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## GENERAL INFORMATION

M2510000102101

**BETTER APPEARANCE**

1. Specially-shaped upper section of front bumper emphasizes the front mask, and decreases the air resistance.
2. Mesh type radiator grille gives a sleek front mask and sporty image.
3. Large front bumper appealing the robust front mask
4. Large rear bumper extending to side body

**BETTER AERODYNAMIC CHARACTERISTICS**

5. Air dam skirt panel
6. Side air dams
7. Rear spoiler <GSR: Standard type, MR: Large type>

**BETTER USER-FRIENDLINESS**

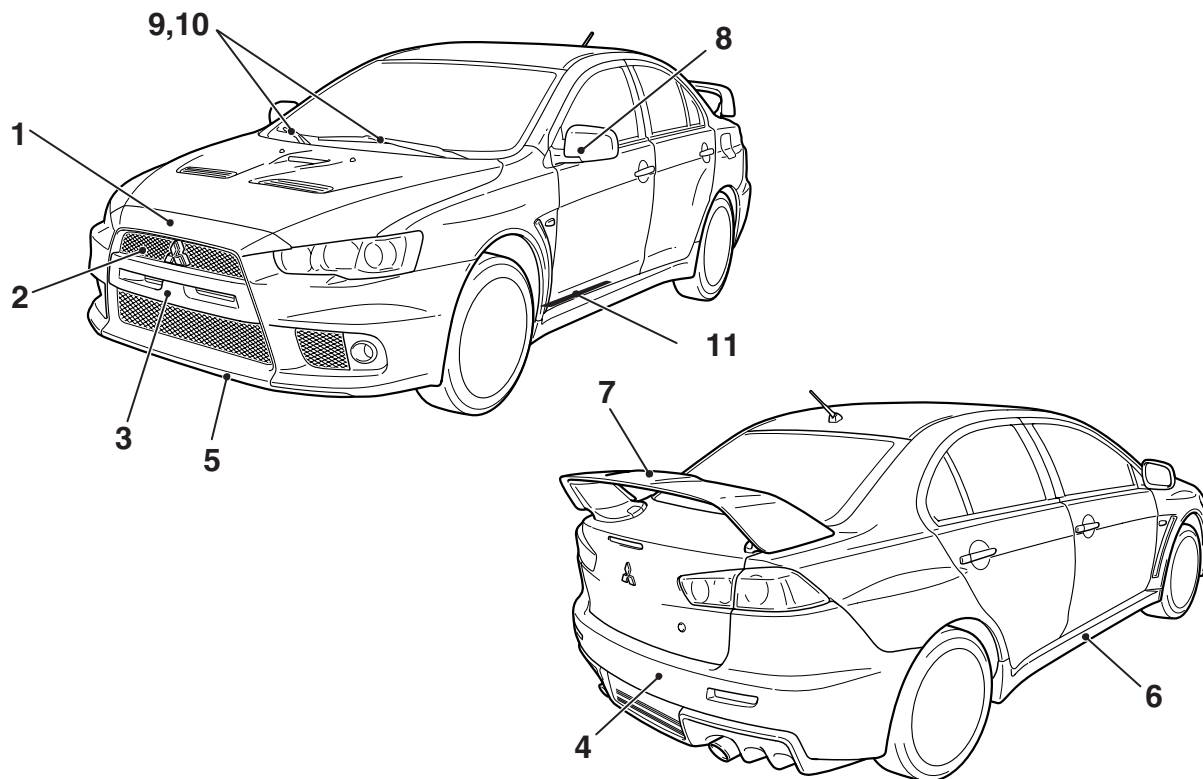
8. Electric remote-controlled door mirrors

**BETTER PRODUCT PACKAGE**

9. Vehicle speed sensitive intermittent time variable windshield wiper
10. Rain sensitive AUTO wiper <Optional: Vehicles for USA with lighting control sensor (rain sensor)>
11. Installation of exclusive front step plate to side sill <MR>

**SUPPORT RECYCLING OF RESOURCES**

Uses PP (polypropylene) materials that are easy to recycle and easy to recognise material symbols on the plastic (resin) parts.



AC708418 AB

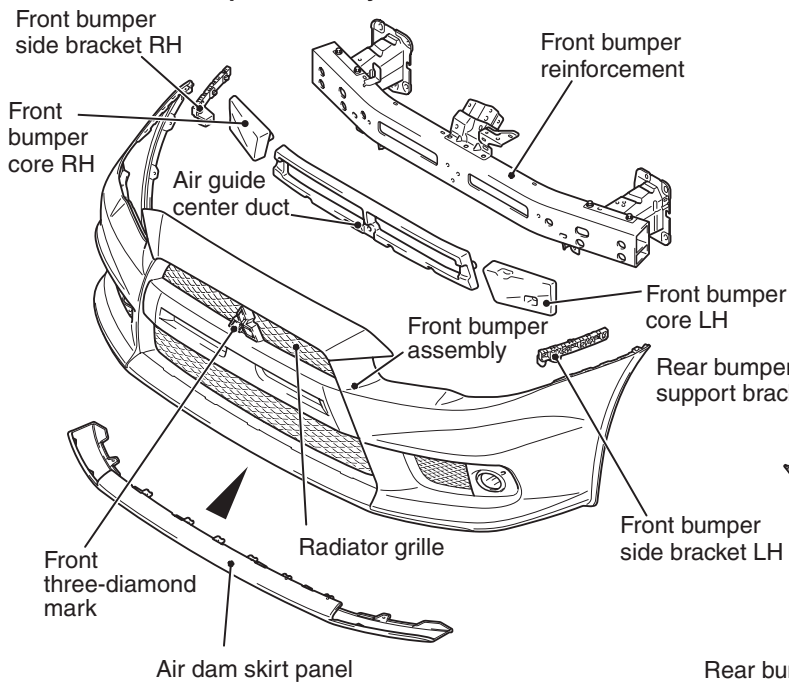
# BUMPER AND RADIATOR GRILLE

M2510001300210

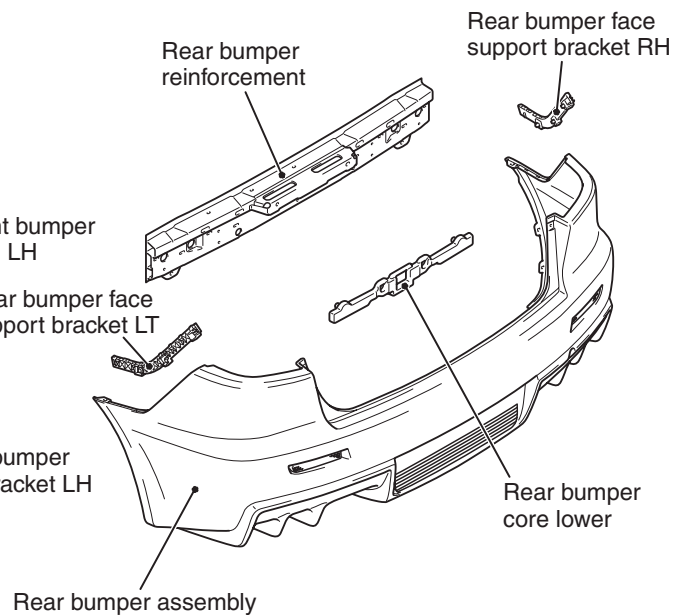
## CONSTRUCTION DIAGRAM

<Vehicles for USA>

<Front bumper assembly>



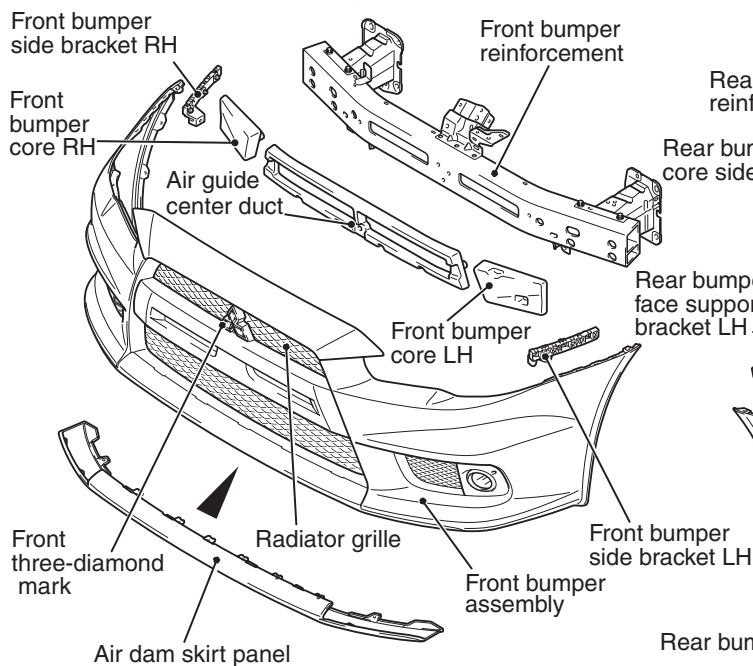
<Rear bumper assembly>



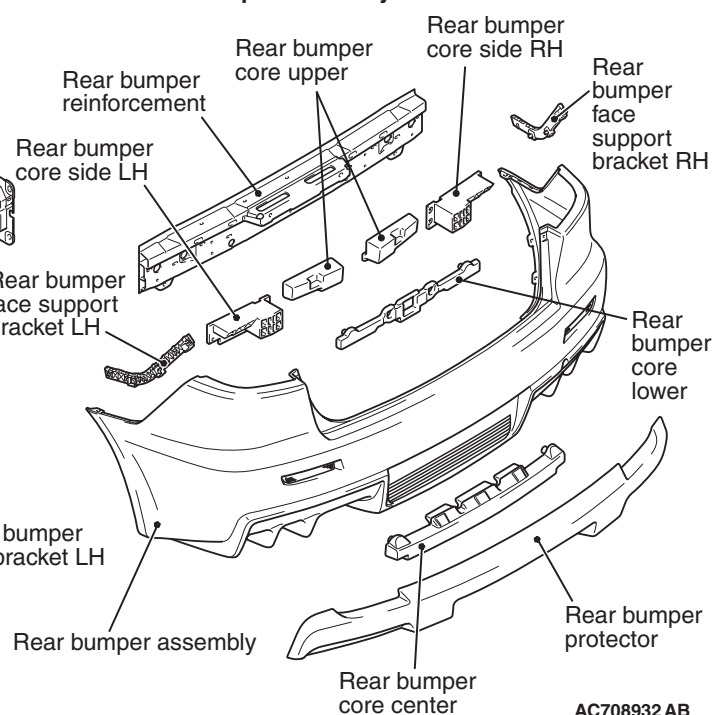
AC708931AB

<Vehicles for Canada>

<Front bumper assembly>



<Rear bumper assembly>



AC708932 AB

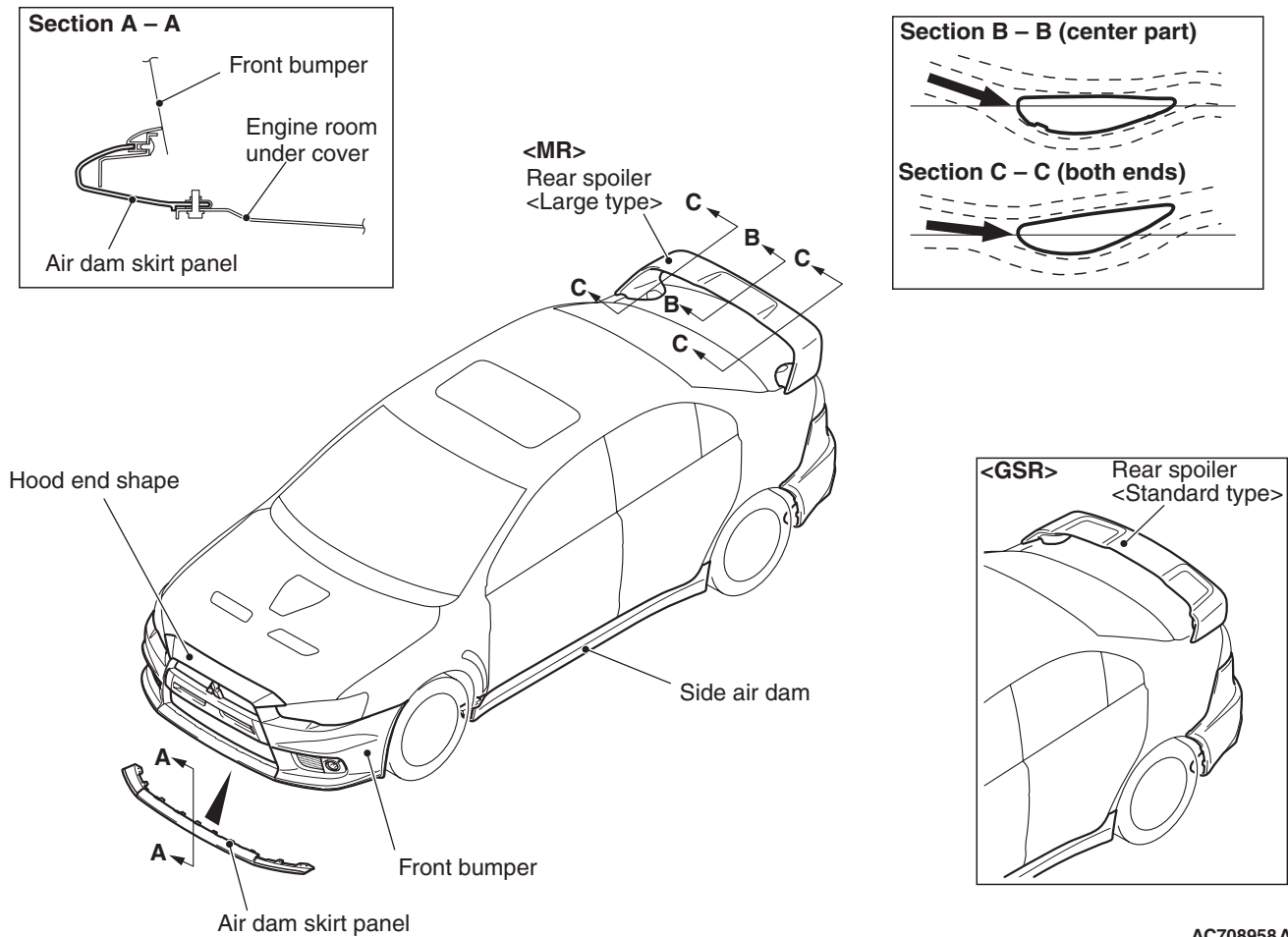
- Mesh type radiator grille gives a sleek front mask and sporty image.
- Front three-diamond mark is protruded from the installation surface of the radiator grille to improve the brand appeal.
- Air dam skirt panel with good aerodynamic characteristics has been equipped to lower section of front bumper.

- Aluminum front bumper reinforcement has been equipped to improve steering stability and riding comfort, and reduce weight and vibration noise (rear bumper reinforcement is made of steel).
- The front and rear bumpers incorporate highly rigid bumper reinforcements and bumper cores for excellent energy-absorption to reduce chassis deformation upon impact.
- With the front and rear bumper reinforcements remaining on the body, front and rear bumpers can be removed as a unit.
- Resin-made front bumper side brackets and rear bumper face support brackets have been adopted to improve the alignment with the body.
- Rear bumper protector and rear bumper core center have been added to the rear bumper assembly. <Vehicles for Canada>

## AERO PARTS

M2510003000903

### CONSTRUCTION DIAGRAM



AC708958 AB

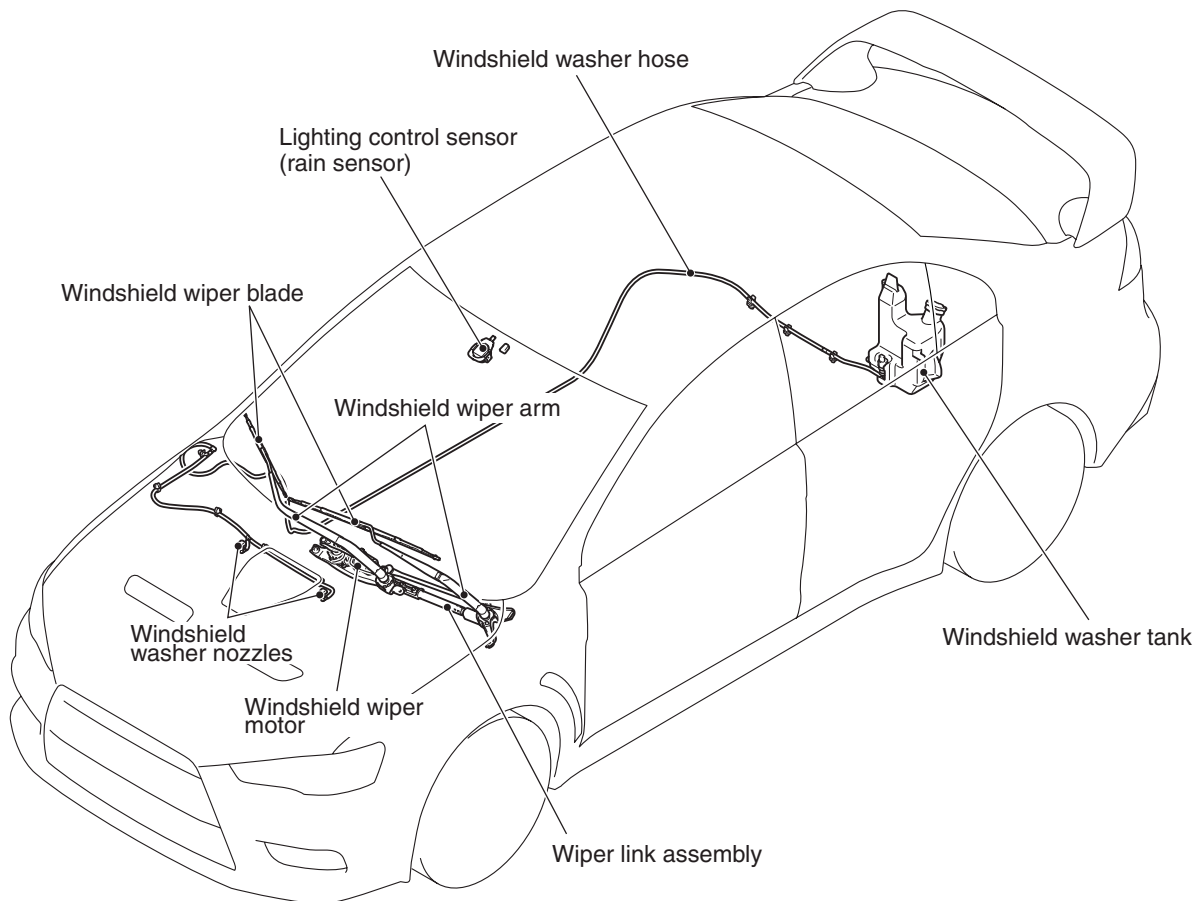
The following aero parts provide better aerodynamic performance and an appealing look.

- Hood end shape:  
Upper section of front bumper also serves as the hood end, reducing the air resistance by shape optimization.
- Front bumper and air dam skirt panel:  
Lower end of front bumper has been lowered. With the mounting of air dam skirt panel, an edge shape is given to the lower end of bumper. This shape alteration reduces the airflow entering under the vehicle to decrease the air resistance and lifting force exerted to the vehicle front. The resulting improvement to the front tire traction provides enhancements to driving stability during high speed traveling.
- Air dam shape at front of front wheel arch:  
The bumper corners at the front of front wheel arch has been made to have a projecting air dam shape to separate the airflow at side of the body. The generated negative pressure lowers the air pressure in the wheel housing, reducing the lifting force at the vehicle front.
- Lip shape at rear of front wheel arch:  
The lip section at the rear of front wheel arch has been bent inward to facilitate venting of air from the wheel housing, decreasing the lifting force and air resistance at the vehicle front.
- Under floor:  
The under cover mounted to the under floor has been flattened and arranged at correct position to smoothen the airflow entering under the floor for a reduction of air resistance. At the same time, the lifting force is reduced to suppress the lifting of vehicle during high speed traveling.
- Side air dams:  
Smoothen the airflow under the floor and around the wheels to decrease the air resistance and lifting force.
- Rear spoiler:  
<Standard type>  
Separates the air vortex induced at the rear of the vehicle to smoothen the airflow. In addition, the enlarged horizontal wing and the helix angle have been optimized to reduce the air resistance and to generate the down force, thus, the road holding quality of rear tires has been increased to improve the driving stability while driving at high speed.  
<Large type>  
The base shape of wing has been optimized to match the airflow. Furthermore, the wing's angle of attack has been modified at the center and both ends, adopting a twisting structure to generate down force to the airflow for a reduction of lifting force at the vehicle rear. At the same time, the rear tire traction is enhanced to improve the driving stability during high speed traveling.

## WINDSHIELD WIPER AND WASHER

M2510007000853

## CONSTRUCTION DIAGRAM



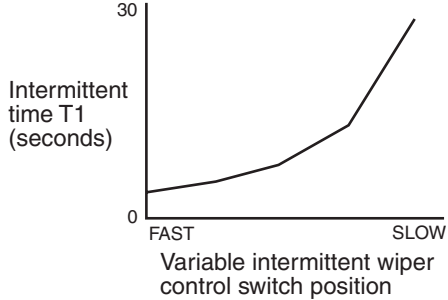
AC708711AB

- 2-speed (low/high speed) windshield wiper has been adopted.
- The intermittent wiper features a vehicle speed-dependent variable intermittent time system\*.
- Rain sensitive AUTO wiper system\*  
<Optional: Vehicles for USA with lighting control sensor (rain sensor)>
- With the windshield washer, the washer spraying area has been enlarged by the adoption of 2-nozzle diffusion washer type, improving the wiping performance of windshield wiper.
- The mist wiper is turned ON by operating the mist switch in the opposite direction of the wiper switch for easy operation. The mist wiper is equipped with the function that quickly wipes raindrops away at high speed when the mist switch is ON, and when the mist switch is OFF, at low speed until the stop position is reached. When the mist switch is briefly turned ON, the wiper operates once at low speed.
- Washer-linked wiper function\* has been adopted. The washer fluid can be injected without operating the wiper. When the ignition switch is turned ON while the washer switch is ON, the washer motor operates but the wiper does not.
- Windshield washer tank is arranged in the trunk room, contributing to the optimization of front-to-back weight distribution for the vehicle.

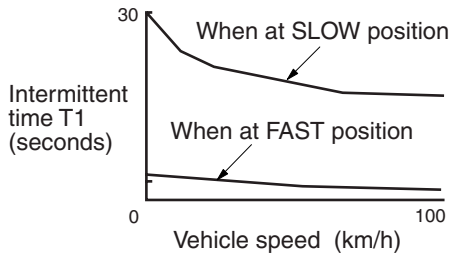
*NOTE: \*\*Using the customization function, the vehicle speed-dependent variable intermittent time system, rain sensitive AUTO wiper system and the washer-linked wiper function can be selected (Refer to P.51-12).*

DESCRIPTION OF CONSTRUCTION AND OPERATION

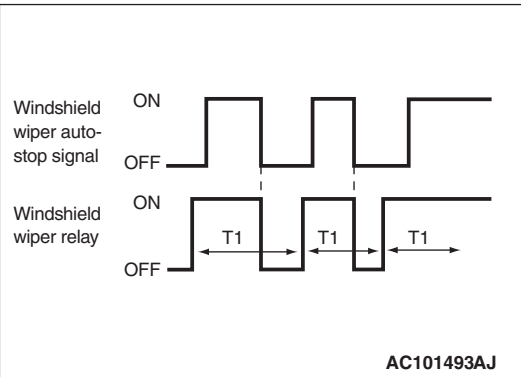
Change in intermittent time by variable intermittent wiper control switch (when vehicle is stationary)



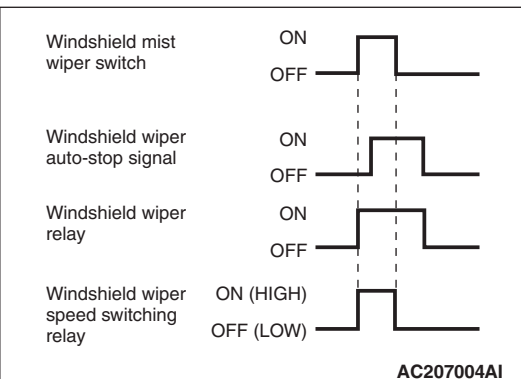
Change in intermittent time according to vehicle speed



AC101502 AC



AC101493AJ



AC207004AI

**Intermittent control (Vehicle speed-dependent variable type) <Initial condition: with function>**

1. ETACS calculates the windshield intermittent wiper interval T1 from the position of the windshield intermittent wiper switch on the column switch and the vehicle speed signal (sent from the combination meter to ETACS via CAN communication).

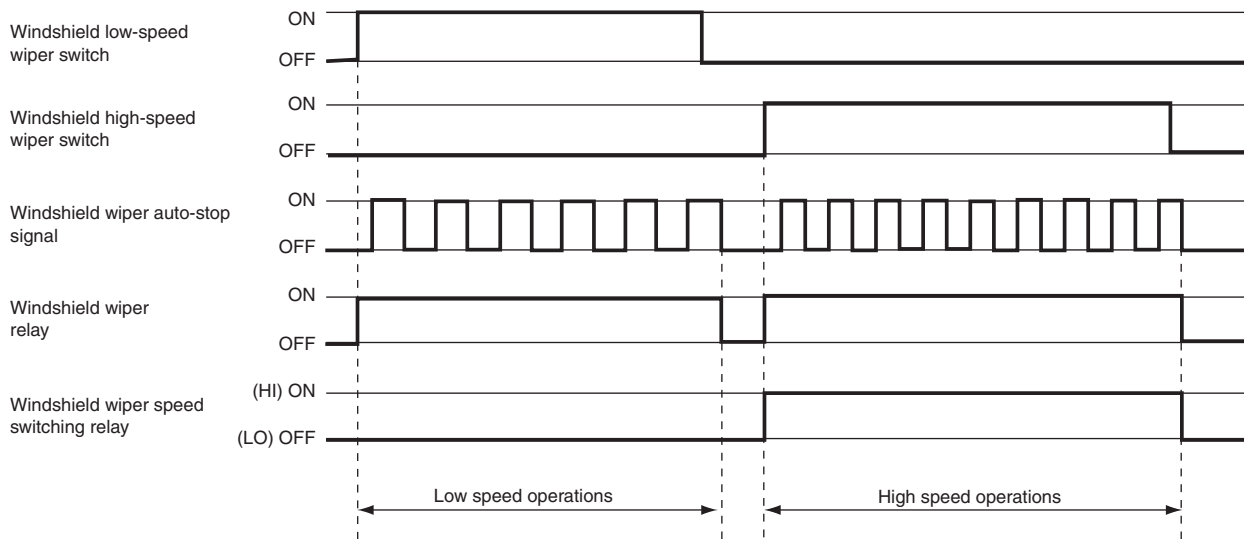
*NOTE: Using the configuration function, the vehicle speed-dependent intermittent function can be invalidated (Refer to P.51-12).*

2. When ETACS receives the ON signal of the windshield intermittent wiper switch, it turns the windshield wiper relay ON. When the wiper reaches the stop position, the windshield wiper auto-stop signal turns OFF, and the windshield wiper relay turns OFF. When the intermittent time T1 calculated by step 1 has elapsed after the windshield wiper relay ON, the windshield wiper relay turns ON again, and the above-mentioned operation is repeated.

**Mist wiper control**

When the windshield wiper mist switch on the column switch is turned ON while the ignition switch is in ACC or ON position, the column switch turns the windshield wiper relay ON. At the same time, the wiper speed switching relay turns ON (HI). When the windshield mist wiper switch is ON, the windshield wiper operates at high speed.

Low speed wiper and high speed wiper control



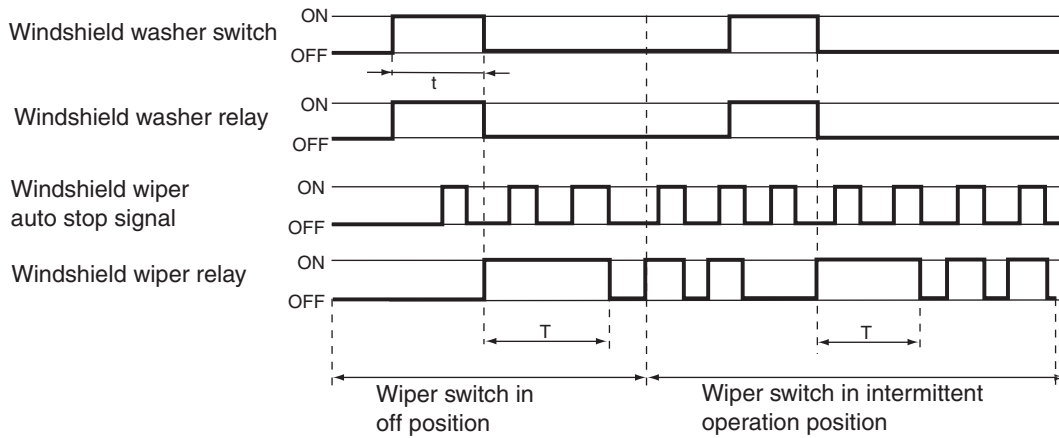
AC506610AH

When the windshield low speed wiper switch on the column switch is turned ON while the ignition switch is in ACC or ON position, the column switch turns the windshield wiper relay ON. Also, the wiper speed switching relay turns OFF (LO), and the windshield wiper operates at low speed.

When the windshield high speed wiper switch is turned ON, the windshield wiper relay turns ON. Also, the wiper speed switching relay turns ON (HI), and the windshield wiper operates at high speed.



**Windshield wiper linked with washer function <Initial condition: with function>**



AC707462 AB

t: 0.3 second  
T: Intermittent wiper intermittent time

Wiper switch	OFF position AUTO position			Low-speed or high-speed operation position
	0.3 second or less	0.3 to 0.5 second	0.5 second or more	
Washer switch ON time (t)	0.3 second or less	0.3 to 0.5 second	0.5 second or more	-
Intermittent wiper time (T)	0 second	1 seconds	3 seconds	3 seconds

When the windshield washer switch on the column switch is turned ON while the ignition switch is in ACC or ON position, ETACS turns the windshield washer relay ON.

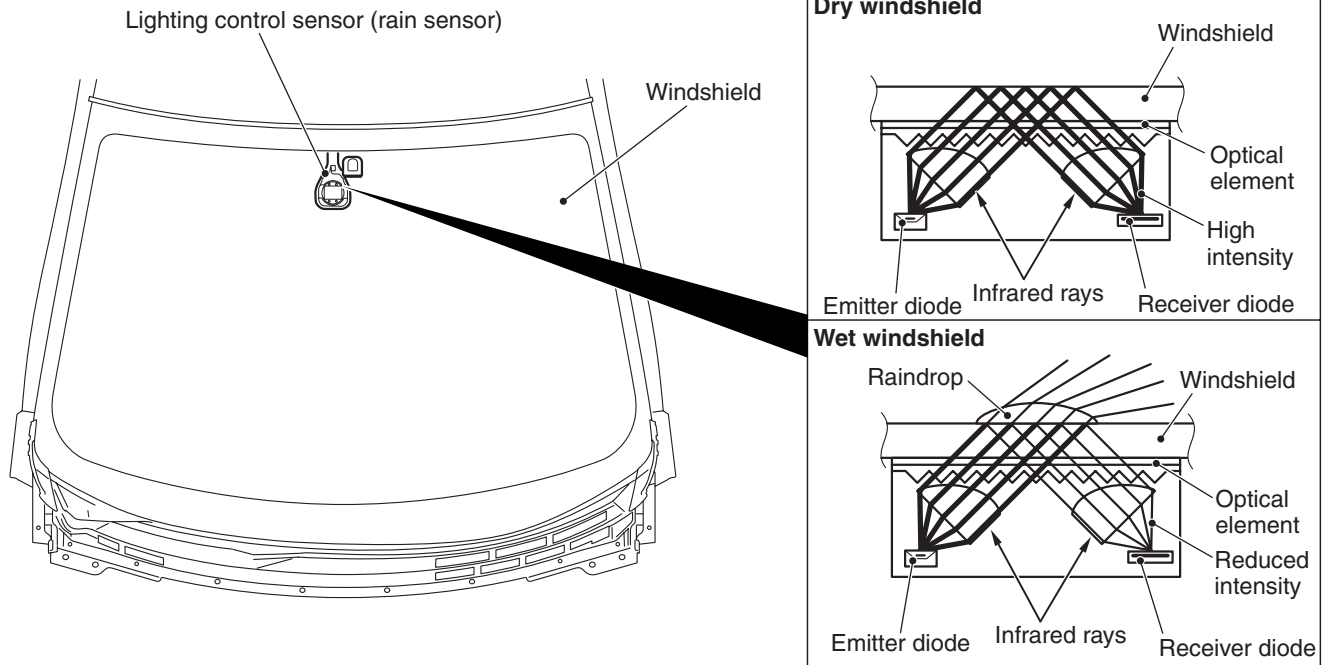
When the windshield washer switch is kept ON for 0.3 seconds or longer, the windshield wiper relay (the wiper relay output time varies depending on the conditions. For details, see the table.) is turned ON, and the windshield wiper operates at LO speed. The windshield wiper is turned OFF with 3 seconds delay after the windshield washer switch is turned OFF. Even when the windshield washer switch is turned ON while the windshield wiper is operating intermittently, the intermittent action starts again after the linked operation is finished.

If the ignition switch is turned from OFF to ACC position while the windshield washer switch is ON, the windshield washer relay turns ON, but the windshield wiper does not perform the linked operation. When the windshield washer switch is turned OFF and then ON, the windshield wiper starts the linked operation.

**NOTE:**

- Using the configuration function, the washer linked windshield wiper function can be invalidated (Refer to P.51-12).
- Using the configuration function, when the washer linked windshield wiper function is invalidated, only the washer operates. It is useful to melt down the ices of the frozen windshield.

## Rain sensitive AUTO wiper function <Optional: Vehicles for USA with lighting control sensor (rain sensor)>



AC708778AB

Lighting control sensor (rain sensor) has been installed on the upper part of the windshield to sense the raindrops and windshield wiper can be operated automatically when the ignition switch is at ON and wiper switch at AUTO position.

- The amount of rainfall on the windshield surface are detected by using the infrared reflection, and the windshield wiper is controlled by intermittent operation or LO and HI operation automatically depending on the amount of rainfall.

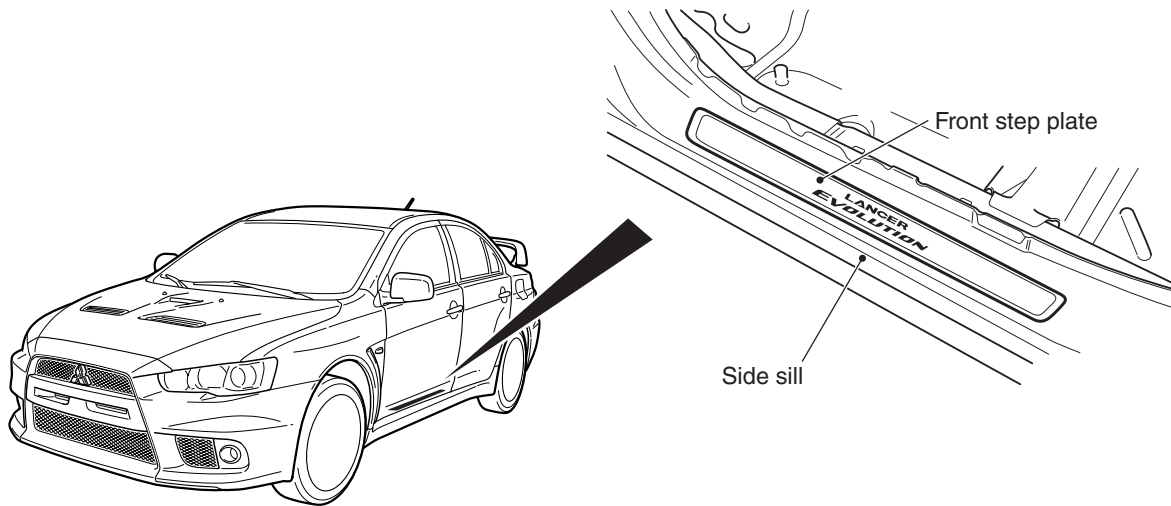
- Dry windshield: All infrared rays emitted from the emitter diode are reflected by the windshield and directed to the receiver diode as they are.
- Wet windshield: Part of the infrared rays emitted from the emitter diode are transmitted to outside of the windshield through the raindrops, and the infrared rays with reduced intensity are directed to the receiver diode.

**NOTE:** Using the configuration function, the rain sensitive AUTO wiper function can be invalidated (Refer to [P.51-12](#)).

## FRONT STEP PLATE <MR>

M2510000600348

### CONSTRUCTION DIAGRAM



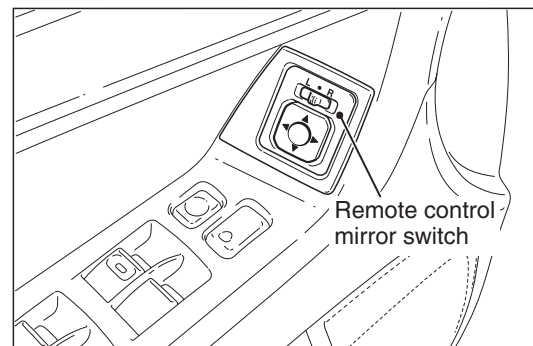
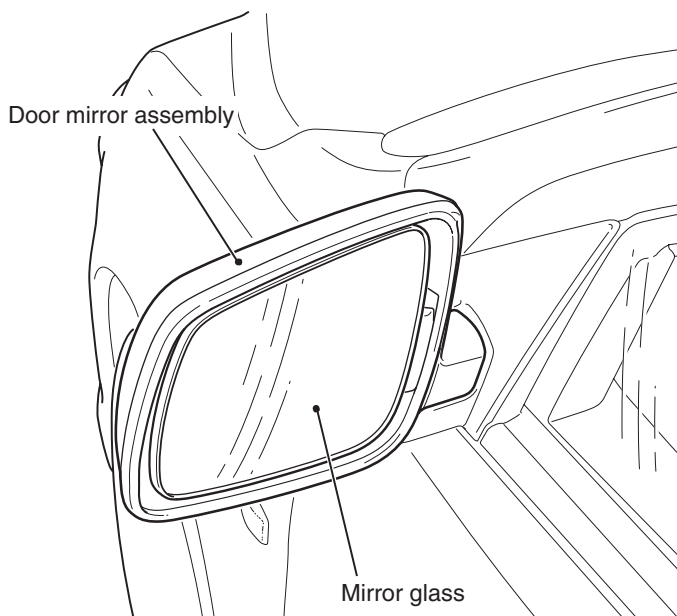
AC708777AB

Front step plates are attached to the both side sills shown in the figure in order to enhance the brand image.

## DOOR MIRRORS

M2510008100552

### CONSTRUCTION DIAGRAM



AC607910AC

The outside mirror (door mirror) is a folded type and has the following characteristics.

- Aerodynamic door mirror shape reduces wind noises, and the door glasses and mirrors do not easily get wet while driving in a rainy day.
- Electric remote-controlled door mirrors

**CONFIGURATION FUNCTION**

M2510001400284

Using the ETACS system of scan tool MB991958, the following functions can be programmed. The programmed information is held even when the battery is disconnected.

<b>Adjustment item (scan tool MB991958 display)</b>	<b>Adjustment item</b>	<b>Adjusting content (scan tool MB991958 display)</b>	<b>Adjusting content</b>
Front wiper operation	Adjustment of the intermittent windshield wiper operation <vehicles without auto light>	Normal INT	Intermittent wiper interval is fixed to 4 seconds.
		Variable INT	Intermittent wiper interval is calculated only by the wiper volume control.
		Speed Sensitive	Intermittent wiper interval is calculated according to the intermittent wiper volume control and vehicle speed (default).
	Adjustment of the intermittent windshield wiper operation <vehicles with auto light>	Normal INT	Intermittent wiper interval is fixed to 4 seconds.
		Variable INT	Intermittent wiper interval is calculated only by the wiper volume control.
		Speed Sensitive	Intermittent wiper interval is calculated according to the intermittent wiper volume control and vehicle speed.
		Rain Sensitive	Intermittent wiper interval is calculated according to the intermittent wiper volume control and lighting control sensor (default).
	Front wiper washer	Disabling or enabling washer-linked wiper function	Only washer
Washer&wiper			With function (default)