

BODY REPAIR MANUAL

BS

	Page
1. Foreword	2
2. Assembly of Exterior Parts.....	9
3. Panel Components.....	11
4. Galvanized Sheet Metal	27
5. Body Construction.....	28
6. Body Reference Points.....	33
7. Measurement for Combined Parts	54
8. Panel Replacement.....	56
8-1. Radiator Panel (total replacement)	56
8-2. Front Wheel Apron (total replacement)	62
8-3. Closing Plate (partial replacement) ('14 MY — '17 MY)	78
8-4. Front Side Frame (total replacement).....	80
8-5. Front Side Frame (partial replacement) ('14 MY — '17 MY).....	84
8-6. Toe Board Reinforcement (total replacement).....	86
8-7. Front Pillar (partial replacement)	100
8-8. Center Pillar (partial replacement).....	120
8-9. Side Sill (partial replacement)	130
8-10. Rear Wheel Apron (partial replacement).....	140
8-11. Rear Quarter Inner (total replacement)	152
8-12. Rear Quarter (partial replacement)	160
8-13. Rear Quarter End Panel (total replacement)	168
8-14. Rear Panel (total replacement).....	170
8-15. Side Sill Inner Rear (total replacement)	174
8-16. Rear Skirt (total replacement)	178
8-17. Rear Floor Pan (partial replacement)	180
8-18. Rear Floor Side (total replacement)	182
8-19. Rear Side Frame Upper Rear (total replacement).....	186
8-20. Rear Side Frame Lower Rear (total replacement).....	192
8-21. Closing Plate (total replacement)	196
8-22. Rear Frame (total replacement)	198
8-23. Roof Center Brace (total replacement).....	204
8-24. Roof Panel (total replacement)	208
8-25. T Stud Installation.....	210
8-26. Carbon roof panel.....	212
9. Body Sealing.....	237
10. Anticorrosion Wax	241
11. Undercoat	246
12. Damping Seat	249
13. Insulator	250
14. Plastic Parts and Materials	252
15. List of Plastic Material Notations.....	258

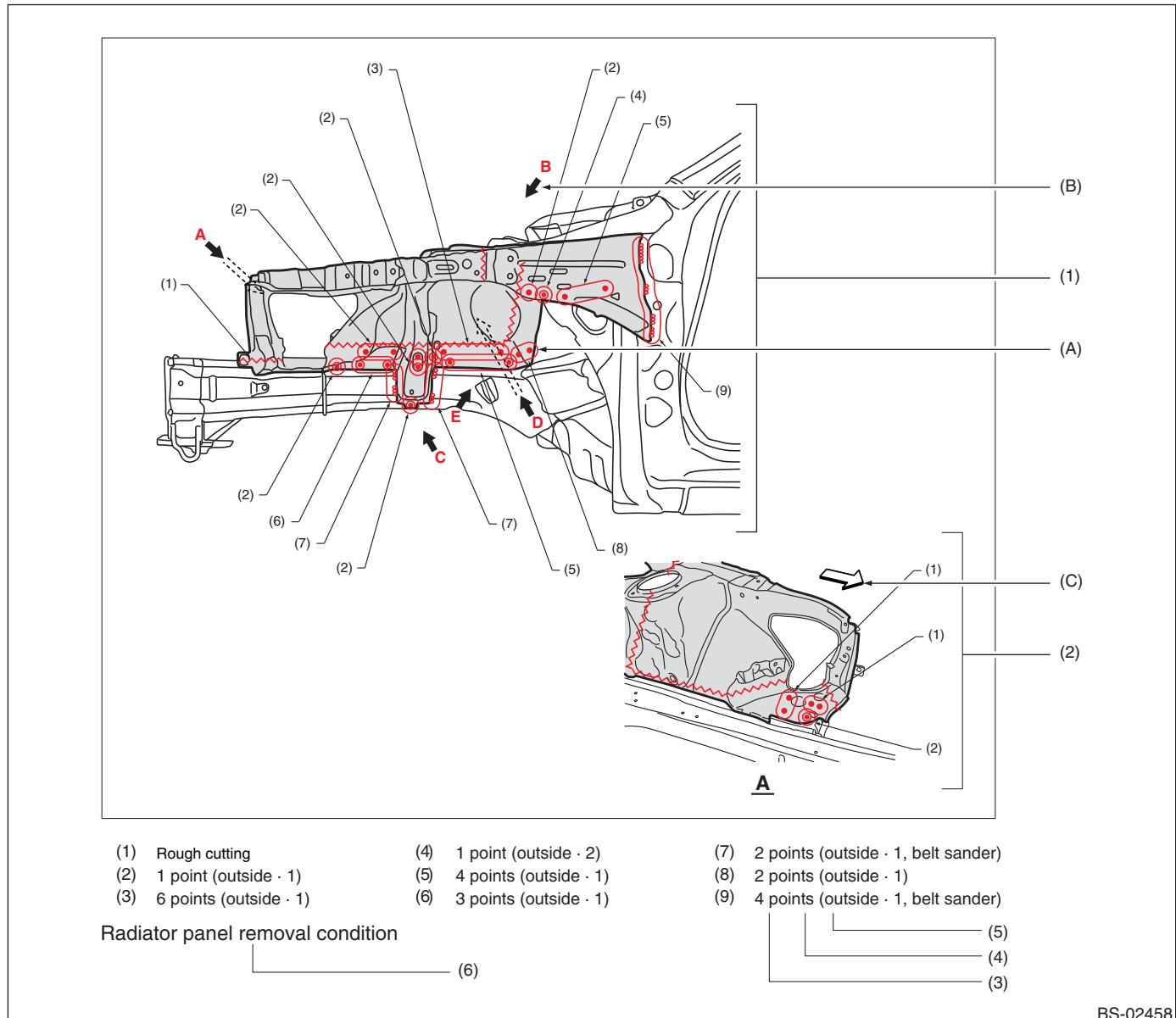
1. Foreword

A: USE OF THIS MANUAL

This manual explains the points to be observed during removal and installation of parts separately by location.

1. ILLUSTRATION EXAMPLE

- Symbols and number of points indicate the welding method and the number of welding points. Text in brackets indicates the direction for removal of welded parts, and numbers indicate the number of plates to be drilled in panels of welded parts to be removed.
- An enclosure by a broken line indicates work from the opposite side (rear side).



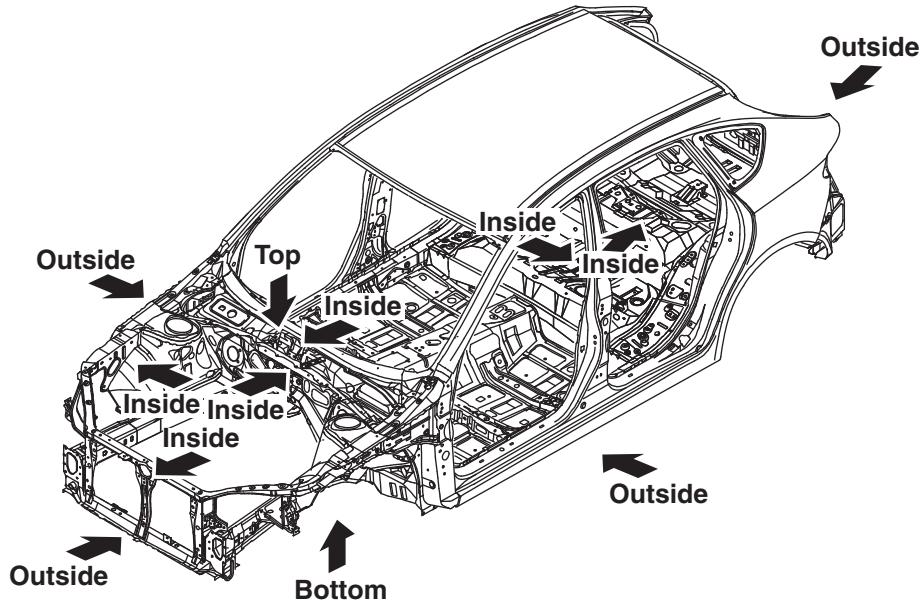
- (1) Overall view
- (2) View
- (3) Number of welding points etc.
- (4) Removal direction
- (5) Number of plates to be drilled
- (6) Cautions for the work etc.

- (A) Welding method
- (B) View direction
- (C) Direction towards the front of the vehicle

BS-02458

2. REMOVAL DIRECTION

Division is made into the four groups of inside, outside, top, and bottom, and these directions are defined as shown in the following figure.

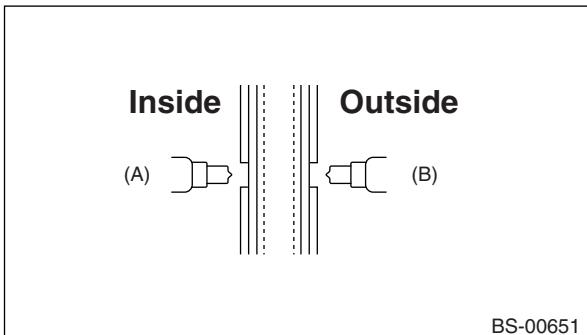


BS-02459

3. NUMBER OF PANELS TO BE DRILLED

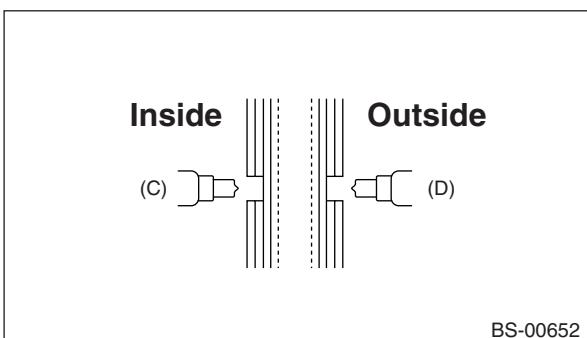
Depending on the number of panels, drilling is done through one panel or two panels, and this number is listed together with the removal direction.

(1) Drilling through one plate



(A) (Inside · 1)
(B) (Outside · 1)

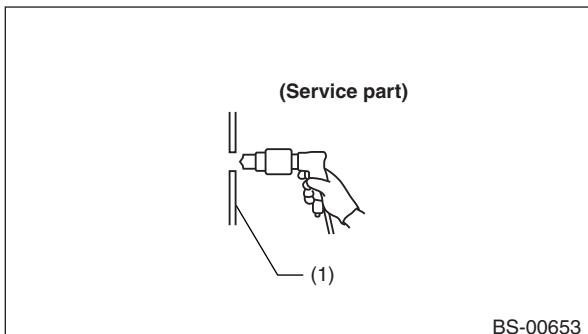
(2) Drilling through two plates



(C) (Inside · 2)
(D) (Outside · 2)

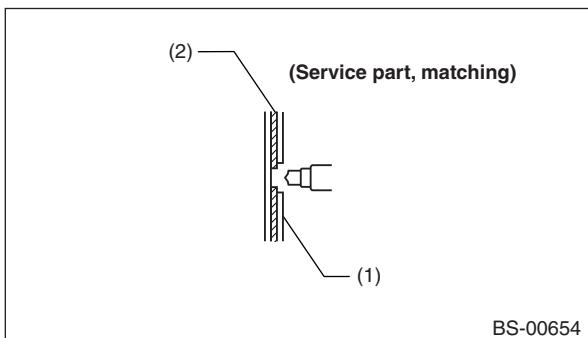
4. HOLE DRILLING FOR PLUG WELDING

(1) Drilling of holes for plug welding in service parts



(1) Service part

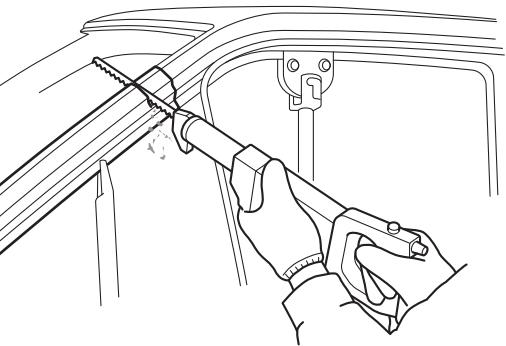
(2) Drilling of holes for plug welding in service parts, matching the holes on the vehicle side



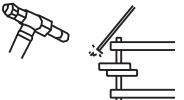
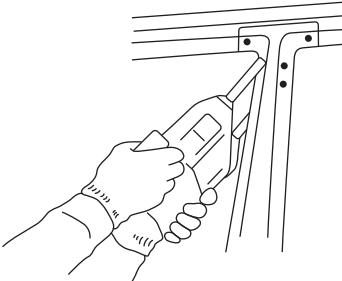
(1) Vehicle side
(2) Service part

5. MEANING OF SYMBOLS

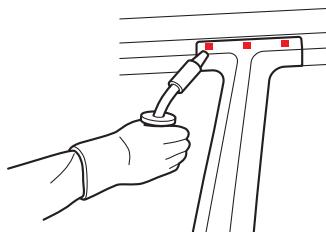
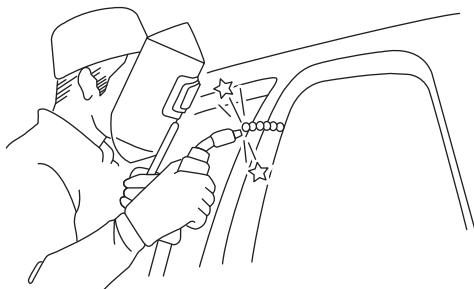
- Cutting

 BS-00352	 BS-00267
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- Spot welding

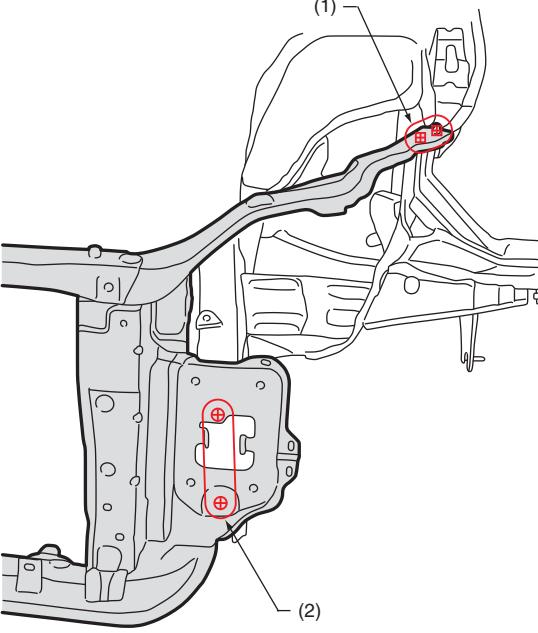
Two overlapping parts	 BS-00655	 BS-00656	 BS-00657
Three or more overlapping parts	 BS-00659	 BS-00660	 BS-00658

- Carbon dioxide gas arc welding (MIG welding)

Plug welding	 BS-00661	 BS-00662	 BS-00663
Continuous welding	 BS-00664	 BS-00665	 BS-00666

Foreword

- Bolt, nut tightening portion

Bolt		 BS-04481
Nut		 BS-04482 BS-04483 (1) Bolt (2) Nut

B: CAUTION

Since there is a possibility that the required strength will not be obtained, an inverter welder must be used for spot-welding at locations where high-strength steel is used.

C: NOTE

1. About high-tensile steel sheets of 980 MPa Class or more

To drill high-strength steel sheets of 980 MPa class and 1,500 MPa class, use a tool that can machine objects of 500 Hv or more hardness (e.g., C-20VR made by Cyuotokenzai).

The usable parts of high-tensile steel sheets of 980 MPa Class or more should be welded under the following conditions.

- It is recommended to perform spot welding according to board thickness and number of overlapping sheets under the following conditions ([a] — [f])
- When spot welding conditions cannot be met, plug weld 980 MPa class following [g] or [h] conditions, and 1,500 MPa class following below [i] or [j] conditions.

Spot welding	[a]	Compression	3.0 kN	Total number of 2 overlapping sheets
		Current	6.0 kA	
		Welding time	15 cyc	
	[b]	Compression	4.0 kN	
		Current	6.5 kA	
		Welding time	15 cyc	
	[c]	Compression	3.0 kN	Total number of 3 overlapping sheets
		Current	6.5 kA	
		Welding time	25 cyc	
	[d]	Compression	3.5 kN	
		Current	7.0 kA	
		Welding time	25 cyc	
	[e]	Compression	3.5 kN	
		Current	7.5 kA	
		Welding time	16 cyc	
	[f]	Compression	4.4 kN	
		Current	8.0 kA	
		Welding time	20 cyc	
Plug welding	[g]	Plug diameter	8 mm or more	Total number of 2 or 3 overlapping sheets
		Wire	YGW12	
		Gas	CO2	
	[h]	Plug diameter	8 mm or more	
		Wire	YGW16	
		Gas	Gas mixture (argon: 80 %, CO2: 20 %)	
	[i]	Plug diameter	8.5 mm	
		Wire	YGW12	
		Gas	CO2	
	[j]	Plug diameter	8.5 mm	
		Wire	YGW16	
		Gas	Gas mixture (argon: 80 %, CO2: 20 %)	

CAUTION:

- For new spot welding, avoid previously welded locations.
- After spot welding, inspect the welding locations, and if the weld appears to be insufficient, perform plug welding.
- To avoid loss of strength, do not use heat repair or patch welding to repair the usable parts of high-tensile steel sheets of 980 MPa class or more.

2. Hole drilling for plug welding

At locations where spot welding is not possible, use a punch or a drill to open holes for plug welding according to the following table.

Plate thickness of the welding material	Plug welding hole diameter
Less than 1.0 mm (0.04 in)	ϕ 5.0 mm (0.20 in) or more
1.0 — 1.6 mm (0.04 — 0.06 in)	ϕ 6.5mm (0.26 in) or more
1.7 — 2.3 mm (0.07 — 0.09 in)	ϕ 8.0mm (0.31 in) or more
2.4 mm (0.09 in) or more	ϕ 10.0 mm (0.39 in) or more

3. Repair work using foam

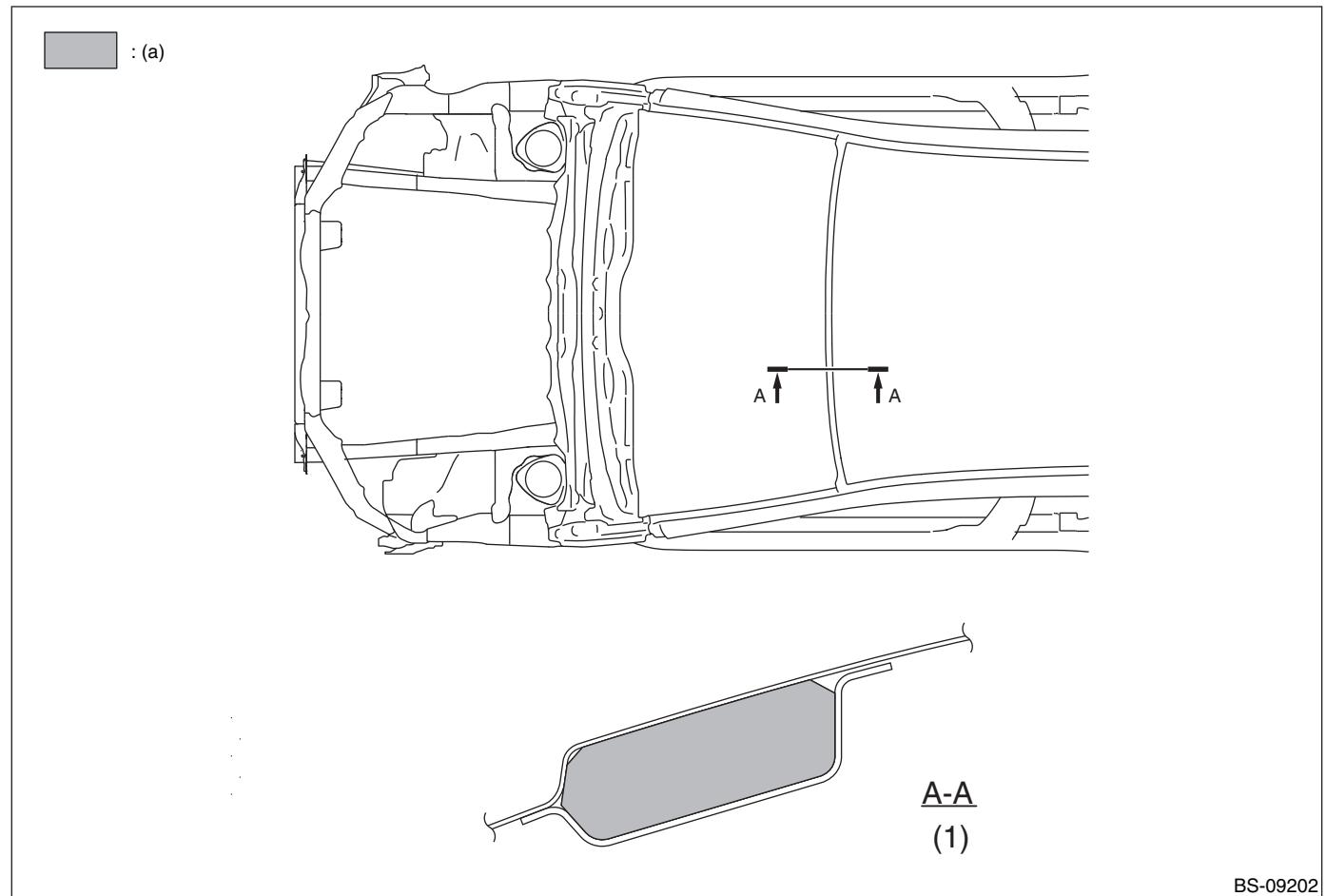
CAUTION:

- Do not perform welding or other work involving high temperatures.
- Do not use an open flame at the time of disassembly.
- Remove residual foam before injecting the new material.
- After completion of work, confirm that there is no danger of igniting the material.
- Spray cans that have been used once cannot be used again.
- Use a narrow nozzle.

Recommended materials: Equivalent to High Span Foam made by Cemedine

For a clipless type, inject cold-setting foam as is.

• Foam injection locations ('18 MY —)



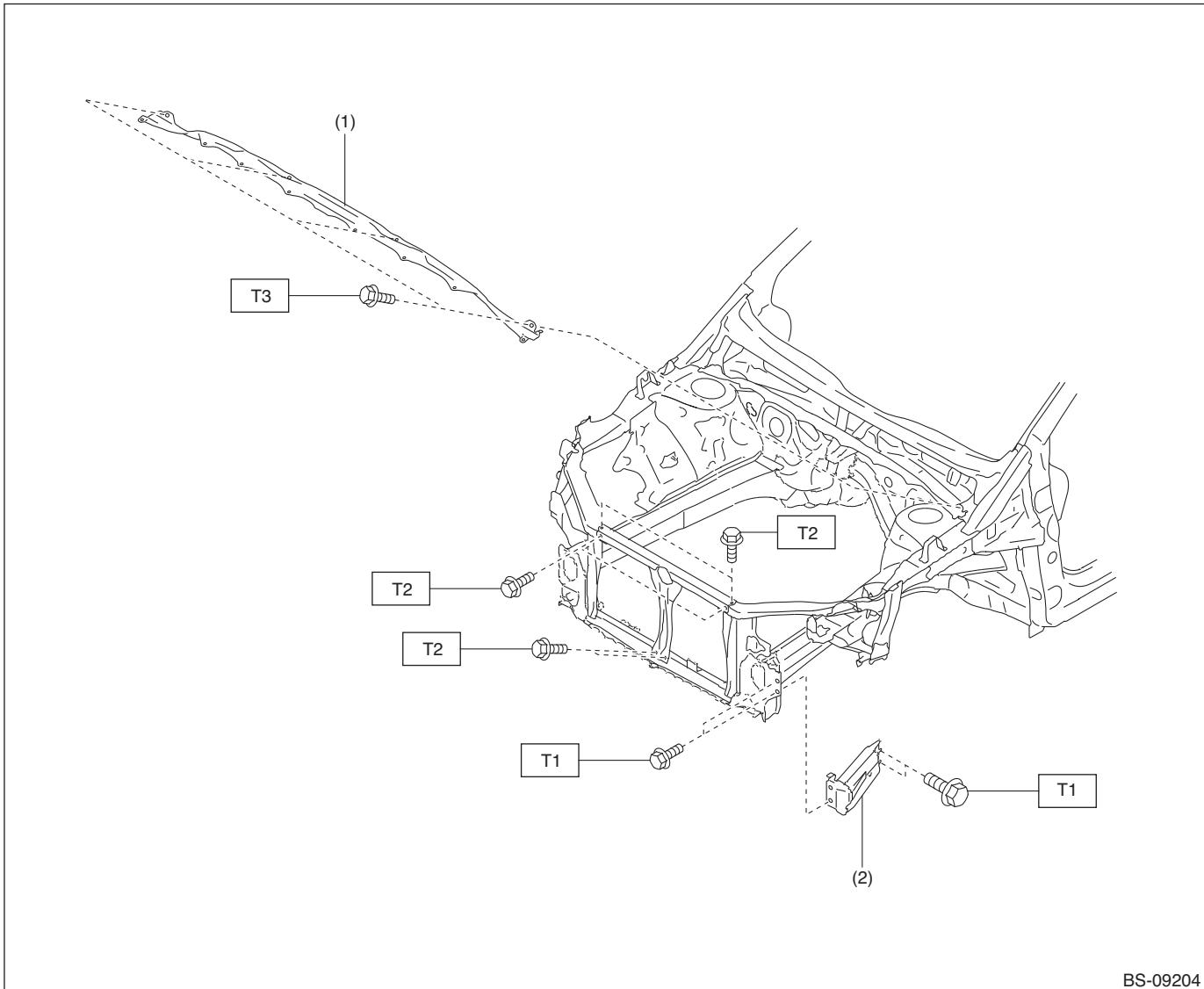
(a) Urethane foam injection locations

(1) Clipless type (Left and right)

2. Assembly of Exterior Parts

A: BODY REINFORCING PARTS

• '14 MY — '17 MY



BS-09204

(1) PNL BULK HEAD F

(2) GUSSET CP F SD

Tightening torque: N·m (kgf·m, ft·lb)

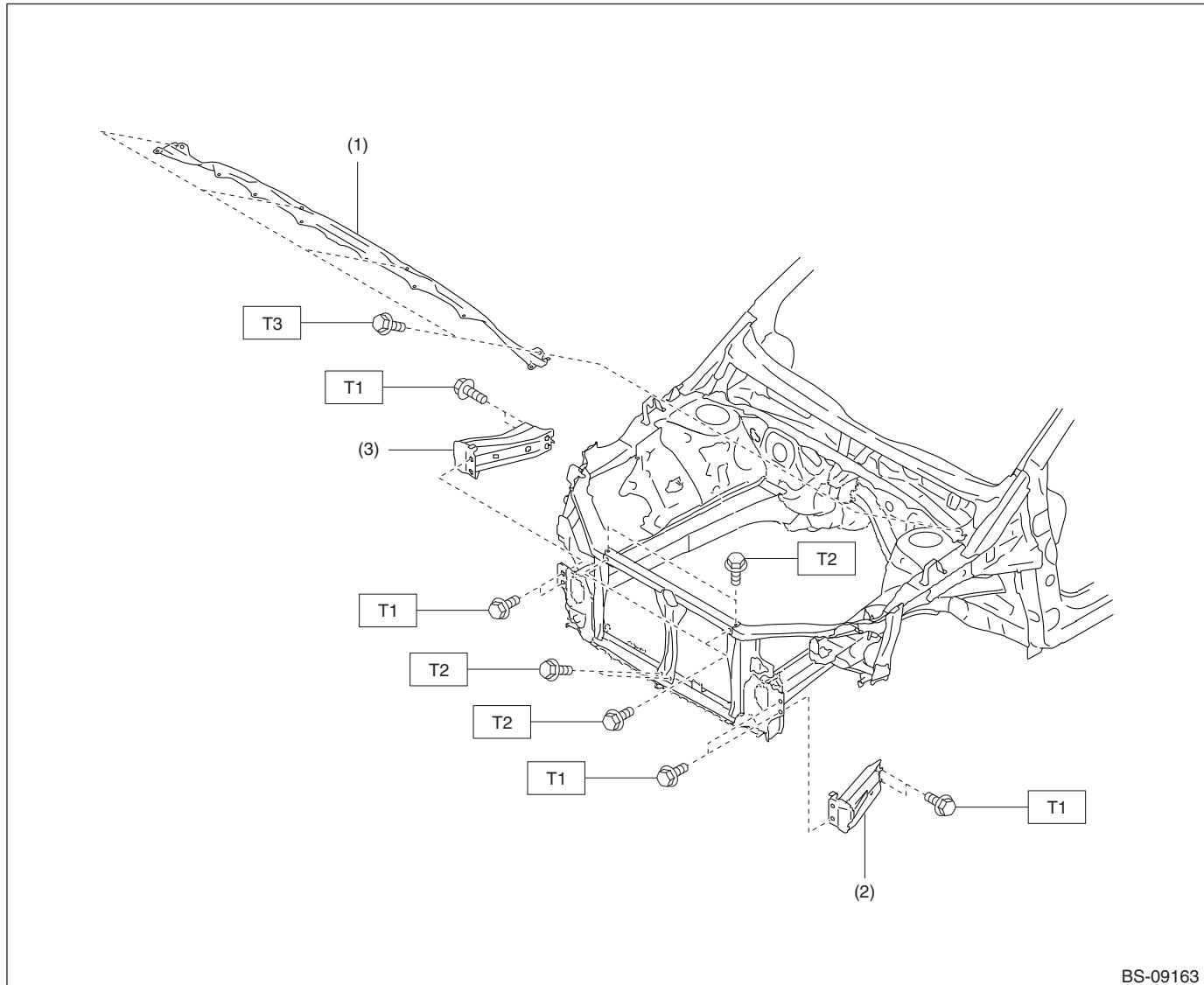
T1: 65 (6.63, 47.94)

T2: 18 (1.84, 13.28)

T3: 7.5 (0.76, 5.53)

Assembly of Exterior Parts

• '18 MY —



(1) PNL BULK HEAD F
(2) GUSSET CP F SD LH

(3) GUSSET CP F SD RH

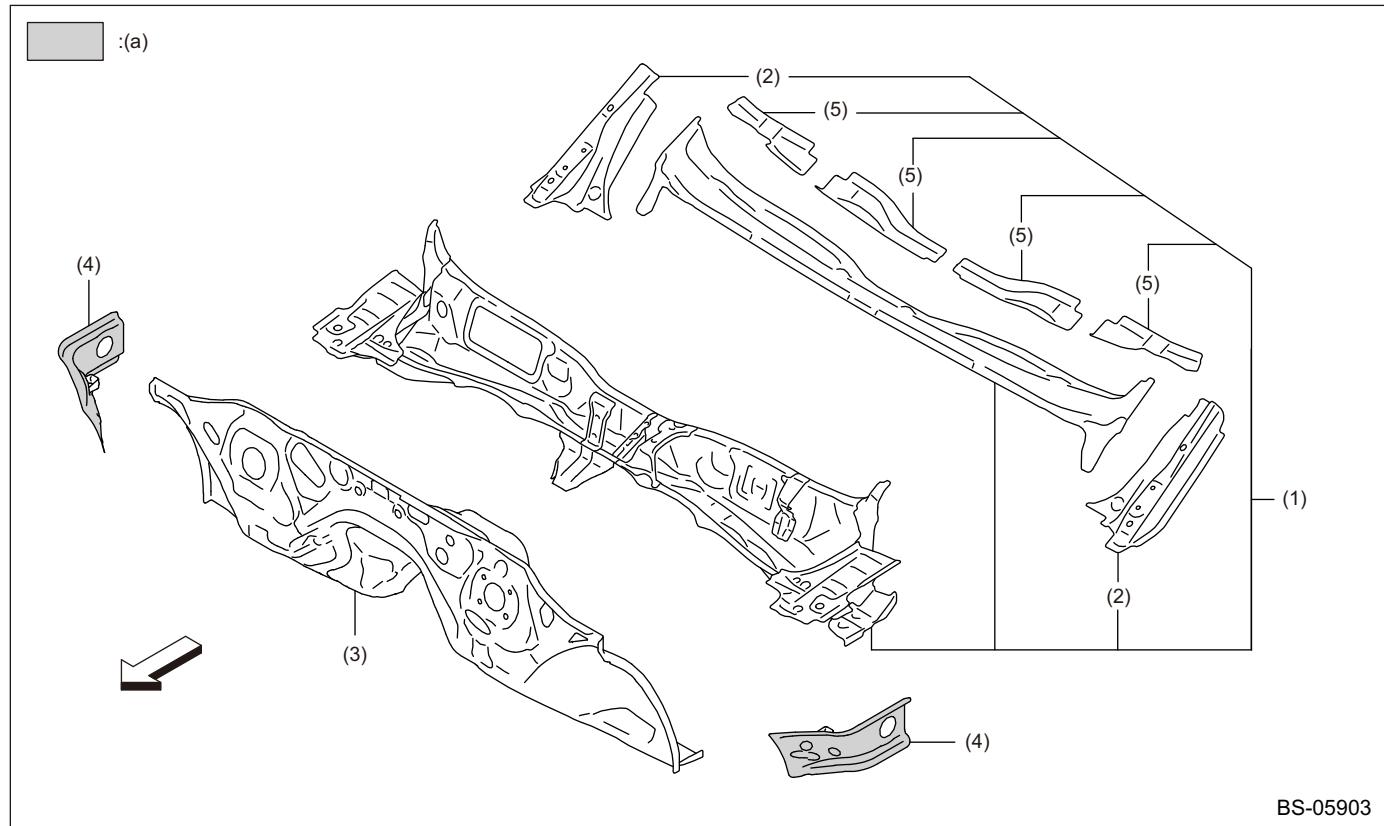
Tightening torque: N·m (kgf·m, ft·lb)
T1: 65 (6.63, 47.94)
T2: 18 (1.84, 13.28)
T3: 7.5 (0.76, 5.53)

3. Panel Components

A: COMPONENTS

1. TOE BOARD & FRONT PANEL

• '14 MY



(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front panel & Duct

(2) Front panel side reinforcement

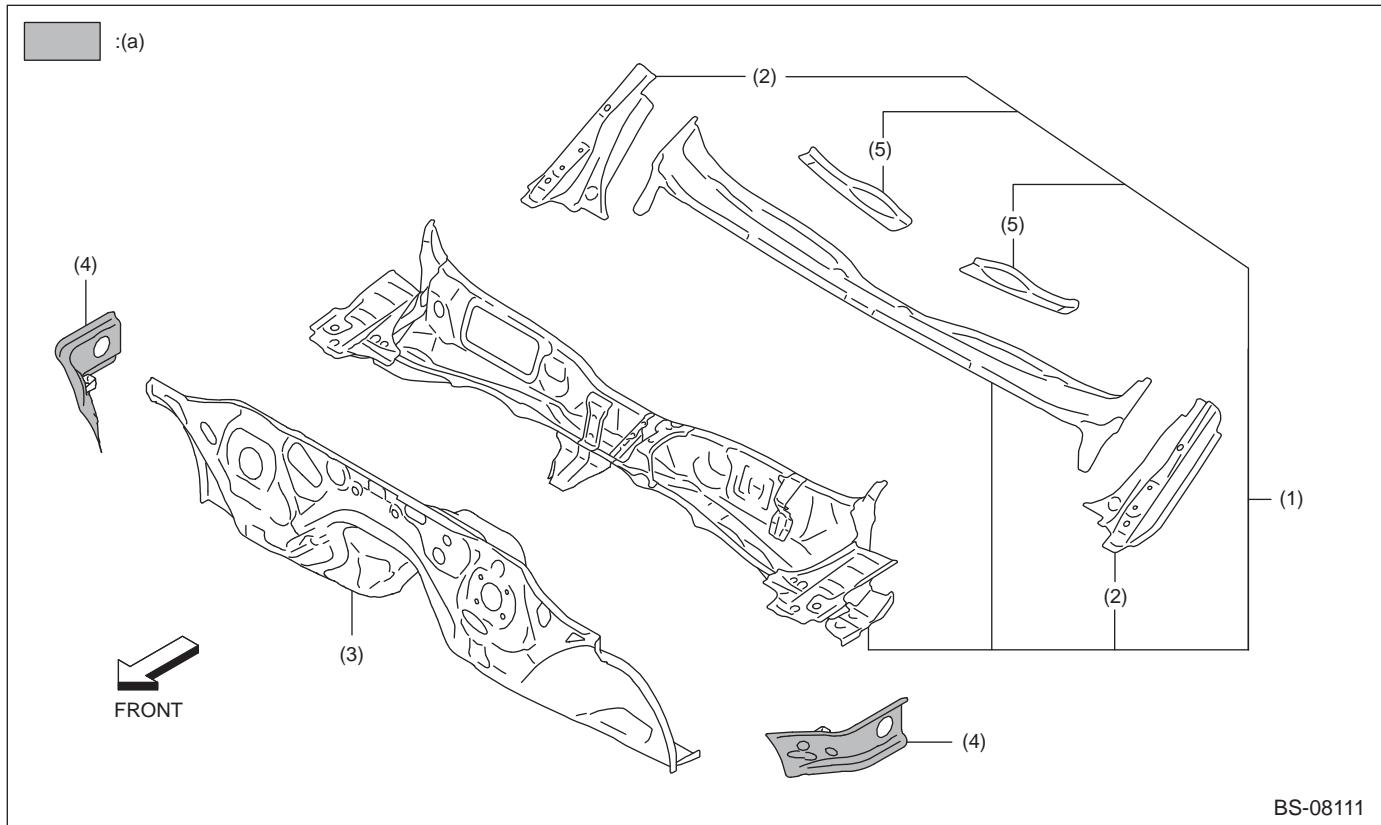
(3) Toe board

(4) Gusset

(5) Front panel cover

Panel Components

• '14/'15MY —



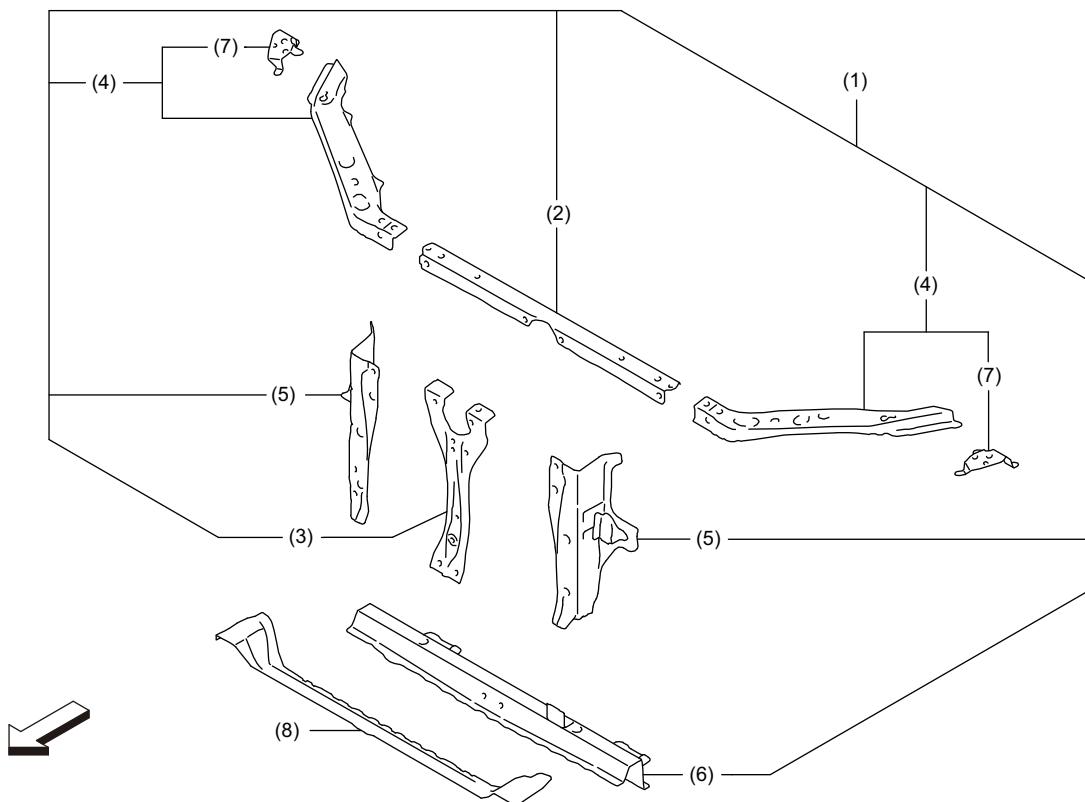
(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front panel & Duct (3) Toe board (5) Front panel cover

(2) Front panel side reinforcement (4) Gusset

Panel Components

2. RADIATOR PANEL



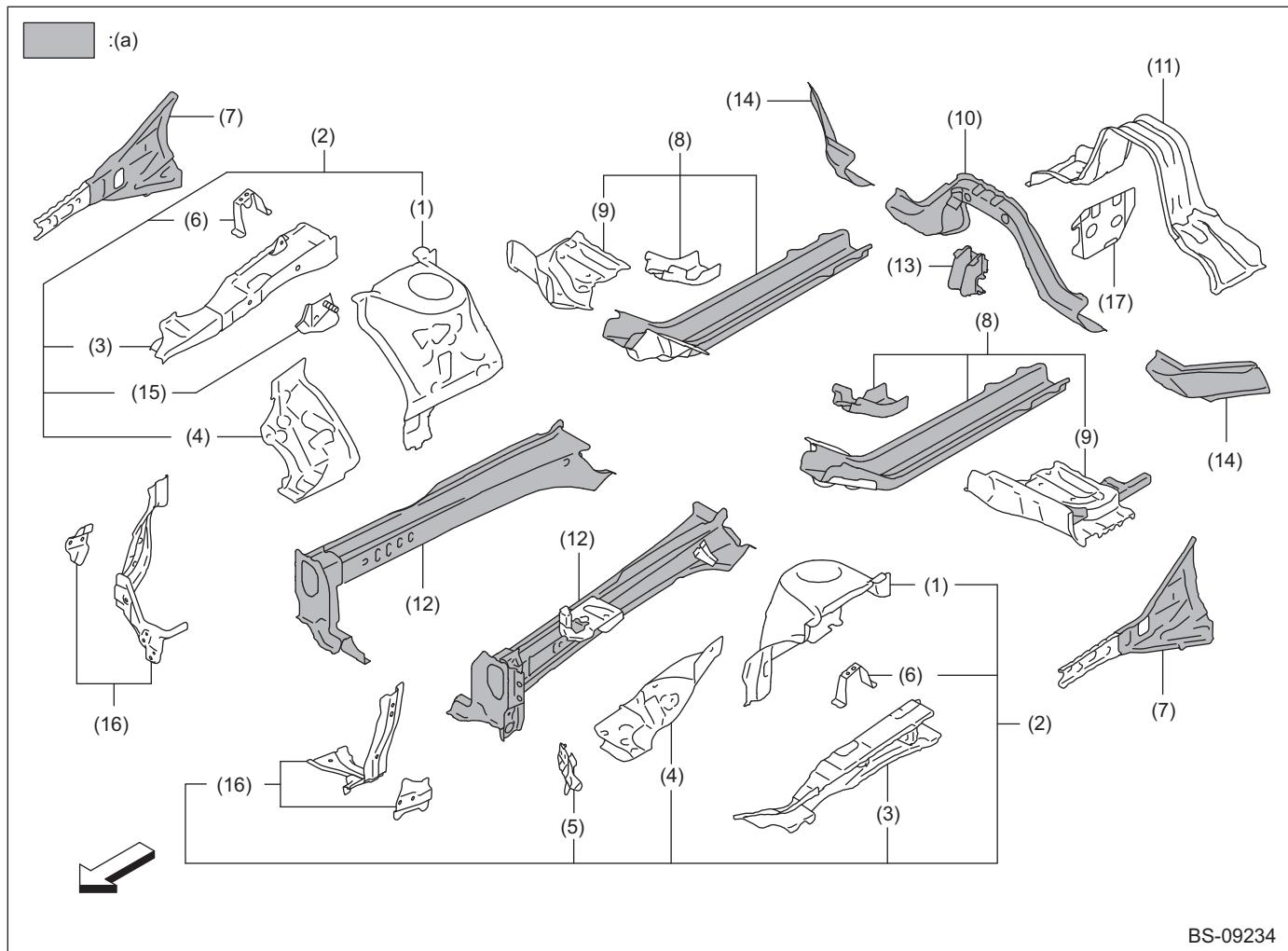
BS-05904

(1) Radiator panel	(4) Radiator side frame upper	(7) Front fender bracket
(2) Radiator frame upper	(5) Radiator panel side	(8) Radiator frame lower B
(3) Hood lock stay	(6) Radiator frame lower A	

Panel Components

3. FRONT WHEEL APRON

• '14 MY — '17 MY



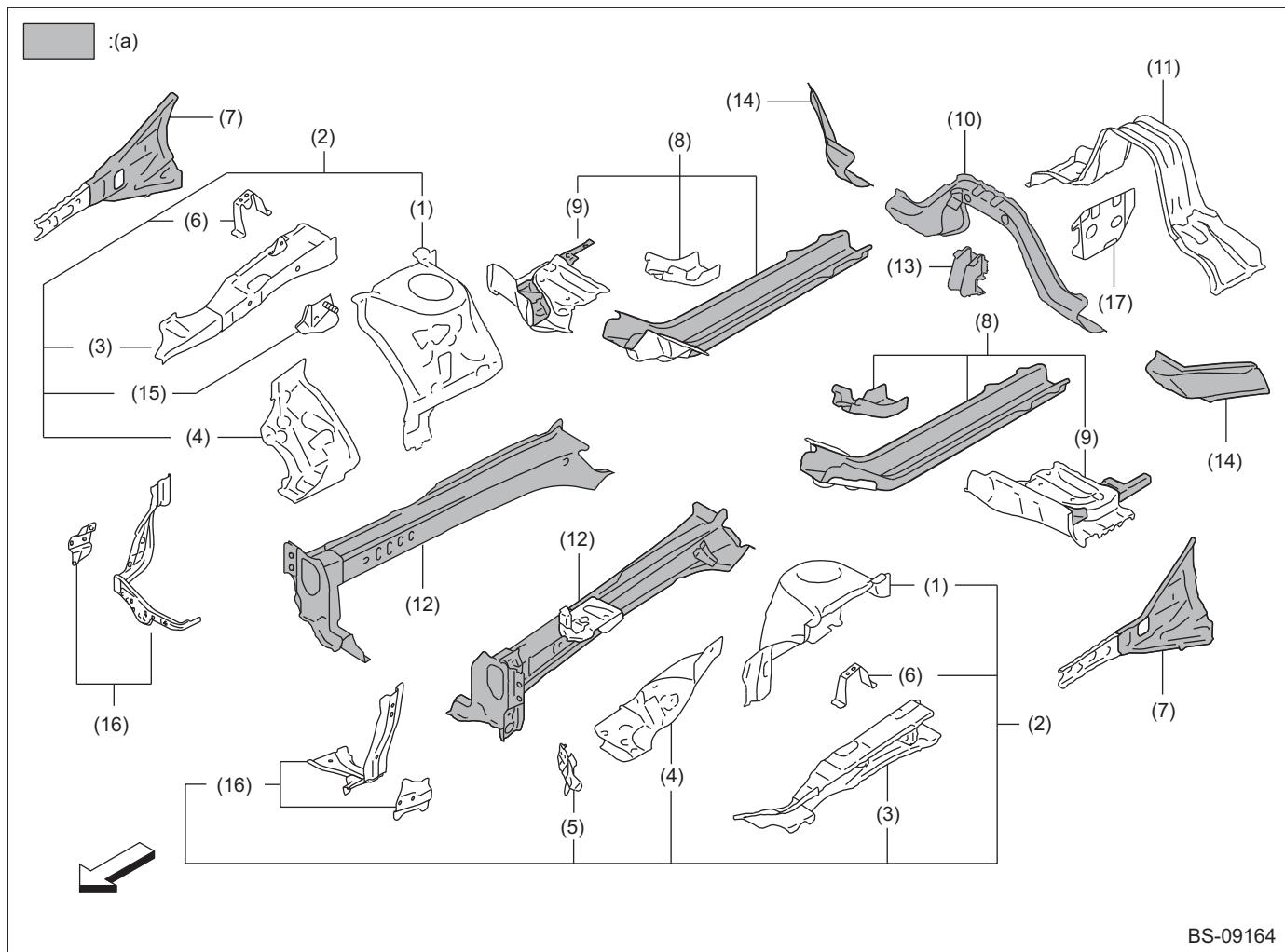
BS-09234

(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front suspension bracket	(7) Side upper frame	(13) Pitching stopper bracket
(2) Wheel apron	(8) Front side frame rear	(14) Toe board cross member side
(3) Side upper inner frame	(9) Toe board reinforcement	(15) VDC bracket
(4) Front wheel apron	(10) Toe board cross member center	(16) Front wheel apron front
(5) Battery rod bracket	(11) Floor cross member front	(17) Reinforcement floor pan front
(6) Upper rear fender bracket	(12) Front side frame front	

Panel Components

• '18 MY —



BS-09164

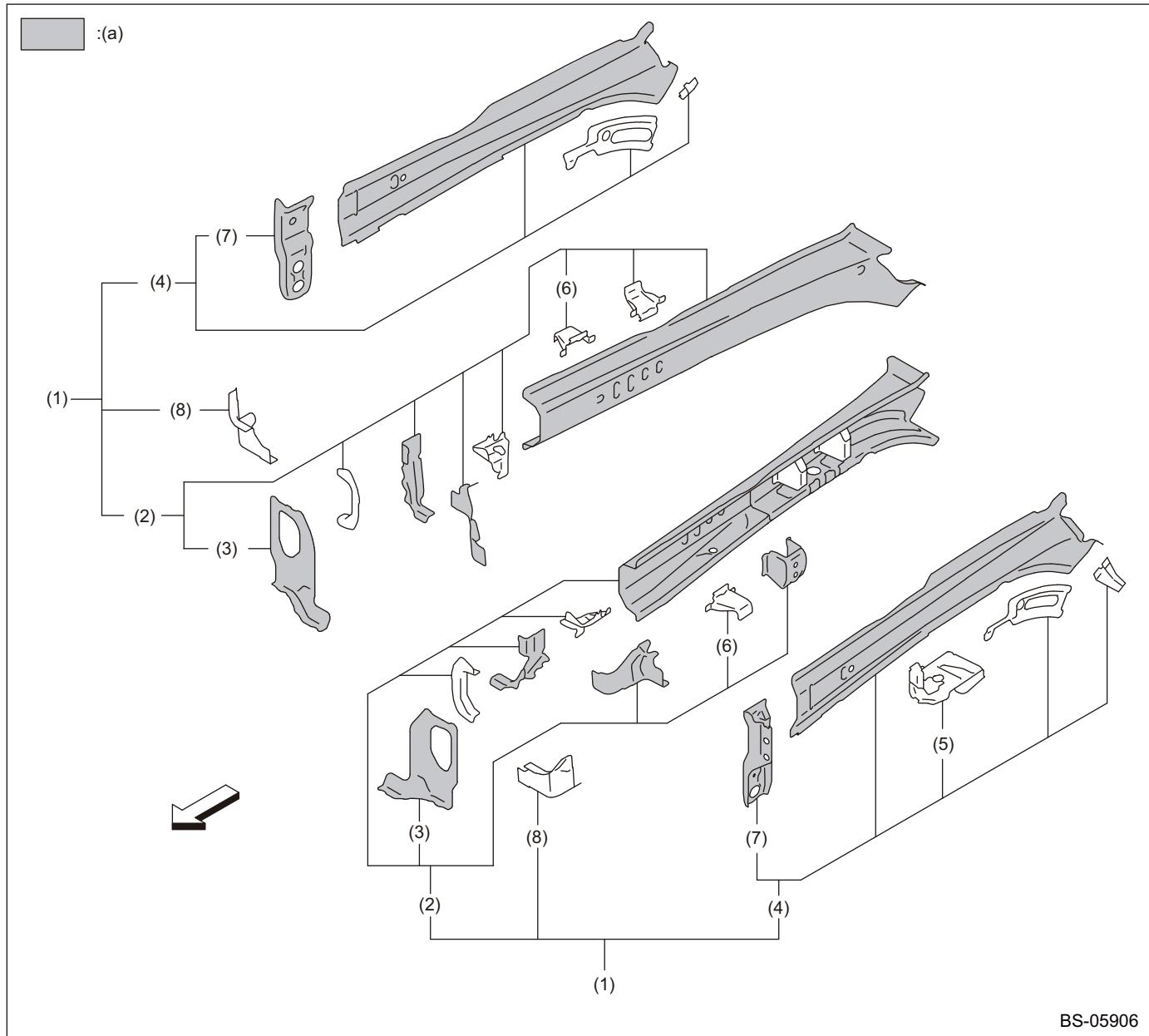
(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front suspension bracket	(7) Side upper frame	(13) Pitching stopper bracket
(2) Wheel apron	(8) Front side frame rear	(14) Toe board cross member side
(3) Side upper inner frame	(9) Toe board reinforcement	(15) VDC bracket
(4) Front wheel apron	(10) Toe board cross member center	(16) Front wheel apron front
(5) Battery rod bracket	(11) Floor cross member front	(17) Reinforcement floor pan front
(6) Upper rear fender bracket	(12) Front side frame front	

Panel Components

4. FRONT SIDE FRAME

• '14 MY — '17 MY



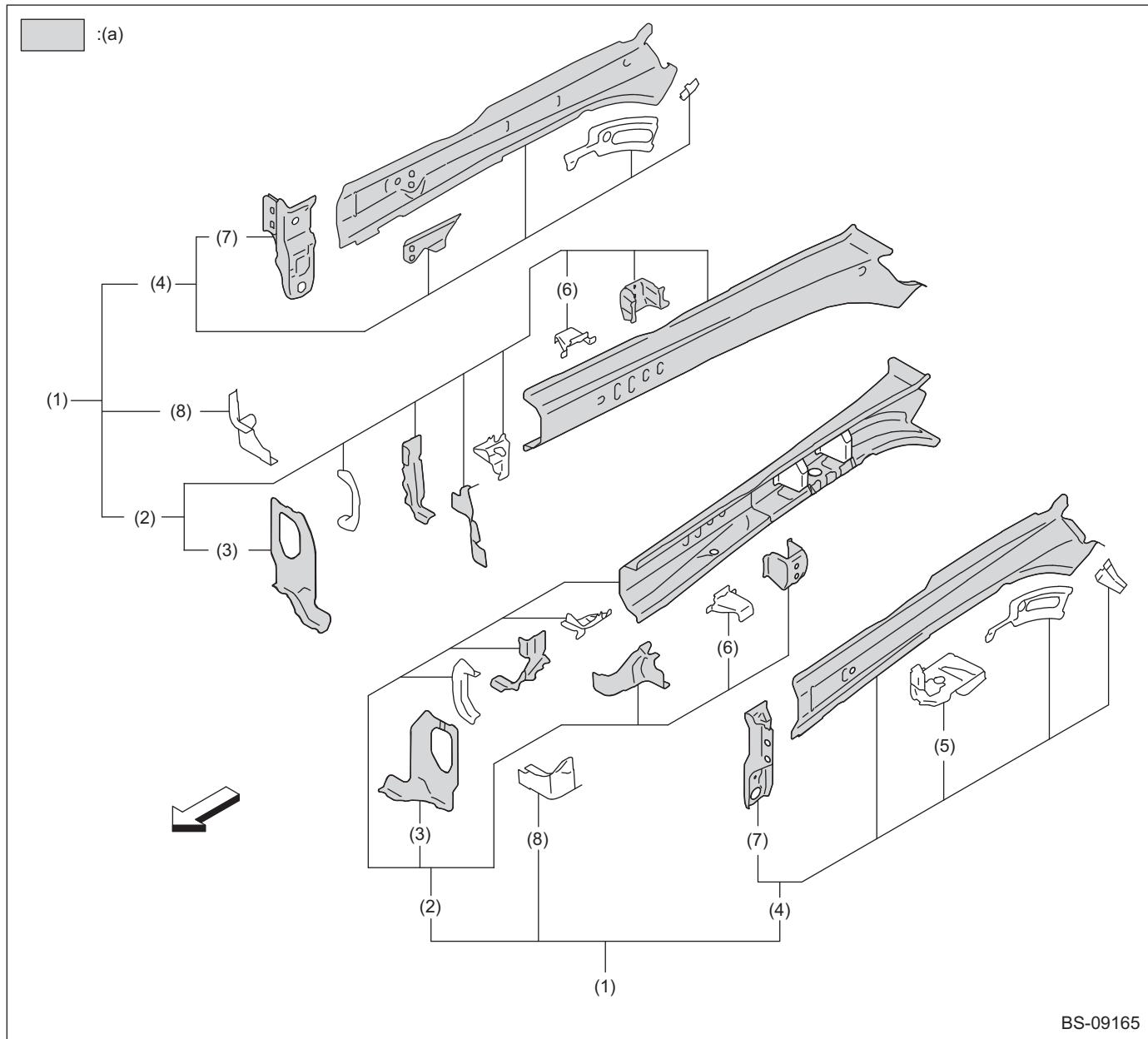
BS-05906

(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front side frame front	(4) Closing plate	(7) Front hook reinforcement
(2) Front side sub frame front	(5) Battery reinforcement gusset	(8) Front frame gusset
(3) Front frame plate front	(6) Separator	

Panel Components

• '18 MY —



BS-09165

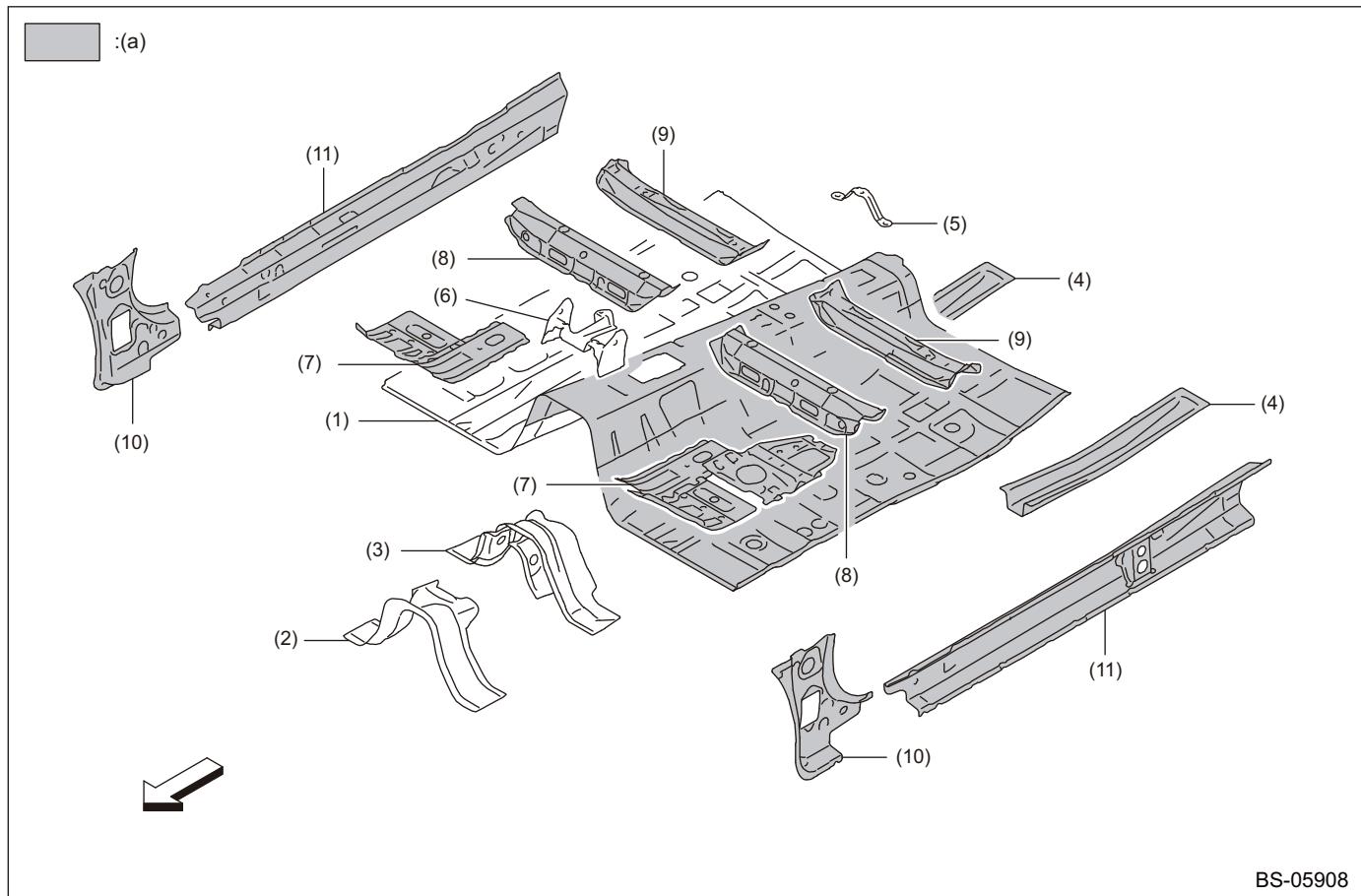
(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front side frame front (4) Closing plate (7) Front hook reinforcement
(2) Front side sub frame front (5) Battery reinforcement gusset (8) Front frame gusset
(3) Front frame plate front (6) Separator

Panel Components

5. FRONT FLOOR PANEL

• '14 MY — '17 MY



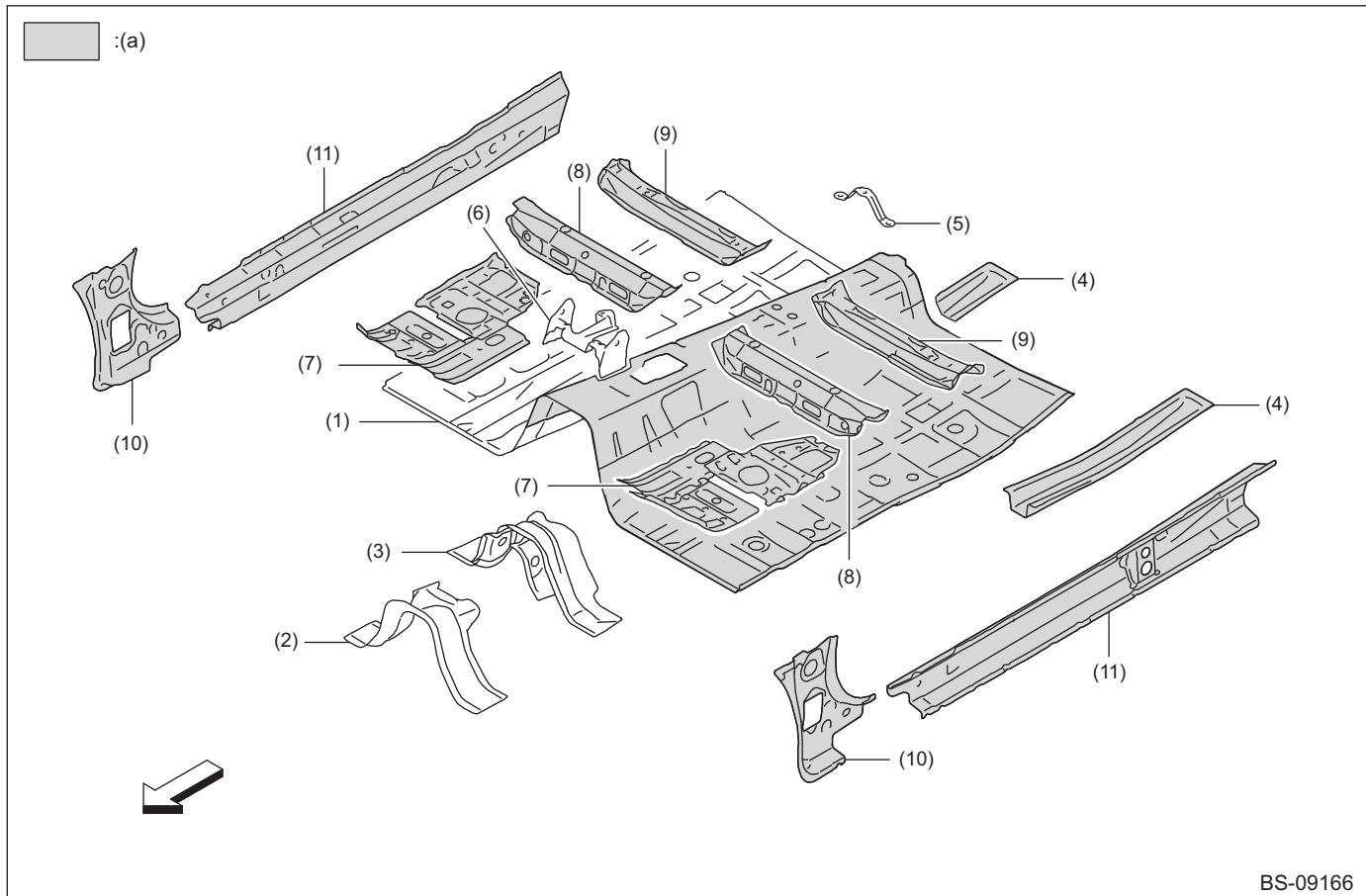
BS-05908

(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front floor pan	(5) Harness bracket	(9) Front seat cross member rear
(2) Floor cross member center	(6) Instrument panel bracket	(10) Front Pillar inner lower
(3) Floor cross member rear	(7) Front floor frame front	(11) Side sill inner
(4) Front floor frame rear	(8) Front seat cross member front	

Panel Components

• '18 MY —



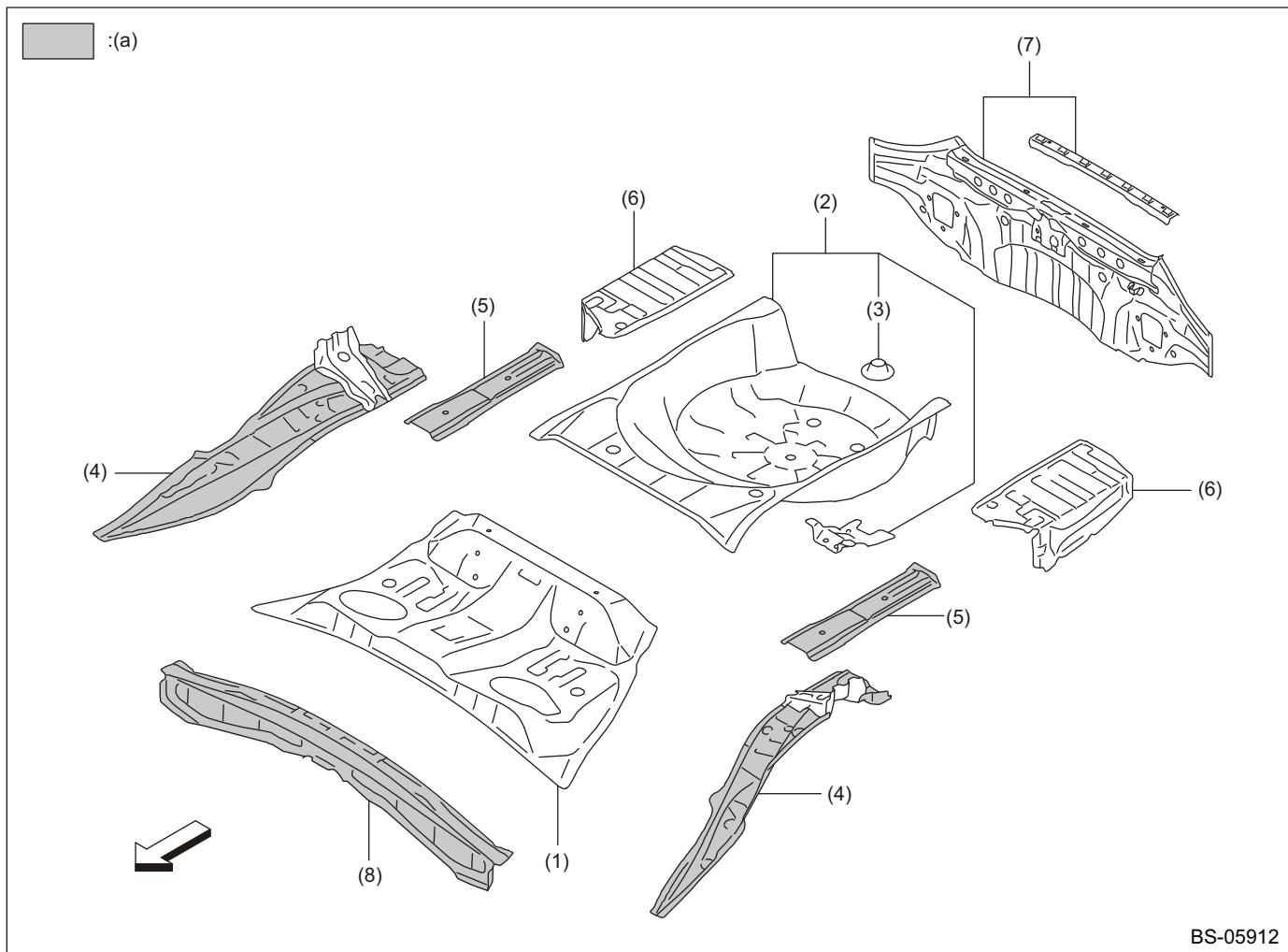
BS-09166

(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front floor pan	(5) Harness bracket	(9) Front seat cross member rear
(2) Floor cross member center	(6) Instrument panel bracket	(10) Front Pillar inner lower
(3) Floor cross member rear	(7) Front floor frame front	(11) Side sill inner
(4) Front floor frame rear	(8) Front seat cross member front	

Panel Components

6. REAR FLOOR PANEL & REAR SKIRT



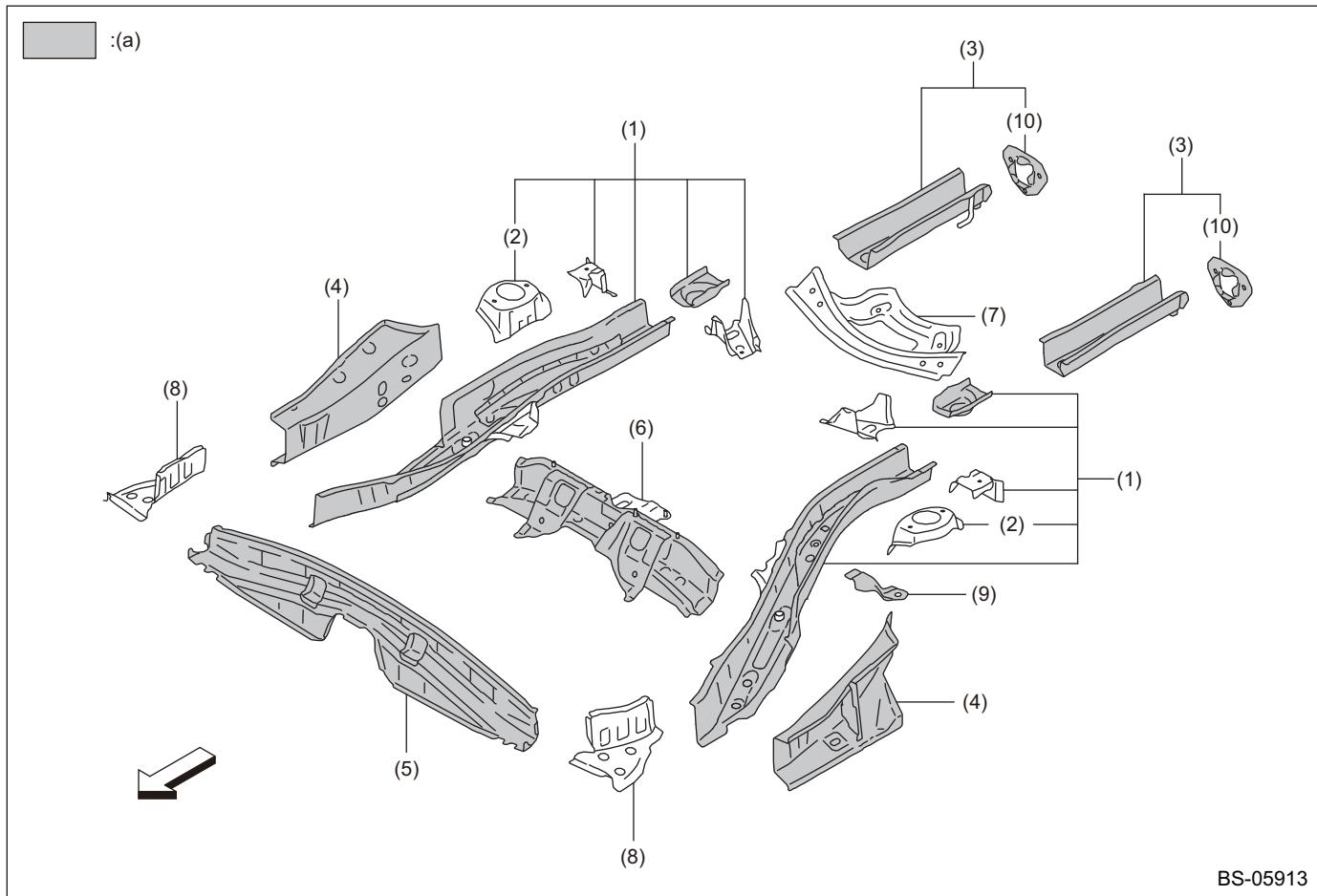
BS-05912

(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Rear floor pan front (4) Damper bracket floor upper (7) Rear skirt
(2) Rear floor pan rear (5) Rear side frame upper rear (8) Rear floor cross member A front
(3) Spare tire bracket (6) Floor side rear

Panel Components

7. REAR FLOOR SIDE FRAME



BS-05913

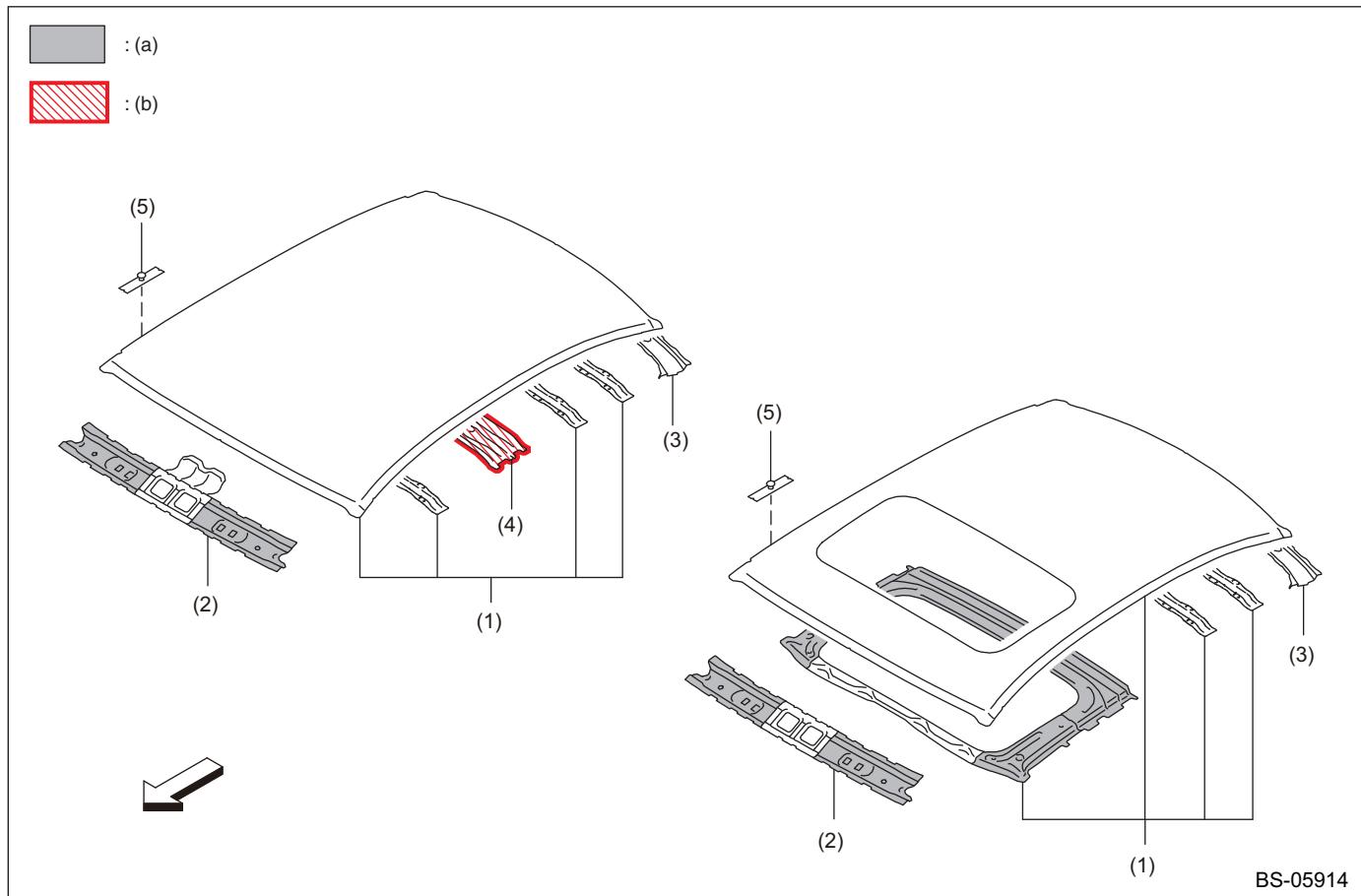
(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Floor side frame rear (5) Rear floor cross member A rear (9) Drain hose bracket
(2) Rear suspension bracket (6) Rear floor cross member B (10) Rear bumper bracket
(3) Floor side frame rear lower rear (7) Rear floor cross member C
(4) Side sill inner rear (8) Rear side frame gusset

Panel Components

8. ROOF

• Models without sunroof/ Models with sunroof



(a) High-strength tensile steel
(440 — 590 MPa class)

(b) High-strength tensile steel
(1,500 MPa class)

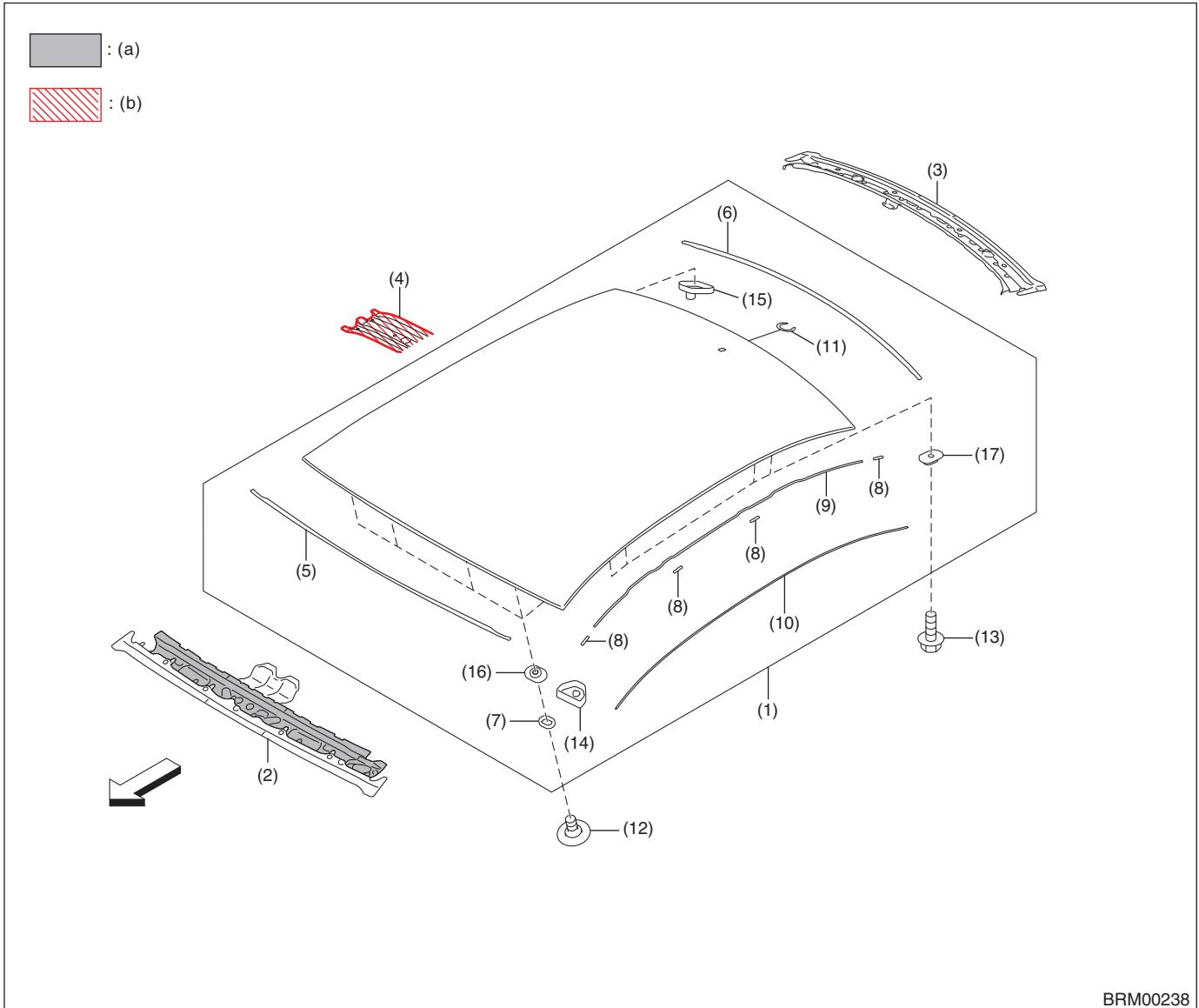
(1) Roof panel
(2) Front roof rail

(3) Rear roof rail
(4) Roof center brace

(5) T stud plate

Panel Components

• Carbon roof model ('18 MY —)



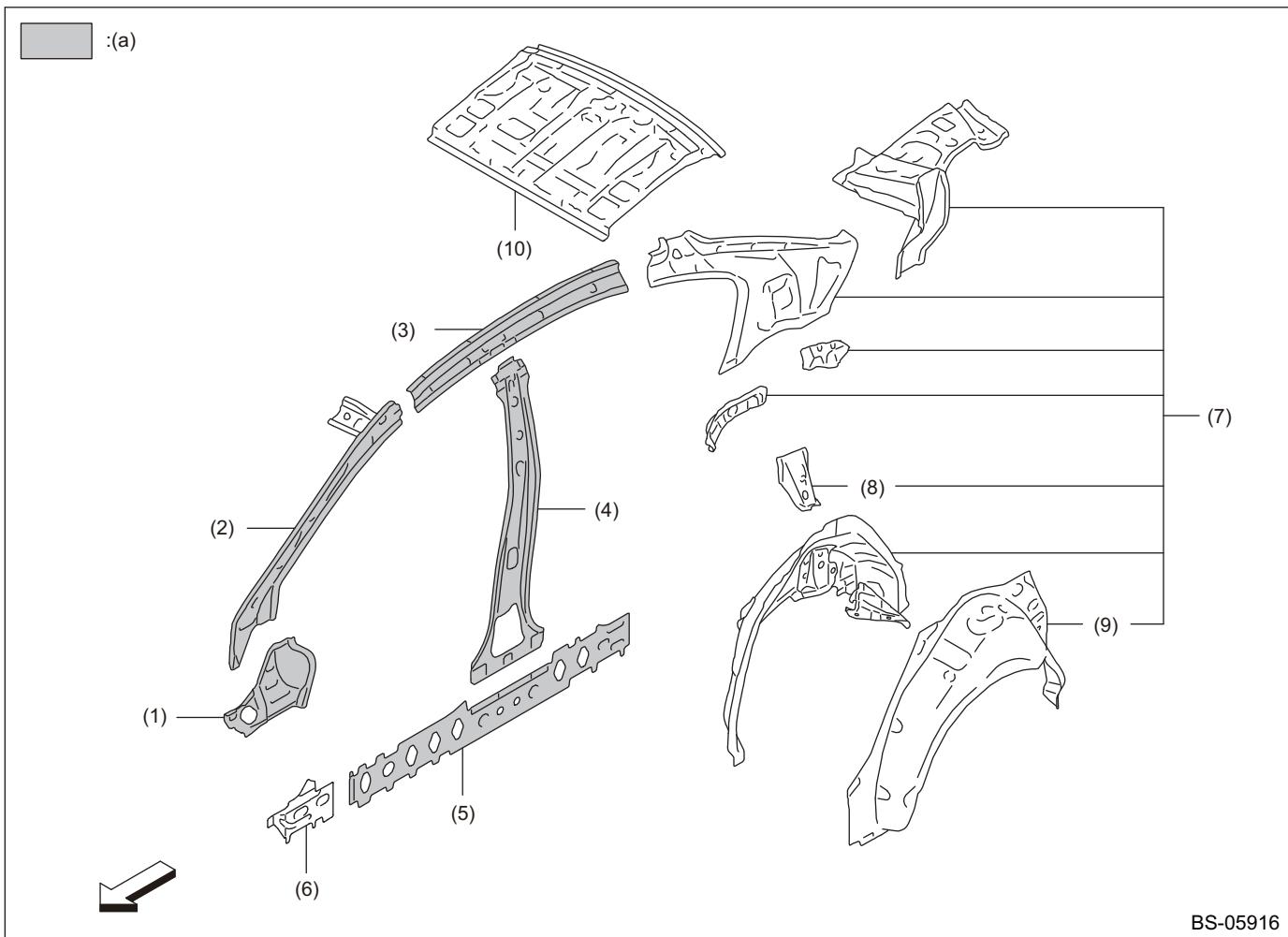
(a) High-strength tensile steel
(440 — 590 MPa class)

(b) High-strength tensile steel
(1,500 MPa class)

(1) Roof panel carbon assembly	(7) Spacer	(13) Roof assembly bolt side
(2) Front roof rail	(8) Spacer roof	(14) Pin front D12
(3) Rear roof rail	(9) Seal roof side	(15) Pin rear D12
(4) Roof center brace	(10) Lip	(16) Spacer nut roof front
(5) Seal roof front	(11) Plate antenna	(17) Spacer nut roof side
(6) Seal roof rear	(12) Roof assembly bolt front	

Panel Components

9. SIDE PANEL INNER



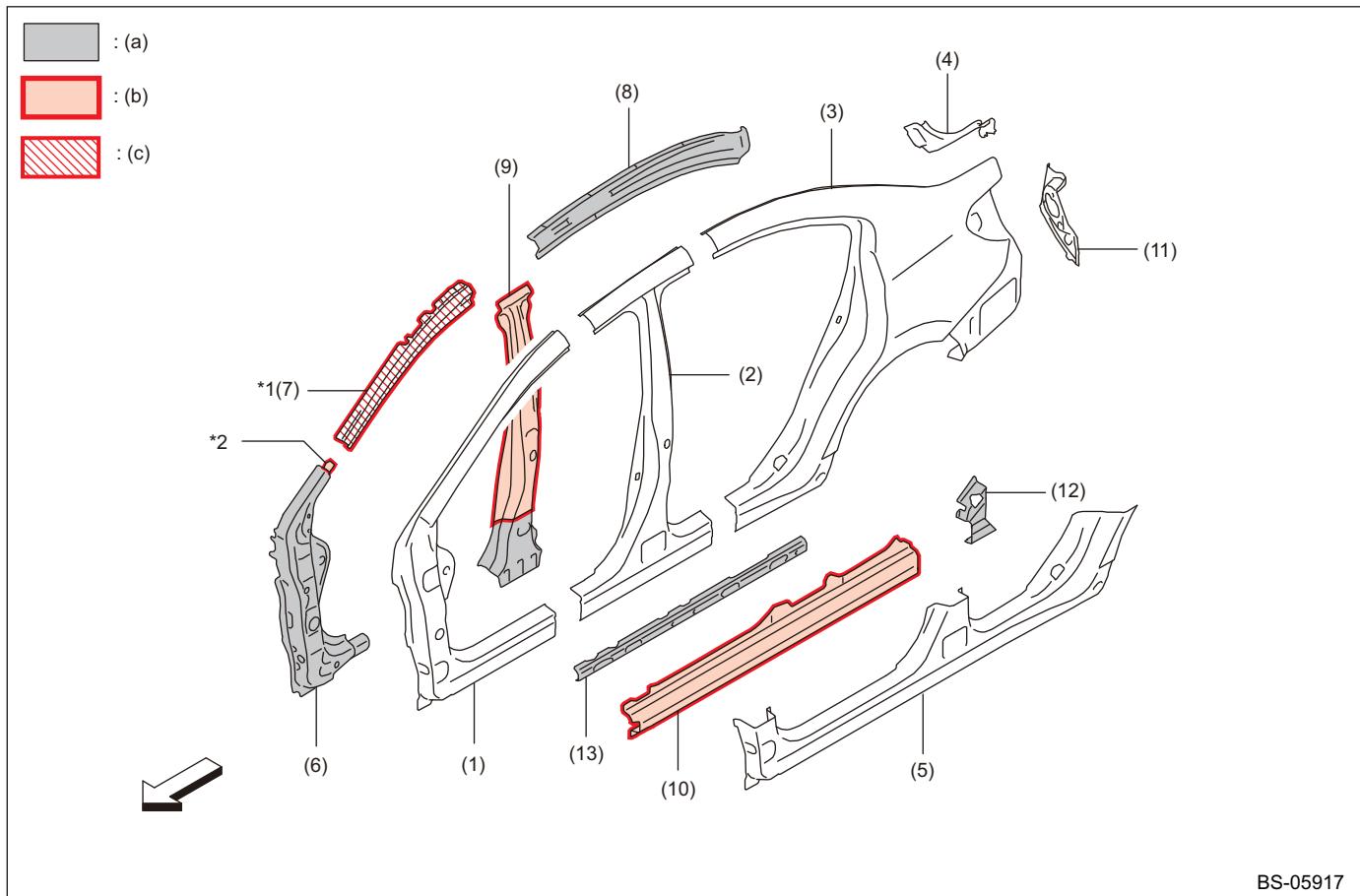
(a) High-strength tensile steel
(440 — 590 MPa class)

(1) Front pillar inner center	(5) Reinforcement sill side rear	(9) Arch rear inner
(2) Front pillar inner upper	(6) Reinforcement sill side front	(10) Rear panel
(3) Side rail inner	(7) Rear quarter inner	
(4) Pillar center inner	(8) Rear pillar reinforcement outer	

Panel Components

10. SIDE PANEL OUTER

• '14 MY — '17 MY



BS-05917

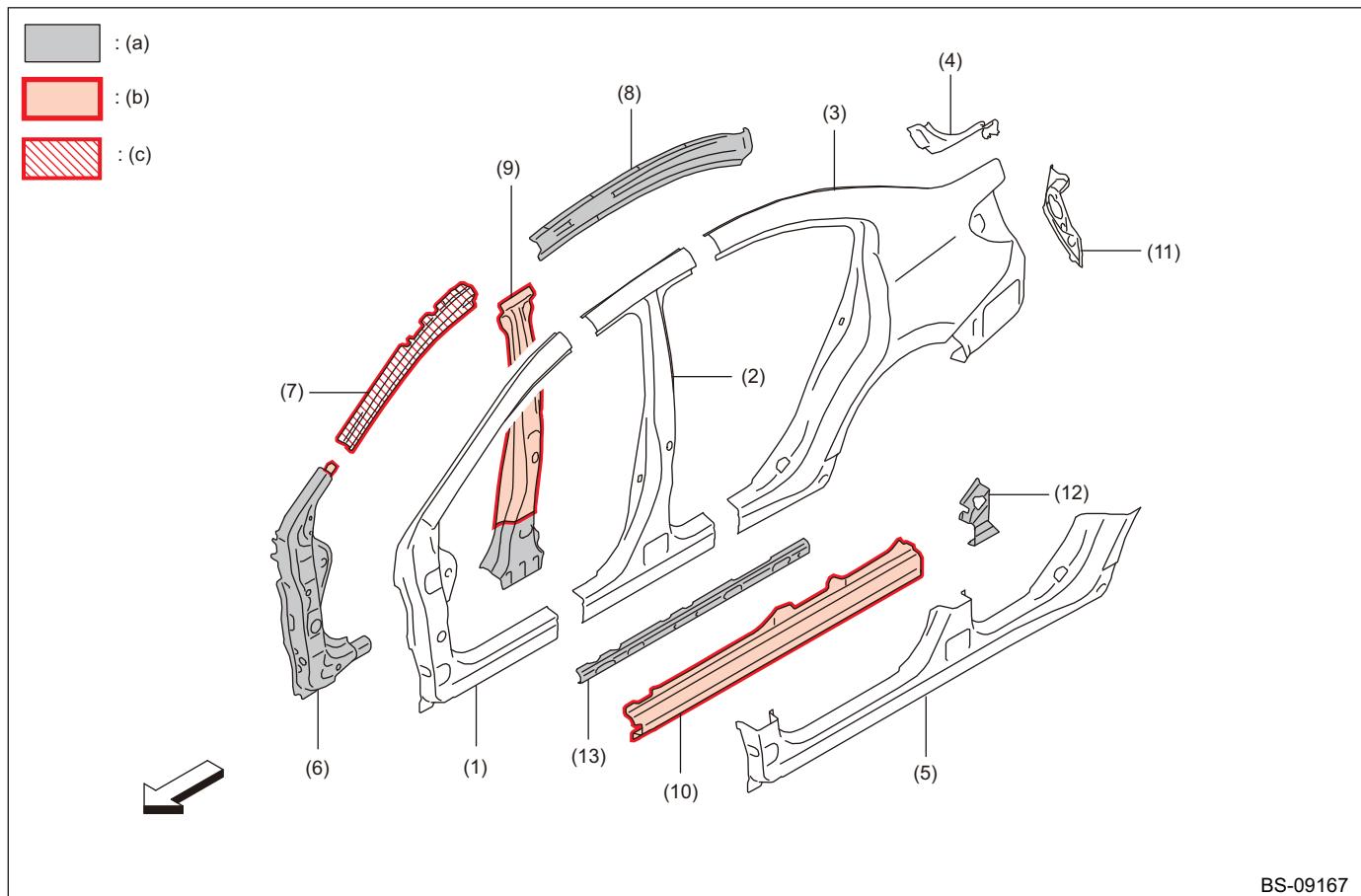
*1: High-tensile tensile steel RH side
(440 — 590 MPa class)

*2: Parts of the LH side only

(a) High-strength tensile steel (440 — 590 MPa class)	(b) High-strength tensile steel (980 MPa class)	(c) High-strength tensile steel (1,500 MPa class)
(1) Front pillar outer	(6) Front pillar reinforcement lower	(11) Rear quarter end
(2) Center pillar outer	(7) Side rail reinforcement outer front	(12) Rear quarter catcher reinforcement
(3) Rear quarter outer	(8) Reinforcement rail side rear	(13) Reinforcement sill side outer A
(4) Rear pillar patch	(9) Center pillar reinforcement	
(5) Side sill outer	(10) Reinforcement sill side outer	

Panel Components

• '18 MY —



(a) High-strength tensile steel
(440 — 590 MPa class)

(b) High-strength tensile steel
(980 MPa class)

(c) High-strength tensile steel
(1,500 MPa class)

(1) Front pillar outer
(2) Center pillar outer
(3) Rear quarter outer
(4) Rear pillar patch
(5) Side sill outer

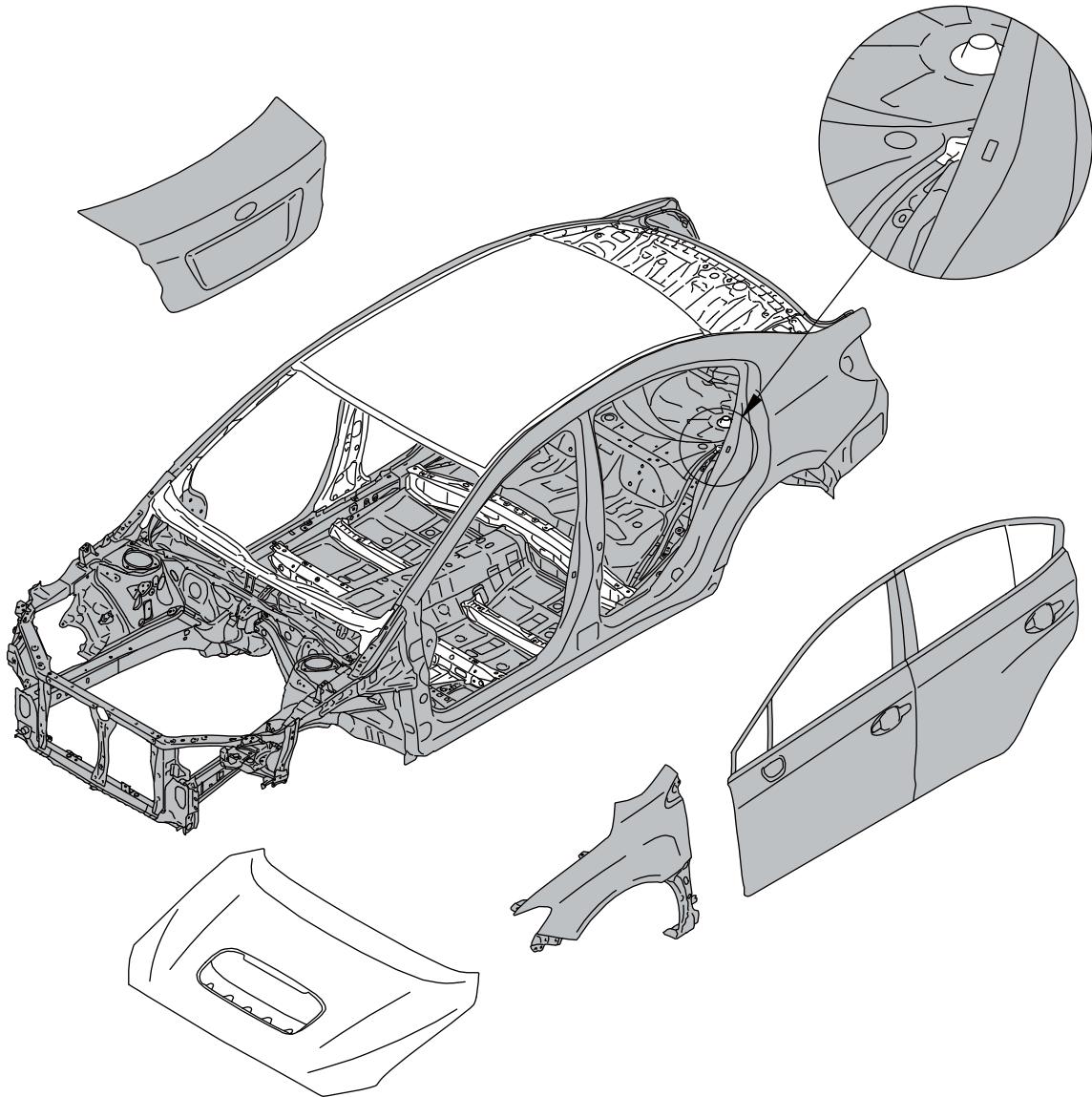
(6) Front pillar reinforcement lower
(7) Side rail reinforcement outer front
(8) Reinforcement rail side rear
(9) Center pillar reinforcement
(10) Reinforcement sill side outer

(11) Rear quarter end
(12) Rear quarter catcher reinforcement
(13) Reinforcement sill side outer A

4. Galvanized Sheet Metal

A: SPECIFICATION

 : (1)



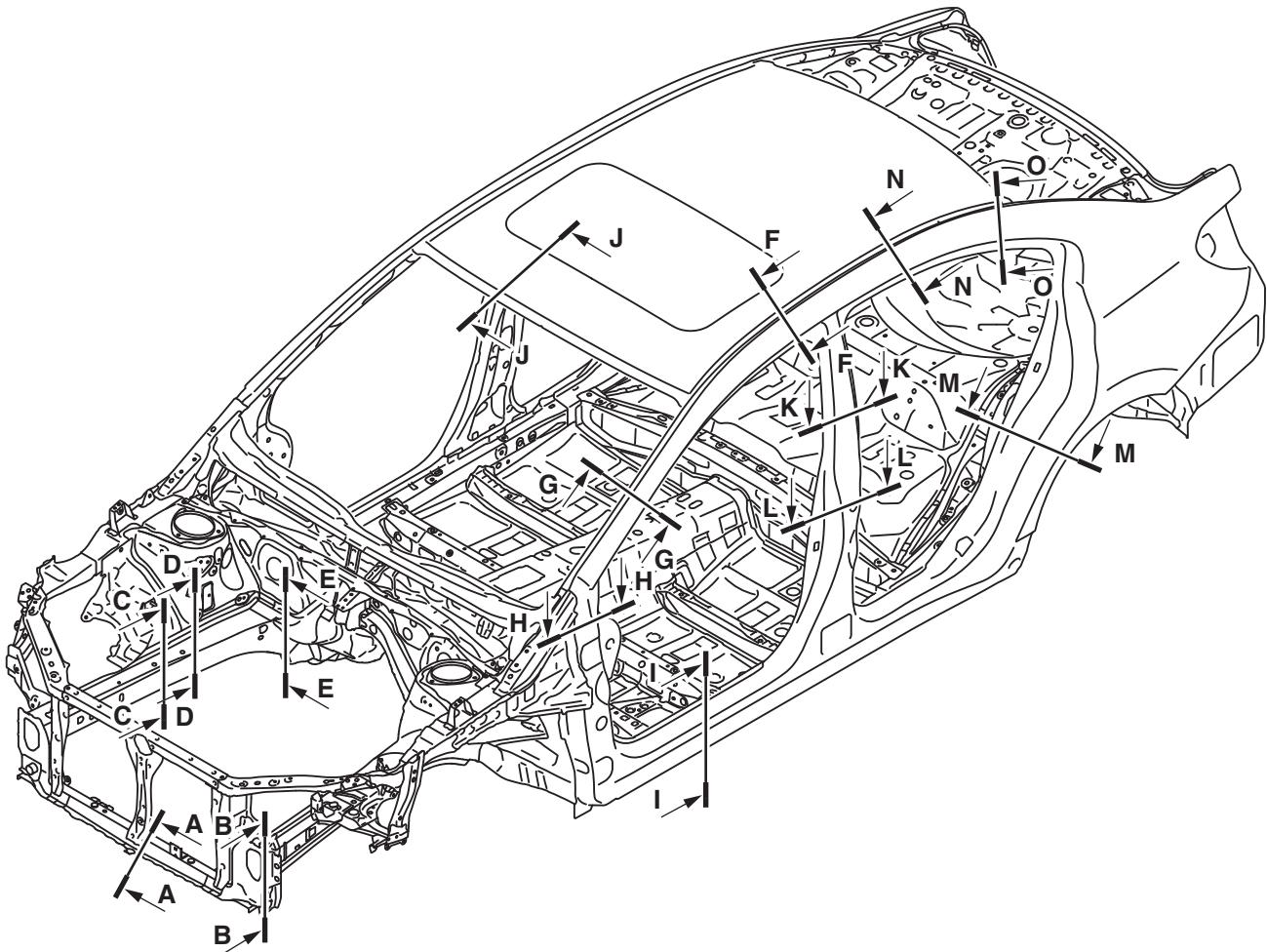
BS-05901

(1) Galvanized sheet metal
(Both sides)

The fuel flap consists of galvanized sheet metal.

5. Body Construction

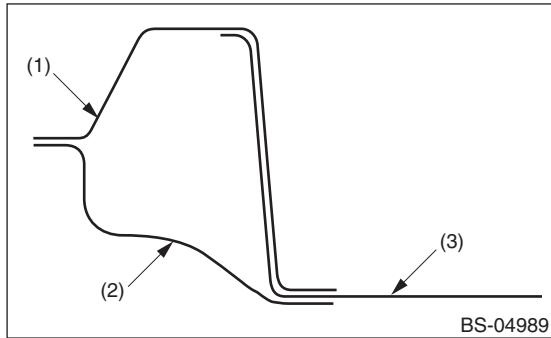
A: SPECIFICATIONS



BS-05977

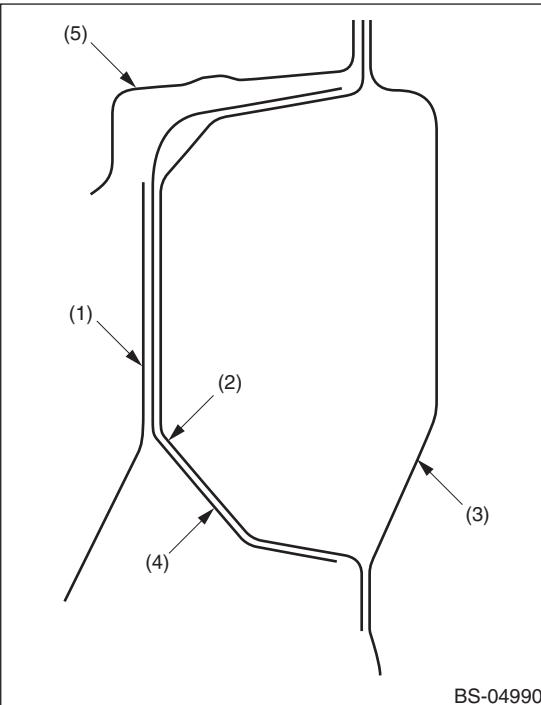
Body Construction

Cross section A — A



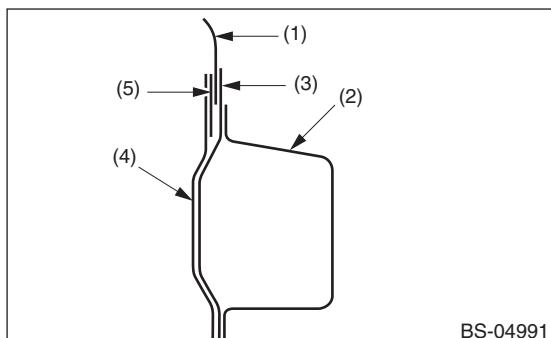
- (1) Radiator frame lower A
- (2) Radiator frame lower B
- (3) Radiator bracket

Cross section B — B



- (1) Front gusset front A
- (2) Front side frame front
- (3) Hook reinforcement
- (4) Bumper bracket front
- (5) Bumper bracket rear

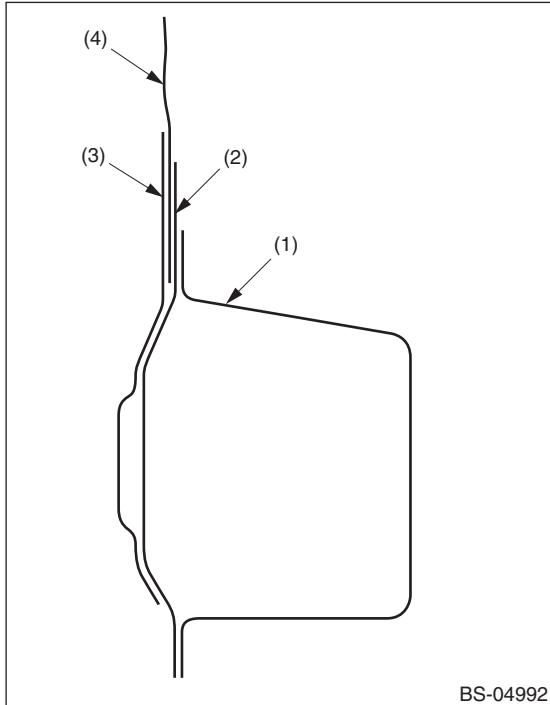
Cross section C — C



- (1) Front wheel apron
- (2) Front side frame front
- (3) Closing plate
- (4) Front suspension lower reinforcement
- (5) Front suspension lower bracket

Body Construction

Cross section D — D



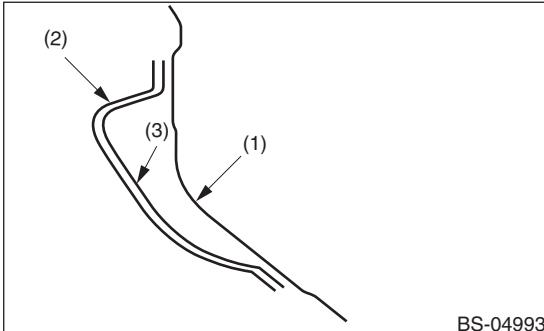
(1) Front side frame front

(2) Closing plate

(3) Front suspension lower reinforcement

(4) Front suspension lower bracket

Cross section E — E



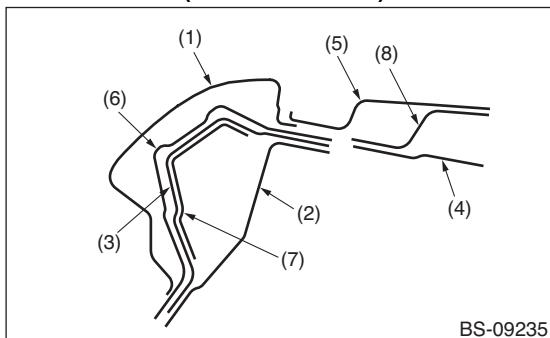
BS-04993

(1) Toe board

(2) Toe board center cross member

(3) Toe board side cross member

Cross section F — F ('14 MY — '17 MY)



BS-09235

(1) Panel side outer

(2) Side rail inner

(3) Reinforcement rail side outer front

(4) Reinforcement frame sunroof

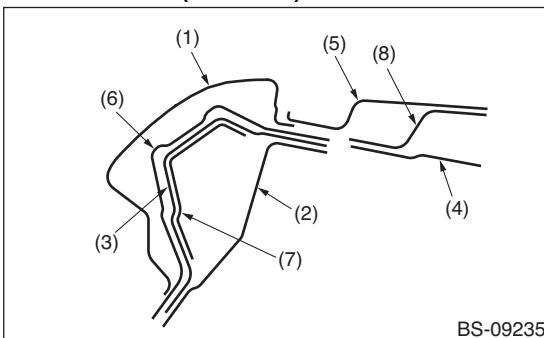
(5) Roof panel

(6) Reinforcement rail side rear

(7) Reinforcement rail side A (only LH)

(8) Frame sunroof

Cross section F — F ('18 MY —)



BS-09235

(1) Panel side outer

(2) Side rail inner

(3) Reinforcement rail side outer front

(4) Reinforcement frame sunroof

(5) Roof panel

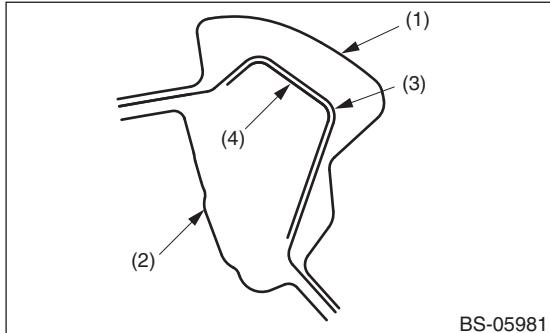
(6) Reinforcement rail side rear

(7) Reinforcement rail side A

(8) Frame sunroof

Body Construction

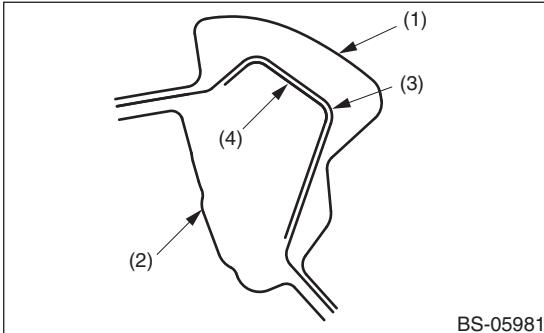
Cross section G — G ('14 MY — '17 MY)



BS-05981

- (1) Panel side outer
- (2) Front pillar inner upper
- (3) Side rail reinforcement outer front
- (4) Side rail reinforcement outer front A (only LH)

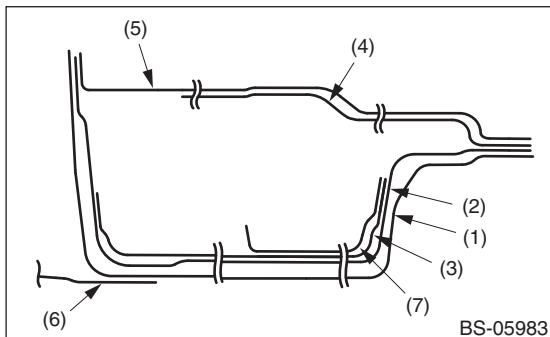
Cross section G — G ('18 MY —)



BS-05981

- (1) Panel side outer
- (2) Front pillar inner upper
- (3) Side rail reinforcement outer front
- (4) Side rail reinforcement outer front A

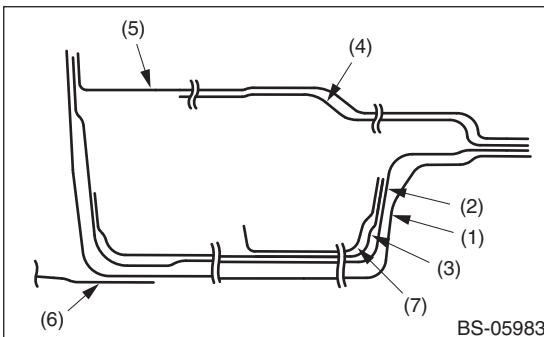
Cross section H — H ('14 MY — '17 MY)



BS-05983

- (1) Panel side outer
- (2) Front pillar reinforcement outer
- (3) Front pillar reinforcement Center B
- (4) Front pillar inner Center
- (5) Front pillar inner upper
- (6) Side frame gusset upper
- (7) front pillar reinforcement upper (only LH)

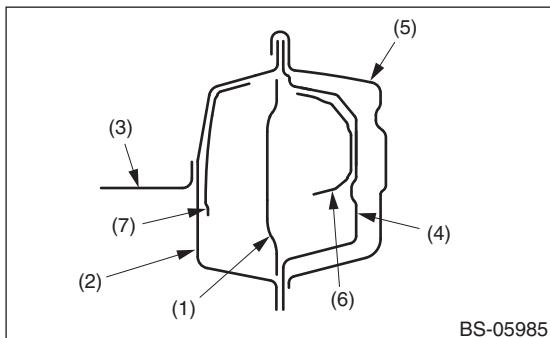
Cross section H — H ('18 MY —)



BS-05983

- (1) Panel side outer
- (2) Front pillar reinforcement outer
- (3) Front pillar reinforcement Center B
- (4) Front pillar inner Center
- (5) Front pillar inner upper
- (6) Side frame gusset upper
- (7) front pillar reinforcement upper

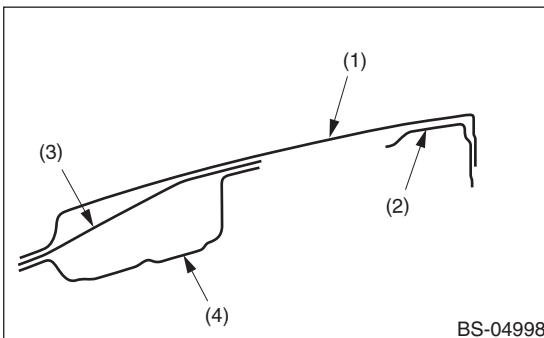
Cross section I — I



BS-05985

- (1) Reinforcement sill side rear
- (2) Side sill inner front
- (3) Floor pan front
- (4) Reinforcement sill side outer
- (5) Panel side outer
- (6) Reinforcement sill side outer A
- (7) Reinforcement sill side front

Cross section J — J

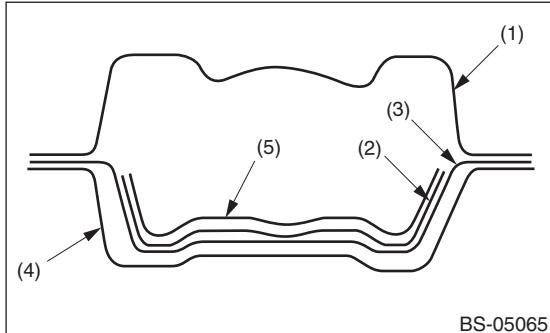


BS-04998

- (1) Roof panel
- (2) Frame sunroof
- (3) Front rail upper
- (4) Front rail lower

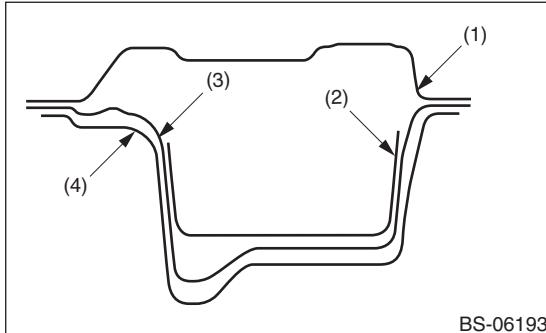
Body Construction

Cross section K — K



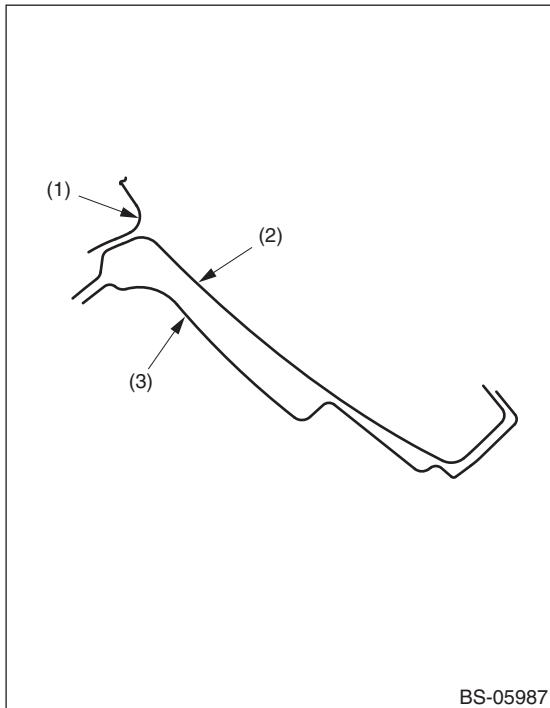
- (1) Pillar center inner
- (2) Reinforcement pillar center outer A
- (3) Reinforcement pillar center outer upper
- (4) Panel side outer
- (5) Reinforcement pillar center outer B

Cross section L — L



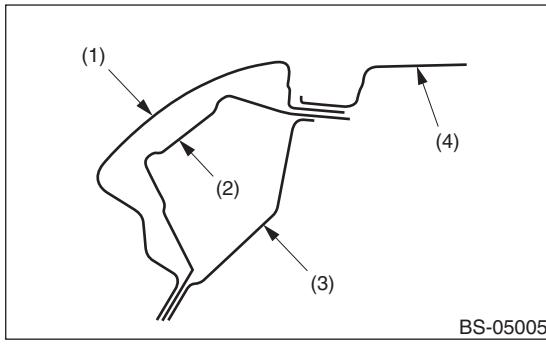
- (1) Pillar center inner
- (2) Reinforcement pillar center outer A
- (3) Reinforcement pillar center outer upper
- (4) Panel side outer

Cross section M — M



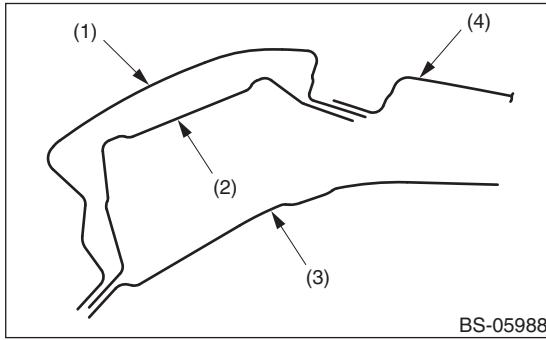
- (1) Wheel apron rear
- (2) Arch rear inner
- (3) Panel side outer

Cross section N — N



- (1) Panel side outer
- (2) Reinforcement rail side outer rear
- (3) Rail side inner
- (4) Roof panel

Cross section O — O



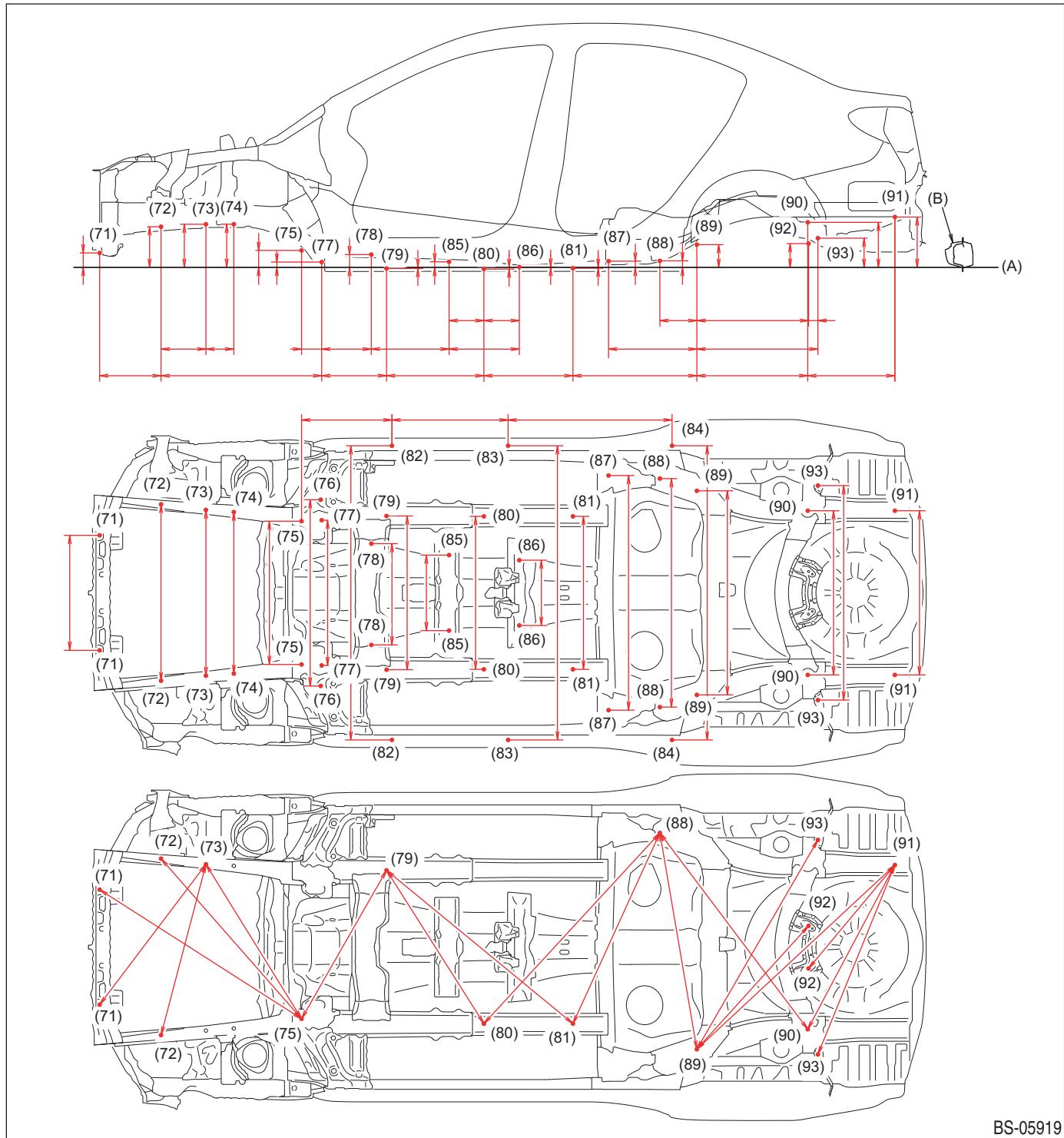
- (1) Panel side outer
- (2) Reinforcement rail side outer rear
- (3) Pillar rear inner
- (4) Roof panel

Body Reference Points

6. Body Reference Points

A: DIMENSIONS

1. LOWER SURFACE



- The longitudinal dimensions are projected dimensions.
- The height dimensions are the vertical distances from the gauge point on the assumed horizontal line through the side sill flange joint (bending angle point).
- Diagonal dimensions are the actual dimensions between reference points.

Body Reference Points

(A) Standard line	(B) Side sill outer panel		
(71) Bracket center lower mounting hole (symmetrical)	(78)b CVT cross member mounting hole R (right side)	(86) Exhaust cover mounting hole (symmetrical)	
(72) Radio ground mounting hole (symmetrical)	(78)b CVT cross member mounting hole L (left side)	(87) Gauge hole (symmetrical)	
(73) Front cross member mounting hole (symmetrical), front	(79) Under cover mounting hole (symmetrical)	(88) Rear suspension support sub frame mounting hole (symmetrical)	
(74) Front cross member mounting hole (symmetrical), rear	(80) Under cover mounting hole (symmetrical)	(89) Rear suspension cross member mounting hole (symmetrical)	
(75) Front suspension arm mounting hole (symmetrical)	(81) Under cover mounting hole (symmetrical)	(90) Rear suspension cross member mounting hole (symmetrical)	
(76) Front suspension plate mounting hole (symmetrical), outer side	(82) Side spoiler mounting hole (symmetrical)	(91) Gauge hole (symmetrical)	
(77) Front suspension plate mounting hole (symmetrical), inner side	(83) Side spoiler mounting hole (symmetrical)	(92) Support sub frame mounting hole (symmetrical)	
(78)a MT cross member mounting hole R (right side)	(84) Air flap mounting hole (symmetrical)	(93) Support sub frame mounting hole (symmetrical)	
(78)a MT cross member mounting hole L (left side)	(85) Gauge hole (symmetrical)		

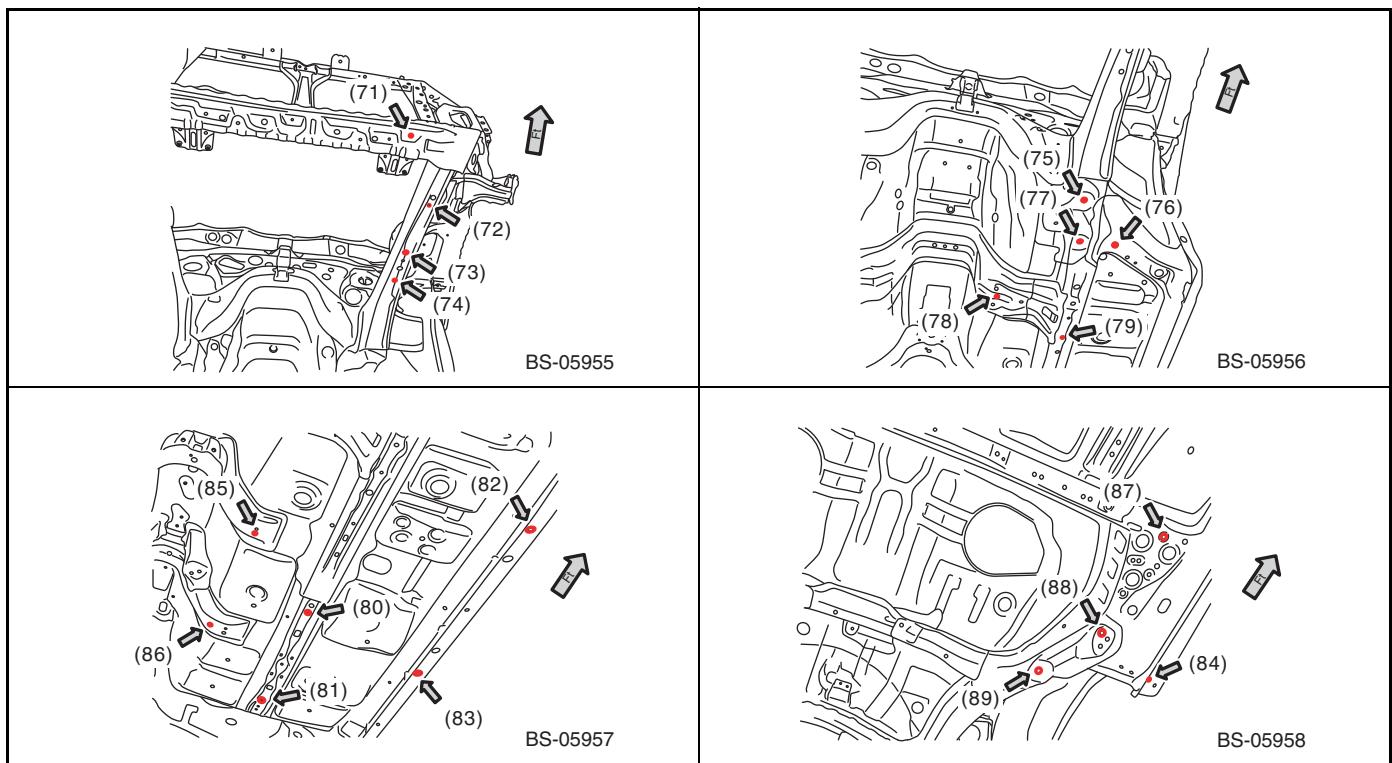
Measuring point	Datum dimension mm (in)	Projected dimensions mm (in)
Datum line — (71)	75(2.95)	—
Datum line — (72)	210(8.27)	—
Datum line — (73)	223(8.78)	—
Datum line — (74)	223(8.78)	—
Datum line — (75)	88(3.46)	—
Datum line — (77)	28(1.10)	—
Datum line — (78)aR	66(2.60)	—
Datum line — (78)aL	60(2.36)	—
Datum line — (78)bR	66(2.60)	—
Datum line — (78)bL	60(2.36)	—
Datum line — (79)	-6(-0.24)	—
Datum line — (80)	-9(-0.35)	—
Datum line — (81)	-5(-0.20)	—
Datum line — (85)	29(1.14)	—
Datum line — (86)	2(0.08)	—
Datum line — (87)	32(1.26)	—
Datum line — (88)	34(1.34)	—
Datum line — (89)	118(4.65)	—
Datum line — (90)	233(9.17)	—
Datum line — (91)	260(10.24)	—
Datum line — (92)	123(4.84)	—
Datum line — (93)	151(5.94)	—
(71) — (72)	317(12.48)	—
(72) — (73)	232(9.13)	—
(72) — (77)	830(32.68)	—
(73) — (74)	144(5.67)	—
(75) — (77)	104(4.09)	—
(77) — (78)aR	257(10.12)	—
(77) — (78)bR	357(14.06)	—

Measuring point	Datum dimension mm (in)	Projected dimensions mm (in)
(77) — (79)	335(13.19)	—
(78)aR — (85)	402(15.83)	—
(78)bR — (85)	302(11.89)	—
(79) — (80)	503(19.80)	—
(80) — (81)	460(18.11)	—
(80) — (85)	180(7.09)	—
(80) — (86)	183(7.20)	—
(81) — (89)	640(25.20)	—
(85) — (86)	363(14.29)	—
(87) — (89)	456(17.95)	—
(88) — (89)	191(7.52)	—
(89) — (90)	573(22.56)	—
(89) — (92)	577(22.72)	—
(89) — (93)	625(24.61)	—
(90) — (91)	450(17.72)	—
(92) — (93)	48(1.89)	—
(75) — (82)	467(18.39)	—
(82) — (83)	600(23.62)	—
(83) — (84)	847(33.35)	—
(71)R — (71)L	600(23.62)	—
(72)R — (72)L	914(35.98)	—
(73)R — (73)L	862(33.94)	—
(74)R — (74)L	840(33.07)	—
(75)R — (75)L	746(29.37)	—
(76)R — (76)L	968(38.11)	—
(77)R — (77)L	756(29.76)	—
(78)aR — (78)aL	376(14.80)	—
(78)bR — (78)bL	361(14.21)	—
(79)R — (79)L	800(31.50)	—

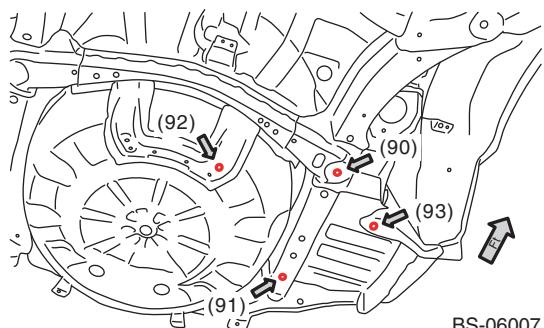
Body Reference Points

Measuring point	Datum dimension mm (in)	Projected dimensions mm (in)
(80)R — (80)L	796(31.34)	—
(81)R — (81)L	796(31.34)	—
(82)R — (82)L	1,525(60.04)	—
(83)R — (83)L	1,525(60.04)	—
(84)R — (84)L	1,516(59.68)	—
(85)R — (85)L	396(15.59)	—
(86)R — (86)L	343(13.50)	—
(87)R — (87)L	1,218(47.95)	—
(88)R — (88)L	1,186(46.69)	—
(89)R — (89)L	1,060(41.73)	—
(90)R — (90)L	854(33.62)	—
(91)R — (91)L	854(33.62)	—
(93)R — (93)L	1,108(43.62)	—
(71)R — (73)L	926(36.46)	914(35.98)
(71)L — (75)R	1,241(48.86)	1,241(48.86)
(72)R — (73)L	918(36.14)	918(36.14)

Measuring point	Datum dimension mm (in)	Projected dimensions mm (in)
(72)L — (75)R	1,109(43.66)	1,103(43.43)
(73)L — (75)R	953(37.52)	944(37.17)
(75)R — (79)L	894(35.20)	889(35.00)
(79)L — (80)R	943(37.13)	943(37.13)
(79)L — (81)R	1,251(49.25)	1,251(49.25)
(80)R — (88)L	1,345(52.95)	1,345(52.95)
(81)R — (88)L	1,089(42.87)	1,088(42.83)
(88)L — (89)R	1,142(44.96)	1,139(44.84)
(88)L — (90)R	1,290(50.79)	1,274(50.16)
(89)R — (91)L	1,408(55.43)	1,401(55.16)
(90)R — (91)L	966(38.03)	965(37.99)
(89)R — (92)L	862(33.94)	862(33.94)
(89)R — (93)L	1,252(49.29)	1,251(49.25)
(91)L — (92)R	711(27.99)	698(27.48)
(91)L — (93)R	1,064(41.89)	1,058(41.65)



Body Reference Points

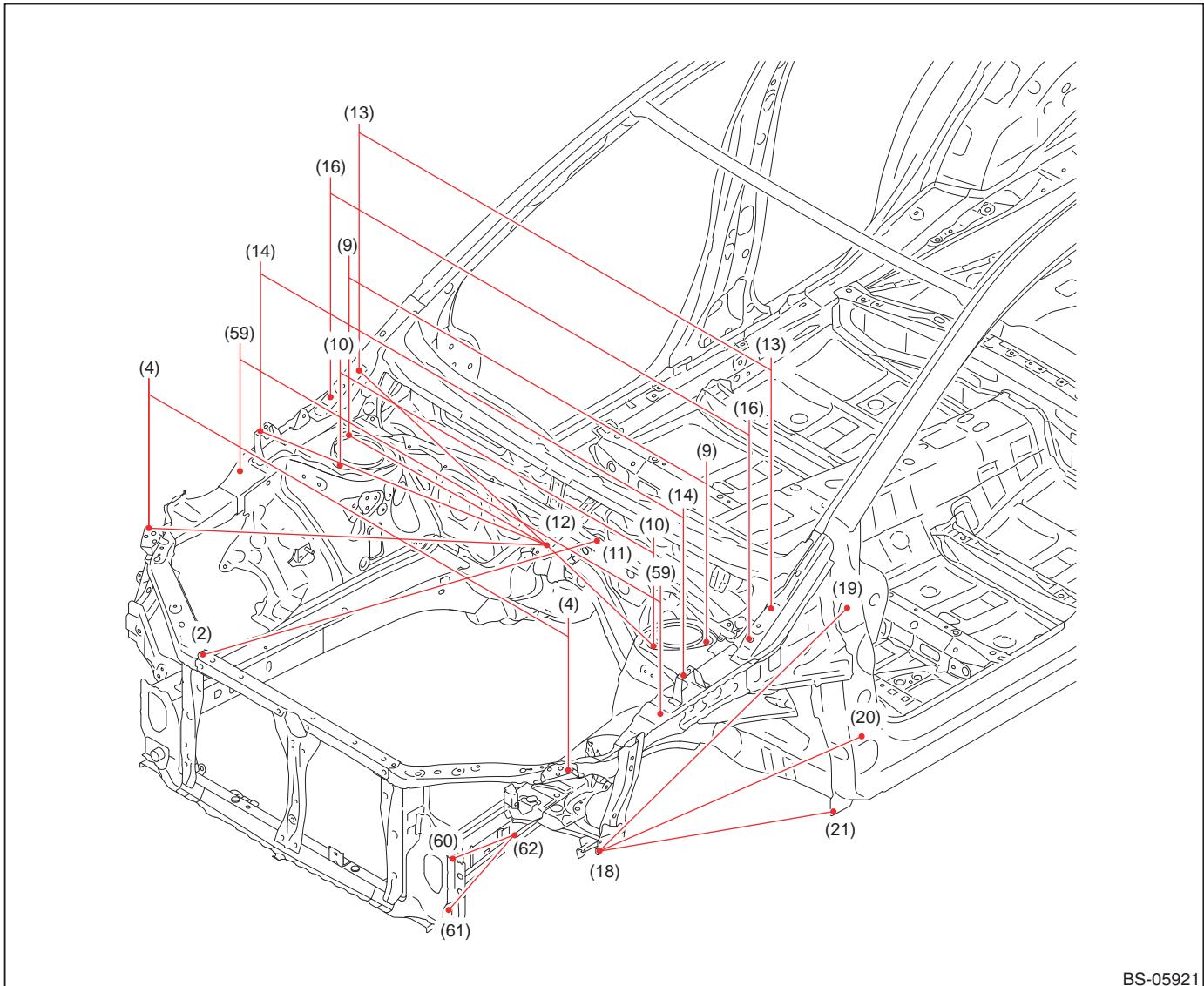


SUBARU.

Body Reference Points

2. FRONT 1

- '14 MY — '17 MY



BS-05921

(2)	Radiator upper frame mounting hole (symmetrical)	(13)	Hood hinge rear mounting hole (symmetrical)	(20)	Front door hinge lower mounting hole (symmetrical), lower side
(4)	Fender mounting hole (symmetrical)	(14)	Fender mounting hole (symmetrical)	(21)	Fender mounting hole (symmetrical)
(9)	Front suspension mounting hole (symmetrical), rear outside	(16)	Gauge hole (symmetrical)	(59)	Frame upper regulation hole (symmetrical)
(10)	Front suspension mounting hole (symmetrical), front	(18)	Gauge hole (right side) R	(60)	Weight reduction hole (only LH)
(11)	Bulkhead mounting hole (symmetrical)	(18)	Gauge hole (left side) L	(61)	Washer tank mounting hole (only LH)
(12)	Harness clip mounting hole (body center)	(19)	front door hinge upper mounting hole (symmetrical), upper side	(62)	Gusset front side mounting hole (only LH)

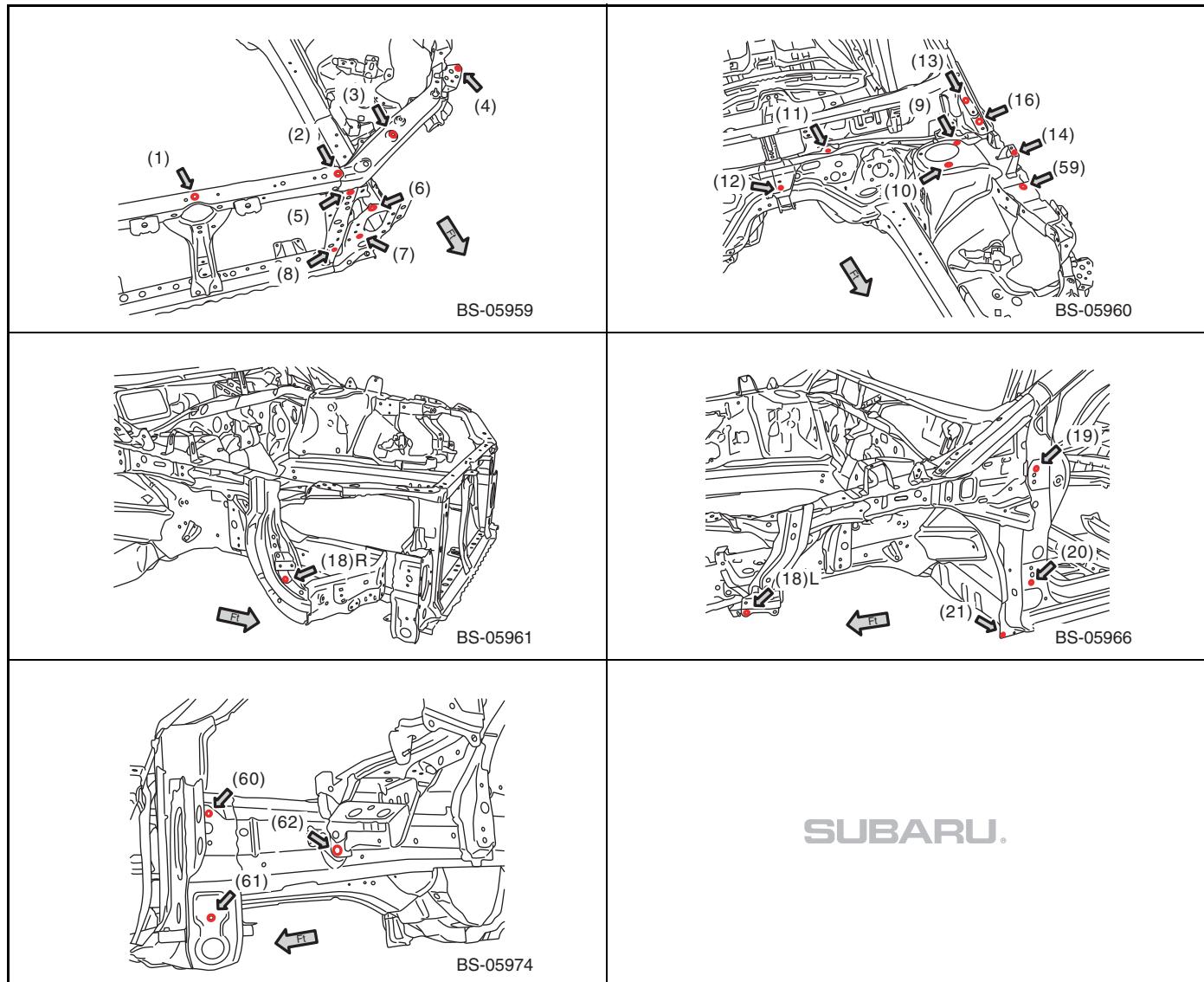
Body Reference Points

• '14 MY — '17 MY

Measuring point	Datum dimension mm (in)
(2)R — (11)L	1,026(40.39)
(4)R — (4)L	1,477(58.15)
(4)R — (12)	992(39.06)
(9)R — (9)L	1,258(49.53)
(9)R — (12)	635(25.00)
(10)R — (10)L	1,103(43.43)
(10)L — (12)	582(22.91)
(12) — (13)R	741(29.17)
(12) — (14)L	797(31.38)
(13)R — (13)L	1,451(57.13)
(14)R — (14)L	1,488(58.58)

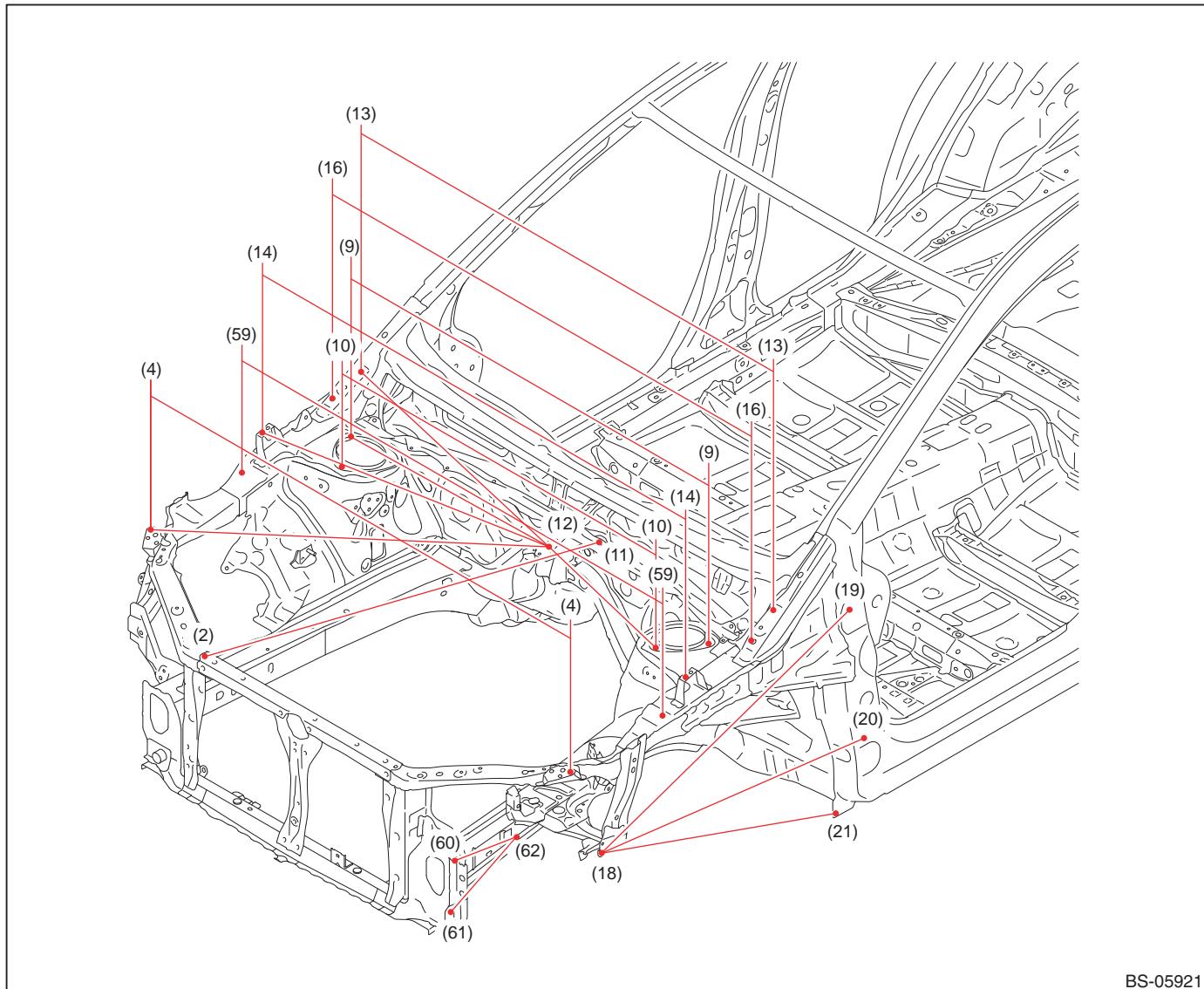
Measuring point	Datum dimension mm (in)
(16)R — (16)L	1,480(58.27)
(18)R — (19)R	932(36.69)
(18)L — (19)L	947(37.28)
(18)R — (20)R	922(36.30)
(18)L — (20)L	944(37.17)
(18)R — (21)R	941(37.05)
(18)L — (21)L	967(38.07)
(59)R — (59)L	1,480(58.27)
(60)L — (62)L	247(9.72)
(61)L — (62)L	261(10.28)

- Reference point (12) is the vehicle midpoint; reference point (18) is a right-left asymmetrical point; reference points (60), (61) and (62) are left side only points; and all other reference points are right-left symmetrical points.
- The dimensions are the actual dimensions between the reference points.



Body Reference Points

• '18 MY —



BS-05921

(2) Radiator upper frame mounting hole (symmetrical)	(13) Hood hinge rear mounting hole (symmetrical)	(20) Front door hinge lower mounting hole (symmetrical), lower side
(4) Fender mounting hole (symmetrical)	(14) Fender mounting hole (symmetrical)	(21) Fender mounting hole (symmetrical)
(9) Front suspension mounting hole (symmetrical), rear outside	(16) Gauge hole (symmetrical)	(59) Frame upper regulation hole (symmetrical)
(10) Front suspension mounting hole (symmetrical), front	(18) Gauge hole (right side) R	(60) Harness mounting hole (only RH) Weight reduction hole (only LH)
(11) Bulkhead mounting hole (symmetrical)	(18) Gauge hole (left side) L	(61) Bracket intake duct mounting hole (only RH) Washer tank mounting hole (only LH)
(12) Harness clip mounting hole (body center)	(19) front door hinge upper mounting hole (symmetrical), upper side	(62) Gusset front side mounting hole

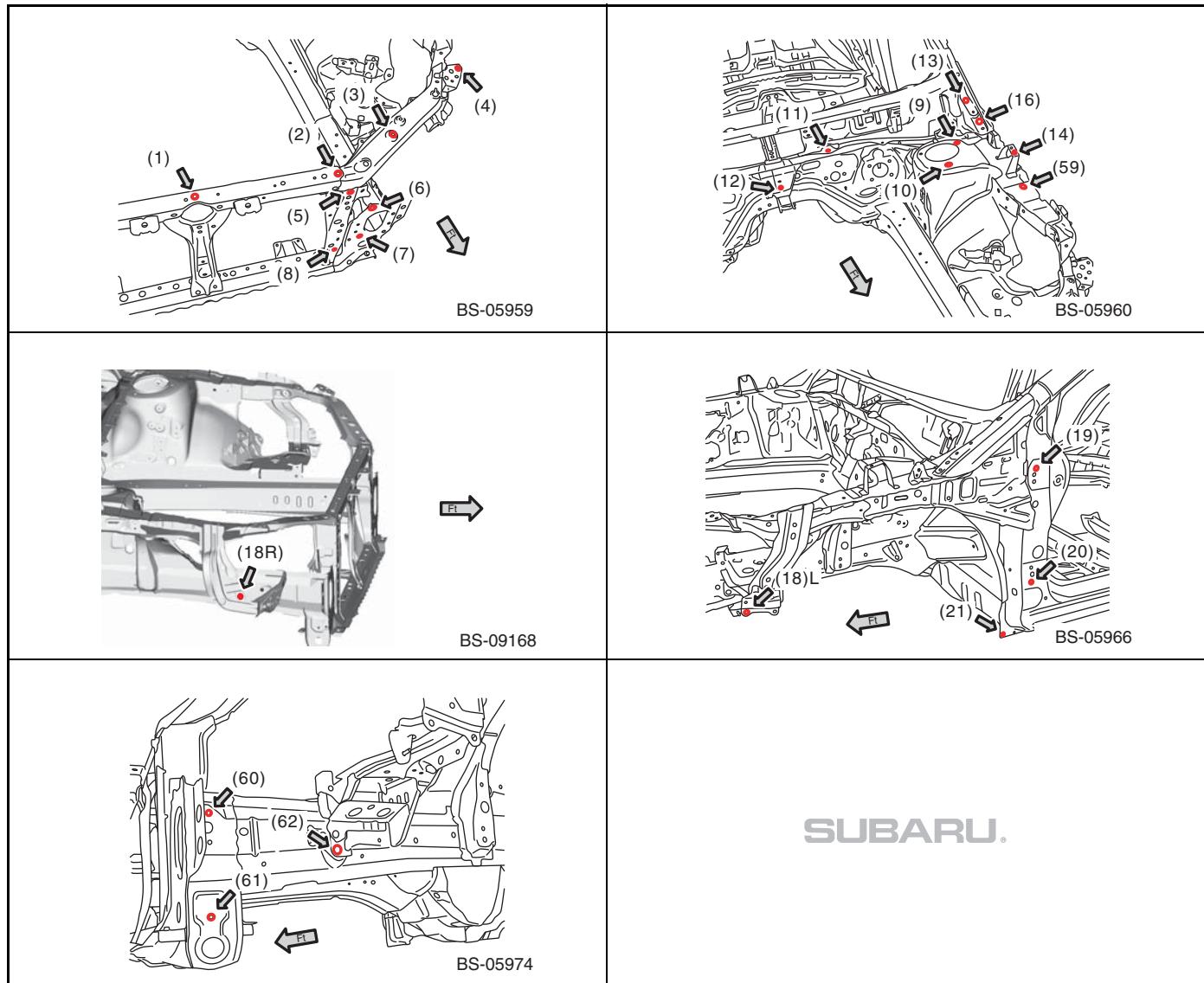
Body Reference Points

• '18 MY —

Measuring point	Datum dimension mm (in)
(2)R — (11)L	1,026(40.39)
(4)R — (4)L	1,477(58.15)
(4)R — (12)	992(39.06)
(9)R — (9)L	1,258(49.53)
(9)R — (12)	635(25.00)
(10)R — (10)L	1,103(43.43)
(10)L — (12)	582(22.91)
(12) — (13)R	741(29.17)
(12) — (14)L	797(31.38)
(13)R — (13)L	1,451(57.13)
(14)R — (14)L	1,488(58.58)

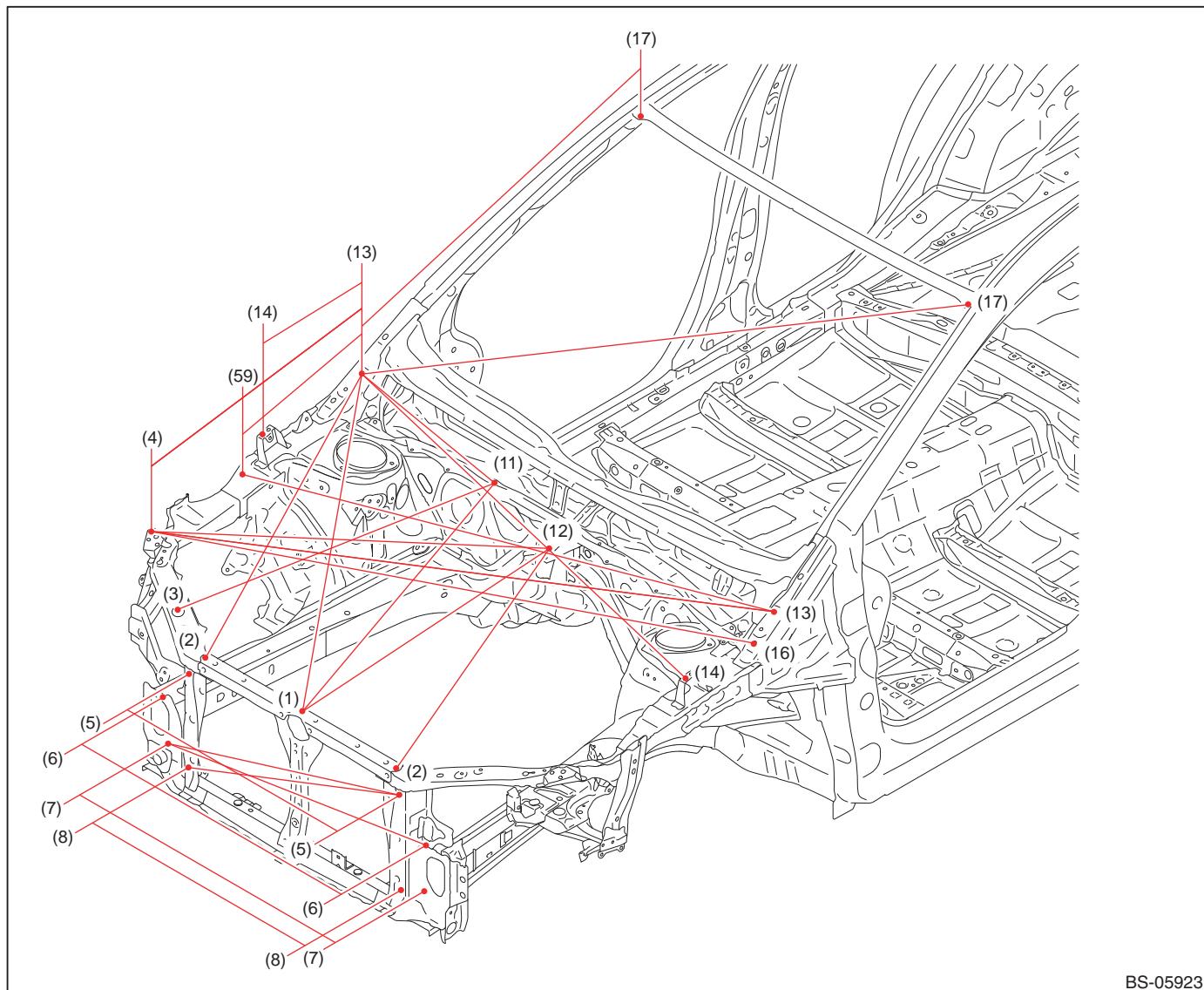
Measuring point	Datum dimension mm (in)
(16)R — (16)L	1,480(58.27)
(18)R — (19)R	953(37.52)
(18)L — (19)L	947(37.28)
(18)R — (20)R	948(37.32)
(18)L — (20)L	944(37.17)
(18)R — (21)R	968(38.11)
(18)L — (21)L	967(38.07)
(59)R — (59)L	1,480(58.27)
(60)L — (62)L	247(9.72)
(61)L — (62)L	261(10.28)

- Reference point (12) is the vehicle midpoint; reference point (18) is a right-left asymmetrical point; and all other reference points are right-left symmetrical points.
- The dimensions are the actual dimensions between the reference points.



Body Reference Points

3. FRONT 2



BS-05923

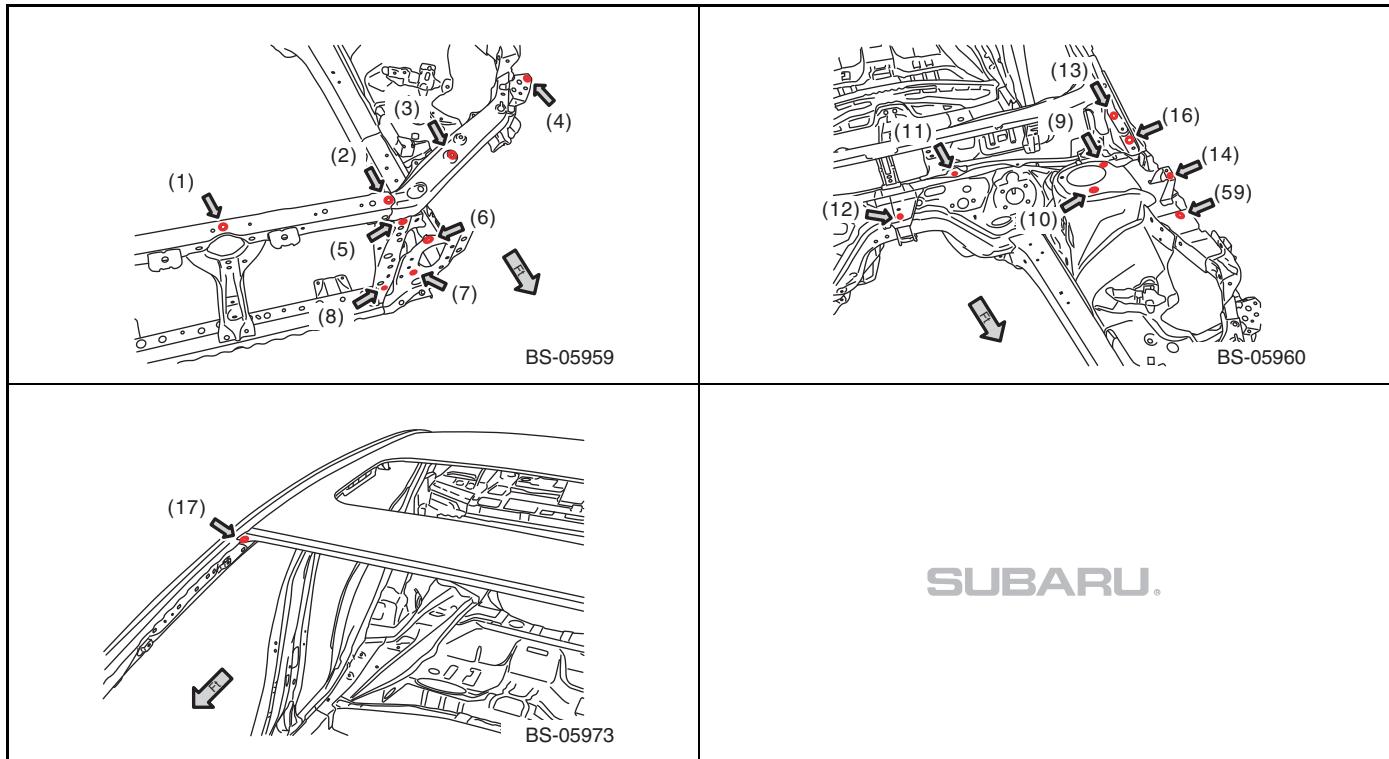
(1)	Repair location hole (body center)	(6)	Bumper bracket mounting hole (symmetrical), upper side	(13)	Hood hinge rear mounting hole (symmetrical)
(2)	Radiator upper frame mounting hole (symmetrical)	(7)	Bumper bracket mounting hole (symmetrical), lower	(14)	Fender mounting hole (symmetrical)
(3)	Headlight mounting hole (symmetrical)	(8)	Bulkhead center lower mounting hole (symmetrical)	(16)	Gauge hole (symmetrical)
(4)	Fender mounting hole (symmetrical)	(11)	Bulkhead mounting hole (symmetrical)	(17)	Front glass installation reference hole (symmetrical)
(5)	EA plate mounting hole (symmetrical)	(12)	Harness clip mounting hole (body center)	(59)	Extension fender mounting hole (symmetrical)

Body Reference Points

Measuring point	Datum dimension mm (in)
(1) — (11)R	898(35.35)
(1) — (12)	871(34.29)
(1) — (13)R	1,199(47.20)
(2)L — (12)	939(36.97)
(2)R — (13)R	1,037(40.83)
(3)R — (11)R	872(34.33)
(4)R — (12)	992(39.06)
(4)R — (13)R	738(29.06)
(4)R — (13)L	1,639(64.53)
(4)R — (16)L	1,613(63.50)
(5)R — (5)L	740(29.13)
(5)L — (7)R	859(33.82)

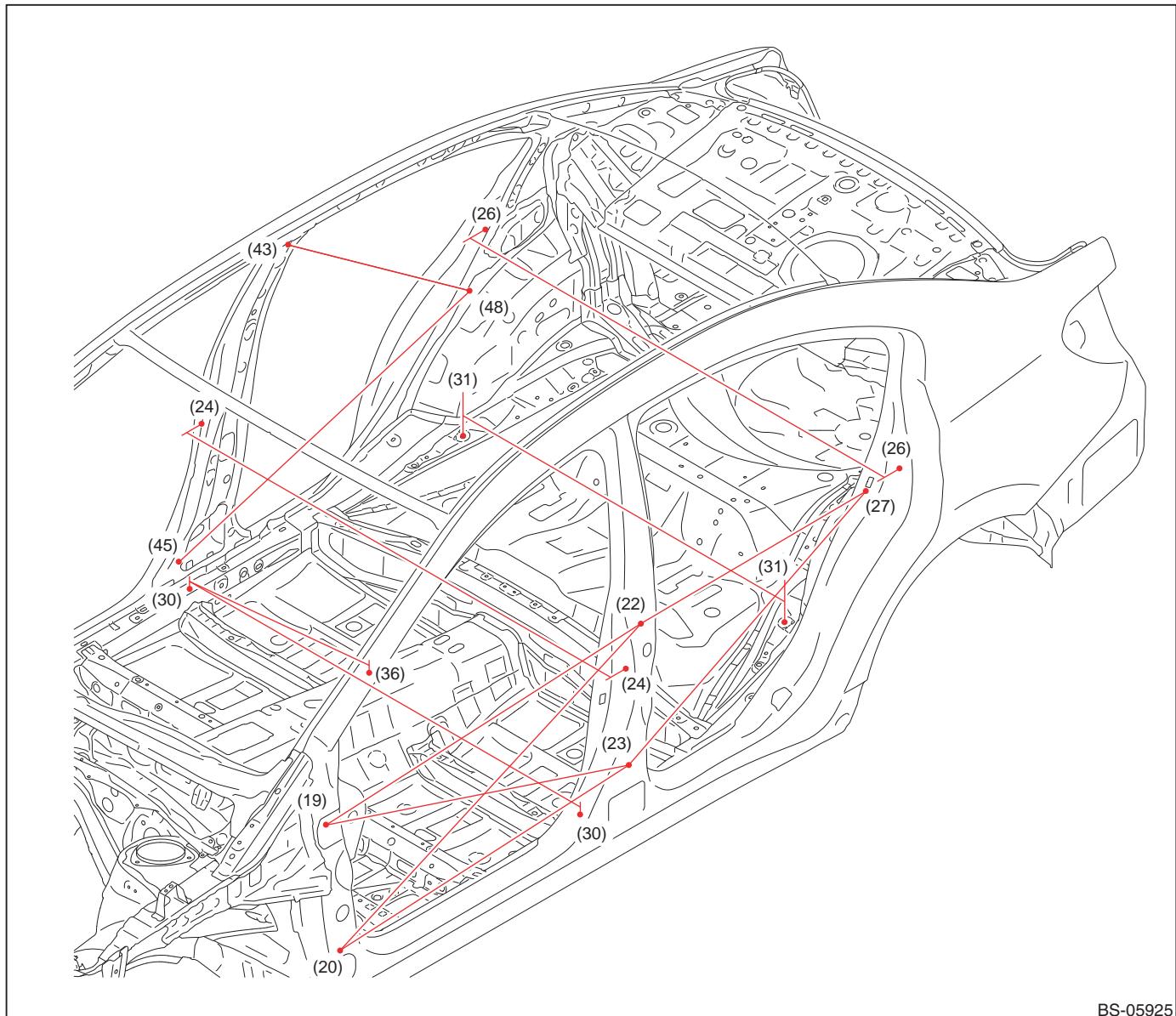
Measuring point	Datum dimension mm (in)
(5)L — (8)R	798(31.42)
(6)R — (6)L	914(35.98)
(6)L — (7)R	918(36.14)
(7)R — (7)L	900(35.43)
(8)R — (8)L	748(29.45)
(11)R — (13)R	546(21.50)
(13)R — (14)R	330(12.99)
(13)R — (14)L	1,506(59.29)
(13)R — (17)R	956(37.64)
(13)R — (17)L	1,608(63.31)
(13)R — (59)R	420(16.54)
(13)L — (59)R	1,524(60.00)

- The reference points (1) and (12) are at the body center, while the other reference points are left-right symmetrical.
- The dimensions are the actual dimensions between the reference points.



Body Reference Points

4. INSIDE COMMON PARTS 1



BS-05925

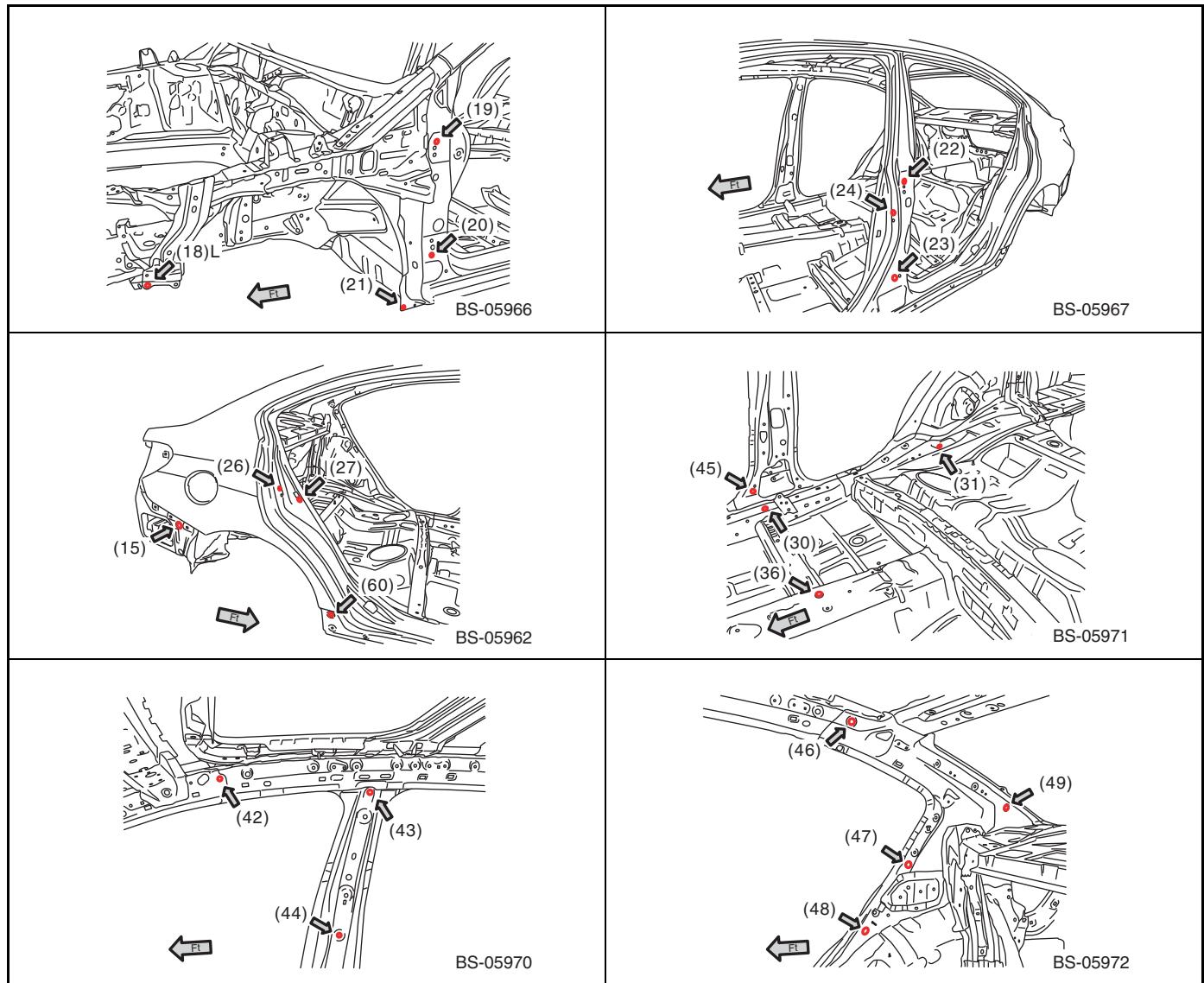
(19) Front door hinge upper mounting hole (symmetrical), upper side	(26) Rear door striker mounting hole (symmetrical), upper side	(43) Trim clip mounting hole (symmetrical)
(20) Front door hinge lower mounting hole (symmetrical), lower side	(27) Rear door switch mounting hole (symmetrical)	(45) Trim Clip mounting hole (symmetrical)
(22) Rear door hinge upper mounting hole (symmetrical), upper side	(30) Harness clip mounting hole (symmetrical)	(48) Rear Airbag sensor mounting hole (symmetrical)
(23) Rear door hinge lower mounting hole (symmetrical), front	(31) Belt anchor mounting hole (symmetrical)	
(24) Front door striker mounting hole (symmetrical), upper side	(36) Harness holding Clip mounting hole (symmetrical)	

Body Reference Points

Measuring point	Datum dimension mm (in)
(19)L — (22)L	1,140(44.88)
(19)L — (23)L	1,131(44.53)
(20)L — (22)L	1,199(47.20)
(20)L — (23)L	1,048(41.26)
(22)L — (27)L	883(34.76)
(23)L — (27)L	1,003(39.49)
(24)R — (24)L	1,529(60.20)

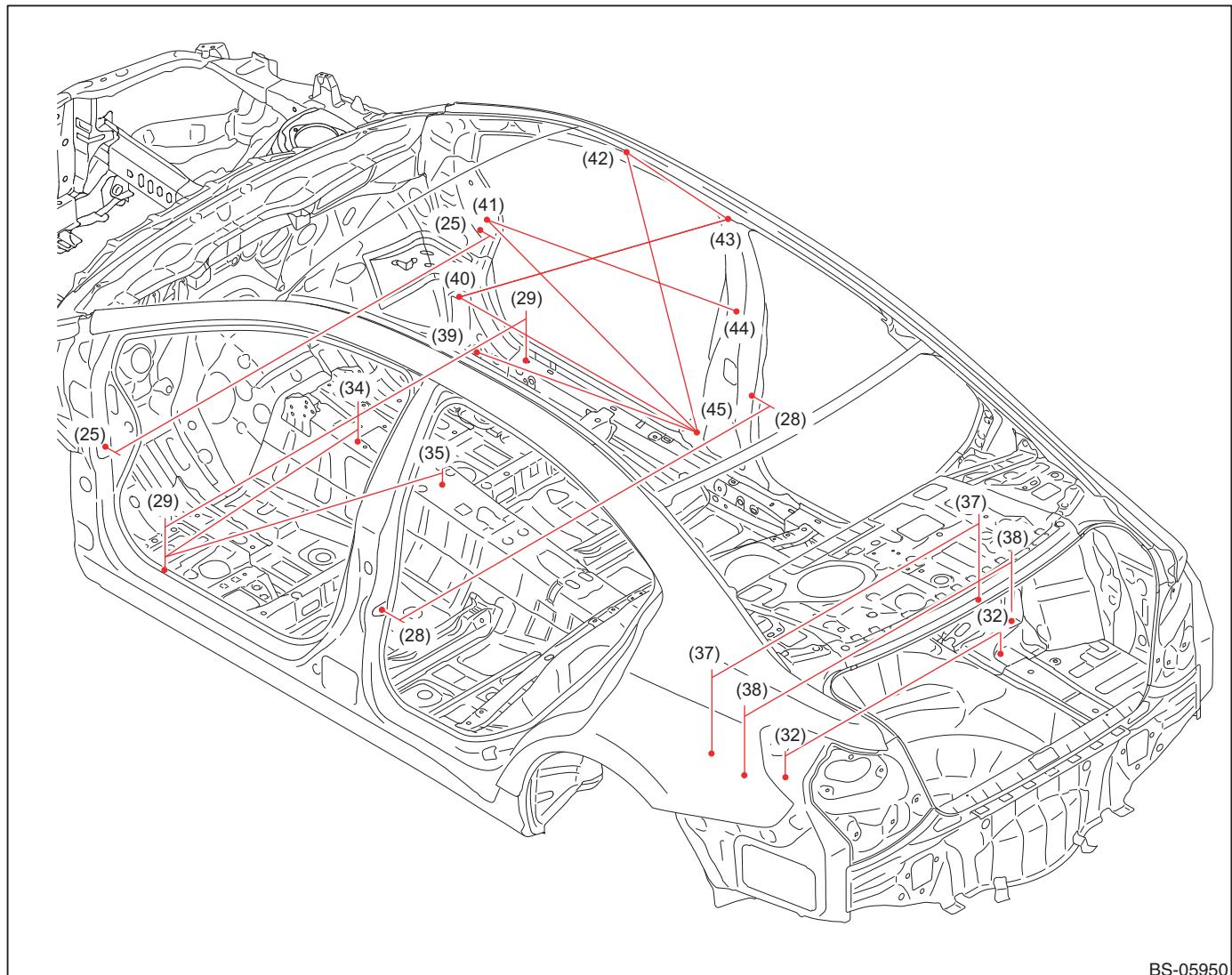
Measuring point	Datum dimension mm (in)
(26)R — (26)L	1,494(58.82)
(30)R — (30)L	1,409(55.47)
(30)R — (36)R	681(26.81)
(31)R — (31)L	1,160(45.67)
(43)R — (48)R	962(37.87)
(45)R — (48)R	1,080(42.52)

- All reference points are left-right symmetrical.
- The dimensions are the actual dimensions between the reference points.



Body Reference Points

5. INSIDE COMMON PARTS 2



BS-05950

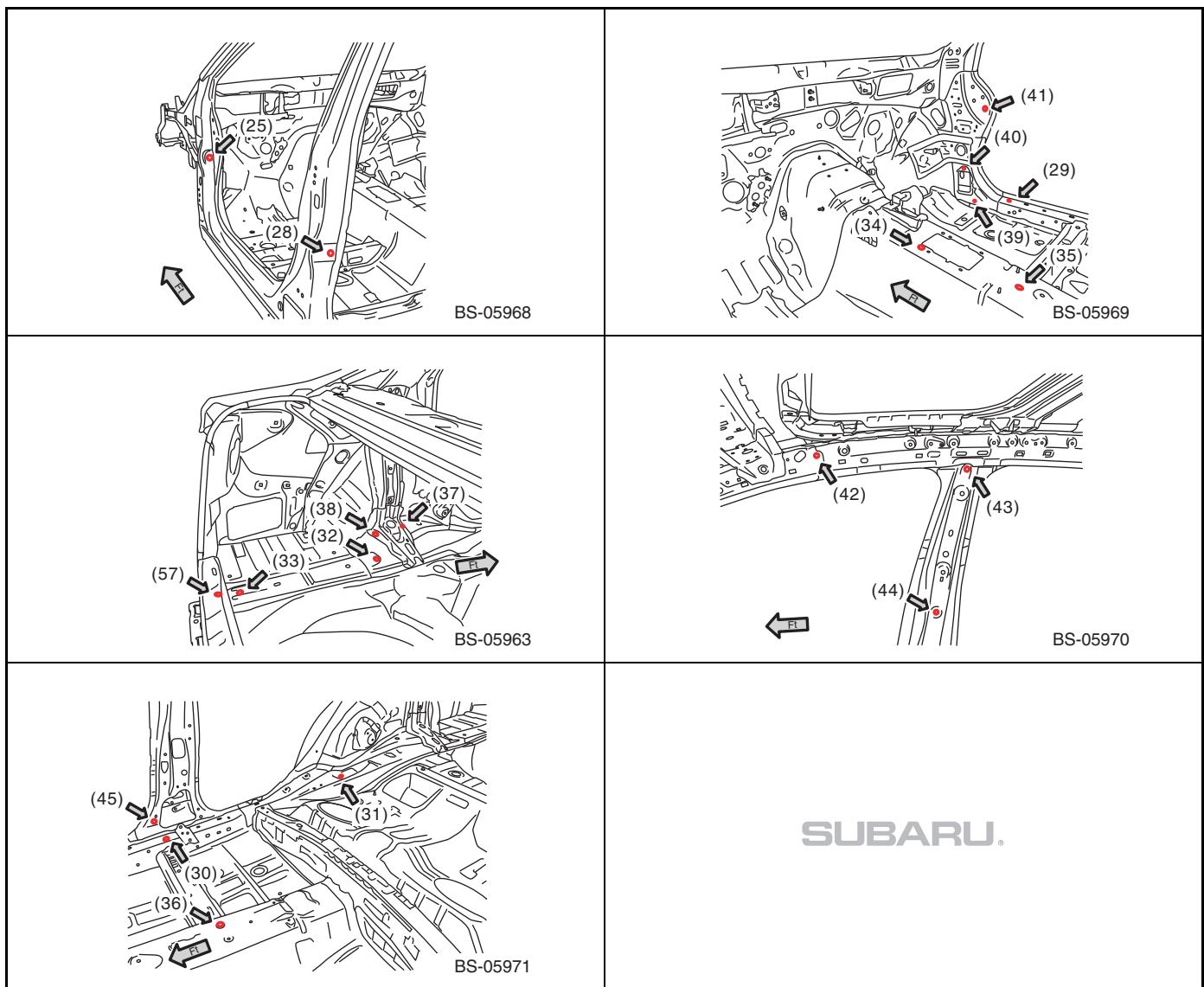
(25) Front door checker mounting hole (symmetrical)	(37) Rear suspension mounting hole (symmetrical), front	(42) Assist bracket mounting hole (symmetrical)
(28) Rear door checker mounting hole (symmetrical)	(38) Rear suspension mounting hole (symmetrical), rear	(43) Trim clip mounting hole (symmetrical)
(29) Harness clip mounting hole (symmetrical)	(39) Gauge hole/Brake pipe mounting R hole	(44) Trim mounting hole (symmetrical)
(32) Gauge hole (symmetrical)	(39) Gauge hole/Fuel pipe mounting L hole	(45) Trim Clip mounting hole (symmetrical)
(34) Shift case mounting hole (symmetrical)	(40) Harness connectors mounting hole (symmetrical)	
(35) Hand brake mounting hole (body center)	(41) Steering beam mounting hole (symmetrical)	

Body Reference Points

Measuring point	Datum dimension mm (in)
(25)R — (25)L	1,486(58.50)
(28)R — (28)L	1,469(57.83)
(29)R — (29)R	1,432(56.38)
(29)L — (34)L	689(27.13)
(29)L — (35)	821(32.32)
(32)R — (32)L	854(33.62)
(37)R — (37)L	1,059(41.69)
(38)R — (38)L	1,059(41.69)
(39)R — (45)R	849(33.43)

Measuring point	Datum dimension mm (in)
(40)R — (43)R	1,485(58.46)
(40)R — (45)R	915(36.02)
(41)R — (44)R	1,027(40.43)
(41)L — (44)L	1,027(40.43)
(41)R — (45)R	880(34.65)
(41)L — (45)L	880(34.65)
(42)R — (43)R	402(15.83)
(42)R — (45)R	981(38.62)

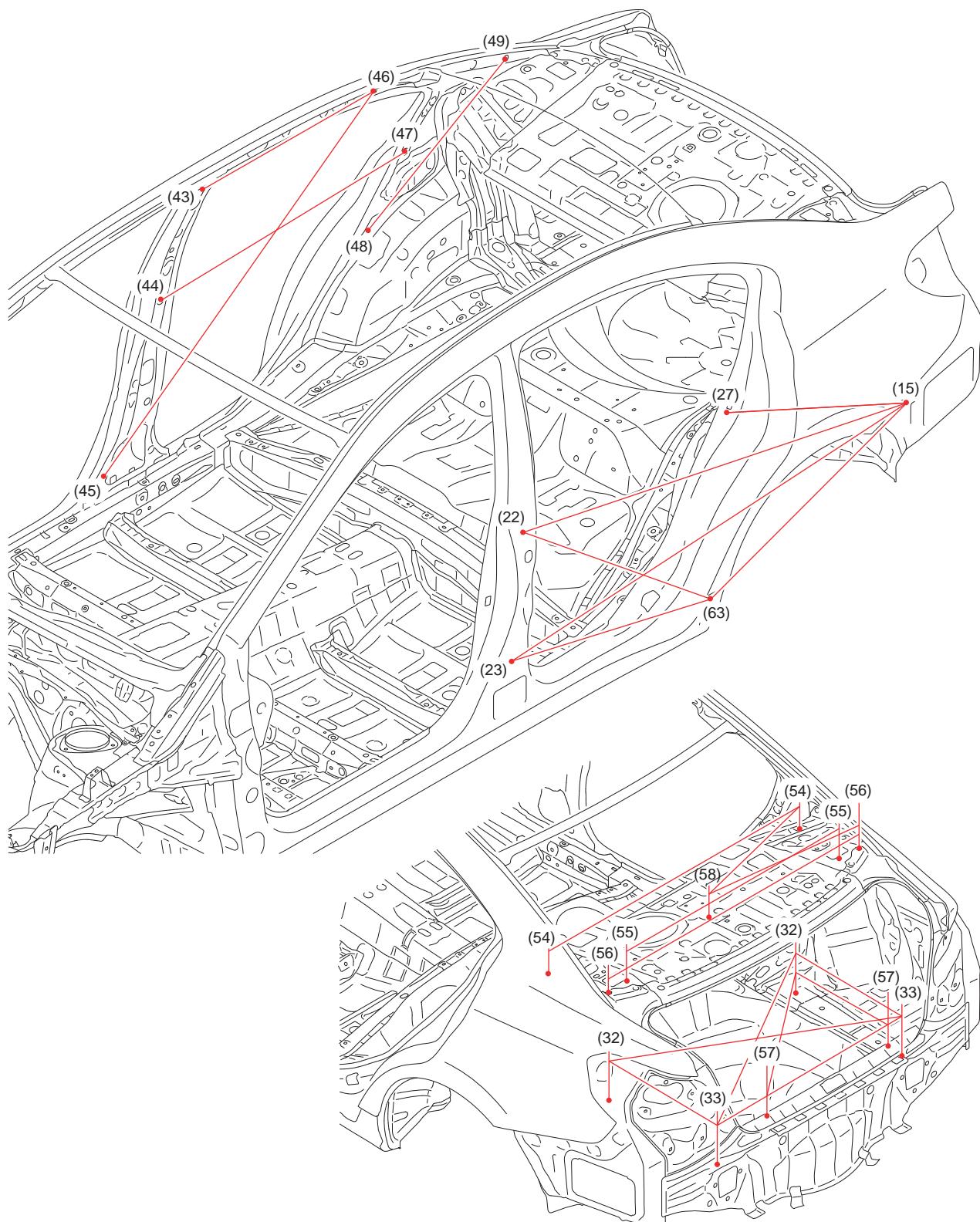
- Reference point (35) is the vehicle midpoint; and all other reference points are right-left symmetrical points.
- The dimensions are the actual dimensions between the reference points.



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Body Reference Points

6. INSIDE REAR



BS-05952

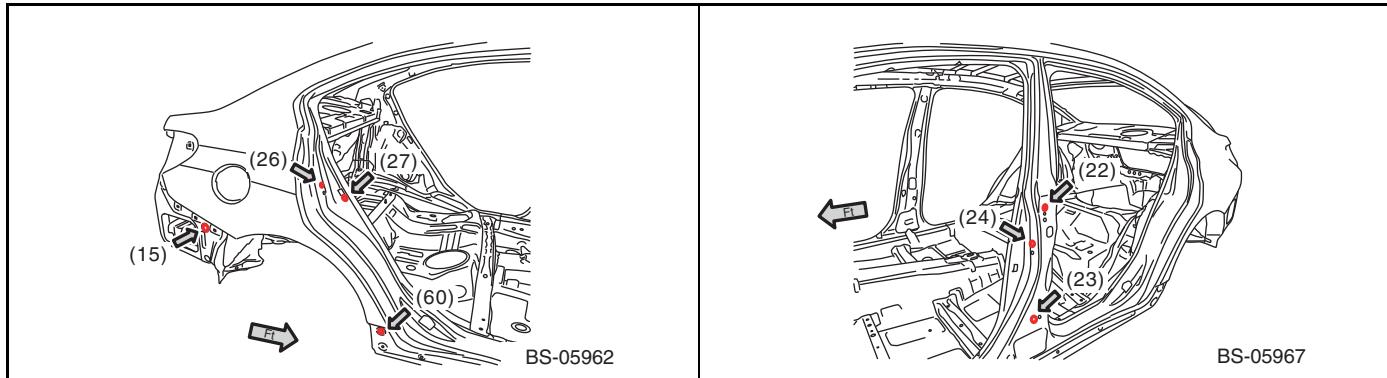
Body Reference Points

(15) R	Gauge hole (right side)	(33) L	Gauge hole (left side)	(49)	Trim clip mounting hole (symmetrical)
(15) L	Gauge hole (left side)	(43)	Trim clip mounting hole (symmetrical)	(54)	Rear shelf mounting hole (symmetrical)
(22)	Rear door hinge upper mounting hole (symmetrical), upper side	(44)	Trim mounting hole (symmetrical)	(55)	Rear shelf mounting hole (symmetrical)
(23)	Rear door hinge lower mounting hole (symmetrical), front	(45)	Trim clip mounting hole (symmetrical)	(56)	Gauge hole (symmetrical)
(27)	Rear door switch mounting hole (symmetrical)	(46)	Drain hose mounting hole (symmetrical)	(57)	Electrode position hole (symmetrical)
(32)	Gauge hole (symmetrical)	(47)	Gauge hole (symmetrical)	(58)	Child anchor mounting hole (body center)
(33) R	Gauge hole (right side)	(48)	Rear Airbag sensor mounting hole (symmetrical)	(63)	Side spoiler mounting hole (symmetrical)

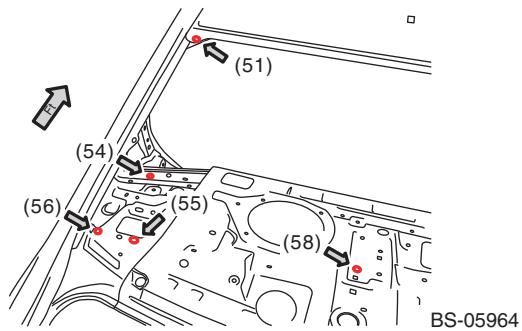
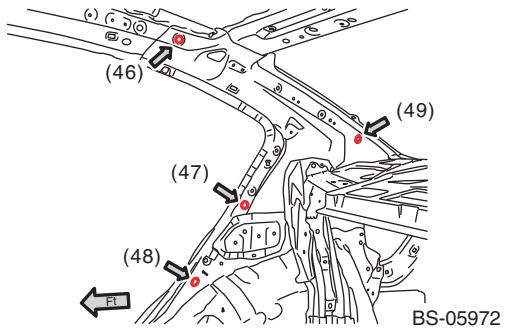
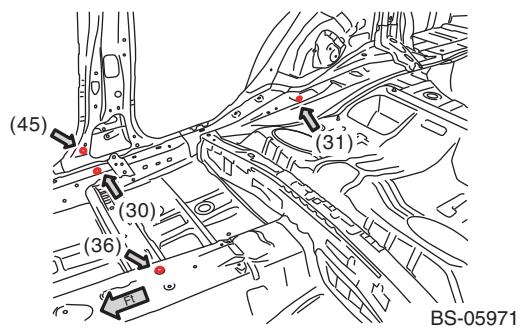
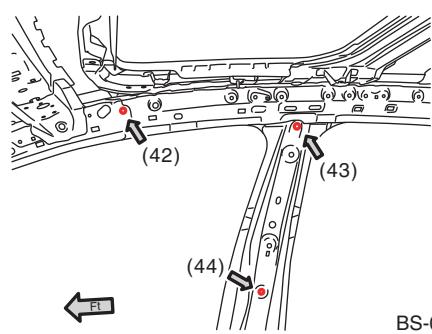
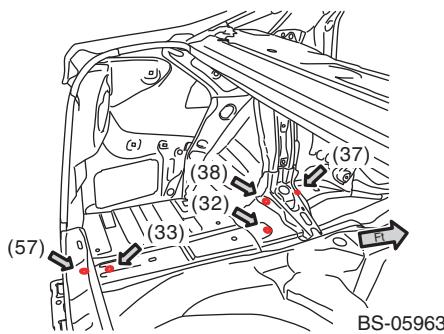
Measuring point	Datum dimension mm (in)
(15)R — (63)R	853(33.58)
(15)L — (63)L	840(33.07)
(22)R — (15)R	1,484(58.43)
(22)L — (15)L	1,473(57.99)
(23)R — (15)R	1,534(60.39)
(23)L — (15)L	1,521(59.88)
(27)R — (15)R	627(24.68)
(27)L — (15)L	618(24.33)
(43)R — (46)R	642(25.28)
(44)R — (47)R	964(37.95)
(45)R — (46)R	1,331(52.40)
(48)R — (49)R	618(24.33)
(22)L — (63)L	838(32.99)

Measuring point	Datum dimension mm (in)
(23)L — (63)L	729(28.70)
(32)R — (57)R	610(24.02)
(32)R — (57)L	920(36.22)
(32)R — (33)R	485(19.09)
(32)R — (33)L	987(38.86)
(32)L — (33)R	982(38.66)
(32)L — (33)L	495(19.49)
(33)R — (33)L	854(33.62)
(54)R — (54)L	1,147(45.16)
(54)R — (58)	595(23.43)
(55)R — (55)L	972(38.27)
(56)R — (56)L	1,146(45.12)
(56)R — (58)	585(23.03)

- Reference point (58) is the vehicle midpoint; reference point (15), (33) is a right-left asymmetrical point; and all other reference points are right-left symmetrical points.
- The dimensions are the actual dimensions between the reference points.



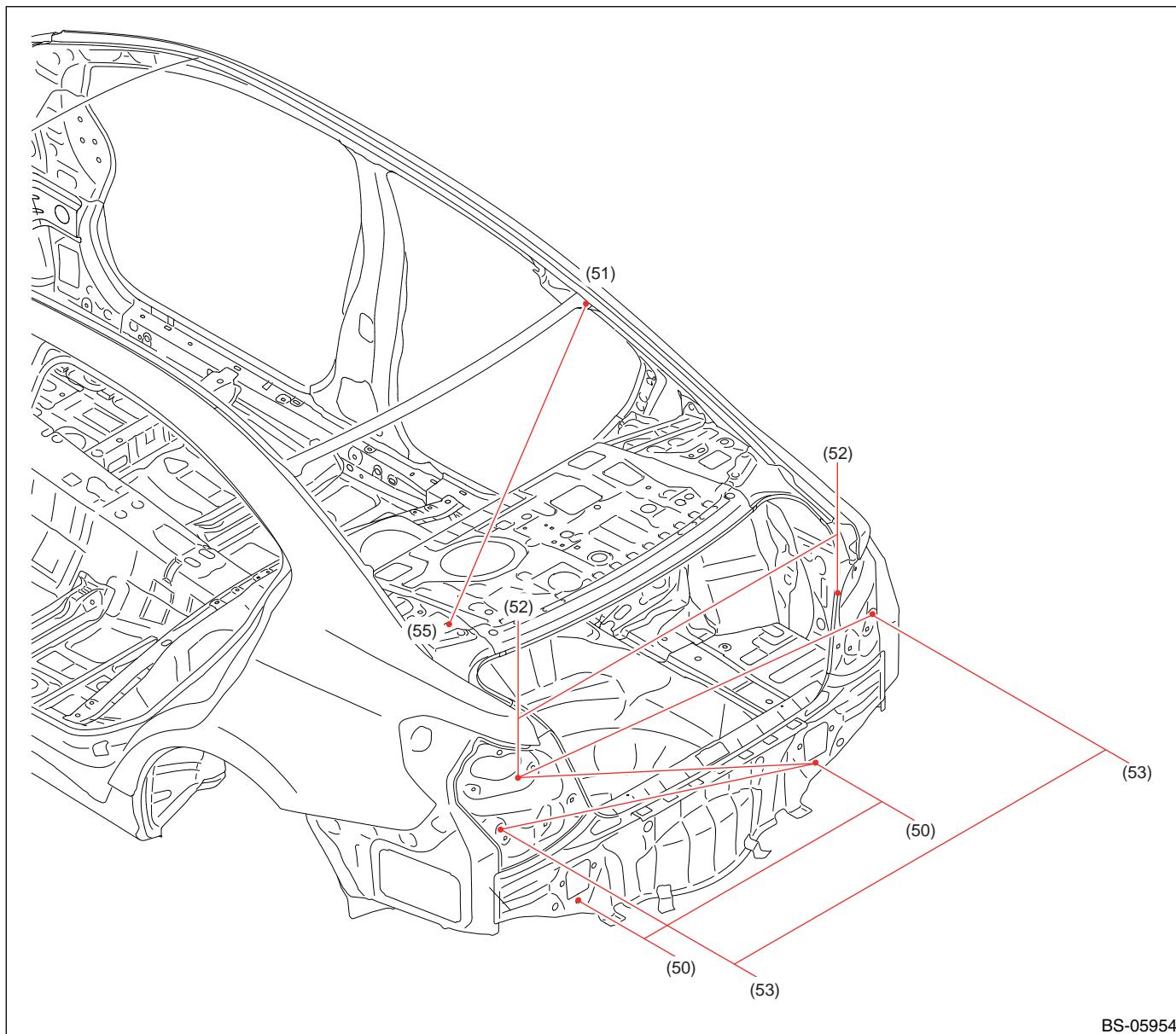
Body Reference Points



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Body Reference Points

7. REAR



BS-05954

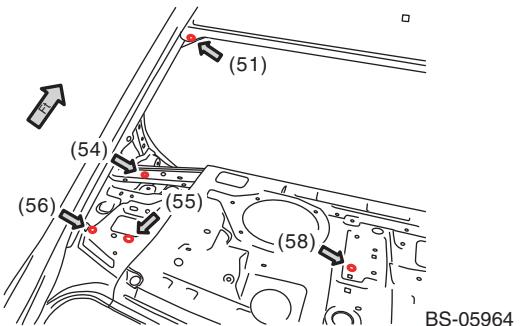
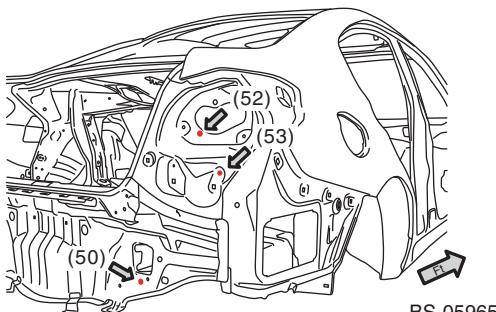
(50) Bumper beam mounting hole (symmetrical)	(52) Rear combination light mounting hole (symmetrical)	(55) Rear shelf mounting hole (symmetrical)
(51) Rear glass installation reference hole (symmetrical)	(53) Rear bumper mounting hole (symmetrical)	

Measuring point	Datum dimension mm (in)
(50)R — (50)L	854(33.62)
(50)R — (52)L	1,088(42.83)
(50)R — (53)L	1,142(44.96)
(51)R — (55)L	1,155(45.47)

Measuring point	Datum dimension mm (in)
(52)R — (52)L	1,148(45.20)
(52)L — (53)R	1,246(49.06)
(53)R — (53)L	1,335(52.56)

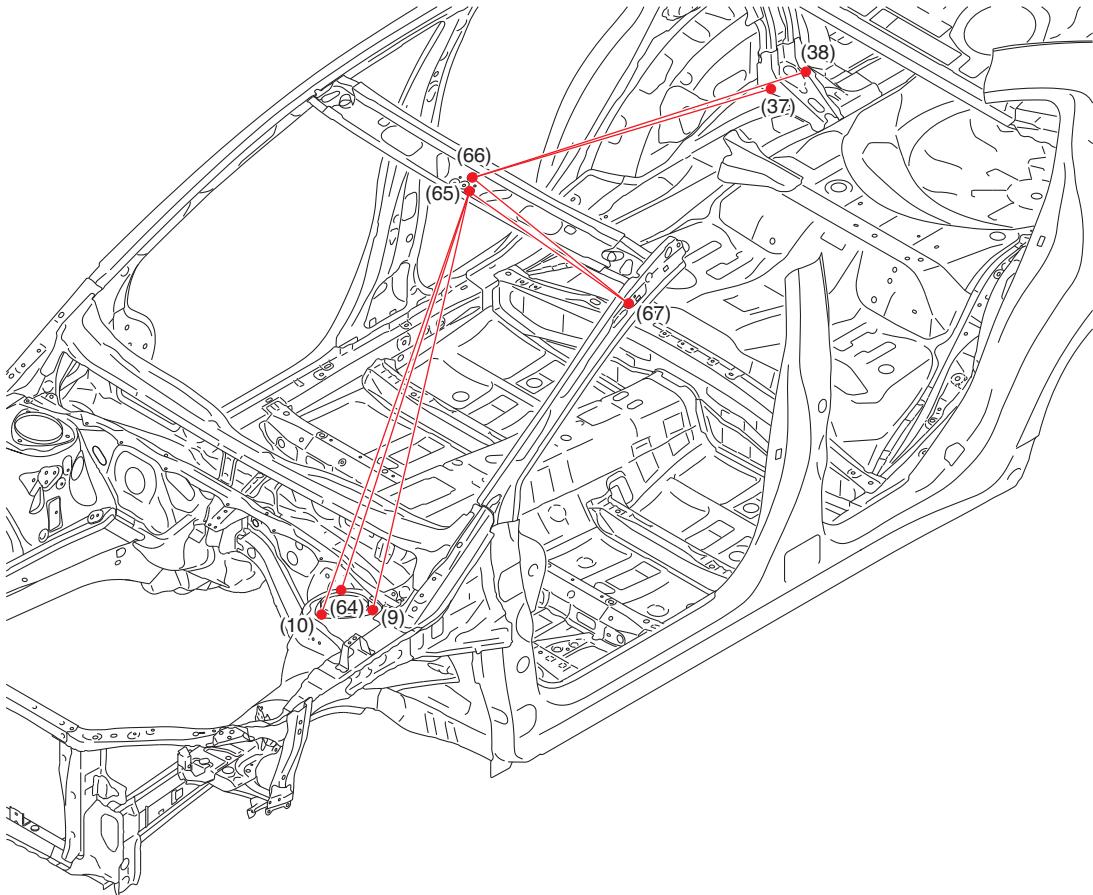
- All reference points are left-right symmetrical.
- The dimensions are the actual dimensions between the reference points.

Body Reference Points



Body Reference Points

8. FRONT ROOF RAIL (CAMERA PLATE)



BRM01404

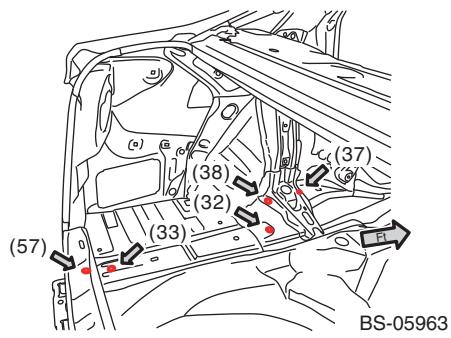
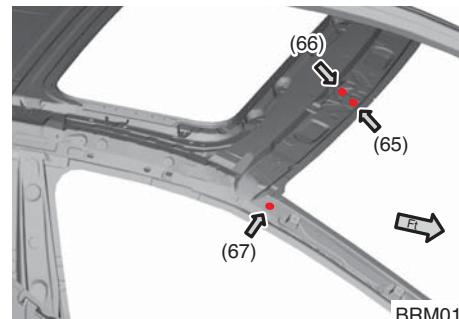
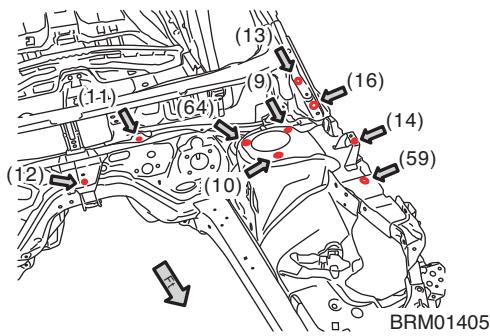
(9) Front suspension mounting hole (symmetrical), rear outside	(38) Rear suspension mounting hole (symmetrical), rear	(66) Stereo camera (camera plate) mounting hole (body center), rear side
(10) Front suspension mounting hole (symmetrical), front	(64) Front suspension mounting hole (symmetrical), rear inside	(67) Curtain air bag mounting hole (symmetrical)
(37) Rear suspension mounting hole (symmetrical), front	(65) Stereo camera (camera plate) mounting hole (symmetrical), front side	

Measuring point	Datum dimension mm (in)
(9)L — (65)L	1,259 (49.57)
(10)L — (65)L	1,310 (51.57)
(37)R — (66)	1,884 (74.17)
(38)R — (66)	2,001 (78.78)

Measuring point	Datum dimension mm (in)
(64)L — (65)L	1,200 (47.24)
(65)L — (67)L	584 (22.99)
(66) — (67)L	613 (24.13)

- Reference point (66) indicates a body center part. All other reference points indicate left-right symmetrical parts.
- The dimensions are the actual dimensions between the reference points.

Body Reference Points

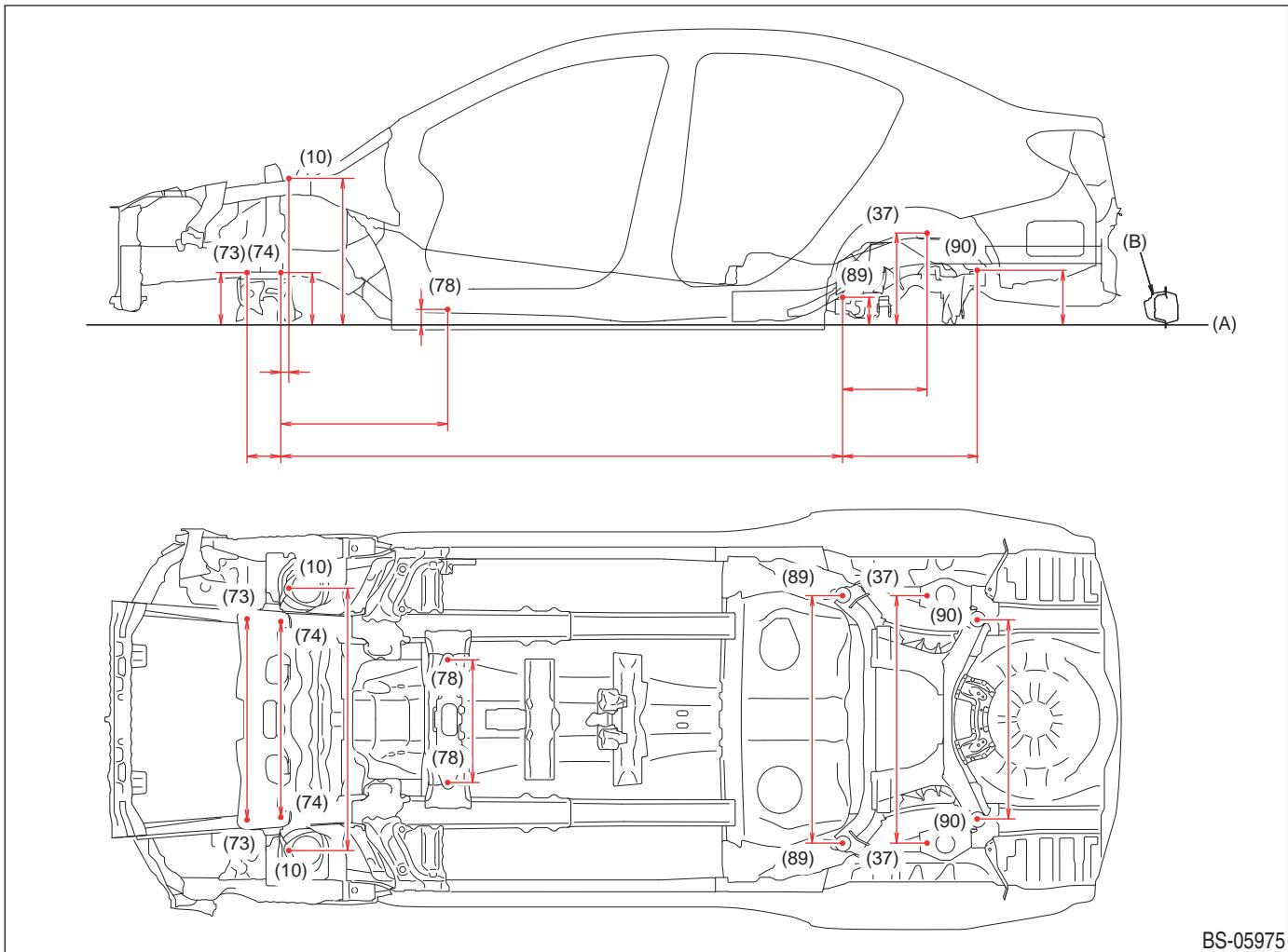


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7. Measurement for Combined Parts

A: DIMENSIONS

1. SUSPENSION MOUNT & ENGINE MOUNT



BS-05975

- The longitudinal dimensions are projected dimensions.
- The height dimensions are the vertical distances from the gauge point on the assumed horizontal line through the side sill flange joint (bending angle point).

(A) Standard line

(B) Side sill outer panel

(10)	Front suspension mounting hole (symmetrical), front	(78)a	MT cross member mounting hole R (right side)	(89)	Rear suspension cross member mounting hole (symmetrical)
(37)	Rear suspension mounting hole (symmetrical), front	(78)a	MT cross member mounting hole L (left side)	(90)	Rear suspension cross member mounting hole (symmetrical)
(73)	Front cross member mounting hole (symmetrical), front	(78)b	CVT cross member mounting hole R (right side)		
(74)	Front cross member mounting hole (symmetrical), rear	(78)b	CVT cross member mounting hole L (left side)		

Measurement for Combined Parts

Measuring point	Datum dimension mm (in)
Datum line — (10)	628(24.72)
Datum line — (37)	392(15.43)
Datum line — (73)	223(8.78)
Datum line — (74)	223(8.78)
Datum line — (78)aR	66(2.60)
Datum line — (78)aL	60(2.36)
Datum line — (78)bR	66(2.60)
Datum line — (78)bL	60(2.36)
Datum line — (89)	118(4.65)
Datum line — (90)	233(9.17)
(10)R — (74)R	31(1.22)
(37)R — (89)R	372(14.65)
(73)R — (74)R	144(5.67)

Measuring point	Datum dimension mm (in)
(74)R — (78)aR	711(27.99)
(74)R — (78)bR	811(31.93)
(74)R — (89)R	2,392(94.17)
(89)R — (90)R	573(22.56)
(10)R — (10)L	1,103(43.43)
(37)R — (37)L	1,059(41.69)
(73)R — (73)L	862(33.94)
(74)R — (74)L	840(33.07)
(78)aR — (78)aL	376(14.80)
(78)bR — (78)bL	361(14.21)
(89)R — (89)L	1,060(41.73)
(90)R — (90)L	854(33.62)

CAUTION:

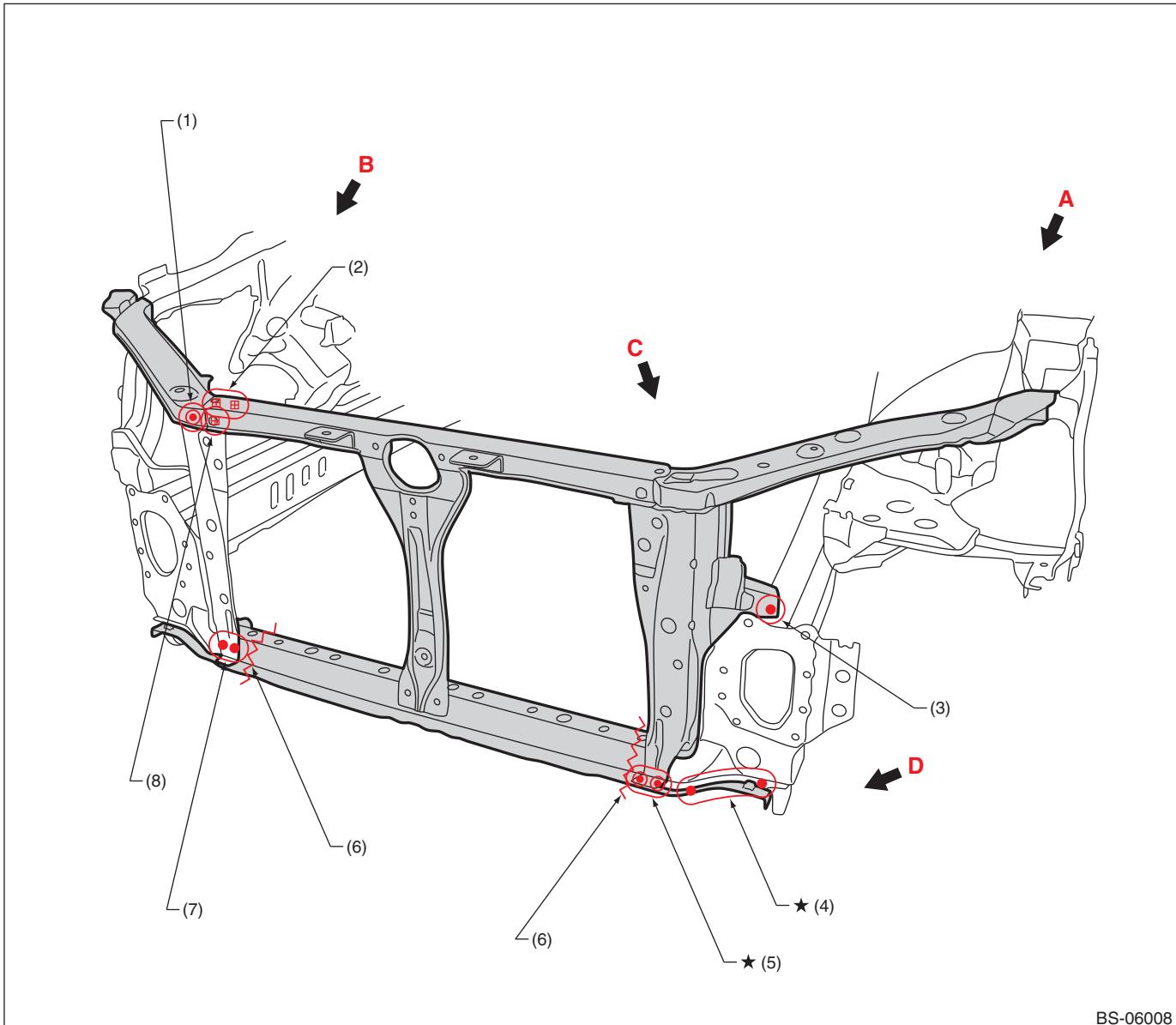
- For the reference points (10), refer to the figure "FRONT 1, DIMENSIONS, Body Reference Points" on page 37.
- For the reference points (37), refer to the figure "INSIDE COMMON PARTS 2, DIMENSIONS, Body Reference Points" on page 45.
- Except the reference points (10) and (37), refer to the figure "LOWER SURFACE, DIMENSIONS, Body Reference Points" on page 33.

8. Panel Replacement

8-1. Radiator Panel (total replacement)

A: REMOVAL

- Overall view



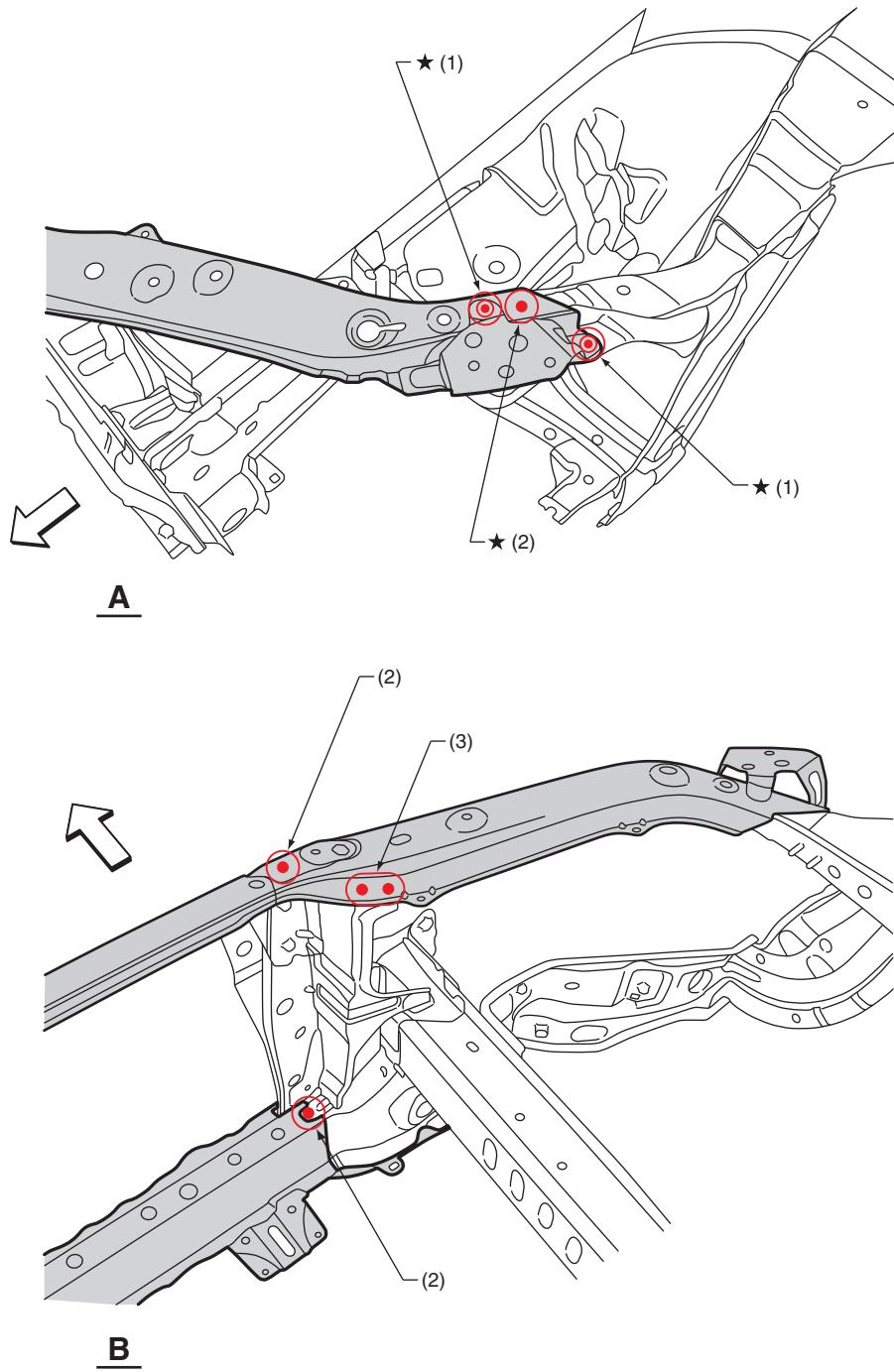
BS-06008

(1) 1 point (outside · 1)	(4) 3 points (bottom · 1)	(7) 2 points (outside · 1)
(2) 2 points (bolt)	(5) 2 points (top · 1, bottom · 1)	(8) 1 point (bolt)
(3) 1 point (top · 1)	(6) Rough cutting	

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

• Views 1



BS-06009

(1) 1 point (top · 2)

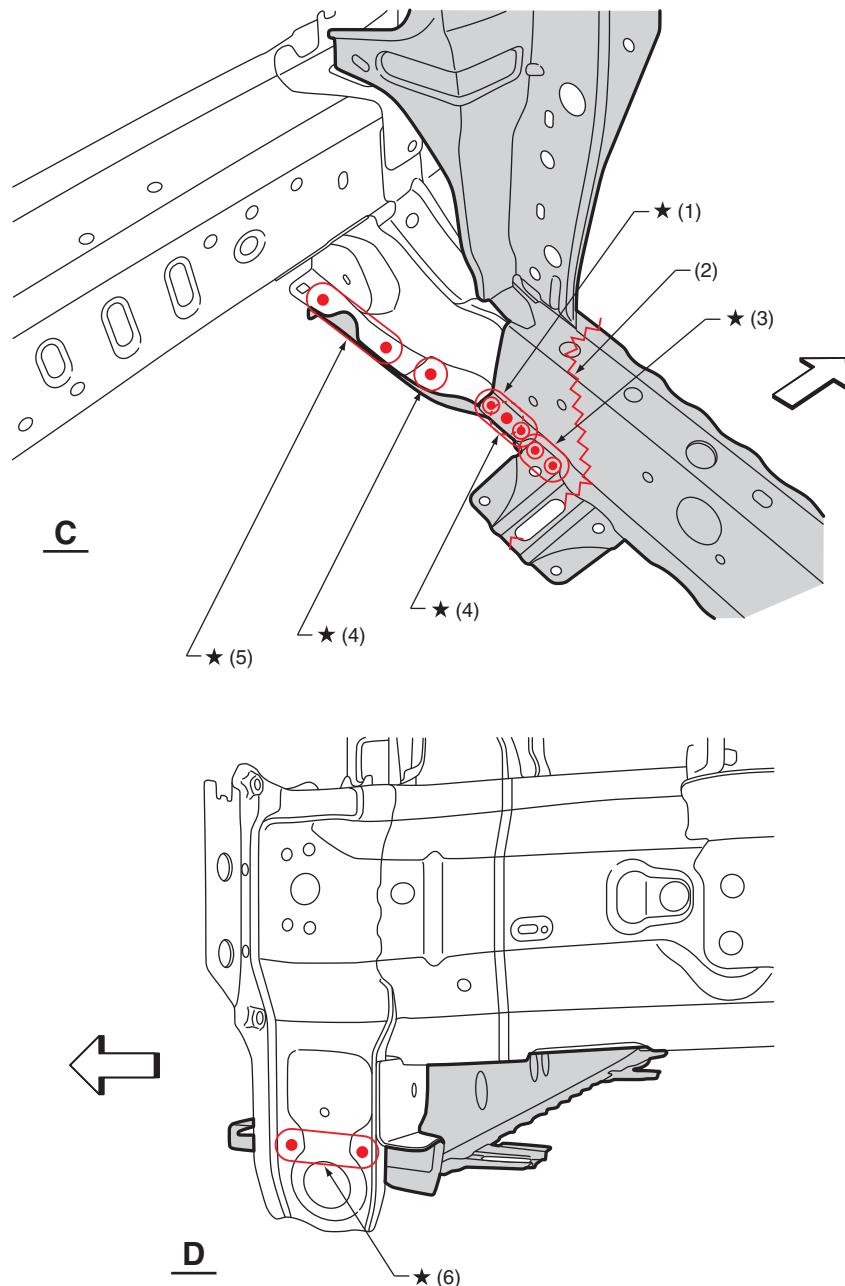
(2) 1 point (top · 1)

(3) 2 points (inside · 1)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

• Views 2



BS-06010

(1) 3 points (top · 1, bottom · 1)
(2) Rough cutting

(3) 2 points (top · 1, bottom · 1)
(4) 1 point (bottom · 1)

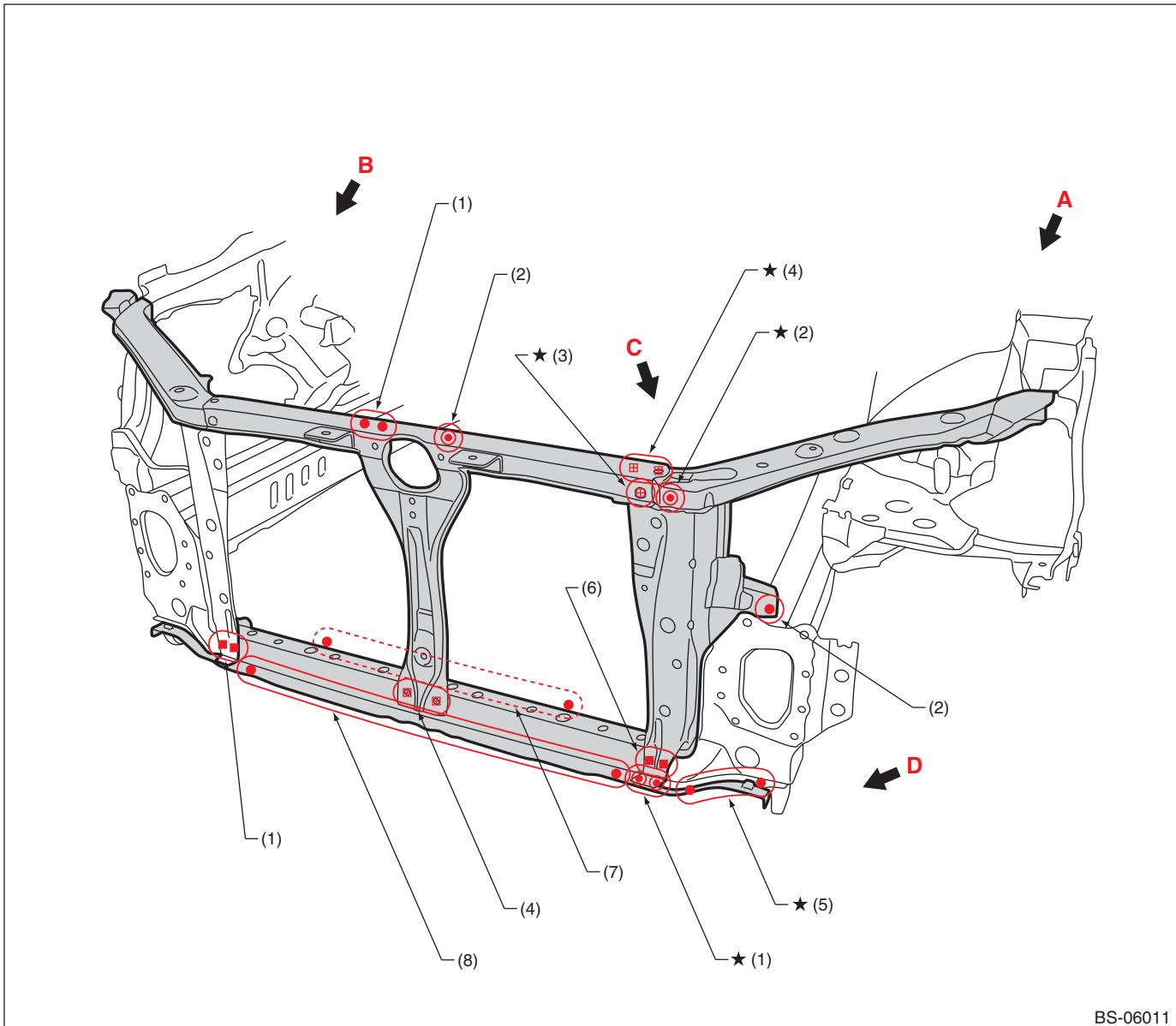
(5) 2 points (bottom · 1)
(6) 2 points (inside · 1 belt sander)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

B: INSTALLATION

• Overall view



BS-06011

(1) 2 points

(2) 1 point

(3) 1 point (bolt)

(4) 2 points (bolt)

(5) 3 points

(6) 2 points (service)

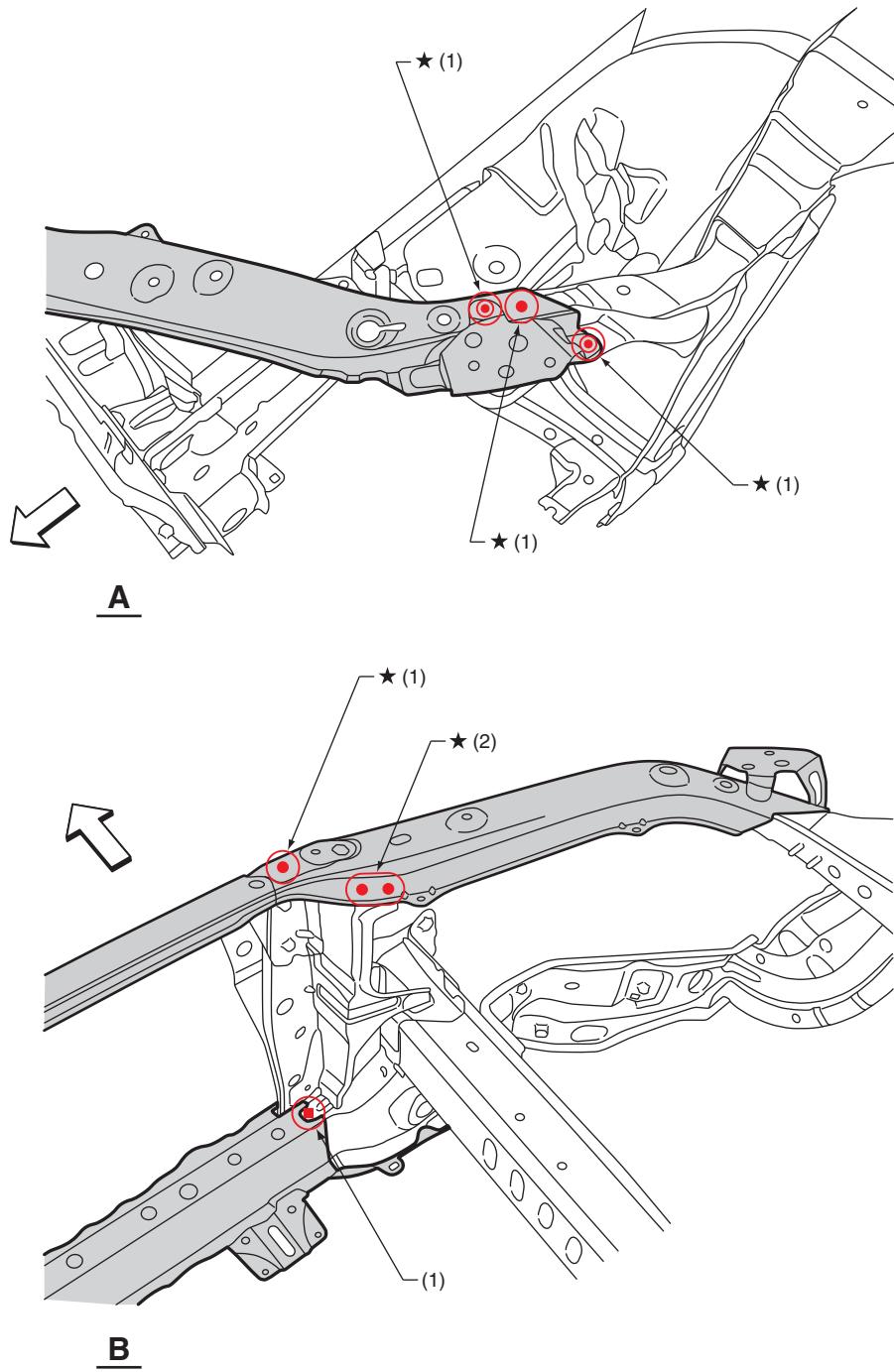
(7) 9 points

(8) 17 points

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

• Views 1



BS-06012

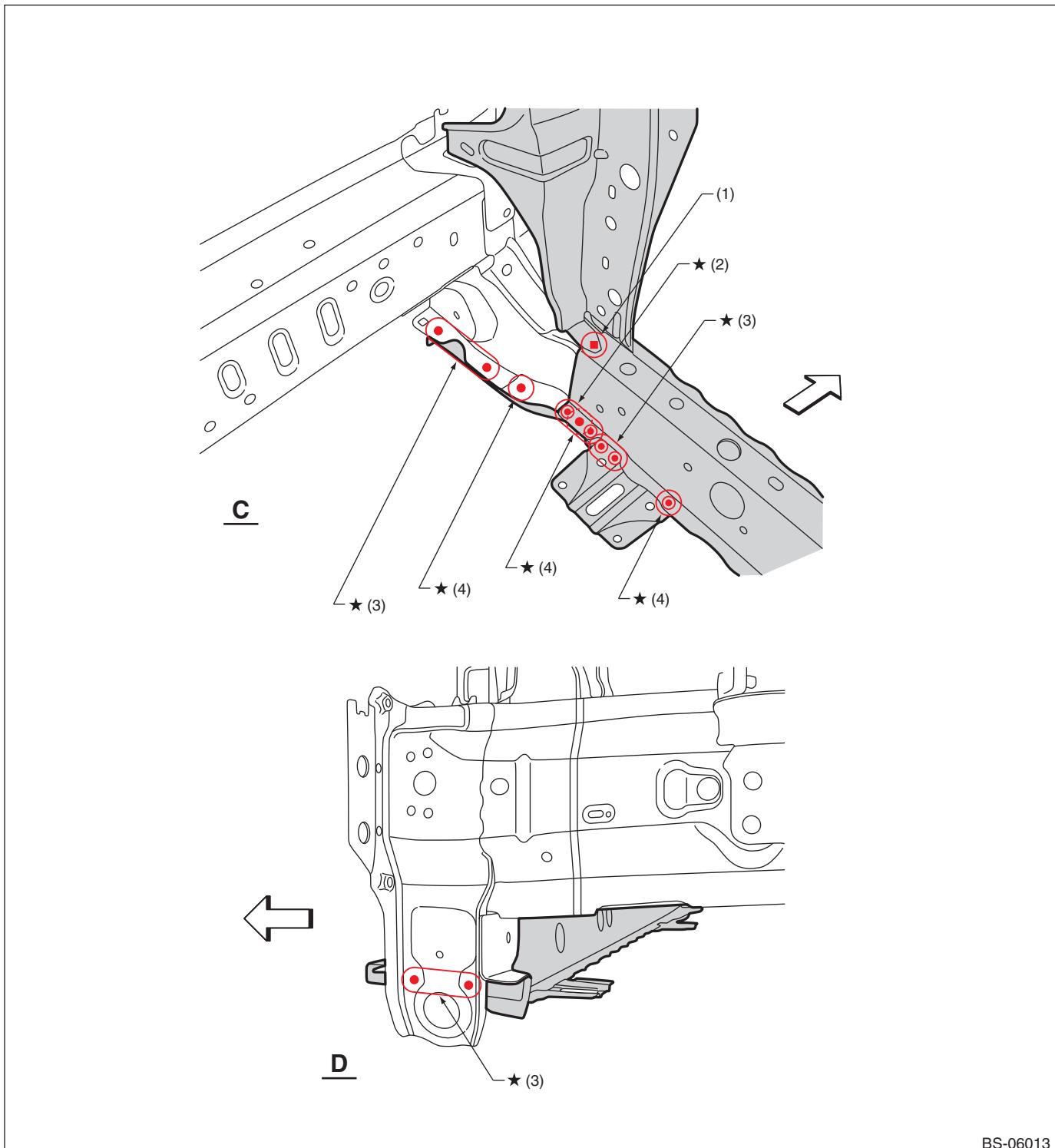
(1) 1 point

(2) 2 points

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

• Views 2



BS-06013

(1) 1 point (service)

(3) 2 points

(4) 1 point

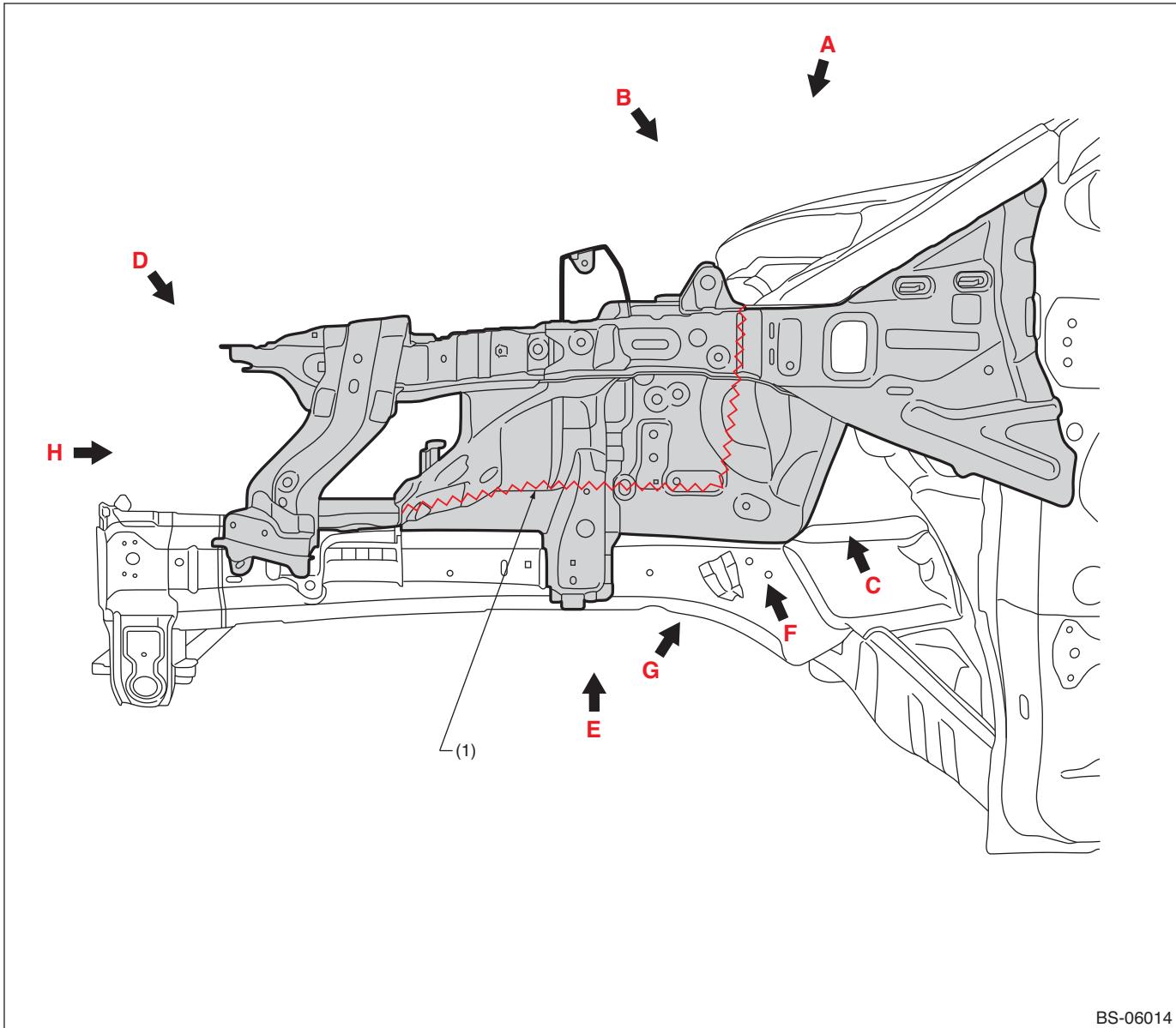
(2) 3 points

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

8-2. Front Wheel Apron (total replacement)

A: REMOVAL

- Overall view (Radiator panel removal condition)

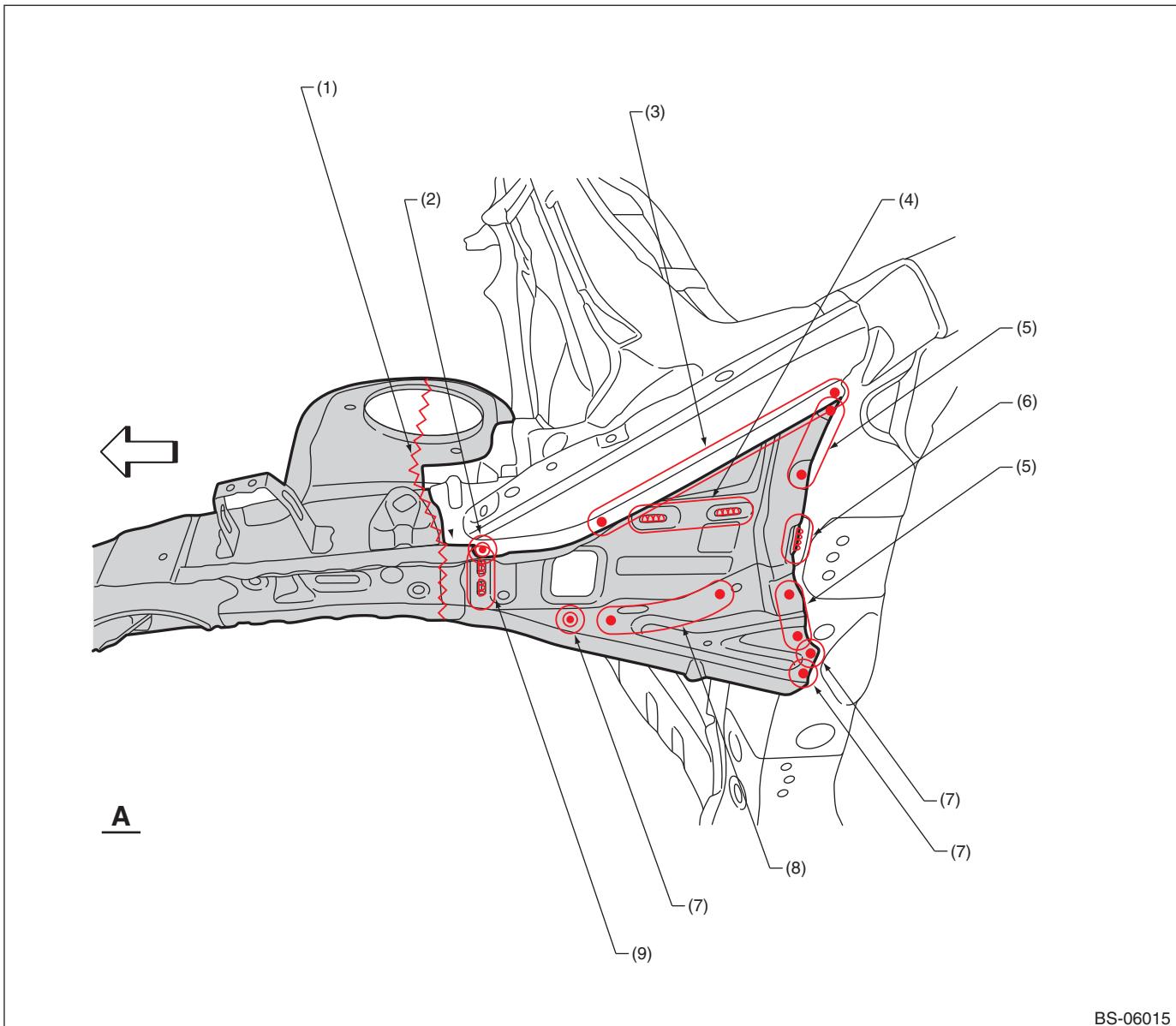


BS-06014

(1) Rough cutting

Panel Replacement

• Views 1

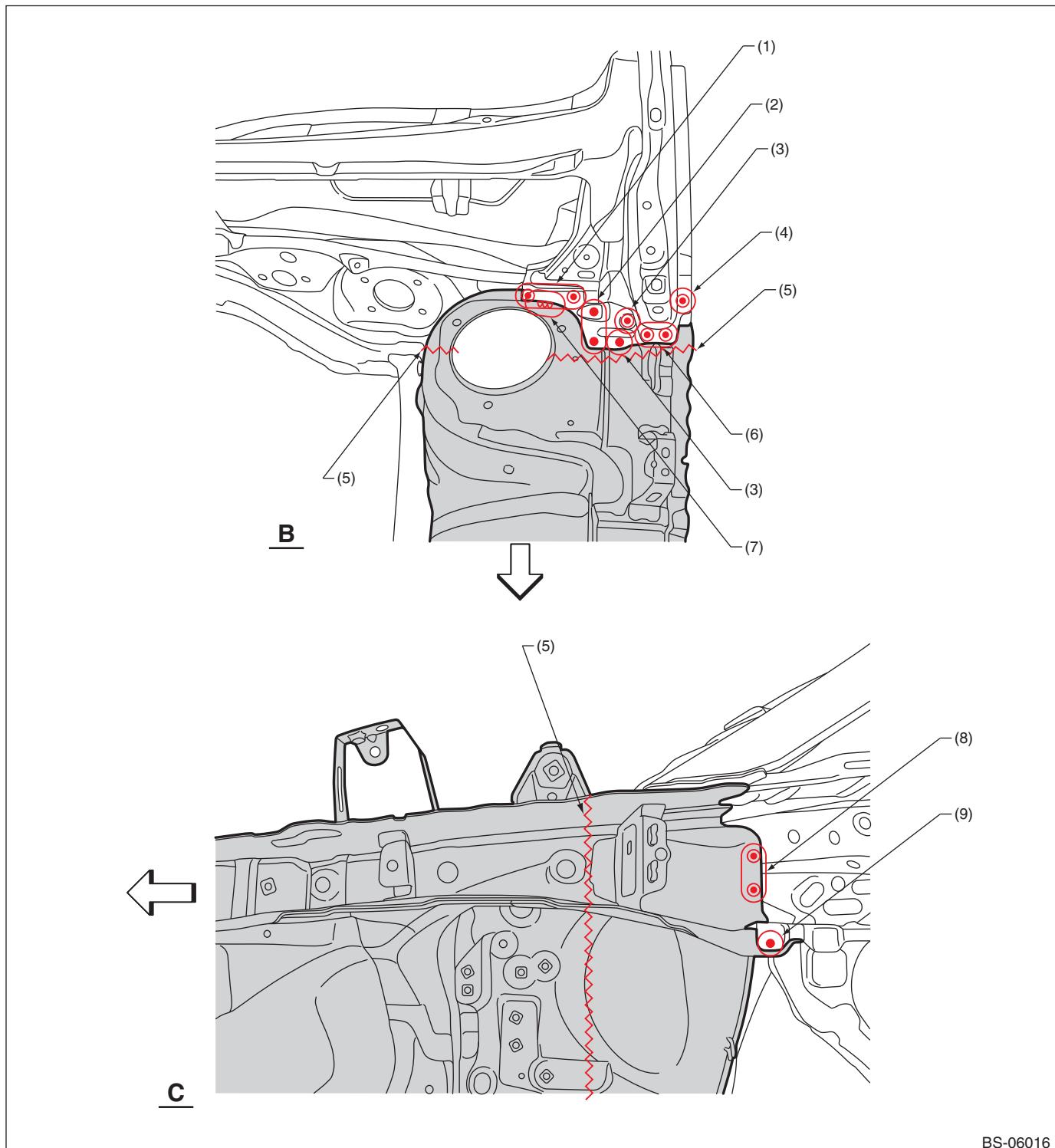


BS-06015

(1) Rough cutting	(5) 2 points (outside · 1)	(9) 2 points (outside · 1, belt sander)
(2) 1 point (top · 2)	(6) 1 point (outside · 1, belt sander)	
(3) 7 points (bottom · 1, belt sander)	(7) 1 point (outside · 1)	
(4) 2 points (outside · 2, belt sander)	(8) 3 points (outside · 1)	

Panel Replacement

• Views 2

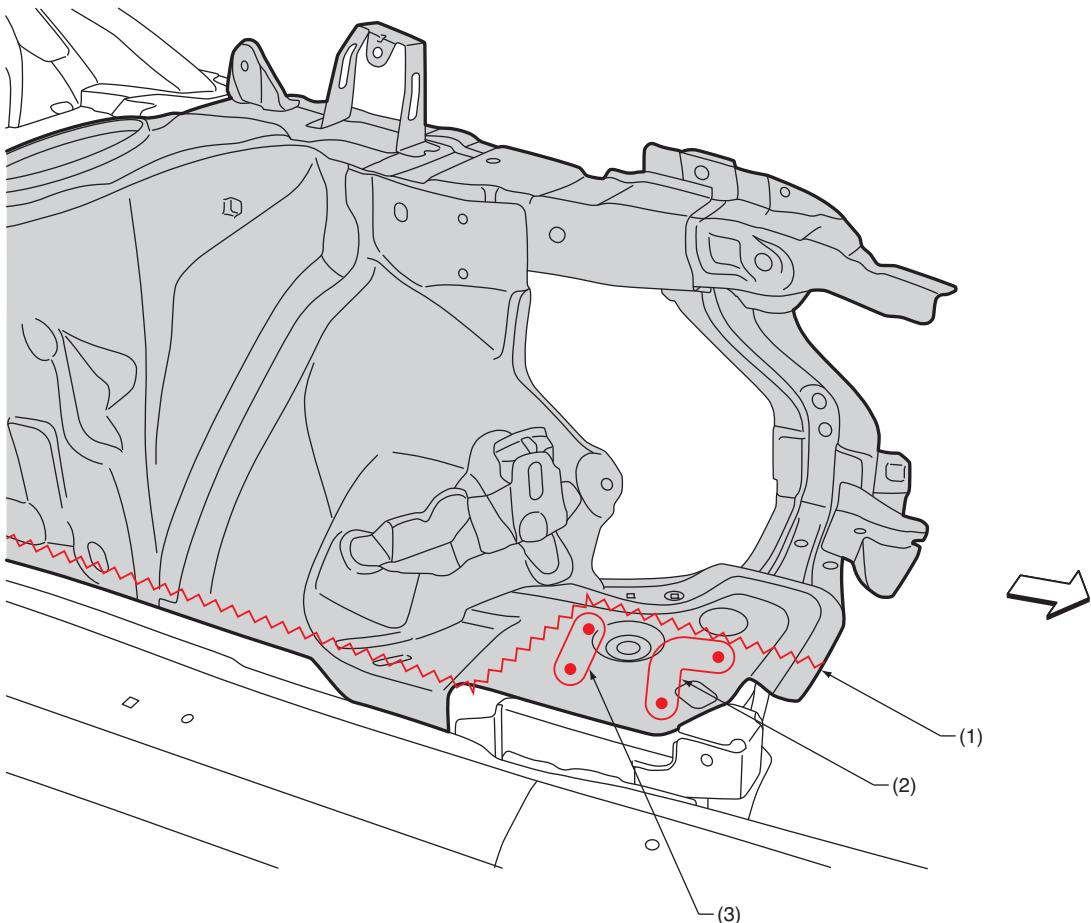


BS-06016

(1) 2 points (top · 1) (only LH) 3 points (top · 1) (only RH)	(5) Rough cutting	(9) 1 point (outside · 1)
(2) 3 points (top · 1)	(6) 2 points (top · 2)	
(3) 1 point (top · 1)	(7) 1 point (top · 1, belt sander) (only LH)	
(4) 1 point (top · 2)	(8) 2 points (outside · 2)	

Panel Replacement

• Views 3



BS-06017

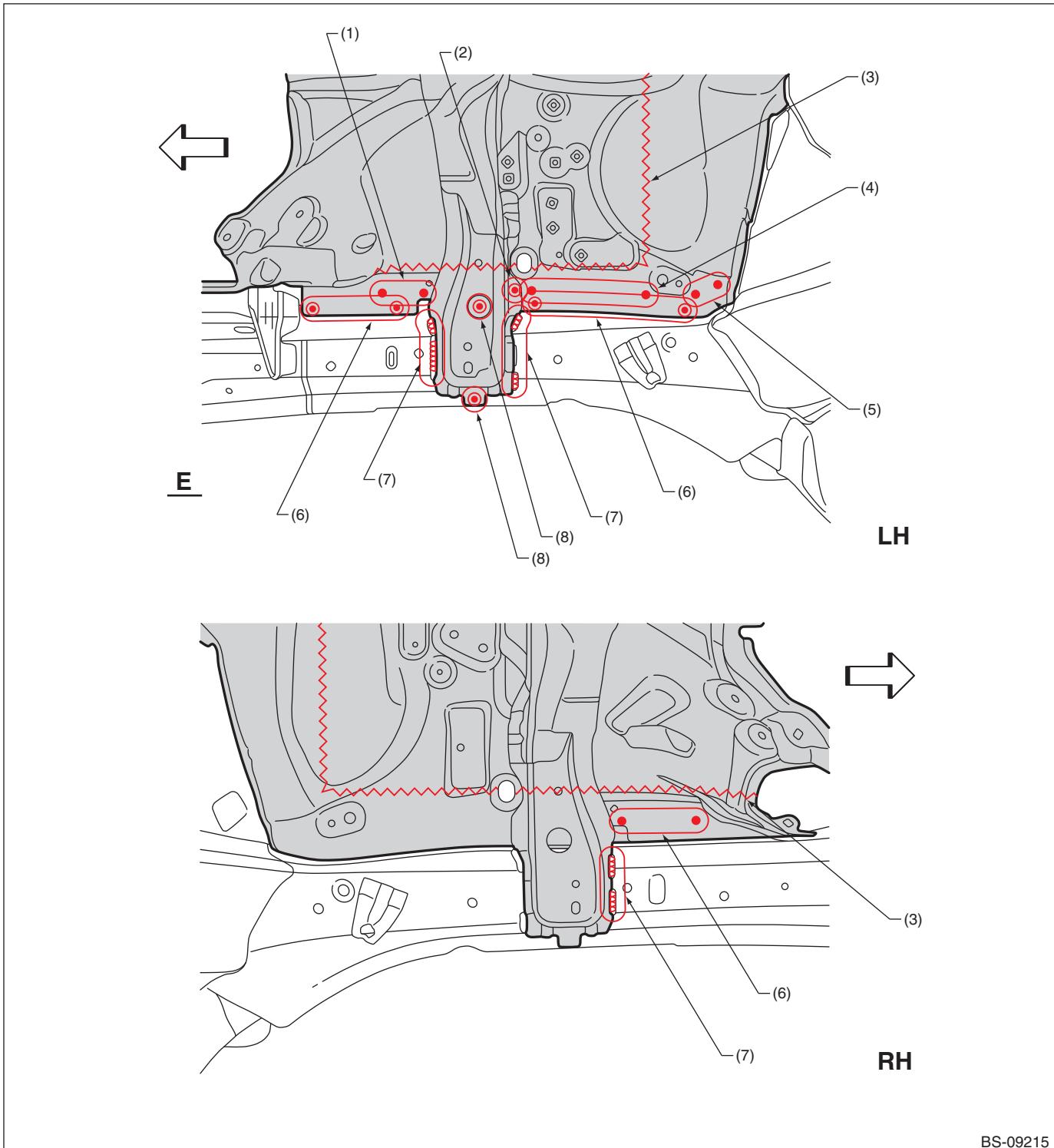
(1) Rough cutting

(2) 3 points (top · 1)

(3) 2 points (top · 1)

Panel Replacement

• Views 4



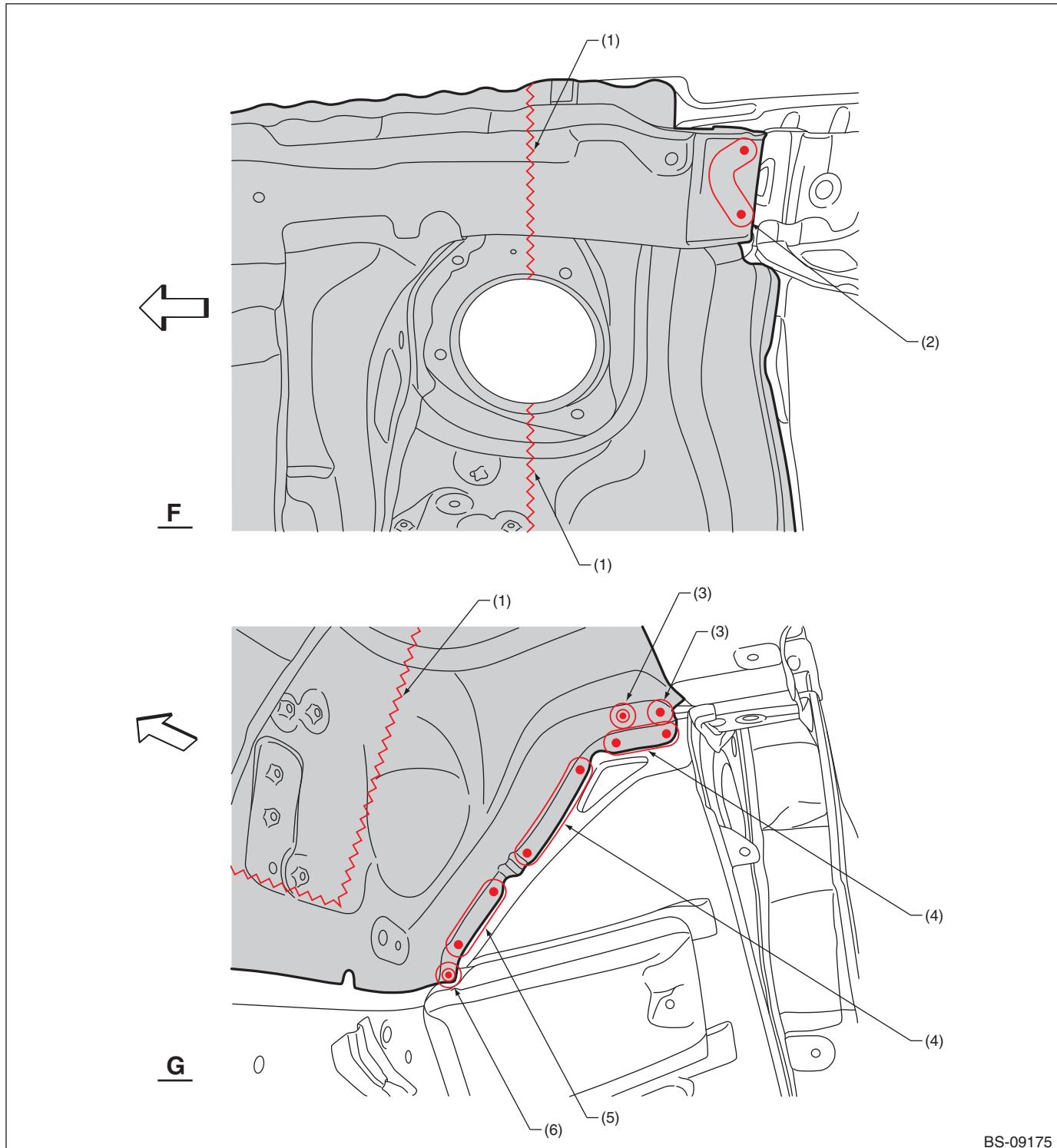
BS-09215

(1) 3 points (outside · 1)	(4) 6 points (outside · 1)	(7) 2 points (outside · 1, belt sander)
(2) 1 point (outside · 2)	(5) 2 points (outside · 1)	(8) 1 point (outside · 1)
(3) Rough cutting	(6) 4 points (outside · 1)	

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 5



(1) Rough cutting

(2) 4 points (bottom · 1)

(3) 1 point (bottom · 1)

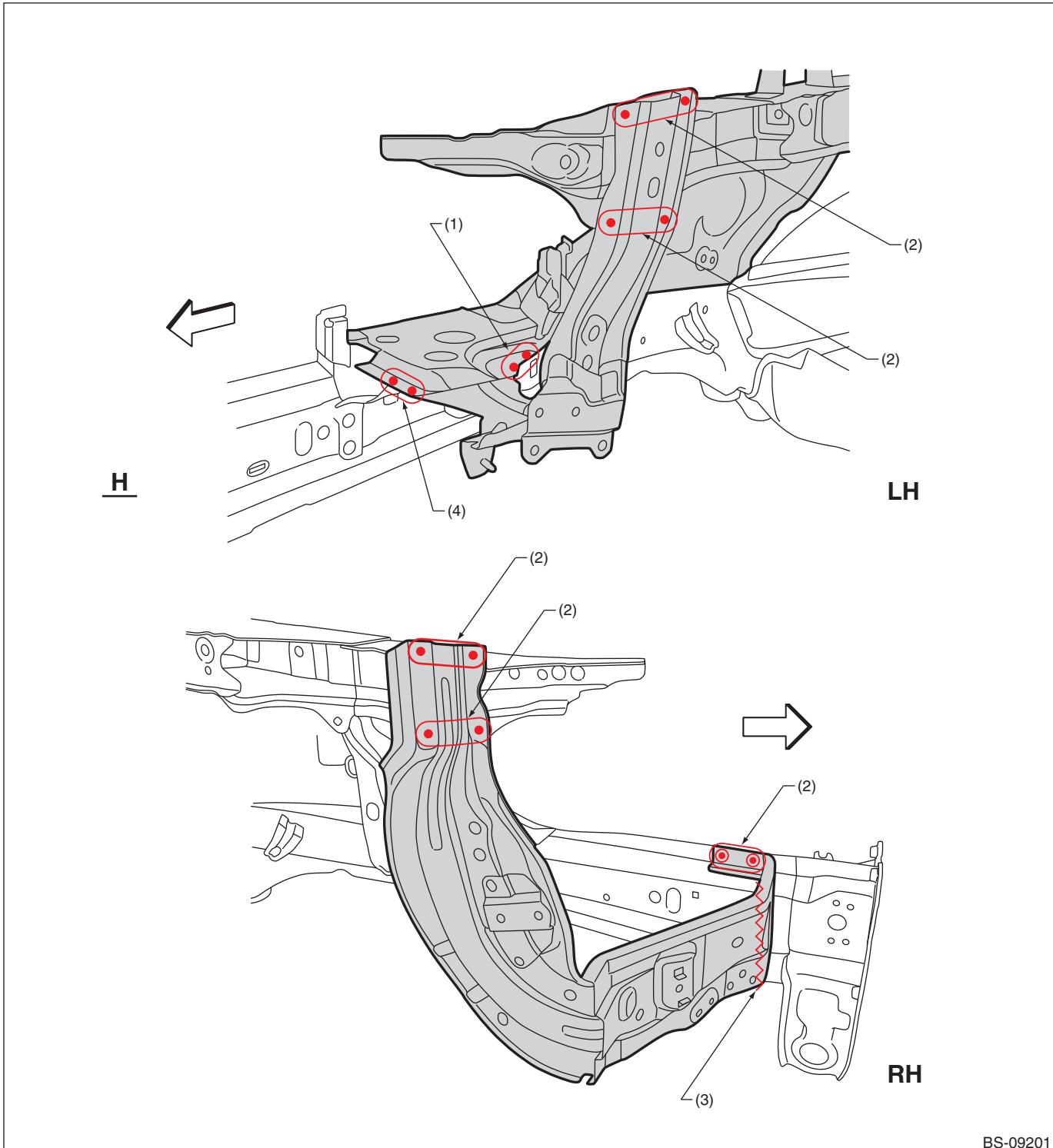
(4) 3 points (outside · 1)

(5) 2 points (outside · 1)

(6) 1 point (outside · 1)

Panel Replacement

• Views 6 ('14 MY — '17 MY)



BS-09201

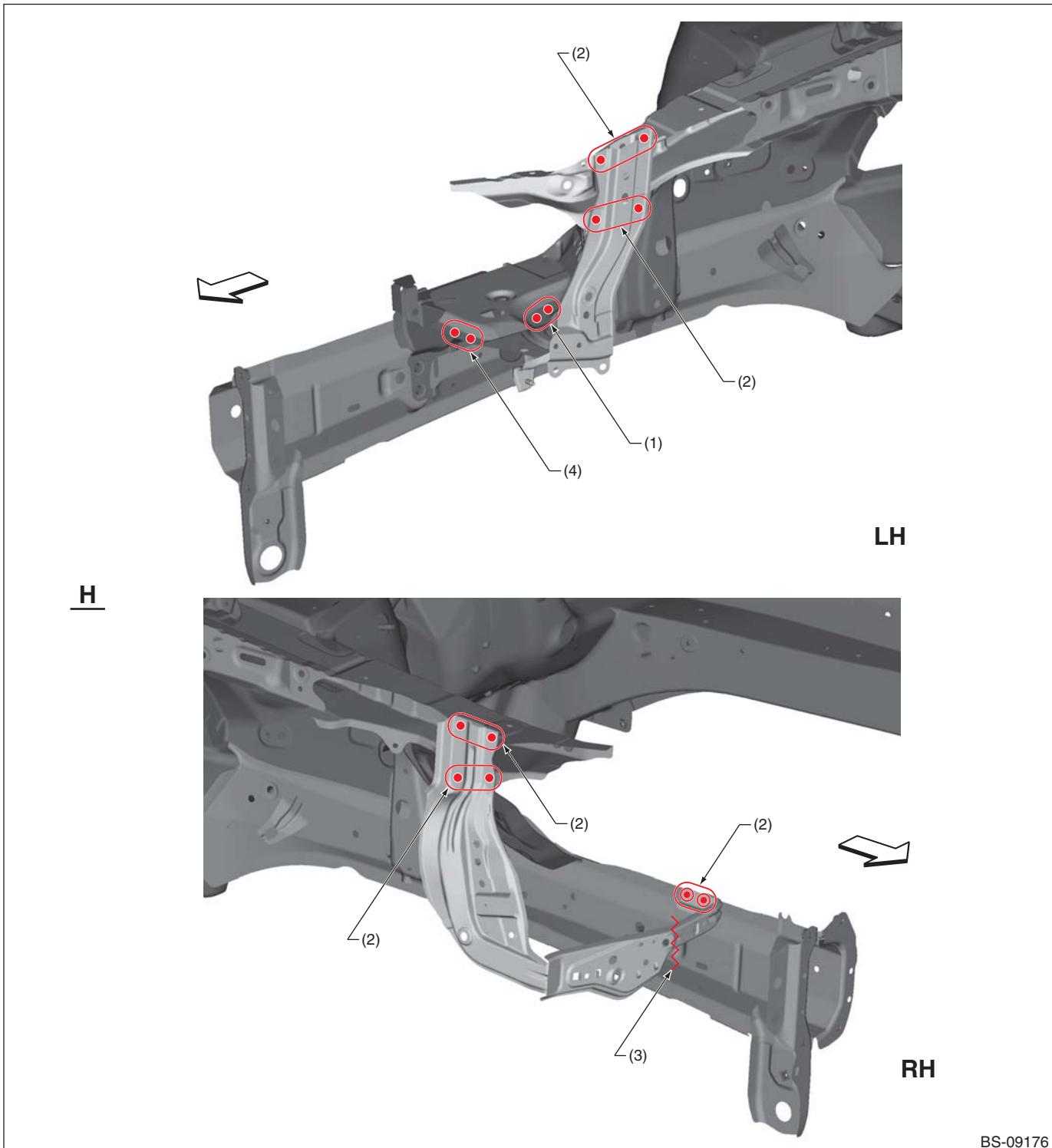
(1) 2 points (bottom · 1)
(2) 2 points (outside · 1)

(3) Rough cutting

(4) 3 points (bottom · 1)

Panel Replacement

• Views 6 ('18 MY —)



(1) 2 points (bottom · 1)
(2) 2 points (outside · 1)

(3) Rough cutting

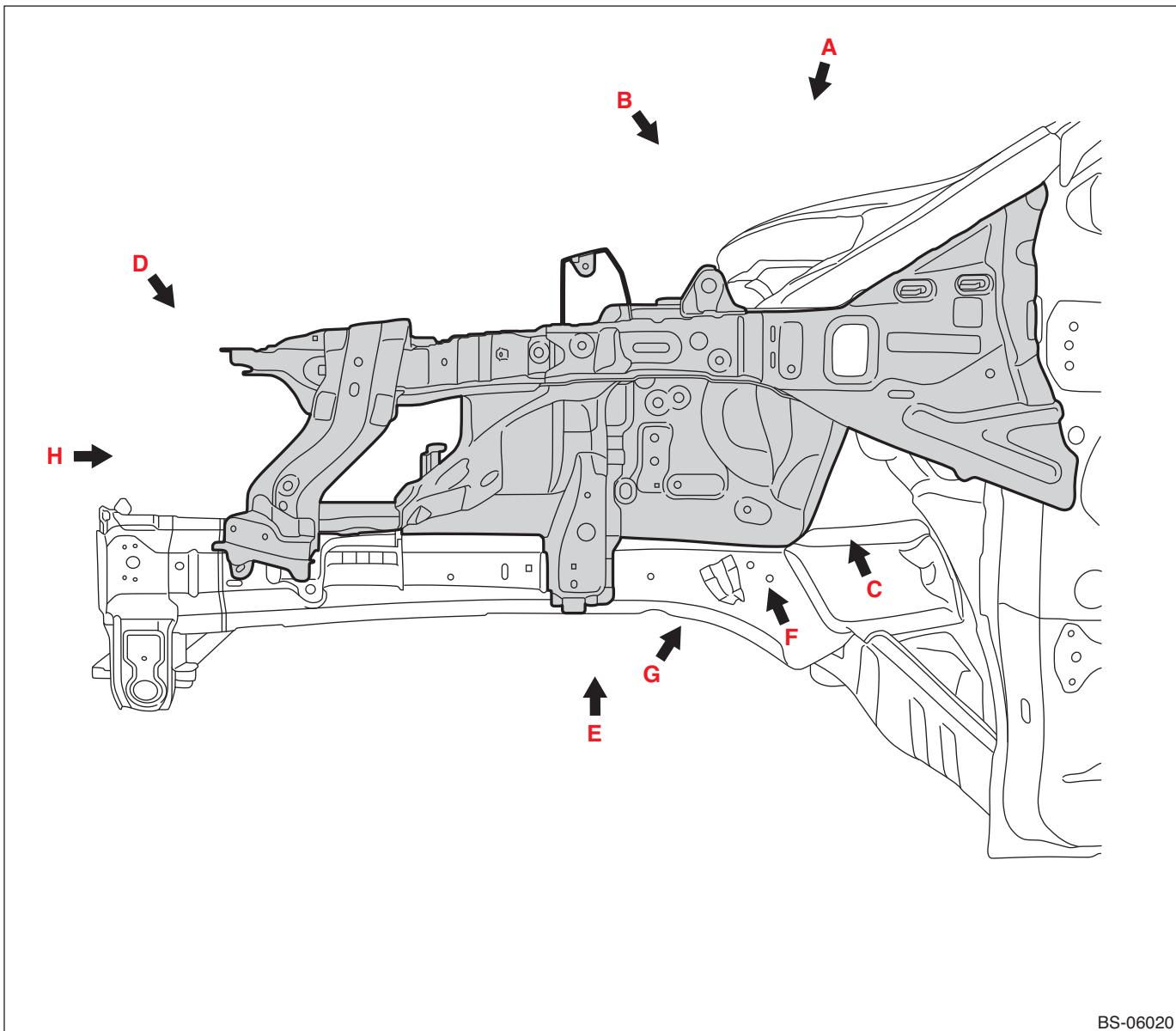
(4) 3 points (bottom · 1)

BS-09176

Panel Replacement

B: INSTALLATION

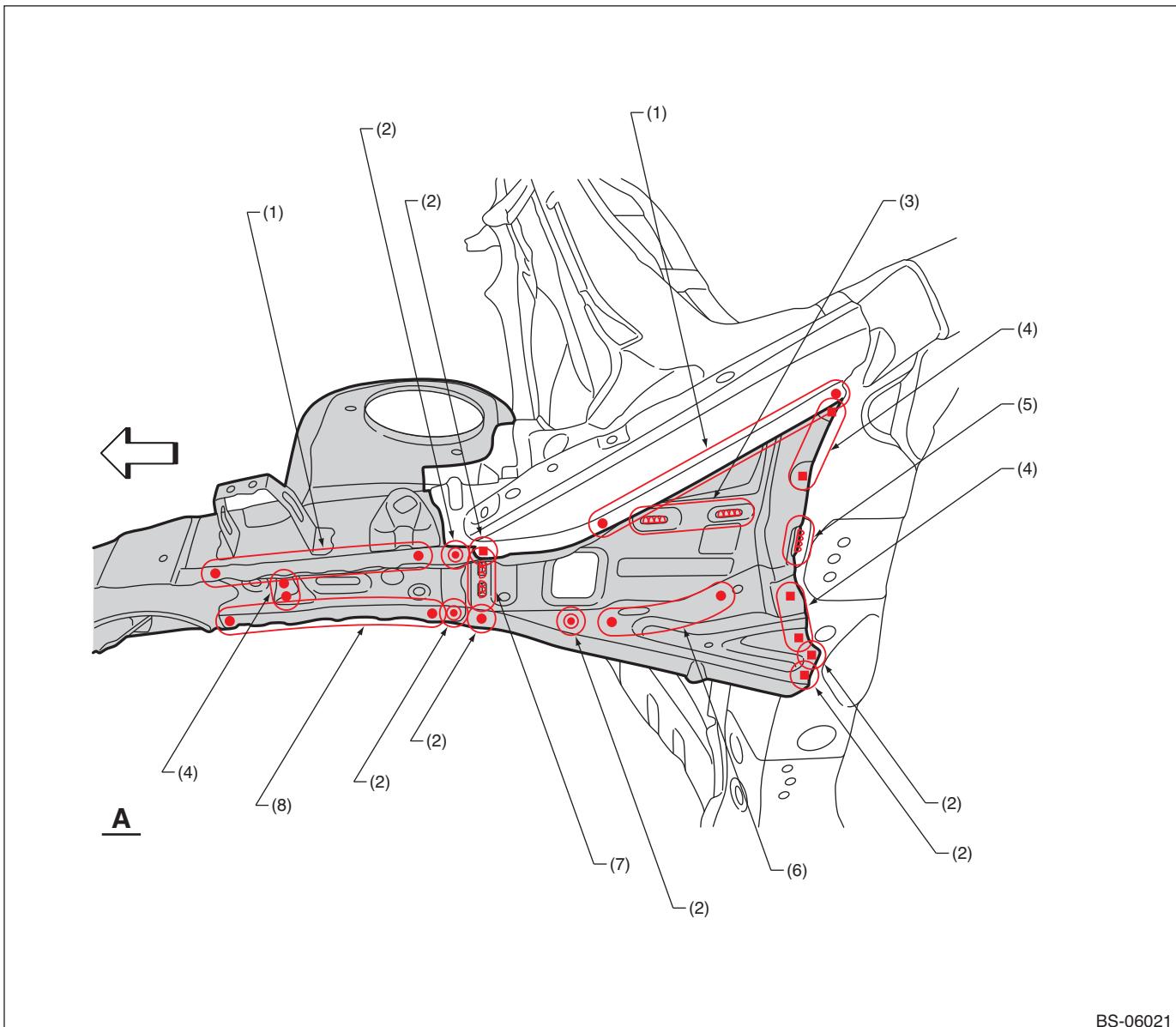
- Overall view



BS-06020

Panel Replacement

• Views 1



BS-06021

(1) 7 points

(2) 1 point

(3) 2 points [20 mm (0.79 in)]

(4) 2 points

(5) 1 point [35 mm (1.38 in)]

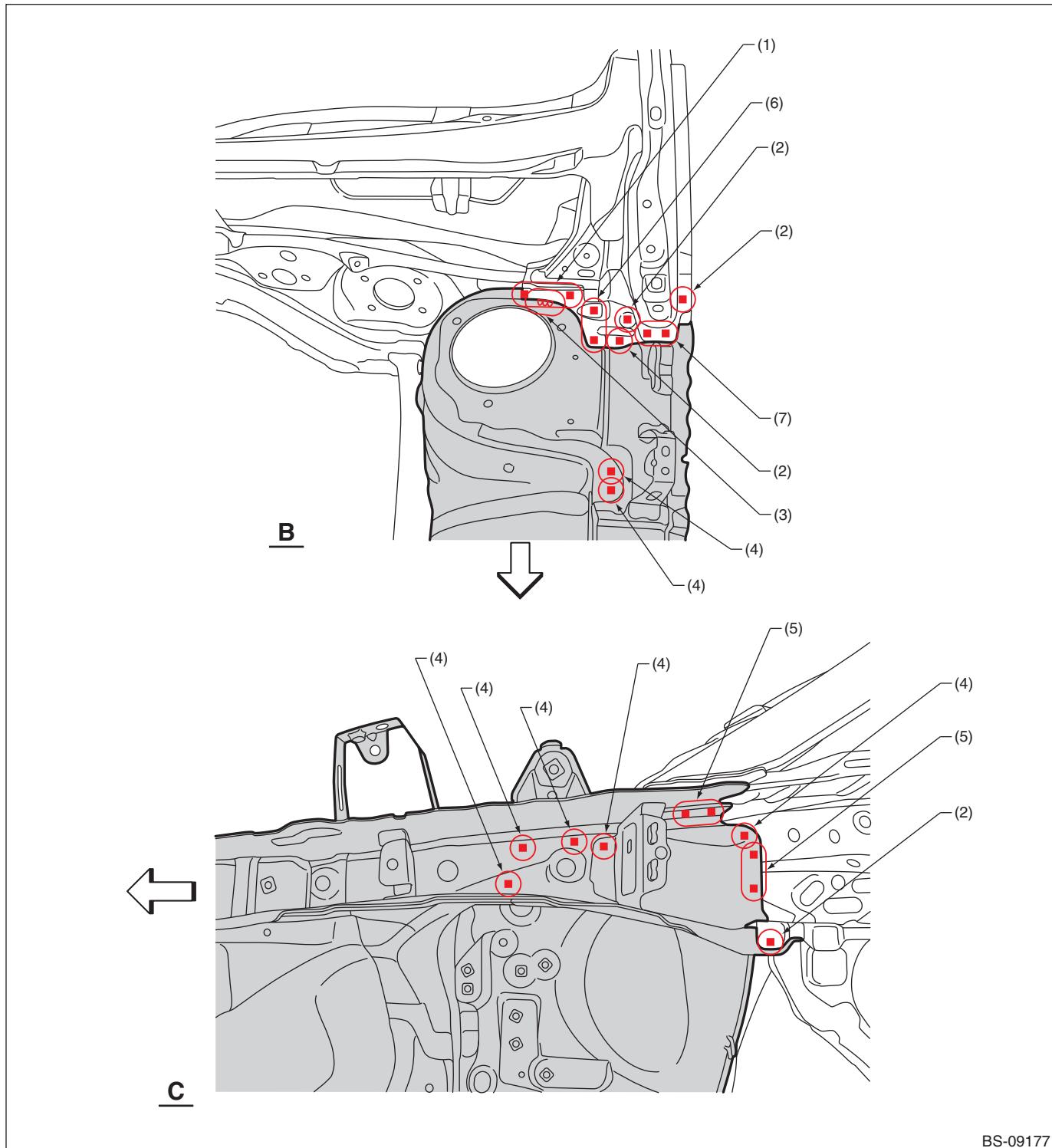
(6) 3 points

(7) 2 points [15 mm (0.59 in)]

(8) 6 points

Panel Replacement

• Views 2



(1) 2 points (only LH)
3 points (only RH)

(4) 1 point (service)

(6) 3 points

(2) 1 point

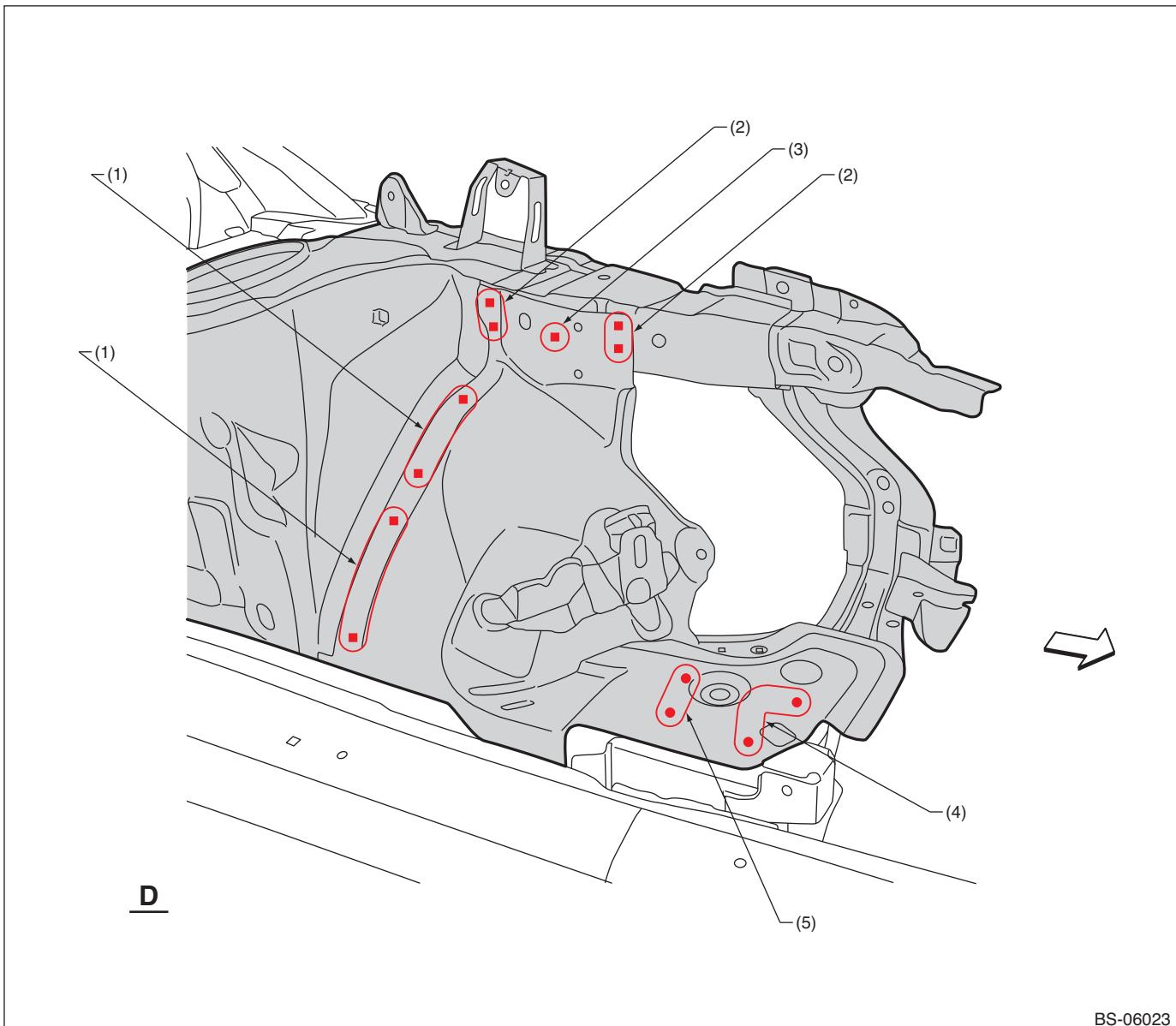
(5) 2 points (service)

(7) 2 points

(3) 1 point [20 mm (0.79 in)] (only LH)

Panel Replacement

• Views 3



BS-06023

(1) 4 points (service)

(2) 2 points (service)

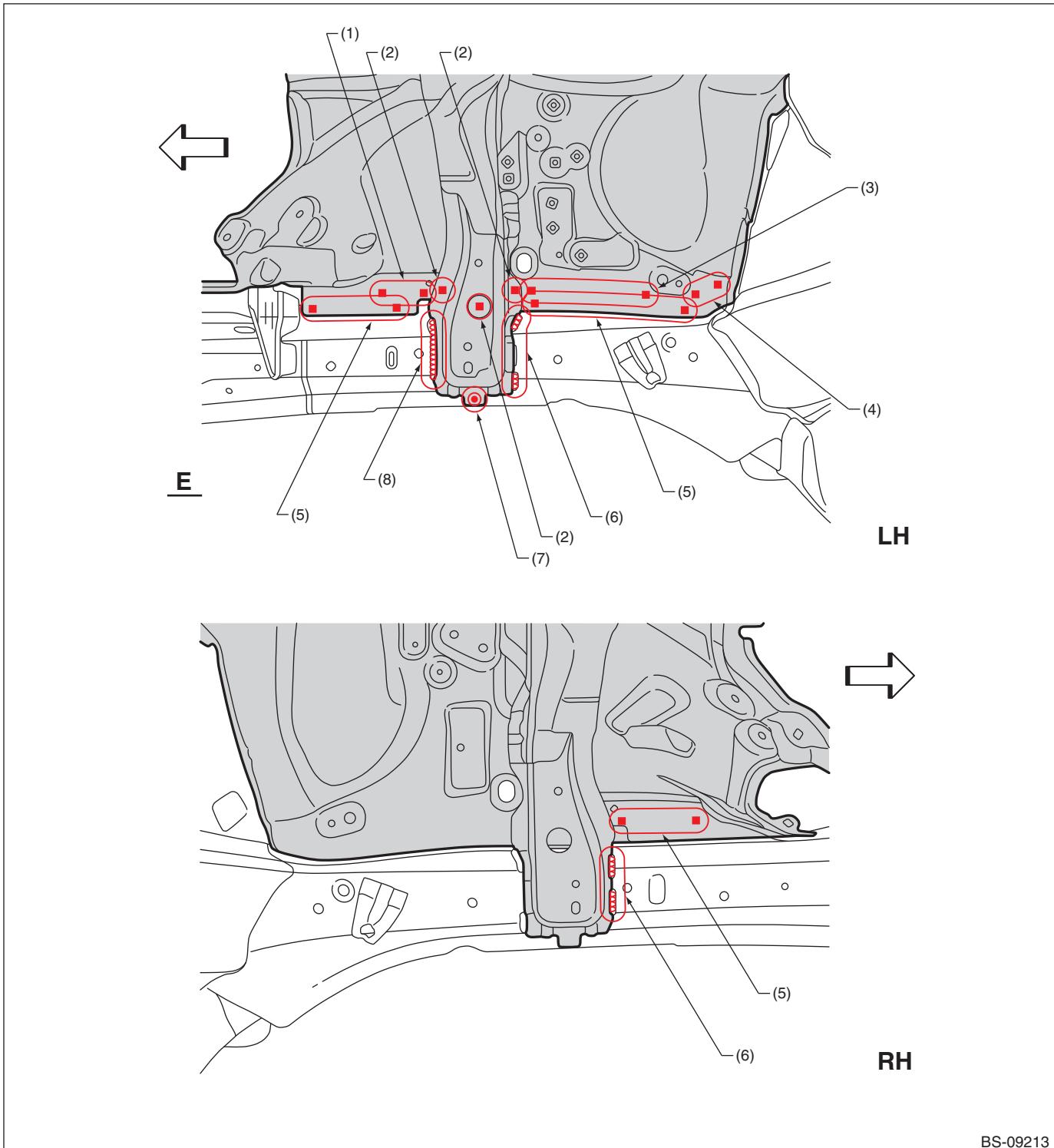
(3) 1 point (service)

(4) 3 points

(5) 2 points

Panel Replacement

• Views 4

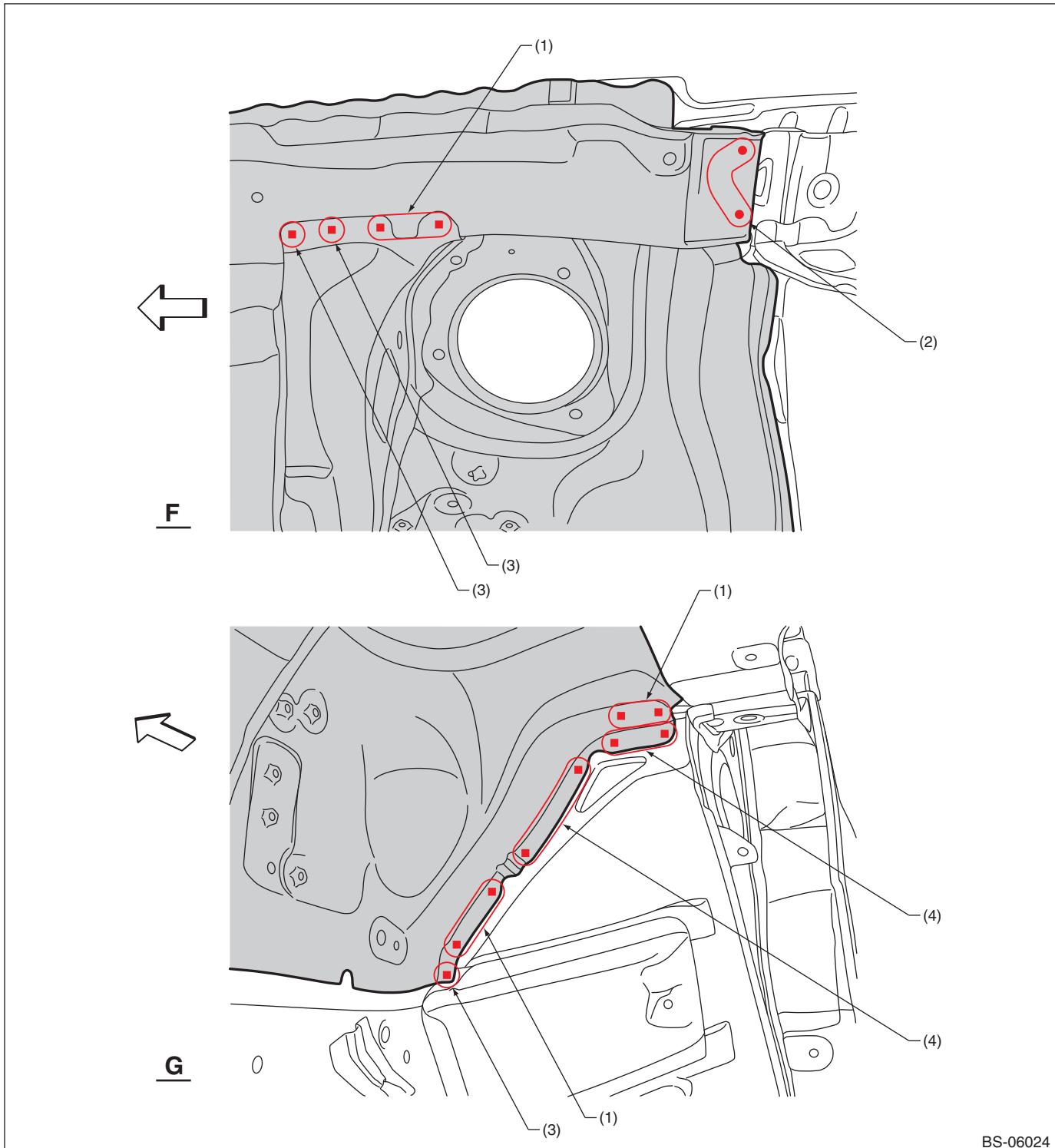


(1) 3 points (service)	(4) 2 points (service)	(7) 1 point
(2) 1 point (service)	(5) 4 points (service)	(8) 1 point [80 mm (3.15 in)]
(3) 6 points (service)	(6) 2 points [25 mm (0.98 in)]	

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 5



(1) 2 points (service)

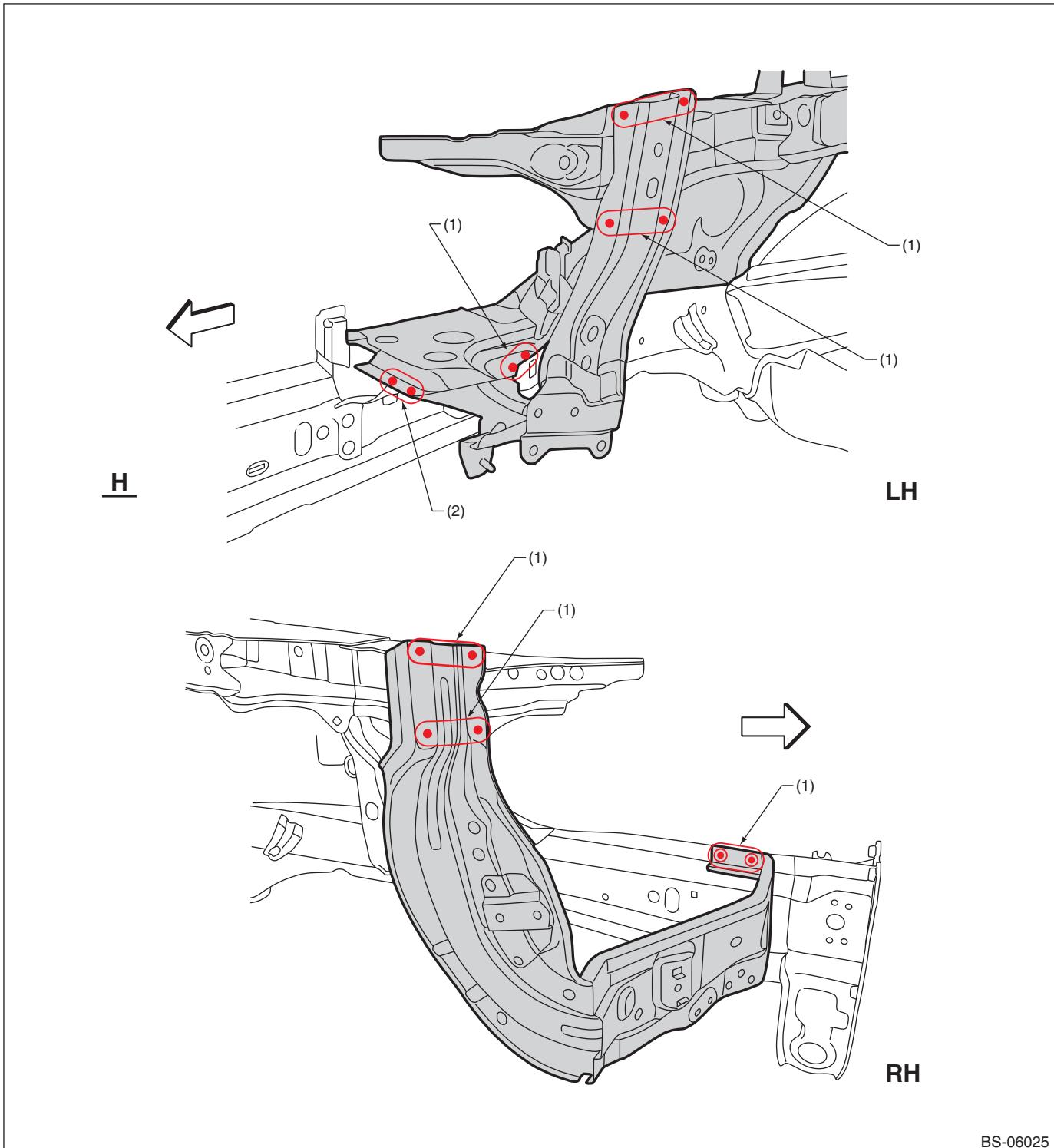
(2) 4 points

(3) 1 point (service)

(4) 3 points (service)

Panel Replacement

• Views 6 ('14 MY — '17 MY)



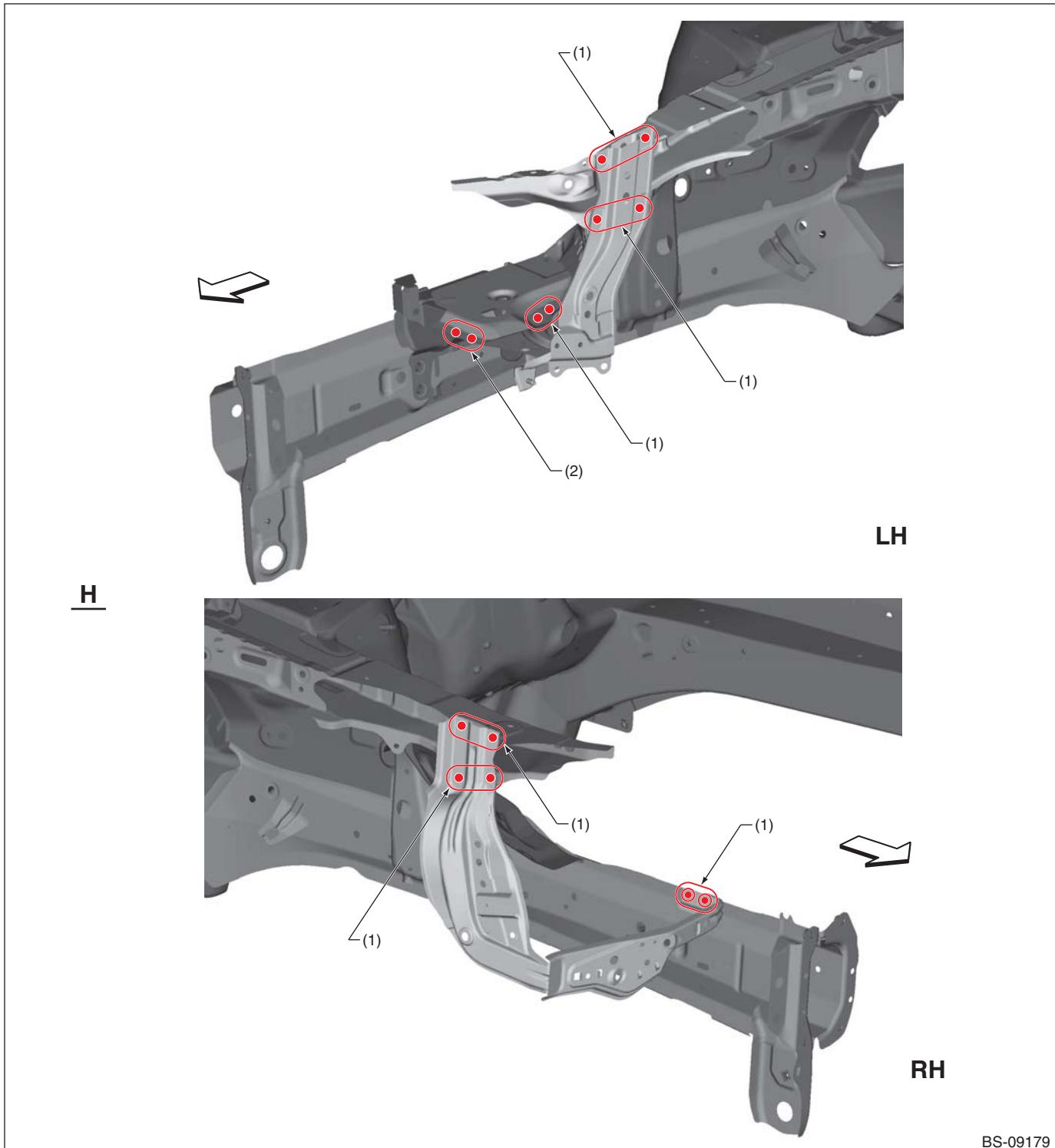
(1) 2 points

(2) 3 points

BS-06025

Panel Replacement

• Views 6 ('18 MY —)



(1) 2 points

(2) 3 points

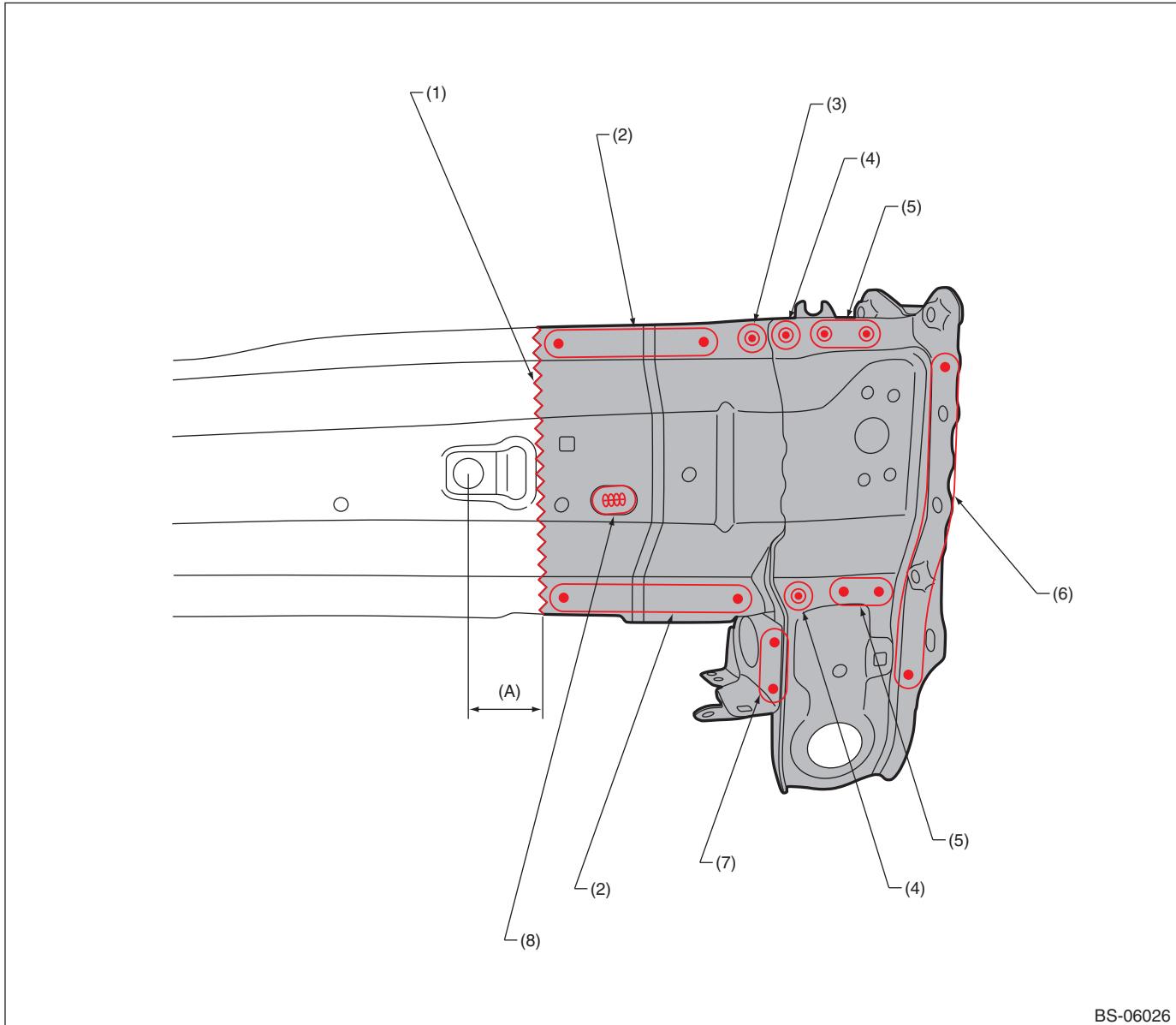
BS-09179

Panel Replacement

8-3. Closing Plate (partial replacement) ('14 MY — '17 MY)

A: REMOVAL

- RH (Radiator panel and front wheel apron front removal condition)



BS-06026

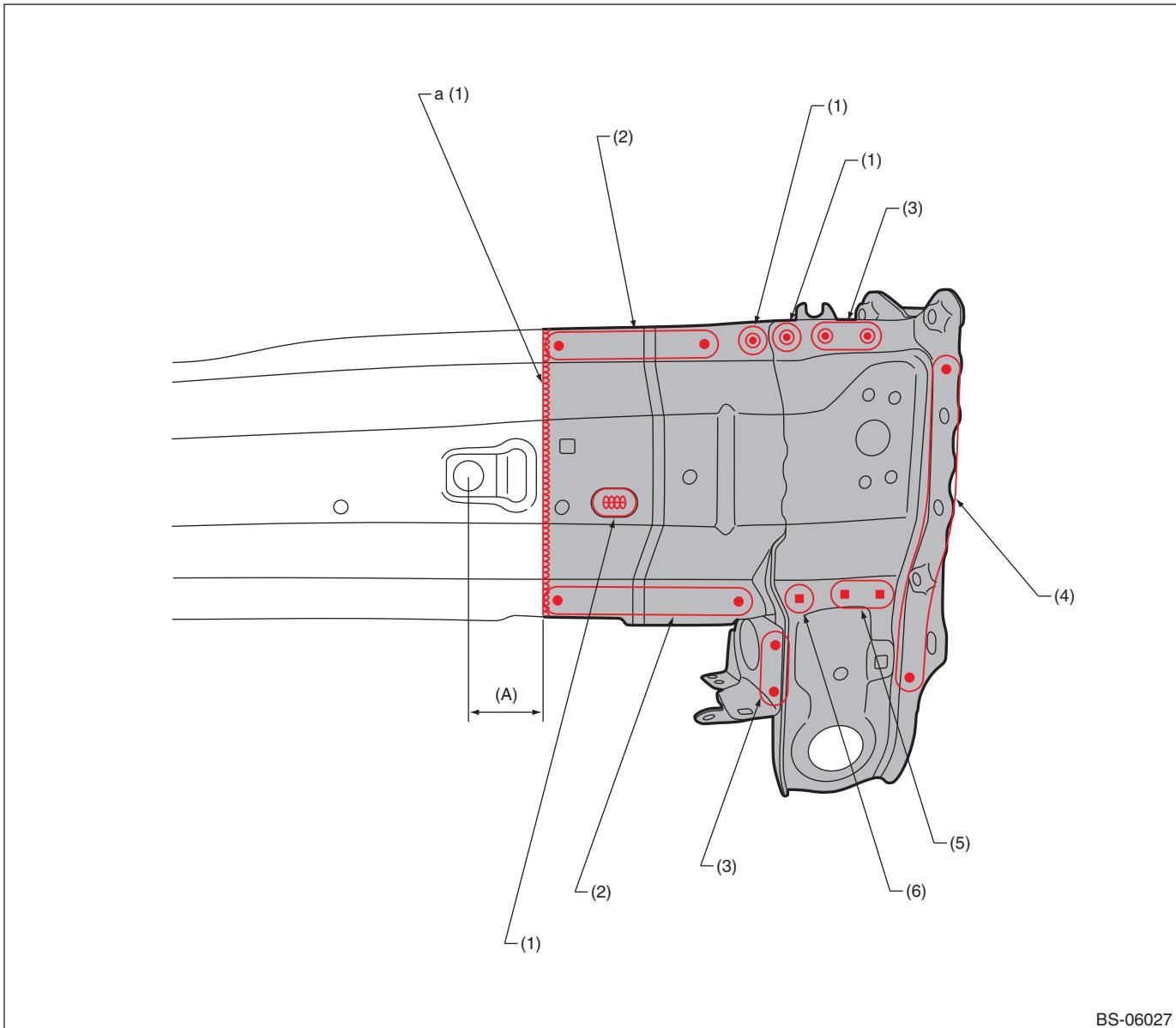
(A) 40 mm (1.57 in)

(1) Cut position	(4) 1 point (outside · 2)	(7) 2 points (inside · 1)
(2) 5 points (outside · 1)	(5) 2 points (outside · 1)	(8) 1 point (outside · 1, belt sander)
(3) 1 point (outside · 1)	(6) 6 points (outside · 1)	

Panel Replacement

B: INSTALLATION

• RH



(A) 40 mm (1.57 in)

(1) 1 point

(2) 5 points

(3) 2 points

(4) 6 points

(5) 2 points (service)

(6) 1 point (service)

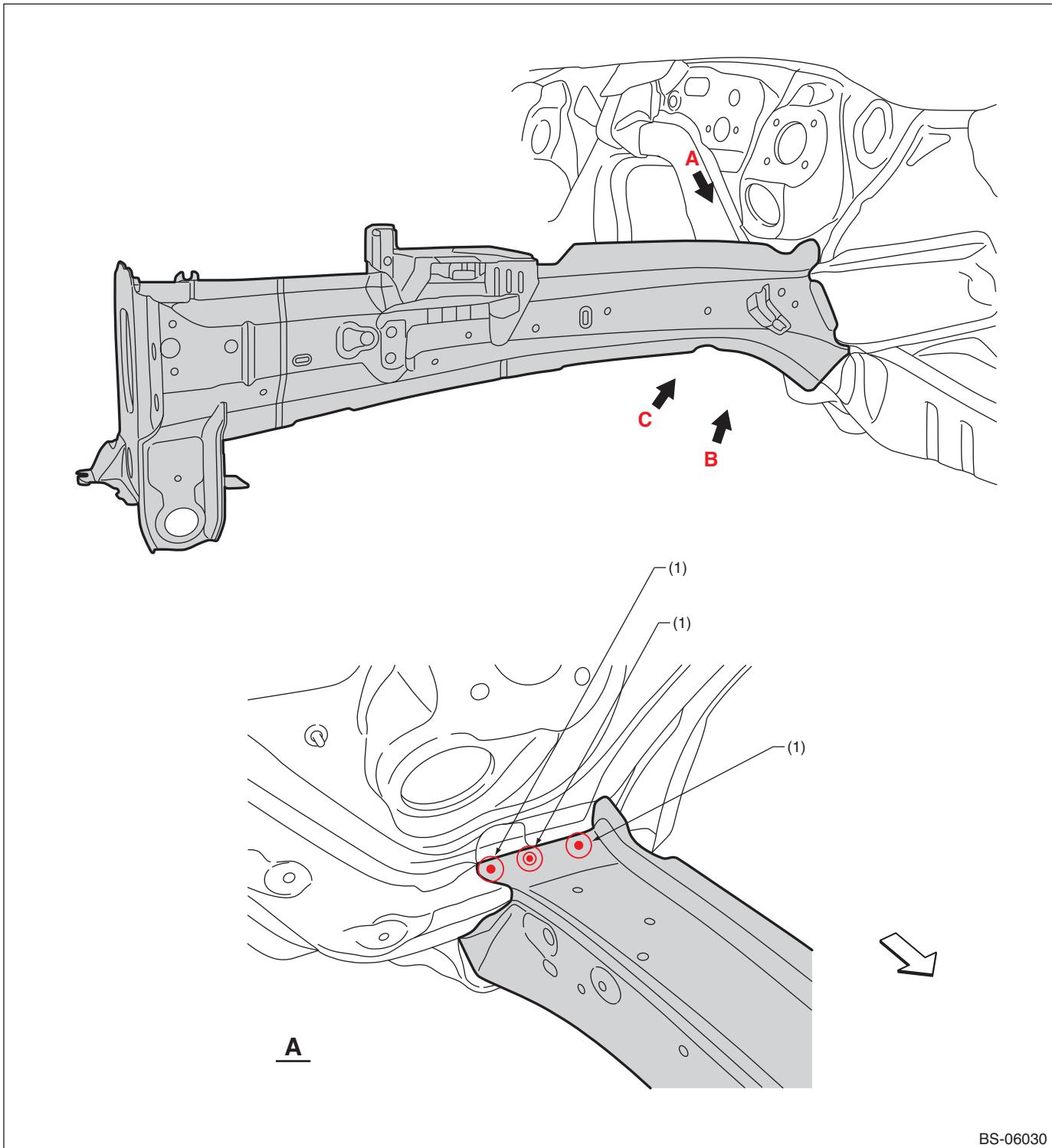
For part marked by "a": Anticorrosion wax shall be applied thoroughly on the back side of continuous welding portion.

Panel Replacement

8-4. Front Side Frame (total replacement)

A: REMOVAL

- Radiator panel and front wheel apron removal condition

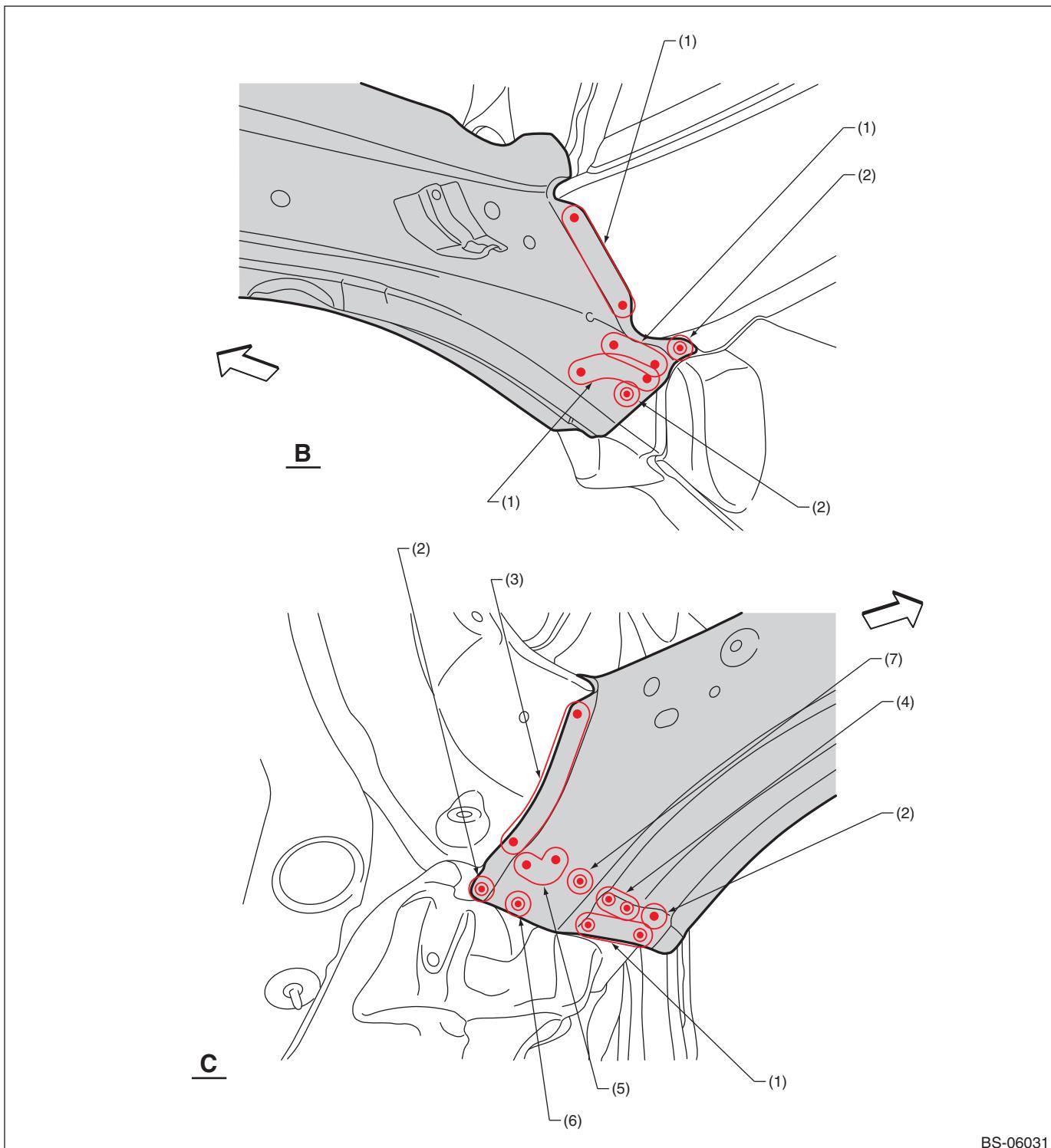


(1) 1 point (top · 1)

BS-06030

Panel Replacement

• Views



BS-06031

(1) 3 points (outside · 1)

(2) 1 point (outside · 1)

(3) 4 points (outside · 1)

(4) 2 points (outside · 2)

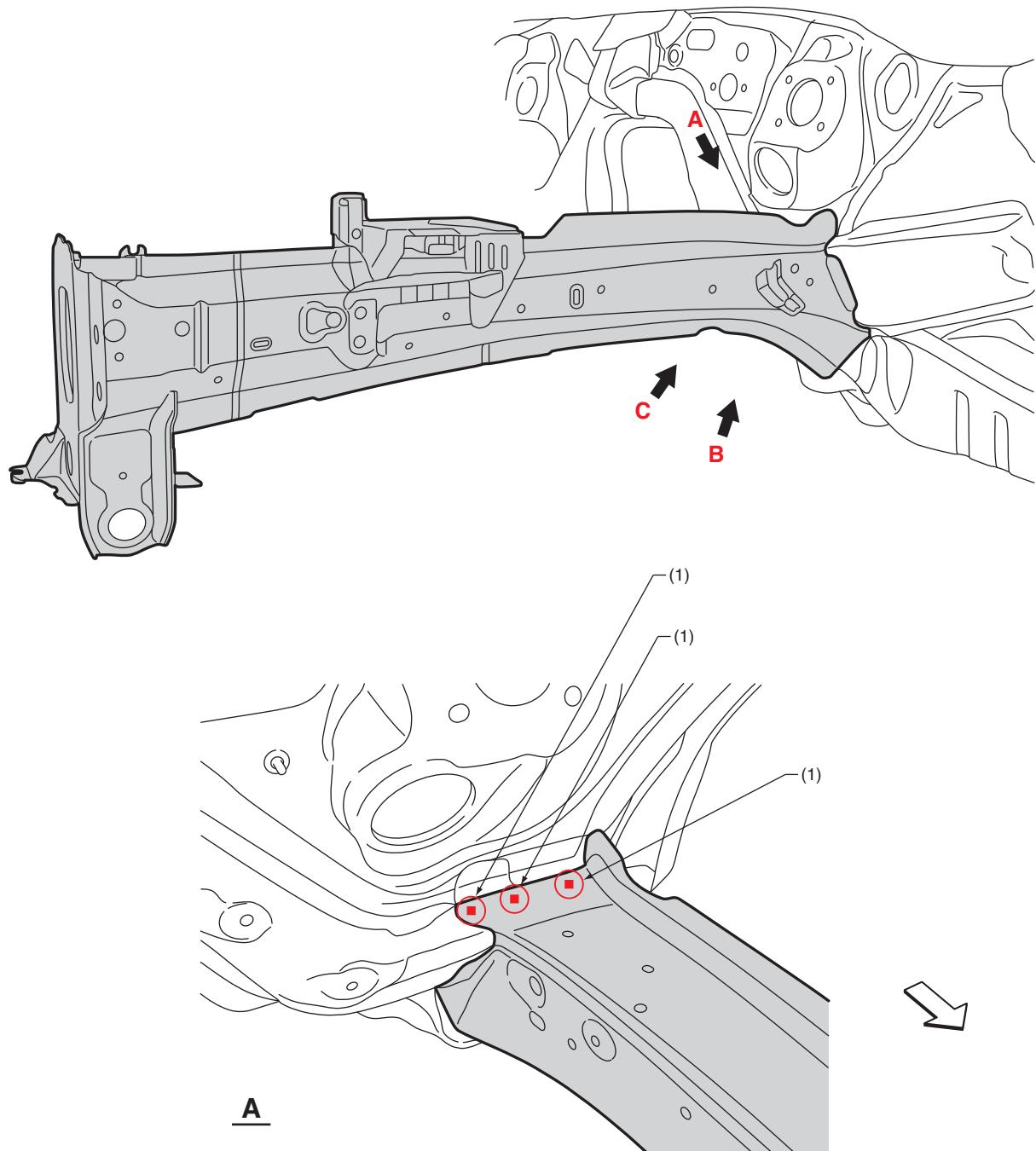
(5) 3 points (inside · 1)

(6) 1 point (inside · 1)

(7) 1 point (inside · 2)

Panel Replacement

B: INSTALLATION

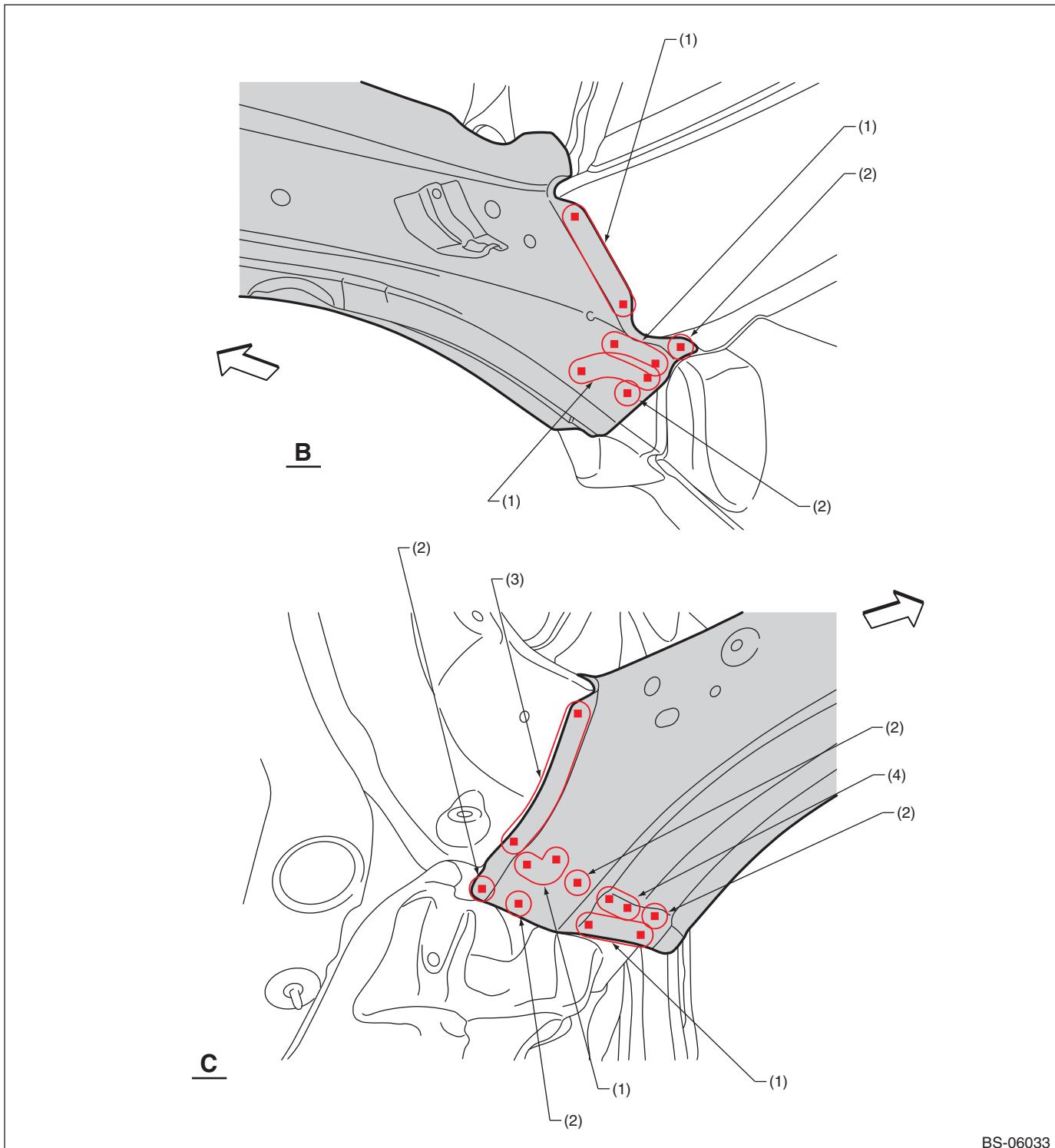


BS-06032

(1) 1 point (service)

Panel Replacement

• Views



BS-06033

(1) 3 points (service)
(2) 1 point (service)

(3) 4 points (service)

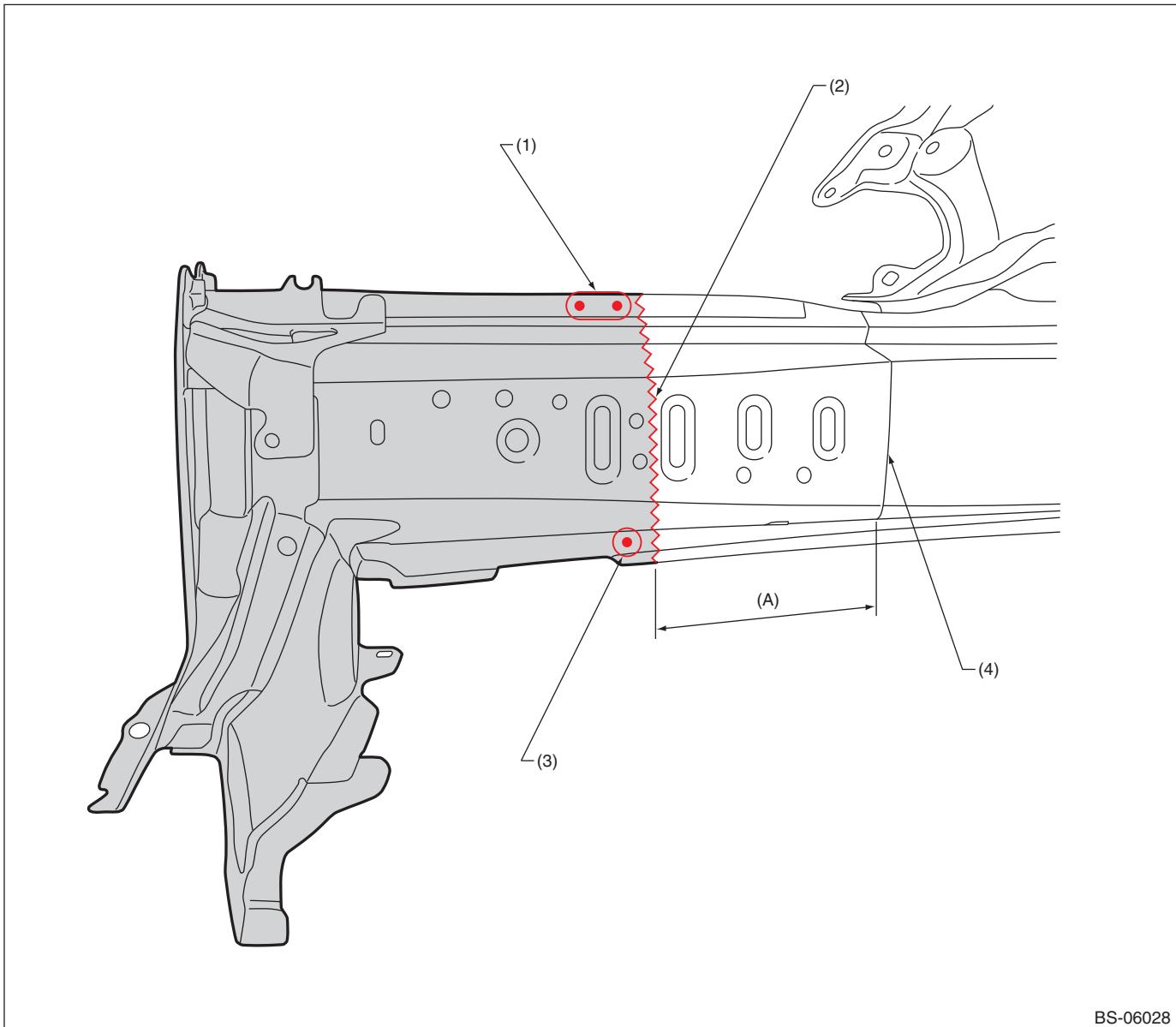
(4) 2 points (service)

Panel Replacement

8-5. Front Side Frame (partial replacement) ('14 MY — '17 MY)

A: REMOVAL

- RH (Radiator panel, front wheel apron front and closing plate (half-cut position) removed condition)



(A) 120 mm (4.72 in)

(1) 2 points (inside · 1)

(2) Cut position

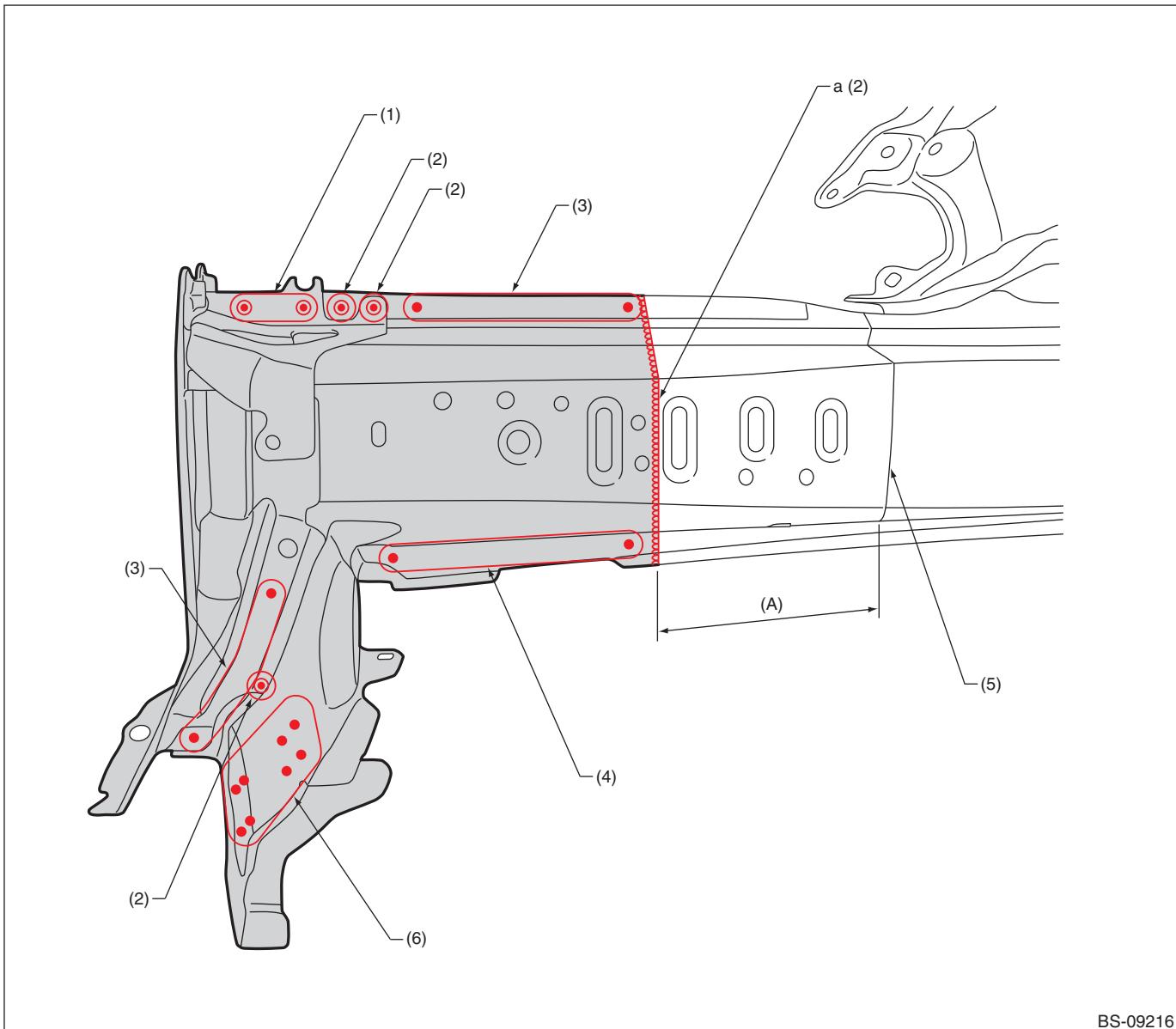
(3) 1 point (inside · 1)

(4) Tailored line

Panel Replacement

B: INSTALLATION

• RH



(A) 120 mm (4.72 in)

(1) 2 points

(2) 1 point

(3) 4 points

(4) 6 points

(5) Tailored line

(6) 8 points

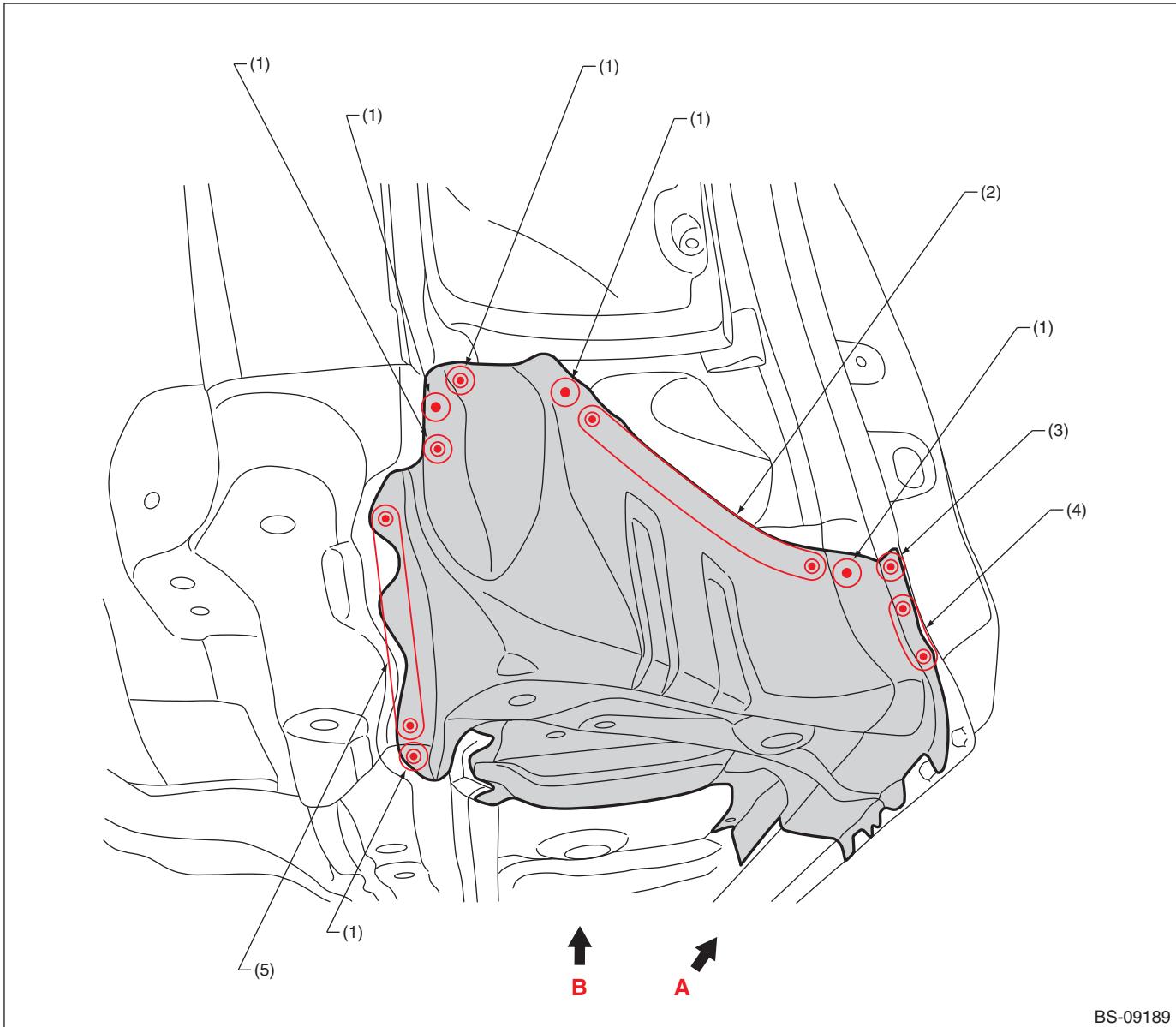
For part marked by "a": Anticorrosion wax shall be applied thoroughly on the back side of continuous welding portion.

Panel Replacement

8-6. Toe Board Reinforcement (total replacement)

A: REMOVAL

- Overall view (LH)



(1) 1 point (outside · 1)

(2) 6 points (outside · 1)

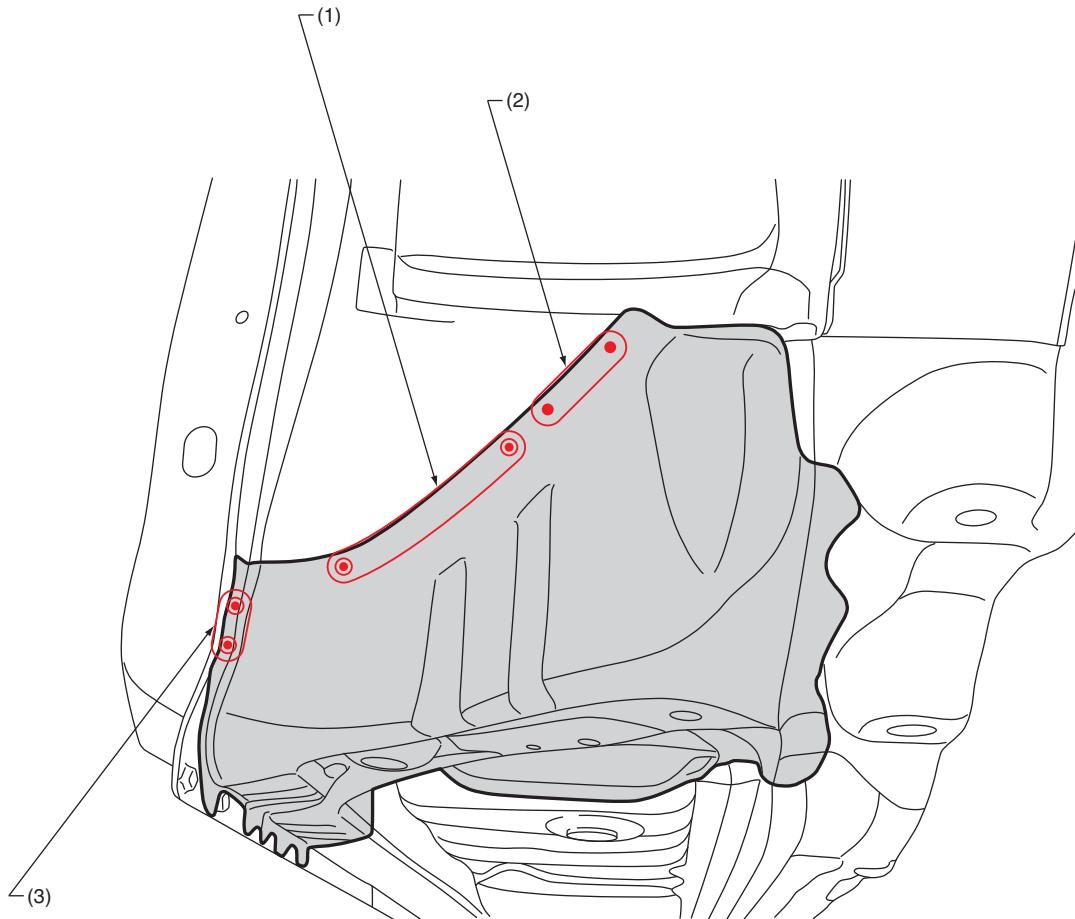
(3) 1 point (inside · 1, belt sander)

(4) 3 points (inside · 1, belt sander)

(5) 3 points (outside · 1)

Panel Replacement

- (RH) ('14 MY — '17 MY)



BS-06168

(1) 4 points (outside · 1)

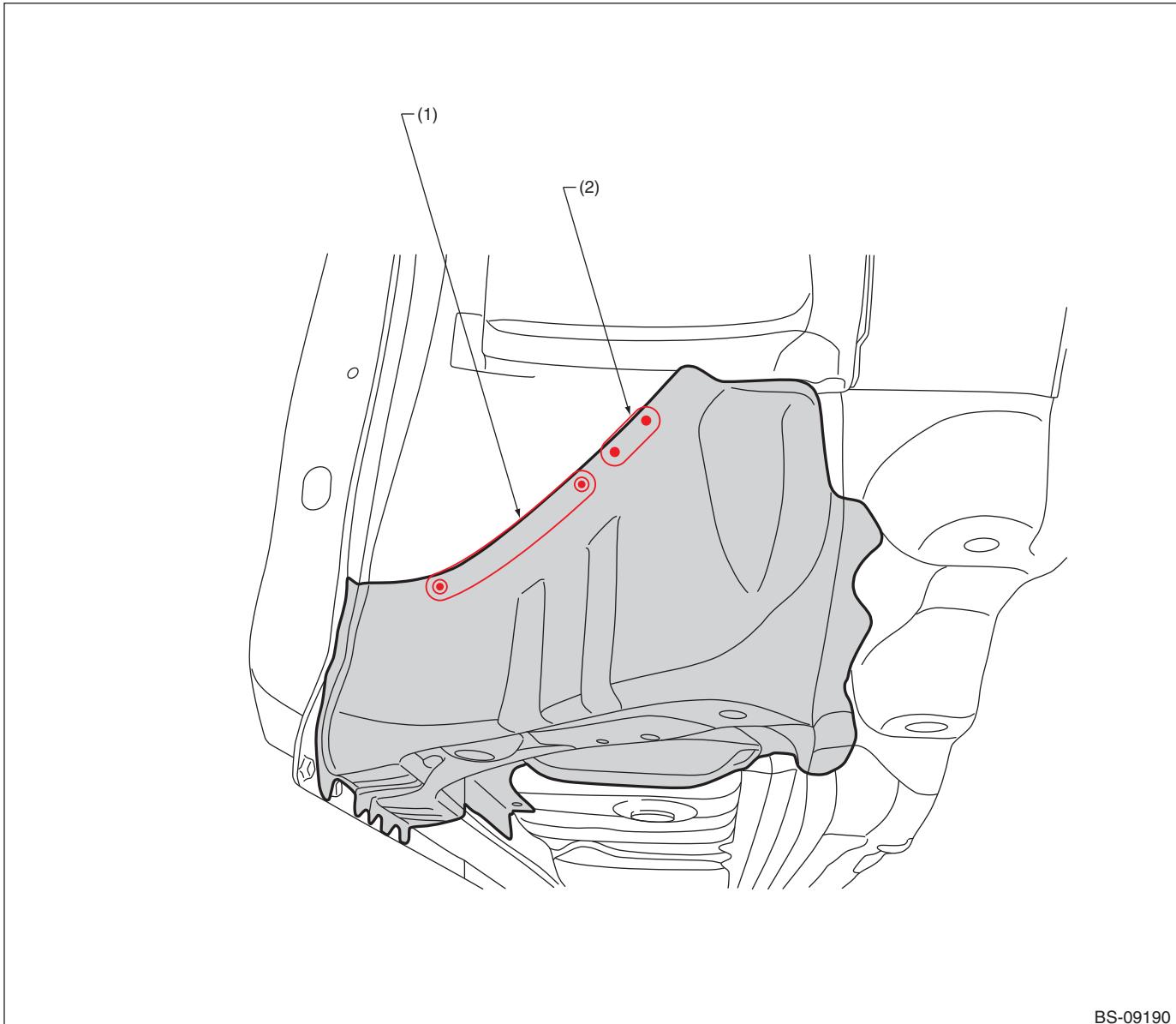
(2) 2 points (outside · 1)

(3) 2 points (inside · 1, belt sander)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

- (RH) ('18 MY —)



BS-09190

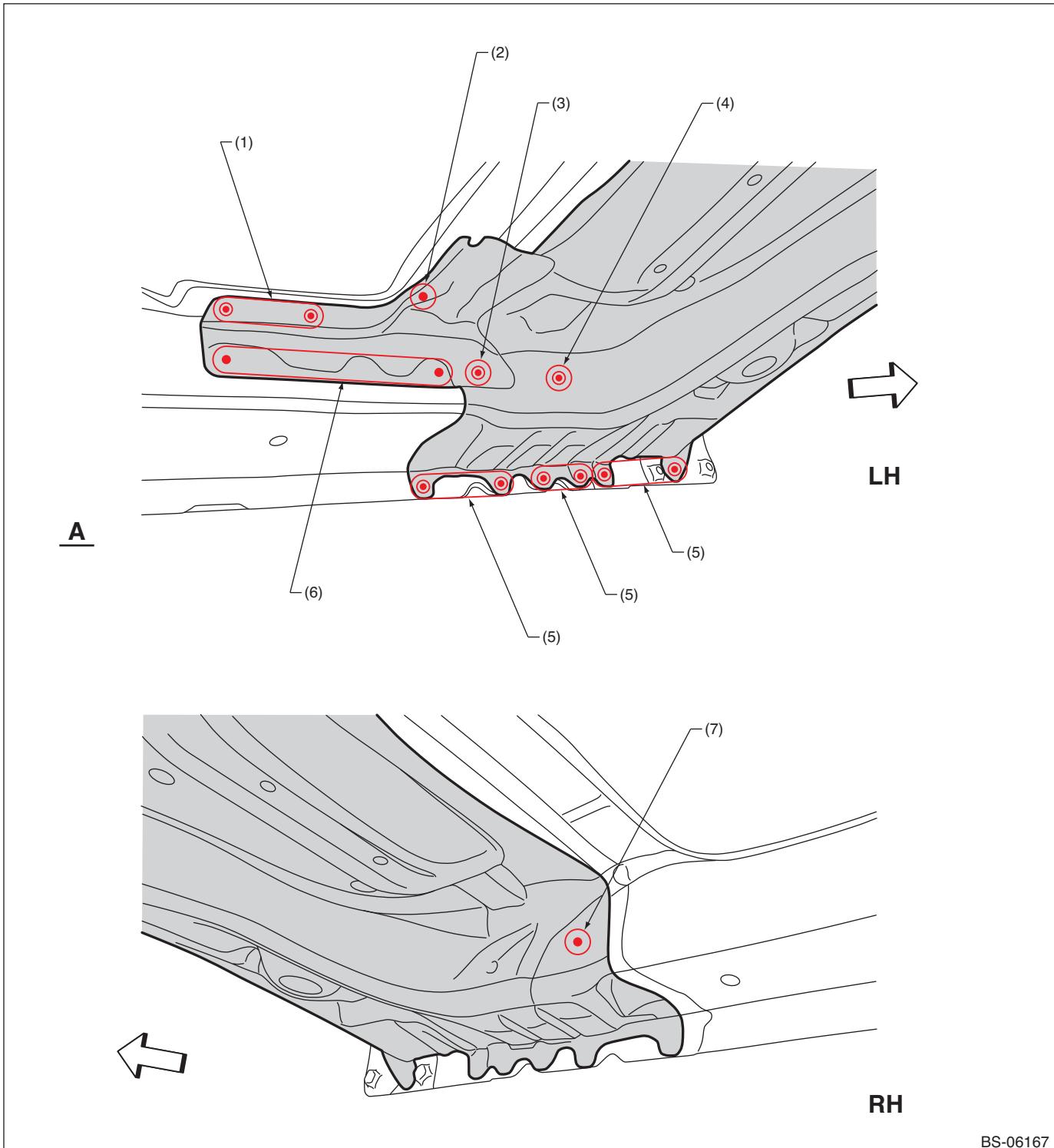
(1) 4 points (outside · 1)

(2) 2 points (outside · 1)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 1 ('14 MY — '17 MY)

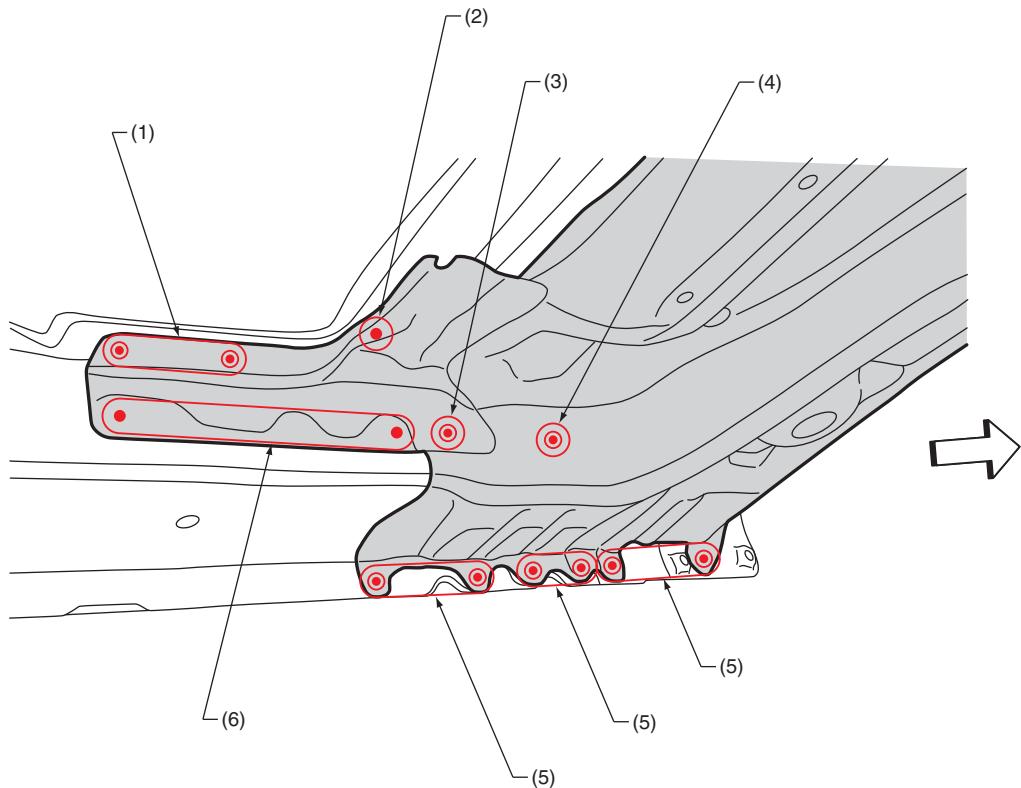


(1) 2 points (bottom · 1)	(4) 1 point (inside · 1, belt sander)	(7) 1 point (inside · 1)
(2) 1 point (bottom · 1)	(5) 2 points (inside · 1)	
(3) 1 point (inside · 2)	(6) 4 points (inside · 1, belt sander)	

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 1 ('18 MY —)



A

BS-09180

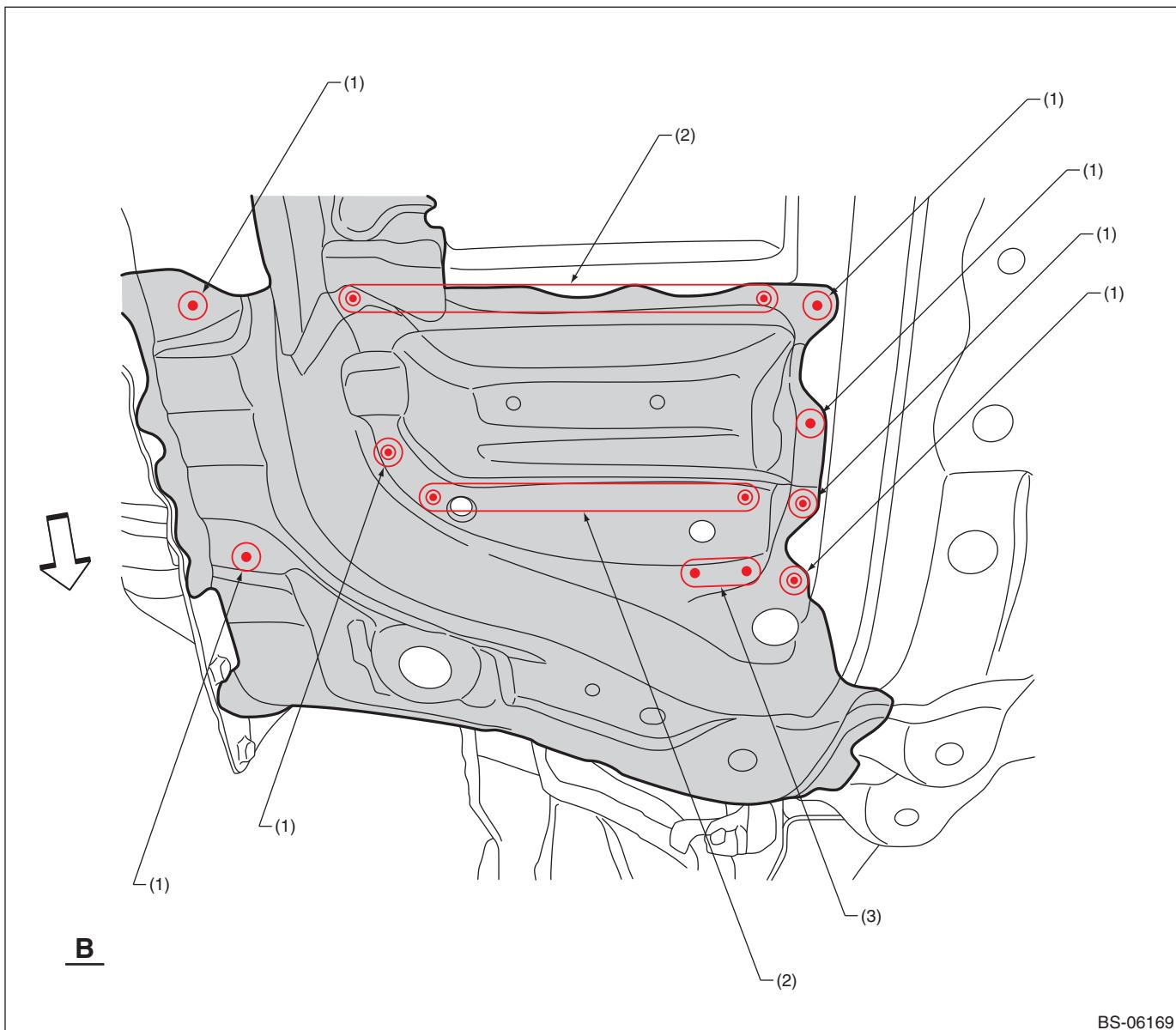
(1) 2 points (bottom · 1)
(2) 1 point (bottom · 1)

(3) 1 point (inside · 2)
(4) 1 point (inside · 1, belt sander)

(5) 2 points (inside · 1)
(6) 4 points (inside · 1, belt sander)

Panel Replacement

• Views 2 ('14 MY — '17 MY)



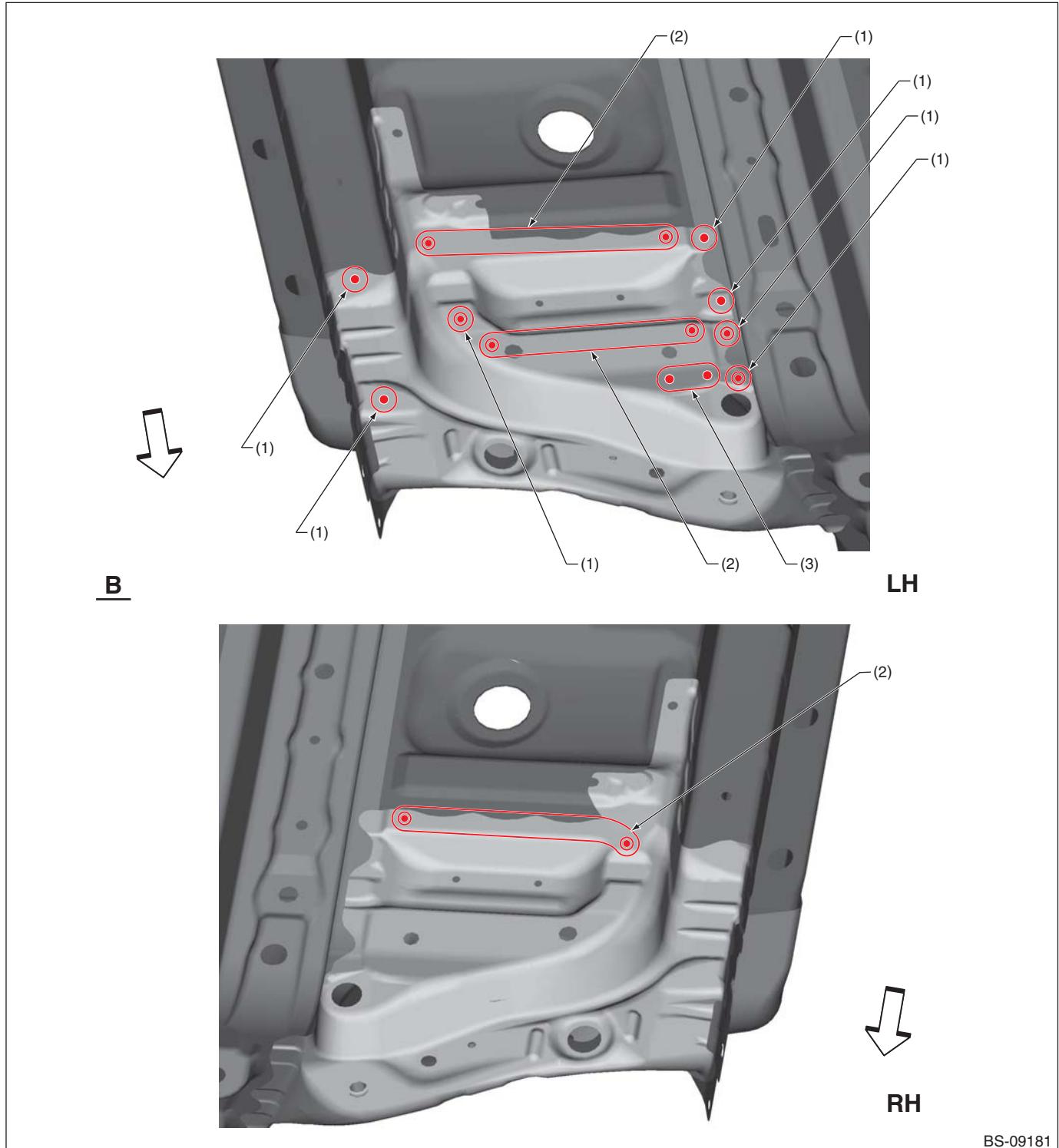
(1) 1 point (bottom · 1)

(2) 5 points (bottom · 1)

(3) 2 points (bottom · 1)

Panel Replacement

• Views 2 ('18 MY —)



(1) 1 point (bottom · 1)

(2) 5 points (bottom · 1)

(3) 2 points (bottom · 1)

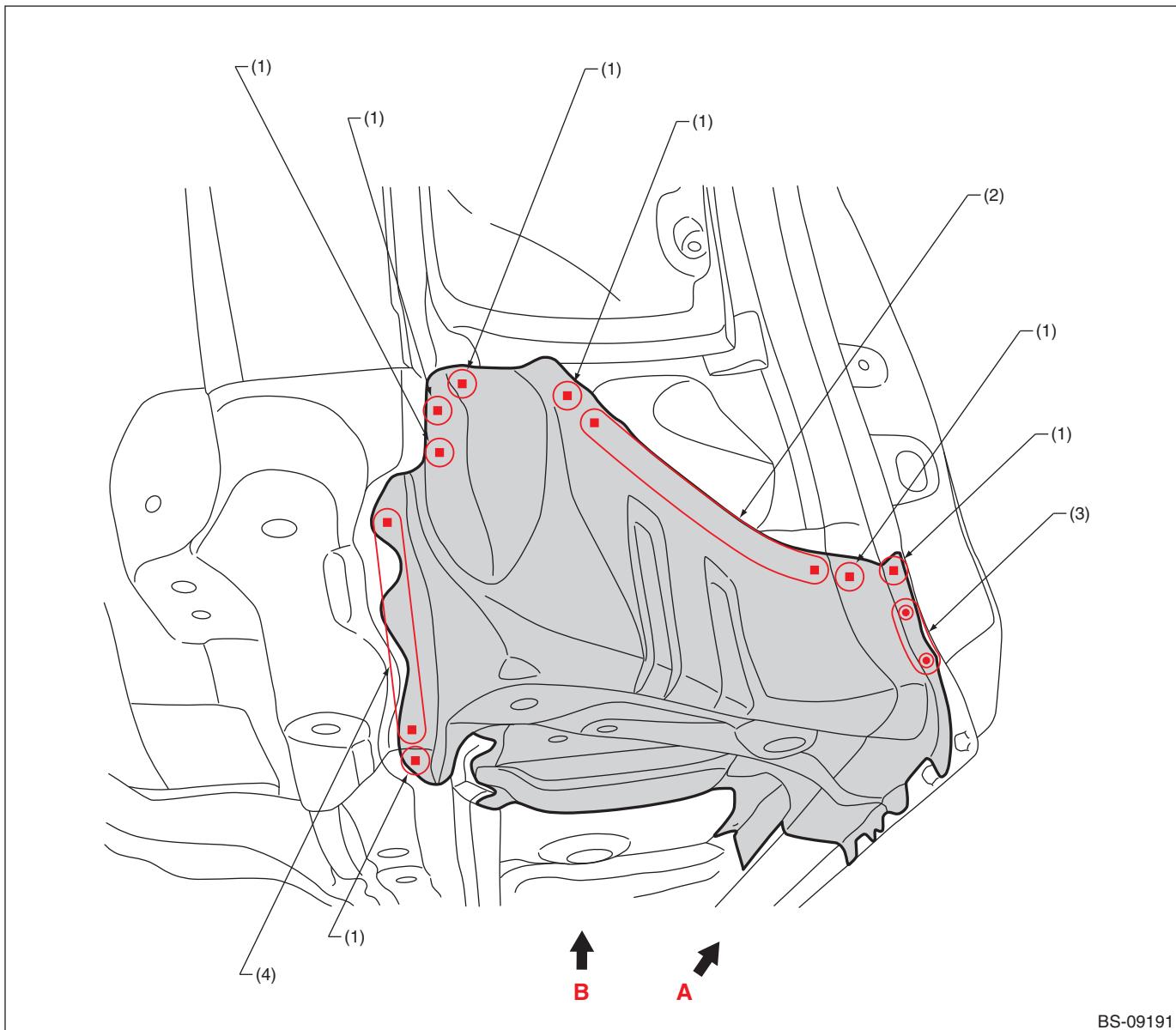
Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

BS-09181

Panel Replacement

B: INSTALLATION

• Overall view (LH)



(1) 1 point (service)

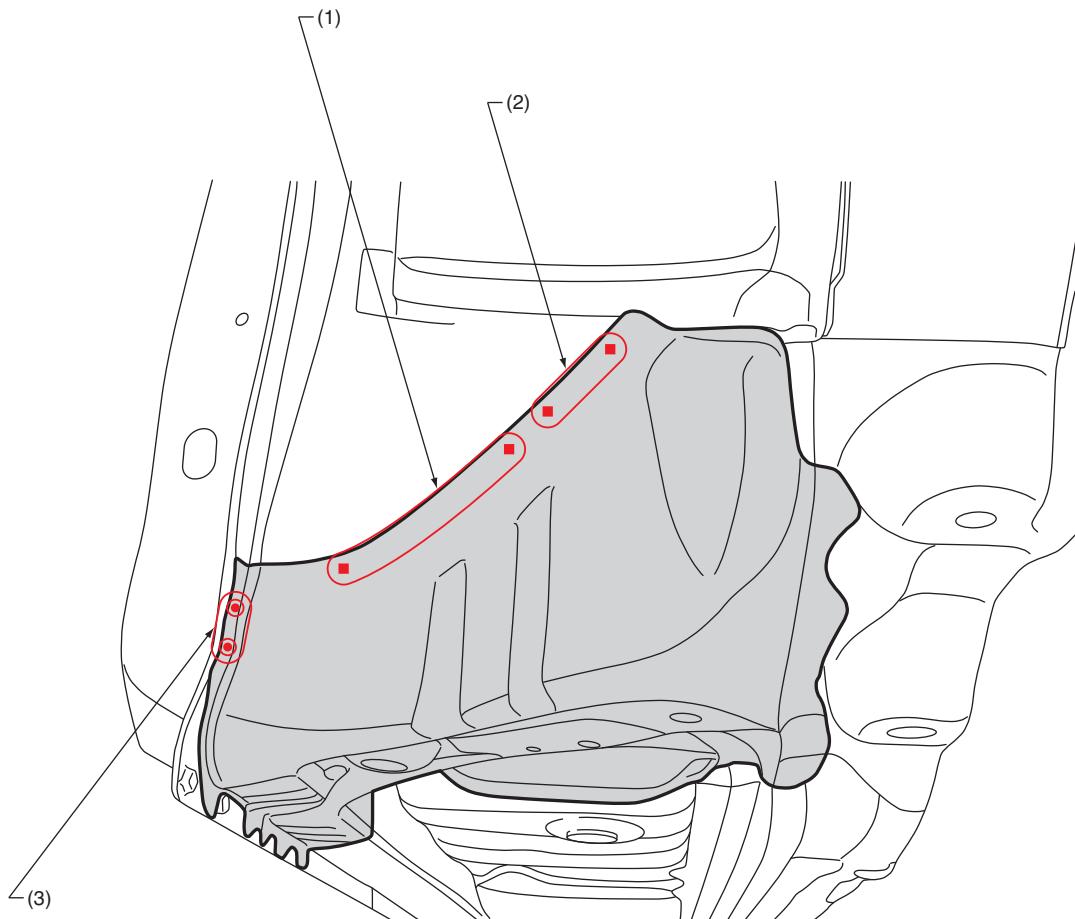
(2) 6 points (service)

(3) 3 points

(4) 3 points (service)

Panel Replacement

- (RH) ('14 MY — '17 MY)



BS-06172

(1) 4 points (service)

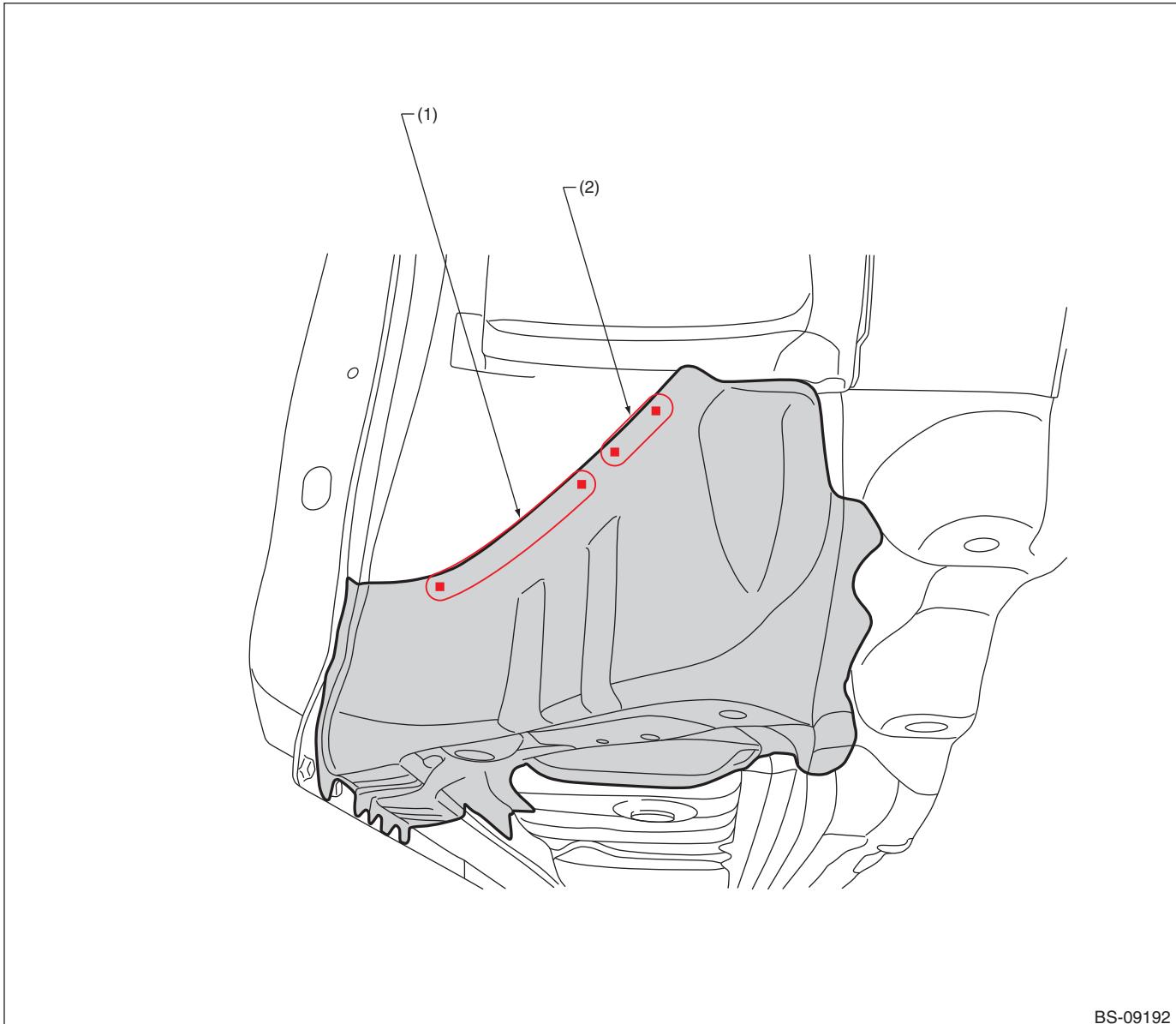
(2) 3 points (service)

(3) 2 points

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

- (RH) ('18 MY —)



BS-09192

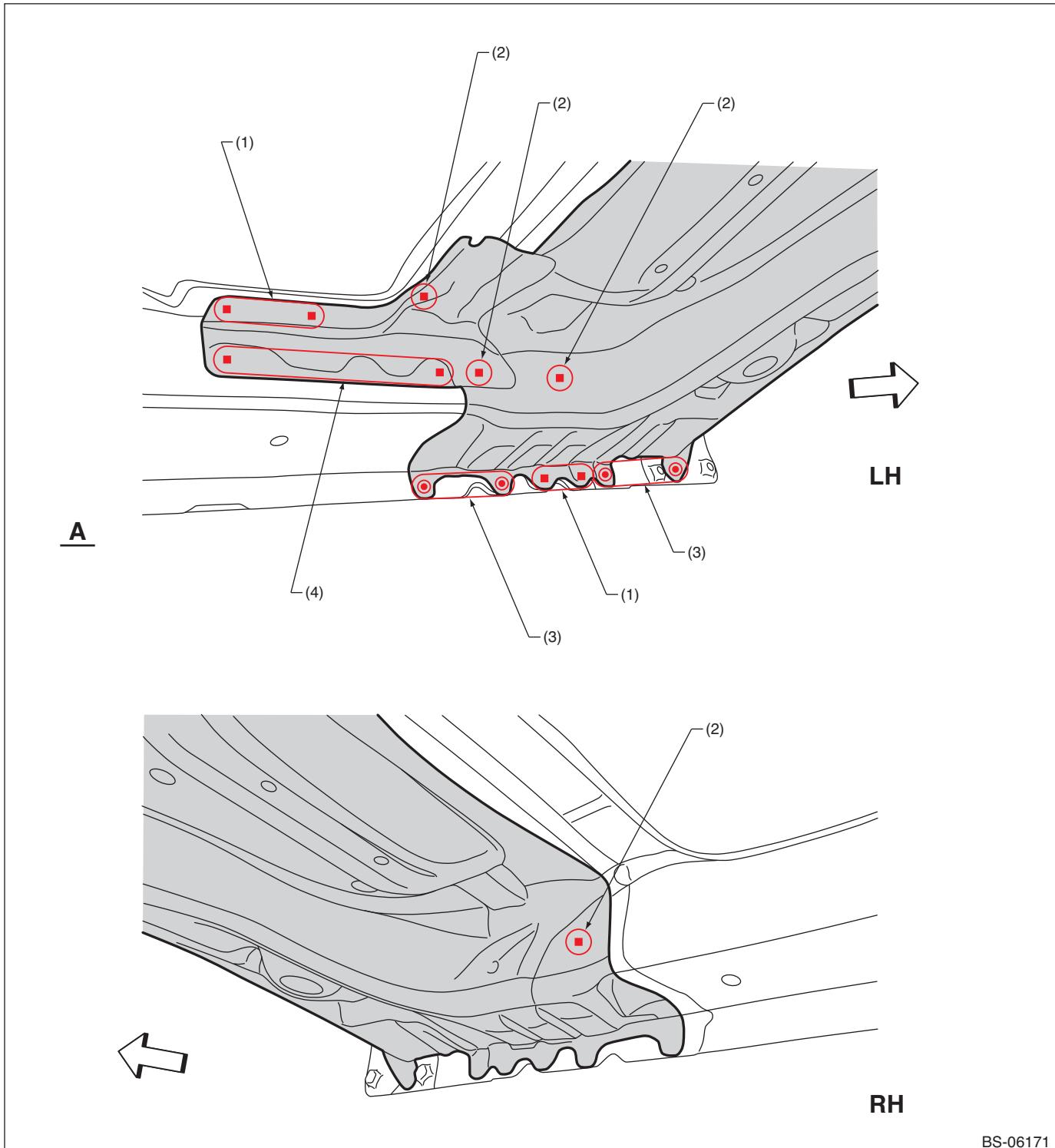
(1) 4 points (service)

(2) 2 points (service)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 1 ('14 MY — '17 MY)



(1) 2 points (service)
(2) 1 point (service)

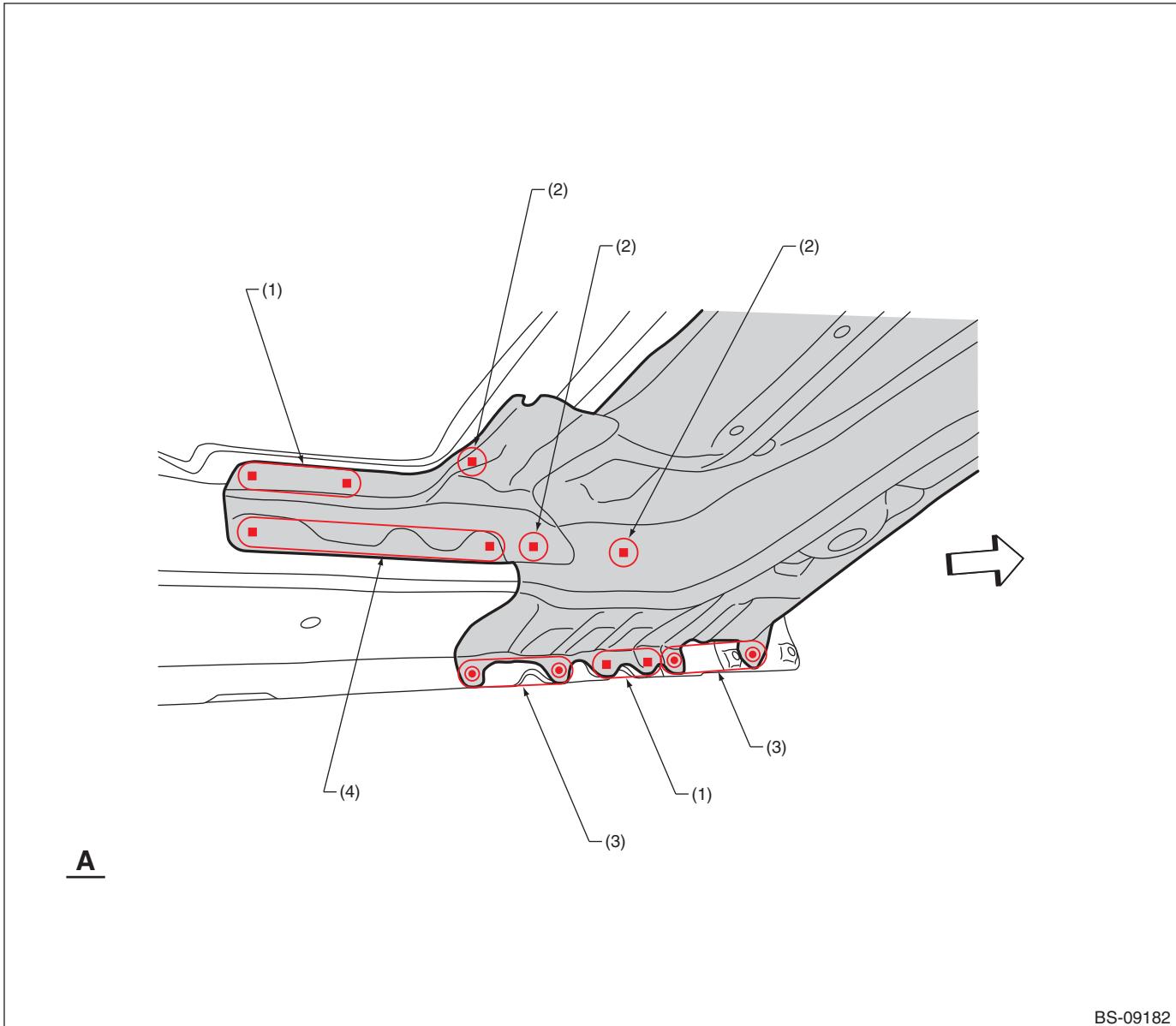
(3) 2 points

(4) 4 points (service)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views 1 ('18 MY —)



BS-09182

(1) 2 points (service)

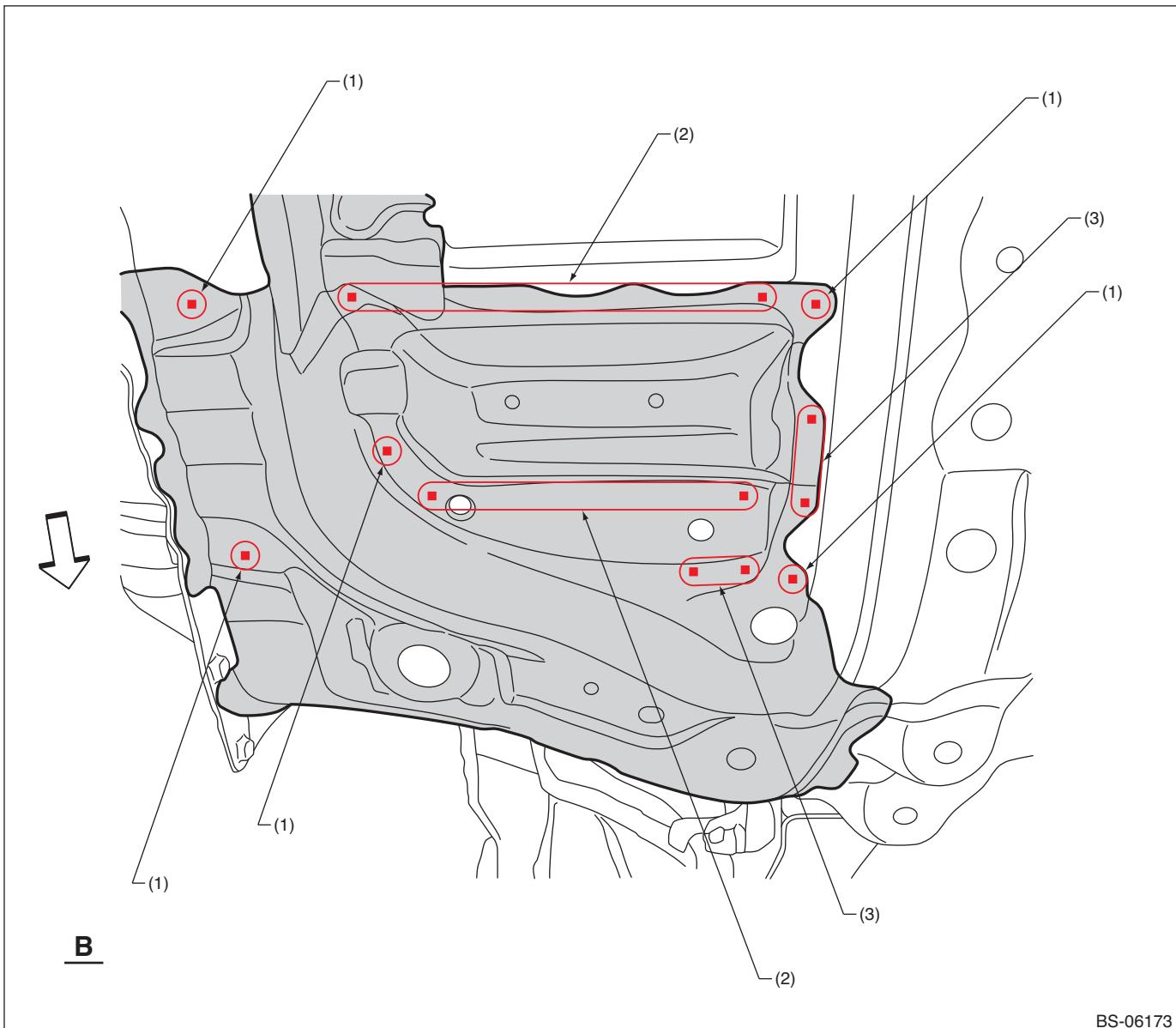
(2) 1 point (service)

(3) 2 points

(4) 4 points (service)

Panel Replacement

• Views 2 ('14 MY — '17 MY)



(1) 1 point (service)

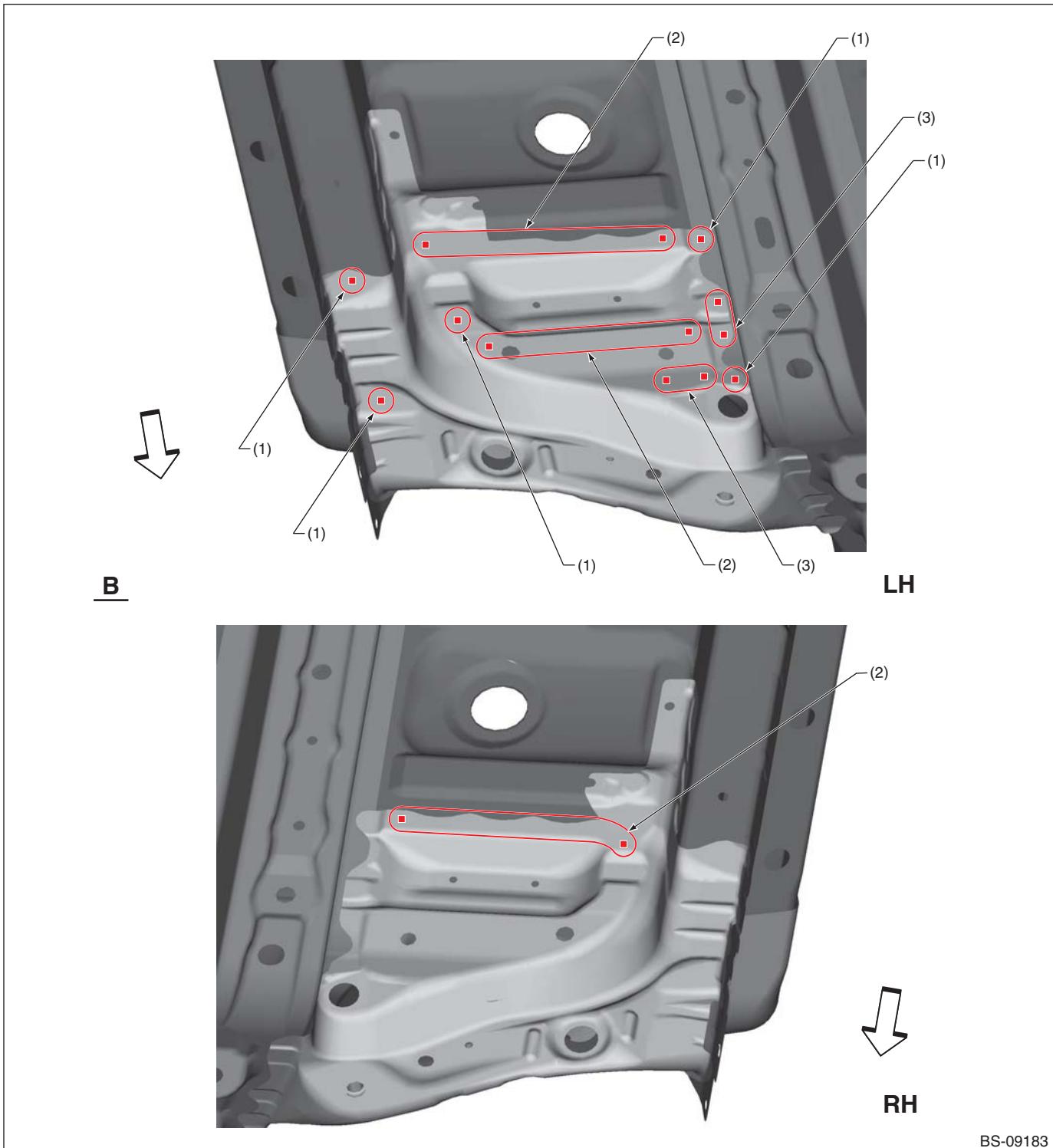
(2) 5 points (service)

(3) 2 points (service)

BS-06173

Panel Replacement

• Views 2 ('18 MY —)



(1) 1 point (service)

(2) 5 points (service)

(3) 2 points (service)

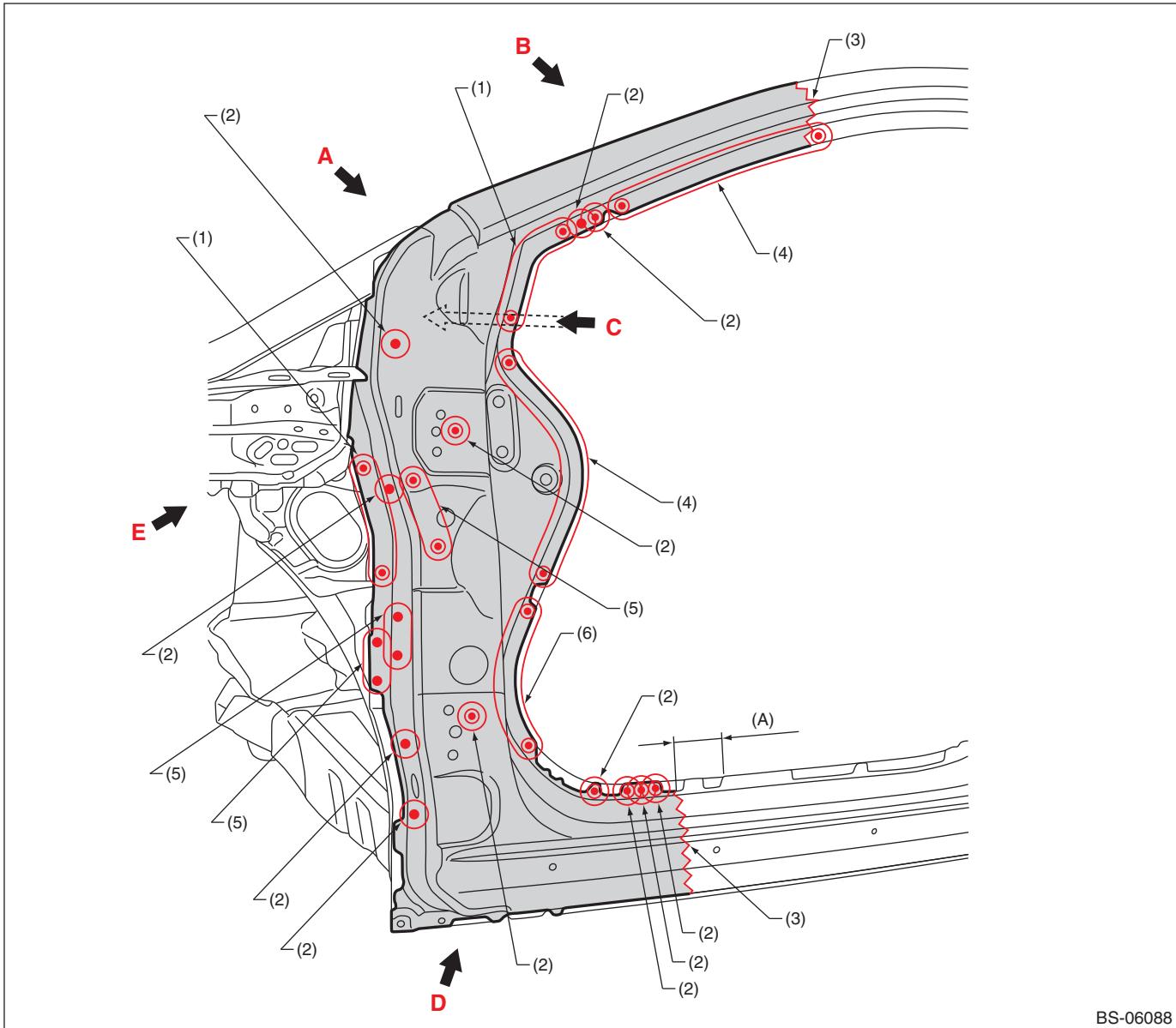
BS-09183

Panel Replacement

8-7. Front Pillar (partial replacement)

A: REMOVAL

- Overall view ('14 MY — '17 MY)



(A) 65 mm (2.56 in)

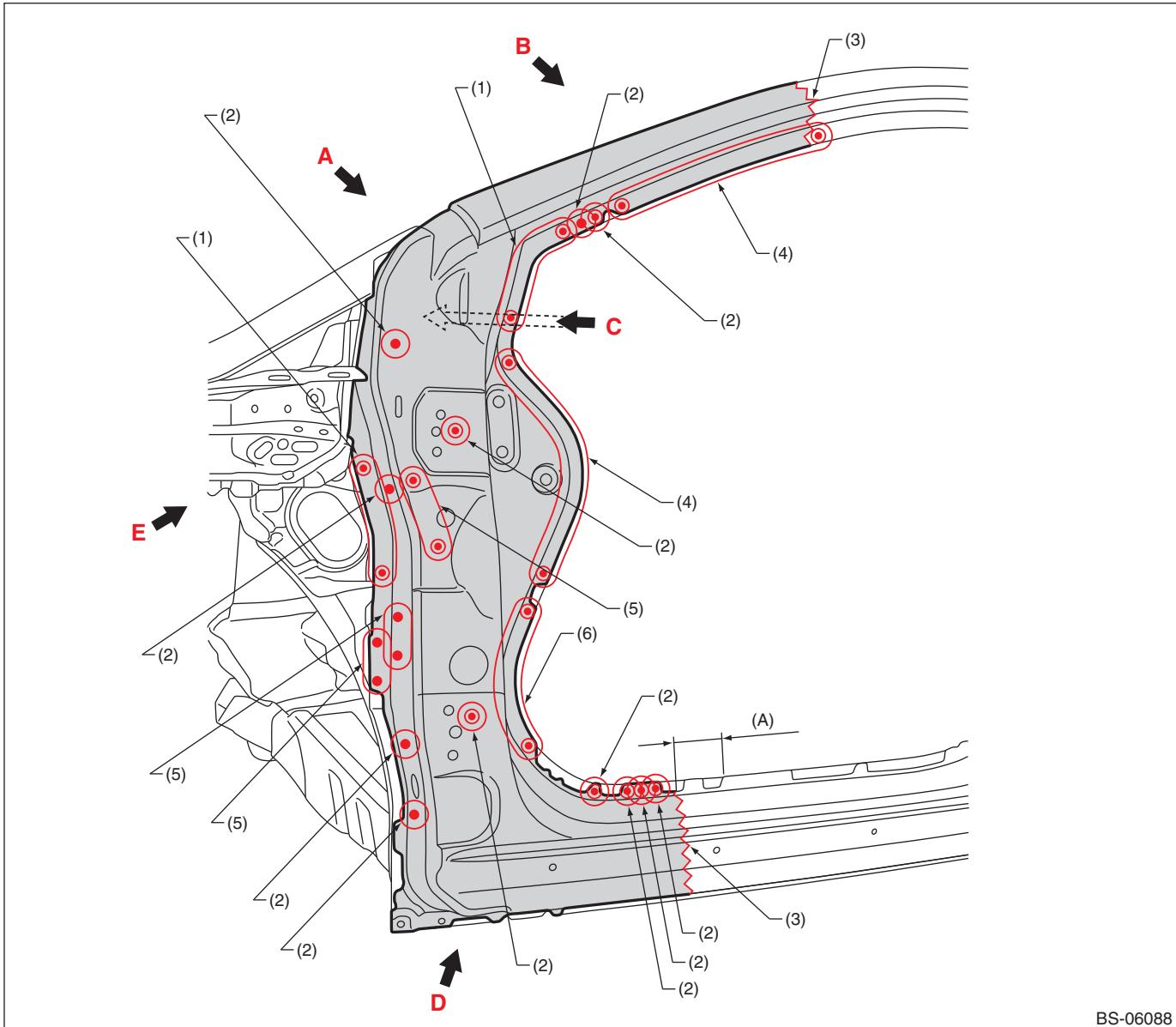
(1) 4 points (outside · 1)
(2) 1 point (outside · 1)

(3) Rough cutting
(4) 8 points (outside · 1)

(5) 2 points (outside · 1)
(6) 7 points (outside · 1) (only LH)
4 points (outside · 1) (only RH)

Panel Replacement

• Overall view ('18 MY —)



(A) 65 mm (2.56 in)

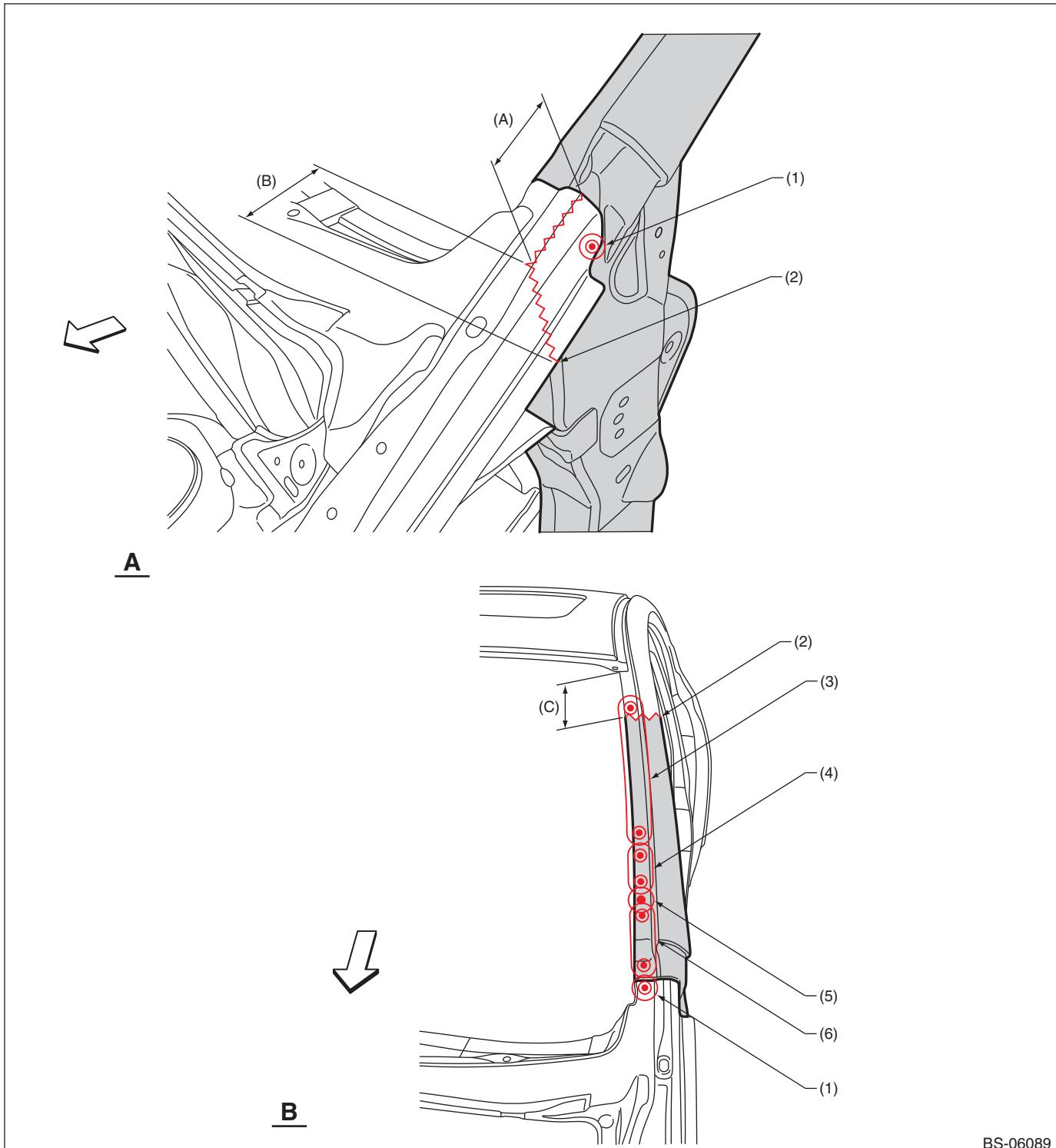
(1) 4 points (outside · 1)
(2) 1 point (outside · 1)

(3) Rough cutting
(4) 8 points (outside · 1)

(5) 2 points (outside · 1)
(6) 7 points (outside · 1)

Panel Replacement

• Views 1



(A) 60 mm (2.36 in)

(B) 80 mm (3.15 in)

(C) 100 mm (3.94 in)

(1) 1 point (outside · 2)

(2) Rough cutting

(3) 9 points (outside · 1)

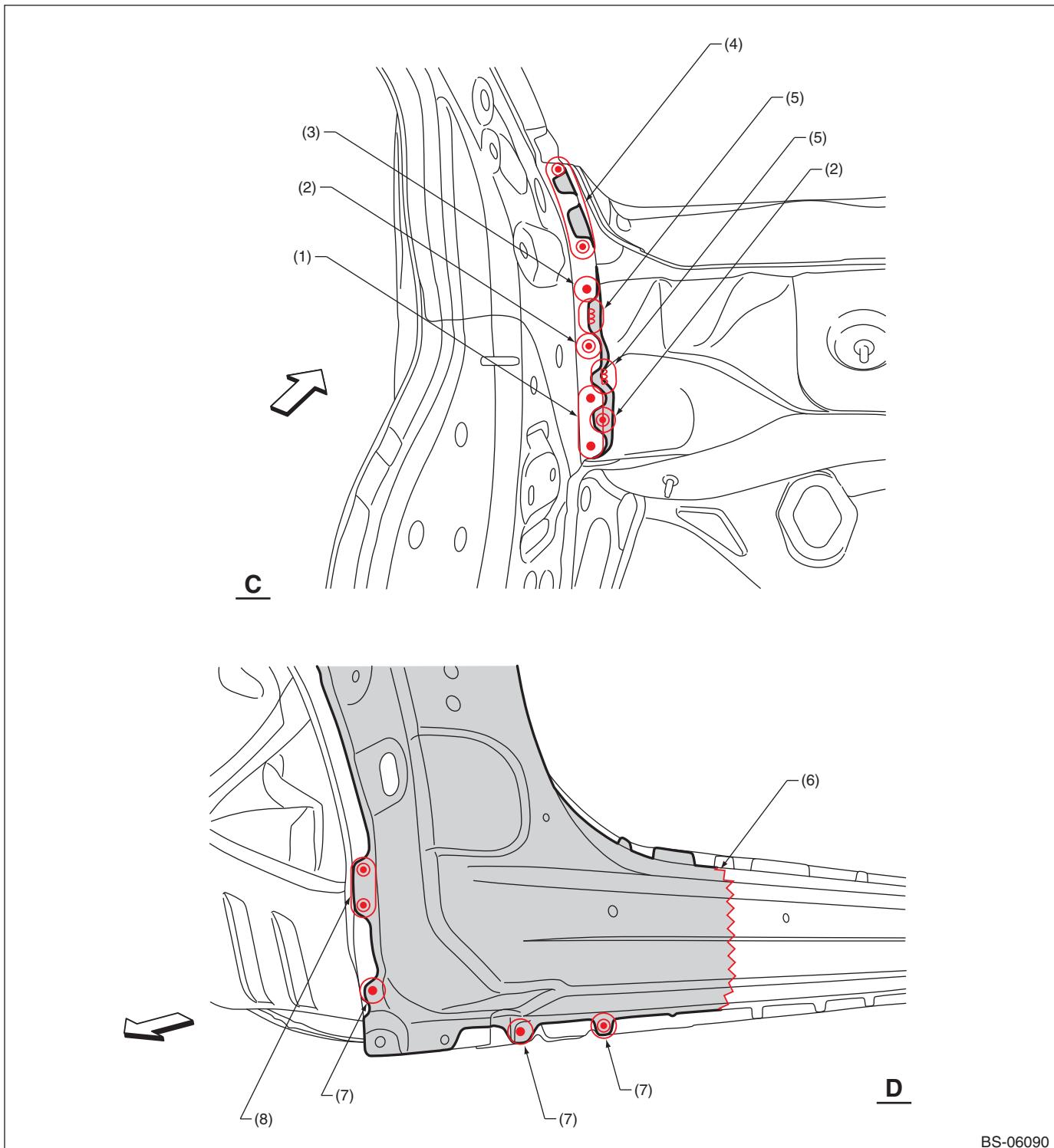
(4) 2 points (outside · 1)

(5) 1 point (outside · 1)

(6) 3 points (outside · 1)

Panel Replacement

• Views 2

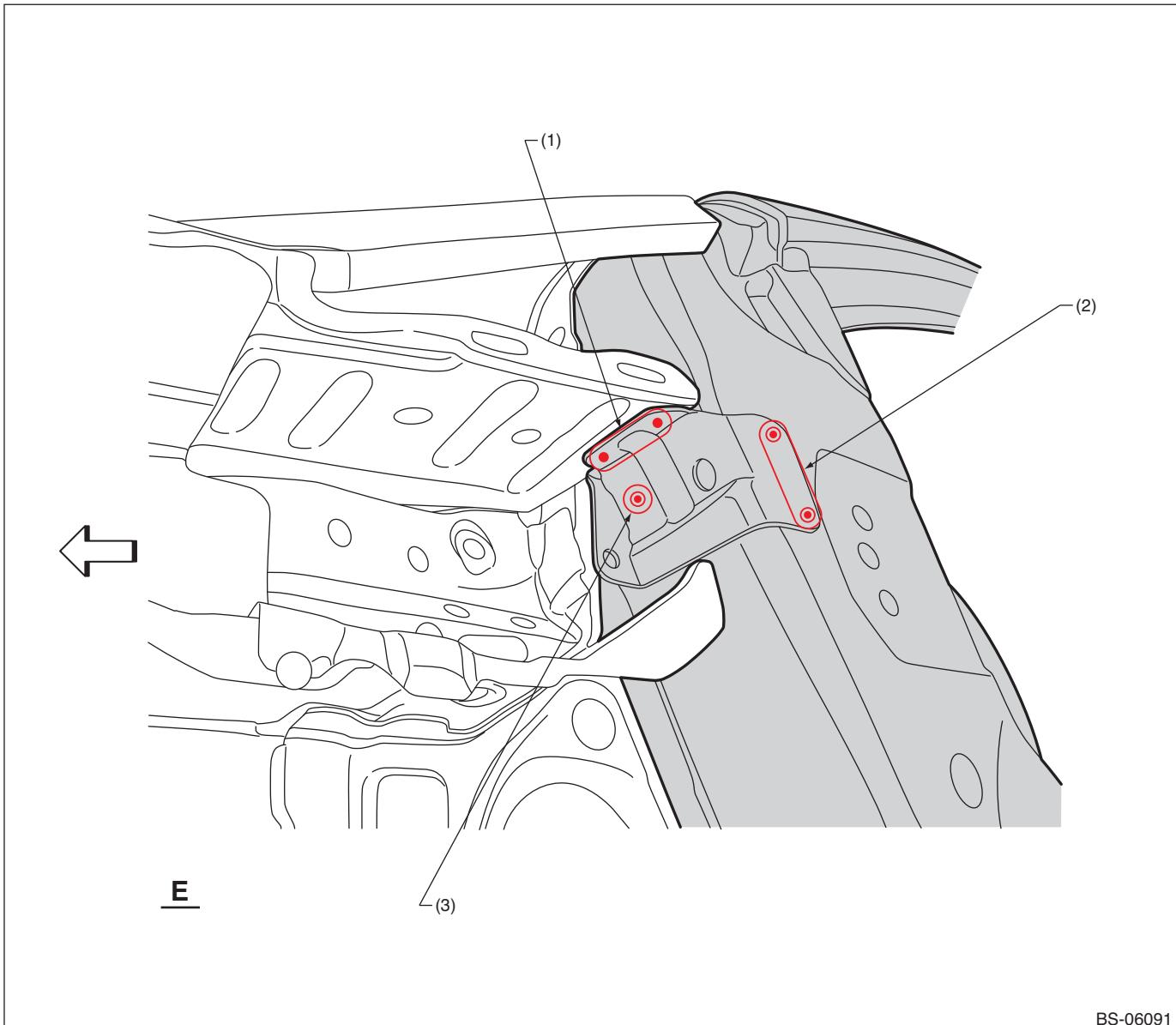


BS-06090

(1) 2 points (inside · 1)	(4) 3 points (inside · 2)	(7) 1 point (outside · 1)
(2) 1 point (inside · 2)	(5) 1 point (inside · 1, belt sander)	(8) 2 points (outside · 1)
(3) 1 point (inside · 1)	(6) Rough cutting	

Panel Replacement

• Views 3



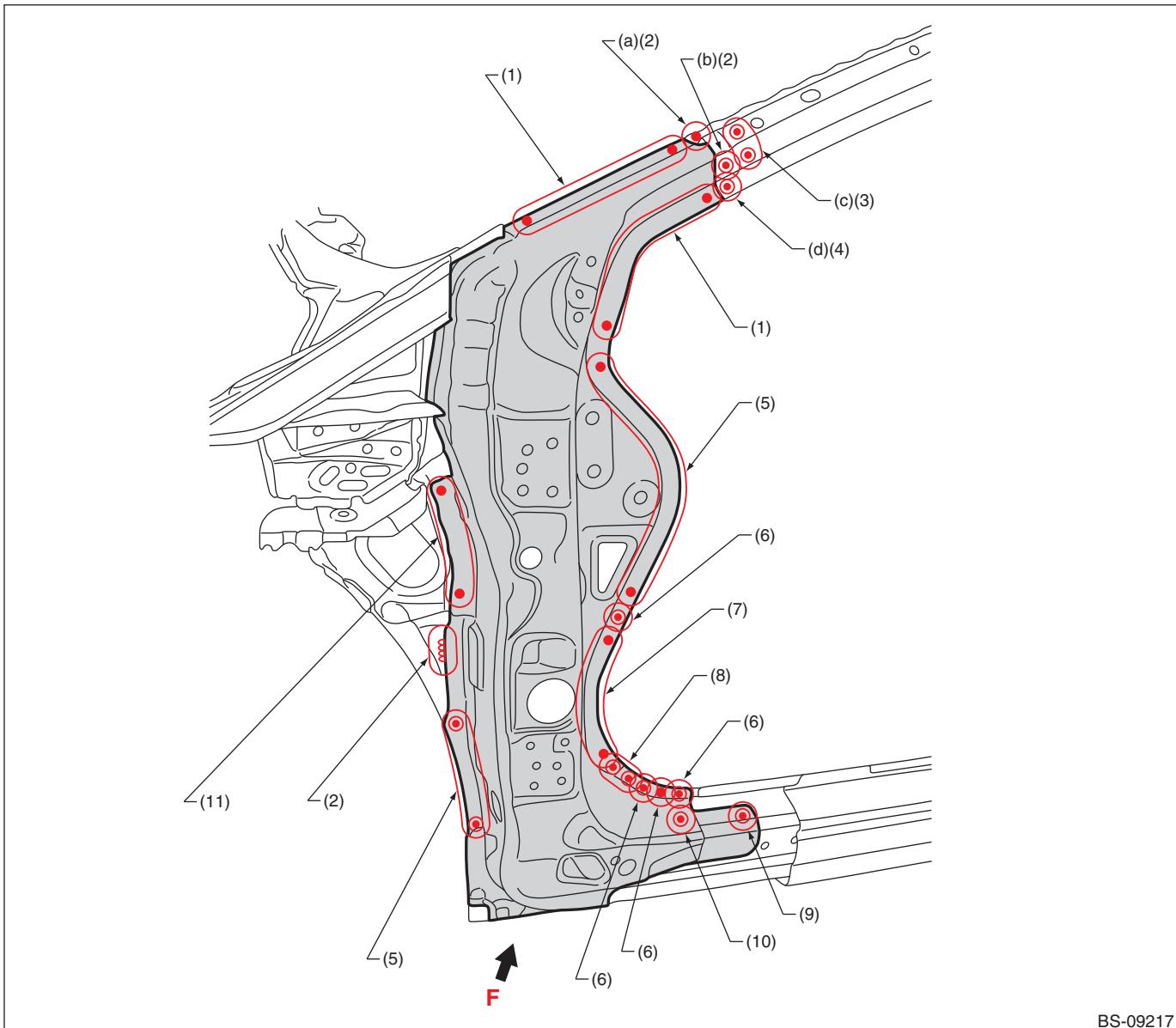
(1) 2 points (bottom · 1)

(2) 2 points (outside · 2)

(3) 1 point (outside · 2)

Panel Replacement

• Overall view (LH) ('14 MY — '17 MY)



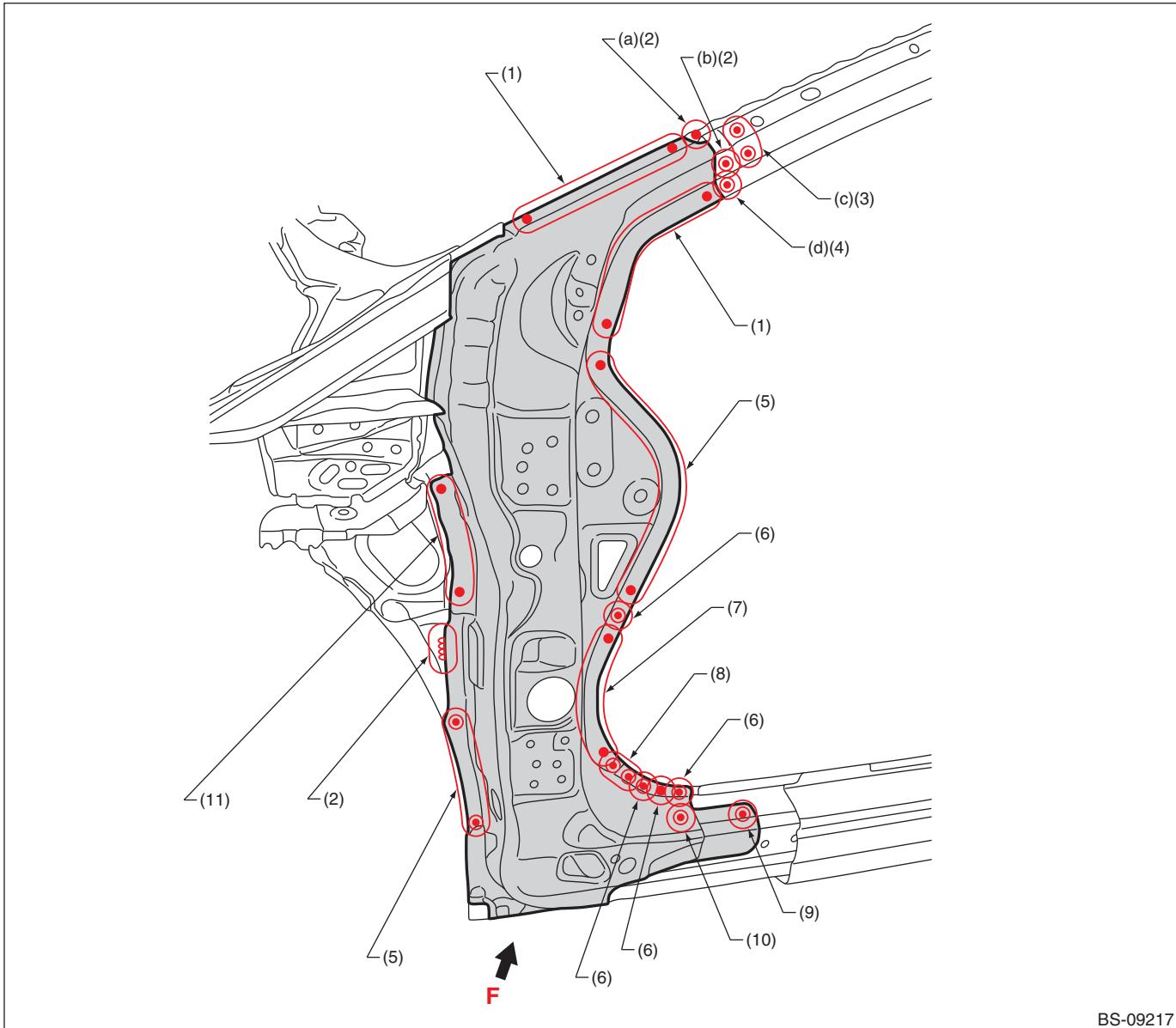
(1) 5 points (outside · 1)	(5) 8 points (outside · 1)	(9) 1 point (top · 1)
(2) 1 point (outside · 1, belt sander)	(6) 1 point (outside · 1)	(10) 1 point (top · 2)
(3) 2 points (outside · 2, belt sander)	(7) 7 points (outside · 1)	(11) 4 points (outside · 1)
(4) 1 point (inside · 2)	(8) 2 points (outside · 1)	

Note: When using a 1,500 MPa Class-compatible spot cutter

- (a): 1 point (outside · 1)
- (b): 1 point (outside · 1)
- (c): 2 points (outside · 2)
- (d): 1 point (outside · 2)

Panel Replacement

• Overall view ('18 MY —)



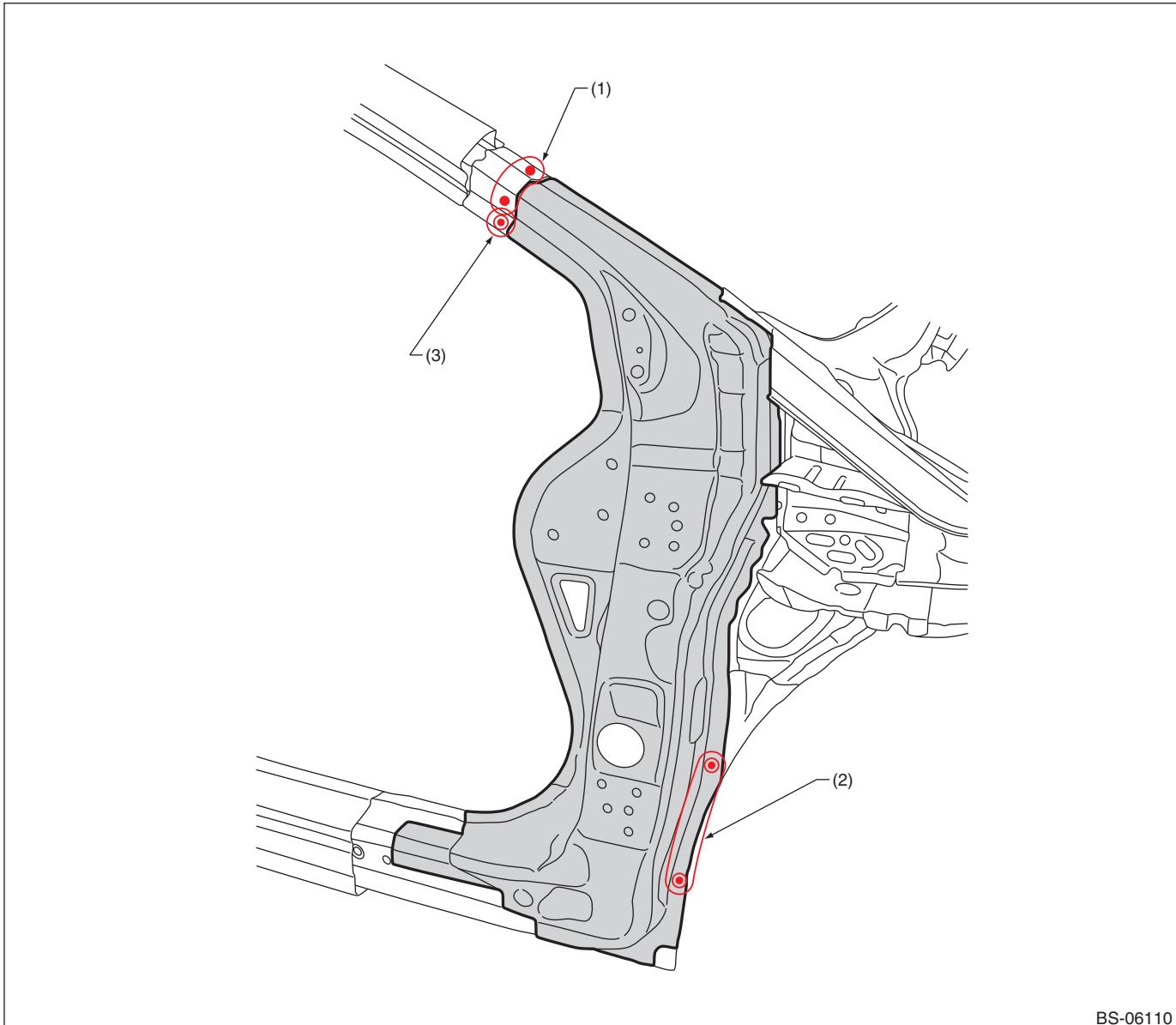
(1) 5 points (outside · 1)	(5) 8 points (outside · 1)	(9) 1 point (top · 1)
(2) 1 point (outside · 1, belt sander)	(6) 1 point (outside · 1)	(10) 1 point (top · 2)
(3) 2 points (outside · 2, belt sander)	(7) 7 points (outside · 1)	(11) 4 points (outside · 1)
(4) 1 point (inside · 2)	(8) 2 points (outside · 1)	

Note: When using a 1,500 MPa Class-compatible spot cutter

- (a): 1 point (outside · 1)
- (b): 1 point (outside · 1)
- (c): 2 points (outside · 2)
- (d): 1 point (outside · 2)

Panel Replacement

- (RH) ('14 MY — '17 MY)



BS-06110

(1) 3 points (outside · 1)

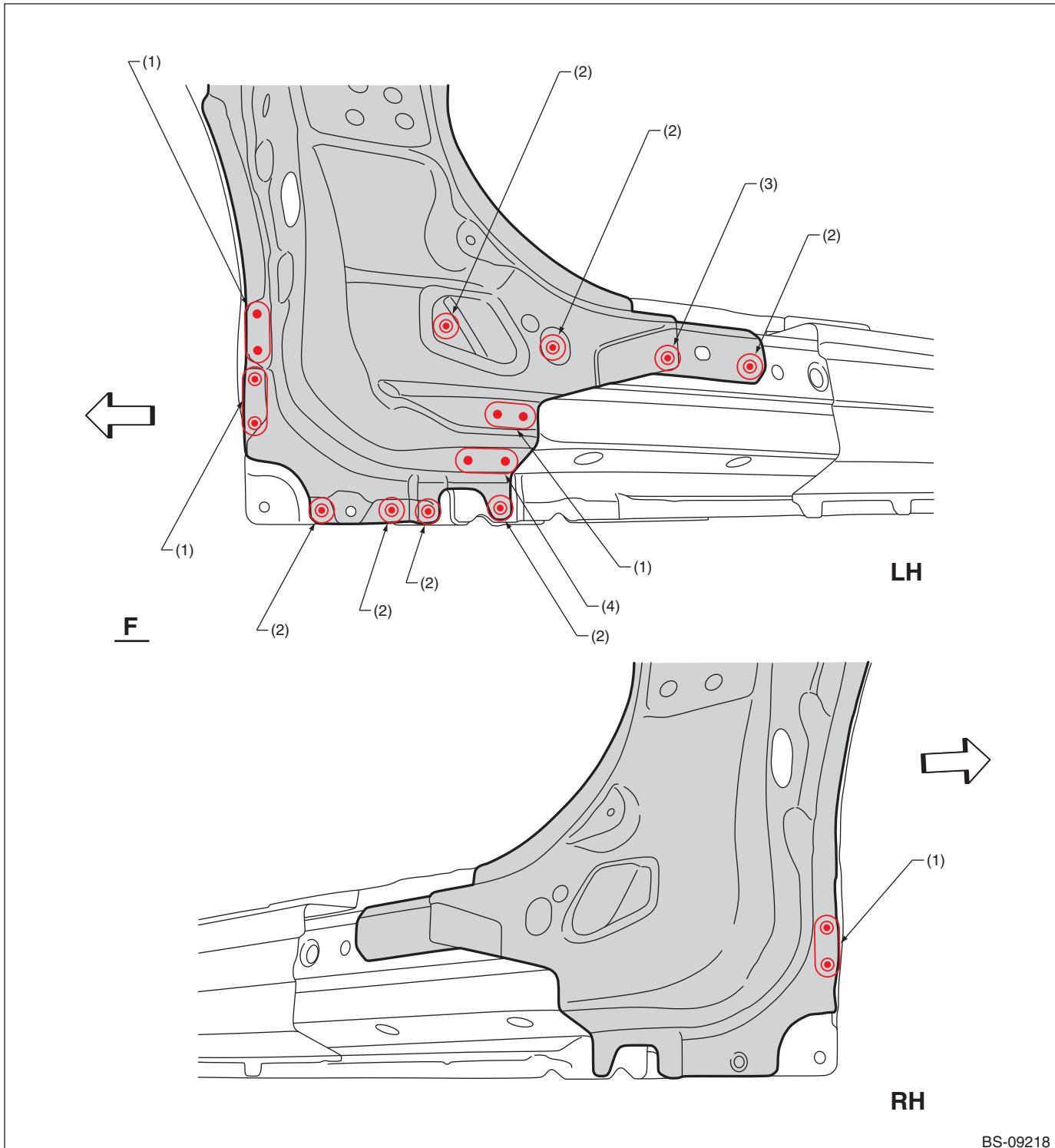
(2) 5 points (outside · 1)

(3) 1 point (outside · 2)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views ('14 MY — '17 MY)



(1) 2 points (outside · 1)
(2) 1 point (outside · 1)

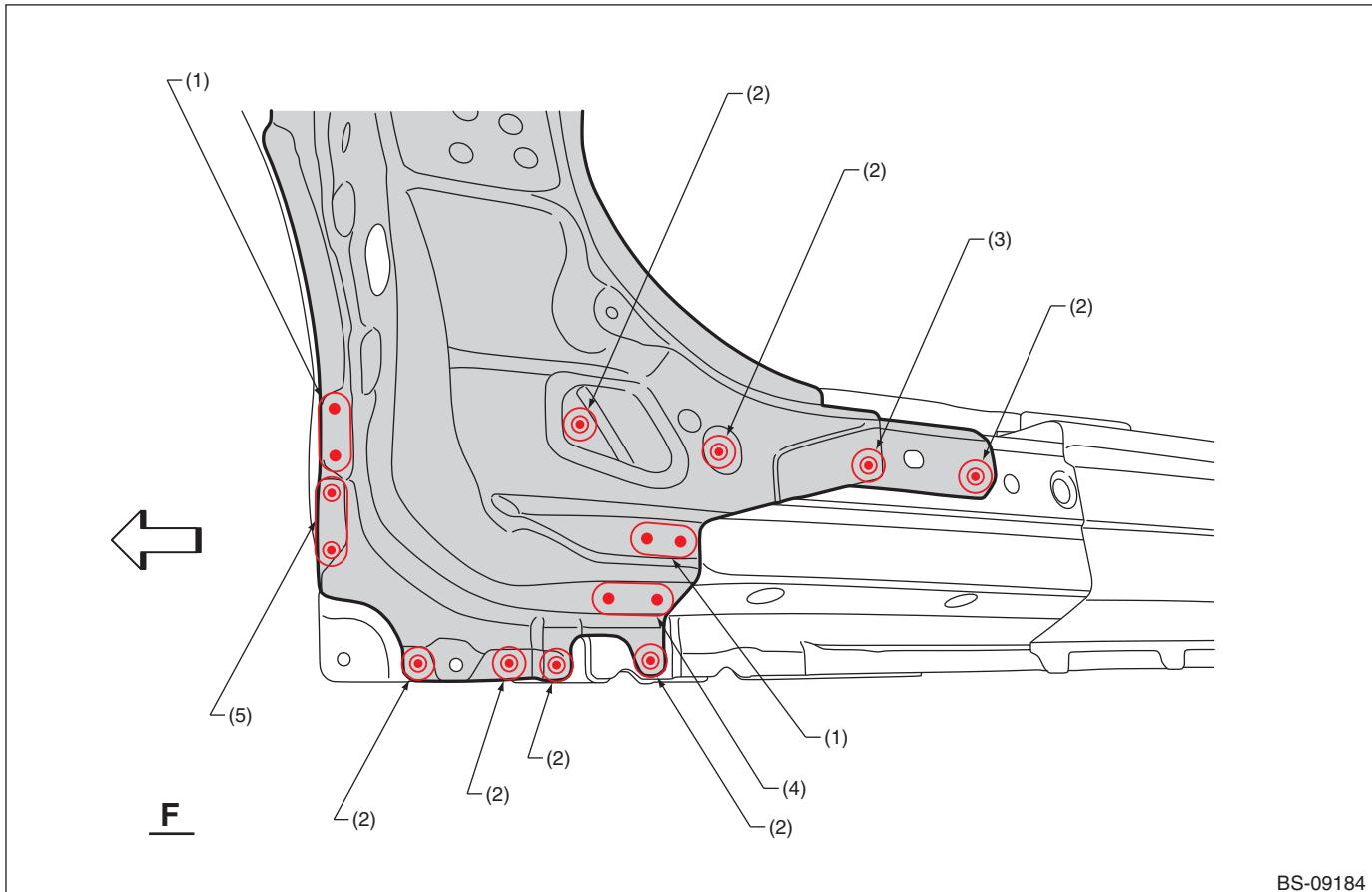
(3) 1 point (outside · 2)

(4) 2 points (bottom · 1)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

Panel Replacement

• Views ('18 MY —)



BS-09184

(1) 2 points (outside · 1)
(2) 1 point (outside · 1)

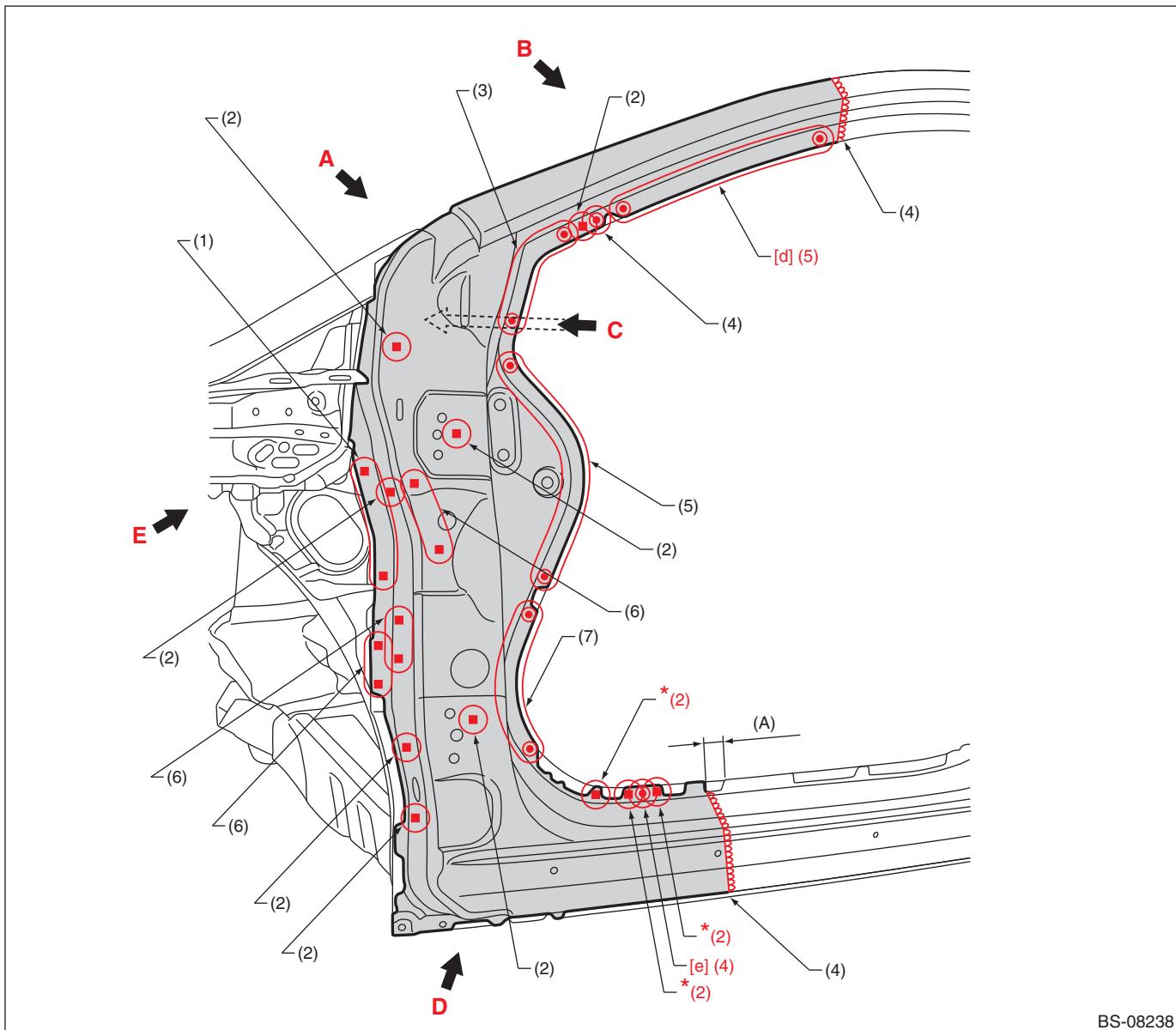
(3) 1 point (outside · 2)
(4) 2 points (bottom · 1)

(5) 3 points (outside · 1)

Panel Replacement

B: INSTALLATION

- Overall view ('14 MY — '17 MY)



(A) 25 mm (0.98 in)

(1) 4 points (service)

(4) 1 point

(7) 7 points (only LH)
4 points (only RH)

(2) 1 point (service)

(5) 8 points

(3) 4 points

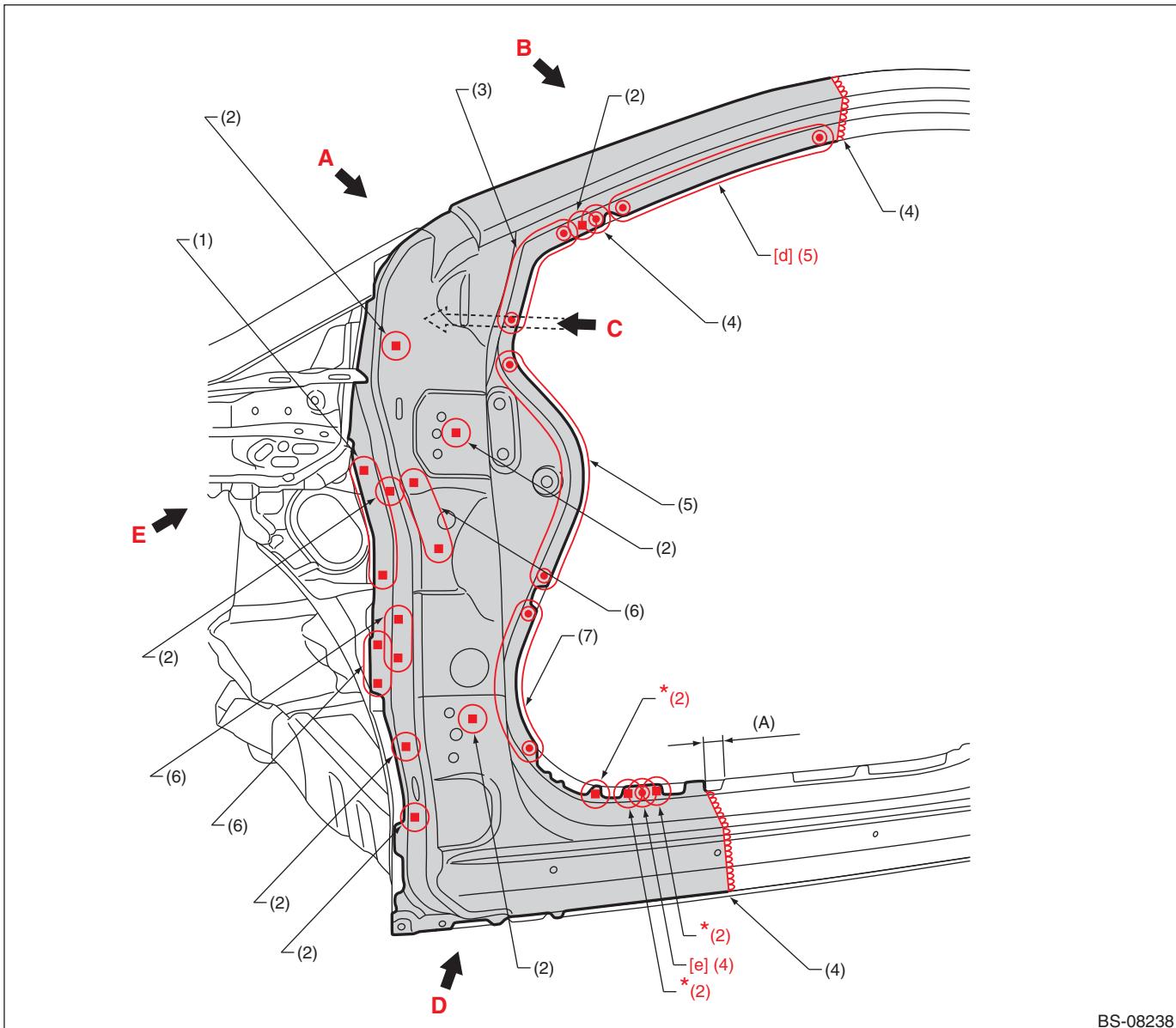
(6) 2 points (service)

[d] Spot welding conditions	Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc
[e] Spot welding conditions	Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Overall view ('18 MY —)



(A) 25 mm (0.98 in)

(1) 4 points (service)

(2) 1 point (service)

(3) 4 points

(4) 1 point

(5) 8 points

(6) 2 points (service)

(7) 7 points

[d] Spot welding conditions

Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc

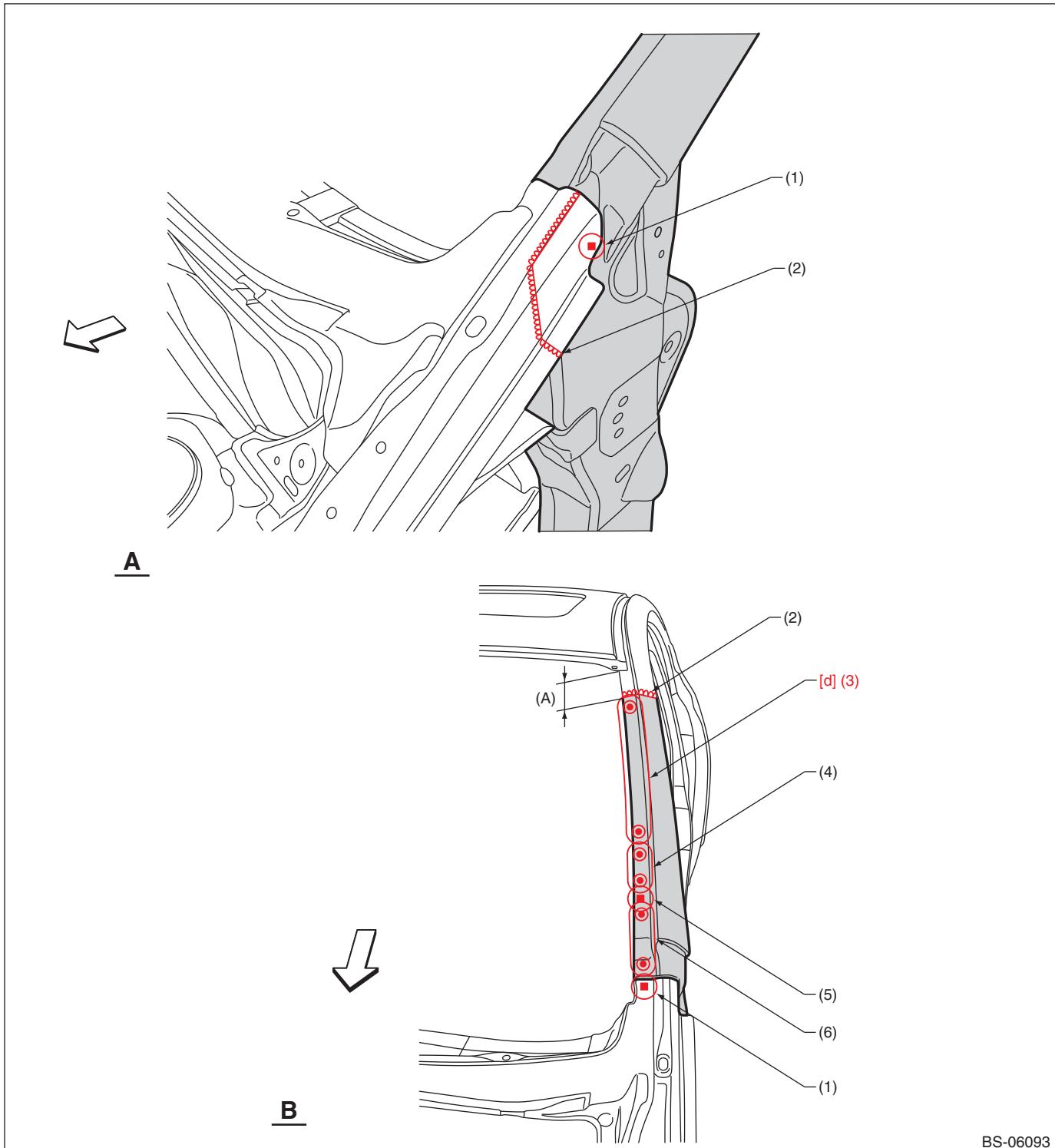
[e] Spot welding conditions

Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views 1



BS-06093

(A) 60 mm (2.36 in)

(1) 1 point (service · matching)

(2) 1 point

(3) 9 points

(4) 2 points

(5) 1 point (service)

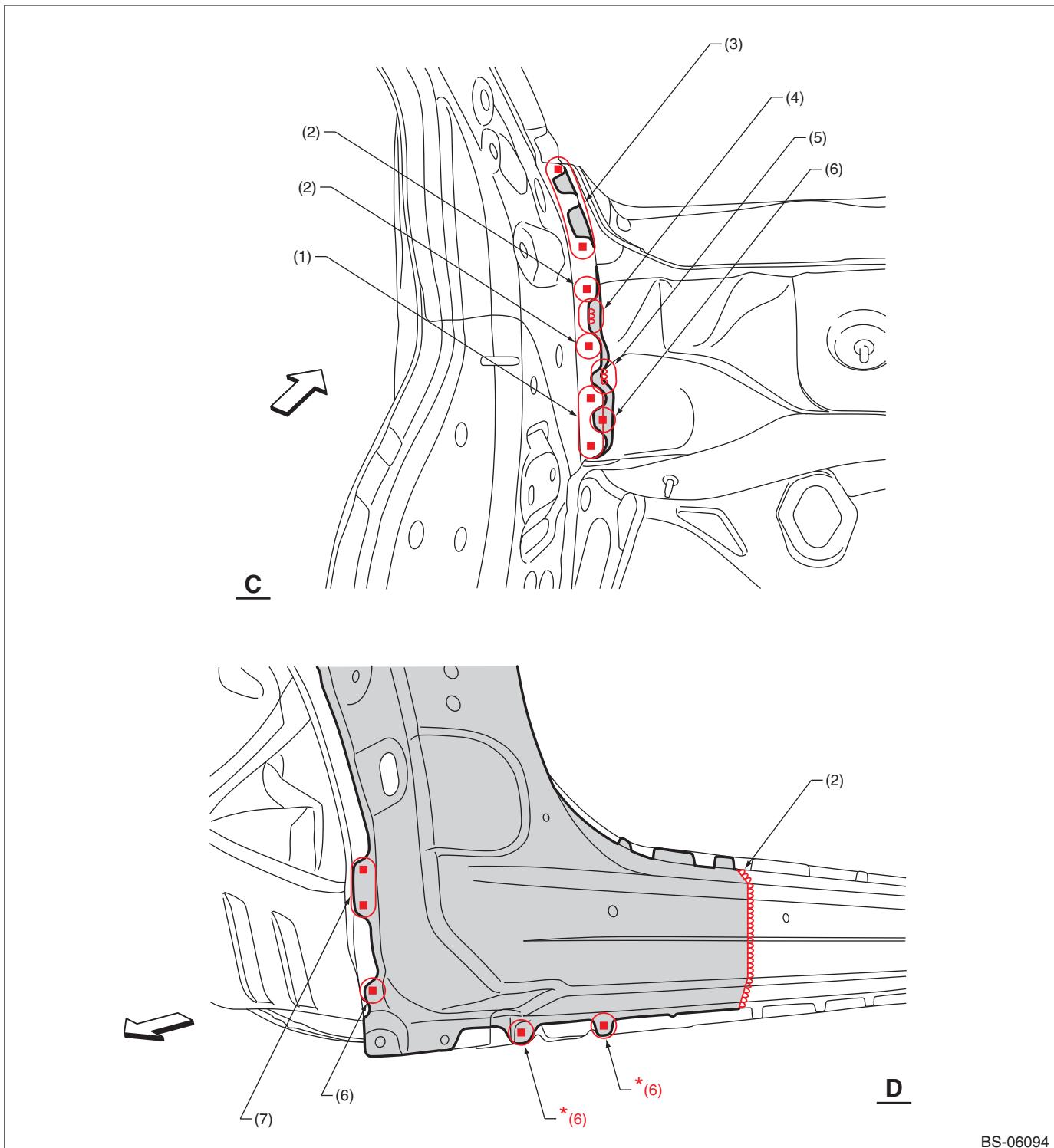
(6) 3 points

[d] Spot welding conditions

Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc

Panel Replacement

• Views 2



(1) 2 points

(2) 1 point

(3) 3 points

(4) 1 point [15 mm (0.59 in)]

(5) 1 point [10 mm (0.39 in)]

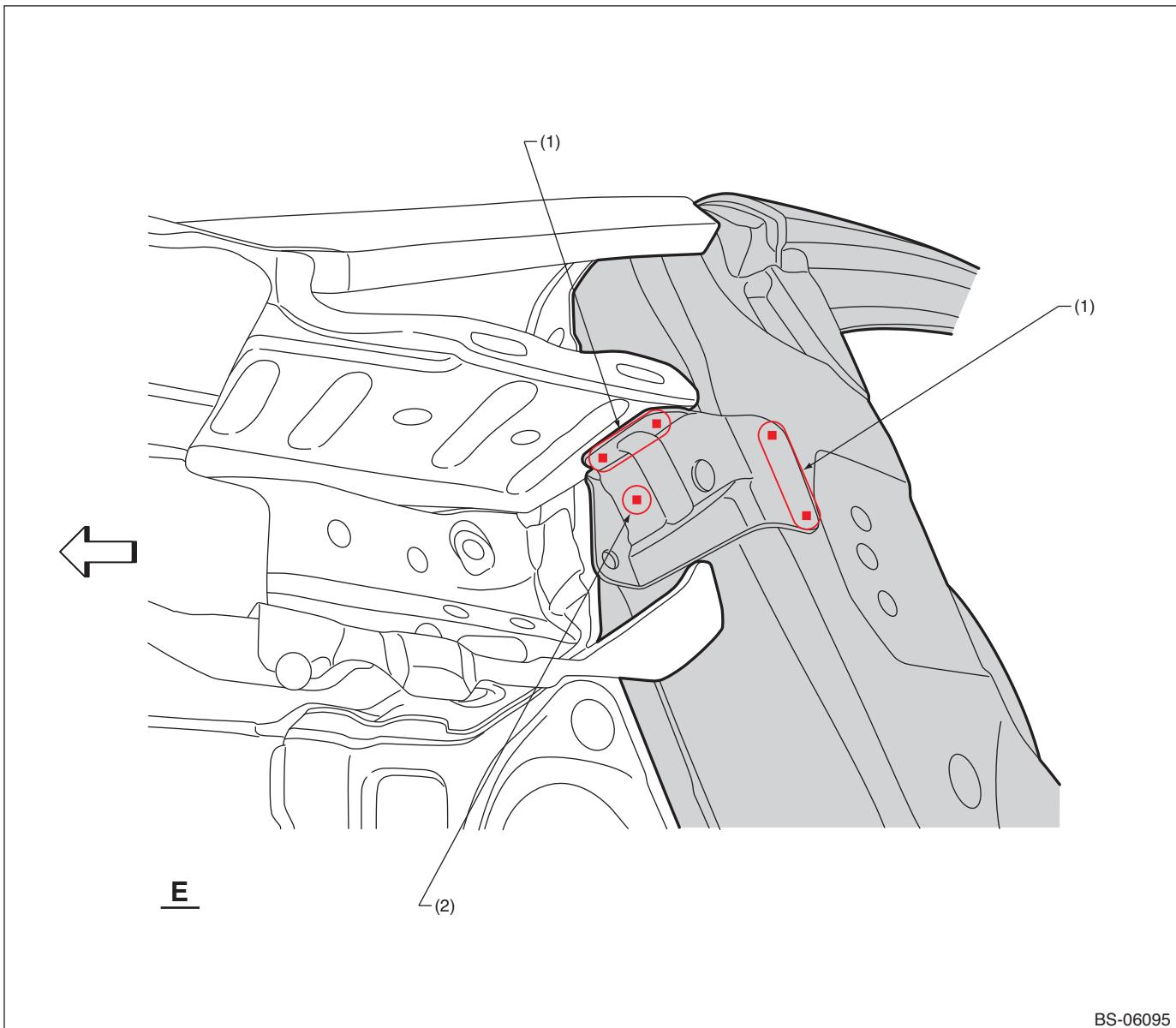
(6) 1 point (service)

(7) 2 points (service)

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views 3



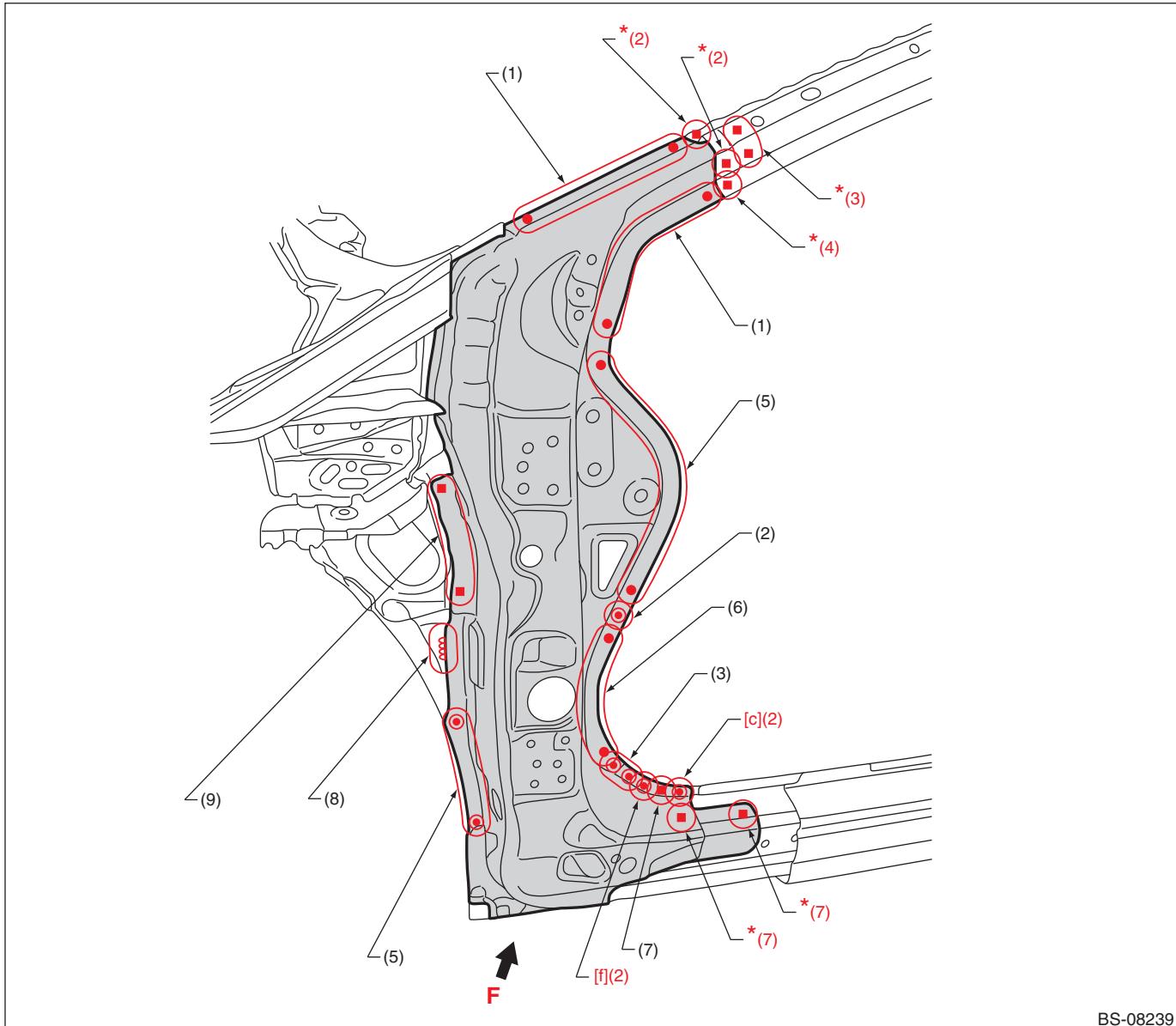
(1) 2 points (service)

(2) 1 point (service)

BS-06095

Panel Replacement

• Overall view (LH) ('14 MY — '17 MY)



(1) 5 points

(2) 1 point

(3) 2 points

(4) 1 point (service · matching)

(5) 8 points

(6) 7 points (only LH)
4 points (only RH)

(7) 1 point (service)

(8) 1 point [25 mm (0.98 in)]

(9) 4 points (service)

[c] Spot welding conditions

Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc

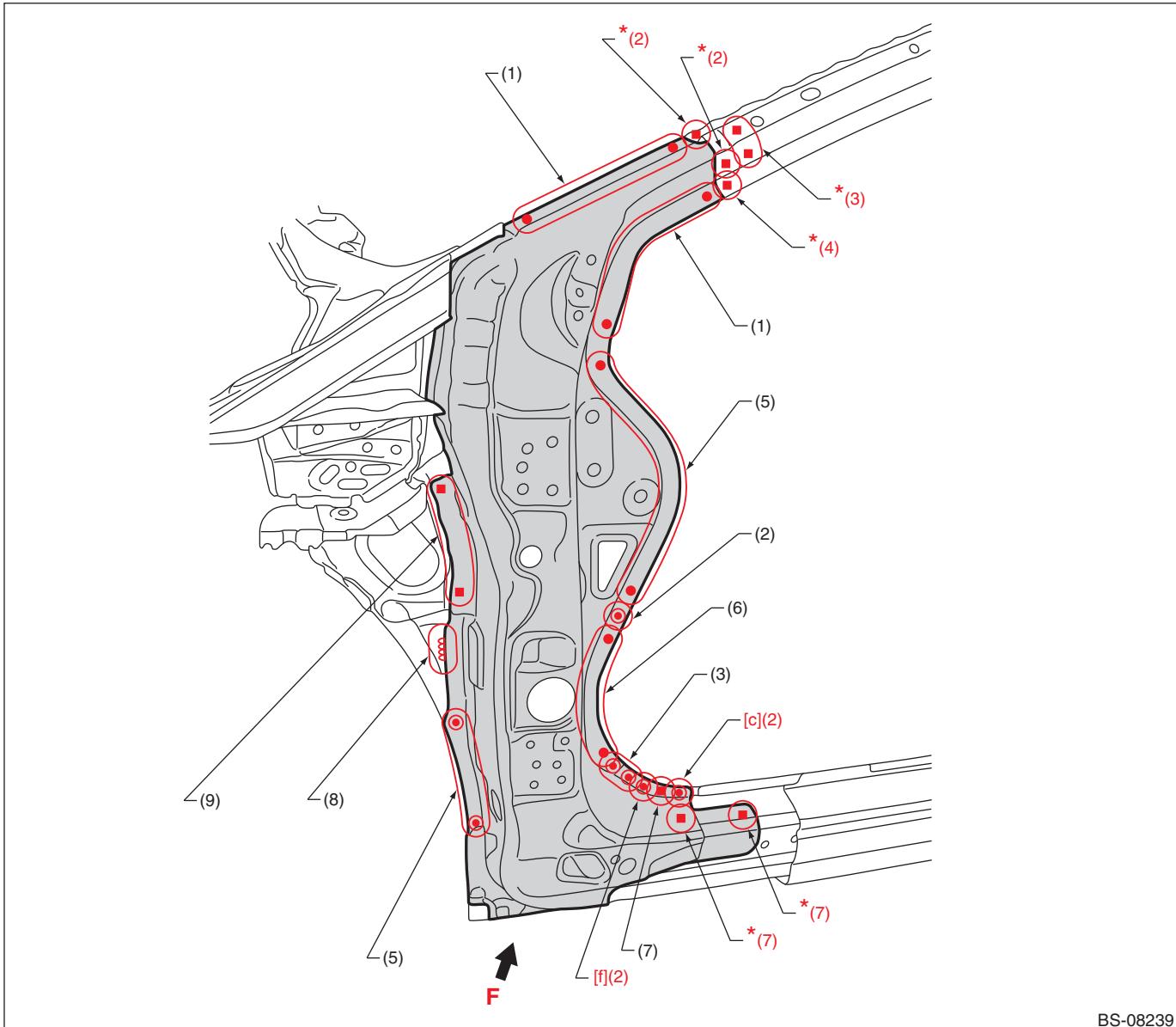
[f] Spot welding conditions

Compression: 4.4 kN, Current: 8.0 kA, Welding time: 20 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Overall view ('18 MY —)



(1) 5 points

(2) 1 point

(3) 2 points

(4) 1 point (service · matching)

(5) 8 points

(6) 7 points

(7) 1 point (service)

(8) 1 point [25 mm (0.98 in)]

(9) 4 points (service)

[c]

[f]

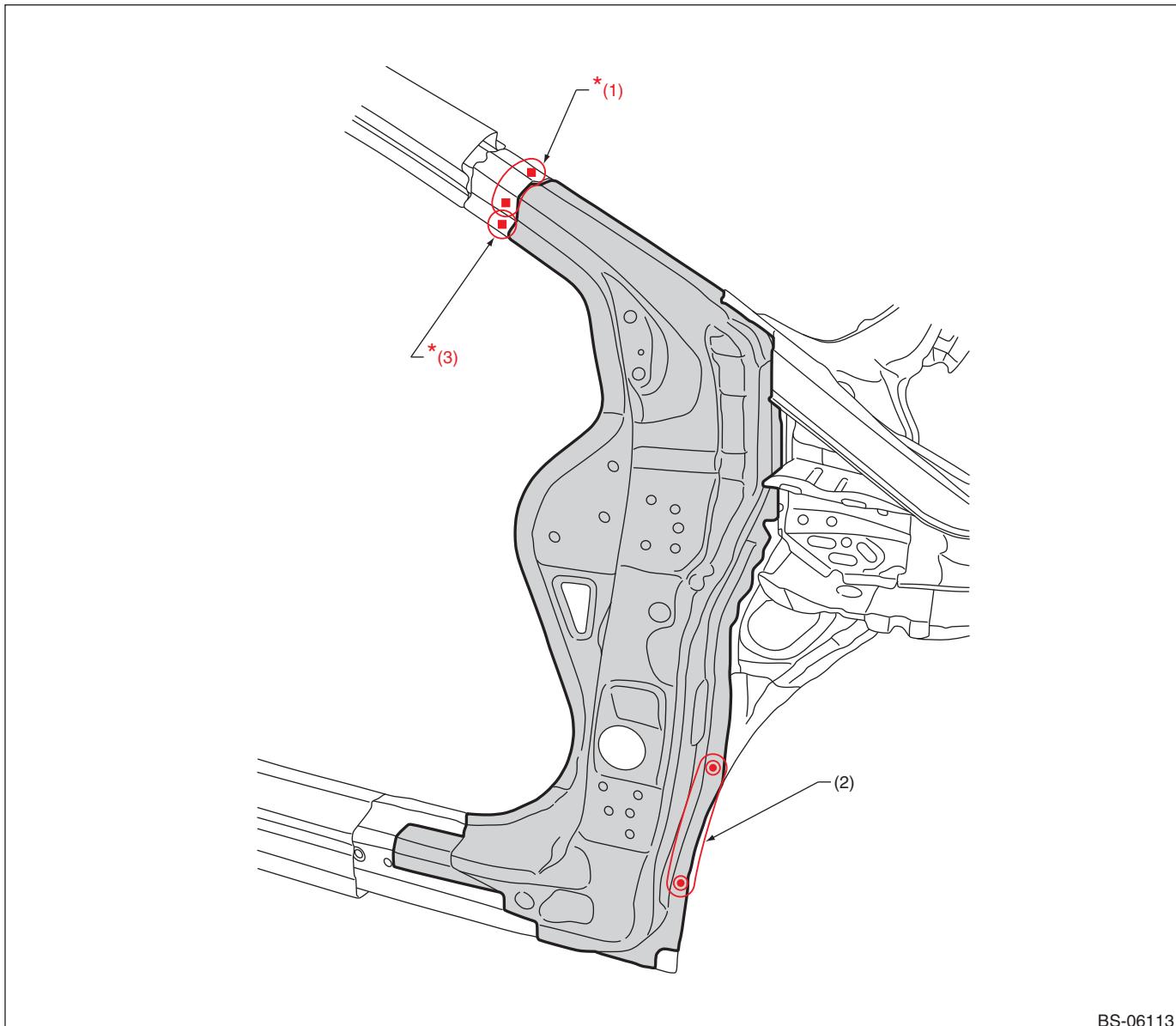
Spot welding conditions Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc

Spot welding conditions Compression: 4.4 kN, Current: 8.0 kA, Welding time: 20 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

- (RH) ('14 MY — '17 MY)



(1) 3 points

(2) 5 points

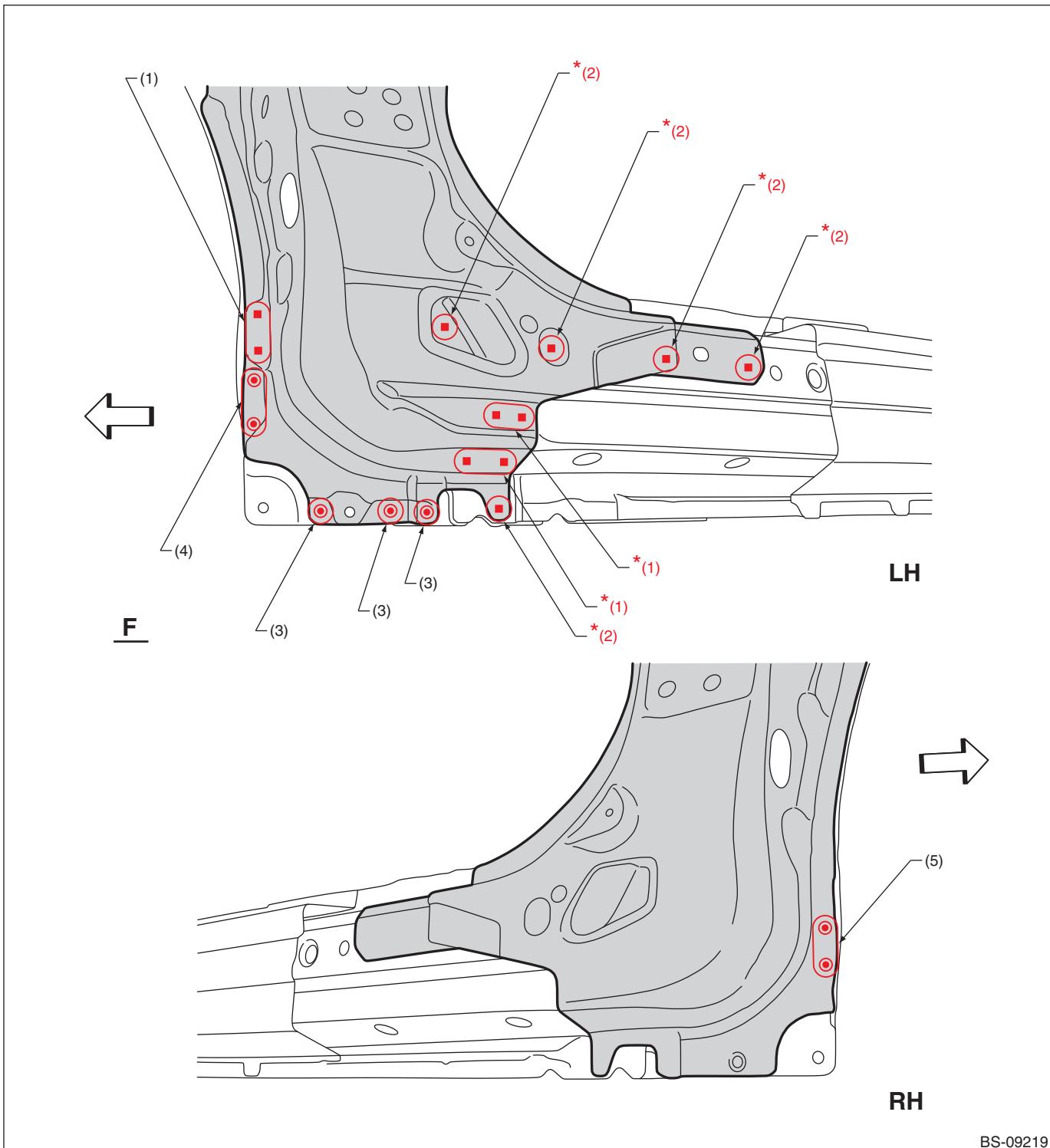
(3) 1 point (service · matching)

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views ('14 MY — '17 MY)



(1) 2 points (service)

(2) 1 point (service)

(3) 1 point

(4) 3 points

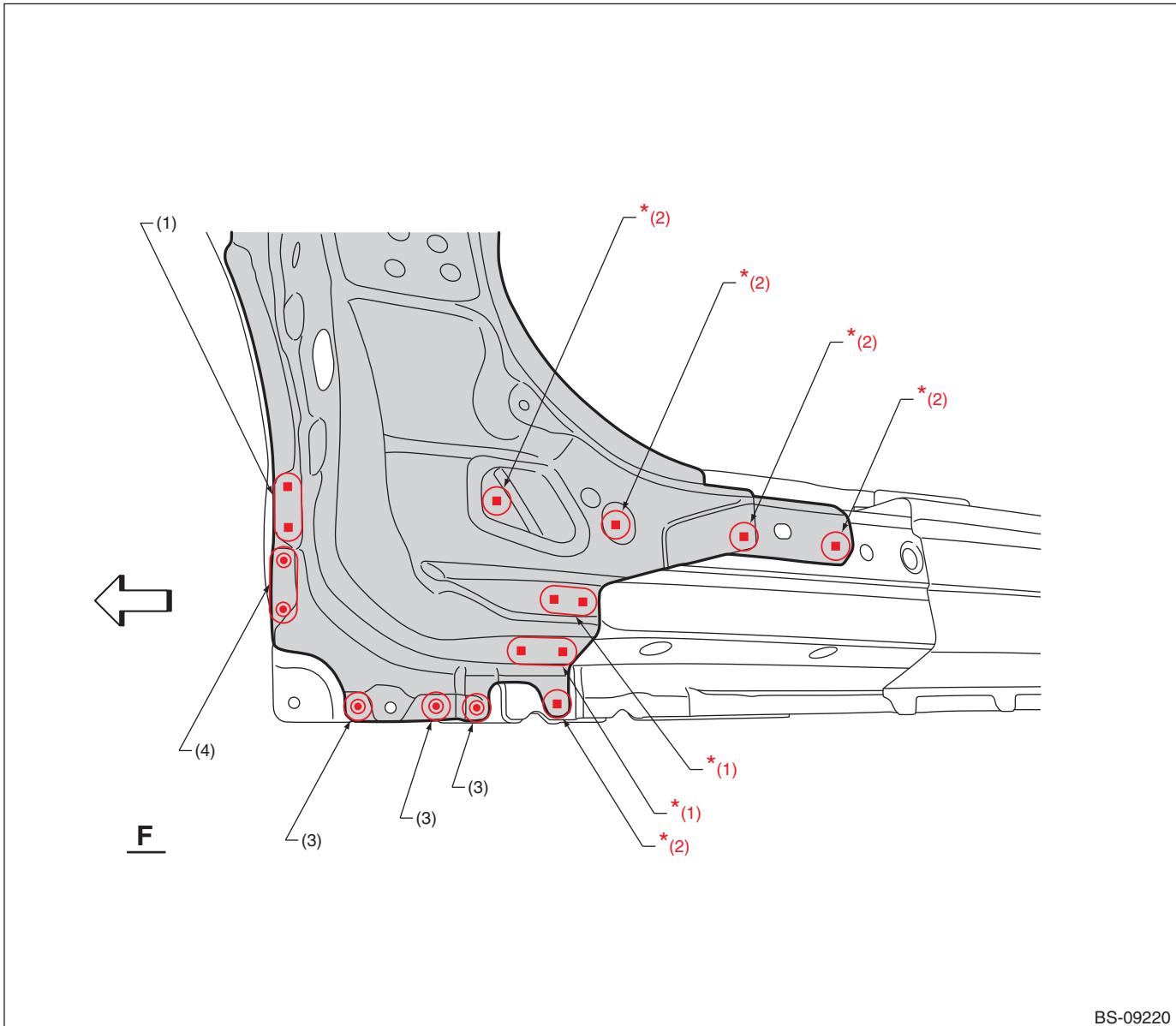
(5) 2 points

BS-09219

Note: Designations in the RH diagram are the same as in the LH diagram, except for the indicated points.
*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

- **Views ('18 MY —)**



(1) 2 points (service)

(3) 1 point

(4) 3 points

(2) 1 point (service)

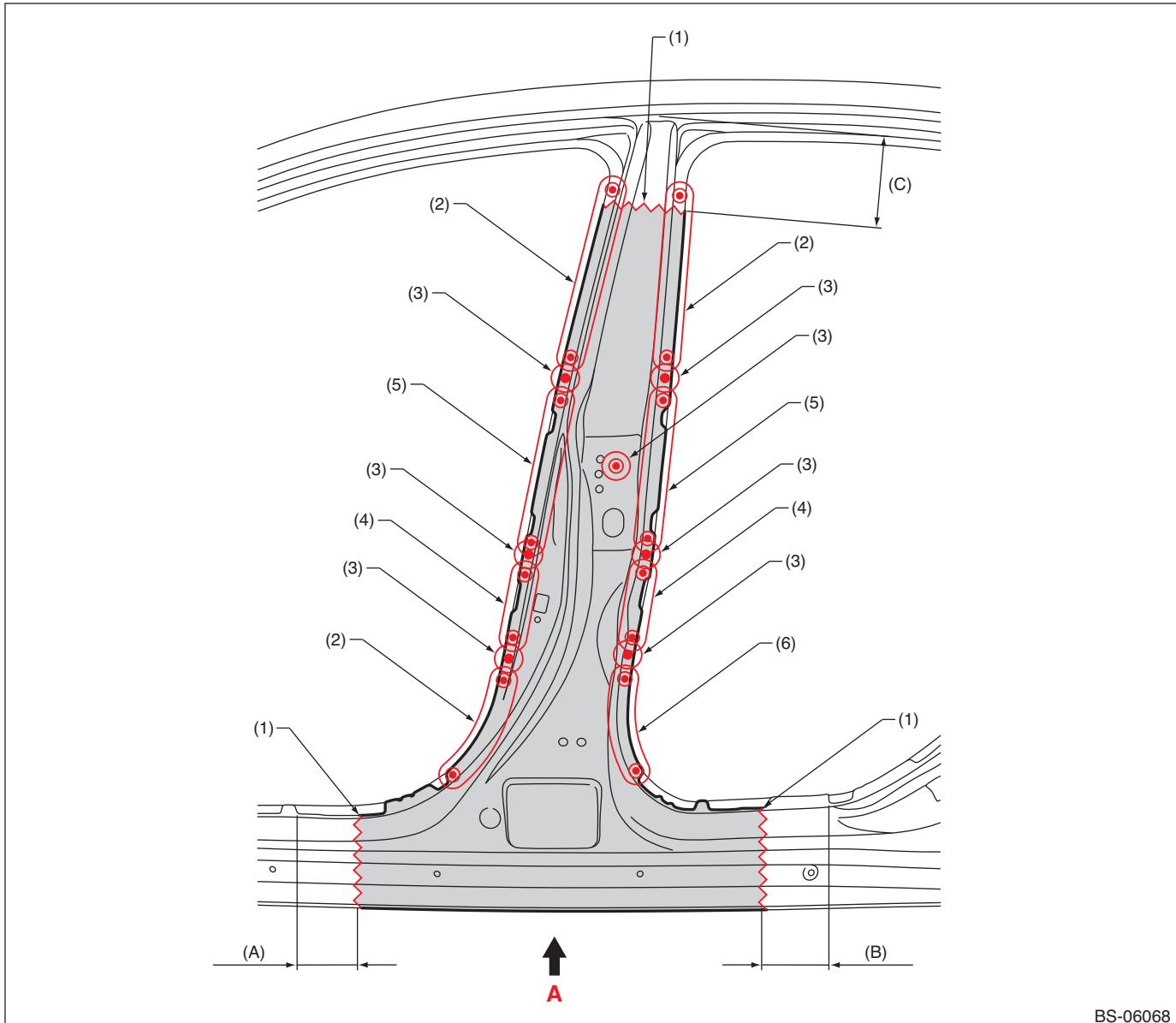
*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

8-8. Center Pillar (partial replacement)

A: REMOVAL

- Overall view



(A) 100 mm (3.94 in)

(B) 110 mm (4.33 in)

(C) 140 mm (5.51 in)

(1) Rough cutting

(2) 7 points (outside · 1)

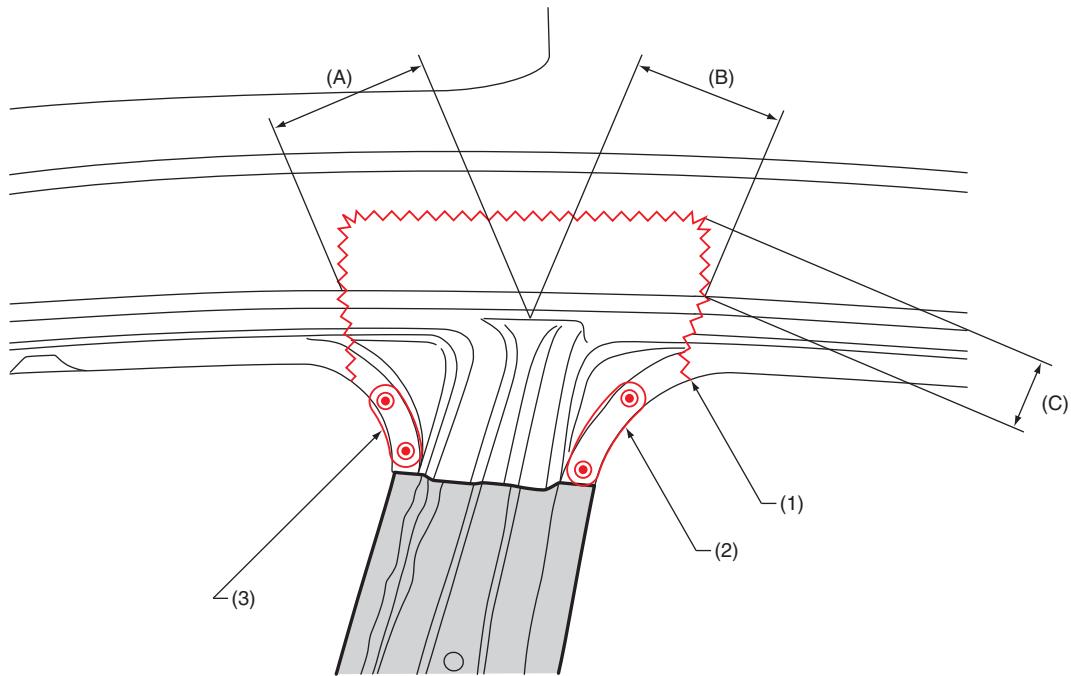
(3) 1 point (outside · 1)

(4) 3 points (outside · 1)

(5) 5 points (outside · 1)

(6) 6 points (outside · 1)

Panel Replacement



BS-06191

(A) 100 mm (3.94 in)

(B) 90 mm (3.54 in)

(C) 50 mm (1.97 in)

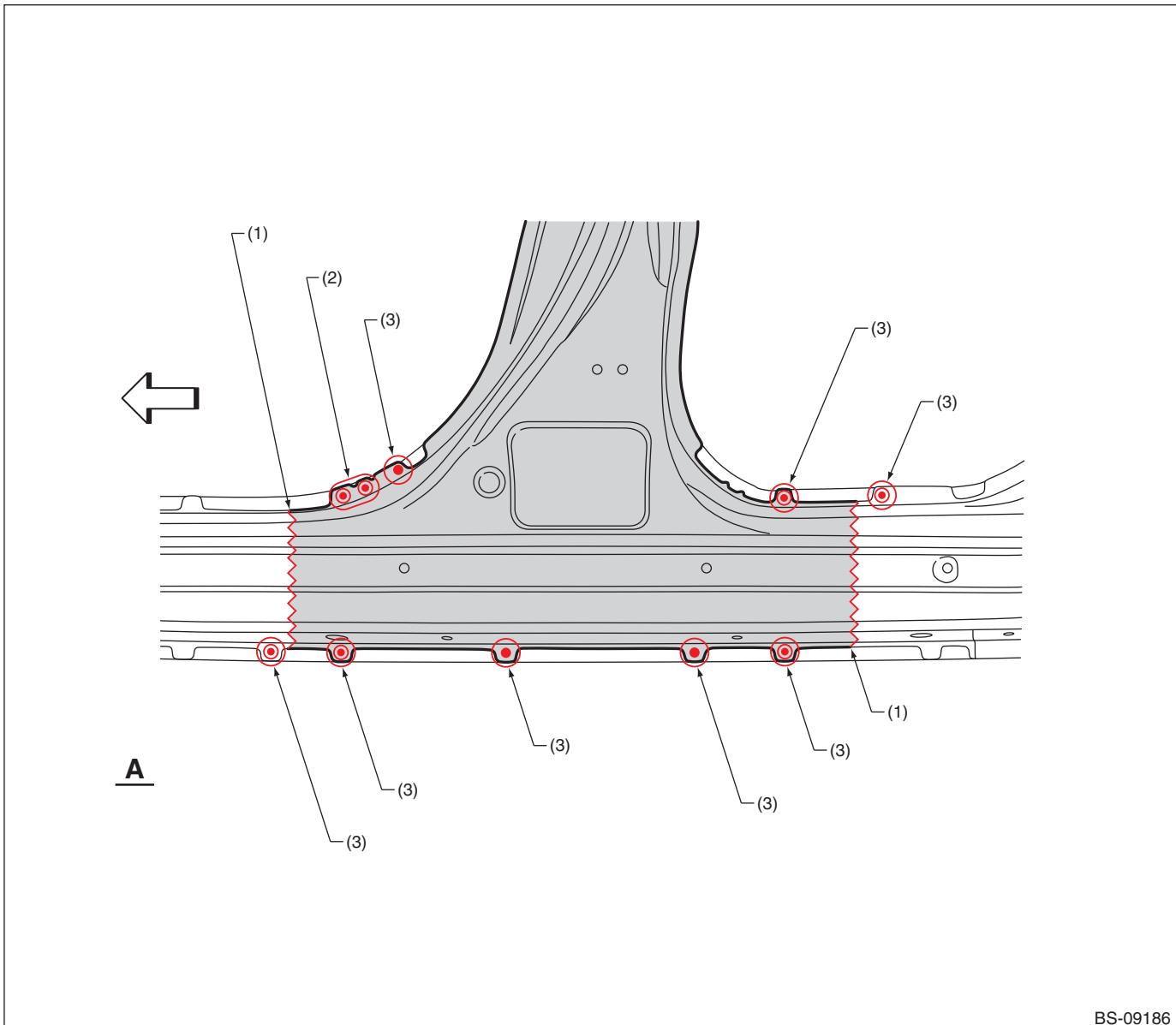
(1) Rough cutting

(2) 3 points (outside · 1)

(3) 2 points (outside · 1)

Panel Replacement

- Views



(1) Rough cutting

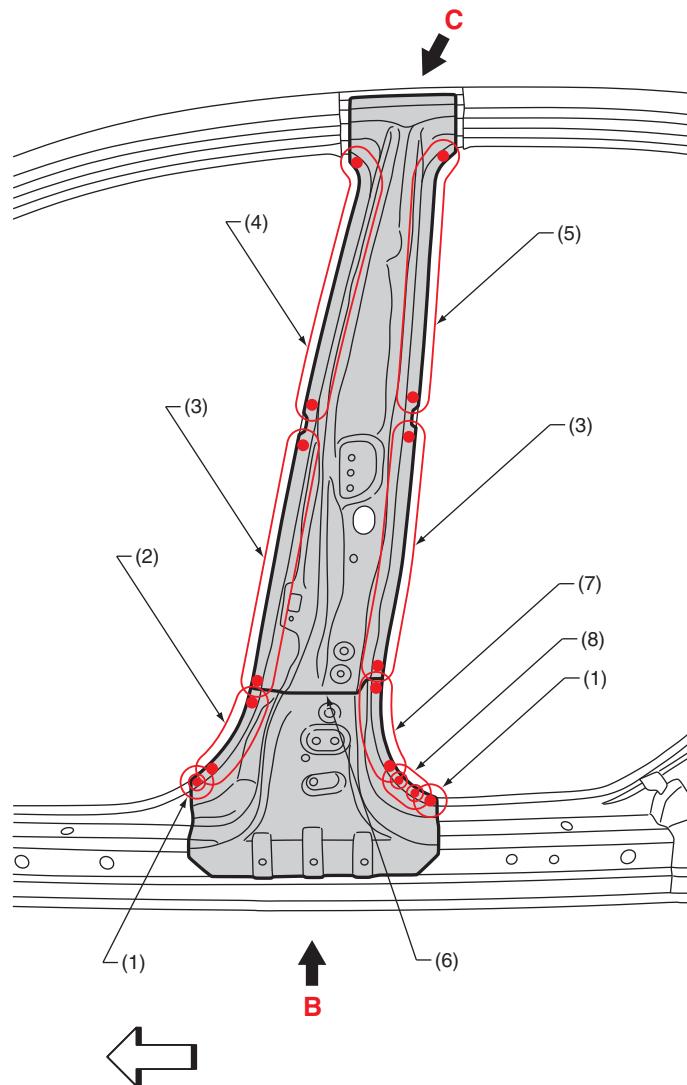
(2) 2 points (outside · 1)

(3) 1 point (outside · 1)

BS-09186

Panel Replacement

• Overall view



BS-06114

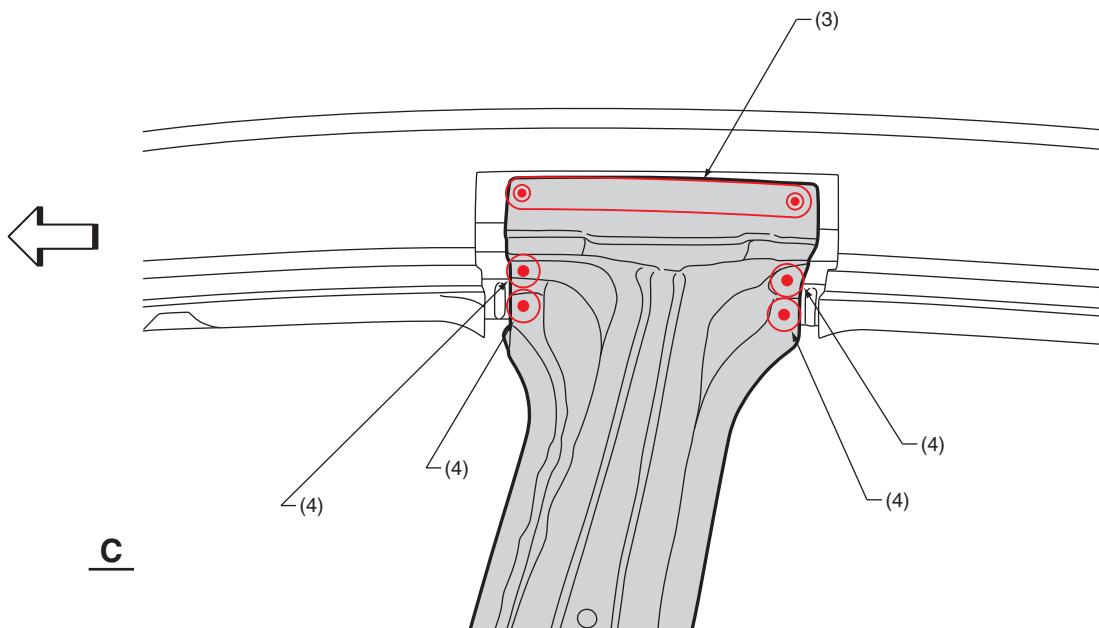
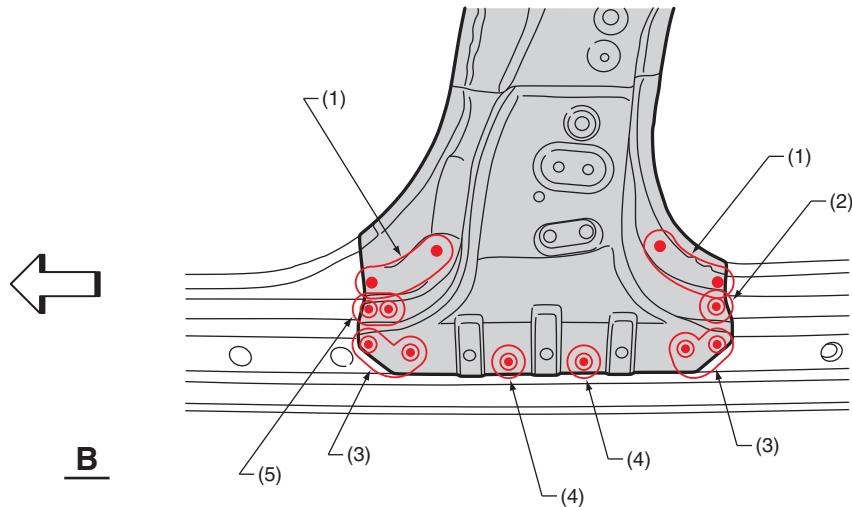
- (1) 1 point (outside · 1)
- (2) 6 points (outside · 1)
- (3) 8 points (outside · 1)

- (4) 10 points (outside · 1)
- (5) 11 points (outside · 1)
- (6) Tailored line

- (7) 5 points (outside · 1)
- (8) 2 points (outside · 1)

Panel Replacement

• Views



BS-06115

(1) 4 points (outside · 1)
(2) 1 point (top · 1)

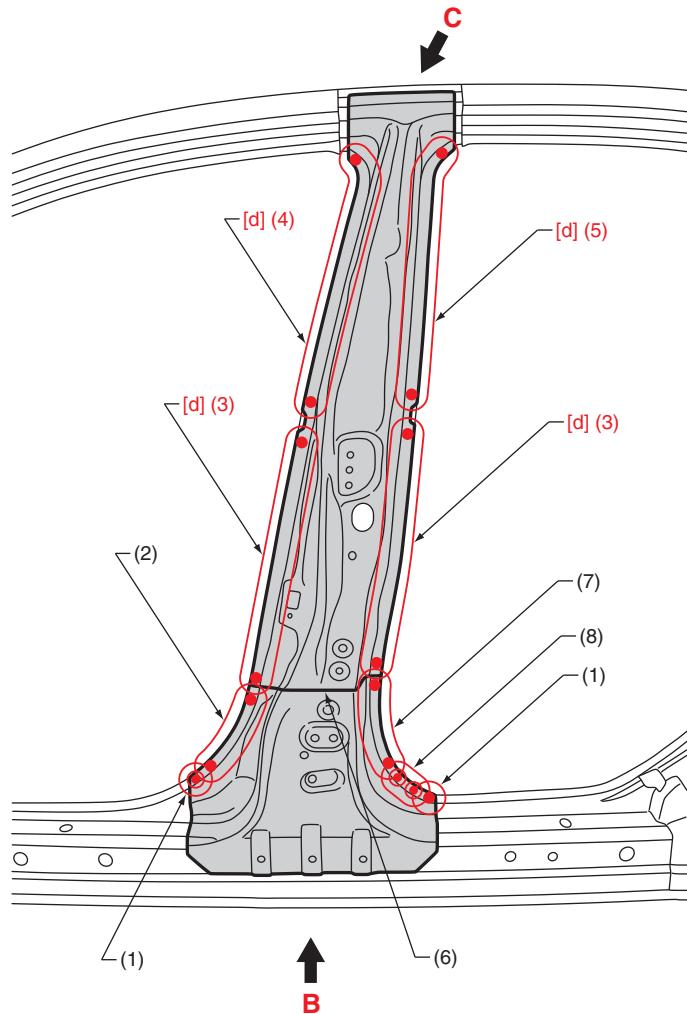
(3) 3 points (inside · 1)
(4) 1 point (inside · 1)

(5) 2 points (top · 1)

Panel Replacement

B: INSTALLATION

• Overall view



BS-06116

(1) 1 point

(2) 6 points

(3) 8 points

(4) 10 points

(5) 11 points

(6) Tailored line

(7) 5 points

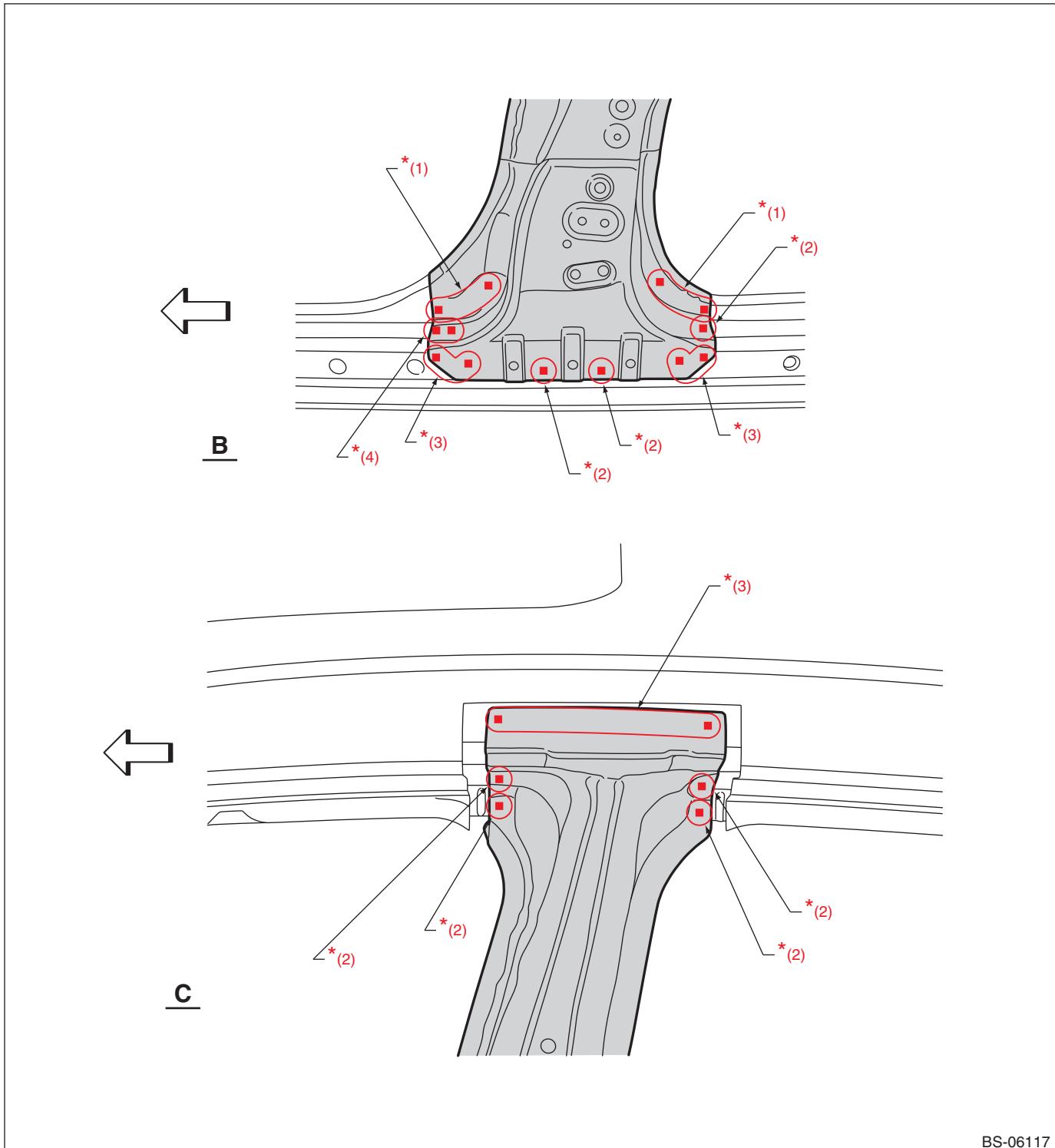
(8) 2 points

[d] Spot welding conditions

Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc

Panel Replacement

• Views



BS-06117

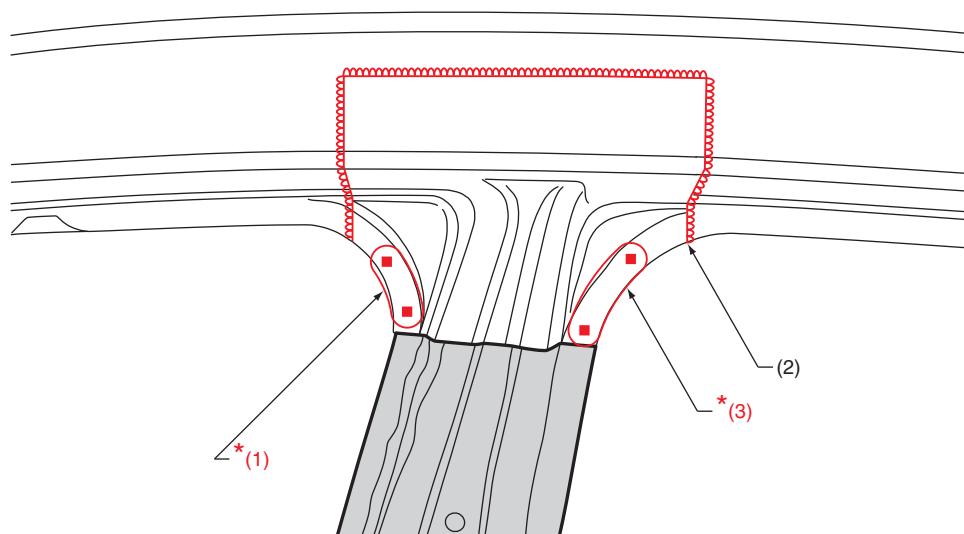
(1) 4 points (service)
(2) 1 point (service)

(3) 3 points (service)

(4) 2 points (service)

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement



BS-06192

(1) 2 points

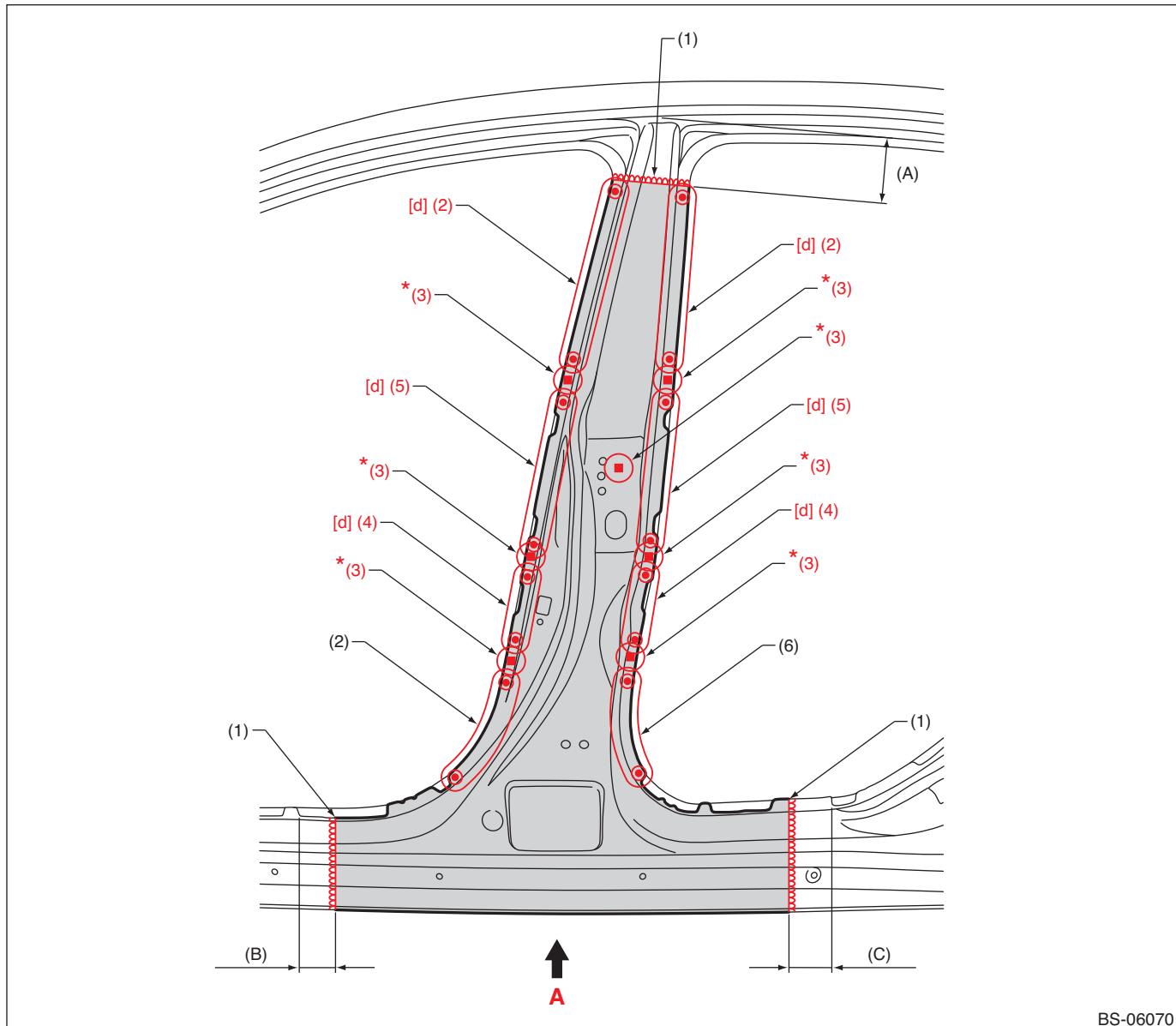
(2) 1 point

(3) 3 points

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Overall view



(A) 100 mm (3.94 in)

(B) 60 mm (2.36 in)

(C) 70 mm (2.76 in)

(1) 1 point

(3) 1 point (service)

(5) 5 points

(2) 7 points

(4) 3 points

(6) 6 points

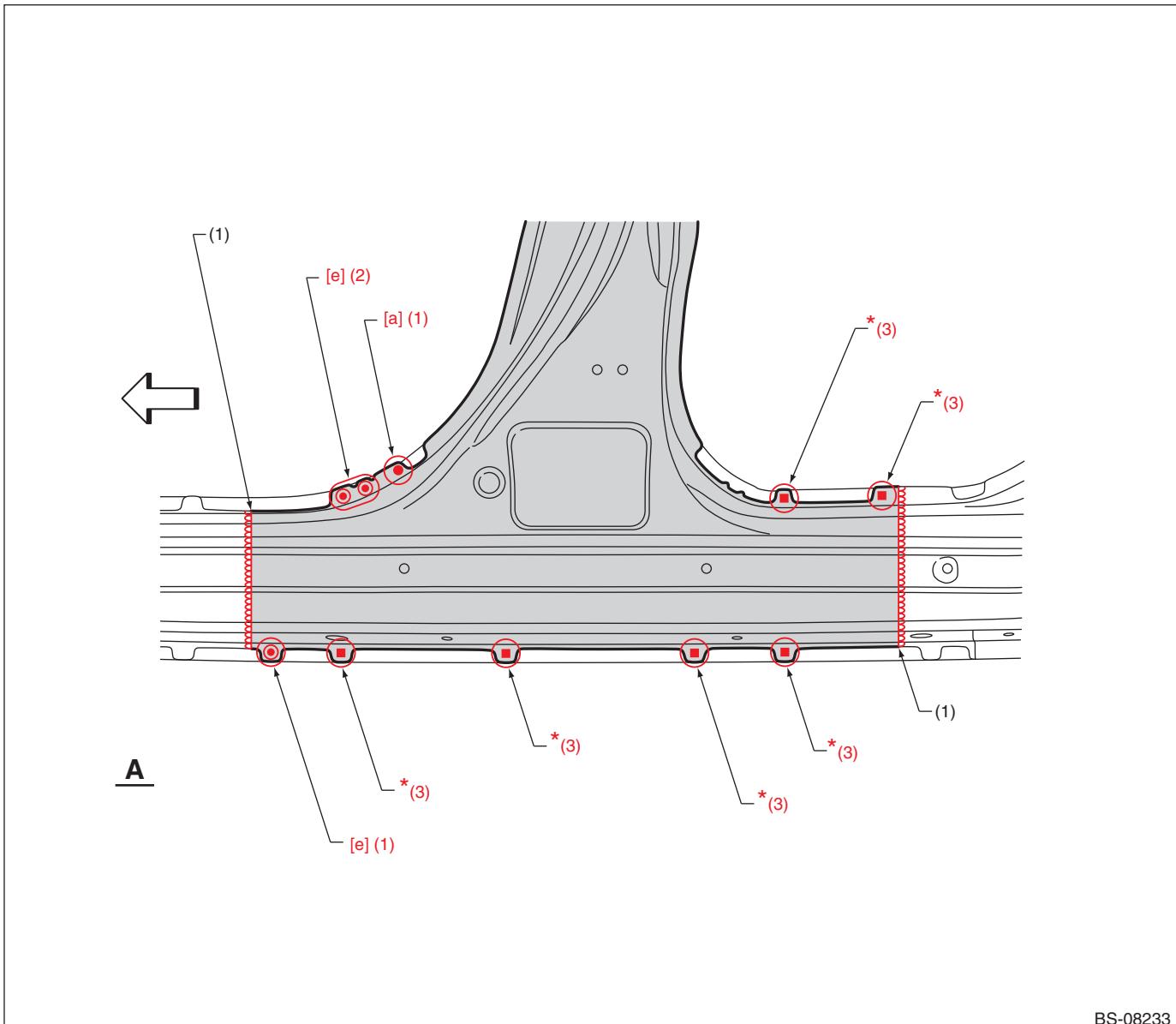
[d] Spot welding conditions

Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views



(1) 1 point

(2) 2 points

(3) 1 point (service)

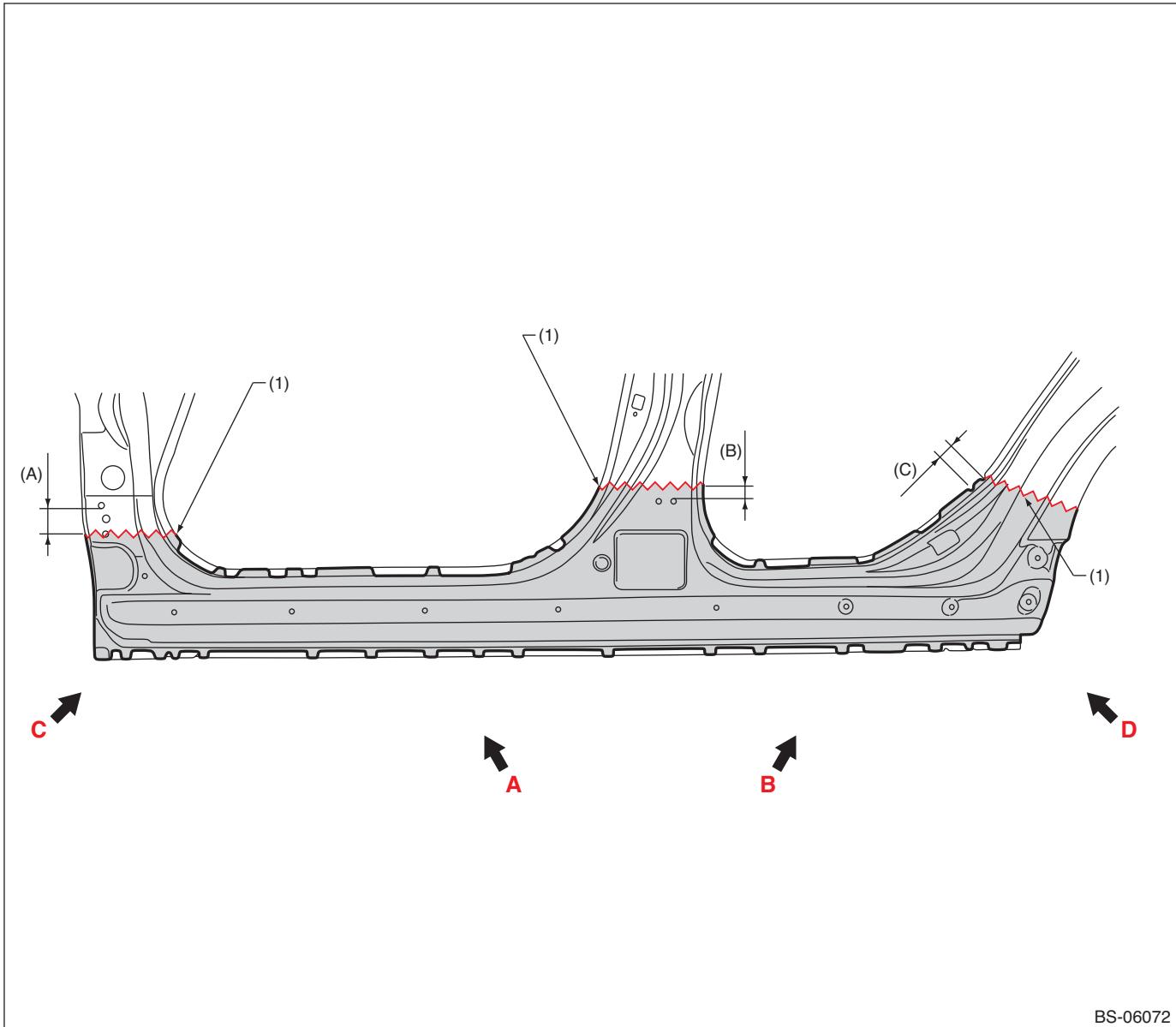
[a] Spot welding conditions	Compression: 3.0 kN, Current: 6.0 kA, Welding time: 15 cyc
[e] Spot welding conditions	Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

8-9. Side Sill (partial replacement)

A: REMOVAL

- Overall view



BS-06072

(A) 60 mm (2.36 in)

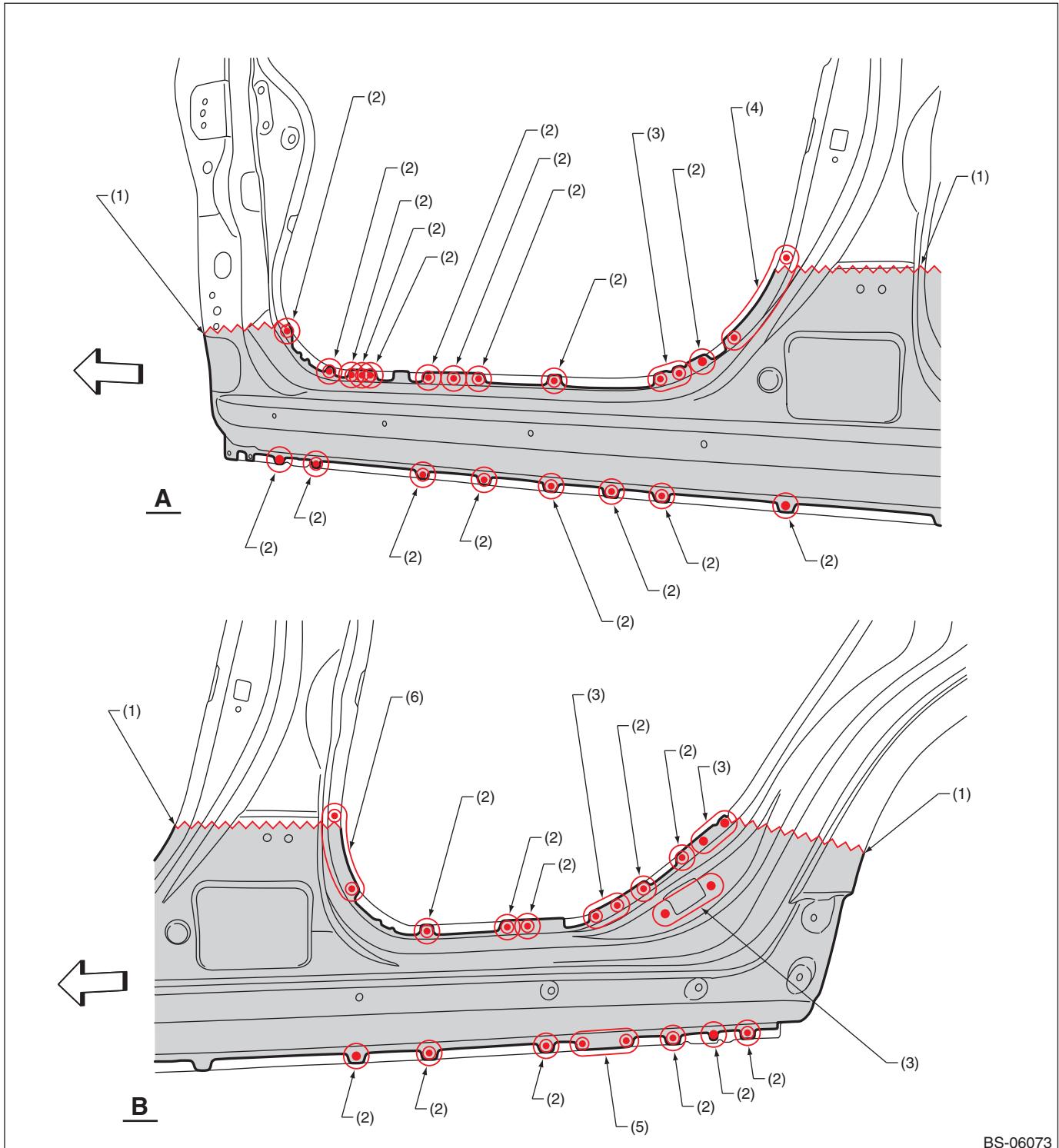
(B) 15 mm (0.59 in)

(C) 20 mm (0.79 in)

(1) Rough cutting

Panel Replacement

- **Views 1**



(1) Rough cutting

(2) 1 point (outside · 1)

(3) 2 points (outside · 1)

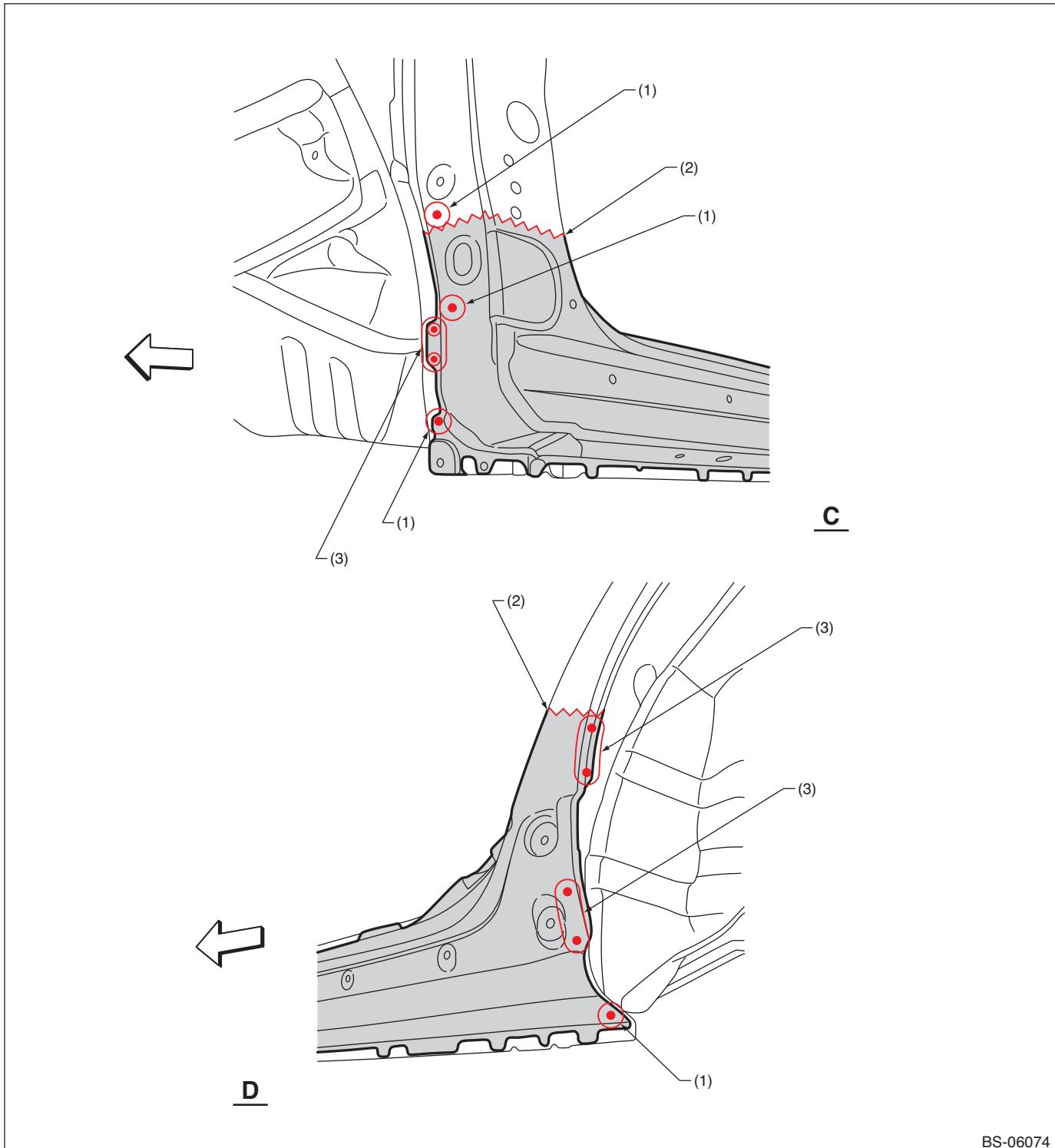
(4) 6 points (outside · 1)

(5) 3 points (outside · 1)

(6) 4 points (outside · 1)

Panel Replacement

• Views 2



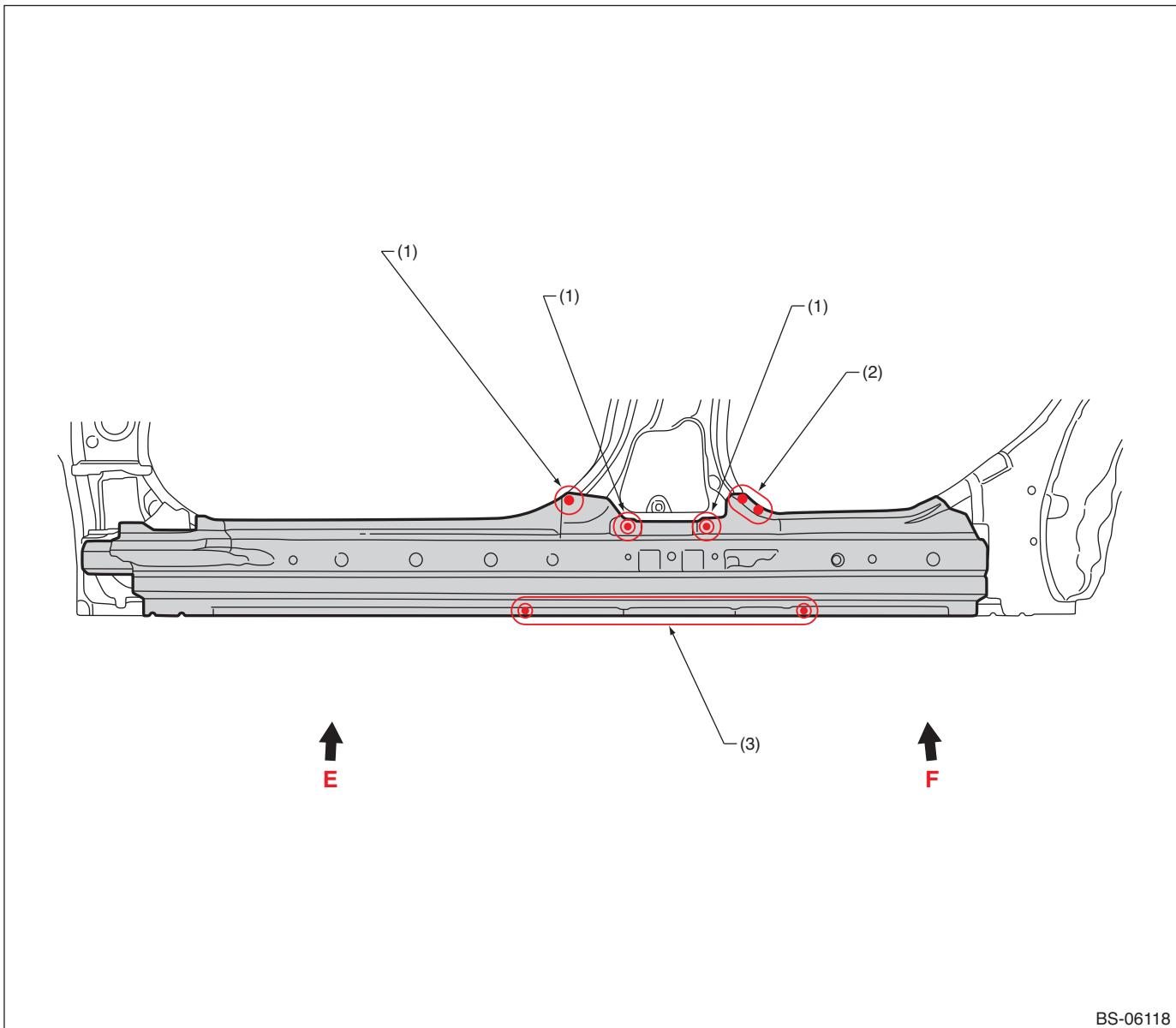
(1) 1 point (outside · 1)

(2) Rough cutting

(3) 2 points (outside · 1)

Panel Replacement

• Overall view



BS-06118

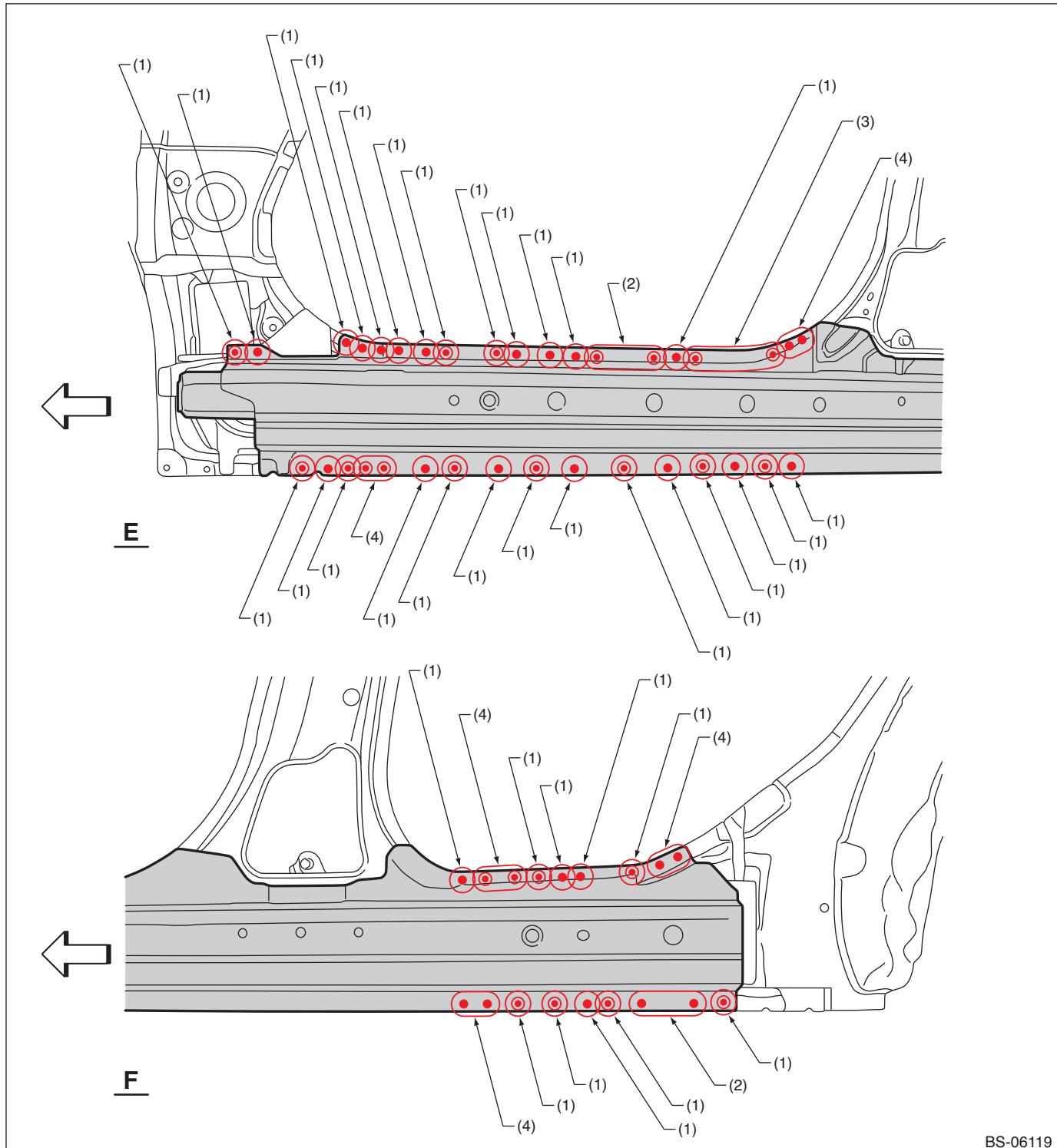
(1) 1 point (outside · 1)

(2) 2 points (outside · 1)

(3) 10 points (outside · 1)

Panel Replacement

• Views



BS-06119

(1) 1 point (outside · 1)
(2) 3 points (outside · 1)

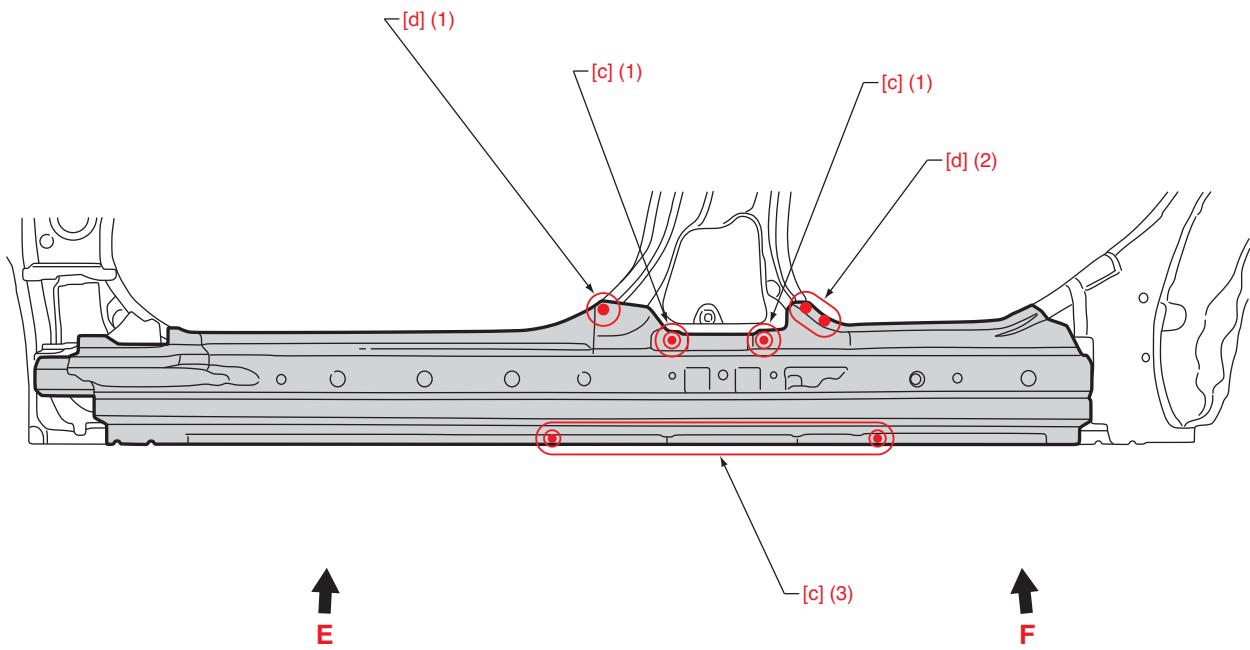
(3) 6 points (outside · 1)

(4) 2 points (outside · 1)

Panel Replacement

B: INSTALLATION

• Overall view



BS-06120

(1) 1 point

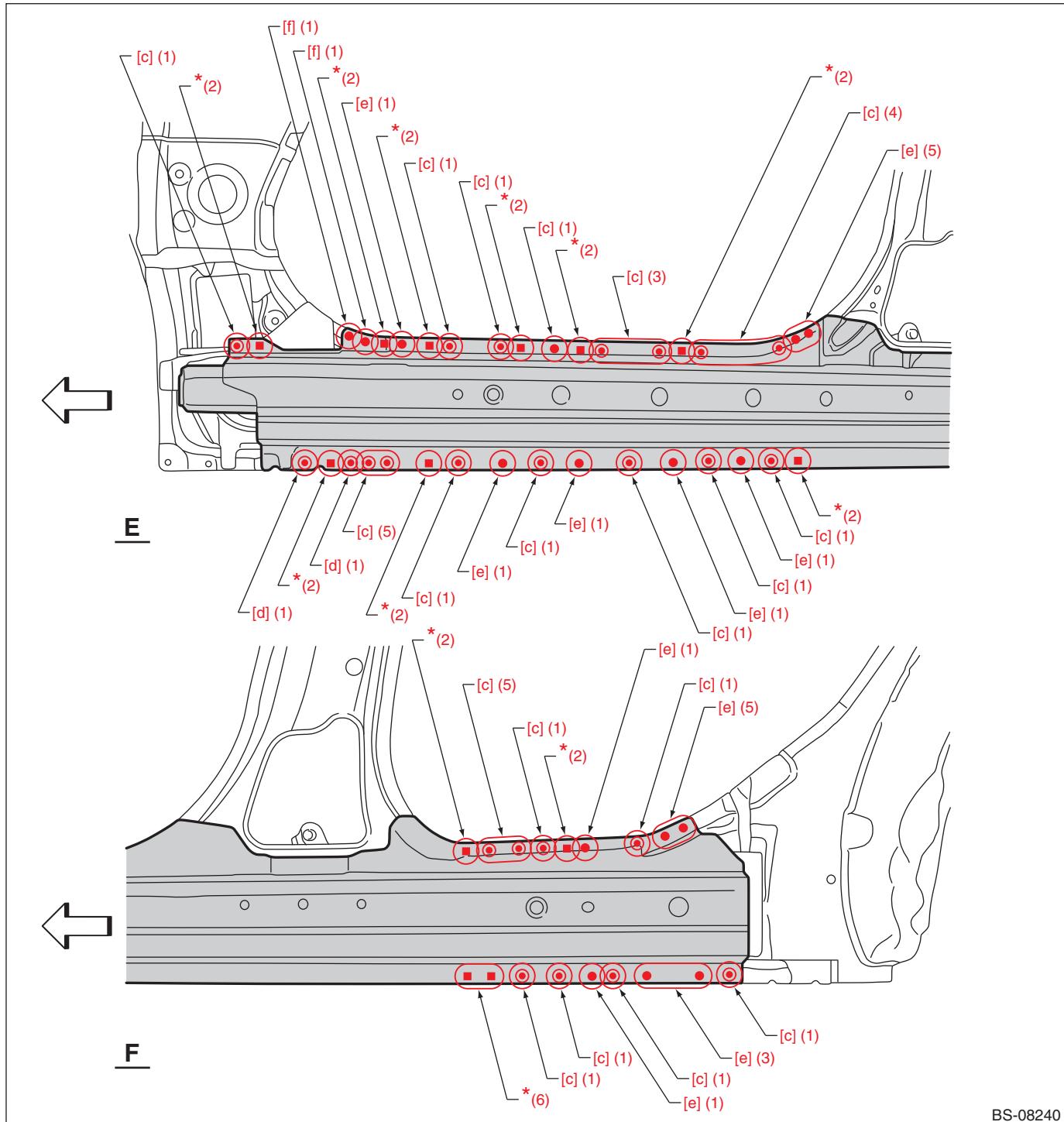
(2) 2 points

(3) 10 points

[c] Spot welding conditions	Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc
[d] Spot welding conditions	Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc

Panel Replacement

• Views



BS-08240

(1) 1 point

(2) 1 point (service)

(3) 3 points

(4) 6 points

(5) 2 points

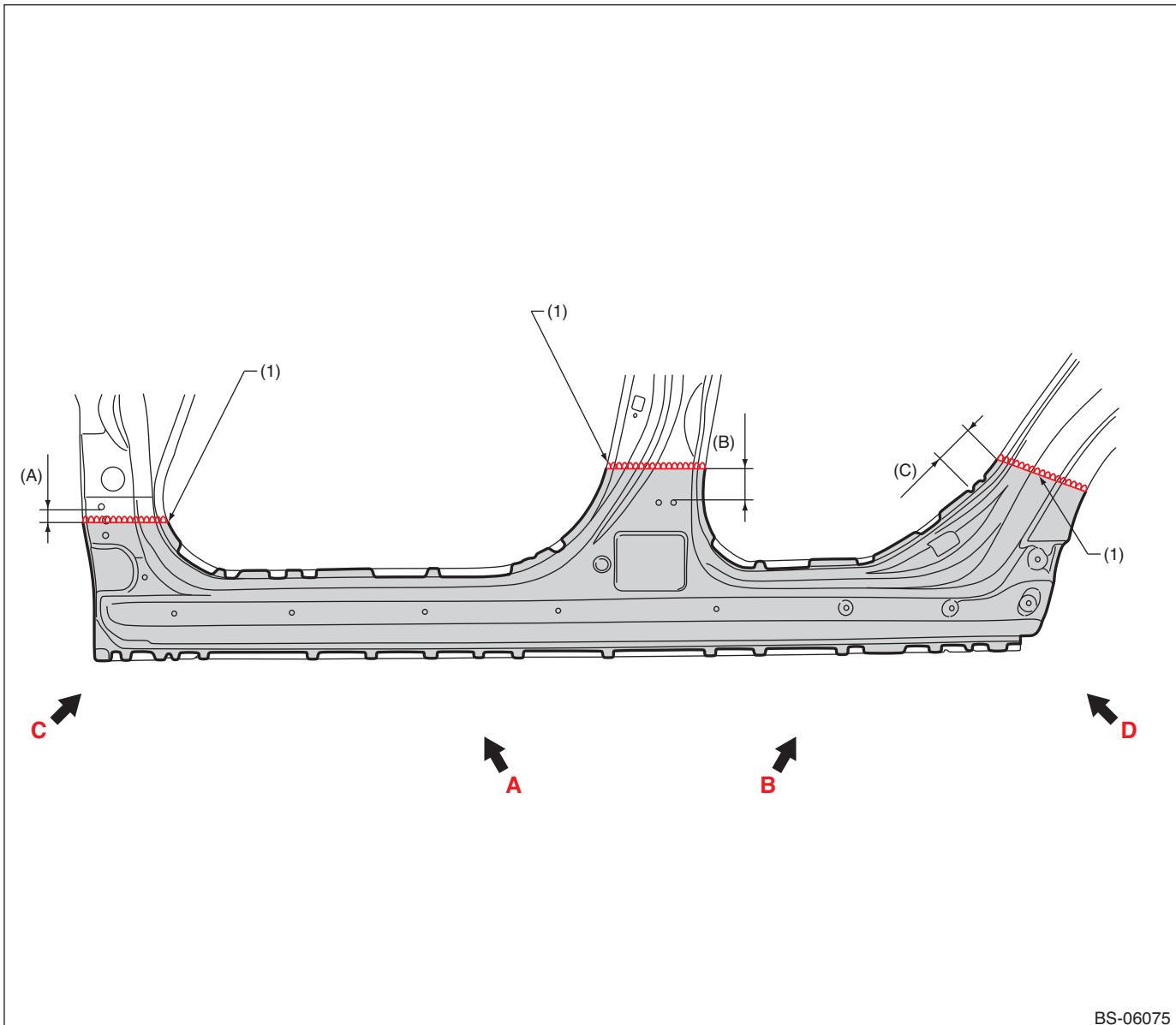
(6) 2 points (service)

[c] Spot welding conditions	Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc
[d] Spot welding conditions	Compression: 3.5 kN, Current: 7.0 kA, Welding time: 25 cyc
[e] Spot welding conditions	Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc
[f] Spot welding conditions	Compression: 4.4 kN, Current: 8.0 kA, Welding time: 20 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Overall view



BS-06075

(A) 30 mm (1.18 in)

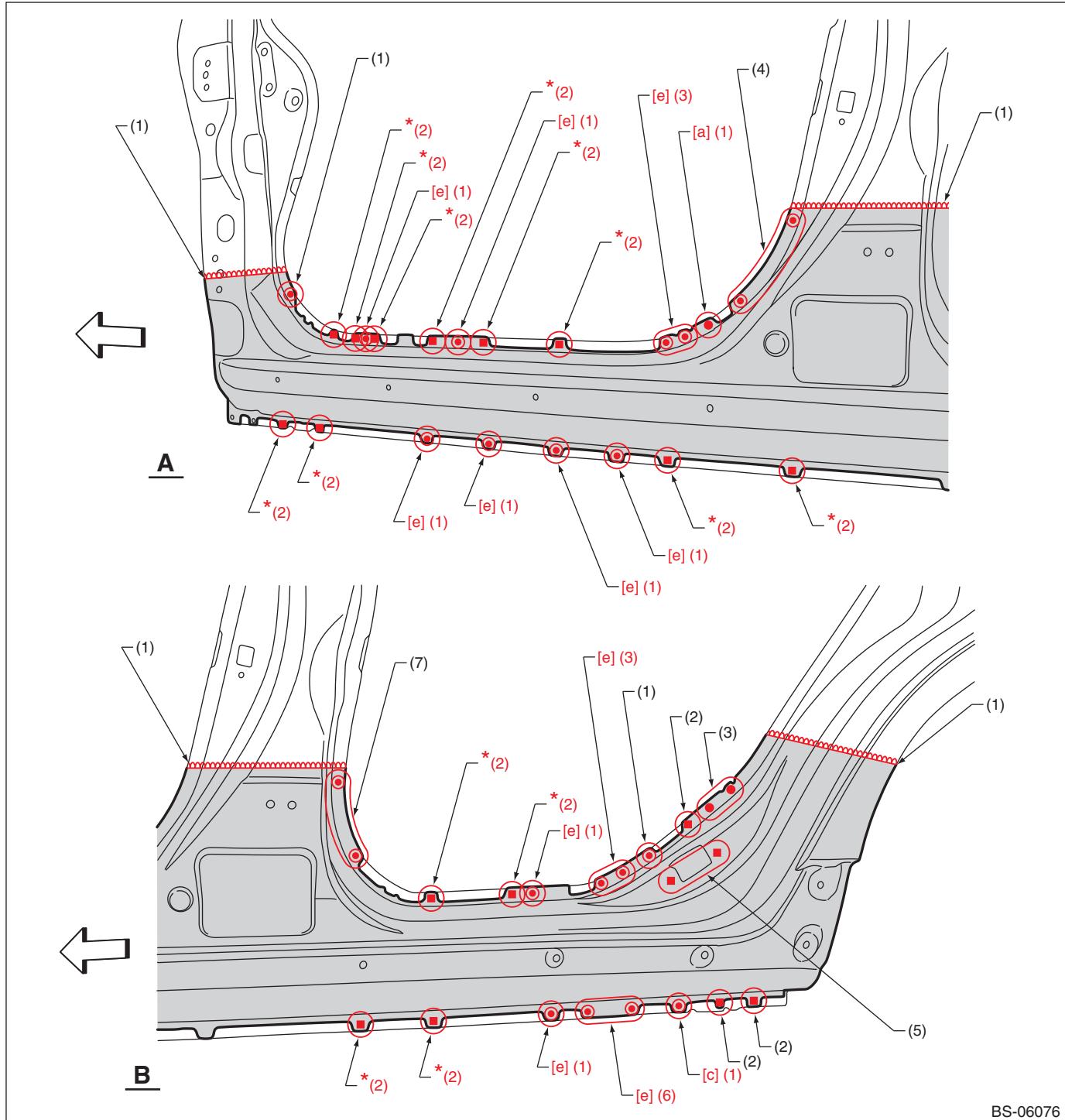
(B) 35 mm (1.38 in)

(C) 50 mm (1.97 in)

(1) 1 point

Panel Replacement

• Views 1



BS-06076

(1) 1 point

(2) 1 point (service)

(3) 2 points

(4) 6 points

(5) 2 points (service)

(6) 3 points

(7) 4 points

[a] Spot welding conditions

Compression: 3.0 kN, Current: 6.0 kA, Welding time: 15 cyc

[c] Spot welding conditions

Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc

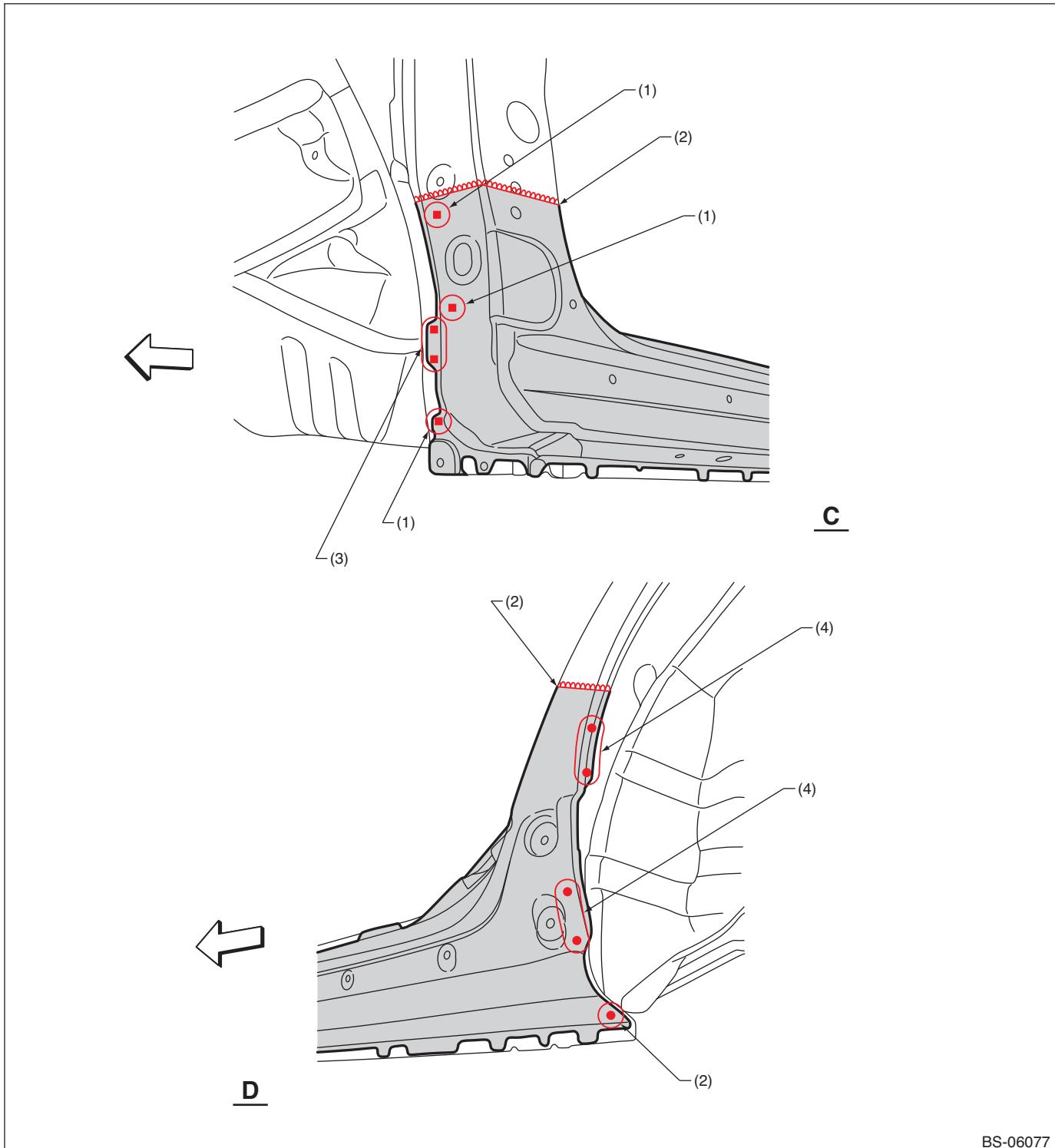
[e] Spot welding conditions

Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views 2



(1) 1 point (service)
(2) 1 point

(3) 2 points (service)

(4) 2 points

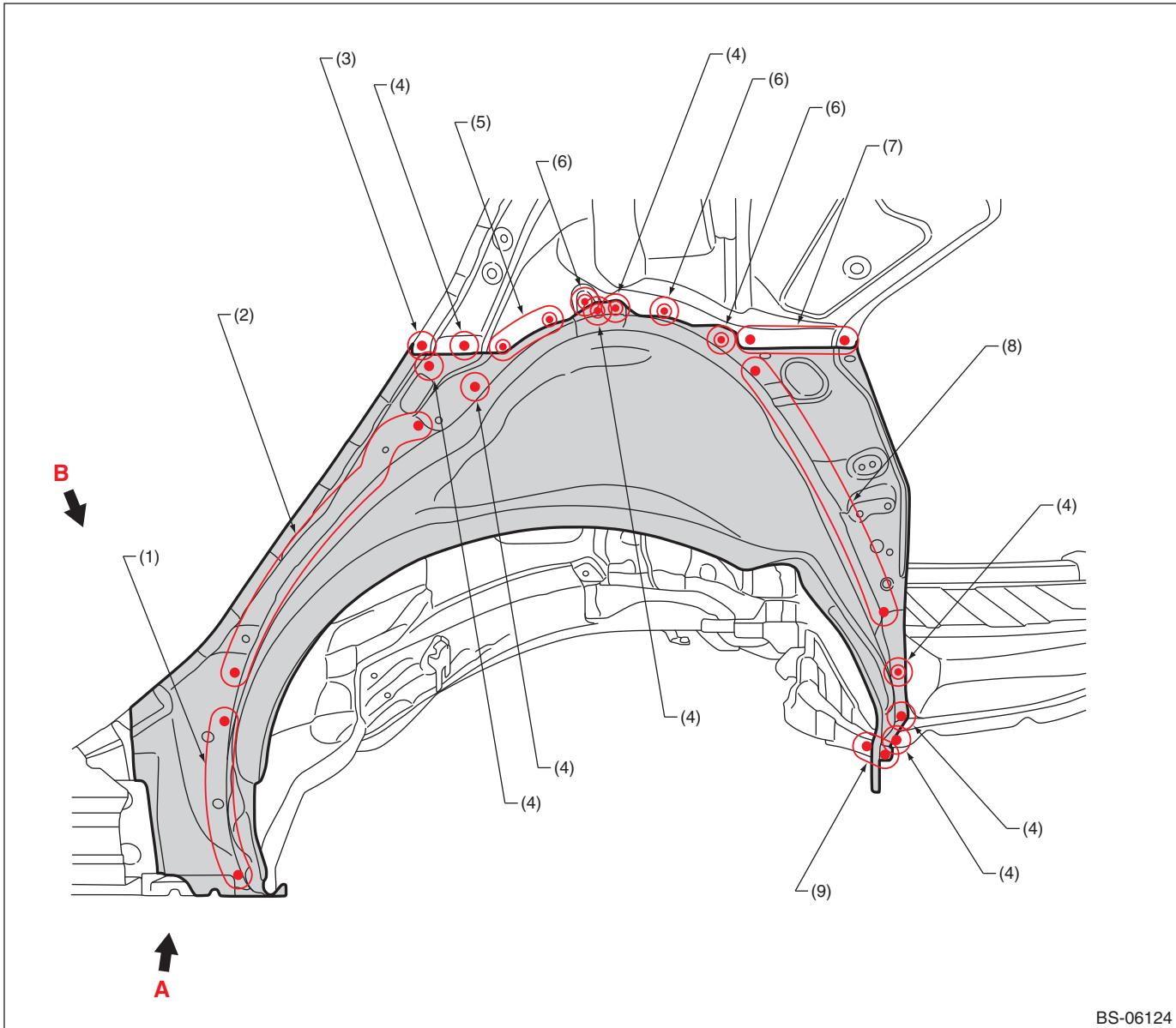
BS-06077

Panel Replacement

8-10. Rear Wheel Apron (partial replacement)

A: REMOVAL

- Overall view (LH) (Rear quarter outer removal condition)



(1) 4 points (inside · 1)

(2) 8 points (outside · 1)

(3) 1 point (inside · 1)

(4) 1 point (outside · 1)

(5) 2 points (outside · 2)

(6) 1 point (outside · 2)

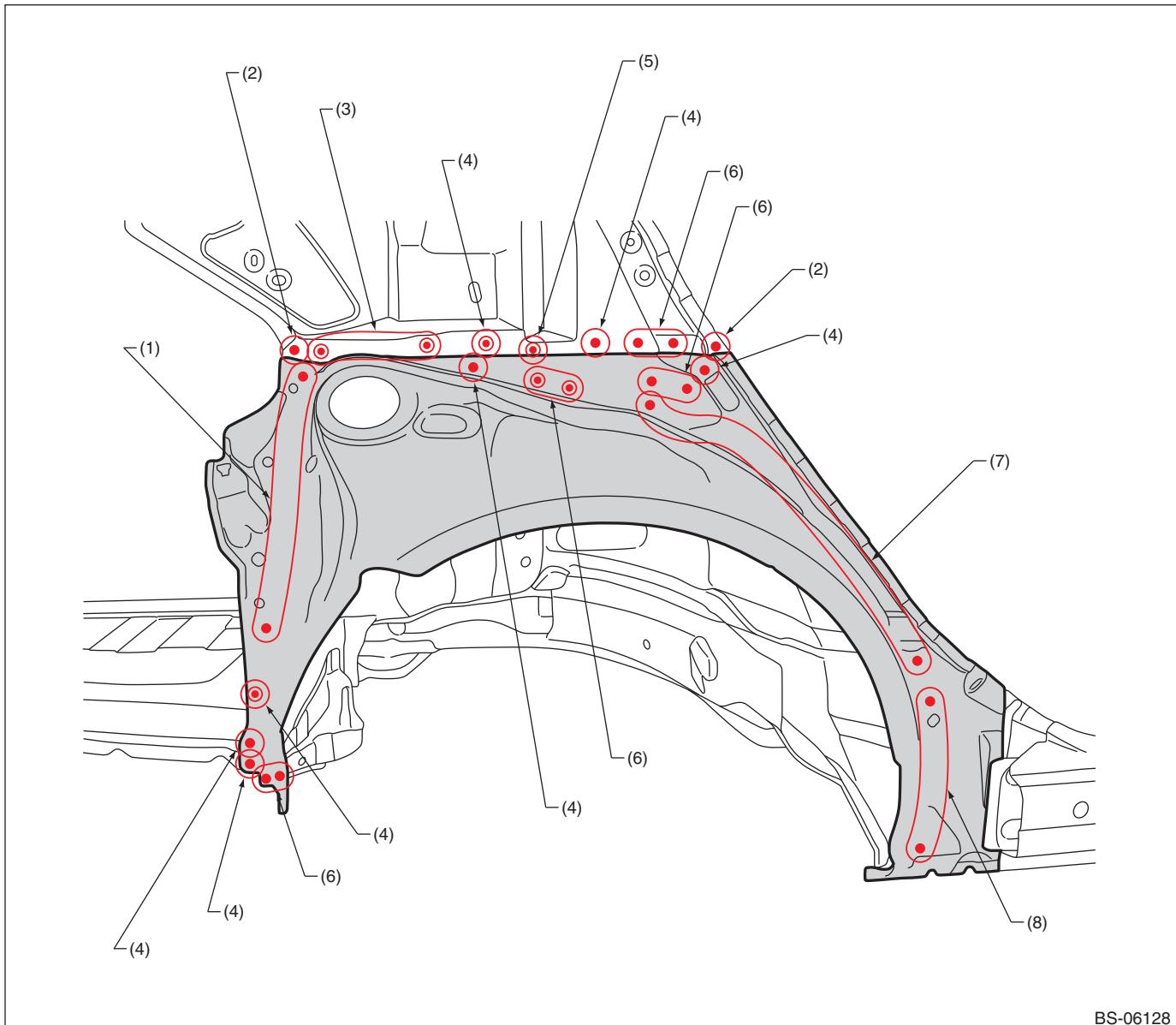
(7) 3 points (inside · 1)

(8) 7 points (outside · 1)

(9) 3 points (outside · 1)

Panel Replacement

- (RH)



(1) 6 points (outside · 1)

(2) 1 point (inside · 1)

(3) 3 points (outside · 2)

(4) 1 point (outside · 1)

(5) 1 point (outside · 2)

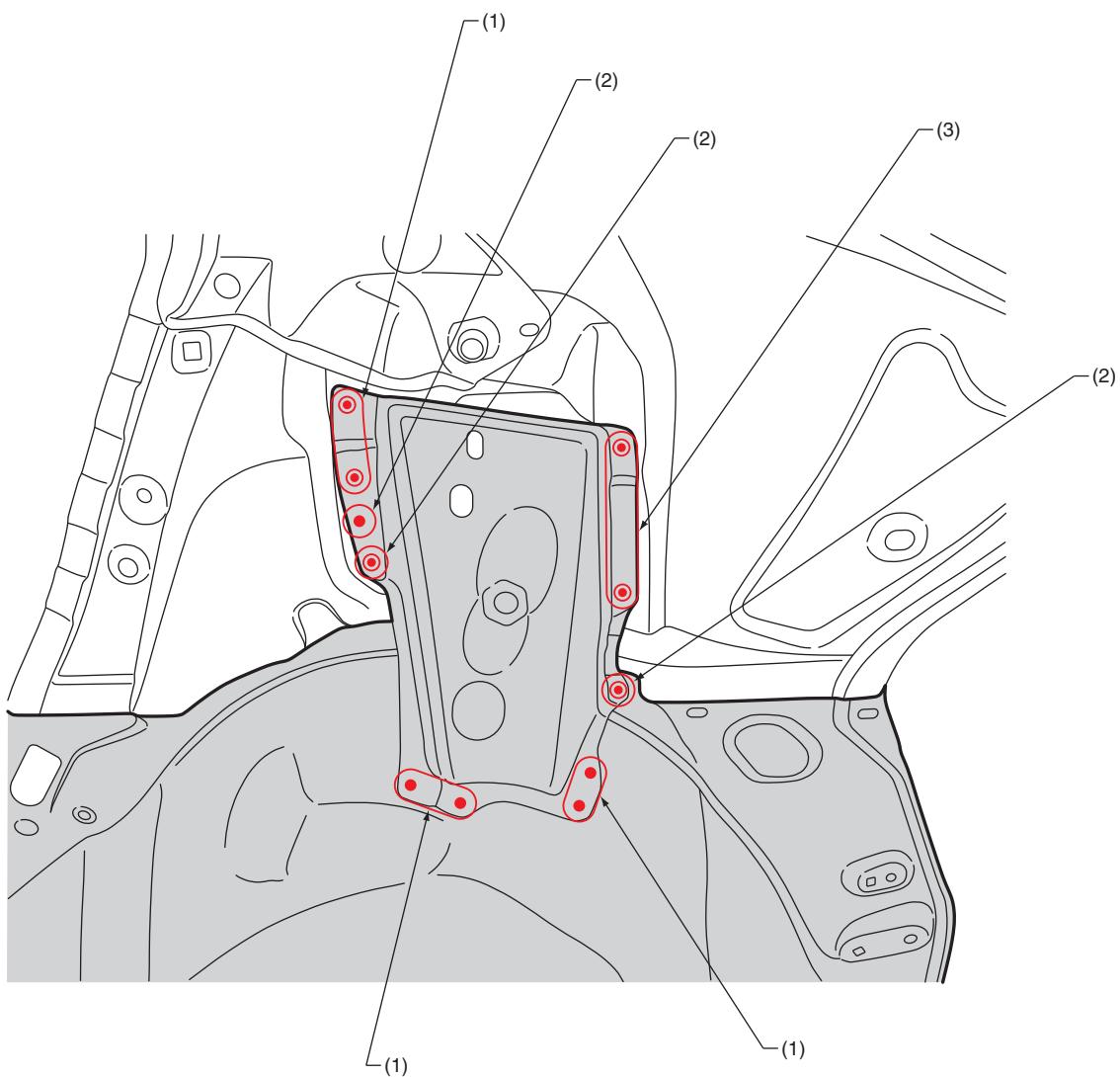
(6) 2 points (outside · 1)

(7) 10 points (outside · 1)

(8) 4 points (outside · 1)

Panel Replacement

- LH



BS-06125

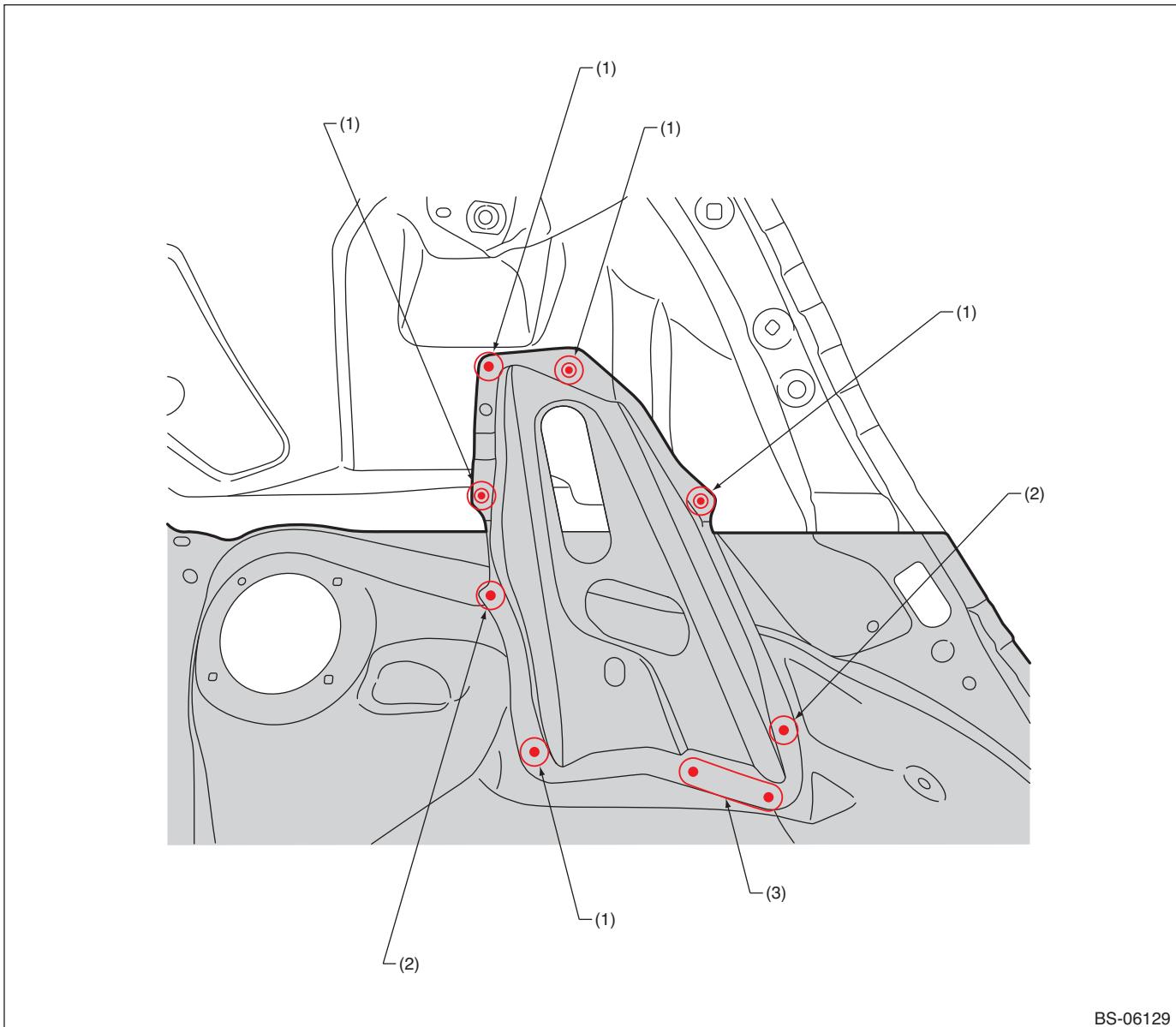
(1) 2 points (outside · 1)

(2) 1 point (outside · 1)

(3) 3 points (outside · 1)

Panel Replacement

- RH

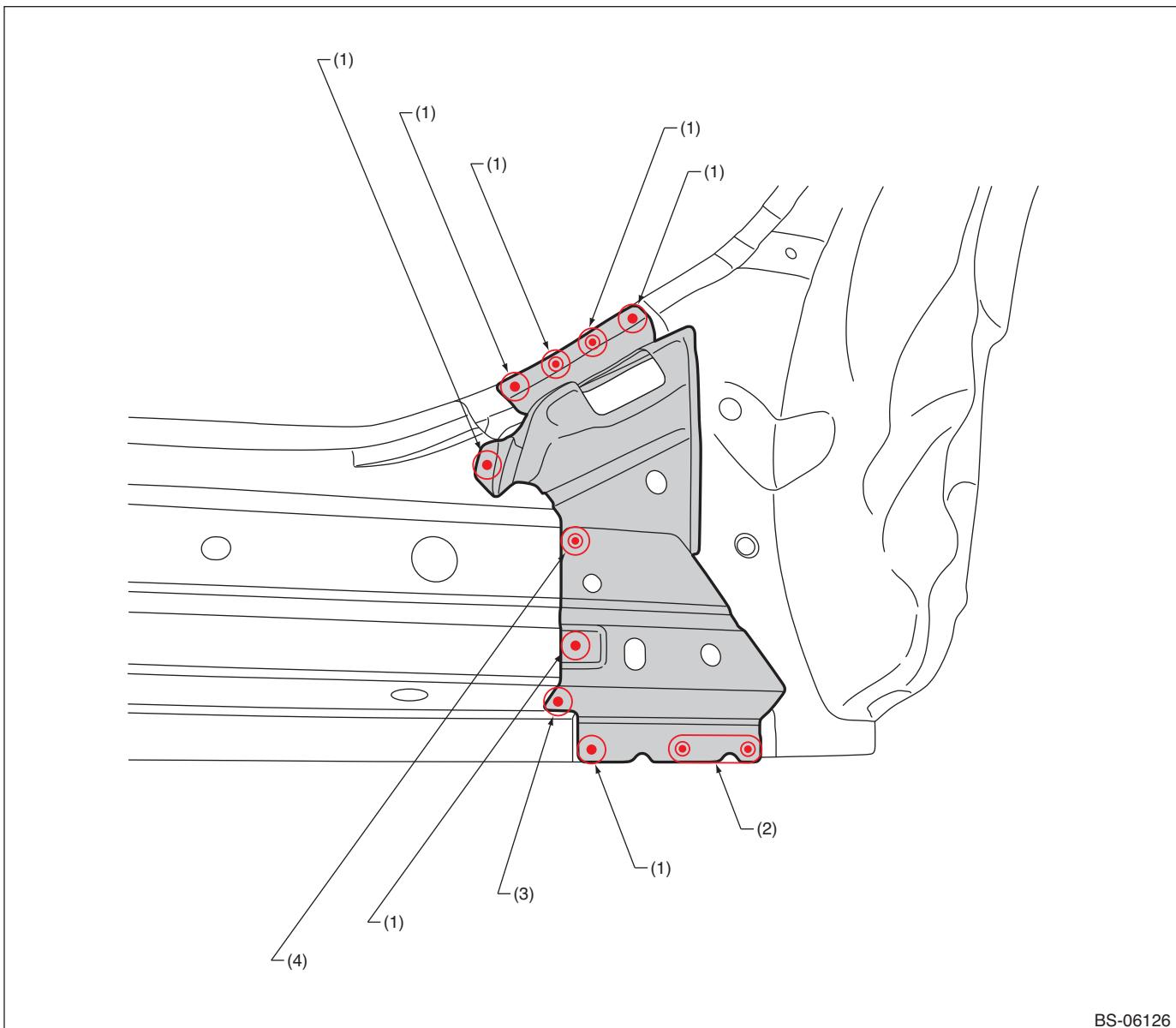


(1) 1 point (outside · 1)

(2) 1 point (top · 1)

(3) 2 points (outside · 1)

Panel Replacement



BS-06126

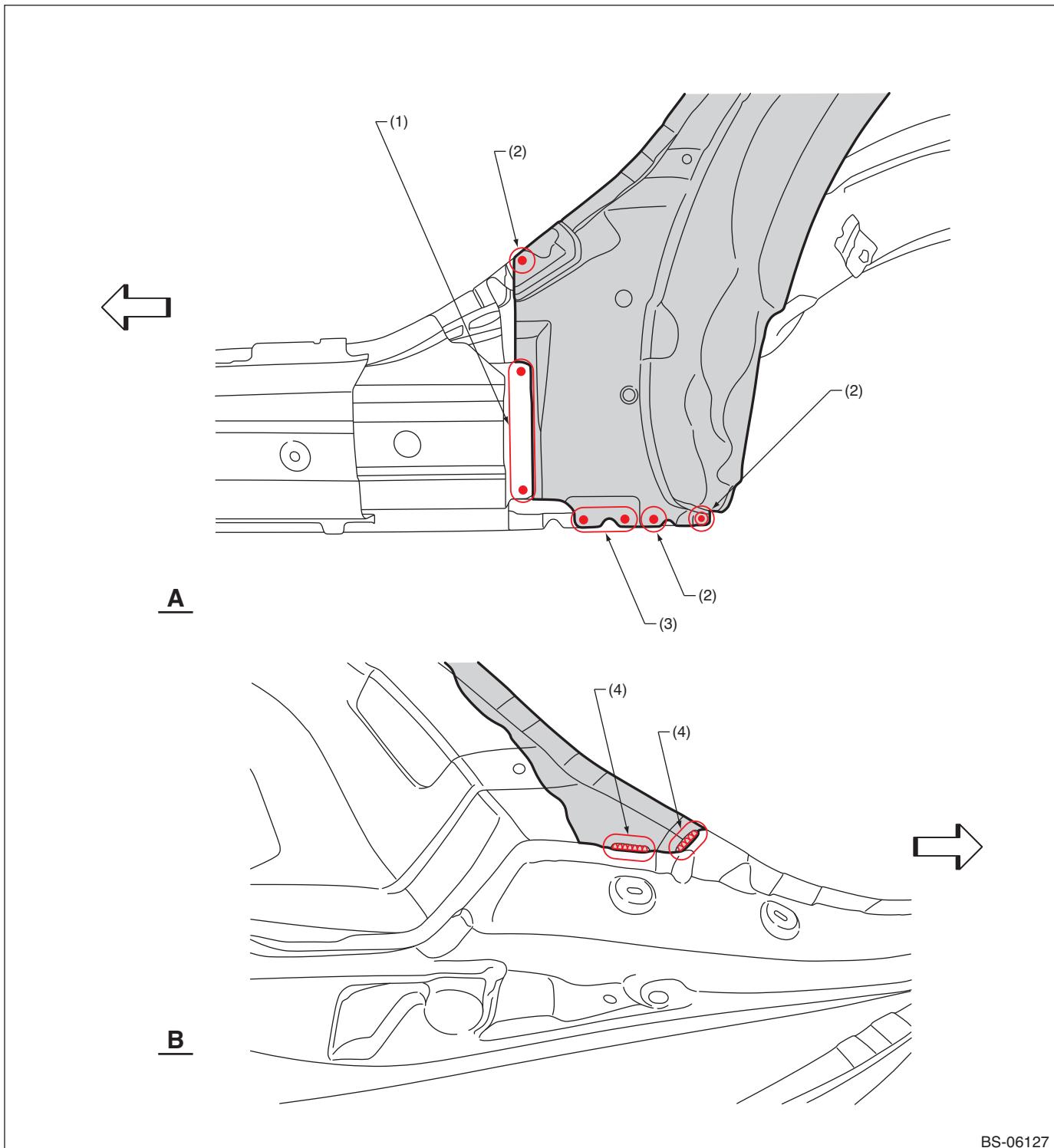
(1) 1 point (outside · 1)
(2) 2 points (outside · 1)

(3) 1 point (bottom · 1)

(4) 1 point (outside · 2)

Panel Replacement

• Views



BS-06127

(1) 3 points (outside · 1)
(2) 1 point (outside · 1)

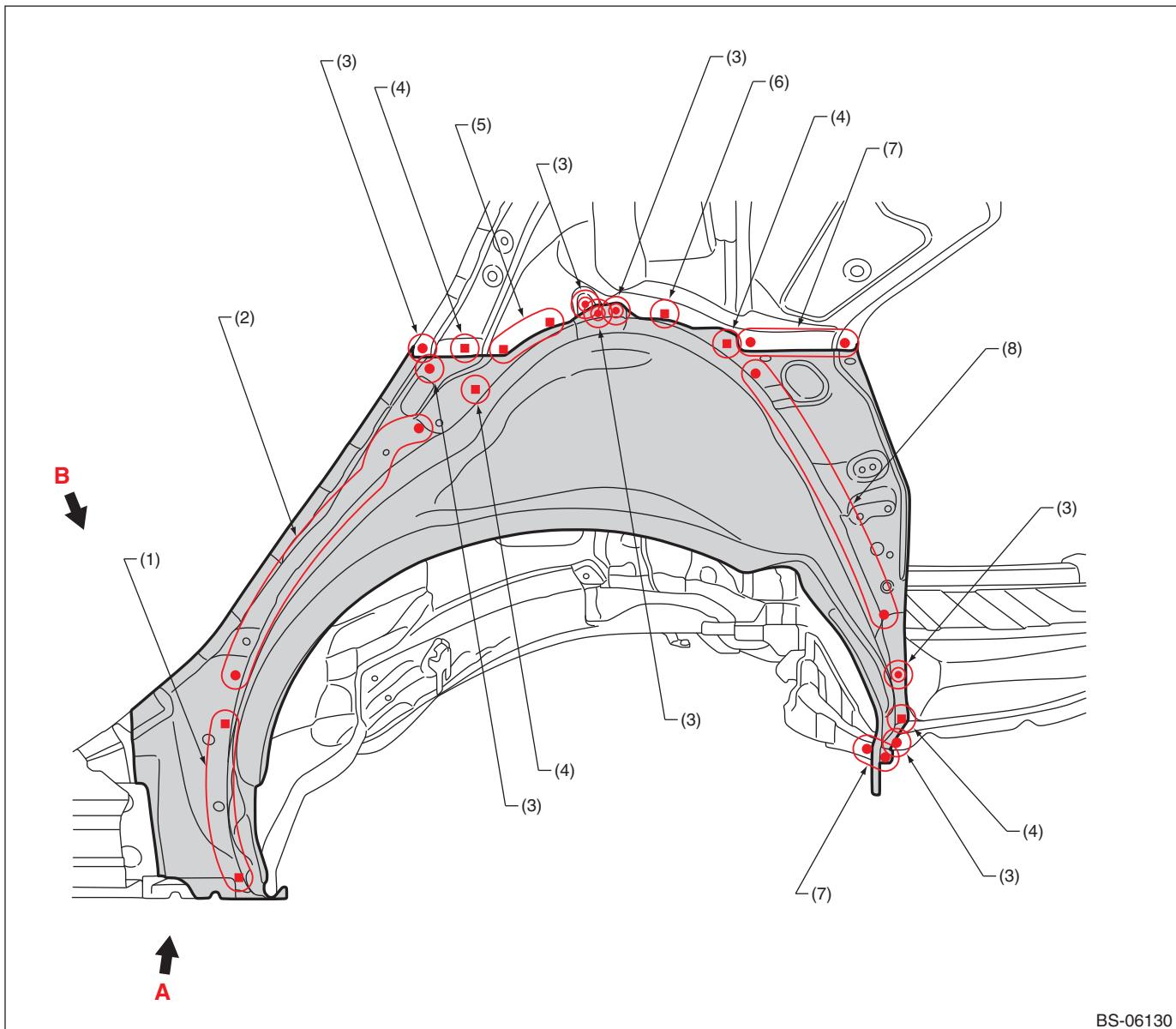
(3) 2 points (outside · 1)

(4) 1 point (inside · 1, belt sander)

Panel Replacement

B: INSTALLATION

• Overall view (LH)



(1) 4 points (service)

(2) 8 points

(3) 1 point

(4) 1 point (service)

(5) 2 points (service · matching)

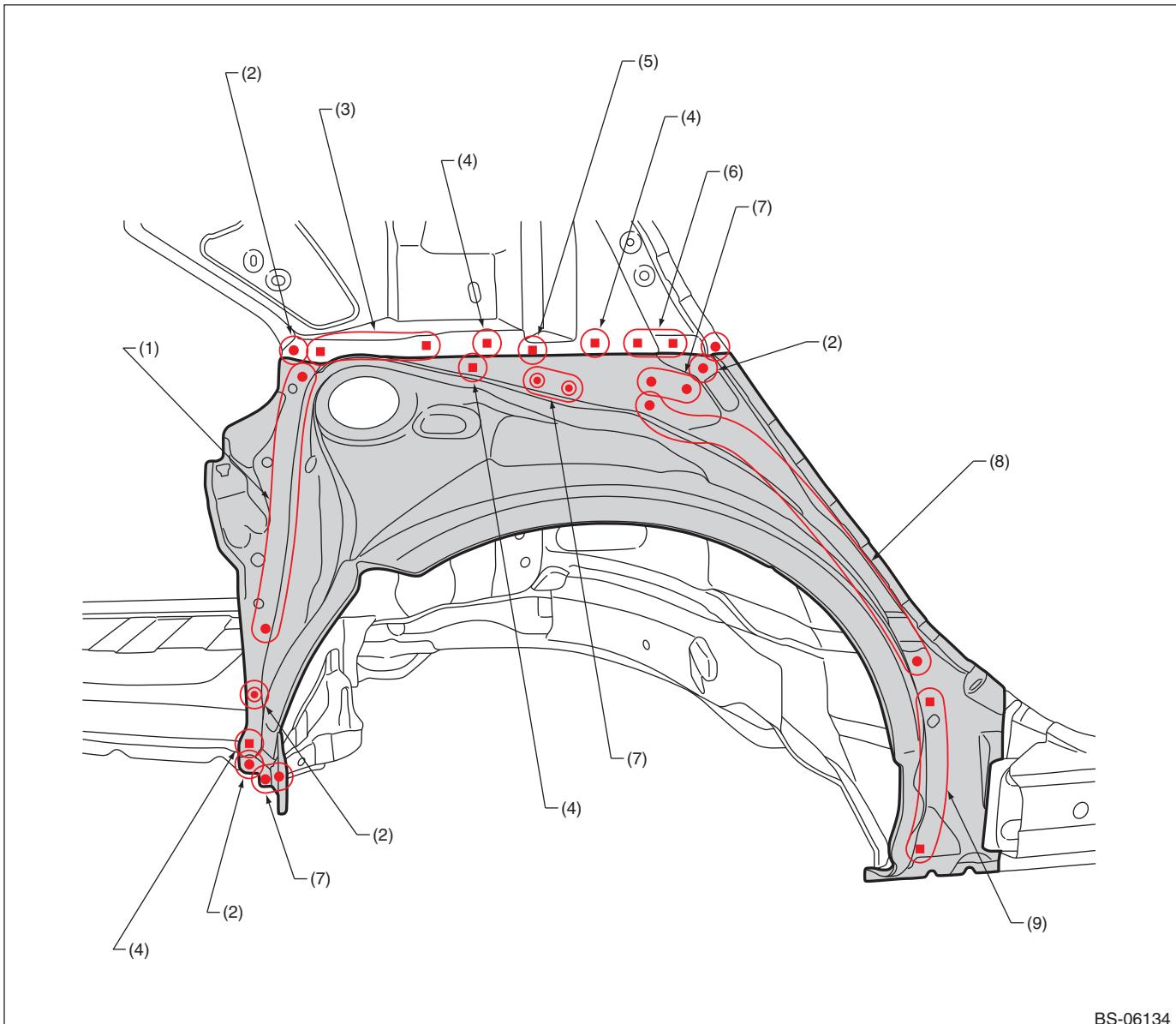
(6) 1 point (service · matching)

(7) 3 points

(8) 7 points

Panel Replacement

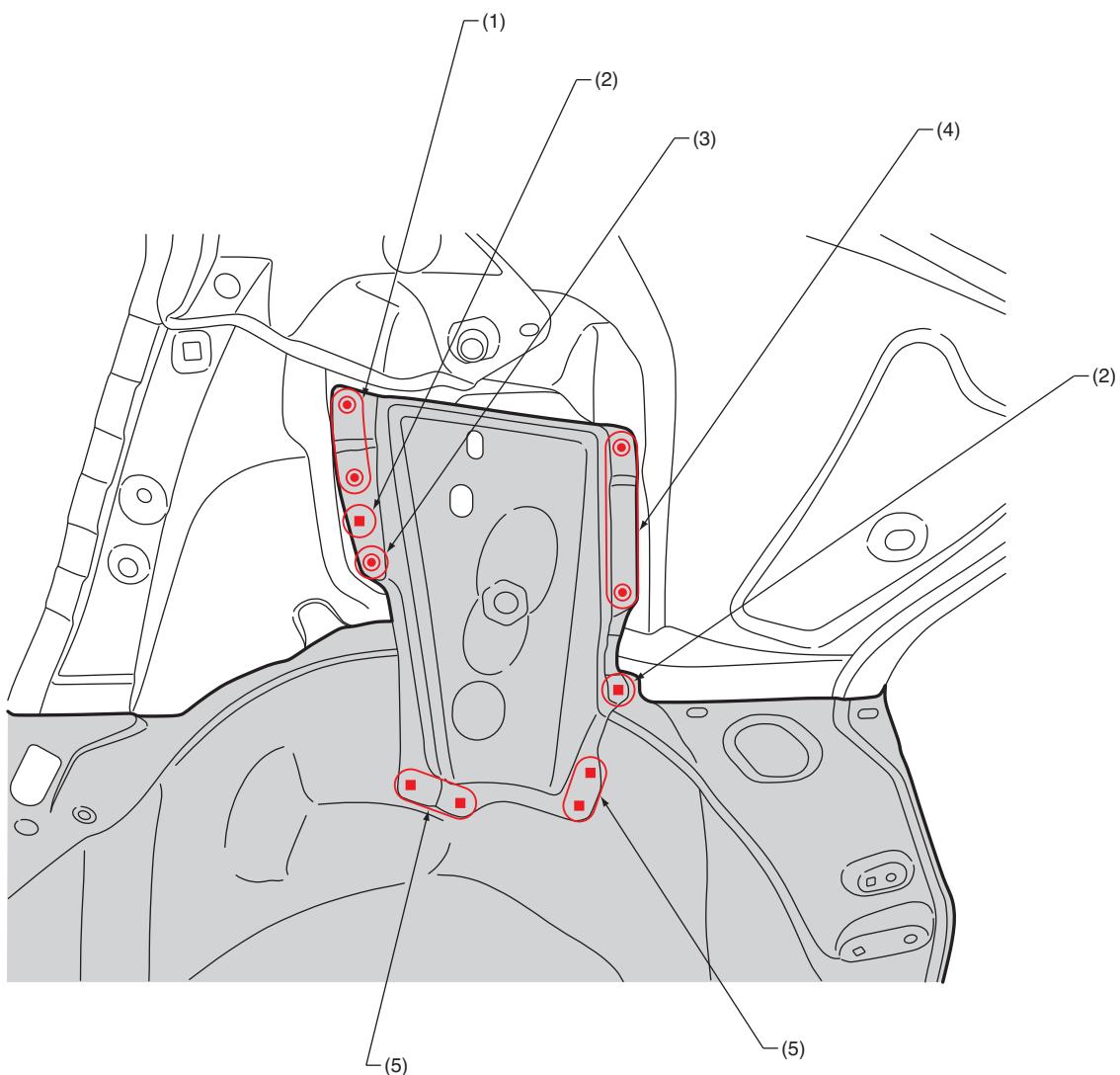
- (RH)



(1) 6 points	(4) 1 point (service)	(7) 2 points
(2) 1 point	(5) 1 point (service · matching)	(8) 10 points
(3) 3 points (service · matching)	(6) 2 points (service)	(9) 4 points (service)

Panel Replacement

- LH



BS-06131

(1) 2 points

(2) 1 point (service)

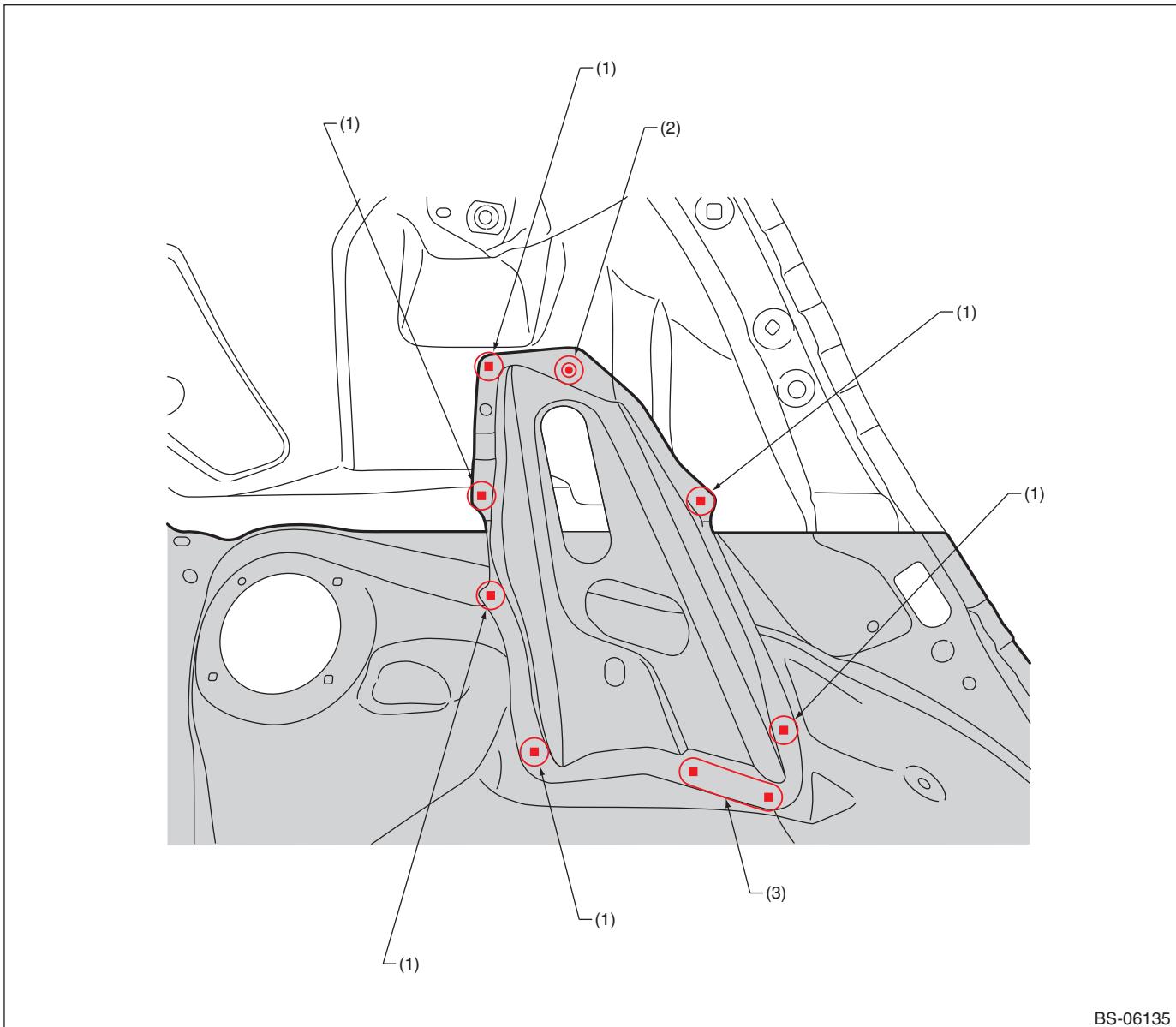
(3) 1 point

(4) 3 points

(5) 2 points (service)

Panel Replacement

• RH

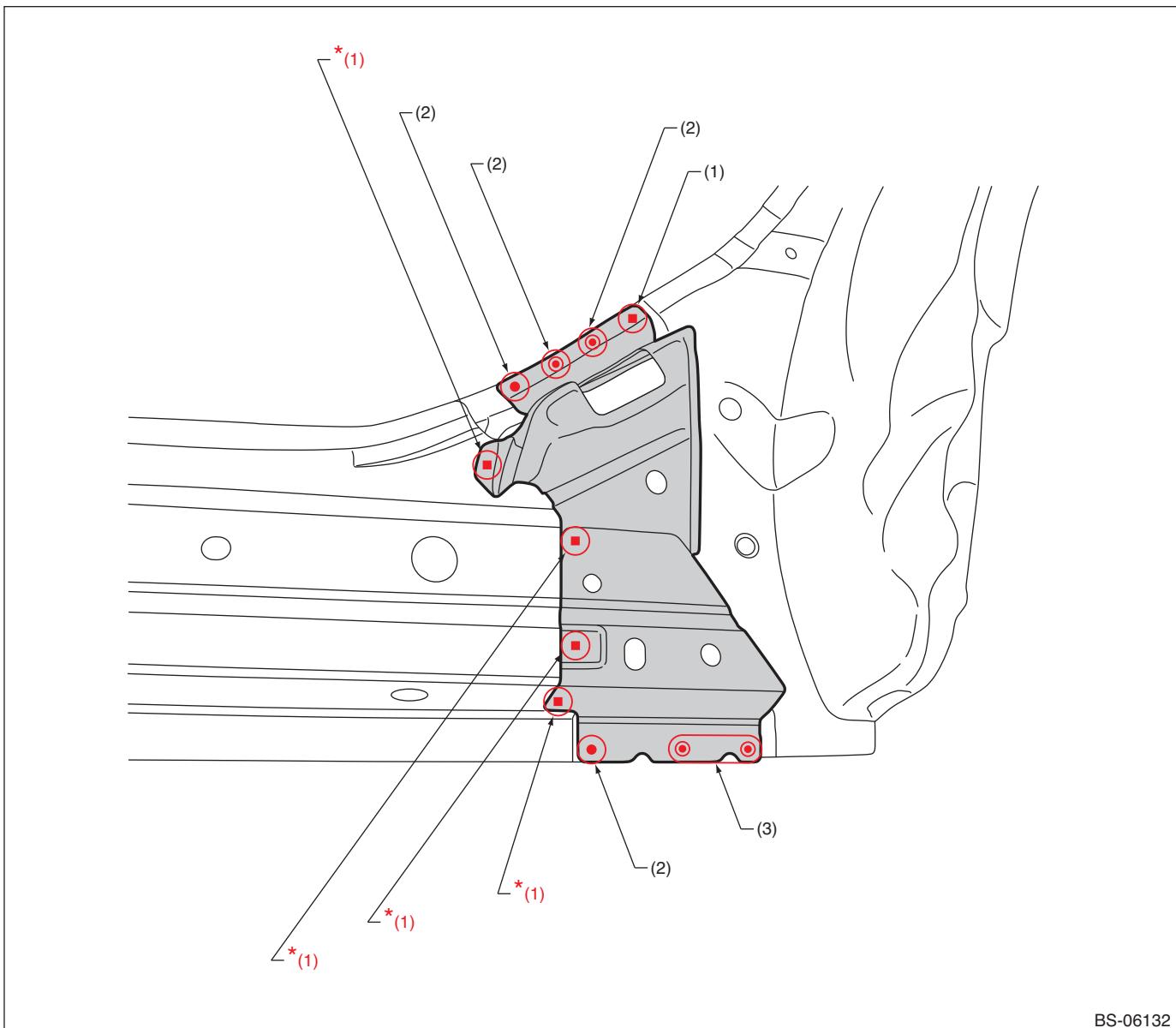


(1) 1 point (service)

(2) 1 point

(3) 2 points (service)

Panel Replacement



BS-06132

(1) 1 point (service)

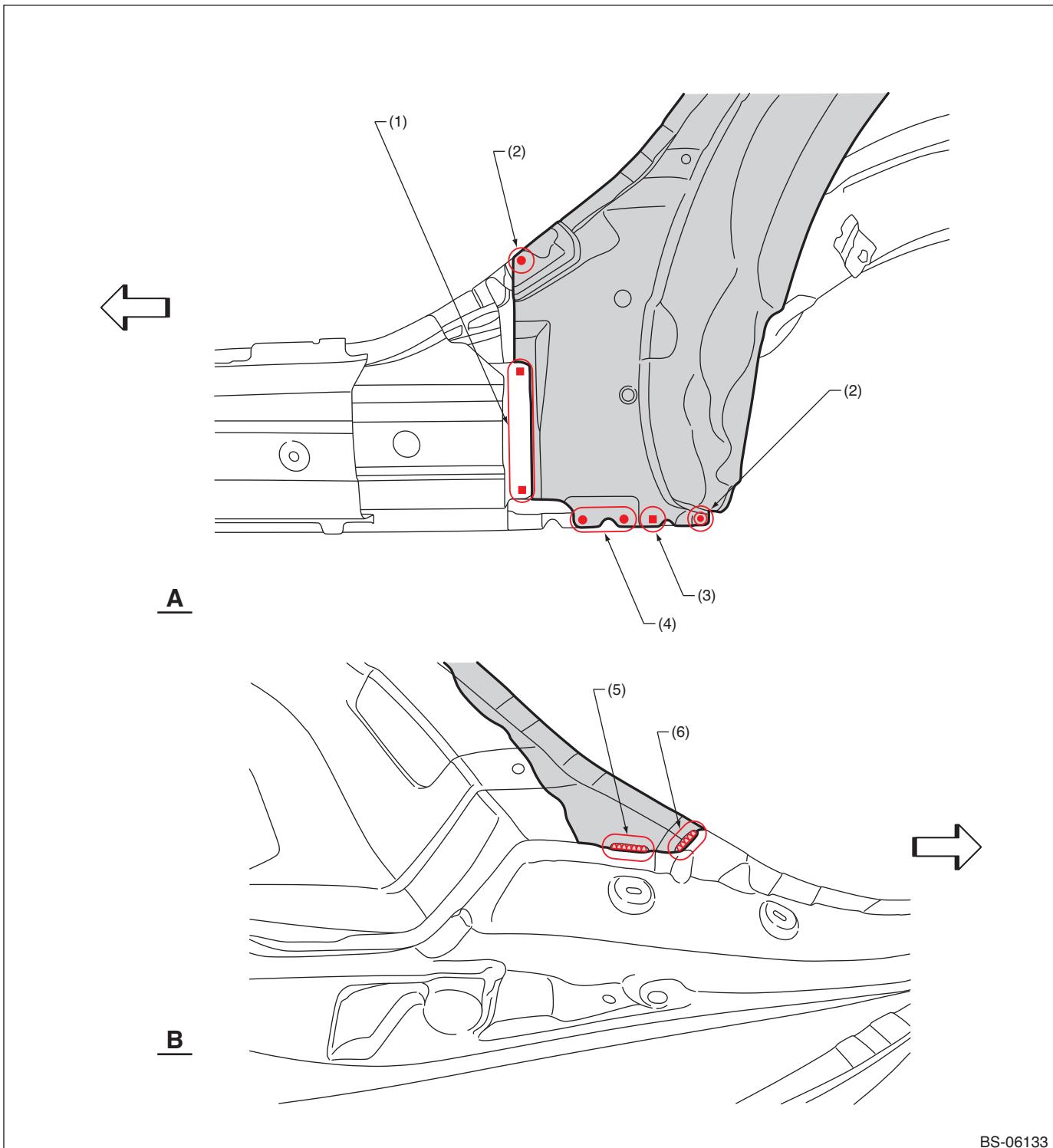
(2) 1 point

(3) 2 points

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

• Views



(1) 3 points
(2) 1 point

(3) 1 point (service)
(4) 2 points

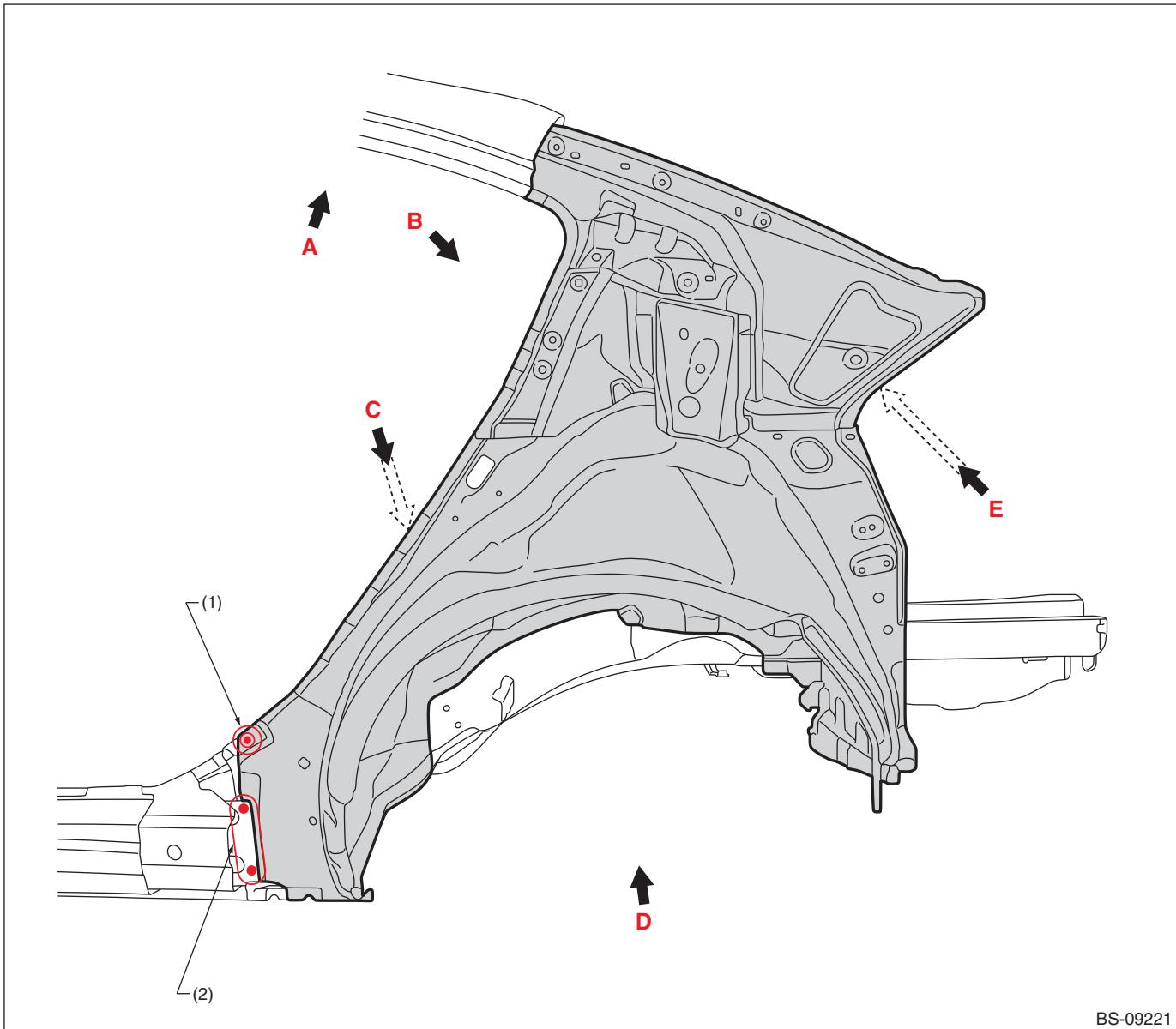
(5) 1 point [30 mm (1.18 in)]
(6) 1 point [25 mm (0.98 in)]

BS-06133

8-11. Rear Quarter Inner (total replacement)

A: REMOVAL

- Overall view (Rear quarter outer, rear skirt, rear side frame upper rear and floor side removal condition)

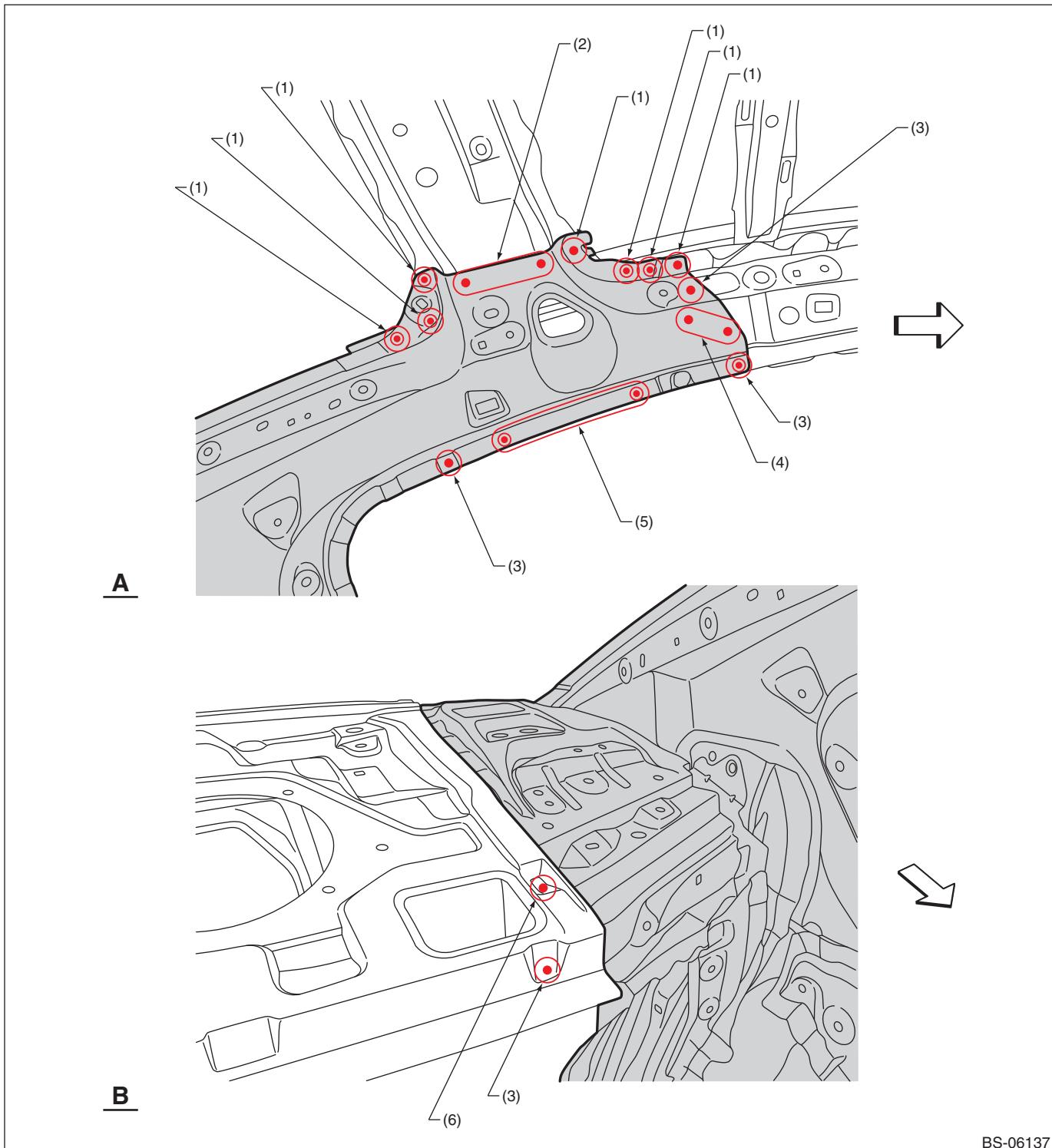


(1) 1 point (outside · 1)

(2) 3 points (outside · 1)

Panel Replacement

• Views 1



(1) 1 point (bottom · 1)
(2) 3 points (bottom · 1)

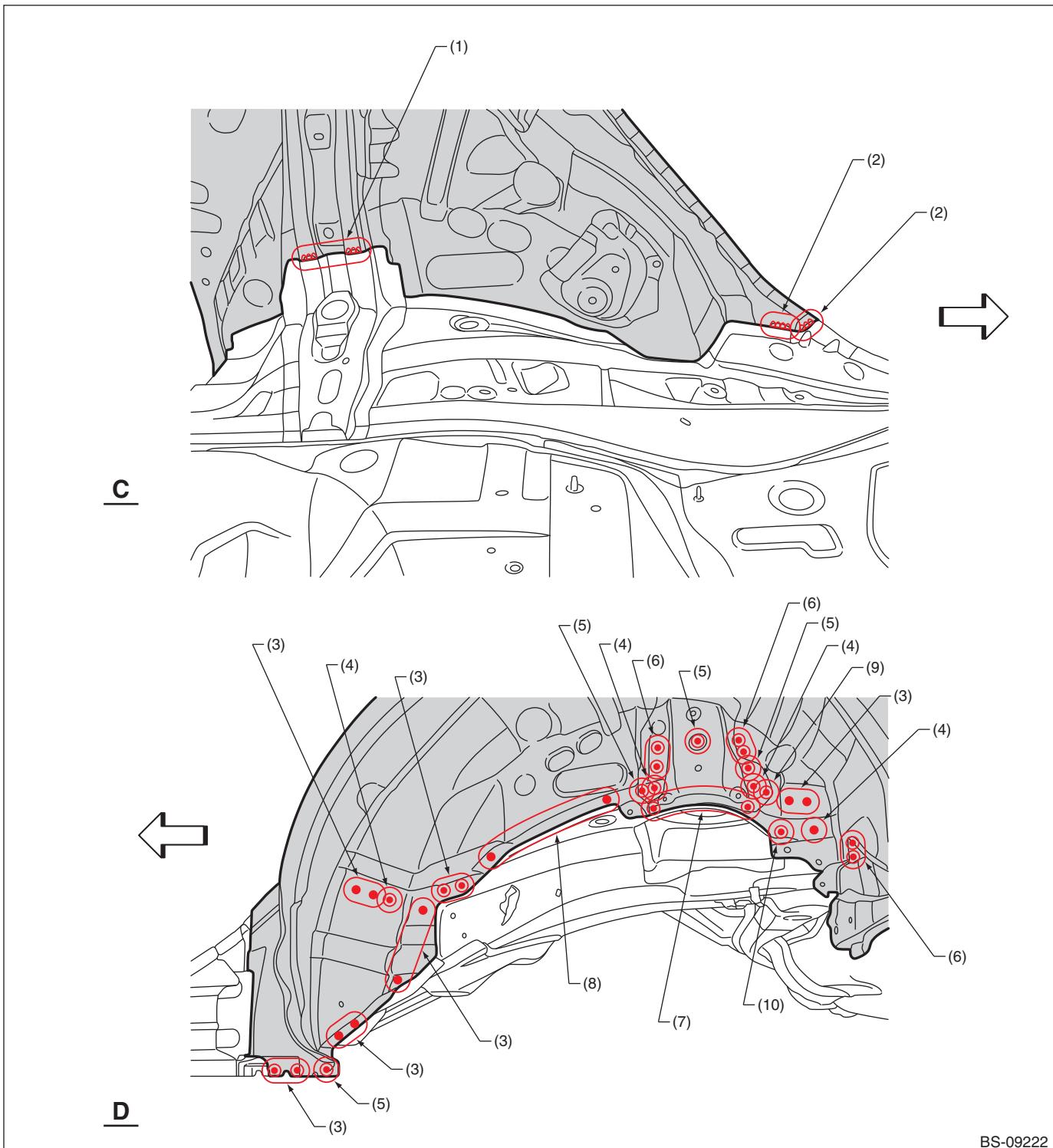
(3) 1 point (inside · 1)
(4) 2 points (inside · 1)

(5) 3 points (inside · 1)
(6) 1 point (top · 1)

BS-06137

Panel Replacement

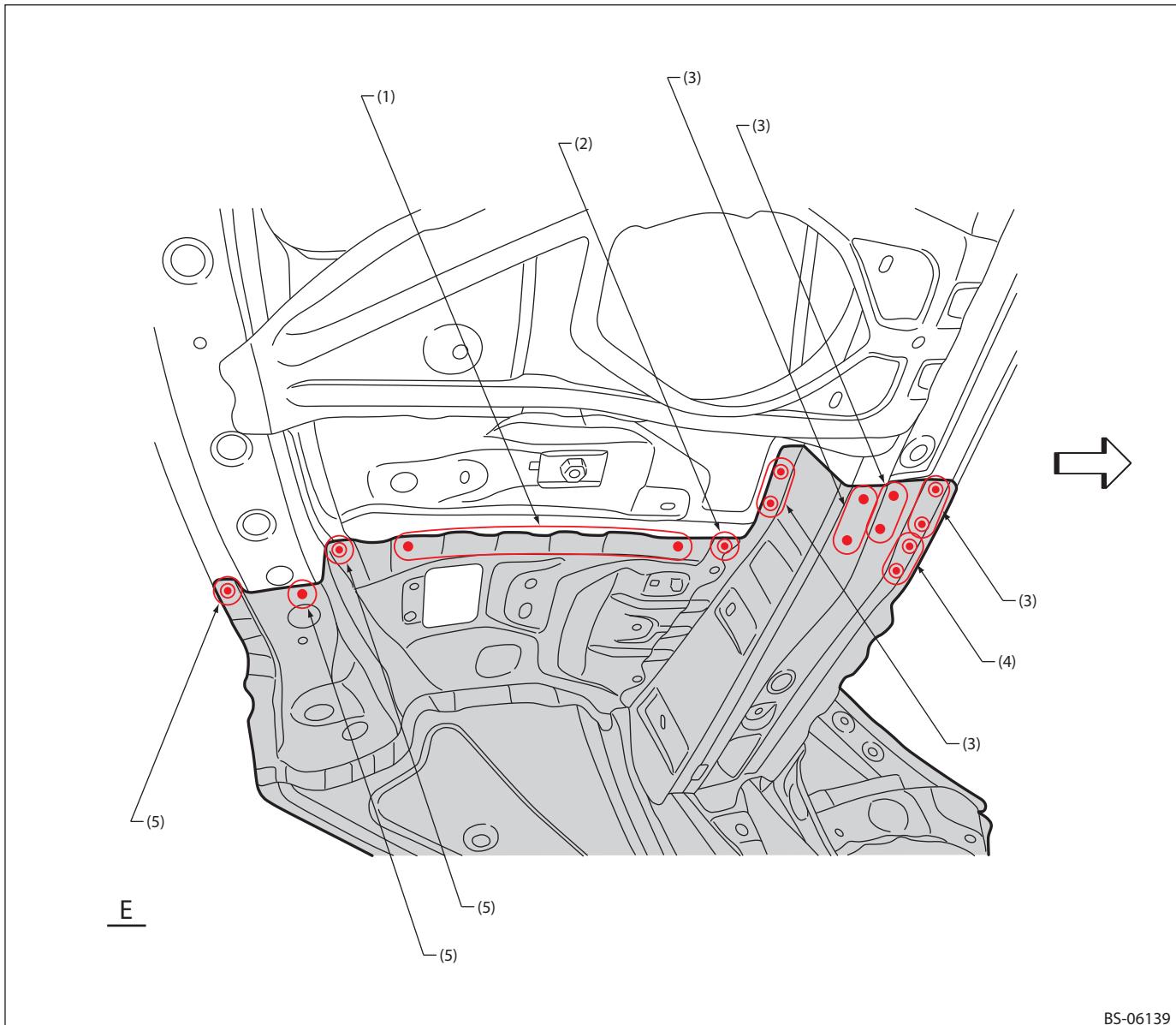
• Views 2



(1) 2 points (inside · 1, belt sander)	(5) 1 point (outside · 2)	(9) 1 point (outside · 2) (only LH)
(2) 1 point (inside · 1, belt sander)	(6) 2 points (outside · 2)	(10) 1 point (outside · 1) (only LH)
(3) 2 points (outside · 1)	(7) 5 points (outside · 2)	
(4) 1 point (outside · 1)	(8) 5 points (outside · 1)	

Panel Replacement

• Views 3



(1) 6 points (bottom · 1)
(2) 1 point (bottom · 2)

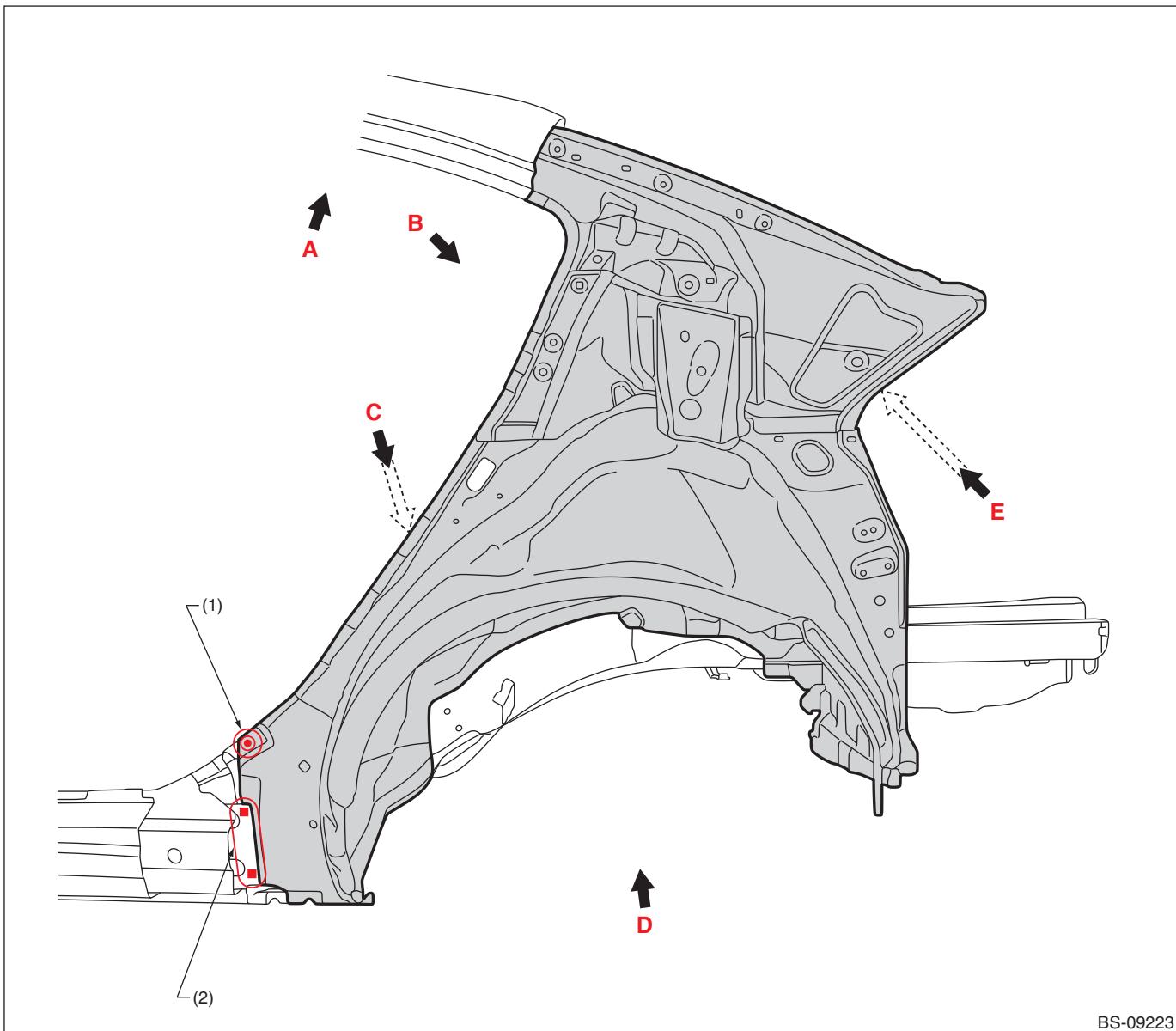
(3) 2 points (bottom · 1)
(4) 2 points (bottom · 2)

(5) 1 point (bottom · 1)

Panel Replacement

B: INSTALLATION

- Overall view



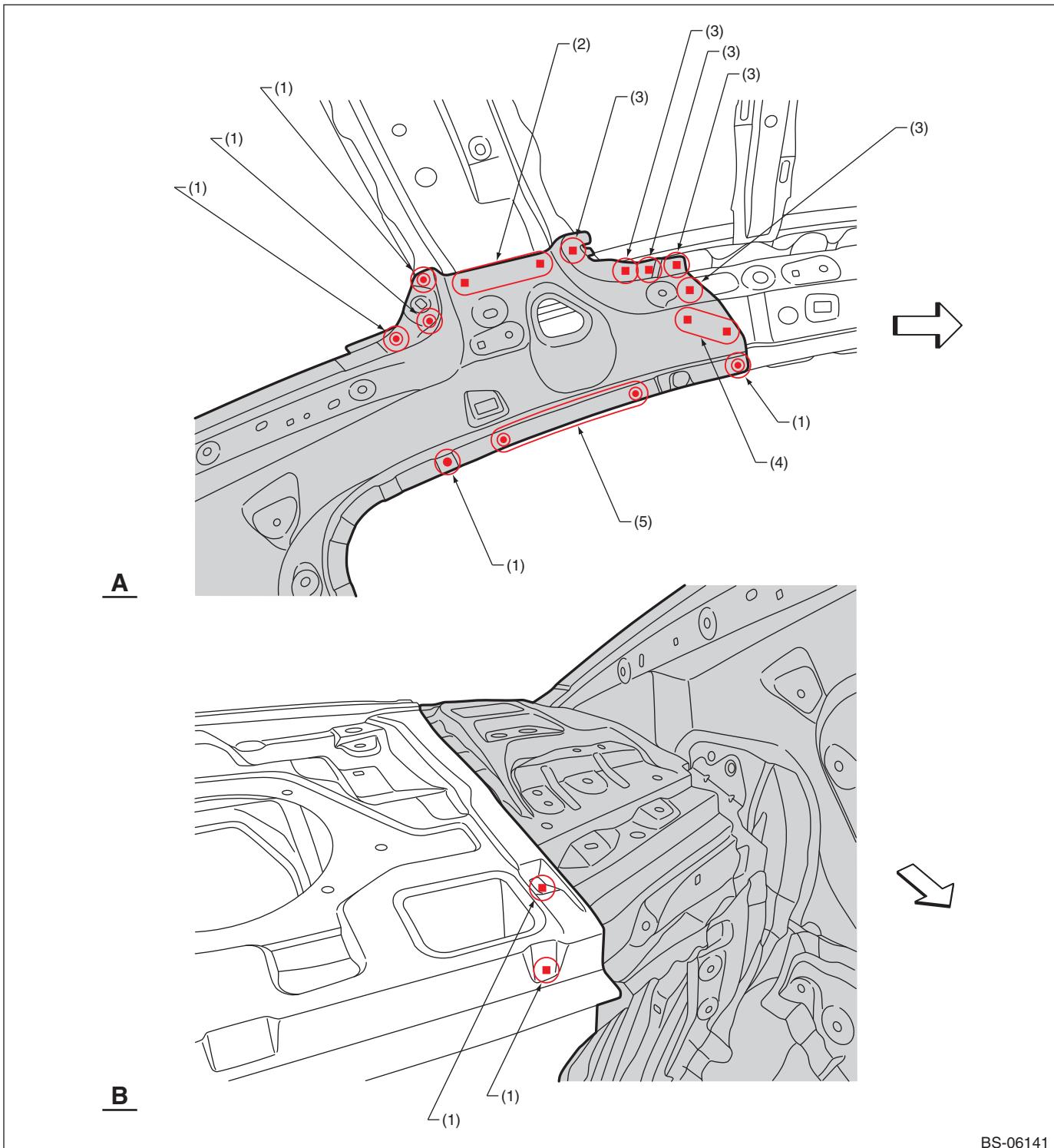
(1) 1 point

(2) 3 points

BS-09223

Panel Replacement

• Views 1



(1) 1 point

(2) 3 points (service)

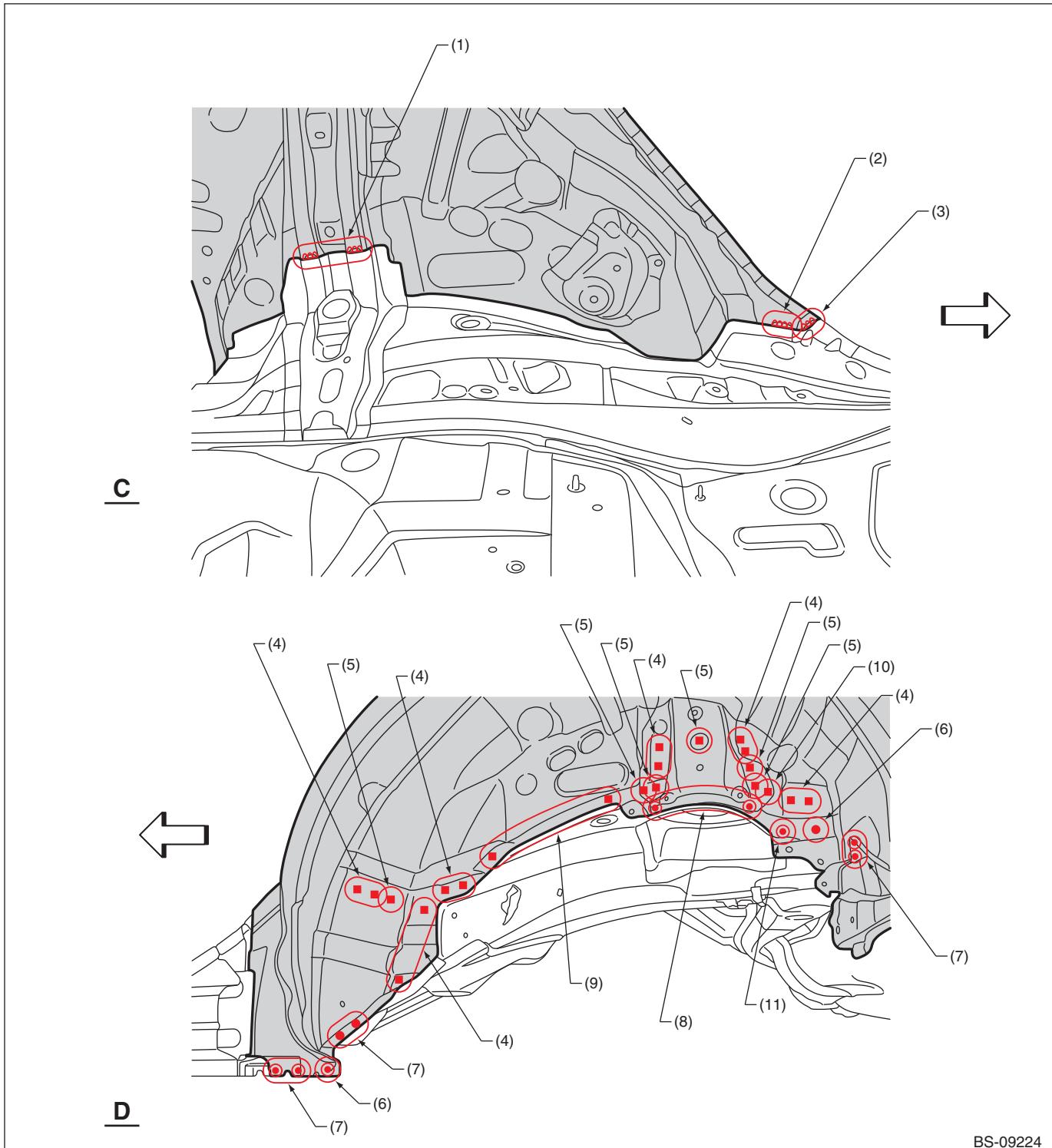
(3) 1 point (service)

(4) 2 points (service)

(5) 3 points

Panel Replacement

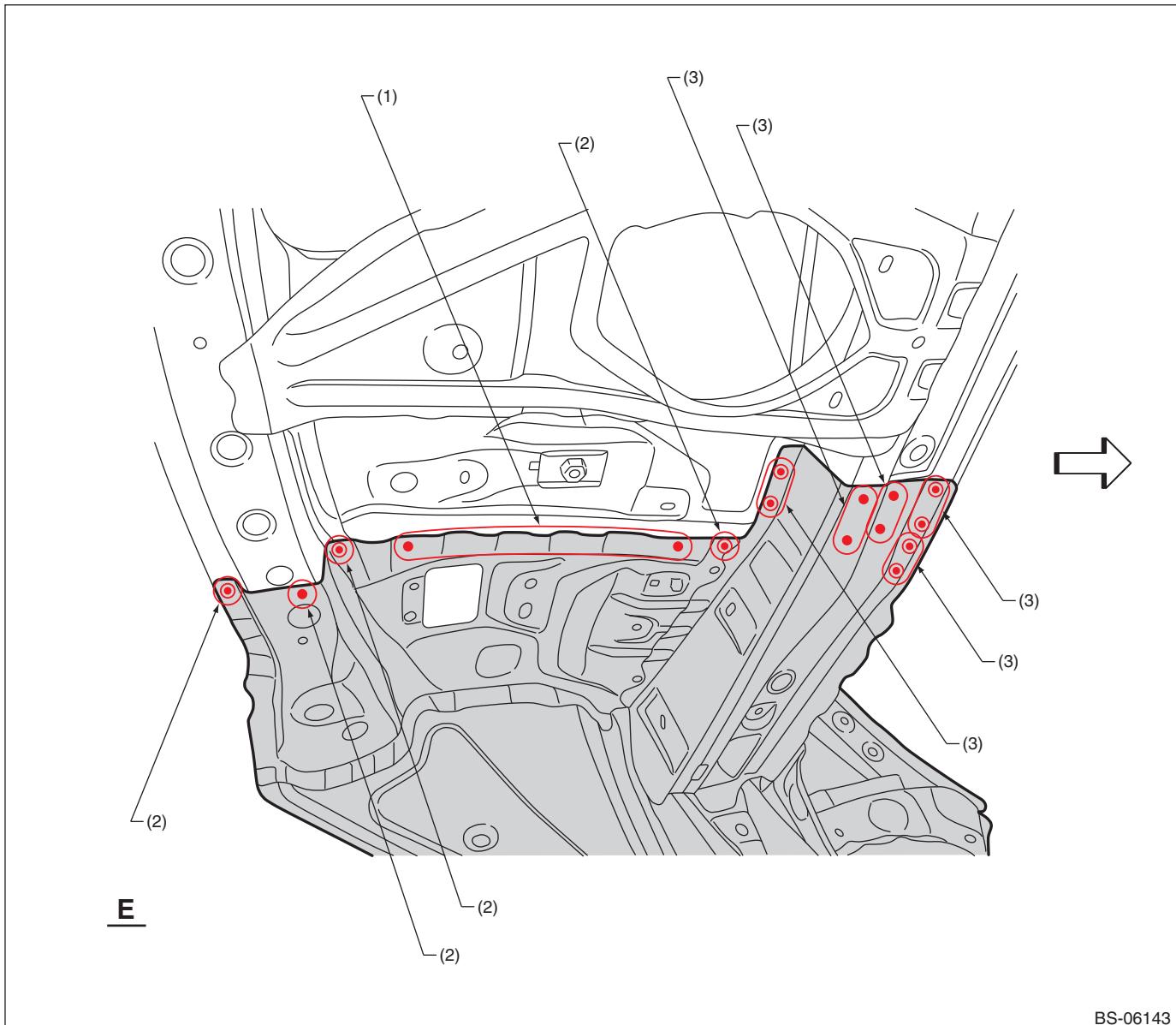
• Views 2



(1) 2 points [20 mm (0.79 in)]	(5) 1 point (service)	(9) 5 points (service)
(2) 1 point [30 mm (1.18 in)]	(6) 1 point	(10) 1 point (service) (only LH)
(3) 1 point [25 mm (0.98 in)]	(7) 2 points	(11) 1 point (only LH)
(4) 2 points (service)	(8) 5 points	

Panel Replacement

• Views 3



(1) 6 points

(2) 1 point

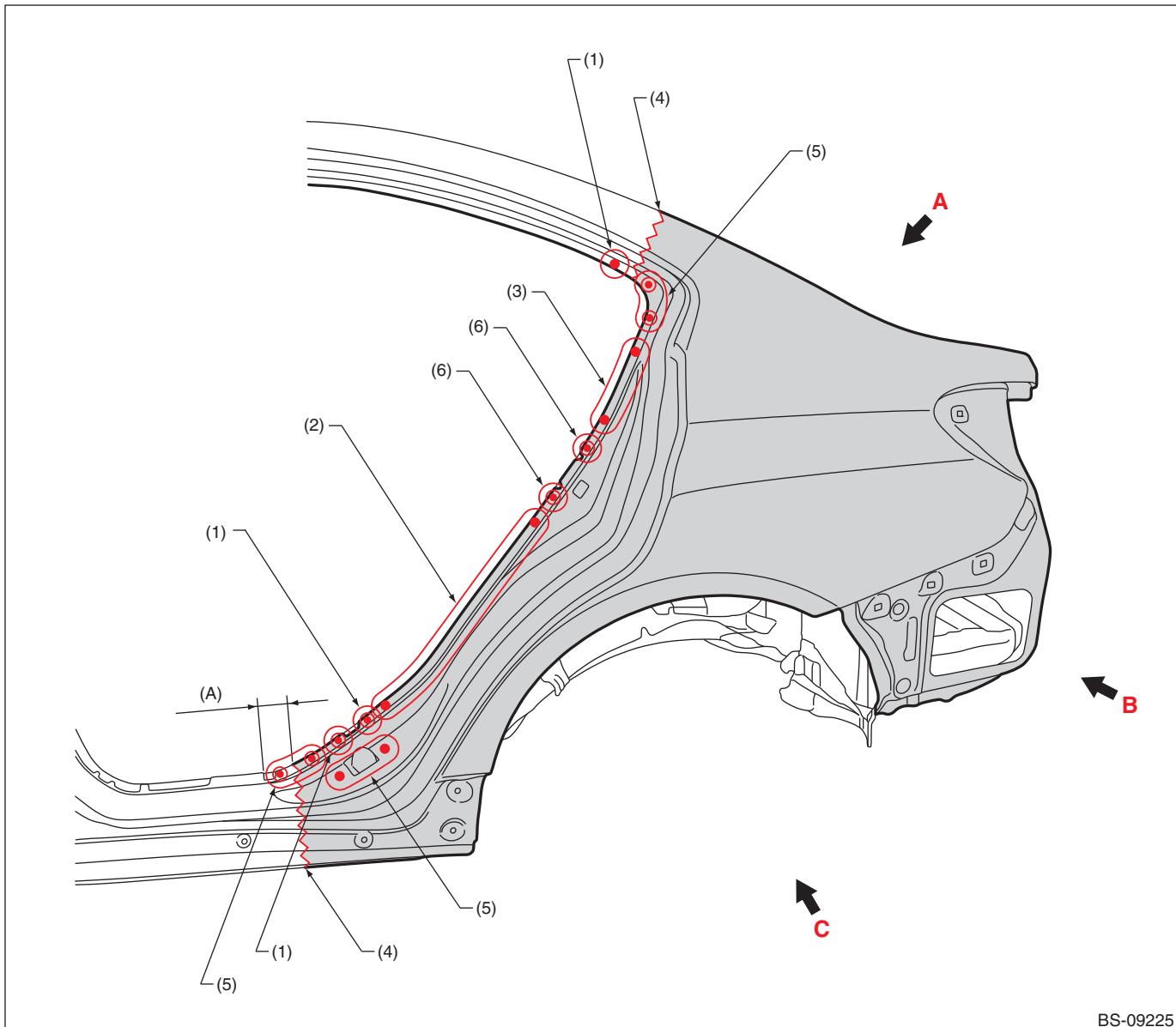
(3) 2 points

BS-06143

8-12. Rear Quarter (partial replacement)

A: REMOVAL

- Overall view



BS-09225

(A) 60 mm (2.36 in)

(1) 1 point (outside · 1)

(2) 8 points (outside · 1)

(3) 3 points (outside · 1)

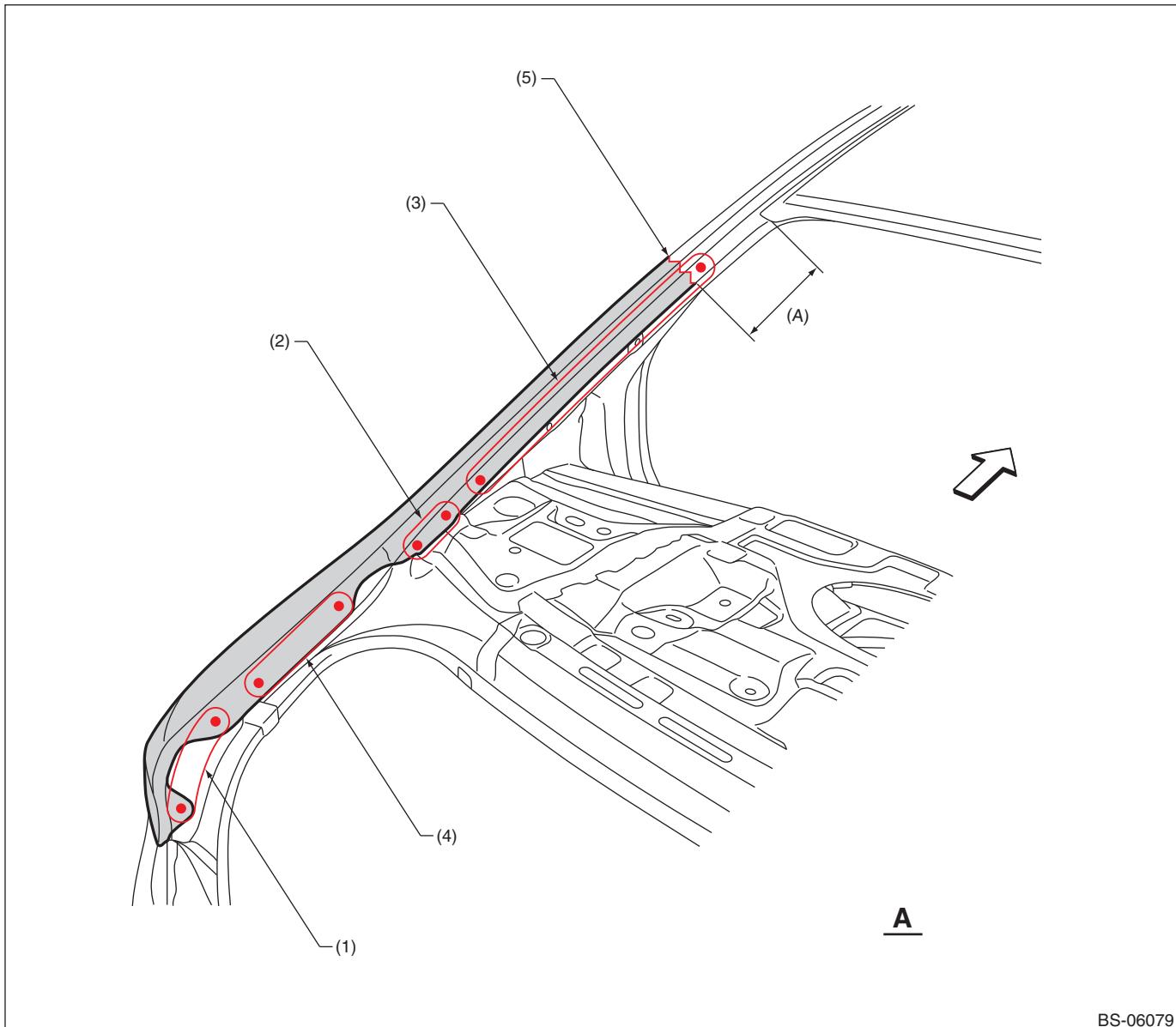
(4) Rough cutting

(5) 2 points (outside · 1)

(6) 1 point (outside · 2)

Panel Replacement

• Views 1



BS-06079

(A) 110 mm (4.33 in)

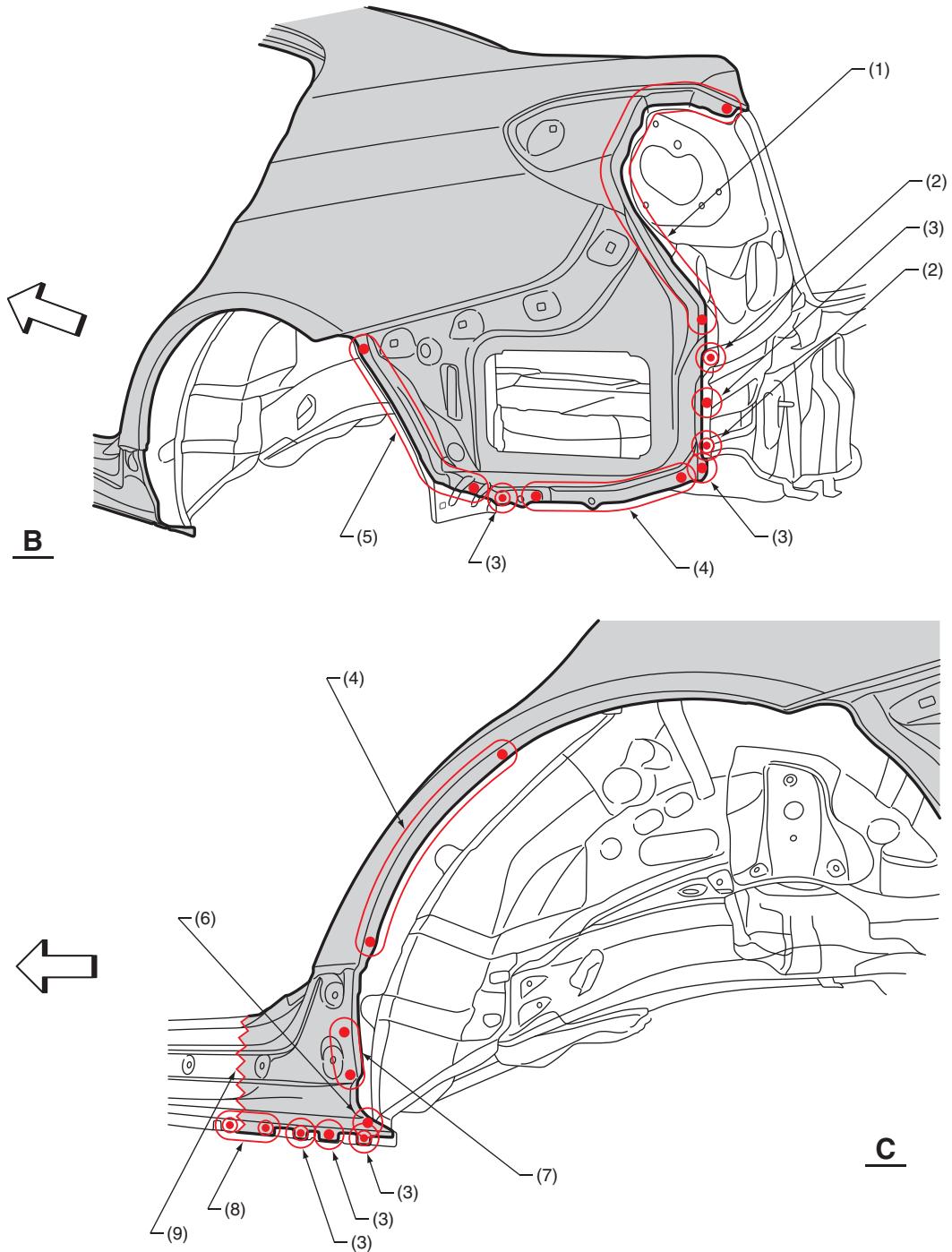
(1) 2 points (inside · 1)
(2) 2 points (outside · 1)

(3) 7 points (outside · 1)
(4) 3 points (inside · 1)

(5) Rough cutting

Panel Replacement

• Views 2



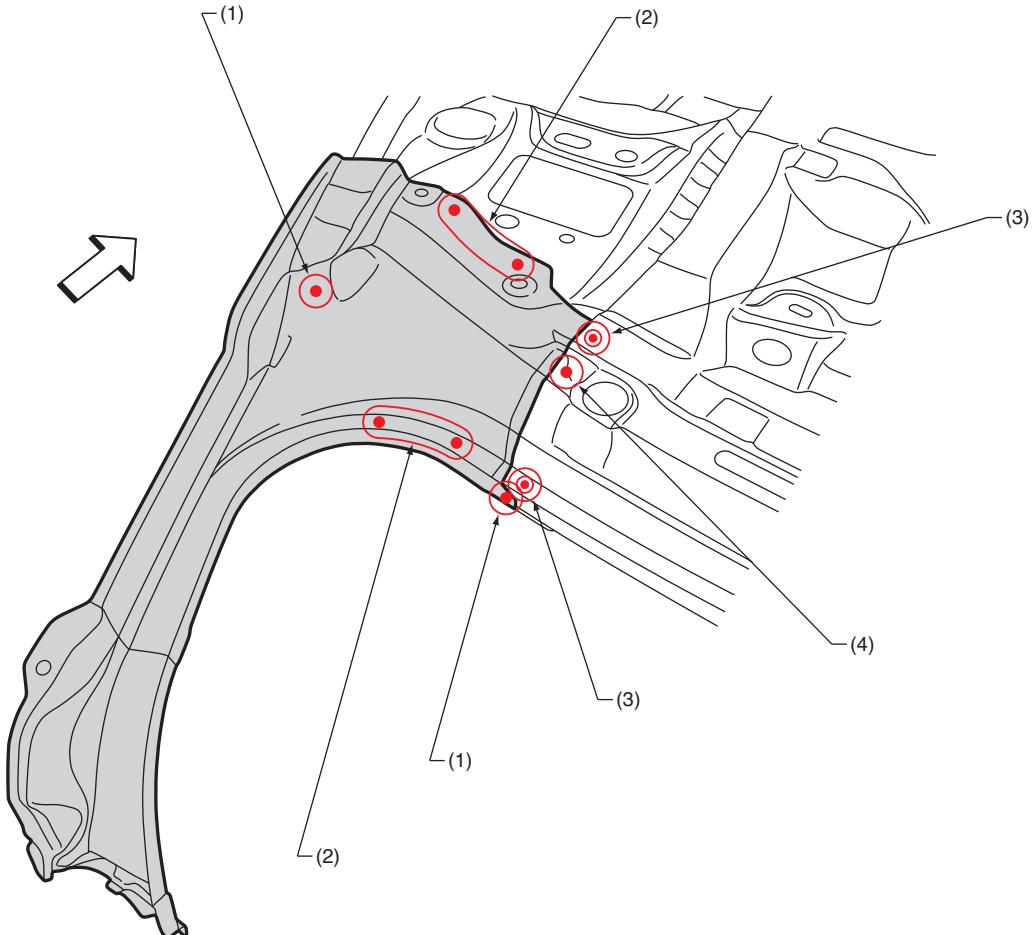
BS-06080

- (1) 10 points (outside · 1)
- (2) 1 point (outside · 2)
- (3) 1 point (outside · 1)

- (4) 5 points (outside · 1)
- (5) 7 points (outside · 1)
- (6) 1 point (bottom · 1)

- (7) 2 points (outside · 1)
- (8) 3 points (outside · 1)
- (9) Rough cutting

Panel Replacement



BS-06122

(1) 1 point (outside · 1)
(2) 2 points (top · 1)

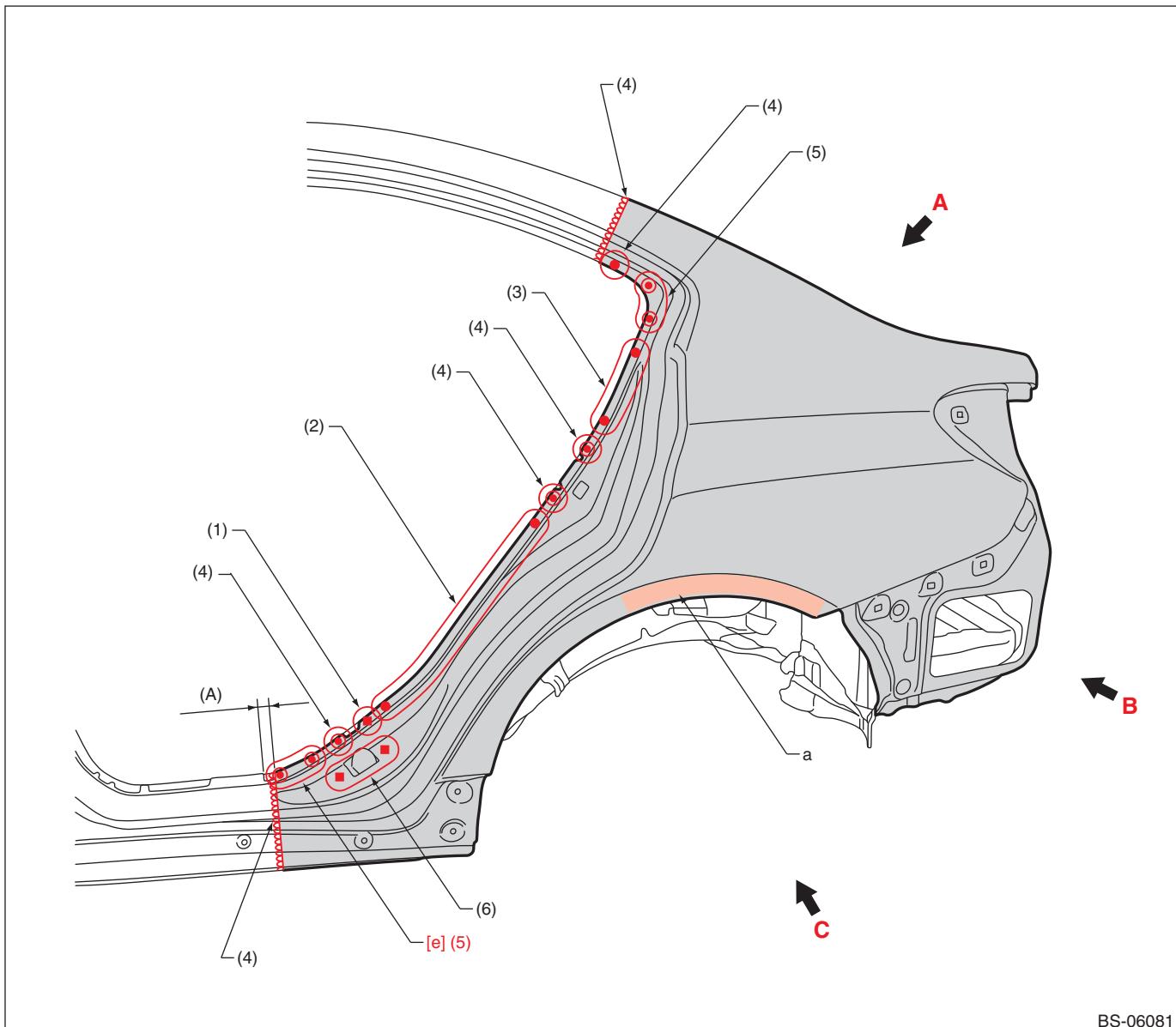
(3) 1 point (top · 2)

(4) 1 point (top · 1)

Panel Replacement

B: INSTALLATION

- Overall view



(A) 20 mm (0.79 in)

(1) 1 point (service)

(3) 3 points

(5) 2 points

(2) 8 points

(4) 1 point

(6) 2 points (service)

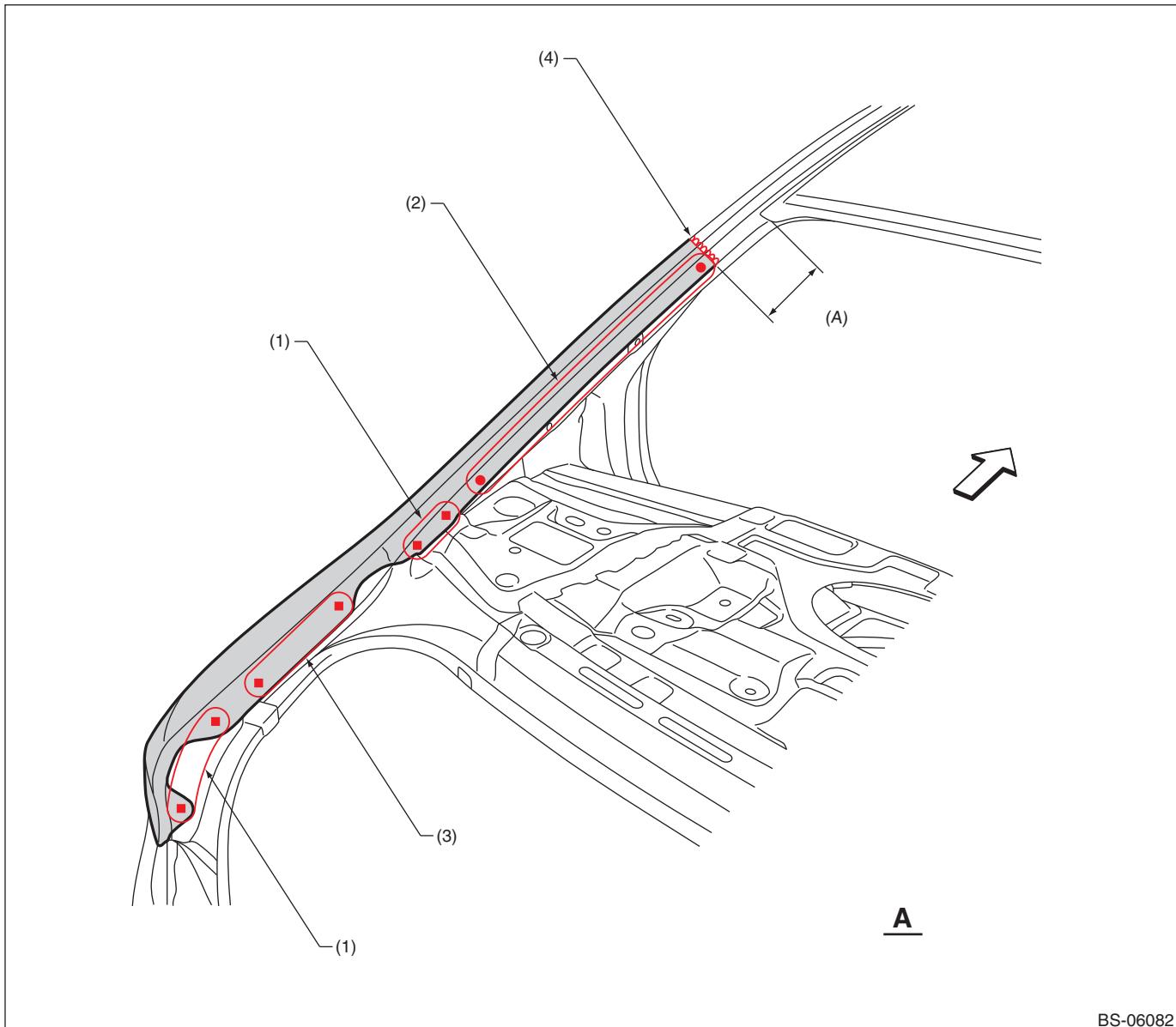
Note: Apply a panel bonding adhesive to part "a".

[e] Spot welding conditions

Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

Panel Replacement

• Views 1



(A) 70 mm (2.76 in)

(1) 2 points (service)
(2) 7 points

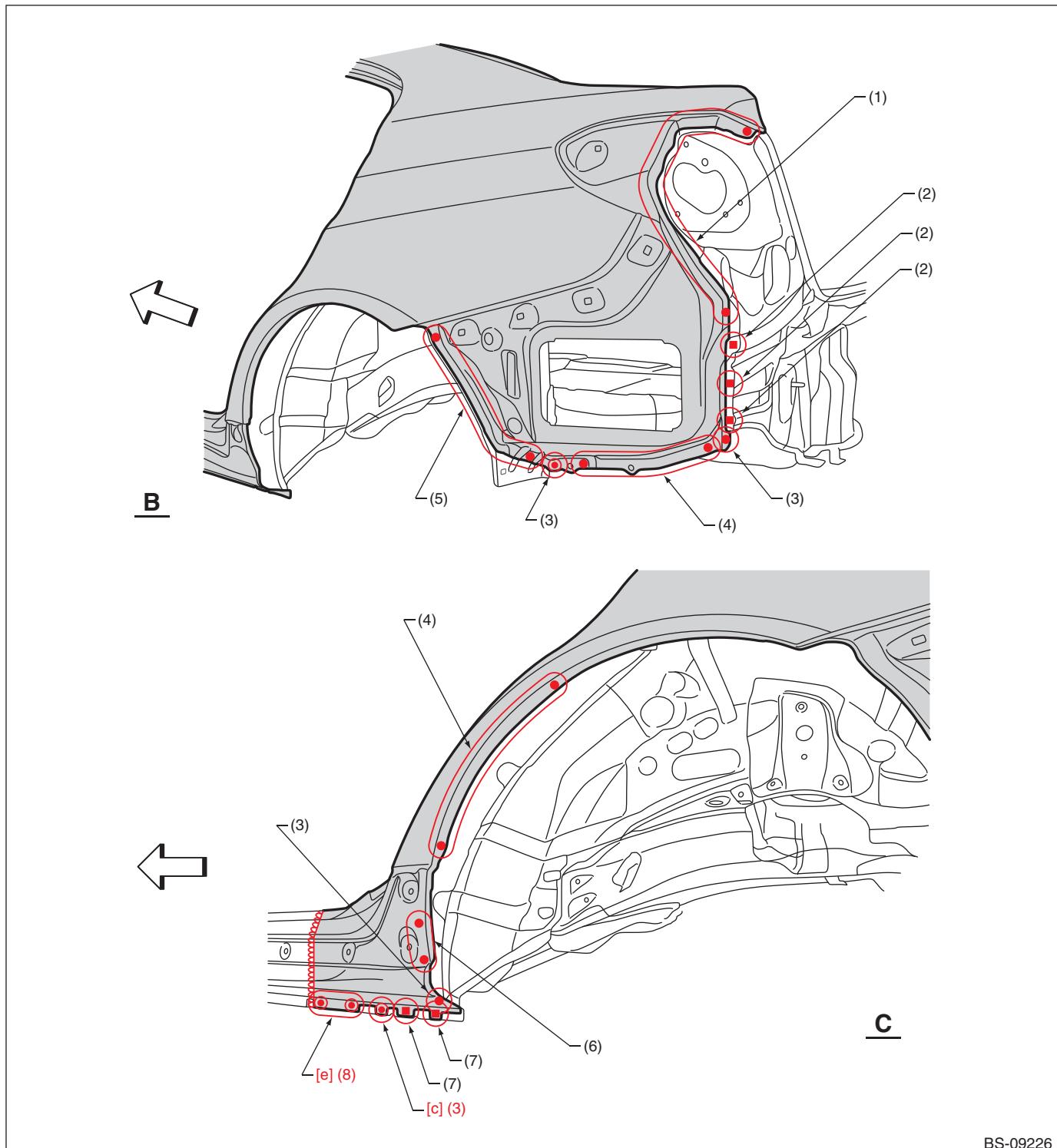
(3) 3 points (service)

(4) 1 point

BS-06082

Panel Replacement

• Views 2



BS-09226

(1) 10 points

(2) 1 point (service · matching)

(3) 1 point

(4) 5 points

(5) 7 points

(6) 2 points

(7) 1 point (service)

(8) 3 points

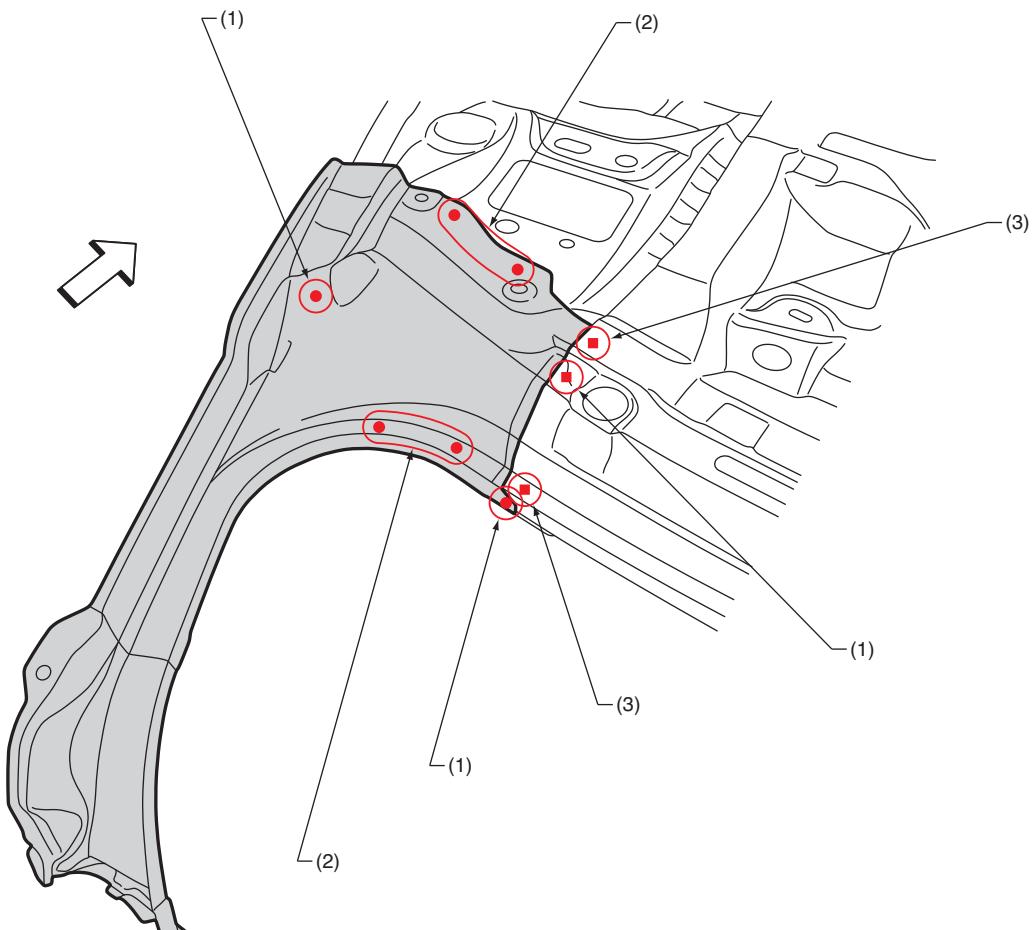
[c] Spot welding conditions

Compression: 3.0 kN, Current: 6.5 kA, Welding time: 25 cyc

[e] Spot welding conditions

Compression: 3.5 kN, Current: 7.5 kA, Welding time: 16 cyc

Panel Replacement



BS-06123

(1) 1 point

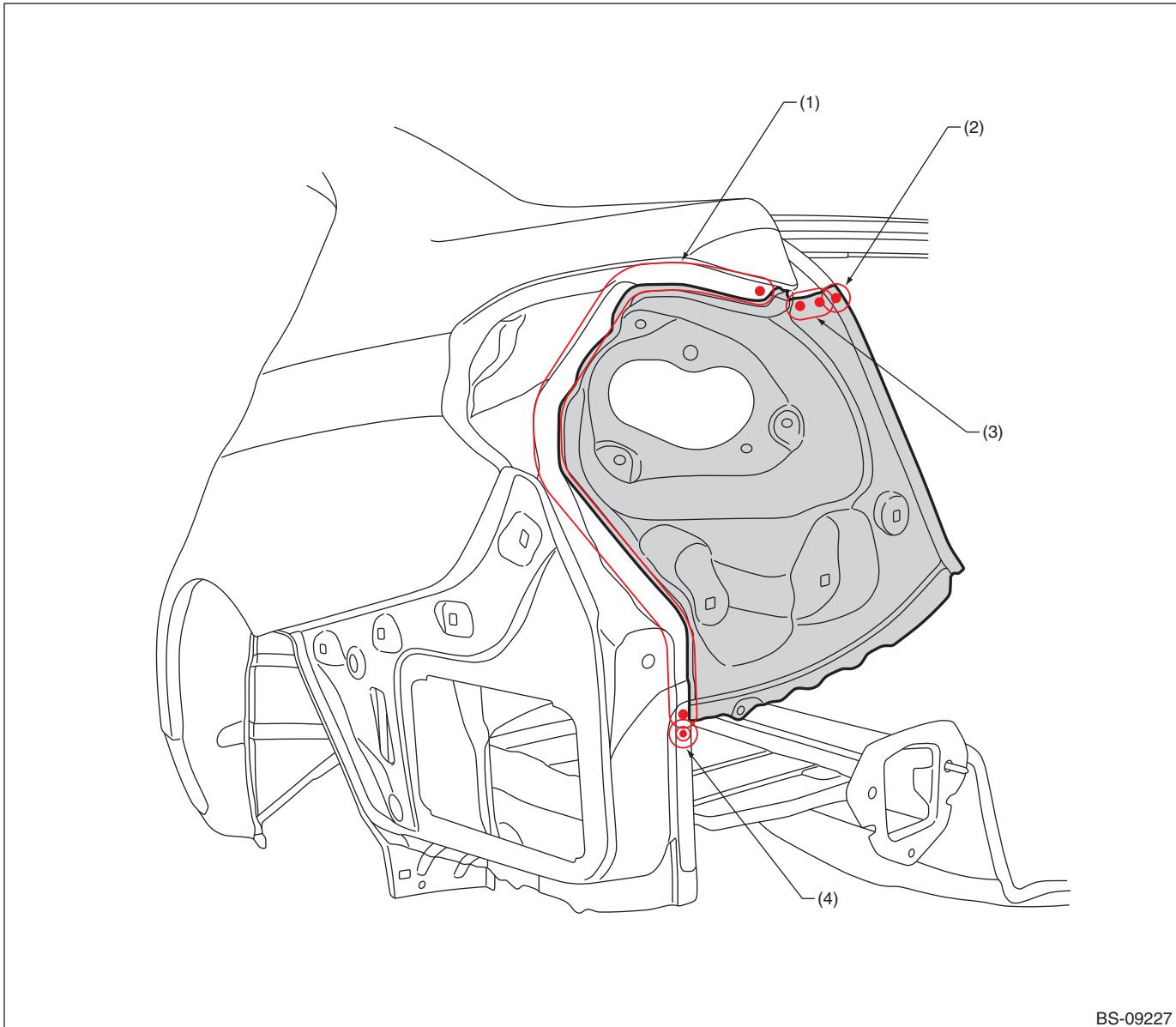
(2) 2 points

(3) 1 point (service · matching)

8-13. Rear Quarter End Panel (total replacement)

A: REMOVAL

- Rear skirt removal condition



BS-09227

(1) 10 points (inside · 1)

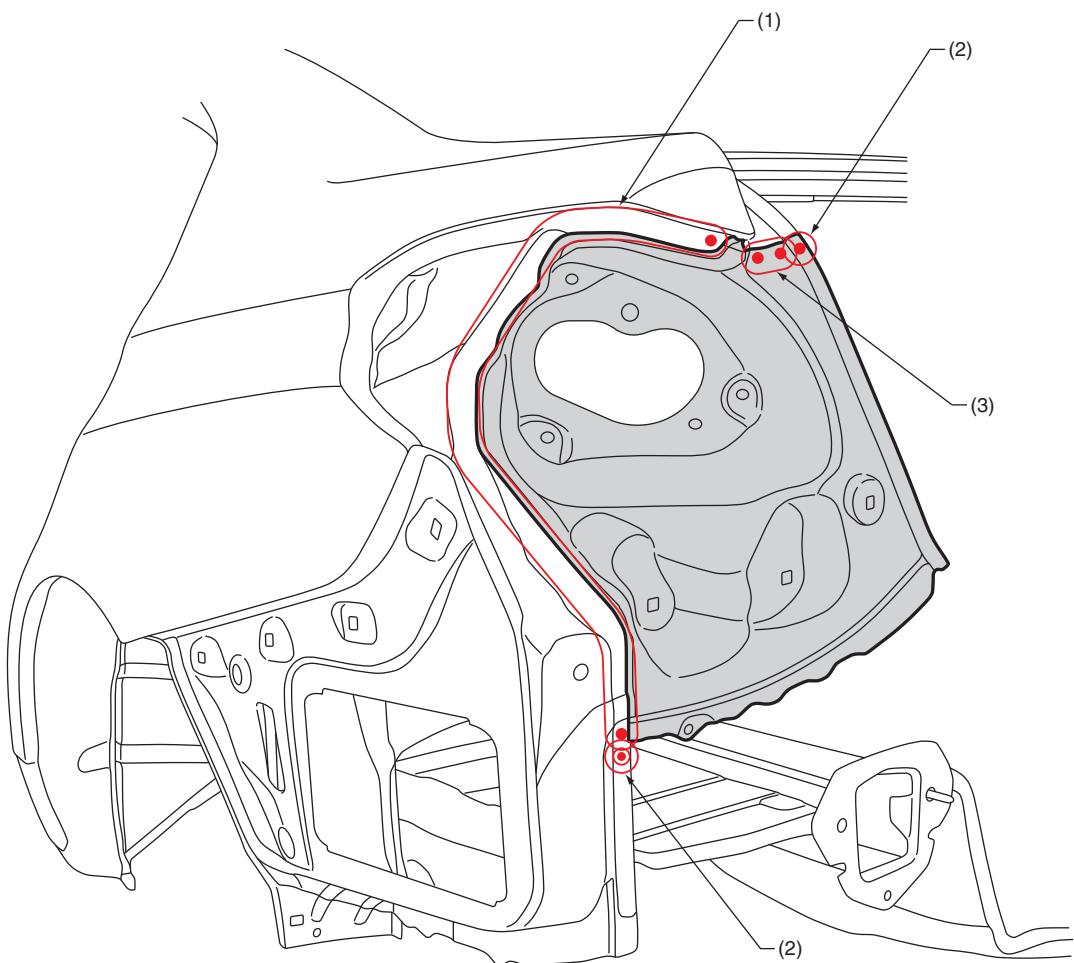
(2) 1 point (outside · 1)

(3) 2 points (outside · 1)

(4) 1 point (inside · 1)

Panel Replacement

B: INSTALLATION



BS-09228

(1) 10 points

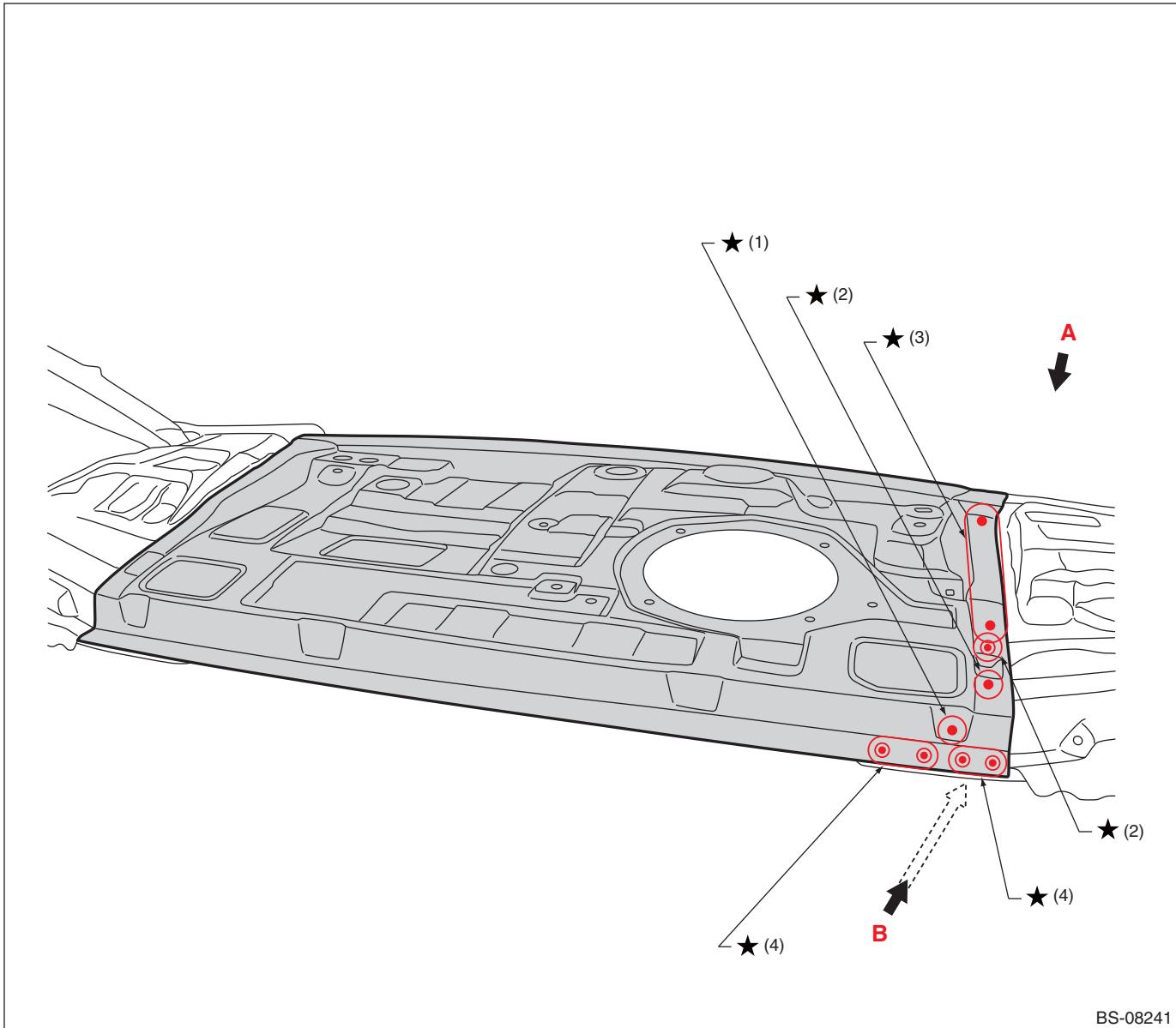
(2) 1 point

(3) 2 points

8-14. Rear Panel (total replacement)

A: REMOVAL

- Overall view



(1) 1 point (inside · 1)

(2) 1 point (top · 1)

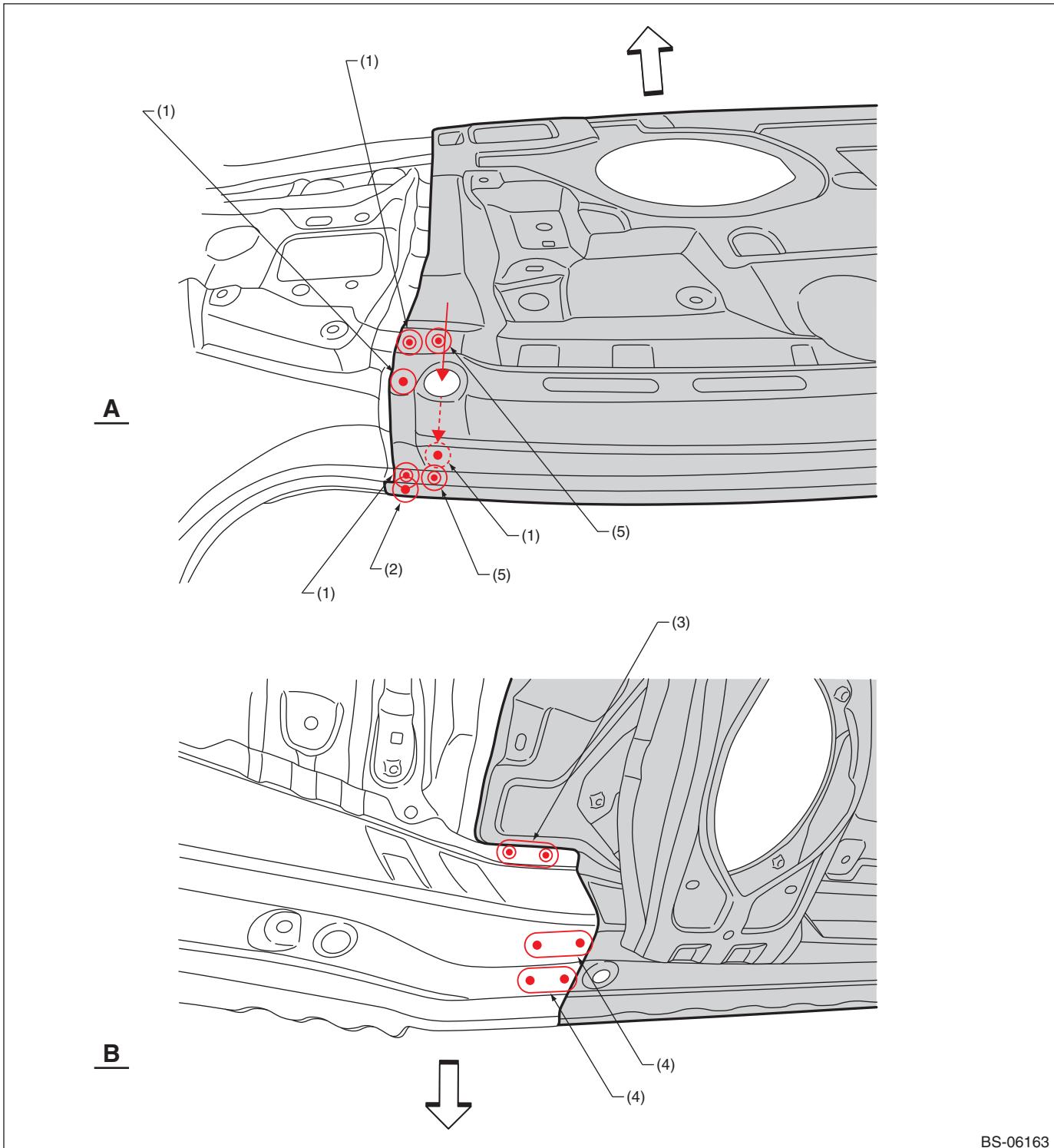
(3) 6 points (top · 1)

(4) 2 points (top · 1)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

• Views



BS-06163

(1) 1 point (top · 1)

(2) 1 point (outside · 1)

(3) 2 points (top · 2)

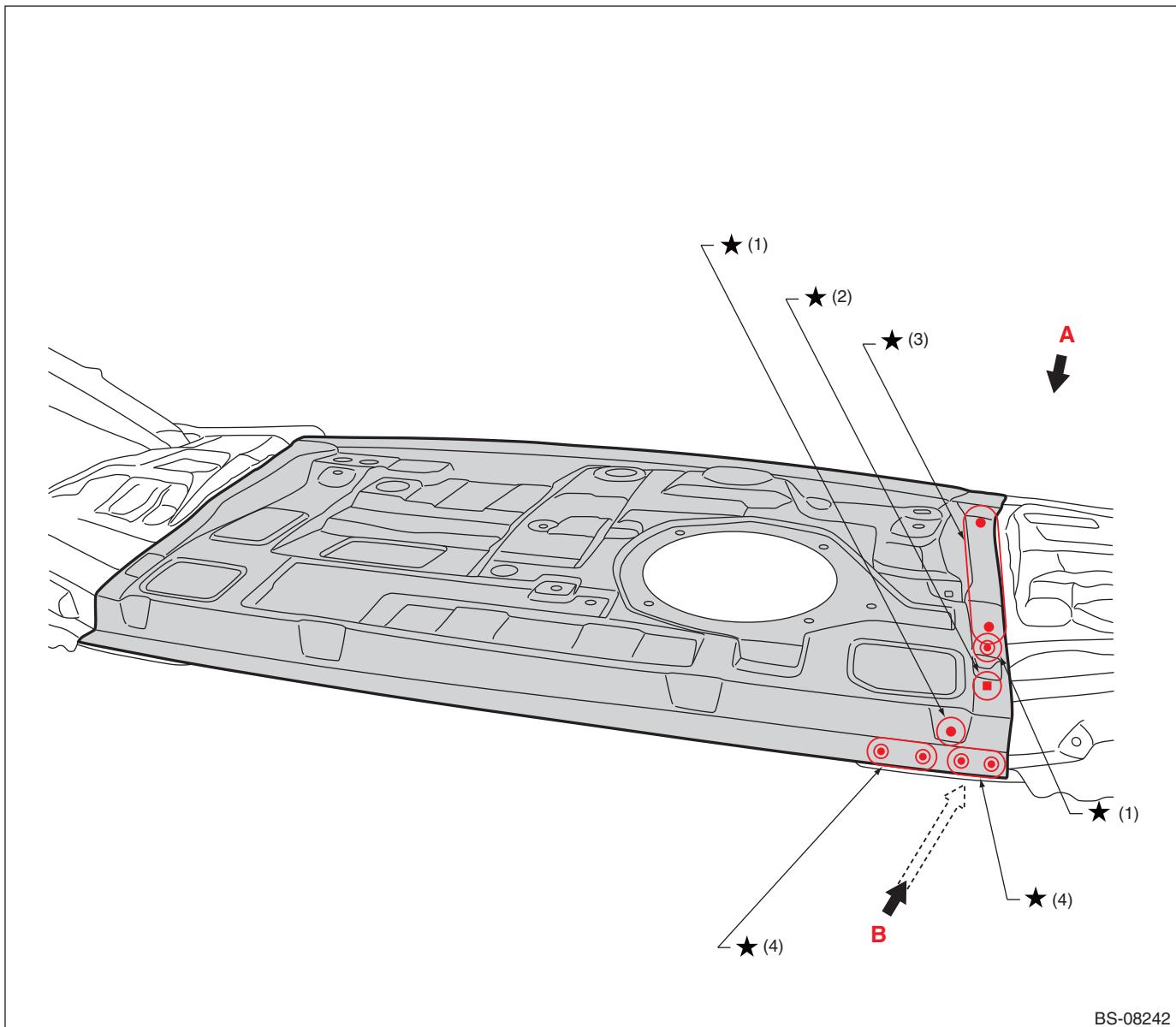
(4) 2 points (top · 1)

(5) 1 point (top · 2)

Panel Replacement

B: INSTALLATION

• Overall view



BS-08242

(1) 1 point

(2) 1 point (service)

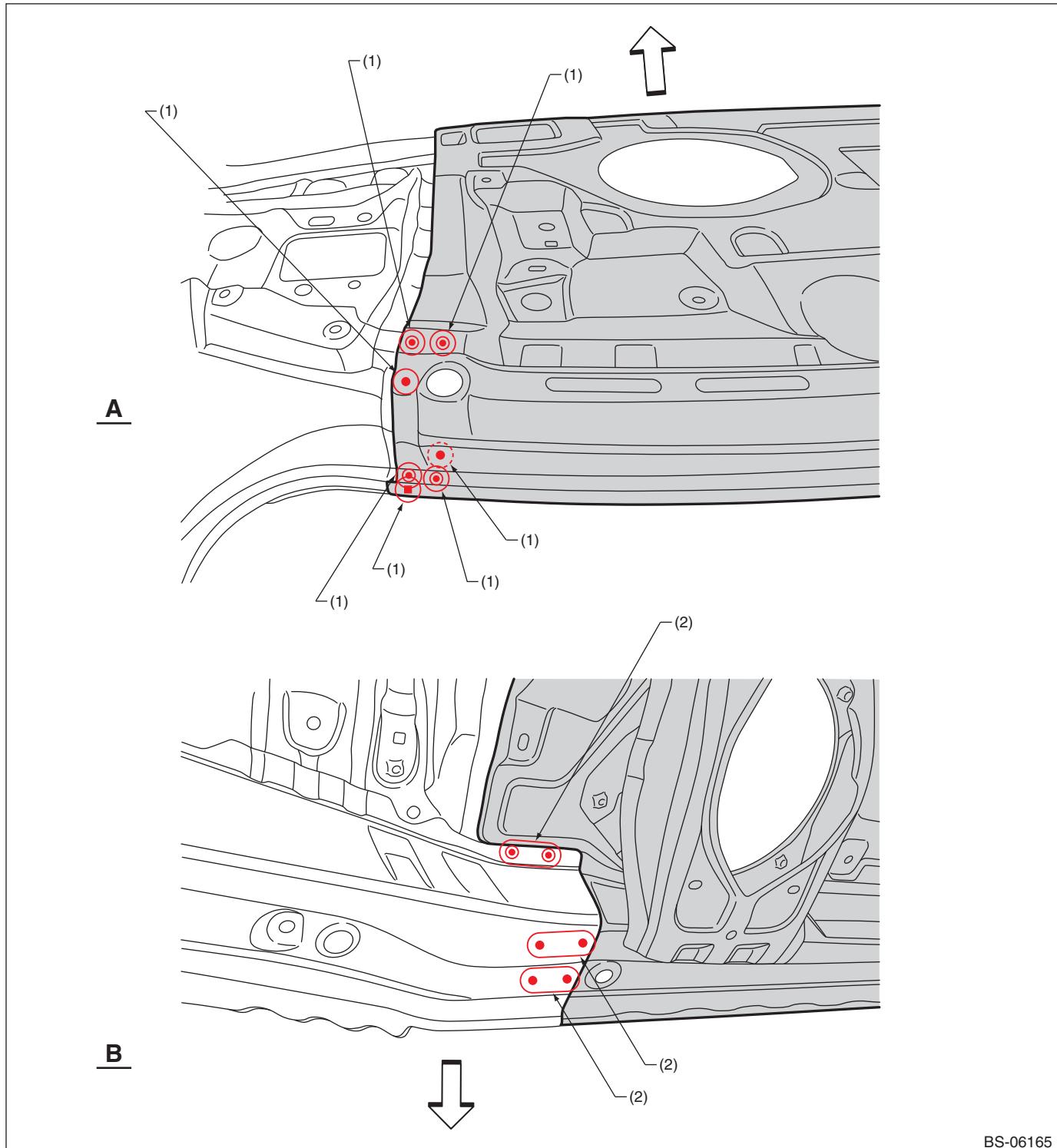
(3) 6 points

(4) 2 points

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

- **Views**



(1) 1 point

(2) 2 points

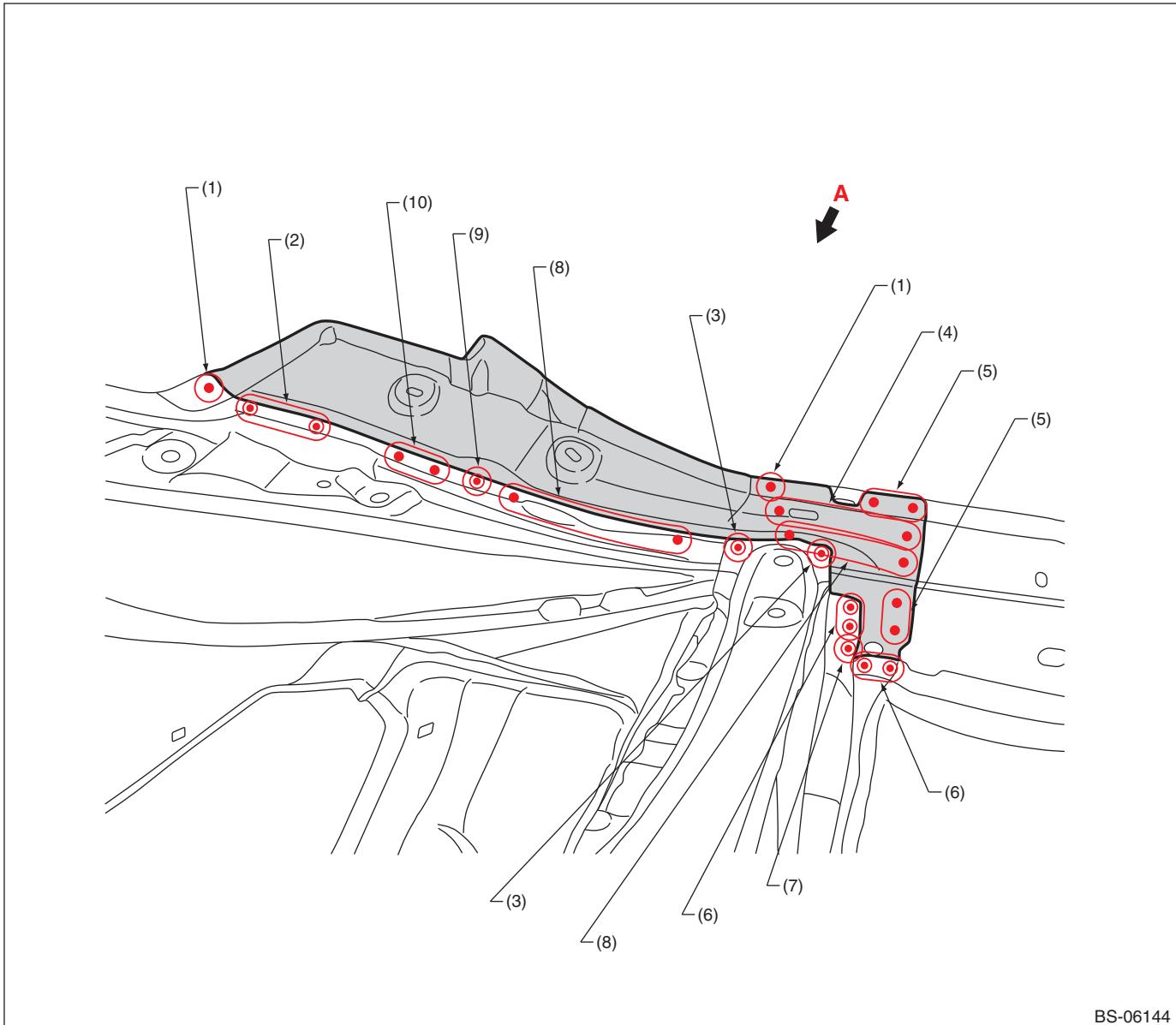
BS-06165

Panel Replacement

8-15. Side Sill Inner Rear (total replacement)

A: REMOVAL

- Overall view (Rear quarter outer & inner and side sill reinforcement outer removal condition)



(1) 1 point (outside · 1)

(2) 2 points (bottom · 1)

(3) 1 point (top · 2)

(4) 4 points (top · 1)

(5) 2 points (inside · 1)

(6) 2 points (outside · 1, inside · 1)

(7) 1 point (inside · 2)

(8) 3 points (top · 1)

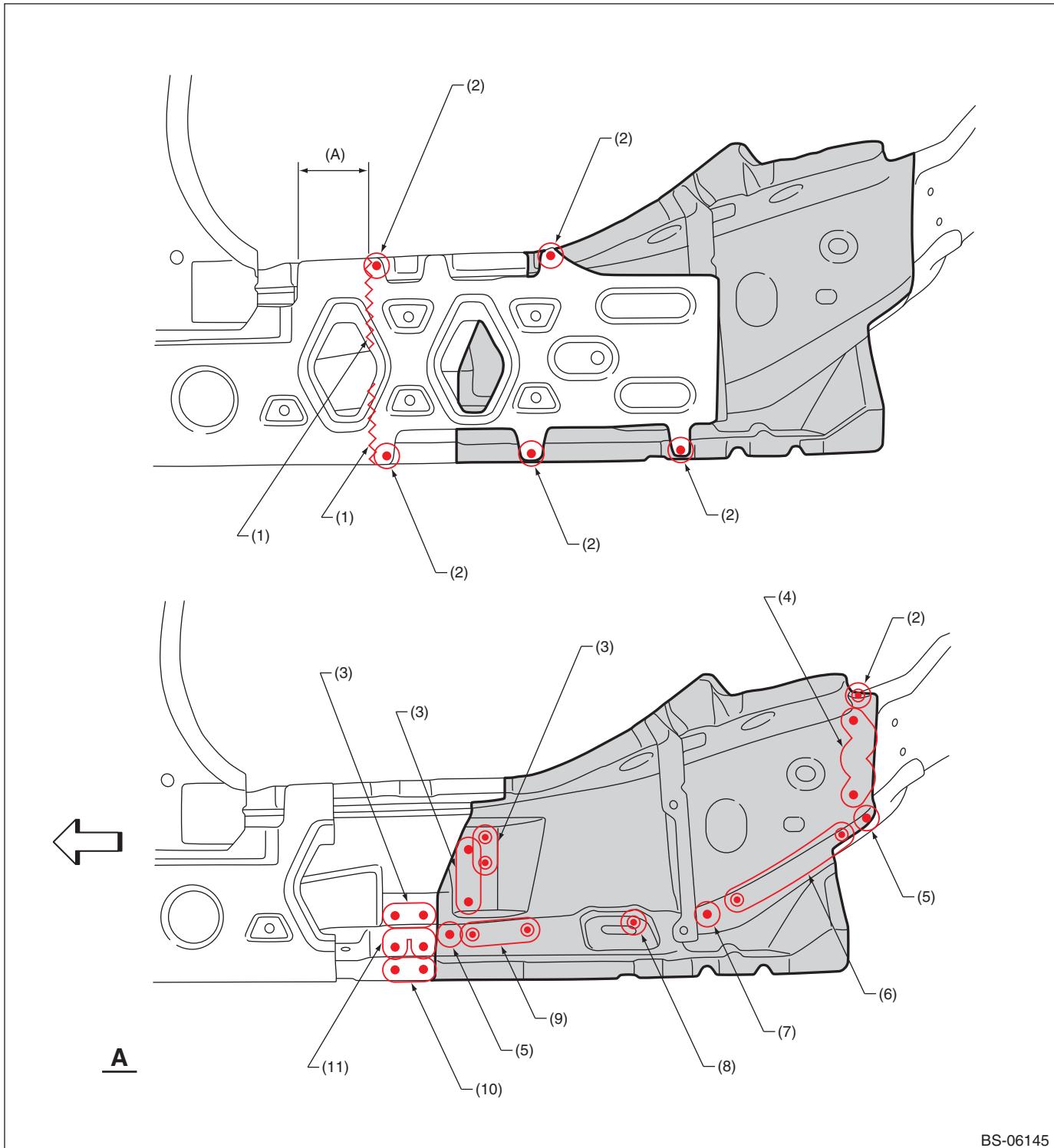
(9) 1 point (top · 1)

(10) 2 points (top · 1)

BS-06144

Panel Replacement

• Views



(A) 60 mm (2.36 in)

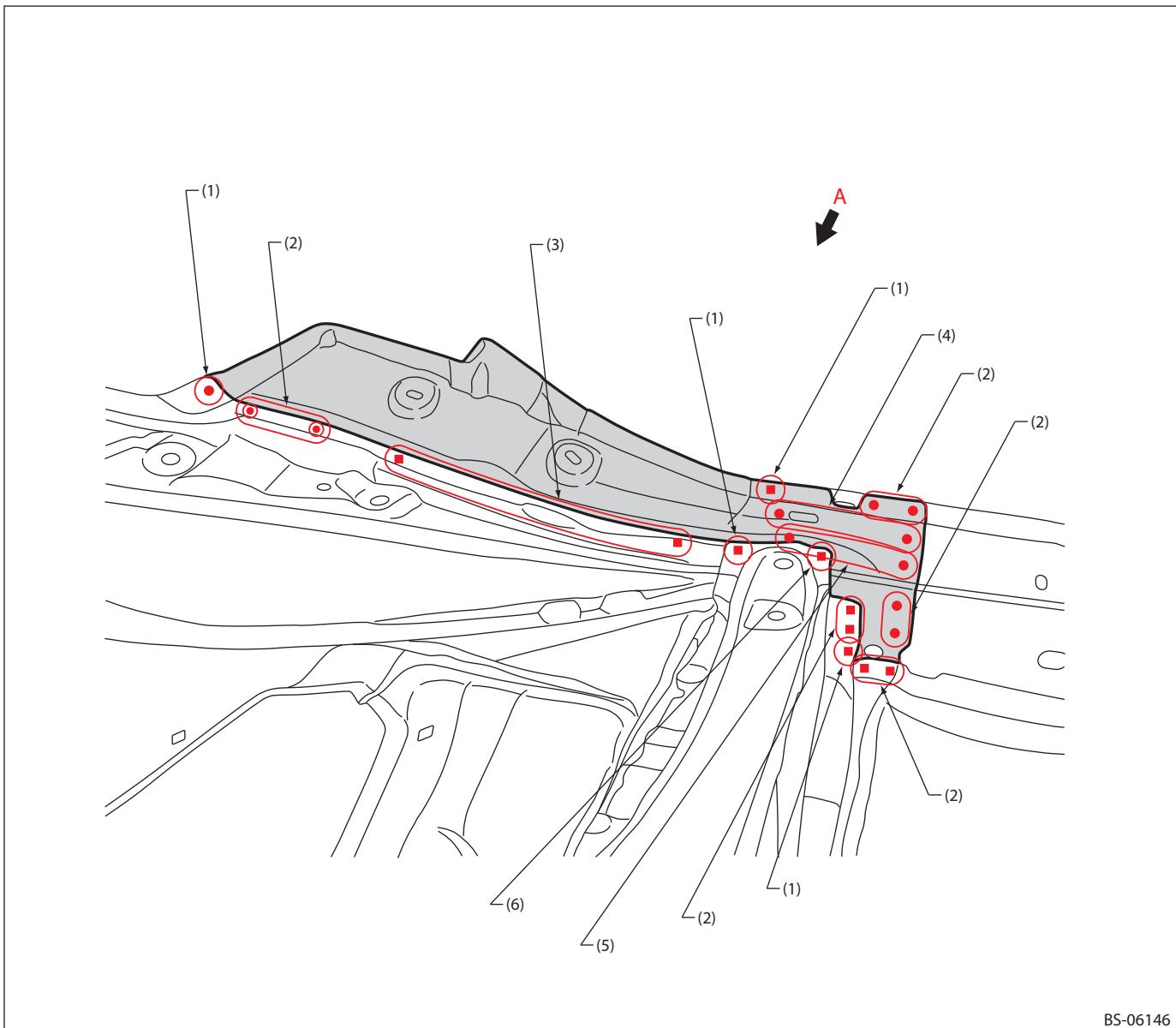
(1) Rough cutting	(5) 1 point (top · 1, belt sander)	(9) 3 points (top · 1, belt sander)
(2) 1 point (outside · 1)	(6) 5 points (top · 1, belt sander)	(10) 2 points (inside · 1)
(3) 2 points (outside · 1)	(7) 1 point (top · 1)	(11) 4 points (bottom · 1)
(4) 5 points (outside · 1)	(8) 1 point (bottom · 1)	

BS-06145

Panel Replacement

B: INSTALLATION

• Overall view



BS-06146

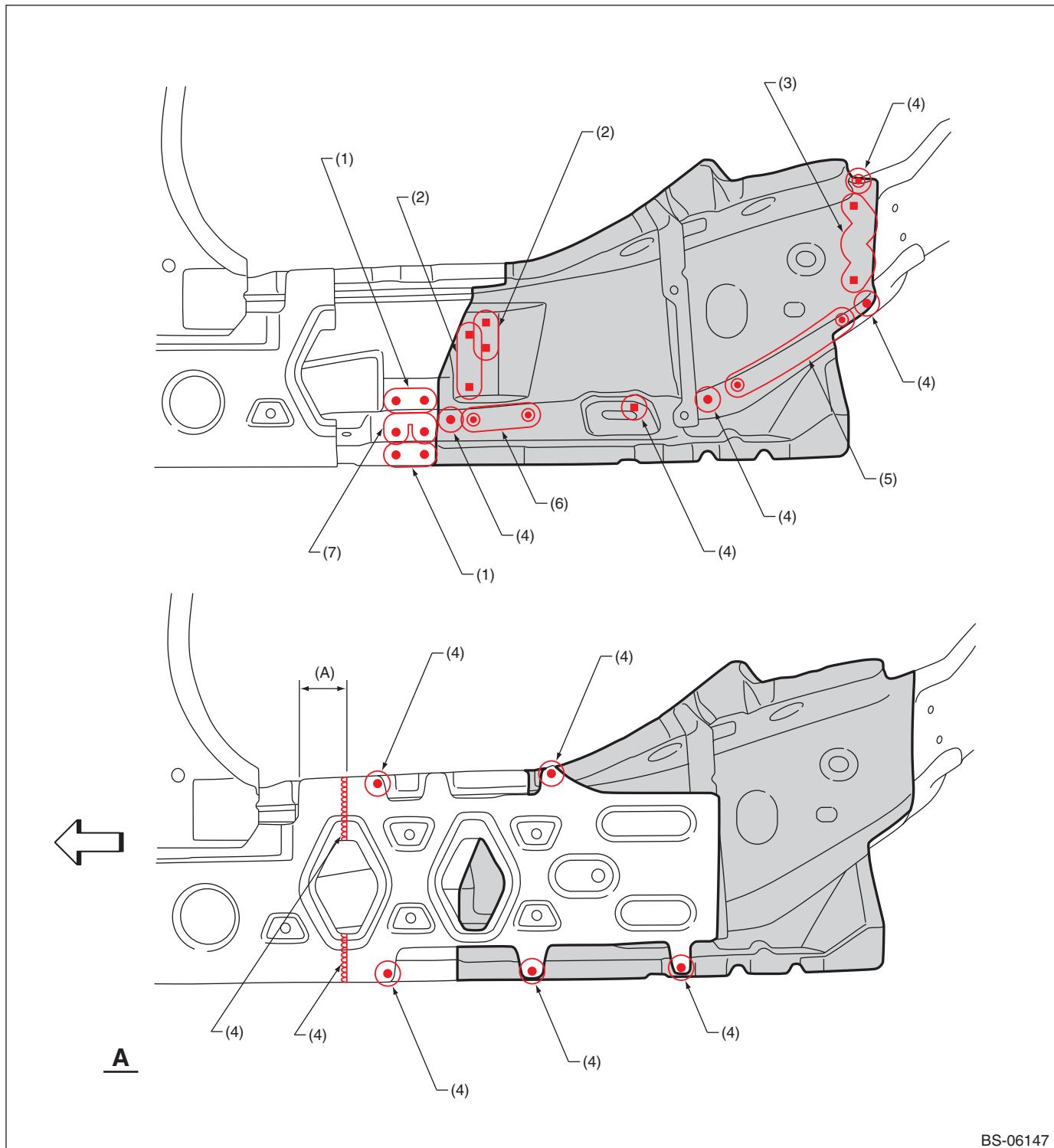
(1) 1 point
(2) 2 points

(3) 6 points
(4) 4 points

(5) 3 points
(6) 1 point (service · matching)

Panel Replacement

• Views



BS-06147

(A) 40 mm (1.57 in)

(1) 2 points

(2) 2 points (service)

(3) 5 points (service)

(4) 1 point

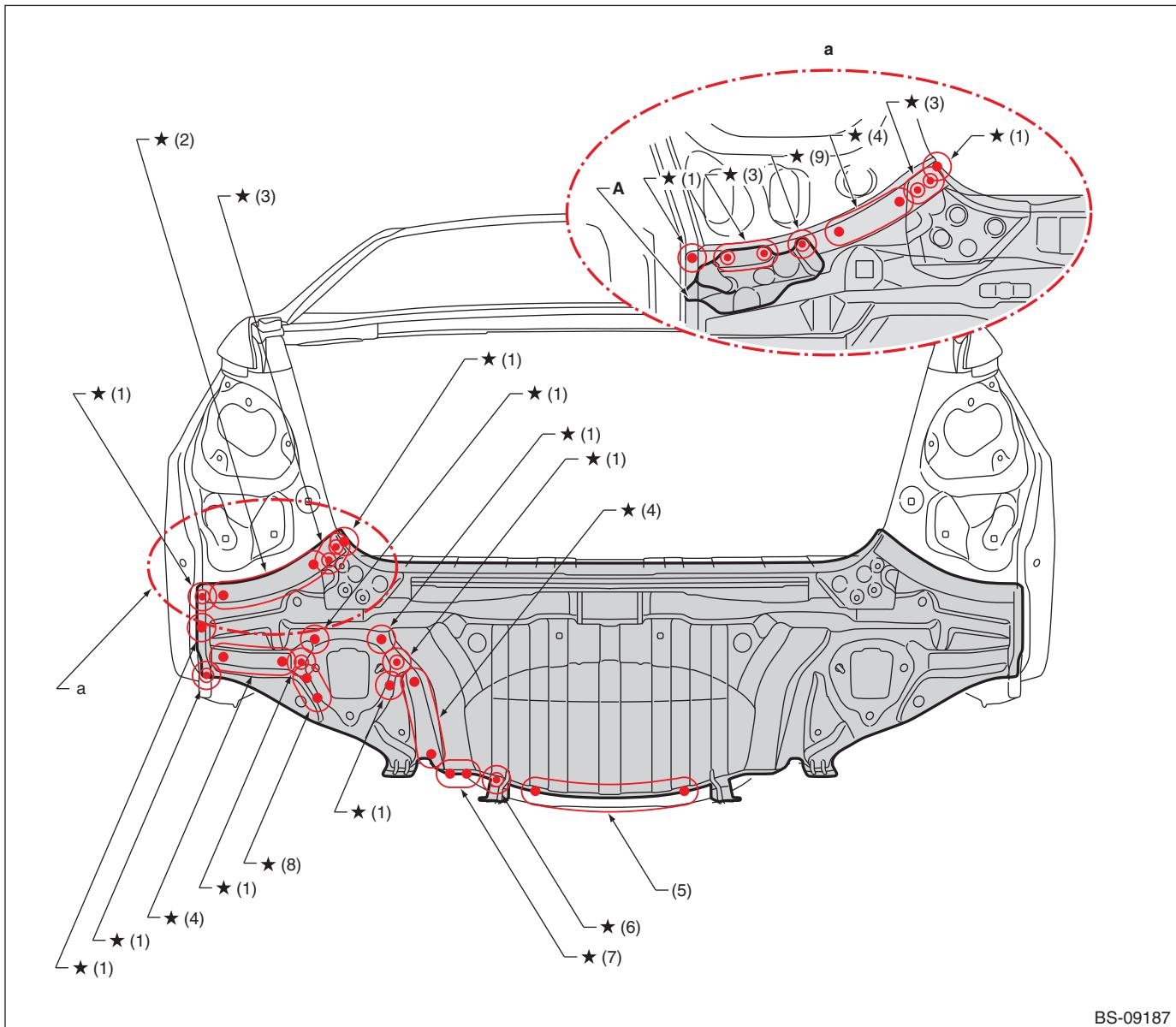
(5) 5 points

(6) 3 points

(7) 4 points

8-16. Rear Skirt (total replacement)

A: REMOVAL



BS-09187

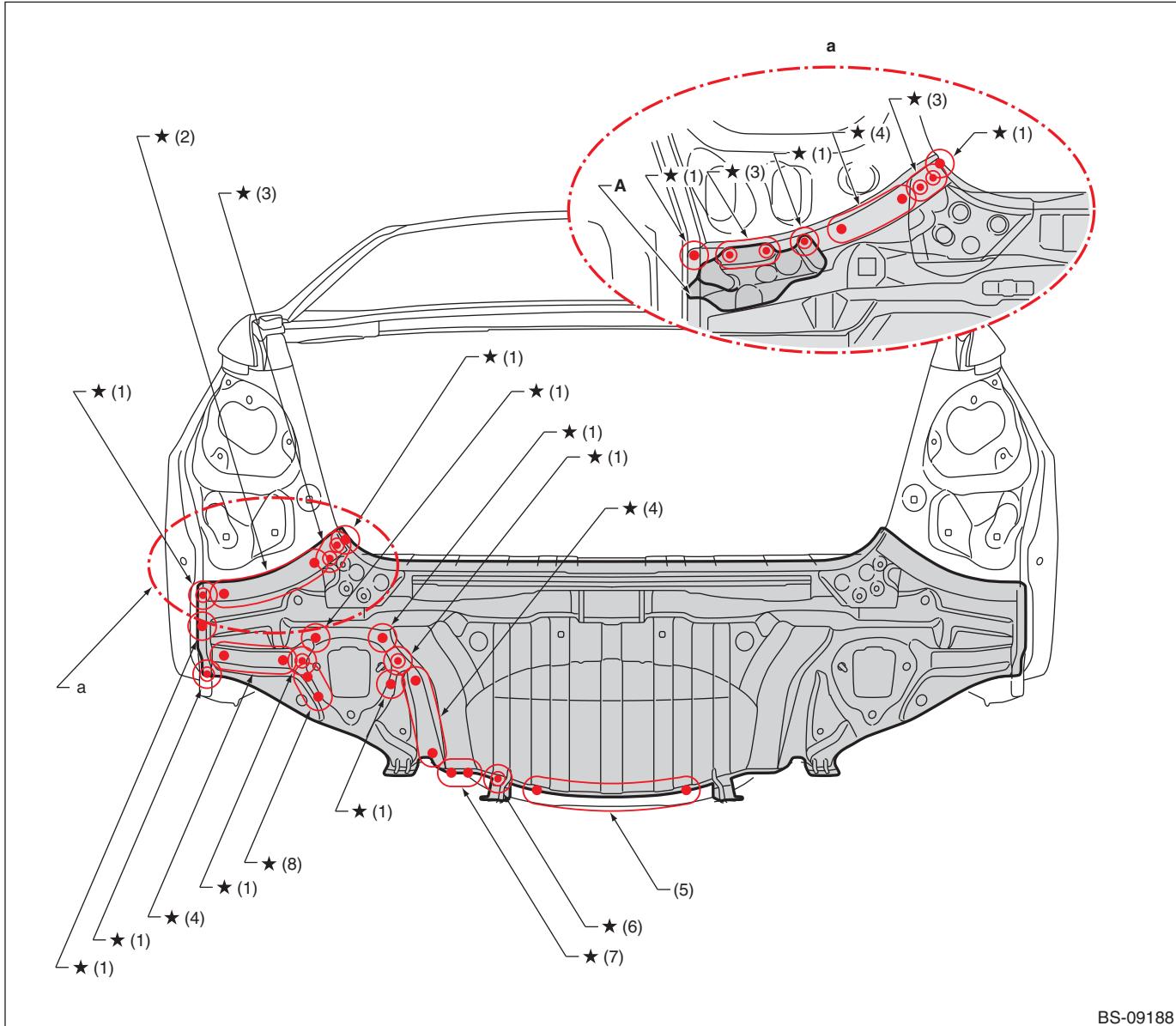
(1) 1 point (outside · 1)	(4) 4 points (outside · 1)	(7) 2 points (top · 1)
(2) 7 points (outside · 1)	(5) 5 points (top · 1)	(8) 2 points (outside · 1)
(3) 2 points (outside · 2)	(6) 1 point (top · 1)	(9) 1 point (outside · 2)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

For the part marked by "a" : Removal for the models with brackets(A), refer to the area "a".

Panel Replacement

B: INSTALLATION



(1) 1 point

(2) 7 points

(3) 2 points

(4) 4 points

(5) 5 points

BS-09188

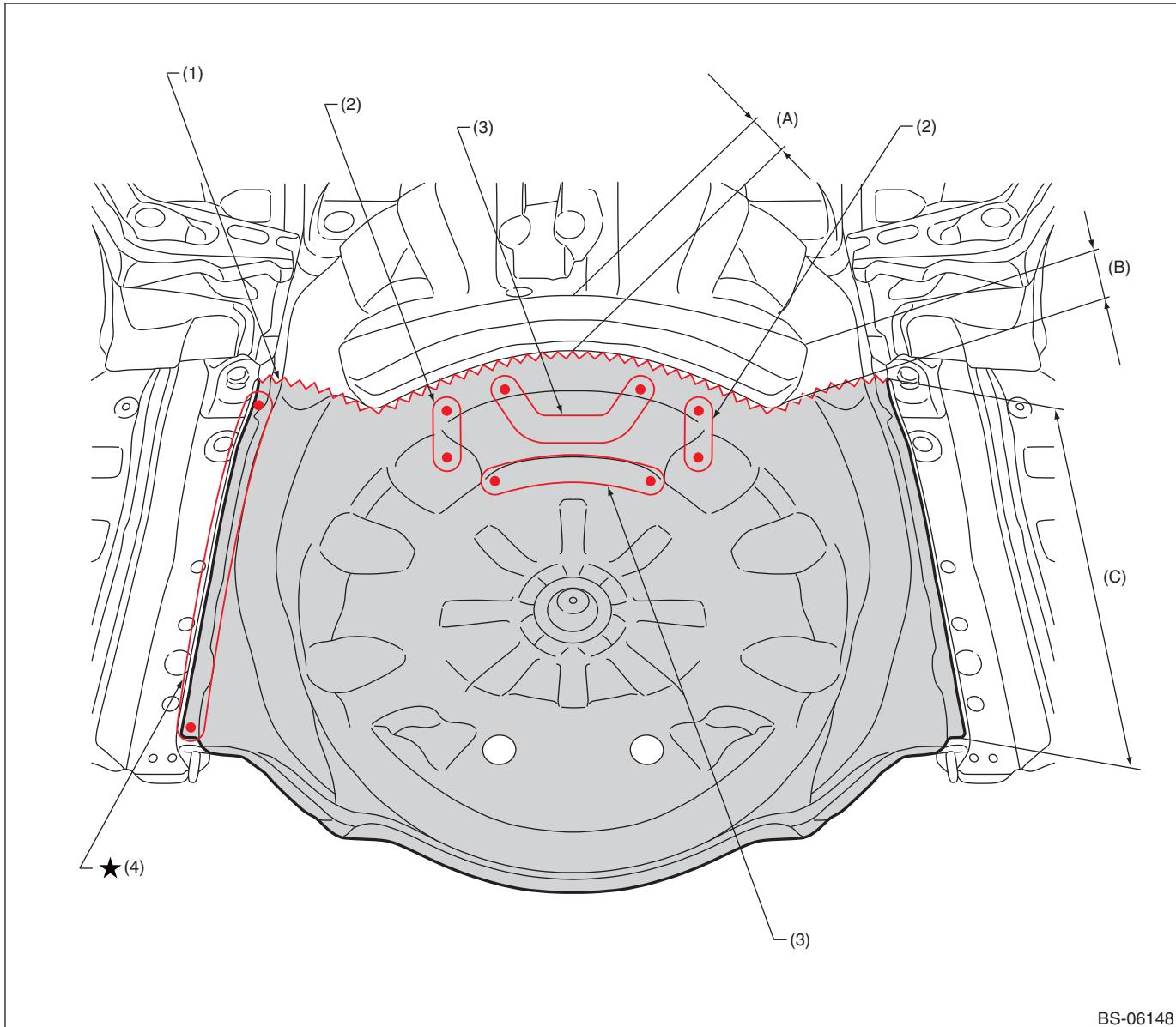
For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

For the part marked by "a" : Installation for the models with brackets(A), refer to the area "a".

8-17. Rear Floor Pan (partial replacement)

A: REMOVAL

- Rear skirt and rear side frame upper rear removal condition



BS-06148

(A) 70 mm (2.76 in)

(B) 90 mm (3.54 in)

(C) 455 mm (17.91 in)

(1) Rough cutting

(3) 4 points (outside · 1)

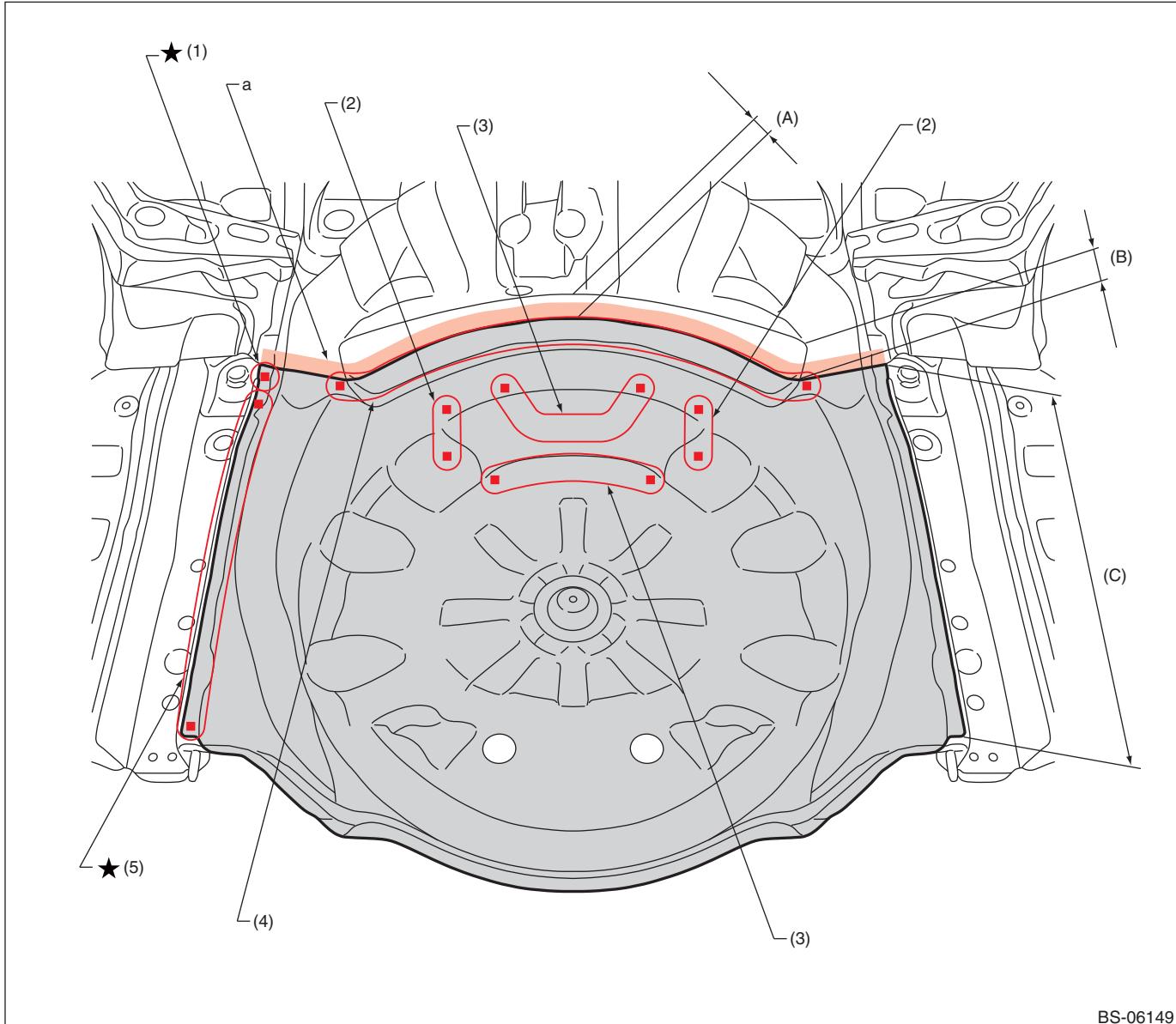
(4) 9 points (top · 1)

(2) 2 points (outside · 1)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

B: INSTALLATION



(A) 30 mm (1.18 in)

(B) 60 mm (2.36 in)

(C) 470 mm (18.50 in)

(1) 1 point (service)

(3) 4 points (service)

(5) 9 points (service)

(2) 2 points (service)

(4) 12 points (service)

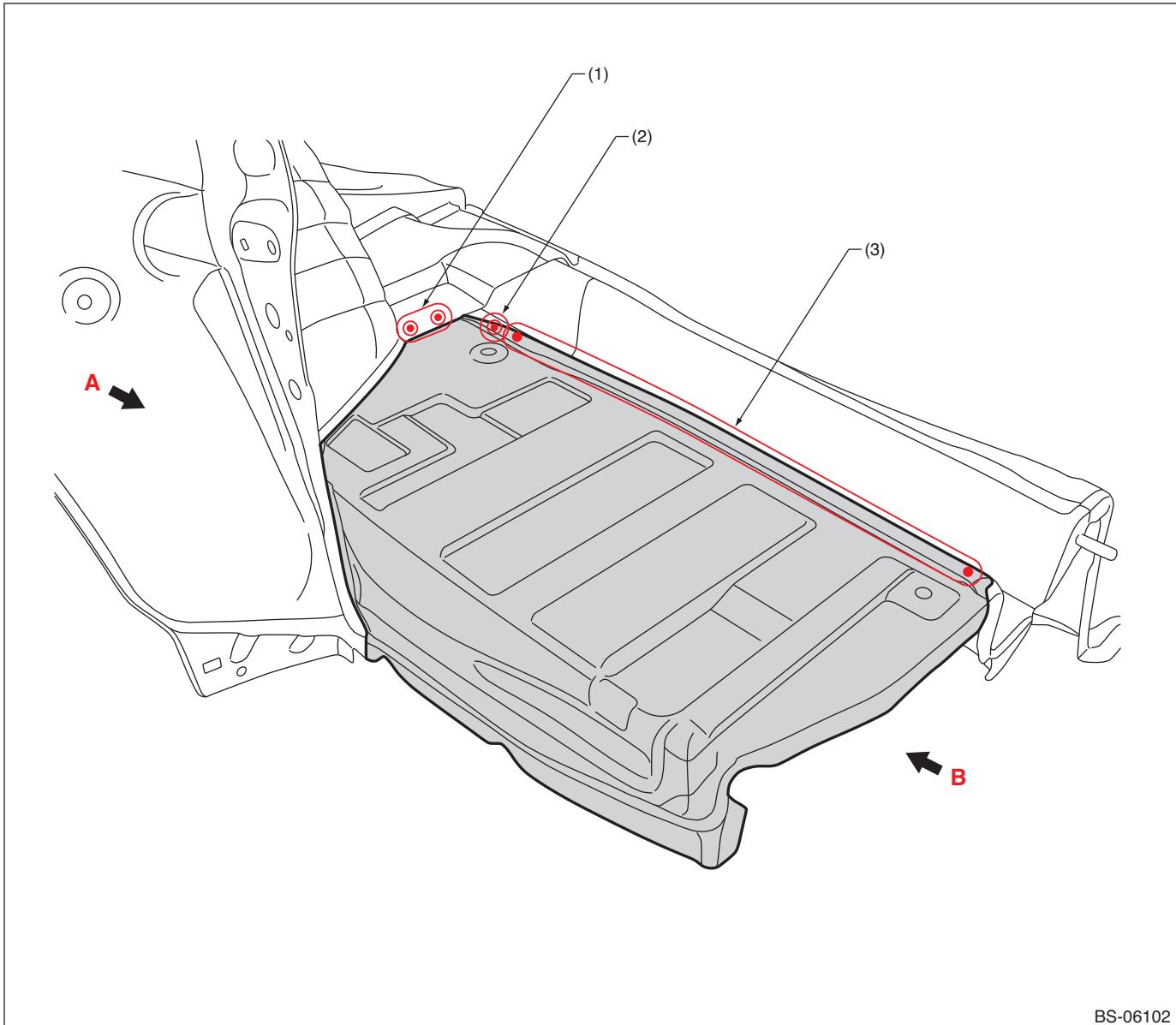
Note: Apply a sealing agent to the floor pan panel fitting parts of part "a".

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

8-18. Rear Floor Side (total replacement)

A: REMOVAL

- Overall view (Rear skirt, rear quarter and rear side frame upper rear removal condition)



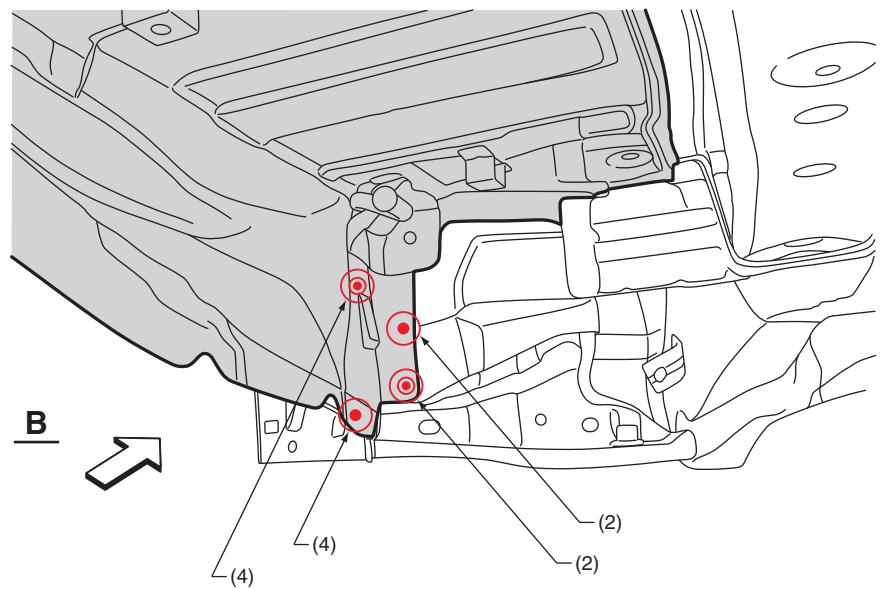
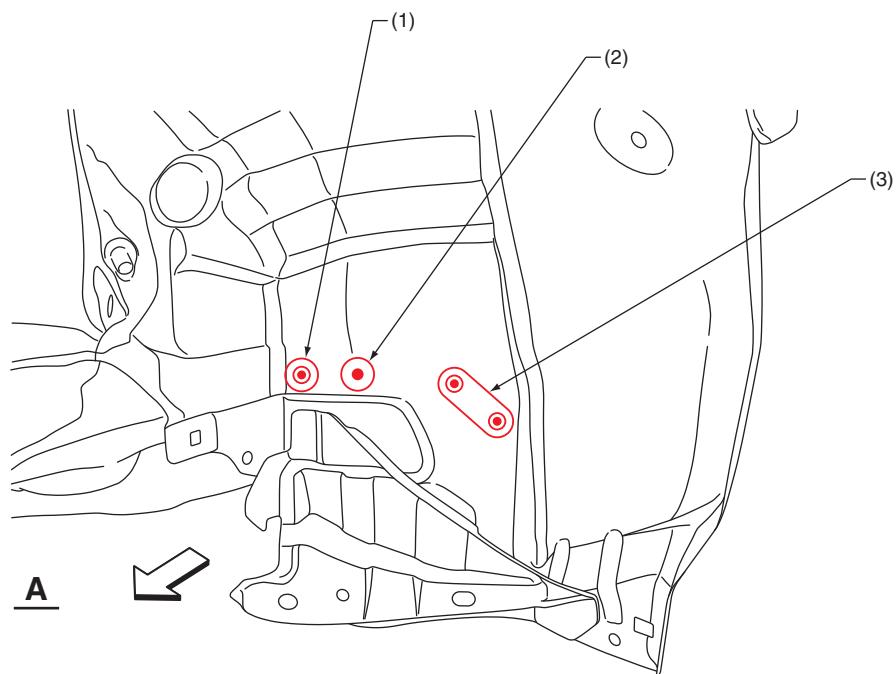
(1) 2 points (top · 2)

(2) 1 point (top · 1)

(3) 10 points (top · 1)

Panel Replacement

• Views



BS-06103

(1) 1 point (outside · 2)
(2) 1 point (outside · 1)

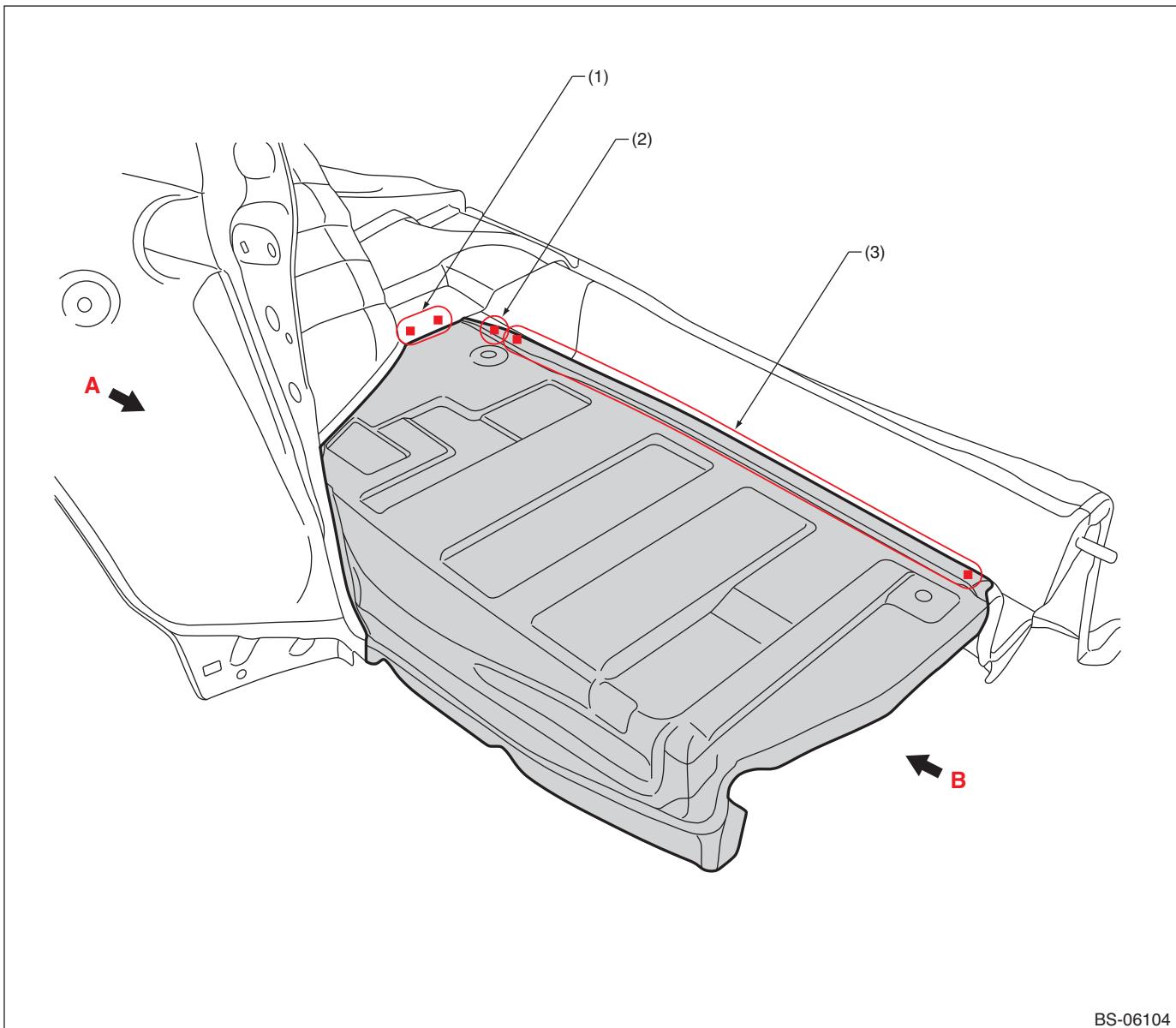
(3) 2 points (outside · 1)

(4) 1 point (inside · 1)

Panel Replacement

B: INSTALLATION

• Overall view



BS-06104

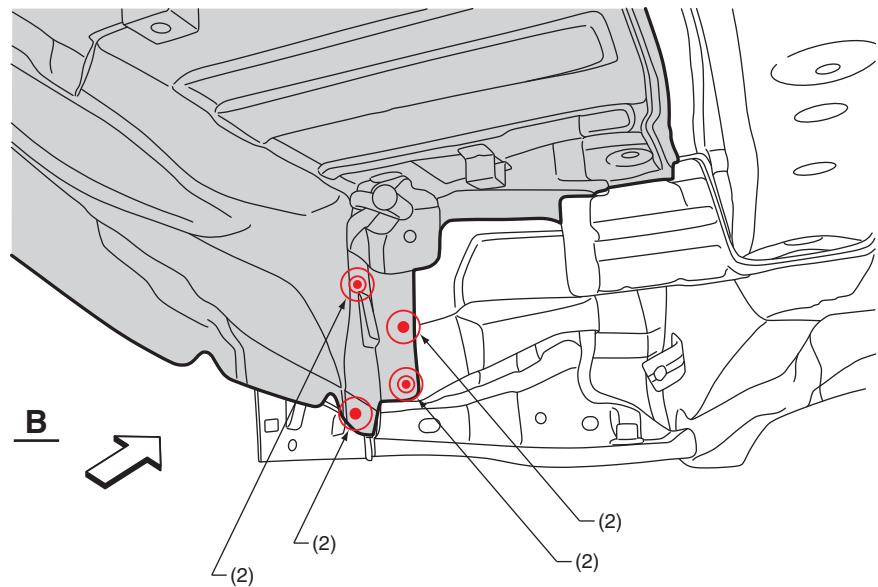
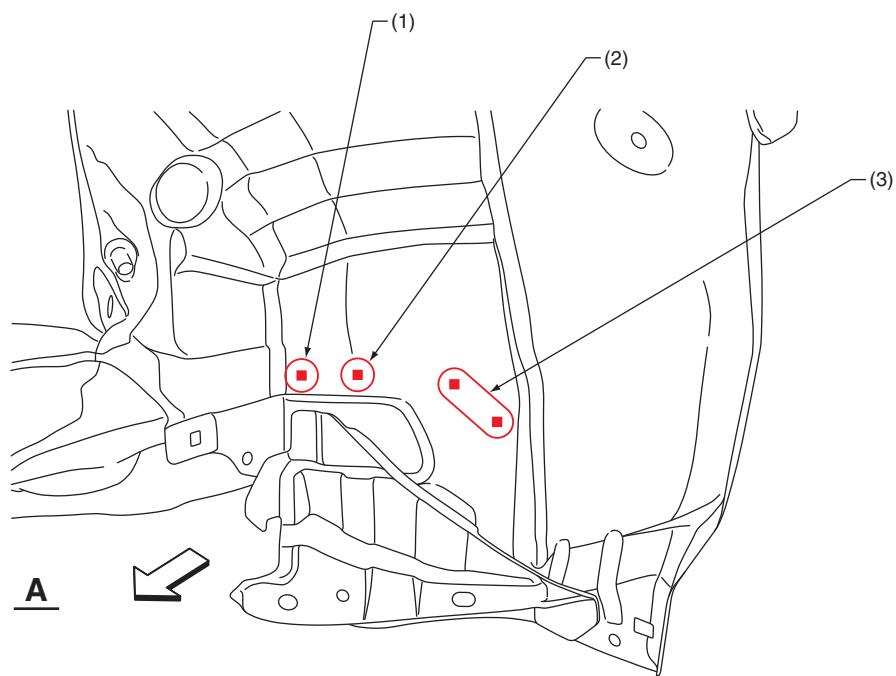
(1) 2 points (service · matching)

(2) 1 point (service)

(3) 10 points (service)

Panel Replacement

• Views



BS-06105

(1) 1 point (service · matching)

(2) 1 point

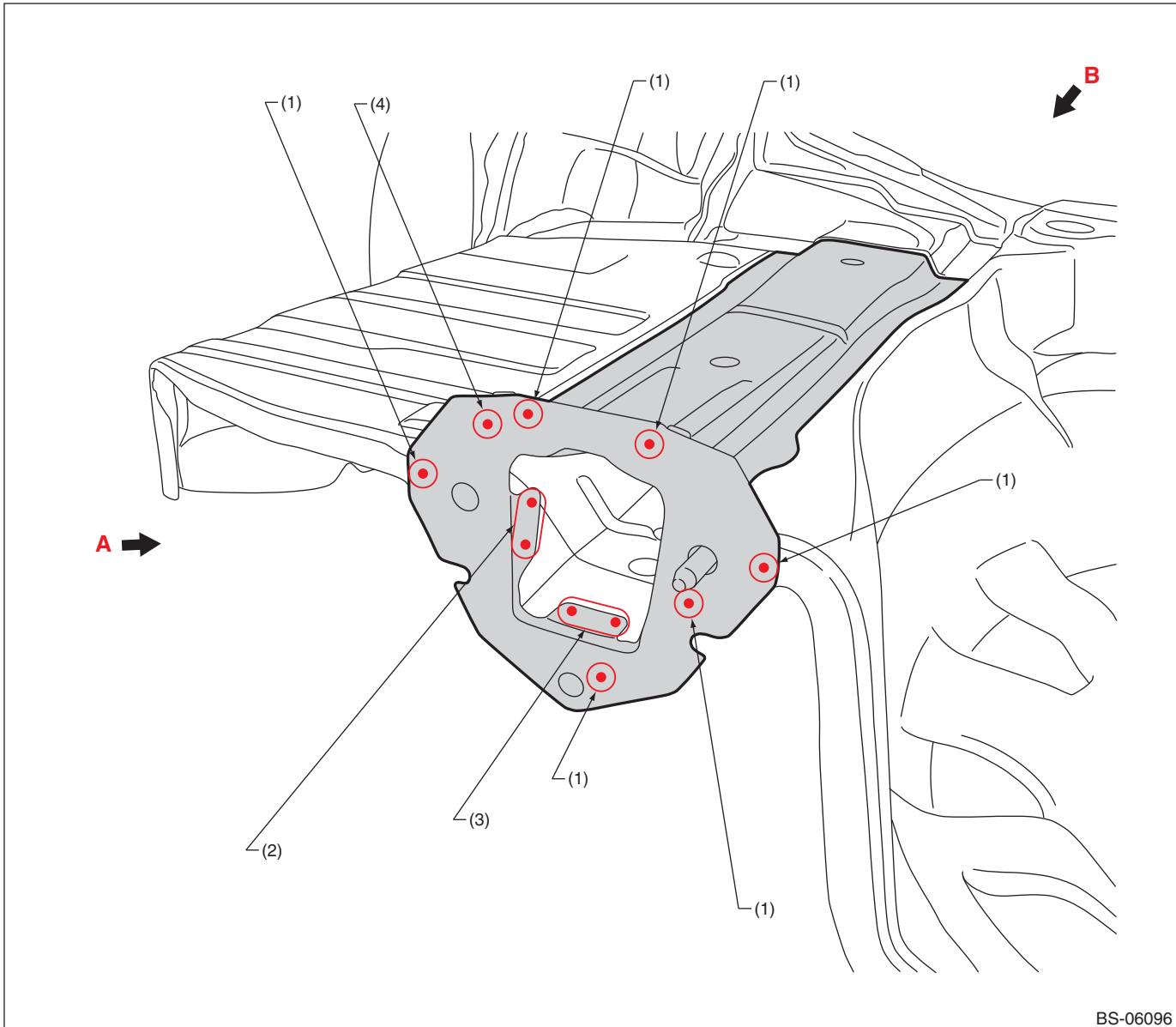
(3) 2 points

Panel Replacement

8-19. Rear Side Frame Upper Rear (total replacement)

A: REMOVAL

- Overall view (Rear skirt removal condition)



(1) 1 point (outside · 1)

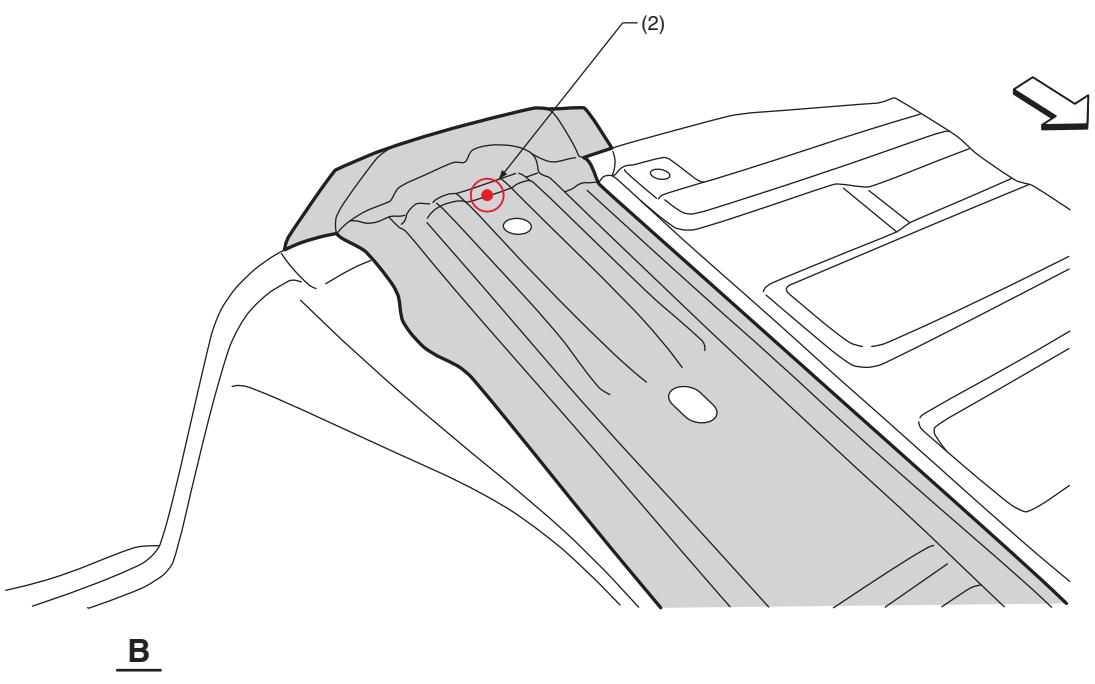
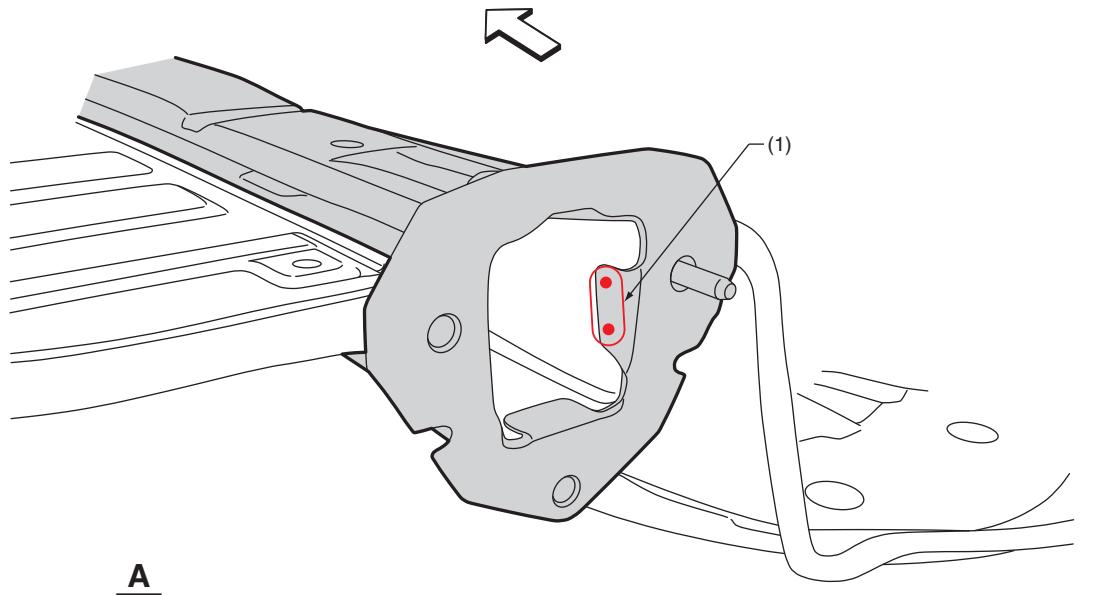
(2) 2 points (outside · 1)

(3) 2 points (bottom · 1)

(4) 1 point (outside · 1) (only LH)

Panel Replacement

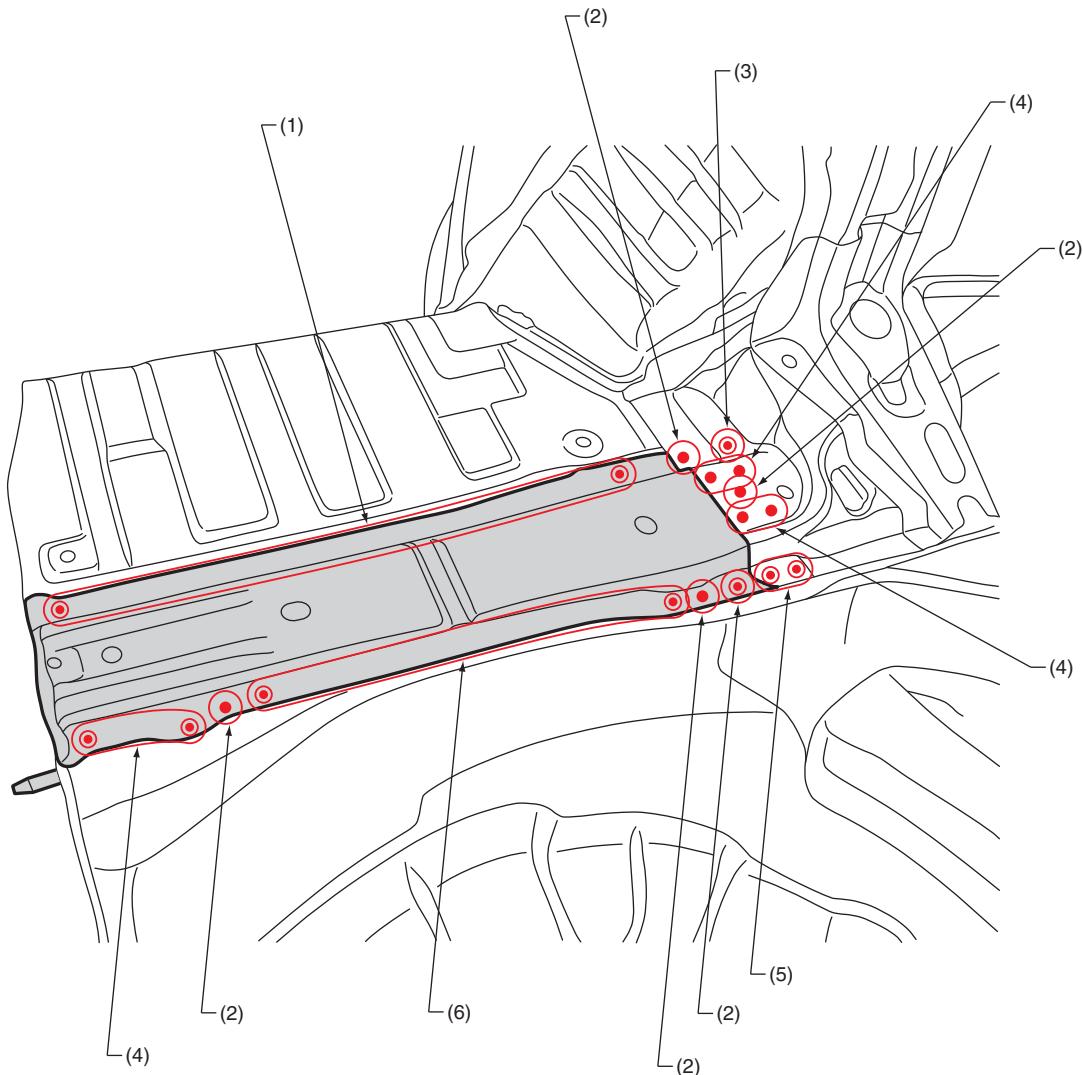
• Views



BS-06097

(1) 2 points (outside · 1, belt sander) (2) 1 point (inside · 1)

Panel Replacement



BS-09098

(1) 9 points (top · 1)

(2) 1 point (top · 1)

(3) 1 point (top · 2)

(4) 2 points (top · 1)

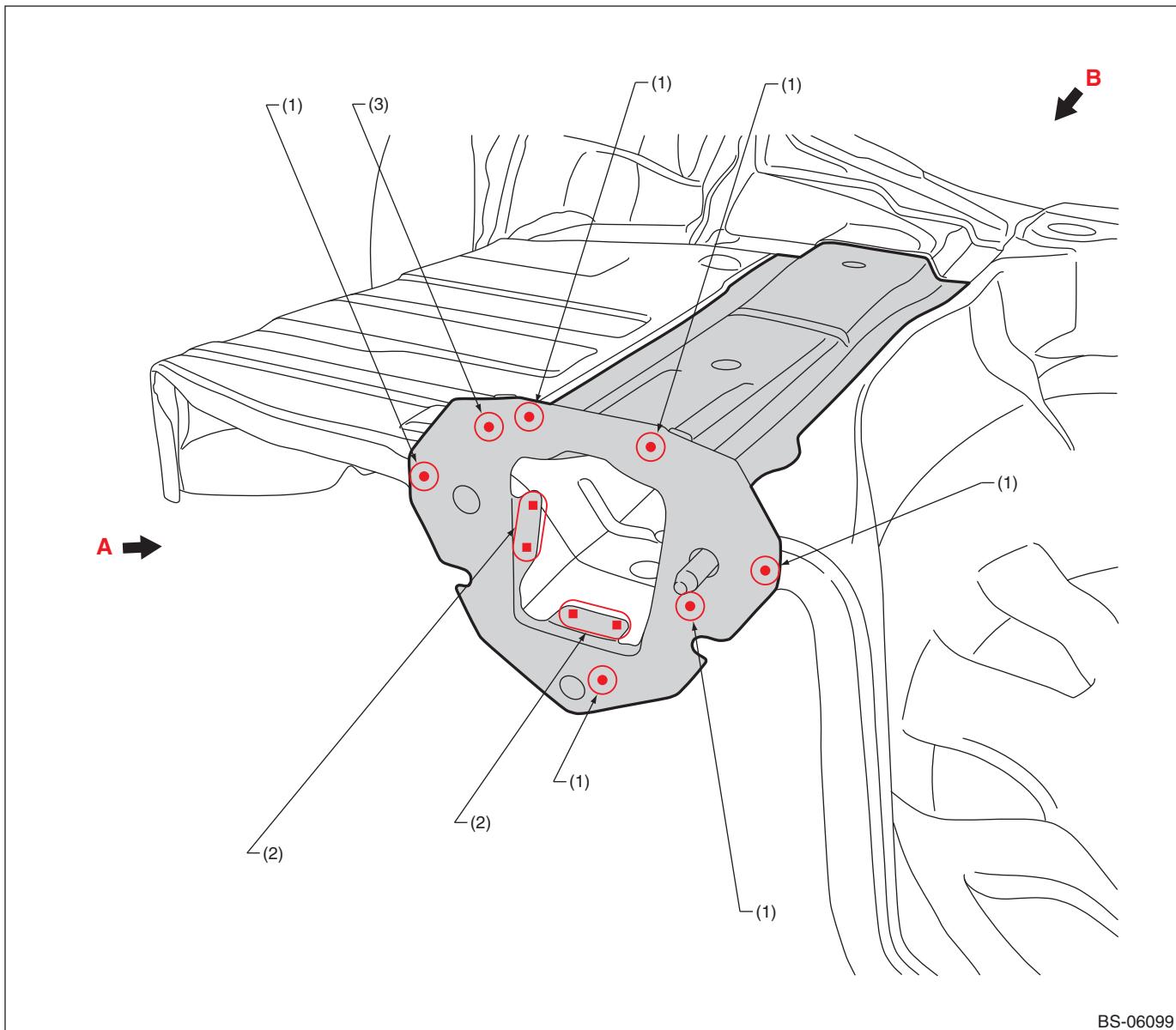
(5) 2 points (top · 2)

(6) 7 points (top · 1)

Panel Replacement

B: INSTALLATION

- Overall view



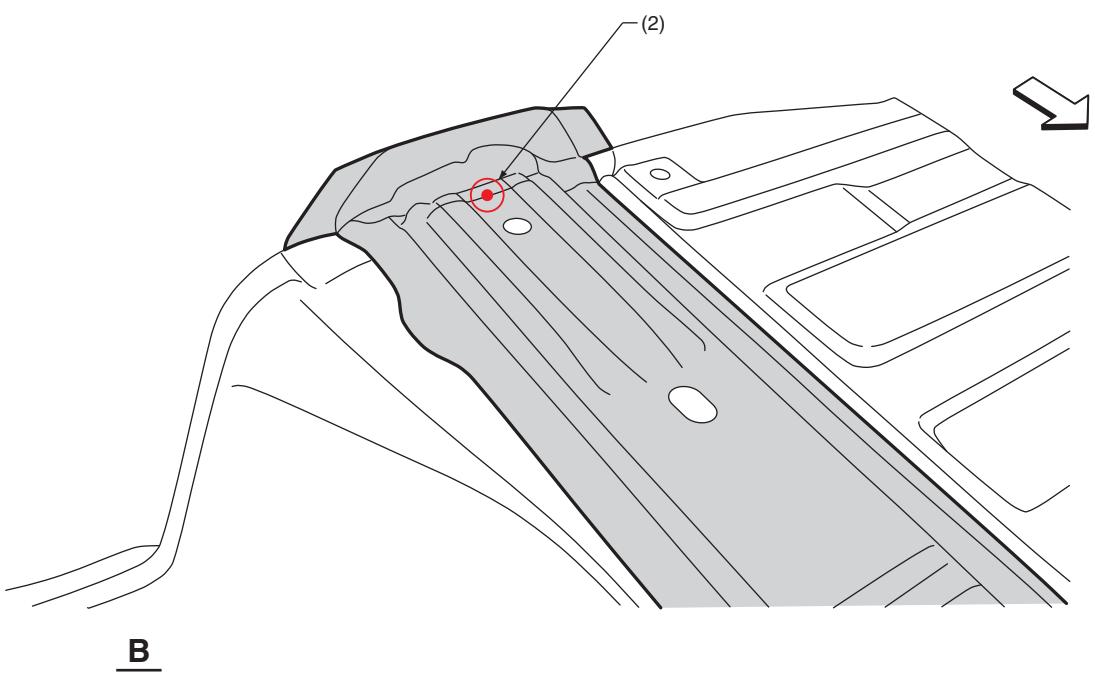
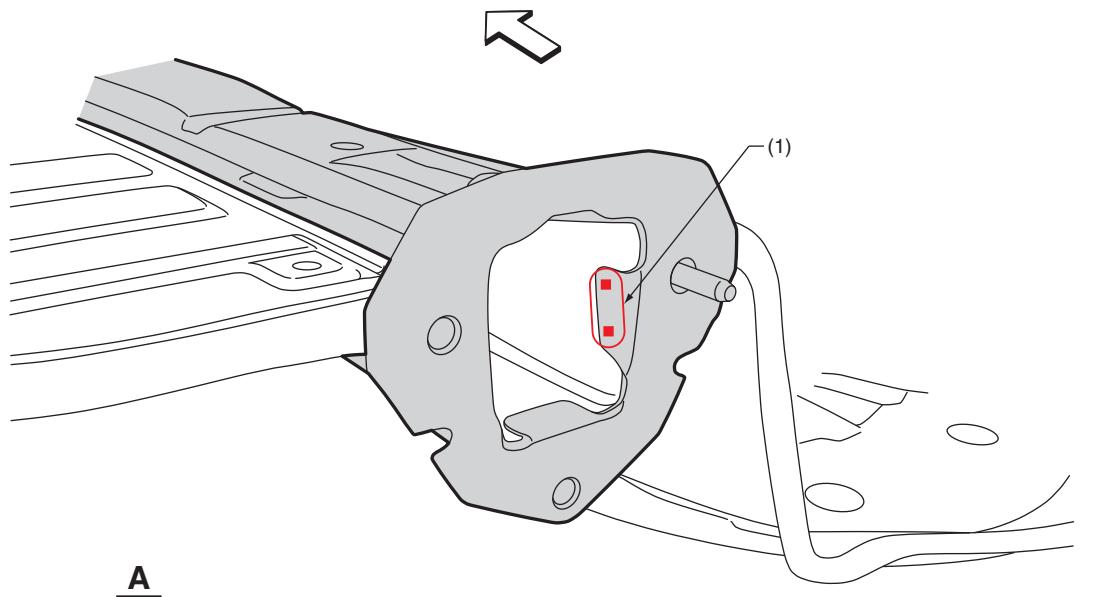
(1) 1 point

(2) 2 points

(3) 1 point (only LH)

Panel Replacement

• Views

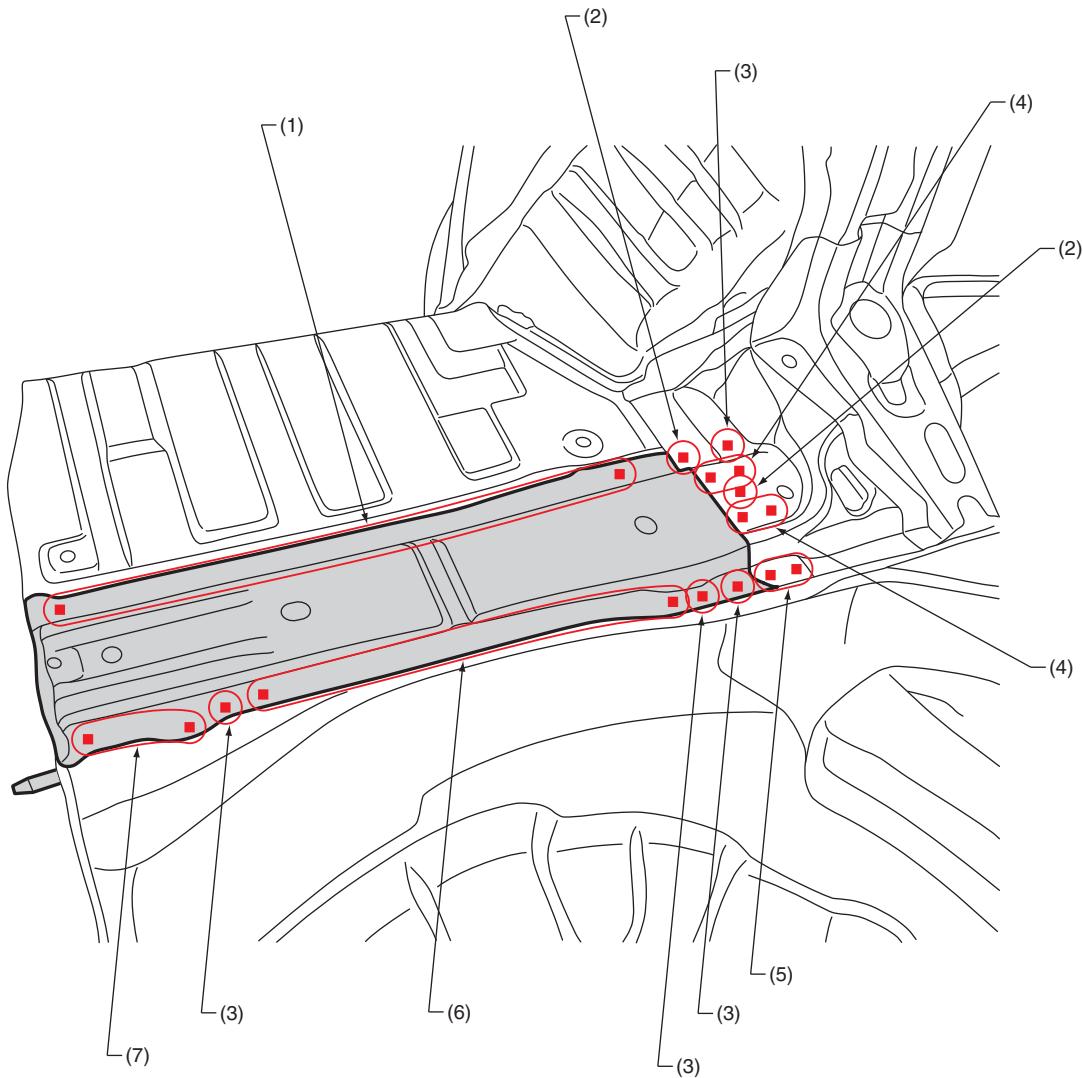


(1) 2 points (service)

(2) 1 point

BS-06100

Panel Replacement



BS-06101

(1) 9 points (service)

(2) 1 point

(3) 1 point (service)

(4) 2 points

(5) 2 points (service · matching)

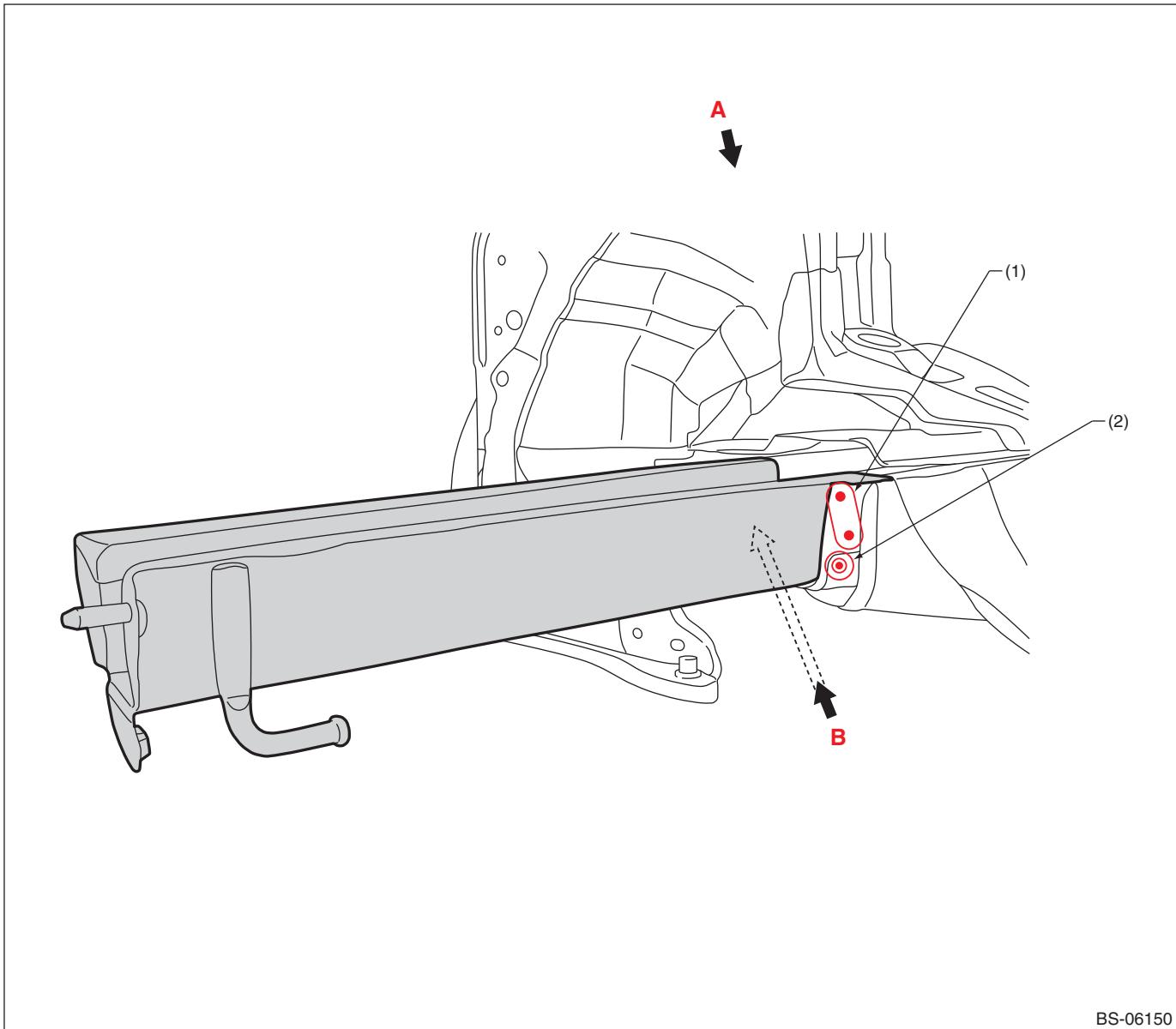
(6) 7 points (service)

(7) 2 points (service)

8-20. Rear Side Frame Lower Rear (total replacement)

A: REMOVAL

- Overall view (Rear skirt, rear side frame upper rear, rear floor pan, rear floor side and rear quarter panel outer removal condition)

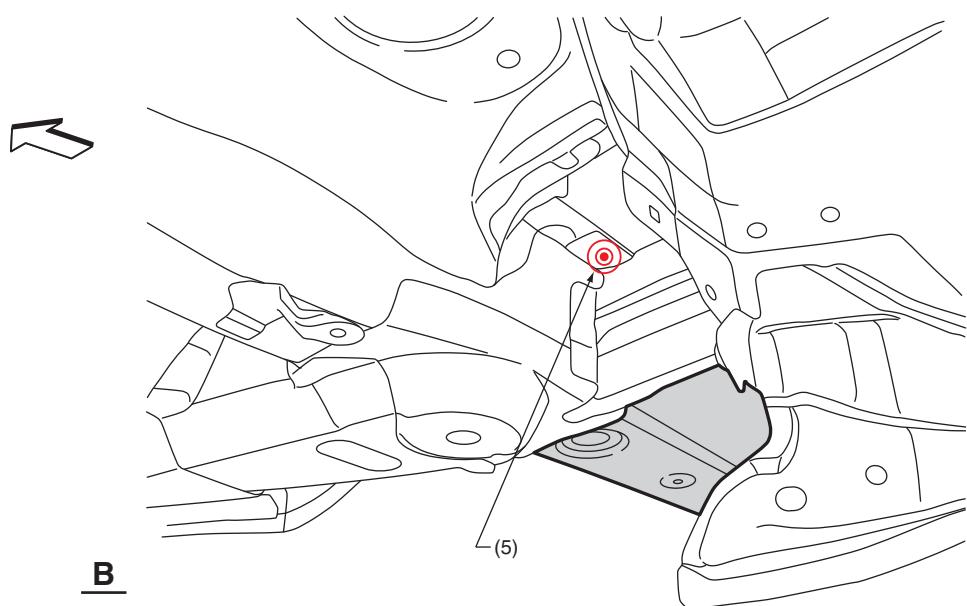
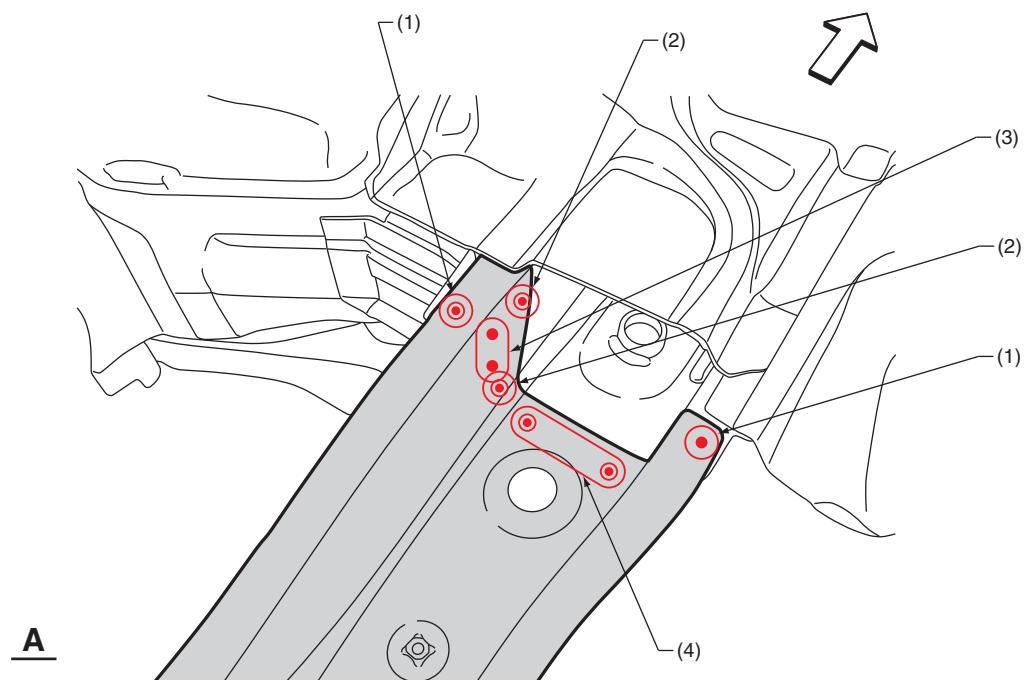


(1) 2 points (inside · 1)

(2) 1 point (inside · 2)

Panel Replacement

• Views



BS-09229

(1) 1 point (top · 1)

(2) 1 point (inside · 1, belt sander)

(3) 2 points (inside · 1 belt sander)

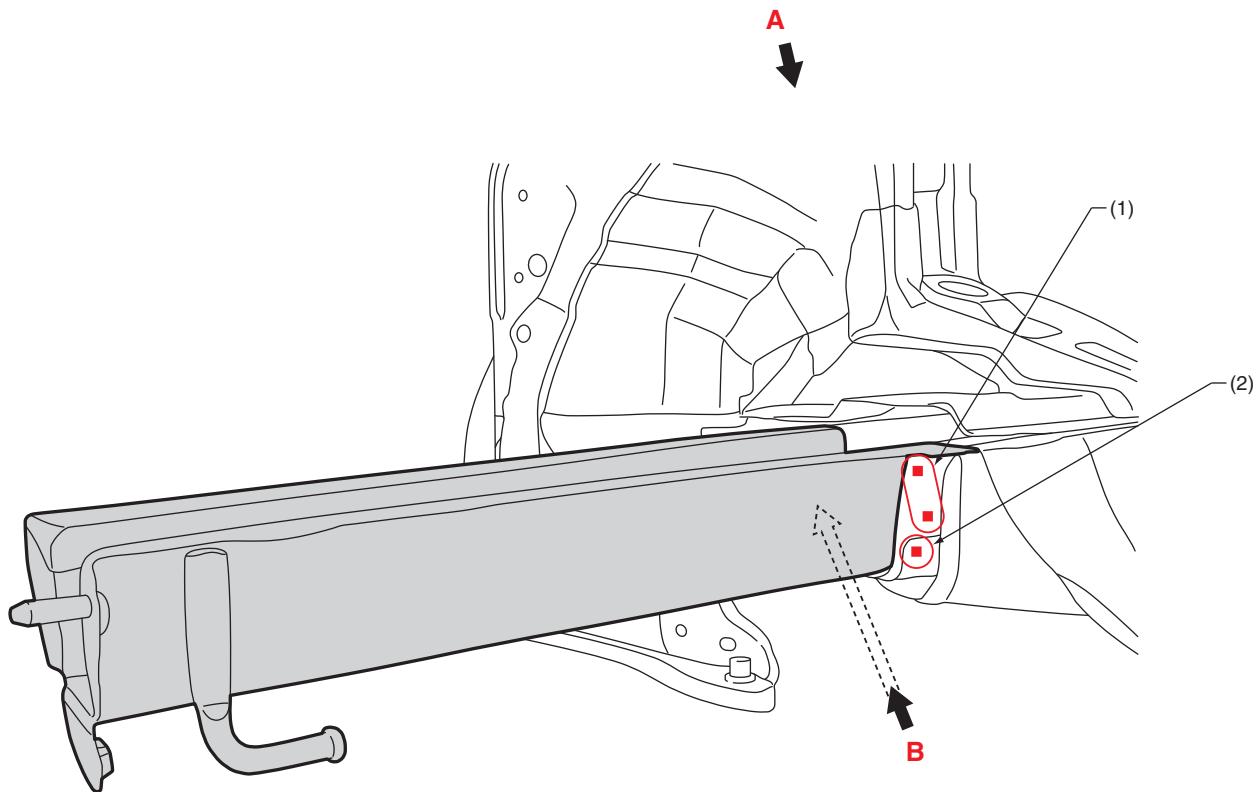
(4) 3 points (top · 1)

(5) 1 point (bottom · 2)

Panel Replacement

B: INSTALLATION

- Overall view



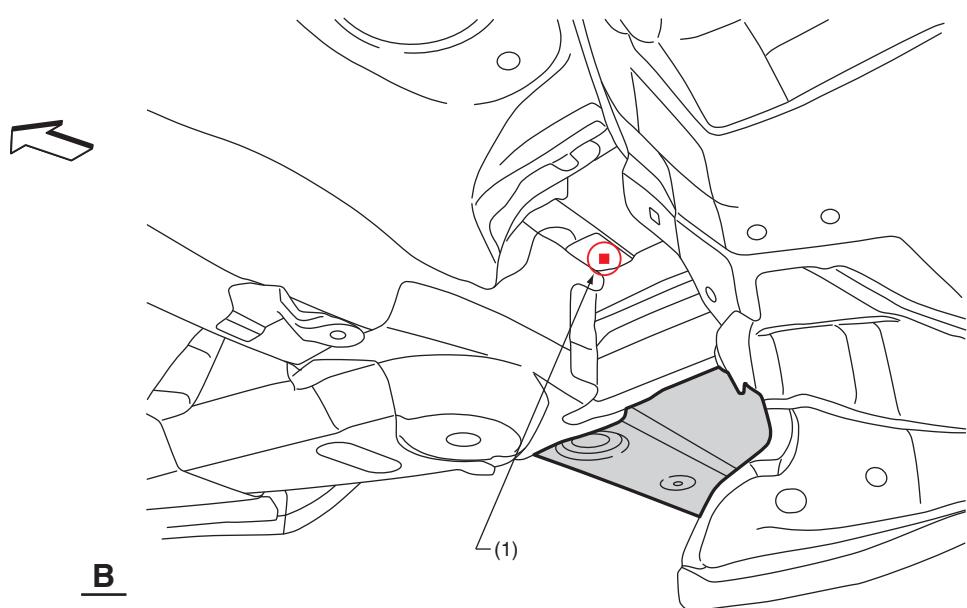
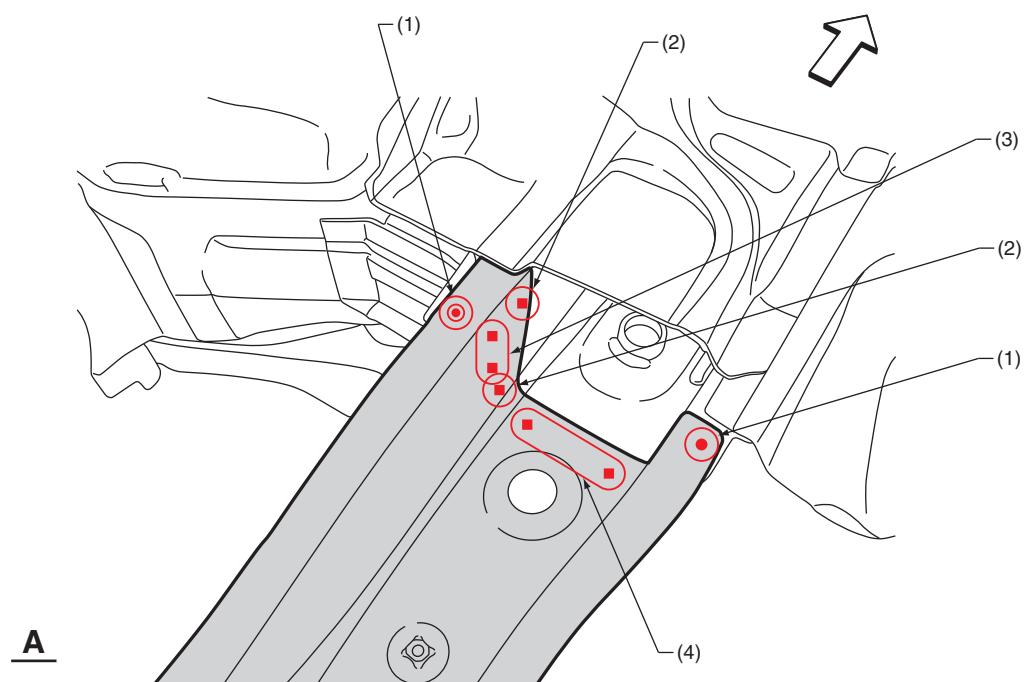
BS-06152

(1) 2 points

(2) 1 point

Panel Replacement

• Views



BS-09230

(1) 1 point

(3) 2 points (service)

(4) 3 points (service)

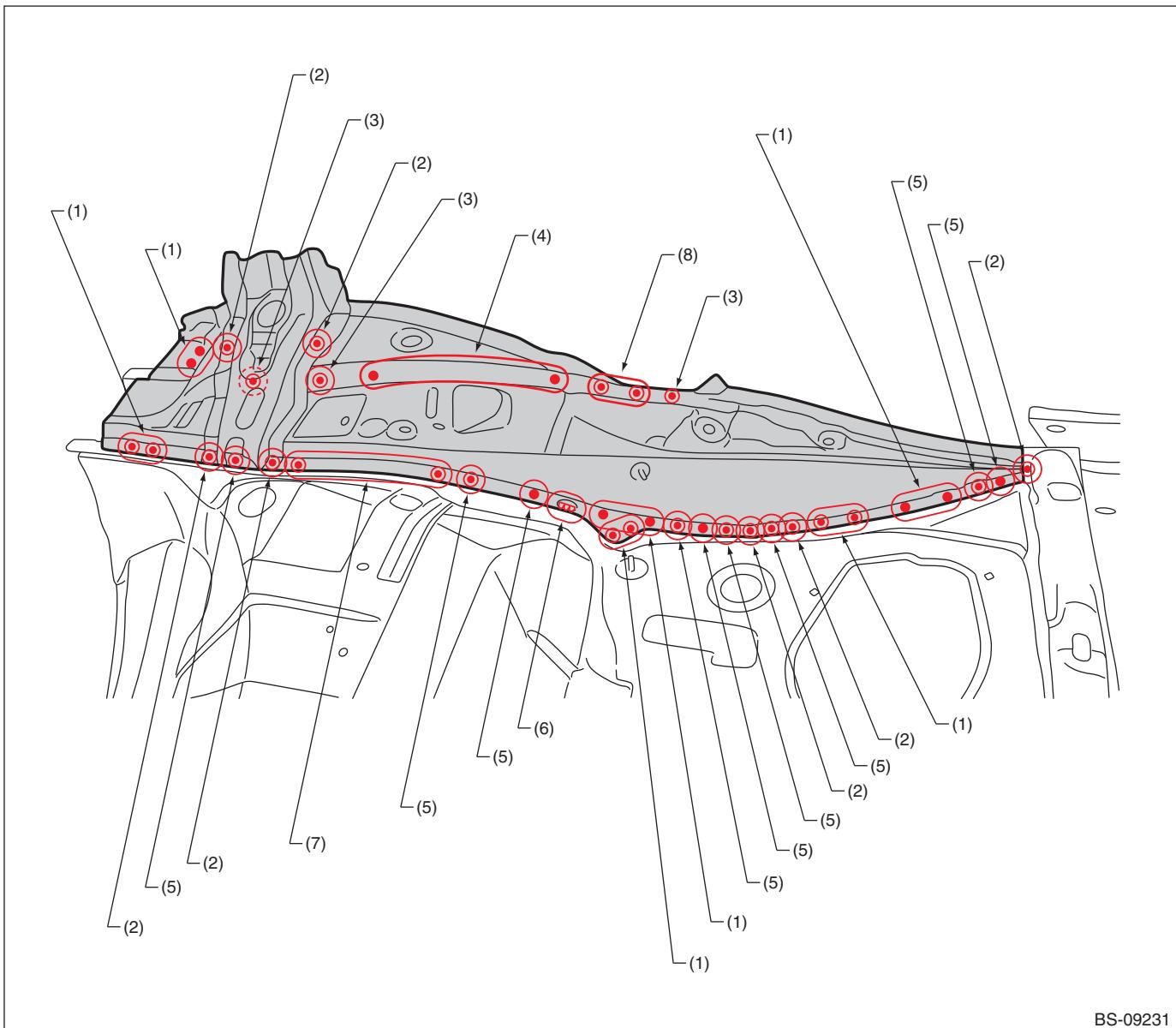
(2) 1 point (service)

Panel Replacement

8-21. Closing Plate (total replacement)

A: REMOVAL

- Rear skirt, rear floor pan, rear side frame rear, quarter panel outer & inner and side sill inner rear removal condition

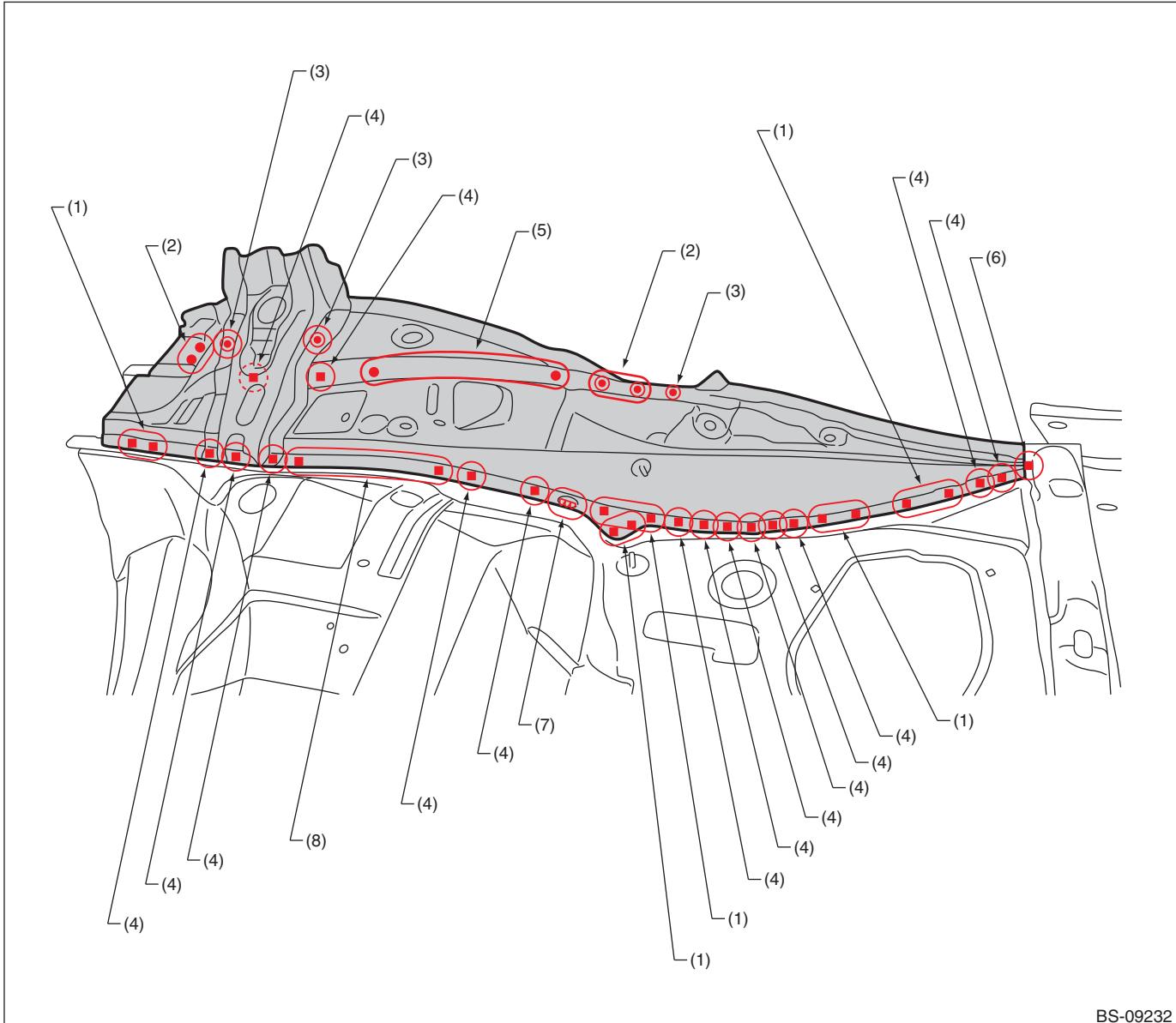


BS-09231

(1) 2 points (top · 1)	(4) 6 points (inside · 1)	(7) 5 points (top · 1)
(2) 1 point (top · 2)	(5) 1 point (top · 1)	(8) 2 points (inside · 1)
(3) 1 point (inside · 1)	(6) 1 point (top · 1, belt sander)	

Panel Replacement

B: INSTALLATION

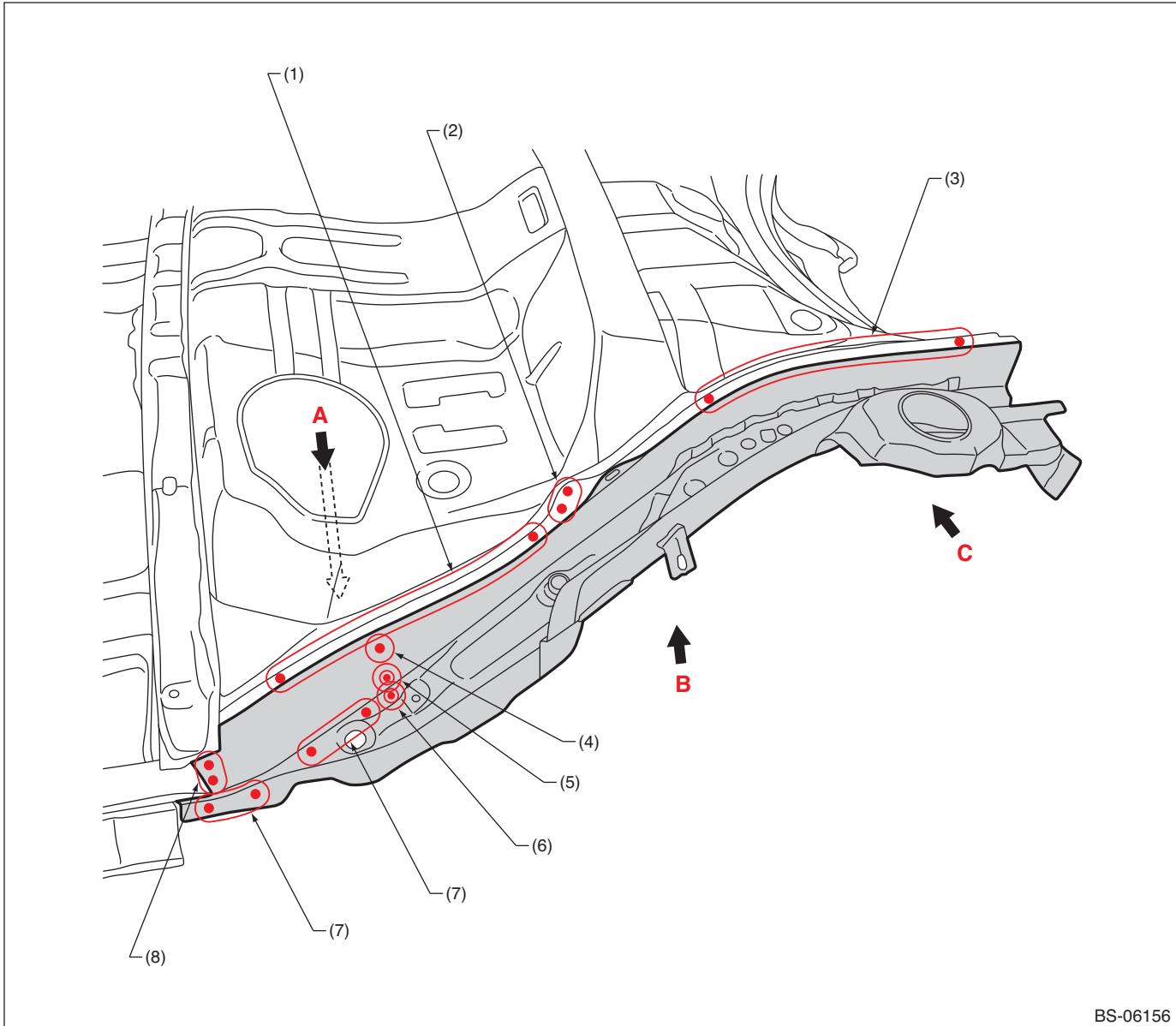


(1) 2 points (service)	(4) 1 point (service)	(7) 1 point [15 mm (0.59 in)]
(2) 2 points	(5) 6 points	(8) 5 points (service)
(3) 1 point	(6) 1 point (service · matching)	

8-22. Rear Frame (total replacement)

A: REMOVAL

- Overall view (Rear skirt, rear floor pan, rear side frame rear, rear quarter panel outer & inner, side sill inner rear and closing plate removal condition)



BS-06156

(1) 6 points (top · 1)

(2) 2 points (top · 1)

(3) 8 points (top · 1)

(4) 1 point (outside · 1)

(5) 1 point (outside · 2)

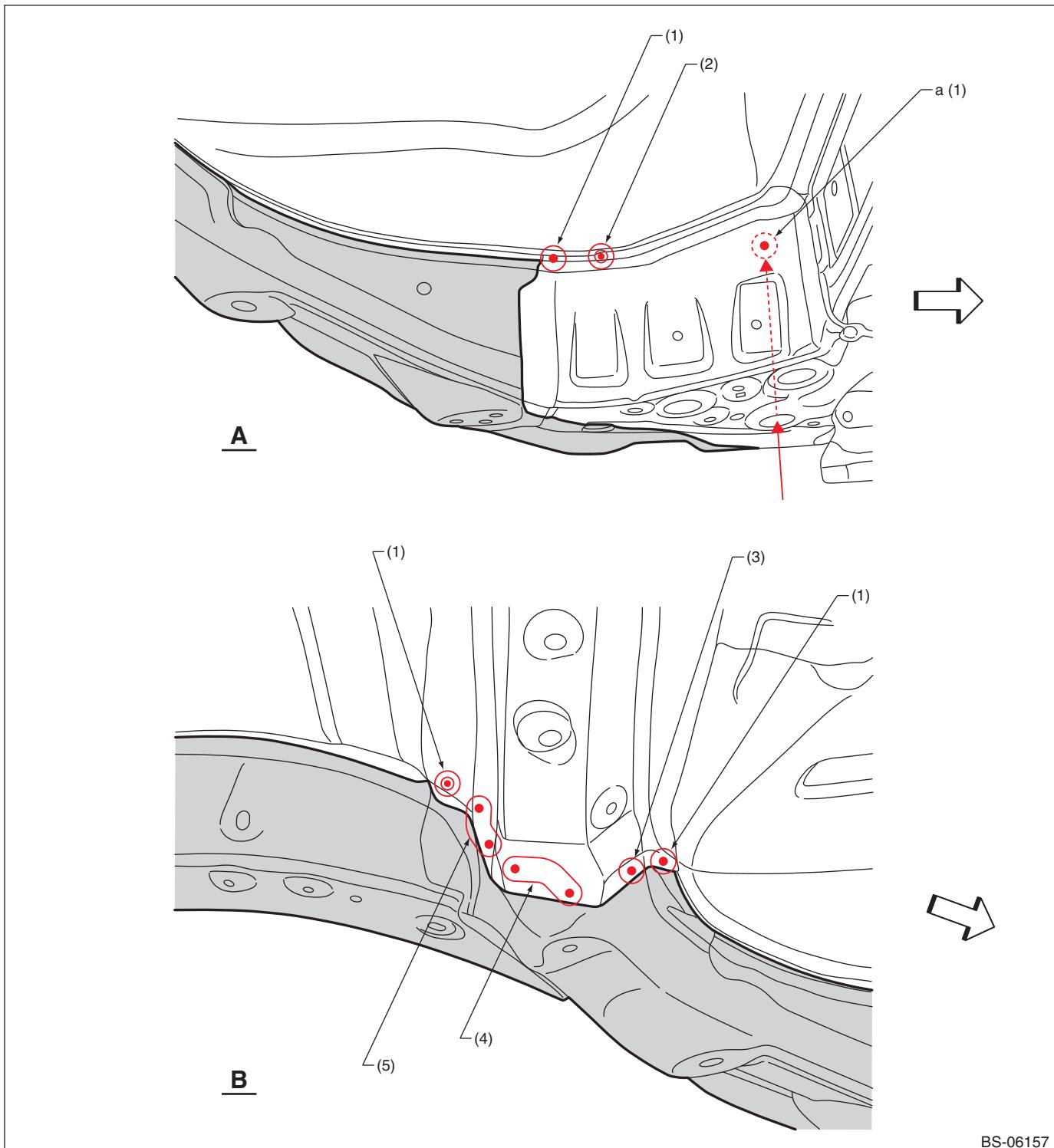
(6) 1 point (top · 2)

(7) 3 points (top · 1)

(8) 2 points (outside · 1)

Panel Replacement

• Views 1



(1) 1 point (bottom · 1)

(2) 1 point (top · 1, bottom · 1)

(3) 1 point (inside · 1)

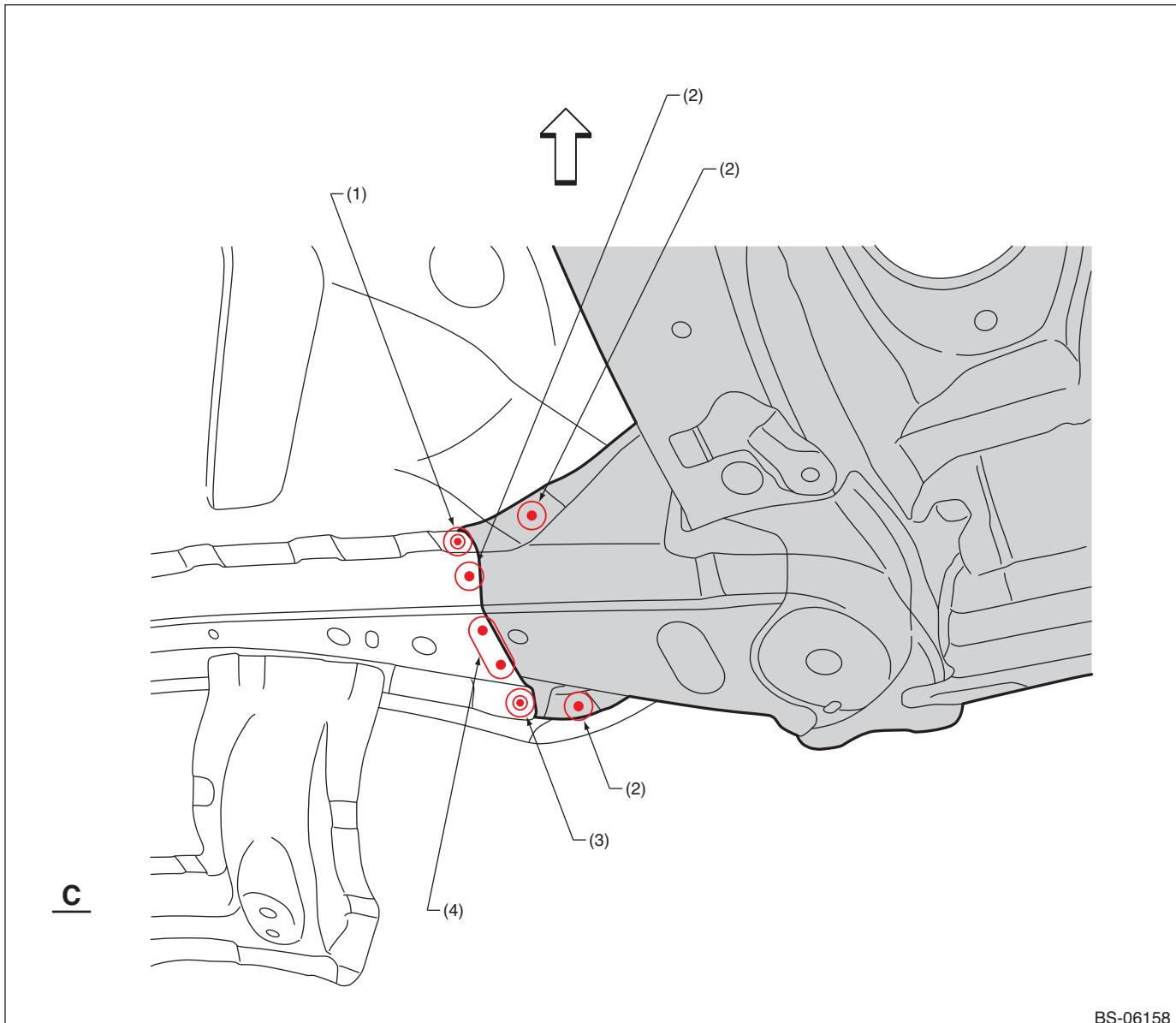
(4) 3 points (bottom · 1)

(5) 3 points (outside · 1)

Note: Remove part "a" with a long spot cutter inserted through the hole indicated by the red arrow.

Panel Replacement

• Views 2



BS-06158

(1) 1 point (top · 1, bottom · 1)
(2) 1 point (inside · 1)

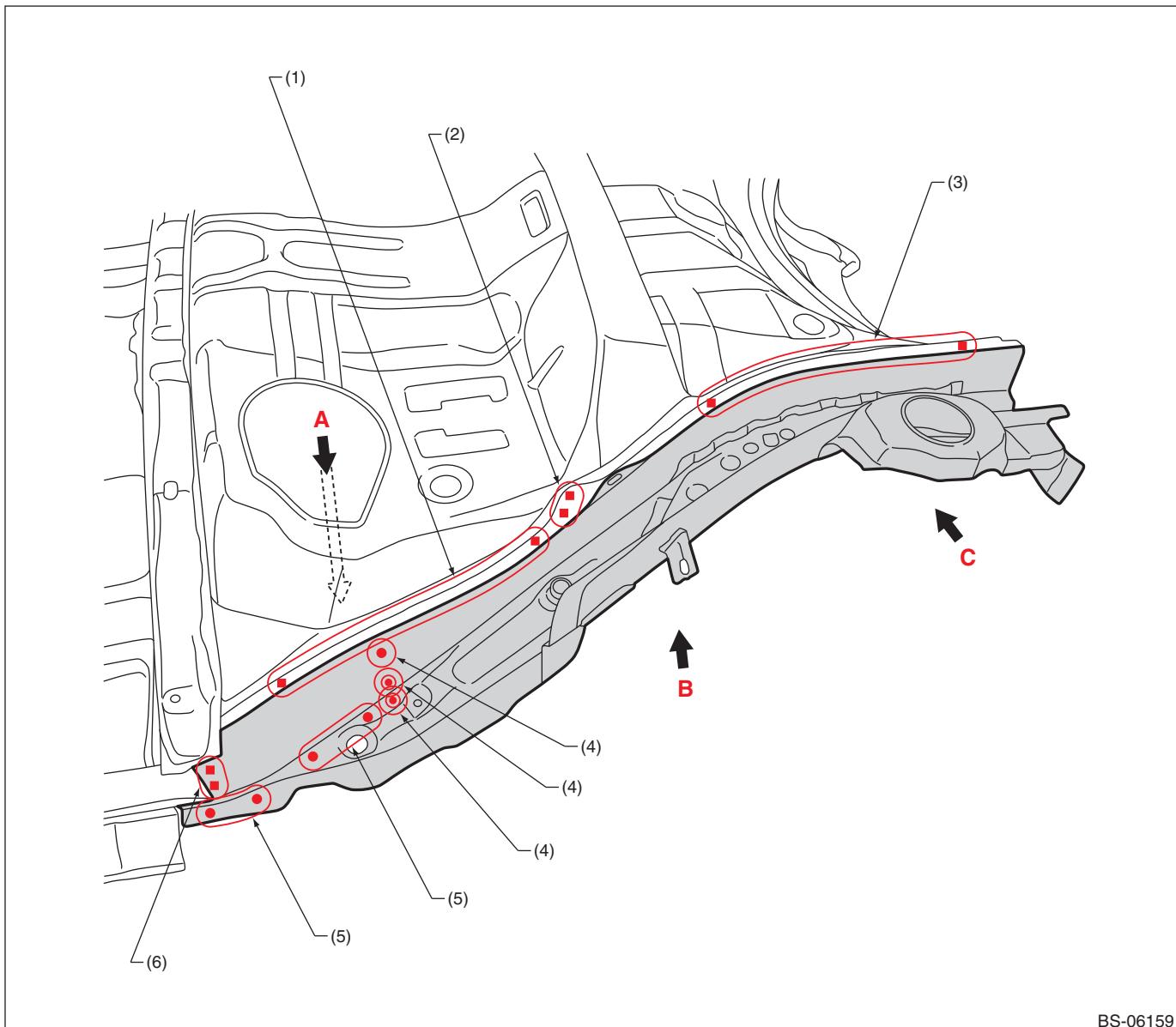
(3) 1 point (outside · 1, inside · 1)

(4) 2 points (bottom · 1)

Panel Replacement

B: INSTALLATION

• Overall view



BS-06159

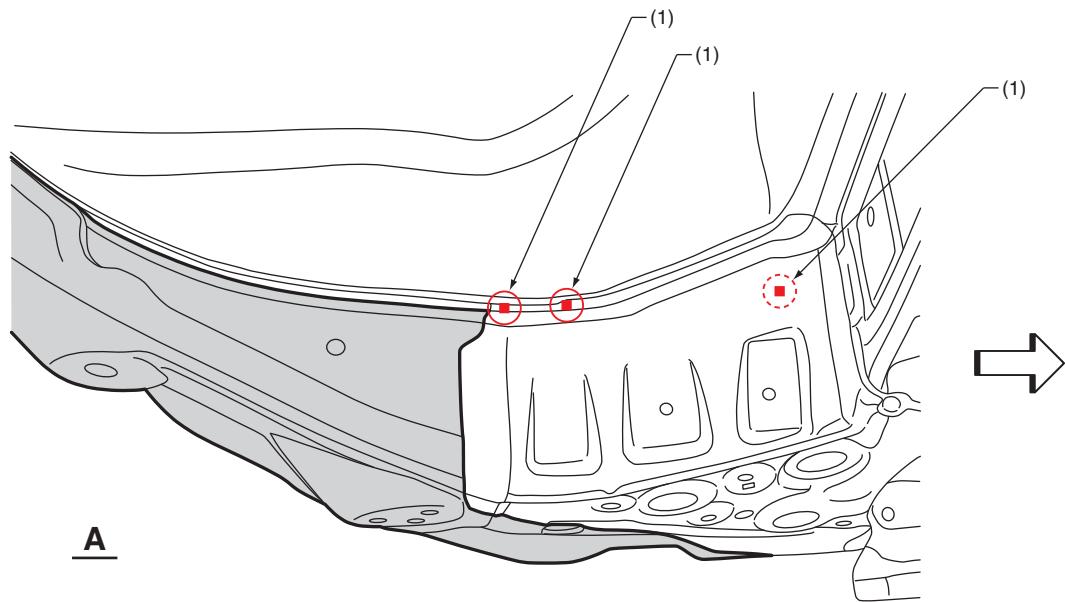
(1) 6 points
(2) 2 points

(3) 8 points
(4) 1 point

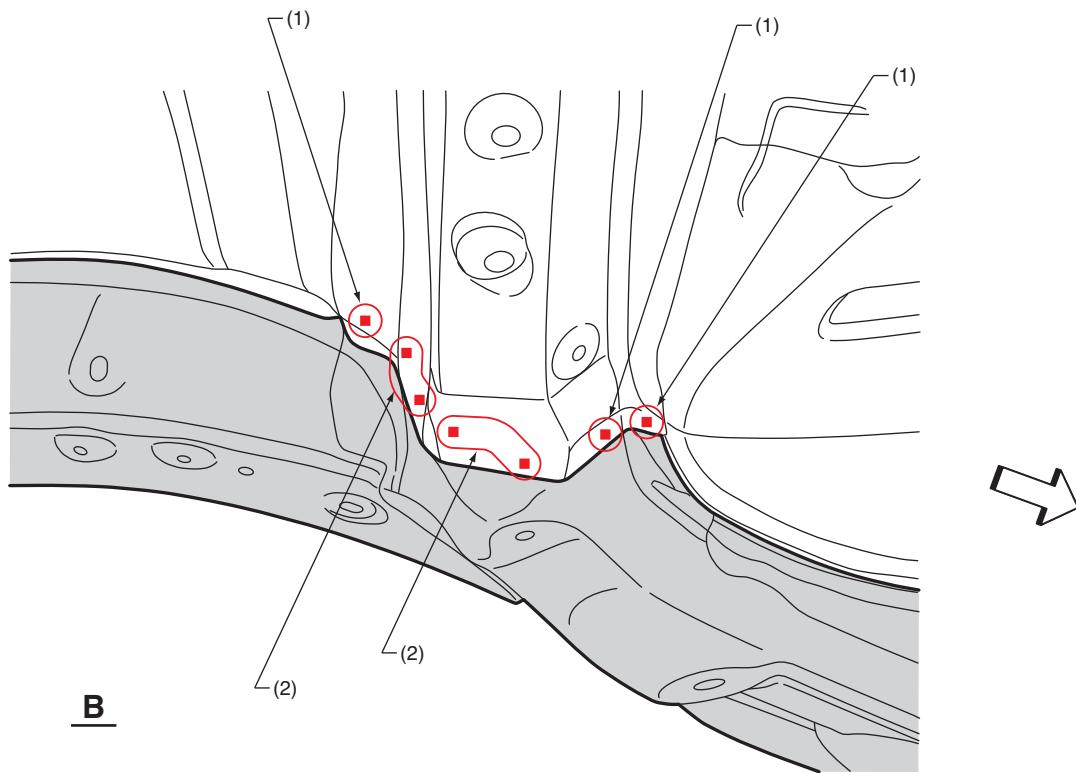
(5) 3 points
(6) 2 points (service)

Panel Replacement

• Views 1



A



B

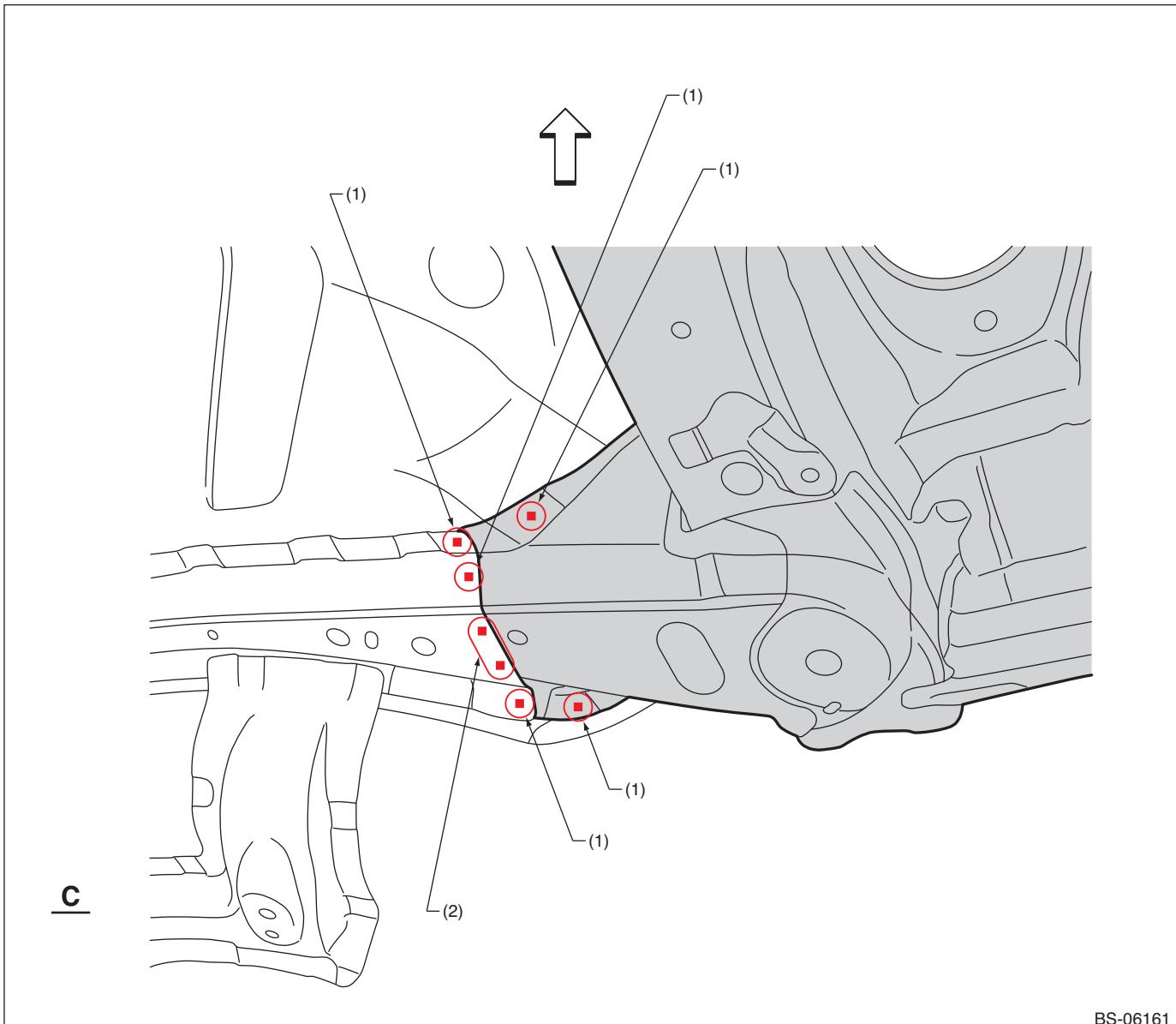
BS-06160

(1) 1 point

(2) 3 points

Panel Replacement

• Views 2



BS-06161

(1) 1 point

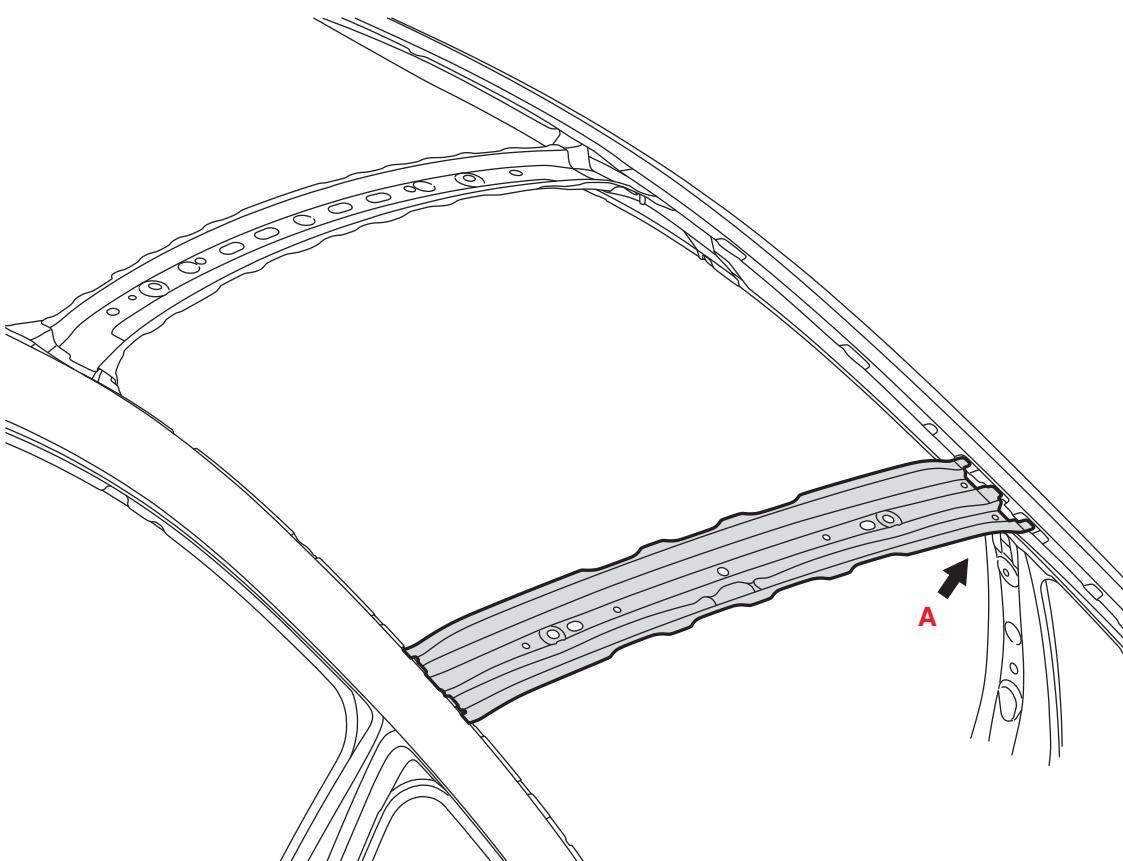
(2) 2 points

Panel Replacement

8-23. Roof Center Brace (total replacement)

A: REMOVAL

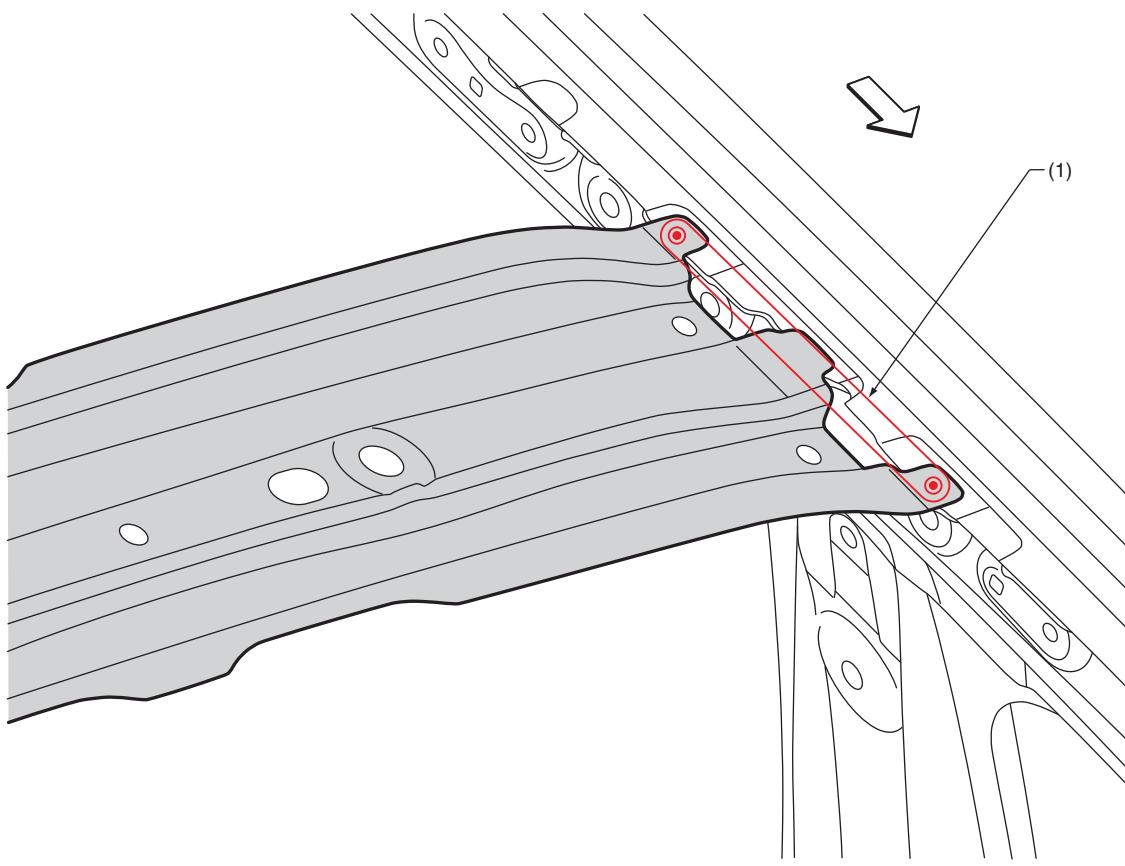
- Overall view (Roof panel removal condition)



BS-06176

Panel Replacement

• Views



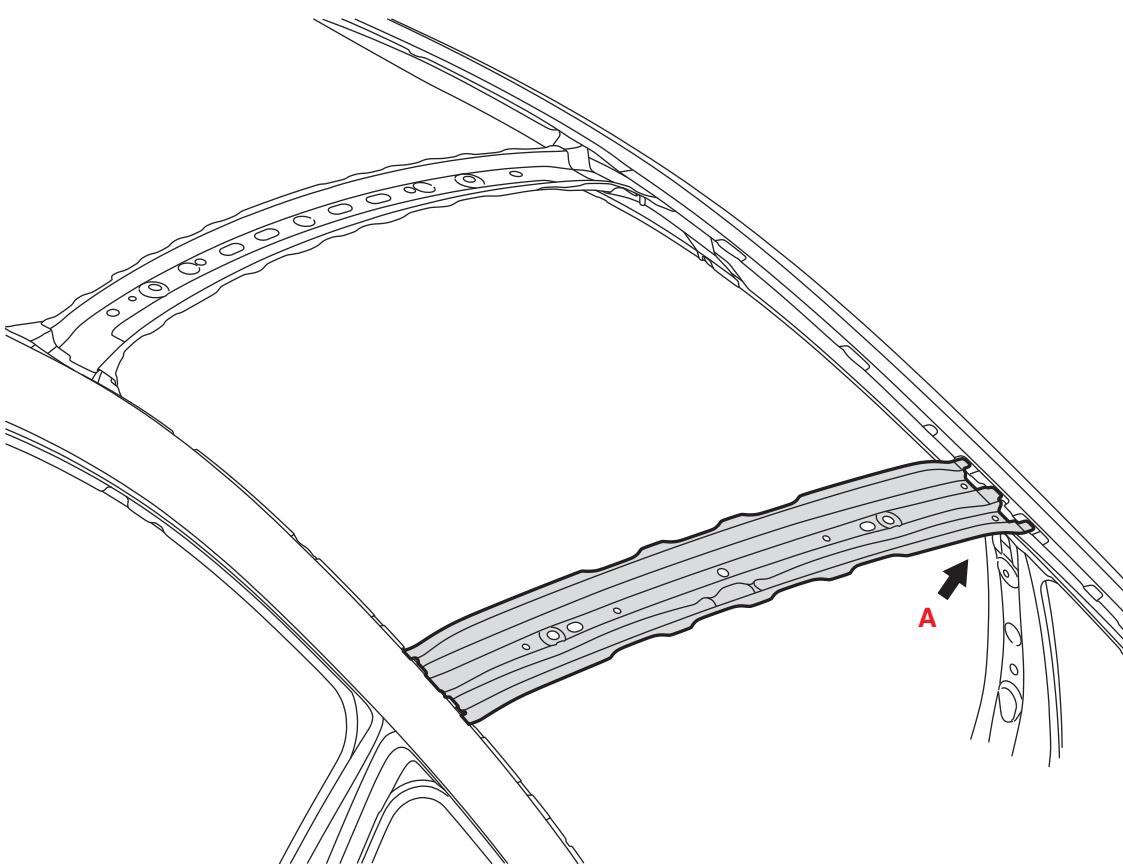
BS-06177

(1) 3 points (top · 1)

Panel Replacement

B: INSTALLATION

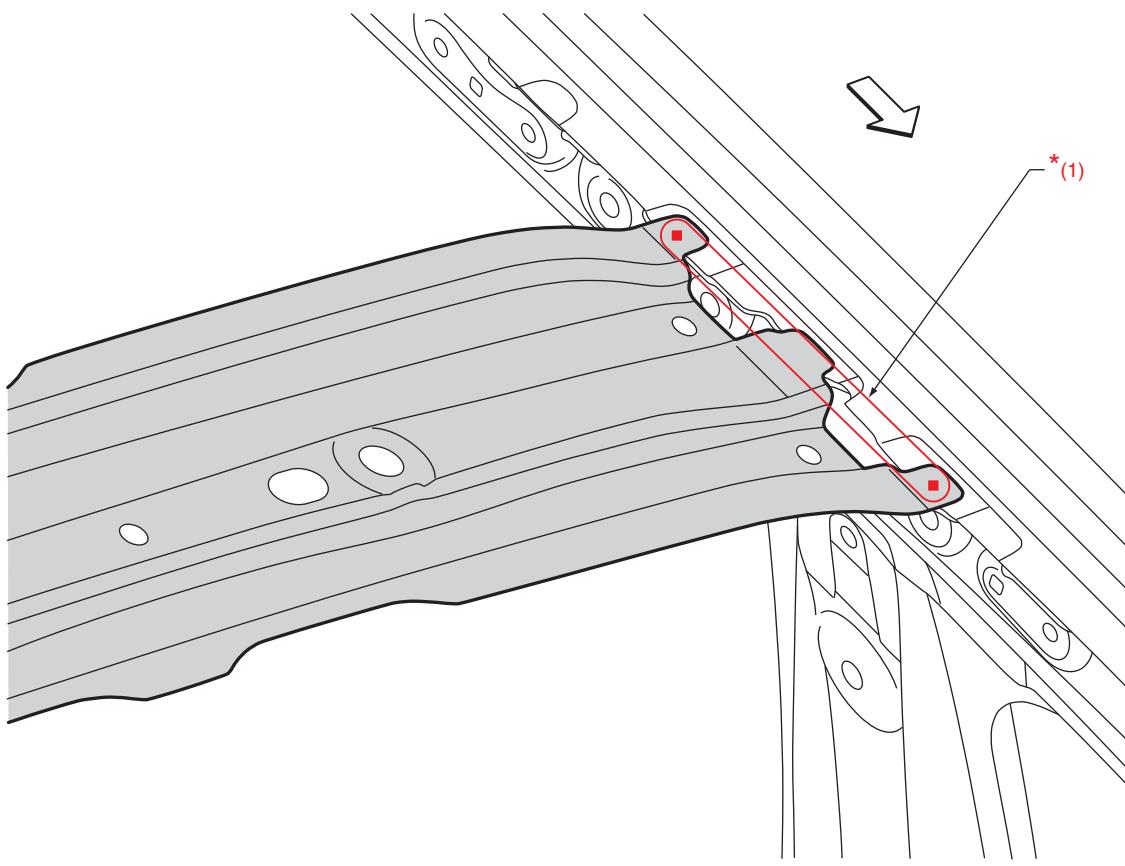
- Overall view



BS-06178

Panel Replacement

• Views



BS-06179

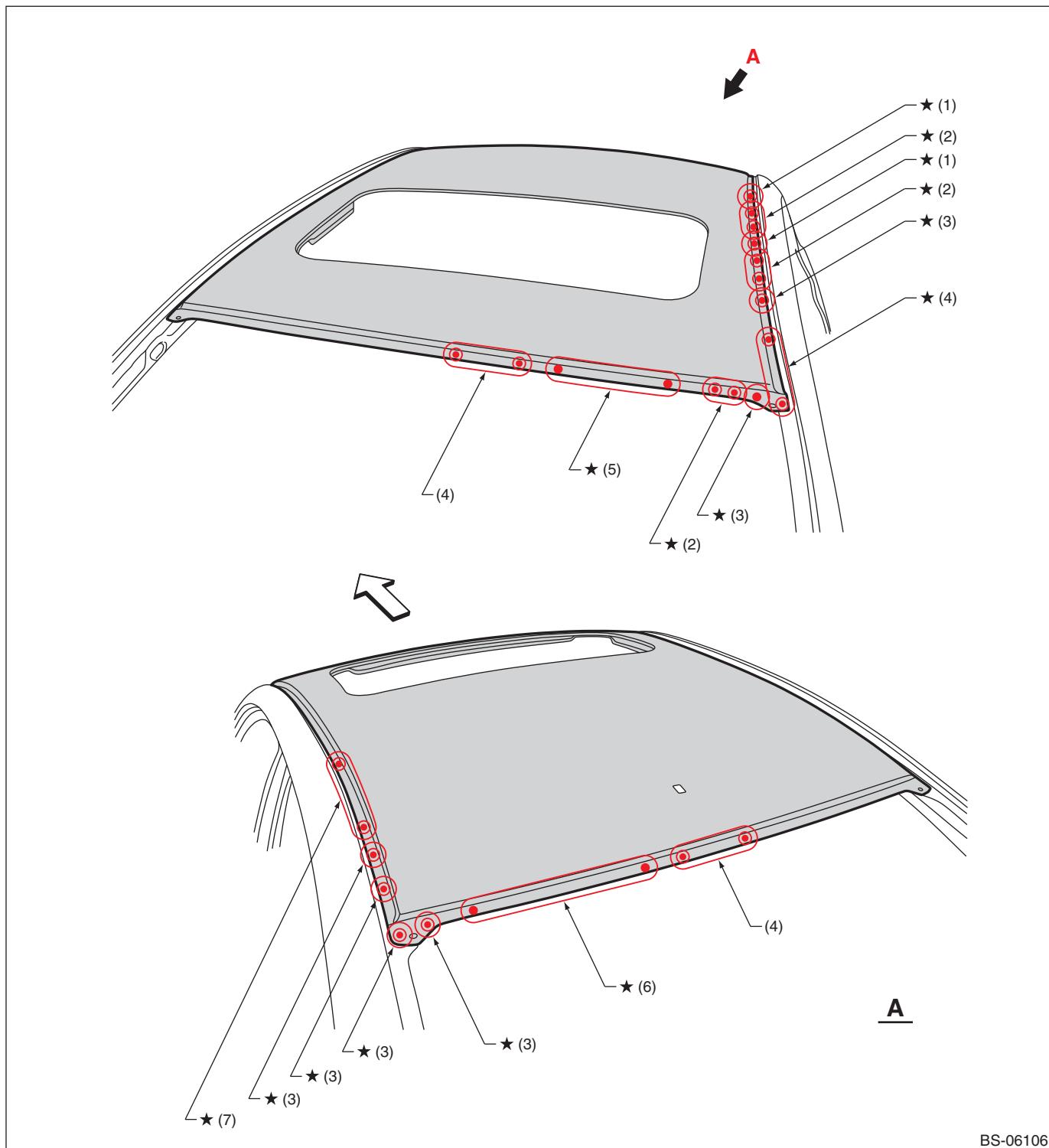
(1) 3 points

*: When plug welding a high-tensile steel sheet of 980 MPa Class or more, refer to "NOTE, Foreword" on page 7.

Panel Replacement

8-24. Roof Panel (total replacement)

A: REMOVAL



BS-06106

(1) 1 point (top · 2)
(only sunroof models)

(2) 2 points (top · 1)

(3) 1 point (top · 1)

(4) 3 points (top · 1)

(5) 4 points (top · 1)

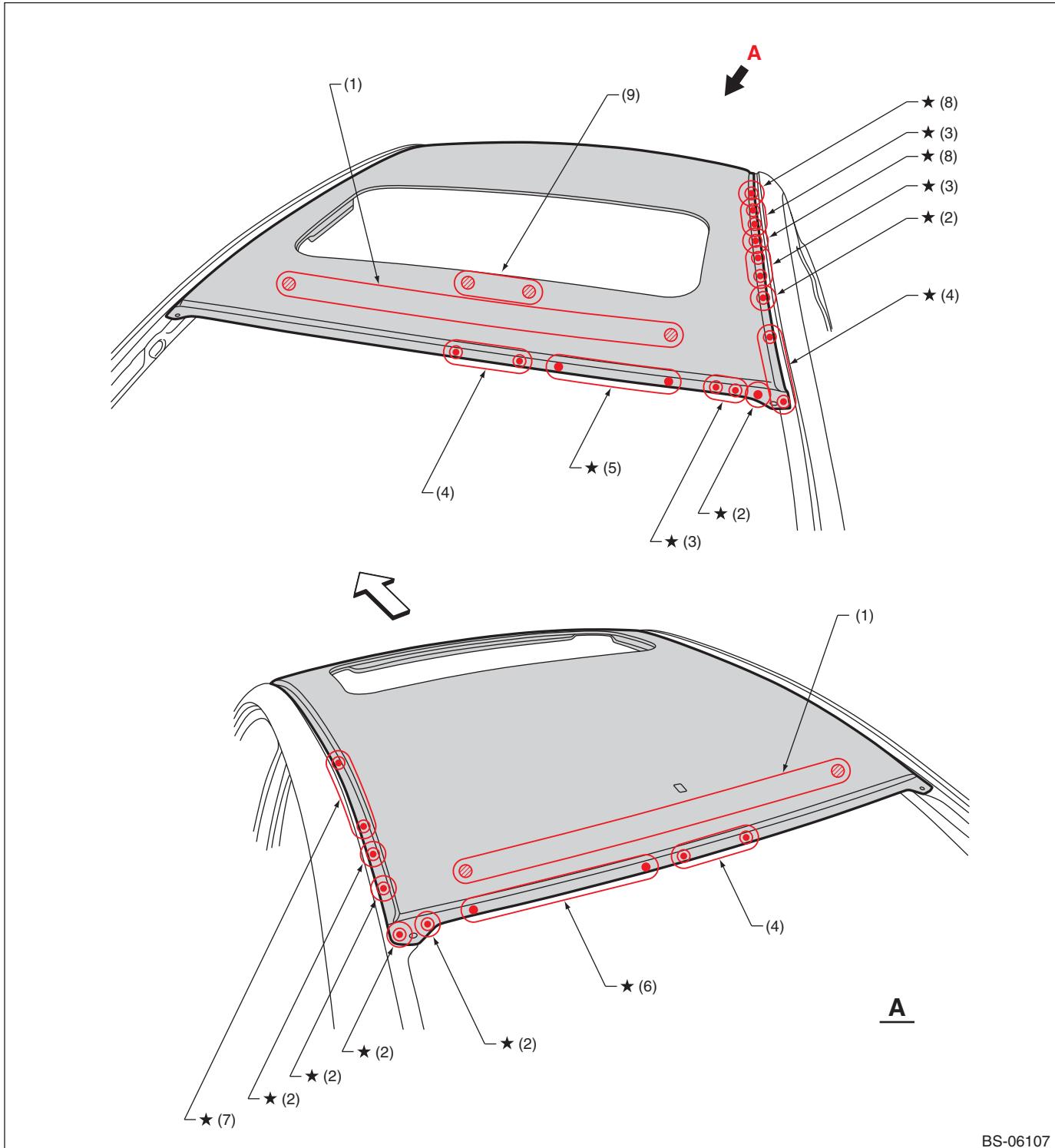
(6) 5 points (top · 1)

(7) 7 points (top · 1)

For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

Panel Replacement

B: INSTALLATION



BS-06107

(1) 9 points	(4) 3 points	(7) 7 points
(2) 1 point	(5) 4 points	(8) 1 point (only sunroof models)
(3) 2 points	(6) 5 points	(9) 2 points (only normal roof models)

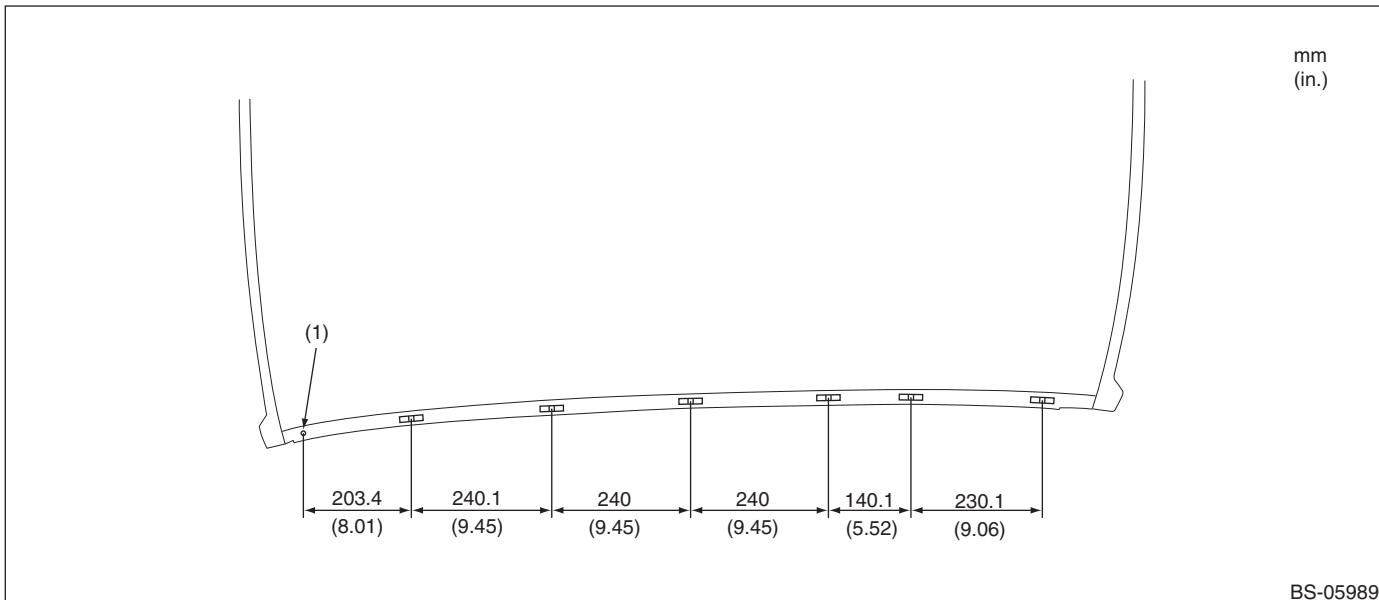
For locations marked by "★": the welding method and the number of welding points are the same on the left and the right.

◎ : Application of adhesive.

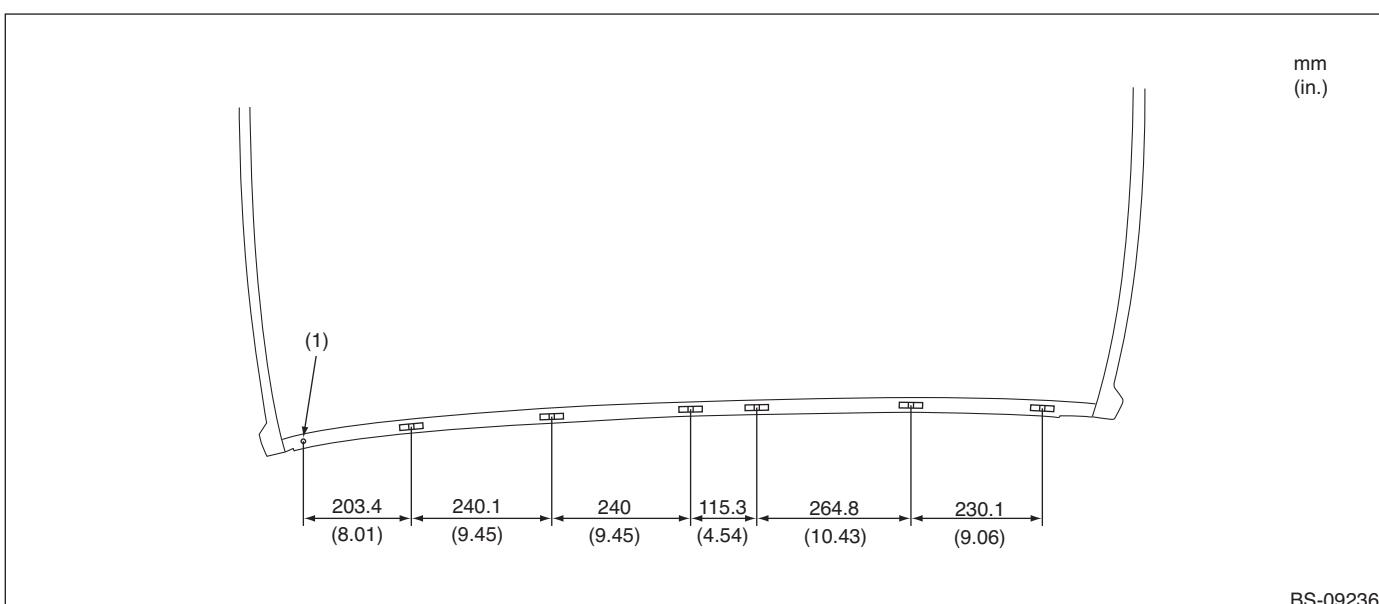
Panel Replacement

8-25. T Stud Installation

• '14 MY — '17 MY

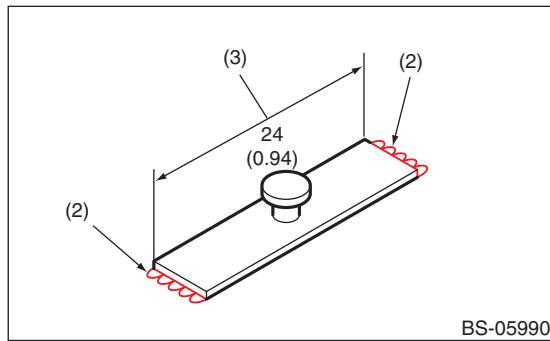


• '18 MY —



Panel Replacement

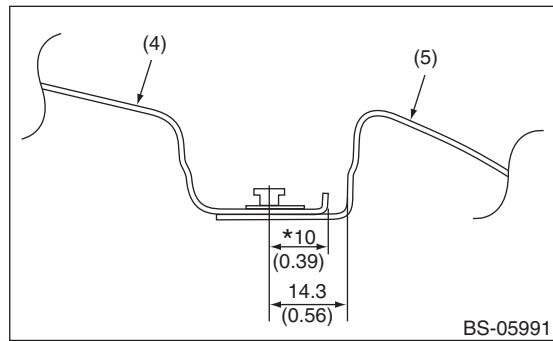
- **T stud welding**



- (1) $\phi 5.2$ mm (0.20 in) hole (for roof mole, standard pop rivet hole)
- (2) Arc welding for both plate ends

- (3) This surface shall be kept flat as it becomes the mating face with the clip.
- (4) Roof panel
- (5) Side panel outer

- **T stud basic cross section**



* Indicates dimensions for reference.

8-26. Carbon roof panel

A: REMOVAL

CAUTION:

- Touch up the coating area if it was damaged during removal work.
- Lift the roof a little with a screwdriver handle bent tip pry bar to prevent the piano wire from getting caught and remove the carbon roof panel.

1) Referring to the service manual, remove the front and rear window glasses.

Note:

Remove the pillar trim and roof trim too.

2) Remove the equipment around the roof.

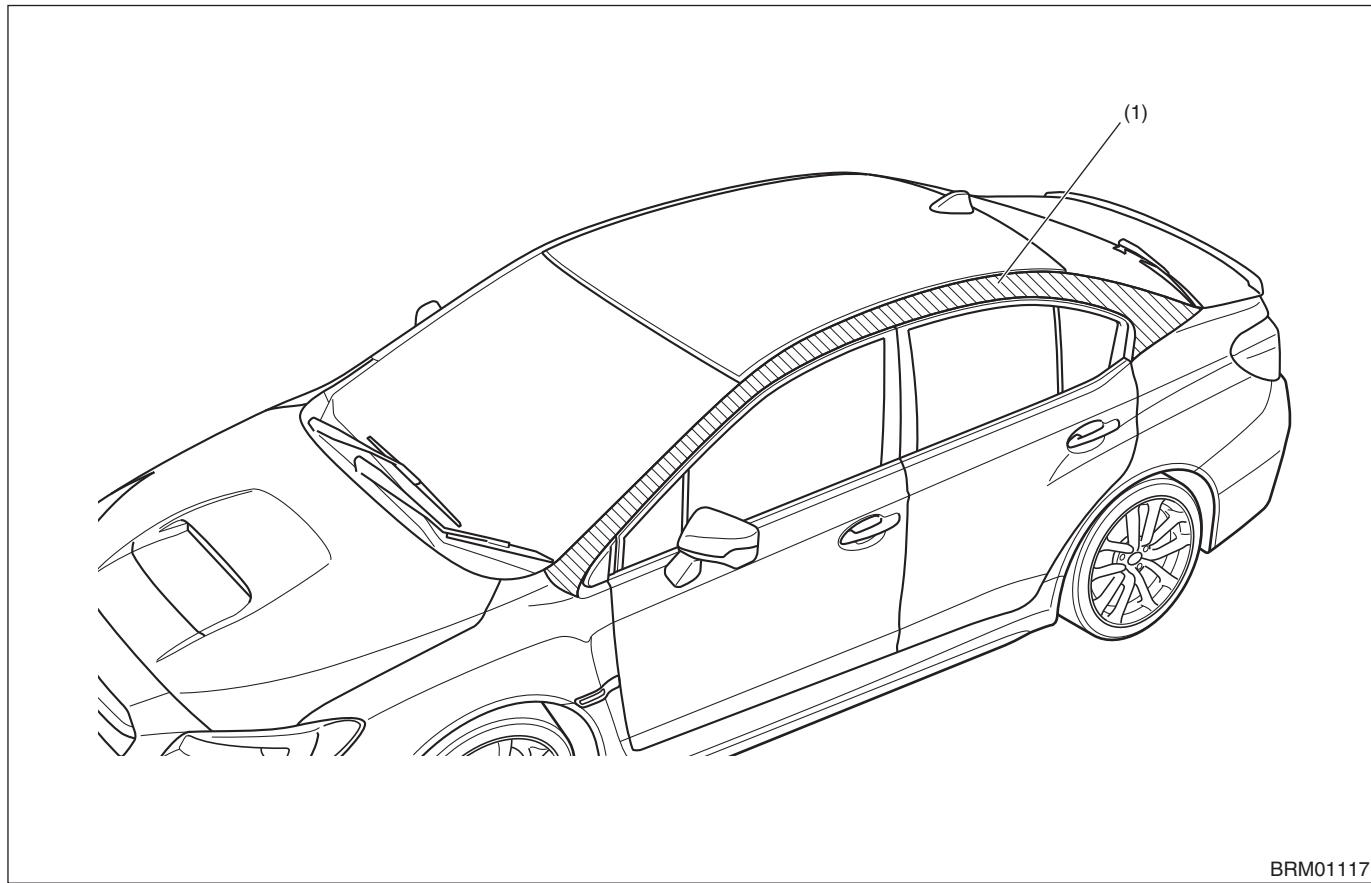
Note:

Remove the air bag, brackets and roof antenna.

3) Affix the protection tape to the body around the roof.

Note:

Affix the protection tape to all panels from the fender divided area to the trunk divided area.



BRM01117

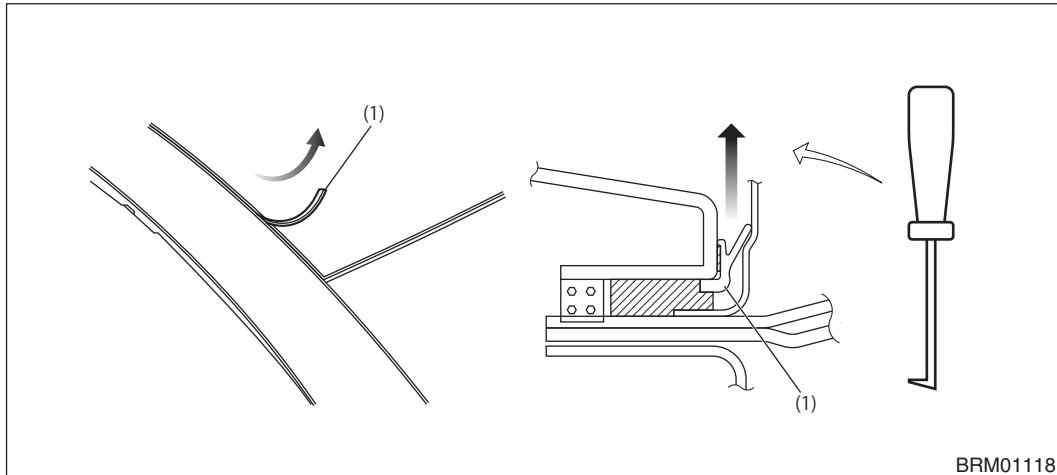
(1) Protection tape

Panel Replacement

4) Remove the lip from the carbon roof side.

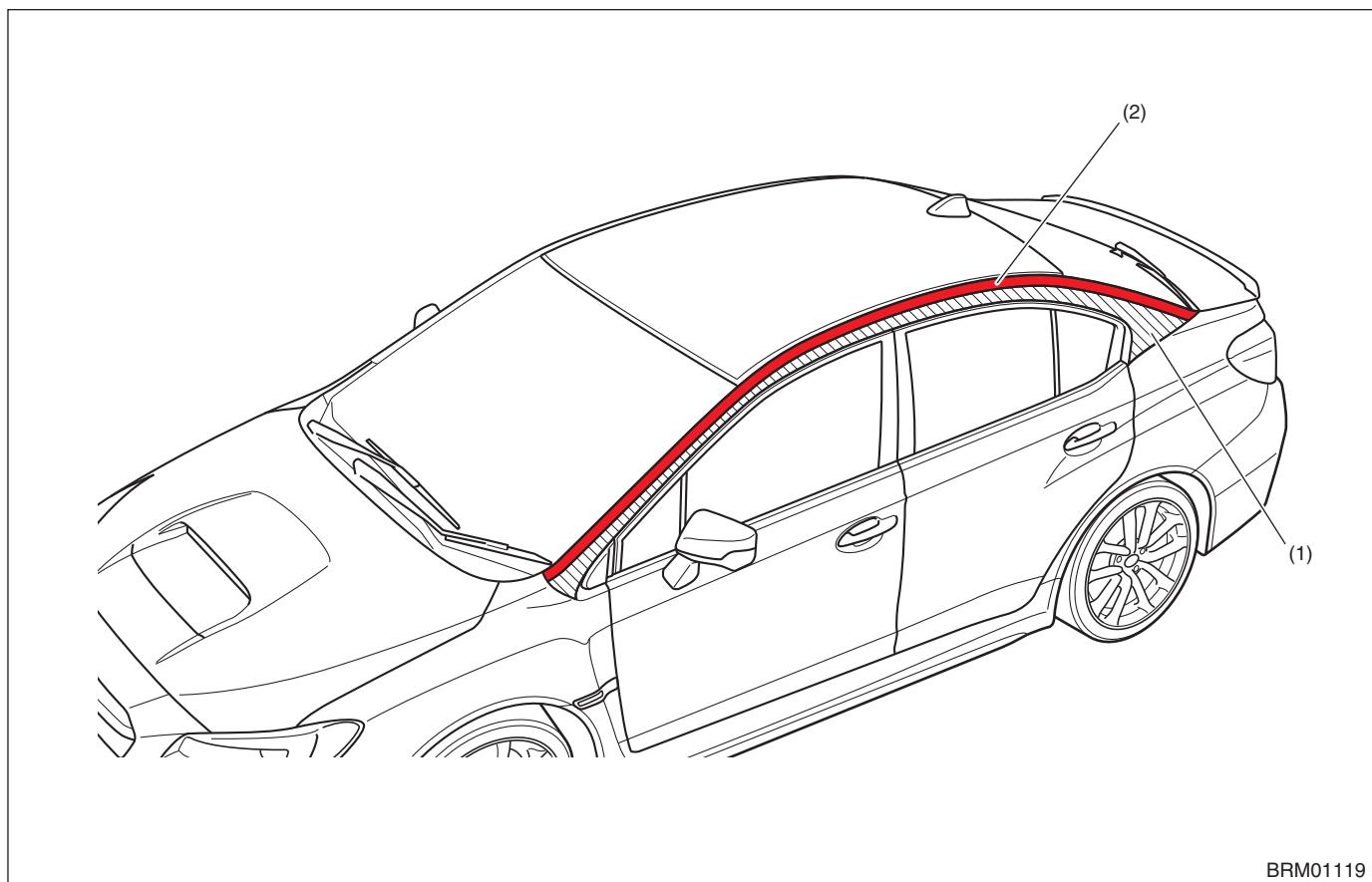
Note:

Use a pick tool to pull the lip from the edge.



(1) Lip

5) Affix the aluminum tape to the body angle areas over the protection tape.



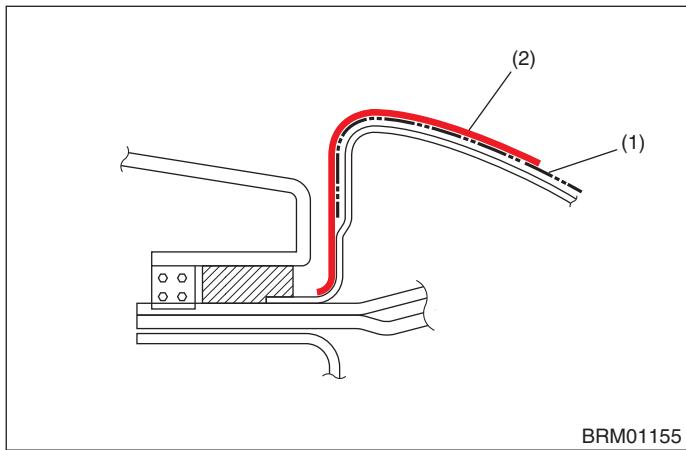
(1) Protection tape

(2) Aluminum tape

Panel Replacement

Note:

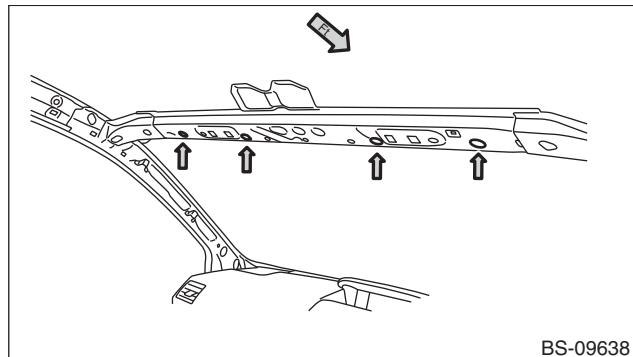
Affix the aluminum tape from the bottom.



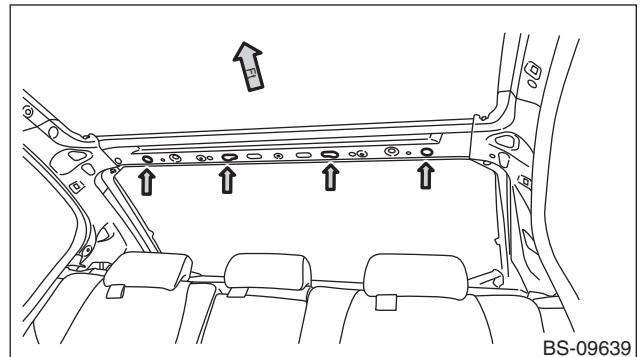
(1) Protection tape

(2) Aluminum tape

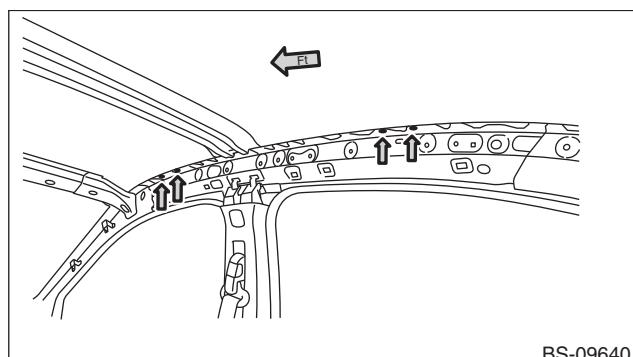
6) Remove the bolts in the vehicle interior (front: 4, rear: 4; right and left sides: 4 each: 4).



Front areas



Rear areas



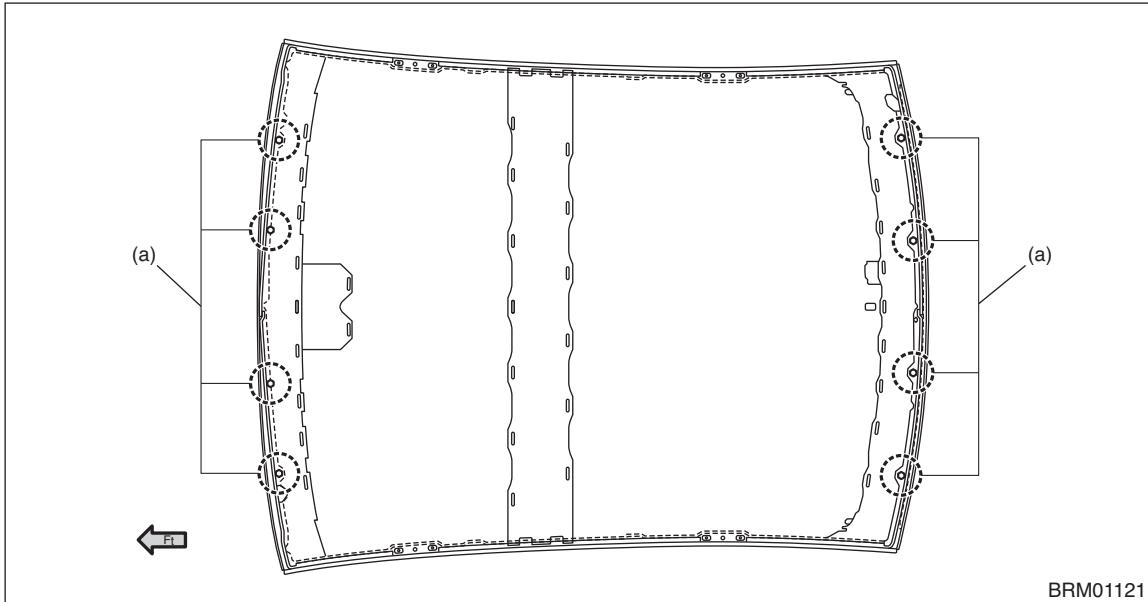
Side area

Panel Replacement

7) Remove the resin spacers that were affixed to the front and rear nut areas.

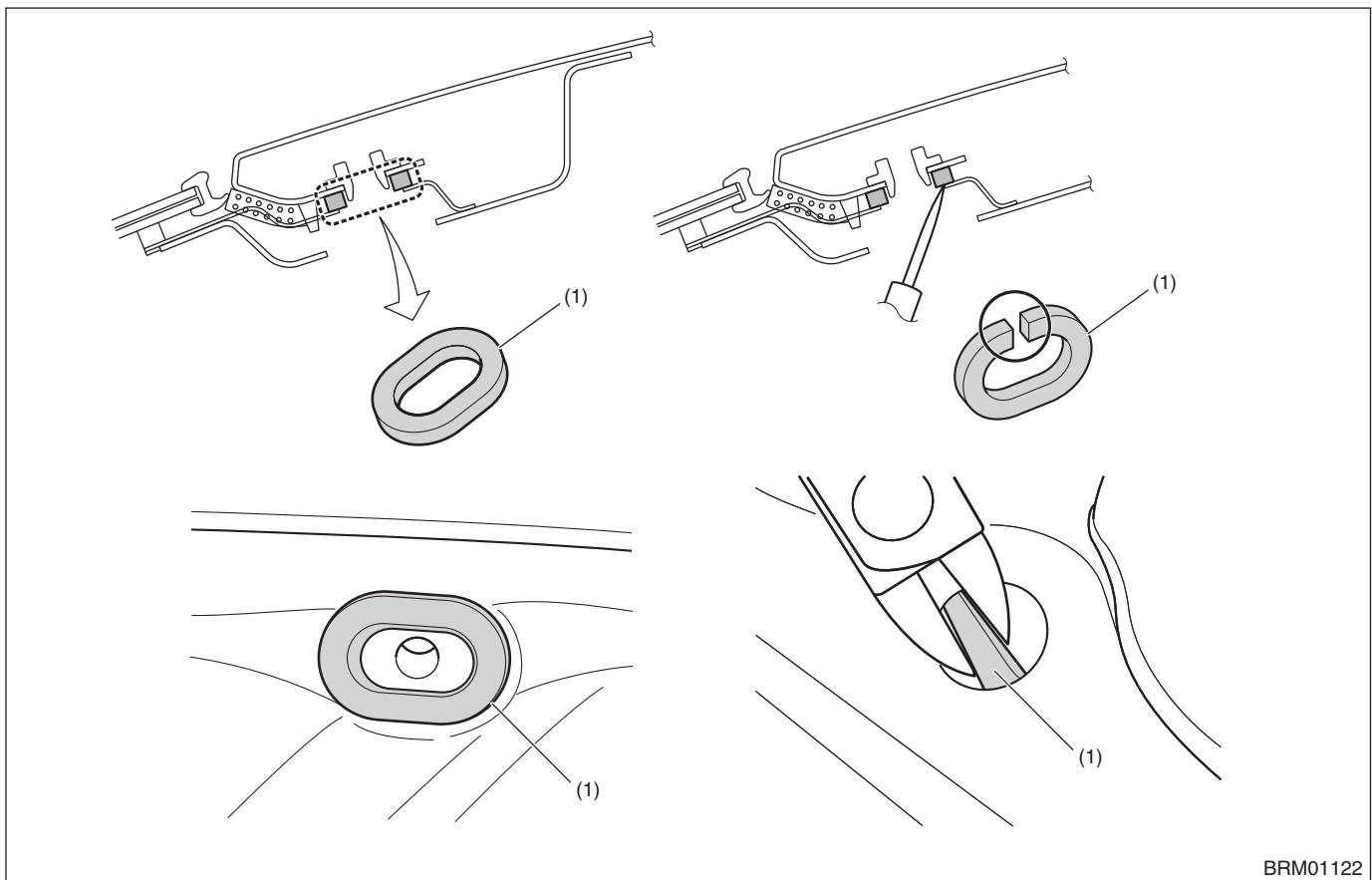
Note:

- Move the spacers with a pick tool and pull them out with thin pliers.
- If it is difficult to pull out the spacers, cut them with nippers and then pull them out.



(a) Nut areas

- The illustration shows the front area. The rear area has the same structure.



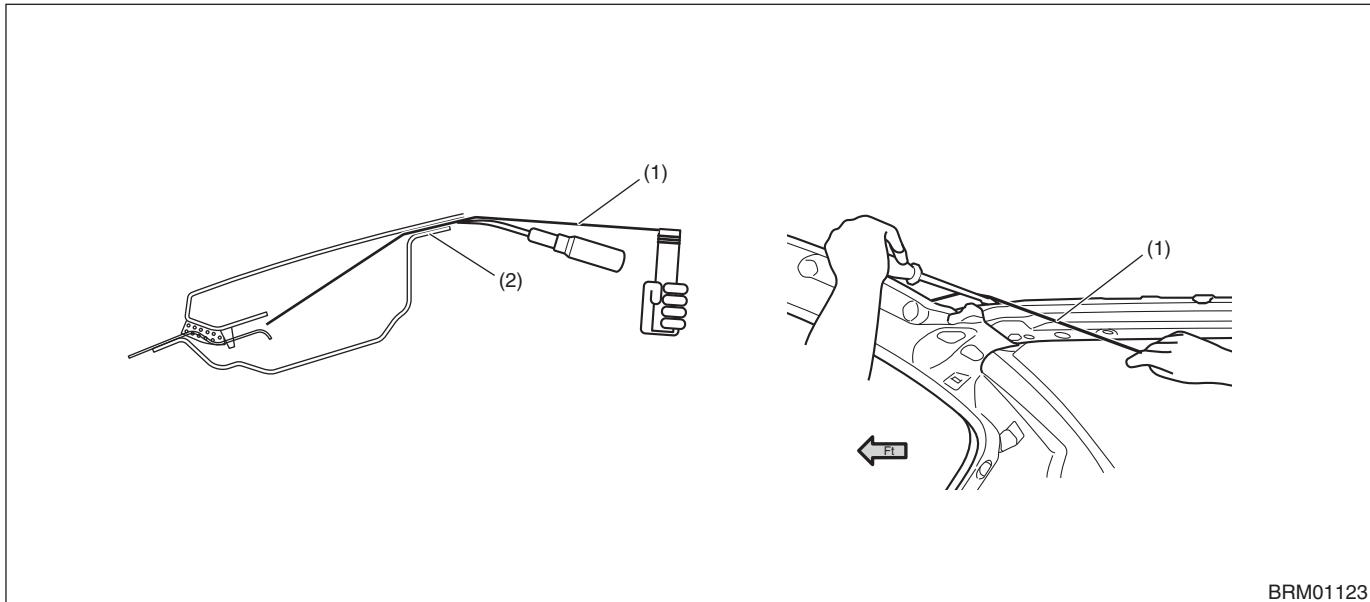
(1) Resin spacer

Panel Replacement

8) Use a piano wire to cut the bonded zone.

Note:

- The recommended diameter of the piano wire is $\phi 0.6$ mm to 0.9 mm. (The diameter should be determined based on ease of operation.)
- If the removal work is performed to float the piano wire from the plate edges with a screwdriver handle bent tip pry bar and weaken the contact to the round edge of the flat bar, the friction resistance is reduced and the piano wire is hard to break.



(1) Piano wire

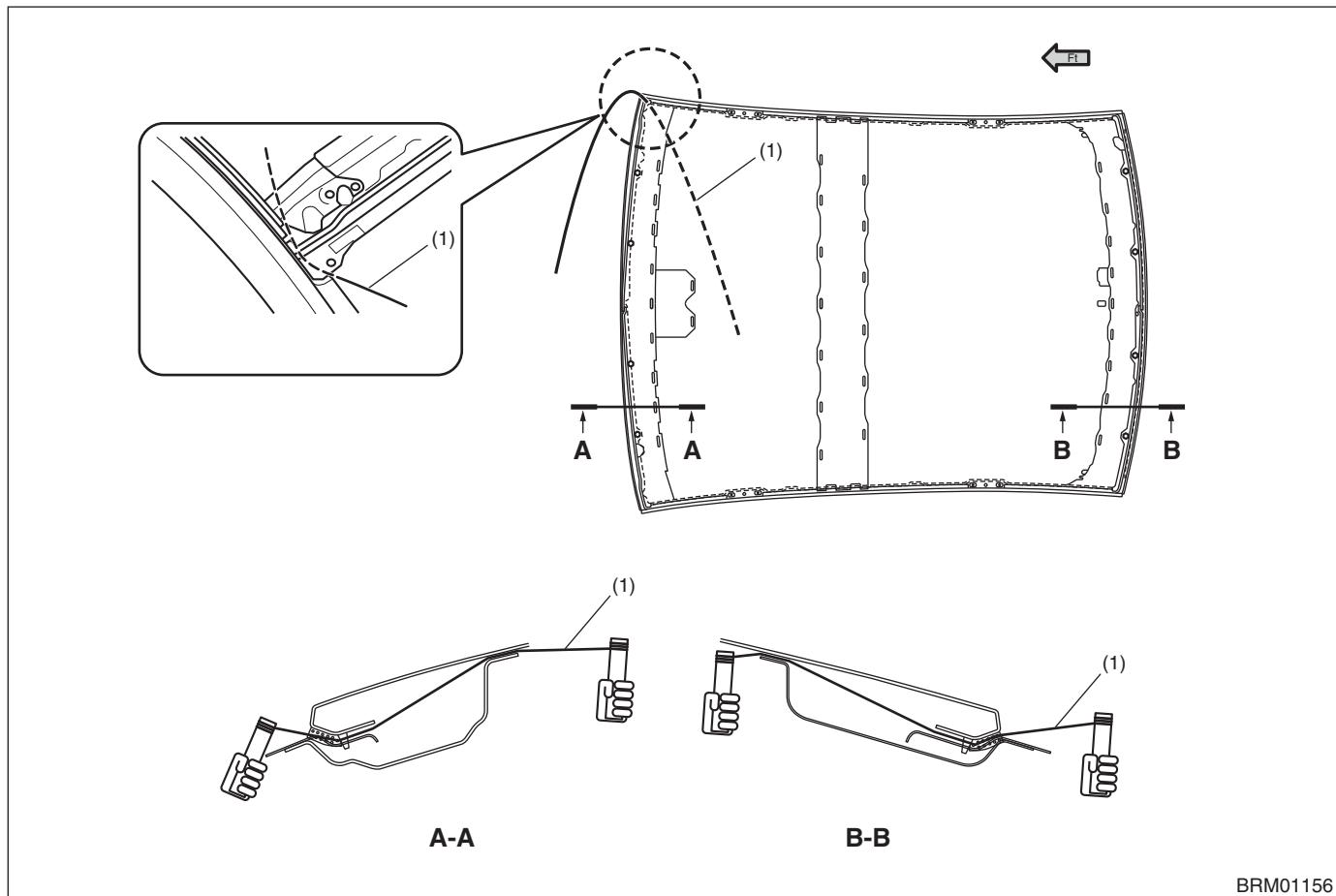
(2) Plate edges

Panel Replacement

• Cutting the rail in the general area

Note:

Insert the piano wire from the corner in the right front pillar side and pull the piano wire around the rail and pull it out.



(1) Piano wire

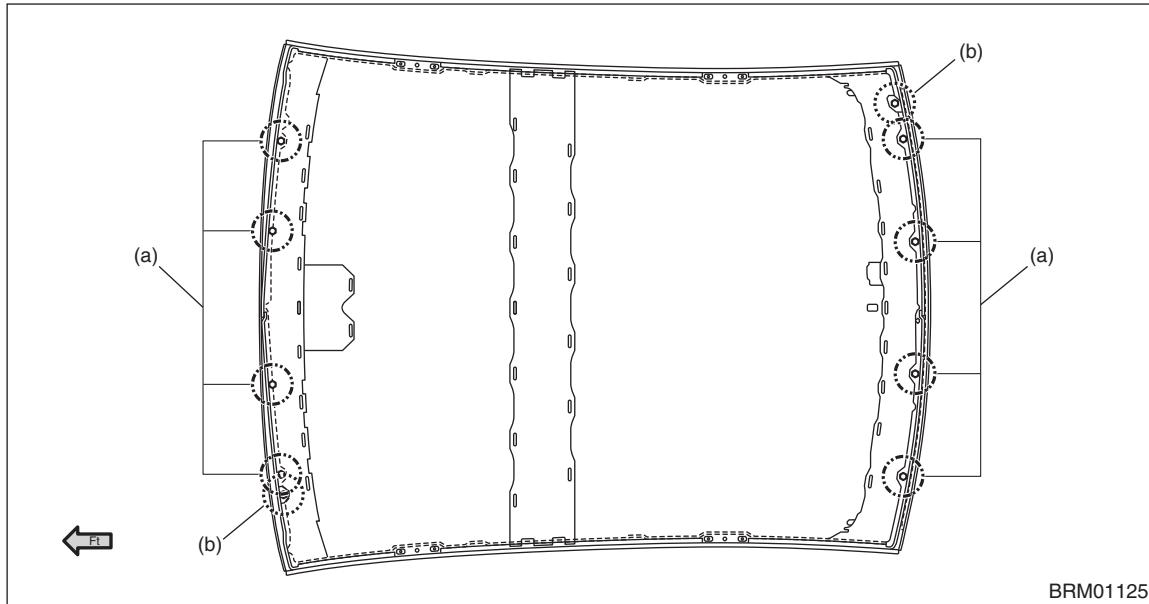
BRM01156

Panel Replacement

• Cutting the rails in the nut areas and reference pin areas

Note:

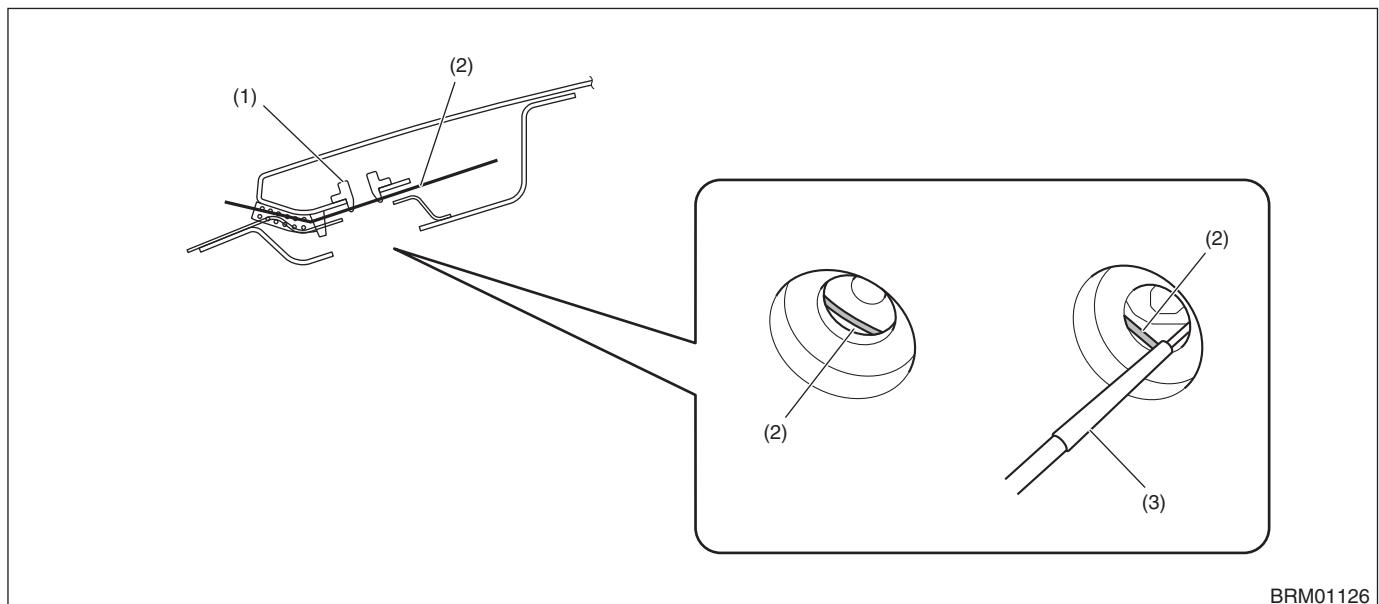
- The piano wire will get caught in the nut and reference pin areas. Therefore, use a bent screwdriver handle bent tip pry bar to lift the roof and raise the roof over the rail.



(a) Nut areas

(b) Reference pin areas

- If the piano wire gets caught in a nut in the nut area, it is easy to raise over the rail by making the piano wire viewable from the hole and pulling it with a pick tool.



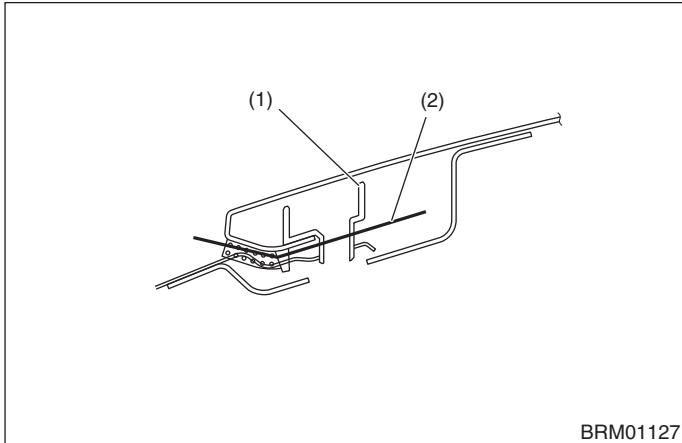
(1) Nut

(2) Piano wire

(3) Pick tool

Panel Replacement

- If the piano wire gets caught in a reference pin in the reference pin areas, the pin can be cut the same as with the adhesive because the pin is a resin part. If it is difficult to cut the pin, use a pick tool to raise the piano wire over the rail as is the case with the nut areas.

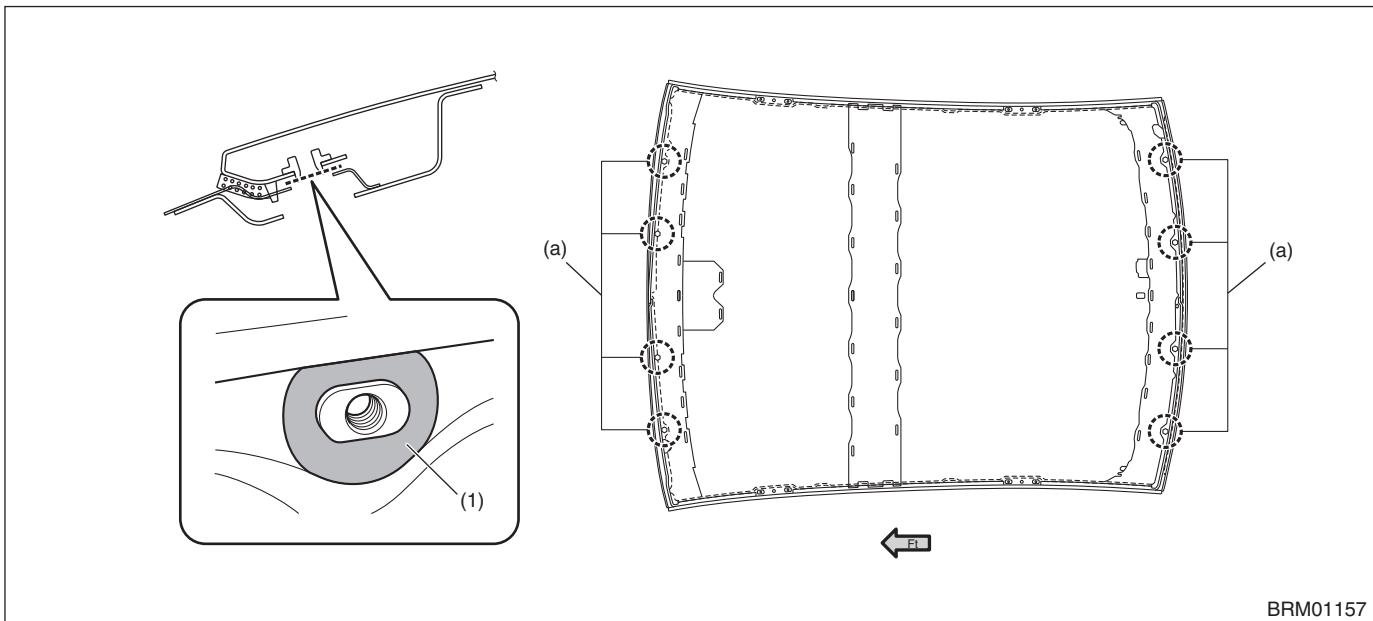


(1) Reference pin

(2) Piano wire

CAUTION:

- Some panels have a specification where the back of the resin spacer has a carbon patch that is the same in form as the spacer (reinforcement part) and the piano wire may get caught in this area. Therefore, cut the rails with the roof lifted a little using a screwdriver handle bent tip pry bar to prevent the piano wire from getting caught.



(a) Back of the resin spacer

(1) Carbon patch

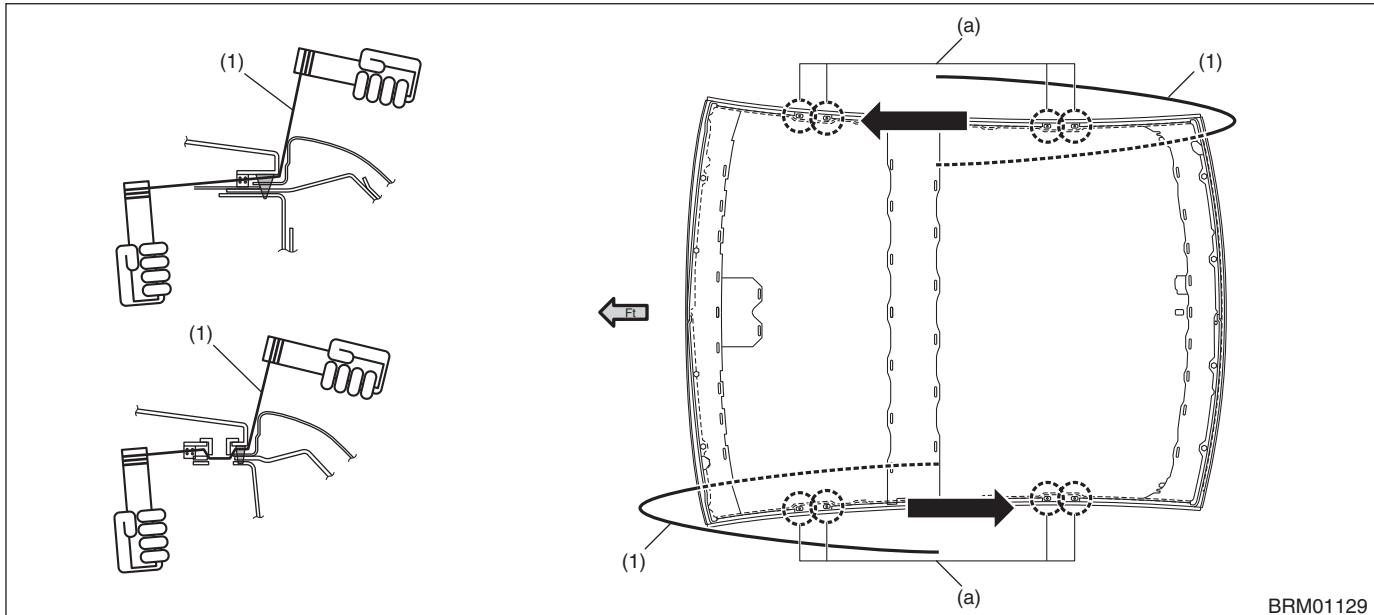
- If the piano wire shows an extremely rough movement near the nut areas, do not force it ahead. Check the condition and cut the rail from the opposite side as necessary.

Panel Replacement

• Cutting the edges of the general area and nut areas

Note:

- The piano wire can be pulled in either direction.
- Use a screwdriver handle bent tip pry bar to lift the roof and raise it over the edges because the piano wire gets caught in the nut areas.
- If the piano wire gets caught in the nut area, it is easy to raise over the edge by making the piano wire viewable from the hole and pulling it with a pick tool.



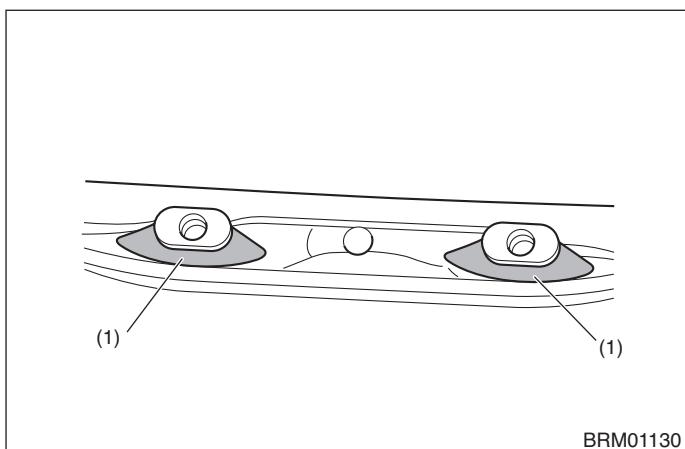
(a) Nut areas

(1) Piano wire

BRM01129

CAUTION:

- Some panels have a specification where the back of the resin spacer has a carbon patch that is the same in form as the spacer (reinforcement part) and the piano wire may get caught in this area. Therefore, cut the edges with the roof lifted a little using a screwdriver handle bent tip pry bar to prevent the piano wire from getting caught.



(1) Carbon patch

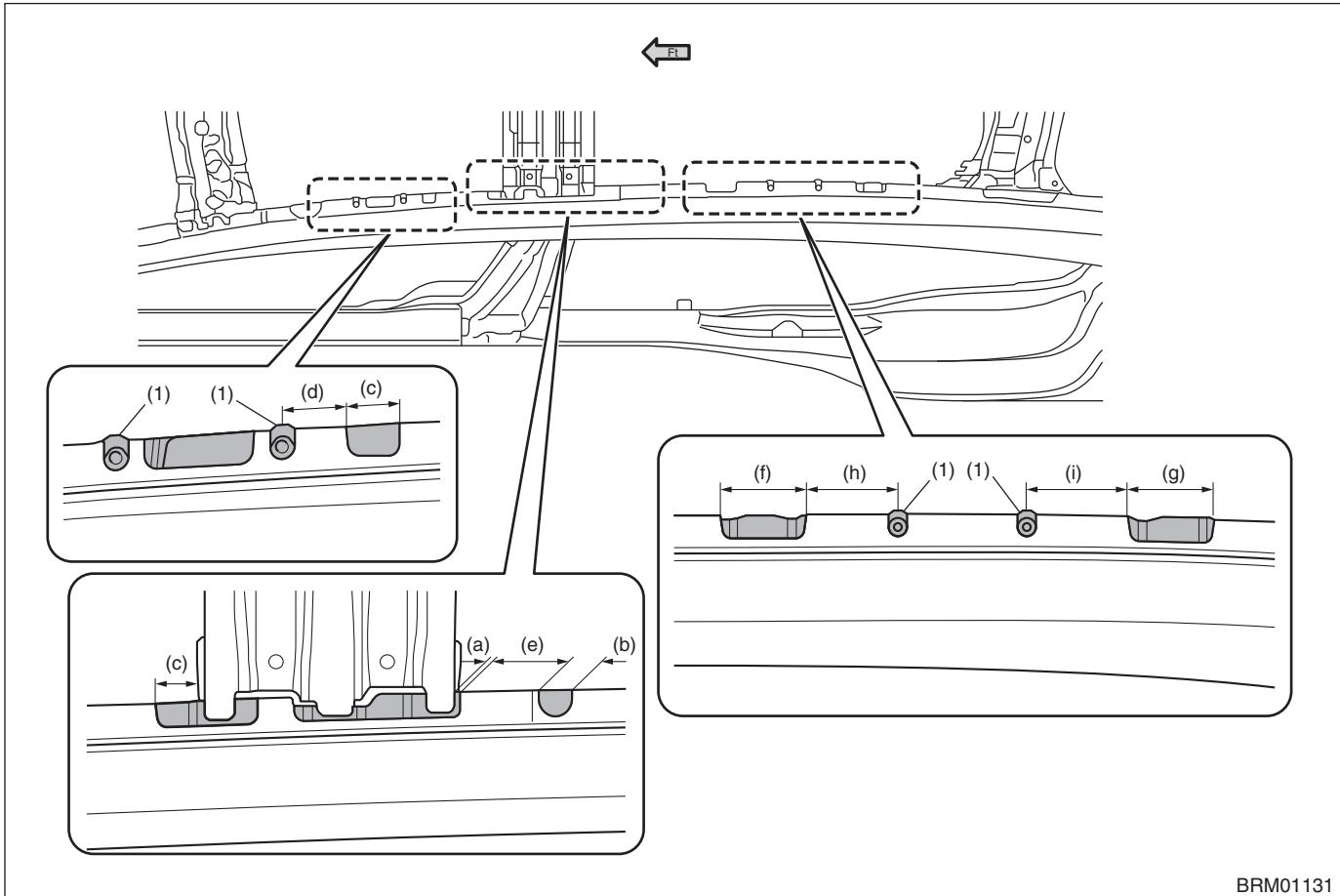
BRM01130

- If the piano wire shows an extremely rough movement near the nut areas, do not force it ahead. Check the condition and cut the rail from the opposite side as necessary.

Panel Replacement

CAUTION:

- The notches of the plate edges in the body panel have areas where cutting is difficult due to interference from the piano wire.



BRM01131

(a) 5 mm [0.20 in]

(d) 30 mm [1.18 in]

(g) 55 mm [2.17 in]

(b) 20 mm [0.79 in]

(e) 45 mm [1.77 in]

(h) 60 mm [2.36 in]

(c) 25 mm [0.98 in]

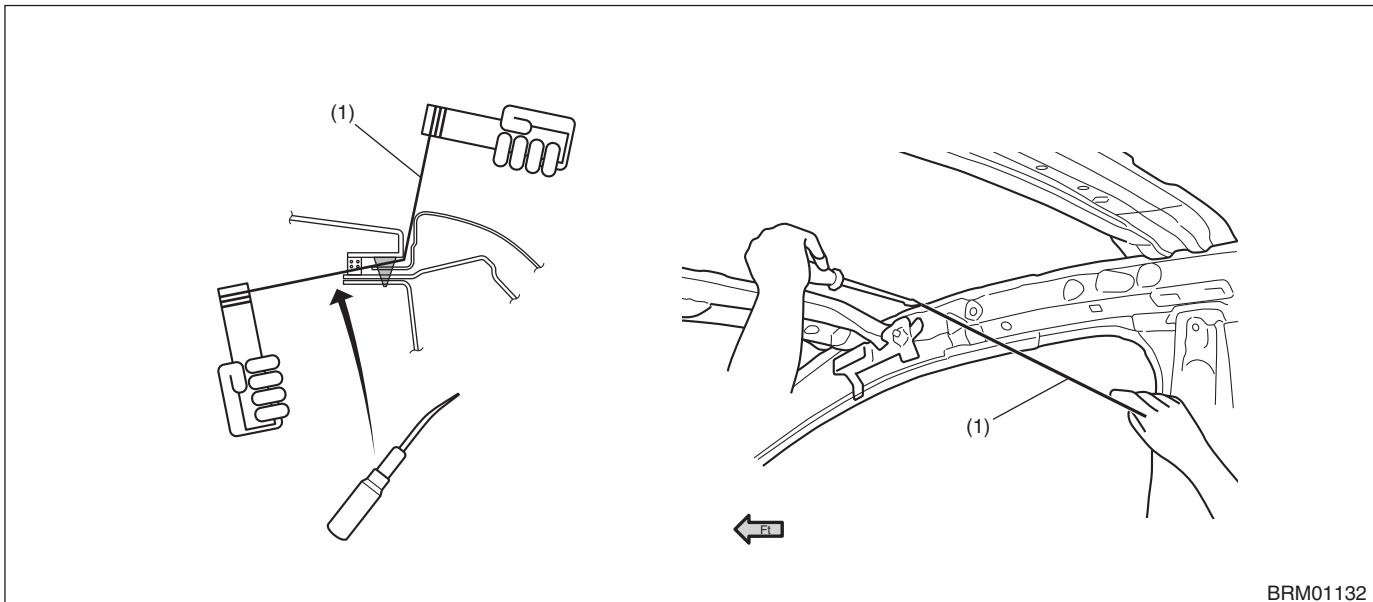
(f) 50 mm [1.97 in]

(i) 65 mm [2.56 in]

(1) Nut areas

Panel Replacement

- Use a screwdriver handle bent tip pry bar to float and guide the piano wire from the plate edges for the cutting operation.

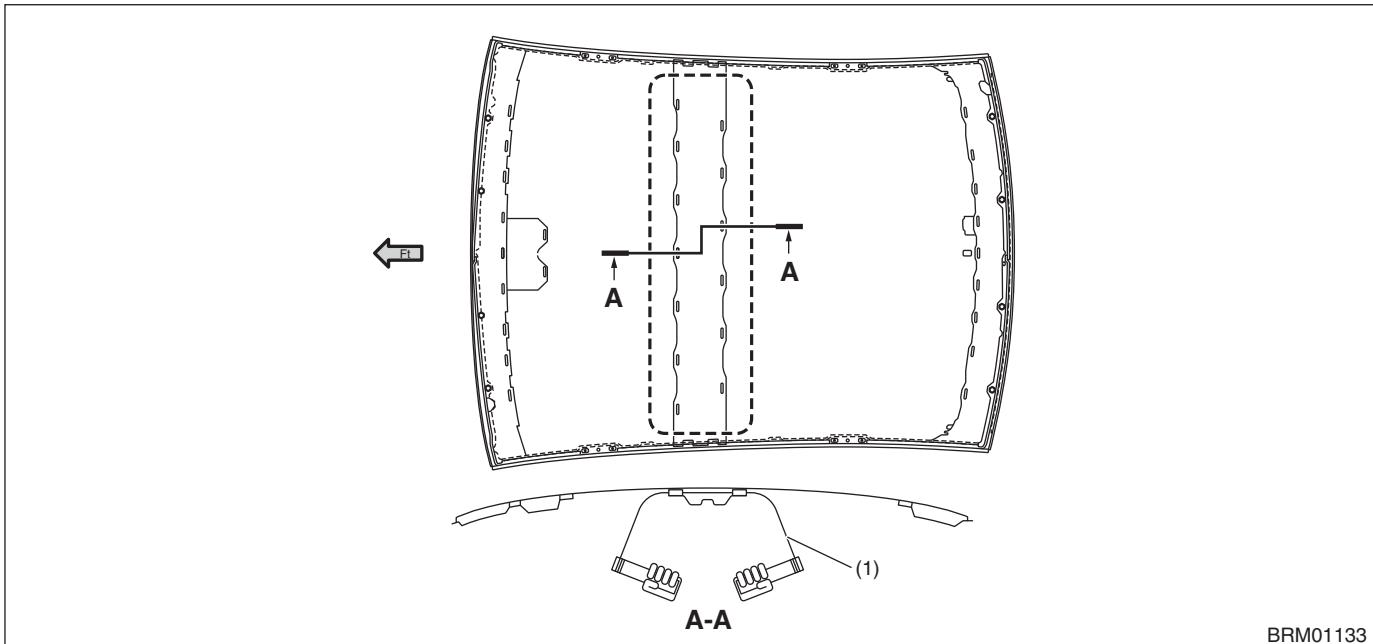


(1) Piano wire

• Cutting the center brace areas

Note:

- Pull the piano wire alternately to cut the bonded zone.
- Use a screwdriver handle bent tip pry bar to float and guide the piano wire from the plate edges for the cutting operation.

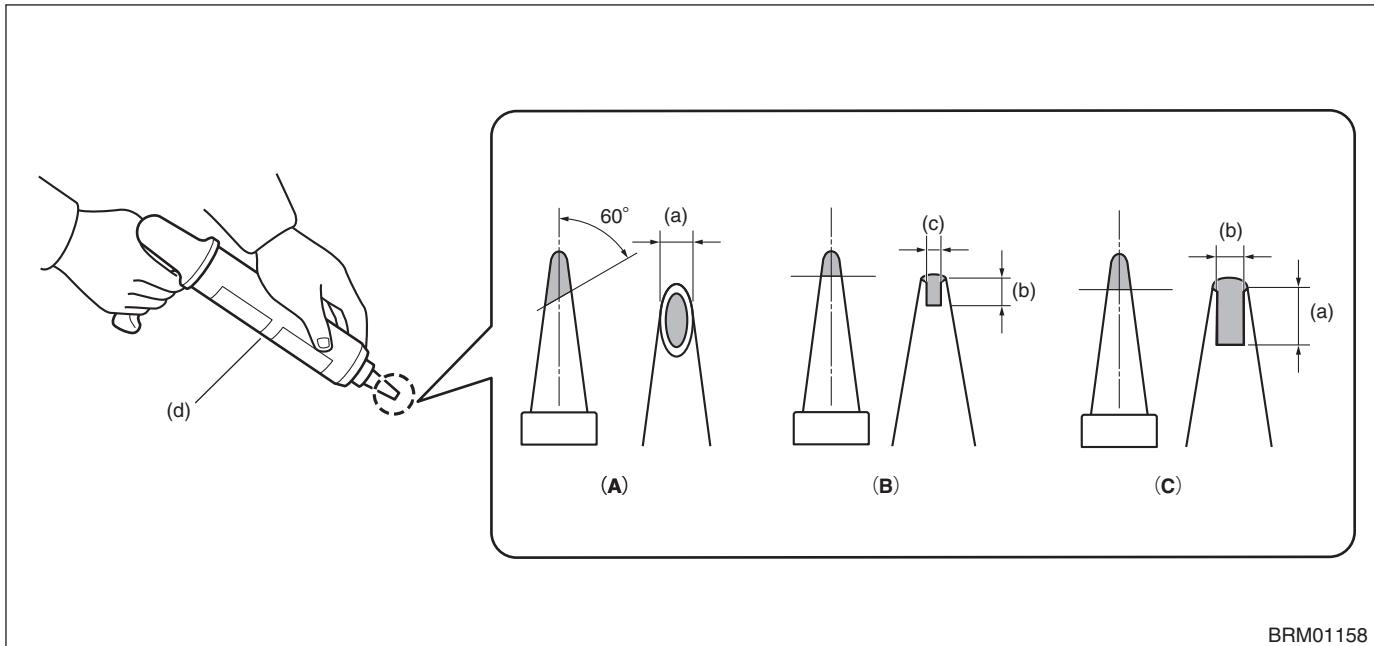


(1) Piano wire

Panel Replacement

B: INSTALLATION

1) Machine the tip of the cartridge nozzle as shown in the figure and set the adhesive agent in the sealant gun.



BRM01158

(A) Nozzle A

(B) Nozzle B

(C) Nozzle C

(a) 10 mm [0.39 in]

(b) 8 mm [0.31 in]

(d) Sealant gun

(b) 8 mm [0.31 in]

2) Use a cutter knife or the like to remove the remaining adhesive agent from the body.

CAUTION:

- Use caution not to damage the body and application surface.

3) Clean the carbon roof and bonded surface, remove dirt including oil and dust, degrease them sufficiently and dry them.

Panel Replacement

4) Apply primer and adhesive agent to the roof and body.

CAUTION:

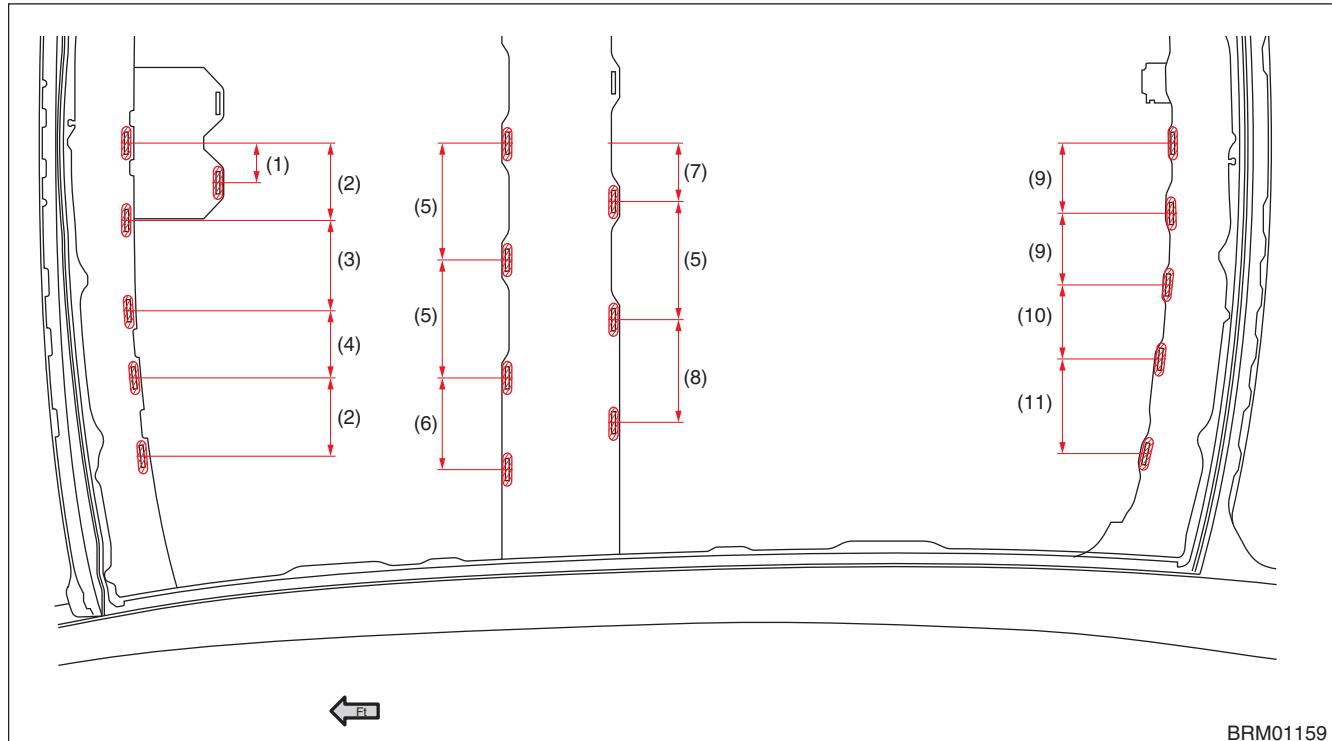
- For the location and amount of adhesive agent to apply, see the below figure.

Recommended adhesive agent :SUNSTAR PENGUIN SEAL # 580 SUPER equivalent

- Adhesive application points on the side of the body

Note:

Use Nozzle A for the following areas.



- (1) 52 mm [2.05 in]
- (2) 100 mm [3.94 in]
- (3) 115.1 mm [4.53 in]
- (4) 85.2 mm [3.35 in]

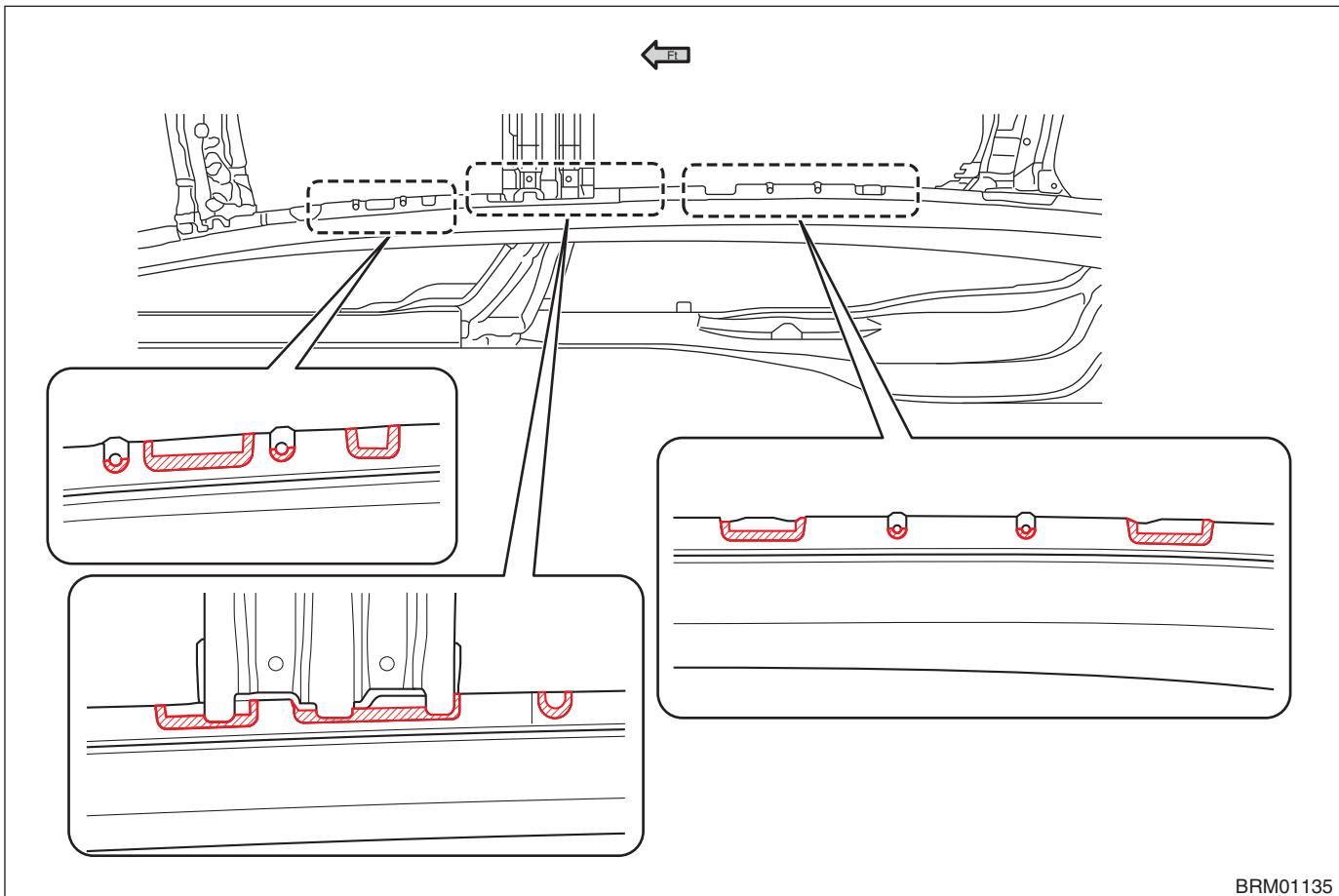
- (5) 150 mm [5.91 in]
- (6) 117 mm [4.61 in]
- (7) 76 mm [2.99 in]
- (8) 132 mm [5.20 in]

- (9) 90.1 mm [3.55 in]
- (10) 95.1 mm [3.74 in]
- (11) 120.2 mm [4.73 in]

: Application of adhesive 30 mm [1.18 in] or more (The adhesive agent should not drip in the room.)

Panel Replacement

- In order to increase the sealing property for securing waterproof performance, apply adhesive to the notches in the right and left edges.
- After applying the adhesive, flatten all the points with a spatula to eliminate differences in level between the panels.
- Apply adhesive to the periphery of the holes in the bolt / nut areas. (You don't need to apply adhesive to the entire circumference.)



BRM01135

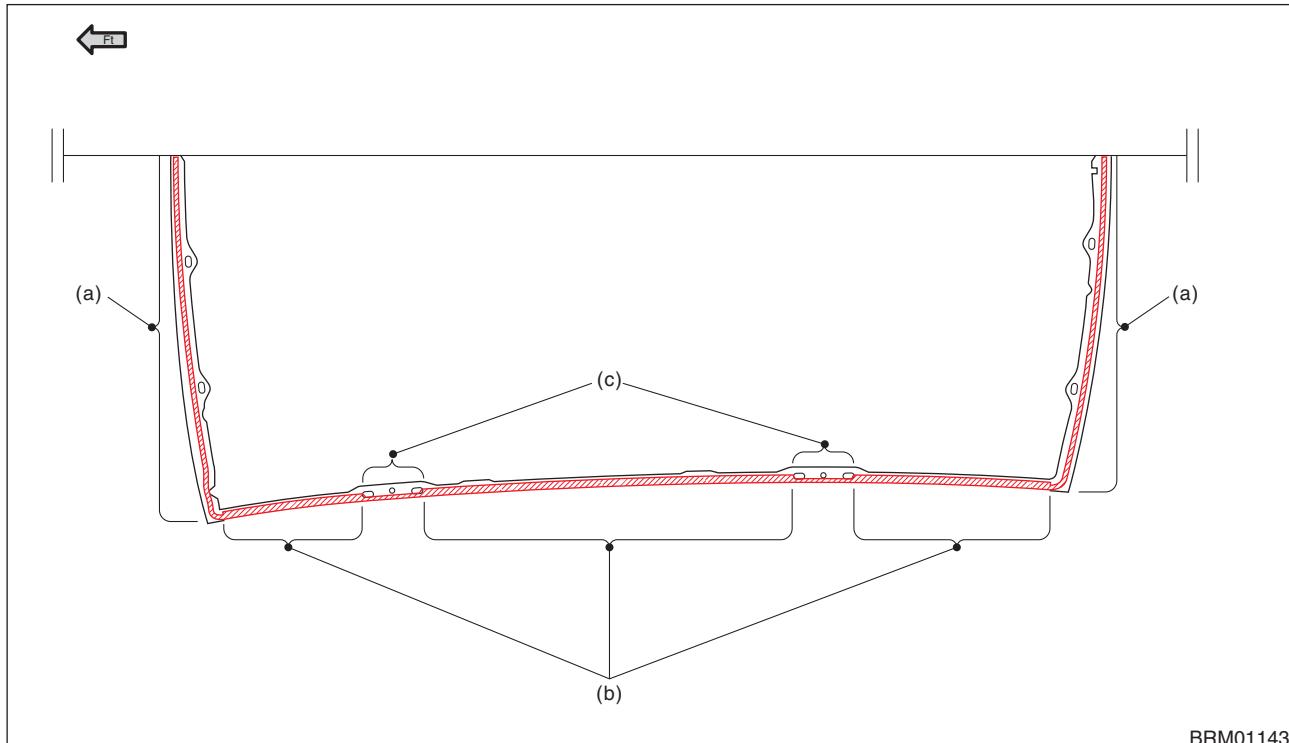
|| : Application of adhesive

Panel Replacement

- Adhesive application points on the roof

CAUTION:

- The quantity for sealant to be applied varies with the areas; therefore, use the different cartridge nozzle cut sides of the sealant gun and apply sealant to each area.
- At the position where the quantity for application is changed, add the adhesive several times and then eliminate the difference in level between the areas.



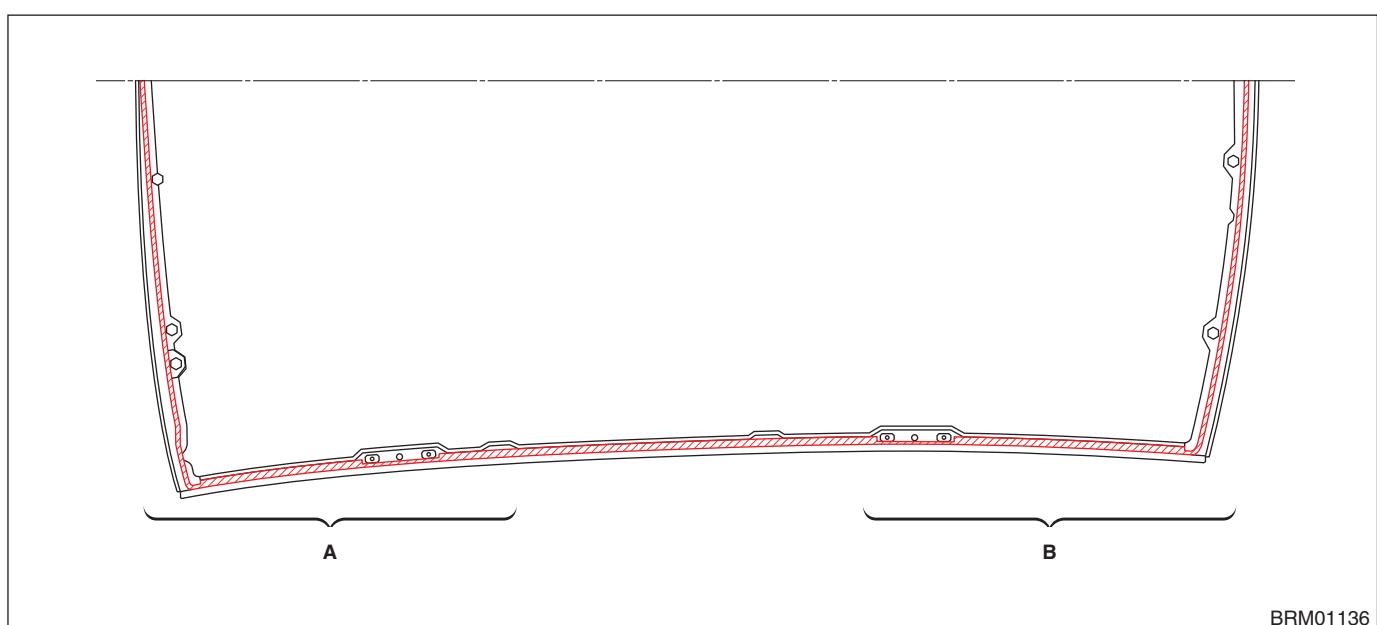
(a) Use a nozzle B.

(b) Use a nozzle C.

(c) Use a nozzle B.

■ : Application of adhesive

Range of change in the quantity for applying adhesive



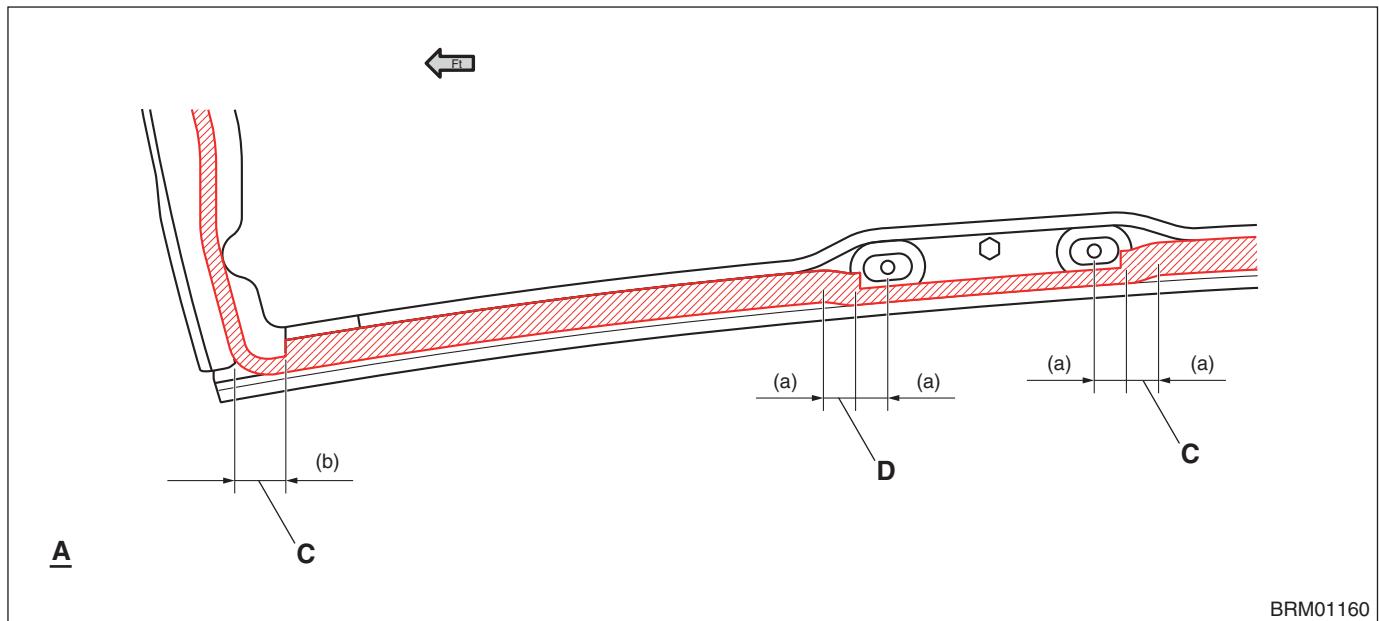
■ : Application of adhesive

Panel Replacement

A: Enlarged view

Note:

Use Nozzle C to apply the adhesive to the areas changed from Nozzle B to Nozzle C in the inside of the vehicle.



(a) 15 mm [0.59 in]

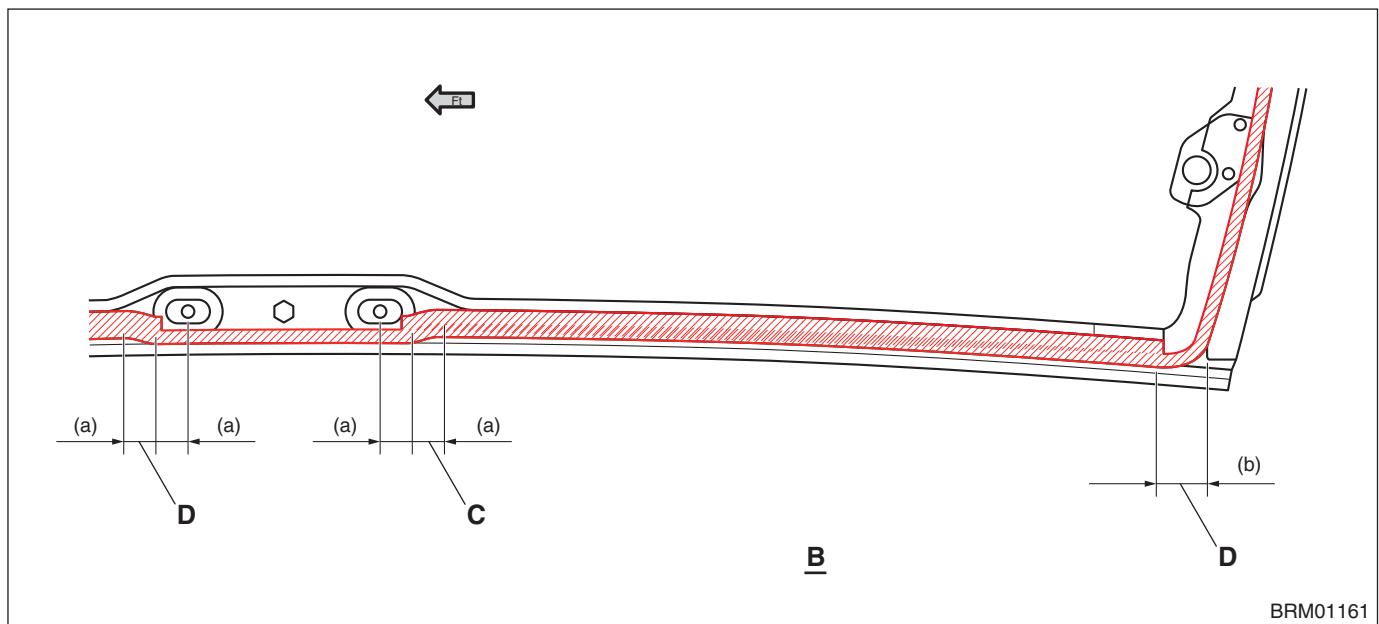
(b) 20 mm [0.79 in]

赤線 : Application of adhesive

B: Enlarged view

Note:

Use Nozzle C to apply the adhesive to the areas changed from Nozzle B to Nozzle C in the inside of the vehicle.

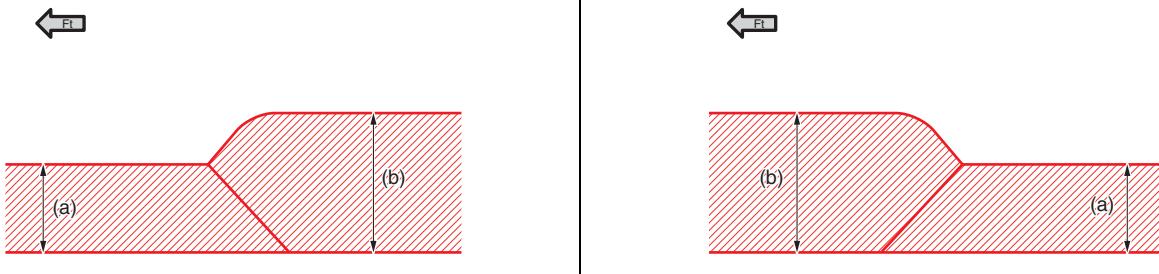
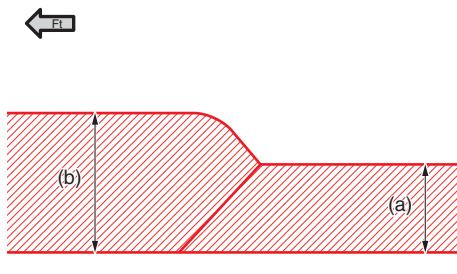


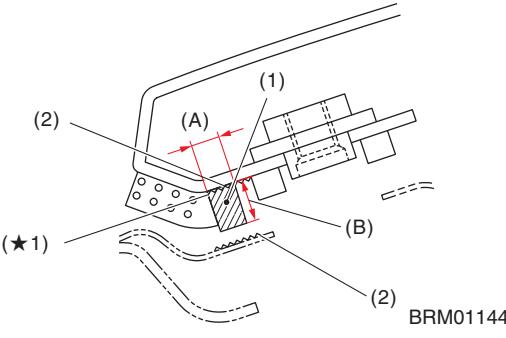
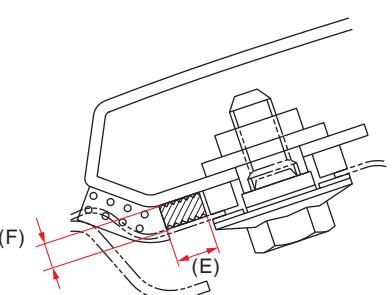
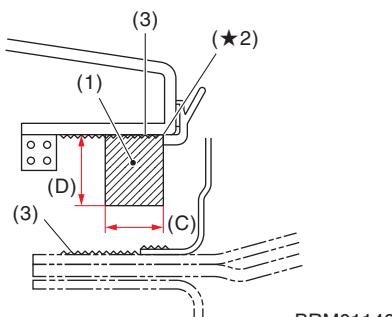
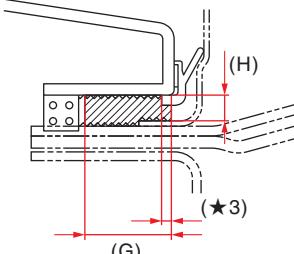
(a) 15 mm [0.59 in]

(b) 20 mm [0.79 in]

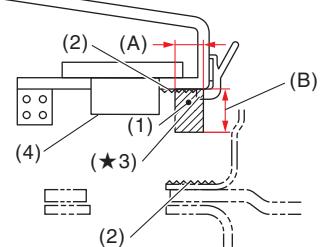
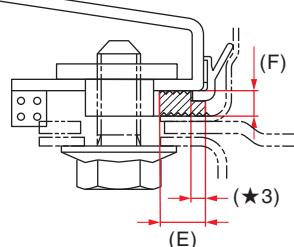
赤線 : Application of adhesive

Panel Replacement

<p>C: Enlarged view (Side view)</p>  <p>C</p> <p>BRM01139</p> <p>(a) 7 mm [0.28 in] (b) 10 mm [0.39 in]</p>	<p>D: Enlarged view (Side view)</p>  <p>D</p> <p>BRM01141</p> <p>(a) 7 mm [0.28 in] (b) 10 mm [0.39 in]</p>
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	Before installation (crimping)	After installation (crimping)
<p>(a)</p>  <p>BRM01144</p> <p>Adhesive agent amount (Front and rear areas) Use a nozzle B.</p>	 <p>BRM01145</p>	
<p>(b)</p>  <p>BRM01146</p> <p>Adhesive agent amount (Wide coating area) Use a nozzle C.</p>	 <p>BRM01147</p>	

Panel Replacement

	Before installation (crimping)	After installation (crimping)
(c)	 <p>BRM01148</p> <p>Adhesive agent amount (Area around the spacer nut roof side) Use a nozzle B.</p>	 <p>BRM01149</p>

*The measured values after installation are the reference values.

(A) 2 mm [0.08 in]	(D) 8 mm [0.31 in]	(G) 12 mm [0.47 in]
(B) 4 mm [0.16 in]	(E) 10 mm [0.39 in]	(H) 6 mm [0.24 in]
(C) 7 mm [0.28 in]	(F) 3.5 mm [0.14 in]	
(1) Adhesive	(3) Primer (Apply primer to 12 mm [0.47 in] or more in thickness.)	(4) Spacer nut roof side
(2) Primer (Apply primer to 6 mm [0.24 in] or more in thickness.)		

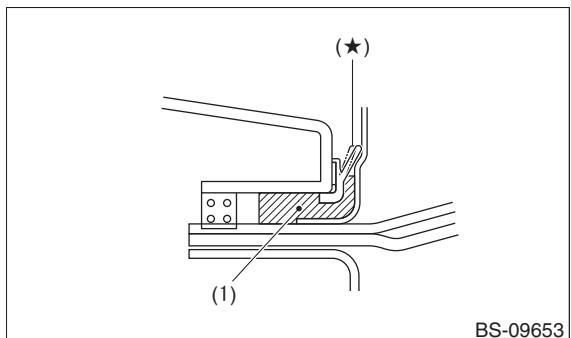
(★1) Apply primer along the end of the seal.

(★2) Apply primer along the end of the lip.

(★3) Apply primer to lap the lip by 1 mm [0.04 in] or more.

CAUTION:

- After installing the carbon roof, use caution so that the adhesive agent does not ooze from the lip. In addition, the lip should not be twisted or wavy.



(1) Adhesive

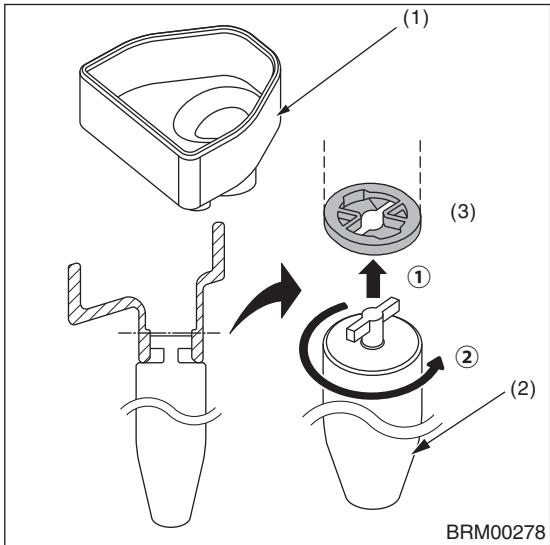
(★) There should be no twisting and waviness due to oozing adhesive agent.

- After installing the carbon roof, the adhesive agent should not be on the spacer nut roof side.

*If the adhesive agent has run onto the spacer nut roof side, remove it.

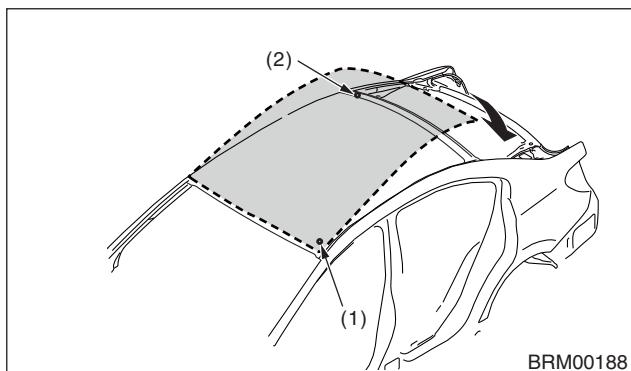
Panel Replacement

5) Insert the locating pin references (1 for front, 1 for rear) and turn them 90° to assemble.



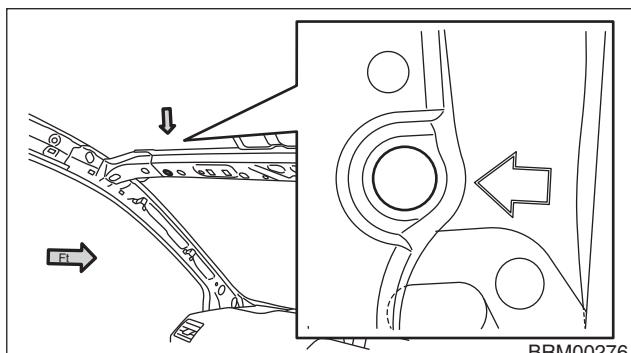
- (1) Pin
- (2) Locating pin reference
- (3) Shape of the installation part

6) After matching the pin with the installation reference hole (A) on the front side, match another pin with the installation reference hole (B) on the rear side and install the pins slowly.

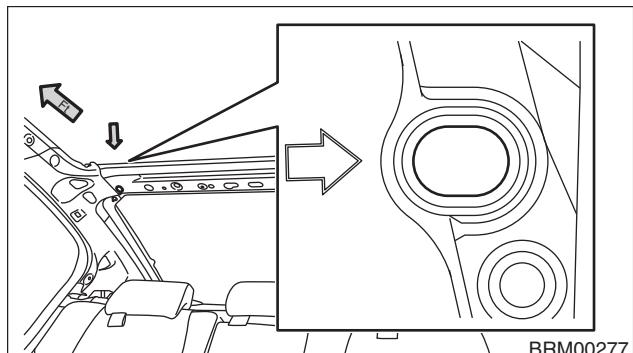


- (1) A reference hole ($\phi 12.2$ mm [0.47 in]-diameter hole)
- (2) B reference hole
(12.2 mm dia. \times 17 mm [0.47 mm dia. \times 0.67 in] slot)

• A reference hole (Enlarged view)



• B reference hole (Enlarged view)



Note:

The reference hole for installation is indicated by the stamp.

Panel Replacement

7) Lightly press the bonded area of the carbon roof and crimp it evenly.

CAUTION:

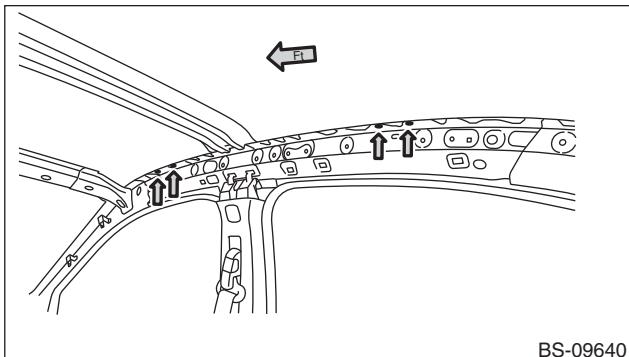
- Crimp the carbon roof by pressing it slowly with your palms. Also, do not tap on the carbon roof.
- When installing the carbon roof, handle it with care because the application surface (clear layer) is easily damaged.

*Operating with gloves made of coarse fiber may damage the carbon roof.

8) Install the bolts (8 bolts in total from the side).

Tightening torque:

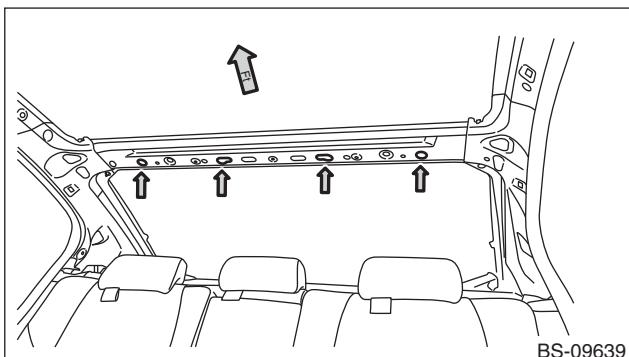
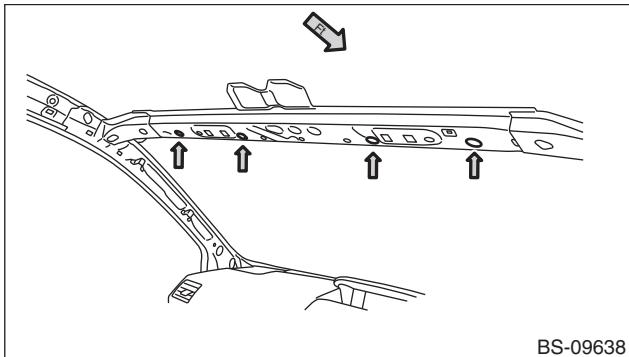
$12 \pm 3.5 \text{ N}\cdot\text{m}$ ($1.2 \pm 0.4 \text{ kgf}\cdot\text{m}$, $8.9 \pm 2.6 \text{ ft-lb}$)



9) Install the bolts (4 from the front side and 4 from the rear side).

Tightening torque:

$12 \pm 3.5 \text{ N}\cdot\text{m}$ ($1.2 \pm 0.4 \text{ kgf}\cdot\text{m}$, $8.9 \pm 2.6 \text{ ft-lb}$)



10) Referring to the service manual, install the front and rear window glasses.

Panel Replacement

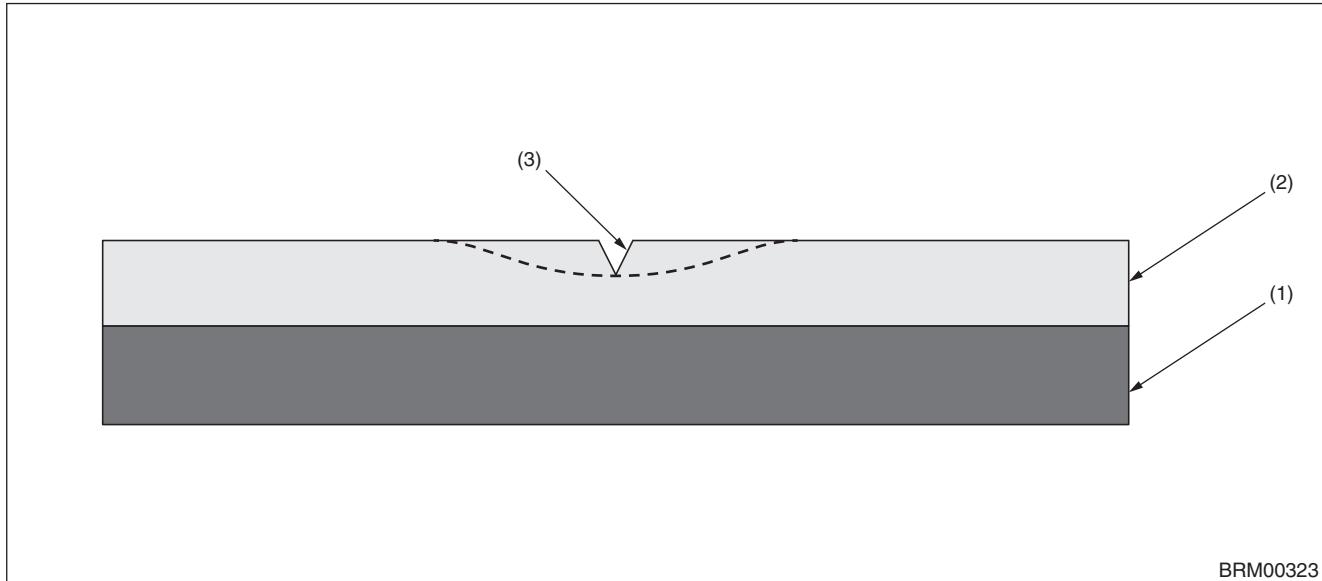
C: REPAIR

1. Repairing the surface of the carbon roof panel (Repairing scratches)

CAUTION:

- Repair only scratches on the clear layer of the carbon roof. If the scratch reaches to the primer layer, replace the carbon roof with a new one.

1) Wet-sand the parts to be repaired flat with waterproof abrasive paper of #400 to #800.

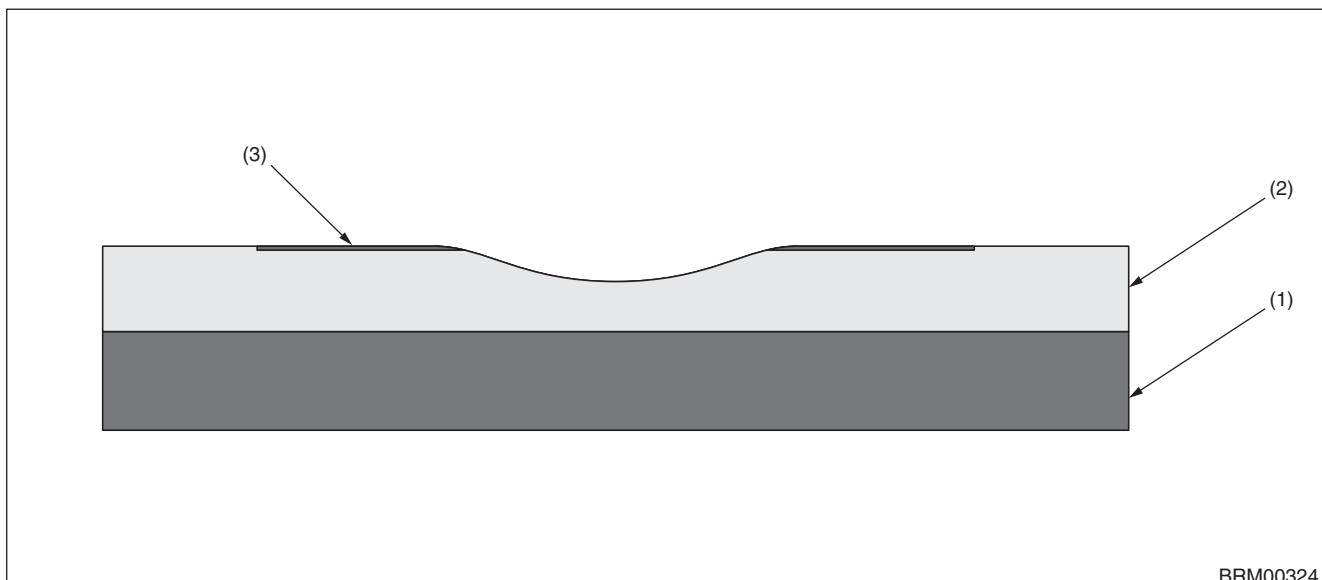


(1) Carbon roof

(2) Clear layer

(3) Scratch

2) Wet-sand the area to be painted with waterproof abrasive paper of #1200 to #2000 to score the surface.



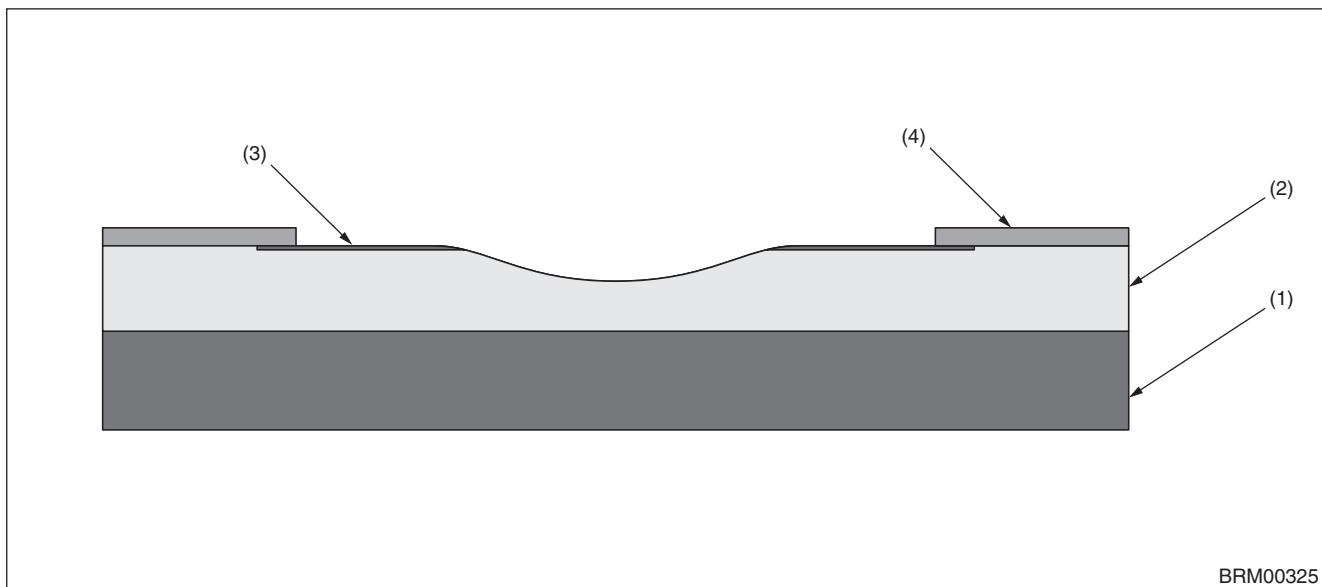
(1) Carbon roof

(2) Clear layer

(3) Scoring

Panel Replacement

- 3) After drying sufficiently, wash the surface with isopropyl alcohol.
- 4) Mask an area (smaller) inside of the scored area.



(1) Carbon roof
(2) Clear layer

(3) Scoring

(4) Masking

- 5) Coat Clear Base to about 15 to 20 μm ^{*1} in thickness and let it stand for about 15 to 30 minutes.

*1 The setting should be adjusted according to the coating environment.

Note:

Coating conditions^{*2}:

Spray gun discharge dial opening: 3 turns

Number of sprays: 1 double shot

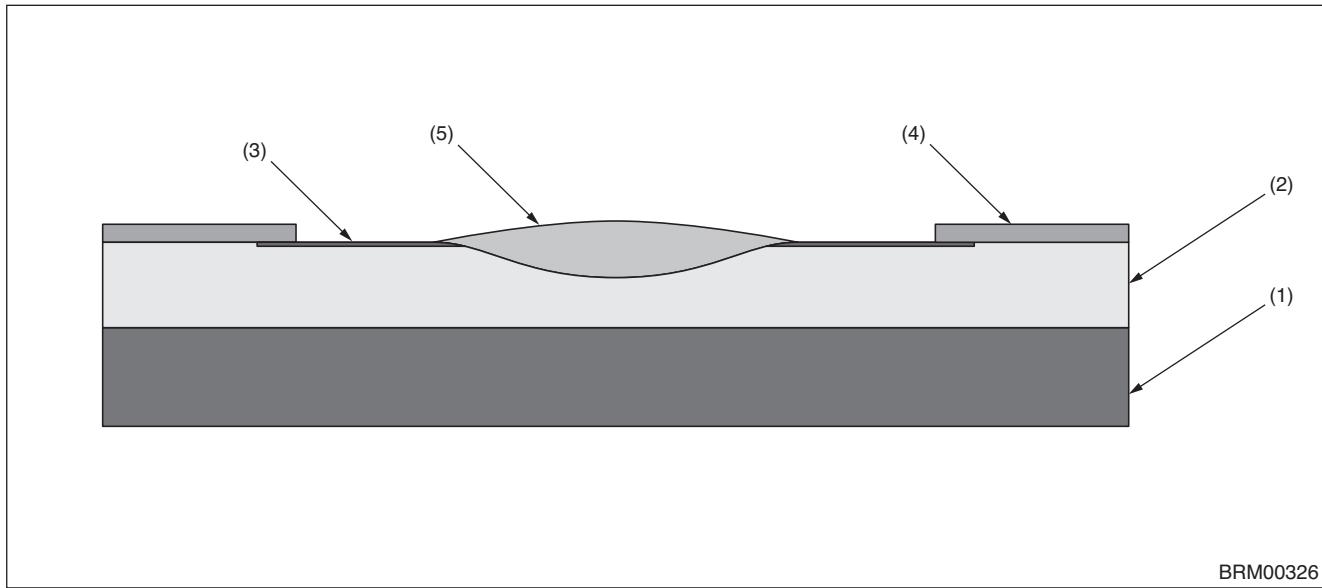
Gun speed: 60 cm/sec.

Pressure: 3 kgf/cm²

Gun distance: 30 to 40 cm ([11.81 in] to [15.75 in])

*2 The conditions should be adjusted according to the coating environment.

Panel Replacement



(1) Carbon roof
(2) Clear layer

(3) Scoring
(4) Masking

(5) Clear Base

6) Coat Top Clear^{*1} to about 50 to 60 μm ^{*2} in thickness and let it stand for about 10 minutes.

^{*1} For paint/hardener mixture, observe the specifications recommended by the manufacturers.

^{*2} The setting should be adjusted according to the coating environment.

Note:

Coating conditions^{*3}:

Spray gun discharge dial opening: 3 turns

Number of sprays: 3 double shots

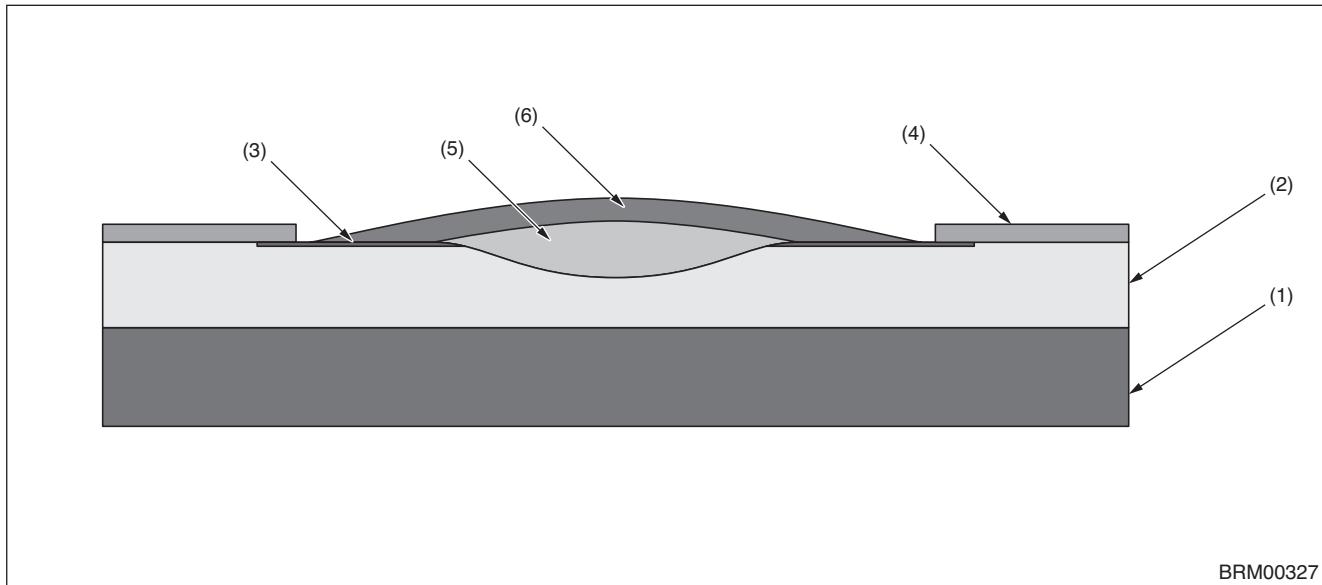
Gun speed: 60 cm/sec.

Pressure: 3 kgf/cm²

Gun distance: 30 to 40 cm ([11.81 in] to [15.75 in])

^{*3} The conditions should be adjusted according to the coating environment.

Panel Replacement



(1) Carbon roof
(2) Clear layer

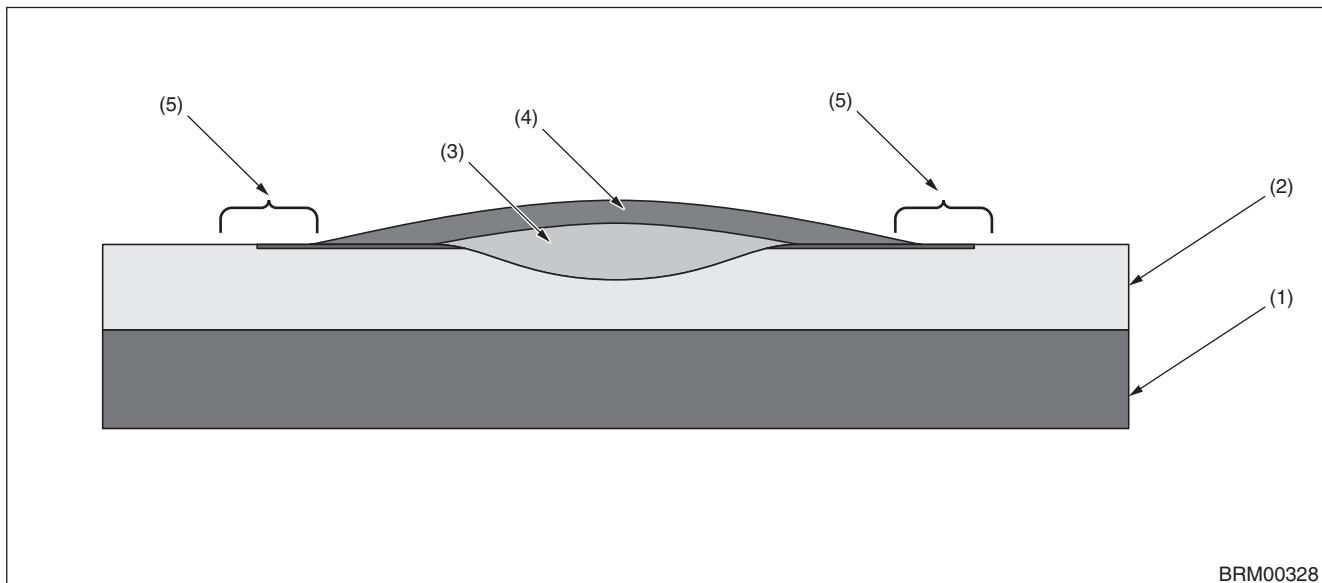
(3) Scoring
(4) Masking

(5) Clear Base
(6) Top Clear

7) Keep it at 90 °C to 110 °C (194 to 230 °F) for 30 minutes for cure the repair.

8) After the work is completed, leave the vehicle for 8 hours or more.

9) Polish the gradation area (around the scored area) with compound.



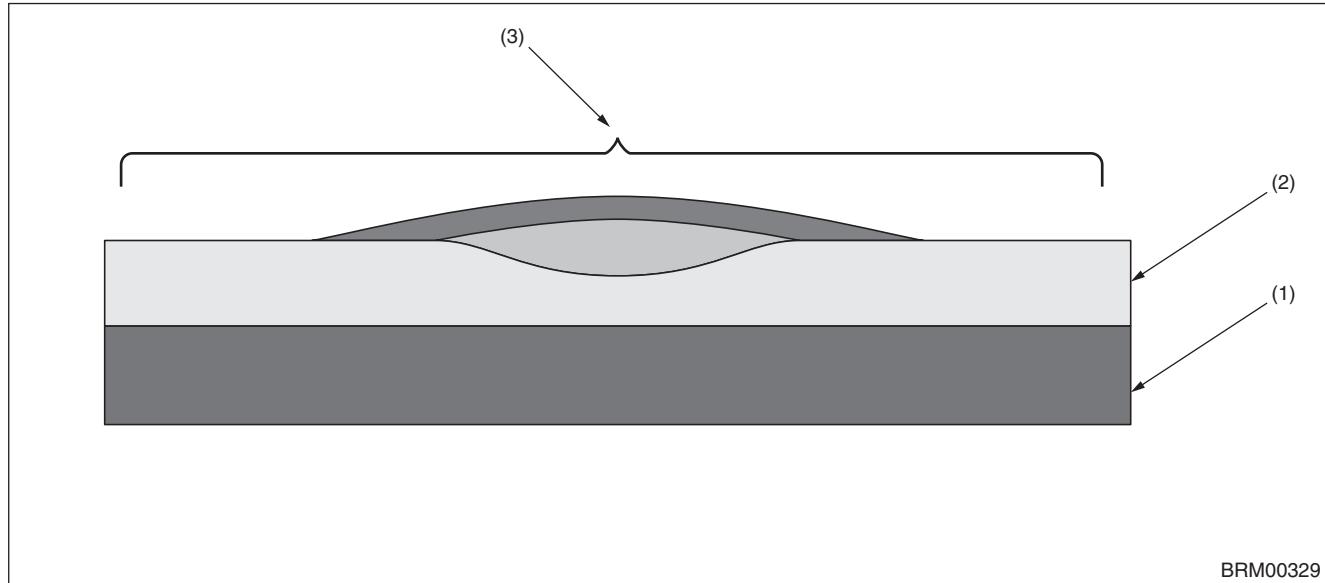
(1) Carbon roof
(2) Clear layer

(3) Clear Base
(4) Top Clear

(5) Gradation area

Panel Replacement

10) Polish the whole area with compound (final polishing).



(1) Carbon roof

(2) Clear layer

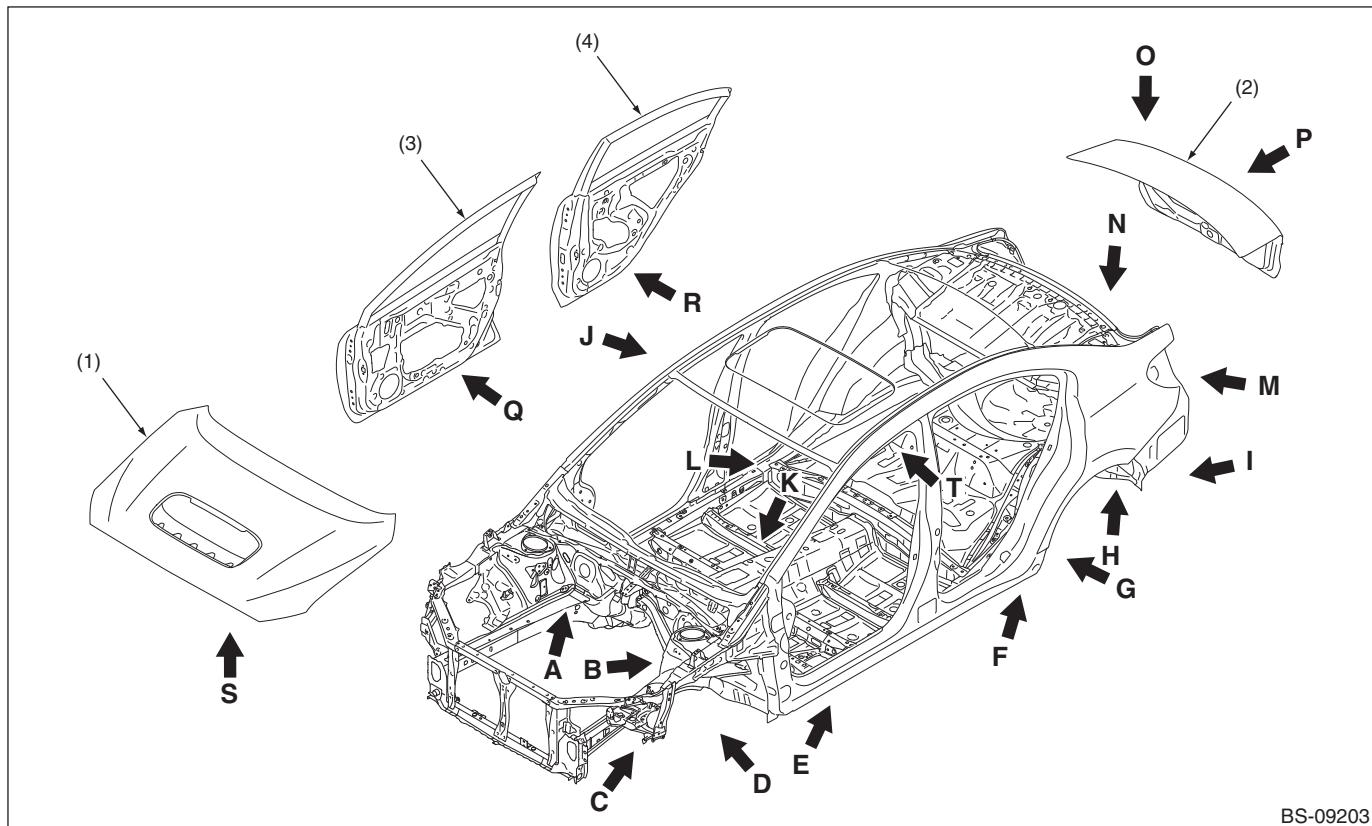
(3) Polish the whole surface.

9. Body Sealing

A: SPECIFICATION

Used material: **Three Bond 4101 (004403063)**

— : Sealer application location



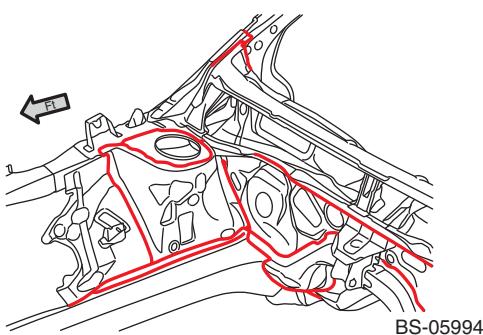
(1) Front hood

(3) Front door

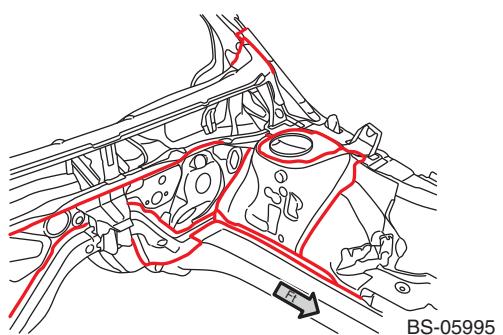
(4) Rear door

(2) Trunk

View A

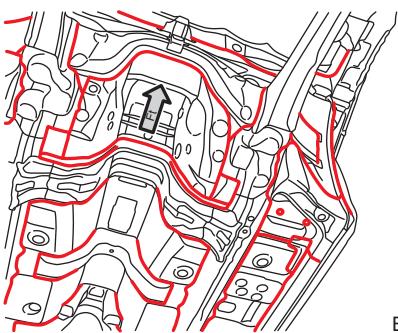


View B

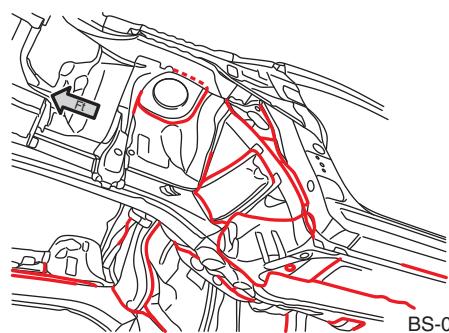


Body Sealing

View C



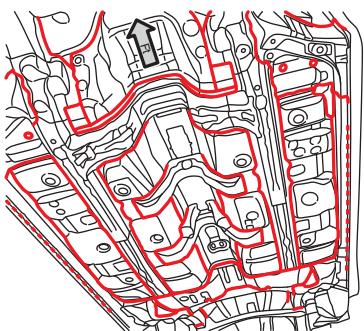
View D



BS-09206

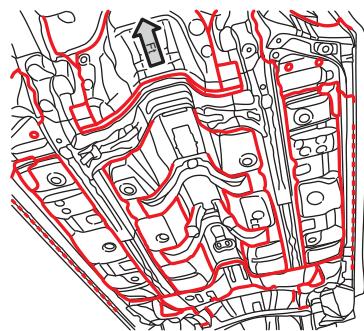
BS-05997

View E ('14 MY — '17 MY)



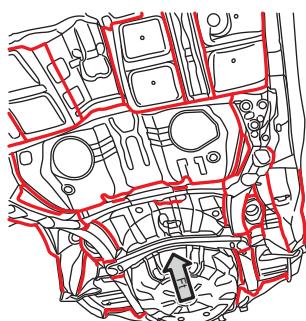
BS-05998

View E ('18 MY —)



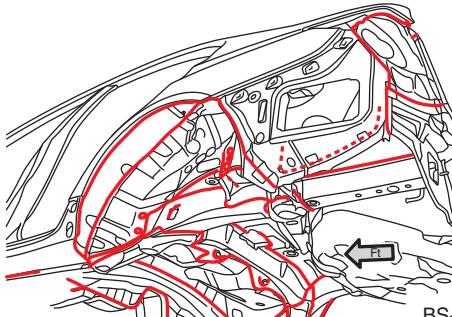
BS-09207

View F



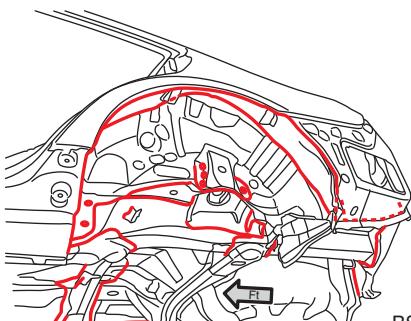
BS-06000

View G



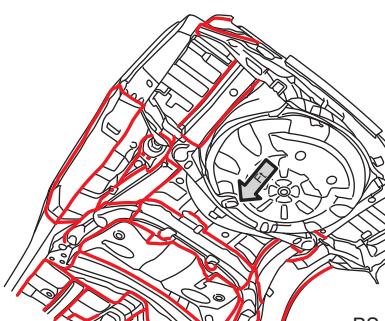
BS-06001

View H



BS-06002

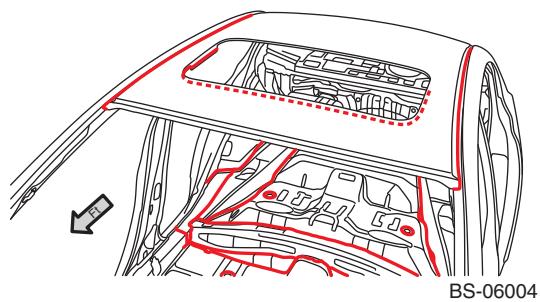
View I



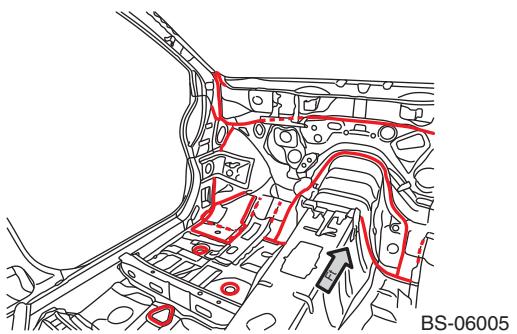
BS-06003

Body Sealing

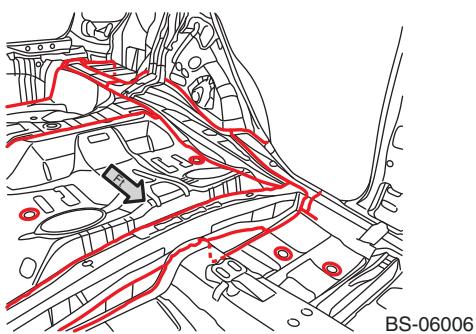
View J



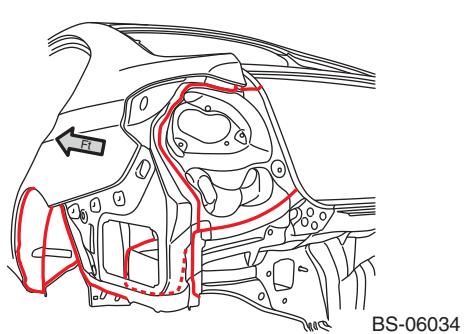
View K



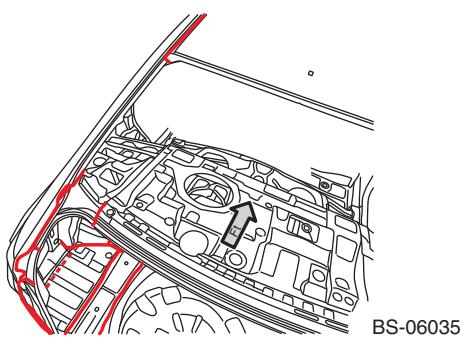
View L



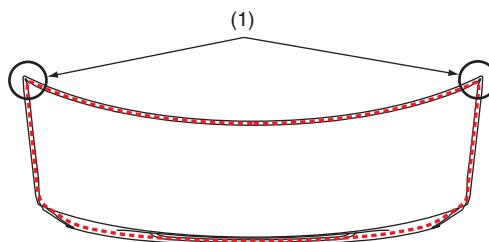
View M



View N



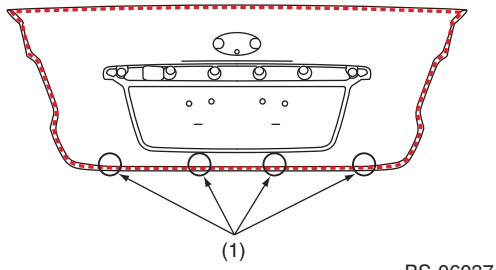
View O



BS-06036

(1) Plug the ED drain hole with PS and then make it smooth and even.

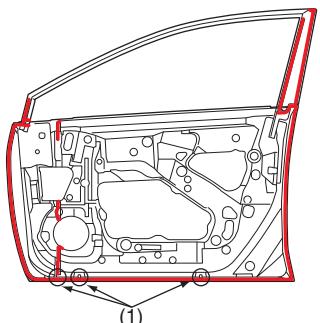
View P



(1) Do not block the water drain holes.

BS-06037

View Q

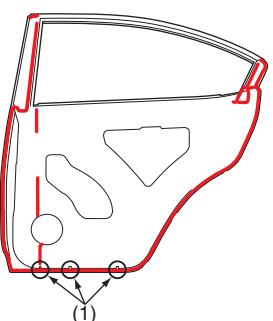


BS-06038

(1) Do not block the water drain holes.

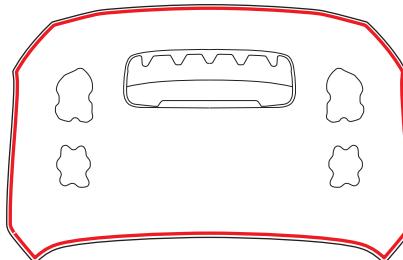
Body Sealing

View R



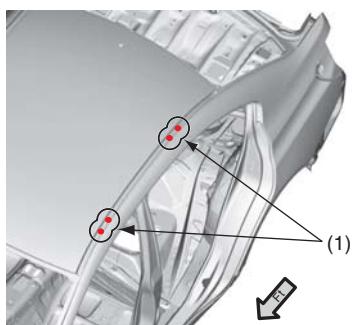
(1) Do not block the water drain holes.

View S



BS-06040

View T



BS-09205

(1) The holes for '14 MY to '17 MY vehicles shall be blocked.

SUBARU.

CAUTION:

Sealer already applied to hood, door and rear gate in replacement condition.

Anticorrosion Wax

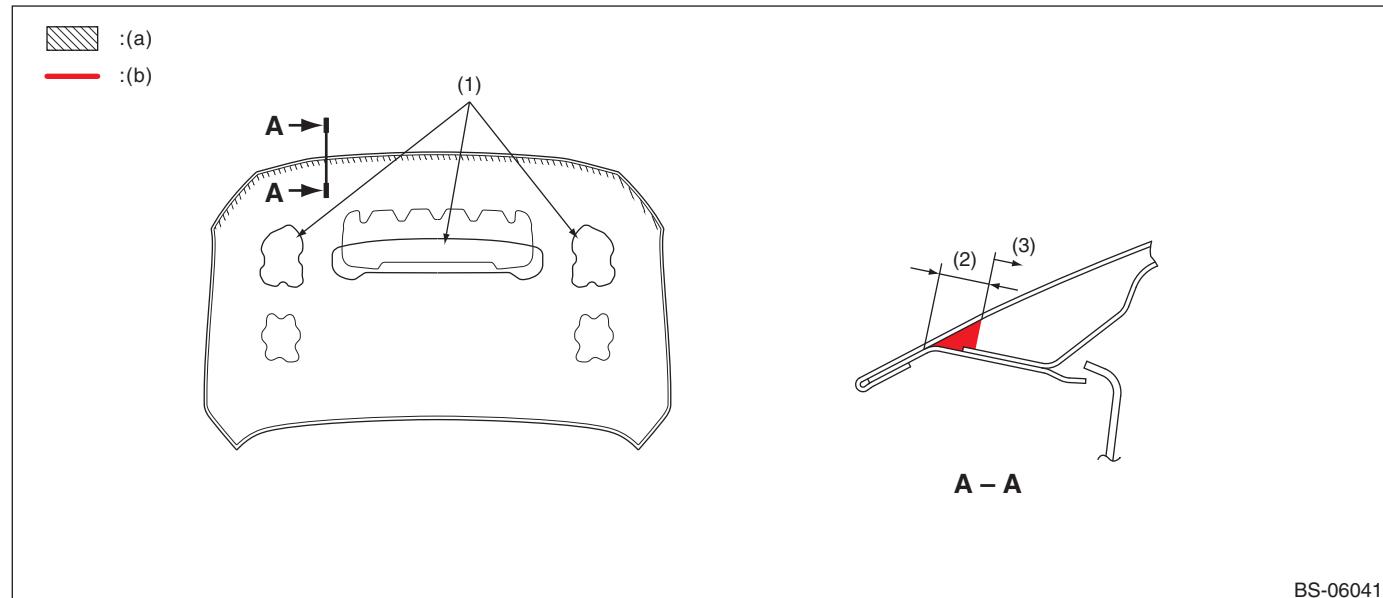
10. Anticorrosion Wax

A: SPECIFICATION

Used material: Rust-stop aerosol (K0877YA015)

— and ■■■■■ : Application area

- Front hood (Application thickness = 50 μm or more)



(a) Rust-stop aerosol

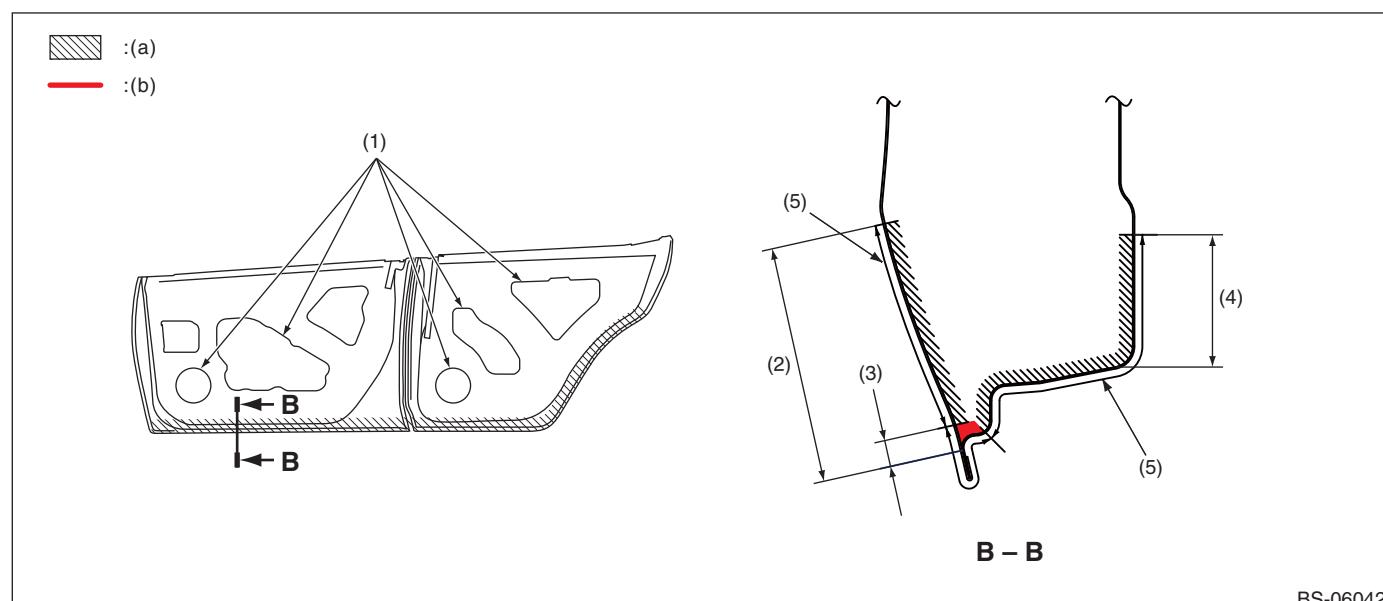
(b) To be filled into the plate joint.

(1) Wax application work openings

(2) 10 mm (0.39 in)

(3) Adherence of mist is allowable.

- Door (Application thickness = 50 μm or more)



(a) Rust-stop aerosol

(b) To be filled into the plate joint.

(1) Wax application work openings

(3) 10 mm (0.39 in)

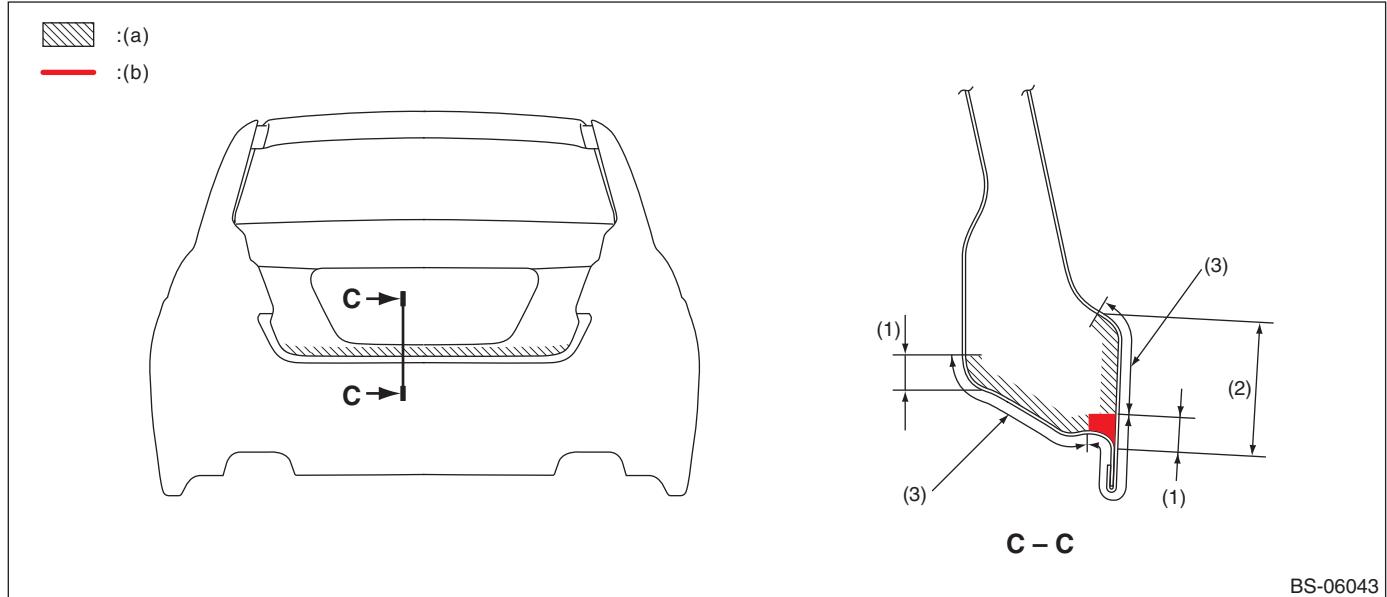
(5) Adherence of mist is allowable.

(2) 90 mm (3.54 in)

(4) 50 mm (1.97 in)

Anticorrosion Wax

- Trunk lid (Application thickness = 50 μm or more)



(a) Rust-stop aerosol

(b) To be filled into the plate joint.

(1) 10 mm (0.39 in)

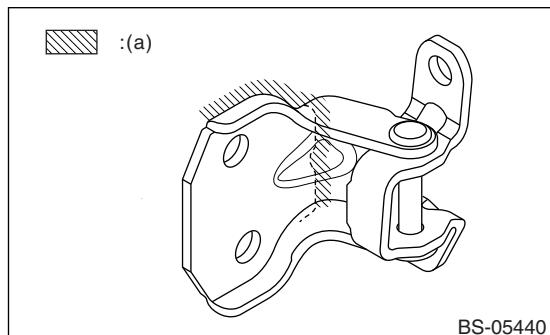
(2) 40 mm (1.57 in)

(3) Adherence of mist is allowable.

- Front door hinge

(Application thickness = 15 μm or more)

Apply to the contact surface (indicated range) on body side at two locations at the top and bottom (four locations in all), and to the installation outer circumference (plate edges) on the door side.

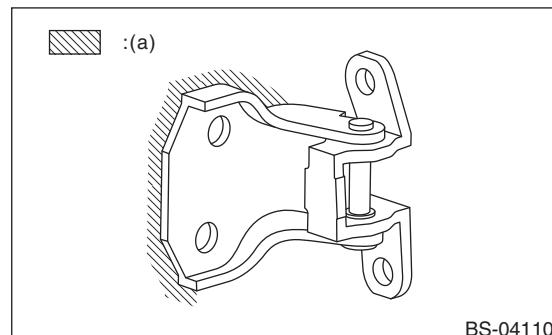


(a) Rust-stop aerosol

- Rear door hinge

(Application thickness = 15 μm or more)

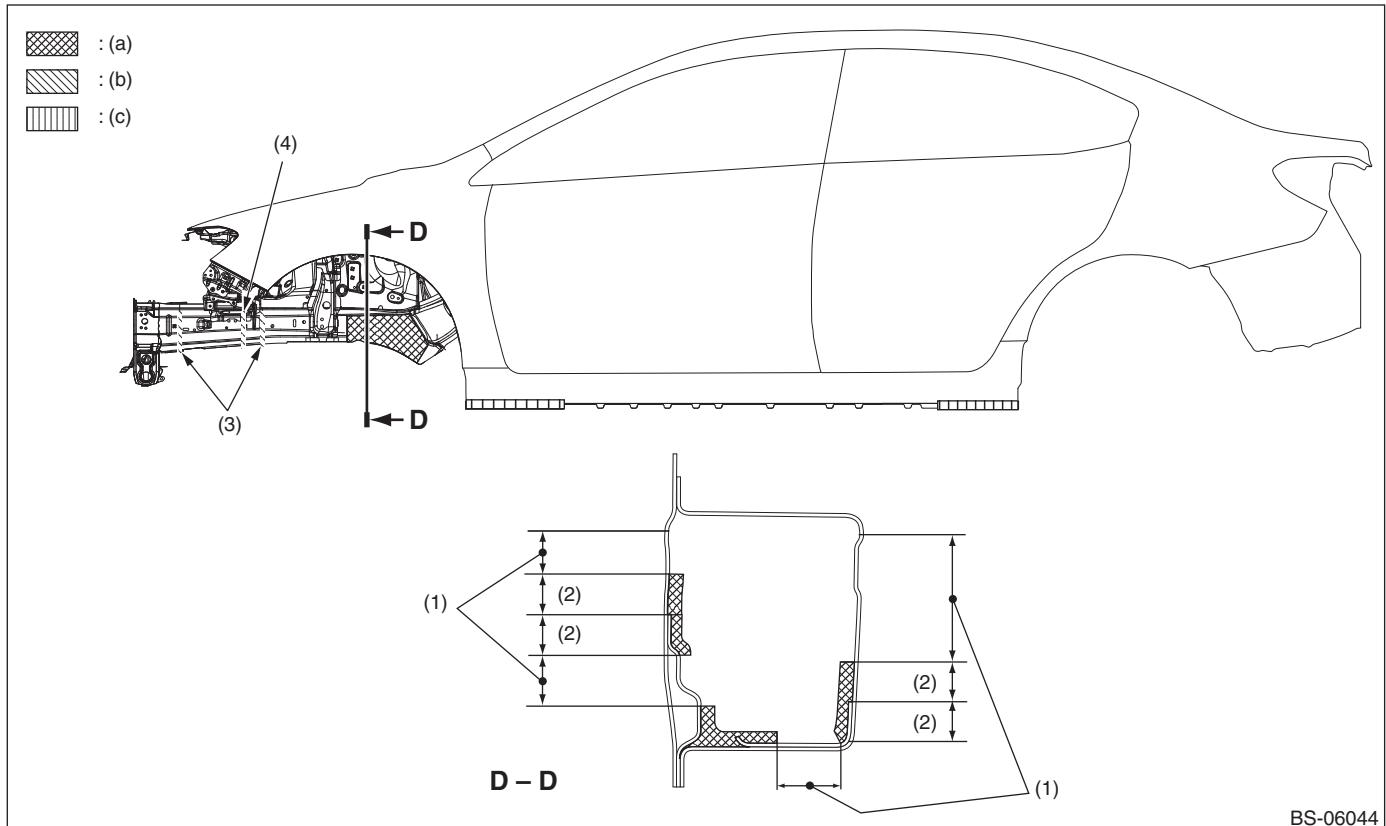
Apply to the contact surface (indicated range) on body side at two locations at the top and bottom (four locations in all), and to the installation outer circumference (plate edges) on the door side.



(a) Rust-stop aerosol

Anticorrosion Wax

• Overall view



BS-06044

(a) Application of rust-stop aerosol to the inside. (Application thickness = 50 μm or more)

(b) Rust-stop aerosol (Application thickness = 15 μm or more)

(c) Rust-stop aerosol (Application thickness = 150 μm or more)

(1) Adherence of mist is allowable.

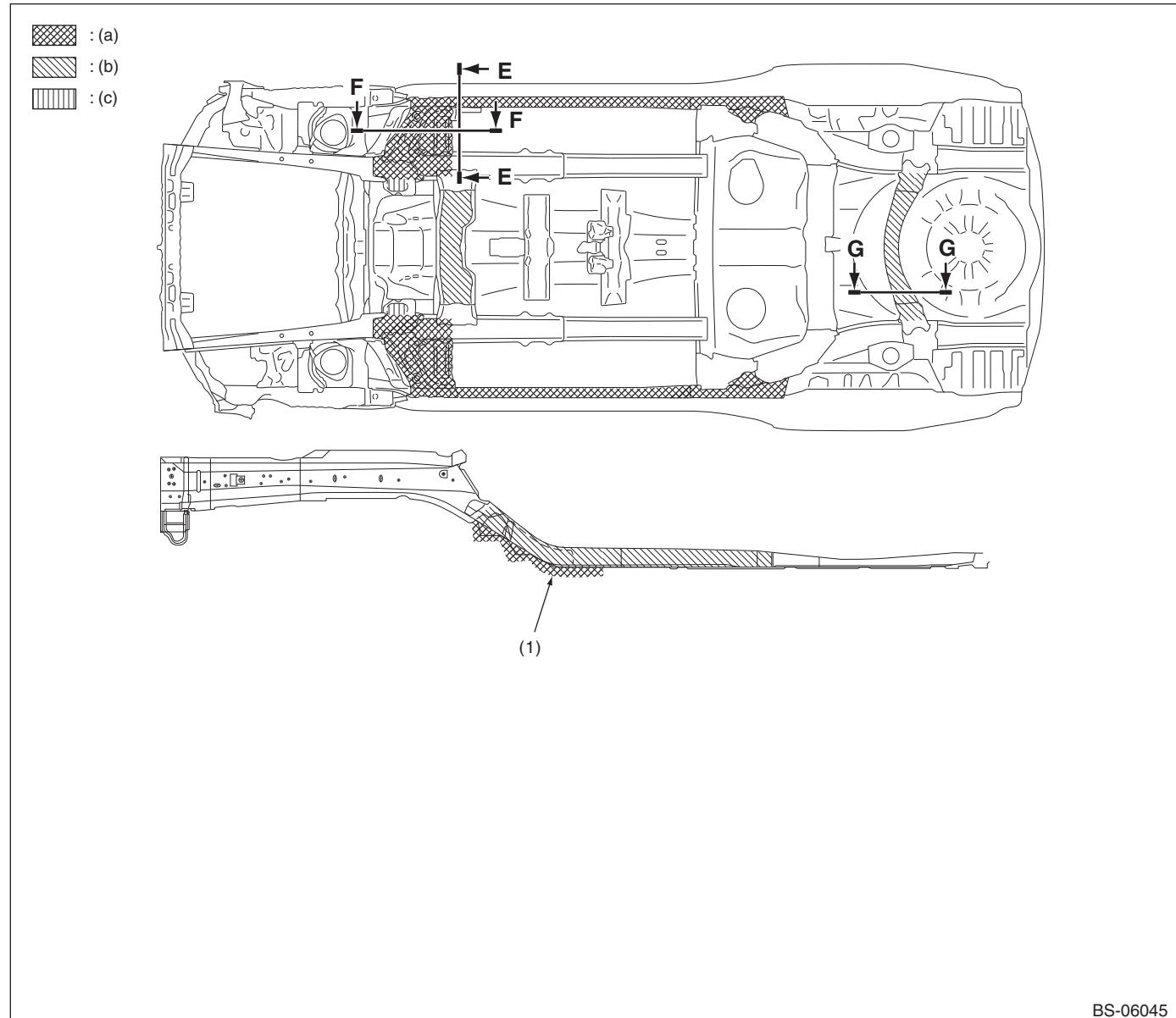
(2) 20 mm (0.79 in)

(3) The panel joints are covered.

(4) The panel joints on the inside of the engine compartment are covered.

Anticorrosion Wax

- **Bottom view**



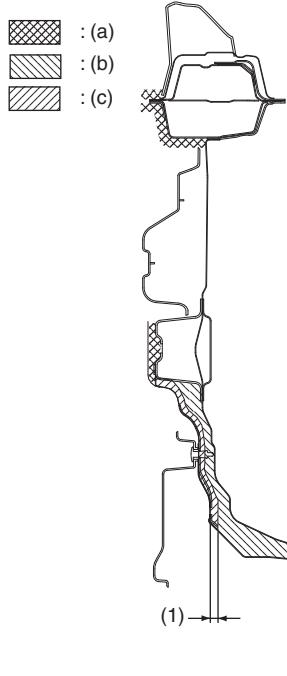
BS-06045

(a) Rust-stop aerosol (Application thickness = 150 μm or more). (b) Rust-stop aerosol (Application thickness = 20 μm or more). (c) Rust-stop aerosol (Application thickness = 50 μm or more).

(1) Coating application area does not include the transverse link bush.

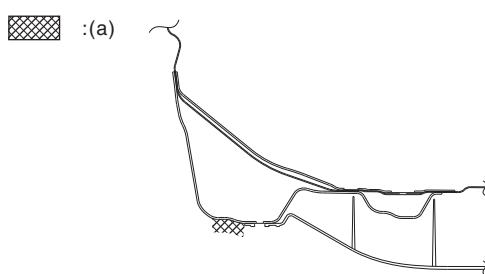
Anticorrosion Wax

Cross section E — E



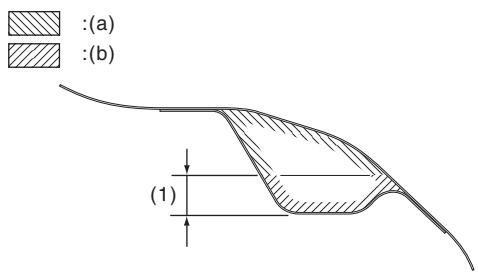
- (a) 150 μm or more
- (b) 20 μm or more
- (c) 50 μm or more
- (1) 10 mm (0.39 in)

Cross section F — F



- (a) 150 μm or more

Cross section G — G



- (a) 20 μm or more
- (b) 50 μm or more
- (1) 10 mm (0.39 in)

11.Undercoat

A: SPECIFICATION

Repair material: PVC (NT guardcoat 5900FL)

CAUTION:

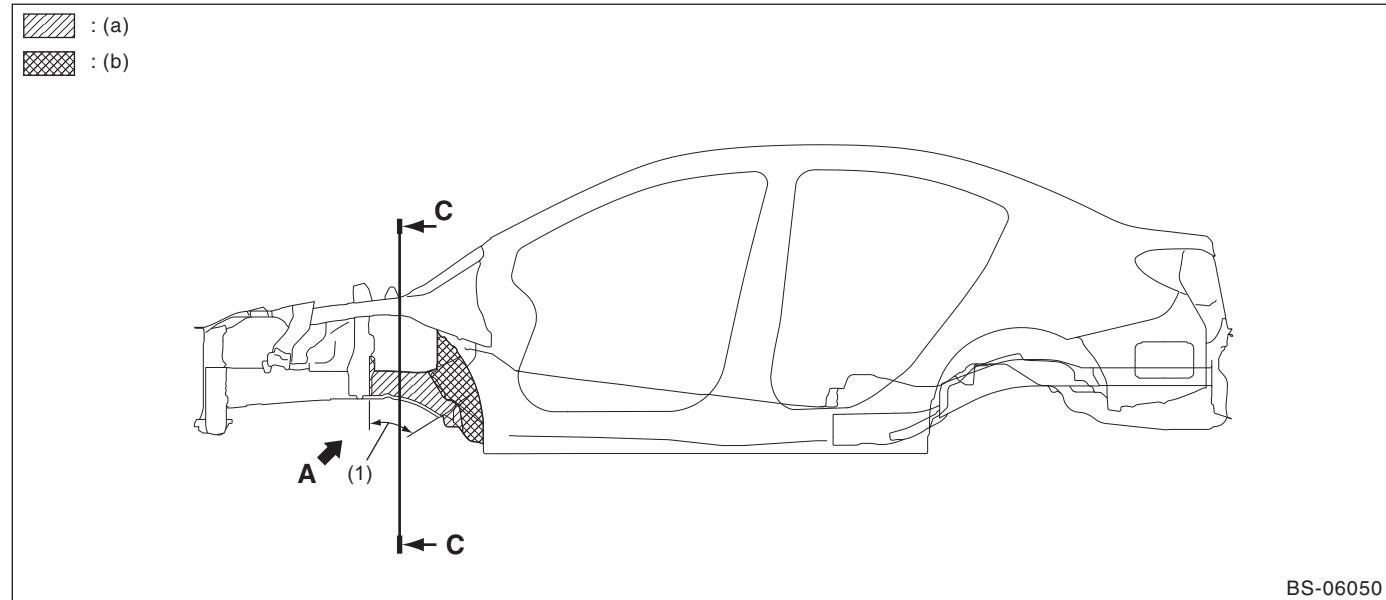
Perform warning so that under the coat will not become attached to locations other than shown and to the following locations.

- High-temperature parts related to the exhaust pipe
- Hoses, tubes and harness parts
- Installation surfaces of rear suspension, transmission, sub frame, etc.

1) Application area and application thickness

	300 μm or more
	600 μm or more
	200 μm or more
	The panel gap shall be filled.

• Side view



(a) 300 μm or more

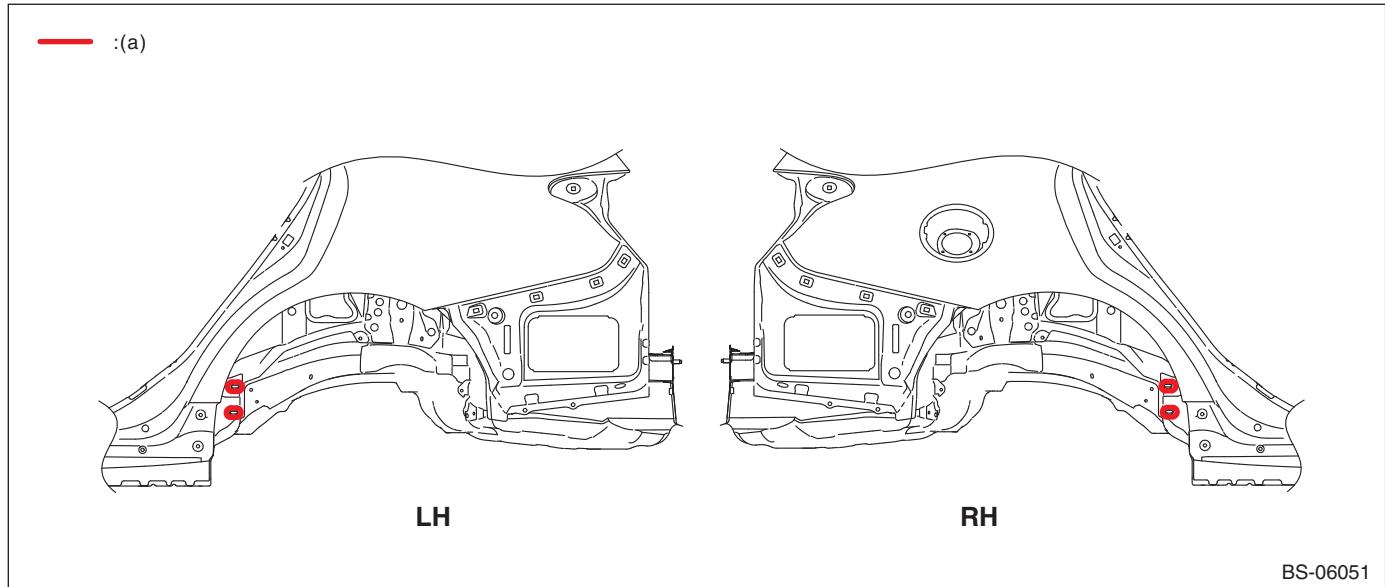
(b) 600 μm or more

(1) 10 mm (0.39 in)

(Adherence of mist is allowable.)

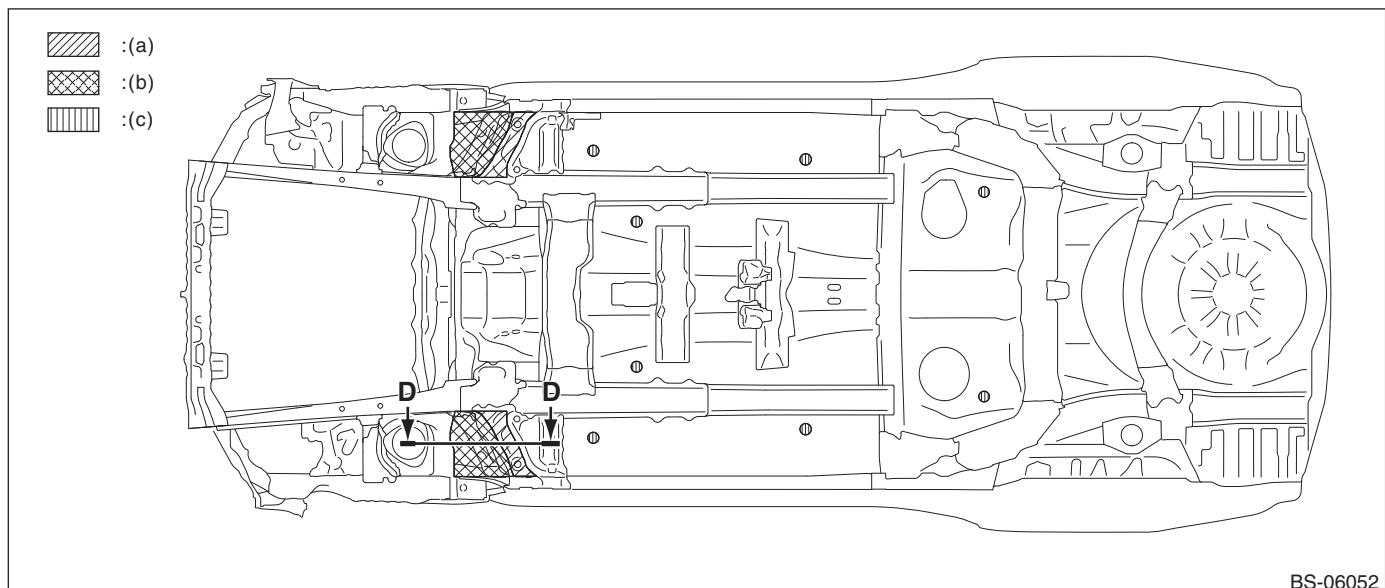
Undercoat

- Rear wheel apron side view



(a) The panel gap shall be filled.

- Bottom view



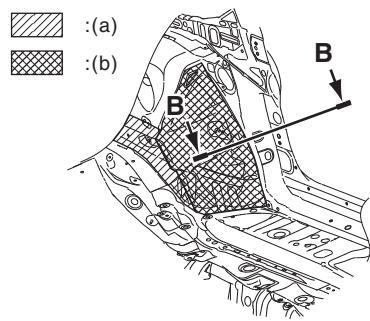
(a) 300 μm or more

(b) 600 μm or more

(c) 200 μm or more

Undercoat

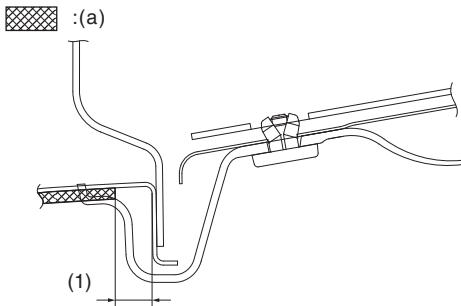
View A



(a) 300 μm or more
(b) 600 μm or more

BS-06054

Cross section B — B

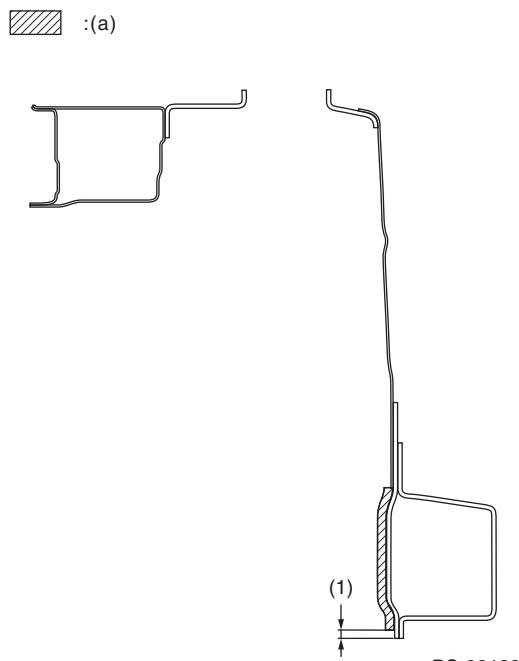


BS-06055

(a) 600 μm or more

(1) 10 mm (0.39 in) (Adherence of mist is allowable.)

Cross section C — C

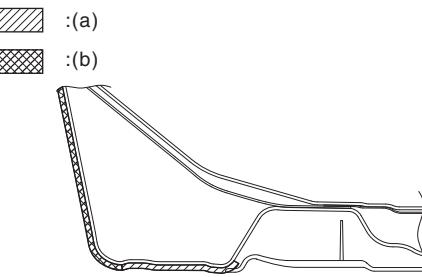


(a) 300 μm or more

(1) 10 mm (0.39 in) (Adherence of mist is allowable.)

BS-06189

Cross section D — D



BS-06056

(a) 300 μm or more

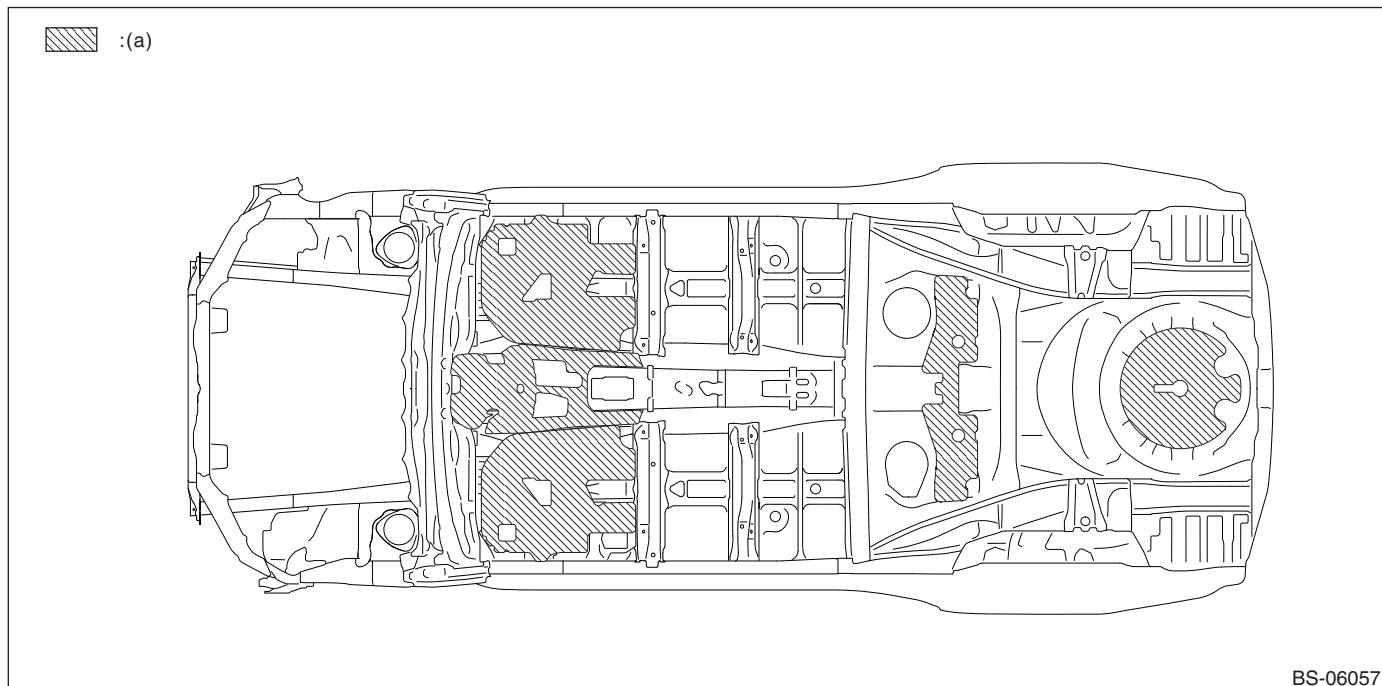
(b) 600 μm or more

SUBARU.

12.Damping Seat

A: SPECIFICATION

1. UPPER VIEW

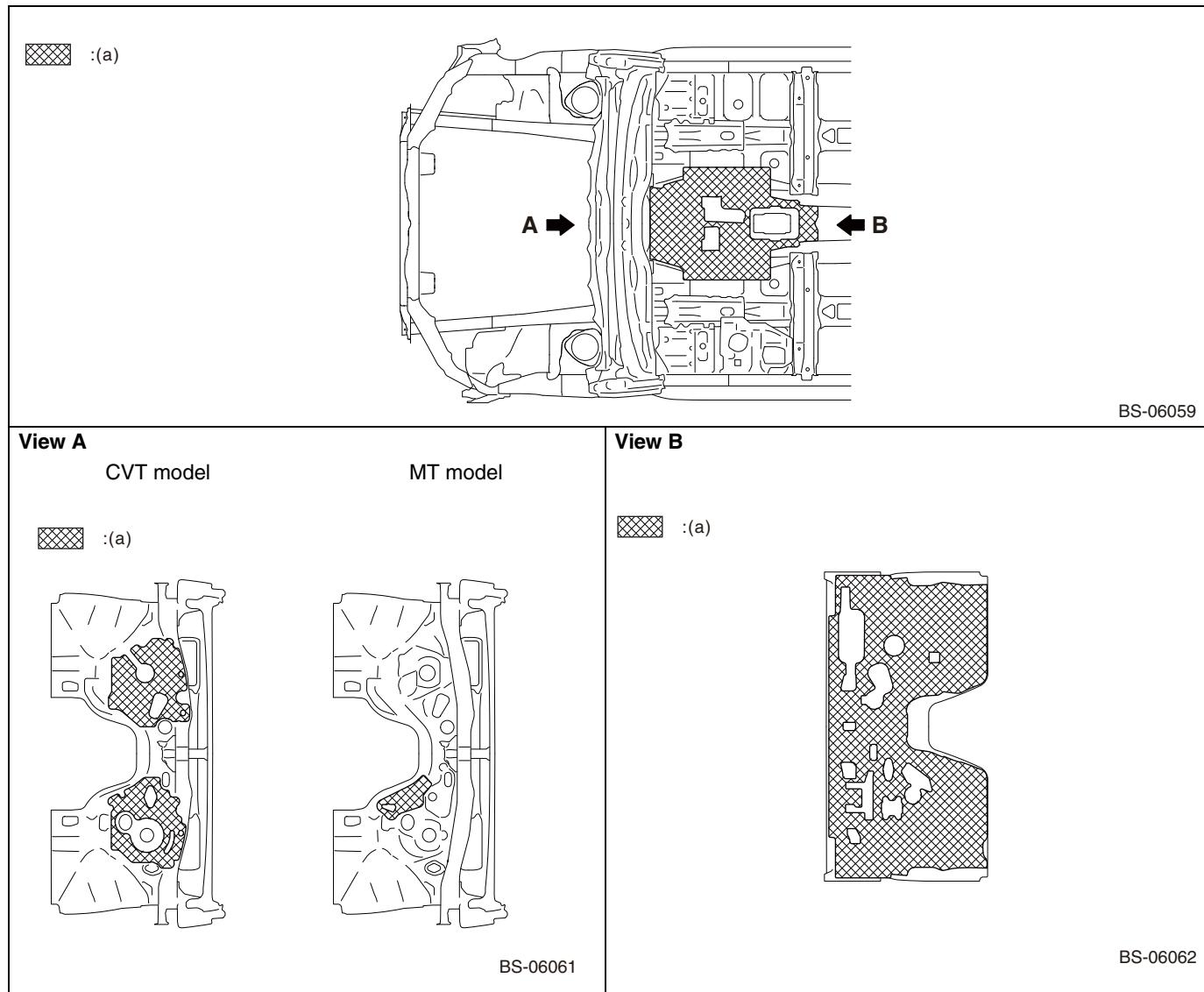


(a) Silencer

13. Insulator

A: SPECIFICATION

1. UPPER VIEW

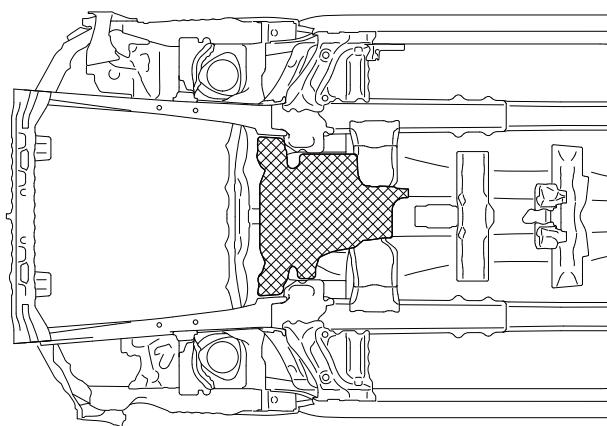


(a) Insulator

Insulator

2. BOTTOM VIEW

:(a)

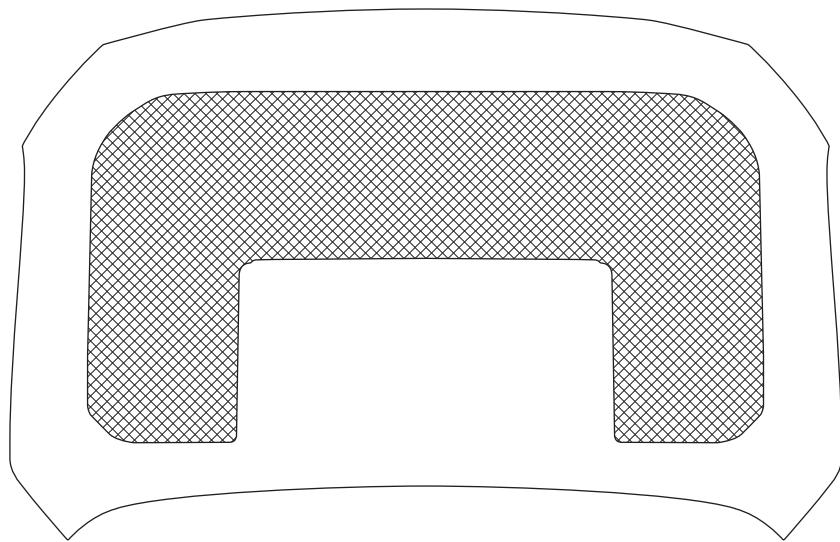


BS-06063

(a) Insulator

3. FRONT HOOD

:(a)



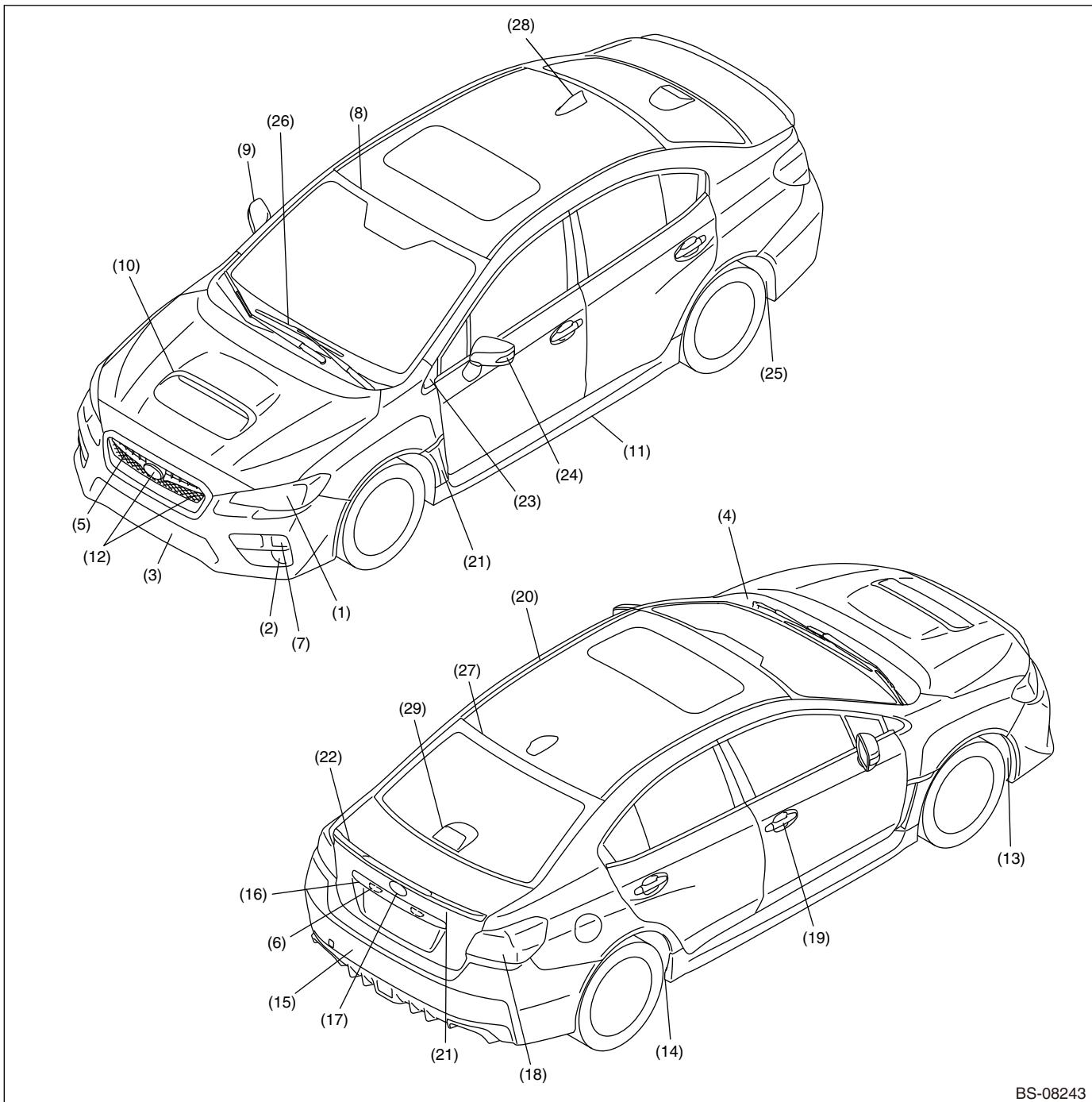
BS-06065

(a) Insulator

14. Plastic Parts and Materials

A: SPECIFICATION

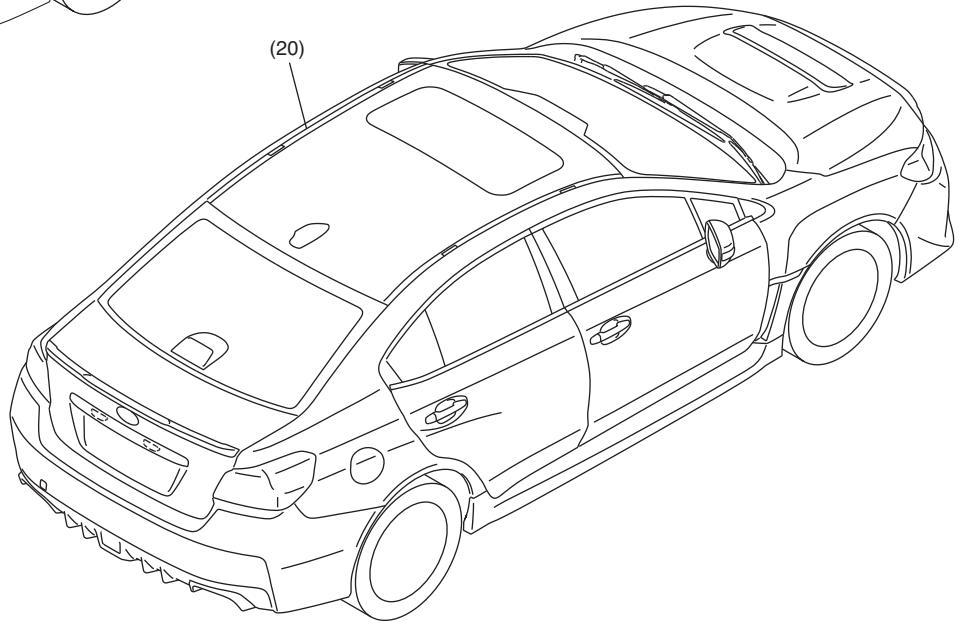
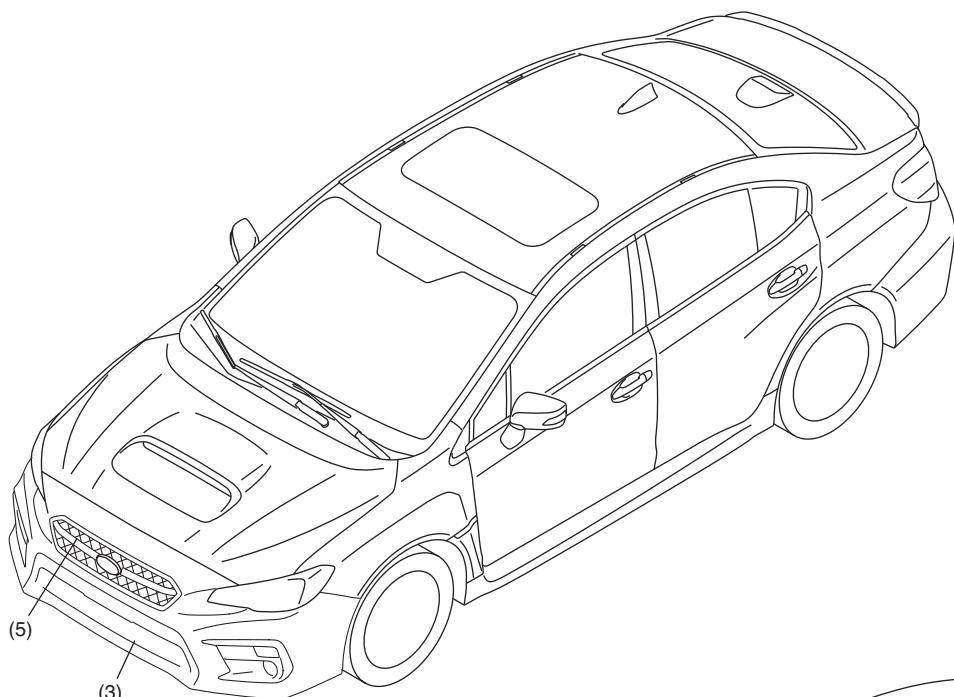
• '14 MY — '17 MY



BS-08243

Plastic Parts and Materials

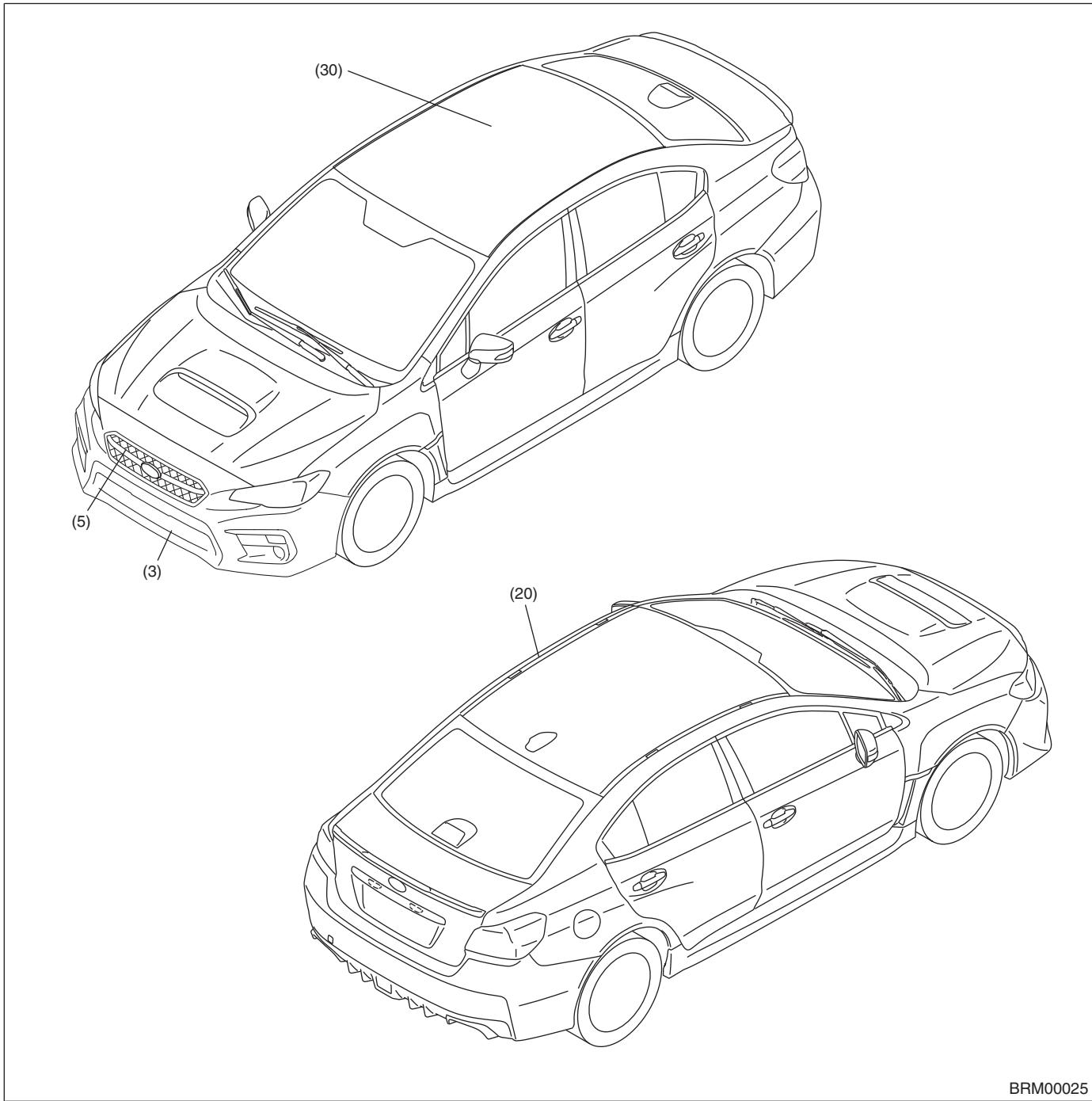
• '18 MY —



BS-09233

Plastic Parts and Materials

• Carbon roof model ('18 MY —)



BRM00025

Plastic Parts and Materials

(1)	Headlight	(12)	Ornament front	(23)	A-pillar cover
(2)	Front fog light	(13)	Front mudguard	(24)	Side turn light
(3)	Front bumper	(14)	Air flap rear	(25)	Rear mudguard
(4)	Cowl panel	(15)	Rear bumper	(26)	Front wiper
(5)	Front grille	(16)	Trunk garnish	(27)	Rear window moulding
(6)	License light	(17)	Ornament rear	(28)	Antenna
(7)	Front turn light	(18)	Rear combination light	(29)	High mount stop light
(8)	Front window moulding	(19)	Door handle	(30)	Roof panel (Carbon)
(9)	Door mirror	(20)	Roof moulding		Under cover
(10)	Hood grille	(21)	Fendergarnish		Splash board
(11)	Side spoiler	(22)	Rear spoiler		

No.	Part name	Material
(1)	Headlight (halogen)	Lens
		Housing
		Inner panel
		Reflector
		Reflex reflector
	('14 MY — '17 MY)	Inner Lens
		Lens
		Housing
		Inner panel
		Reflector
(1)	Headlight (LED)	Reflex reflector
		Inner Lens A
		Inner Lens B
	('18 MY —)	Lens
		Housing
		Extension
		Reflector (turn)
		Reflector (DRL)
(2)	Front fog light	Inner lens
		Bezel
		Reflex reflector
	('18 MY —)	Lens
		Reflector
		Bracket
		Lens
(3)	Front bumper	Reflector
		Bracket
		Face
		Fog light cover
		Hook cover
		Sealing bumper
		Side bracket
		Corner bracket
(4)	Cowl panel	Cover intake
		Body
(5)	Front grille	Side
		Grille
		Spacer

Plastic Parts and Materials

No.	Part name		Material
(6)	License light	Lens	PC
		Housing	PC
(7)	Front turn light	Lens	PC
		Housing	PP+TD30
(8)	Front window moulding		PVC
(9)	Door mirror	Body	AES
		Out cover	AES
		Stay cover	AES
		Cover	ABS
		Mirror holder	PP
(10)	Hood grille	Grille	PPE/PA6-MD10
		Packing A	EPDM
		Packing B	EPDM
		Protector	EPDM
(11)	Side spoiler		PP
(12)	Ornament front		
		Ornament front (STI)	
(13)	Front mudguard	Body	PE
		Air flap	PE
(14)	Air flap rear		PP+EPDM
(15)	Rear bumper	Face	PP
		Hook cover	PP
		Side bracket	POM
		Corner bracket	PP+GF30
		Cover side lower	PP
		Cover fog Rear	PP
(16)	Trunk garnish		ABS
(17)	Ornament rear		ABS+PMMA
(18)	Rear combination light	Lens	PMMA
		Housing	ASA
		Inner Housing A	PC
		Inner Housing B	PC
		Inner Lens A	PC
		Inner Lens B	PMMA
		Inner Lens C	PMMA
(19)	Door handle	Handle	PC+PBT-MD10
		Handle cover	PC+PBT-MD10
(20)	Roof moulding		PVC
(21)	Fendergarnish	Garnish	PP
		Moulding	ABS
(22)	Rear spoiler (small size)	Body	ABS
	Rear spoiler (large size)	Body	ABS
		Cover	ABS
(23)	A-pillar cover		AES
(24)	Side turn light	Lens	PMMA
		Housing	PC
(25)	Rear mudguard		PE
(26)	Front wiper	Blade	PBT
(27)	Rear window moulding		PVC
(28)	Antenna		PC+ASA

Plastic Parts and Materials

No.	Part name	Material
(29)	High mount stop light	Lens
		Housing
		Cover
(30)	('18 MY —) Roof panel (Carbon)	Body
		Pin
		Spacer
		Lip
	Under cover	Body
	Splash board	PP

List of Plastic Material Notations

15. List of Plastic Material Notations

A: SPECIFICATION

Notation symbol	Material name	Notation symbol	Material name
ABS	ABS resin (acrylonitrile/butadiene/styrene/resin)	PET	Polyethylene terephthalate
AES	Acrylonitrile/ethylene/styrene	PET+TD20	Polyethylene terephthalate (20 % talc)
ASA	Acrylonitrile/strene/acrylate	PMMA	Polymethyl methacrylate
BMC	Premixed bulk molding compound	POM	Polyacetal
EP-CF60	Epoxy resin (60 % carbon fiber)	PP	Polypropylene
EPDM	Ethylene/propylene/dien rubber	PP+GF30	Polypropylene (30 % glass fiber content)
PA6	Nylon 6	PPE	Polyphenylene ether
PA6-MD10	Nylon 6 (10 % mineral powder content)	PP+TD10	Polypropylene (10 % talc)
PBT	Polybutylene terephthalate	PP+TD20	Polypropylene (20 % talc)
PBT-MD10	Polybutylene terephthalate (10 % mineral powder content)	PP+TD30	Polypropylene (30 % talc)
PC	Polycarbonate	PVC	Polyvinyl chloride
PE	Polyethylene	TPE	Thermoplastic elastomer