SECTION BRM
BODY REPAIR

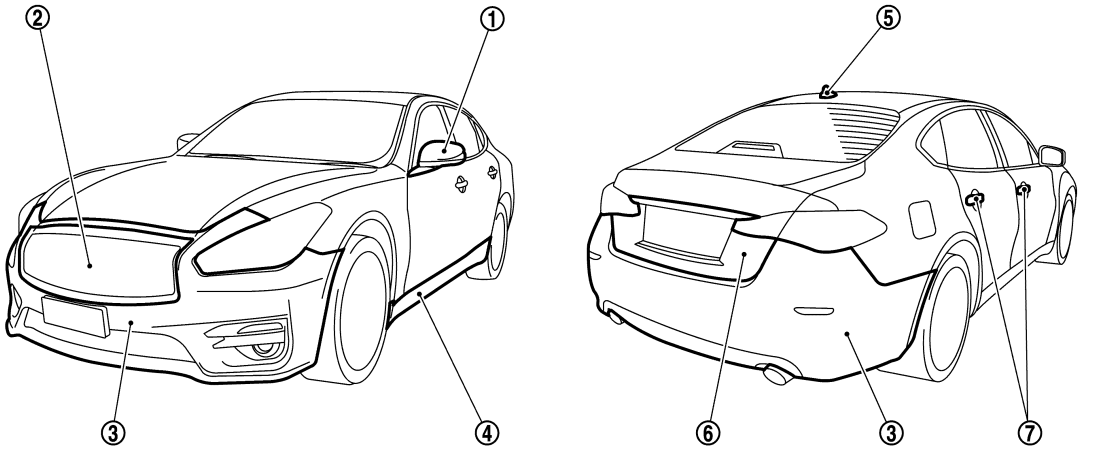
CONTENTS

VEHICLE INFORMATION

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:0000000011256487



JSKIA5352ZZ

Component			Color code	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
			Description	White	Silver	Black	Black	Gray	Dark Blue	Gray	Brown
			Paint type note	3P	2M	2S	2P	2TPM	2P	2M	2M
			Anti scratch advanced paint	–	–	×	×	×	×	–	×
①	Door mirror cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
②	Front grille		Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
③	Bumper fascia		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
④	Sill cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
⑤	Antenna base cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
⑥	Trunk lid finisher	Base	Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
		Molding	Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
⑦	Door outside handle		Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr

NOTE:

- 2M: 2-Coat metallic
- 2P: 2-Coat pearl
- 2S: 2-Coat solid
- 3P: 3-Coat pearl
- 2TPM: 2-Coat titanium pearl metallic

PRECAUTION

REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:0000000011508521

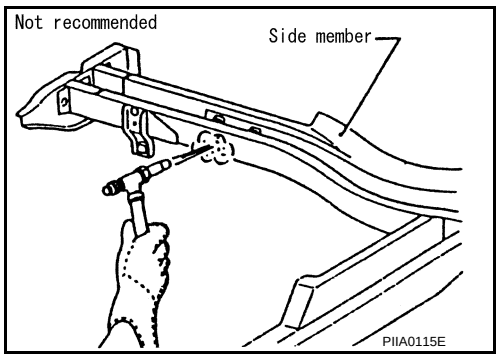
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

Tensile strength	Major applicable parts
440 - 780 MPa	• Hoodledge reinforcement • Upper front hoodledge • Front strut housing • Rear floor seat belt anchor reinforcement • Rear seat crossmember reinforcement assembly • 2nd and 3rd crossmember (Front floor component part) • Inner sill • Center front floor • Lower dash • Lower dash crossmember assembly • Front side member assembly • Front side member closing plate assembly • Front side member outrigger assembly • Rear seat crossmember • Rear tie down hook • Rear side member assembly • Rear side member extension • Inner front roof side rail (Side body assembly component part) • Outer front pillar reinforcement (Lower) (Side body assembly component part) • Outer sill reinforcement • Center pillar reinforcement • Outer rear wheelhouse extension (Upper) • Outer rear wheelhouse extension (Lower rear) • Front roof rail • Rear roof rail • Other reinforcements
980 - 1350 MPa	• Front side member stiffener (Front floor component part) • Front side member rear extension • Inner roof side rail (Front) (Side body assembly component part) • Outer roof side rail (Side body assembly component part) • Inner center pillar (Side body assembly component part) • Outer front pillar reinforcement (Upper) (Side body assembly component part) • Outer sill extension (Outer sill reinforcement component part) • Center pillar reinforcement (Upper) • Center pillar seat belt reinforcement (Center pillar reinforcement component part) • Outer rear wheelhouse extension (Lower front)

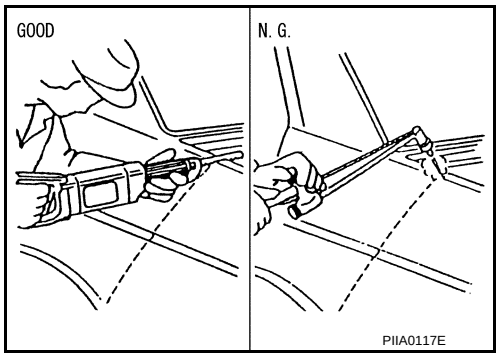
Read the following precautions when repairing HSS:

1. Additional points to consider

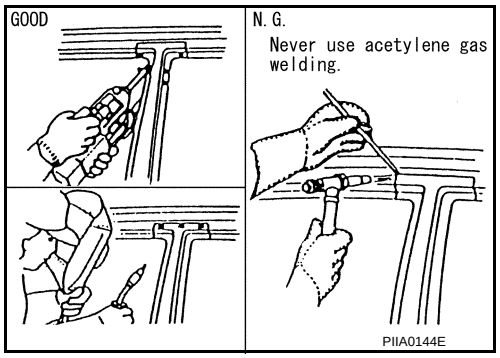
- The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



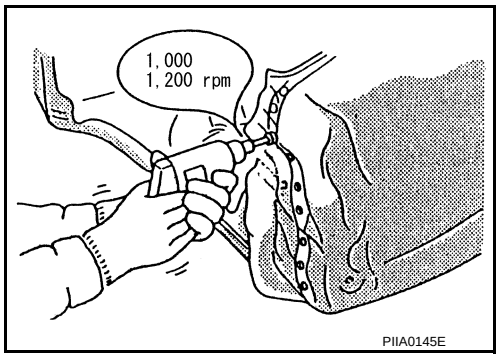
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.
- When cutting HSS panels, avoid gas (torch) cutting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



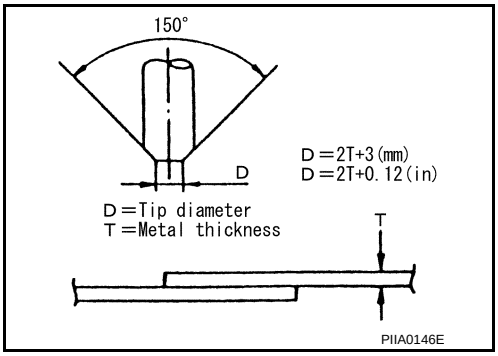
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



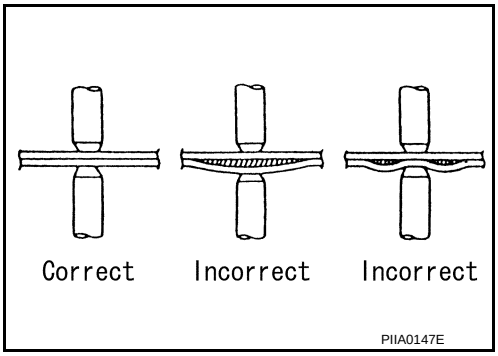
- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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.



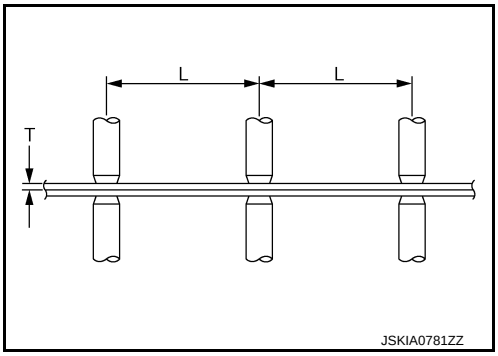
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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:0000000011508522

PROHIBITION OF CUT AND CONNECTION

Never cut and joint the lower lock pillar reinforcement (center pillar reinforcement inside frame parts) because its material is high strength steel plate (ultra high strength steel plate).
The center pillar reinforcement must be replaced if this part is damaged.

PREPARATION

REPAIRING MATERIAL

Foam Repair

INFOID:0000000011508524

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

URETHANE FOAM APPLICATIONS

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

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

Read instructions on product for fill procedures.

Example of foaming agent filling operation procedure

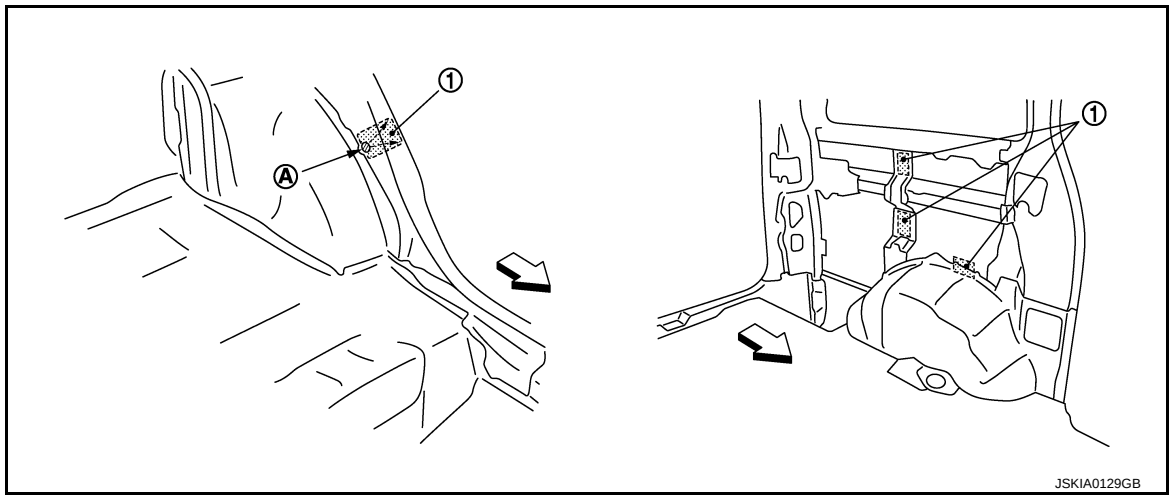
1. Fill procedures after installation of service part.

a. Eliminate foam material remaining on vehicle side.

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

c. Install service part.

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



1. Urethane foam

A. Nozzle insert hole

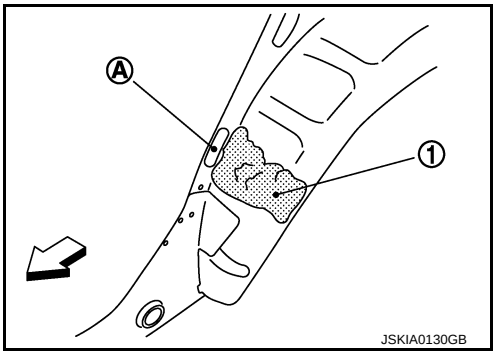
⇦: Vehicle front

2. Fill procedures before installation of service part.

a. Eliminate foam material remaining on vehicle side.

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

c. Fill foam material on wheelhouse outer side.



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

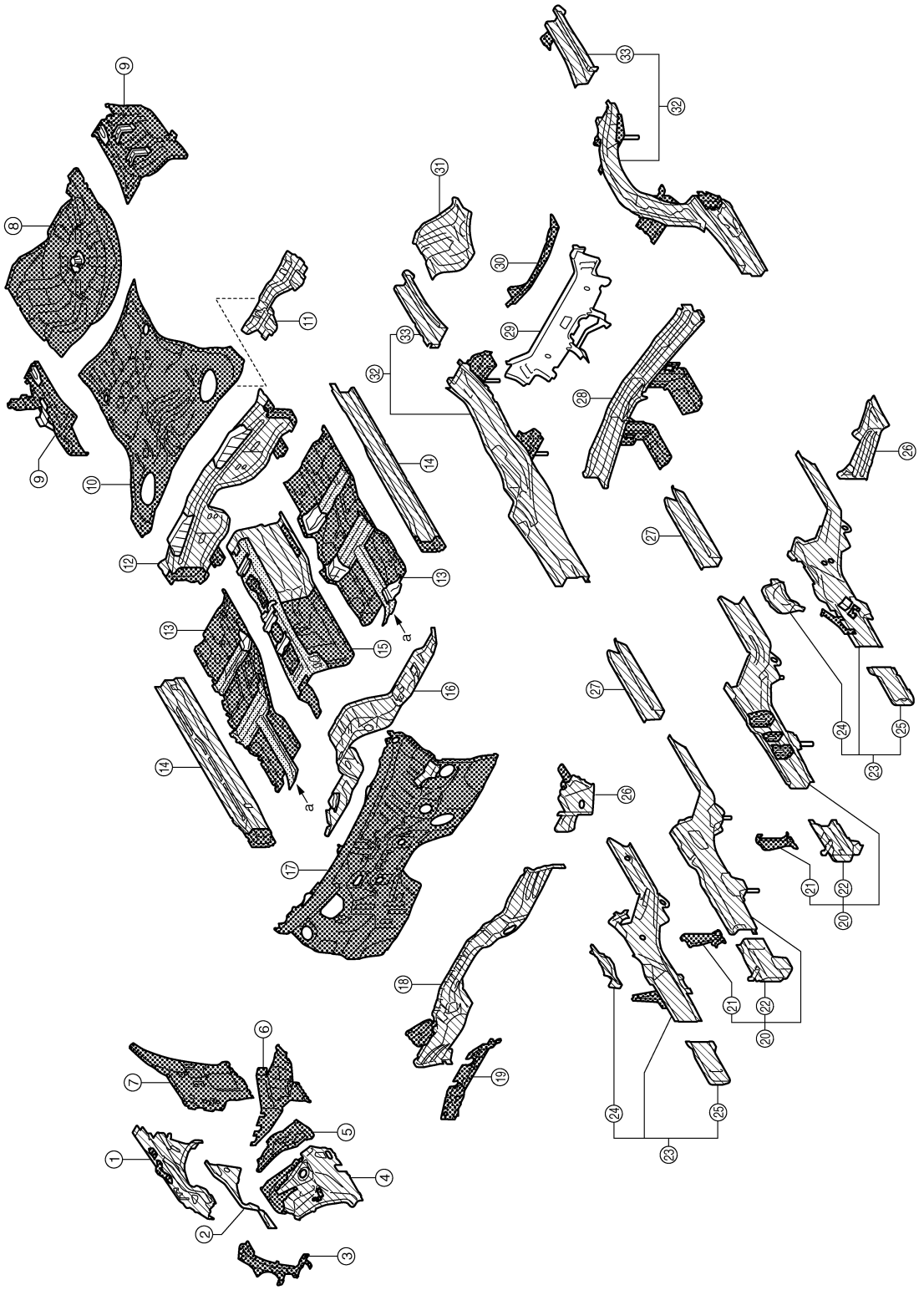
NOTE:
Fill enough to close gap with service part while avoiding flange area.

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

BODY COMPONENT PARTS

Underbody Component Parts

INFOID:0000000011508525



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

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.	Hoodledge reinforcement (RH & LH)			440	×
2.	Upper front hoodledge (RH & LH)			440	×
3.	Side radiator core support (RH & LH)			Under 440	×
4.	Front strut housing (RH & LH)			440	×
5.	Lower rear hoodledge (RH & LH)			Under 440	×
6.	Upper side cowl top (RH & LH)			Under 440	×
7.	Upper rear hoodledge (RH & LH)			Under 440	×
8.	Rear floor rear			440	×
9.	Rear floor side (RH & LH)			Under 440	×
10.	Rear floor front			Under 440	×
11.	Rear floor seat belt anchor reinforcement (RH & LH)			590	×
12.	Rear seat crossmember reinforcement assembly			590	×
13.	Front floor (RH & LH)	a.	T=1.6 mm (0.063 in)	1350[caution]	×
14.	Inner sill (RH & LH)			590	×
15.	Center front floor			440	×
16.	Lower dash			440	×
17.	Upper dash			Under 440	×
18.	Lower dash crossmember assembly			590	×
19.	Front cowl top			Under 440	×
20.	Front side member assembly (RH & LH)			590	×
21.	Front side member connector assembly (RH & LH)			Under 440	×
22.	Front side member front extension (RH & LH)			440	×
23.	Front side member closing plate assembly (RH & LH)			590	×
24.	Front side member center closing plate (RH & LH)			440	×
25.	Front side member front closing plate (RH & LH)			590	×
26.	Front side member outrigger assembly (RH & LH)			590	×
27.	Front side member rear extension (RH & LH)		T=1.2 mm (0.047 in)	980[caution]	×
28.	Rear seat crossmember			590	×
29.	2nd rear crossmember			590	—
30.	Rear crossmember			Under 440	×
31.	Rear tie down hook			440	×
32.	Rear side member assembly (RH & LH)			780	×
33.	Rear side member extension (RH & LH)			780	×

NOTE:

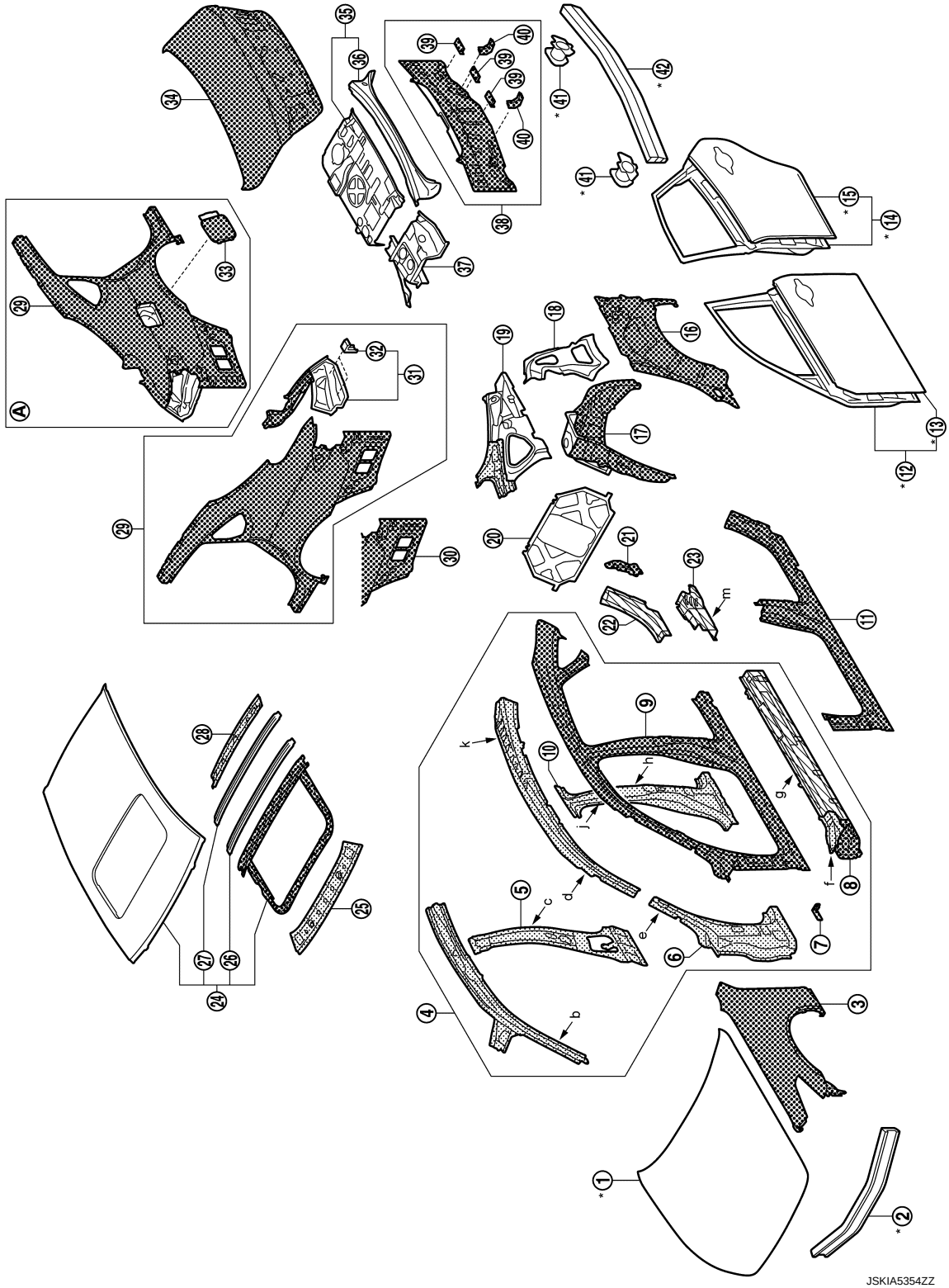
- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

CAUTION:

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

Body Component Parts

INFOID:0000000011256492



Ⓐ Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

*: Aluminum portion

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
1.	Hood			—	—	×
2.	Front bumper armature assembly			—	—	×
3.	Front fender (RH & LH)			Under 440	×	—
4.	Side body assembly (RH & LH)			Refer to No.5 –10		
		b.	T=1.2 mm (0.047 in)	980[caution]	—	—
		d.	T=1.6 mm (0.063 in)	1350[caution]		
		k.	T=1.2 mm (0.047 in)	980[caution]		
5.	Inner center pillar (RH & LH)	c.	T=1.0 mm (0.039 in)	1350[caution]	—	—
6.	Outer front pillar reinforcement (RH & LH)	e.	T=1.2 mm (0.047 in)	980[caution]	—	—
7.	Front fender bracket (RH & LH)			Under 440	×	—
8.	Outer sill reinforcement (RH & LH)	f.	T=1.2 mm (0.047 in)	980[caution]	×	—
		g.	T=1.2 mm (0.047 in)	980[caution]		
9.	Outer front side body (RH & LH)			Under 440	×	—
10.	Center pillar reinforcement (RH & LH)	h.	T=1.2 mm (0.047 in)	980[caution]	—	—
		j.	T=1.6 mm (0.063 in)	1350[caution]		
11.	Outer sill (RH & LH)			Under 440	×	—
12.	Front door assembly (RH & LH)			—	—	×
13.	Outer front door panel (RH & LH)			—	—	×
14.	Rear door assembly (RH & LH)			—	—	×
15.	Outer rear door panel (RH & LH)			—	—	×
16.	Outer rear wheelhouse (RH & LH)			Under 440	×	—
17.	Inner rear wheelhouse (RH & LH)			Under 440	×	—
18.	Inner rear pillar reinforcement (RH & LH)			Under 440	—	—
19.	Inner rear pillar (RH & LH)			590	—	—
20.	Seat back support			Under 440	—	—
21.	Inner rear wheelhouse front extension (RH & LH)			Under 440	×	—
22.	Outer rear wheelhouse extension (RH & LH Upper)			590	×	—
23.	Outer rear wheelhouse extension (RH & LH Lower)	m.	T=1.2 mm (0.047 in)	980[caution]	×	—
24.	Roof			Under 440	×	—
25.	Front roof rail			590	—	—
26.	Roof bow No. 3			Under 440	—	—
27.	Roof bow No. 4			Under 440	—	—
28.	Rear roof rail			440	—	—
29.	Rear fender assembly (RH & LH)			Under 440	×	—
30.	Rear fender extension (RH & LH)			Under 440	×	—

No.	Parts name	Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
31.	Rear fender extension assembly (RH & LH)	Under 440	—	—
32.	Rear bumper side bracket (RH & LH)	Under 440	—	—
33.	Fuel filler lid	Under 440	×	—
34.	Trunk lid	Under 440	×	—
35.	Parcel shelf with rear waist assembly	Under 440	—	—
36.	Rear parcel shelf waist assembly	Under 440	—	—
37.	Parcel shelf side (RH & LH)	Under 440	—	—
38.	Rear panel assembly	Under 440	×	—
39.	Rear bumper bracket	Under 440	×	—
40.	Rear side bumper bracket	Under 440	×	—
41.	Rear bumper stay (RH & LH)	Under 440	—	×
42.	Inner center rear bumper reinforcement assembly	Under 440	—	×

NOTE:

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

CAUTION:

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

REMOVAL AND INSTALLATION

CORROSION PROTECTION

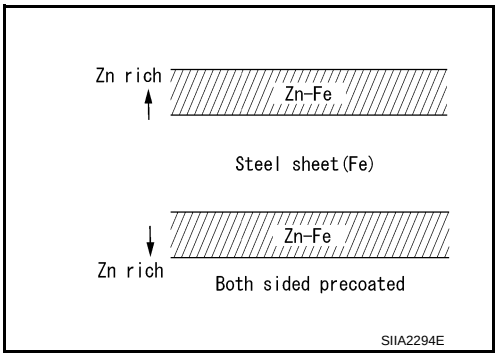
Description

INFOID:0000000011508526

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.



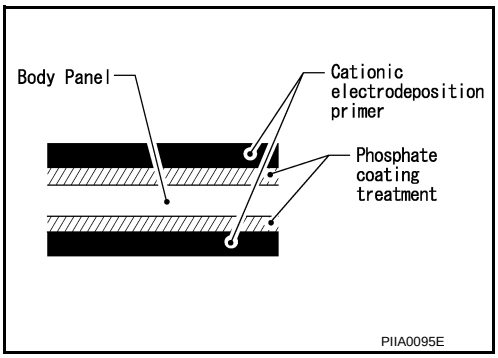
NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

2WD

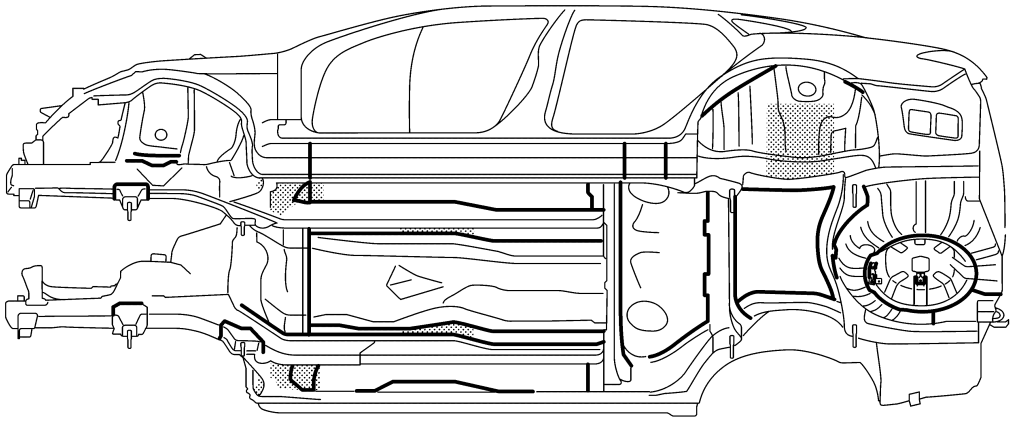
2WD : Undercoating

INFOID:0000000011485250

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.



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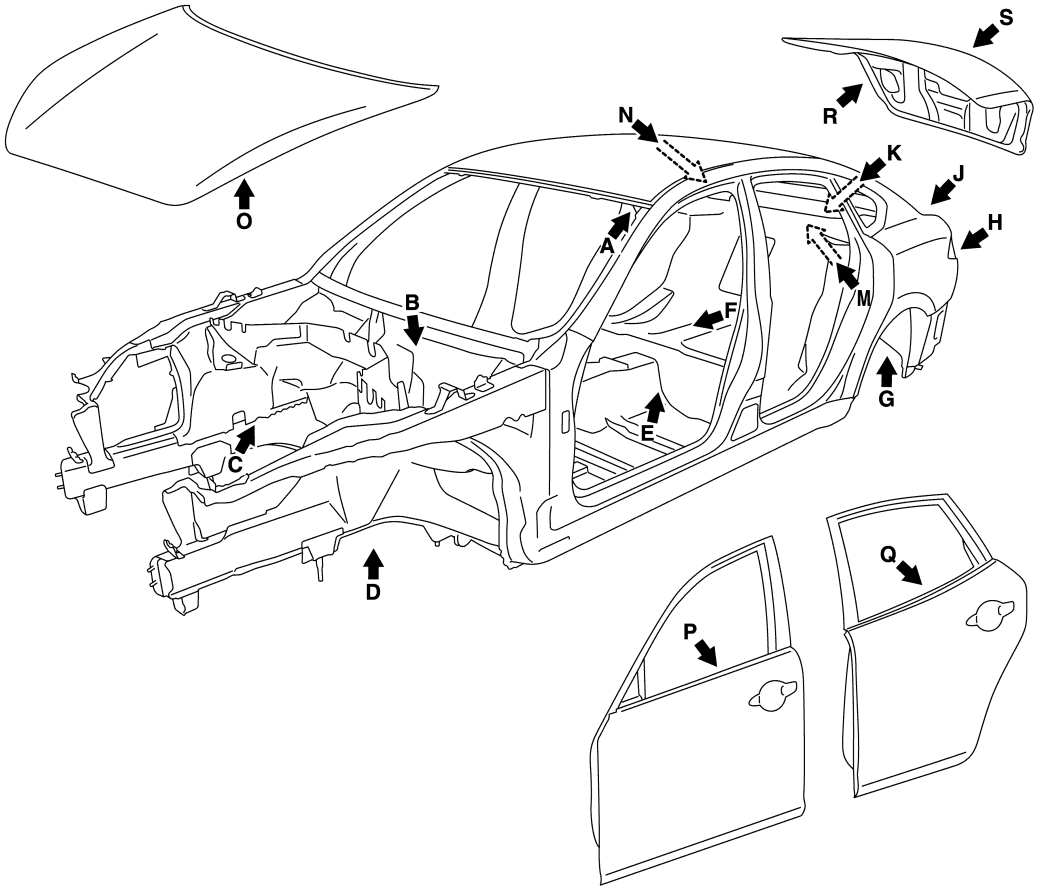
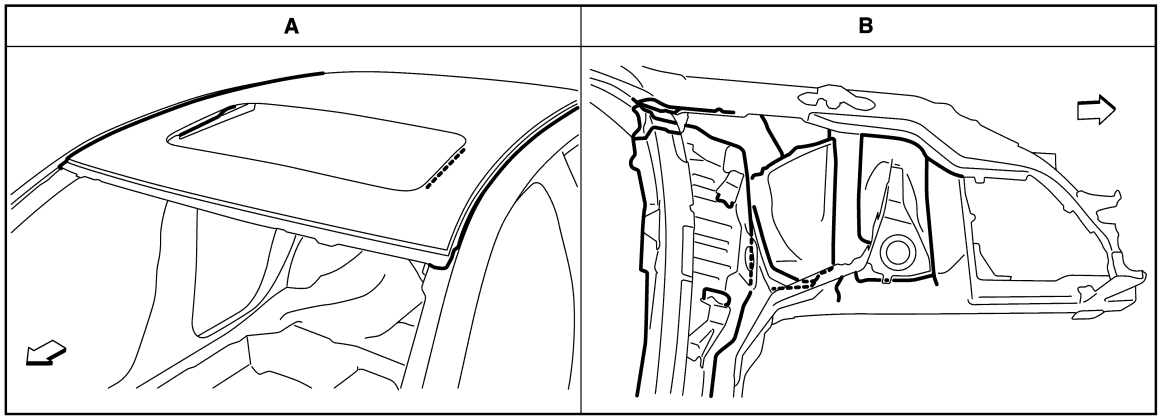
: Undercoated areas
: Sealed portions

2WD : Body Sealing

INFOID:0000000011485251

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.





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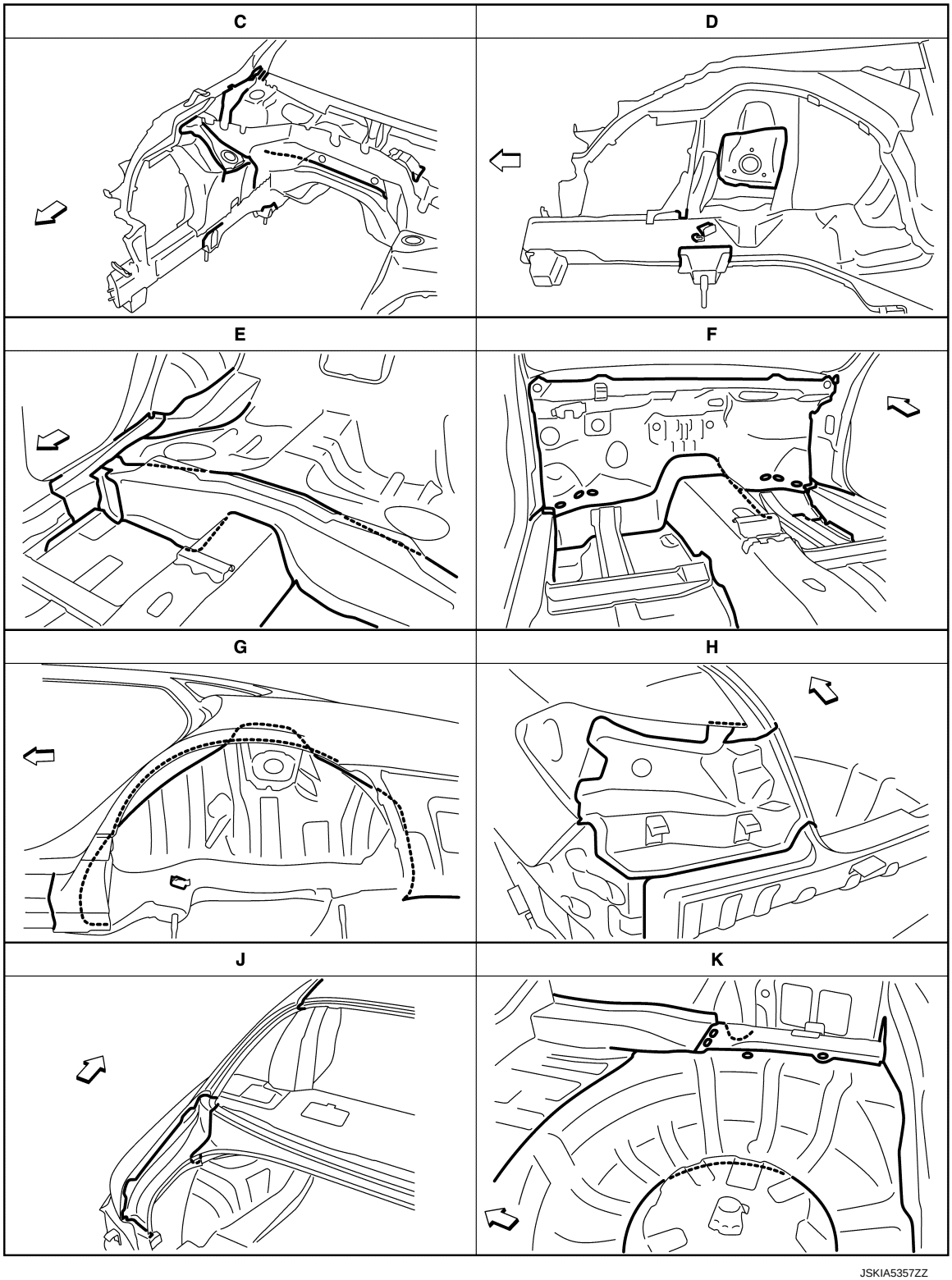
⇦: Vehicle front

▬: Sealed portions



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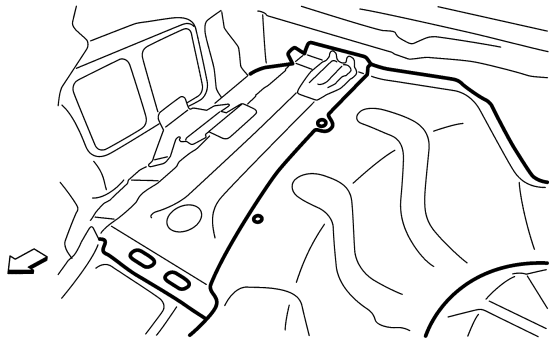
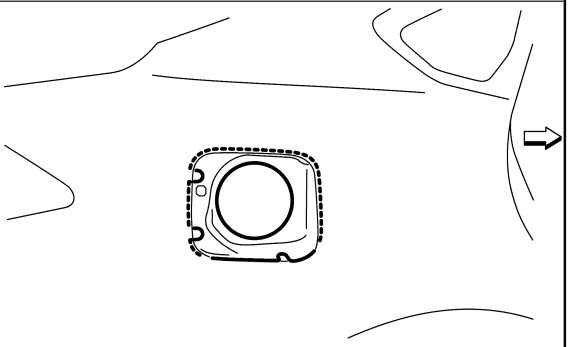
⇦: Vehicle front
▬: Sealed portions

M	N
	
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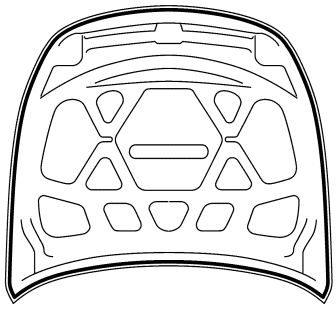	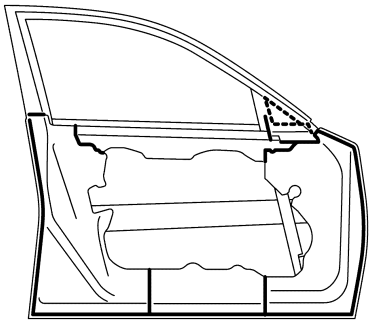
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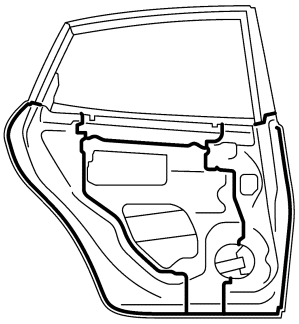	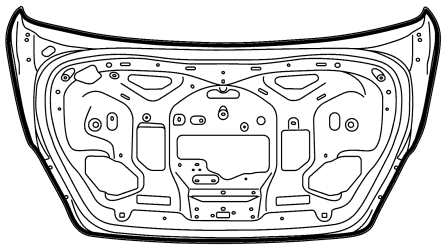
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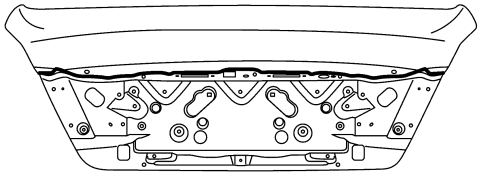
	

JSKIA5358ZZ

⇦: Vehicle front

▬: Sealed portions

AWD

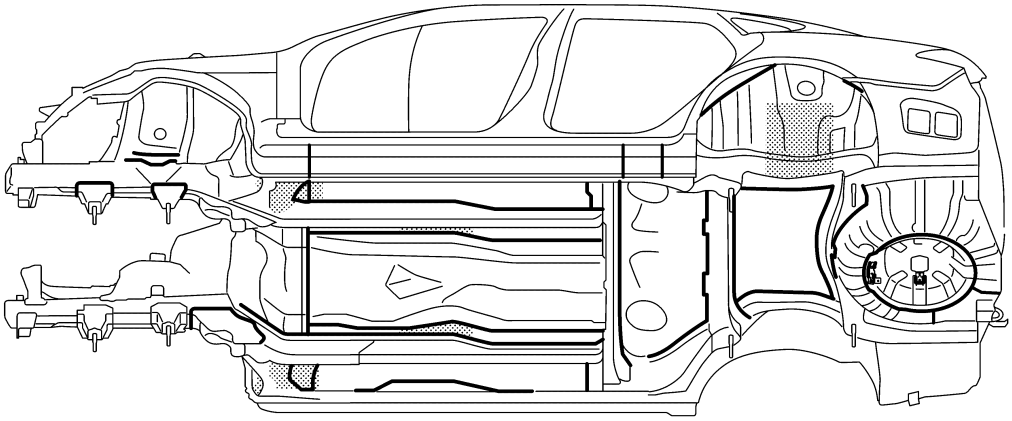
AWD : Undercoating

INFOID:0000000011485248

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.



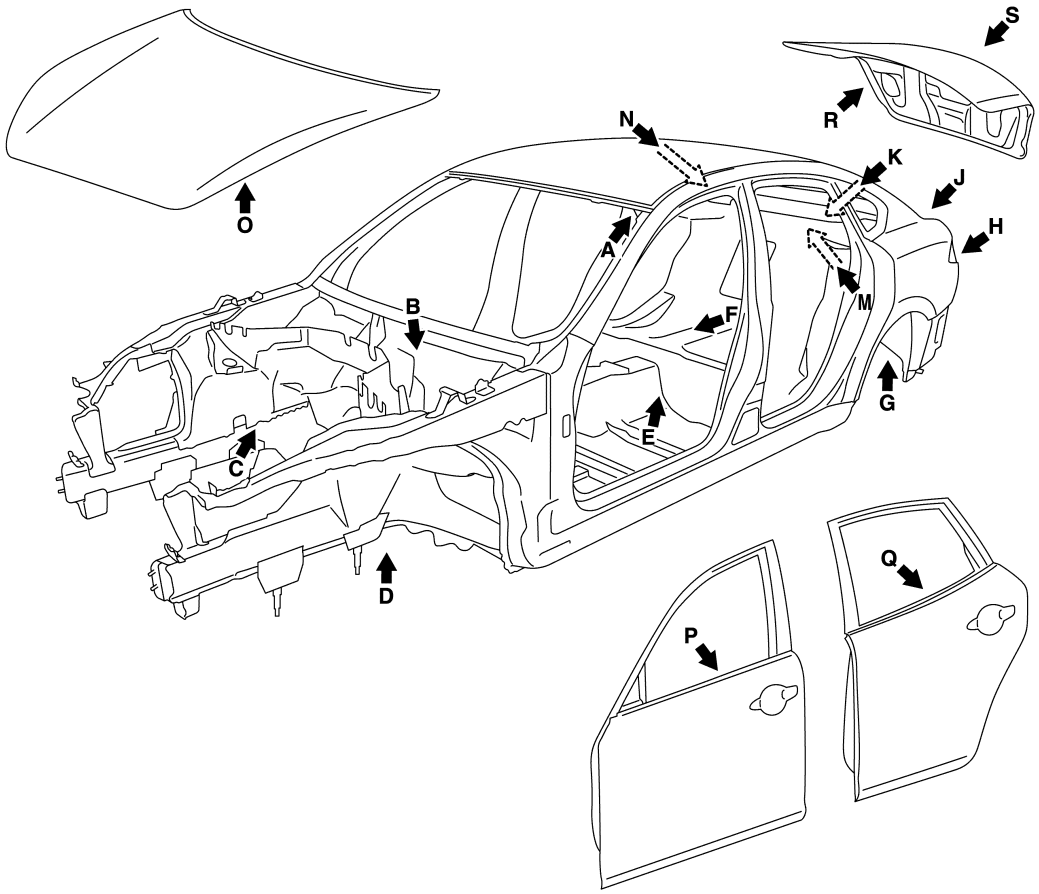
JSKIA5363ZZ

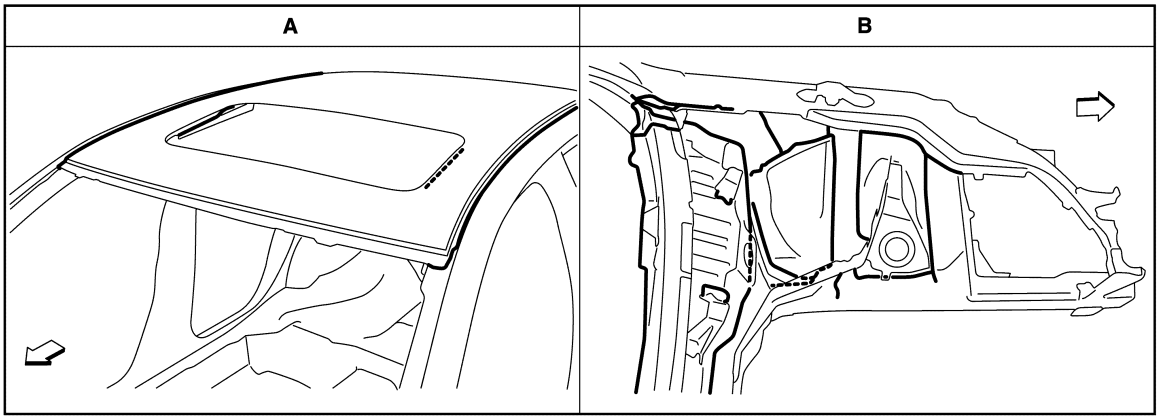
: Undercoated areas
: Sealed portions

AWD : Body Sealing

INFOID:0000000011485249

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.

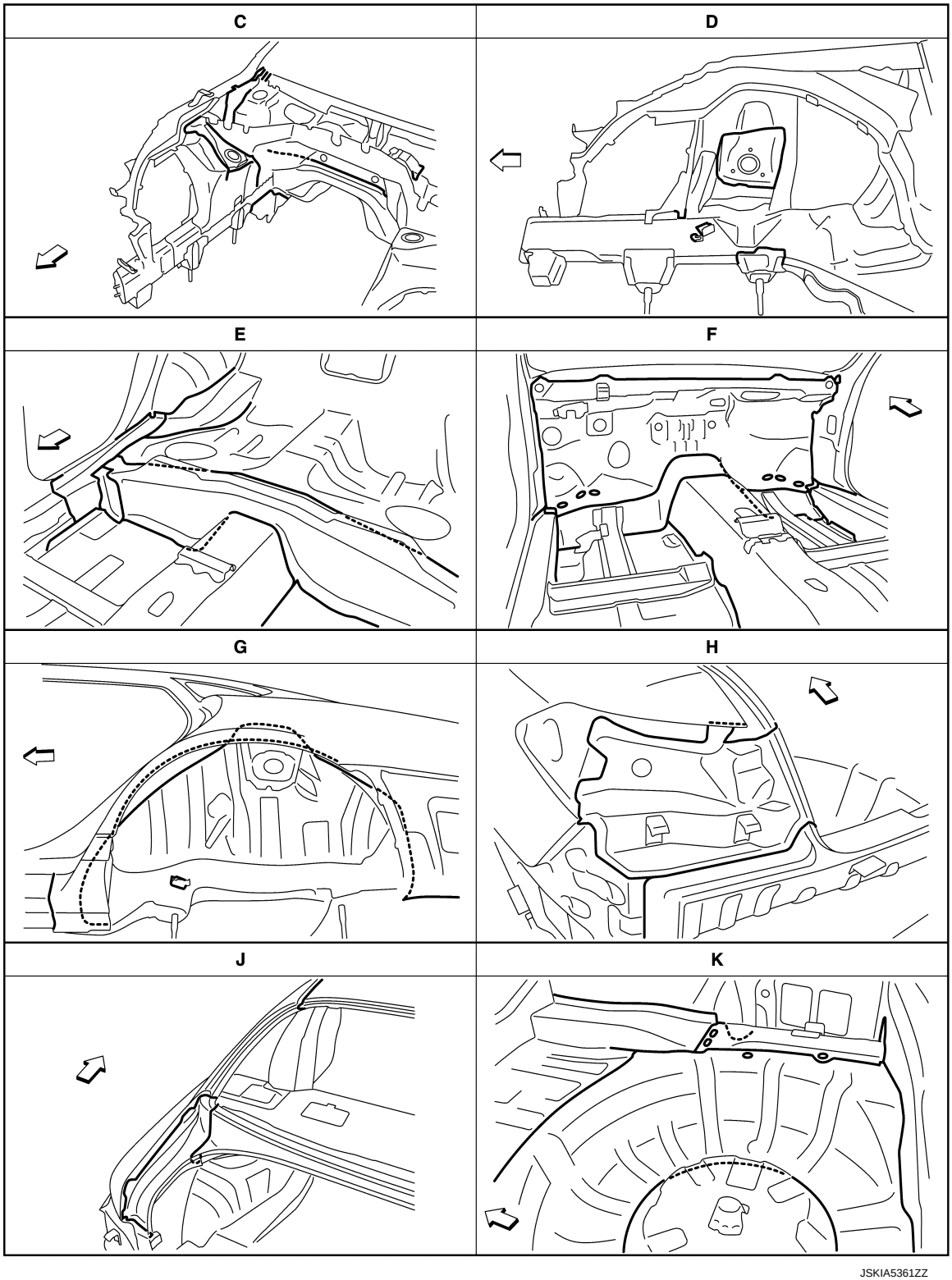




JSKIA5360ZZ

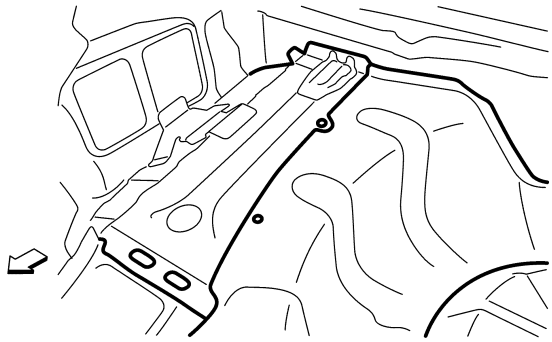
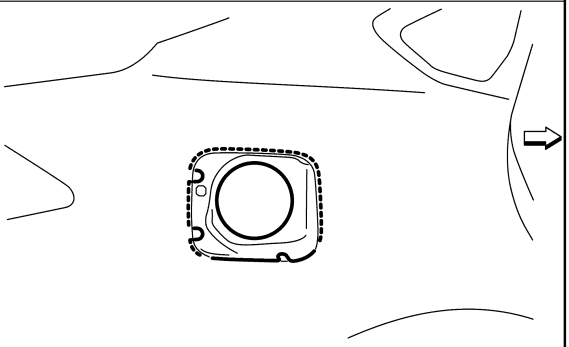
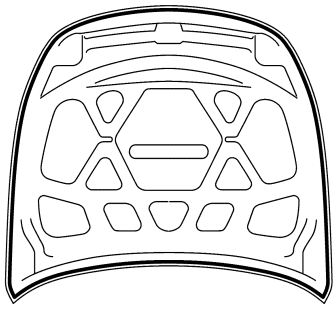
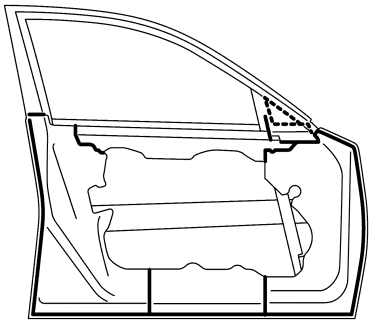
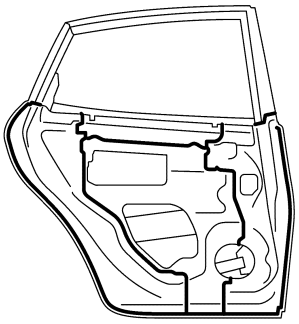
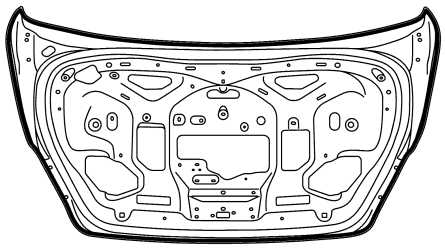
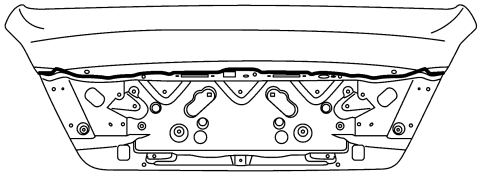
⇦: Vehicle front

▬: Sealed portions



JSKIA5361ZZ

⇦: Vehicle front
▬: Sealed portions

M	N
	
O	**P**
	
Q	**R**
	
S	
	

JSKIA5358ZZ

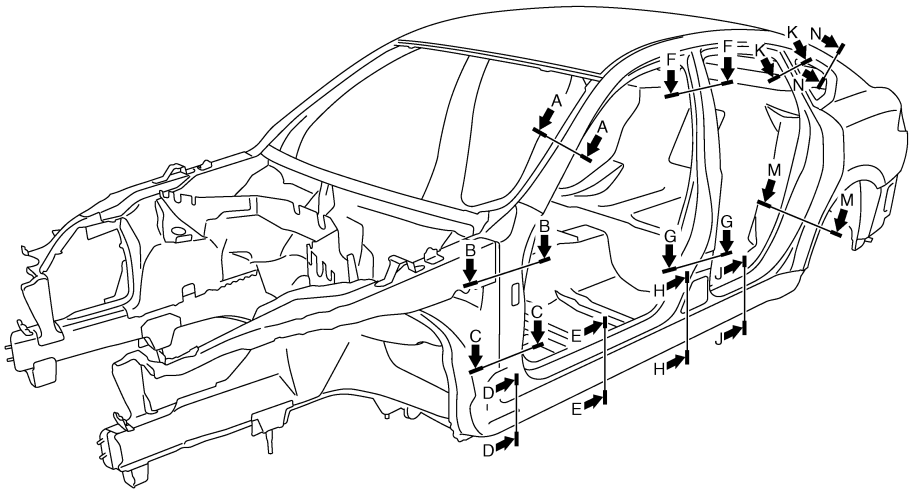
⇦: Vehicle front

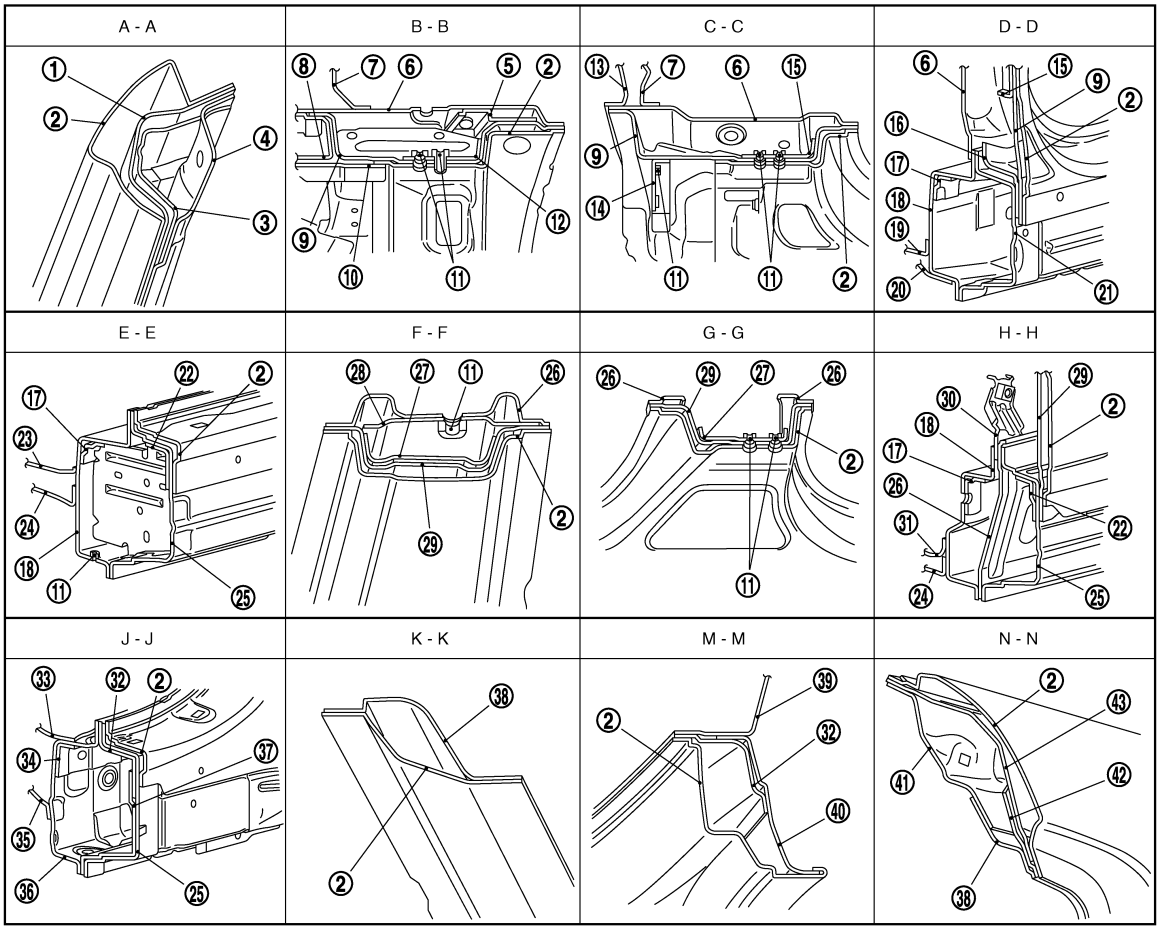
▬: Sealed portions

BODY CONSTRUCTION

Body Construction

INFOID:0000000011256496





JSKIA1626ZZ

1. Outer side roof rail
2. Outer side body
3. Outer front pillar reinforcement
4. Inner side roof rail
5. Outer front pillar bracket
6. Upper rear hoodledge
7. Upper dash
8. Hoodledge reinforcement gusset
9. Front pillar hinge brace

10. Hoodledge reinforcement
11. Weld nut
12. Upper hinge plate
13. Lower dash crossmember
14. Front pillar bracket
15. Lower hinge plate
16. Lower front pillar gusset
17. Center sill reinforcement
18. Inner sill
19. Lower dash
20. Front side member outrigger
21. Outer front sill brace
22. Outer sill extension
23. 2nd crossmember
24. Front floor
25. Outer sill reinforcement
26. Inner center pillar
27. Center pillar seat belt reinforcement
28. Inner center pillar reinforcement
29. Center pillar reinforcement
30. Seat belt anchor
31. 3rd crossmember
32. Outer rear wheelhouse extension
33. Rear seat crossmember reinforcement
34. Rear side member front reinforcement
35. Rear seat crossmember
36. Rear side member front
37. Outer rear sill reinforcement
38. Inner rear pillar
39. Inner rear wheelhouse
40. Outer rear wheelhouse
41. Rear roof rail brace
42. Inner rear pillar reinforcement
43. Outer side roof rail reinforcement

Rear Fender Hemming Process

INFOID:0000000011508529

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.

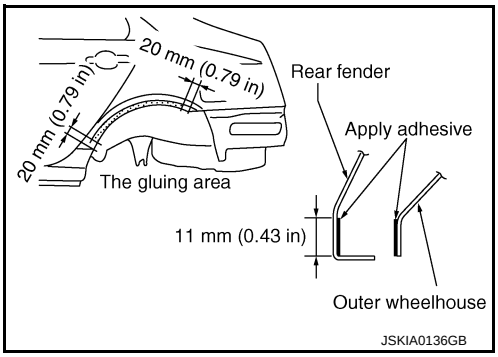
CAUTION:

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

PROCEDURE OF THE HEMMING PROCESS

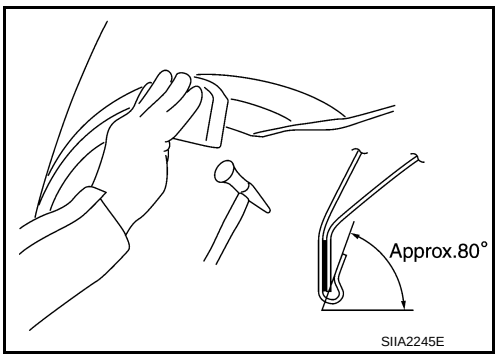
- Peel off old bonding material on the surface of the outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of the outer wheelhouse and rear fender.

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

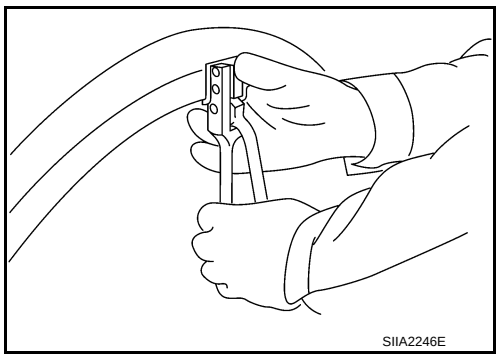


- Attach rear fender to the body of the car, and weld the required part except the hemming part.

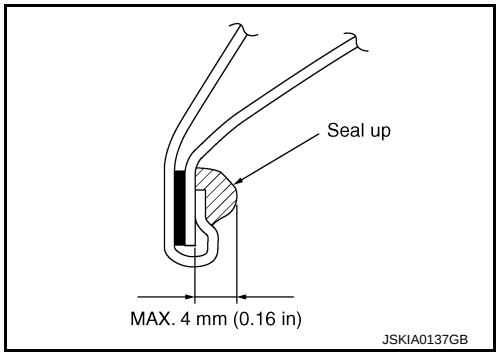
- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.



- 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.



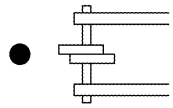
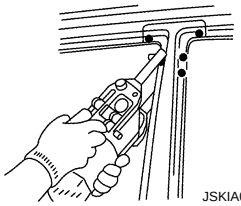
REPLACEMENT OPERATIONS

Description

INFOID:0000000011256498

- 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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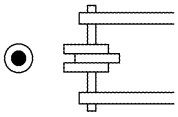
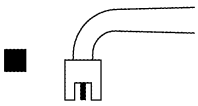
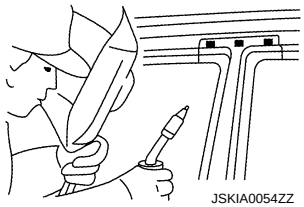
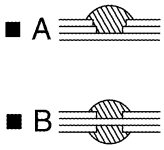
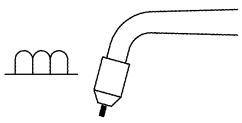
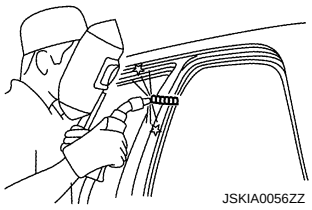
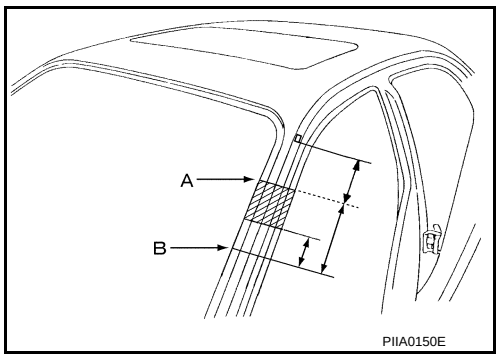
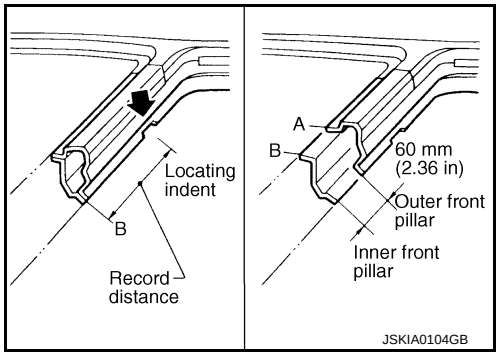
<tr><td> 
JSKIA0050ZZ</td><td>3-spot welds</td></tr>
<tr><td> 
JSKIA0051ZZ</td><td>MIG plug weld</td><td> 
JSKIA0054ZZ
For 3 panels plug weld method
 
JSKIA0055ZZ</td></tr>
<tr><td> 
JSKIA0052ZZ</td><td>MIG seam weld / Point weld</td><td> 
JSKIA0056ZZ</td></tr>
</table>

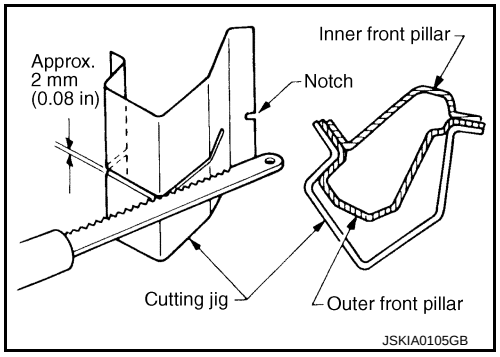
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.



- 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.

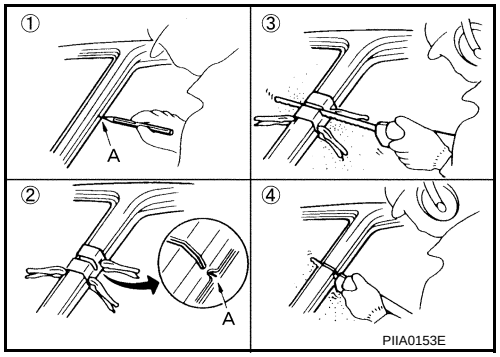


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.



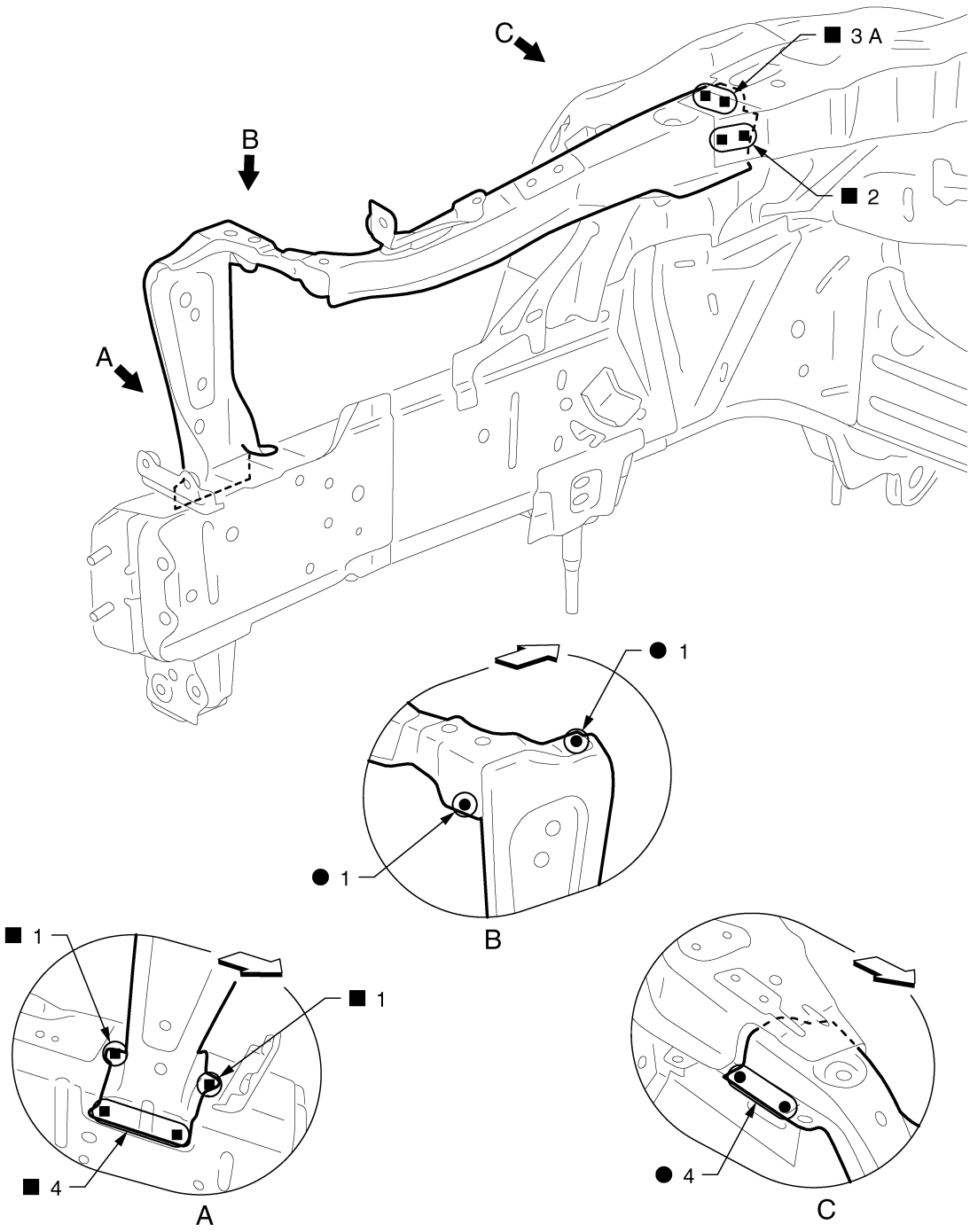
- An example of cutting operation using a cutting jig is as per the following.

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.



Radiator Core Support

INFOID:0000000011256499



JSKIA1628ZZ

⇦: Vehicle front

Replacement parts

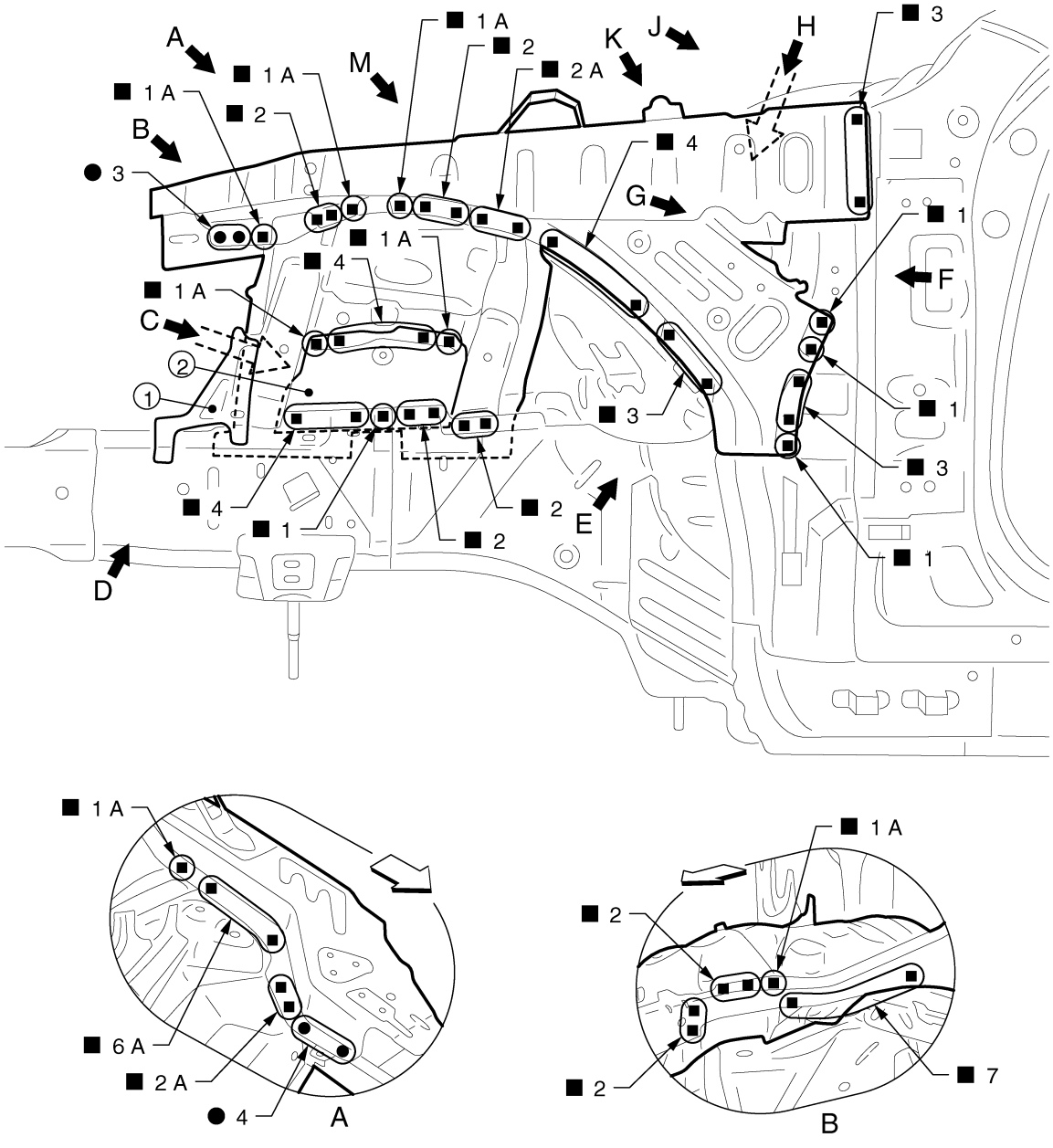
- Side radiator core support (LH)
- Front side member connector assembly (LH)

Hoodledge

INFOID:0000000011256500

Work after radiator core support is removed.

Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable).



JSKIA1629ZZ

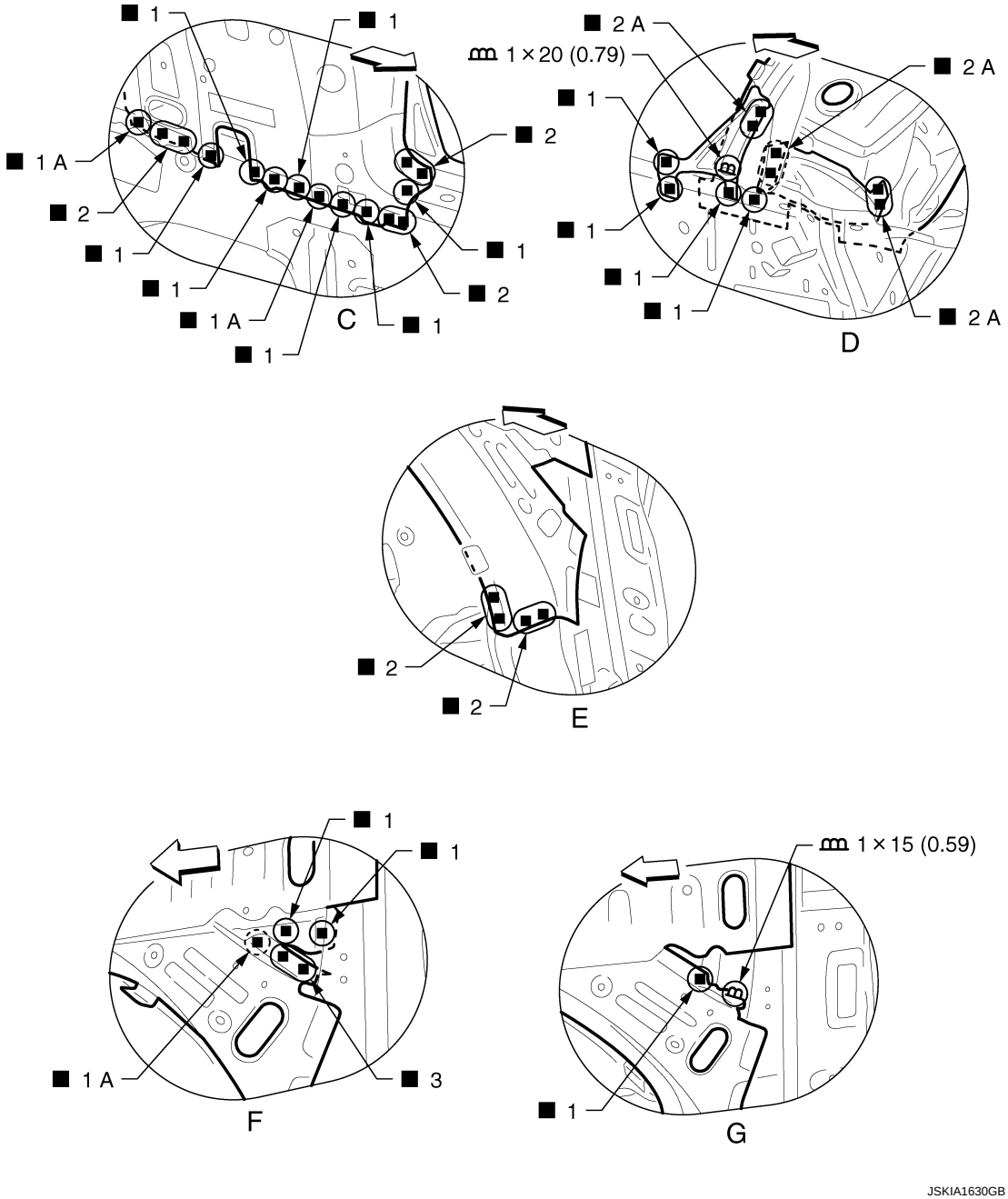
1. Front side member extension front reinforcement (reusable)
2. Front side member center closing plate (reusable)

⇦: Vehicle front

Replacement parts

- Upper front hoodledge (LH)
- Hoodledge reinforcement (LH)
- Front strut housing (LH)

View B: Before installing hoodledge reinforcement

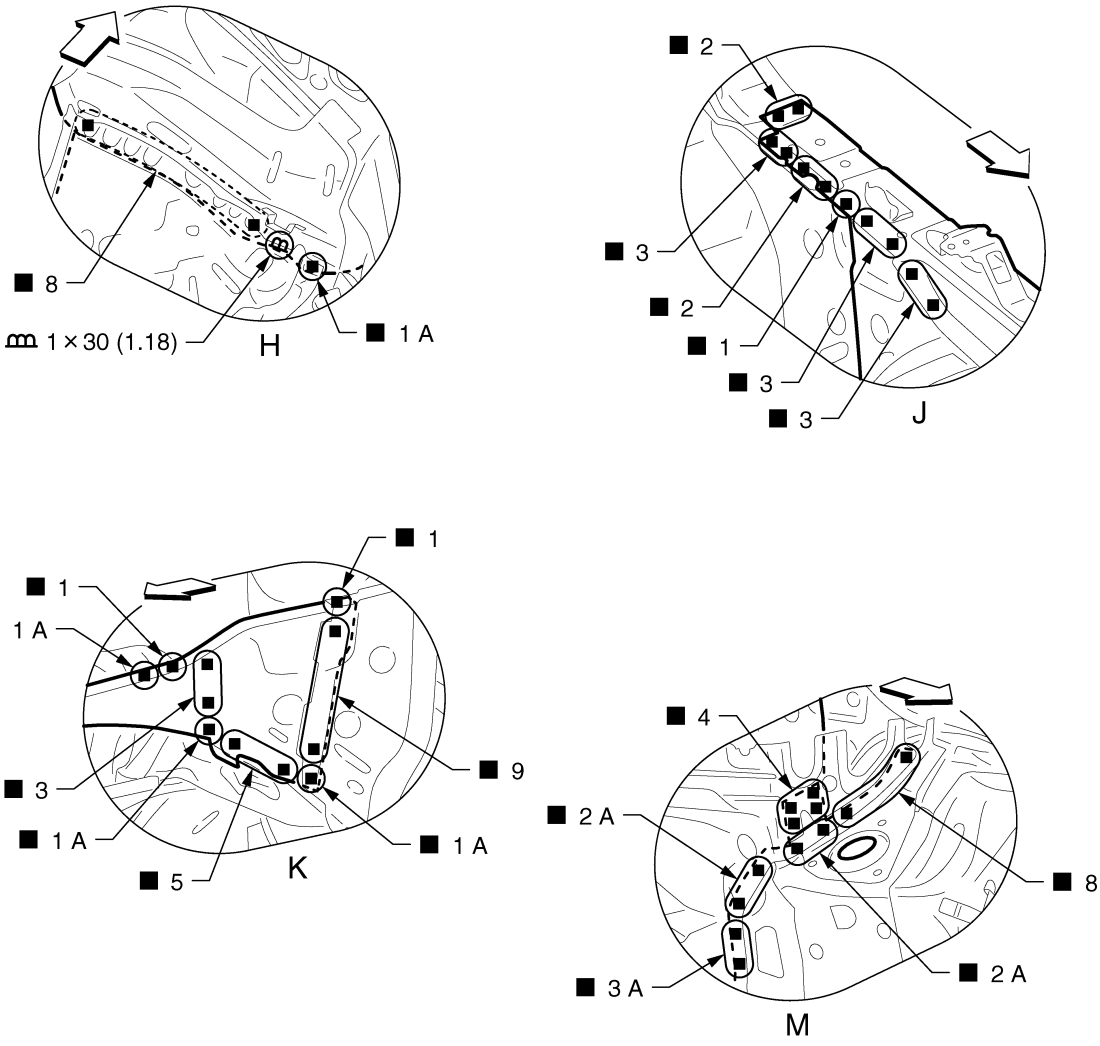


JSKIA1630GB

Unit: mm (in)

⇦: Vehicle front

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



JSKIA1631GB

Unit: mm (in)

⇦: Vehicle front

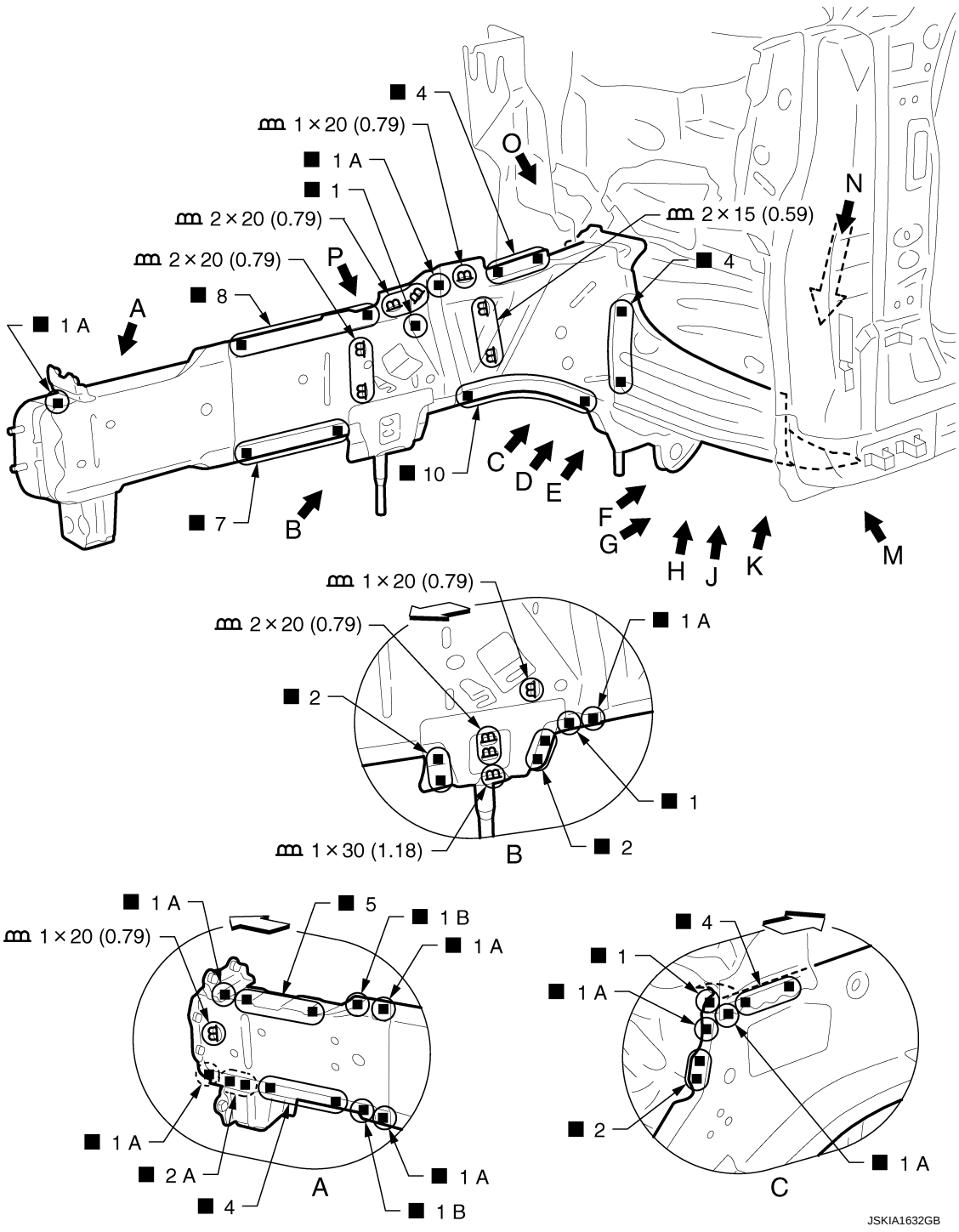
( ): Weld the parts onto the back of the component part.

View K: Before installing hoodledge reinforcement

Front Side Member (2WD)

INFOID:0000000011256501

Work after radiator core support and hoodledge are removed.
Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable) from the service part "front side member closing plate assembly" for easier installation of hoodledge.



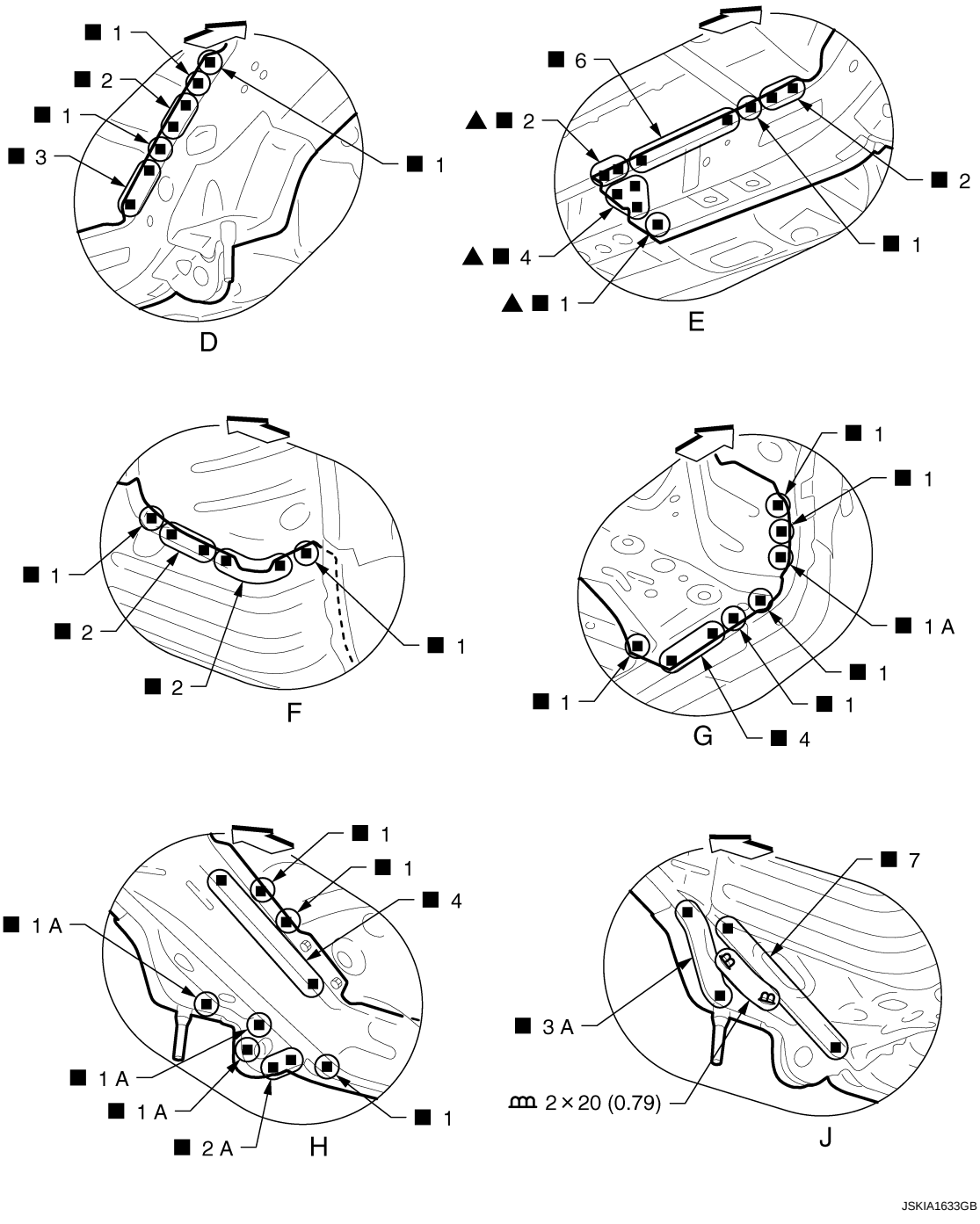
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

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



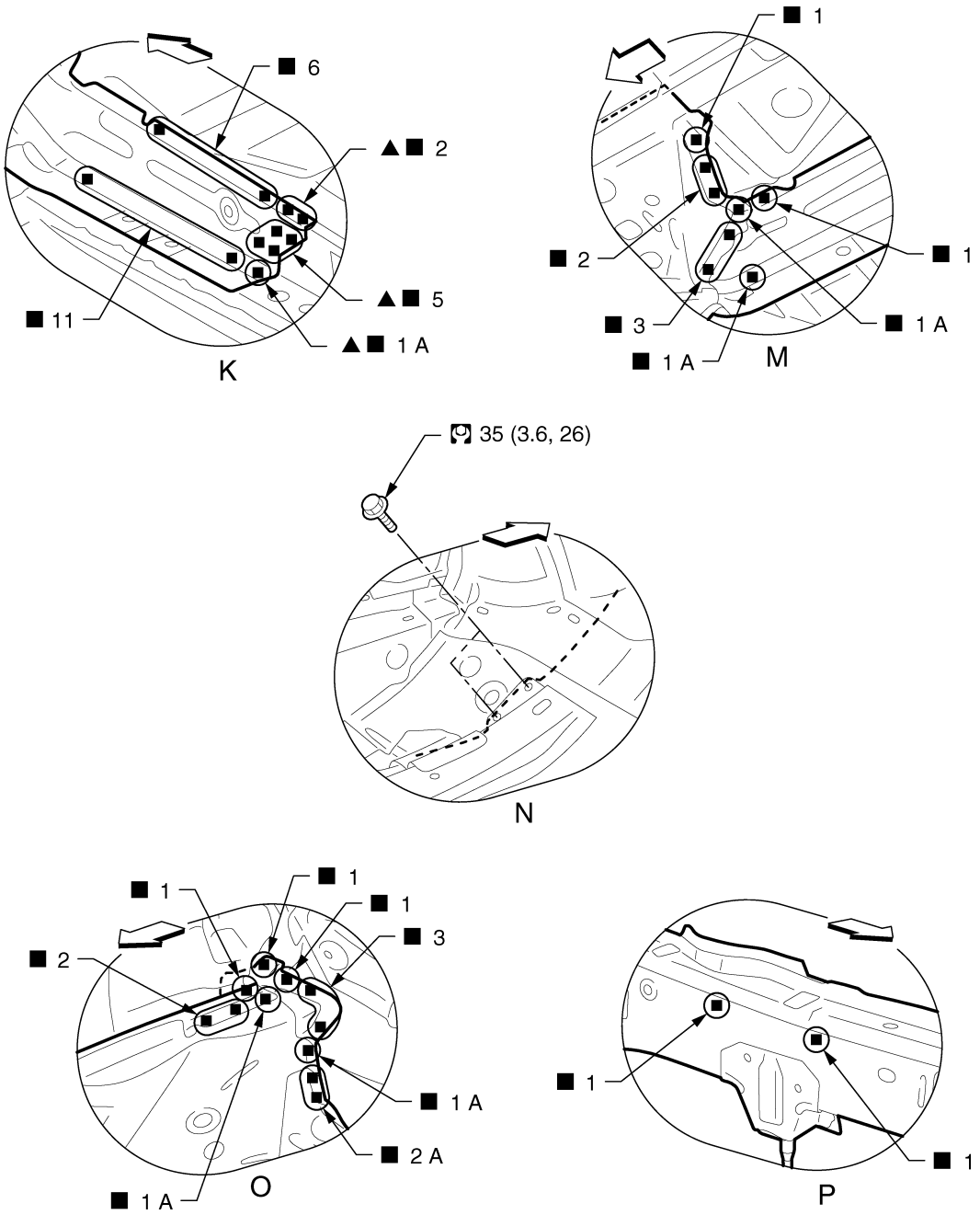
JSKIA1633GB

Unit: mm (in)

⇦: Vehicle front

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

View H: Before installing front side member outrigger assembly



JSKIA1634GB

⇦: Vehicle front

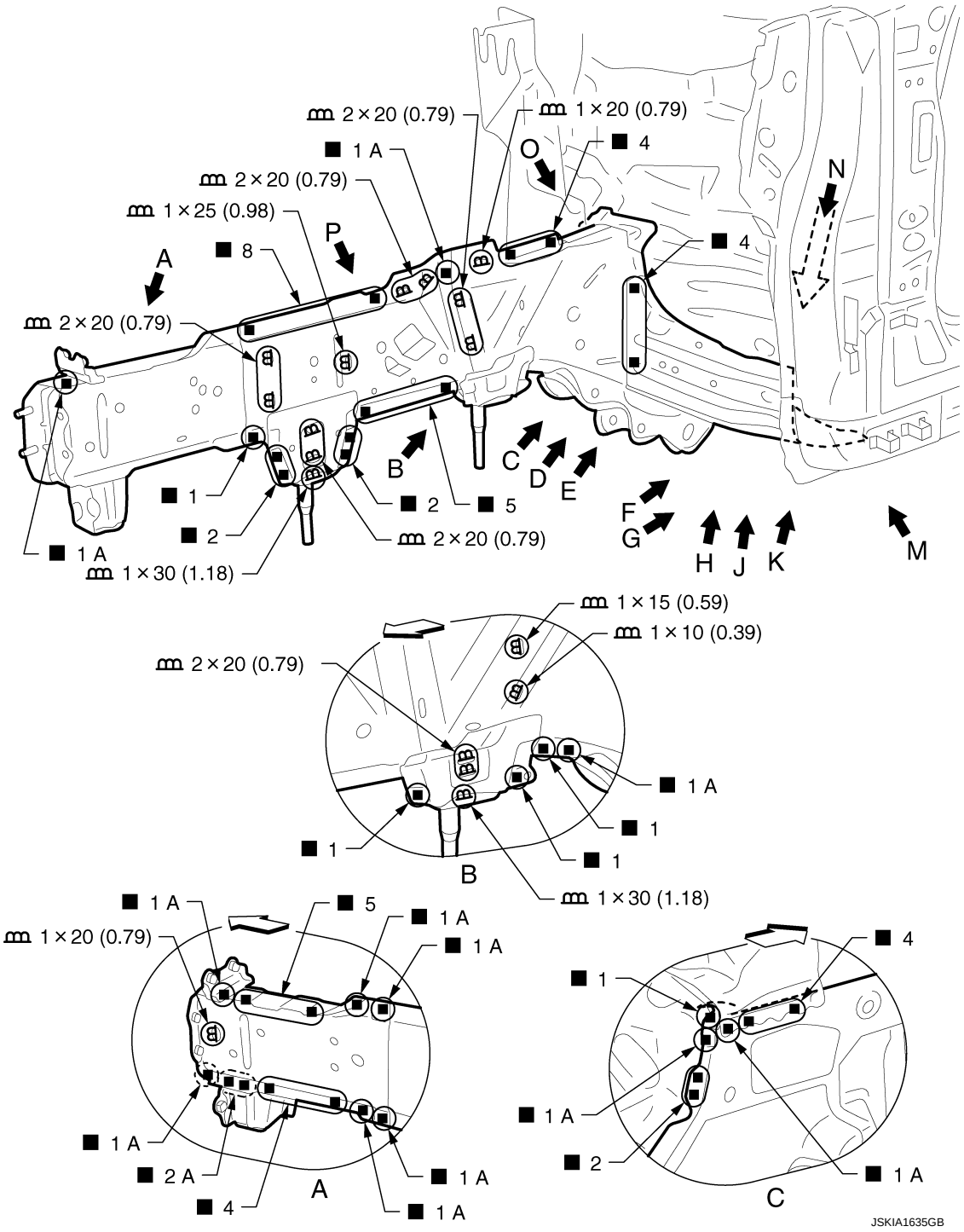
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).
Refer to GI-4, "Components" for symbols in the figure.

View K: Before installing front side member outrigger assembly

Front Side Member (AWD)

INFOID:0000000011256502

Work after radiator core support and hoodledge are removed.
Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable) from the service part ″front side member closing plate assembly″ for easier installation of hoodledge.



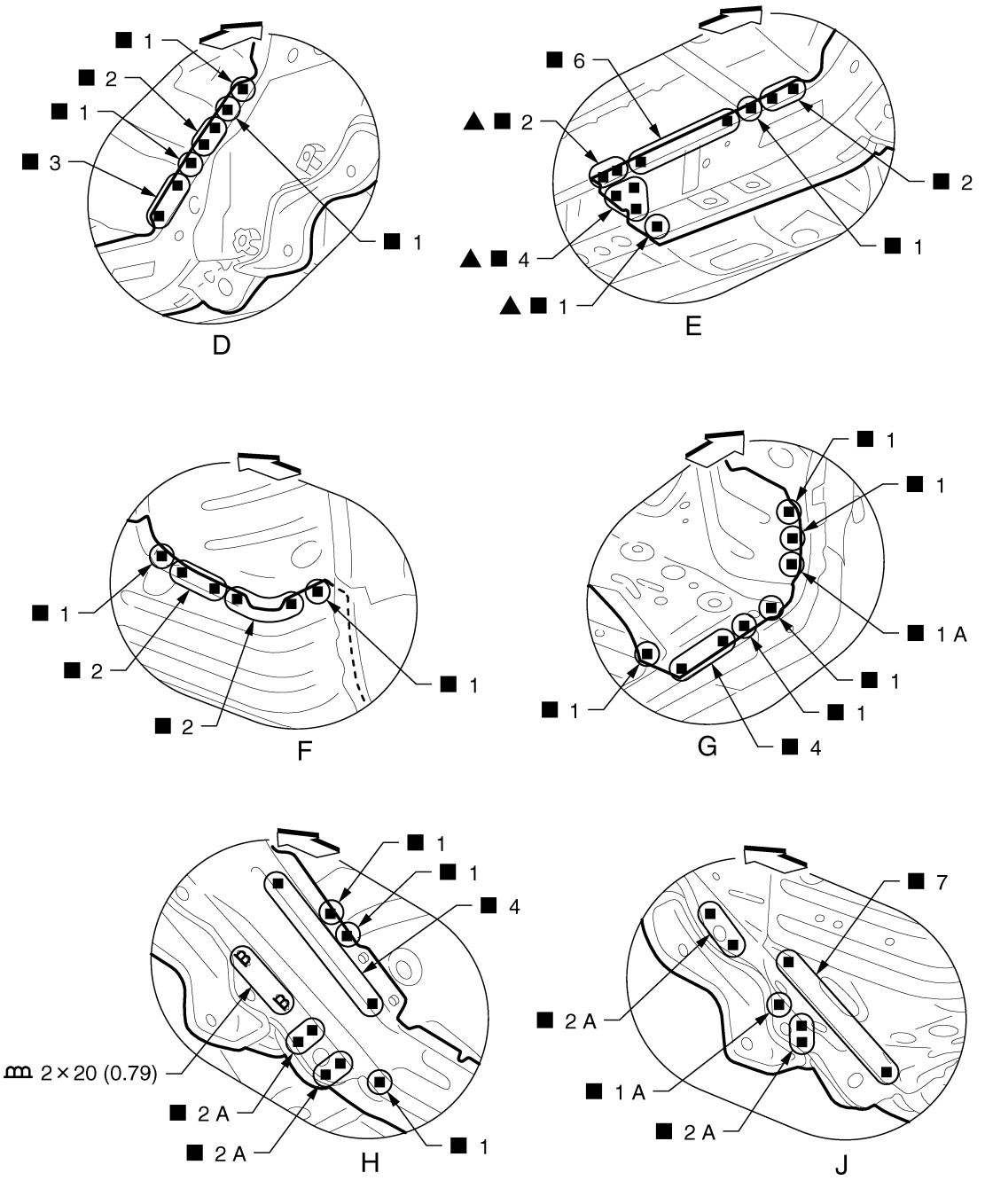
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

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

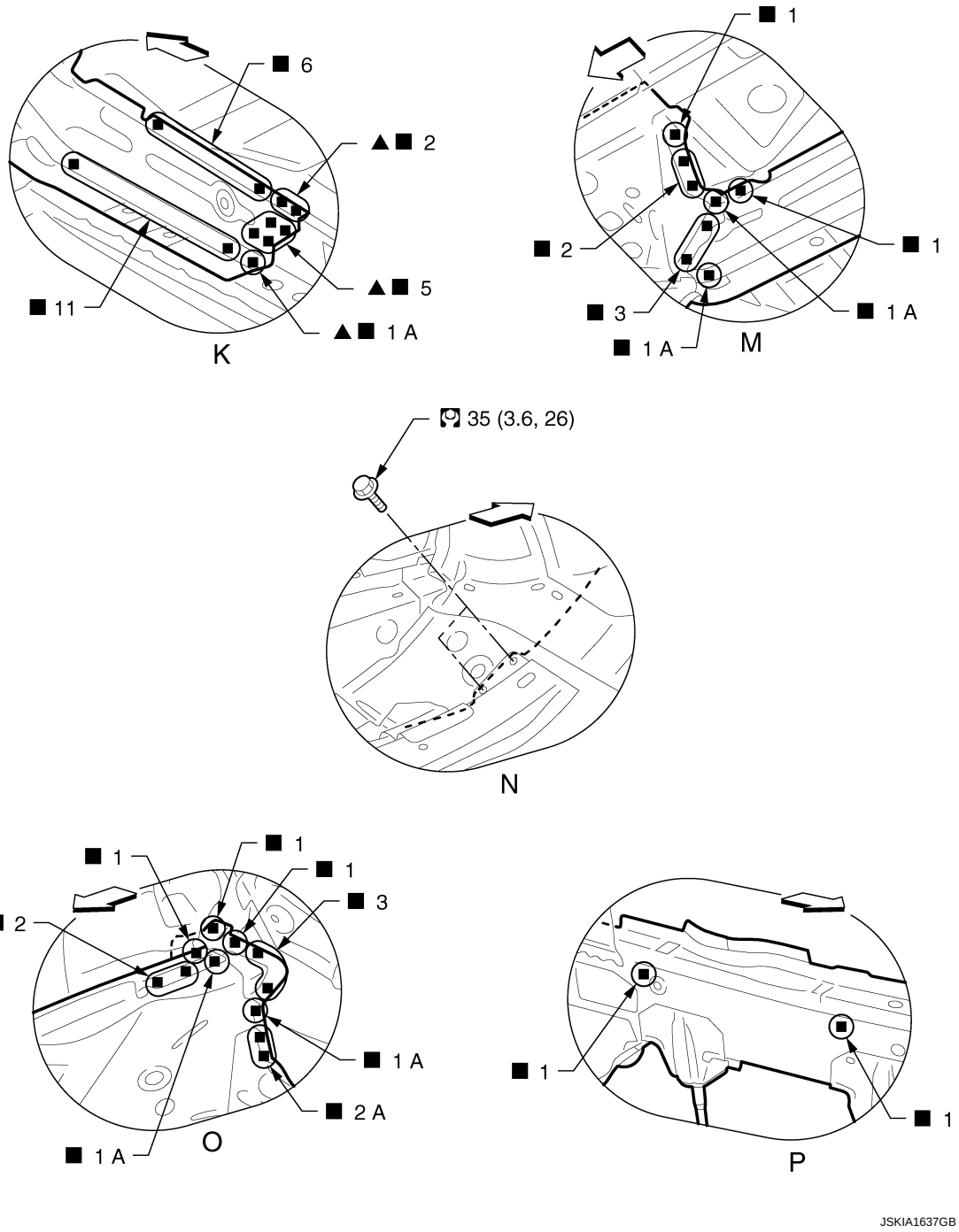


Unit: mm (in)

⇦: Vehicle front

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

View H: Before installing front side member outrigger assembly



JSKIA1637GB

⇦: Vehicle front

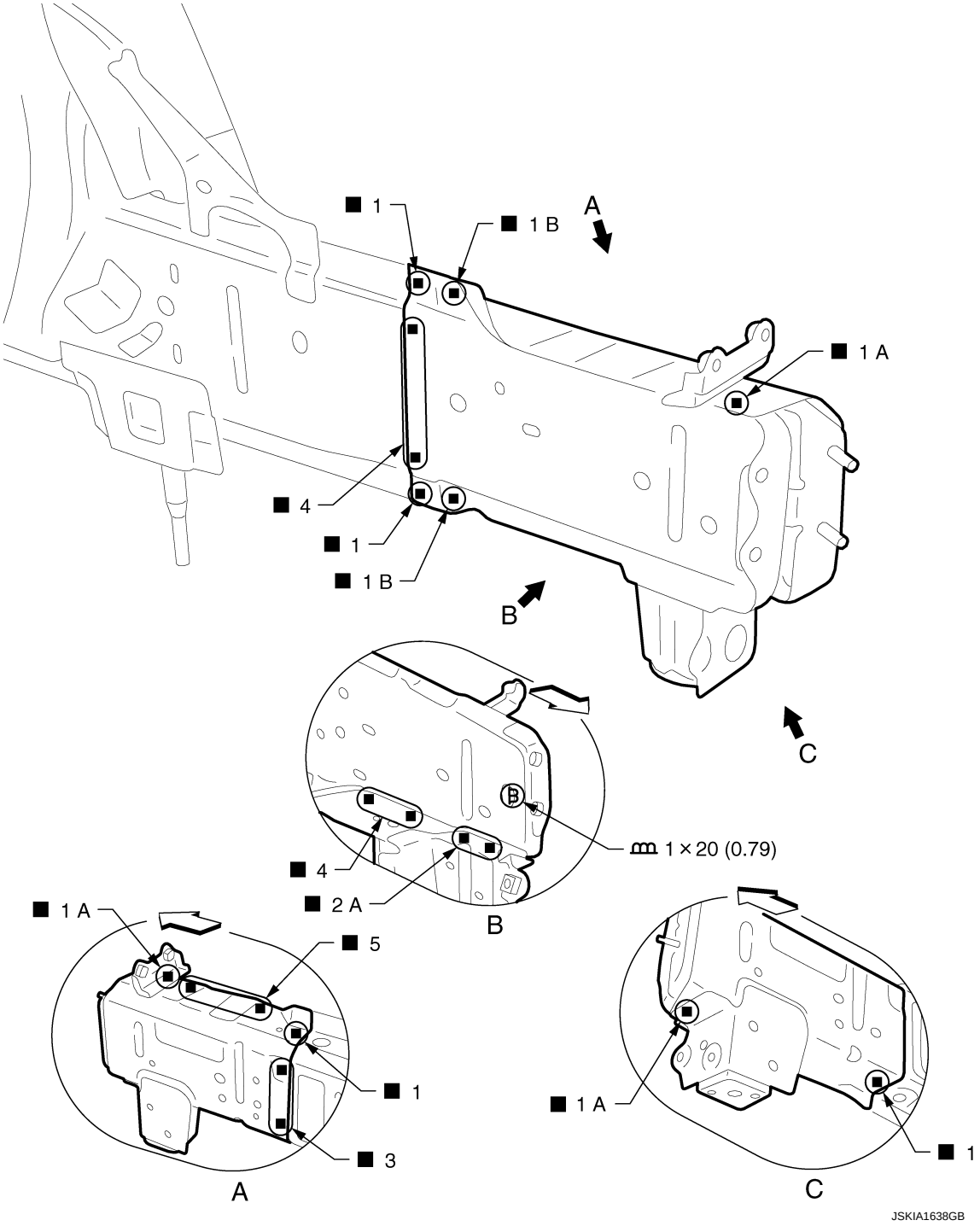
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).
Refer to GI-4, "Components" for symbols in the figure.

View K: Before installing front side member outrigger assembly

Front Side Member (Partial Replacement)

INFOID:0000000011256503

Work after radiator core support is removed.



Unit: mm (in)

⇦: Vehicle front

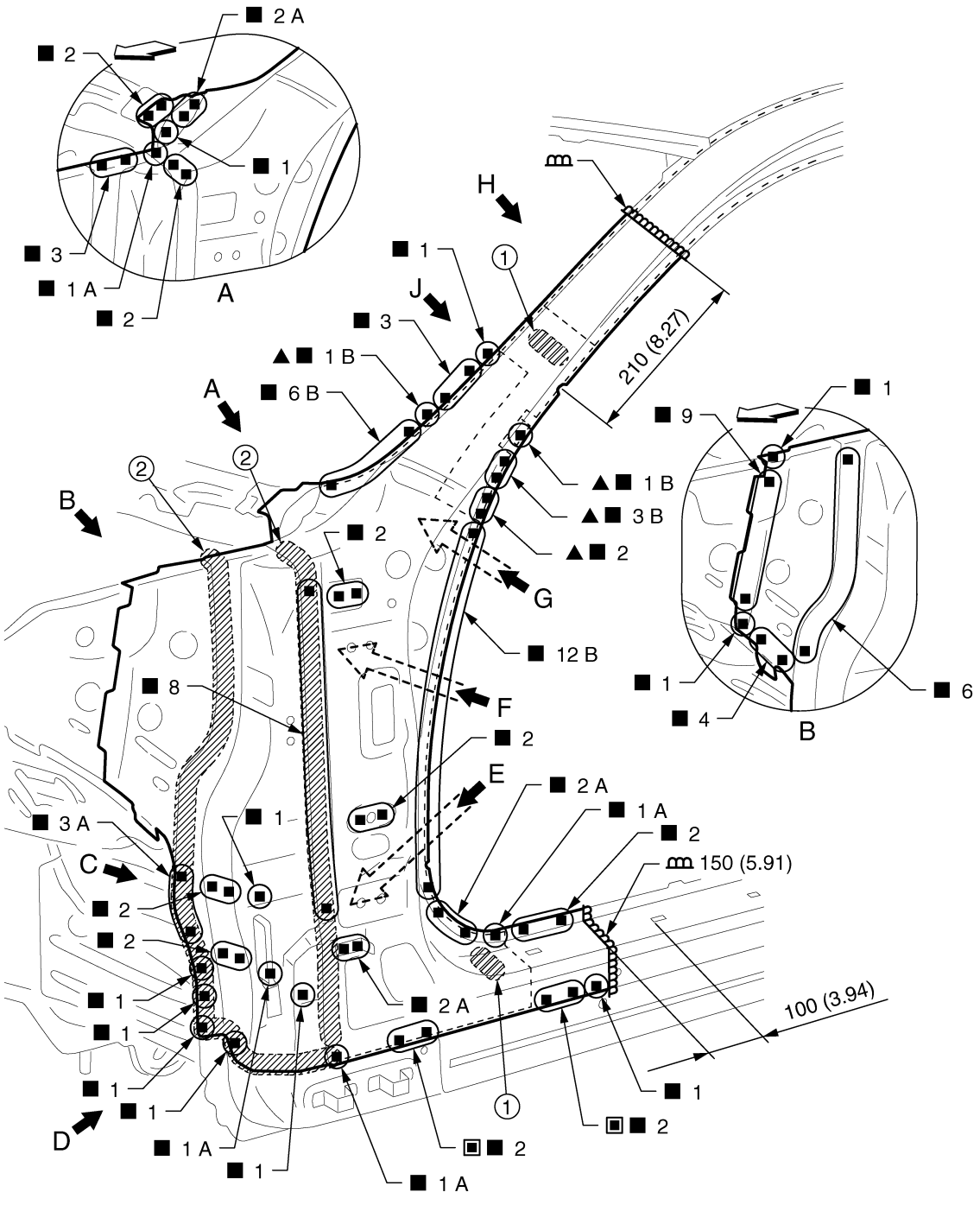
Replacement parts

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

Front Pillar

INFOID:0000000011256504

Work after hoodledge reinforcement is removed.



1. Urethane foam
2. Body sealing

Unit: mm (in)

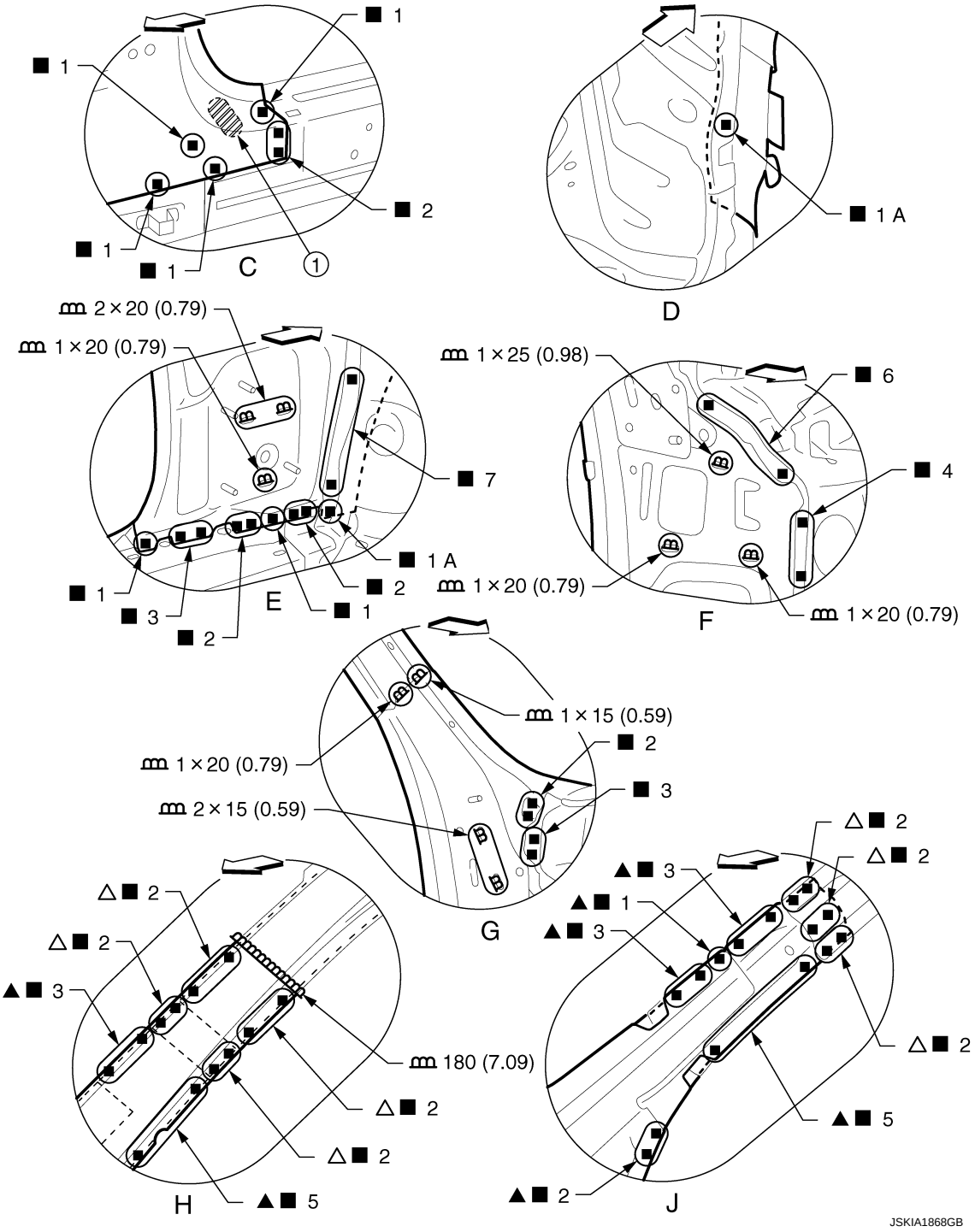
⇦: Vehicle front

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

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

Replacement parts

- Outer front side body (LH)
- Outer front pillar reinforcement (LH)
- Upper rear hoodledge (LH)
- Front fender bracket



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

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

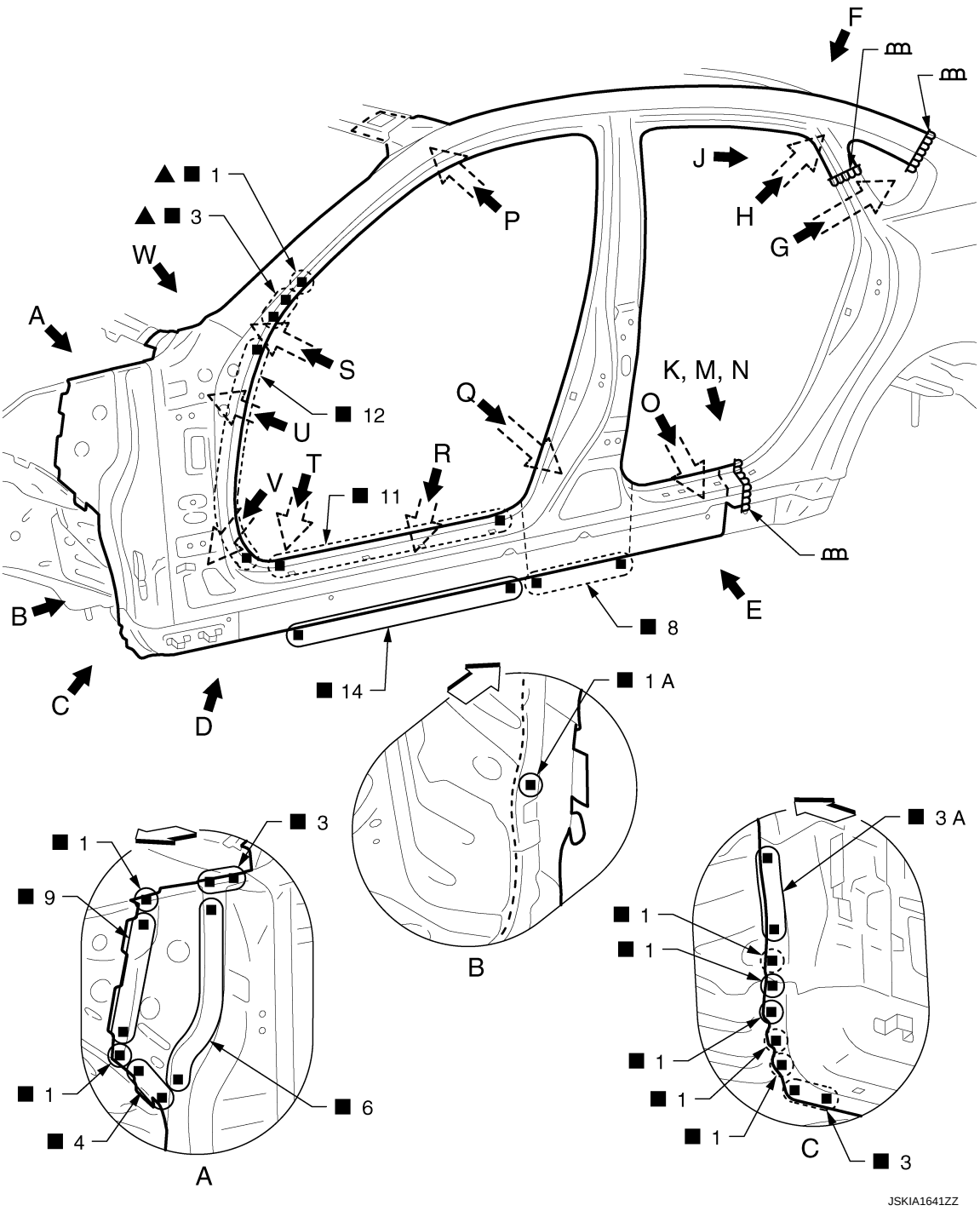
△: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel plate).

View C and J: Before installing outer front side body

Side Body

INFOID:0000000011256505

Work after hoodledge reinforcement and roof are removed.



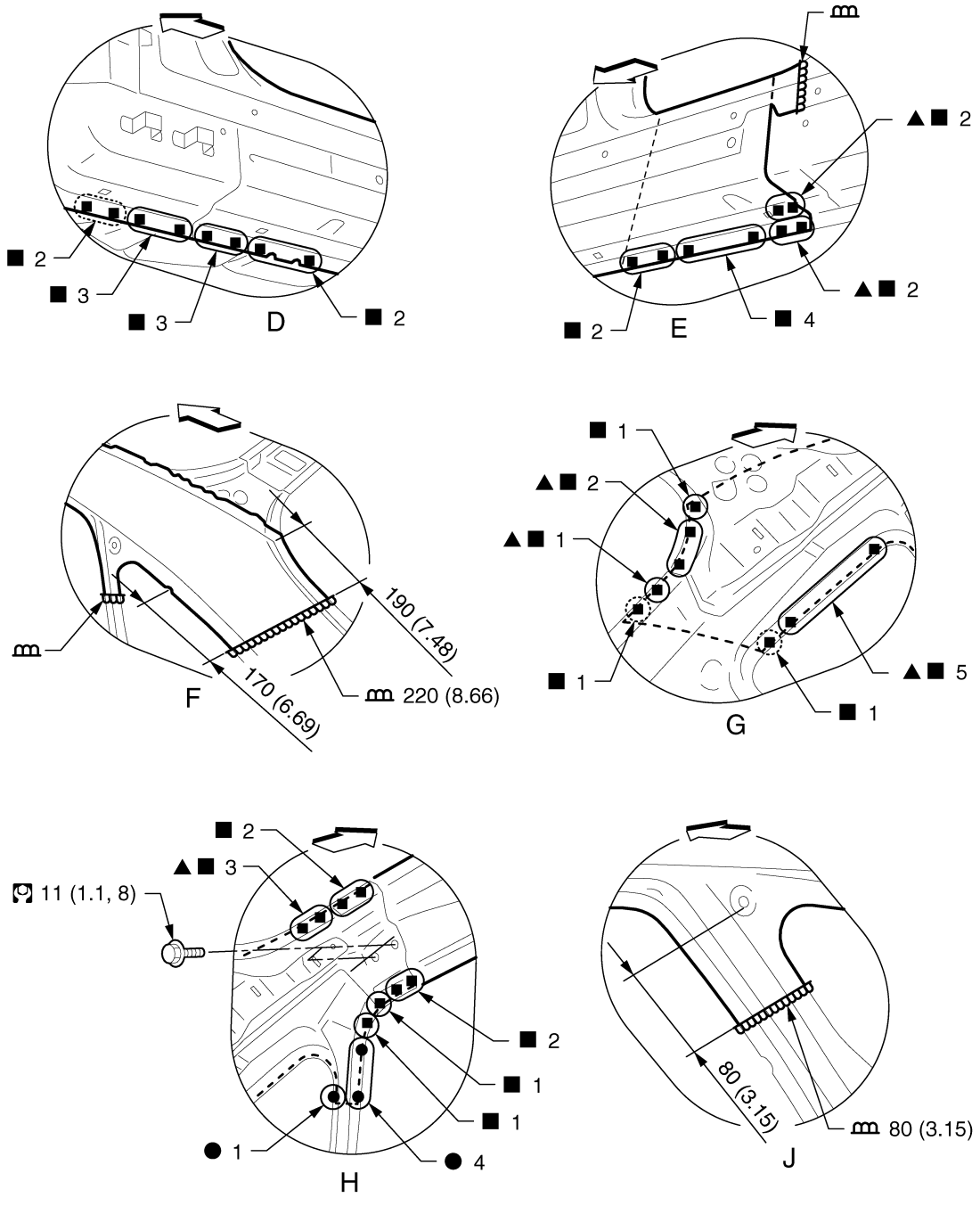
⇦: Vehicle front

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

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

Replacement parts

- Side body assembly (LH)
- Upper rear hoodledge (LH)



JSKIA1642GB

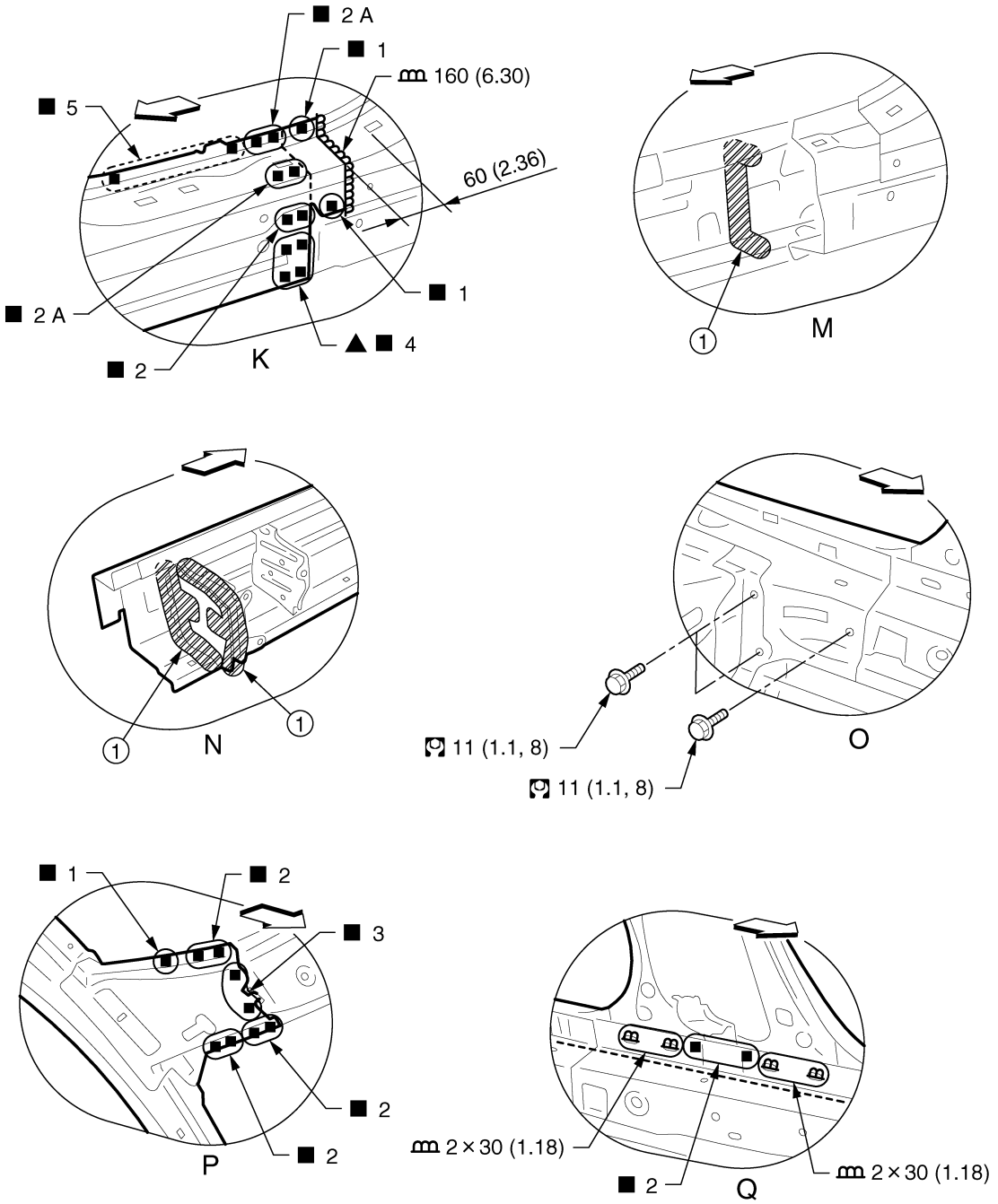
Unit: mm (in)

⇦: Vehicle front

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

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

Refer to GI-4, "Components" for symbols in the figure.



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

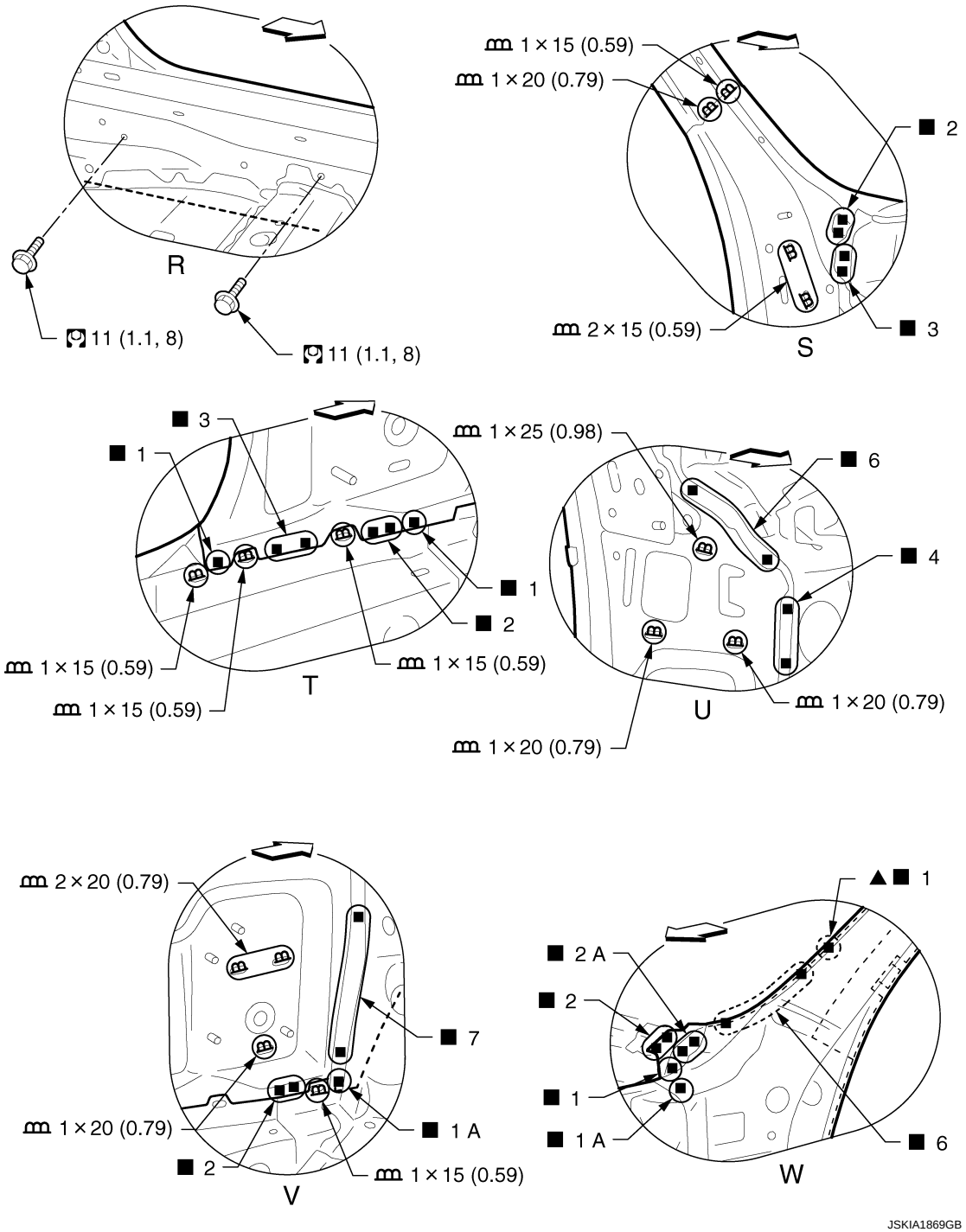
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).

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

Refer to GI-4, "Components" for symbols in the figure.

View M: Before installing side body assembly

View N: Side body assembly (replacement parts)



Unit: mm (in)

⇦: Vehicle front

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

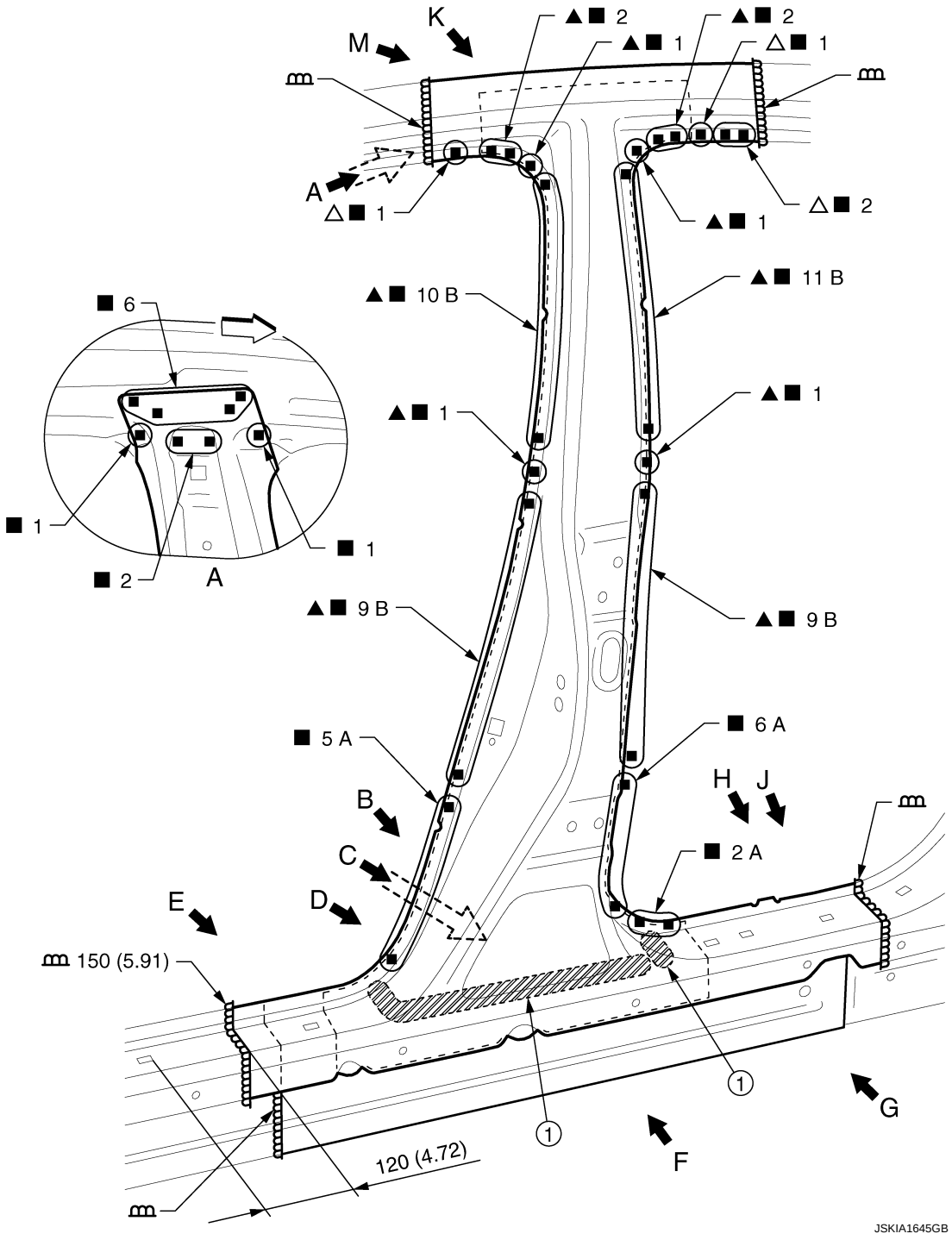
(): Weld the parts onto the back of the component part.

Refer to GI-4, "Components" for symbols in the figure.

Center Pillar

INFOID:0000000011256506

Work after roof is removed.



1. Urethane foam

Unit: mm (in)

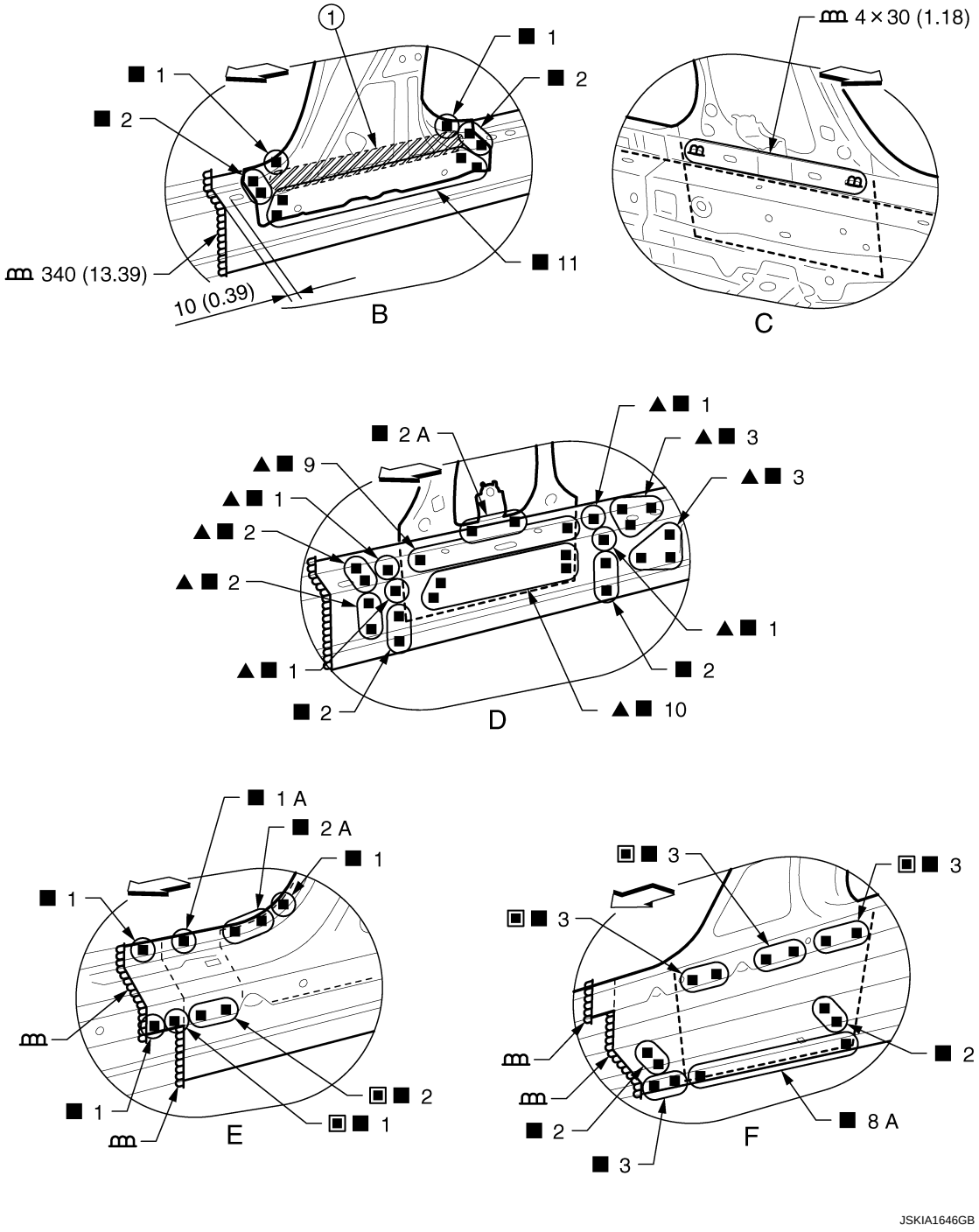
⇦: Vehicle front

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

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

Replacement parts

- Outer front side body (LH)
- Center pillar reinforcement (LH)
- Inner center pillar (LH)



JSKIA1646GB

1. Urethane foam

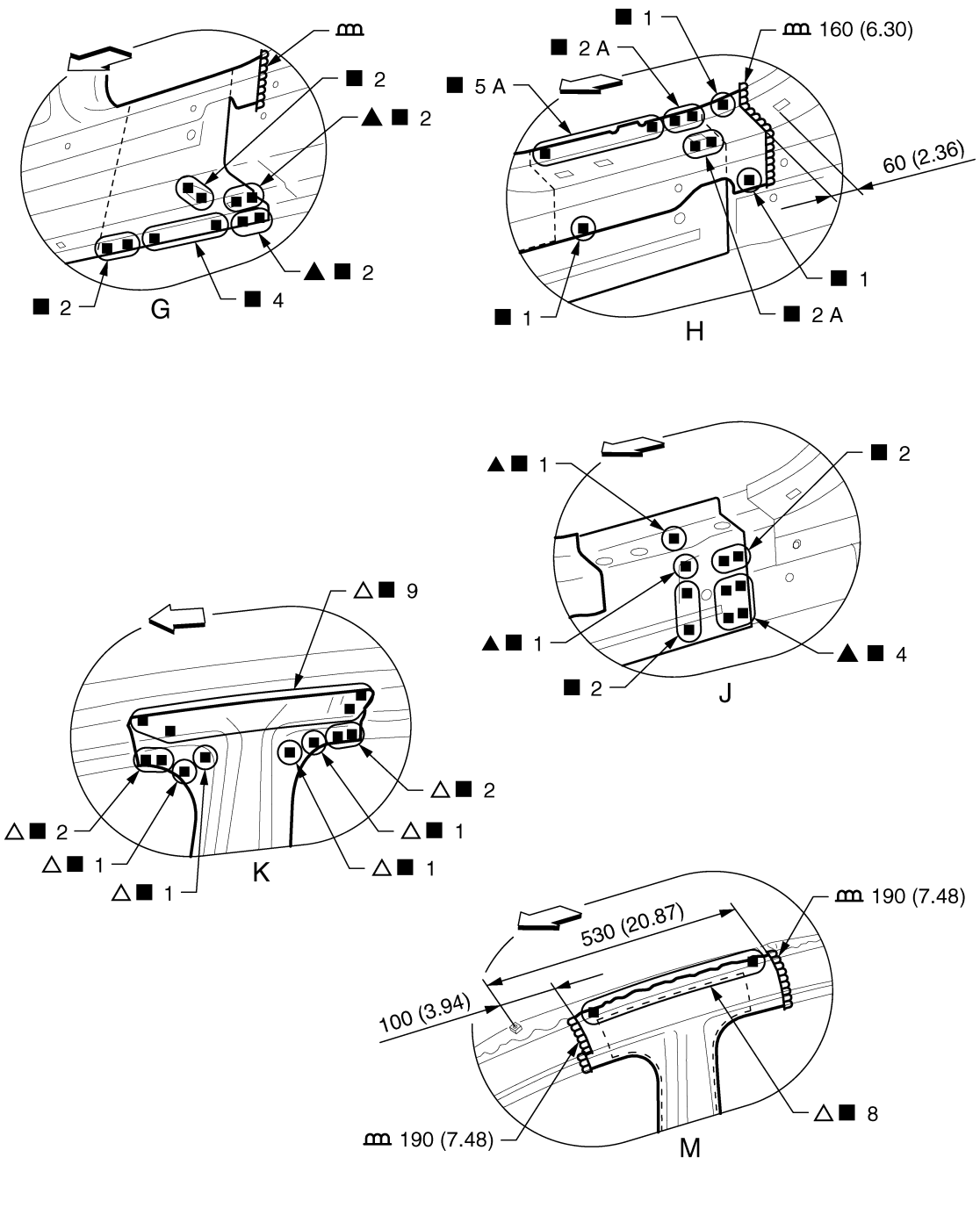
Unit: mm (in)

⇦: Vehicle front

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

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

View B: Before installing outer front side body
View D: Before installing outer front side body and center pillar reinforcement



Unit: mm (in)

⇦: Vehicle front

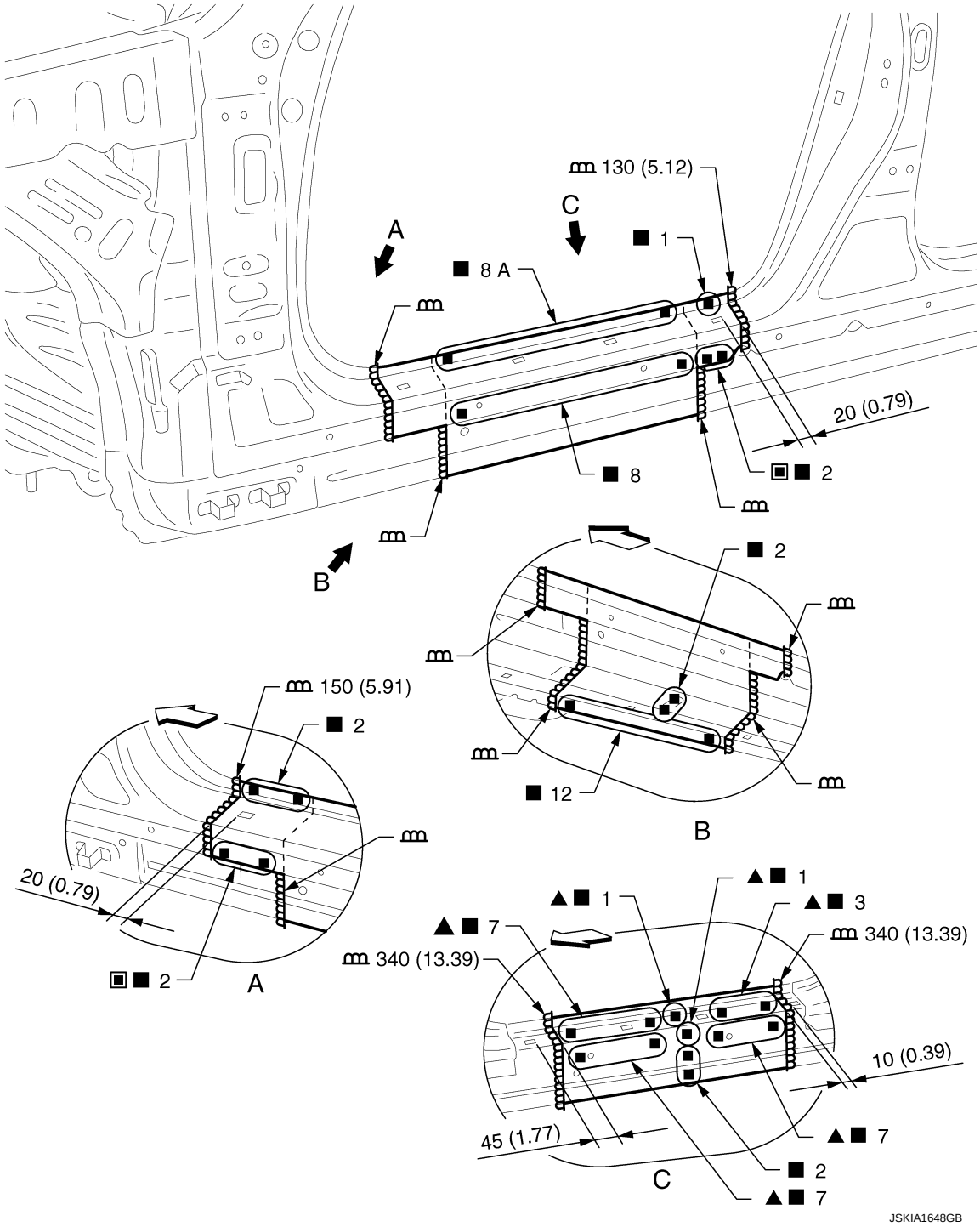
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).

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

View J and K: Before installing outer front side body

Outer Sill (Partial Replacement)

INFOID:0000000011256507



Unit: mm (in)

⇦: Vehicle front

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

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

Replacement parts

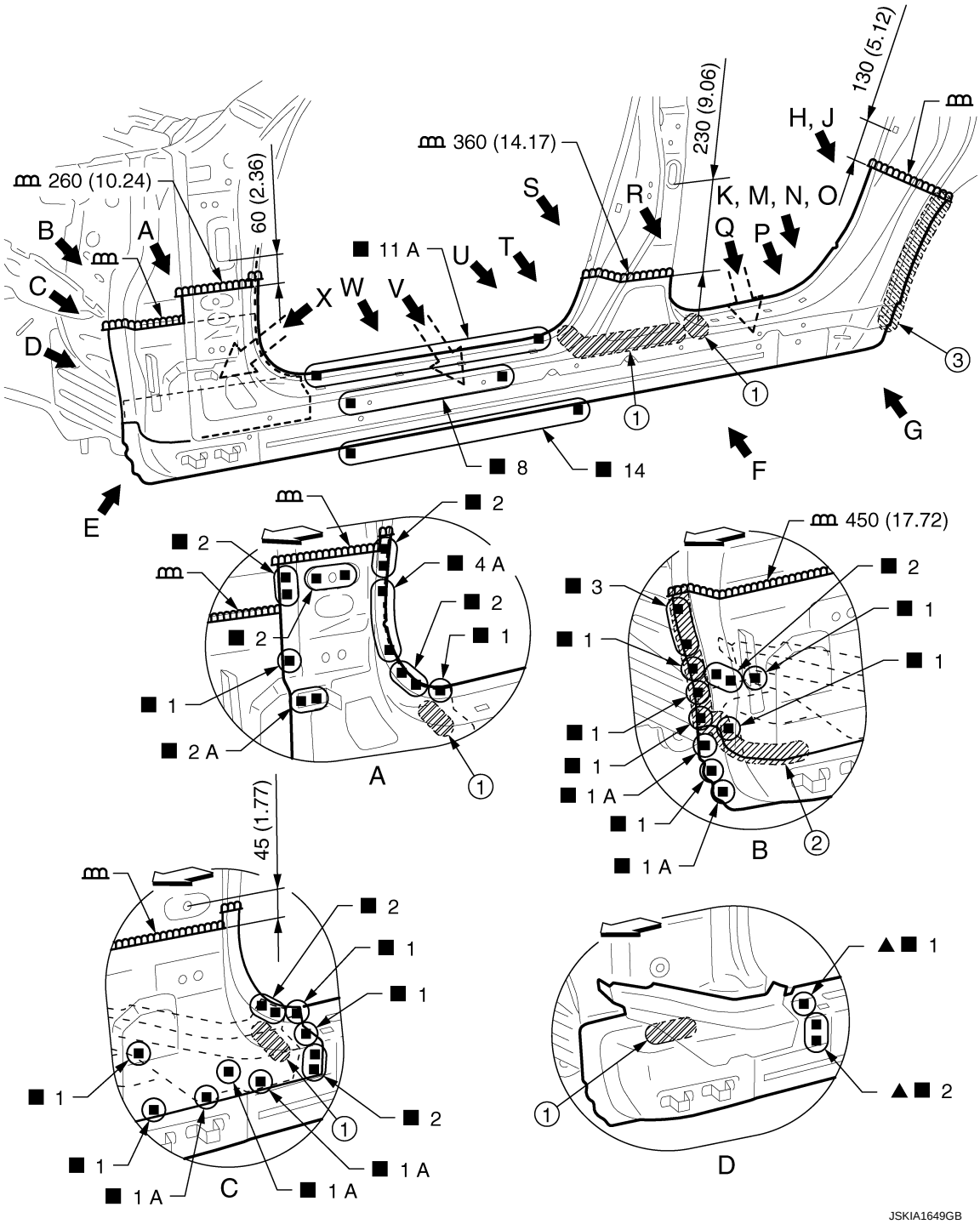
- Outer sill (LH)
- Outer sill reinforcement (LH)

View C: Before installing outer sill

Outer Sill

INFOID:0000000011256508

Work after hoodledge reinforcement is removed.
Remove the outer front pillar reinforcement (reusable) and center pillar reinforcement (reusable) for easier installation.



1. Urethane foam
2. Body sealing
3. Adhesive

Unit: mm (in)

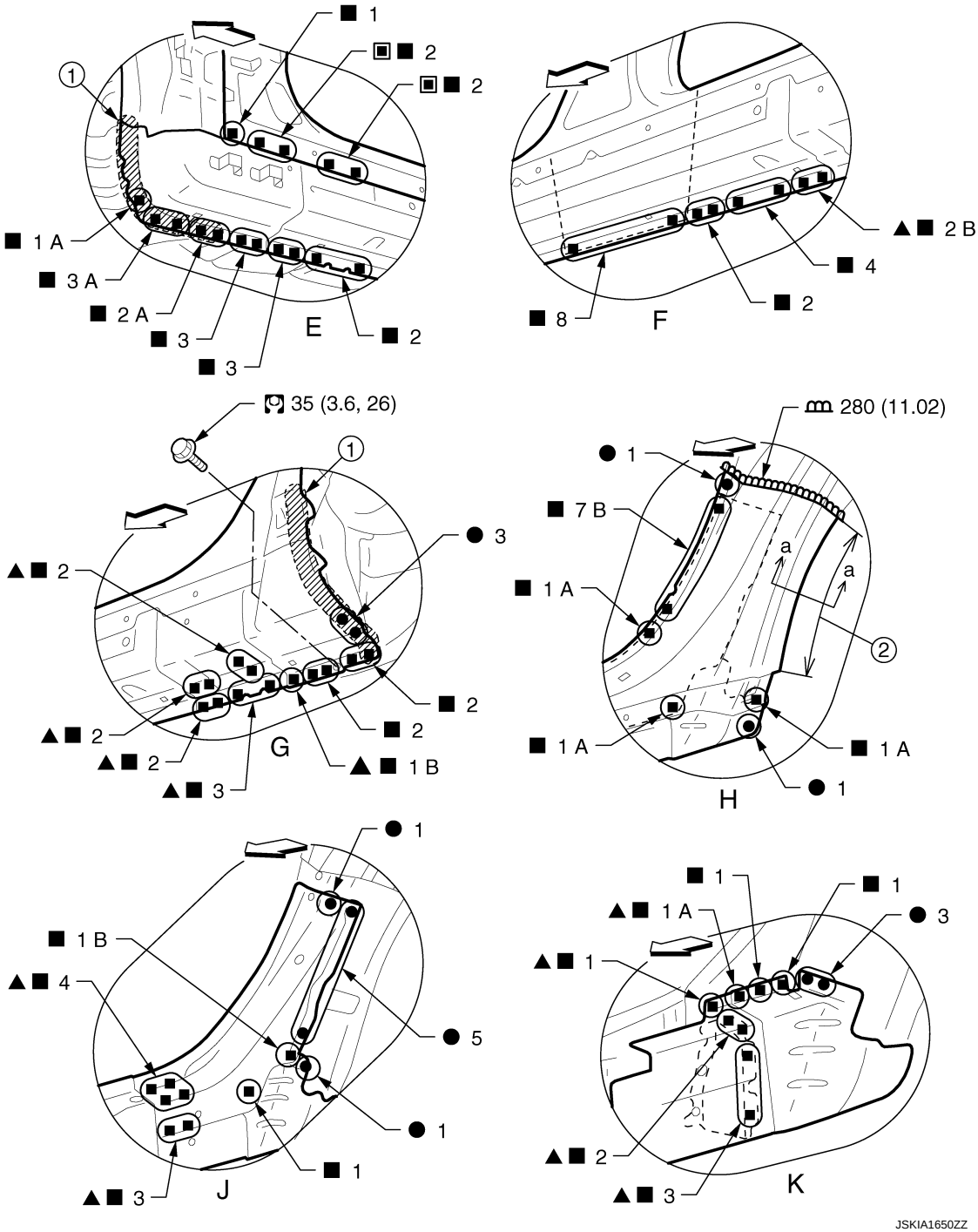
⇦: Vehicle front

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

Replacement parts

- Outer sill (LH)
- Outer sill reinforcement (LH)
- Outer rear wheelhouse extension (LH, Upper)
- Outer rear wheelhouse extension (LH, Lower)
- Front fender bracket

View B and C: Before installing outer sill
View D: Before installing outer sill and outer front pillar reinforcement



JSKIA1650ZZ

1. Body sealing
2. Hemming portion

Unit: mm (in)

⇦: Vehicle front

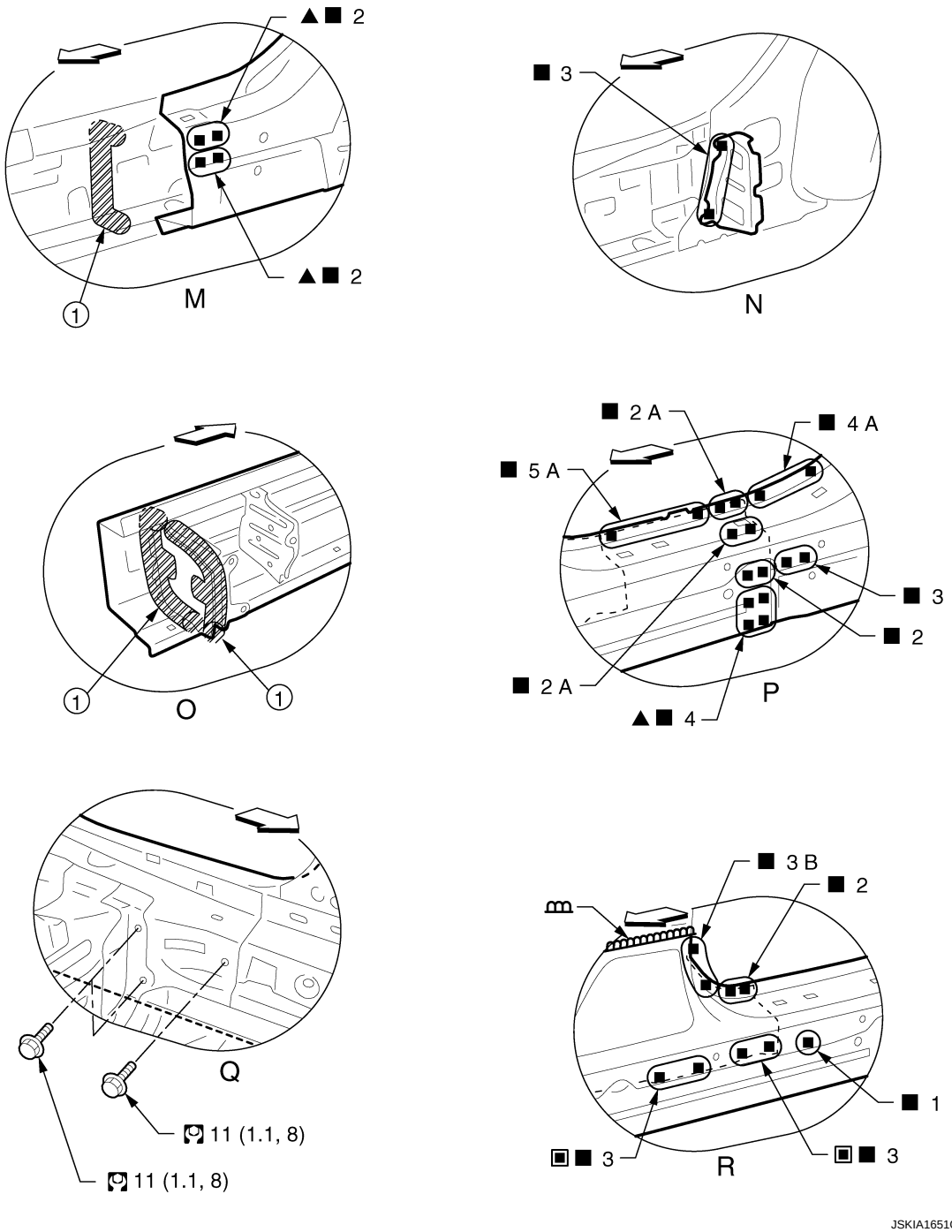
■: Perform the plug welding instead of the laser welding.

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

Refer to GI-4, "Components" for symbols in the figure.

View J: Before installing outer sill

View K: Before installing outer sill, outer sill reinforcement, and outer rear wheelhouse extension (Upper)



1. Urethane foam

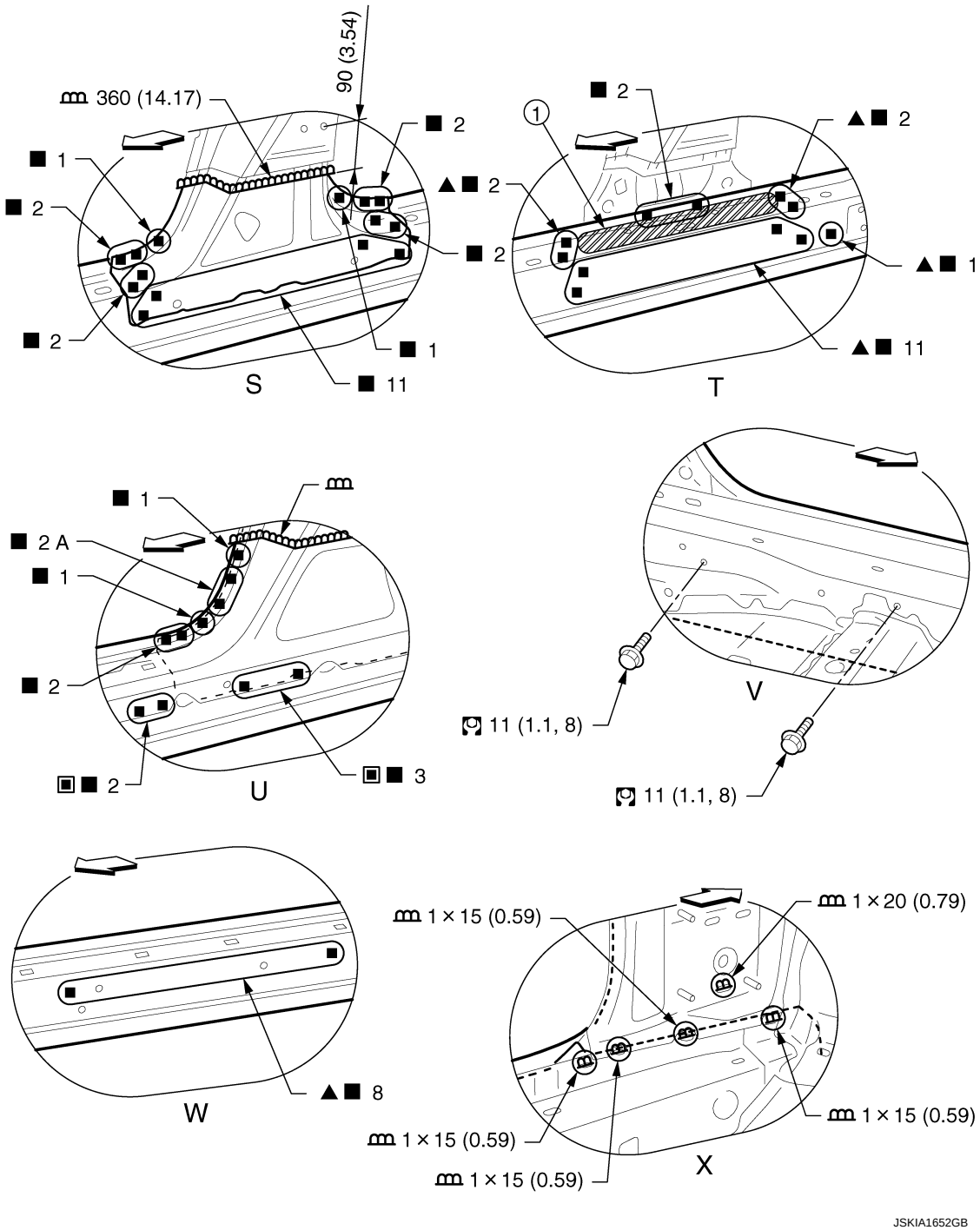
⇦: Vehicle front

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

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

Refer to GI-4, "Components" for symbols in the figure.

View M: Before installing outer sill and outer sill reinforcement
View N: Before installing outer sill, outer sill reinforcement, outer rear wheelhouse extension (Upper), and outer rear wheelhouse extension (Lower)
View O: Outer sill reinforcement (replacement parts)



JSKIA1652GB

1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

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

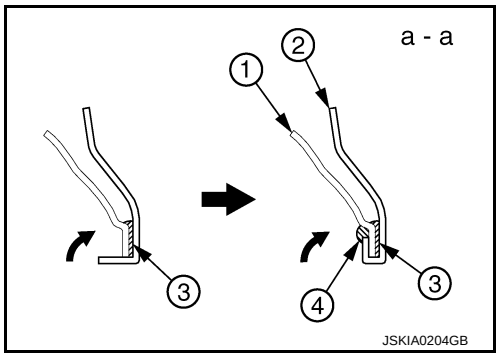
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).

Refer to GI-4, "Components" for symbols in the figure.

View S and W: Before installing outer sill
View T: Before installing outer sill and center pillar reinforcement

POINT

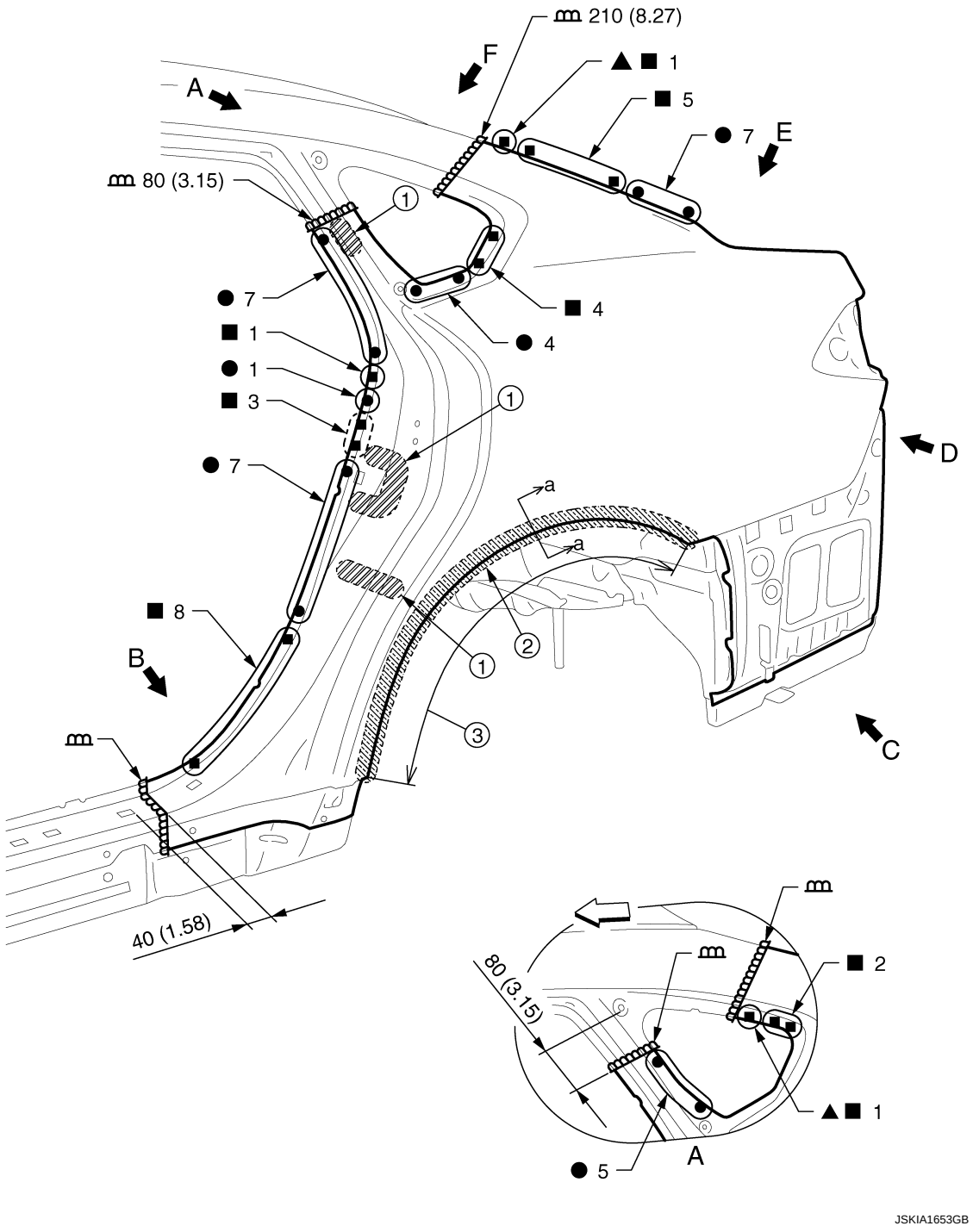
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-24, "Rear Fender Hemming Process".



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

Rear Fender

INFOID:0000000011256509



JSKIA1653GB

1. Urethane foam
2. Adhesive
3. Hemming portion

Unit: mm (in)

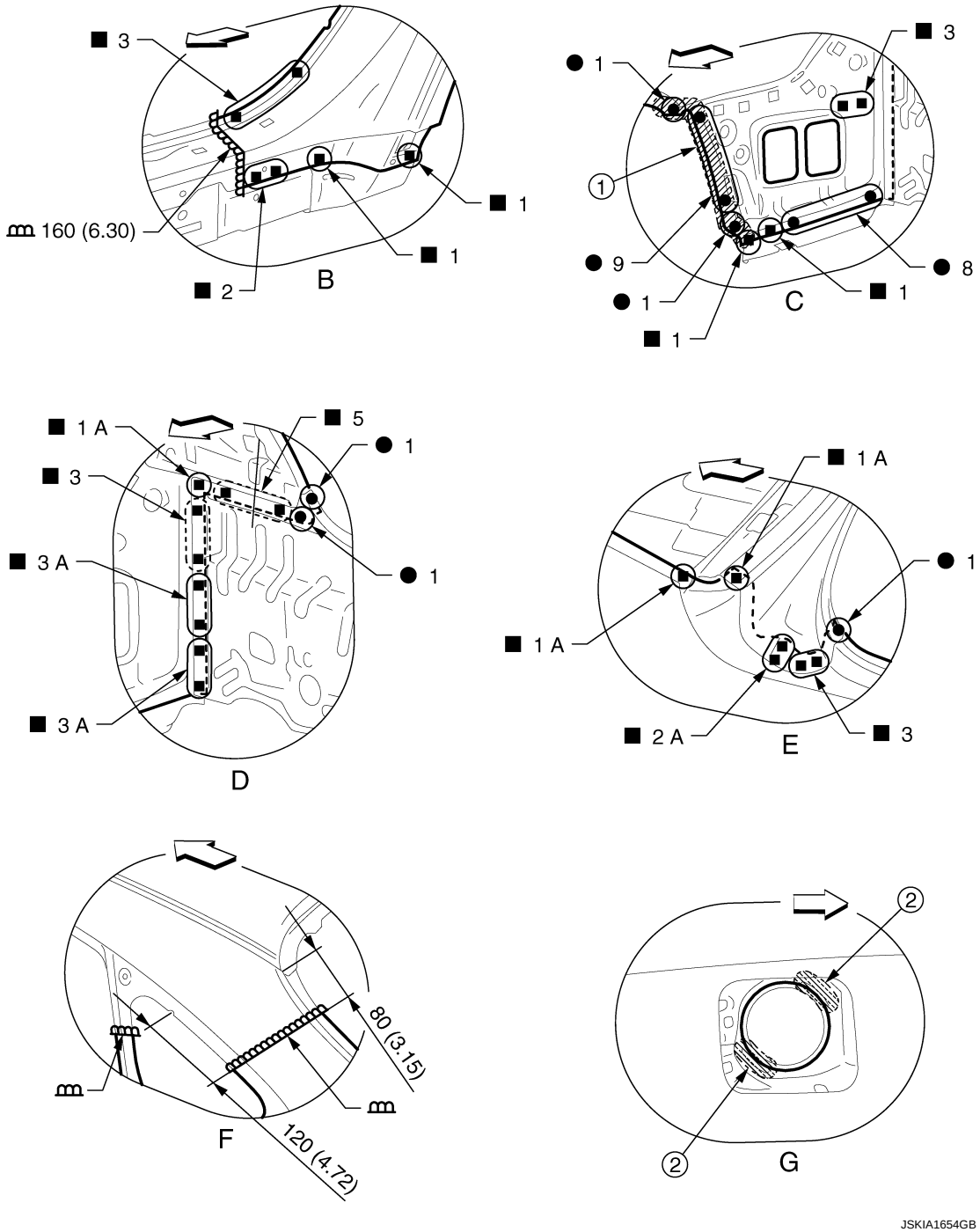
⇦: Vehicle front

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

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

Replacement parts

- Rear fender assembly (LH)



1. Body sealing
2. Adhesive

Unit: mm (in)

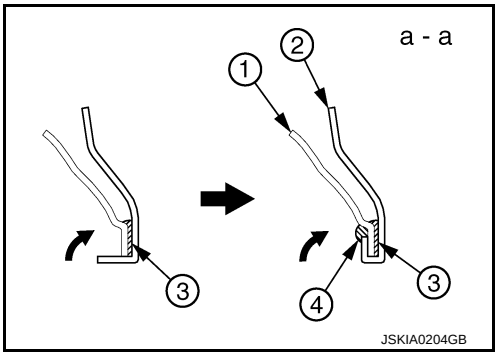
⇦: Vehicle front

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

View G: Right side rear fender

POINT

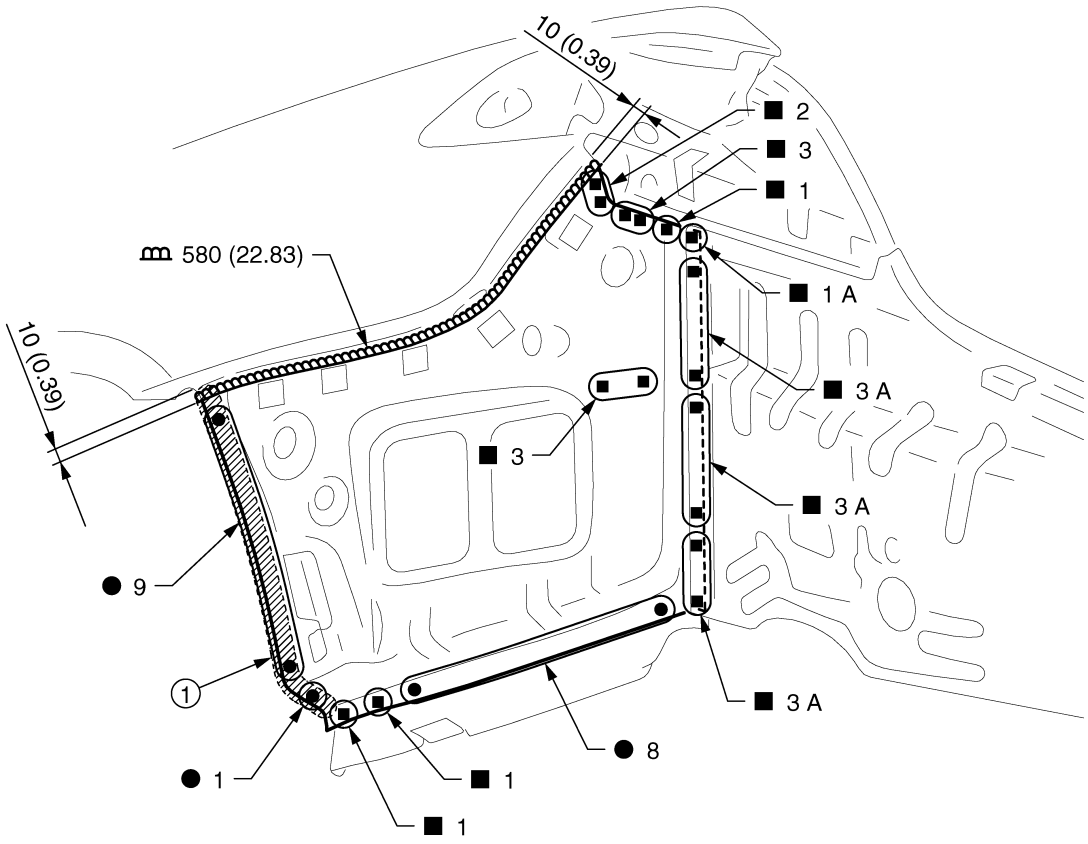
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-24, "Rear Fender Hemming Process".



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

Rear Fender Extension

INFOID:0000000011256510



JSKIA1655GB

1. Body sealing

Unit: mm (in)

Replacement parts

- Rear fender extension (LH)

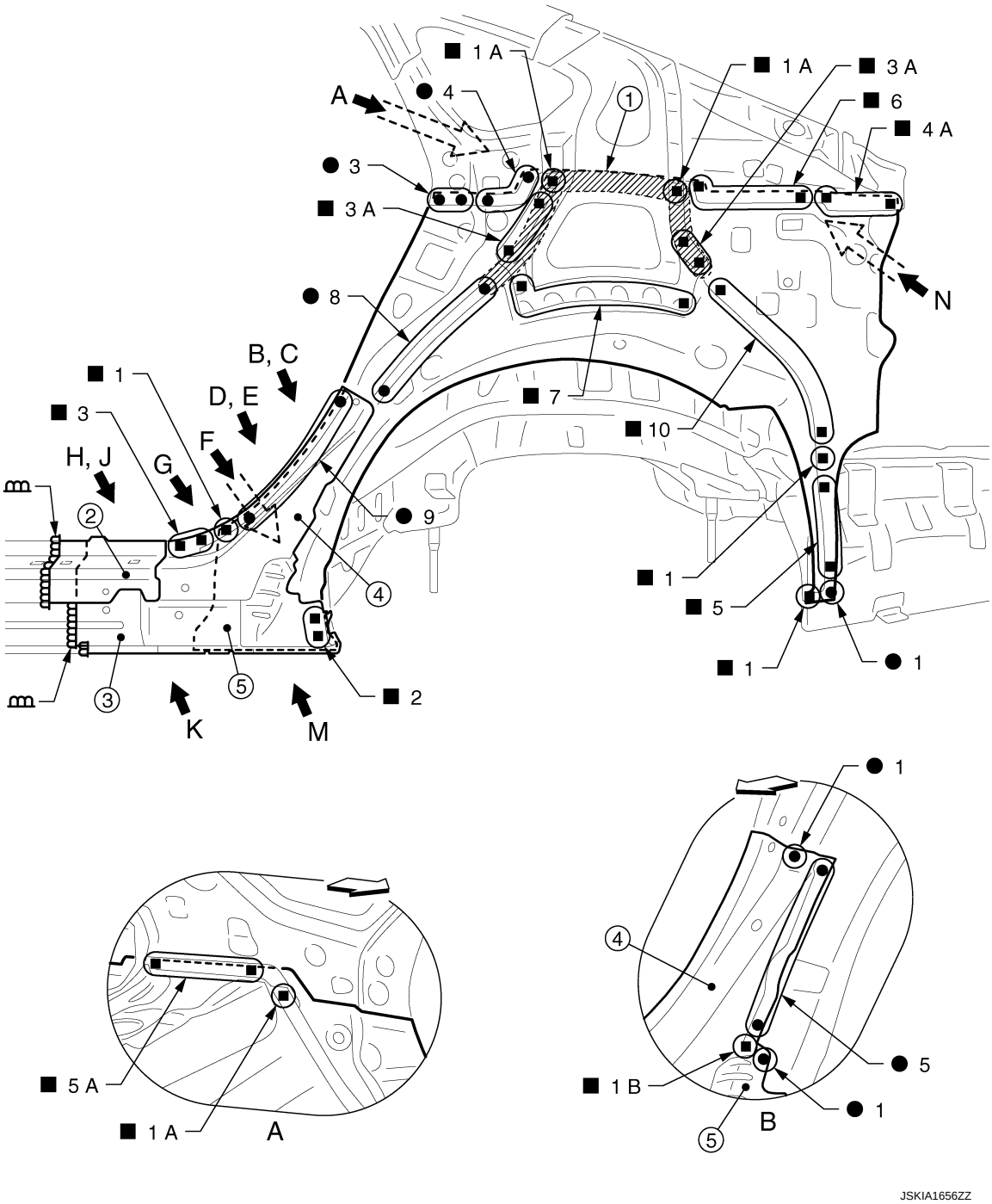
Outer Rear Wheelhouse

INFOID:0000000011256511

Work after rear fender is removed.

CAUTION:

Refer to SUPPLEMENTARY WORK to replace or reuse outer rear wheelhouse.



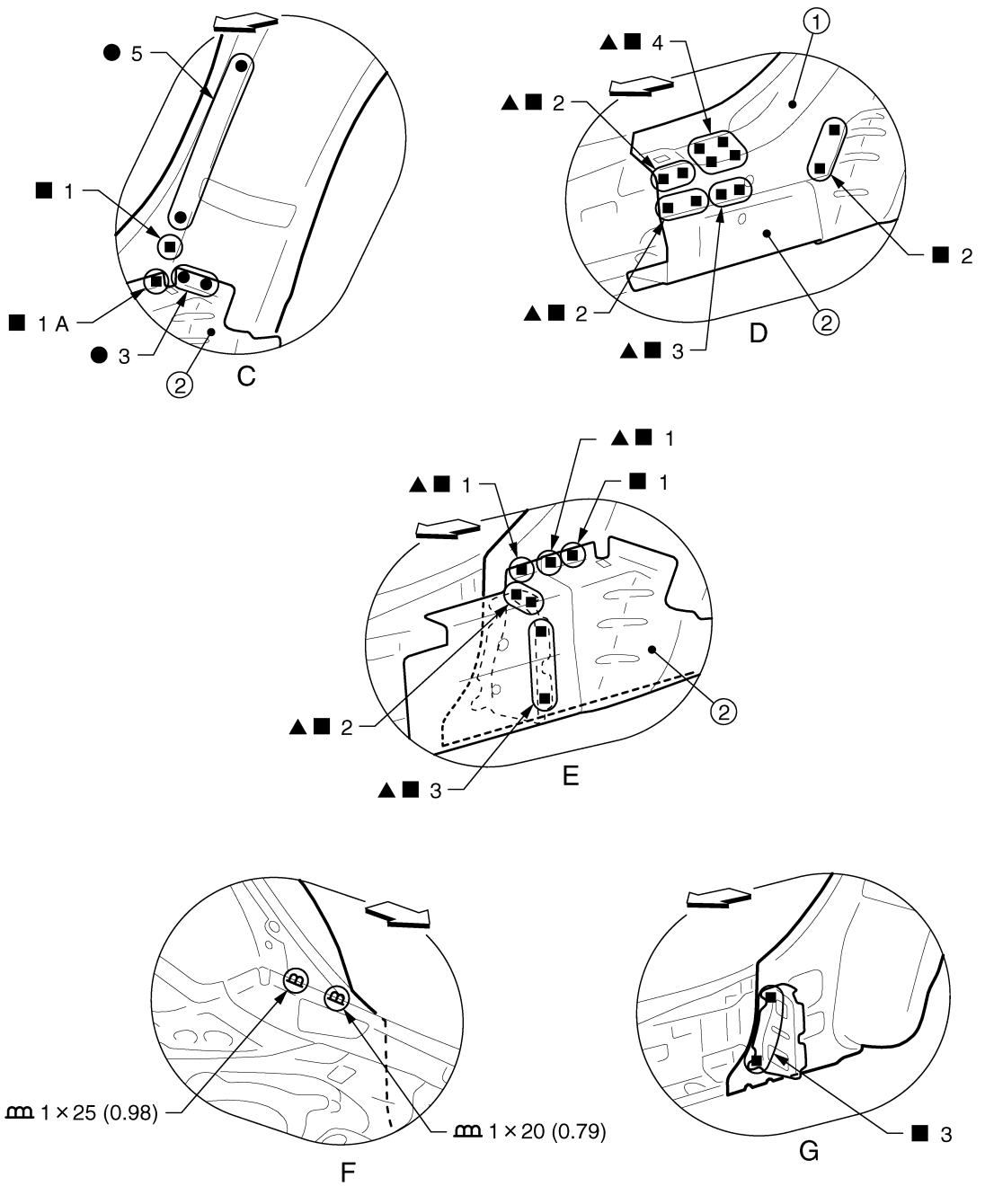
JSKIA1656ZZ

1. Body sealing
2. Outer front side body
3. Outer sill reinforcement
4. Outer rear wheelhouse extension (Upper)
5. Outer rear wheelhouse extension (Lower)

⇦: Vehicle front

Replacement parts

- Outer rear wheelhouse (LH)



JSKIA1657GB

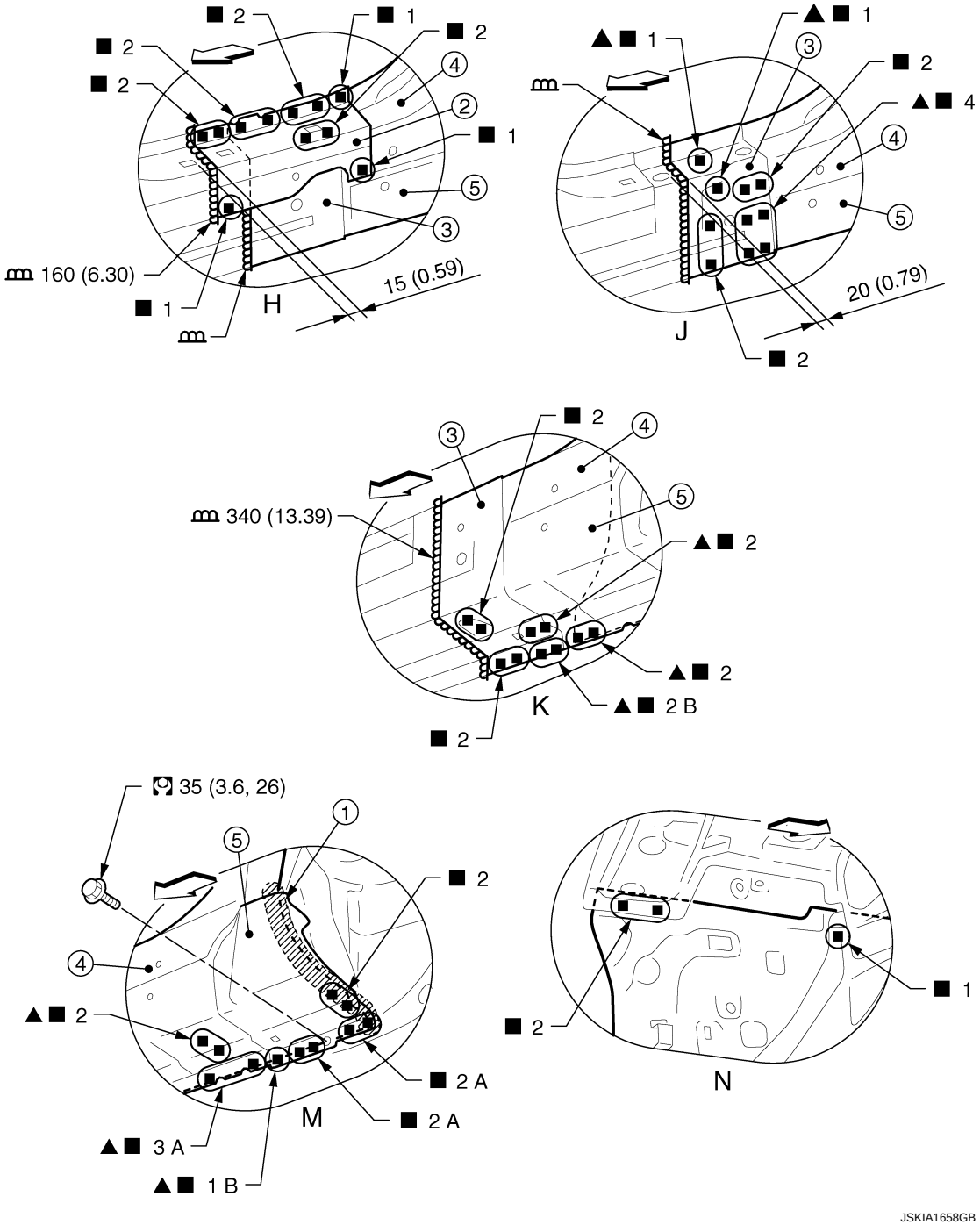
1. Outer rear wheelhouse extension (Upper)
2. Outer rear wheelhouse extension (Lower)

Unit: mm (in)

⇦: Vehicle front

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

View C and E: Before installing outer front side body, outer sill reinforcement, and outer rear wheelhouse extension (Upper)
View D: Before installing outer front side body and outer sill reinforcement
View G: Before installing outer front side body, outer sill reinforcement, outer rear wheelhouse extension (Upper), and outer rear wheelhouse extension (Lower)



1. Body sealing
2. Outer front side body
3. Outer sill reinforcement
4. Outer rear wheelhouse extension (Upper)
5. Outer rear wheelhouse extension (Lower)

Unit: mm (in)

⇦: Vehicle front

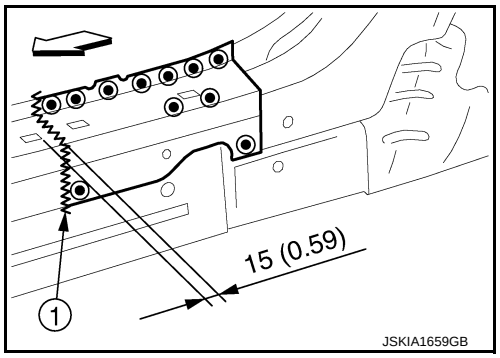
▲: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).
Refer to GI-4, "Components" for symbols in the figure.

View J and K: Before installing outer front side body

SUPPLEMENTARY WORK

Remove the following parts first according to the instruction because the outer rear wheelhouse cannot be removed due to the existence of hidden welding points.

1. Cut the outer front side body as shown in the figure.

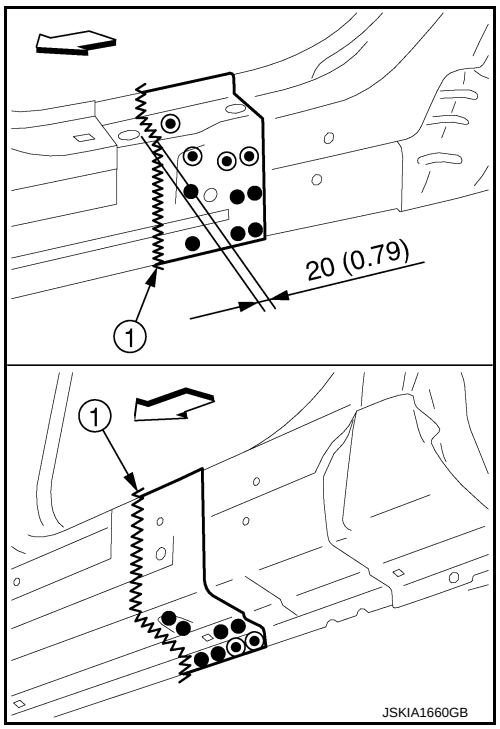


1. Cut position

Unit: mm (in)

⇦: Vehicle front

2. Cut the outer sill reinforcement as shown in the figure.

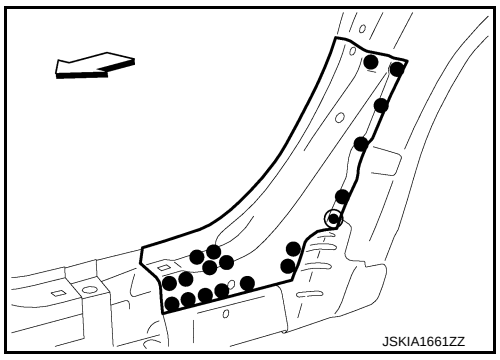


1. Cut position

Unit: mm (in)

⇦: Vehicle front

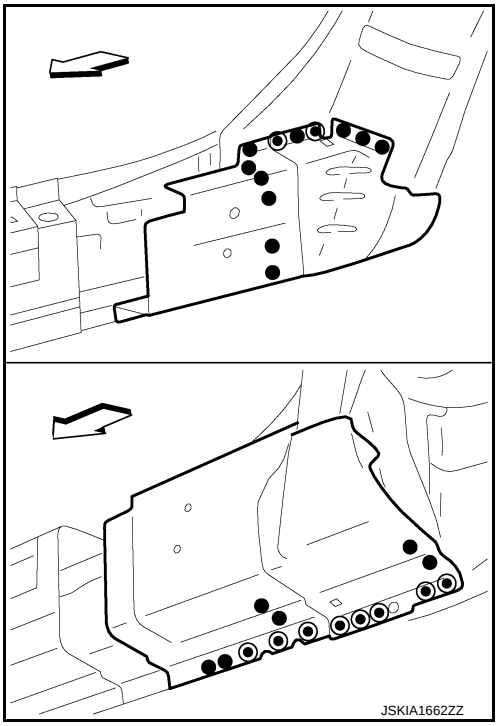
3. Remove the outer rear wheelhouse extension (Upper).



⇦: Vehicle front

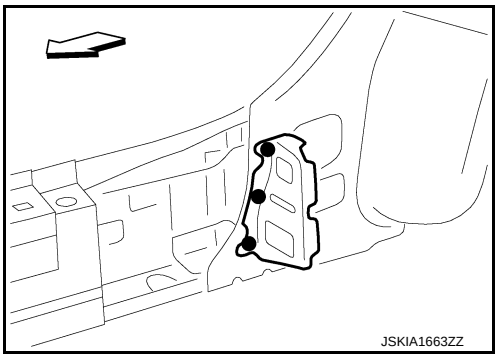
4. Remove the outer rear wheelhouse extension (Lower).

⇦: Vehicle front



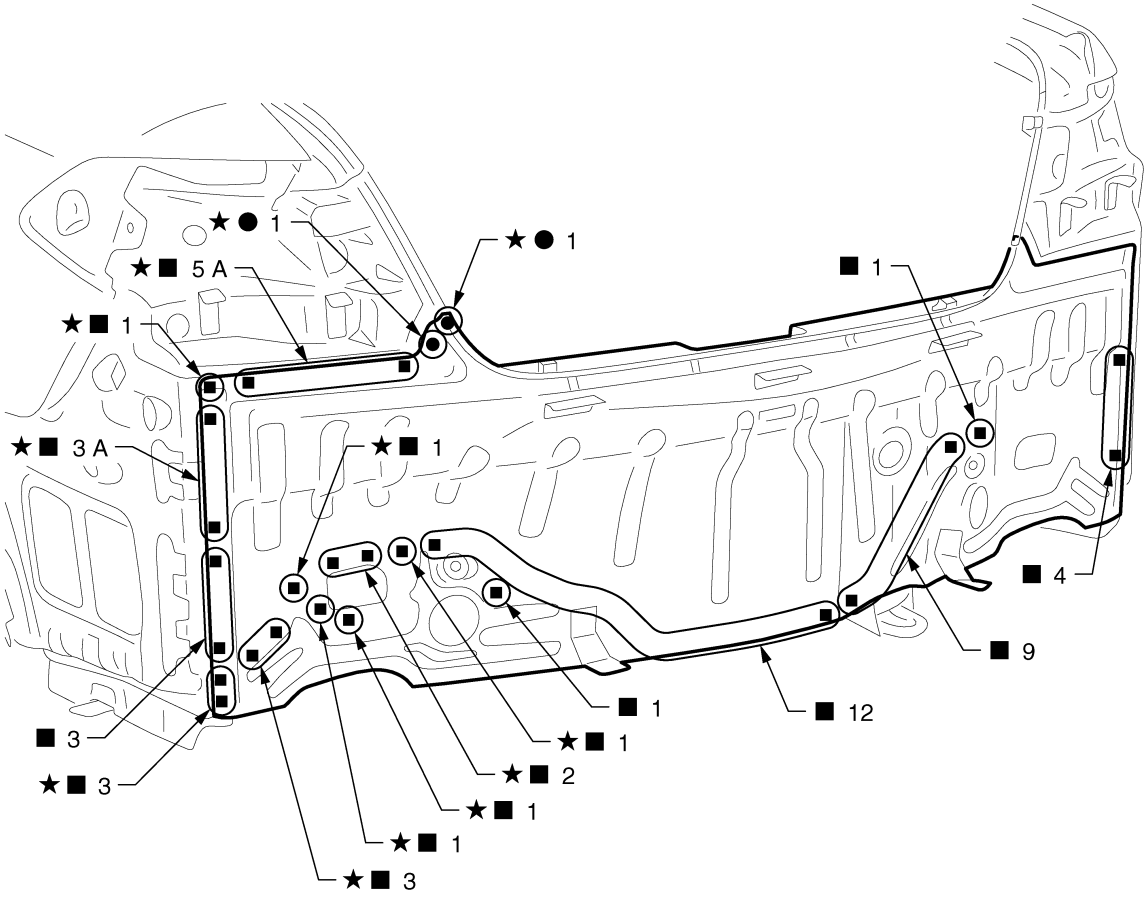
5. Remove the outer rear wheelhouse brace.

⇦: Vehicle front



Rear Panel

INFOID:0000000011256512



JSKIA1664ZZ

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

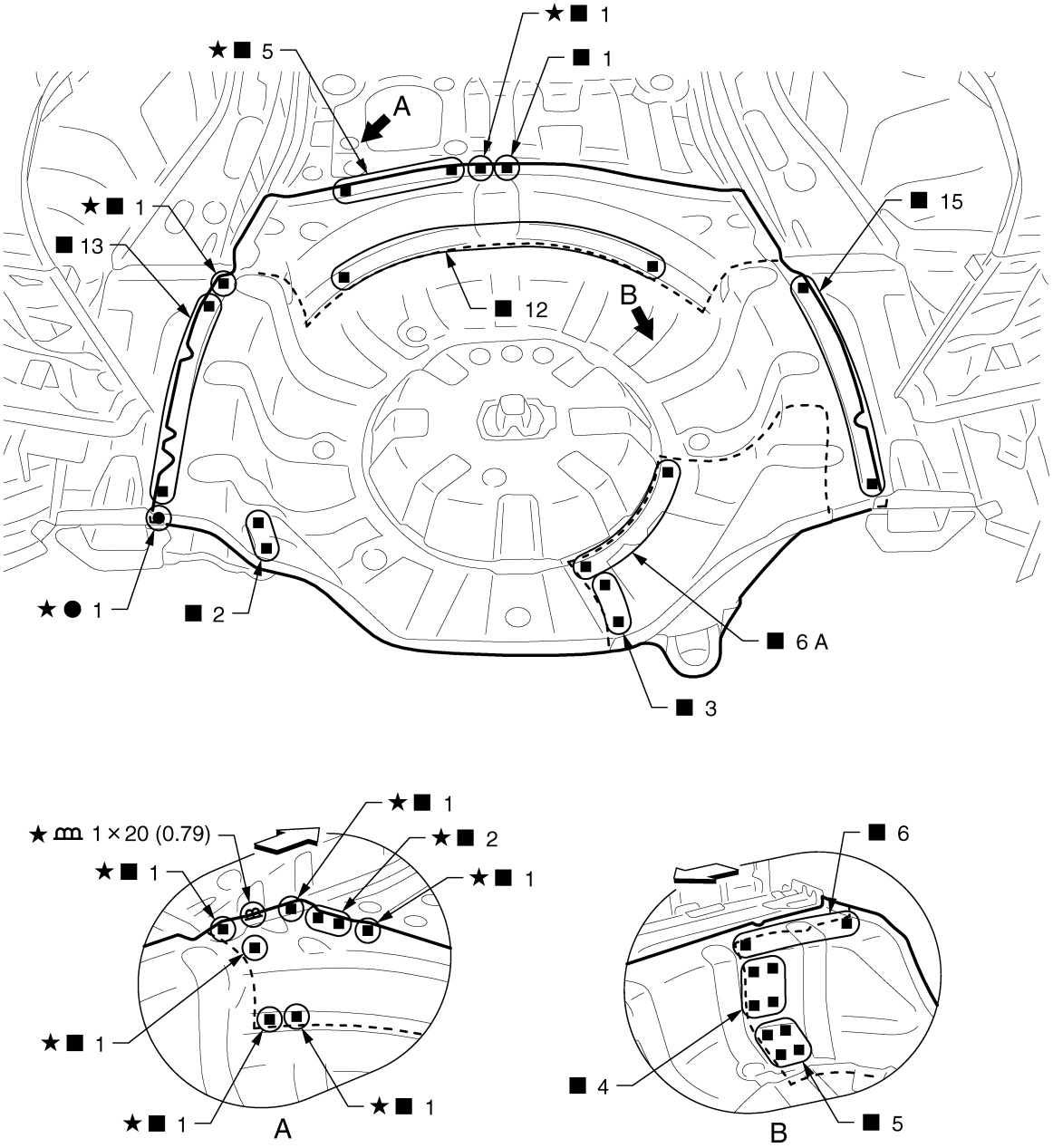
Replacement parts

- Rear panel assembly

Rear Floor Rear

INFOID:0000000011256513

Work after rear panel is removed.



JSKIA1665GB

Unit: mm (in)

⇦: Vehicle front

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

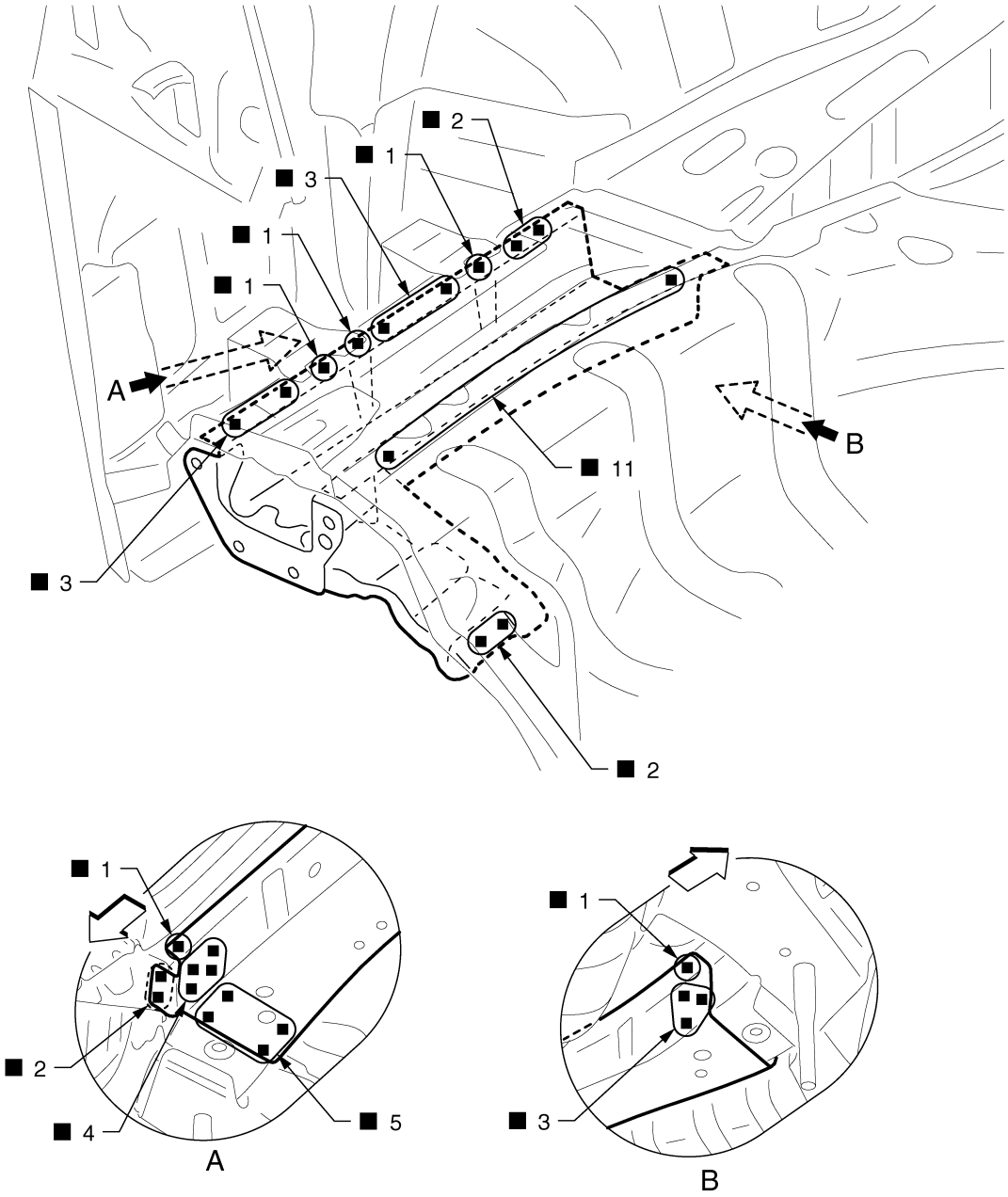
Replacement parts

- Rear floor rear
- Rear tie down hook

Rear Side Member Extension

INFOID:0000000011256514

Work after rear panel is removed.



JSKIA1668ZZ

⇦: Vehicle front

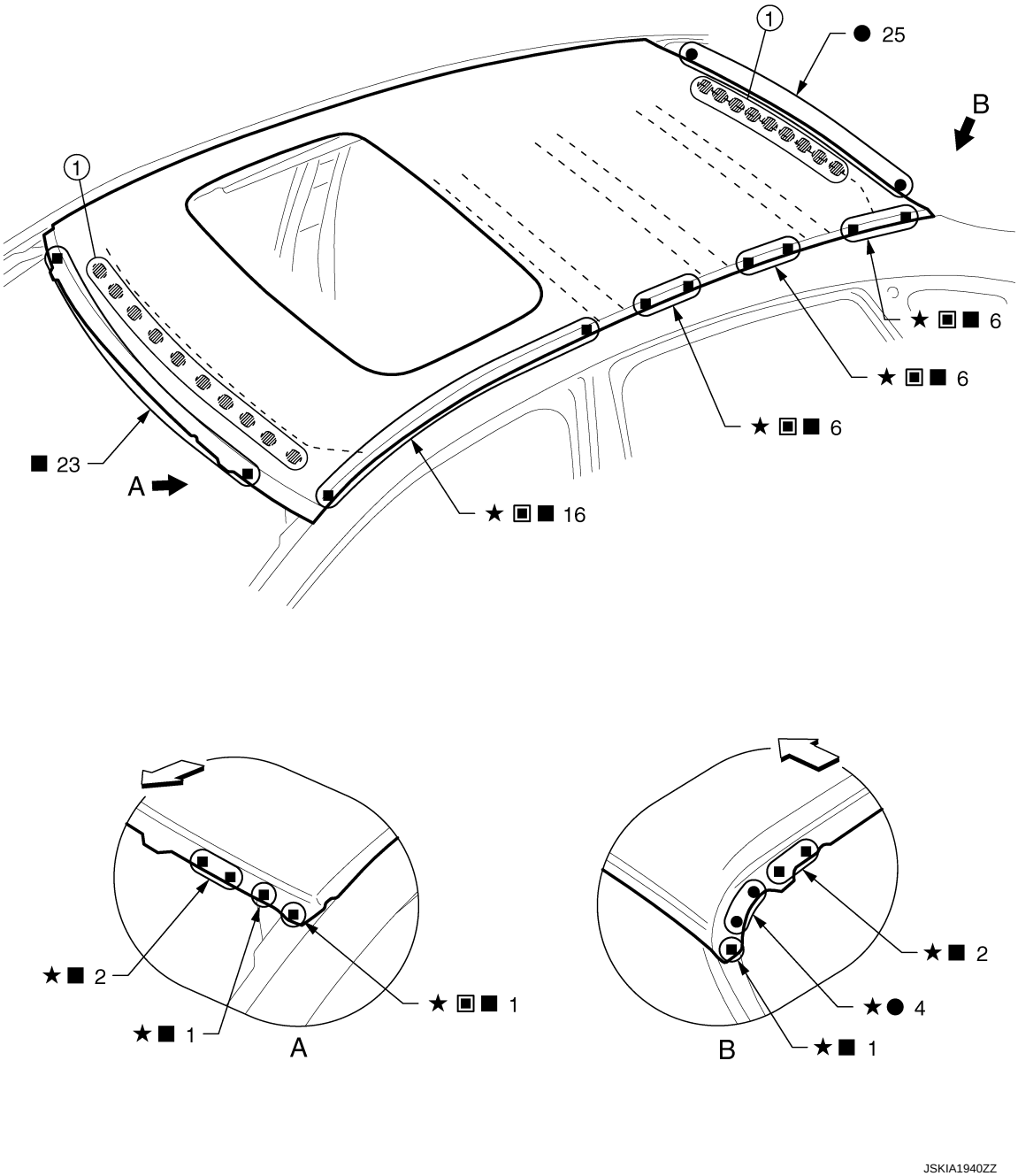
( ): Weld the parts onto the back of the component part.

Replacement parts

- Rear side member extension (LH)

Roof

INFOID:0000000011509071



JSKIA1940ZZ

1. Body sealing

⇦: Vehicle front

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

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

Replacement parts

- Roof

SERVICE DATA AND SPECIFICATIONS (SDS)

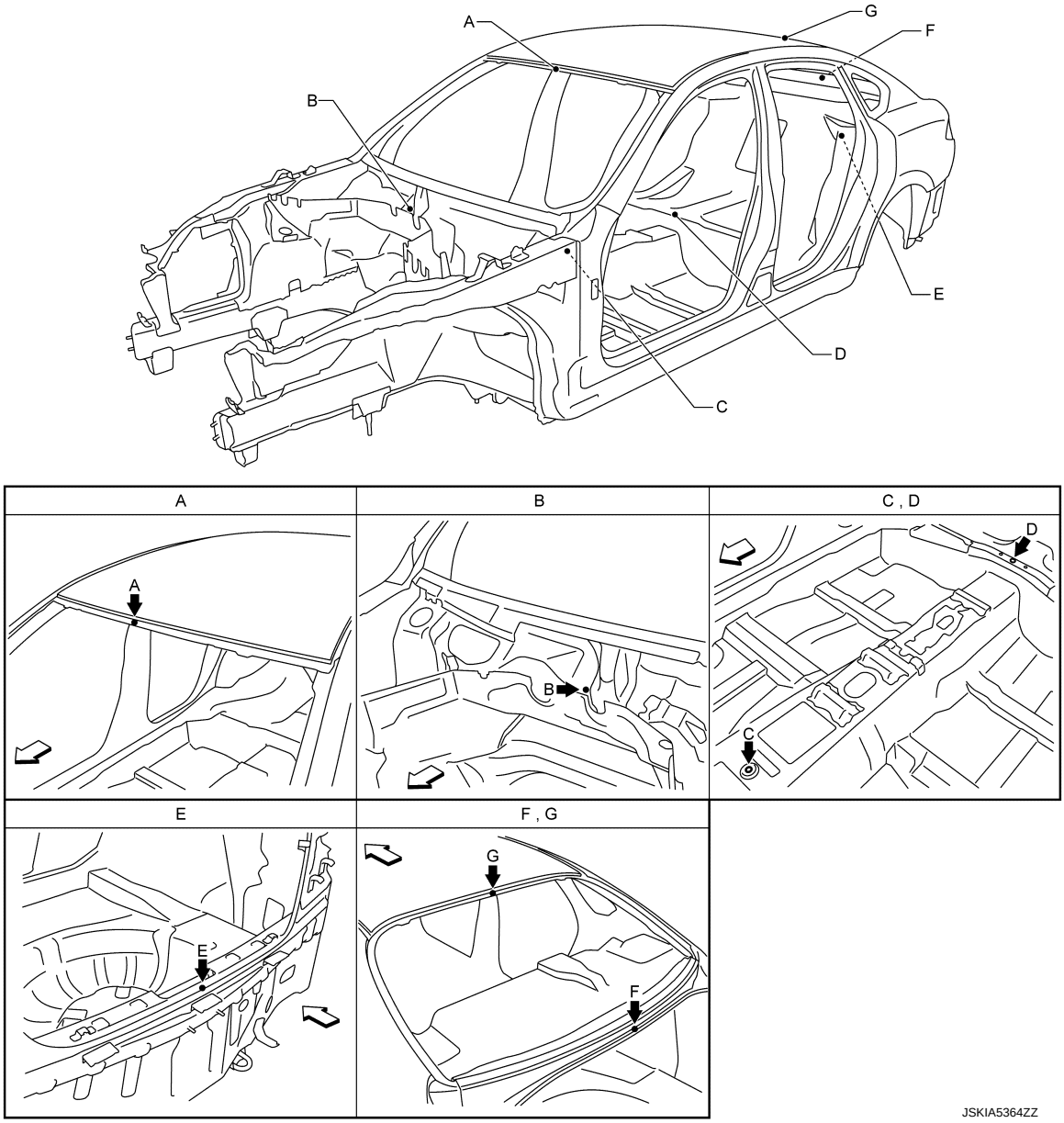
BODY ALIGNMENT

2WD

2WD : Body Center Marks

INFOID:0000000011256515

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.



⇦: Vehicle front

Unit: mm (in)

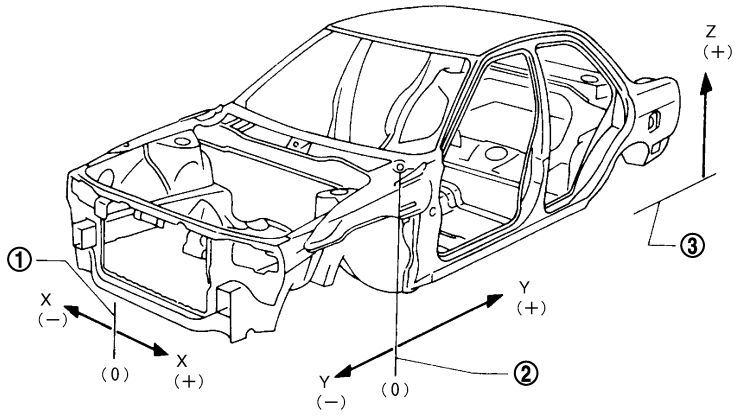
Points	Portion	Marks
A	Front roof	Embossment
B	Upper dash	Embossment
C	Trans control reinforcement	Hole 14×12 (0.55×0.47)

Points	Portion	Marks
D	Rear seat crossmember reinforcement	Hole ϕ5 (0.20)
E	Rear panel	Indent
F	Rear waist	Bead
G	Rear roof	Embossment

2WD : Description

INFOID:0000000011508601

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



JSKIA0073GB

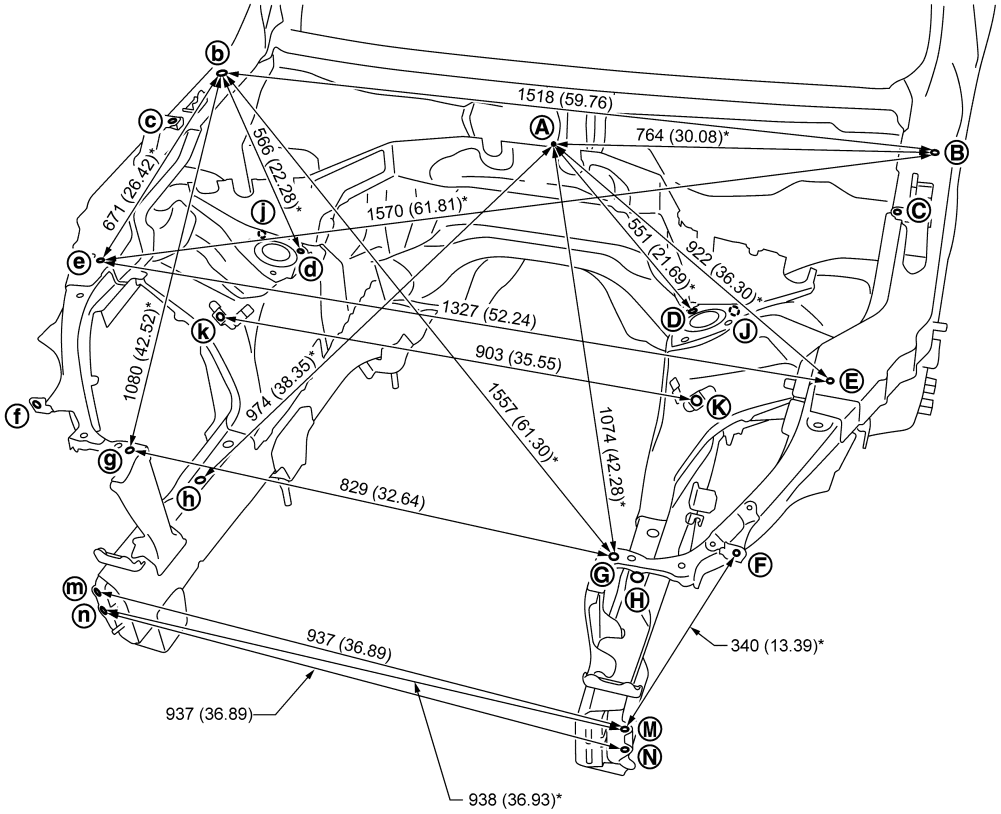
① Vehicle center ② Front axle center ③ Imaginary base line

2WD : Engine Compartment

INFOID:0000000011256517

MEASUREMENT

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



JSKIA5365GB

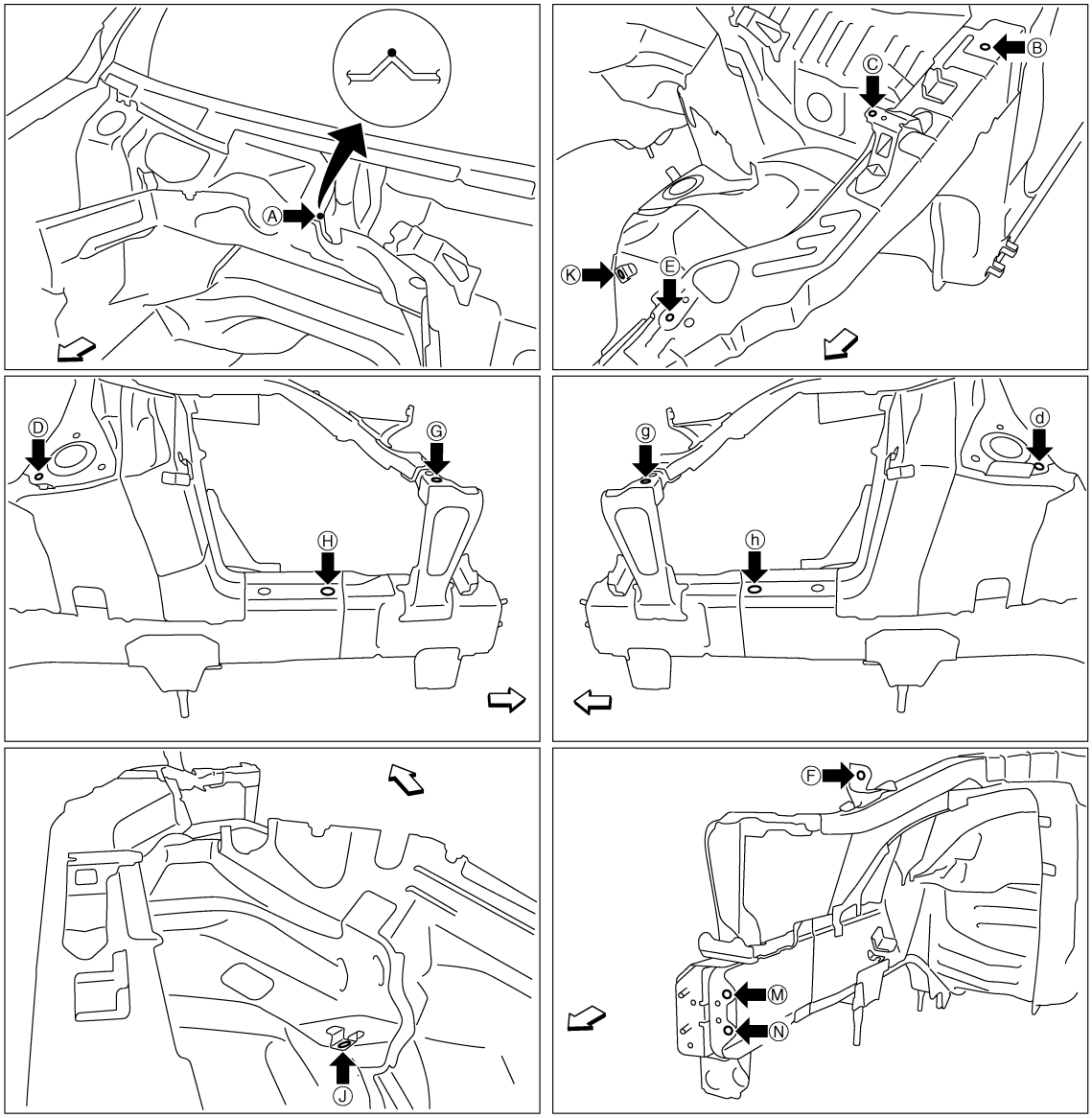
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	767 (30.20)*		D - k	875 (34.45)*		H - h	826 (32.52)	
B - d	1231 (48.46)*		E - G	442 (17.40)*		J - j	903 (35.55)	
C - c	1431 (56.34)		E - g	1138 (44.80)*		–	–	
D - d	787 (30.98)		F - f	1178 (46.38)		–	–	

MEASUREMENT POINTS



JSKIA1878ZZ

⇦: Vehicle front

Unit: mm (in)

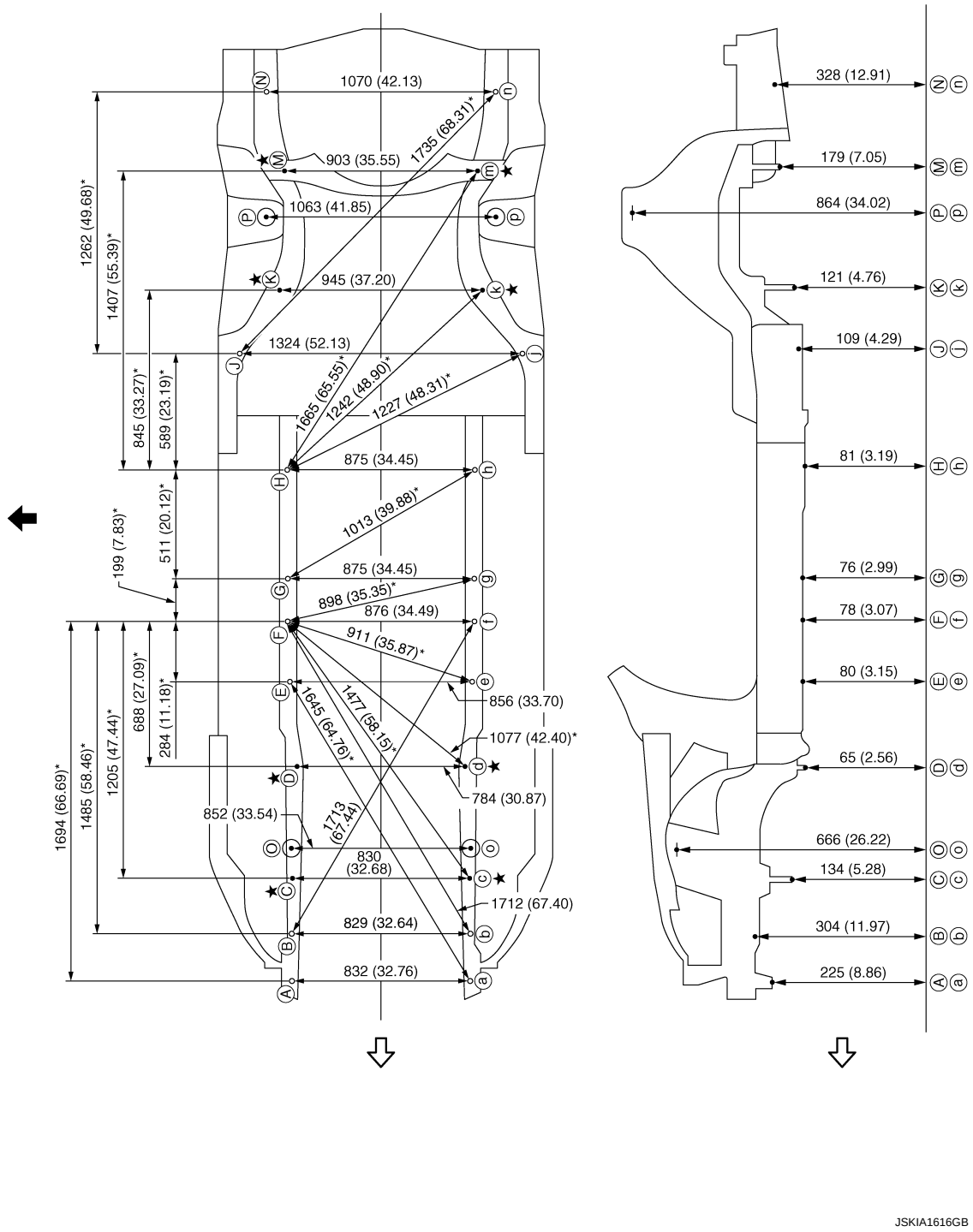
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g	Side radiator core stay hole center ϕ12 (0.47)
B, b	Hood hinge installing hole center ϕ12 (0.47)	H, h	Front side member hole center ϕ20 (0.79)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	J, j, K, k	Nut holder hole center ϕ16 (0.63)
D, d	Front strut installing hole center ϕ11 (0.43)	M, m, N, n	Front bumper reinforcement installing hole center ϕ11 (0.43)
E, e	Hoodledge reinforcement hole center ϕ7 (0.28)	–	–

2WD : Underbody

INFOID:0000000011256518

MEASUREMENT

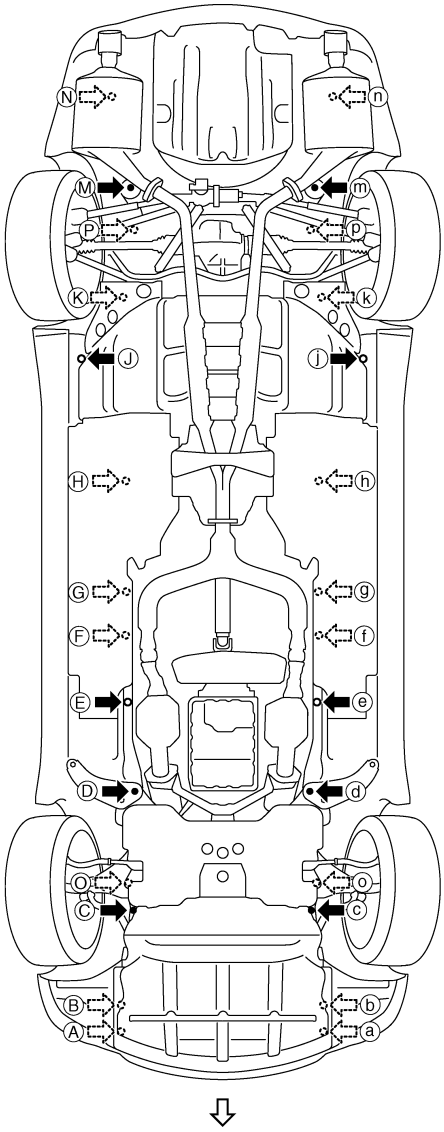
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.

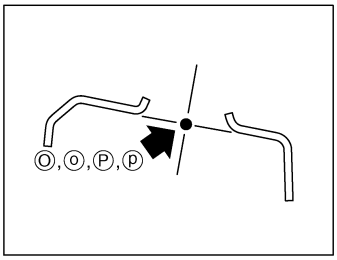


JSKIA1616GB

Unit: mm (in)
⇦: Vehicle front
⬅: Vehicle left side
★: Bolt head

MEASUREMENT POINTS





JSKIA1879ZZ

⇦: Vehicle front

Unit: mm (in)

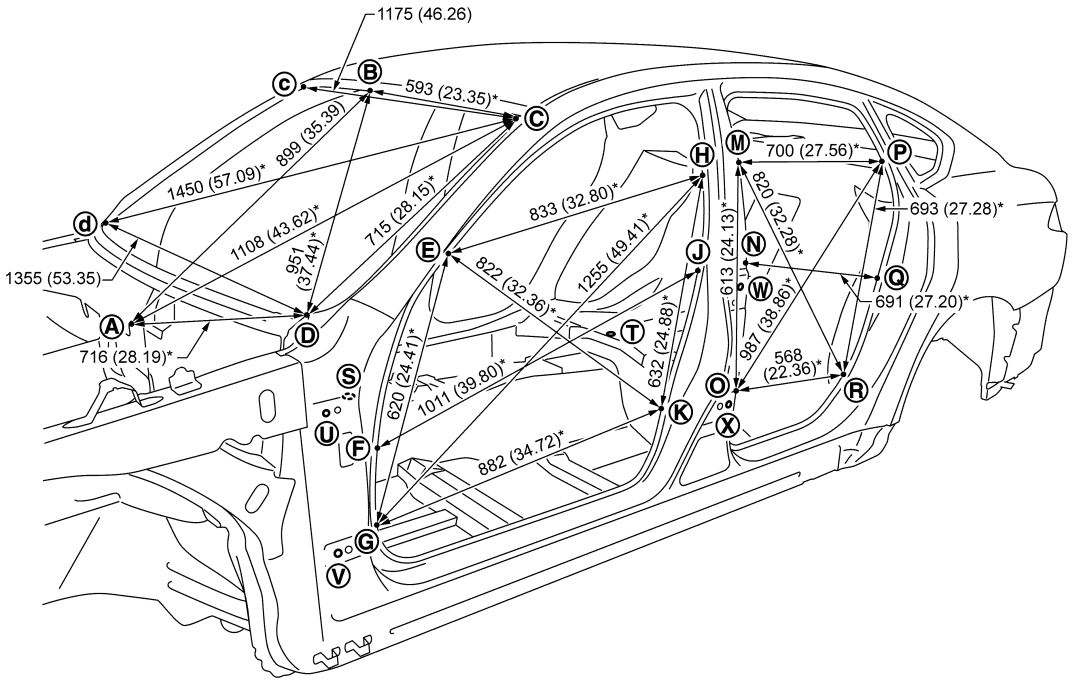
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A, a	±415.8 (±16.370)	–588.0 (–23.150)	224.6 (8.843)	Hole ϕ13 (0.51)	H, h	±437.5 (±17.224)	1810.0 (71.260)	81.2 (3.197)	Hole ϕ16 (0.63)
B	416.2 (16.386)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	J, j	±662.0 (±26.063)	2354.0 (92.677)	108.5 (4.272)	Hole ϕ8 (0.31)
b	–413.0 (–16.260)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	K, k	±472.6 (±18.606)	2653.8 (104.480)	120.8 (4.756)	Bolt head
C, c	±415.0 (±16.339)	–104.0 (–4.094)	133.5 (5.256)	Bolt head	M, m	±451.5 (±17.776)	3213.9 (126.531)	179.0 (7.047)	Bolt head
D, d	±392.0 (±15.433)	414.0 (16.299)	64.5 (2.539)	Bolt head	N, n	±535.0 (±21.063)	3590.0 (141.338)	328.3 (12.925)	Hole 18×16 (0.71×0.63)
E, e	±428.0 (±16.850)	816.6 (32.150)	80.0 (3.150)	Hole 18×16 (0.71×0.63)	O, o	±426.1 (±16.776)	37.1 (1.461)	665.8 (26.213)	Hole ϕ50 (1.97)
F, f	±438.0 (±17.244)	1100.0 (43.307)	78.0 (3.071)	Hole ϕ16 (0.63)	P, p	±531.3 (±20.917)	2995.8 (117.945)	864.1 (34.020)	Hole ϕ68 (2.68)
G, g	±437.5 (±17.224)	1299.0 (51.142)	76.0 (2.992)	Hole ϕ16 (0.63)	–	–	–	–	–

2WD : Passenger Compartment

INFOID:0000000011256520

MEASUREMENT

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



JSKIA5367GB

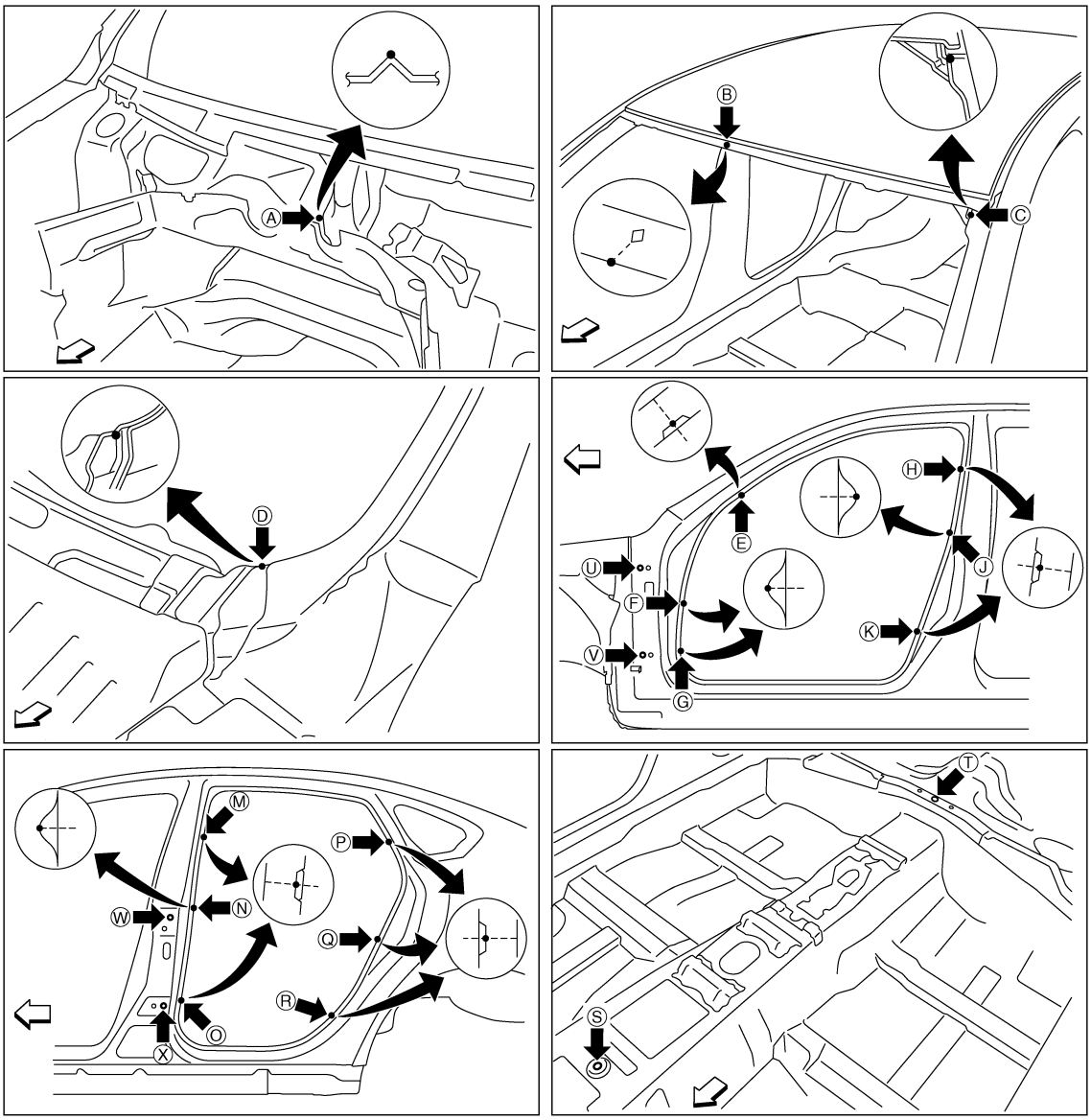
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1431 (56.34)		M - r	1657 (65.24)*		T - M	968 (38.11)*	
E - g	1597 (62.87)*		N - n	1485 (58.46)		T - N	871 (34.29)*	
E - h	1627 (64.05)*		N - q	1630 (64.17)*		T - O	796 (31.34)*	
E - k	1681 (66.18)*		O - o	1501 (59.09)		T - P	1076 (42.36)*	
F - f	1494 (58.82)		O - p	1727 (67.99)*		T - Q	923 (36.34)*	
F - j	1800 (70.87)*		O - r	1614 (63.54)*		T - R	821 (32.32)*	
G - g	1513 (59.57)		P - p	1338 (52.68)		U - u	1609 (63.35)	
G - h	1908 (75.12)*		P - r	1586 (62.44)*		U - W	1220 (48.03)*	
G - k	1746 (68.74)*		Q - q	1468 (57.80)		U - X	1206 (47.48)*	
H - h	1365 (53.74)		R - r	1522 (59.92)		V - v	1631 (64.21)	
H - k	1565 (61.61)*		S - E	930 (36.61)*		V - W	1278 (50.31)*	
J - j	1485 (58.46)		S - F	766 (30.16)*		V - X	1183 (46.57)*	
K - k	1501 (59.09)		S - G	758 (29.84)*		W - w	1614 (63.54)	
M - m	1361 (53.58)		S - H	1390 (54.72)*		X - x	1654 (65.12)	
M - o	1555 (61.22)*		S - J	1279 (50.35)*		–	–	
M - p	1521 (59.88)*		S - K	1125 (44.29)*		–	–	

MEASUREMENT POINTS



JSKIA1881ZZ

⇦: Vehicle front

Unit: mm (in)

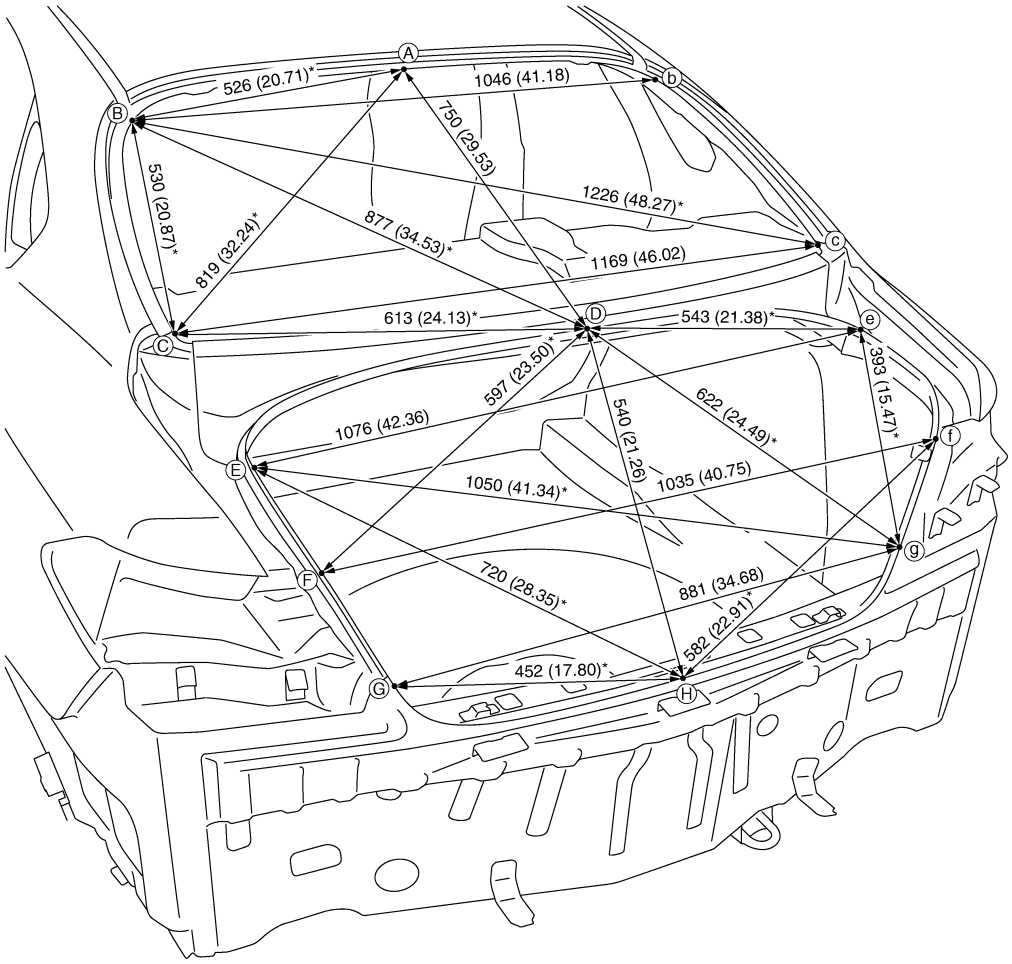
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	H, h, J, j, K, k, M, m, N, n, O, o	Center pillar indent
B	Roof flange end of center positioning mark	P, p, Q, q, R, r	Rear fender indent
C, c	Front pillar joggle	S	Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47)
D, d	Front pillar hinge brace joggle	T	Rear seat crossmember reinforcement hole center of center positioning mark ϕ5 (0.20)
E, e, F, f, G, g	Front pillar indent	U, u, V, v, W, w, X, x	Door hinge installing hole center U, u, V, v, X, x: ϕ12 (0.47) W, w: 11×9 (0.43×0.35)

2WD : Rear Body

INFOID:0000000011256521

MEASUREMENT

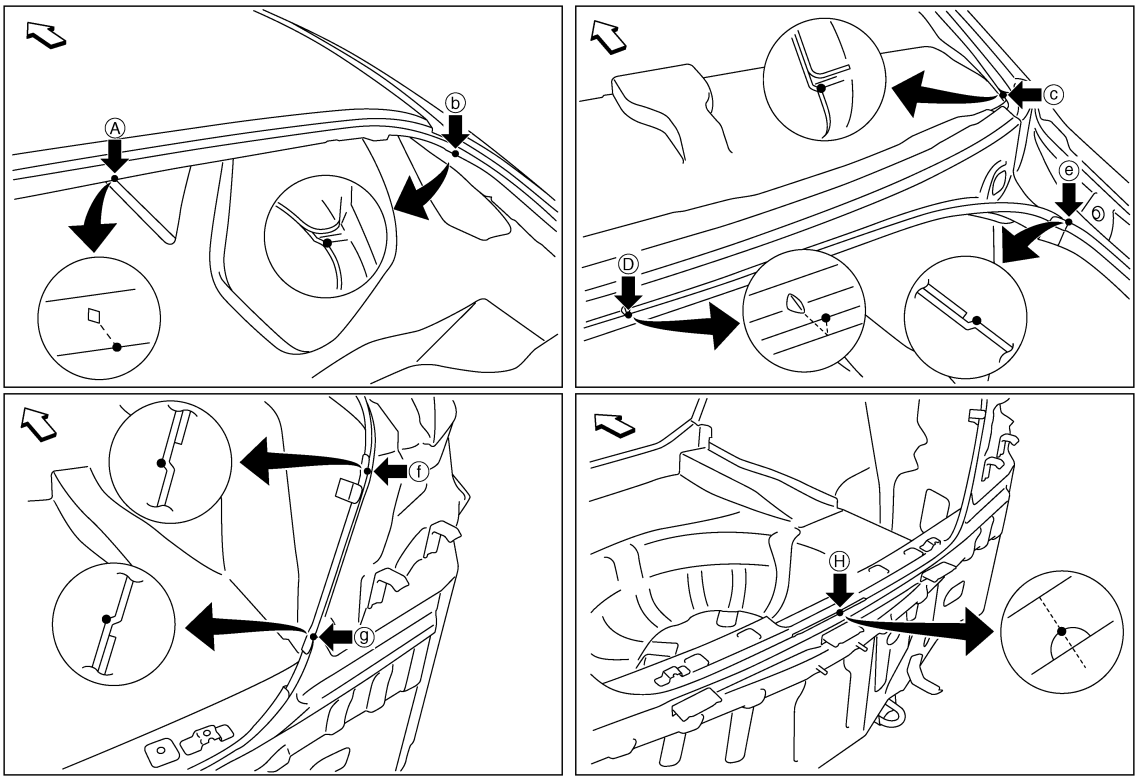
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA1624GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA1625ZZ

⇦: Vehicle front

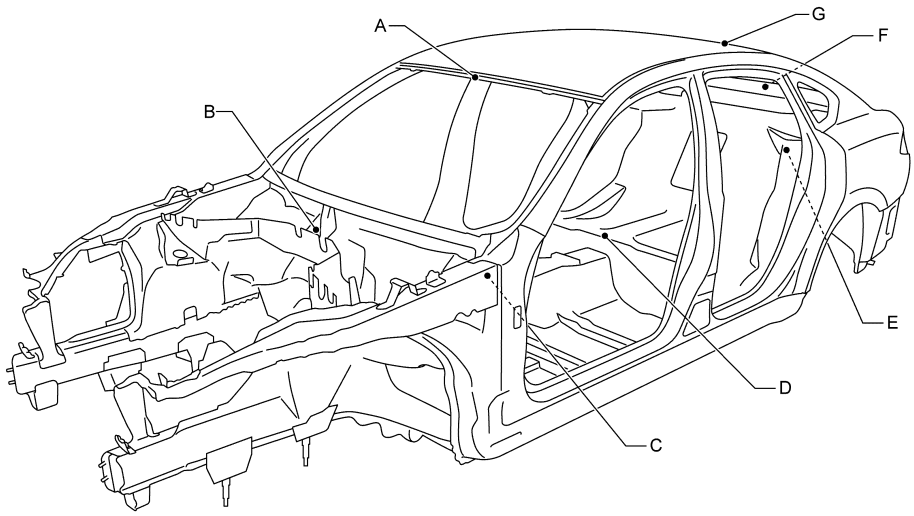
Point	Material	Point	Material
A	Roof flange end of center positioning mark	D	Rear waist flange end of center positioning mark
B, b	Outer side body joggle	F, f, G, g	Rear combination lamp base joggle
C, c, E, e	Rear fender corner joggle	H	Upper rear panel indent of center positioning mark

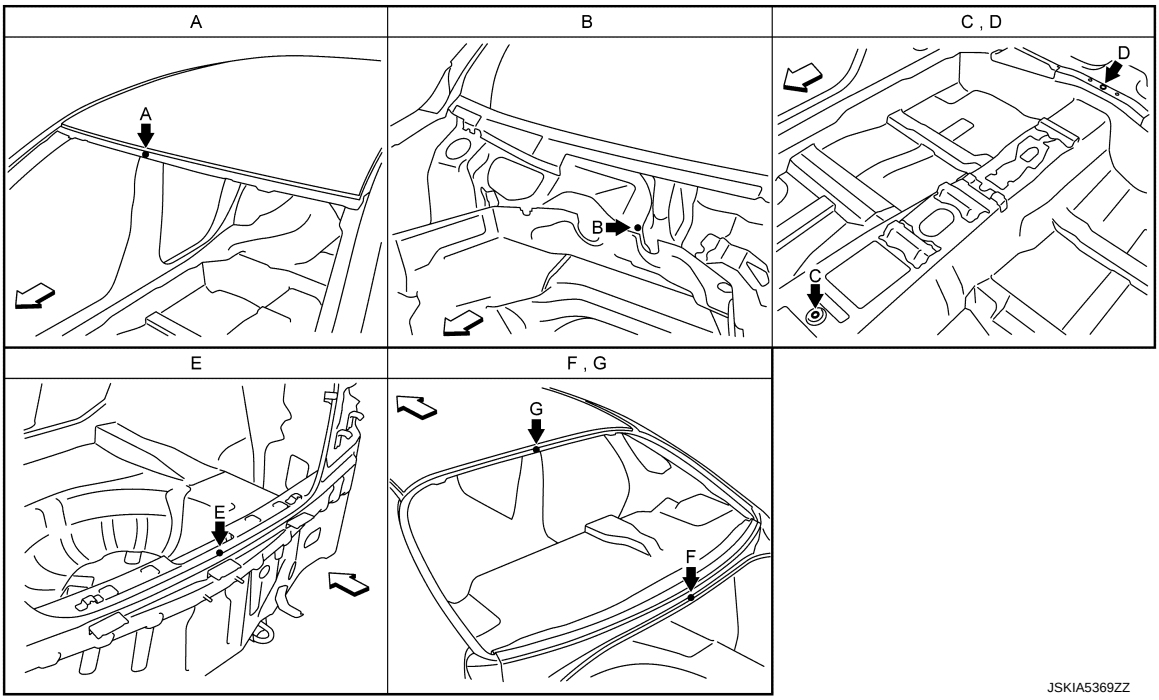
AWD

AWD : Body Center Marks

INFOID:0000000011485252

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.





JSKIA5369ZZ

⇦: Vehicle front

Unit: mm (in)

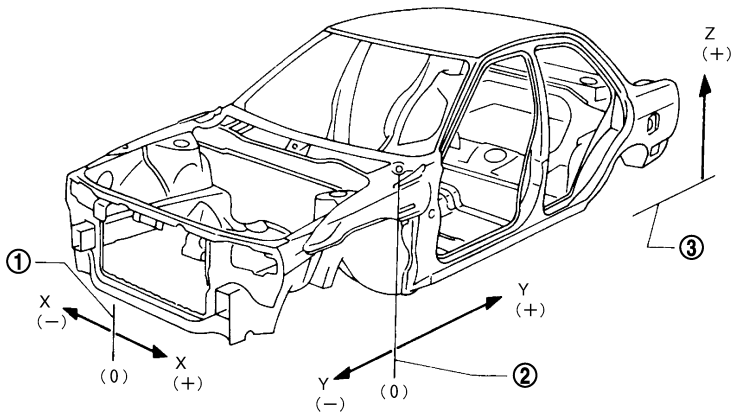
Points	Portion	Marks
A	Front roof	Embossment
B	Upper dash	Embossment
C	Trans control reinforcement	Hole 14×12 (0.55×0.47)
D	Rear seat crossmember reinforcement	Hole ϕ5 (0.20)
E	Rear panel	Indent
F	Rear waist	Bead
G	Rear roof	Embossment

AWD : Description

INFOID:0000000011508602

- All dimensions indicated in the figures are actual.

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



JSKIA0073GB

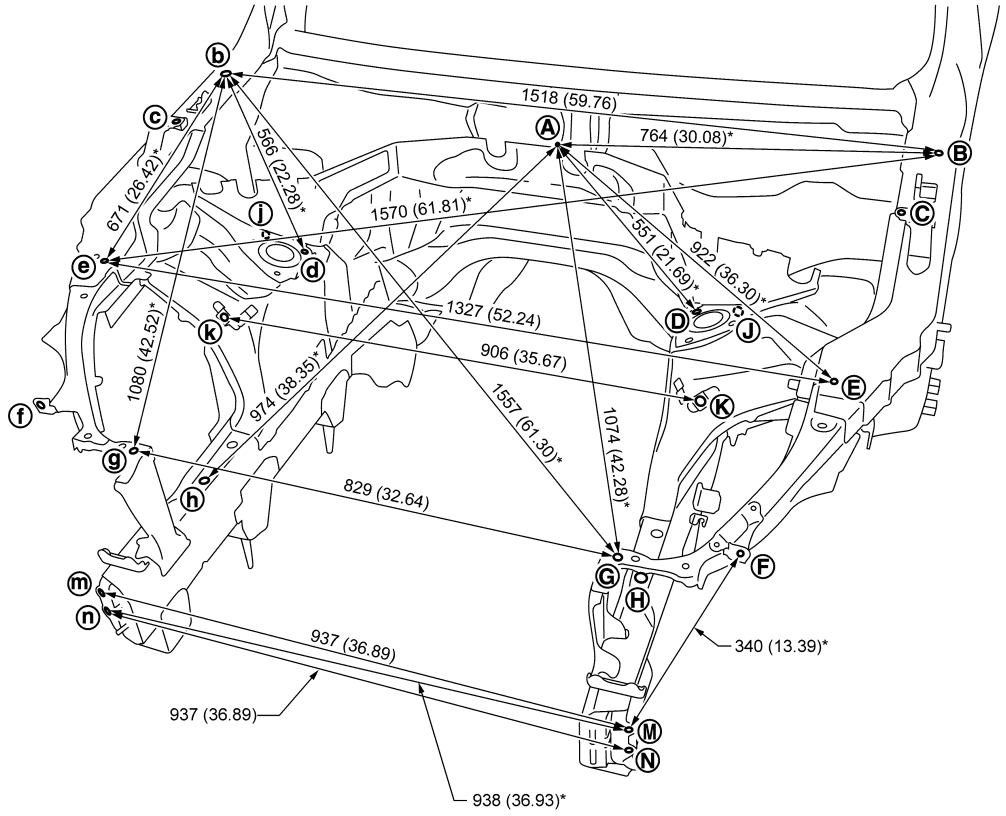
① Vehicle center ② Front axle center ③ Imaginary base line

AWD : Engine Compartment

INFOID:0000000011485254

MEASUREMENT

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



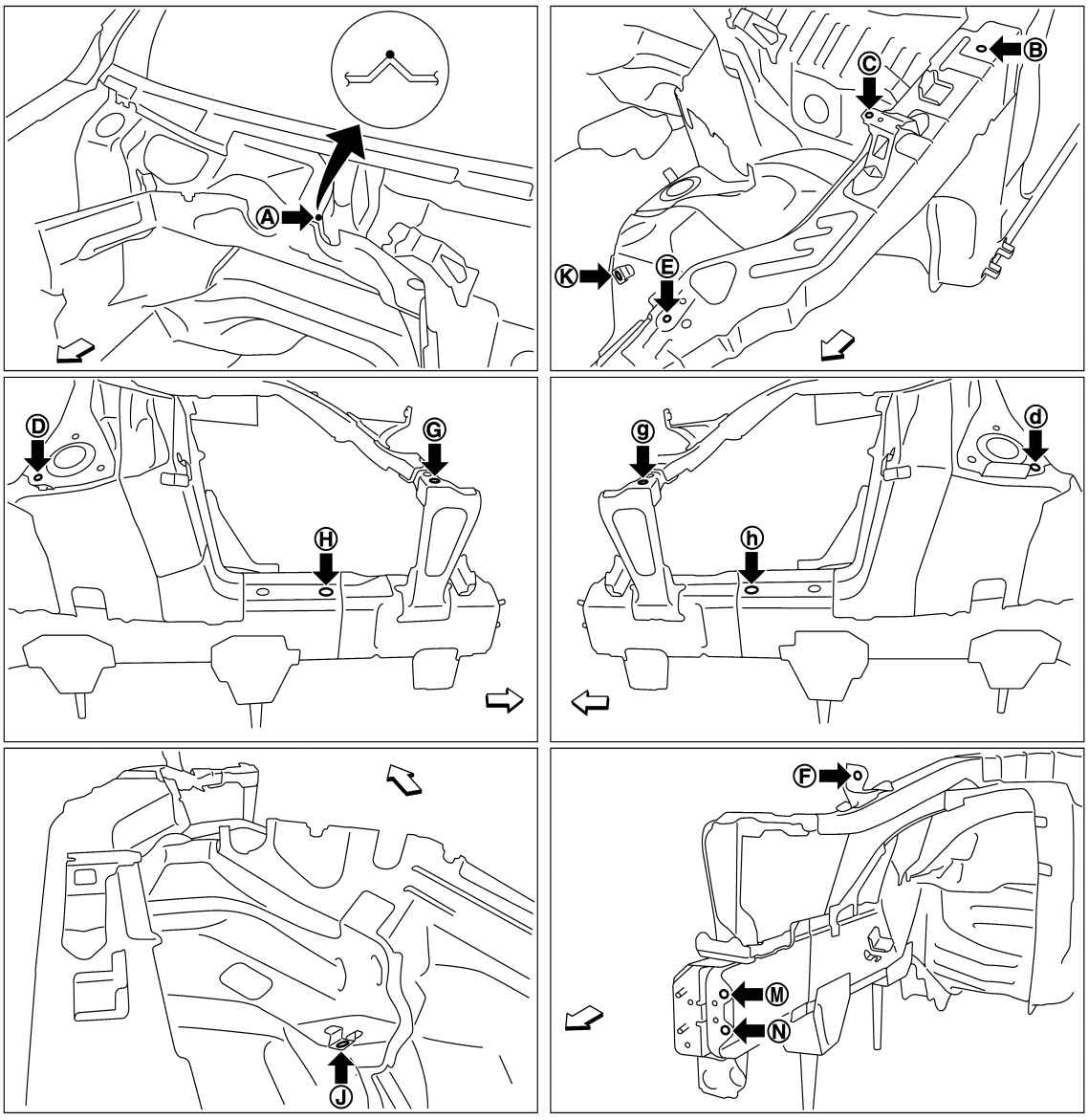
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	767 (30.20)*		D - k	878 (34.57)*		H - h	826 (32.52)	
B - d	1231 (48.46)*		E - G	442 (17.40)*		J - j	906 (35.67)	
C - c	1431 (56.34)		E - g	1138 (44.80)*		–	–	
D - d	787 (30.98)		F - f	1178 (46.38)		–	–	

MEASUREMENT POINTS



JSKIA5371ZZ

⇦: Vehicle front

Unit: mm (in)

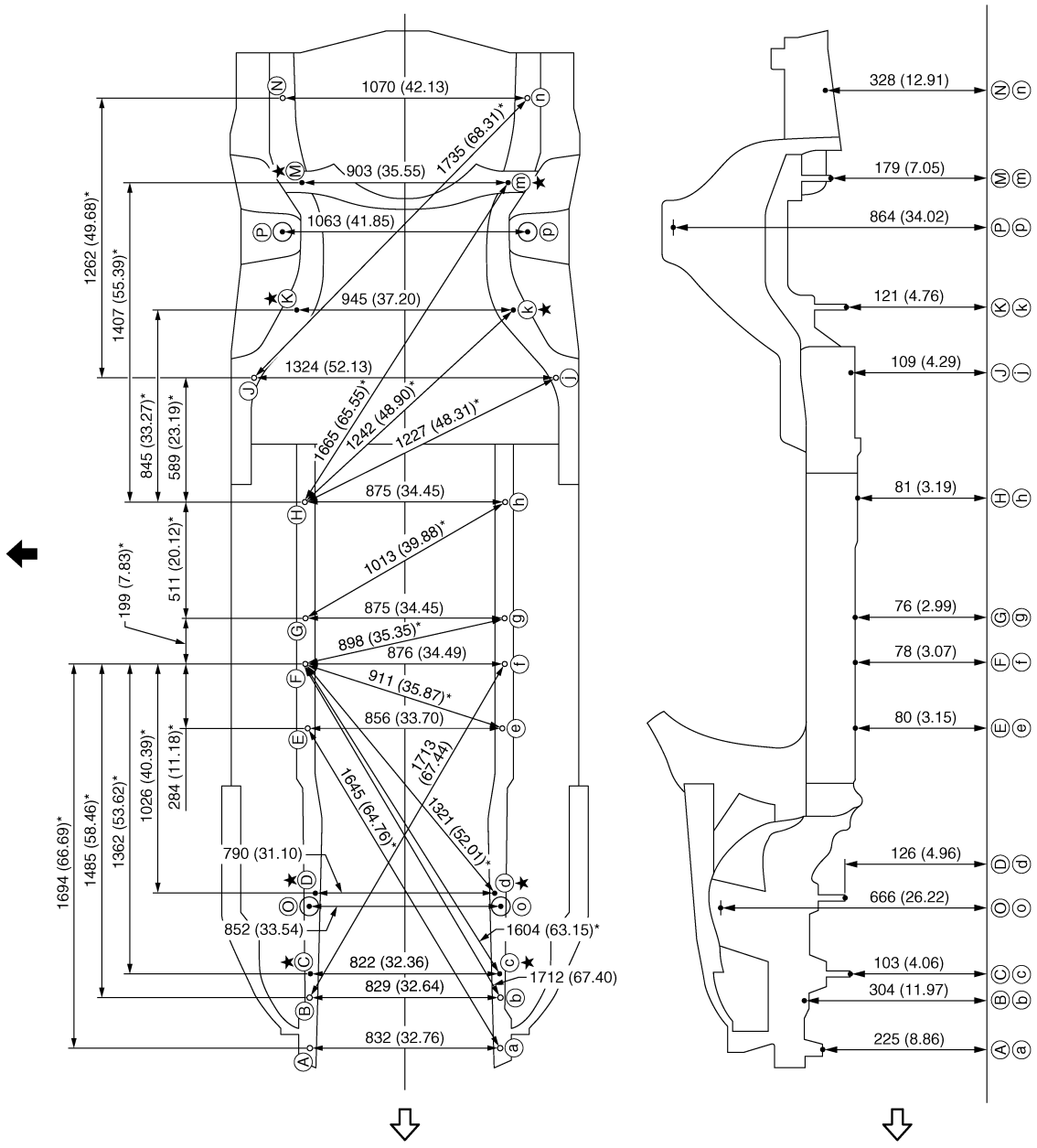
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g	Side radiator core stay hole center ϕ12 (0.47)
B, b	Hood hinge installing hole center ϕ12 (0.47)	H, h	Front side member hole center ϕ20 (0.79)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	J, j, K, k	Nut holder hole center ϕ16 (0.63)
D, d	Front strut installing hole center ϕ11 (0.43)	M, m, N, n	Front bumper reinforcement installing hole center ϕ11 (0.43)
E, e	Hoodledge reinforcement hole center ϕ7 (0.28)	–	–

AWD : Underbody

INFOID:0000000011485256

MEASUREMENT

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



JSKIA1617GB

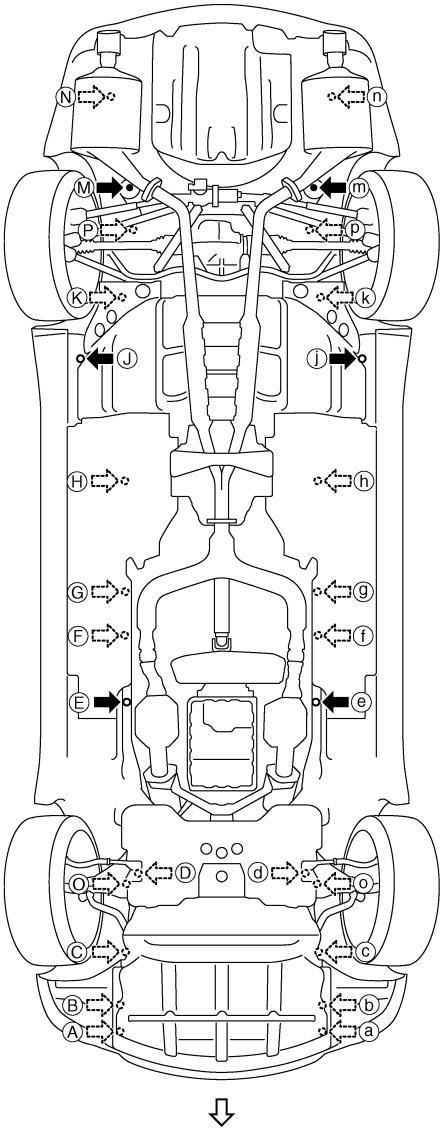
Unit: mm (in)

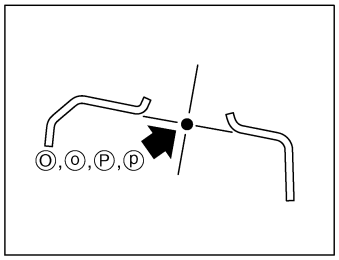
⇦: Vehicle front

⬅: Vehicle left side

★: Bolt head

MEASUREMENT POINTS





JSKIA1880ZZ

⇦: Vehicle front

Unit: mm (in)

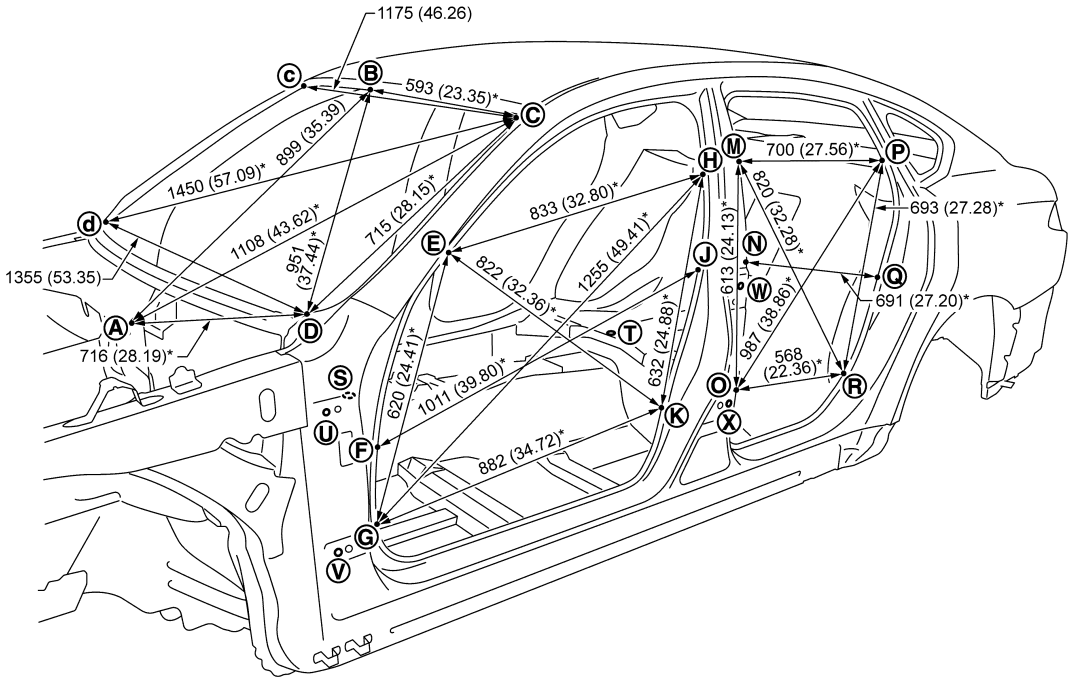
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A, a	±415.8 (±16.370)	–588.0 (–23.150)	224.6 (8.843)	Hole ϕ13 (0.51)	H, h	±437.5 (±17.224)	1810.0 (71.260)	81.2 (3.197)	Hole ϕ16 (0.63)
B	416.2 (16.386)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	J, j	±662.0 (±26.063)	2354.0 (92.677)	108.5 (4.272)	Hole ϕ8 (0.31)
b	–413.0 (–16.260)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	K, k	±472.6 (±18.606)	2653.8 (104.480)	120.8 (4.756)	Bolt head
C, c	±411.0 (±16.181)	–261.0 (–10.276)	103.3 (4.067)	Bolt head	M, m	±451.5 (±17.776)	3213.9 (126.531)	179.0 (7.047)	Bolt head
D, d	±395.0 (±15.551)	76.0 (2.992)	126.3 (4.972)	Bolt head	N, n	±535.0 (±21.063)	3590.0 (141.338)	328.3 (12.925)	Hole 18×16 (0.71×0.63)
E, e	±428.0 (±16.850)	816.6 (32.150)	80.0 (3.150)	Hole 18×16 (0.71×0.63)	O, o	±426.1 (±16.776)	37.1 (1.461)	665.8 (26.213)	Hole ϕ50 (1.97)
F, f	±438.0 (±17.244)	1100.0 (43.307)	78.0 (3.071)	Hole ϕ16 (0.63)	P, p	±531.3 (±20.917)	2995.8 (117.945)	864.1 (34.020)	Hole ϕ68 (2.68)
G, g	±437.5 (±17.224)	1299.0 (51.142)	76.0 (2.992)	Hole ϕ16 (0.63)	–	–	–	–	–

AWD : Passenger Compartment

INFOID:0000000011485257

MEASUREMENT

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



JSKIA5372GB

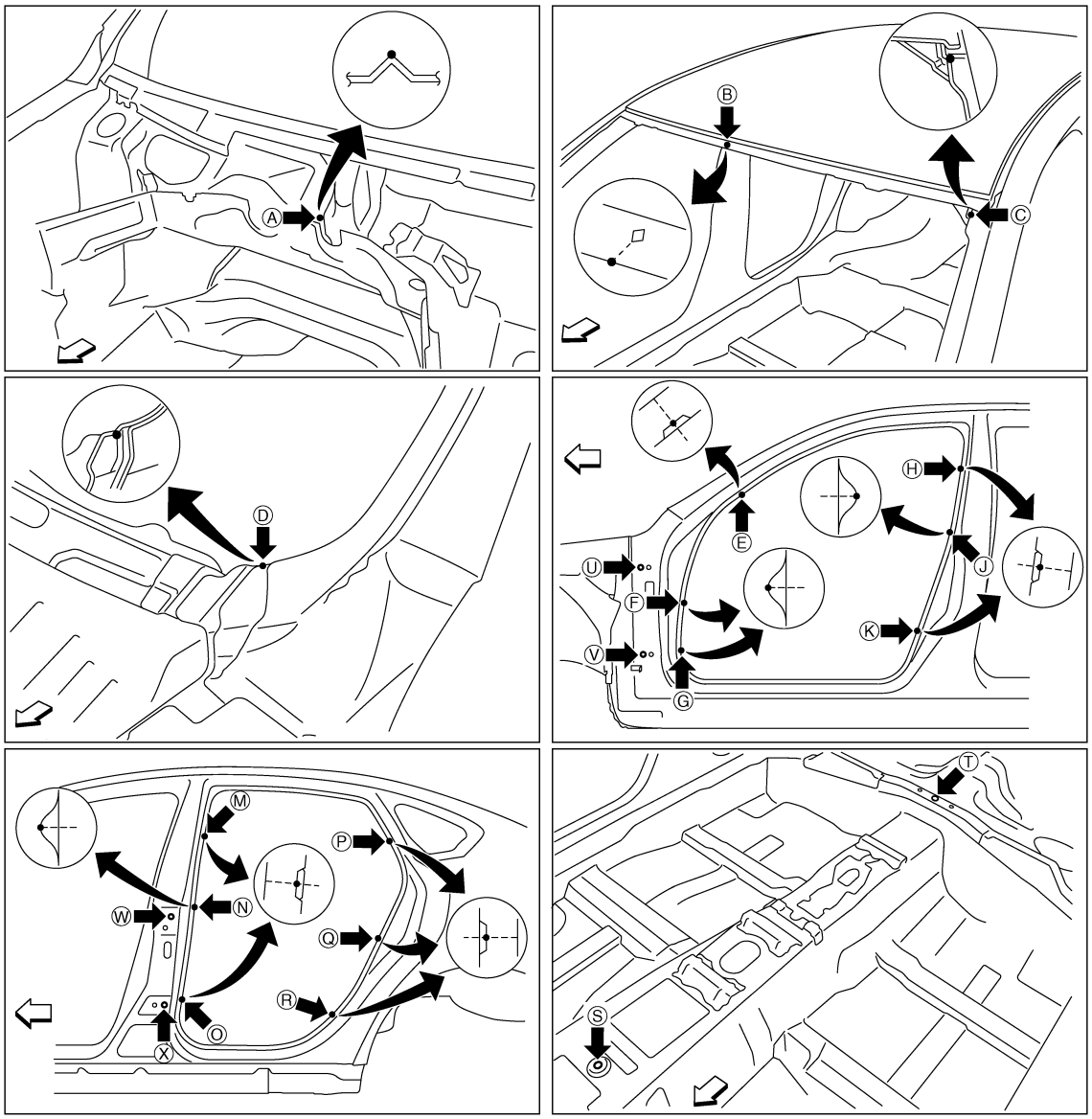
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1431 (56.34)		M - r	1657 (65.24)*		T - M	968 (38.11)*	
E - g	1597 (62.87)*		N - n	1485 (58.46)		T - N	871 (34.29)*	
E - h	1627 (64.05)*		N - q	1630 (64.17)*		T - O	796 (31.34)*	
E - k	1681 (66.18)*		O - o	1501 (59.09)		T - P	1076 (42.36)*	
F - f	1494 (58.82)		O - p	1727 (67.99)*		T - Q	923 (36.34)*	
F - j	1800 (70.87)*		O - r	1614 (63.54)*		T - R	821 (32.32)*	
G - g	1513 (59.57)		P - p	1338 (52.68)		U - u	1609 (63.35)	
G - h	1908 (75.12)*		P - r	1586 (62.44)*		U - W	1220 (48.03)*	
G - k	1746 (68.74)*		Q - q	1468 (57.80)		U - X	1206 (47.48)*	
H - h	1365 (53.74)		R - r	1522 (59.92)		V - v	1631 (64.21)	
H - k	1565 (61.61)*		S - E	930 (36.61)*		V - W	1278 (50.31)*	
J - j	1485 (58.46)		S - F	766 (30.16)*		V - X	1183 (46.57)*	
K - k	1501 (59.09)		S - G	758 (29.84)*		W - w	1614 (63.54)	
M - m	1361 (53.58)		S - H	1390 (54.72)*		X - x	1654 (65.12)	
M - o	1555 (61.22)*		S - J	1279 (50.35)*		–	–	
M - p	1521 (59.88)*		S - K	1125 (44.29)*		–	–	

MEASUREMENT POINTS



JSKIA1881ZZ

⇦: Vehicle front

Unit: mm (in)

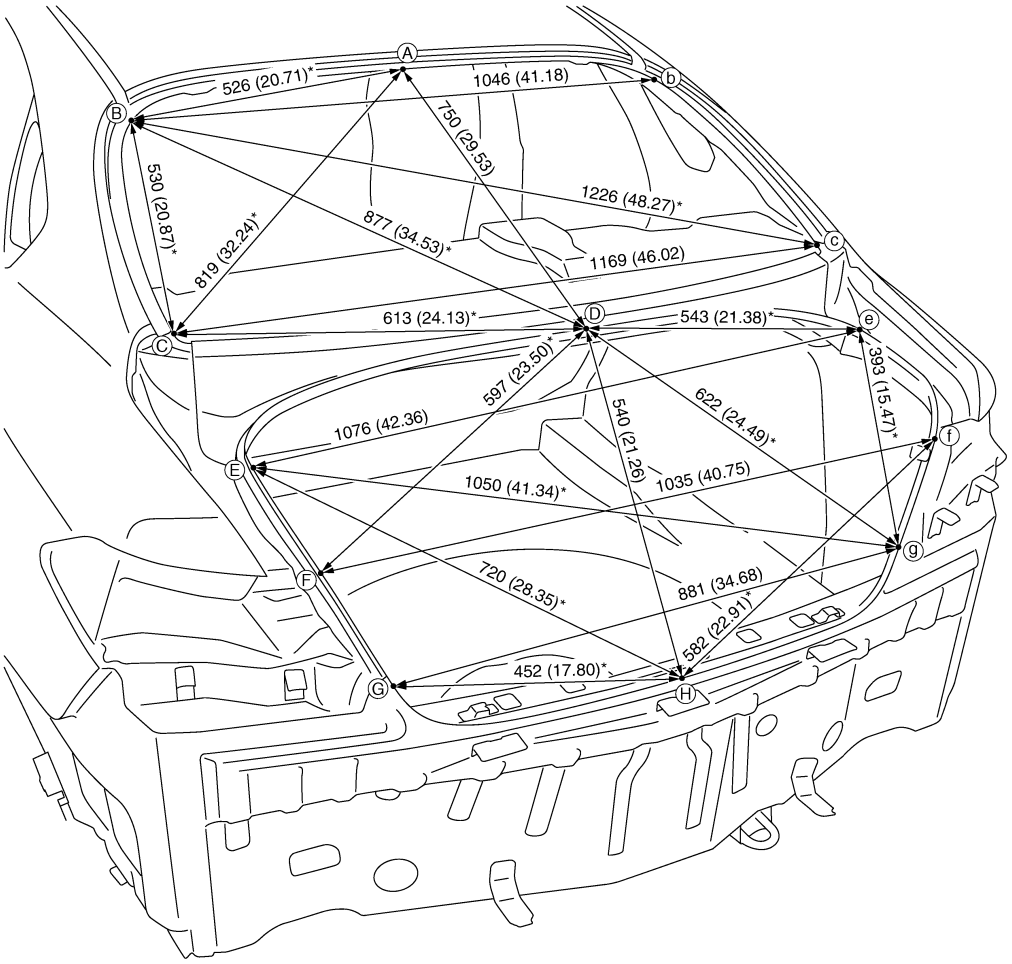
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	H, h, J, j, K, k, M, m, N, n, O, o	Center pillar indent
B	Roof flange end of center positioning mark	P, p, Q, q, R, r	Rear fender indent
C, c	Front pillar joggle	S	Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47)
D, d	Front pillar hinge brace joggle	T	Rear seat crossmember reinforcement hole center of center positioning mark ϕ5 (0.20)
E, e, F, f, G, g	Front pillar indent	U, u, V, v, W, w, X, x	Door hinge installing hole center U, u, V, v, X, x: ϕ12 (0.47) W, w: 11×9 (0.43×0.35)

AWD : Rear Body

INFOID:0000000011485258

MEASUREMENT

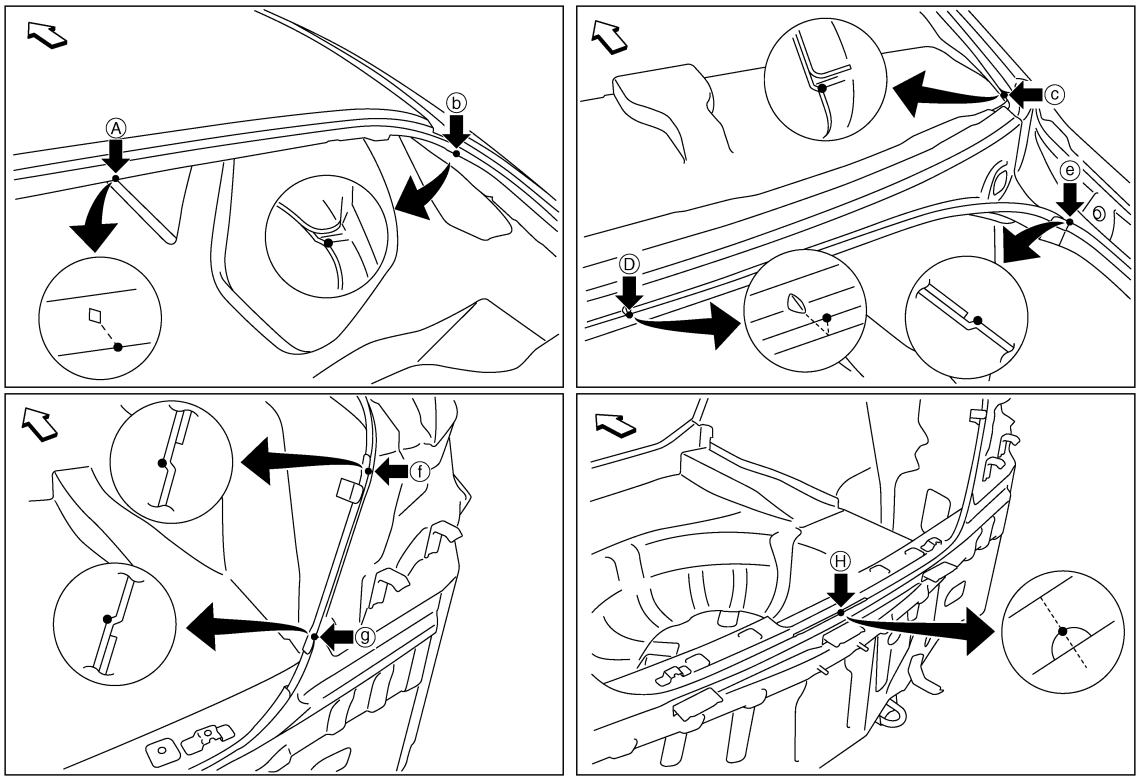
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA1624GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA1625ZZ

⇦: Vehicle front

Point	Material	Point	Material
A	Roof flange end of center positioning mark	D	Rear waist flange end of center positioning mark
B, b	Outer side body joggle	F, f, G, g	Rear combination lamp base joggle
C, c, E, e	Rear fender corner joggle	H	Upper rear panel indent of center positioning mark

LOCATION OF PLASTIC PARTS

Precautions for Plastics

INFOID:0000000011508536

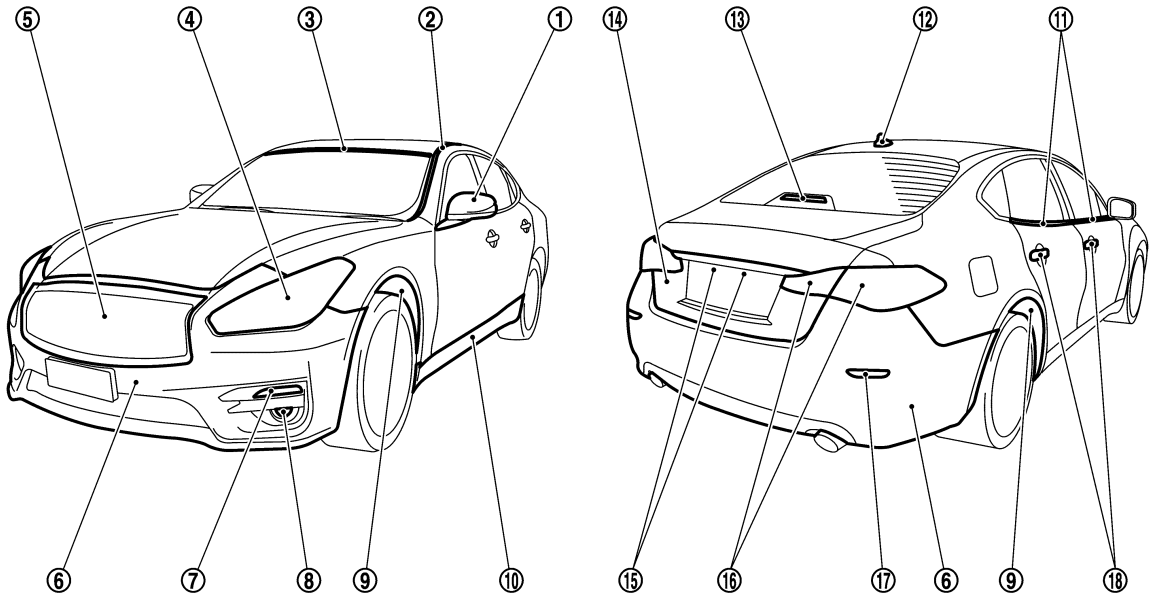
Abbreviation	Material name	Heat resisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly).	Flammable
ABS	Acrylonitrile Butadiene Styrene	80 (176)	Avoid gasoline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

CAUTION:

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

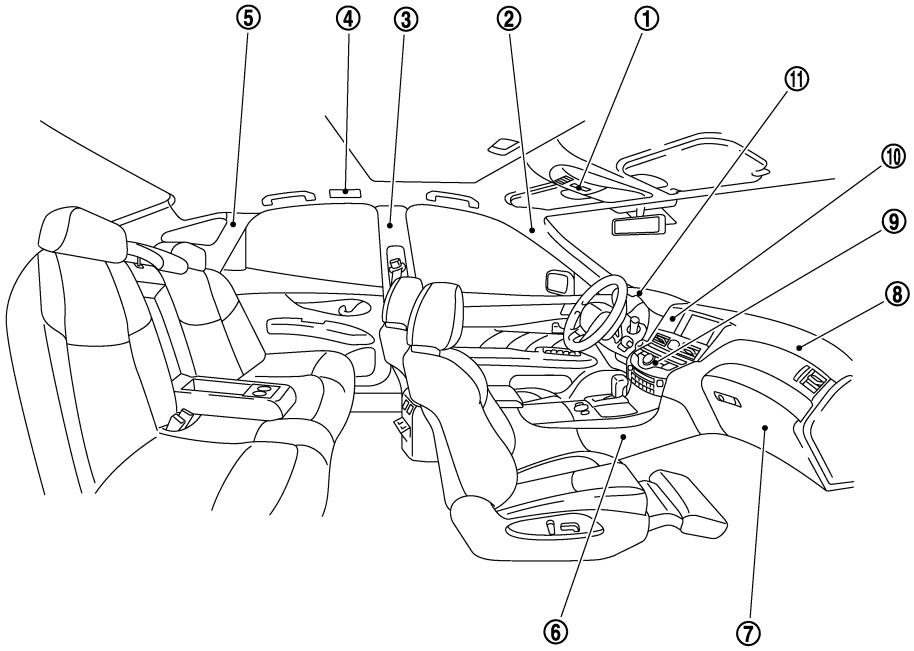
Location of Plastic Parts

INFOID:0000000011256523



JSKIA5374ZZ

Component			Material	Component			Material
1	Door outside mirror	Cover	ABS	12	Antenna base cover		ASA + PC
		Housing	ABS	13	High mount stop lamp	Lens	PC
		Base	PA			Housing	PA
		Base under cover	ASA	14	Trunk lid finisher	Base	ABS
2	Roof side molding		PVC + Stainless			Upper molding	ABS
3	Upper windshield molding		TPO			Lower molding	ABS
4	Front combination lamp	Lens	PC	15	License plate lamp	Lens	PC
		Housing	PP			Housing	PA
5	Front grille		ABS	16	Rear combination lamp (Rear fender)	Lens	PMMA
6	Bumper fascia		PP + EPM			Housing	ABS + ASA
7	Front side turn signal lamp	Lens	PC		Rear combination lamp (Trunk lid)	Lens	PMMA
		Housing	PC			Housing	ABS + ASA
		Reflector	PET + PBT	17	Reflex reflector	Lens	PMMA
8	Front fog lamp	Lens	PC			Housing	ABS
		Housing	PBT + ASA + Glass fiber	18	Door outside handle	Front Grip body	PC + ABS
9	Fender protector	Front	PP			Front Grip cover	PC + PET + Glass fiber
		Rear	PET			Rear Grip body	PC + PET + Glass fiber
10	Sill cover		PP + EPDM			Rear Grip cover	PC + ABS
11	Door outside molding		PVC + Stainless	–	–		–



JSKIA1883ZZ

Component			Material
1	Map lamp	Lens	PC
		Housing	PP
		Knob	PC
		Case	PC + ASA
		Cover	PP
2	Front pillar garnish		PP
3	Center pillar garnish		PP
4	Personal lamp	Lens	PC
		Housing	PP
		Knob	PP
5	Rear pillar finisher		PP
6	Center console	Console panel	ABS
		AT console finisher	ABS
		Cluster lid finisher	ABS
		Cup holder – Outer lid	ABS + Glass fiber
		Cup holder – Inner lid	PA
		Cup holder – Outer case	ABS
		Cup holder – Inner case	PP
	Console lid	Outer lid – Finisher	PVC
		Outer lid – Insert lid	ABS
		Inner lid	ABS
	Side instrument panel		ABS

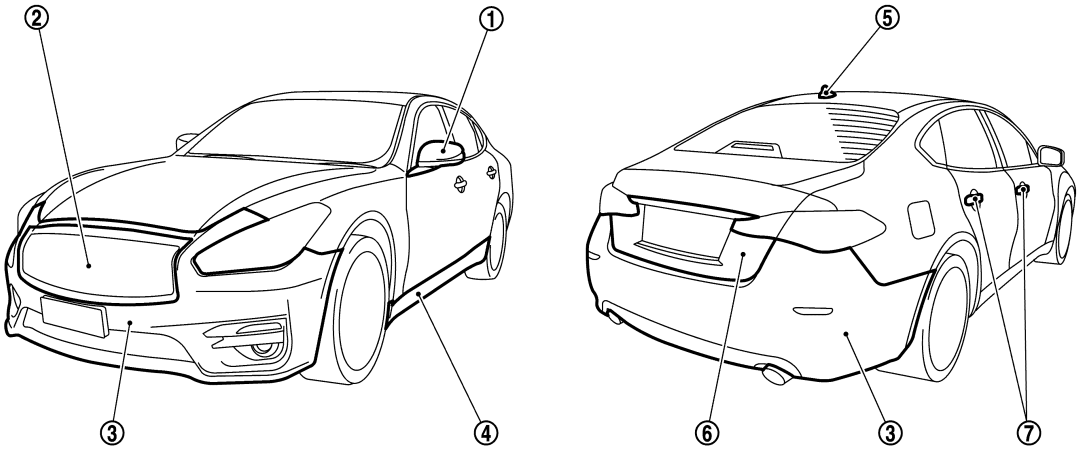
Component			Material
7	Glove box	Cover	PP
		Outer Lid – Skin	PVC
		Outer Lid – Pad	PUR
		Outer Lid – Core	ABS
		Inner lid	ABS
8	Instrument panel	Pad	PUR
		Core	PP
	Instrument finisher A		ABS + Glass fiber
9	Cluster lid C		ABS
	Cluster lid D		ABS + Glass fiber
10	Center ventilator assembly		PC + ABS
11	Cluster lid A	Upper	PC + ABS
		Lower	ABS
–	–		–

VEHICLE INFORMATION

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:0000000011508247



JSKIA5352ZZ

Component			Color code	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
			Description	White	Silver	Black	Black	Gray	Dark Blue	Gray	Brown
			Paint type [note]	3P	2M	2S	2P	2TPM	2P	2M	2M
			Anti scratch advanced paint	–	–	×	×	×	×	–	×
①	Door mirror cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
②	Front grille		Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
③	Bumper fascia		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
④	Sill cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
⑤	Antenna base cover		Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
⑥	Trunk lid finisher	Base	Body color	BQAA	BK23	BKH3	BGAC	BKAT	BBW5	BKAD	BCAN
		Molding	Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
⑦	Door outside handle		Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr

NOTE:

- 2M: 2-Coat metallic
- 2P: 2-Coat pearl
- 2S: 2-Coat solid
- 3P: 3-Coat pearl
- 2TPM: 2-Coat titanium pearl metallic

PRECAUTION

REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:0000000011508537

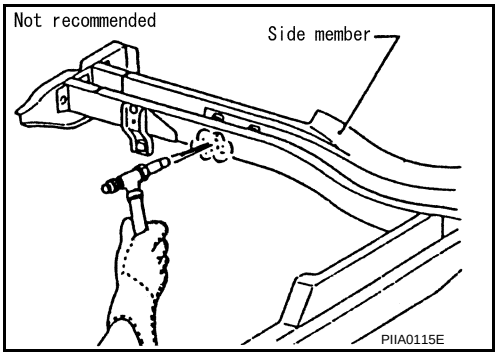
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

Tensile strength	Major applicable parts
440 - 780 MPa	• Hoodledge reinforcement • Upper front hoodledge • Front strut housing • Rear floor seat belt anchor reinforcement • Rear seat crossmember reinforcement assembly • 2nd and 3rd crossmember (Front floor component part) • Inner sill • Center front floor • Lower dash • Lower dash crossmember assembly • Front side member assembly • Front side member closing plate assembly • Front side member outrigger assembly • Rear seat crossmember • Rear tie down hook • Rear side member assembly • Rear side member extension • Inner front roof side rail (Side body assembly component part) • Outer front pillar reinforcement (Lower) (Side body assembly component part) • Outer sill reinforcement • Center pillar reinforcement • Outer rear wheelhouse extension (Upper) • Outer rear wheelhouse extension (Lower rear) • Front roof rail • Rear roof rail • Other reinforcements
980 - 1350 MPa	• Front side member stiffener (Front floor component part) • Front side member rear extension • Inner roof side rail (Front) (Side body assembly component part) • Outer roof side rail (Side body assembly component part) • Inner center pillar (Side body assembly component part) • Outer front pillar reinforcement (Upper) (Side body assembly component part) • Outer sill extension (Outer sill reinforcement component part) • Center pillar reinforcement (Upper) • Center pillar seat belt reinforcement (Center pillar reinforcement component part) • Outer rear wheelhouse extension (Lower front)

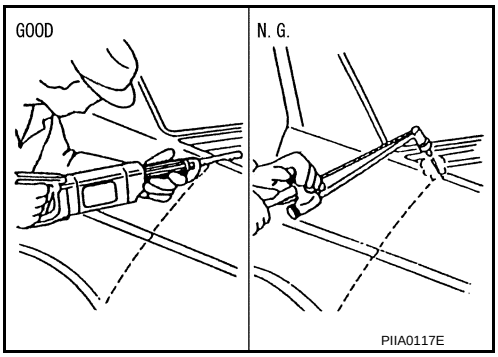
Read the following precautions when repairing HSS:

1. Additional points to consider

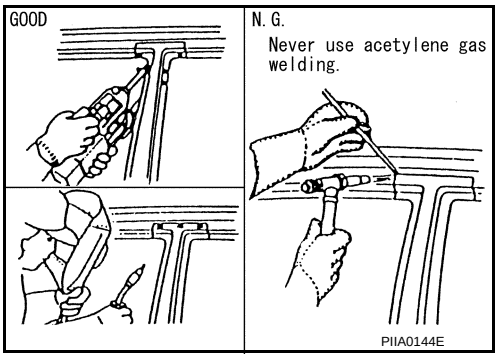
- The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



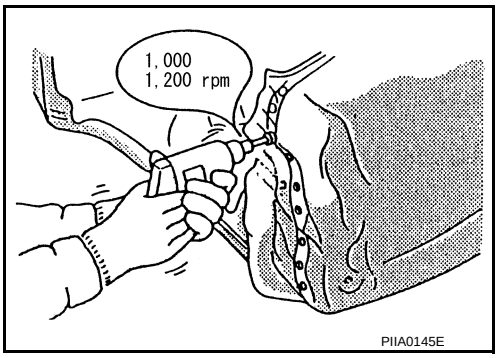
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.
- When cutting HSS panels, avoid gas (torch) cutting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



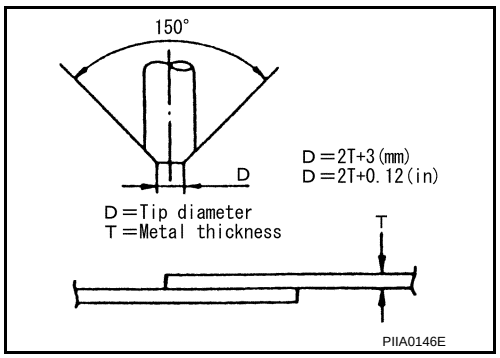
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



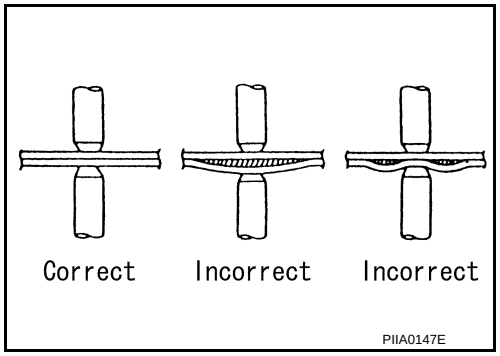
- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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.



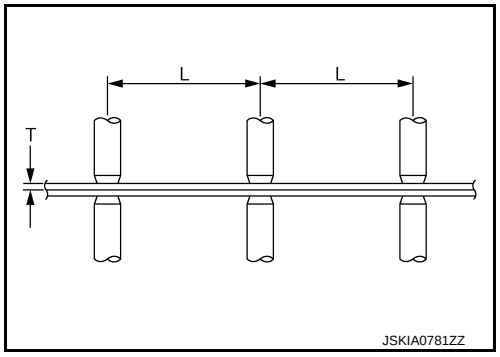
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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:0000000011508538

PROHIBITION OF CUT AND CONNECTION

Never cut and joint the lower lock pillar reinforcement (center pillar reinforcement inside frame parts) because its material is high strength steel plate (ultra high strength steel plate).
The center pillar reinforcement must be replaced if this part is damaged.

PREPARATION

REPAIRING MATERIAL

Foam Repair

INFOID:0000000011485264

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

URETHANE FOAM APPLICATIONS

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

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

Read instructions on product for fill procedures.

Example of foaming agent filling operation procedure

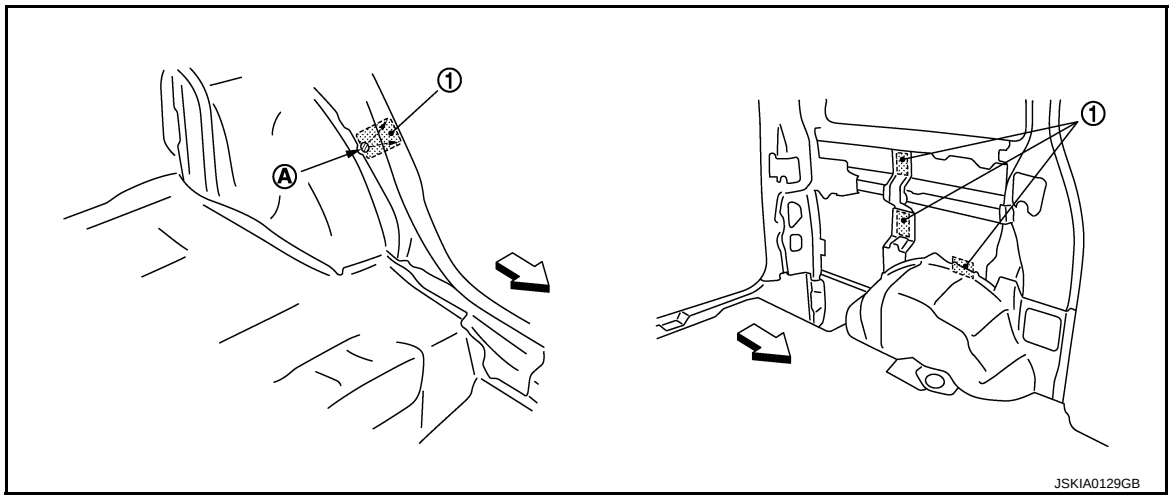
1. Fill procedures after installation of service part.

a. Eliminate foam material remaining on vehicle side.

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

c. Install service part.

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



1. Urethane foam

A. Nozzle insert hole

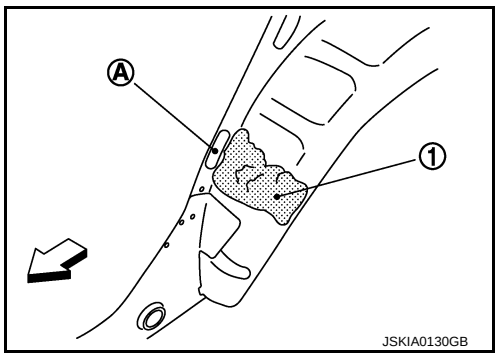
⇦: Vehicle front

2. Fill procedures before installation of service part.

a. Eliminate foam material remaining on vehicle side.

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

c. Fill foam material on wheelhouse outer side.



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

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

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

BODY COMPONENT PARTS

Underbody Component Parts

INFOID:0000000011485265

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

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.	Hoodledge reinforcement (RH & LH)			440	×
2.	Upper front hoodledge (RH & LH)			440	×
3.	Side radiator core support (RH & LH)			Under 440	×
4.	Front strut housing (RH & LH)			440	×
5.	Lower rear hoodledge (RH & LH)			Under 440	×
6.	Upper side cowl top (RH & LH)			Under 440	×
7.	Upper rear hoodledge (RH & LH)			Under 440	×
8.	Rear floor rear			440	×
9.	Rear floor side (RH & LH)			Under 440	×
10.	Rear floor front			Under 440	×
11.	Rear floor seat belt anchor reinforcement (RH & LH)			590	×
12.	Rear seat crossmember reinforcement assembly			590	×
13.	Front floor (RH & LH)	a.	T=1.6 mm (0.063 in)	1350[caution]	×
14.	Inner sill (RH & LH)			590	×
15.	Center front floor			440	×
16.	Lower dash			440	×
17.	Upper dash			Under 440	×
18.	Lower dash crossmember assembly			590	×
19.	Front cowl top			Under 440	×
20.	Front side member assembly (RH & LH)			590	×
21.	Front side member connector assembly (RH & LH)			Under 440	×
22.	Front side member front extension (RH & LH)			440	×
23.	Front side member closing plate assembly (RH & LH)			590	×
24.	Front side member center closing plate (RH & LH)			440	×
25.	Front side member front closing plate (RH & LH)			590	×
26.	Front side member outrigger assembly (RH & LH)			590	×
27.	Front side member rear extension (RH & LH)		T=1.2 mm (0.047 in)	980[caution]	×
28.	Rear seat crossmember			590	×
29.	2nd rear crossmember			590	—
30.	Rear crossmember			Under 440	×
31.	Rear tie down hook			440	×
32.	Rear side member assembly (RH & LH)			780	×
33.	Rear side member extension (RH & LH)			780	×

NOTE:

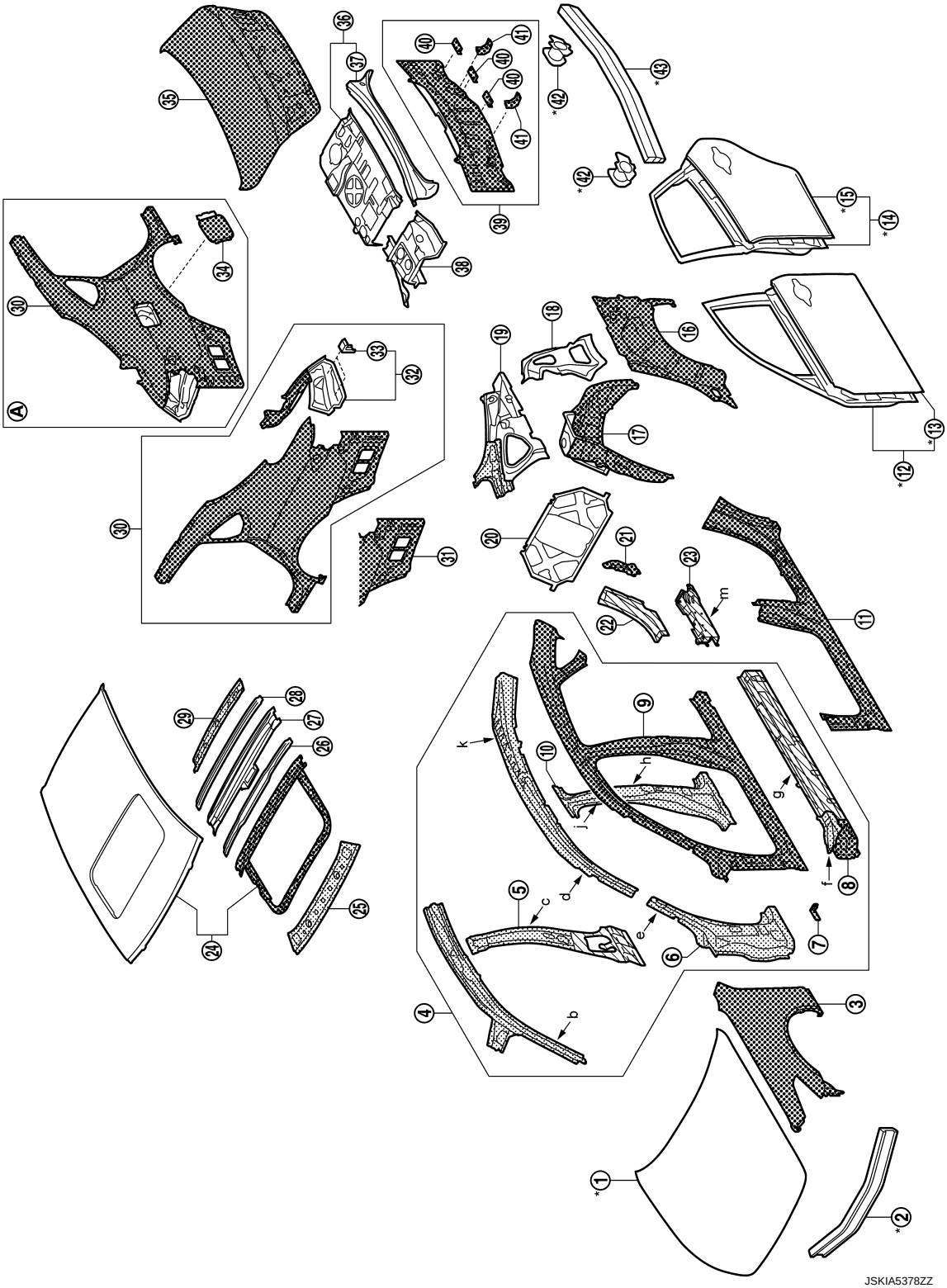
- For the parts without a number described in the figure, it is supplied only with the assembly part that the part is included with.
- Tensile strength column shows the largest strength value of a part in the component part.

CAUTION:

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

Body Component Parts

INFOID:0000000011485266



Ⓐ Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

*: Aluminum portion

No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
1.	Hood			—	—	×
2.	Front bumper armature assembly			—	—	×
3.	Front fender (RH & LH)			Under 440	×	—
4.	Side body assembly (RH & LH)			Refer to No.5 –10		
		b.	T=1.2 mm (0.047 in)	980[caution]	—	—
		d.	T=1.6 mm (0.063 in)	1350[caution]		
		k.	T=1.2 mm (0.047 in)	980[caution]		
5.	Inner center pillar (RH & LH)	c.	T=1.0 mm (0.039 in)	1350[caution]	—	—
6.	Outer front pillar reinforcement (RH & LH)	e.	T=1.2 mm (0.047 in)	980[caution]	—	—
7.	Front fender bracket (RH & LH)			Under 440	×	—
8.	Outer sill reinforcement (RH & LH)	f.	T=1.2 mm (0.047 in)	980[caution]	×	—
		g.	T=1.2 mm (0.047 in)	980[caution]		
9.	Outer front side body (RH & LH)			Under 440	×	—
10.	Center pillar reinforcement (RH & LH)	h.	T=1.2 mm (0.047 in)	980[caution]	—	—
		j.	T=1.6 mm (0.063 in)	1350[caution]		
11.	Outer sill (RH & LH)			Under 440	×	—
12.	Front door assembly (RH & LH)			—	—	×
13.	Outer front door panel (RH & LH)			—	—	×
14.	Rear door assembly (RH & LH)			—	—	×
15.	Outer rear door panel (RH & LH)			—	—	×
16.	Outer rear wheelhouse (RH & LH)			Under 440	×	—
17.	Inner rear wheelhouse (RH & LH)			Under 440	×	—
18.	Inner rear pillar reinforcement (RH & LH)			Under 440	—	—
19.	Inner rear pillar (RH & LH)			590	—	—
20.	Seat back support			Under 440	—	—
21.	Inner rear wheelhouse front extension (RH & LH)			Under 440	×	—
22.	Outer rear wheelhouse extension (RH & LH Upper)			590	×	—
23.	Outer rear wheelhouse extension (RH & LH Lower)	m.	T=1.2 mm (0.047 in)	980[caution]	×	—
24.	Roof			Under 440	×	—
25.	Front roof rail			590	—	—
26.	Roof bow No. 2			Under 440	—	—
27.	Roof bow No. 5			Under 440	—	—
28.	Roof bow No. 4			Under 440	—	—
29.	Rear roof rail			440	—	—
30.	Rear fender assembly (RH & LH)			Under 440	×	—

No.	Parts name	Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections	Aluminum portion
31.	Rear fender extension (RH & LH)	Under 440	×	—
32.	Rear fender extension assembly (RH & LH)	Under 440	—	—
33.	Rear bumper side bracket (RH & LH)	Under 440	—	—
34.	Fuel filler lid	Under 440	×	—
35.	Trunk lid	Under 440	×	—
36.	Parcel shelf with rear waist	Under 440	—	—
37.	Rear waist	Under 440	—	—
38.	Parcel shelf side (RH & LH)	Under 440	—	—
39.	Rear panel assembly	Under 440	×	—
40.	Rear bumper bracket	Under 440	×	—
41.	Rear side bumper bracket	Under 440	×	—
42.	Rear bumper stay (RH & LH)	Under 440	—	×
43.	Inner center rear bumper reinforcement assembly	Under 440	—	×

NOTE:

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

CAUTION:

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

REMOVAL AND INSTALLATION

CORROSION PROTECTION

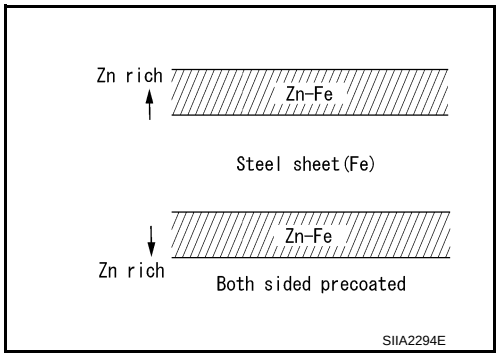
Description

INFOID:0000000011508541

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.



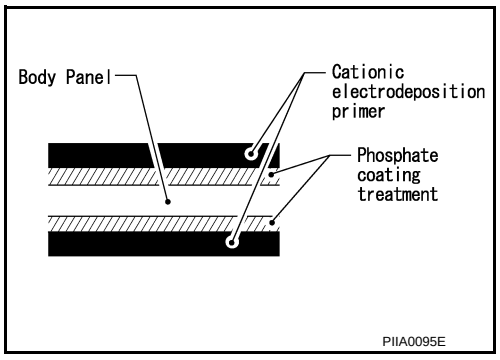
NISSAN genuine parts are fabricated from galvannealed steel. Therefore, it is recommended that NISSAN genuine parts or an equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

2WD

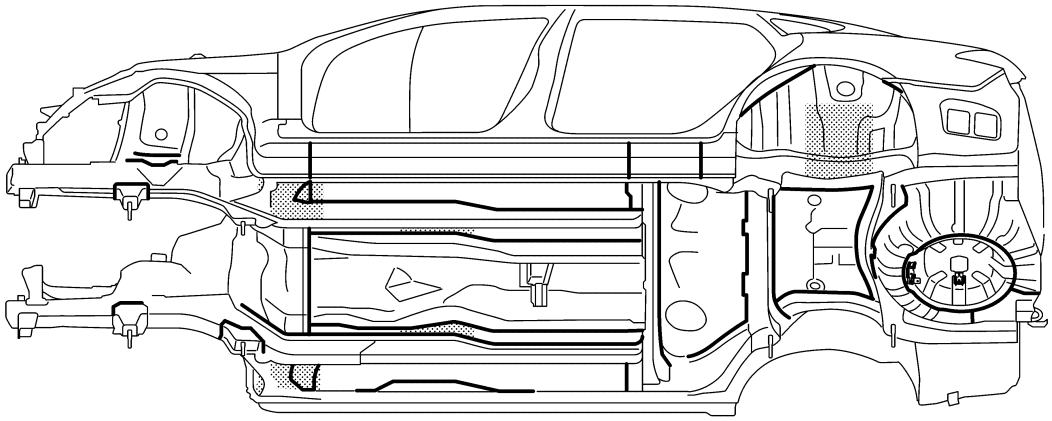
2WD : Undercoating

INFOID:0000000011485268

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.



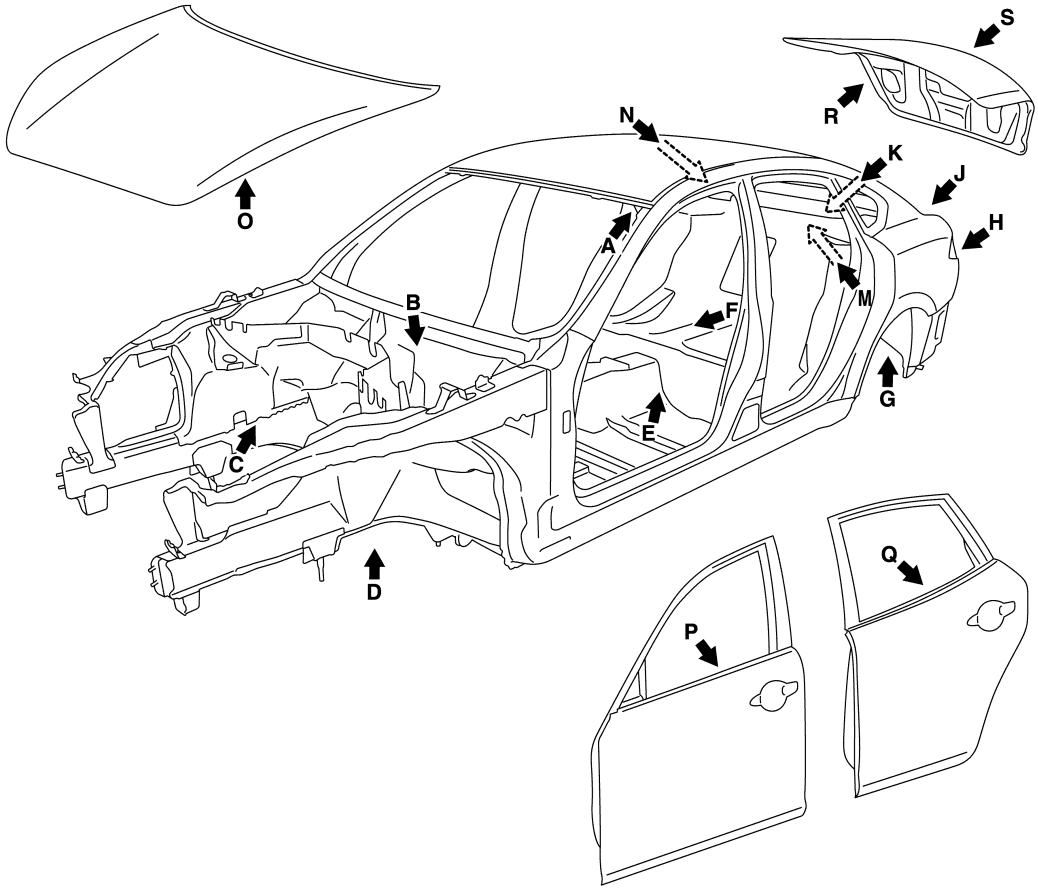
JSKIA5380ZZ

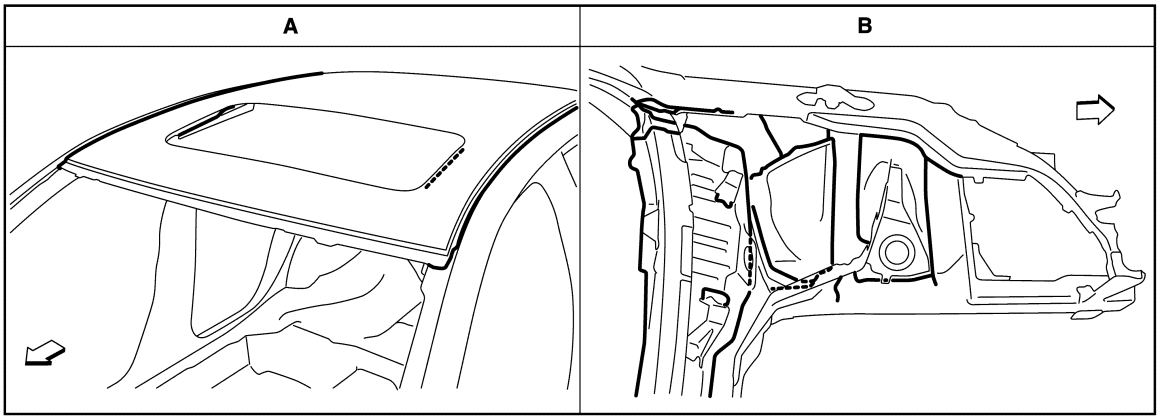
: Undercoated areas
: Sealed portions

2WD : Body Sealing

INFOID:0000000011485269

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.





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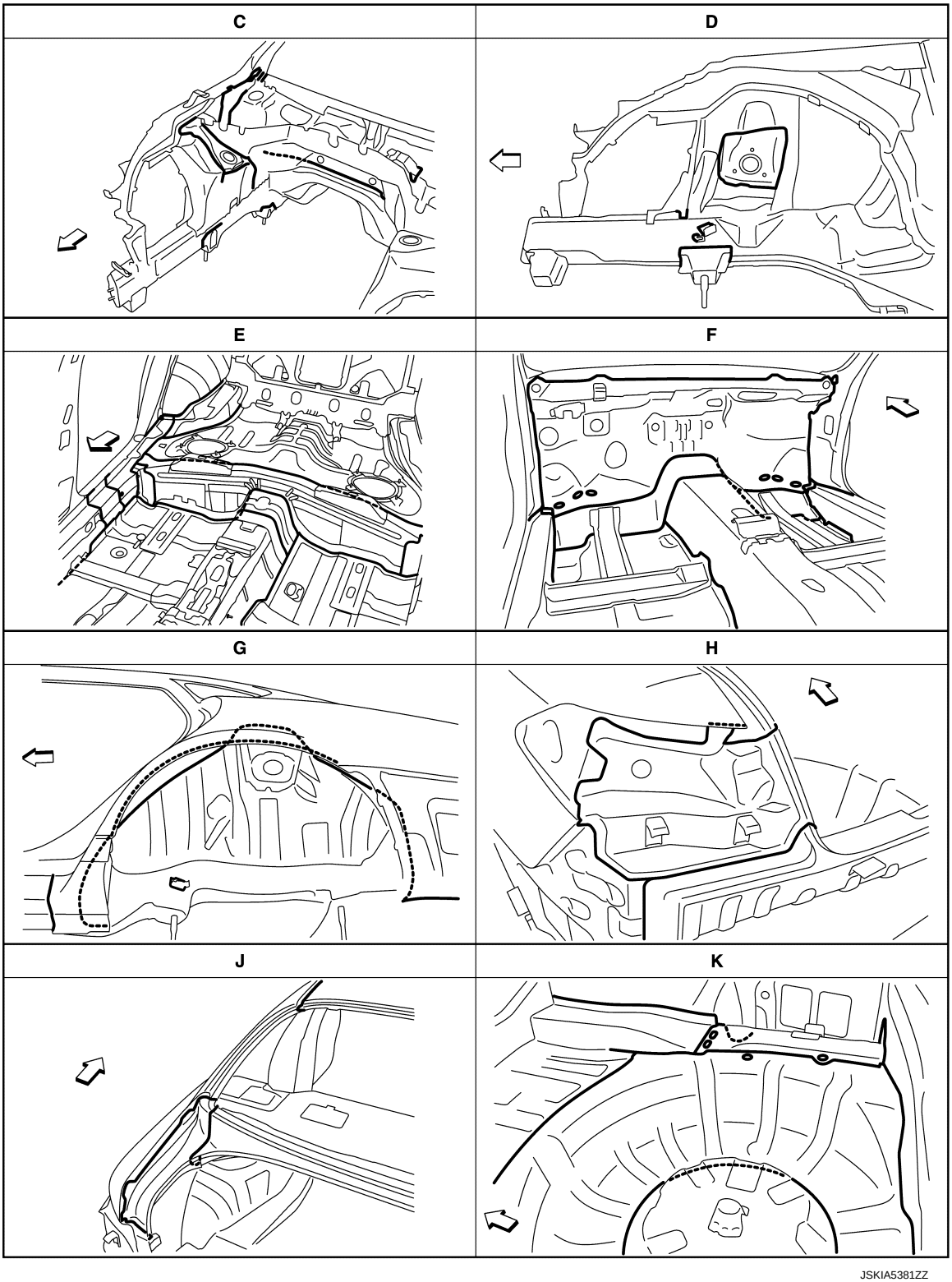
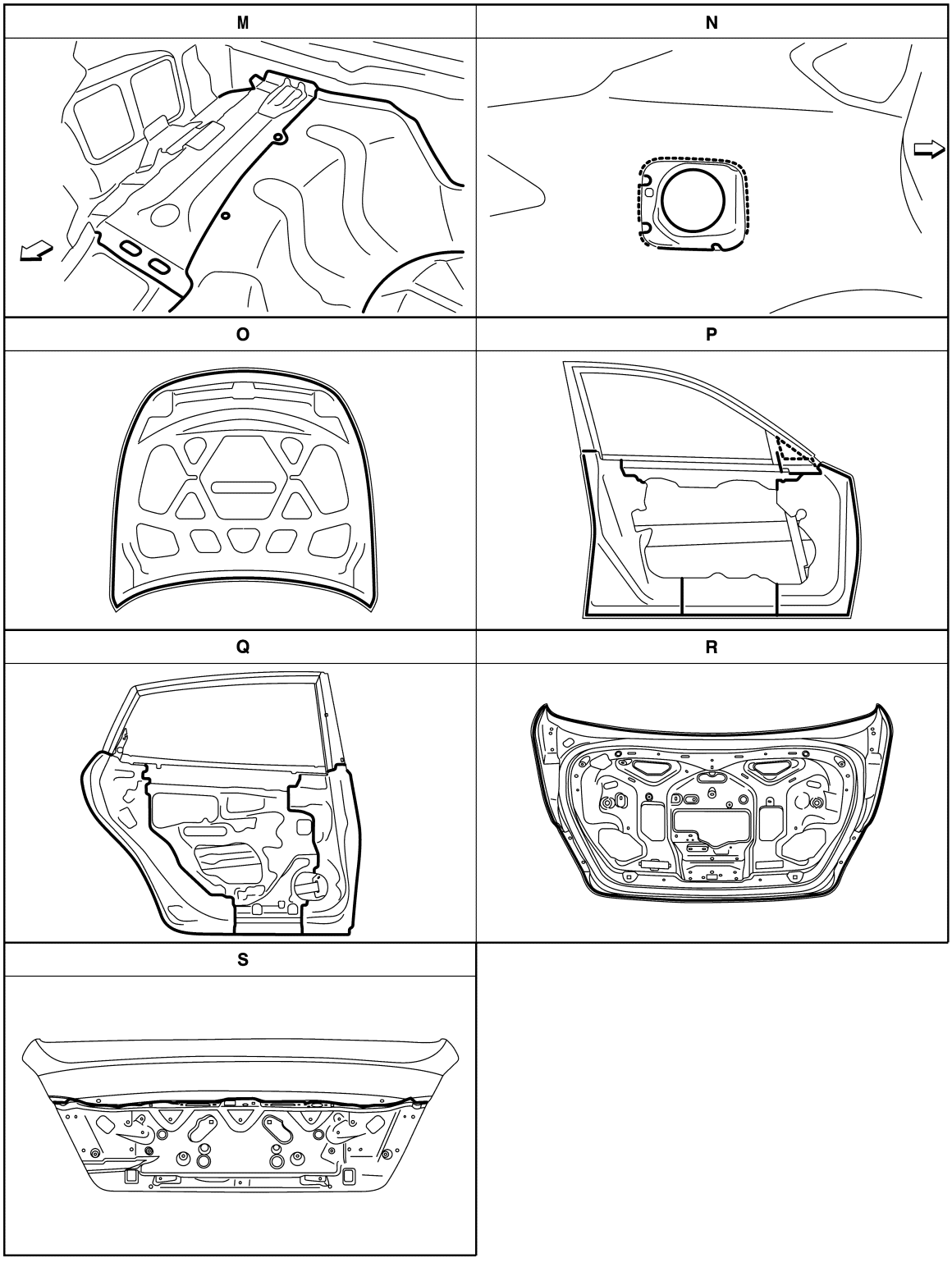
⇦: Vehicle front

▬: Sealed portions



JSKIA5381ZZ

⇦: Vehicle front
▬: Sealed portions



JSKIA5382ZZ

⇦: Vehicle front

▬: Sealed portions

AWD

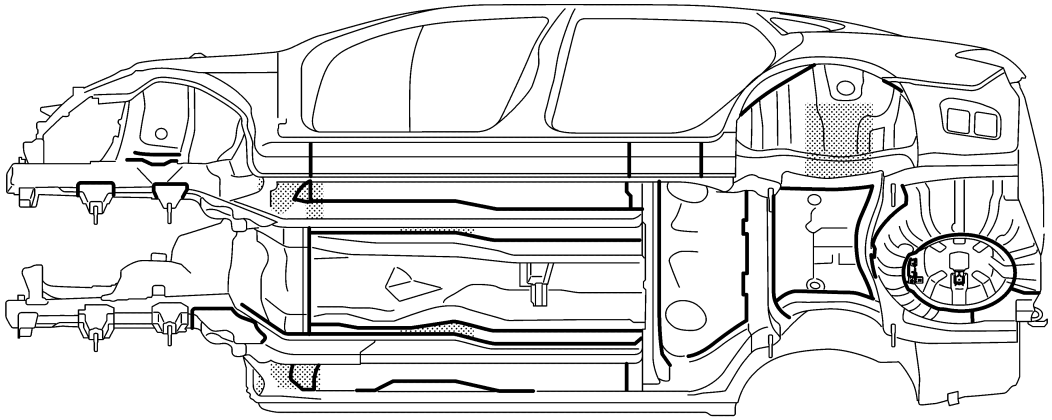
AWD : Undercoating

INFOID:0000000011485270

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.



JSKIA5384ZZ

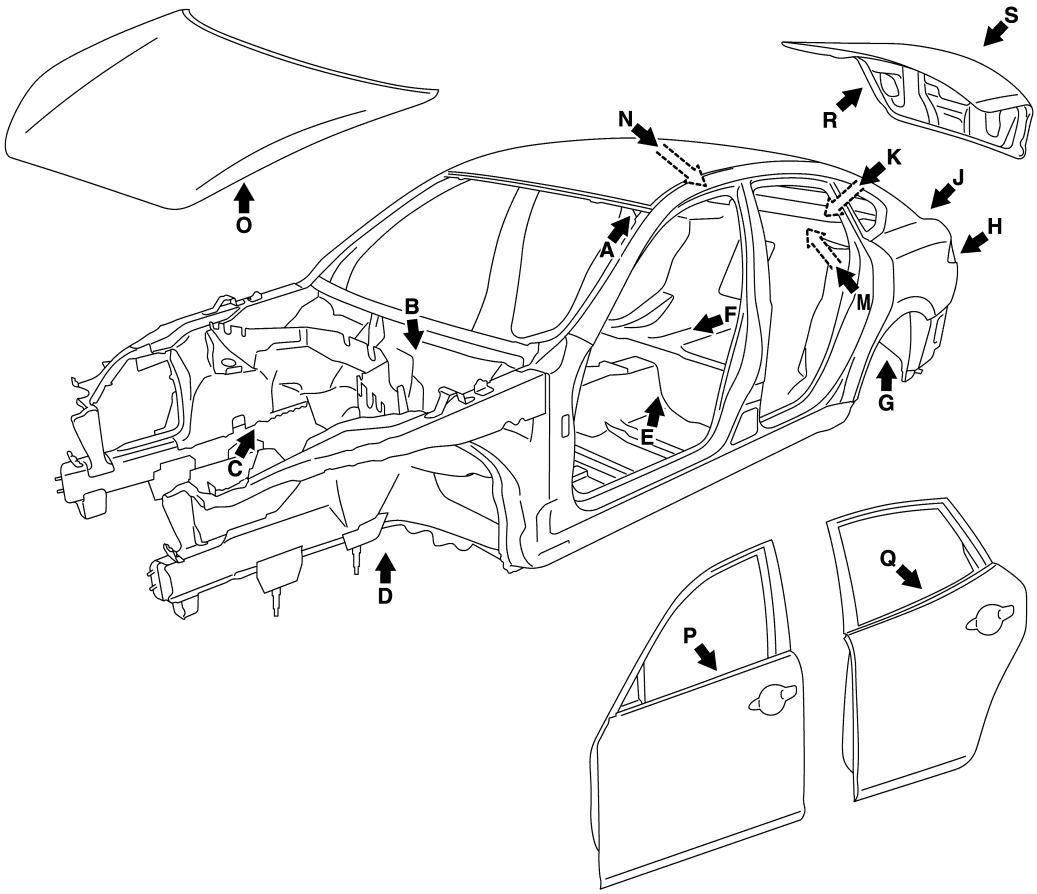
: Undercoated areas

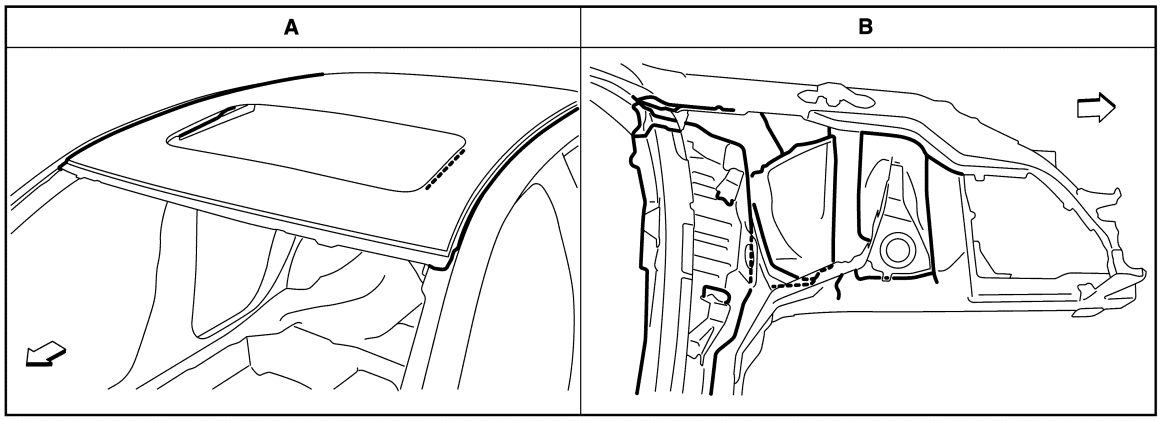
: Sealed portions

AWD : Body Sealing

INFOID:0000000011485271

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.

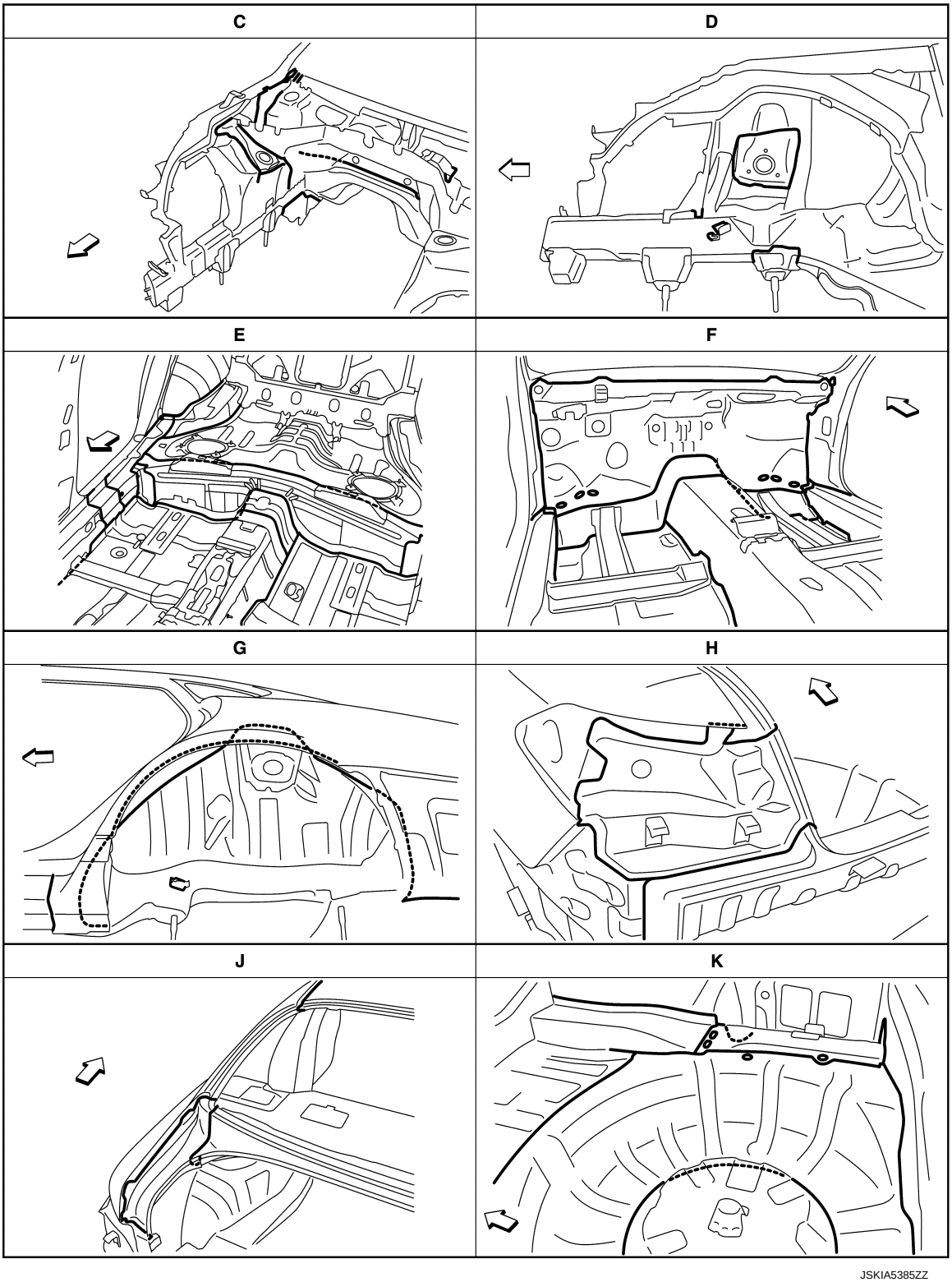




JSKIA5360ZZ

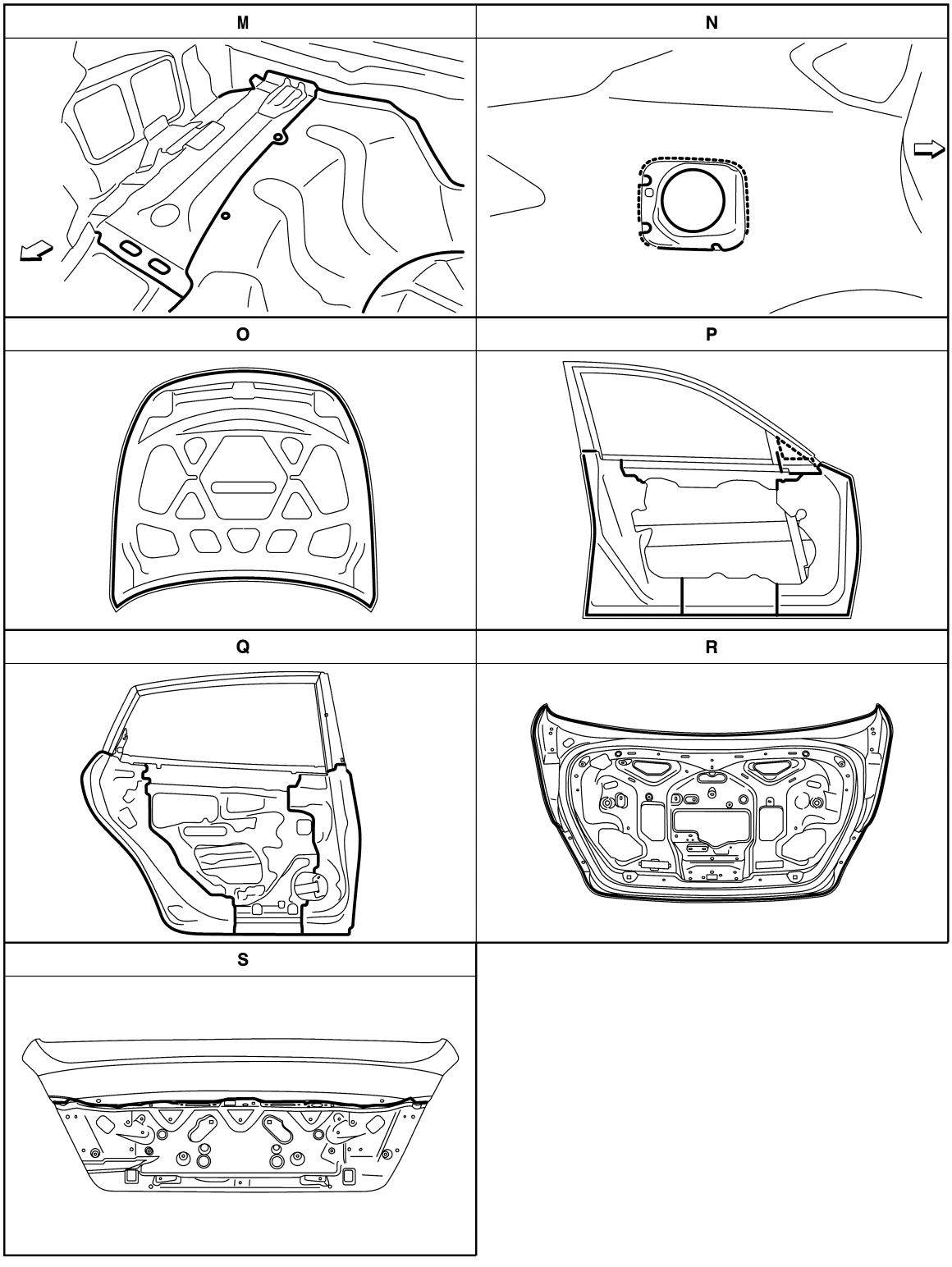
⇦: Vehicle front

▬: Sealed portions



JSKIA5385ZZ

⇦: Vehicle front
▬: Sealed portions



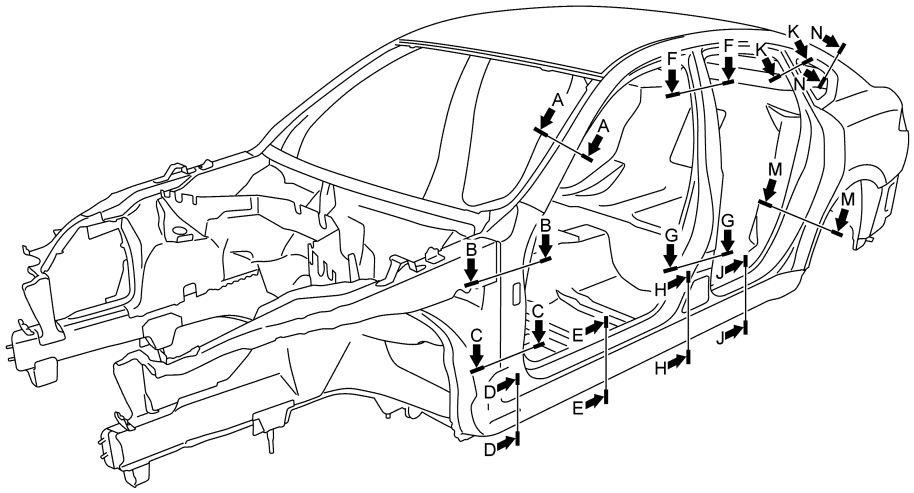
JSKIA5382ZZ

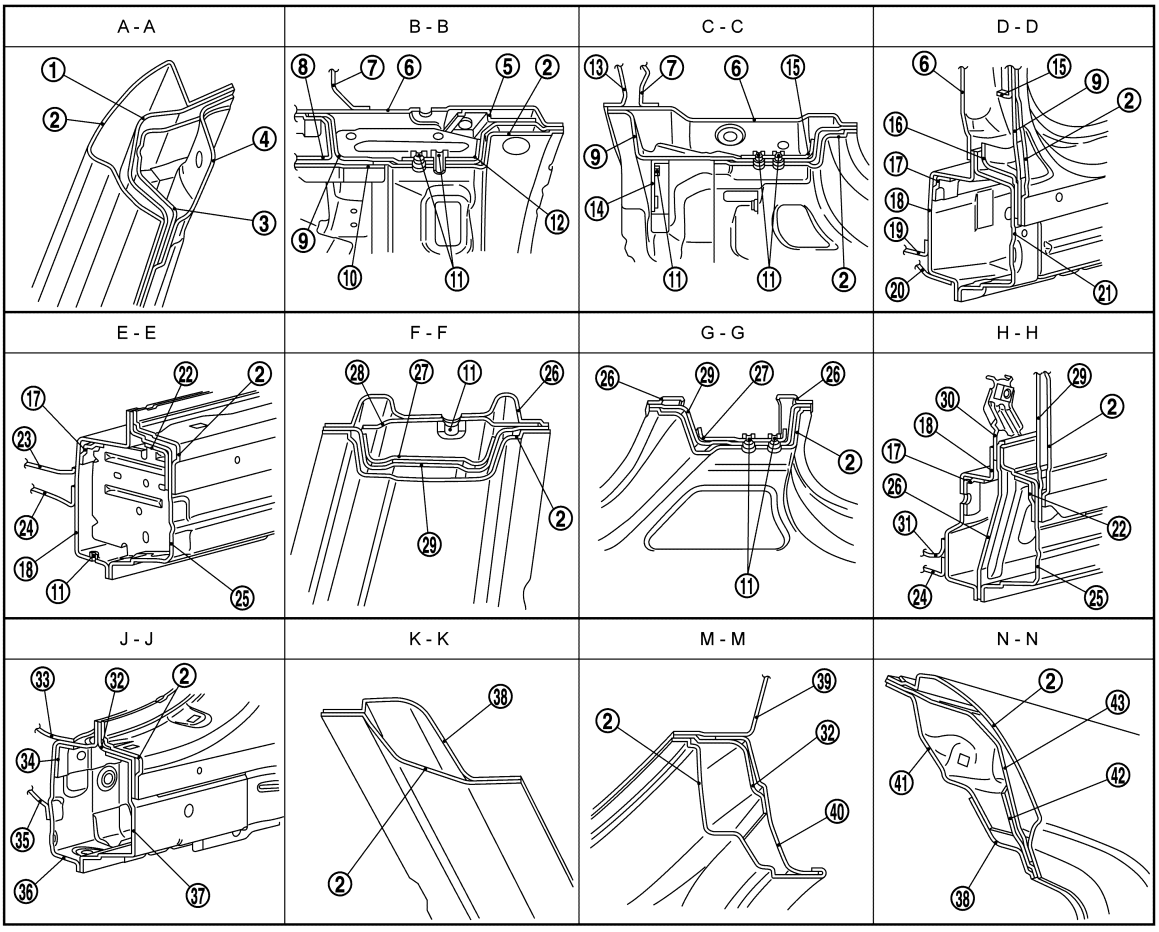
⇦: Vehicle front
▬: Sealed portions

BODY CONSTRUCTION

Body Construction

INFOID:0000000011485272





JSKIA5387ZZ

1. Outer side roof rail
2. Outer side body
3. Outer front pillar reinforcement
4. Inner side roof rail
5. Outer front pillar bracket
6. Upper rear hoodledge
7. Upper dash
8. Hoodledge reinforcement gusset
9. Front pillar hinge brace

10. Hoodledge reinforcement
11. Weld nut
12. Upper hinge plate
13. Lower dash crossmember
14. Front pillar bracket
15. Lower hinge plate
16. Lower front pillar gusset
17. Center sill reinforcement
18. Inner sill
19. Lower dash
20. Front side member outrigger
21. Outer front sill brace
22. Outer sill extension
23. 2nd crossmember
24. Front floor
25. Outer sill reinforcement
26. Inner center pillar
27. Center pillar seat belt reinforcement
28. Inner center pillar reinforcement
29. Center pillar reinforcement
30. Seat belt anchor
31. 3rd crossmember
32. Outer rear wheelhouse extension
33. Rear seat crossmember reinforcement
34. Rear side member front reinforcement
35. Rear seat crossmember
36. Rear side member front
37. Outer rear sill reinforcement
38. Inner rear pillar
39. Inner rear wheelhouse
40. Outer rear wheelhouse
41. Rear roof rail brace
42. Inner rear pillar reinforcement
43. Outer side roof rail reinforcement

Rear Fender Hemming Process

INFOID:0000000011508542

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.

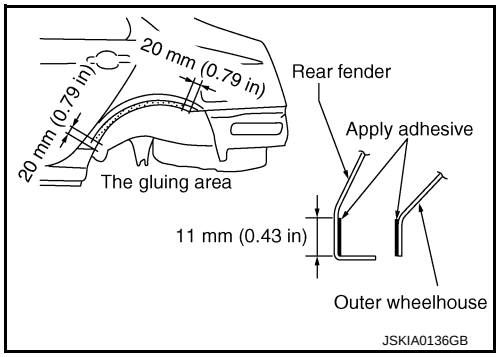
CAUTION:

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

PROCEDURE OF THE HEMMING PROCESS

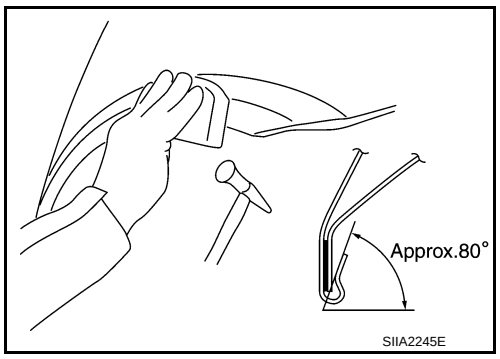
- Peel off old bonding material on the surface of the outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of the outer wheelhouse and rear fender.

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

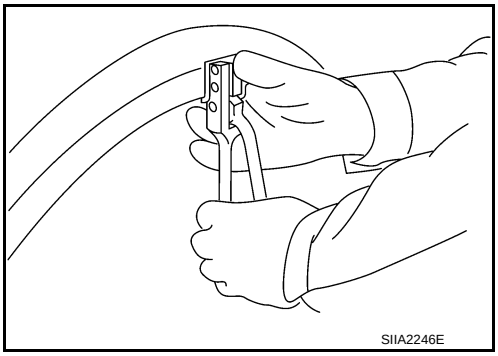


- Attach rear fender to the body of the car, and weld the required part except the hemming part.

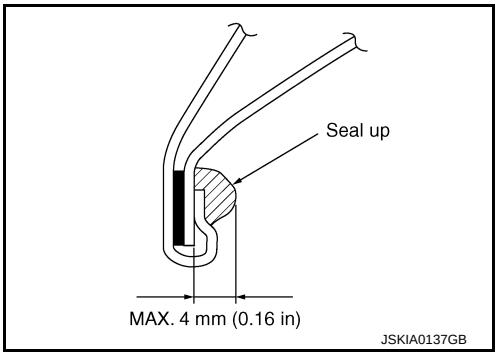
- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.



- 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.



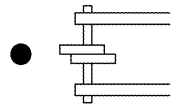
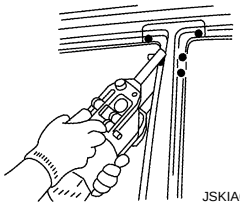
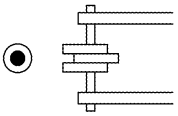
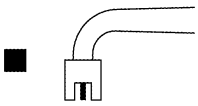
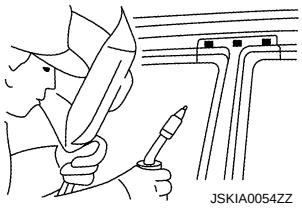
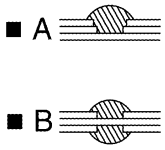
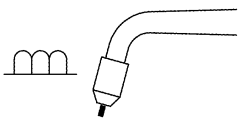
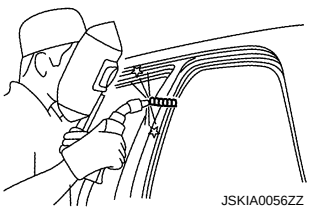
REPLACEMENT OPERATIONS

Description

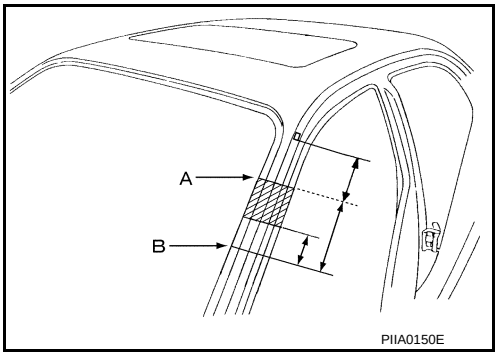
INFOID:0000000011485274

- 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.

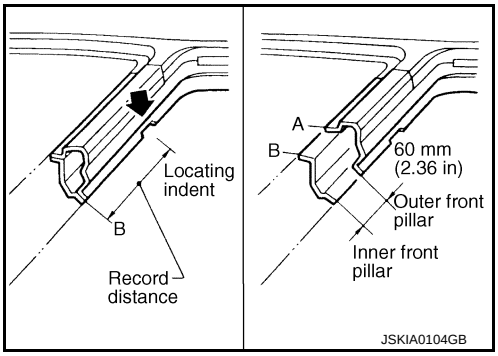
The symbols used in this section for welding operations are shown below.

<table>
<tr><th>Symbol marks</th><th colspan="2">Description</th></tr>
<tr><td> 
JSKIA0049ZZ</td><td>2-spot welds</td><td rowspan="2"> 
JSKIA0053ZZ</td></tr>
<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>

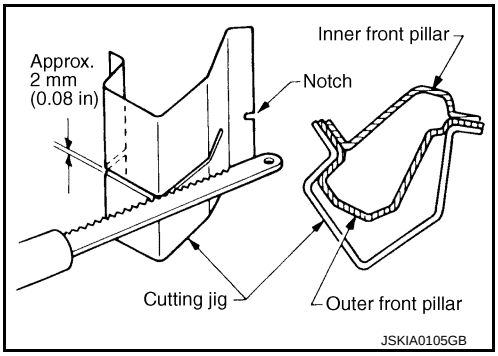
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.



- 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.

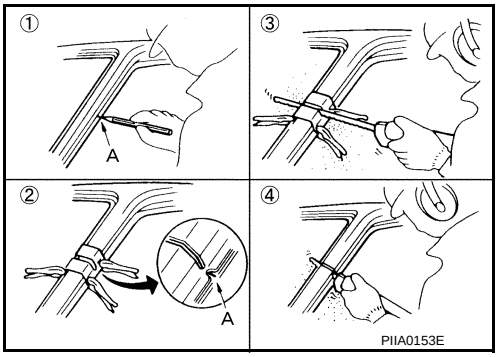


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.



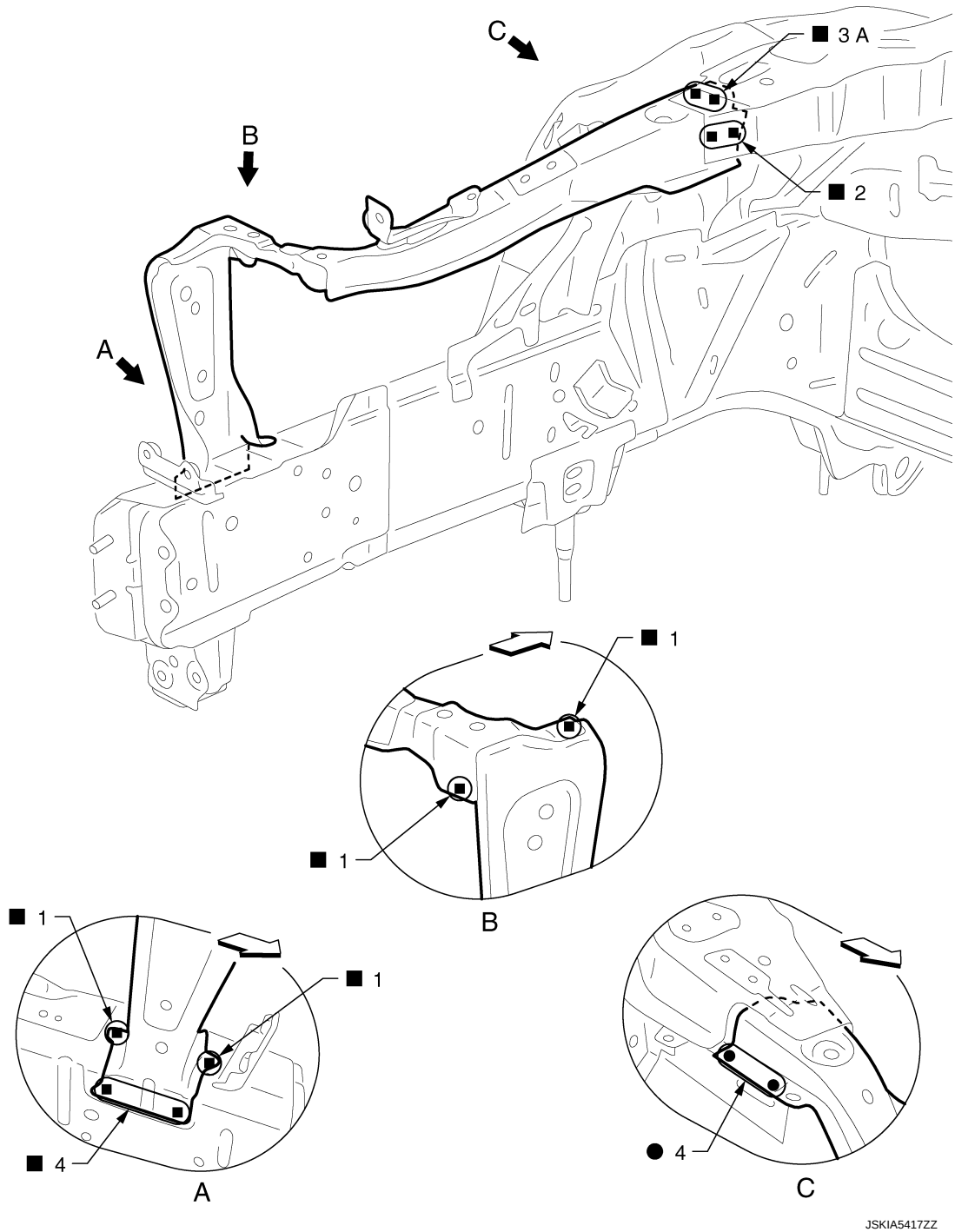
- An example of cutting operation using a cutting jig is as per the following.

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.



Radiator Core Support

INFOID:0000000011485275



⇦: Vehicle front

Replacement parts

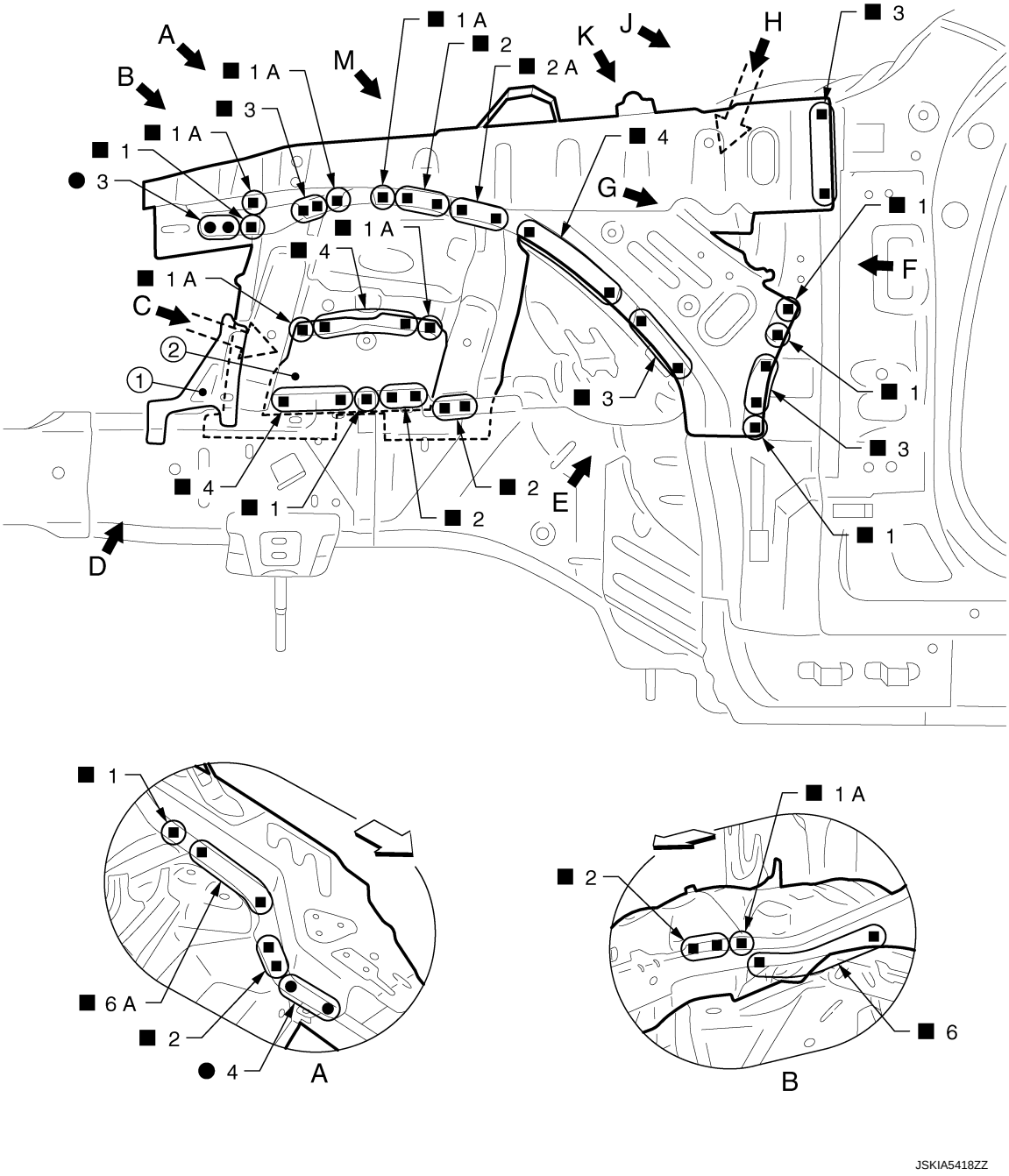
- Side radiator core support (LH)
- Front side member connector assembly (LH)

Hoodledge

INFOID:0000000011485276

Work after radiator core support is removed.

Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable).



JSKIA5418ZZ

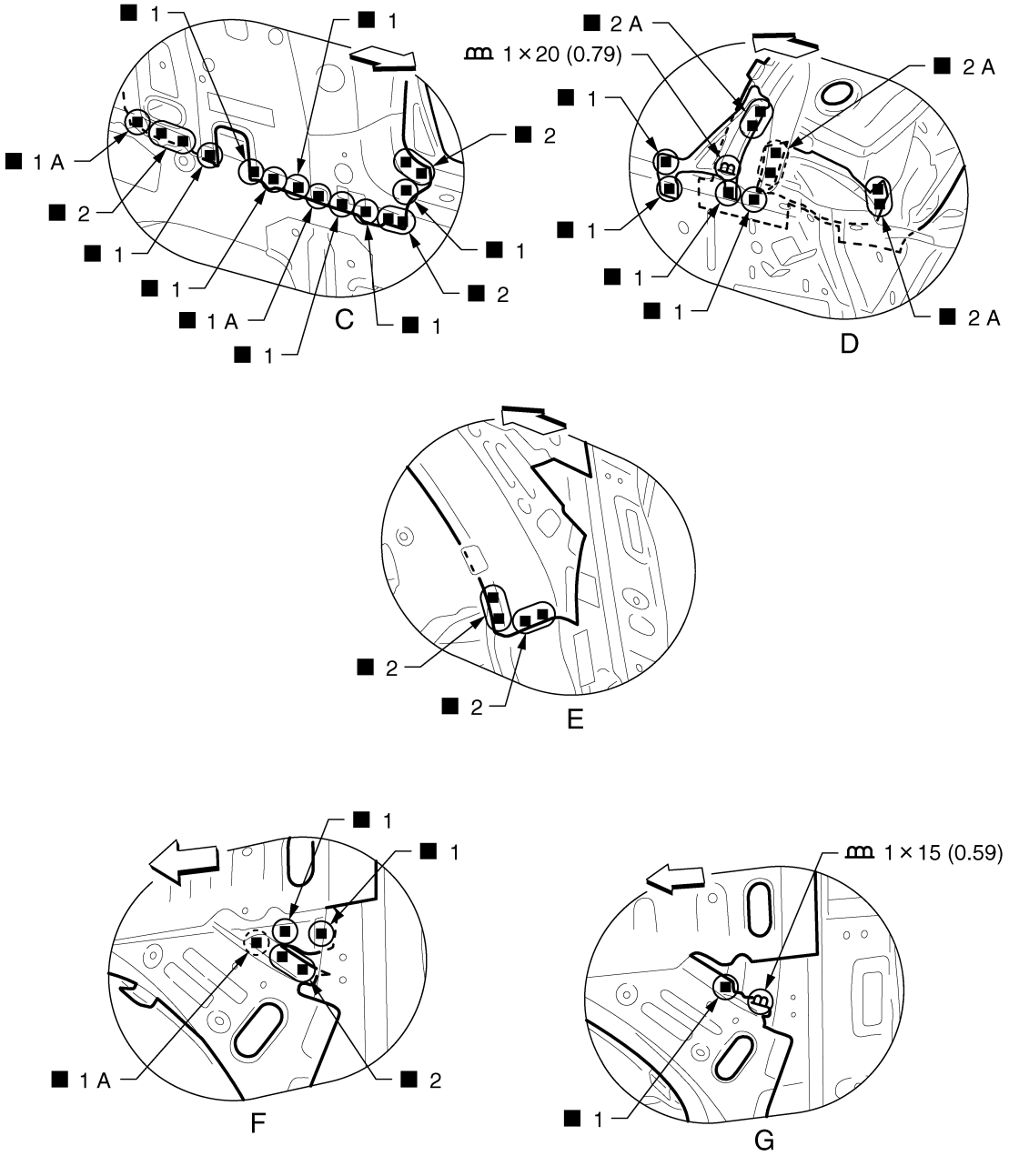
1. Front side member extension front reinforcement (reusable)
2. Front side member center closing plate (reusable)

⇦: Vehicle front

Replacement parts

- Upper front hoodledge (LH)
- Hoodledge reinforcement (LH)
- Front strut housing (LH)

View B: Before installing hoodledge reinforcement

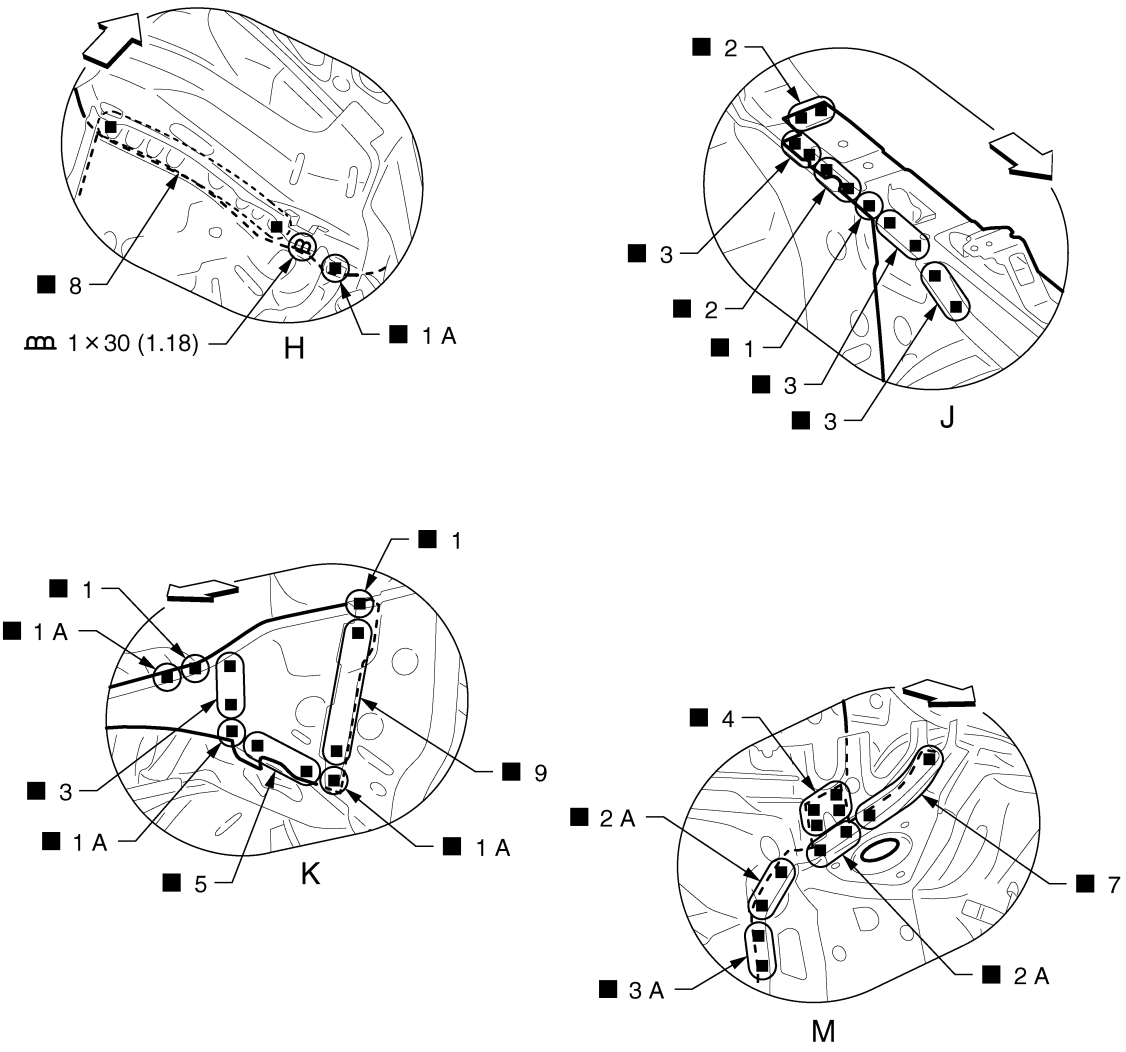


JSKIA5419GB

Unit: mm (in)

⇦: Vehicle front

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



JSKIA5420GB

Unit: mm (in)

⇦: Vehicle front

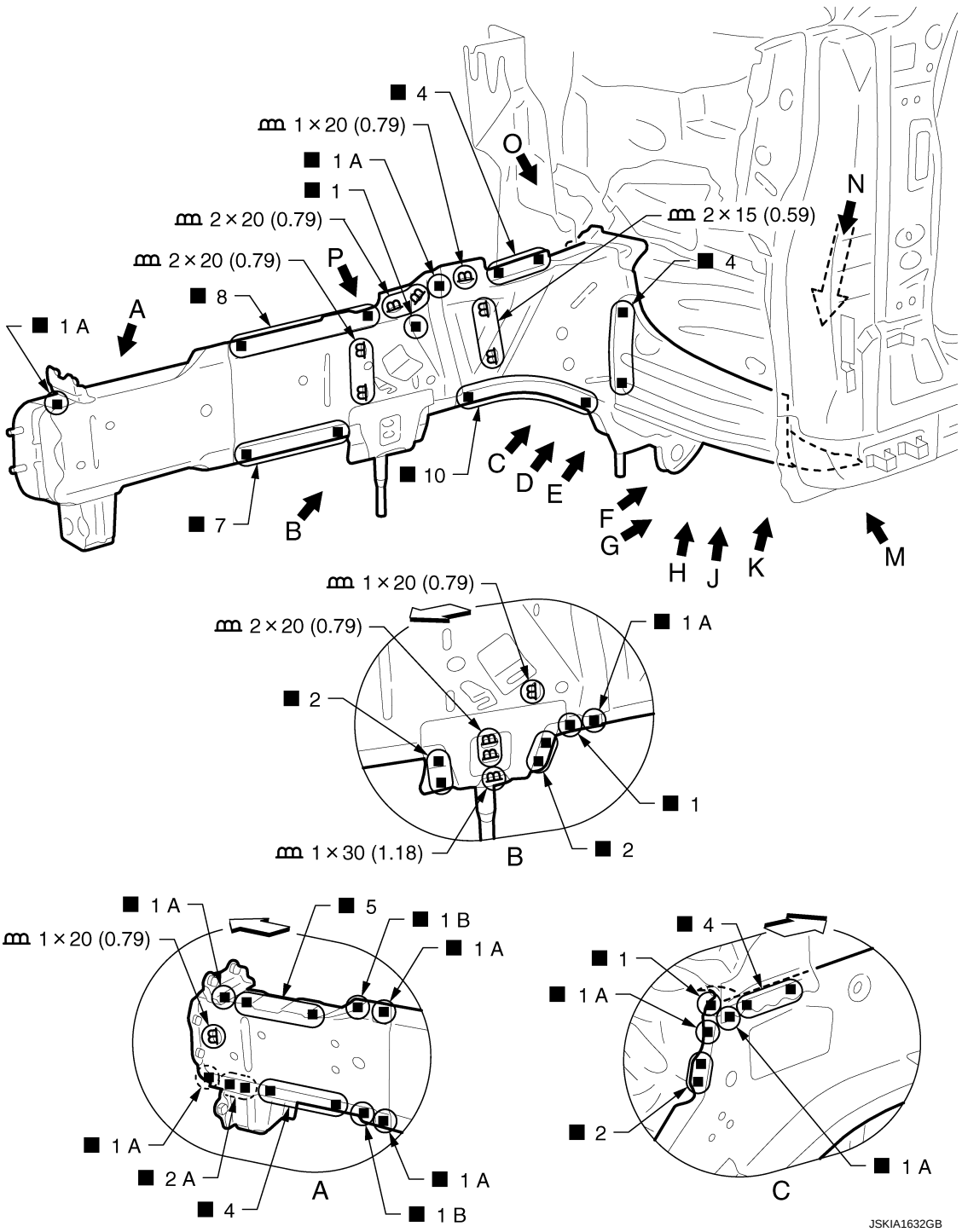
( ): Weld the parts onto the back of the component part.

View K: Before installing hoodledge reinforcement

Front Side Member (2WD)

INFOID:0000000011485277

Work after radiator core support and hoodledge are removed.
Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable) from the service part "front side member closing plate assembly" for easier installation of hoodledge.



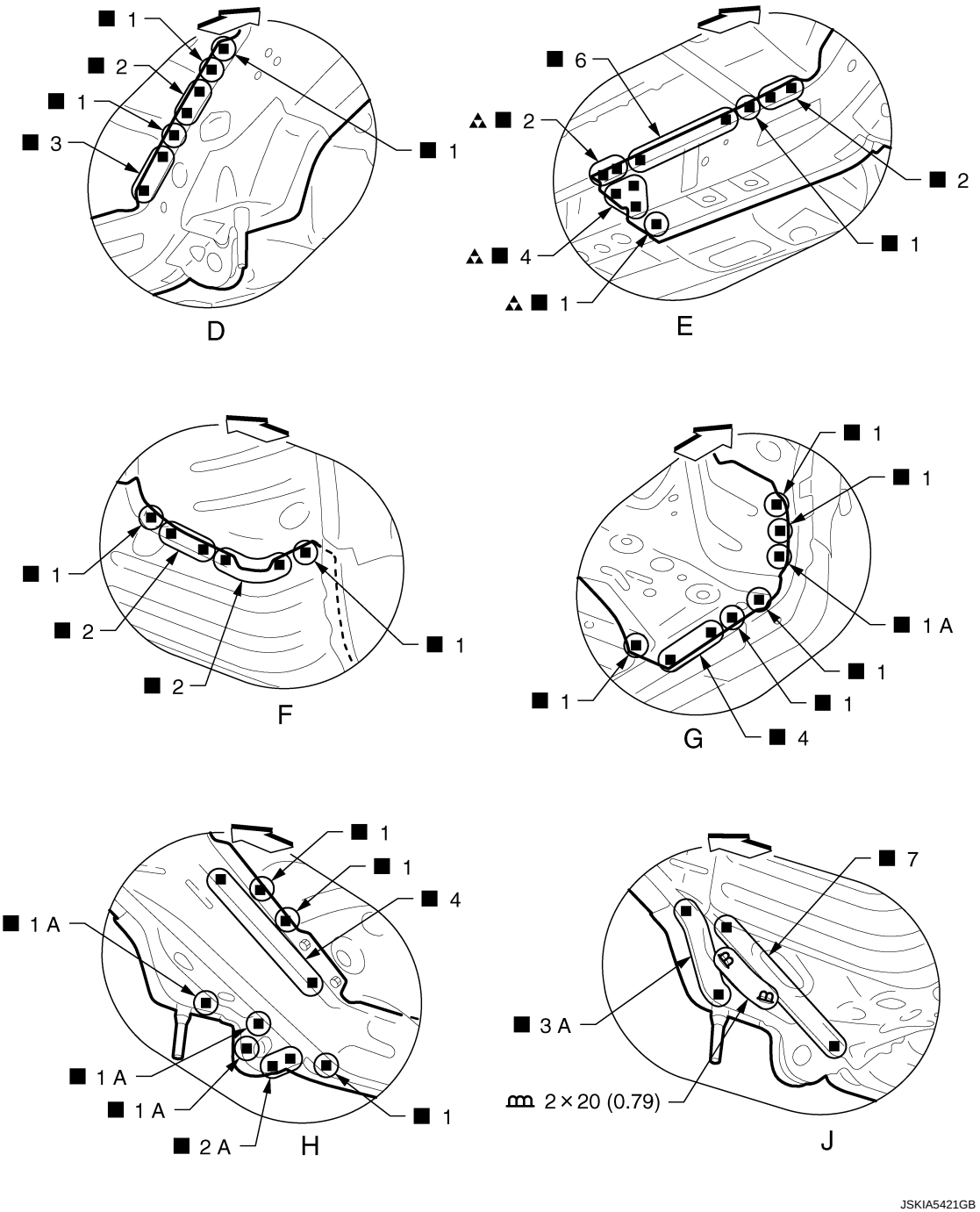
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

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



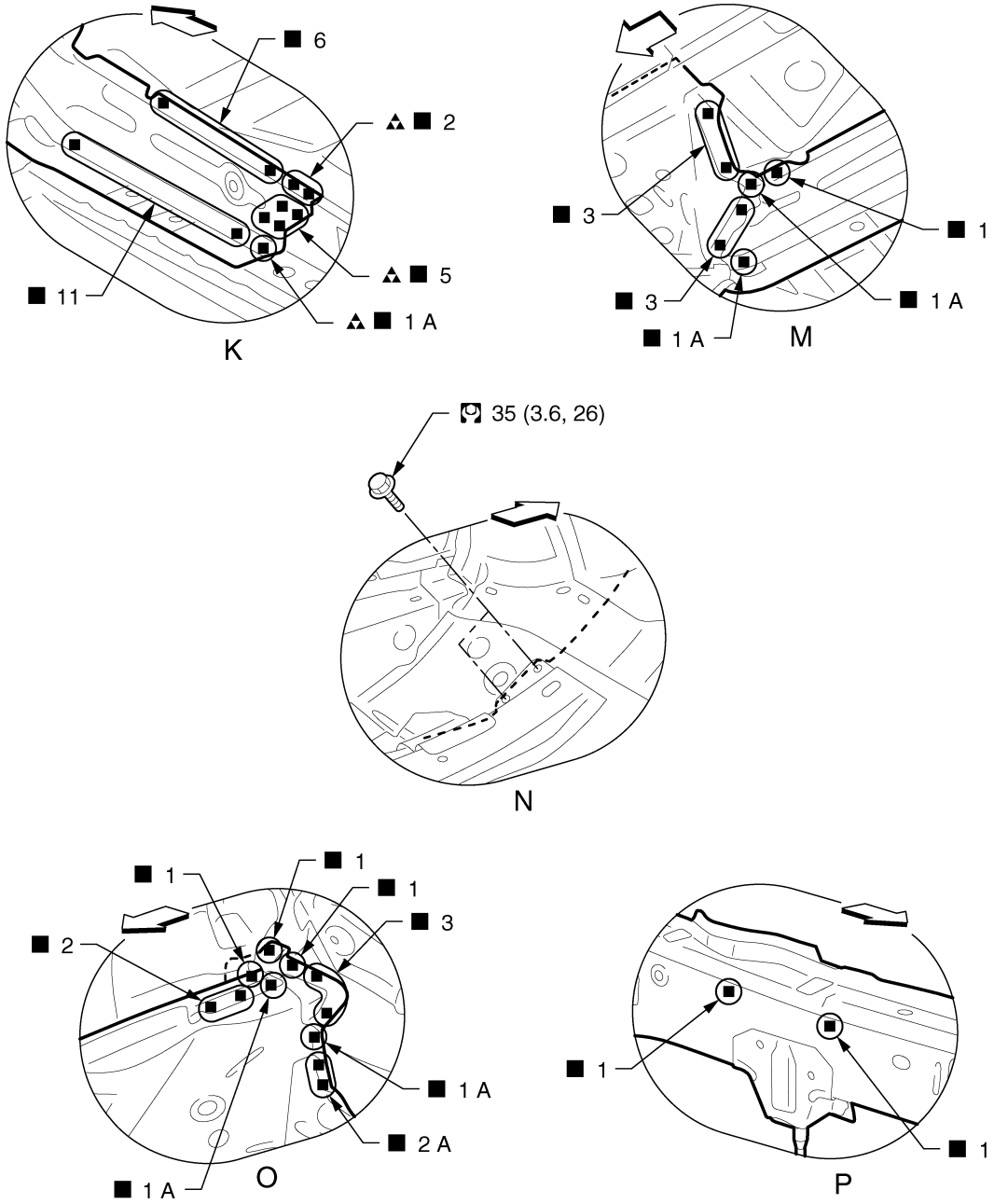
JSKIA5421GB

Unit: mm (in)

⇦: Vehicle front

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

View H: Before installing front side member outrigger assembly



JSKIA5422GB

⇦: Vehicle front

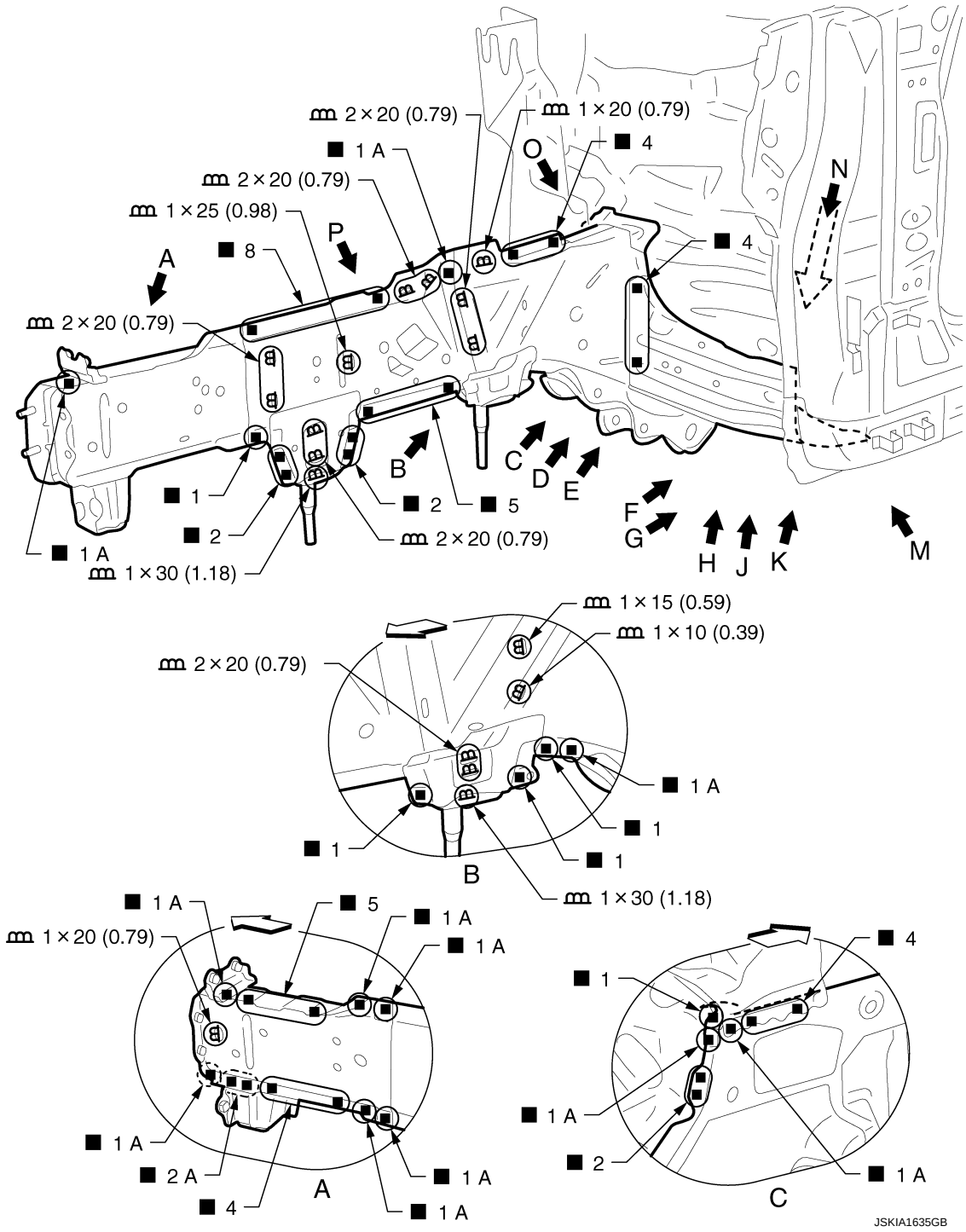
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel plate).
Refer to GI-4, "Components" for symbols in the figure.

View K: Before installing front side member outrigger assembly

Front Side Member (AWD)

INFOID:0000000011485278

Work after radiator core support and hoodledge are removed.
Remove the front side member extension front reinforcement (reusable) and front side member center closing plate (reusable) from the service part "front side member closing plate assembly" for easier installation of hoodledge.



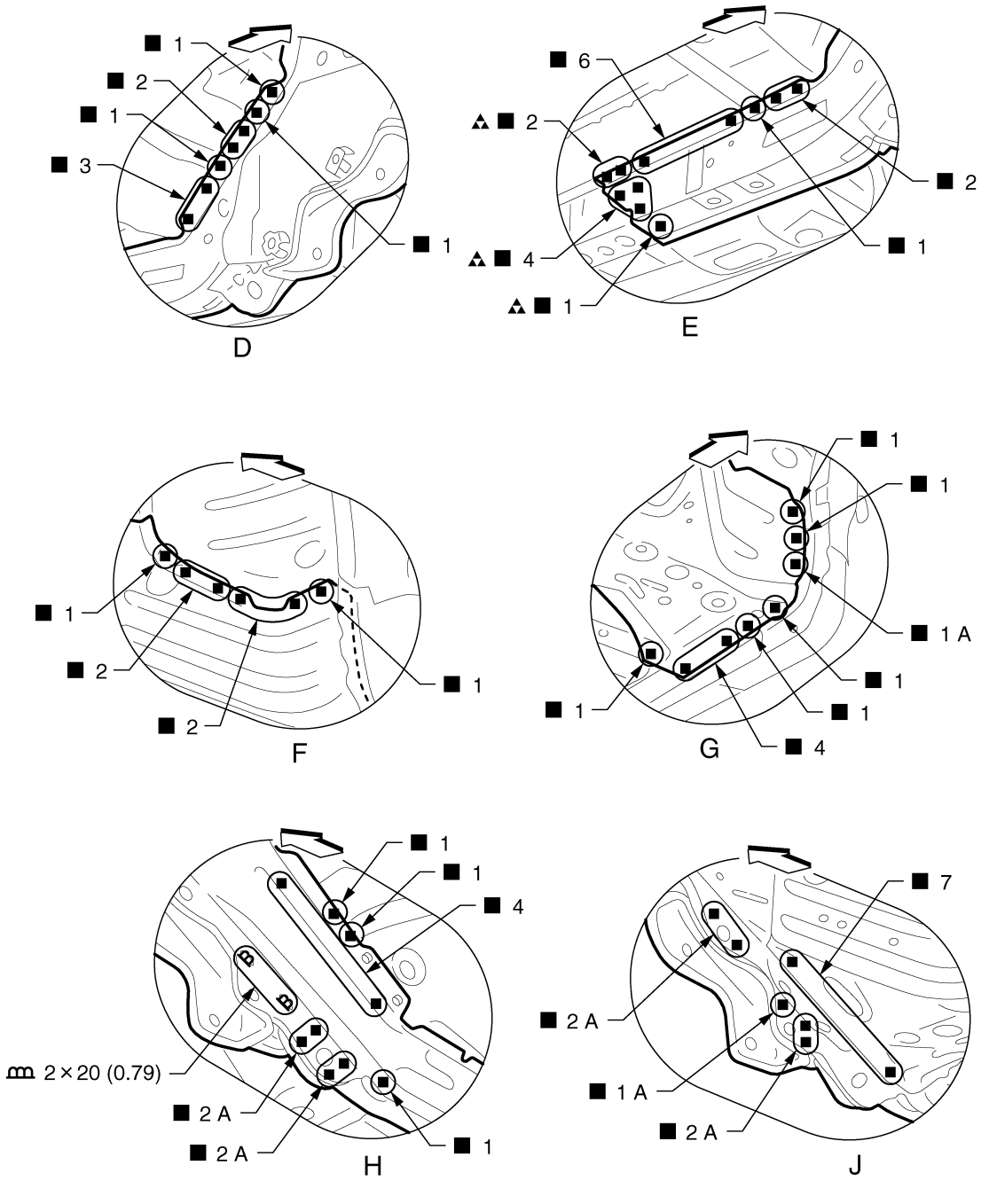
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

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

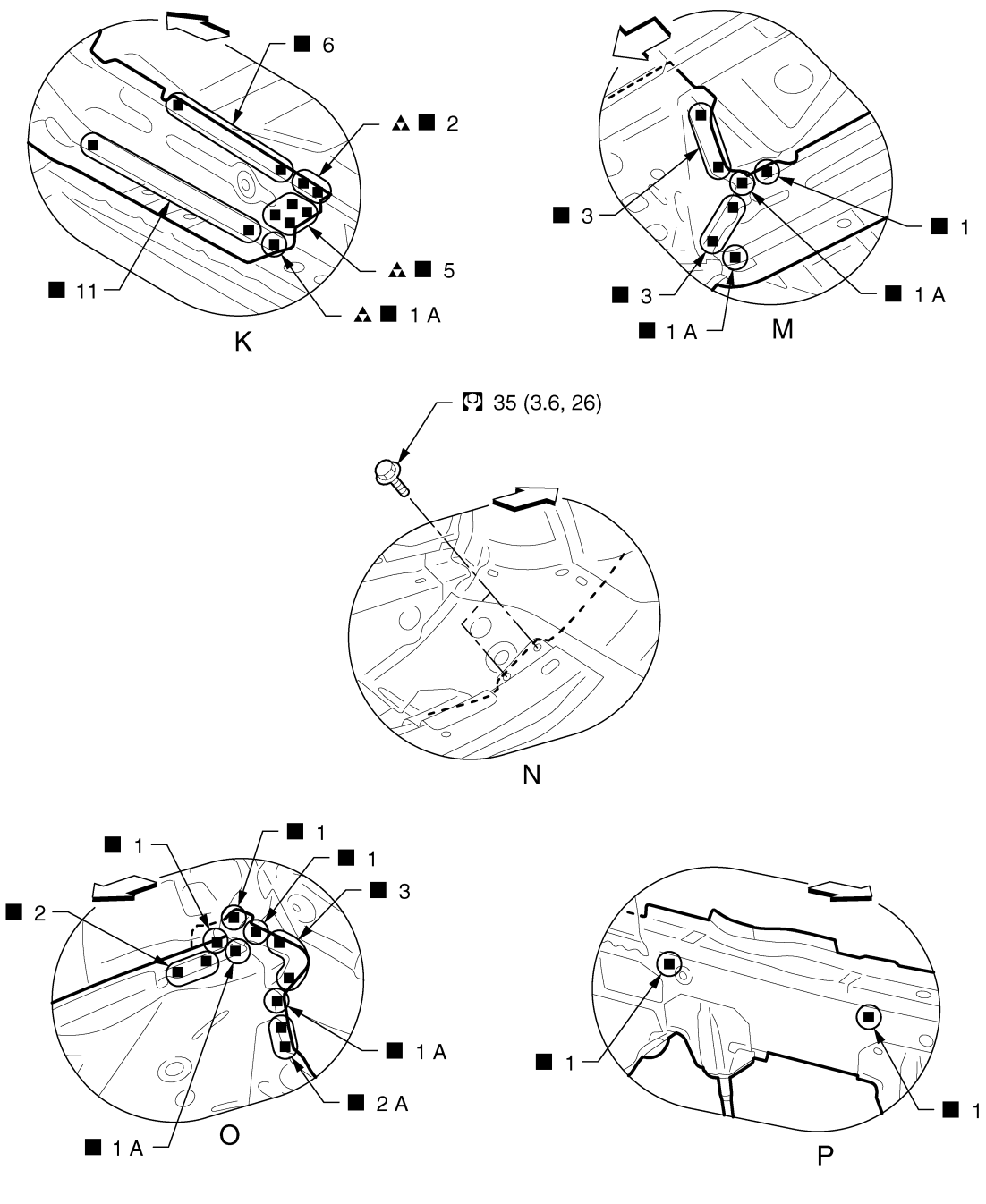


Unit: mm (in)

⇦: Vehicle front

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

View H: Before installing front side member outrigger assembly



⇦: Vehicle front

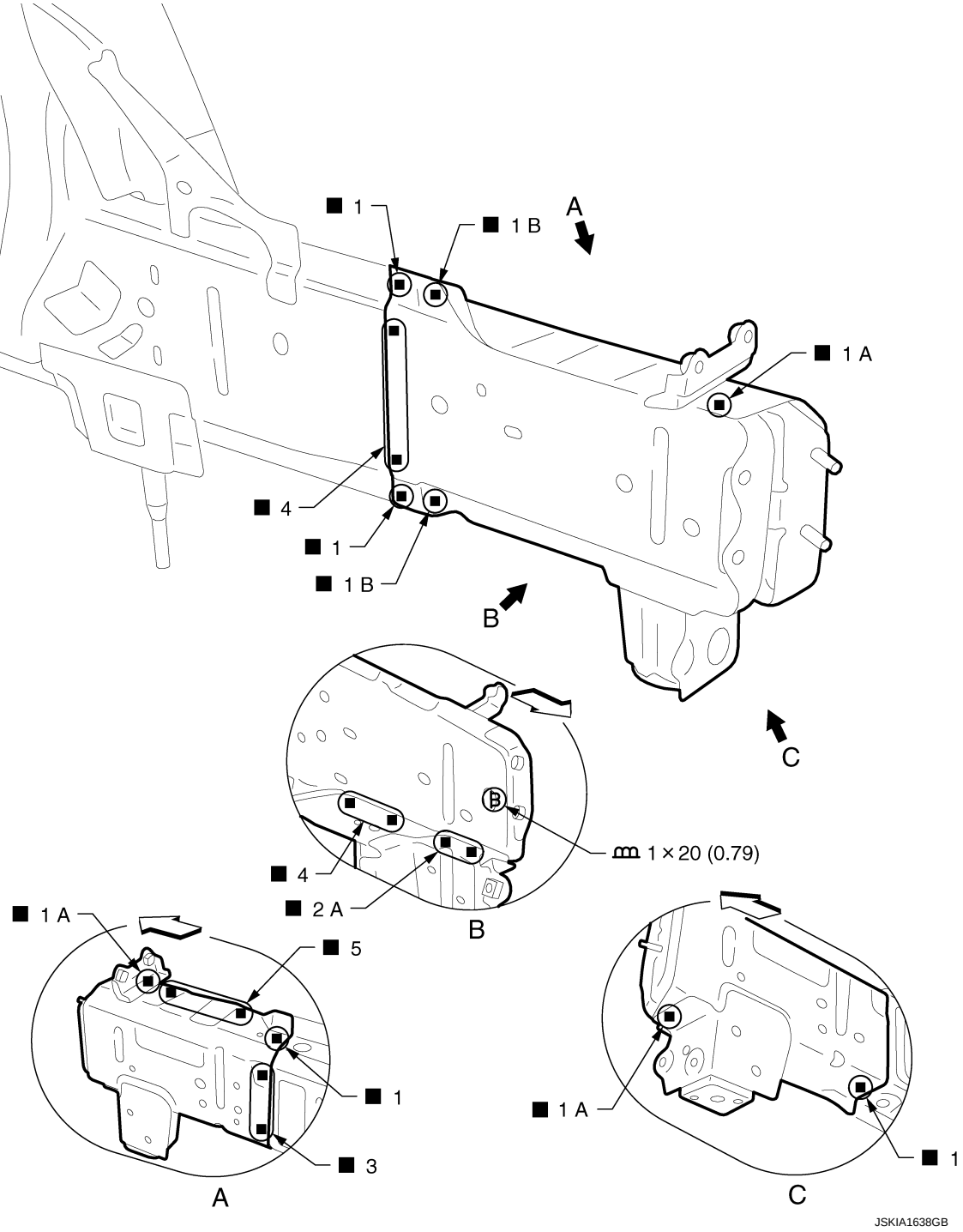
▲: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel plate).
Refer to GI-4, "Components" for symbols in the figure.

View K: Before installing front side member outrigger assembly

Front Side Member (Partial Replacement)

INFOID:0000000011496580

Work after radiator core support is removed.



JSKIA1638GB

Unit: mm (in)

⇦: Vehicle front

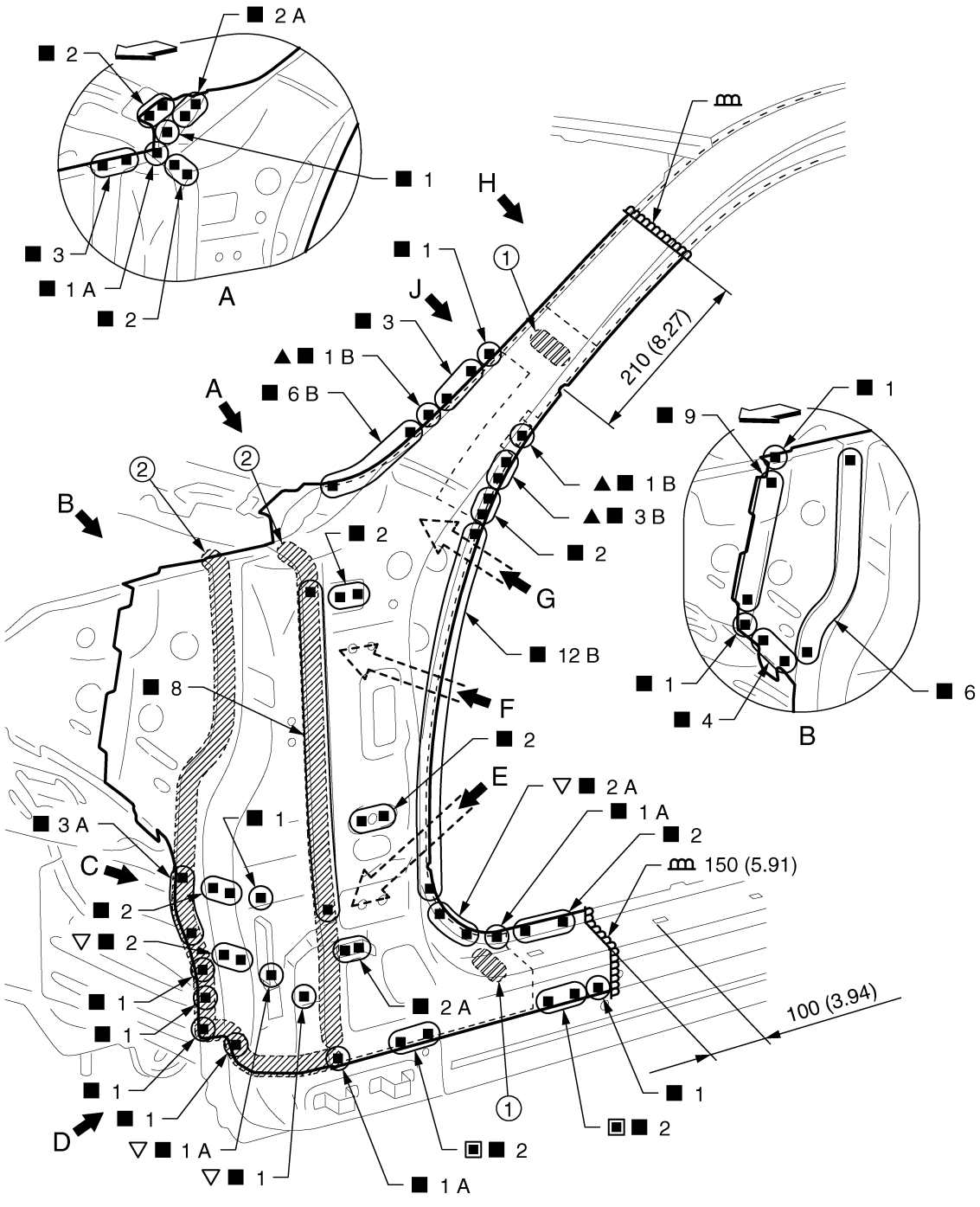
Replacement parts

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

Front Pillar

INFOID:0000000011485280

Work after hoodledge reinforcement is removed.



1. Urethane foam
2. Body sealing

Unit: mm (in)

⇦: Vehicle front

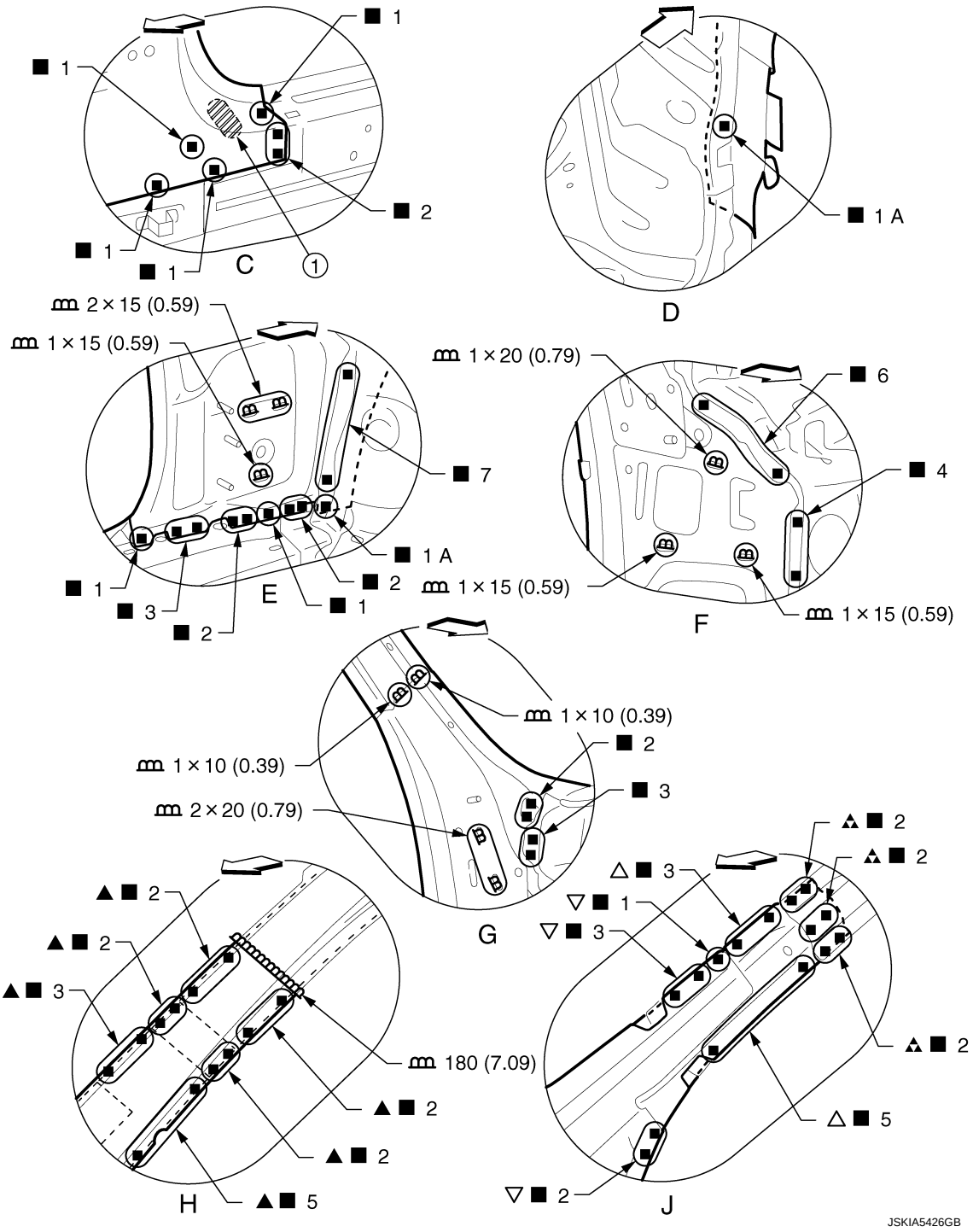
■: Perform the plug welding instead of the laser welding.

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

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

Replacement parts

- Outer front side body (LH)
- Outer front pillar reinforcement (LH)
- Upper rear hoodledge (LH)
- Front fender bracket



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

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

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

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

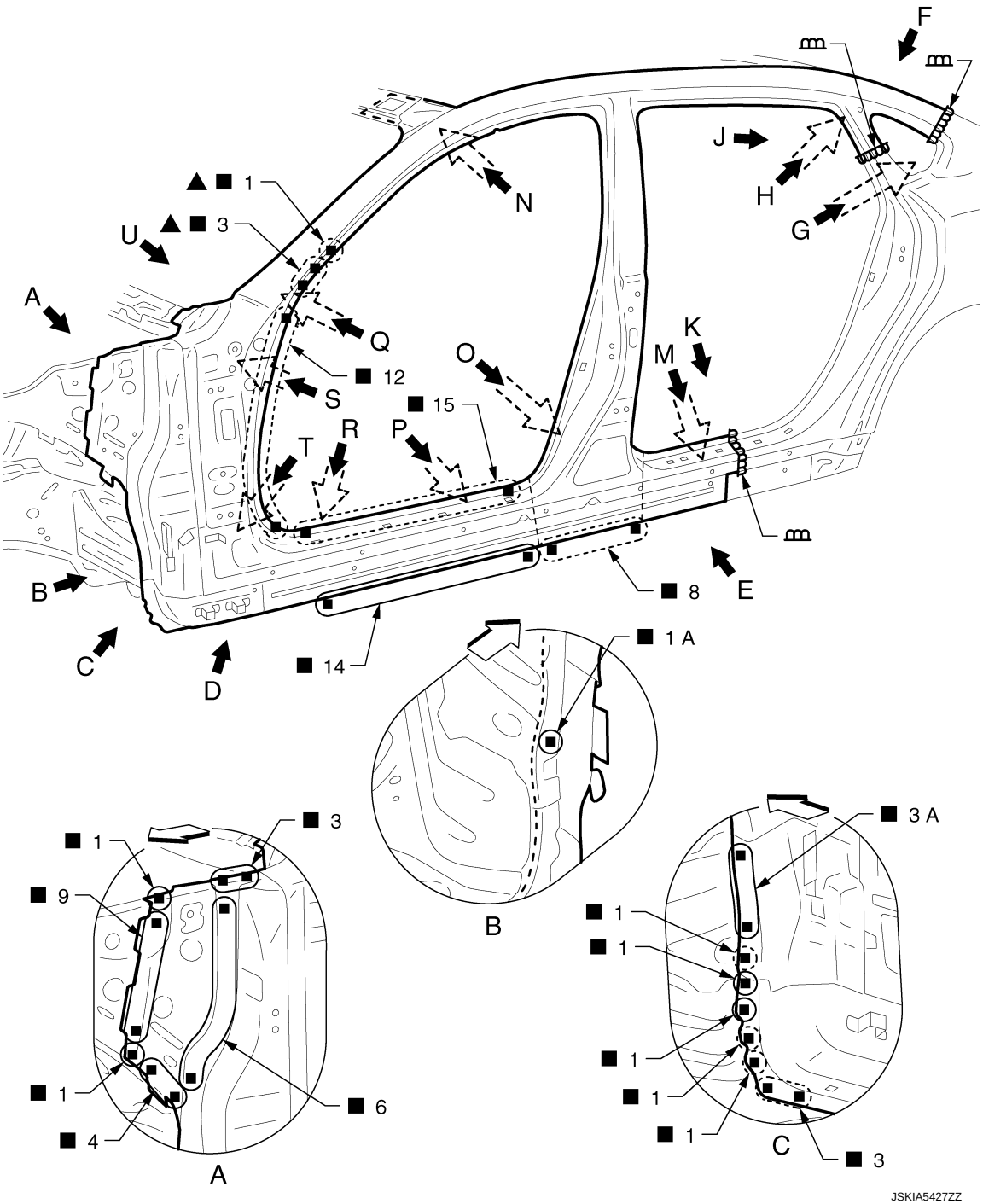
▲△▽: Drill ϕ10 mm (0.39 in) hole for the plug welding hole (ultra high strength steel plate).

View C and J: Before installing outer front side body

Side Body

INFOID:0000000011485281

Work after hoodledge reinforcement and roof are removed.



JSKIA5427ZZ

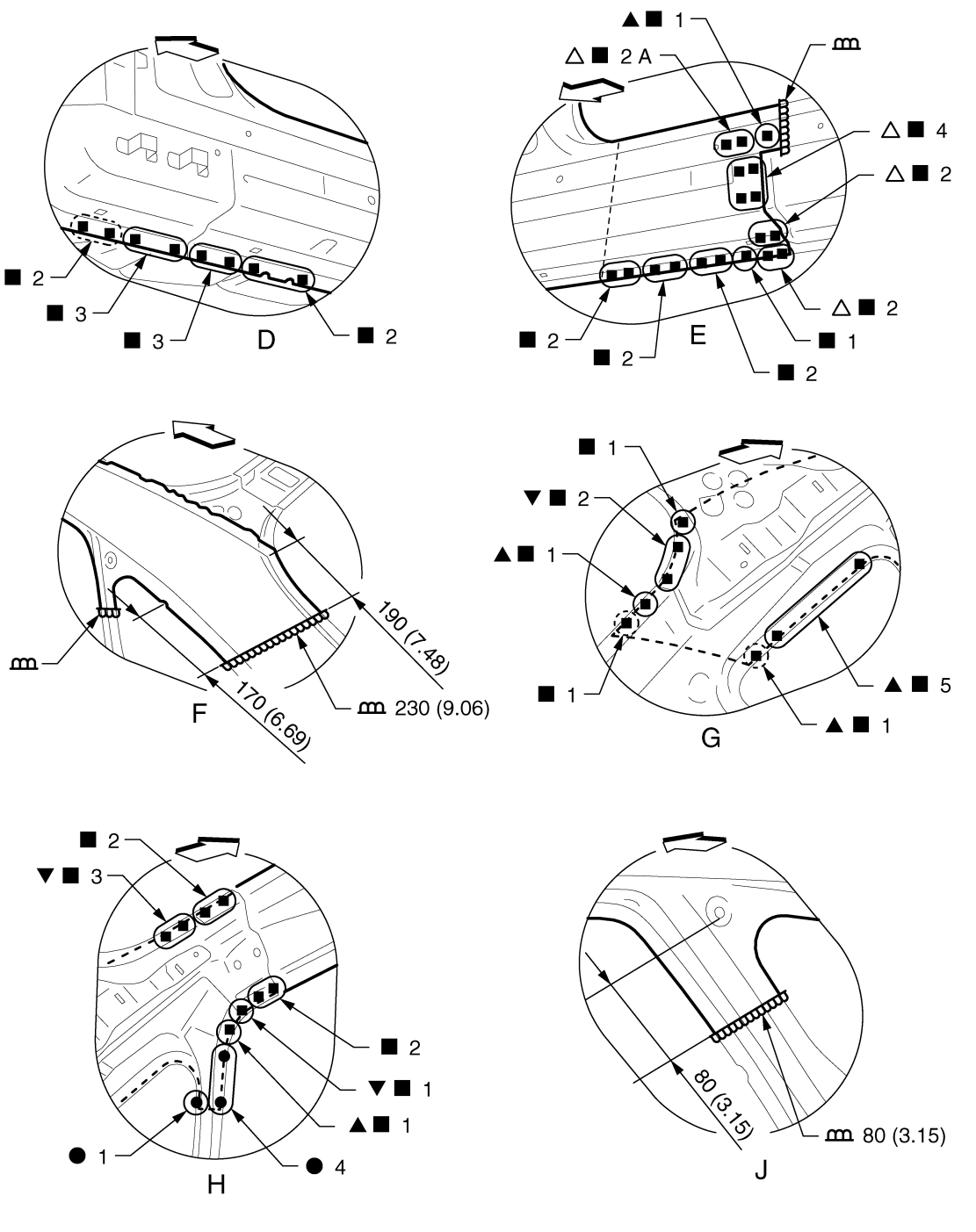
⇦: Vehicle front

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

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

Replacement parts

- Side body assembly (LH)
- Upper rear hoodledge (LH)



JSKIA5428GB

Unit: mm (in)

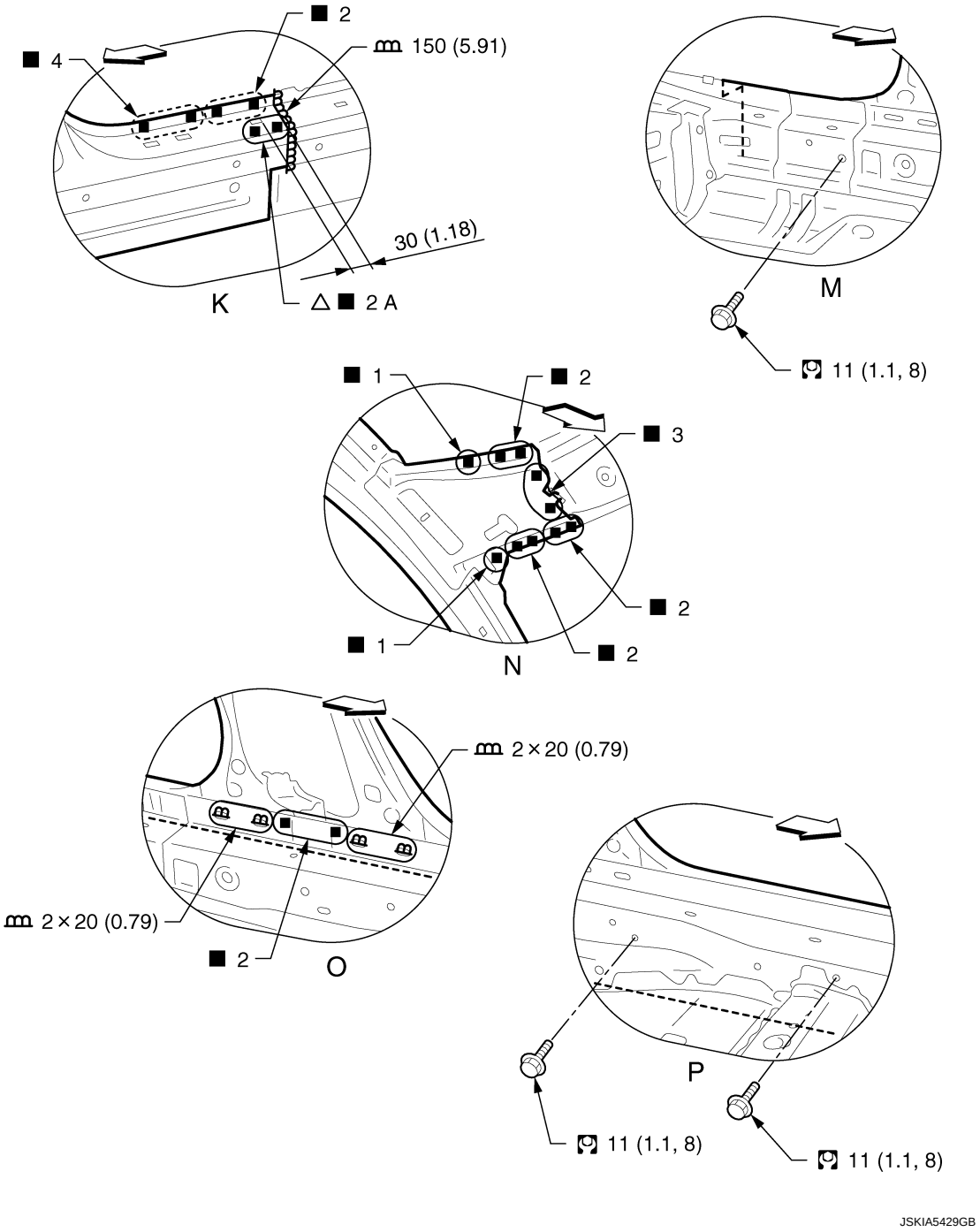
⇦: Vehicle front

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

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

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

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



JSKIA5429GB

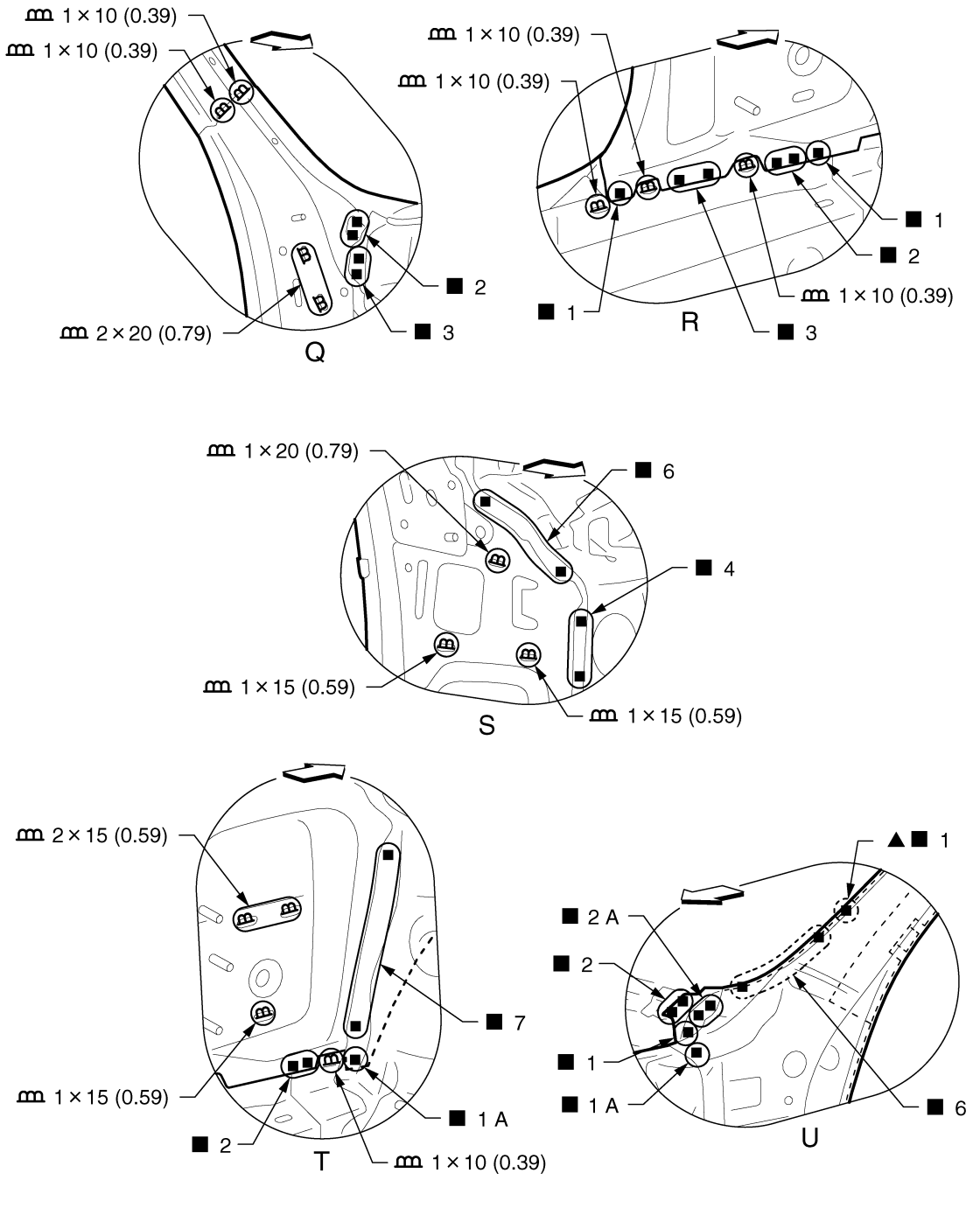
Unit: mm (in)

⇦: Vehicle front

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

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

Refer to GI-4, "Components" for symbols in the figure.



Unit: mm (in)

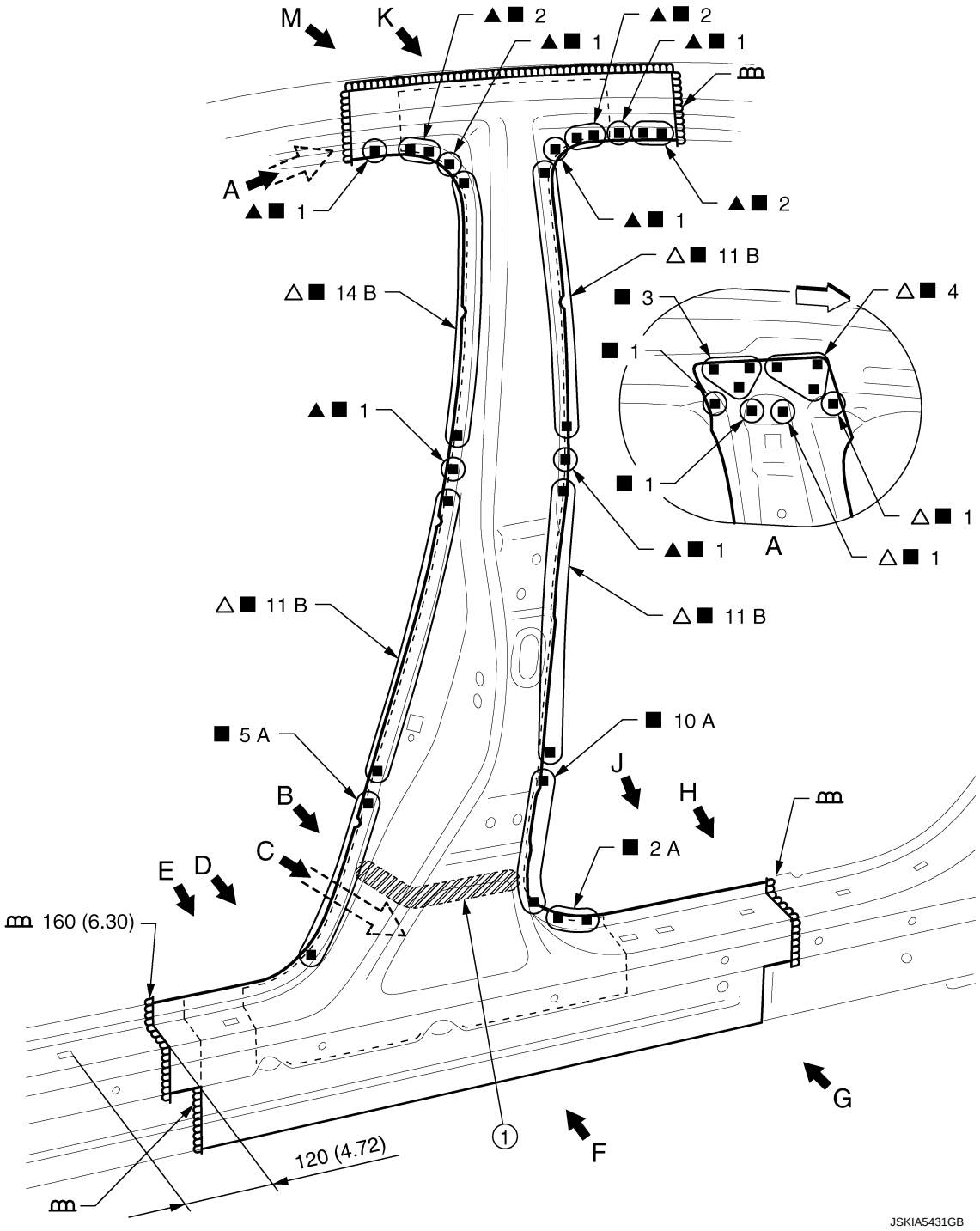
⇦: Vehicle front

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

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

Center Pillar

INFOID:0000000011485282



1. Urethane foam

Unit: mm (in)

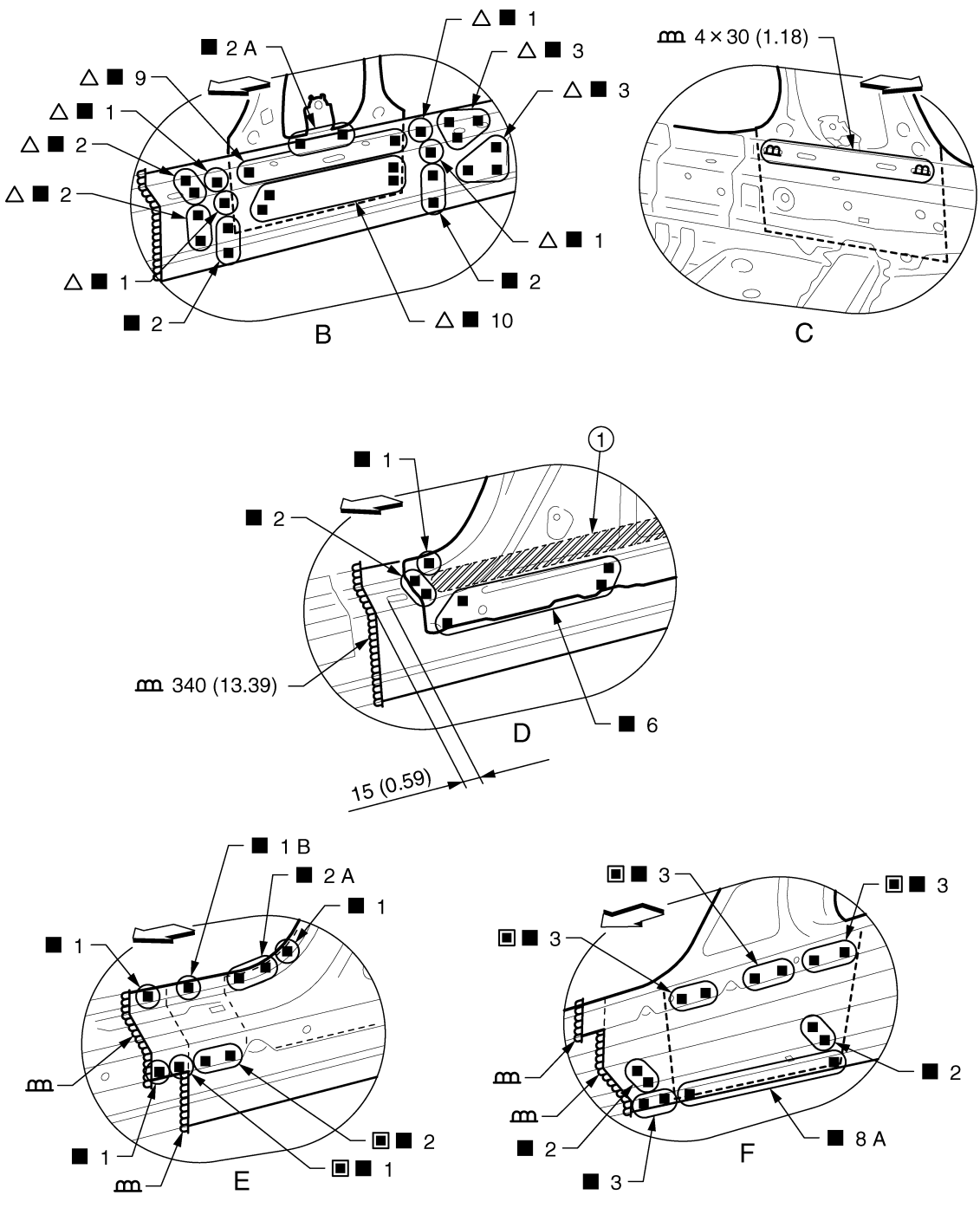
⇦: Vehicle front

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

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

Replacement parts

- Outer front side body (LH)
- Center pillar reinforcement (LH)
- Inner center pillar (LH)



1. Urethane foam

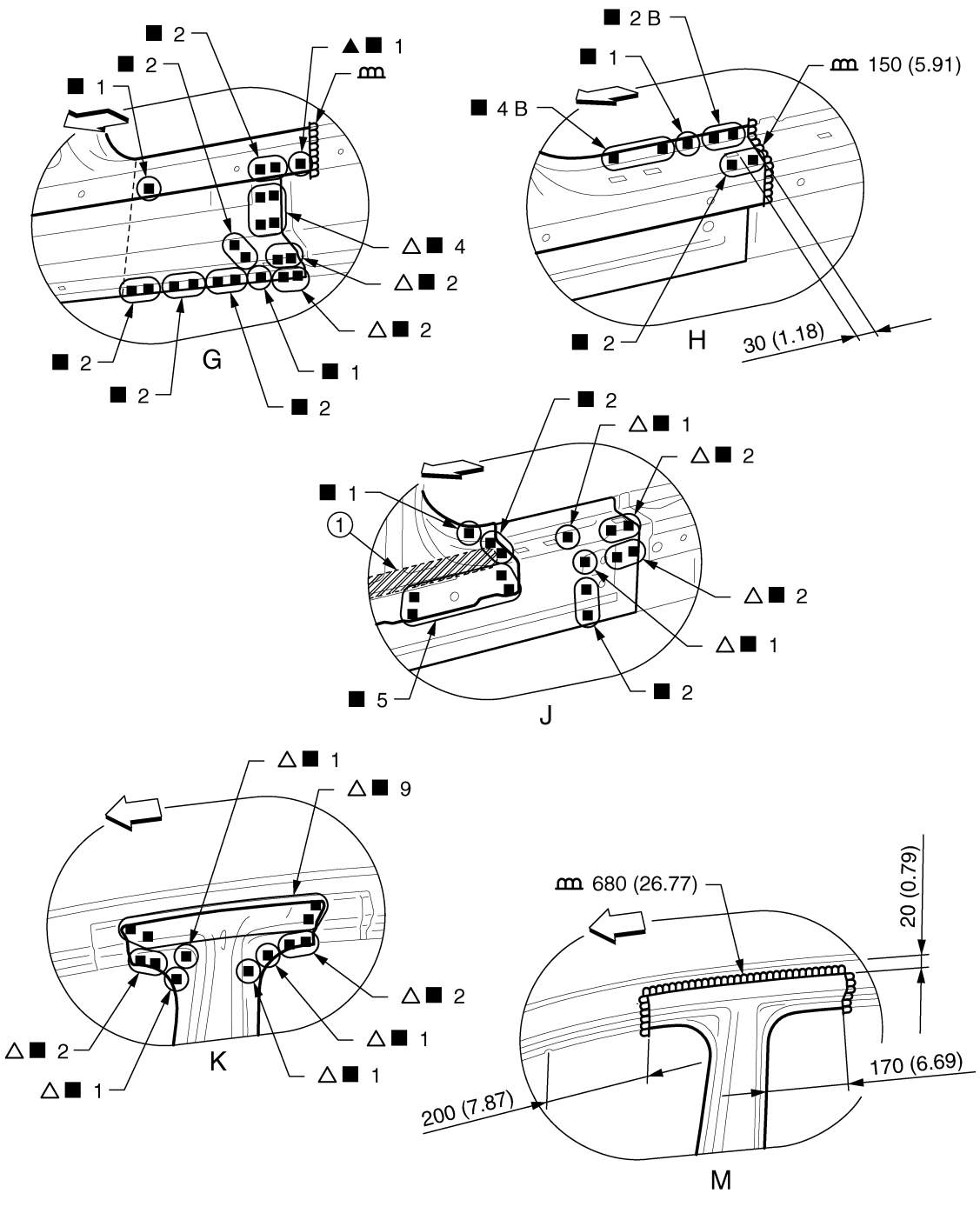
Unit: mm (in)

⇦: Vehicle front

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

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

View B: Before installing outer front side body and center pillar reinforcement
View D: Before installing outer front side body



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

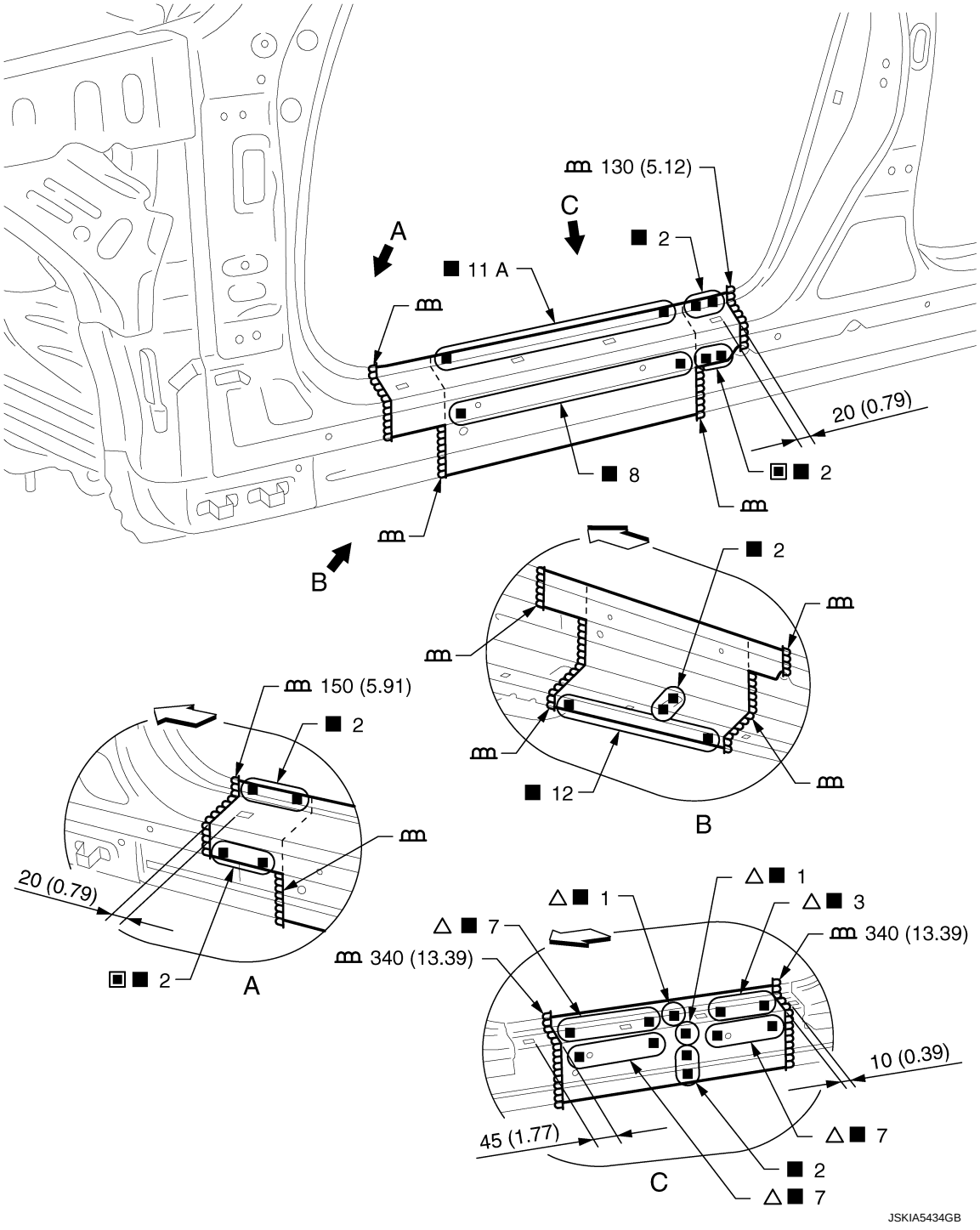
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel plate).

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

View J and K: Before installing outer front side body

Outer Sill (Partial Replacement)

INFOID:0000000011485283



Unit: mm (in)

⇦: Vehicle front

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

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

Replacement parts

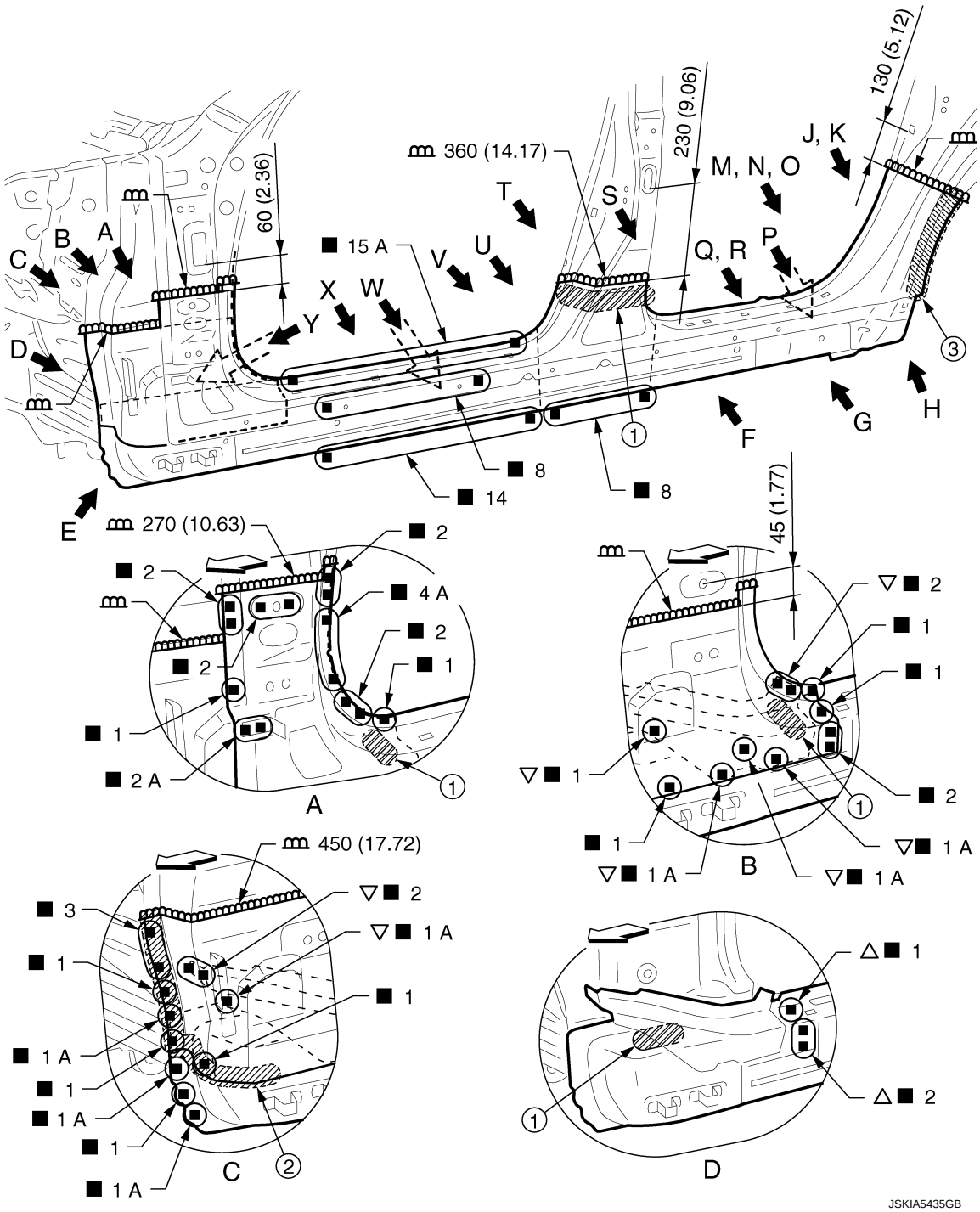
- Outer sill (LH)
- Outer sill reinforcement (LH)

View C: Before installing outer sill

Outer Sill

INFOID:0000000011485284

Work after hoodledge reinforcement is removed.
Remove the outer front pillar reinforcement (reusable) and center pillar reinforcement (reusable) for easier installation.



JSKIA5435GB

1. Urethane foam
2. Body sealing
3. Adhesive

Unit: mm (in)

⇦: Vehicle front

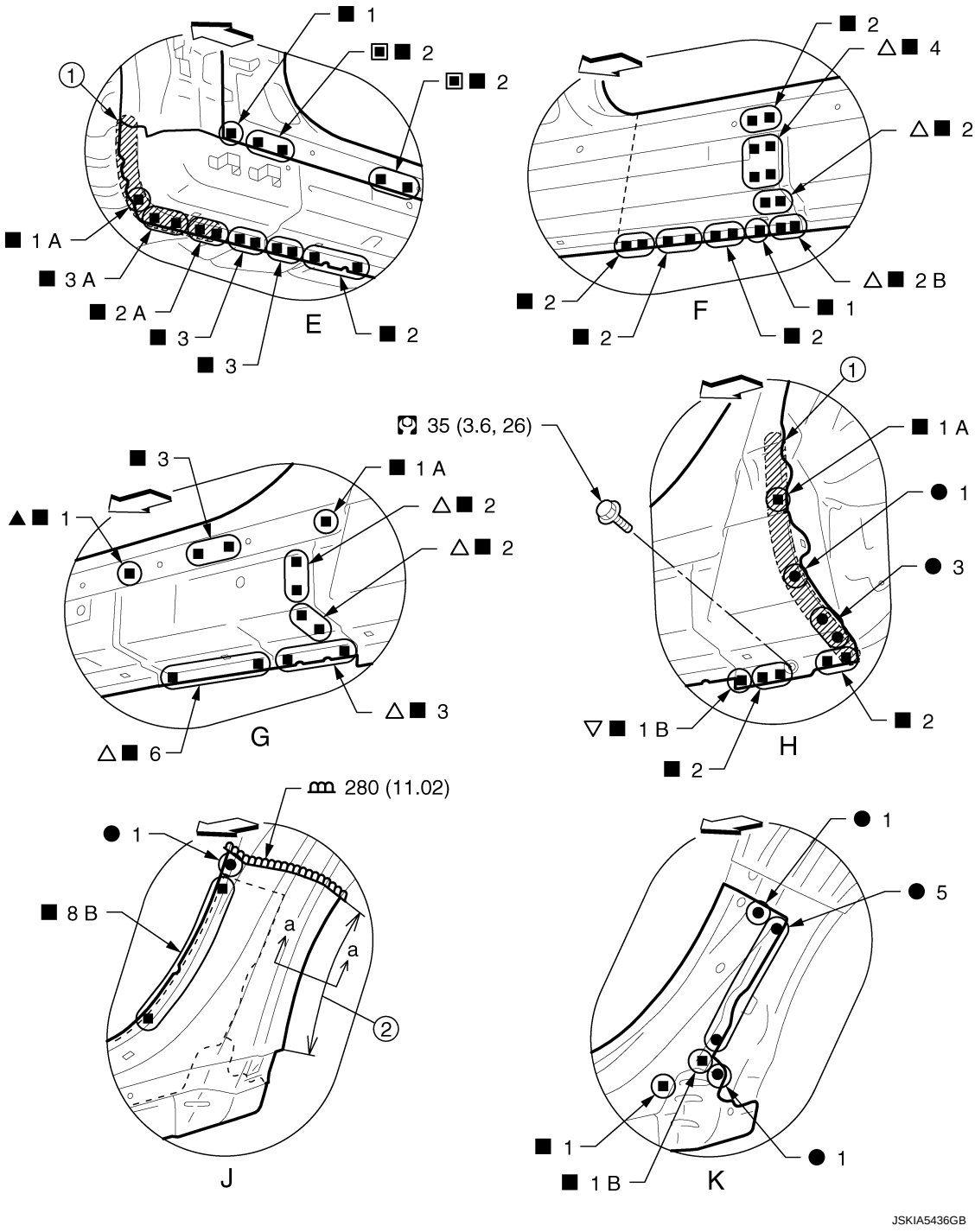
△: Drill ϕ8 mm (0.31 in) hole for the plug welding hole (ultra high strength steel plate).

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

Replacement parts

- Outer sill (LH)
- Outer sill reinforcement (LH)
- Outer rear wheelhouse extension (LH, Upper)
- Outer rear wheelhouse extension (LH, Lower)
- Front fender bracket

View B and C: Before installing outer sill
View D: Before installing outer sill and outer front pillar reinforcement



1. Body sealing
2. Hemming portion

Unit: mm (in)

⇦: Vehicle front

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

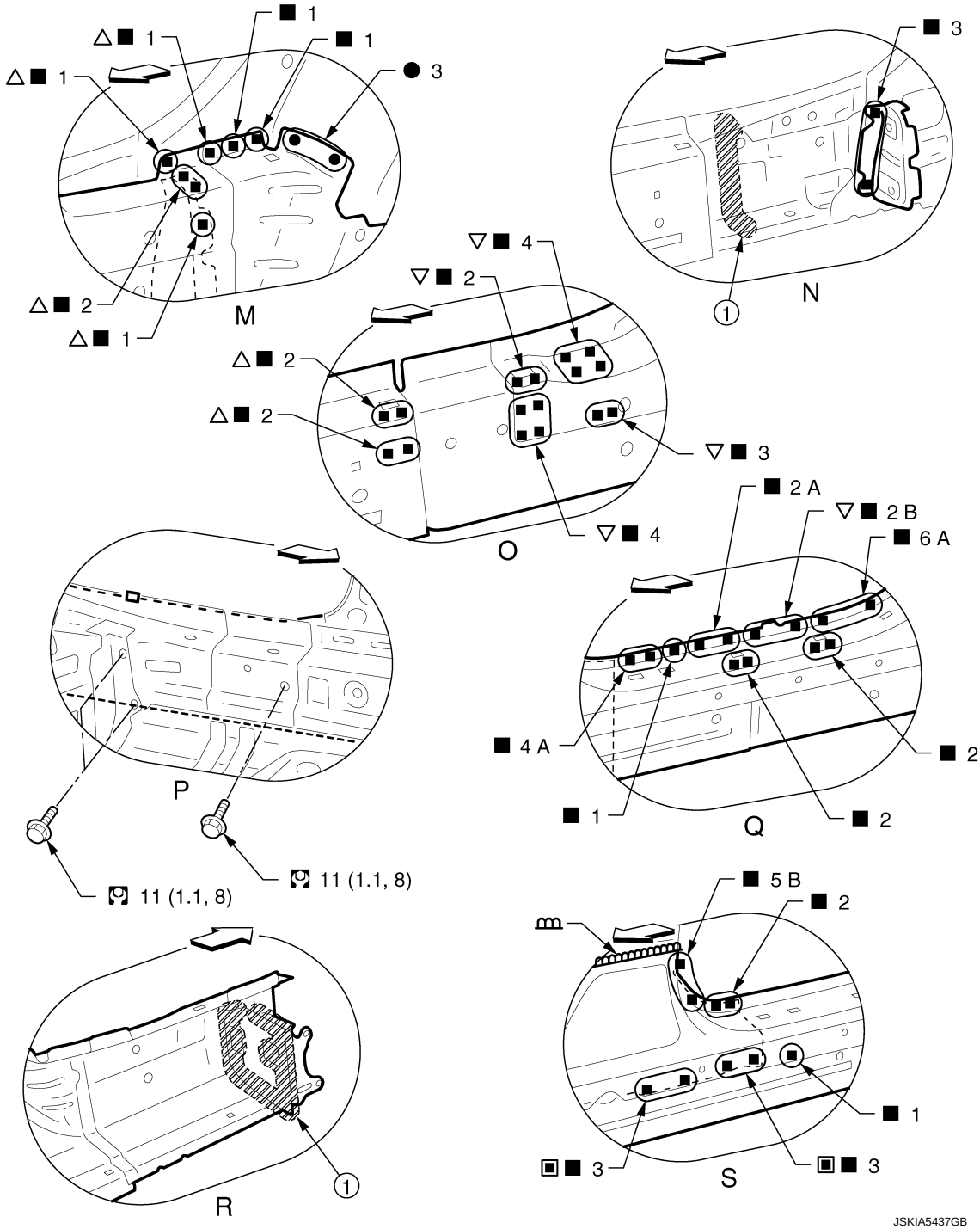
▲: Drill ϕ6 mm (0.24 in) hole for the plug welding hole (ultra high strength steel plate).

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

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

Refer to GI-4, "Components" for symbols in the figure.

View K: Before installing outer sill



1. Urethane foam

⇦: Vehicle front

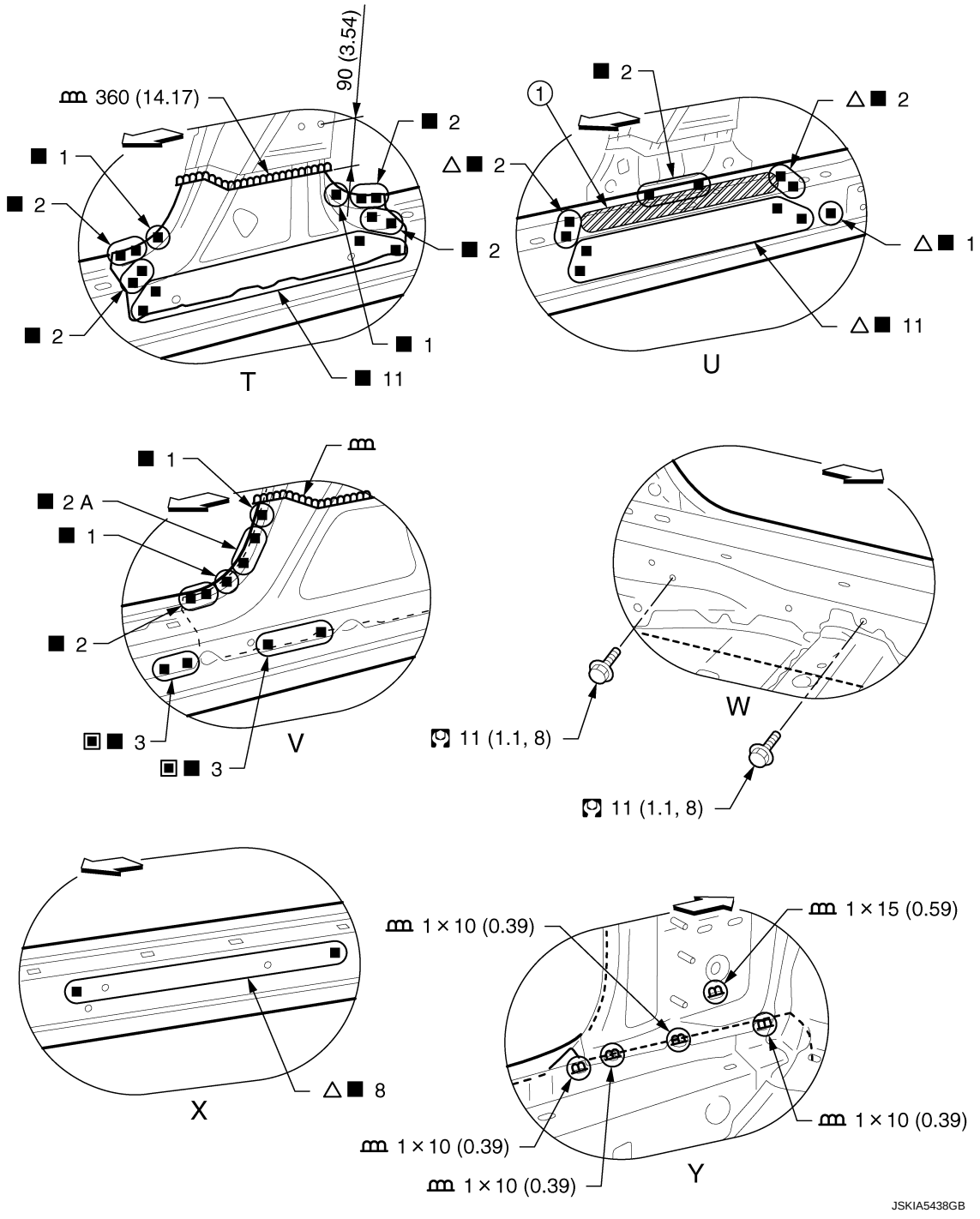
■: Perform the plug welding instead of the laser welding.

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

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

Refer to GI-4, "Components" for symbols in the figure.

View M: Before installing outer sill and outer rear wheelhouse extension (Upper)
View N: Before installing outer sill, outer rear wheelhouse extension (Upper), and outer rear wheelhouse extension (Lower)
View O: Before installing outer sill
View R: Outer rear wheelhouse extension (Lower, reusable)



1. Urethane foam

Unit: mm (in)

⇦: Vehicle front

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

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

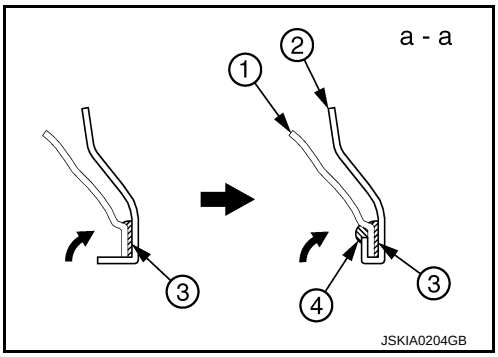
Refer to GI-4, "Components" for symbols in the figure.

View T and S: Before installing outer sill

View U: Before installing outer sill and center pillar reinforcement

POINT

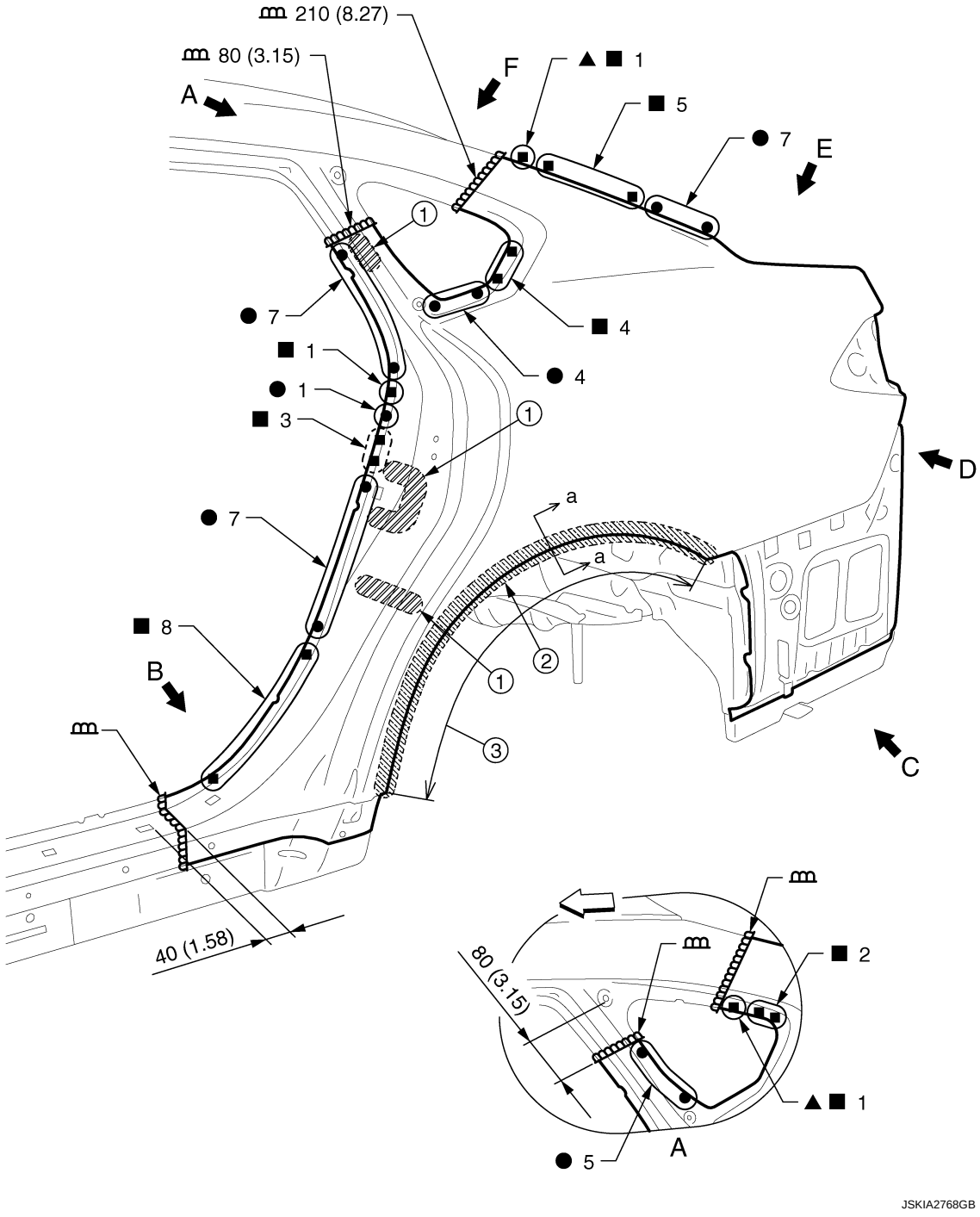
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-113, "Rear Fender Hemming Process".



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

Rear Fender

INFOID:0000000011485285



1. Urethane foam
2. Adhesive
3. Hemming portion

Unit: mm (in)

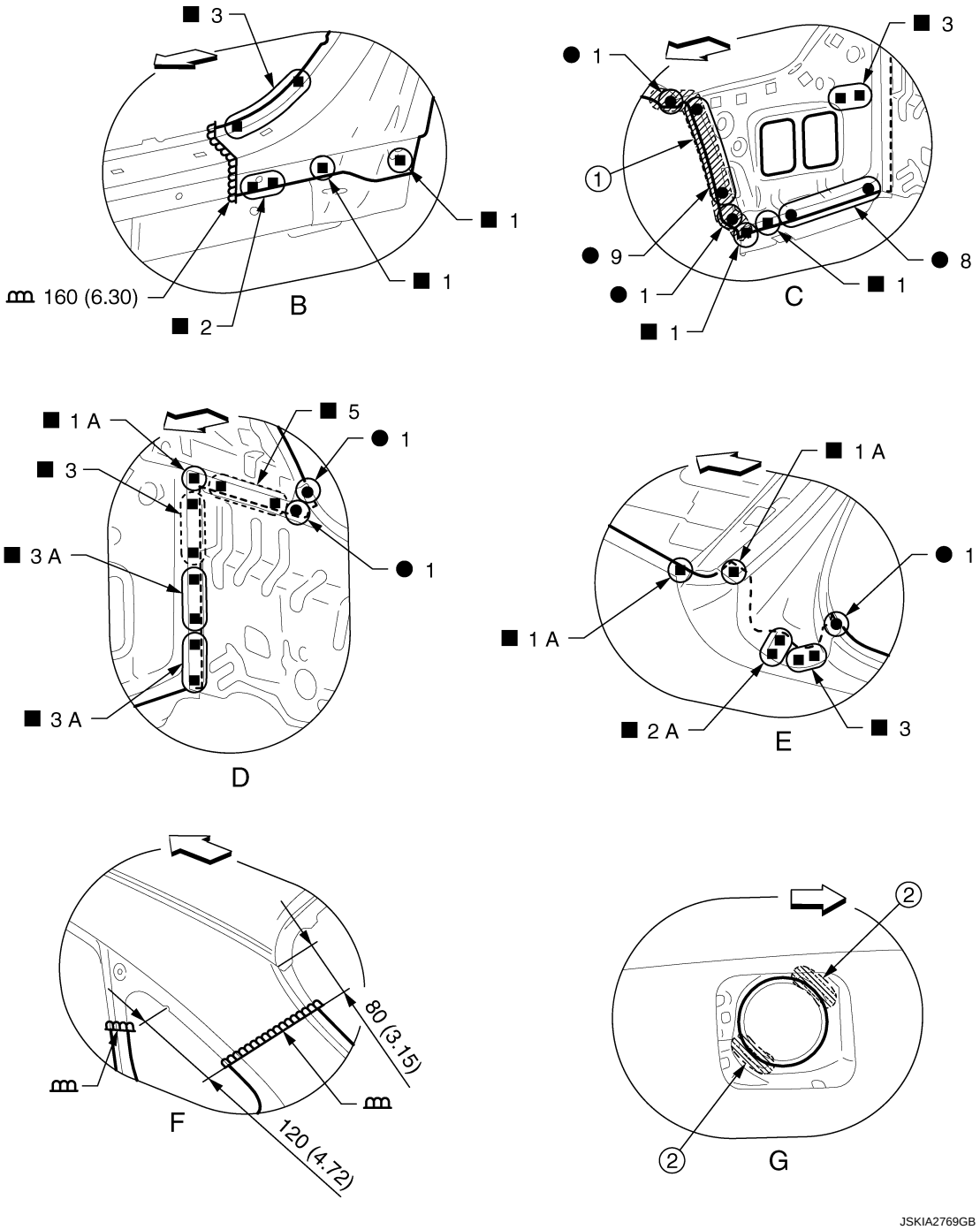
⇦: Vehicle front

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

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

Replacement parts

- Rear fender assembly (LH)



1. Body sealing
2. Adhesive

Unit: mm (in)

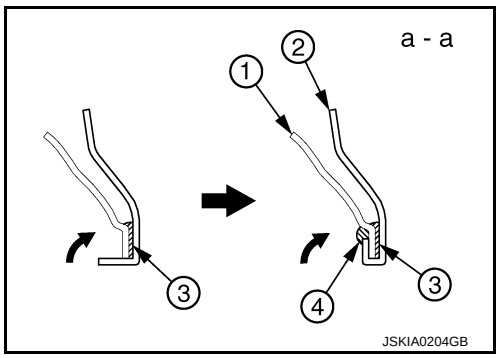
⇦: Vehicle front

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

View G: Right side rear fender

POINT

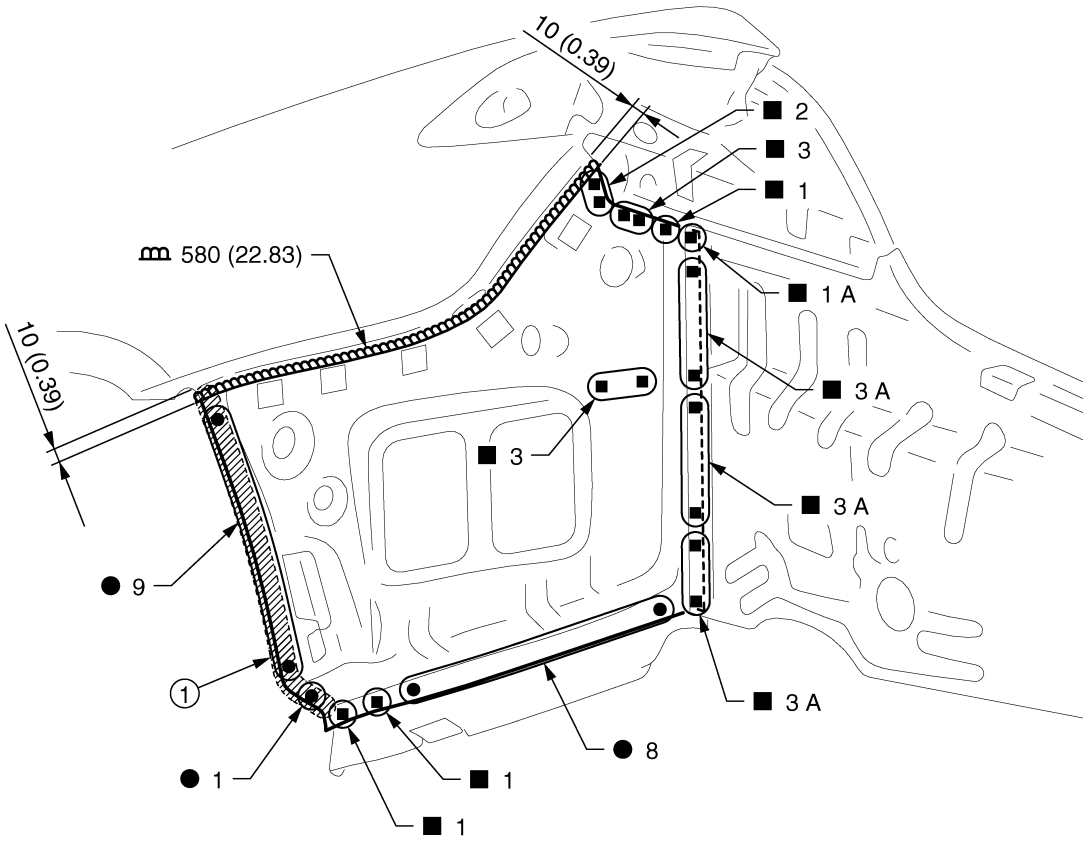
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-113, "Rear Fender Hemming Process".



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

Rear Fender Extension

INFOID:0000000011485286



JSKIA1655GB

1. Body sealing

Unit: mm (in)

Replacement parts

- Rear fender extension (LH)

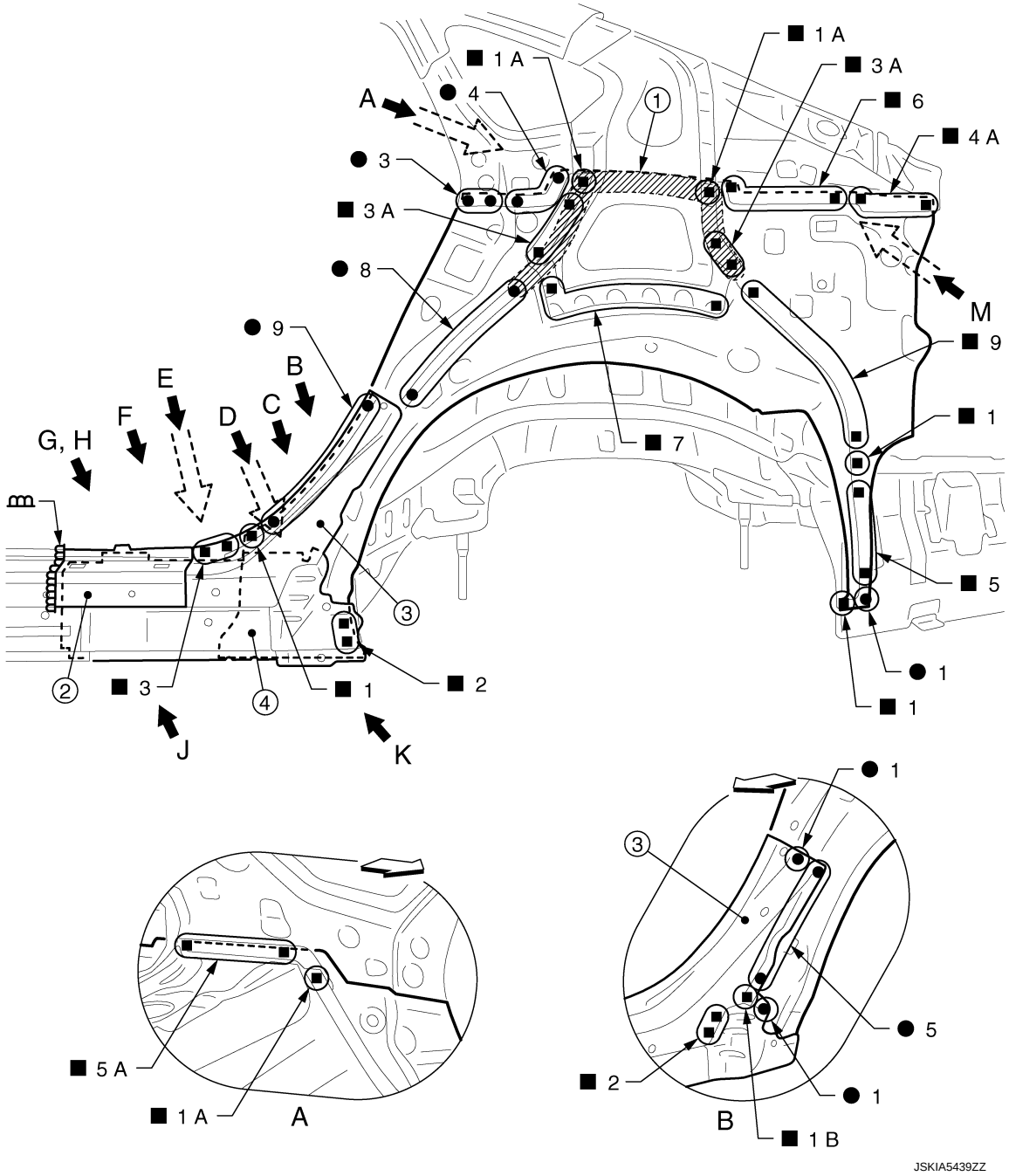
Outer Rear Wheelhouse

INFOID:0000000011485287

Work after rear fender is removed.

Remove outer front side body (reusable), outer rear wheelhouse extension (Upper, reusable), and outer rear wheelhouse extension (Lower, reusable) for easier installation.

Remove the welding points ⓝ (refer to view G and J) for easier installation.



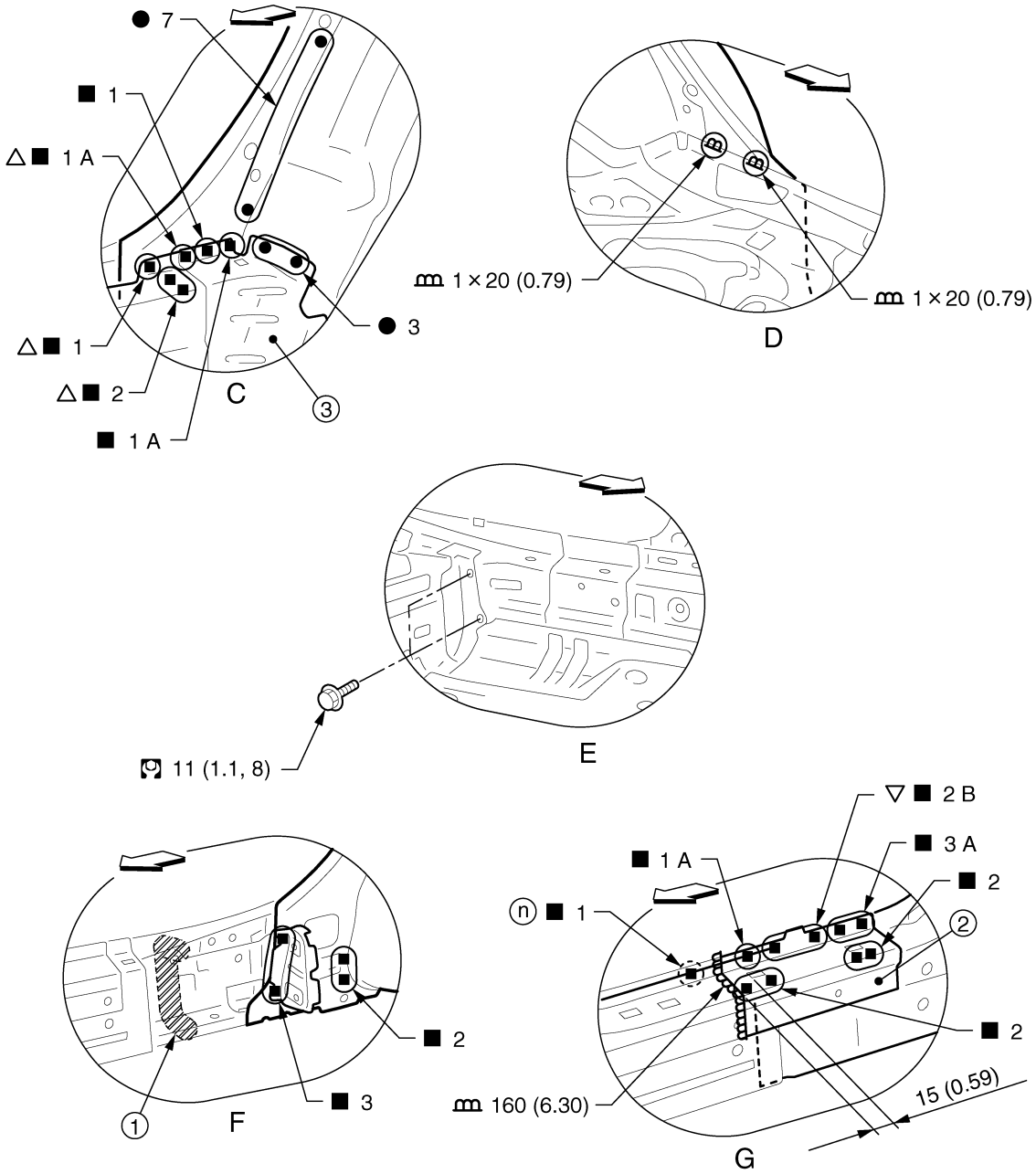
JSKIA5439ZZ

1. Body sealing
2. Outer front side body
3. Outer rear wheelhouse extension (Upper)
4. Outer rear wheelhouse extension (Lower)

⇦: Vehicle front

Replacement parts

- Outer rear wheelhouse (LH)



JSKIA5440GB

1. Urethane foam
2. Outer sill
3. Outer rear wheelhouse extension (Lower)

Unit: mm (in)

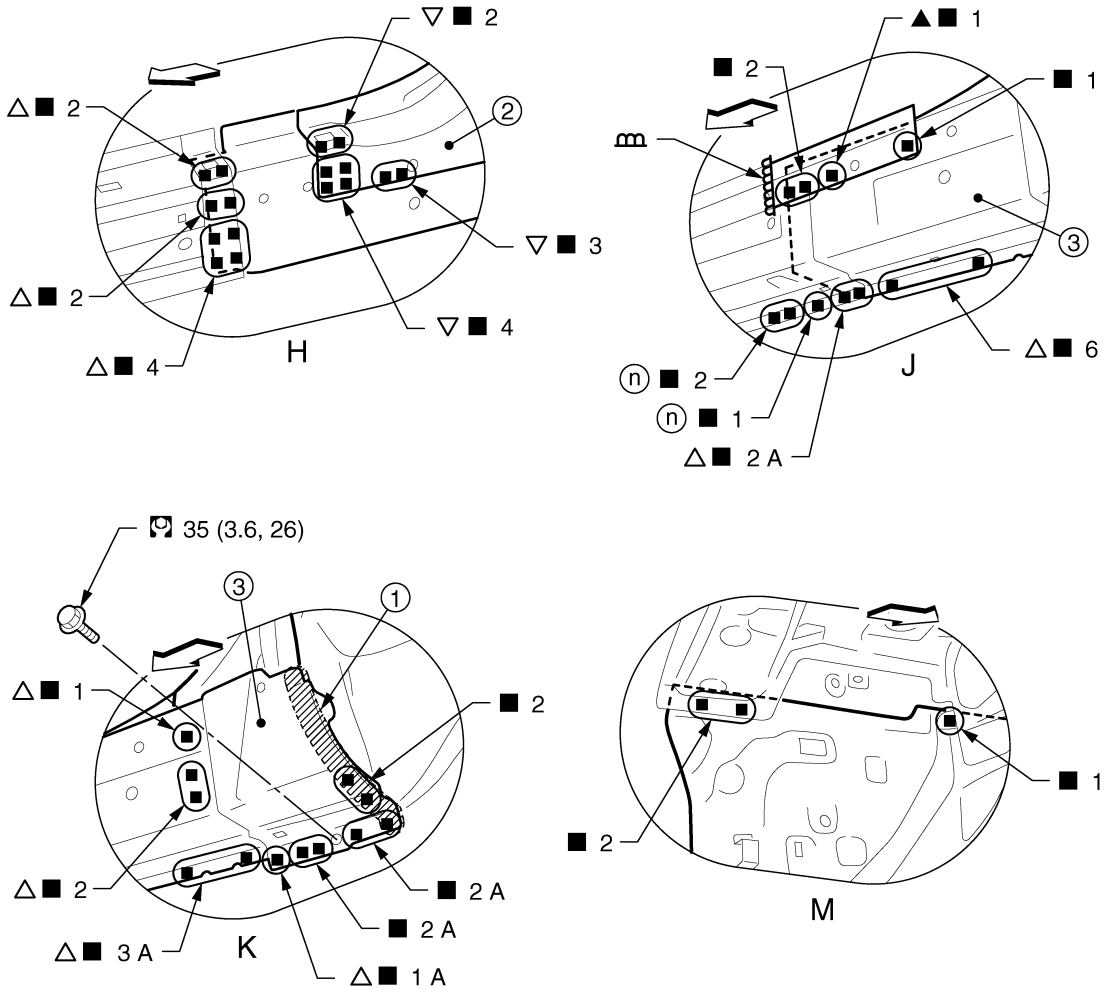
⇦: Vehicle front

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

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

Refer to GI-4, "Components" for symbols in the figure.

View C: Before installing outer front side body and outer rear wheelhouse extension (Upper)
View F: Before installing outer front side body, outer rear wheelhouse extension (Upper), and outer rear wheelhouse extension (Lower)



JSKIA5441GB

1. Body sealing
2. Outer rear wheelhouse extension (Upper)
3. Outer rear wheelhouse extension (Lower)

Unit: mm (in)

⇦: Vehicle front

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

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

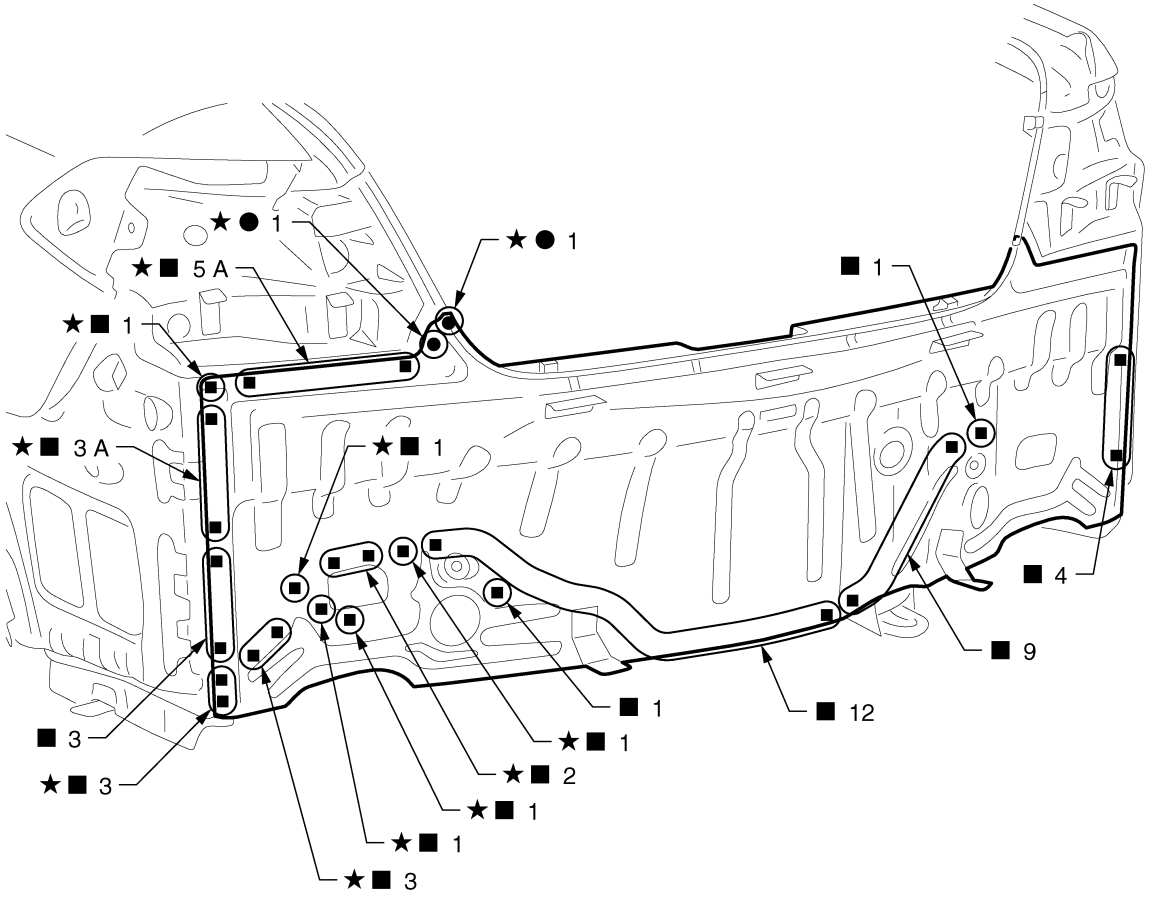
▽: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).

Refer to GI-4, "Components" for symbols in the figure.

View H: Before installing outer front side body

Rear Panel

INFOID:0000000011496581



JSKIA1664ZZ

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

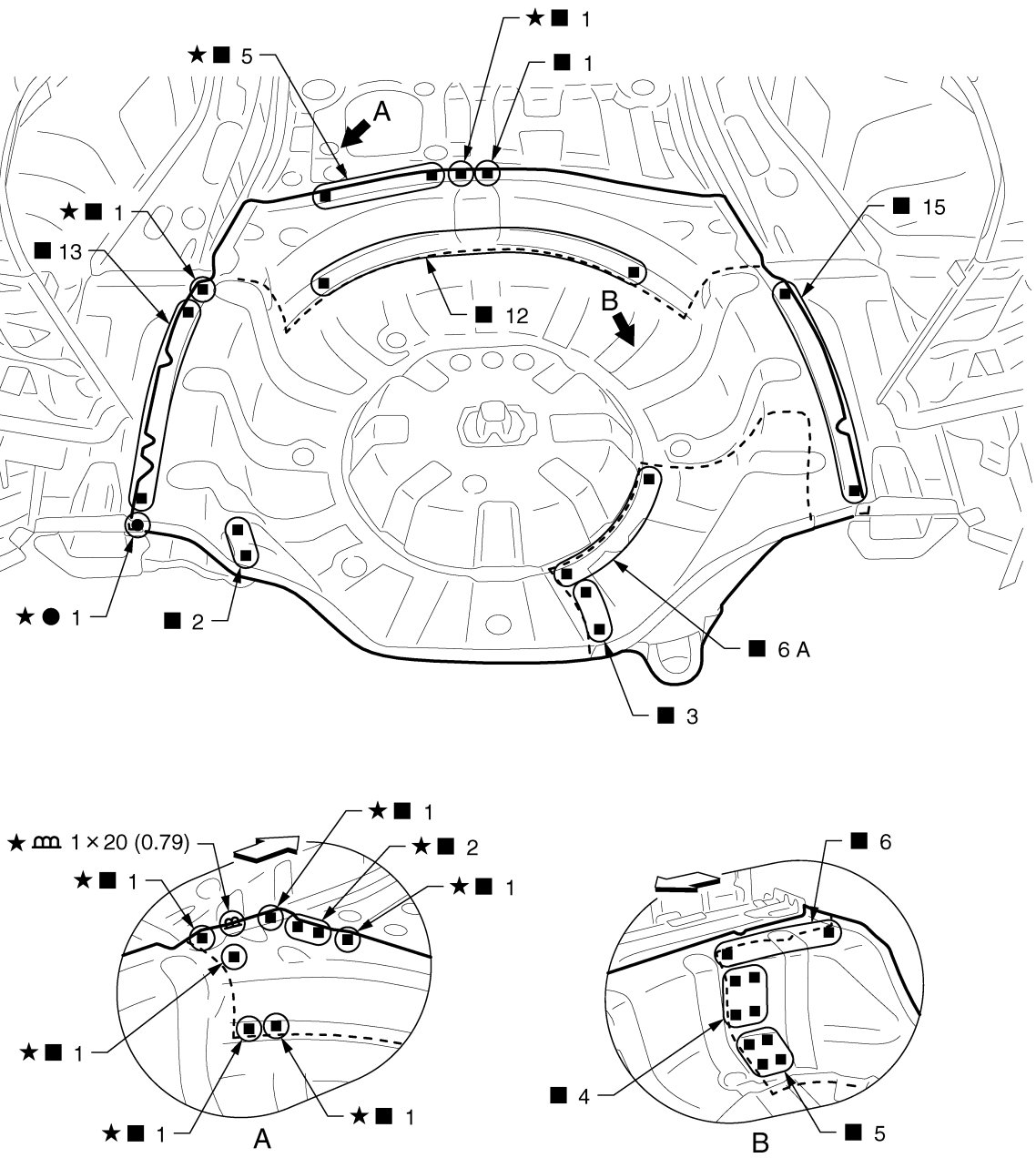
Replacement parts

- Rear panel assembly

Rear Floor Rear

INFOID:0000000011496582

Work after rear panel is removed.



JSKIA1665GB

Unit: mm (in)

⇦: Vehicle front

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

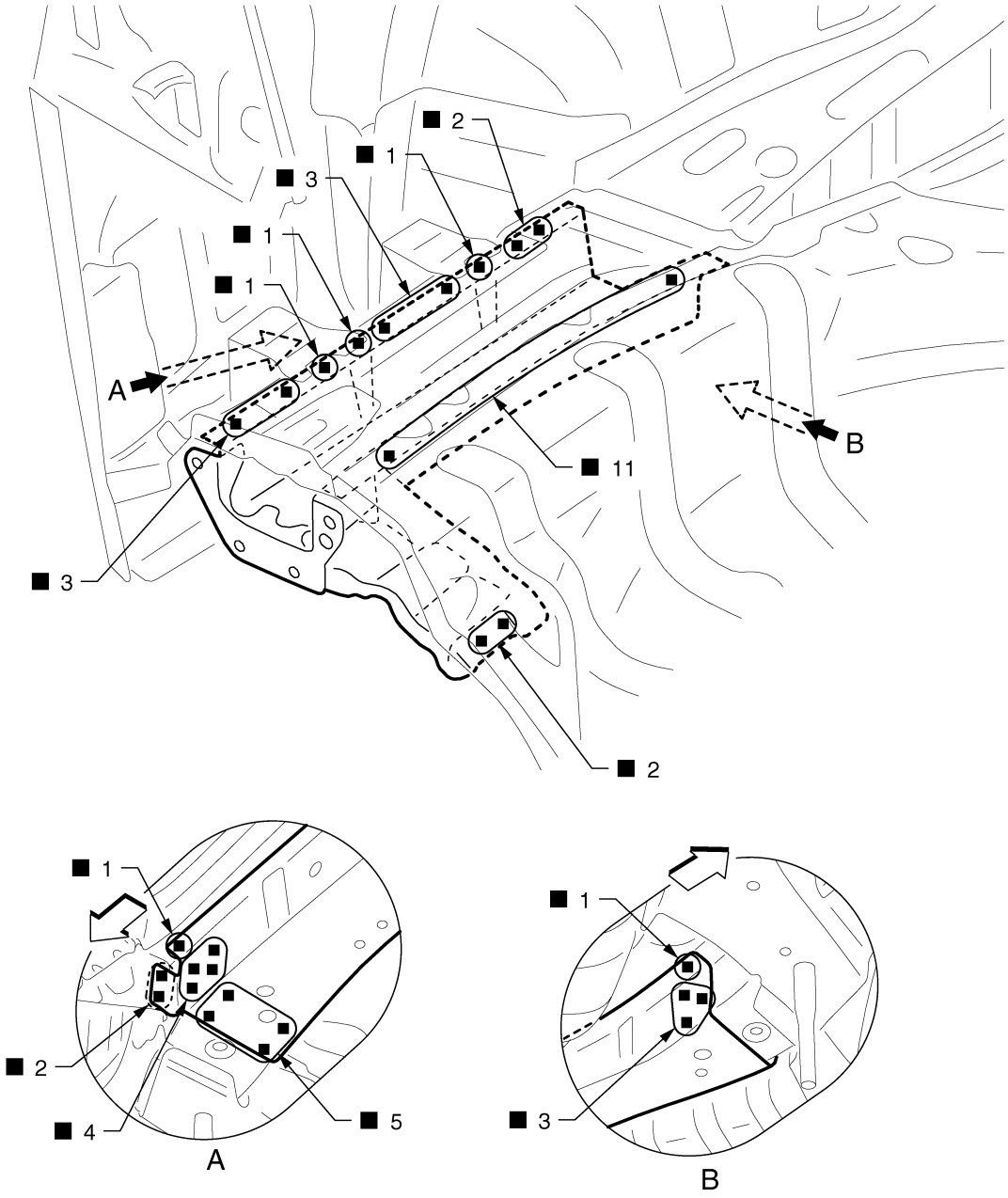
Replacement parts

- Rear floor rear
- Rear tie down hook

Rear Side Member Extension

INFOID:0000000011496583

Work after rear panel is removed.



JSKIA1668ZZ

⇦: Vehicle front

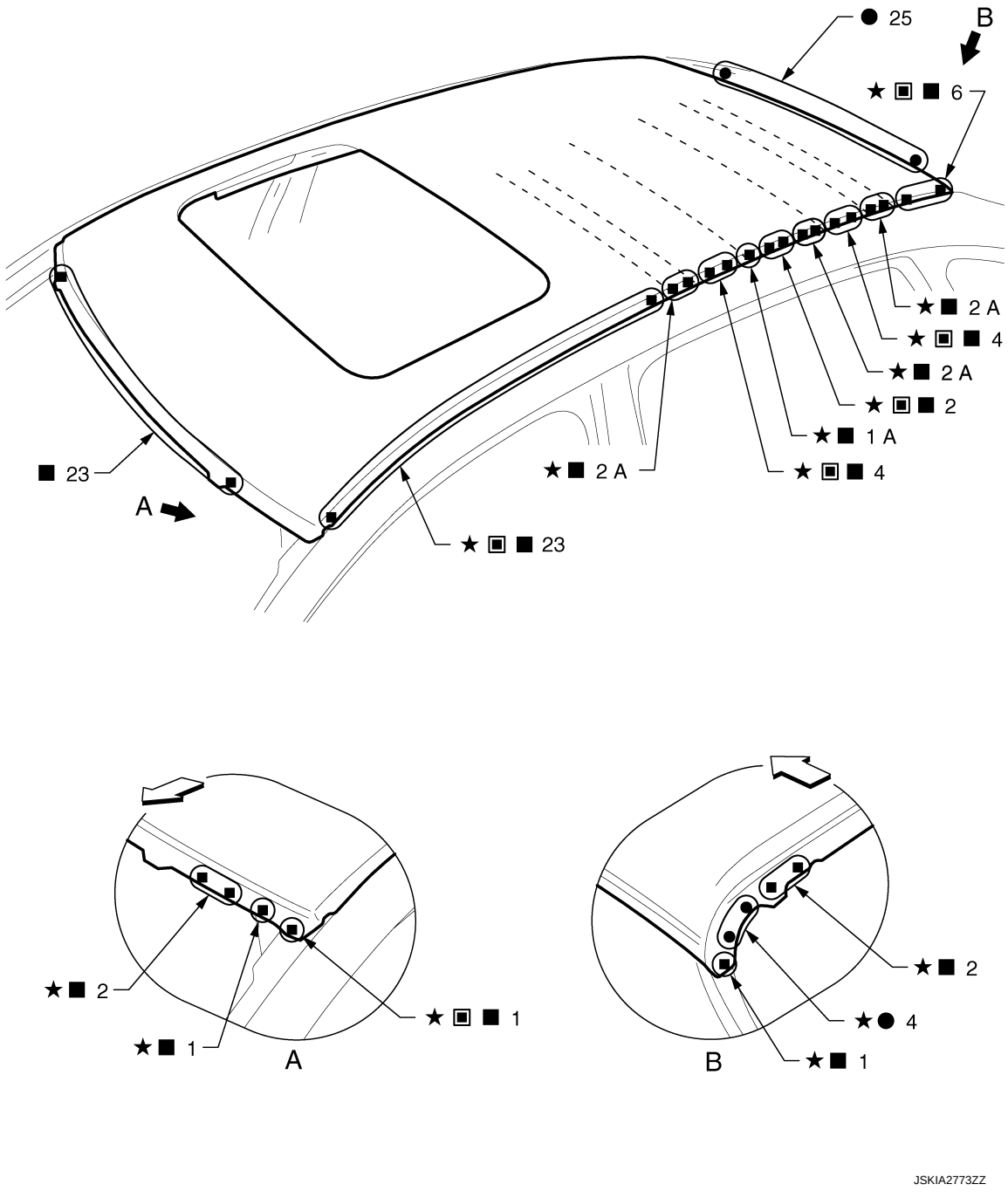
(◌): Weld the parts onto the back of the component part.

Replacement parts

- Rear side member extension (LH)

Roof

INFOID:0000000011495320



JSKIA2773ZZ

⇦: Vehicle front

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

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

Replacement part

- Roof

SERVICE DATA AND SPECIFICATIONS (SDS)

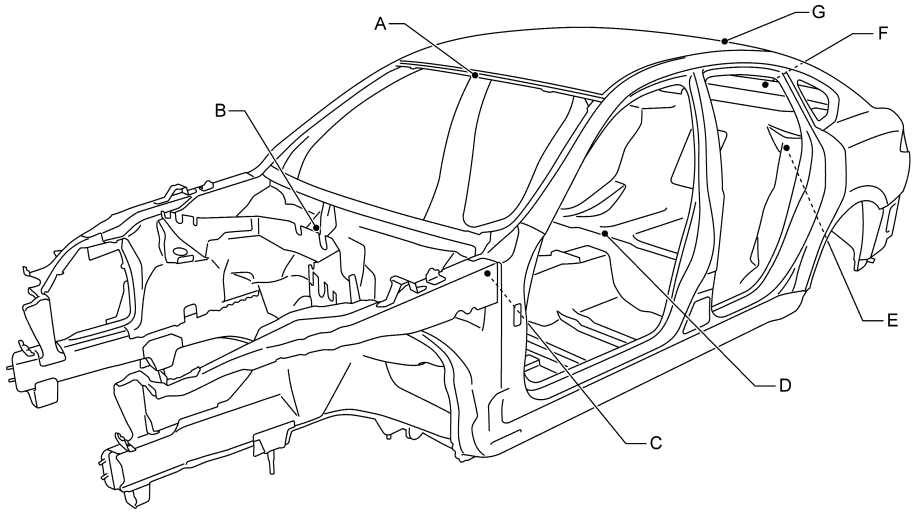
BODY ALIGNMENT

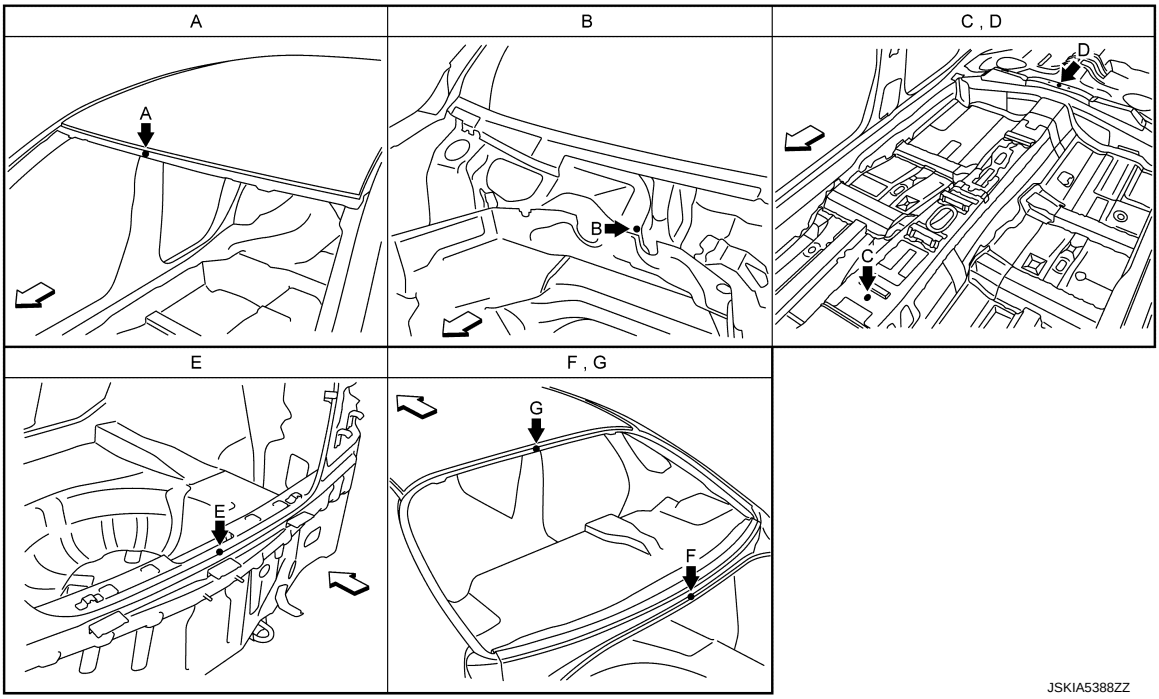
2WD

2WD : Body Center Marks

INFOID:0000000011485291

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.





⇦: Vehicle front

Unit: mm (in)

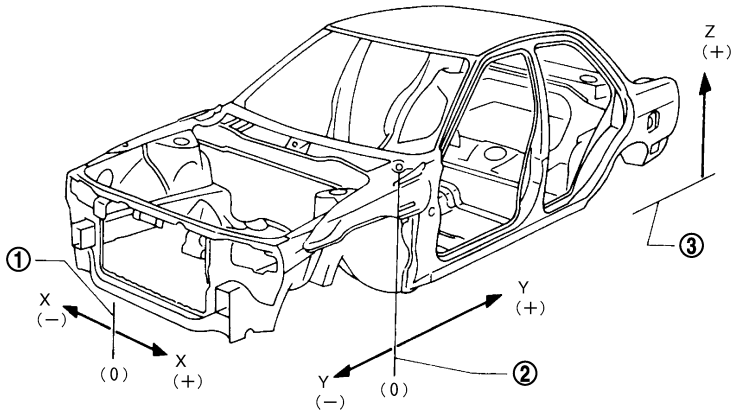
Points	Portion	Marks
A	Front roof	Embossment
B	Upper dash	Embossment
C	Trans control reinforcement	Hole 14×12 (0.55×0.47)

Points	Portion	Marks
D	Rear seat crossmember reinforcement	Hole ϕ5 (0.20)
E	Rear panel	Indent
F	Rear waist	Bead
G	Rear roof	Embossment

2WD : Description

INFOID:0000000011508603

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



JSKIA0073GB

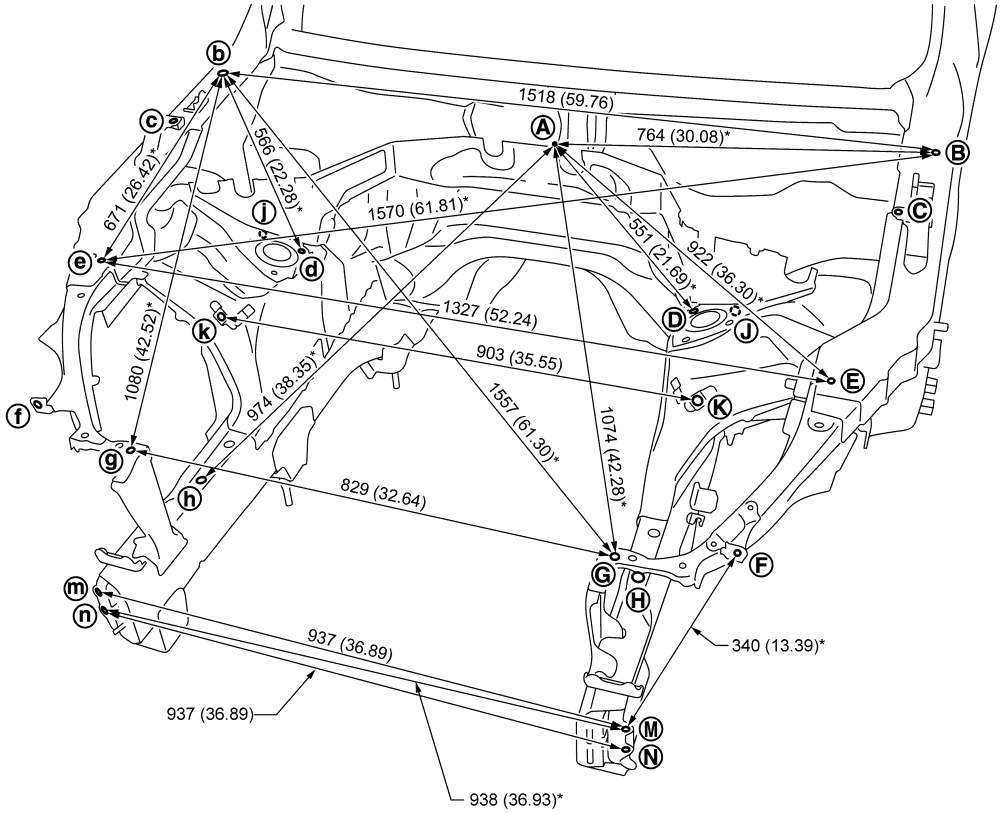
① Vehicle center ② Front axle center ③ Imaginary base line

2WD : Engine Compartment

INFOID:0000000011508599

MEASUREMENT

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



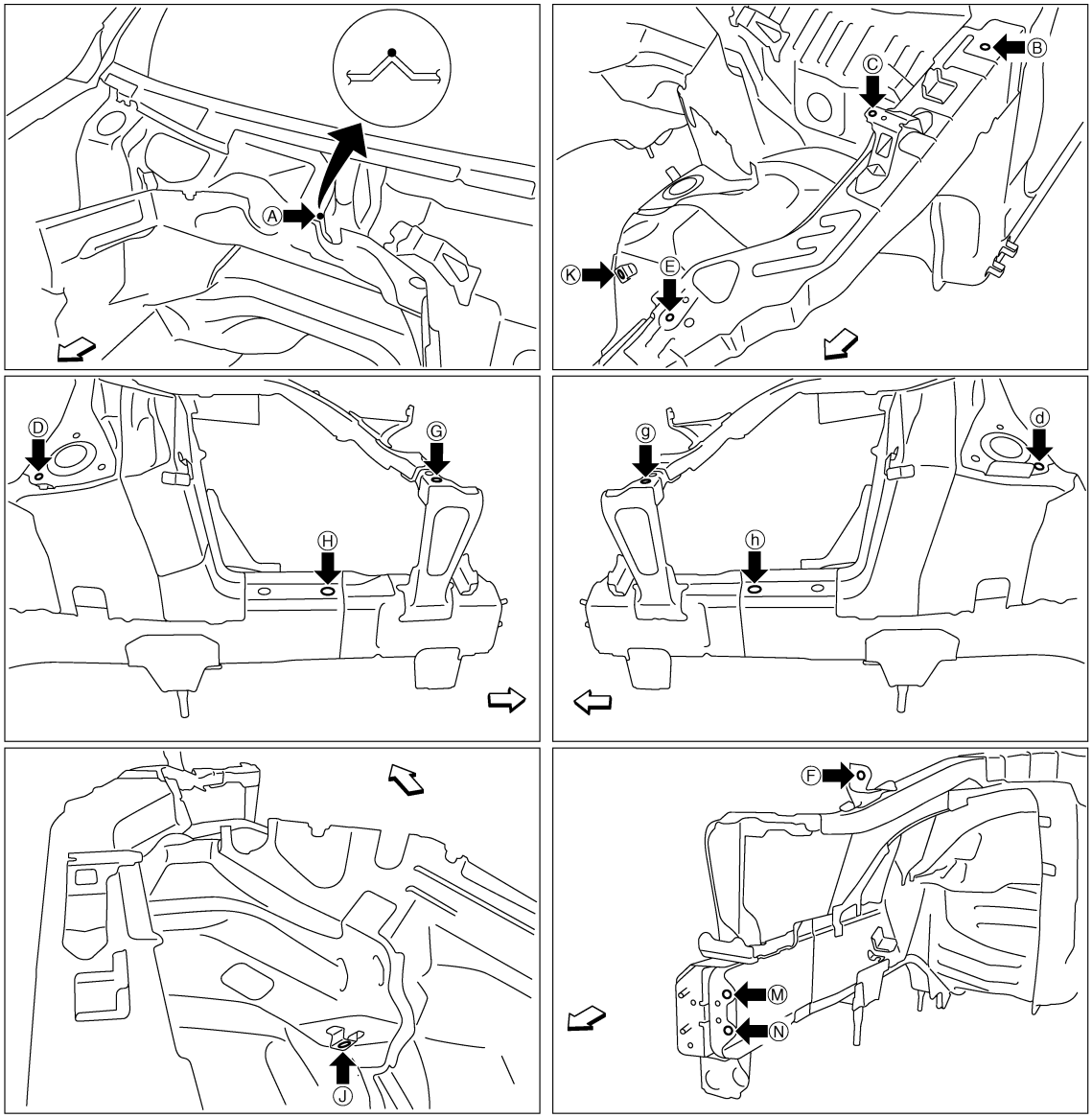
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	767 (30.20)*		D - k	875 (34.45)*		H - h	826 (32.52)	
B - d	1231 (48.46)*		E - G	442 (17.40)*		J - j	903 (35.55)	
C - c	1431 (56.34)		E - g	1138 (44.80)*		–	–	
D - d	787 (30.98)		F - f	1178 (46.38)		–	–	

MEASUREMENT POINTS



JSKIA1878ZZ

⇦: Vehicle front

Unit: mm (in)

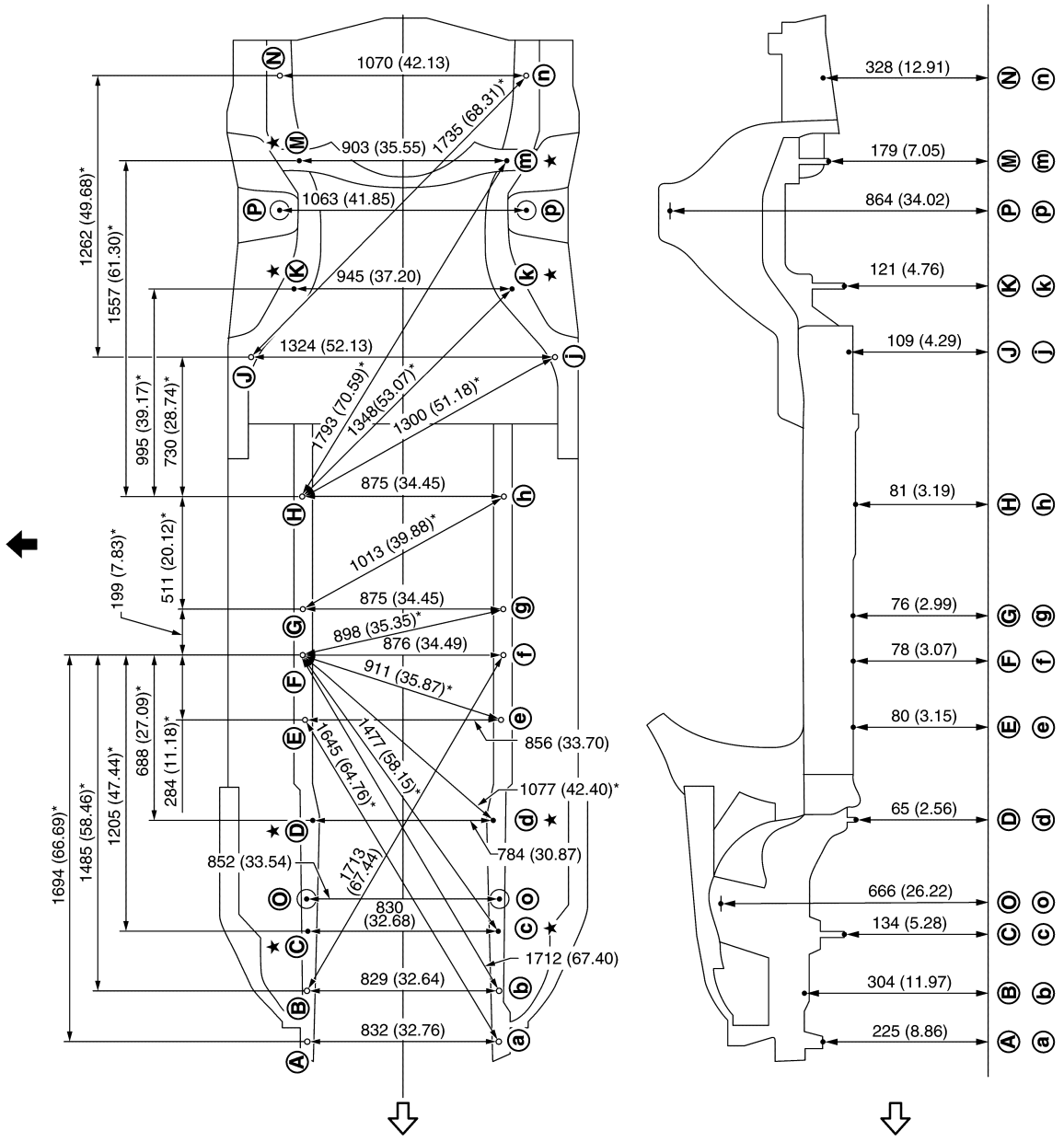
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g	Side radiator core stay hole center ϕ12 (0.47)
B, b	Hood hinge installing hole center ϕ12 (0.47)	H, h	Front side member hole center ϕ20 (0.79)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	J, j, K, k	Nut holder hole center ϕ16 (0.63)
D, d	Front strut installing hole center ϕ11 (0.43)	M, m, N, n	Front bumper reinforcement installing hole center ϕ11 (0.43)
E, e	Hoodledge reinforcement hole center ϕ7 (0.28)	–	–

2WD : Underbody

INFOID:0000000011485294

MEASUREMENT

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



JSKIA2719GB

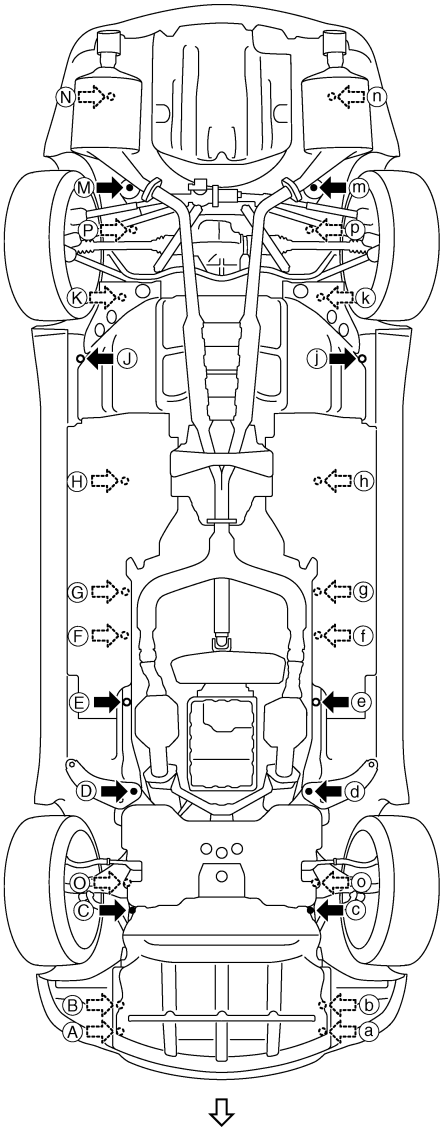
Unit: mm (in)

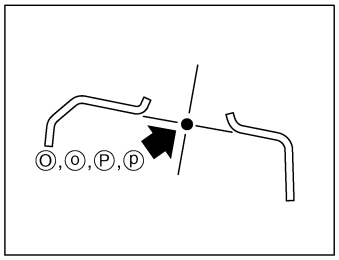
⇦: Vehicle front

⬅: Vehicle left side

★: Bolt head

MEASUREMENT POINTS





JSKIA1879ZZ

⇦: Vehicle front

Unit: mm (in)

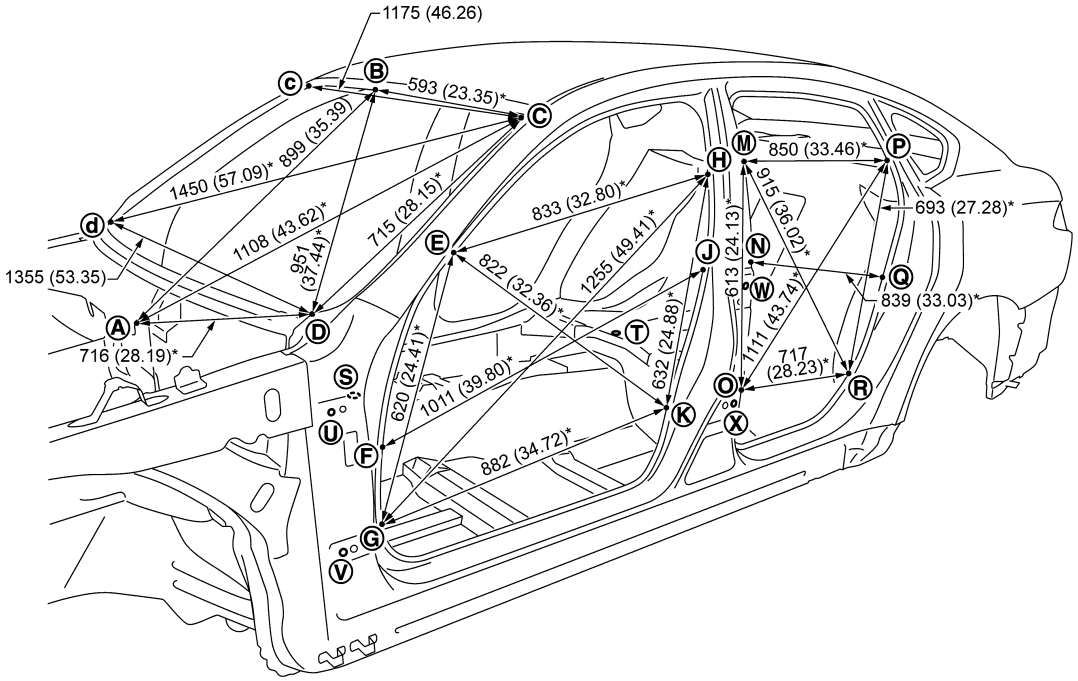
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A, a	±415.8 (±16.370)	–588.0 (–23.150)	224.6 (8.843)	Hole ϕ13 (0.51)	H, h	±437.5 (±17.224)	1810.0 (71.260)	81.2 (3.197)	Hole ϕ16 (0.63)
B	416.2 (16.386)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	J, j	±662.0 (±26.063)	2504.0 (98.582)	108.5 (4.272)	Hole ϕ8 (0.31)
b	–413.0 (–16.260)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	K, k	±472.6 (±18.606)	2803.8 (110.386)	120.8 (4.756)	Bolt head
C, c	±415.0 (±16.339)	–104.0 (–4.094)	133.5 (5.256)	Bolt head	M, m	±451.5 (±17.776)	3363.9 (132.437)	179.0 (7.047)	Bolt head
D, d	±392.0 (±15.433)	414.0 (16.299)	64.5 (2.539)	Bolt head	N, n	±535.0 (±21.063)	3740.0 (147.244)	328.3 (12.925)	Hole 18×16 (0.71×0.63)
E, e	±428.0 (±16.850)	816.6 (32.150)	80.0 (3.150)	Hole 18×16 (0.71×0.63)	O, o	±426.1 (±16.776)	37.1 (1.461)	665.8 (26.213)	Hole ϕ50 (1.97)
F, f	±438.0 (±17.244)	1100.0 (43.307)	78.0 (3.071)	Hole ϕ16 (0.63)	P, p	±531.3 (±20.917)	3145.8 (123.850)	864.1 (34.020)	Hole ϕ68 (2.68)
G, g	±437.5 (±17.224)	1299.0 (51.142)	76.0 (2.992)	Hole ϕ16 (0.63)	–	–	–	–	–

2WD : Passenger Compartment

INFOID:0000000011485295

MEASUREMENT

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



JSKIA5393GB

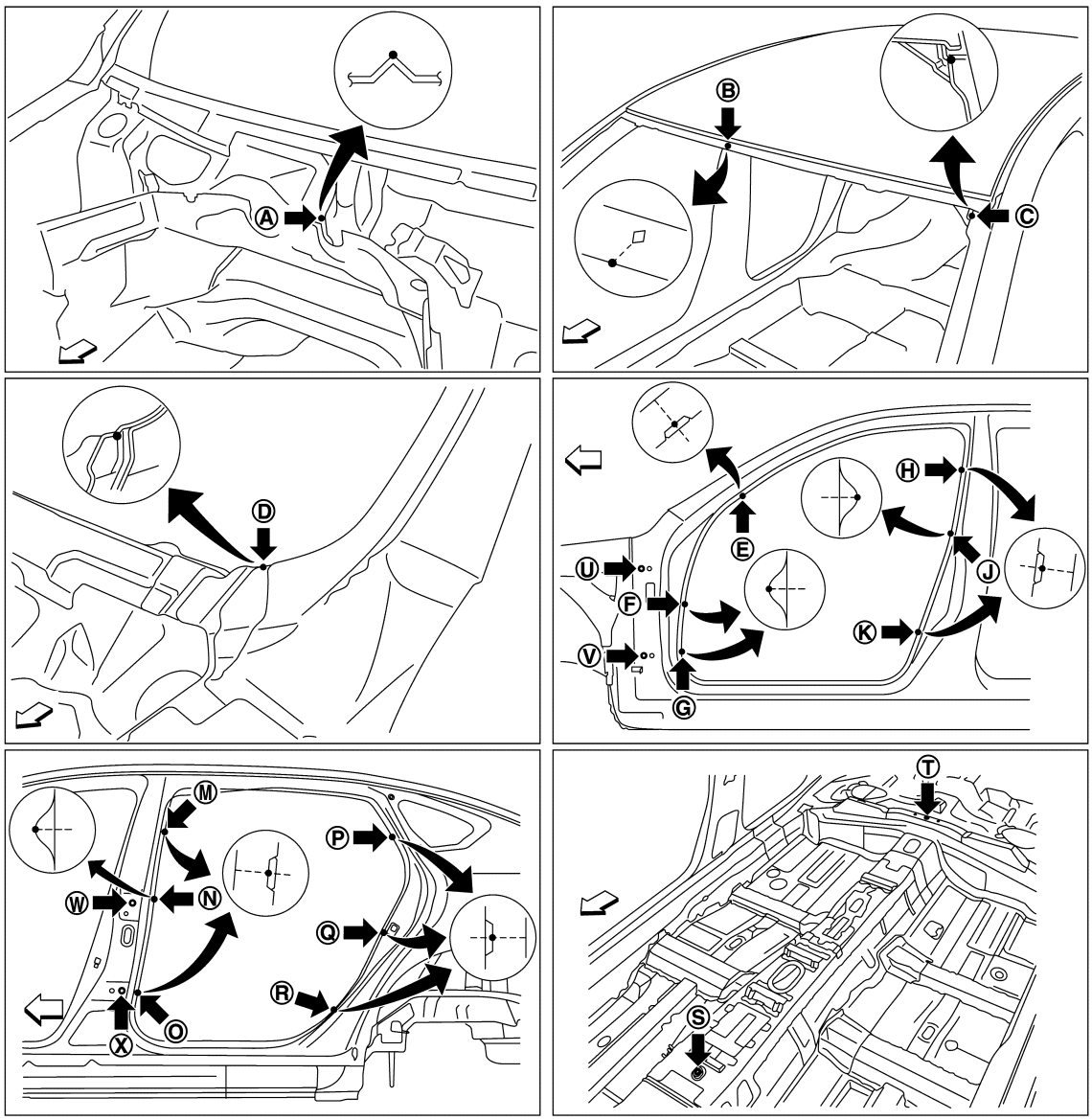
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1431 (56.34)		M - r	1705 (67.13)*		T - M	1005 (39.57)*	
E - g	1597 (62.87)*		N - n	1485 (58.46)		T - N	917 (36.10)*	
E - h	1627 (64.05)*		N - q	1698 (66.85)*		T - O	856 (33.70)*	
E - k	1681 (66.18)*		O - o	1501 (59.09)		T - P	1076 (42.36)*	
F - f	1494 (58.82)		O - p	1801 (70.91)*		T - Q	923 (36.34)*	
F - j	1800 (70.87)*		O - r	1673 (65.87)*		T - R	821 (32.32)*	
G - g	1513 (59.57)		P - p	1338 (52.68)		U - u	1609 (63.35)	
G - h	1908 (75.12)*		P - r	1586 (62.44)*		U - W	1220 (48.03)*	
G - k	1746 (68.74)*		Q - q	1468 (57.80)		U - X	1206 (47.48)*	
H - h	1365 (53.74)		R - r	1522 (59.92)		V - v	1631 (64.21)	
H - k	1565 (61.61)*		S - E	930 (36.61)*		V - W	1278 (50.31)*	
J - j	1485 (58.46)		S - F	766 (30.16)*		V - X	1183 (46.57)*	
K - k	1501 (59.09)		S - G	758 (29.84)*		W - w	1614 (63.54)	
M - m	1361 (53.58)		S - H	1390 (54.72)*		X - x	1654 (65.12)	
M - o	1555 (61.22)*		S - J	1279 (50.35)*		–	–	
M - p	1595 (62.80)*		S - K	1125 (44.29)*		–	–	

MEASUREMENT POINTS



JSKIA5394ZZ

⇦: Vehicle front

Unit: mm (in)

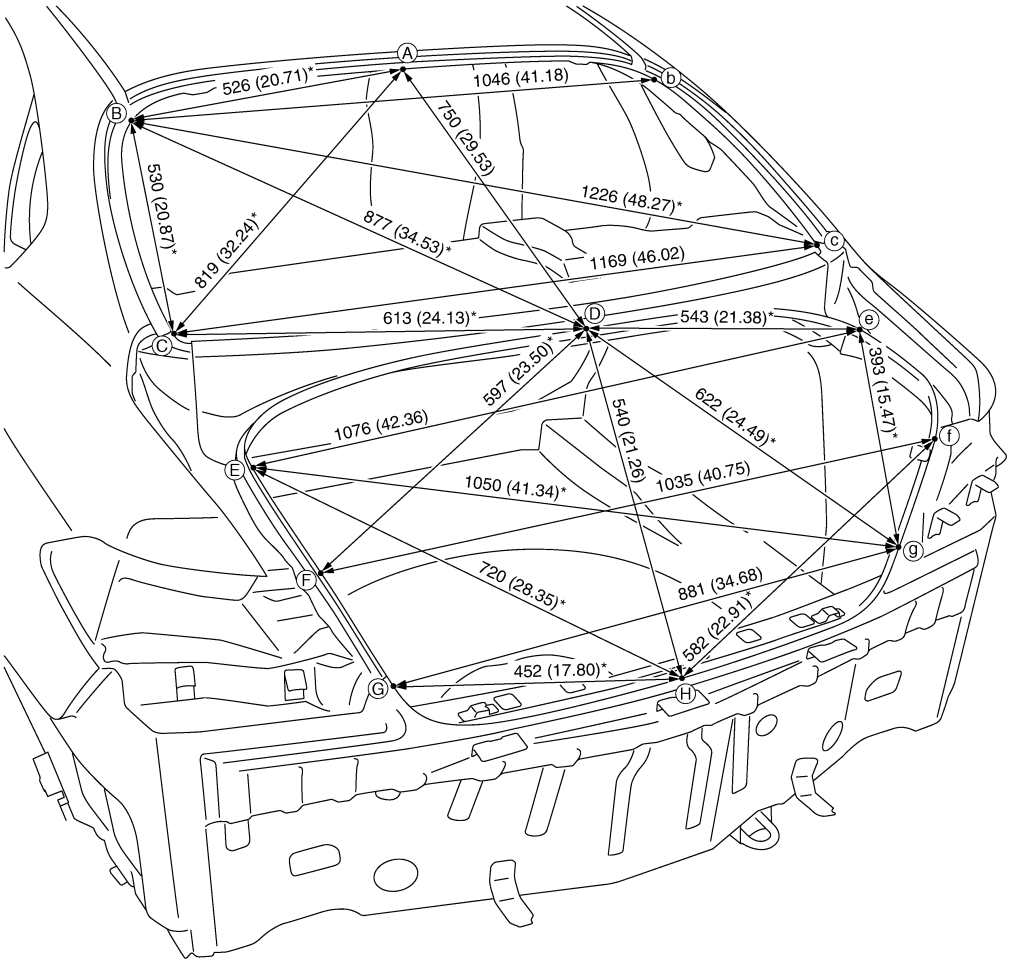
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	H, h, J, j, K, k, M, m, N, n, O, o	Center pillar indent
B	Roof flange end of center positioning mark	P, p, Q, q, R, r	Rear fender indent
C, c	Front pillar joggle	S	Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47)
D, d	Front pillar hinge brace joggle	T	Rear seat crossmember reinforcement hole center of center positioning mark ϕ5 (0.20)
E, e, F, f, G, g	Front pillar indent	U, u, V, v, W, w, X, x	Door hinge installing hole center U, u, V, v, X, x: ϕ12 (0.47) W, w: 11×9 (0.43×0.35)

2WD : Rear Body

INFOID:0000000011485296

MEASUREMENT

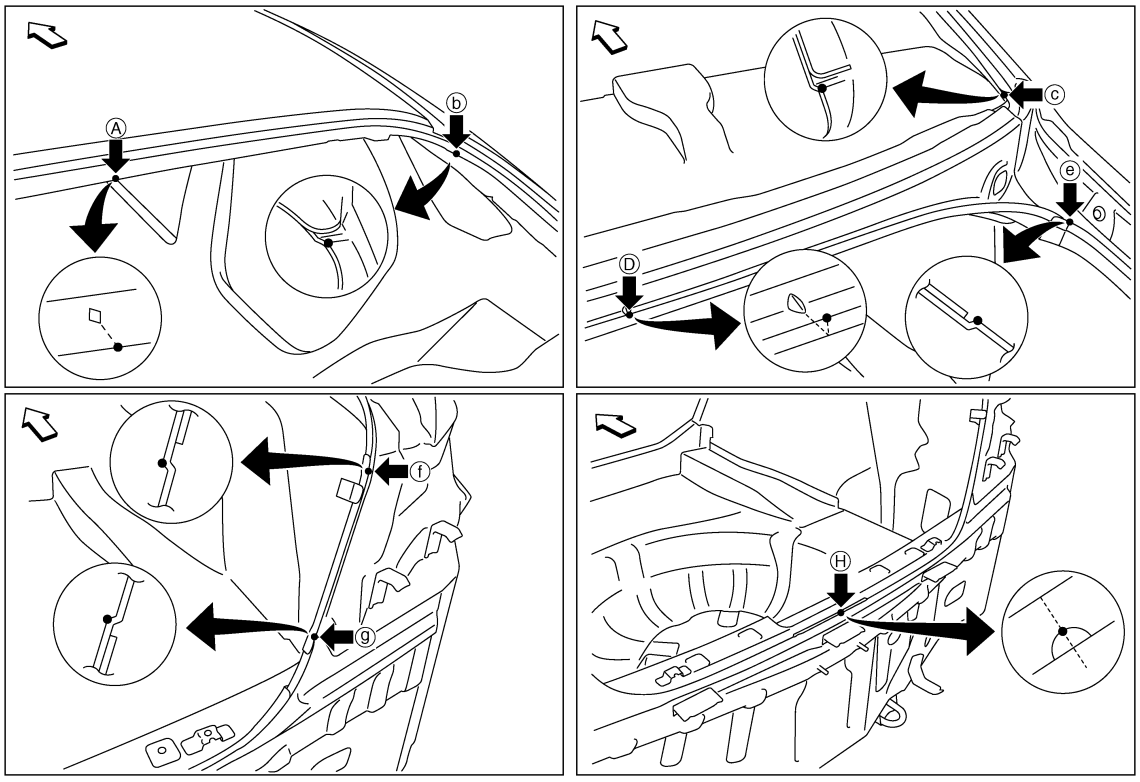
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA1624GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA1625ZZ

⇦: Vehicle front

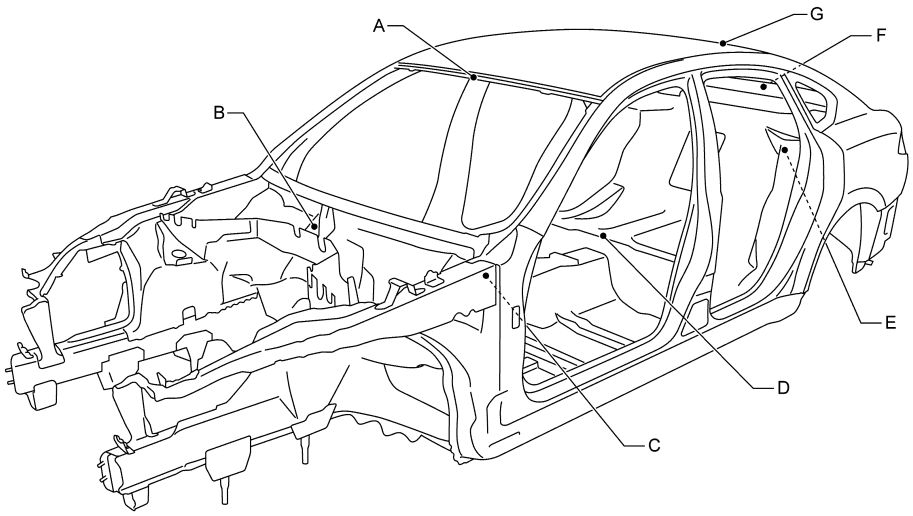
Point	Material	Point	Material
A	Roof flange end of center positioning mark	D	Rear waist flange end of center positioning mark
B, b	Outer side body joggle	F, f, G, g	Rear combination lamp base joggle
C, c, E, e	Rear fender corner joggle	H	Upper rear panel indent of center positioning mark

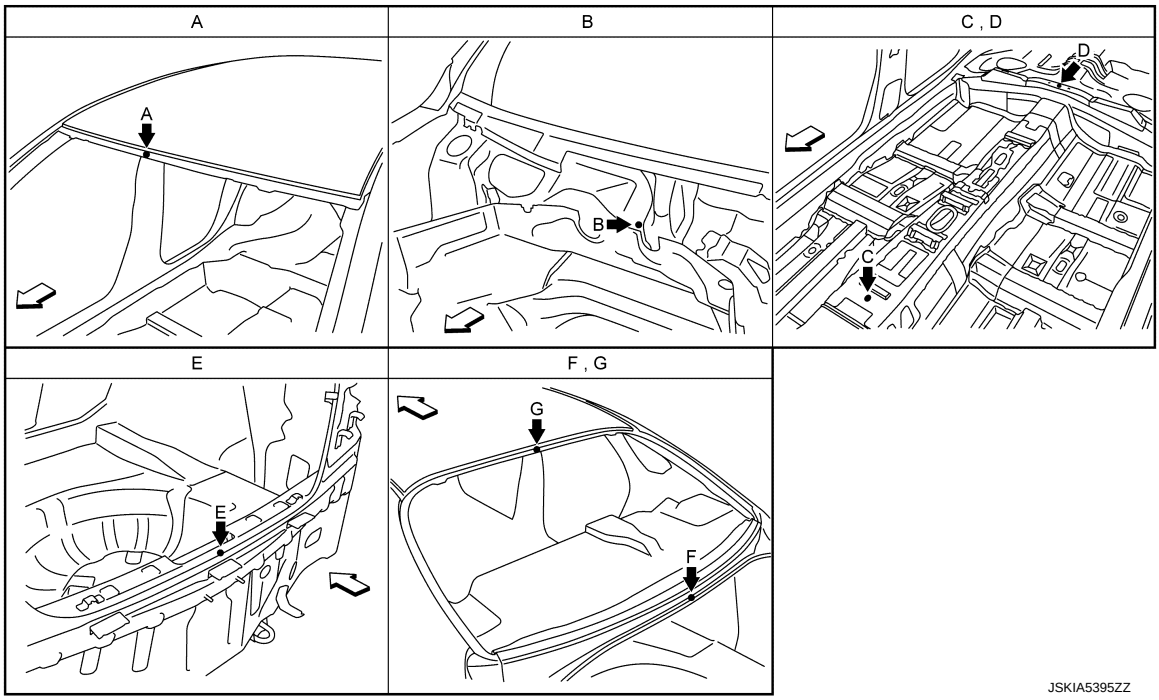
AWD

AWD : Body Center Marks

INFOID:0000000011485297

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.





JSKIA5395ZZ

⇦: Vehicle front

Unit: mm (in)

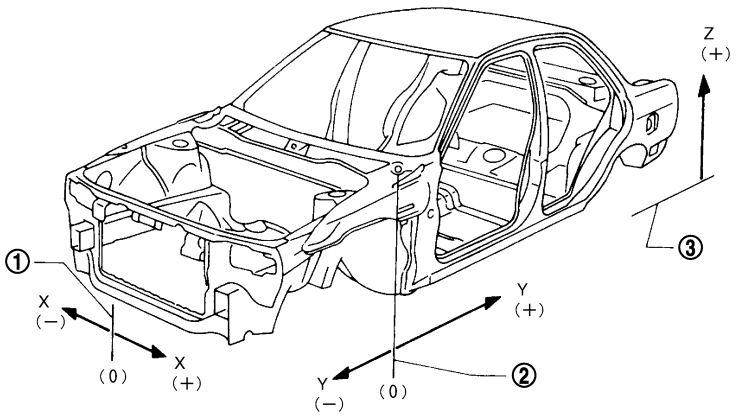
Points	Portion	Marks
A	Front roof	Embossment
B	Upper dash	Embossment
C	Trans control reinforcement	Hole 14×12 (0.55×0.47)
D	Rear seat crossmember reinforcement	Hole ϕ5 (0.20)
E	Rear panel	Indent
F	Rear waist	Bead
G	Rear roof	Embossment

AWD : Description

INFOID:0000000011508604

- All dimensions indicated in the figures are actual.

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



JSKIA0073GB

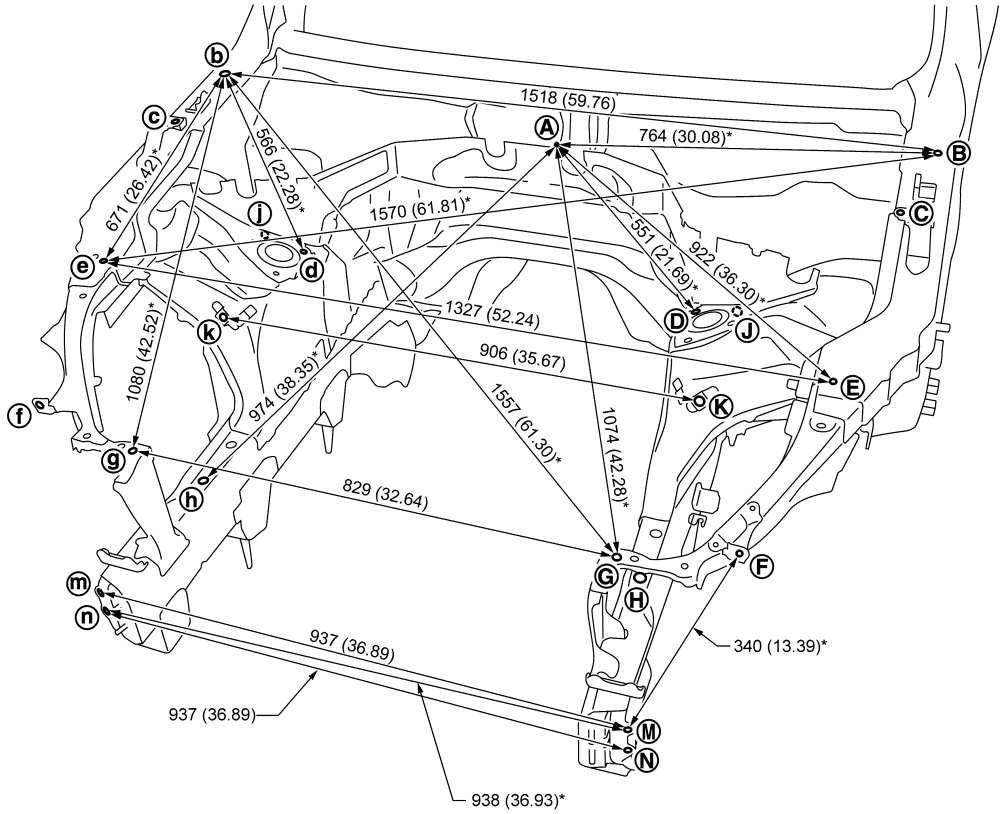
① Vehicle center ② Front axle center ③ Imaginary base line

AWD : Engine Compartment

INFOID:0000000011508600

MEASUREMENT

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



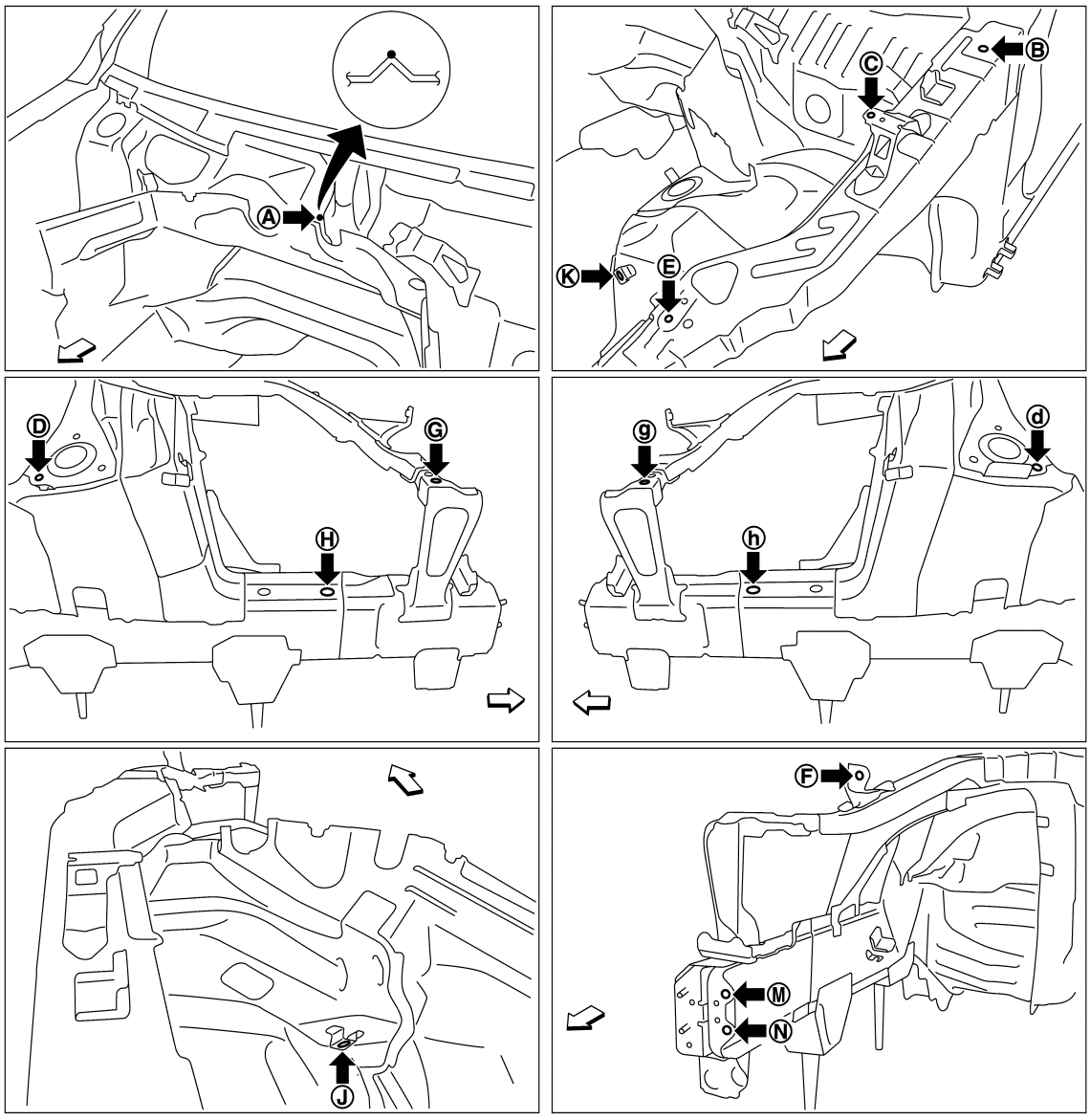
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	767 (30.20)*		D - k	878 (34.57)*		H - h	826 (32.52)	
B - d	1231 (48.46)*		E - G	442 (17.40)*		J - j	906 (35.67)	
C - c	1431 (56.34)		E - g	1138 (44.80)*		–	–	
D - d	787 (30.98)		F - f	1178 (46.38)		–	–	

MEASUREMENT POINTS



JSKIA5371ZZ

⇦: Vehicle front

Unit: mm (in)

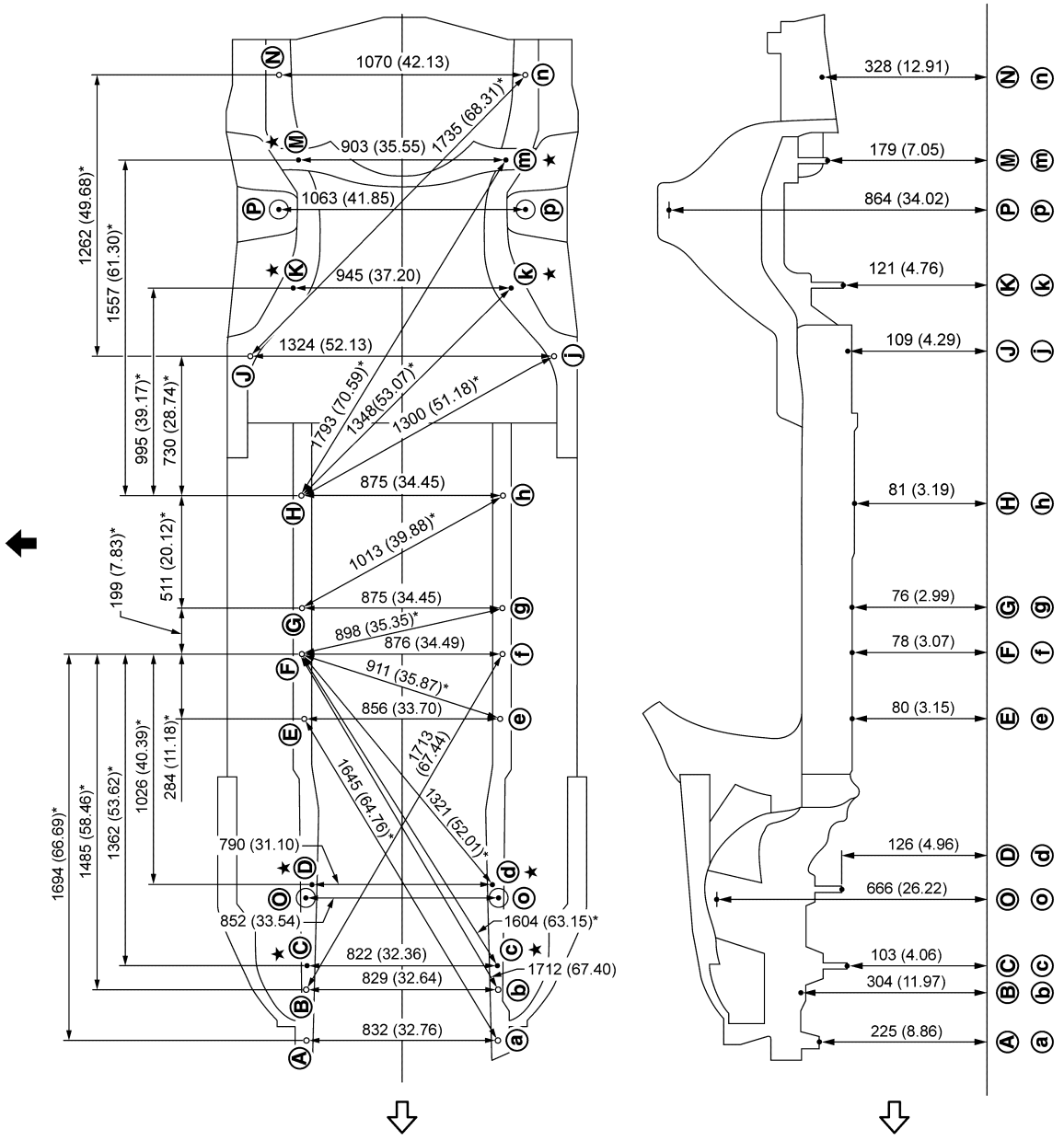
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g	Side radiator core stay hole center ϕ12 (0.47)
B, b	Hood hinge installing hole center ϕ12 (0.47)	H, h	Front side member hole center ϕ20 (0.79)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	J, j, K, k	Nut holder hole center ϕ16 (0.63)
D, d	Front strut installing hole center ϕ11 (0.43)	M, m, N, n	Front bumper reinforcement installing hole center ϕ11 (0.43)
E, e	Hoodledge reinforcement hole center ϕ7 (0.28)	–	–

AWD : Underbody

INFOID:0000000011485300

MEASUREMENT

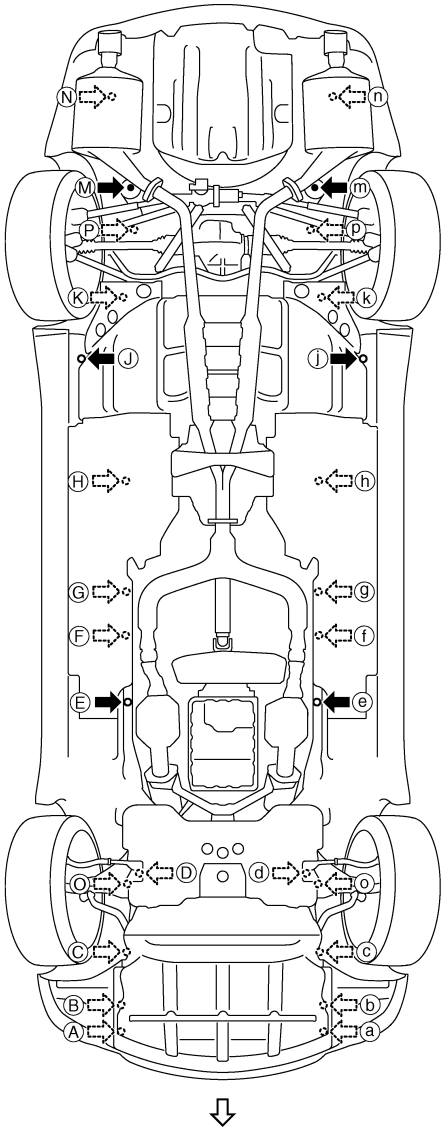
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.

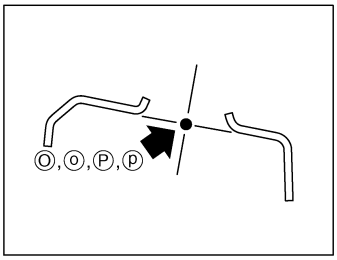


JSKIA5398GB

Unit: mm (in)
⇦: Vehicle front
⬅: Vehicle left side
★: Bolt head

MEASUREMENT POINTS





JSKIA1880ZZ

⇦: Vehicle front

Unit: mm (in)

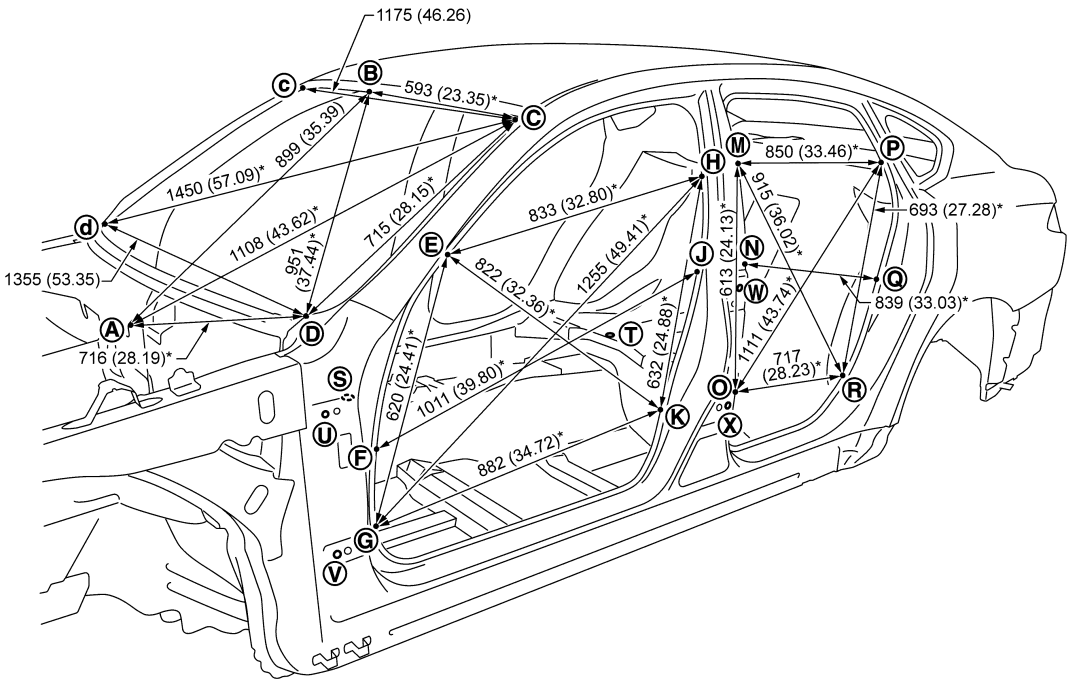
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A, a	±415.8 (±16.370)	–588.0 (–23.150)	224.6 (8.843)	Hole ϕ13 (0.51)	H, h	±437.5 (±17.224)	1810.0 (71.260)	81.2 (3.197)	Hole ϕ16 (0.63)
B	416.2 (16.386)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	J, j	±662.0 (±26.063)	2504.0 (98.582)	108.5 (4.272)	Hole ϕ8 (0.31)
b	–413.0 (–16.260)	–368.0 (–14.488)	303.5 (11.949)	Hole ϕ16 (0.63)	K, k	±472.6 (±18.606)	2803.8 (110.386)	120.8 (4.756)	Bolt head
C, c	±411.0 (±16.181)	–261.0 (–10.276)	103.3 (4.067)	Bolt head	M, m	±451.5 (±17.776)	3363.9 (132.437)	179.0 (7.047)	Bolt head
D, d	±395.0 (±15.551)	76.0 (2.992)	126.3 (4.972)	Bolt head	N, n	±535.0 (±21.063)	3740.0 (147.244)	328.3 (12.925)	Hole 18×16 (0.71×0.63)
E, e	±428.0 (±16.850)	816.6 (32.150)	80.0 (3.150)	Hole 18×16 (0.71×0.63)	O, o	±426.1 (±16.776)	37.1 (1.461)	665.8 (26.213)	Hole ϕ50 (1.97)
F, f	±438.0 (±17.244)	1100.0 (43.307)	78.0 (3.071)	Hole ϕ16 (0.63)	P, p	±531.3 (±20.917)	3145.8 (123.850)	864.1 (34.020)	Hole ϕ68 (2.68)
G, g	±437.5 (±17.224)	1299.0 (51.142)	76.0 (2.992)	Hole ϕ16 (0.63)	–	–	–	–	–

AWD : Passenger Compartment

INFOID:0000000011485301

MEASUREMENT

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



JSKIA5400GB

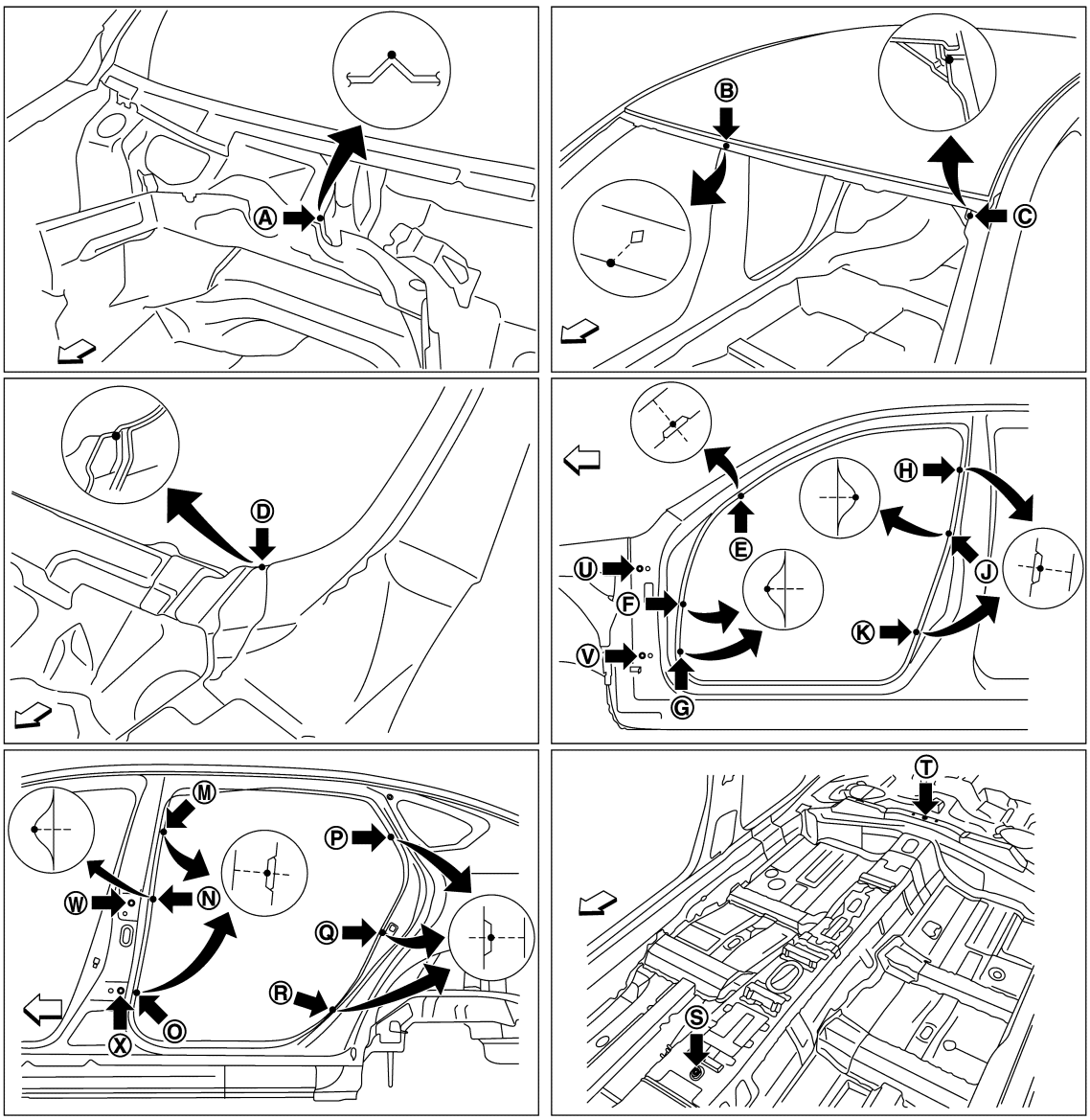
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
E - e	1431 (56.34)		M - r	1705 (67.13)*		T - M	1005 (39.57)*	
E - g	1597 (62.87)*		N - n	1485 (58.46)		T - N	917 (36.10)*	
E - h	1627 (64.05)*		N - q	1698 (66.85)*		T - O	856 (33.70)*	
E - k	1681 (66.18)*		O - o	1501 (59.09)		T - P	1076 (42.36)*	
F - f	1494 (58.82)		O - p	1801 (70.91)*		T - Q	923 (36.34)*	
F - j	1800 (70.87)*		O - r	1673 (65.87)*		T - R	821 (32.32)*	
G - g	1513 (59.57)		P - p	1338 (52.68)		U - u	1609 (63.35)	
G - h	1908 (75.12)*		P - r	1586 (62.44)*		U - W	1220 (48.03)*	
G - k	1746 (68.74)*		Q - q	1468 (57.80)		U - X	1206 (47.48)*	
H - h	1365 (53.74)		R - r	1522 (59.92)		V - v	1631 (64.21)	
H - k	1565 (61.61)*		S - E	930 (36.61)*		V - W	1278 (50.31)*	
J - j	1485 (58.46)		S - F	766 (30.16)*		V - X	1183 (46.57)*	
K - k	1501 (59.09)		S - G	758 (29.84)*		W - w	1614 (63.54)	
M - m	1361 (53.58)		S - H	1390 (54.72)*		X - x	1654 (65.12)	
M - o	1555 (61.22)*		S - J	1279 (50.35)*		–	–	
M - p	1595 (62.80)*		S - K	1125 (44.29)*		–	–	

MEASUREMENT POINTS



JSKIA5394ZZ

⇦: Vehicle front

Unit: mm (in)

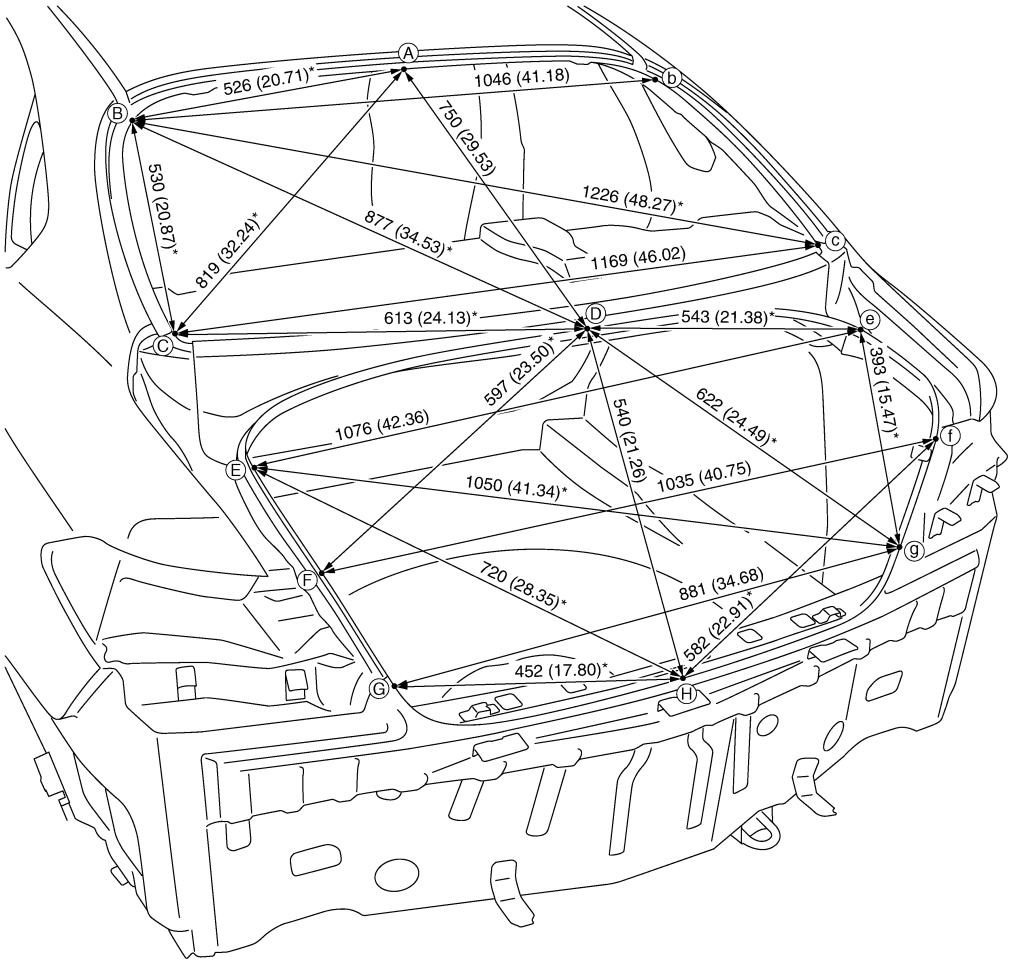
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	H, h, J, j, K, k, M, m, N, n, O, o	Center pillar indent
B	Roof flange end of center positioning mark	P, p, Q, q, R, r	Rear fender indent
C, c	Front pillar joggle	S	Trans control reinforcement hole center of center positioning mark 14×12 (0.55×0.47)
D, d	Front pillar hinge brace joggle	T	Rear seat crossmember reinforcement hole center of center positioning mark ϕ5 (0.20)
E, e, F, f, G, g	Front pillar indent	U, u, V, v, W, w, X, x	Door hinge installing hole center U, u, V, v, X, x: ϕ12 (0.47) W, w: 11×9 (0.43×0.35)

AWD : Rear Body

INFOID:0000000011485302

MEASUREMENT

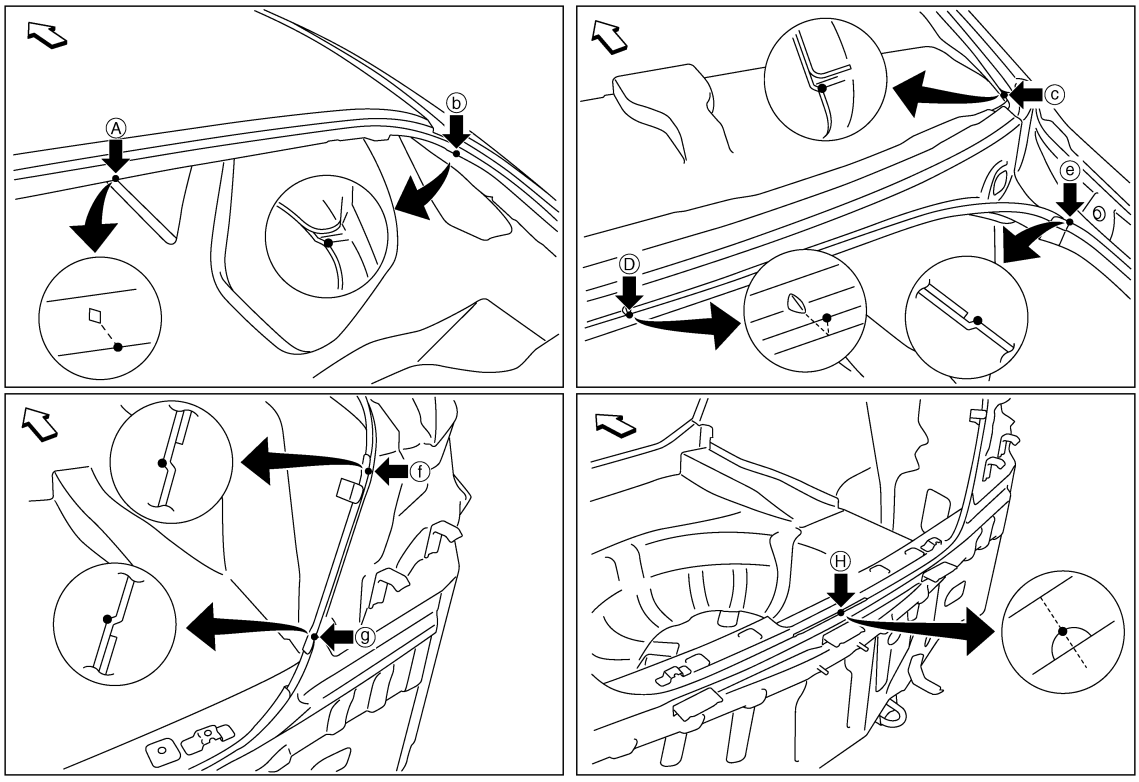
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA1624GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA1625ZZ

⇦: Vehicle front

Point	Material	Point	Material
A	Roof flange end of center positioning mark	D	Rear waist flange end of center positioning mark
B, b	Outer side body joggle	F, f, G, g	Rear combination lamp base joggle
C, c, E, e	Rear fender corner joggle	H	Upper rear panel indent of center positioning mark

LOCATION OF PLASTIC PARTS

Precautions for Plastics

INFOID:0000000011508544

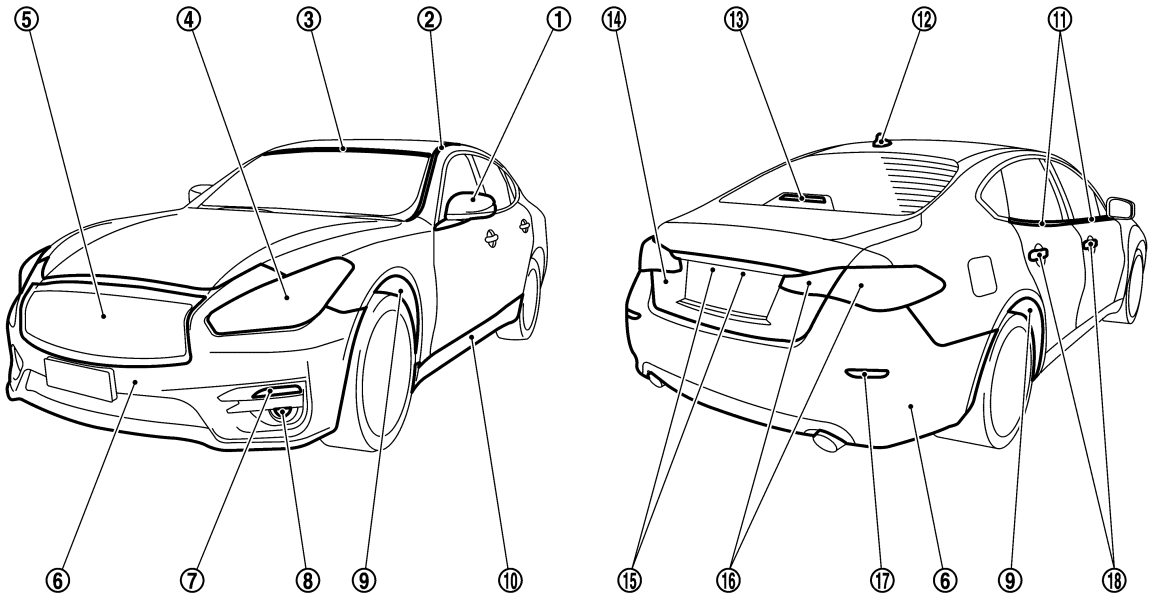
Abbreviation	Material name	Heat resisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly).	Flammable
ABS	Acrylonitrile Butadiene Styrene	80 (176)	Avoid gasoline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

CAUTION:

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

Location of Plastic Parts

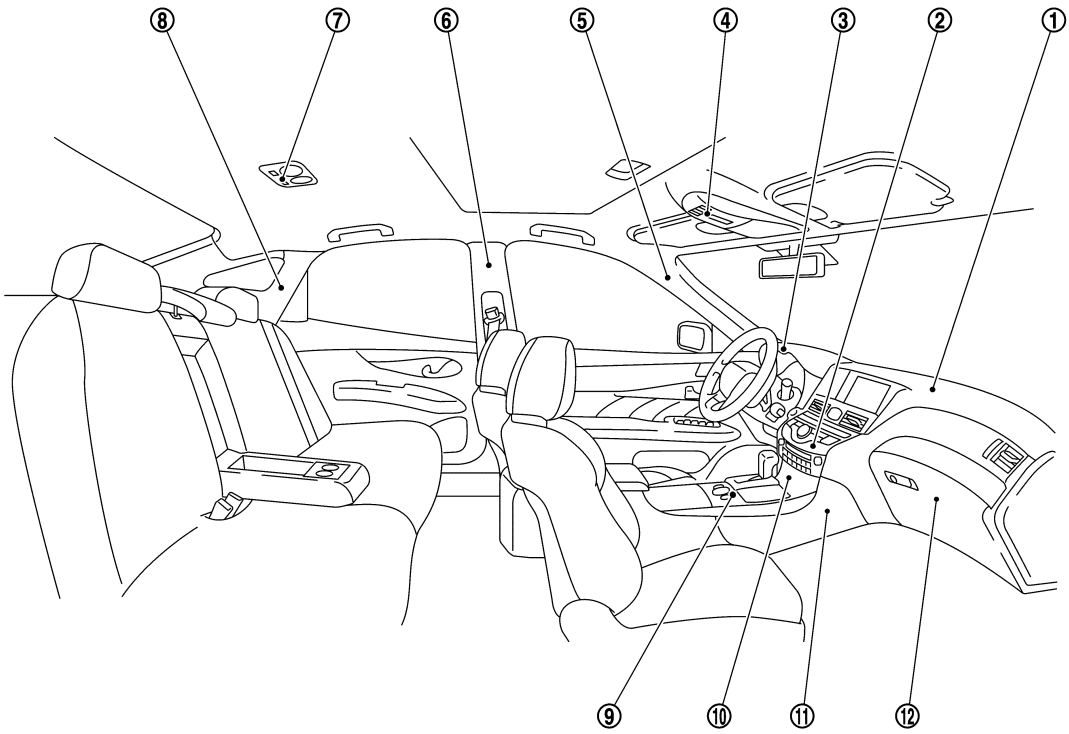
INFOID:0000000011485304



JSKIA5374ZZ

Component			Material
1	Door outside mirror	Cover	ABS
		Housing	ABS
		Base	PA
		Base under cover	ASA
2	Roof side molding		PVC + Stainless
3	Upper windshield molding		TPO
4	Front combination lamp	Lens	PC
		Housing	PP
5	Front grille		ABS
6	Bumper fascia		PP + EPM
7	Front side turn signal lamp	Lens	PC
		Housing	PC
		Reflector	PET + PBT
8	Front fog lamp	Lens	PC
		Housing	PBT + ASA + Glass fiber
9	Fender protector	Front	PP
		Rear	PET
10	Sill cover		PP + EPDM
11	Door outside molding		PVC + Stainless

Component				Material
12	Antenna base cover			ASA + PC
13	High mount stop lamp		Lens	PC
			Housing	PA
14	Trunk lid finisher	Base		ABS
		Upper molding		ABS
		Lower molding		ABS
15	License plate lamp		Lens	PC
			Housing	PA
16	Rear combination lamp (Rear fender)		Lens	PMMA
			Housing	ABS + ASA
	Rear combination lamp (Trunk lid)		Lens	PMMA
			Housing	ABS + ASA
17	Reflex reflector		Lens	PMMA
			Housing	ABS
18	Door outside handle	Front	Grip body	PC + ABS
			Grip cover	PC + PET + Glass fiber
		Rear	Grip body	PC + PET + Glass fiber
			Grip cover	PC + ABS
–	–			–



JSKIA5375ZZ

Component			Material	Component				Material
1	Instrument panel	Pad	PUR	9	Center console	Console panel		ABS
		Core	PP			AT console finisher		ABS
	Instrument finisher A		ABS + Glass fiber			Cluster lid finisher		ABS
2	Cluster lid D		ABS + Glass fiber			Cup holder	Outer lid	ABS + Glass fiber
3	Cluster lid A	Upper	PC + ABS				Inner lid	PA
		Lower	ABS				Outer case	ABS
4	Map lamp	Lens	PC				Inner case	PP
		Housing	PP		Console lid	Outer lid	Finisher	PVC
		Knob	PC				Insert lid	ABS
		Case	PC + ASA			Inner lid		ABS
		Cover	PP	10	Cluster lid C			ABS
5	Front pillar garnish		PP	11	Side instrument panel			ABS
6	Center pillar garnish		PP	12	Glove box	Cover		PP
7	Personal lamp	Lens	PC			Outer Lid	Skin	PVC
		Base	PA				Pad	PUR
		Cover	PC				Core	ABS
		Knob	ABS			Inner lid		ABS
8	Rear pillar finisher		PP	–	–			–