

SECTION **BRM** BODY REPAIR

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BODY EXTERIOR PAINT COLOR

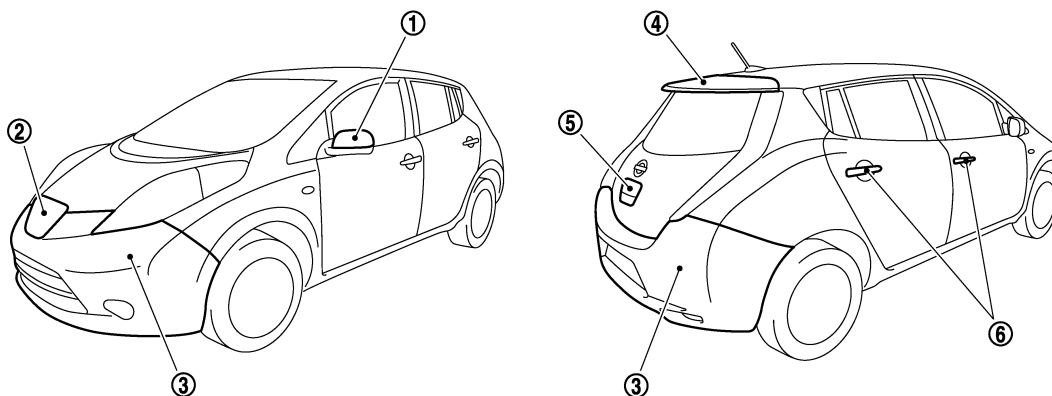
< VEHICLE INFORMATION >

VEHICLE INFORMATION

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:000000006956121



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Component		Color code	BKH3	BK23	BNAH	BQX1	BRAT
		Description	Black	Silver	Red	White	Blue
		Paint type ^{Note}	2S	M	PM	3P	3PM
		Hard clear coat	×	–	×	–	–
1	Outside mirror cover	Body color	BKH3	BK23	BNAH	BQX1	BRAT
2	Charge port lid	Body color	BKH3	BK23	BNAH	BQX1	BRAT
3	Bumper fascia	Body color	BKH3	BK23	BNAH	BQX1	BRAT
4	Rear spoiler	Body color	BKH3	BK23	BNAH	BQX1	BRAT
5	Back door handle	Body color	BKH3	BK23	BNAH	BQX1	BRAT
6	Door outside handle	Chromium plate	Cr	Cr	Cr	Cr	Cr

NOTE:

- S: Solid
- 2S: Solid + Clear
- CS: Color clear solid
- M: Metallic
- P: 2-Coat pearl
- 3P: 3-Coat pearl
- 3PM: 3-Coat pearl metallic
- FPM: Iron oxide pearl
- RPM: Multi flex color
- TM: Micro titanium metallic
- PM: Pearl metallic

PRECAUTIONS

< PRECAUTION >


PRECAUTION

PRECAUTIONS

High Voltage Precautions

INFOID:000000006956122

DANGER:

 Since hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are handled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.

WARNING:

- Be sure to remove the service plug in order to disconnect the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.
- The removed service plug must always be carried in a pocket of the responsible worker or placed in the tool box during the procedure to prevent the plug from being connected by mistake.
- Be sure to wear insulated protective equipment before beginning work on the high voltage system.
- Never allow workers other than the responsible person to touch the vehicle containing high voltage parts. To keep others from touching the high voltage parts, these parts must be covered with an insulating sheet except when using them.

CAUTION:

Never bring the vehicle into the READY status with the service plug removed unless otherwise instructed in the Service Manual. A malfunction may occur if this is not observed.

HIGH VOLTAGE HARNESS AND EQUIPMENT IDENTIFICATION

All the high voltage harnesses and connectors are orange. The Li-ion battery and other high voltage devices include an orange high voltage label. Never touch these harnesses and high voltage parts.

HANDLING OF HIGH VOLTAGE HARNESS AND TERMINALS

Immediately insulate disconnected high voltage connectors and terminals with insulating tape.

REGULATIONS ON WORKERS WITH MEDICAL ELECTRONICS

WARNING:

The vehicle contains parts that contain powerful magnets. If a person who is wearing a heart pacemaker or other medical device is close to these parts, the medical device may be affected by the magnets. Such persons must not perform work on the vehicle.

PROHIBITED ITEMS TO CARRY DURING THE WORK

Hybrid vehicles and electric vehicles contain parts with high voltage and intense magnetic force. Never carry metal products and magnetic recording media (e.g. cash card, prepaid card) to repair/inspect high voltage parts. If this is not observed, the metal products may create a risk of short circuit and the magnetic recording media may lose their magnetic recording.

POSTING A SIGN OF "DANGER! HIGH VOLTAGE AREA. KEEP OUT"

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PRECAUTIONS

< PRECAUTION >

Indicate "HIGH VOLTAGE. DO NOT TOUCH" on the vehicle under repair/inspection to call attention to other workers.

**DANGER:
HIGH VOLTAGE
REPAIR IN PROGRESS.
DO NOT TOUCH!**
Person in charge: _____

**DANGER:
HIGH VOLTAGE
REPAIR IN PROGRESS.
DO NOT TOUCH!**

Person in charge: _____

Copy this page and put it after folding on the roof of the vehicle in service.

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REPAIRING HIGH STRENGTH STEEL

< PRECAUTION >

REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:000000006956123

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	<ul style="list-style-type: none"> • Rear side member closing plate • Trans control reinforcement (Center front floor component part) • Rear side member front extension (Front floor component part) • Front floor front (Front floor component part) • 2nd crossmember (Front floor component part) • 3rd crossmember (Front floor component part) • Inner sill reinforcement (Inner sill component part) • Side dash • Front suspension spring support (Front strut housing component part) • Front side member front assembly • Front side member assembly • Front side member closing plate assembly • Rear seat crossmember • Rear crossmember center assembly • Rear side member • Rear side member extension reinforcement assembly • Rear side member extension • Inner side roof rail • Upper inner front pillar • Front pillar brace • Lower center pillar brace • Outer sill reinforcement • Inner rear pillar reinforcement • Lower rear panel reinforcement (Upper rear panel component part) • Front roof rail (Lower) (Front roof rail component part) • Roof member reinforcement (Center roof reinforcement component part)
980 MPa	<ul style="list-style-type: none"> • Front side member center extension (Front floor component part) • Front side member rear extension (Front floor component part) • Inner sill • Inner front sill reinforcement (Upper & Lower) (Inner sill component part) • Lower dash crossmember (Upper RH & LH) (Lower dash component part) • Lower dash crossmember (Lower) • Center pillar seat belt anchor (Inner center pillar assembly component part) • Inner center pillar assembly (Upper side) • Outer side roof rail reinforcement • Center pillar reinforcement (Lower center pillar brace component part) • Front roof rail reinforcement (Front roof rail component part)

Read the following precautions when repairing HSS:

REPAIRING HIGH STRENGTH STEEL

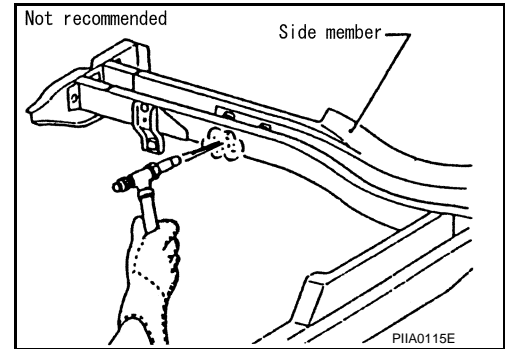
< PRECAUTION >

1. Additional points to consider

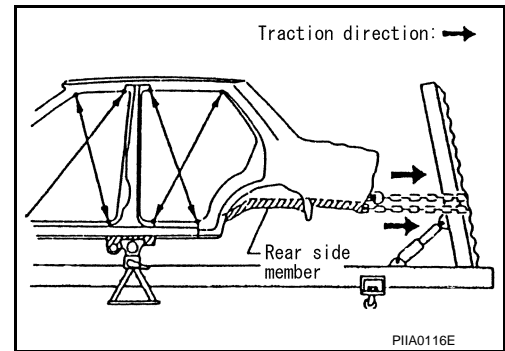
- The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).

Verify heating temperature with a thermometer.

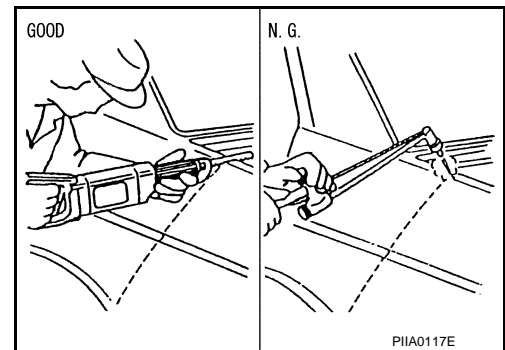
(Crayon-type and other similar type thermometer are appropriate.)



- 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.

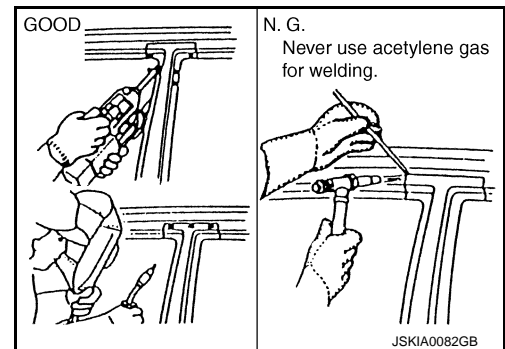


- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.

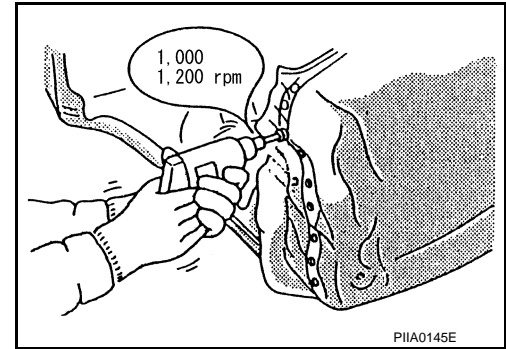
If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



REPAIRING HIGH STRENGTH STEEL

< PRECAUTION >

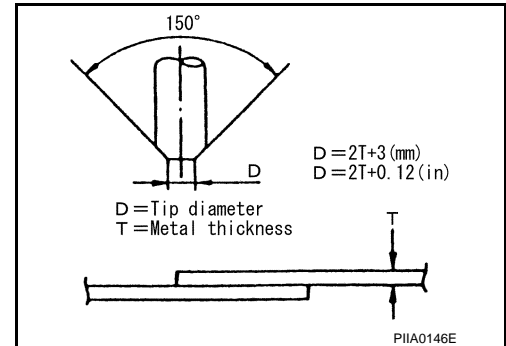
- Spot welding on HSS panels is harder than that of an ordinary steel panel.
Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



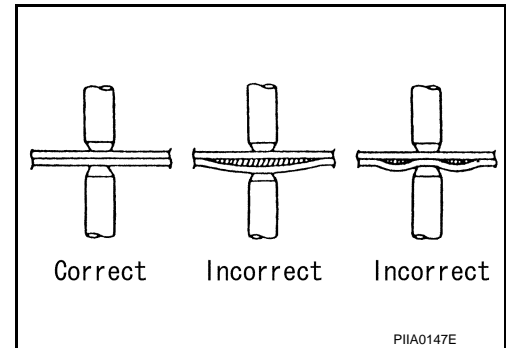
2. Precautions in spot welding HSS

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.



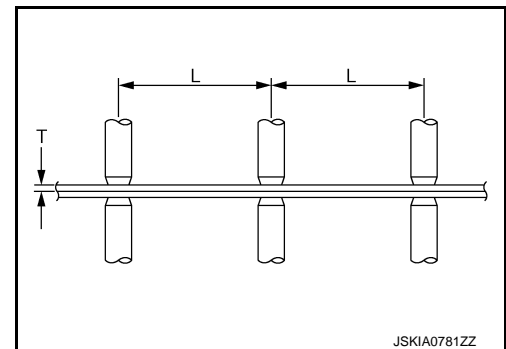
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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



Handling of Ultra High Strength Steel Plate Parts

PROHIBITION OF CUT AND CONNECTION

Never cut and Joint the stiffener front side member (front floor inside frame parts) because its material is high strength steel plate (ultra high strength steel plate).

The front floor assembly must be replaced if this part is damaged.

PAINTING BOOTH

< PRECAUTION >

PAINTING BOOTH

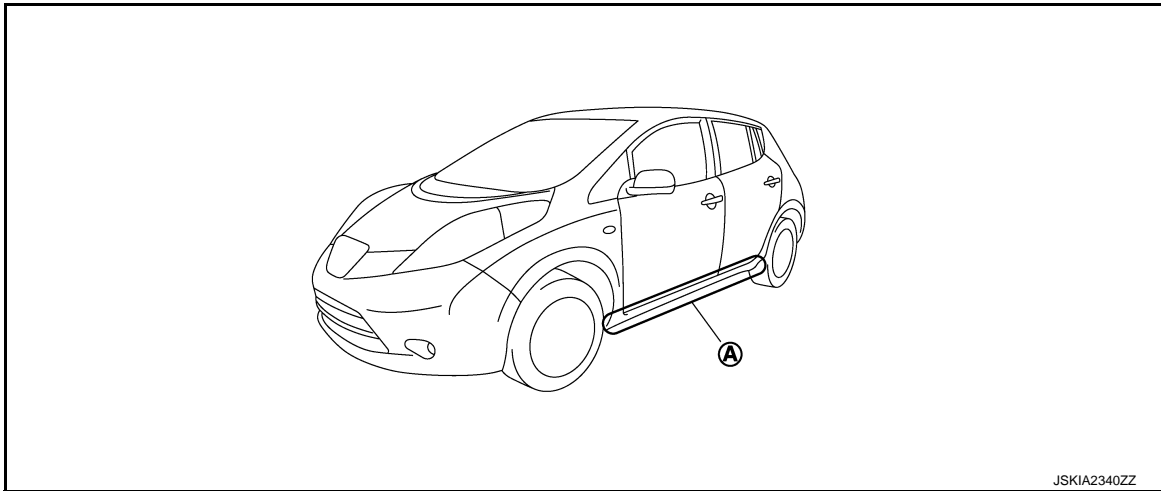
Criteria for Battery Removal When Drying Painting

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To use painting booth, maintain outer sill (A) temperature at 60°C (140°F) or less to prevent deterioration in li-ion battery.

NOTE:

- Measure the temperature with a noncontact thermometer.
 - If a sill cover (resin) is included, remove the sill cover to measure the temperature.
- If outer sill (A) temperature is more than 60°C (140°F), remove li-ion battery beforehand and place in the painting booth.



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A. Outer sill temperature measurement part

PROTECTION OF VEHICLE

< PRECAUTION >

PROTECTION OF VEHICLE

Protection of Vehicle

INFOID:000000006956126

The seats, glass, and carpet must be removed or covered with appropriate material (spatter cover), according to the type of work to be done, to prevent contamination and welding spatter.

In addition, when cutting the vehicle in an area close to high voltage parts or performing a welding operation, the high voltage parts must be covered with a heat-resistant insulating cover (spatter cover).

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REPAIRING MATERIAL

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PREPARATION

REPAIRING MATERIAL

Foam Repair

INFOID:000000006956127

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.

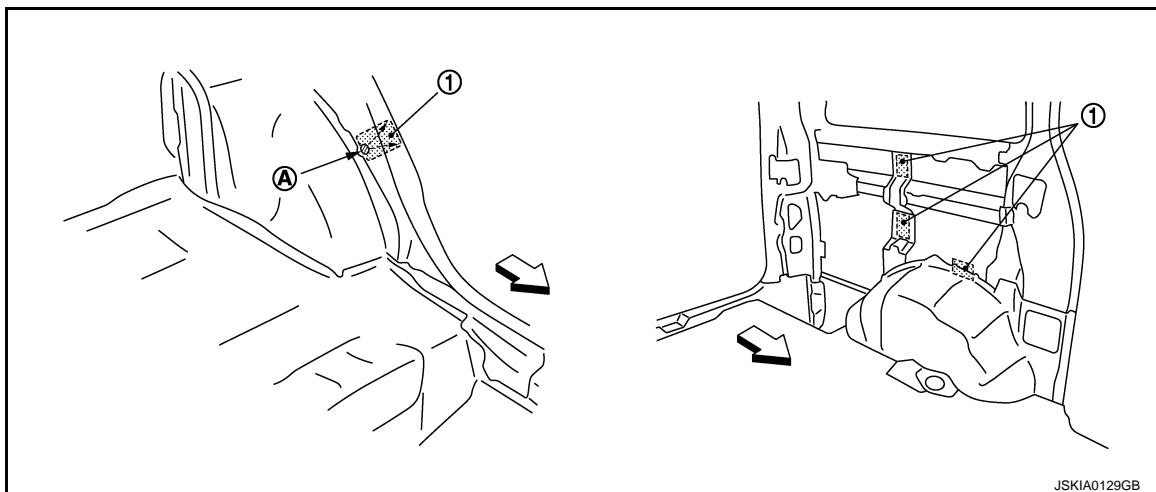
<Urethane foam for foaming agent>

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
- A. 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.

REPAIRING MATERIAL

< PREPARATION >

- 1. Urethane foam
- A. Fill while avoiding flange area
- ⇐: Vehicle front

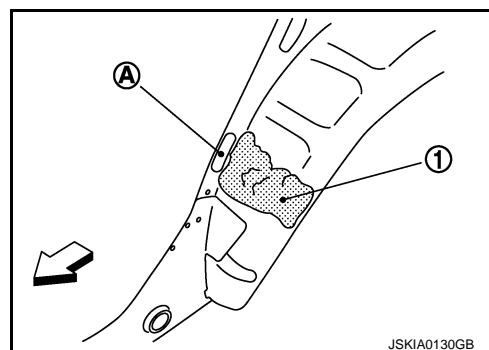
NOTE:

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.



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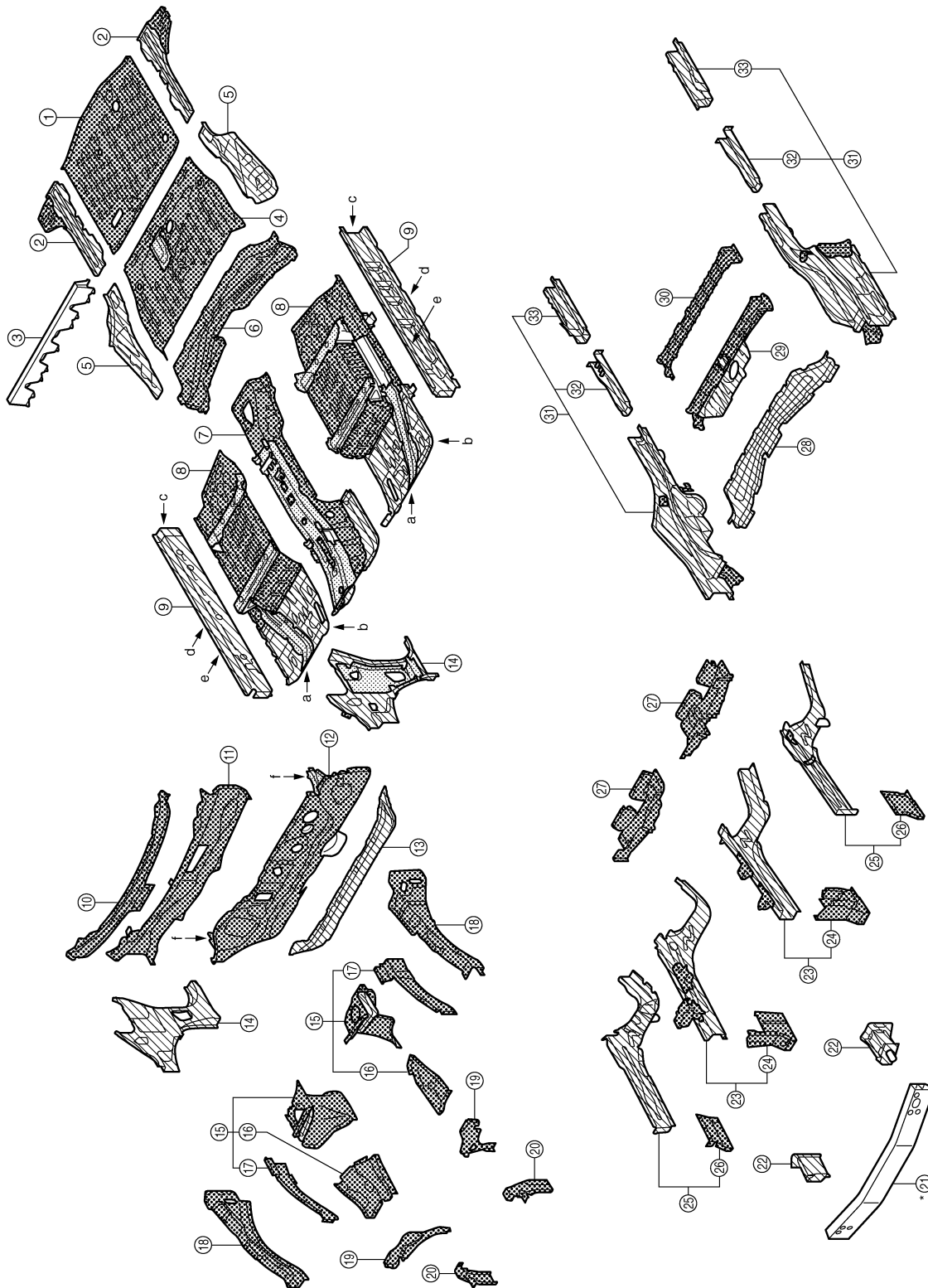
BODY COMPONENT PARTS

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BODY COMPONENT PARTS

Underbody Component Parts




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BODY COMPONENT PARTS

< PREPARATION >

-  Both sided anti-corrosive precoated steel sections
 High strength steel (HSS) sections
 Both sided anti-corrosive steel and HSS sections
 *: Aluminum portion

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
1.	Rear floor rear			Under 440	×	—
2.	Rear floor rear side (RH & LH)			590	×	—
3.	Upper seat crossmember assembly			Under 440	—	—
4.	Rear floor front			440	×	—
5.	Rear side member closing plate (RH & LH)			590	×	—
6.	Rear floor front extension			Under 440	×	—
7.	Center front floor			440	×	—
8.	Front floor (RH & LH)	a.	T=1.8mm (0.071 in)	980 ^{caution}	×	—
		b.	T=1.8mm (0.071 in)	980 ^{caution}		
9.	Inner sill (RH & LH)	c.	T=1.4mm (0.055 in)	980 ^{caution}	×	—
		d.	T=2.0mm (0.079 in)	980 ^{caution}		
		e.	T=1.6mm (0.063 in)	980 ^{caution}		
10.	Cowl top			Under 440	×	—
11.	Upper dash			Under 440	×	—
12.	Lower dash	f.	T=1.4mm (0.055 in)	980 ^{caution}	×	—
13.	Lower dash crossmember		T=2.0mm (0.079 in)	980 ^{caution}	×	—
14.	Side dash (RH & LH)			590	×	—
15.	Front strut housing (RH & LH)			590	×	—
16.	Lower front hoodledge (RH & LH)			Under 440	×	—
17.	Upper hoodledge (RH & LH)			Under 440	×	—
18.	Hoodledge reinforcement (RH & LH)			Under 440	×	—
19.	Hoodledge connector (RH & LH)			Under 440	×	—
20.	Side radiator core support (RH & LH)			Under 440	×	—
21.	Inner center front bumper reinforcement			—	—	×
22.	Front side member front assembly (RH & LH)			590	×	—
23.	Front side member assembly (RH & LH)			780	×	—
24.	Front suspension mounting bracket (RH & LH Front)			590	×	—
25.	Front side member closing plate assembly (RH & LH)			780	×	—
26.	Outer add on frame bracket (RH & LH)			Under 440	×	—
27.	Front suspension mounting bracket (RH & LH Rear)			Under 440	×	—
28.	Rear seat crossmember			440	×	—
29.	Rear crossmember center assembly			440	×	—
30.	7th crossmember			Under 440	×	—

BODY COMPONENT PARTS

< PREPARATION >

No.	Parts name	Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
31.	Rear side member (RH & LH)	780	×	—
32.	Rear side member extension reinforcement assembly (RH & LH)	440	×	—
33.	Rear side member extension (RH & LH)	590	×	—

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.

CAUTION:

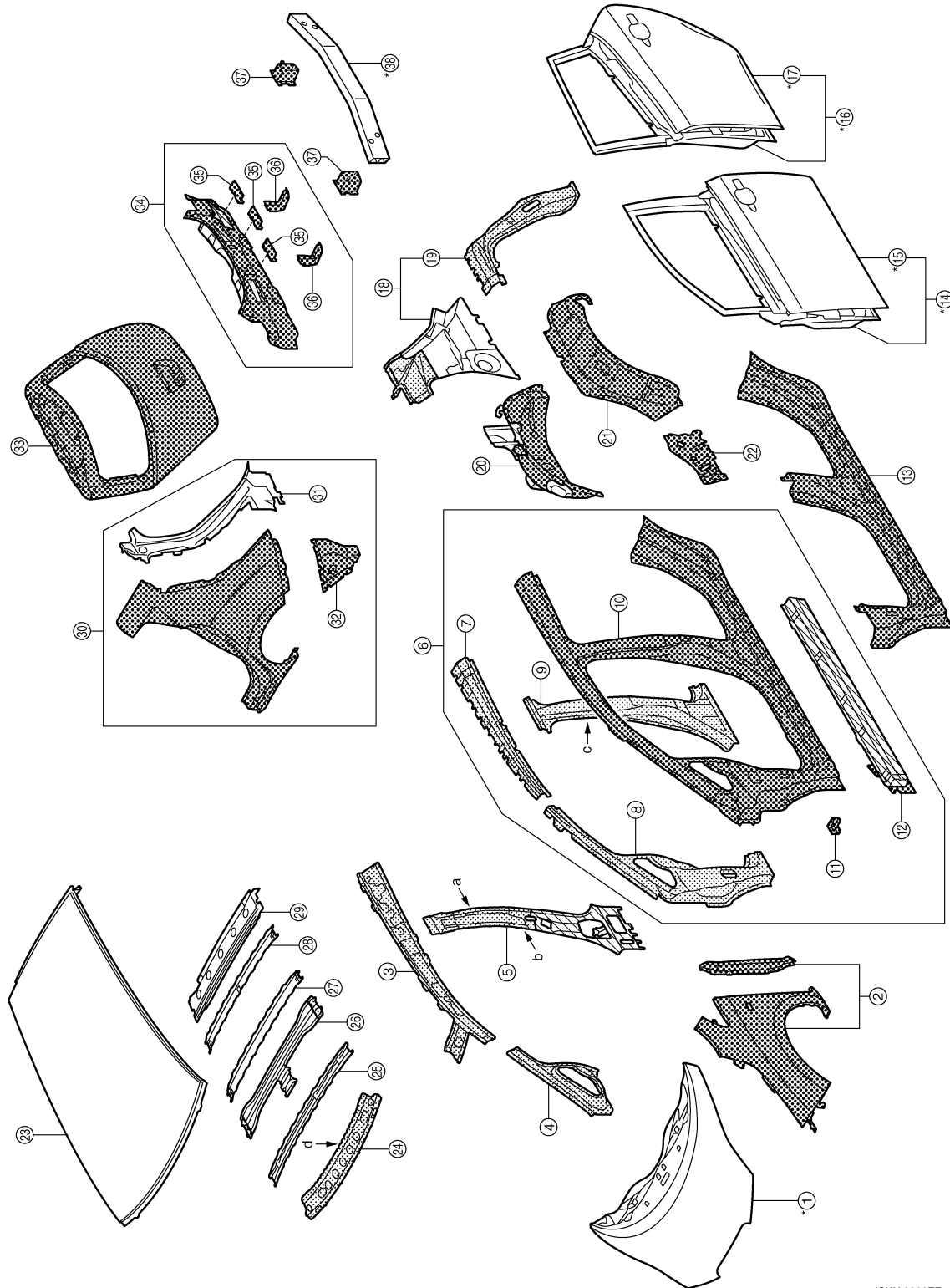
If the high strength steel (ultra high strength steel) of this is broken, replace by assembly for the supply part.

BODY COMPONENT PARTS

< PREPARATION >

Body Component Parts

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- Both sided anti-corrosive precoated steel sections
- High strength steel (HSS) sections
- Both sided anti-corrosive steel and HSS sections
- *: Aluminum portion

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BODY COMPONENT PARTS

< PREPARATION >

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
1.	Hood			—	—	×
2.	Front fender (RH & LH)			Under 440	×	—
3.	Inner side roof rail (RH & LH)			780	—	—
4.	Upper inner front pillar (RH & LH)			780	—	—
5.	Inner center pillar assembly (RH & LH)	a.	T=1.6 mm (0.063 in)	980 ^{caution}	—	—
		b.	T=1.4 mm (0.055 in)	980 ^{caution}	—	—
6.	Side body assembly (RH & LH)			Refer to No.7-12		
7.	Outer side roof rail reinforcement (RH & LH)		T=1.4 mm (0.055 in)	980 ^{caution}	—	—
8.	Front pillar brace (RH & LH)			590	—	—
9.	Lower center pillar brace (RH & LH)	c.	T=1.2 mm (0.047 in)	980 ^{caution}	—	—
10.	Outer front side body (RH & LH)			Under 440	×	—
11.	Front fender bracket assembly (RH & LH)			Under 440	×	—
12.	Outer sill reinforcement (RH & LH)			780	×	—
13.	Outer sill (RH & LH)			Under 440	×	—
14.	Front door (RH & LH)			—	—	×
15.	Outer front door panel (RH & LH)			—	—	×
16.	Rear door (RH & LH)			—	—	×
17.	Outer rear door panel (RH & LH)			—	—	×
18.	Inner rear pillar (RH & LH)			440	—	—
19.	Inner rear pillar reinforcement (RH & LH)			440	—	—
20.	Inner rear wheelhouse (RH & LH)			590	×	—
21.	Outer rear wheelhouse (RH & LH)			Under 440	×	—
22.	Outer rear wheelhouse extension (RH & LH)			Under 440	×	—
23.	Roof			Under 440	—	—
24.	Front roof rail	d.	T=1.0 mm (0.039 in)	980 ^{caution}	—	—
25.	Roof bow No.1			Under 440	—	—
26.	Center roof reinforcement			590	—	—
27.	Roof bow No.3			Under 440	—	—
28.	Roof bow No.4			Under 440	—	—
29.	Rear roof rail			Under 440	—	—
30.	Rear fender (RH & LH)			Under 440	×	—
31.	Rear fender extension (RH & LH)			Under 440	—	—
32.	Rear fender corner (RH & LH)			Under 440	×	—
33.	Back door			Under 440	×	—
34.	Upper rear panel			440	×	—
35.	Upper rear bumper retainer			Under 440	×	—
36.	Rear side bumper bracket			Under 440	×	—

BODY COMPONENT PARTS

< PREPARATION >

No.	Parts name	Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
37.	Rear bumper stay (RH & LH)	Under 440	×	—
38.	Inner center rear bumper reinforcement	—	—	×

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.

CAUTION:

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

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REPAIR WORK FLOW

< BASIC INSPECTION >

BASIC INSPECTION

REPAIR WORK FLOW

Repair Judgment Flow

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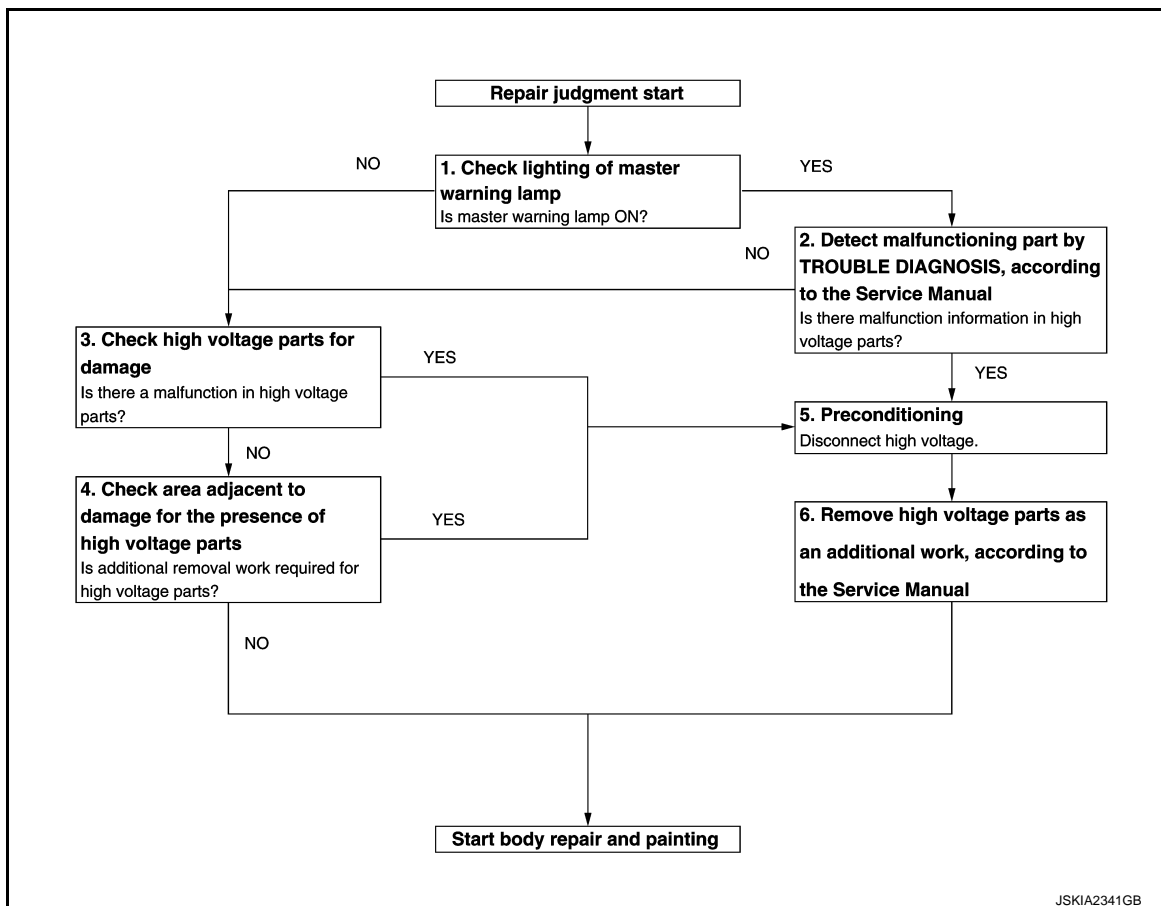
WARNING:

- Because hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are handled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.
- Be sure to remove the service plug in order to disconnect the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.
- To prevent the removed service plug from being connected by mistake during the procedure, always carry it in your pocket or put it in the tool box.
- Be sure to wear insulating protective equipment consisting of glove, shoes, face shield and glasses before beginning work on the high voltage system.
- Clearly identify the persons responsible for high voltage work and ensure that other persons do not touch the vehicle. When not working, cover high voltage parts with an insulating cover sheet or similar item to prevent other persons from contacting them.
- Refer to [GI-33, "High Voltage Precautions"](#).

CAUTION:

There is the possibility of a malfunction occurring if the vehicle is changed to READY status while the service plug is removed. Therefore do not change the vehicle to READY status unless instructed to do so in the Service Manual.

OVERALL SEQUENCE



DETAILED FLOW

1. CHECK LIGHTING OF MASTER WARNING LAMP

Check that the master warning lamp is ON.

REPAIR WORK FLOW

< BASIC INSPECTION >

Is master warning lamp ON?

- YES >> GO TO 2.
NO >> GO TO 3.

2. DETECT MALFUNCTIONING PART BY TROUBLE DIAGNOSIS, ACCORDING TO THE SERVICE MANUAL

Connect CONSULT to check malfunction information.

Is there malfunction information in high voltage parts?

- YES >> GO TO 5.
NO >> GO TO 3.

3. CHECK HIGH VOLTAGE PARTS FOR DAMAGE

Visually check high voltage parts for damage.

WARNING:

When performing high voltage-related work, always wear insulating protective gear.

Is there a malfunction in high voltage parts?

- YES >> GO TO 5.
NO >> GO TO 4.

4. CHECK AREA ADJACENT TO DAMAGE FOR THE PRESENCE OF HIGH VOLTAGE PARTS

Check high voltage parts requiring additional removal work.

Is additional removal work required for high voltage parts?

- YES >> GO TO 5.
NO >> Start body repair and painting.

5. PRECONDITIONING

WARNING:

Disconnect high voltage. Refer to [GI-31, "How to Disconnect High Voltage"](#).

Check voltage in high voltage circuit. (Check that condenser are discharged.)

1. Lift up the vehicle and remove the battery under covers. Refer to [EVB-169, "Removal and Installation"](#).
2. Disconnect high voltage connector from front side of Li-ion battery. Refer to [EVB-169, "Removal and Installation"](#).
3. Measure voltage between high voltage harness connector terminals.

DANGER:



Touching high voltage components without using the appropriate protective equipment will cause electrocution.



Standard

: 5 V or less

CAUTION:

For voltage measurements, use a tester which can measure to 500V or higher.

>> GO TO 6.

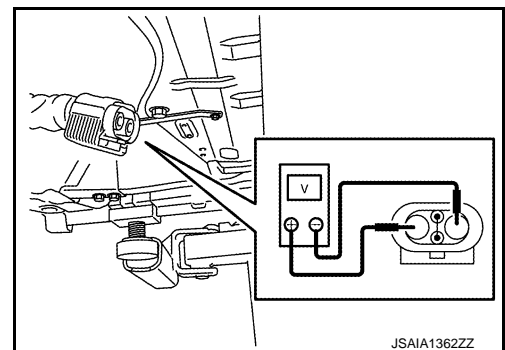
6. REMOVE HIGH VOLTAGE PARTS AS AN ADDITIONAL WORK, ACCORDING TO THE SERVICE MANUAL

Remove high voltage parts as an additional work, according to the Service Manual.

WARNING:

When performing high voltage-related work, always wear insulating protective gear.

>> Start body repair and painting.



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CORROSION PROTECTION

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

CORROSION PROTECTION

Description

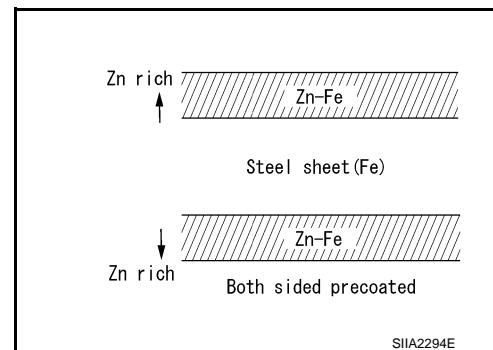
INFOID:000000006956131

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 has been 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.



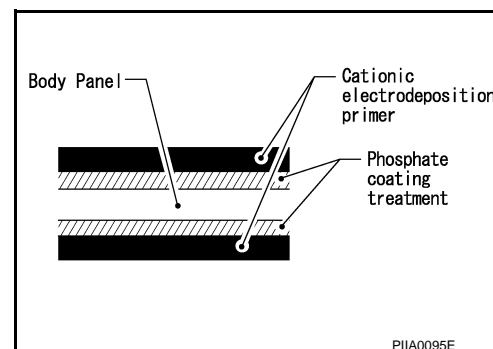
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

PHOSPHATE COATING TREATMENT AND CATIONIC ELECTRODEPOSITION PRIMER

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

CAUTION:

Confine paint removal during welding operations to an absolute minimum.



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

Undercoating

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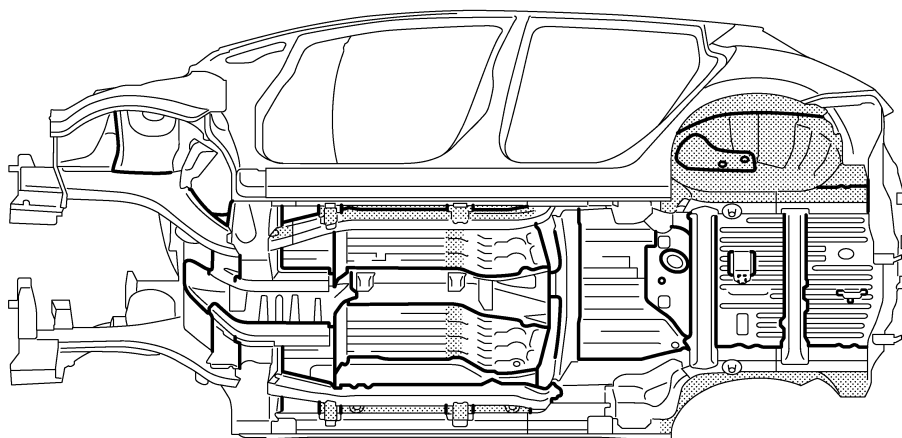
The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust resistant, soundproof, vibration-proof, shock-resistant, adhesive, and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

CORROSION PROTECTION

< REMOVAL AND INSTALLATION >



JSKIA2446ZZ

 Undercoated areas

 Sealed portions

Stone Guard Coat

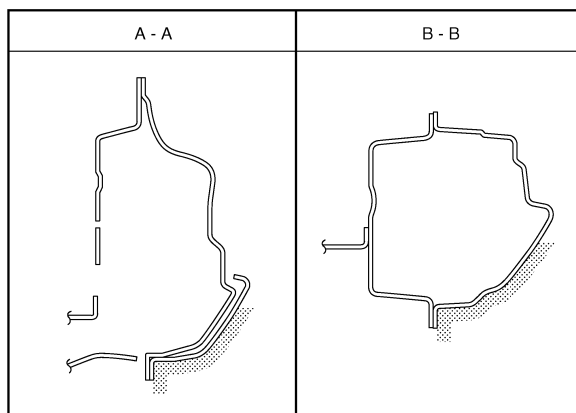
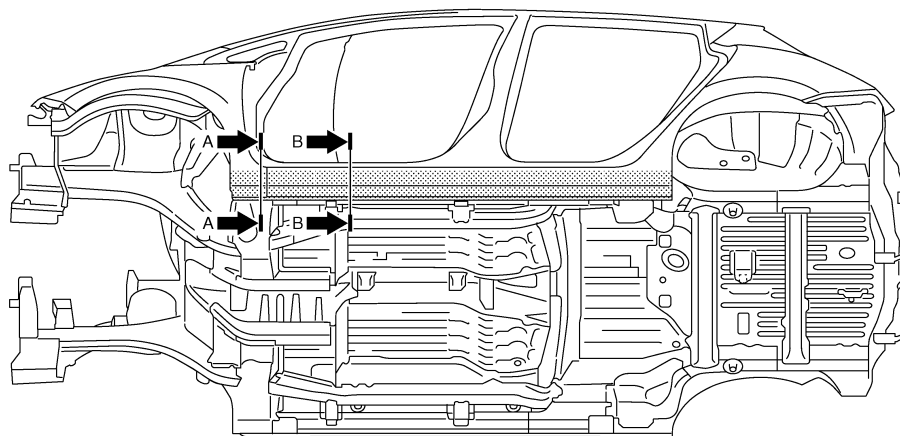
INFOID:000000006956133

To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone Guard coating to the same portions as before. Use a coating which is rust preventive, durable, shock-resistant and has a long shelf life.


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CORROSION PROTECTION

< REMOVAL AND INSTALLATION >



JSK1A2271ZZ

: Stone guard coated portions

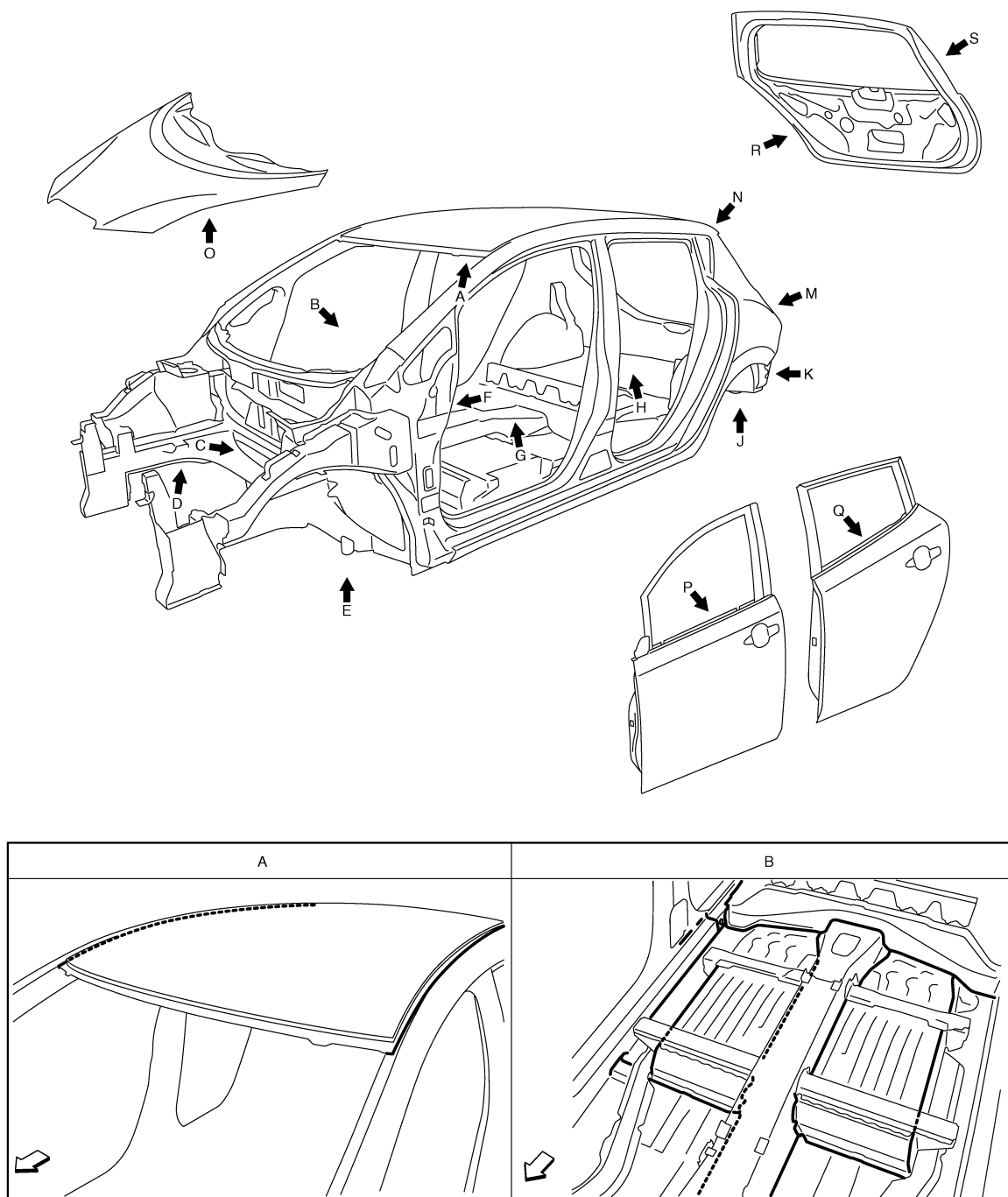
Body Sealing

INFOID:000000006956134

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.

CORROSION PROTECTION

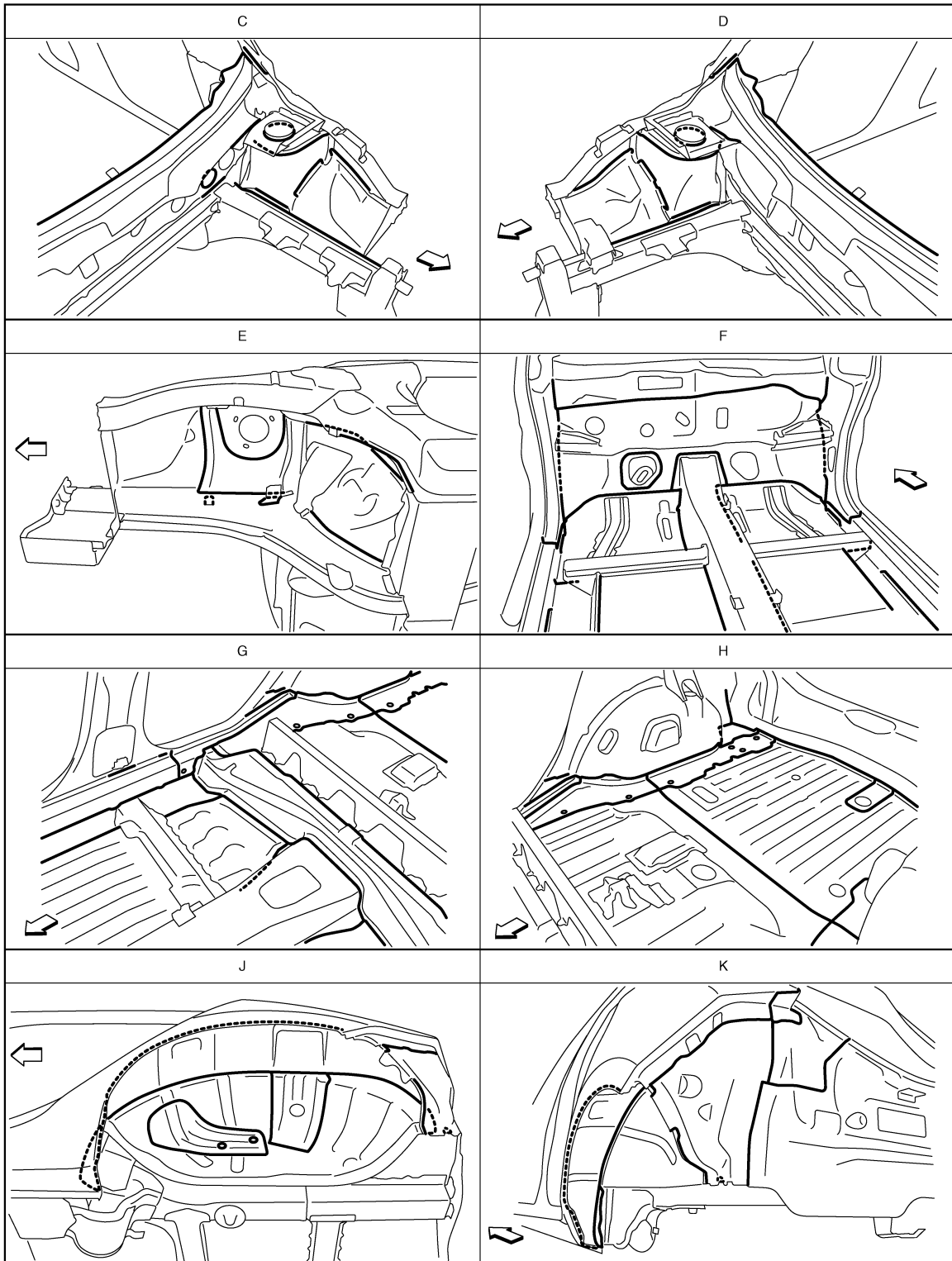
< REMOVAL AND INSTALLATION >



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CORROSION PROTECTION

< REMOVAL AND INSTALLATION >

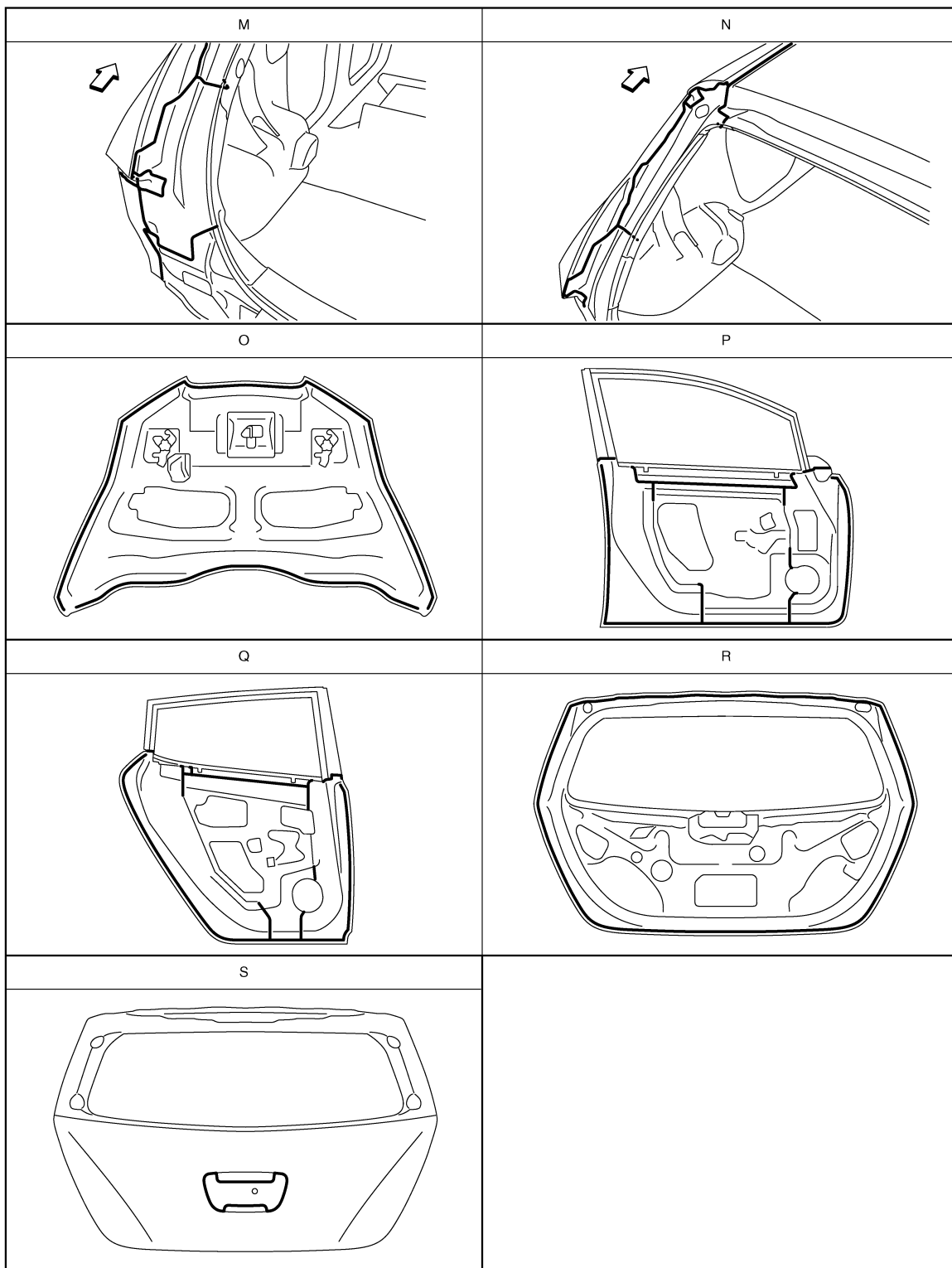


JSKIA2273ZZ

↔: Vehicle front
—: Sealed portions

CORROSION PROTECTION

< REMOVAL AND INSTALLATION >



↔: Vehicle front

—: Sealed portions

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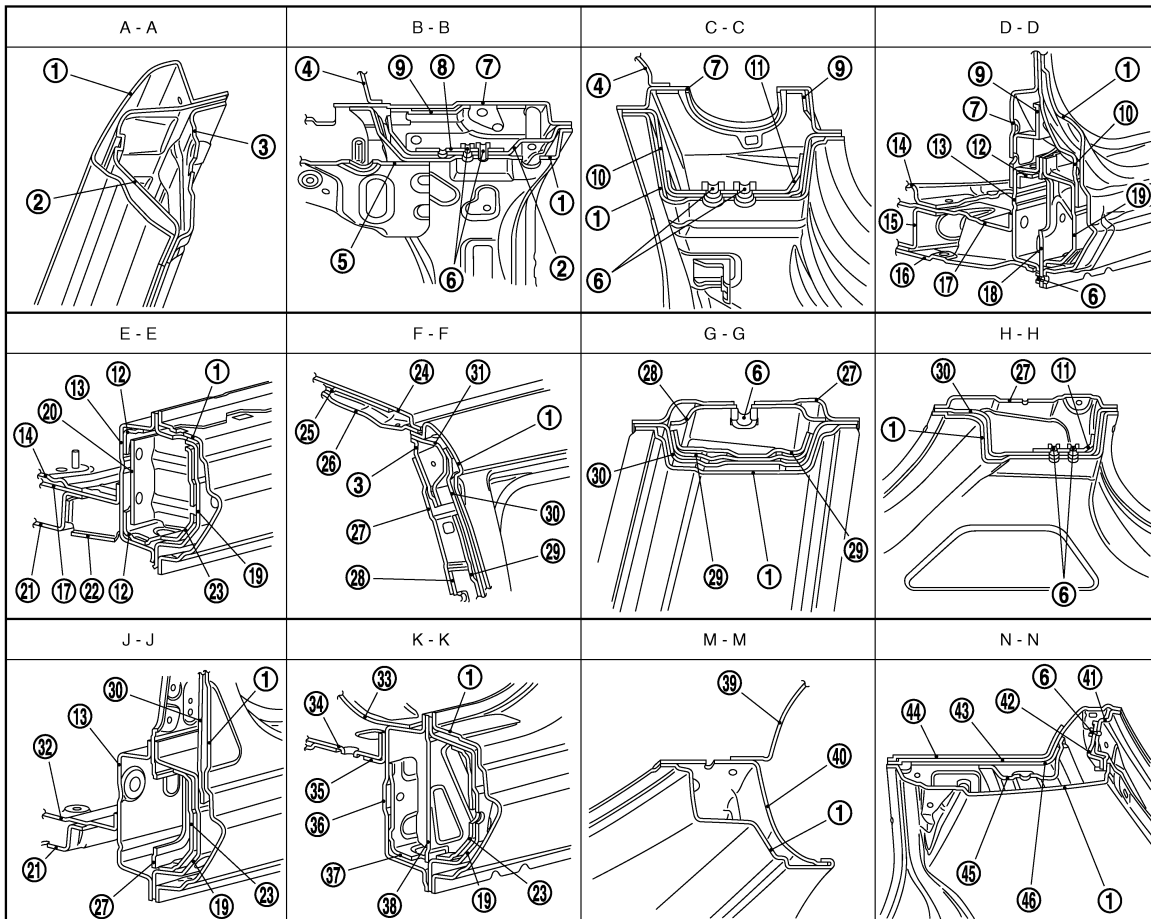
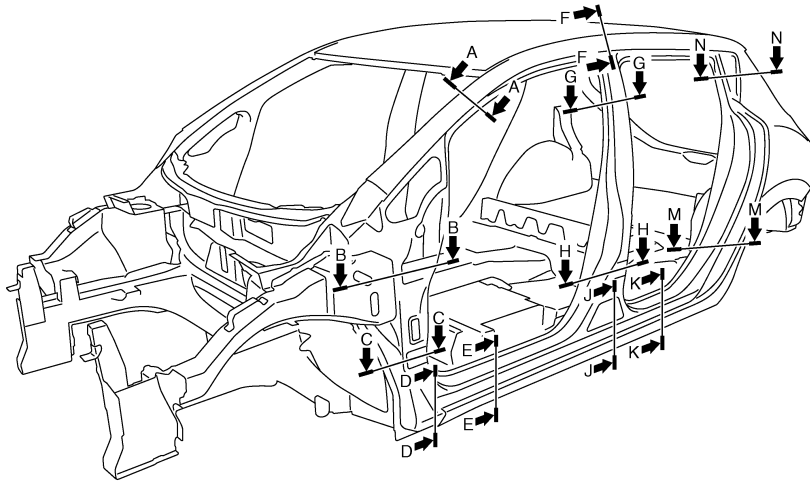
BODY CONSTRUCTION

< REMOVAL AND INSTALLATION >

BODY CONSTRUCTION

Body Construction

INFOID:000000006956135



JSKIA2275ZZ

- | | | |
|--------------------|-------------------------------------|-------------------------------------|
| 1. Outer side body | 2. Outer front pillar reinforcement | 3. Inner front side roof rail |
| 4. Upper dash | 5. Hoodledge reinforcement | 6. Weld nut |
| 7. Side dash | 8. Upper hinge plate | 9. Inner front pillar reinforcement |

BODY CONSTRUCTION

< REMOVAL AND INSTALLATION >

10. Lower dash	11. Lower front pillar hinge brace	12. Lower hinge plate
13. Inner front sill reinforcement	14. Inner sill	15. Front side member extension center
16. Front side member closing plate	17. Front outrigger	18. Front floor front
19. Lower front pillar reinforcement	20. Outer sill reinforcement	21. Outer sill brace
22. Front side member extension rear	23. Floor member extension	24. Center sill reinforcement
25. Roof	26. Center roof reinforcement	27. Roof member reinforcement
28. Inner center pillar	29. Center pillar seat belt anchor	30. Center pillar reinforcement
31. Center pillar hinge brace	32. Outer side roof rail	33. Front floor side
34. Rear side member closing plate	35. Rear side member reinforcement	36. Rear side member
37. Inner sill extension	38. Inner rear sill reinforcement	39. Outer rear wheelhouse extension
40. Inner rear wheelhouse	41. Outer rear wheelhouse	42. Rear fender extension
43. Back door stay bracket	44. Inner rear pillar	45. Rear roof rail brace
46. Inner rear pillar reinforcement	47. Rear pillar seat belt anchor	

Rear Fender Hemming Process

INFOID:000000006956136

1. A wheel arch is to be installed and hemmed over the left and right outer wheel houses.
2. In order to hem the wheel arch, it is necessary to repair any damaged or defaced parts around outer wheel house.

CAUTION:

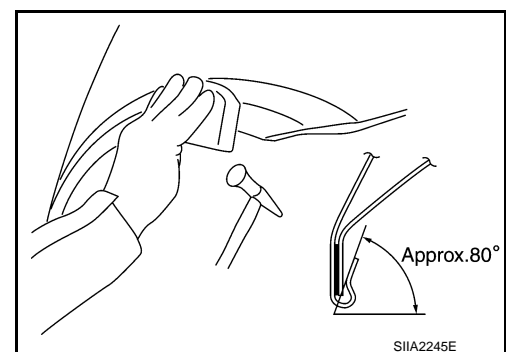
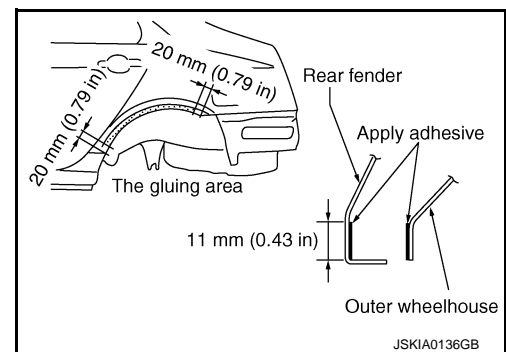
Ensure that the area that is to be glued around the outer wheelhouse is undamaged or defaced.

PROCEDURE OF THE HEMMING PROCESS

- Peel off old bonding material on the surface of the outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of the outer wheelhouse and rear fender.

<Adhesive> 3M™ Automix™ Panel Bonding Adhesive 08115 or equivalent

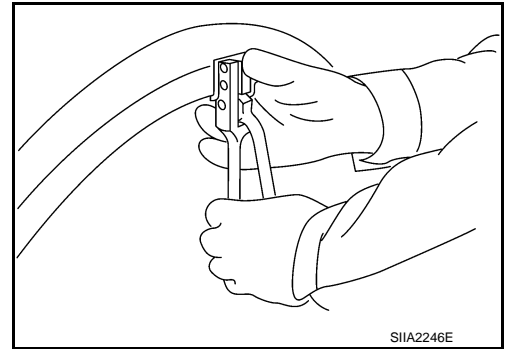
- Attach rear fender to the body of the car, and weld the required part except the hemming part.
- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.



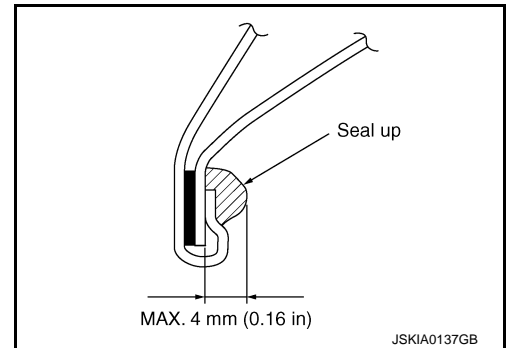
BODY CONSTRUCTION

< REMOVAL AND INSTALLATION >

- Starting from the center, hem the wheel arch gradually, using slight back and forth motion with a hemming tool.



- Seal up the area around the hemmed end of the flange.



REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

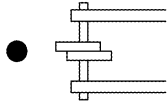
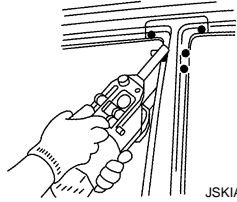
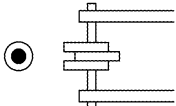
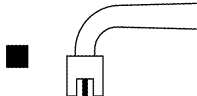

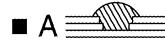
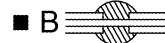
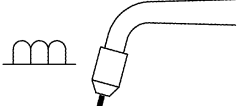
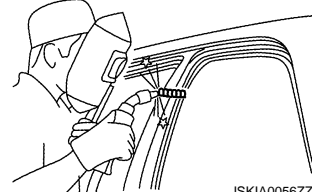
REPLACEMENT OPERATIONS

Description

INFOID:000000006956137

- 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 For 3 panels plug weld method   JSKIA0055ZZ
 JSKIA0052ZZ	MIG seam weld / Point weld	 JSKIA0056ZZ

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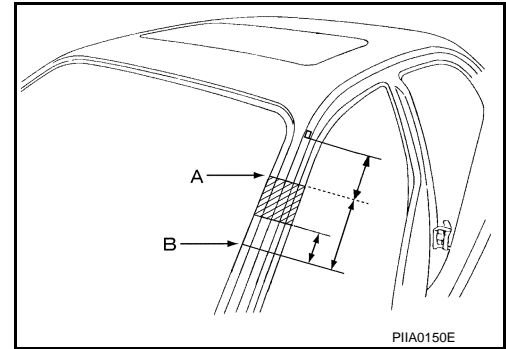
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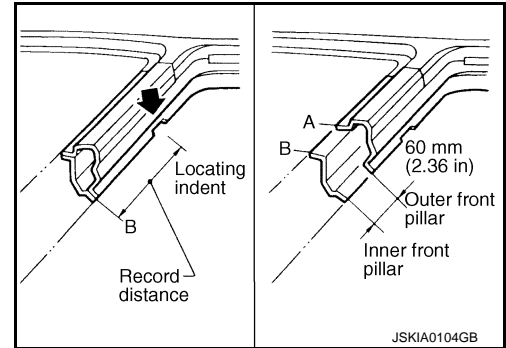
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

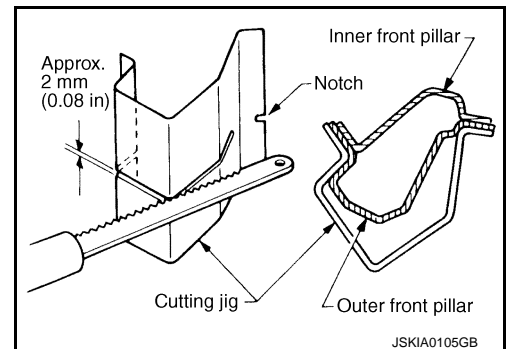
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.



- 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.

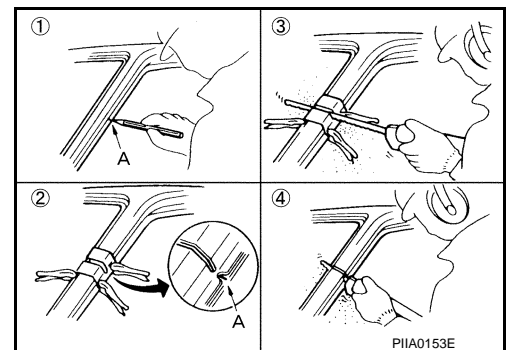


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.



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

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

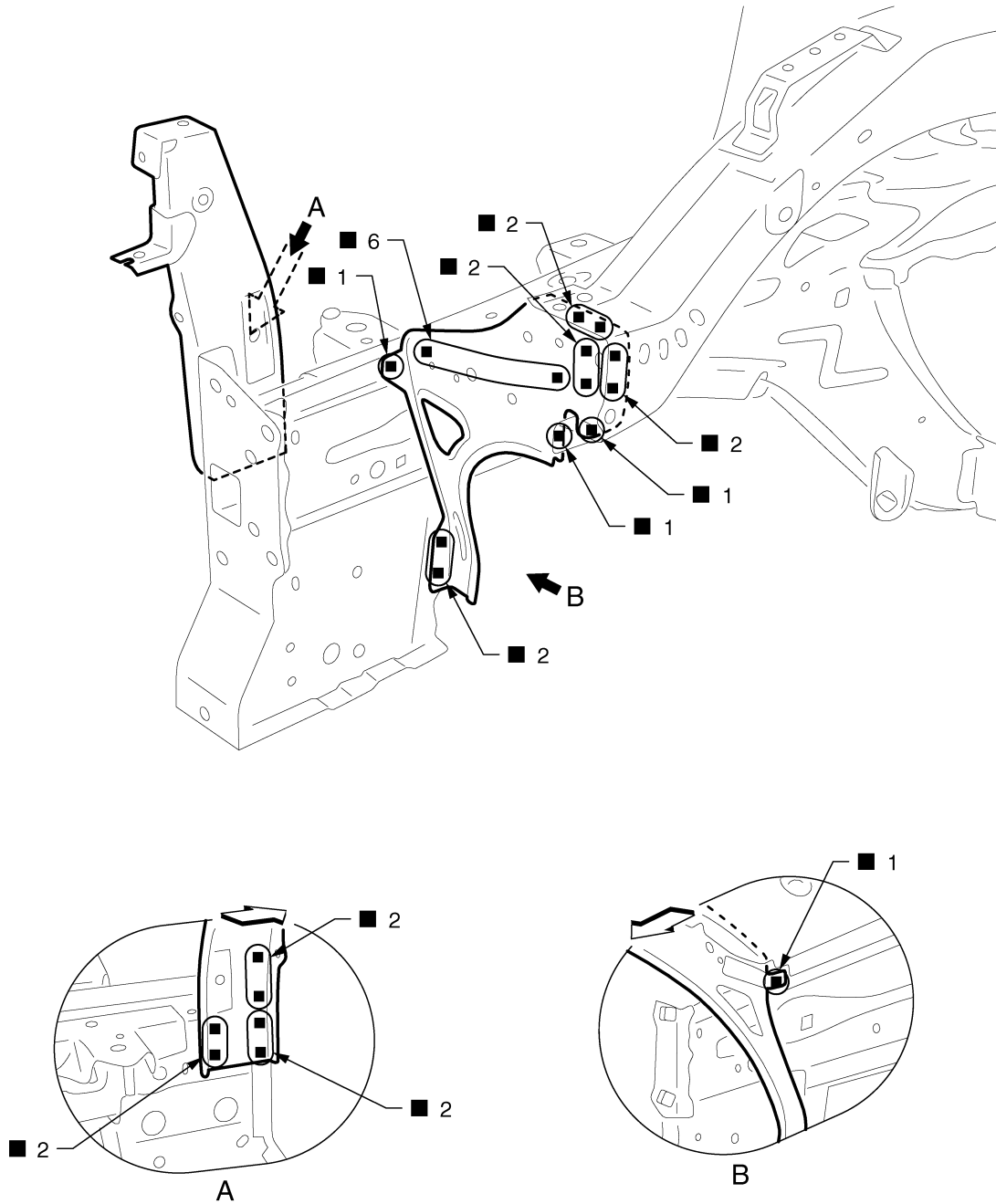


REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Radiator Core Support

INFOID:000000006956138



←: Vehicle front

Replacement parts

- Side radiator core support (LH)
- Hoodedge connector (LH)

High voltage system parts (Removal required depending on damage)

- Service plug
- Front side Li-ion battery high voltage harness connector
- Charge port

JSKIA2302ZZ

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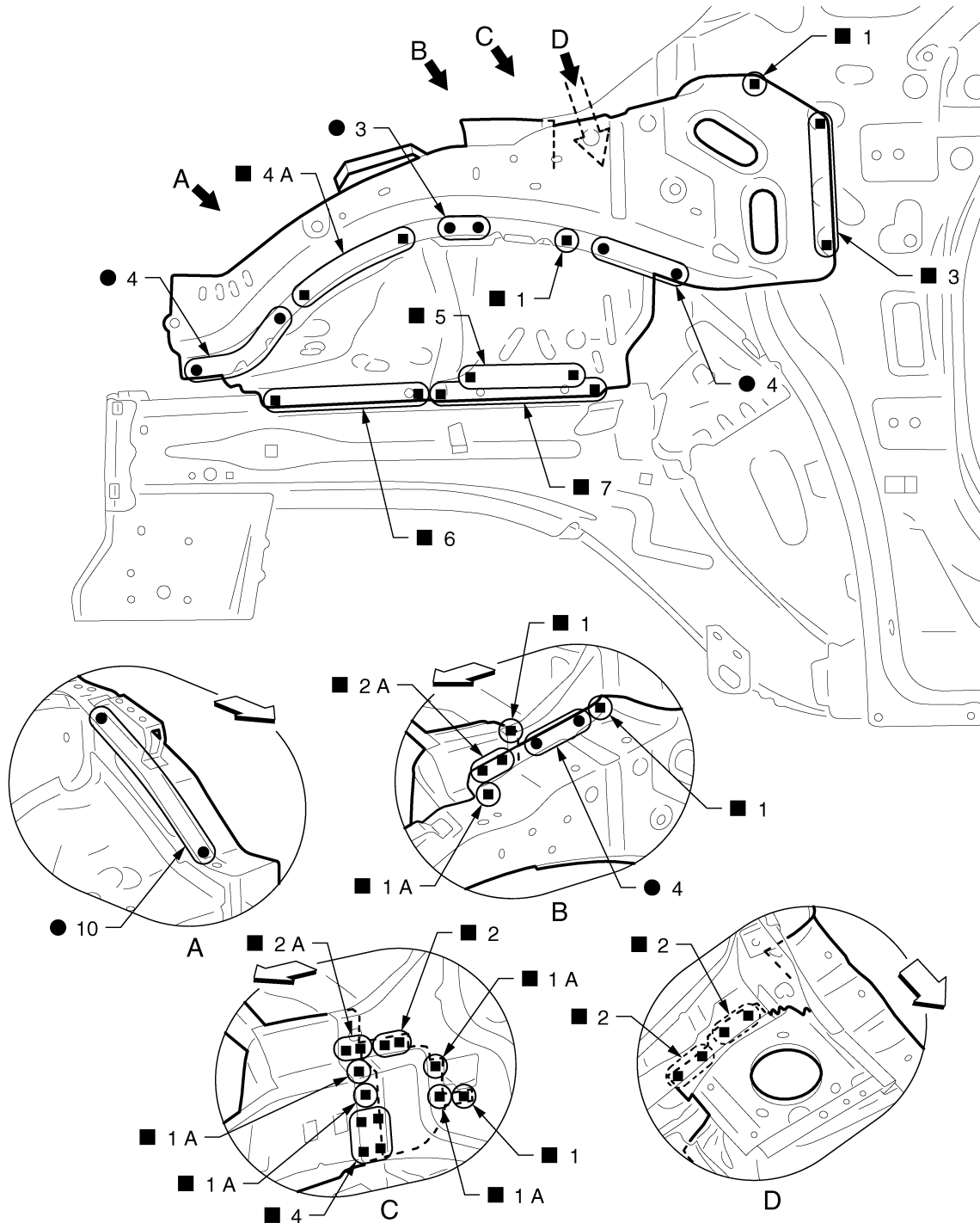
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Hoodledge

INFOID:000000006956139

Work after radiator core support is removed.



JSKIA2303ZZ

◀: Vehicle front

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

Replacement parts

- Front strut housing (LH)
- Hoodledge reinforcement (LH)

High voltage system parts (Removal required depending on damage)

- Service plug
- Front side Li-ion battery high voltage harness connector

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

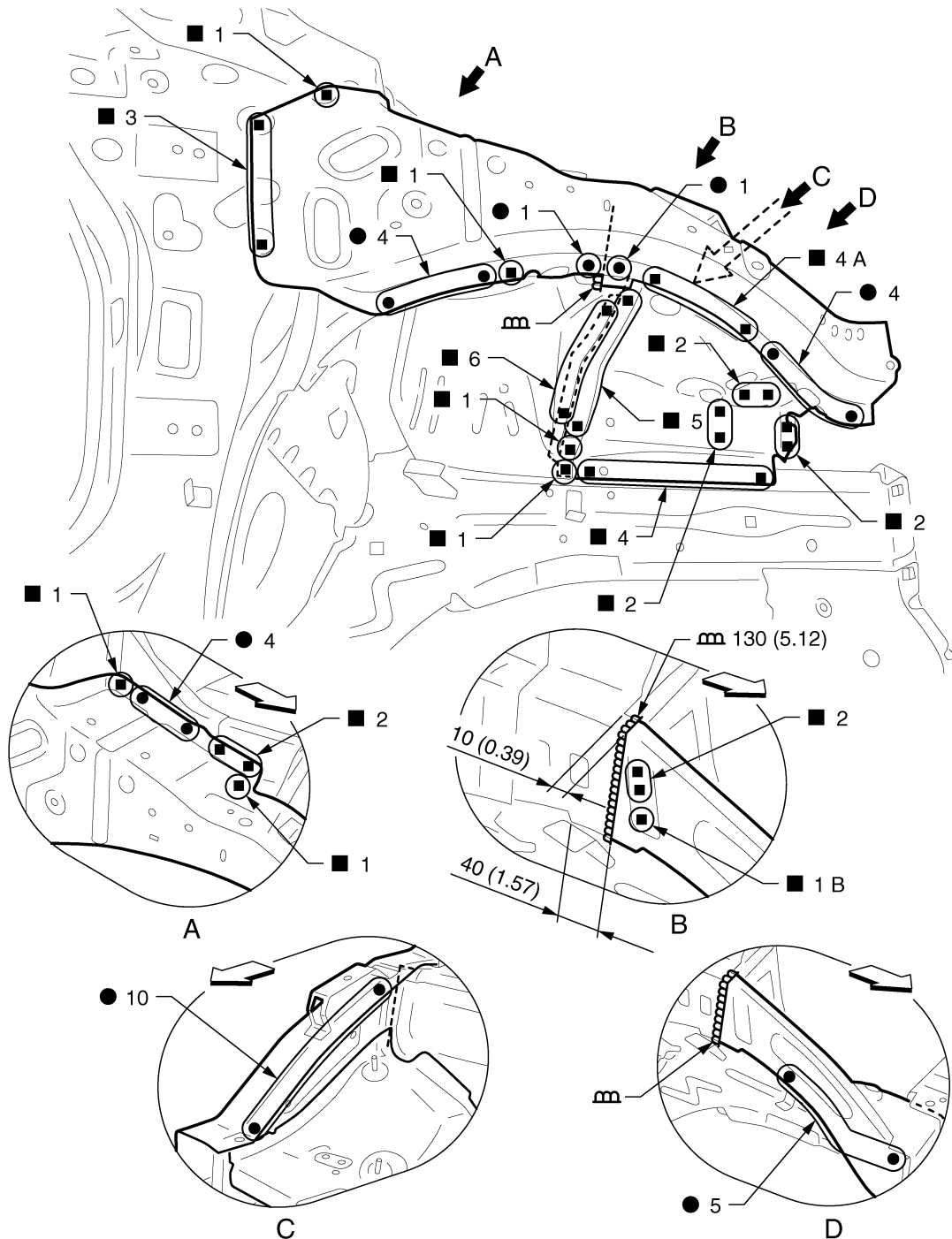
- Charge port
- PTC elements heater
- Traction motor
- Electric compressor
- Traction motor inverter
- DC/DC-J/B

View C: Before installing hoodledge reinforcement

Hoodledge (Partial Replacement)

INFOID:000000006956140

Work after radiator core support is removed.



JSKIA2304GB

Unit: mm (in)

↔: Vehicle front

Replacement parts

- Upper hoodledge (RH)
- Lower front hoodledge (RH)
- Hoodledge reinforcement (RH)

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

High voltage system parts (Removal required depending on damage)

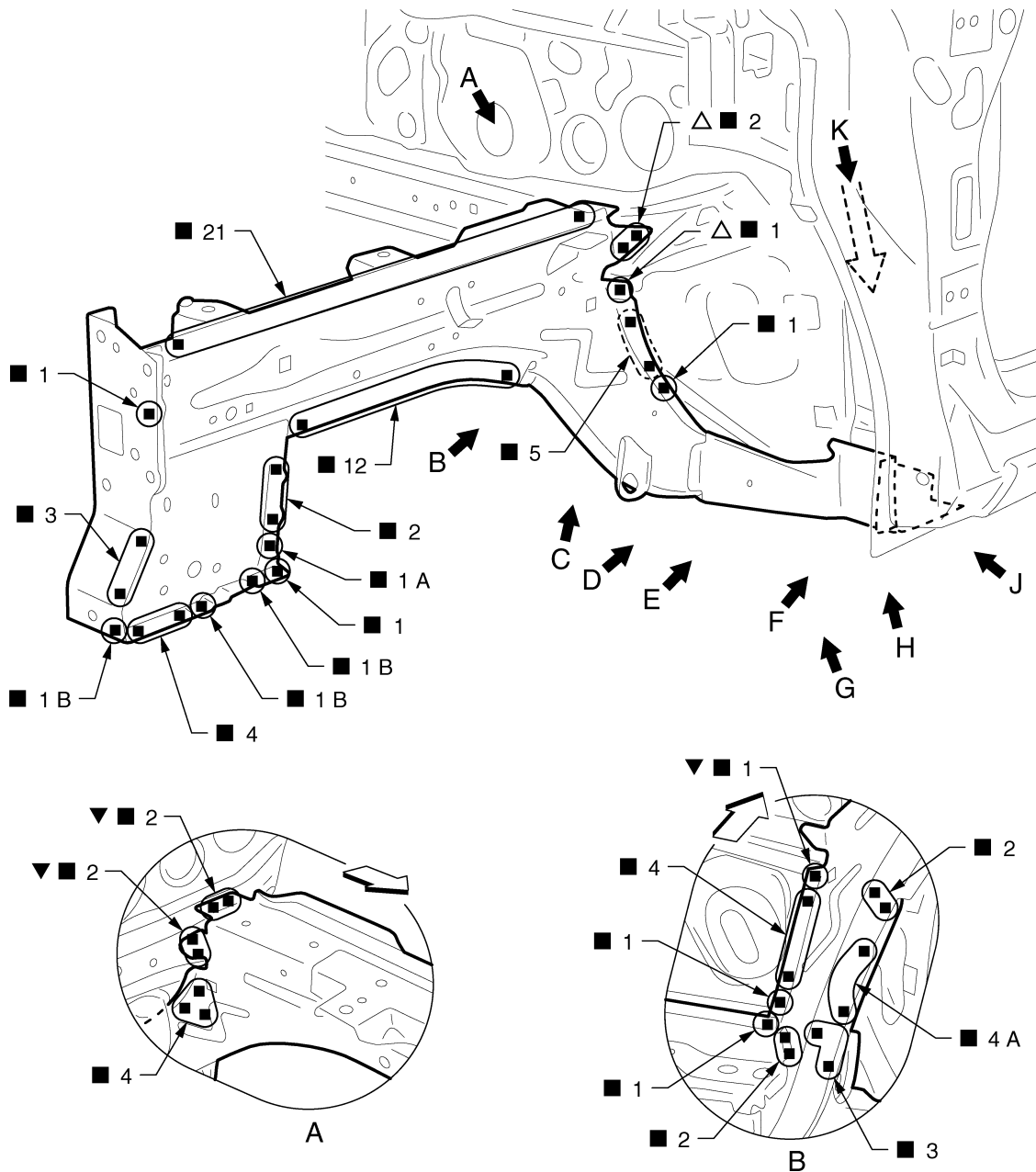
- Service plug
- Charge port
- Electric compressor
- Front side Li-ion battery high voltage harness connector
- PTC elements heater
- Traction motor inverter
- Traction motor
- DC/DC-J/B

View B and D: Before installing hoodledge reinforcement

Front Side Member

INFOID:000000006956141

Work after radiator core support and hoodledge are removed.



JSKIA2305ZZ

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

⇐: Vehicle front

▼: Drill $\phi 11$ mm (0.43 in) hole for the plug welding hole (ultra high strength steel plate).

△: Drill $\phi 12$ mm (0.47 in) hole for the plug welding hole (ultra high strength steel plate).

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

Replacement parts

- Front side member assembly (LH)
- Front side member closing plate assembly (LH)
- Front suspension mounting bracket (LH Rear)

High voltage system parts (Removal required depending on damage)

- Service plug
- Front side Li-ion battery high voltage harness connector
- Charge port
- PTC elements heater
- Traction motor
- Electric compressor
- Traction motor inverter
- DC/DC-J/B

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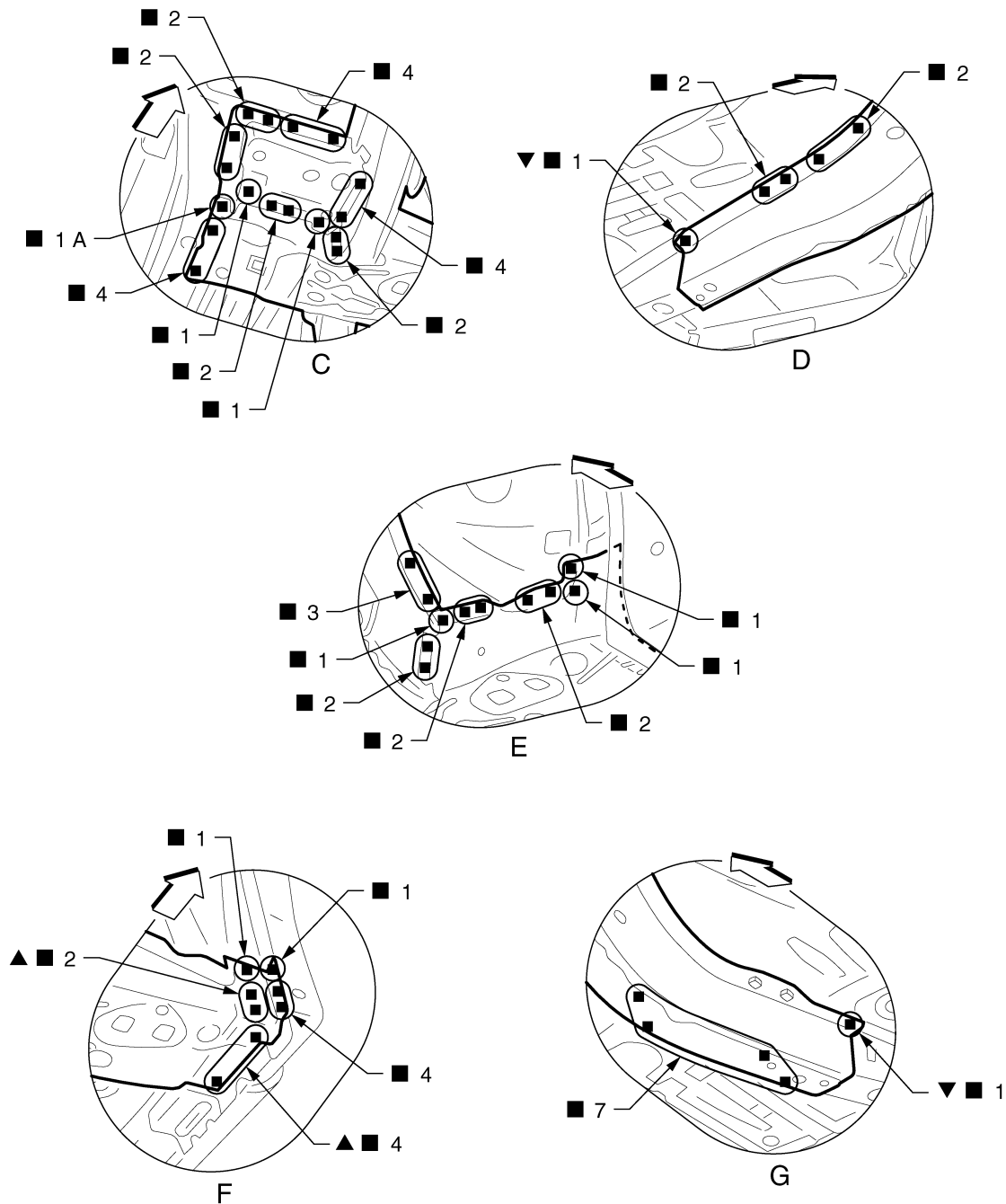
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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



JSKIA2306ZZ

↩: Vehicle front

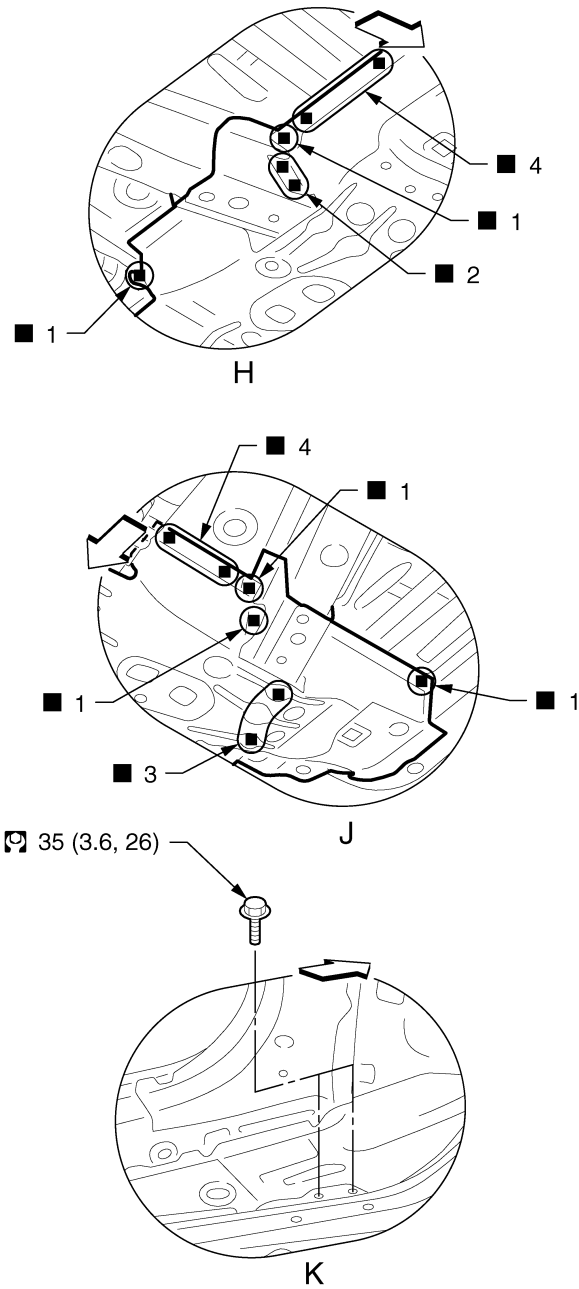
▲: Drill $\phi 7$ mm (0.28 in) hole for the plug welding hole (ultra high strength steel plate).

▼: Drill $\phi 11$ mm (0.43 in) hole for the plug welding hole (ultra high strength steel plate).

View D and G: Before installing front suspension mounting bracket (Rear)

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



M. Bolt diameter 12 mm (0.47 in)

N. Bolt diameter 13 mm (0.51 in)

⇐: Vehicle front

⊗: N·m (kg-m, ft-lb)

Front Side Member (Partial Replacement)

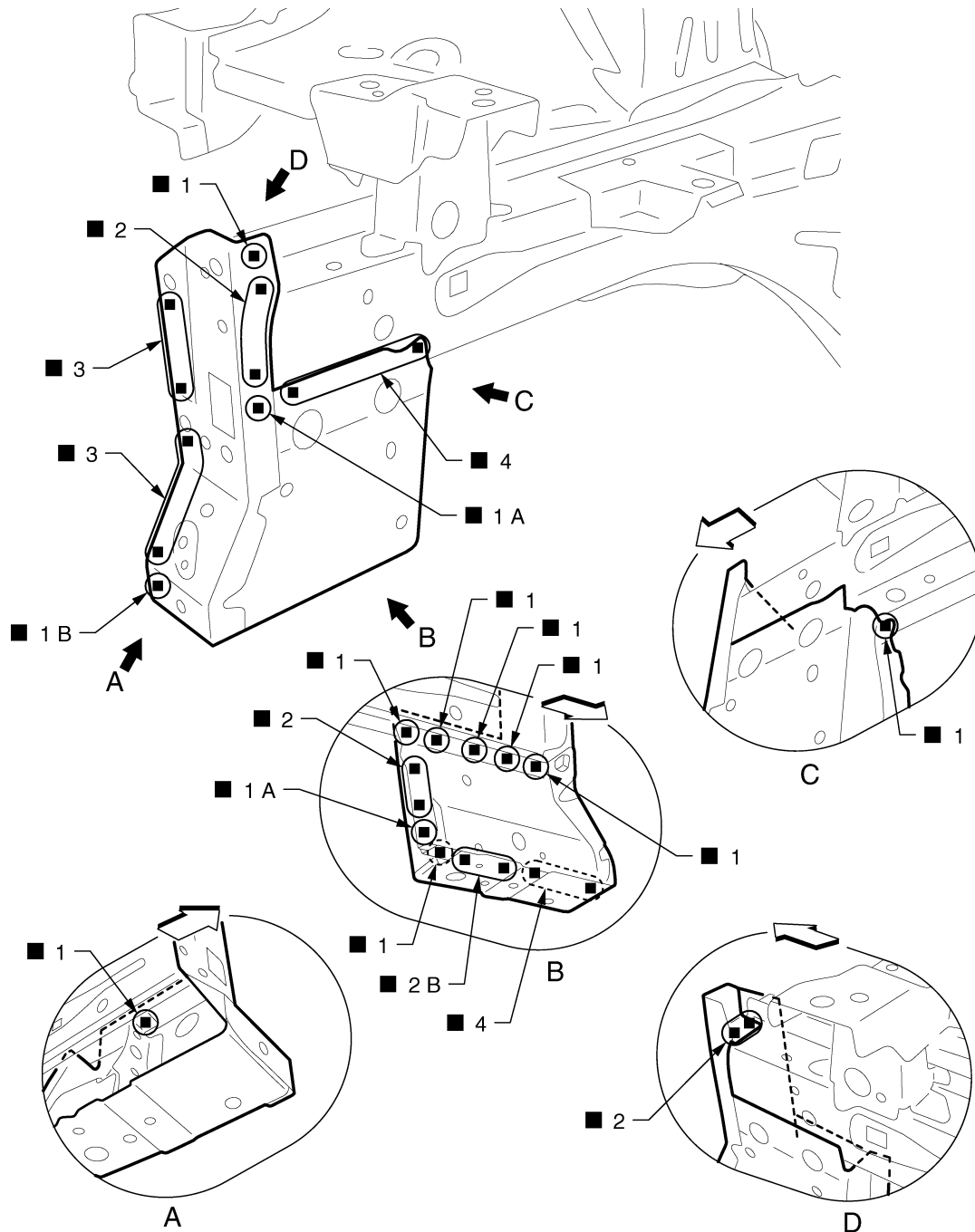
Work after radiator core support is removed.

JSKIA2307GB

INFOID:0000000006956142

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



JSKIA2308ZZ

↔: Vehicle front

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

Replacement parts

- Front suspension mounting bracket (RH Front)
- Outer add on frame bracket (RH)

High voltage system parts (Removal required depending on damage)

- Service plug
- Front side Li-ion battery high voltage harness connector
- Charge port

View A: Before installing outer add on frame bracket

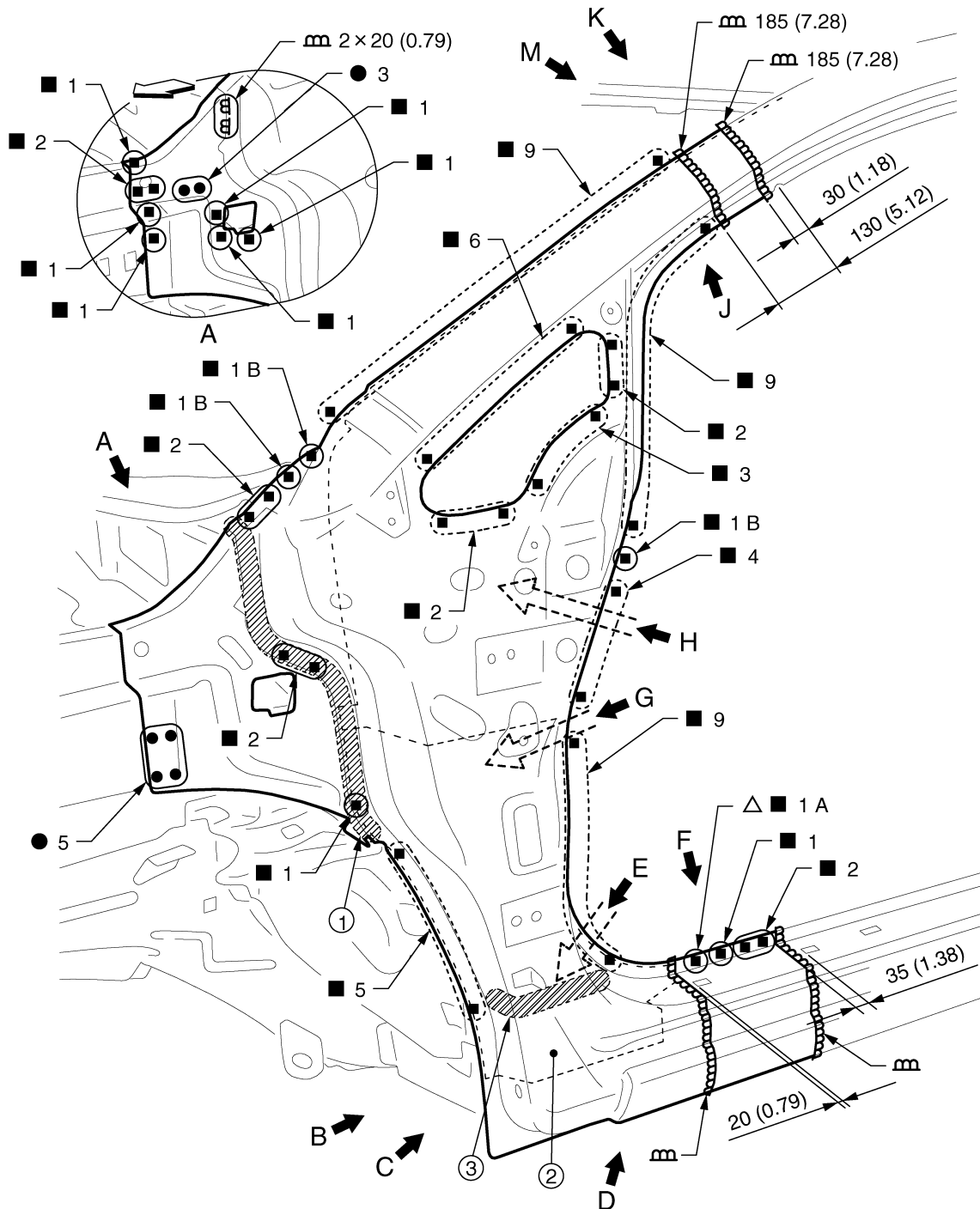
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Front Pillar

INFOID:000000006956143

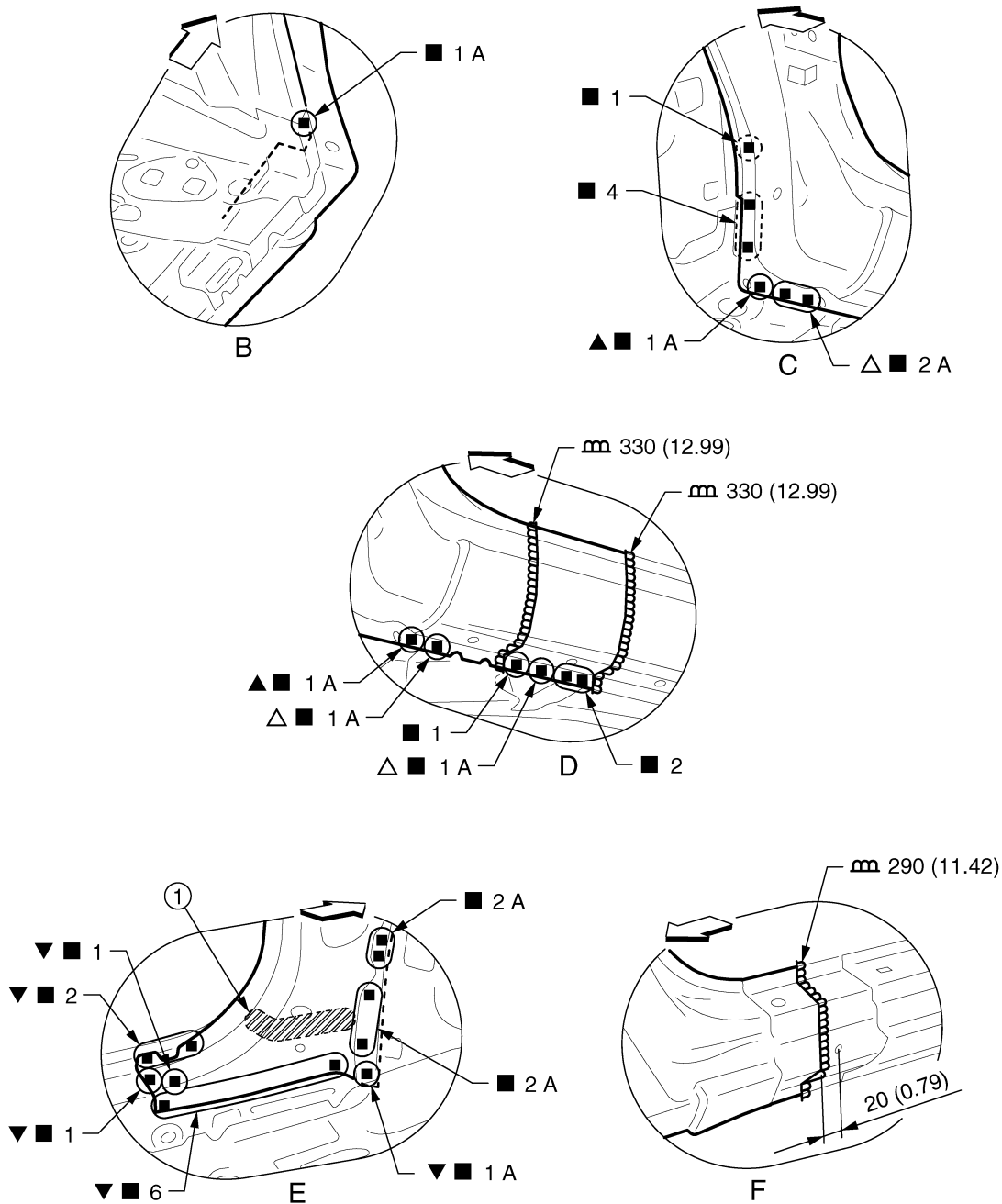
Work after hoodledge reinforcement is removed.



JSKIA2309GB

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



JSKIA2310GB

1. Urethane foam

Unit: mm (in)

◁: Vehicle front

▲: Drill $\phi 6$ mm (0.24 in) hole for the plug welding hole (ultra high strength steel plate).

▼: Drill $\phi 7$ mm (0.28 in) hole for the plug welding hole (ultra high strength steel plate).

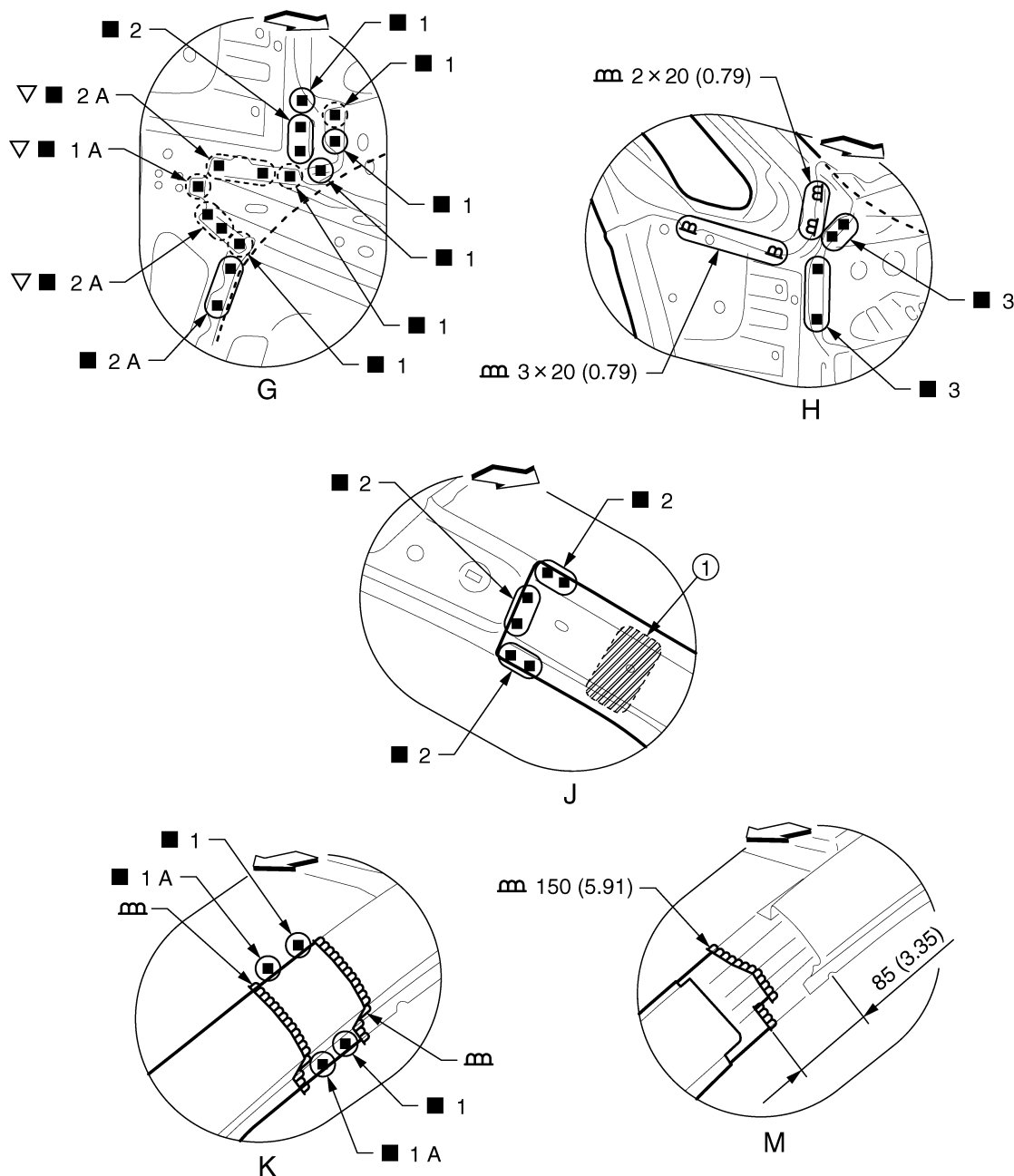
△: Drill $\phi 9$ mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).

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

View F: Before installing outer front side body

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



1. Urethane foam

Unit: mm (in)

⇐: Vehicle front

▽: Drill $\phi 7$ mm (0.28 in) hole for the plug welding hole (ultra high strength steel plate).

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

View G: Before installing side body assembly

View M: Before installing outer front side body

JSKIA2311GB

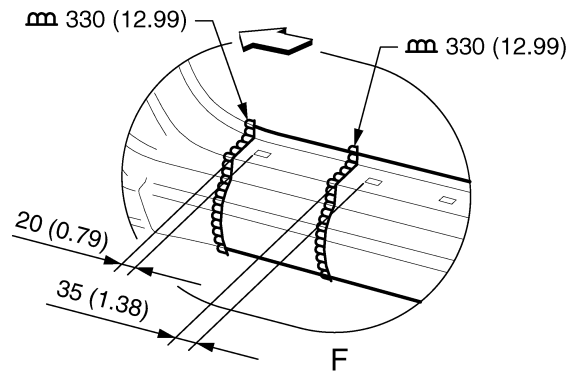
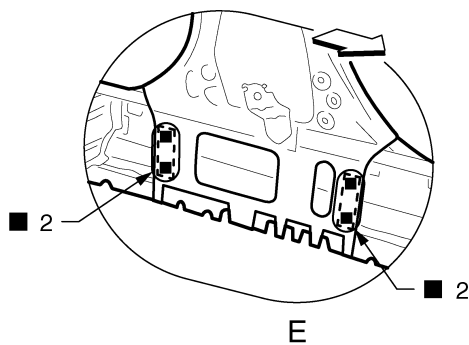
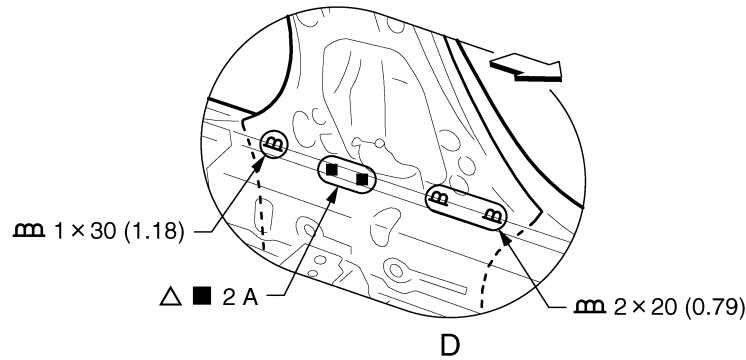
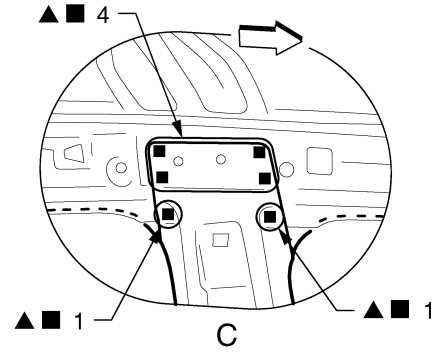
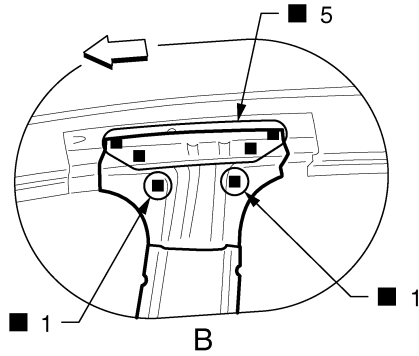
BRM

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Replacement parts

- Side body assembly (LH)
- Inner center pillar assembly (LH)



Unit: mm (in)

↩: Vehicle front

▲: Drill $\phi 7$ mm (0.28 in) hole for the plug welding hole (ultra high strength steel plate).

△: Drill $\phi 9$ mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).

View B: Before installing outer front side body

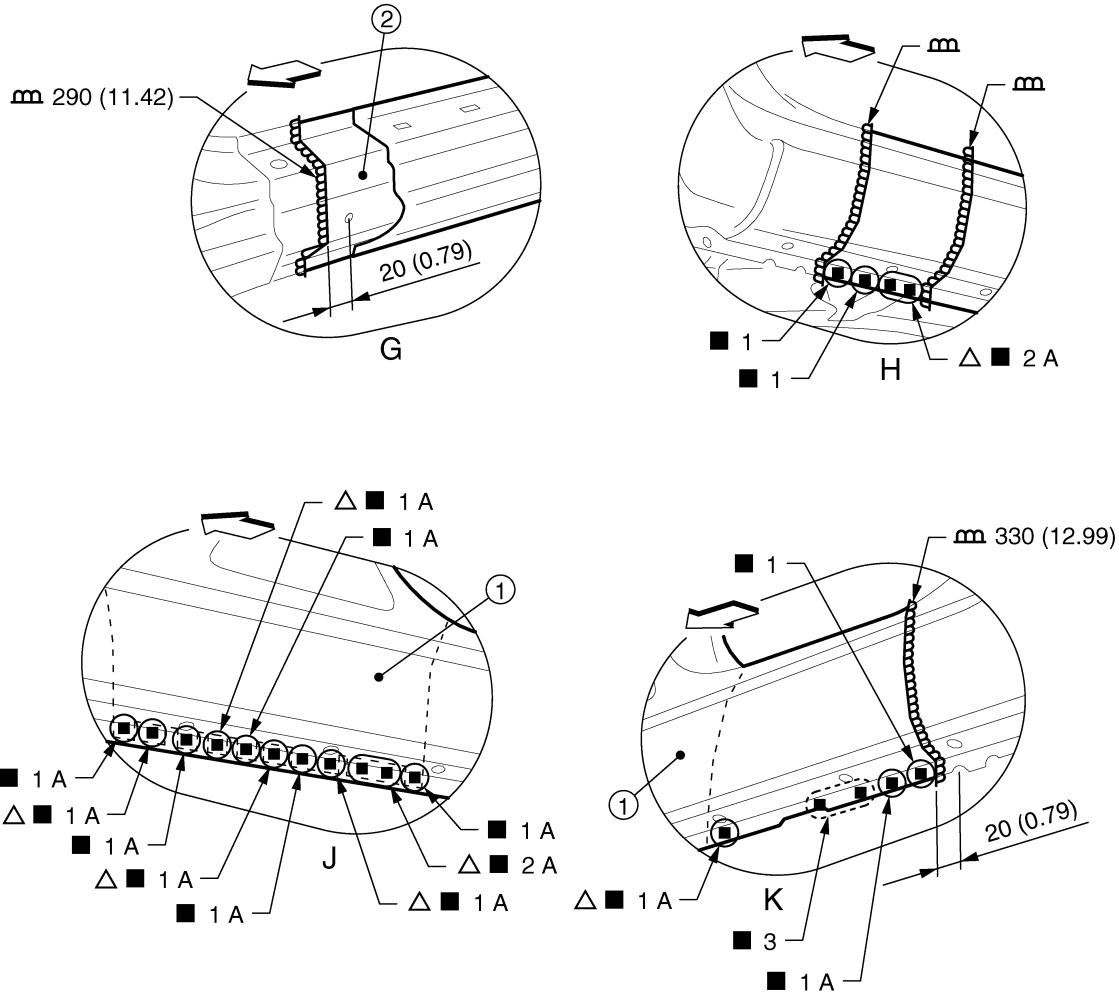
View E: Inner center pillar assembly and side body assembly (replacement parts)

JSKIA2313GB

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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



JSKIA2314GB

1. Inner center pillar assembly 2. Outer sill reinforcement

Unit: mm (in)

↔: Vehicle front

△: Drill $\phi 9$ mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).

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

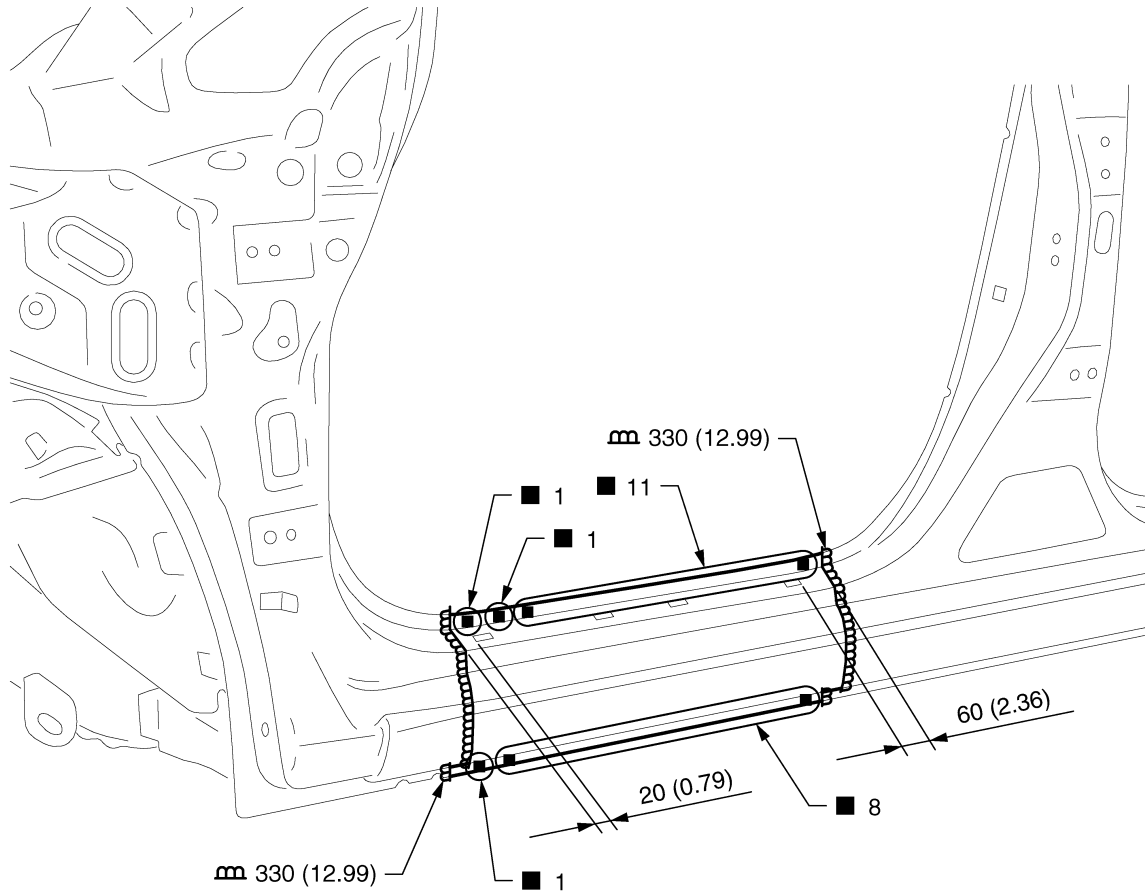
View G: Before installing outer front side body

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Outer Sill (Partial Replacement)

INFOID:000000006956145



Unit: mm (in)

Replacement parts

- Outer sill (LH)

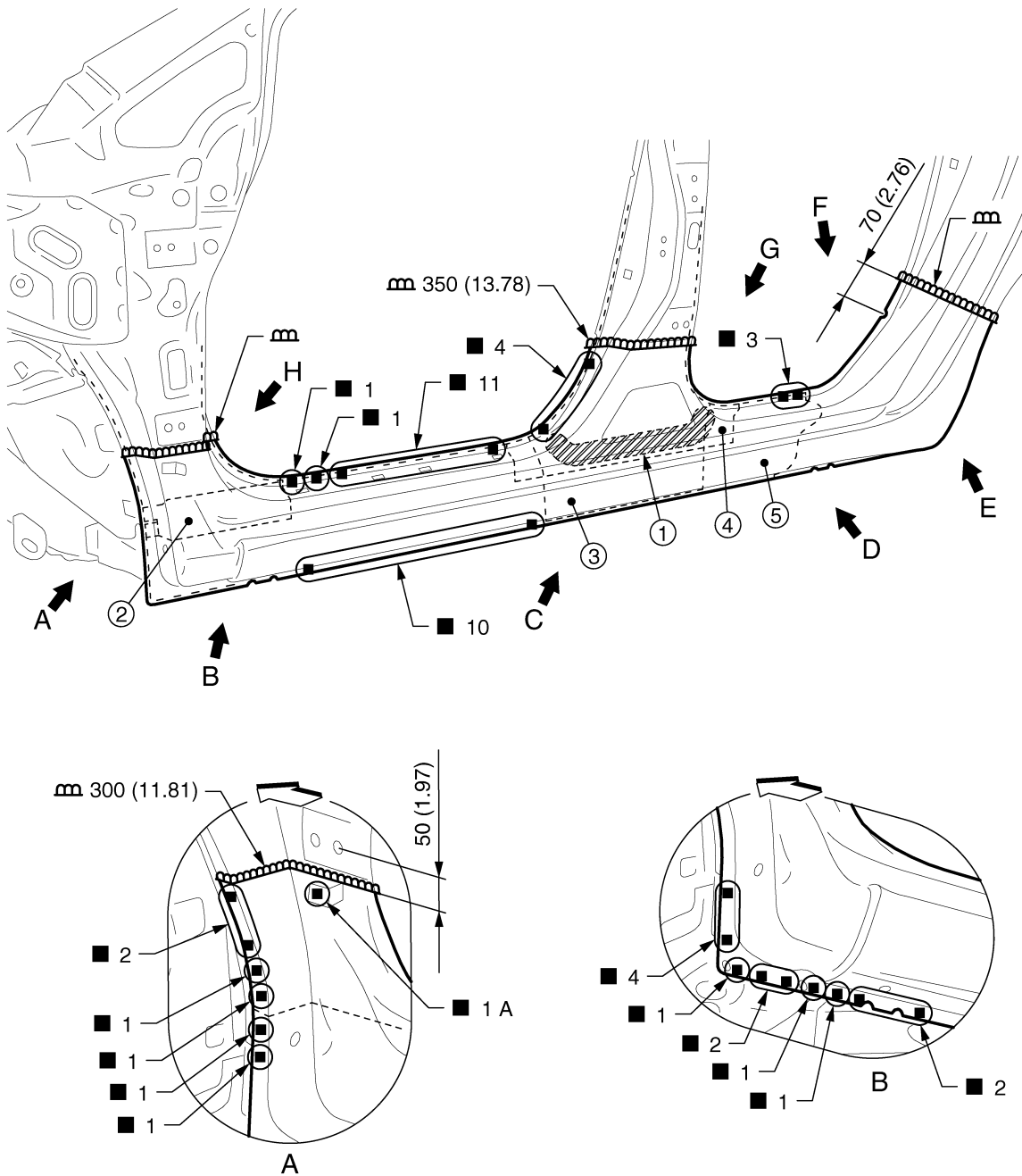
JSKIA2315GB

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Outer Sill

INFOID:000000006956146



JSKIA2316GB

1. Urethane foam

2. Front pillar brace

3. Inner center pillar assembly

4. Lower center pillar brace

5. Outer sill reinforcement

Unit: mm (in)

← Vehicle front

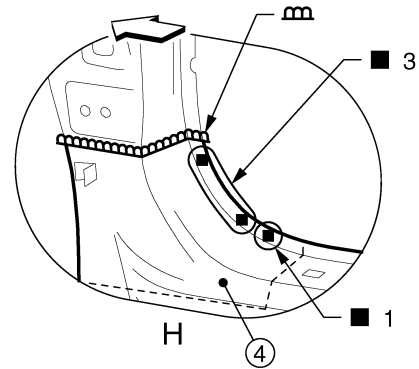
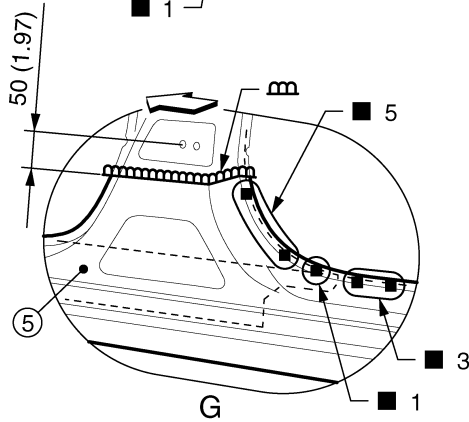
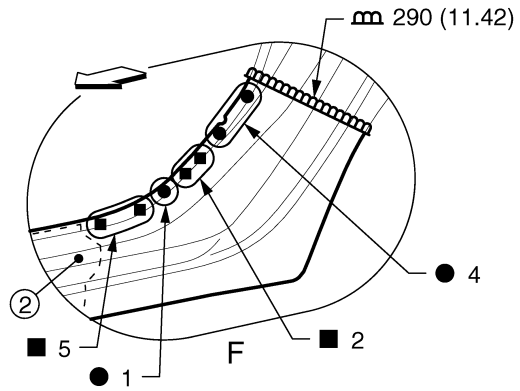
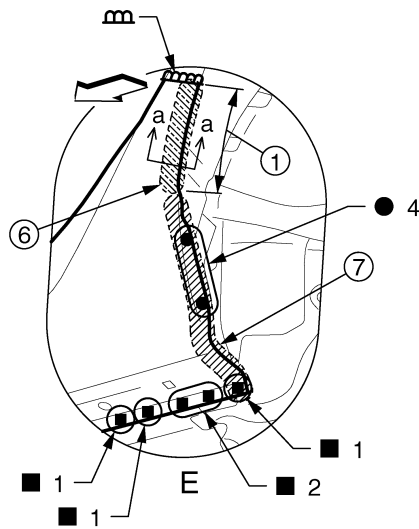
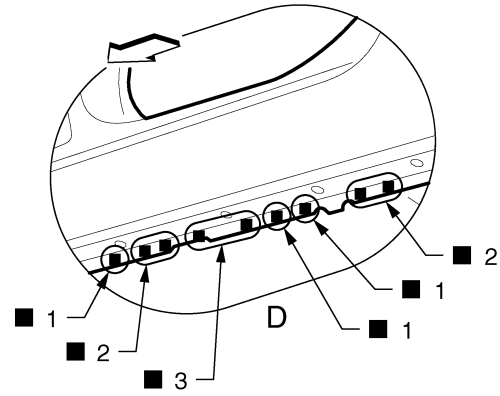
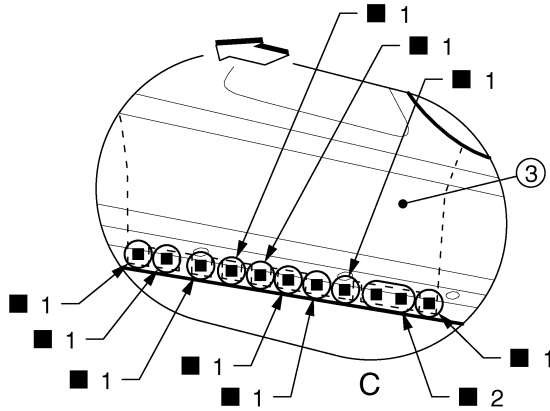
Replacement parts

● Outer sill (LH)

● Front fender bracket assembly (LH)

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



1. Hemming portion
4. Front pillar brace
7. Body sealing

2. Outer sill reinforcement
5. Lower center pillar brace

3. Inner center pillar assembly
6. Adhesive

Unit: mm (in)

⇐: Vehicle front

POINT

JSKIA2317GB

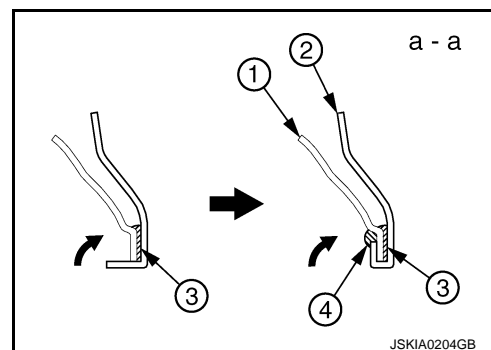
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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to [BRM-27. "Rear Fender Hemming Process"](#).

1. **Outer rear wheelhouse**
2. **Rear fender**
3. **Adhesive**
4. **Sealant**

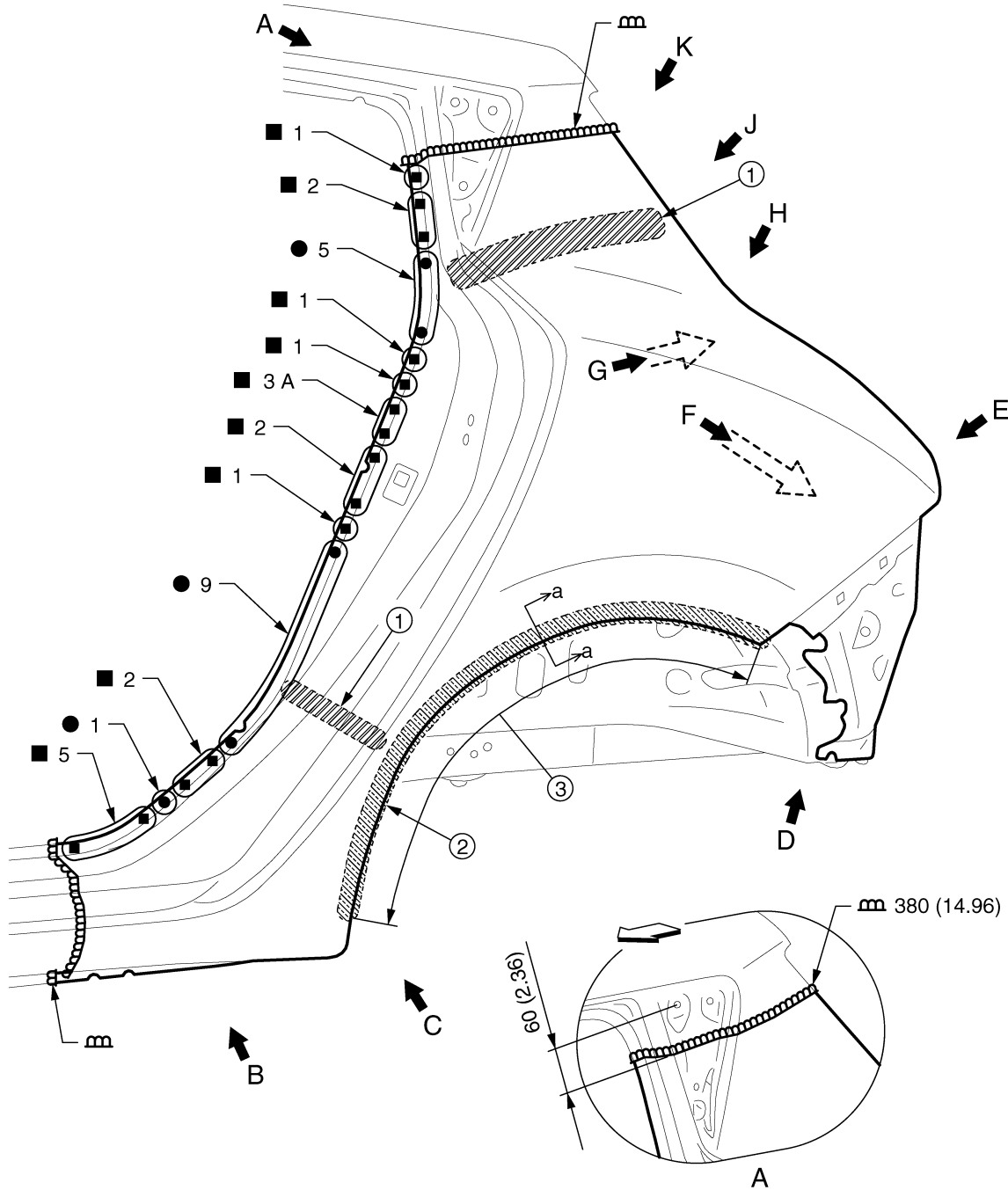


REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Fender

INFOID:000000006956149



1. Urethane foam

2. Adhesive

3. Hemming portion

Unit: mm (in)

◁: Vehicle front

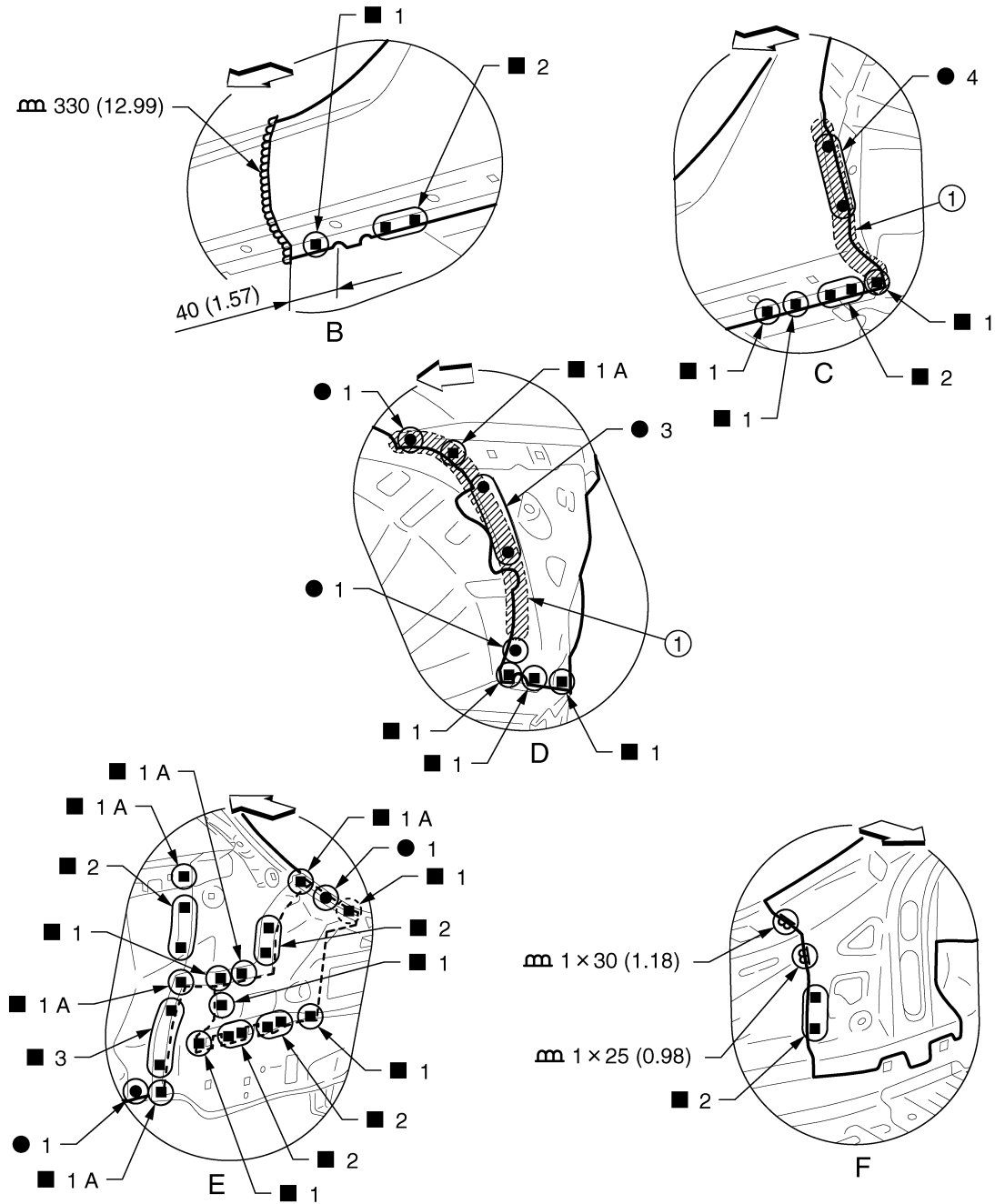
Replacement parts

● Rear fender (LH)

JSKIA2322GB

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



JSKIA2323GB

1. Body sealing

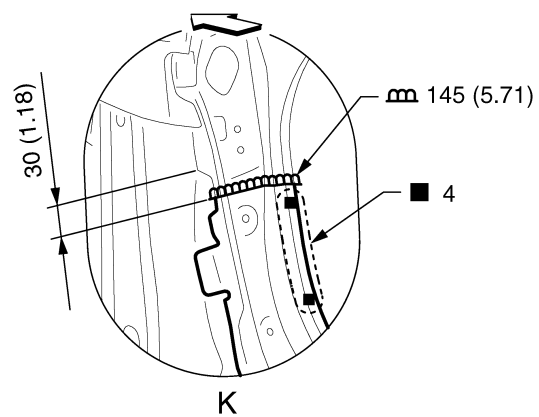
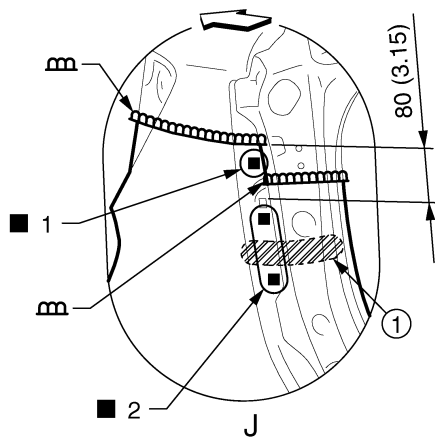
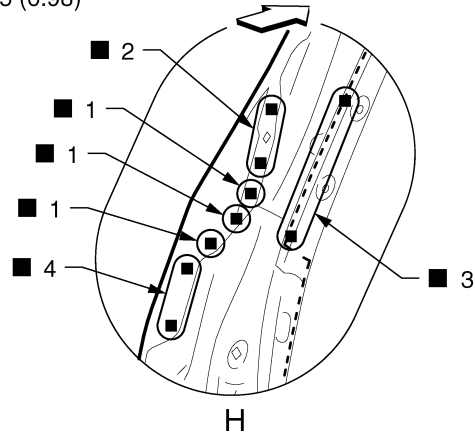
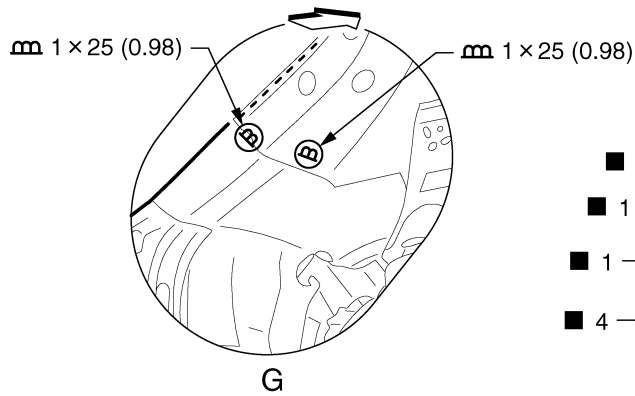
Unit: mm (in)

◀: Vehicle front

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

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



1. Urethane foam

Unit: mm (in)

Vehicle front

Weld the parts onto the back of the component part.

View K: Before installing rear fender

POINT

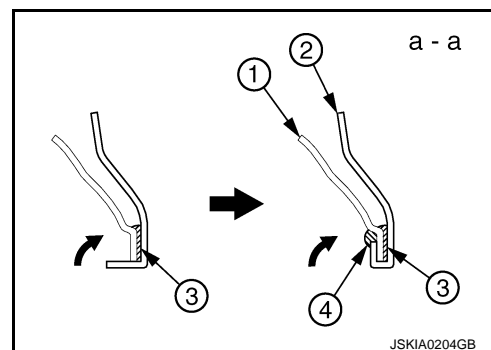
JSKIA2324GB

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to [BRM-27. "Rear Fender Hemming Process"](#).

1. Outer rear wheelhouse
2. Rear fender
3. Adhesive
4. Sealant

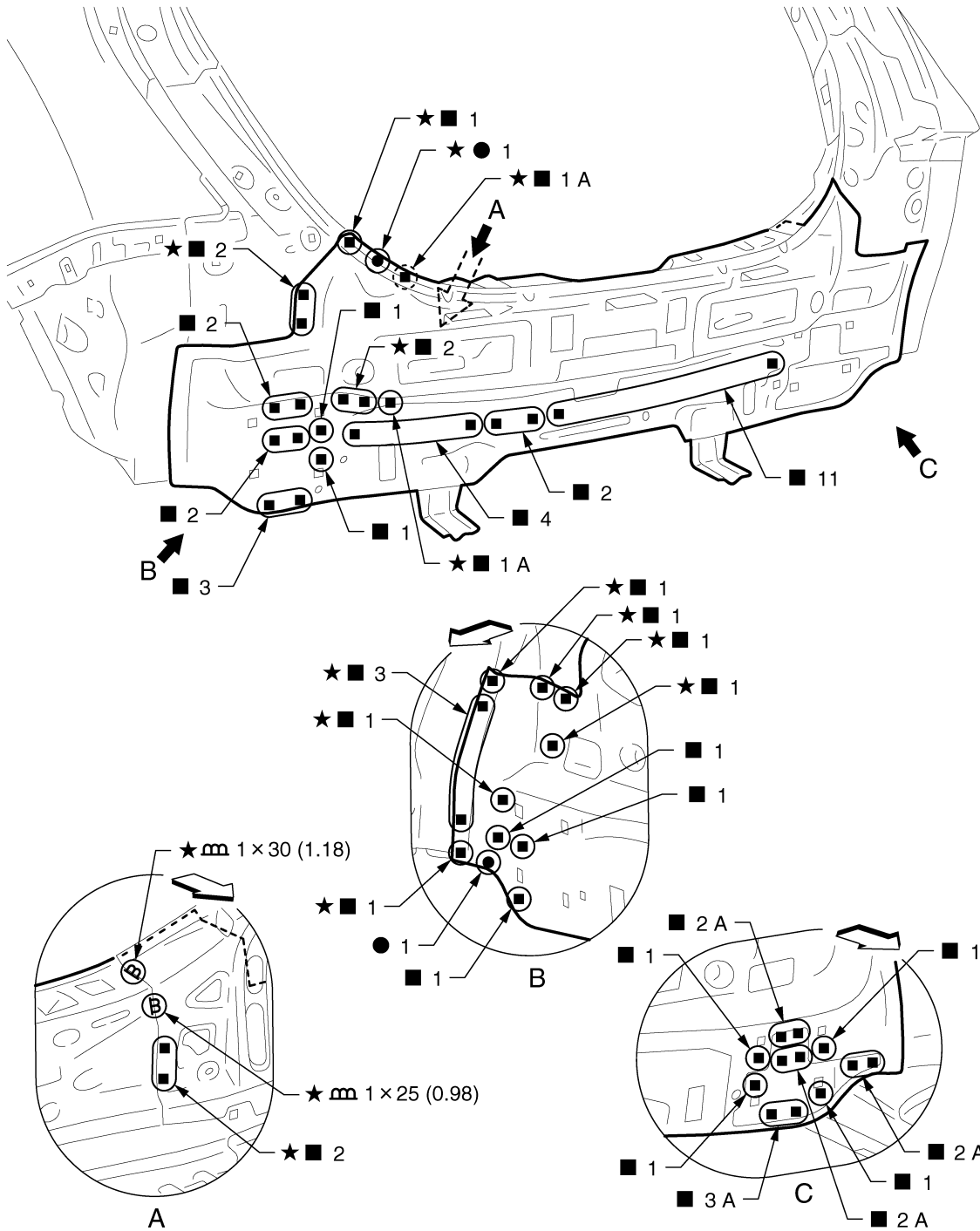


REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Panel

INFOID:000000006956155



JSKIA2330GB

Unit: mm (in)

↔: Vehicle front

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

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

Replacement parts

● Upper rear panel

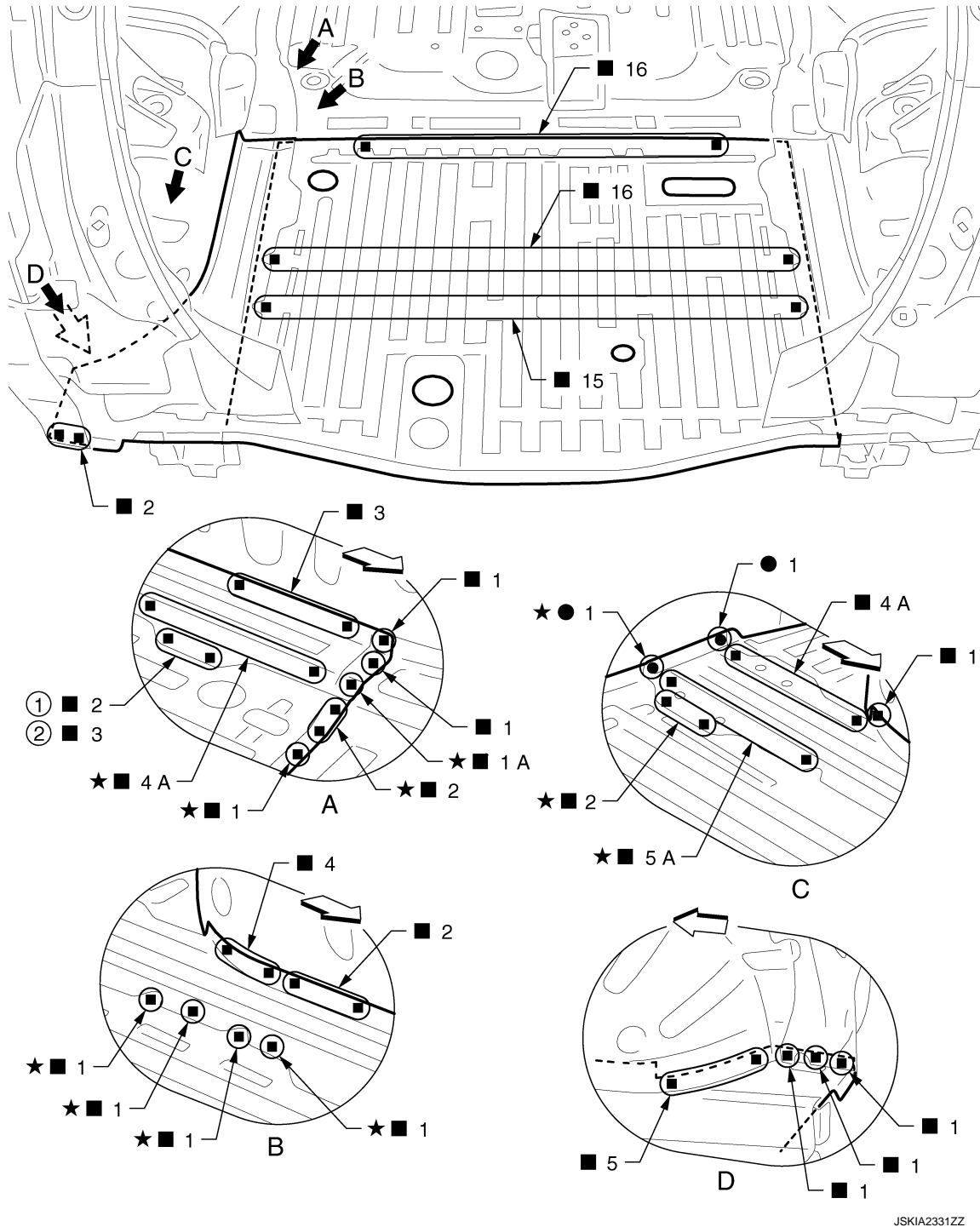
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Floor Rear

INFOID:000000006956156

Work after rear panel is removed.



1. LH side

2. RH side

↔: Vehicle front

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

Replacement parts

● Rear floor rear

★ Rear floor rear side (LH)

High voltage system parts (Removal required depending on damage)

REPLACEMENT OPERATIONS

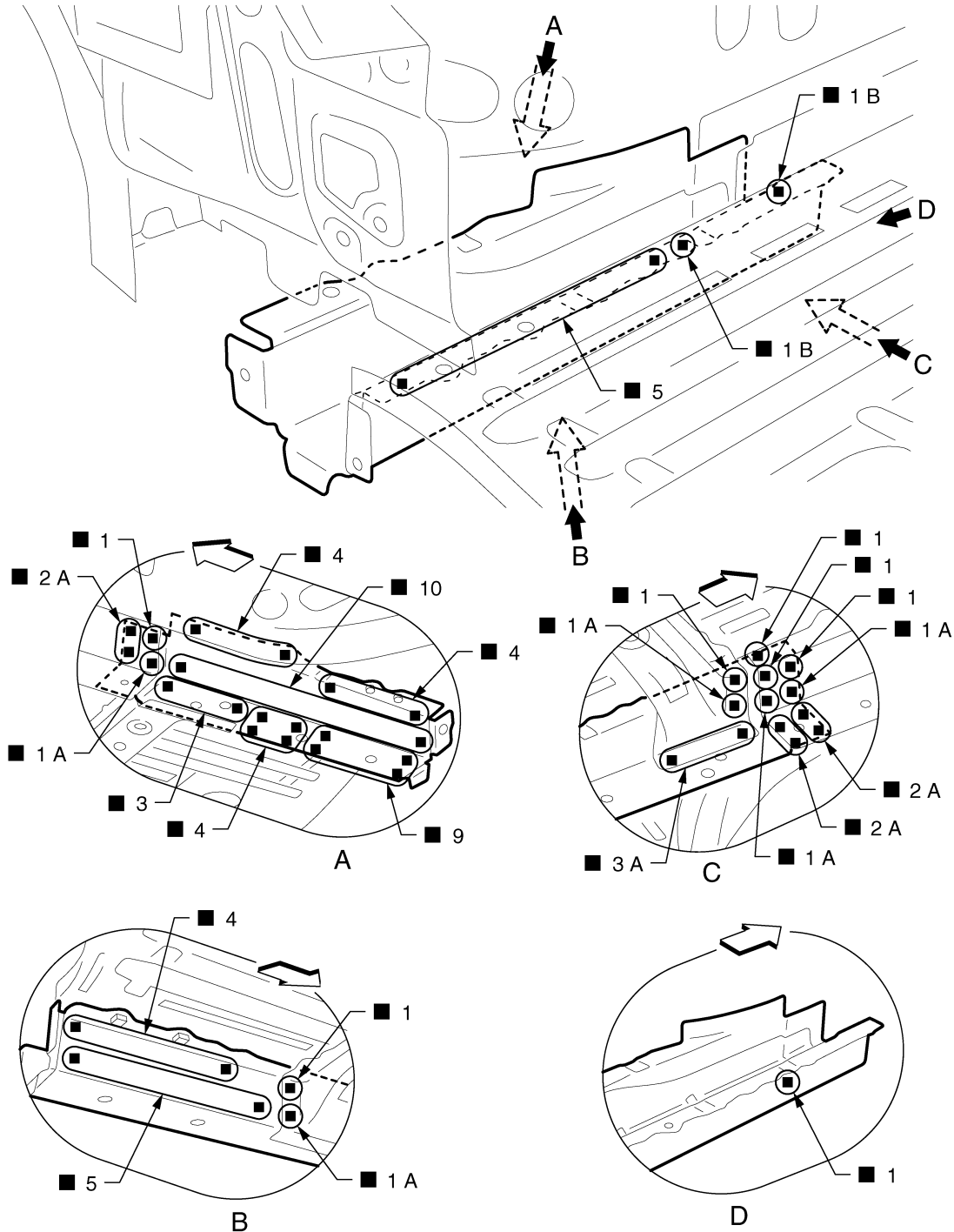
< REMOVAL AND INSTALLATION >

- Service plug
- On board charger
- Front side Li-ion battery high voltage harness connector

Rear Side Member Extension

INFOID:000000006956157

Work after rear panel is removed.



JSKIA2332ZZ

← Vehicle front

Replacement parts

- Rear side member extension (LH)
- Rear side member extension reinforcement assembly (LH)

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

View D: Before installing replacement parts (Weld the rear side member extension and rear side member extension reinforcement assembly)

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BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

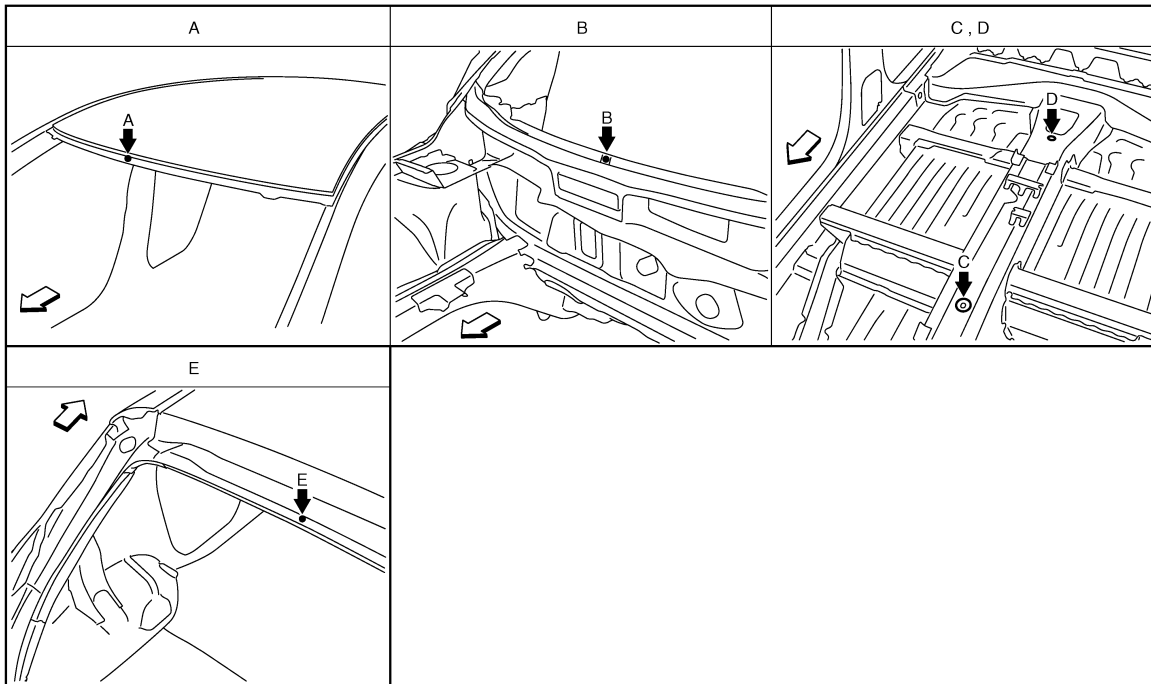
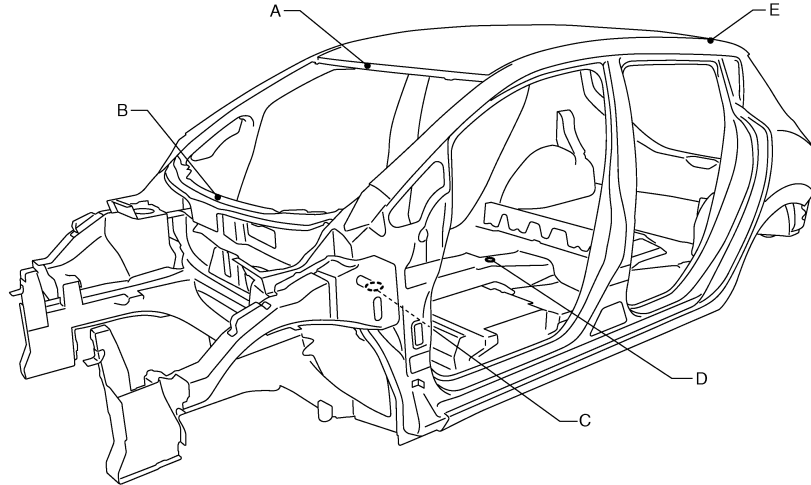
SERVICE DATA AND SPECIFICATIONS (SDS)

BODY ALIGNMENT

Body Center Marks

INFOID:000000006956160

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.



JSKIA2276ZZ

↖: Vehicle front

Unit: mm (in)

Points	Portion	Marks
A	Front roof	Embossment
B	Cowl top	Embossment
C	Trans control reinforcement	Hole $\phi 31$ (1.22)

BODY ALIGNMENT

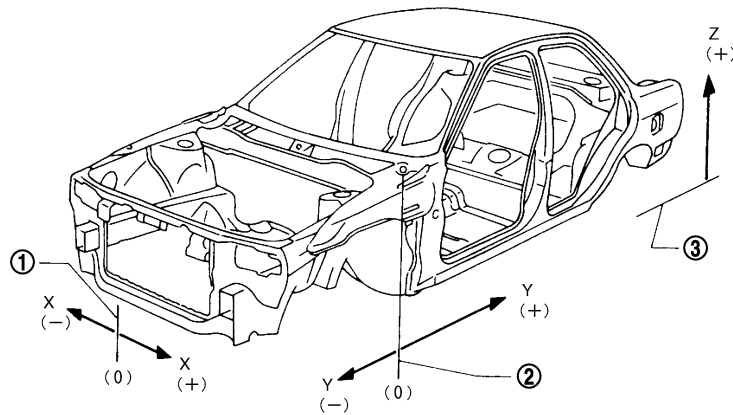
< SERVICE DATA AND SPECIFICATIONS (SDS)

Points	Portion	Marks
D	Center front floor	Hole $\phi 11$ (0.43)
E	Rear roof	Embossment

Description

INFOID:000000006956161

- 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

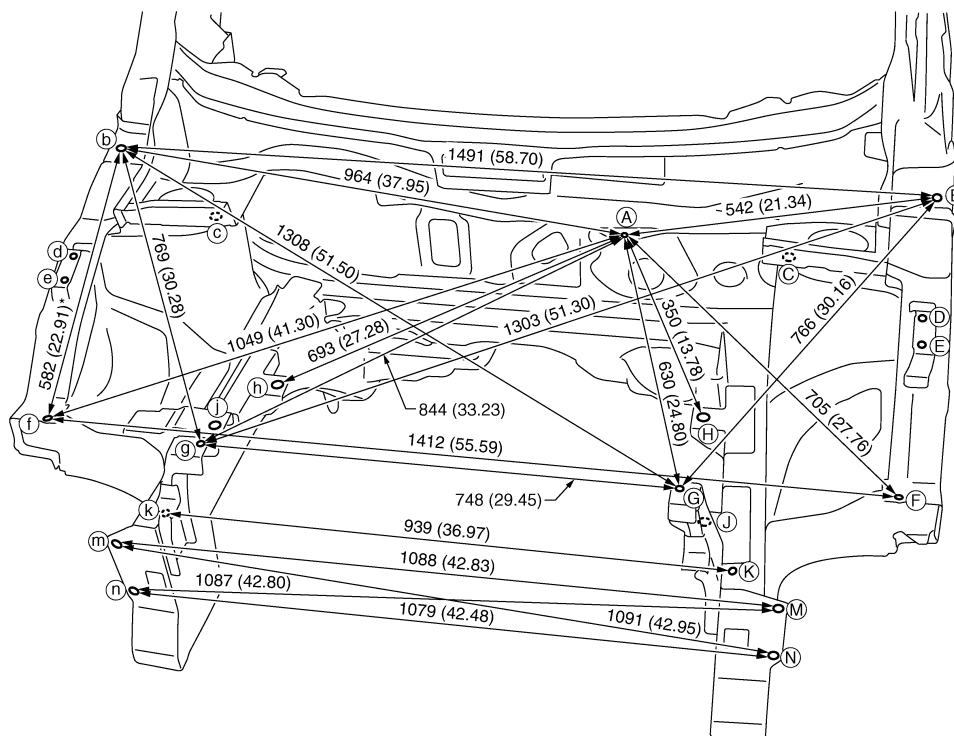
Motor Room

INFOID:000000006956162

MEASUREMENT

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

< SERVICE DATA AND SPECIFICATIONS (SDS)



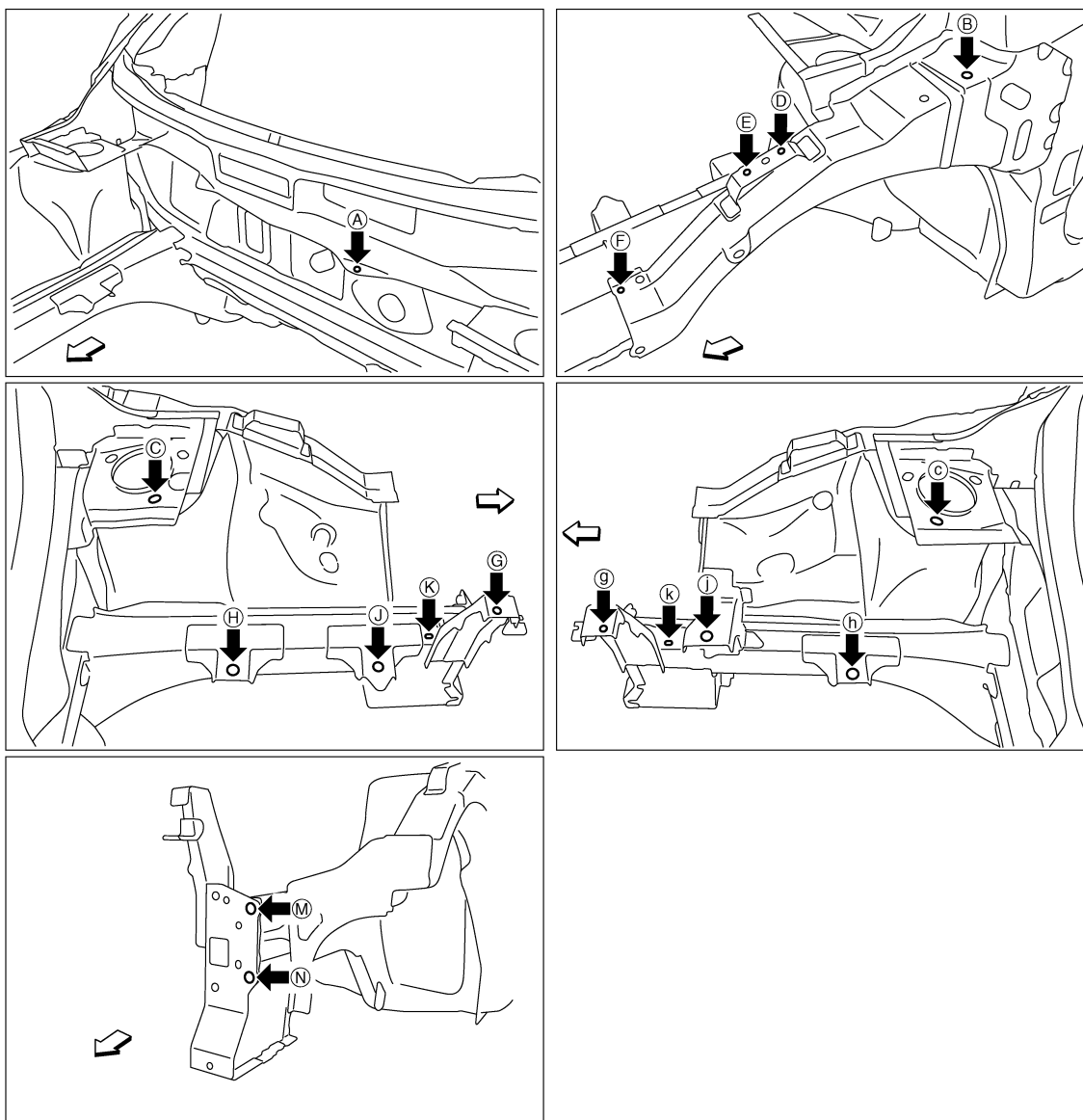
Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	319 (12.56)		A - j	790 (31.10)		D - d	1447 (56.97)		H - j	843 (33.19)	
A - c	738 (29.06)		A - K	659 (25.94)		E - e	1447 (56.97)		h - J	840 (33.07)	
A - D	565 (22.24)		A - k	914 (35.98)		F - G	358 (14.09)		H - k	923 (36.34)	
A - d	968 (38.11)		B - C	268 (10.55)*		f - g	363 (14.29)		h - K	937 (36.89)	
A - E	588 (23.15)		B - c	1272 (50.08)*		F - g	1086 (42.76)		J - j	822 (32.36)	
A - e	982 (38.66)		B - f	1563 (61.54)*		f - G	1092 (42.99)		J - k	878 (34.57)	
A - J	550 (21.65)		C - c	1037 (40.83)		H - h	782 (30.79)		j - K	893 (35.16)	

2011 LEAF

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



JSKIA2278ZZ

←: Vehicle front

Unit: mm (in)

Point	Material	Point	Material
A	Upper dash hole center $\phi 7$ (0.28)	G, g	Side radiator core support hole center $\phi 9$ (0.35)
B, b	Hood hinge installing hole center $\phi 11$ (0.43)	H, h, J, j	Traction motor inverter member mounting hole center $\phi 18$ (0.71)
C, c	Front strut installing hole center 18×13 (0.71×0.51)	K, k	Front side member hole center 12×7 (0.47×0.28)
D, d, E, e	Front fender installing hole center $\phi 7$ (0.28)	M, m, N, n	Front bumper stay installing hole center $\phi 15$ (0.59)
F, f	Hoodledge reinforcement hole center $\phi 12$ (0.47)		

Underbody

INFOID:000000006956163

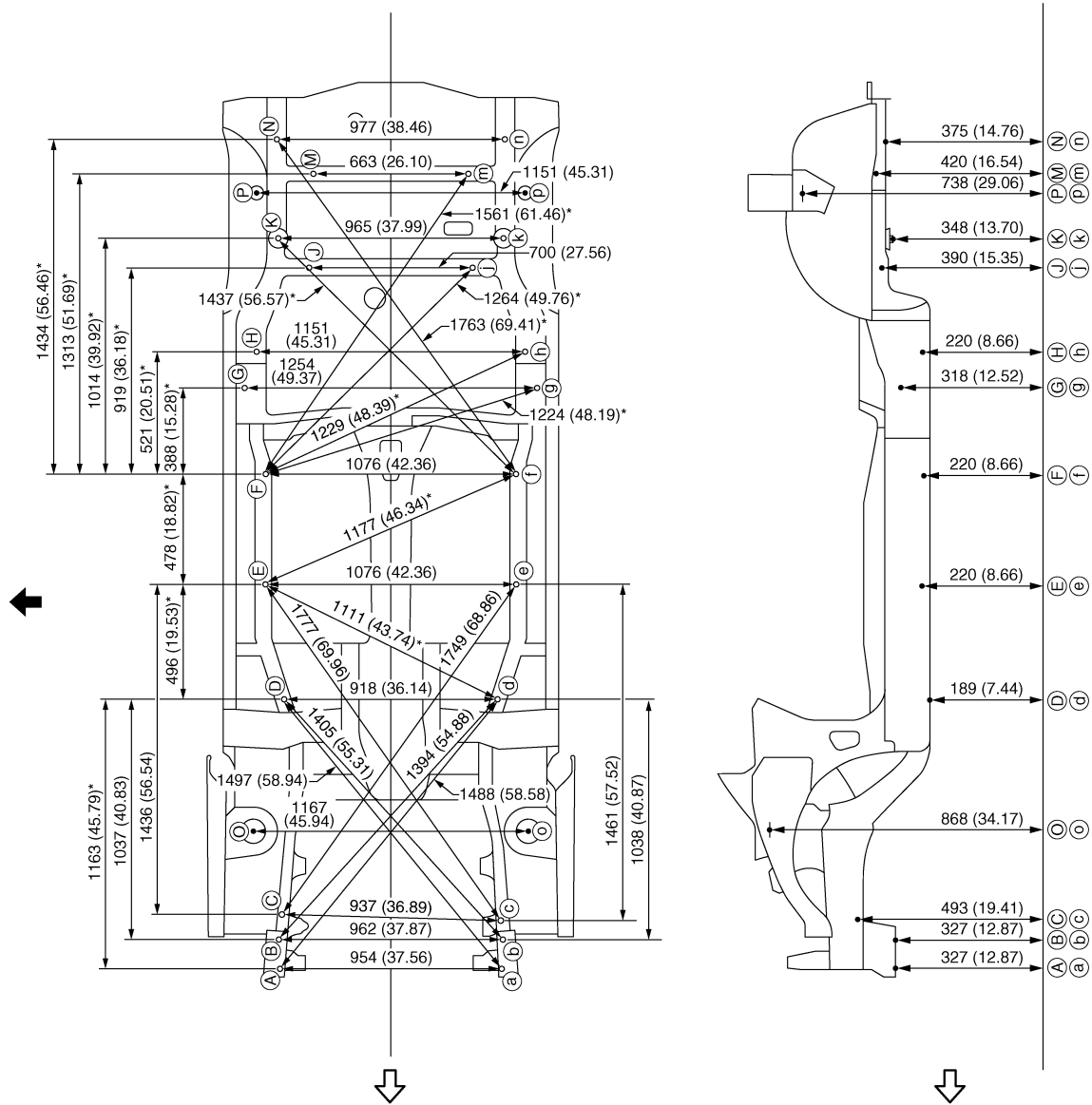
MEASUREMENT

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

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

The following figure shows a bottom view and a side view of the vehicle.



JSK1A2279GB

Unit: mm (in)

Vehicle front

Vehicle left side

MEASUREMENT POINTS

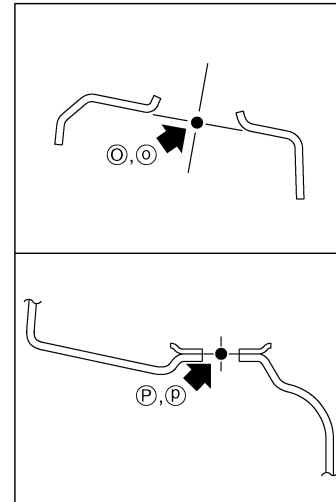
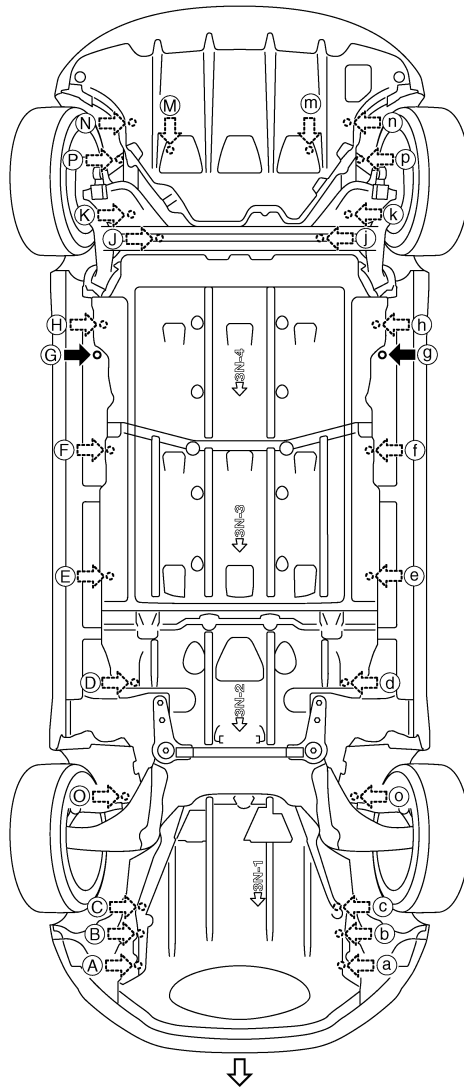
Revision: 2014 June

BRM-62

2011 LEAF

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



JSK1A2280ZZ

←: Vehicle front

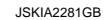
Unit: mm (in)

Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A	470.0 (18.504)	-582.0 (-22.913)	327.3 (12.886)	Hole ϕ 11 (0.43)	G, g	\pm 626.8 (\pm 24.677)	1904.4 (74.976)	318.0 (12.520)	Hole ϕ 16 (0.63)
a	-484.0 (-19.055)	-582.0 (-22.913)	327.3 (12.886)	Hole ϕ 11 (0.43)	H, h	\pm 575.4 (\pm 22.653)	2060.0 (81.102)	220.0 (8.661)	Hole ϕ 13 (0.51)
B	472.4 (18.598)	-455.0 (-17.913)	327.3 (12.886)	Hole ϕ 20 (0.79)	J, j	\pm 350.0 (\pm 13.780)	2423.0 (95.394)	390.4 (15.370)	Hole ϕ 16 (0.63)
b	-489.7 (-19.279)	-455.0 (-17.913)	327.3 (12.886)	Hole ϕ 20 (0.79)	K, k	\pm 482.3 (\pm 18.988)	2544.2 (100.165)	348.3 (13.713)	Hole ϕ 12 (0.47)
C	462.4 (18.205)	-346.0 (-13.622)	492.8 (19.402)	Hole ϕ 16 (0.63)	M, m	\pm 331.3 (\pm 13.043)	2821.5 (111.082)	419.8 (16.528)	M: Hole ϕ 16 (0.63) m: Hole 18 \times 16 (0.71 \times 0.63)

< SERVICE DATA AND SPECIFICATIONS (SDS)

INFOID:0000000006956164

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



«The others»

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1227 (48.31)		K - k	1441 (56.73)		Q - q	1392 (54.80)		T - Q	1169 (46.02)*	
E - g	1582 (62.28)*		M - m	1267 (49.88)		R - r	1441 (56.73)		T - R	983 (38.70)*	
E - h	1397 (55.00)*		M - o	1545 (60.83)*		S - E	1068 (42.05)*		U - u	1539 (60.59)	
E - k	1599 (62.95)*		M - p	1385 (54.53)*		S - F	855 (33.66)*		U - W	1162 (45.75)*	
F - f	1420 (55.91)		M - r	1630 (64.17)*		S - G	772 (30.39)*		U - X	1133 (44.61)*	
F - j	1663 (65.47)*		N - n	1420 (55.91)		S - H	1297 (51.06)*		V - v	1567 (61.69)	
G - g	1425 (56.10)		N - q	1575 (62.01)*		S - J	1068 (42.05)*		V - W	1215 (47.83)*	
G - h	1852 (72.91)*		O - o	1441 (56.73)		S - K	925 (36.42)*		V - X	1105 (43.50)*	
G - k	1666 (65.59)*		O - p	1717 (67.60)*		T - M	1070 (42.13)*		W - w	1559 (61.38)	
H - h	1270 (50.00)		O - r	1558 (61.34)*		T - N	847 (33.35)*		X - x	1590 (62.60)	
H - k	1555 (61.22)*		P - p	1160 (45.67)		T - O	732 (28.82)*				
J - j	1420 (55.91)		P - r	1562 (61.50)*		T - P	1378 (54.25)*				

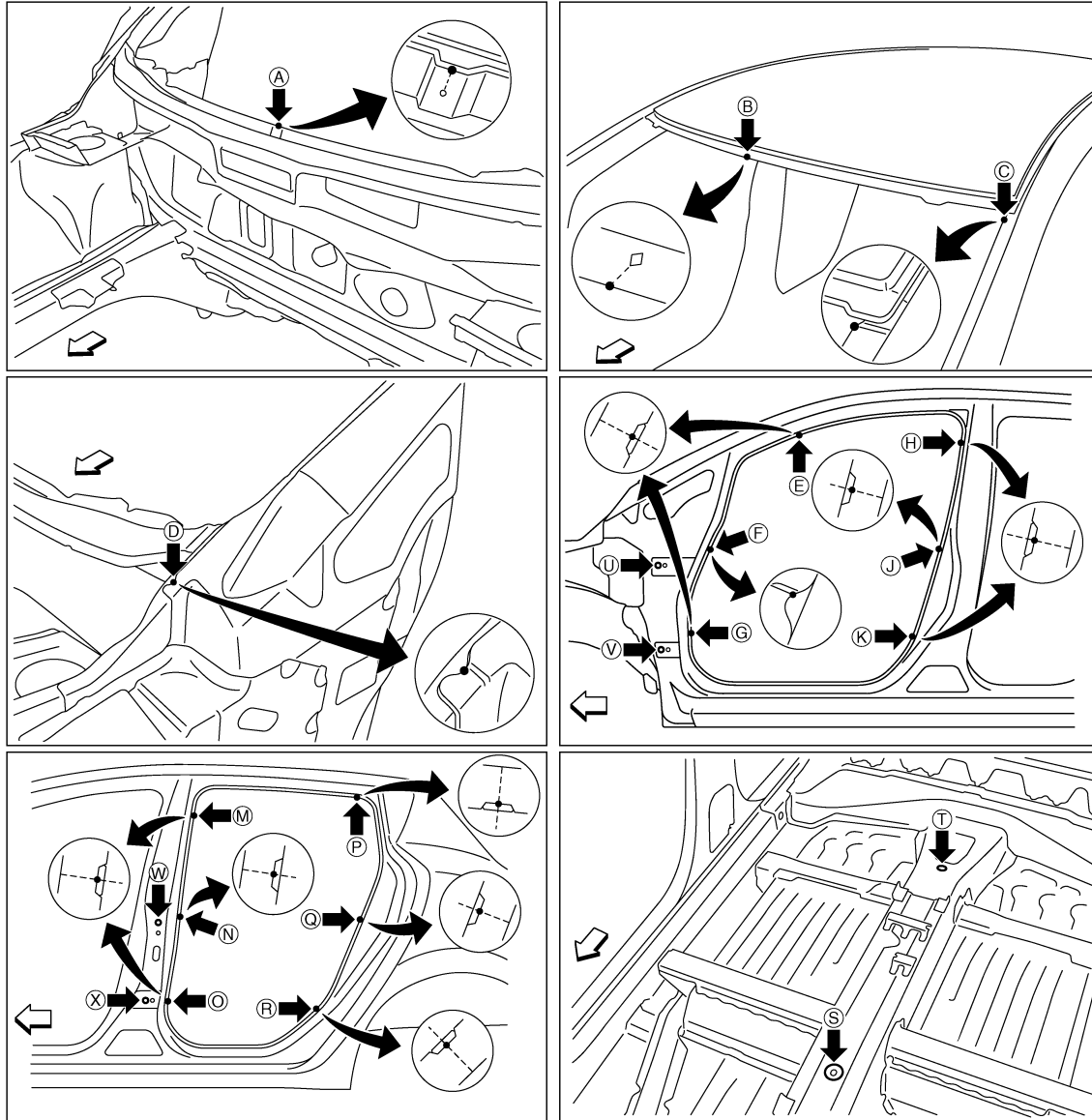
MEASUREMENT POINTS

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BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



JSKIA2282ZZ

↶: Vehicle front

Unit: mm (in)

Point	Material	Point	Material
A	Cowl top flange end of center positioning mark	P, p, Q, q, R, r	Rear fender indent
B	Roof flange end of center positioning mark	S	Trans control reinforcement hole center of center positioning mark $\phi 31$ (1.22)
C, c, F, f	Outer side body joggle	T	Center front floor hole center of center positioning mark $\phi 11$ (0.43)
D, d, E, e, G, g	Outer side body indent	U, u, V, v, W, w, X, x	Door hinge installing hole center U, u, V, v, X, x: $\phi 12$ (0.47) W, w: $\phi 9$ (0.35)
H, h, J, j, K, k, M, m, N, n, O, o	Center pillar indent		

BODY ALIGNMENT

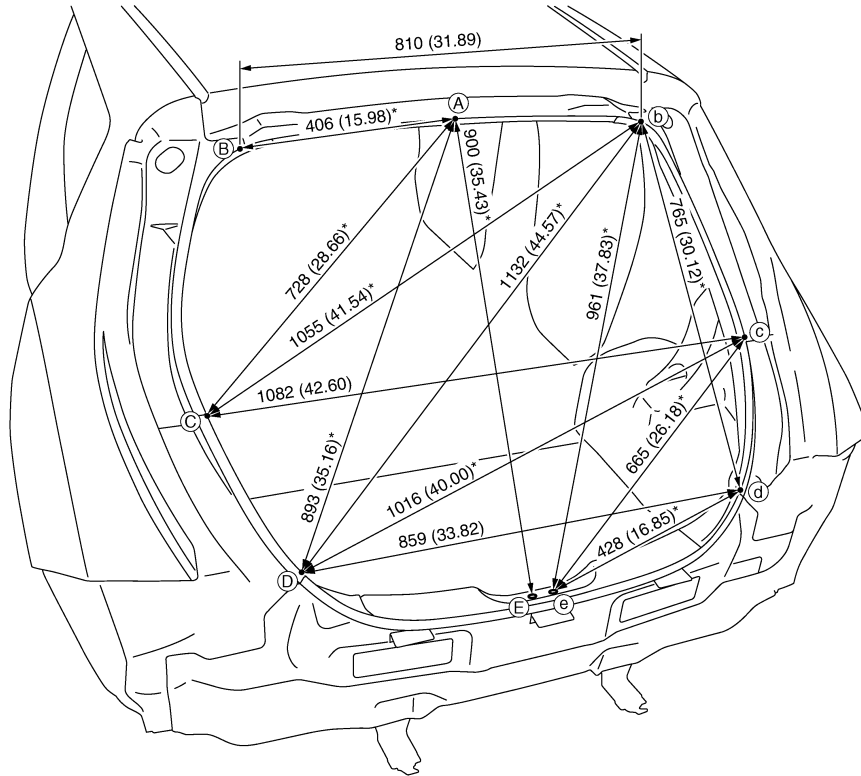
< SERVICE DATA AND SPECIFICATIONS (SDS)

Rear Body

INFOID:000000006956165

MEASUREMENT

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



JSKIA2283GB

Unit: mm (in)

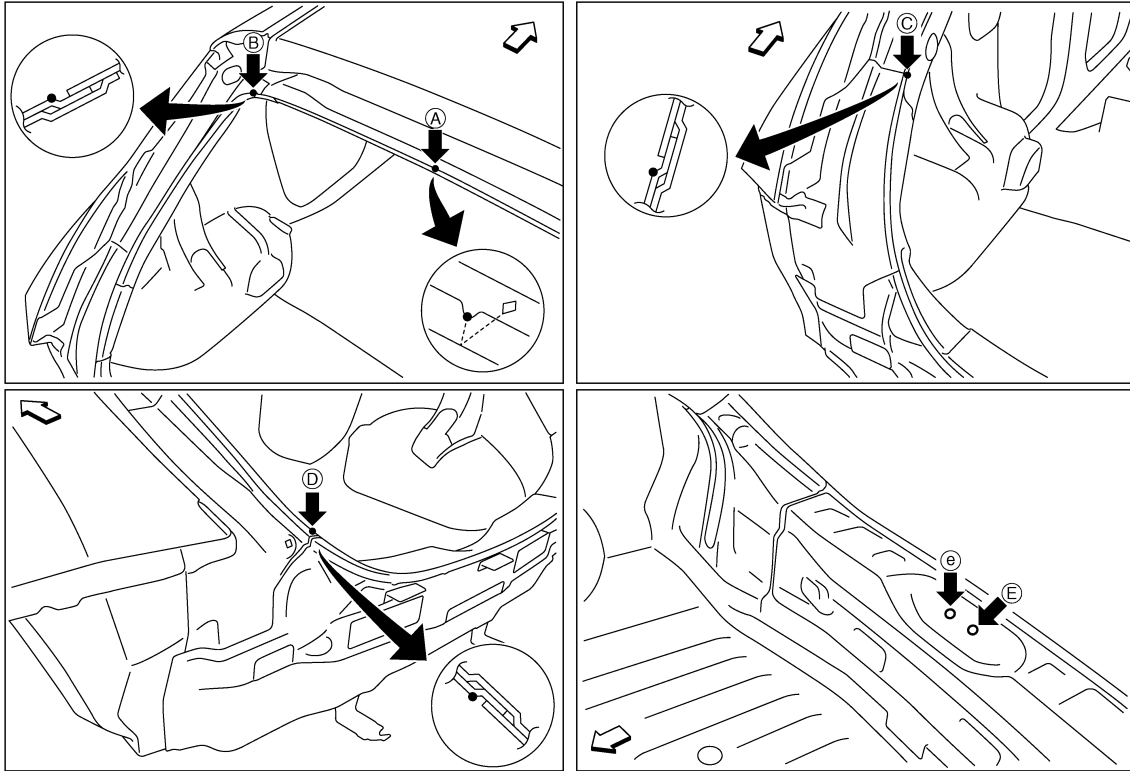
MEASUREMENT POINTS

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BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



JSKIA2284ZZ

↩: Vehicle front

Unit: mm (in)

Point	Material	Point	Material
A	Roof indent of center positioning mark	C, c, D, d	Rear combination lamp base joggle
B, b	Rear fender extension joggle	E, e	Back door striker installing hole center $\phi 15$ (0.59)

LOCATION OF PLASTIC PARTS

< SERVICE DATA AND SPECIFICATIONS (SDS)

LOCATION OF PLASTIC PARTS

Precautions for Plastics

INFOID:000000006956166

Abbreviation	Material name	Heatresisting 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.	—
EPM/EPDM	Ethylene Propylene (Diene) copolymer	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:

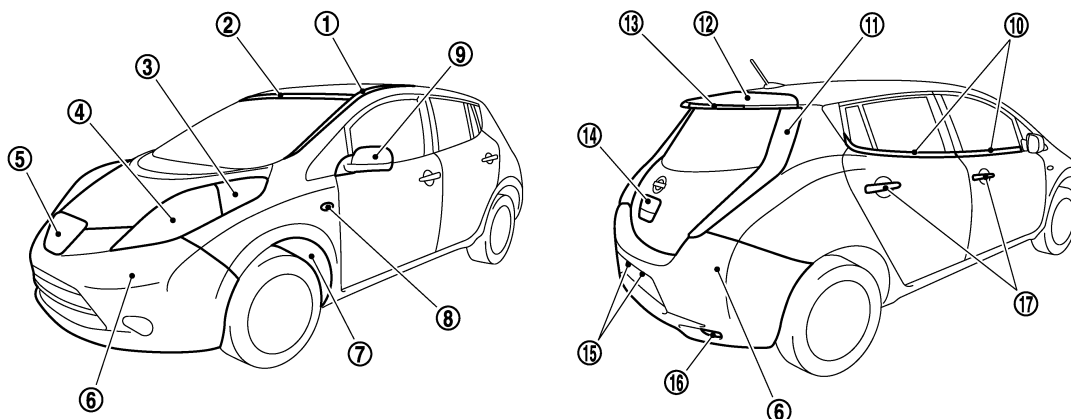
- When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
- Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

LOCATION OF PLASTIC PARTS

< SERVICE DATA AND SPECIFICATIONS (SDS)

Location of Plastic Parts

INFOID:000000006956167

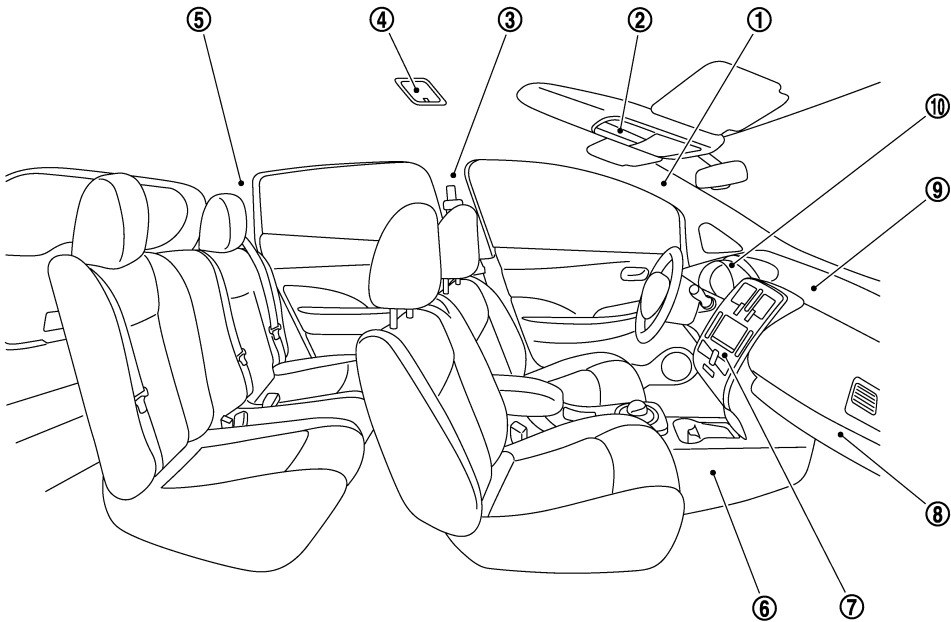


JSKIA2285ZZ

Component			Material	Component			Material
1	Side roof molding		PVC + Stainless	10	Door outside molding		PVC + Stainless
	Lower side molding		ASA	11	Rear combination lamp	Lens	PMMA
2	Upper windshield molding		TPO			Housing	ASA
3	Front side marker lamp	Lens	PMMA	12	Rear spoiler		ABS
		Housing	PP	13	High mount stop lamp	Lens	PMMA
4	Front combination lamp	Lens	PC			Housing	ABS
		Housing	PP	14	Back door handle		ABS
5	Charge port lid		PC + PET	15	License plate lamp	Lens	PMMA
6	Bumper fascia		PP + EPM			Housing	PC
7	Front fender protector		PP	16	Reflex reflector	Lens	PMMA
8	Side turn signal lamp	Lens	PMMA			Housing	ABS
		Housing	PC + ABS	17	Door outside handle	Grip body	PC + PET + Glass fiber
9	Door outside mirror	Case	PP + Glass fiber			Grip cover	PC + ABS
		Base	PBT + PET + Glass fiber				
		Cover	ABS				

LOCATION OF PLASTIC PARTS

< SERVICE DATA AND SPECIFICATIONS (SDS)



JSKIA2286ZZ

Component			Material	Component			Material
1	Front pillar garnish		PP	5	Rear pillar finisher		PP
2	Map lamp	Lens	PC	6	Center console	Body	PP
		Housing	PP			Console finisher	PC + ABS
		Center cover	PP	7	Cluster lid C		PC + ABS
	Sunglass holder	Case	PP	8	Glove box		PP
		Holder	PC + ABS	9	Instrument panel		PP
3	Center pillar garnish		PP	10	Cluster lid A		PP
4	Room lamp	Lens	PC		Cluster lid finisher		PP
		Housing	PP		Meter cover		PC + ABS