SECTION BRM
BODY REPAIR

CONTENTS

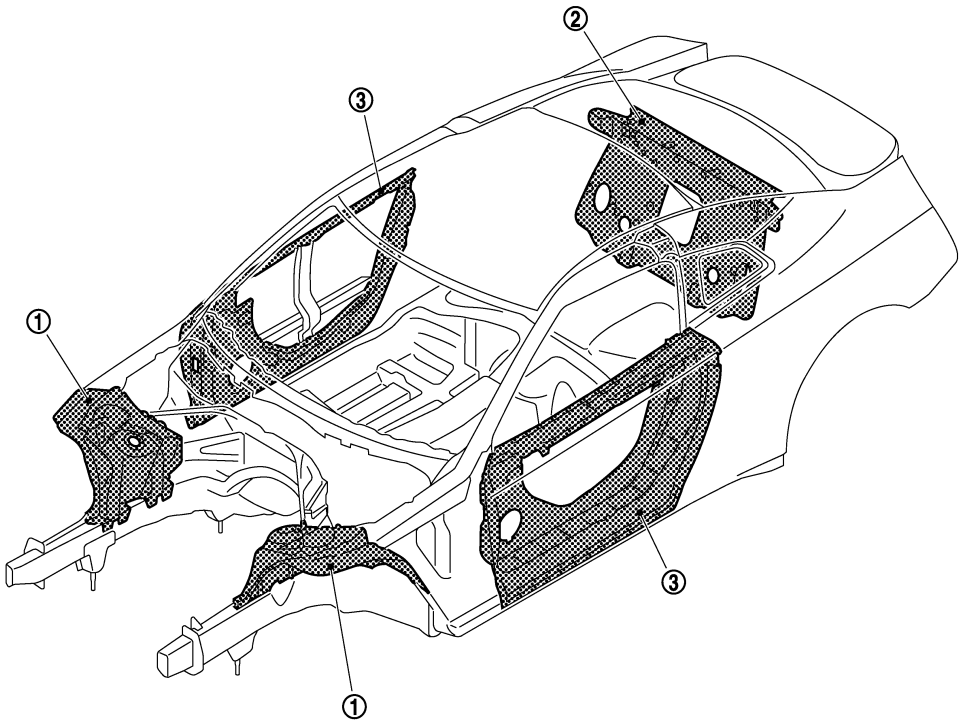
VEHICLE INFORMATION

FEATURE OF BODY CONSTRUCTION

Adoption of Aluminum Die-casting Parts

INFOID:0000000011485502

- A high-vacuum aluminum die-casting integral molding strut housing is adopted to improve body rigidity, weight reduction, collision safety, and high accuracy.
- A high-vacuum die-casting integral molding door inner is adopted to improve glass raising/lowering performance during high-speed driving, to improve weight reduction, collision safety, high accuracy, and to improve open/close operability and closing noise.
- A high-vacuum aluminum die-casting integral molding rear seatback panel is adopted to improve body rigidity and weight reduction.



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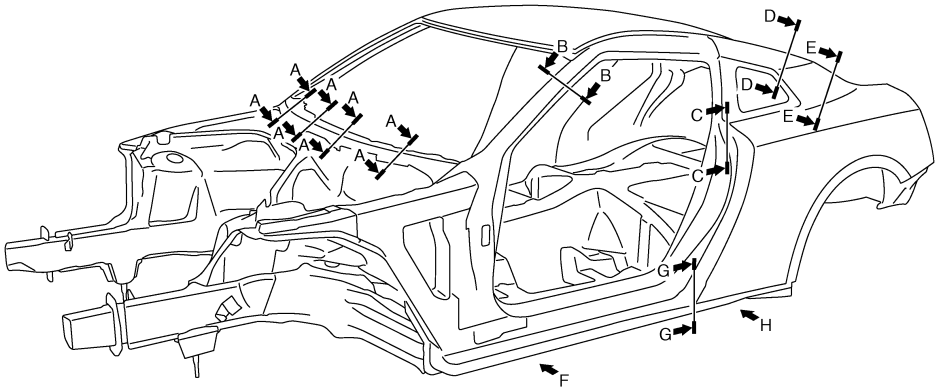
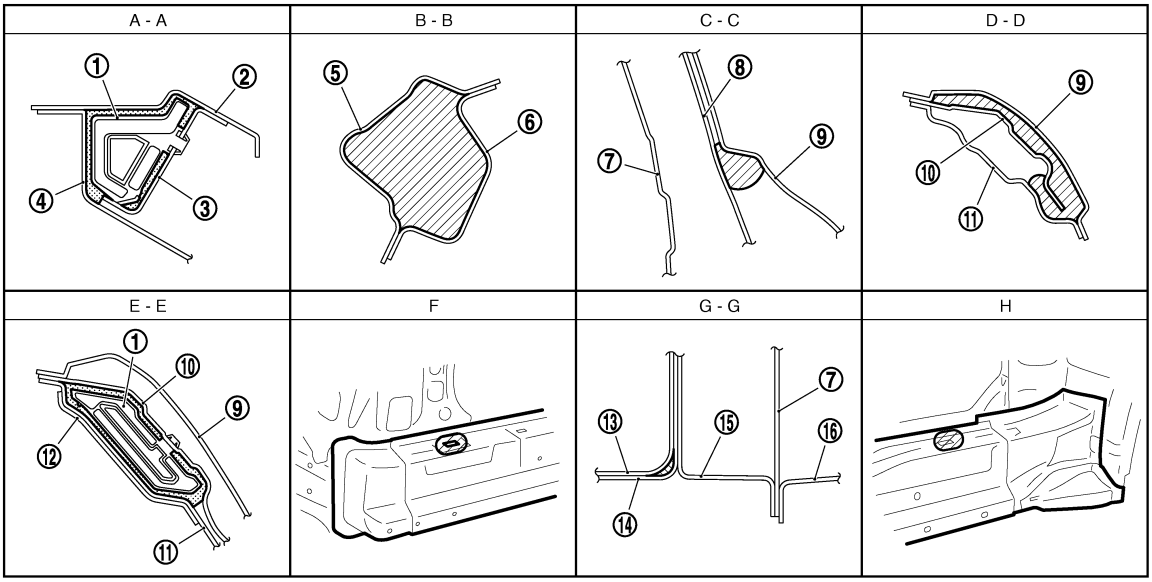
1. Strut housing
2. Rear seatback support
3. Door inner

Adoption of Foaming Agent

INFOID:0000000011485503

For this vehicle, a foaming agent is adopted to improve quietness and a highly rigid foaming agent is adopted to improve body rigidity.
In addition, for details of cross section G, a foaming agent is adopted to improve watertightness.





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1. Insulator
2. Upper dash crossmember
3. Upper dash crossmember lower
4. Upper dash
5. Outer front pillar
6. Inner upper front pillar
7. Inner lock pillar
8. Lock pillar reinforcement
9. Rear fender
10. Rear pillar reinforcement
11. Inner rear pillar
12. Inner rear pillar reinforcement
13. Front floor
14. Rear seat crossmember reinforcement
15. Inner sill extension
16. Outer sill reinforcement

: Foaming agent
: Highly rigid foaming agent

Highly Accurate Body Framework

INFOID:0000000011485504

This vehicle is improved upon the following items as a high performance vehicle:
- Wheel alignment accuracy to provide driving stability and straightness
- Power train mounting accuracy to provide a better vibration level
- Door opening accuracy to provide a comfortable wind noise level

The body framework accuracy is improved to provide these items.

Adoption of Adhesive

INFOID:0000000011485505

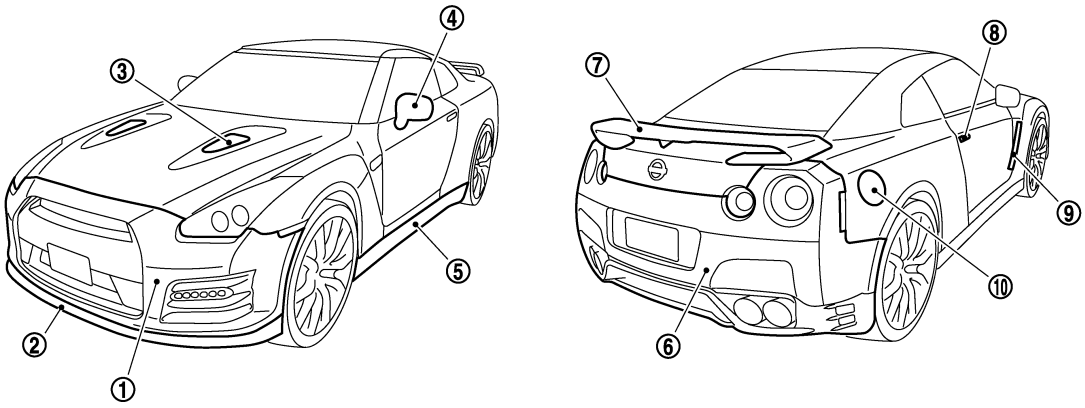
For the joint of strut housing, adhesive is adopted to improve driving stability and to prevent electric corrosion.
For the joint of rear seatback, it is adopted to improve driving stability.

BODY EXTERIOR PAINT COLOR

EXCEPT NISMO

EXCEPT NISMO : Body Exterior Paint Color

INFOID:0000000011485506



JSKIA2342ZZ

Component			Color code	BA54	BKAB*	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
			Description	Red	Bluish Silver	Gray	Black	Blue	White	Red	Light Gold
			Paint type [Note]	3S	4M	2M	2P	2P	3P	4PM	2RPM
			Anti scratch advanced paint	×	×	×	×	×	×	×	×
1	Front bumper fascia	Body	Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
		Grille	Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE
2	Engine undercover		Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE
3	Hood air intake		Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE
4	Door outside mirror		Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
5	Center mud guard		Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
6	Rear bumper fascia	Upper	Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
		Lower	Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE
7	Rear wing		Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0
8	Door outside handle		Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
9	Front fender duct		Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE	BKAE
10	Fuel filler lid		Body color	BA54	BKAB	BKAD	BGAG	BRAY	BQAB	BNAS	BEY0

BKAB*: For repairing methods of body color, follow the procedure specified by the refinish paint supplier or contact the refinish paint supplier.

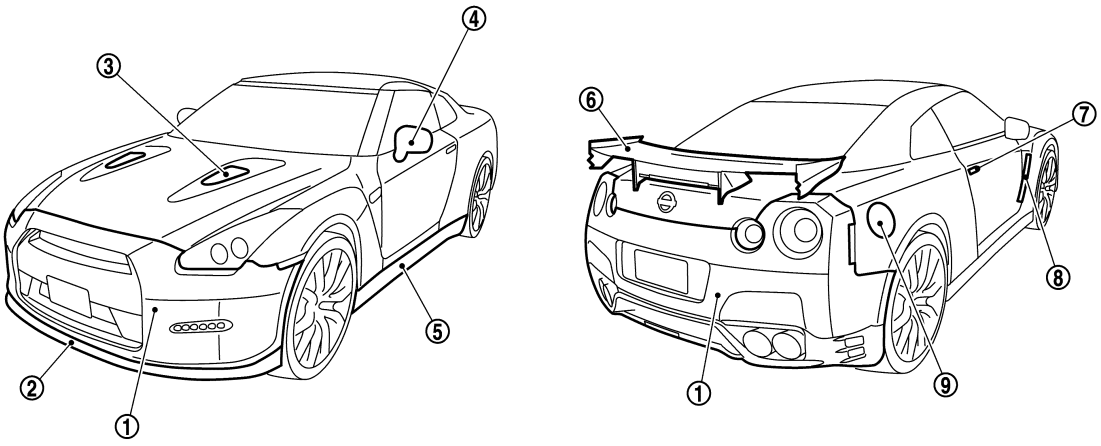
NOTE:

- 2M: 2-Coat metallic
- 2P: 2-Coat pearl
- 3P: 3-Coat pearl
- 3S: 3-Coat solid
- 4M: 4-Coat metallic
- 4PM: 4-Coat pearl metallic
- 2RPM: 2-Coat multi flex pearl metallic

NISMO

NISMO : Body Exterior Paint Color

INFOID:0000000011485507



JSKIA4837ZZ

Component		Color code	BA54	BKAB*	BQAB	BGAG	BKBL*
		Description	Red	Bluish Silver	White	Black	Gray
		Paint type Note	3S	4M	3P	2P	2LM
		Anti scratch advanced paint	×	×	×	×	–
		Matte clear coat	–	–	–	–	×
1	Bumper fascia	Body color	BA54	BKAB	BQAB	BGAG	BKBL
2	Engine undercover	Material color	–	–	–	–	–
3	Hood air intake	Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE
4	Door outside mirror	Body color	BA54	BKAB	BQAB	BGAG	BKBL
5	Center mud guard	Material color	–	–	–	–	–
6	Rear wing	Material color	–	–	–	–	–
7	Door outside handle	Chromium plate	Cr	Cr	Cr	Cr	Cr
8	Front fender duct	Dark gray	BKAE	BKAE	BKAE	BKAE	BKAE
9	Fuel filler lid	Body color	BA54	BKAB	BQAB	BGAG	BKBL

BKAB*, BKBL*: For repairing methods of body color, follow the procedure specified by the refinish paint supplier or contact the refinish paint supplier.

NOTE:

- 2P: 2-Coat pearl
- 3P: 3-Coat pearl
- 3S: 3-Coat solid
- 4M: 4-Coat metallic
- 2LM: 2-Coat low gross metallic

PAINTING OF KBL COLOR

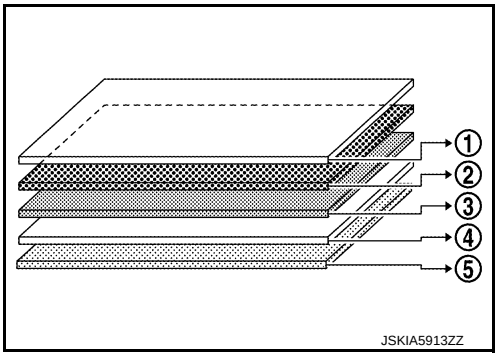
- It is highly recommended to contact refinish paint suppliers when repairing matte paint vehicles.
- Advanced techniques are necessary to apply this new paint accurately and it takes considerably more time than a usual repair.
- The KBL color consists of two coats, a normal color base coat (KAD), and a special Matte clear coat.
- The average gloss value of this matte clear coat is approximately 20.
- When refinishing panels with the KBL color, extra care must be taken to eliminate all surface flaws.

Surface flaws cannot be removed after refinishing by sanding or polishing because it increases the gloss level of the finish and will not match the original finish.

- A spray out panel must be made to check the refinish material for the correct color and gloss level.
  It may take considerably more time than a usual repair because the color and the gloss level of the finish must match the vehicle exactly, and matching may take multiple attempts of tinting and gloss level adjustment.
- To aid in matching the color of the finish, a damaged area of the vehicle may be buffed to a gloss and then a refinish color spray out panel can be compared to the glossy area to verify color match.
- After the refinish color is matched, the proper gloss level is determined by making spray out panels using the required matte clear mixture.
- The spray out panel must be completely dry before checking the color and gloss against the vehicle for match.

MULTILAYER COATING OF KBL COLOR

① Matte clear coat ⇐ Top coat
② Color base coat (KAD) ⇐ Top coat
③ Primer coat
④ Electrodeposition coat
⑤ Steel panel



PRECAUTION

PRECAUTIONS

Precaution for Aluminum Die-casting Parts

INFOID:0000000011485508

PROHIBITION OF HAMMERING AND WELDING

Never weld aluminum die-casting parts, made of heat-treated materials, for crack repairs, etc. Otherwise, the strength of these parts reduced by the welding heat.
Never hammer aluminum die-casting parts, if these parts are deformed. Replace them as an assembly.

CRACK INSPECTION

If the vehicle is damaged, visually inspect aluminum die-casting parts for deformation and carry out the crack inspection.
This inspection is carried out using dye penetrant testing agents (cleaning solution, penetrant liquid, and developer).

Crack Inspection Procedure

1. Spray the cleaning solution on the inspection surface to clean the surface.
2. Spray the penetrant liquid on the inspection surface and wait until the liquid has penetrates thoroughly.
3. Wipe out any excess penetrant liquid on the inspection surface and then wipe out again with a cloth moistened by a little cleaning solution.
4. Spray developer on the inspection surface.
5. A red indication appears on damaged area.

CAUTION:
Follow the manufacturer directions for proper usage.

ELECTRIC CORROSION

Joining these parts and steel plated parts directly may cause electric corrosion. Coat the joint surface with epoxy primer to prevent electric corrosion.

CAUTION:
Clean the joint surface thoroughly to eliminate iron powder first. Then apply the specified adhesive to bond the parts.
Never use bolts other than those that are specified, otherwise electric corrosion occurs. Always use the specified bolt with its surface appropriately finished.
Never reuse the removed specified bolt. Because the surface treatment may peel off, once the bolt is loosened.

SPECIFIED TIGHTENING TORQUE

Because aluminum parts are soft, it is necessary to tighten the parts to specified torques.
Always use a torque wrench when tightening a part to the specified torque.

WARNING:
Never use an impact wrench to remove or install the bolts.

Prohibition Items

INFOID:0000000011485509

SHEET METAL TOOL

- For steel plate tools, distinguish the special tool for aluminum alloy and the tool for steel plate.
- The cutting blade or sandpaper is specified for aluminum alloy. Distinguish them from the part for steel plate.
- When the wire brush is used for the aluminum alloy parts, use the stainless-steel wire and never use the steel wire.

REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

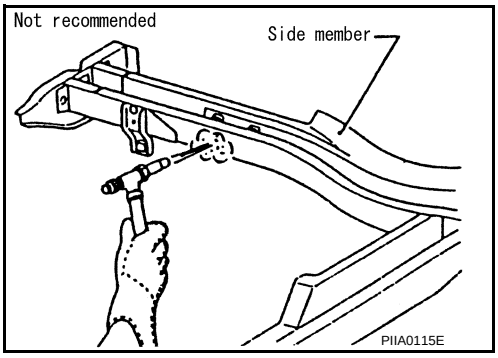
INFOID:0000000011485510

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
370 - 780 MPa	• Center side member assembly (Upper dash Component part) • Center side member reinforcement • Front side member • Hoodledge extension • Hoodledge reinforcement • Front cowl top assembly • Upper dash • Lower dash • Lower dash crossmember assembly • Front pillar brace • Lock pillar reinforcement assembly • Inner lock pillar assembly • Outer sill reinforcement • Inner sill • Center front floor • Front floor (Component part) • Rear seat crossmember • Other reinforcements
980 - 1350 MPa	• Front floor (Component part) • Inner side roof rail (Component part)

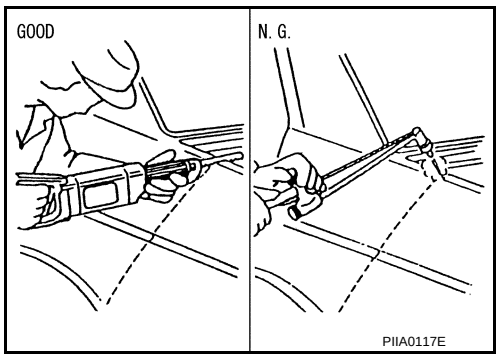
Read the following precautions when repairing HSS:

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.)

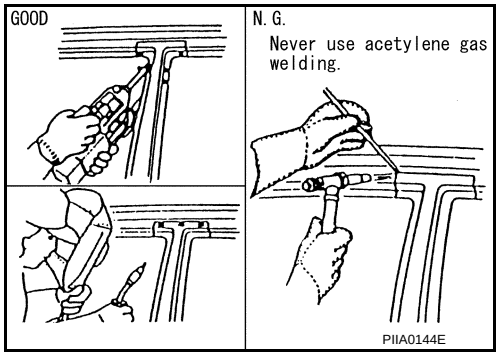


   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.

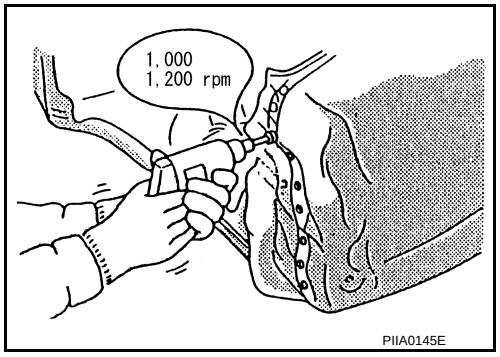
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97 in).



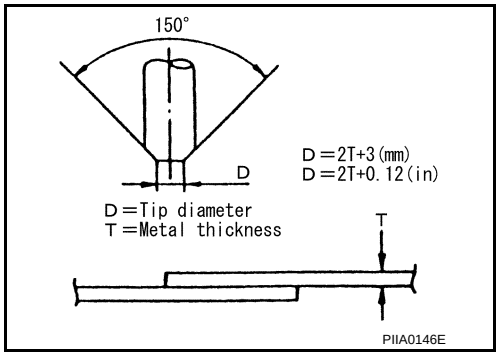
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



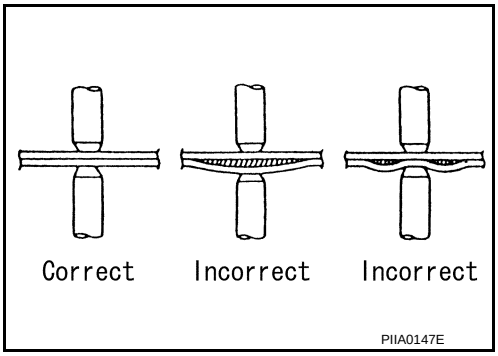
- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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.



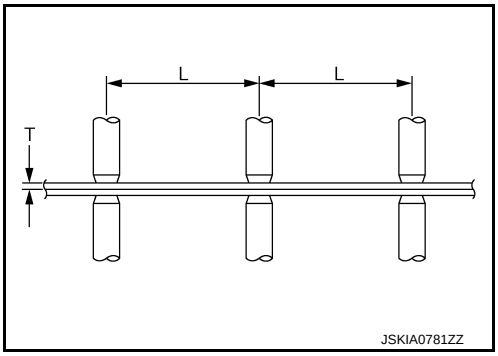
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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



Handling of Ultra High Strength Steel Plate Parts

INFOID:0000000011485511

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.

PREPARATION

RECOMMENDED EQUIPMENT

Body Straightening Equipment

INFOID:0000000011485512

For this vehicle, the body structural tolerances is decreased. Therefore, if the dimension is outside the standard, not only the intrinsic performance for this vehicle is degraded, but also malfunctions such as the uneven tire wear or wind noise may occur.
To make high accurate body repair effectively and keep good repair quality, NISSAN recommend to use CELETTE® advanced collision repair equipment for this vehicle body repair. CELETTE® equipment is approved by NISSAN for this vehicle body structure repair.
See following recommended equipment.

Recommended equipment:

CELETTE® jig bench

CELETTE® MZ + System

- **Universal Piston: 25000.000**
- **Tops (Jig Heads for Underbody): 2506.500**
- **Tops (Jig Heads for Bodyside): 2506.800**

Need ″Overhead gantry supports (9113.63) to use ″Jig Heads for Bodyside″

REPAIRING MATERIAL

Foam Repair

INFOID:0000000011485513

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 or adhesive for sealant (foam material) repair of material used on vehicle.

<Urethane foam for foaming agent>	**3M™ Automix™ Flexible Foam 08463 or equivalent**
<Adhesive for highly rigid foaming agent>	**3M™ Automix™ Panel Bonding Adhesive 08115 or equivalent**

Read instructions on product for fill procedures.

1. Example of foaming agent filling operation procedure

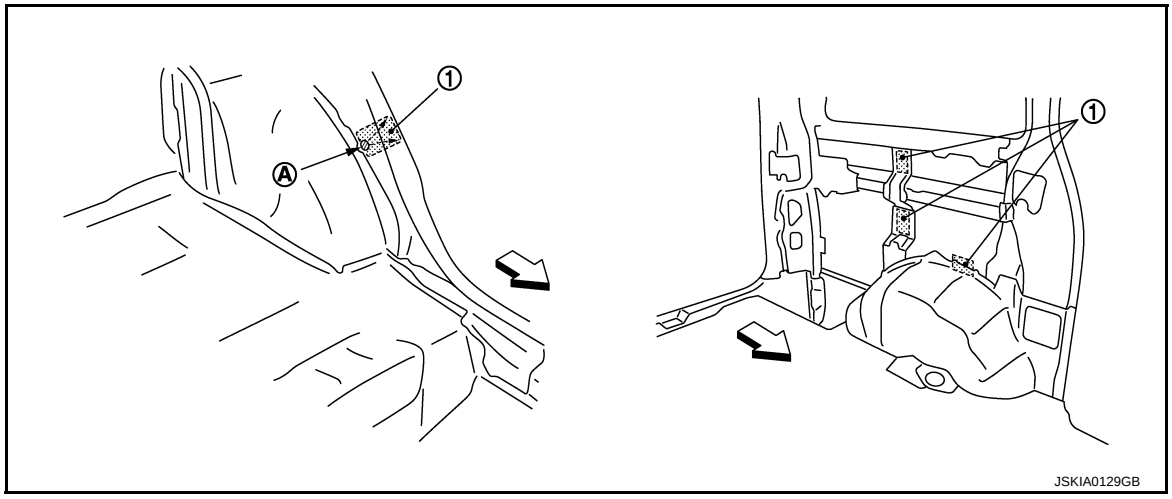
a. Fill procedures after installation of service part.

i. Eliminate foam material remaining on vehicle side.

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

iii. Install service part.

iv. 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

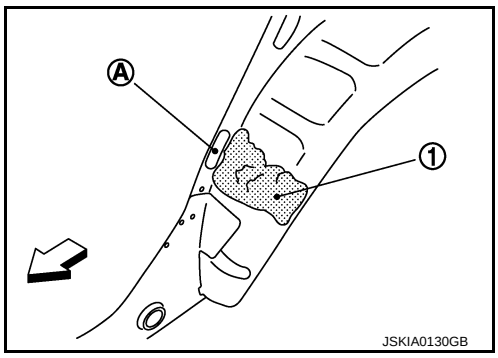
b. Fill procedures before installation of service part.

i. Eliminate foam material remaining on vehicle side.

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

iii. Fill foam material on wheelhouse outer side.

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



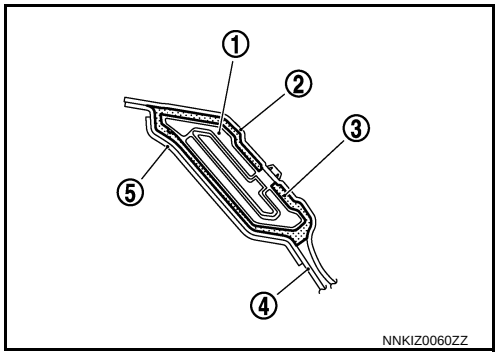
NOTE:
Fill enough to close gap with service part while avoiding flange area.

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

2. Example of highly rigid foaming agent repair procedure

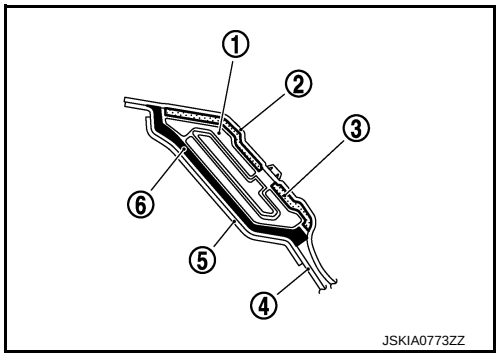
a. Blowing condition of highly rigid foaming agent

1. Insulator (highly rigid foaming agent)
2. Rear pillar reinforcement
3. Foamed area of highly rigid foaming agent
4. Inner rear pillar
5. Inner rear pillar reinforcement



b. Repair condition after applying adhesive

1. Insulator (highly rigid foaming agent)
2. Rear pillar reinforcement
3. Foamed area of highly rigid foaming agent on rear pillar reinforcement side
4. Inner rear pillar
5. Inner rear pillar reinforcement
6. Adhesive (foaming area of highly rigid foaming agent)



CAUTION:
- **Eliminate the foaming agent from the filling area so that the foaming area of highly rigid foaming agent on the insulator does not interfere with the inner rear pillar, and then apply the filler, after degreasing the filling area.**
- **Check the instruction manual of the adhesive for the hardening time.**

INSTRUCTION FOR APPLIED LOCATION OF ADHESIVE

Caution

INFOID:0000000011485514

- Never apply the load to the adhesion parts until the curing is complete. Perform parts assembly and vehicle movement after the curing is complete.
- Check the instruction manual of the adhesive for the hardening time.

BODY COMPONENT PARTS

Service Parts Supply Unit

INFOID:0000000011485515

For the service parts supply unit, pay special attention to the accuracy in the assembly status for parts that require high accuracy.
Therefore, never disassemble and cut parts other than for the purpose of the operations described in this manual.

Underbody Component Parts

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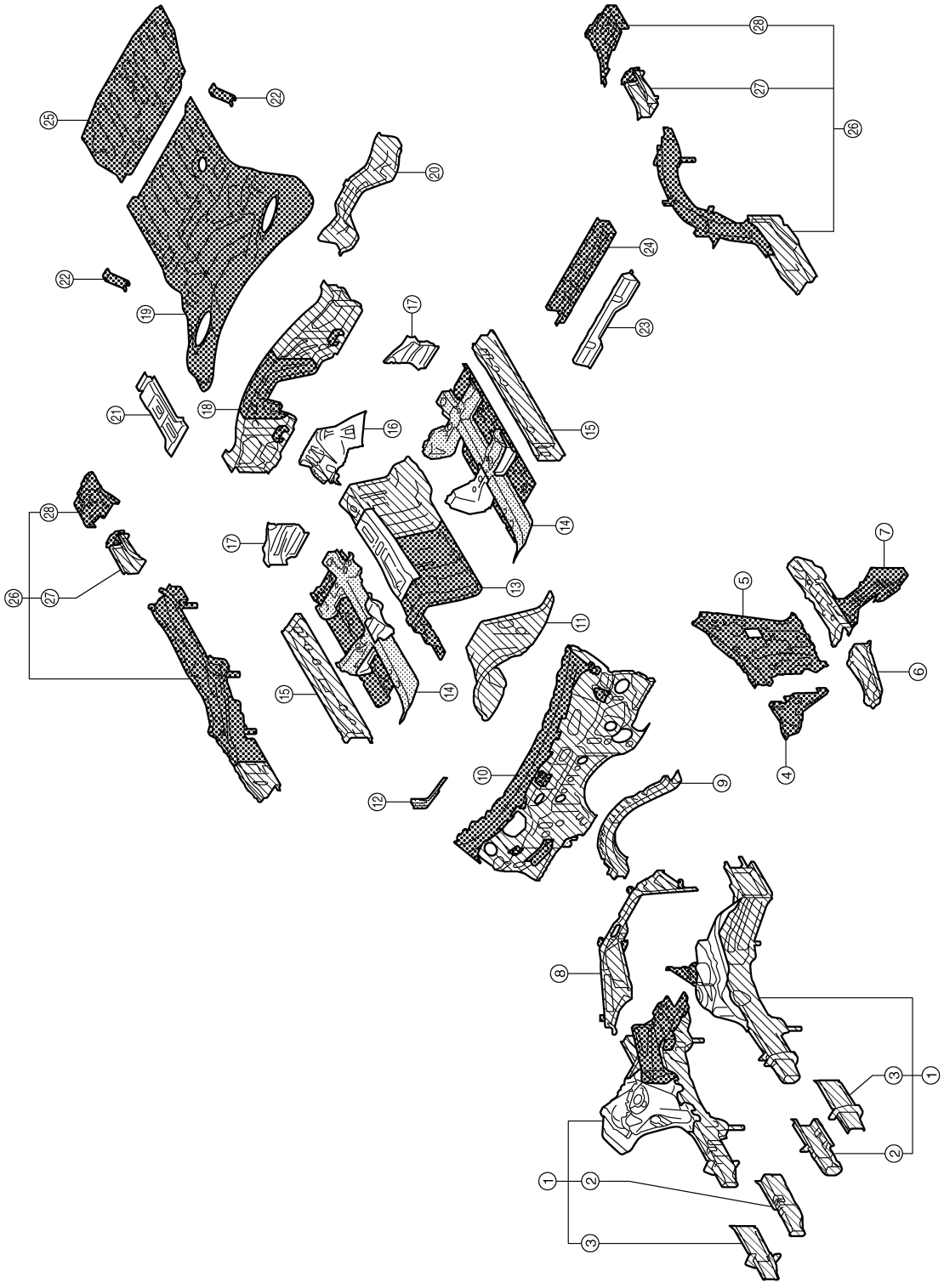

JSKIA2343ZZ

1. Front strut housing assembly with front side member (RH & LH)
2. Front side member (RH & LH)
3. Front side member closing plate (RH & LH)
4. Upper front hoodledge (RH & LH)
5. Upper rear hoodledge (RH & LH)
6. Hoodledge extension (RH & LH)
7. Hoodledge reinforcement (RH & LH)
8. Front cowl top assembly
9. Lower dash crossmember assembly
10. Upper dash
11. Lower dash
12. Center side member reinforcement

13. Front floor center
14. Front floor (RH & LH)
15. Inner sill (RH & LH)
16. Rear floor front extension
17. Front floor rear gusset (RH & LH)
18. Rear seat crossmember
19. Rear floor front
20. Rear floor seat belt anchor reinforcement
21. Sensor mounting bracket assembly
22. Bolt plate (RH & LH)
23. 2nd crossmember
24. Rear crossmember center assembly
25. Rear floor rear
26. Rear side member assembly (RH & LH)
27. Rear side member extension (RH & LH)
28. Rear floor side (RH & LH)

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

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.

Body Component Parts

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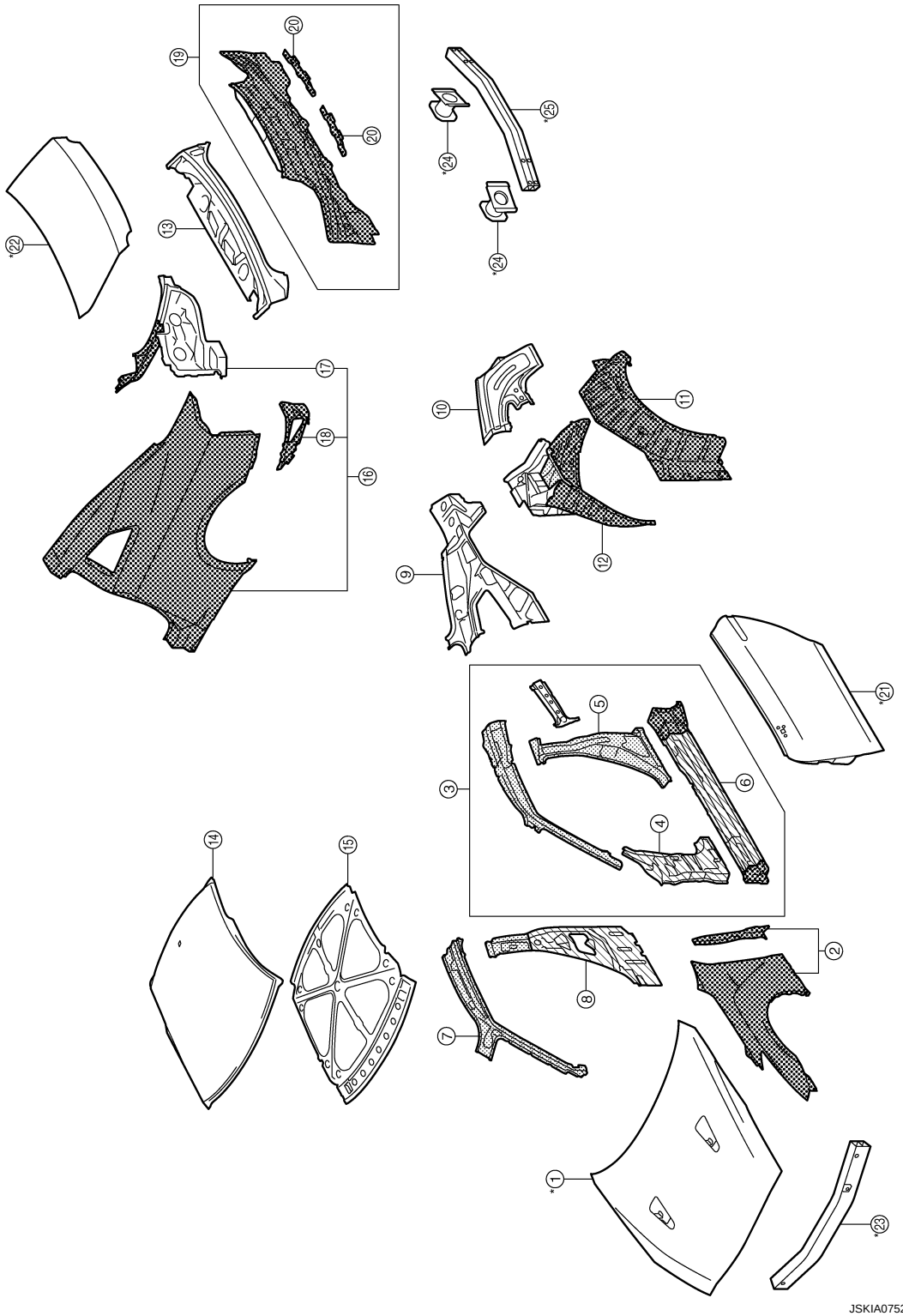


1. Hood	2. Front fender (RH & LH)	3. Side body assembly (RH & LH)
4. Front pillar brace (RH & LH)	5. Lock pillar reinforcement assembly (RH & LH)	6. Outer sill reinforcement (RH & LH)
7. Inner side roof rail (RH & LH)	8. Inner lock pillar assembly (RH & LH)	9. Inner rear pillar (RH & LH)
10. Rear pillar reinforcement (RH & LH)	11. Outer rear wheelhouse (RH & LH)	12. Inner rear wheelhouse (RH & LH)

13. Parcel shelf with rear waist
14. Roof
15. Inner roof
16. Rear fender assembly (RH & LH)
17. Tail pillar assembly (RH & LH)
18. Rear fender extension (RH & LH)
19. Rear panel assembly
20. Rear bumper fascia bracket
21. Front door (RH & LH)
22. Trunk lid
23. Front bumper armature assembly
24. Rear bumper stay (RH & LH)
25. Inner center rear bumper reinforcement assembly

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

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.

REMOVAL AND INSTALLATION

CORROSION PROTECTION

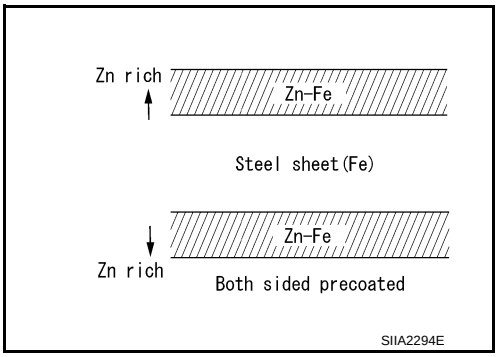
Description

INFOID:0000000011485518

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.



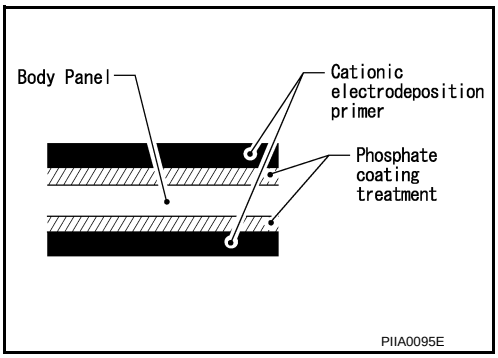
NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

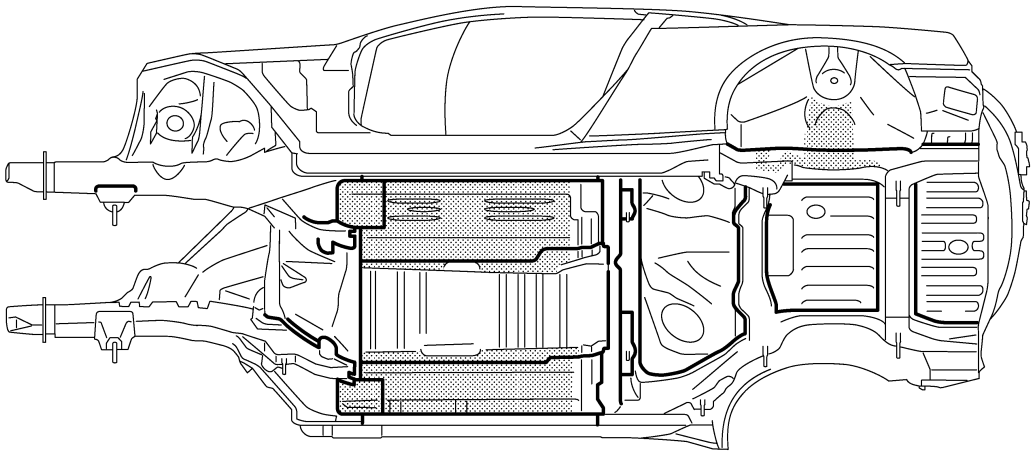
Undercoating

INFOID:0000000011485519

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.



JSKIA0742ZZ

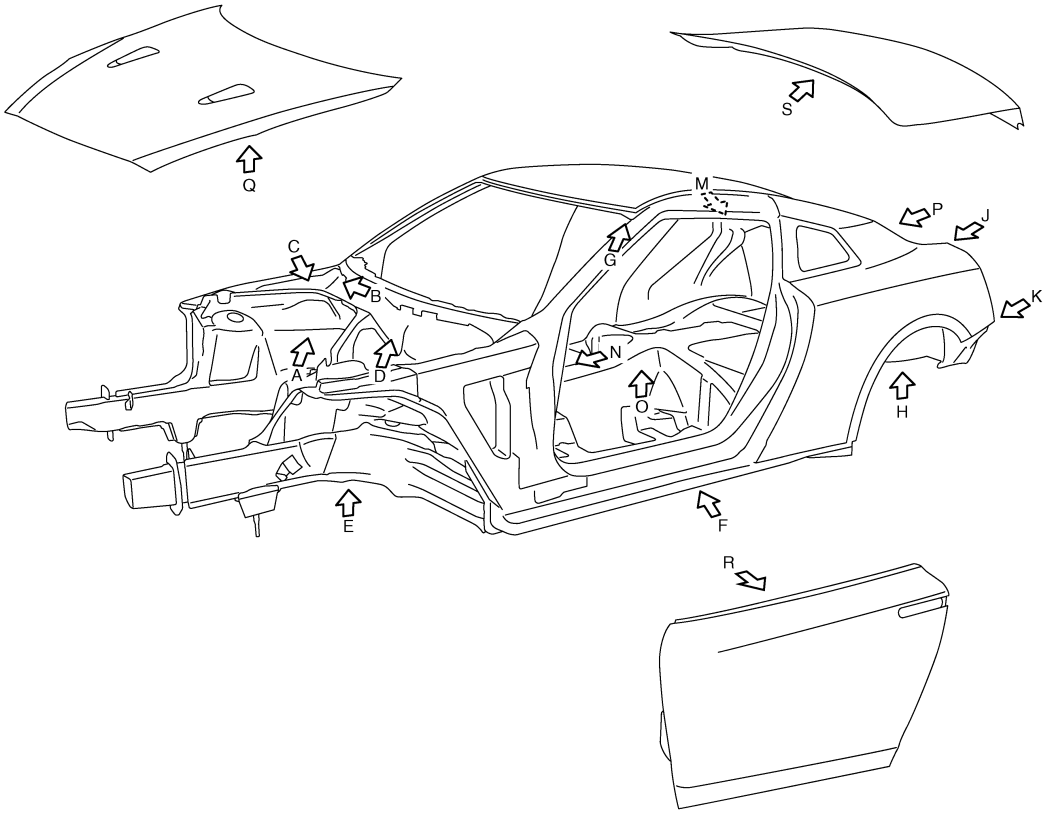
: Undercoated areas
: Sealed portions

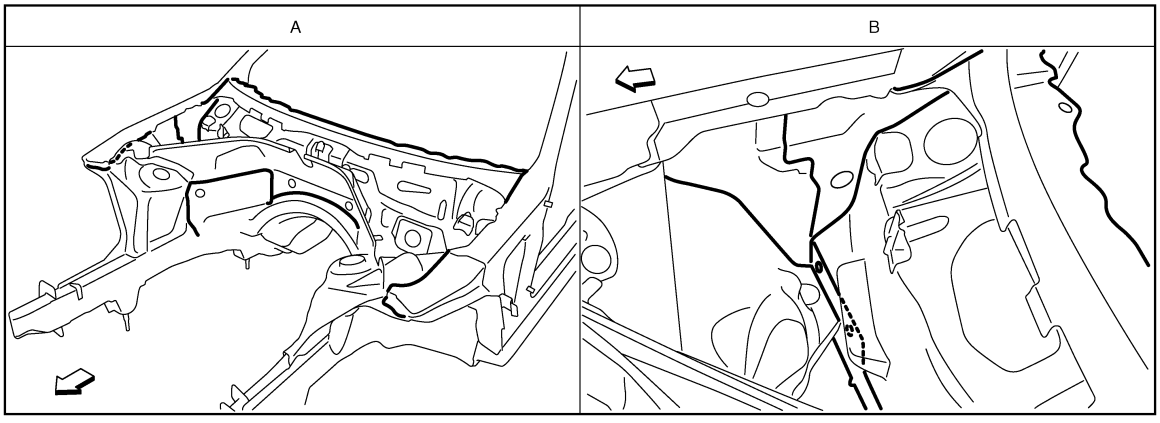
Body Sealing

INFOID:0000000011485520

DESCRIPTION

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.

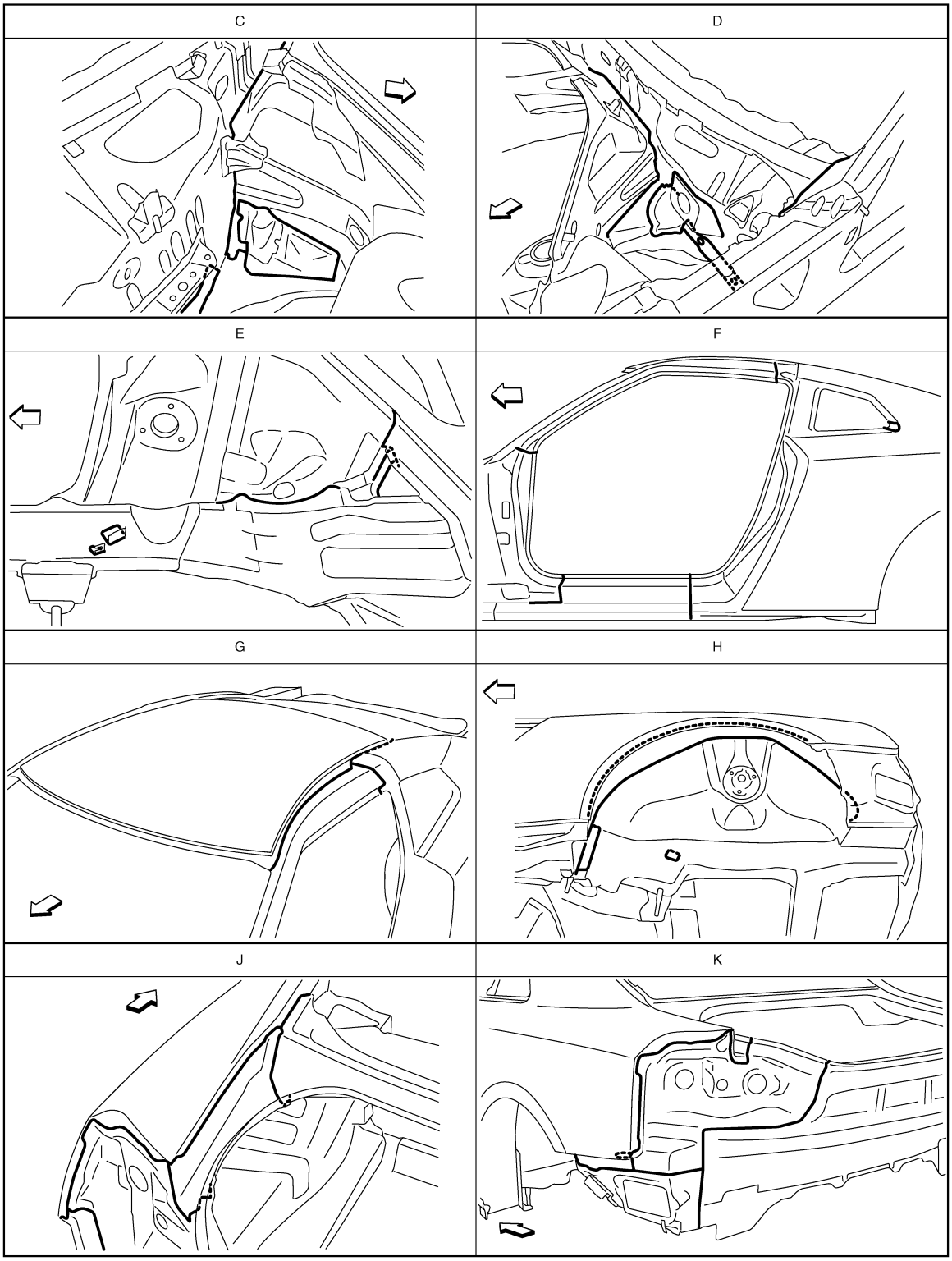




JSKIA1077ZZ

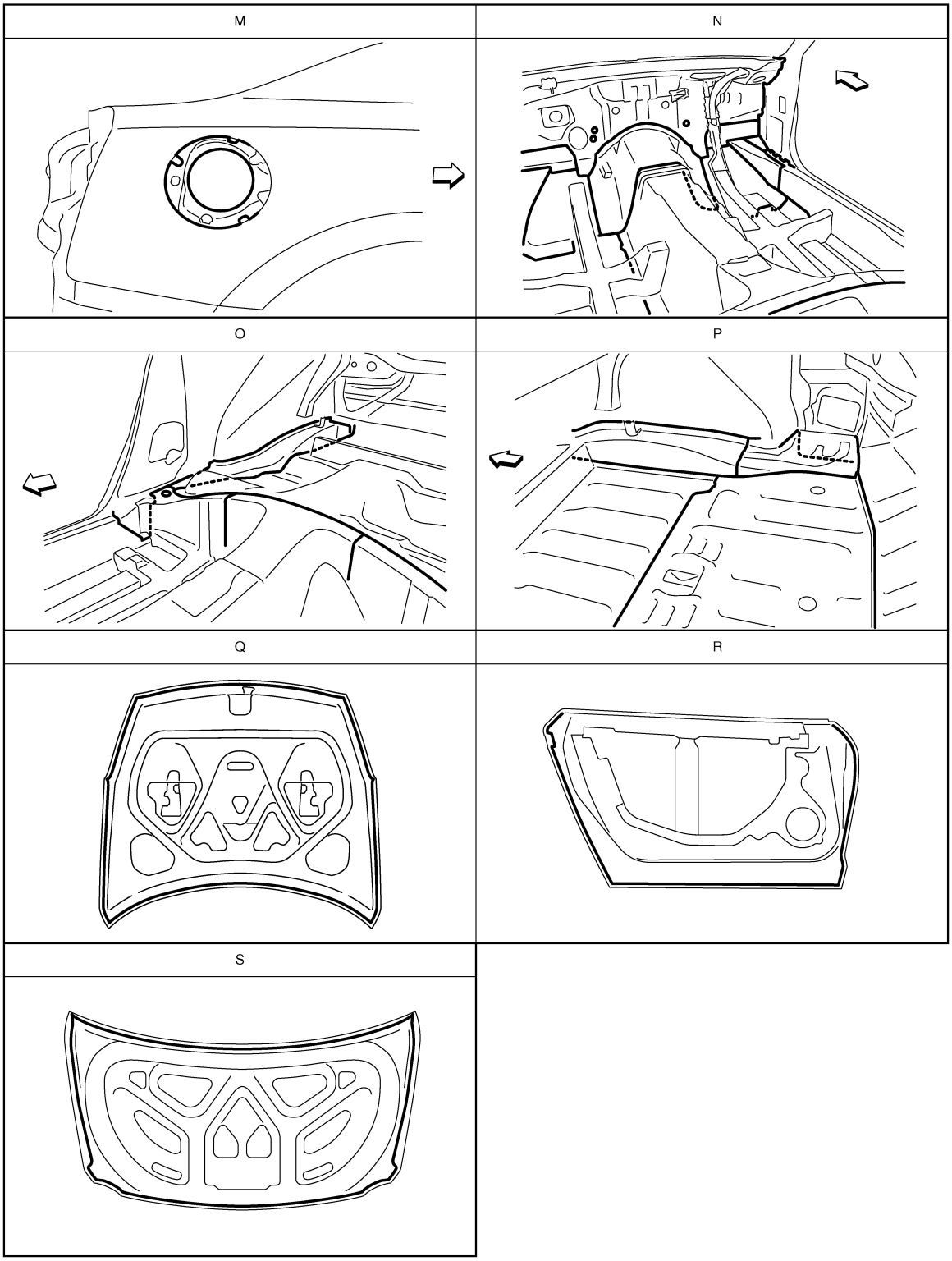
⇦: Vehicle front

▬: Sealed portions



JSKIA2345ZZ

⇦: Vehicle front
▬: Sealed portions



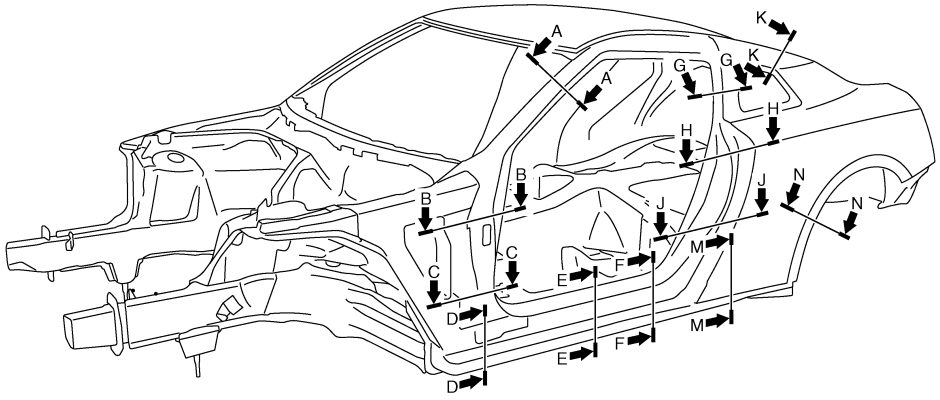
JSKIA2346ZZ

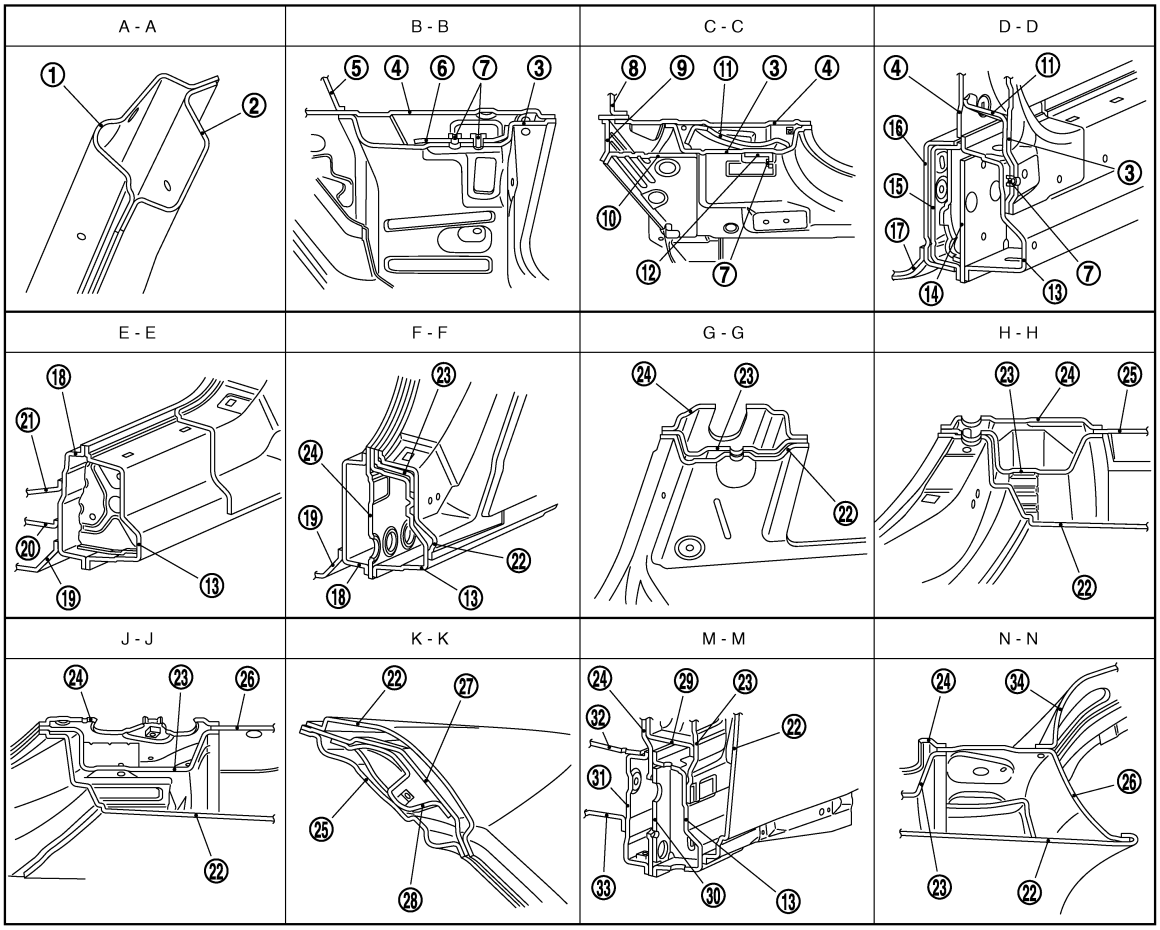
⇦: Vehicle front
▬: Sealed portions

BODY CONSTRUCTION

Body Construction

INFOID:0000000011485521





JSKIA0755ZZ

1. Outer front pillar
2. Inner upper front pillar
3. Front pillar hinge brace
4. Upper rear hoodledge
5. Upper dash
6. Upper hinge plate
7. Weld nut
8. Lower dash upper
9. Hoodledge extension

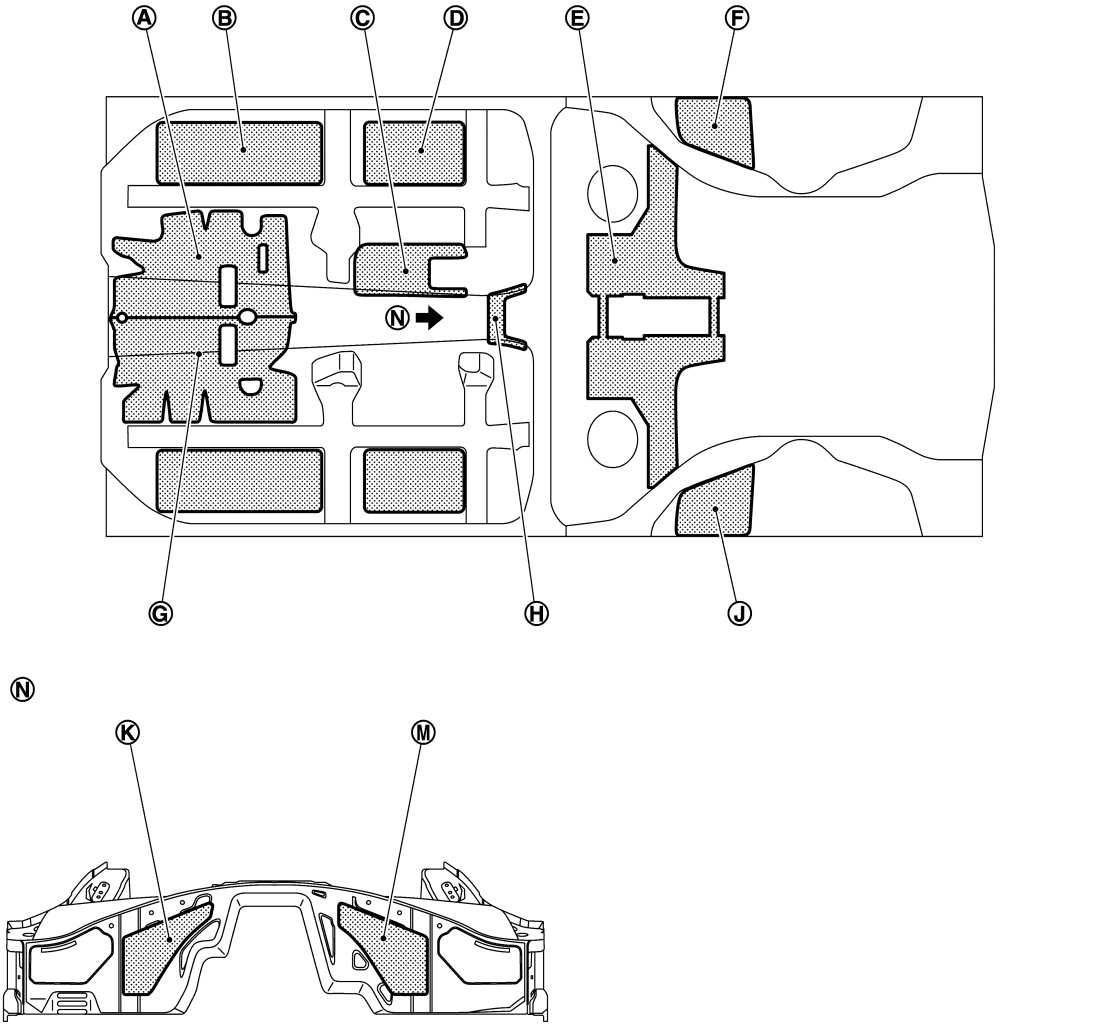
10. Hoodledge reinforcement gusset
11. Lower front pillar gusset
12. Cowl top extension bracket
13. Outer sill reinforcement
14. Outer sill brace
15. Inner sill reinforcement front
16. Front side member
17. Lower dash
18. Inner sill
19. Front floor
20. 2nd crossmember
21. Outer front seat mounting bracket
22. Rear fender
23. Lock pillar reinforcement
24. Inner lock pillar
25. Inner rear pillar
26. Outer rear wheelhouse
27. Outer rear pillar
28. Rear pillar gusset
29. Lower lock pillar reinforcement
30. Outer sill brace
31. Inner sill extension
32. Rear seat crossmember reinforcement
33. Rear seat crossmember
34. Inner rear wheelhouse

EXCEPT NISMO

EXCEPT NISMO : Fusible Insulator Applying Part

INFOID:0000000011485522

Apply the fusible insulator (melsheet) to the floor upper surface and dashboard panel interior side to block noise, vibration, and exhaust gas heat.
Use the fusible insulators Ⓐ, Ⓖ for the front floor set as the service parts. Place these parts in the positions shown in the figure, heat these parts by halogen heaters, etc., and then fix the fusible insulators to the floor.



JSKIA3879ZZ

Unit: mm (in)

Ⓐ T=1.8 (0.071)	Ⓑ T=2.0 (0.079) LH and RH are symmetrical.	Ⓒ T=2.0 (0.079)
Ⓓ T = 2.0 (0.079) LH and RH are symmetrical.	Ⓔ T=3.0 (0.12)	Ⓕ T=2.0 (0.079)
Ⓖ T=1.8 (0.071)	Ⓗ T=2.0 (0.079)	Ⓙ T=2.0 (0.079)
Ⓚ T=3.0 (0.12)	Ⓜ T=3.0 (0.12)	

Ⓝ The figure which looked at rear floor front from vehicle front.

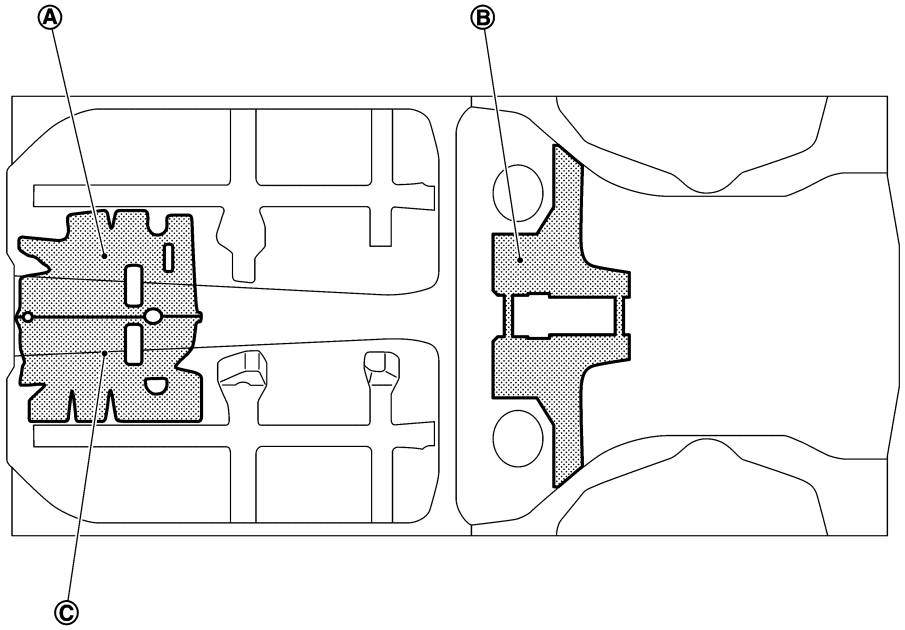
: Fusible insulator applying part

NISMO

NISMO : Fusible Insulator Applying Part

INFOID:0000000011485523

Apply the fusible insulator (melsheet) to the floor upper surface and dashboard panel interior side to block noise, vibration, and exhaust gas heat.
Use the fusible insulators Ⓐ, Ⓒ for the front floor set as the service parts. Place these parts in the positions shown in the figure, heat these parts by halogen heaters, etc., and then fix the fusible insulators to the floor.



JSKIA4644ZZ

Unit: mm (in)

Ⓐ T=1.8 (0.071)	Ⓑ T=3.0 (0.12)	Ⓒ T=1.8 (0.071)

: Fusible insulator applying part

Rear Fender Hemming Process

INFOID:0000000011485524

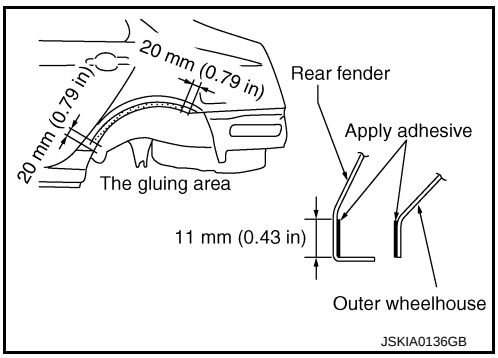
1. A wheel arch is to be installed and hemmed over the left and right outer wheel houses.
2. In order to hem the wheel arch, it is necessary to repair any damaged or defaced parts around outer wheel house.

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

PROCEDURE OF THE HEMMING PROCESS

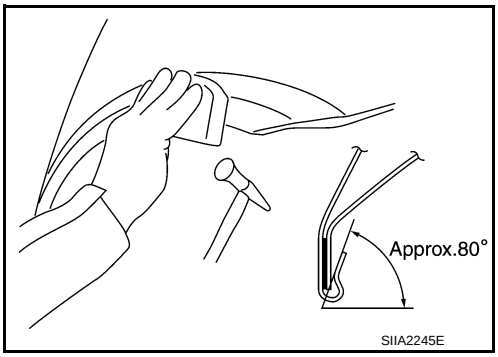
- Peel off old bonding material on the surface of the outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of the outer wheelhouse and rear fender.

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

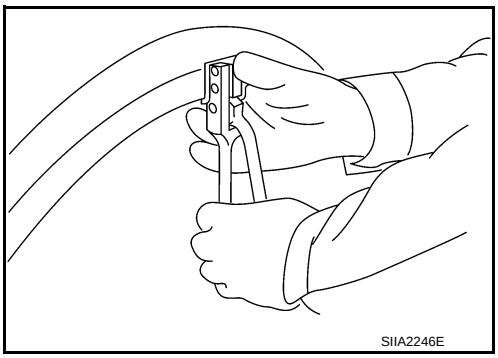


- Attach rear fender to the body of the car, and weld the required part except the hemming part.

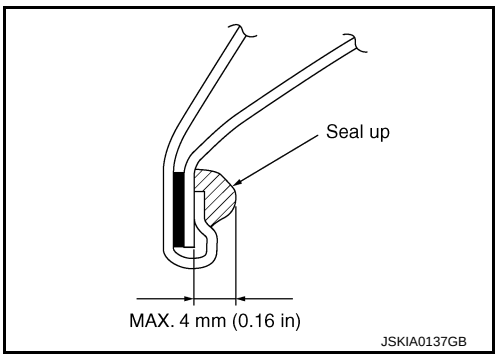
- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.



- 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.



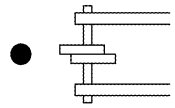
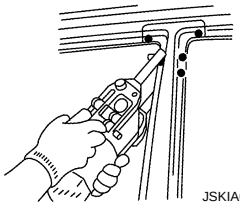
REPLACEMENT OPERATIONS

Description

INFOID:0000000011485525

- 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.

<table>
<tr><th>Symbol marks</th><th colspan="2">Description</th></tr>
<tr><td> 
JSKIA0049ZZ</td><td>2-spot welds</td><td rowspan="2"> 
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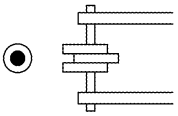
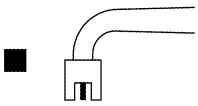
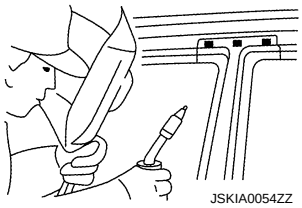
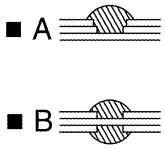
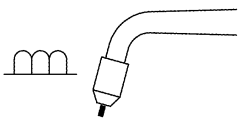
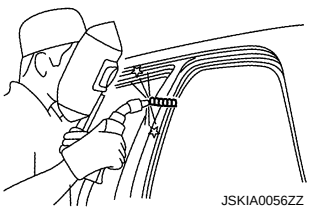
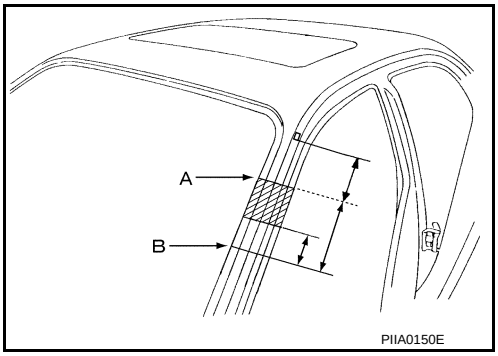
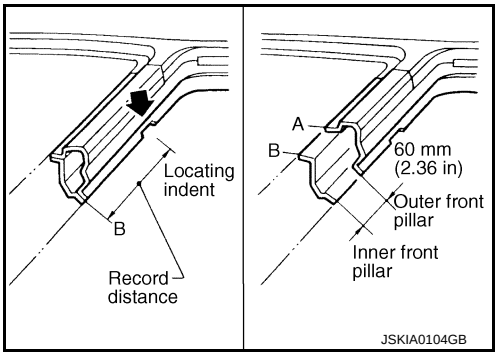
<tr><td> 
JSKIA0050ZZ</td><td>3-spot welds</td></tr>
<tr><td> 
JSKIA0051ZZ</td><td>MIG plug weld</td><td> 
JSKIA0054ZZ
For 3 panels plug weld method
 
JSKIA0055ZZ</td></tr>
<tr><td> 
JSKIA0052ZZ</td><td>MIG seam weld / Point weld</td><td> 
JSKIA0056ZZ</td></tr>
</table>

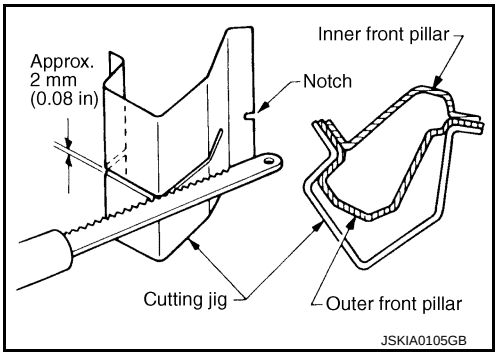
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.



- 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.

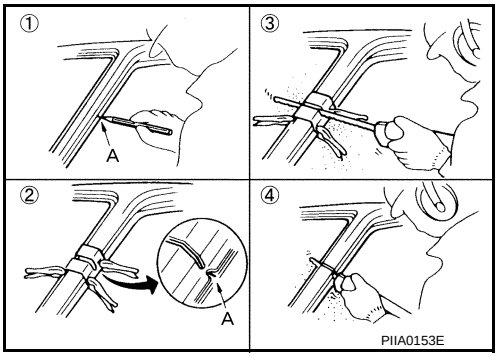


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.



- 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.



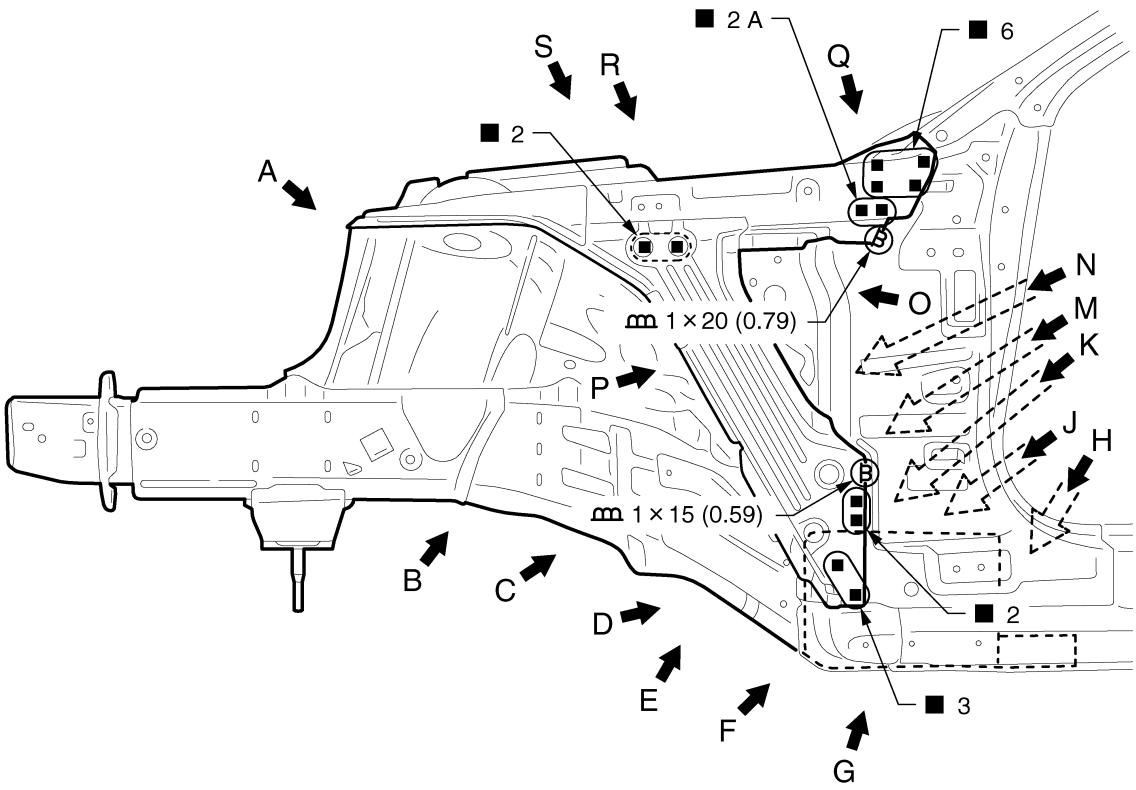
EXCEPT NISMO

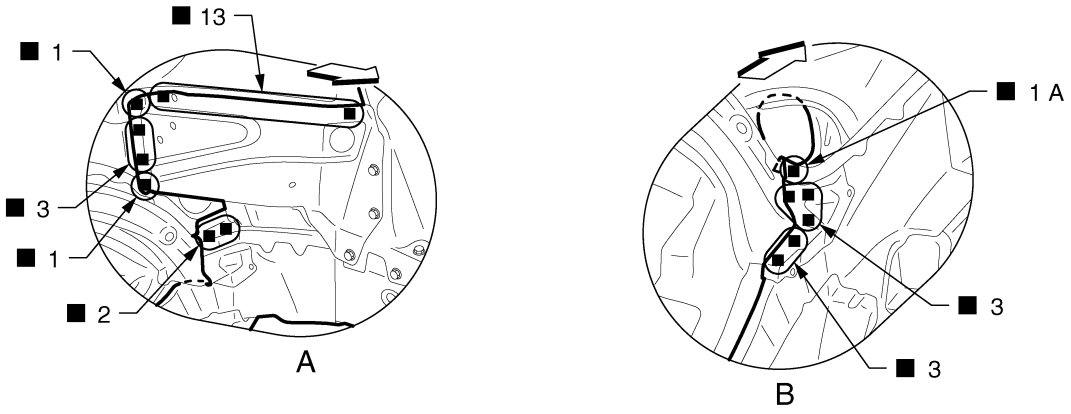
EXCEPT NISMO : Hoodledge Panel and Front Side Member

INFOID:0000000011485526

CAUTION:

Refer to ″Removal procedure of aluminum strut housing adhesive joint″ and ″Installation procedure of aluminum strut housing adhesive joint″ when replacing and reusing the hoodledge extension and hoodledge reinforcement.





JSKIA2670GB

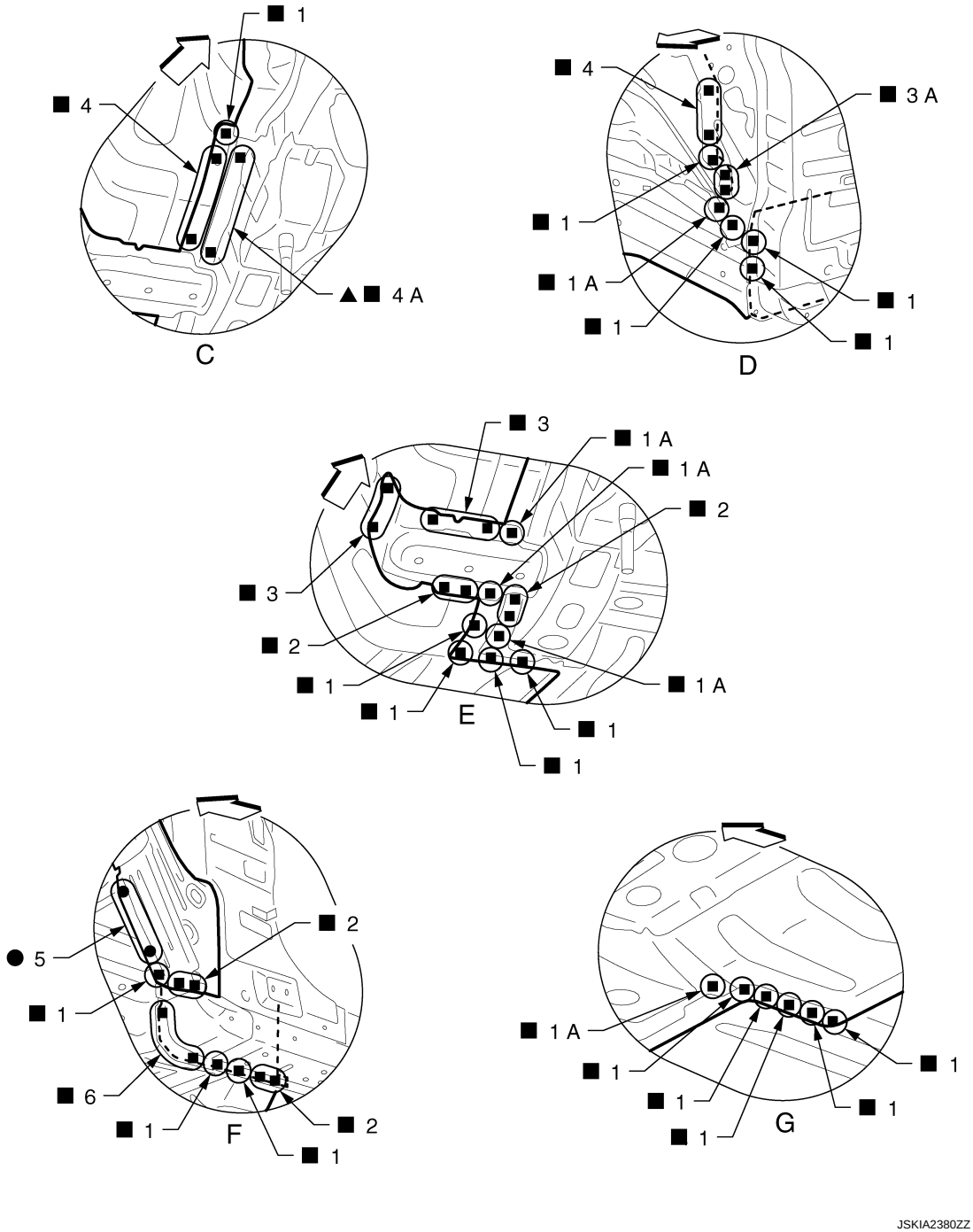
Unit: mm (in)

⇦: Vehicle front

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

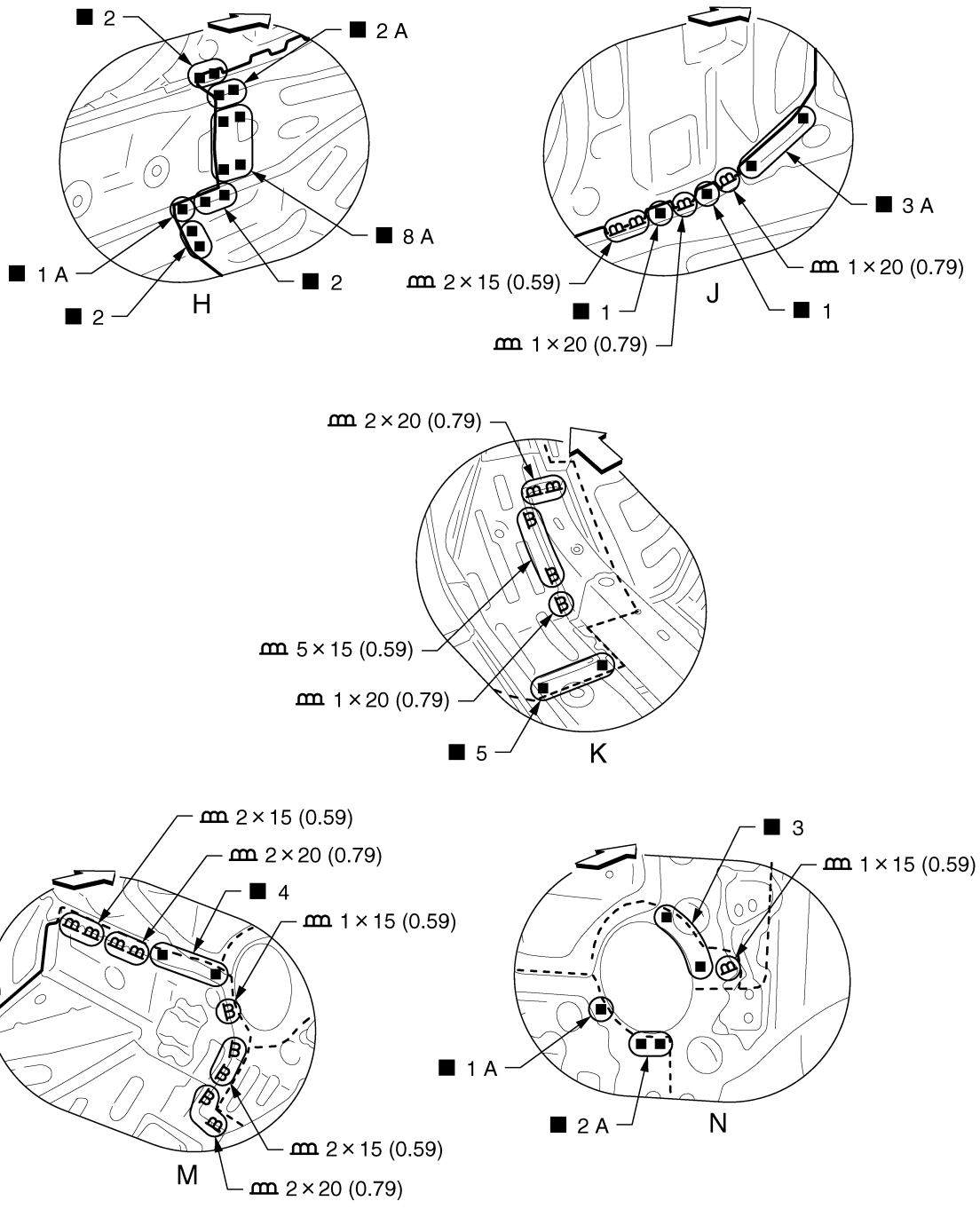
Replacement parts

- Front strut housing assembly with front side member (LH)
- Hoodledge extension (LH)
- Hoodledge reinforcement (LH)
- Upper front hoodledge (LH)



⇦: Vehicle front

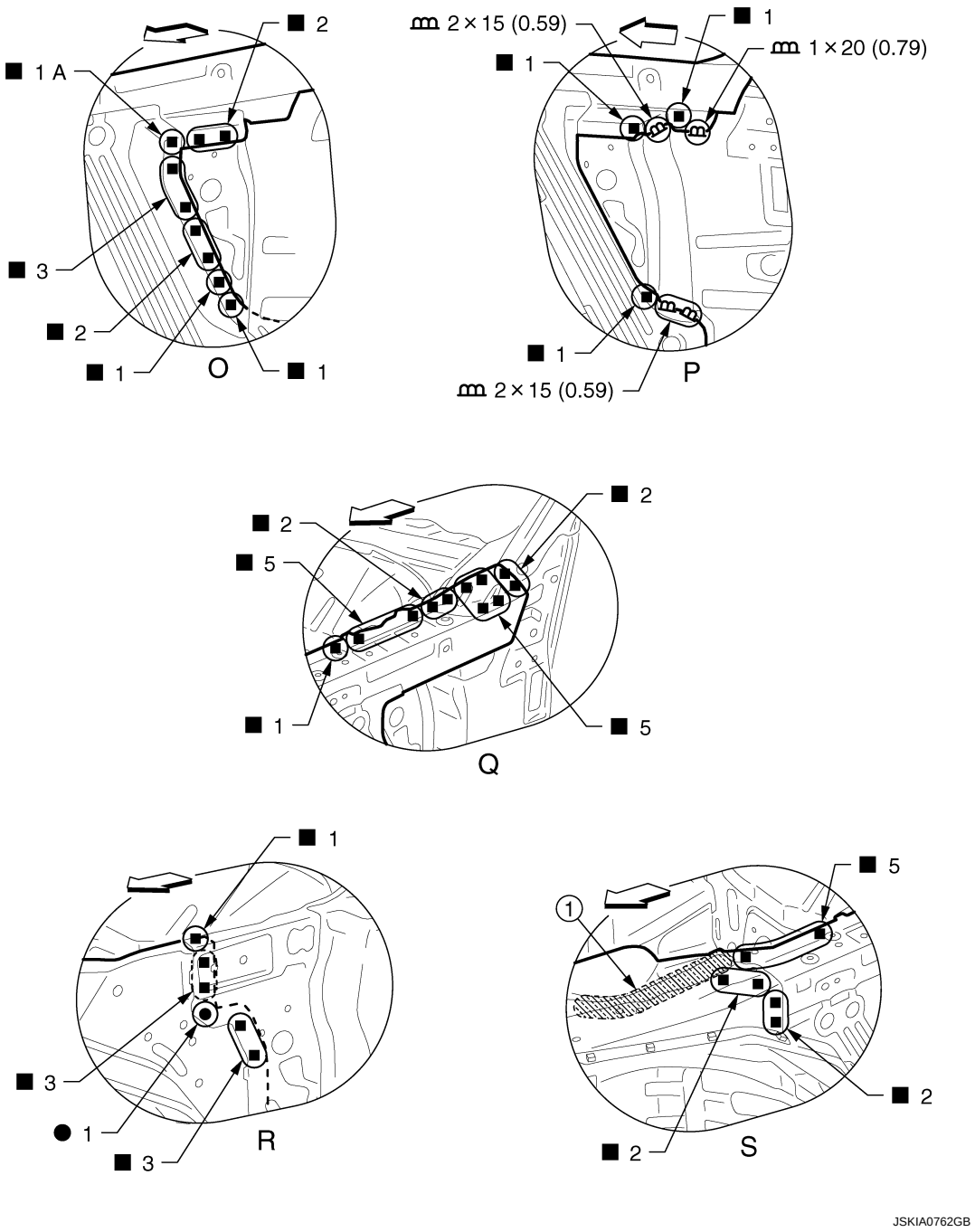
▲: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).



JSKIA0839GB

Unit: mm (in)

⇦: Vehicle front



1. Adhesive (3M™ Scotch-Weld™ Epoxy Adhesive DP420 Off-White Duo-Pak or equivalent)

Unit: mm (in)

⇦: Vehicle front

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

View R: Before installing hoodledge reinforcement
View S: Cool the aluminum strut housing using compressed air to avoid the heat applied at the welding procedure.

REMOVAL PROCEDURE OF ALUMINUM STRUT HOUSING ADHESIVE JOINT

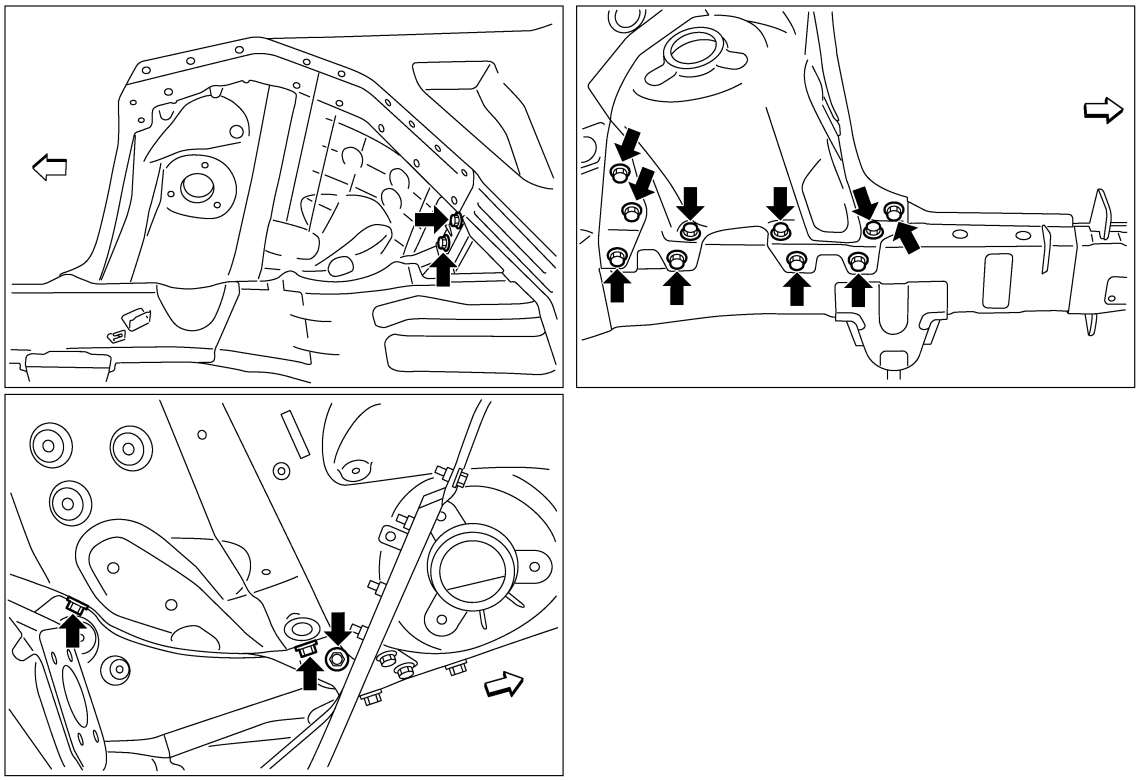
CAUTION:

- **Always perform the following procedure to visually check the strut housing for deformation and perform the crack inspection (dye penetrant test) when the vehicle is damaged.**

Crack inspection procedure (Follow the manufacturer's directions for proper usage.)

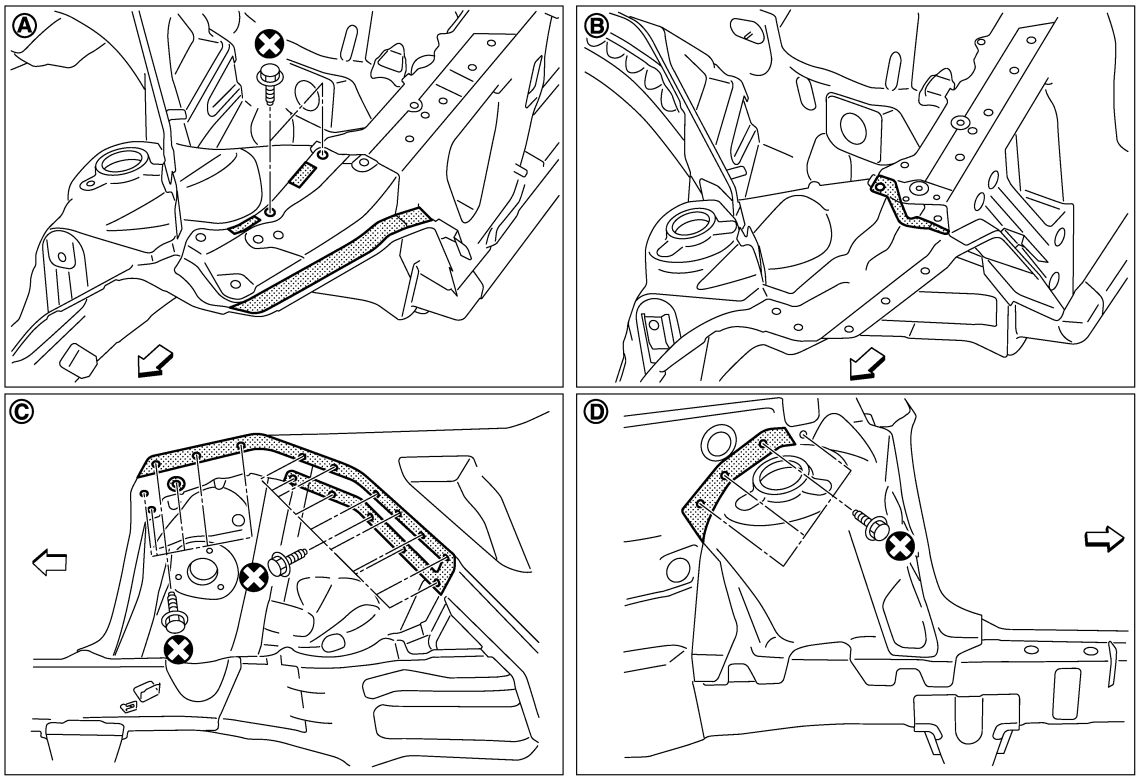
1. **Spray the cleaning solution on the inspection surface to clean the surface.**
2. **Spray the penetrant liquid on the inspection surface and wait until the liquid has penetrates thoroughly.**
3. **Wipe out any excess penetrant liquid on the inspection surface and then wipe out again with a cloth moistened by a little cleaning solution.**
4. **Spray the developer on the inspection surface.**
5. **A red indication appears on damaged area.**

- **Always use the specified bolt with its surface finished.**
  Never use bolts other than those that are specified, otherwise electric corrosion occurs.
- **Never reuse the removed specified bolts.**
- **Never use an impact wrench to remove or install the mounting bolt.**
- **Never remove the joint bolts (15) between side member and strut housing that are shown in the figure.**



JSKIA0840ZZ

⇦: Vehicle front
⬅: Never remove



JSKIA0757ZZ

A. Hoodledge extension
B. Hoodledge reinforcement
C. Hoodledge extension, hoodledge reinforcement, and upper front hoodledge
D. Front cowl top assembly

⇦: Vehicle front

: Adhesive exfoliated position

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

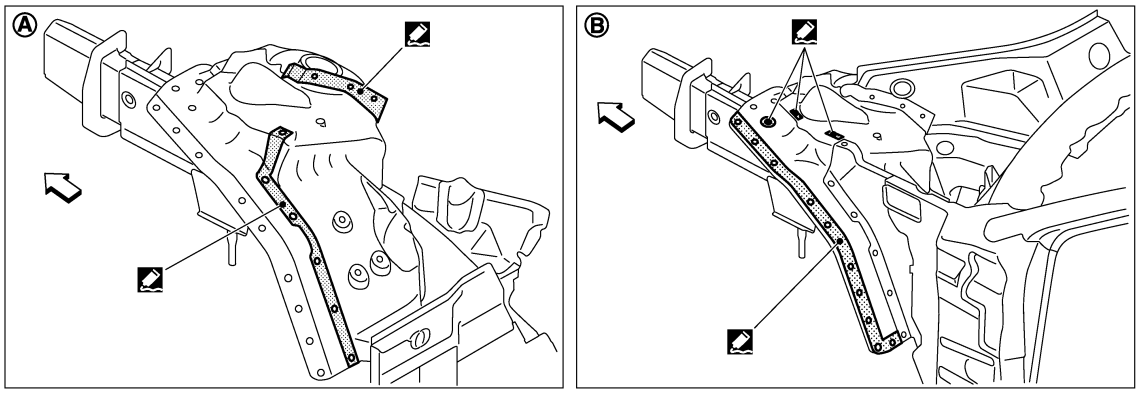
1. Remove the mounting bolts and spot welding of the hoodledge extension.
2. Set the temperature gauge (the infrared non-contact temperature gauge is recommended for temperature management) to the strut housing, and then heat up to 110°C (230°F) using a halogen heater.
   CAUTION:
   The heating temperature should not exceed 110°C (230°F).
3. Use a chisel while heating the hoodledge extension, insert it between the hoodledge extension and the strut housing. Then slightly separate the hoodledge extension while ungluing the adhesive from the front.
   CAUTION:
   Never damage the strut housing and the portions where the strut housing is bonded.
4. Eliminate the adhesive that remains on the strut housing and the portions where the strut housing is bonded with a disc sander.
5. If the coating on the joint surface with the strut housing and the vehicle is peeled off, apply epoxy primer on the surface to prevent electric corrosion.
6. Remove the hoodledge reinforcement, upper front hoodledge, and front cowl top assembly while observing the procedure and precautions above.

INSTALLATION PROCEDURE OF ALUMINUM STRUT HOUSING ADHESIVE JOINT

CAUTION:

- **Always use the specified bolt with its surface finished.**
  Never use bolts other than those that are specified, otherwise electric corrosion may occur.
- **Never reuse the removed specified bolts.**
- **Never use an impact wrench to remove or install the mounting bolt.**

- **Apply the adhesive, after degreasing its application area.**
- **Check the instruction manual of the adhesive for the hardening time.**



NNKIZ0046ZZ

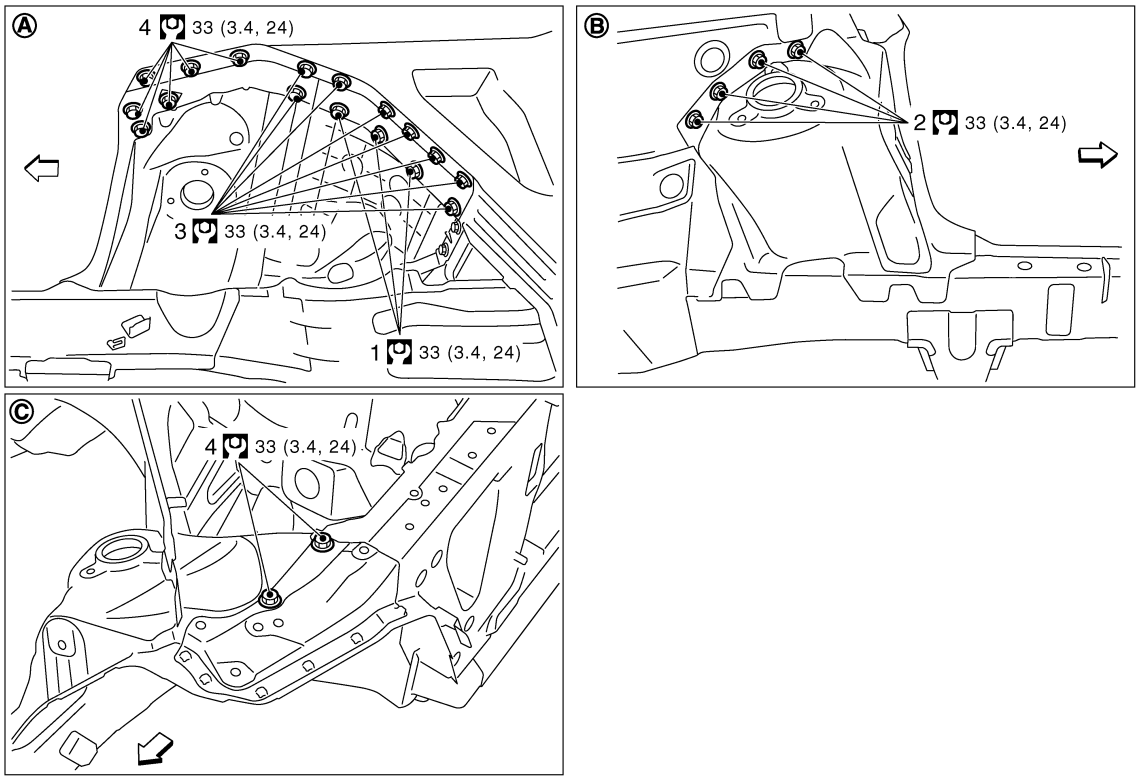
A. Bonded area between front cowl top assembly and upper front hoodledge
B. Bonded area between hoodledge extension and hoodledge reinforcement

⇦: Vehicle front

: 3M™ Scotch-Weld™ Epoxy Adhesive DP420 Off-White Duo-Pak or equivalent

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Apply the adhesive to the bonded area (strut housing side) between front cowl top assembly (A) of strut housing and upper front hoodledge (A) before temporarily installing the service parts to the vehicle.
CAUTION:
Apply the adhesive so that it protrudes from the bonded area (the flange end should be covered with the adhesive) when temporarily installing and tightening the service parts.
Add the adhesive to the area where the flange area is not covered with the adhesive. Then, smooth it with a spatula so that the flange end is covered with the adhesive.



JSKIA0758GB

A. Joint with hoodledge extension, hoodledge reinforcement, and upper front hoodledge
B. Joint with front cowl top assembly
C. Joint with hoodledge extension

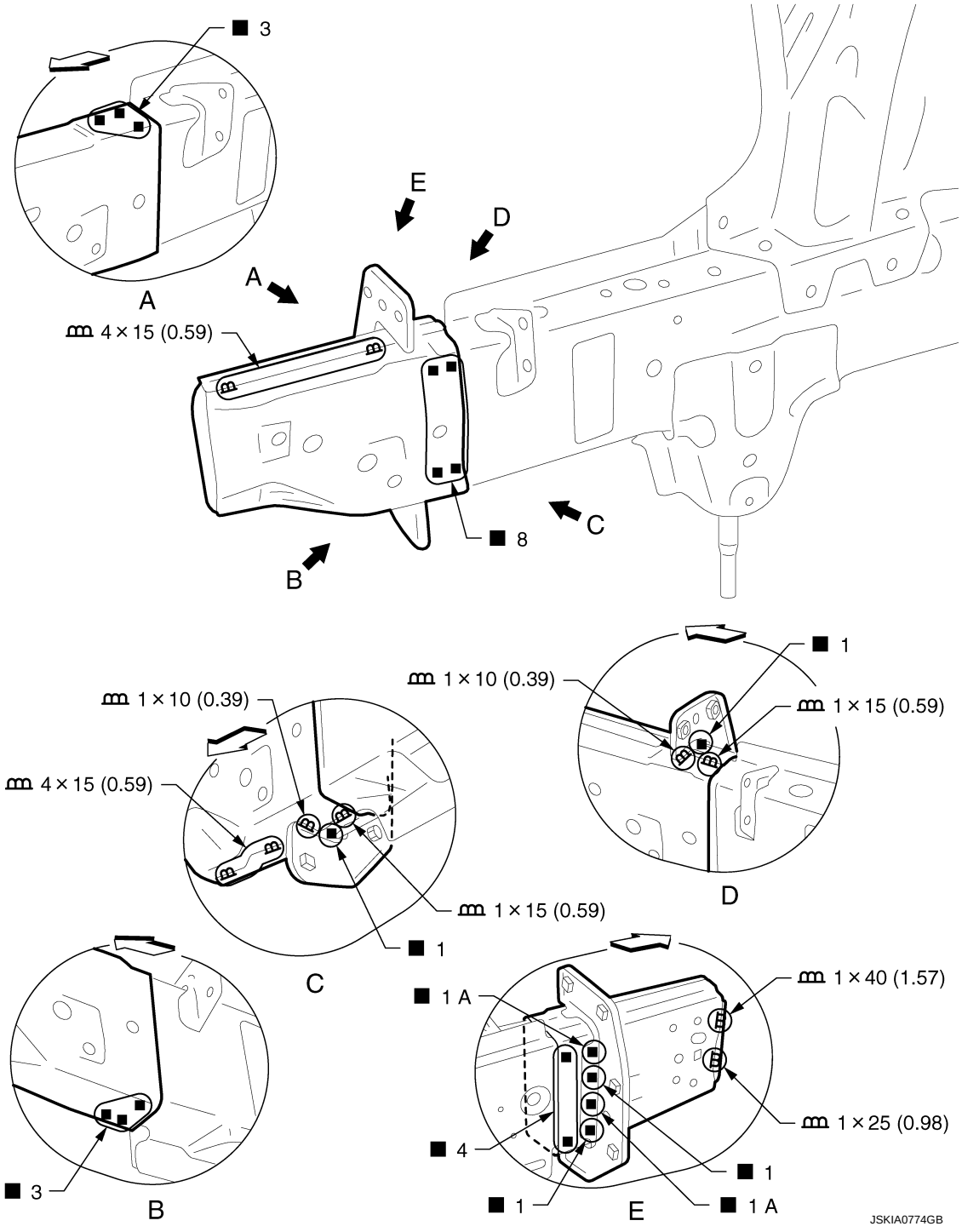
⇦: Vehicle front

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

2. Temporarily install the parts before hardening the adhesive, tighten the mounting bolts of upper front hoodledge (1) and front cowl top assembly (2) evenly in 2 or 3 steps in the order shown in the figure, and then tighten bolts to the specified torque.
3. Install hoodledge reinforcement (3) and hoodledge extension (4) in this order. Observe the procedure and precautions above.

EXCEPT NISMO : Front Side Member

INFOID:0000000011485527



Unit: mm (in)

⇦ : Vehicle front

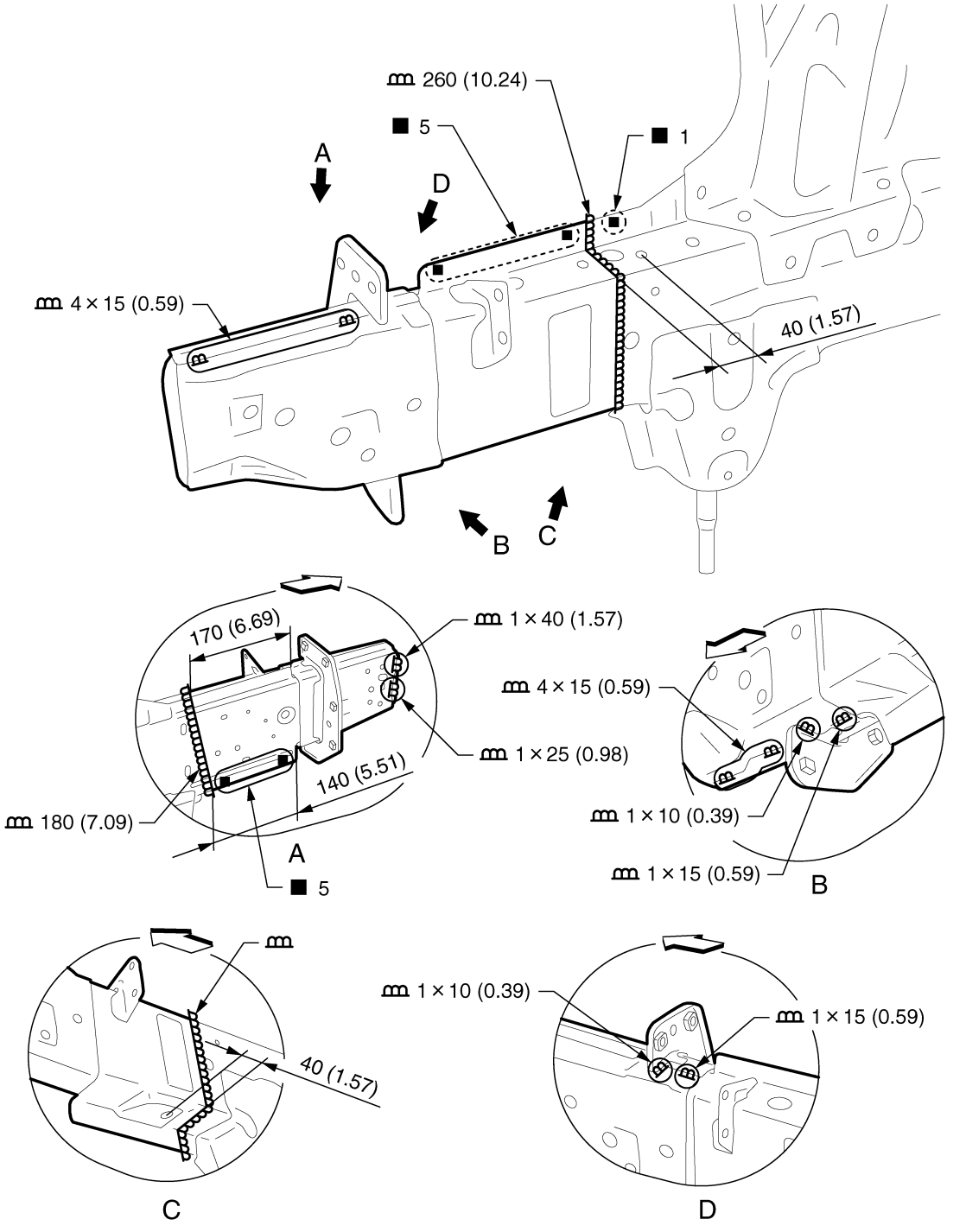
Replacement parts

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

View A and B: Before installing front side member closing plate

EXCEPT NISMO : Front Side Member (Partial Replacement)

INFOID:0000000011485528



NNKIZ0049GB

Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

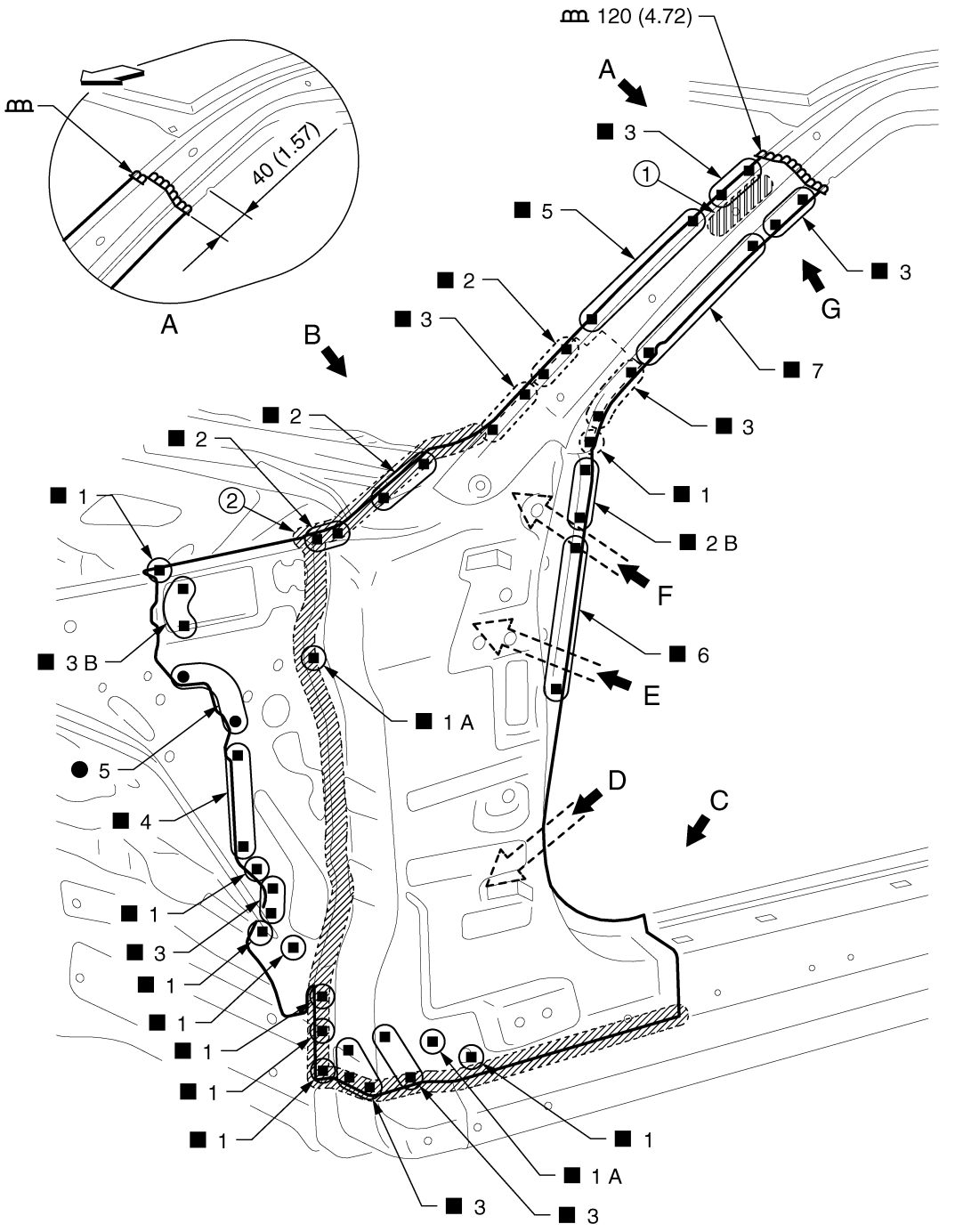
- Front side member (RH)
- Front side member closing plate (RH)

EXCEPT NISMO : Front Pillar

INFOID:0000000011485529

Work after hoodledge reinforcement is removed.

CAUTION:
Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding.
After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.



JSKIA0763GB

1. Urethane foam
2. Body sealing

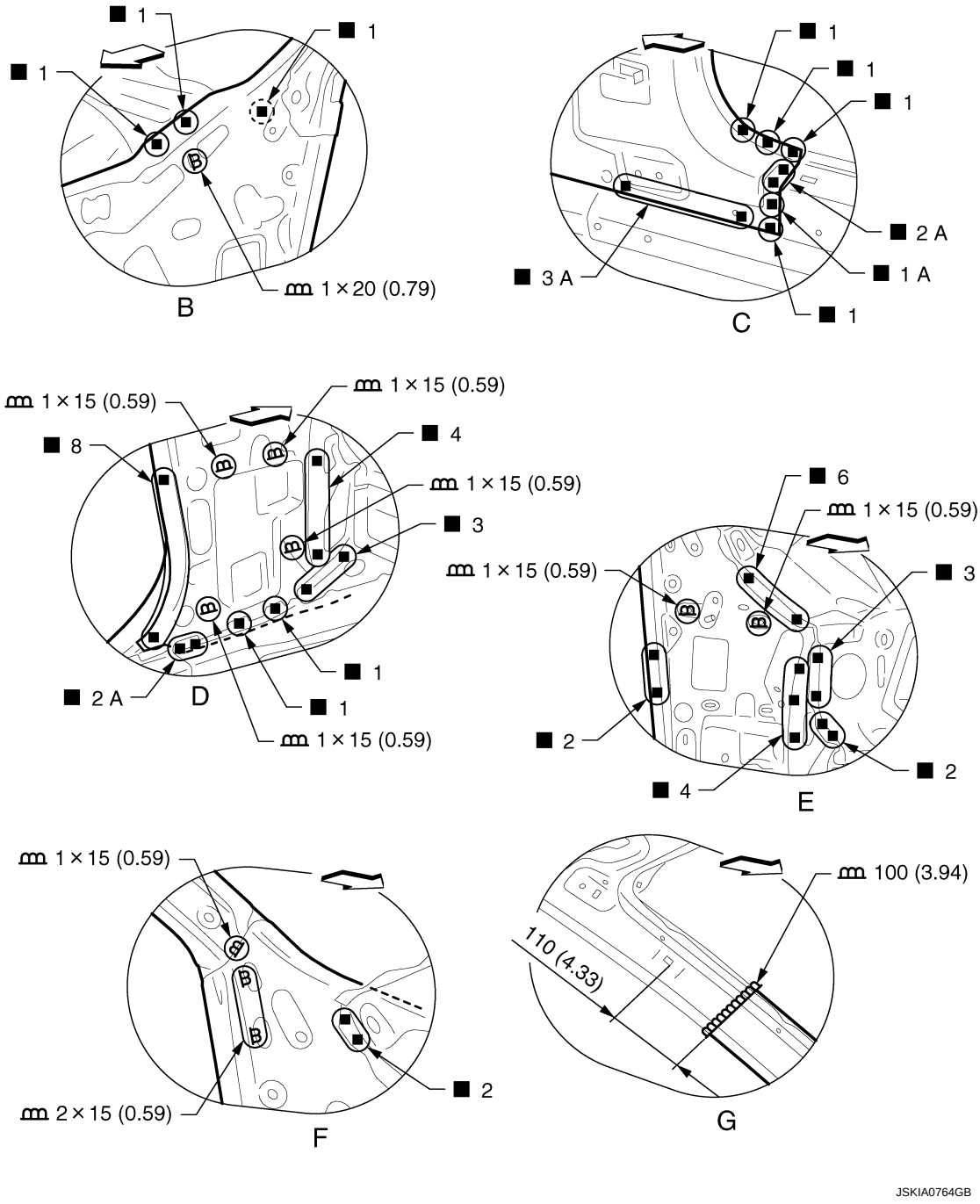
Unit: mm (in)

⇦: Vehicle front

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

Replaced parts

- Side body assembly (LH)
- Upper rear hoodledge (LH)
- Inner side roof rail



JSKIA0764GB

Unit: mm (in)

⇦: Vehicle front

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

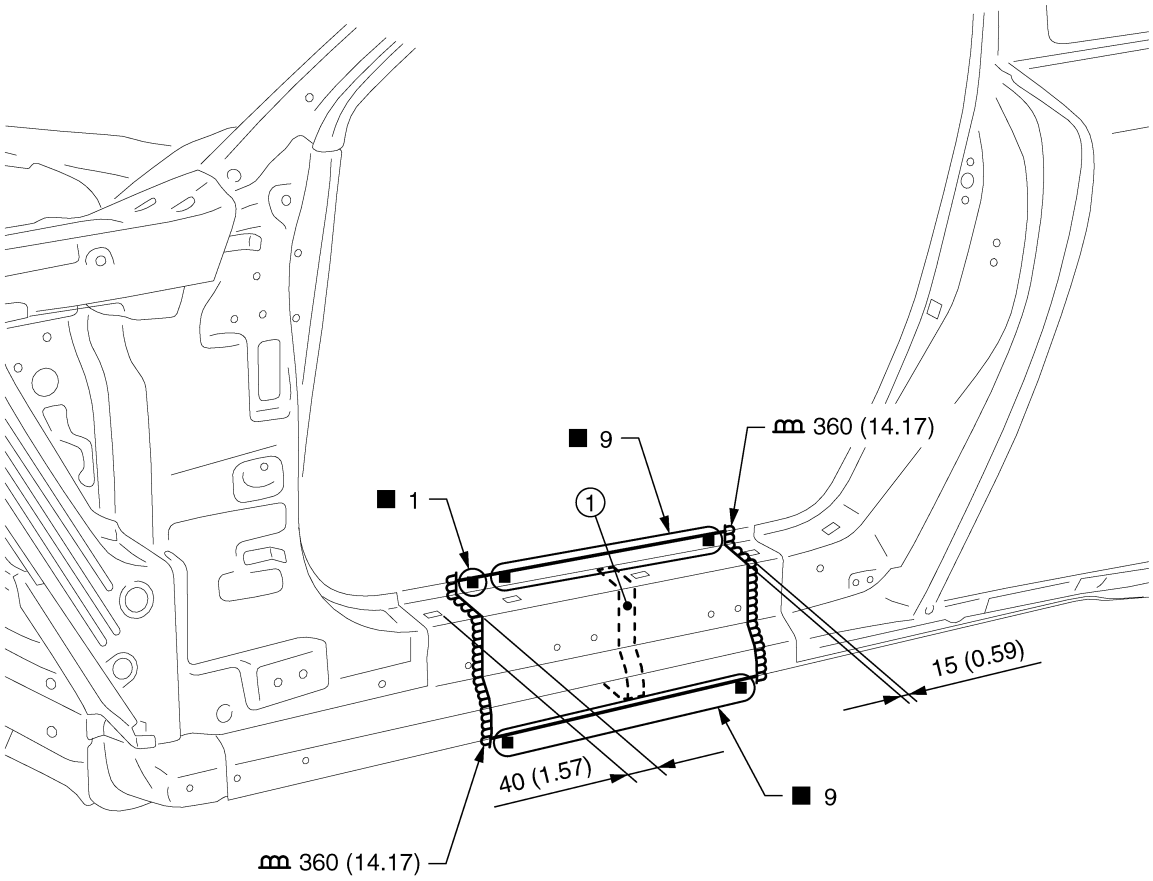
View B: Before installing side body assembly

EXCEPT NISMO : Outer Sill (Partial Replacement)

INFOID:0000000011485530

CAUTION:

Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding.
After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.



NNKIZ0024GB

1. Outer sill brace

Unit: mm (in)

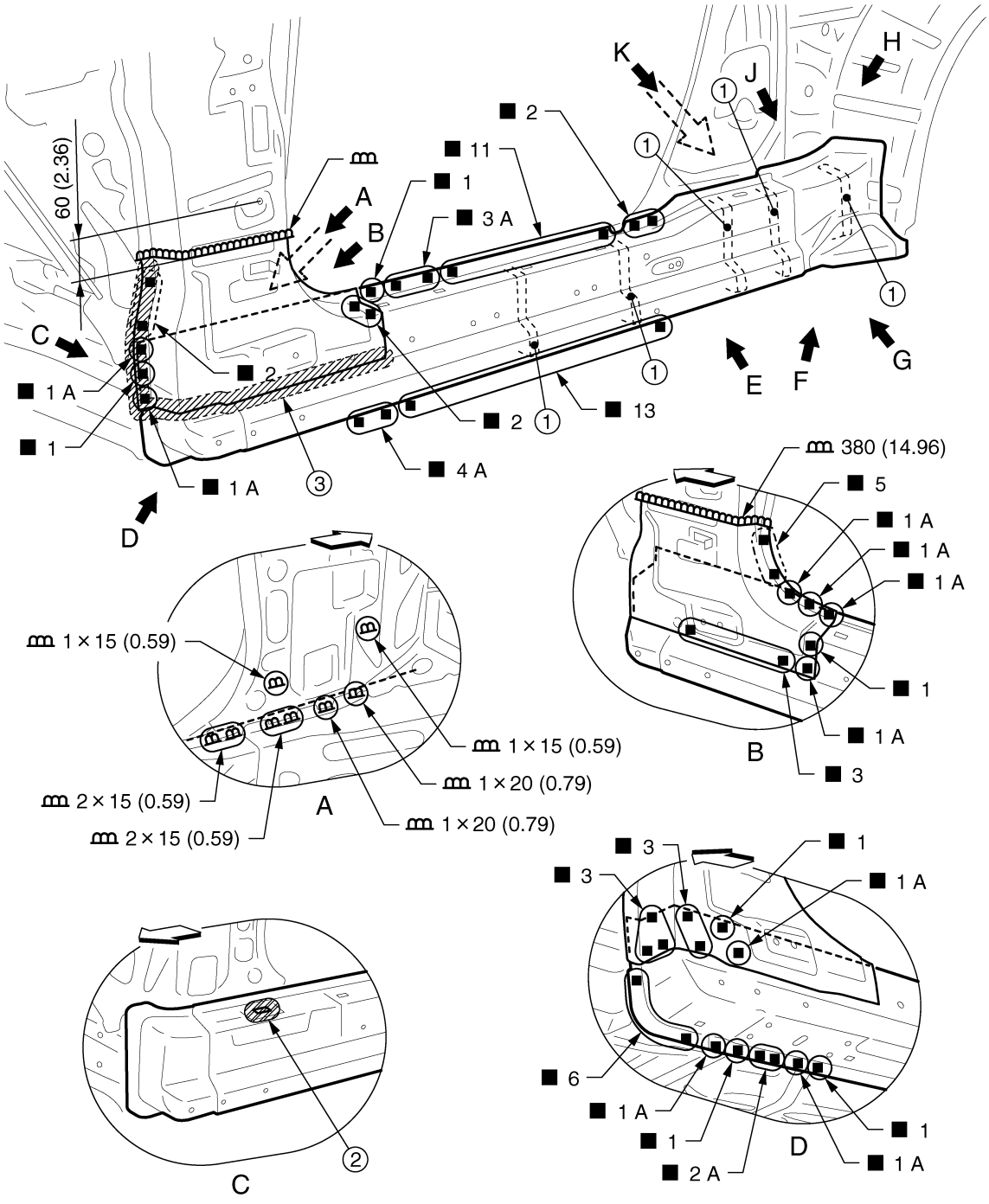
Replacement parts

- Outer sill reinforcement (LH)

EXCEPT NISMO : Outer Sill

INFOID:0000000011485531

Work after hoodledge reinforcement, rear fender, and lock pillar reinforcement are removed.
Remove the front pillar brace (reusable).



1. Outer sill brace
2. Urethane foam
3. Body sealing

Unit: mm (in)

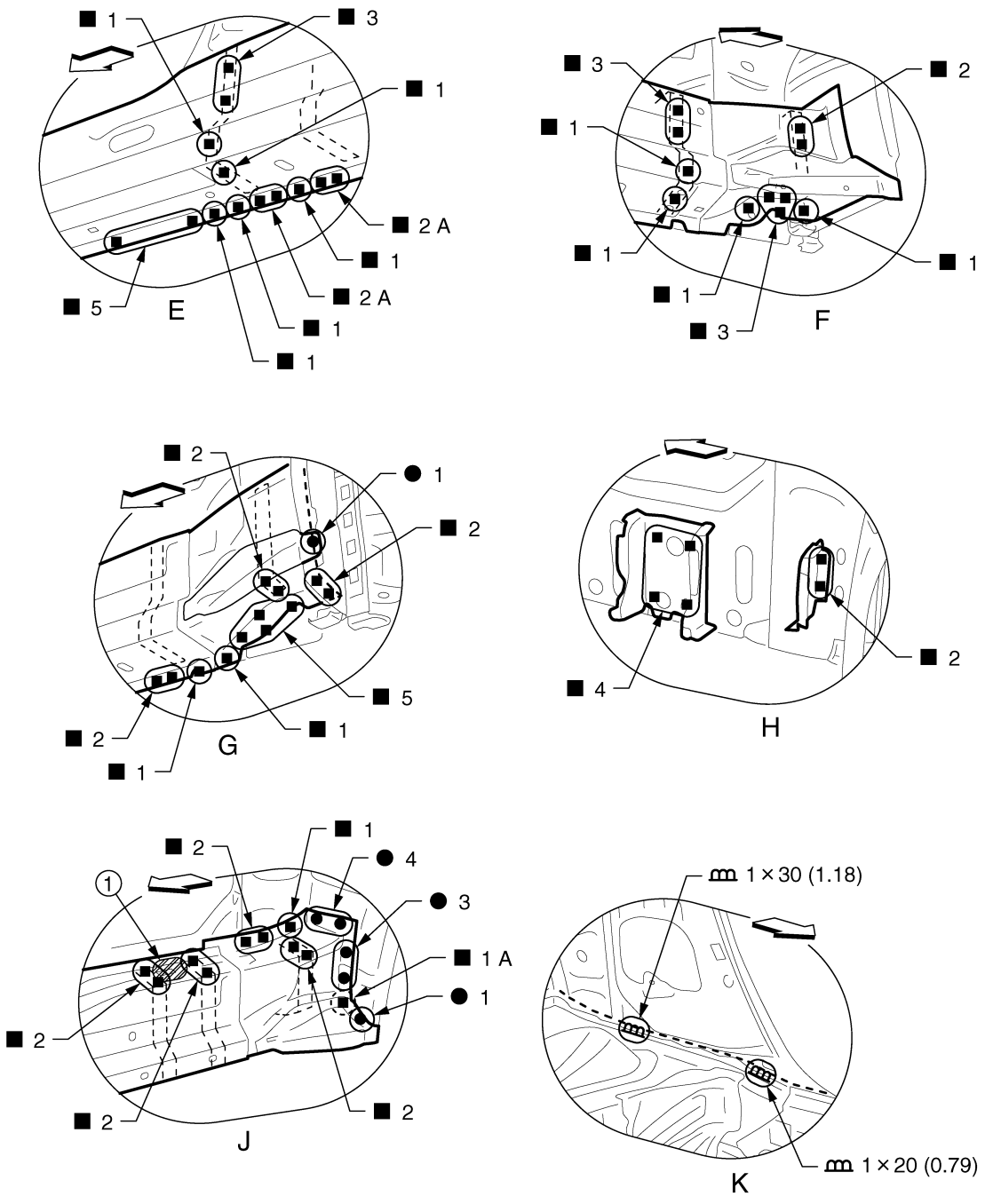
⇦: Vehicle front

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

Replacement parts

- Outer sill reinforcement (LH)

View C: Before installing front pillar brace



NNKIZ0026GB

1. Urethane foam

Unit: mm (in)

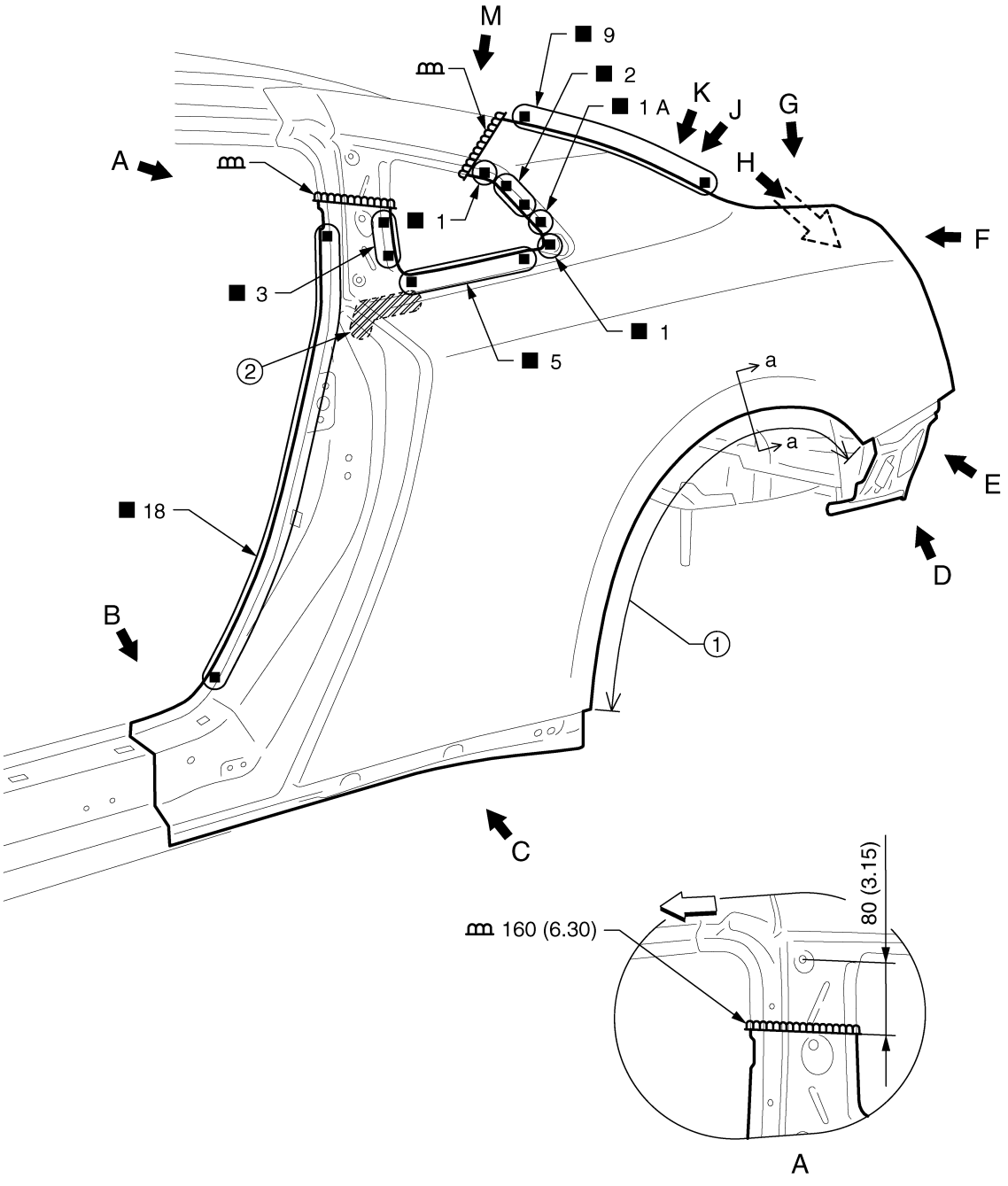
⇦: Vehicle front

View H: Before installing outer sill reinforcement

EXCEPT NISMO : Rear Fender

INFOID:0000000011485532

Perform the hidden welding point repair procedure for arrow view J by lifting up the flange of parcel shelf with rear waist.



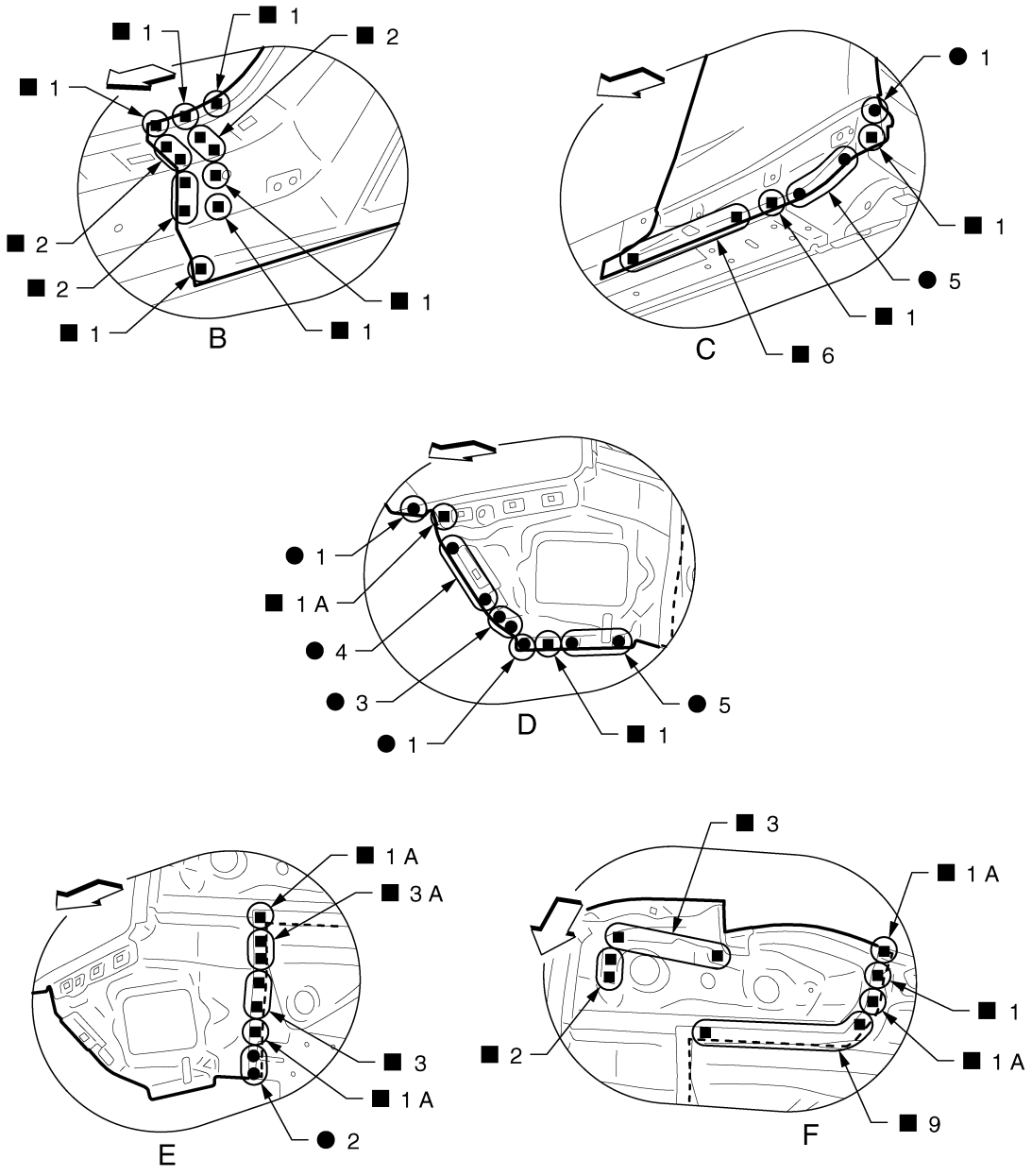
1. Hemming
2. Urethane foam

Unit: mm (in)

⇦ : Vehicle front

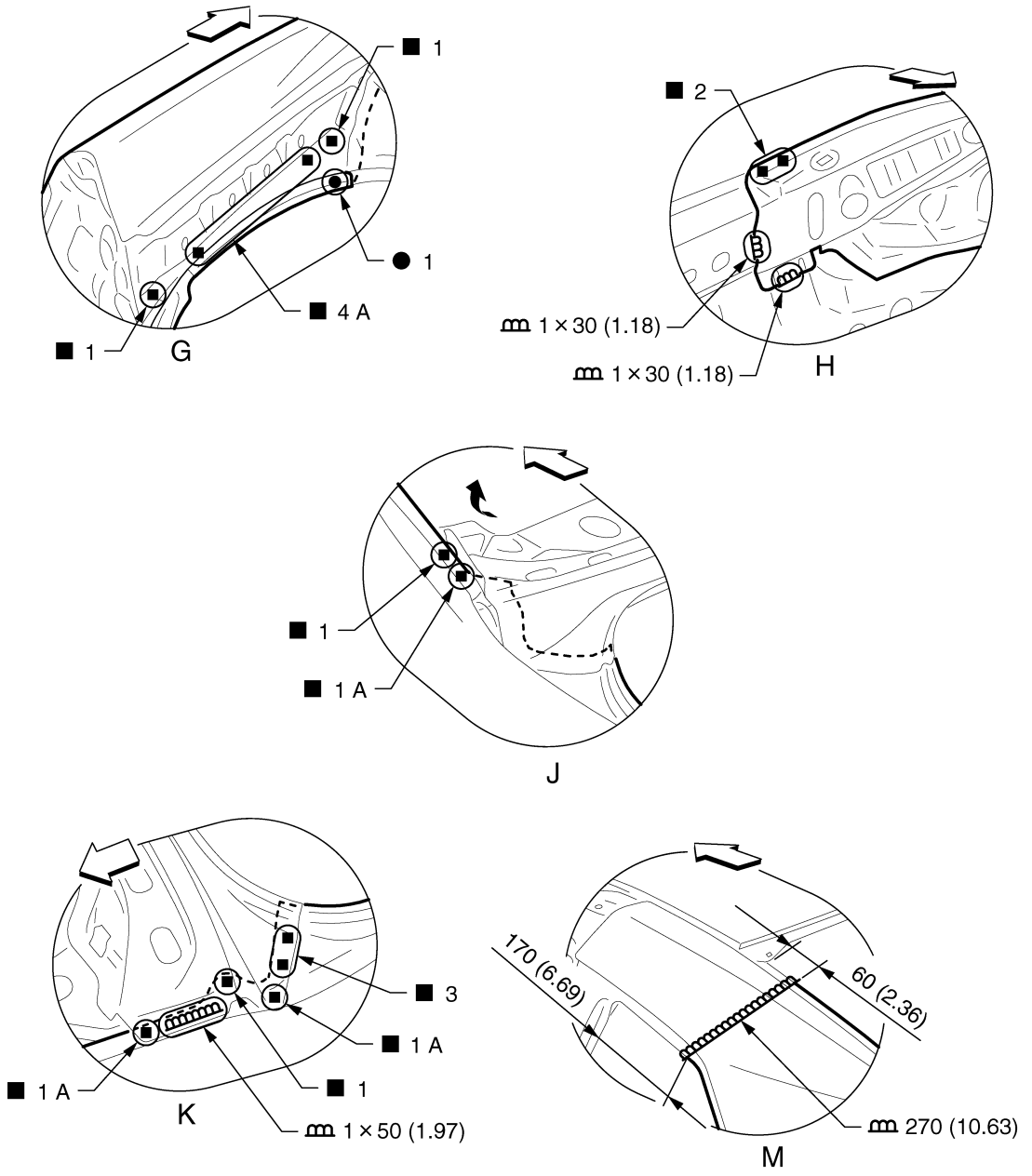
Replacement parts

- Rear fender assembly (LH)



NNKIZ0028ZZ

⇦ : Vehicle front



NNKIZ0029GB

Unit: mm (in)

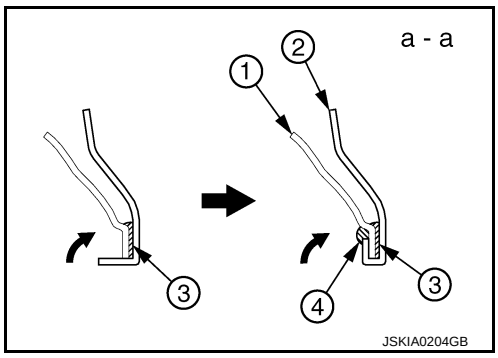
⇦ : Vehicle front

View J: The flange of parcel shelf with rear waist is lifted up.

POINT

- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-29, "Rear Fender Hemming Process".

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



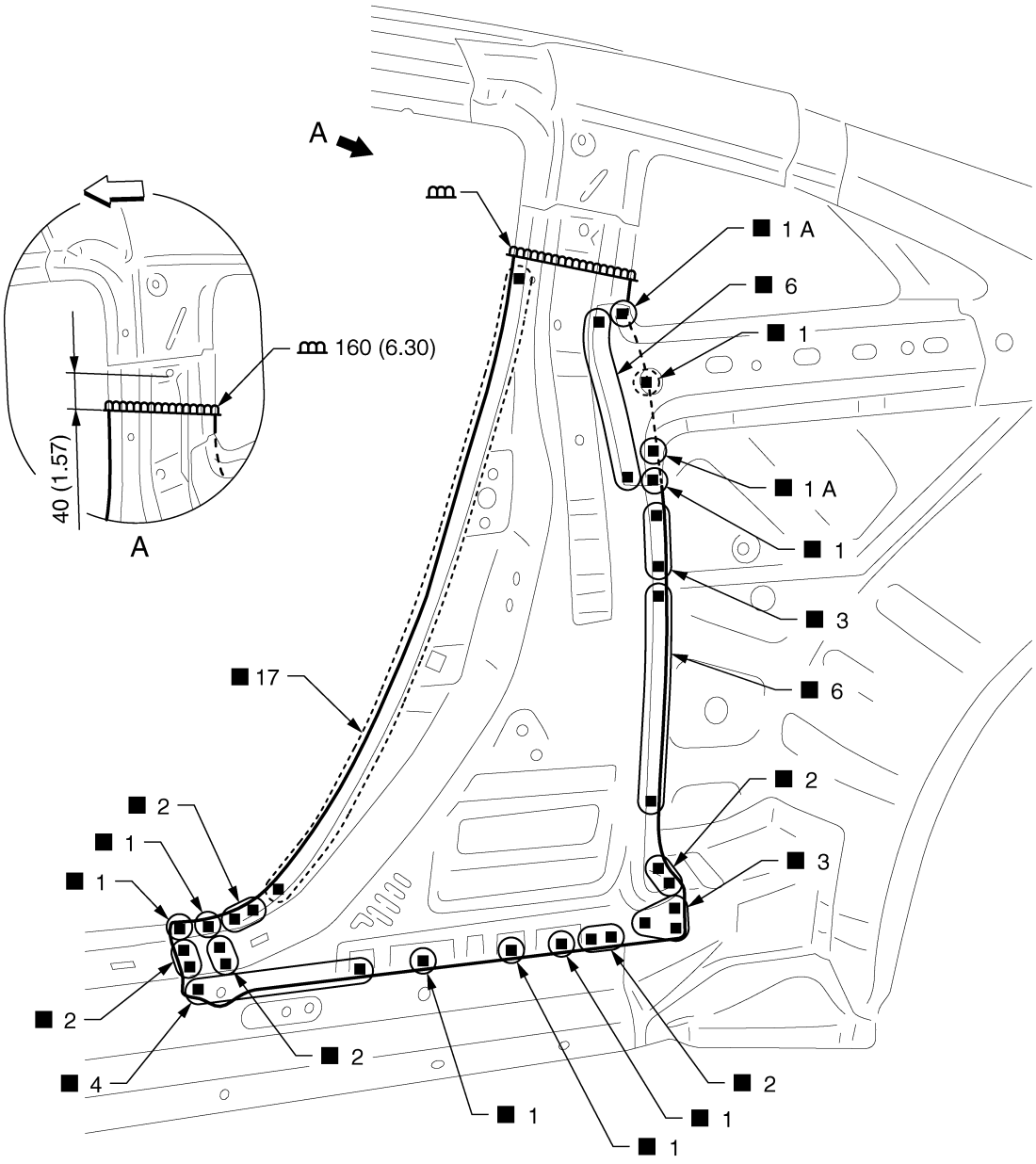
EXCEPT NISMO : Lock Pillar Reinforcement

INFOID:0000000011485533

Work after rear fender is removed.

CAUTION:

Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding.
After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.



NNKIZ0030GB

Unit: mm (in)

⇦: Vehicle front

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

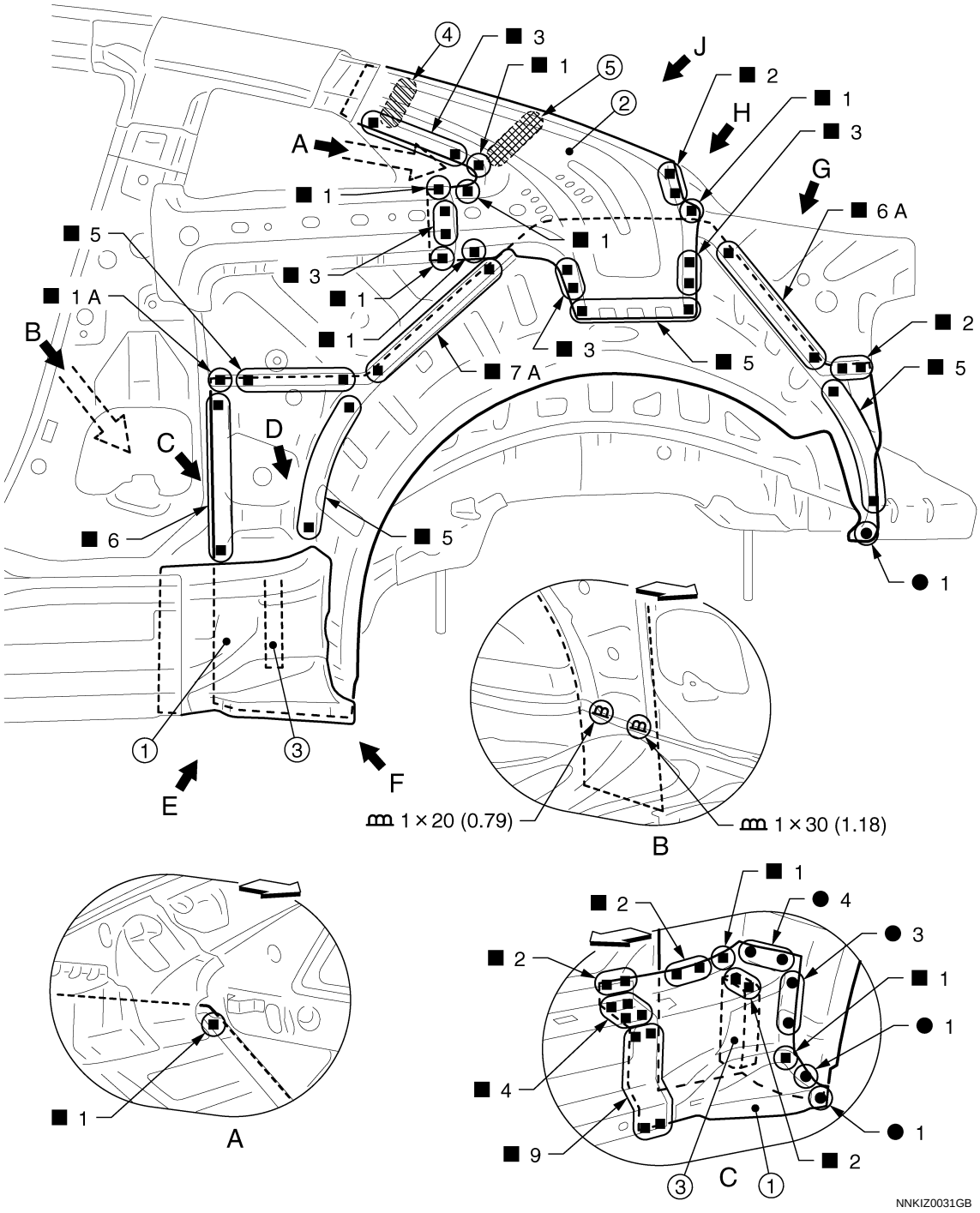
Replacement parts

- Lock pillar reinforcement assembly (LH)

EXCEPT NISMO : Outer Rear Wheelhouse

INFOID:0000000011485534

Work after rear fender and lock pillar reinforcement are removed.
Remove the outer sill reinforcement rear and rear pillar reinforcement (reusable).



1. Outer sill reinforcement rear
2. Rear pillar reinforcement
3. Outer rear sill brace
4. Urethane foam
5. Highly rigid foaming agent

Unit: mm (in)

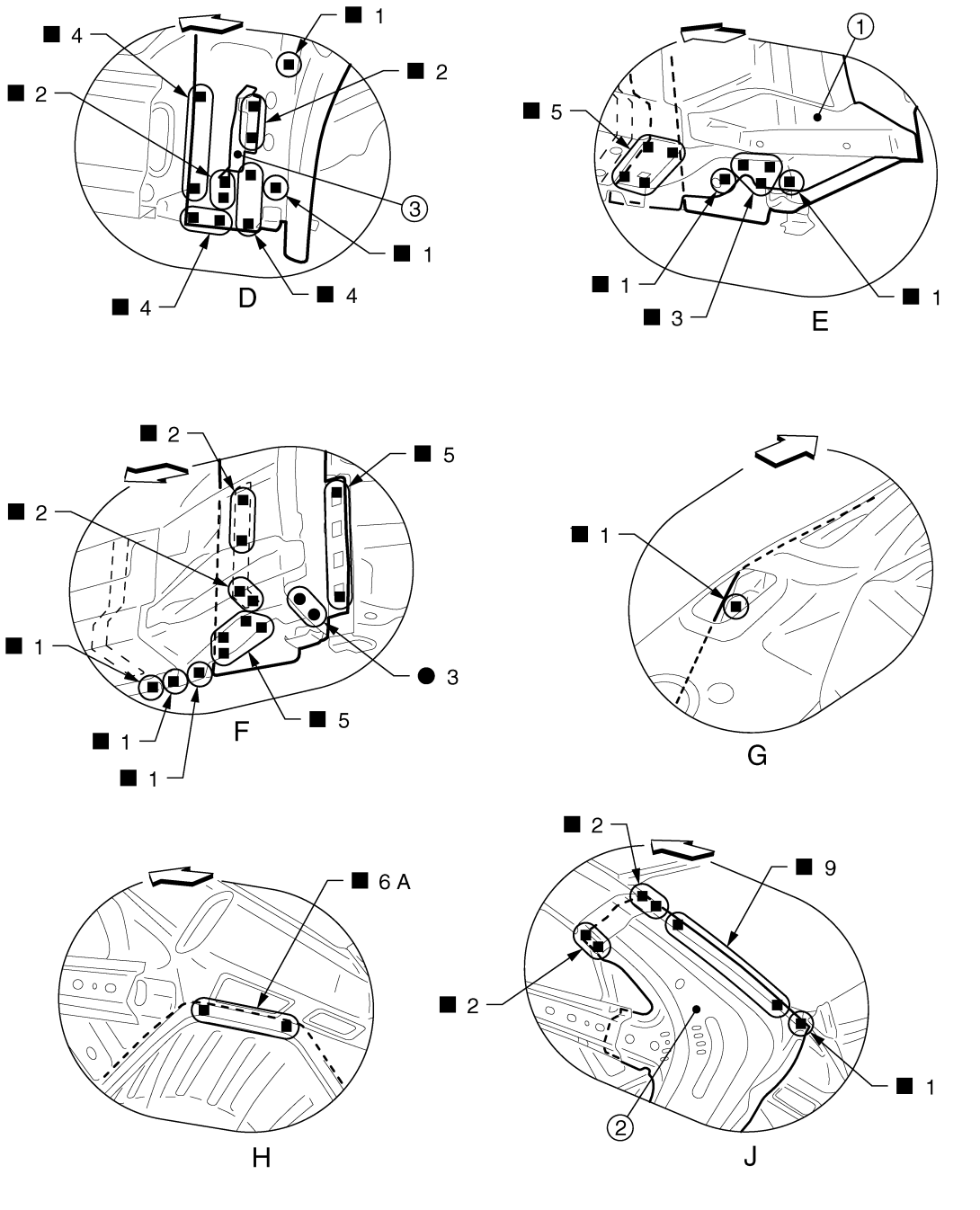
⇦: Vehicle front

Replaced parts

- Outer rear wheelhouse (LH)

CAUTION:

Refer to BRM-14, "Foam Repair" (section of Example of highly rigid foaming agent repair procedure) for filling procedure of highly rigid foaming agent.



NNKIZ0032ZZ

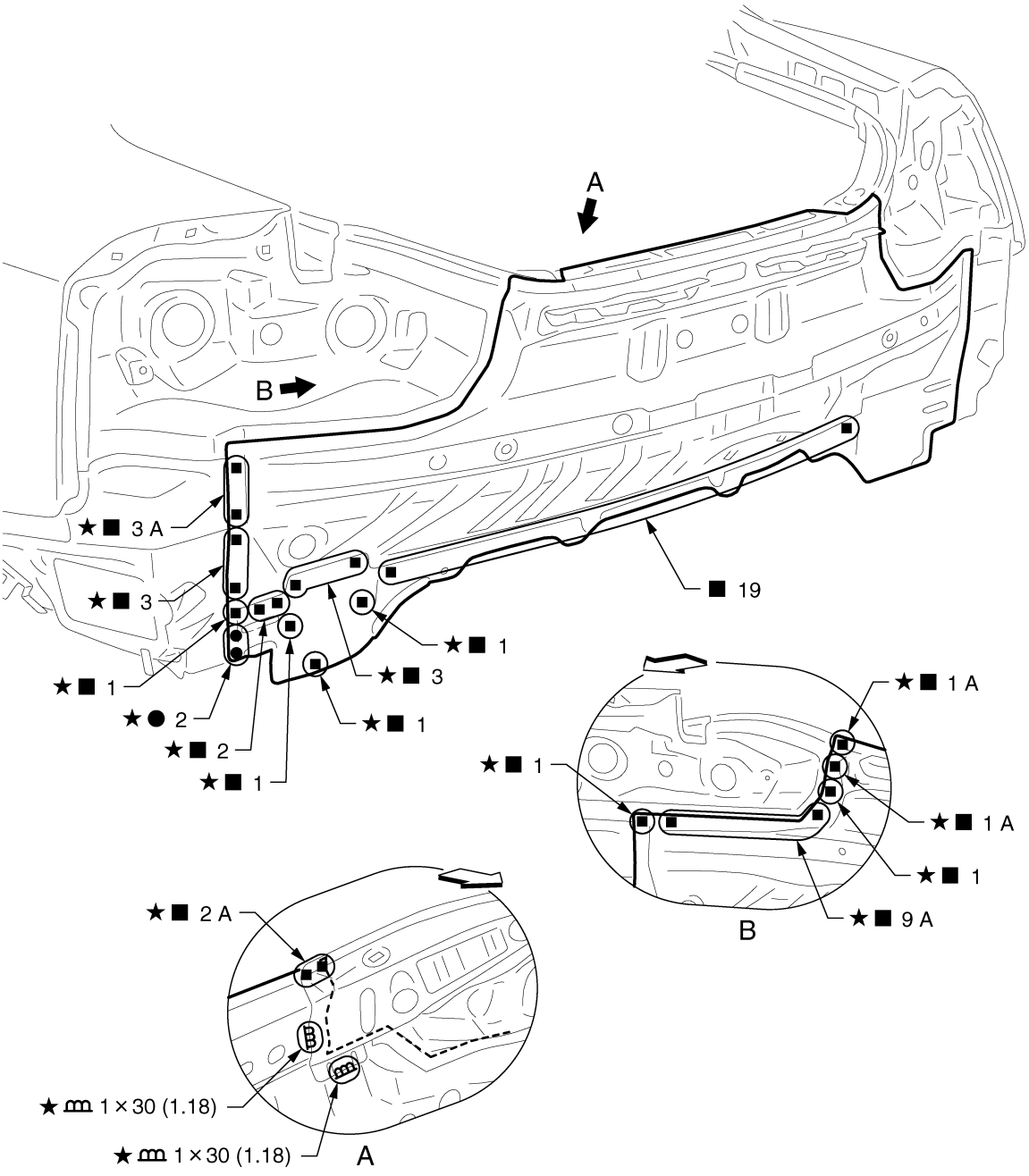
1. Outer sill reinforcement rear
2. Rear pillar reinforcement
3. Outer rear sill brace

⇦: Vehicle front

View D: Before installing outer sill reinforcement rear
View H: Before installing rear pillar reinforcement

EXCEPT NISMO : Rear Panel

INFOID:0000000011485535



JSKIA0765GB

Unit: mm (in)

⇦ : Vehicle front

★ : An equivalent welding area with the same dimensions is on the opposite side.

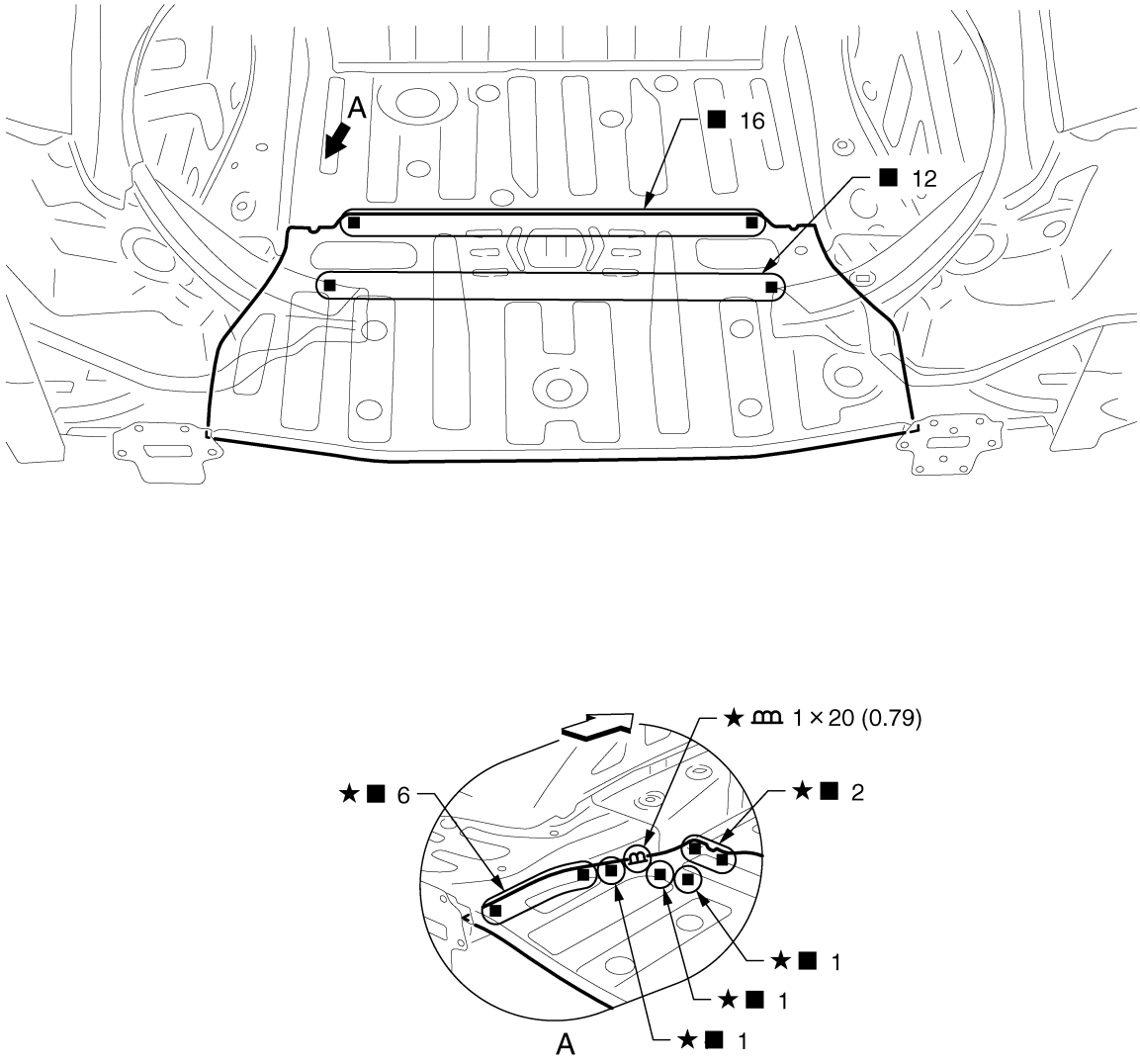
Replacement parts

- Rear panel assembly

EXCEPT NISMO : Rear Floor Rear

INFOID:0000000011485536

Work after rear panel is removed.



NNKIZ0034GB

Unit: mm (in)

⇦ : Vehicle front

★ : An equivalent welding area with the same dimensions is on the opposite side.

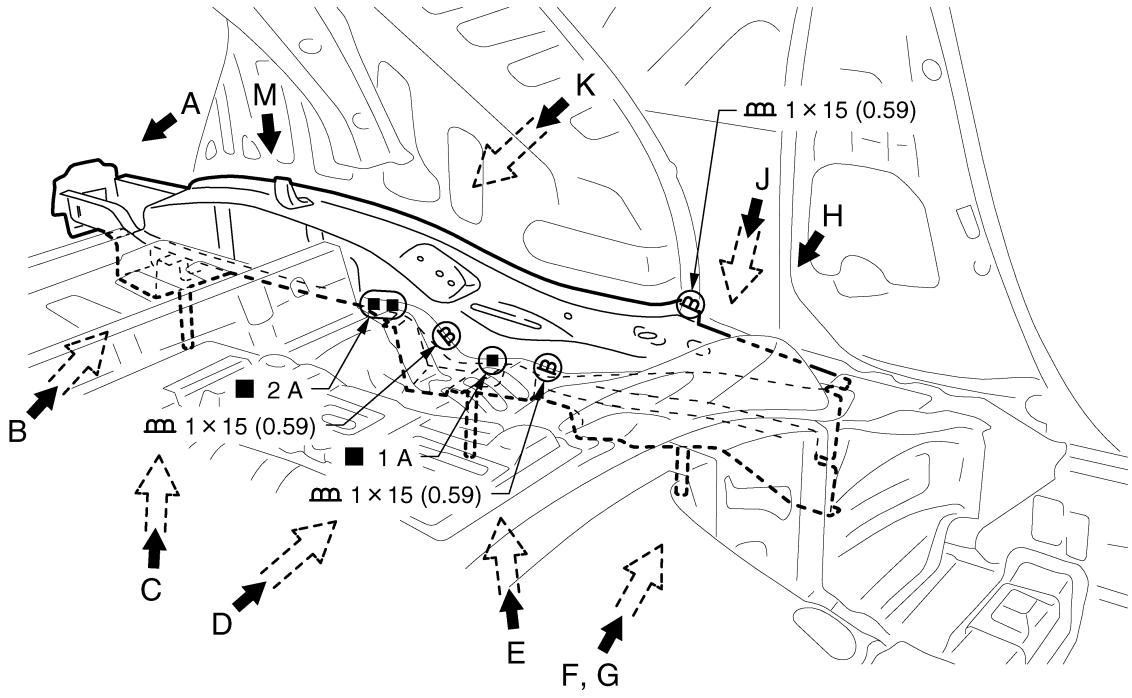
Replacement parts

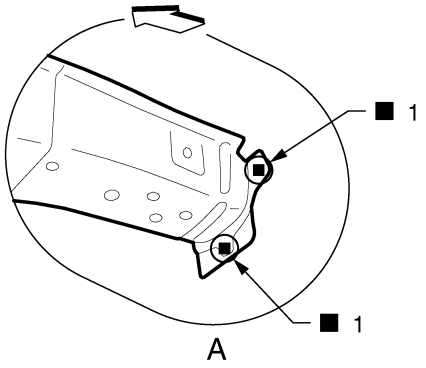
- Rear floor rear

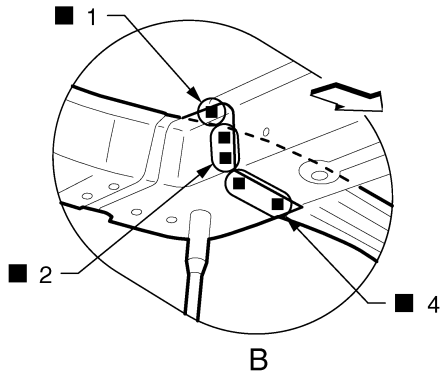
EXCEPT NISMO : Rear Side Member

INFOID:0000000011485537

Work after rear fender, rear panel, rear floor rear, rear floor side, lock pillar reinforcement, and outer rear wheelhouse are removed.







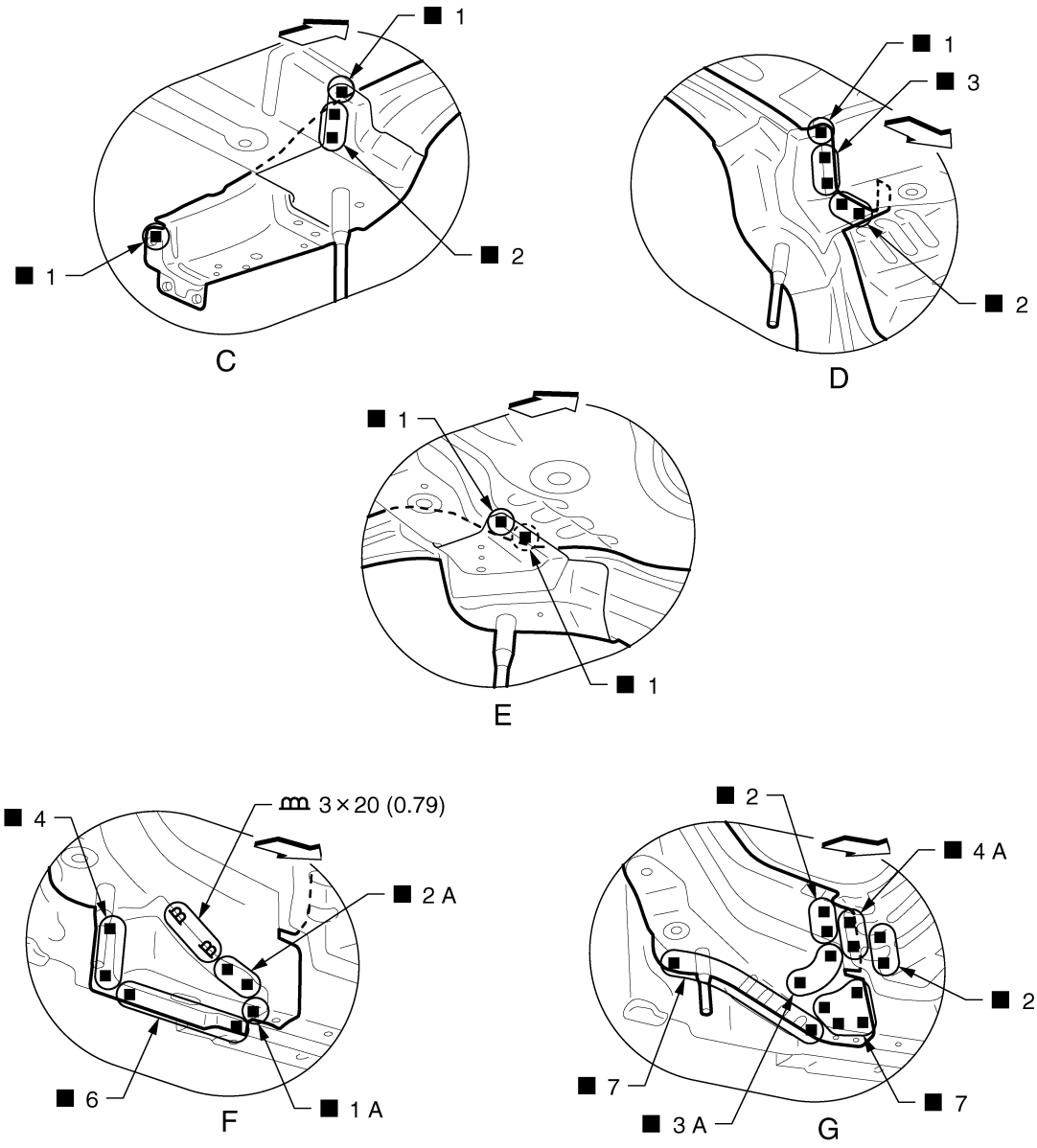
NNKIZ0035GB

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Rear side member assembly (LH)



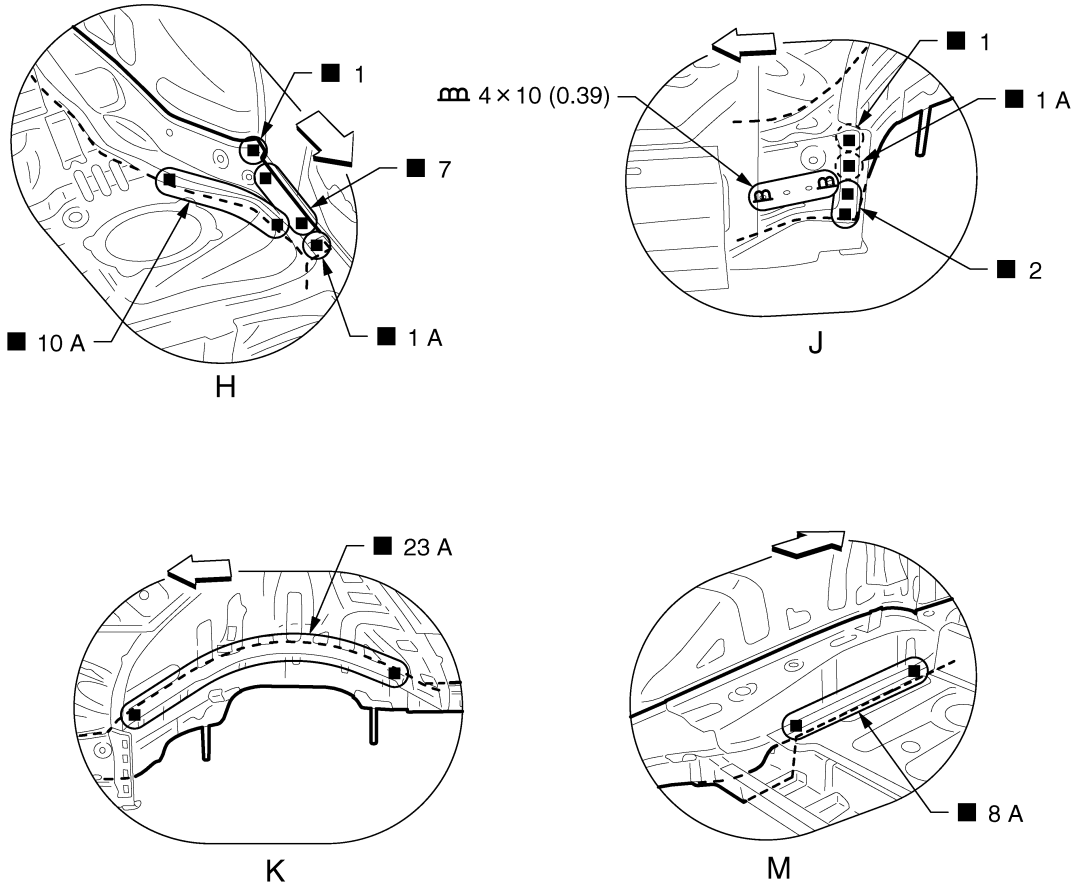
NNKIZ0036GB

Unit: mm (in)

⇦: Vehicle front

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

View G: Before installing jack mounting bracket



NNKIZ0037GB

Unit: mm (in)

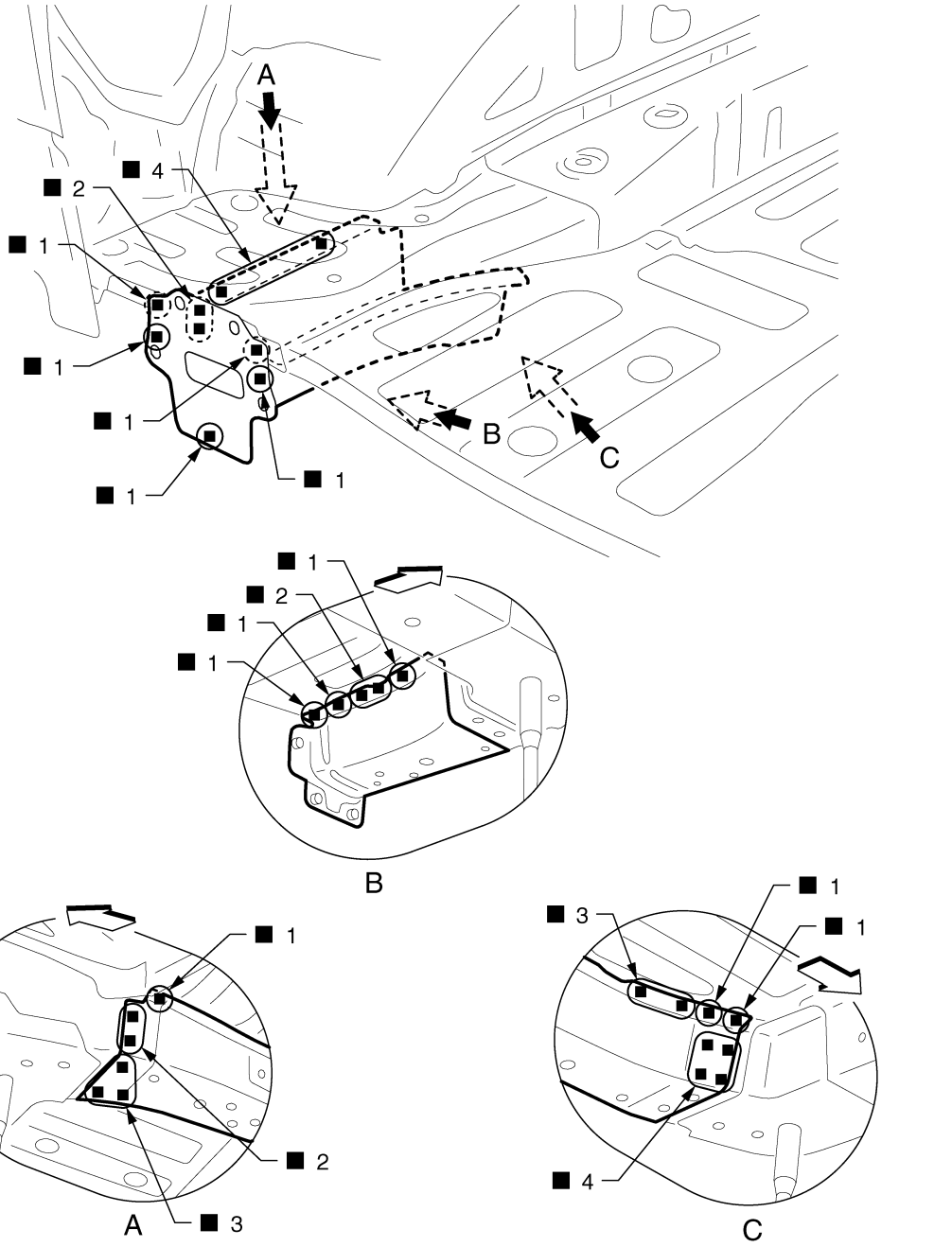
⇦: Vehicle front

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

EXCEPT NISMO : Rear Side Member Extension

INFOID:0000000011485538

Work after rear panel is removed.



NNKIZ0038ZZ

⇦: Vehicle front

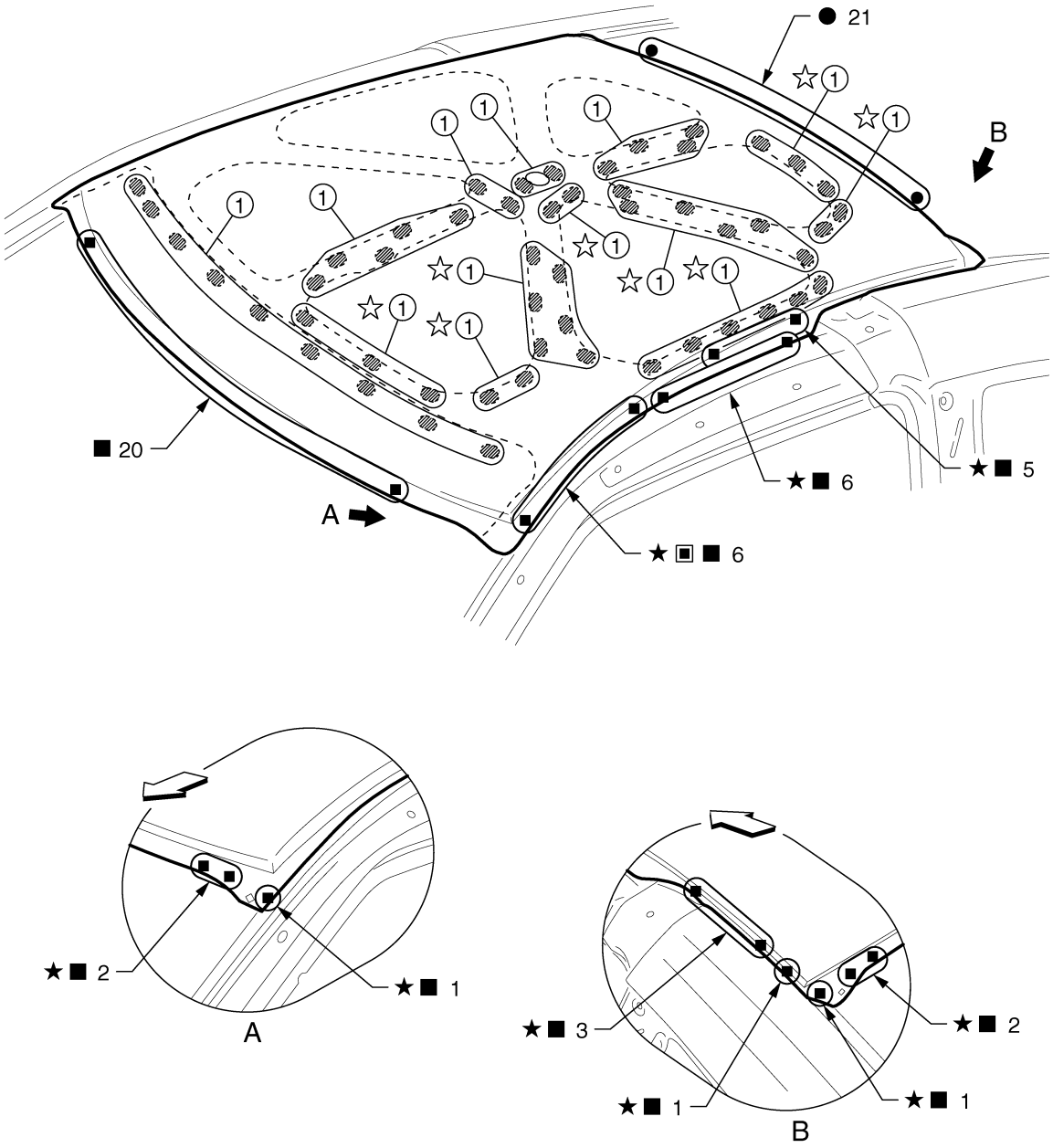
(◌): Weld the parts onto the back of the component part.

Replacement parts

- Rear side member extension (LH)

EXCEPT NISMO : Roof

INFOID:0000000011485539



JSKIA1086ZZ

1. Sealing

⇦: Vehicle front

▣: Perform the plug welding instead of the laser welding.

★: An equivalent welding area with the same dimensions is on the opposite side.

☆: An equivalent sealing area with the same dimensions is on the opposite side.

Replacement parts

- Roof

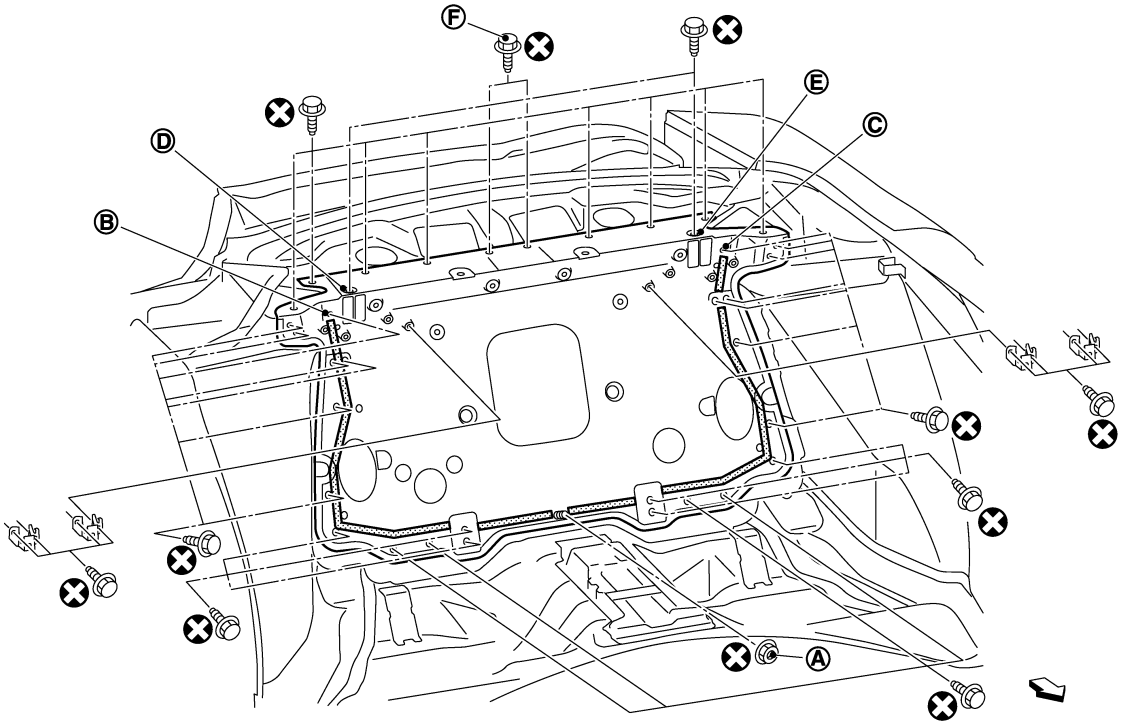
EXCEPT NISMO : Seatback Support

INFOID:0000000011485540

REMOVAL

CAUTION:

- **Never use an impact wrench to remove or install the mounting bolts and nut.**
- **Always use the specified bolts and nut with the surface finished.**
- **Never reuse the removed mounting bolts and nut.**



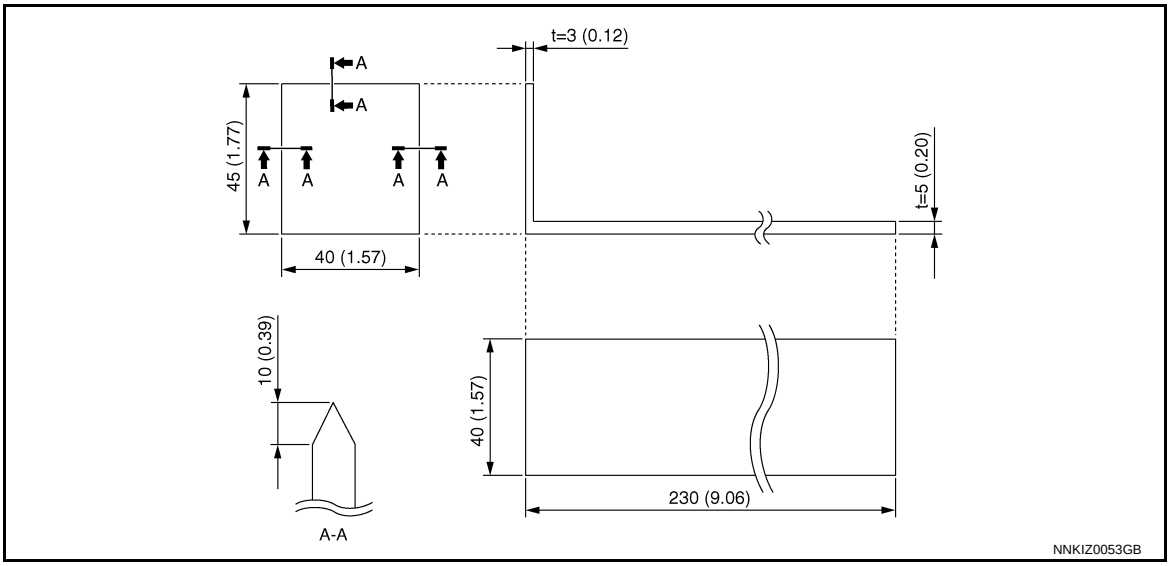
NNKIZ0050ZZ

⇦ : Vehicle front

▨: Adhesive exfoliated position

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Remove all of the remaining 30 bolts except the bolts and nut of (A) to (E) shown in the figure.
   CAUTION:
   Tighten 2 bolts (F) together with the parcel shelf reinforcement.
2. Loosen the mounting bolts and nut of (A) to (E) to safely unglue the adhesive of seatback support.
3. Set the temperature gauge (the infrared noncontact temperature gauge is recommended for temperature management) to the seatback support, and then heat up to 110°C (230°F) using halogen heater, etc.
   CAUTION:
   The heating temperature should not exceed 110°C (230°F).
4. Use an L-chisel shaped as shown in the figure and insert it to either the left or right gap between the vehicle body and seatback support on the top of bonding area while heating the seatback support. Slightly unglue the adhesive from the upper side to the lower side to remove the seatback support.
   CAUTION:
   Never damage the seatback support and the portions where the seatback support is bonded.



Unit: mm (in)

5. Eliminate the adhesive that remains on the seatback support and the portions where the seatback support is bonded with a disc sander.
6. If the coating on the joint surface with the vehicle is peeled off, apply epoxy primer on the surface to prevent electric corrosion.

INSTALLATION

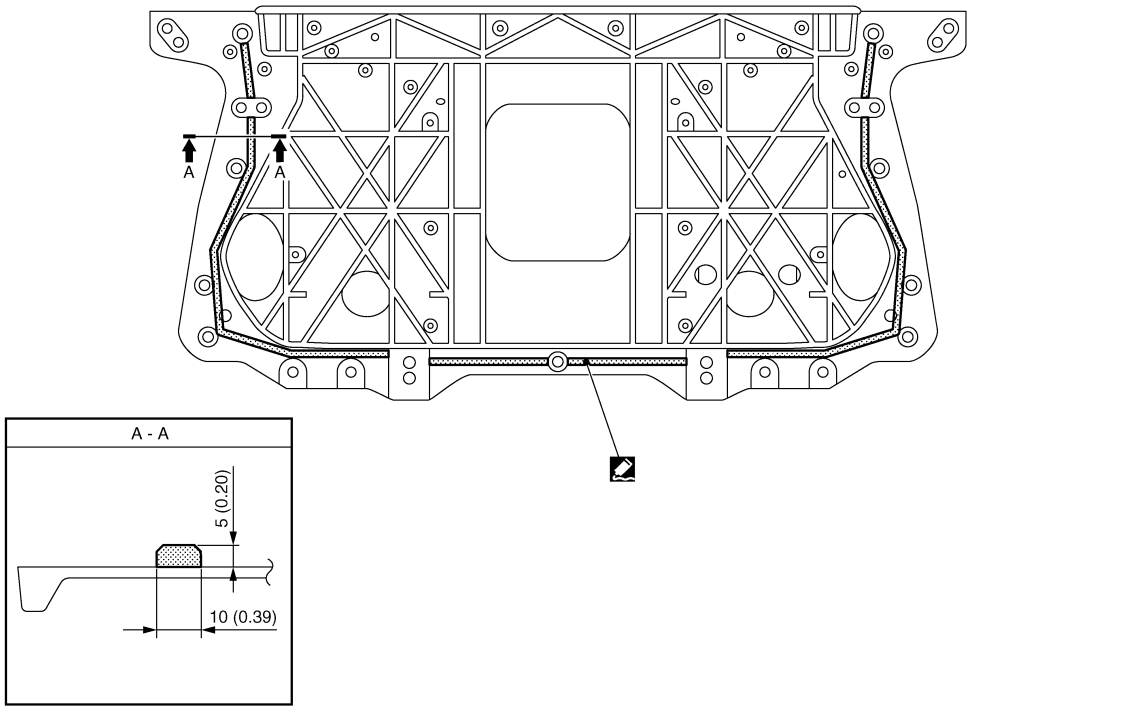
CAUTION:

- **Always perform the following procedure to visually check the rear seatback panel for deformation and perform the crack inspection (dye penetrant test) when the vehicle is damaged.**

Crack inspection procedure (Follow the manufacturer's directions for proper usage.)

1. **Spray the cleaning solution on the inspection surface to clean the surface.**
2. **Spray the penetrant liquid on the inspection surface and wait until the liquid is penetrated.**
3. **Wipe out any excess penetrant liquid on the inspection surface and then wipe out again with a cloth moistened by a little cleaning solution.**
4. **Spray the developer on the inspection surface.**
5. **A red indication appears on damaged area.**

- **Never use an impact wrench to remove or install the mounting bolts and nut.**
- **Always use the specified bolts and nut with the surface finished.**
- **Never reuse the removed mounting bolts and nut.**
- **Tighten all of the mounting bolts and nut before hardening the adhesive.**



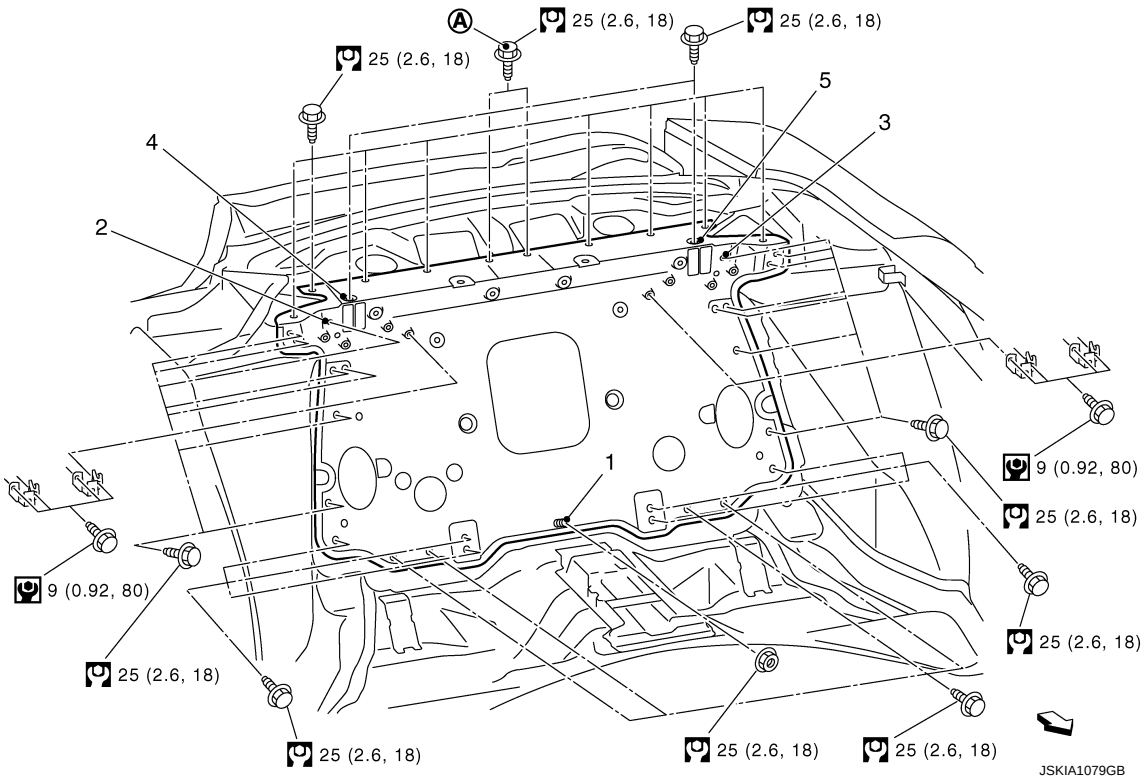
NNKIZ0051GB

Unit: mm (in)

: 3M™ Automix™ Panel Bonding Adhesive 08115 or equivalent

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Apply the adhesive to the seatback support as shown above in the figure.



JSKIA1079GB

⇦ : Vehicle front

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

2. Tighten the bolts and nut of 1 to 5 from the mounting bolts and nut in this order to the specified torque in advance. Tighten the remaining bolts evenly in 2 or 3 steps, and then tighten them to the specified torque.

1	: Determine the left or right direction of the center of seatback support bottom in advance, and then tighten to the specified torque.
2, 3	: Determine the top center of the height direction of seatback support in advance, and then tighten to the specified torque.
4, 5	: Determine the left or right direction of the seatback support in advance, and then tighten to the specified torque.

CAUTION:
Tighten 2 bolts (A) together with the parcel shelf reinforcement.

NISMO

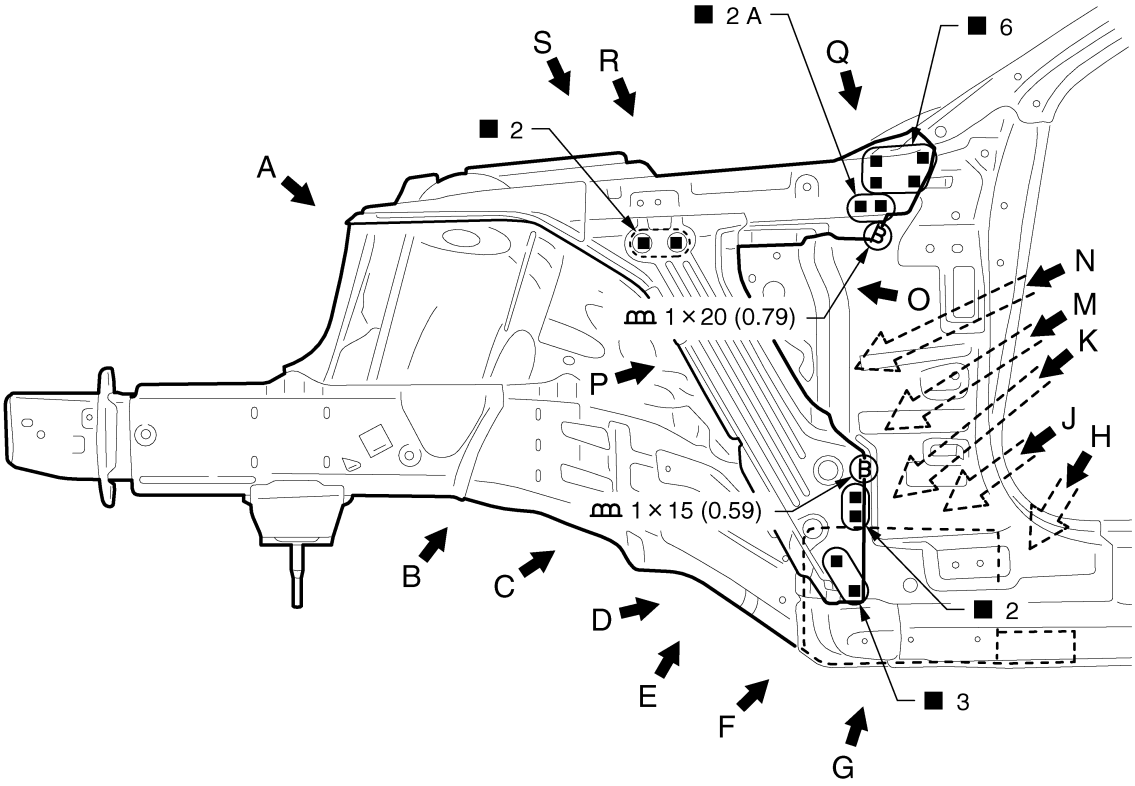
NISMO : Hoodledge Panel and Front Side Member

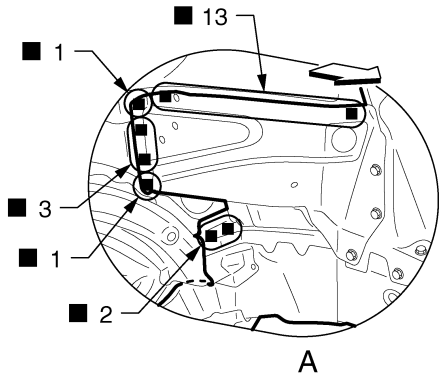
INFOID:0000000011485541

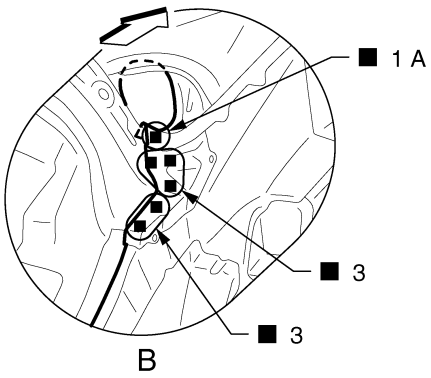
CAUTION:
Refer to ″Removal procedure of aluminum strut housing adhesive joint″ and ″Installation procedure of aluminum strut housing adhesive joint″ when replacing and reusing the hoodledge extension and hoodledge reinforcement.

Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:
Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.







JSKIA2670GB

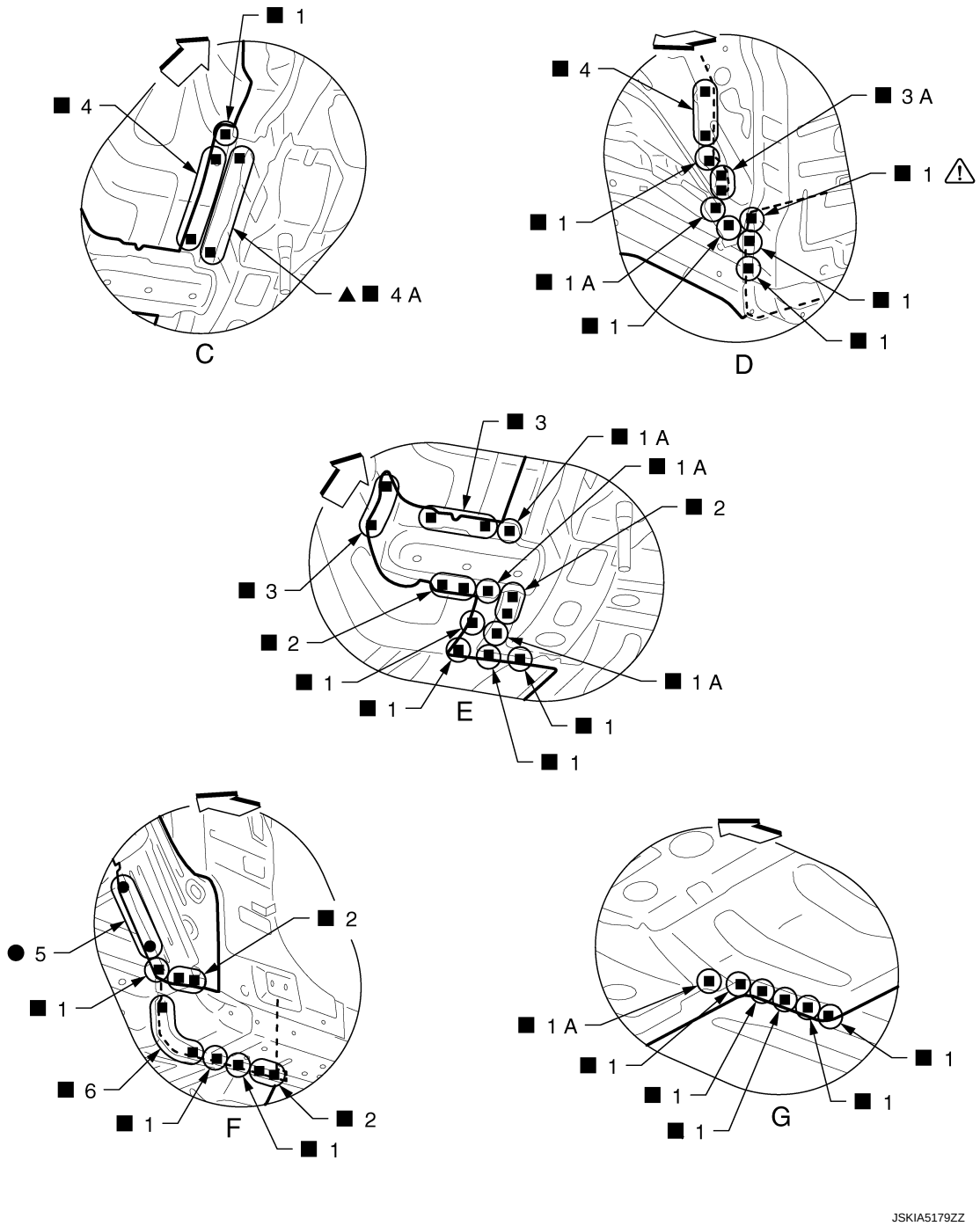
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

- Front strut housing assembly with front side member (LH)
- Hoodledge extension (LH)
- Hoodledge reinforcement (LH)
- Upper front hoodledge (LH)



JSKIA5179ZZ

Unit: mm (in)

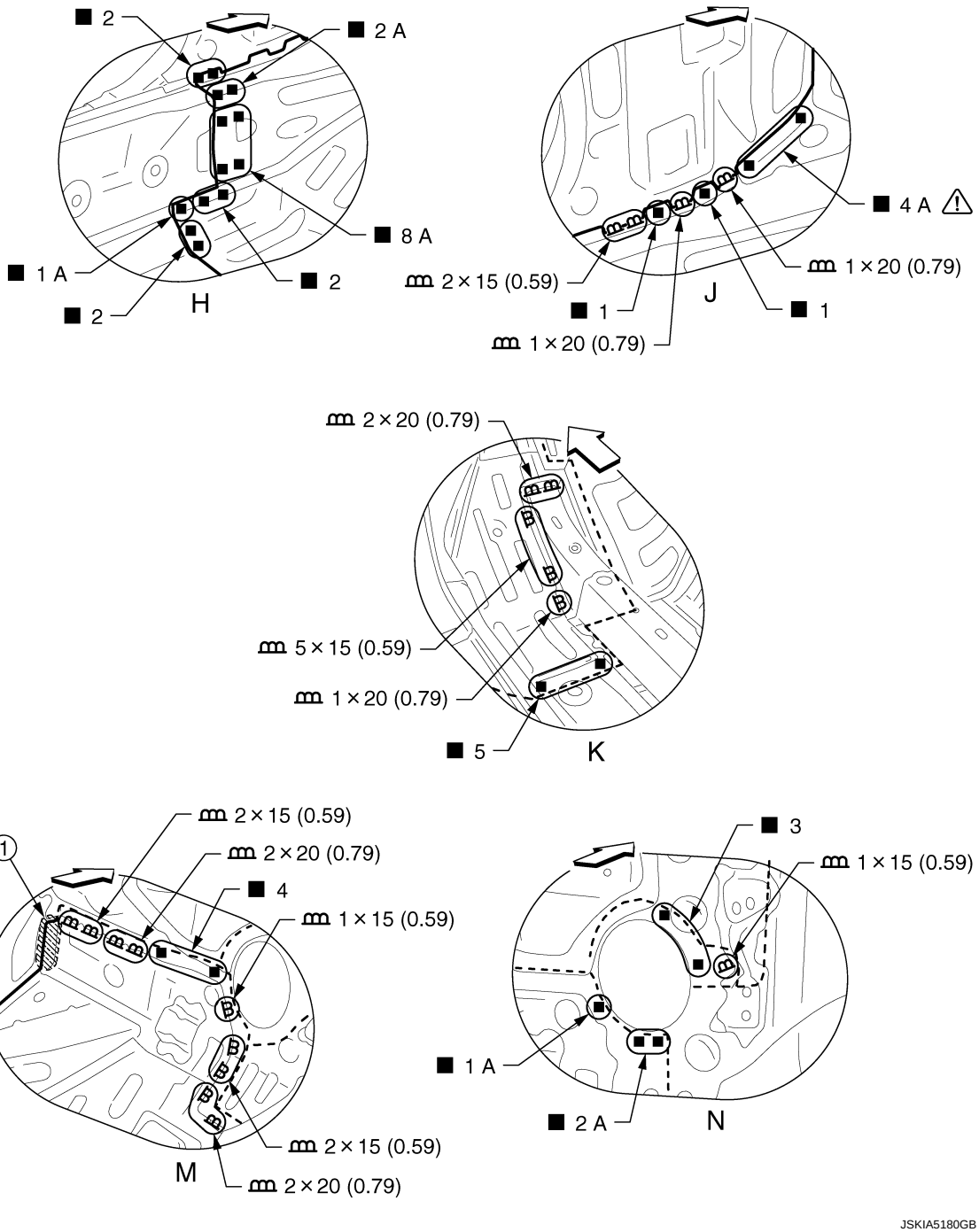
⇦: Vehicle front

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

⚠: Remove adhesive agent from welding surface.

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.



1. Adhesive

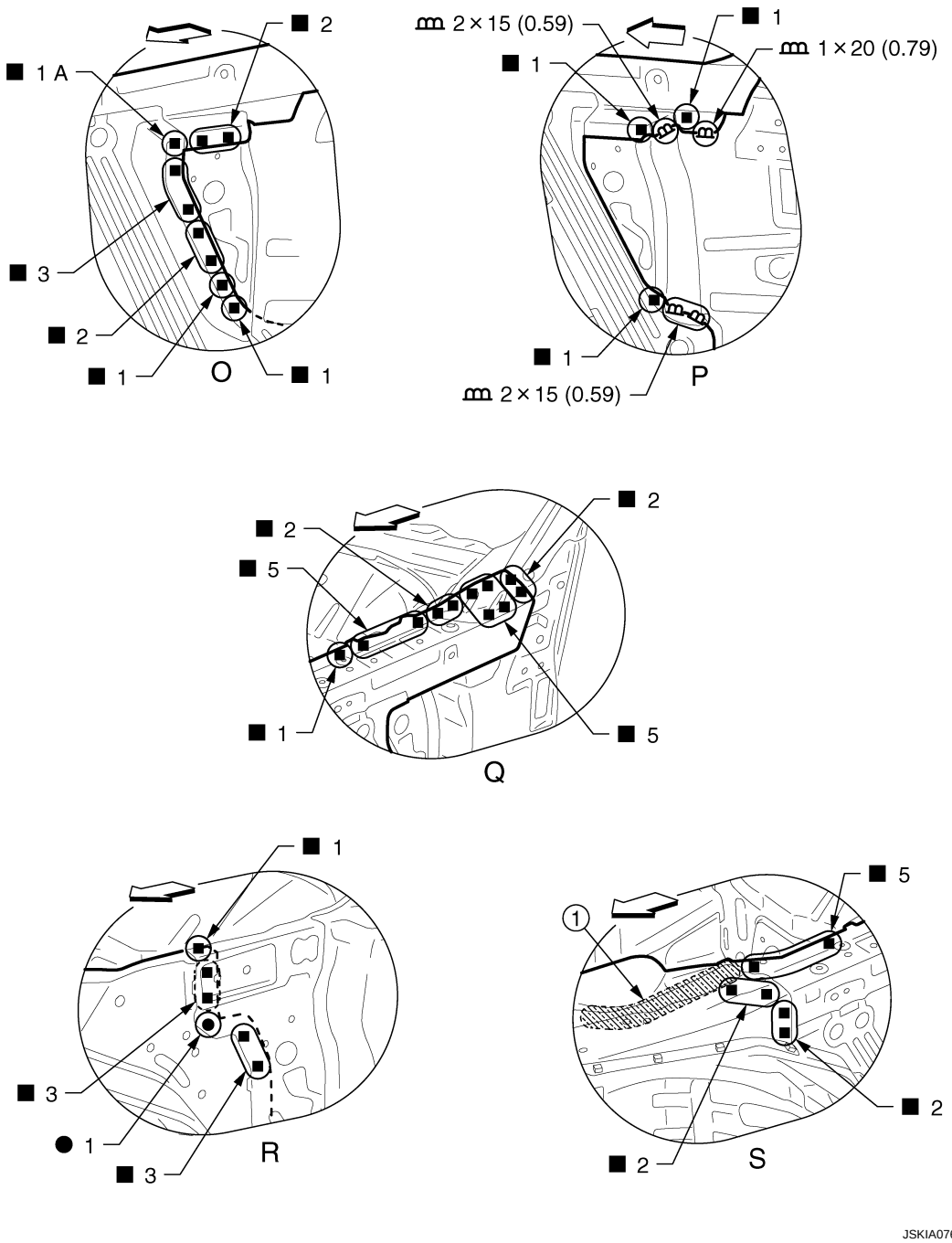
Unit: mm (in)

⇦: Vehicle front

⚠: Remove adhesive agent from welding surface.

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.



JSKIA0762GB

1. Adhesive (3M™ Scotch-Weld™ Epoxy Adhesive DP420 Off-White Duo-Pak or equivalent)

Unit: mm (in)

⇦: Vehicle front

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

View R: Before installing hoodledge reinforcement
View S: Cool the aluminum strut housing using compressed air to avoid the heat applied at the welding procedure.

REMOVAL PROCEDURE OF ALUMINUM STRUT HOUSING ADHESIVE JOINT

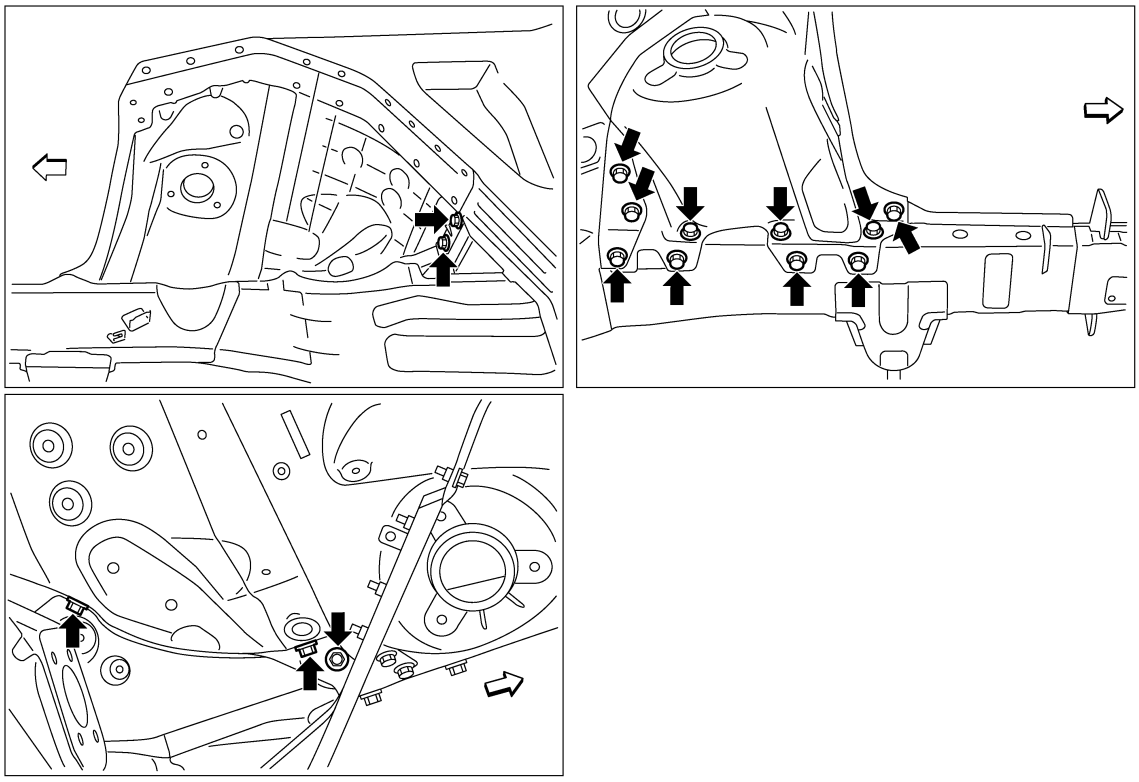
CAUTION:

- **Always perform the following procedure to visually check the strut housing for deformation and perform the crack inspection (dye penetrant test) when the vehicle is damaged.**

Crack inspection procedure (Follow the manufacturer's directions for proper usage.)

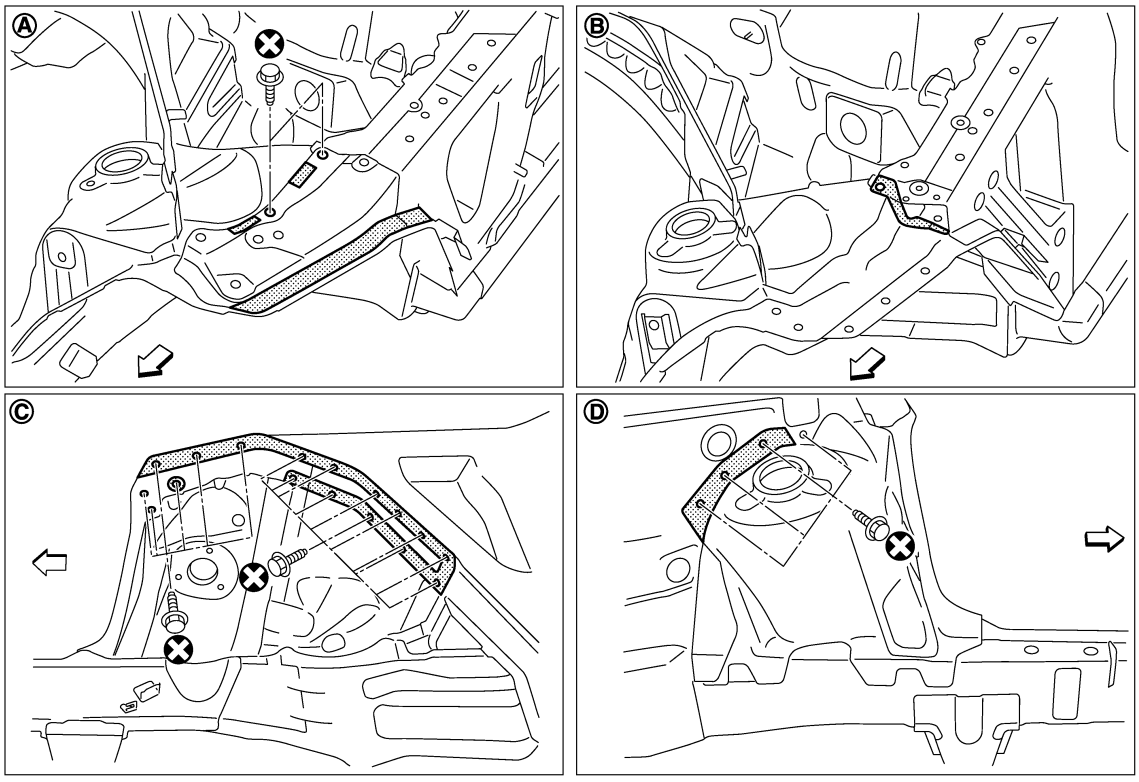
1. **Spray the cleaning solution on the inspection surface to clean the surface.**
2. **Spray the penetrant liquid on the inspection surface and wait until the liquid has penetrates thoroughly.**
3. **Wipe out any excess penetrant liquid on the inspection surface and then wipe out again with a cloth moistened by a little cleaning solution.**
4. **Spray the developer on the inspection surface.**
5. **A red indication appears on damaged area.**

- **Always use the specified bolt with its surface finished.**
  Never use bolts other than those that are specified, otherwise electric corrosion occurs.
- **Never reuse the removed specified bolts.**
- **Never use an impact wrench to remove or install the mounting bolt.**
- **Never remove the joint bolts (15) between side member and strut housing that are shown in the figure.**



JSKIA0840ZZ

⇦: Vehicle front
⬅: Never remove



JSKIA0757ZZ

A. Hoodledge extension
B. Hoodledge reinforcement
C. Hoodledge extension, hoodledge reinforcement, and upper front hoodledge
D. Front cowl top assembly

⇦: Vehicle front

: Adhesive exfoliated position

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

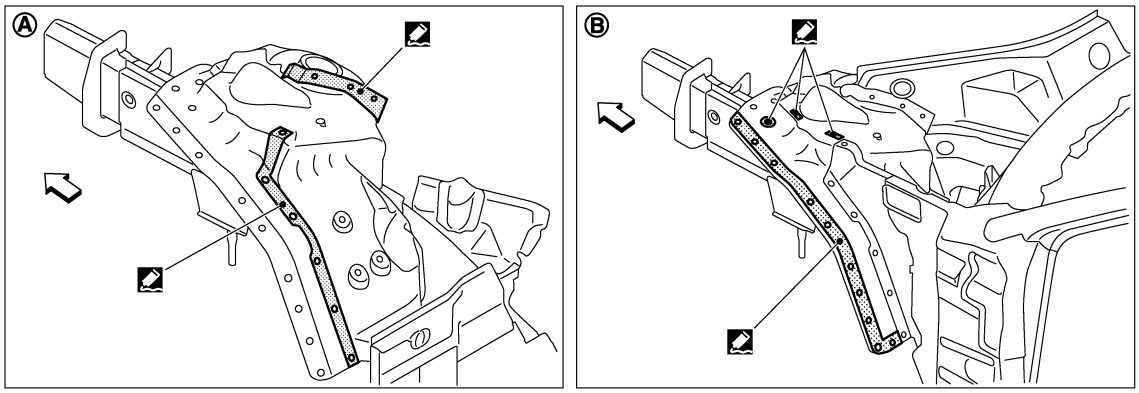
1. Remove the mounting bolts and spot welding of the hoodledge extension.
2. Set the temperature gauge (the infrared non-contact temperature gauge is recommended for temperature management) to the strut housing, and then heat up to 110°C (230°F) using a halogen heater.
   CAUTION:
   The heating temperature should not exceed 110°C (230°F).
3. Use a chisel while heating the hoodledge extension, insert it between the hoodledge extension and the strut housing. Then slightly separate the hoodledge extension while ungluing the adhesive from the front.
   CAUTION:
   Never damage the strut housing and the portions where the strut housing is bonded.
4. Eliminate the adhesive that remains on the strut housing and the portions where the strut housing is bonded with a disc sander.
5. If the coating on the joint surface with the strut housing and the vehicle is peeled off, apply epoxy primer on the surface to prevent electric corrosion.
6. Remove the hoodledge reinforcement, upper front hoodledge, and front cowl top assembly while observing the procedure and precautions above.

INSTALLATION PROCEDURE OF ALUMINUM STRUT HOUSING ADHESIVE JOINT

CAUTION:

- **Always use the specified bolt with its surface finished.**
  Never use bolts other than those that are specified, otherwise electric corrosion may occur.
- **Never reuse the removed specified bolts.**
- **Never use an impact wrench to remove or install the mounting bolt.**

- **Apply the adhesive, after degreasing its application area.**
- **Check the instruction manual of the adhesive for the hardening time.**



NNKIZ0046ZZ

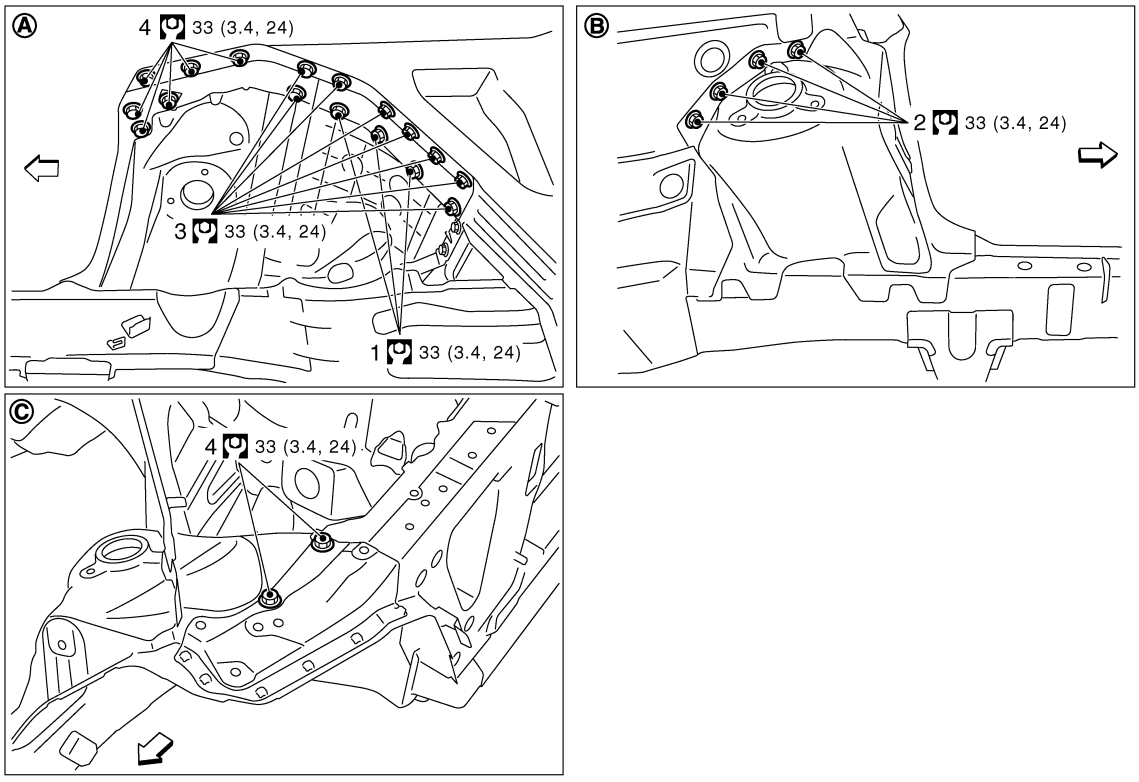
A. Bonded area between front cowl top assembly and upper front hoodledge
B. Bonded area between hoodledge extension and hoodledge reinforcement

⇦: Vehicle front

: 3M™ Scotch-Weld™ Epoxy Adhesive DP420 Off-White Duo-Pak or equivalent

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Apply the adhesive to the bonded area (strut housing side) between front cowl top assembly (A) of strut housing and upper front hoodledge (A) before temporarily installing the service parts to the vehicle.
   CAUTION:
   Apply the adhesive so that it protrudes from the bonded area (the flange end should be covered with the adhesive) when temporarily installing and tightening the service parts.
   Add the adhesive to the area where the flange area is not covered with the adhesive. Then, smooth it with a spatula so that the flange end is covered with the adhesive.



JSKIA0758GB

A. Joint with hoodledge extension, hoodledge reinforcement, and upper front hoodledge
B. Joint with front cowl top assembly
C. Joint with hoodledge extension

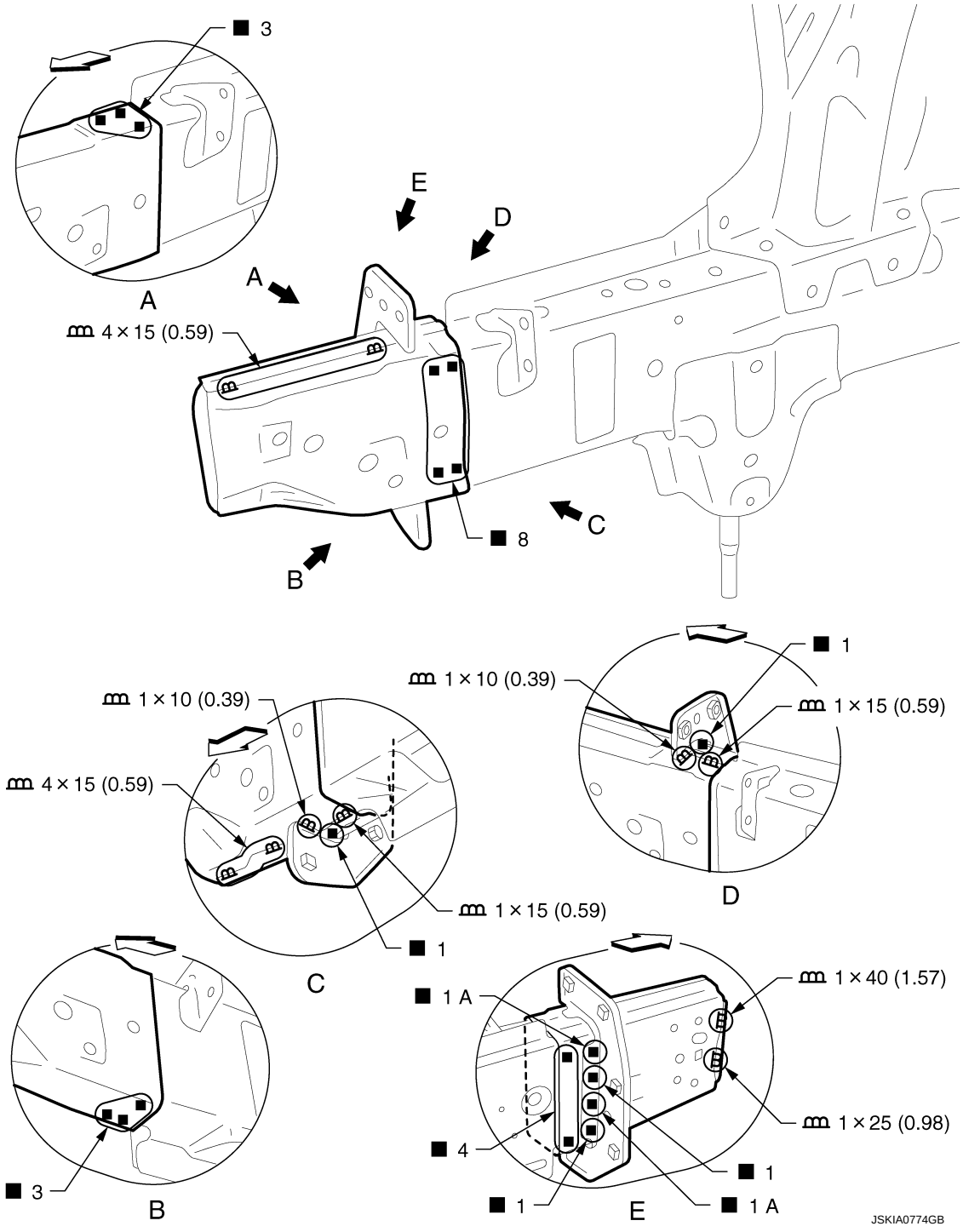
⇦: Vehicle front

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

2. Temporarily install the parts before hardening the adhesive, tighten the mounting bolts of upper front hoodledge (1) and front cowl top assembly (2) evenly in 2 or 3 steps in the order shown in the figure, and then tighten bolts to the specified torque.
3. Install hoodledge reinforcement (3) and hoodledge extension (4) in this order. Observe the procedure and precautions above.

NISMO : Front Side Member

INFOID:0000000011485542



Unit: mm (in)

⇦ : Vehicle front

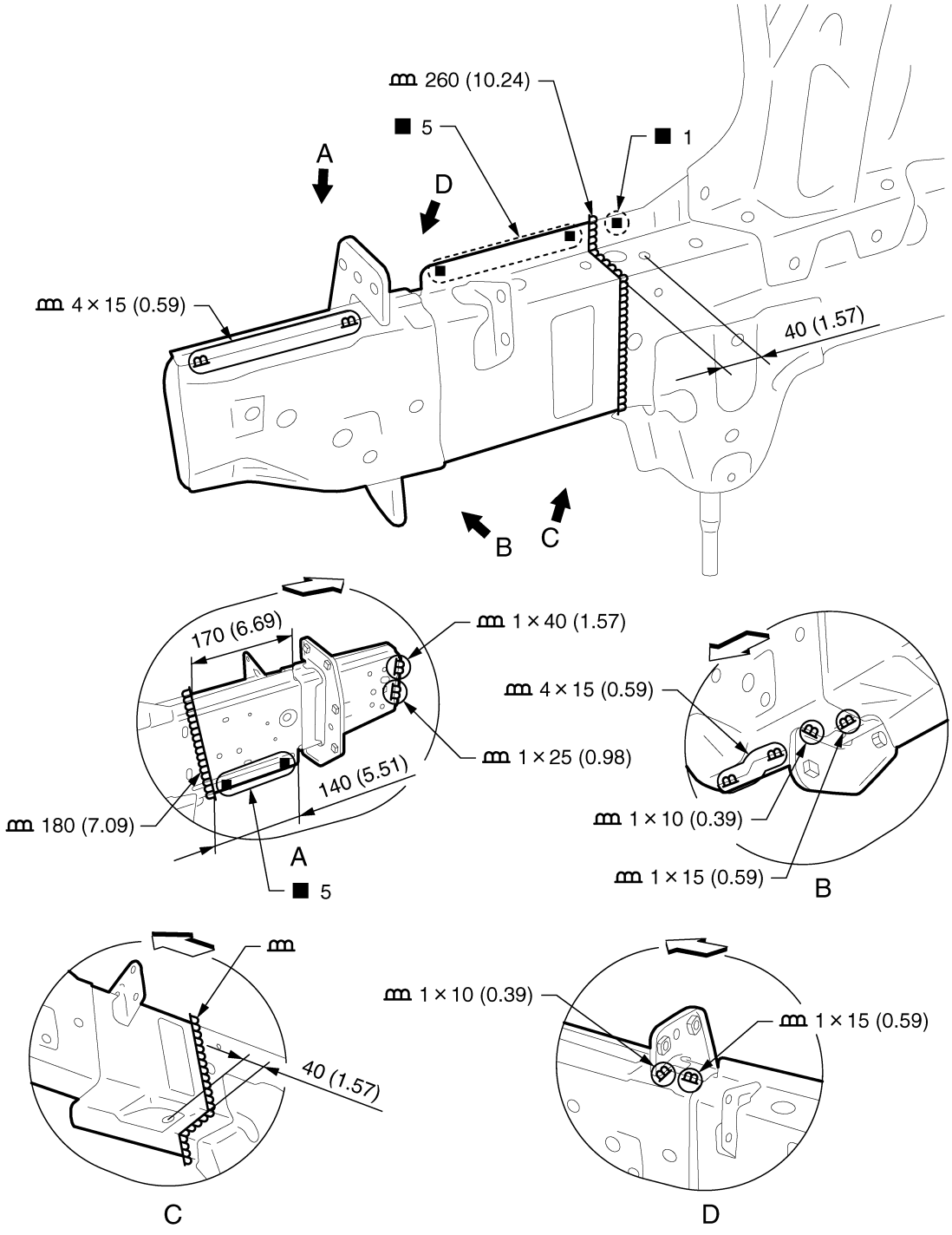
Replacement parts

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

View A and B: Before installing front side member closing plate

NISMO : Front Side Member (Partial Replacement)

INFOID:0000000011485543



Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

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

NISMO : Front Pillar

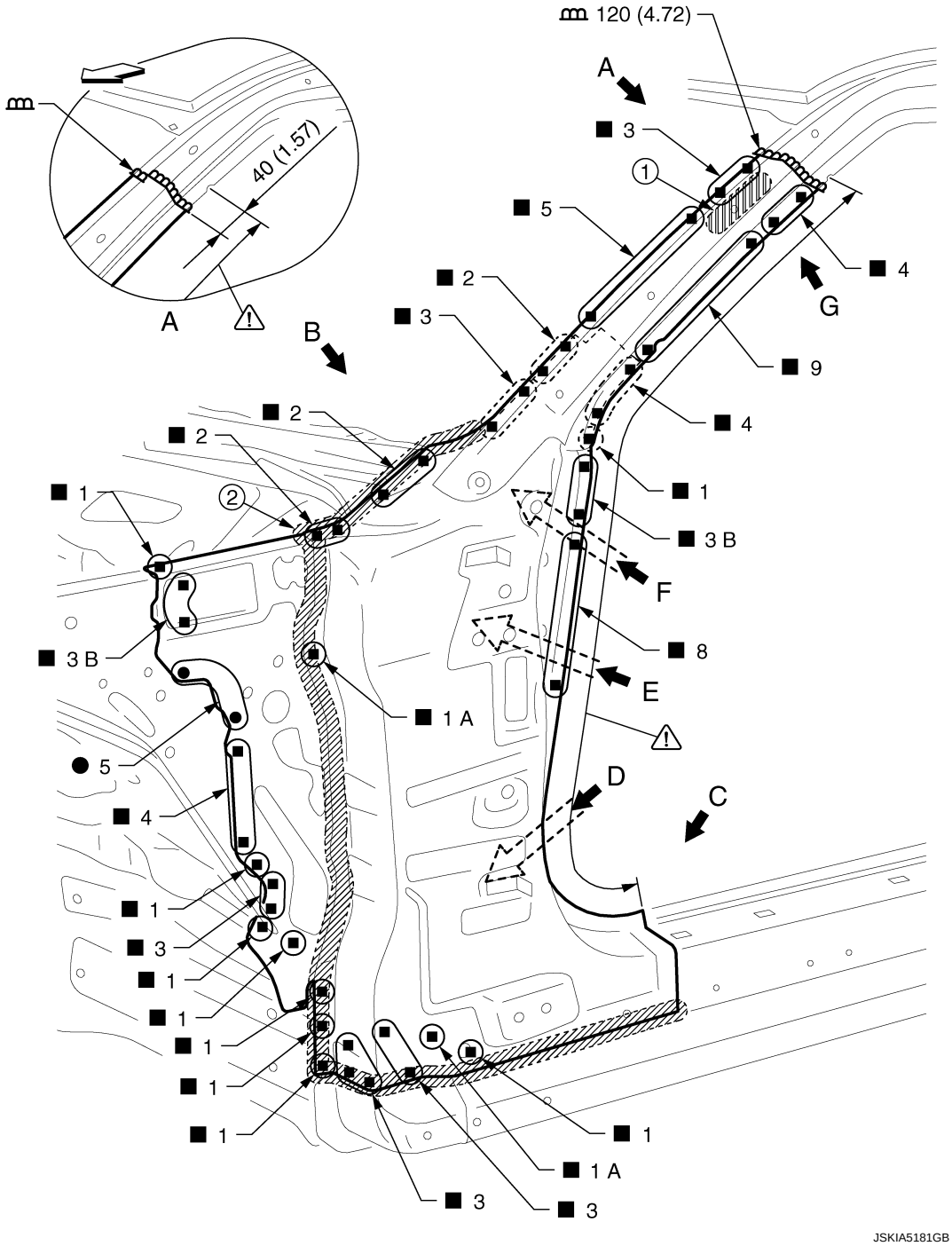
INFOID:0000000011485544

Work after hoodledge reinforcement is removed.

CAUTION:
Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding.
After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.

Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:
Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.



1. Urethane foam
2. Body sealing

Unit: mm (in)

⇦: Vehicle front

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

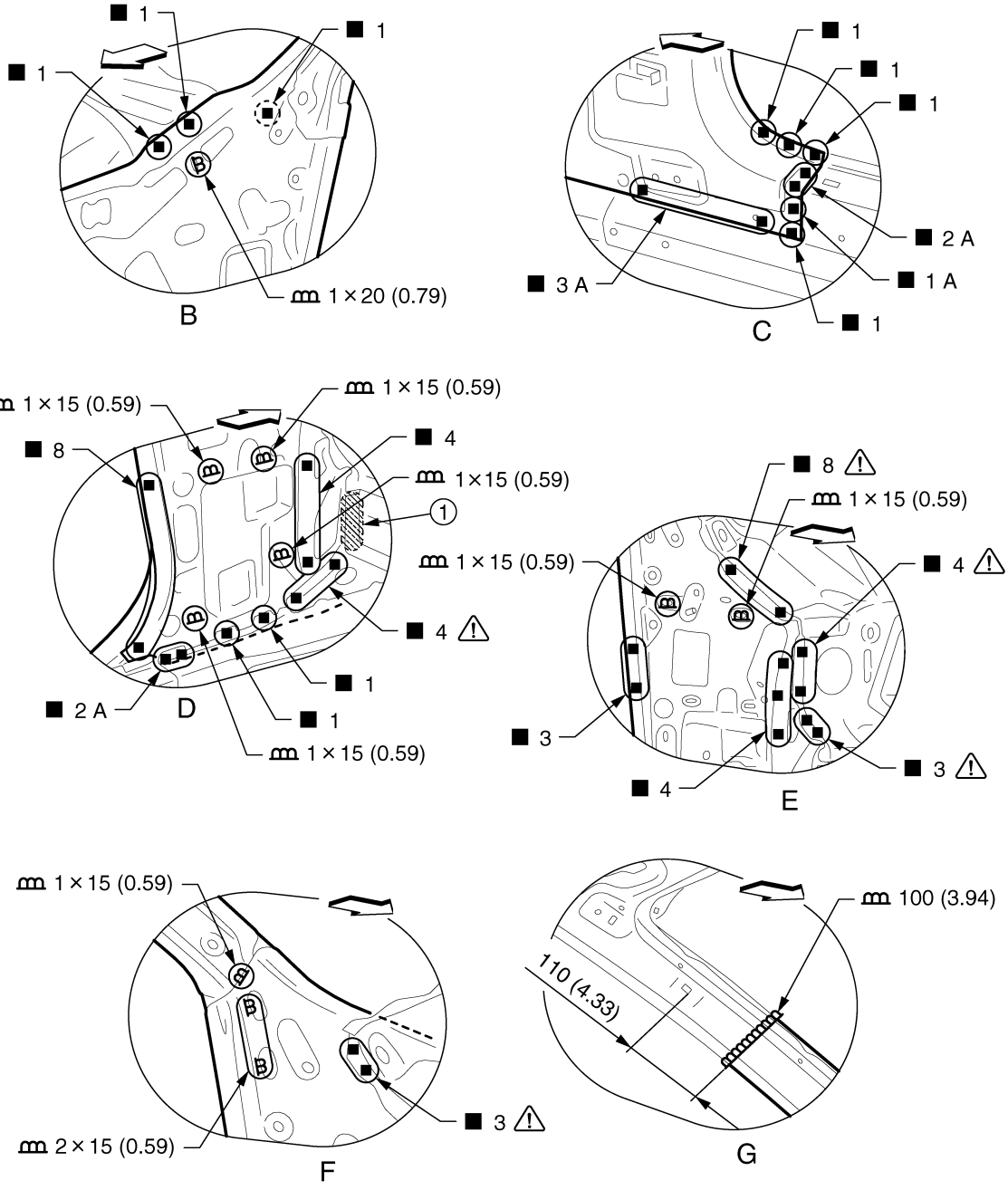
⚠: Remove adhesive agent from welding surface.

Replaced parts

- Side body assembly (LH)
- Upper rear hoodledge (LH)
- Inner side roof rail

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.



JSKIA5182GB

1. Adhesive

Unit: mm (in)

⇦: Vehicle front

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

⚠: Remove adhesive agent from welding surface.

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

View B: Before installing side body assembly

NISMO : Outer Sill (Partial Replacement)

INFOID:0000000011485545

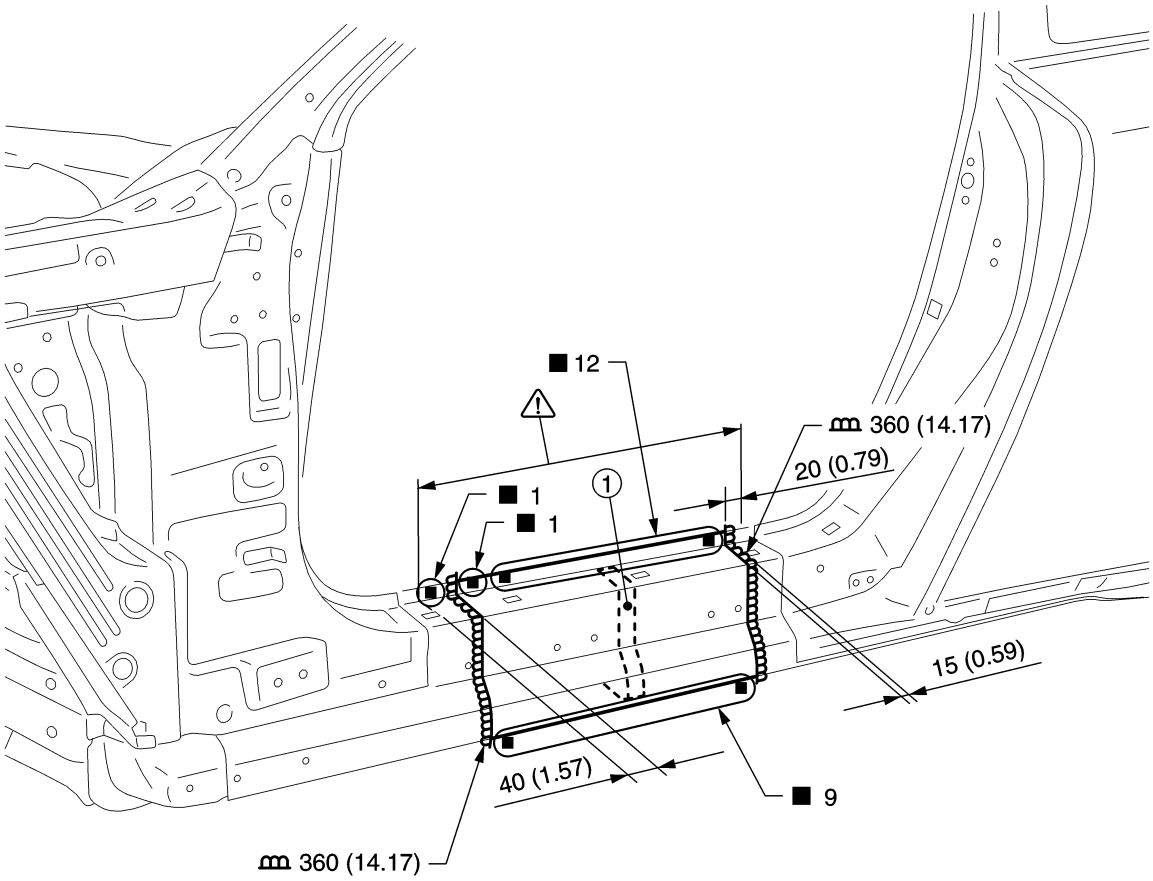
CAUTION:

Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding.
After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.

Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:

Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.



JSKIA4909GB

1. Outer sill brace

Unit: mm (in)

⚠: Remove adhesive agent from welding surface.

Replacement parts

- Outer sill reinforcement (LH)

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

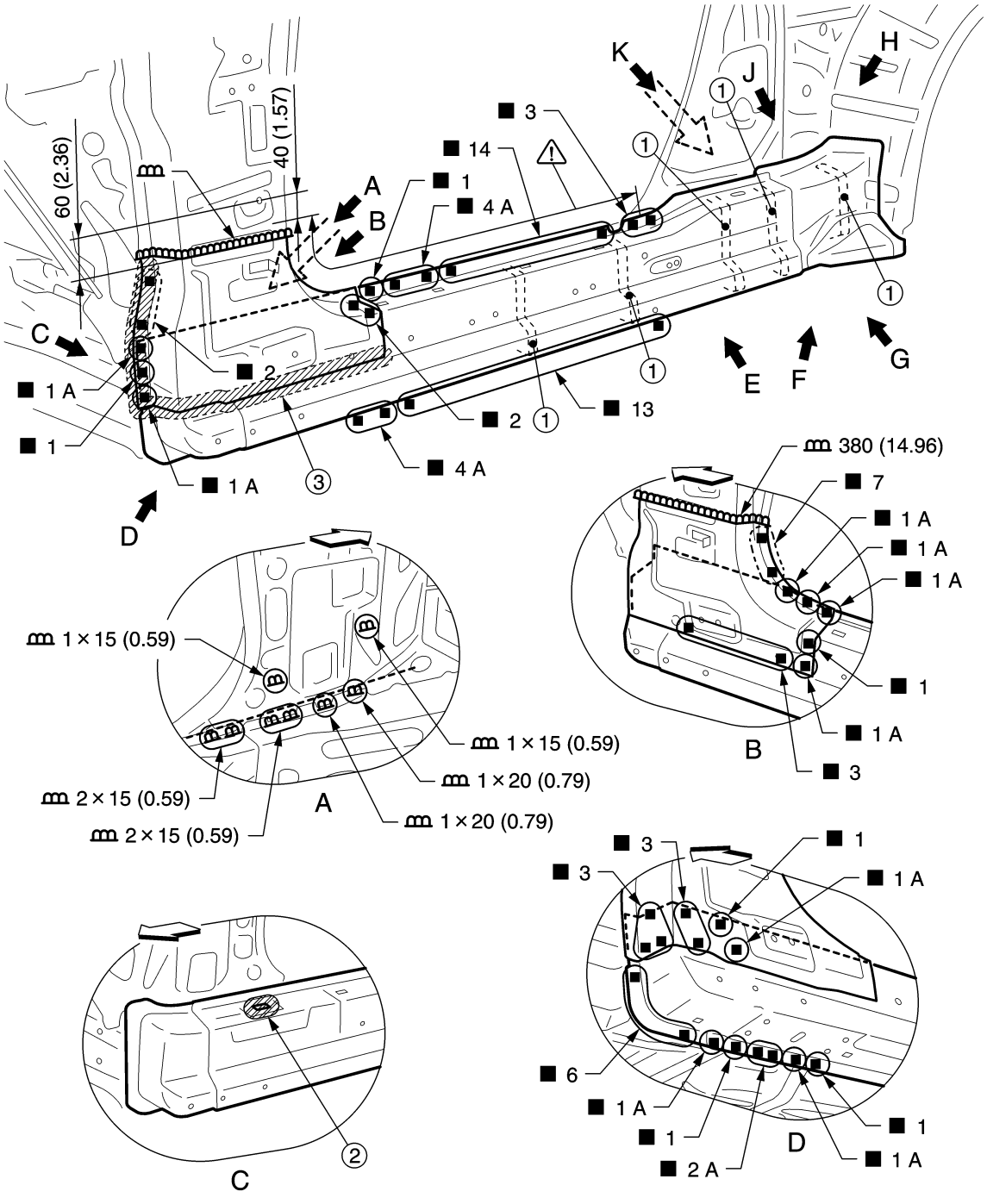
NISMO : Outer Sill

INFOID:0000000011485546

Work after hoodledge reinforcement, rear fender, and lock pillar reinforcement are removed.
Remove the front pillar brace (reusable).
Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:

Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.



JSKIA4910GB

1. Outer sill brace
2. Urethane foam
3. Body sealing

Unit: mm (in)

⇦: Vehicle front

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

⚠: Remove adhesive agent from welding surface.

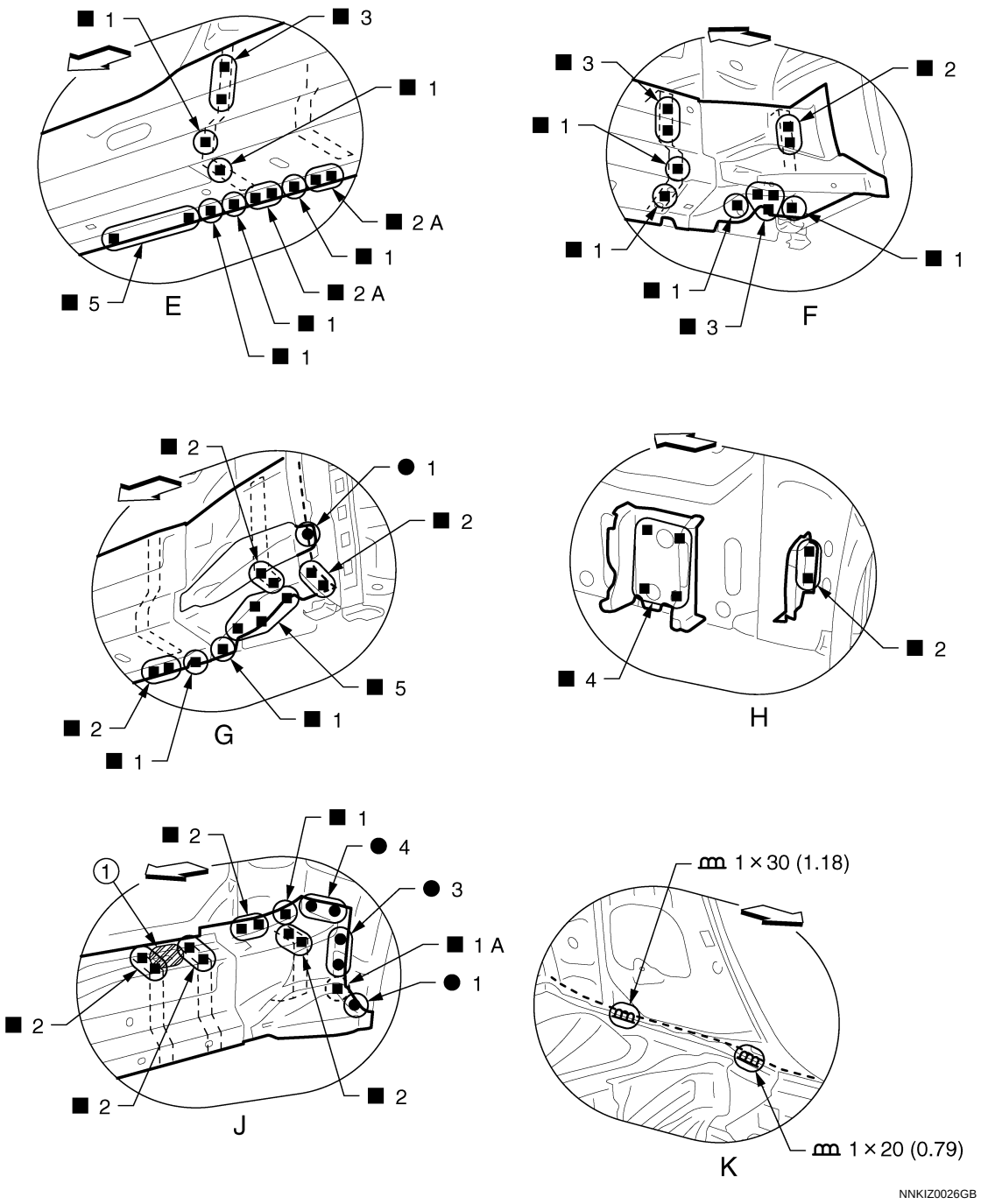
Replacement parts

- Outer sill reinforcement (LH)

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

View C: Before installing front pillar brace



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

View H: Before installing outer sill reinforcement

NISMO : Rear Fender and Lock Pillar Reinforcement

INFOID:0000000011485547

REAR FENDER

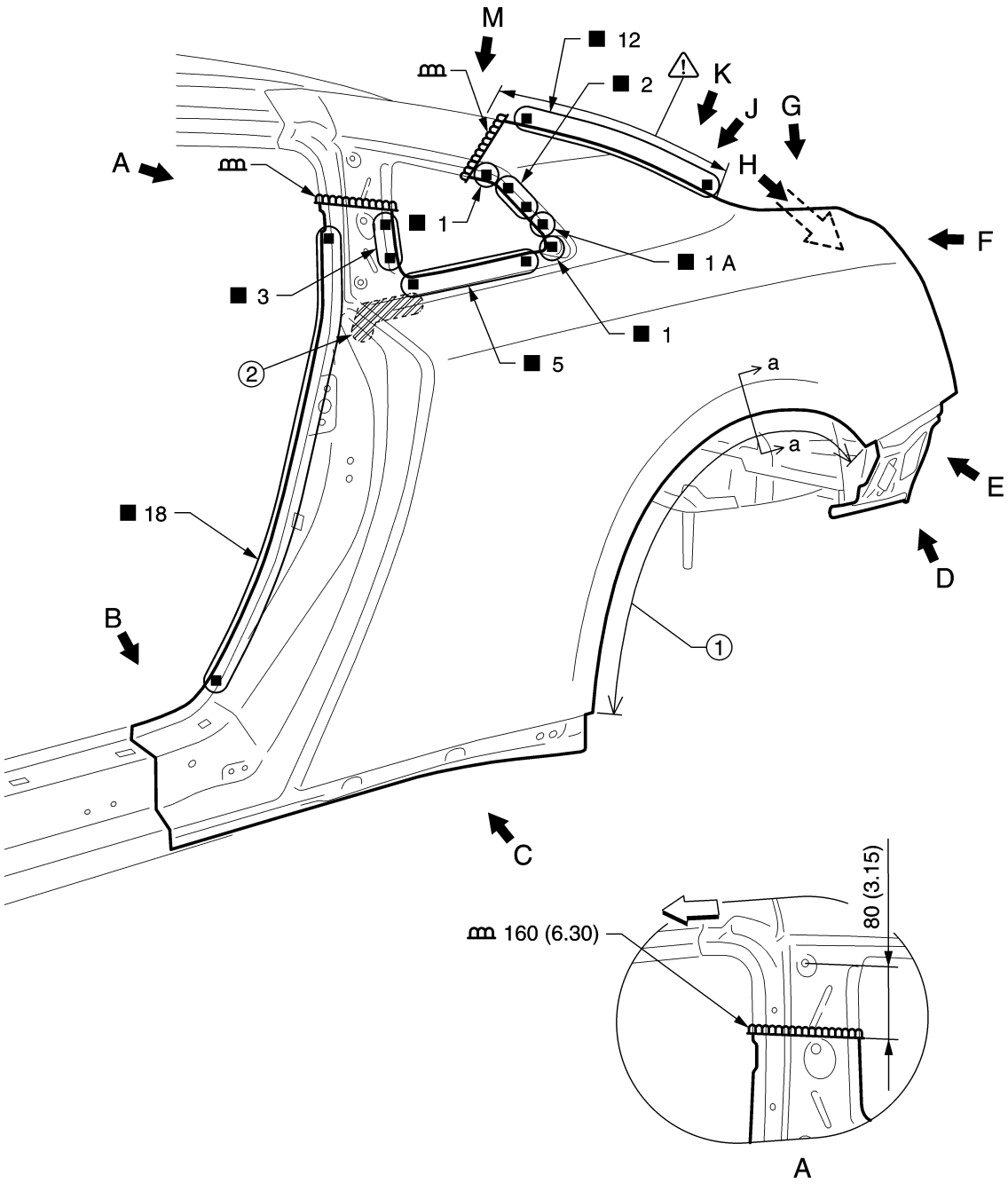
Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:

Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.

When replacing rear fender, remove lock pillar reinforcement and remove adhesive agent from the welding surface of flange end on the door-opening side before installing lock pillar reinforcement and rear fender.

Perform the hidden welding point repair procedure for arrow view J by lifting up the flange of parcel shelf with rear waist.



1. Hemming
2. Urethane foam

Unit: mm (in)

⇦: Vehicle front

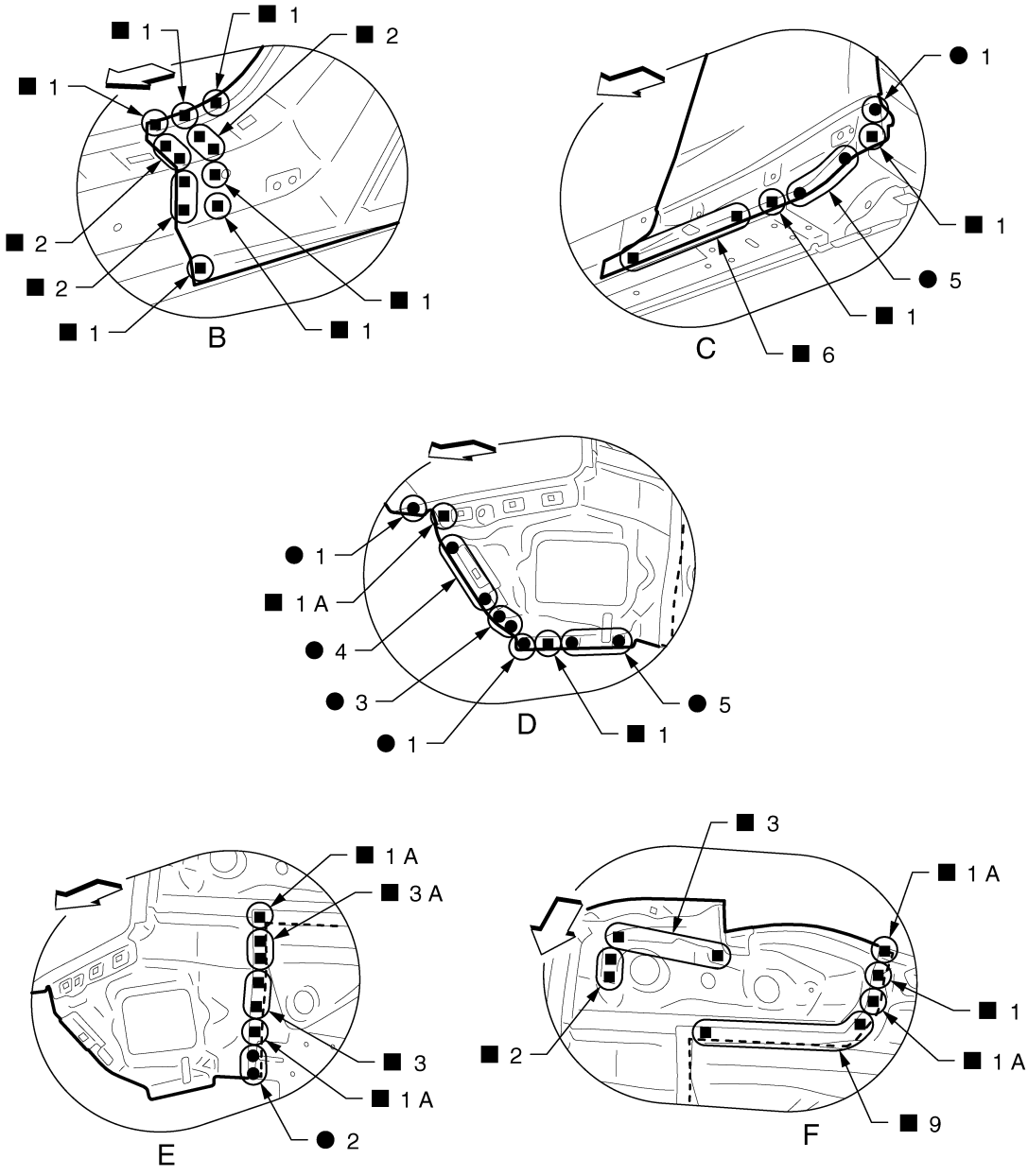
⚠: Remove adhesive agent from welding surface.

Replacement parts

- Rear fender assembly (LH)

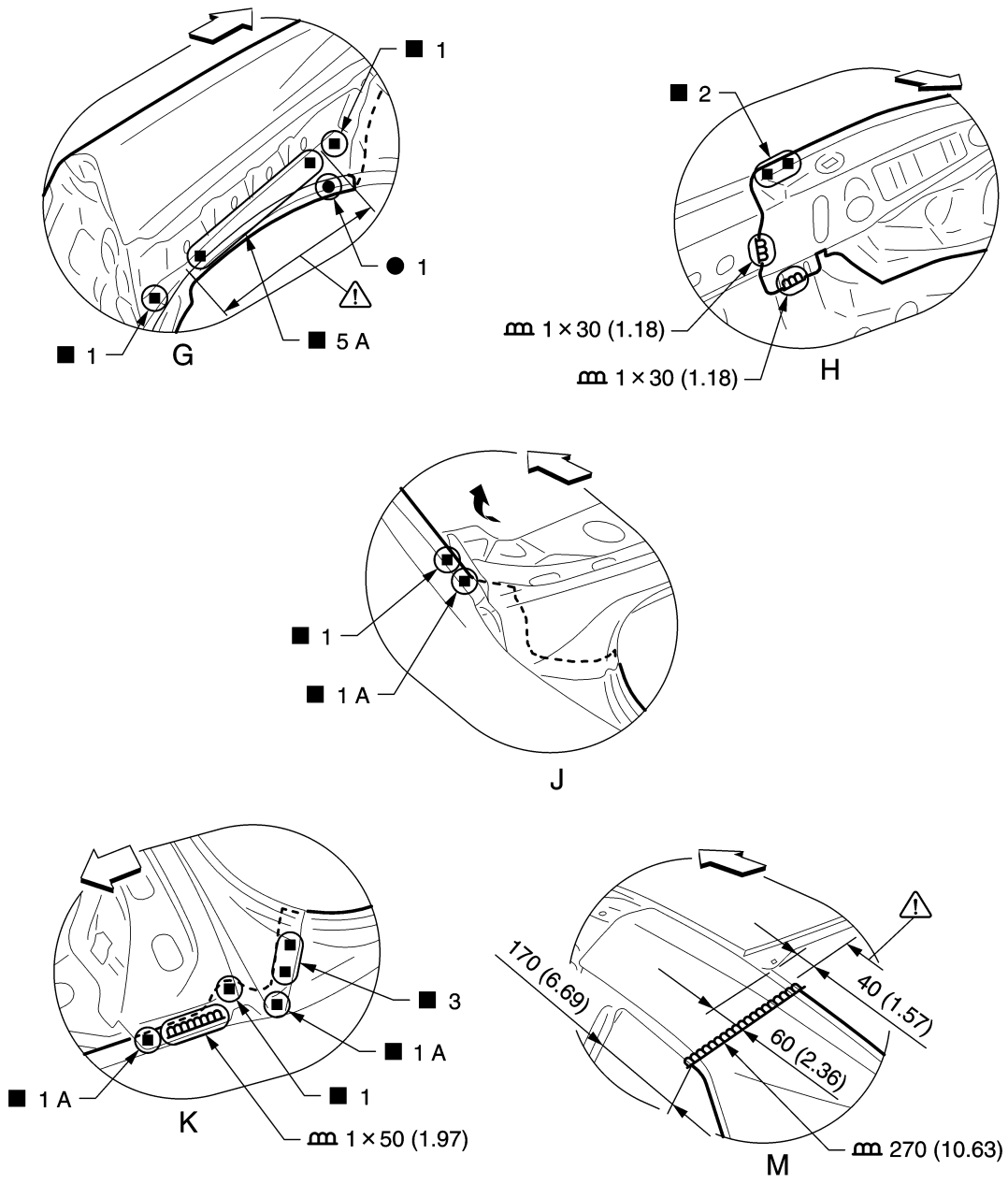
CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.



NNKIZ0028ZZ

⇦: Vehicle front



JSKIA4912GB

Unit: mm (in)

⇦: Vehicle front

⚠: Remove adhesive agent from welding surface.

CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

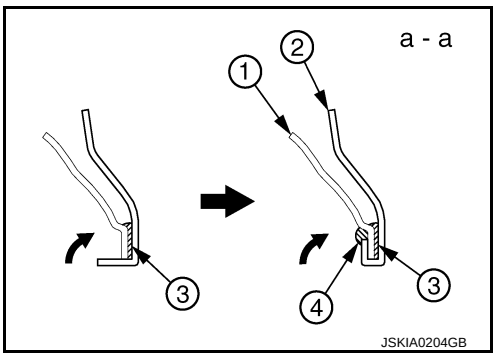
View J: The flange of parcel shelf with rear waist is lifted up.

Point

- Perform the hemming to the flange of wheelarch after applying the adhesive.

- Apply the sealing to the flange end.
- Refer to BRM-29, "Rear Fender Hemming Process".

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



LOCK PILLAR REINFORCEMENT

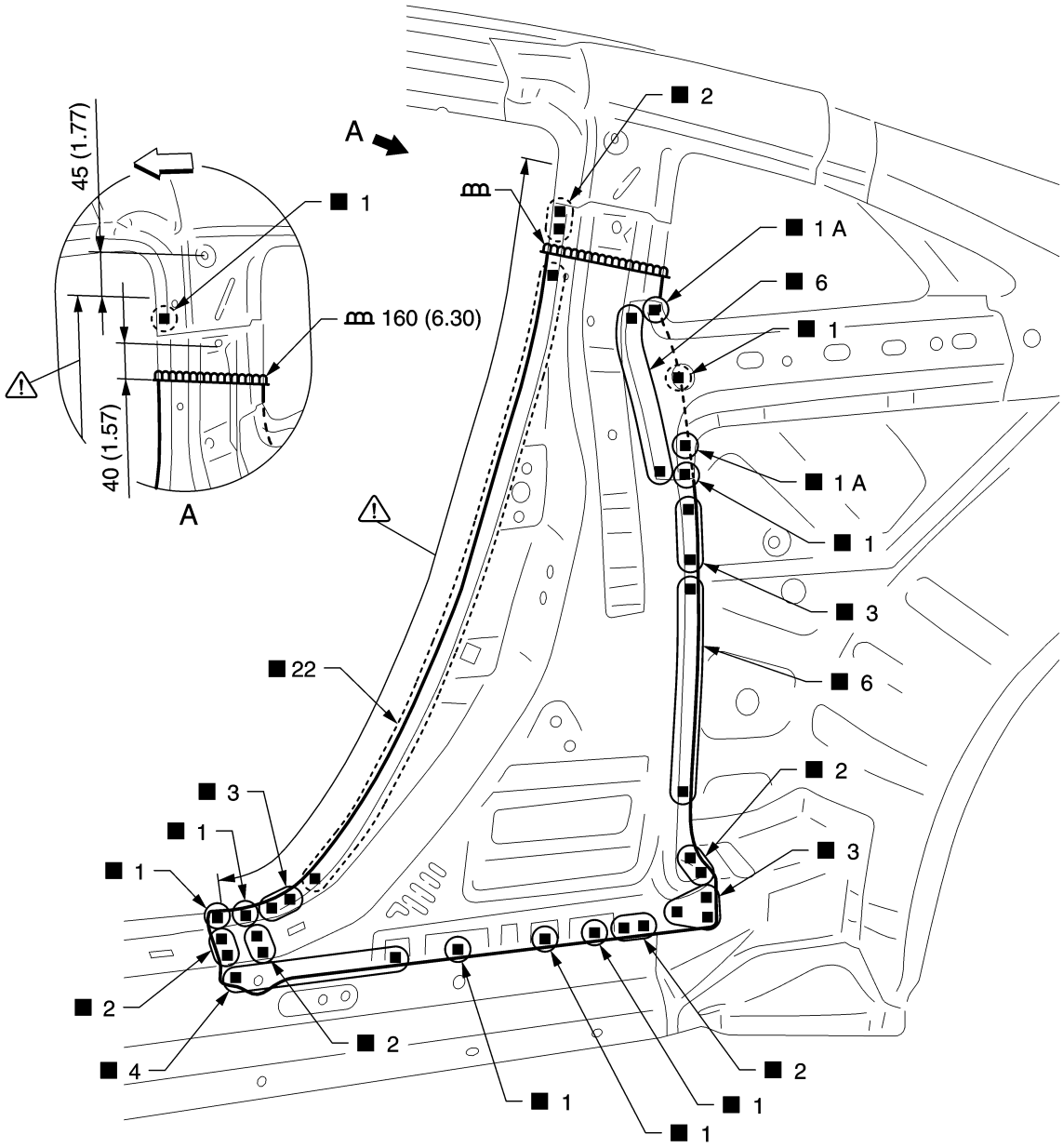
CAUTION:

Create the reinforcing sheet from the redundant area of service parts for butt welding area. Weld the reinforcing sheet on the back of butt welding area, and then perform butt welding. After welding, apply anti-corrosive wax on the reinforcing sheet-welded area.

Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:

Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.



JSKIA4913GB

Unit: mm (in)

⇦: Vehicle front

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

⚠: Remove adhesive agent from welding surface.

Replacement parts

- Lock pillar reinforcement (LH)

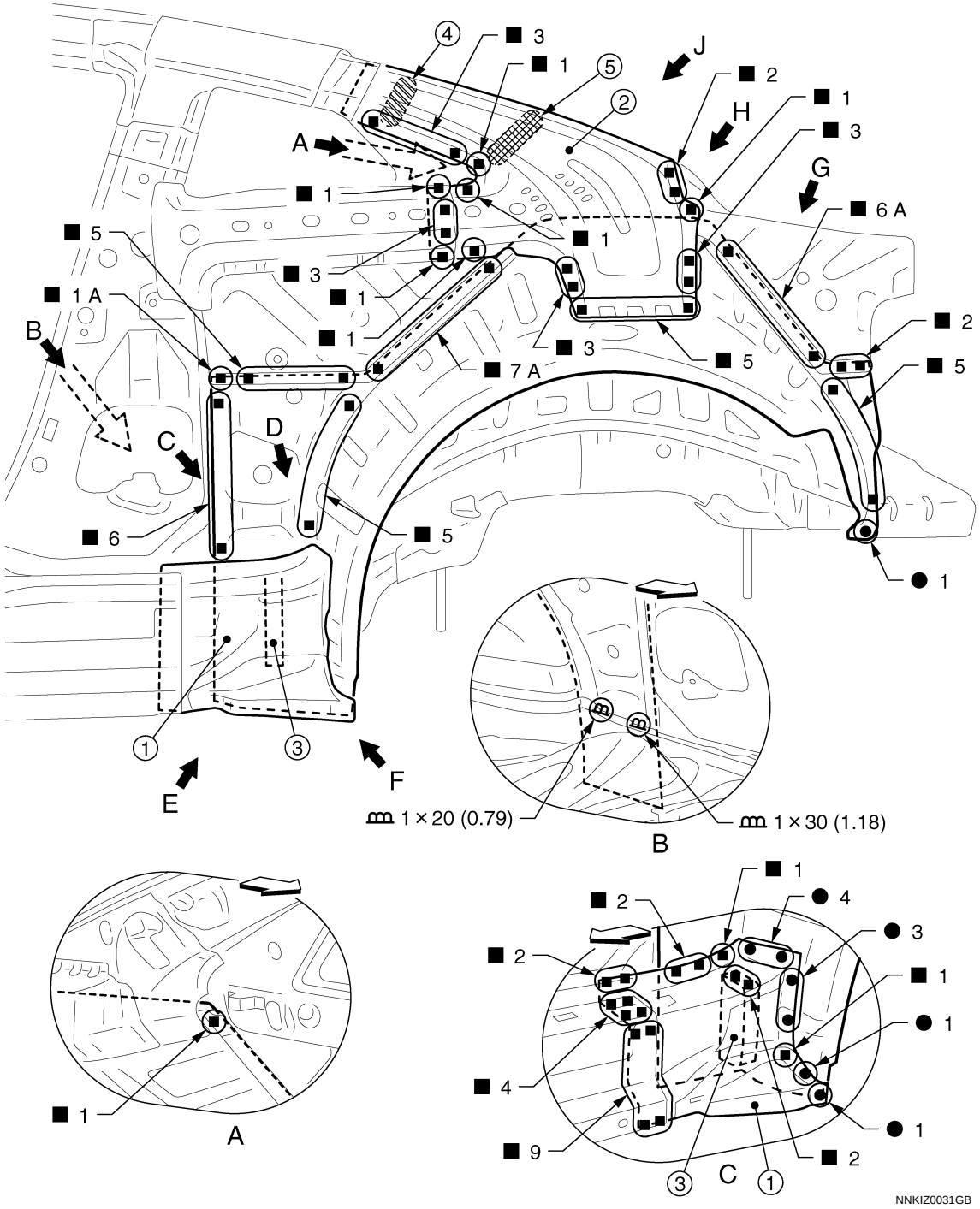
CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

NISMO : Outer Rear Wheelhouse

INFOID:0000000011485548

Work after rear fender and lock pillar reinforcement are removed.
Remove the outer sill reinforcement rear and rear pillar reinforcement (reusable).



1. Outer sill reinforcement rear
2. Rear pillar reinforcement
3. Outer rear sill brace
4. Urethane foam
5. Highly rigid foaming agent

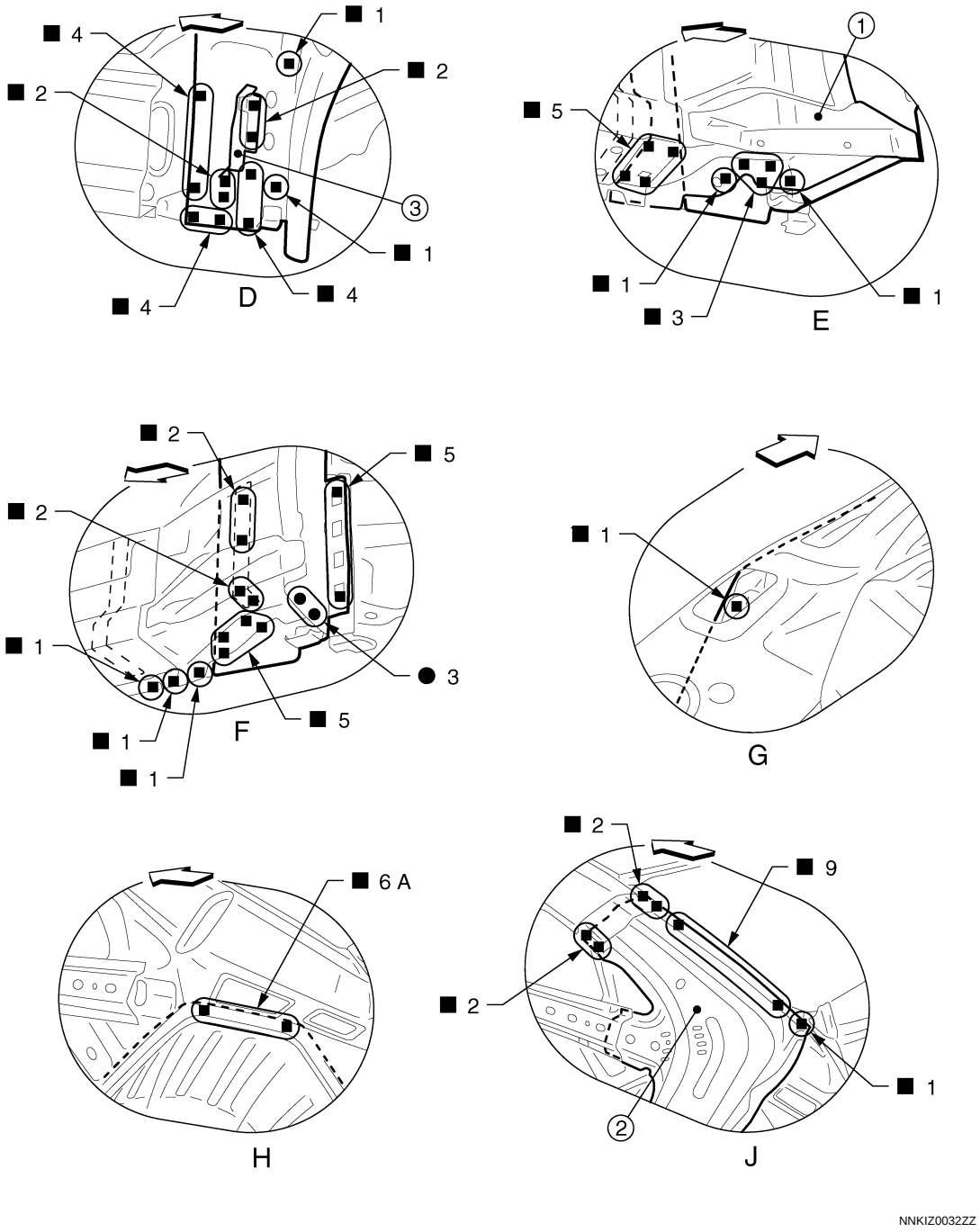
Unit: mm (in)

⇦: Vehicle front

Replaced parts

- Outer rear wheelhouse (LH)

CAUTION:
Refer to BRM-14, "Foam Repair" (section of Example of highly rigid foaming agent repair procedure) for filling procedure of highly rigid foaming agent.



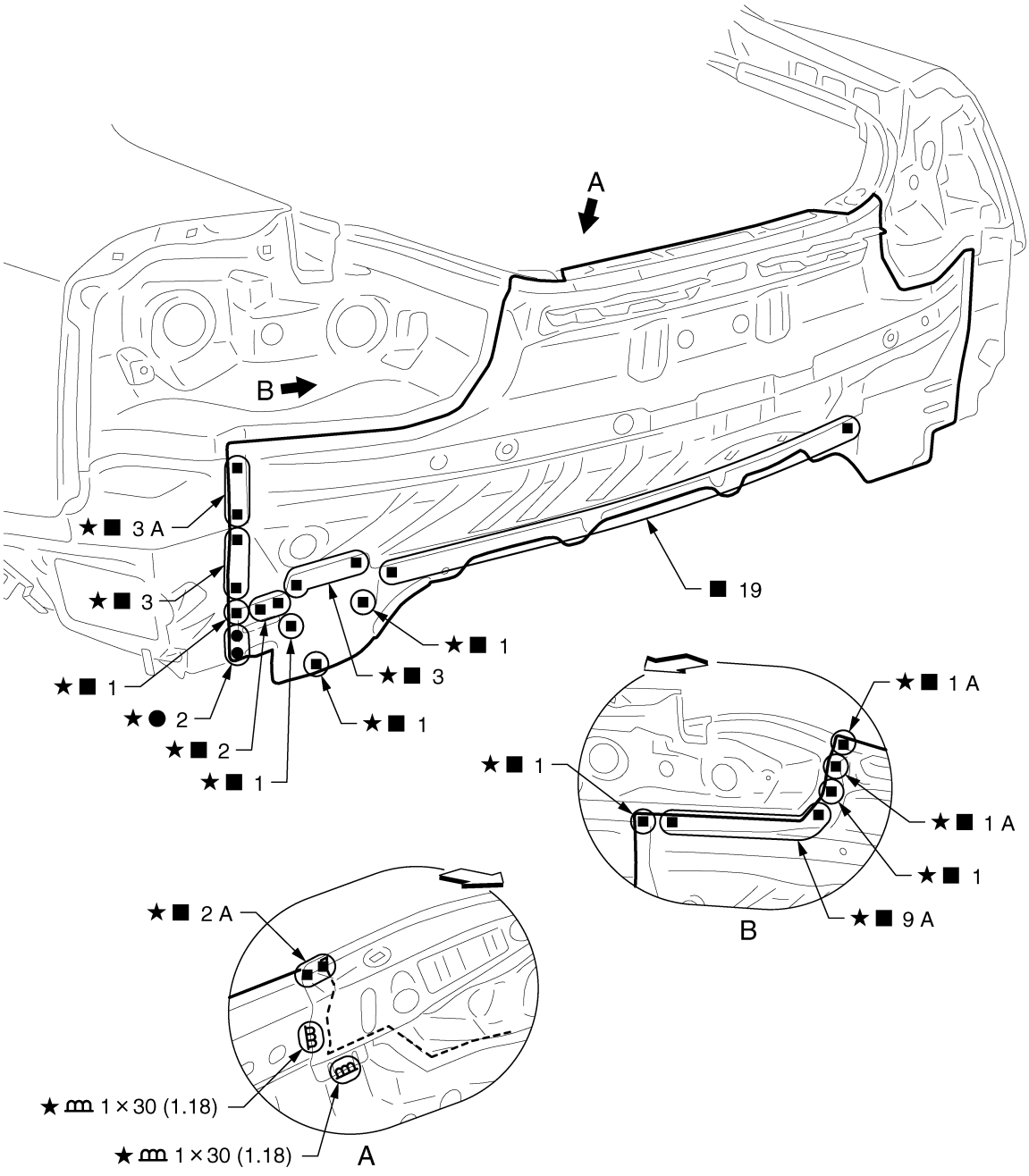
1. Outer sill reinforcement rear
2. Rear pillar reinforcement
3. Outer rear sill brace

⇦: Vehicle front

View D: Before installing outer sill reinforcement rear
View H: Before installing rear pillar reinforcement

NISMO : Rear Panel

INFOID:0000000011485549



JSKIA0765GB

Unit: mm (in)

⇦ : Vehicle front

★ : An equivalent welding area with the same dimensions is on the opposite side.

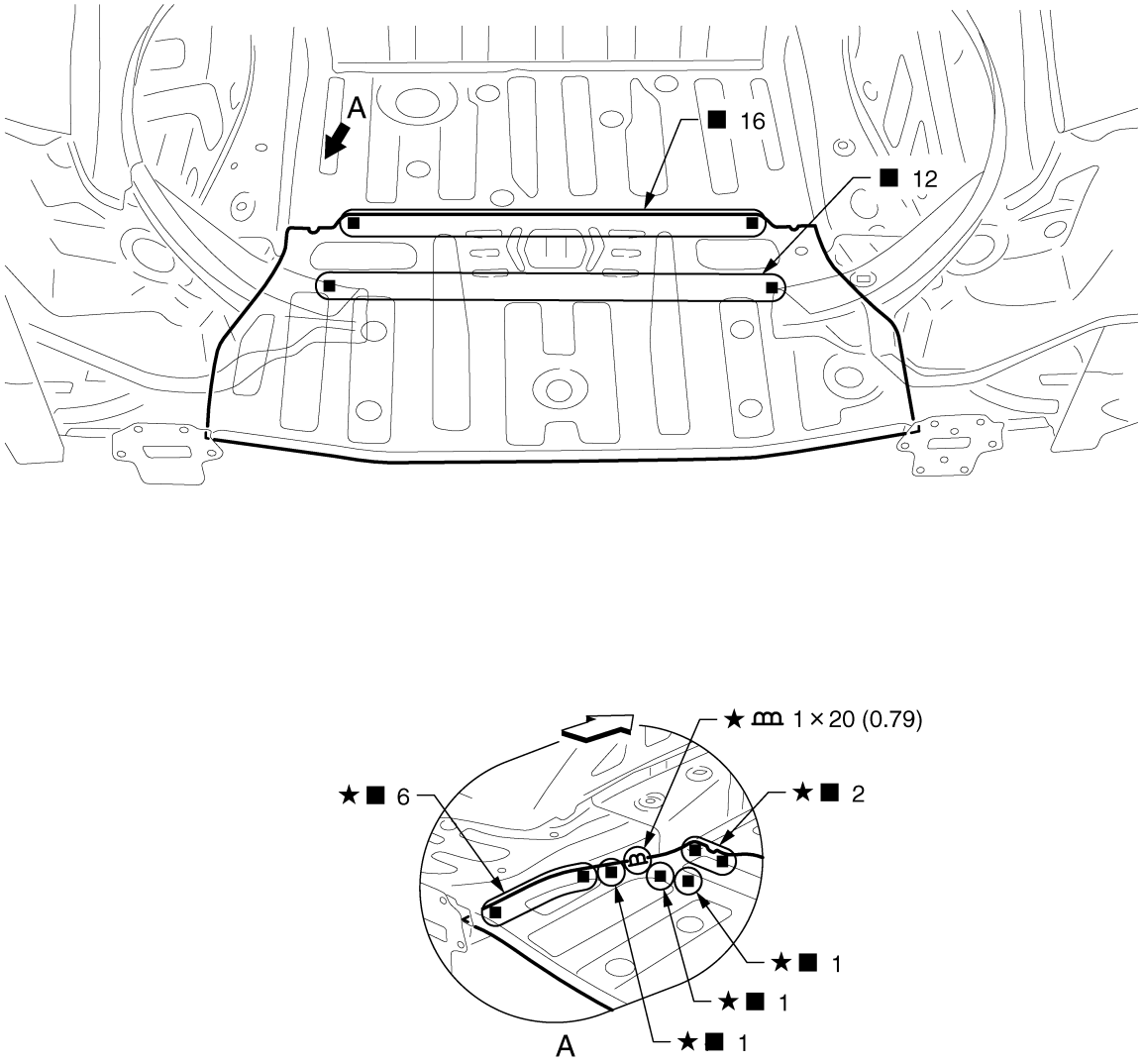
Replacement parts

- Rear panel assembly

NISMO : Rear Floor Rear

INFOID:0000000011485550

Work after rear panel is removed.



NNKIZ0034GB

Unit: mm (in)

⇦ : Vehicle front

★ : An equivalent welding area with the same dimensions is on the opposite side.

Replacement parts

- Rear floor rear

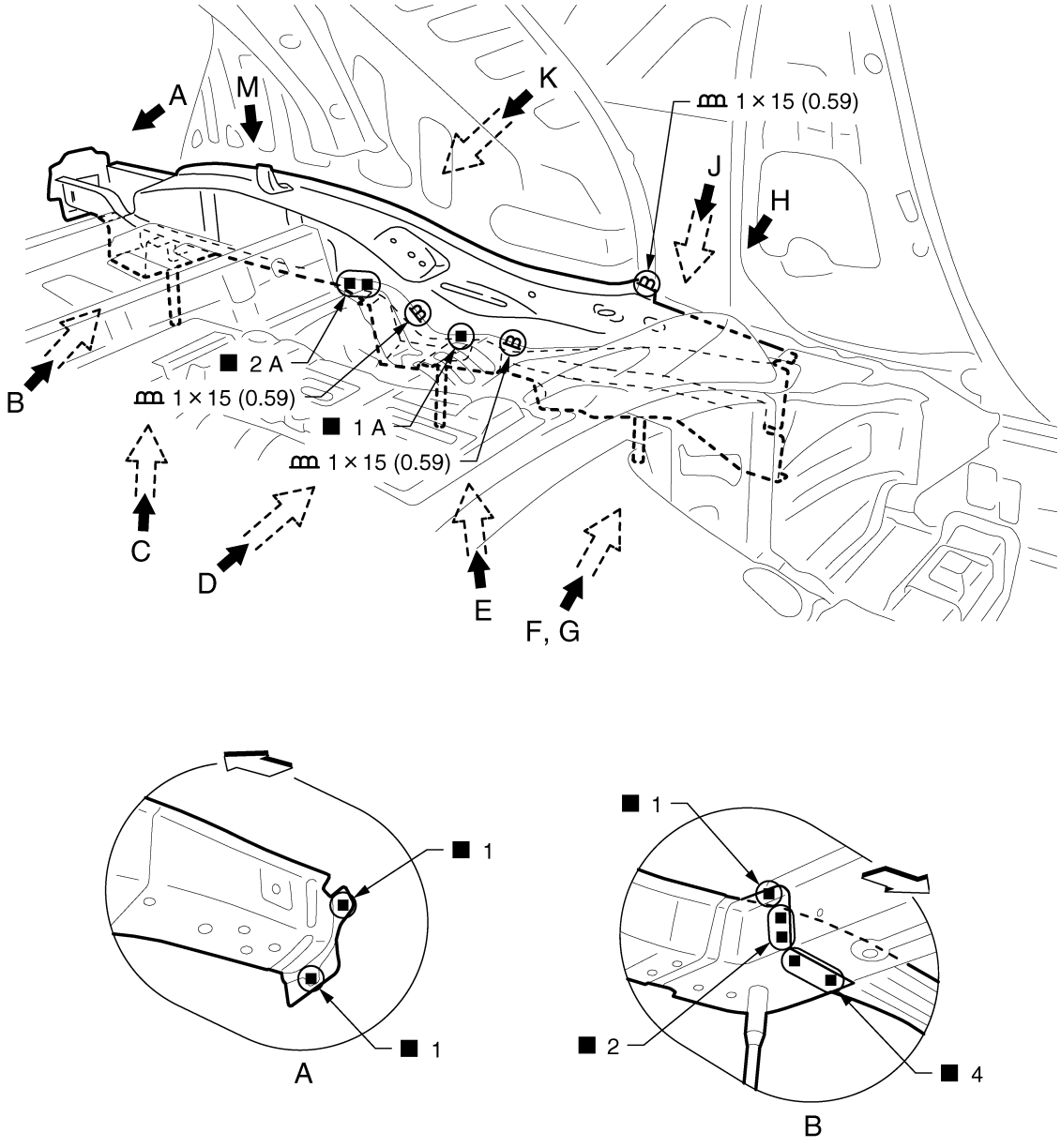
NISMO : Rear Side Member

INFOID:0000000011485551

Work after rear fender, rear panel, rear floor rear, rear floor side, lock pillar reinforcement, and outer rear wheelhouse are removed.

Welding spots marked with ⚠ have adhesive agent applied on the welding surface for enhancing body rigidity.

CAUTION:
Even when adhesive agent is not used, performing welding based on the number of welding spots described in this manual brings the body rigidity equivalent to the case where an adhesive is applied. To secure the weld quality, always remove adhesive agent from the welding surface and its periphery, and perform welding according to the number of spots described in this manual without applying an adhesive.



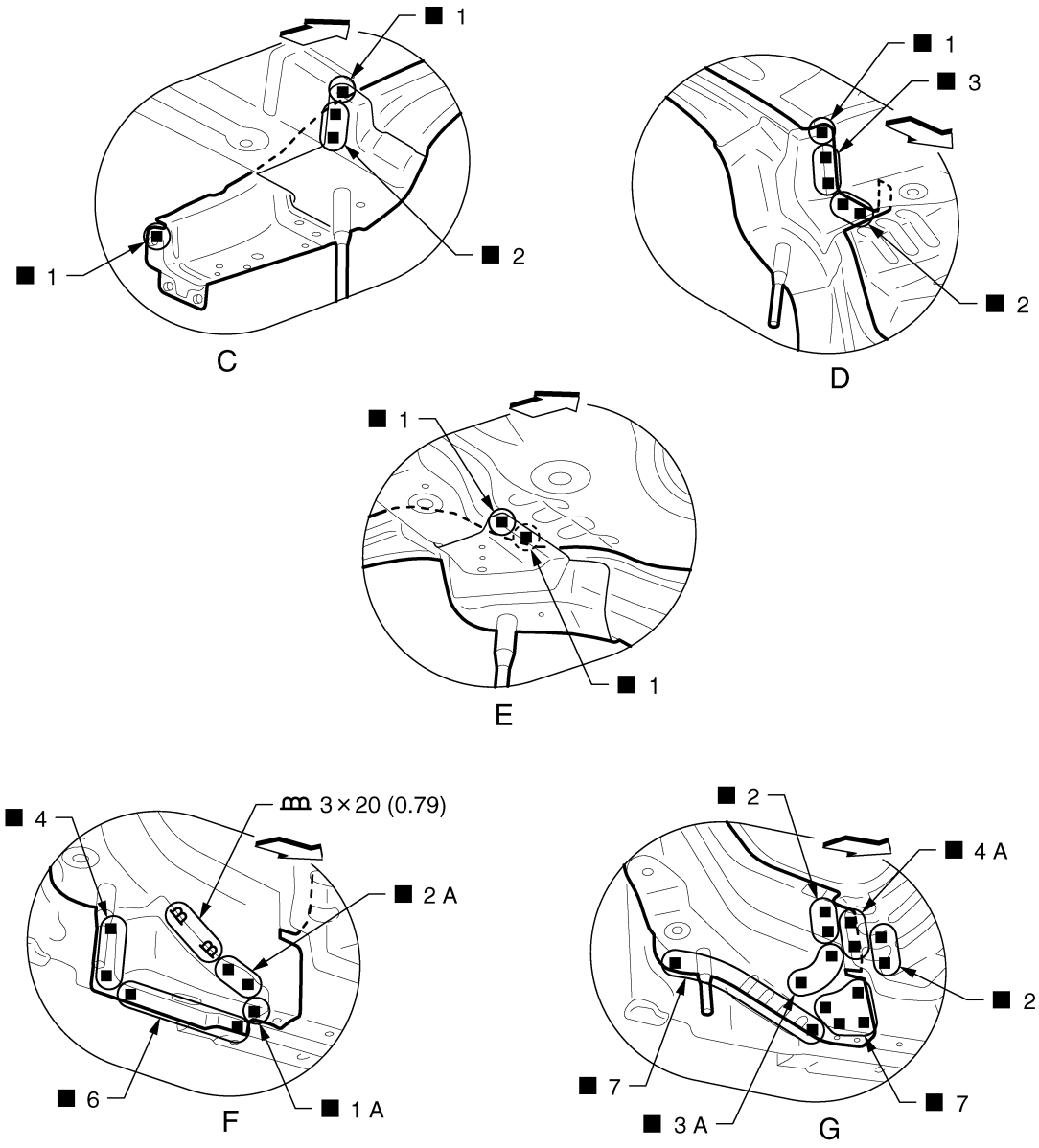
NNKIZ0035GB

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Rear side member assembly (LH)



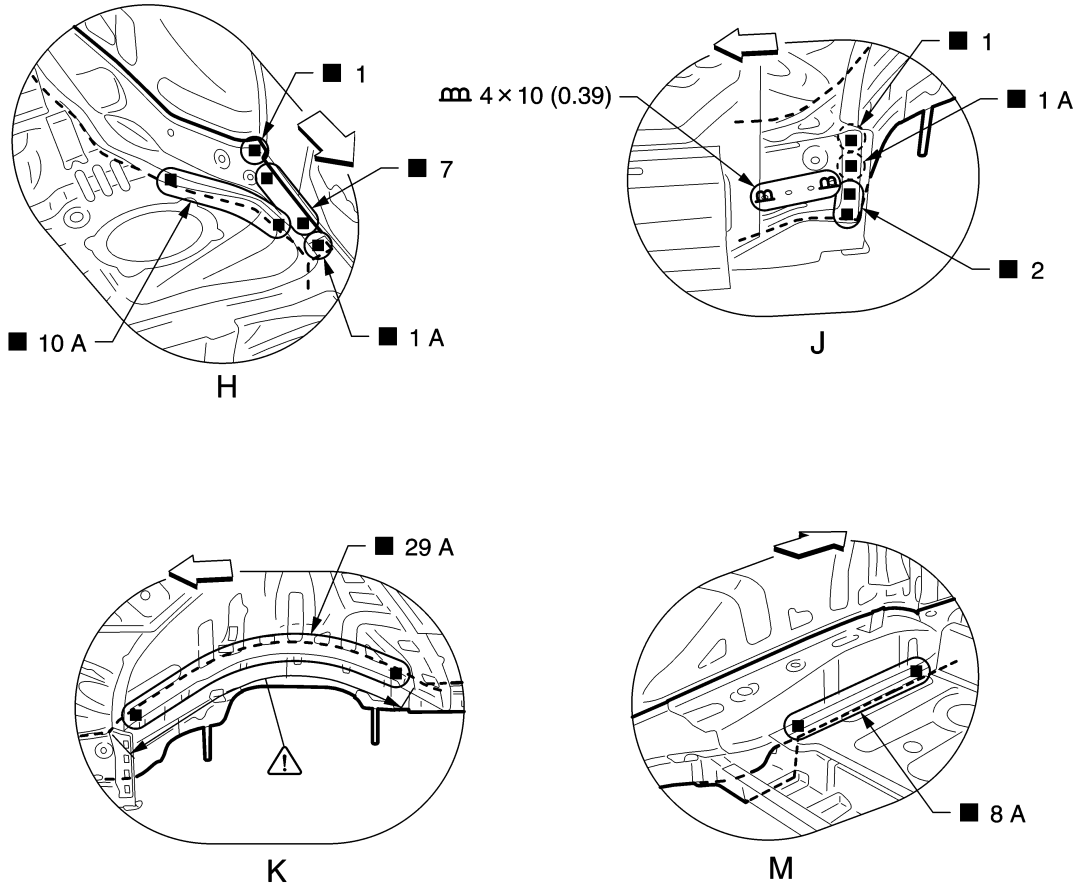
NNKIZ0036GB

Unit: mm (in)

⇦: Vehicle front

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

View G: Before installing jack mounting bracket



JSKIA4914GB

Unit: mm (in)

⇦: Vehicle front

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

⚠: Remove adhesive agent from welding surface.

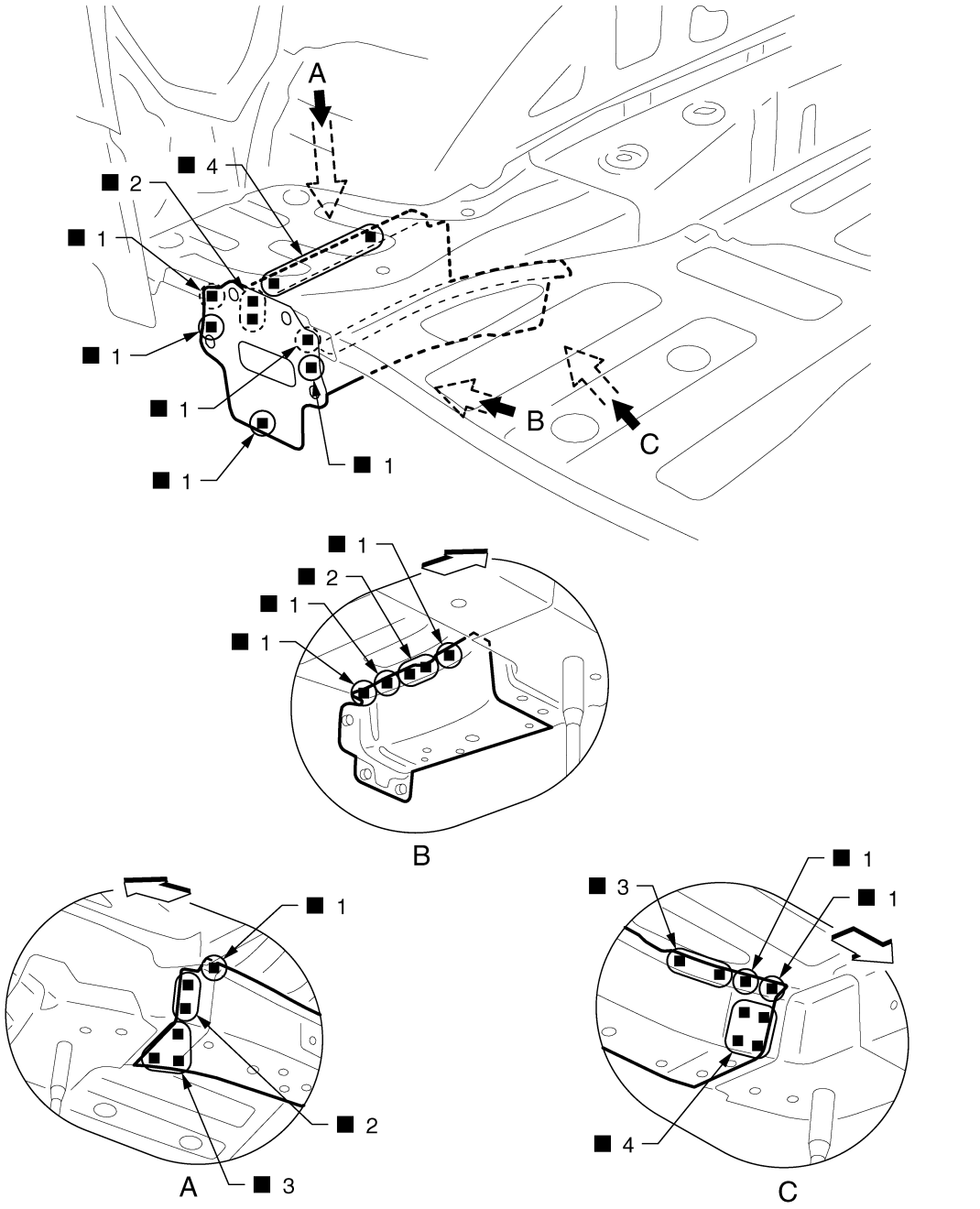
CAUTION:

For the above welding spot marked with ⚠, remove adhesive agent from the welding surface and its periphery before welding.

NISMO : Rear Side Member Extension

INFOID:0000000011485552

Work after rear panel is removed.



NNKIZ0038ZZ

⇦: Vehicle front

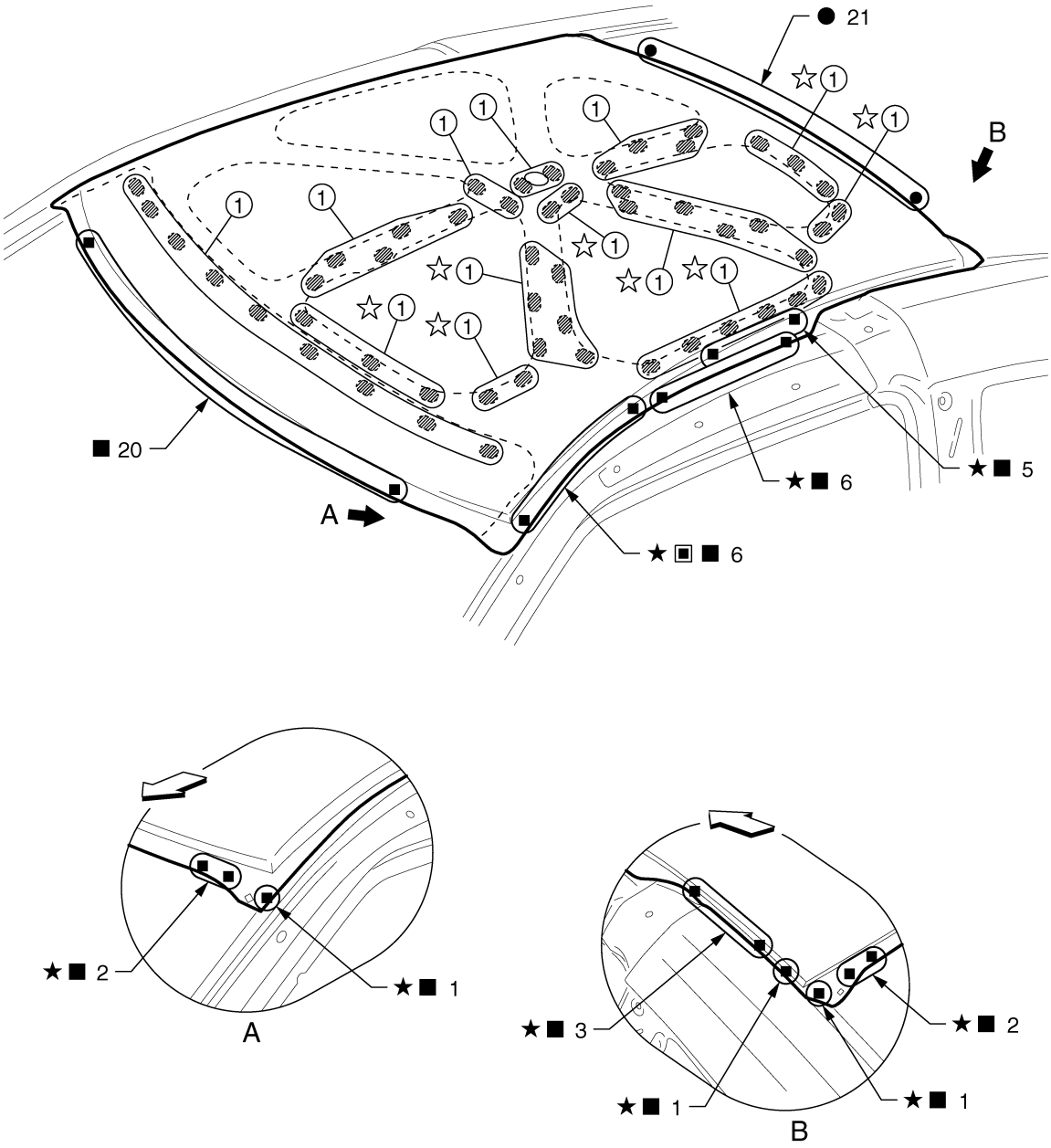
( ): Weld the parts onto the back of the component part.

Replacement parts

- Rear side member extension (LH)

NISMO : Roof

INFOID:0000000011485553



JSKIA1086ZZ

1. Sealing

⇦: Vehicle front

▣: Perform the plug welding instead of the laser welding.

★: An equivalent welding area with the same dimensions is on the opposite side.

☆: An equivalent sealing area with the same dimensions is on the opposite side.

Replacement parts

- Roof

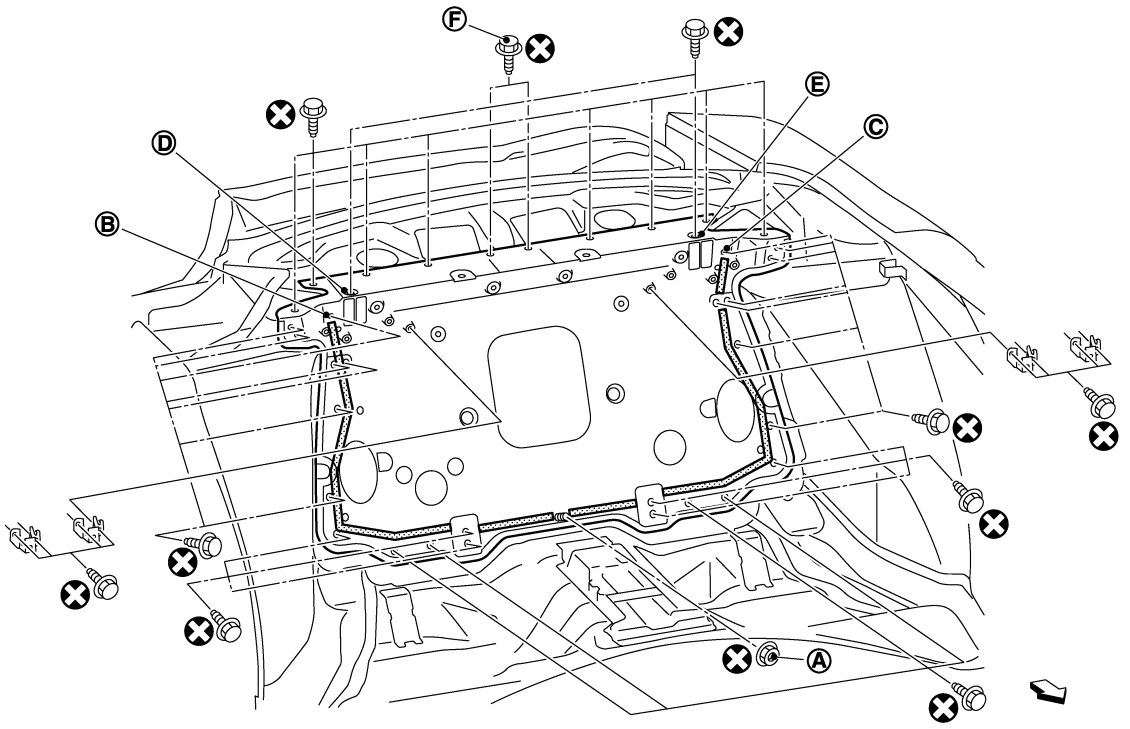
NISMO : Seatback Support

INFOID:0000000011485554

REMOVAL

CAUTION:

- **Never use an impact wrench to remove or install the mounting bolts and nut.**
- **Always use the specified bolts and nut with the surface finished.**
- **Never reuse the removed mounting bolts and nut.**



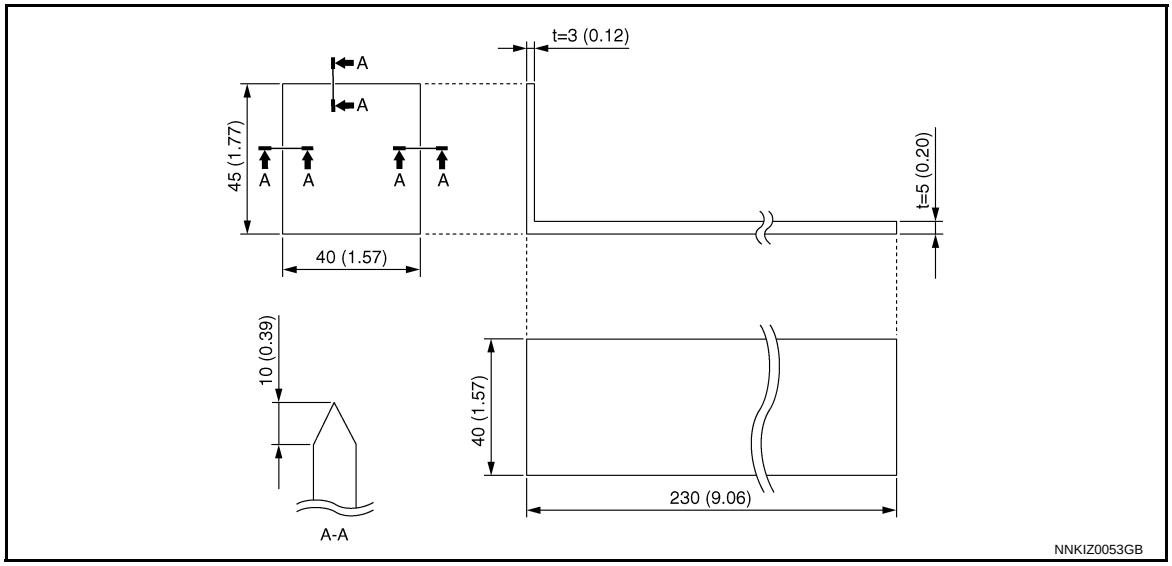
NNKIZ0050ZZ

⇦ : Vehicle front

: Adhesive exfoliated position

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Remove all of the remaining 30 bolts except the bolts and nut of (A) to (E) shown in the figure.
   CAUTION:
   Tighten 2 bolts (F) together with the parcel shelf reinforcement.
2. Loosen the mounting bolts and nut of (A) to (E) to safely unglue the adhesive of seatback support.
3. Set the temperature gauge (the infrared noncontact temperature gauge is recommended for temperature management) to the seatback support, and then heat up to 110°C (230°F) using halogen heater, etc.
   CAUTION:
   The heating temperature should not exceed 110°C (230°F).
4. Use an L-chisel shaped as shown in the figure and insert it to either the left or right gap between the vehicle body and seatback support on the top of bonding area while heating the seatback support. Slightly unglue the adhesive from the upper side to the lower side to remove the seatback support.
   CAUTION:
   Never damage the seatback support and the portions where the seatback support is bonded.



Unit: mm (in)

5. Eliminate the adhesive that remains on the seatback support and the portions where the seatback support is bonded with a disc sander.
6. If the coating on the joint surface with the vehicle is peeled off, apply epoxy primer on the surface to prevent electric corrosion.

INSTALLATION

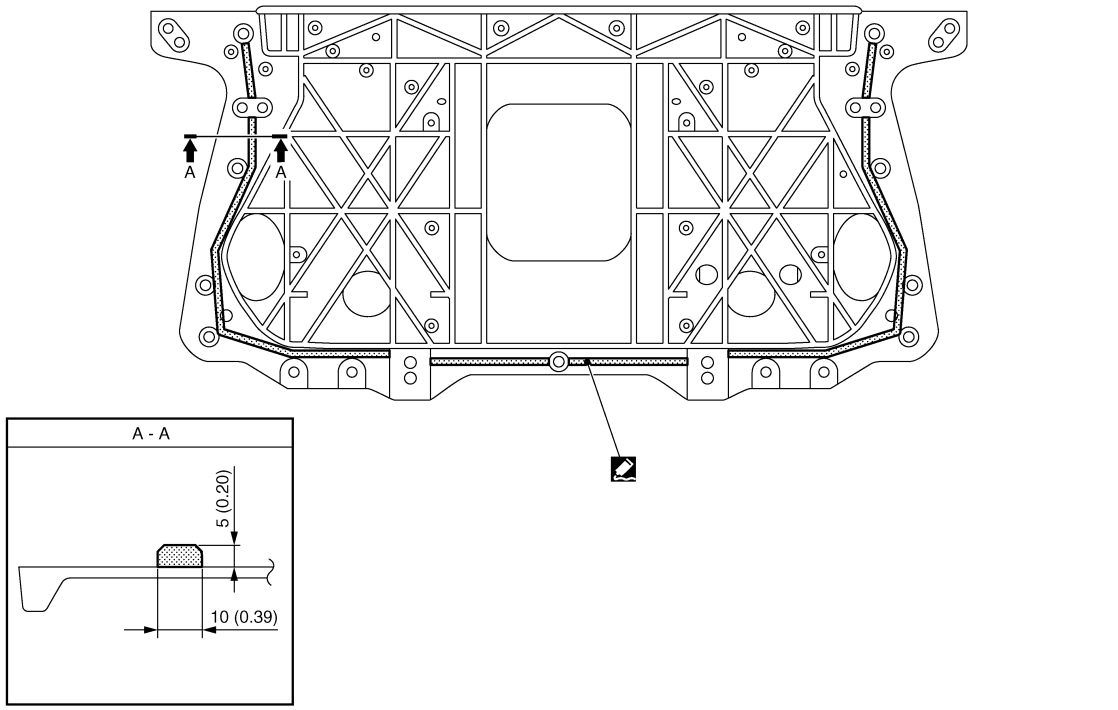
CAUTION:

- **Always perform the following procedure to visually check the rear seatback panel for deformation and perform the crack inspection (dye penetrant test) when the vehicle is damaged.**

Crack inspection procedure (Follow the manufacturer's directions for proper usage.)

1. **Spray the cleaning solution on the inspection surface to clean the surface.**
2. **Spray the penetrant liquid on the inspection surface and wait until the liquid is penetrated.**
3. **Wipe out any excess penetrant liquid on the inspection surface and then wipe out again with a cloth moistened by a little cleaning solution.**
4. **Spray the developer on the inspection surface.**
5. **A red indication appears on damaged area.**

- **Never use an impact wrench to remove or install the mounting bolts and nut.**
- **Always use the specified bolts and nut with the surface finished.**
- **Never reuse the removed mounting bolts and nut.**
- **Tighten all of the mounting bolts and nut before hardening the adhesive.**



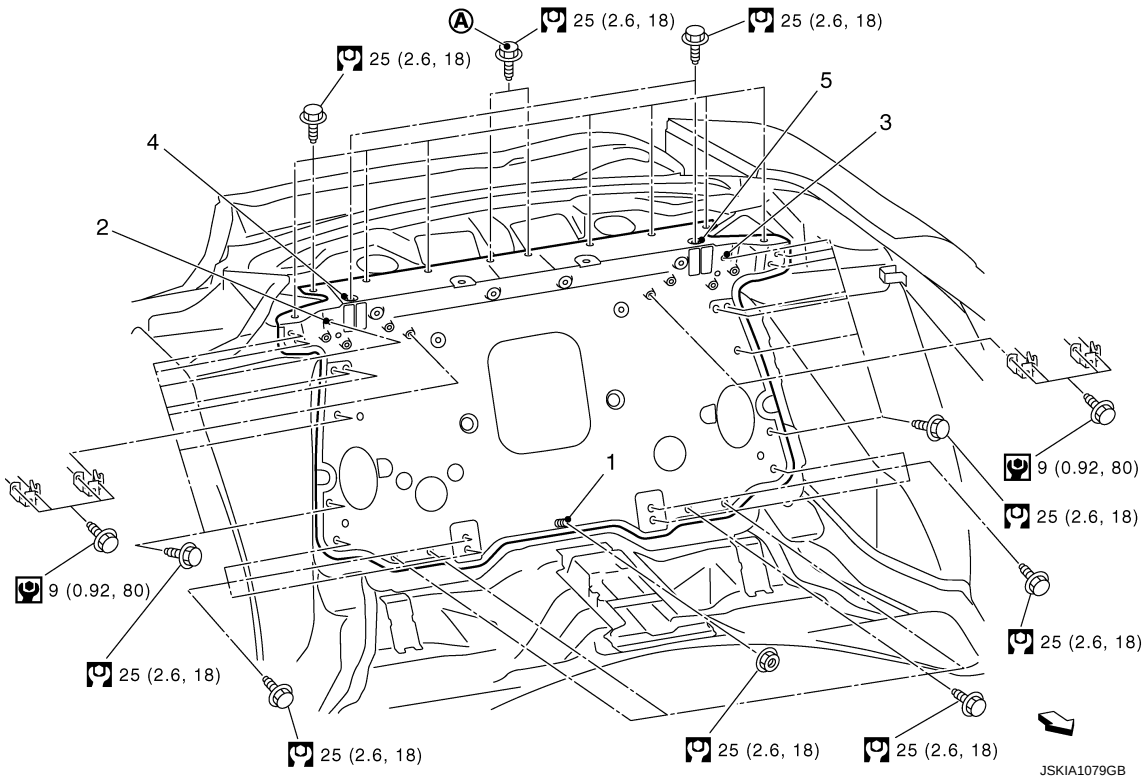
NNKIZ0051GB

Unit: mm (in)

: 3M™ Automix™ Panel Bonding Adhesive 08115 or equivalent

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

1. Apply the adhesive to the seatback support as shown above in the figure.



JSKIA1079GB

⇦ : Vehicle front

Refer to ″How to use this manual″ GI-4, "Components" for the symbols shown in the figure.

2. Tighten the bolts and nut of 1 to 5 from the mounting bolts and nut in this order to the specified torque in advance. Tighten the remaining bolts evenly in 2 or 3 steps, and then tighten them to the specified torque.

1	: Determine the left or right direction of the center of seatback support bottom in advance, and then tighten to the specified torque.
2, 3	: Determine the top center of the height direction of seatback support in advance, and then tighten to the specified torque.
4, 5	: Determine the left or right direction of the seatback support in advance, and then tighten to the specified torque.

CAUTION:
Tighten 2 bolts (A) together with the parcel shelf reinforcement.

SERVICE DATA AND SPECIFICATIONS (SDS)

ASSESSMENT OF DAMAGE AND INITIAL SUPPORT

Check Presence of Framework Damage

INFOID:0000000011485555

When the customer's vehicle is in service, check the framework and aluminum die-casting parts for damage.

Damage Scale Diagnosis

INFOID:0000000011485556

JUDGMENT STANDARD

Damage grade	Judgment standard	Example of specific operation	Remarks
A	• There is damage to frame parts. • Replacement of door opening parts • Damage to the extent that the roof replacement is necessary	• Replacement of member • Replacement of sill • Replacement of lock pillar • Replacement of front pillar • Replacement of roof • Replacement of floor • Replacement of inner wheelhouse • Replacement of rear fender • Replacement of front-end module (radiator core support) • Replacement of windshield glass, side window glass, rear window glass, door glass	NISSAN recommend ″Certified body shop″ for structural body repair.
	• Damage of aluminum die-casting parts (Other than door)	• Removal, installation, and replacement of rear seatback support • Replacement of strut housing	
B	• Sheet metal and replacement of bolt-on outer plate parts • Partial sheet metal and paint of outer plate	• Replacement, sheet metal, and paint of front fender • Replacement, sheet metal, and paint of hood • Replacement, sheet metal, and paint of door • Replacement, sheet metal, and paint of trunk lid • Replacement, sheet metal, and paint of rear panel • Sheet metal and paint of rear fender (Outer plate damage only) • Sheet metal and paint of roof • Replacement, repair, and paint of bumper • Replacement, repair, and paint of center mud guard • Replacement, repair, and paint of pillar garnish • Replacement, repair, and paint of door mirror • Replacement of undercovers	—

JUDGMENT PROCEDURE

The judgment procedures for framework are exampled as per the following.

Location	Judgment procedure	
Body shop	Check with device	• Check the dimensions described in the body repair manual using tracking gauge. • Check damage of aluminum die-casting parts by the dye penetrant testing procedure.
Body shop and workshop	Driving and visual check point	• If the vehicle can be driven, check that the steering position. → There is possible structural damage if it drifts to the left or right. • If the vehicle can be driven, check the straightness by the driving check. → There is possible structural damage if it drifts to the left or right. • Check for signs of interference between tire and fender protector around the damaged area. → There is possible structural damage if there are signs of interference. • Check for impact and damage around front pillar. → It is possible that the damage influences the door fitting accuracy.

Certified Body Shop

INFOID:0000000011485557

NISSAN recommend ″Certified Body Shop″ to repair this vehicle. Especially, for structural body damage (equivalent to grade A as described in ″JUDGMENT STANDARD″). Only certified body shops using

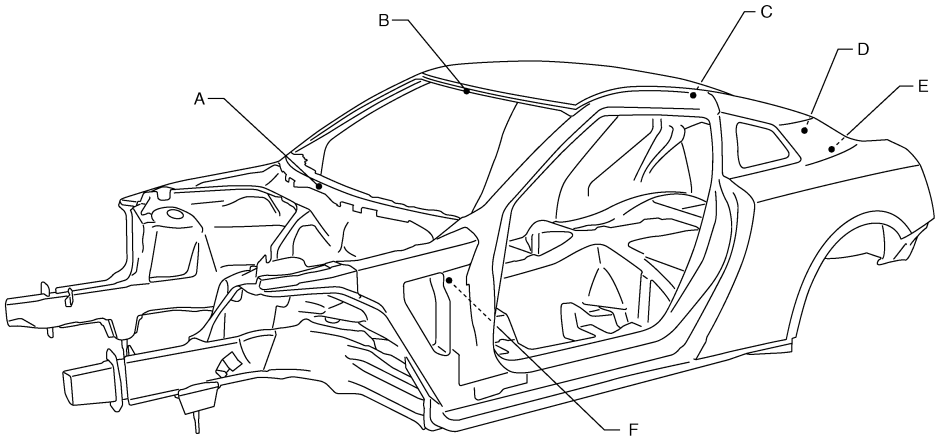
CELETTE® advanced collision repair equipment are approved by NISSAN for repairing structural body damage. And only certificated mechanic completed this vehicle body repair training is also approved to repair. Contact a GT-R certified NISSAN dealer or NISSAN Consumer Affairs for a referral or list of certified body shop.

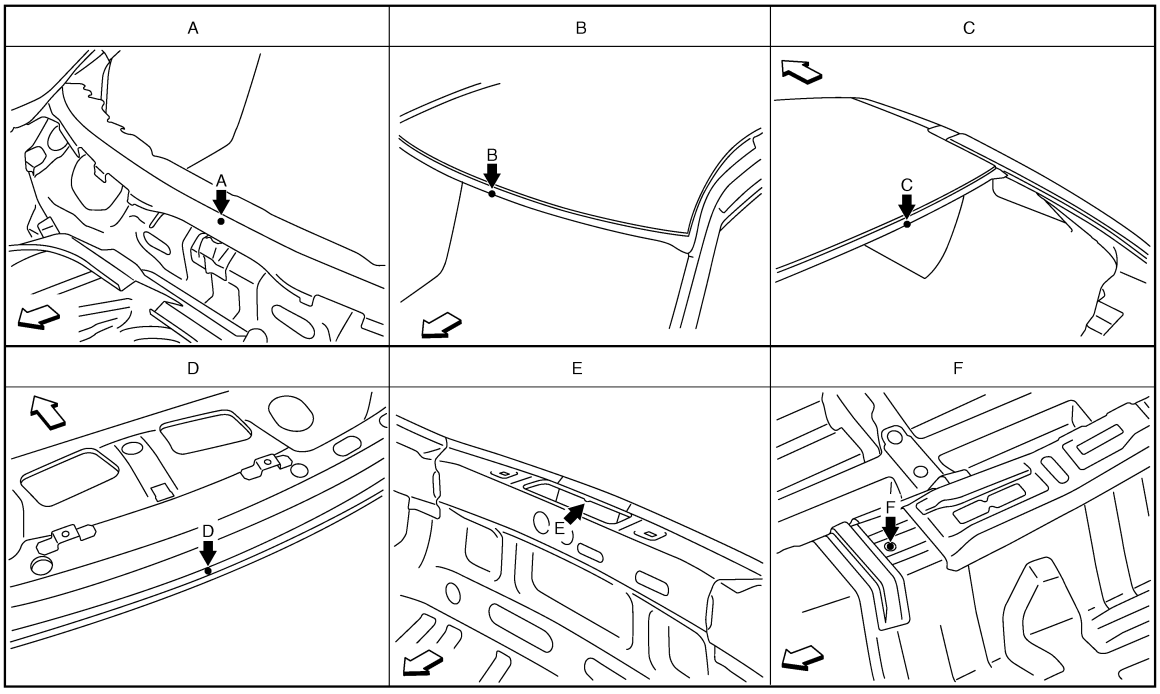
BODY ALIGNMENT

Body Center Marks

INFOID:0000000011485558

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.





JSKIA0725ZZ

⇦: Vehicle front

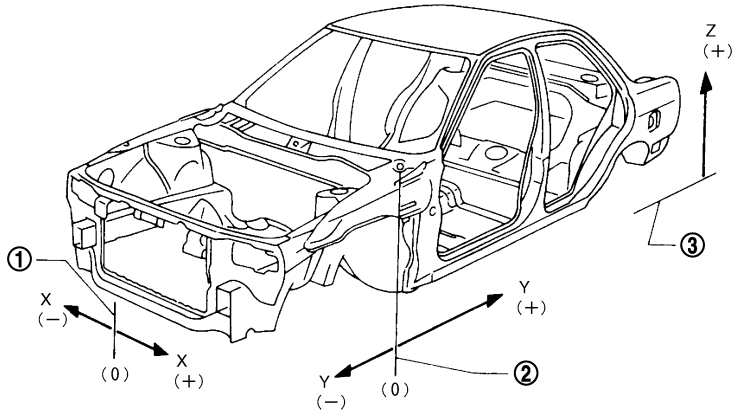
Points	Portion	Marks
A	Upper dash	Embossment
B	Front roof	Embossment
C	Rear roof	Embossment
D	Rear waist	Embossment

Points	Portion	Marks
E	Rear panel	Flange end
F	Front floor center	Embossment

Description

INFOID:0000000011485559

- 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 that 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

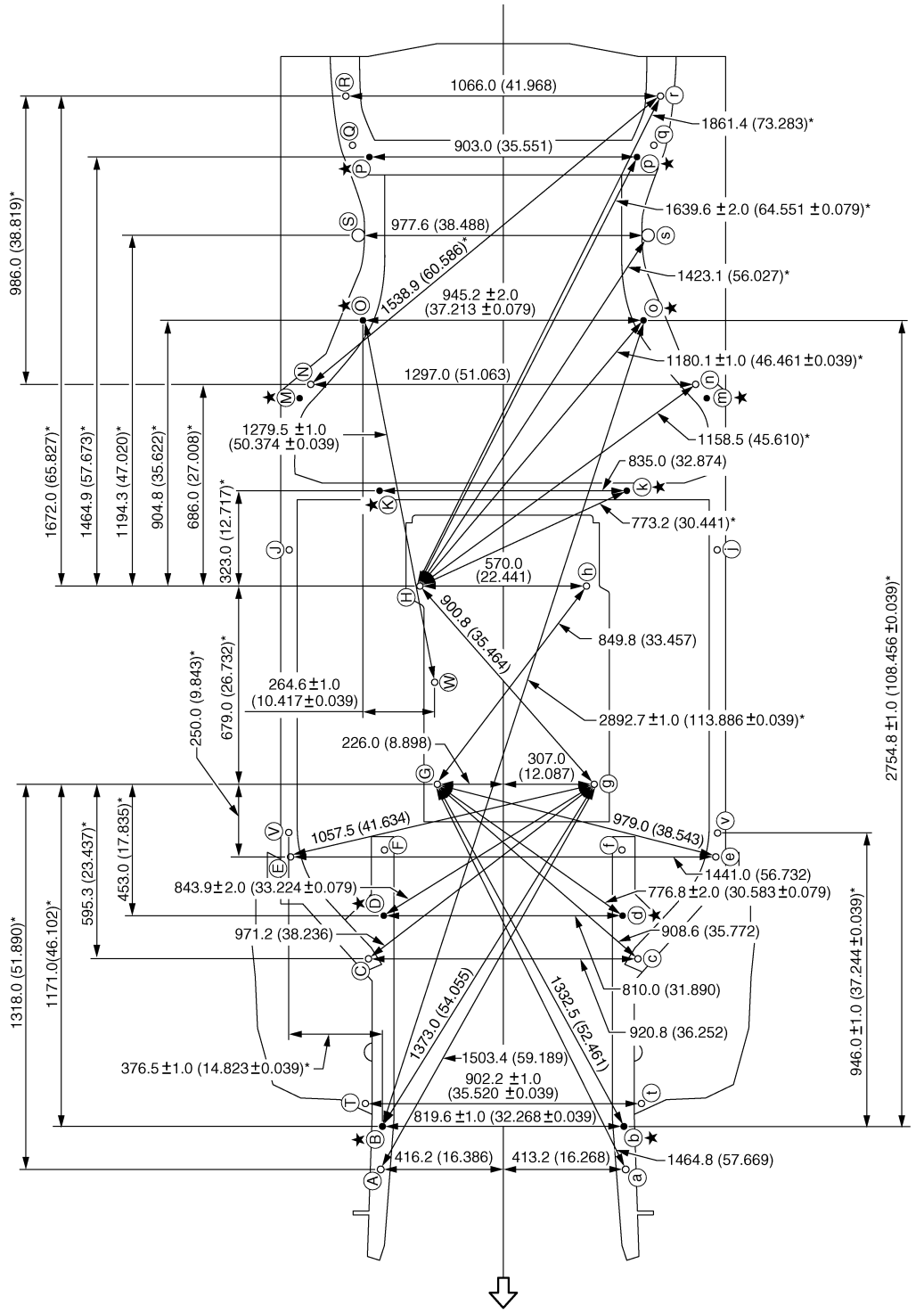
1. Vehicle center
2. Front axle center
3. Imaginary base line

Underbody Projection Dimension

INFOID:0000000011485560

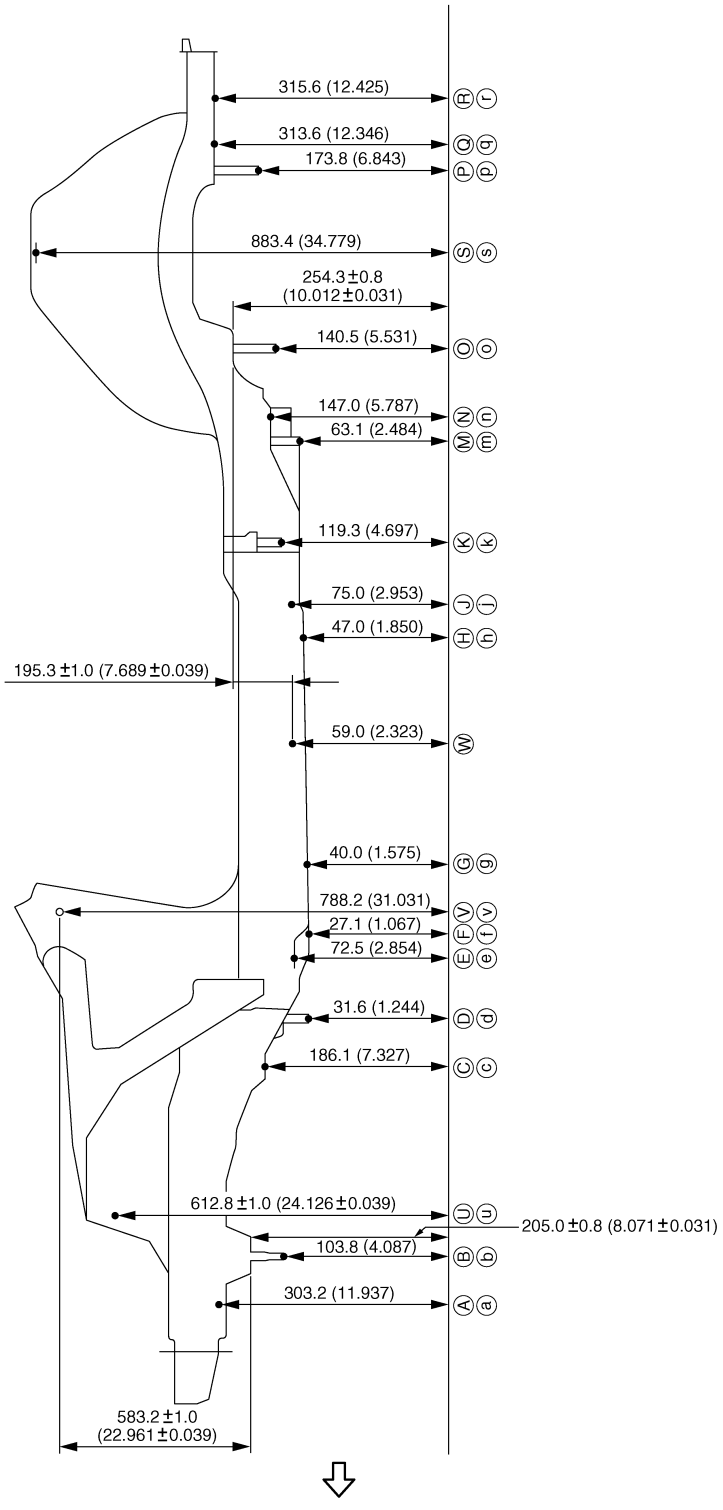
MEASUREMENT

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



Unit: mm (in)

⇦: Vehicle front
★: Bolt head



JSKIA0747GB

Unit: mm (in)

⇦: Vehicle front

«Front and rear dimension not shown in the figure»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
G - F	231.0 (9.094)*		H - M	638.5 (25.138)*				
H - J	121.0 (4.764)*		H - Q	1505.0 (59.252)*				

«Width dimension not shown in the figure»

Unit: mm (in)

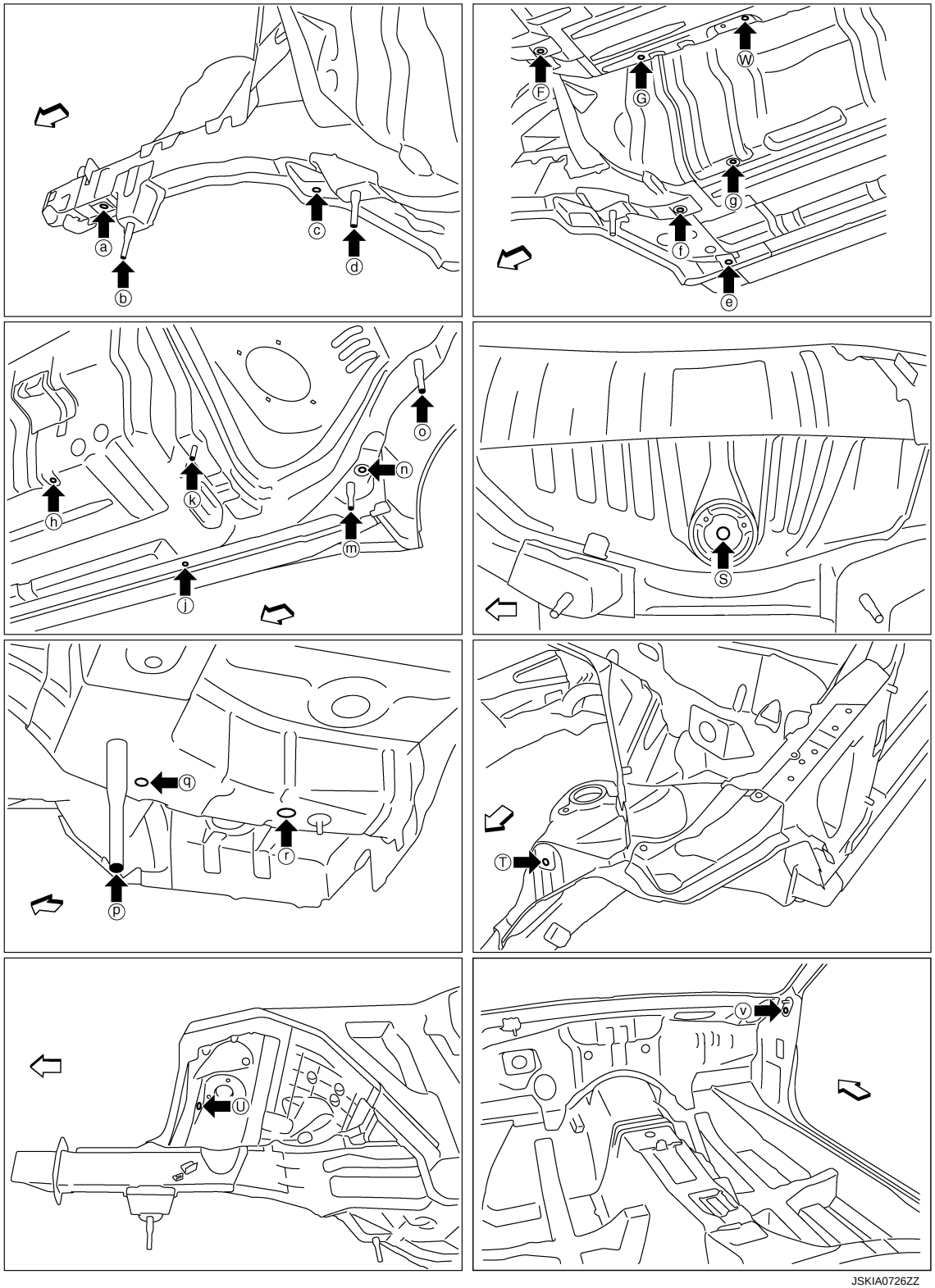
Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
F - f	810.0 (31.890)		M - m	1372.0 (54.016)				
J - j	1445.2 (56.898)		Q - q	1022.0 (40.236)				

«Opposite angle dimension not shown in the figure»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
G - f	672.0 (26.457)		H - j	1014.8 (39.953)*		H - q	1702.5 (67.027)*	
g - F	748.5 (29.468)		H - m	1162.1 (45.752)*				

MEASUREMENT POINTS



JSKIA0726ZZ

⇦: Vehicle front

Unit: mm (in)

Point	Remarks	Point	Remarks
A, a, E, e	Front side member location hole center ϕ16 (0.63)	K, k	Transmission mounting installing bolt head
B, b, D, d	Front suspension member installing bolt head	M, m, O, o, P, p	Rear suspension member installing bolt head

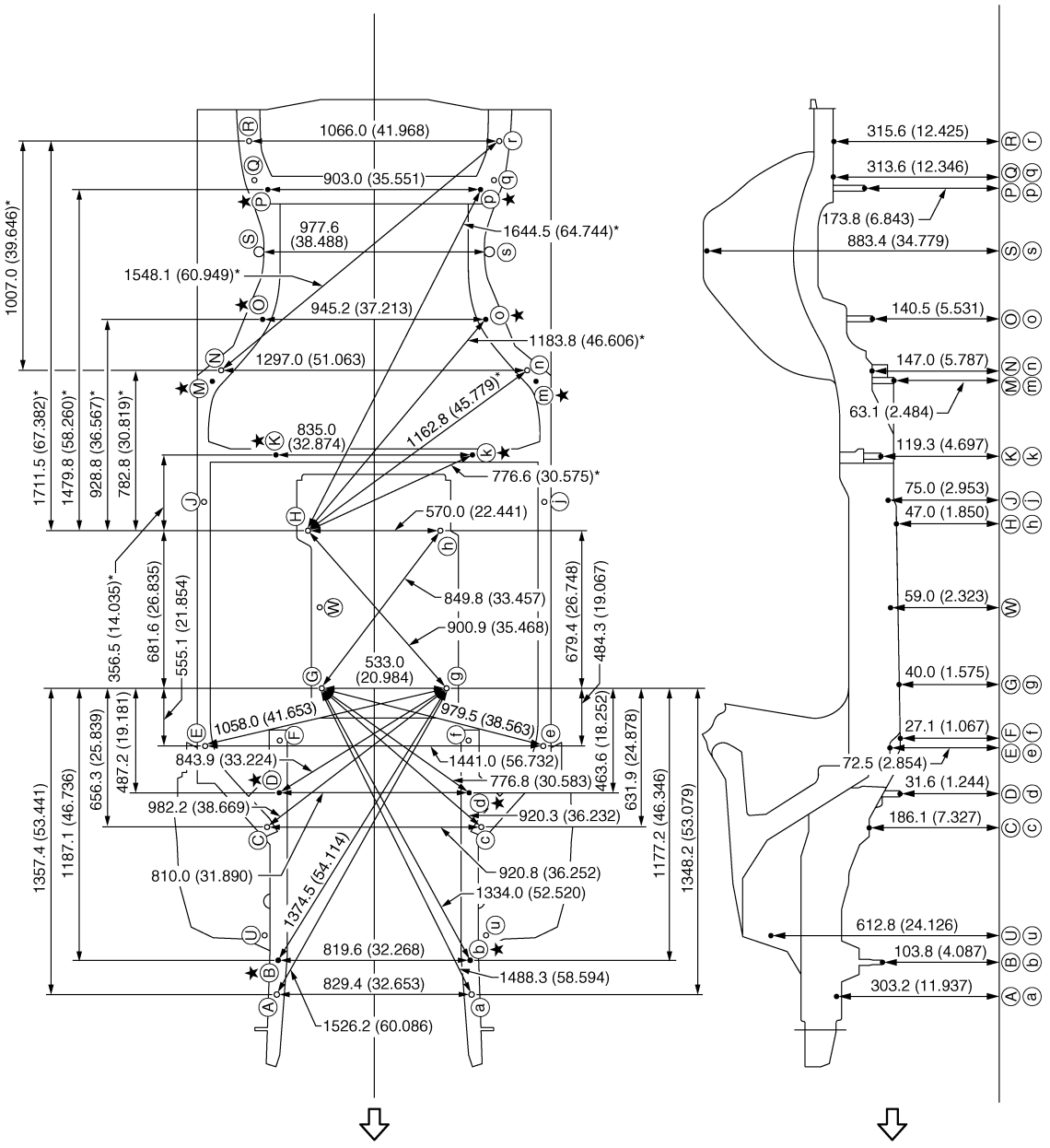
Point	Remarks	Point	Remarks
C, c	Front side member measurement hole center ϕ14 (0.55)	R, r	Rear side member extension location hole center 18×16 (0.71×0.63)
F, f	Front side member extension location hole center ϕ16 (0.63)	S, s	Rear strut installing hole center ϕ30 (1.18)
G, g, H, h	Center front floor location hole center ϕ12 (0.47)	T, t, U, u	Front strut housing upper link installing hole center ϕ12.5 (0.492)
J, j	Inner sill measurement hole center ϕ9 (0.35)	V, v	Steering member installing hole center ϕ13 (0.51)
N, n, Q, q	Rear side member location hole center N, n: ϕ16 (0.63) Q, q: ϕ12 (0.47)	W	Tunnel stay mounting hole center ϕ14 (0.55)

Underbody Straight Line Dimension

INFOID:0000000011485561

MEASUREMENT

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



JSKIA0748GB

Unit: mm (in)

⇦: Vehicle front

★: Bolt head

«Front and rear dimension not shown in the figure»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
G - F	292.5 (11.516)		H - J	454.9 (17.909)*		H - Q	1545.0 (60.827)*	
g - f	251.3 (9.894)		H - M	754.2 (29.693)*				

«Width dimension not shown in the figure»

Unit: mm (in)

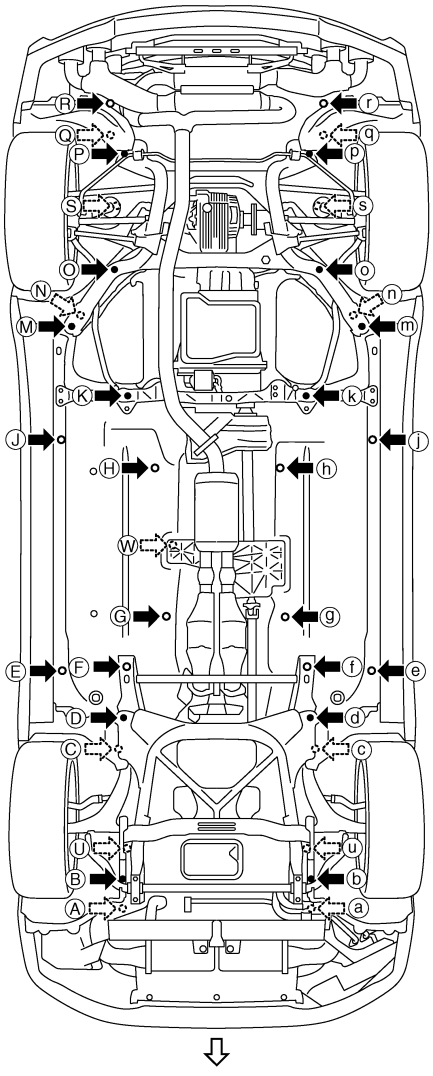
Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
F - f	810.0 (31.890)		M - m	1372.0 (54.016)				
J - j	1445.2 (56.898)		Q - q	1022.0 (40.236)				

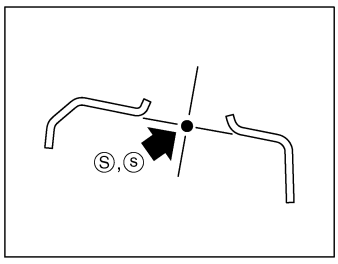
«Opposite angle dimension not shown in the figure»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
G - f	672.1 (26.461)		H - j	1015.2 (39.968)*		H - q	1723.3 (67.846)*	
g - F	748.6 (29.472)		H - m	1162.2 (45.756)*				

MEASUREMENT POINTS





JSKIA0766ZZ

⇦: Vehicle front

Unit: mm (in)

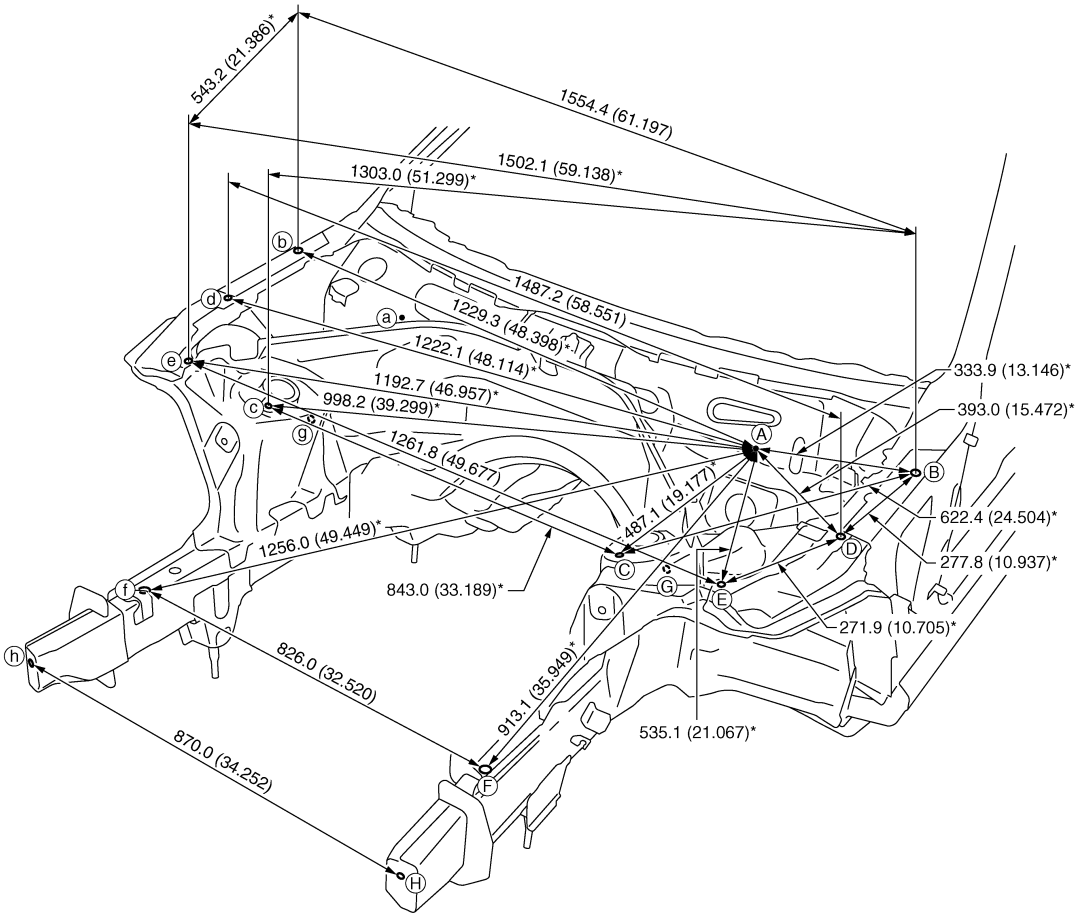
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A	416.2 (16.386)	–368.0 (–14.488)	303.2 (11.937)	Hole ϕ16 (0.63)	K, k	±417.5 (±16.437)	1952.0 (76.850)	119.3 (4.697)	Bolt head
a	–413.2 (–16.268)	–368.0 (–14.488)	303.2 (11.937)	Hole ϕ16 (0.63)	M, m	±686.0 (±27.008)	2267.5 (89.271)	63.1 (2.484)	Bolt head
B, b	±409.8 (±16.134)	–221.0 (–8.701)	103.8 (4.087)	Bolt head	N, n	±648.5 (±25.531)	2315.0 (91.142)	147.0 (5.787)	Hole ϕ16 (0.63)
C, c	±460.4 (±18.126)	354.7 (13.965)	186.1 (7.327)	Hole ϕ14 (0.55)	O, o	±472.6 (±18.606)	2533.8 (99.756)	140.5 (5.531)	Bolt head
D, d	±405.0 (±15.945)	497.0 (19.567)	31.6 (1.244)	Bolt head	P, p	±451.5 (±17.776)	3093.9 (121.807)	173.8 (6.843)	Bolt head
E, e	±720.5 (±28.366)	700.0 (27.559)	72.5 (2.854)	Hole ϕ16 (0.63)	Q, q	±511.0 (±20.118)	3134.0 (123.386)	313.6 (12.346)	Hole ϕ12 (0.47)
F, f	±405.0 (±15.945)	719.0 (28.307)	27.1 (1.067)	Hole ϕ16 (0.63)	R, r	±533.0 (±20.984)	3301.0 (129.960)	315.6 (12.425)	Hole 18×16 (0.71×0.63)
G	226.0 (8.898)	950.0 (37.402)	40.0 (1.575)	Hole ϕ12 (0.47)	S, s	±488.8 (±19.244)	2823.3 (111.153)	883.4 (34.779)	Hole ϕ30 (1.18)
g	–307.0 (–12.087)	950.0 (37.402)	40.0 (1.575)	Hole ϕ12 (0.47)	U, u	±451.1 (±17.760)	172.7 (6.799)	548.2 (21.583)	Hole ϕ12.5 (0.492)
H, h	±285.0 (±11.220)	1629.0 (64.134)	47.0 (1.850)	Hole ϕ12 (0.47)	W	208.0 (8.189)	1282.0 (50.472)	59.0 (2.323)	Hole ϕ14 (0.55)
J, j	±722.6 (±28.449)	1750.0 (68.898)	75.0 (2.953)	Hole ϕ9 (0.35)					

Engine Compartment

INFOID:0000000011485562

MEASUREMENT

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



JSKIA0727GB

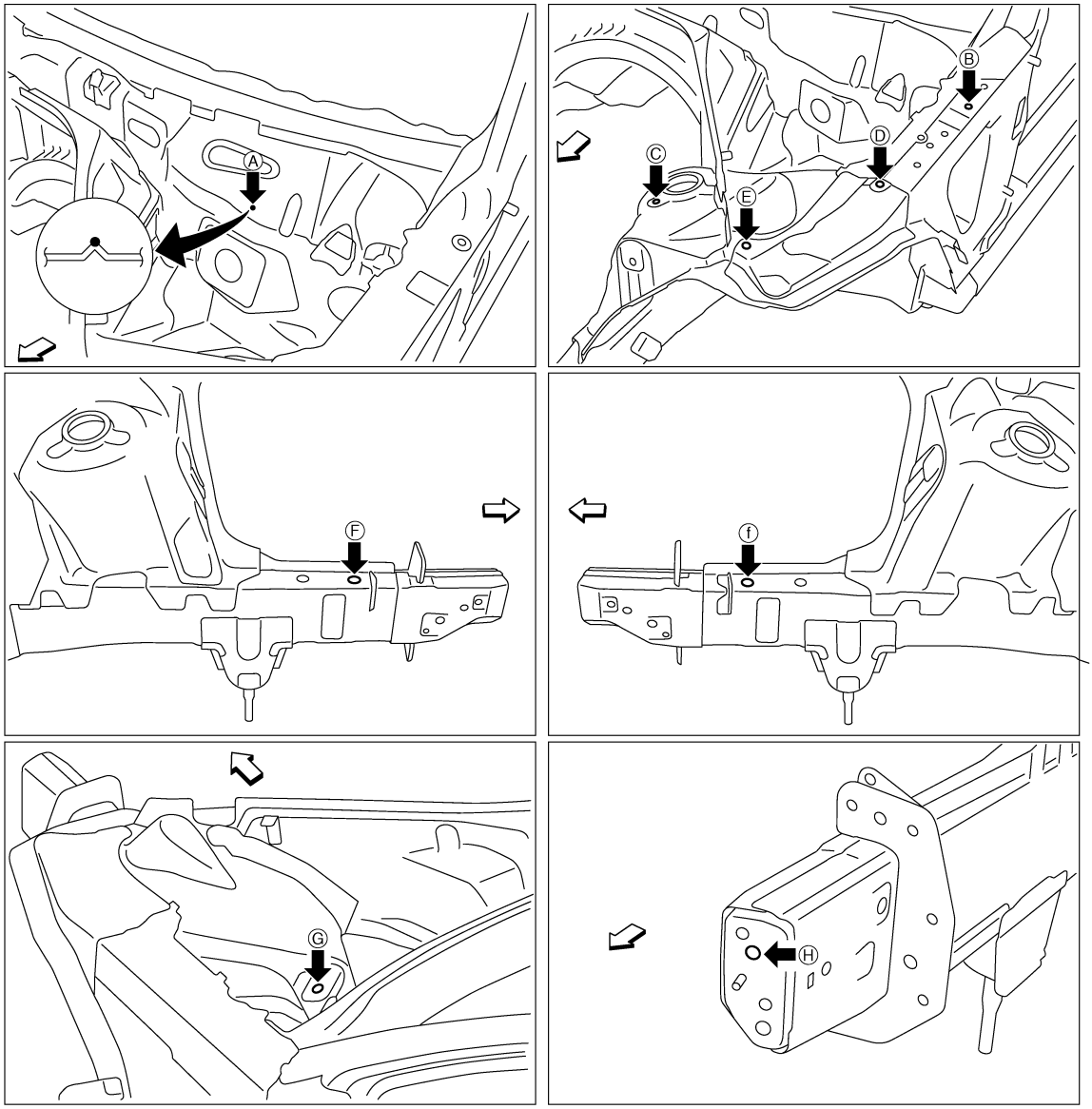
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
G - g	902.2 (35.520)							

MEASUREMENT POINTS



JSKIA0728ZZ

⇦: Vehicle front

Unit: mm (in)

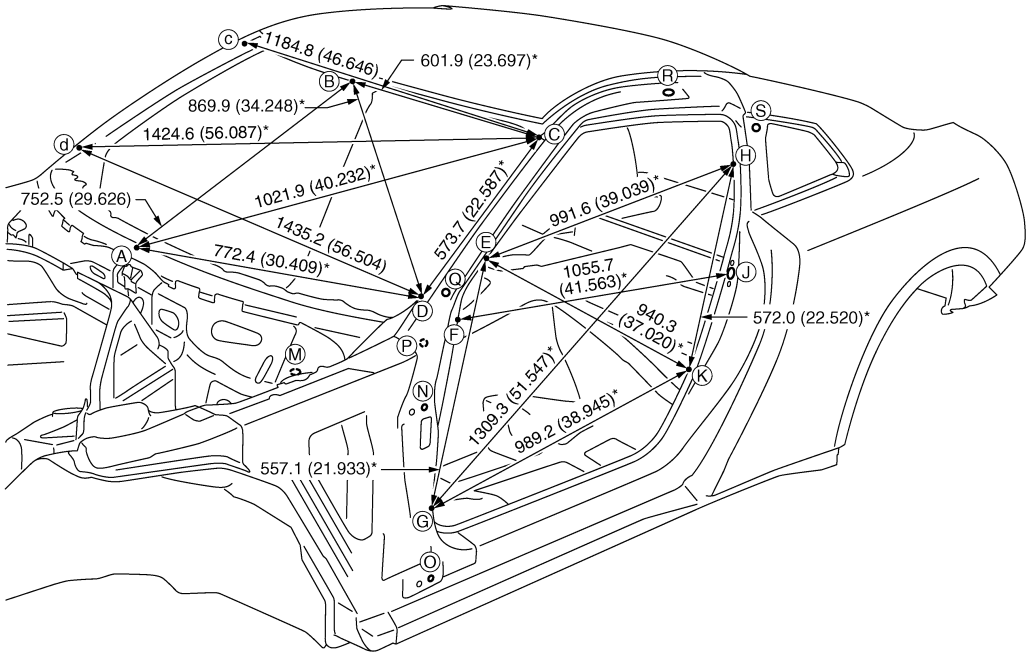
Point	Remarks	Point	Remarks
A, a	Upper dash positioning mark	E, e	Radiator core support mounting installing hole center ϕ14 (0.55)
B, b	Hood hinge installing hole center ϕ10 (0.39)	F, f	Front side member location hole center ϕ20 (0.79)
C, c	Front strut installing hole center ϕ8.5 (0.335)	G, g	Front strut housing upper link installing hole center ϕ12.5 (0.492)
D, d	Front fender installing hole center ϕ12 (0.47)	H, h	Bumper reinforcement mounting installing hole center ϕ10 (0.39)

Passenger Compartment

INFOID:0000000011485563

MEASUREMENT

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



JSKIA0729GB

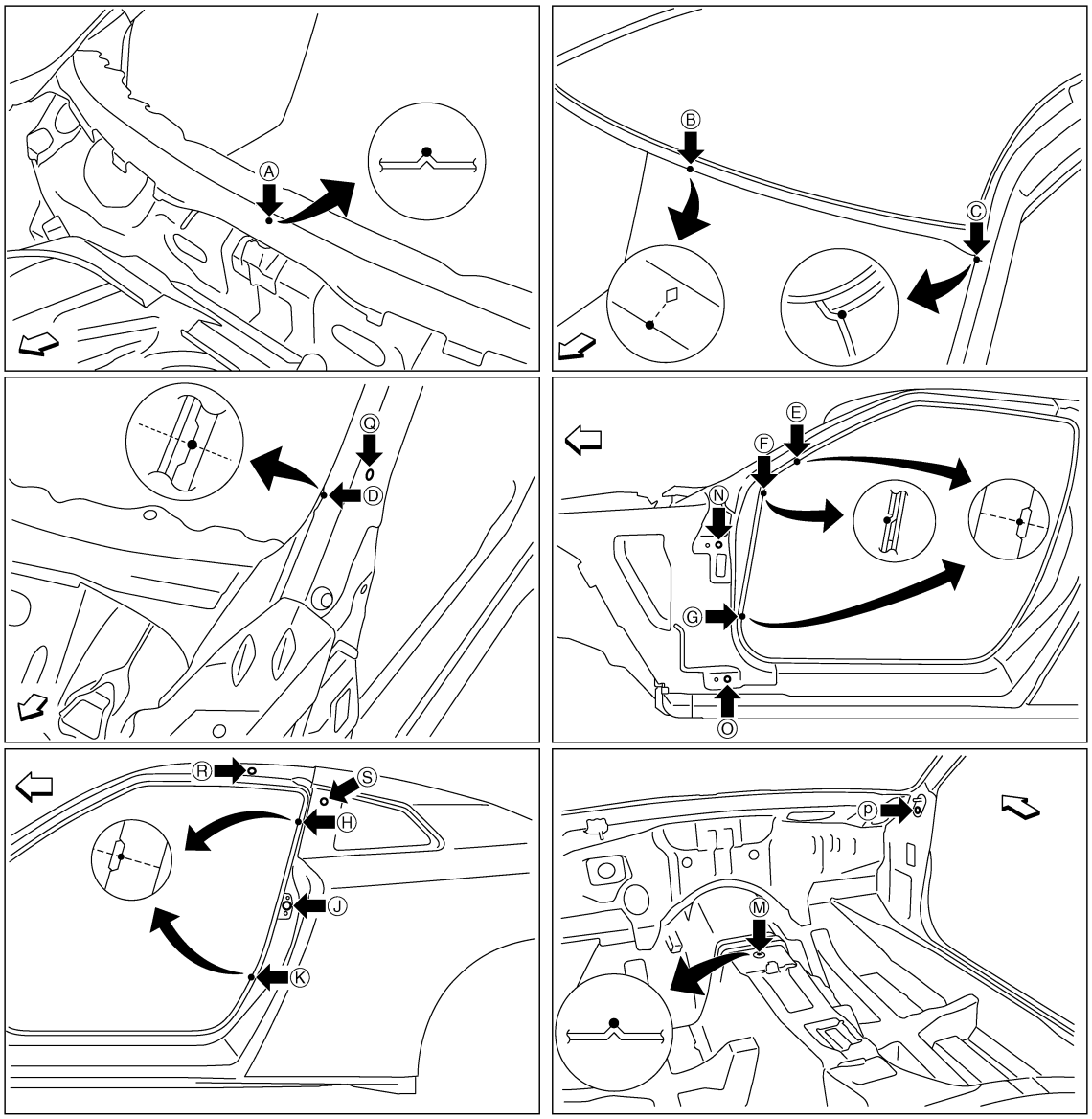
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1424.4 (56.079)		H - h	1373.4 (54.071)		M - P	926.9 (36.492)*	
E - g	1560.4 (61.433)*		H - k	1541.4 (60.685)*		N - J	1198.1 (47.169)*	
E - h	1714.5 (67.500)*		J - S	411.0±0.7 (16.181±0.028)*		N - K	1084.5 (42.697)*	
E - k	1734.6 (68.291)*		K - k	1491.6 (58.724)		N - Q	268.5±1.0 (10.571±0.039)*	
F - f	1486.0 (58.504)		M - E	923.5 (36.358)*		N - R	1222.4±1.0 (48.126±0.039)*	
F - j	1827.8 (71.960)*		M - F	883.7±1.0 (34.791±0.039)*		N - S	1404.3±1.0 (55.287±0.039)*	
G - g	1491.6 (58.724)		M - G	758.7±1.0 (29.870±0.039)*		O - J	1269.2 (49.968)*	
G - h	1939.8 (76.370)*		M - H	1405.6±1.0 (55.338±0.039)*		O - K	1065.1 (41.933)*	
G - k	1789.8 (70.464)*		M - K	1144.6±1.0 (45.063±0.039)*		P - p	1572.6±1.5 (61.916±0.059)	

MEASUREMENT POINTS



JSKIA0730ZZ

⇦: Vehicle front

Unit: mm (in)

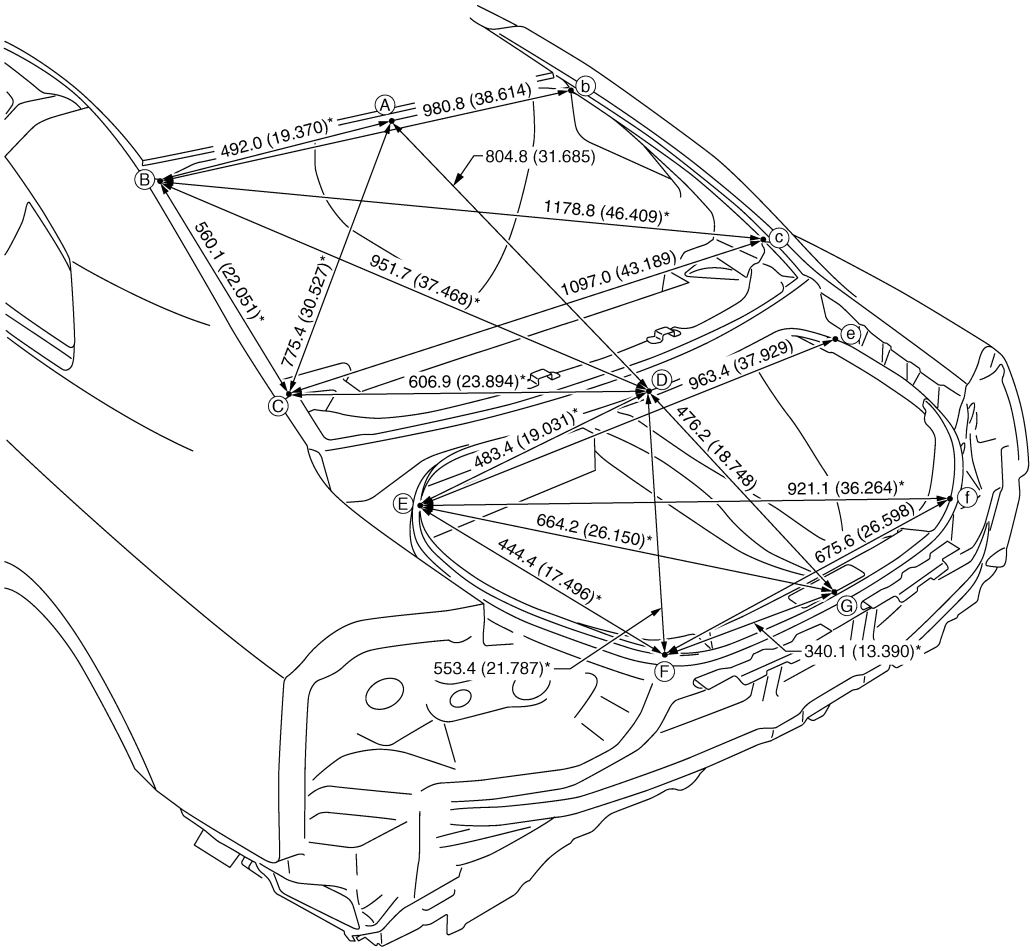
Point	Remarks	Point	Remarks
A	Upper dash positioning mark of center positioning mark	M	Front floor positioning mark of center positioning mark
B	Roof flange end of center positioning mark	N, n, O, o	Door hinge installing hole center N, n: ϕ12.2 (0.480) O, o: ϕ14 (0.55)
C, c, F, f	Front pillar joggle	P, p	Steering member installing hole center ϕ13 (0.51)
D, d, E, e, G, g	Front pillar indent	Q, q, R, r	Front pillar finisher installing hole center 12×8 (0.47×0.31)
H, h, K, k	Rear fender indent	S, s	Side window installing hole center 9×7 (0.35×0.28)
J, j	Door catcher installing hole center ϕ28 (1.10)		

Rear Body

INFOID:0000000011485564

MEASUREMENT

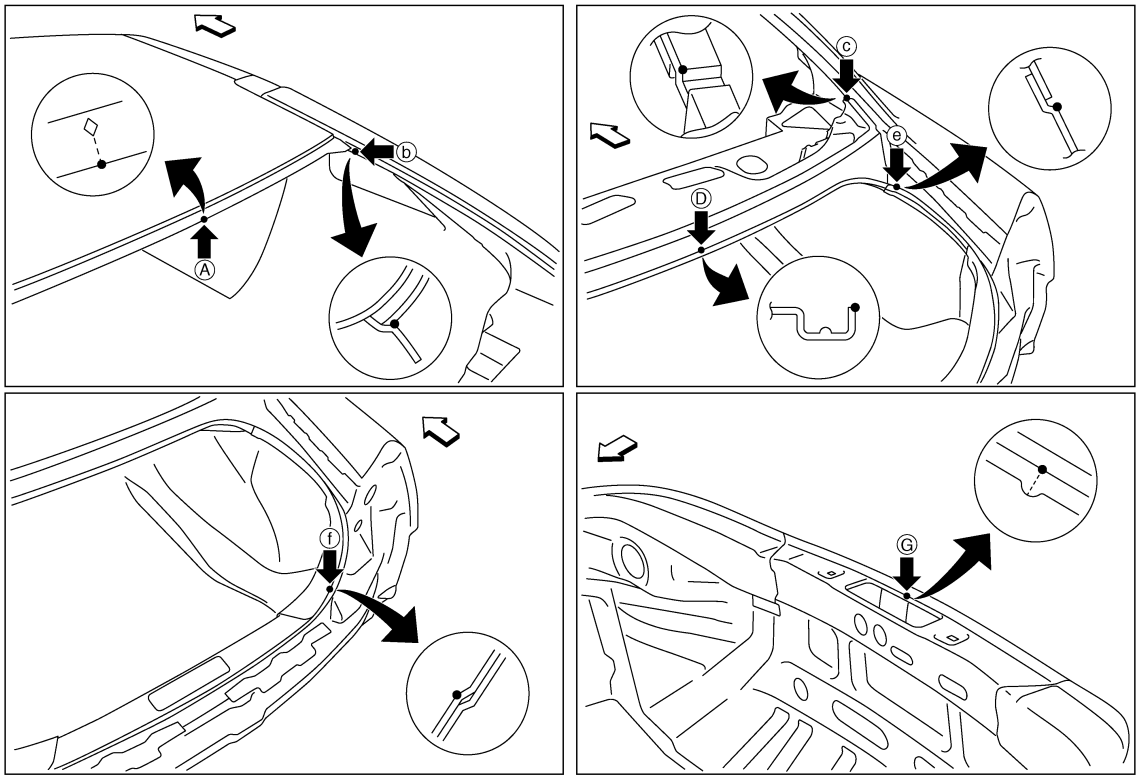
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA0731GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA0732ZZ

⇦: Vehicle front

Point	Remarks	Point	Remarks
A	Roof flange end of center positioning mark	E, e	Rear fender corner joggle
B, b, C, c	Rear fender joggle	F, f	Rear fender brace joggle
D	Rear waist flange end of center positioning mark	G	Rear panel lock installing hole corner section of center positioning mark

LOCATION OF PLASTIC PARTS

Precautions for Plastics

INFOID:0000000011485565

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.	—
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:

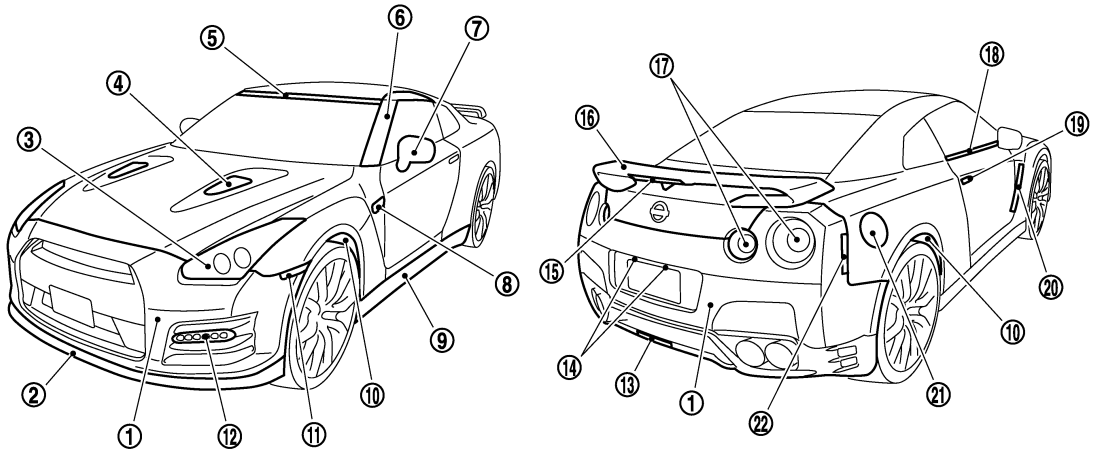
- **When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.**
- **Plastic parts should be repaired and painted using methods suiting the materials'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

EXCEPT NISMO

EXCEPT NISMO : Location of Plastic Parts

INFOID:0000000011485566

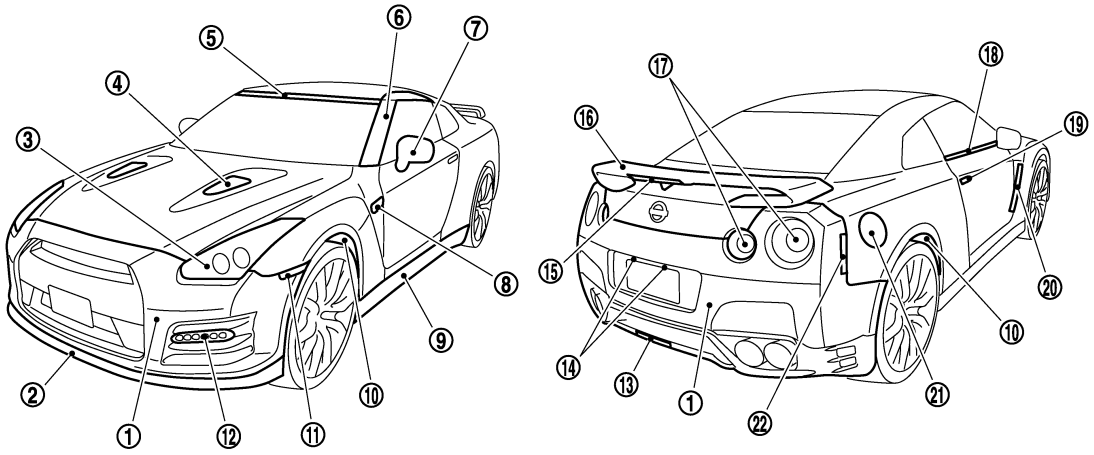
Except for EGOIST, VVIP



JSKIA2348ZZ

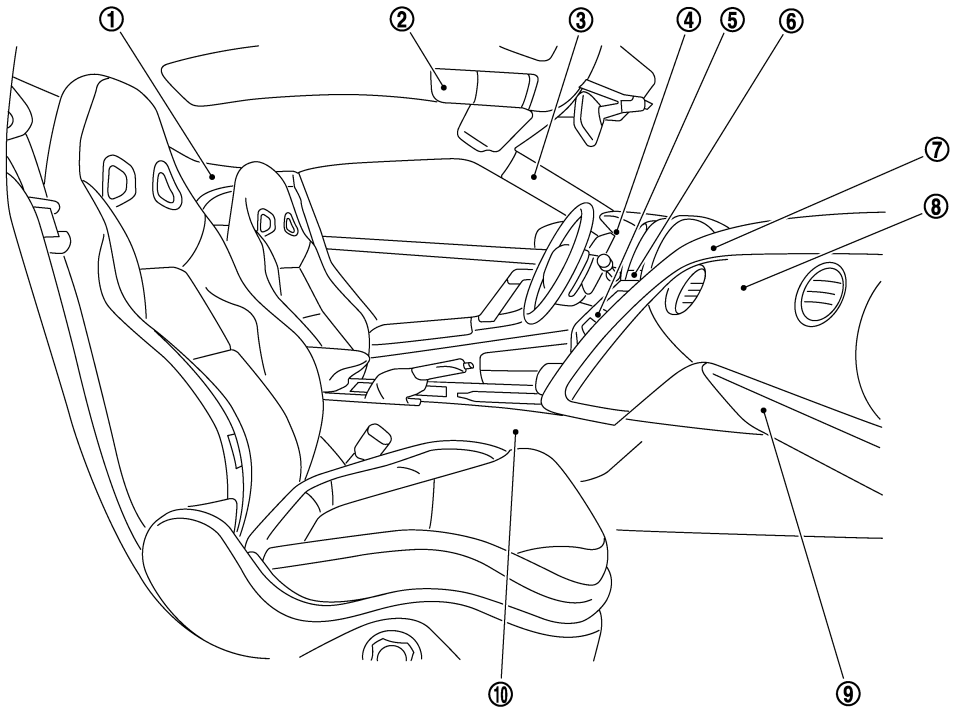
Component			Material	Component			Material
1	Bumper fascia		PP + EPM	13	Rear fog lamp	Lens	PMMA
2	Engine undercover		PP			Housing	PC
3	Front combination lamp	Lens	PC	14	License plate lamp	Lens	PC
		Housing	PP			Housing	PC
4	Hood air intake		PA + PPE	15	High mount stop lamp	Lens	PMMA
5	Windshield upper molding		TPO			Housing	ABS
6	Front pillar finisher		PC + PET	16	Rear wing		ABS
7	Door mirror	Housing	ABS	17	Rear combination lamp	Lens	PMMA
		Cover	ABS			Housing	PP
8	Front fender emblem	Base	PC + ABS	18	Door outside molding		PVC + stainless steel
		Emblem	PMMA	19	Door outside handle		PC + ABS
9	Center mud guard		PP	20	Front fender duct		ABS
10	Fender protector	Front	PP	21	Fuel filler lid		PA + PPE
		Rear	PET	22	Rear side marker lamp	Lens	PMMA
11	Side turn signal lamp	Lens	PMMA			Housing	PP
		Housing	ABS				
12	Daytime running light	Lens	PC				
		Housing	PC				

For EGOIST, VVIP



JSKIA2348ZZ

Component			Material	Component			Material
1	Bumper fascia		PP + EPM	13	Rear fog lamp	Lens	PMMA
2	Engine undercover		PP			Housing	PC
3	Front combination lamp	Lens	PC	14	License plate lamp	Lens	PC
		Housing	PP			Housing	PC
4	Hood air intake		PA + PPE	15	High mount stop lamp	Lens	PMMA
5	Windshield upper molding		TPO			Housing	ABS
6	Front pillar finisher		PC + PET	16	Rear wing	Side leg	ABS
7	Door mirror	Housing	ABS			Center leg	ABS
		Cover	ABS			Wing	Carbon
8	Front fender emblem	Base	PC + ABS	17	Rear combination lamp	Lens	PMMA
		Emblem	PMMA			Housing	PP
9	Center mud guard		PP	18	Door outside molding		PVC + stainless steel
10	Fender protector	Front	PP	19	Door outside handle		PC + ABS
		Rear	PET	20	Front fender duct		ABS
11	Side turn signal lamp	Lens	PMMA	21	Fuel filler lid		PA + PPE
		Housing	ABS	22	Rear side marker lamp	Lens	PMMA
12	Daytime running light	Lens	PC			Housing	PP
		Housing	PC				



JSKIA0754ZZ

Component			Material	Component		Material
1	Rear pillar finisher		PP	6	Instrument panel pad A	PC + ABS
2	Map lamp	Lens	PC	7	Instrument panel assembly	PP
		Housing	PP	8	Instrument panel pad C	PP
3	Front pillar garnish		ABS	9	Glove box	ABS
4	Cluster lid A		PC + ABS	10	Center console	PC + ABS + PVC
	Meter cover		PP		Console finisher	ABS
5	Cluster lid C (Upper)		PC + ABS			
	Cluster lid C (Lower)		PC + ABS			

NISMO

NISMO : Location of Plastic Parts

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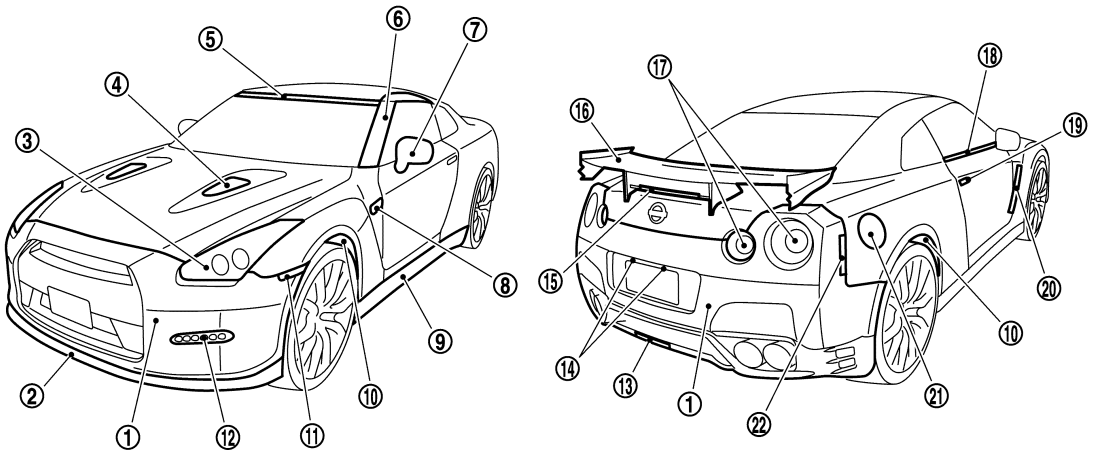
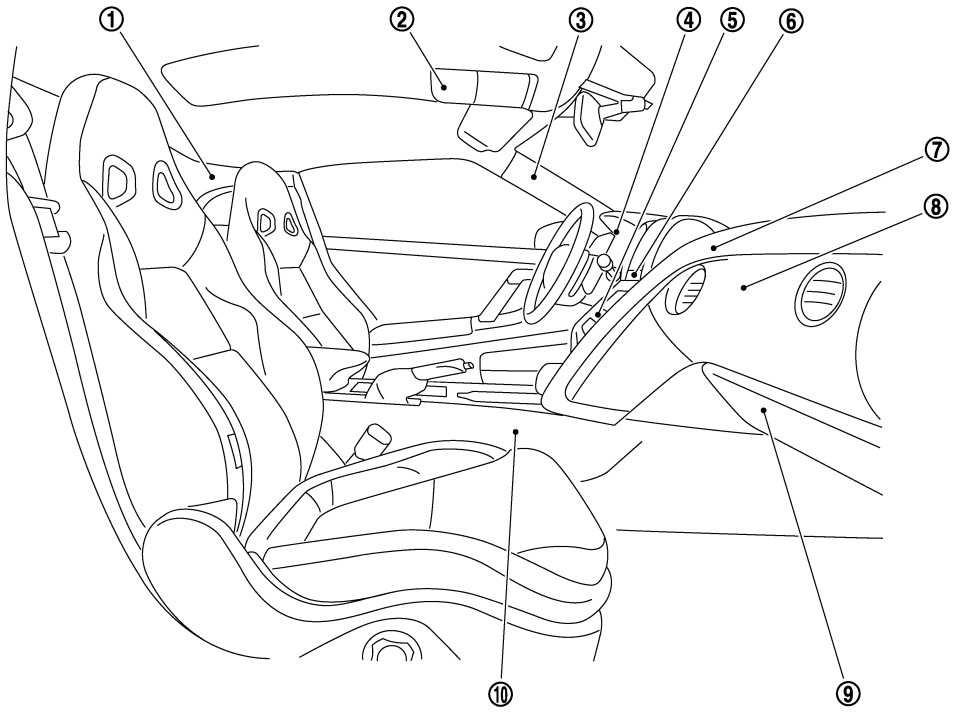


JSKIA4643ZZ

Component			Material	Component			Material
1	Bumper fascia		Carbon fiber	13	Rear fog lamp	Lens	PMMA
2	Engine undercover		Carbon fiber			Housing	PC
3	Front combination lamp	Lens	PC	14	License plate lamp	Lens	PC
		Housing	PP			Housing	PC
4	Hood air intake		PA + PPE	15	High mount stop lamp	Lens	PMMA
5	Windshield upper molding		TPO			Housing	ABS
6	Front pillar finisher		PC + PET	16	Rear wing		Carbon fiber
7	Door mirror	Housing	ABS	17	Rear combination lamp	Lens	PMMA
		Cover	ABS			Housing	PP
8	Front fender emblem	Base	PC + ABS	18	Door outside molding		PVC + stainless steel
		Emblem	PMMA	19	Door outside handle		PC + ABS
9	Center mud guard		Carbon fiber	20	Front fender duct		ABS
10	Fender protector	Front	PP	21	Fuel filler lid		PA + PPE
		Rear	PET	22	Rear side marker lamp	Lens	PMMA
11	Side turn signal lamp	Lens	PMMA			Housing	PP
		Housing	ABS				
12	Daytime running light	Lens	PC				
		Housing	PC				



JSKIA0754ZZ

Component			Material	Component		Material
1	Rear pillar finisher		PP	6	Instrument panel pad A	PC + ABS
2	Map lamp	Lens	PC	7	Instrument panel assembly	PP
		Housing	PP	8	Instrument panel pad C	PP
3	Front pillar garnish		ABS	9	Glove box	ABS
4	Cluster lid A		PC + ABS	10	Center console	PC + ABS + PVC
	Meter cover		PP		Console finisher	ABS
5	Cluster lid C (Upper)		PC + ABS			
	Cluster lid C (Lower)		PC + ABS			