintenance cycle and go to the GAC Motor authorized shop for change.

# High engine coolant temperature indicator lamp

Always observe the temperature gauge of engine coolant during driving.

If the coolant temperature is too high, the indicator lamp on the instrument cluster comes on in red, and an alarm message is given to prompt the driver; at this time, the vehicle must be stopped in a safe place and the engine shut down. After the engine cools down, check the coolant level.

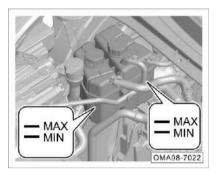
If the coolant level is normal but the indicator lamp is still on after the engine is started, do not continue to start the engine. In this case, contact the GAC Motor authorized shop timely for inspection.

#### Inspecting the coolant level

Be sure to check the coolant level regularly. Park the vehicle on a level ground, apply the parking brake, and shut down the engine. After the engine cools down, open the engine hood and then check the coolant level.

### **↑** WARNING

- Be careful when working in the engine compartment.
- The front engine compartment is a high-risk area. Be sure to carefully read and observe the relevant instructions before opening the engine hood.
- If steam or coolant flows out from the engine compartment, do not open the engine hood, for fear of burns; wait till there is no steam or coolant overflowing and the system cools down before opening the engine hood.



Check whether the coolant level in the expansion tanks is between the upper limit mark "MAX" and the lower limit mark "MIN".

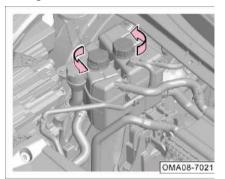
# i NOTE

When the engine is not cooled, the coolant level will be high, and there will be errors in checking the coolant level.

#### **CAUTION**

When the coolant level is below the lower limit mark "MIN", coolant must be added. Insufficient coolant will affect the cooling effect and cause damage to the engine.

#### Adding coolant



After checking the coolant level, if required, add the coolant following the steps below:

- Wrap the expansion tank cap with a thick cloth and unscrew it counterclockwise.
- Add coolant till the upper limit mark "MAX".
- Tighten the expansion tank cover clockwise.

#### **OCAUTION**

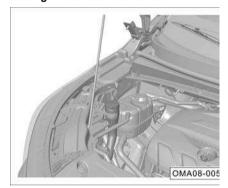
- When the engine is not cooled, the cooling system is under high pressure. In this case, do not open the expansion tank cap, otherwise, the emerging coolant will cause scald.
- A thick cloth must be used to unscrew the expansion tank cap to avoid scald.
- Coolant can only be added after the engine has cooled down. The coolant level after filling must not exceed the upper limit mark "MAX". Otherwise, when the vehicle is started and the cooling system is under high pressure, coolant will overflow.
- Only fresh coolant is allowed to be added.

#### **M** WARNING

- It is forbidden to mix coolant that has not been approved by our company in the original coolant. Otherwise, the engine may be damaged due to incompatibility.
- In case of emergency, if other coolant or pure water is added, you should go to the GAC Motor authorized shop to clean the cooling system and replace it with a new one.
- If too much coolant is consumed or coolant is consumed too fast, there may be a leak in the cooling system. In this case, please go to the GAC Motor authorized shop for inspection in time.
- Coolant must be contained in line with environmental protection laws.
- Coolant must be contained in the original container, and kept out of children's contact to avoid poisoning due to accidental ingestion.

# 6.4.4 Windshield washer fluid and wiper blades

#### Adding windshield washer fluid



If the washer fluid level is found to be too low, add the washer fluid into the reservoir in time.

### **CAUTION**

Do not mix the windshield washer fluid with other washing liquids, otherwise, it will cause the washer fluid components to decompose and block the windshield washer nozzle.

# **MARNING**

- Be careful when working in the engine compartment. Before operation, be sure to carefully read and follow the relevant instructions.
- Do not misuse coolant or any other additives as windshield washer fluid. Otherwise, oil stains will be left on the windshield during cleaning of the windshield, which will affect the visibility and easily cause accidents.
- It is forbidden to use windshield washer fluid with more than 10% ethanol content. In a hightemperature environment, this type of windshield washer fluid will cause corrosion of lamps and crack lamps.

# Replacing of front windshield wiper blades

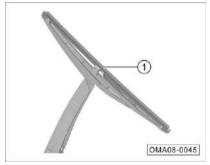


- Set the ENGINE START/STOP button to the "ON" position and then to the "OFF" position.
- Move the wiper combination switch to the "MIST" position within 10s. The wiper arm will stop after running for half a circle.



- Lift the wiper arm, turn the wiper blade (as shown in the figure), and press the wiper blade down to remove it.
- Install the new wiper blade into the wiper arm in reverse steps. It is installed in place when a "click" is heard.
- Gently put the wiper arm back onto the windshield.

# Replacing of rear windshield wiper blades



- Lift the wiper arm.
- Pull the wiper blade ① to remove it.
- Install the new wiper blade into the wiper arm.
- Gently put the wiper arm back onto the windshield.

To replace the wiper blade, it is recommended to go to the GAC Motor authorized shop for replacement.

#### **CAUTION**

- When pulling up the wiper arm, please hold the wiper arm by hand instead of the soft wiper blade.
- New wiper blades with the same length and specifications as the previous ones must be used.
- Be careful while lowering the wiper arm to prevent it from falling and hitting the windshield instantly.
- The status of wiper blades must be checked regularly and replaced as required. Damaged wiper blades must be replaced in time.
- Excessive worn or dirty wiper blades are easy to scratch the windshield, and will affect the field of vision and reduce driving safety during use.

#### 6.4.5 Brake fluid

#### Function of brake fluid

Brake fluid is used to transmit power in the hydraulic brake system of the vehicle.

The brake fluid used for the vehicle is specifically developed by our company for the brake system of the vehicle. To ensure normal operation of the brake system, only the brake fluid recommended by the original factory can be used.

The brake fluid is water-absorbent, so it can continuously absorb moisture in the surrounding air during use. If the brake fluid remains in the system for a long time and the water absorption is too high, air resistance will be generated in the system pipeline during braking, which will reduce the braking effect, affect driving safety, and even lead to complete failure of the brake system, causing accidents. Therefore, be sure to go to the GAC Motor authorized shop to check the brake fluid level or change the brake fluid according to the period specified in the *Warranty Manual*.

#### i NOTE

Specifications of brake fluid: DOT4.

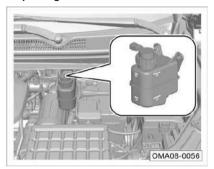
# **MARNING**

- The use of waste brake fluid or improper brake fluid will greatly reduce the braking effect and even cause brake system failure! The company does not assume any responsibility (including quality guarantee) for vehicle failures and damage caused thereby.
- Brake fluid in use must meet the criteria and be fresh.
- The specifications of brake fluid are specified on the packing container of the brake fluid. Brake fluid in line with the specifications must be used in any circumstances.

#### Brake system indicator lamp

When the vehicle is running, if the indicator lamp ① comes on in red, and the instrument cluster displays the information "Please add brake fluid", be sure to immediately stop the vehicle at a safe place and check whether the brake fluid level is normal.

#### Inspecting brake fluid level



When the engine cools down, check whether the brake fluid level is between the upper limit mark "MAX" and the lower limit mark "MIN".

During the use of the vehicle, the brake fluid level will slightly drop due to the worn brake linings and automatic adjustment.

If the brake fluid level drops significantly or drops below "MIN" in a short period of time, it indicates that there may be a leakage in the brake system.

#### i NOTE

- Be sure to carefully read and observe the relevant instructions before opening the engine hood.
- If the brake fluid level is checked to be below the lower limit mark "MIN", the brake fluid must be added.
- If the brake system lamp does not go out or comes on again during driving after adding the brake fluid, there may be a leakage in the brake system that causes the brake level decreasing too fast or the brake system may be faulty. In this case, do not continue driving. Please contact the GAC Motor authorized shop for inspection and repair in time.

#### Adding brake fluid

In order to ensure the normal operation of the brake system, the added brake fluid shall meet the specifications:

- Open the brake fluid reservoir cap counterclockwise.
- Add fresh brake fluid to the upper limit mark "MAX" and stop adding.
- Tighten the brake fluid reservoir cap clockwise.

#### **CAUTION**

- The brake fluid will corrode the paintwork of the vehicle body. Brake fluid splashed on the paintwork shall be wiped off in time.
- The use of waste brake fluid or improper brake fluid will greatly reduce the braking effect due to incompatibility, and even lead to brake system failure.

#### **∴** WARNING

- Brake fluid is a poisonous substance and must be packed in the original sealed container and placed in a safe place. Beware of children's contact, so as to avoid poisoning by accidental ingestion.
- Brake fluid must be stored in accordance with environmental protection laws.

#### 6.4.6 Battery

Battery symbols and instructions for battery operation

<b>(P)</b>	Goggles must be worn during operation!
A	The battery electrolyte is highly corrosive. Protective gloves and goggles must be worn during operation!
8	Open flames, sparks, uncovered lamps and smoking are prohibited in the workplace!
A	An extremely explosive gas mixture is generated during battery charging!
8	Children must keep away from electrolytes and vehicle batteries!

In case of unfamiliarity with the operation process or no special tools, never carry out any operations on the electrical system of the vehicle. The relevant operation shall be conducted by the GAC Motor authorized shop.

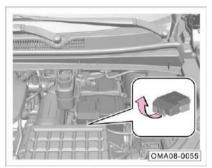
### Charging system warning lamp

The warning lamp is used to indicate alternator failure. The lamp  $\Box$  will come on when the vehicle is not started with the ENGINE START/STOP button set to the "ON" position, and will go out after the vehicle is started.

When the vehicle is running, if the lamp comes on, it indicates that the charging system is faulty. In this case, please go to the GAC Motor authorized shop for inspection in time.

#### Inspecting the battery

The battery must be checked according to the period specified in the *Warranty Manual*.



- Flip up the cover of the battery's positive terminal.
- Check the connection of the battery connector and the cable for corrosion or looseness; check the appearance of the battery for cracks and swelling. If the phenomena above are found, please go to the GAC Motor authorized shop for inspection as soon as possible.
- If the vehicle is not used for a long period of time, check the battery condition frequently.

# i NOTE

- If the battery level is insufficient or the battery is damaged, which makes it difficult to start the vehicle, please contact the GAC Motor authorized shop in time to charge or replace the battery.
- If it is required to replace the battery, please go to the GAC Motor authorized shop for replacement; if a wrong type of battery is used, the vehicle may not run due to incompatibility or the electrical system may fail.

### Instructions for using the battery

The battery will quickly discharge when an electrical device on the vehicle is being used after the engine is shut down.

- Do not use electrical devices in the vehicle for a long time after the engine is shut down.
- While leaving the vehicle, make sure that the doors are closed and all electrical devices (e.g., lamps) are turned off.

#### **CAUTION**

- If the vehicle cannot be started due to a depleted battery, please try emergency start. If the vehicle still cannot be started, please contact the GAC Motor authorized shop for inspection.
- To avoid damage to the electrical system of the vehicle, never connect power generation equipment such as solar panels or vehicle battery chargers to a power outlet.
- The battery contains toxic substances such as sulfuric acid and lead, so it must be properly disposed of and must not be treated as ordinary household waste.

#### 6.5 A/C filter

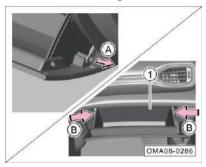
#### Inspecting and cleaning of the A/C filter

Check or clean the A/C filter regularly according to the provisions in the *Warranty Manual*. If the vehicle is running in a dusty environment and the A/C filter is too dirty, it is recommended to replace the A/C filter earlier.

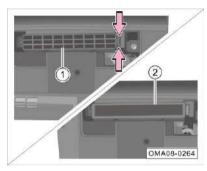
# i NOTE

If you cannot remove or mount the A/C filter, please go to the GAC Motor authorized shop to have it done by a professional.

#### Removal and mounting of the A/C filter



- 1. Open the glove box.
- 2. Press the glove box in the direction of Arrow B, and pull to disconnect the glove box ① from the instrument panel assembly.
- 3. Disconnect the glove box from the damper\* in the direction of Arrow A.
- 4. Remove the glove box.



- Remove the cartridge cover ① by pressing the cartridge cover buckle in the direction of Arrow A.
- 6. Remove the A/C filter element ②. Tap to clean dust from the A/C filter element.
- 7. Install the A/C filter in reverse steps.

#### **CAUTION**

- The fiber layer on the back of the A/C filter cannot be blown with an air gun, so it is impossible to clean it up. It needs to be replaced promptly after becoming dirty.
- Due to the special material of the A/C filter, it cannot be cleaned with water, otherwise, dust will coagulate to be pie-shaped, resulting in a decrease in the airflow of the air conditioner or even clogging.



# 6.6 Replacing of bulbs

### Instructions for replacing bulbs

Be careful not to touch the bulb glass with your fingers when replacing the bulb, otherwise, the heat from the bulb will leave your fingerprints on the bulb glass, reducing the brightness of the lamps.

After replacing the bulbs, you must check the lamps' working condition, and have the light beams checked by the GAC Motor authorized shop.

#### i NOTE

- All vehicle lamps are halogen or LED lamps. If LED lamps are damaged, please go to the GAC Motor authorized shop for replacement.
- As the way to remove and mount the bulbs on the left and right sides are basically the same, the removal and mounting of halogen bulbs on only one side are described here.

#### **CAUTION**

The damaged bulb must be replaced with a new one of the same specifications. For the specifications of bulbs of the vehicle, => See page 265.

### **↑** WARNING

In case of unfamiliarity with the operation process and operation safety or no special tools, never replace bulbs without permission.

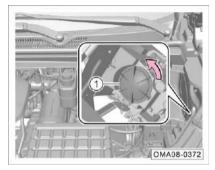
 All lamps shall be turned off and cool down, before their bulbs are replaced.

#### Preparation for bulb replacement

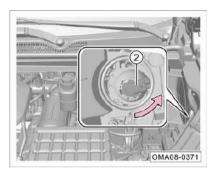
A damaged bulb, if any, shall be replaced as soon as possible. The following preparation shall be done before replacement:

- 1. Turn off all lamps.
- 2. Set the ENGINE START/STOP button to the "OFF" position.
- Check if the related fuse is blown. If the fuse is good, check and replace the bulb.

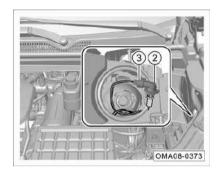
#### Replacing of low beam bulbs\*



1. Unscrew the low beam's seal cover counterclockwise ①.

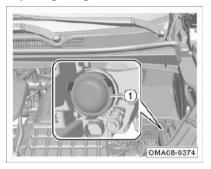


2. Unscrew the low beam bulb counterclockwise ②.

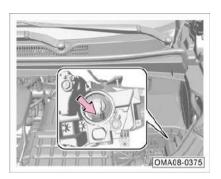


- 3. Slightly pry up the plug catch ③ with a straight screwdriver, and pull out the low beam bulb ②.
- 4. Replace it with the new one in reverse steps.

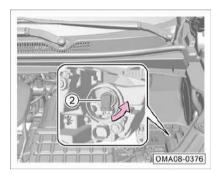
### Replacing of high beam bulbs\*



1. Remove the high beam's seal cover ①.

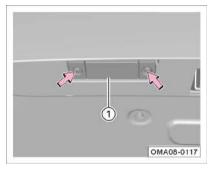


2. Disconnect the high beam bulb's connection plug as arrowed.

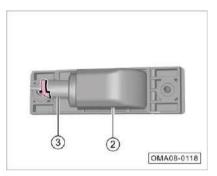


- 3. Unscrew the high beam bulb counterclockwise ②.
- 4. Replace it with the new one in reverse steps.

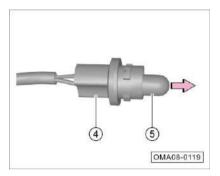
### Replacing of license plate lamp bulbs



1. Unscrew the license plate lamp assembly's fixing screw as arrowed, and remove the license plate lamp assembly ①.

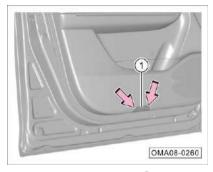


2. Rotate the license plate lamp's harness assembly ③ as arrowed, and remove the lampshade ②.

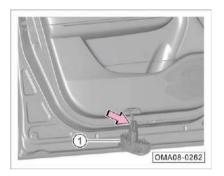


- 3. Pull out the license plate lamp bulb ⑤ from the license plate lamp's bulb socket ④ as arrowed.
- 4. Install the new one in reverse steps.

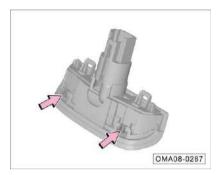
### Replacing of courtesy lamp bulbs\*



1. Pry up the courtesy lamp  $\ensuremath{\textcircled{1}}$  as arrowed.



2. Disconnect the plug as arrowed and remove the courtesy lamp ①.



Remove the courtesy lamp cover by carefully disengaging the plastic catches as arrowed.



- 4. Remove the courtesy lamp bulb 2.
- 5. Install the new one in reverse steps.

#### 6.7 Wheels

#### **⚠ WARNING**

Within the first 500km, the road adhesion of new tires is unlikely to reach the best condition. Therefore, the vehicle shall be driven carefully at a moderate speed to prevent accidents.

- The road adhesion of non-runningin or excessively worn tires is insufficient, which directly affects the braking effect.
- If abnormal vibration or deviation of the vehicle is found during vehicle driving, stop the vehicle immediately and check whether the tire is damaged.
- If you find uneven and excessive tire wear, go to the GAC Motor authorized shop for inspection as soon as possible.

### **↑** WARNING

If tires burst or leak when the vehicle is running, it is very easy to cause serious traffic accidents.

- Never use damaged tires and wheels or use tires whose treads have been worn to the wear indicator. Otherwise, it is very easy to cause accidents, because such tires may burst during driving, causing traffic accidents and injuries. Such tires and wheels shall be replaced in time.
- The tire pressure must meet the regulations. Otherwise, it may cause an accident. If the tire pressure is insufficient, the vehicle driving at high speed will cause the tire to deflect, and the tire will easily overheat, which may cause tire shelling or tire bursts.
- Be careful not to expose the tires to chemicals, oil, grease, fuel and brake fluid.

#### **↑** WARNING

- Used wheels and tires of unknown origin should not be used under any circumstances, as such wheels and tires may be damaged without visible damage and may cause loss of control and an accident while the vehicle is in motion.
- It is recommended not to use a retread tire. As the service life of such tires passes, the carcass may change, and the durability may also be limited and driving safety may be affected.

#### Precautions for wheel failure

- When driving over curbs or similar obstacles, keep a slow speed in the vertical direction of the obstacles as much as possible.
- Do not contact the tire with grease, oil and fuel.
- Regularly check the tire damage (such as cutting, wear, falling off, deformation or bulge).
- Regularly remove debris embedded in the grooves of the tire pattern.

#### Instructions for storing tires

- Before removing the tire, mark the tire to indicate the rotation direction of the tire, and reset it according to the mark when installing the tire to keep the rotation direction and dynamic balance state of the wheel unchanged.
- Store the removed wheels or tires in a cool, dry place, and preferably in a dark place.
- The tire mounted on the rim must not be stored upright.

#### New tires and wheels

- Select the new tire and wheel carefully, and make sure that the dimensions, load range, rated speed and structure type of the new tire are the same as those of the original one.
- Do not replace only one tire separately, but at least replace two tires on the same axle at the same time.
- Do not mix tires of different sizes or types, and do not mix summer, allseason and winter tires.
- It is recommended to install and use the combination of tires and wheels recognized by our company for the relevant model. Our company cannot judge the tires and wheels not recognized by us, so we cannot guarantee driving safety.
- After each wheel installation, check whether the wheel bolts are tightened to the specified torque (125±10N•m).

#### Non-full-size spare tires

Spare tires and standard tires are different in aspects such as structure, pattern, speed rating and load index, and cannot be exchanged.

After emergency use of the spare tire, it is necessary to drive safely to the GAC Motor authorized shop or wheel repair shop for full-size tire replacement as soon as possible to avoid driving safety hazards caused by long-term use of the spare tire.

#### **↑** WARNING

- Spare tires can only be used temporarily for emergency, and the maximum driving speed shall not exceed 80km/h.
- The storage and service life of spare tires is 6 years. It is prohibited to use them beyond the time limit.

#### Summer tires

Summer is a rainy season. The tire tread depth directly affects driving safety in rainy days. When the tread depth of a summer tire is lower than 3mm, it is highly likely for the vehicle to slip on water.

#### Winter tires

Winter tires still have good grip performance when roads are covered with snow and ice. The specially designed rubber tread makes the tires less affected by a low-temperature environment and excellent braking ability, ensuring driving safety.

- Use winter tires on all the four wheels.
- Winter tires are recommended when it snows or the temperature is lower than 7°C.
- Use only radial winter tires of the same dimensions, load range and rated speed as the original ones and approved for the vehicle.

- Please note that the tread of winter tires shall have patterns deep enough (tread depth not less than 4mm, otherwise, the applicability in winter will be limited).
- After installation of tires, check the tire inflation pressure.

#### **↑** WARNING

- Winter and summer tires are designed according to their respective typical lane driving conditions under the corresponding seasonal conditions. It is recommended to use winter tires in winter. At low temperatures, the adaptability of summer tires is significantly poorer, thereby losing road adhesion and braking ability.
- In severe cold conditions, if the summer tires are used, cracks may appear on the tires, which can completely damage them and cause excessive tire noise and loss of balance.

#### **MARNING**

- After using the winter tire, there may be reduced driving traction on dry roads, increased road noise and shorten Please pay attention to the performance change of the vehicle in terms of maneuvering and braking after the winter tires are used.
- Please note that the maximum speed for winter tires is relatively low. Do not exceed the allowable maximum speed for the tires.
- Please note that please replace the winter tires with summer tires in time in order to ensure driving safety and performance when driving in the environment at the atmospheric temperature rising above 7°C.
- When driving with winter tires, if a spare tire is installed, unstable steering characteristics may occur due to different tires, weakening driving stability. In this case, driving styles need to be adjusted and driving shall be performed carefully.

#### Inspection of tire pressure

The label of standard pressure data of original tires of the vehicle is pasted on the B pillar at the driver's side.

- Check the tire pressure value suitable for the vehicle from the label (the listed pressure values apply to both summer and winter tires).
- Unscrew the valve cap (if the valve cap is missing, a new one shall be provided in time).
- A high-quality tire pressure gauge is required to check the tire pressure. It is impossible to determine whether the tire pressure is appropriate only by visual inspection.
- Attach the tire pressure gauge to the valve.

- For inspection of tire pressure, the tire must be in a cold state. When the temperature increases, the tire pressure can be slightly higher than the specified value, and it is not necessary to reduce the tire pressure.
- Balance the weight of passengers and luggage, avoid slopes, and adjust tire pressure according to vehicle load.
- Check the tire pressure of the spare wheel or emergency spare wheel at the same time.
- Install and tighten the valve cap.

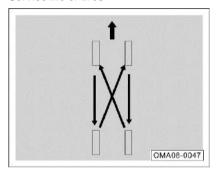
#### i NOTE

- The current tire pressure can be checked through the information on the instrument cluster display.
- Be sure to refit the valve cap to the valve core. The valve cap prevents the ingress of dust and moisture.

### **MARNING**

- Abnormal tire pressure may cause tire bursts, resulting in a traffic accident, injury or even death.
- Check the tire pressure at least once a month or before longdistance driving. The tire pressure must meet the specified requirements to prevent accidents.
- Insufficient tire pressure will exacerbate tire deflection, and tires are extremely prone to overheating, which may lead to tread separation and tire bursts.
- Too low or too high tire pressure will cause early wear of the tire and reduce the steering stability of the vehicle.

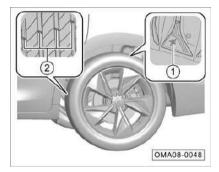
#### Service life of tires



Service life of tires depends on tire pressure, driving style and tire assembly conditions.

If the front tires are worn more seriously than the rear tires, it is recommended to perform tire rotation for the front and rear wheels as shown, so as to make the service life of all tires about the same.

#### Tire wear indicator



The mark ① is used to indicate the wear condition of the tire's outer circle pattern. If the tire's outer circle pattern wears to the condition as shown, the tire can no longer be used safely and must be replaced immediately.

The tread wear indicator mark ② is 1.6mm high. If the tread pattern wears to the marked surface, the tire can no longer be used safely and must be replaced immediately.

#### Wheel balance

The wheels of the new vehicle are balanced, but during operation, the wheels may be unbalanced due to various reasons, which can be manifested by the vibration of the steering mechanism.

Because unbalanced wheels can cause excessive wear on the steering system, wheel suspension mechanism and tires, the wheels shall be rebalanced.

In addition, wheels must be rebalanced after installation of a new tire or tire repair for any wheel.

#### Wheel misalignment

Inaccurate wheel alignment will cause uneven and excessive tire wear and affect driving safety. If you find any uneven and excessive tire wear, or the vehicle obviously deviates to one side, please go to the GAC Motor authorized shop to check the wheel alignment as soon as possible.

#### 6.8 Tire chains

In winter, driving in harsh environments such as snowy or icy roads can increase the degree of tire wear or cause other failures. To reduce failures in winter, the following opinions must be followed:

- When driving in deep snow, it is necessary to install tire chains on the tires. If so, be sure to choose an equivalent product whose size and type meet the specifications of the tires on the vehicle. Failure to do this will adversely affect the performance and safety of the vehicle. Moreover, operations such as full-load driving, speeding, emergency acceleration, emergency braking, and emergency turning are potentially dangerous.
- During deceleration, make full use of the engine braking function.
   Emergency braking on snowy or icy roads will cause the vehicle to flick and slip. Maintain an appropriate safety distance from the vehicle in front, step on the brake pedal slightly, and pay attention to that installing tire chains on the tires can increase certain friction force, but cannot prevent side slipping.

### i NOTE

Different countries or regions have different regulations for tire chains, and the regulations of each country or region should be consulted before assembling tire chains. Do not install tire chains without understanding the laws and regulations of the corresponding country and region that may restrict the use of tire chains.

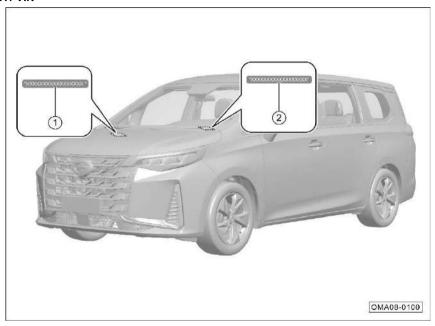
#### **CAUTION**

 Install tire chain on the tires to ensure balanced driving in all kinds of weather. It shall be borne in mind that after installation of tire chains, the vehicle may be underpower. Even if the road surface is in good condition, drive carefully. While driving, neither exceed the specified speed limit of tire chains nor exceed 50km/h, whichever is lower.

#### **CAUTION**

- If tire chains are installed on the tires, the size and type of the tire chains shall be consistent with the standard tires on the vehicle, otherwise, the safety and handling of the vehicle will be adversely affected.
- Tire chains must be installed in pairs on the front wheels rather than on the rear wheels.
- Do not install the tire chain on an emergency spare tire. If a spare tire is installed on the front tire and a tire chain is required, be sure to exchange the position of the spare tire with the rear tire.
- Do not use tire chains on dry ground.
   After driving to snow-free roads,
   remove tire chains
- After installing the tire chains as closely as possible to the front tires, drive 0.5 to 1.0km, and then tighten the tire chains again.

#### 7.1 VIN



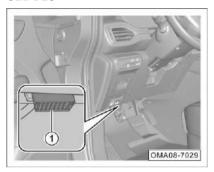
The location of the VIN is as shown in the figure:

- ① VIN: On the engine hood.
- $\ensuremath{\textcircled{2}}$  VIN: On the left side of the instrument panel.

## i NOTE

The location indication and quantity of VIN are not complete. Please refer to the actual vehicle.

#### **OBD DLC**

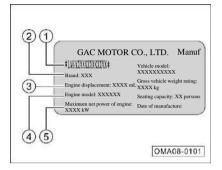


The OBD DLC ① for reading the electronic VIN is located at the lower left of the instrument panel. The electronic VIN and vehicle status information can be read through a special diagnostic scan tool.

### i NOTE

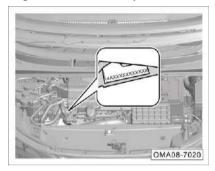
If you need to purchase diagnostic scan tool, please go to the GAC Motor authorized shop for consultation and purchase.

#### Vehicle nameplate



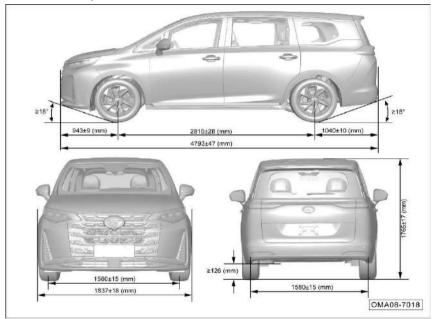
- ① VIN, vehicle model
- 2 Brand, gross vehicle weight rating
- ③Engine displacement, seating capacity
- ④Engine model, date of manufacture
- ⑤ Maximum net power of engine, country of manufacture

### Engine model and factory number



Engine model and factory number as arrowed are indicated on the engine block (behind the generator).

### 7.2 Dimensions & parameters of vehicle



#### **Dimensions**

Dillicitatoria				
	Item	Parameters		
item		Value	Unit	
0.40	ما المسمدال المس	4,793 ± 47		
Ove	rall length	4,780 ± 47	mm	
Ove	erall width	1,837 ± 18	mm	
0		1,765 ± 17		
Ove	rall height	1,730 ± 17	mm	
WI	neelbase	2,810 ± 28	mm	
Wh	Wheel	1,580 ± 15		
eel	track	1,000 ± 10	mm	
tra	Rear	1,580 ± 15		
ck	track	,		
Fron	t overhang	943 ± 9	mm	
1 1011	covernarig	$930 \pm 9$		
Rea	r overhang	1,040 ± 10	mm	
M	linimum			
9	ground	≥ 126	mm	
clearance		2 120	111111	
(full load)				
Approach angle		≥ 15	0	
(full load)		_ 10		
Departure		≥ 18	0	
angle	e (full load)	= 10		

Note: Exterior rearview mirrors (one on the right and one on the left) near the junction of the lower end of the A pillar and the front door and the antenna above the rear of the roof are not included in the overall width.

Vehicle mass & parameters of engine and fluids

#### Mass

Model		Kerb mass of vehicle (kg)		Gross vehicle weight rating (kg)			
		Kerb mass (kg)	Front axle load	Rear axle load	Gross vehicle weight rating	Front axle load	Rear axle load
GAC6480KCW6A	High, secondary top, and top configuration	1,660 ± 49	931 ± 27	729 ± 21	2,215	1,076	1,139
	Low and medium configuration	1,625 ± 48	920 ± 27	705 ± 21			

**Comprehensive parameters** 

lto-ro	Performance parameters	
ltem	GAC6480KCW6A	Unit
Seating capacity	7	Person
Minimum turning diameter	11.5	m
Maximum gradeability	40	%
Maximum speed	≥ 190	km/h
Combined fuel consumption under WLTC	≤ 7.22	L/100km
Combined CO2 emission under WLTC	≤ 195.5	g/km

### Parameters of engine

Model	4A15J2
Туре	Gasoline engine, spark-ignition, in-line four-cylinder, four-stroke, GDI, exhaust turbocharging
Number of cylinders (pcs)	4
Ignition order	1 - 3 - 4 - 2
Bore (mm)	74
Travel (mm)	87
Displacement (mL)	1,497
Compression ratio	(11.5 ± 0.3):1
Rated power/speed (kW/(r/min))	130/5,500
Maximum net power/speed (kW/(r/min))	125/5,500
Maximum torque/speed (N • m/(r/min))	270/1,400 – 4,500
Maximum net torque/speed (N • m/(r/min))	250/1,400 – 4,500
Stable idling speed (r/min)	700 ± 50
Emission level	China VI

#### Specifications and capacity of fuel/oil/fluid

Item	Specification	Capacity	
Fuel 1)	92 and above high-quality lead- free gasoline	Capacity	52 L
Engine ecolont	DE 6. 35°C applicat	0 : 2)	10.6 ± 0.2L (rear hot/cold A/C)
Engine coolant	DF-6, -35°C coolant	Capacity 2)	8.8 ± 0.2L (rear single cold A/C)
	Engine oil grade: API SN/ILSAC	Total filling volume 3)	4.5L
Engine oil	GF-5 Oil viscosity: SAE 0W-20	Change 4)	4.2L
Intercoolant	DF-6, -35°C coolant	Capacity	3.2 ± 0.2L
WDCT fluid	Spirax S5 DCT 12 Plus	Total filling volume 5)	6.9L
WDC1 fluid		Change 5)	5 ± 0.2L
Brake fluid	DOT4	Capacity	0.77 ± 0.03L
Windshield washer fluid	44% methanol with freezing point of -30°C, and 56% water with hardness not more than 205g/t	Capacity	3L
A/C refrigerant	HFC-134a	Capacity	830 ± 20g
A/C compressor lubricant	PAG (SP-10)	Capacity 6)	5mL

Note: 1) Long-term use of fuels with sulfur content higher than the standard value may result in excessive emissions. Please pay attention and use fuels that comply with local standards for vehicles.

- 2) Including the coolant in the reservoir and the residual coolant in the engine.
- 3) The oil capacity for overhaul of engine assembly.
- 4) Including the oil capacity for replacement of oil filter.
- 5) Except for special circumstances (such as transmission fluid leakage), it is recommended to add as much as they are drained.
- 6) The amount of compressor lubricant added for A/C refrigeration system maintenance only.

### 7.3 Specifications of transmission, chassis and lamps

Transmission parameters

Type WDC, seven speed		
туре	WDC, Seven speed	
Final drive ratio	Main reducer 1 (5124 reverse gear): 4.389	
Final universalio	Main reducer 2 (736 gear): 2.274	
1st gear	3.846	
2nd gear	2.308	
3rd gear	2.500	
4th gear	1.140	
5th gear	0.911	
6th gear	1.180	
7th gear	0.946	
Reverse gear	3.491	

#### Wheels

Wilcold				
Specifications of rim	6.5J×16*, 7J×17*, 7J×18*			
Tire specifications	215/60R16*, 215/55R17*, 215/50R18*			
	Wheel track	Rear track		
Tire pressure	240kPa (no load)	240kPa (no load)		
	240kPa (full load)	260kPa (full load)		
Specifications of spare rim	4.0T×16			
Specifications of spare tire	T135/90D16, T125/90R16			
Pressure of spare tire	420kPa			

Note: The label of standard pressure data of original tires of the vehicle is pasted on the B pillar at the driver's side.

#### Suspension

	Front suspension	Rear suspension
Type	McPherson, independent	Torsion beam, semi- independent

### Steering gear

Туре	Rack and pinion electric power steering gear
Power steering type	Electric power steering

#### **Brake**

Туре	Vacuum booster, X-type hydraulic dual circuit
Wheel track	Disc brake
Rear track	Disc brake
Parking brake	Electronic parking brake (EPB)

### Drive mode

Drive mode	Front-wheel drive

### Dynamic balance of wheels

	Name	Residue dynamic unbalance
Wheel	Inner side	≤ 8g
track	Outer side	≤ 8g
Rear track	Inner side	≤ 8g
	Outer side	≤ 8g

### Free travel of brake pedal

Name	Parameters
Travel	106.4mm
Free travel	≤ 5.4mm

### Technical parameters of brake linings

Name	Parameters
Wear limit of front wheel brake lining (excluding the backplate of brake lining)	2mm
Wear limit of rear wheel brake lining (excluding the backplate of brake lining)	2mm

### Wheel alignment parameters

Name		Parameters
	Individual toe-in	0°5′ ± 3′
	Wheel camber	-0°15′ ± 30′
Wheel track	Kingpin caster angle	7°14′ ± 45′
	Kingpin inclination angle	12°16′ ± 45′
	Total toe-in	0°12′ ± 18′
Rear track	Propulsion line	0° ± 25′
	Wheel camber	-1°6′ ± 30′

### Battery

Model		SLI T5
	Rated voltage	12V
Parameters	Capacity at 20hr	55Ah
Faiameters	Low temperature start current (EN)	530A

#### Fuse

Electrical box under the instrument panel	=> <u>See page 275</u>
Electrical box in engine compartment	=> <u>See page 278</u>

### Lamps

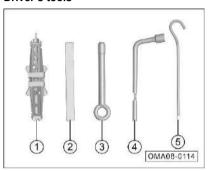
Lamps			
I	Lamps	Model	Power
	High beam*	H8 (halogen)	35W
	Low beam*	HB3 (halogen)	60W
Front combinat ion lamp	High beam*	LED	1
	Low beam*	LED	/
	Daytime running lamp*	LED	/
	Front position lamp	LED	/
	Front turn signal lamp	LED	1
Rea	r fog lamp	P21W (halogen)	21W
Side tui	rn signal lamp	LED	/
	Brake lamp	LED	/
Rear combinat	Rear position lamp	LED	1
ion lamp	Rear turn signal lamp	LED	/
	Reverse lamp	W16W (halogen)	16W
Licens	e plate lamp	W5W (halogen)	5W
High-mou	unted stop lamp	LED	/
Front	dome lamp	LED	/

Lamps	Model	Power
2nd/3rd-row dome lamp	LED	/
Glove box lamp*	LED	/
Trunk lamp	C10W (halogen)	10W
Ambient light*	LED	/
Vanity mirror light*	LED	/
Courtesy lamp*	C5W (halogen)	5W

For replacement => See page 245. Some lamps are only available for certain vehicle models, please refer to actual vehicle configurations!

#### 8.1 Driver's tools and spare tire

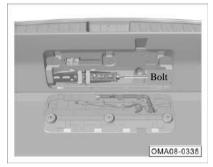
#### Driver's tools



The following driver's tools provided by the vehicle shall be placed in the trunk => See page 111. After use, they shall be cleaned in time and put back to the original position.

- ① Jack
- ② Warning triangle
- ③ Towing hook
- 4 Wheel bolt removal wrench
- ⑤ Special wrench for jack

#### Jack



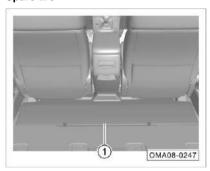
- Remove: Rotate the bolt to retract the jack for easy removal.
- Fix: After use, the jack shall be put back in its original position, and the bolt shall be slightly raised by a rotation to fix the jack.

Fire extinguisher (available for operating version vehicles)



 The extinguisher is fixed to the side of the front passenger seat near the instrument panel.

#### Spare tire



#### Remove the spare tire:

- Adjust the 2nd-row seats back to the limit position.
- Lift the trunk carpet ① and remove it.



 Unscrew the central handwheel ② of the spare tire counterclockwise to take out the spare tire ③.

#### i NOTE

The spare tire has been inflated, and its tire pressure shall be checked regularly to ensure that it is at the specified maximum pressure, and multiple inspections shall be carried out within 1 year.

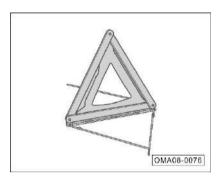
#### **MARNING**

- Use the spare tire in strict accordance with the use requirements to avoid danger.
- It is strictly forbidden to install and use more than one spare tire at the same time.
- Do not use spare tire that has been damaged or worn to the limit.
- The storage and service life of spare tires is 6 years. It is prohibited to use them beyond the time limit.
- The tire pressure shall be checked as soon as possible after the spare tire is installed to make it within the specified range.
- The maximum speed of spare tires must not exceed 80km/h, and sharp acceleration and emergency braking shall be avoided.

#### 8.2 Use of warning triangle



 Open the liftgate, take out the warning triangle ①, and use it.



#### Placement distance

Ordinary highway		Expresswa
Daytime Night		У
≥ 50m	≥ 80m	≥ 150m

#### **CAUTION**

The data above is for reference only. Please place the warning triangle at the distance specified by traffic regulations.

#### 8.3 Use of reflective vest



 If the vehicle needs to stop due to an accident or other faults, take out the reflective vest from the glove box and wear it neatly before getting off to check and deal with the vehicle faults.

### i NOTE

- While handling vehicle accidents, be sure to wear a reflective vest as required to attract the attention of passersby or other drivers regardless of the lighting conditions.
- After using the reflective vest, please store it in the glove box properly. If necessary, clean it according to the indication on the collar mark to maintain the reflective performance.

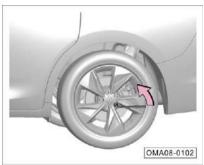
# 8.4 Replacing flat tires Preparations

- Apply the parking brake.
- Set the gearshift lever to the P position.
- Set the ENGINE START/STOP button to the "OFF" position and turn on the hazard warning lamp.
- Place a warning triangle in a suitable position behind the vehicle.
- Find a suitable object to wedge the wheel diagonally opposite to the wheel to be replaced to prevent the vehicle from moving.
- Take out the driver's tools and spare tire.

#### **↑** WARNING

- Relevant regulations must be strictly followed.
- All passengers must leave the vehicle and wait in a safe position.

### Unscrewing the wheel bolts

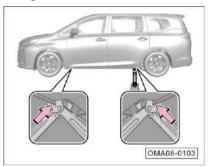


Set the wheel bolt removal wrench firmly on the wheel bolt, and unscrew the wheel bolts counterclockwise.

#### **CAUTION**

Loosen the wheel bolts just one turn before lifting the vehicle. After lifting the vehicle, unscrew the wheel bolts completely and remove the fat tire.

#### Lifting the vehicle



- Place the jack directly under the spine closest to the flat tire.
- Extend the jack high to ensure that the groove of the jack can engage with the spine.
- Check whether the jack is stable and tightly attached to the ground.



- Assemble the wheel bolt removal wrench, the special wrench for jack and the jack.
- Extend the jack clockwise and lift the vehicle to make the tire leave the ground.

#### **↑** WARNING

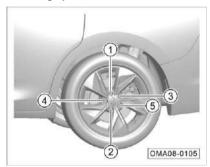
Improper use of jack will cause serious injury.

- The jack must be used on a hard and flat ground, and a hard pad (height not more than 1cm) can also be placed under the jack as needed.
- Strictly observe the precautions for jack operation.
- If there is a towing trailer, the trailer must be separated from the vehicle.
- Observe the status of the vehicle continuously during the lifting. If the vehicle body is noticeably tilted, stop the lifting, identify the problem, and then lift the vehicle after solving the problem.

#### **M** WARNING

- The jack on the vehicle can only be used to lift the vehicle rather than other heavy objects or vehicles.
- When the jack is used, do not start the engine, otherwise an accident will occur.
- When lifting the vehicle with a jack, remember not to place any part of the body under the vehicle to avoid accidents.
- If it is required to work under the vehicle, be sure to place a suitable protective support under the vehicle.

#### Installing spare tire



- Install the spare tire to the vehicle.
  - Install all the wheel bolts, and pretighten them using the wheel bolt removal wrench according to the sequence ① to ⑤ as shown in the figure.
- Give a verbal warning, and after confirming that nobody is around the car, rotate the jack wrench counterclockwise to lower the vehicle.
- Tighten all wheel bolts using the wheel bolt removal wrench.
- In order to avoid the noise of the vehicle during driving later on, please remember the locations of various tools, put them back in place after use and fix them.

#### **OCAUTION**

After installing the wheel, please go to the GAC Motor authorized shop in time to check the tightening torque of the wheel bolts (125  $\pm$  10N·m). Otherwise, the bolts may be loose while the vehicle is running, easily causing traffic accidents.

#### **↑** WARNING

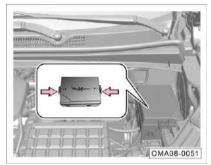
- The thread on the wheel bolt and the hub must be kept clean and free from adherent matters such as grease so that the bolt is easy to tighten.
- For replacement of a tire, if the bolts are rusted or difficult to be tightened, they must be replaced and the thread hole cleaned.
- When the spare tire is not in use, it must be reliably fixed at the spare tire mounting position.

8.5 Fuse Electrical box under the instrument panel



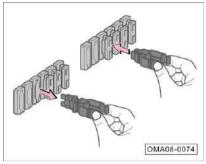
 Open and remove the storage compartment of cab's lower guard in the direction of the arrow to expose the fuse above the instrument panel electrical box.

### Engine compartment electrical box



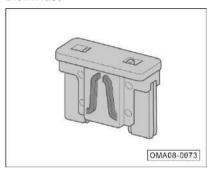
- Open the engine hood.
- Press the fixing clip in the direction of arrow to completely unlock the electrical box, and then remove the electrical box cover.
- The fuse above the engine compartment electrical box is exposed when the cover of the electrical box is removed.

#### Replacing fuse



 Pull out or install the fuse using the fuse puller in the engine compartment electrical box.

#### Blown fuse



 If the fuse is blown, it is recommended to replace it in a GAC Motor authorized shop.

### i NOTE

Some electrical consumers may be equipped with multiple fuses each, or multiple electrical consumers may share a single fuse.

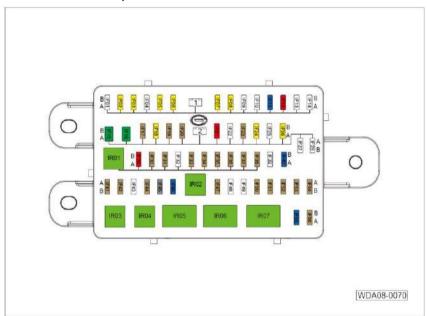
#### **CAUTION**

- Turn off all electrical devices before replacing the fuse.
- If you need to replace the fuse, please consult the GAC Motor authorized shop.

### **MARNING**

- Fuses must not be reused.
- Do not use fuses rated above the specified current value, otherwise it will damage other parts of the electrical system.
- Using unsuitable or patched fuse can cause short circuit or even fire.
- The color and logo of the replaced fuse must be exactly the same as the original one.
- Do not replace fuse with metal sheets, paper clips, etc.
- The electrical box must be kept clean inside. Pay attention to protection against moisture.

### 8.5.1 Fuse in instrument panel electrical box



The figure is not guaranteed to apply to every vehicle model. For the purpose of the fuse, please check it on the actual vehicle. The fuses may slightly vary from vehicle to vehicle.

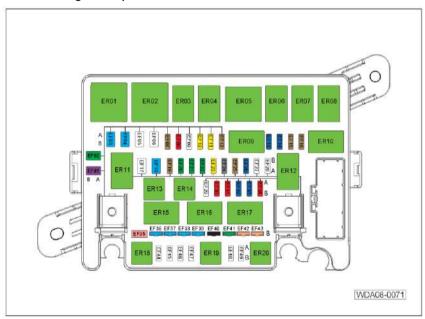
No.	Rated value	Feature/component
IF01	-	-
IF02	20A	Left front seat electric adjustment*
IF03	20A	Electric sunroof control unit*/panoramic sunroof control unit*/panoramic sunroof sunshade*
IF04	•	-
IF05	20A	Body control unit (right front window regulator)
IF06	20A	Body control unit (left front window regulator)
IF07	20A	Body control unit (right rear window regulator)
IF08	20A	Body control unit (left rear window regulator)
IF09	-	-
IF10	-	-
IF11	15A	Body control unit (windshield washer and wiper motor)
IF12	10A	Rearview mirror folding relay (IR06)/rearview mirror unfolding relay (IR07)/left rearview mirror/right rearview mirror
IF13	-	-
IF14	-	-
IF15	30A	Electric liftgate module*
IF16	30A	Rear A/C control panel/audio control unit/Body control unit/front A/C control panel/audio display screen/instrument cluster module (12.3-inch TFT color screen)*/instrument cluster module (7-inch TFT color screen)*
IF17	7.5A	OBD DLC
IF18	20A	Body control unit (main lighting power supply 2)
IF19	7.5A	Gateway control unit

No.	Rated value	Feature/component
IF20	7.5A	Gearshift lever module (mechanical gearshift)*/gearshift lever module (shift-by-wire)*
IF21	10A	Body control unit (turn signal lamp power supply)
IF22	-	-
IF23	7.5A	ETC OBU/keyless start/intelligent entry system controller*/ENGINE START/STOP button*
IF24	20A	Body control unit (main lighting power supply 1)
IF25	-	-
IF26	20A	Body control unit (door lock)
IF27	-	-
IF28	Short circuit piece	Diverter
IF29	10A	Airbag control unit
IF30	7.5A	Engine control unit/7WDCT transmission control unit
IF31	7.5A	Gateway control unit/keyless start/intelligent entry system controller*/body control unit
IF32	-	-
IF33	7.5A	Steering angular velocity sensor/electric power steering (EPS) control unit/gearshift lever module (mechanical gearshift)*/gearshift lever module (shift-by-wire)*/electronic P-gear actuator*
IF34	7.5A	Brake switch/electronic stability and parking control module
IF35	7.5A	Left front seat connector A (seat heating module)*/rear A/C control panel*/RPA control unit/around view parking control unit*
IF36	7.5A	Plasma generator*/air quality sensor*

No.	Rated value	Feature/component
IF37	7.5A	Front headlamp automatic adjusting control unit*/headlamp height adjusting switch*/left front combination lamp (height adjustment motor)/right front combination lamp (height adjustment motor)/MRR module*
IF38	7.5A	Electric sunroof control unit*/rain light sensor*/front A/C control panel/instrument cluster module (7-inch TFT color screen)*/T-BOX control unit*/audio control unit/panoramic sunroof control unit*/lane departure warning module*/left instrument panel switch group
IF39	-	-
IF40	15A	Audio control unit
IF41	7.5A	Body control unit/keyless start/intelligent entry system controller*
IF42	7.5A	Driving recorder USB charging interface/USB charging interface 1*/USB charging interface 2/USB charging interface 3/right rear seat connector (USB charging interface)
IF43	-	-
IF44	7.5A	Exterior rearview mirror adjusting switch/audio control unit/driver status monitoring ECU*
IF45	25A	Front row 12V power interface*
IF46	15A	Front row USB_TYPE_C interface
IF47	7.5A	Electronic anti-glare interior rearview mirror*/ETC OBU/keyless start/intelligent entry system controller*/defogger relay (ER09)
IF48	-	-

No.	Rated value	Feature/component
IF49	-	-
IF50	7.5A	Engine control unit/keyless start/intelligent entry system controller*/body control unit*
IF51	7.5A	Around view parking control unit*/driver status monitoring ECU*
IF52	7.5A	T-BOX control unit*/front headlamp automatic adjusting control unit*
IF53	7.5A	Left front door handle switch*
IF54	7.5A	A/C control unit
IF55	15A	Body control unit
IF56	7.5A	Front A/C control panel/audio display screen/rear A/C control panel*/instrument cluster module (7-inch TFT color screen)*/instrument cluster module (12.3-inch TFT color screen)

#### 8.5.2 Fuse in engine compartment electrical box



The figure is not guaranteed to apply to every vehicle model. For the purpose of the fuse, please check it on the actual vehicle. The fuses may slightly vary from vehicle to vehicle.

No.	Rated value	Feature/component	
EF01	50A	Left cooling fan	
EF02	30A	Electronic P-gear actuator	
EF03	40A	Rear blower	
EF04	40A	Electronic stability and parking control module	
EF05	ı	-	
EF06	-	-	
EF07	7.5A	A/C compressor	
EF08	10A	Electric water pump	
EF09	-	-	
EF10	20A	Left front seat connector A (seat heating module)*	
EF11	20A	High beam relay (ER08)/left front combination lamp (high beam)/right front combination lamp (high beam)	
EF12	7.5A	Rear blower relay (ER17)/front blower relay (ER04)	
EF13	15A	Left front combination lamp (low beam)	
EF14	15A	Right front combination lamp (low beam)	
EF15	7.5A	Engine control unit	
EF16	7.5A	Rearview mirror heater	
EF17	ı	-	
EF18	40A	ACC power supply/IG1 power supply/ENGINE START/STOP button*	
EF19	7.5A	Low beam relay (ER11)	
EF20	30A	7WDCT transmission control unit	
EF21	30A	7WDCT transmission control unit	

No.	Rated value	Feature/component	
EF22	30A	7WDCT transmission control unit	
EF23	20A	Fuel pump	
EF24	25A	Wiper/wiper speed control relay (ER06)/wiper relay (ER07)	
EF25	7.5A	Engine control unit/brake switch/main relay (ER12)	
EF26	15A	Horn relay (ER19)/horn	
EF27	-	-	
EF28	-	-	
EF29	-	-	
EF30	10A	Oil pump solenoid valve/oil control valve (intake) oil control valve (exhaust)/canister solenoid valve/electronic intake recirculation valve/canister vent valve/engine control unit/PVC heater	
EF31	10A	Upstream oxygen sensor/downstream oxygen sensor/compressor relay (ER13)	
EF32	15A	Engine control unit/starting relay 1 (ER15)/starting relay 2 (ER16)	
EF33	15A	Ignition coil 1/ignition coil 2/ignition coil 3/ignition coil 4	
EF34	10A	Fuel pump relay (ER03)/water pump relay (ER14)/low speed fan relay (ER01)/high speed fan relay 1 (ER02)	
EF35	80A	EPS control unit	
EF36	40A	Connected to the electrical box under instrument panel	
EF37	40A	Front blower	
EF38	40A	Electronic stability and parking control module	

No.	Rated value	Feature/component	
EF39	40A	Rear windshield defrosting and heating/ exterior rearview mirror heater	
EF40	150A	Main fuse	
EF41	30A	IG2 power supply*/starter/ENGINE START/STOP button*	
EF42	50A	Right cooling fan	
EF43	50A	Connected to the electrical box under instrument panel	
EF44	-	-	
EF45	-	-	
EF46	-	-	
EF47	-	-	
EF48	-	-	
EF49	-	-	

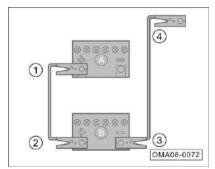
### 8.6 Emergency start Jumper cable

If the engine is unable to start due to a low battery level, you can start it by connecting it to another car's battery via a jumper cable.

#### **↑** WARNING

- The engine compartment is a highrisk area, and improper operation can easily lead to casualties.
- Be sure to carefully read and follow the safety warning instructions before starting the battery operation.

While connecting the batteries of two vehicles, be sure to first connect the positive terminal and then the negative terminal.



- Set the ENGINE START/STOP button to the "OFF" position.
- Connect the end ① of the cable to the positive terminal (+) of the depleted battery A, and the other end ② to the positive terminal (+) of the power supply battery B.

 Connect the end ③ of the black cable to the negative terminal (-) of the power supply battery B, and the other end ④ to the engine block of the vehicle with the depleted battery A or a metal component firmly connected to the engine block.

#### **CAUTION**

Properly place the jumper cable to avoid contact between the cable and the moving parts of the engine.

 Start the vehicle with a power supply battery and let it run at idle speed.
 Then, start the engine of the vehicle with a depleted battery until the engine is running smoothly.

#### **M** WARNING

- Ensure that the headlamps are off before removing the jumper cable.
- Turn on the blower and rear windshield heater of the vehicle with the depleted battery to reduce the voltage peak generated when the cable is being removed.
- Remove the jumper cables with the engine running in the reverse order.

#### **↑** WARNING

Improper use of jumper cable may cause battery explosion and serious injury to personnel.

- The voltage of the power supply battery must be the same as that of the depleted battery, and the capacity of the two batteries must be the same as much as possible. Otherwise, it may cause an explosion.
- Do not expose the battery to open fire, and beware of explosion.
- Do not connect the negative cable directly to the negative terminal of the battery without power. There shall be no static electricity near the battery. Otherwise, the combustible gas produced by the battery may be ignited by sparks, causing an explosion accident.
- Do not connect the negative cable to the fuel system component or brake pipeline, and do not bend over to the battery during operation to avoid being burned by acid.

#### **∴** WARNING

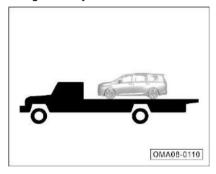
The jumper cable should be correctly connected to the battery's positive and negative terminals according to the above instructions. It should not be connected to other parts of the battery. Otherwise, it may cause fuse ablation or partial function failure of the vehicle, which will not be covered by the warranty.

#### 8.7 Vehicle towing

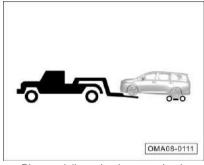
If the vehicle needs to be towed, it shall be towed by the GAC Motor authorized shop or a professional towing company.

It is recommended to use a rollback tow truck for towing. If the conditions can not be met, a wheel-lift truck can also be used for towing the vehicle as appropriate.

#### Being towed by a rollback tow truck

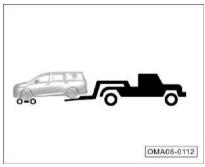


# Being towed by a wheel-lift truck from the front



Place a dolly under the rear wheels.

# Being towed by a wheel-lift truck from the rear



Place a dolly under the front wheels.

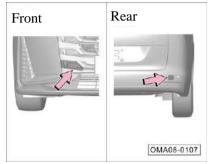
#### **Emergency towing**

If it is impossible to find a tow truck in an emergency, fasten the towing cable or towing chain in the emergency towing ring to temporarily tow the vehicle. However, this method is only suitable for low speed and short distance towing on a solid and flat road.

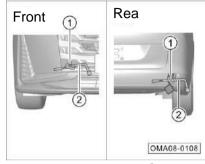
#### **M** WARNING

In emergency towing, drive slowly to avoid violent operation. Excessive towing force will damage the vehicle.

#### Installing a towing hook



 Pry off the towing hook cover in the arrowed position using a slotted screwdriver wrapped with a cloth.



- Take out the towing hook ① and wheel bolt removal wrench ② from the driver's tool kit in the trunk.
- Screw the towing hook ① clockwise into the thread hole.
- Insert the wheel bolt removal wrench ②
  into the round opening of the towing
  hook, and turn the wheel bolt removal
  wrench clockwise to make the towing
  hook be firmly screwed into the thread
  hole.

#### Precautions for towing

Before emergency towing, be sure to follow the instructions below:

- Hazard warning lamps of both towing and towed vehicles must be turned on, and local traffic regulations must be complied with.
- The towing hook must be firmly tightened in the thread hole. Otherwise, the towing hook may slip out of the thread hole during towing.
- The towed vehicle must be shifted into "N".
- For the towed vehicle, set the ENGINE START/STOP button to the "ON" position and turn the steering wheel back and forth to confirm that the steering wheel can be turned.

During the emergency towing, be sure to follow the instructions below:

- Start the engine and drive at a slow speed till the towing rope is tight and then perform acceleration slowly.
- Be sure to drive steadily, and do not accelerate, decelerate, or turn the vehicle sharply.
- For towing, the towed vehicle shall be braked earlier than normal conditions, with the brake pedal lightly depressed.
- During towing, the towing rope must always be in a tight state.

#### 8.8 Getting out of a trap

If the vehicle is stuck on a soft road such as sandy, muddy or snowy road, follow the steps below to get out of a trap:

- Observe the areas in front of and behind the vehicle to ensure that there are no obstacles.
- Turn the steering wheel to the left and to the right to grind areas around the front wheels to remove mud, snow or sand trapped around the tires.
- Place wooden blocks, stones or other materials to help increase tire friction.
- Start the engine and accelerate the vehicle slowly to get the vehicle out of the pit.
- If the vehicle still can not get out of the trap after attempts for several times, it is required to have a tow truck for rescue.

### i NOTE

In the acceleration process, human assistance can be provided to push the vehicle from the front and rear for driving the vehicle out of the trap.

### 9. Environmental Protection Information

9.1 Environmental protection information number

_				
	Index	Type name	Environmental protection information number	Index
	1	GAC6480KCW6A	CN QQ G6 Z2 0B82000105	000001
				000002
				000003
			000004	

#### 9.2 Environmental Protection Information

5.2 Environmental i rotection infor	Type name	
Environmental protection information	GAC6480KCW6A	
Engine model/manufacturer	4A15J2/Guangzhou Qisheng Powertrain Co., Ltd.	
Catalytic converter model/manufacturer	Before: 02515701/Before: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch After: 02915303/After: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch	
Coating/carrier/packaging manufacturer	Coating: Before: Unit 1: Wuxi Weifu Environmental Catalysts. Co., Ltd./After: Unit 1: Wuxi Weifu Environmental Catalysts. Co., Ltd. Carrier: Before: Unit 1: NGK Ceramics Suzhou Co., Ltd./After: Unit 1: NGK Ceramics Suzhou Co., Ltd. Packaging: Before: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch/After: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch	
Catalyzed Gasoline Particulate Filter (CGPF) model/manufacturer	After: 02915303/After: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch	
Coating/carrier/packaging manufacturer	Coating: After: Unit 1: Wuxi Weifu Environmental Catalysts. Co., Ltd. Carrier: After: Unit 1: NGK Ceramics Suzhou Co., Ltd. Packaging: After: Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch	
Canister model/manufacturer	2140003ADE00/Langfang Hua An Automotive Equipment Co., Ltd.	
Oxygen sensor model/manufacturer	Before: ZFAS. After: LX4/Before: Changshu NGK Spark Plug Co., Ltd. After: United Automotive Electronic Systems	
Crankcase emission control model/manufacturer	10090081040000/Shentong Technology Group Co., Ltd.	
ERG model/manufacturer	/	
OBD system supplier	United Automotive Electronic Systems	
ECU model/manufacturer	UD8 PRO/United Automotive Electronic Systems	
Transmission type/number of gears	Automatic/7	
Muffler model/manufacturer	Before: 2235452X. After: 2235490X/Faurecia (Guangzhou) Automotive Systems Co., Ltd. Sanshui Branch	
Supercharger model/manufacturer	MGT1446Z/Garrett Motion Technology (Wuhan) Co., Ltd. NT00/VOFON Turbo Technology (Jiaxing) Co., Ltd.	
Intercooler model	Empty water	

This manual describes related information of entire GAC Motor series, including their configuration, functions, performance parameters and product schematic diagrams. Its content is valid when allowed to be printed. However, the actual configuration and function of the vehicles are subject to the specific vehicles delivered. If there is any difference between the schematic diagrams and the specific vehicle delivered, the actual vehicle shall prevail.

GAC Motor Co., Ltd. reserves the right to change, supplement or terminate the contents and technical specifications in this manual without prior notice.

GAC Motor Co., Ltd. owns the copyright of this manual. Without the written consent of the GAC Motor Co., Ltd., the contents of this manual shall not be photocopied or extracted.

GAC MOTOR CO., LTD.

For the operation instructions for the M6 PRO model, please refer to: https://www.gacmotor.com/service/school



# GAC INTERNATIONAL CO., LTD.

Address: NO.60, Donglong Road, Panyu District, Guangzhou, P.R.C.

Postcode: 511434

Service hotline: 400-158-9999