# SECTION BRM
## BODY REPAIR



## CONTENTS

## FOR RUSSIA

# VEHICLE INFORMATION

## BODY EXTERIOR PAINT COLOR

### Body Exterior Paint Color

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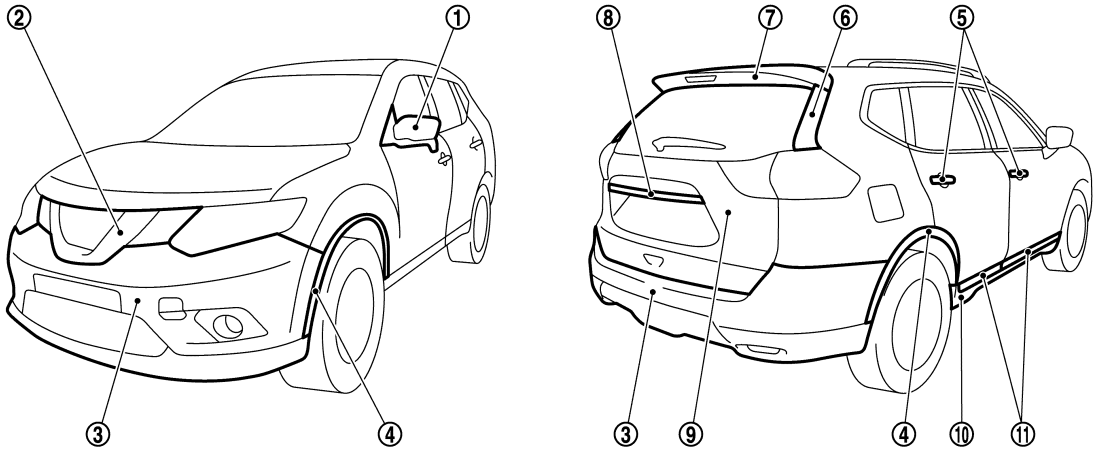



JSKIA4358ZZ

| Component | | Color code | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Description | Red | Dark Olive | Orange | Black | Silver | Gray | White | Dark Blue |
| | | Paint type [note] | 2S | 2PM | 2PM | 2P | 2M | 2M | 3P | 2M |
| | | Hard clear coat | × | × | × | × | – | – | – | × |
| ① | Door mirror cover | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ② | Front grille | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ③ | Bumper fascia | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ④ | Fillet molding | Material color | – | – | – | – | – | – | – | – |
| ⑤ | Door outside handle | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑥ | Rear spoiler (Side) | Black | G01 | G01 | G01 | G01 | G01 | G01 | G01 | G01 |
| ⑦ | Rear spoiler (Upper) | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑧ | Back door finisher | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑨ | Back door | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑩ | Sill cover | Material color | – | – | – | – | – | – | – | – |
| ⑪ | Side guard molding | Material color | – | – | – | – | – | – | – | – |

**NOTE:**

- 2M: 2-Coat Metallic
- 2P: 2-Coat pearl
- 2S: 2-Coat solid
- 3P: 3-Coat pearl
- 2PM: 2-Coat Pearl metallic

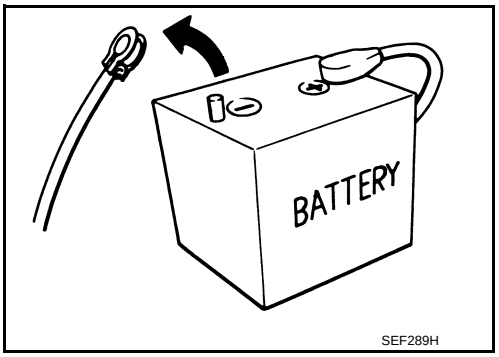
# PRECAUTION

## PRECAUTIONS

### Precautions for Removing Battery Terminal

INFOID:0000000010843416

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  **NOTE:**
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  **NOTE:**
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  **NOTE:**
  The removal of 12V battery may cause a DTC detection error.




#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

| | |
|---|---|
| D4D engine | : 20 minutes |
| HRA2DDT | : 12 minutes |
| K9K engine | : 4 minutes |
| M9R engine | : 4 minutes |
| R9M engine | : 4 minutes |
| V9X engine | : 4 minutes |

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.
   **CAUTION:**
   **After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   **NOTE:**
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

**CAUTION:**
**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

# REPAIRING HIGH STRENGTH STEEL

## High Strength Steel (HSS)

INFOID:0000000010843417

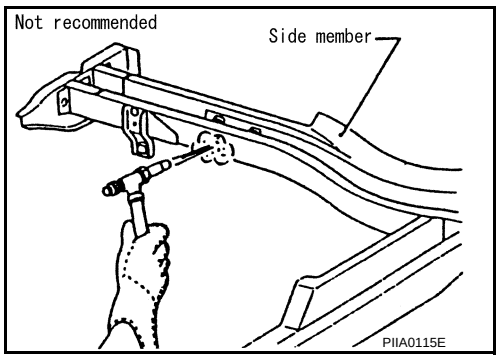
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

| Tensile strength | Major applicable parts |
|---|---|
| 440 - 780 MPa | • Rear seat crossmember reinforcement<br>(Rear seat crossmember assembly component part)<br>• Center front floor (Front)<br>(Center front floor component part)<br>• Trans control reinforcement<br>(Center front floor component part)<br>• Front floor (Front)<br>(Front floor component part)<br>• 2nd crossmember<br>(Front floor component part)<br>• 3rd crossmember<br>(Front floor component part)<br>• Inner sill reinforcement<br>(Inner sill component part)<br>• Side dash<br>(Side dash component part)<br>• Inner front pillar reinforcement (RH only)<br>(Side dash component part)<br>• Front suspension spring support<br>(Front strut housing assembly component part)<br>• Front bumper stay<br>• Front side member closing plate (Front)<br>(Front side member closing plate component part)<br>• Front side member flange<br>(Front side member closing plate component part)<br>• Front tie down hook<br>(Front side member closing plate component part)<br>• Front side member (Front)<br>(Front side member assembly component part)<br>• Front side member brace<br>(Front side member assembly component part)<br>• Front suspension mounting bracket<br>• Rear crossmember center assembly<br>• Rear side member<br>(Rear side member component part)<br>• Rear side member rear reinforcement<br>(Rear side member component part)<br>• Inner sill extension<br>(Rear side member component part)<br>• Rear side member reinforcement<br>(Rear side member component part)<br>• Outer rear anchor reinforcement<br>(Rear side member component part)<br>• Rear spring mounting bracket<br>(Rear side member component part)<br>• Spring mounting reinforcement<br>(Rear side member component part)<br>• Rear side member extension<br>• Inner center pillar assembly (Lower)<br>• Outer front pillar reinforcement (Rear)<br>• Lower center pillar brace (Lower)<br>• Lower front pillar hinge brace<br>• Outer sill reinforcement<br>• Rear pillar gusset<br>(Inner rear pillar component part)<br>• Rear pillar seat belt anchor<br>(Inner rear pillar component part)<br>• Rear bumper stay |

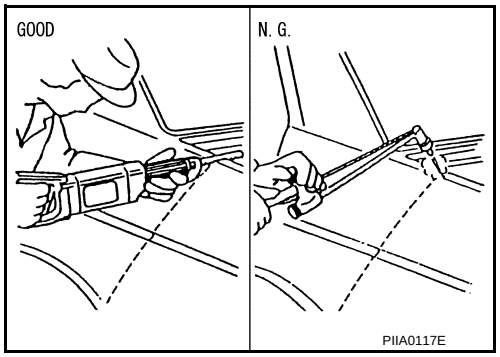
| Tensile strength | Major applicable parts |
|---|---|
| 980 - 1500 MPa | • Front side member rear extension (Front floor component part)<br>• Inner sill<br>• Lower dash crossmember (Lower dash complete component part)<br>• Lower dash crossmember<br>• Front bumper armature assembly<br>• Front side member closing plate (Rear) (Front side member closing plate component part)<br>• Front side member (Rear) (Front side member assembly component part)<br>• Inner center pillar (Upper) (Inner center pillar assembly component part)<br>• Upper center pillar brace (Inner center pillar assembly component part)<br>• Center pillar seat belt anchor (Inner center pillar assembly component part)<br>• Outer front pillar reinforcement (Outer front pillar reinforcement component part)<br>• Center pillar hinge brace (Upper) (Lower center pillar brace component part)<br>• Center pillar extension (Lower center pillar brace component part)<br>• Inner center rear bumper reinforcement |

Read the following precautions when repairing HSS:

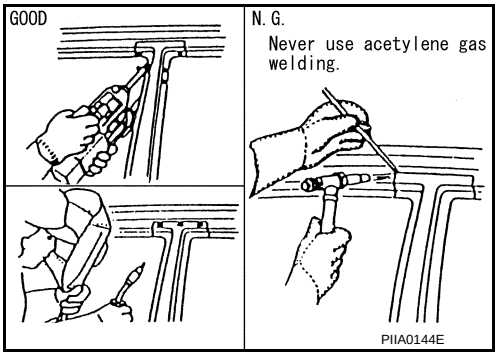
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type and other similar type thermometer are appropriate.)



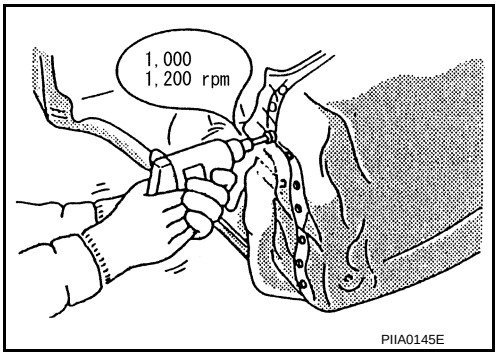

   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.
   - When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97 in).



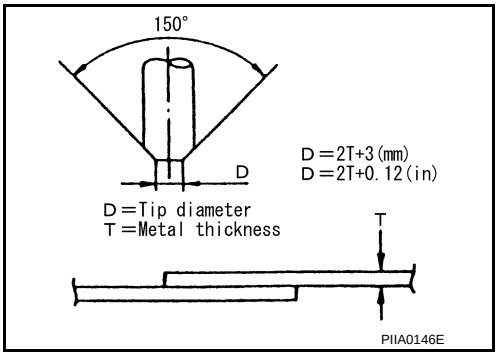
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



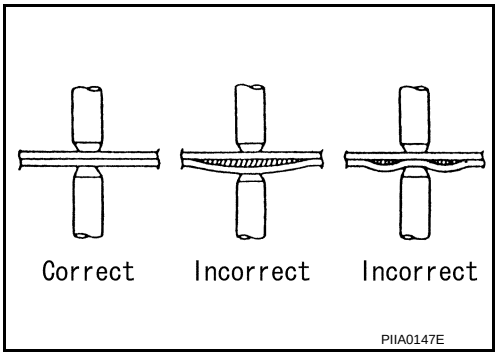

- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.




2. Precautions in spot welding HSS
   This work should be performed under standard working conditions. Always note the following when spot welding HSS:
   - The electrode tip diameter must be sized properly according to the metal thickness.



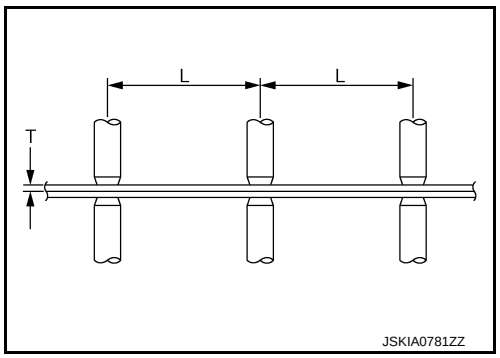

- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit: mm (in)

| Thickness (T) | Minimum pitch (L) |
|---|---|
| 0.6 (0.024) | 10 (0.39) or more |
| 0.8 (0.031) | 12 (0.47) or more |
| 1.0 (0.039) | 18 (0.71) or more |
| 1.2 (0.047) | 20 (0.79) or more |
| 1.6 (0.063) | 27 (1.06) or more |
| 1.8 (0.071) | 31 (1.22) or more |



# PREPARATION

## REPAIRING MATERIAL

### Foam Repair

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During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

Use commercially available Urethane foam for sealant (foam material) repair of material used on vehicle.

**<Urethane foam for foaming agent>** **3M™ Automix™ Flexible Foam 08463 or equivalent**

Read instructions on product for fill procedures.

Example of foaming agent filling operation procedure

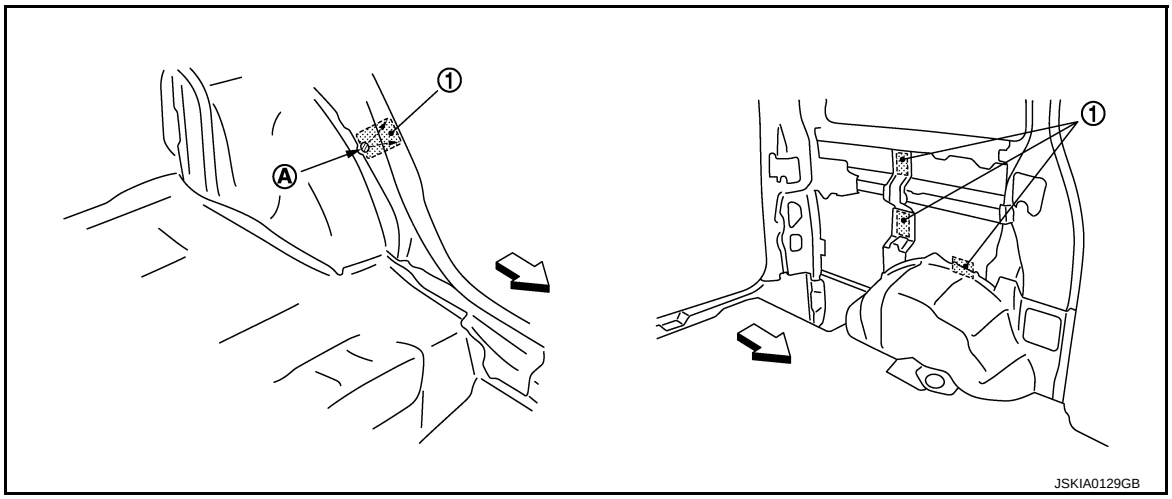
1. Fill procedures after installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating form insulator and foam material.

c. Install service part.

d. Insert nozzle into hole near fill area and fill foam material or fill enough to close gap with the service part.




① Urethane foam

Ⓐ Nozzle insert hole

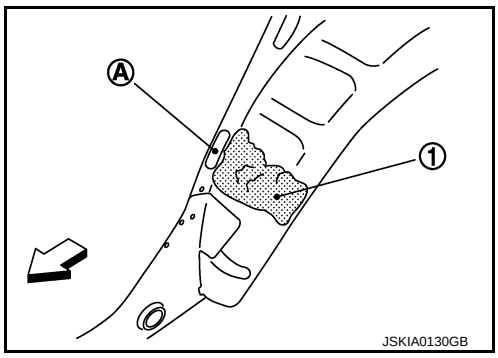
⇦: Vehicle front

2. Fill procedures before installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating foam insulator and foam material.

c. Fill foam material on wheelhouse outer side.




① Urethane foam
Ⓐ Fill while avoiding flange area
⇦: Vehicle front

**NOTE:**
Fill enough to close gap with service part while avoiding flange area.

d. Install service part.
**NOTE:**
Refer to label for information on working times.

# BODY COMPONENT PARTS

## Ultra High Strength Steel Part

INFOID:0000000010843419

### DESCRIPTION

Ultra high strength steel parts signify high strength steel plates with tensile strength of 980 MPa or more.
When replacing parts made of ultra high strength steel or parts including ultra high strength steel, never perform the prohibition described below:

### PROHIBITION

**WARNING:**

**Never cut ultra high strength steel parts or perform butt welding. Violation of this prohibition causes extreme strength degradation, and the strength before damage cannot be secured.**

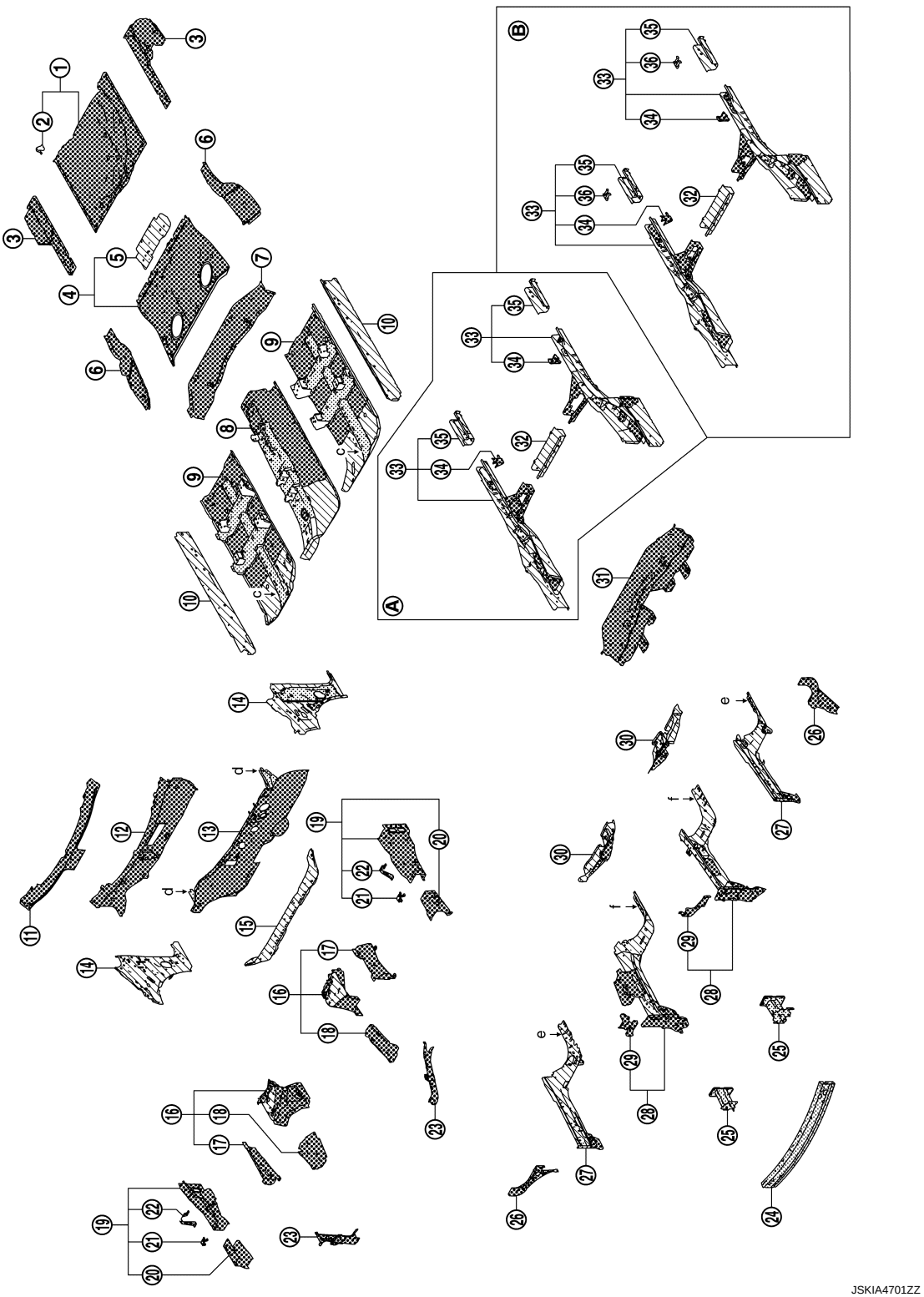
### PART REPLACEMENT

To replace an ultra high strength part, be sure to replace it by panel supply unit of ultra high strength steel part.
For the welding method, refer to BRM-29, "Welding of Ultra High Strength Steel"

## Underbody Component Parts

INFOID:0000000010843420

Refer to parts catalogue for the replacement parts.



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Ⓐ SUV models Ⓑ Wagon models

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Rear floor rear | | | Under 440 | × |
| ② | Spare tire clamp bracket | | | Under 440 | — |
| ③ | Rear floor side assembly (RH & LH) | | | Under 440 | × |
| ④ | Rear floor front | | | Under 440 | — |
| ⑤ | Rear floor board reinforcement | | | 590 | × |
| ⑥ | Rear floor front extension (Upper RH & LH) | | | Under 440 | × |
| ⑦ | Rear seat crossmember assembly | | | 590 | × |
| ⑧ | Center front floor | | | 780 | × |
| ⑨ | Front floor (RH & LH) | c. | 980MPa[caution] T=1.8 mm (0.071 in) | 590 | × |
| | | | Inside (RH only) 980MPa[caution] T=2.0 mm (0.079 in) | | |
| ⑩ | Inner sill (RH & LH) | | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑪ | Cowl top | | | Under 440 | × |
| ⑫ | Upper dash assembly | | | Under 440 | × |
| ⑬ | Lower dash complete | d. | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑭ | Side dash (RH & LH) | | | 590 | × |
| ⑮ | Lower dash crossmember | | 980MPa[caution] T=2.0 mm (0.079 in) | 440 | × |
| ⑯ | Front strut housing assembly (RH & LH) | | | 590 | × |
| ⑰ | Upper hoodledge (RH & LH) | | | Under 440 | × |
| ⑱ | Lower hoodledge (RH & LH) | | | Under 440 | × |
| ⑲ | Hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ⑳ | Front hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ㉑ | Upper front fender bracket (RH & LH) | | | Under 440 | × |
| ㉒ | Front fender bracket (RH & LH) | | | Under 440 | × |
| ㉓ | Upper radiator core support assembly (RH & LH) | | | Under 440 | × |
| ㉔ | Front bumper armature assembly | | 1500MPa[caution] T=1.0 mm (0.039 in) | — | — |
| ㉕ | Front bumper stay (RH & LH) | | | 590 | — |
| ㉖ | Hoodledge connector assembly (RH & LH) | | | Under 440 | × |
| ㉗ | Front side member closing plate (RH & LH) | e. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉘ | Front side member assembly (RH & LH) | f. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉙ | Side radiator core support (RH & LH) | | | Under 440 | × |
| ㉚ | Front suspension mounting bracket (RH & LH) | | | 590 | × |

| No. | Parts name | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|
| ㉛ | Rear floor front extension (Lower) | Under 440 | × |
| ㉜ | Rear crossmember center assembly | 590 | × |
| ㉝ | Rear side member (RH & LH) | 590 | × |
| ㉞ | Muffler mounting bracket assembly (RH & LH) | Under 440 | × |
| ㉟ | Rear side member extension (RH & LH) | 780 | × |
| ㊱ | Rear 3rd seat mounting bracket assembly (RH & LH) | Under 440 | × |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

## Body Component Parts

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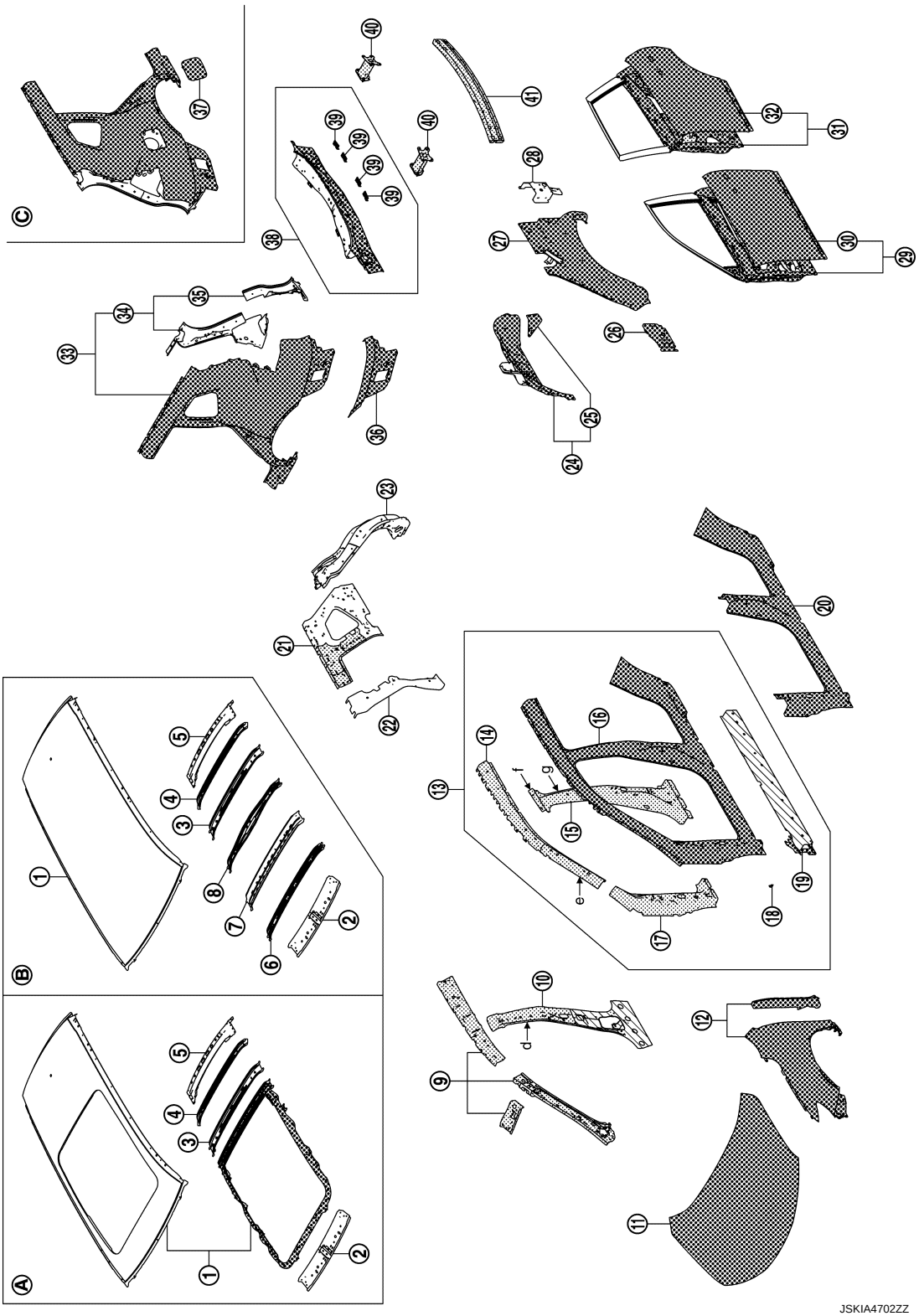
Refer to parts catalogue for the replacement parts.




Ⓐ Sunroof models Ⓑ Normal roof models Ⓒ Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Roof | | | Under 440 | — |
| ② | Front roof rail | | | Under 440 | — |
| ③ | Roof bow No.4 | | | Under 440 | — |
| ④ | Roof bow No.5 | | | Under 440 | — |
| ⑤ | Rear roof rail | | | Under 440 | — |
| ⑥ | Roof bow No.1 | | | Under 440 | — |
| ⑦ | Roof bow No.2 | | | Under 440 | — |
| ⑧ | Roof bow No.3 | | | Under 440 | — |
| ⑨ | Upper inner front pillar (RH & LH) | | | 590 | — |
| ⑩ | Inner center pillar assembly (RH & LH) | d. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑪ | Hood | | | 440 | × |
| ⑫ | Front fender (RH & LH) | | | Under 440 | × |
| ⑬ | Side body assembly (RH & LH) | | | Refer to No. ⑭ – ⑲ | |
| ⑭ | Outer front pillar reinforcement (RH & LH) | e. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑮ | Lower center pillar brace (RH & LH) | f. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| | | g. | 980MPa[caution] T=1.0 mm (0.039 in) | | |
| ⑯ | Outer front side body (RH & LH) | | | Under 440 | × |
| ⑰ | Lower front pillar hinge brace (RH & LH) | | | 590 | — |
| ⑱ | Front fender bracket assembly (RH & LH) | | | Under 440 | × |
| ⑲ | Outer sill reinforcement (RH & LH) | | | 590 | × |
| ⑳ | Outer sill assembly (RH & LH) | | | Under 440 | × |
| ㉑ | Inner rear pillar (RH & LH) | | | 590 | — |
| ㉒ | Upper rear pillar reinforcement (RH & LH) | | | Under 440 | — |
| ㉓ | Back pillar assembly (Inner RH & LH) | | SUV models | 440 | — |
| | | | Wagon models | 590 | |
| ㉔ | Inner rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉕ | Inner rear wheelhouse rear extension (RH & LH) | | | Under 440 | × |
| ㉖ | Outer rear wheelhouse extension (RH & LH) | | | Under 440 | × |
| ㉗ | Outer rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉘ | Jack mounting bracket | | | Under 440 | — |
| ㉙ | Front door assembly (RH & LH) | | | 590 | × |
| ㉚ | Outer front door panel (RH & LH) | | | Under 440 | × |
| ㉛ | Rear door assembly (RH & LH) | | | 440 | × |
| ㉜ | Outer rear door panel (RH & LH) | | | Under 440 | × |

| No. | Parts name | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|
| ㉝ | Rear fender assembly (RH & LH) | | Under 440 | × |
| ㉞ | Outer back pillar (RH & LH) | | Under 440 | — |
| ㉟ | Back pillar assembly (Outer RH & LH) | | Under 440 | — |
| ㊱ | Rear fender extension (RH & LH) | | Under 440 | × |
| ㊲ | Fuel filler lid assembly | | Under 440 | × |
| ㊳ | Upper rear panel | | Under 440 | × |
| ㊴ | Upper rear bumper retainer | | Under 440 | × |
| ㊵ | Rear bumper stay (RH & LH) | | 590 | — |
| ㊶ | Inner center rear bumper reinforcement | 1270MPa[caution] T=1.2 mm (0.047 in) | — | — |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

# REMOVAL AND INSTALLATION

## CORROSION PROTECTION

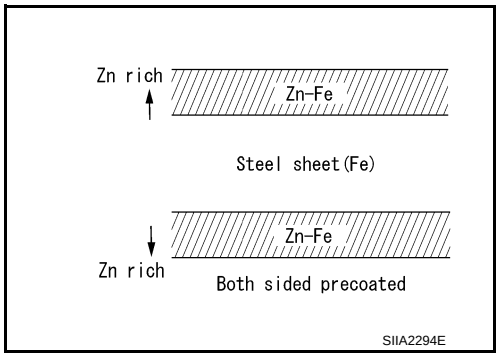
### Description

INFOID:0000000010843422

To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

#### Anti-Corrosive Precoated Steel (Galvannealed Steel)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet is adopted replacing conventional zinc-coated steel sheet.
Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



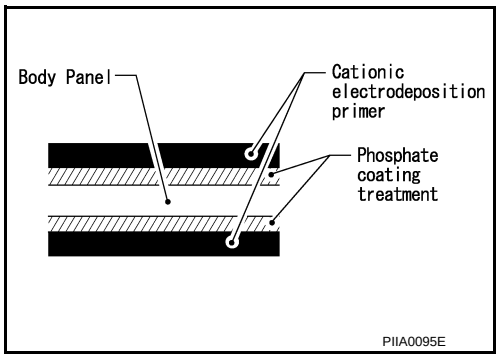

NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

#### Phosphate Coating Treatment and Cationic Electrodeposition Primer

A phosphate coating treatment and a cationic electrodeposition primer, which provide excellent corrosion protection, are applied to all body components.

**CAUTION:**

**Confine paint removal during welding operation to an absolute minimum.**




NISSAN genuine parts are also treated in the same manner. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

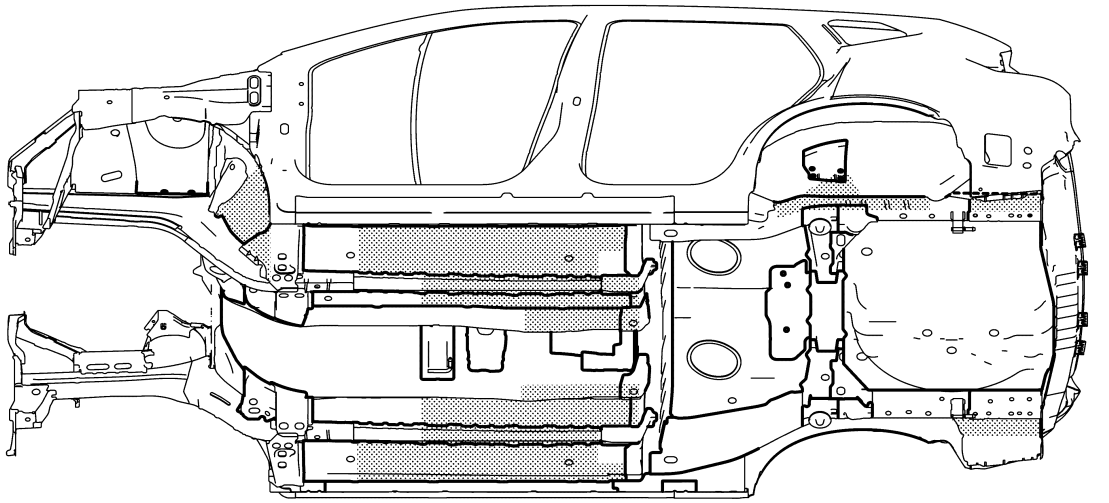
### Undercoating

INFOID:0000000010860040

The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust resistant, soundproof, vibration-proof, shock-resistant, adhesive, and durable.

#### Precautions in Undercoating

1. Never apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst that are subjected to heat).
2. Never undercoat the exhaust pipe or other parts that become hot.
3. Never undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.
5. After putting seal on the vehicle, put undercoating on it.



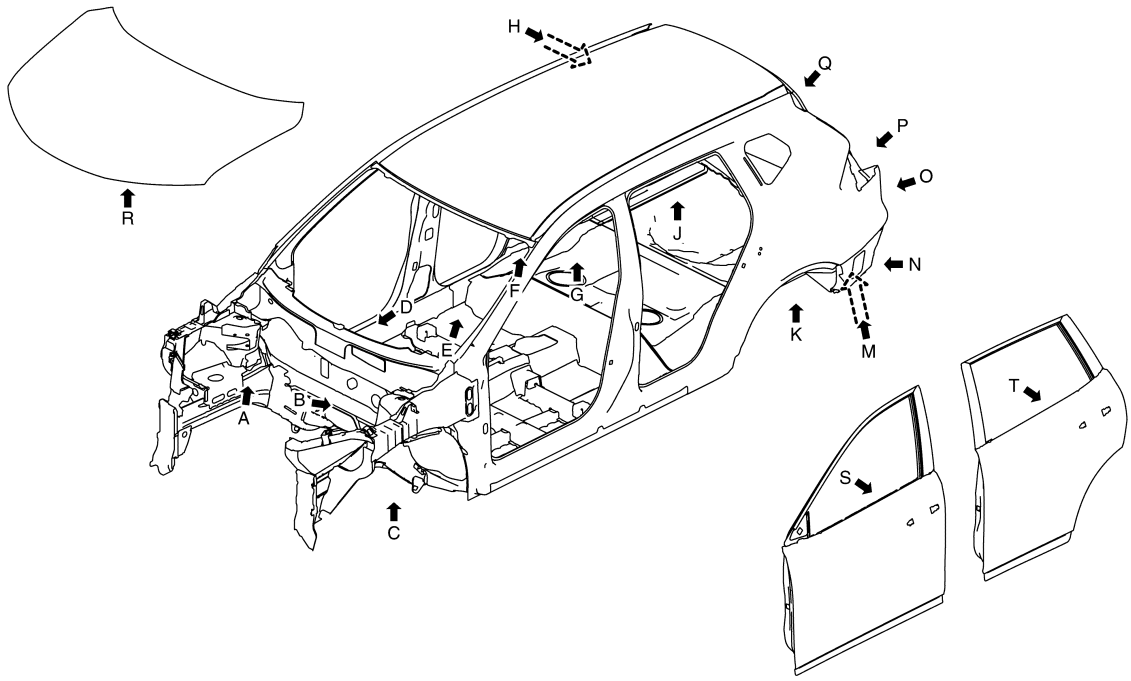
JSKIA4703ZZ

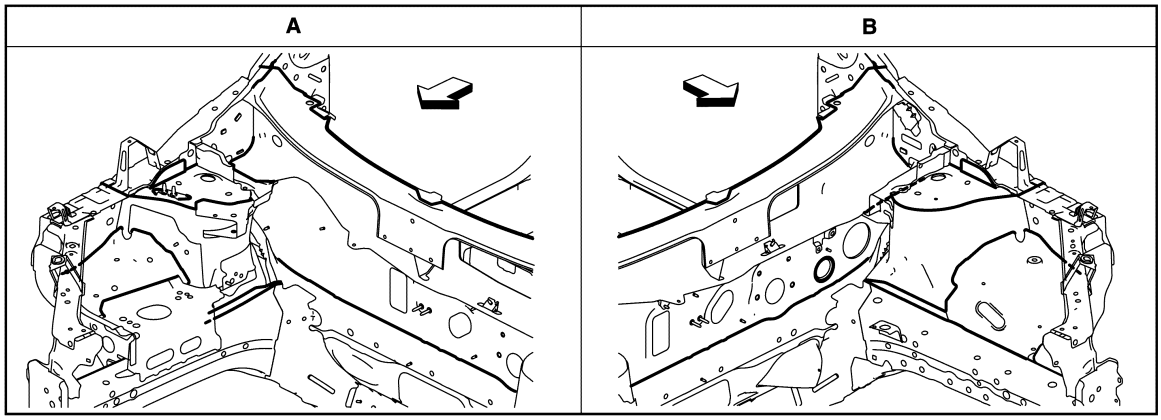
: Undercoated areas
: Sealed portions

## Body Sealing

INFOID:0000000010860041

The following figure shows the areas that are sealed at the factory. Sealant that is applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

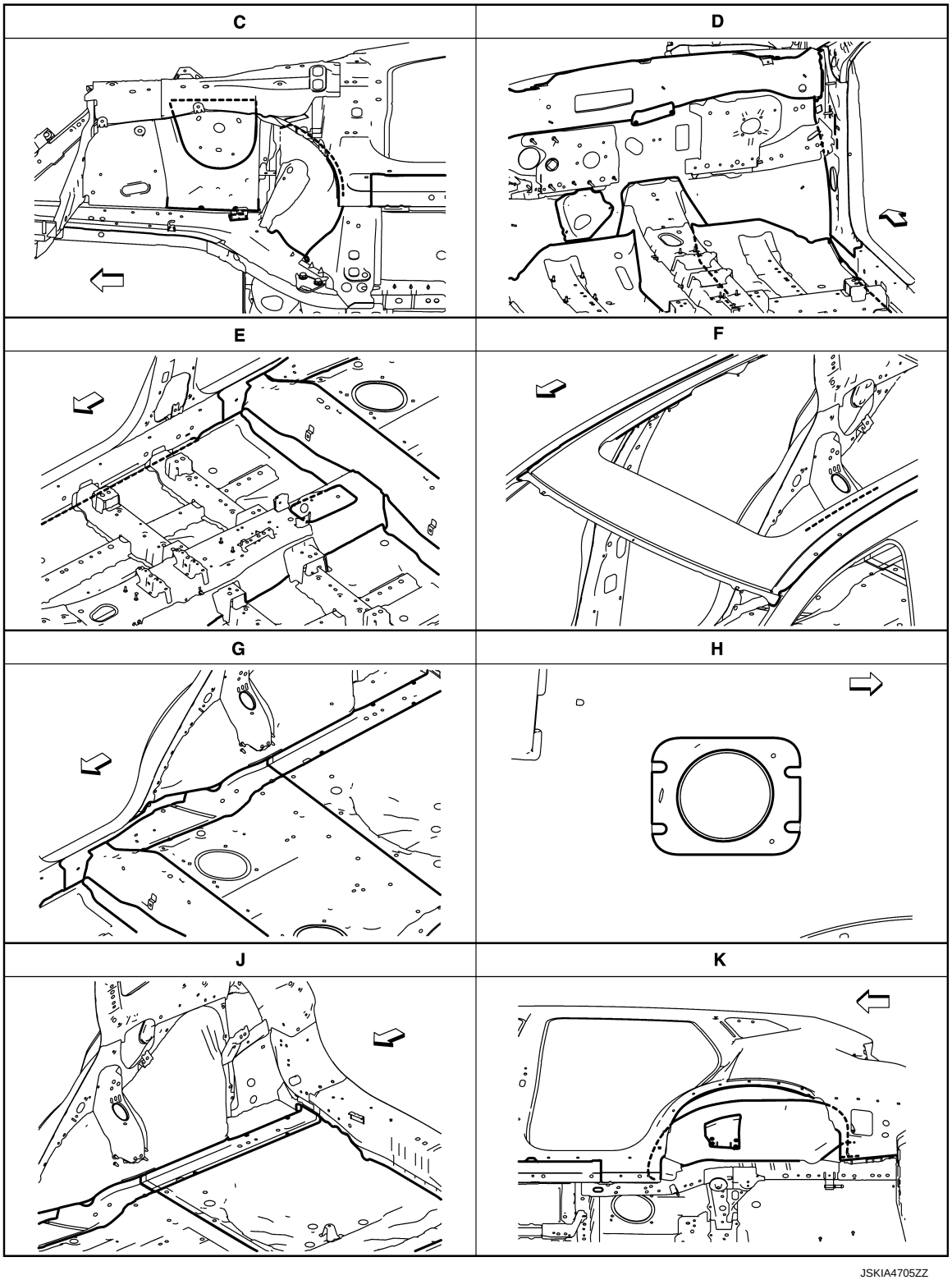



JSKIA4704ZZ

⇦: Vehicle front

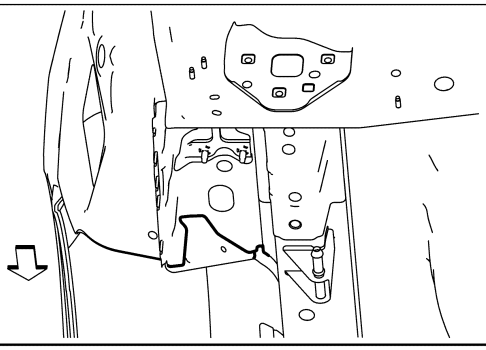
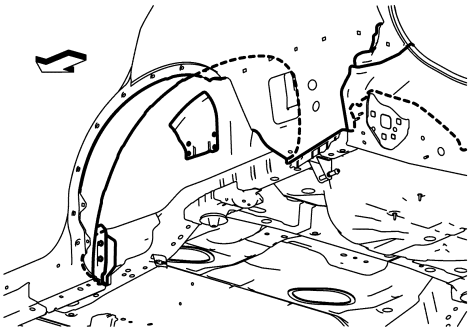
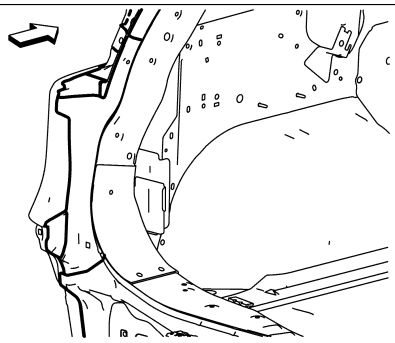
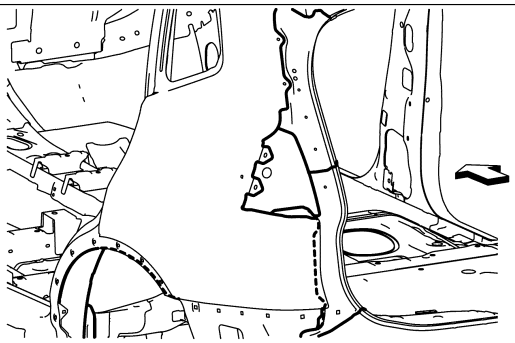
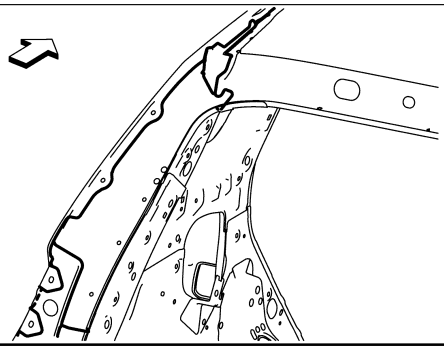
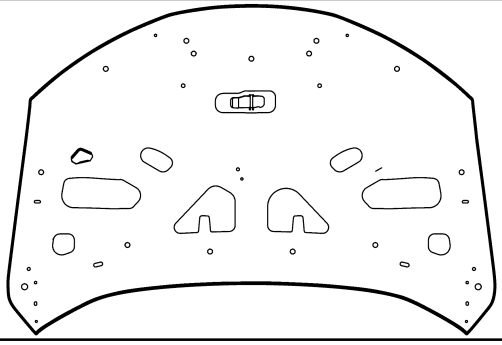
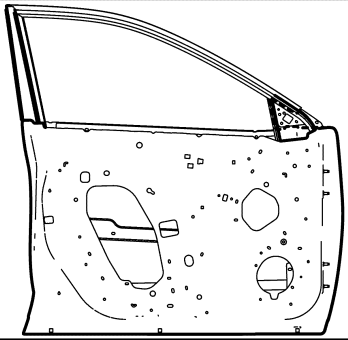
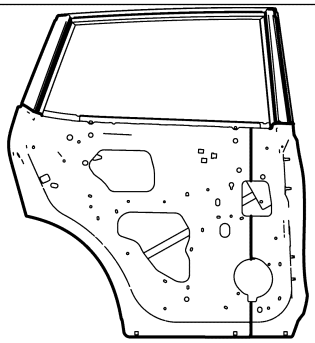
▬: Sealed portions




JSKIA4705ZZ

⇦: Vehicle front

▬: Sealed portions

| M | N |
|---|---|
|  |  |
| **O** | **P** |
|  |  |
| **Q** | **R** |
|  |  |
| **S** | **T** |
|  |  |

JSKIA4706ZZ

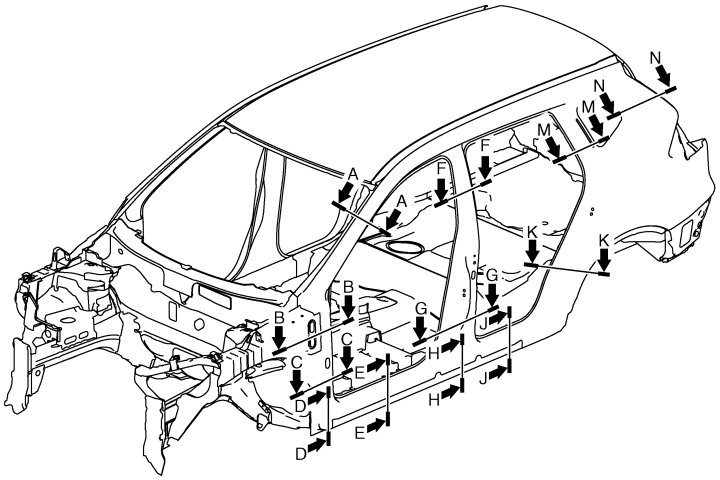
⇦: Vehicle front

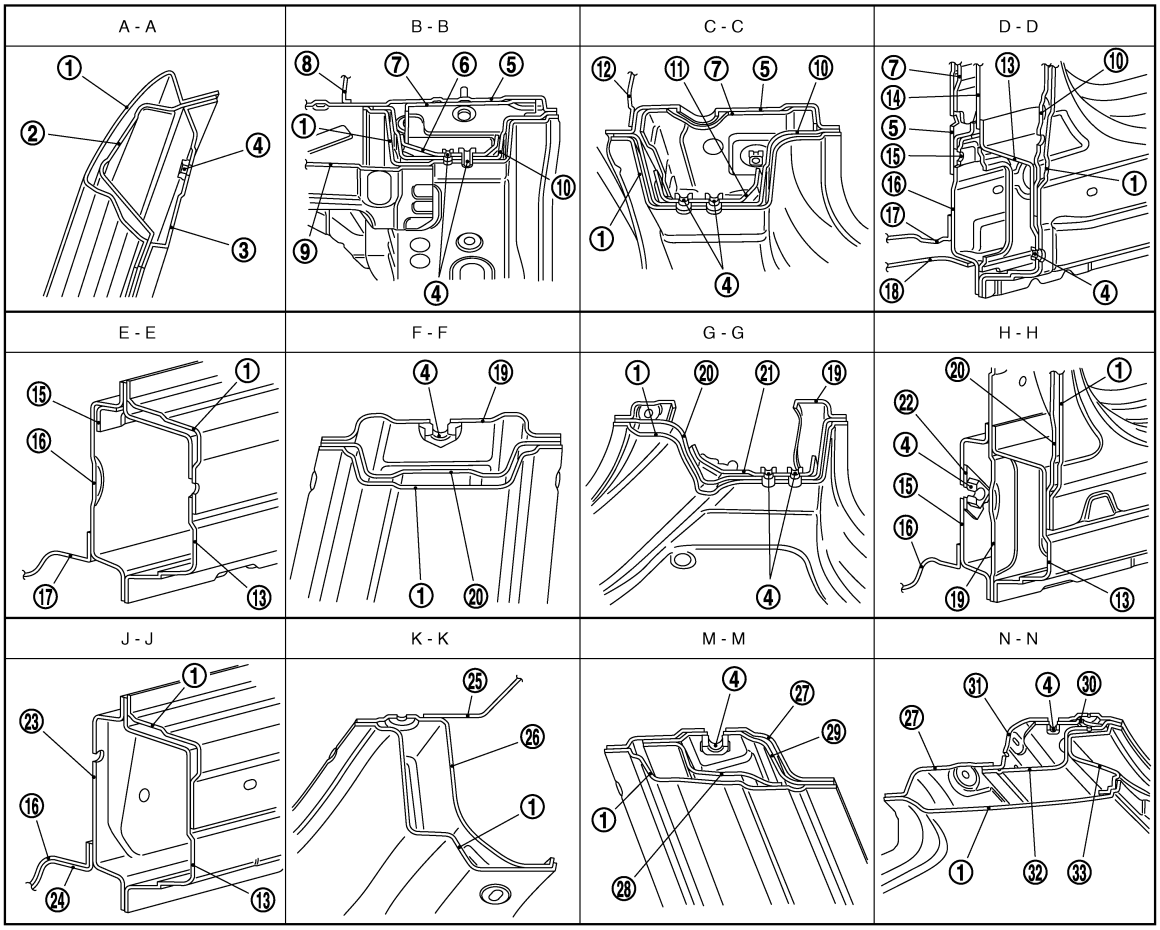
▬: Sealed portions

# BODY CONSTRUCTION

## Body Construction

INFOID:0000000010843427




JSKIA4707ZZ

① Outer side body
② Outer front pillar reinforcement
③ Upper inner front pillar
④ Weld nut
⑤ Side dash
⑥ Upper hinge plate
⑦ Inner front pillar reinforcement
⑧ Upper dash
⑨ Rear hoodledge reinforcement

⑩ Lower front pillar hinge brace
⑪ Lower hinge plate
⑫ Lower dash
⑬ Outer sill reinforcement
⑭ Lower front pillar reinforcement
⑮ Inner sill reinforcement
⑯ Inner sill
⑰ Front floor
⑱ Front side member outrigger
⑲ Inner center pillar
⑳ Center pillar hinge brace
㉑ Lower center pillar hinge brace
㉒ Anchor plate
㉓ Inner sill extension
㉔ Rear floor front extension
㉕ Inner rear wheelhouse
㉖ Outer rear wheelhouse
㉗ Inner rear pillar
㉘ Inner rear pillar reinforcement
㉙ Rear pillar seat belt anchor
㉚ Back pillar seat belt anchor
㉛ Rear roof rail brace
㉜ Upper back pillar reinforcement
㉝ Center back pillar main

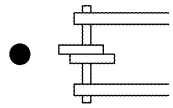
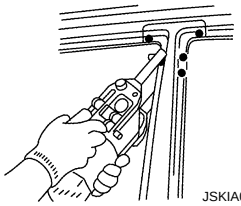
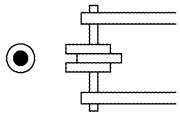
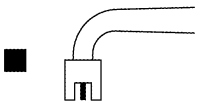
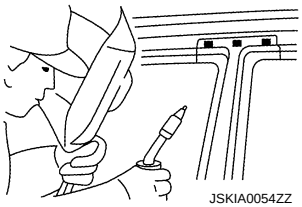
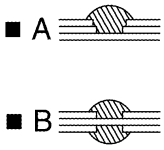
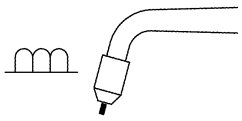
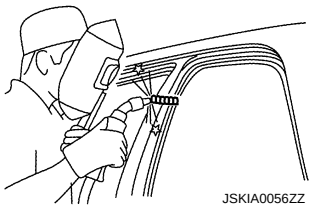
# REPLACEMENT OPERATIONS

## Description

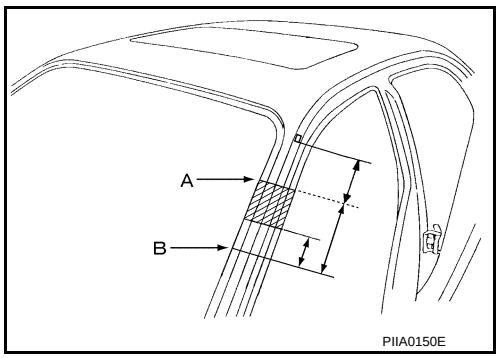
INFOID:0000000010843428

- This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.
- Technicians are also encouraged to read the Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle are maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not including in this manual. Technicians should refer to both manuals to ensure proper repair.
- Please note that this information is prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

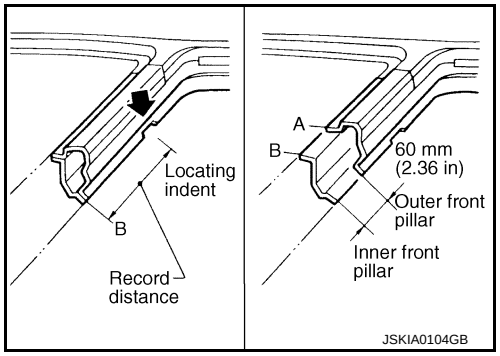
The symbols used in this section for welding operations are shown below.

| Symbol marks | Description | |
|---|---|---|
|  JSKIA0049ZZ | 2-spot welds |  JSKIA0053ZZ |
|  JSKIA0050ZZ | 3-spot welds | |
|  JSKIA0051ZZ | MIG plug weld |  JSKIA0054ZZ<br>For 3 panels plug weld method<br>  JSKIA0055ZZ |
|  JSKIA0052ZZ | MIG seam weld / Point weld |  JSKIA0056ZZ |

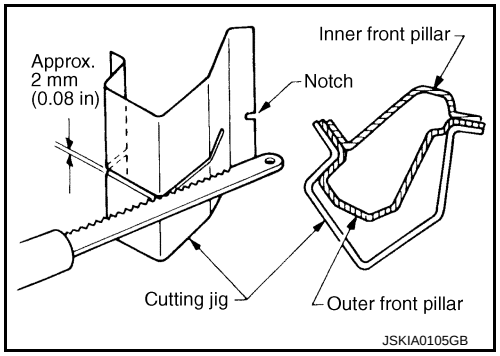
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.




- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm (2.36 in) above the inner front pillar cut position.

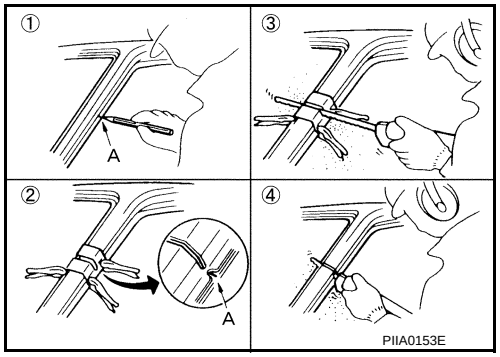



- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.




- An example of cutting operation using a cutting jig is as per the following.

1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig (at position A).
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.




## Welding of Ultra High Strength Steel

INFOID:0000000010843429

### SPOT WELDING

Spot welding is limited to ultra high strength steel (tensile strength: 980 MPa) according to the welding conditions listed below.

**CAUTION:**

- **If the below welding conditions cannot be met, then perform plug welding.**
- **Never spot weld ultra high strength steel of tensile strength more than 980 MPa. For this type of ultra high strength steel, perform plug welding.**

- **The below welding condition is applicable only to this vehicle. Never apply this same welding condition to other vehicles.**

Welding condition

| | |
|---|---|
| **Welder tip diameter** | **6 mm** |
| **Welding pressure (Gun force)** | **3500 N** |
| **Welding current** | **8200 A** |
| **Weld time** | **0.22 sec (11 cyc: 50 Hz area, 13 cyc: 60 Hz area)** |
| **Panel configuration** | **Combination of a plate of tensile strength 980 MPa and that of tensile strength less than 980 MPa. (Up to 3 plates)** |

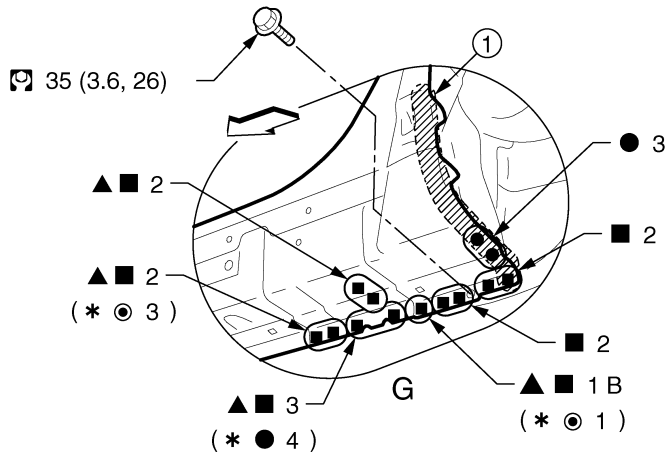
PLUG WELDING

To weld ultra high strength steel of tensile strength 980 MPa or more, perform plug welding observing the welding hole diameter described in the manual.

**CAUTION:**

- **To perform plug welding, use fuel mixture (Ar 80% + CO2 20%) for shielding gas of welder.**
- **Never use carbon dioxide gas (CO2 100%) as shielding gas of welder. Using CO2 100% gas results in inadequate weld strength.**
- **When welding hole diameter cannot be met, make multiple holes (smaller diameter) so that the sum of the hole areas equals the area of the original weld hole.**

EXAMPLE




① Body sealing

⇦: Vehicle front

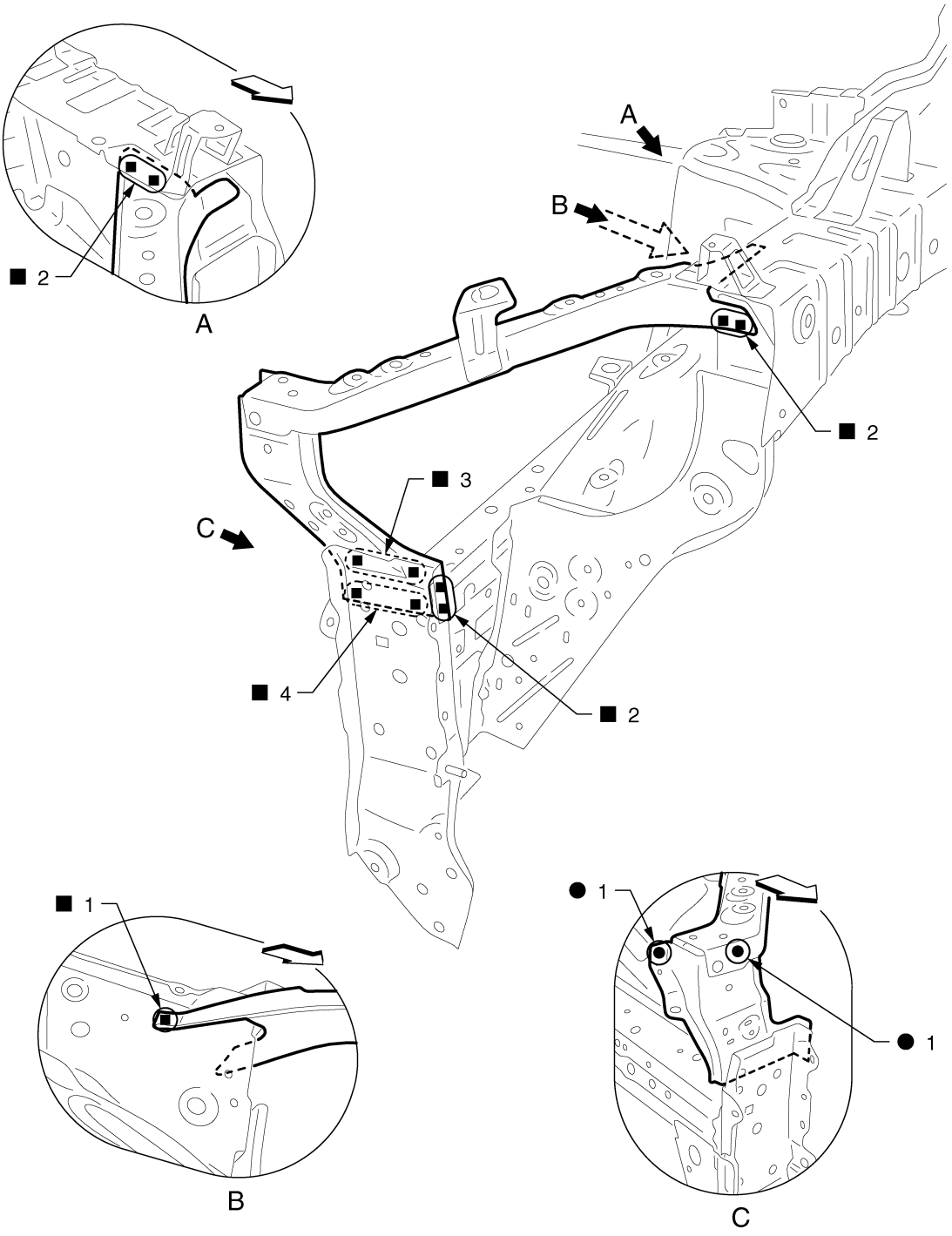
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

: N·m (kg-m, ft-lb)

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to ″Welding of Ultra High Strength Steel″.

## Radiator Core Support

INFOID:0000000010843430




⇦: Vehicle front

(  ): Weld the parts onto the back of the component part.

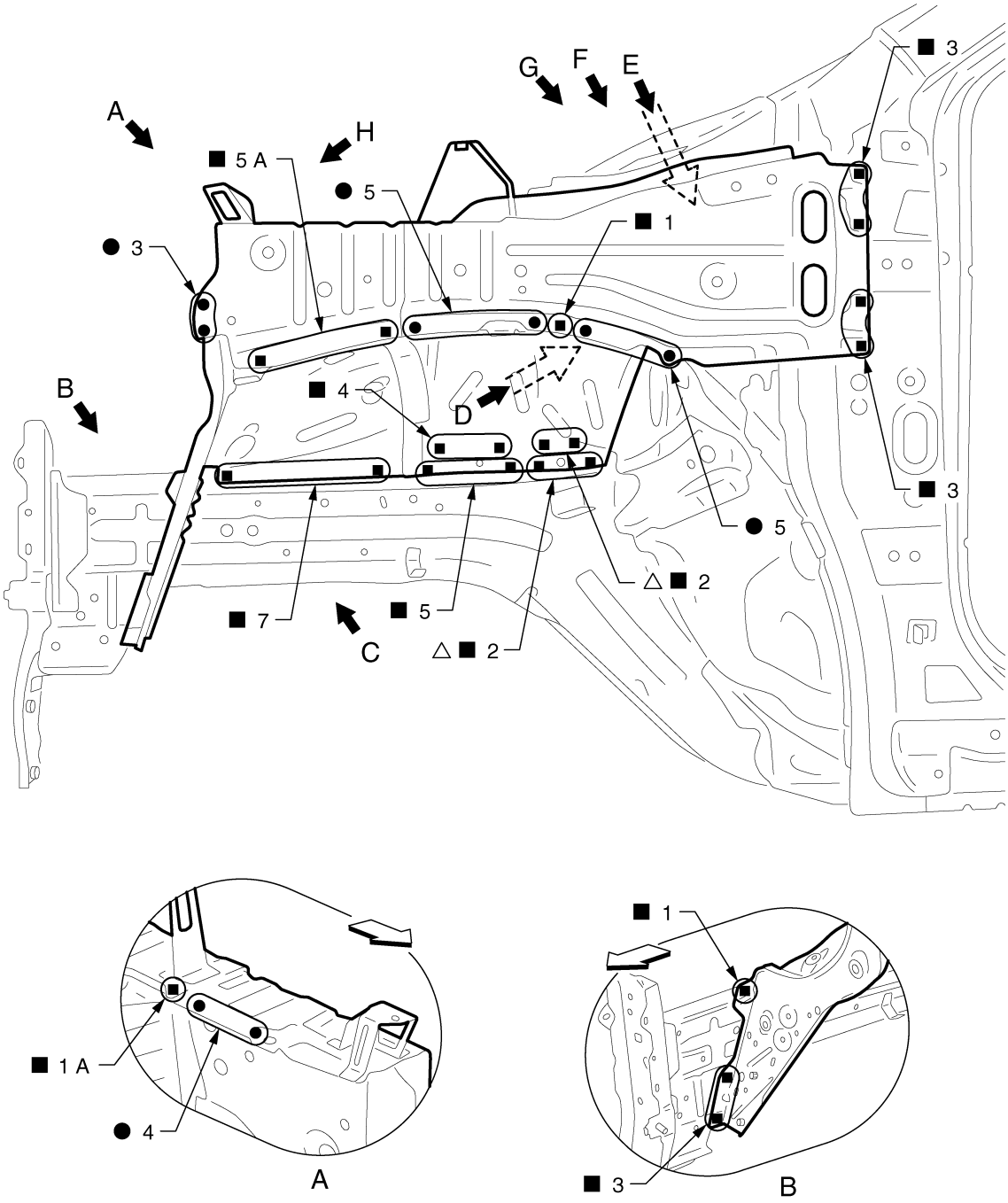
Replacement part

- Upper radiator core support assembly
- Side radiator core support

## Hoodledge

INFOID:0000000010843431

Work after radiator core support is removed.



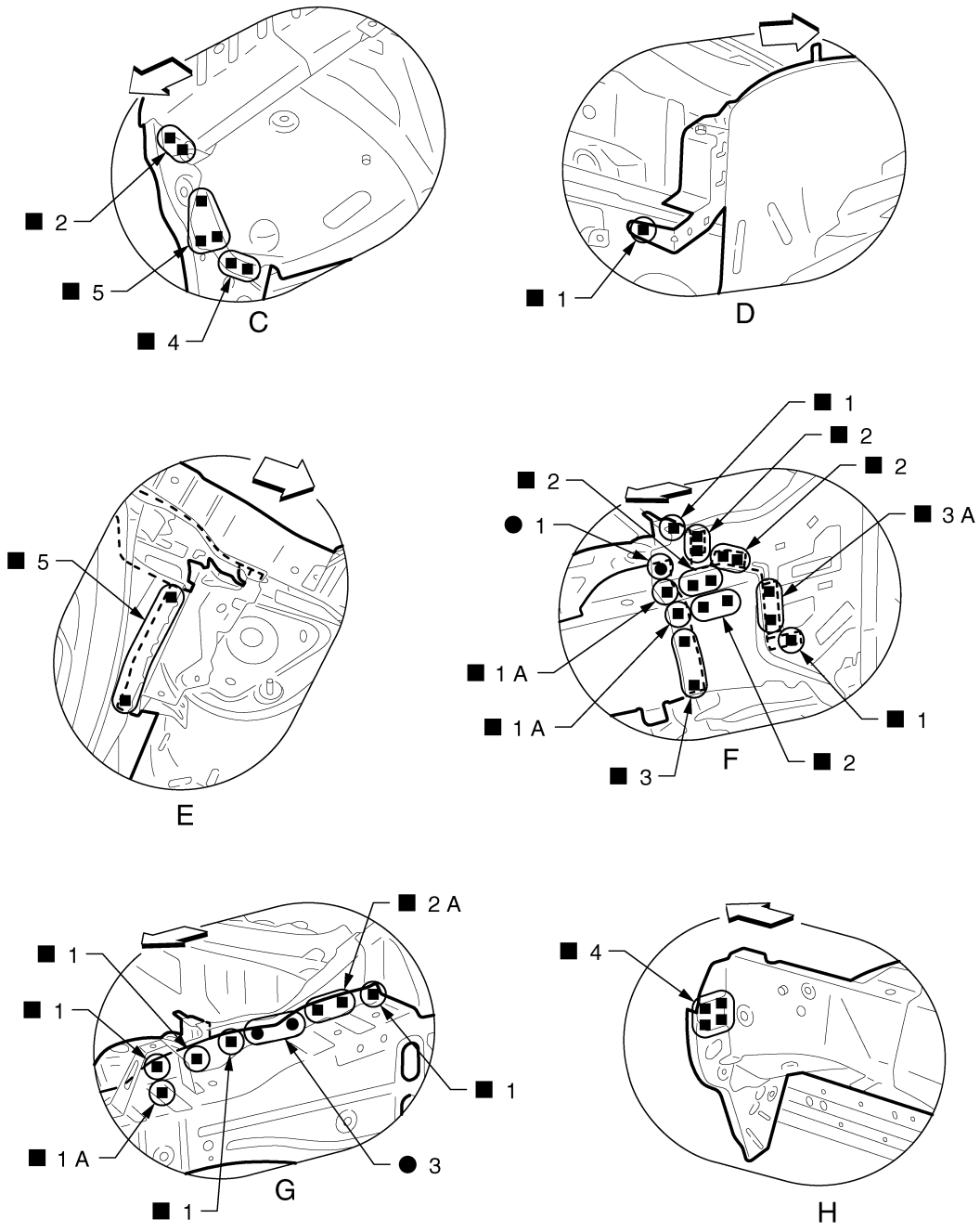

JSKIA4916ZZ

⇦: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

Replacement part

- Front strut housing assembly
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4616ZZ

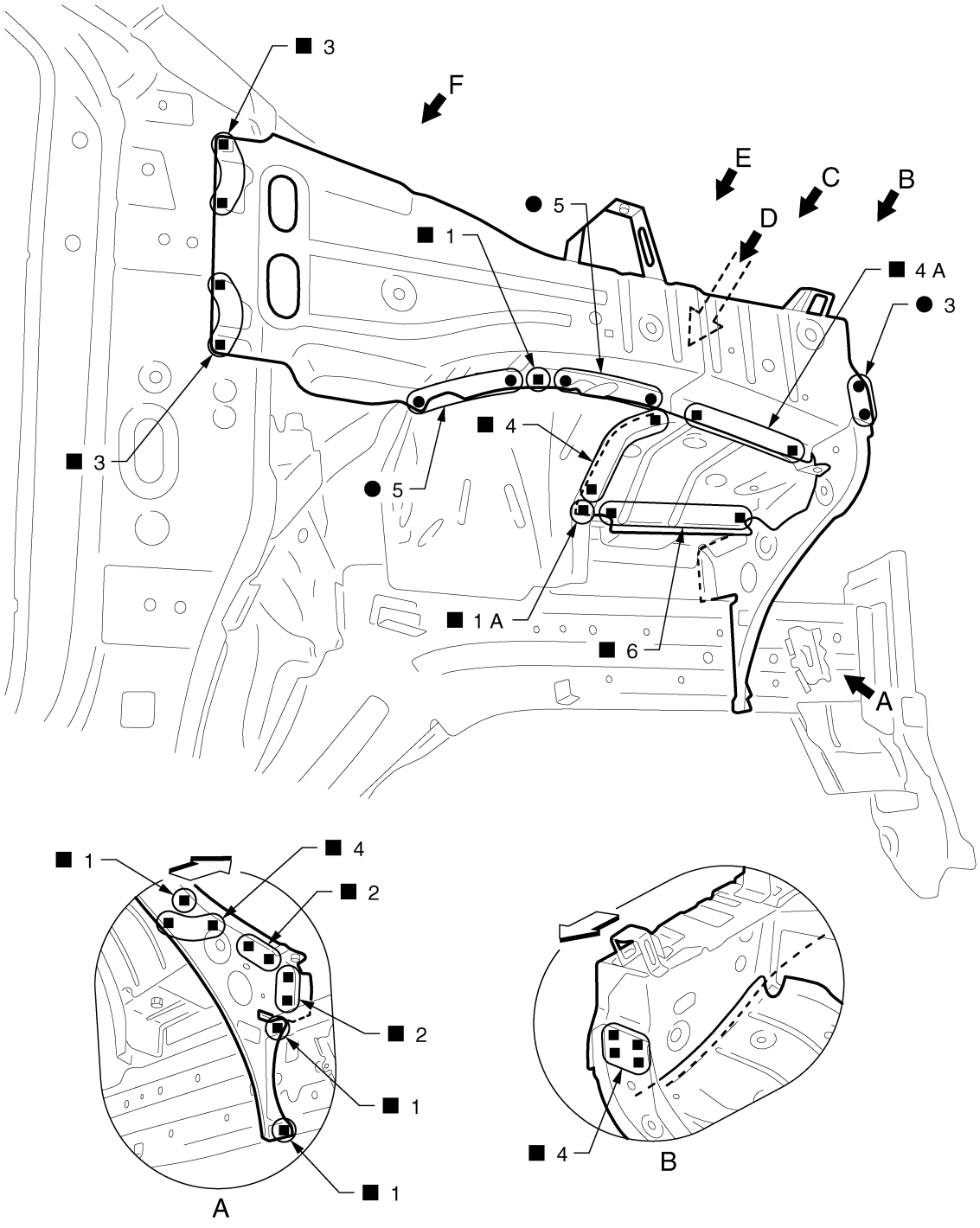
⇦: Vehicle front

View F and H: Before installing hoodledge reinforcement

## Hoodledge (Partial Replacement)

INFOID:0000000010843432

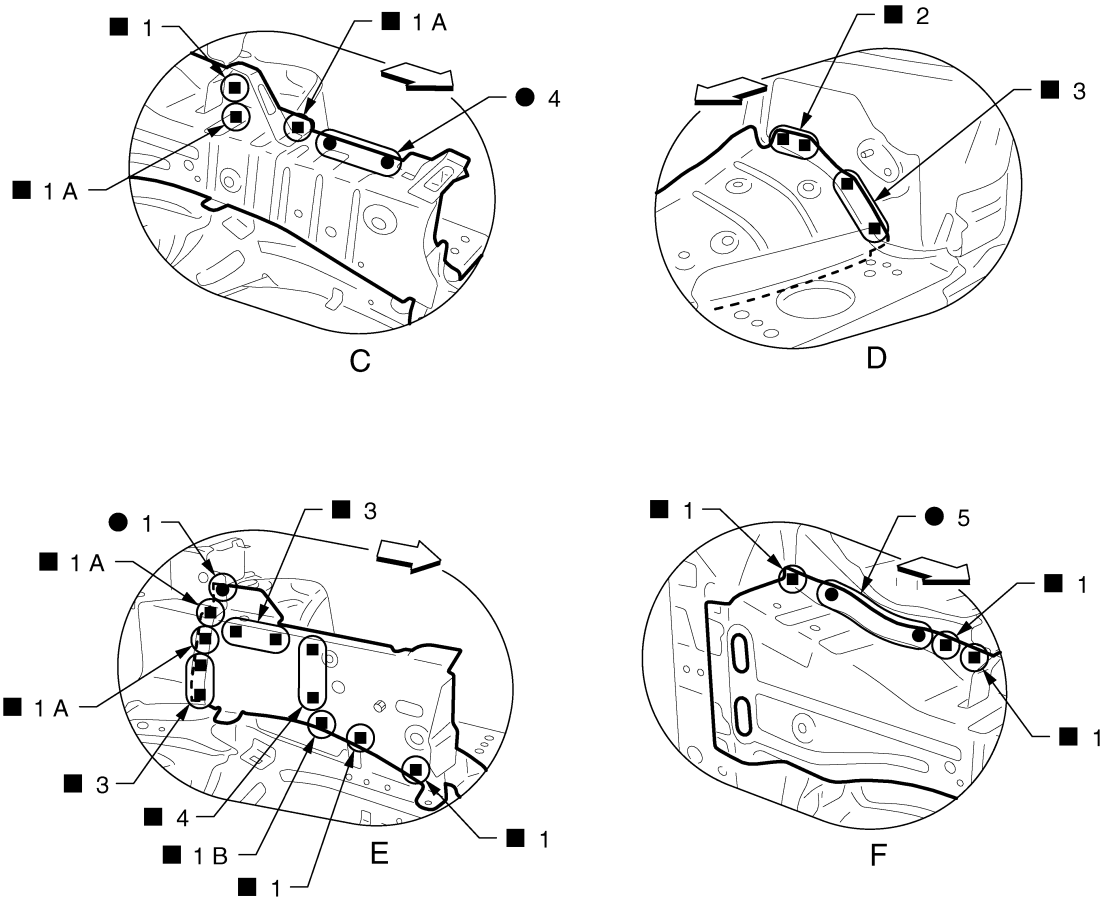
Work after radiator core support is removed.




⇦: Vehicle front

Replacement part

- Front strut housing assembly
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4618ZZ

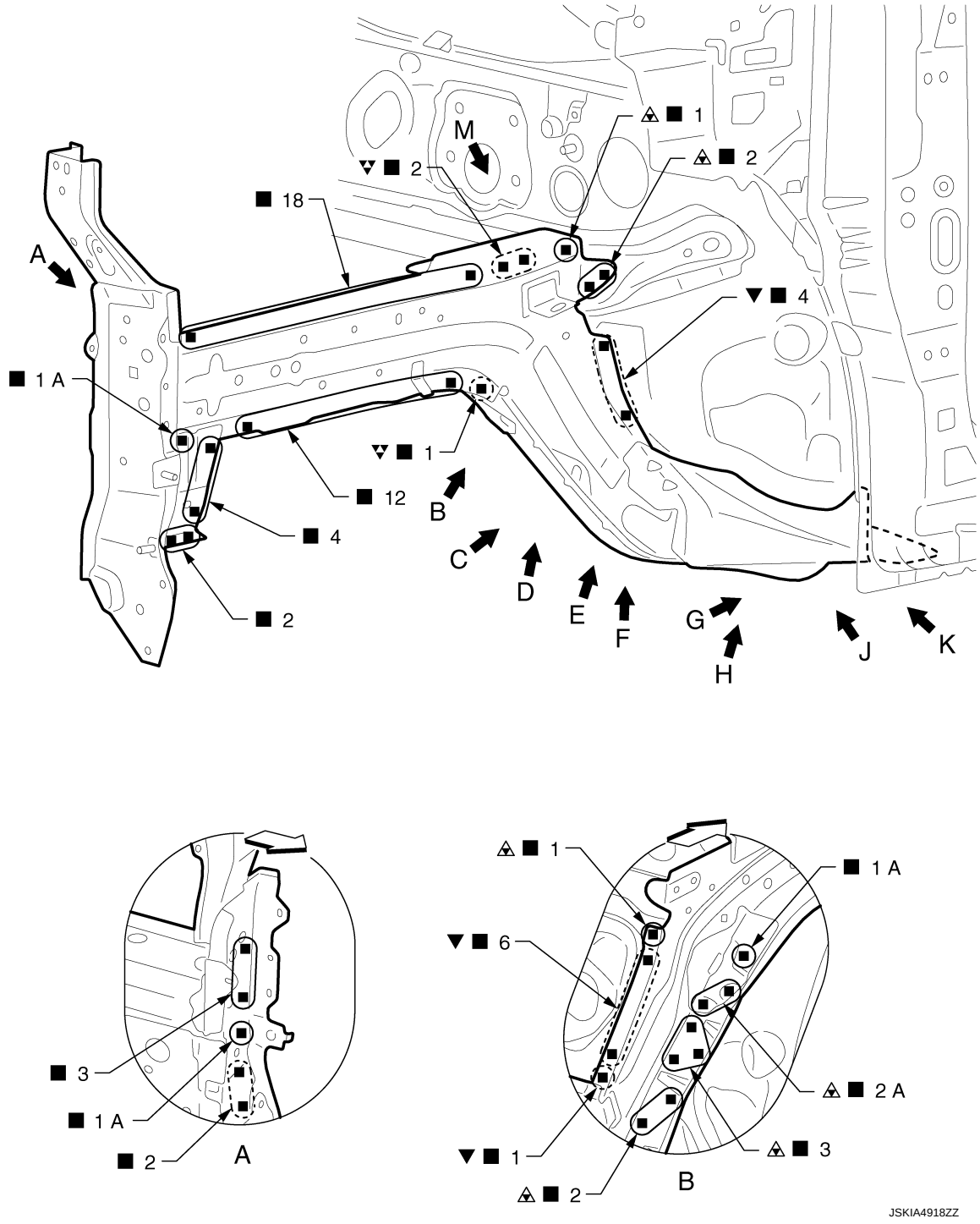
⇦: Vehicle front

View E: Before installing hoodledge reinforcement

## Front Side Member

INFOID:0000000010843433

Work after upper radiator core support assembly and hoodledge are removed.




⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

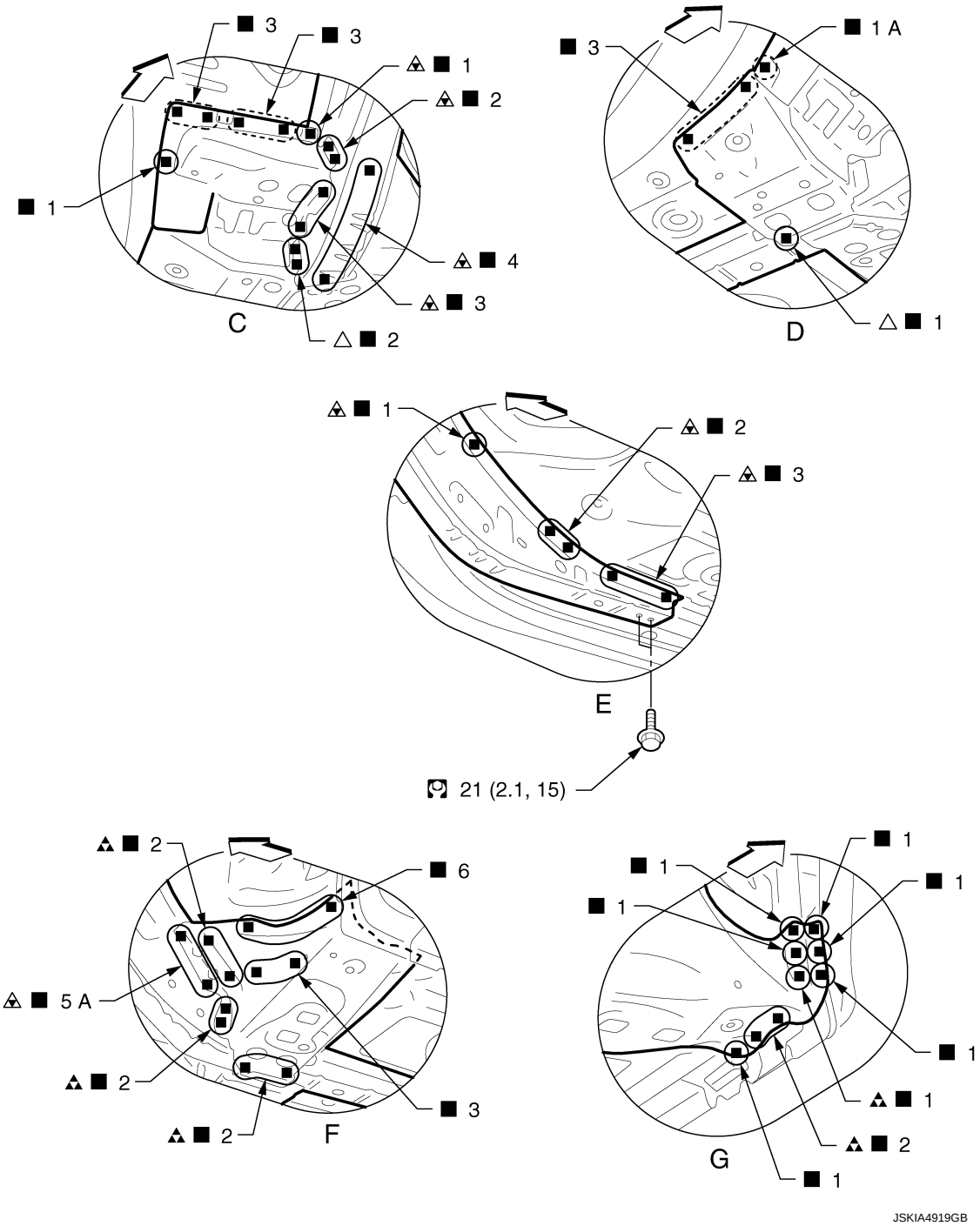
▼▼: Drill ϕ11 mm (0.43 in) hole for the plug welding hole (ultra high strength steel).

△▼: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate
- Front side member assembly
- Front suspension mounting bracket




⇦: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

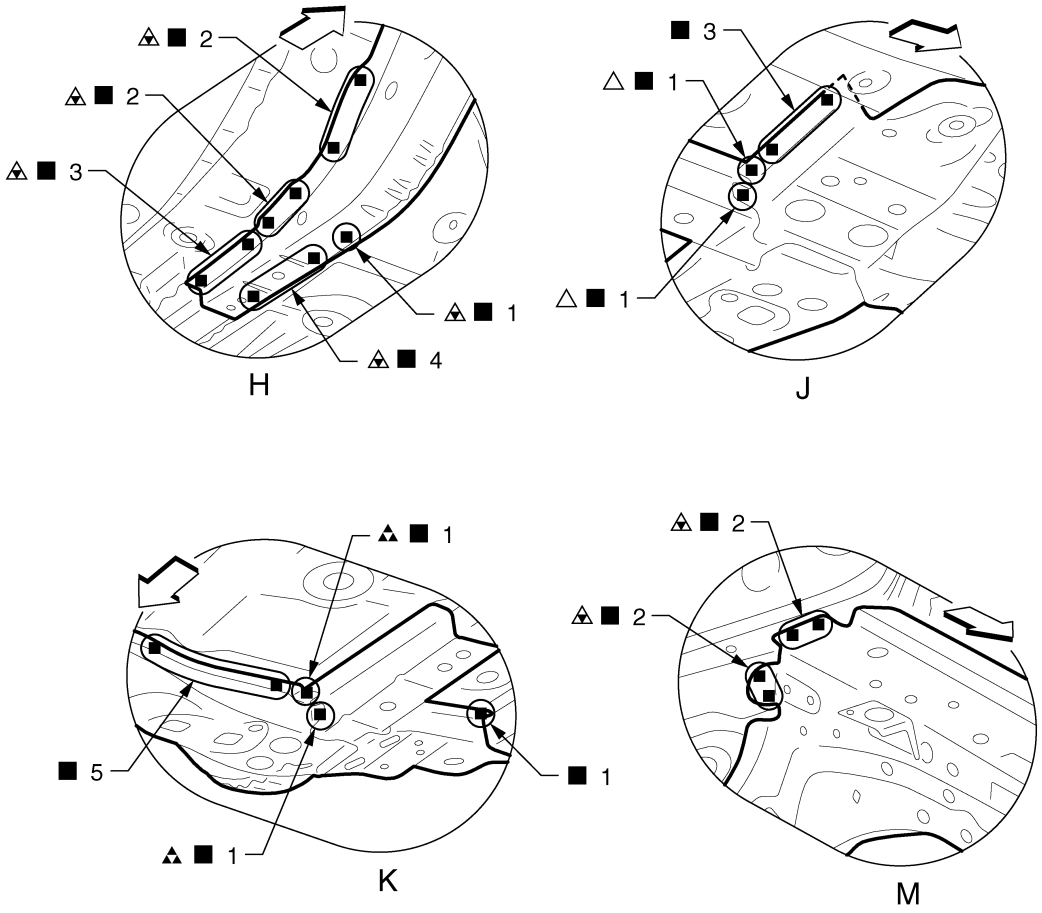
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

◬: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View E: Before installing front suspension mounting bracket




JSKIA3850ZZ

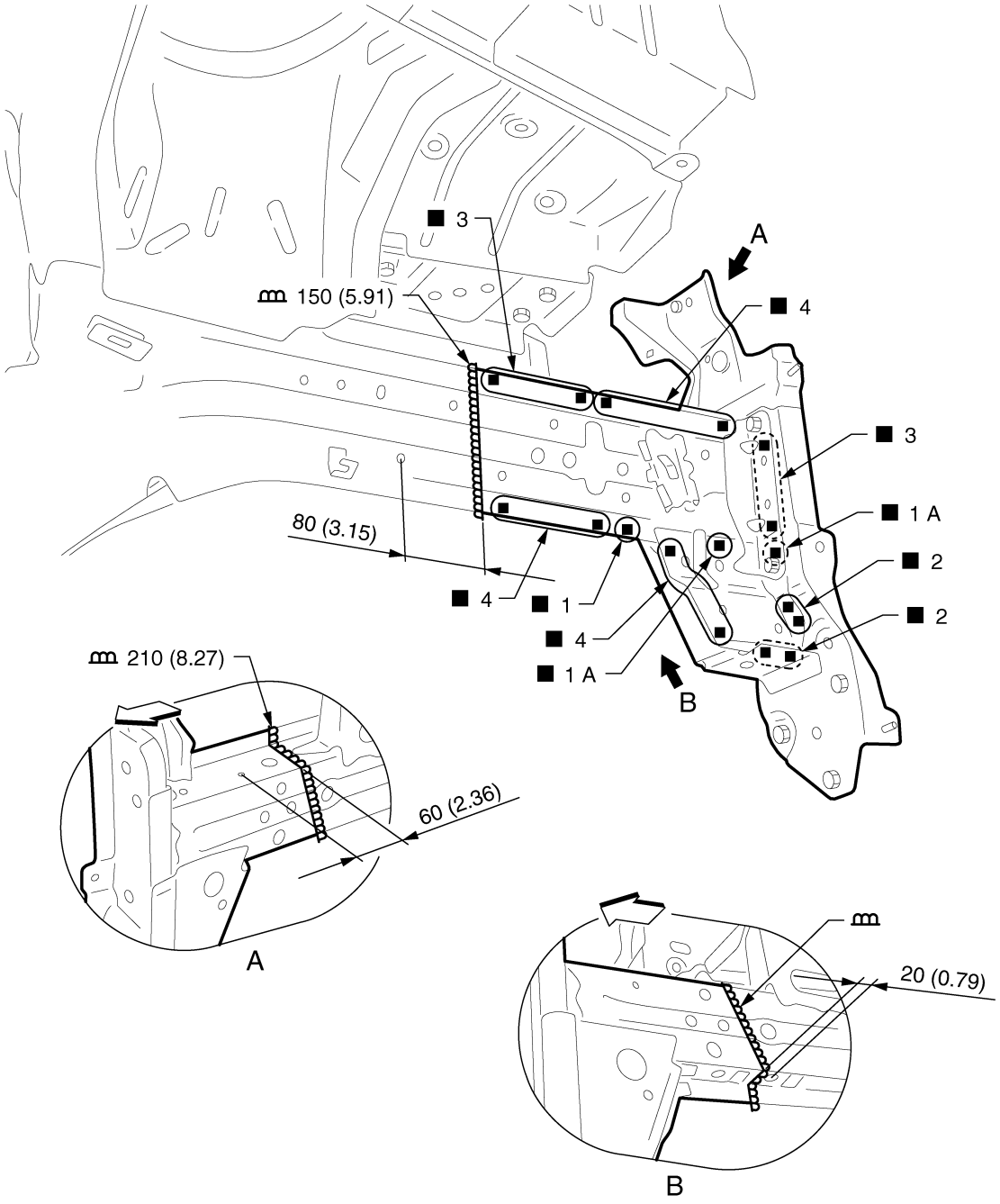
⇦: Vehicle front
△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).
⧋: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

View H: Before installing front suspension mounting bracket

## Front Side Member (Partial Replacement)

INFOID:0000000010843434

Work after upper radiator core support assembly and hoodledge connector assembly are removed.




JSKIA4604GB

Unit: mm (in)

⇦: Vehicle front

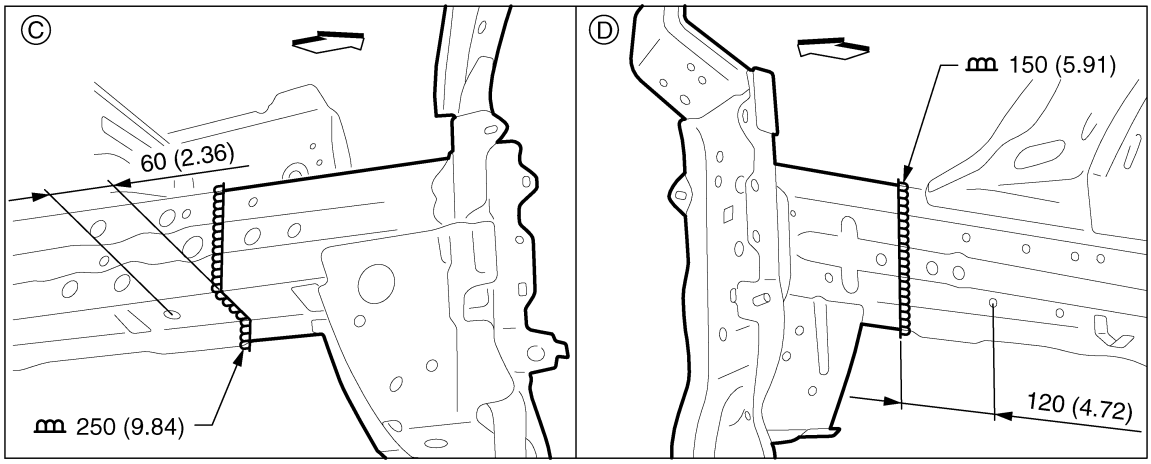
(◌): Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate (RH)
- Front side member assembly (RH)

POINT

The front side member on the left can also be replaced partially by cutting at the position shown in the figure.




JSKIA3852GB

Ⓒ Front side member assembly cutting position (LH)
Ⓓ Front side member closing plate cutting position (LH)

Unit: mm (in)

⇦: Vehicle front

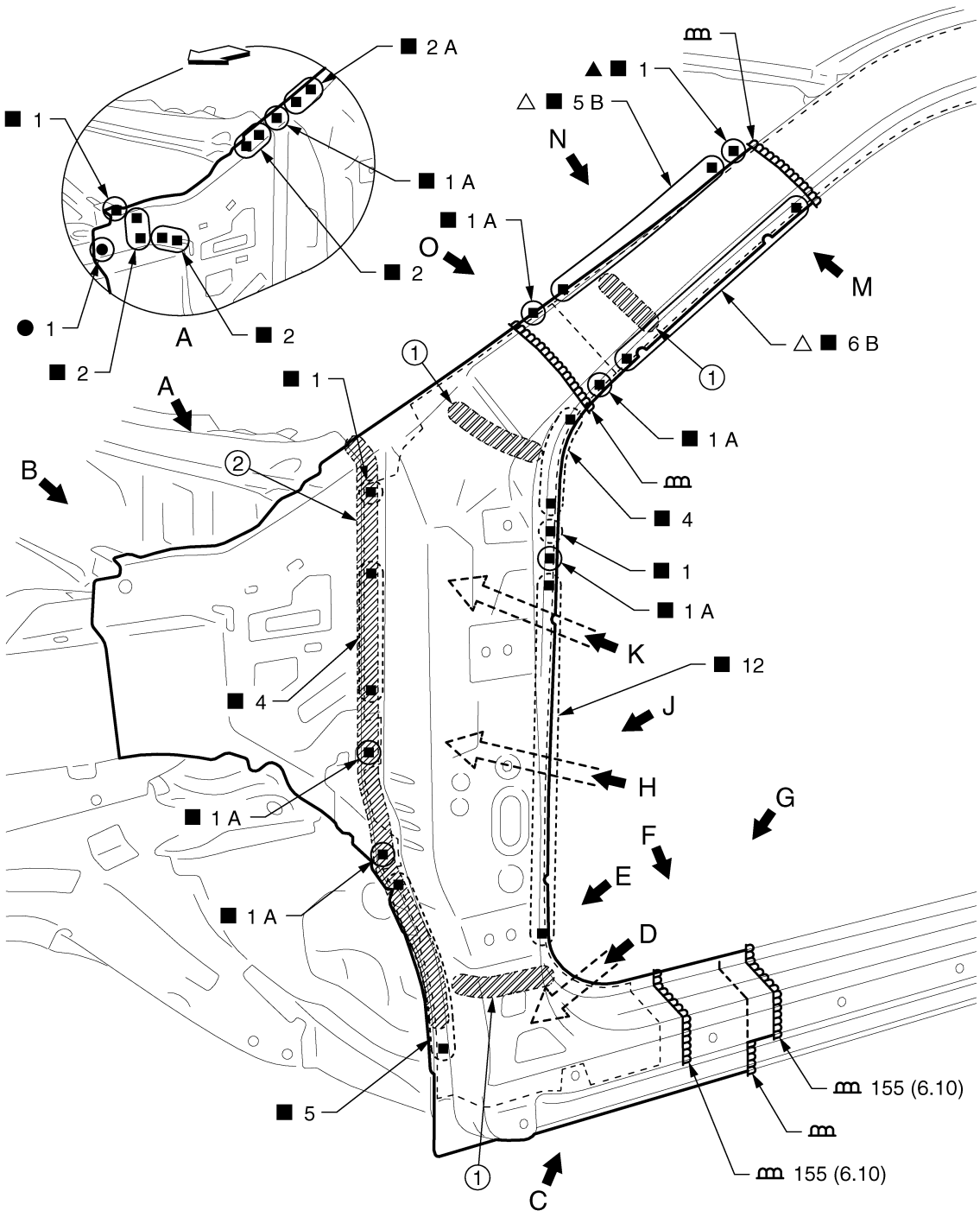
Replacement part

- Front side member closing plate (LH)
- Front side member assembly (LH)

## Front Pillar

INFOID:0000000010843435

Work after hoodledge reinforcement is removed.




① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

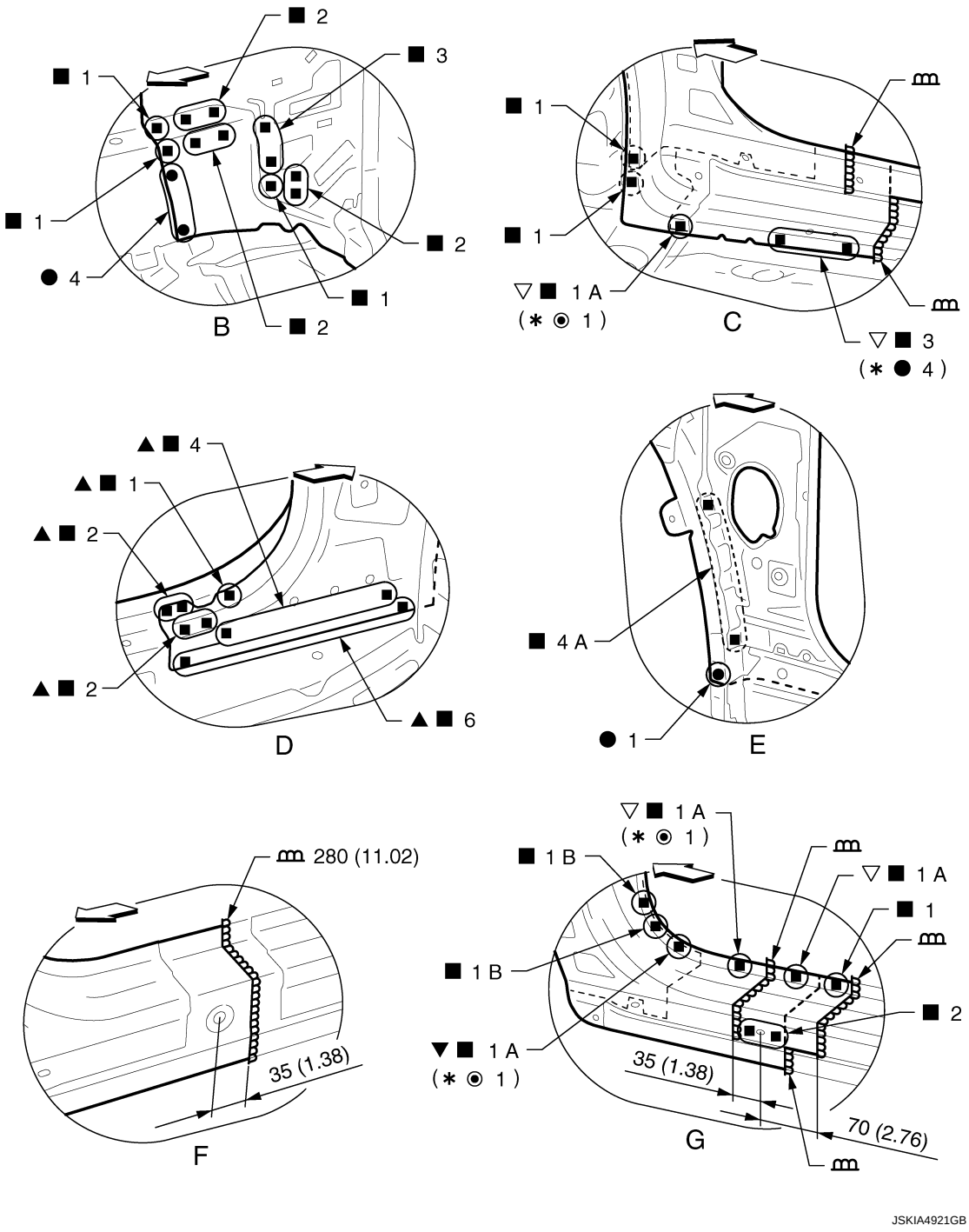
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

(⁀): Weld the parts onto the back of the component part.

Replacement part

- Side body assembly
- Upper inner front pillar
- Side dash




JSKIA4921GB

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

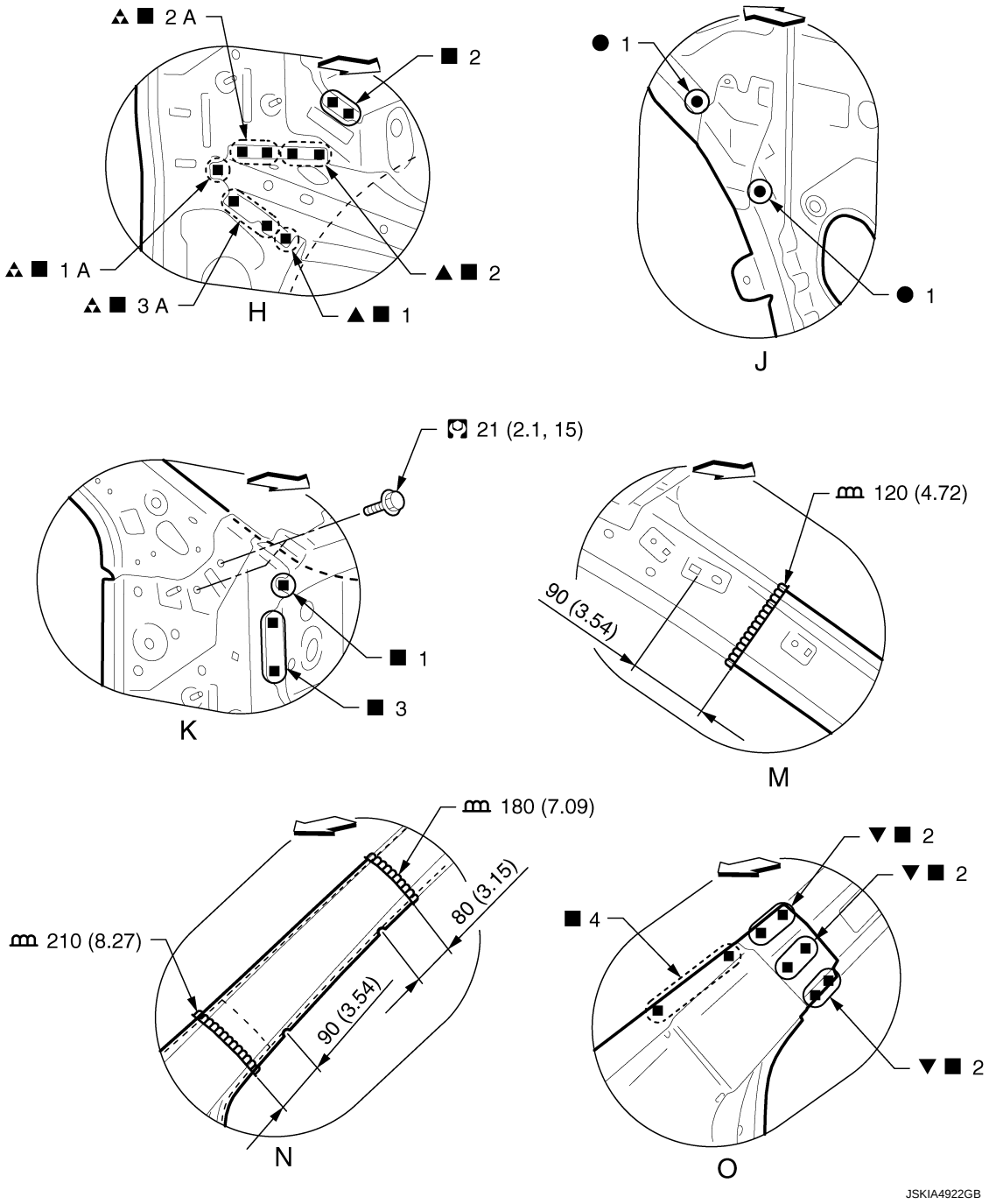
▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

View D: Before installing side body assembly
View F: Before installing outer front side body




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▲▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

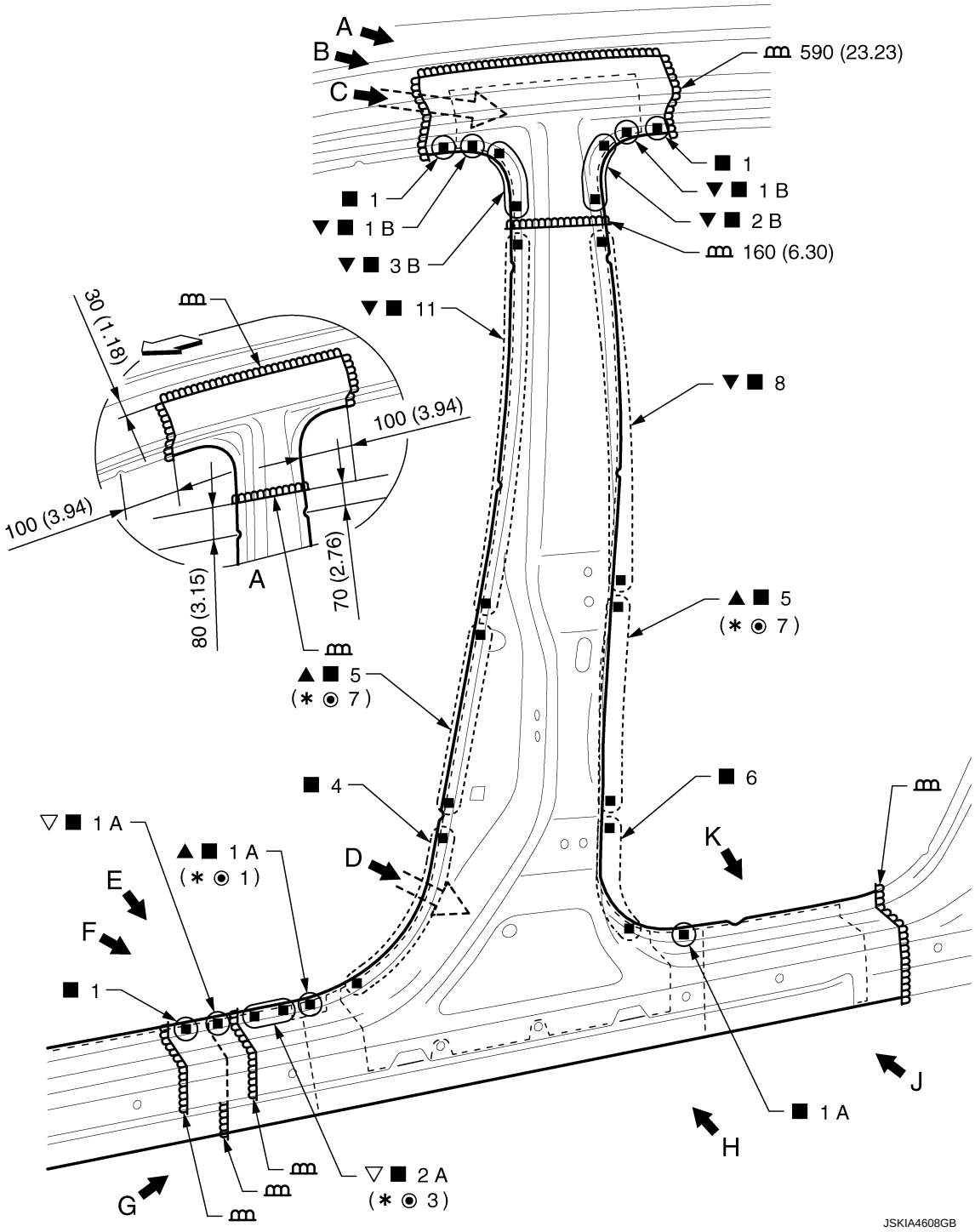
(  ): Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View H and J: Before installing side body assembly
View O: Before installing outer front side body

# Center Pillar

INFOID:0000000010843436




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

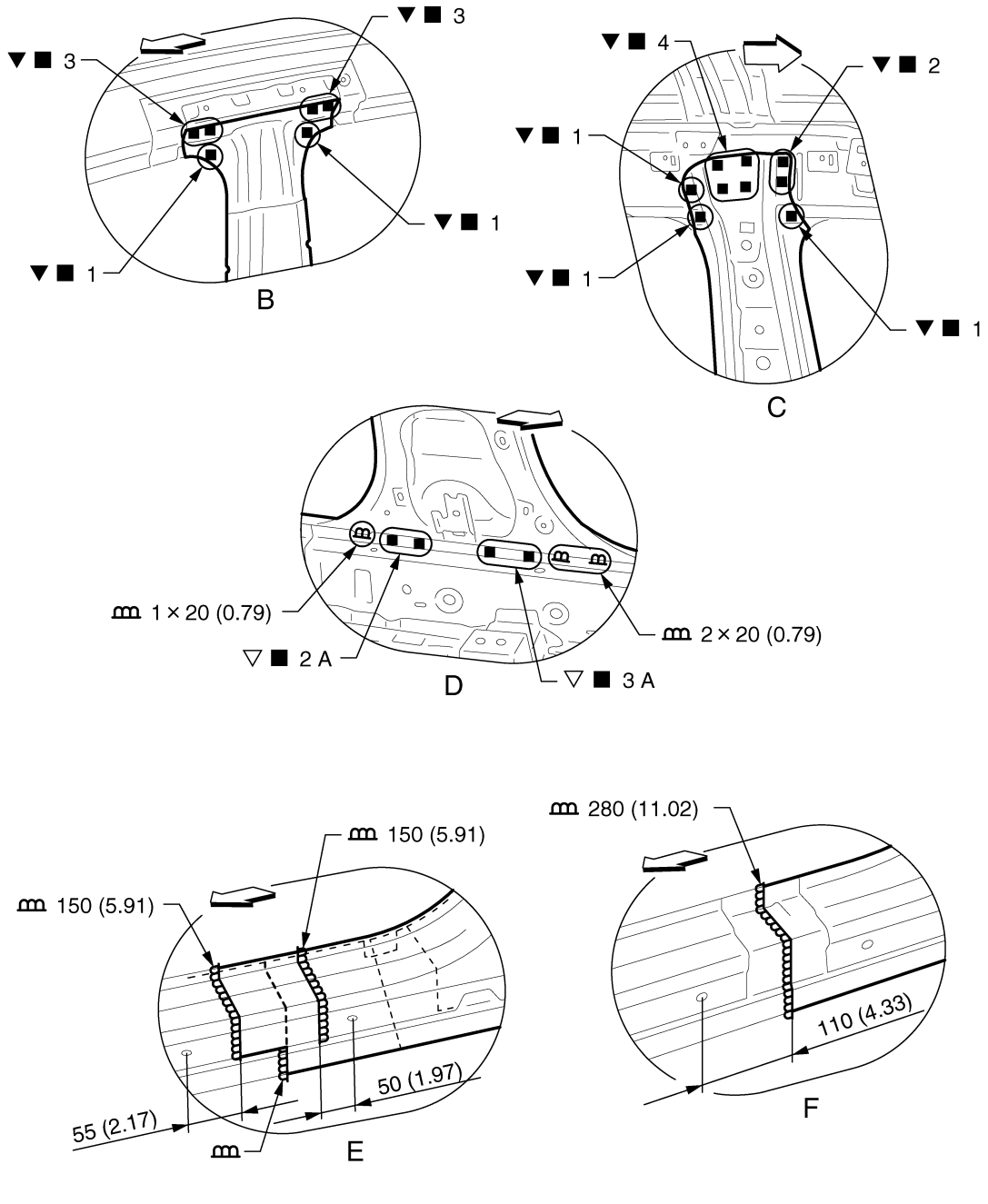
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

Replacement part

- Side body assembly
- Inner center pillar assembly




JSKIA3857GB

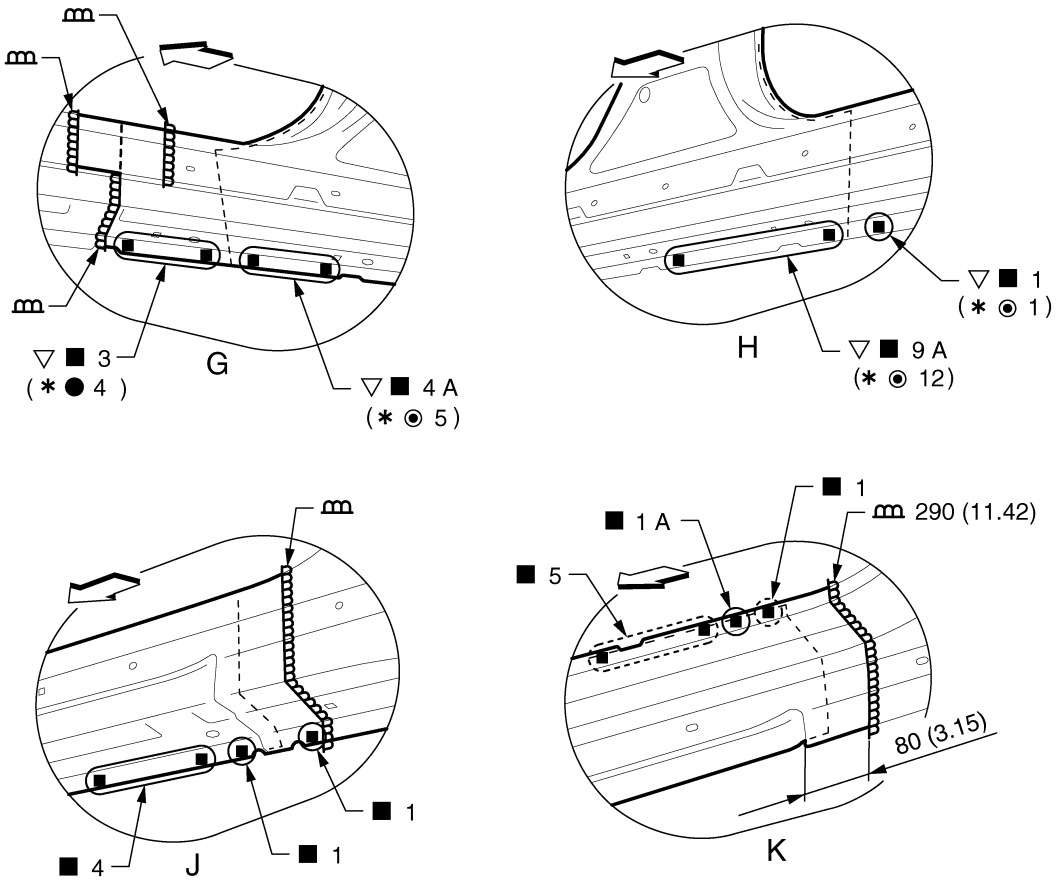
Unit: mm (in)

⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

View B and F: Before installing outer front side body




JSKIA4609GB

Unit: mm (in)

⇦: Vehicle front

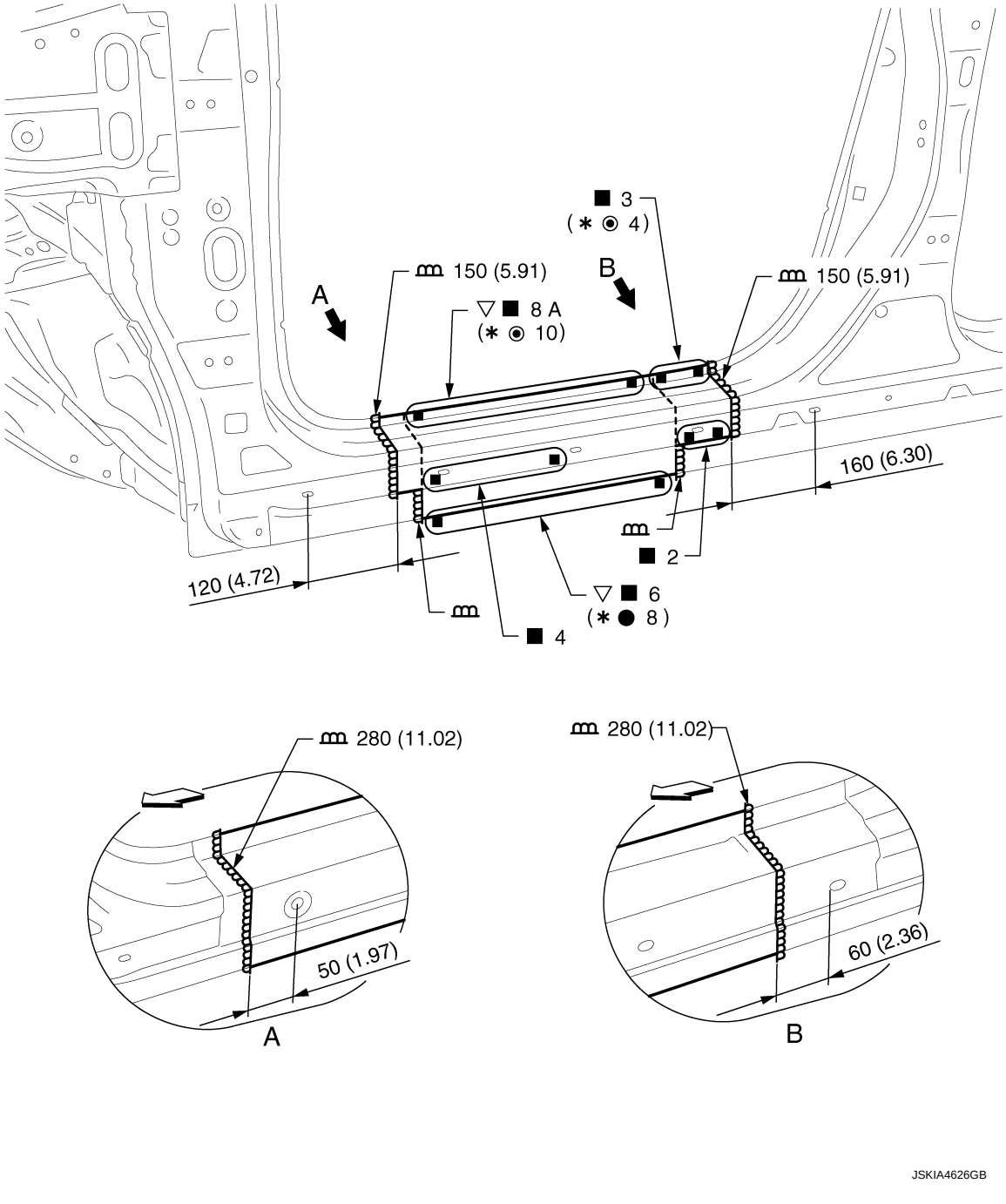
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

## Outer Sill (Partial Replacement)

INFOID:0000000010843437




JSKIA4626GB

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

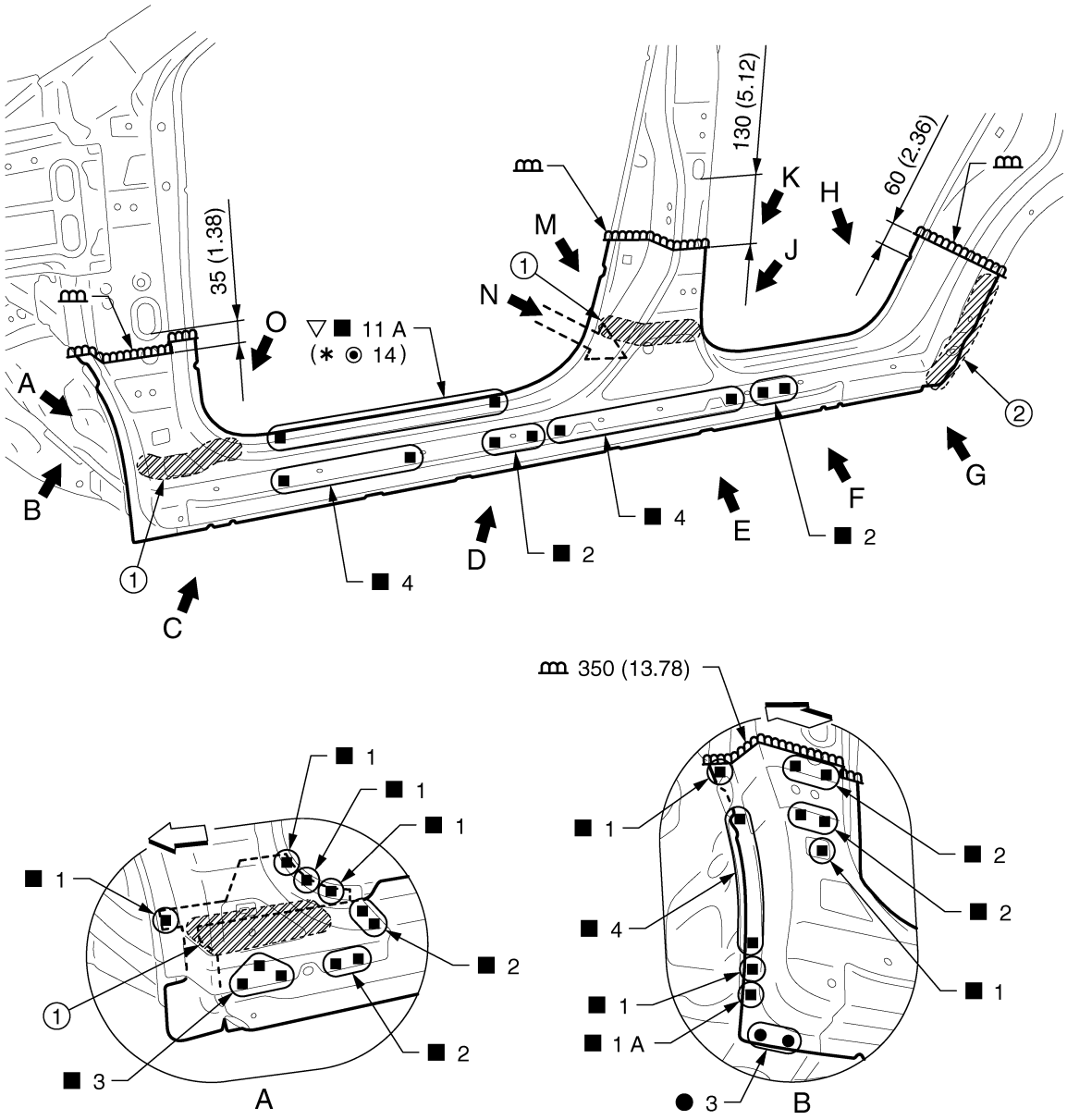
Replacement part

- Outer sill assembly
- Outer sill reinforcement

View A and B: Before installing outer sill assembly

# Outer Sill

INFOID:0000000010843438




JSKIA4923GB

① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

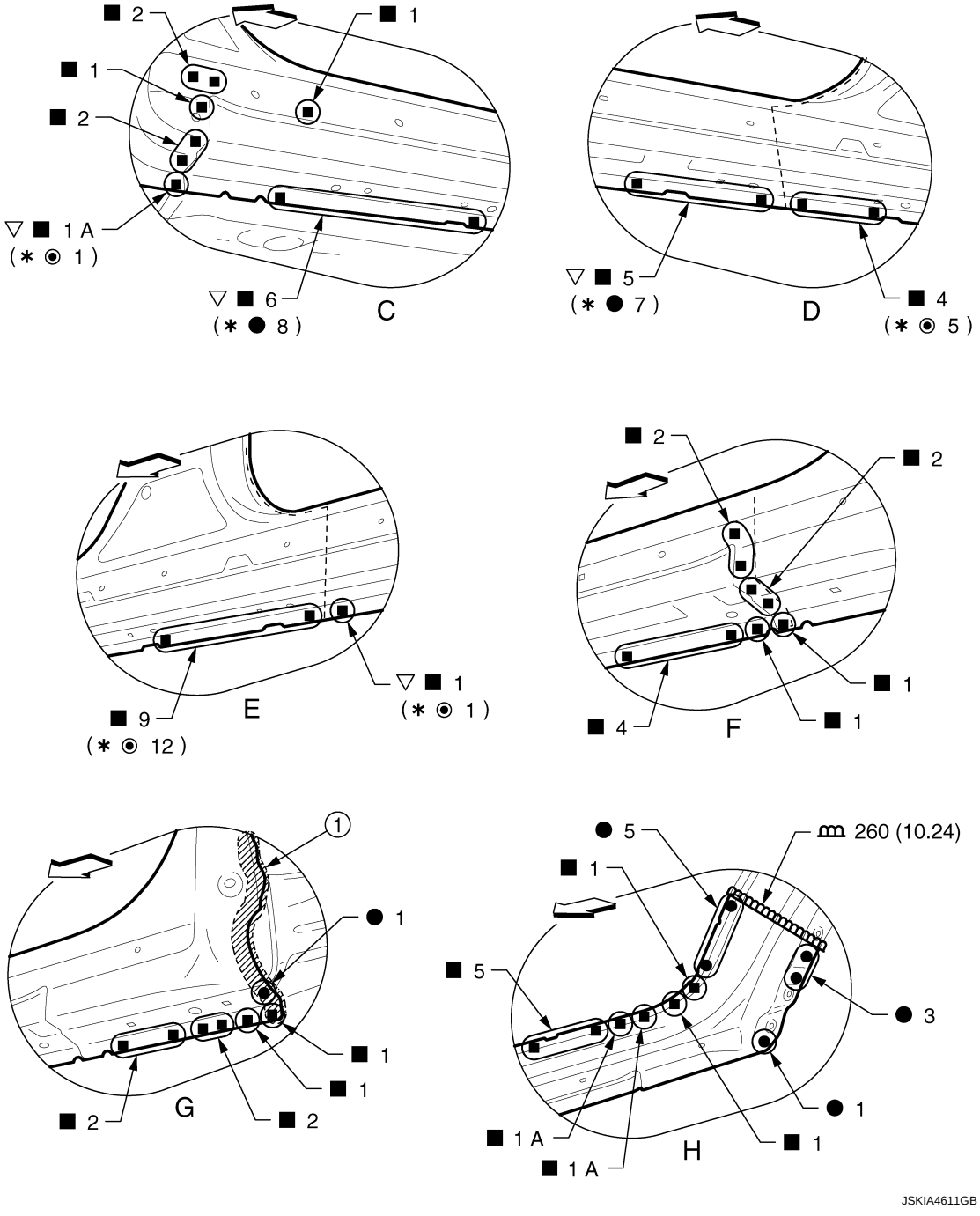
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

Replacement part

- Outer sill assembly
- Outer sill reinforcement

View A: Before installing outer sill assembly



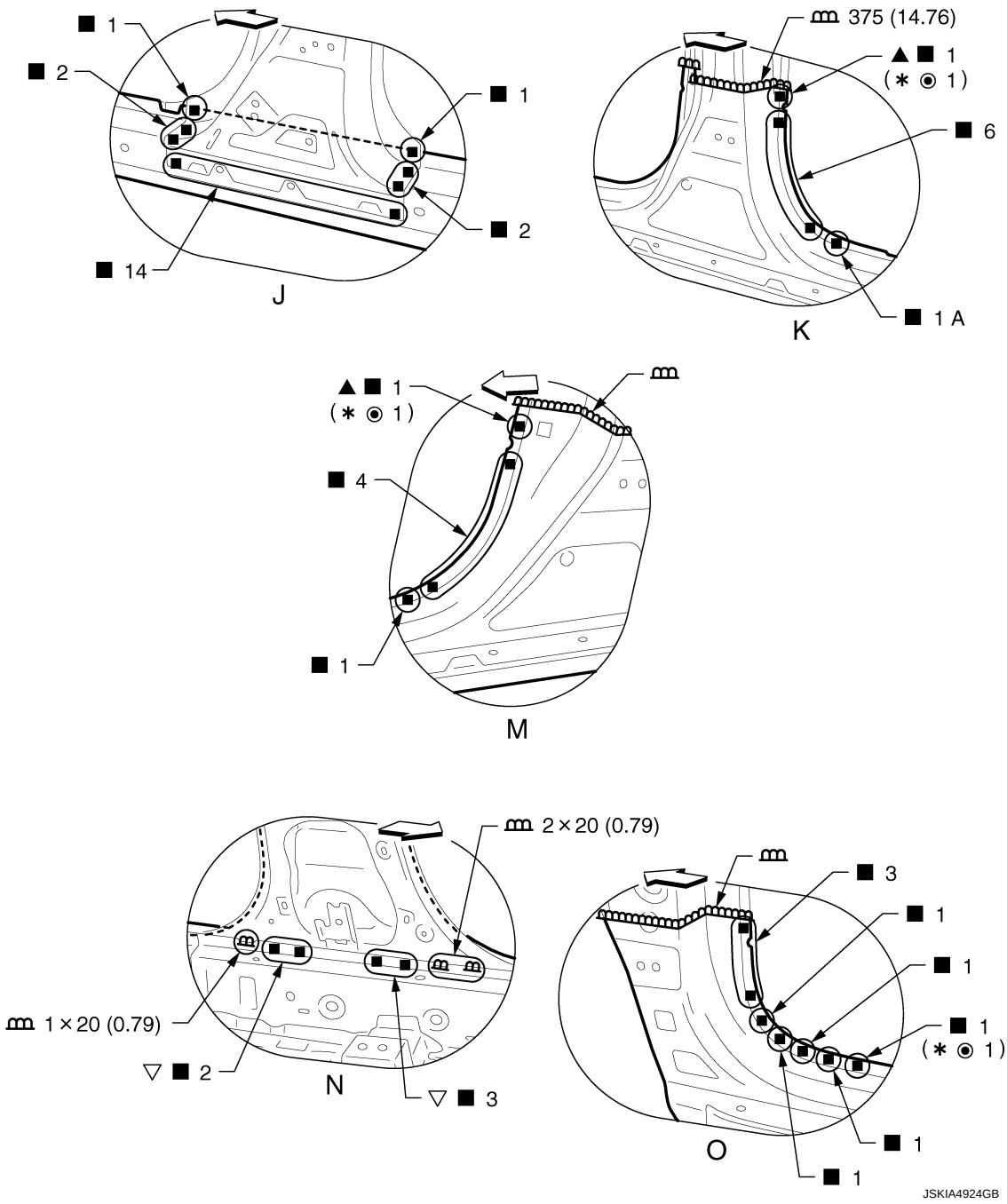

① Body sealing

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

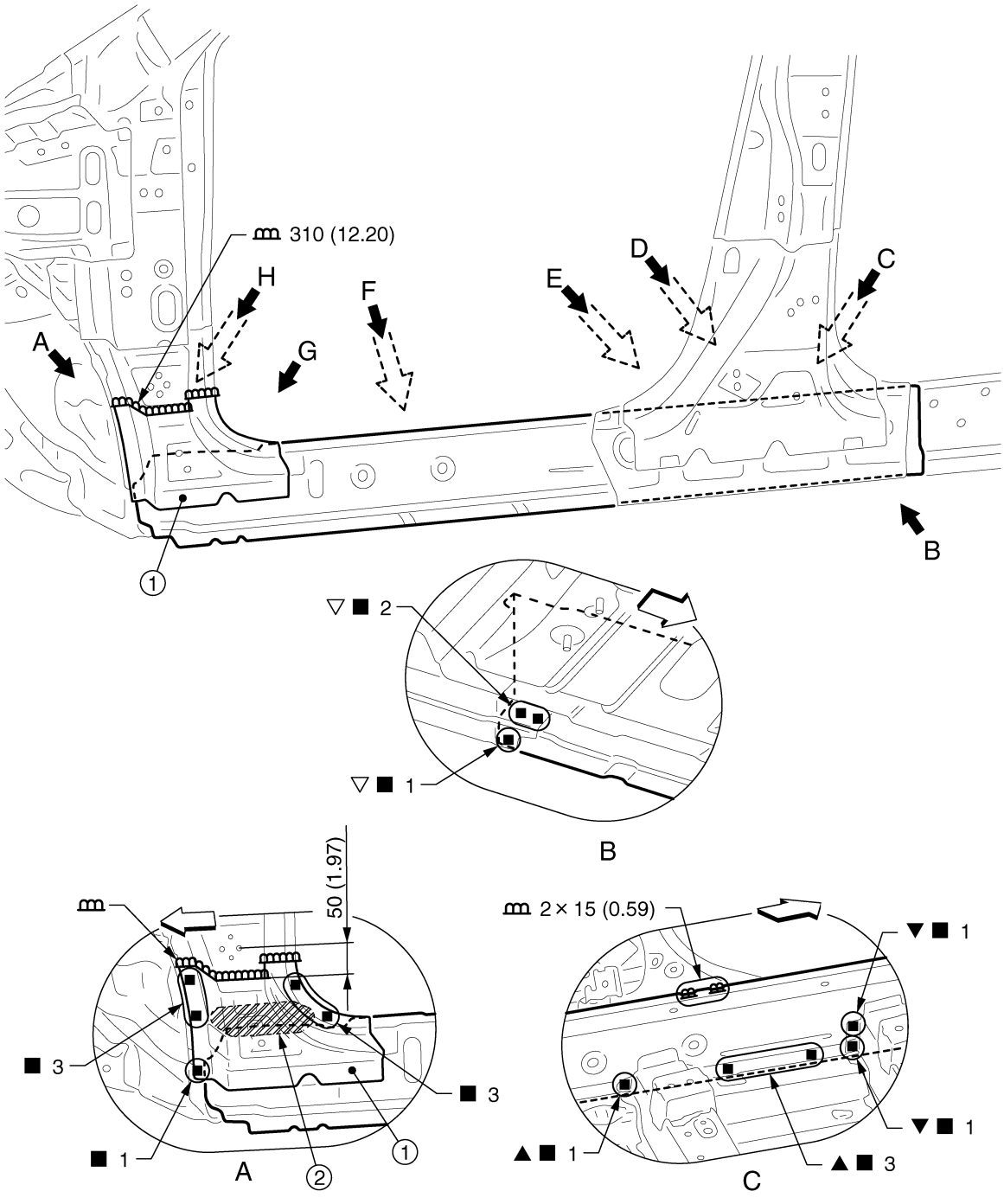
∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

View J: Before installing outer sill assembly

## Inner Sill

INFOID:0000000011005179

Work after outer sill assembly and outer sill reinforcement are removed.




① Lower front pillar hinge brace (reusable) ② Urethane foam

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

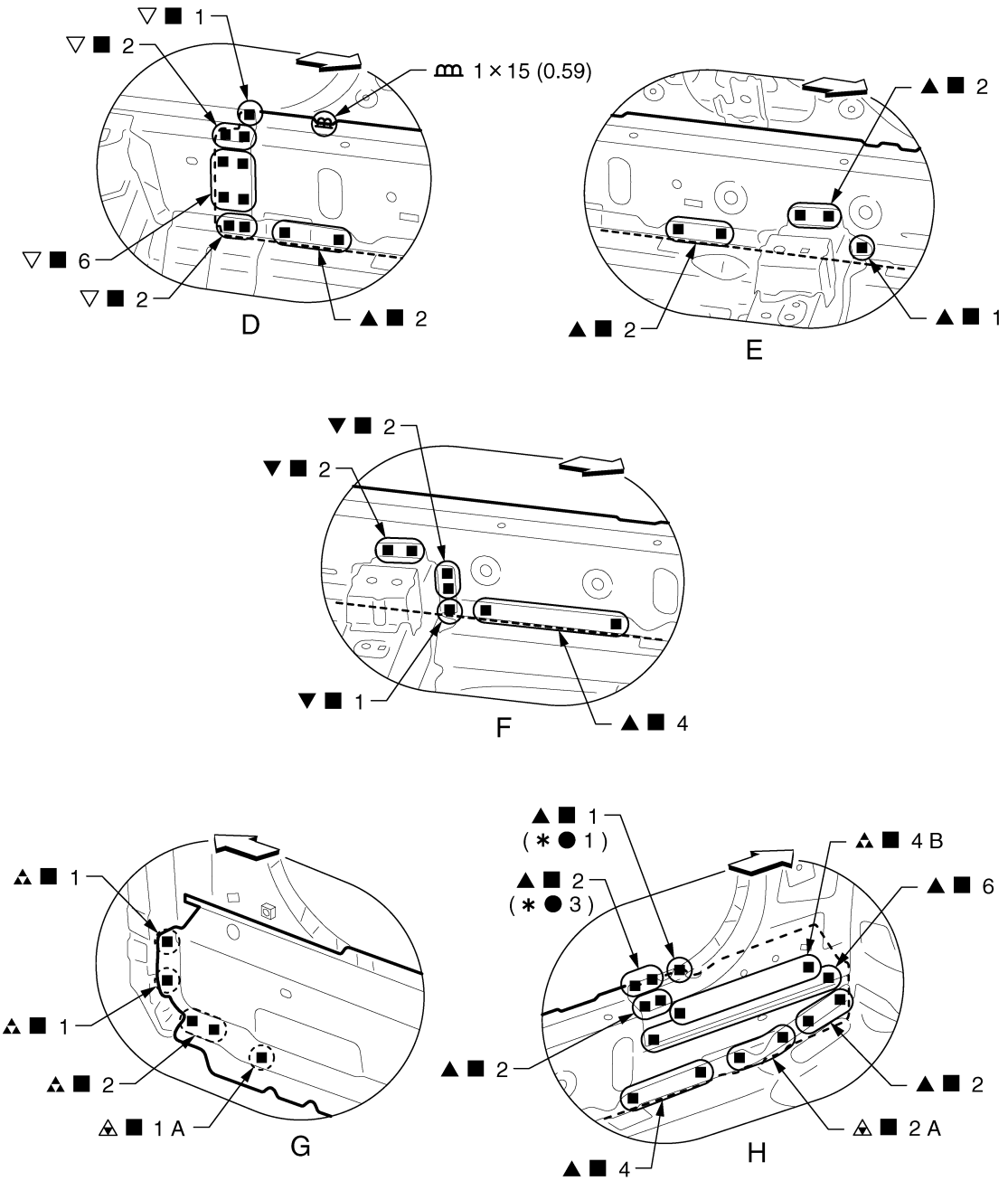
▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

Replacement part

- Inner sill

View A: Before installing outer sill assembly and front fender bracket assembly




JSKIA4928GB

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

▲A: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

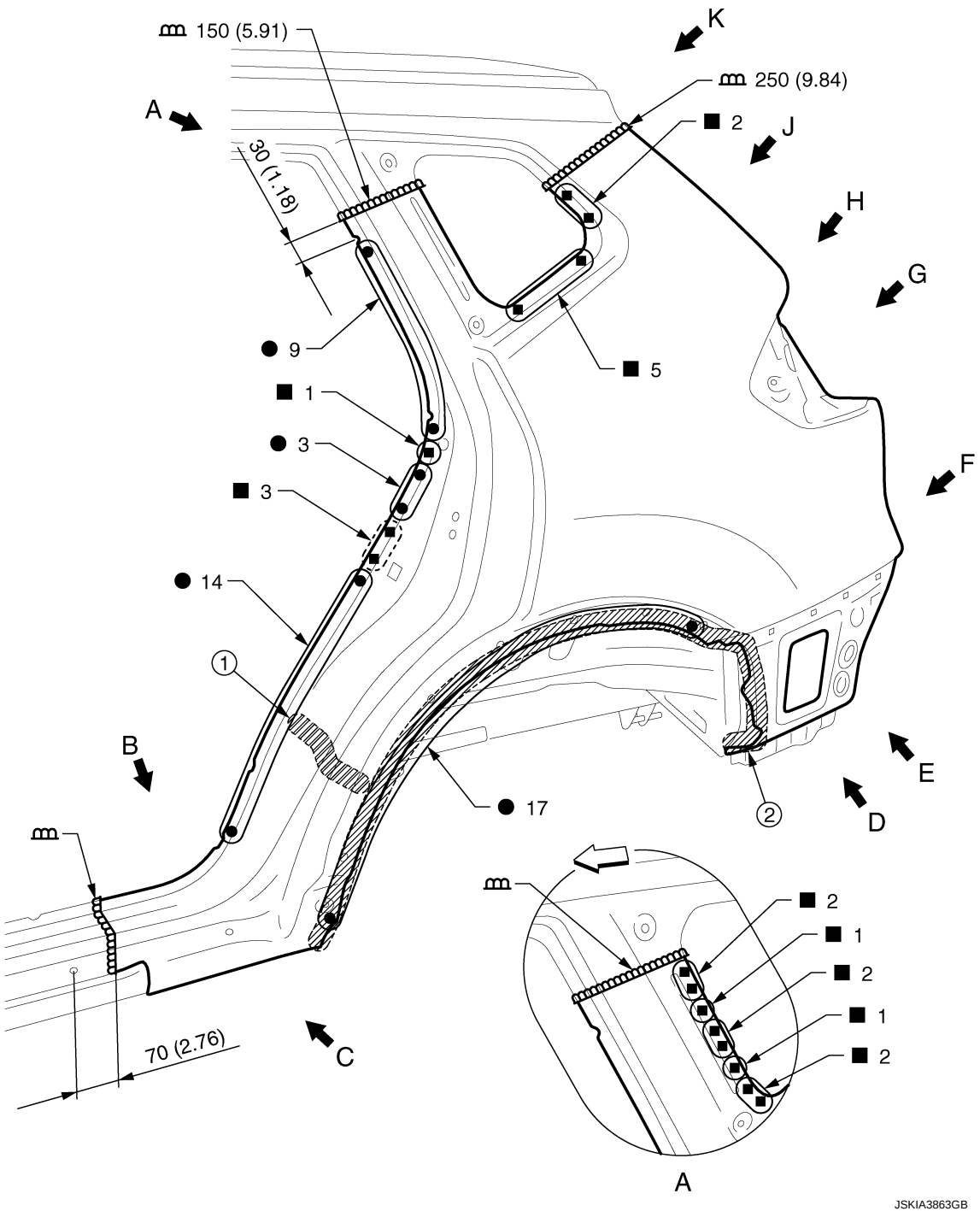
△A: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-29, "Welding of Ultra High Strength Steel"

## Rear Fender

INFOID:0000000010843439




① Urethane foam ② Body sealing

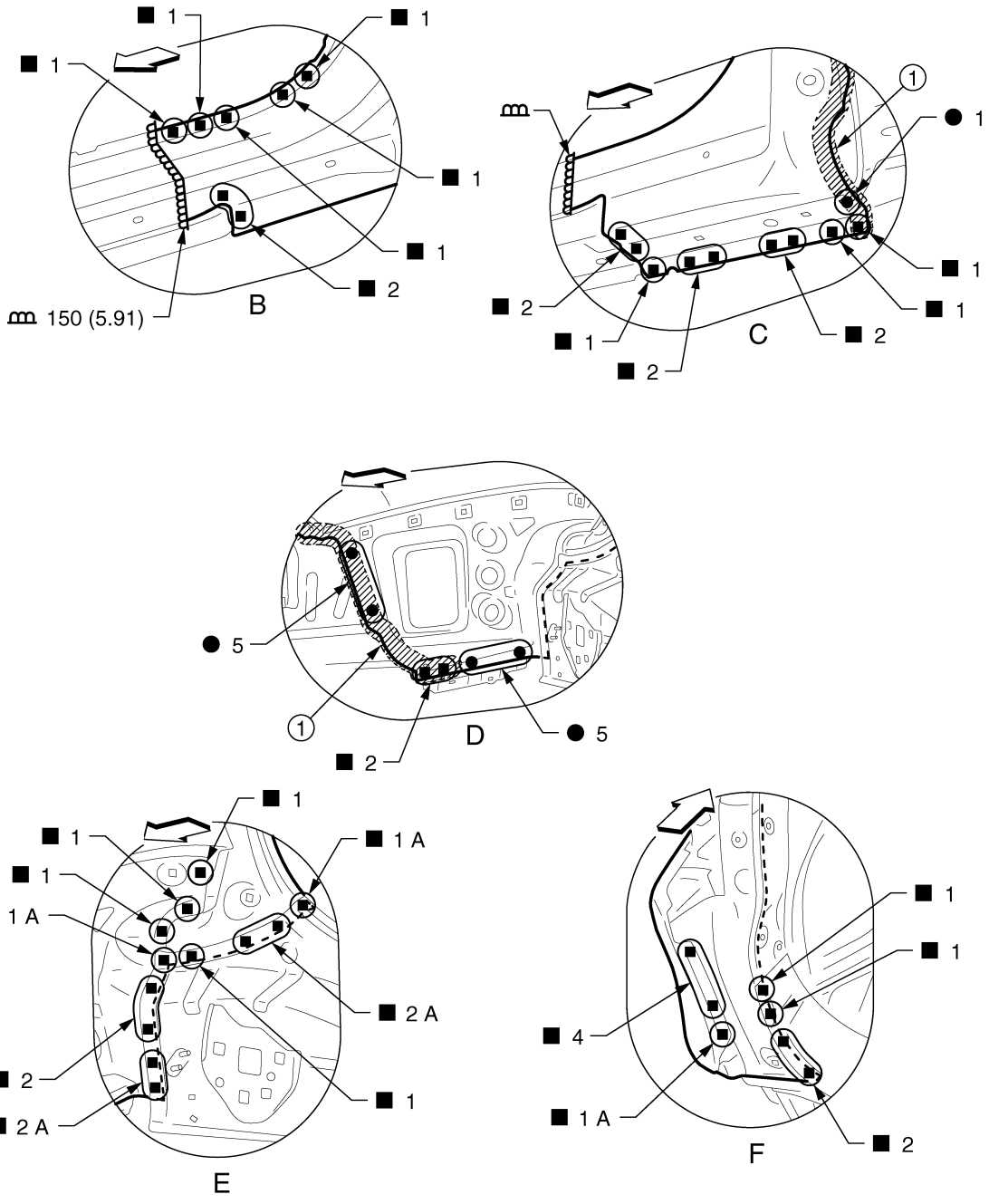
Unit: mm (in)

⇦: Vehicle front

(  ): Weld the parts onto the back of the component part.

Replacement part

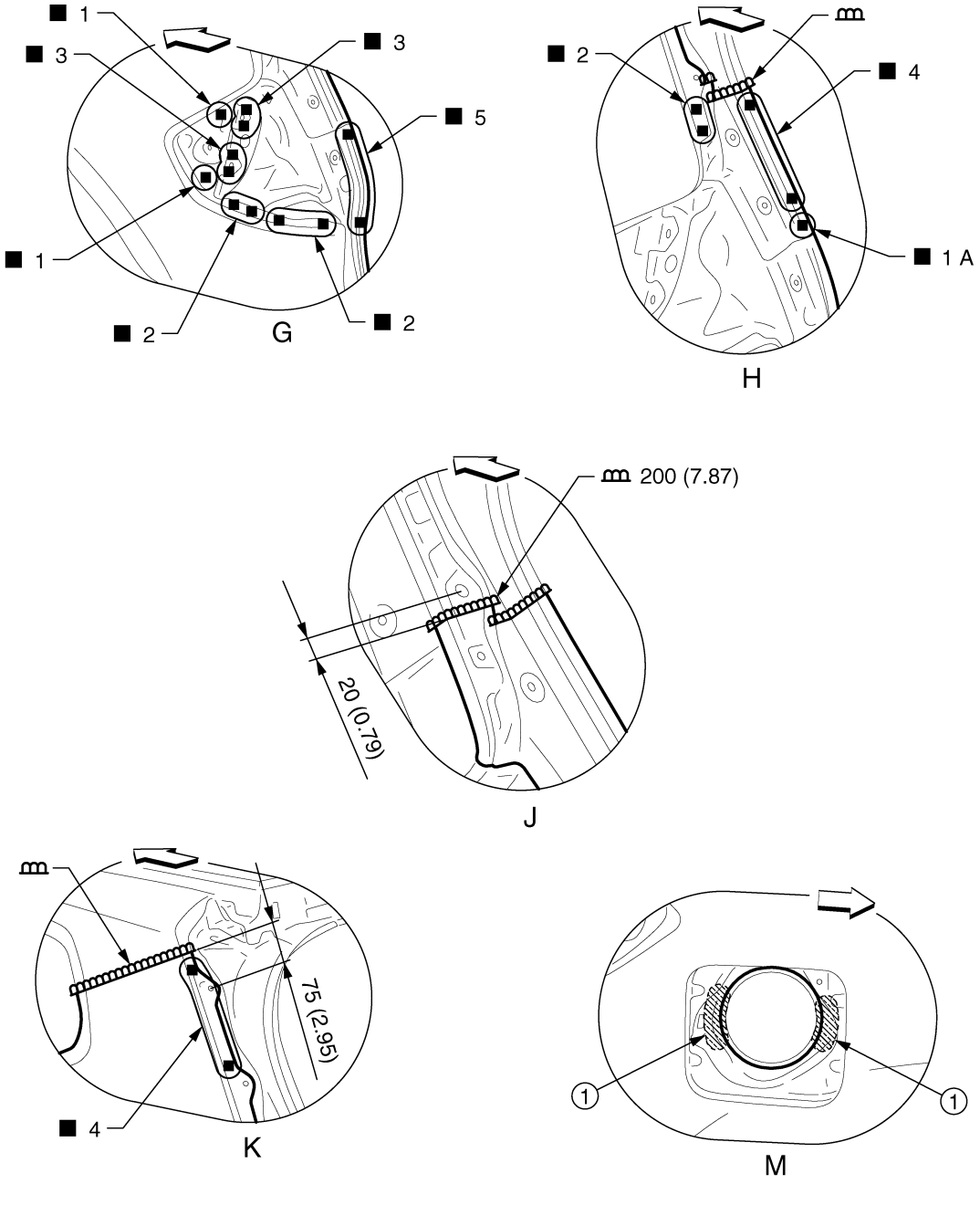
- Rear fender assembly




① Body sealing

Unit: mm (in)

⇦: Vehicle front




JSKIA3865GB

① Adhesive

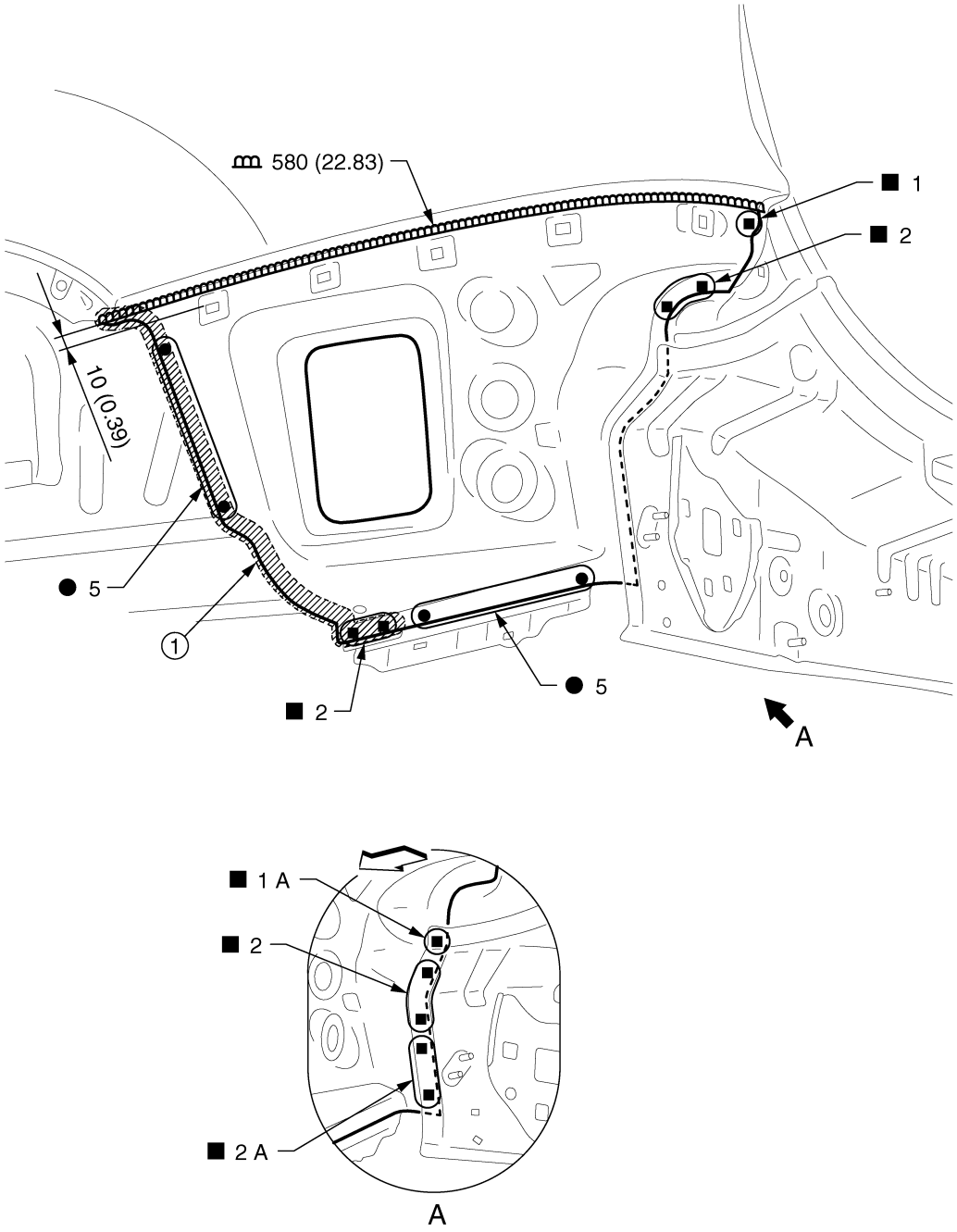
Unit: mm (in)

⇦: Vehicle front

View J: Before installing rear fender
View M: Right side rear fender

## Rear Fender Extension

INFOID:0000000011005180




JSKIA4930GB

① Body sealing

Unit: mm (in)

⇦: Vehicle front

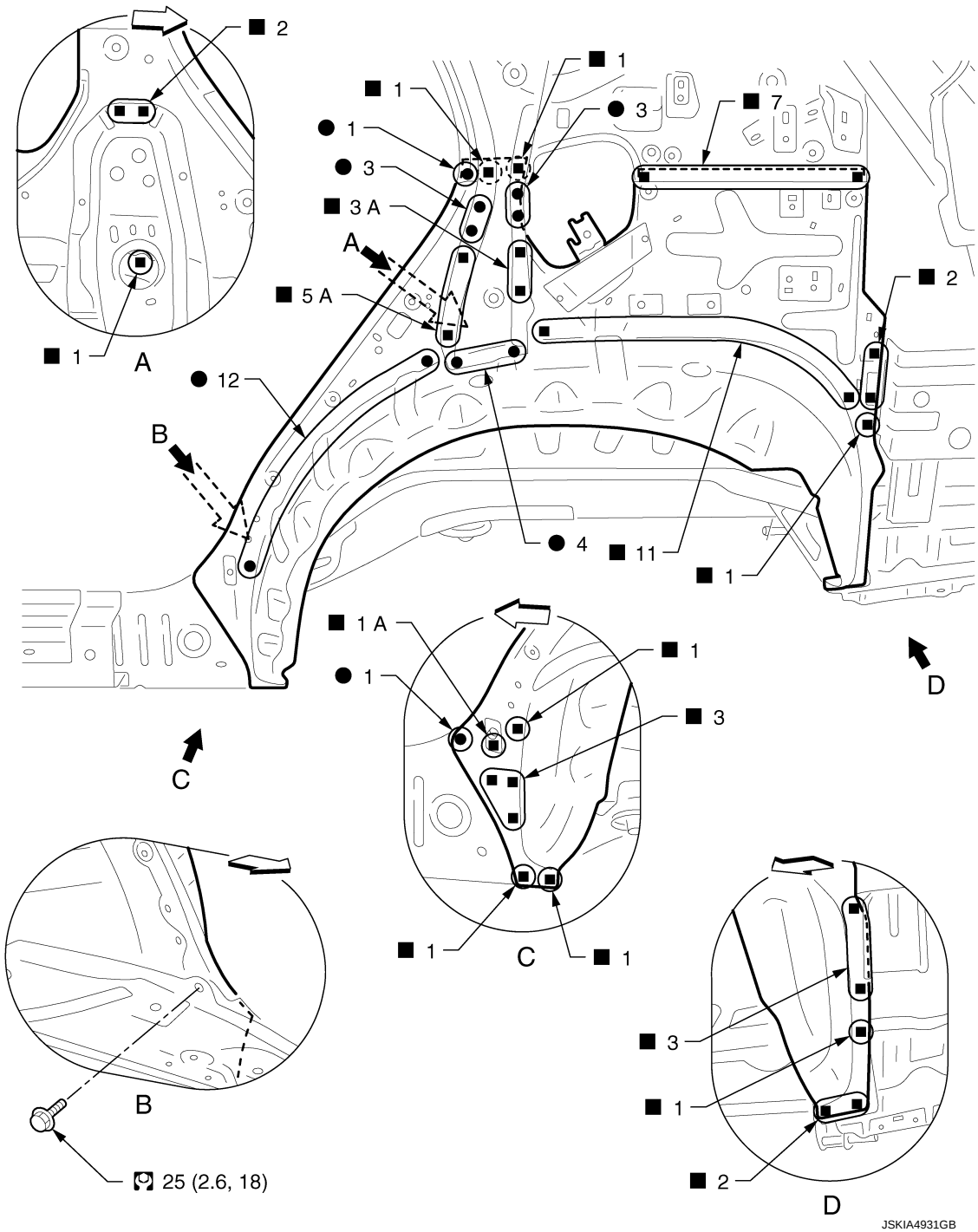
Replacement part

- Rear fender extension

## Outer Rear Wheelhouse

INFOID:0000000011005183

Work after rear fender is removed.




: Vehicle front

: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

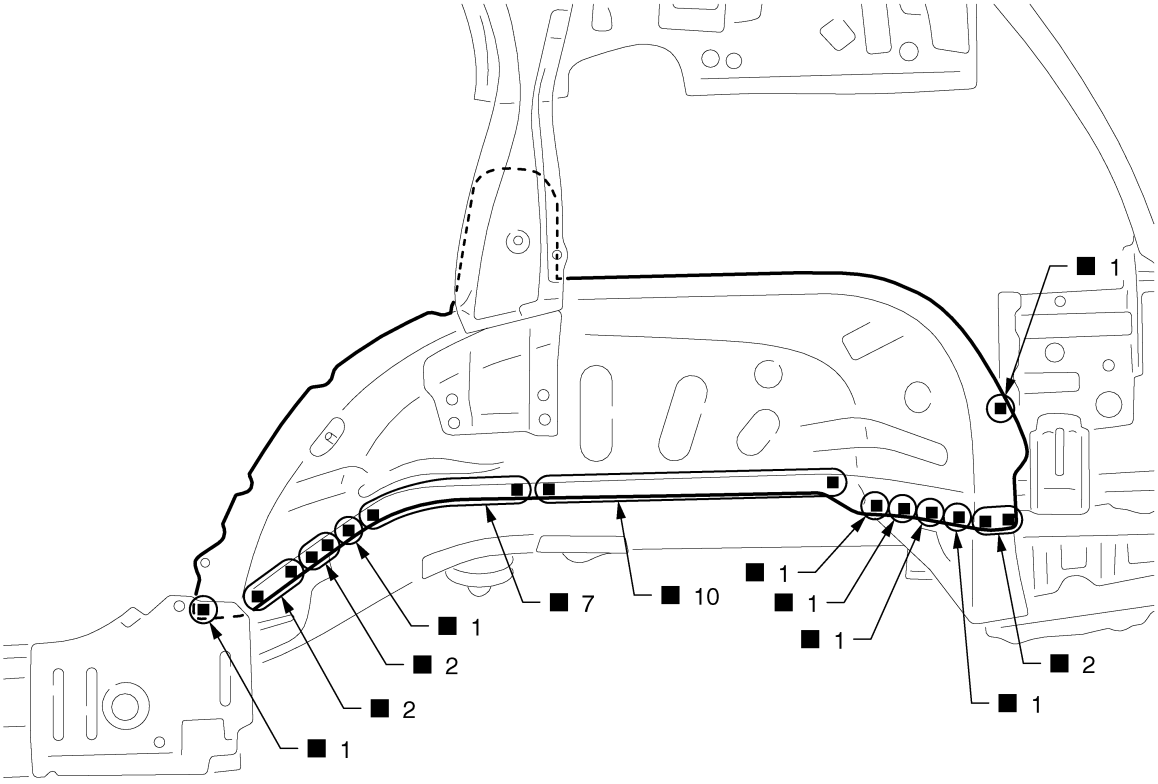
Replacement part

- Outer rear wheelhouse

## Inner Rear Wheelhouse

INFOID:0000000011005182

Work after rear fender and outer rear wheelhouse are removed.




JSKIA4932ZZ

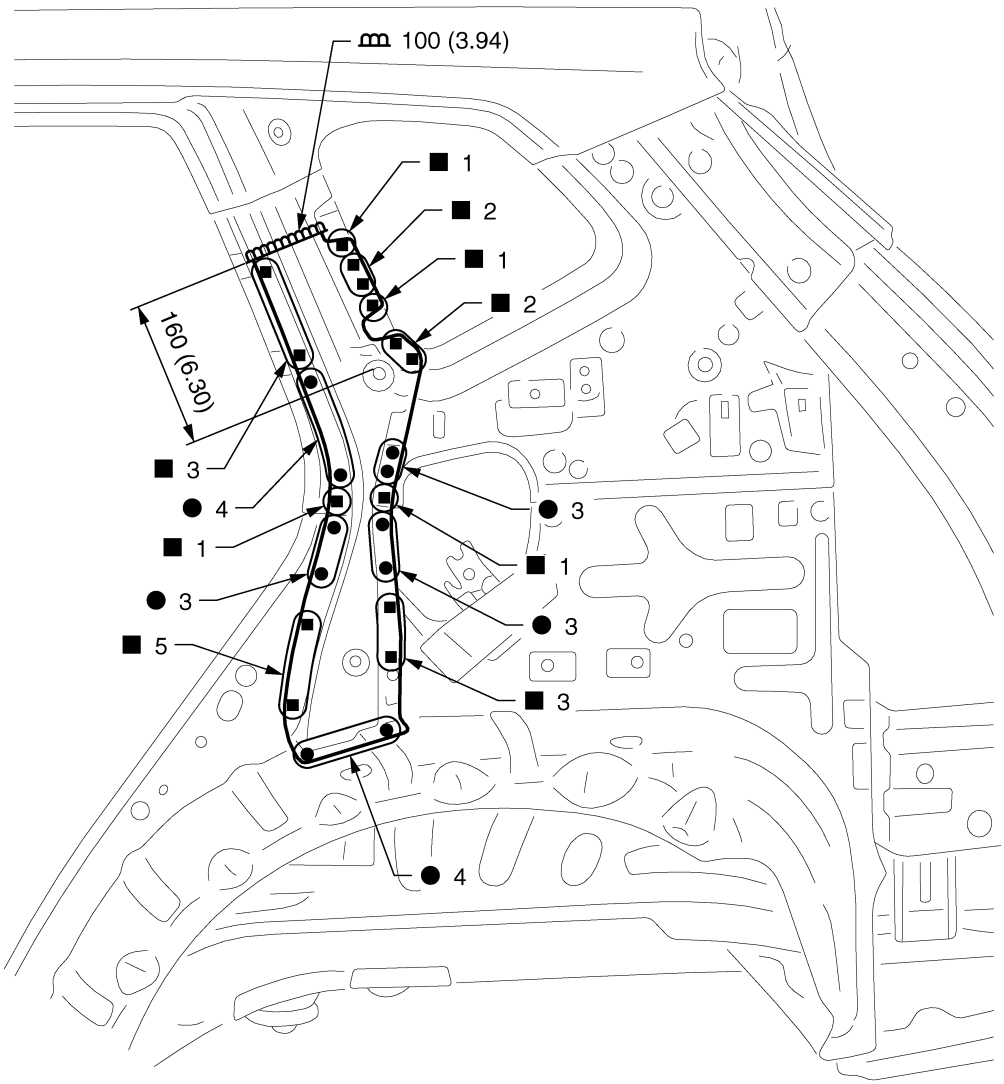
Replacement part

- Inner rear wheelhouse

## Inner Rear Pillar Reinforcement

INFOID:0000000011005184

Work after rear fender is removed.




JSKIA4933GB

Unit: mm (in)

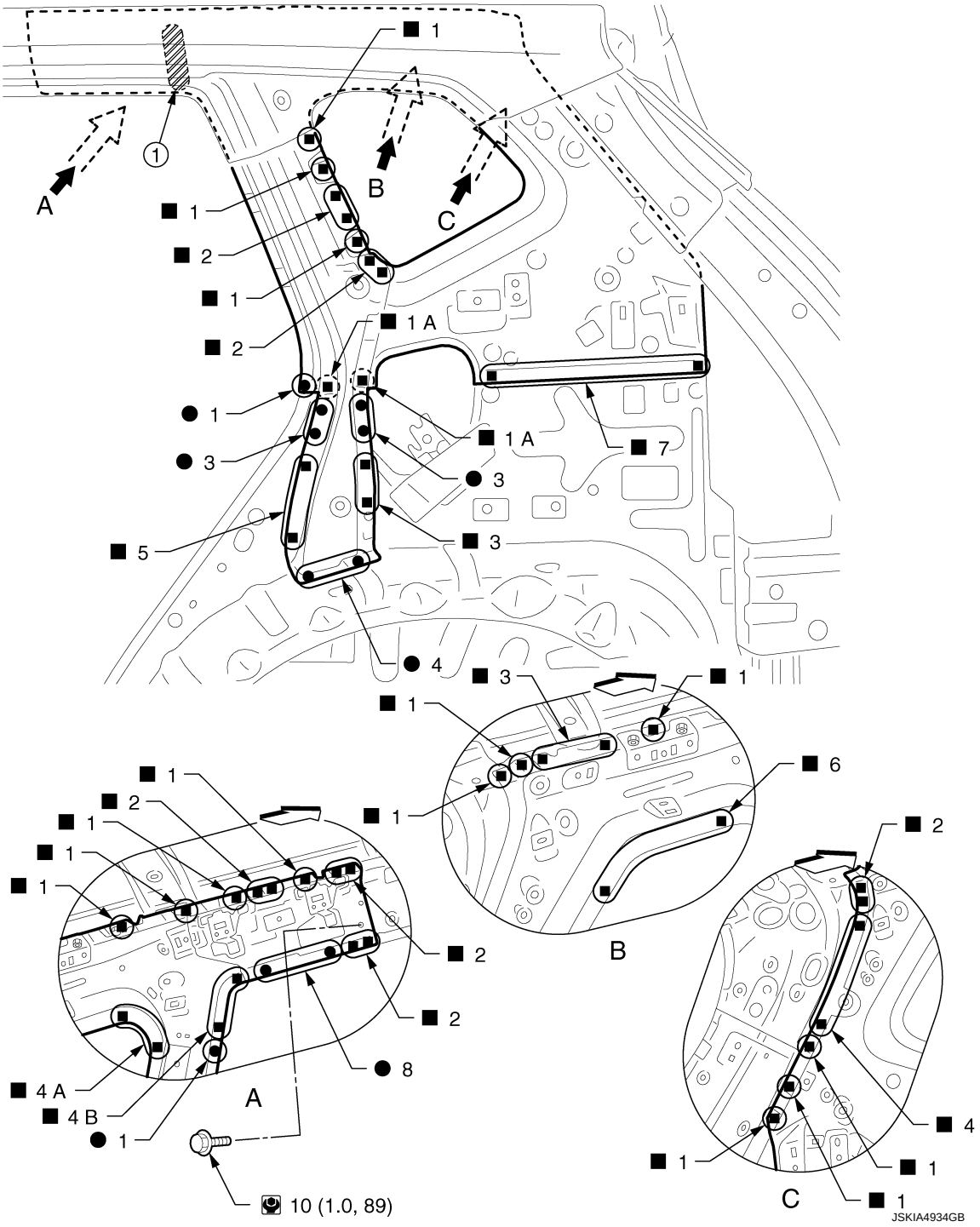
Replacement part

- Upper rear pillar reinforcement

## Inner Rear Pillar

INFOID:0000000011005185

Work after rear fender is removed.




① Urethane foam

⇦: Vehicle front

(◌): Weld the parts onto the back of the component part.

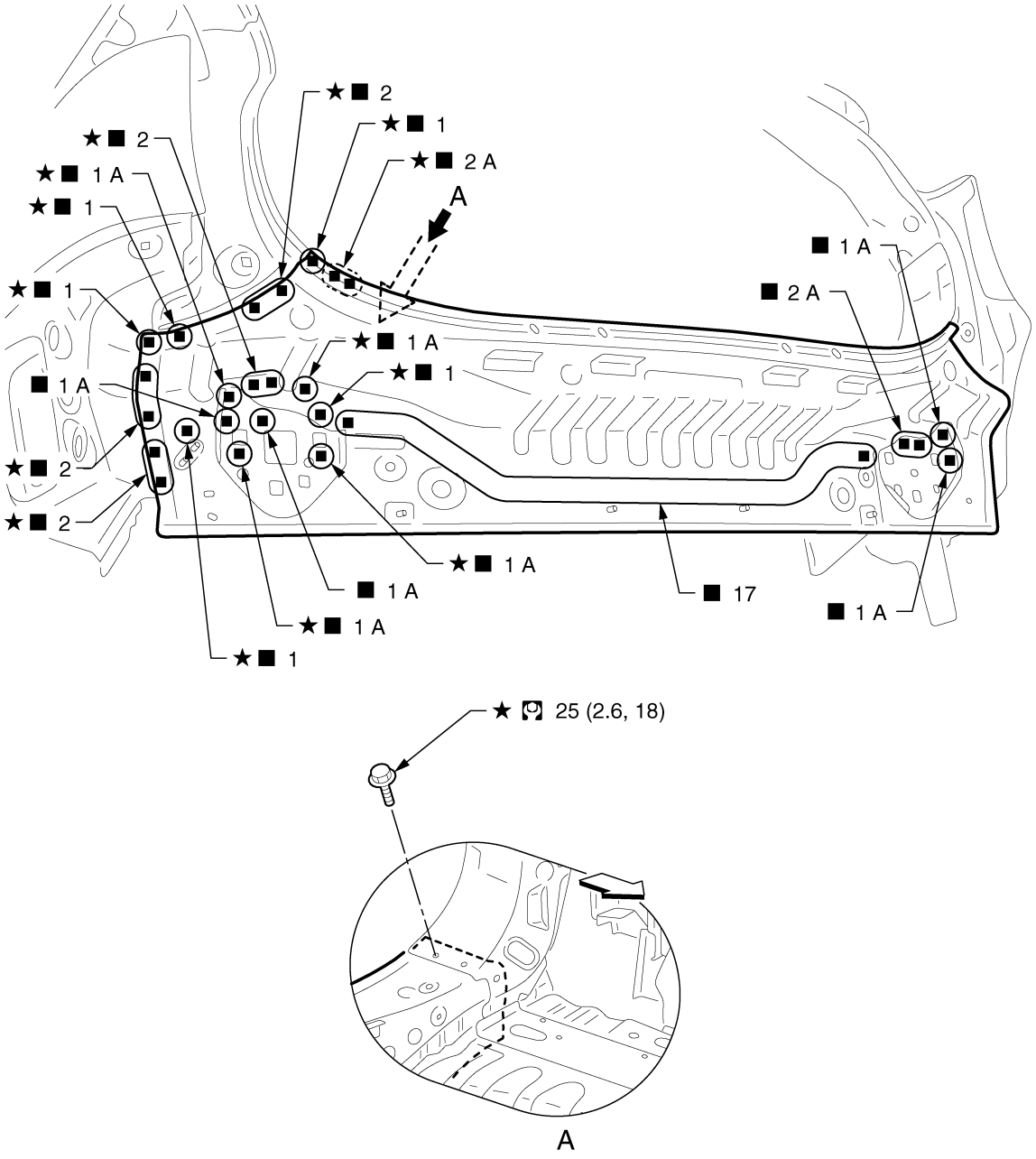
: N·m (kg-m, in-lb)

Replacement part

- Inner rear pillar
- Upper rear pillar reinforcement

## Rear Panel

INFOID:0000000010843440




JSKIA4614GB

⇦: Vehicle front

★: Welding method, the number of welding points, and the tightening torque apply to both side of the vehicle.

(⁀): Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

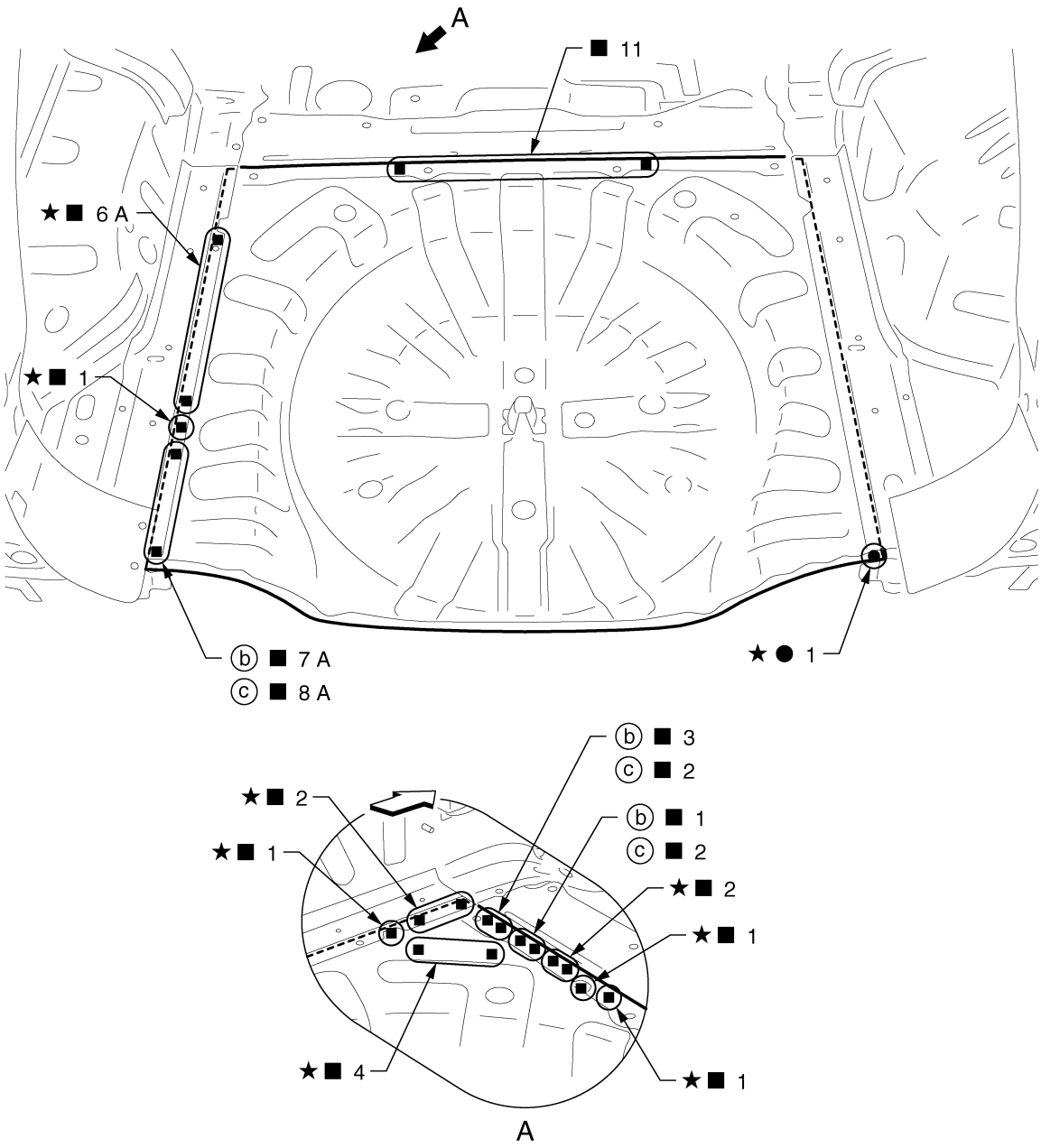
Replacement part

- Upper rear panel

## Rear Floor Rear

INFOID:0000000010843441

Work after rear panel is removed.




JSKIA3869ZZ

ⓑ Left side ⓒ Right side

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

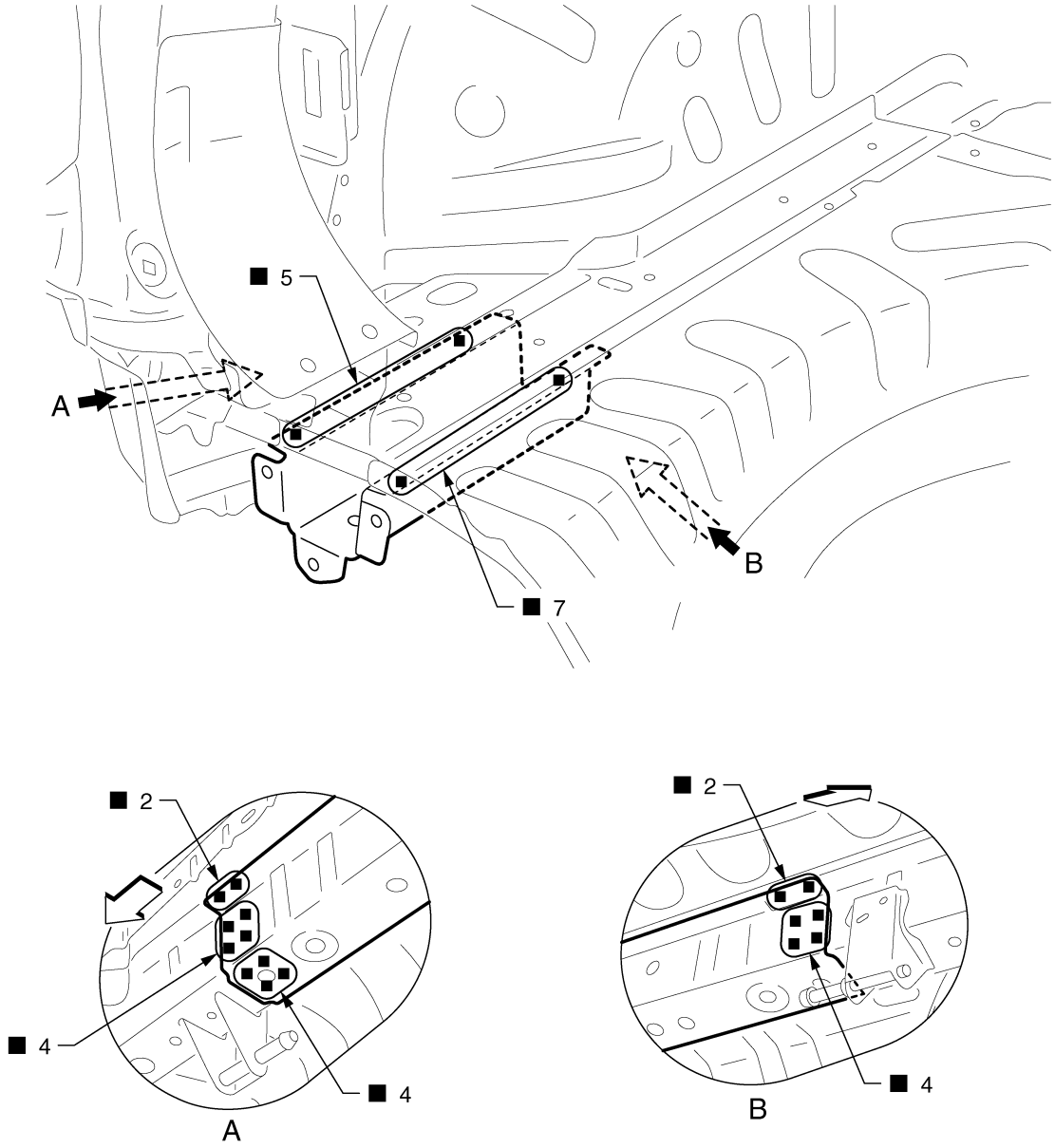
Replacement part

- Rear floor rear

## Rear Side Member Extension (SUV Models)

INFOID:0000000010843442

Work after rear panel is removed.




JSKIA3872ZZ

⇦: Vehicle front

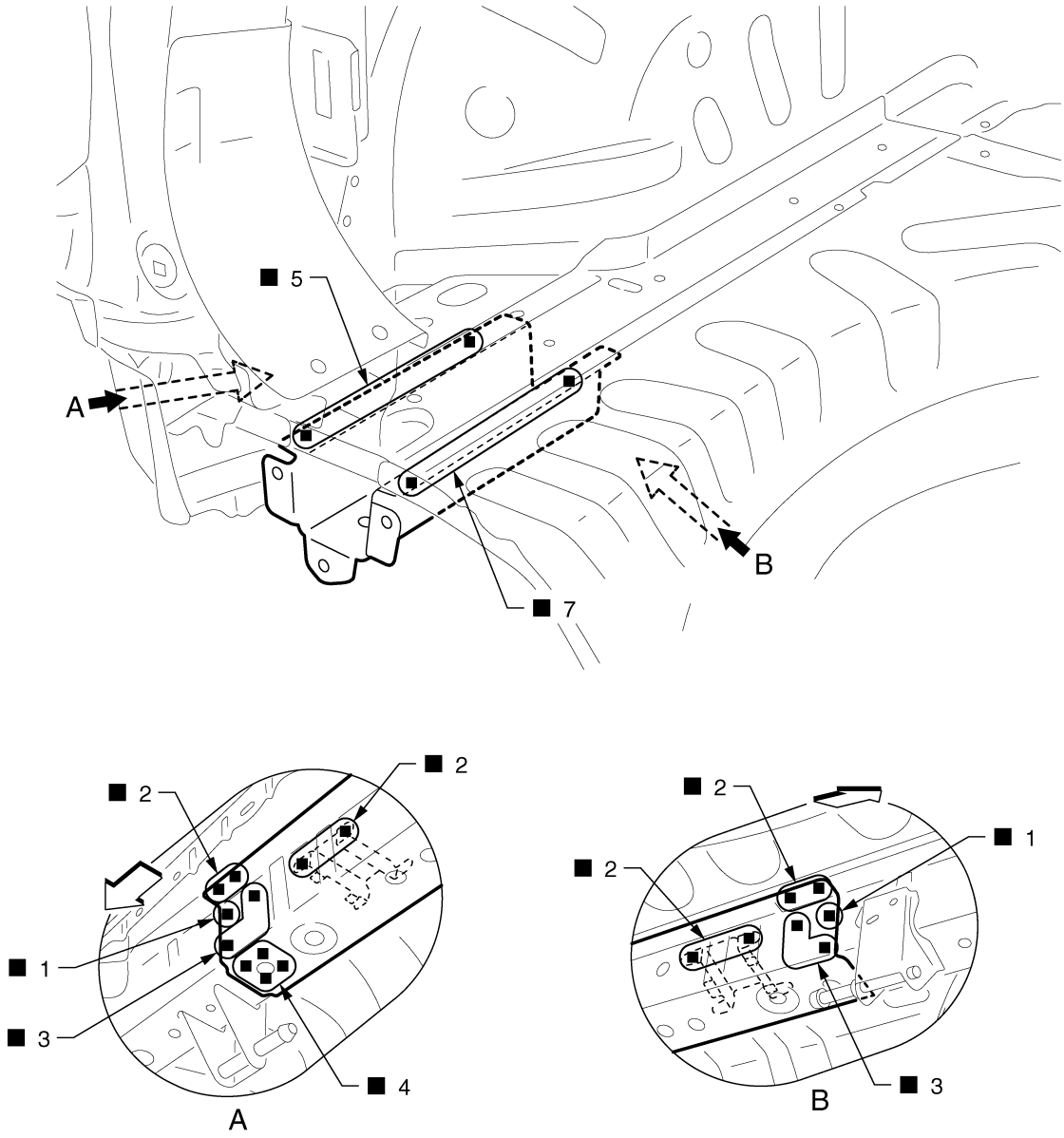
Replacement part

- Rear side member extension

## Rear Side Member Extension (Wagon Models)

INFOID:0000000010843443

Work after rear panel is removed.




JSKIA4034ZZ

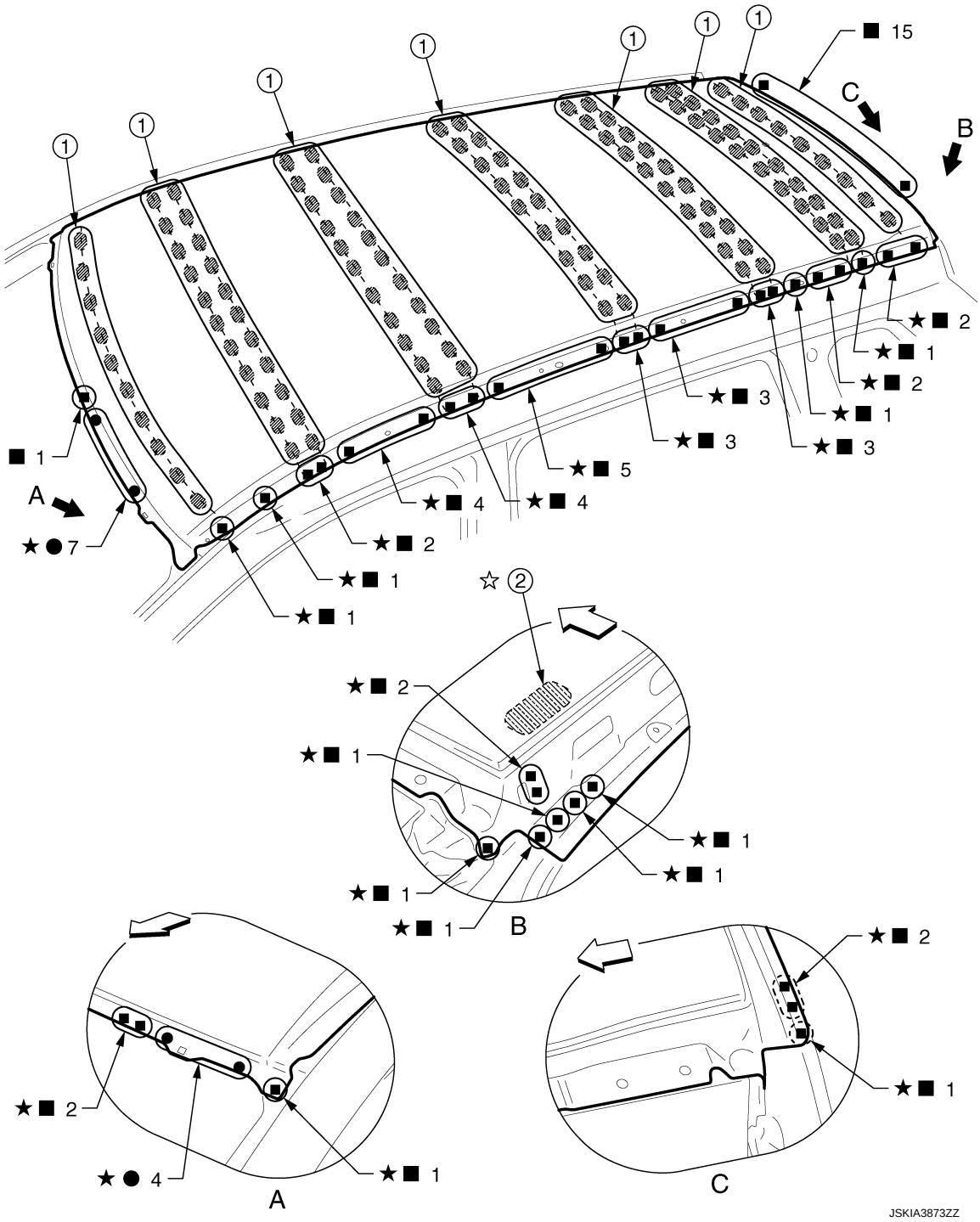
⇦: Vehicle front

Replacement part

- Rear side member extension
- Rear 3rd seat mounting bracket assembly

## Roof (Normal Roof Models)

INFOID:0000000011005186




① Body sealing ② adhesive

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

☆: Adhesive portion apply to both side of the vehicle.

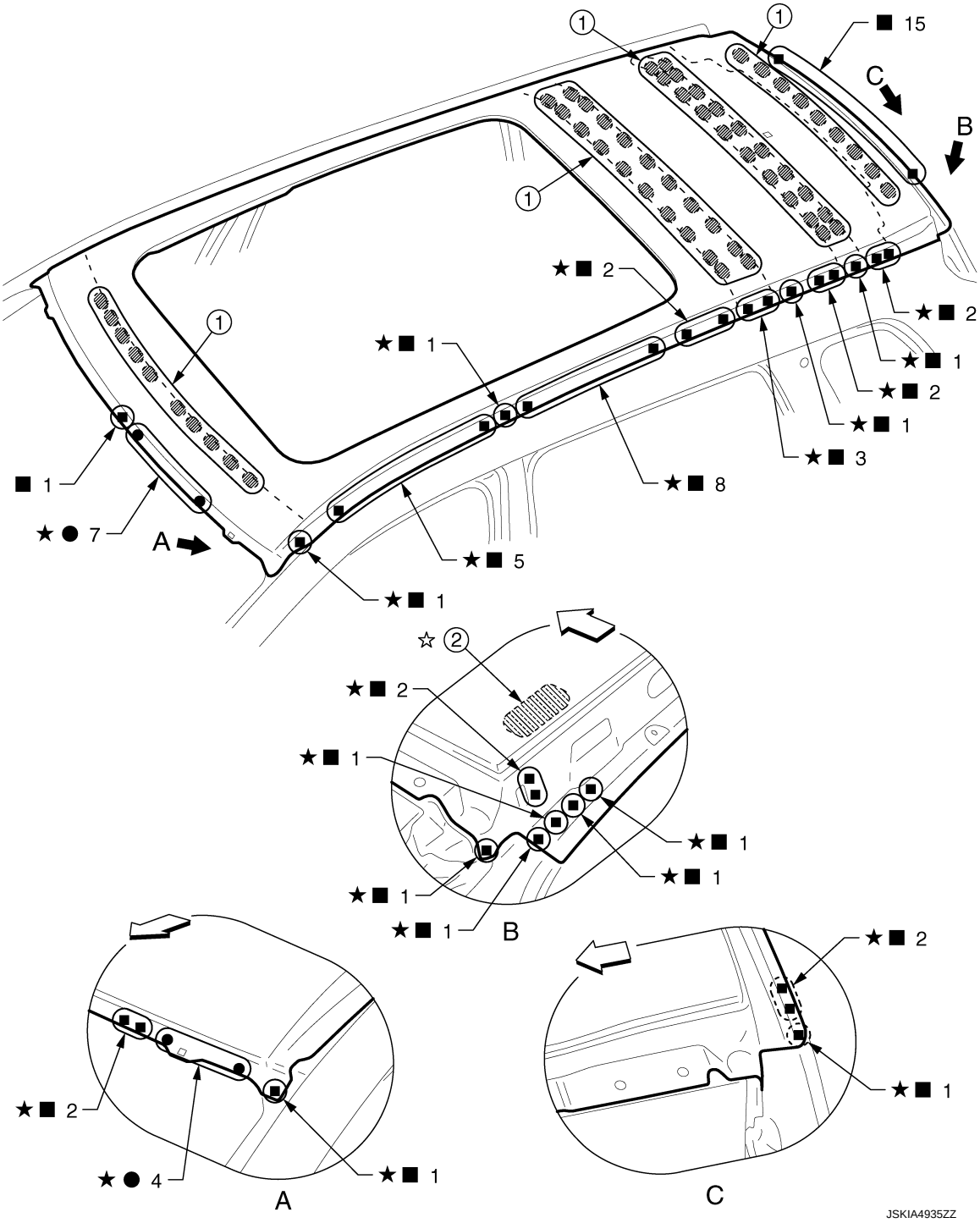
(): Weld the parts onto the back of the component part.

Replacement part

- Roof
- Roof bow No.1
- Roof bow No.2
- Roof bow No.3
- Roof bow No.4
- Roof bow No.5

# Roof (Sunroof Models)

INFOID:0000000011005188




① Body sealing ② adhesive

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

☆: Adhesive portion apply to both side of the vehicle.

◌: Weld the parts onto the back of the component part.

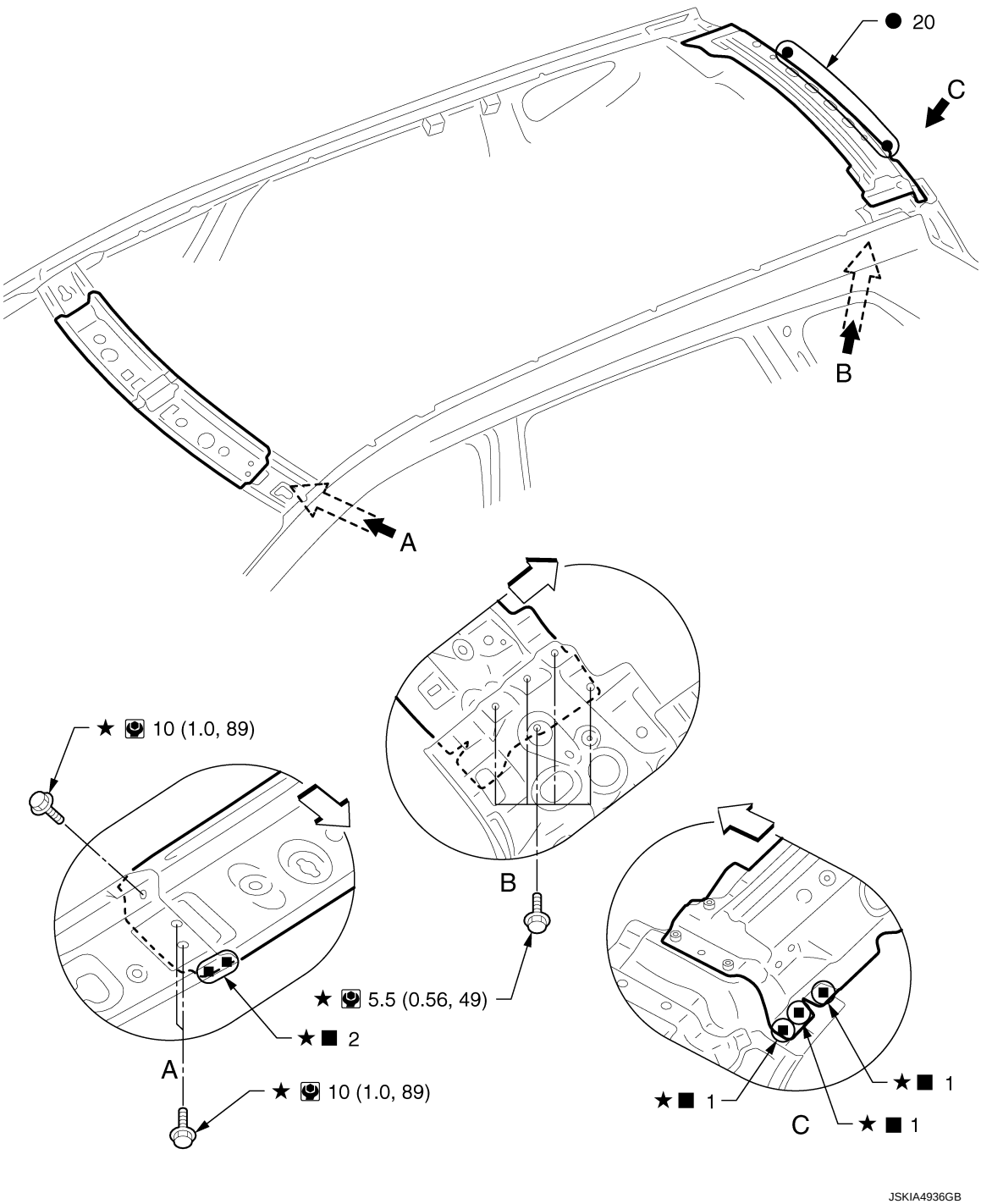
Replacement part

- Roof
- Roof bow No.4
- Roof bow No.5

## Roof Rail

INFOID:0000000011005189

Work after roof is removed.




JSKIA4936GB

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

: N·m (kg-m, in-lb)

Replacement part

- Front roof rail
- Rear roof rail

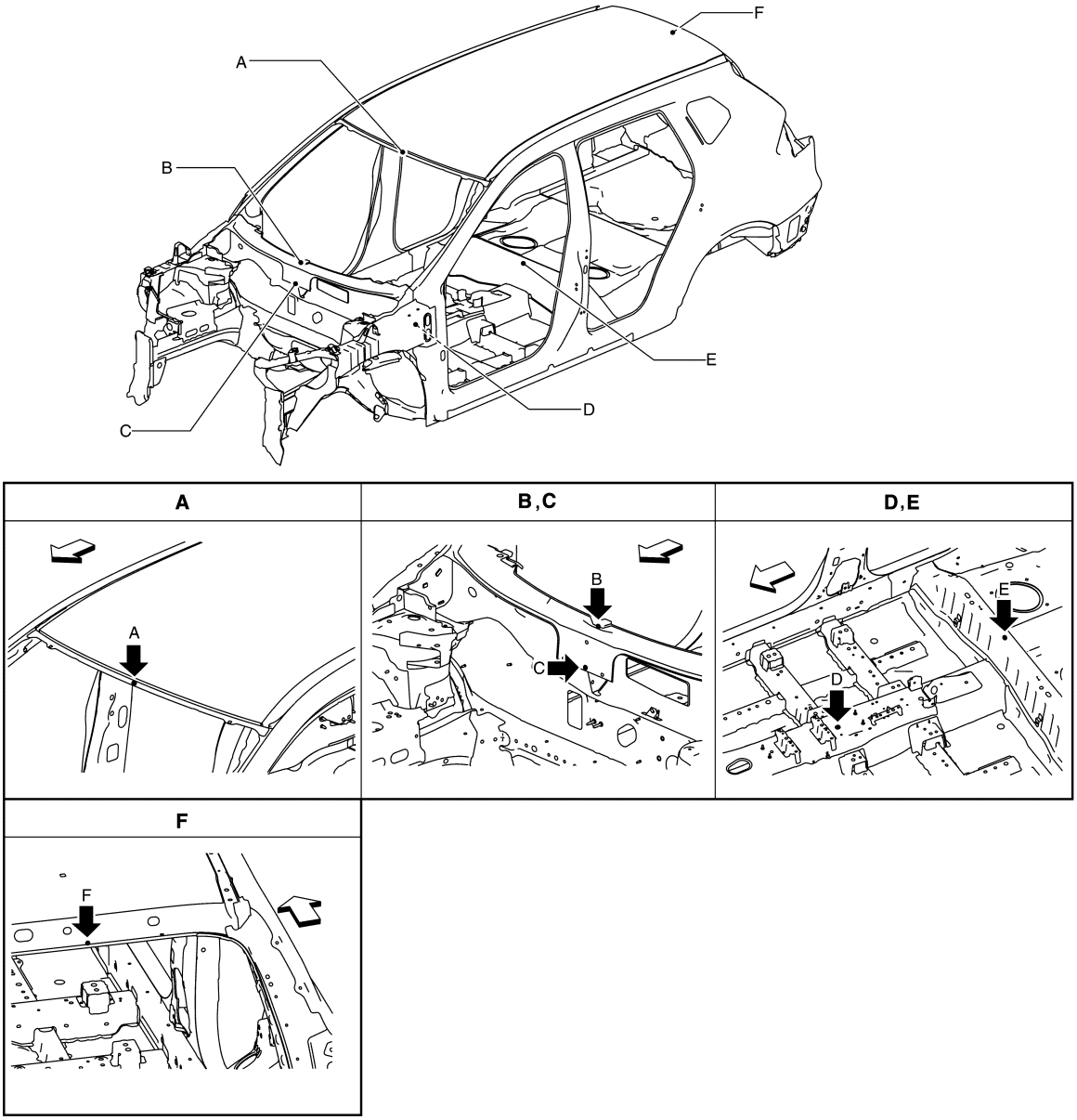
# SERVICE DATA AND SPECIFICATIONS (SDS)

## BODY ALIGNMENT

### Body Center Marks

INFOID:0000000010860042

A mark is placed on each part of the body to indicate the vehicle center. When repairing the vehicle frame (members, pillars, etc.) damaged by an accident which it enables more accurate and effective repair by using these marks together with body alignment specifications.




JSKIA4708ZZ

⇦: Vehicle front

Unit: mm (in)

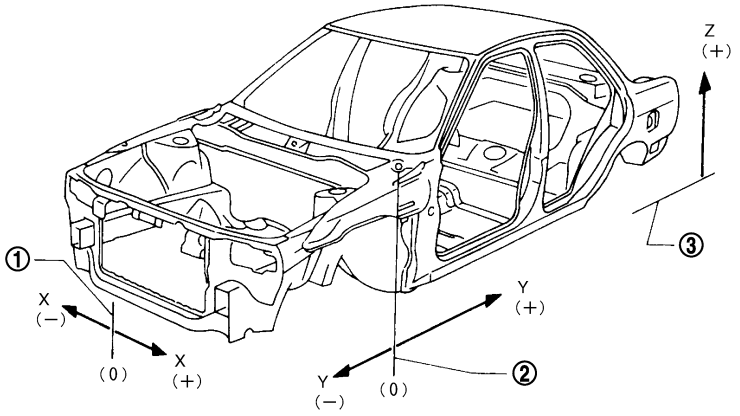
| Points | Portion | Marks |
|---|---|---|
| A | Front roof | Embossment |
| B | Cowl top | Indent |
| C | Cowl top | Hole ϕ8 (0.31) |
| D | Trans control reinforcement | Hole 14×12 (0.55×0.47) |

| Points | Portion | Marks |
|---|---|---|
| E | Rear seat crossmember | Embossment |
| F | Rear roof | Embossment |

## Description

INFOID:0000000010860043

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of ″X″, ″Y″ and ″Z″.
- ″Z″: Imaginary base line [200 mm (7.87 in) below datum line (″0Z″ at design plan)]




JSKIA0073GB

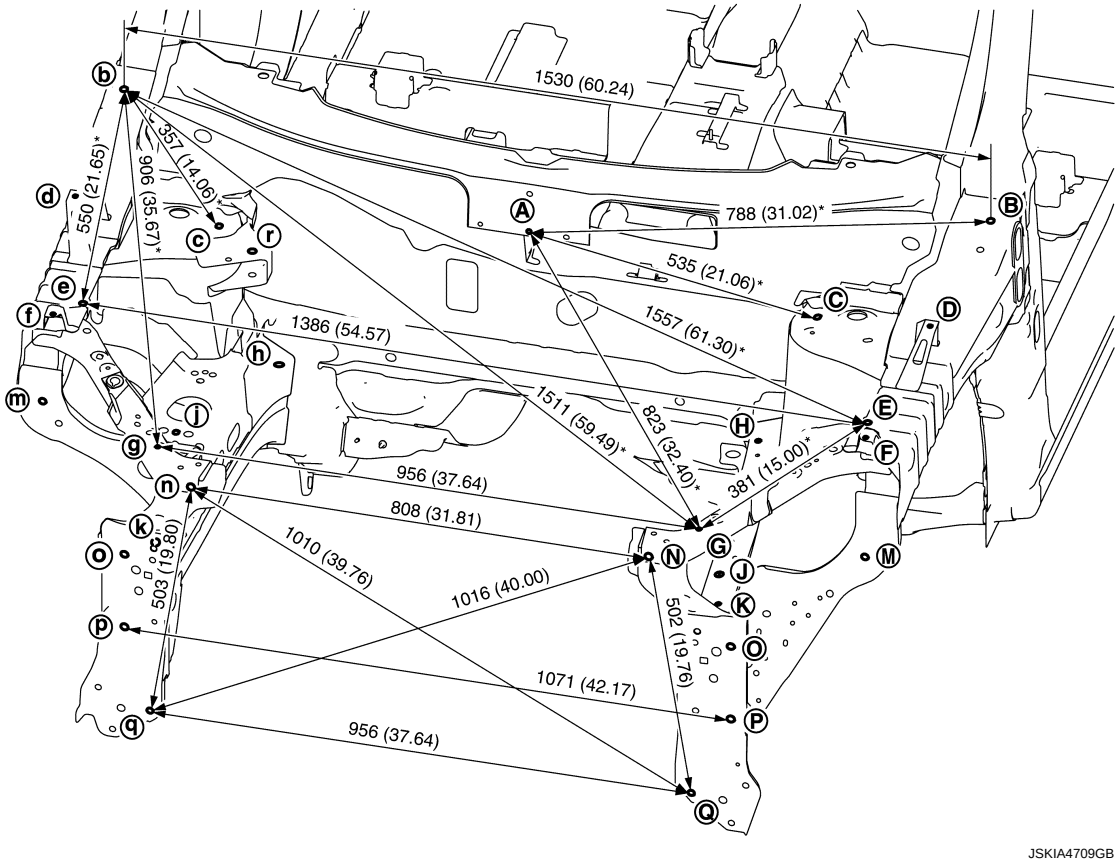
① Vehicle center ② Front axle center ③ Imaginary base line

## Engine Compartment

INFOID:0000000010860044

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



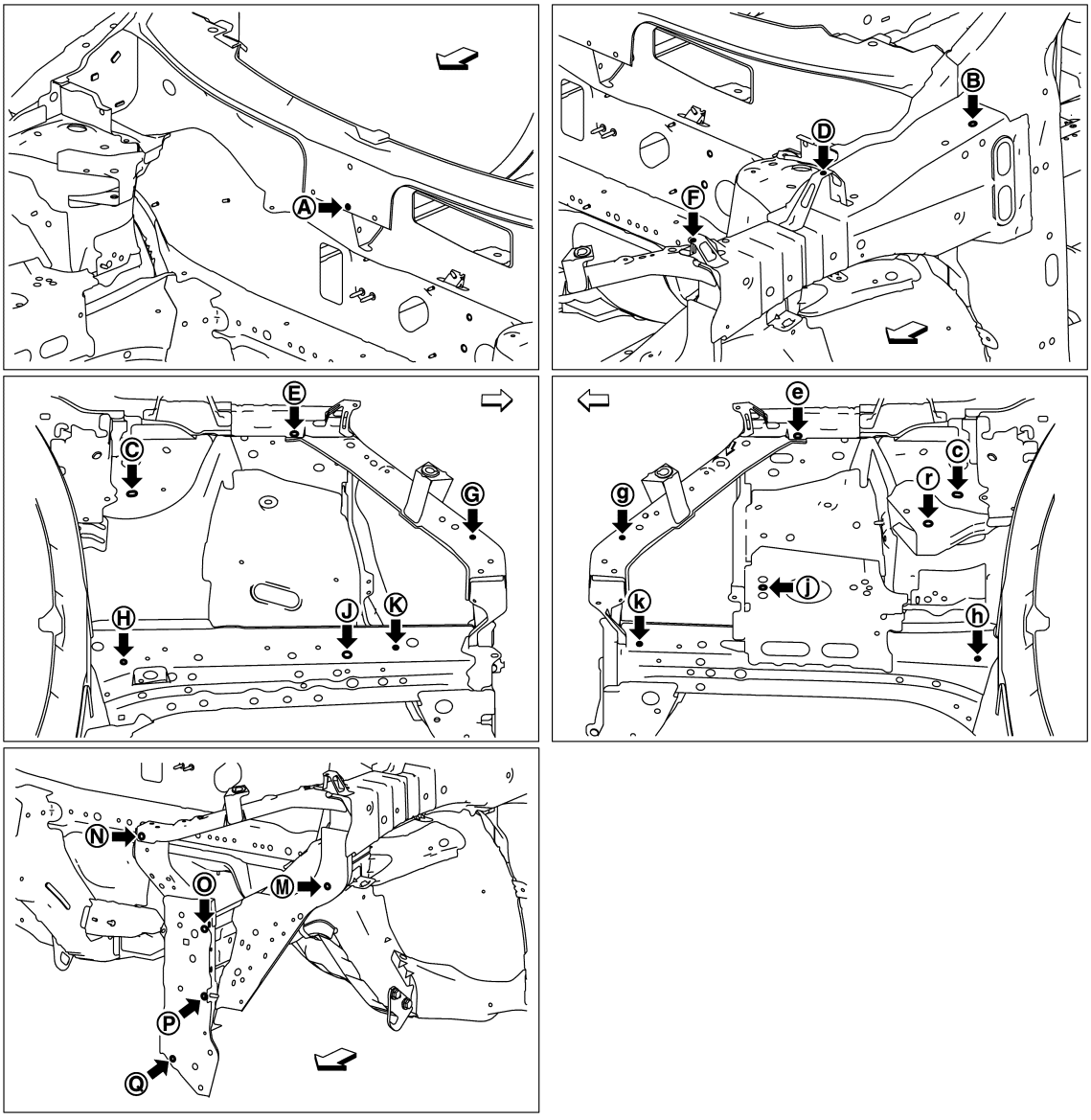

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓓ | 777 (30.59)* | | Ⓒ – Ⓖ | 596 (23.46)* | | ⓙ – Ⓚ | 1000 (39.37) | |
| Ⓐ – Ⓕ | 852 (33.54)* | | Ⓒ – ⓖ | 1169 (46.02)* | | Ⓚ – ⓚ | 967 (38.07) | |
| Ⓐ – Ⓗ | 535 (21.06) | | Ⓒ – ⓡ | 986 (38.82) | | Ⓜ – ⓜ | 1425 (56.10) | |
| Ⓐ – ⓗ | 546 (21.50) | | Ⓓ – ⓓ | 1509 (59.41) | | Ⓜ – Ⓞ | 290 (11.42) | |
| Ⓐ – Ⓙ | 721 (28.39) | | Ⓔ – ⓖ | 1212 (47.72)* | | ⓜ – ⓞ | 296 (11.65) | |
| Ⓐ – ⓙ | 700 (27.56) | | Ⓔ – ⓡ | 1171 (46.10) | | Ⓜ – Ⓟ | 362 (14.25) | |
| Ⓐ – Ⓚ | 789 (31.06) | | ⓔ – ⓡ | 331 (13.03) | | ⓜ – ⓟ | 375 (14.76) | |
| Ⓐ – ⓚ | 869 (34.21) | | Ⓕ – ⓕ | 1435 (56.50) | | Ⓝ – ⓞ | 962 (37.87)* | |
| Ⓐ – Ⓜ | 884 (34.80) | | Ⓗ – ⓗ | 853 (33.58) | | Ⓝ – ⓟ | 1005 (39.57)* | |
| Ⓐ – ⓜ | 872 (34.33) | | Ⓗ – ⓙ | 1003 (39.49) | | Ⓞ – ⓞ | 1071 (42.17) | |
| Ⓐ – ⓡ | 474 (18.66) | | ⓗ – Ⓙ | 977 (38.46) | | Ⓞ – ⓟ | 1081 (42.56)* | |
| Ⓑ – ⓒ | 1321 (52.01)* | | Ⓗ – ⓚ | 1073 (42.24) | | Ⓞ – ⓠ | 1059 (41.69) | |
| Ⓑ – ⓡ | 1262 (49.68) | | ⓗ – Ⓚ | 1033 (40.67) | | ⓞ – Ⓠ | 1053 (41.46) | |
| ⓑ – ⓡ | 445 (17.52) | | Ⓙ – ⓙ | 973 (38.31) | | Ⓟ – ⓠ | 1027 (40.43) | |
| Ⓒ – ⓒ | 1058 (41.65) | | Ⓙ – ⓚ | 959 (37.76) | | ⓟ – Ⓠ | 1021 (40.20) | |

MEASUREMENT POINTS




JSKIA4710ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top hole center of center positioning mark ϕ8 (0.31) | Ⓗ ⓗ Ⓙ Ⓚ ⓚ | Front side member hole center<br>Ⓗ: ϕ9 (0.35)<br>ⓗ Ⓚ ⓚ: ϕ8 (0.31)<br>Ⓙ: ϕ14 (0.55) |
| Ⓑ ⓑ | Hood hinge installing hole center ϕ12 (0.47) | ⓙ | Engine mounting bracket hole center 12×10 (0.47×0.39) |
| Ⓒ ⓒ | Front suspension installing hole center 16×10 (0.63×0.39) | Ⓜ ⓜ | Hoodledge connector hole center ϕ12 (0.47) |
| Ⓓ ⓓ Ⓕ ⓕ | Front fender installing hole center ϕ7 (0.28) | Ⓞ ⓞ Ⓟ ⓟ Ⓠ ⓠ | Front side member hole center<br>Ⓞ Ⓠ ⓠ: ϕ11 (0.43)<br>ⓞ: ϕ12 (0.47)<br>Ⓟ ⓟ: ϕ13 (0.51) |

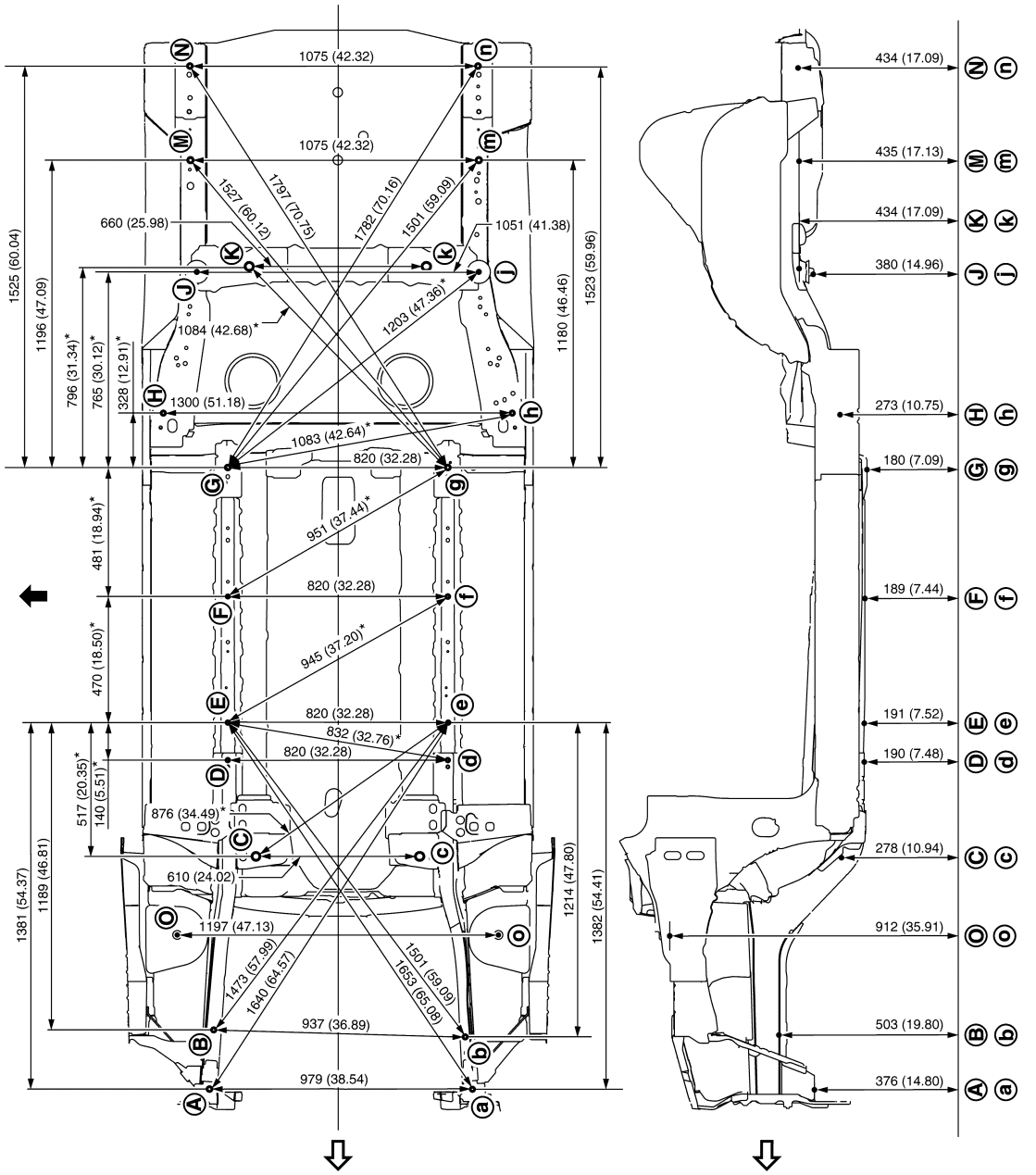
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓔ ⓔ | Front hoodledge reinforcement hole center ϕ12 (0.47) | ⓡ | Torque rod mounting bracket hole center ϕ14 (0.55) |
| Ⓖ ⓖ Ⓝ ⓝ | Upper radiator core support hole center<br>Ⓖ ⓖ: ϕ7 (0.28)<br>Ⓝ ⓝ: ϕ13 (0.51) | | |

## Underbody

INFOID:0000000010860045

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



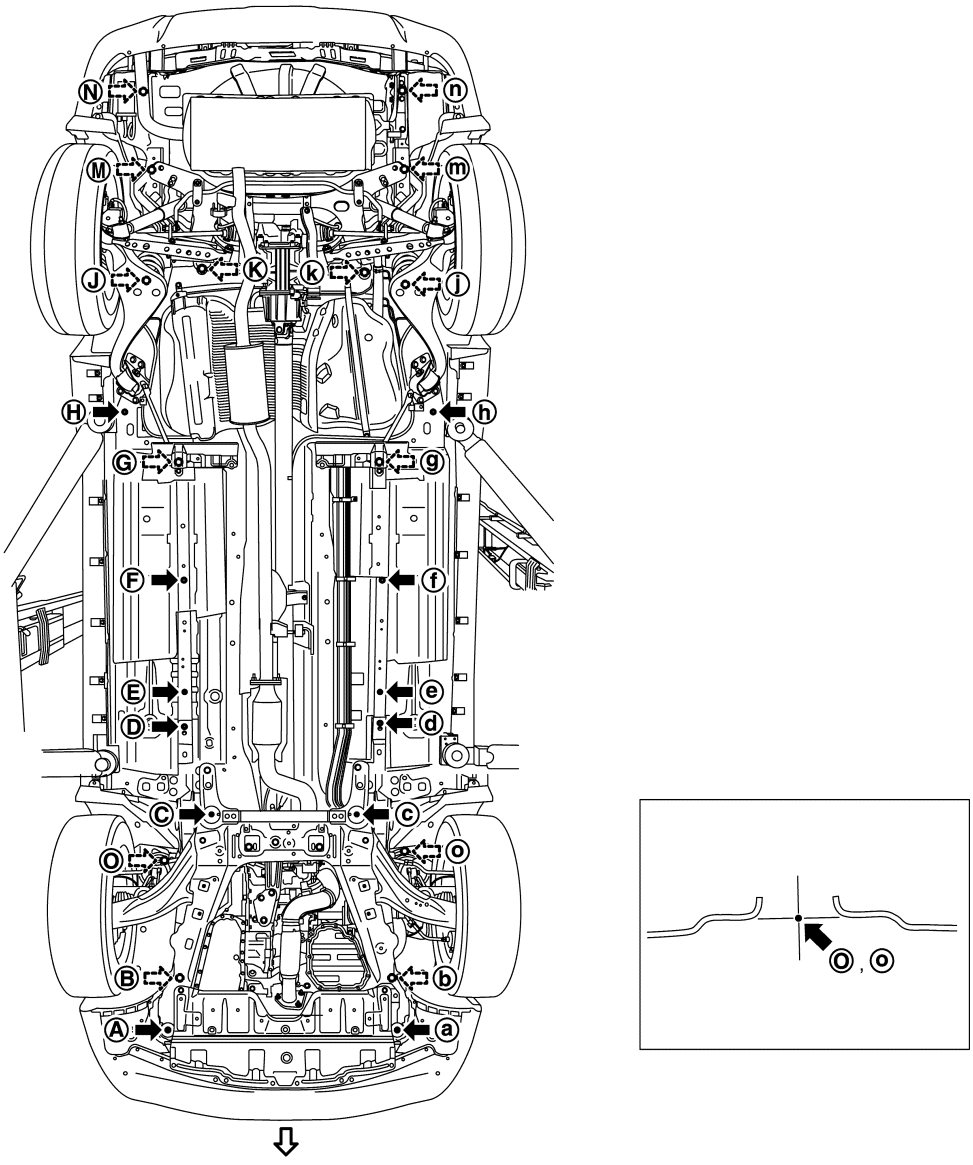

JSKIA4422GB

Unit: mm (in)

⇦: Vehicle front

⬅: Vehicle left side

## MEASUREMENT POINTS




JSKIA4423ZZ

⇦: Vehicle front

Unit: mm (in)

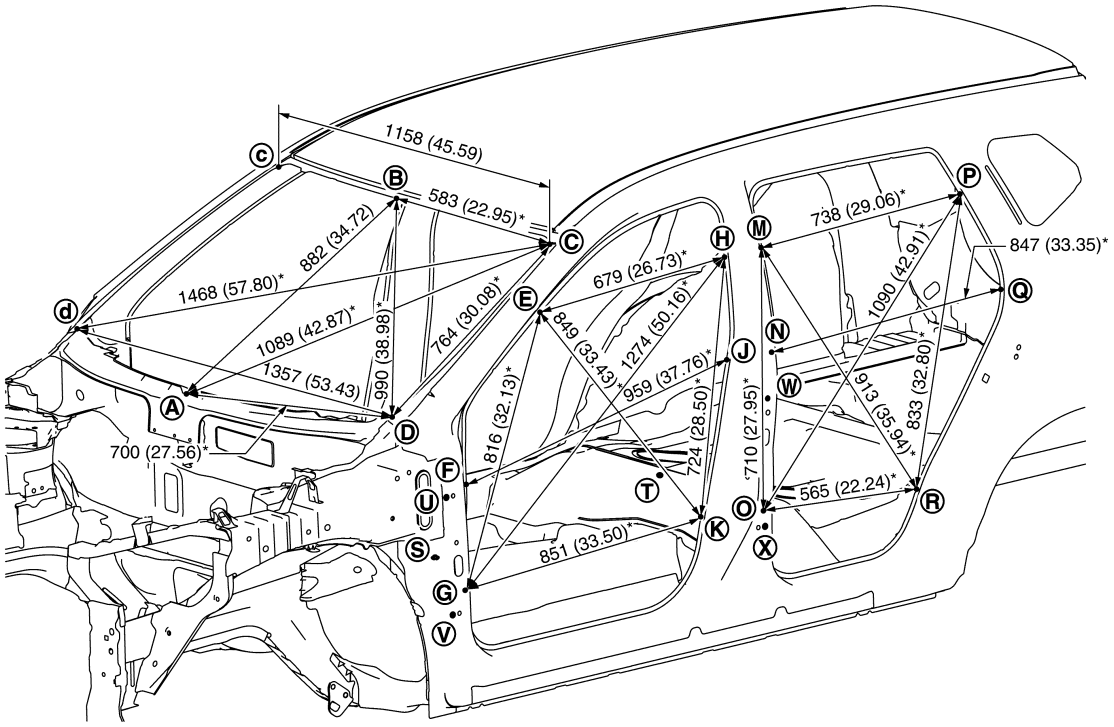
| Points | Coordinates | | | Remarks | Points | Coordinates | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | | | X | Y | Z | |
| Ⓐ | 478.0 (18.819) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓗ ⓗ | ±650.0 (±25.591) | 1954.0 (76.929) | 272.9 (10.744) | Hole ϕ16 (0.63) |
| ⓐ | –501.0 (–19.724) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓙ ⓙ | ±525.4 (±20.685) | 2480.4 (97.653) | 380.0 (14.961) | Hole ϕ12 (0.47) |
| Ⓑ | 462.4 (18.205) | –346.0 (–13.622) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓚ ⓚ | ±330.0 (±12.992) | 2501.0 (98.464) | 434.0 (17.087) | Ⓚ: Hole ϕ30 (1.18)<br>ⓚ: Hole 32×30 (1.26×1.18) |
| ⓑ | –474.7 (–18.689) | –372.0 (–14.646) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓜ | 549.0 (21.614) | 2911.0 (114.606) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓒ ⓒ | ±305.0 (±12.008) | 301.0 (11.850) | 277.8 (10.936) | Ⓒ: Hole ϕ30 (1.18)<br>ⓒ: Hole 32×30 (1.26×1.18) | ⓜ | –525.5 (–20.689) | 2897.2 (114.063) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓓ ⓓ | ±410.0 (±16.142) | 660.0 (25.984) | 190.4 (7.495) | Hole ϕ14 (0.55) | Ⓝ | 551.0 (21.693) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓔ ⓔ | ±410.0 (±16.142) | 800.0 (31.496) | 191.4 (7.535) | Hole ϕ12 (0.47) | ⓝ | –523.5 (–20.610) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓕ ⓕ | ±410.0 (±16.142) | 1270.0 (50.000) | 189.2 (7.449) | Hole ϕ12 (0.47) | Ⓞ ⓞ | ±598.6 (±23.566) | 7.4 (0.291) | 911.9 (35.902) | Hole ϕ33 (1.30) |
| Ⓖ ⓖ | ±410.0 (±16.142) | 1751.0 (68.937) | 180.2 (7.094) | Hole ϕ13 (0.51) | | | | | |

## Passenger Compartment

INFOID:0000000010860046

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



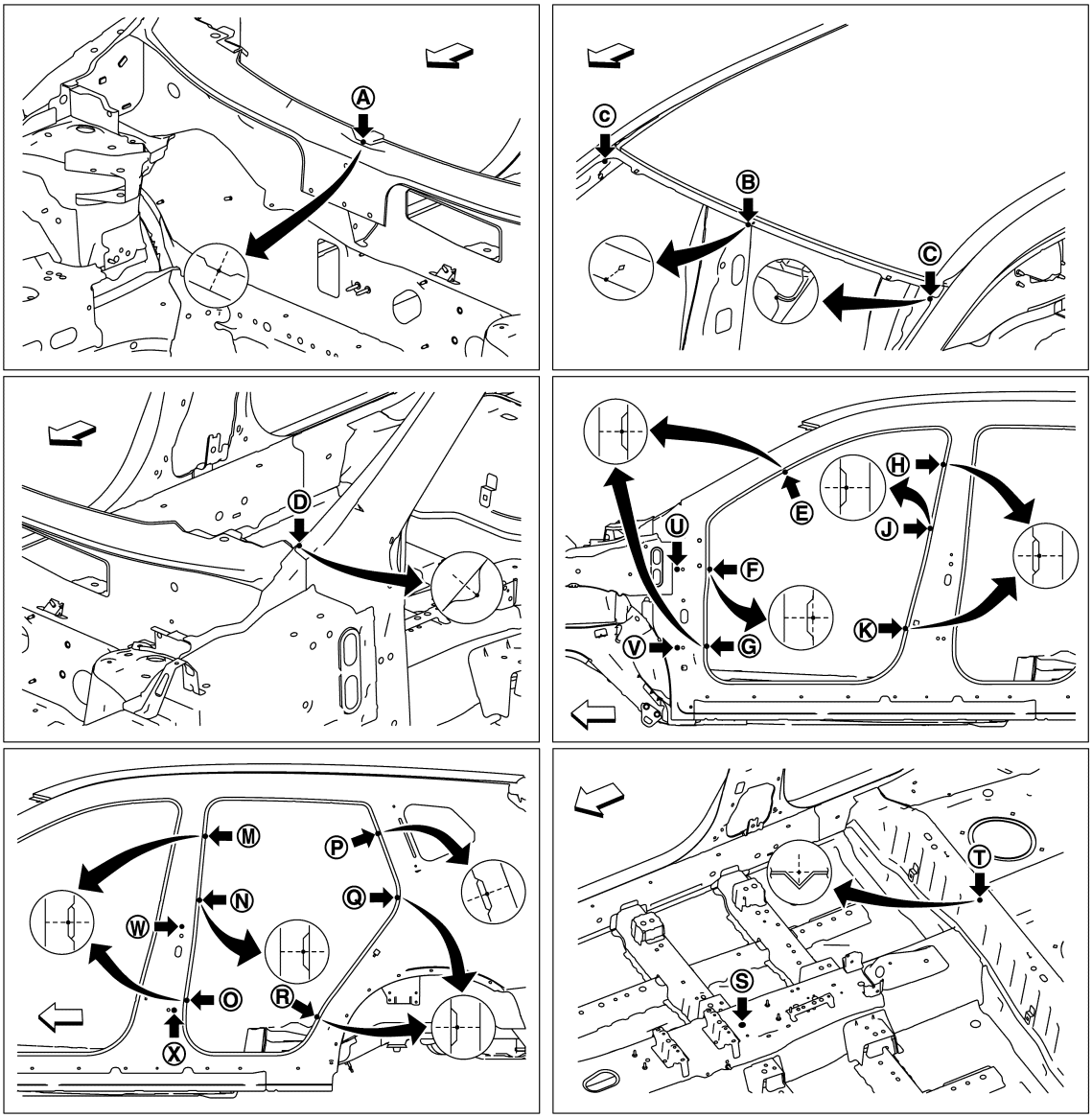

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓔ - ⓔ | 1334 (52.52) | | Ⓜ - ⓡ | 1665 (65.55)* | | Ⓣ - Ⓜ | 1077 (42.40)* | |
| Ⓔ - ⓖ | 1616 (63.62)* | | Ⓝ - ⓝ | 1458 (57.40) | | Ⓣ - Ⓝ | 943 (37.13)* | |
| Ⓔ - ⓗ | 1494 (58.82)* | | Ⓝ - ⓠ | 1670 (65.75)* | | Ⓣ - Ⓞ | 794 (31.26)* | |
| Ⓔ - ⓚ | 1634 (64.33)* | | Ⓞ - ⓞ | 1461 (57.52) | | Ⓣ - Ⓟ | 1179 (46.42)* | |
| Ⓕ - ⓕ | 1441 (56.73) | | Ⓞ - ⓟ | 1749 (68.86)* | | Ⓣ - Ⓠ | 1092 (42.99)* | |
| Ⓕ - ⓙ | 1738 (68.43)* | | Ⓞ - ⓡ | 1567 (61.69)* | | Ⓣ - Ⓡ | 782 (30.79)* | |
| Ⓖ - ⓖ | 1458 (57.40) | | Ⓟ - ⓟ | 1281 (50.43) | | Ⓤ - ⓤ | 1592 (62.68) | |
| Ⓖ - ⓗ | 1886 (74.25)* | | Ⓟ - ⓡ | 1602 (63.07)* | | Ⓤ - Ⓦ | 1172 (46.14)* | |
| Ⓖ - ⓚ | 1689 (66.50)* | | Ⓠ - ⓠ | 1419 (55.87) | | Ⓤ - Ⓧ | 1175 (46.26)* | |
| Ⓗ - ⓗ | 1327 (52.24) | | Ⓡ - ⓡ | 1462 (57.56) | | Ⓥ - ⓥ | 1623 (63.90) | |
| Ⓗ - ⓚ | 1569 (61.77)* | | Ⓢ - Ⓔ | 1110 (43.70)* | | Ⓥ - Ⓦ | 1235 (48.62)* | |
| Ⓙ - ⓙ | 1458 (57.40) | | Ⓢ - Ⓕ | 979 (38.54)* | | Ⓥ - Ⓧ | 1137 (44.76)* | |
| Ⓚ - ⓚ | 1461 (57.52) | | Ⓢ - Ⓖ | 890 (35.04)* | | Ⓦ - ⓦ | 1588 (62.52) | |
| Ⓜ - ⓜ | 1326 (52.20) | | Ⓢ - Ⓗ | 1233 (48.54)* | | Ⓧ - ⓧ | 1619 (63.74) | |
| Ⓜ - ⓞ | 1562 (61.50)* | | Ⓢ - Ⓙ | 1068 (42.05)* | | | | |
| Ⓜ - ⓟ | 1498 (58.98)* | | Ⓢ - Ⓚ | 836 (32.91)* | | | | |

## MEASUREMENT POINTS




JSKIA4712ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top indent of center positioning mark | Ⓗ ⓗ Ⓙ ⓙ Ⓚ ⓚ Ⓜ ⓜ Ⓝ ⓝ Ⓞ ⓞ | Center pillar indent |
| Ⓑ | Roof flange end of center positioning mark | Ⓟ ⓟ Ⓠ ⓠ Ⓡ ⓡ | Rear fender indent |
| Ⓒ ⓒ | Outer side body joggle | Ⓢ | Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47) |

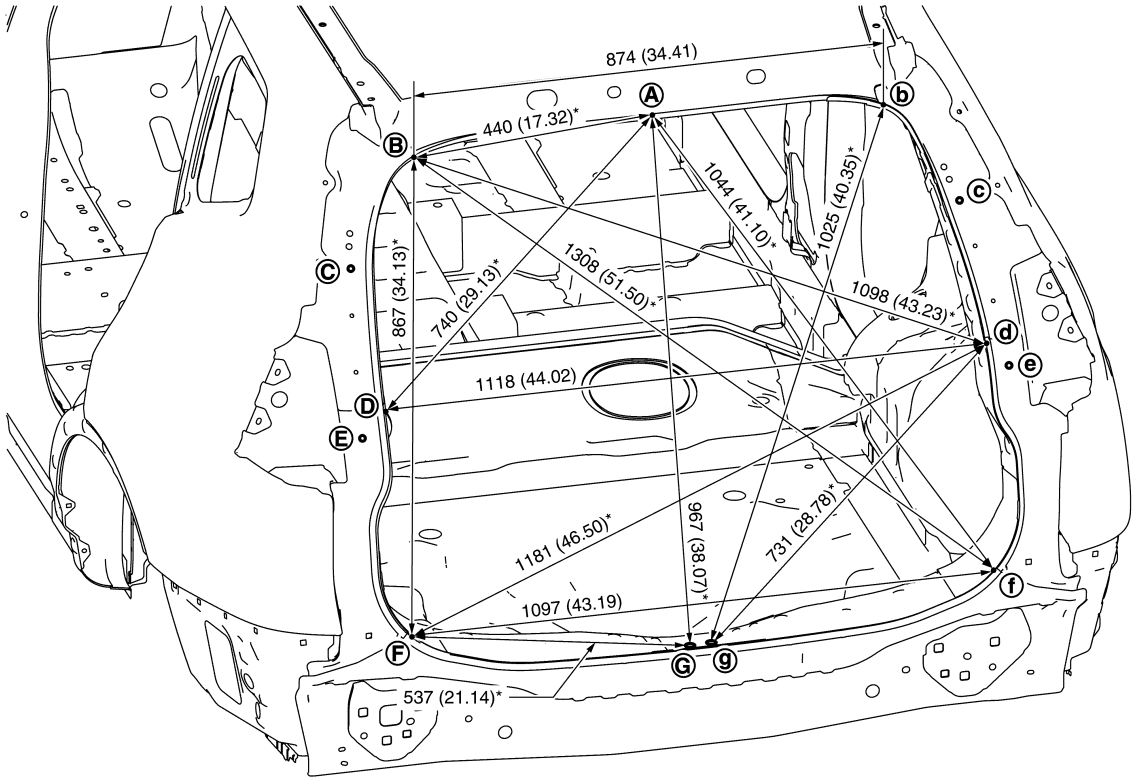
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓓ ⓓ | Outer side body indent | Ⓣ | Rear seat crossmember positioning mark of center positioning mark |
| Ⓔ ⓔ Ⓕ ⓕ Ⓖ ⓖ | Front pillar indent | Ⓤ ⓤ Ⓥ ⓥ Ⓦ ⓦ Ⓧ ⓧ | Door hinge installing hole center<br>Ⓤ ⓤ Ⓥ ⓥ Ⓧ ⓧ: ϕ12 (0.47)<br>Ⓦ ⓦ: ϕ9 (0.35) |

## Rear Body

INFOID:0000000010860047

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.




JSKIA4428GB

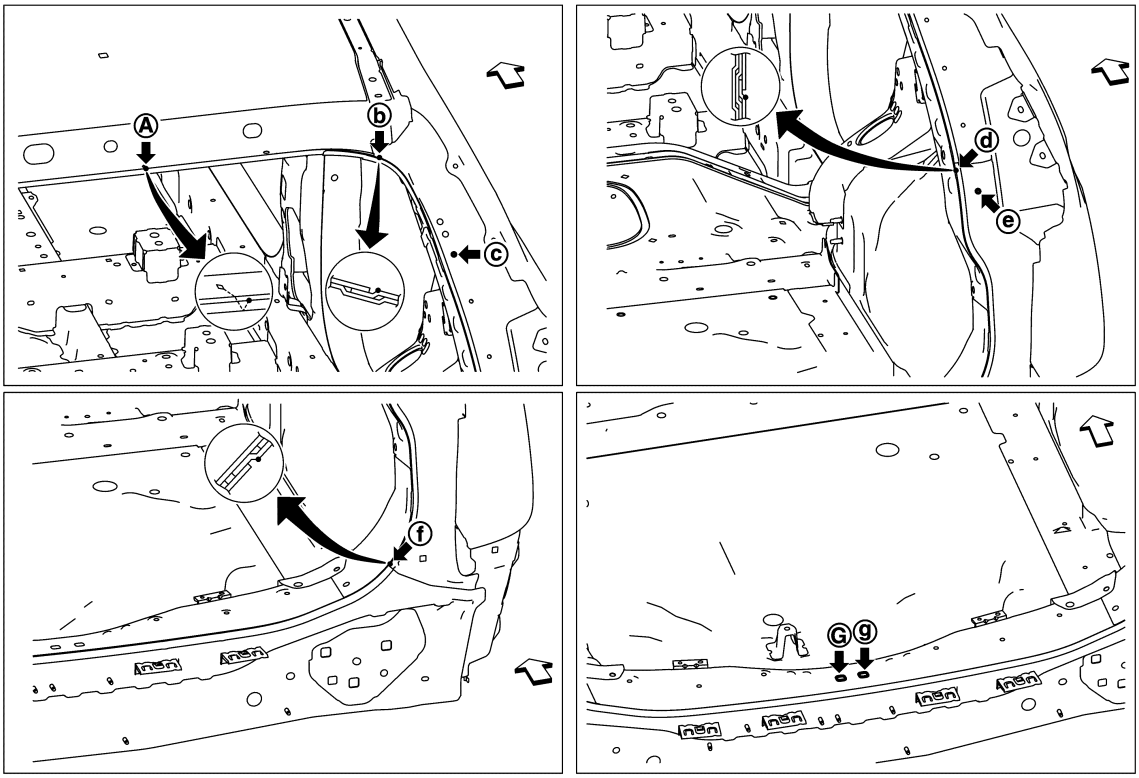
Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓒ | 612 (24.09)* | | Ⓒ – ⓒ | 1131 (44.53) | | Ⓓ – ⓖ | 762 (30.00)* | |
| Ⓐ – Ⓔ | 797 (31.38)* | | Ⓒ – Ⓔ | 323 (12.72)* | | Ⓔ – ⓔ | 1202 (47.32) | |
| Ⓑ – ⓖ | 1042 (41.02)* | | Ⓒ – ⓔ | 1210 (47.64)* | | Ⓕ – ⓖ | 578 (22.76)* | |

### MEASUREMENT POINTS




JSKIA4429ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Roof flange end of center positioning mark | Ⓓ ⓓ Ⓕ ⓕ | Lower back pillar main joggle |
| Ⓑ ⓑ | Center back pillar main joggle | Ⓔ ⓔ | Lower back pillar main hole center ϕ7 (0.28) |
| Ⓒ ⓒ | Center back pillar main hole center ϕ7 (0.28) | Ⓖ ⓖ | Back door striker installing hole center |

# LOCATION OF PLASTIC PARTS

## Precautions for Plastics

INFOID:0000000010843453

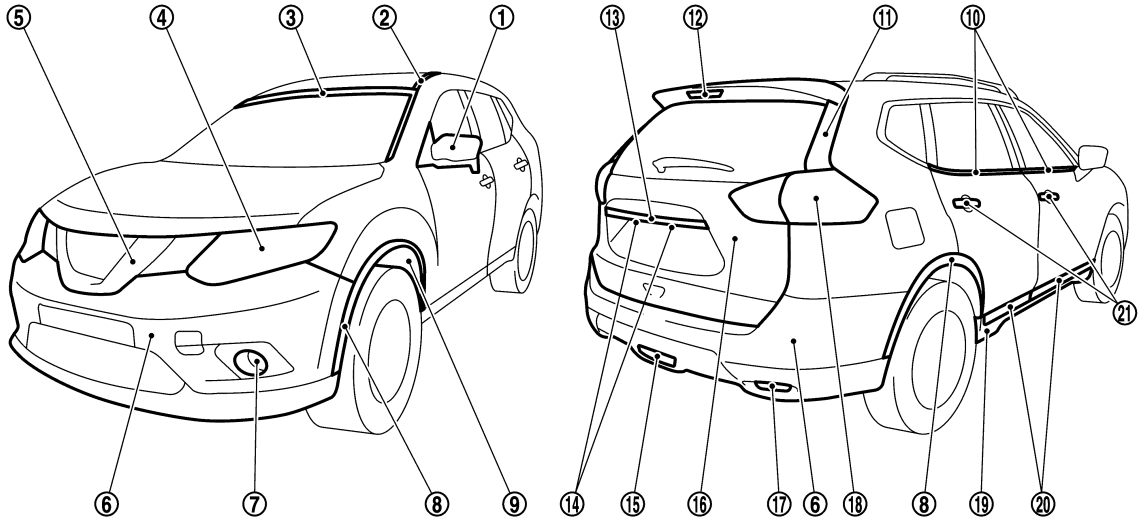
| Abbre-viation | Material name | Heat resisting temperature °C (°F) | Resistance to gasoline and solvents | Other cautions |
|---|---|---|---|---|
| PE | Polyethylene | 60 (140) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| ABS | Acrylonitrile Butadiene Styrene | 80 (176) | Avoid gasoline and solvents. | — |
| AES | Acrylonitrile Ethylene Styrene | 80 (176) | ↑ | — |
| EPM/ EPDM | Ethylene Propylene (Diene) co-polymer | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| PS | Polystyrene | 80 (176) | Avoid solvents. | Flammable |
| PVC | Poly Vinyl Chloride | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Poisonous gas is emitted when burned. |
| TPO | Thermoplastic Olefine | 80 (176) | ↑ | Flammable |
| AAS | Acrylonitrile Acrylic Styrene | 85 (185) | Avoid gasoline and solvents. | — |
| PMMA | Poly Methyl Methacrylate | 85 (185) | ↑ | — |
| EVAC | Ethylene Vinyl Acetate | 90 (194) | ↑ | — |
| PP | Polypropylene | 90 (194) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable, avoid battery acid. |
| PUR | Polyurethane | 90 (194) | Avoid gasoline and solvents. | — |
| UP | Unsaturated Polyester | 90 (194) | ↑ | Flammable |
| ASA | Acrylonitrile Styrene Acrylate | 100 (212) | ↑ | Flammable |
| PPE | Poly Phenylene Ether | 110 (230) | ↑ | — |
| TPU | Thermoplastic Urethane | 110 (230) | ↑ | — |
| PBT+ PC | Poly Butylene Terephthalate + Polycarbonate | 120 (248) | ↑ | Flammable |
| PC | Polycarbonate | 120 (248) | ↑ | — |
| POM | Poly Oxymethylene | 120 (248) | ↑ | Avoid battery acid. |
| PA | Polyamide | 140 (284) | ↑ | Avoid immersing in water. |
| PBT | Poly Butylene Terephthalate | 140 (284) | ↑ | — |
| PAR | Polyarylate | 180 (356) | ↑ | — |
| PET | Polyethylene terephthalate | 180 (356) | ↑ | — |
| PEI | Polyetherimide | 200 (392) | ↑ | — |

**CAUTION:**

- **When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.**
- **Plastic parts should be repaired and painted using methods suiting the materials' characteristics.**

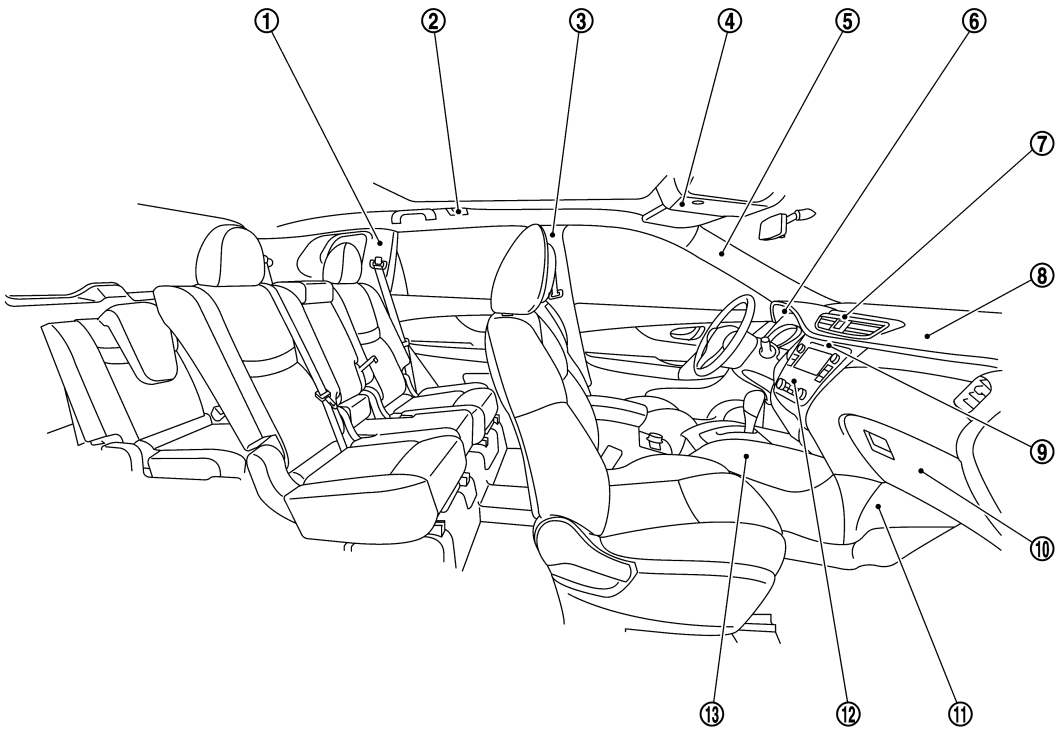
## Location of Plastic Parts

INFOID:0000000010843454




JSKIA4713ZZ

| Component | | | Material | Component | | | Material |
|---|---|---|---|---|---|---|---|
| ① | Door mirror | Cover | ABS | ⑪ | Rear spoiler | | PC + ABS |
| | | Base | PBT + PET + Glass fiber | ⑫ | High mount stop lamp | Lens | PMMA |
| | | Case | ASA | | | Housing | ABS |
| | | Finisher | ASA | ⑬ | Back door finisher | | ABS |
| | Side turn signal lamp | Lens | PMMA | ⑭ | License plate lamp | Lens | PC |
| | | Housing | ABS | | | Housing | PC |
| ② | Side roof molding | | PVC + Stainless | ⑮ | Rear fog lamp | Lens | PC |
| ③ | Wind shield molding | | PVC | | | Housing | PC |
| ④ | Front combination lamp | Lens | PC | ⑯ | Back door | | PP |
| | | Housing | PP | ⑰ | Reflex reflector | Lens | PMMA |
| ⑤ | Front grille | | ABS | | | Housing | ABS |
| ⑥ | Bumper fascia | | PP + EPM | ⑱ | Rear combination lamp | Lens | PMMA |
| ⑦ | Front fog lamp | Lens | Glass | | | Housing | ASA |
| | | Housing | PBT + ASA + Glass fiber | ⑲ | Sill cover | | PP |
| ⑧ | Fillet molding | | PP | ⑳ | Side guard molding | | PP |
| ⑨ | Front fender protector | | PP | ㉑ | Door outside handle | Grip cover | PC + PET |
| ⑩ | Door outside molding | | PVC + Stainless | | | Grip body | PC + ABS |




JSKIA4714ZZ

| Component | | | Material |
|---|---|---|---|
| ① | Side luggage finisher | | PP |
| ② | Personal lamp | Lens | PC |
| | | Housing | PP |
| ③ | Center pillar garnish | | PP |
| ④ | Map lamp | Switch finisher | PP |
| | | Console | PP |
| | Lid box | | PC + ABS |
| ⑤ | Front pillar garnish | | PP |
| ⑥ | Cluster lid A | | PP |
| ⑦ | Center ventilator grille | | PC + ABS |
| ⑧ | Instrument panel | Skin | TPO |
| | | Pad | PUR |
| | | Core | PP + EPDM |

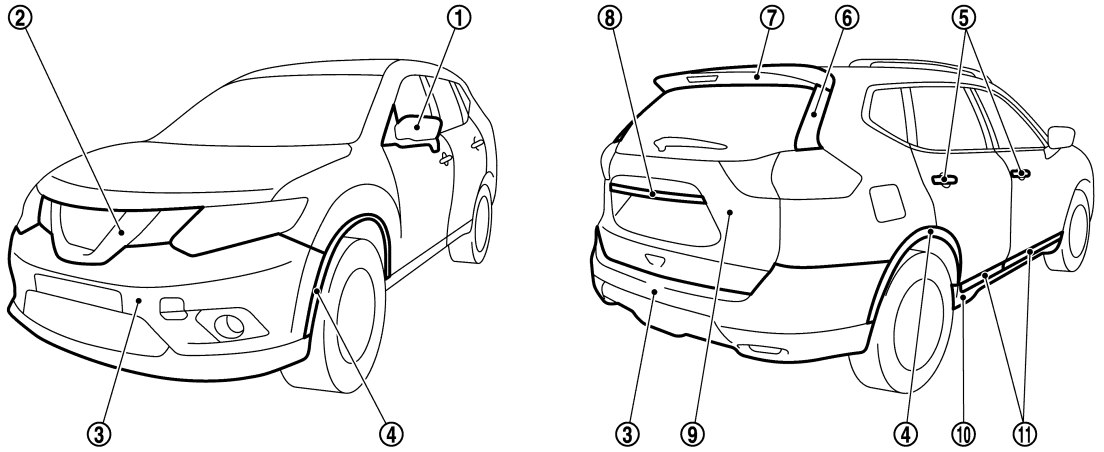
| Component | | | | Material |
|---|---|---|---|---|
| ⑨ | Cluster lid C | | | PC + ABS |
| ⑩ | Glove box | | | PP |
| ⑪ | Lower side panel | | | PP + EPM |
| ⑫ | A/C Control | Manual A/C | Finisher | PC + ABS |
| | | | Switch | PC |
| | | | Case | ABS |
| | | Automatic A/C | Finisher | PC + ABS |
| | | | Switch | PC |
| | | | Case | PC + ABS |
| | | | Lens | PC |
| ⑬ | Center console | | Body | PP |
| | | | Console box | PP |
| | | | A/T console finisher | PC + ABS |

# VEHICLE INFORMATION

## BODY EXTERIOR PAINT COLOR

### Body Exterior Paint Color

INFOID:0000000010843489




JSKIA4358ZZ

| Component | | Color code | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Description | Red | Dark Olive | Orange | Black | Silver | Gray | White | Dark Blue |
| | | Paint type [note] | 2S | 2PM | 2PM | 2P | 2M | 2M | 3P | 2M |
| | | Hard clear coat | × | × | × | × | – | – | – | × |
| ① | Door mirror cover | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ② | Front grille | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ③ | Bumper fascia | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ④ | Fillet molding | Material color | – | – | – | – | – | – | – | – |
| ⑤ | Door outside handle | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑥ | Rear spoiler (Side) | Black | G01 | G01 | G01 | G01 | G01 | G01 | G01 | G01 |
| ⑦ | Rear spoiler (Upper) | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑧ | Back door finisher | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑨ | Back door | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑩ | Sill cover | Material color | – | – | – | – | – | – | – | – |
| ⑪ | Side guard molding | Material color | – | – | – | – | – | – | – | – |

**NOTE:**

- 2M: 2-Coat Metallic
- 2P: 2-Coat pearl
- 2S: 2-Coat solid
- 3P: 3-Coat pearl
- 2PM: 2-Coat Pearl metallic

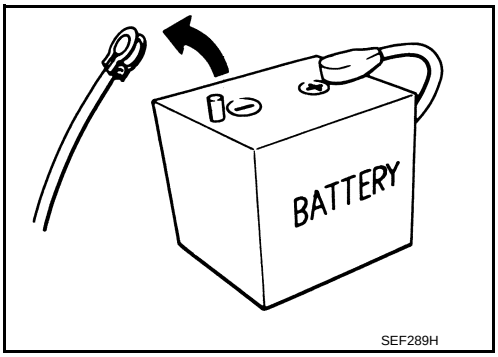
# PRECAUTION

## PRECAUTIONS

### Precautions for Removing Battery Terminal

INFOID:0000000010843490

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  **NOTE:**
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  **NOTE:**
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  **NOTE:**
  The removal of 12V battery may cause a DTC detection error.




#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

| | |
|---|---|
| D4D engine | : 20 minutes |
| HRA2DDT | : 12 minutes |
| K9K engine | : 4 minutes |
| M9R engine | : 4 minutes |
| R9M engine | : 4 minutes |
| V9X engine | : 4 minutes |

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.
   **CAUTION:**
   **After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   **NOTE:**
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

**CAUTION:**
**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

# REPAIRING HIGH STRENGTH STEEL

## High Strength Steel (HSS)

INFOID:0000000010843491

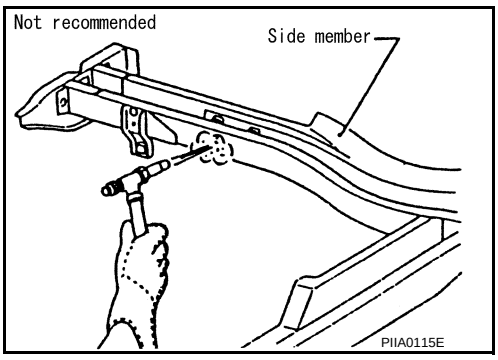
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

| Tensile strength | Major applicable parts |
|---|---|
| 440 - 780 MPa | • Rear seat crossmember reinforcement<br>(Rear seat crossmember assembly component part)<br>• Center front floor (Front)<br>(Center front floor component part)<br>• Trans control reinforcement<br>(Center front floor component part)<br>• Front floor (Front)<br>(Front floor component part)<br>• 2nd crossmember<br>(Front floor component part)<br>• 3rd crossmember<br>(Front floor component part)<br>• Inner sill reinforcement<br>(Inner sill component part)<br>• Side dash<br>(Side dash component part)<br>• Inner front pillar reinforcement (RH only)<br>(Side dash component part)<br>• Front suspension spring support<br>(Front strut housing assembly component part)<br>• Front bumper stay<br>• Front side member closing plate (Front)<br>(Front side member closing plate component part)<br>• Front side member flange<br>(Front side member closing plate component part)<br>• Front tie down hook<br>(Front side member closing plate component part)<br>• Front side member (Front)<br>(Front side member assembly component part)<br>• Front side member brace<br>(Front side member assembly component part)<br>• Front suspension mounting bracket<br>• Rear crossmember center assembly<br>• Rear side member<br>(Rear side member component part)<br>• Rear side member rear reinforcement<br>(Rear side member component part)<br>• Inner sill extension<br>(Rear side member component part)<br>• Rear side member reinforcement<br>(Rear side member component part)<br>• Outer rear anchor reinforcement<br>(Rear side member component part)<br>• Rear spring mounting bracket<br>(Rear side member component part)<br>• Spring mounting reinforcement<br>(Rear side member component part)<br>• Rear side member extension<br>• Inner center pillar assembly (Lower)<br>• Outer front pillar reinforcement (Rear)<br>• Lower center pillar brace (Lower)<br>• Lower front pillar hinge brace<br>• Outer sill reinforcement<br>• Rear pillar gusset<br>(Inner rear pillar component part)<br>• Rear pillar seat belt anchor<br>(Inner rear pillar component part)<br>• Rear bumper stay |

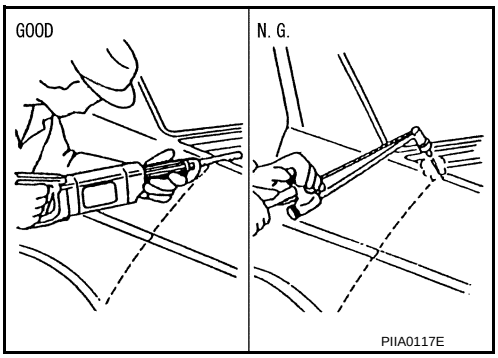
| Tensile strength | Major applicable parts |
|---|---|
| 980 - 1500 MPa | • Front side member rear extension (Front floor component part)<br>• Inner sill<br>• Lower dash crossmember (Lower dash complete component part)<br>• Lower dash crossmember<br>• Front bumper armature assembly<br>• Front side member closing plate (Rear) (Front side member closing plate component part)<br>• Front side member (Rear) (Front side member assembly component part)<br>• Inner center pillar (Upper) (Inner center pillar assembly component part)<br>• Upper center pillar brace (Inner center pillar assembly component part)<br>• Center pillar seat belt anchor (Inner center pillar assembly component part)<br>• Outer front pillar reinforcement (Outer front pillar reinforcement component part)<br>• Center pillar hinge brace (Upper) (Lower center pillar brace component part)<br>• Center pillar extension (Lower center pillar brace component part)<br>• Inner center rear bumper reinforcement |

Read the following precautions when repairing HSS:

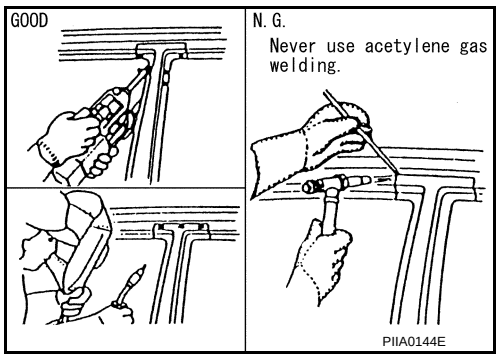
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type and other similar type thermometer are appropriate.)



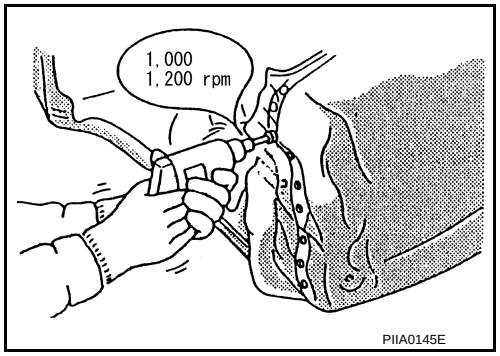

   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.
   - When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97 in).



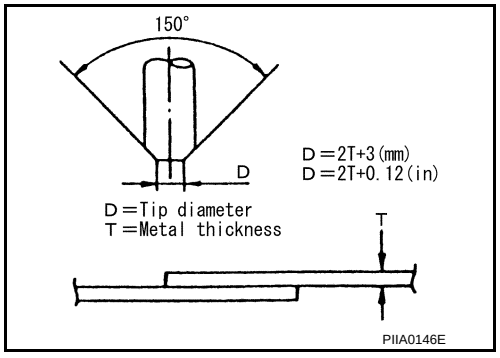
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



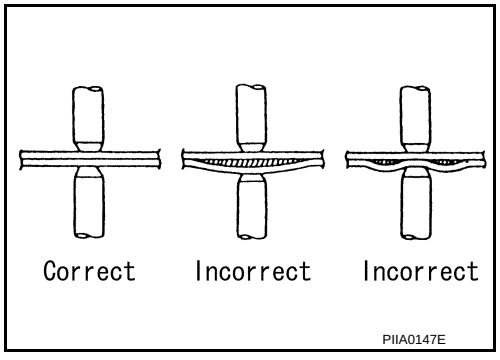

- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.




2. Precautions in spot welding HSS
   This work should be performed under standard working conditions. Always note the following when spot welding HSS:
   - The electrode tip diameter must be sized properly according to the metal thickness.



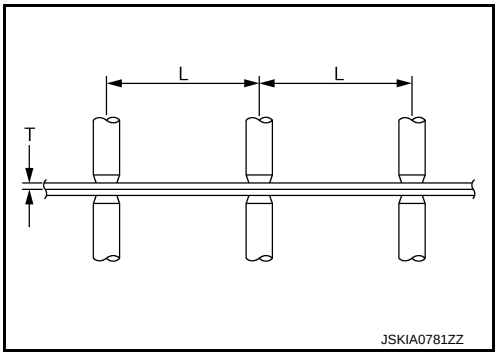

- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit: mm (in)

| Thickness (T) | Minimum pitch (L) |
|---|---|
| 0.6 (0.024) | 10 (0.39) or more |
| 0.8 (0.031) | 12 (0.47) or more |
| 1.0 (0.039) | 18 (0.71) or more |
| 1.2 (0.047) | 20 (0.79) or more |
| 1.6 (0.063) | 27 (1.06) or more |
| 1.8 (0.071) | 31 (1.22) or more |



# PREPARATION

## REPAIRING MATERIAL

### Foam Repair

INFOID:0000000010843492

During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

Use commercially available Urethane foam for sealant (foam material) repair of material used on vehicle.

| | |
|---|---|
| **<Urethane foam for foaming agent>** | **3M™ Automix™ Flexible Foam 08463 or equivalent** |

Read instructions on product for fill procedures.

Example of foaming agent filling operation procedure

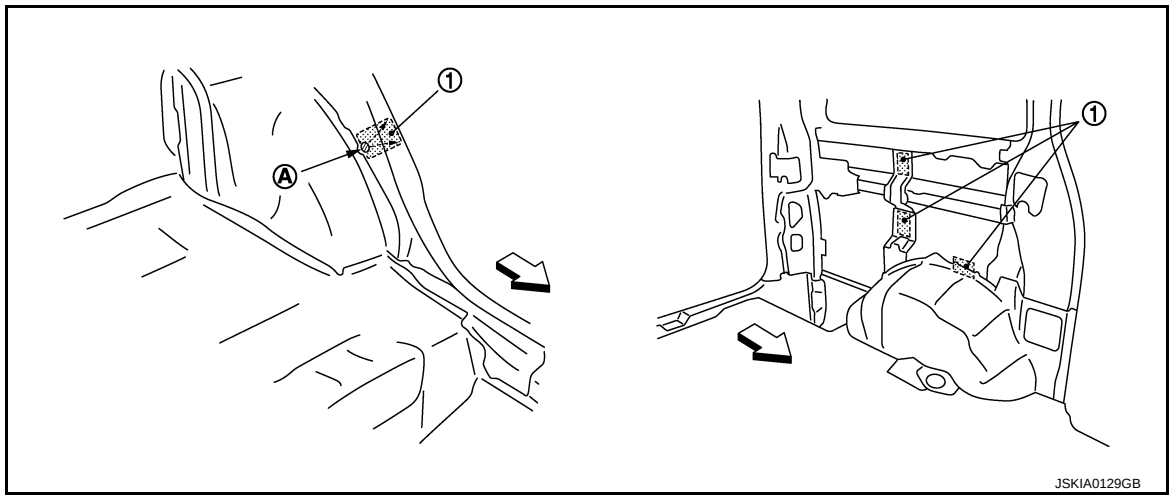
1. Fill procedures after installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating form insulator and foam material.

c. Install service part.

d. Insert nozzle into hole near fill area and fill foam material or fill enough to close gap with the service part.




① Urethane foam

Ⓐ Nozzle insert hole

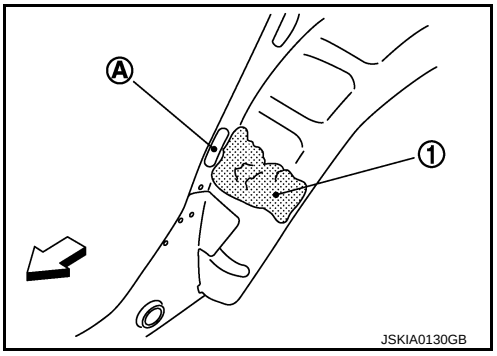
⇦: Vehicle front

2. Fill procedures before installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating foam insulator and foam material.

c. Fill foam material on wheelhouse outer side.




① Urethane foam

Ⓐ Fill while avoiding flange area

⇦: Vehicle front

**NOTE:**
Fill enough to close gap with service part while avoiding flange area.

d. Install service part.
**NOTE:**
Refer to label for information on working times.

# BODY COMPONENT PARTS

## Ultra High Strength Steel Part

INFOID:0000000010843493

### DESCRIPTION

Ultra high strength steel parts signify high strength steel plates with tensile strength of 980 MPa or more.
When replacing parts made of ultra high strength steel or parts including ultra high strength steel, never perform the prohibition described below:

### PROHIBITION

**WARNING:**

**Never cut ultra high strength steel parts or perform butt welding. Violation of this prohibition causes extreme strength degradation, and the strength before damage cannot be secured.**

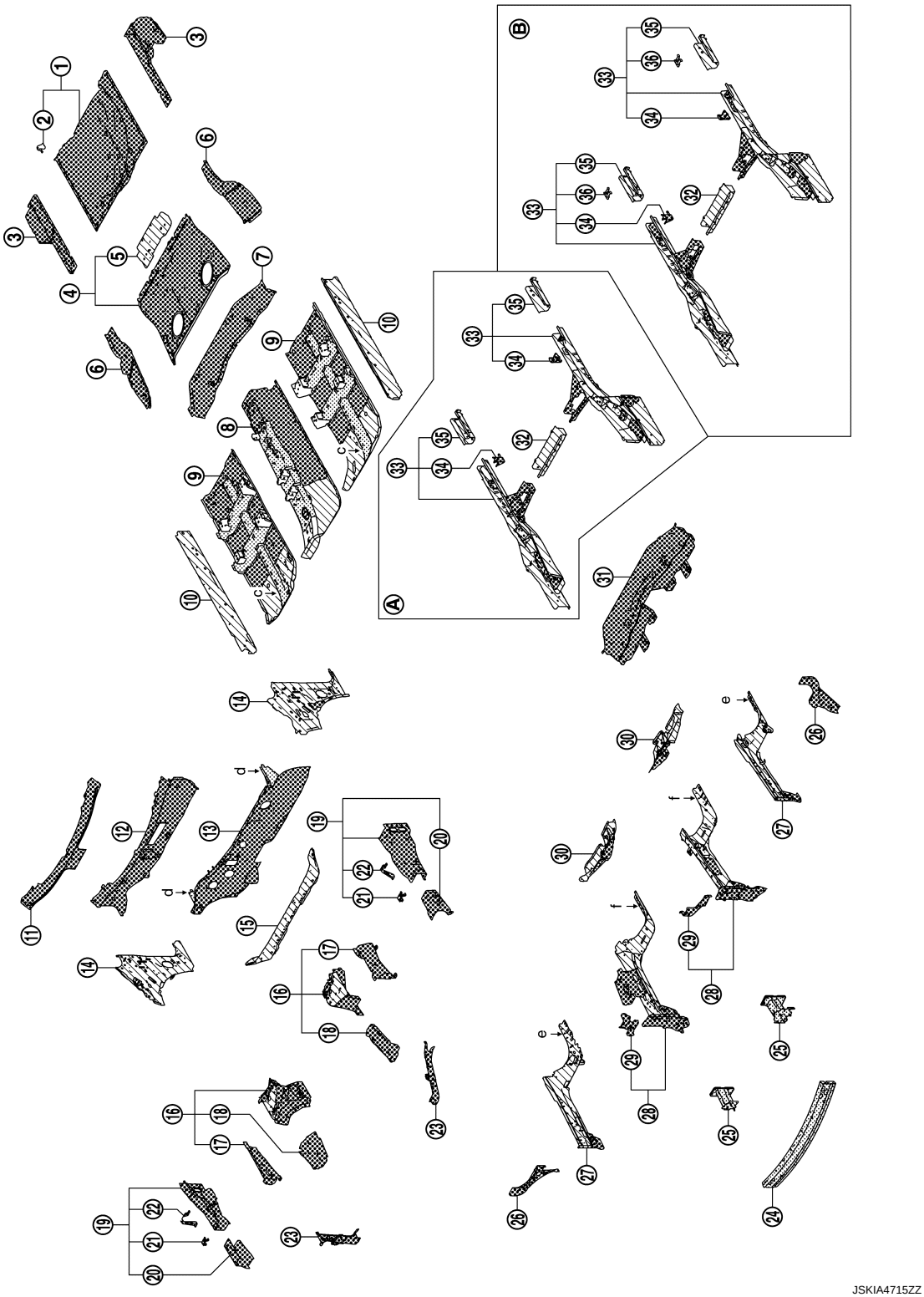
### PART REPLACEMENT

To replace an ultra high strength part, be sure to replace it by panel supply unit of ultra high strength steel part.
For the welding method, refer to BRM-108, "Welding of Ultra High Strength Steel"

## Underbody Component Parts

INFOID:0000000010843494

Refer to parts catalogue for the replacement parts.



JSKIA4715ZZ

Ⓐ SUV models Ⓑ Wagon models

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Rear floor rear | | | Under 440 | × |
| ② | Spare tire clamp bracket | | | Under 440 | — |
| ③ | Rear floor side assembly (RH & LH) | | | Under 440 | × |
| ④ | Rear floor front | | | Under 440 | — |
| ⑤ | Rear floor board reinforcement | | | 590 | × |
| ⑥ | Rear floor front extension (Upper RH & LH) | | | Under 440 | × |
| ⑦ | Rear seat crossmember assembly | | | 590 | × |
| ⑧ | Center front floor | | | 780 | × |
| ⑨ | Front floor (RH & LH) | c. | 980MPa[caution] T=1.8 mm (0.071 in) | 590 | × |
| | | | Inside (RH only) 980MPa[caution] T=2.0 mm (0.079 in) | | |
| ⑩ | Inner sill (RH & LH) | | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑪ | Cowl top | | | Under 440 | × |
| ⑫ | Upper dash assembly | | | Under 440 | × |
| ⑬ | Lower dash complete | d. | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑭ | Side dash (RH & LH) | | | 590 | × |
| ⑮ | Lower dash crossmember | | 980MPa[caution] T=2.0 mm (0.079 in) | 440 | × |
| ⑯ | Front strut housing assembly (RH & LH) | | | 590 | × |
| ⑰ | Upper hoodledge (RH & LH) | | | Under 440 | × |
| ⑱ | Lower hoodledge (RH & LH) | | | Under 440 | × |
| ⑲ | Hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ⑳ | Front hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ㉑ | Upper front fender bracket (RH & LH) | | | Under 440 | × |
| ㉒ | Front fender bracket (RH & LH) | | | Under 440 | × |
| ㉓ | Upper radiator core support assembly (RH & LH) | | | Under 440 | × |
| ㉔ | Front bumper armature assembly | | 1500MPa[caution] T=1.0 mm (0.039 in) | — | — |
| ㉕ | Front bumper stay (RH & LH) | | | 590 | — |
| ㉖ | Hoodledge connector assembly (RH & LH) | | | Under 440 | × |
| ㉗ | Front side member closing plate (RH & LH) | e. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉘ | Front side member assembly (RH & LH) | f. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉙ | Side radiator core support (RH & LH) | | | Under 440 | × |
| ㉚ | Front suspension mounting bracket (RH & LH) | | | 590 | × |

| No. | Parts name | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|
| ㉛ | Rear floor front extension (Lower) | Under 440 | × |
| ㉜ | Rear crossmember center assembly | 590 | × |
| ㉝ | Rear side member (RH & LH) | 590 | × |
| ㉞ | Muffler mounting bracket assembly (RH & LH) | Under 440 | × |
| ㉟ | Rear side member extension (RH & LH) | 780 | × |
| ㊱ | Rear 3rd seat mounting bracket assembly (RH & LH) | Under 440 | × |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

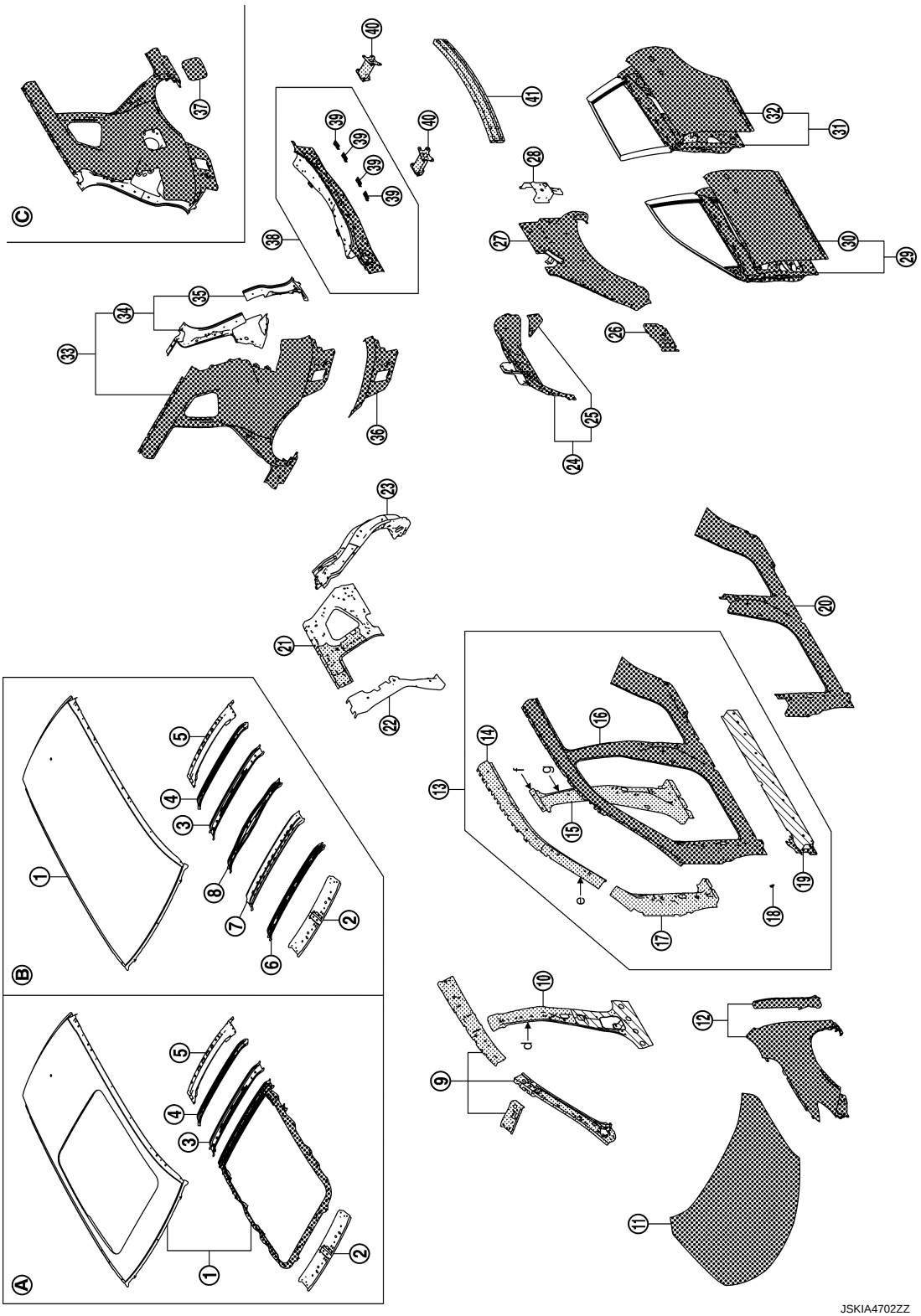
**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

## Body Component Parts

INFOID:0000000010860048

Refer to parts catalogue for the replacement parts.




Ⓐ Sunroof models Ⓑ Normal roof models Ⓒ Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Roof | | | Under 440 | — |
| ② | Front roof rail | | | Under 440 | — |
| ③ | Roof bow No.4 | | | Under 440 | — |
| ④ | Roof bow No.5 | | | Under 440 | — |
| ⑤ | Rear roof rail | | | Under 440 | — |
| ⑥ | Roof bow No.1 | | | Under 440 | — |
| ⑦ | Roof bow No.2 | | | Under 440 | — |
| ⑧ | Roof bow No.3 | | | Under 440 | — |
| ⑨ | Upper inner front pillar (RH & LH) | | | 590 | — |
| ⑩ | Inner center pillar assembly (RH & LH) | d. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑪ | Hood | | | 440 | × |
| ⑫ | Front fender (RH & LH) | | | Under 440 | × |
| ⑬ | Side body assembly (RH & LH) | | | Refer to No. ⑭ – ⑲ | |
| ⑭ | Outer front pillar reinforcement (RH & LH) | e. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑮ | Lower center pillar brace (RH & LH) | f. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| | | g. | 980MPa[caution] T=1.0 mm (0.039 in) | | |
| ⑯ | Outer front side body (RH & LH) | | | Under 440 | × |
| ⑰ | Lower front pillar hinge brace (RH & LH) | | | 590 | — |
| ⑱ | Front fender bracket assembly (RH & LH) | | | Under 440 | × |
| ⑲ | Outer sill reinforcement (RH & LH) | | | 590 | × |
| ⑳ | Outer sill assembly (RH & LH) | | | Under 440 | × |
| ㉑ | Inner rear pillar (RH & LH) | | | 590 | — |
| ㉒ | Upper rear pillar reinforcement (RH & LH) | | | Under 440 | — |
| ㉓ | Back pillar assembly (Inner RH & LH) | | SUV models | 440 | — |
| | | | Wagon models | 590 | |
| ㉔ | Inner rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉕ | Inner rear wheelhouse rear extension (RH & LH) | | | Under 440 | × |
| ㉖ | Outer rear wheelhouse extension (RH & LH) | | | Under 440 | × |
| ㉗ | Outer rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉘ | Jack mounting bracket | | | Under 440 | — |
| ㉙ | Front door assembly (RH & LH) | | | 590 | × |
| ㉚ | Outer front door panel (RH & LH) | | | Under 440 | × |
| ㉛ | Rear door assembly (RH & LH) | | | 440 | × |
| ㉜ | Outer rear door panel (RH & LH) | | | Under 440 | × |

| No. | Parts name | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|
| ㉝ | Rear fender assembly (RH & LH) | | Under 440 | × |
| ㉞ | Outer back pillar (RH & LH) | | Under 440 | — |
| ㉟ | Back pillar assembly (Outer RH & LH) | | Under 440 | — |
| ㊱ | Rear fender extension (RH & LH) | | Under 440 | × |
| ㊲ | Fuel filler lid assembly | | Under 440 | × |
| ㊳ | Upper rear panel | | Under 440 | × |
| ㊴ | Upper rear bumper retainer | | Under 440 | × |
| ㊵ | Rear bumper stay (RH & LH) | | 590 | — |
| ㊶ | Inner center rear bumper reinforcement | 1270MPa[caution] T=1.2 mm (0.047 in) | — | — |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

# REMOVAL AND INSTALLATION

## CORROSION PROTECTION

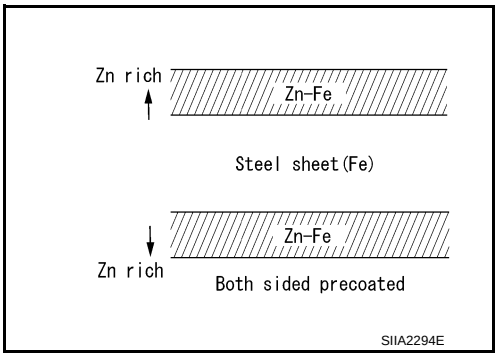
### Description

INFOID:0000000010843496

To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

#### Anti-Corrosive Precoated Steel (Galvannealed Steel)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet is adopted replacing conventional zinc-coated steel sheet.
Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



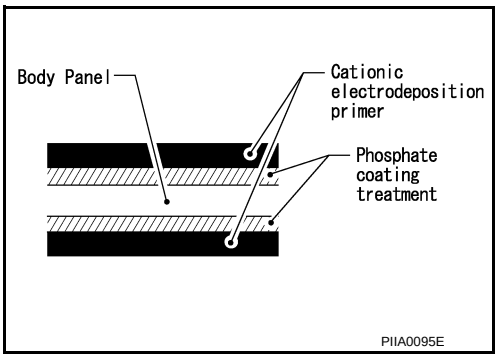

NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

#### Phosphate Coating Treatment and Cationic Electrodeposition Primer

A phosphate coating treatment and a cationic electrodeposition primer, which provide excellent corrosion protection, are applied to all body components.

**CAUTION:**

**Confine paint removal during welding operation to an absolute minimum.**




NISSAN genuine parts are also treated in the same manner. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

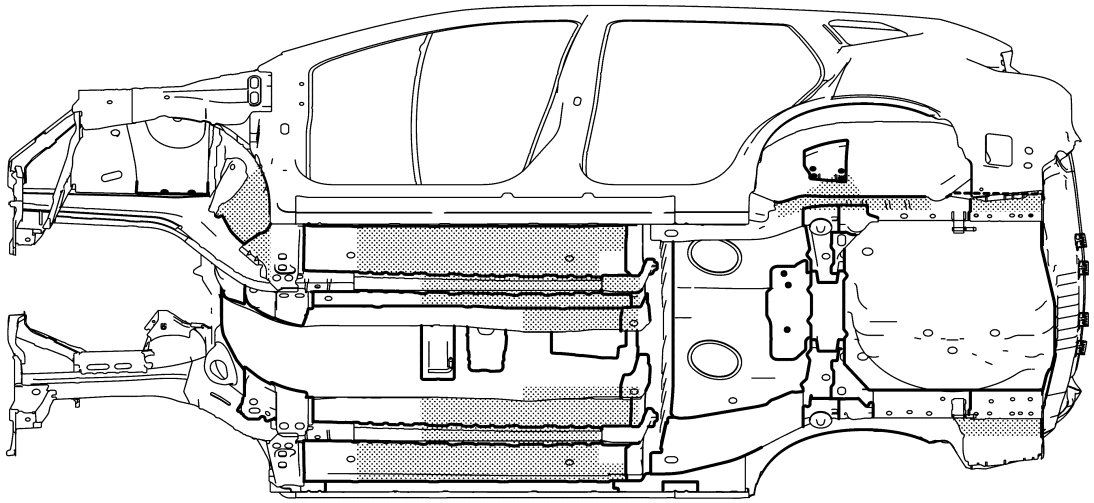
### Undercoating

INFOID:0000000010843497

The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust resistant, soundproof, vibration-proof, shock-resistant, adhesive, and durable.

#### Precautions in Undercoating

1. Never apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst that are subjected to heat).
2. Never undercoat the exhaust pipe or other parts that become hot.
3. Never undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.
5. After putting seal on the vehicle, put undercoating on it.



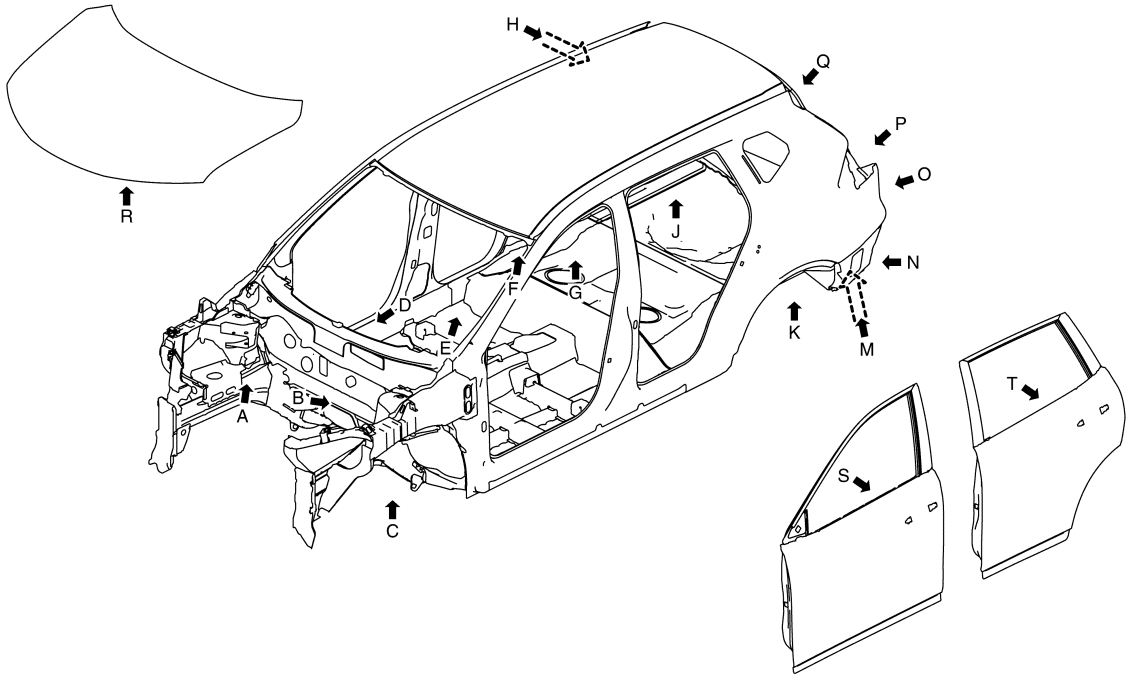
JSKIA4717ZZ

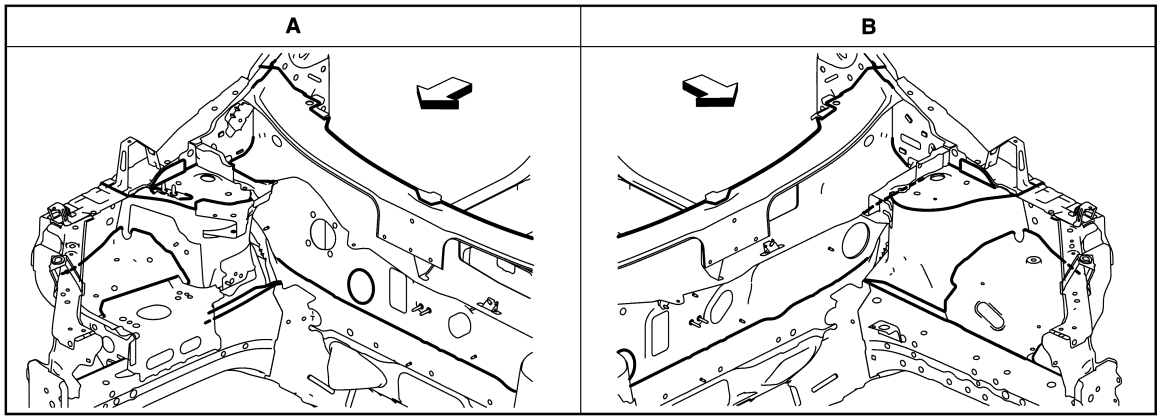
: Undercoated areas
: Sealed portions

## Body Sealing

INFOID:0000000010843499

The following figure shows the areas that are sealed at the factory. Sealant that is applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

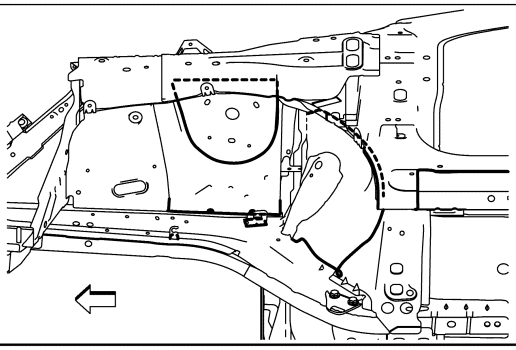
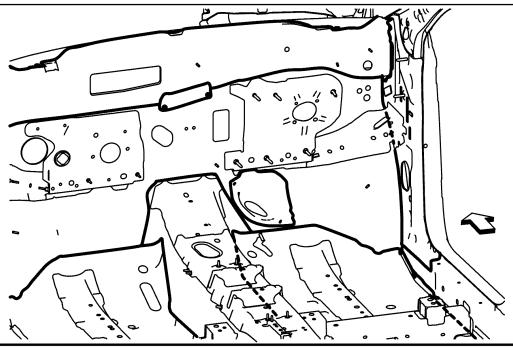
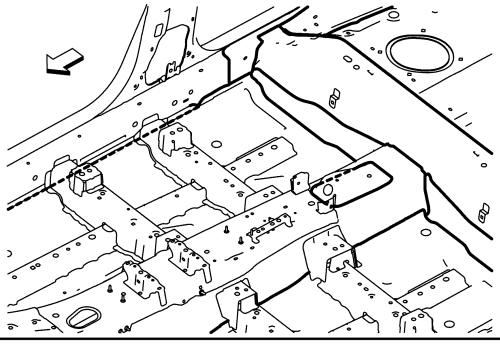
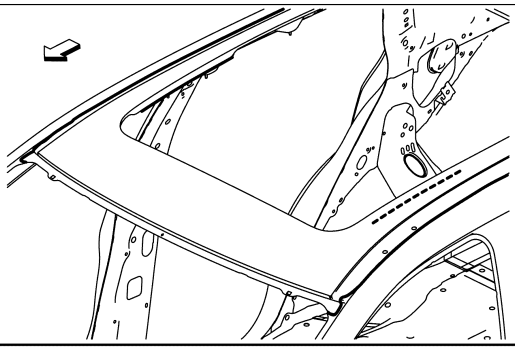
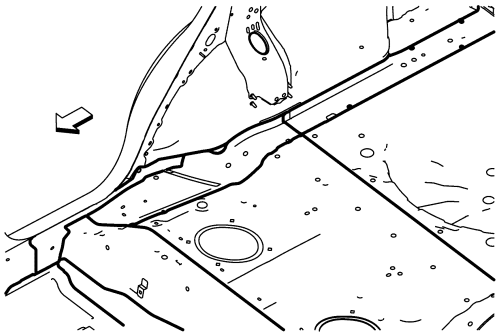
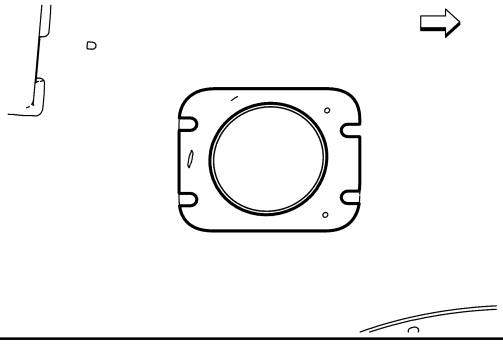
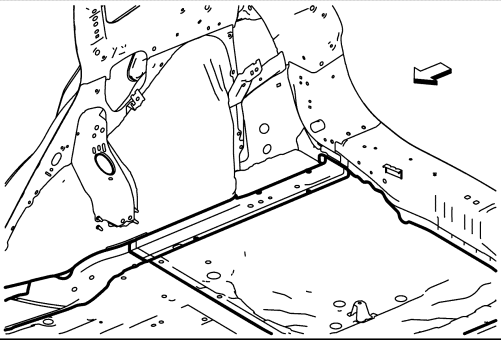
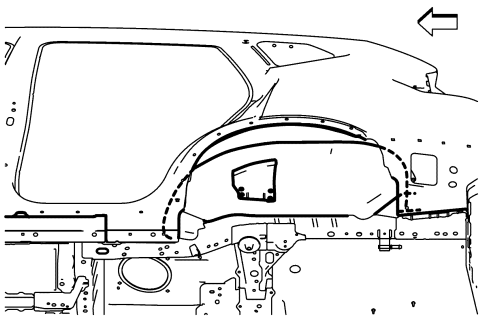



JSKIA4718ZZ

⇦: Vehicle front

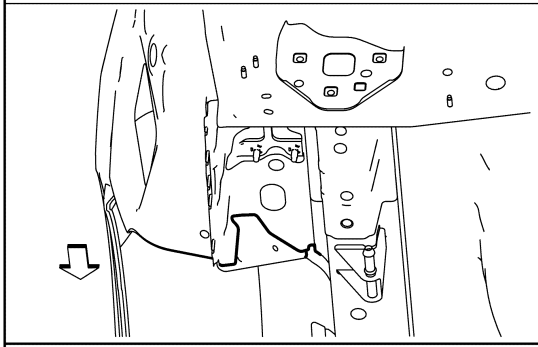
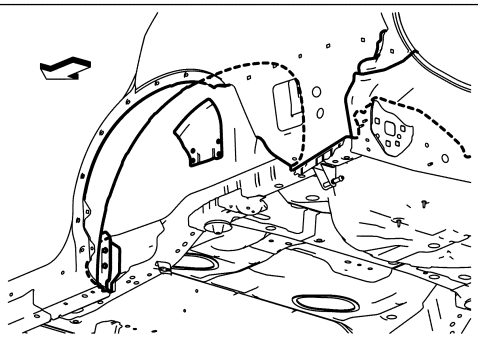
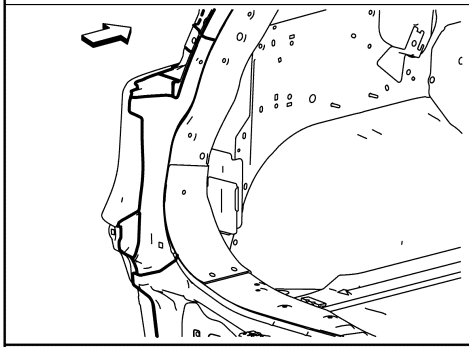
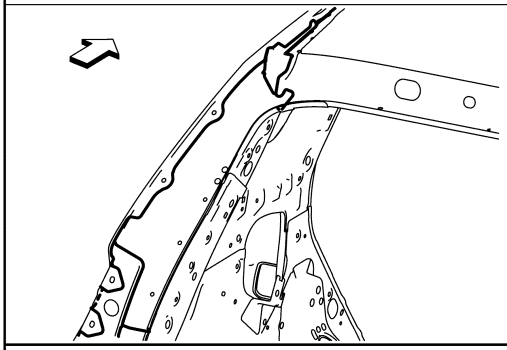
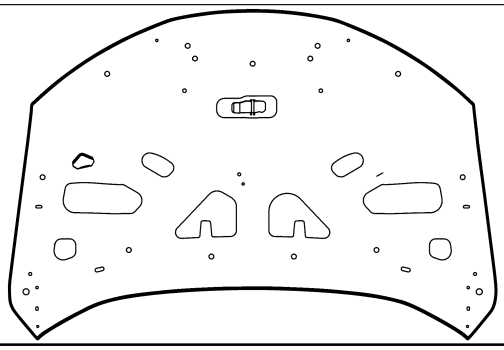
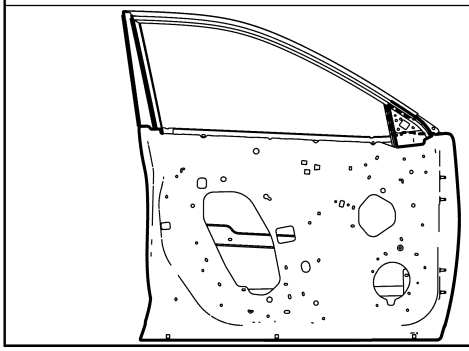
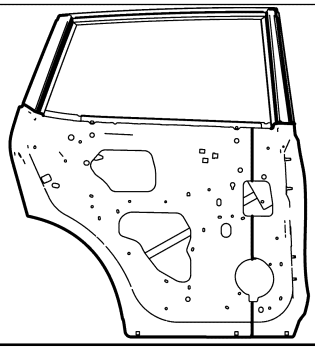
▬: Sealed portions

| C | D |
|---|---|
|  |  |
| **E** | **F** |
|  |  |
| **G** | **H** |
|  |  |
| **J** | **K** |
|  |  |

JSKIA4719ZZ

⇦: Vehicle front

▬: Sealed portions

| M | N |
|---|---|
|  |  |
| **O** | **P** |
|  |  |
| **Q** | **R** |
|  |  |
| **S** | **T** |
|  |  |

JSKIA4441ZZ

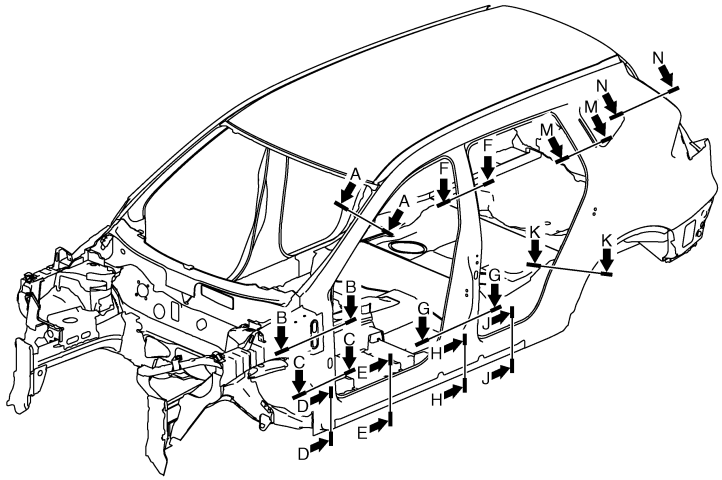
⇦: Vehicle front

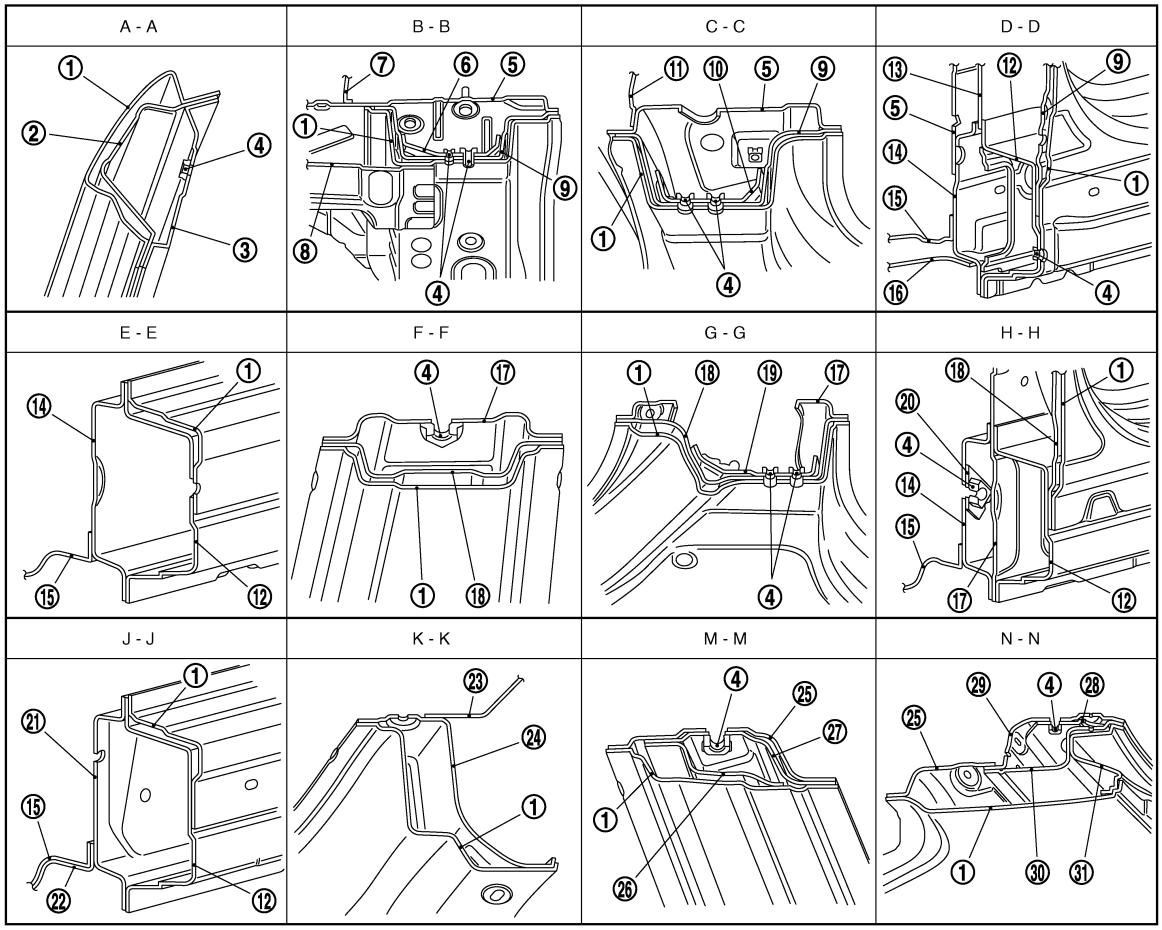
▬: Sealed portions

# BODY CONSTRUCTION

## Body Construction

INFOID:0000000010843501




JSKIA4721ZZ

① Outer side body
② Outer front pillar reinforcement
③ Upper inner front pillar
④ Weld nut
⑤ Side dash
⑥ Upper hinge plate
⑦ Upper dash
⑧ Rear hoodledge reinforcement
⑨ Lower front pillar hinge brace

⑩ Lower hinge plate
⑪ Lower dash
⑫ Outer sill reinforcement
⑬ Lower front pillar reinforcement
⑭ Inner sill
⑮ Front floor
⑯ Front side member outrigger
⑰ Inner center pillar
⑱ Center pillar hinge brace
⑲ Lower center pillar hinge brace
⑳ Anchor plate
㉑ Inner sill extension
㉒ Rear floor front extension
㉓ Inner rear wheelhouse
㉔ Outer rear wheelhouse
㉕ Inner rear pillar
㉖ Inner rear pillar reinforcement
㉗ Rear pillar seat belt anchor
㉘ Back pillar seat belt anchor
㉙ Rear roof rail brace
㉚ Upper back pillar reinforcement
㉛ Center back pillar main

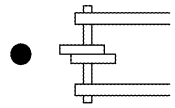
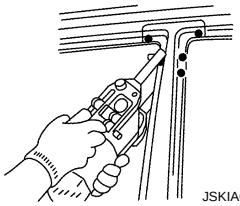
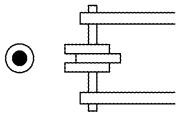
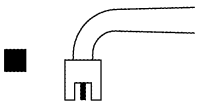
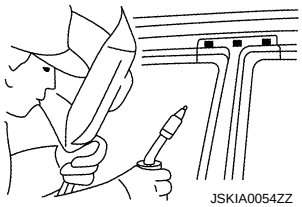
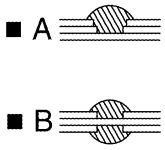
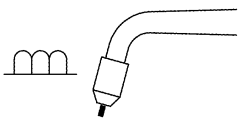
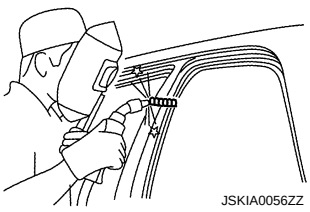
# REPLACEMENT OPERATIONS

## Description

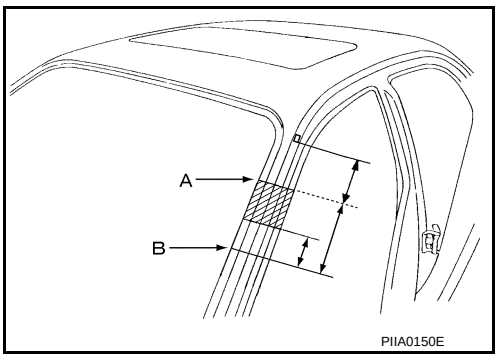
INFOID:0000000010843502

- This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.
- Technicians are also encouraged to read the Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle are maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not including in this manual. Technicians should refer to both manuals to ensure proper repair.
- Please note that this information is prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

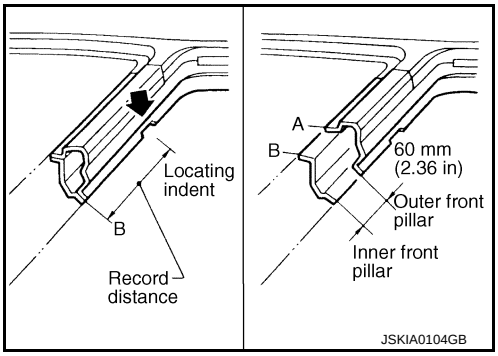
The symbols used in this section for welding operations are shown below.

| Symbol marks | Description | |
|---|---|---|
|  JSKIA0049ZZ | 2-spot welds |  JSKIA0053ZZ |
|  JSKIA0050ZZ | 3-spot welds | |
|  JSKIA0051ZZ | MIG plug weld |  JSKIA0054ZZ<br>For 3 panels plug weld method<br>  JSKIA0055ZZ |
|  JSKIA0052ZZ | MIG seam weld / Point weld |  JSKIA0056ZZ |

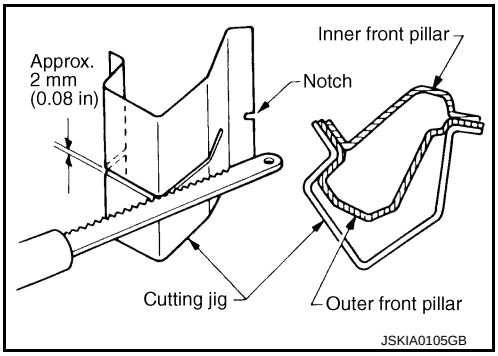
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.




- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm (2.36 in) above the inner front pillar cut position.

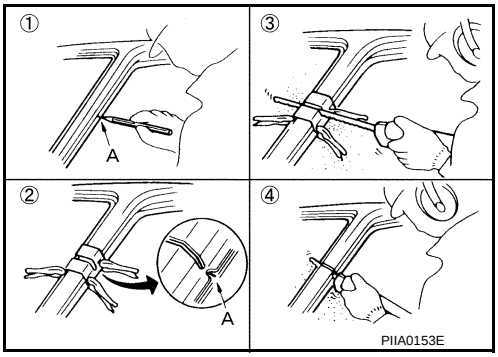



- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.




- An example of cutting operation using a cutting jig is as per the following.

1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig (at position A).
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.




## Welding of Ultra High Strength Steel

INFOID:0000000010843503

### SPOT WELDING

Spot welding is limited to ultra high strength steel (tensile strength: 980 MPa) according to the welding conditions listed below.

**CAUTION:**

- **If the below welding conditions cannot be met, then perform plug welding.**
- **Never spot weld ultra high strength steel of tensile strength more than 980 MPa. For this type of ultra high strength steel, perform plug welding.**

- **The below welding condition is applicable only to this vehicle. Never apply this same welding condition to other vehicles.**

Welding condition

| | |
|---|---|
| **Welder tip diameter** | **6 mm** |
| **Welding pressure (Gun force)** | **3500 N** |
| **Welding current** | **8200 A** |
| **Weld time** | **0.22 sec (11 cyc: 50 Hz area, 13 cyc: 60 Hz area)** |
| **Panel configuration** | **Combination of a plate of tensile strength 980 MPa and that of tensile strength less than 980 MPa. (Up to 3 plates)** |

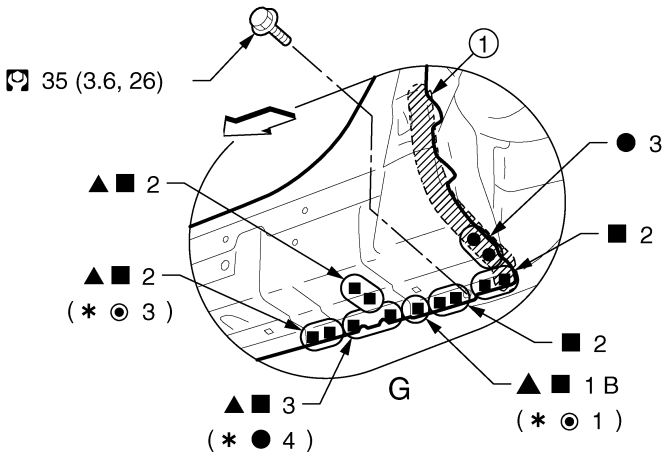
PLUG WELDING

To weld ultra high strength steel of tensile strength 980 MPa or more, perform plug welding observing the welding hole diameter described in the manual.

**CAUTION:**

- **To perform plug welding, use fuel mixture (Ar 80% + CO2 20%) for shielding gas of welder.**
- **Never use carbon dioxide gas (CO2 100%) as shielding gas of welder. Using CO2 100% gas results in inadequate weld strength.**
- **When welding hole diameter cannot be met, make multiple holes (smaller diameter) so that the sum of the hole areas equals the area of the original weld hole.**

EXAMPLE




JSKIA3503GB

① Body sealing

⇦: Vehicle front

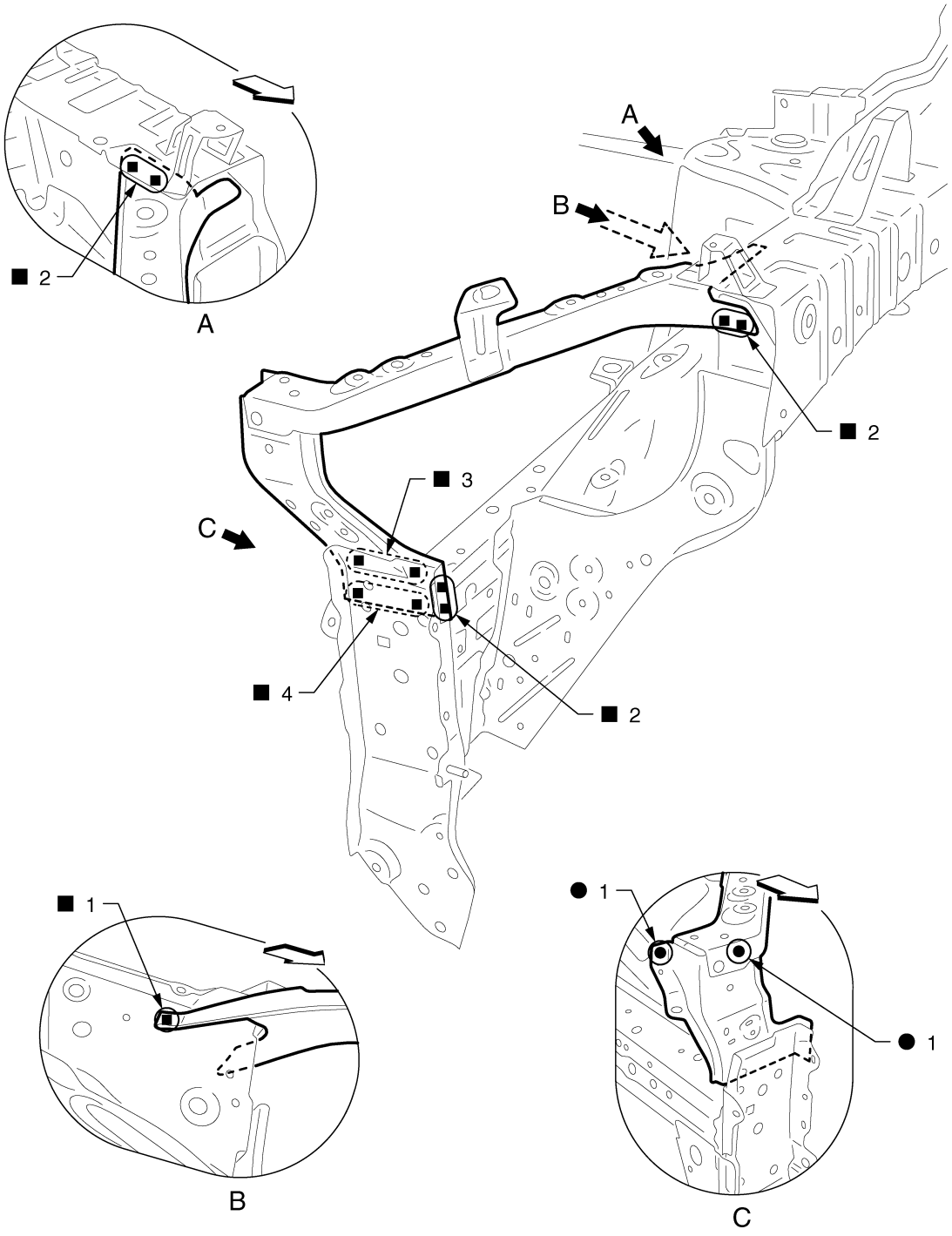
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

: N·m (kg-m, ft-lb)

✱: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to ″Welding of Ultra High Strength Steel″.

## Radiator Core Support

INFOID:0000000010843504




JSKIA3843ZZ

⇦: Vehicle front

(◌): Weld the parts onto the back of the component part.

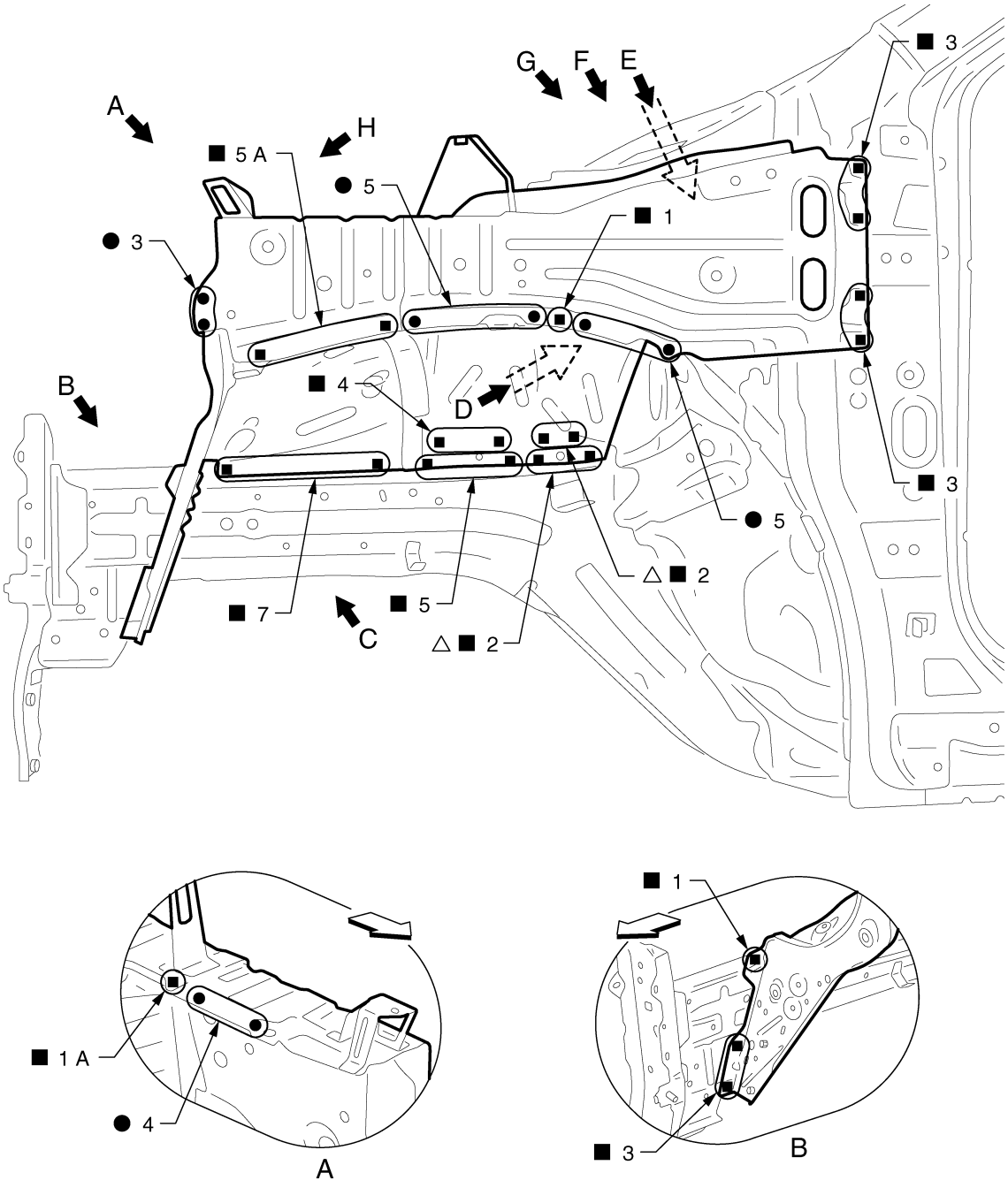
Replacement part

- Upper radiator core support assembly
- Side radiator core support

## Hoodledge

INFOID:0000000011010379

Work after radiator core support is removed.



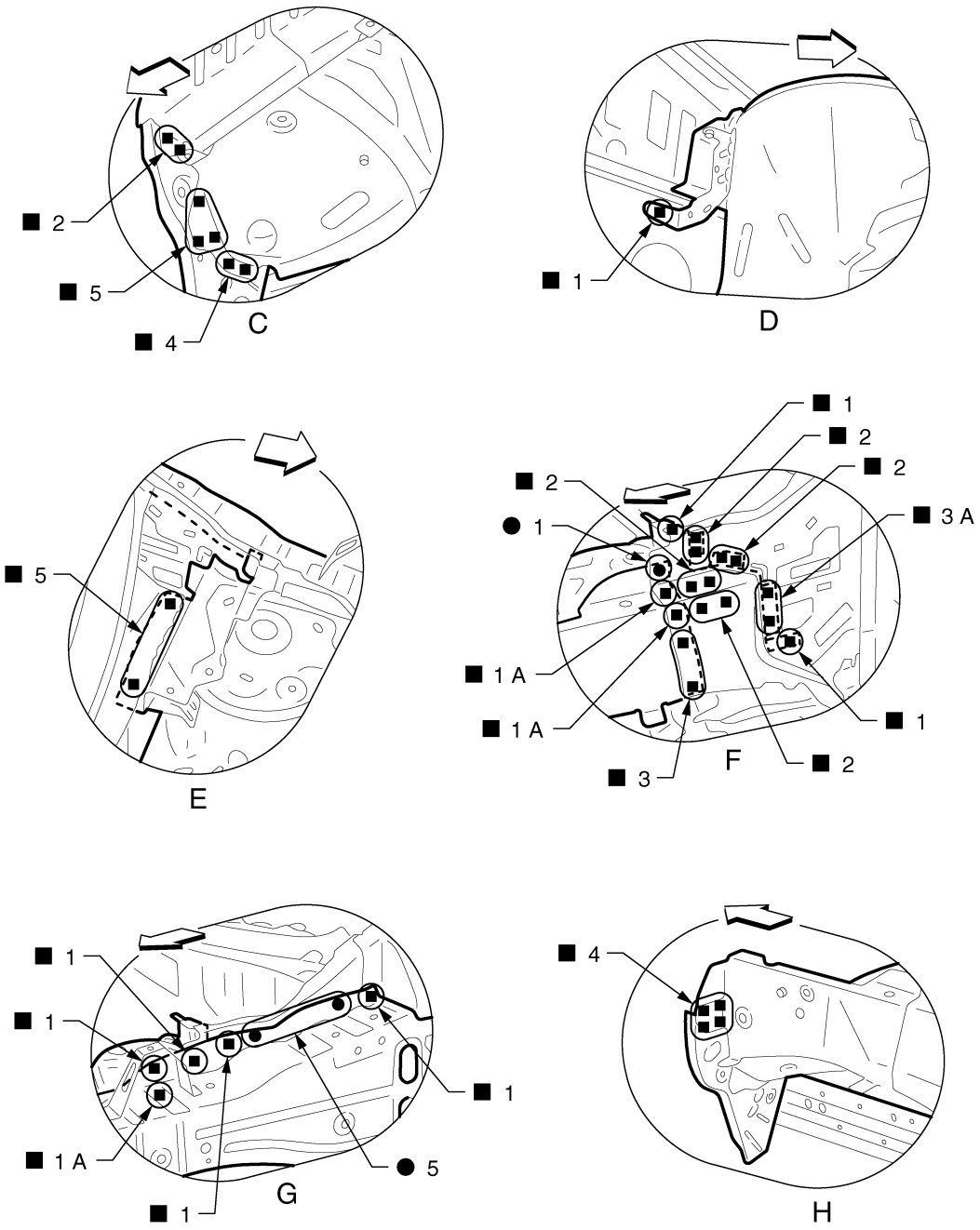

JSKIA4598ZZ

⇦: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

Replacement part

- Front strut housing assembly
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4599ZZ

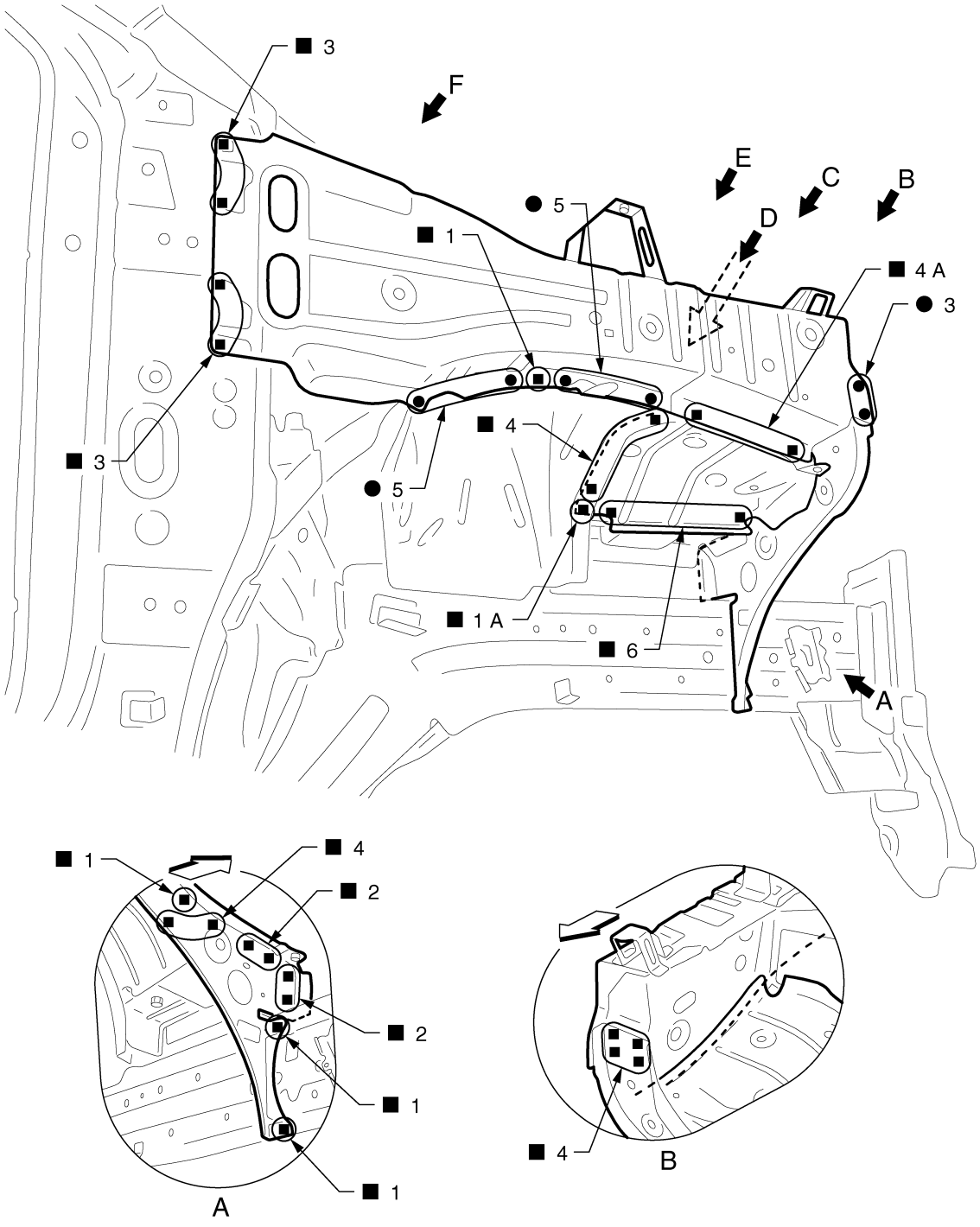
⇦: Vehicle front

View F and H: Before installing hoodledge reinforcement

## Hoodledge (Partial Replacement)

INFOID:0000000011010380

Work after radiator core support is removed.

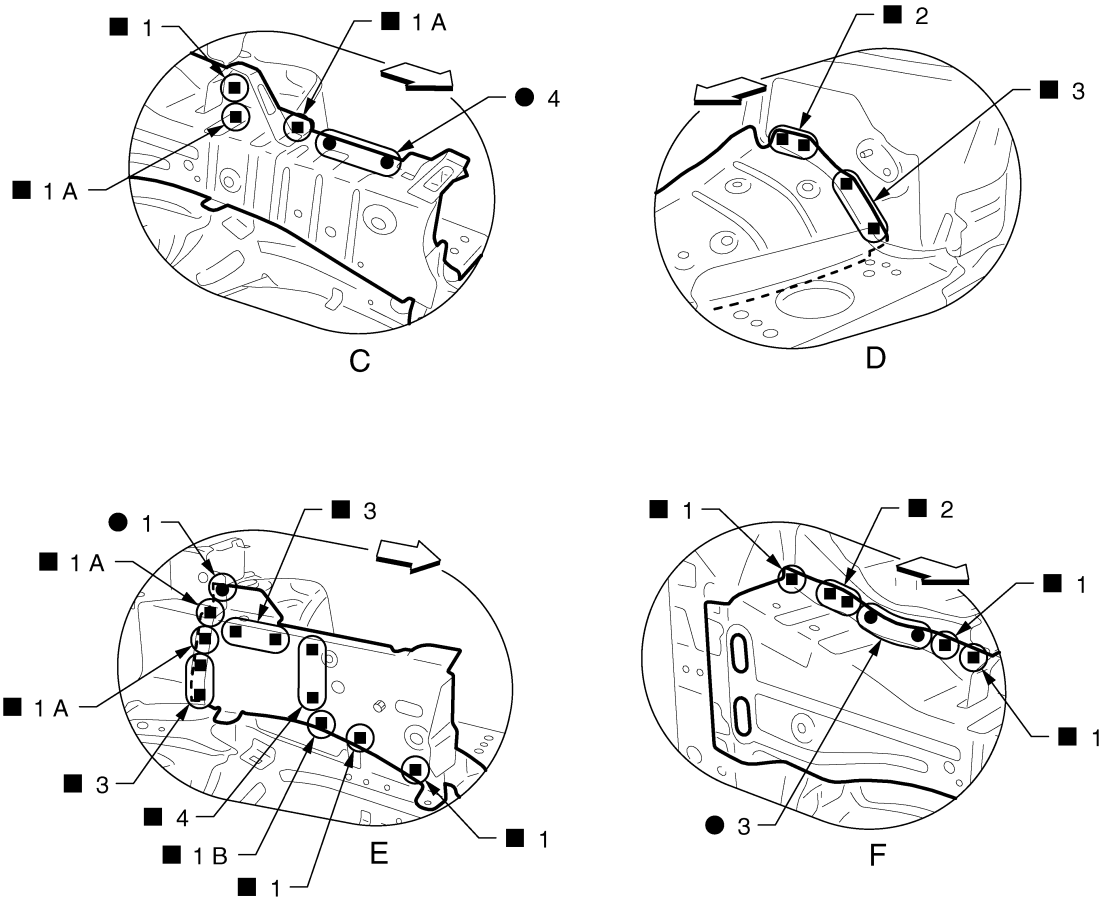



JSKIA4600ZZ

⇦: Vehicle front

Replacement part

- Upper hoodledge
- Lower hoodledge
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4601ZZ

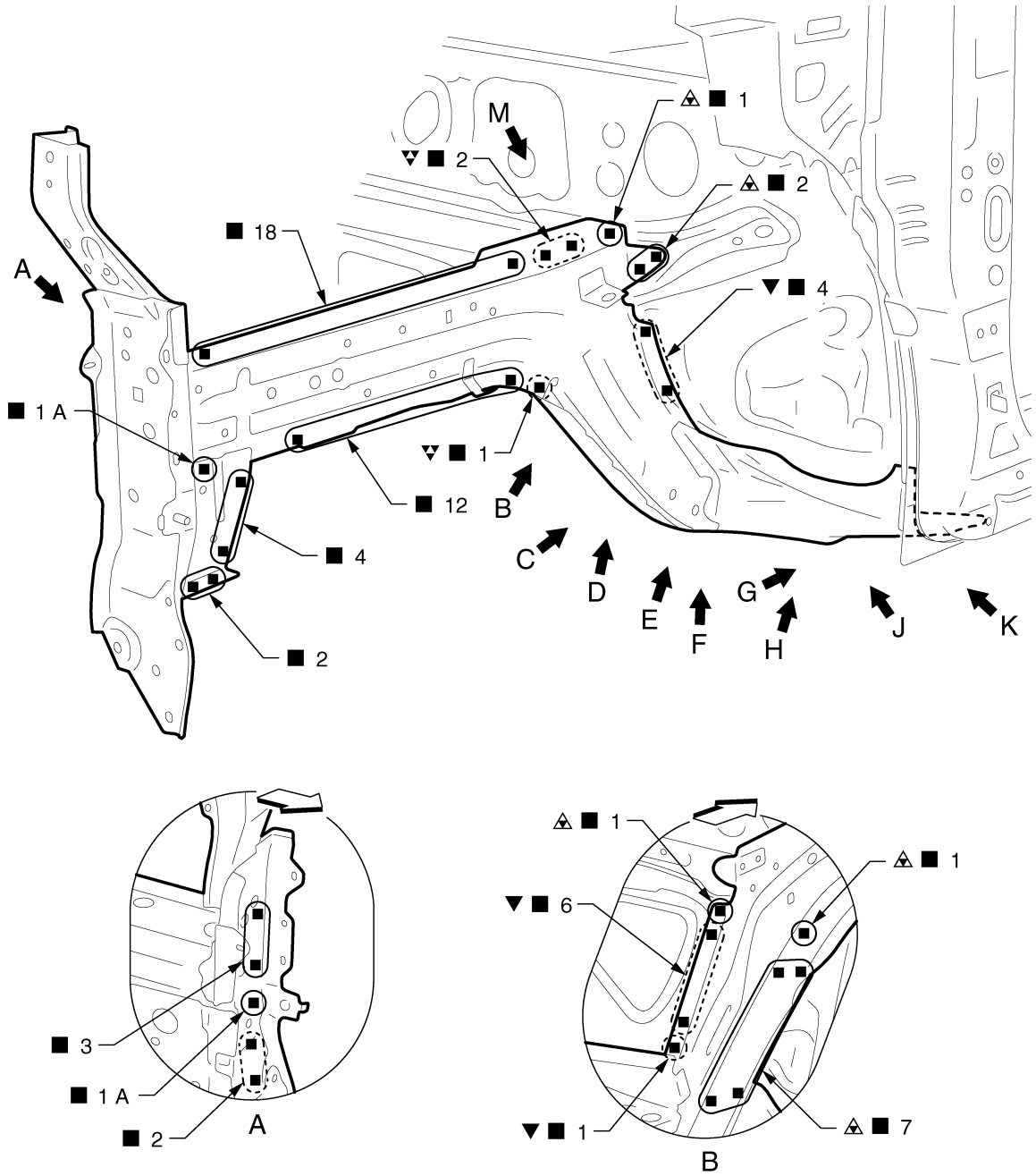
⇦: Vehicle front

View E: Before installing hoodledge reinforcement

## Front Side Member

INFOID:0000000010843507

Work after upper radiator core support assembly and hoodledge are removed.




JSKIA3848ZZ

⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

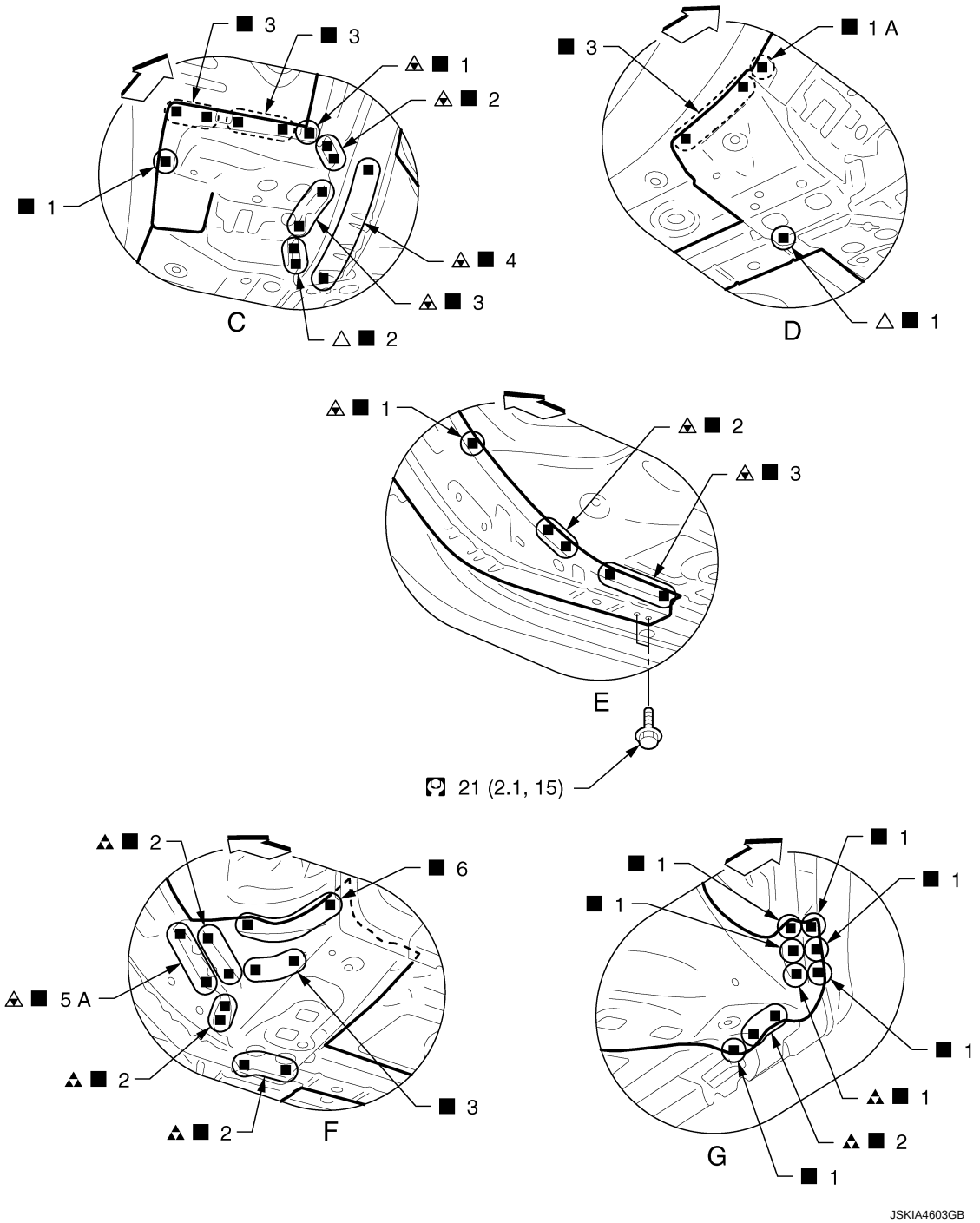
▼▼: Drill ϕ11 mm (0.43 in) hole for the plug welding hole (ultra high strength steel).

△: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

(  ): Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate
- Front side member assembly
- Front suspension mounting bracket




: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

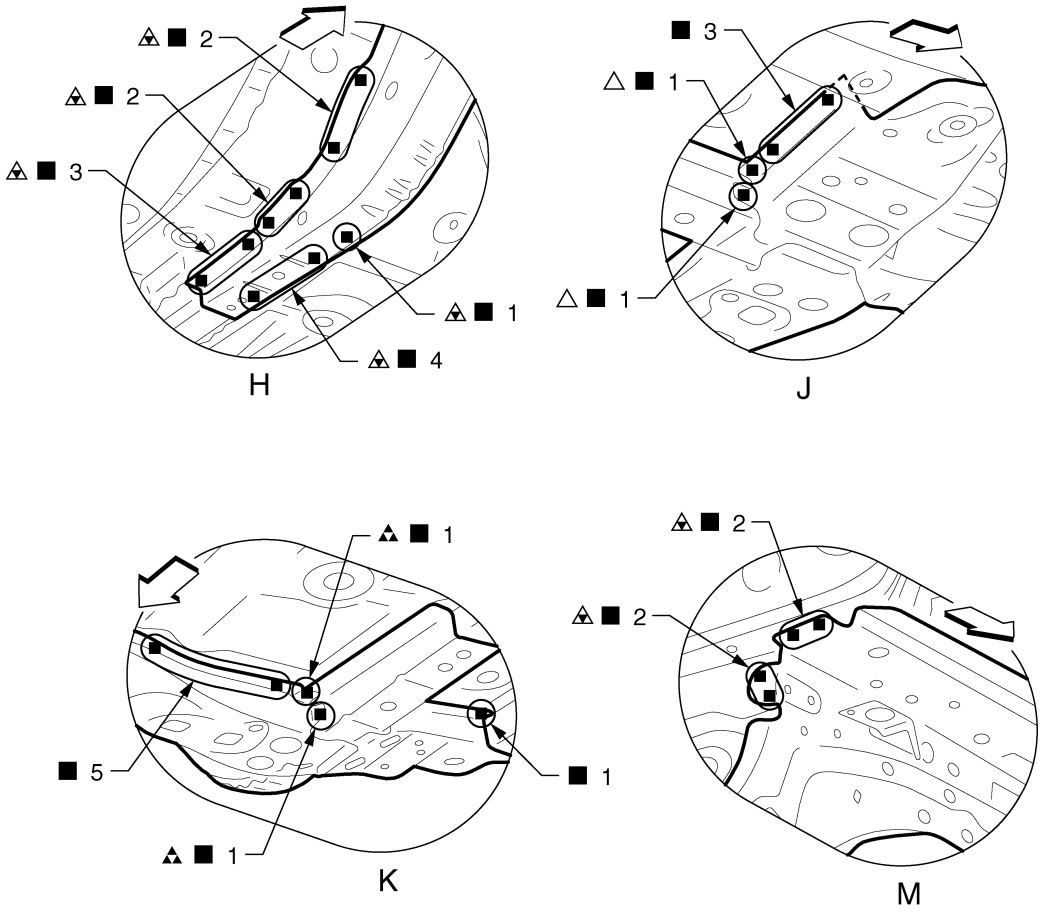
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

▲: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View E: Before installing front suspension mounting bracket




JSKIA3850ZZ

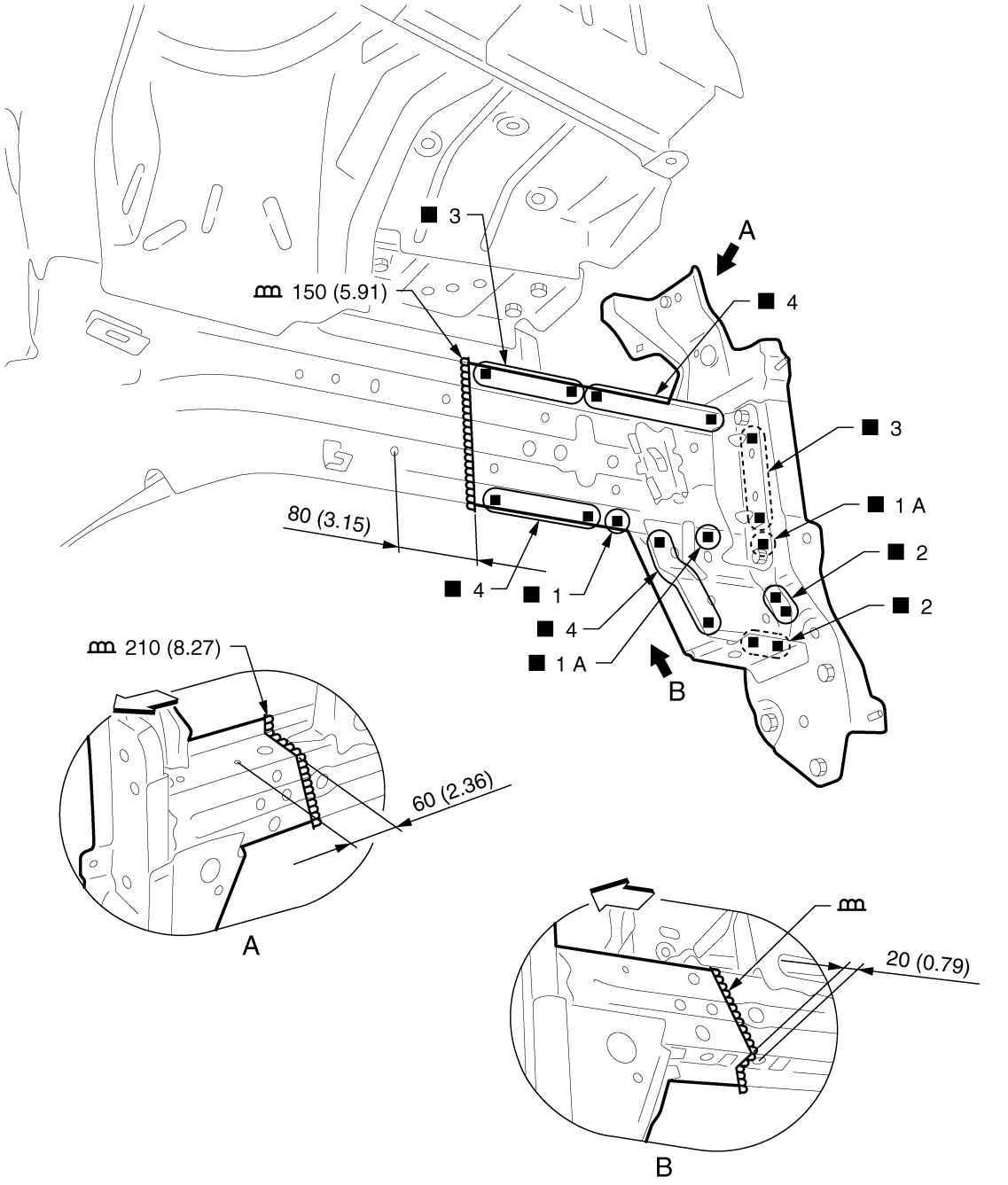
⇦: Vehicle front
△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).
▲: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

View H: Before installing front suspension mounting bracket

## Front Side Member (Partial Replacement)

INFOID:0000000010843508

Work after upper radiator core support assembly and hoodledge connector assembly are removed.




JSKIA4604GB

Unit: mm (in)

⇦: Vehicle front

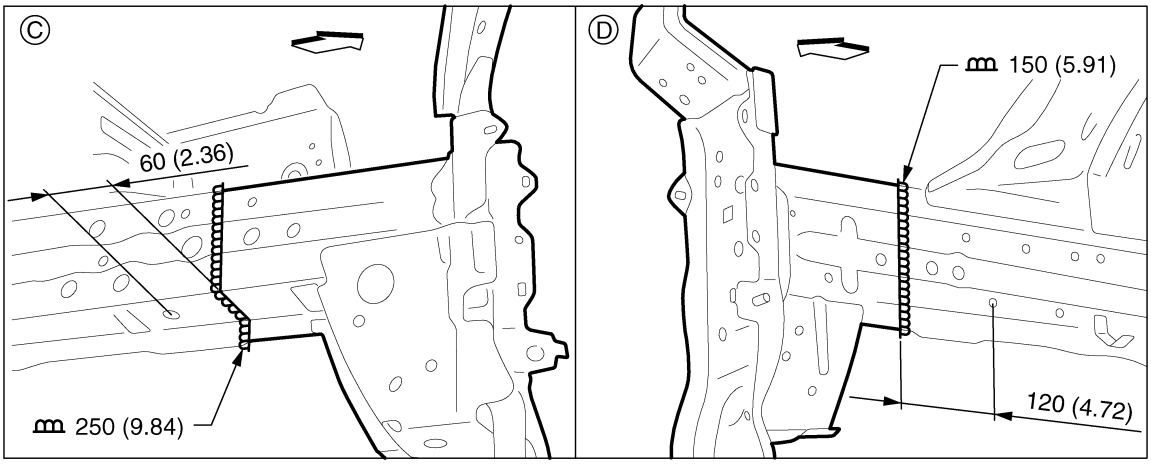
(): Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate (RH)
- Front side member assembly (RH)

POINT

The front side member on the left can also be replaced partially by cutting at the position shown in the figure.




JSKIA3852GB

Ⓒ Front side member assembly cutting position (LH)
Ⓓ Front side member closing plate cutting position (LH)

Unit: mm (in)

⇦: Vehicle front

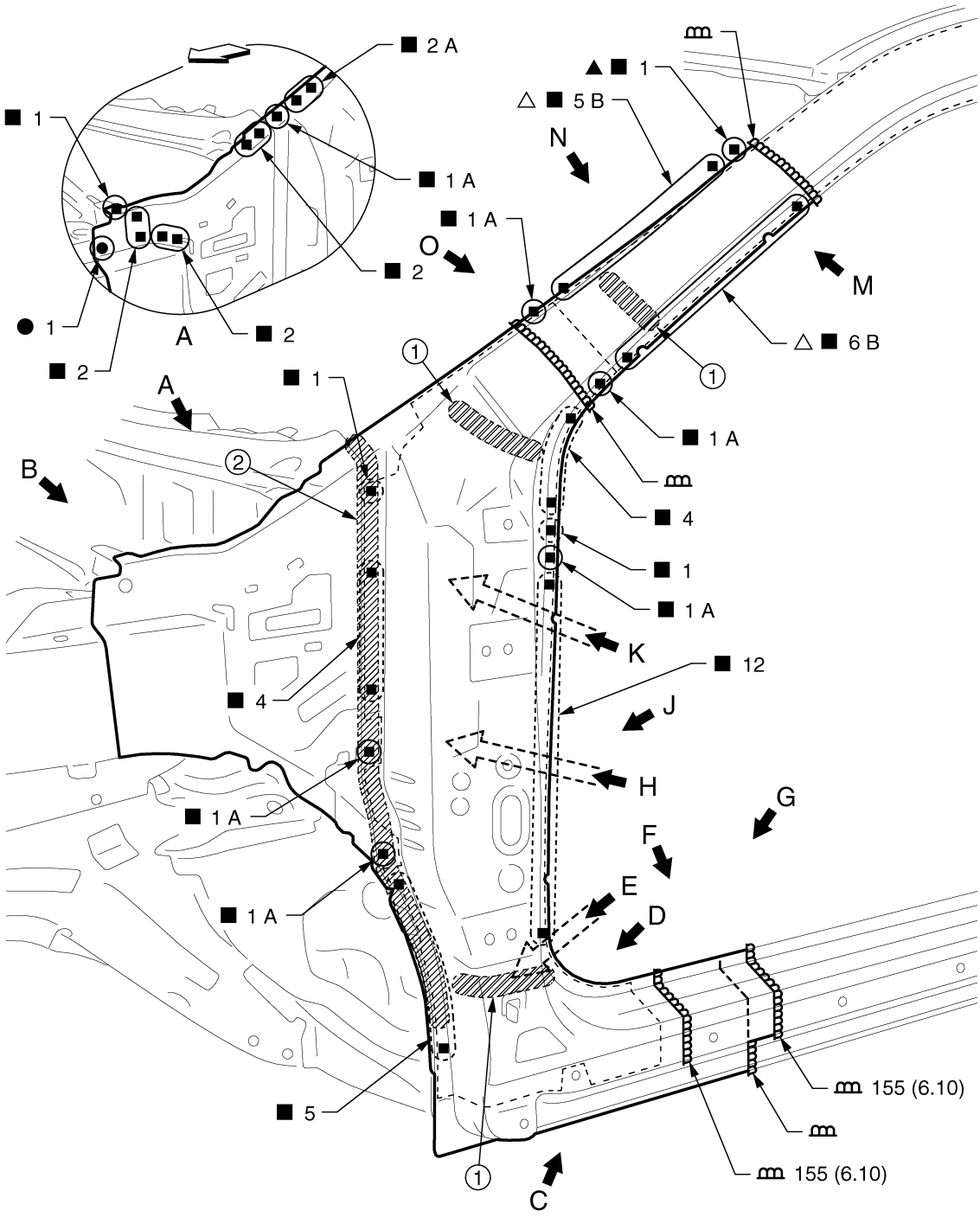
Replacement part

- Front side member closing plate (LH)
- Front side member assembly (LH)

## Front Pillar

INFOID:0000000011010381

Work after hoodledge reinforcement is removed.




① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

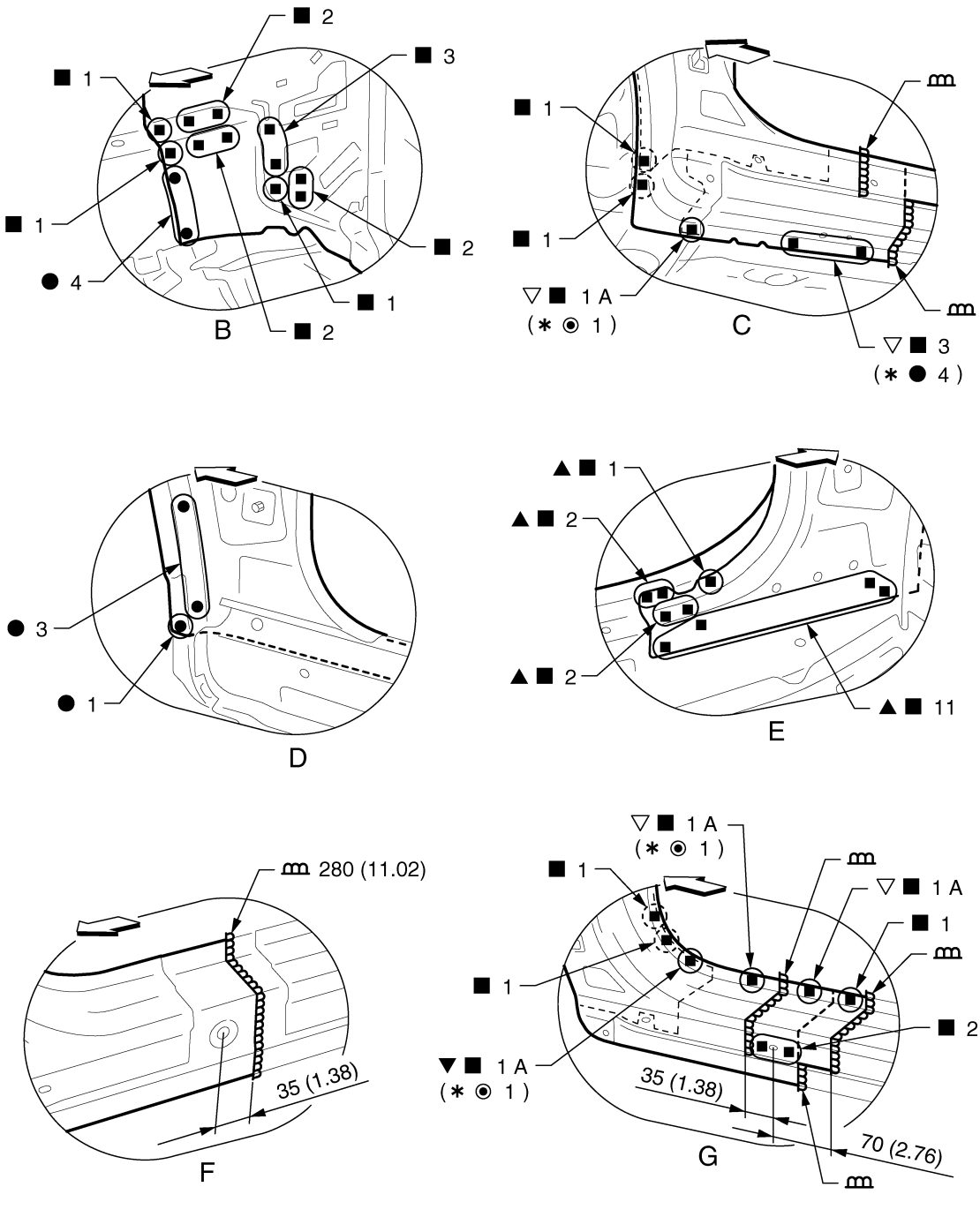
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

(◌): Weld the parts onto the back of the component part.

Replacement part

- Side body assembly
- Upper inner front pillar
- Side dash




JSKIA4606GB

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

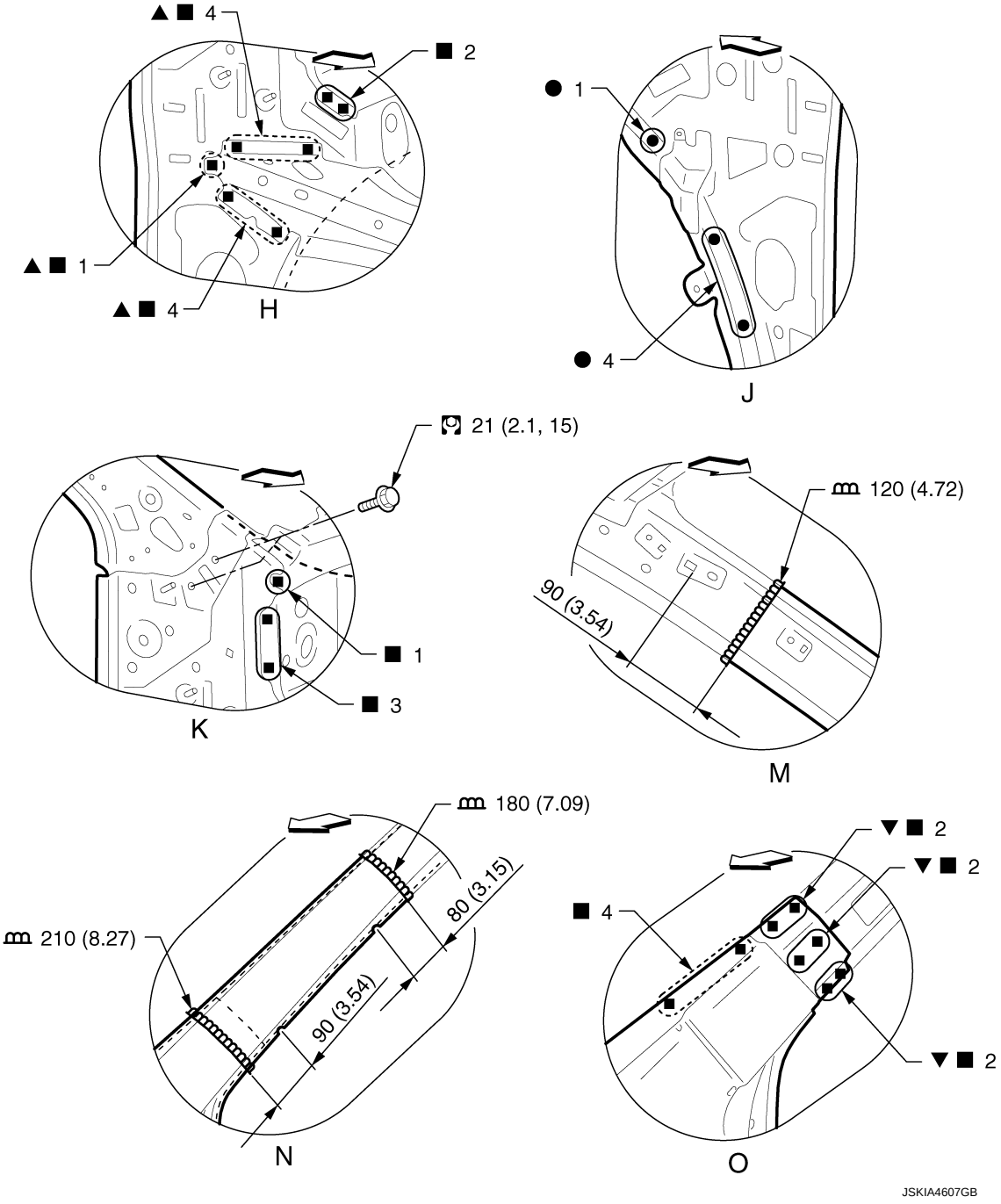
▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

View D: Before installing side body assembly
View F: Before installing outer front side body




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

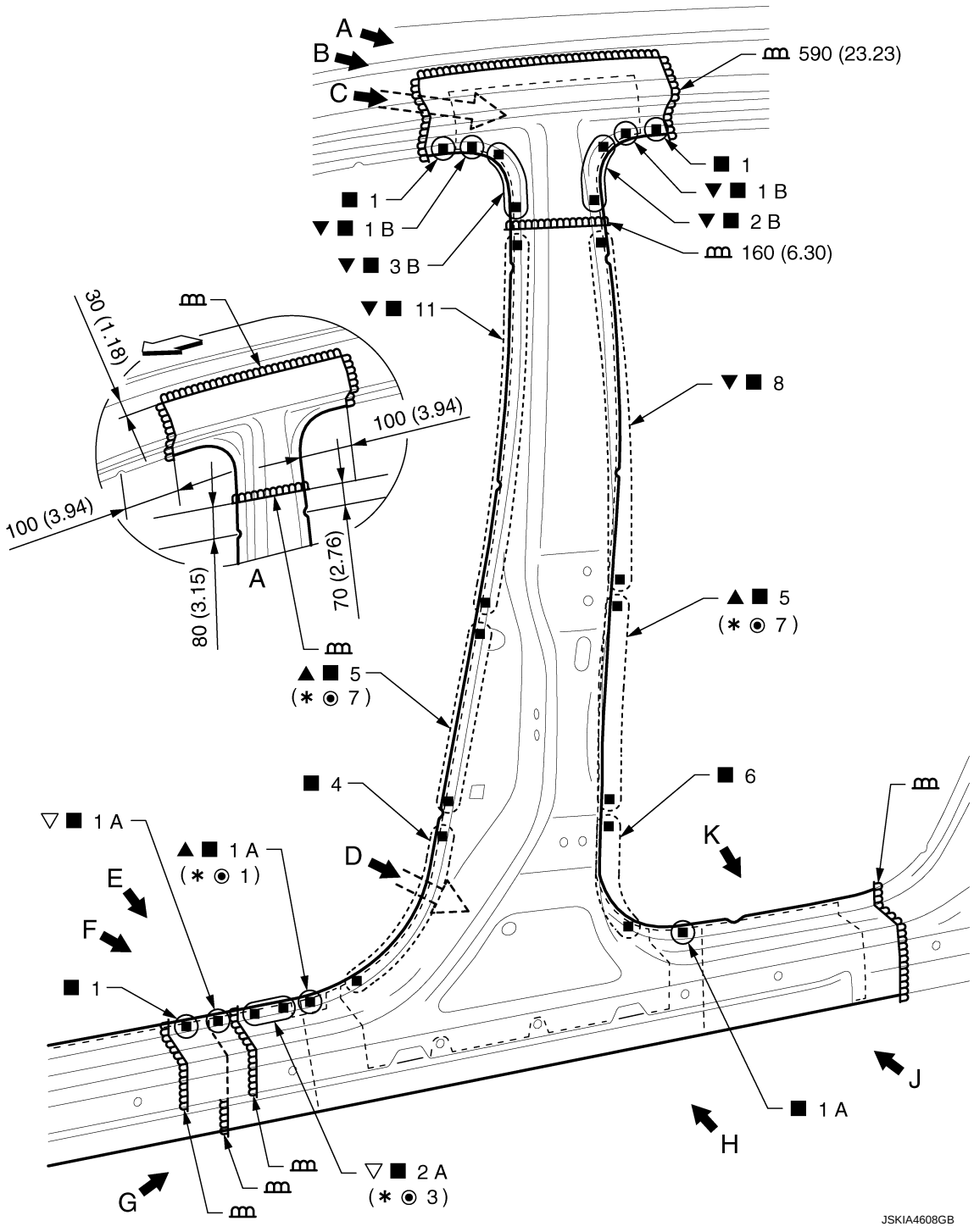
◌: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View H and J: Before installing side body assembly
View O: Before installing outer front side body

## Center Pillar

INFOID:0000000010843510




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

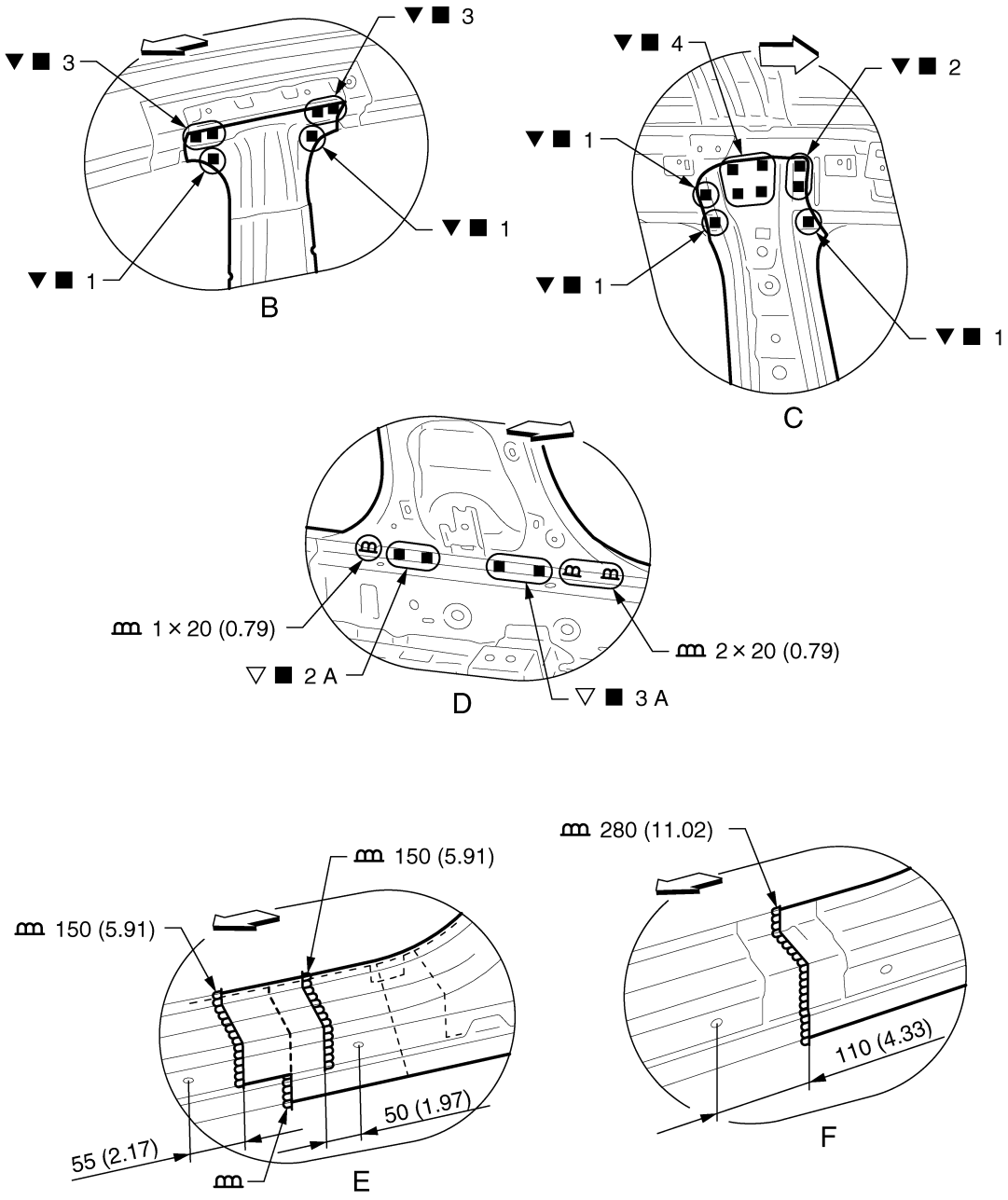
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

Replacement part

- Side body assembly
- Inner center pillar assembly



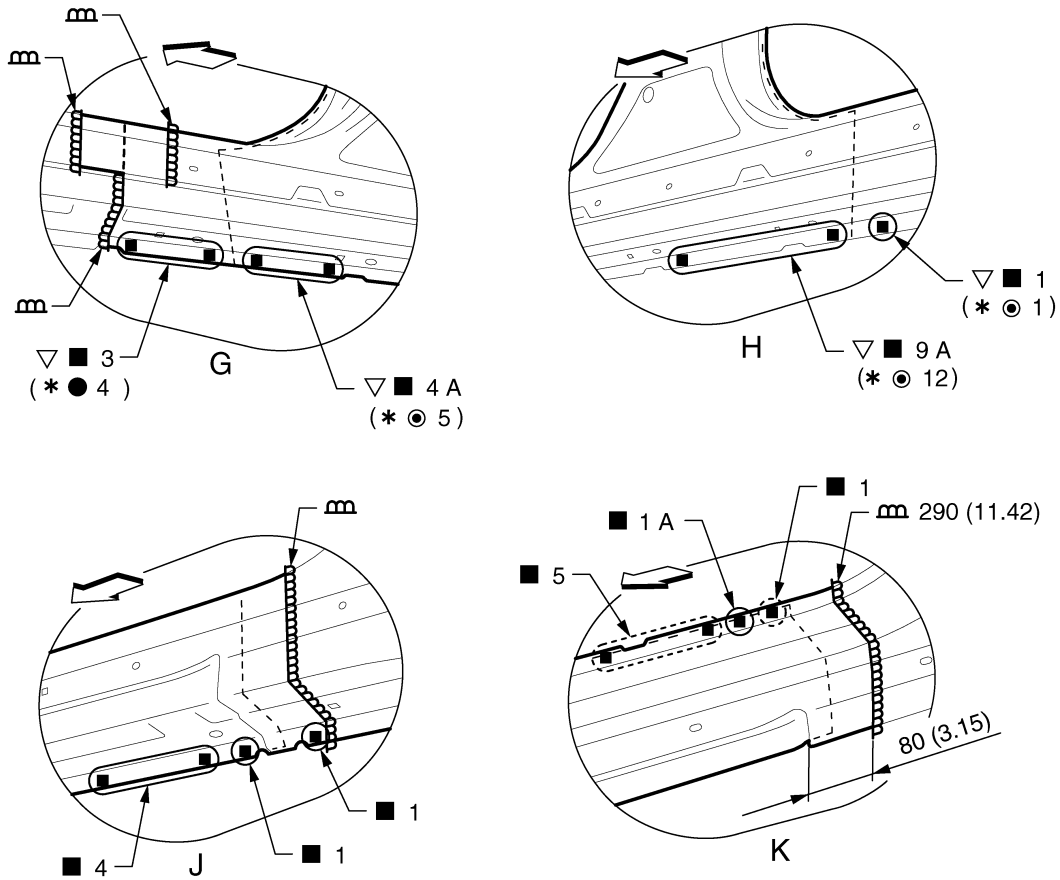

Unit: mm (in)

⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

View B and F: Before installing outer front side body




JSKIA4609GB

Unit: mm (in)

⇦: Vehicle front

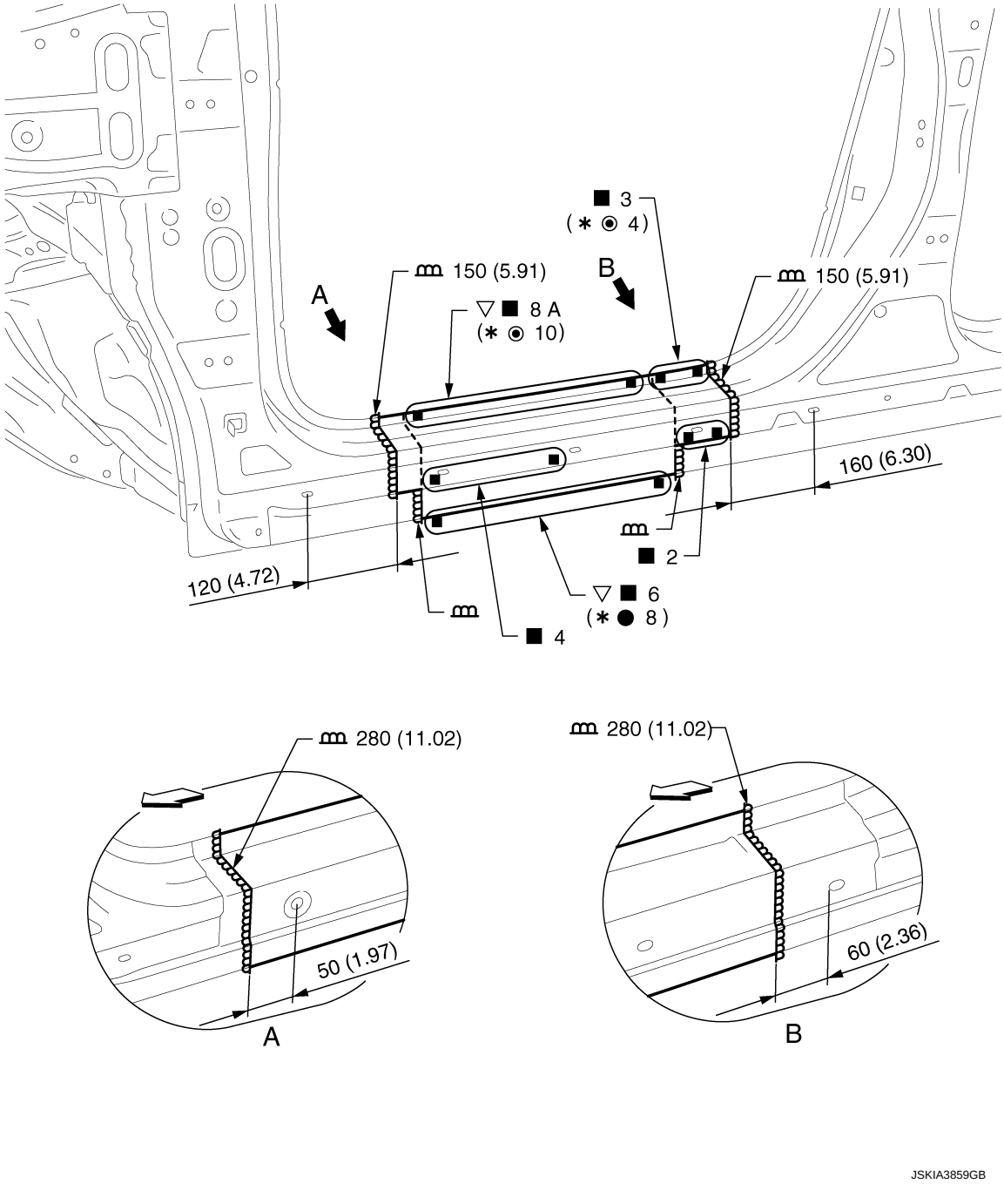
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

## Outer Sill (Partial Replacement)

INFOID:0000000011010382




JSKIA3859GB

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

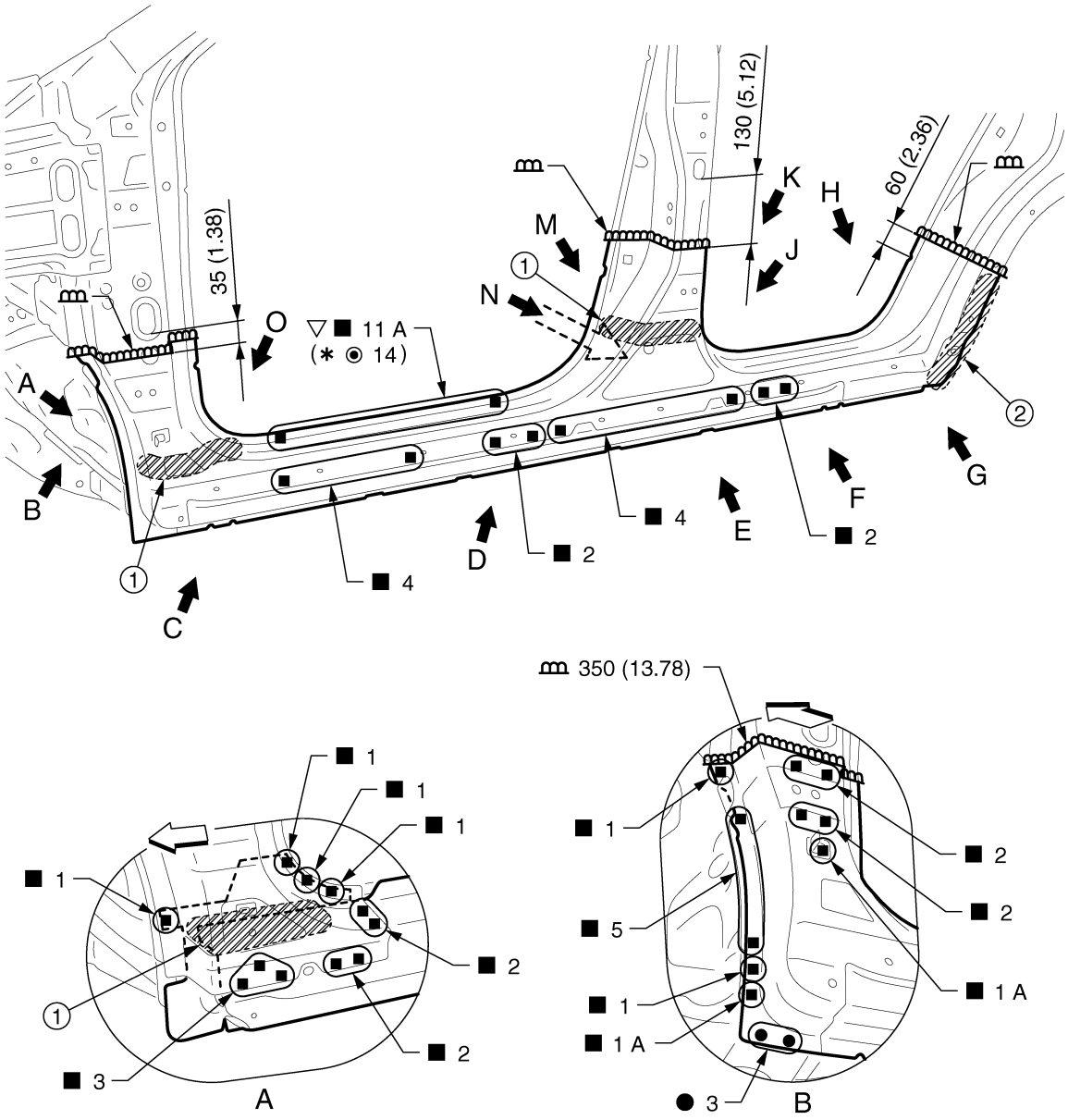
Replacement part

- Outer sill assembly
- Outer sill reinforcement

View A and B: Before installing outer sill assembly

# Outer Sill

INFOID:0000000010843512




JSKIA4925GB

① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

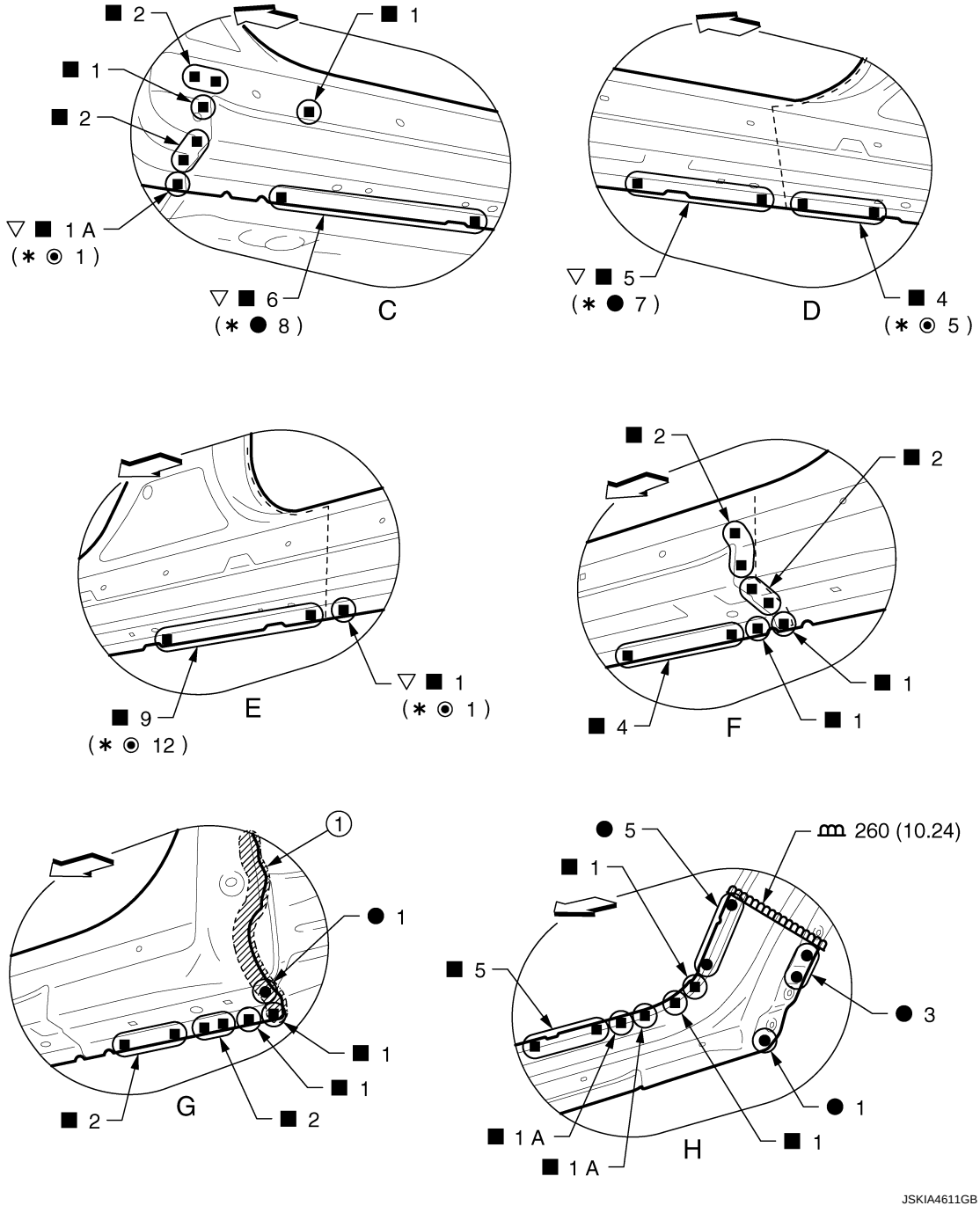
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

Replacement part

- Outer sill assembly
- Outer sill reinforcement
- Front fender bracket assembly

View A: Before installing outer sill assembly and front fender bracket assembly



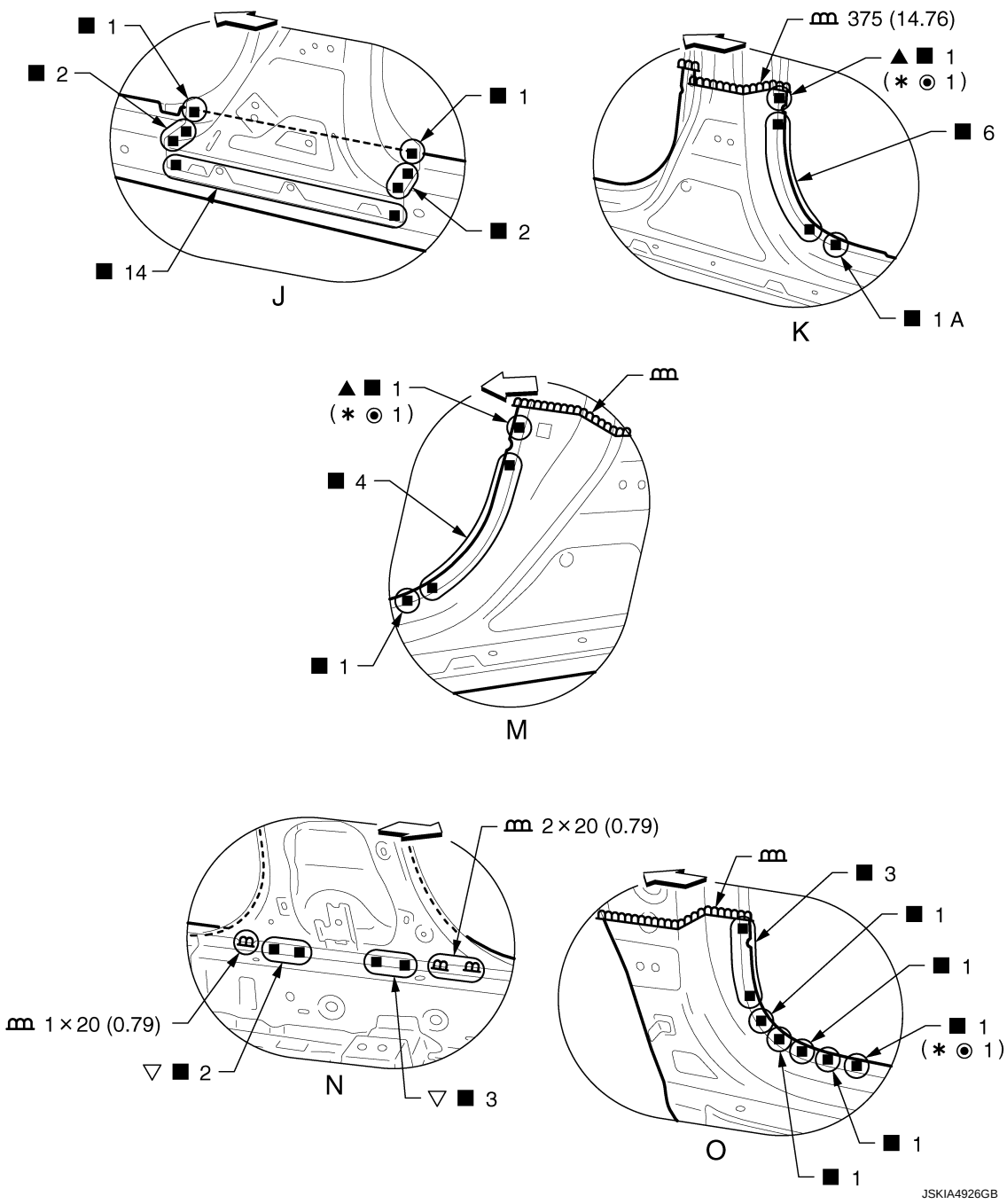

① Body sealing

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

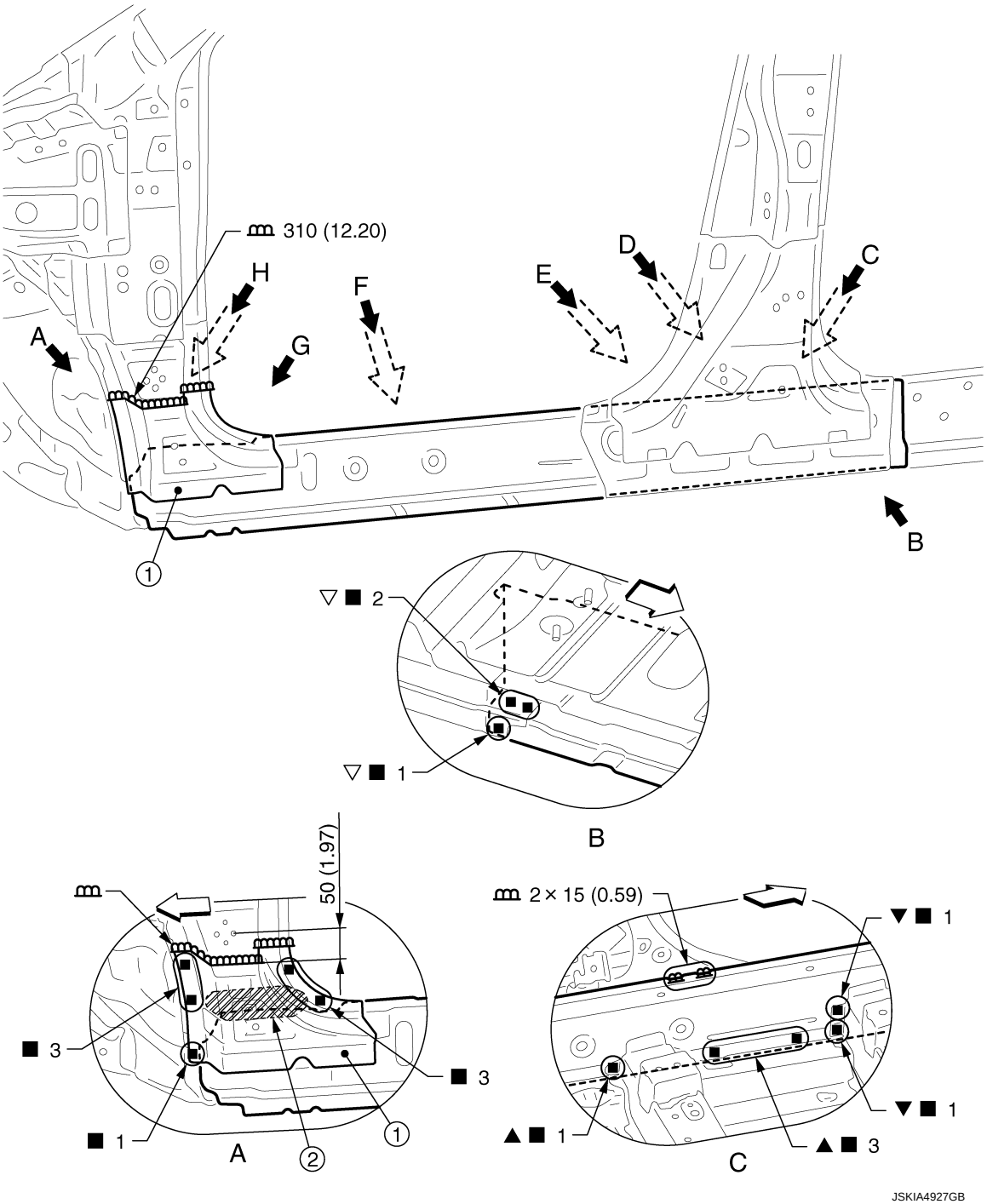
∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

View J: Before installing outer sill assembly and front fender bracket assembly

## Inner Sill

INFOID:0000000011010468

Work after outer sill assembly and outer sill reinforcement are removed.




① Lower front pillar hinge brace (reusable) ② Urethane foam

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

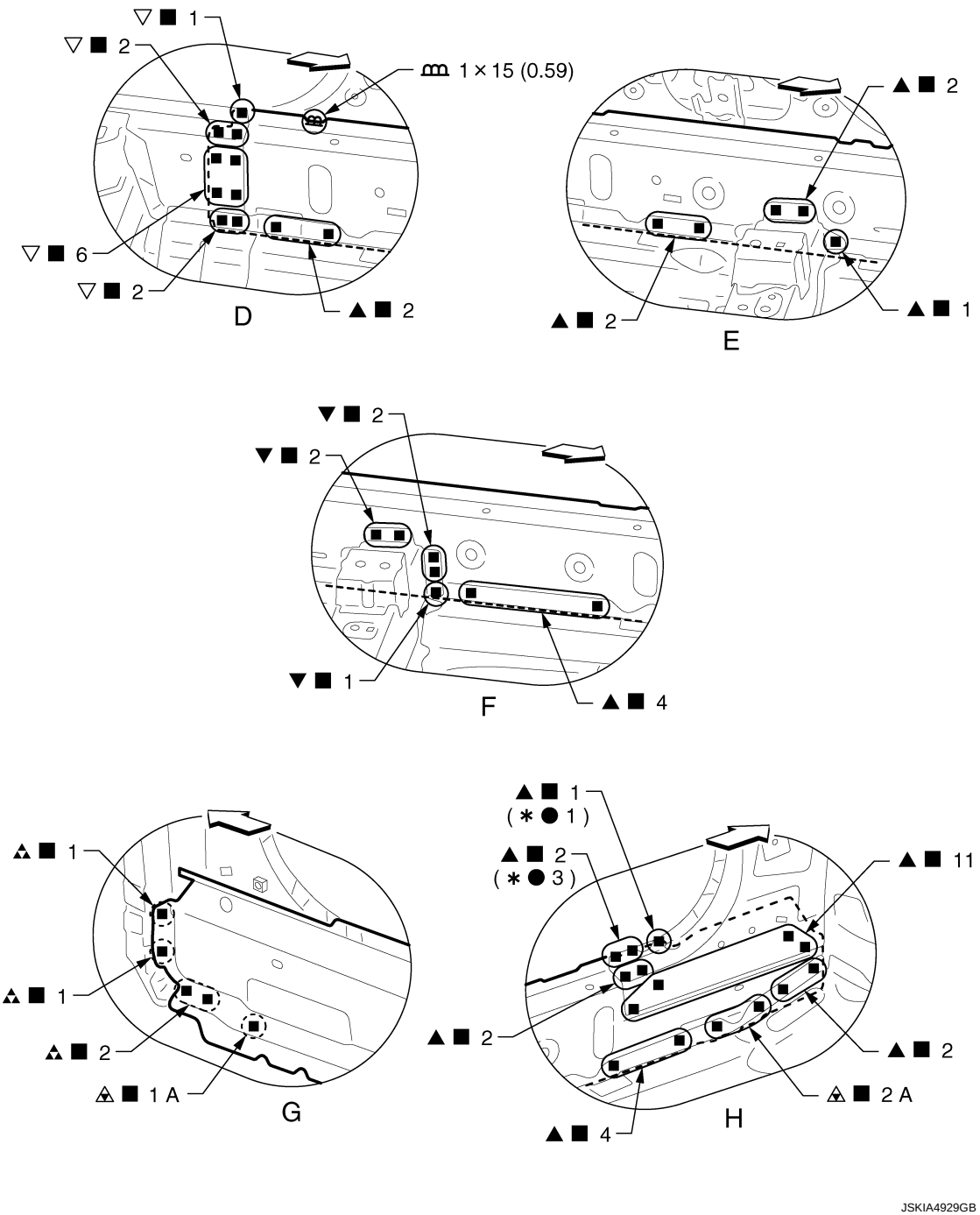
▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

Replacement part

- Inner sill

View A: Before installing outer sill assembly and front fender bracket assembly




JSKIA4929GB

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

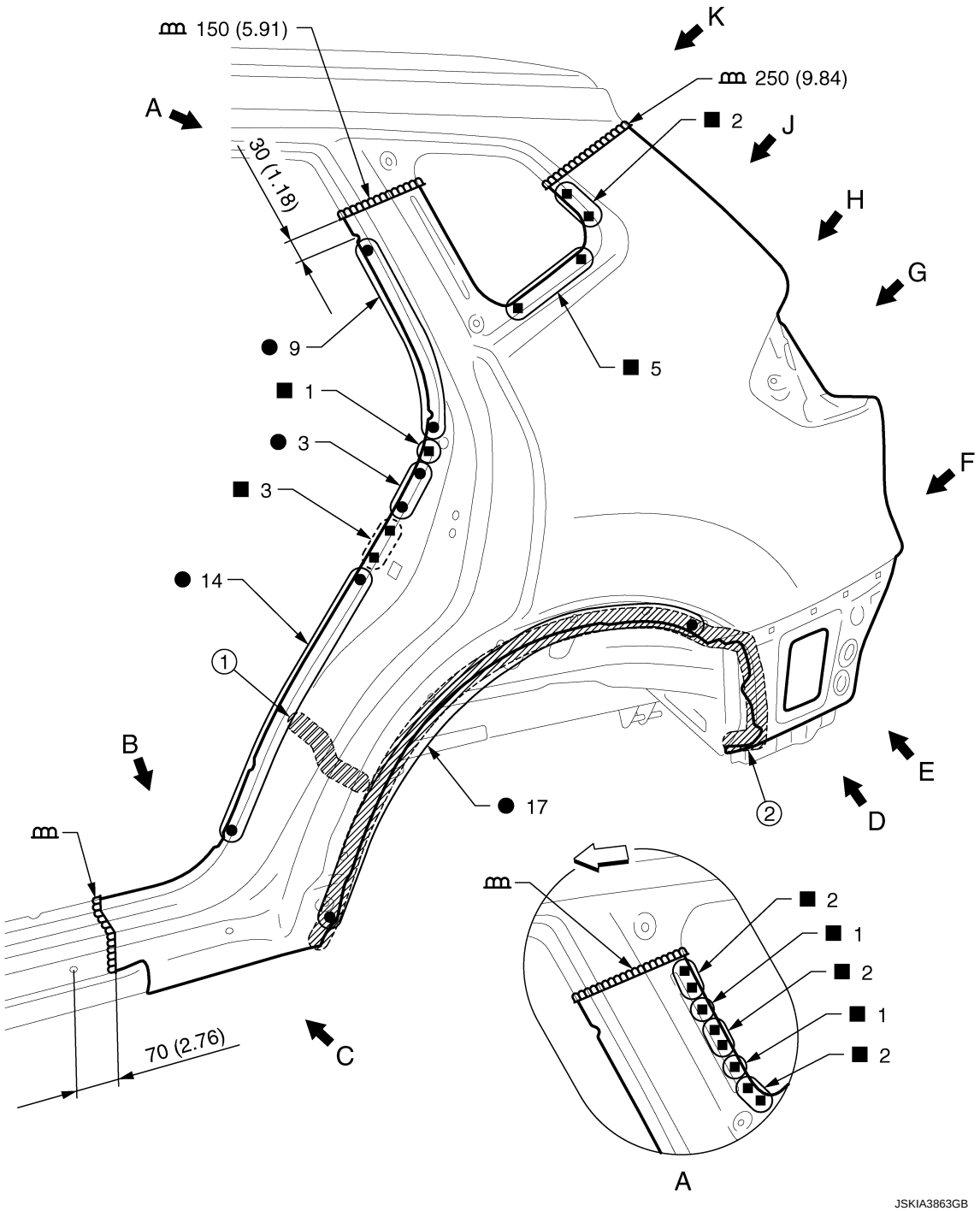
△: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

(‾): Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-108, "Welding of Ultra High Strength Steel"

# Rear Fender

INFOID:0000000010843513




① Urethane foam ② Body sealing

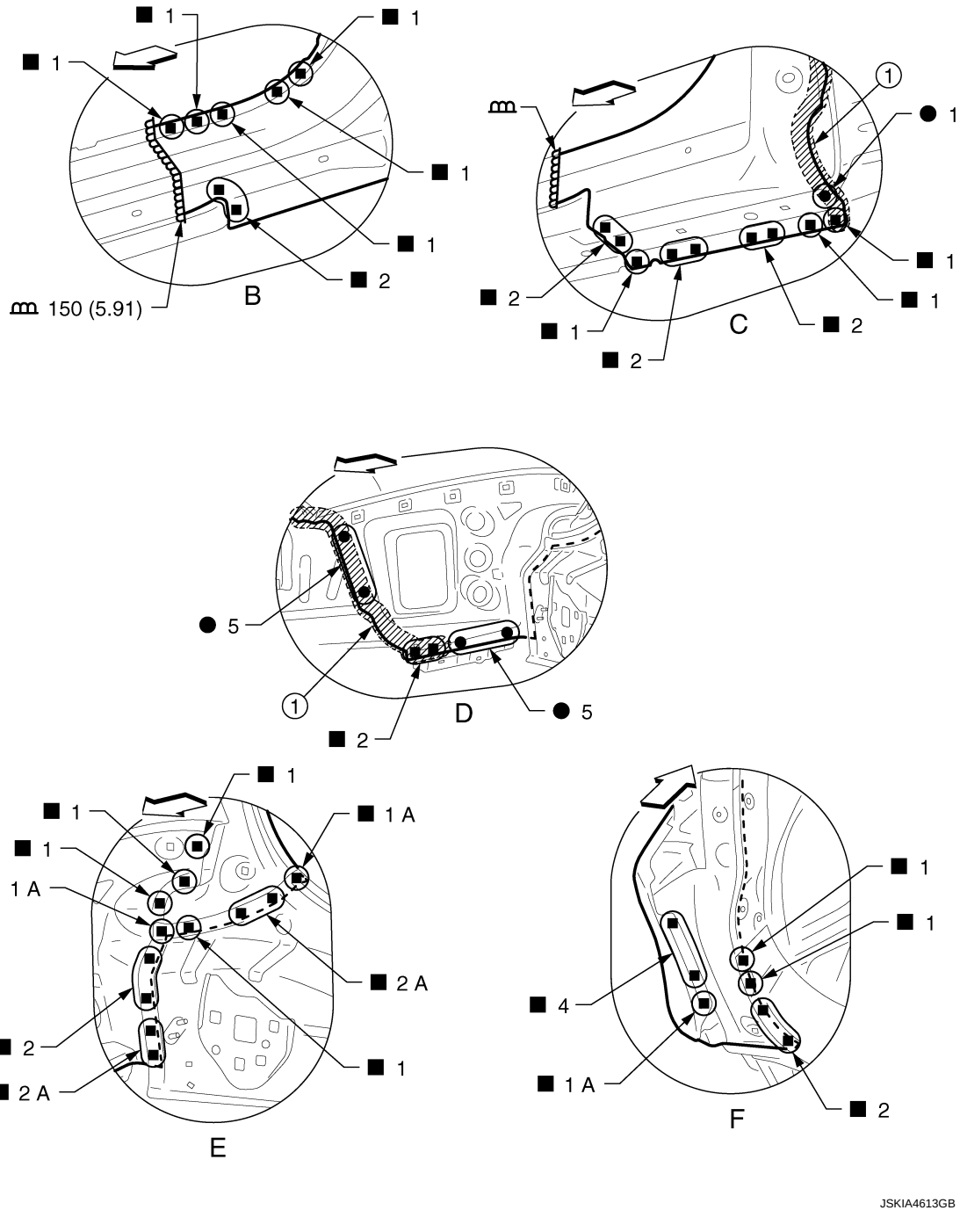
Unit: mm (in)

⇦: Vehicle front

(◌): Weld the parts onto the back of the component part.

Replacement part

- Rear fender assembly

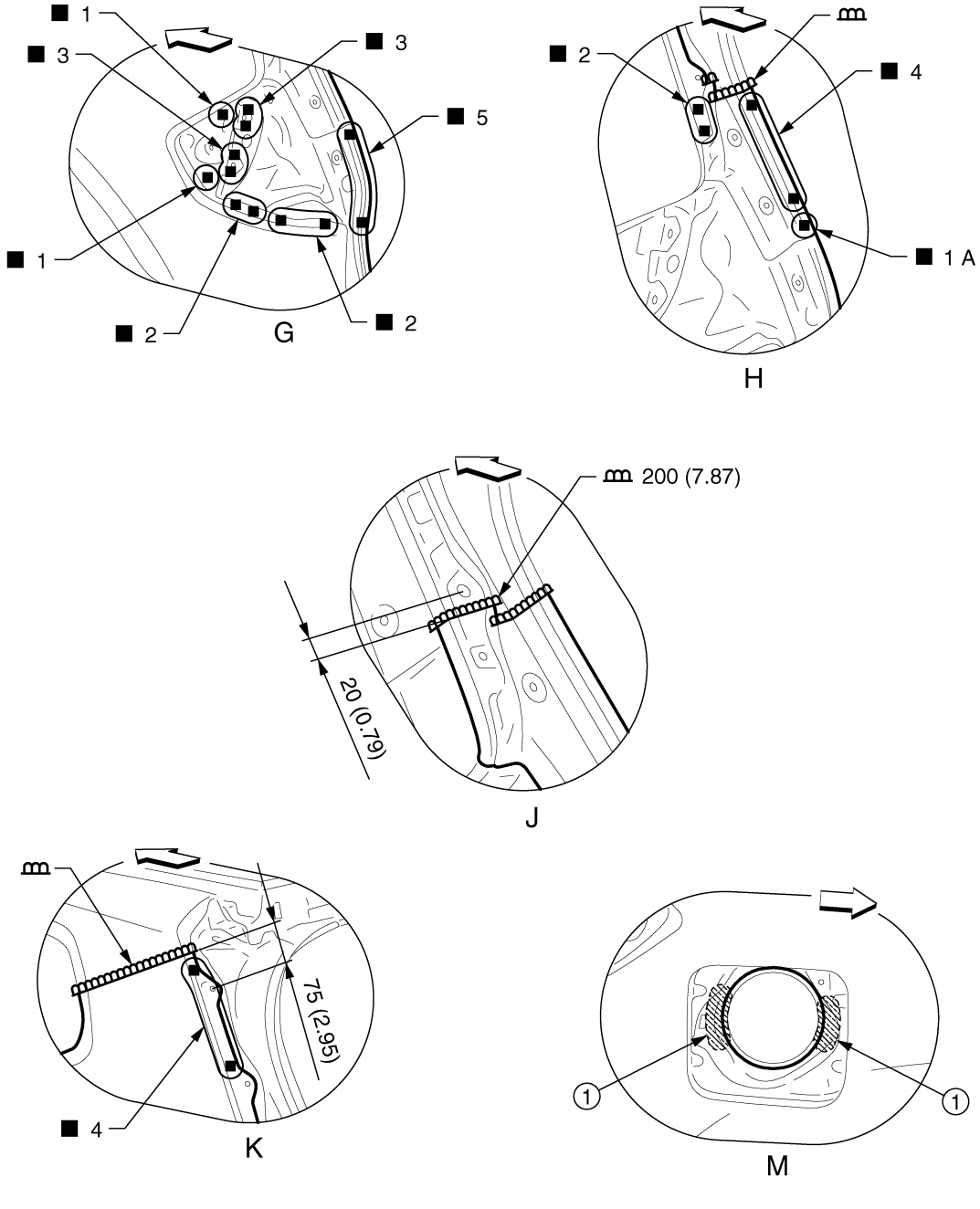



JSKIA4613GB

① Body sealing

Unit: mm (in)

⇦: Vehicle front




JSKIA3865GB

① Adhesive

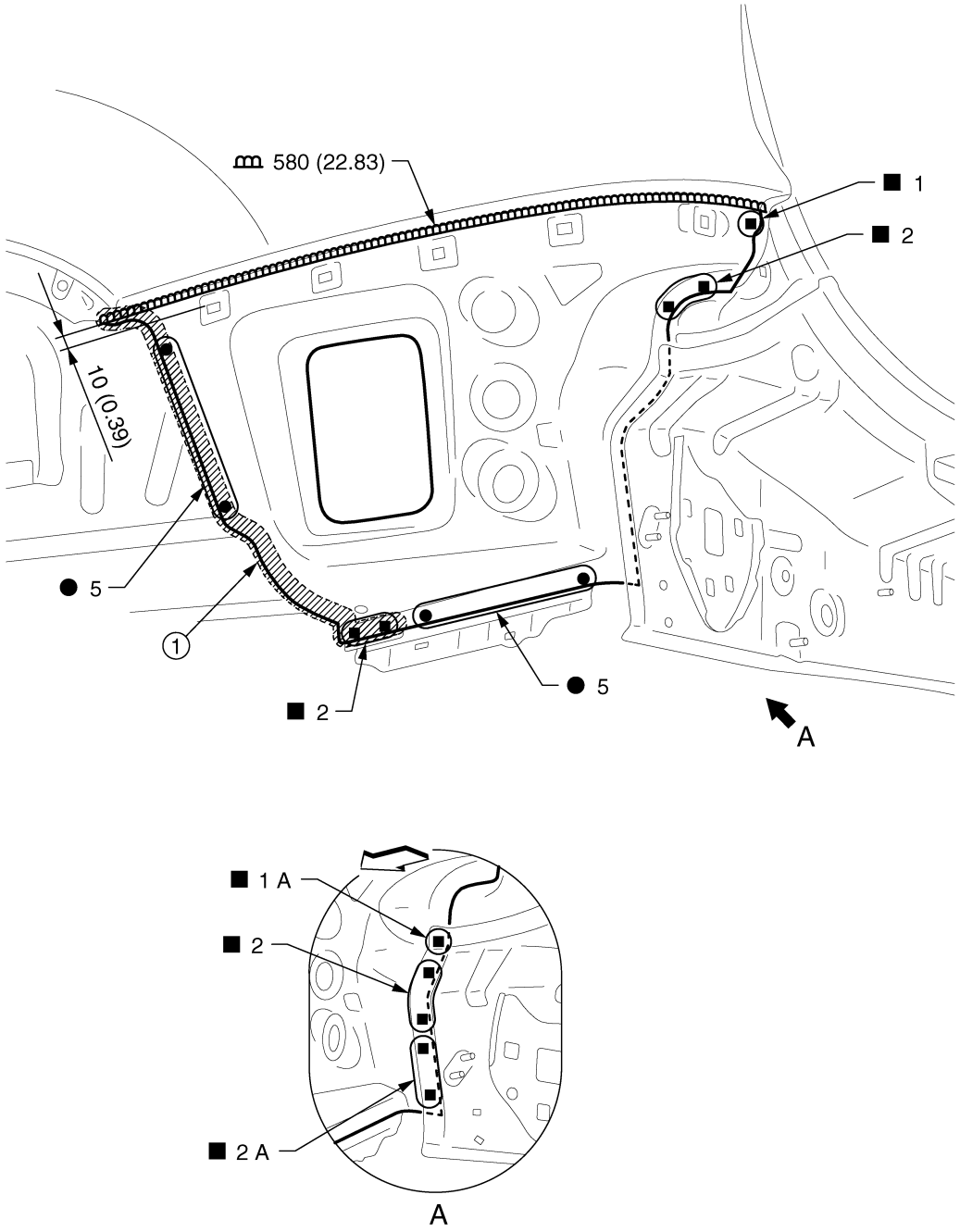
Unit: mm (in)

⇦: Vehicle front

View J: Before installing rear fender
View M: Right side rear fender

## Rear Fender Extension

INFOID:0000000011005437




JSKIA4930GB

① Body sealing

Unit: mm (in)

⇦: Vehicle front

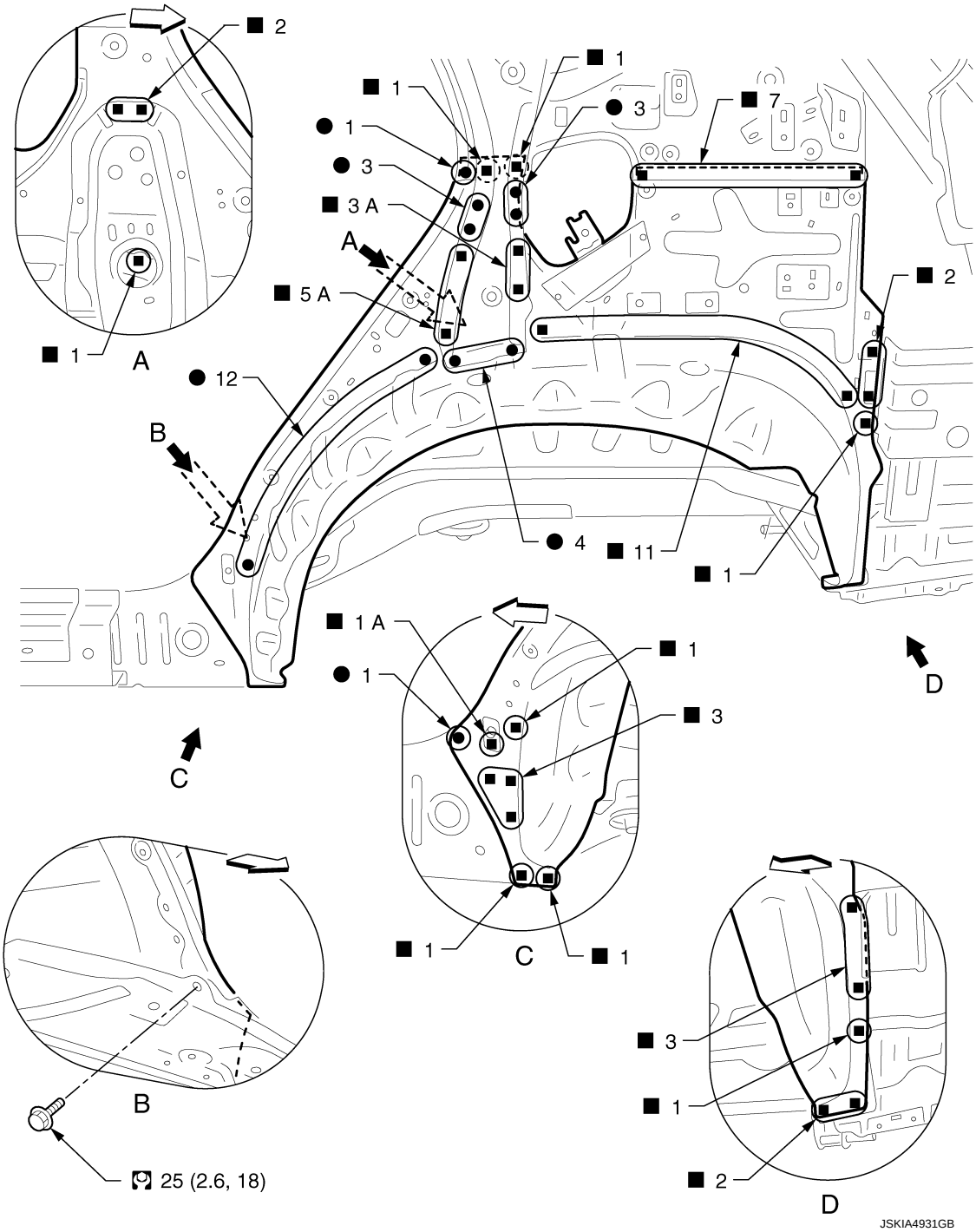
Replacement part

- Rear fender extension

## Outer Rear Wheelhouse

INFOID:0000000011005438

Work after rear fender is removed.




: Vehicle front

: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

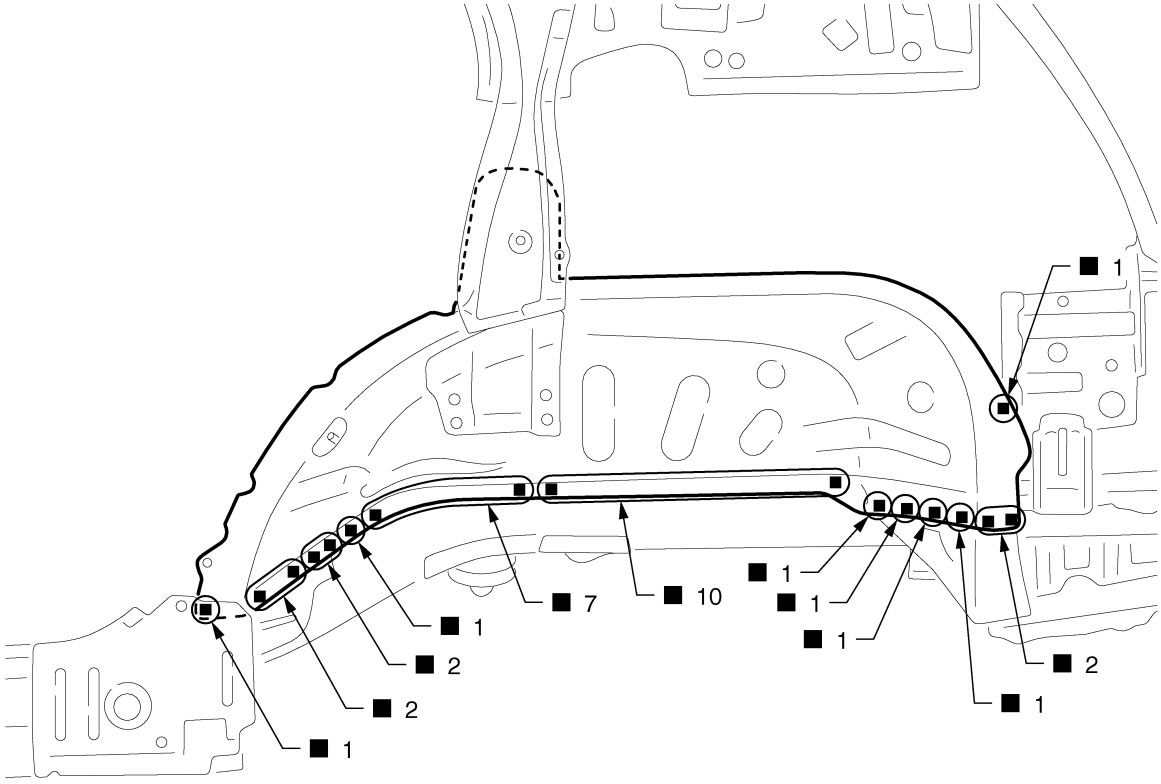
Replacement part

- Outer rear wheelhouse

## Inner Rear Wheelhouse

*INFOID:0000000011005439*

Work after rear fender and outer rear wheelhouse are removed.




JSKIA4932ZZ

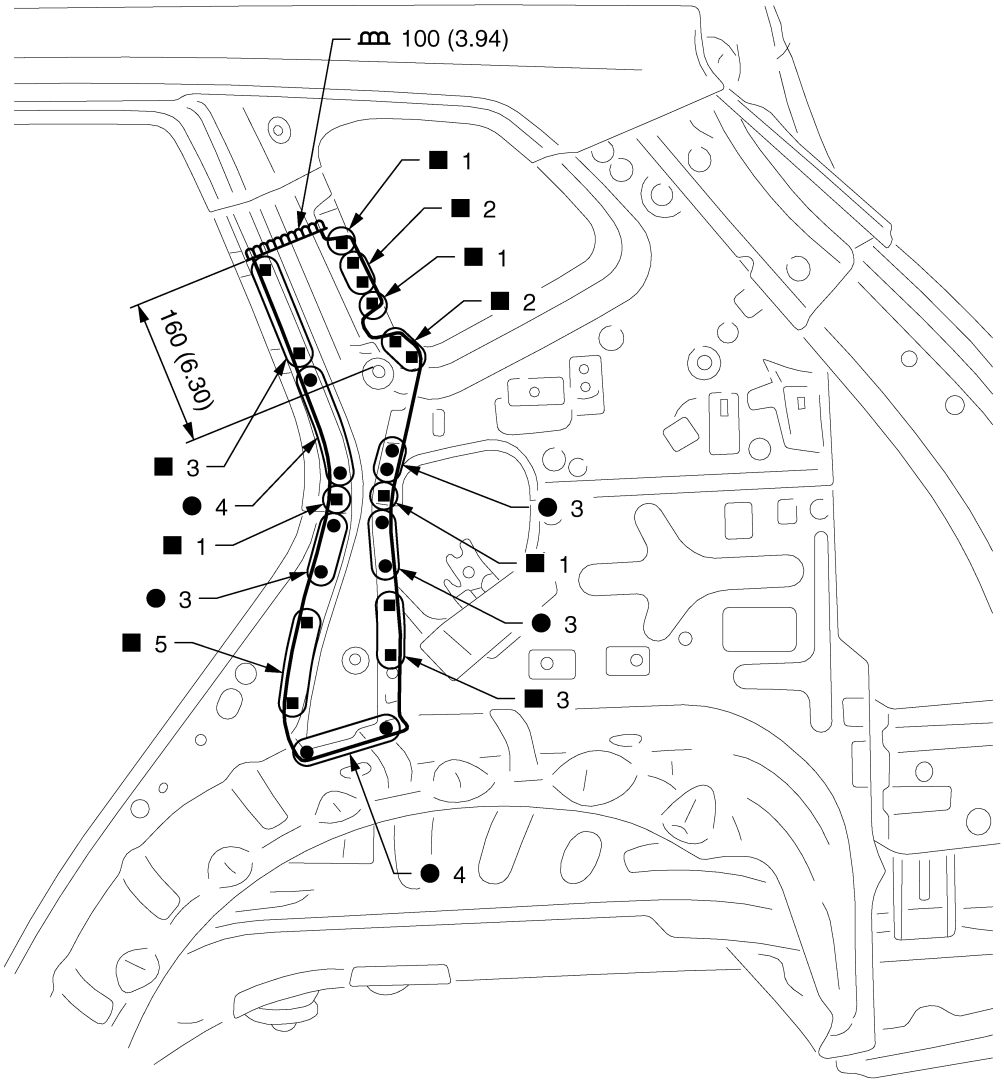
Replacement part

- Inner rear wheelhouse

## Inner Rear Pillar Reinforcement

INFOID:0000000011005440

Work after rear fender is removed.




JSKIA4933GB

Unit: mm (in)

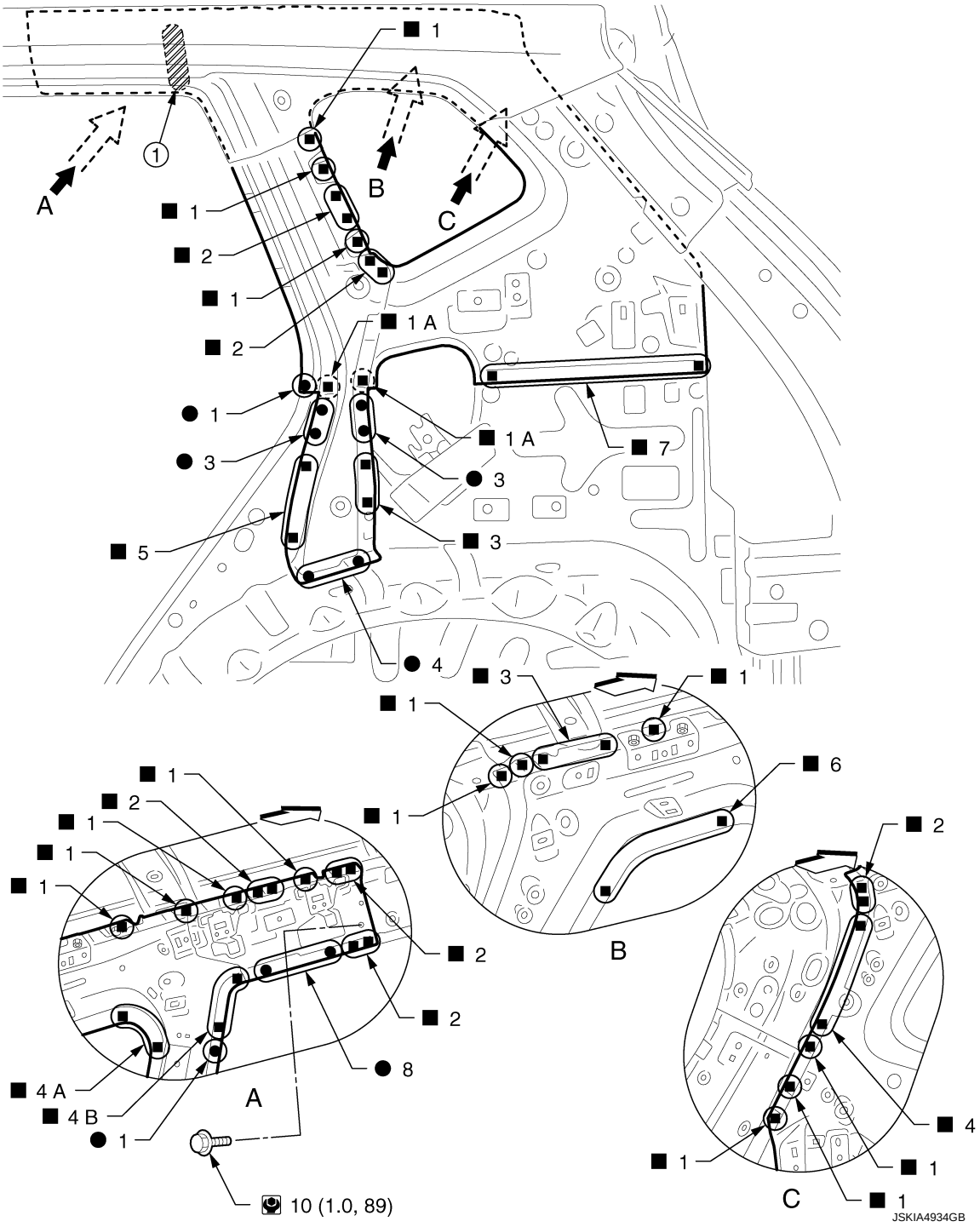
Replacement part

- Upper rear pillar reinforcement

## Inner Rear Pillar

INFOID:0000000011005441

Work after rear fender is removed.




① Urethane foam

⇦: Vehicle front

(dashed circle): Weld the parts onto the back of the component part.

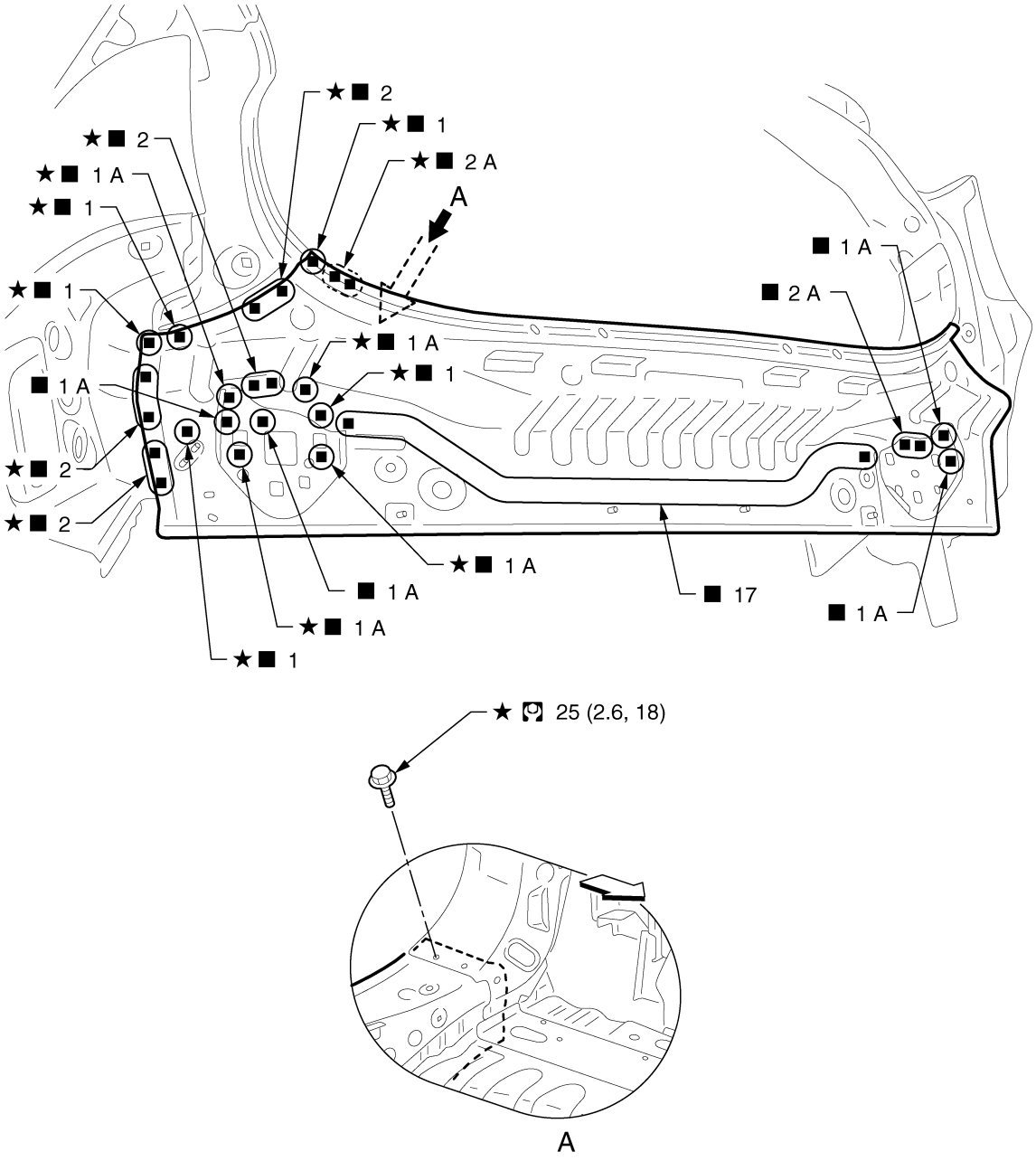
: N·m (kg-m, in-lb)

Replacement part

- Inner rear pillar
- Upper rear pillar reinforcement

## Rear Panel

INFOID:0000000010843514




⇦: Vehicle front

★: Welding method, the number of welding points, and the tightening torque apply to both side of the vehicle.

◌: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

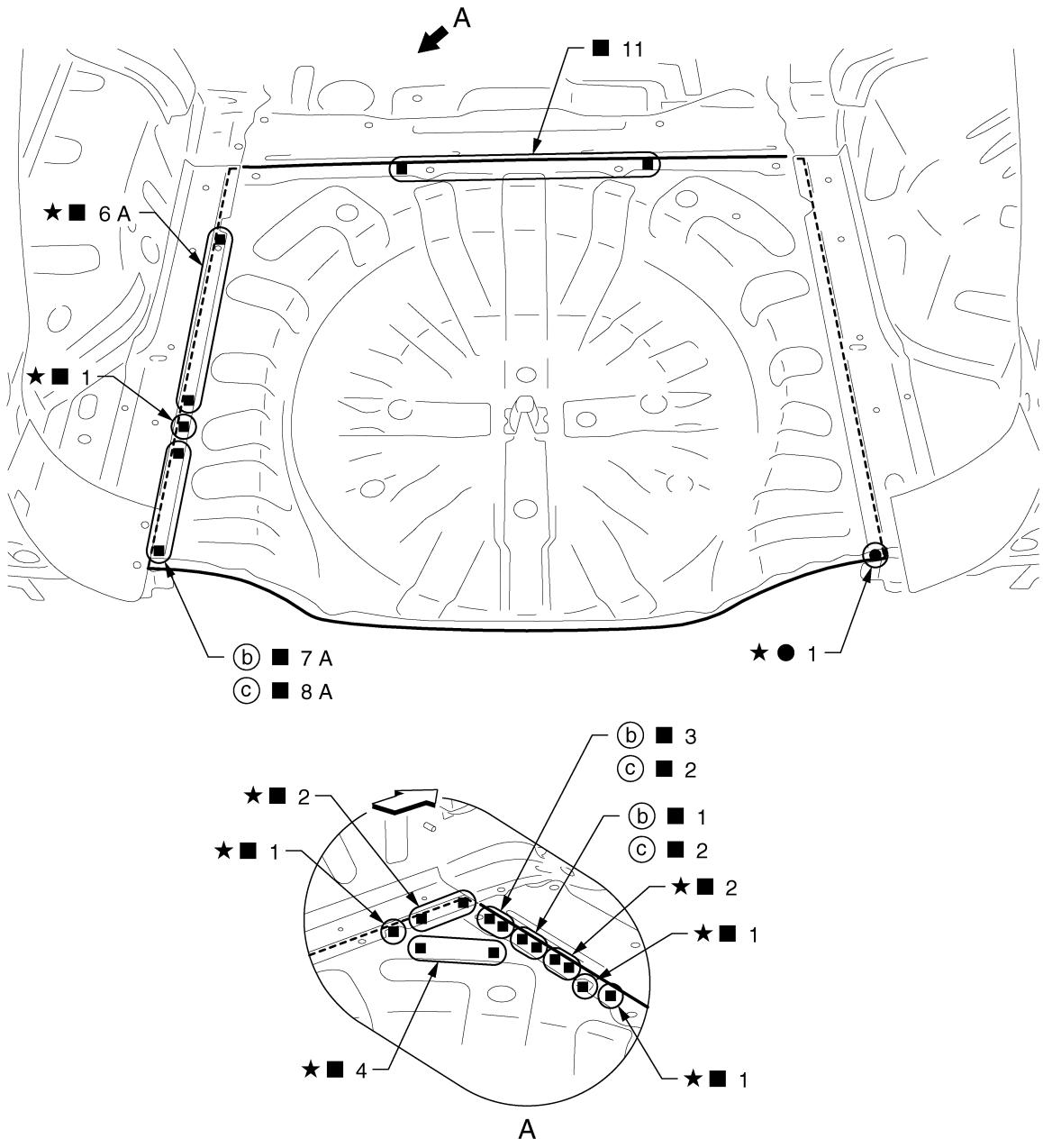
Replacement part

- Upper rear panel

## Rear Floor Rear

INFOID:0000000010843515

Work after rear panel is removed.




JSKIA3869ZZ

ⓑ Left side ⓒ Right side

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

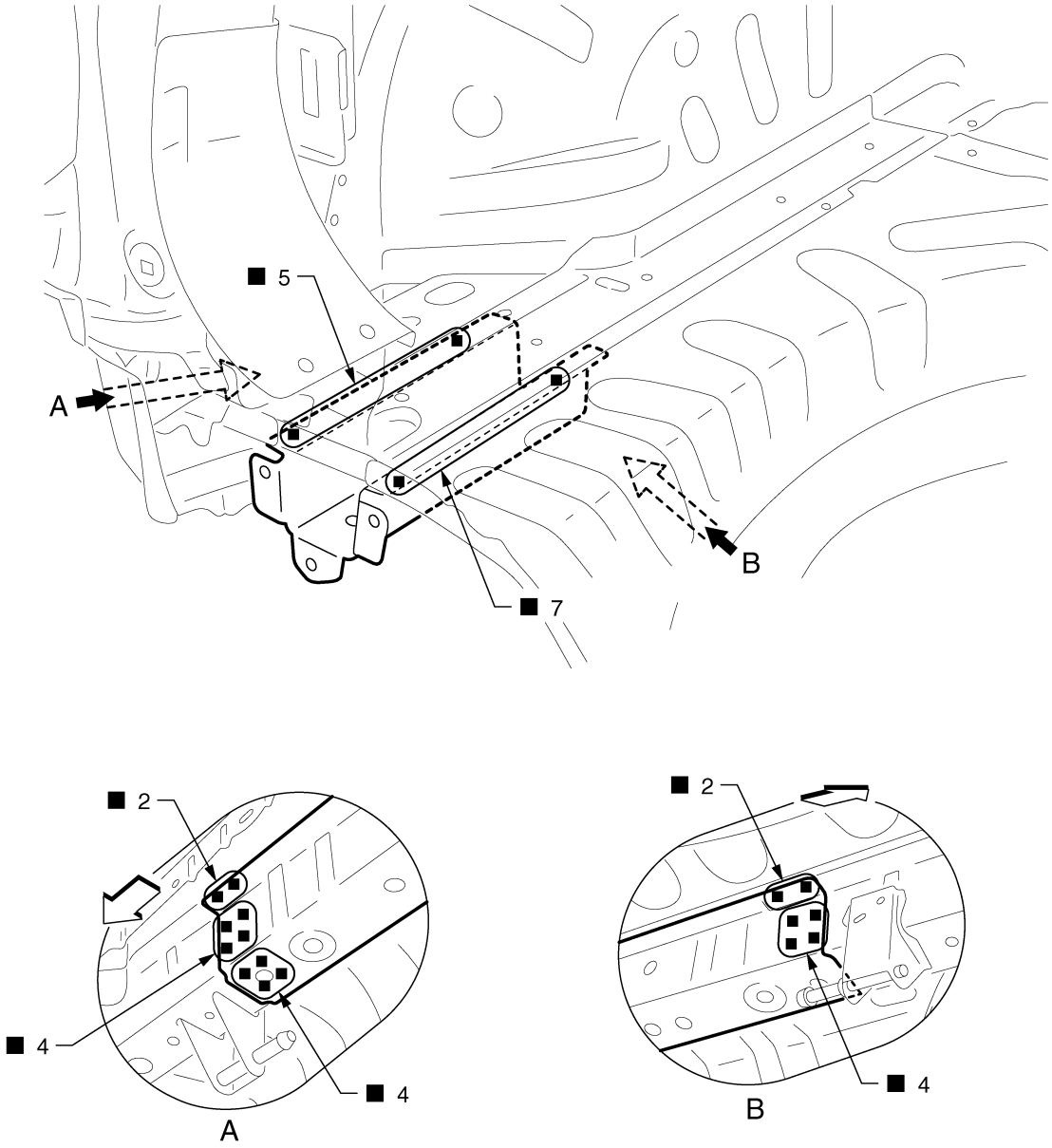
Replacement part

- Rear floor rear

## Rear Side Member Extension (SUV Models)

INFOID:0000000010843516

Work after rear panel is removed.




JSKIA3872ZZ

⇦: Vehicle front

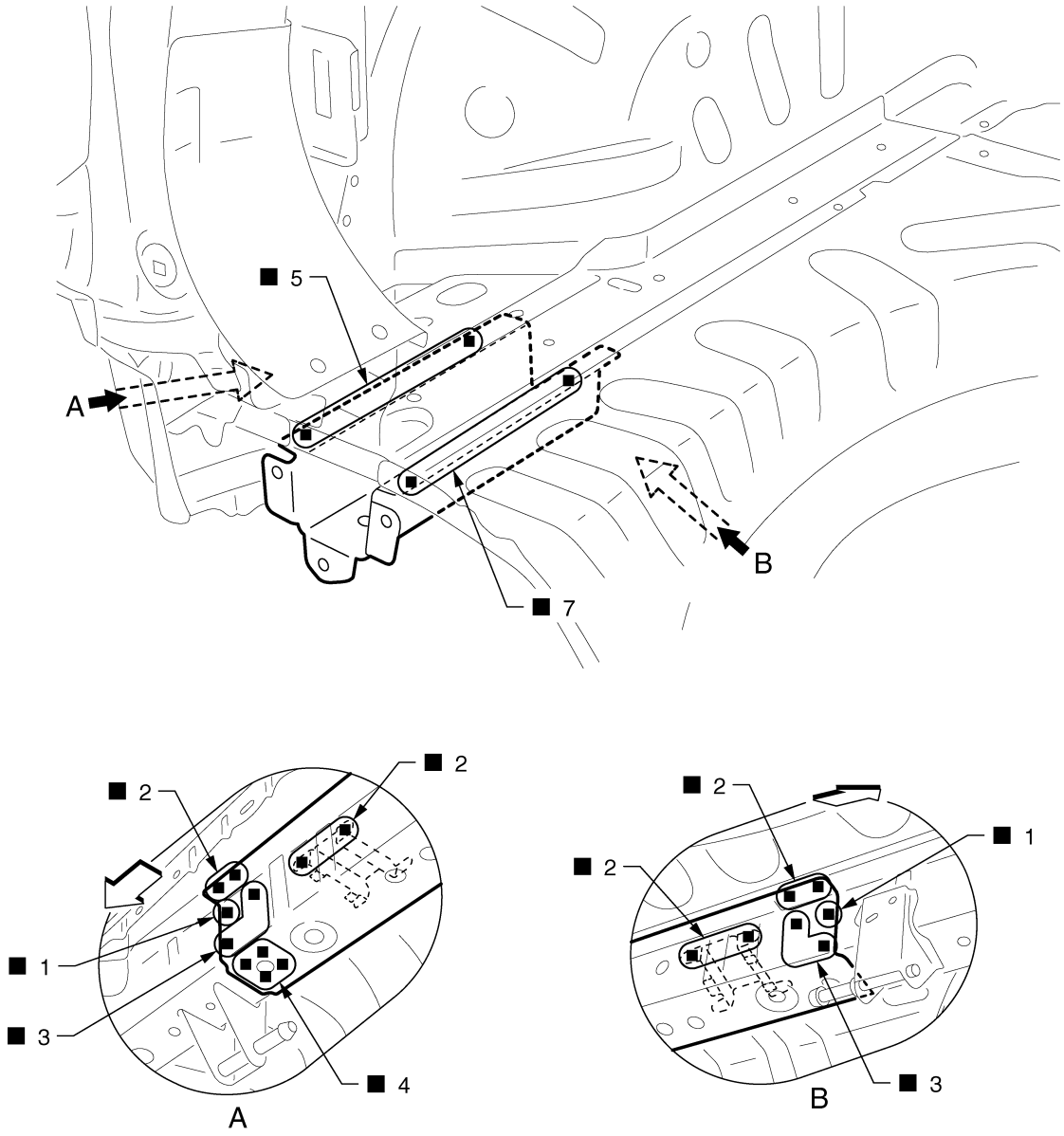
Replacement part

- Rear side member extension

## Rear Side Member Extension (Wagon Models)

INFOID:0000000010843517

Work after rear panel is removed.




JSKIA4034ZZ

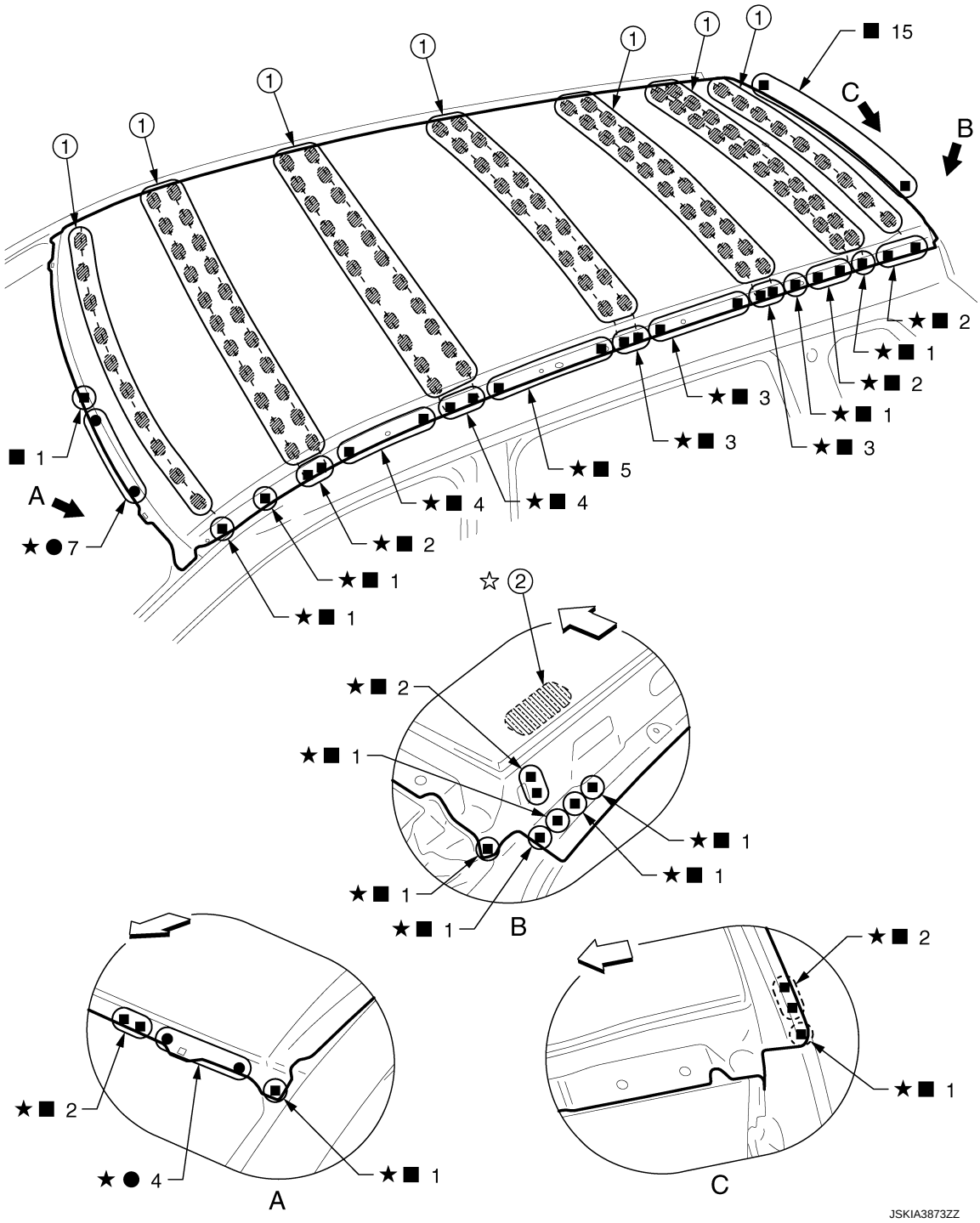
⇦: Vehicle front

Replacement part

- Rear side member extension
- Rear 3rd seat mounting bracket assembly

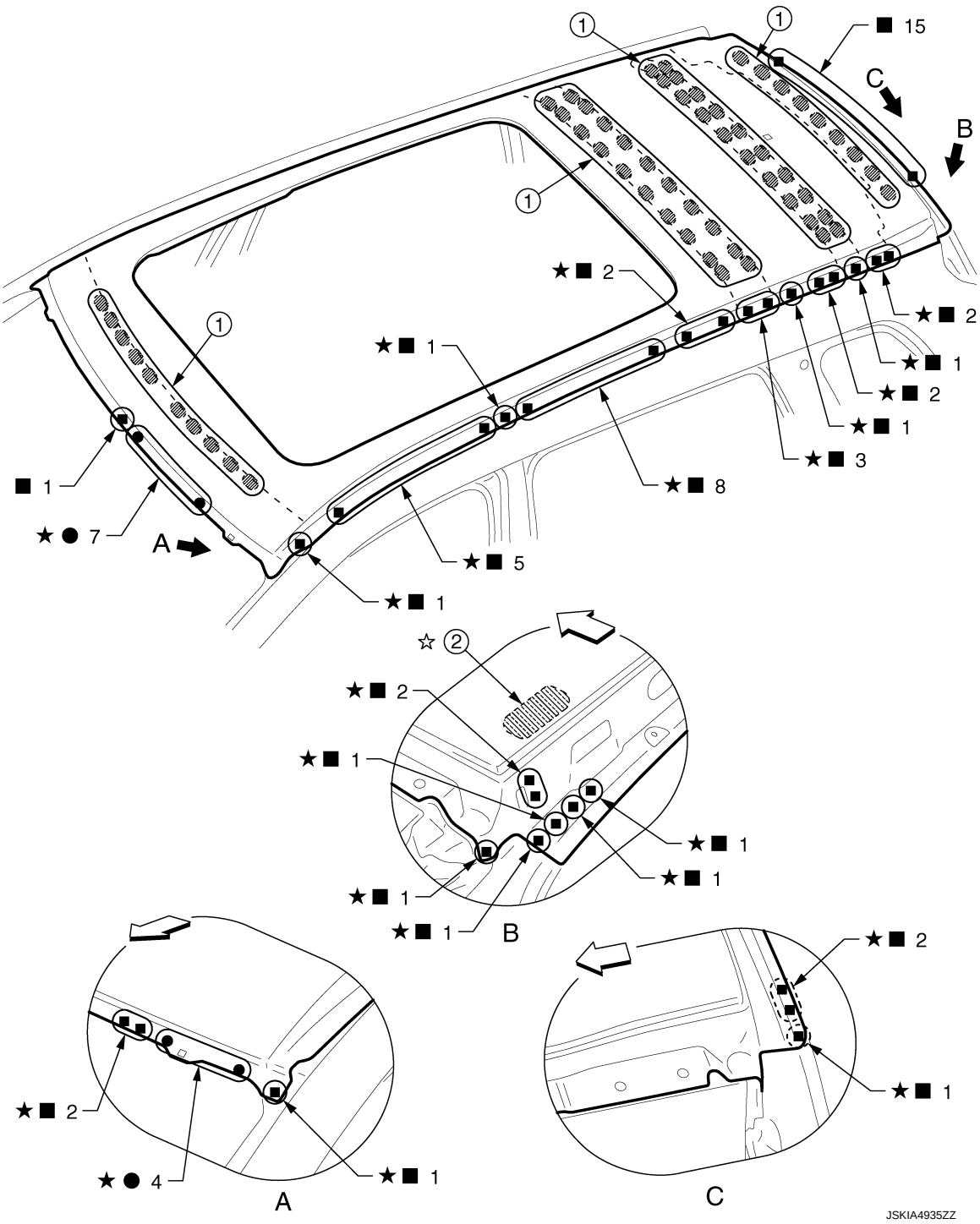
# Roof (Normal Roof Models)

INFOID:0000000011005442



# Roof (Sunroof Models)

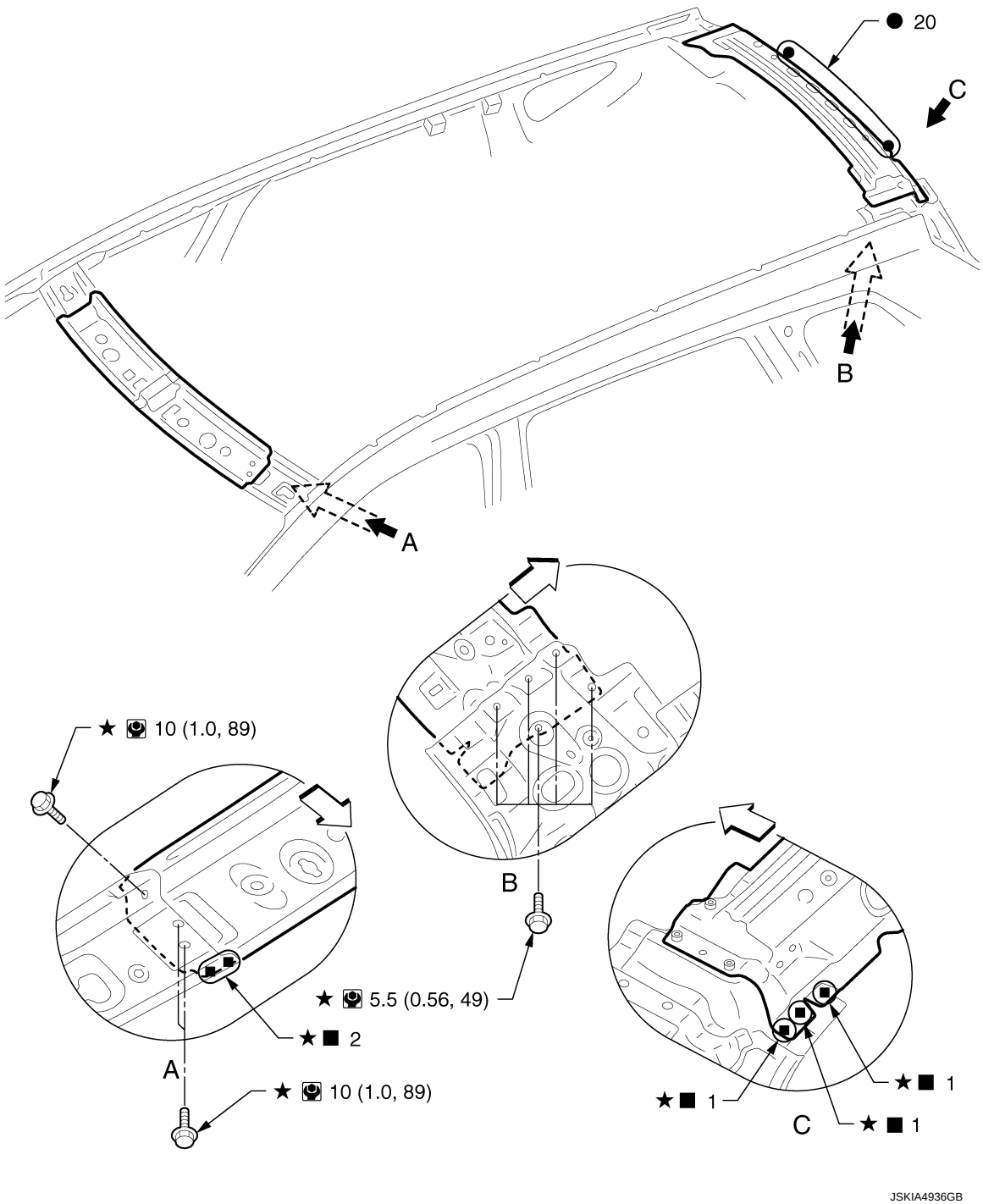
INFOID:0000000011005443



# Roof Rail

INFOID:0000000011005444

Work after roof is removed.




⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

: N·m (kg-m, in-lb)

Replacement part

- Front roof rail
- Rear roof rail

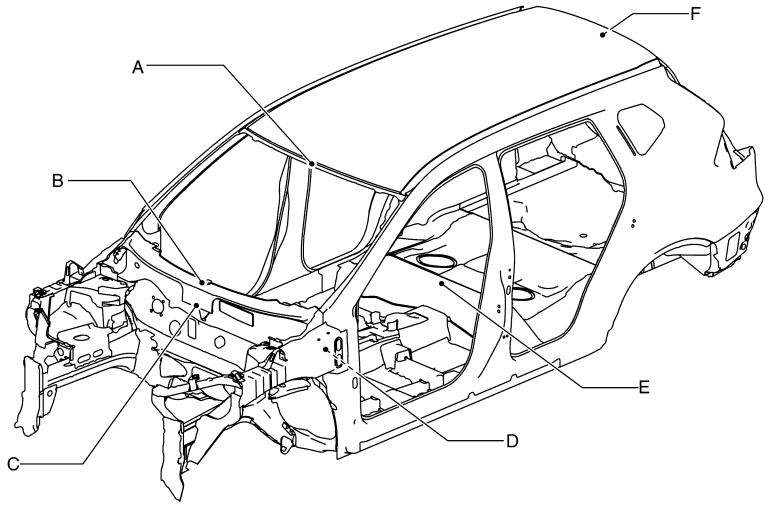
# SERVICE DATA AND SPECIFICATIONS (SDS)

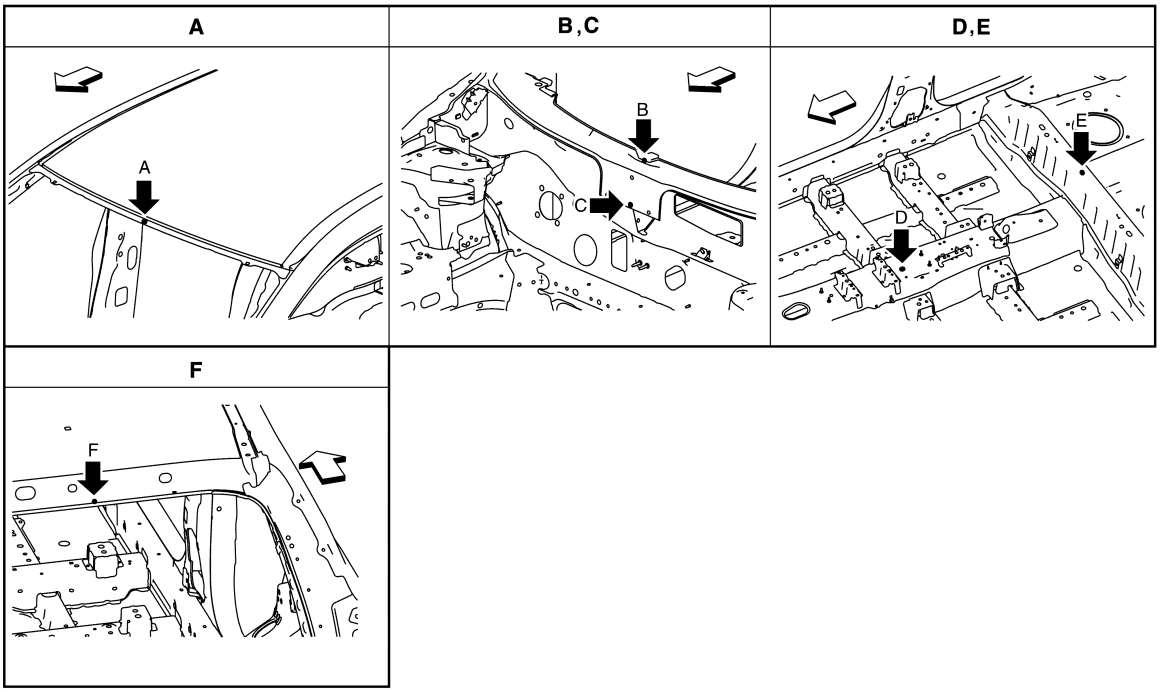
## BODY ALIGNMENT

### Body Center Marks

INFOID:0000000010843518

A mark is placed on each part of the body to indicate the vehicle center. When repairing the vehicle frame (members, pillars, etc.) damaged by an accident which it enables more accurate and effective repair by using these marks together with body alignment specifications.




JSKIA4722ZZ

⇦: Vehicle front

Unit: mm (in)

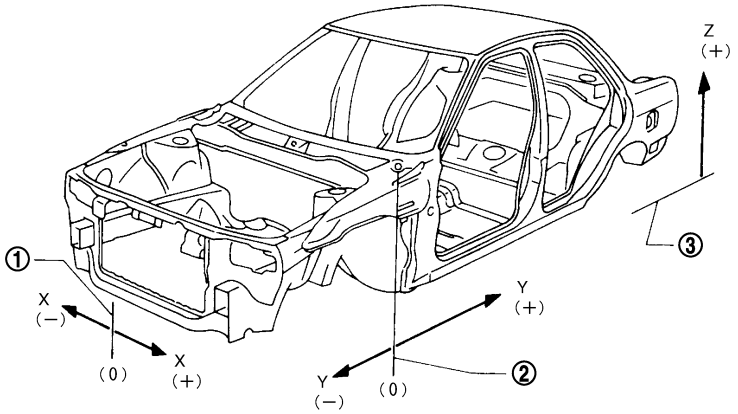
| Points | Portion | Marks |
|---|---|---|
| A | Front roof | Embossment |
| B | Cowl top | Indent |
| C | Cowl top | Hole ϕ8 (0.31) |
| D | Trans control reinforcement | Hole 14×12 (0.55×0.47) |

| Points | Portion | Marks |
|---|---|---|
| E | Rear seat crossmember | Embossment |
| F | Rear roof | Embossment |

## Description

INFOID:0000000010843520

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of ″X″, ″Y″ and ″Z″.
- ″Z″: Imaginary base line [200 mm (7.87 in) below datum line (″0Z″ at design plan)]




JSKIA0073GB

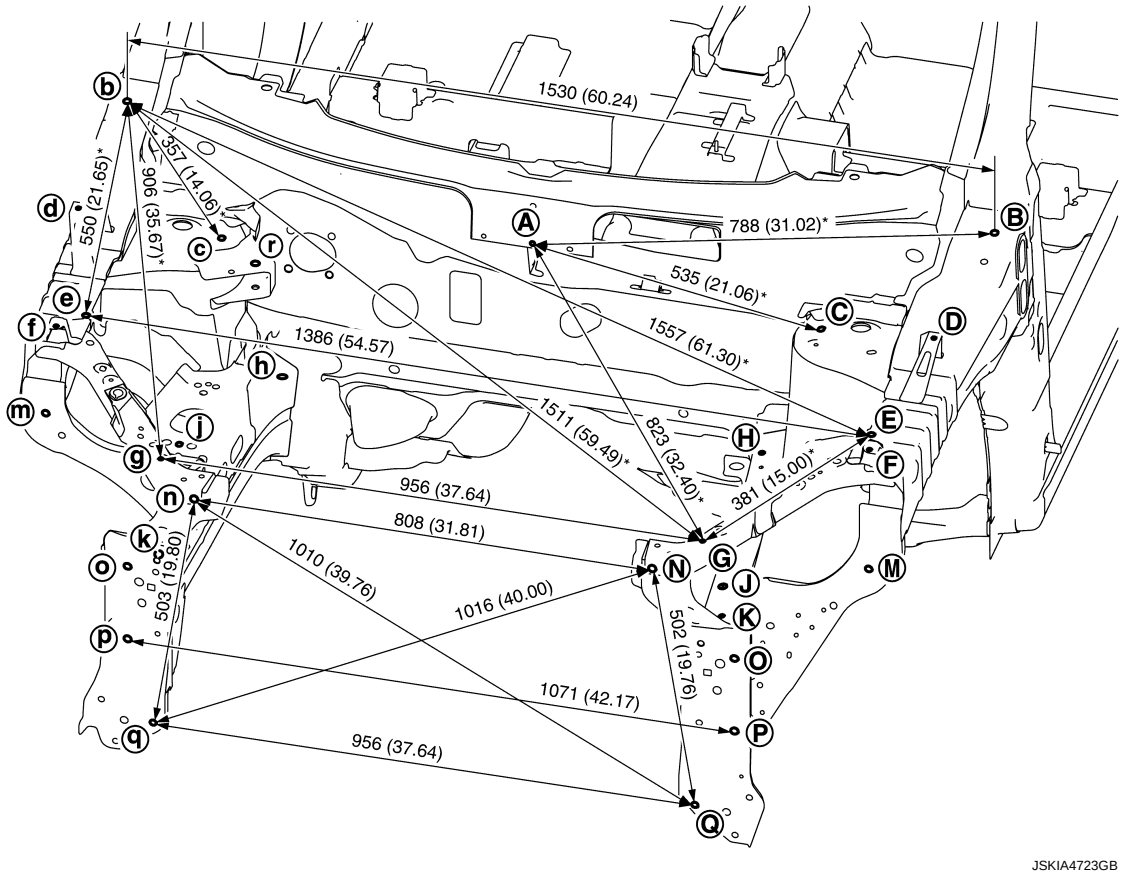
① Vehicle center ② Front axle center ③ Imaginary base line

## Engine Compartment

INFOID:0000000010843521

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



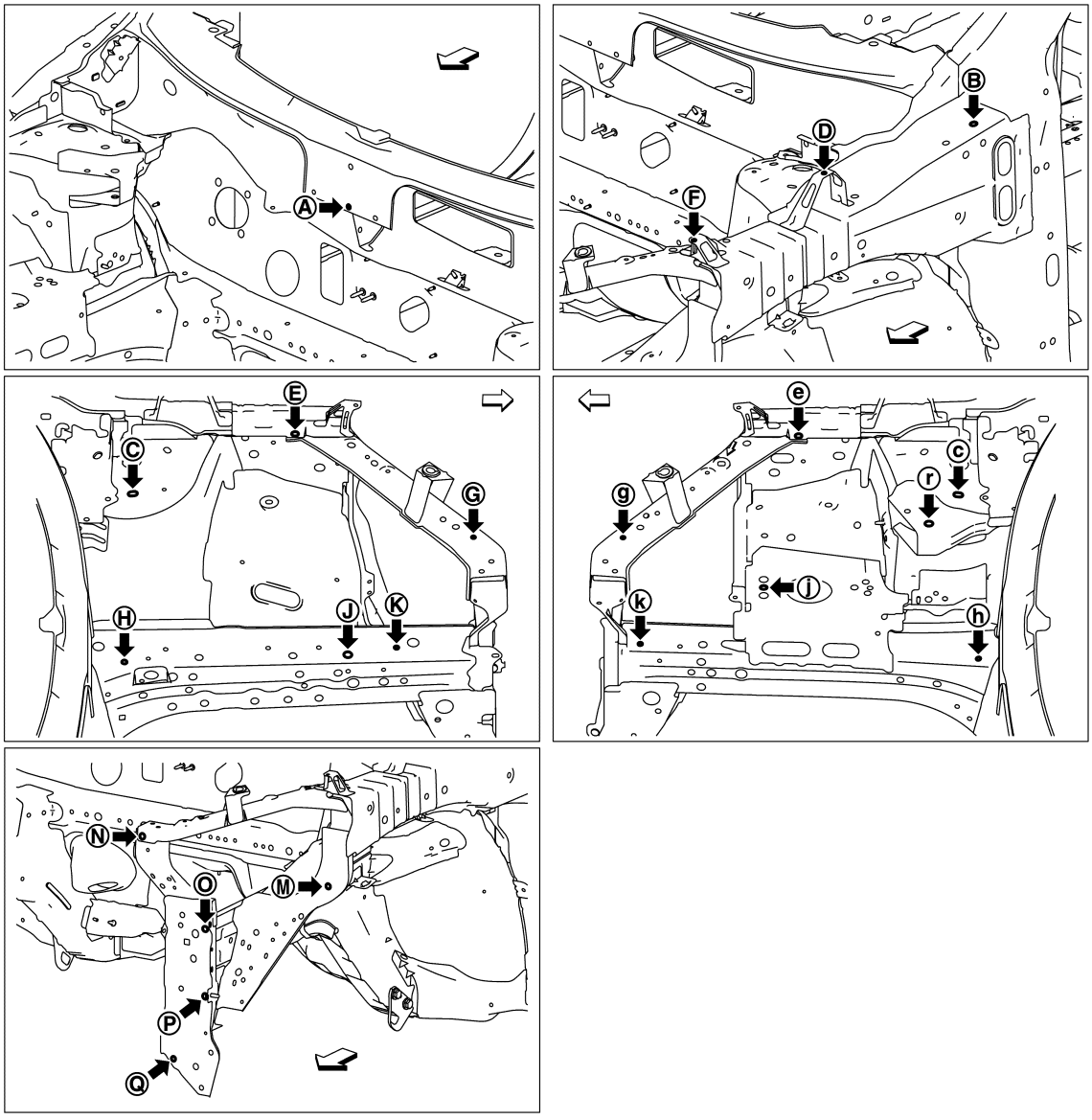

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓓ | 777 (30.59)* | | Ⓒ – Ⓖ | 596 (23.46)* | | ⓙ – Ⓚ | 1000 (39.37) | |
| Ⓐ – Ⓕ | 852 (33.54)* | | Ⓒ – ⓖ | 1169 (46.02)* | | Ⓚ – ⓚ | 967 (38.07) | |
| Ⓐ – Ⓗ | 535 (21.06) | | Ⓒ – ⓡ | 986 (38.82) | | Ⓜ – ⓜ | 1425 (56.10) | |
| Ⓐ – ⓗ | 546 (21.50) | | Ⓓ – ⓓ | 1509 (59.41) | | Ⓜ – Ⓞ | 290 (11.42) | |
| Ⓐ – Ⓙ | 721 (28.39) | | Ⓔ – ⓖ | 1212 (47.72)* | | ⓜ – ⓞ | 296 (11.65) | |
| Ⓐ – ⓙ | 700 (27.56) | | Ⓔ – ⓡ | 1171 (46.10) | | Ⓜ – Ⓟ | 362 (14.25) | |
| Ⓐ – Ⓚ | 789 (31.06) | | ⓔ – ⓡ | 331 (13.03) | | ⓜ – ⓟ | 375 (14.76) | |
| Ⓐ – ⓚ | 869 (34.21) | | Ⓕ – ⓕ | 1435 (56.50) | | Ⓝ – ⓞ | 962 (37.87)* | |
| Ⓐ – Ⓜ | 884 (34.80) | | Ⓗ – ⓗ | 853 (33.58) | | Ⓝ – ⓟ | 1005 (39.57)* | |
| Ⓐ – ⓜ | 872 (34.33) | | Ⓗ – ⓙ | 1003 (39.49) | | Ⓞ – ⓞ | 1071 (42.17) | |
| Ⓐ – ⓡ | 474 (18.66) | | ⓗ – Ⓙ | 977 (38.46) | | Ⓞ – ⓟ | 1081 (42.56)* | |
| Ⓑ – ⓒ | 1321 (52.01)* | | Ⓗ – ⓚ | 1073 (42.24) | | Ⓞ – ⓠ | 1059 (41.69) | |
| Ⓑ – ⓡ | 1262 (49.68) | | ⓗ – Ⓚ | 1033 (40.67) | | ⓞ – Ⓠ | 1053 (41.46) | |
| ⓑ – ⓡ | 445 (17.52) | | Ⓙ – ⓙ | 973 (38.31) | | Ⓟ – ⓠ | 1027 (40.43) | |
| Ⓒ – ⓒ | 1058 (41.65) | | Ⓙ – ⓚ | 959 (37.76) | | ⓟ – Ⓠ | 1021 (40.20) | |

MEASUREMENT POINTS




JSKIA4724ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top hole center of center positioning mark ϕ8 (0.31) | Ⓗ ⓗ Ⓙ Ⓚ ⓚ | Front side member hole center<br>Ⓗ: ϕ9 (0.35)<br>ⓗ Ⓚ ⓚ: ϕ8 (0.31)<br>Ⓙ: ϕ14 (0.55) |
| Ⓑ ⓑ | Hood hinge installing hole center ϕ12 (0.47) | ⓙ | Engine mounting bracket hole center 12×10 (0.47×0.39) |
| Ⓒ ⓒ | Front suspension installing hole center 16×10 (0.63×0.39) | Ⓜ ⓜ | Hoodledge connector hole center ϕ12 (0.47) |
| Ⓓ ⓓ Ⓕ ⓕ | Front fender installing hole center ϕ7 (0.28) | Ⓞ ⓞ Ⓟ ⓟ Ⓠ ⓠ | Front side member hole center<br>Ⓞ Ⓠ ⓠ: ϕ11 (0.43)<br>ⓞ: ϕ12 (0.47)<br>Ⓟ ⓟ: ϕ13 (0.51) |

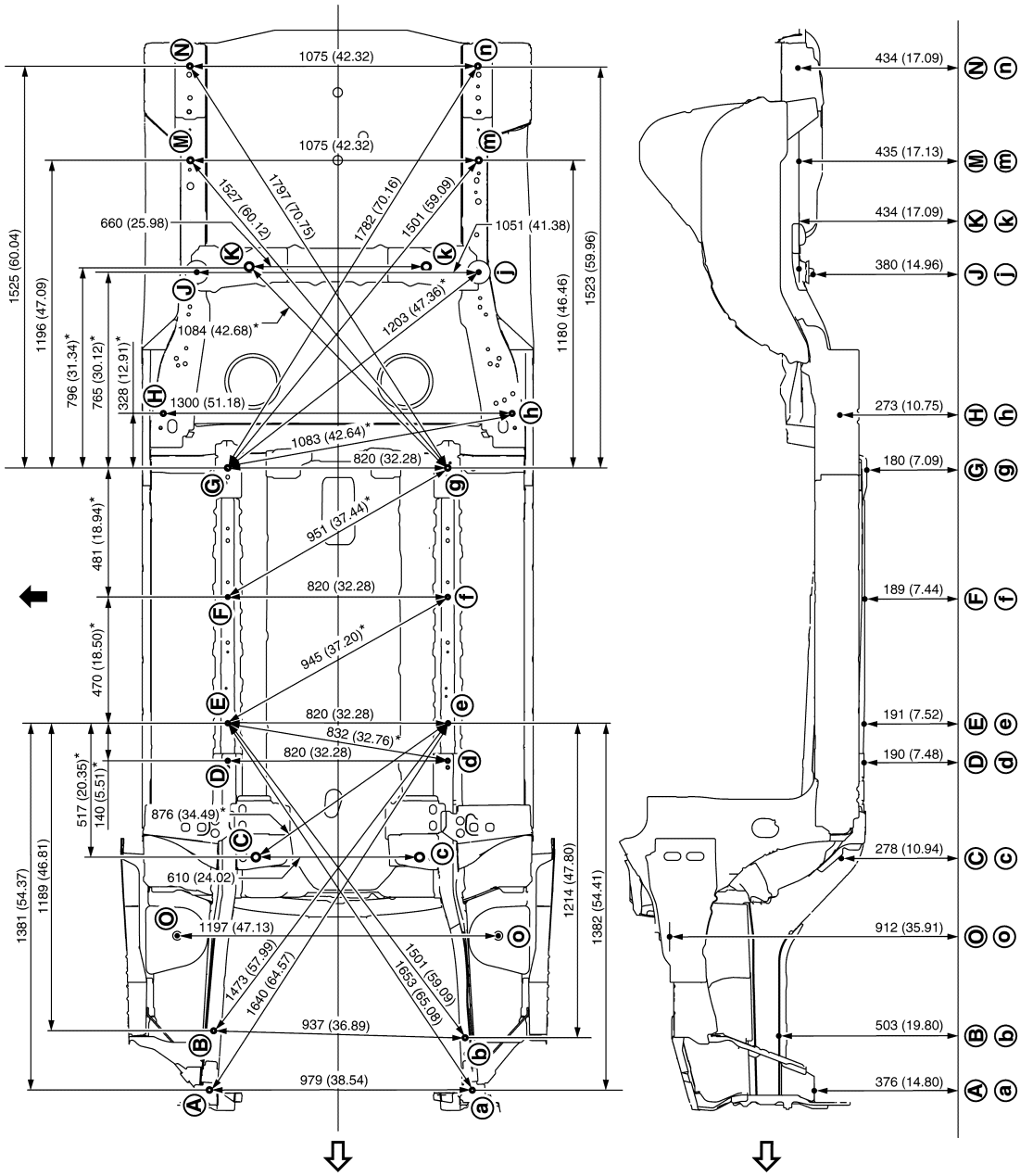
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓔ ⓔ | Front hoodledge reinforcement hole center ϕ12 (0.47) | ⓡ | Torque rod mounting bracket hole center ϕ14 (0.55) |
| Ⓖ ⓖ Ⓝ ⓝ | Upper radiator core support hole center<br>Ⓖ ⓖ: ϕ7 (0.28)<br>Ⓝ ⓝ: ϕ13 (0.51) | | |

## Underbody

INFOID:0000000010843523

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



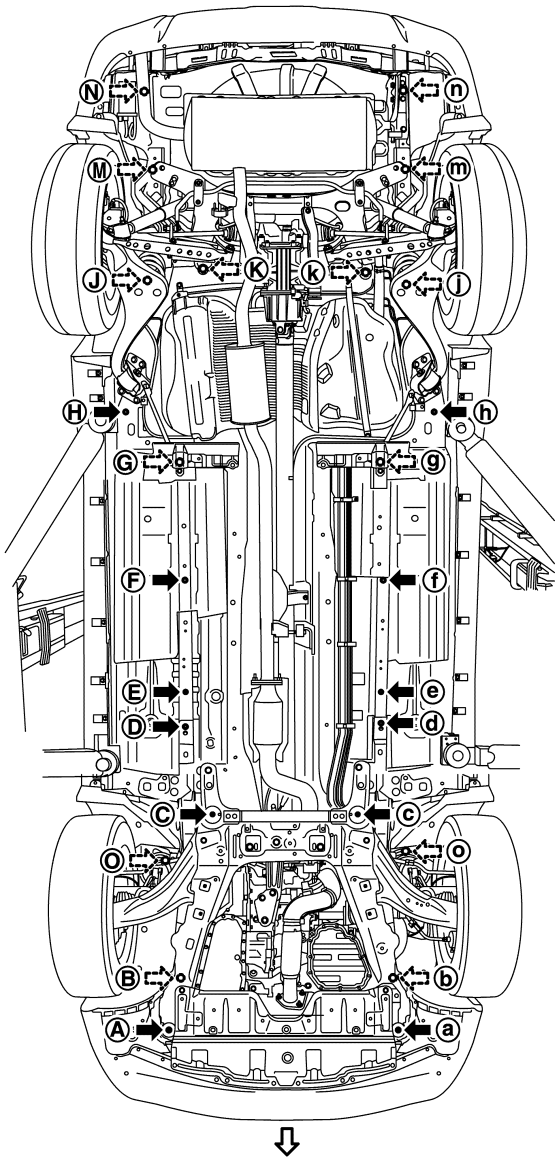

JSKIA4422GB

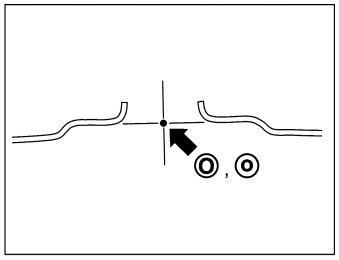
Unit: mm (in)

⇦: Vehicle front

⬅: Vehicle left side

MEASUREMENT POINTS




JSKIA4423ZZ

⇦: Vehicle front

Unit: mm (in)

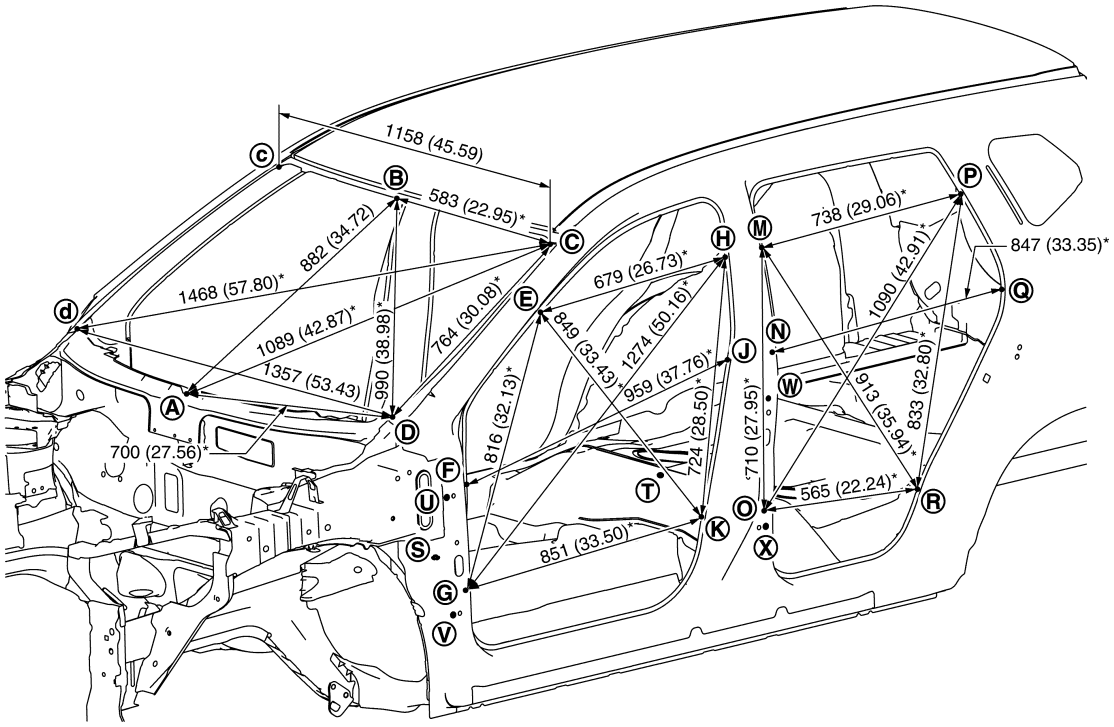
| Points | Coordinates | | | Remarks | Points | Coordinates | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | | | X | Y | Z | |
| Ⓐ | 478.0 (18.819) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓗ ⓗ | ±650.0 (±25.591) | 1954.0 (76.929) | 272.9 (10.744) | Hole ϕ16 (0.63) |
| ⓐ | –501.0 (–19.724) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓙ ⓙ | ±525.4 (±20.685) | 2480.4 (97.653) | 380.0 (14.961) | Hole ϕ12 (0.47) |
| Ⓑ | 462.4 (18.205) | –346.0 (–13.622) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓚ ⓚ | ±330.0 (±12.992) | 2501.0 (98.464) | 434.0 (17.087) | Ⓚ: Hole ϕ30 (1.18)<br>ⓚ: Hole 32×30 (1.26×1.18) |
| ⓑ | –474.7 (–18.689) | –372.0 (–14.646) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓜ | 549.0 (21.614) | 2911.0 (114.606) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓒ ⓒ | ±305.0 (±12.008) | 301.0 (11.850) | 277.8 (10.936) | Ⓒ: Hole ϕ30 (1.18)<br>ⓒ: Hole 32×30 (1.26×1.18) | ⓜ | –525.5 (–20.689) | 2897.2 (114.063) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓓ ⓓ | ±410.0 (±16.142) | 660.0 (25.984) | 190.4 (7.495) | Hole ϕ14 (0.55) | Ⓝ | 551.0 (21.693) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓔ ⓔ | ±410.0 (±16.142) | 800.0 (31.496) | 191.4 (7.535) | Hole ϕ12 (0.47) | ⓝ | –523.5 (–20.610) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓕ ⓕ | ±410.0 (±16.142) | 1270.0 (50.000) | 189.2 (7.449) | Hole ϕ12 (0.47) | Ⓞ ⓞ | ±598.6 (±23.566) | 7.4 (0.291) | 911.9 (35.902) | Hole ϕ33 (1.30) |
| Ⓖ ⓖ | ±410.0 (±16.142) | 1751.0 (68.937) | 180.2 (7.094) | Hole ϕ13 (0.51) | | | | | |

## Passenger Compartment

INFOID:0000000010843524

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



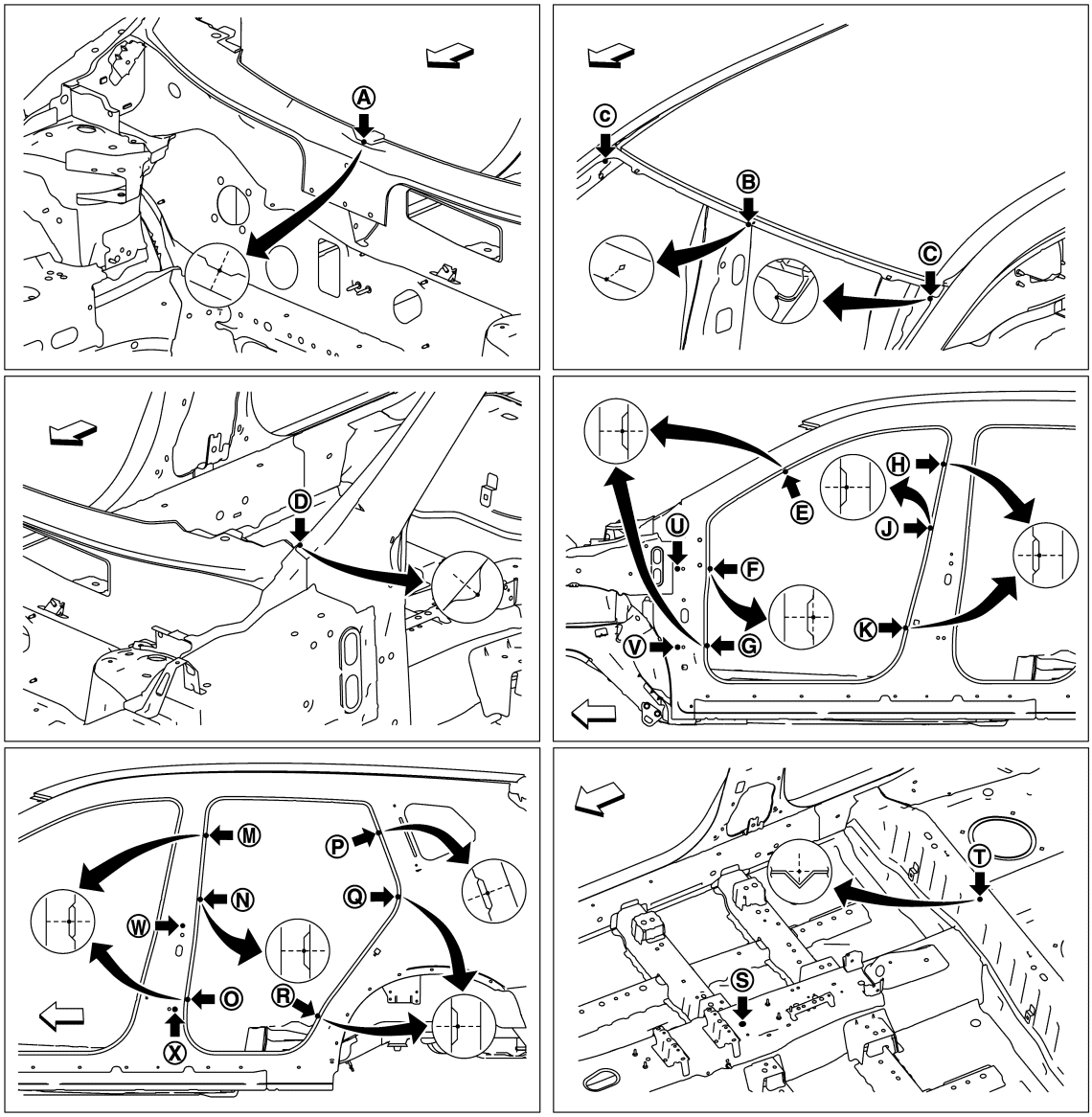

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓔ - ⓔ | 1334 (52.52) | | Ⓜ - ⓡ | 1665 (65.55)* | | Ⓣ - Ⓜ | 1077 (42.40)* | |
| Ⓔ - ⓖ | 1616 (63.62)* | | Ⓝ - ⓝ | 1458 (57.40) | | Ⓣ - Ⓝ | 943 (37.13)* | |
| Ⓔ - ⓗ | 1494 (58.82)* | | Ⓝ - ⓠ | 1670 (65.75)* | | Ⓣ - Ⓞ | 794 (31.26)* | |
| Ⓔ - ⓚ | 1634 (64.33)* | | Ⓞ - ⓞ | 1461 (57.52) | | Ⓣ - Ⓟ | 1179 (46.42)* | |
| Ⓕ - ⓕ | 1441 (56.73) | | Ⓞ - ⓟ | 1749 (68.86)* | | Ⓣ - Ⓠ | 1092 (42.99)* | |
| Ⓕ - ⓙ | 1738 (68.43)* | | Ⓞ - ⓡ | 1567 (61.69)* | | Ⓣ - Ⓡ | 782 (30.79)* | |
| Ⓖ - ⓖ | 1458 (57.40) | | Ⓟ - ⓟ | 1281 (50.43) | | Ⓤ - ⓤ | 1592 (62.68) | |
| Ⓖ - ⓗ | 1886 (74.25)* | | Ⓟ - ⓡ | 1602 (63.07)* | | Ⓤ - Ⓦ | 1172 (46.14)* | |
| Ⓖ - ⓚ | 1689 (66.50)* | | Ⓠ - ⓠ | 1419 (55.87) | | Ⓤ - Ⓧ | 1175 (46.26)* | |
| Ⓗ - ⓗ | 1327 (52.24) | | Ⓡ - ⓡ | 1462 (57.56) | | Ⓥ - ⓥ | 1623 (63.90) | |
| Ⓗ - ⓚ | 1569 (61.77)* | | Ⓢ - Ⓔ | 1110 (43.70)* | | Ⓥ - Ⓦ | 1235 (48.62)* | |
| Ⓙ - ⓙ | 1458 (57.40) | | Ⓢ - Ⓕ | 979 (38.54)* | | Ⓥ - Ⓧ | 1137 (44.76)* | |
| Ⓚ - ⓚ | 1461 (57.52) | | Ⓢ - Ⓖ | 890 (35.04)* | | Ⓦ - ⓦ | 1588 (62.52) | |
| Ⓜ - ⓜ | 1326 (52.20) | | Ⓢ - Ⓗ | 1233 (48.54)* | | Ⓧ - ⓧ | 1619 (63.74) | |
| Ⓜ - ⓞ | 1562 (61.50)* | | Ⓢ - Ⓙ | 1068 (42.05)* | | | | |
| Ⓜ - ⓟ | 1498 (58.98)* | | Ⓢ - Ⓚ | 836 (32.91)* | | | | |

MEASUREMENT POINTS




JSKIA4726ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top indent of center positioning mark | Ⓗ ⓗ Ⓙ ⓙ Ⓚ ⓚ Ⓜ ⓜ Ⓝ ⓝ Ⓞ ⓞ | Center pillar indent |
| Ⓑ | Roof flange end of center positioning mark | Ⓟ ⓟ Ⓠ ⓠ Ⓡ ⓡ | Rear fender indent |
| Ⓒ ⓒ | Outer side body joggle | Ⓢ | Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47) |

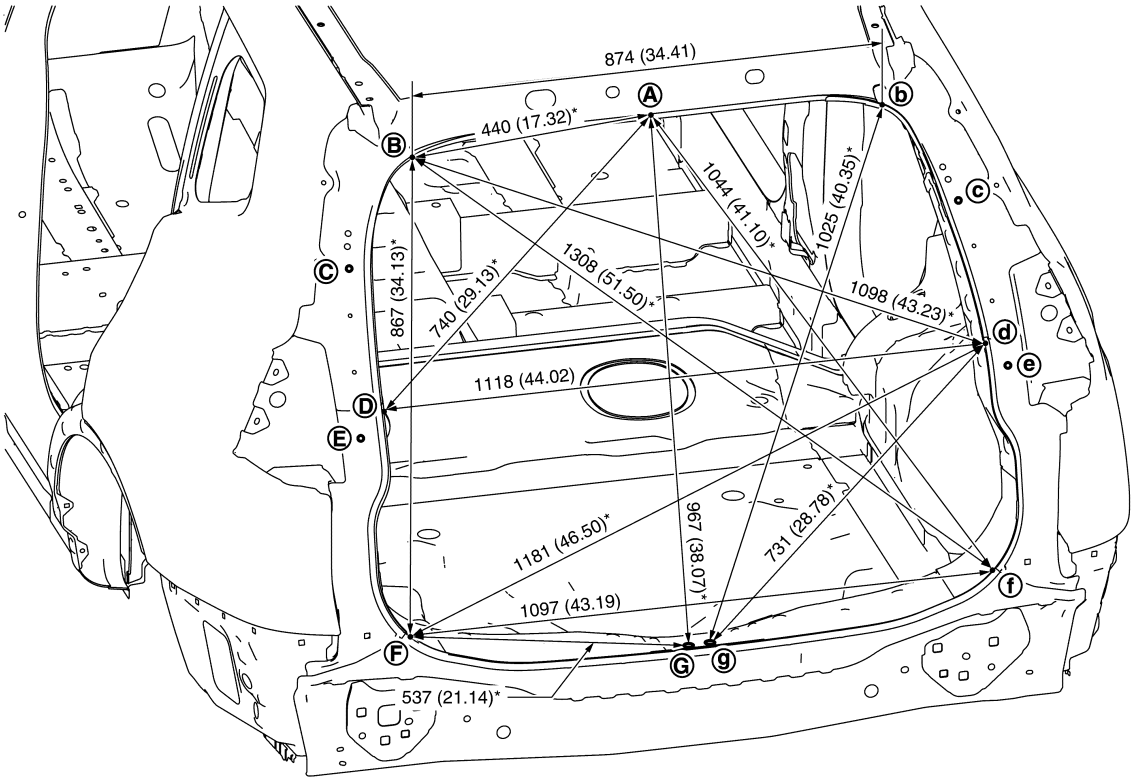
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓓ ⓓ | Outer side body indent | Ⓣ | Rear seat crossmember positioning mark of center positioning mark |
| Ⓔ ⓔ Ⓕ ⓕ Ⓖ ⓖ | Front pillar indent | Ⓤ ⓤ Ⓥ ⓥ Ⓦ ⓦ Ⓧ ⓧ | Door hinge installing hole center<br>Ⓤ ⓤ Ⓥ ⓥ Ⓧ ⓧ: ϕ12 (0.47)<br>Ⓦ ⓦ: ϕ9 (0.35) |

## Rear Body

INFOID:0000000010843526

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



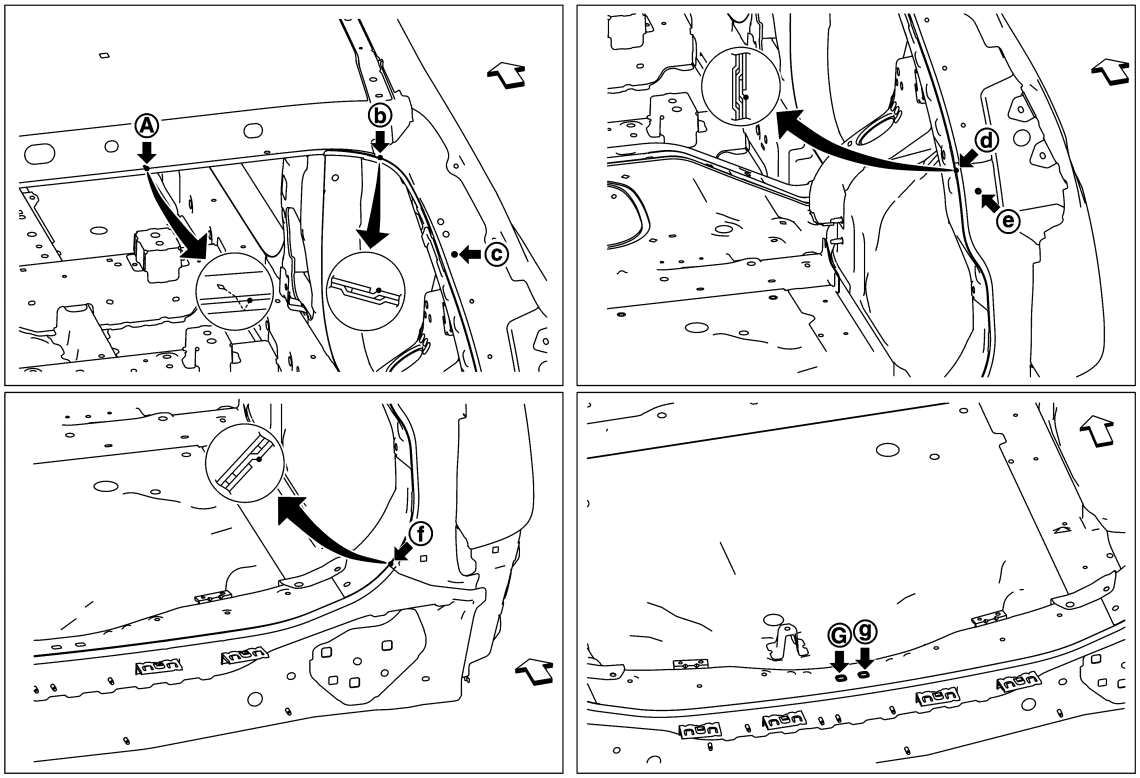

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓒ | 612 (24.09)* | | Ⓒ – ⓒ | 1131 (44.53) | | Ⓓ – ⓖ | 762 (30.00)* | |
| Ⓐ – Ⓔ | 797 (31.38)* | | Ⓒ – Ⓔ | 323 (12.72)* | | Ⓔ – ⓔ | 1202 (47.32) | |
| Ⓑ – ⓖ | 1042 (41.02)* | | Ⓒ – ⓔ | 1210 (47.64)* | | Ⓕ – ⓖ | 578 (22.76)* | |

### MEASUREMENT POINTS




JSKIA4429ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Roof flange end of center positioning mark | Ⓓ ⓓ Ⓕ ⓕ | Lower back pillar main joggle |
| Ⓑ ⓑ | Center back pillar main joggle | Ⓔ ⓔ | Lower back pillar main hole center ϕ7 (0.28) |
| Ⓒ ⓒ | Center back pillar main hole center ϕ7 (0.28) | Ⓖ ⓖ | Back door striker installing hole center |

# LOCATION OF PLASTIC PARTS

## Precautions for Plastics

INFOID:0000000010843527

| Abbre-viation | Material name | Heat resisting temperature °C (°F) | Resistance to gasoline and solvents | Other cautions |
|---|---|---|---|---|
| PE | Polyethylene | 60 (140) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| ABS | Acrylonitrile Butadiene Styrene | 80 (176) | Avoid gasoline and solvents. | — |
| AES | Acrylonitrile Ethylene Styrene | 80 (176) | ↑ | — |
| EPM/ EPDM | Ethylene Propylene (Diene) co-polymer | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| PS | Polystyrene | 80 (176) | Avoid solvents. | Flammable |
| PVC | Poly Vinyl Chloride | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Poisonous gas is emitted when burned. |
| TPO | Thermoplastic Olefine | 80 (176) | ↑ | Flammable |
| AAS | Acrylonitrile Acrylic Styrene | 85 (185) | Avoid gasoline and solvents. | — |
| PMMA | Poly Methyl Methacrylate | 85 (185) | ↑ | — |
| EVAC | Ethylene Vinyl Acetate | 90 (194) | ↑ | — |
| PP | Polypropylene | 90 (194) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable, avoid bat-tery acid. |
| PUR | Polyurethane | 90 (194) | Avoid gasoline and solvents. | — |
| UP | Unsaturated Polyester | 90 (194) | ↑ | Flammable |
| ASA | Acrylonitrile Styrene Acrylate | 100 (212) | ↑ | Flammable |
| PPE | Poly Phenylene Ether | 110 (230) | ↑ | — |
| TPU | Thermoplastic Urethane | 110 (230) | ↑ | — |
| PBT+ PC | Poly Butylene Terephthalate + Polycarbonate | 120 (248) | ↑ | Flammable |
| PC | Polycarbonate | 120 (248) | ↑ | — |
| POM | Poly Oxymethylene | 120 (248) | ↑ | Avoid battery acid. |
| PA | Polyamide | 140 (284) | ↑ | Avoid immersing in wa-ter. |
| PBT | Poly Butylene Terephthalate | 140 (284) | ↑ | — |
| PAR | Polyarylate | 180 (356) | ↑ | — |
| PET | Polyethylene terephthalate | 180 (356) | ↑ | — |
| PEI | Polyetherimide | 200 (392) | ↑ | — |

**CAUTION:**

- **When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.**
- **Plastic parts should be repaired and painted using methods suiting the materials' characteristics.**

## Location of Plastic Parts

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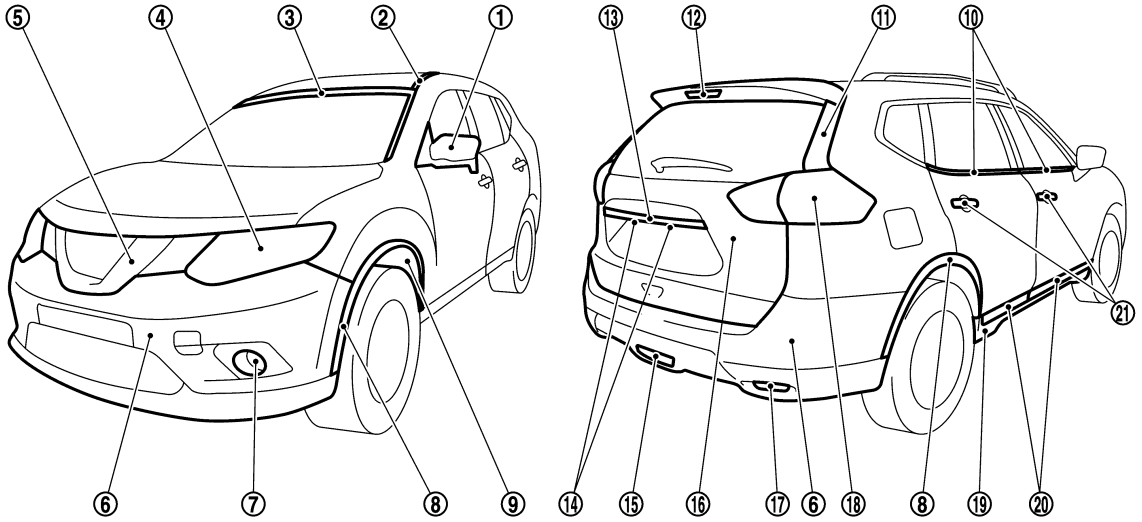
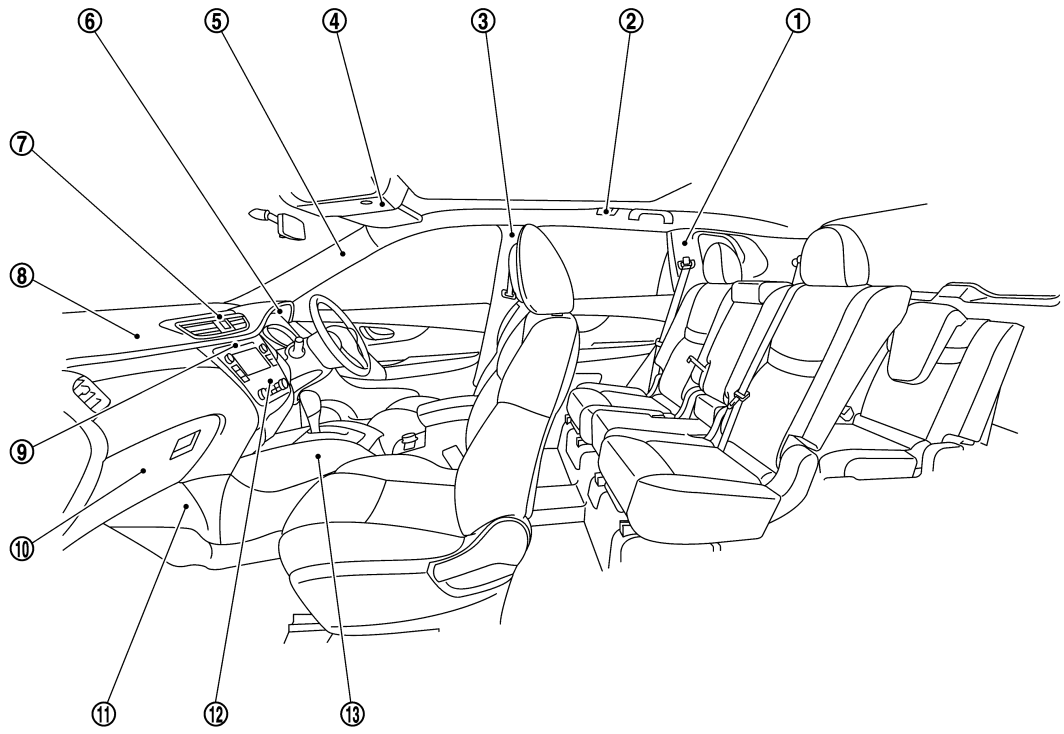



JSKIA4713ZZ

| Component | | | Material |
|---|---|---|---|
| ① | Door mirror | Cover | ABS |
| | | Base | PBT + PET + Glass fiber |
| | | Case | ASA |
| | | Finisher | ASA |
| | Side turn signal lamp | Lens | PMMA |
| | | Housing | ABS |
| ② | Side roof molding | | PVC + Stainless |
| ③ | Wind shield molding | | PVC |
| ④ | Front combination lamp | Lens | PC |
| | | Housing | PP |
| ⑤ | Front grille | | ABS |
| ⑥ | Bumper fascia | | PP + EPM |
| ⑦ | Front fog lamp | Lens | Glass |
| | | Housing | PBT + ASA + Glass fiber |
| ⑧ | Fillet molding | | PP |
| ⑨ | Front fender protector | | PP |
| ⑩ | Door outside molding | | PVC + Stainless |

| Component | | | Material |
|---|---|---|---|
| ⑪ | Rear spoiler | | PC + ABS |
| ⑫ | High mount stop lamp | Lens | PMMA |
| | | Housing | ABS |
| ⑬ | Back door finisher | | ABS |
| ⑭ | License plate lamp | Lens | PC |
| | | Housing | PC |
| ⑮ | Rear fog lamp | Lens | PC |
| | | Housing | PC |
| ⑯ | Back door | | PP |
| ⑰ | Reflex reflector | Lens | PMMA |
| | | Housing | ABS |
| ⑱ | Rear combination lamp | Lens | PMMA |
| | | Housing | ASA |
| ⑲ | Sill cover | | PP |
| ⑳ | Side guard molding | | PP |
| ㉑ | Door outside handle | Grip cover | PC + PET |
| | | Grip body | PC + ABS |




JSKIA3819ZZ

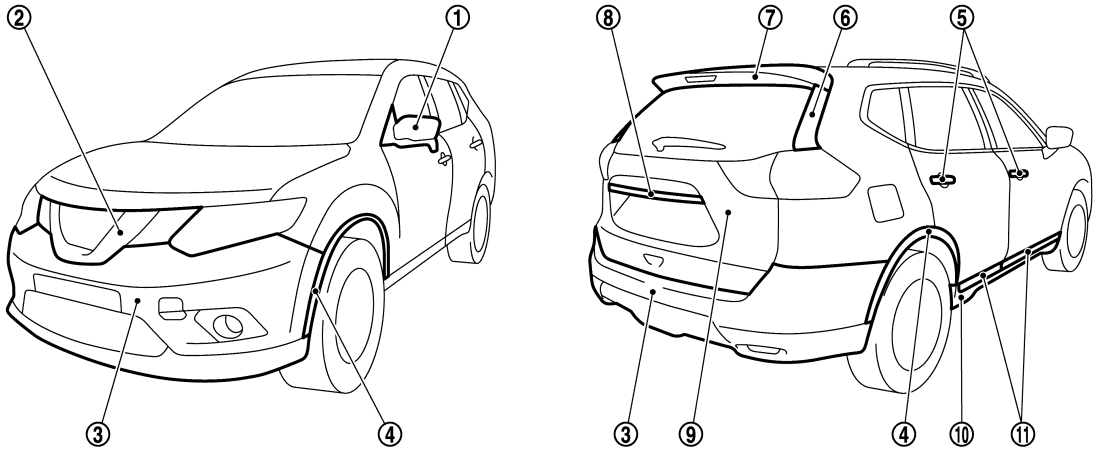
| Component | | | Material | Component | | | | Material |
|---|---|---|---|---|---|---|---|---|
| ① | Side luggage finisher | | PP | ⑨ | Cluster lid C | | | PC + ABS |
| ② | Personal lamp | Lens | PC | ⑩ | Glove box | | | PP |
| | | Housing | PP | ⑪ | Lower side panel | | | PP + EPM |
| ③ | Center pillar garnish | | PP | ⑫ | A/C Control | Manual A/C | Finisher | PC + ABS |
| ④ | Map lamp | Switch finisher | PP | | | | Switch | PC |
| | | Console | PP | | | | Case | ABS |
| | Lid box | | PC + ABS | | | Automatic A/C | Finisher | PC + ABS |
| ⑤ | Front pillar garnish | | PP | | | | Switch | PC |
| ⑥ | Cluster lid A | | PP | | | | Case | PC + ABS |
| ⑦ | Center ventilator grille | | PC + ABS | | | | Lens | PC |
| ⑧ | Instrument panel | Skin | TPO | ⑬ | Center console | | Body | PP |
| | | Pad | PUR | | | | Console box | PP |
| | | Core | PP + EPDM | | | | A/T console finisher | PC + ABS |

# VEHICLE INFORMATION

## BODY EXTERIOR PAINT COLOR

### Body Exterior Paint Color

INFOID:0000000010843595




JSKIA4358ZZ

| Component | | Color code | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Description | Red | Dark Olive | Orange | Black | Silver | Gray | White | Dark Blue |
| | | Paint type [note] | 2S | 2PM | 2PM | 2P | 2M | 2M | 3P | 2M |
| | | Hard clear coat | × | × | × | × | – | – | – | × |
| ① | Door mirror cover | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ② | Front grille | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ③ | Bumper fascia | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ④ | Fillet molding | Material color | – | – | – | – | – | – | – | – |
| ⑤ | Door outside handle | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑥ | Rear spoiler (Side) | Black | G01 | G01 | G01 | G01 | G01 | G01 | G01 | G01 |
| ⑦ | Rear spoiler (Upper) | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑧ | Back door finisher | Chromium plate | Cr | Cr | Cr | Cr | Cr | Cr | Cr | Cr |
| ⑨ | Back door | Body color | BAX6 | BEAN | BEAR | BG41 | BK23 | BKAD | BQAB | BRAQ |
| ⑩ | Sill cover | Material color | – | – | – | – | – | – | – | – |
| ⑪ | Side guard molding | Material color | – | – | – | – | – | – | – | – |

**NOTE:**

- 2M: 2-Coat Metallic
- 2P: 2-Coat pearl
- 2S: 2-Coat solid
- 3P: 3-Coat pearl
- 2PM: 2-Coat Pearl metallic

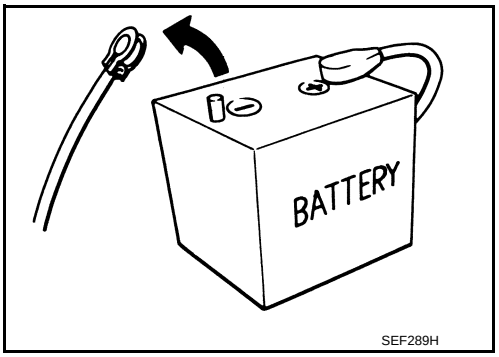
# PRECAUTION

## PRECAUTIONS

### Precautions for Removing Battery Terminal

INFOID:0000000010843596

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  **NOTE:**
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  **NOTE:**
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  **NOTE:**
  The removal of 12V battery may cause a DTC detection error.




#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

| | |
|---|---|
| D4D engine | : 20 minutes |
| HRA2DDT | : 12 minutes |
| K9K engine | : 4 minutes |
| M9R engine | : 4 minutes |
| R9M engine | : 4 minutes |
| V9X engine | : 4 minutes |

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.
   **CAUTION:**
   **After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   **NOTE:**
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

**CAUTION:**
**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

**CAUTION:**
**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

# REPAIRING HIGH STRENGTH STEEL

## High Strength Steel (HSS)

INFOID:0000000010843597

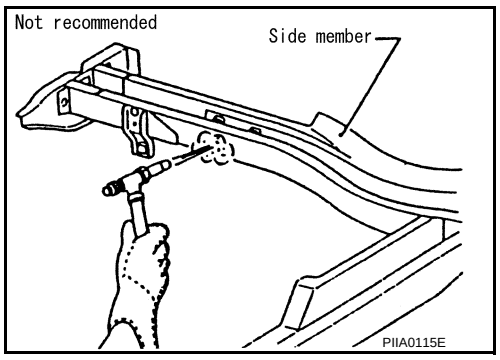
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

| Tensile strength | Major applicable parts |
|---|---|
| 440 - 780 MPa | • Rear seat crossmember reinforcement<br>(Rear seat crossmember assembly component part)<br>• Center front floor (Front)<br>(Center front floor component part)<br>• Trans control reinforcement<br>(Center front floor component part)<br>• Front floor (Front)<br>(Front floor component part)<br>• 2nd crossmember<br>(Front floor component part)<br>• 3rd crossmember<br>(Front floor component part)<br>• Inner sill reinforcement<br>(Inner sill component part)<br>• Side dash<br>(Side dash component part)<br>• Inner front pillar reinforcement (RH only)<br>(Side dash component part)<br>• Front suspension spring support<br>(Front strut housing assembly component part)<br>• Front bumper stay<br>• Front side member closing plate (Front)<br>(Front side member closing plate component part)<br>• Front side member flange<br>(Front side member closing plate component part)<br>• Front tie down hook<br>(Front side member closing plate component part)<br>• Front side member (Front)<br>(Front side member assembly component part)<br>• Front side member brace<br>(Front side member assembly component part)<br>• Front suspension mounting bracket<br>• Rear crossmember center assembly<br>• Rear side member<br>(Rear side member component part)<br>• Rear side member rear reinforcement<br>(Rear side member component part)<br>• Inner sill extension<br>(Rear side member component part)<br>• Rear side member reinforcement<br>(Rear side member component part)<br>• Outer rear anchor reinforcement<br>(Rear side member component part)<br>• Rear spring mounting bracket<br>(Rear side member component part)<br>• Spring mounting reinforcement<br>(Rear side member component part)<br>• Rear side member extension<br>• Inner center pillar assembly (Lower)<br>• Outer front pillar reinforcement (Rear)<br>• Lower center pillar brace (Lower)<br>• Lower front pillar hinge brace<br>• Outer sill reinforcement<br>• Rear pillar gusset<br>(Inner rear pillar component part)<br>• Rear pillar seat belt anchor<br>(Inner rear pillar component part)<br>• Rear bumper stay |

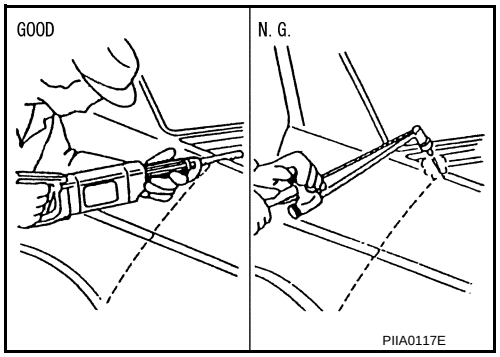
| Tensile strength | Major applicable parts |
|---|---|
| 980 - 1500 MPa | • Front side member rear extension (Front floor component part)<br>• Inner sill<br>• Lower dash crossmember (Lower dash complete component part)<br>• Lower dash crossmember<br>• Front bumper armature assembly<br>• Front side member closing plate (Rear) (Front side member closing plate component part)<br>• Front side member (Rear) (Front side member assembly component part)<br>• Inner center pillar (Upper) (Inner center pillar assembly component part)<br>• Upper center pillar brace (Inner center pillar assembly component part)<br>• Center pillar seat belt anchor (Inner center pillar assembly component part)<br>• Outer front pillar reinforcement (Outer front pillar reinforcement component part)<br>• Center pillar hinge brace (Upper) (Lower center pillar brace component part)<br>• Center pillar extension (Lower center pillar brace component part)<br>• Inner center rear bumper reinforcement |

Read the following precautions when repairing HSS:

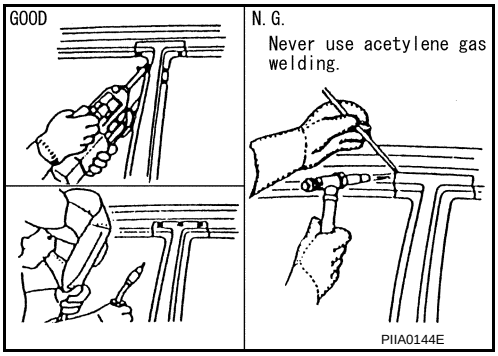
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type and other similar type thermometer are appropriate.)



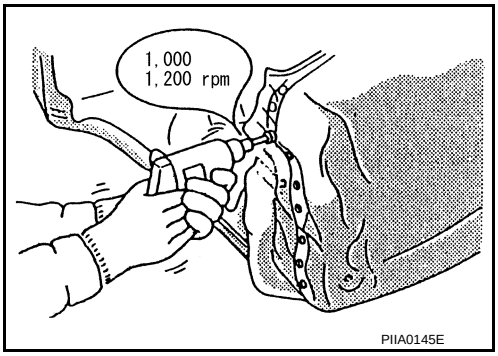

   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.
   - When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97 in).



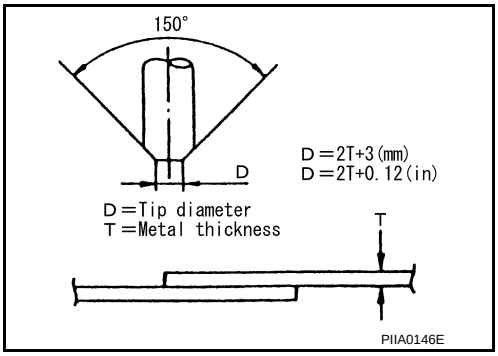
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



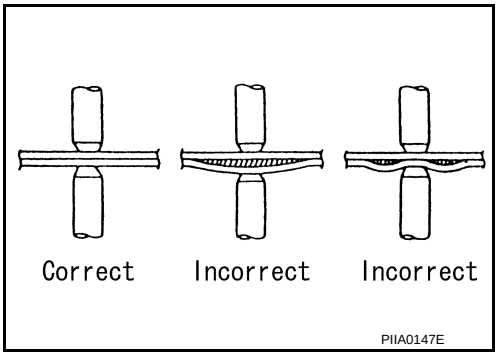

- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.




2. Precautions in spot welding HSS
   This work should be performed under standard working conditions. Always note the following when spot welding HSS:
   - The electrode tip diameter must be sized properly according to the metal thickness.



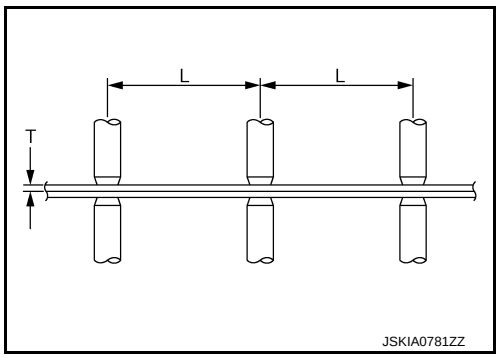

- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit: mm (in)

| Thickness (T) | Minimum pitch (L) |
|---|---|
| 0.6 (0.024) | 10 (0.39) or more |
| 0.8 (0.031) | 12 (0.47) or more |
| 1.0 (0.039) | 18 (0.71) or more |
| 1.2 (0.047) | 20 (0.79) or more |
| 1.6 (0.063) | 27 (1.06) or more |
| 1.8 (0.071) | 31 (1.22) or more |



# PREPARATION

## REPAIRING MATERIAL

### Foam Repair

INFOID:0000000010843598

During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

Use commercially available Urethane foam for sealant (foam material) repair of material used on vehicle.

**<Urethane foam for foaming agent>** **3M™ Automix™ Flexible Foam 08463 or equivalent**

Read instructions on product for fill procedures.

Example of foaming agent filling operation procedure

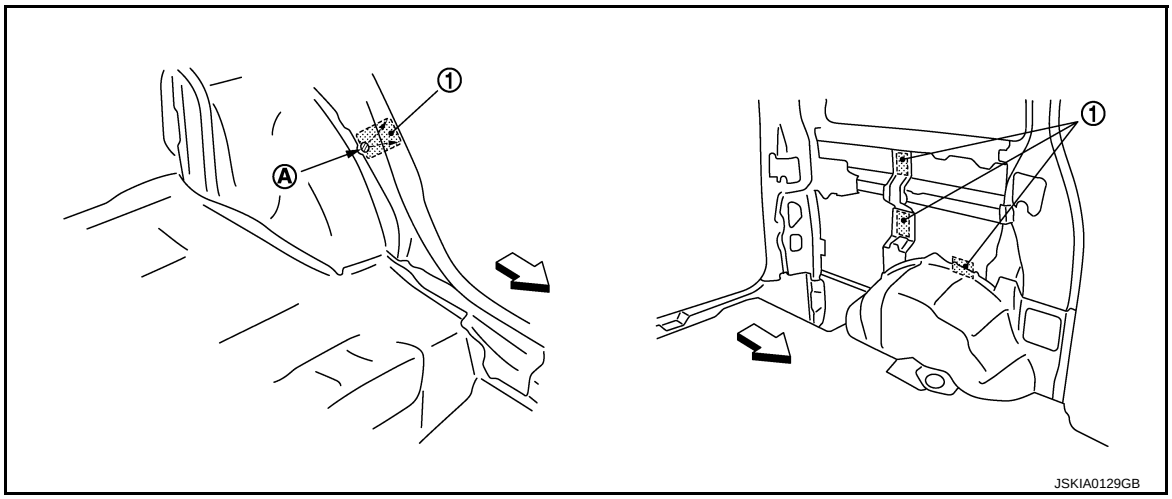
1. Fill procedures after installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating form insulator and foam material.

c. Install service part.

d. Insert nozzle into hole near fill area and fill foam material or fill enough to close gap with the service part.




① Urethane foam

Ⓐ Nozzle insert hole

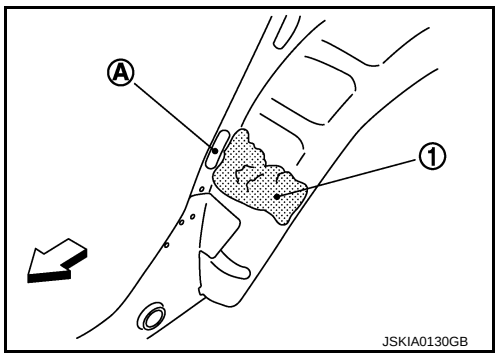
⇦: Vehicle front

2. Fill procedures before installation of service part.

a. Eliminate foam material remaining on vehicle side.

b. Clean area after eliminating foam insulator and foam material.

c. Fill foam material on wheelhouse outer side.




① Urethane foam

Ⓐ Fill while avoiding flange area

⇦: Vehicle front

**NOTE:**
Fill enough to close gap with service part while avoiding flange area.

d. Install service part.
**NOTE:**
Refer to label for information on working times.

# BODY COMPONENT PARTS

## Ultra High Strength Steel Part

INFOID:0000000010843599

### DESCRIPTION

Ultra high strength steel parts signify high strength steel plates with tensile strength of 980 MPa or more. When replacing parts made of ultra high strength steel or parts including ultra high strength steel, never perform the prohibition described below:

### PROHIBITION

**WARNING:**

**Never cut ultra high strength steel parts or perform butt welding. Violation of this prohibition causes extreme strength degradation, and the strength before damage cannot be secured.**

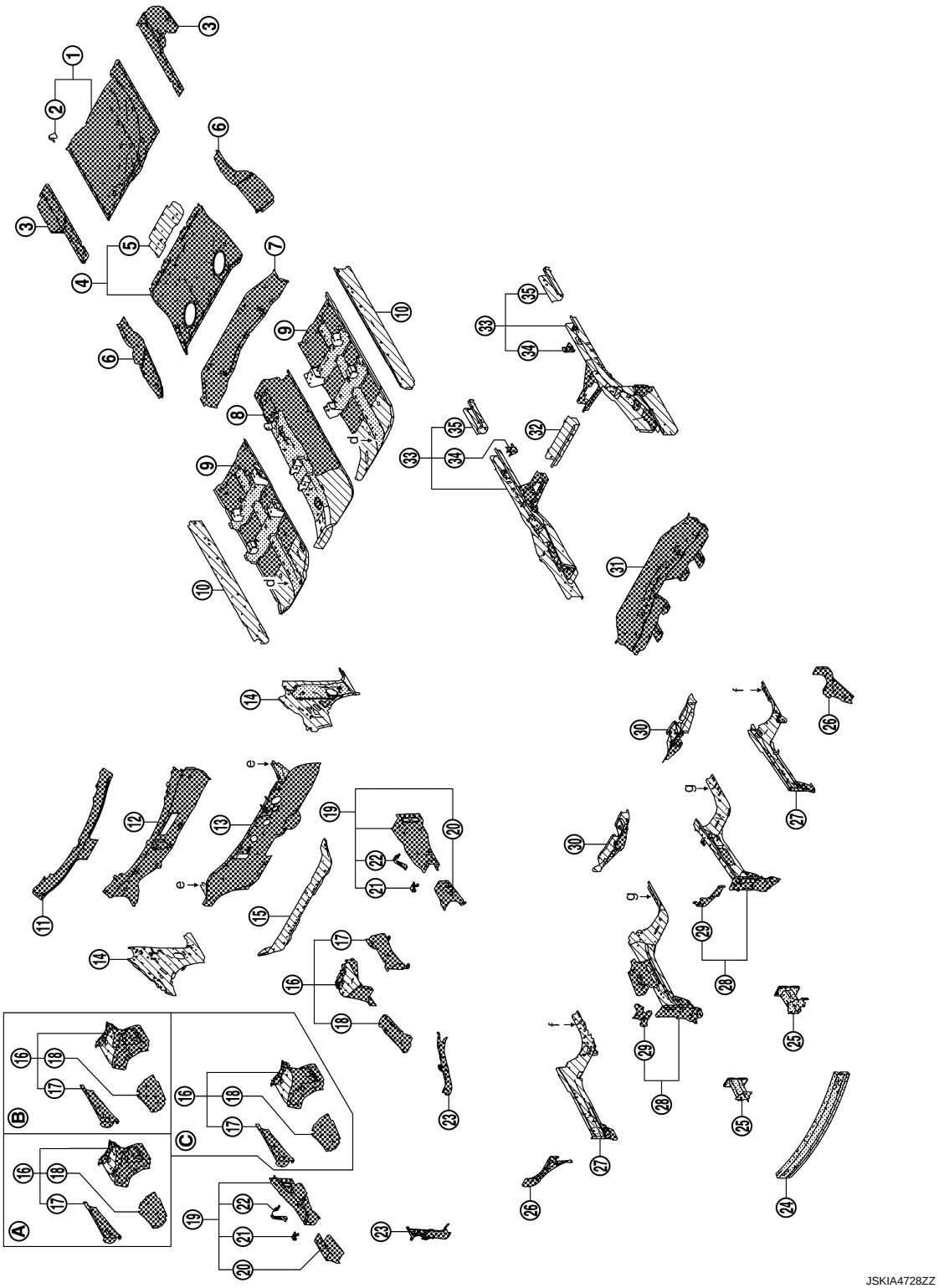
### PART REPLACEMENT

To replace an ultra high strength part, be sure to replace it by panel supply unit of ultra high strength steel part. For the welding method, refer to BRM-193, "Welding of Ultra High Strength Steel"

## Underbody Component Parts

INFOID:0000000010843600

Refer to parts catalogue for the replacement parts.




Ⓐ R9M engine models Ⓑ QR20DE engine models Ⓒ MR20DD engine models

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Rear floor rear | | | Under 440 | × |
| ② | Spare tire clamp bracket | | | Under 440 | — |
| ③ | Rear floor side assembly (RH & LH) | | | Under 440 | × |
| ④ | Rear floor front | | | Under 440 | — |
| ⑤ | Rear floor board reinforcement | | | 590 | × |
| ⑥ | Rear floor front extension (Upper RH & LH) | | | Under 440 | × |
| ⑦ | Rear seat crossmember assembly | | | 590 | × |
| ⑧ | Center front floor | | | 780 | × |
| ⑨ | Front floor (RH & LH) | d. | 980MPa[caution] T=1.8 mm (0.071 in) | 590 | × |
| | | | Inside (RH only) 980MPa[caution] T=2.0 mm (0.079 in) | | |
| ⑩ | Inner sill (RH & LH) | | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑪ | Cowl top | | | Under 440 | × |
| ⑫ | Upper dash assembly | | | Under 440 | × |
| ⑬ | Lower dash complete | e. | 980MPa[caution] T=1.4 mm (0.055 in) | 590 | × |
| ⑭ | Side dash (RH & LH) | | | 590 | × |
| ⑮ | Lower dash crossmember | | 980MPa[caution] T=2.0 mm (0.079 in) | 440 | × |
| ⑯ | Front strut housing assembly (RH & LH) | | | 590 | × |
| ⑰ | Upper hoodledge (RH & LH) | | | Under 440 | × |
| ⑱ | Lower hoodledge (RH & LH) | | | Under 440 | × |
| ⑲ | Hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ⑳ | Front hoodledge reinforcement (RH & LH) | | | Under 440 | × |
| ㉑ | Upper front fender bracket (RH & LH) | | | Under 440 | × |
| ㉒ | Front fender bracket (RH & LH) | | | Under 440 | × |
| ㉓ | Upper radiator core support assembly (RH & LH) | | | Under 440 | × |
| ㉔ | Front bumper armature assembly | | 1500MPa[caution] T=1.0 mm (0.039 in) | — | — |
| ㉕ | Front bumper stay (RH & LH) | | | 590 | — |
| ㉖ | Hoodledge connector assembly (RH & LH) | | | Under 440 | × |
| ㉗ | Front side member closing plate (RH & LH) | f. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉘ | Front side member assembly (RH & LH) | g. | 980MPa[caution] T=2.0 mm (0.079 in) | 590 | × |
| ㉙ | Side radiator core support (RH & LH) | | | Under 440 | × |
| ㉚ | Front suspension mounting bracket (RH & LH) | | | 590 | × |

| No. | Parts name | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|
| ㉛ | Rear floor front extension (Lower) | Under 440 | × |
| ㉜ | Rear crossmember center assembly | 590 | × |
| ㉝ | Rear side member (RH & LH) | 590 | × |
| ㉞ | Muffler mounting bracket assembly (RH & LH) | Under 440 | × |
| ㉟ | Rear side member extension (RH & LH) | 780 | × |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

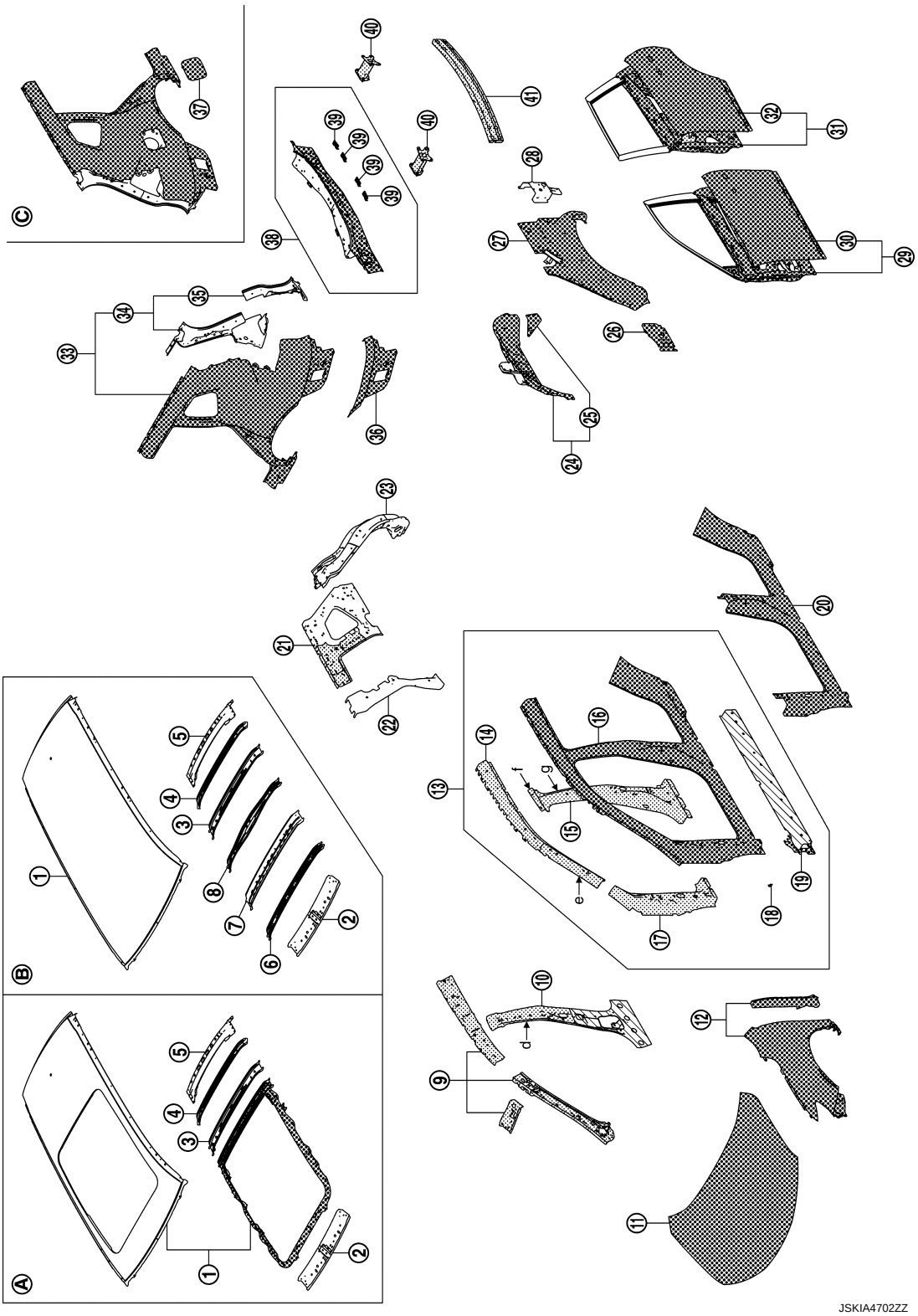
**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

## Body Component Parts

INFOID:0000000010860049

Refer to parts catalogue for the replacement parts.




Ⓐ Sunroof models Ⓑ Normal roof models Ⓒ Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

| No. | Parts name | | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|---|
| ① | Roof | | | Under 440 | — |
| ② | Front roof rail | | | Under 440 | — |
| ③ | Roof bow No.4 | | | Under 440 | — |
| ④ | Roof bow No.5 | | | Under 440 | — |
| ⑤ | Rear roof rail | | | Under 440 | — |
| ⑥ | Roof bow No.1 | | | Under 440 | — |
| ⑦ | Roof bow No.2 | | | Under 440 | — |
| ⑧ | Roof bow No.3 | | | Under 440 | — |
| ⑨ | Upper inner front pillar (RH & LH) | | | 590 | — |
| ⑩ | Inner center pillar assembly (RH & LH) | d. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑪ | Hood | | | 440 | × |
| ⑫ | Front fender (RH & LH) | | | Under 440 | × |
| ⑬ | Side body assembly (RH & LH) | | | Refer to No. ⑭ – ⑲ | |
| ⑭ | Outer front pillar reinforcement (RH & LH) | e. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| ⑮ | Lower center pillar brace (RH & LH) | f. | 980MPa[caution] T=1.0 mm (0.039 in) | 590 | — |
| | | g. | 980MPa[caution] T=1.0 mm (0.039 in) | | |
| ⑯ | Outer front side body (RH & LH) | | | Under 440 | × |
| ⑰ | Lower front pillar hinge brace (RH & LH) | | | 590 | — |
| ⑱ | Front fender bracket assembly (RH & LH) | | | Under 440 | × |
| ⑲ | Outer sill reinforcement (RH & LH) | | | 590 | × |
| ⑳ | Outer sill assembly (RH & LH) | | | Under 440 | × |
| ㉑ | Inner rear pillar (RH & LH) | | | 590 | — |
| ㉒ | Upper rear pillar reinforcement (RH & LH) | | | Under 440 | — |
| ㉓ | Back pillar assembly (Inner RH & LH) | | | 440 | — |
| ㉔ | Inner rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉕ | Inner rear wheelhouse rear extension (RH & LH) | | | Under 440 | × |
| ㉖ | Outer rear wheelhouse extension (RH & LH) | | | Under 440 | × |
| ㉗ | Outer rear wheelhouse (RH & LH) | | | Under 440 | × |
| ㉘ | Jack mounting bracket | | | Under 440 | — |
| ㉙ | Front door assembly (RH & LH) | | | 590 | × |
| ㉚ | Outer front door panel (RH & LH) | | | Under 440 | × |
| ㉛ | Rear door assembly (RH & LH) | | | 440 | × |
| ㉜ | Outer rear door panel (RH & LH) | | | Under 440 | × |
| ㉝ | Rear fender assembly (RH & LH) | | | Under 440 | × |

| No. | Parts name | | Tensile strength (MPa) | Both sided anti-corrosive precoated steel sections |
|---|---|---|---|---|
| ㉞ | Outer back pillar (RH & LH) | | Under 440 | — |
| ㉟ | Back pillar assembly (Outer RH & LH) | | Under 440 | — |
| ㊱ | Rear fender extension (RH & LH) | | Under 440 | × |
| ㊲ | Fuel filler lid assembly | | Under 440 | × |
| ㊳ | Upper rear panel | | Under 440 | × |
| ㊴ | Upper rear bumper retainer | | Under 440 | × |
| ㊵ | Rear bumper stay (RH & LH) | | 590 | — |
| ㊶ | Inner center rear bumper reinforcement | 1270MPa[caution] T=1.2 mm (0.047 in) | — | — |

**CAUTION:**

**If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.**

**NOTE:**

- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

# REMOVAL AND INSTALLATION

## CORROSION PROTECTION

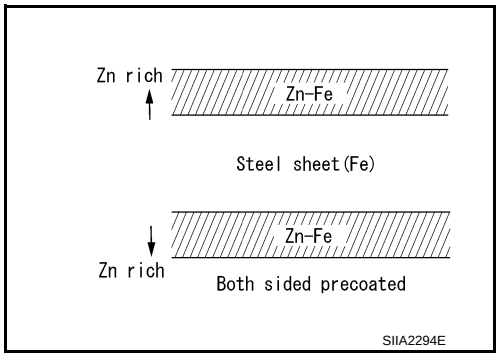
### Description

INFOID:0000000010843602

To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

#### Anti-Corrosive Precoated Steel (Galvannealed Steel)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet is adopted replacing conventional zinc-coated steel sheet.
Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



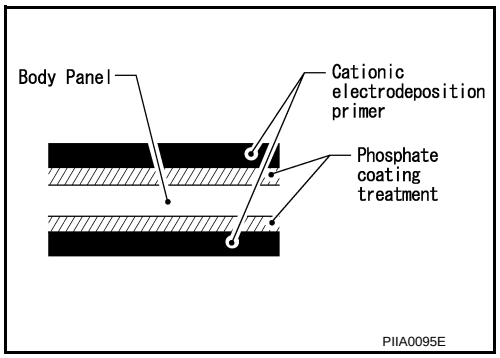

NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

#### Phosphate Coating Treatment and Cationic Electrodeposition Primer

A phosphate coating treatment and a cationic electrodeposition primer, which provide excellent corrosion protection, are applied to all body components.

**CAUTION:**

**Confine paint removal during welding operation to an absolute minimum.**




NISSAN genuine parts are also treated in the same manner. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

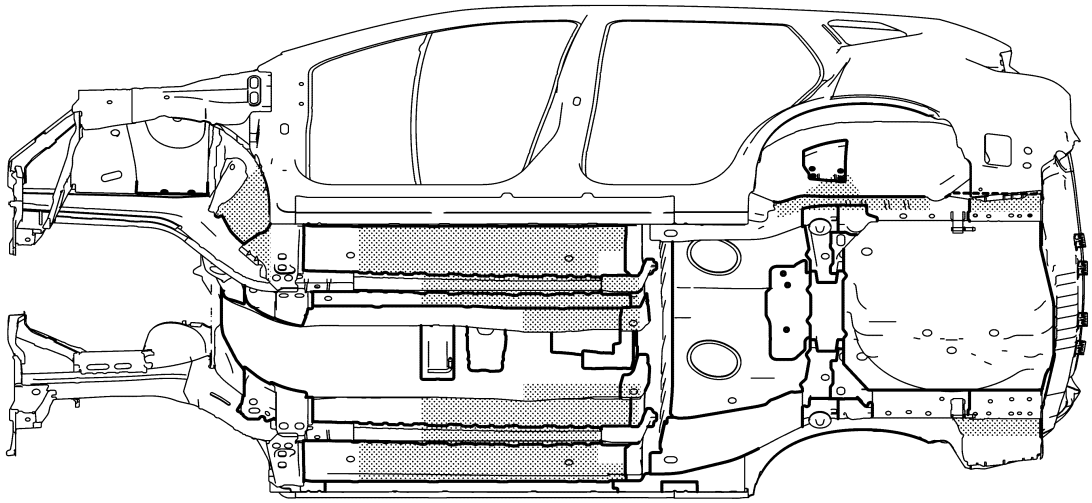
### Undercoating (MR20DD Engine Models)

INFOID:0000000010843603

The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust resistant, soundproof, vibration-proof, shock-resistant, adhesive, and durable.

#### Precautions in Undercoating

1. Never apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst that are subjected to heat).
2. Never undercoat the exhaust pipe or other parts that become hot.
3. Never undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.
5. After putting seal on the vehicle, put undercoating on it.



JSKIA4730ZZ

: Undercoated areas

: Sealed portions

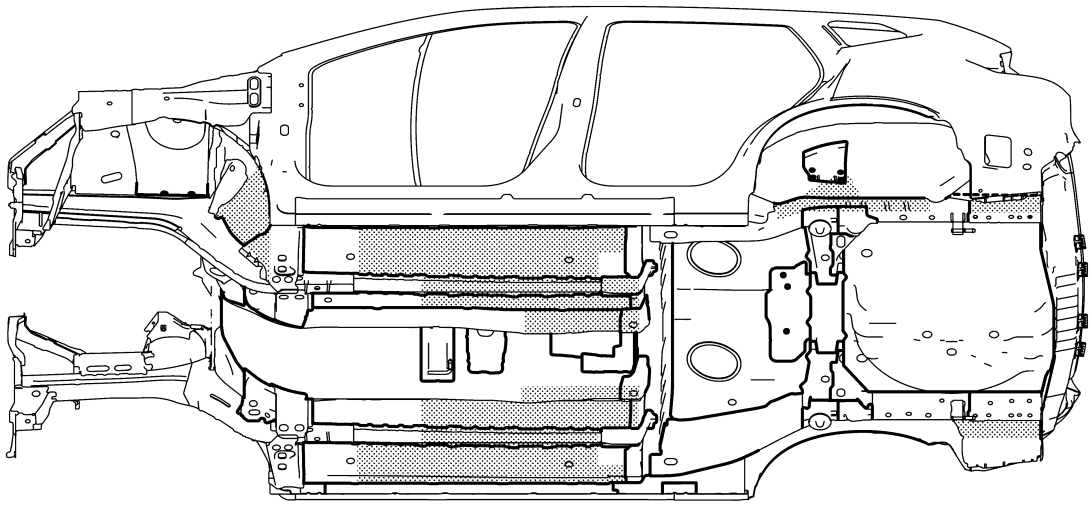
## Undercoating (Except For MR20DD Engine Models)

INFOID:0000000010843604

The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust resistant, soundproof, vibration-proof, shock-resistant, adhesive, and durable.

### Precautions in Undercoating

1. Never apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst that are subjected to heat).
2. Never undercoat the exhaust pipe or other parts that become hot.
3. Never undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.
5. After putting seal on the vehicle, put undercoating on it.



JSKIA4703ZZ

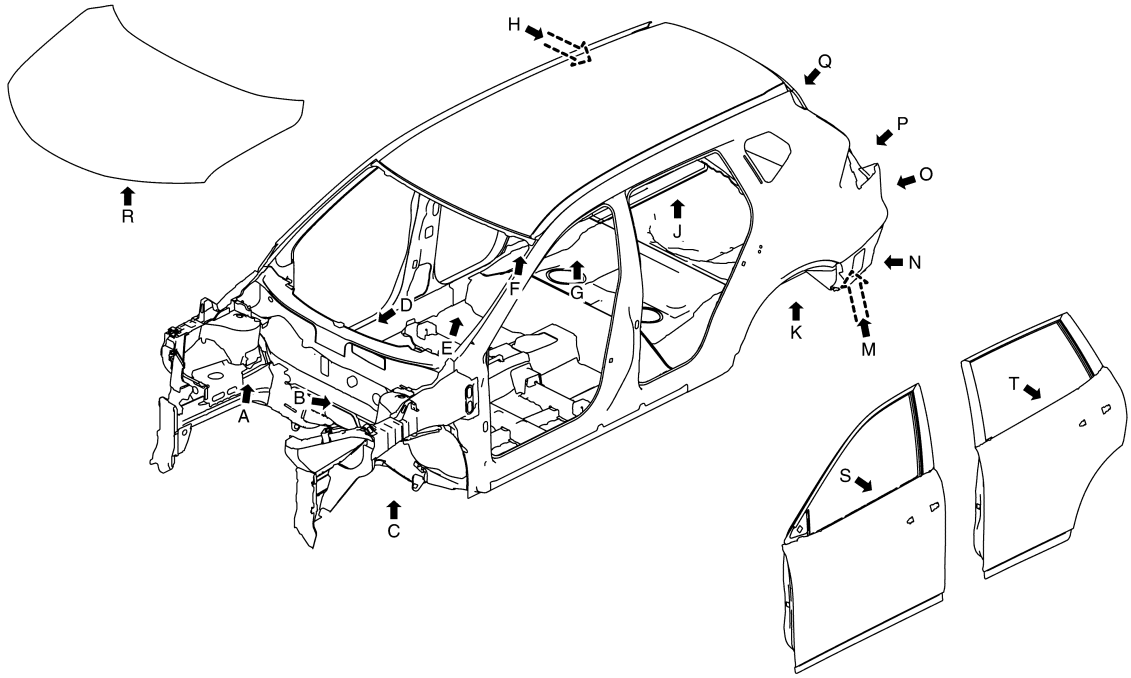
: Undercoated areas

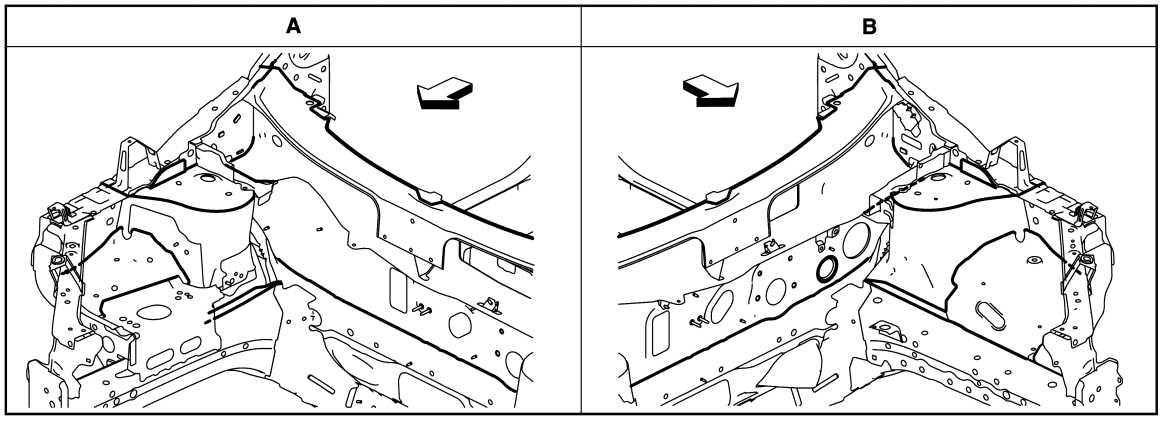
: Sealed portions

## Body Sealing (MR20DD Engine Models)

INFOID:0000000010843605

The following figure shows the areas that are sealed at the factory. Sealant that is applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

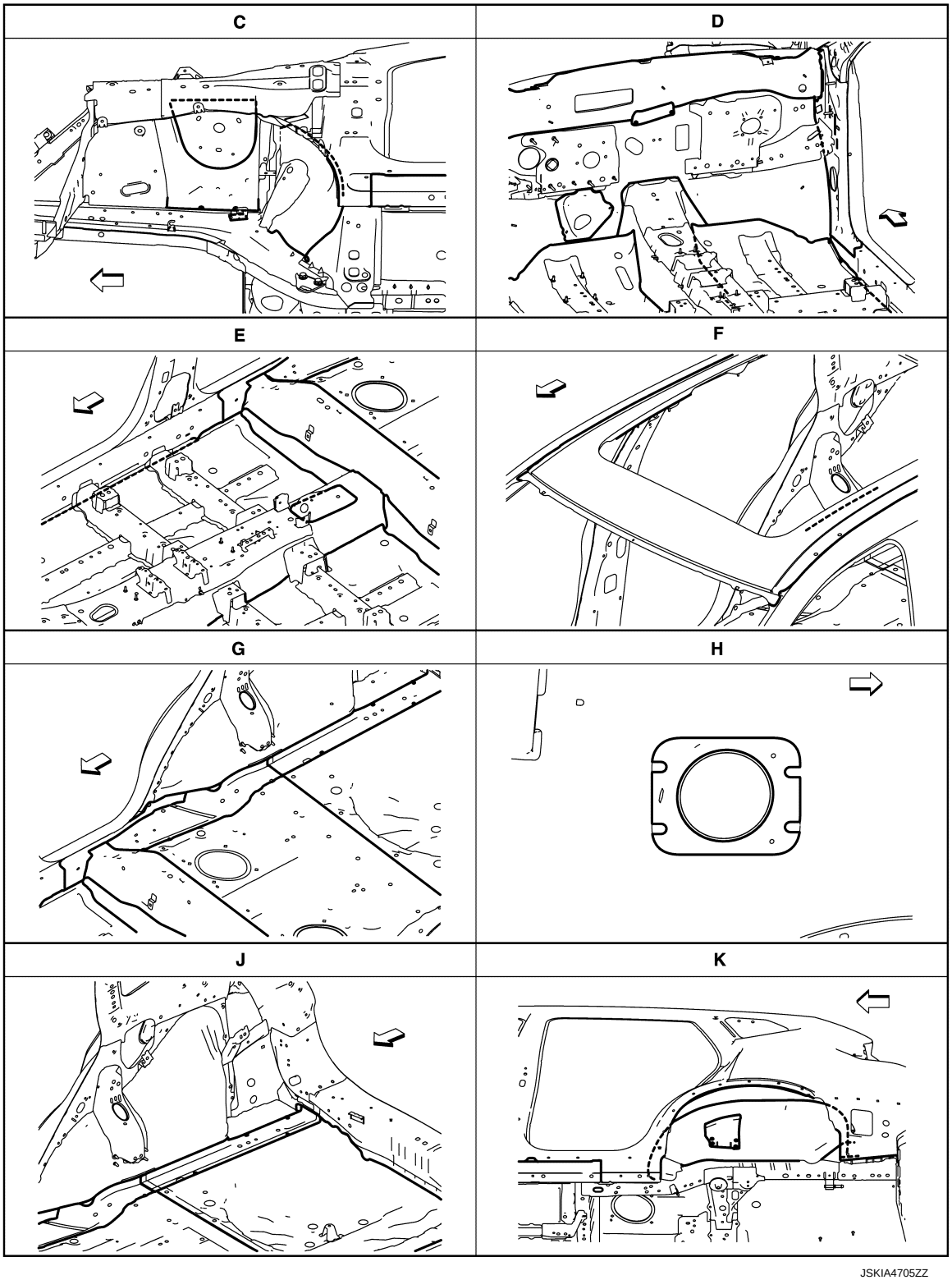



JSKIA4732ZZ

⇦: Vehicle front

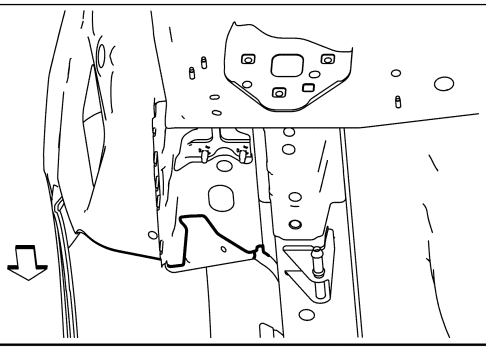
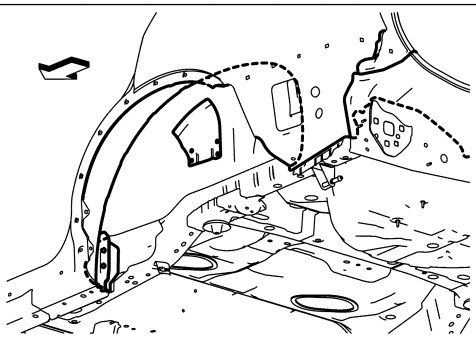
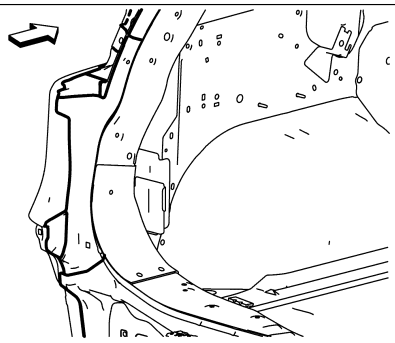
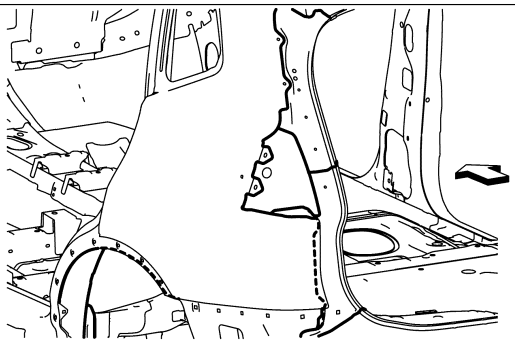
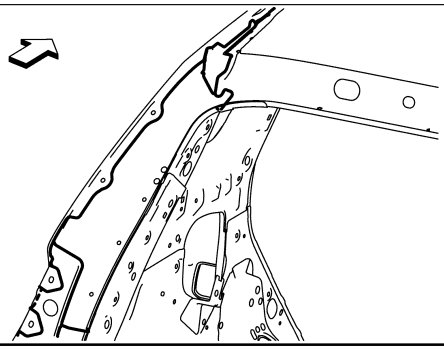
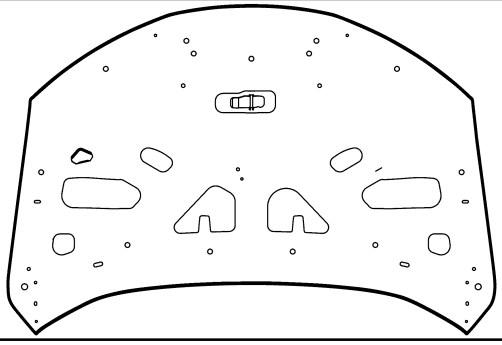
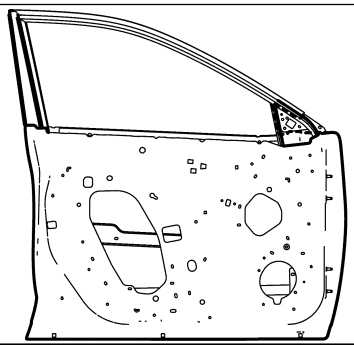
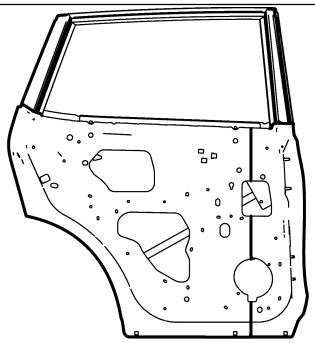
▬: Sealed portions




JSKIA4705ZZ

⇦: Vehicle front

▬: Sealed portions

| M | N |
|---|---|
|  |  |
| **O** | **P** |
|  |  |
| **Q** | **R** |
|  |  |
| **S** | **T** |
|  |  |

JSKIA4706ZZ

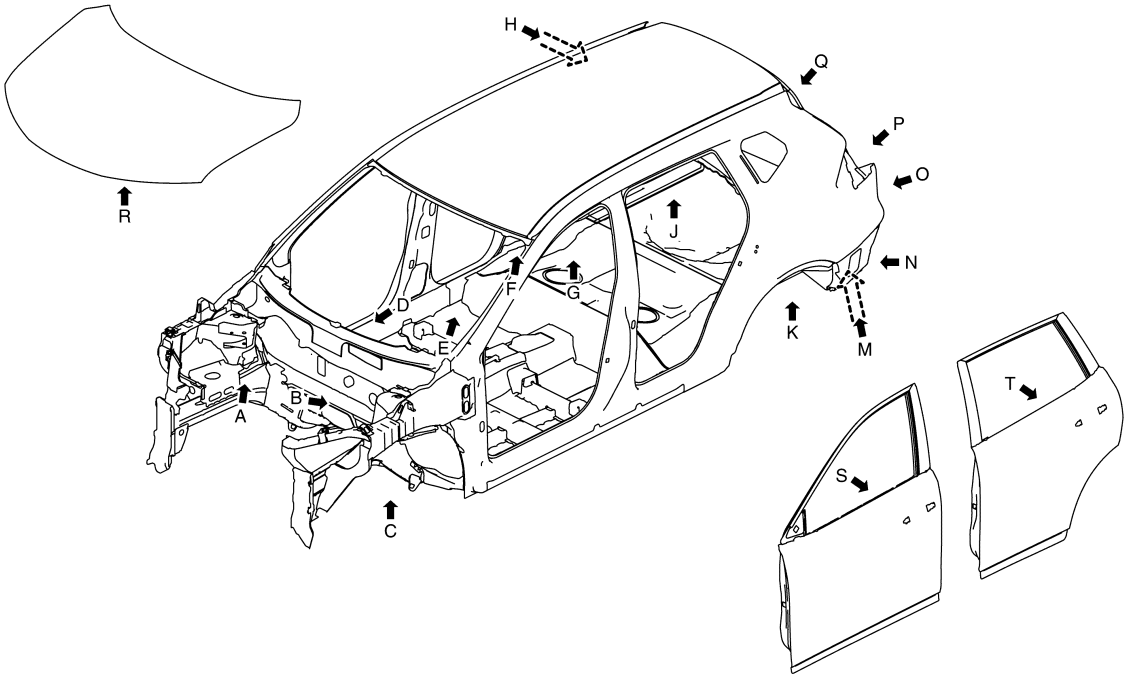
⇦: Vehicle front

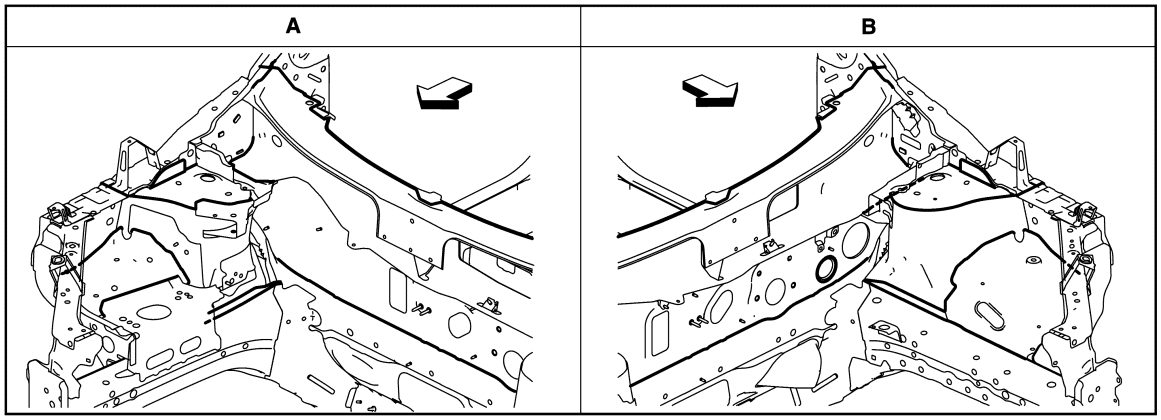
▬: Sealed portions

## Body Sealing (QR25DE Engine Models)

INFOID:0000000010843606

The following figure shows the areas that are sealed at the factory. Sealant that is applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

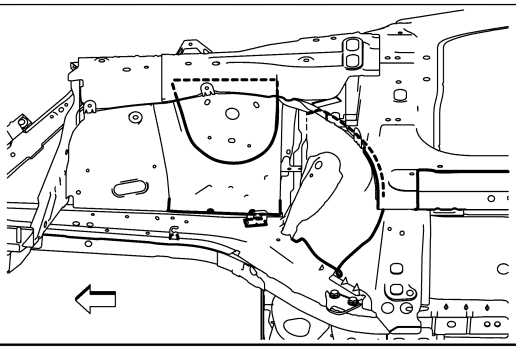
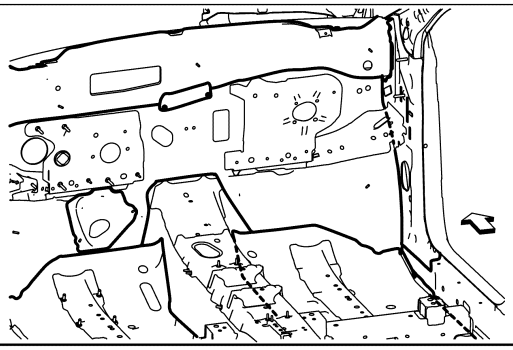
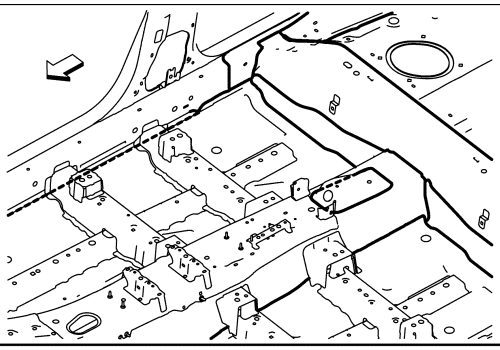
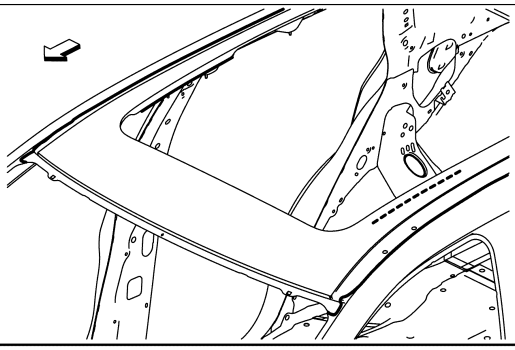
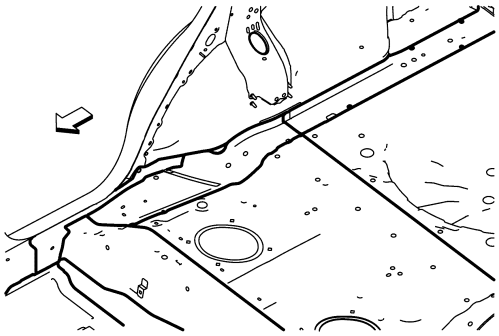
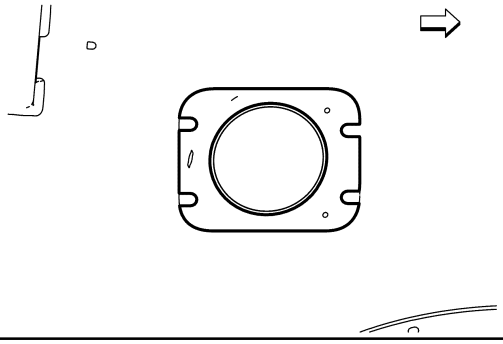
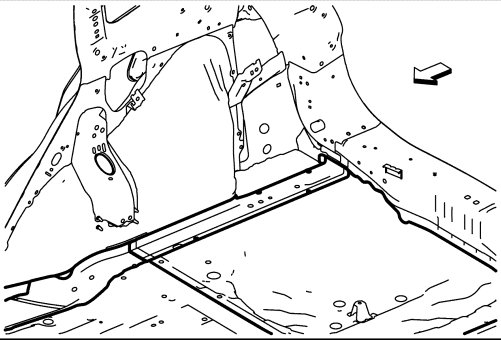
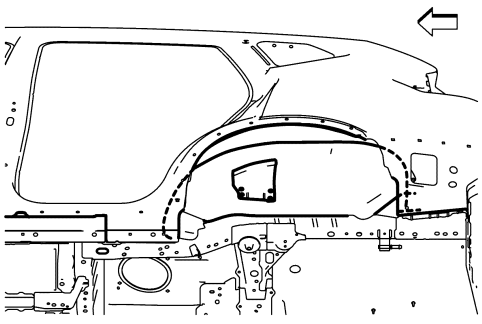



JSKIA4735ZZ

⇦: Vehicle front

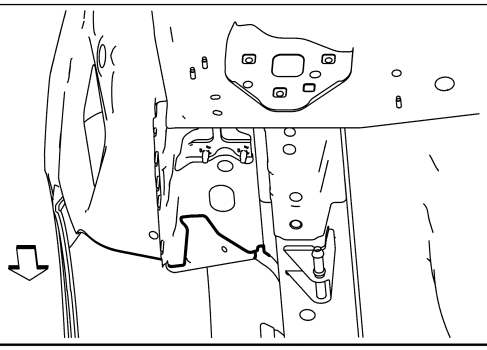
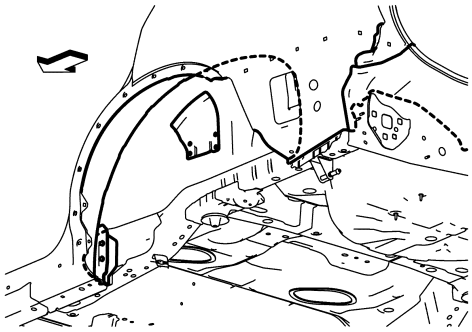
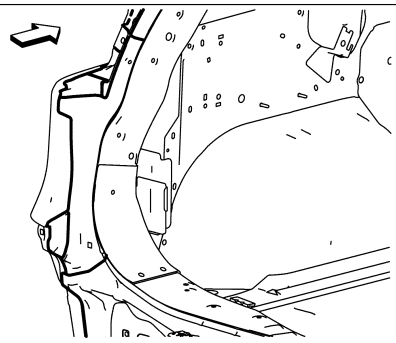
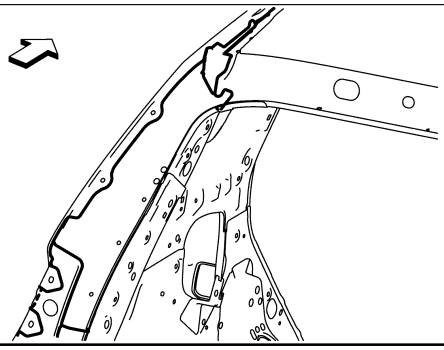
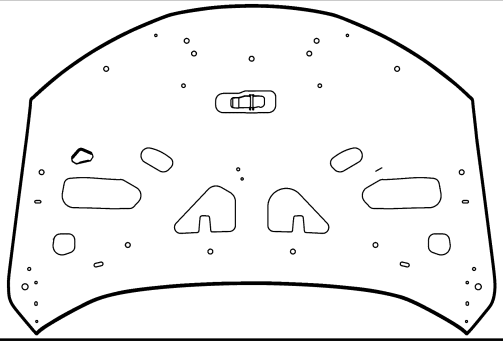
▬: Sealed portions

| C | D |
|---|---|
|  |  |
| **E** | **F** |
|  |  |
| **G** | **H** |
|  |  |
| **J** | **K** |
|  |  |

JSKIA4705ZZ

⇦: Vehicle front

▬: Sealed portions

| M | N |
|---|---|
|  |  |
| **O** | **P** |
|  |  |
| **Q** | **R** |
|  |  |
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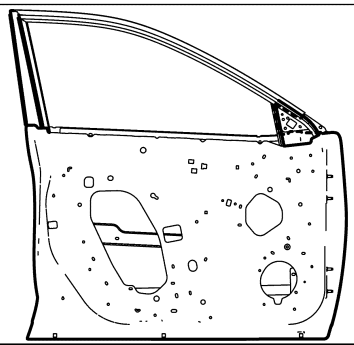
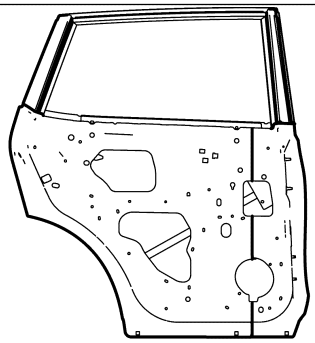
|  |  |

JSKIA4706ZZ

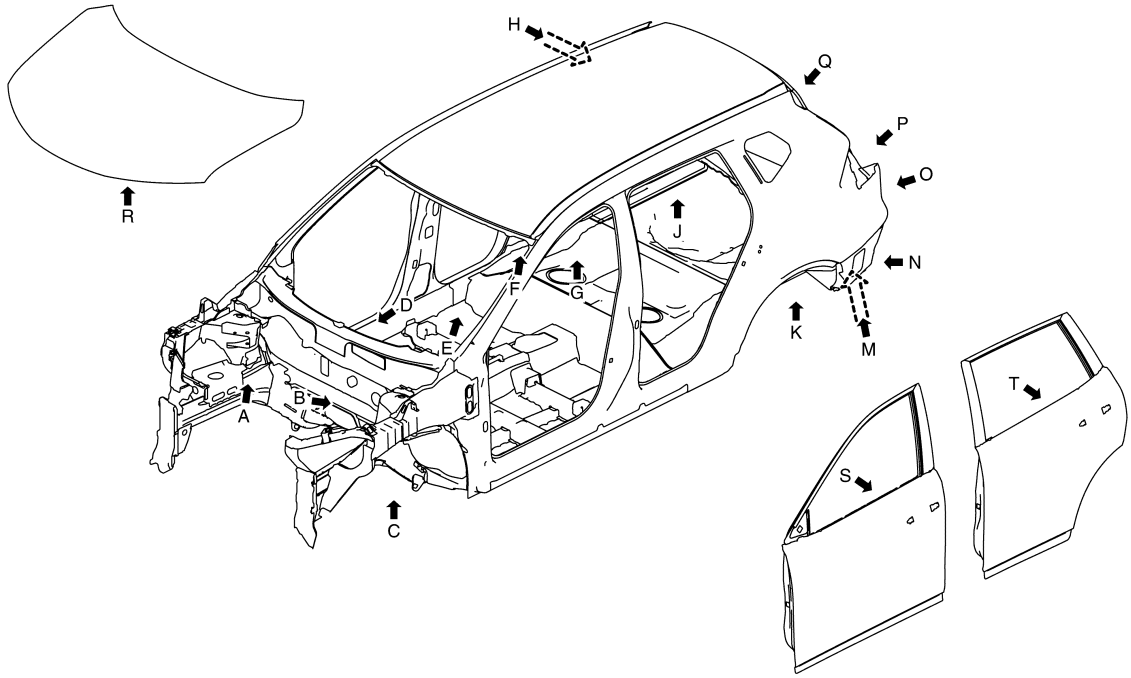
⇦: Vehicle front

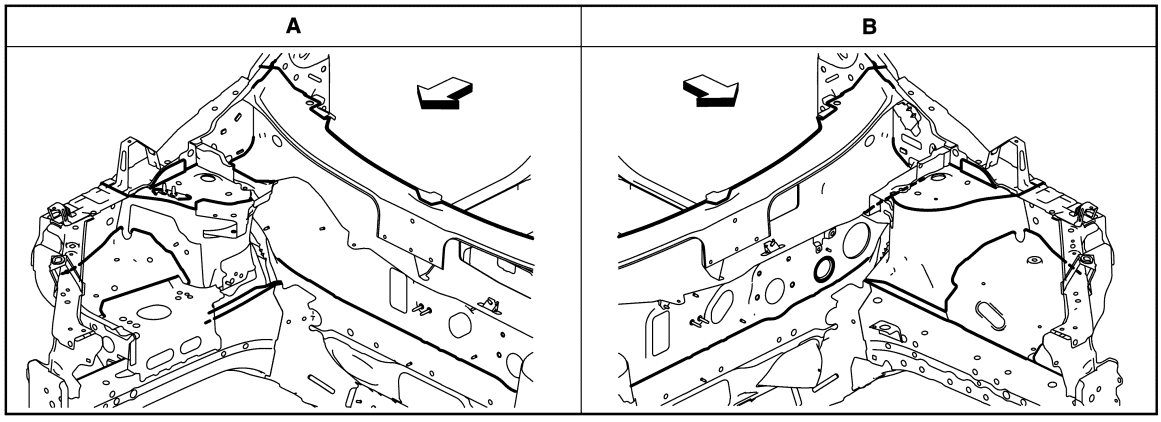
▬: Sealed portions

## Body Sealing (R9M Engine Models)

INFOID:0000000010860050

The following figure shows the areas that are sealed at the factory. Sealant that is applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

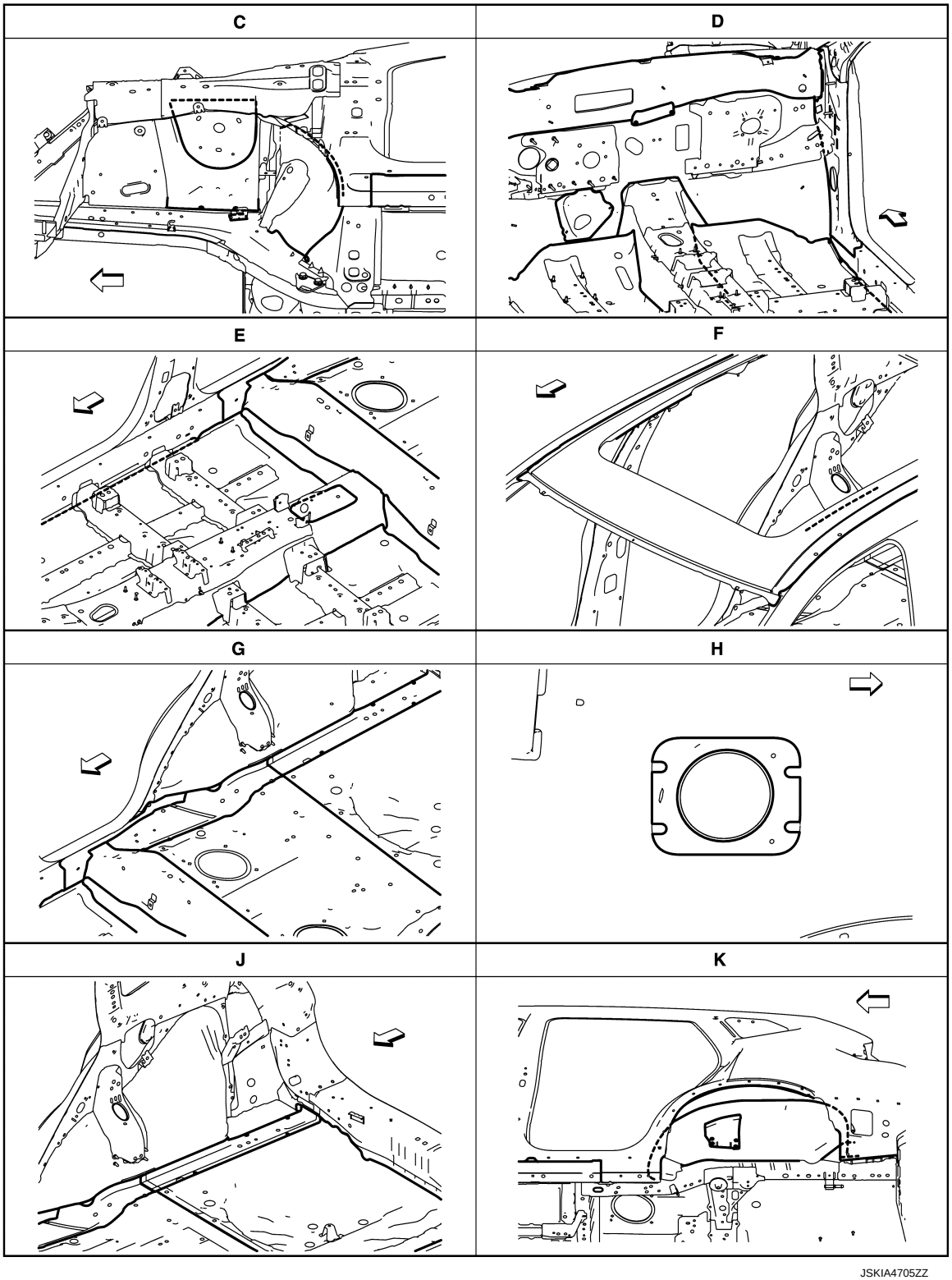



JSKIA4704ZZ

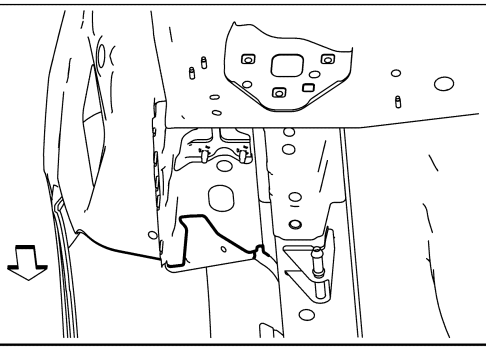
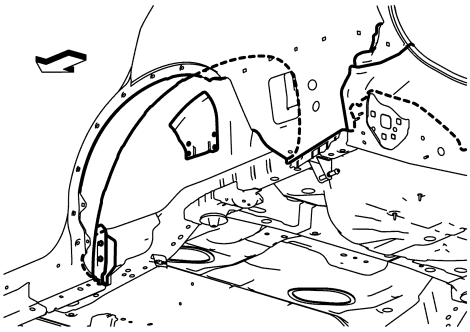
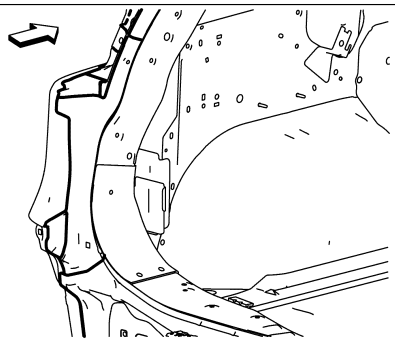
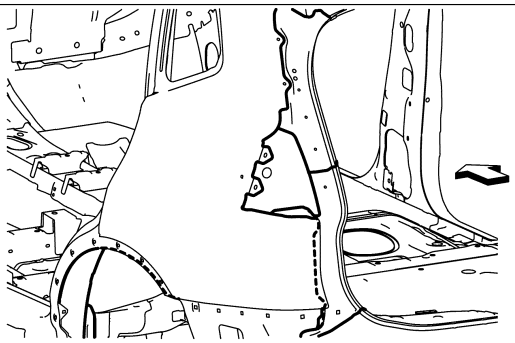
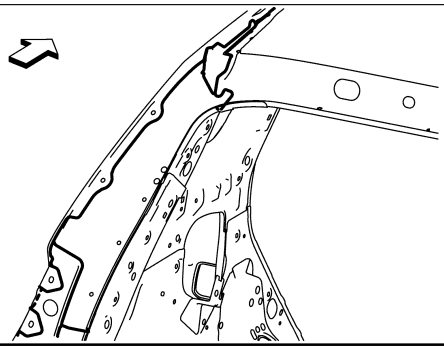
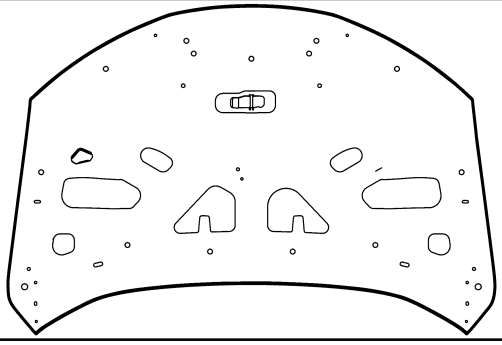
⇦: Vehicle front

▬: Sealed portions




JSKIA4705ZZ

⇦: Vehicle front
▬: Sealed portions

| M | N |
|---|---|
|  |  |
| **O** | **P** |
|  |  |
| **Q** | **R** |
|  |  |
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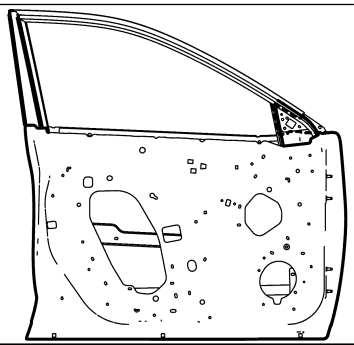
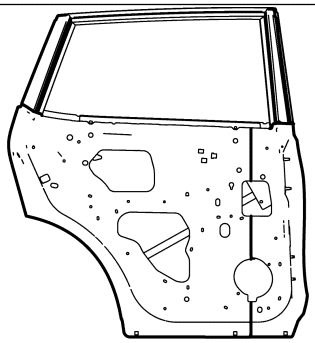
|  |  |

JSKIA4706ZZ

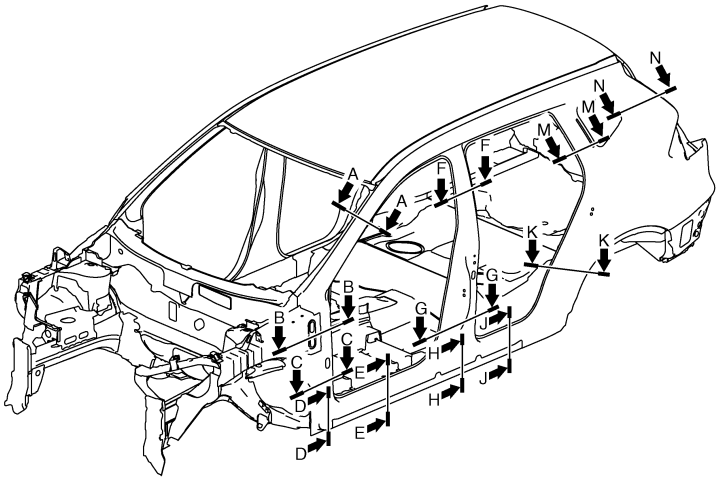
⇦: Vehicle front

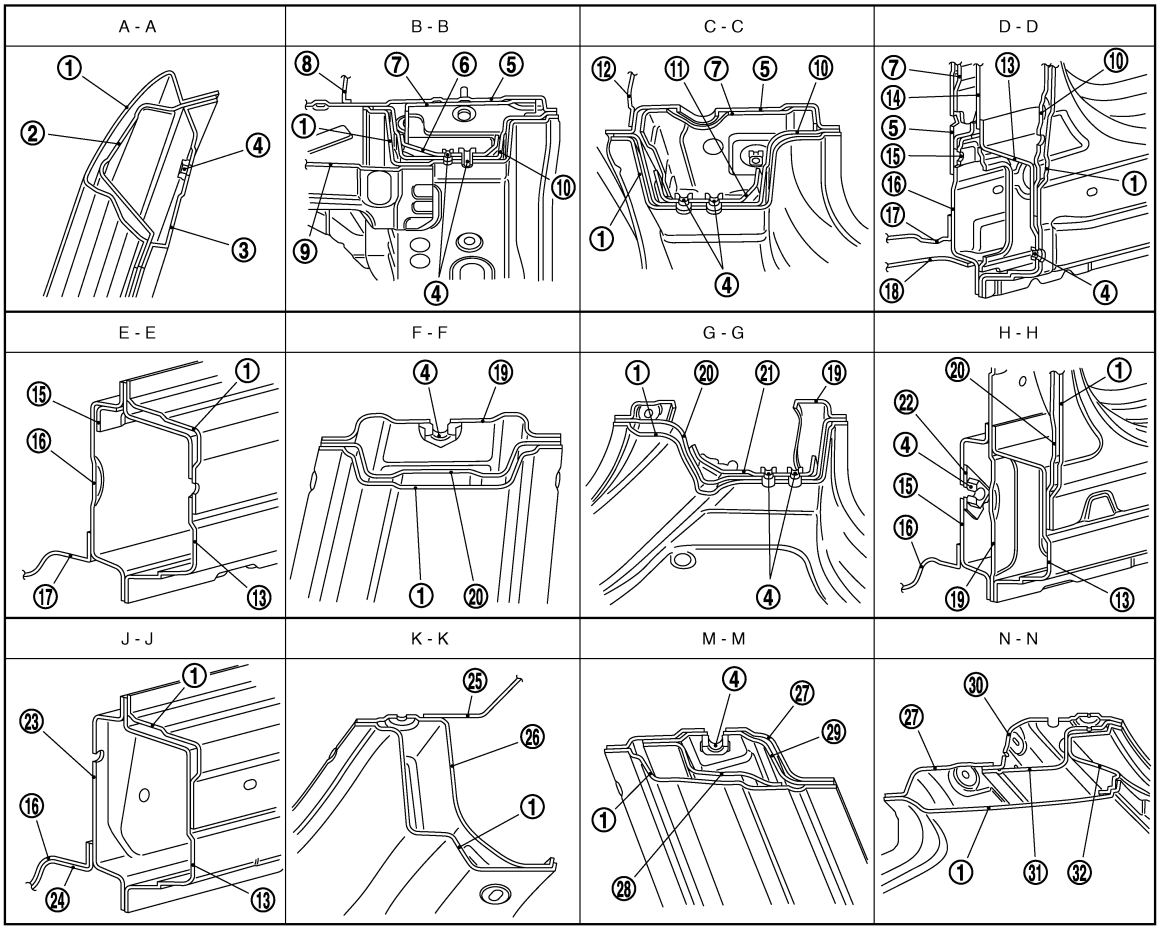
▬: Sealed portions

# BODY CONSTRUCTION

## Body Construction

INFOID:0000000010843607




JSKIA4741ZZ

① Outer side body
② Outer front pillar reinforcement
③ Upper inner front pillar
④ Weld nut
⑤ Side dash
⑥ Upper hinge plate
⑦ Inner front pillar reinforcement
⑧ Upper dash
⑨ Rear hoodledge reinforcement

⑩ Lower front pillar hinge brace
⑪ Lower hinge plate
⑫ Lower dash
⑬ Outer sill reinforcement
⑭ Lower front pillar reinforcement
⑮ Inner sill reinforcement
⑯ Inner sill
⑰ Front floor
⑱ Front side member outrigger
⑲ Inner center pillar
⑳ Center pillar hinge brace
㉑ Lower center pillar hinge brace
㉒ Anchor plate
㉓ Inner sill extension
㉔ Rear floor front extension
㉕ Inner rear wheelhouse
㉖ Outer rear wheelhouse
㉗ Inner rear pillar
㉘ Inner rear pillar reinforcement
㉙ Rear pillar seat belt anchor
㉚ Rear roof rail brace
㉛ Upper back pillar reinforcement
㉜ Center back pillar main

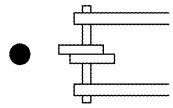
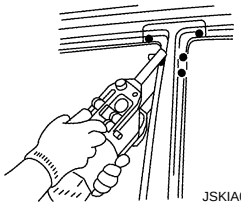
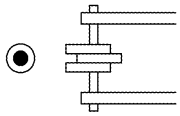
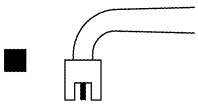
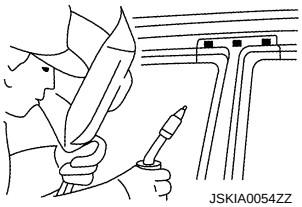
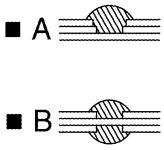
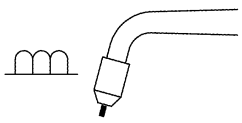
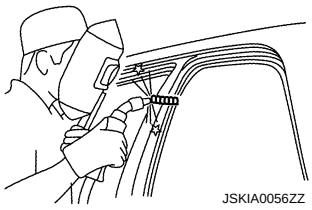
# REPLACEMENT OPERATIONS

## Description

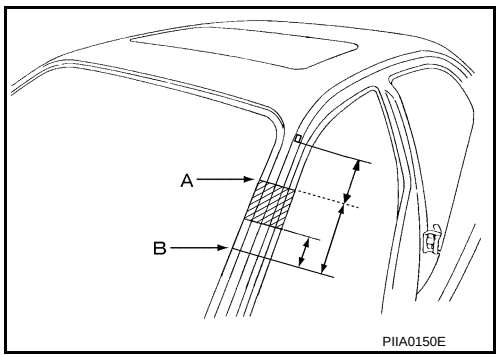
INFOID:0000000010843608

- This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.
- Technicians are also encouraged to read the Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle are maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not including in this manual. Technicians should refer to both manuals to ensure proper repair.
- Please note that this information is prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

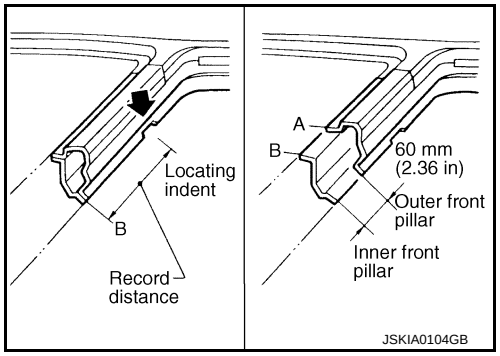
The symbols used in this section for welding operations are shown below.

| Symbol marks | Description | |
|---|---|---|
|  JSKIA0049ZZ | 2-spot welds |  JSKIA0053ZZ |
|  JSKIA0050ZZ | 3-spot welds | |
|  JSKIA0051ZZ | MIG plug weld |  JSKIA0054ZZ<br>For 3 panels plug weld method<br>  JSKIA0055ZZ |
|  JSKIA0052ZZ | MIG seam weld / Point weld |  JSKIA0056ZZ |

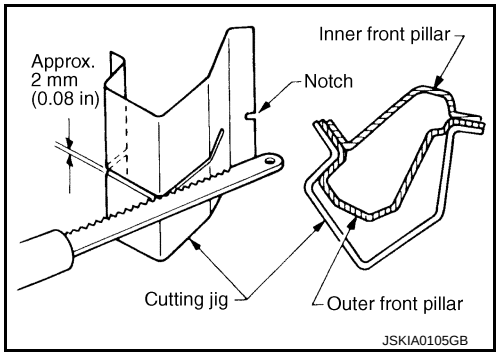
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.




- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm (2.36 in) above the inner front pillar cut position.

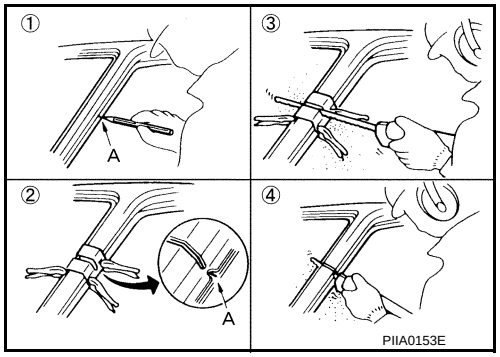



- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.




- An example of cutting operation using a cutting jig is as per the following.

1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig (at position A).
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.




## Welding of Ultra High Strength Steel

INFOID:0000000010843609

### SPOT WELDING

Spot welding is limited to ultra high strength steel (tensile strength: 980 MPa) according to the welding conditions listed below.

**CAUTION:**

- **If the below welding conditions cannot be met, then perform plug welding.**
- **Never spot weld ultra high strength steel of tensile strength more than 980 MPa. For this type of ultra high strength steel, perform plug welding.**

- **The below welding condition is applicable only to this vehicle. Never apply this same welding condition to other vehicles.**

Welding condition

| | |
|---|---|
| **Welder tip diameter** | **6 mm** |
| **Welding pressure (Gun force)** | **3500 N** |
| **Welding current** | **8200 A** |
| **Weld time** | **0.22 sec (11 cyc: 50 Hz area, 13 cyc: 60 Hz area)** |
| **Panel configuration** | **Combination of a plate of tensile strength 980 MPa and that of tensile strength less than 980 MPa. (Up to 3 plates)** |

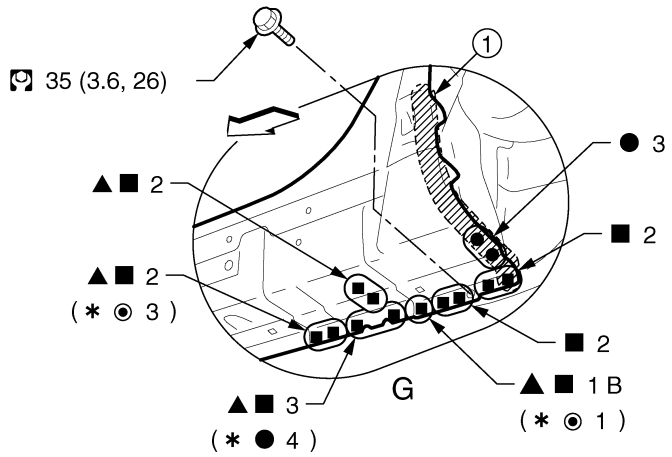
PLUG WELDING

To weld ultra high strength steel of tensile strength 980 MPa or more, perform plug welding observing the welding hole diameter described in the manual.

**CAUTION:**

- **To perform plug welding, use fuel mixture (Ar 80% + CO2 20%) for shielding gas of welder.**
- **Never use carbon dioxide gas (CO2 100%) as shielding gas of welder. Using CO2 100% gas results in inadequate weld strength.**
- **When welding hole diameter cannot be met, make multiple holes (smaller diameter) so that the sum of the hole areas equals the area of the original weld hole.**

EXAMPLE




JSKIA3503GB

① Body sealing

⇦: Vehicle front

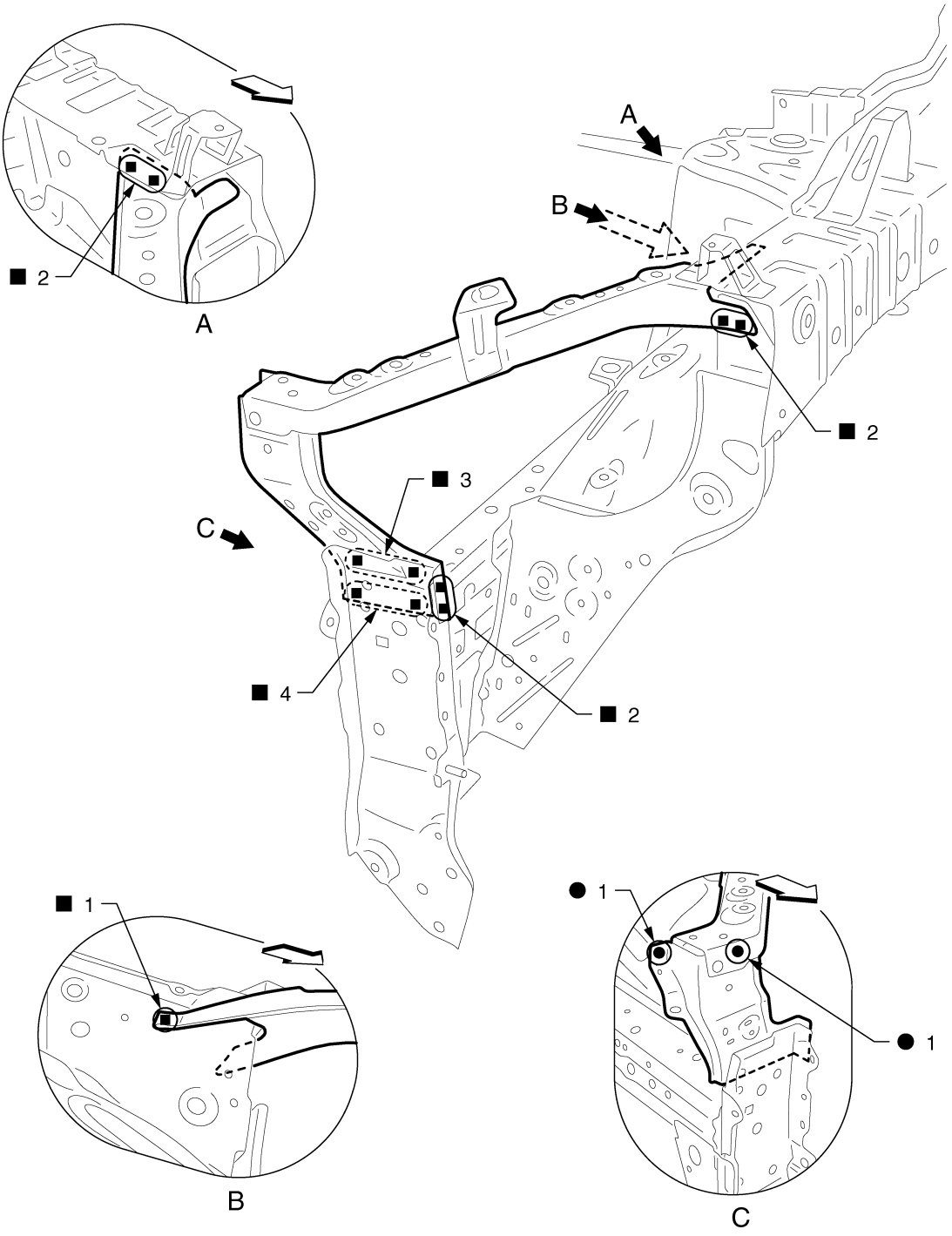
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

: N·m (kg-m, ft-lb)

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to ″Welding of Ultra High Strength Steel″.

## Radiator Core Support

INFOID:0000000010843610




⇦: Vehicle front

(◌): Weld the parts onto the back of the component part.

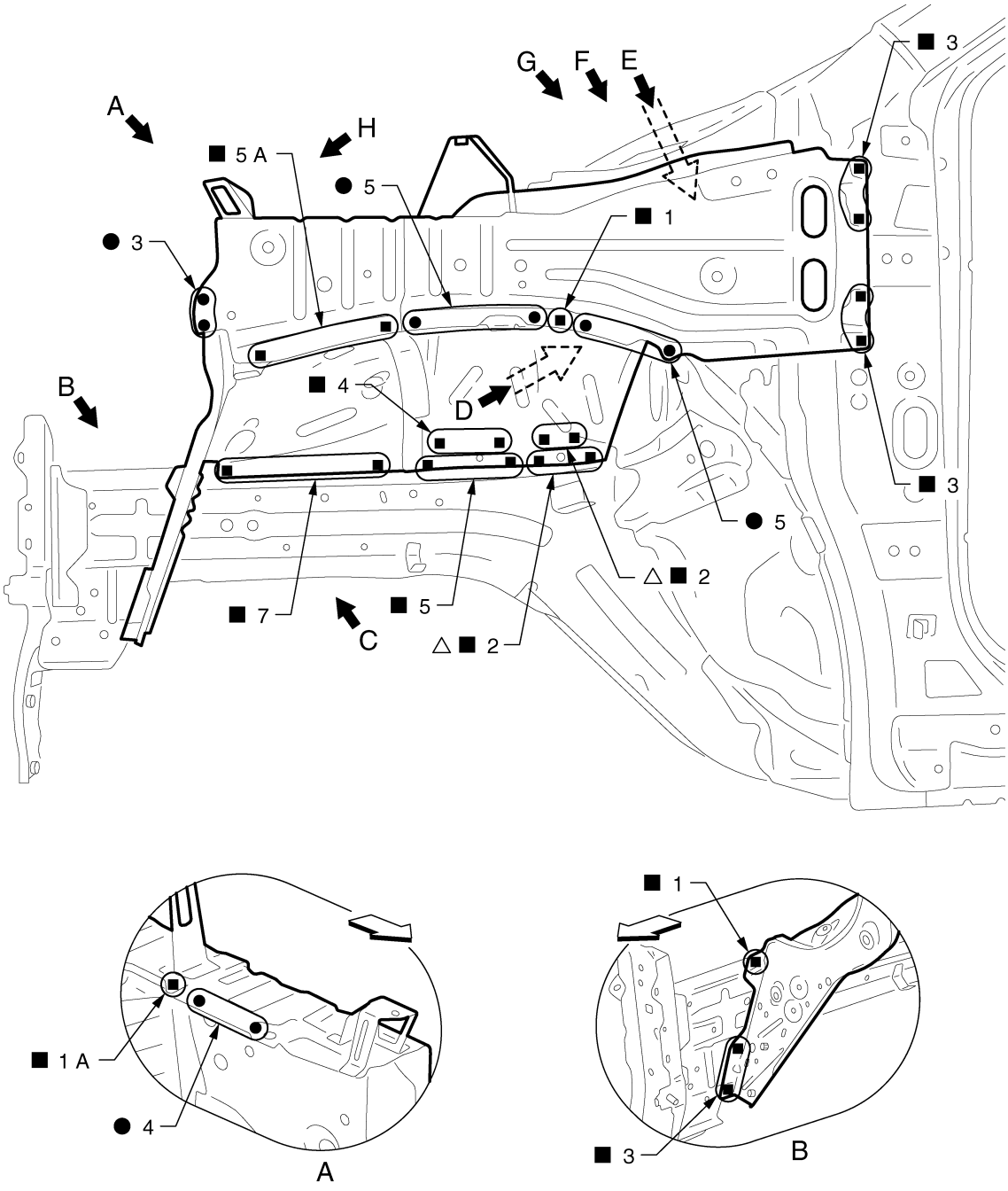
Replacement part

- Upper radiator core support assembly
- Side radiator core support

## Hoodledge

INFOID:0000000010843611

Work after radiator core support is removed.



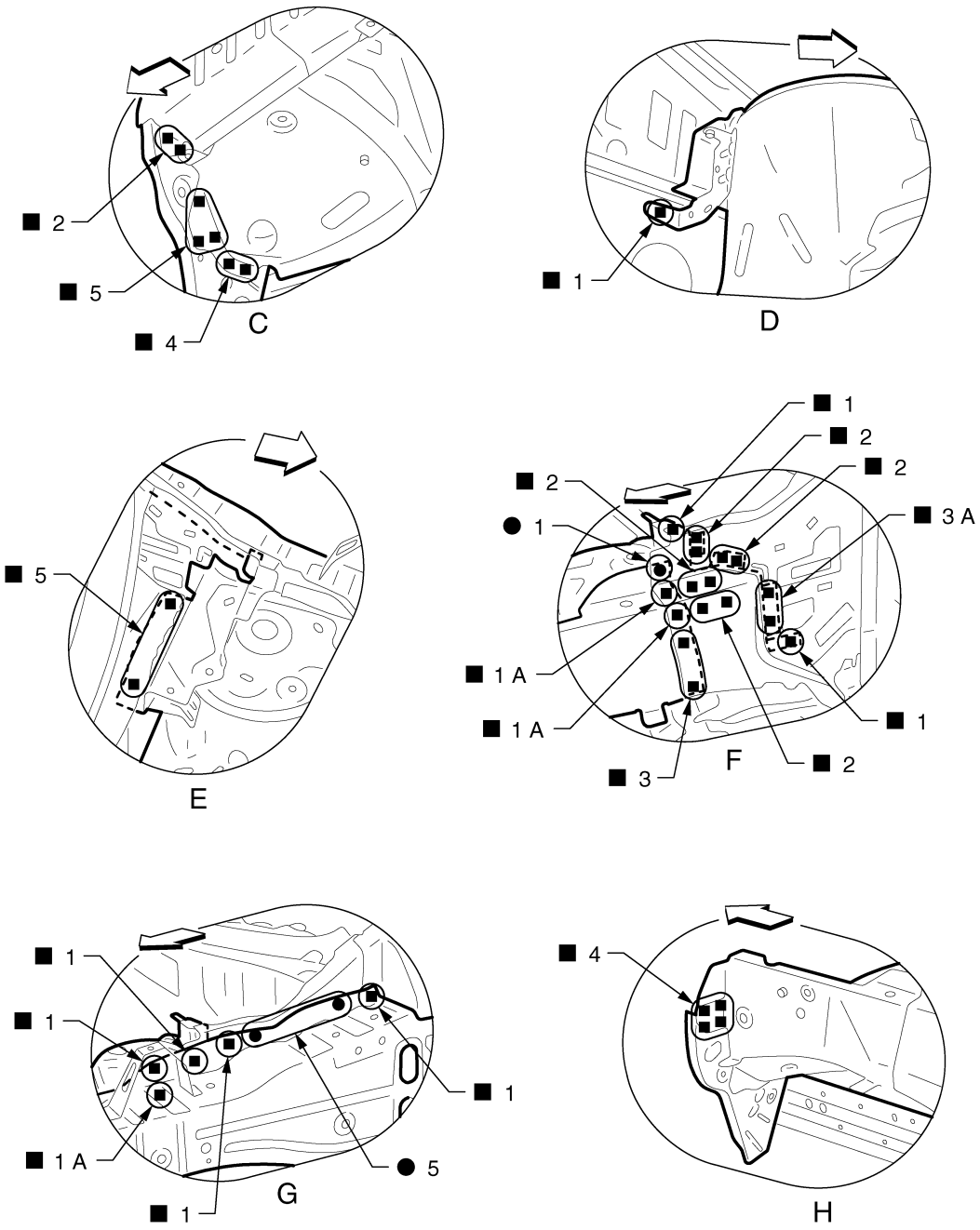

JSKIA4598ZZ

⇦: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

Replacement part

- Front strut housing assembly
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4599ZZ

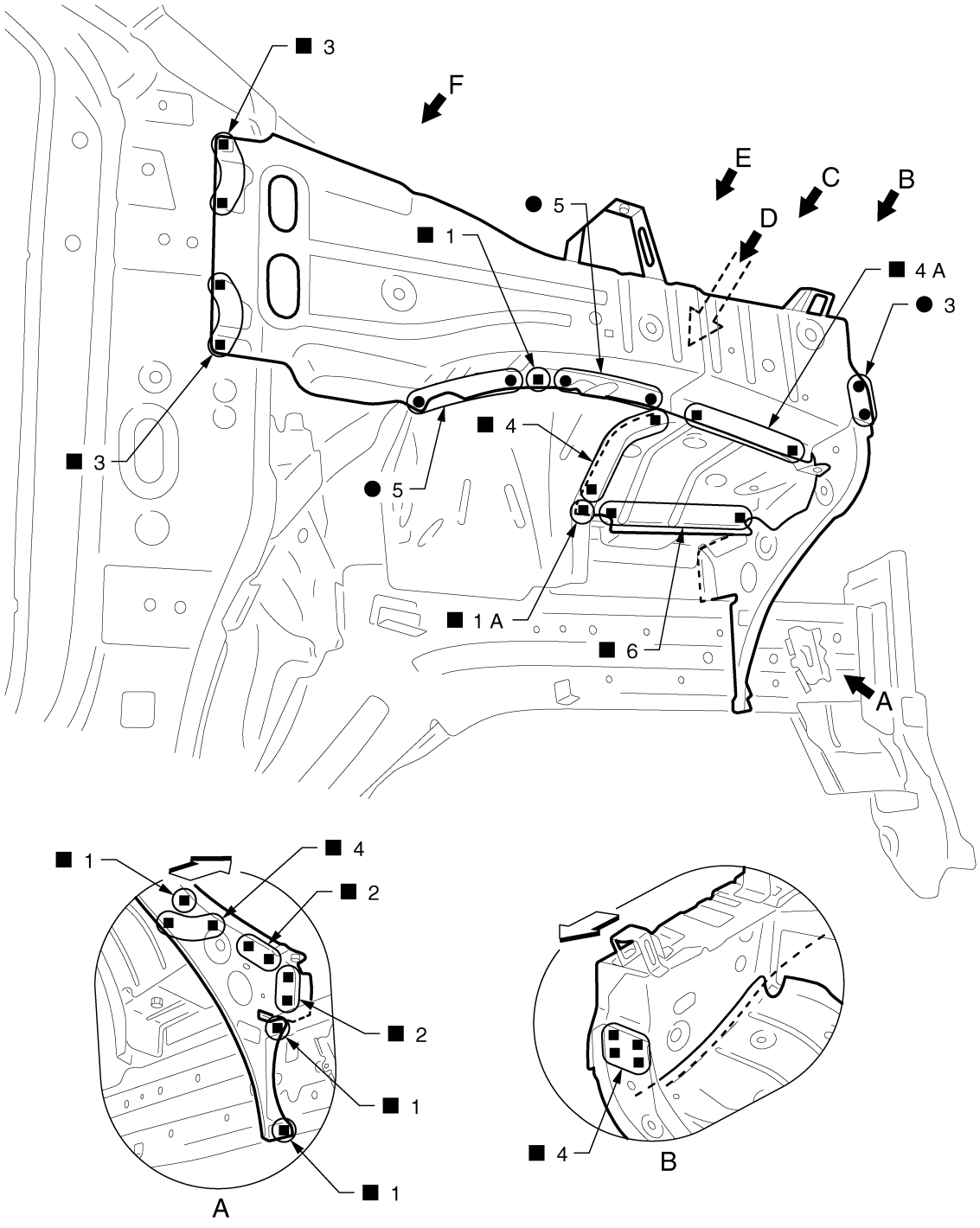
⇦: Vehicle front

View F and H: Before installing hoodledge reinforcement

## Hoodledge (Partial Replacement)

INFOID:0000000010843612

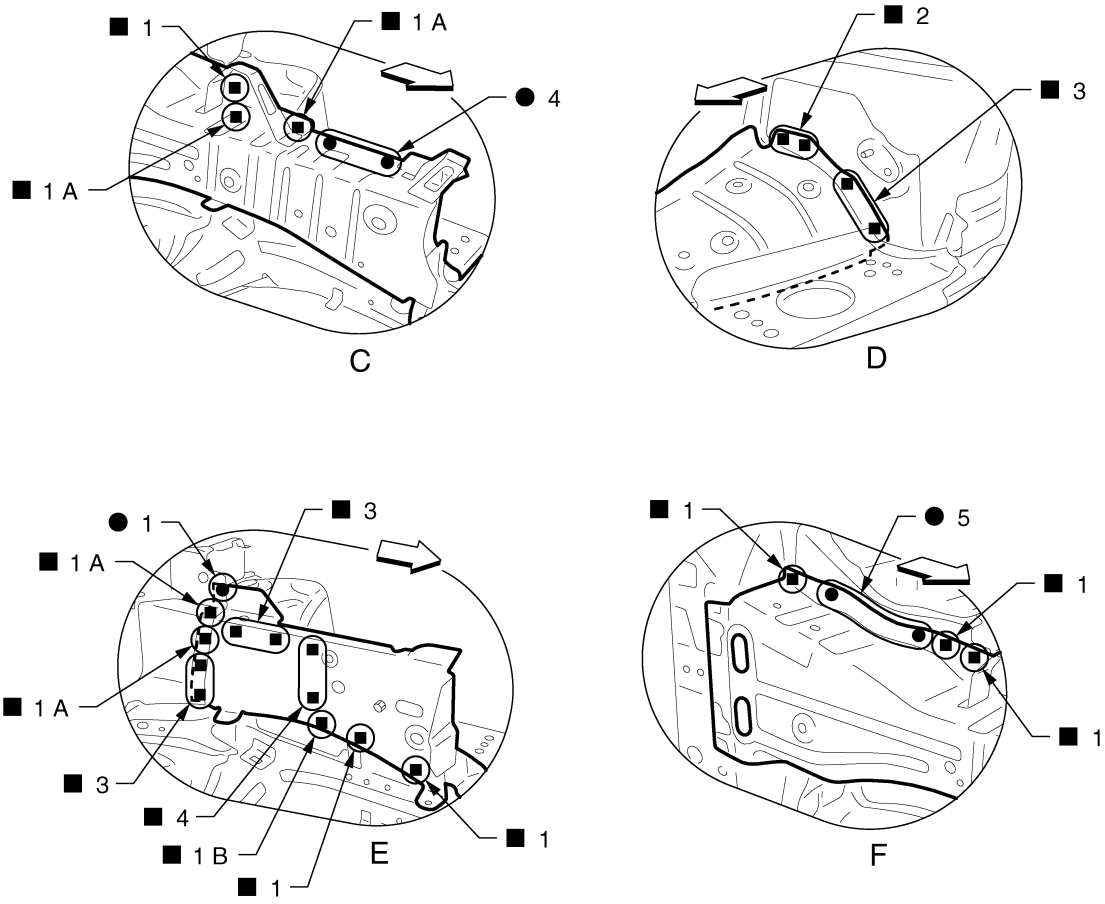
Work after radiator core support is removed.




⇦: Vehicle front

Replacement part

- Front strut housing assembly
- Hoodledge reinforcement
- Hoodledge connector assembly




JSKIA4618ZZ

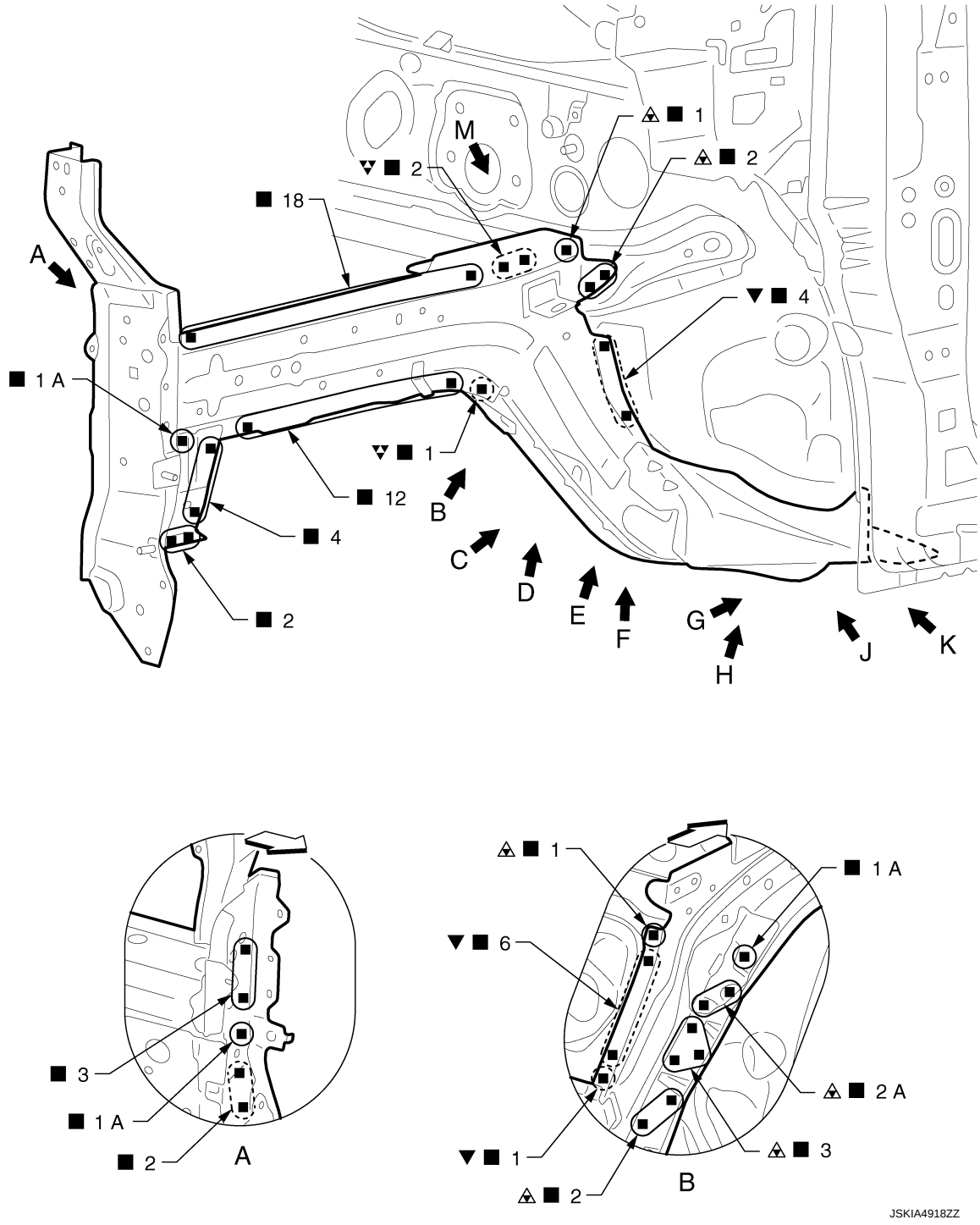
⇦: Vehicle front

View E: Before installing hoodledge reinforcement

## Front Side Member

INFOID:0000000010843613

Work after upper radiator core support assembly and hoodledge are removed.




⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

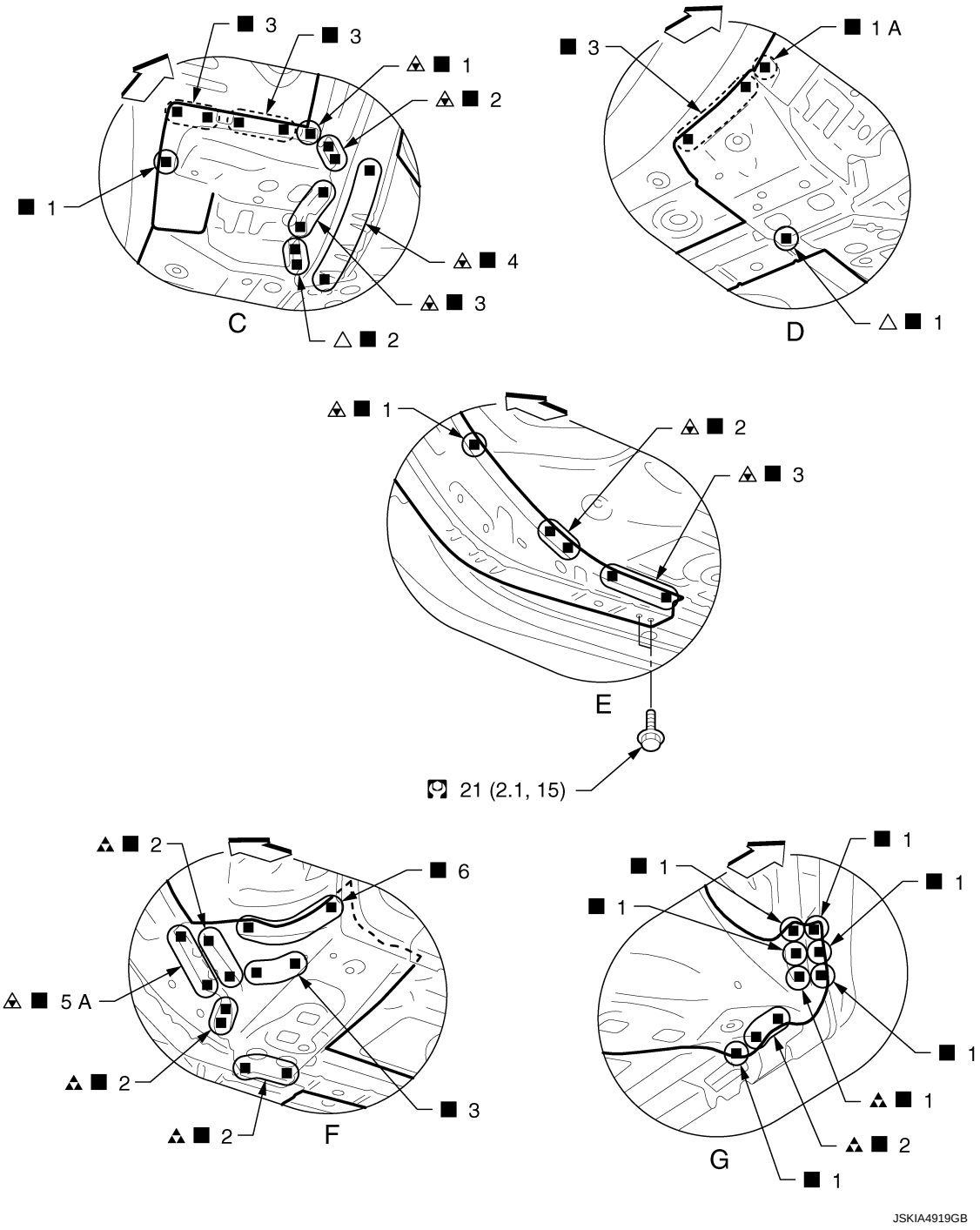
▼▼: Drill ϕ11 mm (0.43 in) hole for the plug welding hole (ultra high strength steel).

△: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate
- Front side member assembly
- Front suspension mounting bracket




⇦: Vehicle front

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

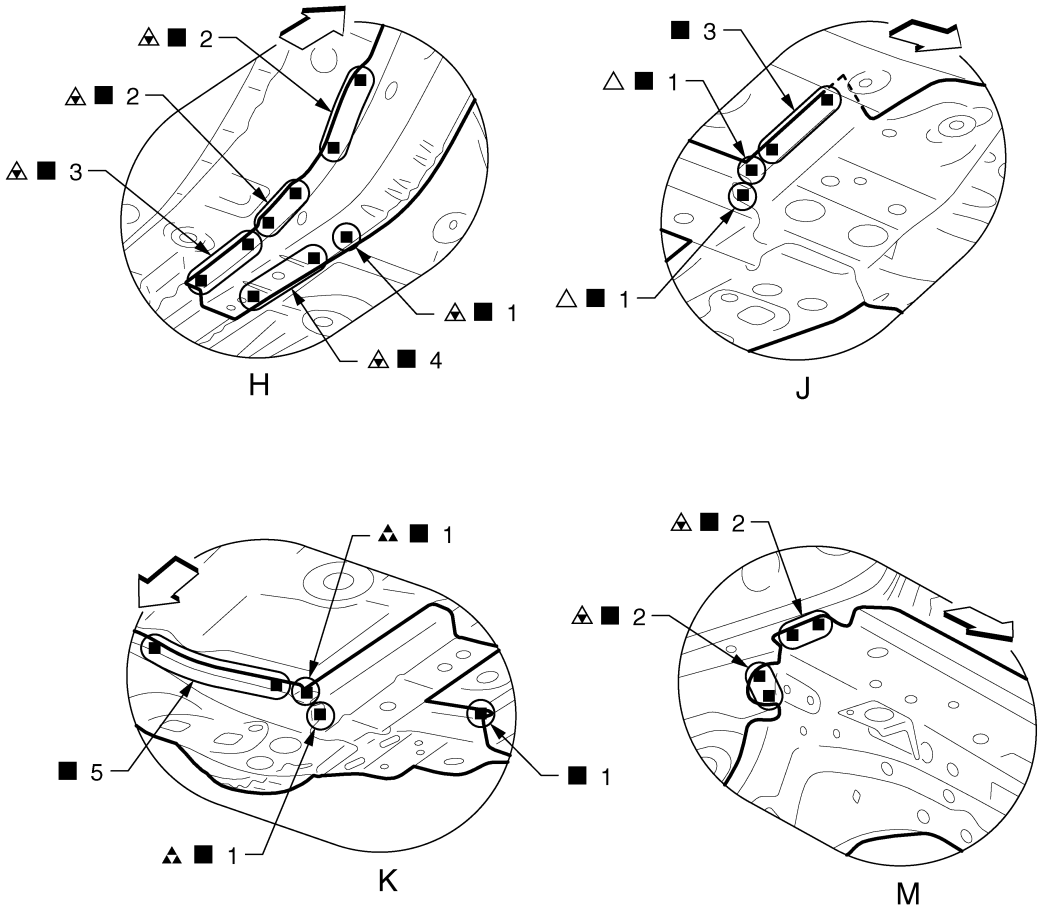
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

◬: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View E: Before installing front suspension mounting bracket




JSKIA3850ZZ

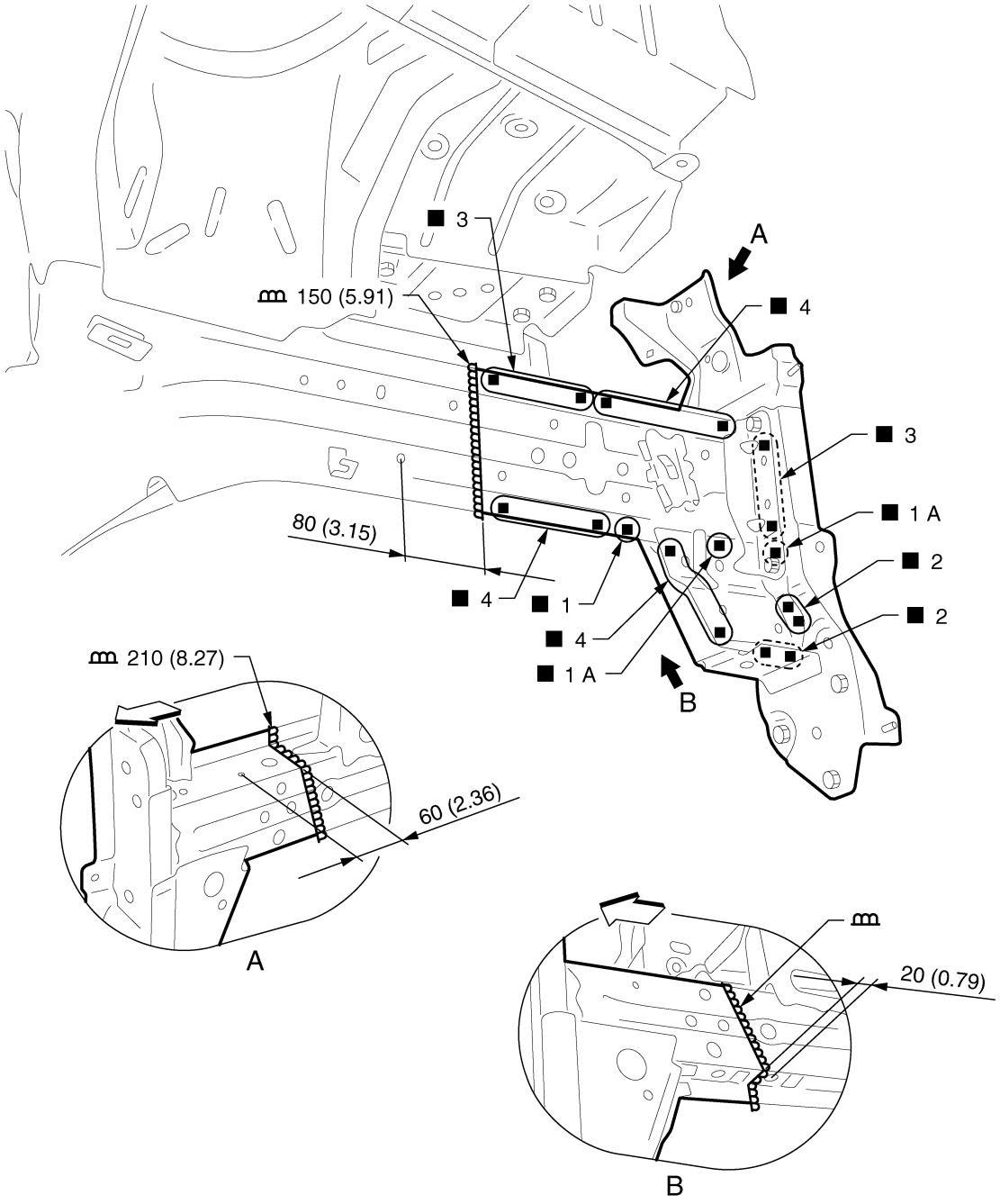
⇦: Vehicle front
△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).
⧋: Drill ϕ12 mm (0.47 in) hole for the plug welding hole (ultra high strength steel).

View H: Before installing front suspension mounting bracket

## Front Side Member (Partial Replacement)

INFOID:0000000010843614

Work after upper radiator core support assembly and hoodledge connector assembly are removed.




JSKIA4604GB

Unit: mm (in)

⇦: Vehicle front

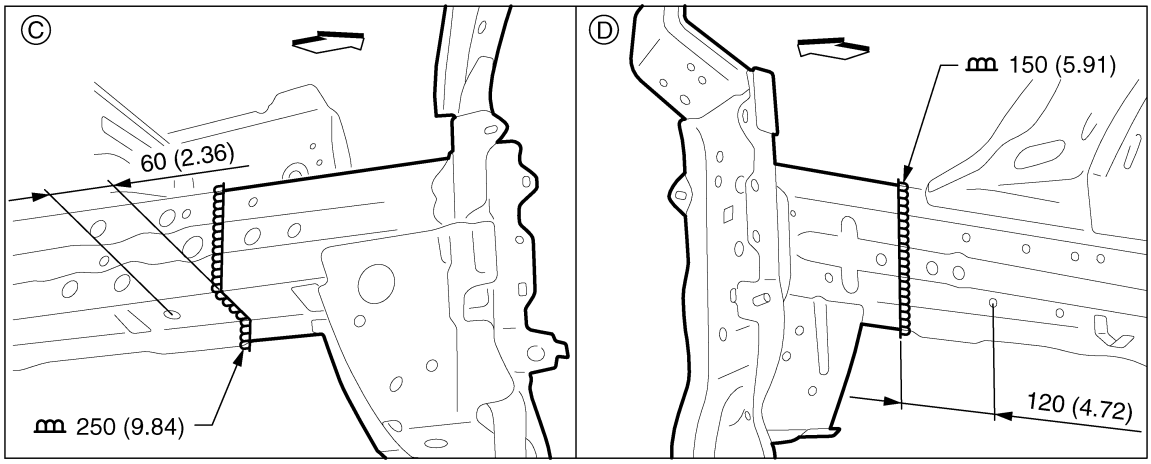
(◌): Weld the parts onto the back of the component part.

Replacement part

- Front side member closing plate (RH)
- Front side member assembly (RH)

POINT

The front side member on the left can also be replaced partially by cutting at the position shown in the figure.




JSKIA3852GB

Ⓒ Front side member assembly cutting position (LH)
Ⓓ Front side member closing plate cutting position (LH)

Unit: mm (in)

⇦: Vehicle front

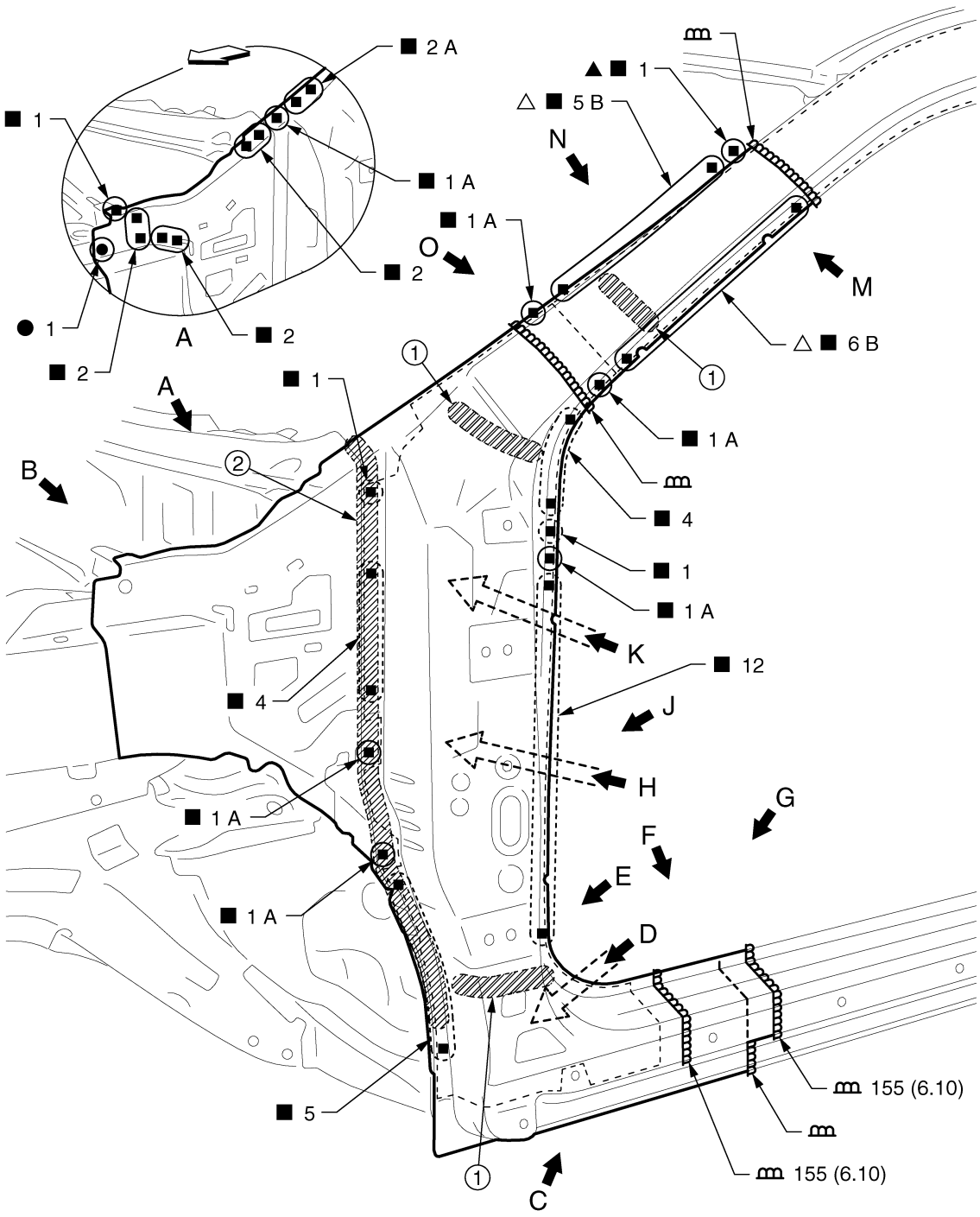
Replacement part

- Front side member closing plate (LH)
- Front side member assembly (LH)

## Front Pillar

INFOID:0000000010843615

Work after hoodledge reinforcement is removed.




① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

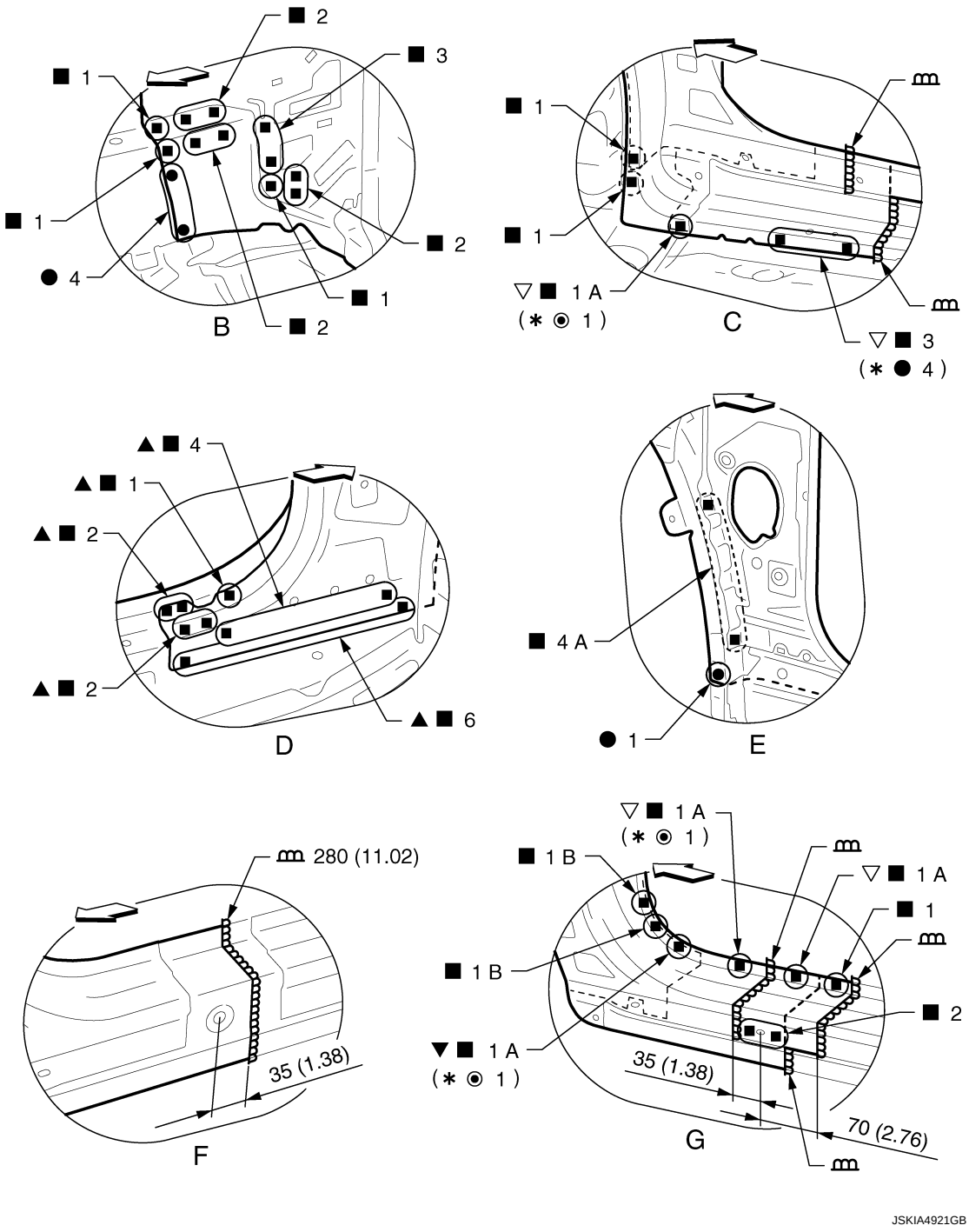
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

Replacement part

- Side body assembly
- Upper inner front pillar
- Side dash




JSKIA4921GB

Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

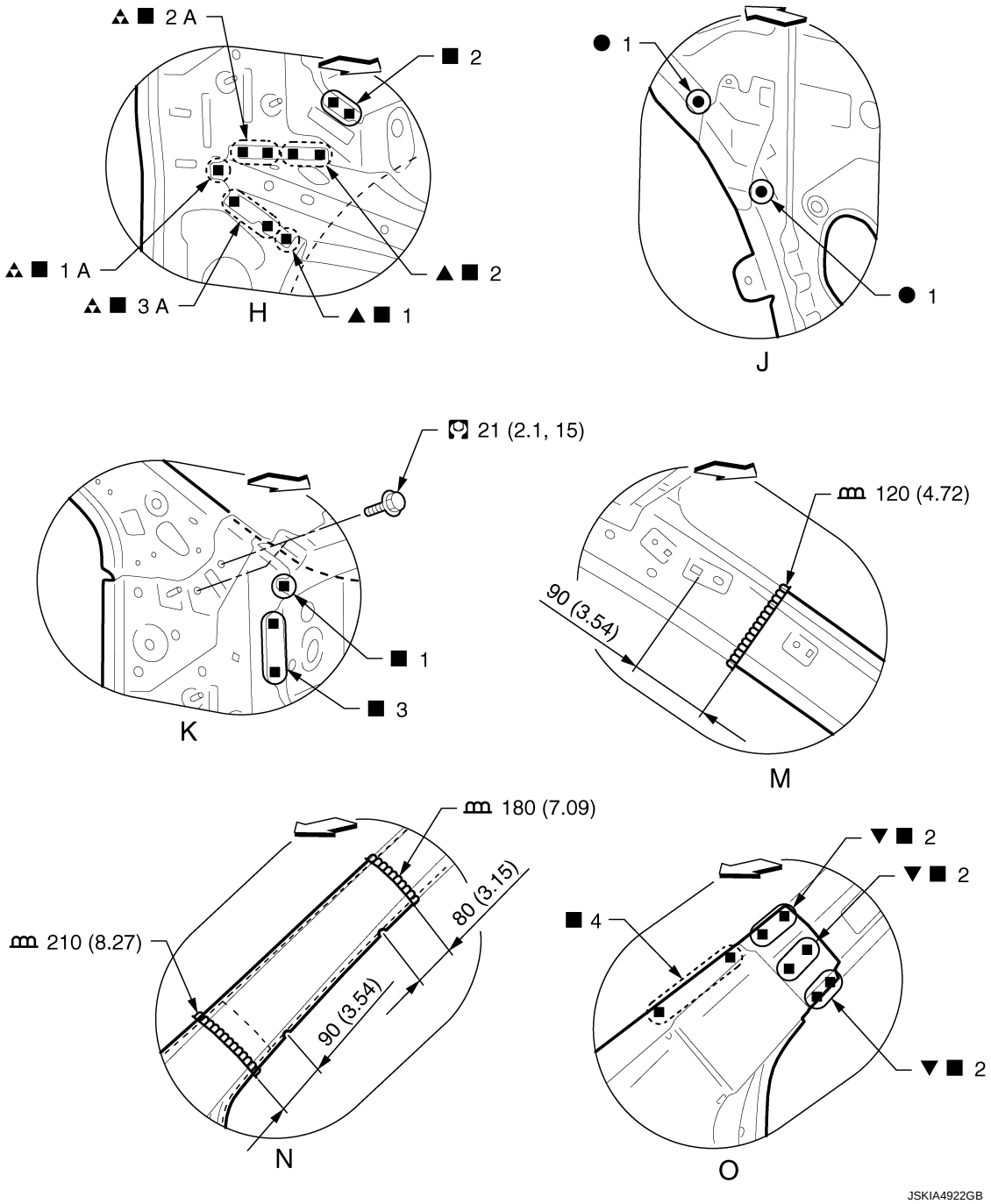
▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

View D: Before installing side body assembly
View F: Before installing outer front side body




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▲▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel).

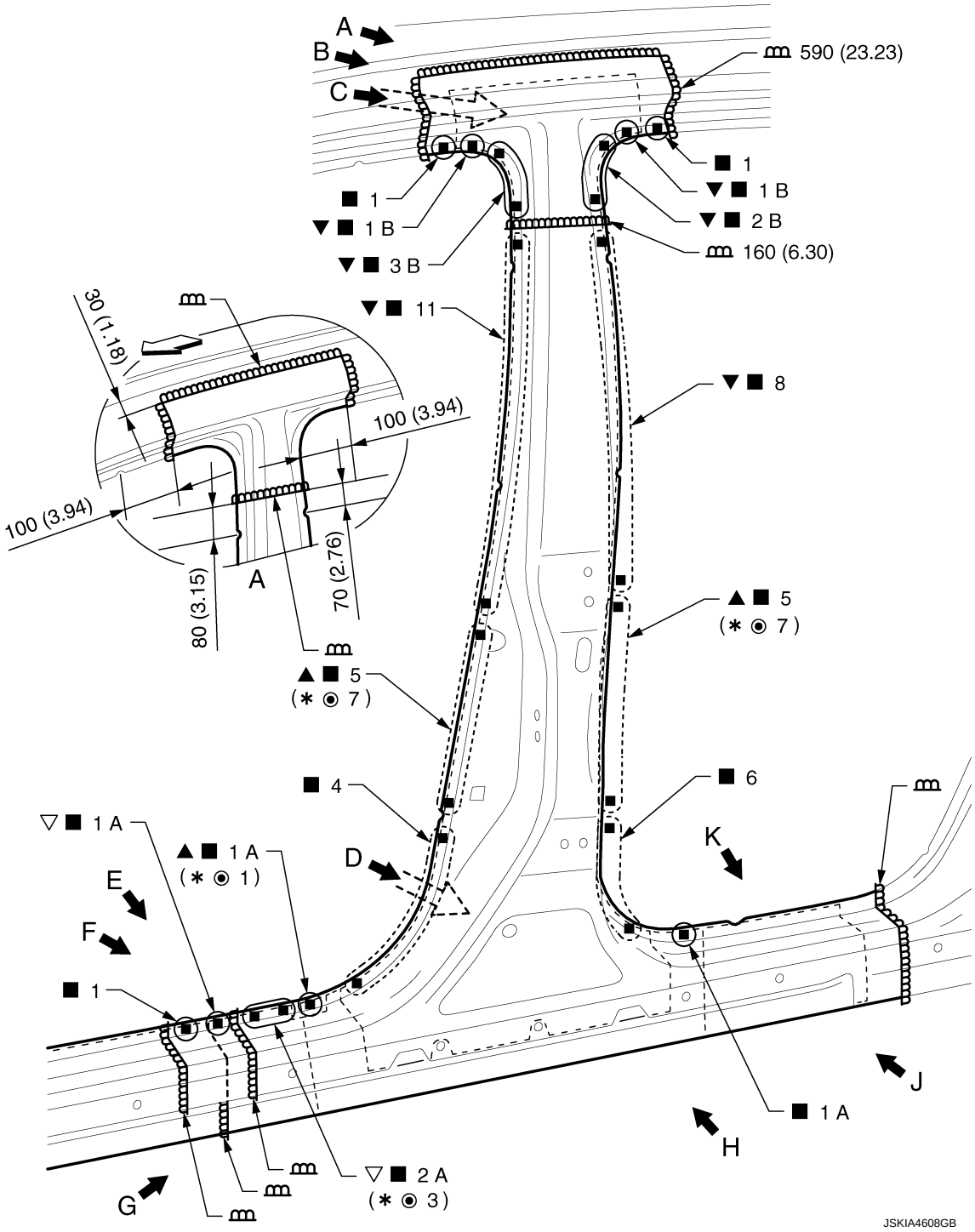
(  ): Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

View H and J: Before installing side body assembly
View O: Before installing outer front side body

# Center Pillar

INFOID:0000000010843616




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

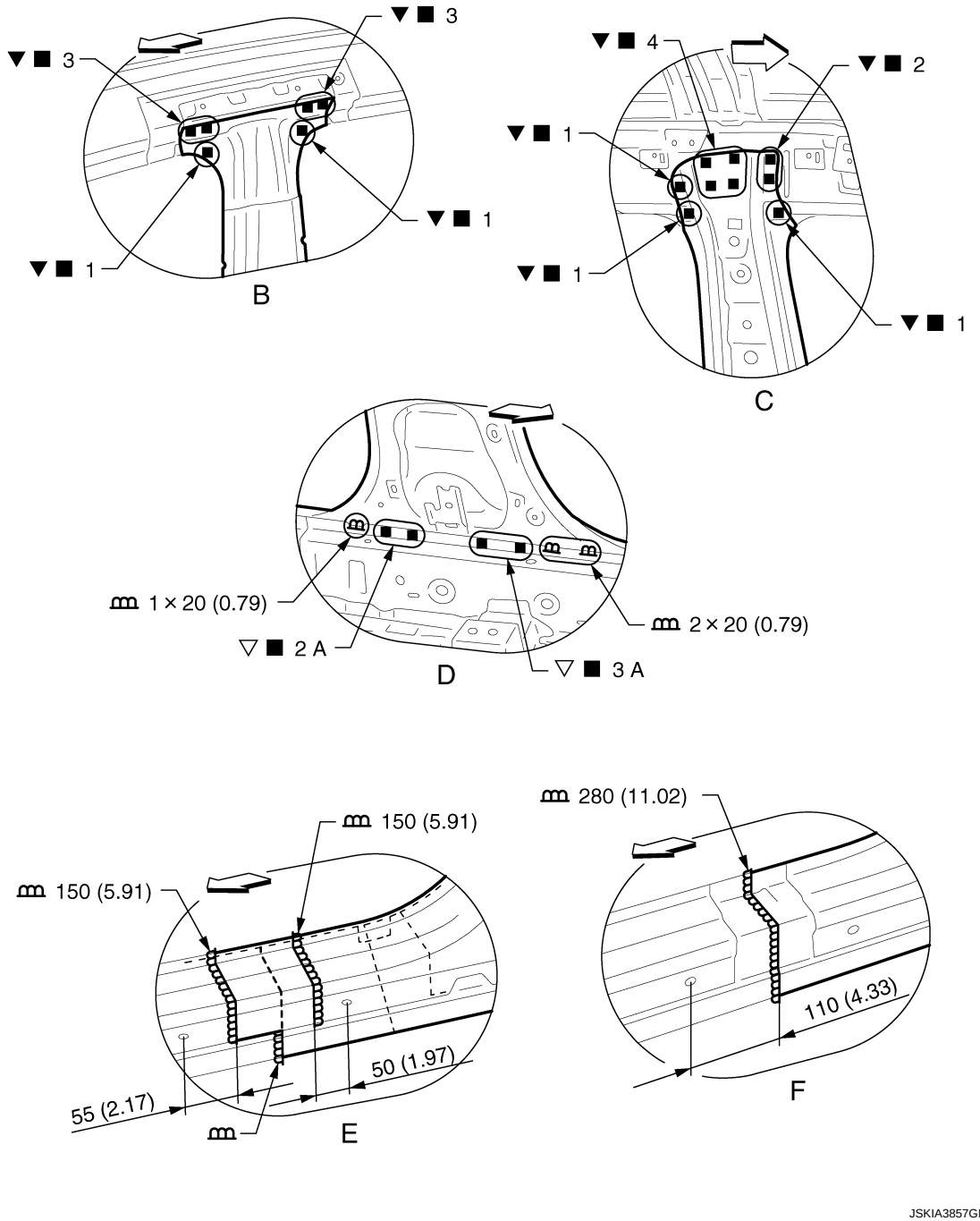
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

Replacement part

- Side body assembly
- Inner center pillar assembly



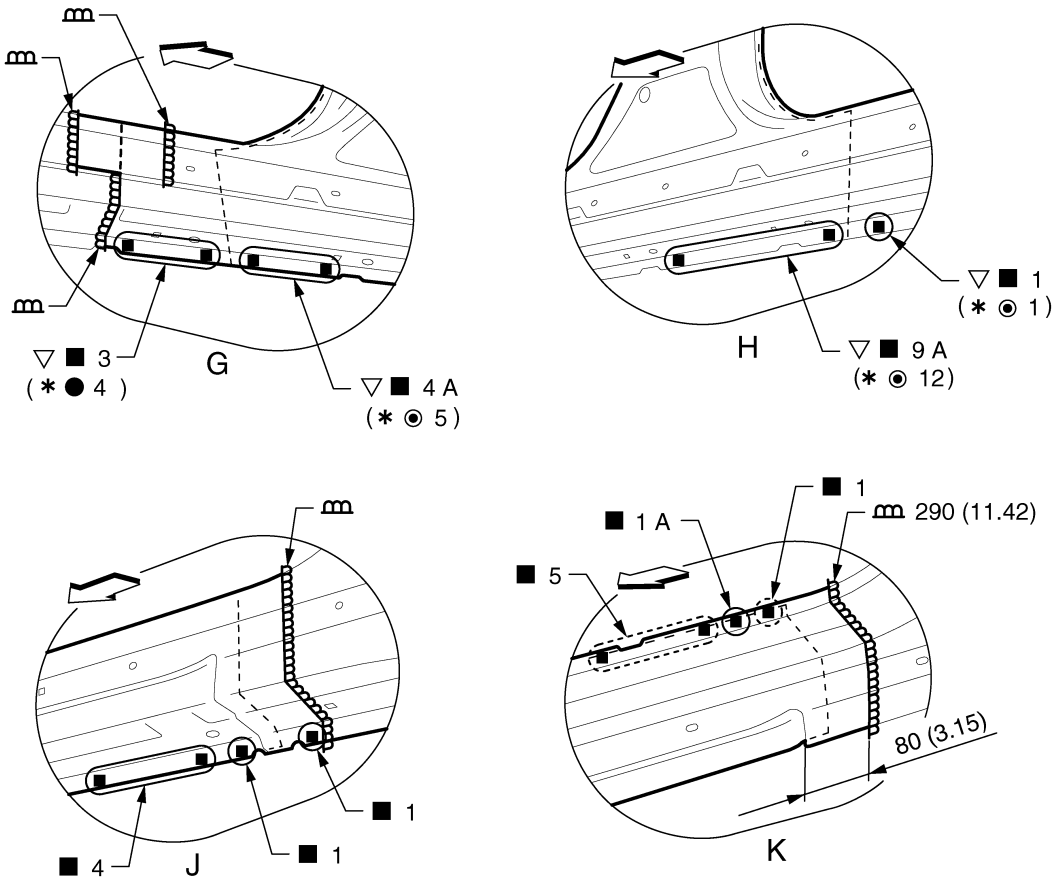

Unit: mm (in)

⇦: Vehicle front

▼: Drill ϕ7 mm (0.28 in) hole for the plug welding hole (ultra high strength steel).

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

View B and F: Before installing outer front side body




JSKIA4609GB

Unit: mm (in)

⇦: Vehicle front

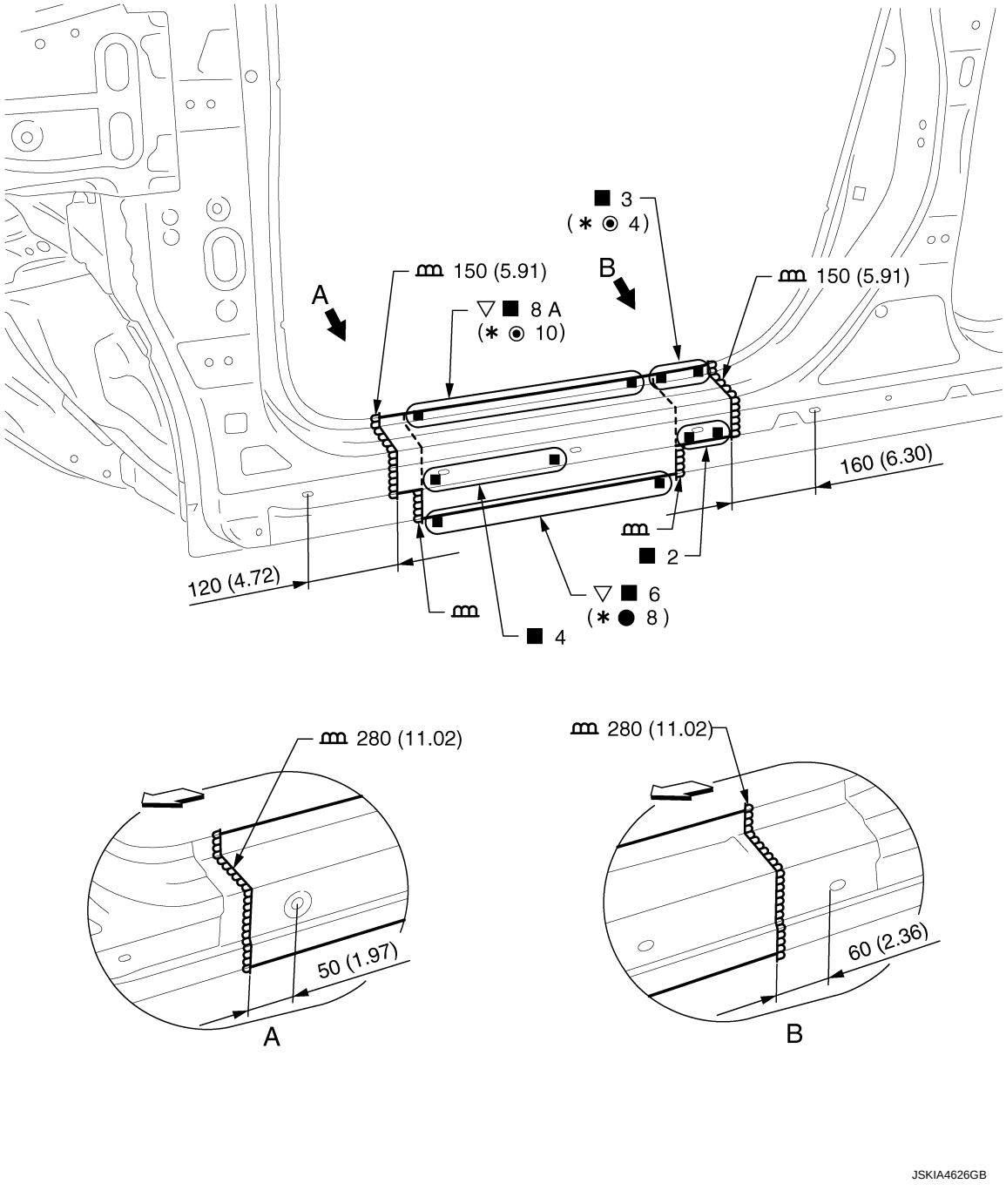
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

◌: Weld the parts onto the back of the component part.

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

## Outer Sill (Partial Replacement)

INFOID:0000000010843617




JSKIA4626GB

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

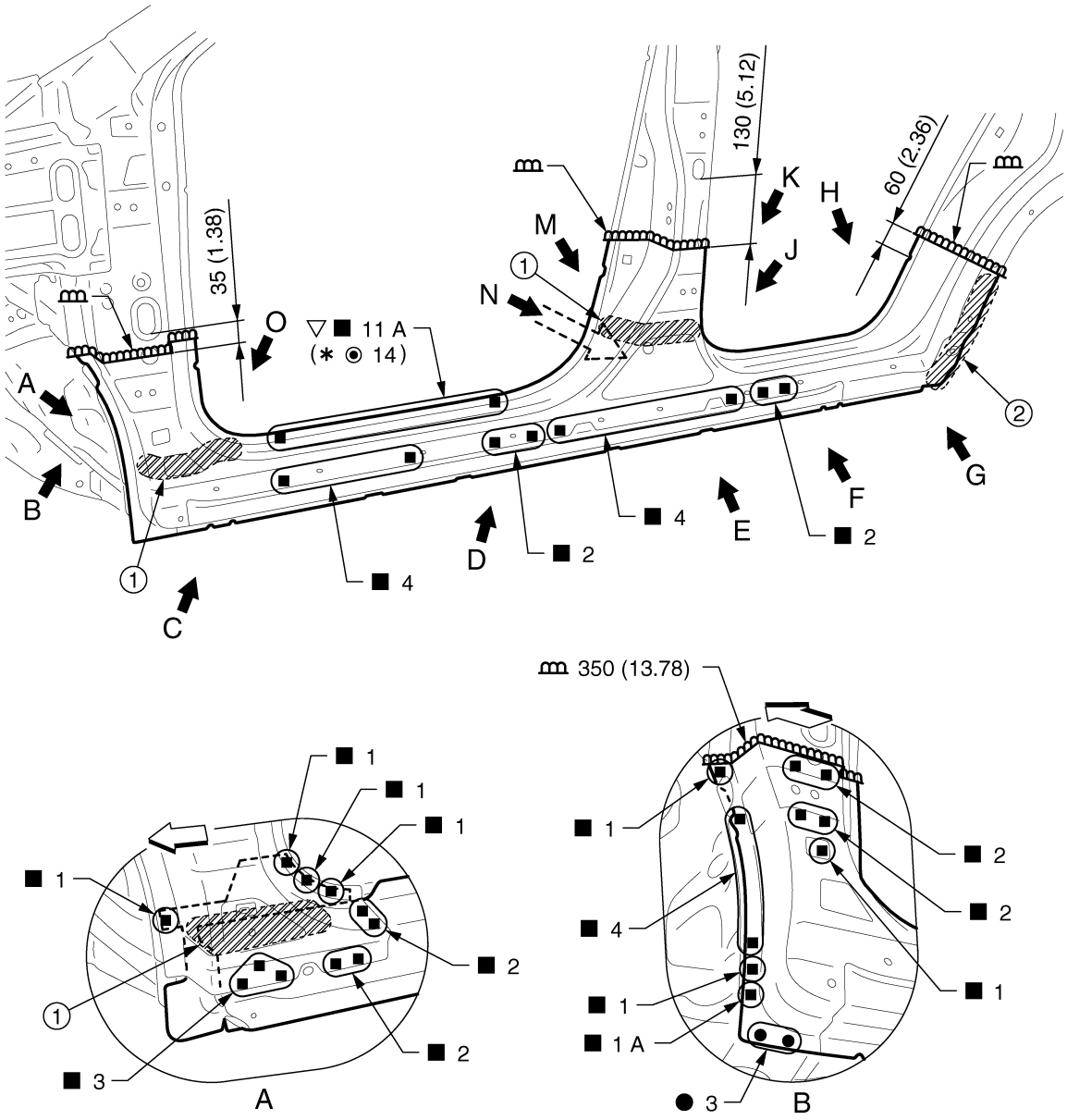
Replacement part

- Outer sill assembly
- Outer sill reinforcement

View A and B: Before installing outer sill assembly

# Outer Sill

INFOID:0000000010843618




JSKIA4923GB

① Urethane foam ② Body sealing

Unit: mm (in)

⇦: Vehicle front

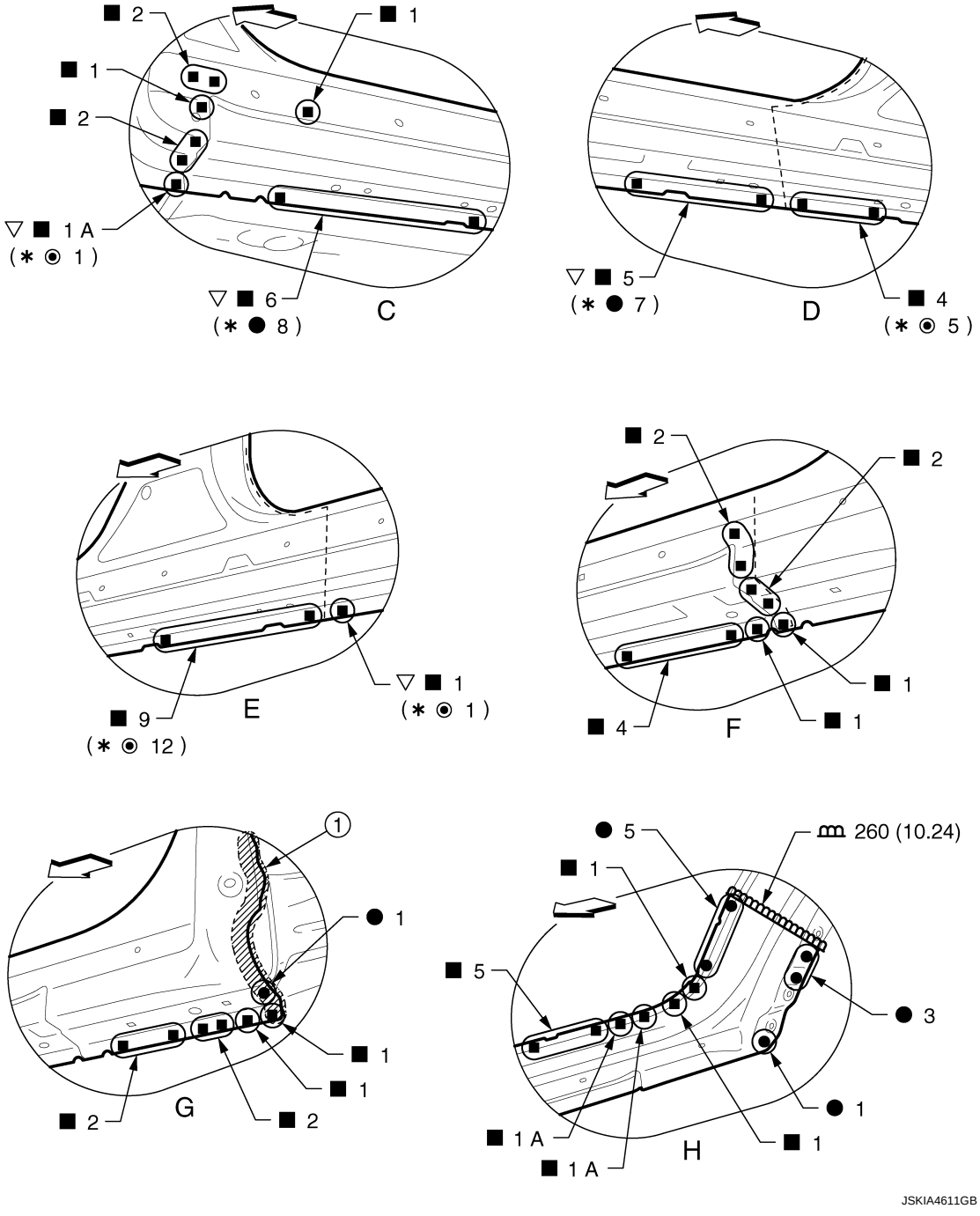
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

✱: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

Replacement part

- Outer sill assembly
- Outer sill reinforcement

View A: Before installing outer sill assembly



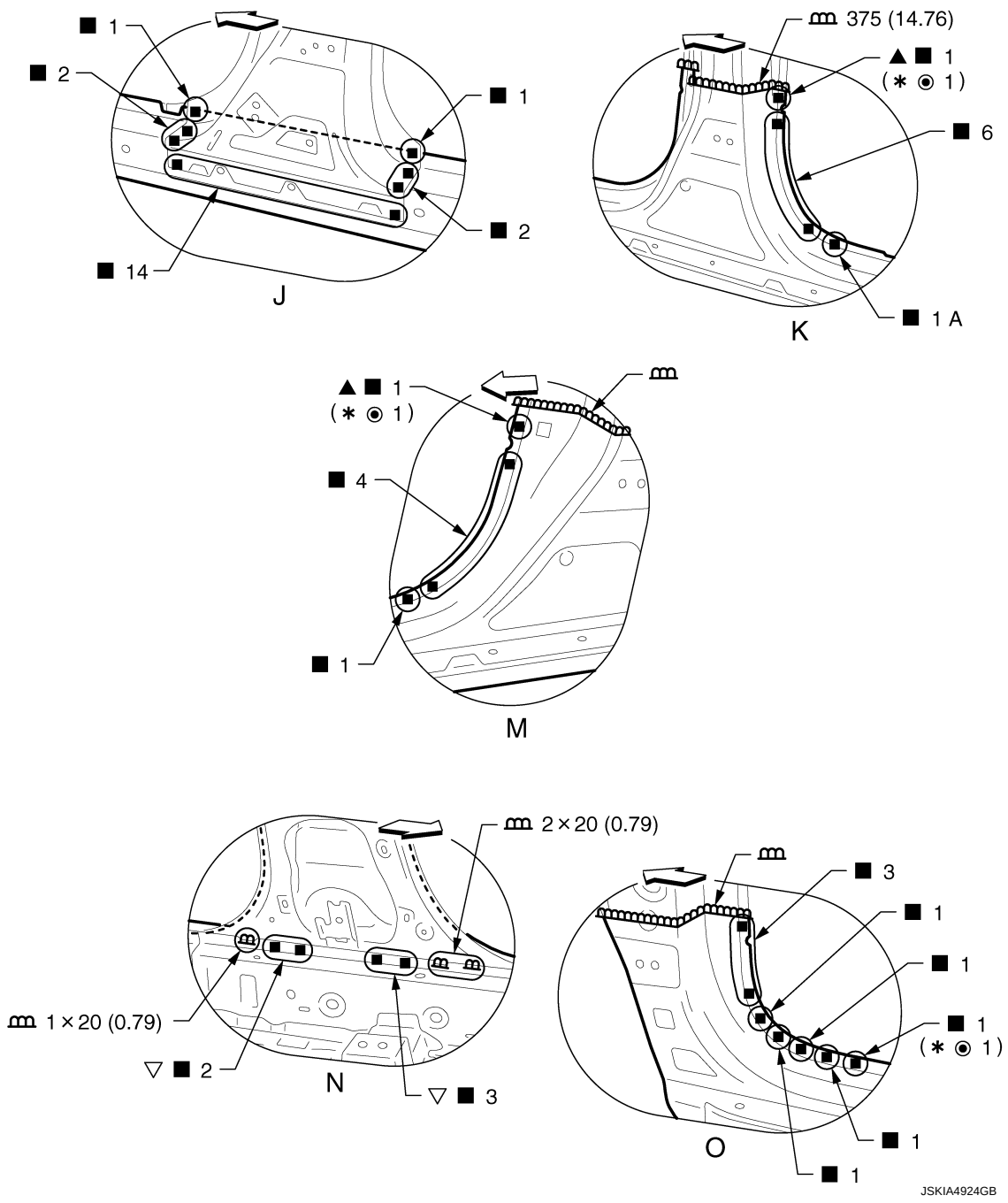

① Body sealing

Unit: mm (in)

⇦: Vehicle front

▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"




Unit: mm (in)

⇦: Vehicle front

▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel).

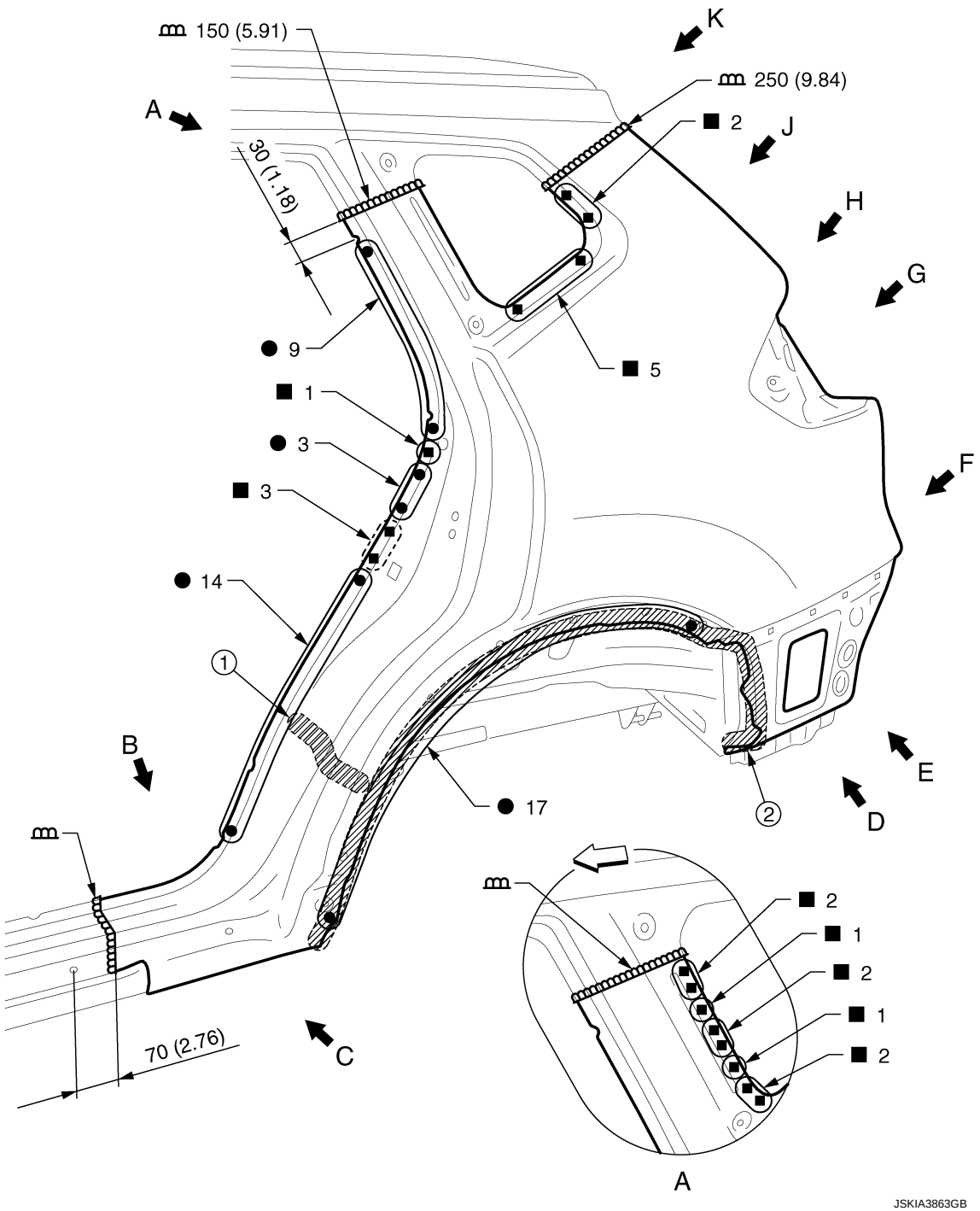
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel).

∗: For spot welding of steel plate of tensile strength 980 MPa, observe the indicated welding conditions. Refer to BRM-193, "Welding of Ultra High Strength Steel"

View J: Before installing outer sill assembly

# Rear Fender

INFOID:0000000010843619




① Urethane foam ② Body sealing

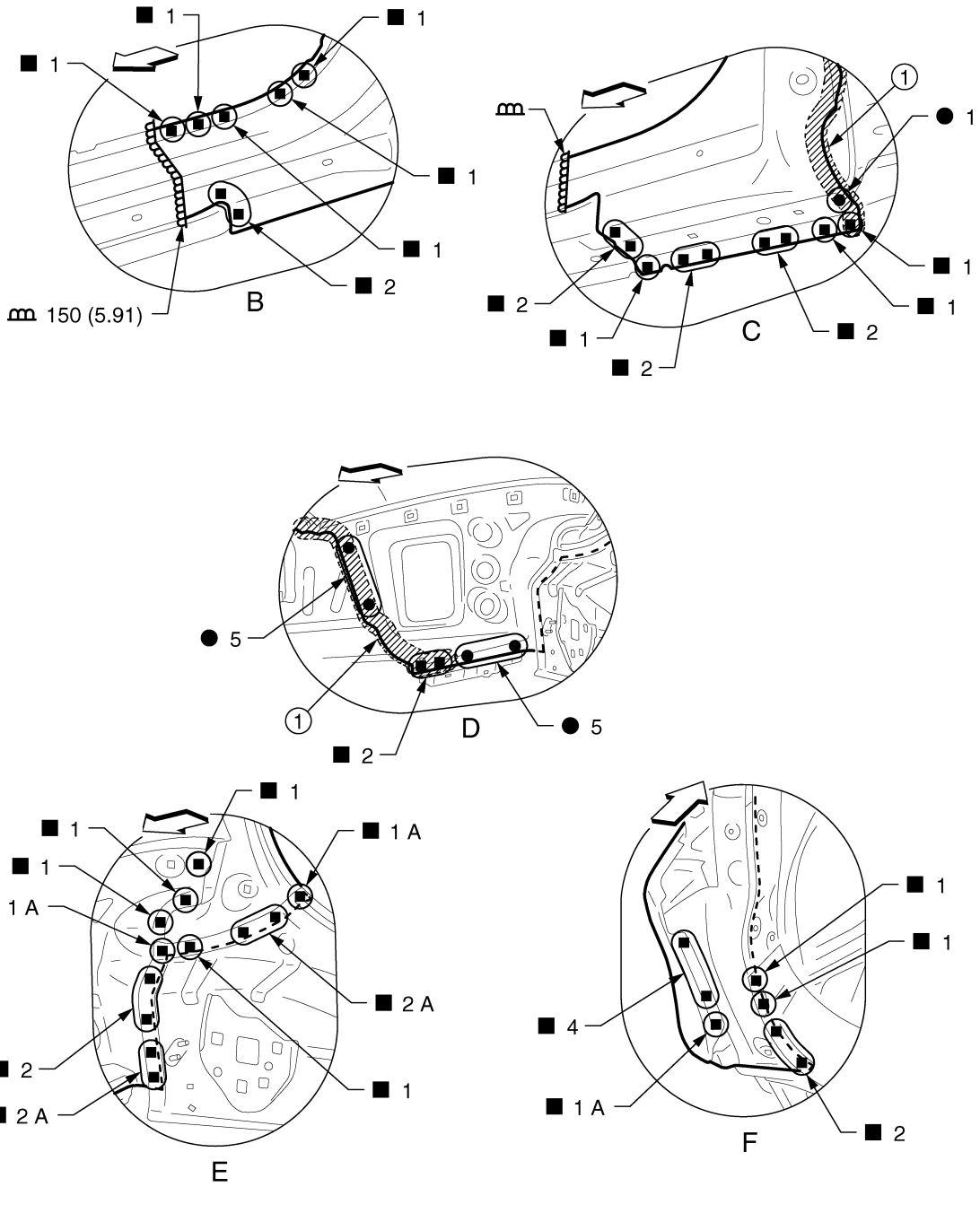
Unit: mm (in)

⇦: Vehicle front

(  ): Weld the parts onto the back of the component part.

Replacement part

- Rear fender assembly

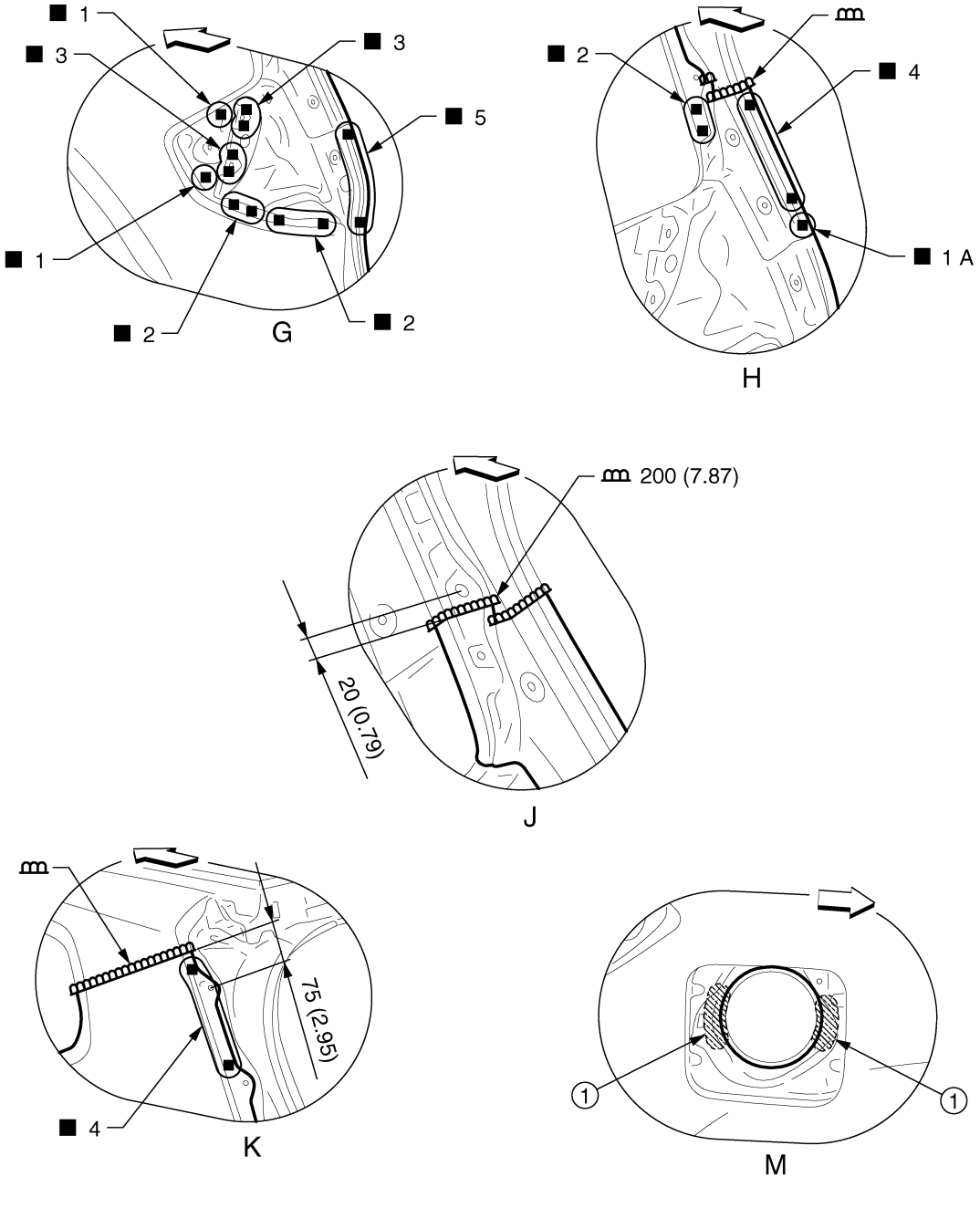



JSKIA4613GB

① Body sealing

Unit: mm (in)

⇦: Vehicle front




① Adhesive

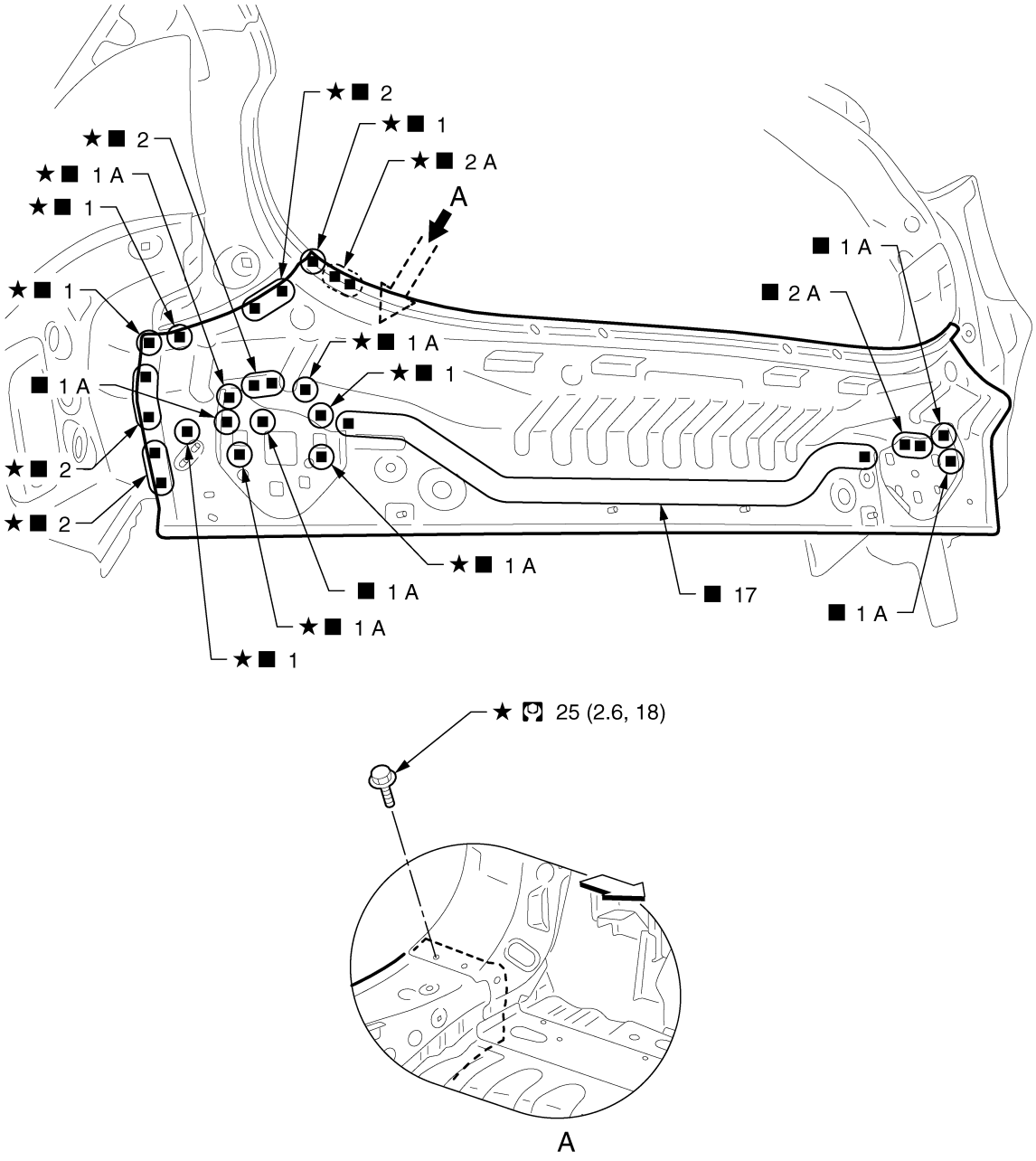
Unit: mm (in)

⇦: Vehicle front

View J: Before installing rear fender
View M: Right side rear fender

## Rear Panel

INFOID:0000000010843620




JSKIA4614GB

⇦: Vehicle front

★: Welding method, the number of welding points, and the tightening torque apply to both side of the vehicle.

(◌): Weld the parts onto the back of the component part.

: N·m (kg-m, ft-lb)

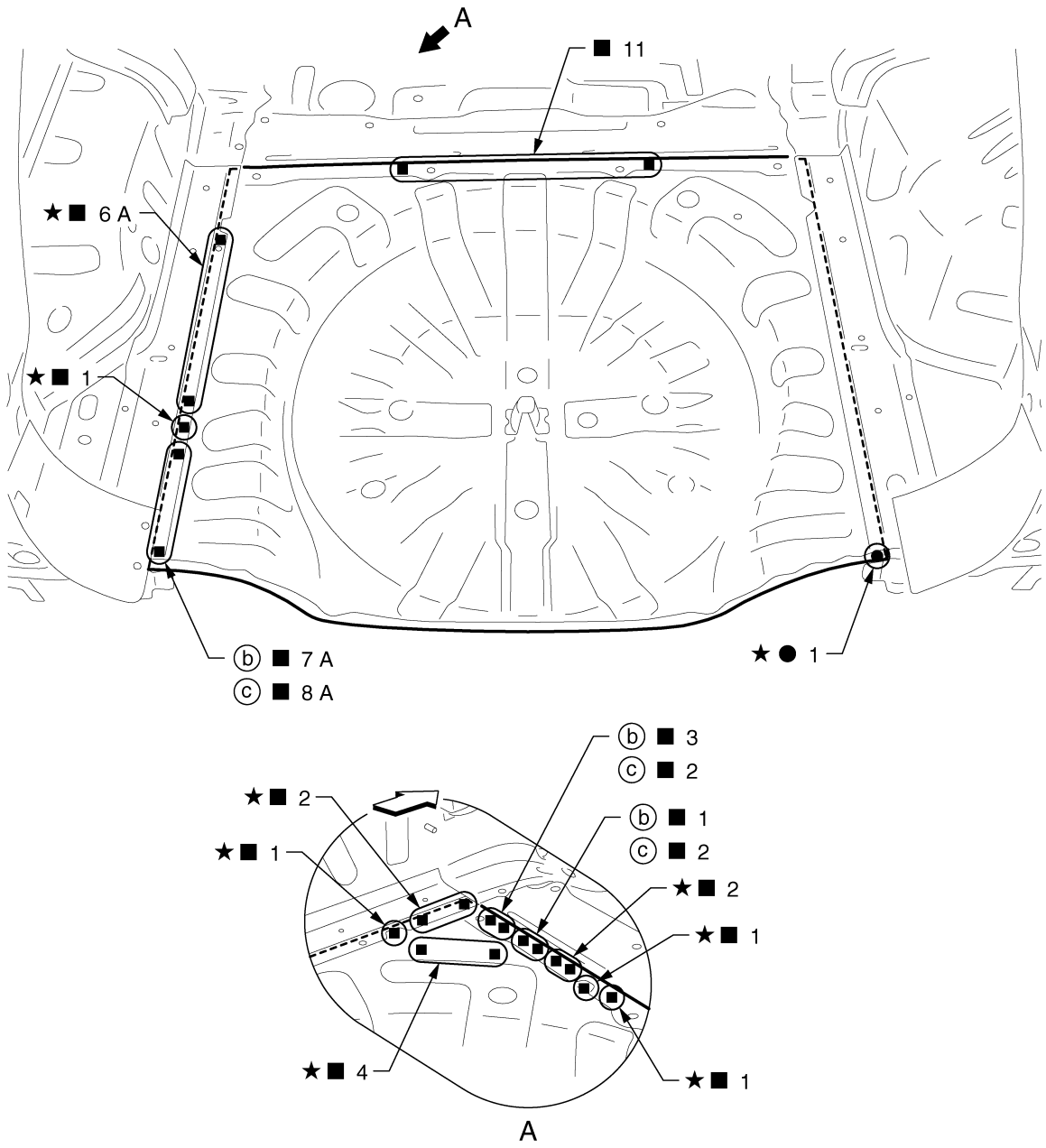
Replacement part

- Upper rear panel

## Rear Floor Rear

INFOID:0000000010843621

Work after rear panel is removed.




JSKIA3869ZZ

ⓑ Left side ⓒ Right side

⇦: Vehicle front

★: Welding method and the number of welding points apply to both side of the vehicle.

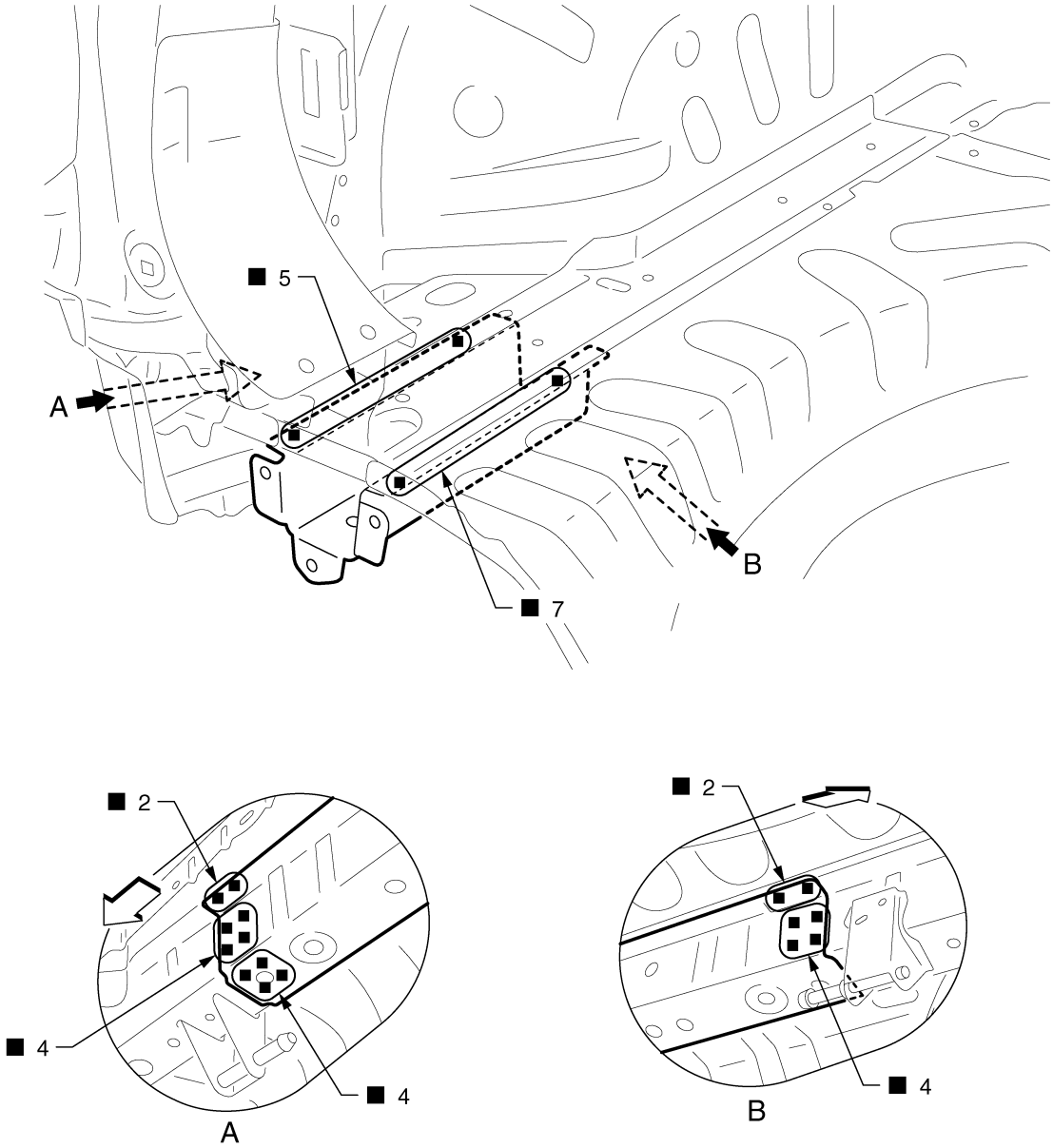
Replacement part

- Rear floor rear

## Rear Side Member Extension (SUV Models)

INFOID:0000000010843622

Work after rear panel is removed.




JSKIA3872ZZ

⇦: Vehicle front

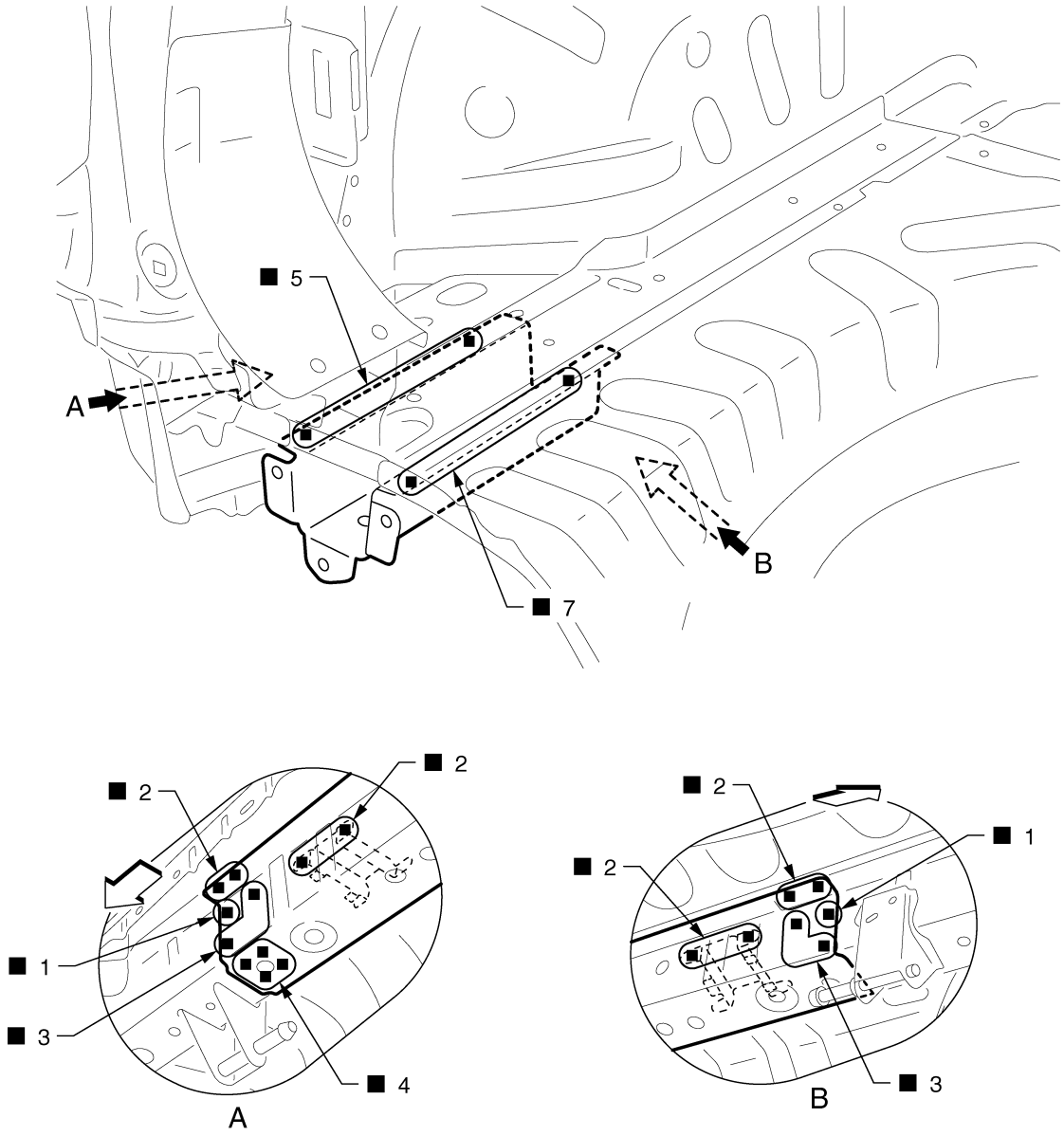
Replacement part

- Rear side member extension

## Rear Side Member Extension (Wagon Models)

INFOID:0000000010843623

Work after rear panel is removed.




JSKIA4034ZZ

⇦: Vehicle front

Replacement part

- Rear side member extension
- Rear 3rd seat mounting bracket assembly

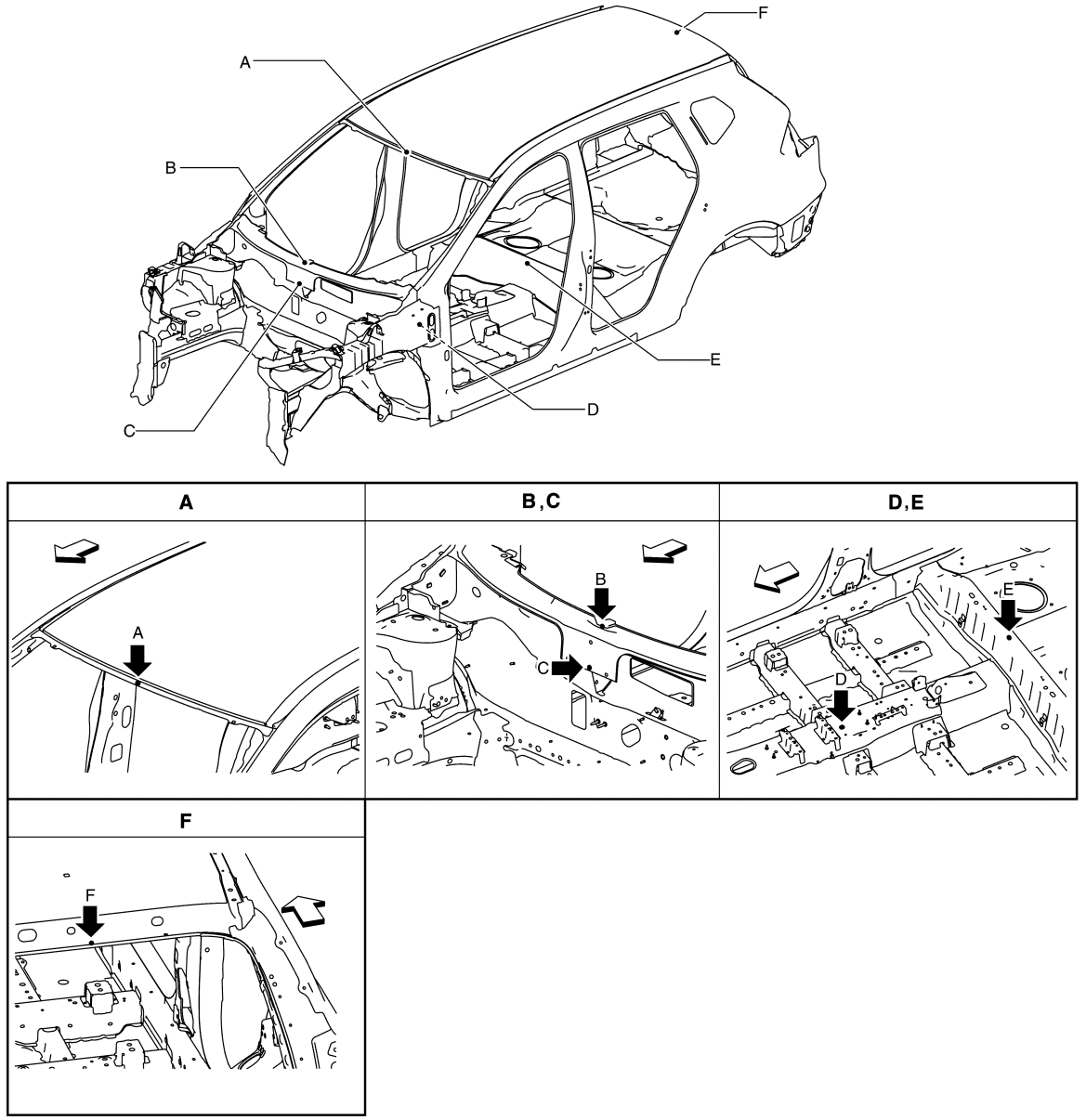
# SERVICE DATA AND SPECIFICATIONS (SDS)

## BODY ALIGNMENT

### Body Center Marks (MR20DD Engine Models)

INFOID:0000000010860057

A mark is placed on each part of the body to indicate the vehicle center. When repairing the vehicle frame (members, pillars, etc.) damaged by an accident which it enables more accurate and effective repair by using these marks together with body alignment specifications.




JSKIA4742ZZ

⇦: Vehicle front

Unit: mm (in)

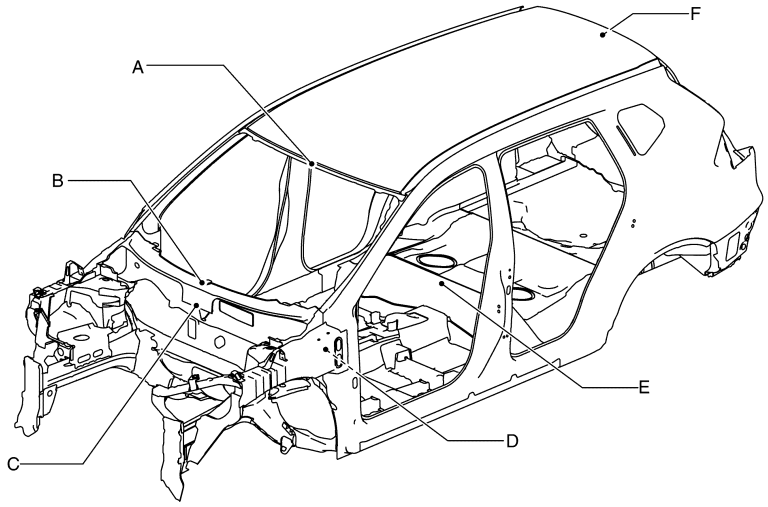
| Points | Portion | Marks |
|---|---|---|
| A | Front roof | Embossment |
| B | Cowl top | Indent |
| C | Cowl top | Hole ϕ8 (0.31) |
| D | Trans control reinforcement | Hole 14×12 (0.55×0.47) |

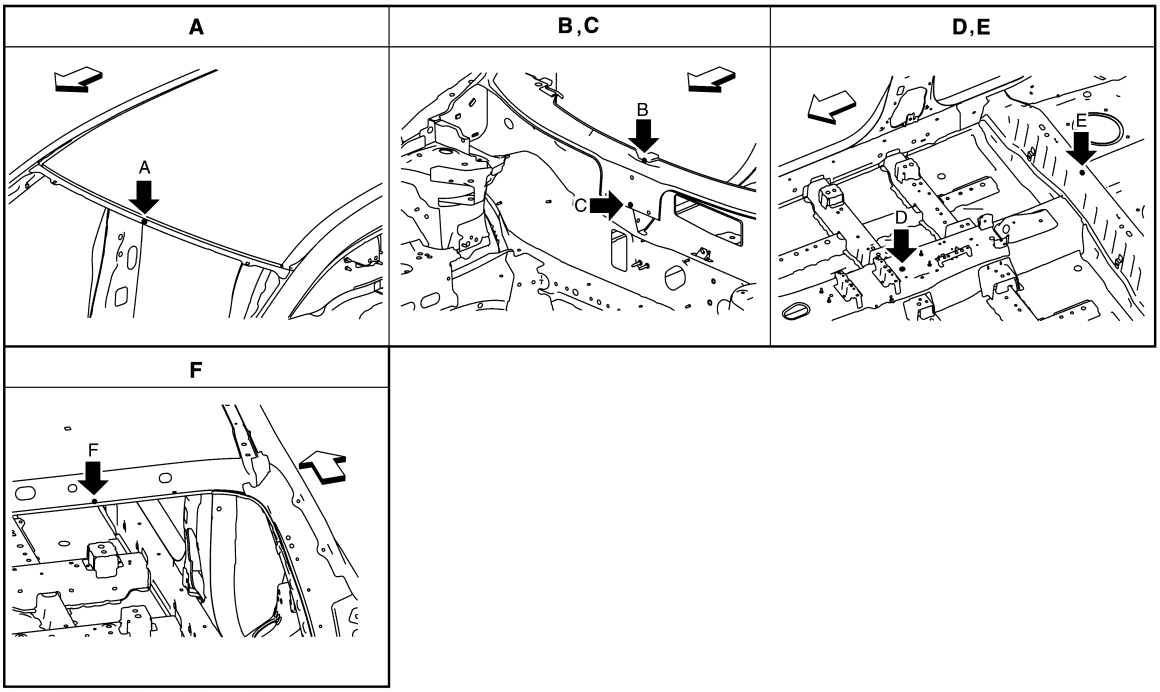
| Points | Portion | Marks |
|---|---|---|
| E | Rear seat crossmember | Embossment |
| F | Rear roof | Embossment |

## Body Center Marks (Except For MR20DD Engine Models)

INFOID:0000000010860060

A mark is placed on each part of the body to indicate the vehicle center. When repairing the vehicle frame (members, pillars, etc.) damaged by an accident which it enables more accurate and effective repair by using these marks together with body alignment specifications.




JSKIA4708ZZ

⇦: Vehicle front

Unit: mm (in)

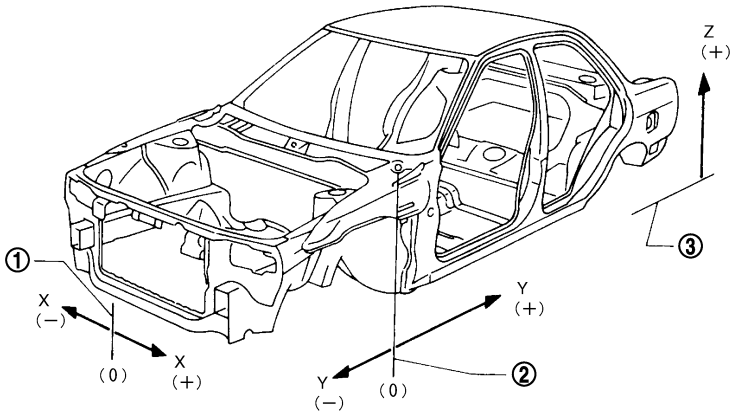
| Points | Portion | Marks |
|---|---|---|
| A | Front roof | Embossment |
| B | Cowl top | Indent |
| C | Cowl top | Hole ϕ8 (0.31) |

| Points | Portion | Marks |
|---|---|---|
| D | Trans control reinforcement | Hole 14×12 (0.55×0.47) |
| E | Rear seat crossmember | Embossment |
| F | Rear roof | Embossment |

## Description

INFOID:0000000010860052

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of ″X″, ″Y″ and ″Z″.
- ″Z″: Imaginary base line [200 mm (7.87 in) below datum line (″0Z″ at design plan)]




JSKIA0073GB

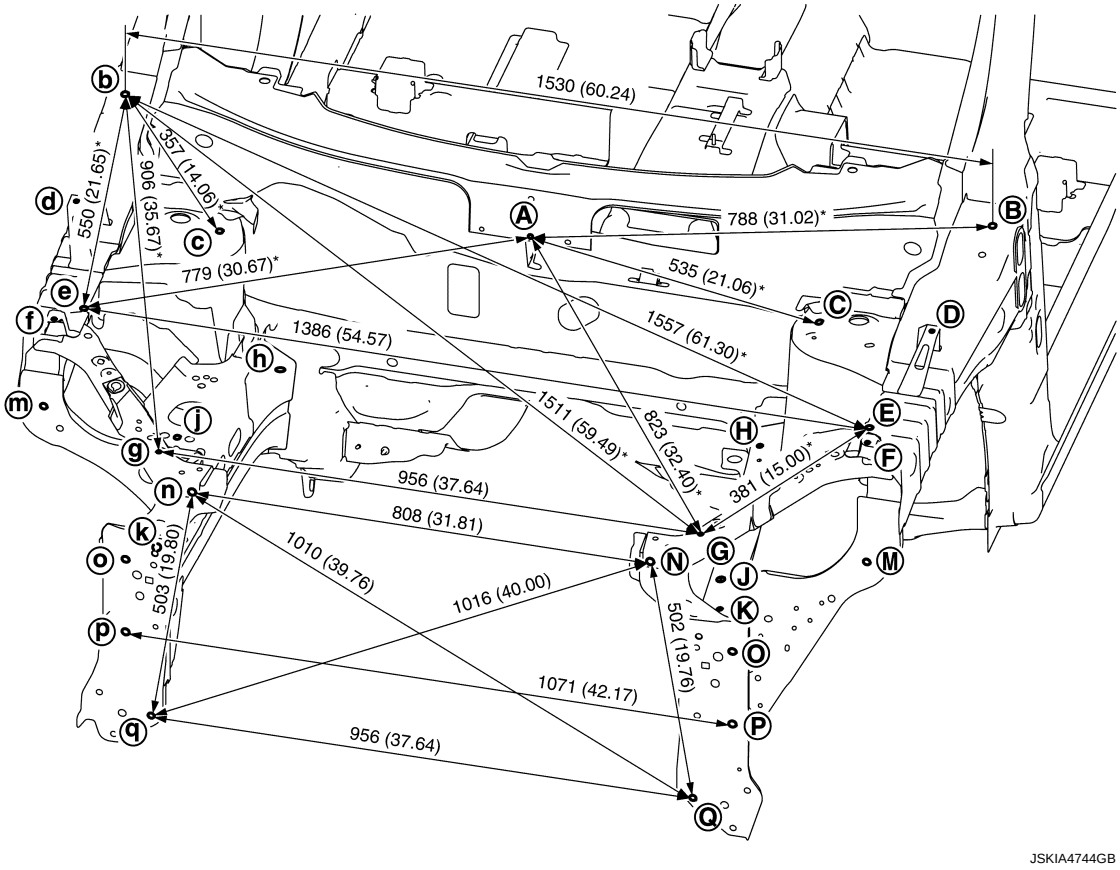
① Vehicle center ② Front axle center ③ Imaginary base line

## Engine Compartment (MR20DD Engine Models)

INFOID:0000000010860058

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



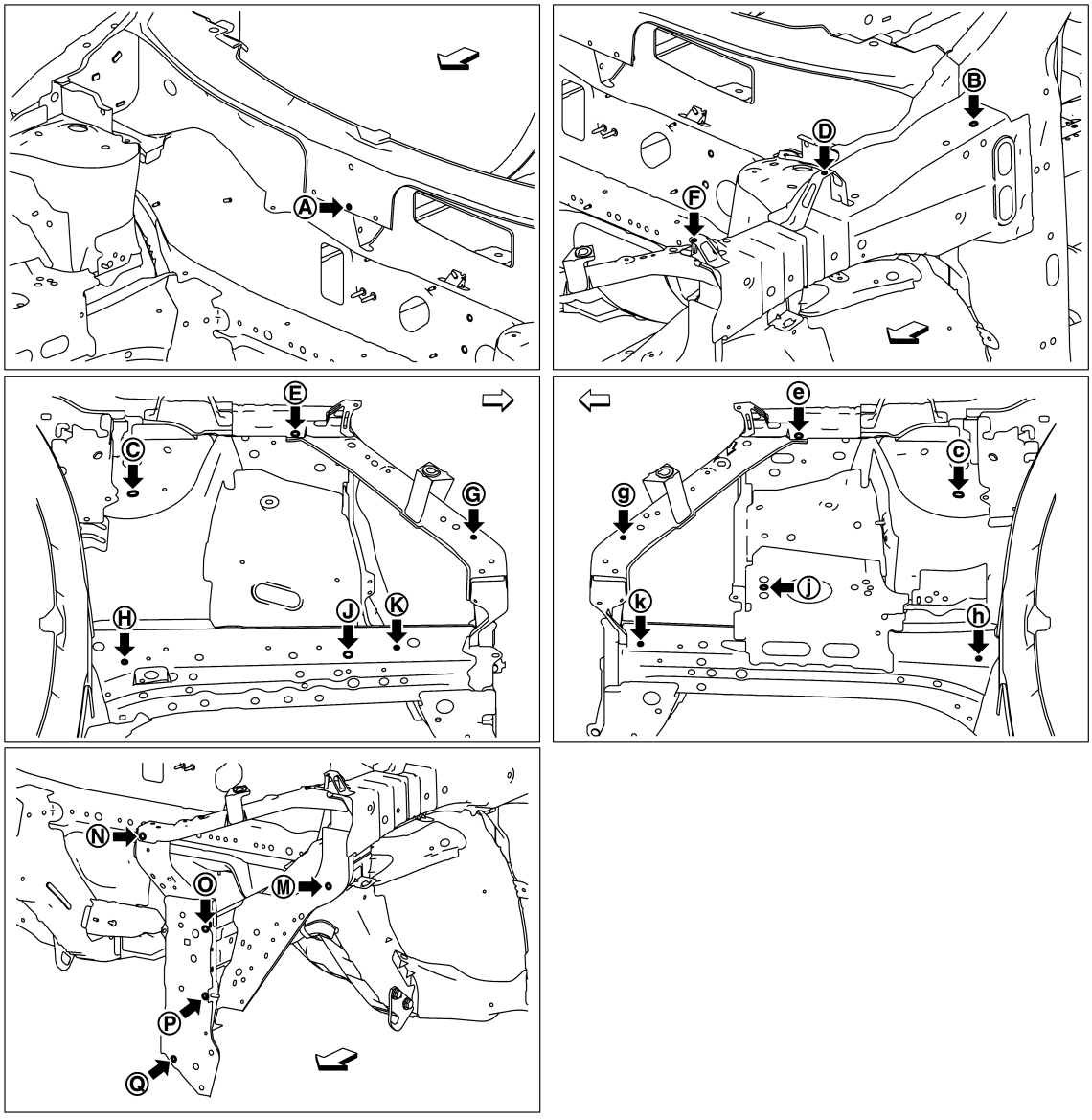

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓓ | 777 (30.59)* | | Ⓒ – ⓖ | 1169 (46.02)* | | Ⓜ – ⓜ | 1425 (56.10) | |
| Ⓐ – Ⓕ | 852 (33.54)* | | Ⓓ – ⓓ | 1509 (59.41) | | Ⓜ – Ⓞ | 290 (11.42) | |
| Ⓐ – Ⓗ | 535 (21.06) | | Ⓔ – ⓖ | 1212 (47.72)* | | ⓜ – ⓞ | 296 (11.65) | |
| Ⓐ – ⓗ | 546 (21.50) | | Ⓕ – ⓕ | 1435 (56.50) | | Ⓜ – Ⓟ | 362 (14.25) | |
| Ⓐ – Ⓙ | 721 (28.39) | | Ⓗ – ⓗ | 853 (33.58) | | ⓜ – ⓟ | 375 (14.76) | |
| Ⓐ – ⓙ | 700 (27.56) | | Ⓗ – ⓙ | 1003 (39.49) | | Ⓝ – ⓞ | 962 (37.87)* | |
| Ⓐ – Ⓚ | 789 (31.06) | | ⓗ – Ⓙ | 977 (38.46) | | Ⓝ – ⓟ | 1005 (39.57)* | |
| Ⓐ – ⓚ | 869 (34.21) | | Ⓗ – ⓚ | 1073 (42.24) | | Ⓞ – ⓞ | 1071 (42.17) | |
| Ⓐ – Ⓜ | 884 (34.80) | | ⓗ – Ⓚ | 1033 (40.67) | | Ⓞ – ⓟ | 1081 (42.56)* | |
| Ⓐ – ⓜ | 872 (34.33) | | Ⓙ – ⓙ | 973 (38.31) | | Ⓞ – ⓠ | 1059 (41.69) | |
| Ⓑ – ⓒ | 1321 (52.01)* | | Ⓙ – ⓚ | 959 (37.76) | | ⓞ – Ⓠ | 1053 (41.46) | |
| Ⓒ – ⓒ | 1058 (41.65) | | ⓙ – Ⓚ | 1000 (39.37) | | Ⓟ – ⓠ | 1027 (40.43) | |
| Ⓒ – Ⓖ | 596 (23.46)* | | Ⓚ – ⓚ | 967 (38.07) | | ⓟ – Ⓠ | 1021 (40.20) | |

MEASUREMENT POINTS




JSKIA4745ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top hole center of center positioning mark ϕ8 (0.31) | Ⓖ ⓖ Ⓝ ⓝ | Upper radiator core support hole center<br>Ⓖ ⓖ: ϕ7 (0.28)<br>Ⓝ ⓝ: ϕ13 (0.51) |
| Ⓑ ⓑ | Hood hinge installing hole center ϕ12 (0.47) | Ⓗ ⓗ Ⓙ Ⓚ ⓚ | Front side member hole center<br>Ⓗ: ϕ9 (0.35)<br>ⓗ Ⓚ ⓚ: ϕ8 (0.31)<br>Ⓙ: ϕ14 (0.55) |
| Ⓒ ⓒ | Front suspension installing hole center 16×10 (0.63×0.39) | ⓙ | Engine mounting bracket hole center 12×10 (0.47×0.39) |

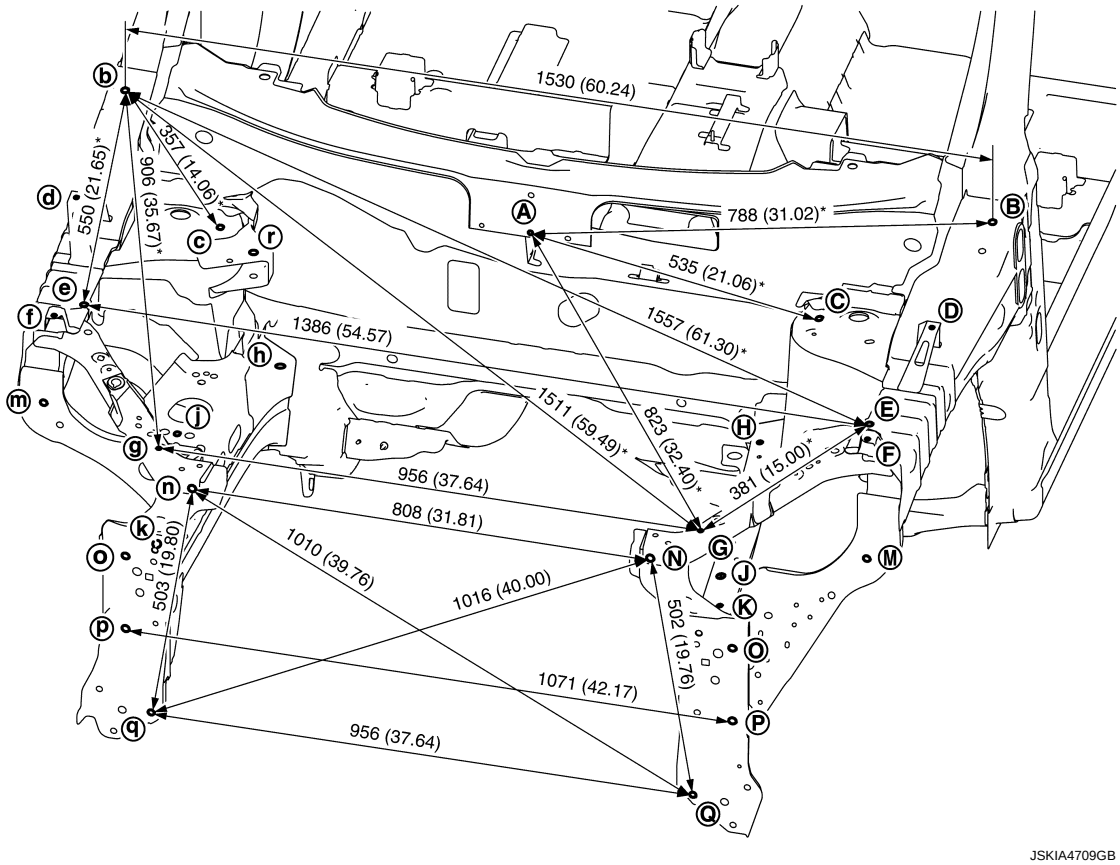
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓓ ⓓ Ⓕ ⓕ | Front fender installing hole center ϕ7 (0.28) | Ⓜ ⓜ | Hoodledge connector hole center ϕ12 (0.47) |
| Ⓔ ⓔ | Front hoodledge reinforcement hole center ϕ12 (0.47) | Ⓞ ⓞ Ⓟ ⓟ Ⓠ ⓠ | Front side member hole center<br>Ⓞ Ⓠ ⓠ: ϕ11 (0.43)<br>ⓞ: ϕ12 (0.47)<br>Ⓟ ⓟ: ϕ13 (0.51) |

## Engine Compartment (Except For MR20DD Engine Models)

INFOID:0000000010860061

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



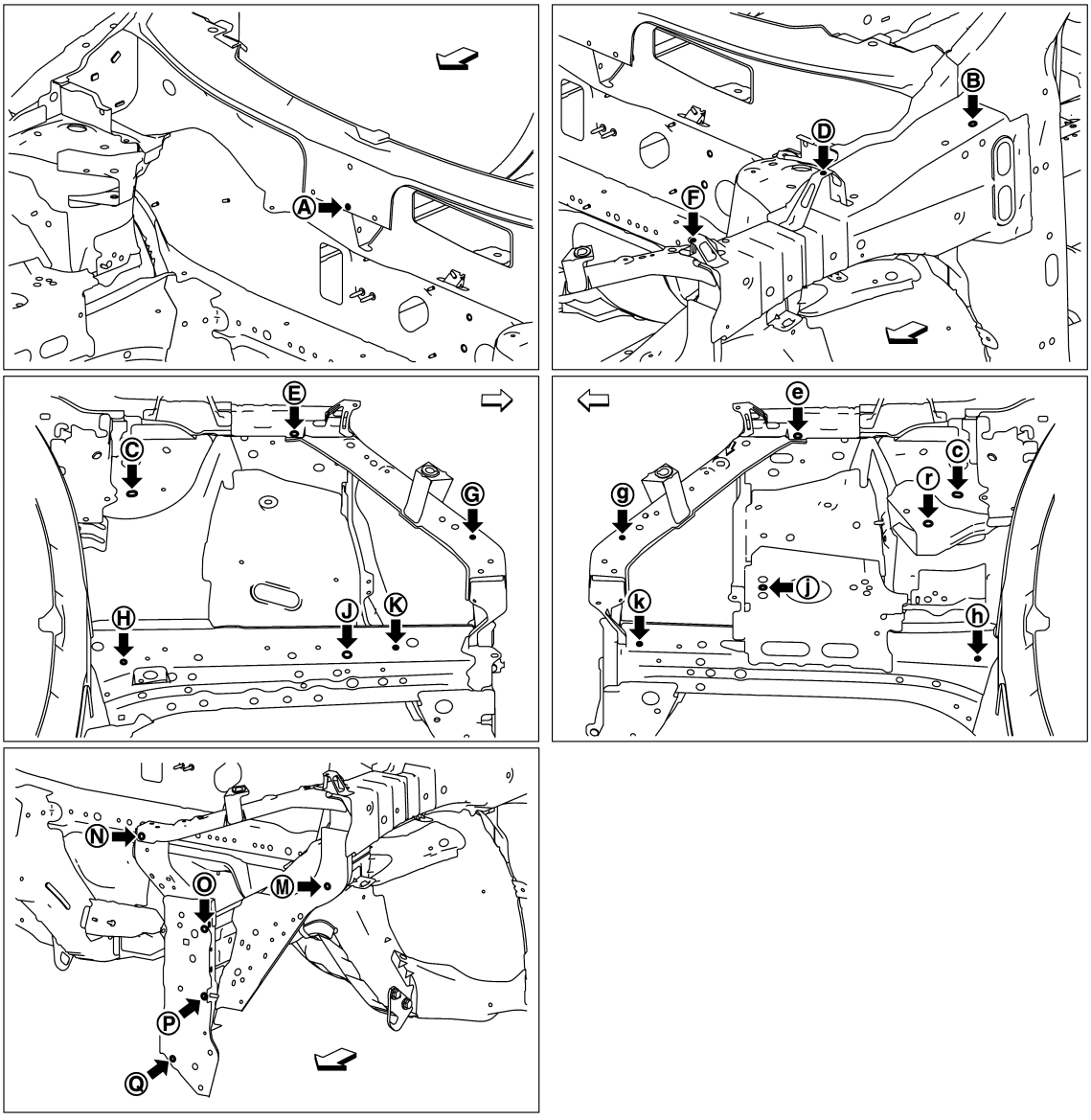

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓓ | 777 (30.59)* | | Ⓒ – Ⓖ | 596 (23.46)* | | ⓙ – Ⓚ | 1000 (39.37) | |
| Ⓐ – Ⓕ | 852 (33.54)* | | Ⓒ – ⓖ | 1169 (46.02)* | | Ⓚ – ⓚ | 967 (38.07) | |
| Ⓐ – Ⓗ | 535 (21.06) | | Ⓒ – ⓡ | 986 (38.82) | | Ⓜ – ⓜ | 1425 (56.10) | |
| Ⓐ – ⓗ | 546 (21.50) | | Ⓓ – ⓓ | 1509 (59.41) | | Ⓜ – Ⓞ | 290 (11.42) | |
| Ⓐ – Ⓙ | 721 (28.39) | | Ⓔ – ⓖ | 1212 (47.72)* | | ⓜ – ⓞ | 296 (11.65) | |
| Ⓐ – ⓙ | 700 (27.56) | | Ⓔ – ⓡ | 1171 (46.10) | | Ⓜ – Ⓟ | 362 (14.25) | |
| Ⓐ – Ⓚ | 789 (31.06) | | ⓔ – ⓡ | 331 (13.03) | | ⓜ – ⓟ | 375 (14.76) | |
| Ⓐ – ⓚ | 869 (34.21) | | Ⓕ – ⓕ | 1435 (56.50) | | Ⓝ – ⓞ | 962 (37.87)* | |
| Ⓐ – Ⓜ | 884 (34.80) | | Ⓗ – ⓗ | 853 (33.58) | | Ⓝ – ⓟ | 1005 (39.57)* | |
| Ⓐ – ⓜ | 872 (34.33) | | Ⓗ – ⓙ | 1003 (39.49) | | Ⓞ – ⓞ | 1071 (42.17) | |
| Ⓐ – ⓡ | 474 (18.66) | | ⓗ – Ⓙ | 977 (38.46) | | Ⓞ – ⓟ | 1081 (42.56)* | |
| Ⓑ – ⓒ | 1321 (52.01)* | | Ⓗ – ⓚ | 1073 (42.24) | | Ⓞ – ⓠ | 1059 (41.69) | |
| Ⓑ – ⓡ | 1262 (49.68) | | ⓗ – Ⓚ | 1033 (40.67) | | ⓞ – Ⓠ | 1053 (41.46) | |
| ⓑ – ⓡ | 445 (17.52) | | Ⓙ – ⓙ | 973 (38.31) | | Ⓟ – ⓠ | 1027 (40.43) | |
| Ⓒ – ⓒ | 1058 (41.65) | | Ⓙ – ⓚ | 959 (37.76) | | ⓟ – Ⓠ | 1021 (40.20) | |

MEASUREMENT POINTS




JSKIA4710ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top hole center of center positioning mark ϕ8 (0.31) | Ⓗ ⓗ Ⓙ Ⓚ ⓚ | Front side member hole center<br>Ⓗ: ϕ9 (0.35)<br>ⓗ Ⓚ ⓚ: ϕ8 (0.31)<br>Ⓙ: ϕ14 (0.55) |
| Ⓑ ⓑ | Hood hinge installing hole center ϕ12 (0.47) | ⓙ | Engine mounting bracket hole center 12×10 (0.47×0.39) |
| Ⓒ ⓒ | Front suspension installing hole center 16×10 (0.63×0.39) | Ⓜ ⓜ | Hoodledge connector hole center ϕ12 (0.47) |
| Ⓓ ⓓ Ⓕ ⓕ | Front fender installing hole center ϕ7 (0.28) | Ⓞ ⓞ Ⓟ ⓟ Ⓠ ⓠ | Front side member hole center<br>Ⓞ Ⓠ ⓠ: ϕ11 (0.43)<br>ⓞ: ϕ12 (0.47)<br>Ⓟ ⓟ: ϕ13 (0.51) |

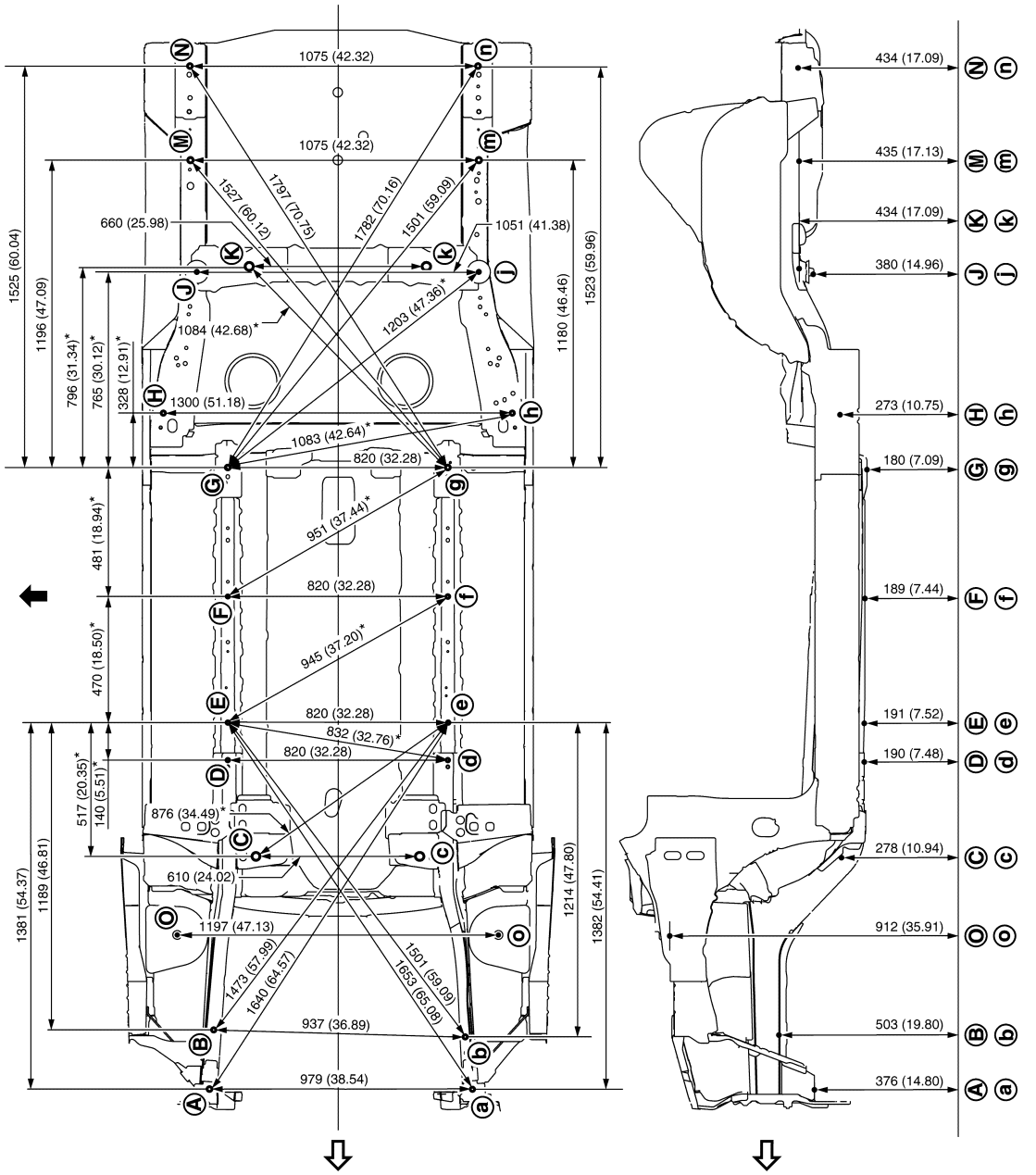
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓔ ⓔ | Front hoodledge reinforcement hole center ϕ12 (0.47) | ⓡ | Torque rod mounting bracket hole center ϕ14 (0.55) |
| Ⓖ ⓖ Ⓝ ⓝ | Upper radiator core support hole center<br>Ⓖ ⓖ: ϕ7 (0.28)<br>Ⓝ ⓝ: ϕ13 (0.51) | | |

## Underbody

INFOID:0000000010860054

### MEASUREMENT

Dimensions marked with ″*″ indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



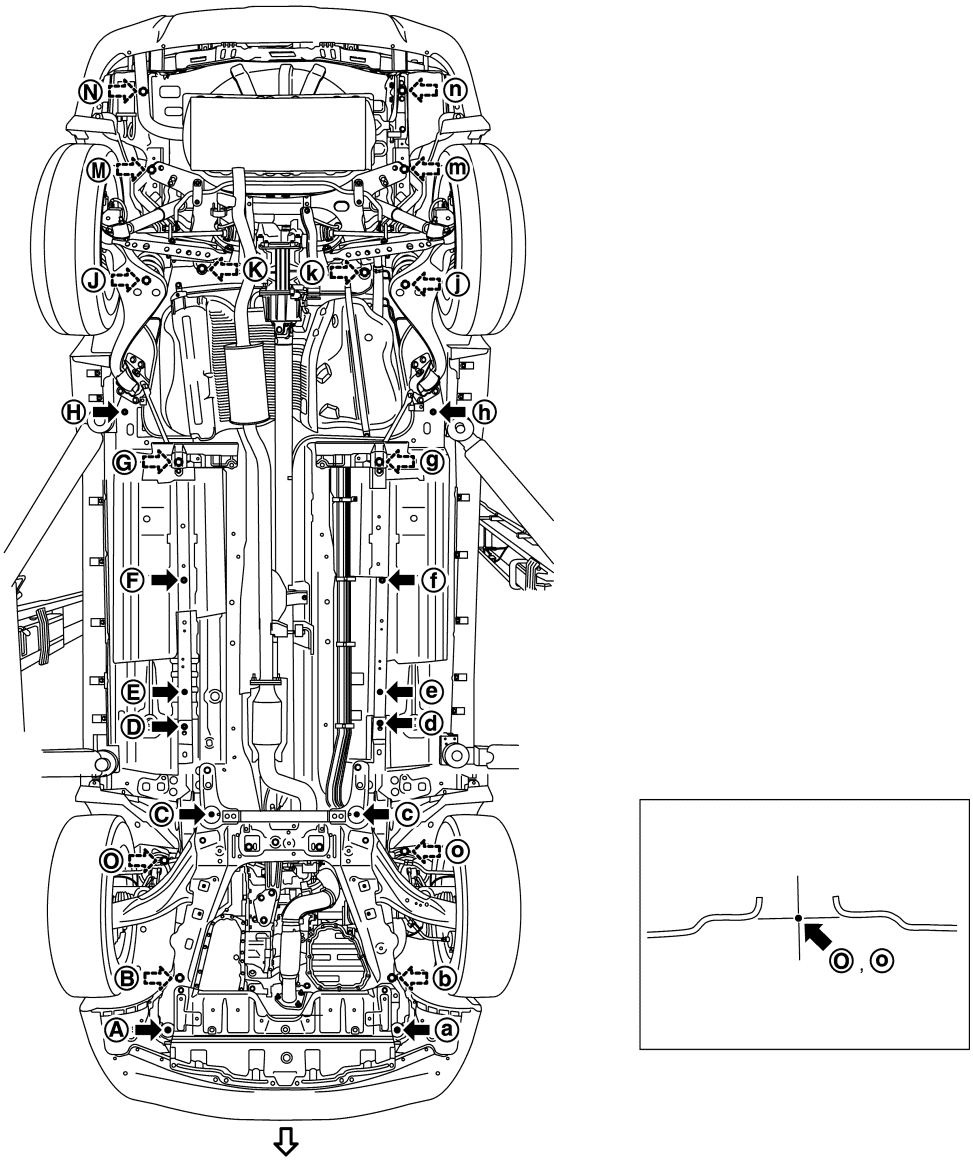

JSKIA4422GB

Unit: mm (in)

⇦: Vehicle front

⬅: Vehicle left side

## MEASUREMENT POINTS




JSKIA4423ZZ

⇦: Vehicle front

Unit: mm (in)

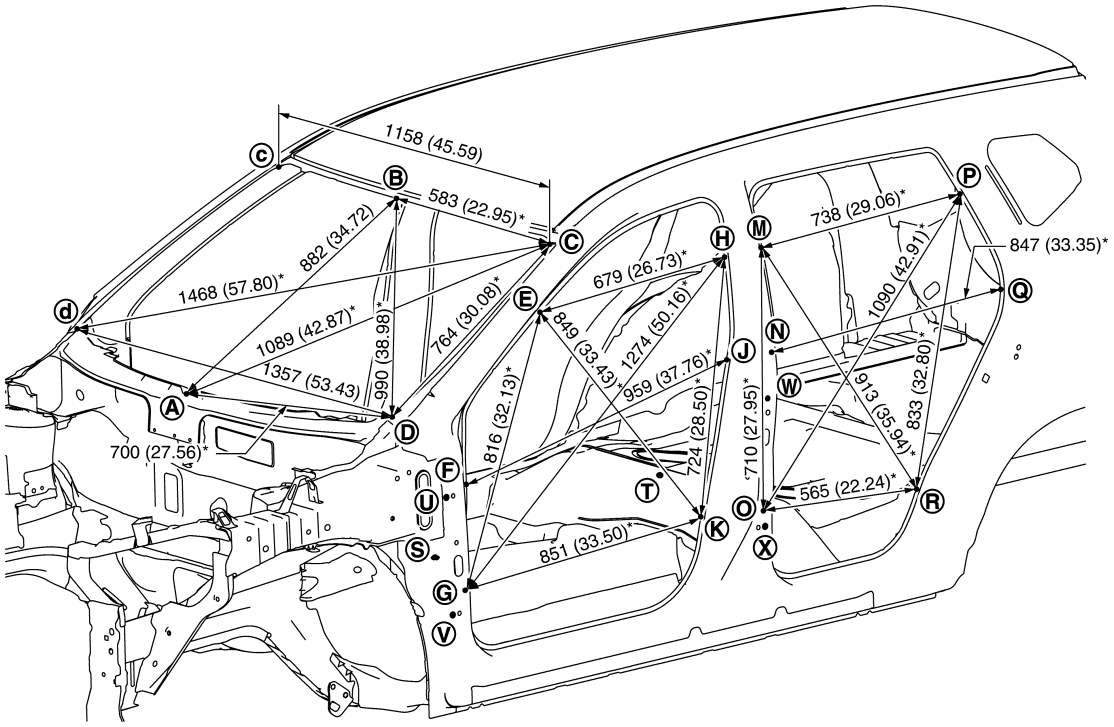
| Points | Coordinates | | | Remarks | Points | Coordinates | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | | | X | Y | Z | |
| Ⓐ | 478.0 (18.819) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓗ ⓗ | ±650.0 (±25.591) | 1954.0 (76.929) | 272.9 (10.744) | Hole ϕ16 (0.63) |
| ⓐ | –501.0 (–19.724) | –566.6 (–22.307) | 375.5 (14.783) | Hole ϕ18 (0.71) | Ⓙ ⓙ | ±525.4 (±20.685) | 2480.4 (97.653) | 380.0 (14.961) | Hole ϕ12 (0.47) |
| Ⓑ | 462.4 (18.205) | –346.0 (–13.622) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓚ ⓚ | ±330.0 (±12.992) | 2501.0 (98.464) | 434.0 (17.087) | Ⓚ: Hole ϕ30 (1.18)<br>ⓚ: Hole 32×30 (1.26×1.18) |
| ⓑ | –474.7 (–18.689) | –372.0 (–14.646) | 502.5 (19.783) | Hole ϕ16 (0.63) | Ⓜ | 549.0 (21.614) | 2911.0 (114.606) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓒ ⓒ | ±305.0 (±12.008) | 301.0 (11.850) | 277.8 (10.936) | Ⓒ: Hole ϕ30 (1.18)<br>ⓒ: Hole 32×30 (1.26×1.18) | ⓜ | –525.5 (–20.689) | 2897.2 (114.063) | 435.0 (17.126) | Hole ϕ20 (0.79) |
| Ⓓ ⓓ | ±410.0 (±16.142) | 660.0 (25.984) | 190.4 (7.495) | Hole ϕ14 (0.55) | Ⓝ | 551.0 (21.693) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓔ ⓔ | ±410.0 (±16.142) | 800.0 (31.496) | 191.4 (7.535) | Hole ϕ12 (0.47) | ⓝ | –523.5 (–20.610) | 3248.0 (127.874) | 433.8 (17.079) | Hole 16×14 (0.63×0.55) |
| Ⓕ ⓕ | ±410.0 (±16.142) | 1270.0 (50.000) | 189.2 (7.449) | Hole ϕ12 (0.47) | Ⓞ ⓞ | ±598.6 (±23.566) | 7.4 (0.291) | 911.9 (35.902) | Hole ϕ33 (1.30) |
| Ⓖ ⓖ | ±410.0 (±16.142) | 1751.0 (68.937) | 180.2 (7.094) | Hole ϕ13 (0.51) | | | | | |

## Passenger Compartment (MR20DD Engine Models)

INFOID:0000000010860059

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



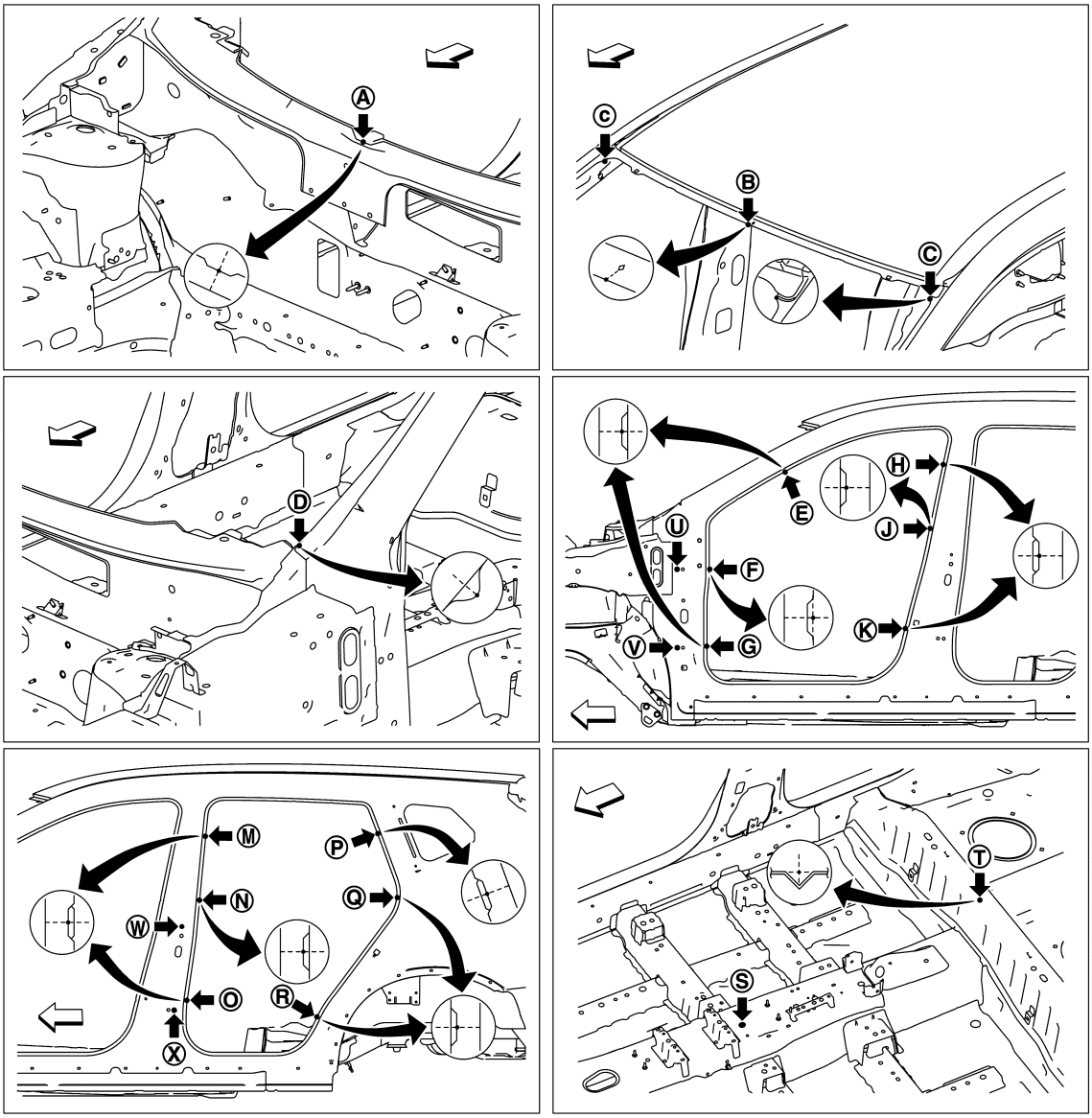

Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓔ - ⓔ | 1334 (52.52) | | Ⓜ - ⓡ | 1665 (65.55)* | | Ⓣ - Ⓜ | 1077 (42.40)* | |
| Ⓔ - ⓖ | 1616 (63.62)* | | Ⓝ - ⓝ | 1458 (57.40) | | Ⓣ - Ⓝ | 943 (37.13)* | |
| Ⓔ - ⓗ | 1494 (58.82)* | | Ⓝ - ⓠ | 1670 (65.75)* | | Ⓣ - Ⓞ | 794 (31.26)* | |
| Ⓔ - ⓚ | 1634 (64.33)* | | Ⓞ - ⓞ | 1461 (57.52) | | Ⓣ - Ⓟ | 1179 (46.42)* | |
| Ⓕ - ⓕ | 1441 (56.73) | | Ⓞ - ⓟ | 1749 (68.86)* | | Ⓣ - Ⓠ | 1092 (42.99)* | |
| Ⓕ - ⓙ | 1738 (68.43)* | | Ⓞ - ⓡ | 1567 (61.69)* | | Ⓣ - Ⓡ | 782 (30.79)* | |
| Ⓖ - ⓖ | 1458 (57.40) | | Ⓟ - ⓟ | 1281 (50.43) | | Ⓤ - ⓤ | 1592 (62.68) | |
| Ⓖ - ⓗ | 1886 (74.25)* | | Ⓟ - ⓡ | 1602 (63.07)* | | Ⓤ - Ⓦ | 1172 (46.14)* | |
| Ⓖ - ⓚ | 1689 (66.50)* | | Ⓠ - ⓠ | 1419 (55.87) | | Ⓤ - Ⓧ | 1175 (46.26)* | |
| Ⓗ - ⓗ | 1327 (52.24) | | Ⓡ - ⓡ | 1462 (57.56) | | Ⓥ - ⓥ | 1623 (63.90) | |
| Ⓗ - ⓚ | 1569 (61.77)* | | Ⓢ - Ⓔ | 1110 (43.70)* | | Ⓥ - Ⓦ | 1235 (48.62)* | |
| Ⓙ - ⓙ | 1458 (57.40) | | Ⓢ - Ⓕ | 979 (38.54)* | | Ⓥ - Ⓧ | 1137 (44.76)* | |
| Ⓚ - ⓚ | 1461 (57.52) | | Ⓢ - Ⓖ | 890 (35.04)* | | Ⓦ - ⓦ | 1588 (62.52) | |
| Ⓜ - ⓜ | 1326 (52.20) | | Ⓢ - Ⓗ | 1233 (48.54)* | | Ⓧ - ⓧ | 1619 (63.74) | |
| Ⓜ - ⓞ | 1562 (61.50)* | | Ⓢ - Ⓙ | 1068 (42.05)* | | | | |
| Ⓜ - ⓟ | 1498 (58.98)* | | Ⓢ - Ⓚ | 836 (32.91)* | | | | |

## MEASUREMENT POINTS




JSKIA4749ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top indent of center positioning mark | Ⓗ ⓗ Ⓙ ⓙ Ⓚ ⓚ Ⓜ ⓜ Ⓝ ⓝ Ⓞ ⓞ | Center pillar indent |
| Ⓑ | Roof flange end of center positioning mark | Ⓟ ⓟ Ⓠ ⓠ Ⓡ ⓡ | Rear fender indent |
| Ⓒ ⓒ | Outer side body joggle | Ⓢ | Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47) |

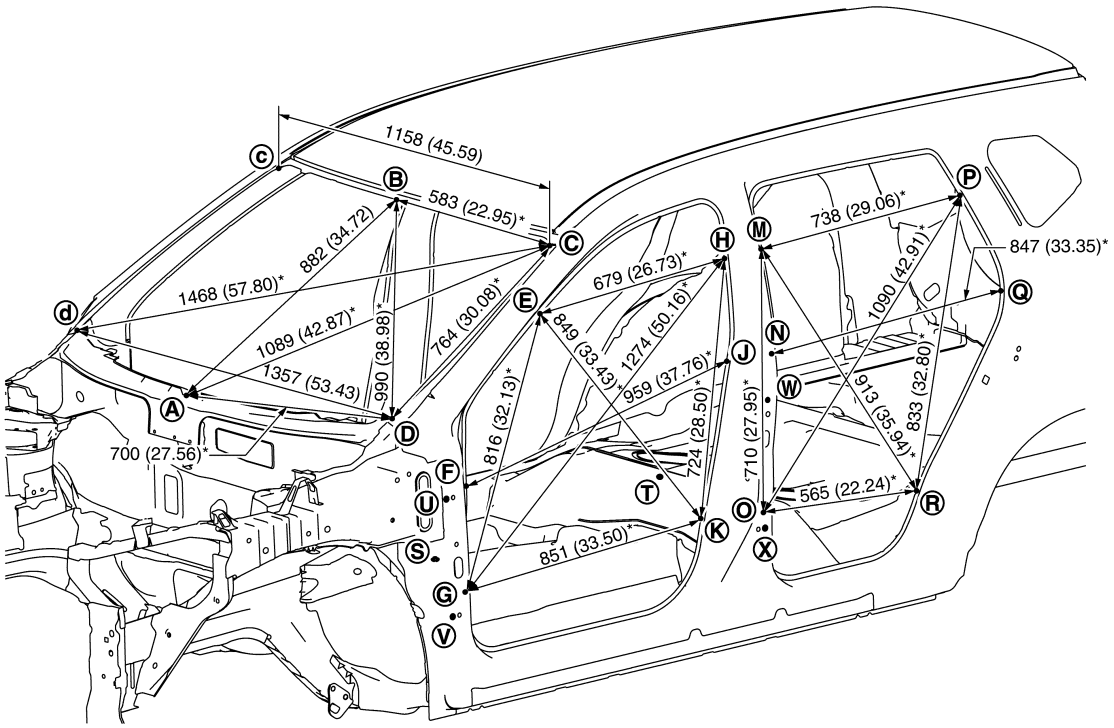
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓓ ⓓ | Outer side body indent | Ⓣ | Rear seat crossmember positioning mark of center positioning mark |
| Ⓔ ⓔ Ⓕ ⓕ Ⓖ ⓖ | Front pillar indent | Ⓤ ⓤ Ⓥ ⓥ Ⓦ ⓦ Ⓧ ⓧ | Door hinge installing hole center<br>Ⓤ ⓤ Ⓥ ⓥ Ⓧ ⓧ: ϕ12 (0.47)<br>Ⓦ ⓦ: ϕ9 (0.35) |

## Passenger Compartment (Except For MR20DD Engine Models)

INFOID:0000000010860062

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.




JSKIA4711GB

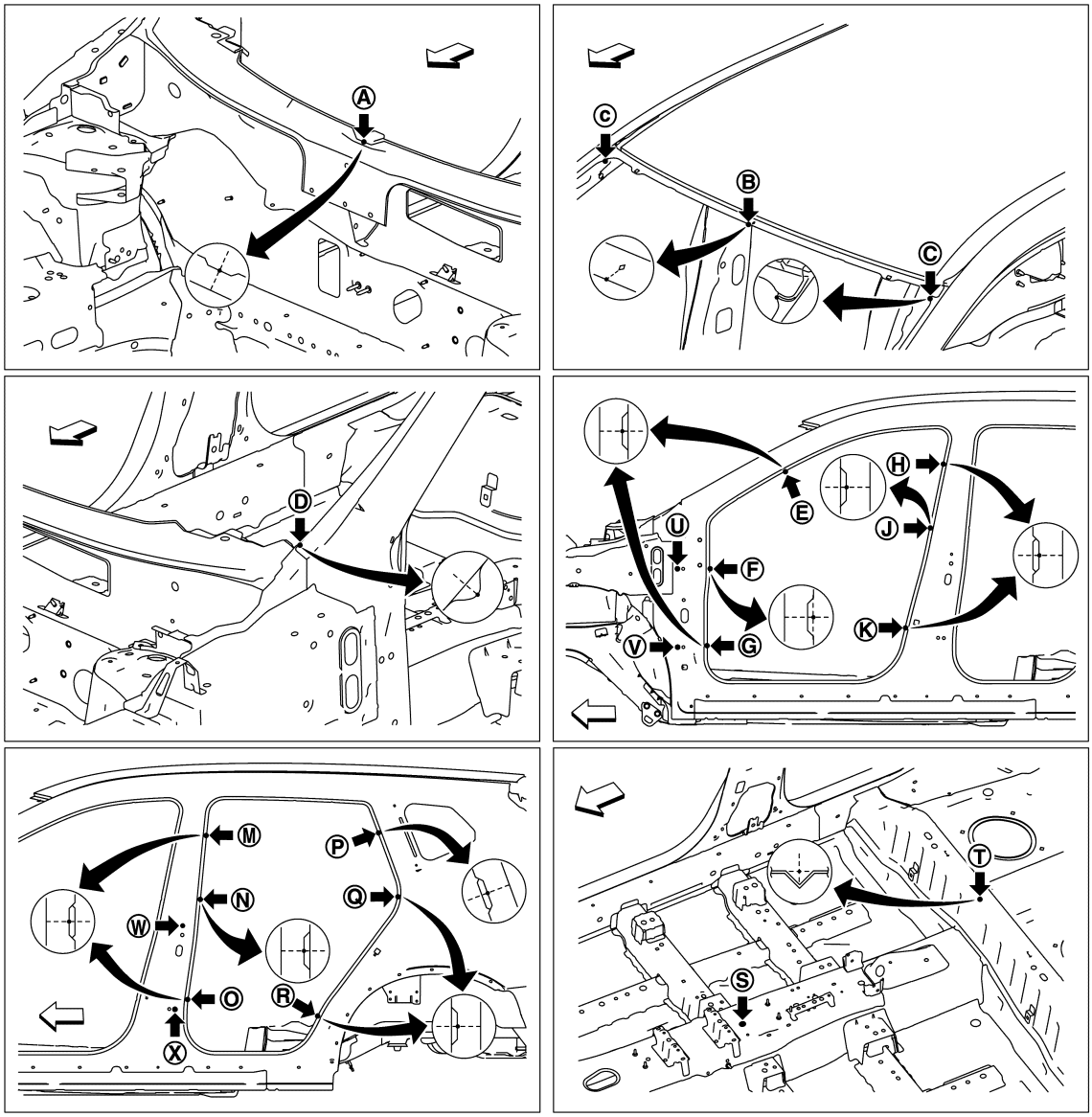
Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓔ - ⓔ | 1334 (52.52) | | Ⓜ - ⓡ | 1665 (65.55)* | | Ⓣ - Ⓜ | 1077 (42.40)* | |
| Ⓔ - ⓖ | 1616 (63.62)* | | Ⓝ - ⓝ | 1458 (57.40) | | Ⓣ - Ⓝ | 943 (37.13)* | |
| Ⓔ - ⓗ | 1494 (58.82)* | | Ⓝ - ⓠ | 1670 (65.75)* | | Ⓣ - Ⓞ | 794 (31.26)* | |
| Ⓔ - ⓚ | 1634 (64.33)* | | Ⓞ - ⓞ | 1461 (57.52) | | Ⓣ - Ⓟ | 1179 (46.42)* | |
| Ⓕ - ⓕ | 1441 (56.73) | | Ⓞ - ⓟ | 1749 (68.86)* | | Ⓣ - Ⓠ | 1092 (42.99)* | |
| Ⓕ - ⓙ | 1738 (68.43)* | | Ⓞ - ⓡ | 1567 (61.69)* | | Ⓣ - Ⓡ | 782 (30.79)* | |
| Ⓖ - ⓖ | 1458 (57.40) | | Ⓟ - ⓟ | 1281 (50.43) | | Ⓤ - ⓤ | 1592 (62.68) | |
| Ⓖ - ⓗ | 1886 (74.25)* | | Ⓟ - ⓡ | 1602 (63.07)* | | Ⓤ - Ⓦ | 1172 (46.14)* | |
| Ⓖ - ⓚ | 1689 (66.50)* | | Ⓠ - ⓠ | 1419 (55.87) | | Ⓤ - Ⓧ | 1175 (46.26)* | |
| Ⓗ - ⓗ | 1327 (52.24) | | Ⓡ - ⓡ | 1462 (57.56) | | Ⓥ - ⓥ | 1623 (63.90) | |
| Ⓗ - ⓚ | 1569 (61.77)* | | Ⓢ - Ⓔ | 1110 (43.70)* | | Ⓥ - Ⓦ | 1235 (48.62)* | |
| Ⓙ - ⓙ | 1458 (57.40) | | Ⓢ - Ⓕ | 979 (38.54)* | | Ⓥ - Ⓧ | 1137 (44.76)* | |
| Ⓚ - ⓚ | 1461 (57.52) | | Ⓢ - Ⓖ | 890 (35.04)* | | Ⓦ - ⓦ | 1588 (62.52) | |
| Ⓜ - ⓜ | 1326 (52.20) | | Ⓢ - Ⓗ | 1233 (48.54)* | | Ⓧ - ⓧ | 1619 (63.74) | |
| Ⓜ - ⓞ | 1562 (61.50)* | | Ⓢ - Ⓙ | 1068 (42.05)* | | | | |
| Ⓜ - ⓟ | 1498 (58.98)* | | Ⓢ - Ⓚ | 836 (32.91)* | | | | |

MEASUREMENT POINTS




JSKIA4712ZZ

⇦: Vehicle front

Unit: mm (in)

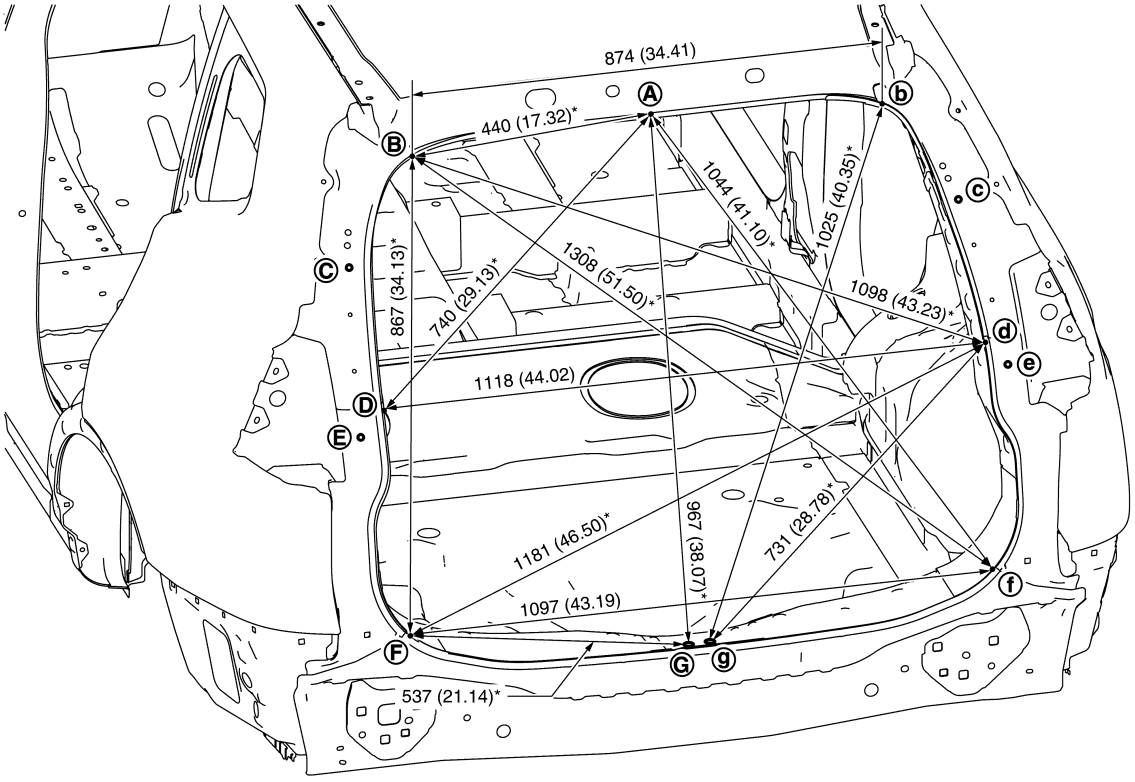
| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Cowl top indent of center positioning mark | Ⓗ ⓗ Ⓙ ⓙ Ⓚ ⓚ Ⓜ ⓜ Ⓝ ⓝ Ⓞ ⓞ | Center pillar indent |
| Ⓑ | Roof flange end of center positioning mark | Ⓟ ⓟ Ⓠ ⓠ Ⓡ ⓡ | Rear fender indent |
| Ⓒ ⓒ | Outer side body joggle | Ⓢ | Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47) |
| Ⓓ ⓓ | Outer side body indent | Ⓣ | Rear seat crossmember positioning mark of center positioning mark |
| Ⓔ ⓔ Ⓕ ⓕ Ⓖ ⓖ | Front pillar indent | Ⓤ ⓤ Ⓥ ⓥ Ⓦ ⓦ Ⓧ ⓧ | Door hinge installing hole center<br>Ⓤ ⓤ Ⓥ ⓥ Ⓧ ⓧ: ϕ12 (0.47)<br>Ⓦ ⓦ: ϕ9 (0.35) |

## Rear Body

INFOID:0000000010860056

### MEASUREMENT

Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.




JSKIA4428GB

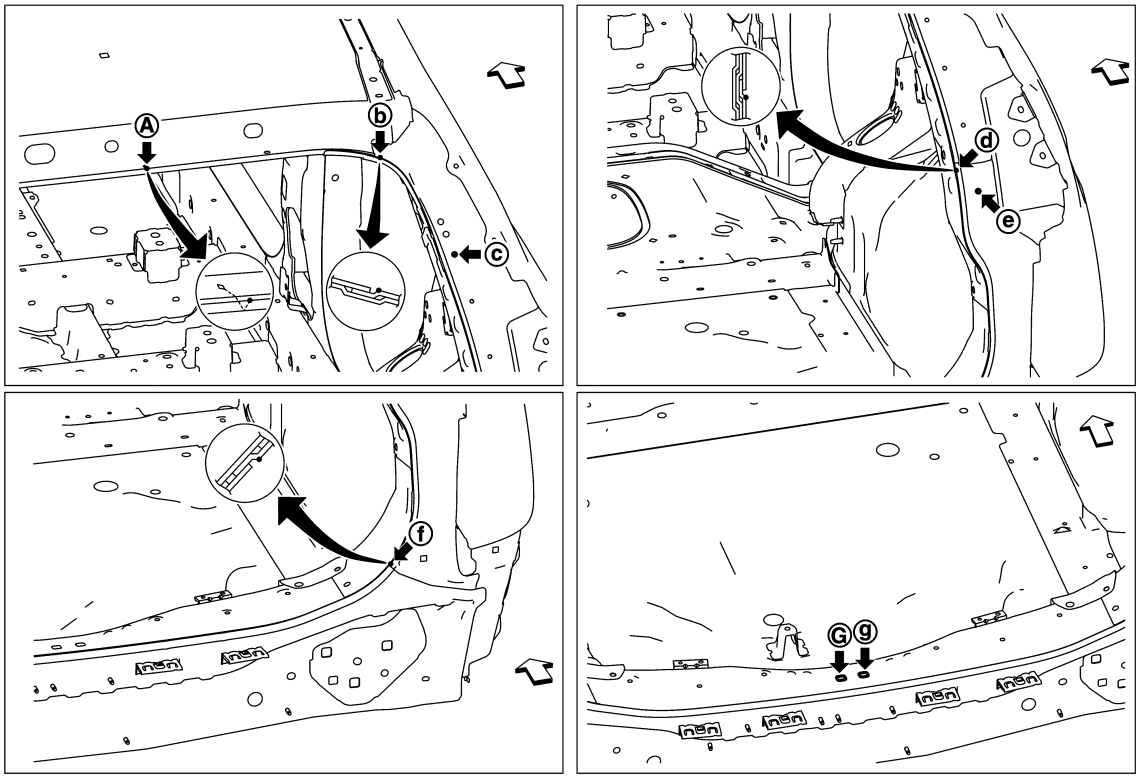
Unit: mm (in)

«The others»

Unit: mm (in)

| Point | Dimension | Memo | Point | Dimension | Memo | Point | Dimension | Memo |
|---|---|---|---|---|---|---|---|---|
| Ⓐ – Ⓒ | 612 (24.09)* | | Ⓒ – ⓒ | 1131 (44.53) | | Ⓓ – ⓖ | 762 (30.00)* | |
| Ⓐ – Ⓔ | 797 (31.38)* | | Ⓒ – Ⓔ | 323 (12.72)* | | Ⓔ – ⓔ | 1202 (47.32) | |
| Ⓑ – ⓖ | 1042 (41.02)* | | Ⓒ – ⓔ | 1210 (47.64)* | | Ⓕ – ⓖ | 578 (22.76)* | |

### MEASUREMENT POINTS




JSKIA4429ZZ

⇦: Vehicle front

Unit: mm (in)

| Point | Material | Point | Material |
|---|---|---|---|
| Ⓐ | Roof flange end of center positioning mark | Ⓓ ⓓ Ⓕ ⓕ | Lower back pillar main joggle |
| Ⓑ ⓑ | Center back pillar main joggle | Ⓔ ⓔ | Lower back pillar main hole center ϕ7 (0.28) |
| Ⓒ ⓒ | Center back pillar main hole center ϕ7 (0.28) | Ⓖ ⓖ | Back door striker installing hole center |

# LOCATION OF PLASTIC PARTS

## Precautions for Plastics

INFOID:0000000010843633

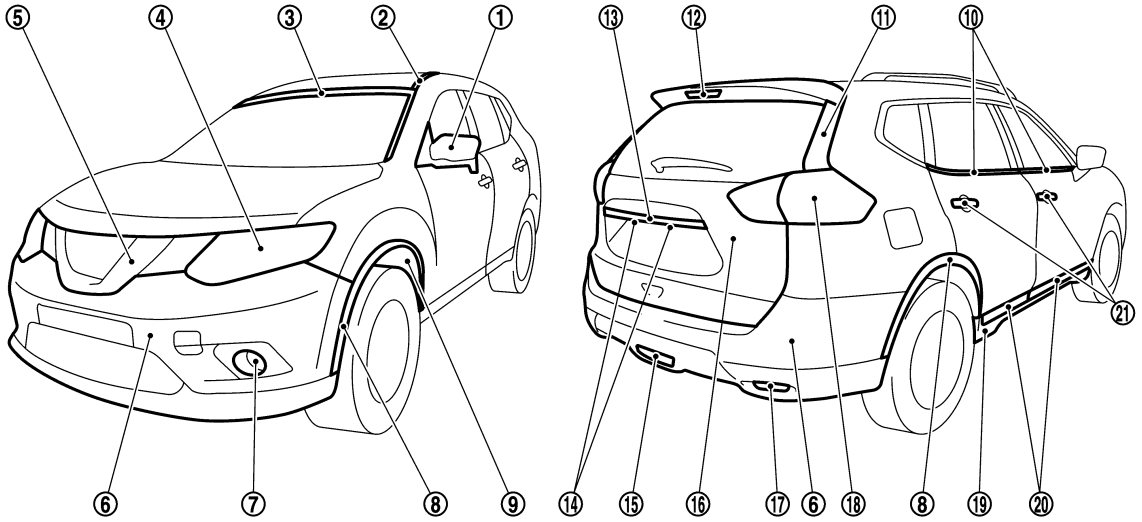
| Abbre-viation | Material name | Heat resisting temperature °C (°F) | Resistance to gasoline and solvents | Other cautions |
|---|---|---|---|---|
| PE | Polyethylene | 60 (140) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| ABS | Acrylonitrile Butadiene Styrene | 80 (176) | Avoid gasoline and solvents. | — |
| AES | Acrylonitrile Ethylene Styrene | 80 (176) | ↑ | — |
| EPM/ EPDM | Ethylene Propylene (Diene) co-polymer | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable |
| PS | Polystyrene | 80 (176) | Avoid solvents. | Flammable |
| PVC | Poly Vinyl Chloride | 80 (176) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Poisonous gas is emitted when burned. |
| TPO | Thermoplastic Olefine | 80 (176) | ↑ | Flammable |
| AAS | Acrylonitrile Acrylic Styrene | 85 (185) | Avoid gasoline and solvents. | — |
| PMMA | Poly Methyl Methacrylate | 85 (185) | ↑ | — |
| EVAC | Ethylene Vinyl Acetate | 90 (194) | ↑ | — |
| PP | Polypropylene | 90 (194) | Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly). | Flammable, avoid bat-tery acid. |
| PUR | Polyurethane | 90 (194) | Avoid gasoline and solvents. | — |
| UP | Unsaturated Polyester | 90 (194) | ↑ | Flammable |
| ASA | Acrylonitrile Styrene Acrylate | 100 (212) | ↑ | Flammable |
| PPE | Poly Phenylene Ether | 110 (230) | ↑ | — |
| TPU | Thermoplastic Urethane | 110 (230) | ↑ | — |
| PBT+ PC | Poly Butylene Terephthalate + Polycarbonate | 120 (248) | ↑ | Flammable |
| PC | Polycarbonate | 120 (248) | ↑ | — |
| POM | Poly Oxymethylene | 120 (248) | ↑ | Avoid battery acid. |
| PA | Polyamide | 140 (284) | ↑ | Avoid immersing in wa-ter. |
| PBT | Poly Butylene Terephthalate | 140 (284) | ↑ | — |
| PAR | Polyarylate | 180 (356) | ↑ | — |
| PET | Polyethylene terephthalate | 180 (356) | ↑ | — |
| PEI | Polyetherimide | 200 (392) | ↑ | — |

**CAUTION:**

- **When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.**
- **Plastic parts should be repaired and painted using methods suiting the materials' characteristics.**

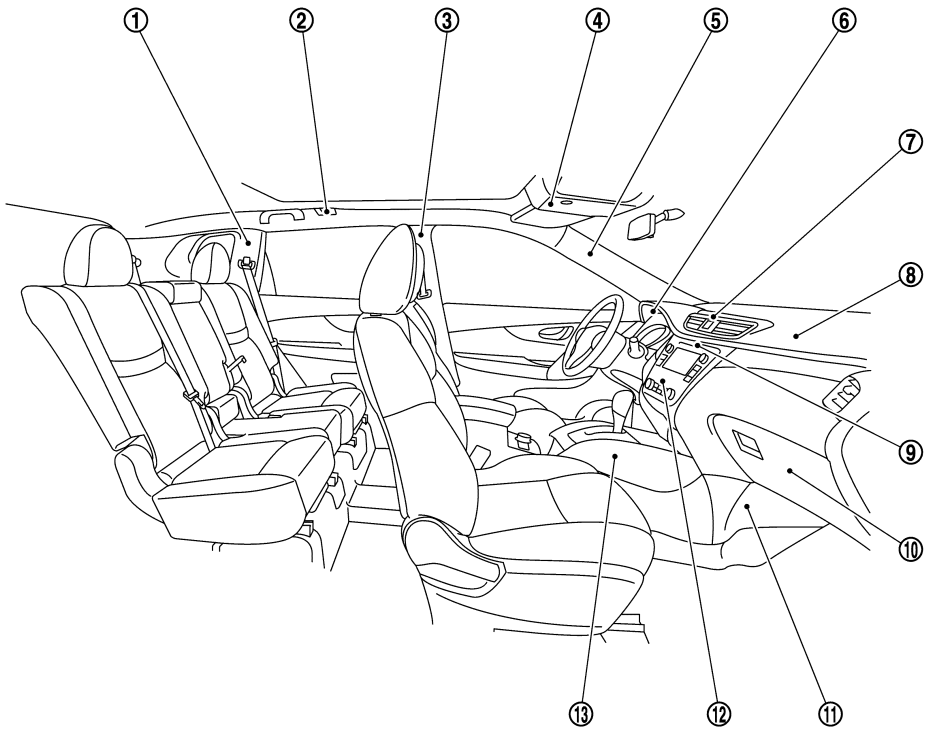
## Location of Plastic Parts

INFOID:0000000010843634




JSKIA4713ZZ

| Component | | | Material | Component | | | Material |
|---|---|---|---|---|---|---|---|
| ① | Door mirror | Cover | ABS | ⑪ | Rear spoiler | | PC + ABS |
| | | Base | PBT + PET + Glass fiber | ⑫ | High mount stop lamp | Lens | PMMA |
| | | Case | ASA | | | Housing | ABS |
| | | Finisher | ASA | ⑬ | Back door finisher | | ABS |
| | Side turn signal lamp | Lens | PMMA | ⑭ | License plate lamp | Lens | PC |
| | | Housing | ABS | | | Housing | PC |
| ② | Side roof molding | | PVC + Stainless | ⑮ | Rear fog lamp | Lens | PC |
| ③ | Wind shield molding | | PVC | | | Housing | PC |
| ④ | Front combination lamp | Lens | PC | ⑯ | Back door | | PP |
| | | Housing | PP | ⑰ | Reflex reflector | Lens | PMMA |
| ⑤ | Front grille | | ABS | | | Housing | ABS |
| ⑥ | Bumper fascia | | PP + EPM | ⑱ | Rear combination lamp | Lens | PMMA |
| ⑦ | Front fog lamp | Lens | Glass | | | Housing | ASA |
| | | Housing | PBT + ASA + Glass fiber | ⑲ | Sill cover | | PP |
| ⑧ | Fillet molding | | PP | ⑳ | Side guard molding | | PP |
| ⑨ | Front fender protector | | PP | ㉑ | Door outside handle | Grip cover | PC + PET |
| ⑩ | Door outside molding | | PVC + Stainless | | | Grip body | PC + ABS |




JSKIA4752ZZ

| Component | | | Material |
|---|---|---|---|
| ① | Side luggage finisher | | PP |
| ② | Personal lamp | Lens | PC |
| | | Housing | PP |
| ③ | Center pillar garnish | | PP |
| ④ | Map lamp | Switch finisher | PP |
| | | Console | PP |
| | Lid box | | PC + ABS |
| ⑤ | Front pillar garnish | | PP |
| ⑥ | Cluster lid A | | PP |
| ⑦ | Center ventilator grille | | PC + ABS |
| ⑧ | Instrument panel | Skin | TPO |
| | | Pad | PUR |
| | | Core | PP + EPDM |

| Component | | | | Material |
|---|---|---|---|---|
| ⑨ | Cluster lid C | | | PC + ABS |
| ⑩ | Glove box | | | PP |
| ⑪ | Lower side panel | | | PP + EPM |
| ⑫ | A/C Control | Manual A/C | Finisher | PC + ABS |
| | | | Switch | PC |
| | | | Case | ABS |
| | | Automatic A/C | Finisher | PC + ABS |
| | | | Switch | PC |
| | | | Case | PC + ABS |
| | | | Lens | PC |
| ⑬ | Center console | | Body | PP |
| | | | Console box | PP |
| | | | A/T console finisher | PC + ABS |