SECTION BRM
BODY REPAIR

CONTENTS

VEHICLE INFORMATION 3

BODY EXTERIOR PAINT COLOR 3
Body Exterior Paint Color 3

PRECAUTION 5

REPAIRING HIGH STRENGTH STEEL 5
High Strength Steel (HSS) 5
Handling of Ultra High Strength Steel Plate Parts 8

PREPARATION 9

REPAIRING MATERIAL 9
Foam Repair 9

BODY COMPONENT PARTS 11
Underbody Component Parts (2WD Models) 11
Underbody Component Parts (4WD Models) 13
Body Component Parts (2WD Models) 15
Body Component Parts (4WD Models) 18

REMOVAL AND INSTALLATION 21

CORROSION PROTECTION 21
Description 21
Anti-corrosive Wax 21
Undercoating (2WD Models) 22
Undercoating (4WD Models) 23
Body Sealing (2WD RHD Models) 24
Body Sealing (2WD LHD Models) 28
Body Sealing (4WD RHD Models) 31
Body Sealing (4WD LHD Models) 34

BODY CONSTRUCTION 37
Body Construction (RHD Models) 37
Body Construction (LHD Models) 39
Rear Fender Hemming Process 40

REPLACEMENT OPERATIONS 42
Description 42
Radiator Core Support 44
Hoodledge (RHD Models) 44
Hoodledge (LHD Models) 45
Hoodledge (RHD Models Partial Replacement) 46
Hoodledge (LHD Models Partial Replacement) 48
Front Side Member (2WD, RHD Models) 50
Front Side Member (2WD, LHD Models) 53
Front Side Member (4WD, RHD Models) 56
Front Side Member (4WD, LHD Models) 58
Front Side Member (2WD Models Partial Replacement) 60
Front Side Member (4WD Models Partial Replacement) 62
Front Pillar (RHD Models) 64
Front Pillar (LHD Models) 67
Center Pillar (2WD Models) 71
Center Pillar (4WD Models) 73
Outer Sill (Partial Replacement) 75
Outer Sill (RHD Models) 76
Outer Sill (LHD Models) 79
Inner Sill 81
Rear Fender (2WD Models) 84
Rear Fender (4WD Models) 87
Rear Fender Extension (2WD Models) 90
Rear Fender Extension (4WD Models) 91
Rear Pillar Reinforcement 91
Outer Rear Wheelhouse (2WD Models) 92
Outer Rear Wheelhouse (4WD Models) 94
Inner Rear Wheelhouse (2WD Models) 96
Inner Rear Wheelhouse (4WD Models) 97
Rear Panel (2WD Models) 99
Rear Panel (4WD Models) 100
Inner Rear Pillar 100
Rear Floor Rear (2WD Models) 101
Rear Floor Rear (4WD Models) 102
Rear Side Member (4WD Models Partial Replacement) 103
Rear Side Member Extension (2WD Models) 104
Rear Side Member Extension (4WD Models) 105
Roof 107
Roof Rail 108

SERVICE DATA AND SPECIFICATIONS (SDS) 109

BODY ALIGNMENT 109
Body Center Marks (RHD Models) 109
Body Center Marks (LHD Models) 110
Description 111
Engine Compartment (2WD RHD Models) 111
Engine Compartment (2WD LHD Models) 114
Engine Compartment (4WD RHD Models) 116
Engine Compartment (4WD LHD Models) 118
Underbody (2WD Models) 120
Underbody (4WD Models) 122
Passenger Compartment 125
Rear Body 127

LOCATION OF PLASTIC PARTS 129
Precautions for Plastics 129
Location of Plastic Parts 130

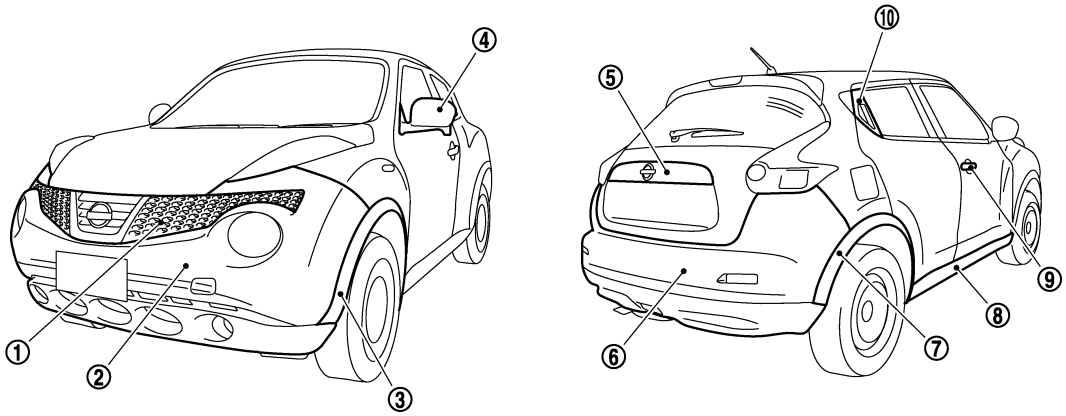
VEHICLE INFORMATION

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:0000000006482807

FOR 2WD MODELS



JSKIA2126ZZ

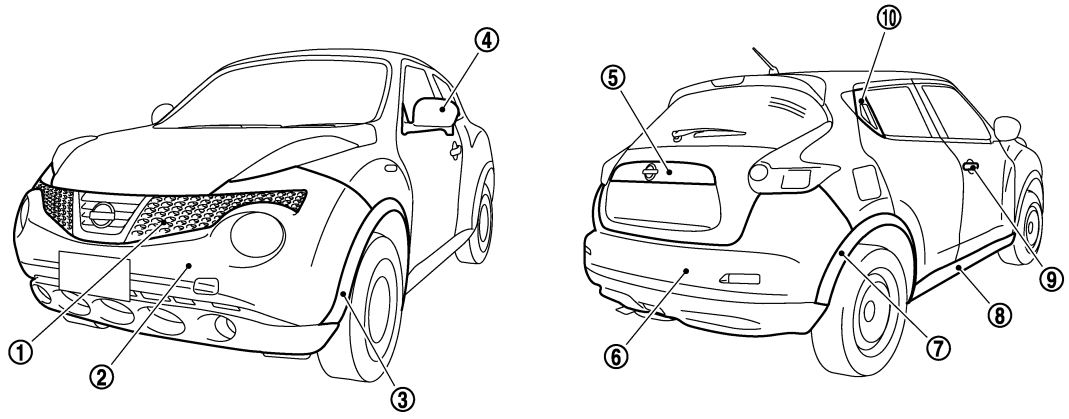
Component			Color code	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
			Description	White	Gray	Dark Gray	Silver	Red	Dark Blue	Black
			Paint type [Note]	Solid	M	PM	M	PM	M	PM
			Hard clear coat	–	×	×	×	×	×	×
1	Front grille	Grille	Material color	–	–	–	–	–	–	–
		Molding	Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
2	Front bumper fascia		Body color	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
3	Front fillet molding		Material color	–	–	–	–	–	–	–
4	Door outside mirror		Body color	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
			Material color	–	–	–	–	–	–	–
5	Back door finisher		Body color	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
6	Rear bumper fascia		Body color	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
7	Rear fillet molding		Material color	–	–	–	–	–	–	–
8	Center mudguard		Material color	–	–	–	–	–	–	–
9	Front door outside handle		Body color	B326	BKAD	BKAX	BKY0	BNAH	BRAQ	BZ11
			Material color	–	–	–	–	–	–	–
10	Rear door outside handle		Material color	–	–	–	–	–	–	–

NOTE:

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

- TM: Micro titanium metallic
- PM: Pearl metallic

FOR 4WD MODELS



JSKIA2126ZZ

Component			Color code	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
			Description	Bluish Black	Gray	Dark Gray	Silver	Red	Dark Blue	White
			Paint type [Note]	P	M	PM	M	PM	M	3P
			Hard clear coat	×	–	×	–	×	×	–
1	Front grille	Grille	Material color	–	–	–	–	–	–	–
		Molding	Chromium plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
2	Front bumper fascia		Body color	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
3	Front fillet molding		Material color	–	–	–	–	–	–	–
4	Door outside mirror		Body color	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
			Material color	–	–	–	–	–	–	–
5	Back door finisher		Body color	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
6	Rear bumper fascia		Body color	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
7	Rear fillet molding		Material color	–	–	–	–	–	–	–
8	Center mudguard		Material color	–	–	–	–	–	–	–
9	Front door outside handle		Body color	BB20	BKAD	BKAX	BKY0	BNAH	BRAQ	BQX1
			Material color	–	–	–	–	–	–	–
10	Rear door outside handle		Material color	–	–	–	–	–	–	–

NOTE:

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

PRECAUTION

REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:0000000006482809

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:

FOR 2WD MODELS

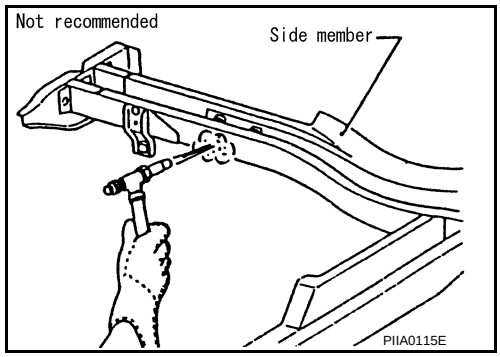
Tensile strength	Major applicable parts
440 - 780 MPa	• Trans control reinforcement (Center front floor component part) • Rear side member front extension (Front floor component part) • Inner sill • Side dash • Lower dash crossmember • Front strut housing • Front side member assembly • Front side member closing plate assembly • Rear seat crossmember reinforcement (Center rear crossmember assembly component part) • Rear side member • Inner side roof rail • Upper inner front pillar • Inner center pillar • Outer side roof rail reinforcement • Lower center pillar brace • Outer front pillar reinforcement (Front pillar brace component part) • Lower front pillar hinge brace • Outer sill reinforcement • Inner rear pillar reinforcement • Front roof rail • Rear bumper stay assembly
980 - 1310 MPa	• Lower dash crossmember (Upper) (Lower dash component part) • Inner center front bumper reinforcement • Inner center rear bumper reinforcement

FOR 4WD MODELS

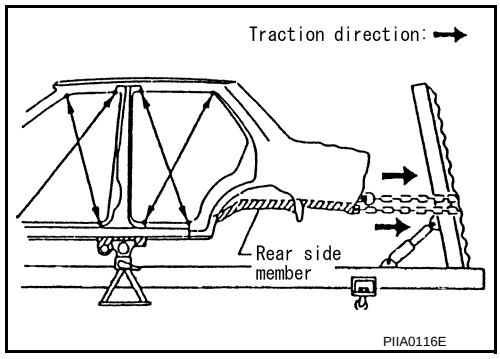
Tensile strength	Major applicable parts
440 - 780 MPa	• Trans control reinforcement (Center front floor component part) • 2nd crossmember (Front floor component part) • Inner sill • Side dash • Lower dash crossmember • Front strut housing • Front side member assembly • Front side member closing plate assembly • Front suspension mounting bracket (Front) • Rear seat crossmember • Rear seat crossmember reinforcement (Center rear crossmember assembly component part) • Rear side member • Front side member front assembly • Inner side roof rail • Upper inner front pillar • Inner center pillar • Outer side roof rail reinforcement • Lower center pillar brace • Outer front pillar reinforcement (Front pillar brace component part) • Lower front pillar hinge brace • Outer sill reinforcement • Inner rear pillar reinforcement • Front roof rail • Rear bumper stay assembly
980 - 1310 MPa	• Rear front side member extension (Front floor component part) • Lower dash crossmember (Upper) (Lower dash component part) • Inner center front bumper reinforcement • Inner center rear bumper reinforcement

Read the following precautions when repairing HSS:

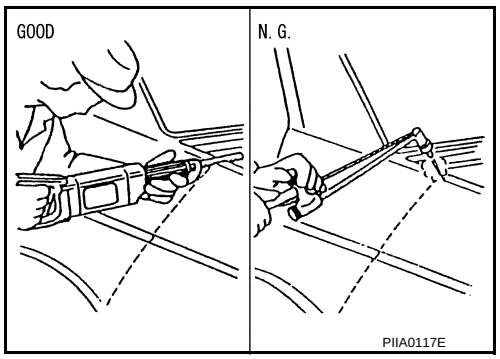
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended, because it may weaken the component. When heating is unavoidable, never heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type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



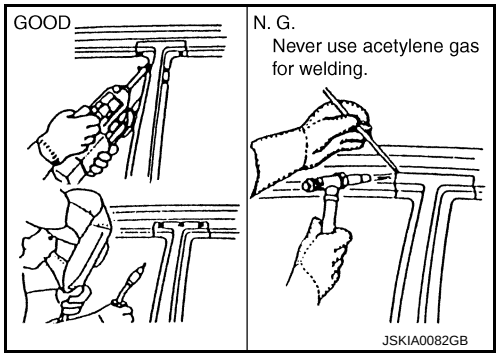
   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent sections of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



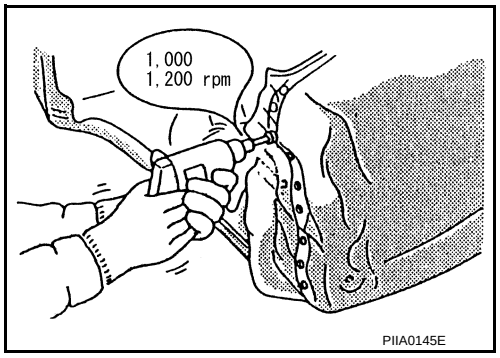
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



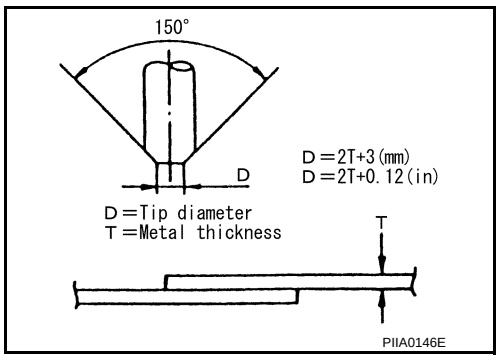
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use MIG. welding. Do not use gas (torch) for welding because it is inferior in welding strength.



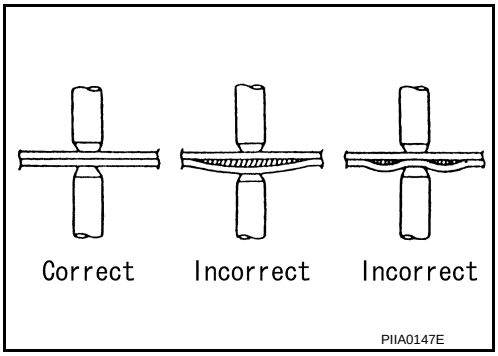
- Spot welding on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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.



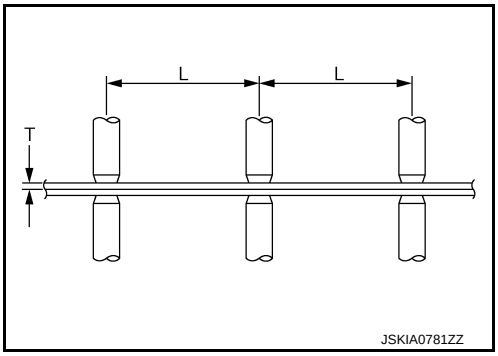
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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:0000000006482810

PROHIBITION OF CUT AND CONNECTION

Never cut and Joint the stiffener front side member (front floor inside frame parts) because its material is high strength steel plate (ultra high strength steel plate).
The front floor assembly must be replaced if this part is damaged.

PREPARATION

REPAIRING MATERIAL

Foam Repair

INFOID:0000000006482811

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

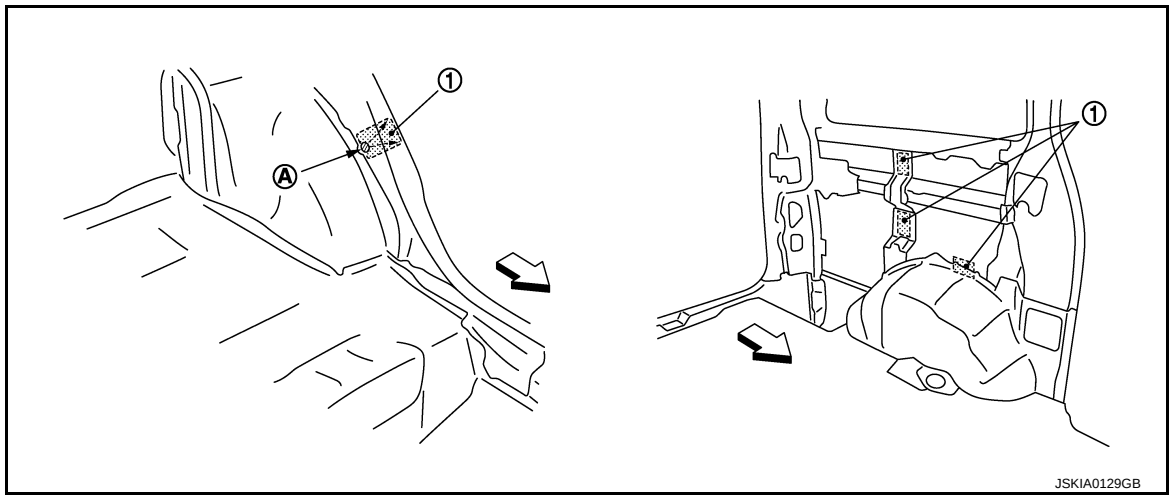
1. Fill procedures after installation of service part.

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

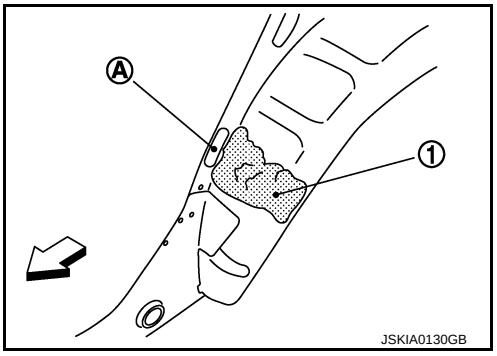
⇦: Vehicle front

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

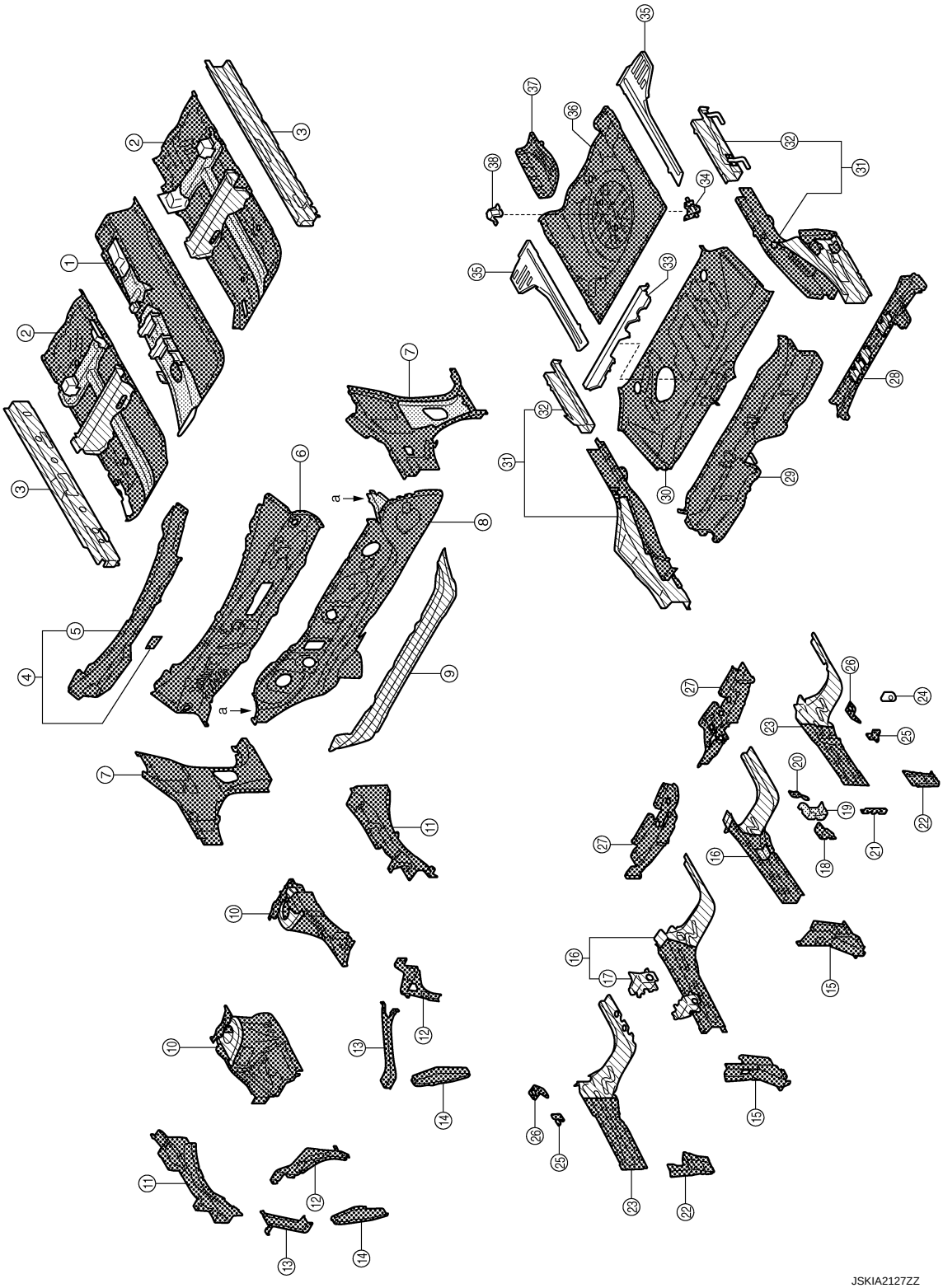
NOTE:
Fill enough to close gap with service part while avoiding flange area.

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

BODY COMPONENT PARTS

Underbody Component Parts (2WD Models)

INFOID:0000000006482812



JSKIA2127ZZ

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

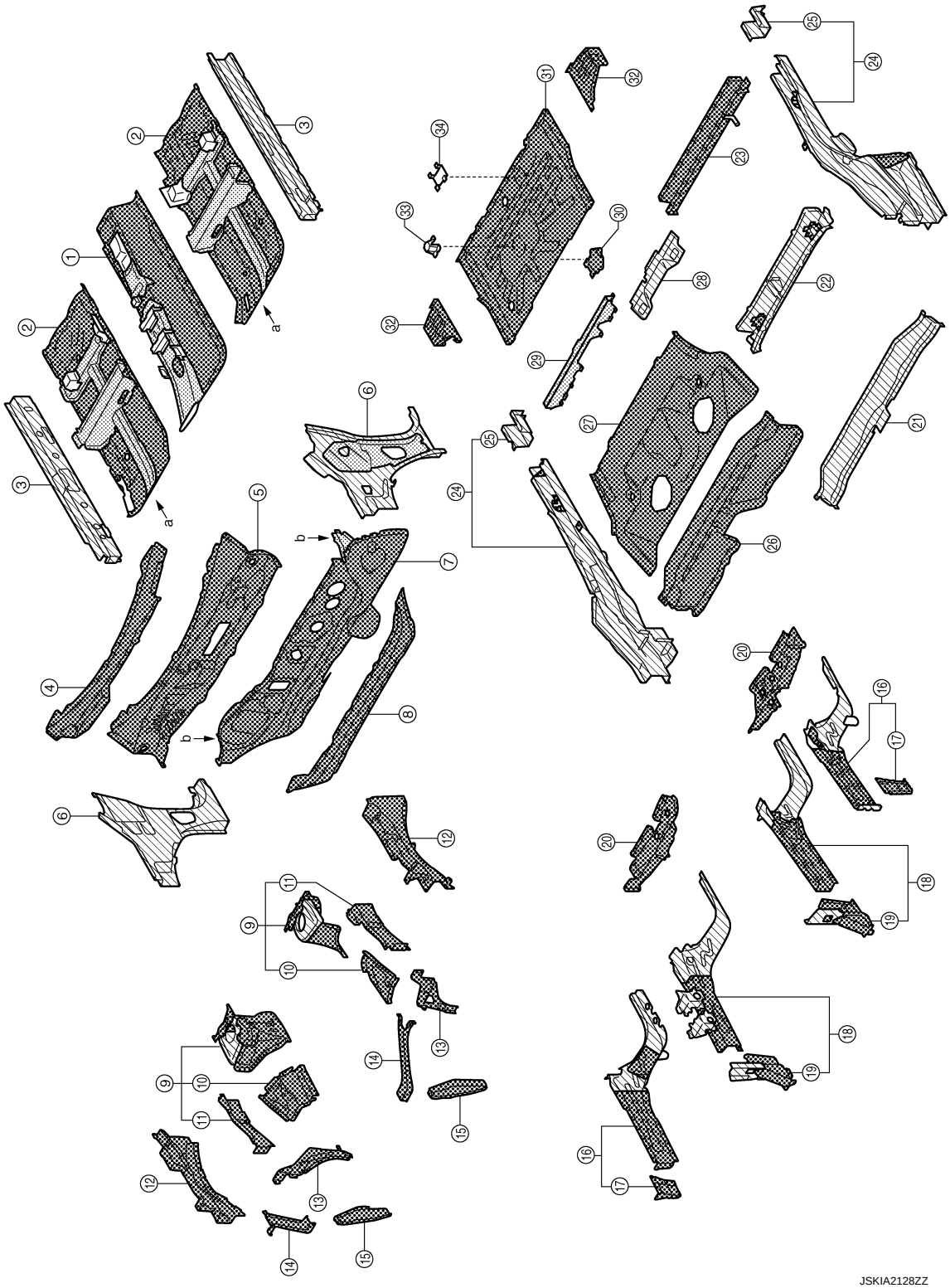
No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.	Center front floor			500	×
2.	Front floor (RH & LH)			750	×
3.	Inner sill (RH & LH)			590	×
4.	Cowl top assembly			Under 440	×
5.	Cowl top			Under 440	×
6.	Upper dash			Under 440	×
7.	Side dash (RH & LH)			590	×
8.	Lower dash	a.	T=1.4 mm (0.055 in)	980[caution]	×
9.	Lower dash crossmember			780	×
10.	Front strut housing (RH & LH)			590	×
11.	Hoodledge reinforcement (RH & LH)			Under 440	×
12.	Hoodledge connector (RH & LH)			Under 440	×
13.	Side radiator core support (RH & LH Upper)			Under 440	×
14.	Side radiator core support (RH & LH Lower)			Under 440	×
15.	Front suspension mounting bracket (RH & LH Front)			Under 440	×
16.	Front side member assembly (RH & LH)			780	×
17.	Engine mounting member bracket			440	×
18.	Engine mounting reinforcement			Under 440	×
19.	Front side member reinforcement assembly			780	—
20.	Tie down hook reinforcement			Under 440	×
21.	Front towing hook reinforcement			Under 440	×
22.	Add on frame bracket (RH & LH)			Under 440	×
23.	Front side member closing plate assembly (RH & LH)			560	×
24.	Front tie down hook			Under 440	—
25.	Sensor harness bracket (RH & LH)			Under 440	×
26.	Front brake hose bracket (RH & LH)			Under 440	×
27.	Front suspension mounting bracket (RH & LH Rear)			445	×
28.	Rear crossmember center assembly			780	×
29.	Rear seat crossmember			Under 440	×
30.	Rear floor front			Under 440	×
31.	Rear side member (RH & LH)			590	×
32.	Rear side member extension (RH & LH)			445	×
33.	Upper rear seat crossmember			Under 440	—
34.	Muffler mounting bracket			Under 440	×
35.	Rear floor side (RH & LH)			Under 440	—
36.	Rear floor rear			Under 440	×
37.	Rear towing hook bracket			Under 440	×
38.	Spare tire clamp bracket			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.

Underbody Component Parts (4WD Models)

INFOID:0000000006482813



JSKIA2128ZZ

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

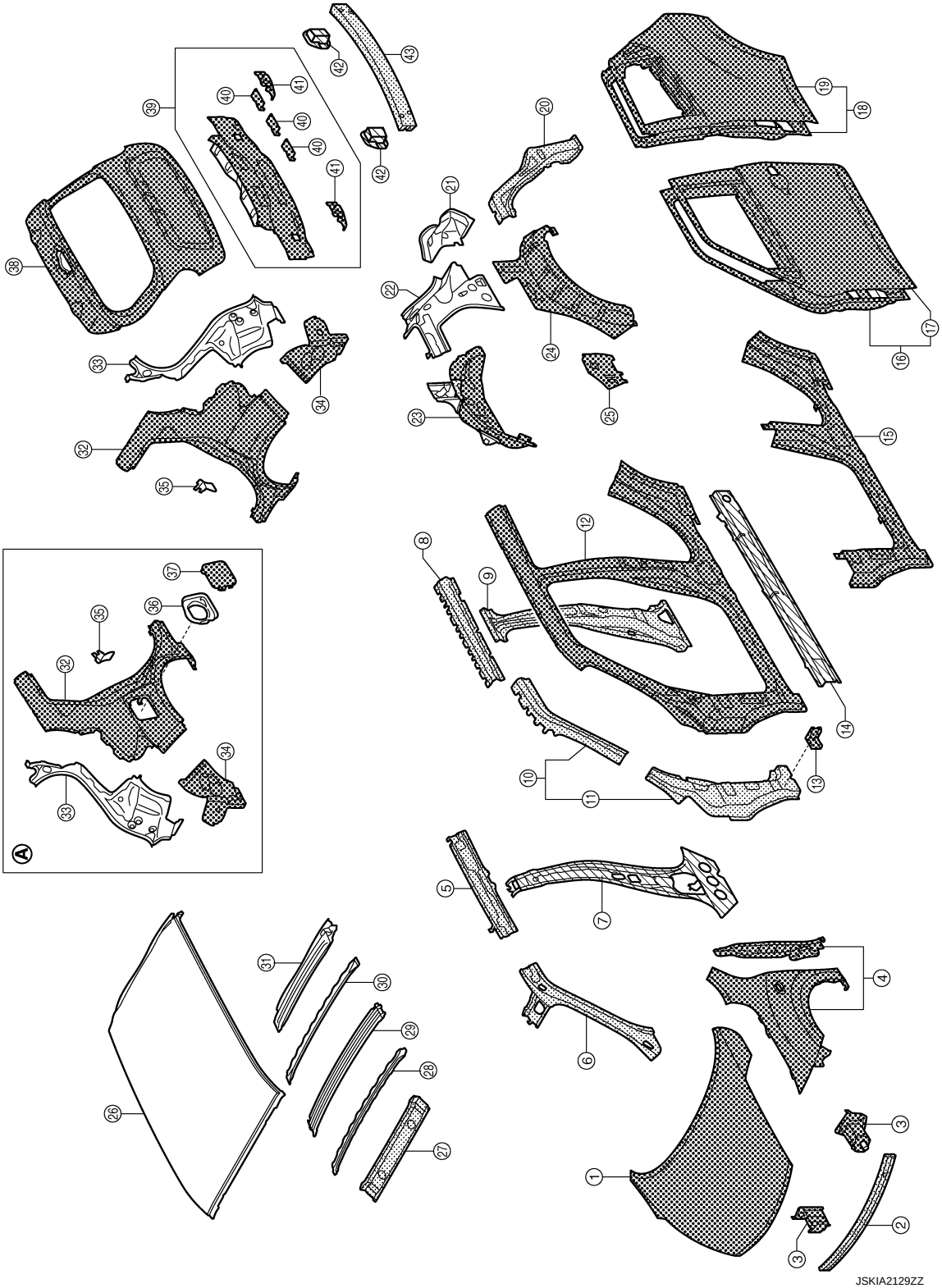
No.	Parts name			Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.	Center front floor			590	×
2.	Front floor (RH & LH)	a.	T=1.8mm (0.071 in)	980[caution]	×
3.	Inner sill (RH & LH)			590	×
4.	Inner cowl top			Under 440	×
5.	Upper dash			Under 440	×
6.	Side dash (RH & LH)			590	×
7.	Lower dash	b.	T=1.4mm (0.055 in)	980[caution]	×
8.	Lower dash crossmember			780	×
9.	Front strut housing (RH & LH)			590	×
10.	Lower front hoodledge (RH & LH)			Under 440	×
11.	Upper hoodledge (RH & LH)			Under 440	×
12.	Hoodledge reinforcement (RH & LH)			Under 440	×
13.	Hoodledge connector (RH & LH)			Under 440	×
14.	Side radiator core support (RH & LH Upper)			Under 440	×
15.	Side radiator core support (RH & LH Lower)			Under 440	×
16.	Front side member closing plate assembly (RH & LH)			590	×
17.	Add on frame bracket (RH & LH)			Under 440	×
18.	Front side member assembly (RH & LH)			590	×
19.	Front suspension mounting bracket (RH & LH Front)			440	×
20.	Front suspension mounting bracket (RH & LH Rear)			Under 440	×
21.	Rear seat crossmember			440	×
22.	Rear crossmember center assembly			590	×
23.	7th crossmember			Under 440	×
24.	Rear side member			780	×
25.	Rear side member extension (RH & LH)			590	×
26.	Rear floor front extension			Under 440	×
27.	Rear floor front			Under 440	×
28.	Rear floor belt anchor reinforcement			590	×
29.	Upper rear seat crossmember			440	—
30.	Canister bracket			Under 440	×
31.	Rear floor rear			Under 440	×
32.	Rear floor side (RH & LH)			Under 440	×
33.	Spare tire clamp bracket			Under 440	—
34.	Jack mounting bracket			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.

Body Component Parts (2WD Models)

INFOID:0000000006482814



A. Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

No.	Parts name		Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.	Hood		Under 440	×
2.	Inner center front bumper reinforcement	T=1.2 mm (0.047 in)	1310[caution]	—
3.	Front side member front assembly (RH & LH)		Under 440	×
4.	Front fender (RH & LH)		Under 440	×
5.	Inner side roof rail (RH & LH)		590	—
6.	Upper inner front pillar (RH & LH)		780	—
7.	Inner center pillar (RH & LH)		590	×
8.	Outer side roof rail reinforcement (RH & LH)		590	—
9.	Lower center pillar brace (RH & LH)		590	—
10.	Front pillar brace (RH & LH)		590	—
11.	Lower front pillar hinge brace (RH & LH)		590	—
12.	Outer front side body (RH & LH)		Under 440	×
13.	Front fender bracket assembly (RH & LH)		Under 440	×
14.	Outer sill reinforcement (RH & LH)		780	×
15.	Outer sill (RH & LH)		Under 440	×
16.	Front door (RH & LH)		Under 440	×
17.	Outer front door panel (RH & LH)		Under 440	×
18.	Rear door (RH & LH)		Under 440	×
19.	Outer rear door panel (RH & LH)		Under 440	×
20.	Inner rear pillar reinforcement (RH & LH)		450	—
21.	Rear pillar reinforcement (RH & LH)		Under 440	—
22.	Inner rear pillar (RH & LH)		Under 440	—
23.	Inner rear wheelhouse (RH & LH)		450	×
24.	Outer rear wheelhouse (RH & LH)		Under 440	×
25.	Outer rear wheelhouse extension (RH & LH)		Under 440	×
26.	Roof		Under 440	—
27.	Front roof rail		780	—
28.	Roof bow No.1		Under 440	—
29.	Roof bow No.2		590	—
30.	Roof bow No.3		Under 440	—
31.	Rear roof rail		Under 440	—
32.	Rear fender (RH & LH)		Under 440	×
33.	Rear fender extension (RH & LH)		Under 440	—
34.	Rear fender corner (RH & LH)		Under 440	×
35.	Striker retainer (RH & LH)		Under 440	—
36.	Fuel filler base		Under 440	—
37.	Fuel filler lid		Under 440	×
38.	Back door		Under 440	×
39.	Upper rear panel		Under 440	×
40.	Upper rear bumper retainer		Under 440	×
41.	Rear side bumper bracket		Under 440	×

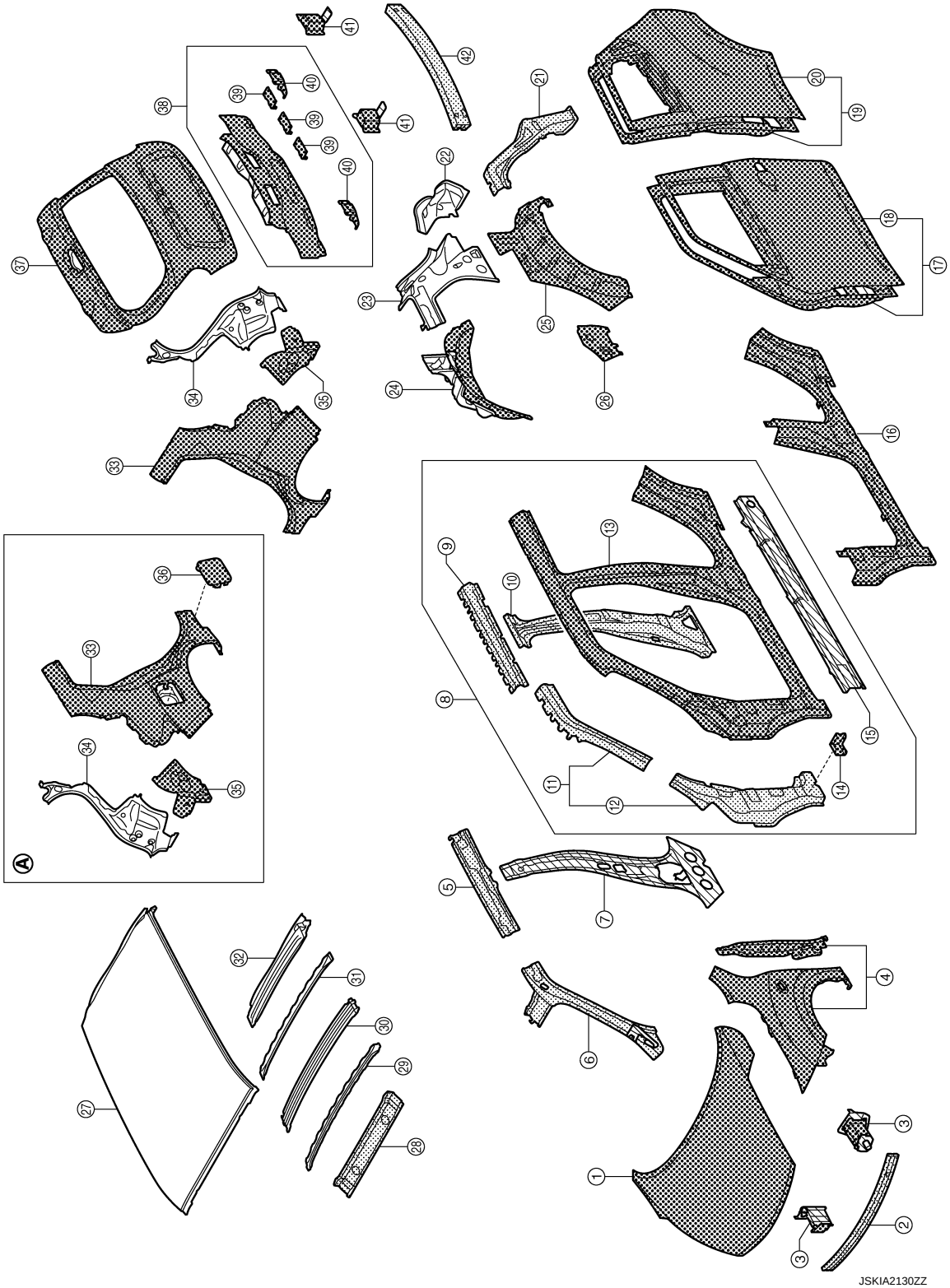
No.	Parts name		Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
42.	Rear bumper stay (RH & LH)		590	×
43.	Inner center rear bumper reinforcement	T=1.2 mm (0.047 in)	1310[caution]	—

NOTE:

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

Body Component Parts (4WD Models)

INFOID:0000000006482815



A. Right side

: Both sided anti-corrosive precoated steel sections

: High strength steel (HSS) sections

: Both sided anti-corrosive steel and HSS sections

No.		Parts name		Tensile strength (MPa)	Both sided anti-corrosive precoated steel sections
1.		Hood		Under 440	×
2.		Inner center front bumper reinforcement	T=1.2 mm (0.047 in)	1310[caution]	—
3.		Front side member front assembly (RH & LH)		590	×
4.		Front fender (RH & LH)		Under 440	×
5.		Inner side roof rail (RH & LH)		590	—
6.		Upper inner front pillar (RH & LH)		780	—
7.		Inner center pillar (RH & LH)		590	×
8.		Side body assembly (RH & LH)		Refer to No.9–15	
	9.	Outer side roof rail reinforcement (RH & LH)		590	—
	10.	Lower center pillar brace (RH & LH)		590	—
	11.	Front pillar brace (RH & LH)		590	—
	12.	Lower front pillar hinge brace (RH & LH)		590	—
	13.	Outer front side body (RH & LH)		Under 440	×
	14.	Front fender bracket assembly (RH & LH)		Under 440	×
	15.	Outer sill reinforcement (RH & LH)		780	×
16.		Outer sill (RH & LH)		Under 440	×
17.		Front door (RH & LH)		Under 440	×
18.		Outer front door panel (RH & LH)		Under 440	×
19.		Rear door (RH & LH)		Under 440	×
20.		Outer rear door panel (RH & LH)		Under 440	×
21.		Inner rear pillar reinforcement (RH & LH)		440	—
22.		Rear pillar reinforcement (RH & LH)		Under 440	—
23.		Inner rear pillar (RH & LH)		Under 440	—
24.		Inner rear wheelhouse (RH & LH)		440	×
25.		Outer rear wheelhouse (RH & LH)		Under 440	×
26.		Outer rear wheelhouse extension (RH & LH)		Under 440	×
27.		Roof		Under 440	—
28.		Front roof rail		780	—
29.		Roof bow No.1		Under 440	—
30.		Roof bow No.2		590	—
31.		Roof bow No.3		Under 440	—
32.		Rear roof rail		Under 440	—
33.		Rear fender (RH & LH)		Under 440	×
34.		Rear fender extension (RH & LH)		Under 440	—
35.		Rear fender corner (RH & LH)		Under 440	×
36.		Fuel filler lid		Under 440	×
37.		Back door		Under 440	×
38.		Upper rear panel		Under 440	×
39.		Upper rear bumper retainer		Under 440	×
40.		Rear side bumper bracket		Under 440	×
41.		Rear bumper stay (RH & LH)		440	×
42.		Inner center rear bumper reinforcement	T=1.2 mm (0.047 in)	1310[caution]	—

NOTE:

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

REMOVAL AND INSTALLATION

CORROSION PROTECTION

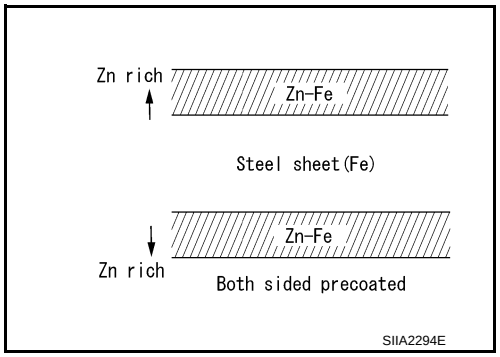
Description

INFOID:0000000006482816

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

ANTI-CORROSIVE PRECOATED STEEL (GALVANNEALED STEEL)

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



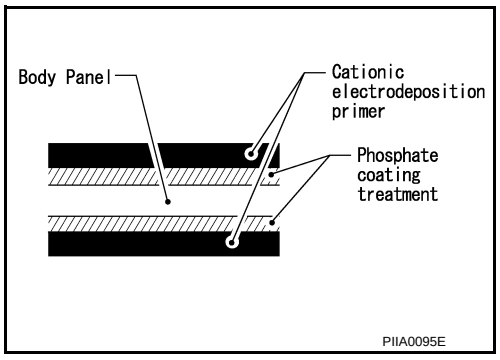
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

PHOSPHATE COATING TREATMENT AND CATIONIC ELECTRODEPOSITION PRIMER

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

CAUTION:

Confine paint removal during welding operations to an absolute minimum.



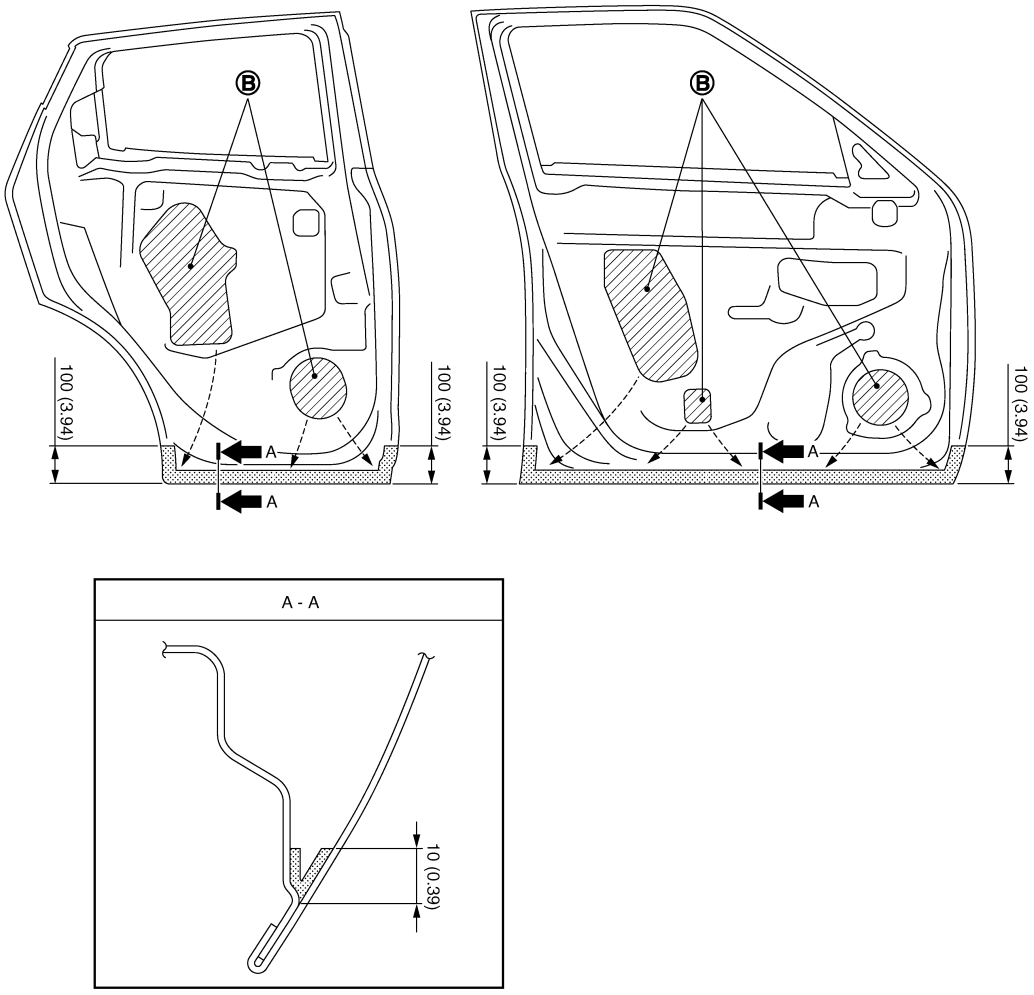
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or an equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

Anti-corrosive Wax

INFOID:0000000006482817

To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of the new parts. Select an excellent anti-corrosive wax which will penetrate after application and has a long shelf life.

DOOR



JSKIA2131ZZ

B. Nozzle insert hole

Unit: mm (in)

: Anti-corrosive wax coated portions

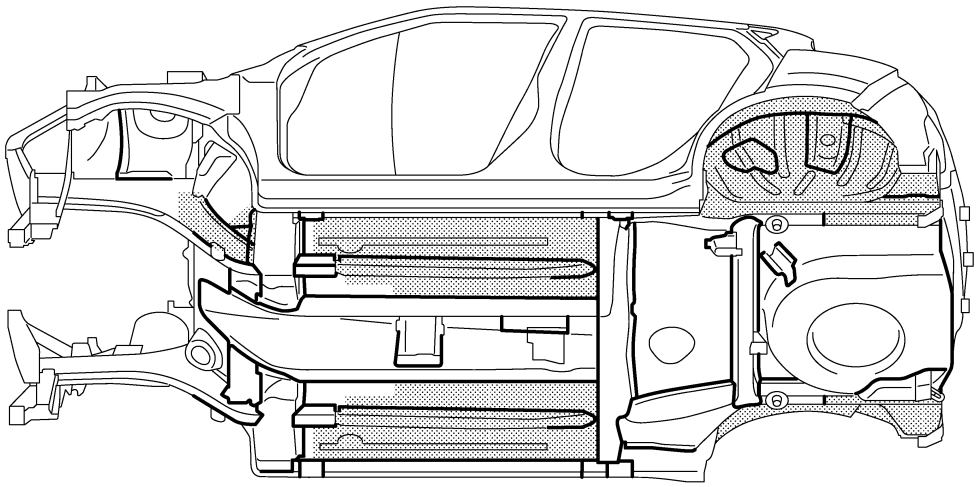
Undercoating (2WD Models)

INFOID:0000000006482821

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.



JSKIA2132ZZ

: Undercoated areas
: Sealed portions

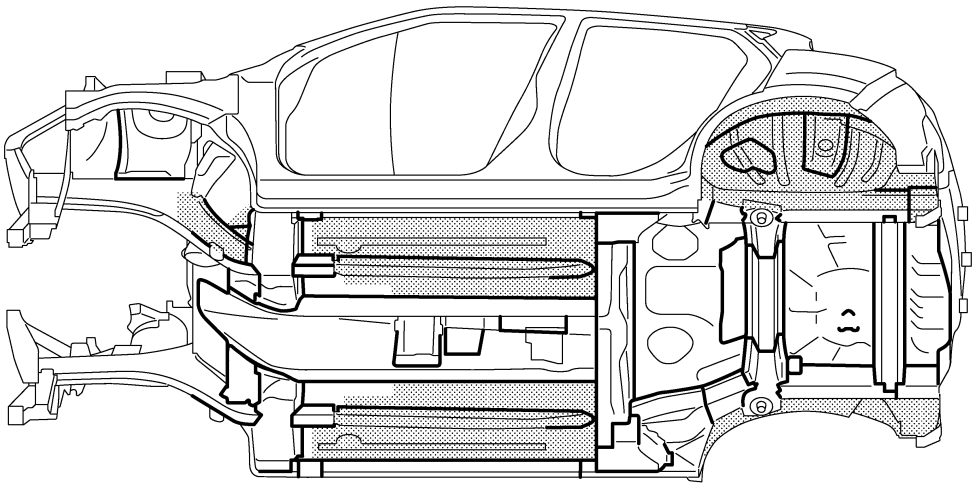
Undercoating (4WD Models)

INFOID:0000000006482822

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.



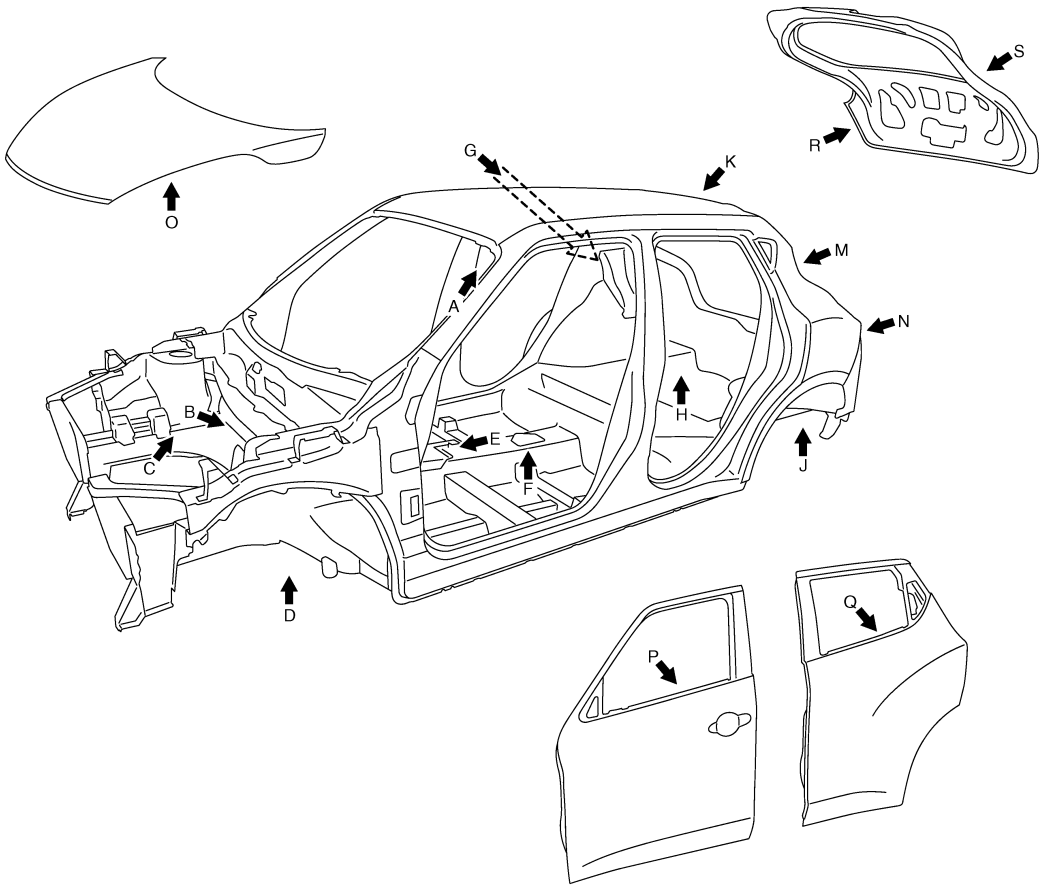
JSKIA2133ZZ

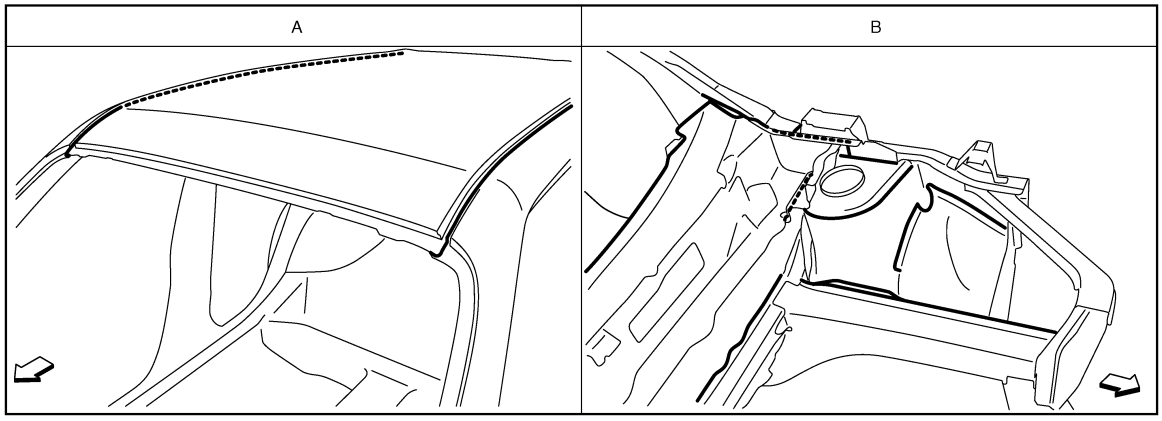
: Undercoated areas
: Sealed portions

Body Sealing (2WD RHD Models)

INFOID:0000000006482818

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.

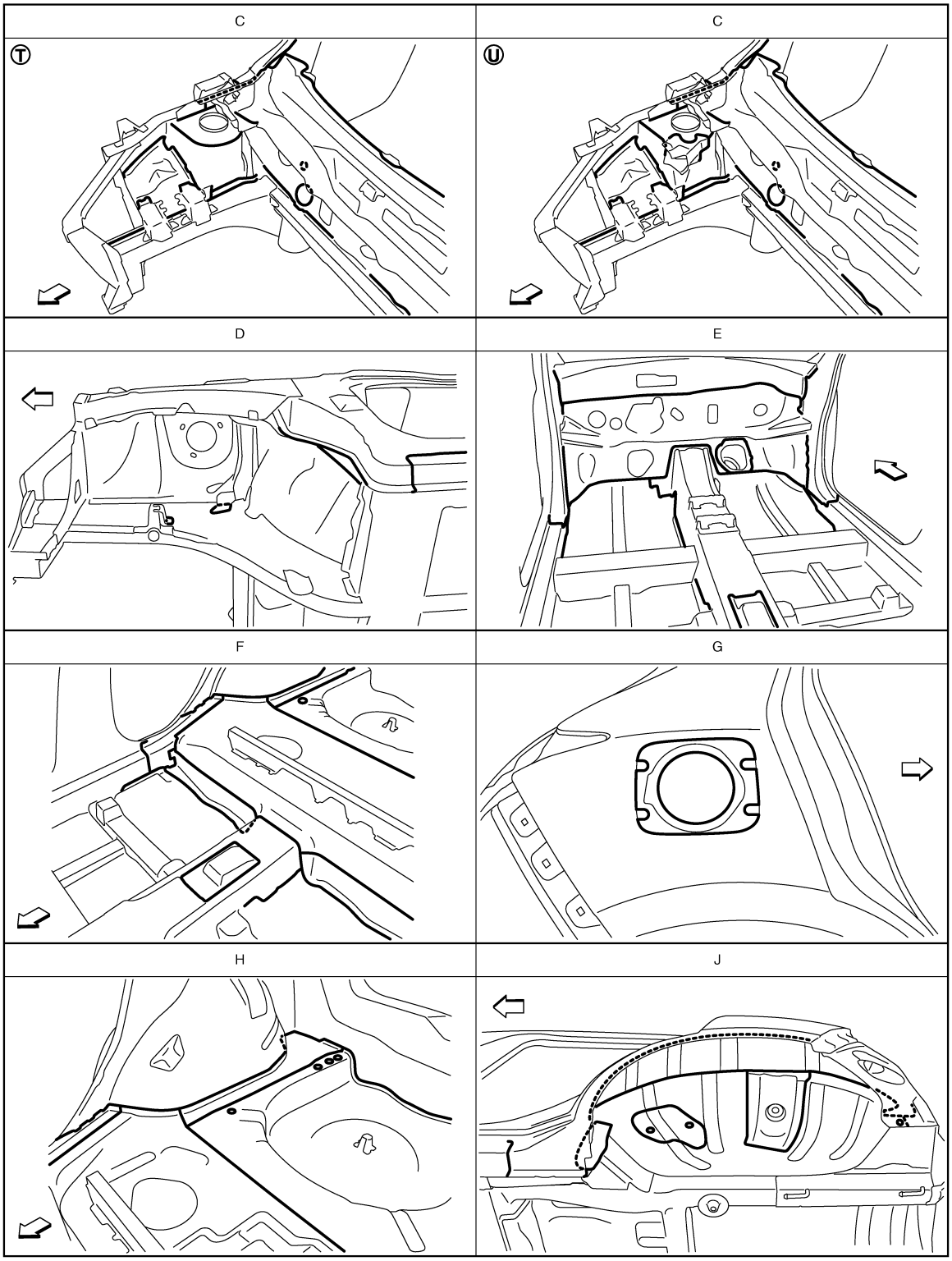




JSKIA2002ZZ

⇦: Vehicle front

▬: Sealed portions



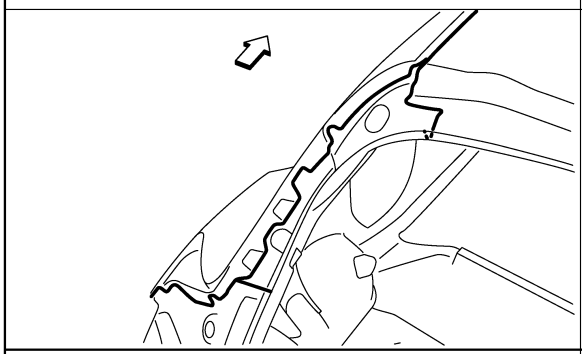
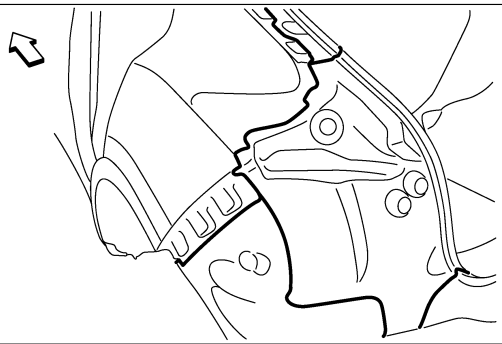
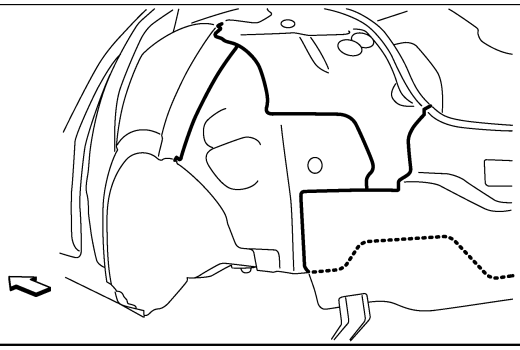
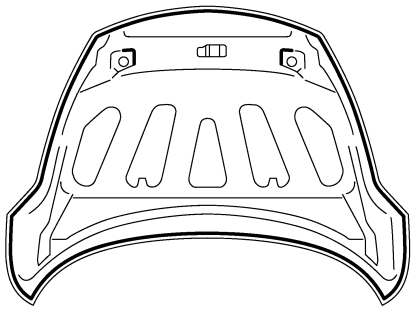
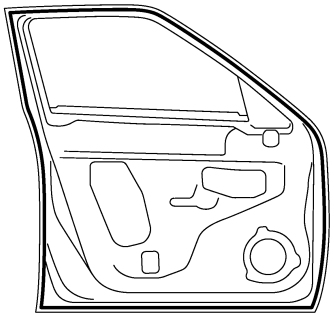
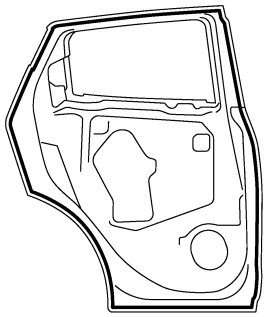
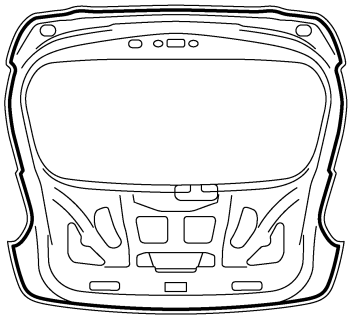
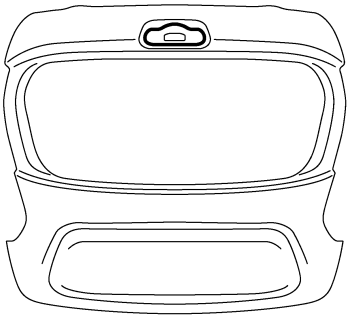
JSKIA2134ZZ

T. HR16DE Engine models

U. MR16DDT and K9K Engine models

⇦: Vehicle front

▬: Sealed portions

K	M
	
N	O
	
P	Q
	
R	S
	

JSKIA2135ZZ

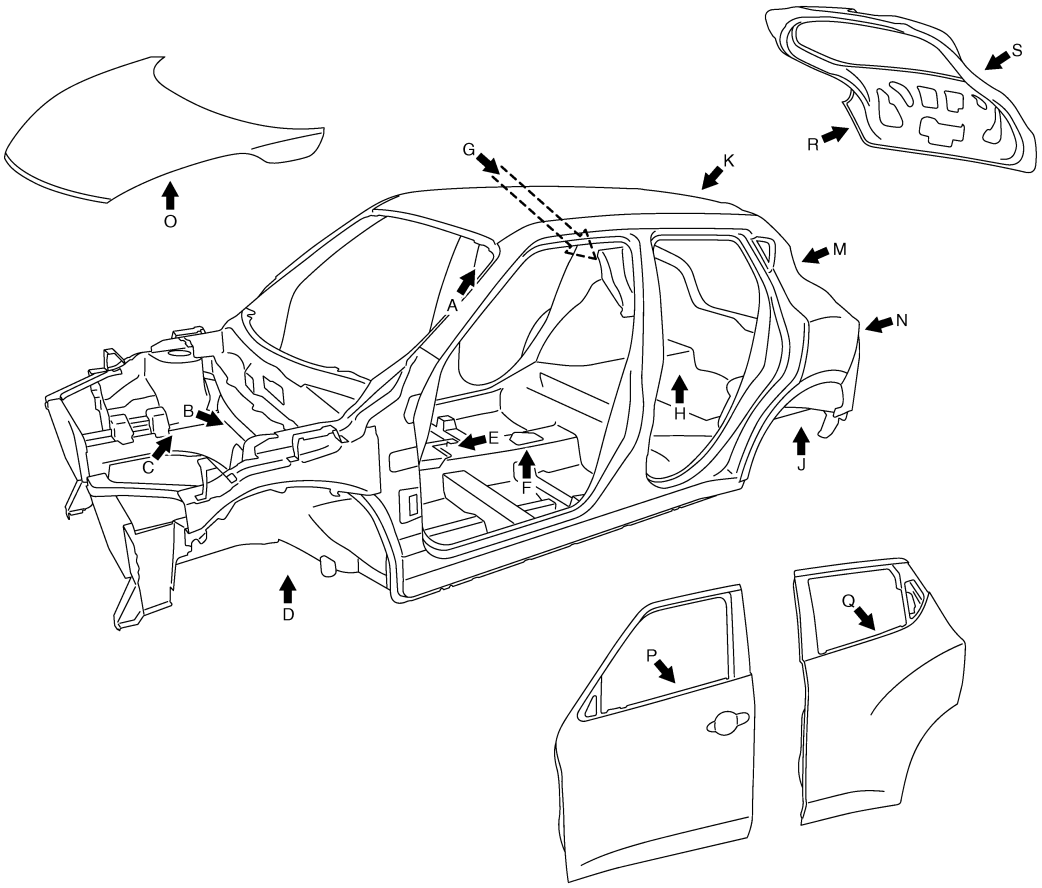
⇦: Vehicle front

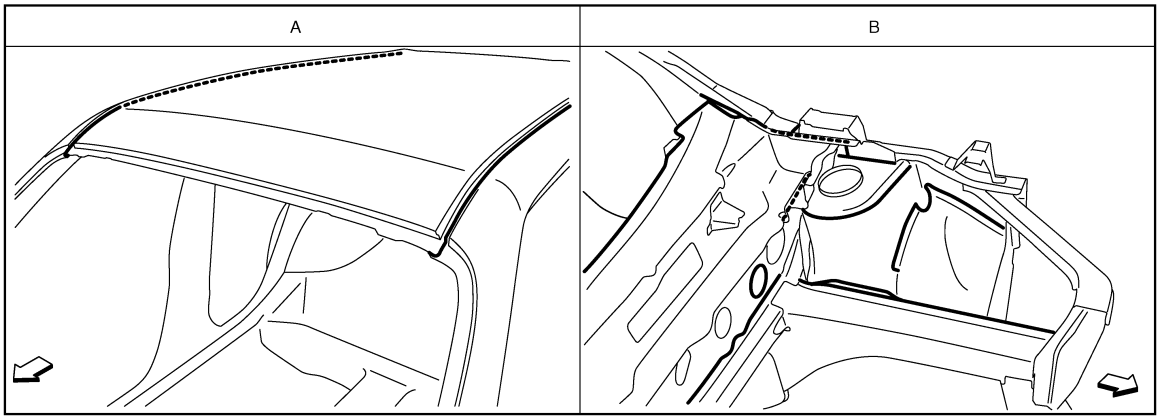
▬: Sealed portions

Body Sealing (2WD LHD Models)

INFOID:0000000006486722

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.

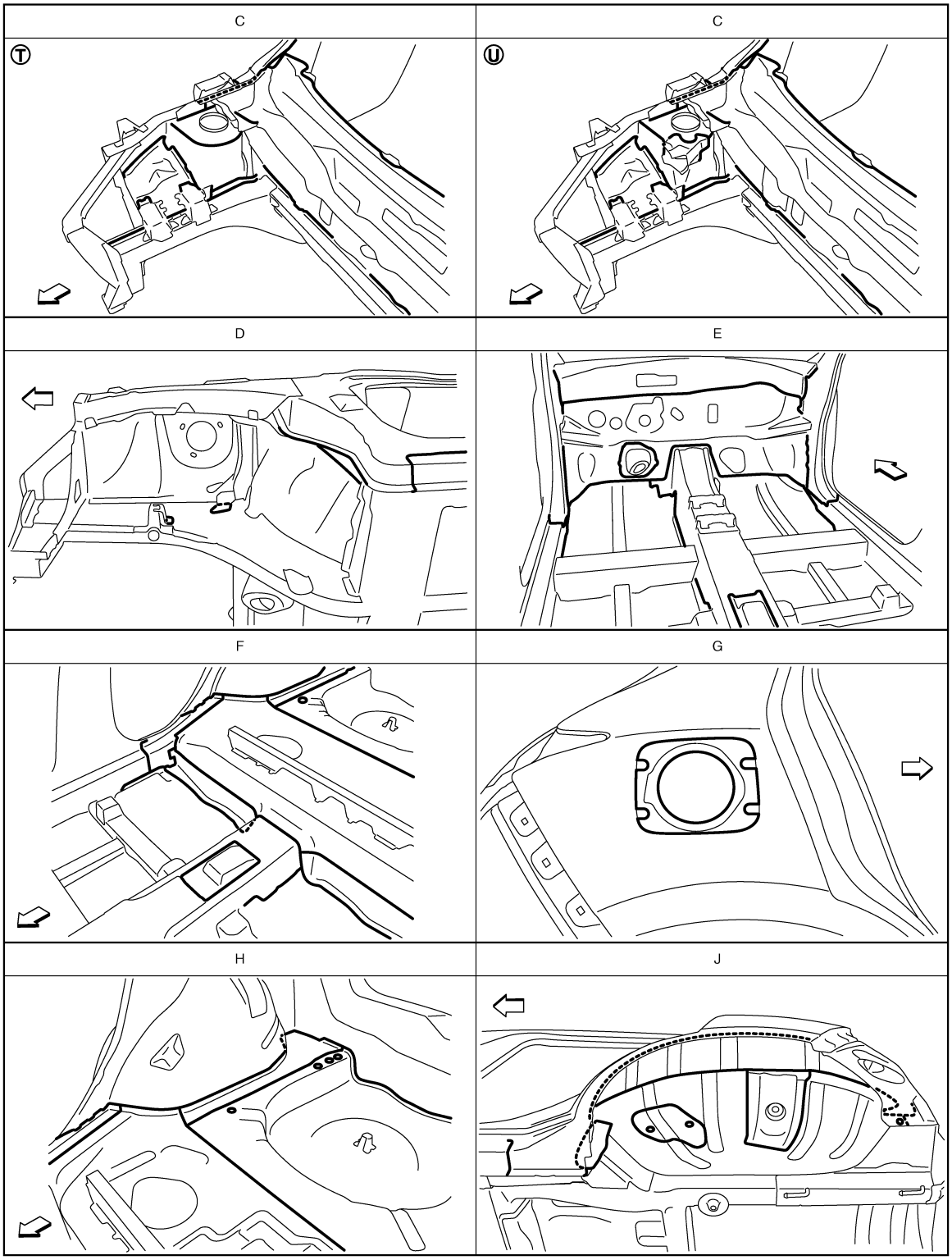




JSKIA2136ZZ

⇦: Vehicle front

▬: Sealed portions



JSKIA2137ZZ

T. HR16DE Engine models

U. MR16DDT and K9K Engine models

⇦: Vehicle front

▬: Sealed portions

JSKIA2135ZZ

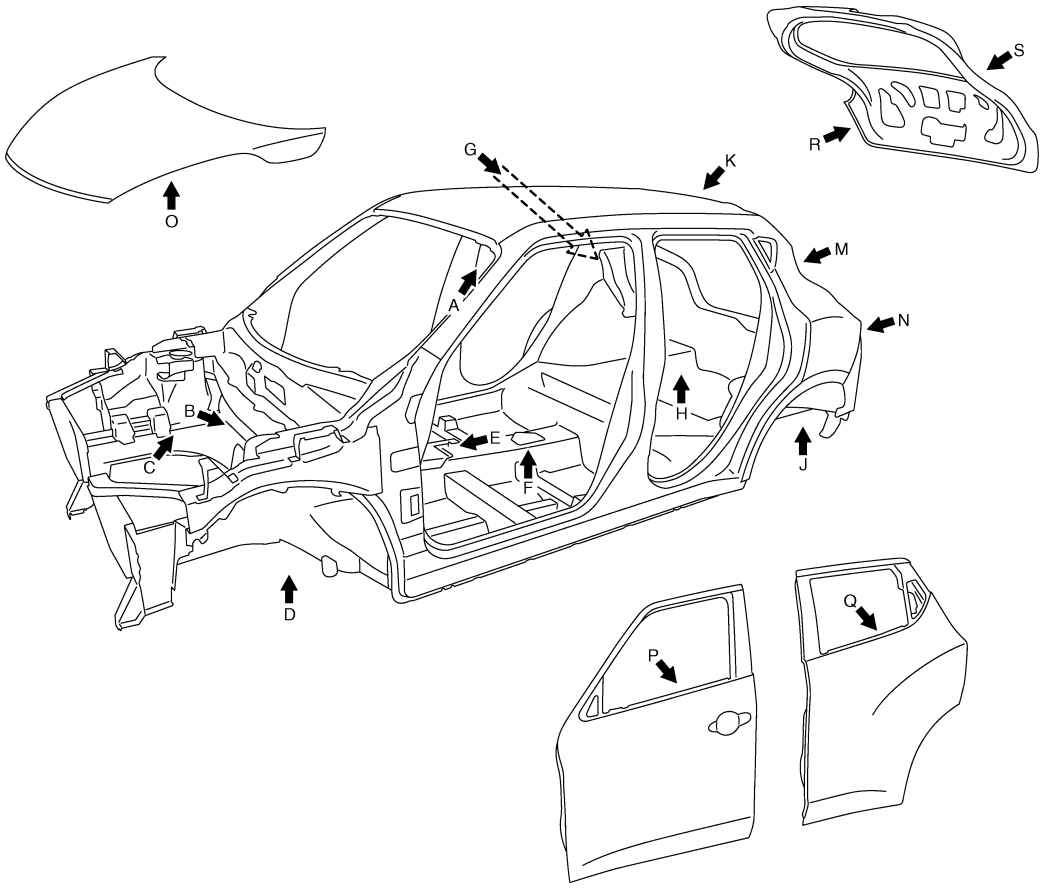
⇦: Vehicle front

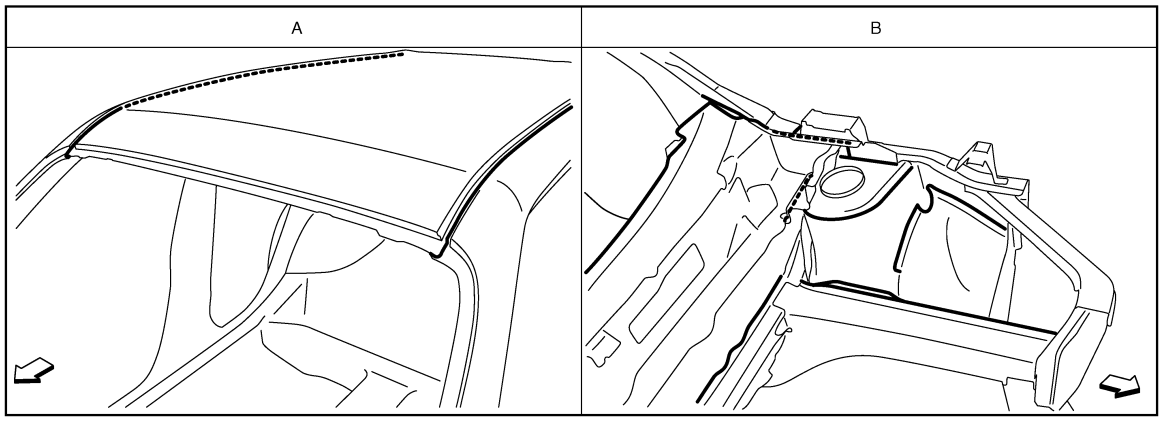
▬: Sealed portions

Body Sealing (4WD RHD Models)

INFOID:0000000006482892

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.

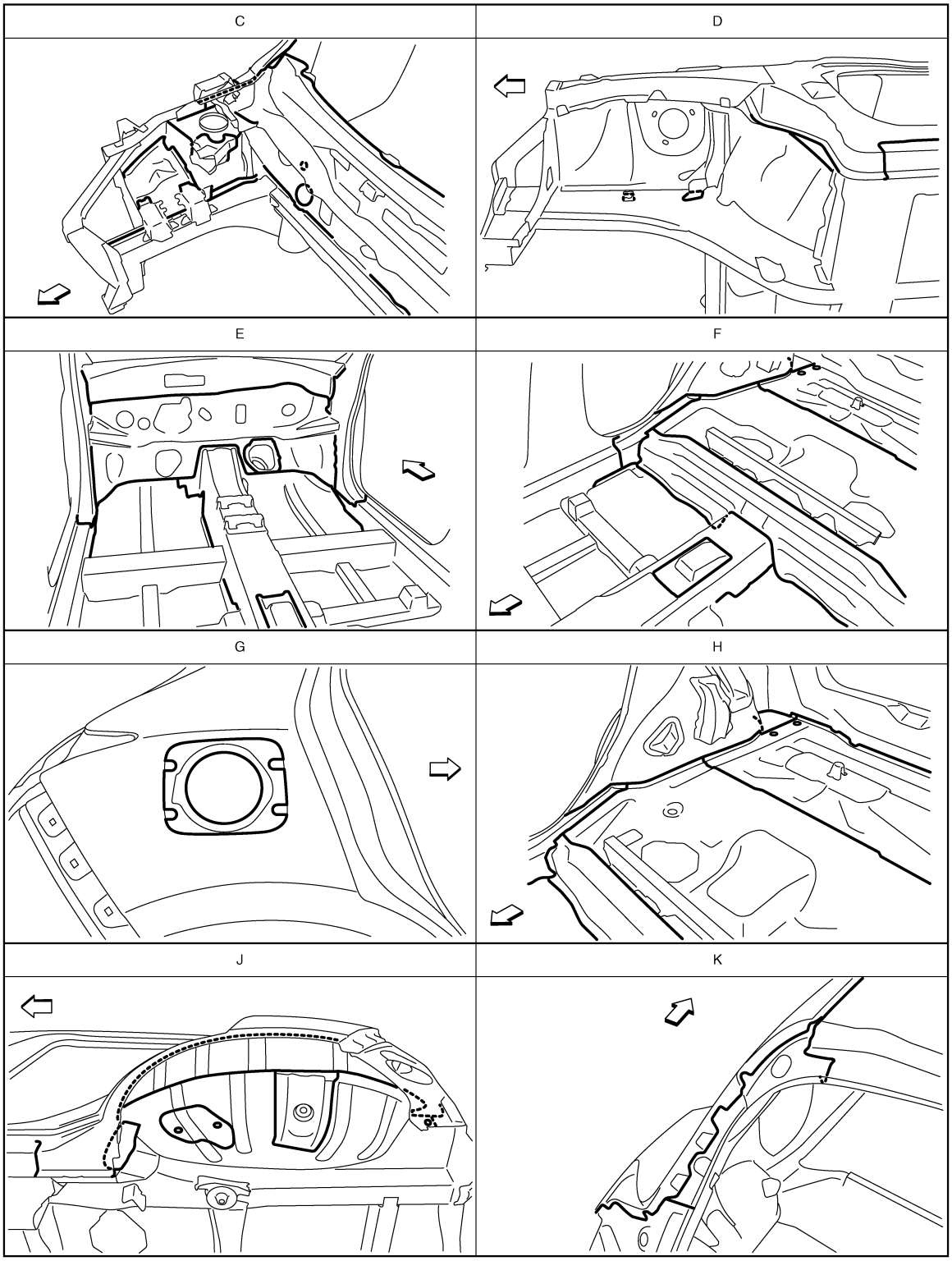




JSKIA2138ZZ

⇦: Vehicle front

▬: Sealed portions



JSKIA2139ZZ

⇦: Vehicle front

▬: Sealed portions

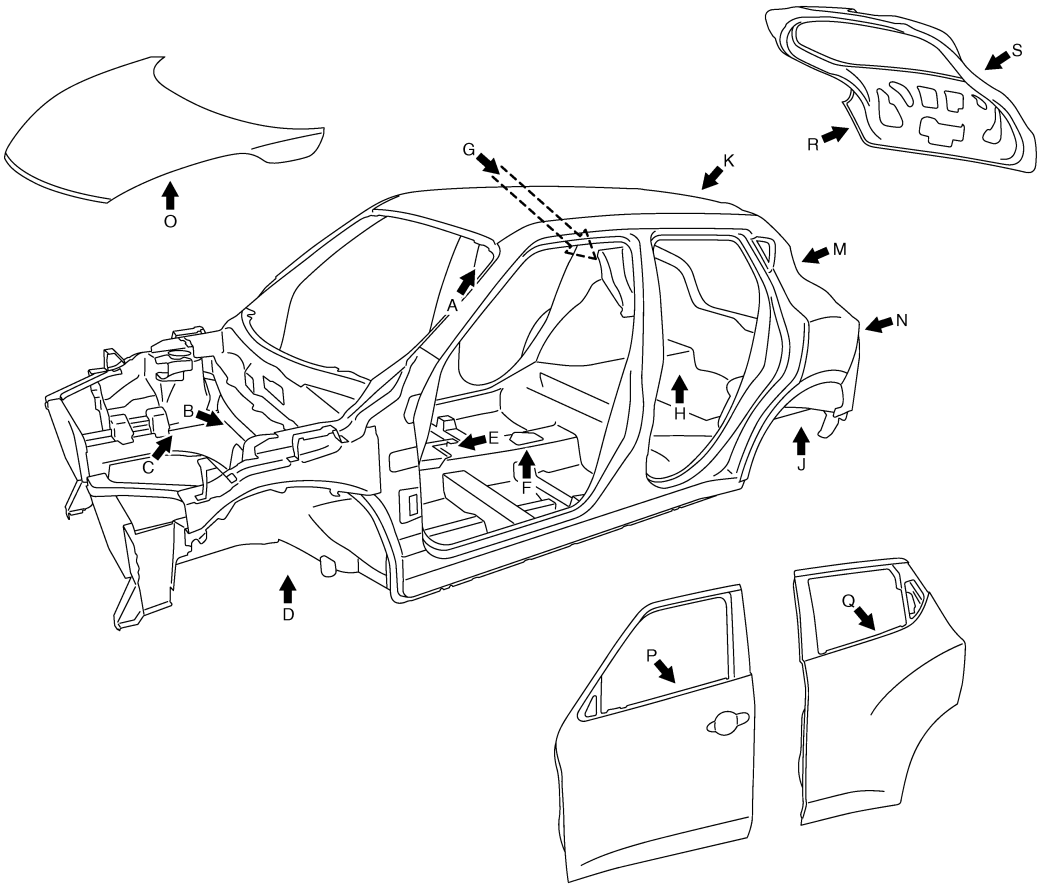
JSKIA2140ZZ

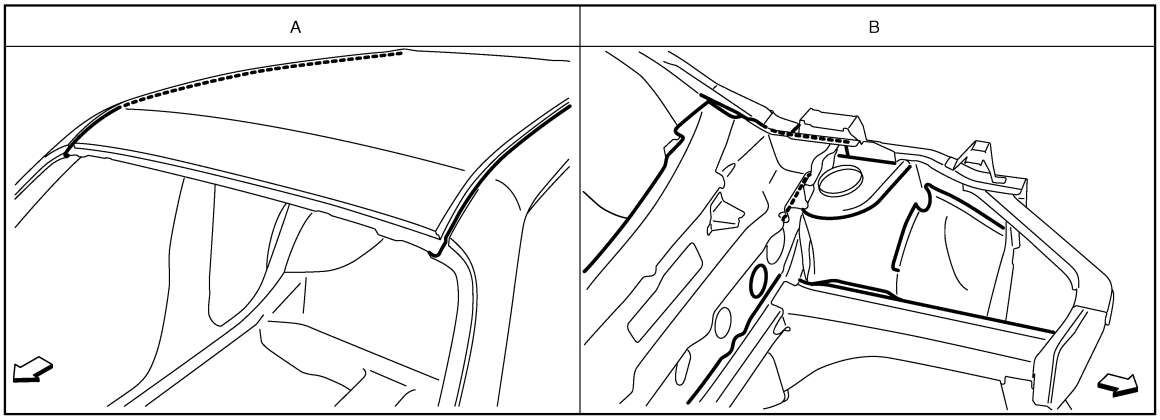
⇦: Vehicle front
▬: Sealed portions

Body Sealing (4WD LHD Models)

INFOID:0000000006486723

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.

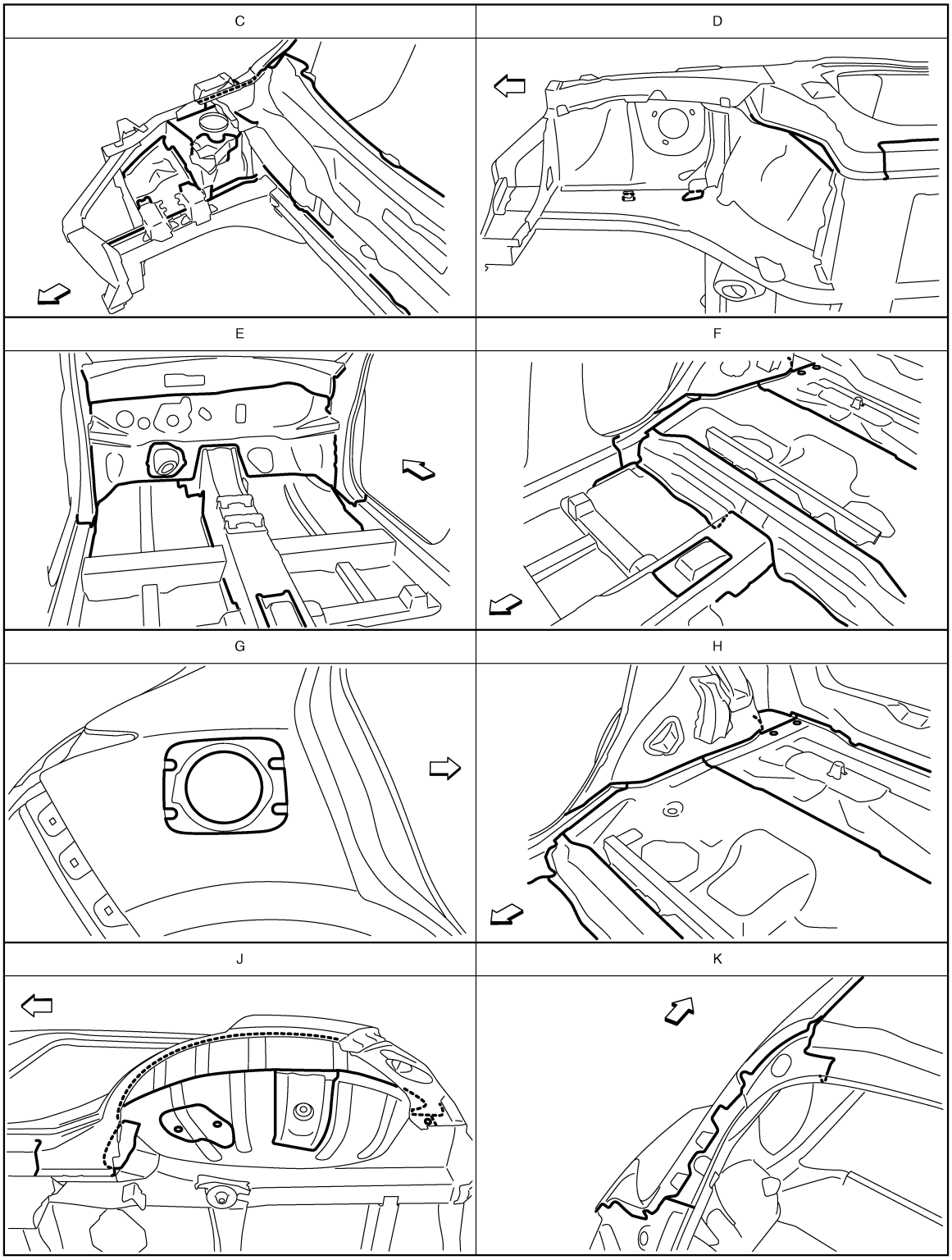




JSKIA2141ZZ

⇦: Vehicle front

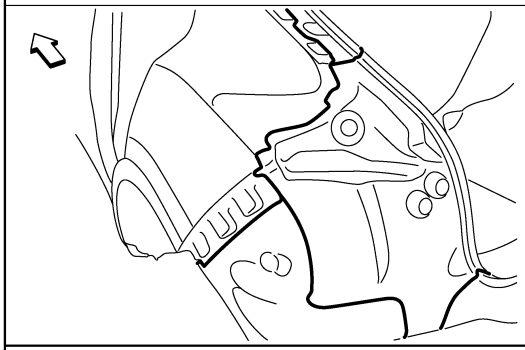
▬: Sealed portions



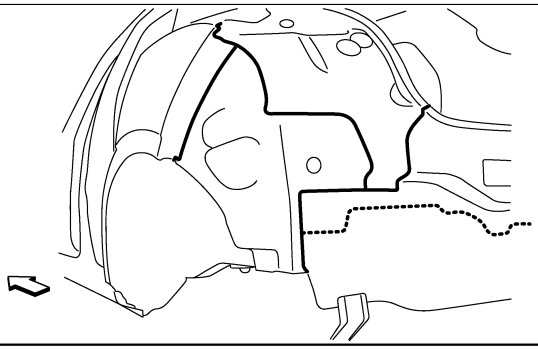
JSKIA2142ZZ

⇦: Vehicle front
▬: Sealed portions

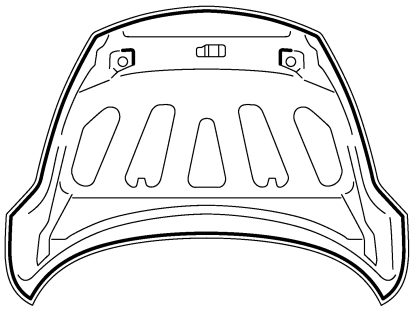
M



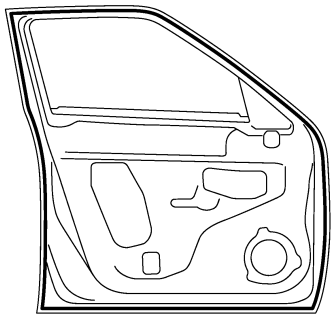
N



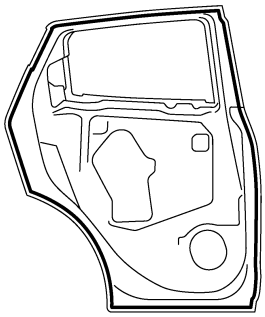
O



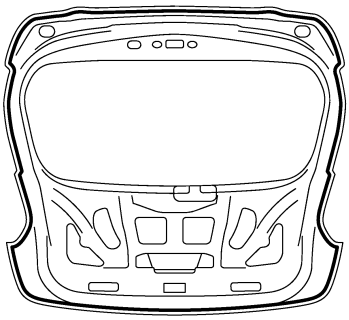
P



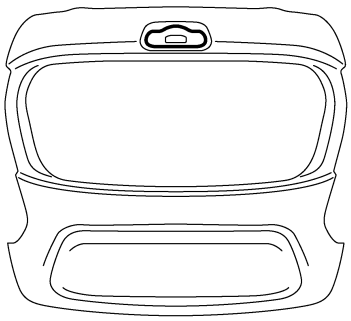
Q



R



S



JSKIA2140ZZ

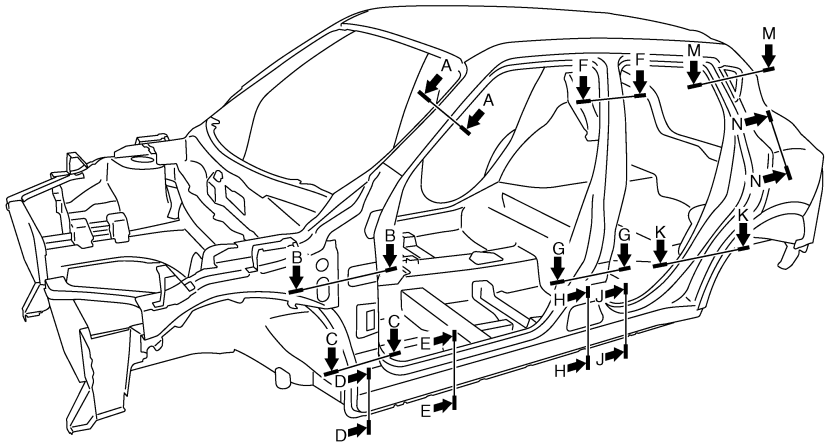
⇦: Vehicle front

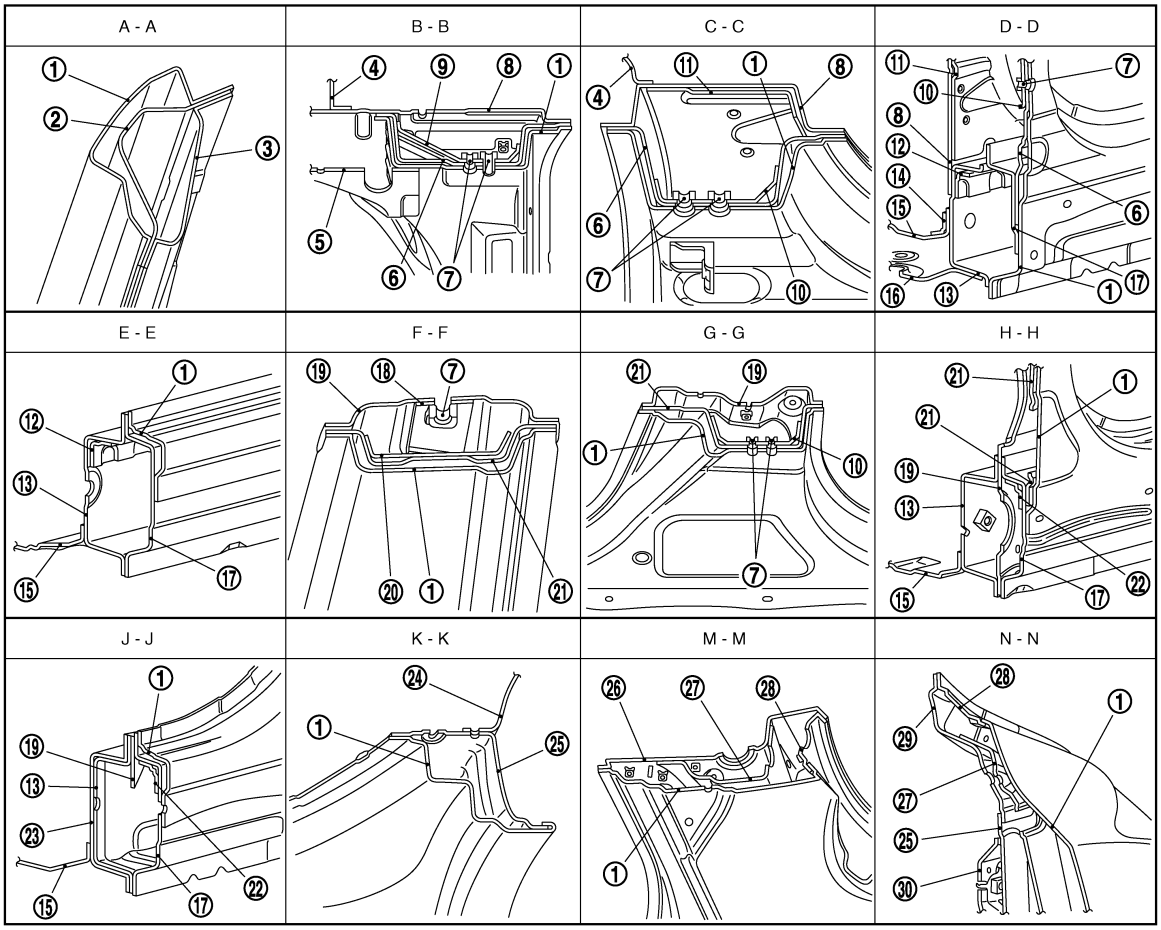
▬: Sealed portions

BODY CONSTRUCTION

Body Construction (RHD Models)

INFOID:0000000006482825





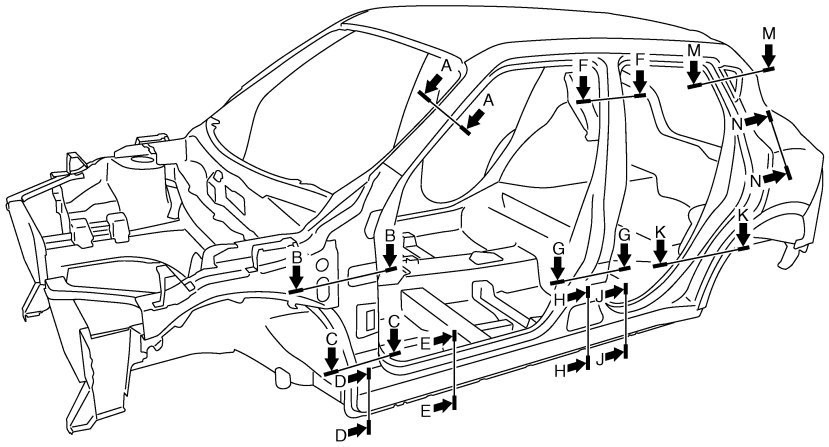
JSKIA2006ZZ

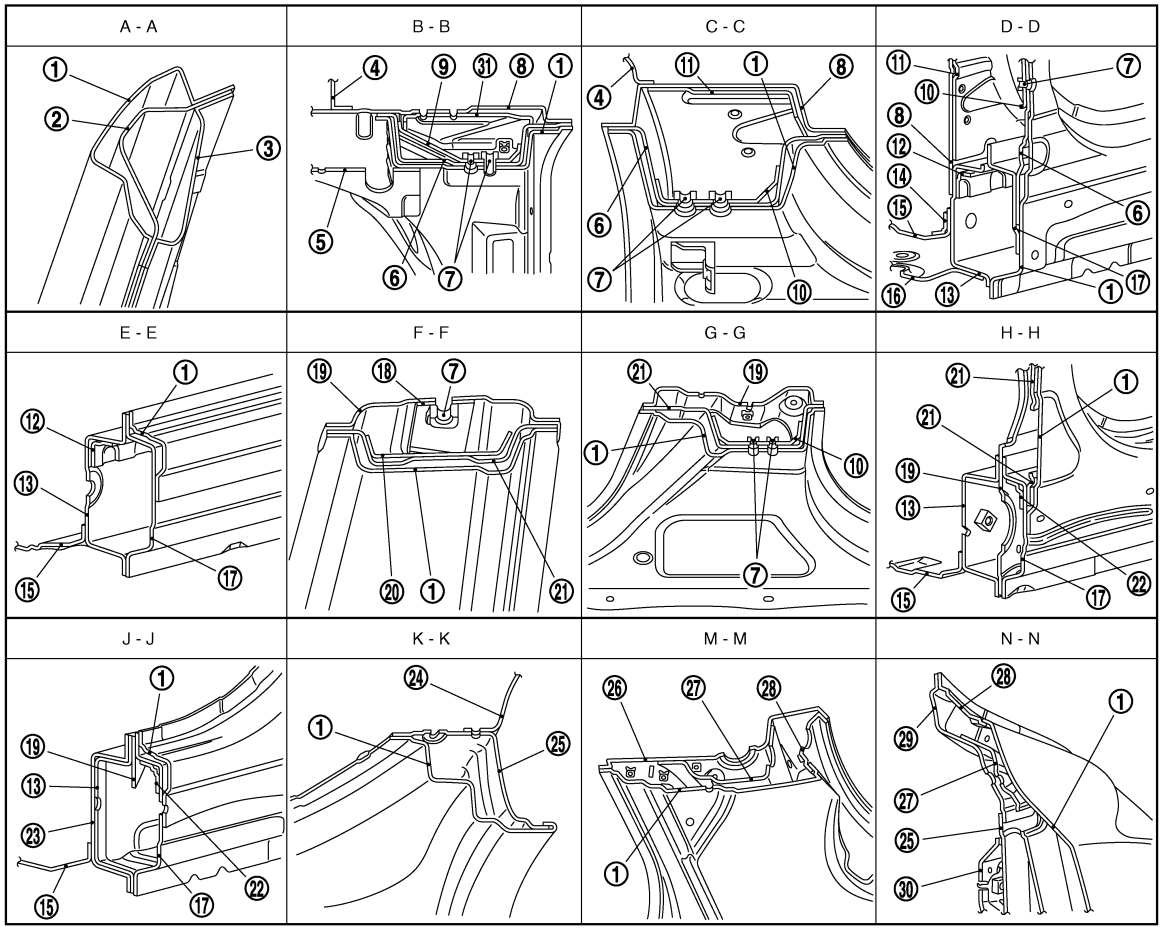
1. Outer side body
2. Outer front pillar reinforcement
3. Upper inner front pillar
4. Lower dash
5. Hoodledge reinforcement
6. Lower front pillar hinge brace
7. Weld nut
8. Side dash
9. Upper hinge plate

10. Lower hinge plate
11. Inner front pillar reinforcement
12. Inner front sill reinforcement
13. Inner sill
14. Front floor reinforcement
15. Front floor
16. Front outrigger
17. Outer sill reinforcement
18. Plate nut
19. Inner center pillar
20. Center pillar reinforcement
21. Center pillar hinge brace
22. Center sill reinforcement
23. Inner sill extension
24. Inner rear wheelhouse
25. Outer rear wheelhouse
26. Rear roof rail brace
27. Inner rear pillar reinforcement
28. Rear fender extension
29. Inner rear pillar
30. Inner rear wheelhouse reinforcement

Body Construction (LHD Models)

INFOID:0000000006482826





JSKIA2143ZZ

1. Outer side body
2. Outer front pillar reinforcement
3. Upper inner front pillar
4. Lower dash
5. Hoodledge reinforcement
6. Lower front pillar hinge brace
7. Weld nut
8. Side dash
9. Upper hinge plate
10. Lower hinge plate
11. Inner front pillar reinforcement
12. Inner front sill reinforcement
13. Inner sill
14. Front floor reinforcement
15. Front floor

16. Front outrigger
17. Outer sill reinforcement
18. Plate nut
19. Inner center pillar
20. Center pillar reinforcement
21. Center pillar hinge brace
22. Center sill reinforcement
23. Inner sill extension
24. Inner rear wheelhouse
25. Outer rear wheelhouse
26. Rear roof rail brace
27. Inner rear pillar reinforcement
28. Rear fender extension
29. Inner rear pillar
30. Inner rear wheelhouse reinforcement
31. Upper inner front pillar reinforcement

Rear Fender Hemming Process

INFOID:0000000006648942

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.

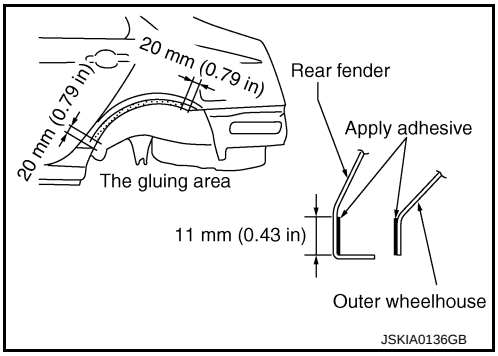
CAUTION:

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

PROCEDURE OF THE HEMMING PROCESS

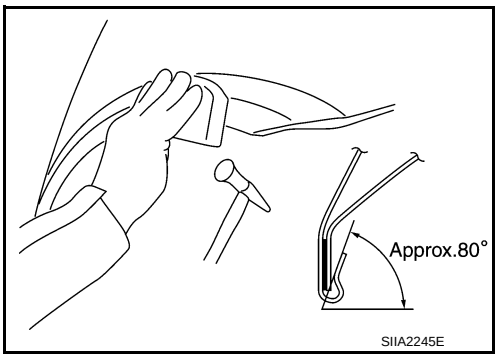
- Peel off old bonding material on the surface of the outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of the outer wheelhouse and rear fender.

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

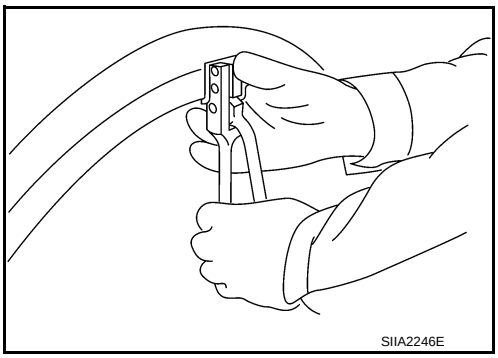


- Attach rear fender to the body of the car, and weld the required part except the hemming part.

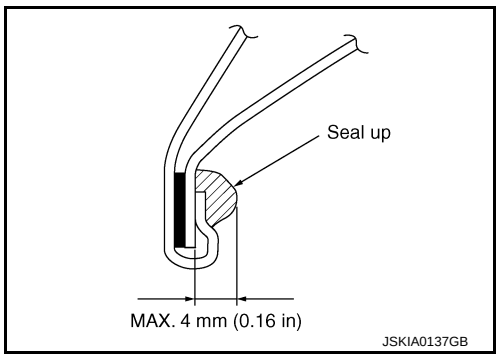
- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.



- 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.



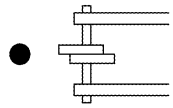
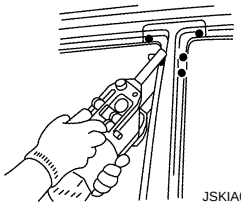
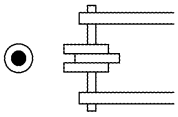
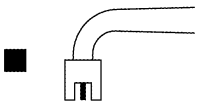
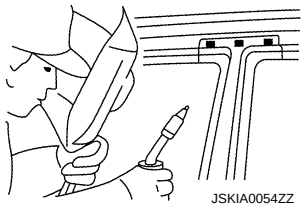
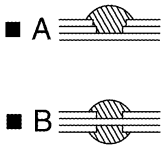
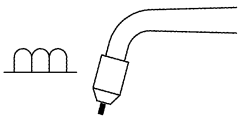
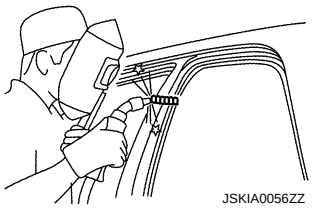
REPLACEMENT OPERATIONS

Description

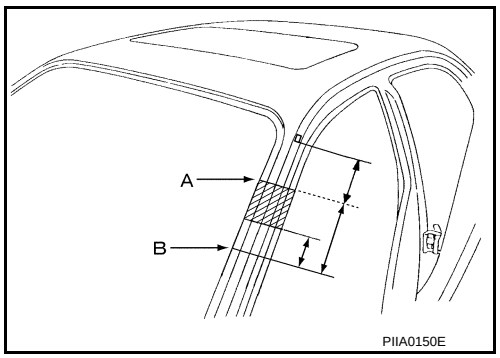
INFOID:0000000006482827

- 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.

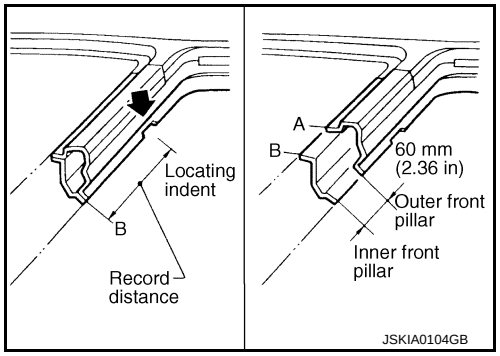
The symbols used in this section for welding operations are shown below.

<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>

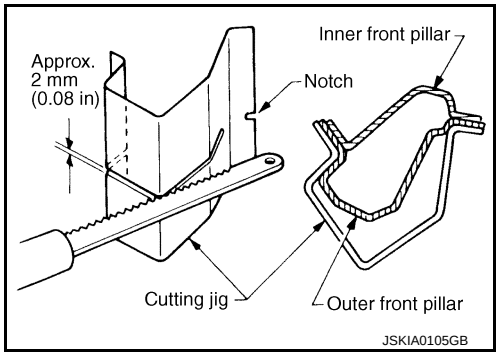
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle.



- 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.

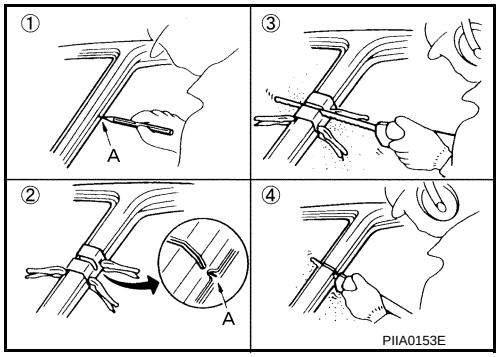


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit the service part to be accurately cut at the joint position.



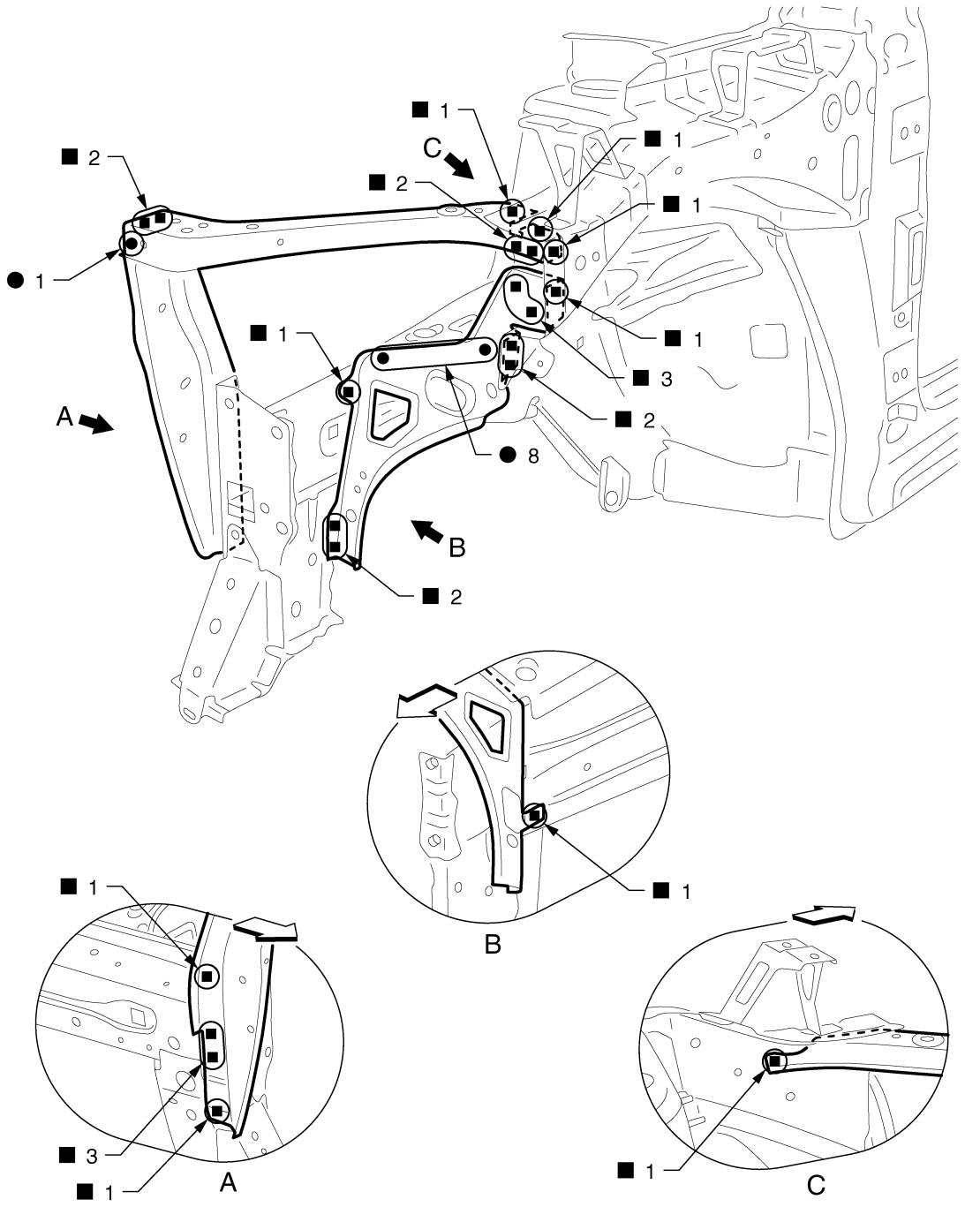
- An example of cutting operation using a cutting jig is as per the following.

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:0000000006482828



JSKIA2008ZZ

⇦: Vehicle front

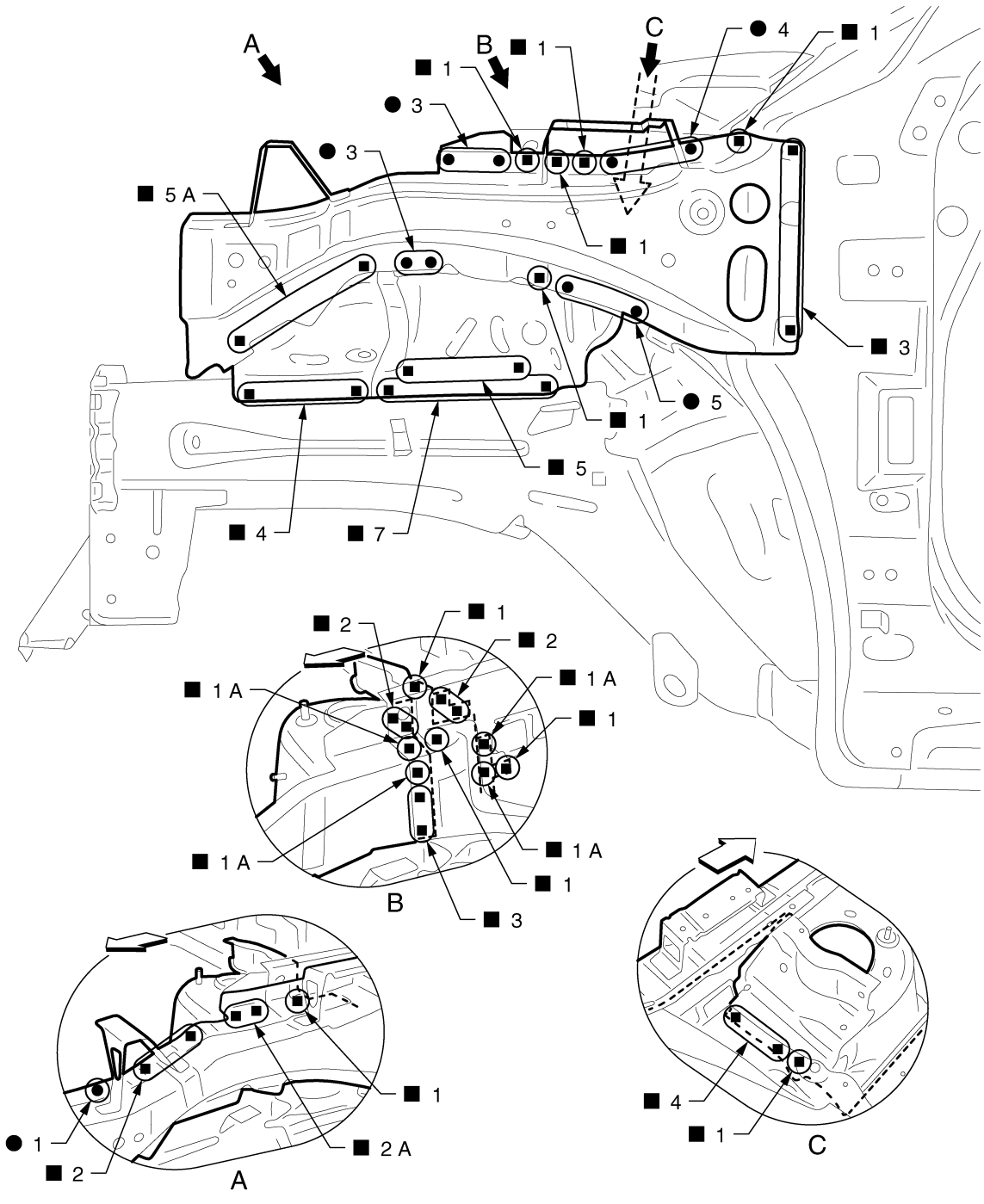
Replacement parts

- Side radiator core support (LH Upper)
- Side radiator core support (LH Lower)
- Hoodledge connector (LH)

Hoodledge (RHD Models)

INFOID:0000000006482829

Work after radiator core support is removed.



⇦: Vehicle front

Replacement parts

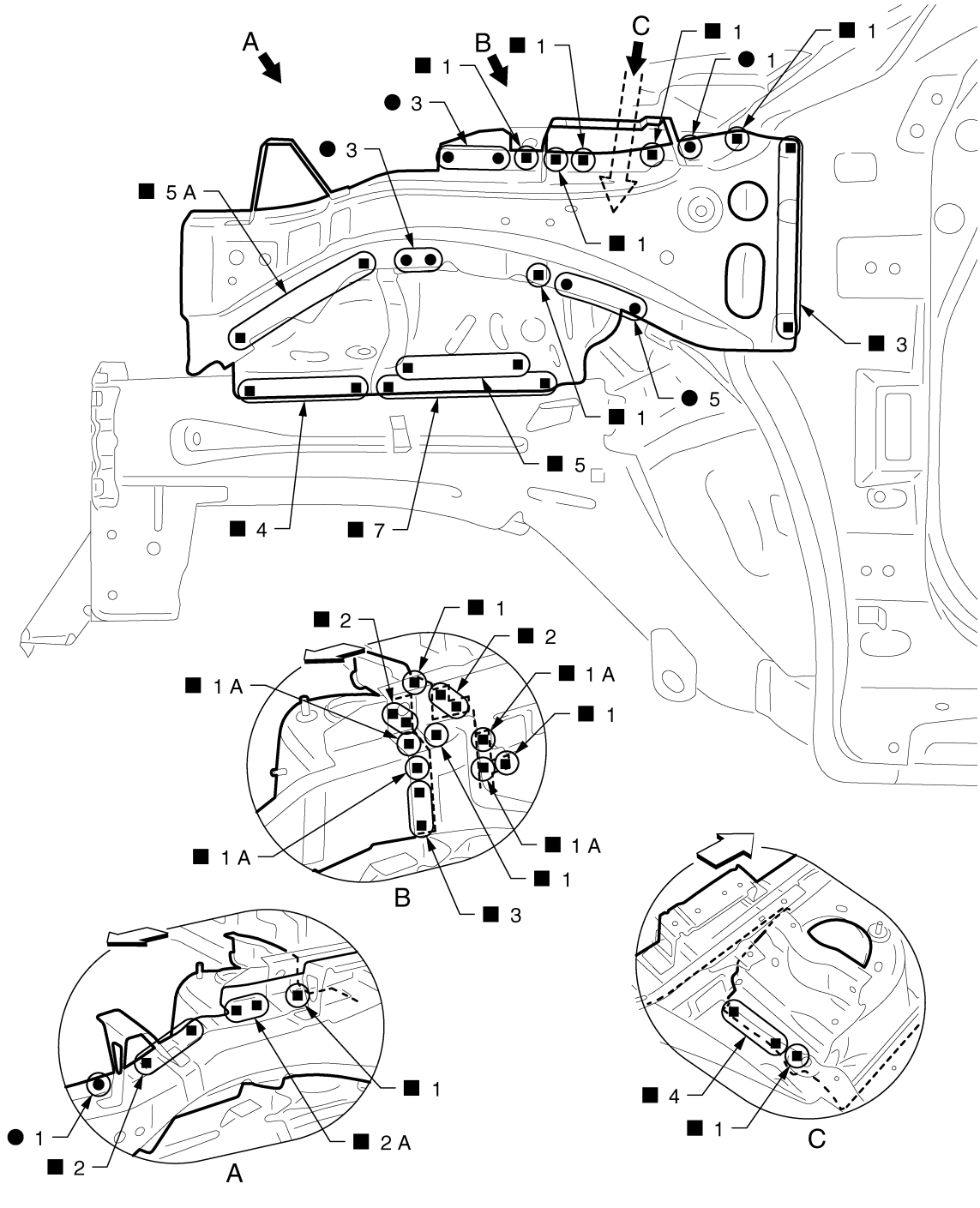
- Front strut housing (LH)
- Hoodledge reinforcement (LH)

View B: Before installing hoodledge reinforcement

Hoodledge (LHD Models)

INFOID:0000000006517470

Work after radiator core support is removed.



⇦: Vehicle front

Replacement parts

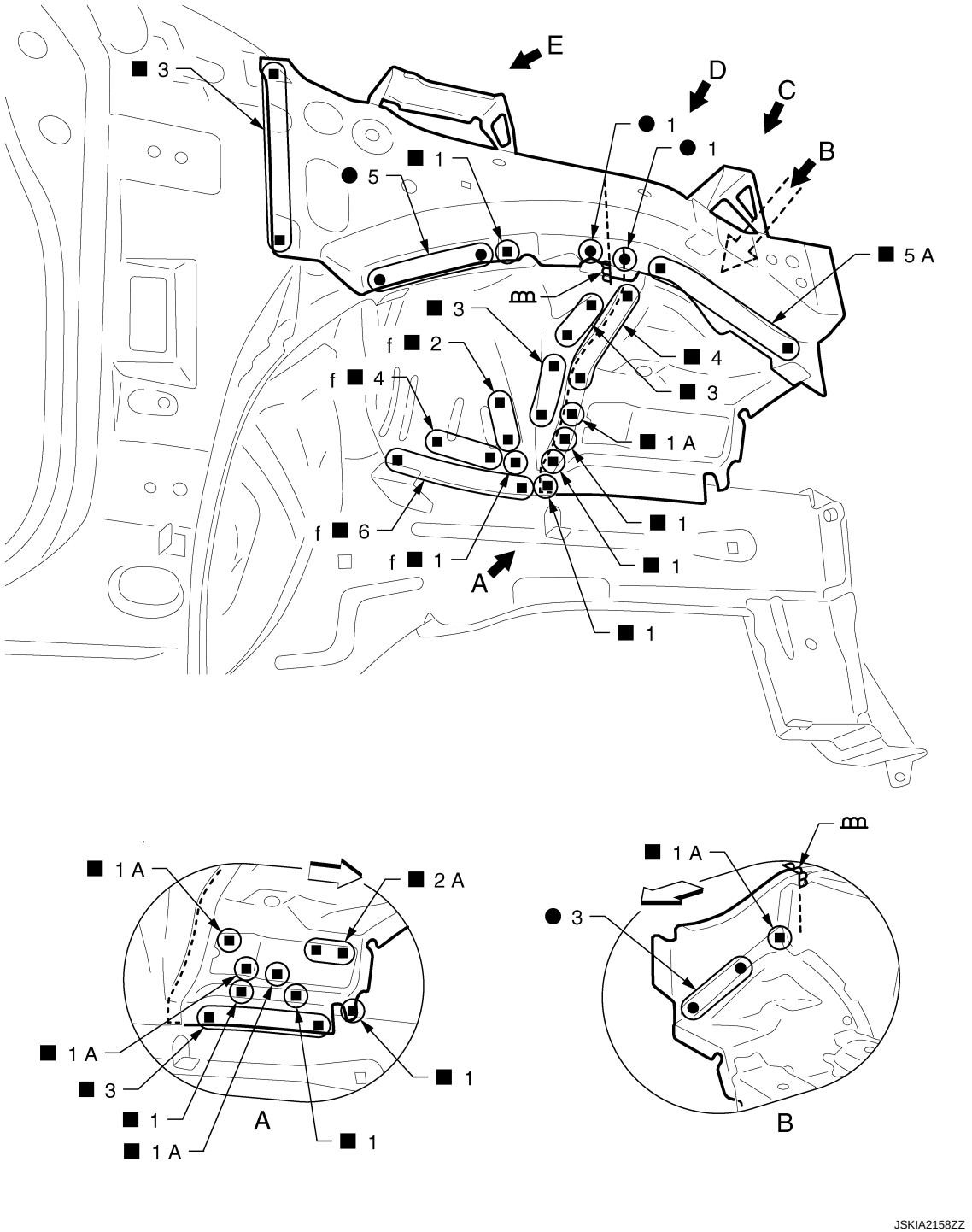
- Front strut housing (LH)
- Hoodledge reinforcement (LH)

View B: Before installing hoodledge reinforcement

Hoodledge (RHD Models Partial Replacement)

INFOID:0000000006482830

Work after radiator core support is removed.
Remove the welding points ″f″ for easier installation.

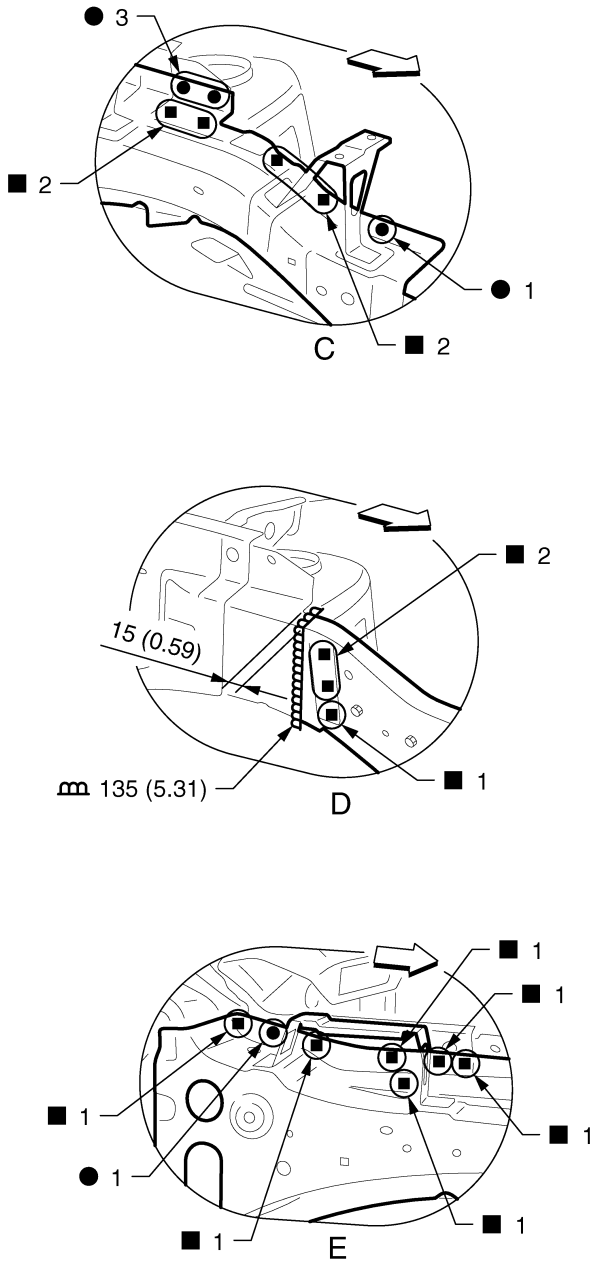


⇦: Vehicle front

Replacement parts

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

View B: Before installing hoodledge reinforcement



JSKIA2034GB

Unit: mm (in)

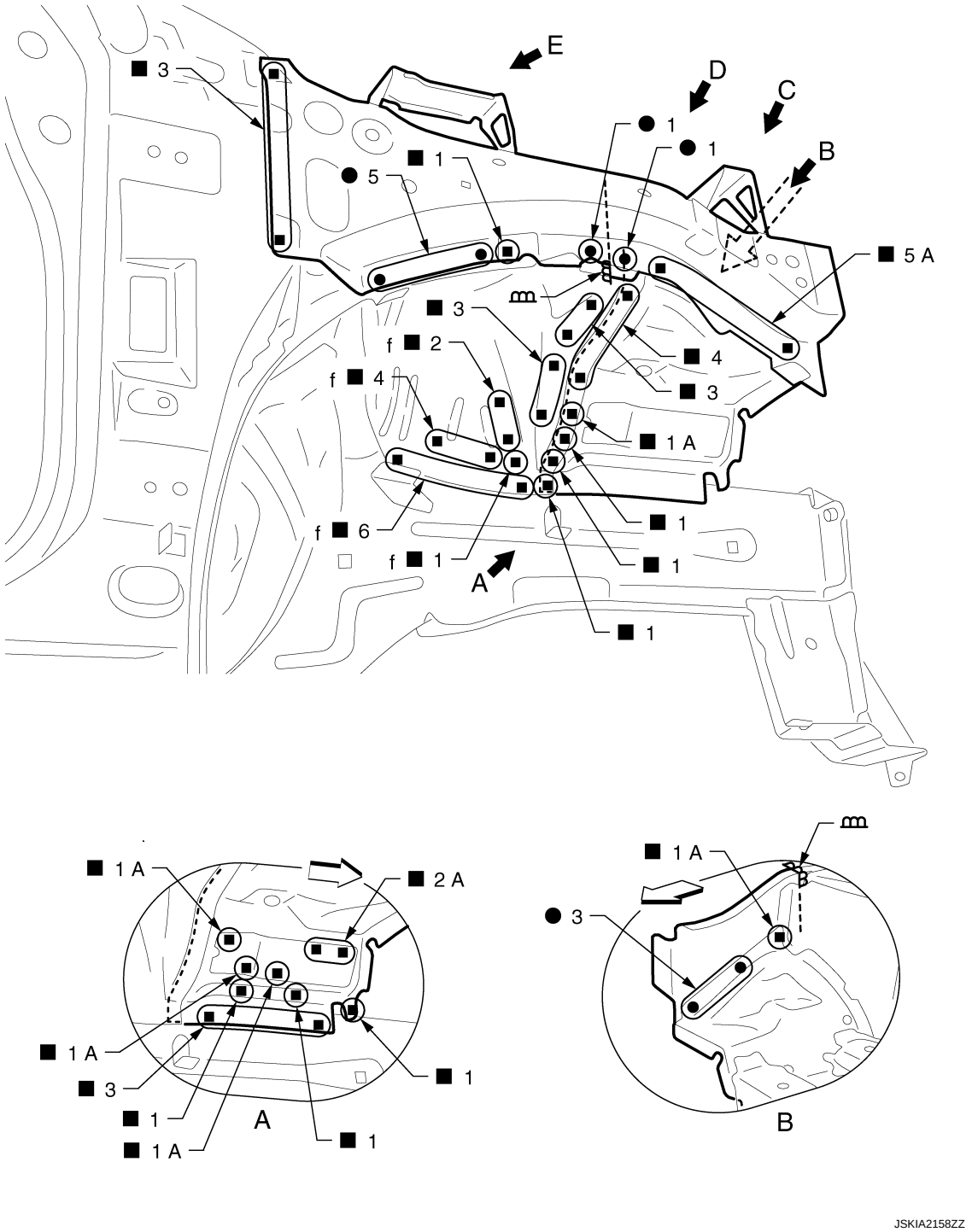
⇦: Vehicle front

View D: Before installing hoodledge reinforcement

Hoodledge (LHD Models Partial Replacement)

INFOID:0000000006482831

Work after radiator core support is removed.
Remove the welding points ″f″ for easier installation.

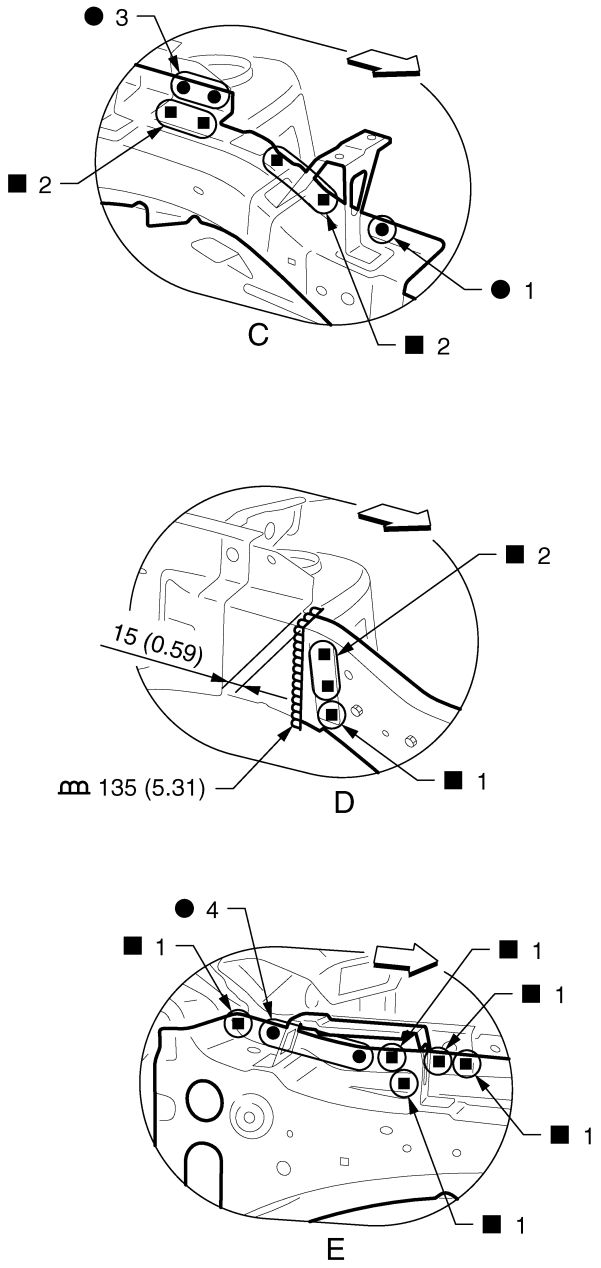


⇦: Vehicle front

Replacement parts

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

View B: Before installing hoodledge reinforcement



JSKIA2159GB

Unit: mm (in)

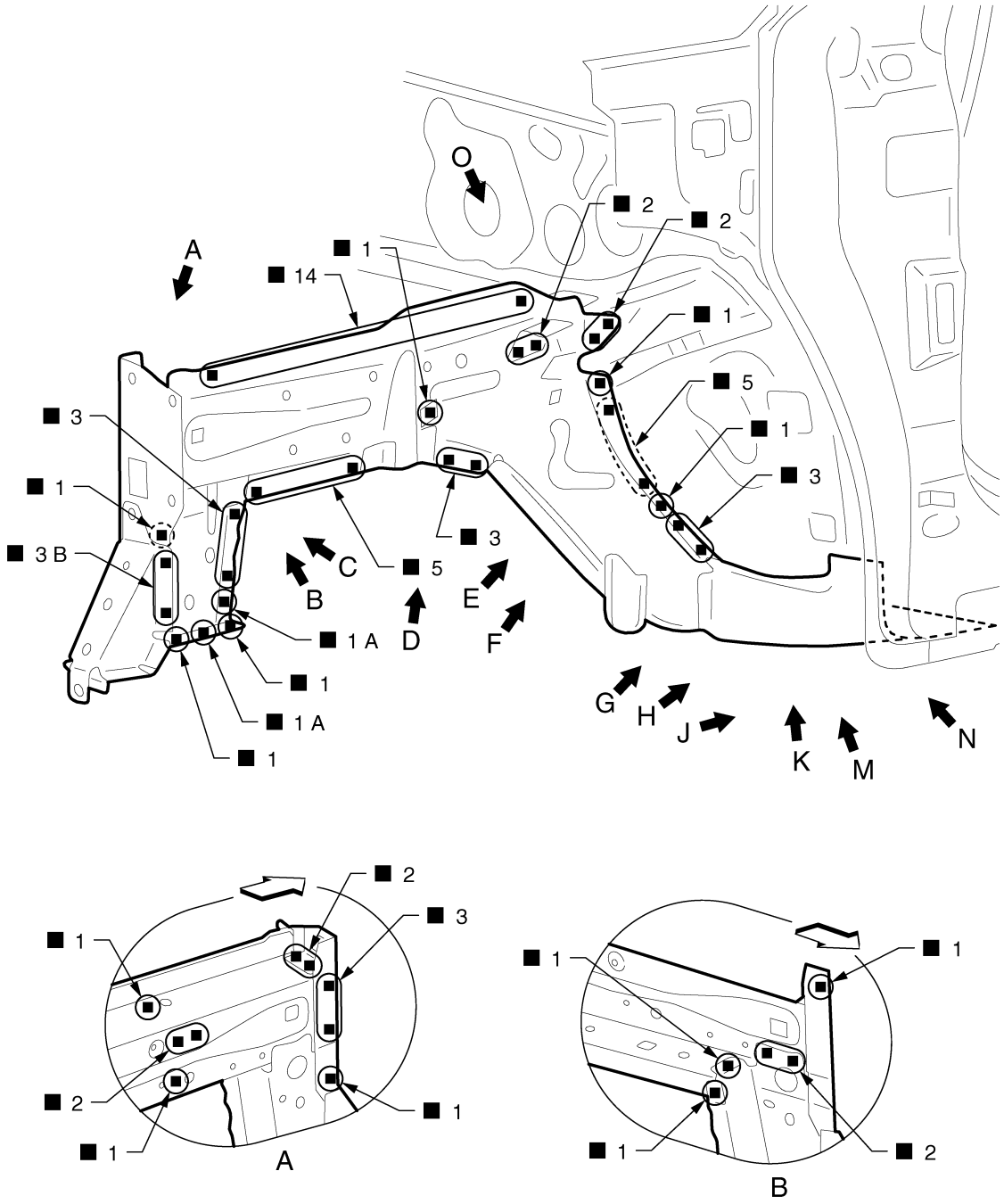
⇦: Vehicle front

View D: Before installing hoodledge reinforcement

Front Side Member (2WD, RHD Models)

INFOID:0000000006482832

Work after radiator core support and hoodledge are removed.



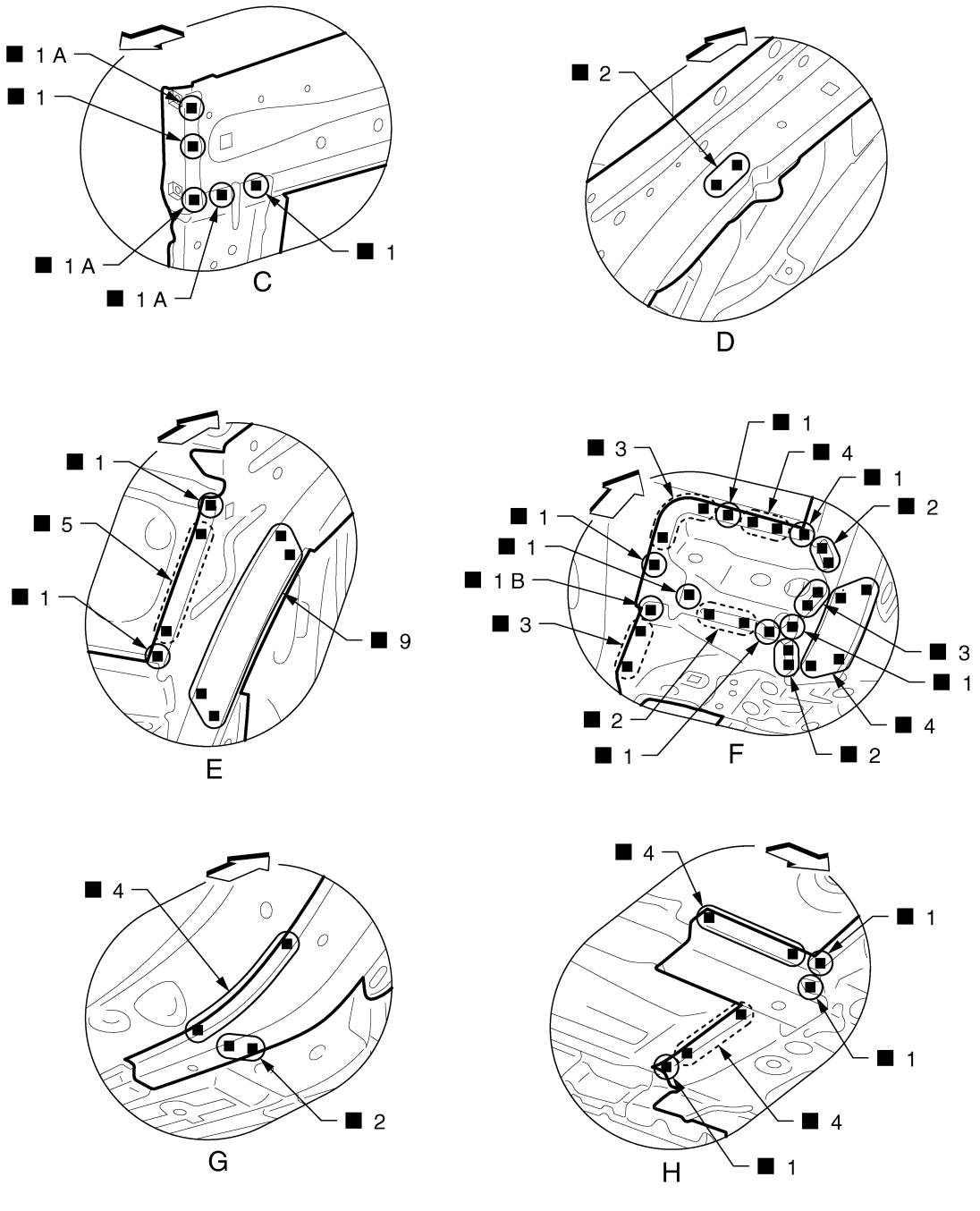
JSKIA2160ZZ

⇦: Vehicle front

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

Replacement parts

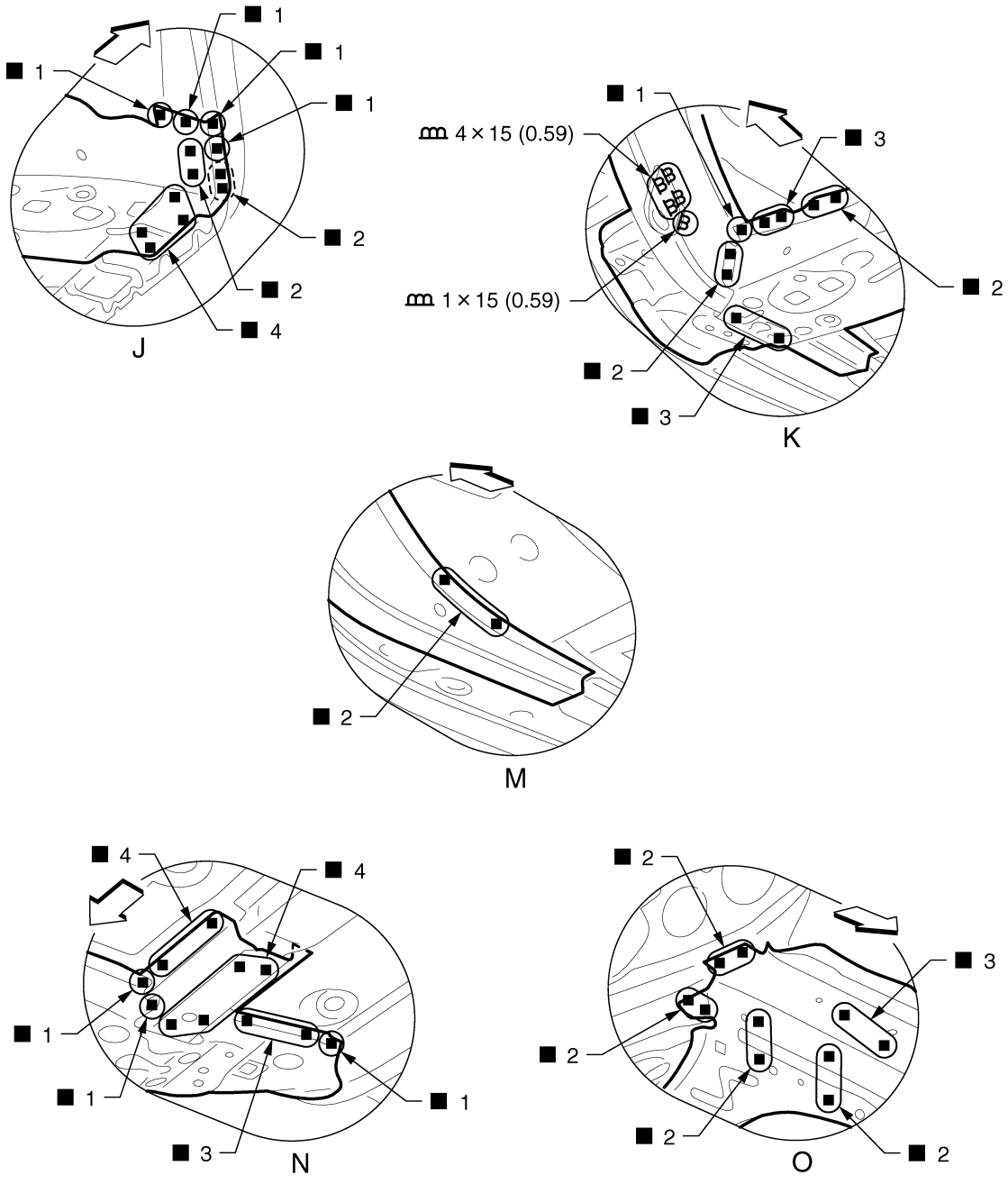
- Front side member assembly (LH)
- Front side member reinforcement assembly
- Front towing hook reinforcement
- Sensor harness bracket (LH)
- Front suspension mounting bracket (LH Front)
- Tie down hook reinforcement
- Add on frame bracket (LH)
- Front brake hose bracket (LH)
- Engine mounting reinforcement
- Front side member closing plate assembly (LH)
- Front tie down hook
- Front suspension mounting bracket (LH Rear)



: Vehicle front

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

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



JSKIA2162GB

Unit: mm (in)

⇦: Vehicle front

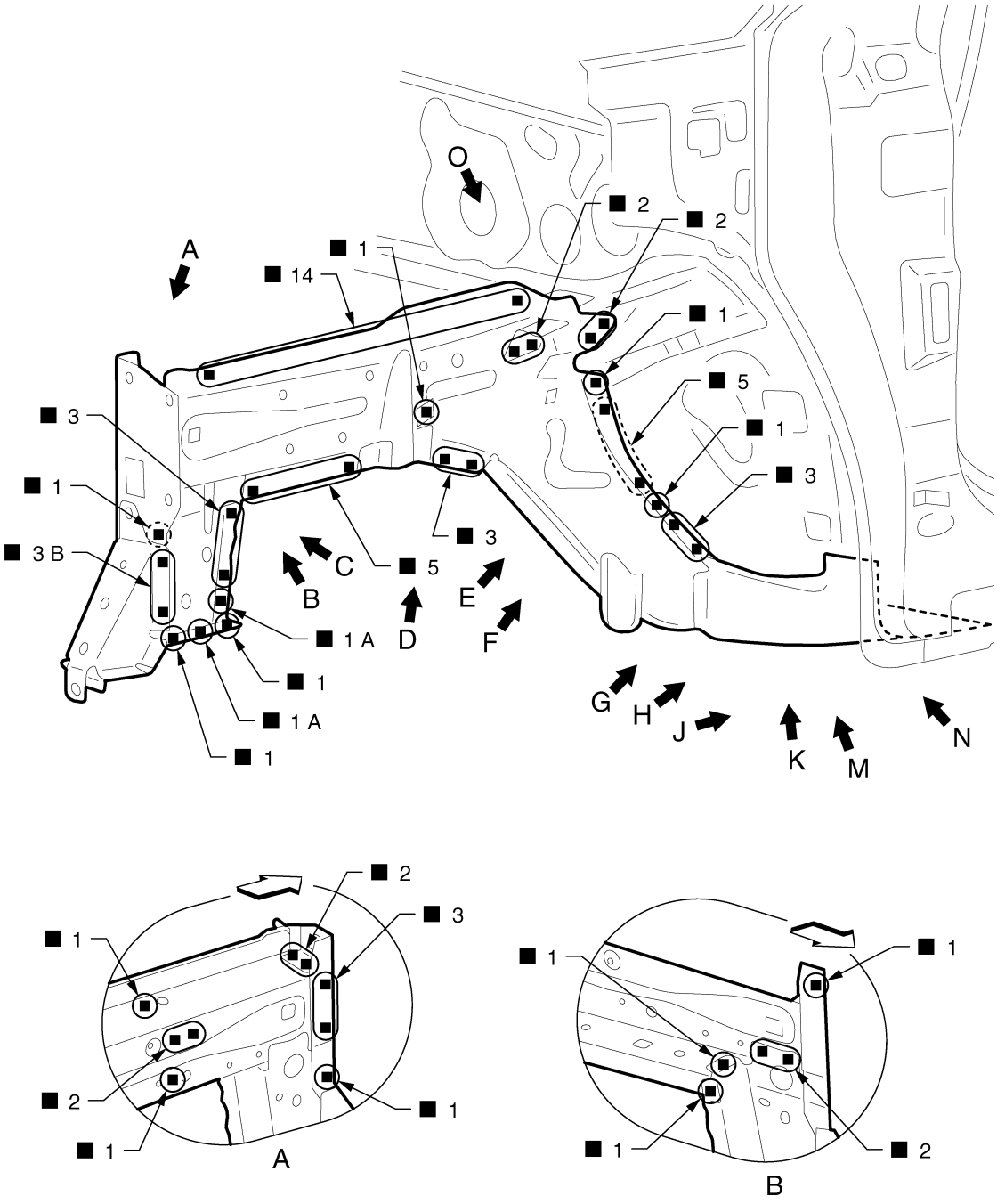
(): Weld the parts onto the back of the component part.

View M: Before installing front suspension mounting bracket (Rear)

Front Side Member (2WD, LHD Models)

INFOID:0000000006517471

Work after radiator core support and hoodledge are removed.



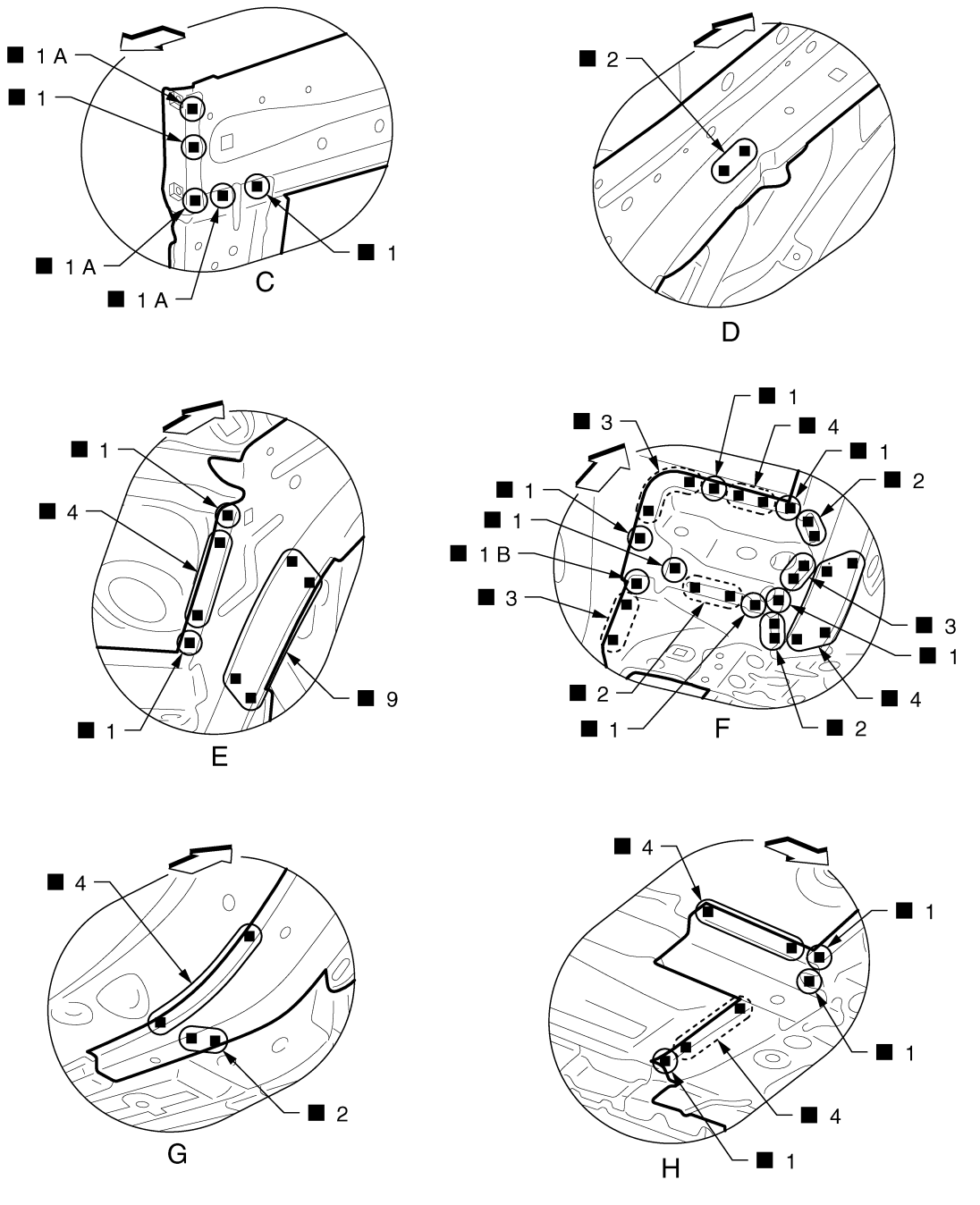
JSKIA2160ZZ

⇦: Vehicle front

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

Replacement parts

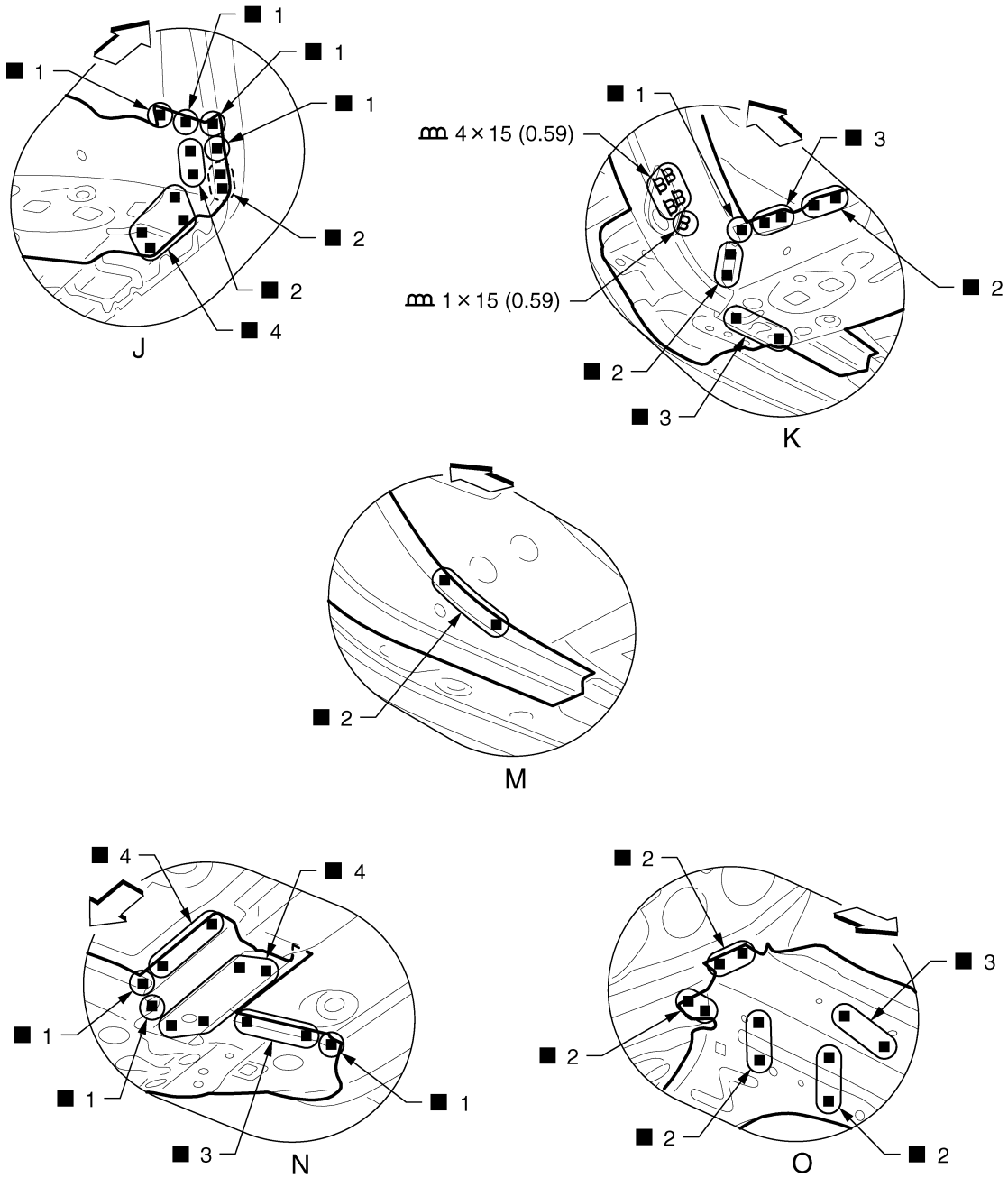
- Front side member assembly (LH)
- Front side member reinforcement assembly
- Front towing hook reinforcement
- Sensor harness bracket (LH)
- Front suspension mounting bracket (LH Front)
- Tie down hook reinforcement
- Add on frame bracket
- Front brake hose bracket (LH)
- Engine mounting reinforcement
- Front side member closing plate assembly (LH)
- Front tie down hook
- Front suspension mounting bracket (LH Rear)



⇦: Vehicle front

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

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



JSKIA2162GB

Unit: mm (in)

⇦: Vehicle front

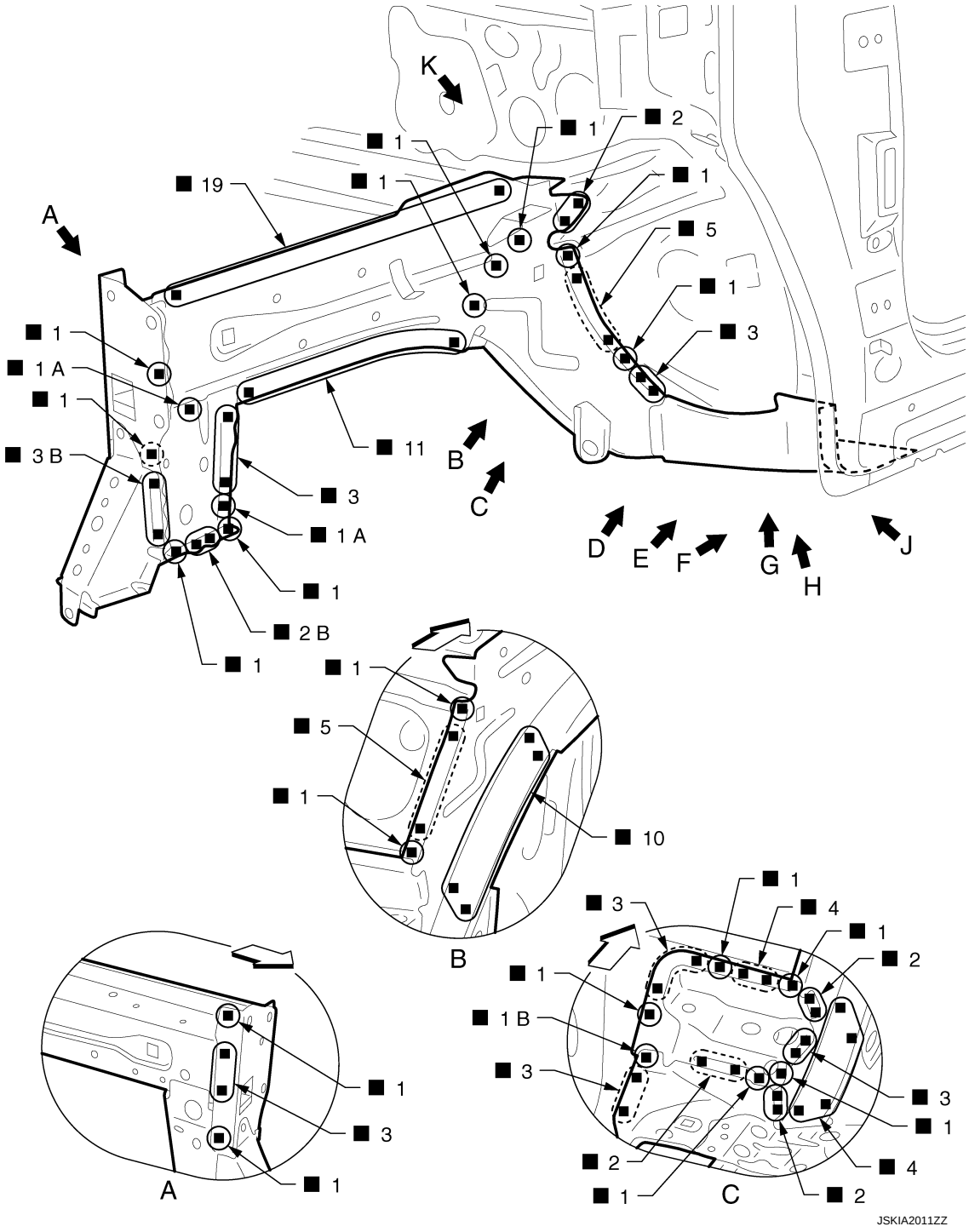
(⌒): Weld the parts onto the back of the component part.

View M: Before installing front suspension mounting bracket (Rear)

Front Side Member (4WD, RHD Models)

INFOID:0000000006517506

Work after radiator core support and hoodledge are removed.

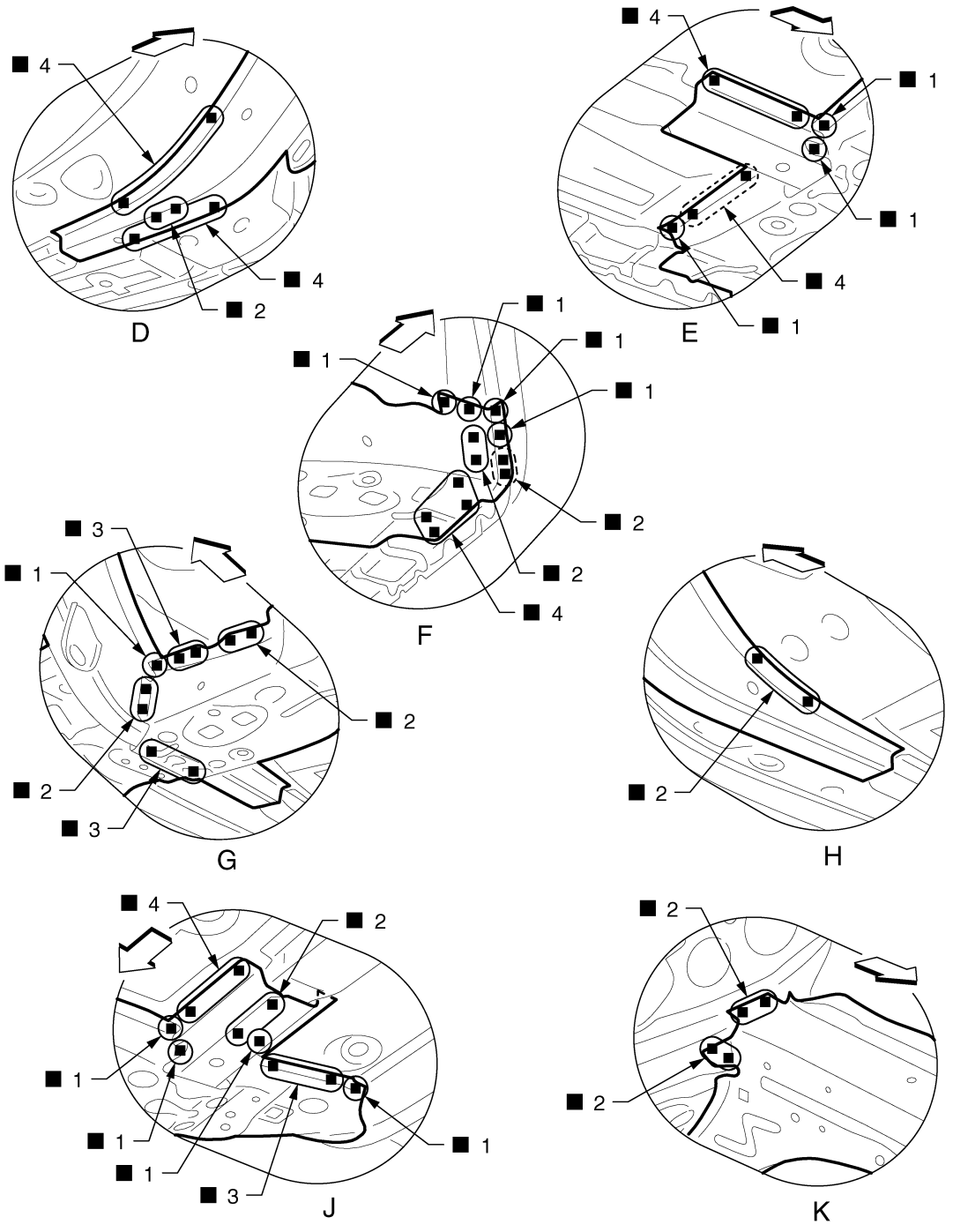


⇦: Vehicle front

(): 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 suspension mounting bracket (LH Rear)



: Vehicle front

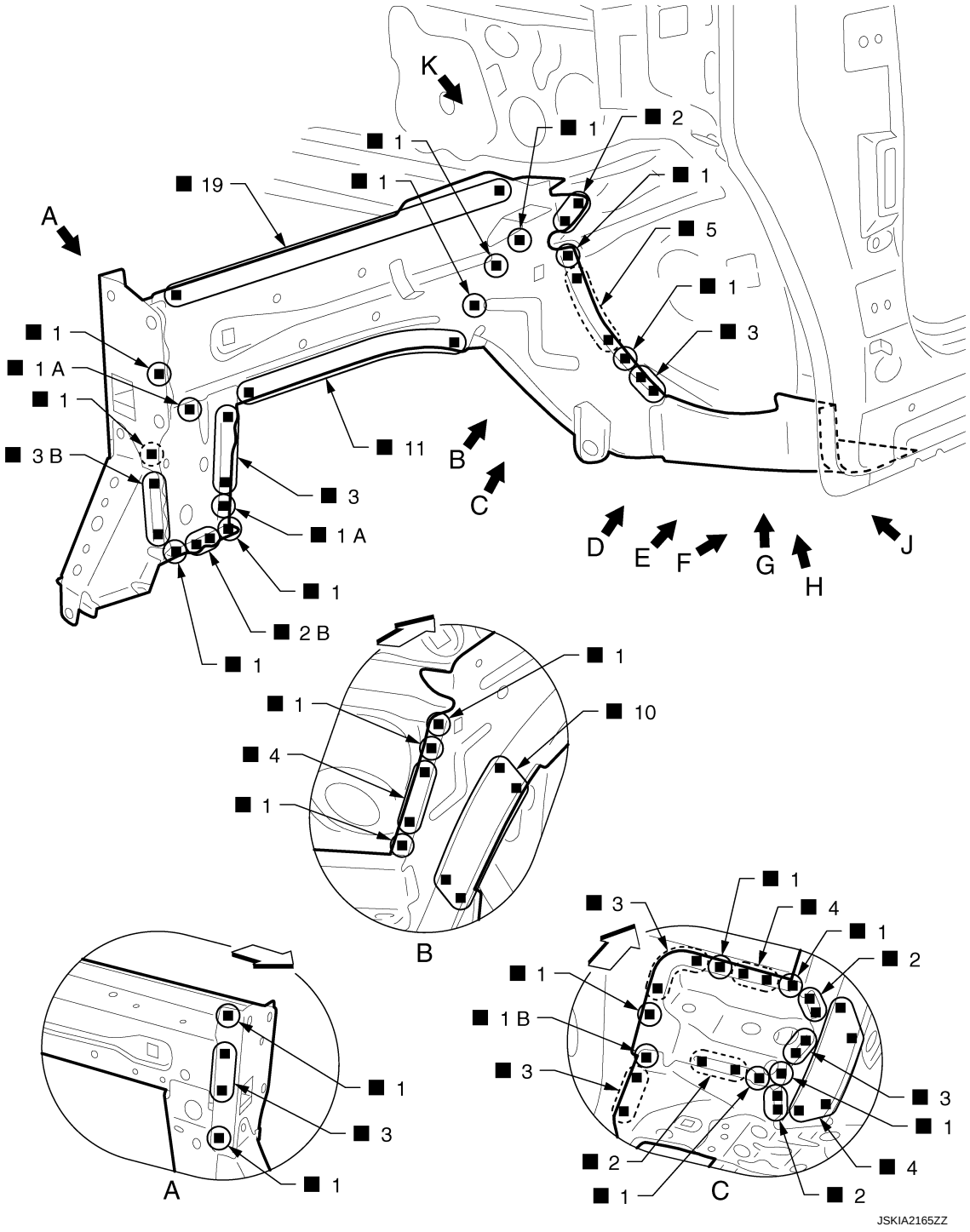
: Weld the parts onto the back of the component part.

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

Front Side Member (4WD, LHD Models)

INFOID:0000000006517472

Work after radiator core support and hoodledge are removed.

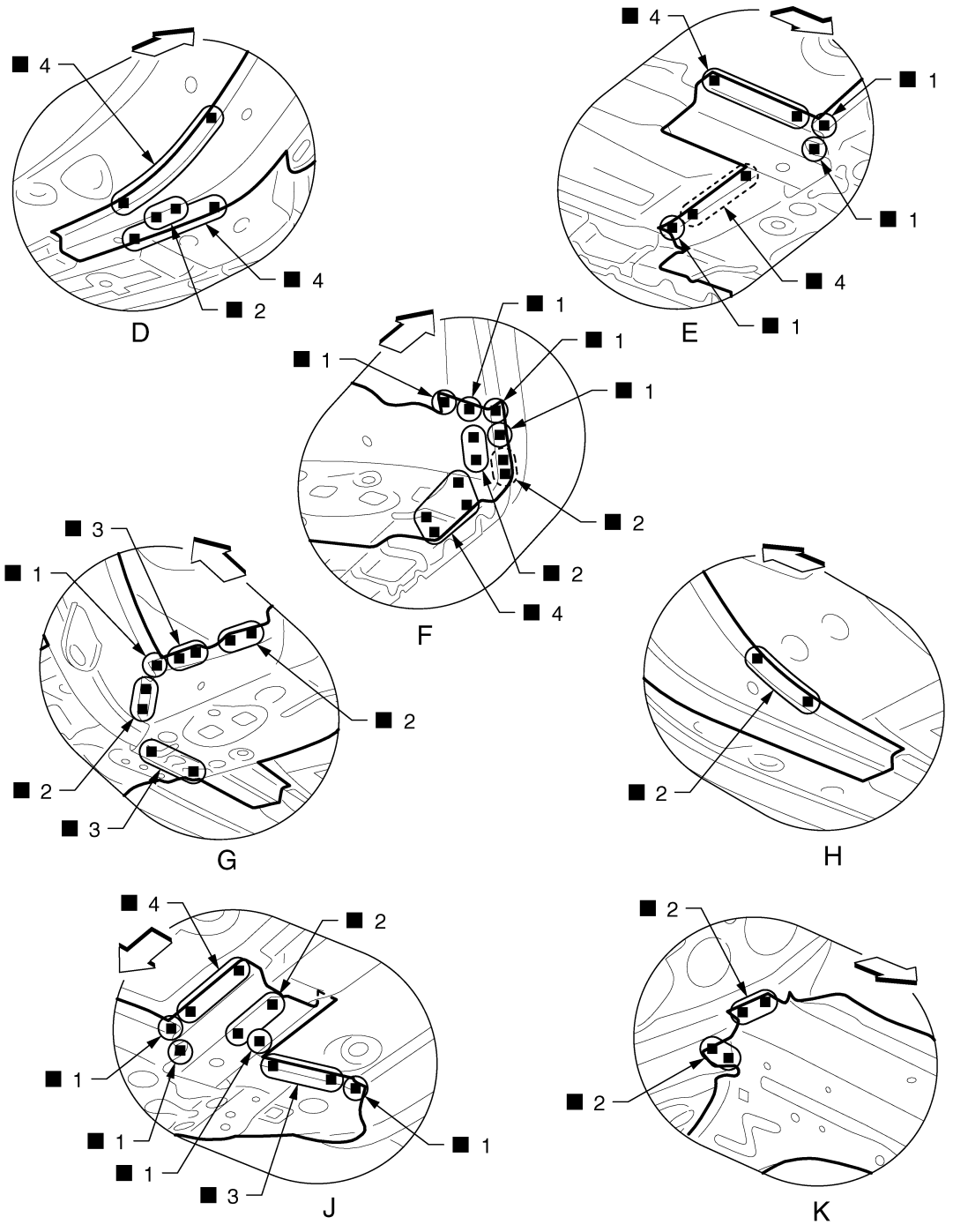


⇦: Vehicle front

(): 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 suspension mounting bracket (LH Rear)



: Vehicle front

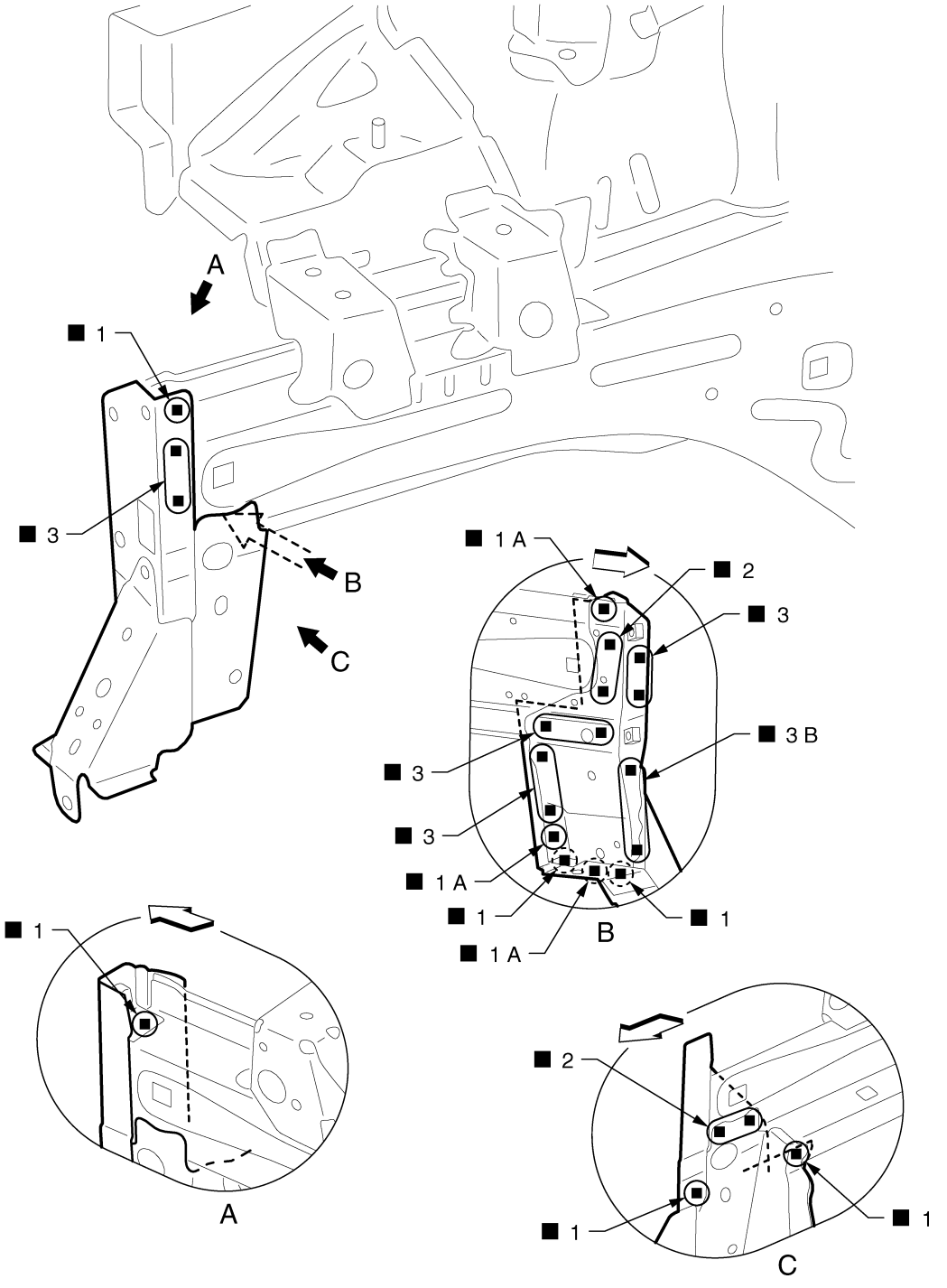
: Weld the parts onto the back of the component part.

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

Front Side Member (2WD Models Partial Replacement)

INFOID:0000000006482833

Work after radiator core support is removed.



⇦: Vehicle front

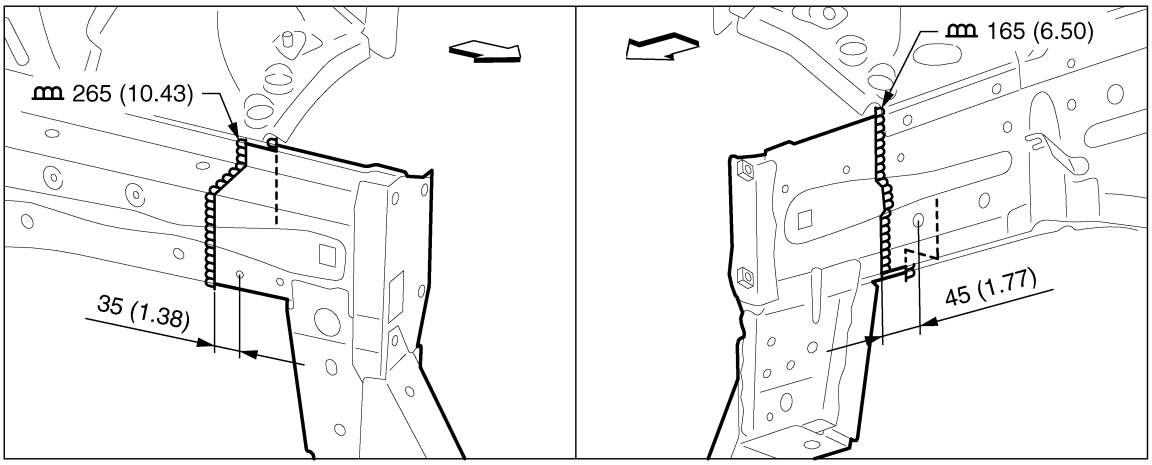
( ): Weld the parts onto the back of the component part.

Replacement parts

- Front suspension mounting bracket (RH Front)
- Add on frame bracket (RH)

POINT

The front side member on the left can also be replaced partially by butt welding.



JSKIA2167GB

Unit: mm (in)

⇦: Vehicle front

Replacement parts

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

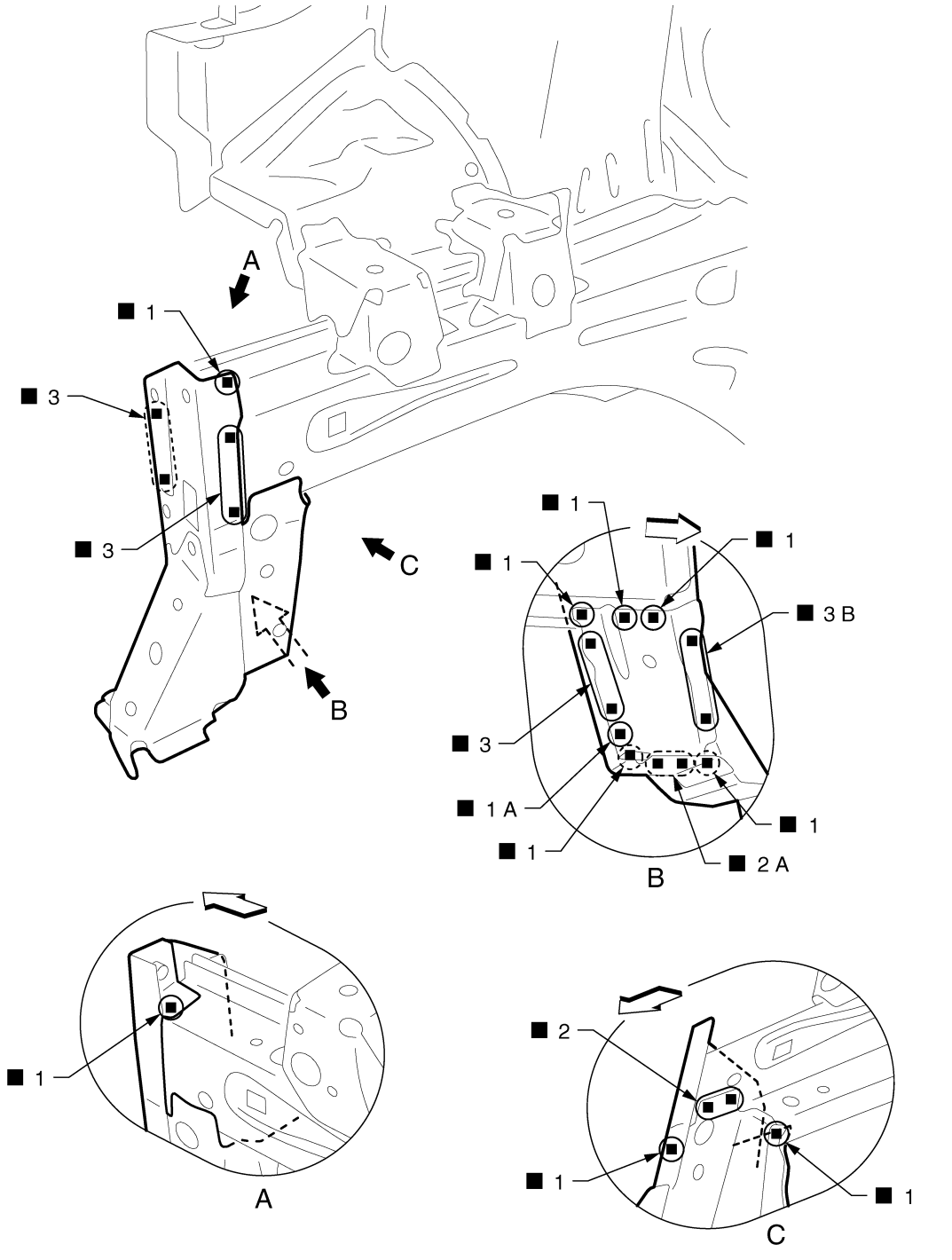
NOTE:

For welding method and the number of welding points, refer to BRM-50, "Front Side Member (2WD, RHD Models)" or BRM-53, "Front Side Member (2WD, LHD Models)".

Front Side Member (4WD Models Partial Replacement)

INFOID:0000000006517507

Work after radiator core support is removed.



JSKIA2013ZZ

⇦: Vehicle front

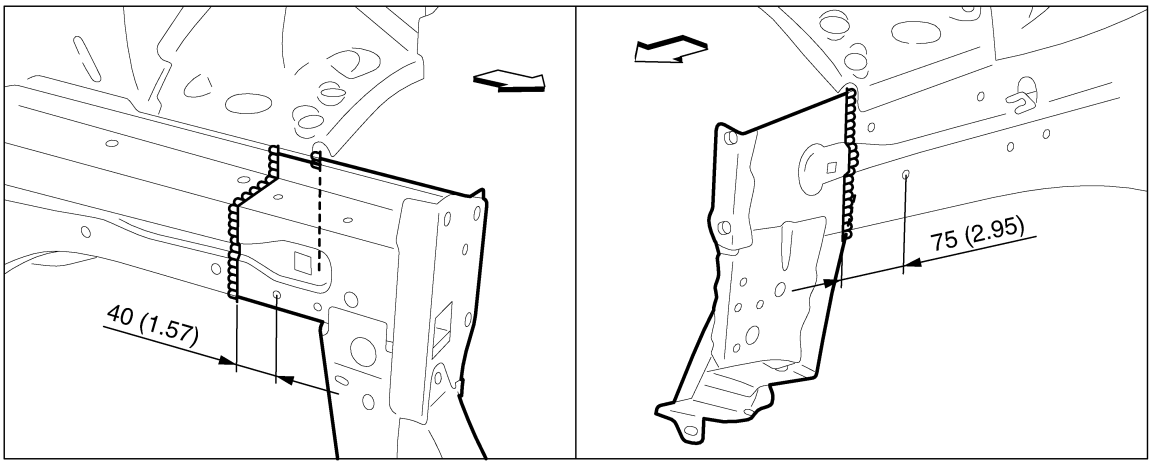
( ): Weld the parts onto the back of the component part.

Replacement parts

- Front suspension mounting bracket (RH Front)
- Add on frame bracket (RH)

POINT

The front side member on the left can also be replaced partially by butt welding.



JSKIA2014GB

Unit: mm (in)

⇦: Vehicle front

Replacement parts

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

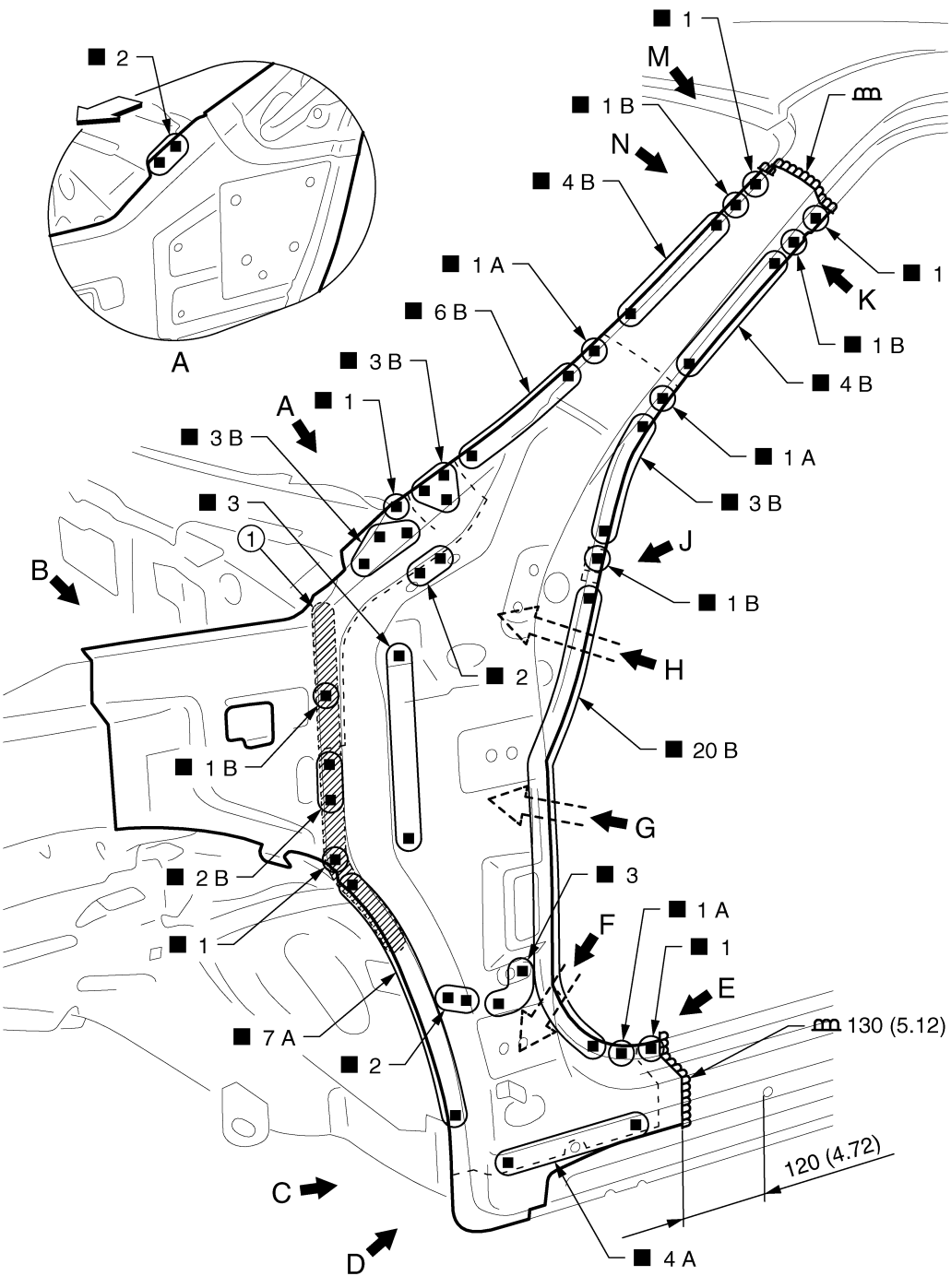
NOTE:

For welding method and the number of welding points, refer to BRM-56, "Front Side Member (4WD, RHD Models)" or BRM-58, "Front Side Member (4WD, LHD Models)".

Front Pillar (RHD Models)

INFOID:0000000006482834

Work after hoodledge reinforcement is removed.



1. Body sealing

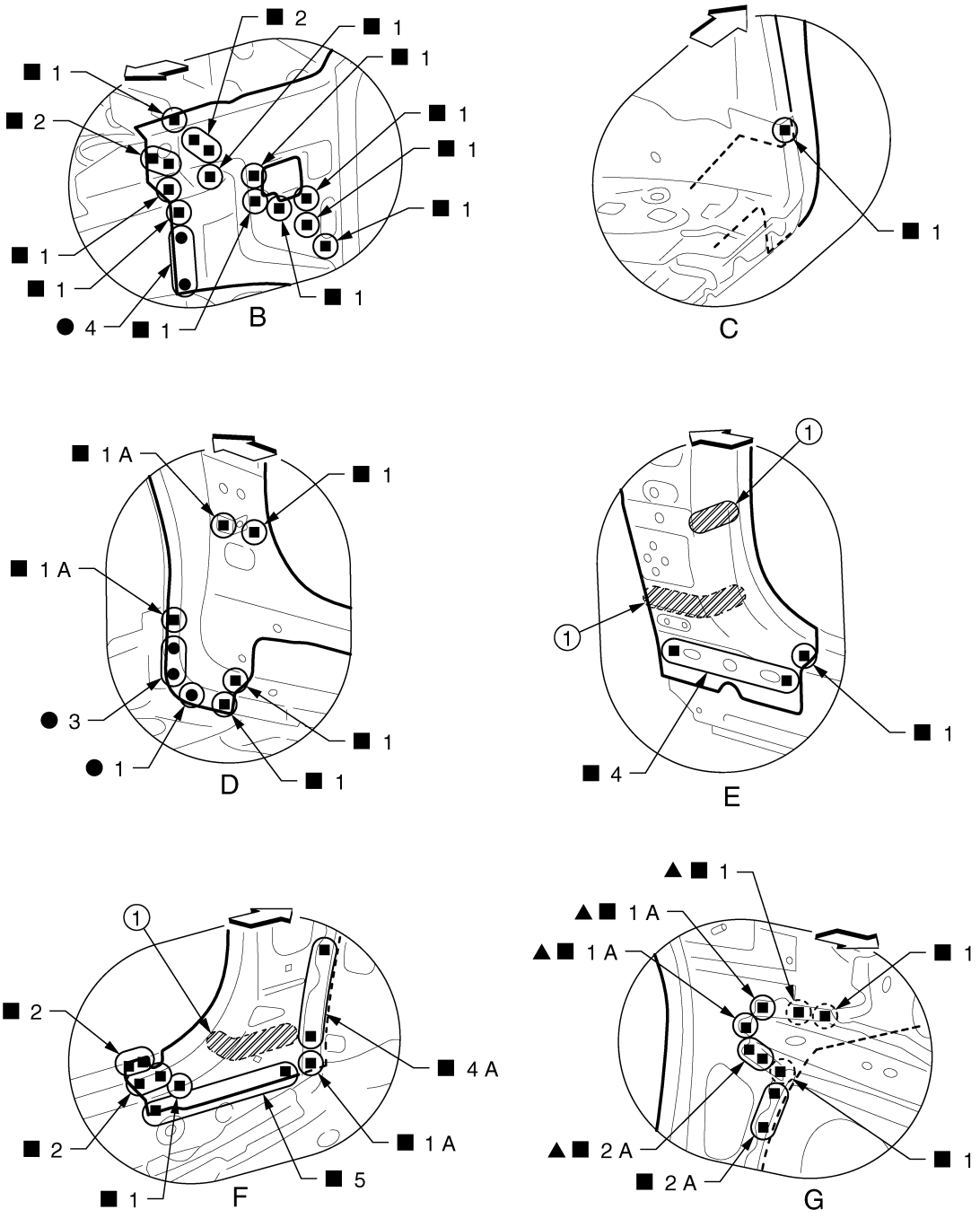
Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer front side body (LH)
- Front pillar brace (LH)
- Side dash (LH)
- Upper inner front pillar (LH)
- Front fender bracket assembly (LH)

View A: Before installing outer front side body, front fender bracket assembly, and front pillar brace



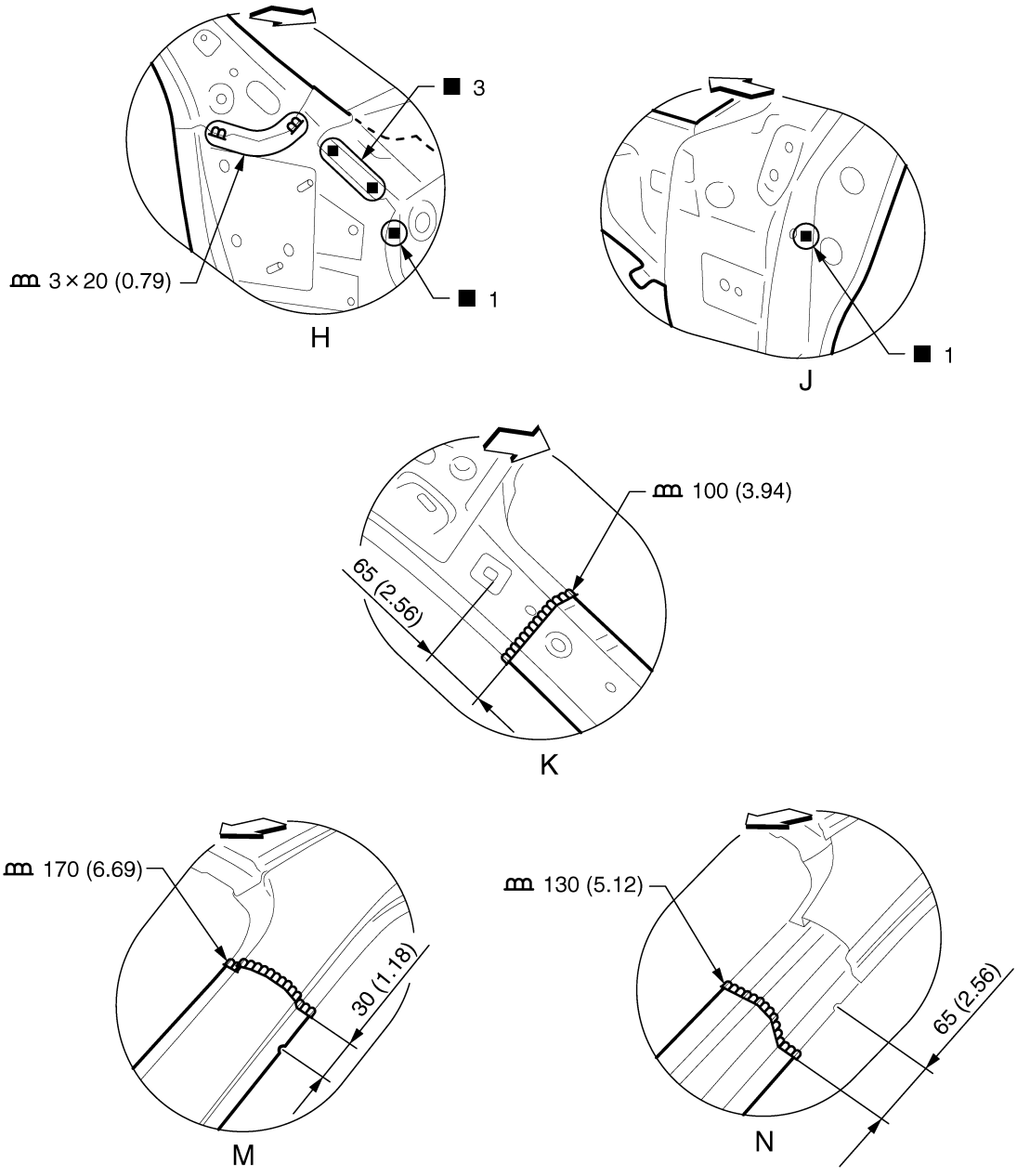
1. Urethane foam

⇦: Vehicle front

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

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

View E: Before installing outer front side body and front fender bracket assembly
View G: Before installing outer front side body, front fender bracket assembly, and front pillar brace



JSKIA2017GB

Unit: mm (in)

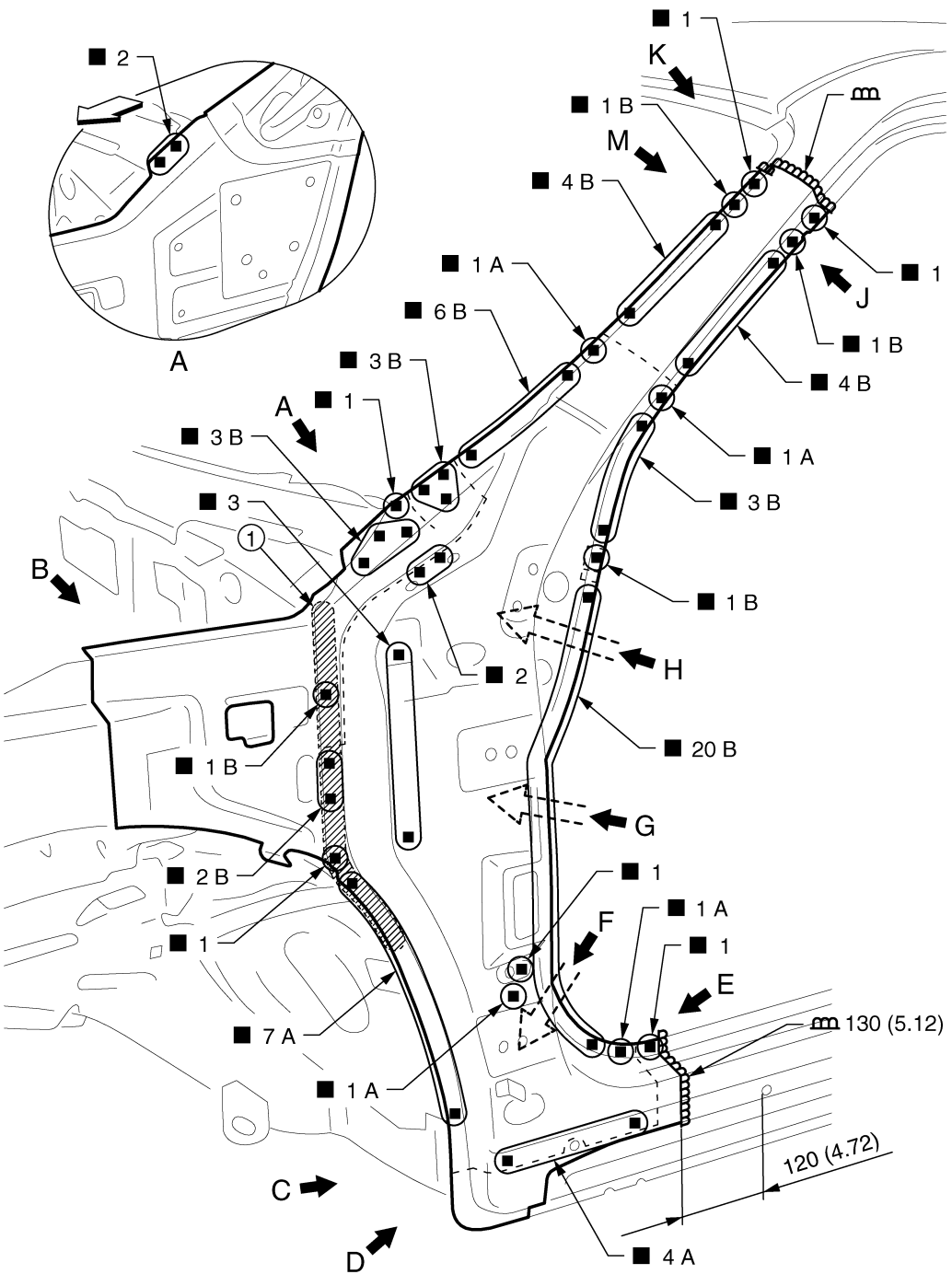
⇦: Vehicle front

View N: Before installing outer front side body

Front Pillar (LHD Models)

INFOID:0000000006517508

Work after hoodledge reinforcement is removed.



1. Body sealing

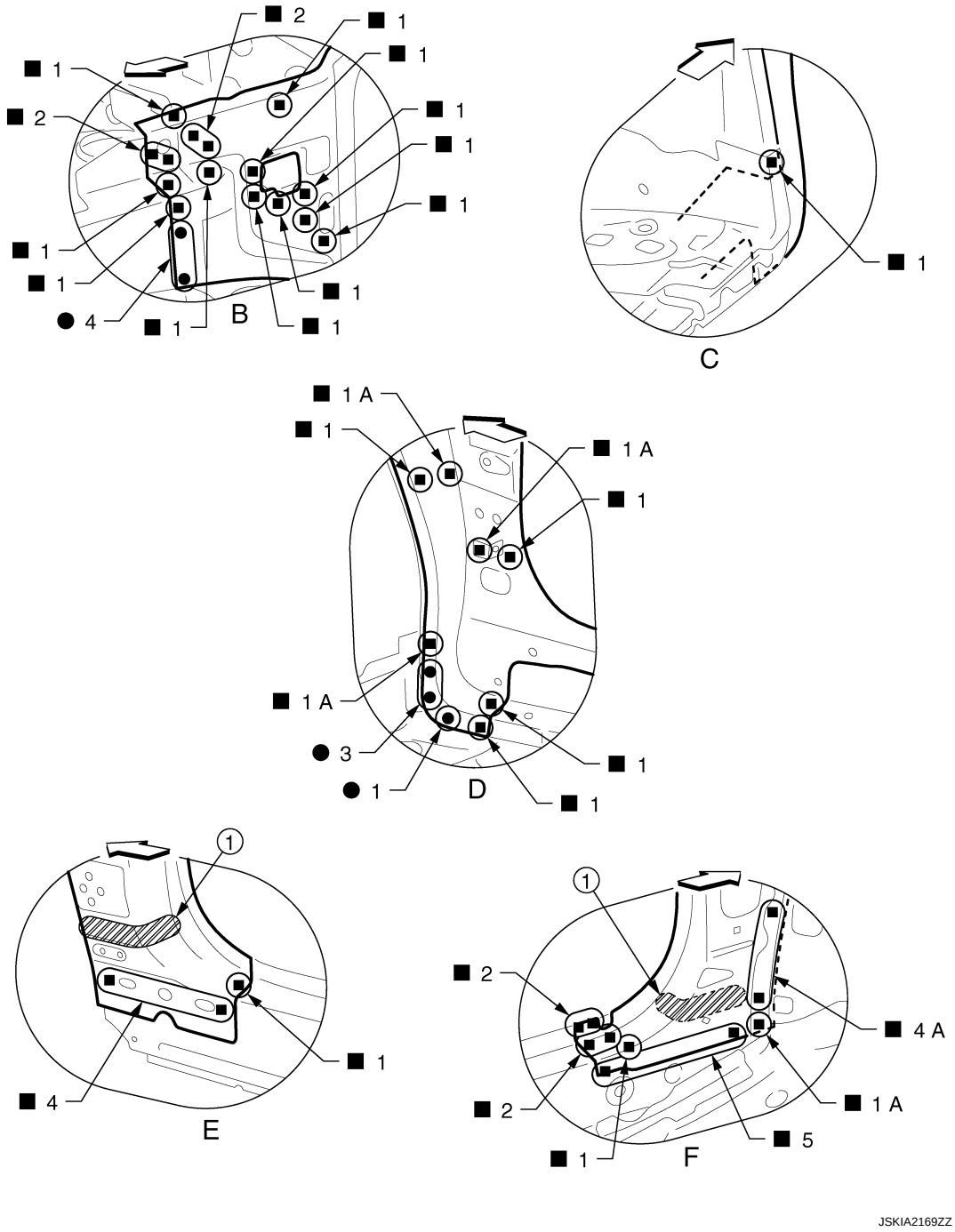
Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer front side body (LH)
- Front pillar brace (LH)
- Side dash (LH)
- Upper inner front pillar (LH)
- Front fender bracket assembly (LH)

View A: Before installing outer front side body, front fender bracket assembly, and front pillar brace

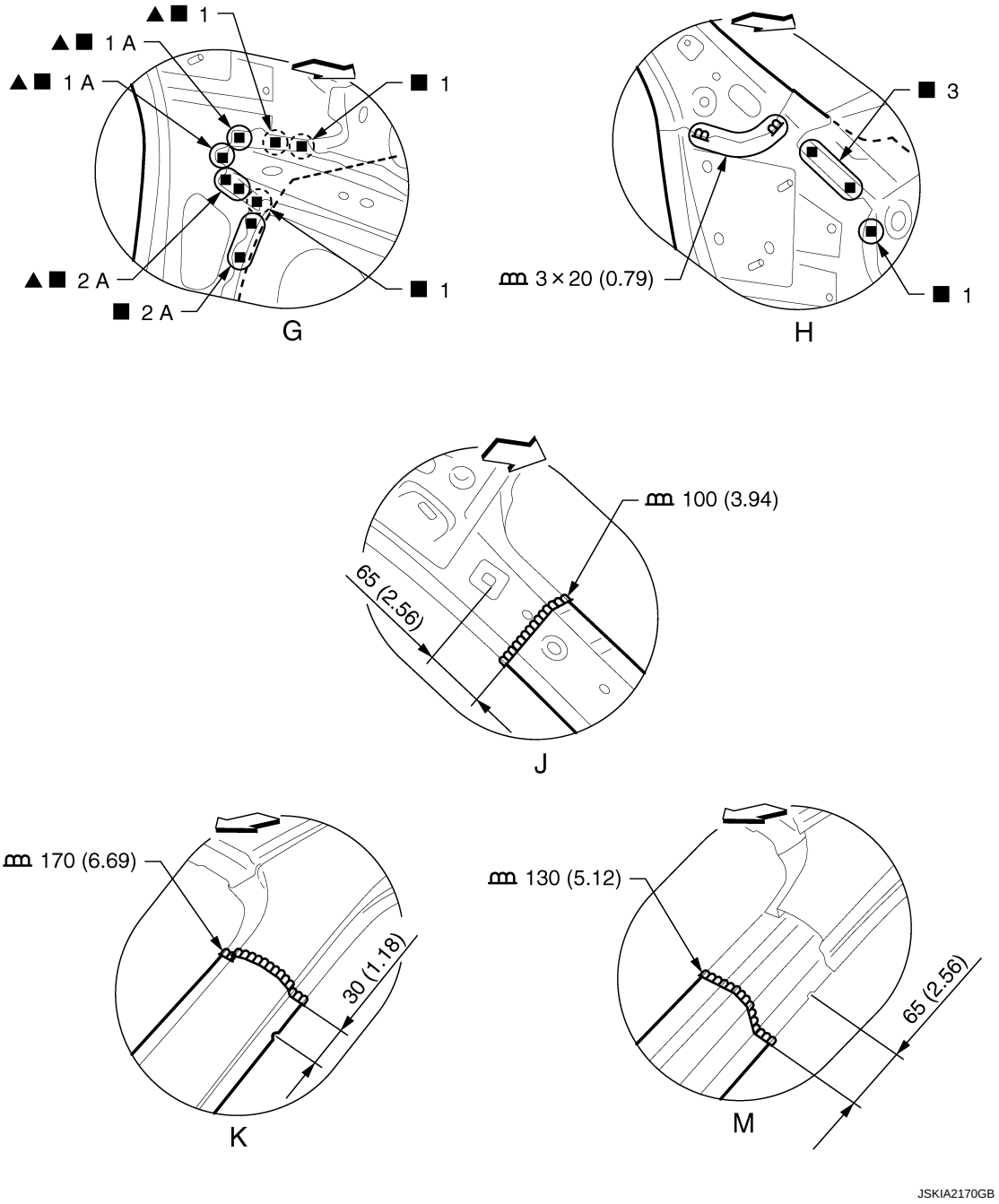


JSKIA2169ZZ

1. Urethane foam

⇦: Vehicle front

View E: Before installing outer front side body and front fender bracket assembly



JSKIA2170GB

Unit: mm (in)

⇦: Vehicle front

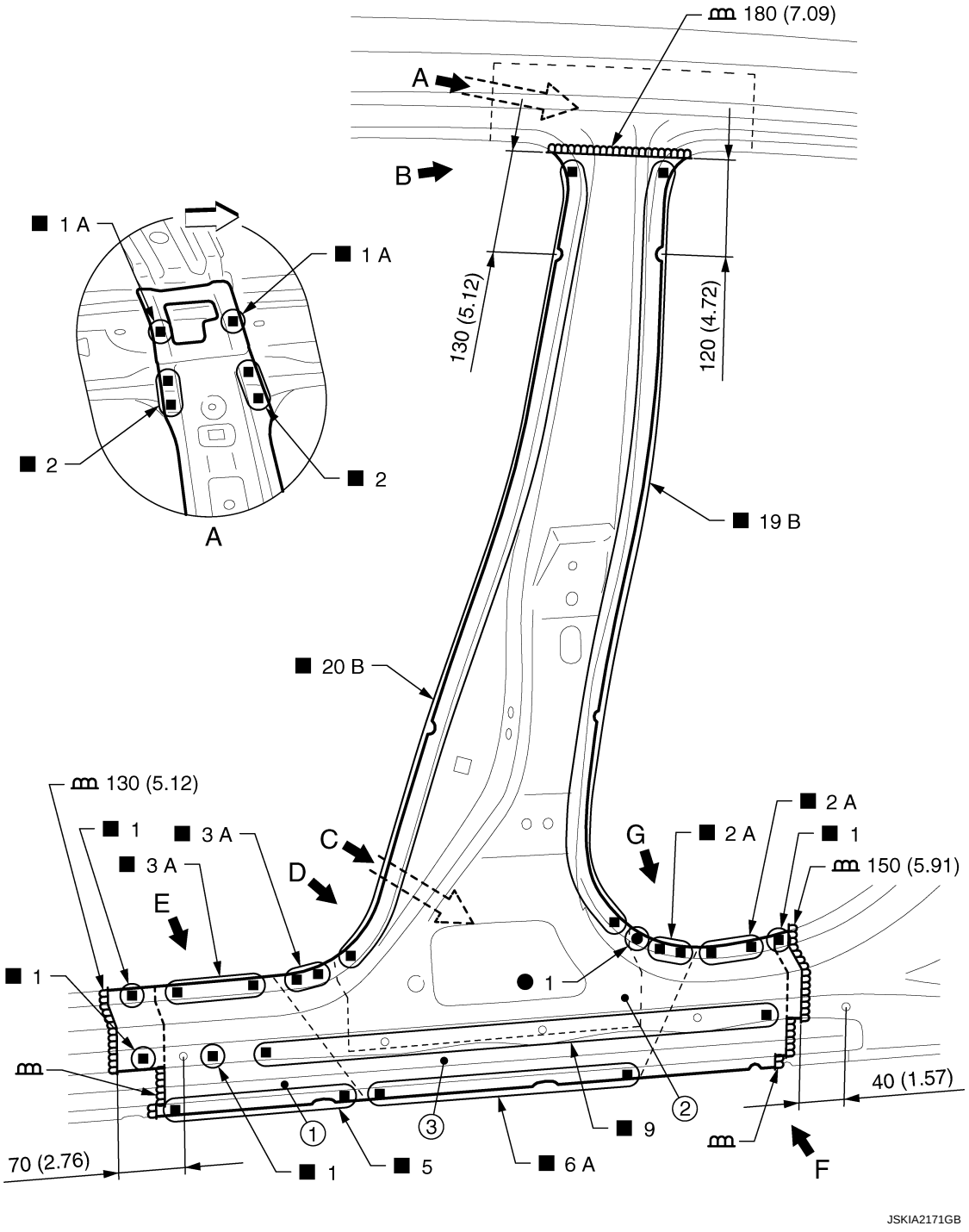
▲: Drill ϕ9 mm (0.35 in) hole for the plug welding hole (ultra high strength steel plate).

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

View G: Before installing outer front side body, front fender bracket assembly, and front pillar brace
View M: Before installing outer front side body

Center Pillar (2WD Models)

INFOID:0000000006482835



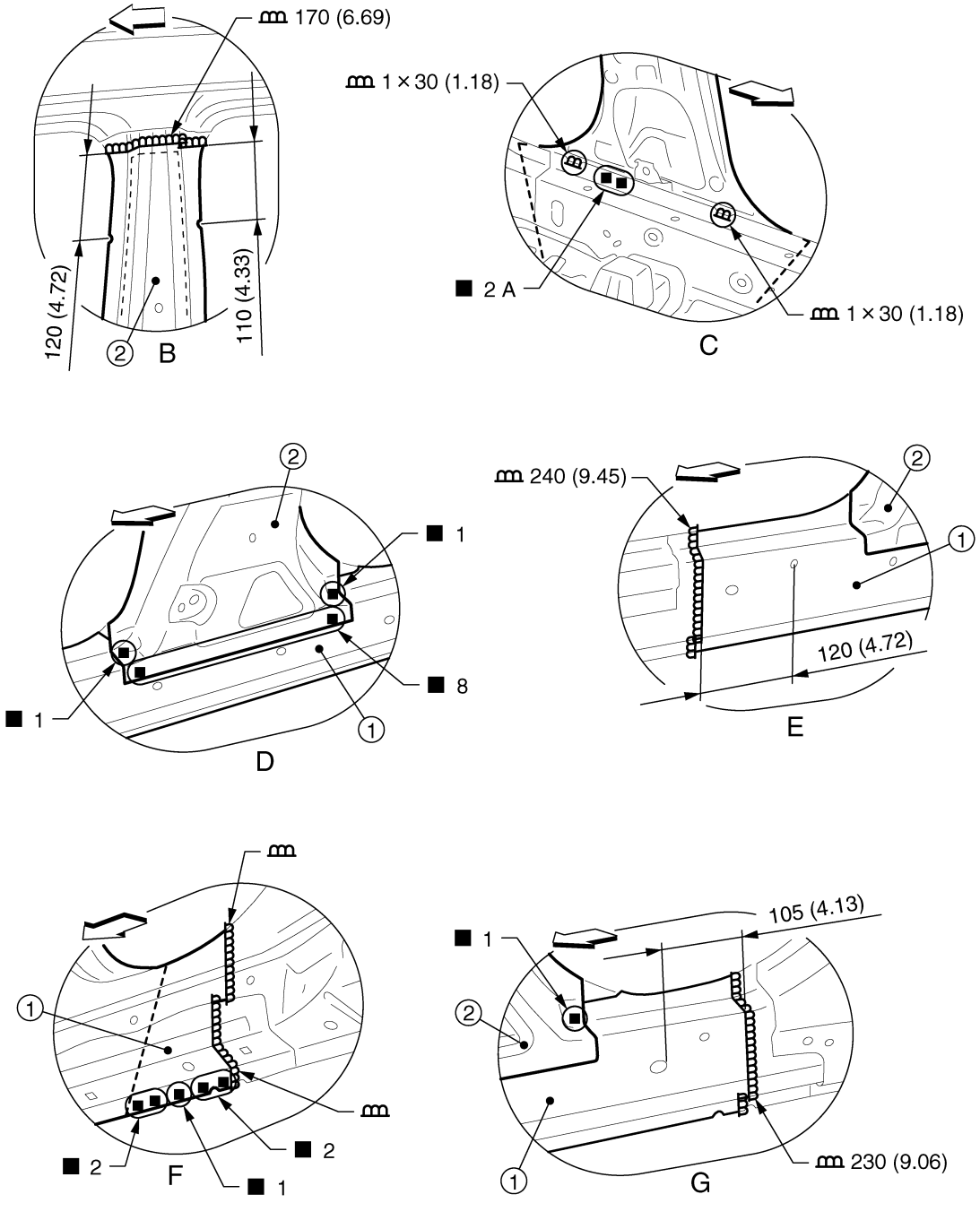
1. Outer sill reinforcement
2. Lower center pillar brace
3. Inner center pillar

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer front side body (LH)
- Lower center pillar brace (LH)
- Inner center pillar (LH)



JSKIA2172GB

1. Outer sill reinforcement
2. Lower center pillar brace

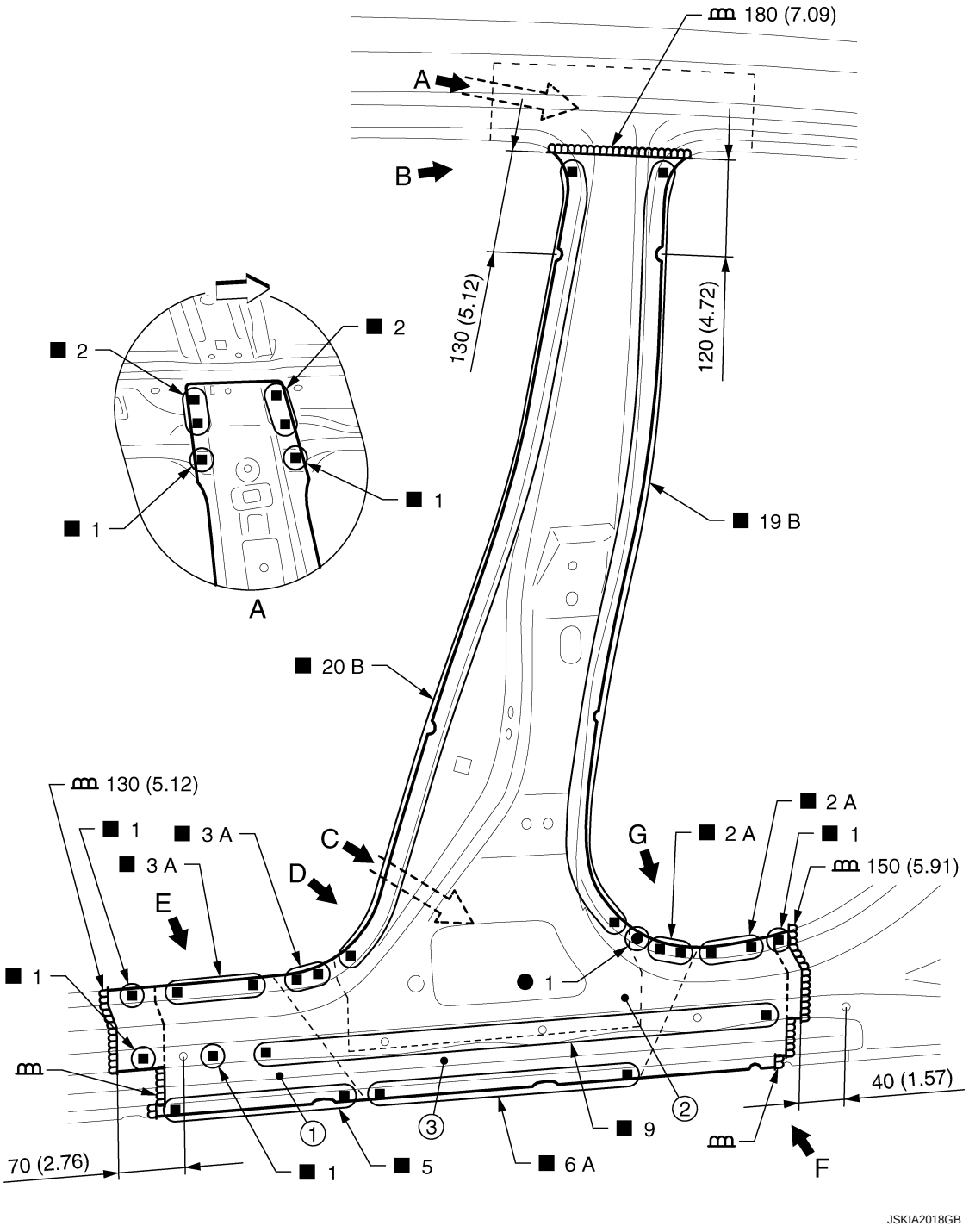
Unit: mm (in)

⇦: Vehicle front

View B, D, E, and G: Before installing outer front side body

Center Pillar (4WD Models)

INFOID:0000000006517509



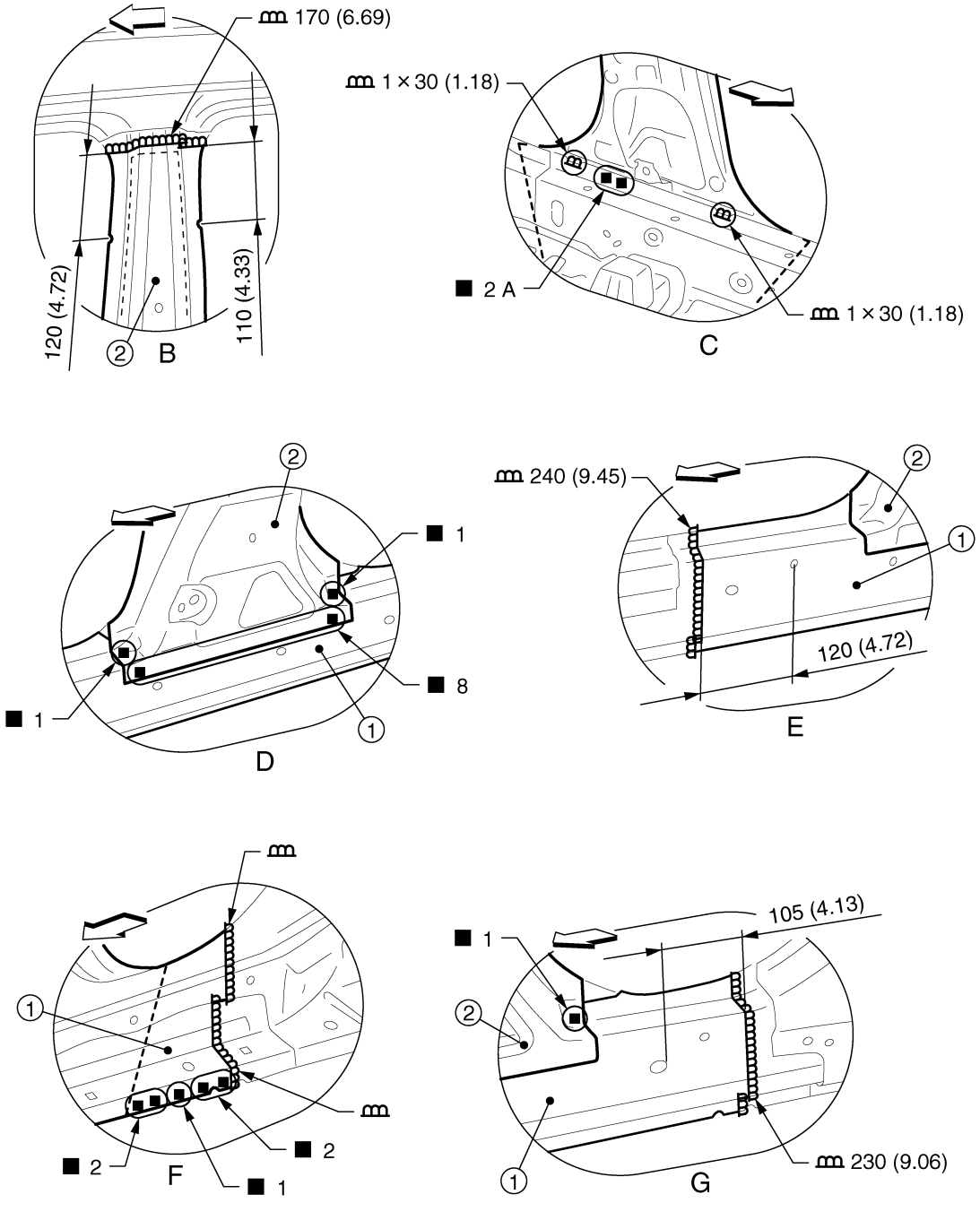
1. Outer sill reinforcement
2. Lower center pillar brace
3. Inner center pillar

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer front side body (LH)
- Lower center pillar brace (LH)
- Inner center pillar (LH)



1. Outer sill reinforcement
2. Lower center pillar brace

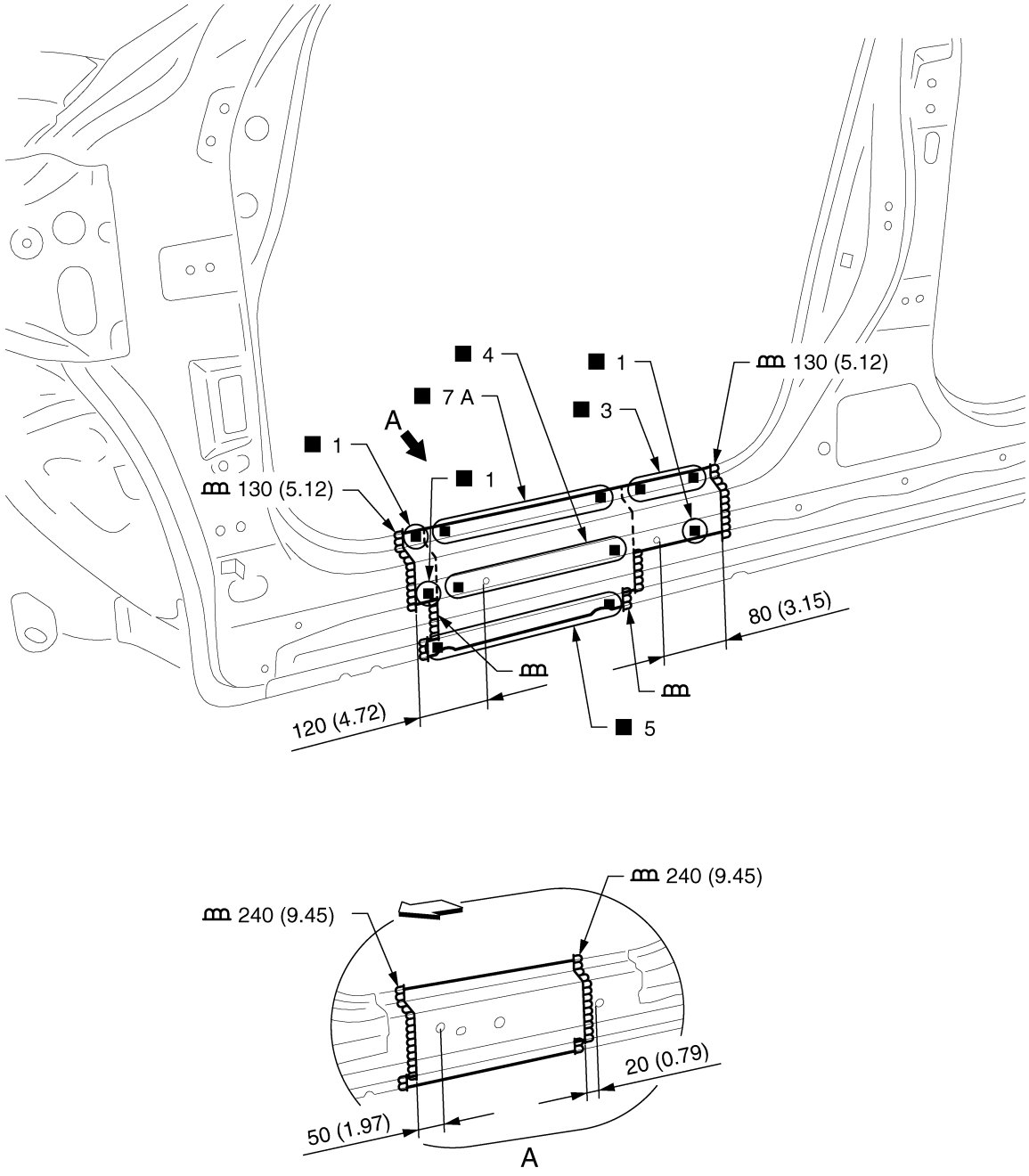
Unit: mm (in)

⇦: Vehicle front

View B, D, E, and G: Before installing outer front side body

Outer Sill (Partial Replacement)

INFOID:0000000006482838



JSKIA2020GB

Unit: mm (in)

⇦: Vehicle front

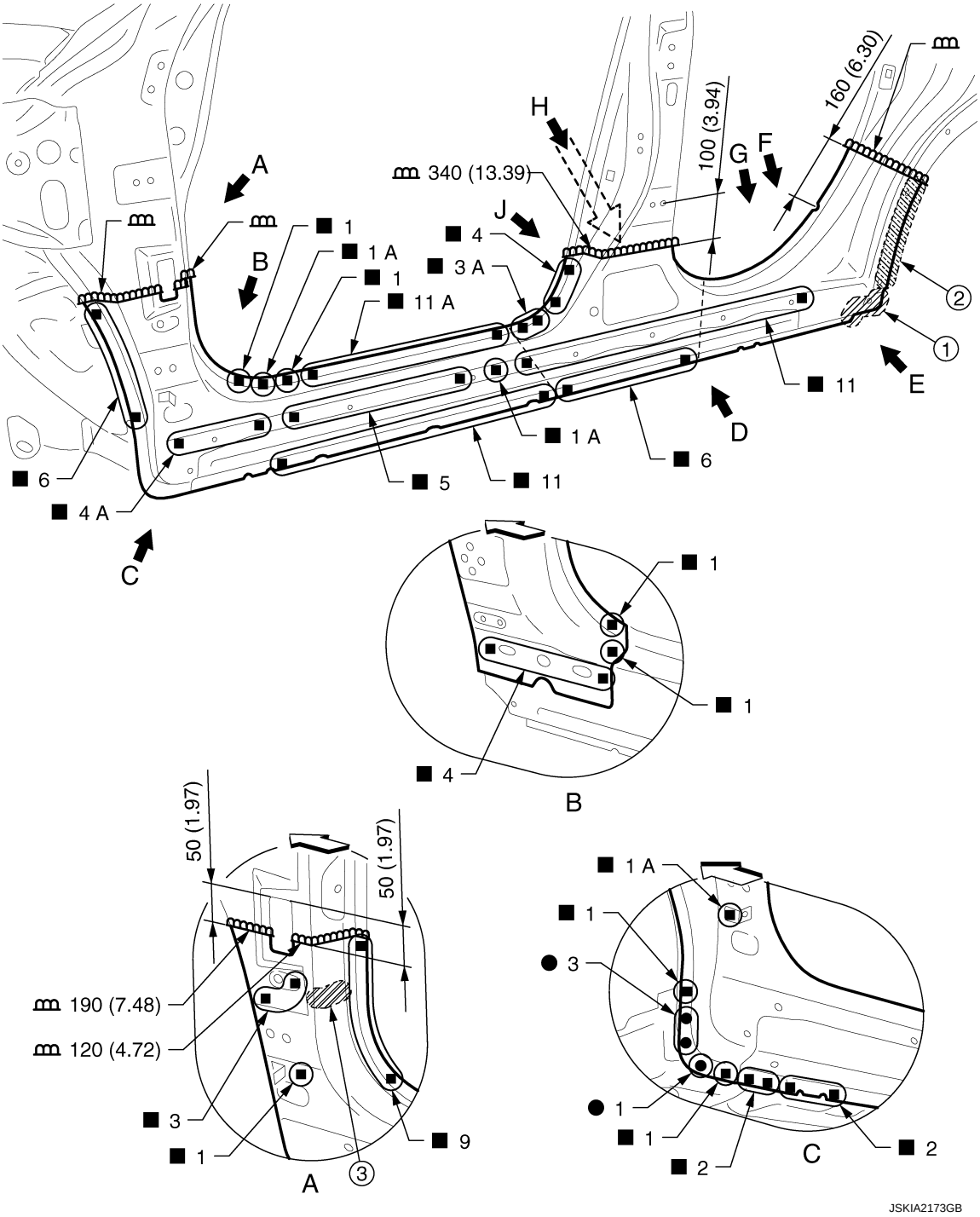
Replacement parts

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

View A: Before installing outer sill

Outer Sill (RHD Models)

INFOID:0000000006527930



1. Body sealing
2. Adhesive
3. Urethane foam

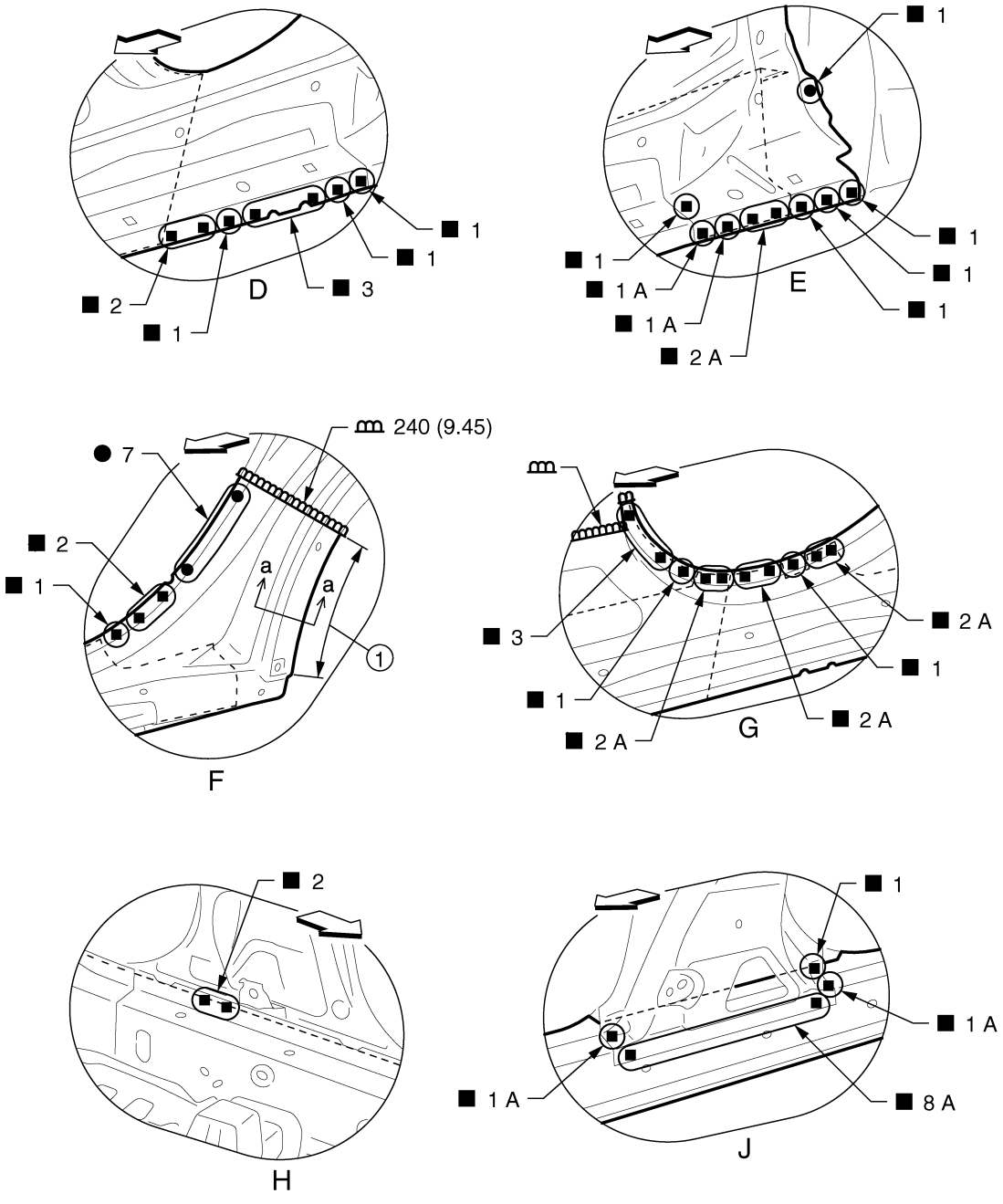
Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer sill (LH)
- Outer sill reinforcement (LH)
- Front fender bracket assembly (LH)

View B: Before installing outer sill



1. Hemming portion

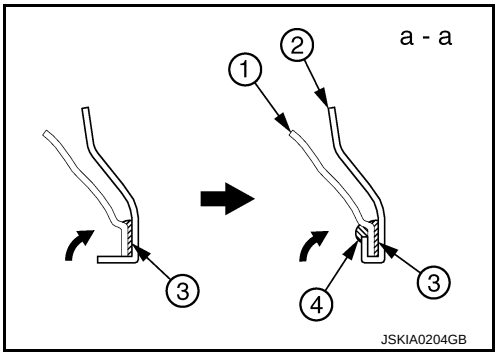
Unit: mm (in)

⇦: Vehicle front

View J: Before installing outer sill

POINT

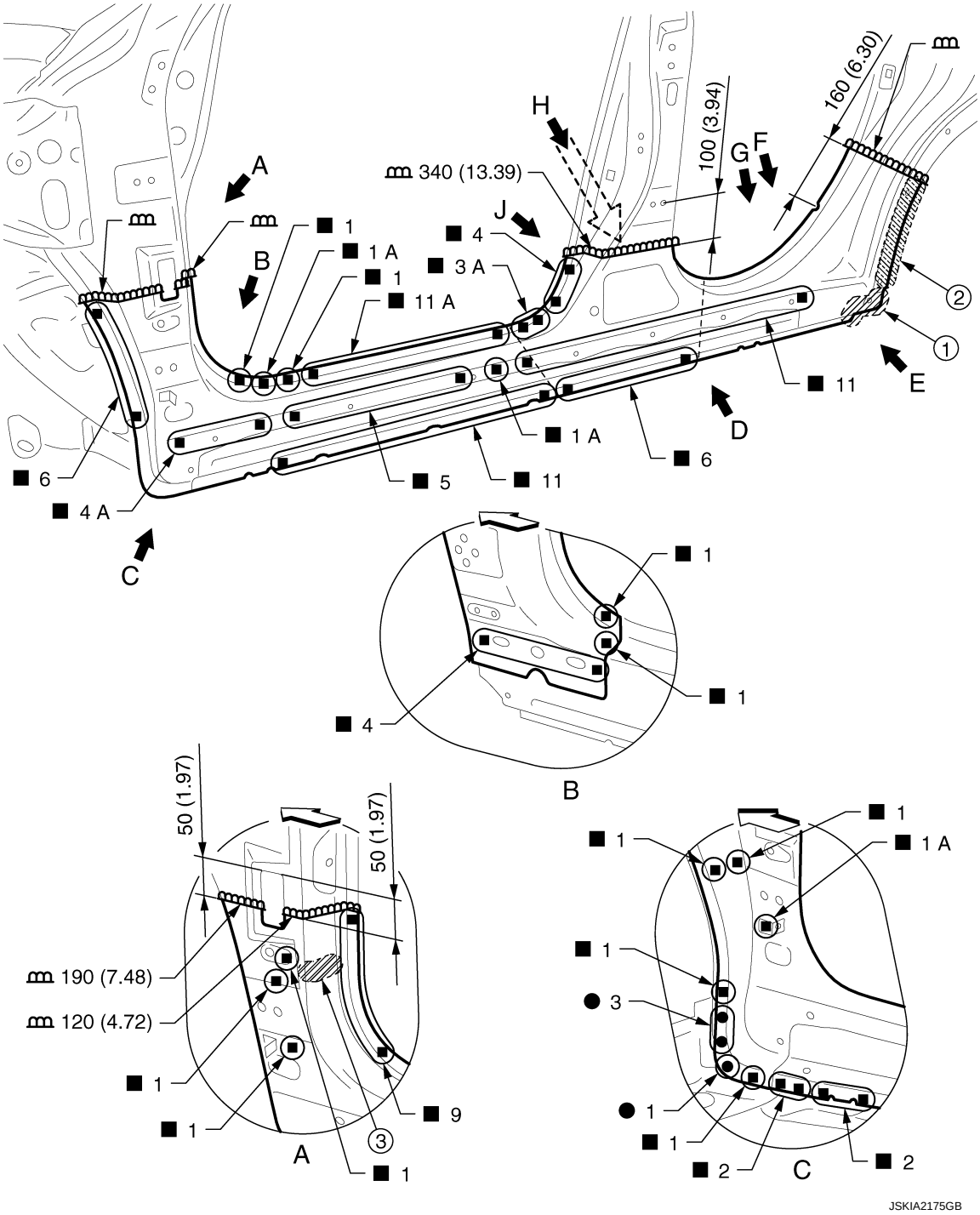
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-40, "Rear Fender Hemming Process".



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

Outer Sill (LHD Models)

INFOID:0000000006527931



1. Body sealing
2. Adhesive
3. Urethane foam

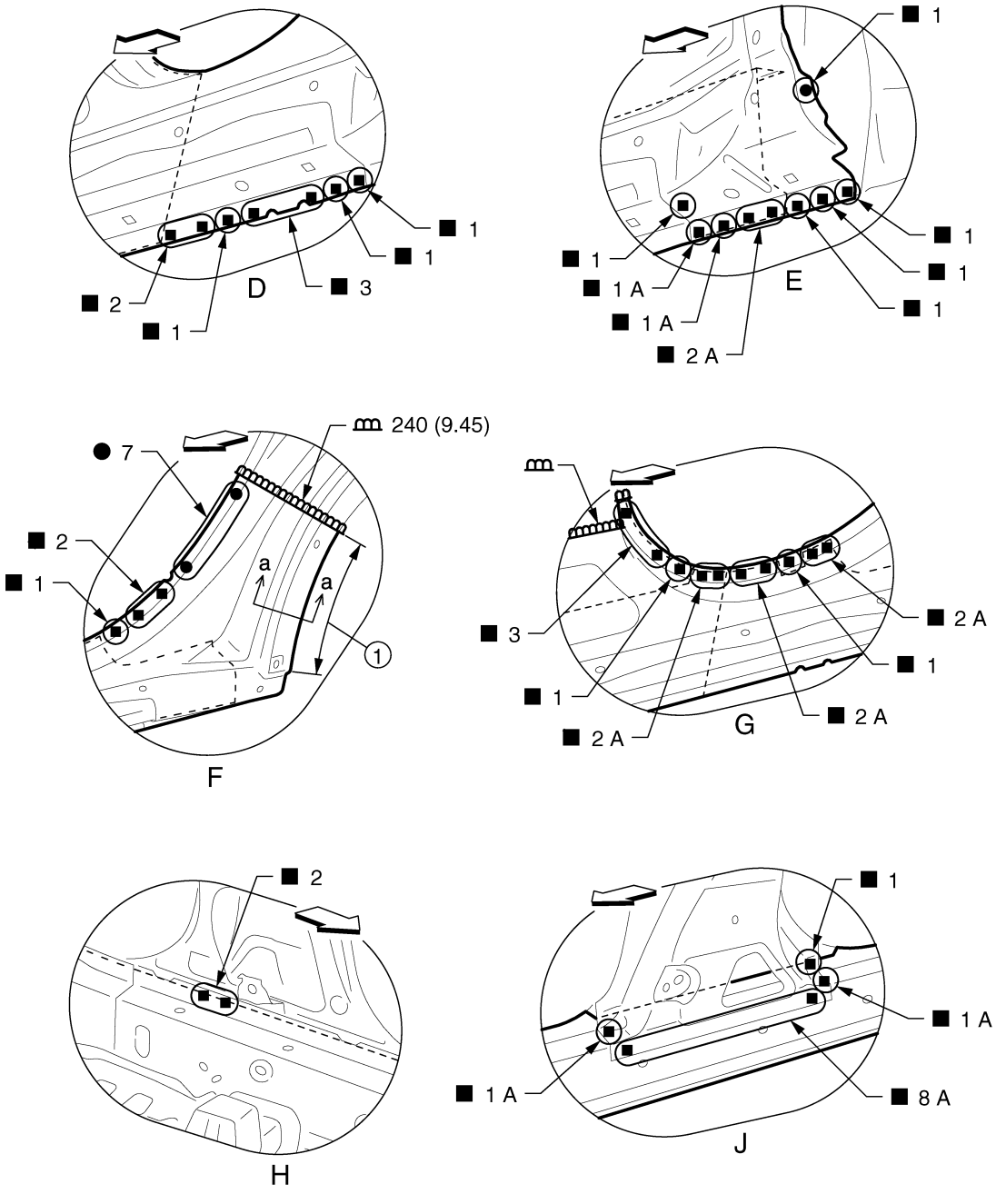
Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Outer sill (LH)
- Outer sill reinforcement (LH)
- Front fender bracket assembly (LH)

View B: Before installing outer sill



1. Hemming portion

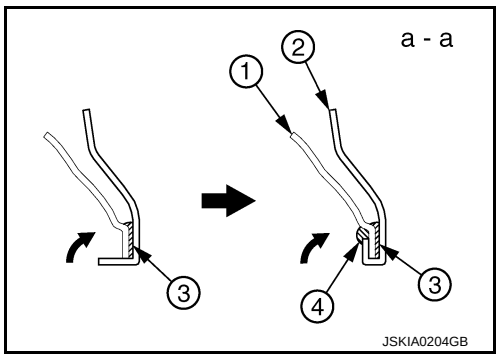
Unit: mm (in)

⇦: Vehicle front

View J: Before installing outer sill

POINT

- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-40, "Rear Fender Hemming Process".

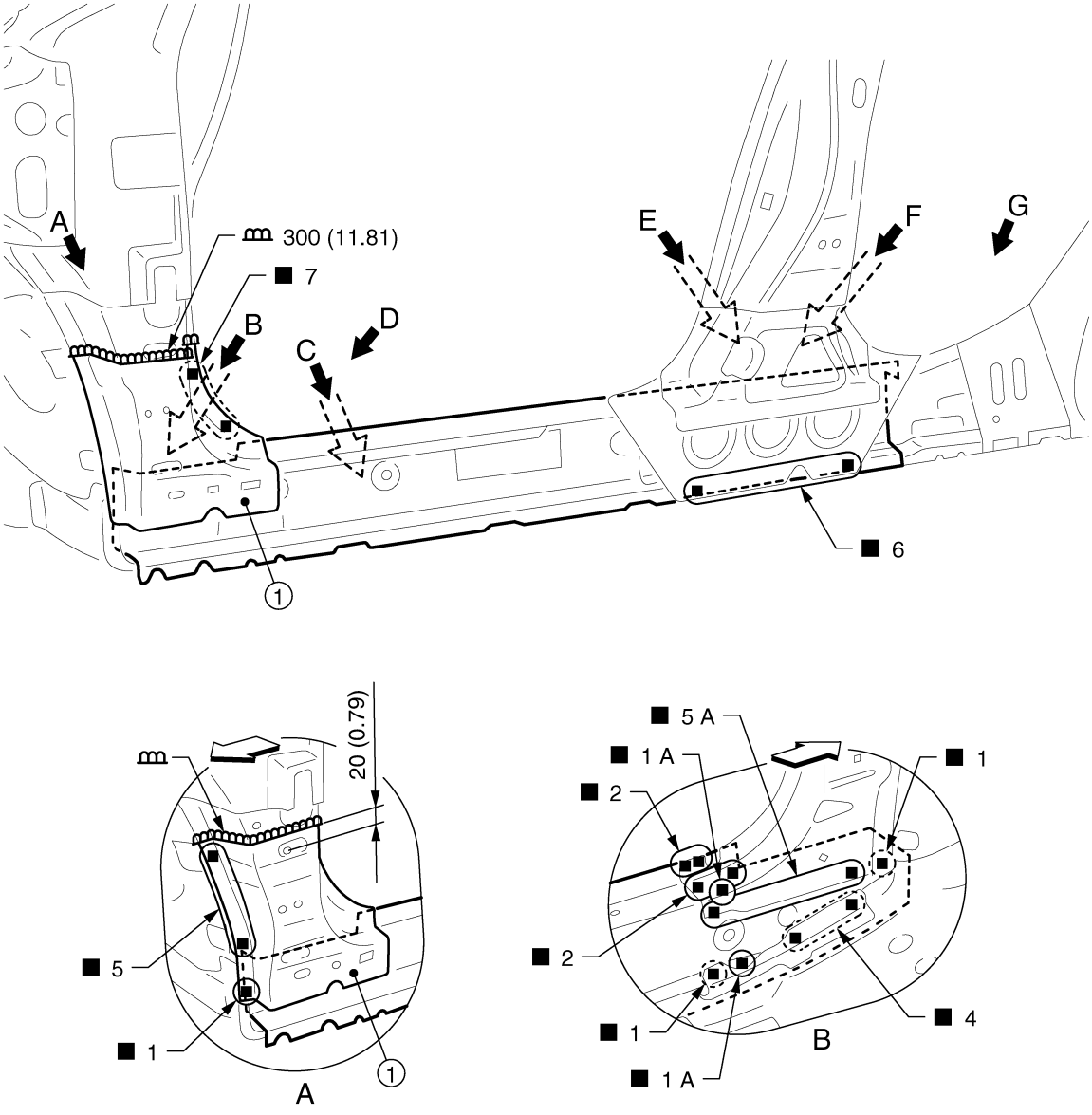


1. **Outer rear wheelhouse**
2. **Rear fender**
3. **Adhesive**
4. **Sealant**

Inner Sill

INFOID:0000000006482843

Work after outer sill is removed.
Remove the lower front pillar hinge brace (reusable).



JSKIA2176GB

1. Lower front pillar hinge brace

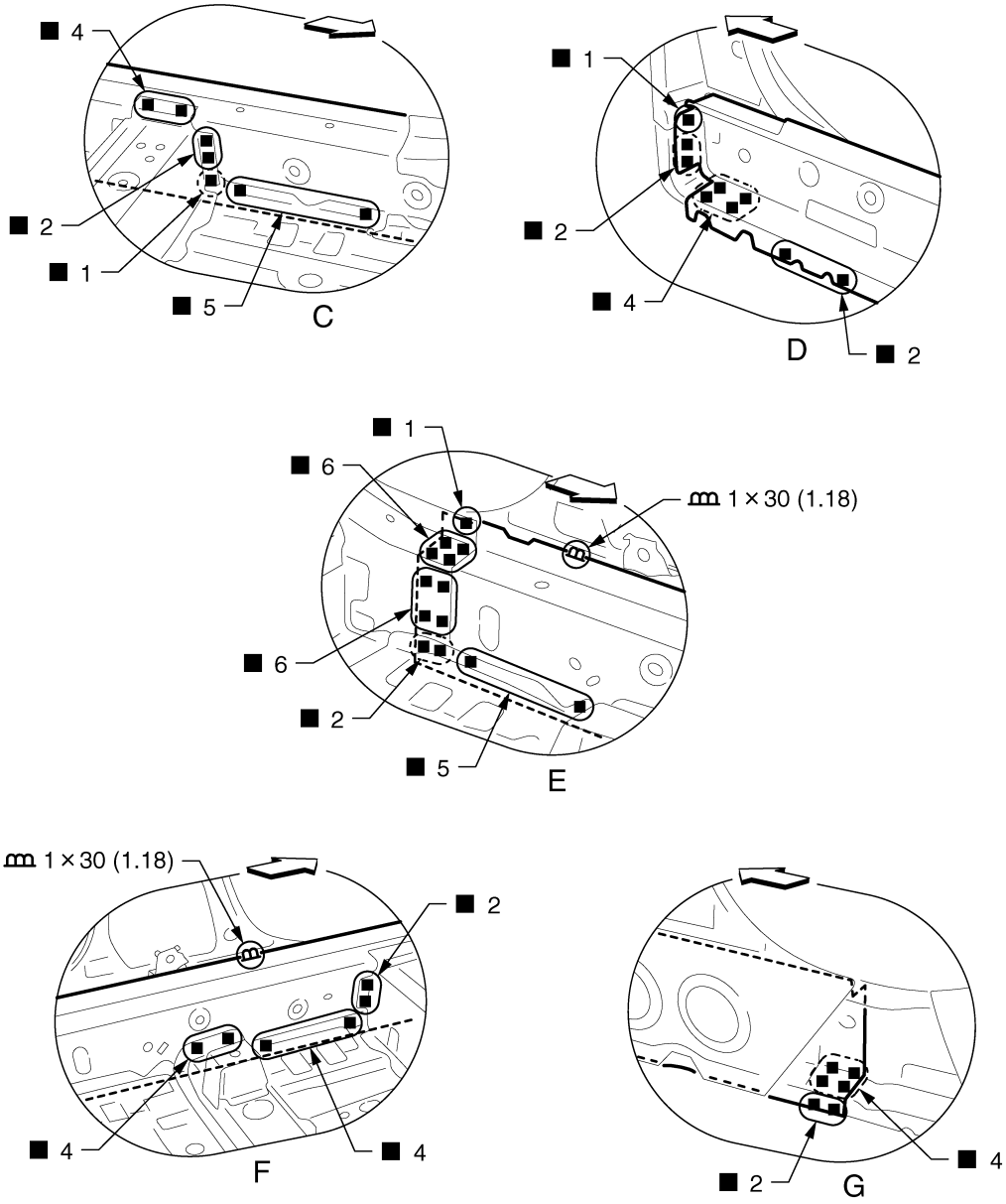
Unit: mm (in)

⇦: Vehicle front

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

Replacement parts

- Inner sill (LH)



JSKIA2177GB

Unit: mm (in)

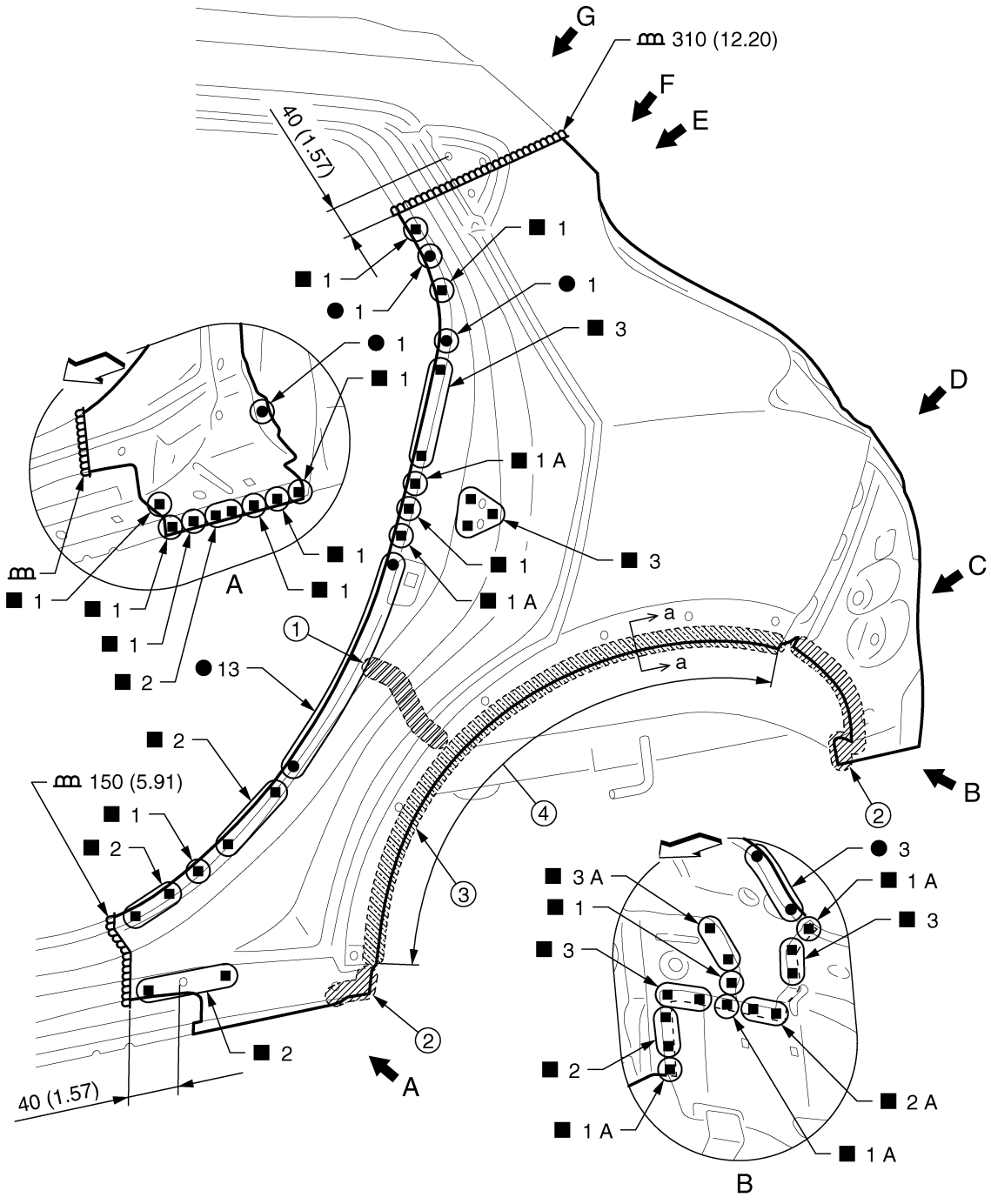
⇦: Vehicle front

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

View D: Before installing lower front pillar hinge brace

Rear Fender (2WD Models)

INFOID:0000000006527932



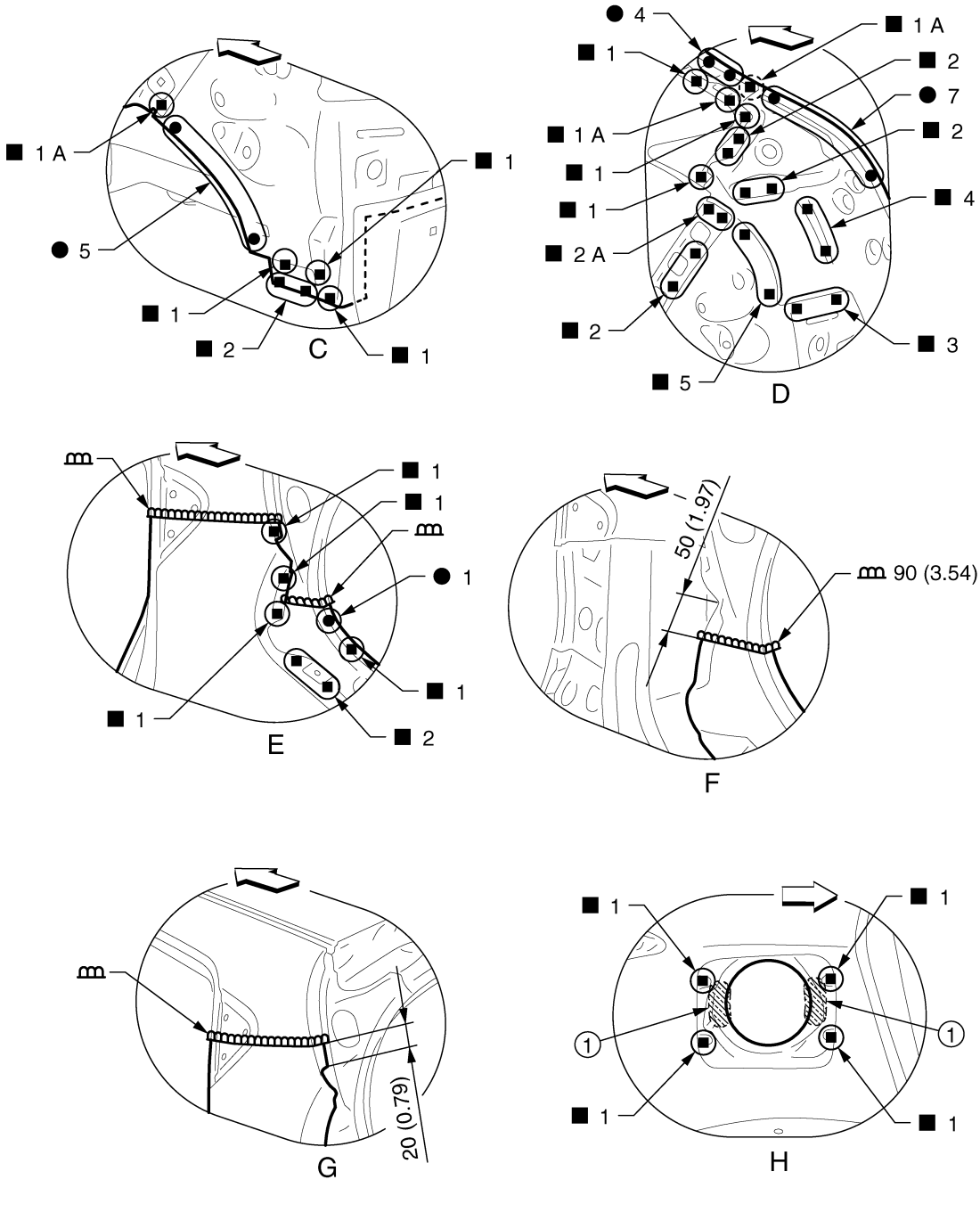
1. Urethane foam
2. Body sealing
3. Adhesive
4. Hemming portion

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Rear fender (LH)
- Rear fender extension (LH)
- Rear fender corner (LH)
- Striker retainer
- Fuel filler base (Right side rear fender)



1. Adhesive

Unit: mm (in)

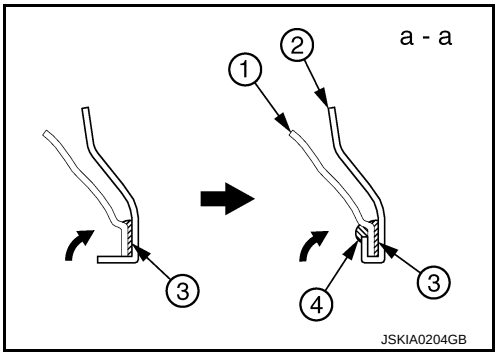
⇦: Vehicle front

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

View F: Before installing rear fender
View H: Right side rear fender

POINT

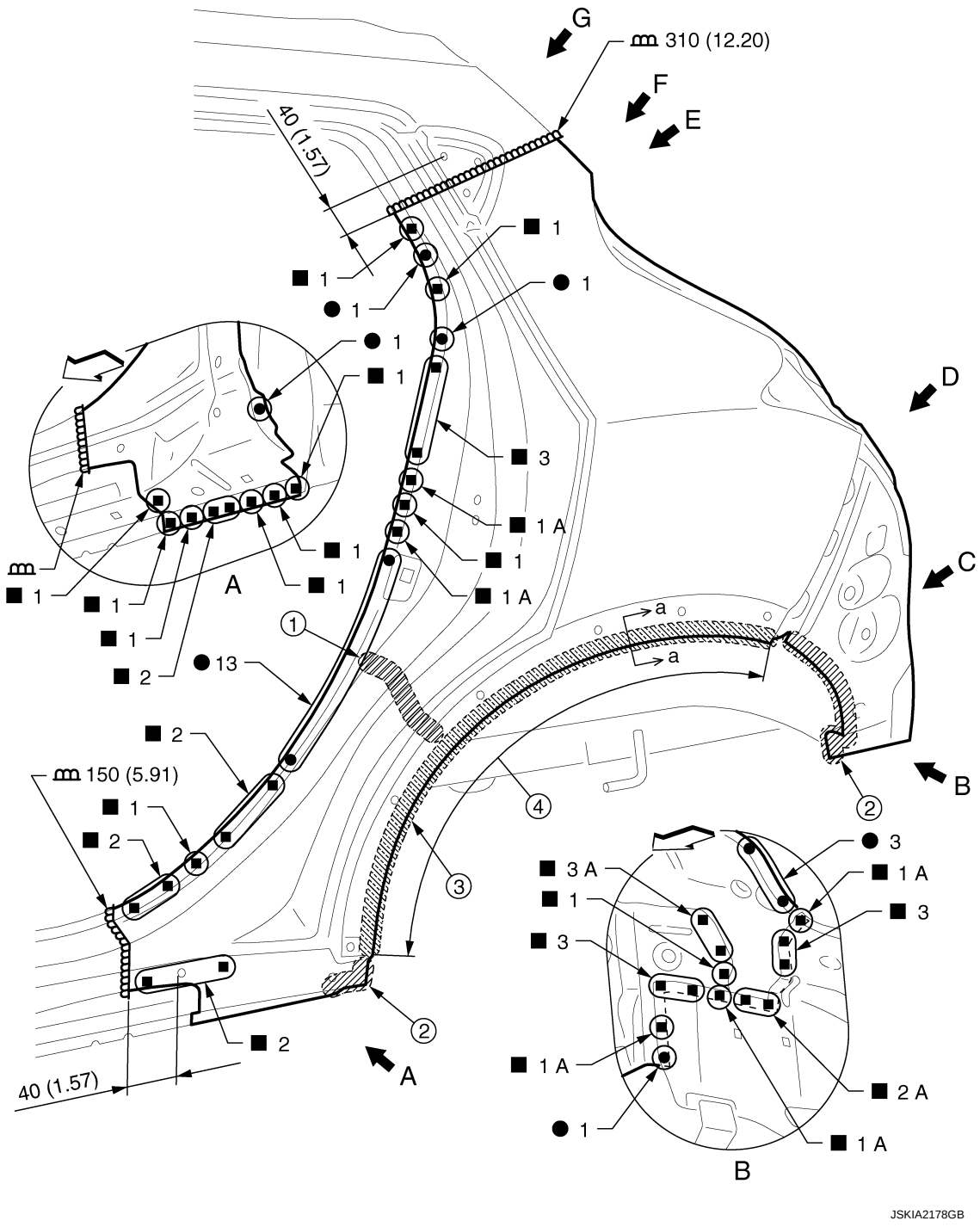
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-40, "Rear Fender Hemming Process".



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

Rear Fender (4WD Models)

INFOID:0000000006527933



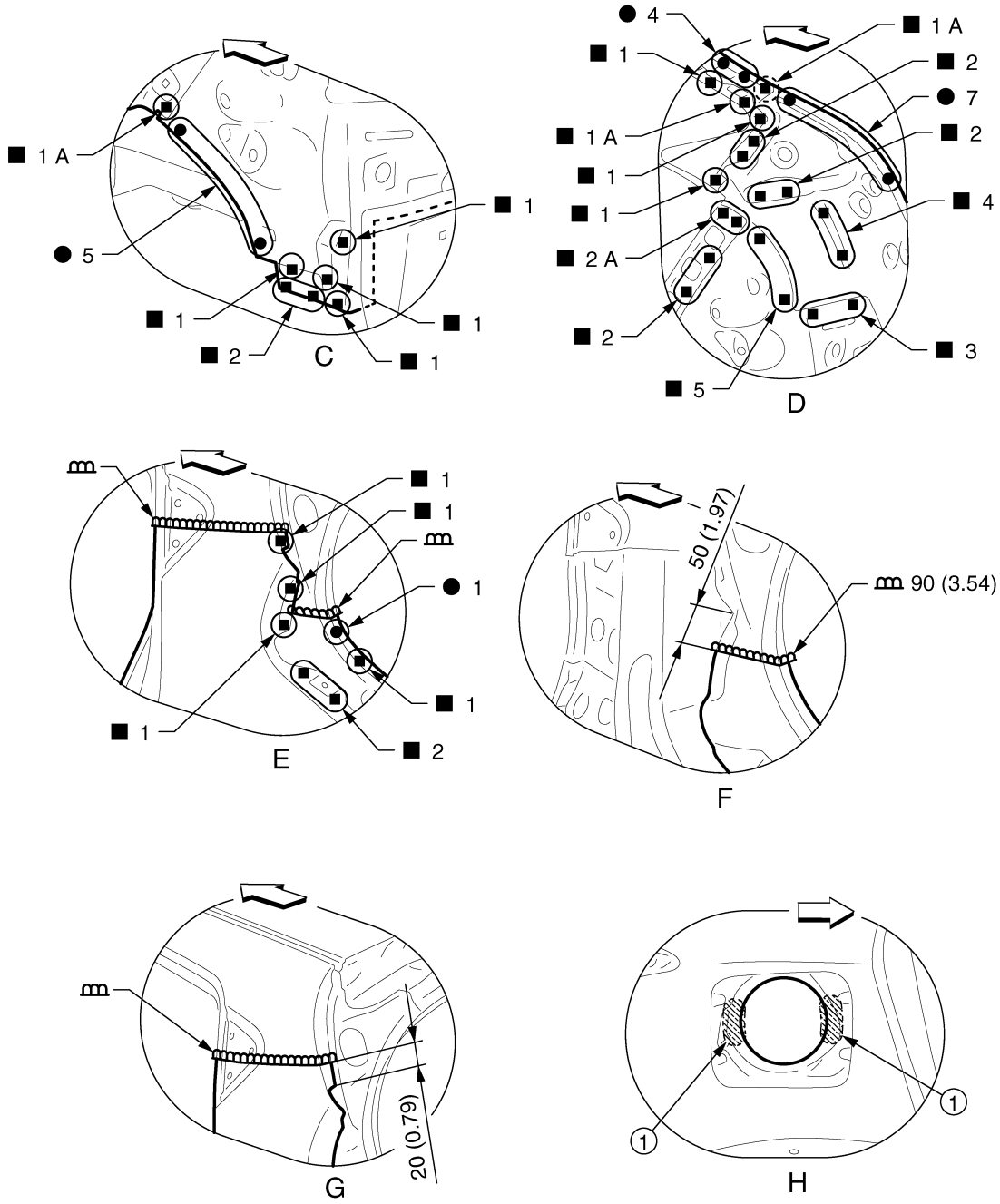
1. Urethane foam
2. Body sealing
3. Adhesive
4. Hemming portion

Unit: mm (in)

⇦: Vehicle front

Replacement parts

- Rear fender (LH)
- Rear fender extension (LH)
- Rear fender corner (LH)



JSKIA2179GB

1. Adhesive

Unit: mm (in)

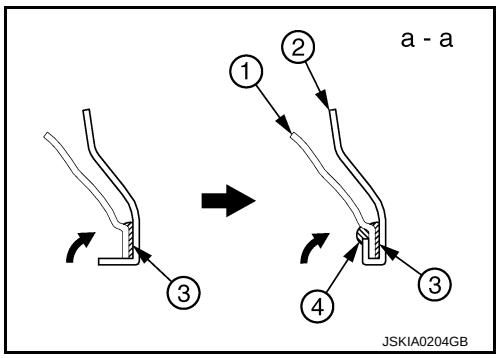
⇦: Vehicle front

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

View F: Before installing rear fender
View H: Right side rear fender

POINT

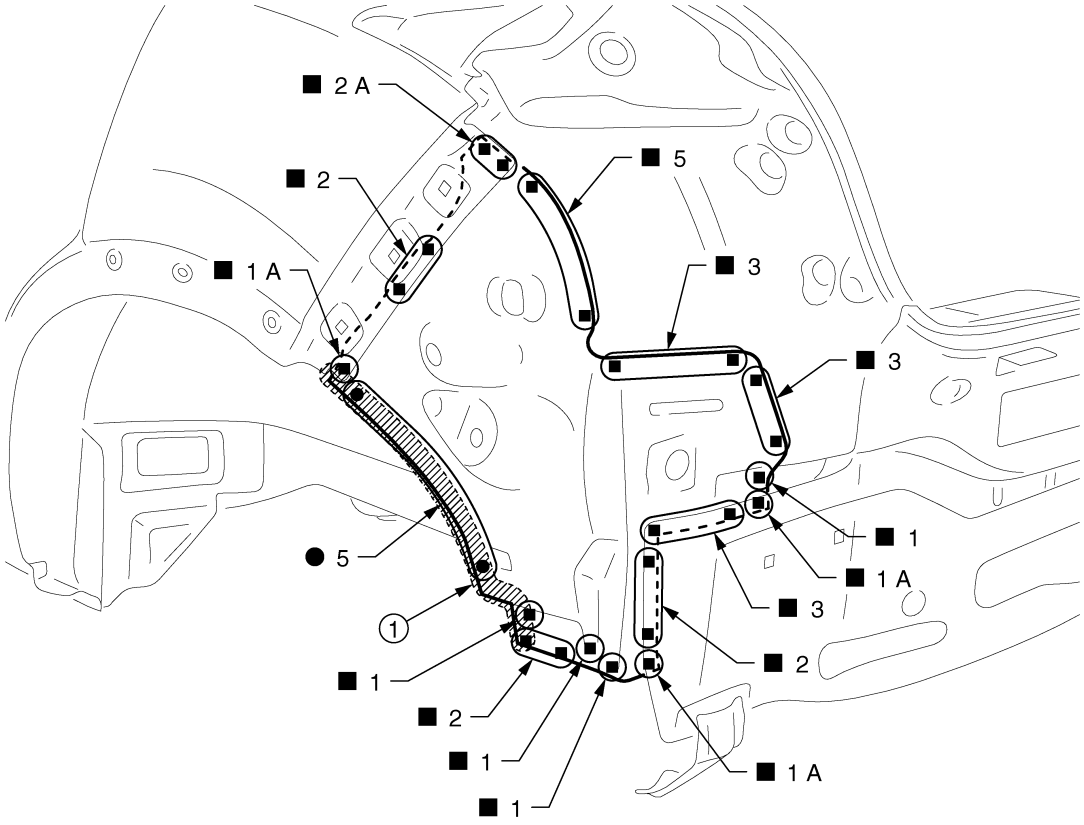
- Perform the hemming to the flange of wheelarch after applying the adhesive.
- Apply the sealing to the flange end.
- Refer to BRM-40, "Rear Fender Hemming Process".



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

Rear Fender Extension (2WD Models)

INFOID:0000000006517610



JSKIA2025ZZ

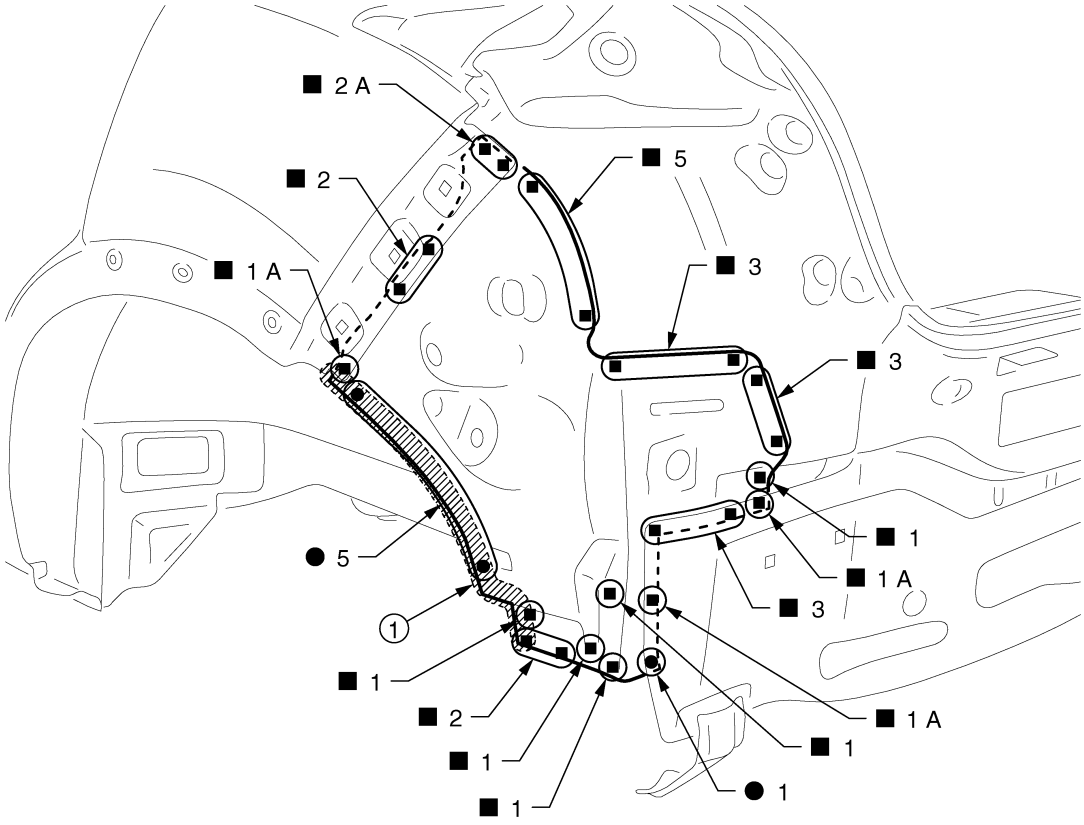
1. Body sealing

Replacement parts

- Rear fender corner (LH)

Rear Fender Extension (4WD Models)

INFOID:0000000006517607



JSKIA2180ZZ

1. Body sealing

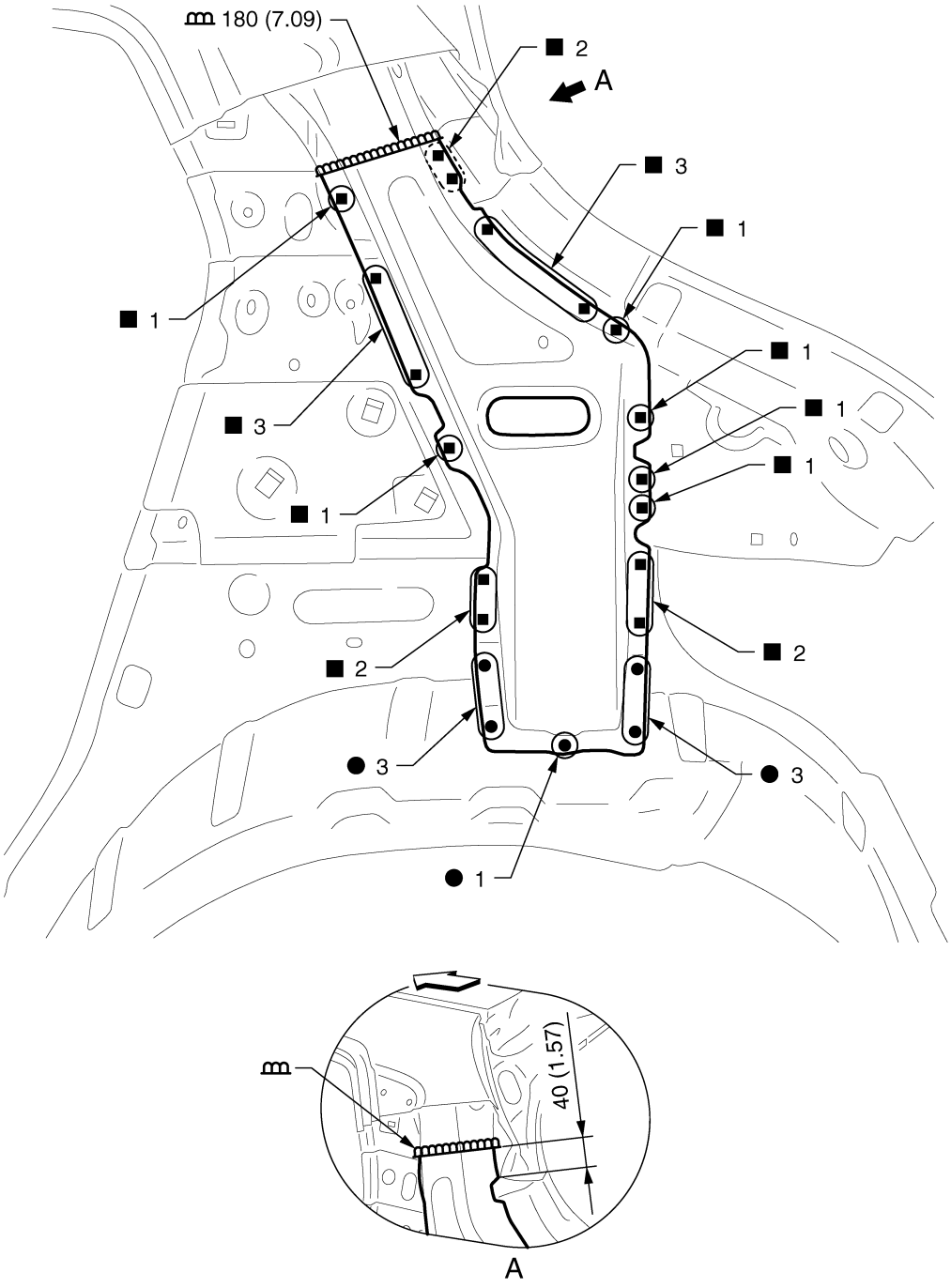
Replacement parts

- Rear fender corner (LH)

Rear Pillar Reinforcement

INFOID:0000000006518633

Work after rear fender is removed.



JSKIA2181GB

Unit: mm (in)

⇦: Vehicle front

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

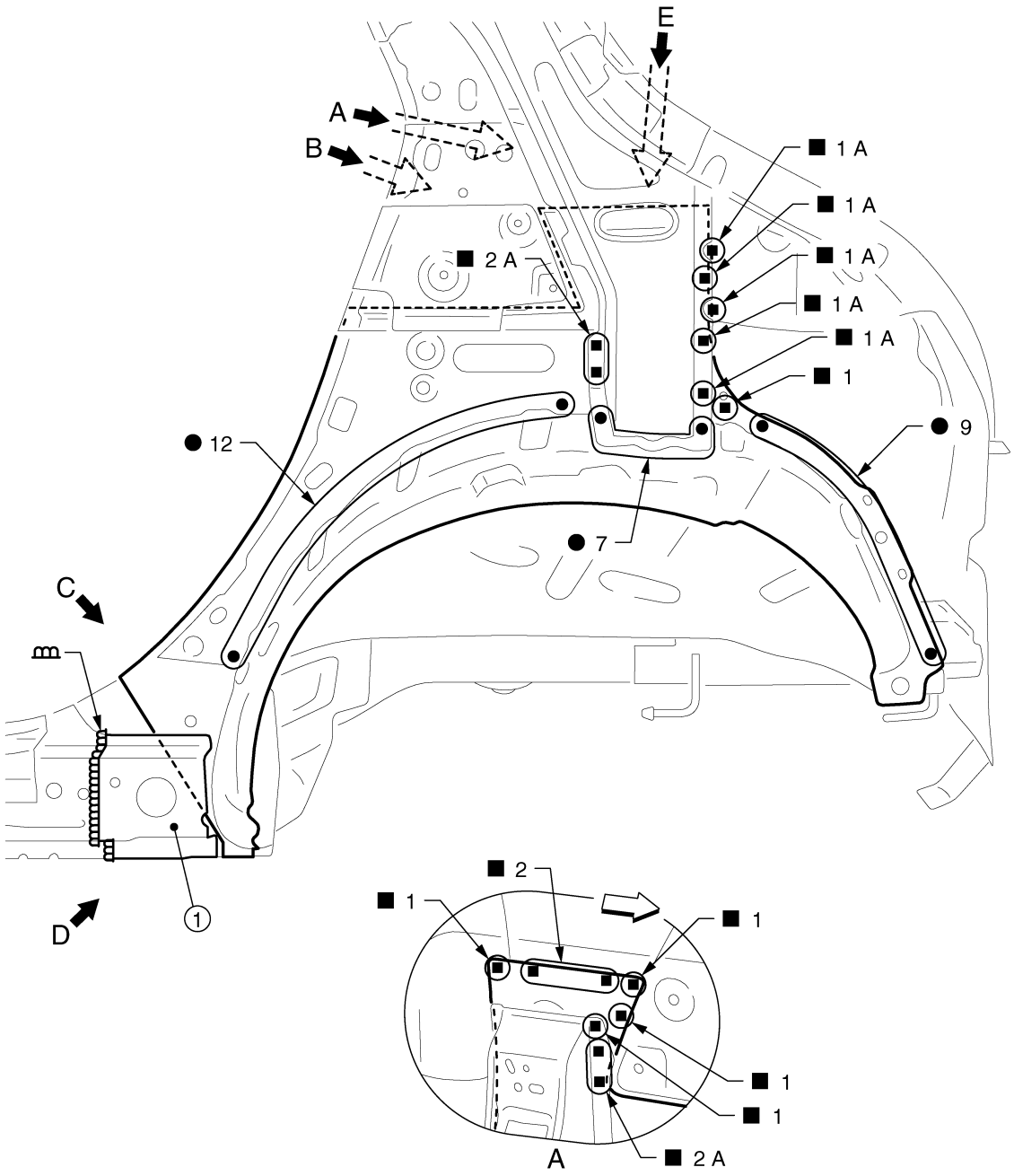
Replacement parts

- Inner rear pillar reinforcement (LH)

Outer Rear Wheelhouse (2WD Models)

INFOID:0000000006482852

Work after rear fender is removed.
Remove the outer sill reinforcement (reusable) for easier installation.



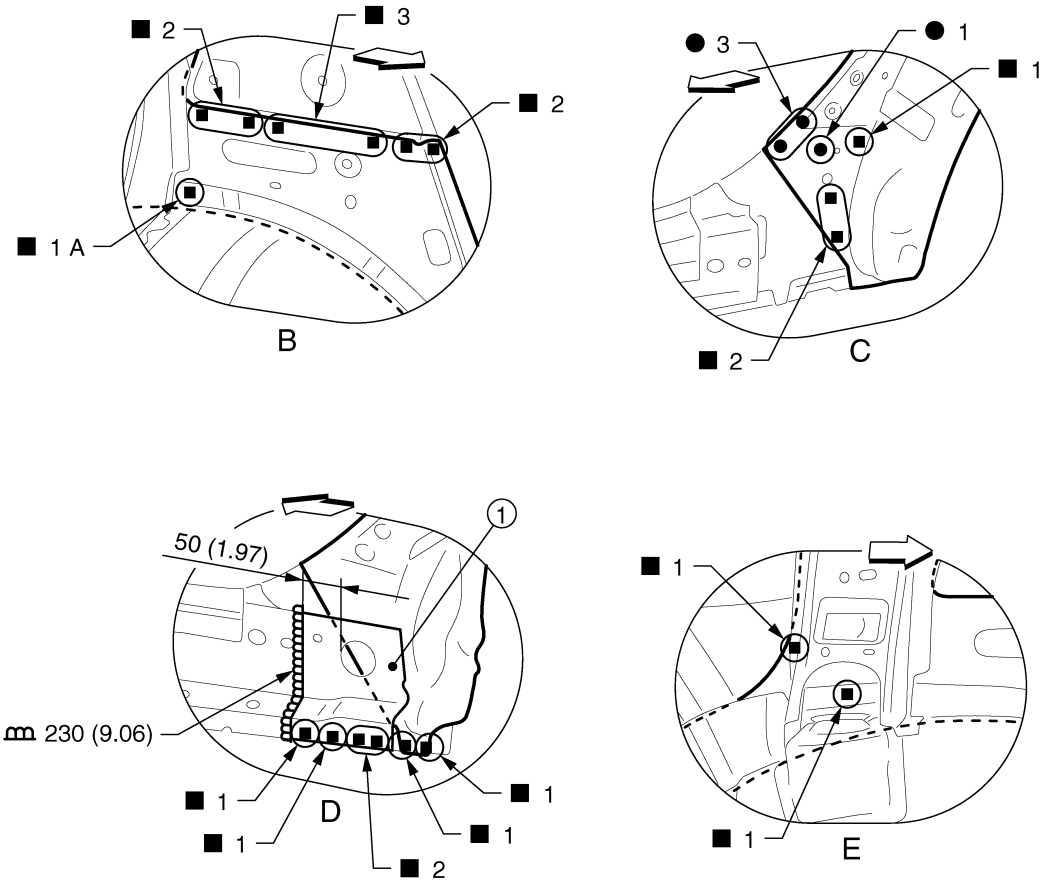
JSKIA2026ZZ

1. Outer sill reinforcement

⇦: Vehicle front

Replacement parts

- Outer rear wheelhouse (LH)



JSKIA2027GB

1. Outer sill reinforcement

Unit: mm (in)

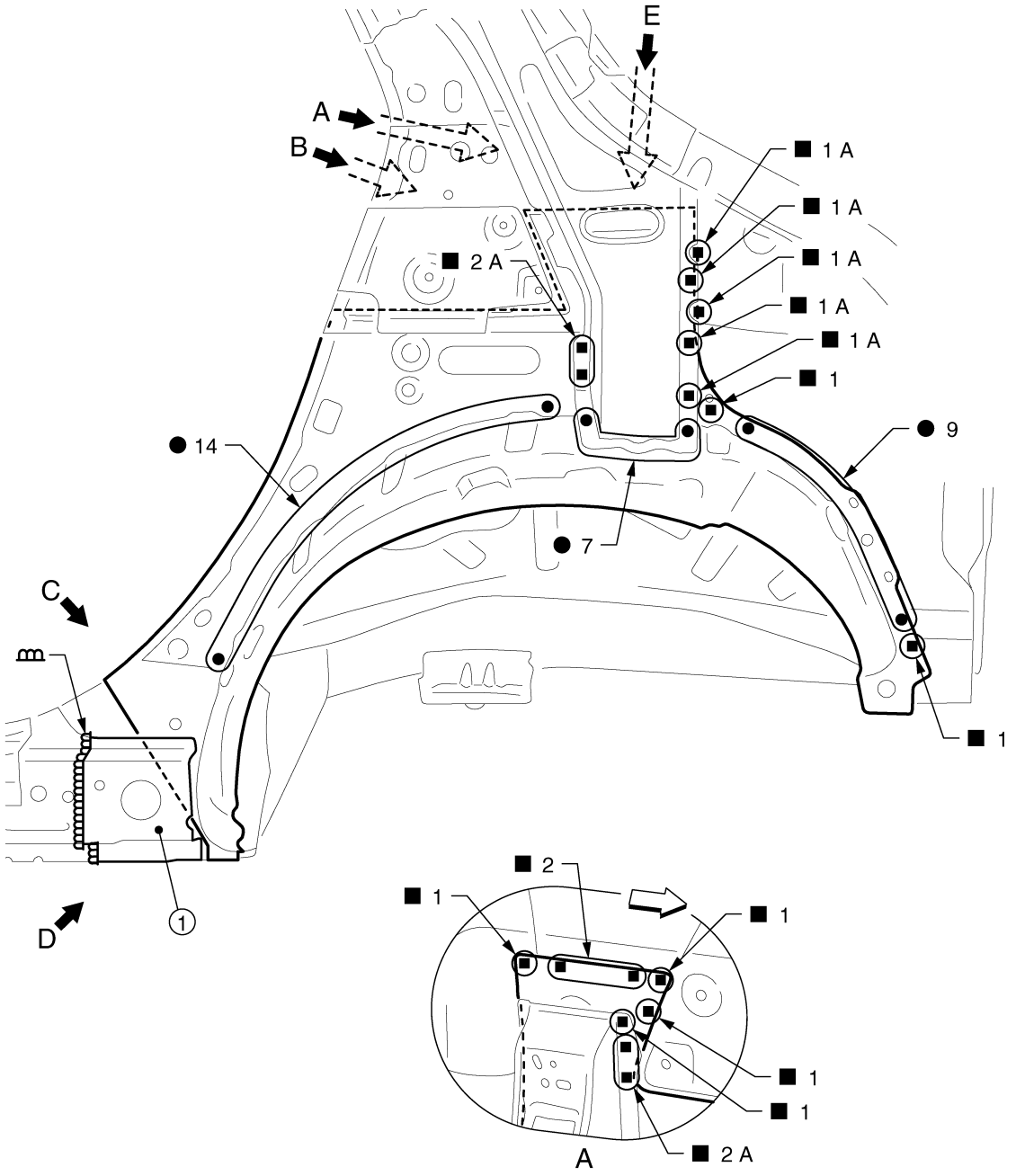
⇦: Vehicle front

View C: Before installing outer sill reinforcement

Outer Rear Wheelhouse (4WD Models)

INFOID:0000000006482853

Work after rear fender is removed.
Remove the outer sill reinforcement (reusable) for easier installation.



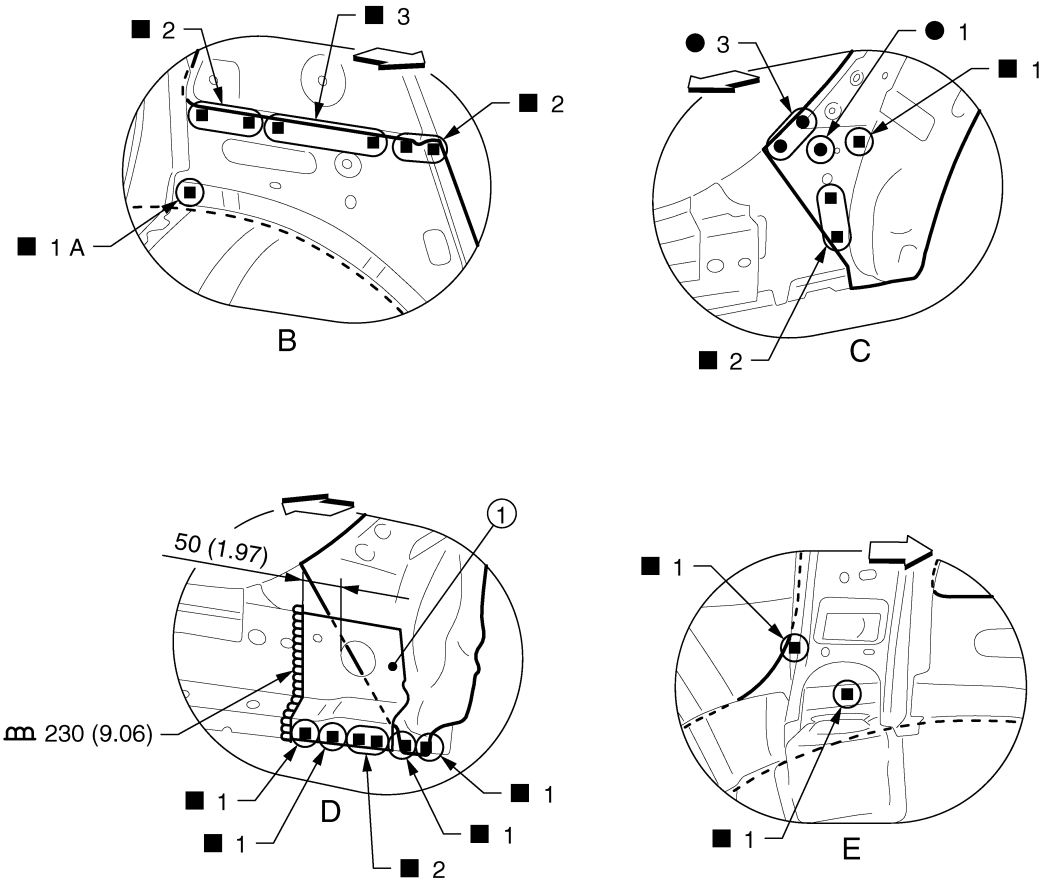
JSKIA2182ZZ

1. Outer sill reinforcement

⇦: Vehicle front

Replacement parts

- Outer rear wheelhouse (LH)



JSKIA2027GB

1. Outer sill reinforcement

Unit: mm (in)

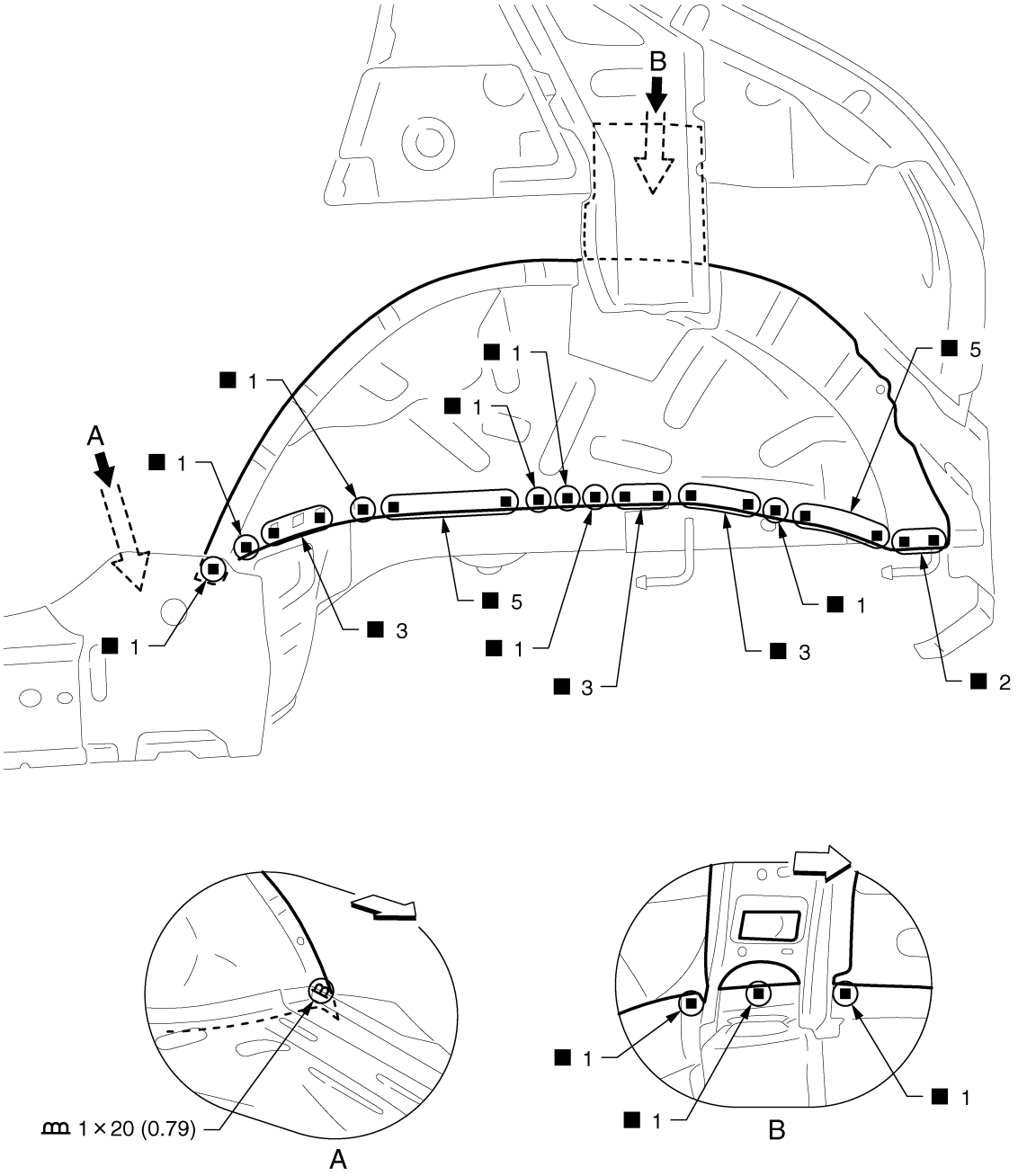
⇦: Vehicle front

View C: Before installing outer sill reinforcement

Inner Rear Wheelhouse (2WD Models)

INFOID:0000000006482854

Work after rear fender, outer sill reinforcement, and outer rear wheelhouse are removed.



JSKIA2183GB

Unit: mm (in)

⇦: Vehicle front

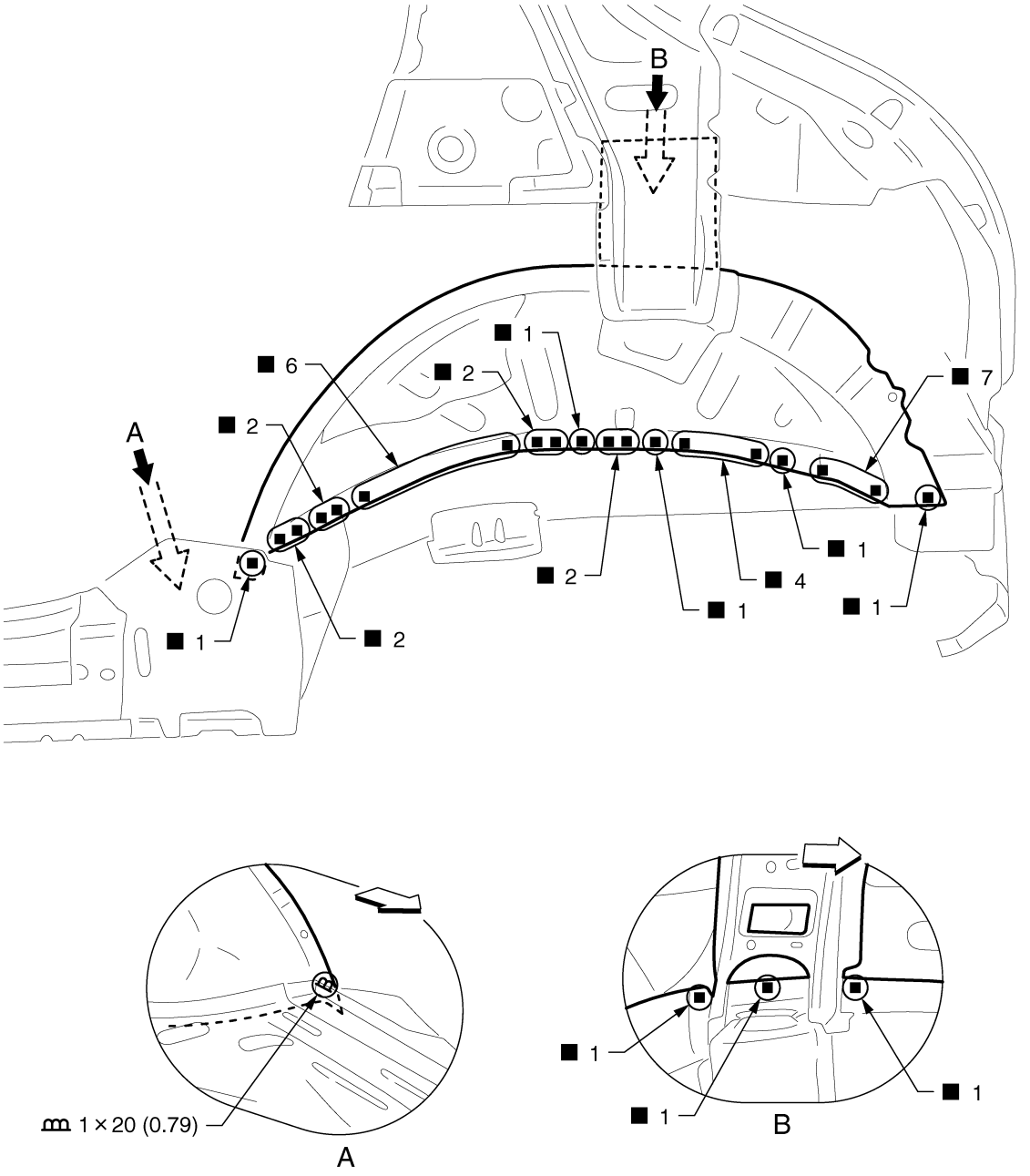
Replacement parts

- Inner rear wheelhouse (LH)

Inner Rear Wheelhouse (4WD Models)

INFOID:0000000006482855

Work after rear fender, outer sill reinforcement, and outer rear wheelhouse are removed.



JSKIA2184GB

Unit: mm (in)

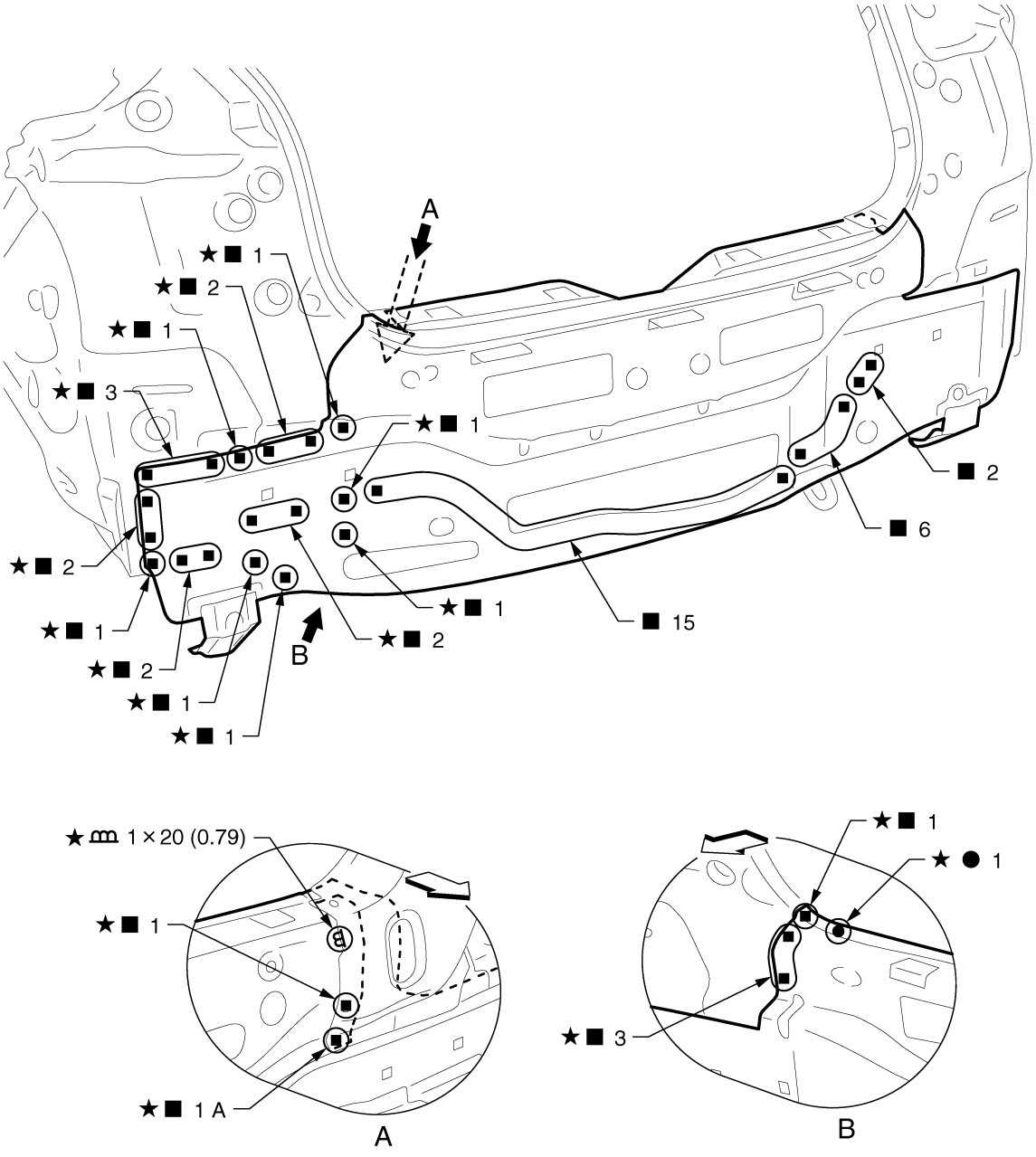
⇦: Vehicle front

Replacement parts

- Inner rear wheelhouse (LH)

Rear Panel (2WD Models)

INFOID:0000000006482861



JSKIA2028GB

Unit: mm (in)

⇦: Vehicle front

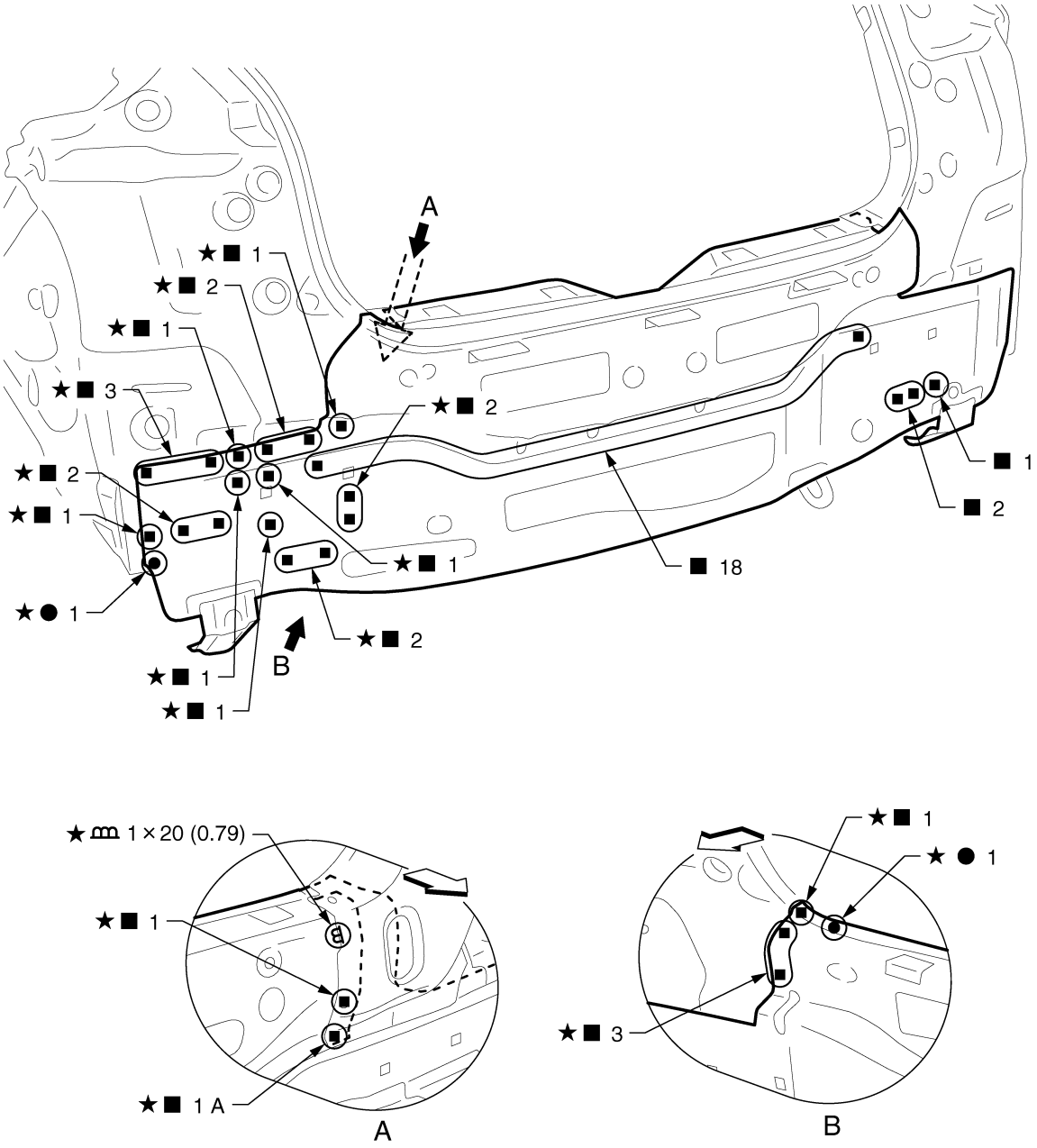
★: Welding method and the number of welding points apply to both side of the vehicle.

Replacement parts

- Upper rear panel

Rear Panel (4WD Models)

INFOID:0000000006482862



JSKIA2185GB

Unit: mm (in)

⇦: Vehicle front

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

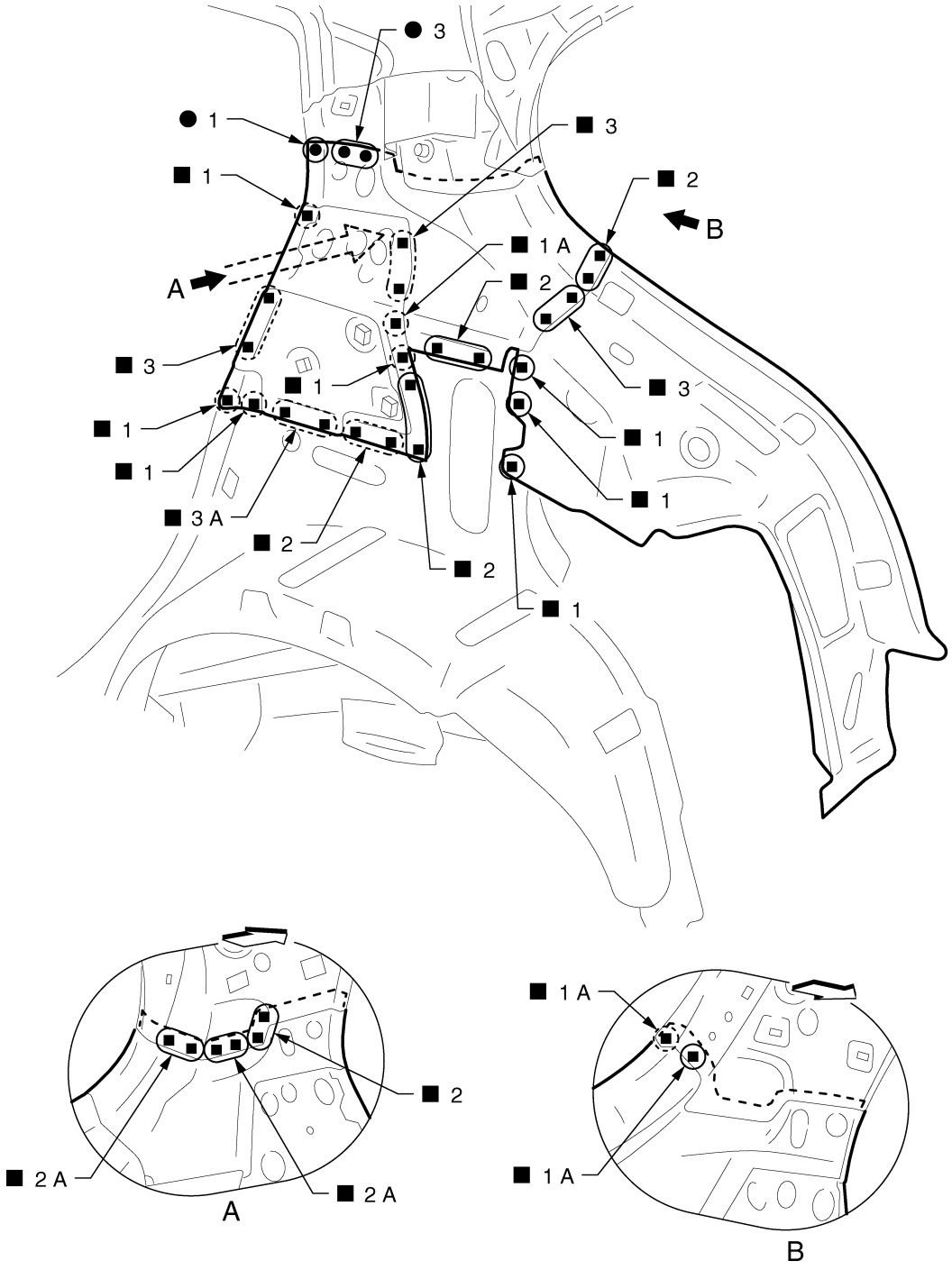
Replacement parts

- Upper rear panel

Inner Rear Pillar

INFOID:0000000006482857

Work after rear fender and inner rear pillar reinforcement are removed.



JSKIA2186ZZ

⇦: Vehicle front

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

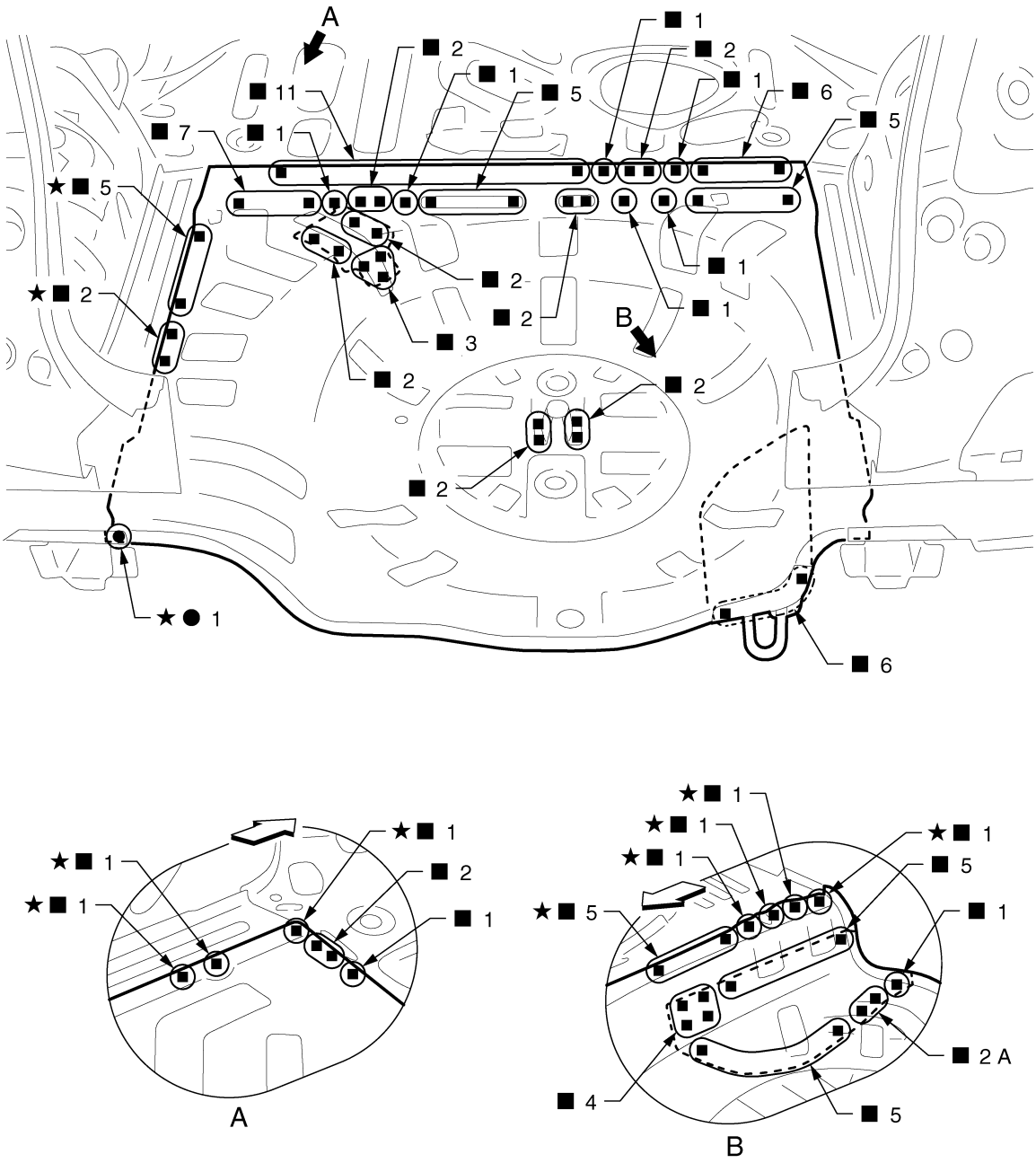
Replacement parts

- Inner rear pillar (LH)
- Rear pillar reinforcement (LH)

Rear Floor Rear (2WD Models)

INFOID:0000000006482864

Work after rear panel is removed.



⇦: Vehicle front

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

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

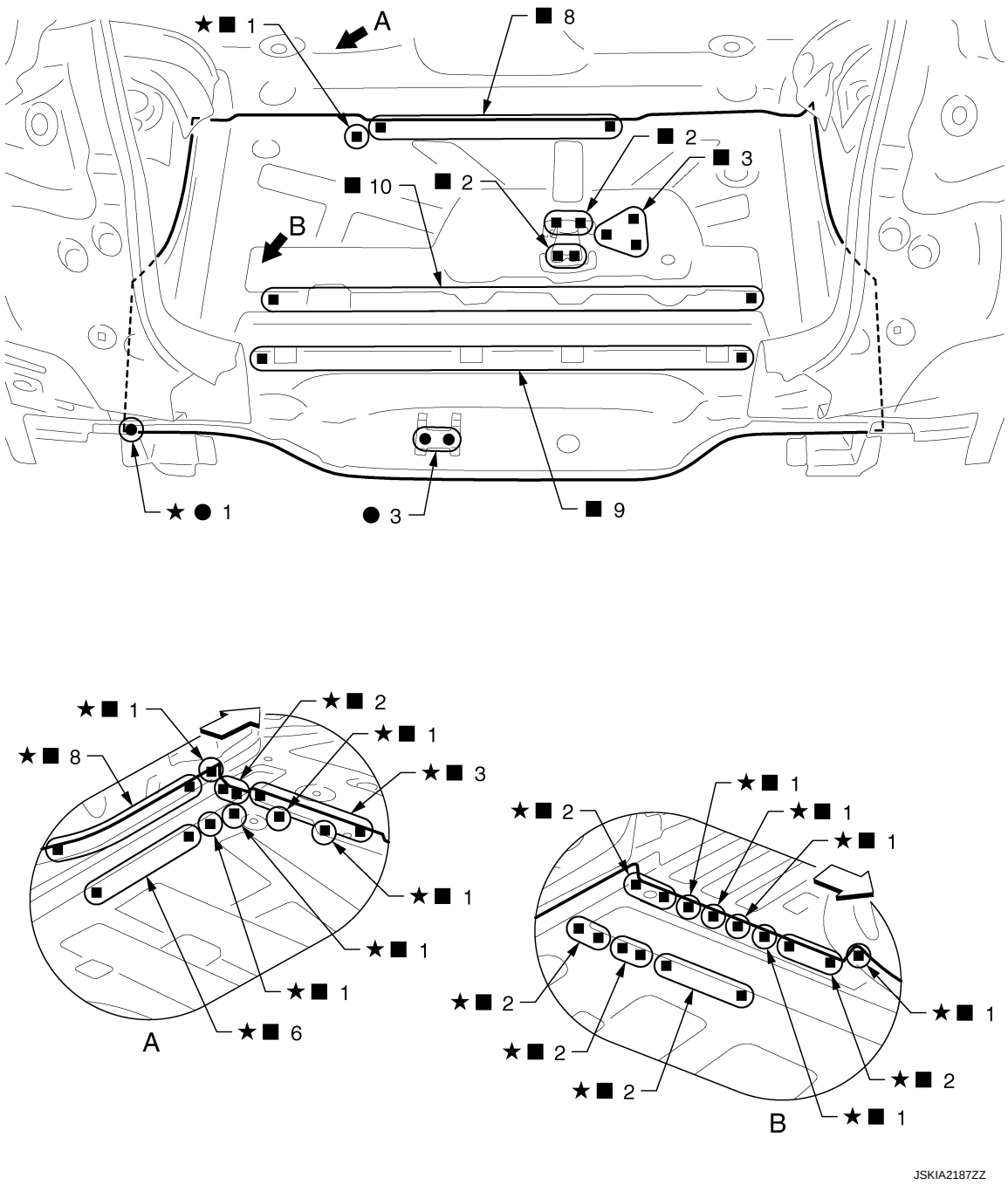
Replacement parts

- Rear floor rear
- Spare tire clamp bracket
- Rear towing hook bracket
- Muffler mounting bracket

Rear Floor Rear (4WD Models)

INFOID:0000000006482865

Work after rear panel is removed.



⇦: Vehicle front

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

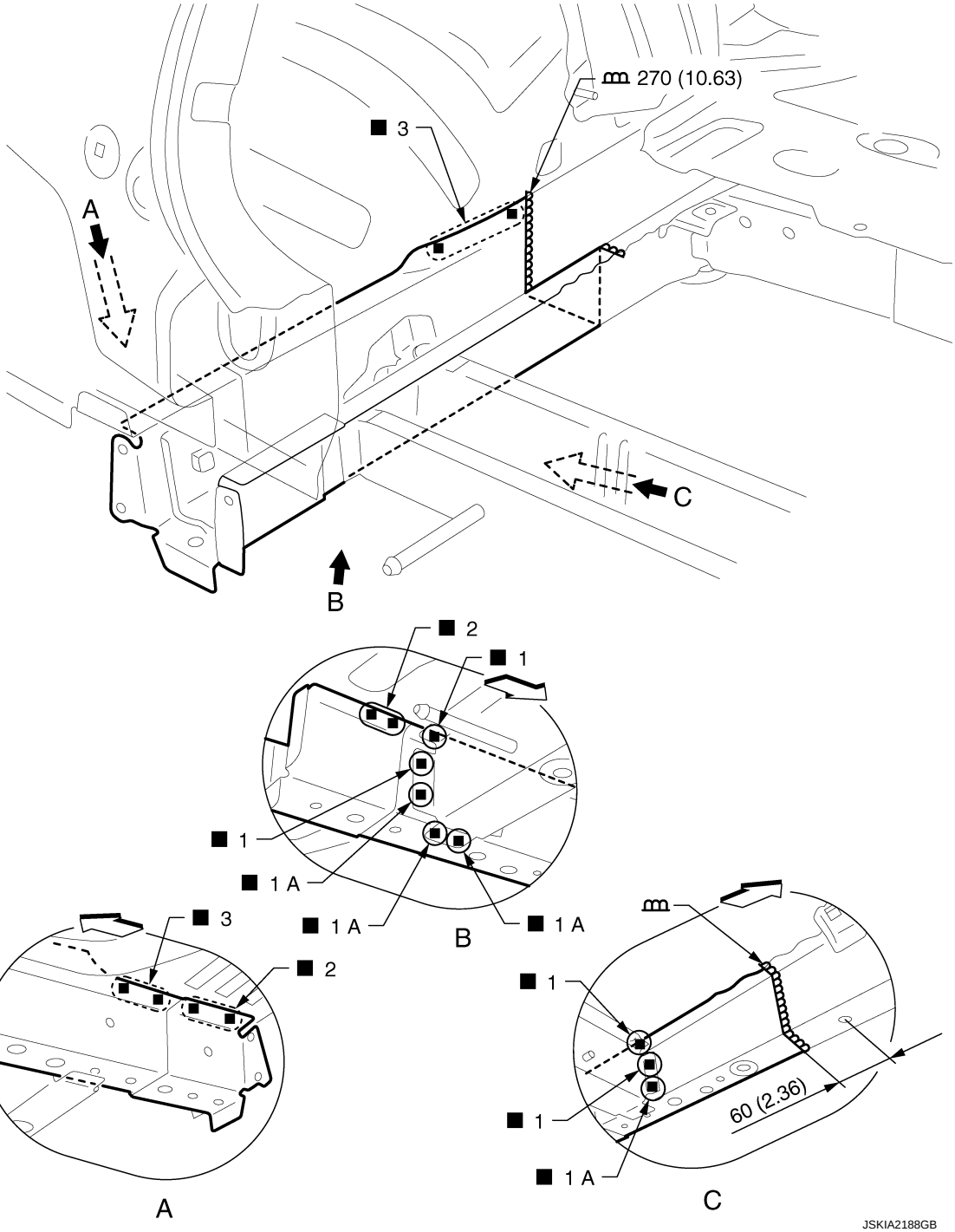
Replacement parts

- Rear floor rear
- Spare tire clamp bracket
- Jack mounting bracket
- Canister bracket

Rear Side Member (4WD Models Partial Replacement)

INFOID:0000000006482867

Work after rear panel and rear floor rear are removed.



Unit: mm (in)

⇦: Vehicle front

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

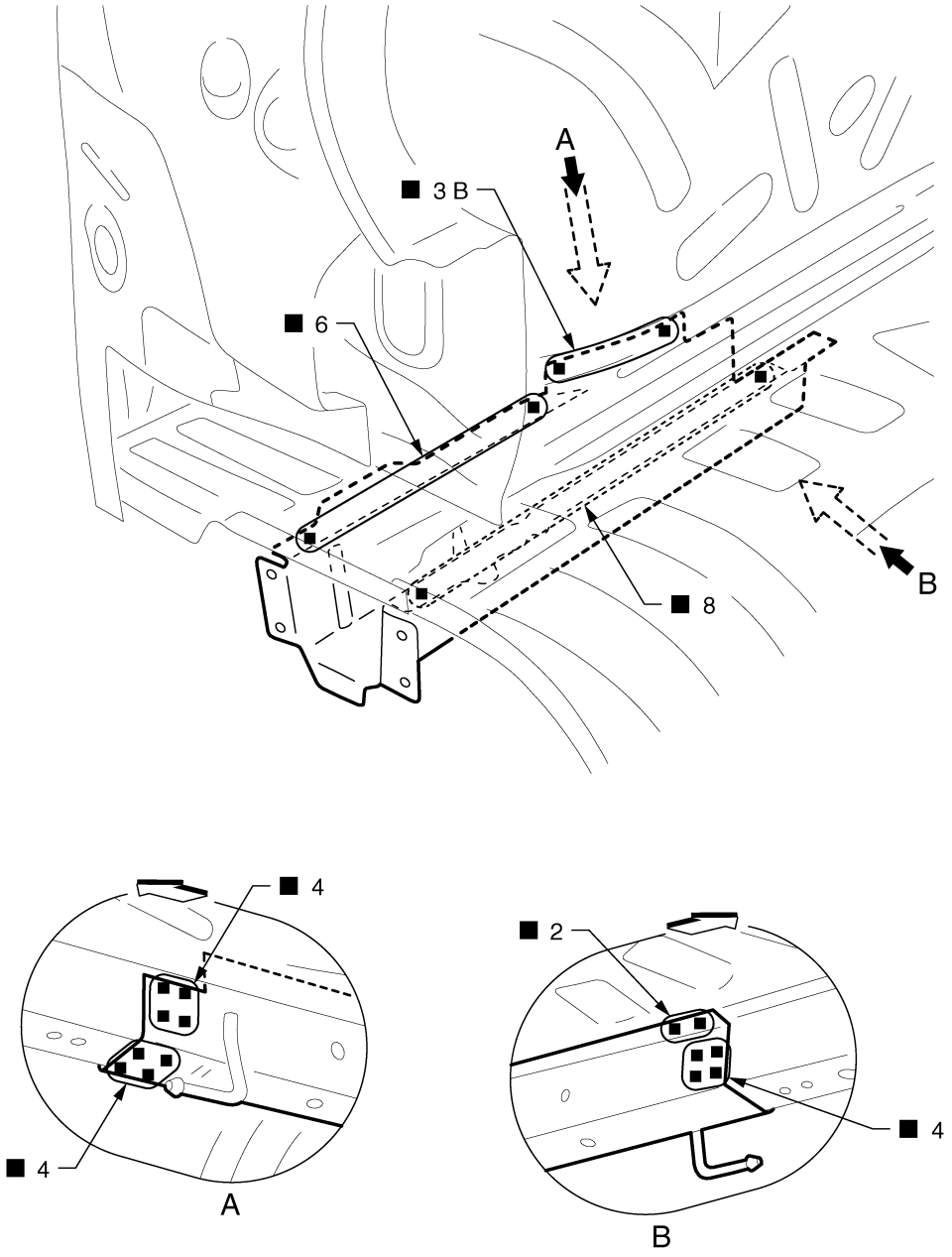
Replacement parts

- Rear side member assembly (LH)

Rear Side Member Extension (2WD Models)

INFOID:0000000006482868

Work after rear panel is removed.



JSKIA2032ZZ

⇦: Vehicle front

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

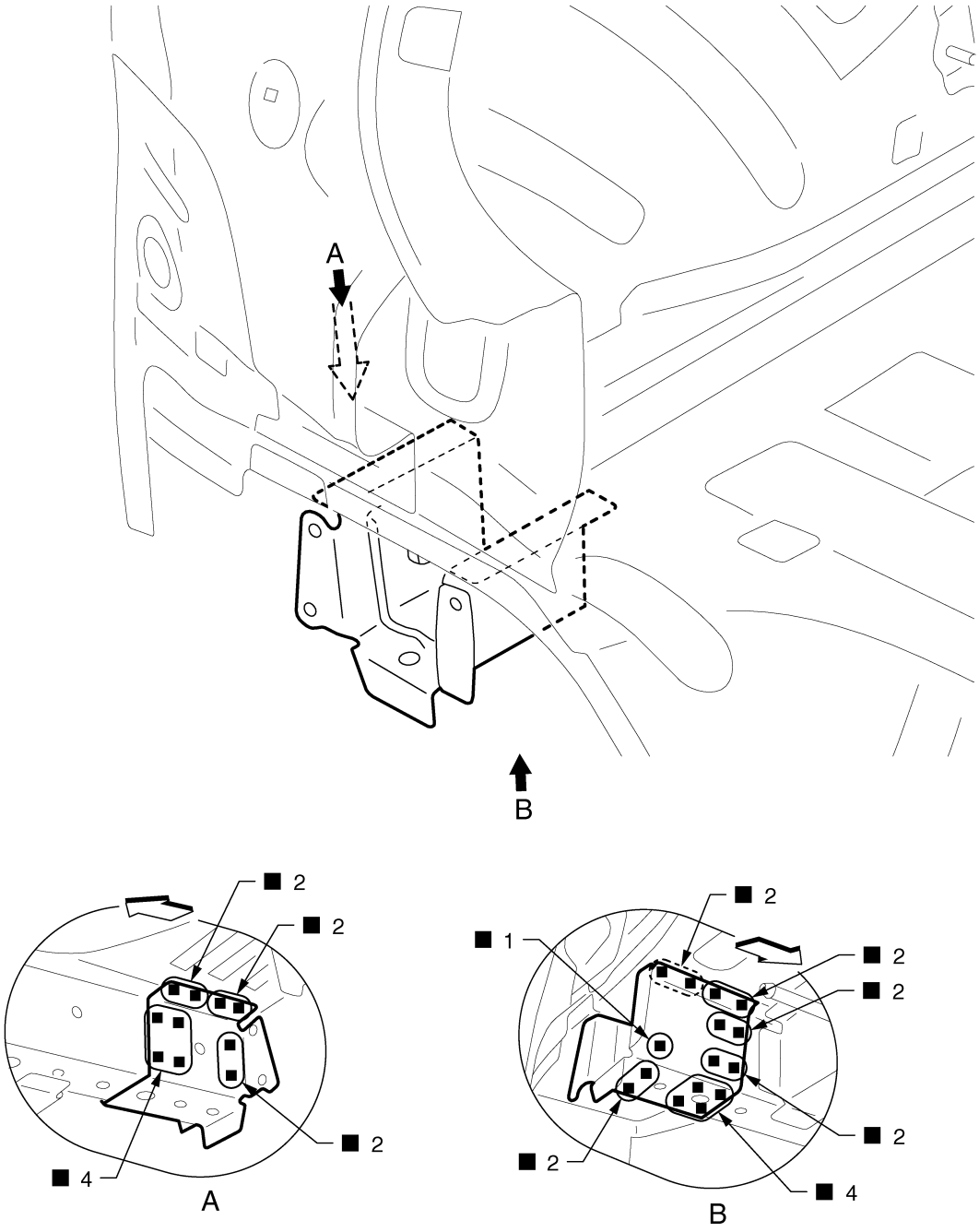
Replacement parts

- Rear side member extension (LH)

Rear Side Member Extension (4WD Models)

INFOID:0000000006517746

Work after rear panel is removed.



JSKIA2189ZZ

⇦: Vehicle front

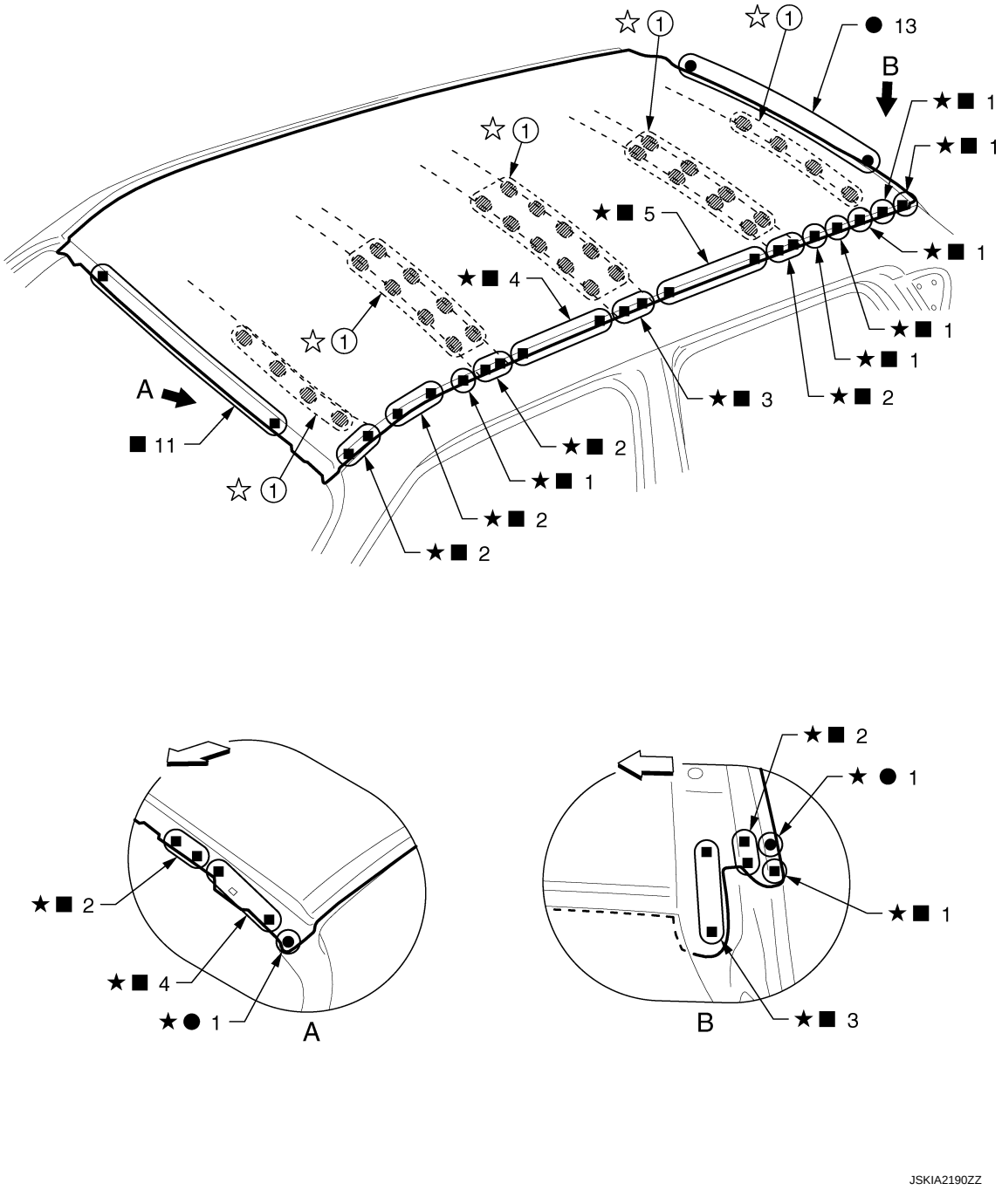
(◌): Weld the parts onto the back of the component part.

Replacement parts

- Rear side member extension (LH)

Roof

INFOID:0000000006482869



JSKIA2190ZZ

1. Body sealing

⇦: Vehicle front

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

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

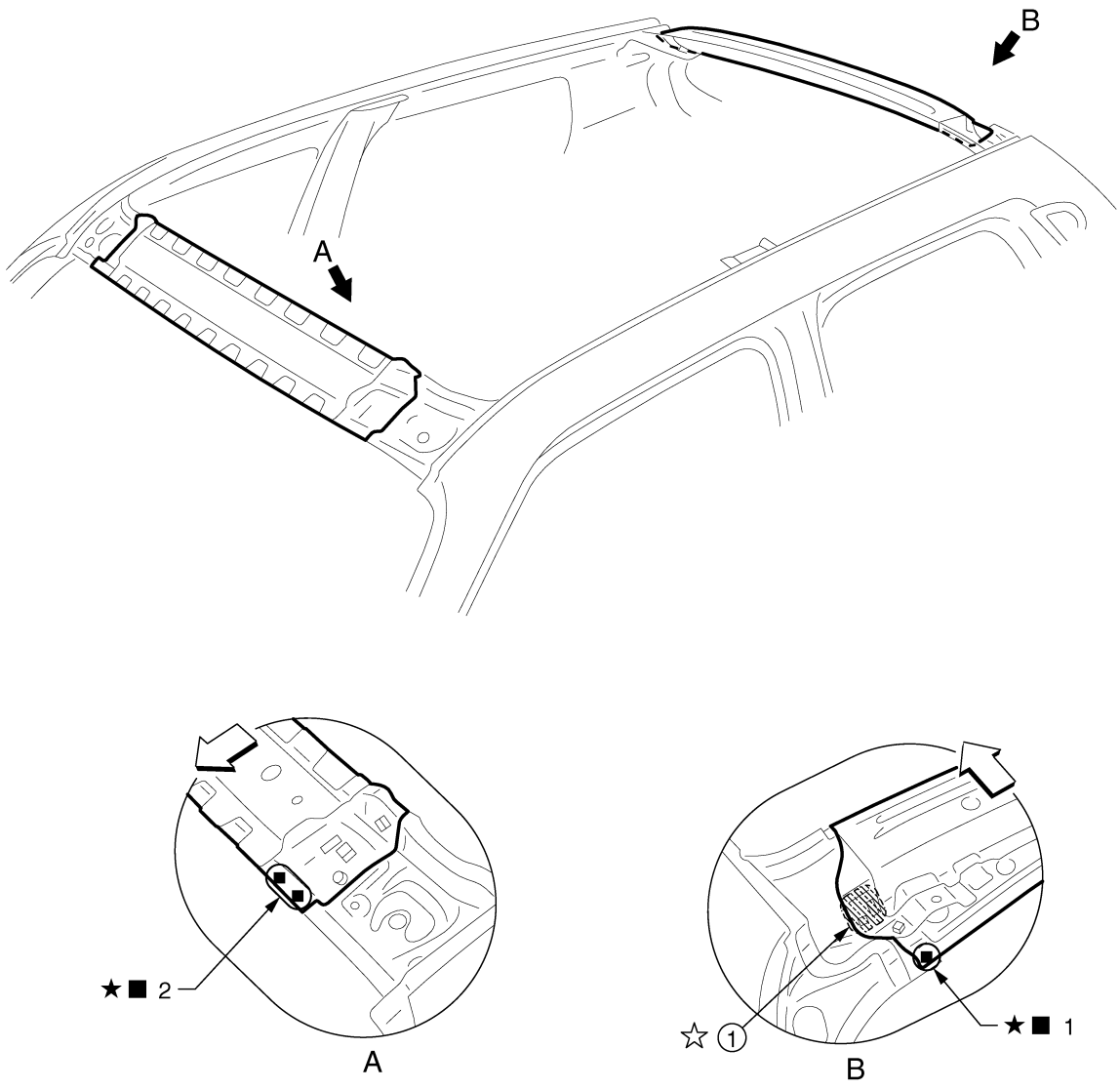
Replacement parts

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

Roof Rail

INFOID:0000000006482870

Work after roof is removed.



JSKIA2191ZZ

1. Adhesive

⇦: Vehicle front

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

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

Replacement parts

- Front roof rail
- Rear roof rail

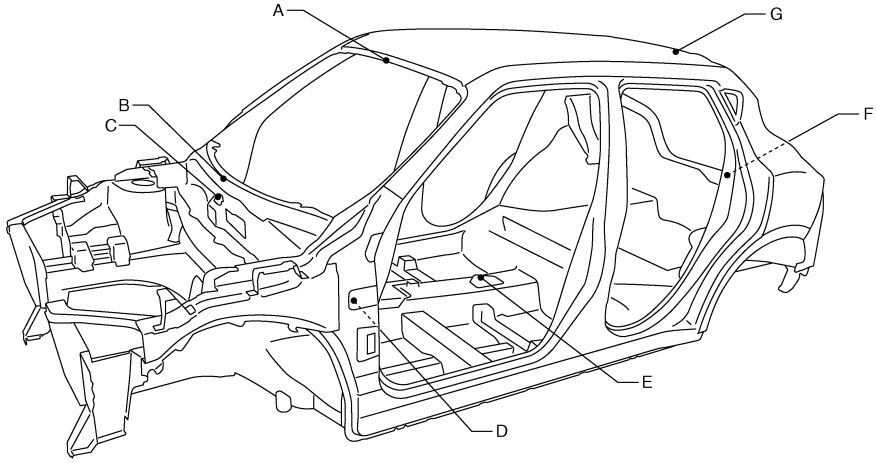
SERVICE DATA AND SPECIFICATIONS (SDS)

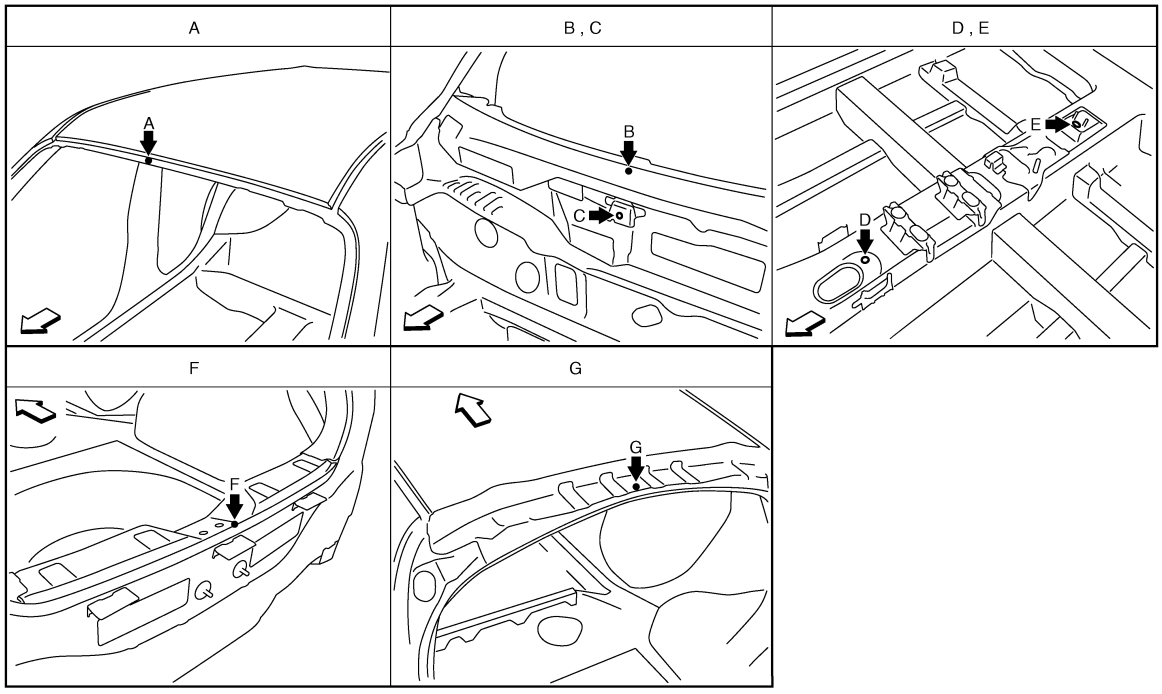
BODY ALIGNMENT

Body Center Marks (RHD Models)

INFOID:0000000006482872

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.





JSKIA1988ZZ

⇦: Vehicle front

Unit: mm (in)

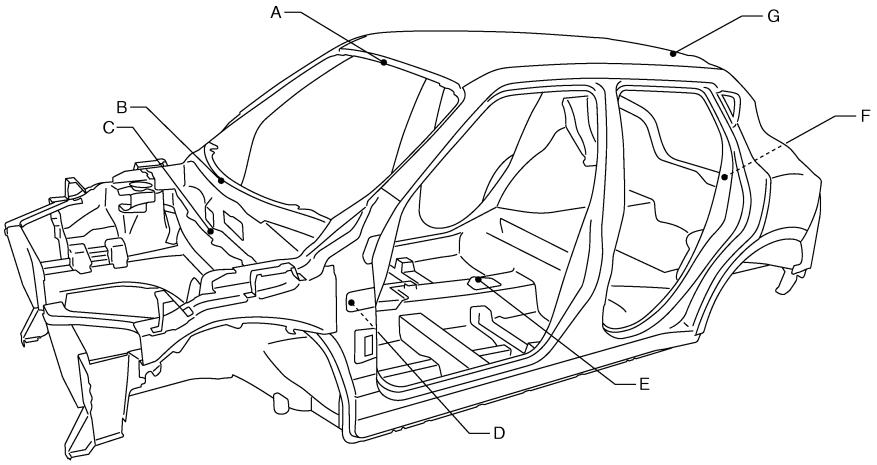
Points	Portion	Marks
A	Front roof	Embossment
B	Cowl top	Embossment
C	Upper dash	Hole ϕ7 (0.28)
D	Trans control reinforcement	Hole ϕ16 (0.63)

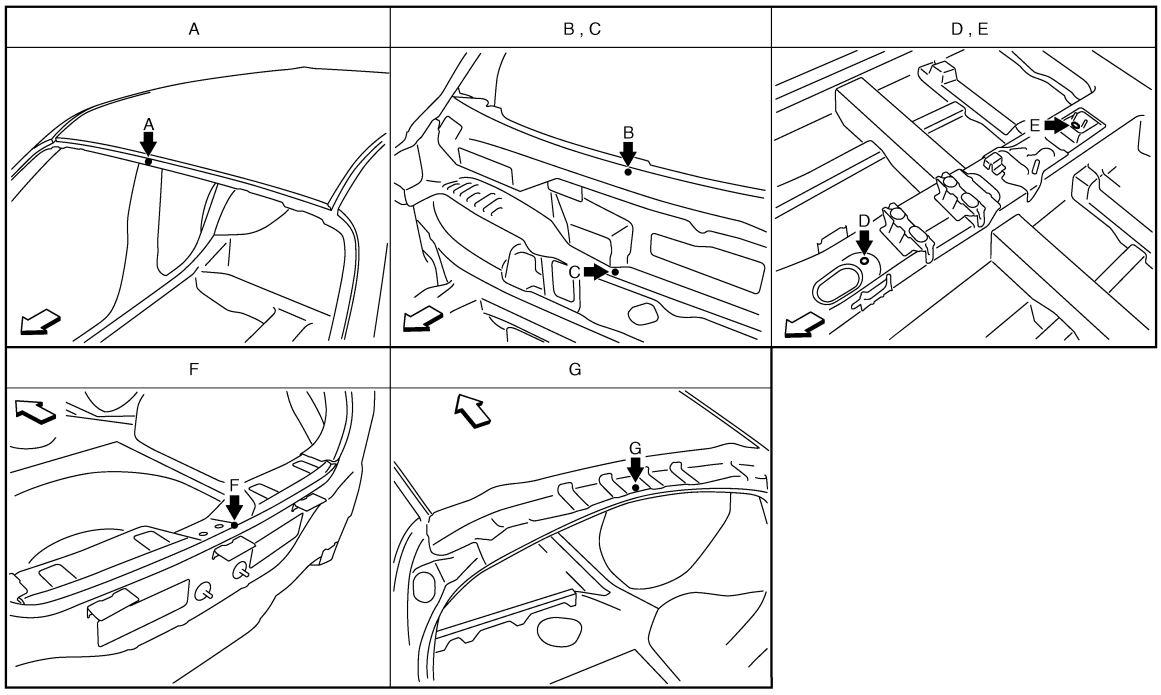
Points	Portion	Marks
E	Parking brake reinforcement	Hole ϕ12 (0.47)
F	Rear panel	Indent
G	Rear roof	Embossment

Body Center Marks (LHD Models)

INFOID:0000000006482893

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.





JSKIA2144ZZ

⇦: Vehicle front

Unit: mm (in)

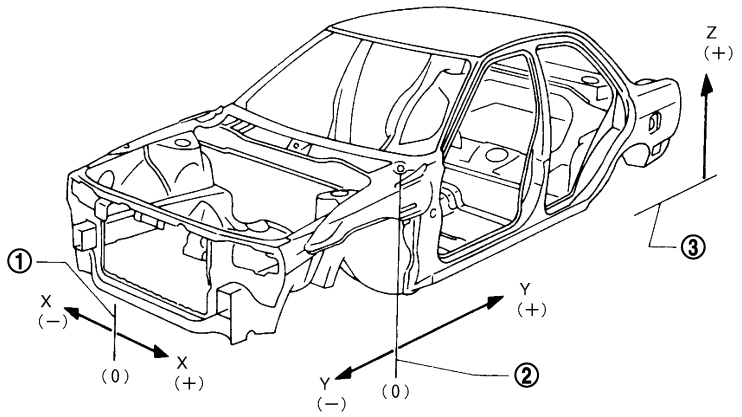
Points	Portion	Marks
A	Front roof	Embossment
B	Cowl top	Embossment

Points	Portion	Marks
C	Upper dash	Embossment
D	Trans control reinforcement	Hole ϕ16 (0.63)
E	Parking brake reinforcement	Hole ϕ12 (0.47)
F	Rear panel	Indent
G	Rear roof	Embossment

Description

INFOID:0000000006482873

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



JSKIA0073GB

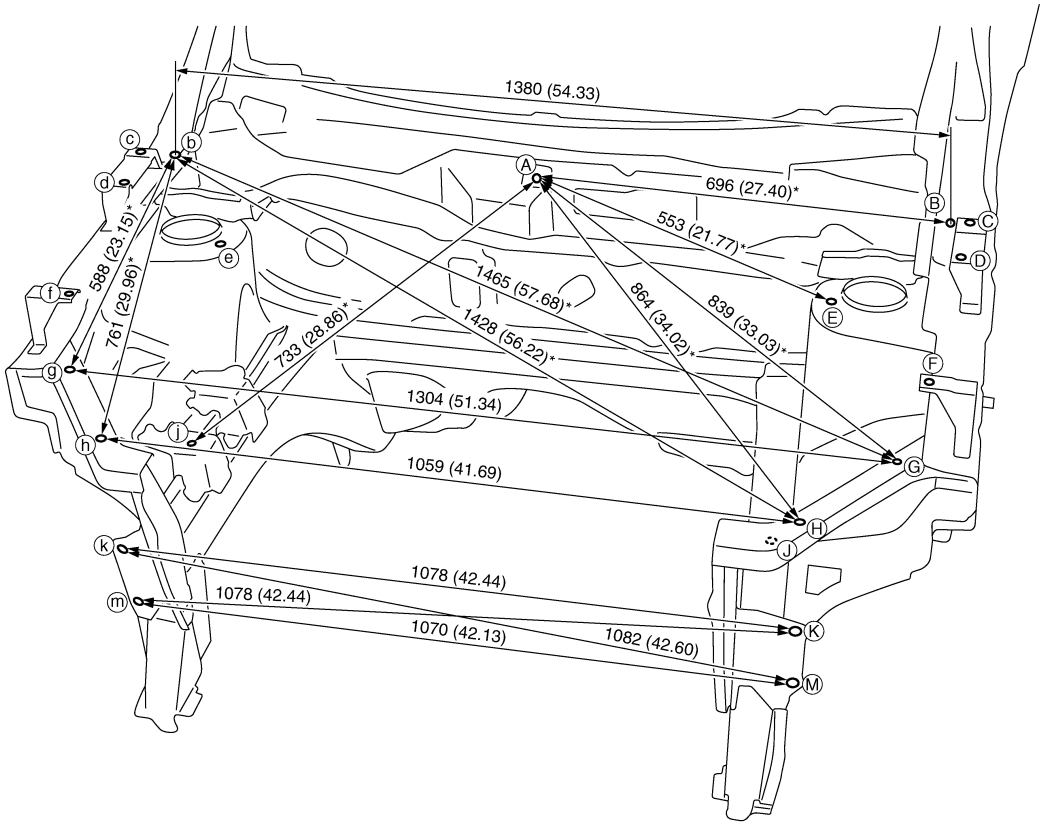
1. Vehicle center
2. Front axle center
3. Imaginary base line

Engine Compartment (2WD RHD Models)

INFOID:0000000006482874

MEASUREMENT

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



JSKIA2145GB

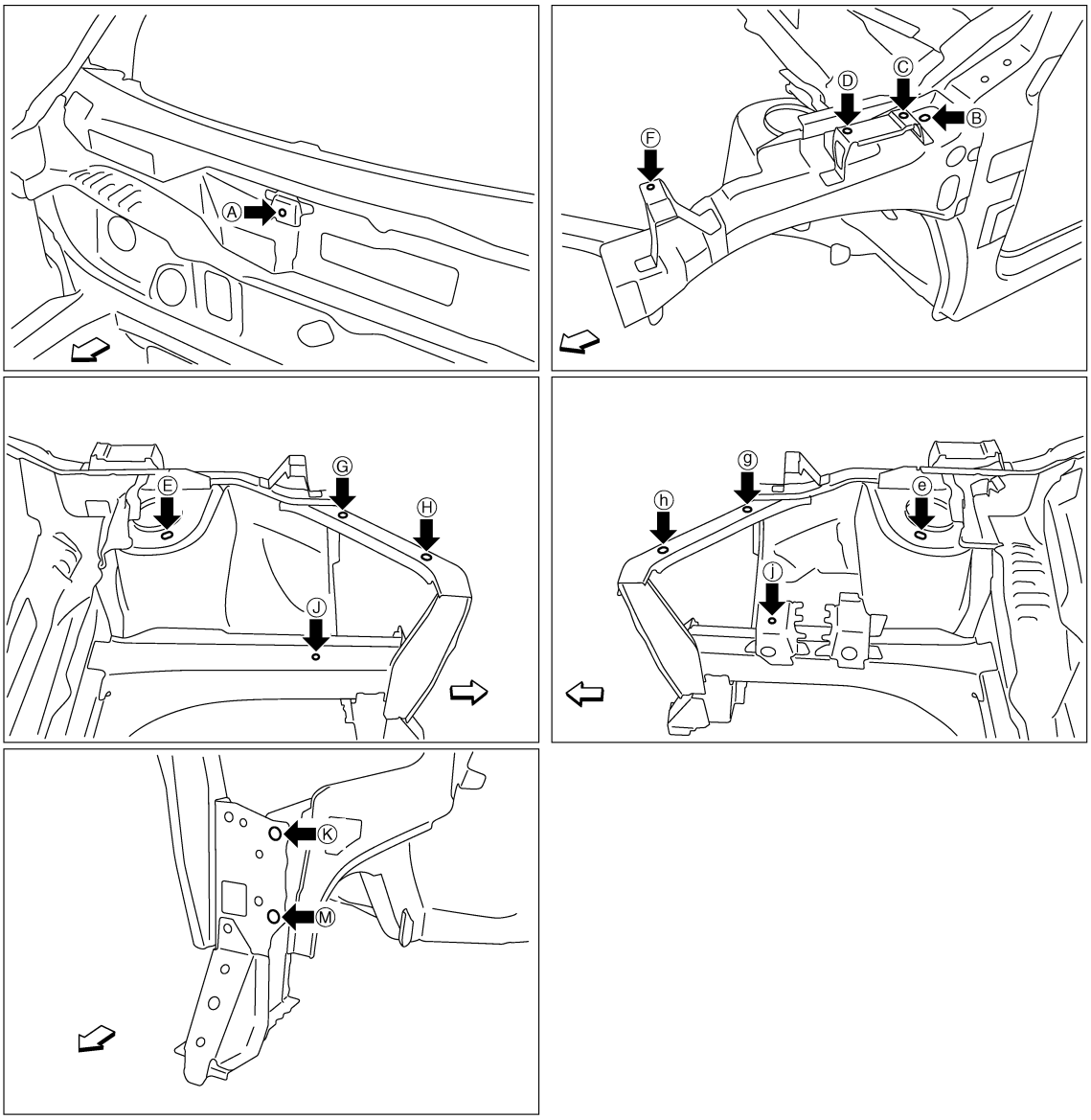
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	721 (28.39)*		B - E	298 (11.73)*		D - d	1429 (56.26)		G - h	1192 (46.93)*	
A - D	723 (28.46)*		B - e	1233 (48.54)*		E - e	1037 (40.83)		J - j	965 (37.99)	
A - F	802 (31.57)*		C - c	1441 (56.73)		F - f	1366 (53.78)				

MEASUREMENT POINTS



JSKIA2146ZZ

⇦: Vehicle front

Unit: mm (in)

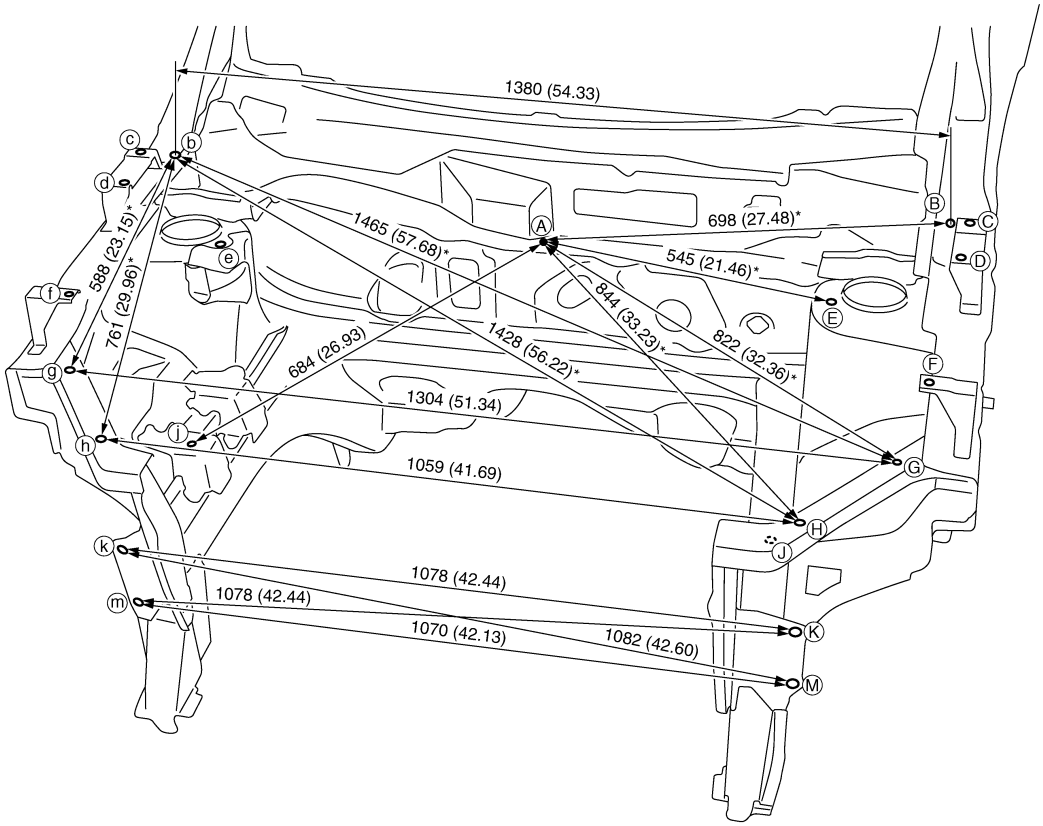
Point	Material	Point	Material
A	Wiper mounting bracket hole center of center positioning mark ϕ7 (0.28)	G, g, H, h	Upper radiator core support hole center G, g: ϕ12 (0.47) H, h: 14×12 (0.55×0.47)
B, b	Hoodledge reinforcement hole center 14×10 (0.55×0.39)	J	Front side member hole center ϕ7 (0.28)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	j	Engine mounting bracket hole center ϕ11 (0.43)
D, d	Front combination lamp installing hole center ϕ7 (0.28)	K, k, M, m	Front bumper stay installing hole center ϕ15 (0.59)
E, e	Front strut installing hole center 16×10 (0.63×0.39)		

Engine Compartment (2WD LHD Models)

INFOID:0000000006482894

MEASUREMENT

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



JSKIA2147GB

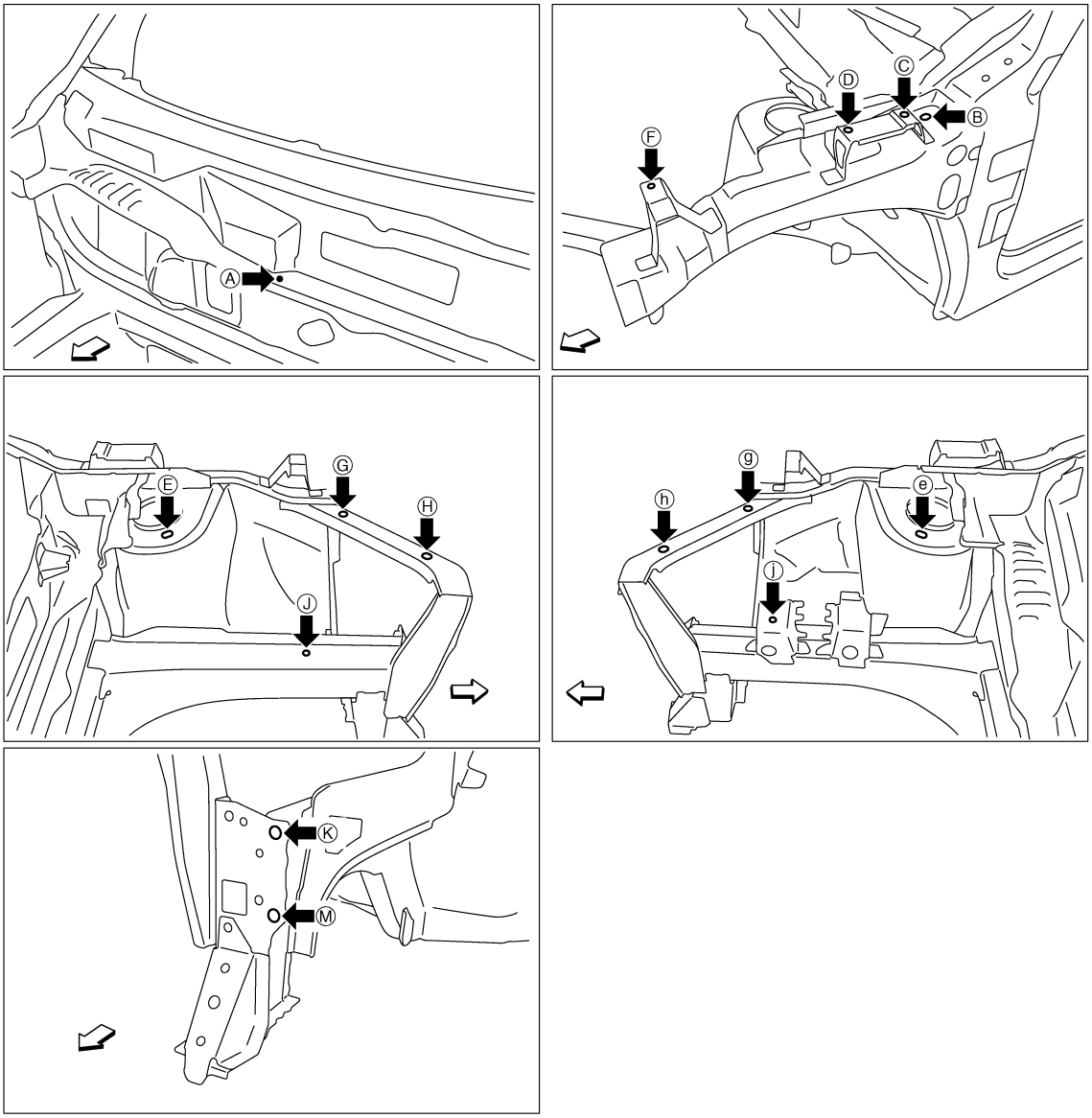
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	729 (28.70)*		A - J	673 (26.50)		C - c	1441 (56.73)		F - f	1366 (53.78)	
A - D	729 (28.70)*		B - E	298 (11.73)*		D - d	1429 (56.26)		G - h	1192 (46.93)*	
A - F	798 (31.42)*		B - e	1233 (48.54)*		E - e	1037 (40.83)		J - j	965 (37.99)	

MEASUREMENT POINTS



JSKIA2148ZZ

⇦: Vehicle front

Unit: mm (in)

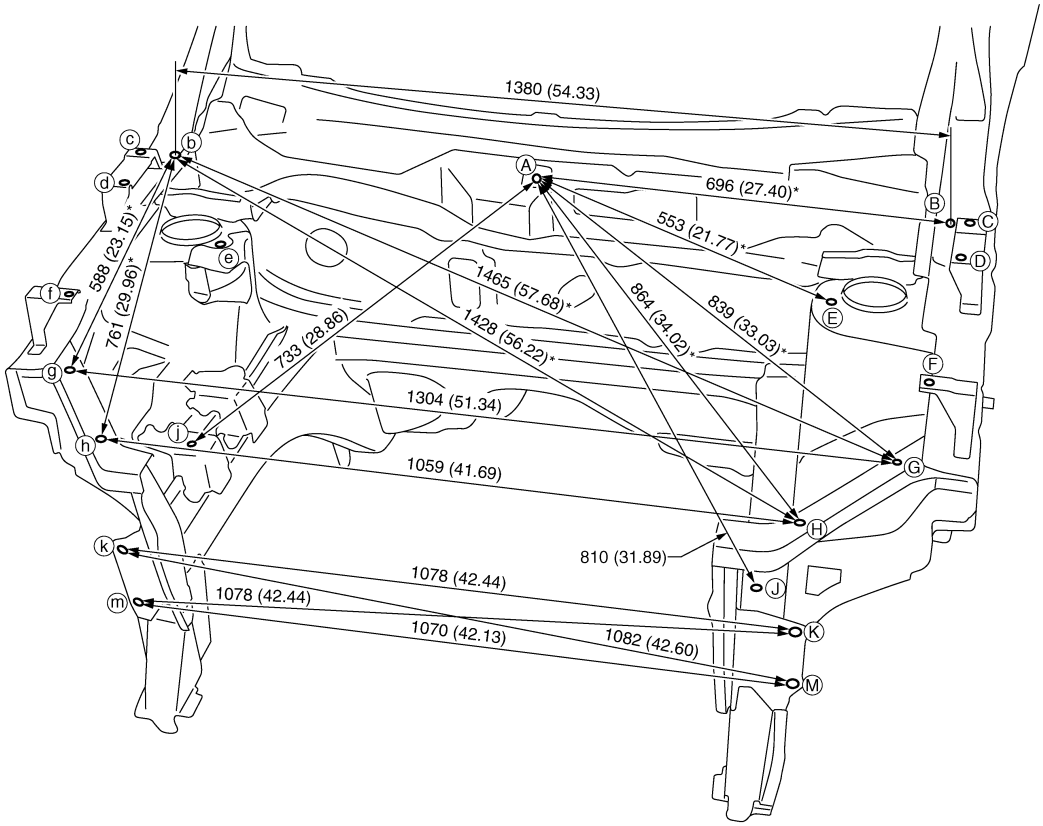
Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g, H, h	Upper radiator core support hole center G, g: ϕ12 (0.47) H, h: 14×12 (0.55×0.47)
B, b	Hoodledge reinforcement hole center 14×10 (0.55×0.39)	J	Front side member hole center ϕ7 (0.28)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	j	Engine mounting bracket hole center ϕ11 (0.43)
D, d	Front combination lamp installing hole center ϕ7 (0.28)	K, k, M, m	Front bumper stay installing hole center ϕ15 (0.59)
E, e	Front strut installing hole center 16×10 (0.63×0.39)		

Engine Compartment (4WD RHD Models)

INFOID:0000000006482875

MEASUREMENT

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



JSKIA2149GB

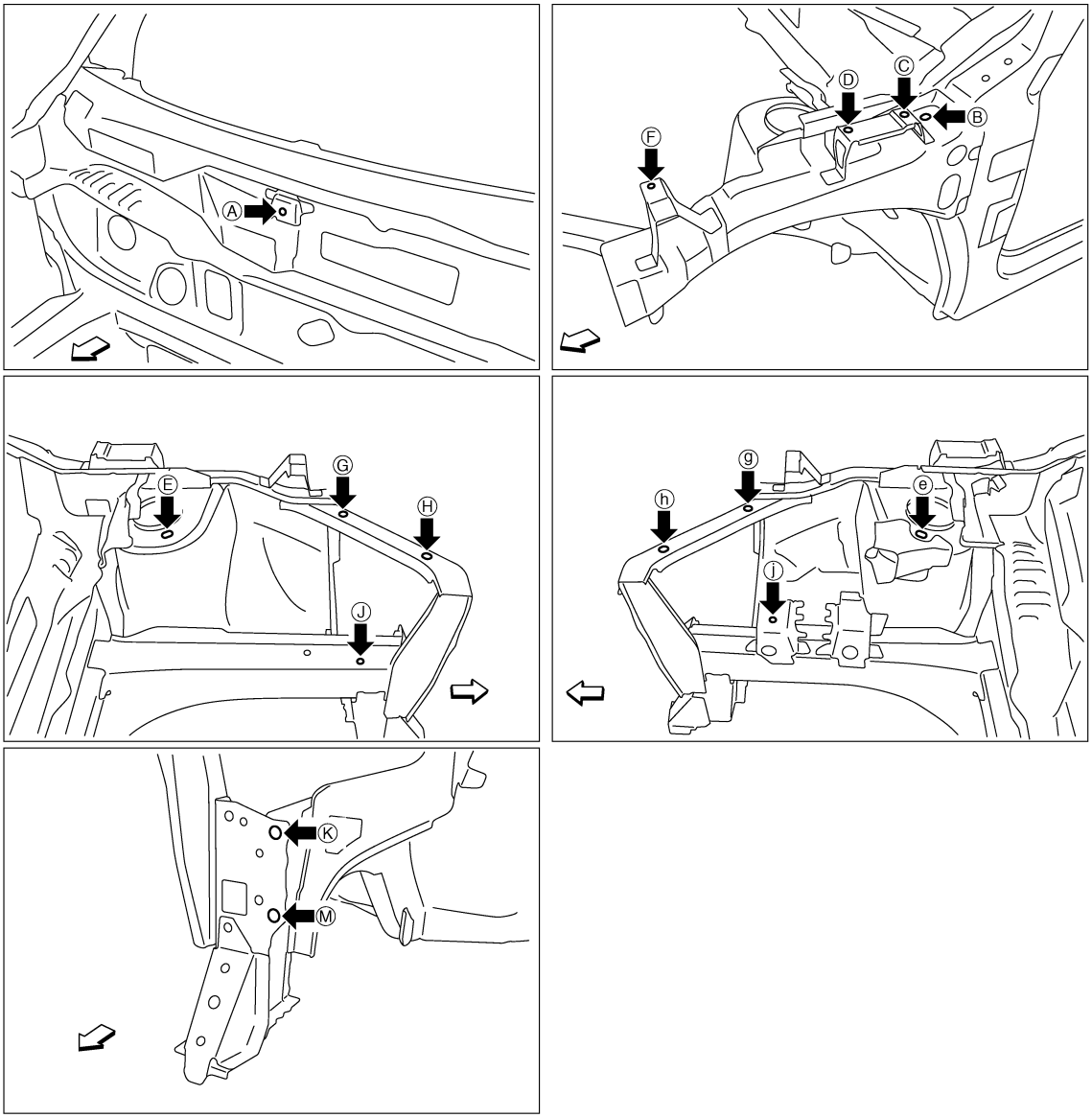
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	721 (28.39)*		B - E	298 (11.73)*		D - d	1429 (56.26)		G - h	1192 (46.93)*	
A - D	723 (28.46)*		B - e	1233 (48.54)*		E - e	1037 (40.83)		J - j	958 (37.72)	
A - F	802 (31.57)*		C - c	1441 (56.73)		F - f	1366 (53.78)				

MEASUREMENT POINTS



JSKIA2150ZZ

⇦: Vehicle front

Unit: mm (in)

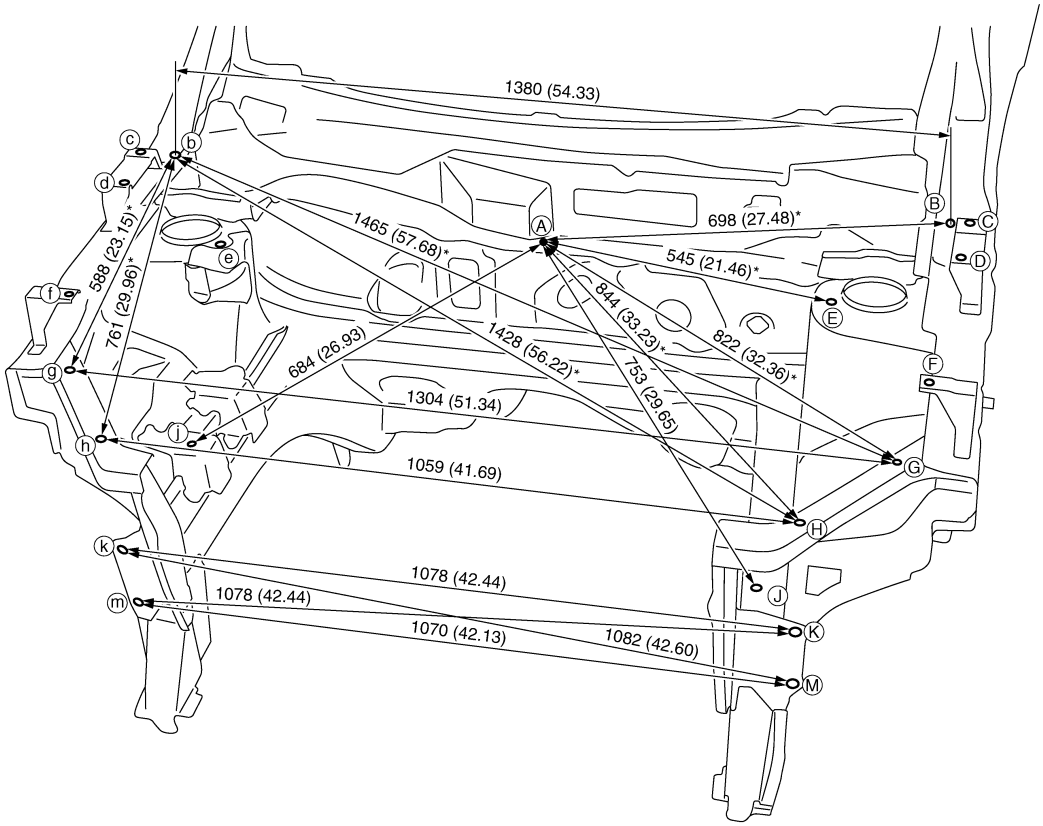
Point	Material	Point	Material
A	Wiper mounting bracket hole center of center positioning mark ϕ7 (0.28)	G, g, H, h	Upper radiator core support hole center G, g: ϕ12 (0.47) H, h: 14×12 (0.55×0.47)
B, b	Hoodledge reinforcement hole center 14×10 (0.55×0.39)	J	Front side member hole center ϕ7 (0.28)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	j	Engine mounting bracket hole center ϕ11 (0.43)
D, d	Front combination lamp installing hole center ϕ7 (0.28)	K, k, M, m	Front bumper stay installing hole center ϕ15 (0.59)
E, e	Front strut installing hole center 16×10 (0.63×0.39)		

Engine Compartment (4WD LHD Models)

INFOID:0000000006482895

MEASUREMENT

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



JSKIA2151GB

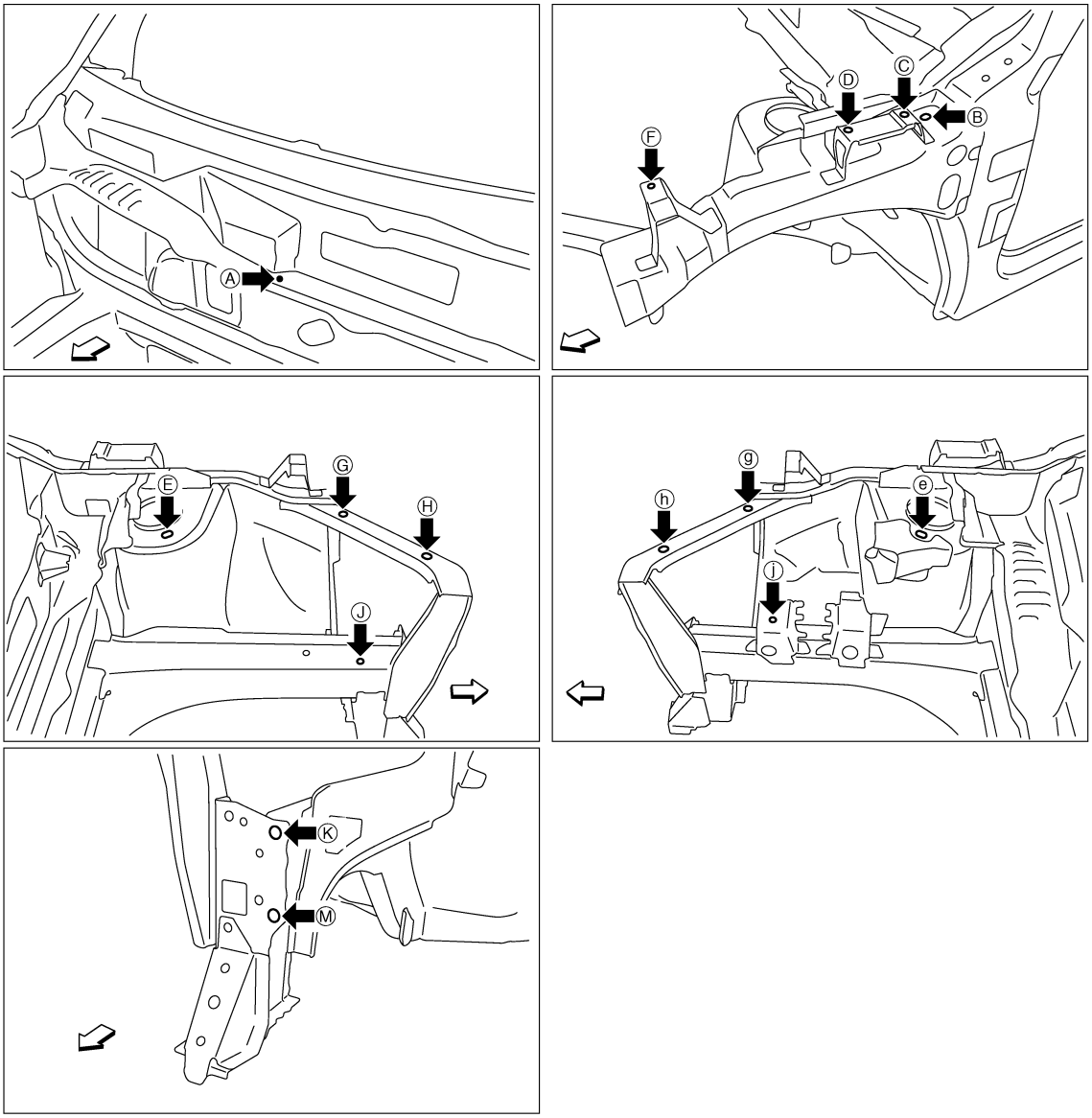
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - C	729 (28.70)*		B - E	298 (11.73)*		D - d	1429 (56.26)		G - h	1192 (46.93)*	
A - D	729 (28.70)*		B - e	1233 (48.54)*		E - e	1037 (40.83)		J - j	958 (37.72)	
A - F	798 (31.42)*		C - c	1441 (56.73)		F - f	1366 (53.78)				

MEASUREMENT POINTS



JSKIA2152ZZ

⇦: Vehicle front

Unit: mm (in)

Point	Material	Point	Material
A	Upper dash positioning mark of center positioning mark	G, g, H, h	Upper radiator core support hole center G, g: ϕ12 (0.47) H, h: 14×12 (0.55×0.47)
B, b	Hoodledge reinforcement hole center 14×10 (0.55×0.39)	J	Front side member hole center ϕ7 (0.28)
C, c, F, f	Front fender installing hole center ϕ7 (0.28)	j	Engine mounting bracket hole center ϕ11 (0.43)
D, d	Front combination lamp installing hole center ϕ7 (0.28)	K, k, M, m	Front bumper stay installing hole center ϕ15 (0.59)
E, e	Front strut installing hole center 16×10 (0.63×0.39)		

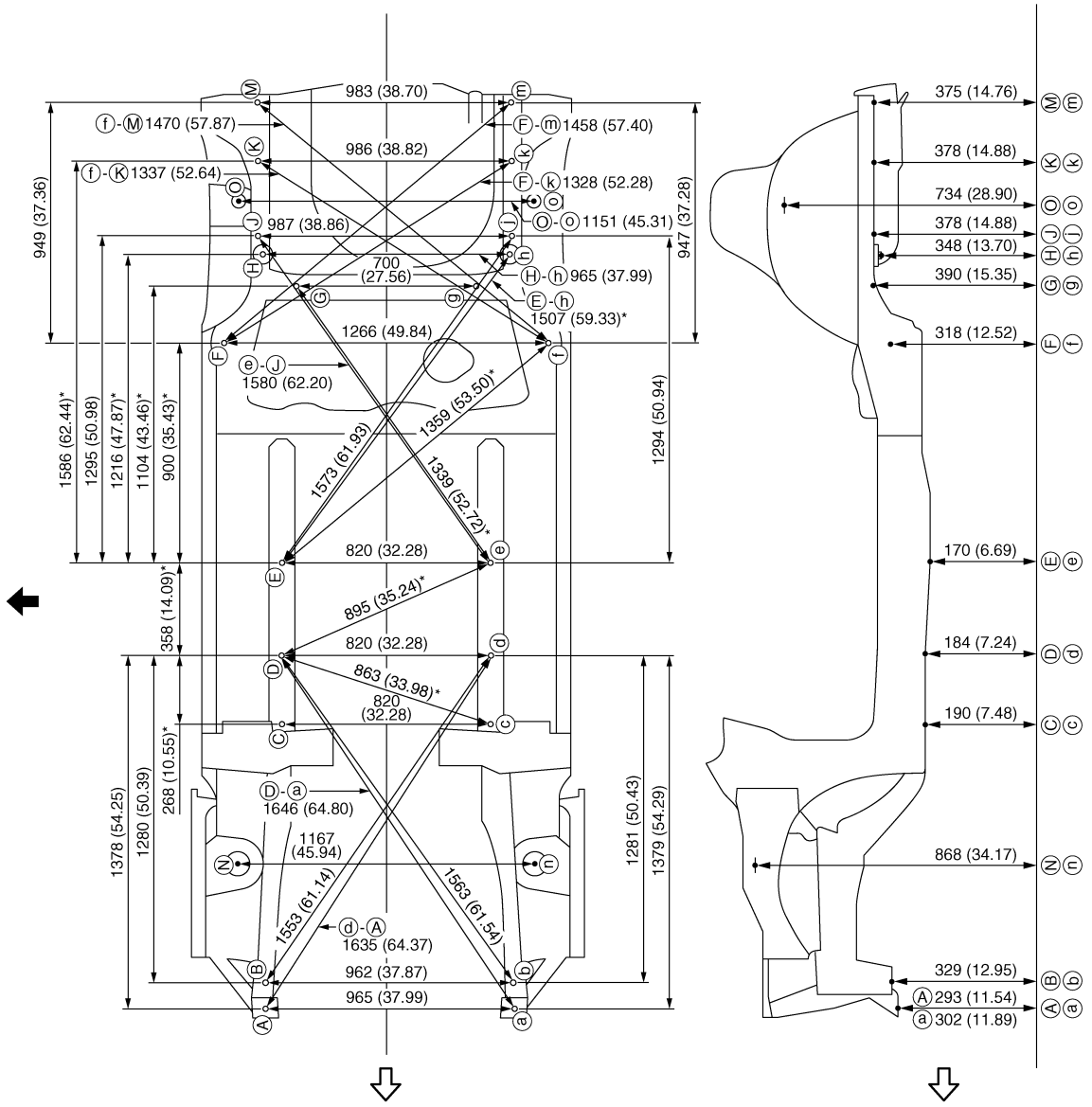
Underbody (2WD Models)

INFOID:0000000006482876

MEASUREMENT

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

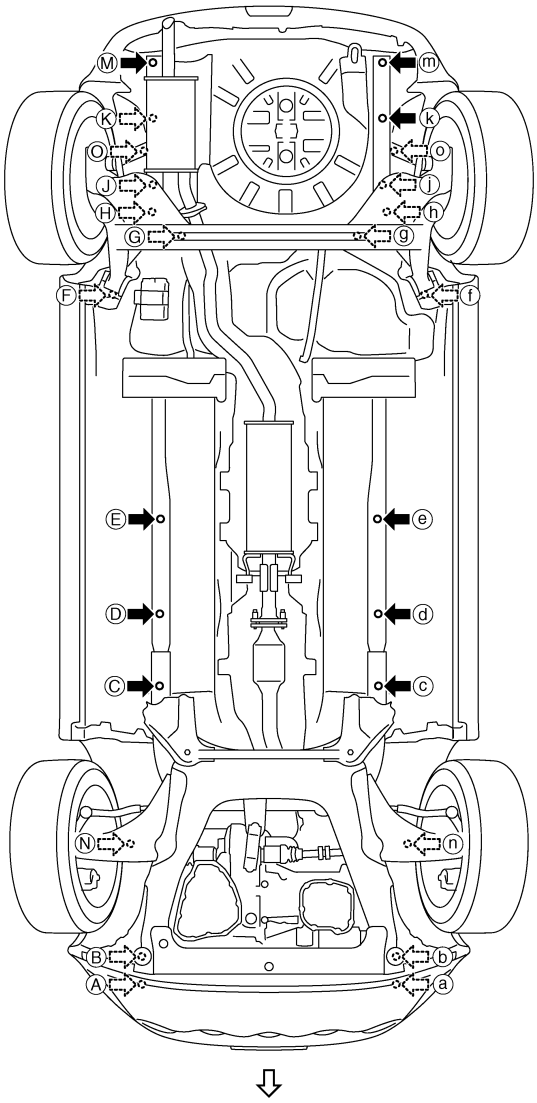
The following figure shows a bottom view and a side view of the vehicle.

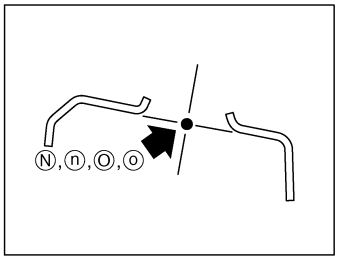


JSKIA1991GB

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

MEASUREMENT POINTS





JSKIA2153ZZ

⇦: Vehicle front

Unit: mm (in)

Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A	473.5 (18.642)	–557.0 (–21.929)	293.0 (11.535)	Hole ϕ11 (0.43)	H, h	±482.3 (±18.988)	2374.2 (93.472)	348.3 (13.713)	Hole ϕ12 (0.47)
a	–491.0 (–19.331)	–557.0 (–21.929)	301.9 (11.886)	Hole ϕ11 (0.43)	J	499.5 (19.665)	2448.0 (96.378)	378.0 (14.882)	Hole ϕ21 (0.83)
B	472.4 (18.598)	–455.0 (–17.913)	328.9 (12.949)	Hole ϕ18 (0.71)	j	–487.5 (–19.193)	2448.0 (96.378)	378.0 (14.882)	Hole ϕ21 (0.83)

Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
b	–489.7 (–19.279)	–455.0 (–17.913)	328.9 (12.949)	Hole ϕ18 (0.71)	K	498.0 (19.606)	2743.0 (107.992)	378.0 (14.882)	Hole 17×16 (0.67×0.63)
C, c	±410.0 (±16.142)	547.0 (21.535)	190.2 (7.488)	Hole ϕ16 (0.63)	k	–487.5 (–19.193)	2743.0 (107.992)	378.0 (14.882)	Hole 17×16 (0.67×0.63)
D, d	±410.0 (±16.142)	815.0 (32.087)	184.0 (7.244)	Hole ϕ12 (0.47)	M	498.0 (19.606)	2970.0 (116.929)	375.4 (14.779)	Hole ϕ16 (0.63)
E, e	±410.0 (±16.142)	1173.0 (46.181)	170.1 (6.697)	Hole 14×2 (0.55×0.47)	m	–485.1 (–19.098)	2965.8 (116.764)	375.4 (14.779)	Hole ϕ16 (0.63)
F, f	±633.0 (±24.921)	2032.3 (80.012)	318.0 (12.520)	Hole ϕ16 (0.63)	N, n	±583.6 (±22.976)	6.6 (0.261)	868.2 (34.181)	Hole ϕ98 (3.86)
G, g	±350.0 (±13.780)	2253.0 (88.701)	390.4 (15.370)	Hole □16 (0.63)	O, o	±575.4 (±22.653)	2569.2 (101.149)	734.4 (28.913)	Hole ϕ20 (0.79)

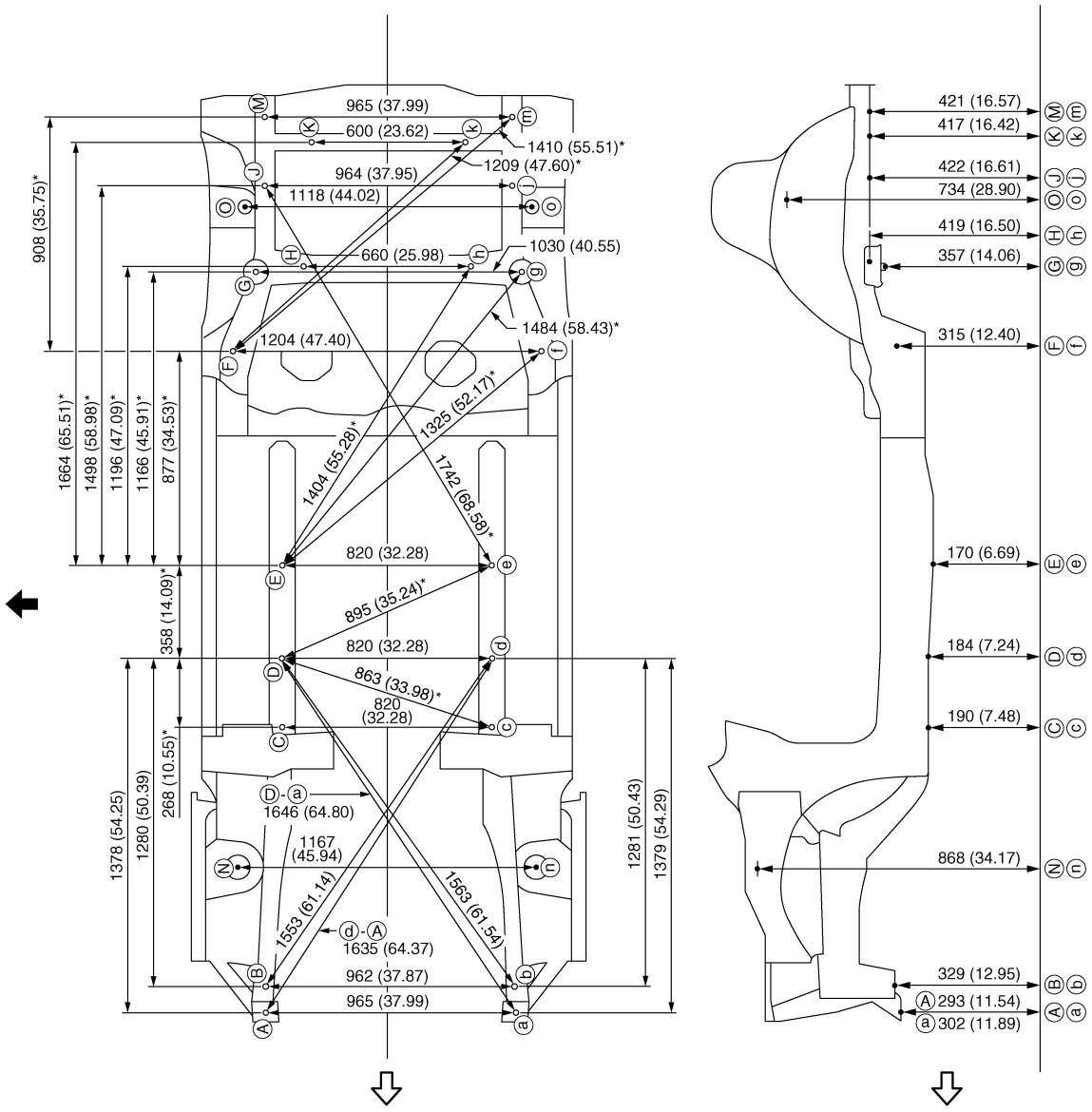
Underbody (4WD Models)

INFOID:0000000006482896

MEASUREMENT

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

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



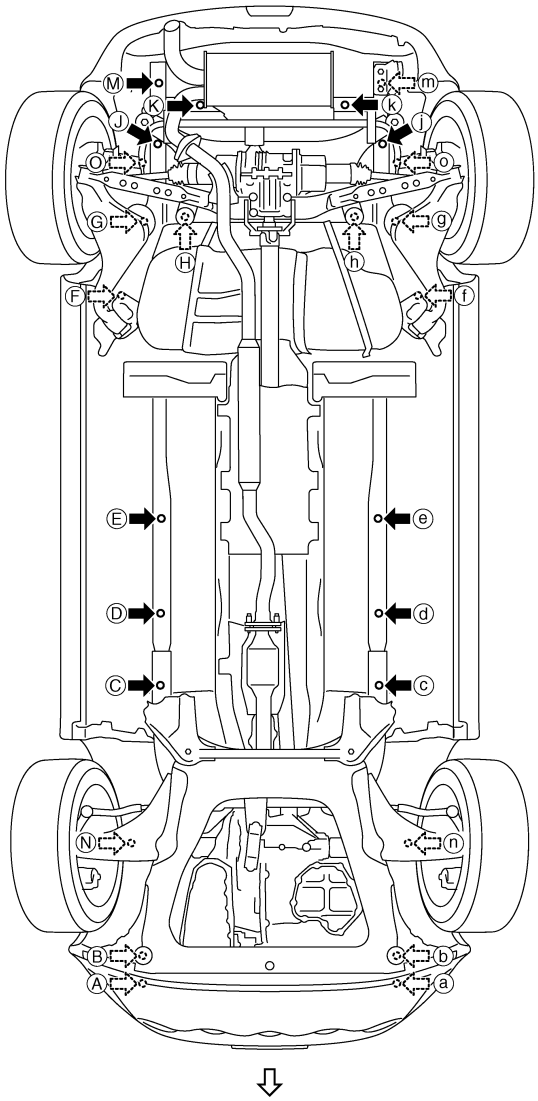
JSKIA2154GB

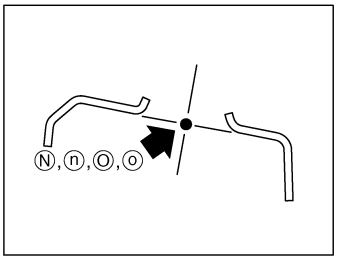
Unit: mm (in)

⇦: Vehicle front

⬅: Vehicle left side

MEASUREMENT POINTS





JSKIA2155ZZ

⇦: Vehicle front

Unit: mm (in)

Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
A	473.5 (18.642)	–557.0 (–21.929)	293.0 (11.535)	Hole ϕ11 (0.43)	G, g	±515.1 (±20.279)	2318.6 (91.283)	357.2 (14.063)	Hole ϕ12 (0.47)
a	–491.0 (–19.331)	–557.0 (–21.929)	301.9 (11.886)	Hole ϕ11 (0.43)	H, h	±330.0 (±12.992)	2339.7 (92.114)	419.0 (16.496)	Hole 33×30 (1.30×1.18)
B	472.4 (18.598)	–455.0 (–17.913)	328.9 (12.949)	Hole ϕ18 (0.71)	J, j	±482.0 (±18.976)	2648.0 (104.252)	422.2 (16.622)	Hole 20×6 (0.79×0.63)
b	–489.7 (–19.279)	–455.0 (–17.913)	328.9 (12.949)	Hole ϕ18 (0.71)	K, k	±300.0 (±11.811)	2815.0 (110.827)	417.2 (16.425)	Hole 18×6 (0.71×0.63)
C, c	±410.0 (±16.142)	547.0 (21.535)	190.2 (7.488)	Hole ϕ16 (0.63)	M, m	±482.7 (±19.004)	2910.5 (114.586)	421.4 (16.591)	Hole ϕ23 (0.91)
D, d	±410.0 (±16.142)	815.0 (32.087)	184.0 (7.244)	Hole ϕ12 (0.47)	N, n	±583.6 (±22.976)	6.6 (0.261)	868.2 (34.181)	Hole ϕ98 (3.86)

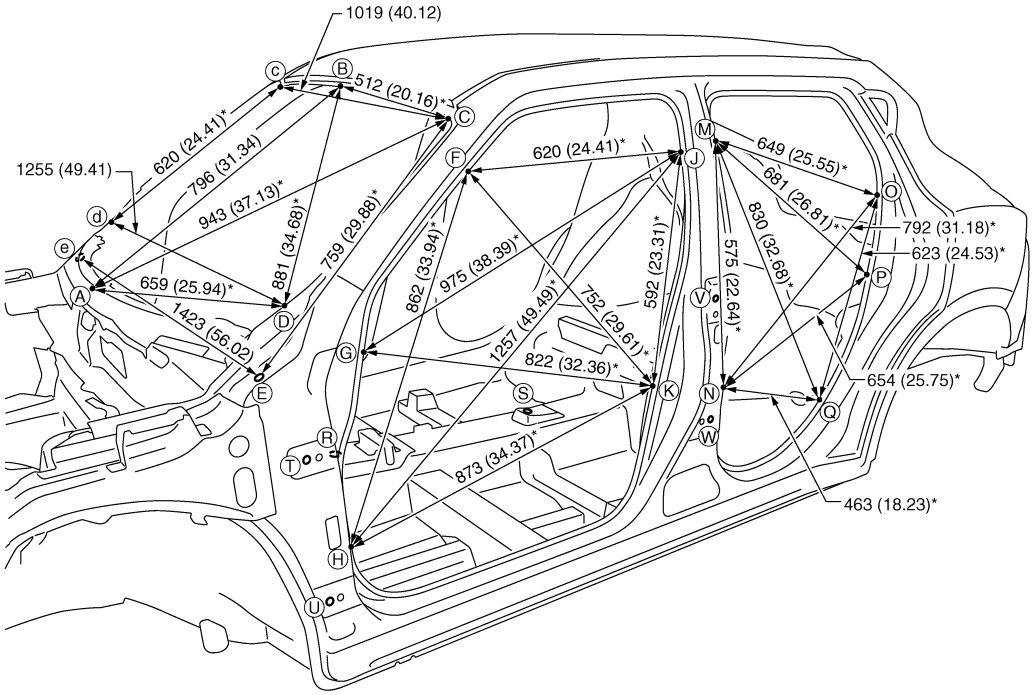
Points	Coordinates			Remarks	Points	Coordinates			Remarks
	X	Y	Z			X	Y	Z	
E, e	±410.0 (±16.142)	1173.0 (46.181)	170.1 (6.697)	Hole 14×2 (0.55×0.47)	O, o	±558.8 (±22.000)	2568.4 (101.118)	734.4 (28.913)	Hole ϕ20 (0.79)
F, f	±601.8 (±23.693)	2016.4 (79.386)	315.0 (12.402)	Hole ϕ15 (0.59)					

Passenger Compartment

INFOID:0000000006482877

MEASUREMENT

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



JSKIA1996GB

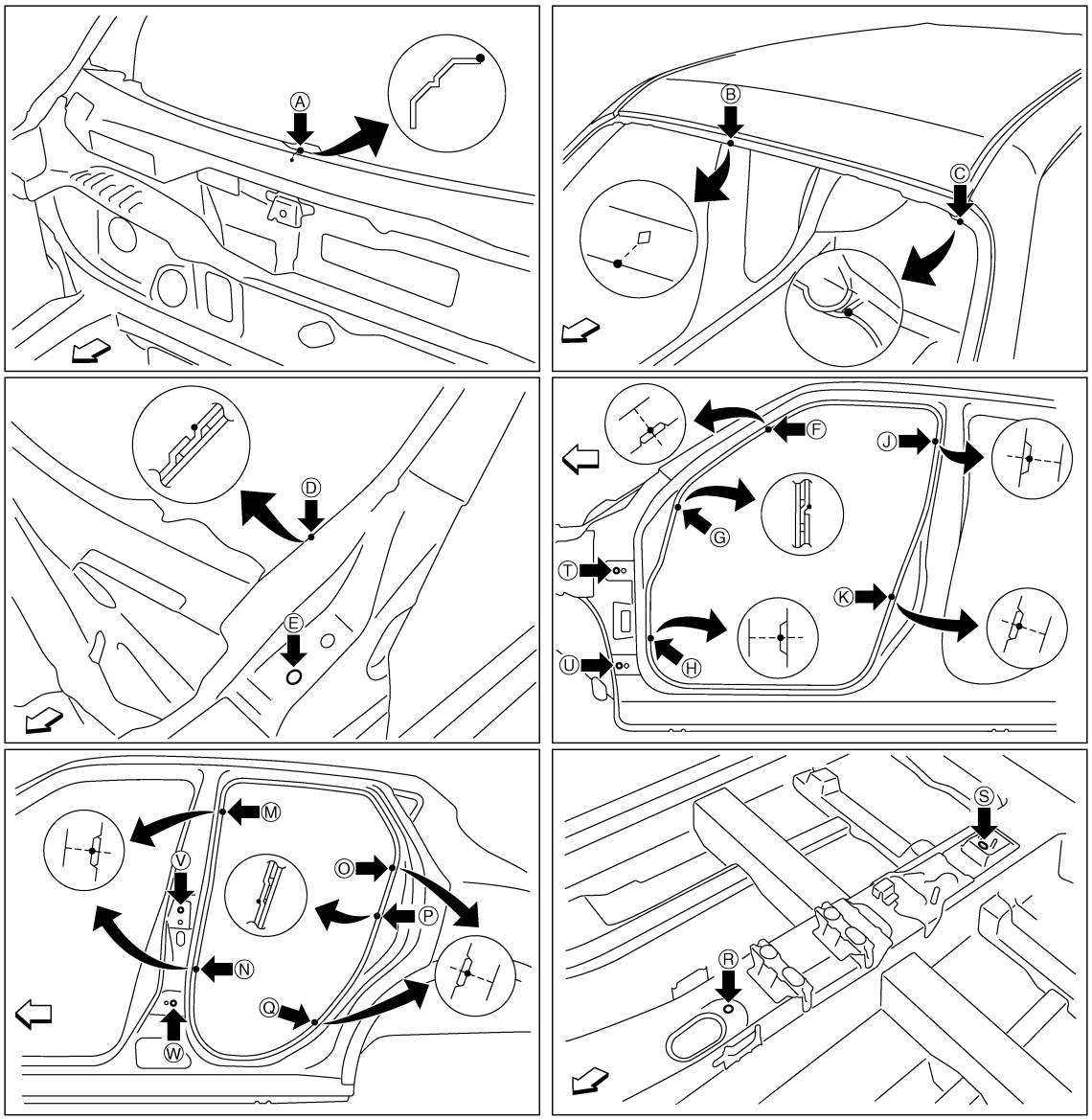
Unit: mm (in)

«The others»

Unit: mm (in)

Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo	Point	Dimension	Memo
A - E	724 (28.50)*		H - h	1406 (55.35)		N - n	1423 (56.02)		R - J	1394 (54.88)*	
B - E	1028 (40.47)*		H - j	1829 (72.01)*		N - o	1585 (62.40)*		R - K	1072 (42.20)*	
C - d	1290 (50.79)*		H - k	1663 (65.47)*		N - p	1554 (61.18)*		S - M	1094 (43.07)*	
C - e	1423 (56.02)*		J - j	1257 (49.49)		N - q	1506 (59.29)*		S - N	786 (30.94)*	
F - f	1222 (48.11)		J - k	1463 (57.60)*		O - o	1326 (52.20)		S - O	1248 (49.13)*	
F - h	1569 (61.77)*		K - k	1425 (56.10)		O - q	1518 (59.76)*		S - P	1126 (44.33)*	
F - j	1386 (54.57)*		M - m	1248 (49.13)		P - p	1397 (55.00)		S - Q	905 (35.63)*	
F - k	1519 (59.80)*		M - n	1451 (57.13)*		Q - q	1444 (56.85)		T - V	1128 (44.41)*	
G - g	1359 (53.50)		M - o	1441 (56.73)*		R - F	1104 (43.46)*		T - W	1105 (43.50)*	
G - j	1630 (64.17)*		M - p	1486 (58.50)*		R - G	885 (34.84)*		U - V	1204 (47.40)*	
G - k	1616 (63.62)*		M - q	1578 (62.13)*		R - H	720 (28.35)*		U - W	1091 (42.95)*	

MEASUREMENT POINTS



JSKIA1997ZZ

⇦: Vehicle front

Unit: mm (in)

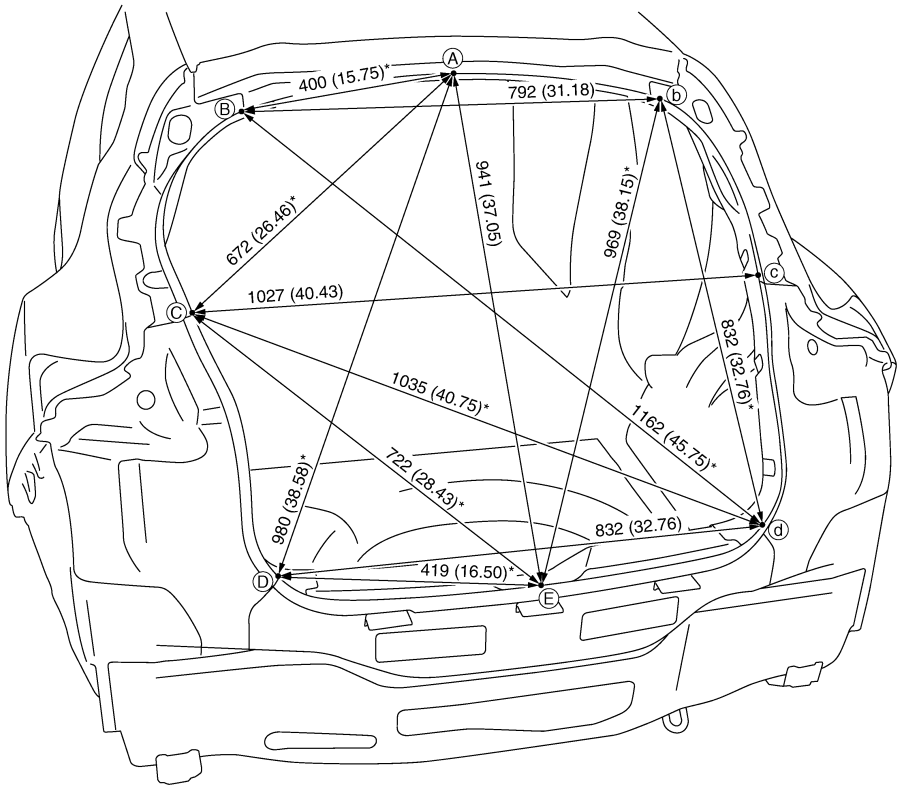
Point	Material	Point	Material
A	Cowl top flange end of center positioning mark	J, j, K, k, M, m, N, n	Center pillar indent
B	Roof flange end of center positioning mark	O, o, Q, q	Rear fender indent
C, c	Outer side body joggle	P, p	Outer rear wheelhouse joggle
D, d, G, g	Upper inner front pillar joggle	R	Trans control reinforcement hole center of center positioning mark ϕ16 (0.63)
E, e	Hood hinge installing hole center ϕ12 (0.47)	S	Parking brake reinforcement hole center of center positioning mark ϕ12 (0.47)
F, f, H, h	Front pillar indent	T, t, U, u, V, v, W, w	Door hinge installing hole center T, t, U, u, W, w: ϕ12 (0.47) V, v: ϕ9 (0.35)

Rear Body

INFOID:0000000006482880

MEASUREMENT

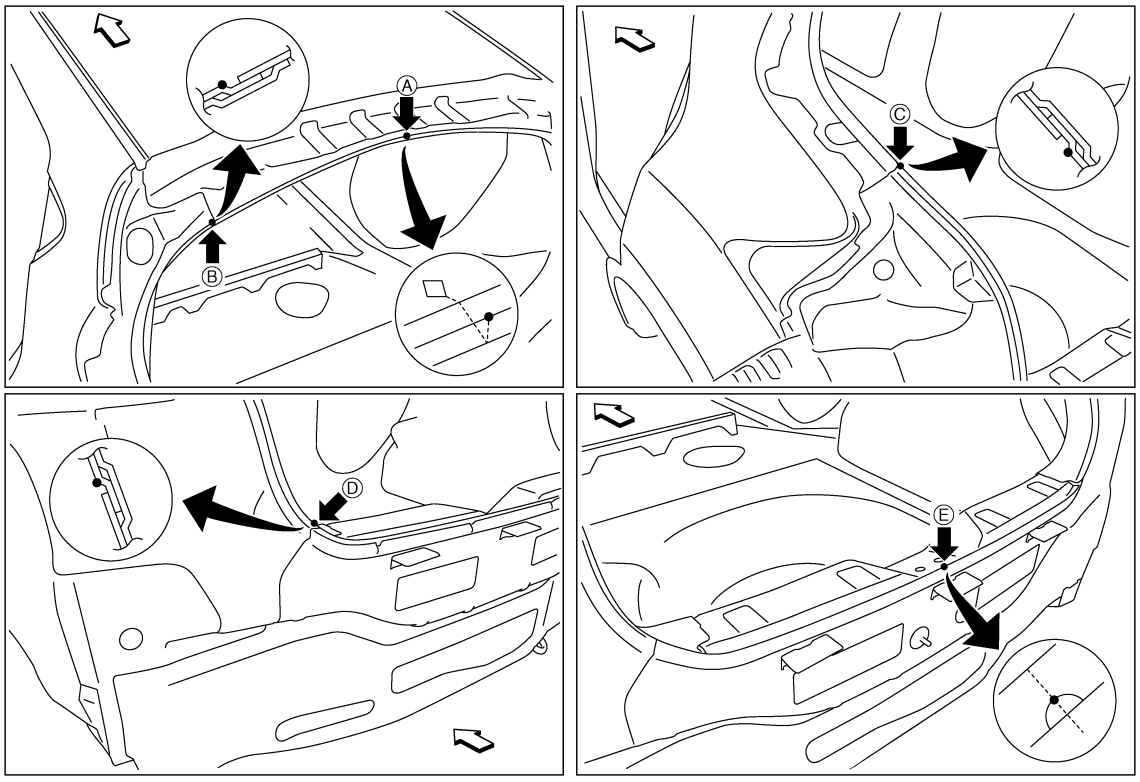
Dimensions marked with "*" indicate symmetrically identical dimensions on both the right and left hand of the vehicle.



JSKIA1998GB

Unit: mm (in)

MEASUREMENT POINTS



JSKIA1999ZZ

⇦: Vehicle front

Point	Material	Point	Material
A	Roof flange end of center positioning mark	C, c, D, d	Rear combination lamp base joggle
B, b	Rear fender extension joggle	E	Upper rear panel indent of center positioning mark

LOCATION OF PLASTIC PARTS

Precautions for Plastics

INFOID:0000000006698764

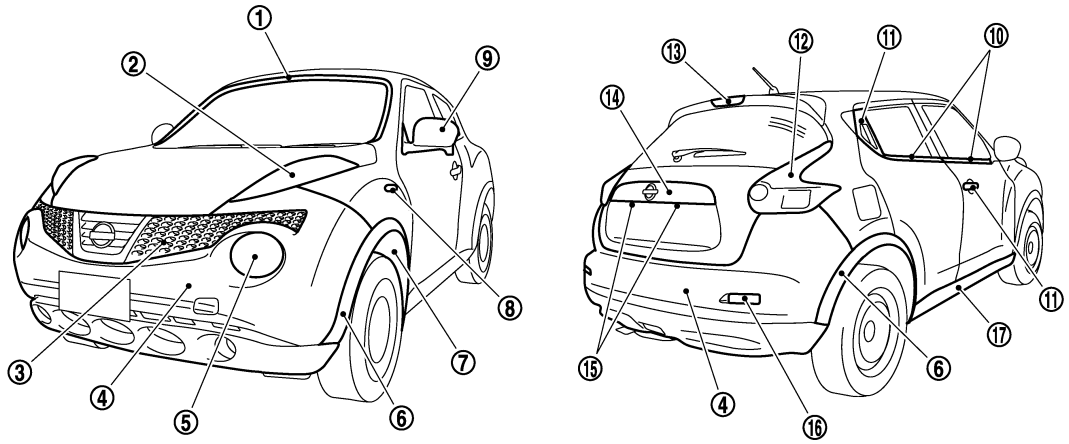
Abbreviation	Material name	Heat resisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe out quickly).	Flammable
ABS	Acrylonitrile Butadiene Styrene	80 (176)	Avoid gasoline 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.**

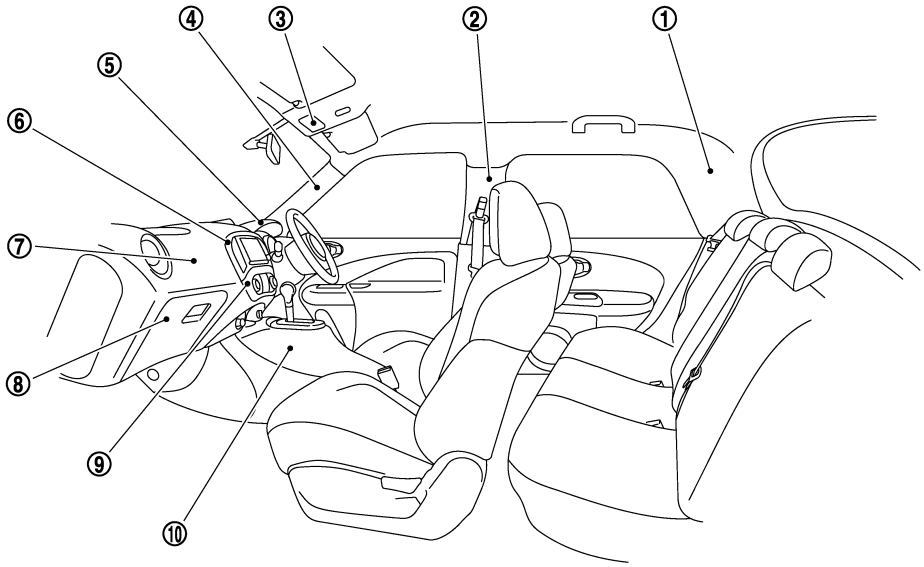
Location of Plastic Parts

INFOID:0000000006482882



JSKIA2000ZZ

Component			Material	Component			Material
1	Windshield molding		PVC	10	Door outside molding		PVC + Stainless
2	Front combination lamp	Lens	PMMA	11	Door outside handle	Front	PC + PET
		Housing	PP			Rear	PC + PET + Glass fiber
3	Front grille		ABS	12	Rear combination lamp	Lens	PMMA
4	Bumper fascia		PP + EPM			Housing	ASA
5	Head lamp	Lens	PC	13	High mount stop lamp	Lens	PMMA
		Housing	PP			Housing	PC + ABS
6	Fillet molding		PP + EPM	14	Back door finisher		ABS
7	Front fender protector		PP	15	License plate lamp (2WD Models)	Lens	PC
8	Side turn signal lamp	Lens	PMMA			Housing	PBT
		Housing	PC + ABS		License plate lamp (4WD Models)	Lens	PC
9	Door outside mirror	Housing	ASA			Housing	PC
		Base	PBT + PET + Glass fiber	16	Reflex reflector	Lens	PMMA
		Cover (Material color)	ASA			Housing	ABS
		Cover (Body color)	ABS	17	Center mudguard		PP + EPM



JSKIA2001ZZ

Component			Material	Component			Material
1	Rear pillar finisher		PP	6	Cluster lid C		PC + ABS
2	Center pillar garnish		PP	7	Instrument panel		PP
3	Map lamp	Lens	PC	8	Glove box		PP
		Housing	PA	9	Multi display unit	Lens	PC
4	Front pillar garnish		PP			Finisher	PC + ABS
5	Cluster lid A		PP	10	Center console		PP