

# General Description

EyeSight (DIAGNOSTICS)

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## 3. General Description

### A: CAUTION

#### 1. AIRBAG SYSTEM

Airbag system wiring harness is routed near the cruise control command switch.

#### CAUTION:

- Do not use the electrical test equipment on the airbag system wiring harnesses and connector circuits.
- Be careful not to damage the airbag system wiring harness when servicing the cruise control command switch. Airbag system wiring harness is routed near the cruise control command switch.

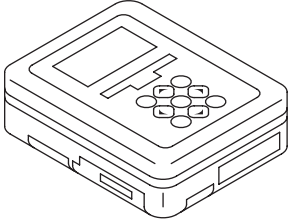
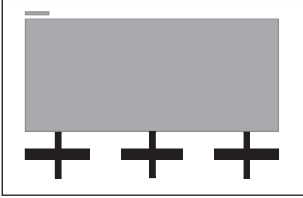
#### 2. EyeSight

#### CAUTION:

- Do not hold the camera unit of the stereo camera.
- Do not touch the lens on the stereo camera.
- Do not clean the lens of the stereo camera.
- When cleaning the windshield glass, use care so that the glass cleaner, etc. does not come in contact with the lens of the stereo camera.
- Do not make an impact or apply excessive force to the stereo camera.
- Do not disassemble the stereo camera.
- Do not change the installation position of the stereo camera or do not modify the surrounding structure.
- If the stereo camera or windshield glass is removed or replaced, always adjust or check the stereo camera.
- When lifting up the vehicle to rotate the tires, turn off the pre-crash function.
- Stereo camera axis may be displaced even in a minor collision. Even if the EyeSight warning light or etc. is not illuminated, or the "EyeSight Disabled Check Manual" is not displayed on the multi information display, adjust the stereo camera.
- When removing the stereo camera cover assembly, cover the camera cover opening with the protective tape with a weak adhesive force such as masking tape, etc. <Ref. to ES-8, REMOVAL, Stereo Camera.>

## B: PREPARATION TOOL

### 1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.
 ST87599YC001	87599YC001	RANDOM CHART	Used for adjusting stereo camera.

### 2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
Measure (5 m (16 ft) or more)	Used for adjusting stereo camera.
Leveling line	Used for adjusting stereo camera.
Plumb bob	Used for adjusting stereo camera.
Weight	Used for adjusting stereo camera.
Packing tape	Used for adjusting stereo camera.
Masking tape	Used for removing and installing stereo camera cover assembly.

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## C: INSPECTION

### 1. BATTERY

Measure the battery voltage and specific gravity of electrolyte.

**Standard voltage:**

**12 V or more**

**Specific gravity:**

**1.260 or more**

### 2. WINDSHIELD GLASS AND DASHBOARD

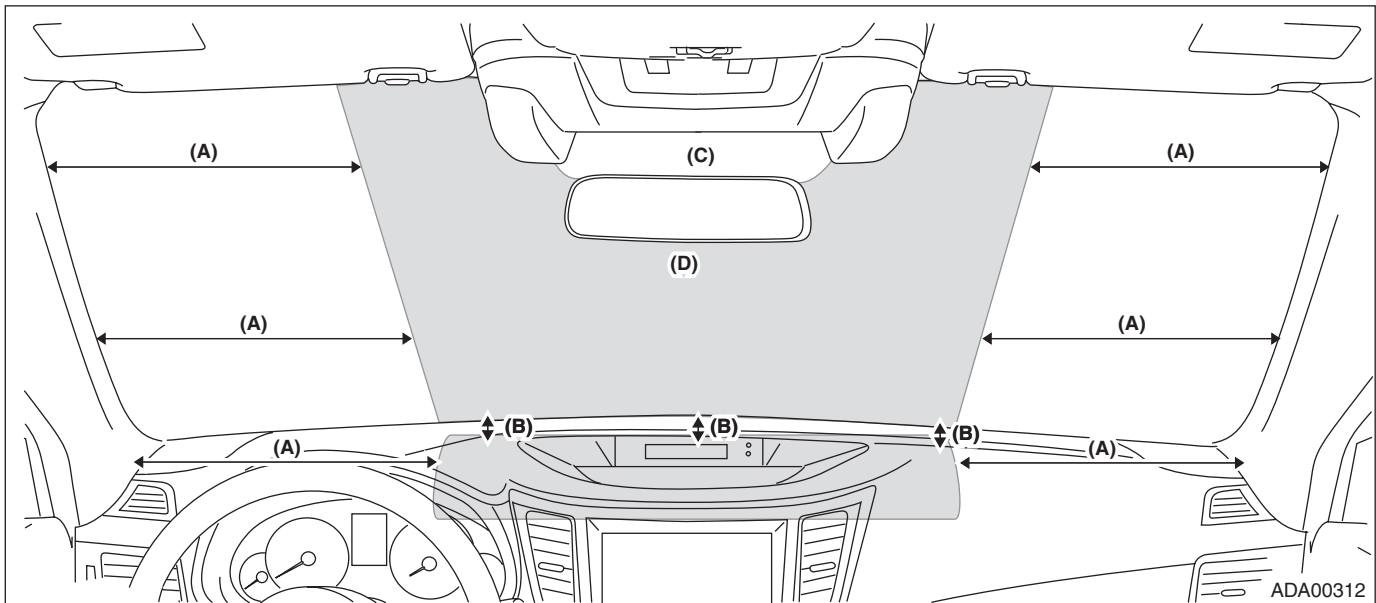
Remove the windshield glass and dashboard in front of the stereo camera.

**Standard:**

**There must be no oil film, dirt, scratch or fogging that obstructs the forward visibility of the stereo camera.**

**Do not stick or attach the aftermarket parts on the prohibited area (E) shown in the figure below. Even outside the prohibited area, if the abnormal operation occurs due to the reflection of the light or the reflection to the glass, change the adhering position or installation position.**

- **Application of stickers or antennas**
  - This will affect the visibility of the stereo camera, causing the function not to operate correctly.
- **Object on the dashboard**
  - These things will be reflected on the windshield glass, affecting the recognition of the stereo camera, thus causing the function not to operate correctly.
- Front view



(A) 350 mm (13.8 in)

(C) Ceramic area

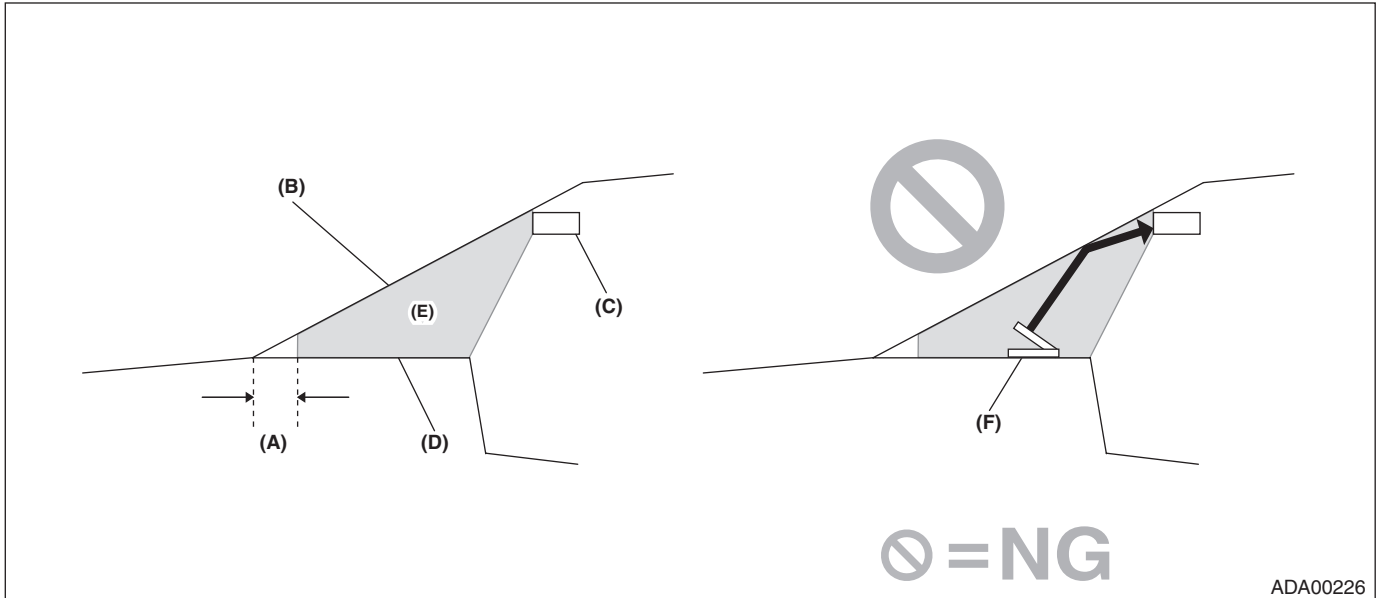
(D) Prohibited area

(B) 150 mm (5.9 in)

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- Side view



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(A) 150 mm (5.9 in)  
(B) Windshield glass

(C) Stereo camera cover  
(D) Dashboard

(E) Prohibited area  
(F) External monitor etc.

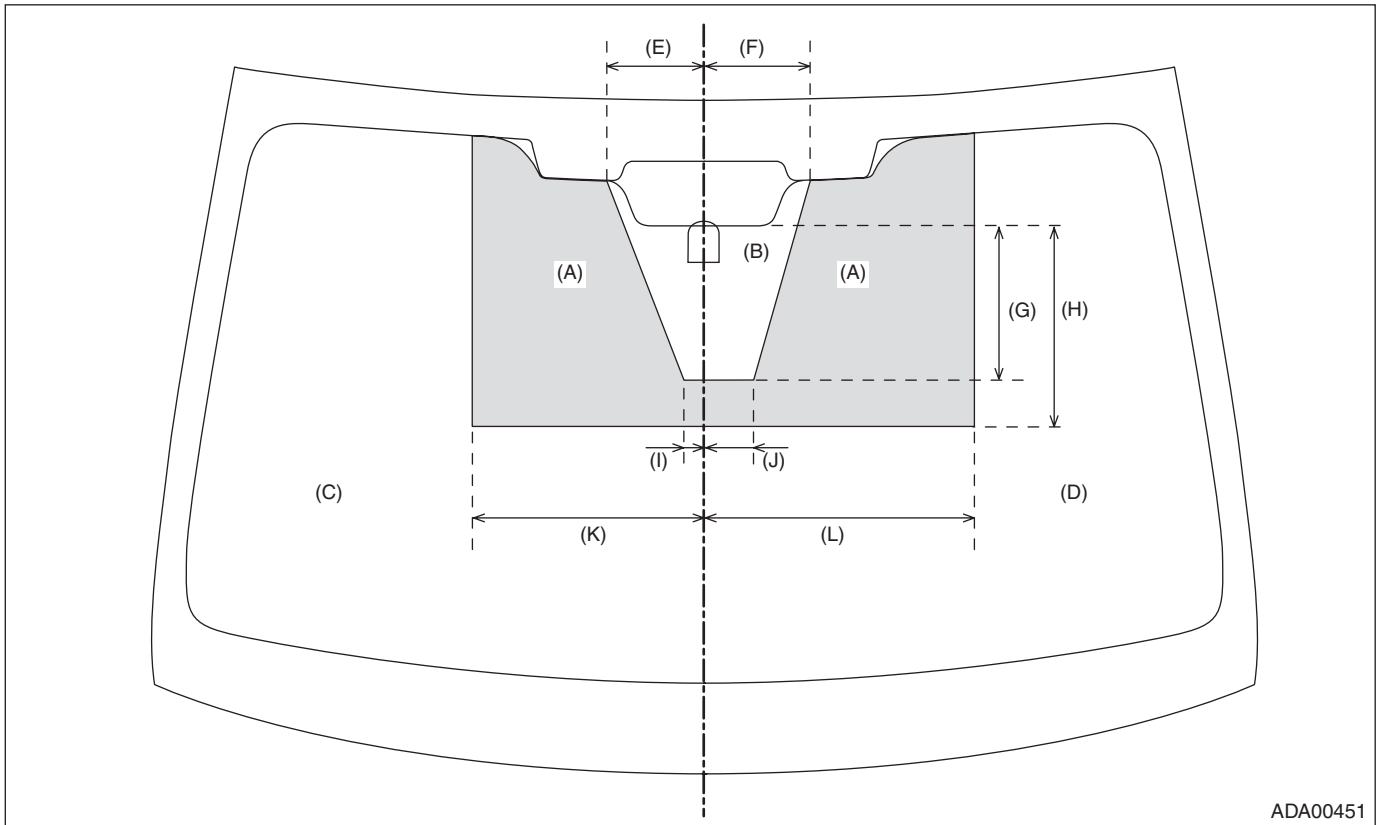
## NOTE:

- Clean the windshield glass if dirt or fogging is found on the glass. Repair or replace the glass if damage is found.
  - When cleaning the inner side of the windshield glass, be careful not to touch the lens of the stereo camera. Take care so that the glass cleaner is not applied to the lens. (As with the removal of the stereo camera, cover the camera cover opening with the protective tape with a weak adhesive force such as masking tape, etc before operation. After operation, be sure to remove the tape.)<Ref. to ES-8, REMOVAL, Stereo Camera.>
  - When replacing the windshield glass, be sure to replace the part for the EyeSight.
  - If the glass is removed or replaced, always perform the stereo camera adjustment and inspection.
- Relocate any aftermarket parts out of the prohibited area.
- Do not touch the lens on the stereo camera. Do not clean the lens of the stereo camera. (If the lens surface is touched, the lens hood must be replaced as it is impossible to clean the lens surface for ensuring quality.)

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- If the damage is found in the glass repair prohibited area shown in the figure below, replace the glass.
  - Damage in the prohibited area can affect the recognition of the stereo camera even if it is repaired, and thereby EyeSight function may not operate properly.



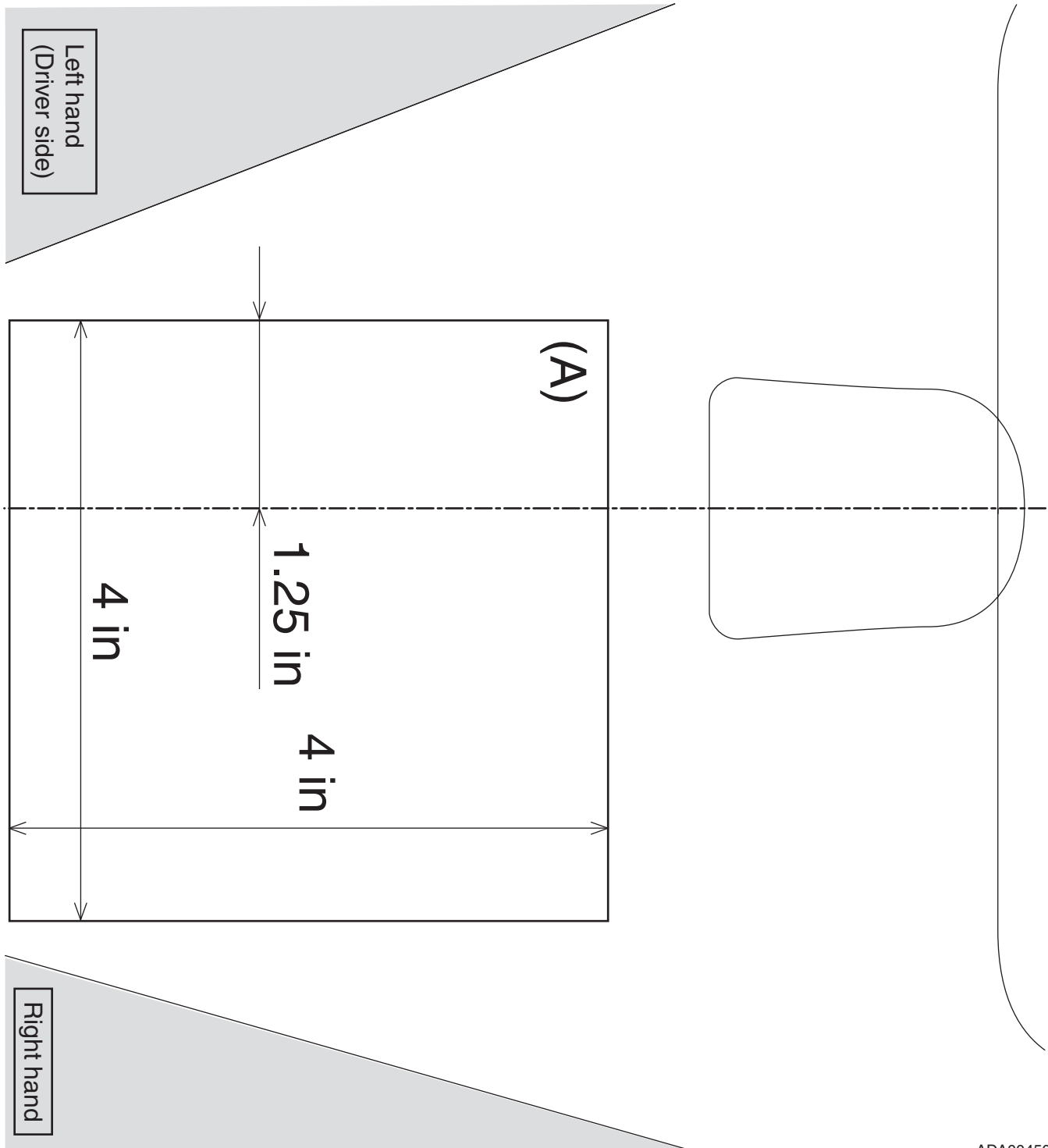
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(A) Glass repair prohibited area	(E) 128 mm (5 in)	(I) 27 mm (1.1 in)
(B) Glass repairable area	(F) 140 mm (5.5 in)	(J) 65 mm (2.6 in)
(C) Glass repairable area (Driver's side)	(G) 203 mm (8 in)	(K) 305 mm (12 in)
(D) Glass repairable area (Passenger's side)	(H) 270 mm (10.6 in)	(L) 356 mm (14 in)

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- Install the ETC transponder inside the area (A) shown in the figure below. Before installing, attach a full-scale copy of the following figure on the inside of the windshield glass surface to install the parts to correct positions.
  - Align the position with respect to the end of the ceramic area.
  - Prepare a copy in which the line drawn in the figure actually has 4 inches long. (A full-scale copy without enlargement or reduction can be used.)
  - Only the transponder with a thickness of 1.5 inches or less can be used.



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### 3. REAR VIEW MIRROR

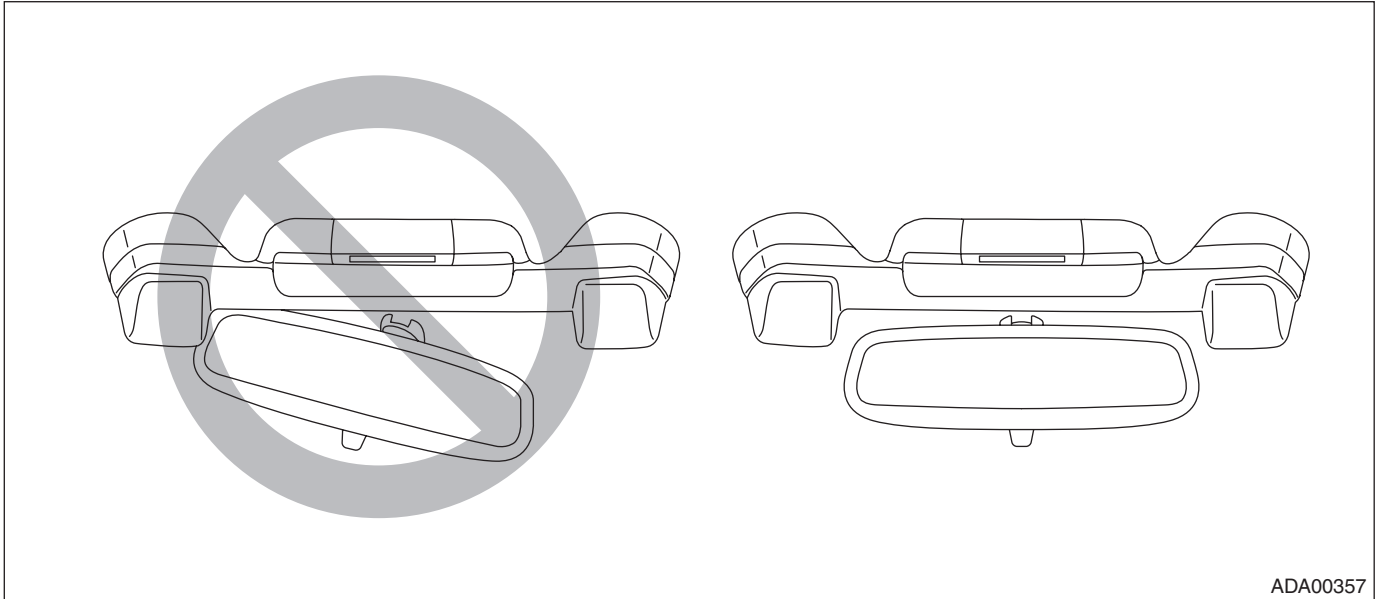
Check the rear view mirror condition.

**Standard:**

***The rear view mirror other than genuine parts shall not be used. (Wide mirrors shall not be used)***

***The visibility of the stereo camera shall not be blocked.***

***— This will affect the visibility of the stereo camera, causing the system not to operate correctly.***



### 4. FRONT WIPER

Check the wiping condition of windshield glass.

**Standard:**

***Use Subaru genuine part only for wiper blade body and blade rubber.***

***— Using the part other than genuine part will affect the recognition of the stereo camera, which may cause the function not to operate correctly.***

***Do not continue using the damaged blade rubber.***

***— The glass may be damaged. If the wiping performance decreases, or if the distinct streak is found, replace it as soon as possible.***

**NOTE:**

Clean the windshield glass if oil film or dirt is found.

### 5. TIRE INFLATION PRESSURE

Check the tire air pressure.

**Standard:**

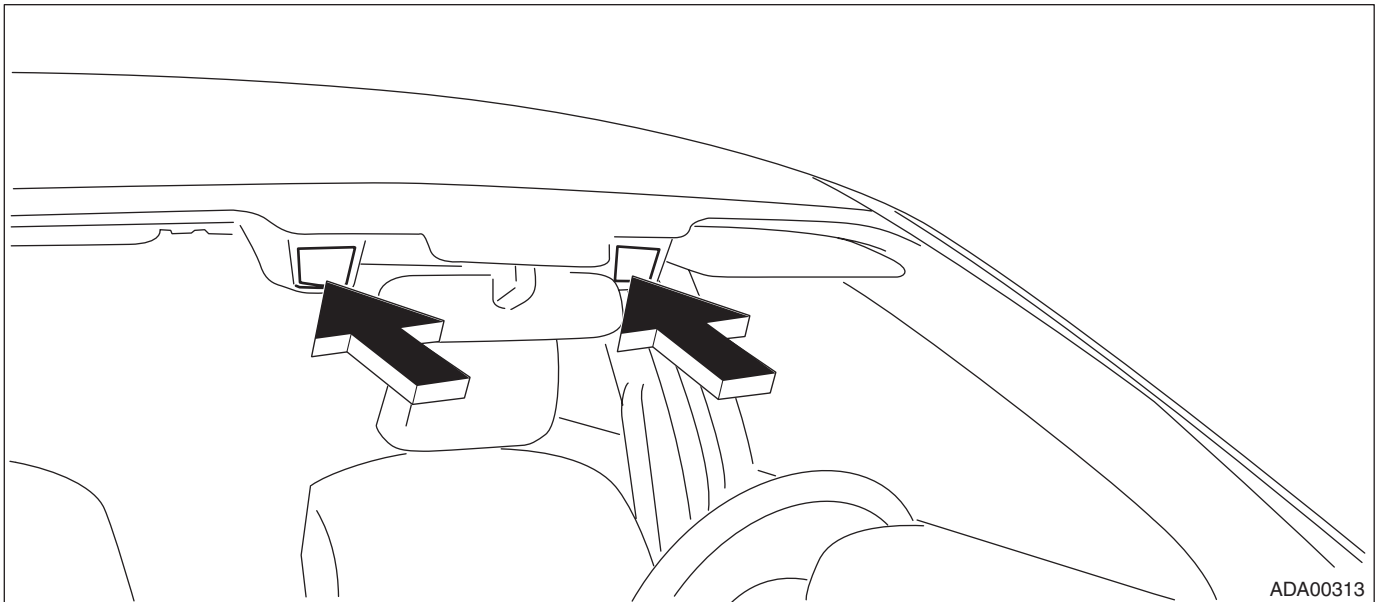
***Adjust to the specified air pressure. <Ref. to WT-2, SPECIFICATION, General Description.>***

***Do not install worn tire or tires with excessive wear difference.***

***Install tires with specified size.***

## 6. STEREO CAMERA

Check the lens filter on the left and right camera lenses of the stereo camera for fingerprints or lens filter for cracks or etc. through the windshield glass.



### NOTE:

- Do not remove the camera or camera cover to check the lens.
- When spider's web or insects are found in the visibility of the camera or lens hood, remove it using the air blow not to touch the lens surface. Do not cover them with hand or cloth.
- Thin and uniform adhesion of dust, dirt or tobacco stains to the lens filter surface resulting from normal use will not be an obstacle. Do not attempt to clean in such cases.
- If oil from such as a fingerprint adheres or an excessive dirt adheres, or if lens filter cracks, the lens hood must be replaced. <Ref. to ES-13, REPLACEMENT OF LENS HOOD, REPLACEMENT, Stereo Camera.>
- If the fingerprint adhesions or cracks occur on the lens filter, the following failures may arise.
  - The vehicle may not be able to detect the preceding vehicle or obstacle because the defects can induce the irregular reflection of the headlight of oncoming vehicle.
  - The vehicle may not be able to detect the preceding vehicle or obstacle because the defects can induce the irregular reflection of the brake light of the preceding vehicle.
  - All the functions of the EyeSight may be suspended by the self-diagnosis function equipped with the camera.
  - When the lens filter is broken, the vehicle may not be able to detect the preceding vehicle or obstacle all day and all night.
- Even if the lens filter is not touched, applying the force to the black hood securing the lens filter may tension the lens filter to crack it.
- Do not clean the lens filter with any cleaner. It is quite difficult to uniformly clean both of the right and left lenses, and such an attempt just ends up spreading dirt and will cause problems as same as those from oil film.