SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-15EXML52-501	DATE : 2015-02-09
SUBJECT : Error in writing of the troubleshooting regarding SRS		<DESTINATION/MODEL> (MMNA/USTP/EU/MMAL/NZ i-MiEV(HA3W) <M/Y> 12-16
GROUP : Gr:52(Interior & SRS Airbag)		

1. Description :

Please refer to the attached document for the correction of the error in writing existing in the applicable service manual.

2. Affected service manuals :

Please refer to the attached document (Attached sheet 1)

3. About the details :

Please refer to the attached document (Attached sheet 5-6)

<For overseas market>
<EU>

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2014 i-MiEV Workshop Manual CD-ROM	CHAE14E1-CD (Eng) CHAF14E1-CD (Fra) CHAG14E1-CD (Ger) CHAI14E1-CD (Ita) CHAS14E1-CD (Spa)	・CHECK CHART FOR DIAGNOSIS CODES (M524-00-332-63200-01) ・CODE No.B1406: G-SENSOR OF FRONT IMPACT SENSOR (RH) FAILURE ・Code No.B1416: G-SENSOR OF FRONT IMPACT SENSOR (LH) FAILURE (M524-02-500-46200-01) ・CODE No.B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-63900-01) ・CODE No.B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-49800-01) ・CODE No.B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-56400-01) ・CODE No.B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-48600-01) ・CODE No.B1426: G-SENSOR OF SIDE IMPACT SENSOR (RH) FAILURE ・Code No.B1436: G-SENSOR OF SIDE IMPACT SENSOR (LH) FAILURE (M524-01-770-53000-01) ・CODE No.B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-65600-01) ・CODE No.B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-57800-01) ・CODE No.B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-67700-01) ・CODE No.B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-62900-01)	Attached sheet 5 (1/31)-(3/31), (8/31)-(31/31)
2015 i-MiEV Workshop Manual CD-ROM	CHAE15E1-CD (Eng) CHAF15E1-CD (Fra) CHAG15E1-CD (Ger) CHAI15E1-CD (Ita) CHAS15E1-CD (Spa)	・CHECK CHART FOR DIAGNOSIS CODES (M524-00-332-63200-01) ・CODE No.B1406: G-SENSOR OF FRONT IMPACT SENSOR (RH) FAILURE ・Code No.B1416: G-SENSOR OF FRONT IMPACT SENSOR (LH) FAILURE (M524-02-500-46200-01) ・CODE No.B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-63900-01) ・CODE No.B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-49800-01) ・CODE No.B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-56400-01)	Attached sheet 5 (4/31)-(5/31), (8/31)-(31/31)

2015 i-MiEV Workshop Manual CD-ROM		・CODE No.B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-48600-01) ・CODE No.B1426: G-SENSOR OF SIDE IMPACT SENSOR (RH) FAILURE ・Code No.B1436: G-SENSOR OF SIDE IMPACT SENSOR (LH) FAILURE (M524-01-770-53000-01) ・CODE No.B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-65600-01) ・CODE No.B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-57800-01) ・CODE No.B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-67700-01) ・CODE No.B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-62900-01)	

<MMAL/NZ>

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2013.5 i-MiEV Service Manual CD-ROM	AU900414 NZ:DRAFT	・CHECK CHART FOR DIAGNOSIS CODES (M524-00-332-56800-01) ・CODE No.B1406: G-SENSOR OF FRONT IMPACT SENSOR (RH) FAILURE ・Code No.B1416: G-SENSOR OF FRONT IMPACT SENSOR (LH) FAILURE (M524-02-500-44000-01) ・CODE No.B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-61700-01) ・CODE No.B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-47600-01) ・CODE No.B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-60500-01) ・CODE No.B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-51600-01) ・CODE No.B1426: G-SENSOR OF SIDE IMPACT SENSOR (RH) FAILURE ・Code No.B1436: G-SENSOR OF SIDE IMPACT SENSOR (LH) FAILURE (M524-01-770-56300-01) ・CODE No.B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-63400-01) ・CODE No.B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・Code No.B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-60800-01) ・CODE No.B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-70700-01)	Attached sheet 5 (6/31)-(7/31), (8/31)-(31/31)

2013.5 i-MiEV Service Manual CD-ROM		・CODE No.B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・Code No.B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-65200-01)	

<MMNA>

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2012 i-MiEV Service Manual CD-ROM	MSCD-018B-2012	・DTC B1406: MALFUNCTION OF FRONT IMPACT SENSOR (RH) ・DTC B1416: MALFUNCTION OF FRONT IMPACT SENSOR (LH) (M524-02-500-42800-01) ・DTC B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-58700-01) ・DTC B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-44300-01) ・DTC B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-52000-01) ・DTC B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-44200-01) ・DTC B1426: MALFUNCTION OF SIDE IMPACT SENSOR (RH) ・DTC B1436: MALFUNCTION OF SIDE IMPACT SENSOR (LH) (M524-01-770-48800-01) ・DTC B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-59300-01) ・DTC B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-42300-01) ・DTC B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-61100-01) ・DTC B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-57700-01)	Attached sheet 6 (7/42)-(42/42)
2013 i-MiEV Service Manual CD-ROM	MSCD-018B-2013	・CHECK CHART FOR DIAGNOSTICS TROUBLE CODES (M524-00-332-46101-01) ・DTC B1406: MALFUNCTION OF FRONT IMPACT SENSOR (RH) ・DTC B1416: MALFUNCTION OF FRONT IMPACT SENSOR (LH) (M524-02-500-42801-01) ・DTC B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-58701-01) ・DTC B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-44301-01) ・DTC B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-52001-01) ・DTC B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-44201-01) ・DTC B1426: MALFUNCTION OF SIDE IMPACT SENSOR (RH) ・DTC B1436: MALFUNCTION OF SIDE IMPACT SENSOR (LH) (M524-01-770-48801-01) ・DTC B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-59301-01)	Attached sheet 6 (1/42)-(3/42), (7/42)-(42/42)

2013 i-MiEV Service Manual CD-ROM		・DTC B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-42301-01) ・DTC B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-61101-01) ・DTC B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-57701-01)	
2016 i-MiEV Service Manual CD-ROM	MSCD-018B-2016	・CHECK CHART FOR DIAGNOSTICS TROUBLE CODES (M524-00-332-46101-01) ・DTC B1406: MALFUNCTION OF FRONT IMPACT SENSOR (RH) ・DTC B1416: MALFUNCTION OF FRONT IMPACT SENSOR (LH) (M524-02-500-42801-01) ・DTC B1407: FRONT IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-620-58701-01) ・DTC B1408: FRONT IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1409: FRONT IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-630-44301-01) ・DTC B1417: FRONT IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-700-52001-01) ・DTC B1418: FRONT IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1419: FRONT IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-710-44201-01) ・DTC B1426: MALFUNCTION OF SIDE IMPACT SENSOR (RH) ・DTC B1436: MALFUNCTION OF SIDE IMPACT SENSOR (LH) (M524-01-770-48801-01) ・DTC B1427: SIDE IMPACT SENSOR (RH) VOLTAGE ERROR (M524-01-780-59301-01) ・DTC B1428: SIDE IMPACT SENSOR (RH) COMMUNICATION ERROR ・DTC B1429: SIDE IMPACT SENSOR (RH) COMMUNICATION IMPOSSIBLE (M524-01-790-42301-01) ・DTC B1437: SIDE IMPACT SENSOR (LH) VOLTAGE ERROR (M524-01-860-61101-01) ・DTC B1438: SIDE IMPACT SENSOR (LH) COMMUNICATION ERROR ・DTC B1439: SIDE IMPACT SENSOR (LH) COMMUNICATION IMPOSSIBLE (M524-01-870-57701-01)	Attached sheet 6 (4/42)-(6/42), (7/42)-(42/42)

Code No.	Diagnostic item	Reference page
B1405*3	Driver's air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
B1406*3 <Up to January, 2014>*2 <From February, 2014>	Malfunction of G-sensor inside right front impact sensor	P.52B-32
B1407*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (RH) voltage error <Incorrect> <Correct>	P.52B-33
B1408*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (RH) communication error	P.52B-35
B1409*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (RH) communication impossible <Incorrect> <Correct>	P.52B-35
B1410*1	Passenger's (front) air bag module (squib) system (short-circuited between terminals of the squib circuit)	P.52B-37
B1411*1	Passenger's (front) air bag module (squib) system (open-circuited in the squib circuit)	P.52B-41
B1412*1	Passenger's (front) air bag module (squib) system (short-circuited to the earth)	P.52B-44
B1413*1	Passenger's (front) air bag module (squib) system (short-circuited to the power supply)	P.52B-47
B1414*3	Passenger's (front) air bag module (squib ignition drive circuit) system detected short circuit	P.52B-30
B1415*3	Passenger's (front) air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
B1416*3 <Up to January, 2014>*2 <From February, 2014>	Malfunction of G-sensor inside left front impact sensor	P.52B-32
B1417*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (LH) voltage error <Incorrect> <Correct>	P.52B-50
B1418*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (LH) communication error	P.52B-52
B1419*1 <Up to January, 2014>*2 <From February, 2014>	Front impact sensor (LH) communication impossible <Incorrect> <Correct>	P.52B-52
B1420*1	Side-airbag module (RH) (squib) system (short-circuit between terminals of the squib circuit)	P.52B-54

B1406*1 <Up to February, 2014>*2 <From March, 2014>

B1407*1 <Up to February, 2014>*2 <From March, 2014>

B1408*1 <Up to February, 2014>*2 <From March, 2014>

B1409*1 <Up to February, 2014>*2 <From March, 2014>

B1416*1 <Up to February, 2014>*2 <From March, 2014>

B1417*1 <Up to February, 2014>*2 <From March, 2014>

B1418*1 <Up to February, 2014>*2 <From March, 2014>

B1419*1 <Up to February, 2014>*2 <From March, 2014>

Attached sheet 5 (2/31)

Code No.	Diagnostic item	Reference page
B1421*1	Side-airbag module (RH) (squib) system (open-circuited in the squib circuit)	P.52B-57
B1422*1	Side-airbag module (RH) (squib) system (short-circuited to the earth)	P.52B-60
B1423*1	Side-airbag module (RH) (squib) system (short-circuited to the power supply)	P.52B-63
B1424*3	Side-airbag module (RH) (squib ignition drive circuit) system detected short circuit	P.52B-30
B1425*3	Side-airbag module (RH) (squib ignition drive circuit) system detected open circuit	P.52B-30
B1426*3 <Up to January, 2014>*2 <From February, 2014>	G-sensor of side impact sensor (RH) failure	P.52B-65
B1427*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (RH) voltage error	P.52B-66
B1428*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (RH) communication error	P.52B-68
B1429*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (RH) communication impossible	P.52B-68
B1430*1	Side-airbag module (LH) (squib) system (short-circuit between terminals of the squib circuit)	P.52B-70
B1431*1	Side-airbag module (LH) (squib) system (open-circuited in the squib circuit)	P.52B-73
B1432*1	Side-airbag module (LH) (squib) system (short-circuited to the earth)	P.52B-76
B1433*1	Side-airbag module (LH) (squib) system (short-circuited to the power supply)	P.52B-79
B1434*3	Side-airbag module (LH) (squib ignition drive circuit) system detected short circuit	P.52B-30
B1435*3	Side-airbag module (LH) (squib ignition drive circuit) system detected open circuit	P.52B-30
B1436*3 <Up to January, 2014>*2 <From February, 2014>	G-sensor of side impact sensor (LH) failure	P.52B-65
B1437*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (LH) voltage error	P.52B-81

<Incorrect> <Correct>

B1426*1 <Up to February, 2014>*2 <From March, 2014>

B1427*1 <Up to February, 2014>*2 <From March, 2014>

B1428*1 <Up to February, 2014>*2 <From March, 2014>

<Incorrect> <Correct>

B1429*1 <Up to February, 2014>*2 <From March, 2014>

<Incorrect> <Correct>

B1436*1 <Up to February, 2014>*2 <From March, 2014>

B1437*1 <Up to February, 2014>*2 <From March, 2014>

Code No.	Diagnostic item		Reference page
B1438*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (LH) communication error <Incorrect> <Correct> B1438*1 <Up to February, 2014>*2 <From March, 2014>		P.52B-83
B1439*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (LH) communication impossible <Incorrect> <Correct> B1439*1 <Up to February, 2014>*2 <From March, 2014>		P.52B-83
B1440*1	Curtain air bag module (RH) (squib) system (short-circuited between terminals of the squib circuit)		P.52B-85
B1441*1	Curtain air bag module (RH) (squib) system (open-circuited in the squib circuit)		P.52B-89
B1442*1	Curtain air bag module (RH) (squib) system (short-circuited to the earth)		P.52B-92
B1443*1	Curtain air bag module (RH) (squib) system (short-circuited to the power supply)		P.52B-95
B1444*3	Curtain air bag module (RH) (squib ignition drive circuit) system detected short circuit		P.52B-30
B1445*3	Curtain air bag module (RH) (squib ignition drive circuit) system detected open circuit		P.52B-30
B1450*1	Curtain air bag module (LH) (squib) system (short-circuited between terminals of the squib circuit)		P.52B-98
B1451*1	Curtain air bag module (LH) (squib) system (open-circuited in the squib circuit)		P.52B-102
B1452*1	Curtain air bag module (LH) (squib) system (short-circuited to the earth)		P.52B-105
B1453*1	Curtain air bag module (LH) (squib) system (short-circuited to the power supply)		P.52B-106
B1454*3	Curtain air bag module (LH) (squib ignition drive circuit) system detected short circuit		P.52B-108
B1455*3	Curtain air bag module (LH) (squib ignition drive circuit) system detected open circuit		P.52B-30
B1466*3	Analog G-sensor system in the SRS-ECU (front air bag)		P.52B-30
B1467*3	Safing G-sensor open circuit (front air bag)		P.52B-30
B1468*3	Safing G-sensor short circuit (front air bag)		P.52B-30
B1469*3	Analog G-sensor system in the SRS-ECU (side air bag)		P.52B-30
B1476*2	ON power supply open circuit (Fuse No.15 circuit)		P.52B-111
B1477*2	ON power supply open circuit (Fuse No.21 circuit)		P.52B-111
B1478*3	SRS-ECU backup capacitor circuit voltage too high		P.52B-30
B1479*3	SRS-ECU backup capacitor circuit voltage too low		P.52B-30
B1488*3	Passenger's air bag OFF indicator lamp drive circuit malfunction		P.52B-114
B1489*1	Passenger's air bag OFF indicator lamp circuit malfunction	Lamp does not illuminate	P.52B-115
		Lamp does not switch off	P.52B-118

Code No.	Diagnostic item	Reference page
B1405*3	Driver's air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
B1406*4 <Up to January, 2014>*2 <From February, 2014>	Malfunction of G-sensor inside right front impact sensor <Incorrect> <Correct> B1406*2	P.52B-32
B1407*2	Front impact sensor (RH) voltage error	P.52B-33
B1408*2	Front impact sensor (RH) communication error	P.52B-35
B1409*2	Front impact sensor (RH) communication impossible	P.52B-35
B1410*1	Passenger's (front) air bag module (squib) system (short-circuited between terminals of the squib circuit)	P.52B-37
B1411*1	Passenger's (front) air bag module (squib) system (open-circuited in the squib circuit)	P.52B-41
B1412*1	Passenger's (front) air bag module (squib) system (short-circuited to the earth)	P.52B-44
B1413*1	Passenger's (front) air bag module (squib) system (short-circuited to the power supply)	P.52B-46
B1414*3	Passenger's (front) air bag module (squib ignition drive circuit) system detected short circuit	P.52B-30
B1415*3	Passenger's (front) air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
B1416*4 <Up to January, 2014>*2 <From February, 2014>	Malfunction of G-sensor inside left front impact sensor <Incorrect> <Correct> B1416*2	P.52B-32
B1417*2	Front impact sensor (LH) voltage error	P.52B-49
B1418*2	Front impact sensor (LH) communication error	P.52B-51
B1419*2	Front impact sensor (LH) communication impossible	P.52B-51
B1420*1	Side-airbag module (RH) (squib) system (short-circuit between terminals of the squib circuit)	P.52B-53
B1421*1	Side-airbag module (RH) (squib) system (open-circuited in the squib circuit)	P.52B-56
B1422*1	Side-airbag module (RH) (squib) system (short-circuited to the earth)	P.52B-59
B1423*1	Side-airbag module (RH) (squib) system (short-circuited to the power supply)	P.52B-62
B1424*3	Side-airbag module (RH) (squib ignition drive circuit) system detected short circuit	P.52B-30
B1425*3	Side-airbag module (RH) (squib ignition drive circuit) system detected open circuit	P.52B-30
B1426*3 <Up to January, 2014>*2 <From February, 2014>	G-sensor of side impact sensor (RH) failure <Incorrect> <Correct> B1426*2	P.52B-64
B1427*2	Side impact sensor (RH) voltage error	P.52B-65

Attached sheet 5 (5/31)

Code No.	Diagnostic item	Reference page
B1428*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (RH) communication error	P.52B-67
B1429*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (RH) communication impossible	P.52B-67
B1430*1	Side-airbag module (LH) (squib) system (short-circuit between terminals of the squib circuit)	P.52B-69
B1431*1	Side-airbag module (LH) (squib) system (open-circuited in the squib circuit)	P.52B-72
B1432*1	Side-airbag module (LH) (squib) system (short-circuited to the earth)	P.52B-75
B1433*1	Side-airbag module (LH) (squib) system (short-circuited to the power supply)	P.52B-78
B1434*3	Side-airbag module (LH) (squib ignition drive circuit) system detected short circuit	P.52B-30
B1435*3	Side-airbag module (LH) (squib ignition drive circuit) system detected open circuit	P.52B-30
B1436*3 <Up to January, 2014>*2 <From February, 2014>	G-sensor of side impact sensor (LH) failure	P.52B-64
B1438*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (LH) communication error	P.52B-82
B1439*1 <Up to January, 2014>*2 <From February, 2014>	Side impact sensor (LH) communication impossible	P.52B-82
B1440*1	Curtain air bag module (RH) (squib) system (short-circuited between terminals of the squib circuit)	P.52B-84
B1441*1	Curtain air bag module (RH) (squib) system (open-circuited in the squib circuit)	P.52B-88
B1442*1	Curtain air bag module (RH) (squib) system (short-circuited to the earth)	P.52B-91
B1443*1	Curtain air bag module (RH) (squib) system (short-circuited to the power supply)	P.52B-94
B1444*3	Curtain air bag module (RH) (squib ignition drive circuit) system detected short circuit	P.52B-30
B1445*3	Curtain air bag module (RH) (squib ignition drive circuit) system detected open circuit	P.52B-30
B1450*1	Curtain air bag module (LH) (squib) system (short-circuited between terminals of the squib circuit)	P.52B-97

<Incorrect> <Correct>
B1428*2
B1429*2

<Incorrect> <Correct>
B1428*2
B1429*2
B1439*2

Attached sheet 5 (6/31)

CHECK CHART FOR DIAGNOSIS CODES

M1524003302568

⚠ CAUTION

During diagnosis, a diagnosis code associated with other system may be set when the ignition switch is turned on with connector(s) disconnected. On completion, confirm all systems for diagnosis code(s). If diagnosis code(s) are set, erase them all.

Code No.	Diagnostic item	Reference page
B1406*4 <Up to Jan uary, 2014> *2 <From February, 2014>	Malfunction of G-sensor inside right front impact sensor <Incorrect> <Correct>	B1406*1 <Up to February, 2014>*2 <From March, 2014>
B1407*2	Front impact sensor (RH) voltage error	
B1408*2	Front impact sensor (RH) communication error	
B1409*2	Front impact sensor (RH) communication impossible	
B1416*4 <Up to Jan uary, 2014> *2 <From February, 2014>	Malfunction of G-sensor inside left front impact sensor <Incorrect> <Correct>	B1416*1 <Up to February, 2014>*2 <From March, 2014>
B1417*2	Front impact sensor (LH) voltage error	
B1418*2	Front impact sensor (LH) communication error	
B1419*2	Front impact sensor (LH) communication impossible	
B1426*3 <Up to Jan uary, 2014> *2 <From February, 2014>	G-sensor of side impact sensor (RH) failure <Incorrect> <Correct>	B1426*1 <Up to February, 2014>*2 <From March, 2014>
B1427*2	Side impact sensor (RH) voltage error	
B1428*1 <Up to Jan uary, 2014> *2 <From February, 2014>	Side impact sensor (RH) communication error	B1428*1 <Up to February, 2014>*2 <From March, 2014>
B1429*1 <Up to Jan uary, 2014> *2 <From February, 2014>	Side impact sensor (RH) communication impossible	B1429*1 <Up to February, 2014>*2 <From March, 2014>
B1436*3 <Up to Jan uary, 2014> *2 <From February, 2014>	G-sensor of side impact sensor (LH) failure <Incorrect> <Correct>	B1436*1 <Up to February, 2014>*2 <From March, 2014>
B1438*1 <Up to Jan uary, 2014> *2 <From February, 2014>	Side impact sensor (LH) communication error	B1438*1 <Up to February, 2014>*2 <From March, 2014>

Attached sheet 5 (7/31)

Code No.	Diagnostic item	Reference page
B1439*1 <Up to Jan uary, 2014> *2 <From February, 2014>	Side impact sensor (LH) communication impossible	B1439*1 <Up to February, 2014>*2 <From March, 2014>
B1699*4	SRS-ECU collective deployment	
U1100	EV ECU CAN timeout(1)	
U1102	ASC/TCL/ABS timeout/Not equipped	
U1108	Combination Meter CAN timeout	
U1109	ETACS CAN timeout	
U111B	MCU CAN timeout	
U1190*3	No receive fault detect signal	
U1195*3	Coding not completed	
U1199	Chassis No. not programmed	
U119A	Chassis No. mismatch	

NOTE:

- **1: This diagnosis code will remain in memory and the SRS warning lamp will be switched on even if the system returns to normal condition.*
- **2: This diagnosis code will remain in memory and the SRS warning lamp will be switched off when the system returns to normal condition.*
- **3: This diagnosis code cannot be erased by "Erase diagnosis codes" function.*
- **4: Though the SRS does not have emergency call function, this diagnosis code is set.*

DIAGNOSIS CODE PROCEDURES

Code No.B1406: G-sensor of front impact sensor (RH) failure
Code No.B1416: G-sensor of front impact sensor (LH) failure

⚠ CAUTION
If diagnosis code B1406 or B1416 is set in the SRS-ECU, always diagnose the CAN main bus line.

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if the following conditions are detected from the analogue G-sensor inside the front impact sensor output:

- Analogue G-sensor is not operating.
- Analogue G-sensor characteristics are abnormal.
- Analogue G-sensor output is abnormal.

PROBABLE CAUSES
Malfunction of front impact sensor (RH) (for diagnosis code B1406) and front impact sensor (LH) (for diagnosis code B1416)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54D, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Attached sheet 5 (8/31)

Code No.B1406: G-sensor of front impact sensor (RH) failure
Code No.B1416: G-sensor of front impact sensor (LH) failure

⚠ CAUTION
If diagnosis code B1406 or B1416 is set in the SRS-ECU, always diagnose the CAN main bus line.

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if the following conditions are detected from the analogue G-sensor inside the front impact sensor output:
- Analogue G-sensor is not operating.
- Analogue G-sensor characteristics are abnormal.
- Analogue G-sensor output is abnormal.

PROBABLE CAUSES
Malfunction of front impact sensor (RH) (for diagnosis code B1406) and front impact sensor (LH) (for diagnosis code B1416)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor.
- <For diagnosis code B1406>

Replace front impact sensor (RH) (Refer to) and SRS-ECU (Refer to) with new part.
- <For diagnosis code B1416>

Replace front impact sensor (LH) (Refer to) and SRS-ECU (Refer to) with new part.
Check the diagnosis code.

Q: Is either diagnosis code B1406 or B1416 set?
YES : Return to Step 1.
NO : The procedure is complete.

<Incorrect>

From attached sheet 5 (19/31)

<Correct>

Attached sheet 5 (9/31)

⚠ CAUTION
If diagnosis code B1407 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs.

DIAGNOSIS CODE SET CONDITIONS
This diagnosis code will set when the power supply voltage to the front impact sensor (RH) remains less than a predetermined value for one second.

PROBABLE CAUSES
- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).
NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Are the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1) in good condition?
YES : Go to Step 4.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

STEP 4. Check the front impact sensor (RH).
(1) Disconnect the negative battery terminal.
(2) Alternate the front impact sensor (RH) and the front impact sensor (LH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1407 set?
YES : Replace the front impact sensor (RH) with a new one (Refer to).
NO : Go to Step 5.

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1407 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

From attached sheet 5 (20/31)

<Correct>

Attached sheet 5 (10/31)

⚠ CAUTION
If diagnosis code B1408 or B1409 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if communication between the front impact sensor (RH) and the SRS-ECU is not possible or faulty.

PROBABLE CAUSES
- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor (RH).
(1) Disconnect the negative battery terminal.
(2) Alternate the front impact sensor (RH) and the front impact sensor (LH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1408 or B1409 set?
YES : Replace the front impact sensor (RH) with a new one. (Refer to). Go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1408 or B1409 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

From attached sheet 5 (21/31)

<Correct>

Attached sheet 5 (11/31)

⚠ CAUTION
If diagnosis code B1417 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs.

DIAGNOSIS CODE SET CONDITIONS
This diagnosis code will set when the power supply voltage to the front impact sensor (LH) remains less than a predetermined value for one second.

PROBABLE CAUSES
- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).
NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Are the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1) in good condition?
YES : Go to Step 4.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-24 (terminal No.2 and 1).

STEP 4. Check the front impact sensor (LH).
(1) Disconnect the negative battery terminal.
(2) Alternate the front impact sensor (LH) and the front impact sensor (RH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1417 set?
YES : Replace the front impact sensor (LH) with a new one (Refer to).
NO : Go to Step 5.

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1417 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

From attached sheet 5 (22/31 - 23/31)

<Correct>

Attached sheet 5 (12/31)

⚠ CAUTION
If diagnosis code B1418 or B1419 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if communication between the front impact sensor (LH) and the SRS-ECU is not possible or faulty.

PROBABLE CAUSES
- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor (LH).
(1) Disconnect the negative battery terminal.
(2) Alternate the front impact sensor (LH) and the front impact sensor (RH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1418 or B1419 set?
YES : Replace the front impact sensor (LH) with a new one. (Refer to) Go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).
NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1418 or B1419 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

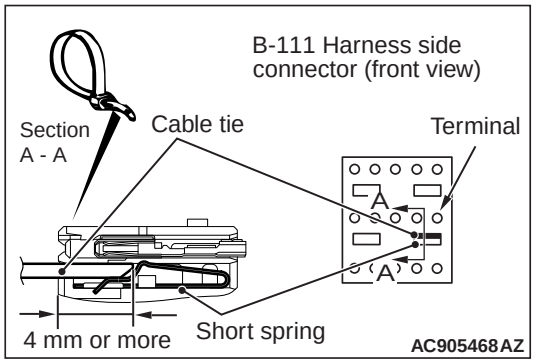
From attached sheet 5 (24/31 - 25/31)

<Correct>

Attached sheet 5 (13/31)

connector. When disconnecting C-29 connector, unlock the connector by sliding the locking button to the direction of the arrow as shown in the figure, and then disconnect the connector.

⚠ CAUTION



The short spring may not be released due to the insufficient insertion, thus insert for 4 mm or more.

(4) Insert the insulator (width: 3 mm, thickness: 0.5 mm) such as cable tie between the terminals Nos. 56 and 57, and then release the short spring.

(5) Connect the negative auxiliary battery terminal.

(6) Electric motor switch to the "ON" position.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

(7) Take the measurements below at the B-111 harness side connector.

- Voltage between terminal No. 56/57 and body earth

  OK: 1 V or less

Q: Is the check result normal?

YES : Go to Step 3.

NO : Repair the harness wires between B-111 SRS-ECU connector (terminal No.56 and 57) and the C-29 side-airbag (RH) air bag module connector (terminal No.2 and 1).

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1423 set?

YES : Replace the SRS-ECU (Refer to).

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

Code No.B1426: G-sensor of side impact sensor (RH) failure
Code No.B1436: G-sensor of side impact sensor (LH) failure

TROUBLE JUDGEMENT

These diagnosis codes are set if the following conditions are detected from the analogue G-sensor inside the side impact sensor output:

- Analogue G-sensor is not operating.
- Analogue G-sensor characteristics are abnormal.
- Analogue G-sensor output is abnormal.

PROBABLE CAUSES

Malfunction of side impact sensor (RH) (for diagnosis code B1426) and side impact sensor (LH) (for diagnosis code B1436)

DIAGNOSIS PROCEDURE

Replace the SRS-ECU and side impact sensor (RH) (for diagnosis code B1426) or replace the SRS-ECU and side impact sensor (LH) (for diagnosis code B1436) (Refer to <SRS-ECU>, <Side impact sensor>).

<Incorrect>

From attached sheet 5 (26/31)

<Correct>

Attached sheet 5 (14/31)

⚠ CAUTION
If diagnosis code B1427 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

DIAGNOSIS CODE SET CONDITIONS
This diagnosis code will set when the power supply voltage to the side impact sensor (front) (RH) remains less than a predetermined value for one second.

PROBABLE CAUSES
- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (front) (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (front) (RH) connector C-30 (terminal No.1 and 2).

Q: Are the harness wires between SRS-ECU connector B-111 (terminal No.61 and 62) and side impact sensor (front) (RH) connector C-30 in good condition?
YES : Go to Step 4.
NO : Repair the harness wires between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (front) (RH) connector C-30 (terminal No.1 and 2).

STEP 4. Check the side impact sensor (RH).
(1) Disconnect the negative battery terminal.
(2) Alternate the side impact sensor (front) (RH) and the side impact sensor (front) (LH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1427 set?
YES : Replace the side impact sensor (front) (RH) with a new one (Refer to).
NO : Go to Step 5.

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1427 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

From attached sheet 5 (27/31)

<Correct>

Attached sheet 5 (15/31)

OPERATION
If an impact of set value or more is detected, the side impact sensor sends the coded acceleration data to SRS-ECU. Based on the acceleration data, SRS-ECU determines the necessity of side-airbag and curtain air bag deployment, and then turns ON the power supply circuit to the inflator.

TROUBLE JUDGEMENT
The code is set if the communication between the left side impact sensor and SRS-ECU is abnormal (No. B1428), or impossible (No. B1429).

PROBABLE CAUSES
- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. Check the side impact sensor (RH).
(1) Check that the negative auxiliary battery terminal is disconnected. If the negative auxiliary battery terminal is connected, disconnect it.
(2) Alternate the side impact sensor (RH) and the side impact sensor (LH), and then install the alternated sensor.
(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnosis code memory, check the diagnosis code again.
(5) Disconnect the negative auxiliary battery terminal.

Q: Is diagnosis code B1438 or B1439 set?
YES : Replace the side impact sensor (RH) with a new one (Refer to). Then go to Step 3.
NO : Go to Step 2

STEP 2. Wiring harness check between the C-30 side impact sensor (RH) connector terminal No. 1/2 and the B-111 SRS-ECU connector terminal No. 64/65.
- Wiring harness check for open and short circuit between right side impact sensor and SRS-ECU

Q: Is the check result normal?
YES : Go to Step 3
NO : Repair the wiring harness.

STEP 3. Check whether the diagnosis code is reset.

Q: Is the diagnosis code B1428 or B1429 set?
YES : Replace SRS-ECU (Refer to).
NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/ Inspection Service Points – How to Cope with Intermittent Malfunction).

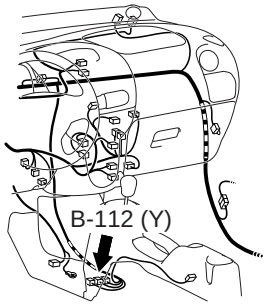
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From attached sheet 5 (28/31)

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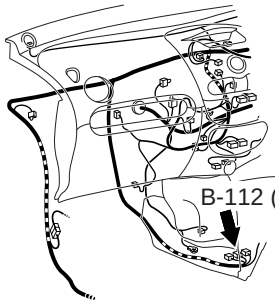
Attached sheet 5 (16/31)

Connector: B-112 <LHD>



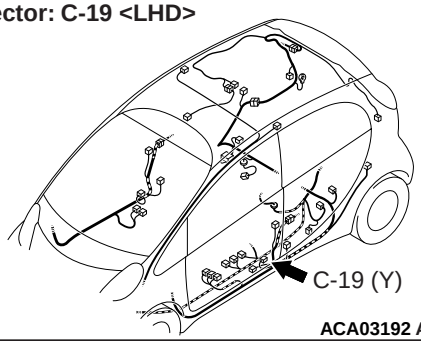
ACA03178AB

Connector: B-112 <RHD>



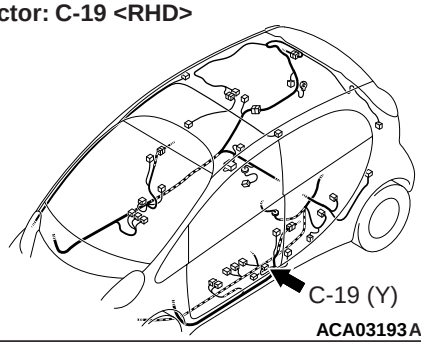
ACA03188AB

Connector: C-19 <LHD>



ACA03192 AE

Connector: C-19 <RHD>



ACA03193AE

<Incorrect>

From attached sheet 5 (29/31 - 30/31)

<Correct>

⚠ CAUTION

If diagnosis code B1437 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

DIAGNOSIS CODE SET CONDITIONS

This diagnosis code will set when the power supply voltage to the side impact sensor (LH) remains less than a predetermined value for one second.

PROBABLE CAUSES

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 2.

NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.

(2) Ignition: "LOCK" (OFF) position to "ON"

(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?

YES : Go to Step 3.

NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

Q: Are the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side

Attached sheet 5 (17/31)

impact sensor (LH) connector C-19 (terminal No.2 and 1) in good condition?
YES : Go to Step 4.
NO : Repair the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

STEP 4. Check the side impact sensor (LH).
(1) Disconnect the negative battery terminal.
(2) Alternate the side impact sensor (LH) and the side impact sensor (RH), and then install the alternated sensor.
(3) Connect the negative battery terminal.
(4) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1437 set?
YES : Replace the side impact sensor (LH) with a new one (Refer to).
NO : Go to Step 5.

STEP 5. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1437 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

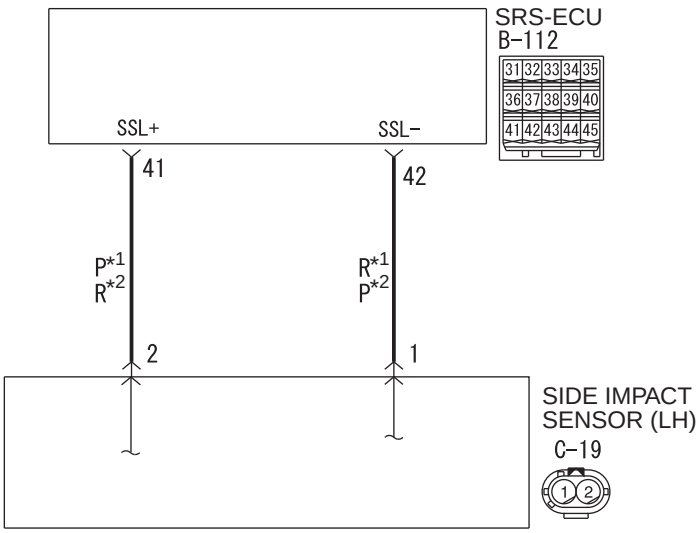
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Code No.B1438: Side impact sensor (LH) communication error
Code No.B1439: Side impact sensor (LH) communication impossible

From attached sheet 5 (29/31 - 30/31)

<Correct>

Side Impact Sensor (LH) Circuit

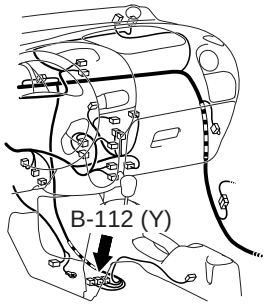


NOTE
*1: LHD
*2: RHD

Wire colour code
B : Black LG : Light green G : Green L : Blue W : White Y : Yellow SB : Sky blue
BR : Brown O : Orange GR : Grey R : Red P : Pink V : Violet PU : Purple SI : Silver

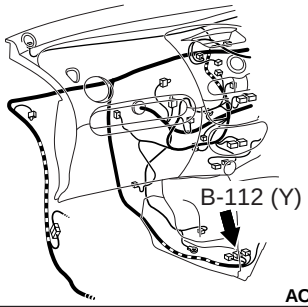
ACA03150AC

Connector: B-112 <LHD>



ACA03178AB

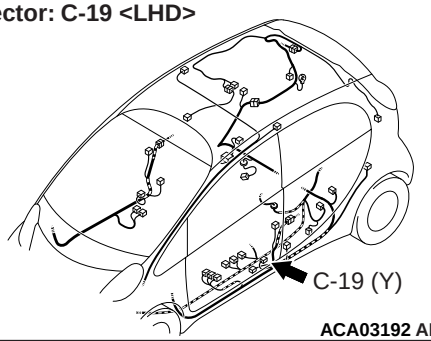
Connector: B-112 <RHD>



ACA03188AB

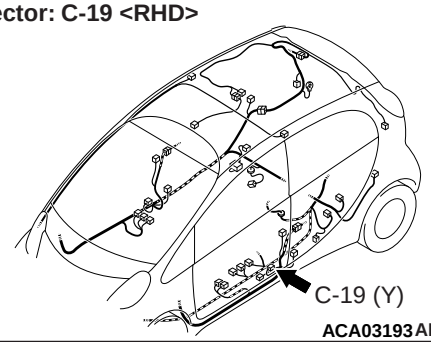
Attached sheet 5 (18/31)

Connector: C-19 <LHD>



ACA03192 AE

Connector: C-19 <RHD>



ACA03193 AE

OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

TROUBLE JUDGEMENT

The diagnosis code is set if the communication between the left side impact sensor and SRS-ECU is abnormal (No. B1438), or impossible (No. B1439).

PROBABLE CAUSES

- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. Check the side impact sensor (LH).

(1) Check that the negative auxiliary battery terminal is disconnected. If the negative auxiliary battery terminal is connected, disconnect it.
(2) Alternate the side impact sensor (LH) and the side impact sensor (RH), and then install the alternated sensor.
(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnosis code memory, check the diagnosis code again.
(5) Disconnect the negative auxiliary battery terminal.

Q: Is diagnosis code B1428 or B1429 set?

YES : Replace the side impact sensor (LH) with a new one. (Refer to). Go to Step 3.
NO : Go to Step 2

STEP 2. Wiring harness check between the C-19 side impact sensor connector (LH) terminal No. 2/1 and the B-112 SRS-ECU connector terminal No. 41/42.

- Wiring harness check for open and short circuit between right side impact sensor and SRS-ECU

Q: Is the check result normal?

YES : Go to Step 3
NO : Repair the wiring harness.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code B1438 or B1439 set?

YES : Replace the SRS-ECU (Refer to).
NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/ Inspection Service Points – How to Cope with Intermittent Malfunction).

<Incorrect>

From attached sheet 5 (31/31)

<Correct>

Attached sheet 5 (19/31)

Code No.B1406: G-sensor of front impact sensor (RH) failure
Code No.B1416: G-sensor of front impact sensor (LH) failure

⚠ CAUTION
If diagnosis code B1406 or B1416 is set in the SRS-ECU, always diagnose the CAN main bus line.

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if the following conditions are detected from the analogue G-sensor inside the front impact sensor output:
- Analogue G-sensor is not operating.
- Analogue G-sensor characteristics are abnormal.
- Analogue G-sensor output is abnormal.

PROBABLE CAUSES
Malfunction of front impact sensor (RH) (for diagnosis code B1406) and front impact sensor (LH) (for diagnosis code B1416)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Replace the front impact sensor.
(1) <For diagnosis code B1406>
Replace front impact sensor (RH) (Refer to).
(2) <For diagnosis code B1416>
Replace front impact sensor (LH) (Refer to).
(3) Check the diagnosis code.

Q: Is either diagnosis code B1406 or B1416 set?
YES : Replace SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

To attached sheet 5 (8/31)

<Incorrect>

Attached sheet 5 (20/31)

⚠ CAUTION
If diagnosis code B1407 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs.

DIAGNOSIS CODE SET CONDITIONS
This diagnosis code will set when the power supply voltage to the front impact sensor (RH) remains less than a predetermined value for one second.

PROBABLE CAUSES
- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).
NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1407 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the front impact sensor (RH).
(1) Replace the front impact sensor (RH) with a new one (Refer to).
(2) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1407 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

To attached sheet 5 (9/31)

<Incorrect>

Attached sheet 5 (21/31)

⚠ CAUTION
If diagnosis code B1408 or B1409 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs

DIAGNOSIS CODE SET CONDITIONS
These diagnosis codes are set if communication between the front impact sensor (RH) and the SRS-ECU is not possible or faulty.

PROBABLE CAUSES
- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).
NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1408 or B1409 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the front impact sensor (RH).
(1) Replace the front impact sensor (RH) with a new one (Refer to).
(2) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1408 or B1409 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

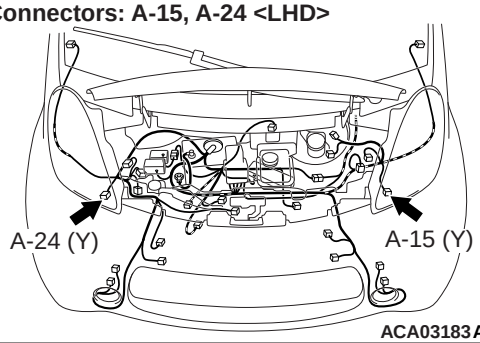
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To attached sheet 5 (10/31)

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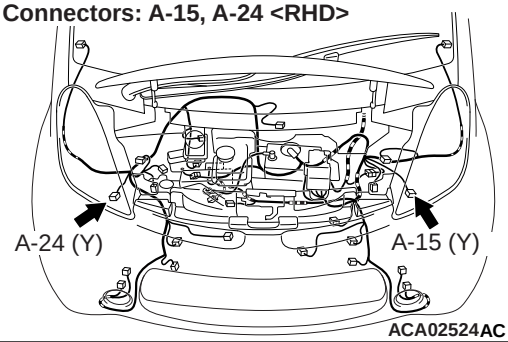
Attached sheet 5 (22/31)

Connectors: A-15, A-24 <LHD>



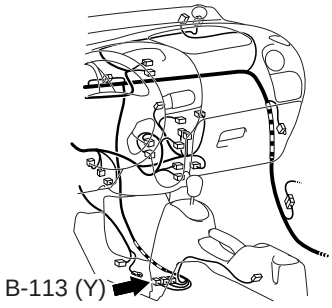
ACA03183AG

Connectors: A-15, A-24 <RHD>



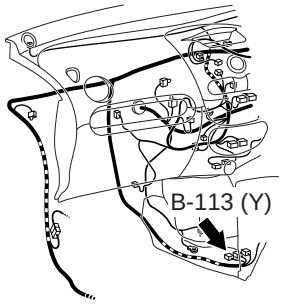
ACA02524AC

Connector: B-113 <LHD>



ACA03178AE

Connector: B-113 <RHD>



ACA03188AE

<Correct>

To attached sheet 5 (11/31)

<Incorrect>

⚠ CAUTION

If diagnosis code B1417 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION

The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs.

DIAGNOSIS CODE SET CONDITIONS

This diagnosis code will set when the power supply voltage to the front impact sensor (LH) remains less than a predetermined value for one second.

PROBABLE CAUSES

- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 2.

NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.

(2) Ignition: "LOCK" (OFF) position to "ON"

(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?

YES : Go to Step 3.

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Attached sheet 5 (23/31)

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-24 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1417 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the front impact sensor (LH).
(1) Replace the front impact sensor (LH) with a new one (Refer to).
(2) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1417 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

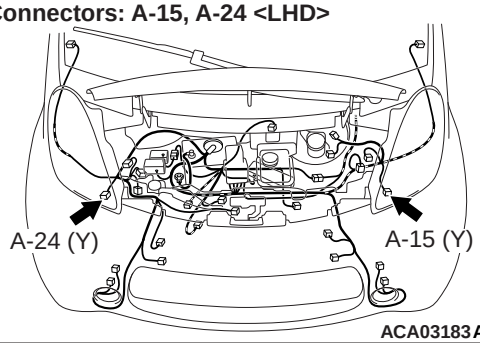
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To attached sheet 5 (11/31)

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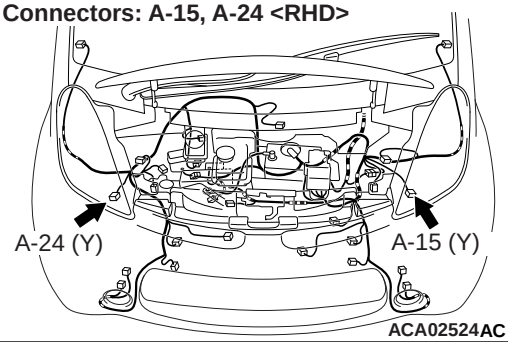
Attached sheet 5 (24/31)

Connectors: A-15, A-24 <LHD>



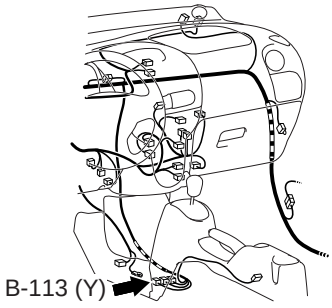
ACA03183AG

Connectors: A-15, A-24 <RHD>



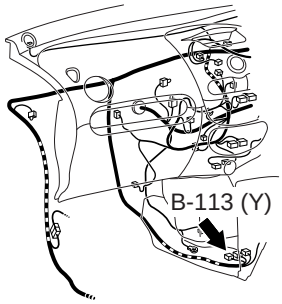
ACA02524AC

Connector: B-113 <LHD>



ACA03178AE

Connector: B-113 <RHD>



ACA03188AE

⚠ CAUTION

If diagnosis code B1418 or B1419 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION

The front impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines whether to operate the front air bags, and then outputs an ignition signal when necessary. The front impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a malfunction occurs

DIAGNOSIS CODE SET CONDITIONS

These diagnosis codes are set if communication between the front impact sensor (LH) and the SRS-ECU is not possible or faulty.

PROBABLE CAUSES

- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 2.

NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.

(2) Ignition: "LOCK" (OFF) position to "ON"

(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?

YES : Go to Step 3.

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Correct>

To attached sheet 5 (12/31)

<Incorrect>

Attached sheet 5 (25/31)

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 28) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1418 or B1419 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the front impact sensor (LH).

(1) Replace the front impact sensor (LH) with a new one (Refer to).
(2) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1418 or B1419 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

To attached sheet 5 (12/31)

<Incorrect>

Attached sheet 5 (26/31)

<Incorrect>

To attached sheet 5 (13/31)

Code No.B1426: G-sensor of side impact sensor (RH) failure
Code No.B1436: G-sensor of side impact sensor (LH) failure

<Correct>

TROUBLE JUDGEMENT
These diagnosis codes are set if the following conditions are detected from the analogue G-sensor inside the side impact sensor output:

- Analogue G-sensor is not operating.
- Analogue G-sensor characteristics are abnormal.
- Analogue G-sensor output is abnormal.

PROBABLE CAUSES
Malfunction of side impact sensor (RH) (for diagnosis code B1426) and side impact sensor (LH) (for diagnosis code B1436)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Replace the front impact sensor.
(1) <For diagnosis code B1426>
Replace side impact sensor (RH) (Refer to).
(2) <For diagnosis code B1436>
Replace side impact sensor (LH) (Refer to).
(3) Check the diagnosis code.

Q: Is either diagnosis code B1426 or B1436 set?
YES : Replace SRS-ECU (Refer to).
NO : The procedure is complete.

Attached sheet 5 (27/31)

⚠ CAUTION
If diagnosis code B1427 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION
The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

DIAGNOSIS CODE SET CONDITIONS
This diagnosis code will set when the power supply voltage to the side impact sensor (front) (RH) remains less than a predetermined value for one second.

PROBABLE CAUSES
- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (front) (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (front) (RH) connector C-30 (terminal No.1 and 2).

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (front) (RH) connector C-30 (terminal No.1 and 2). Then go to Step 4 .

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1427 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the side impact sensor (RH).
(1) Replace the side impact sensor (front) (RH) with a new one (Refer to).
(2) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1427 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

To attached sheet 5 (14/31)

<Incorrect>

Attached sheet 5 (28/31)

OPERATION

If an impact of set value or more is detected, the side impact sensor sends the coded acceleration data to SRS-ECU. Based on the acceleration data, SRS-ECU determines the necessity of side-airbag and curtain air bag deployment, and then turns ON the power supply circuit to the inflator.

TROUBLE JUDGEMENT

The code is set if the communication between the left side impact sensor and SRS-ECU is abnormal (No. B1428), or impossible (No. B1429).

PROBABLE CAUSES

- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 2.

NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?

YES : Go to Step 3.

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Wiring harness check between the C-30 side impact sensor (RH) connector terminal No. 1/2 and the B-111 SRS-ECU connector terminal No. 64/65.

- Wiring harness check for open and short circuit between right side impact sensor and SRS-ECU

Q: Is the check result normal?

YES : Go to Step 5.

NO : Repair the wiring harness. Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code B1428 or B1429 set?

YES : Go to Step 5.

NO : The procedure is complete.

STEP 5. Replace the side impact sensor (RH).

(1) Replace the side impact sensor (RH) with a new one (Refer to).
(2) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1428 or B1429 set?

YES : Replace SRS-ECU (Refer to).

NO : The procedure is complete.

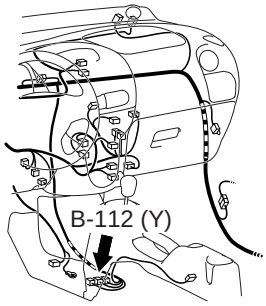
<Correct>

To attached sheet 5 (15/31)

<Incorrect>

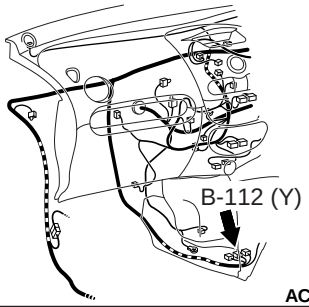
Attached sheet 5 (29/31)

Connector: B-112 <LHD>



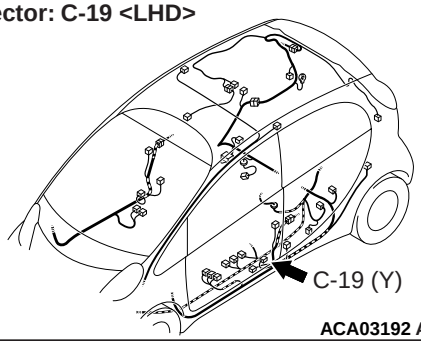
ACA03178AB

Connector: B-112 <RHD>



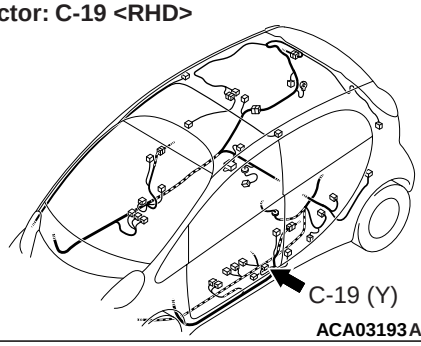
ACA03188AB

Connector: C-19 <LHD>



ACA03192 AE

Connector: C-19 <RHD>



ACA03193AE

<Correct>

To attached sheet 5 (16/31 - 17/31)

<Incorrect>

⚠ CAUTION

If diagnosis code B1437 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

DIAGNOSIS CODE SET CONDITIONS

This diagnosis code will set when the power supply voltage to the side impact sensor (LH) remains less than a predetermined value for one second.

PROBABLE CAUSES

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 2.

NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.

Check again if the diagnosis code is set.

(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?

YES : Go to Step 3.

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

Q:Is the check result normal?

Attached sheet 5 (30/31)

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1437 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the side impact sensor (LH).
(1) Replace the side impact sensor (LH) with a new one (Refer to).
(2) Erase the diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1437 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

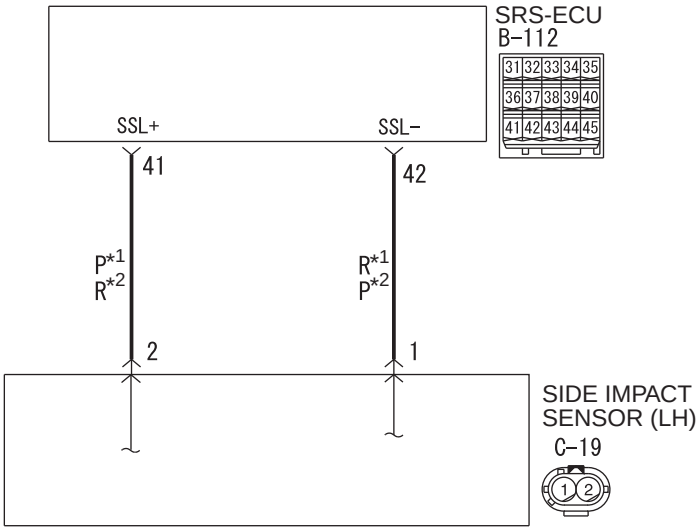
<Correct>

Code No.B1438: Side impact sensor (LH) communication error
Code No.B1439: Side impact sensor (LH) communication impossible

To attached sheet 5 (16/31 - 17/31)

<Incorrect>

Side Impact Sensor (LH) Circuit

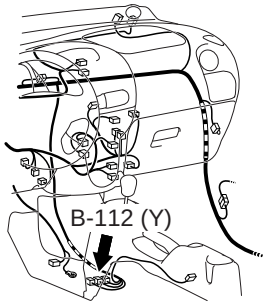


NOTE
*1: LHD
*2: RHD

Wire colour code
B : Black LG : Light green G : Green L : Blue W : White Y : Yellow SB : Sky blue
BR : Brown O : Orange GR : Grey R : Red P : Pink V : Violet PU : Purple SI : Silver

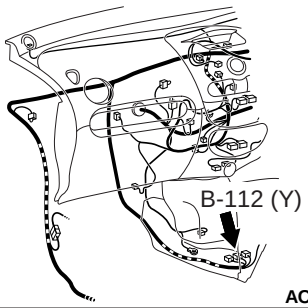
ACA03150AC

Connector: B-112 <LHD>



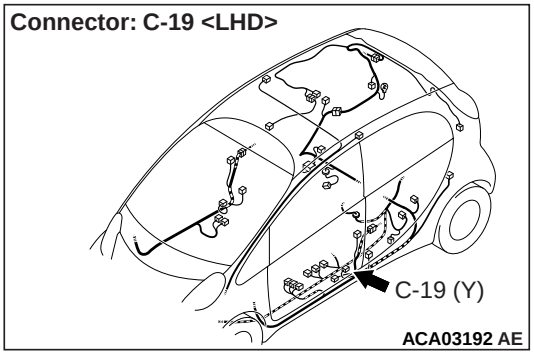
ACA03178AB

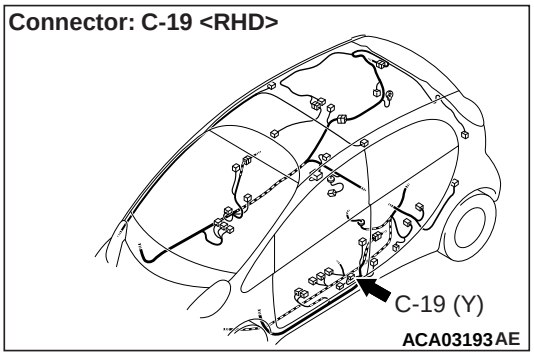
Connector: B-112 <RHD>



ACA03188AB

Attached sheet 5 (31/31)





OPERATION
The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnosis code to the SRS-ECU if a problem occurs.

TROUBLE JUDGEMENT
The diagnosis code is set if the communication between the left side impact sensor and SRS-ECU is abnormal (No. B1438), or impossible (No. B1439).

PROBABLE CAUSES
- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use the M.U.T.-III to diagnose the CAN bus lines.

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is the diagnosis code set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Wiring harness check between the C-19 side impact sensor connector (LH) terminal No. 2/1 and the B-112 SRS-ECU connector terminal No. 41/42.
- Wiring harness check for open and short circuit between right side impact sensor and SRS-ECU

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the wiring harness. Then go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
Check again if the diagnosis code is set.
(1) Erase the diagnosis code.
(2) Ignition: "LOCK" (OFF) position to "ON"
(3) On completion, check that the diagnosis code is not reset.

Q: Is diagnosis code B1438 or B1439 set?
YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the side impact sensor (LH).
(1) Replace the side impact sensor (LH) with a new one (Refer to).
(2) Erase diagnosis code from memory, and check the diagnosis code.

Q: Is diagnosis code B1438 or B1439 set?
YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

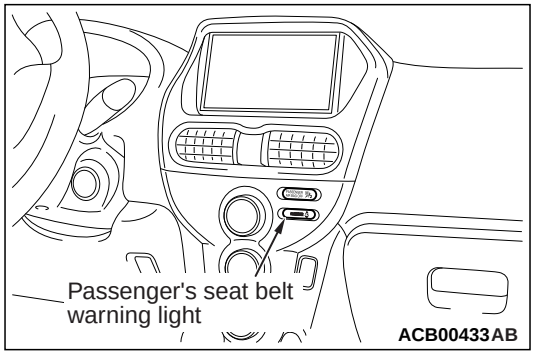
To attached sheet 5 (18/31)

<Incorrect>

2. Check that the light is extinguished after the approximately 6 to 8 seconds illumination. Check that the warning light is extinguished afterward.
3. Except the above, the SRS system is abnormal. Thus, check the diagnostic trouble code (Refer to).

PASSENGER'S SEAT BELT WARNING LIGHT CHECK

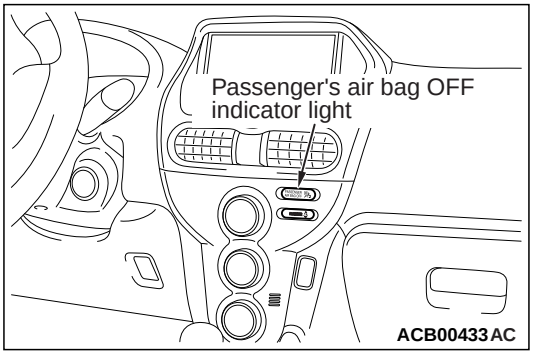
M1524026200168



When an adult on the front passenger's seat wears the seat belt with the electric motor switch "ON," confirm that the passenger's seat belt warning light goes out.
The light comes on when a person sits on the front passenger seat but does not fasten the seat belt.

PASSENGER'S AIR BAG OFF INDICATOR LIGHT CHECK

M1524026300240



1. Check that the passenger's air bag OFF indicator light illuminates when the electric motor switch is turned "ON" position.
2. Check that the light is extinguished after the approximately 6 to 8 seconds illumination. Check that the warning light is extinguished afterward.
3. Except the above, the SRS system is abnormal. Thus, check the diagnostic trouble code (Refer to).

CHECK CHART FOR DIAGNOSTIC TROUBLE CODES

M1524003302461

⚠ CAUTION
During diagnosis, a DTC associated with another system may be set when the electric motor switch is turned "ON" position with connector(s) disconnected. After completing the repair, confirm all systems for DTC(s). If DTC(s) are set, erase them all.

Inspect according to the inspection chart that is appropriate for the DTC.

Code No.	Diagnostic item	Reference page
B1400*2	Driver's Air Bag Module (1st squib) System (Short Circuit Between Squib Circuit Terminals)	
B1401*2	Driver's Air Bag Module (1st squib) System (Squib Circuit Open)	
B1402*2	Driver's Air Bag Module (1st squib) System (Shorted to Squib Circuit Ground)	
B1403*2	Driver's Air Bag Module (1st squib) System (Shorted to Squib Circuit Power Supply)	
B1404*4	Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit	
B1405*4	Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Open Circuit	
~~B1406*4 <Up to January, 2014>*3 <From February, 2014>~~	Malfunction of Front Impact Sensor (RH)	B1406*4 <Up to February, 2014>*3 <From March, 2014>

<Incorrect> <Correct>

Attached sheet 6 (2/42)

Code No.	Diagnostic item	Reference page
B1407*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Voltage Error	B1407*2 <Up to February, 2014>*3 <From March, 2014>
B1408*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Communication Error <Incorrect>	B1408*2 <Up to February, 2014>*3 <From March, 2014>
B1409*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Communication Impossible	B1409*2 <Up to February, 2014>*3 <From March, 2014>
B1410*2	Passenger's (Front) Air Bag Module (1st squib) System (Short Circuit Between Squib Circuit Terminals)	<Correct>
B1411*2	Passenger's (Front) Air Bag Module (1st squib) System (Squib Circuit Open)	
B1412*2	Passenger's (Front) Air Bag Module (1st squib) System (Shorted to Squib Circuit Ground)	
B1413*2	Passenger's (Front) Air Bag Module (1st squib) System (Shorted to Squib Circuit Power Supply)	
B1414*4	Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit	
B1415*4	Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Open Circuit	
B1416*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Front Impact Sensor (LH)	B1416*4<Up to February, 2014>*3 <From March, 2014>
B1417*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Voltage Error	B1417*2 <Up to February, 2014>*3 <From March, 2014>
B1418*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Communication Error <Incorrect>	B1418*2 <Up to February, 2014>*3 <From March, 2014>
B1419*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Communication Impossible	B1419*2 <Up to February, 2014>*3 <From March, 2014>
B1420*2	Side-airbag Module (RH) (Squib) System (Short Circuit between Squib Circuit Terminals)	<Correct>
B1421*2	Side-airbag Module (RH) (Squib) System (Squib Circuit Open)	
B1422*2	Side-airbag Module (RH) (Squib) System (Shorted to Squib Circuit Ground)	
B1423*2	Side-airbag Module (RH) (Squib) System (Shorted to Squib Circuit Power Supply)	
B1424*4	Side-airbag Module (RH) (Squib) System Detected Short Circuit	
B1425*4	Side-airbag Module (RH) (Squib) System Detected Open Circuit	

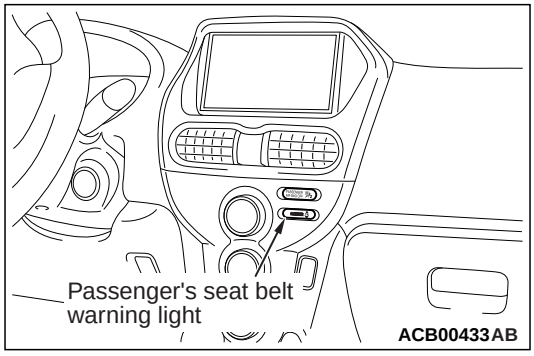
Attached sheet 6 (3/42)

Code No.	Diagnostic item	Reference page
B1426*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Side Impact Sensor (RH)	B1426*4 <Up to February, 2014>*3 <From March, 2014>
B1427*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (RH) Voltage Error	B1427*2 <Up to February, 2014>*3 <From March, 2014>
B1428*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact sensor (RH) Communication Error <Incorrect>	B1428*2 <Up to February, 2014>*3 <From March, 2014>
B1429*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact sensor (RH) Communication impossible	B1429*2 <Up to February, 2014>*3 <From March, 2014>
B1430*2	Side-airbag Module (LH) (Squib) System (Short Circuit between Squib Circuit Terminals)	<Correct>
B1431*2	Side-airbag Module (LH) (Squib) System (Squib Circuit Open)	
B1432*2	Side-airbag Module (LH) (Squib) System (Shorted to Squib Circuit Ground)	
B1433*2	Side-airbag Module (LH) (Squib) System (Shorted to Squib Circuit Power Supply)	
B1434*4	Side-airbag Module (LH) (Squib) System Detected Short Circuit	
B1435*4	Side-airbag Module (LH) (Squib) System Detected Open Circuit	
B1436*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Side Impact Sensor (Front: LH)	B1436*4 <Up to February, 2014>*3 <From March, 2014>
B1437*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Voltage Error	B1437*2 <Up to February, 2014>*3 <From March, 2014>
B1438*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Communication Error <Incorrect>	B1438*2 <Up to February, 2014>*3 <From March, 2014>
B1439*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Communication Impossible	B1439*2 <Up to February, 2014>*3 <From March, 2014>
B1440*2	Curtain Air Bag Module (RH) (Squib) System (Short Circuit between Squib Circuit Terminals)	<Correct>
B1441*2	Curtain Air Bag Module (RH) (Squib) System (Squib Circuit Open	
B1442*2	Curtain Air Bag Module (RH) (Squib) System (Shorted to Squib Circuit Ground)	
B1443*2	Curtain Air Bag Module (RH) (Squib) System (Shorted to Squib Circuit Power Supply))	
B1444*4	Curtain Air Bag Module (RH) (Squib) System Detected Short Circuit	

2. Check that the light is extinguished after the approximately 6 to 8 seconds illumination. Check that the warning light is extinguished afterward.
3. Except the above, the SRS system is abnormal. Thus, check the diagnostic trouble code (Refer to).

PASSENGER'S SEAT BELT WARNING LIGHT CHECK

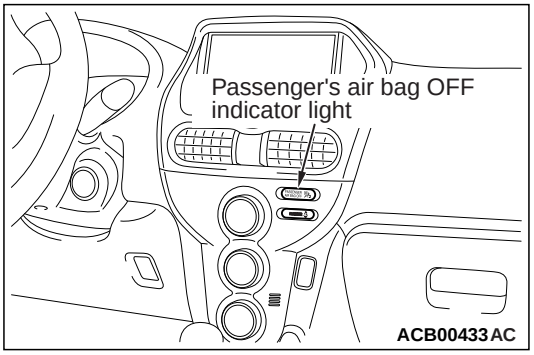
M1524026200168



When an adult on the front passenger's seat wears the seat belt with the electric motor switch "ON," confirm that the passenger's seat belt warning light goes out.
The light comes on when a person sits on the front passenger seat but does not fasten the seat belt.

PASSENGER'S AIR BAG OFF INDICATOR LIGHT CHECK

M1524026300240



1. Check that the passenger's air bag OFF indicator light illuminates when the electric motor switch is turned "ON" position.
2. Check that the light is extinguished after the approximately 6 to 8 seconds illumination. Check that the warning light is extinguished afterward.
3. Except the above, the SRS system is abnormal. Thus, check the diagnostic trouble code (Refer to).

CHECK CHART FOR DIAGNOSTIC TROUBLE CODES

M1524003302461

⚠ CAUTION
During diagnosis, a DTC associated with another system may be set when the electric motor switch is turned "ON" position with connector(s) disconnected. After completing the repair, confirm all systems for DTC(s). If DTC(s) are set, erase them all.

Inspect according to the inspection chart that is appropriate for the DTC.

Code No.	Diagnostic item	Reference page
B1400*2	Driver's Air Bag Module (1st squib) System (Short Circuit Between Squib Circuit Terminals)	
B1401*2	Driver's Air Bag Module (1st squib) System (Squib Circuit Open)	
B1402*2	Driver's Air Bag Module (1st squib) System (Shorted to Squib Circuit Ground)	
B1403*2	Driver's Air Bag Module (1st squib) System (Shorted to Squib Circuit Power Supply)	
B1404*4	Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit	
B1405*4	Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Open Circuit	
~~B1406*4 <Up to January, 2014>*3 <From February, 2014>~~	Malfunction of Front Impact Sensor (RH)	<Correct> B1406*3

<Incorrect>

Attached sheet 6 (5/42)

Code No.	Diagnostic item	Reference page
B1407*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Voltage Error	B1407*3
B1408*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Communication Error <Incorrect> <Correct>	B1408*3
B1409*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (RH) Communication Impossible	B1409*3
B1410*2	Passenger's (Front) Air Bag Module (1st squib) System (Short Circuit Between Squib Circuit Terminals)	
B1411*2	Passenger's (Front) Air Bag Module (1st squib) System (Squib Circuit Open)	
B1412*2	Passenger's (Front) Air Bag Module (1st squib) System (Shorted to Squib Circuit Ground)	
B1413*2	Passenger's (Front) Air Bag Module (1st squib) System (Shorted to Squib Circuit Power Supply)	
B1414*4	Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit	
B1415*4	Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Open Circuit	
B1416*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Front Impact Sensor (LH)	B1416*3
B1417*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Voltage Error	B1417*3
B1418*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Communication Error <Incorrect> <Correct>	B1418*3
B1419*2 <Up to January, 2014>*3 <From February, 2014>	Front Impact Sensor (LH) Communication Impossible	B1419*3
B1420*2	Side-airbag Module (RH) (Squib) System (Short Circuit between Squib Circuit Terminals)	
B1421*2	Side-airbag Module (RH) (Squib) System (Squib Circuit Open)	
B1422*2	Side-airbag Module (RH) (Squib) System (Shorted to Squib Circuit Ground)	
B1423*2	Side-airbag Module (RH) (Squib) System (Shorted to Squib Circuit Power Supply)	
B1424*4	Side-airbag Module (RH) (Squib) System Detected Short Circuit	
B1425*4	Side-airbag Module (RH) (Squib) System Detected Open Circuit	

Attached sheet 6 (6/42)

Code No.	Diagnostic item	Reference page
B1426*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Side Impact Sensor (RH)	B1426*3
B1427*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (RH) Voltage Error	B1427*3
B1428*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact sensor (RH) Communication Error <Incorrect> <Correct>	B1428*3
B1429*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact sensor (RH) Communication impossible	B1429*3
B1430*2	Side-airbag Module (LH) (Squib) System (Short Circuit between Squib Circuit Terminals)	
B1431*2	Side-airbag Module (LH) (Squib) System (Squib Circuit Open)	
B1432*2	Side-airbag Module (LH) (Squib) System (Shorted to Squib Circuit Ground)	
B1433*2	Side-airbag Module (LH) (Squib) System (Shorted to Squib Circuit Power Supply)	
B1434*4	Side-airbag Module (LH) (Squib) System Detected Short Circuit	
B1435*4	Side-airbag Module (LH) (Squib) System Detected Open Circuit	
B1436*4 <Up to January, 2014>*3 <From February, 2014>	Malfunction of Side Impact Sensor (Front: LH)	B1436*3
B1437*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Voltage Error	B1437*3
B1438*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Communication Error <Incorrect> <Correct>	B1438*3
B1439*2 <Up to January, 2014>*3 <From February, 2014>	Side Impact Sensor (LH) Communication Impossible	B1439*3
B1440*2	Curtain Air Bag Module (RH) (Squib) System (Short Circuit between Squib Circuit Terminals)	
B1441*2	Curtain Air Bag Module (RH) (Squib) System (Squib Circuit Open	
B1442*2	Curtain Air Bag Module (RH) (Squib) System (Shorted to Squib Circuit Ground)	
B1443*2	Curtain Air Bag Module (RH) (Squib) System (Shorted to Squib Circuit Power Supply))	
B1444*4	Curtain Air Bag Module (RH) (Squib) System Detected Short Circuit	

Attached sheet 6 (7/42)

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis). Then go to Step 2.

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is stored.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is stored.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Are the DTCs stored?
YES : Replace the SRS-ECU (Refer to -).
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<Correct>

From attached sheet 6 (24/42)

DTC B1406: Malfunction of Front Impact Sensor (RH)
DTC B1416: Malfunction of Front Impact Sensor (LH)

<Incorrect>

⚠ CAUTION
If DTC B1406 or B1416 is set in the SRS-ECU, always diagnose the CAN main bus line.

DTC SET CONDITIONS
These DTCs are set if the following conditions are detected from the front impact sensor output:
- Front impact sensor is not operating.
- Front impact sensor characteristics are abnormal.
- Front impact sensor output is abnormal.

TROUBLESHOOTING HINTS
Malfunction of front impact sensor (RH) (for DTC B1406) and front impact sensor (LH) (for DTC B1416)

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check the front impact sensor.
(1) Disconnect the negative auxiliary battery terminal.
(2) A front impact sensor is checked in the following way.
- Replace the front impact sensor (RH) {In case of code B1406 (Regardless of "Active" or "Stored" faults)} with new part.
- Replace the front impact sensor (LH) {In case of code B1416 (Regardless of "Active" or "Stored" faults)} with new part.

(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnostic trouble code memory, check the diagnostic trouble code again.

Q: Is either DTC B1406 or B1416 set?
YES : Go to Step 3.
NO : The procedure is complete.

Attached sheet 6 (8/42)

STEP 3. Check the SRS-ECU.
(1) Disconnect the negative auxiliary battery terminal.
(2) Replace the SRS-ECU with a new one. (Refer to).
(3) Connect the negative auxiliary battery terminal.
(4) Check the diagnostic trouble code again.

Q: Is either DTC B1406 or B1416 set?
YES : Return to Step 1.
NO : The procedure is complete.

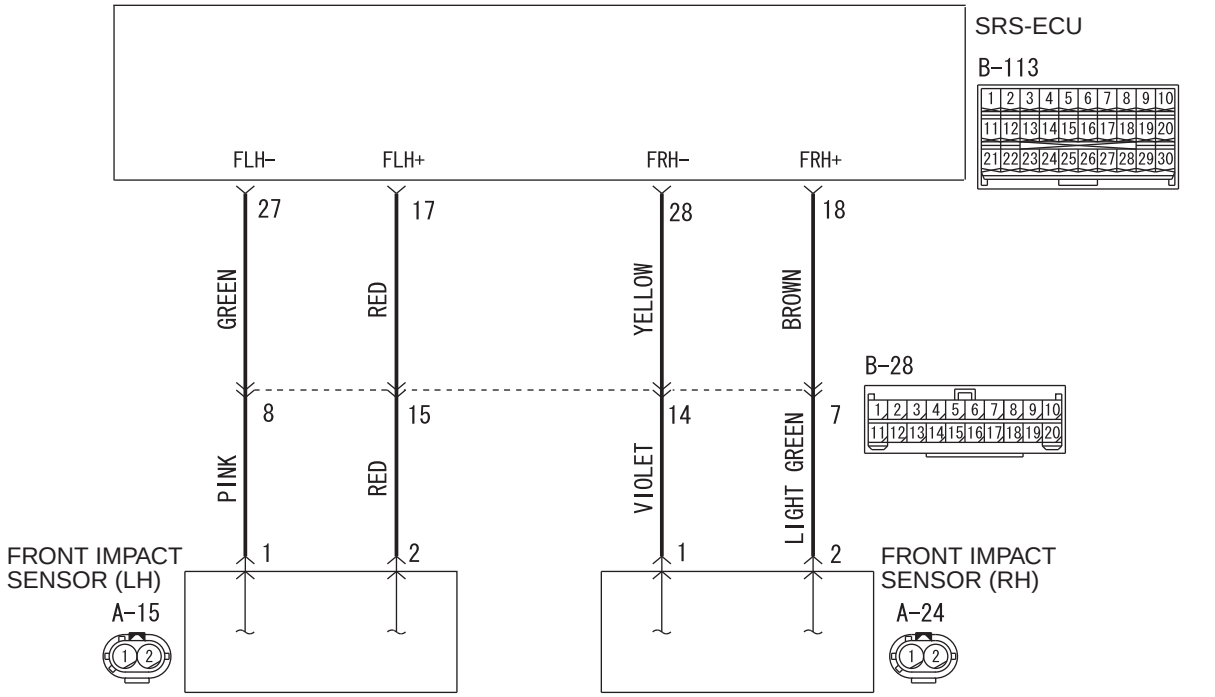
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From attached sheet 6 (24/42)

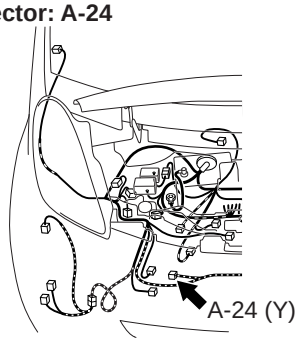
DTC B1407: Front Impact Sensor (RH) Voltage Error

Front Impact Sensor Circuit



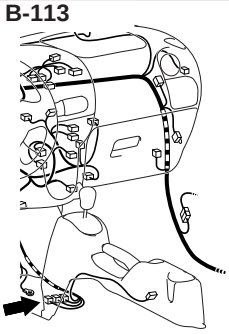
ACB01253 AB

Connector: A-24



ACB01401 AH

Connector: B-113



ACB01395 AV

⚠ CAUTION
If diagnostic trouble code B1407 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION
The front impact sensor includes a CPU, etc. The CPU monitors output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

DTC SET CONDITIONS

This DTC will set when the power supply voltage to the front impact sensor (RH) remains less than a predetermined value for five seconds.

TROUBLESHOOTING HINTS

- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS <Incorrect>

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

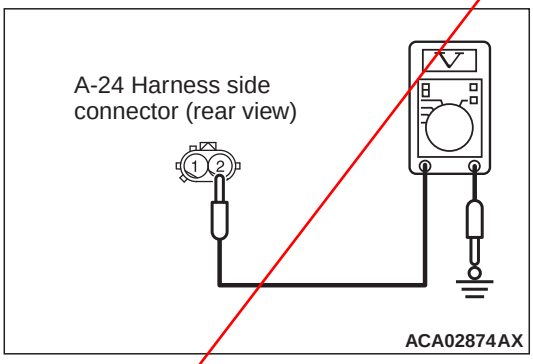
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor (RH) power supply circuit. Measure the voltage at the front impact sensor (RH) connector A-24.

(1) Disconnect the negative auxiliary battery terminal.
(2) Disconnect front impact sensor (RH) connector A-24, and measure at the wiring harness side.
(3) Connect the negative auxiliary battery terminal.
(4) Turn the electric motor switch to the "ON" position.

⚠ CAUTION



Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(5) Measure the voltage between A-24 harness side connector terminal 2 and ground.
Voltage should measure 9 volts or more

Q: Is the measured voltage within the specified range?
YES : Replace the front impact sensor (RH) (Refer to). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-113 (terminal No.18) and front impact sensor (RH) connector A-24 (terminal No.2).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Are the harness wires between SRS-ECU connector B-113 (terminal No.18) and front impact sensor (RH) connector A-24 (terminal No.1) in good condition?
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1407 sets, replace the SRS-ECU (Refer to). Then go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (RH) connector A-24. Then go to Step 5.

STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.

Attached sheet 6 (10/42)

(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1407 set?
YES : Return to Step 1.
NO : The procedure is complete.

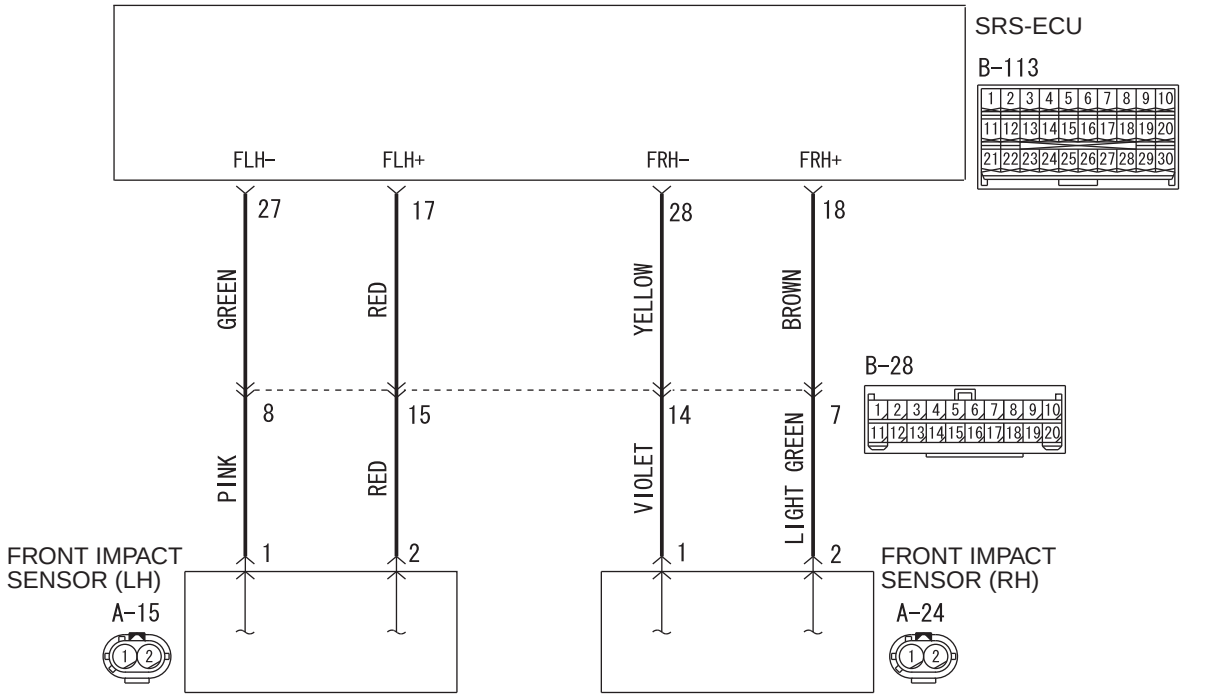
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<Correct>

From attached sheet 6 (25/42 - 26/42)

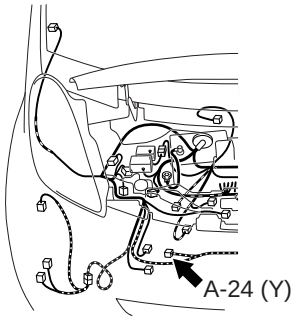
DTC B1408: Front Impact Sensor (RH) Communication Error
DTC B1409: Front Impact Sensor (RH) Communication Impossible

Front Impact Sensor Circuit



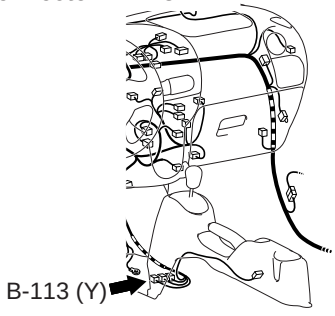
ACB01253AB

Connector: A-24



ACB01401AH

Connector: B-113



ACB01395AV

⚠ CAUTION
If DTC B1408 or B1409 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION
The front impact sensor includes a CPU, etc. The CPU monitors output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

DTC SET CONDITIONS
These DTCs are set if communication between the front impact sensor (RH) and the SRS-ECU is not possible or faulty.

TROUBLESHOOTING HINTS
- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (RH)

Attached sheet 6 (11/42)

- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis). Then go to Step 2.

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check for any diagnostic trouble code.
Check the front impact sensor (RH).
(1) Disconnect the negative auxiliary battery terminal.
(2) Temporarily replace the front impact sensor (RH) with the front impact sensor (LH).
(3) Connect the negative auxiliary battery terminal.
(4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

Q: Is DTC B1408 or B1409 set?
YES : Replace the front impact sensor (RH) with a new one. (Refer to). Go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Are the harness wires between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1) in good condition?
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1408 or B1409 sets, replace the SRS-ECU (Refer to). Then go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (RH) connector A-24. Then go to Step 5.

STEP 5. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1408 or B1409 set?
YES : Return to Step 1.
NO : The procedure is complete.

<Incorrect>
<Correct>
From attached sheet 6 (27/42 - 28/42)

Attached sheet 6 (12/42)

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

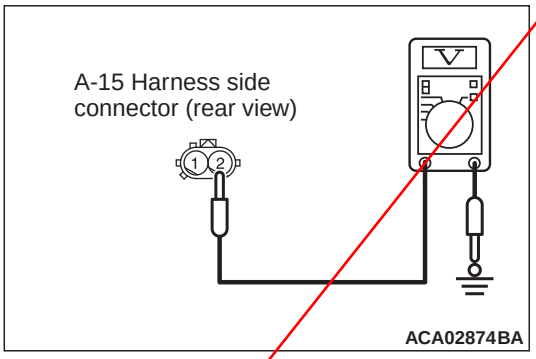
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor (LH) power supply circuit. Measure the voltage at the front impact sensor (LH) connector A-15.

(1) Disconnect the negative auxiliary battery terminal.
(2) Disconnect front impact sensor (LH) connector A-15, and measure at the wiring harness side.
(3) Connect the negative auxiliary battery terminal.
(4) Turn the electric motor switch to the "ON" position.

⚠ CAUTION



Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(5) Measure the voltage between A-15 harness side connector terminal 2 and ground.
Voltage should measure 9 volts or more

Q: Is the measured voltage within the specified range?
YES : Replace the front impact sensor (RH). (Refer to). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Are the harness wires between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1) in good condition?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (LH) connector A-15.

STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1417 set?

<Incorrect>
<Correct>
From attached sheet 6 (29/42 - 30/42)

Attached sheet 6 (13/42)

YES : Replace SRS-ECU (Refer to).
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

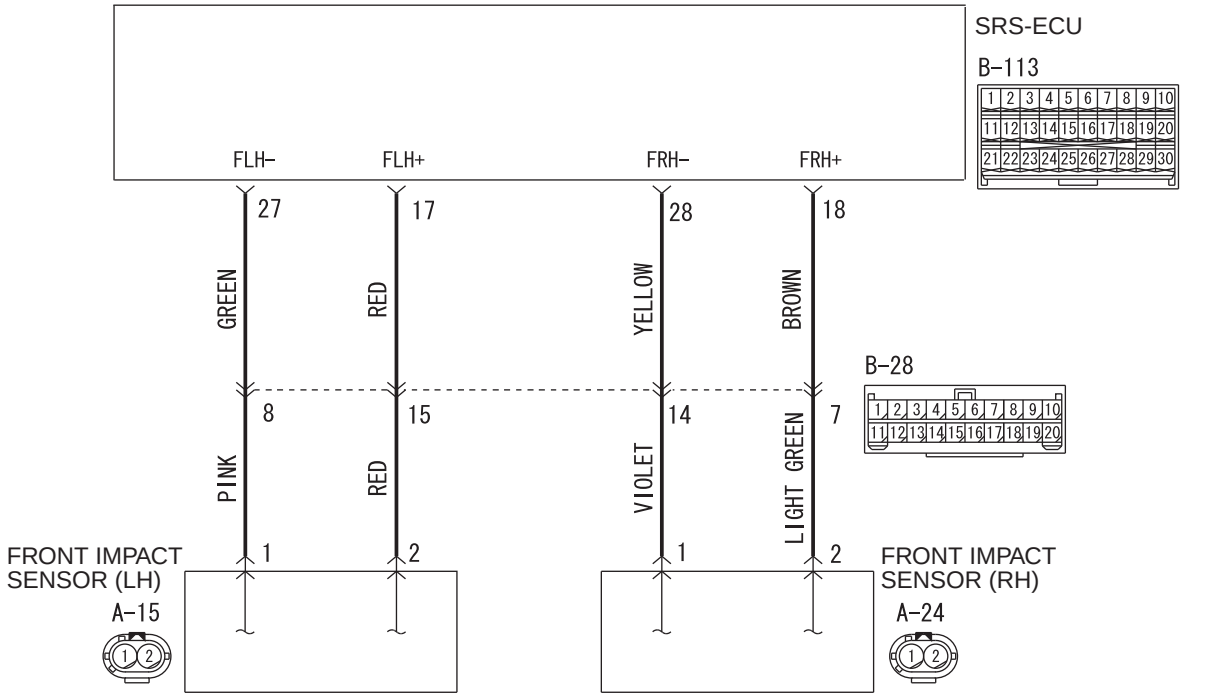
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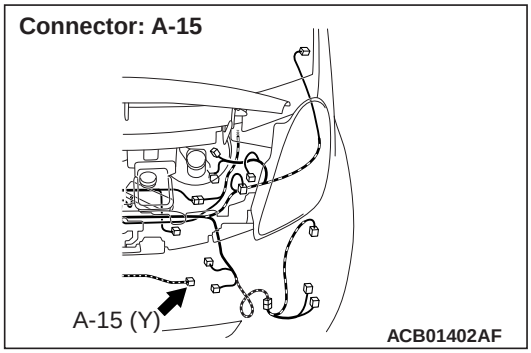
From attached sheet 6 (29/42 - 30/42)

DTC B1418: Front Impact Sensor (LH) Communication Error
DTC B1419: Front Impact Sensor (LH) Communication Impossible

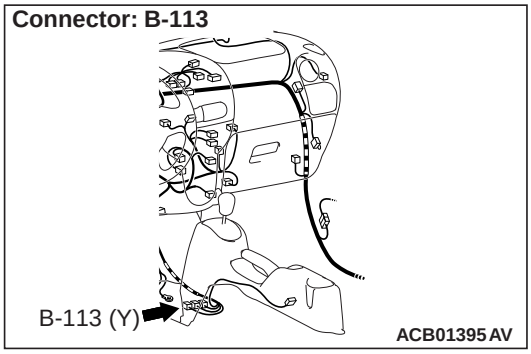
Front Impact Sensor Circuit



ACB01253 AB



ACB01402AF



ACB01395 AV

⚠ CAUTION
If diagnostic trouble code B1418 or B1419 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION

The front impact sensor includes a CPU, etc. The CPU monitors output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

Attached sheet 6 (14/42)

DTC SET CONDITIONS

These DTCs are set if communication between the front impact sensor (LH) and the SRS-ECU is not possible or faulty.

TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the front impact sensor (LH).

(1) Check that the negative auxiliary battery terminal is disconnected. If the negative auxiliary battery terminal is connected, disconnect it.
(2) Alternate the right front impact sensor and left front impact sensor, and then install the alternated sensors.
(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnostic trouble code memory, check the diagnostic trouble code again.
(5) Disconnect the negative auxiliary battery terminal.

Q: Is the diagnostic trouble code No. B1408 or B1409 set?
YES : Replace the front impact sensor (LH) (Refer to).
NO : Go to Step 4.

STEP 4. Check the harness wires between A-15 front impact sensor (LH) connector (terminal No.1 and 2) and B-113 SRS-ECU connector (terminal No.27 and 17).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

- Wiring harness check for open and short circuit between right front impact sensor and SRS-ECU

Q: Are the harness wires between A-15 front impact sensor (LH) connector (terminal No.1 and 2) and B-113 SRS-ECU connector (terminal No.27 and 17) in good condition?
YES : Go to Step 5
NO : Repair the wiring harness.

STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the diagnostic trouble code No. B1418 or B1419 set?
YES : Replace SRS-ECU (Refer to).
NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/ Inspection Service Points – How to Cope with Intermittent Malfunction).

<Incorrect>
<Correct> From attached sheet 6 (31/42 - 32/42)

Attached sheet 6 (15/42)

DTC B1426: Malfunction of Side Impact Sensor (RH)
DTC B1436: Malfunction of Side Impact Sensor (LH)

⚠ CAUTION
If DTC B1426 or B1436 is set in the SRS-ECU, always diagnose the CAN main bus line.

DTC SET CONDITIONS
These DTCs are set if the following conditions are detected from the side impact sensor
- Side impact sensor is not operating.
- Side impact sensor characteristics are abnormal.
- Side impact sensor output is abnormal.

TROUBLESHOOTING HINTS
Malfunction of side impact sensor (RH) (for DTC B1426) and side impact sensor (LH) (for DTC B1436)

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check the side impact sensor (Using scan tool MB991958, read the diagnostic trouble code).

(1) Check that the negative auxiliary battery terminal is disconnected. If the negative auxiliary battery terminal is connected, disconnect it.
(2) A side impact sensor is checked in the following way.
- Replace the side impact sensor (RH) {In case of code B1426 (Regardless of "Active" or "Stored" faults)} with the new part.
- Replace the side impact sensor (LH) {In case of code B1436 (Regardless of "Active" or "Stored" faults)} with the new part.

(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnostic trouble code memory, check the diagnostic trouble code again.
(5) Disconnect the negative auxiliary battery terminal.

Q: Is the diagnostic trouble code No. B1426 or B1436 set?
YES : Go to Step 3.
NO : The procedure is complete.

STEP 3. Check the SRS-ECU check (Using the SRS-ECU scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative auxiliary battery terminal.
(2) Replace the SRS-ECU with a new one (Refer to).
(3) Connect the negative auxiliary battery terminal.
(4) Check the diagnostic trouble code again.

Q: Is the diagnostic trouble code No. B1426 or B1436 set?
YES : Return to Step 1.
NO : The procedure is complete.

<Incorrect>
<Correct>
From attached sheet 6 (33/42 - 34/42)

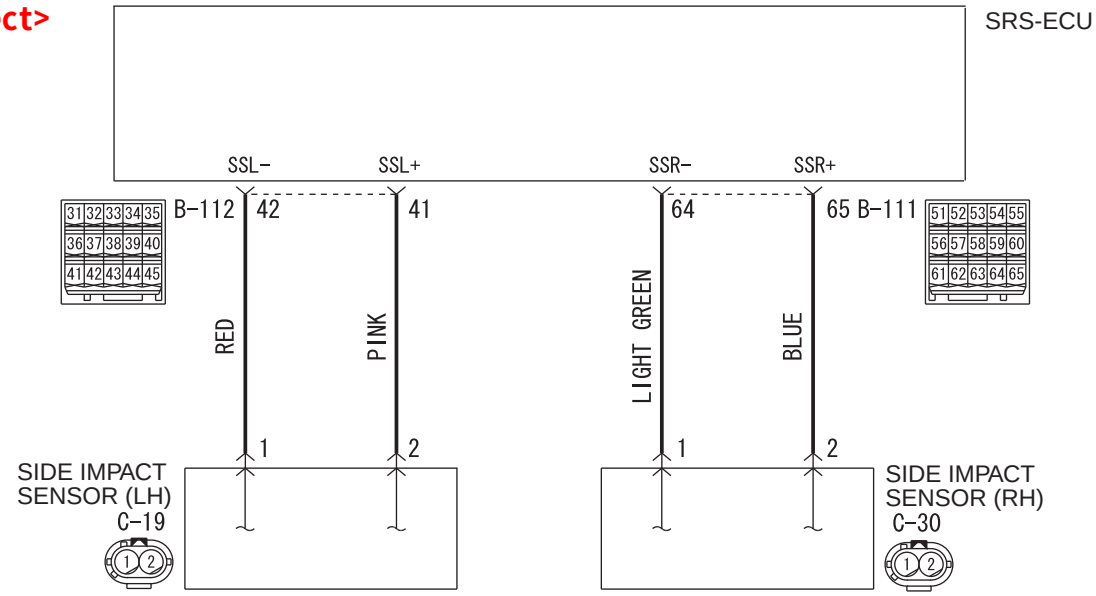
Attached sheet 6 (16/42)

DTC B1427: Side impact sensor (RH) Voltage Error

From attached sheet 6 (35/42 - 36/42)

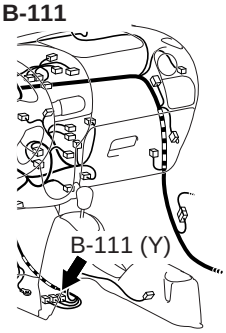
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Side Impact Sensor Circuit



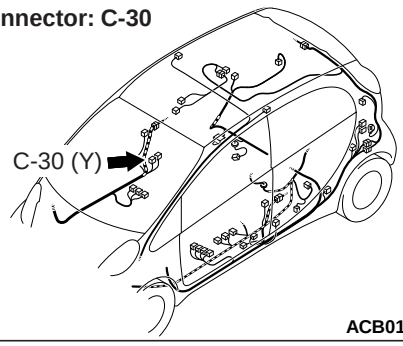
ACB01256AB

Connector: B-111



ACB01395AY

Connector: C-30



ACB01399AL

<Incorrect>

⚠ CAUTION

If diagnostic trouble code B1427 is set in the SRS-ECU, always diagnose the CAN main bus line.

OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnostic trouble code to the SRS-ECU if a problem occurs.

DIAGNOSTIC TROUBLE CODE SET CONDITIONS

This diagnostic trouble code will set when the power supply voltage to the side impact sensor (RH) remains less than a predetermined value for one second.

PROBABLE CAUSES

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.

Attached sheet 6 (17/42)

(4) Turn the electric motor switch to the "LOCK" (OFF) position.

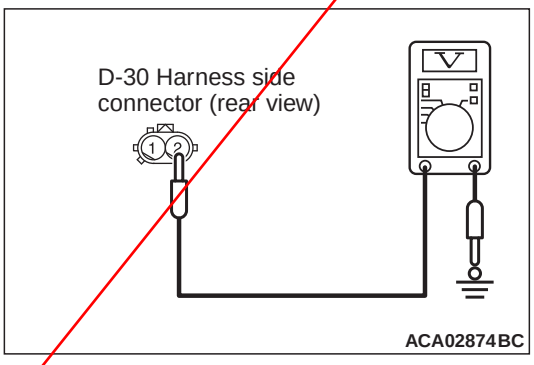
Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

STEP 3. Check the side impact sensor (RH) power supply circuit. Measure the voltage at the side impact sensor (RH) connector C-30.
(1) Disconnect the negative auxiliary battery terminal.
(2) Disconnect side impact sensor (RH) connector C-30, and measure at the wiring harness side.
(3) Connect the negative auxiliary battery terminal.
(4) Turn the electric motor switch to the "ON" position.

⚠ CAUTION



Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.
(5) Measure the voltage between C-30 harness side connector terminal 2and ground.
Voltage should measure 9 volts or more

Q: Is the measured voltage within the specified range?
YES : Replace the side impact sensor (RH). (Refer to). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-111 (terminal No.65) and side impact sensor (RH) connector C-30 (terminal No.2).

Q: Are the harness wires between SRS-ECU connector B-111 (terminal No.65) and side impact sensor (RH) connector C-30 (terminal No.1) in good condition?
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1427 sets, replace the SRS-ECU (Refer to). Then go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-111 and side impact sensor (RH) connector C-30. Then go to Step 5.

STEP 5. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1427 set?
YES : Return to Step 1.
NO : The procedure is complete.

<Incorrect>
<Correct>

From attached sheet 6 (35/42 - 36/42)

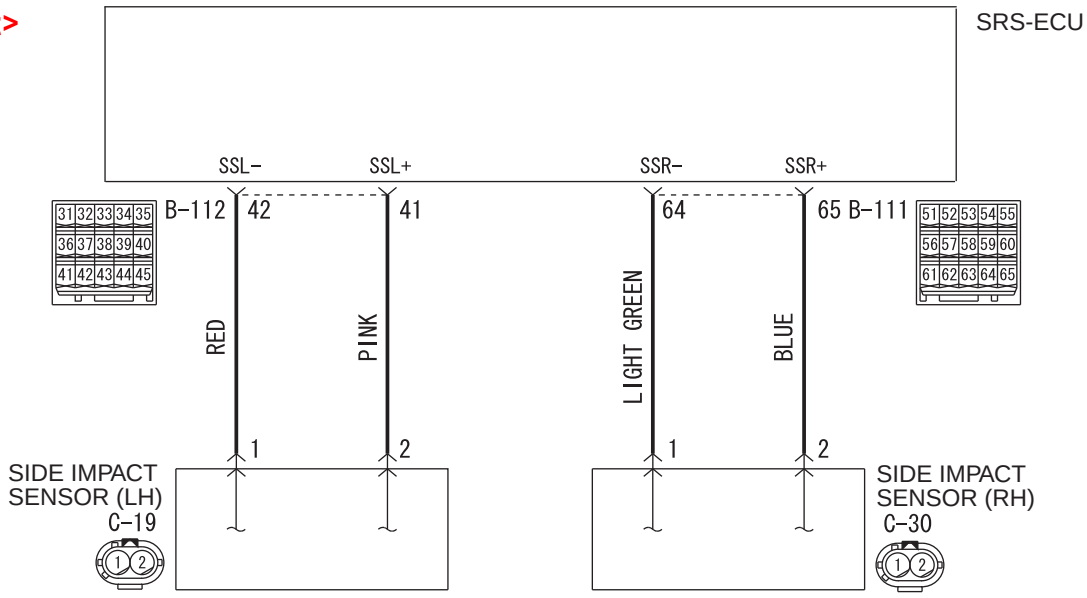
Attached sheet 6 (18/42)

DTC B1428: Side Impact Sensor (RH) Communication Error
DTC B1429: Side Impact Sensor (RH) Communication Impossible

From attached sheet 6 (37/42 - 38/42)

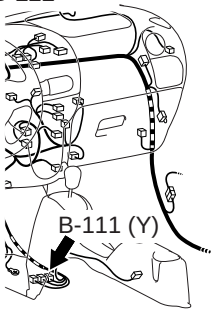
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Side Impact Sensor Circuit



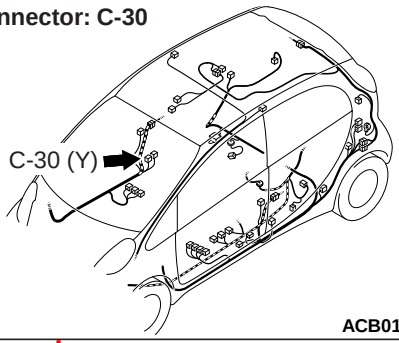
ACB01256AB

Connector: B-111



ACB01395AY

Connector: C-30



ACB01399AL

⚠ CAUTION
If DTC B1428 or B1429 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION
If an impact of set value or more is detected, the side impact sensor (RH) sends the coded acceleration data to SRS-ECU. Based on the acceleration data, SRS-ECU determines the necessity of side-airbag and curtain air bag deployment, and then turns ON the power supply circuit to the inflator.

DTC SET CONDITIONS
The diagnostic trouble code is set if the communication between the side impact sensor (RH) and SRS-ECU is abnormal (No. B1428), or impossible (No. B1429).

TROUBLESHOOTING HINTS
- Malfunction of the side impact sensor (RH)
- Damaged wiring harness and connectors
- Malfunction of SRS-ECU

<Incorrect>

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.

Attached sheet 6 (19/42)

(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

STEP 3. Check the side impact sensor (RH).
(1) Disconnect the negative auxiliary battery terminal.
(2) Alternate the side impact sensor (RH) and the side impact sensor (LH), and then install the alternated sensor.
(3) Connect the negative auxiliary battery terminal.
(4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

Q: Is DTC B1438 or B1439 set?
YES : Replace the side impact sensor (RH) with a new one (Refer to). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (RH) connector C-30 (terminal No.1 and 2).

Q: Are the harness wires between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (RH) connector C-30(terminal No.1 and 2) in good condition?
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1428 or B1429 sets, replace the SRS-ECU (Refer to). Then go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-111 and side impact sensor (RH) connector C-30. Then go to Step 5.

STEP 5. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1428 or B1429 set?
YES : Return to Step 1.
NO : The procedure is complete.

<Incorrect>

<Correct> From attached sheet 6 (37/42 - 38/42)

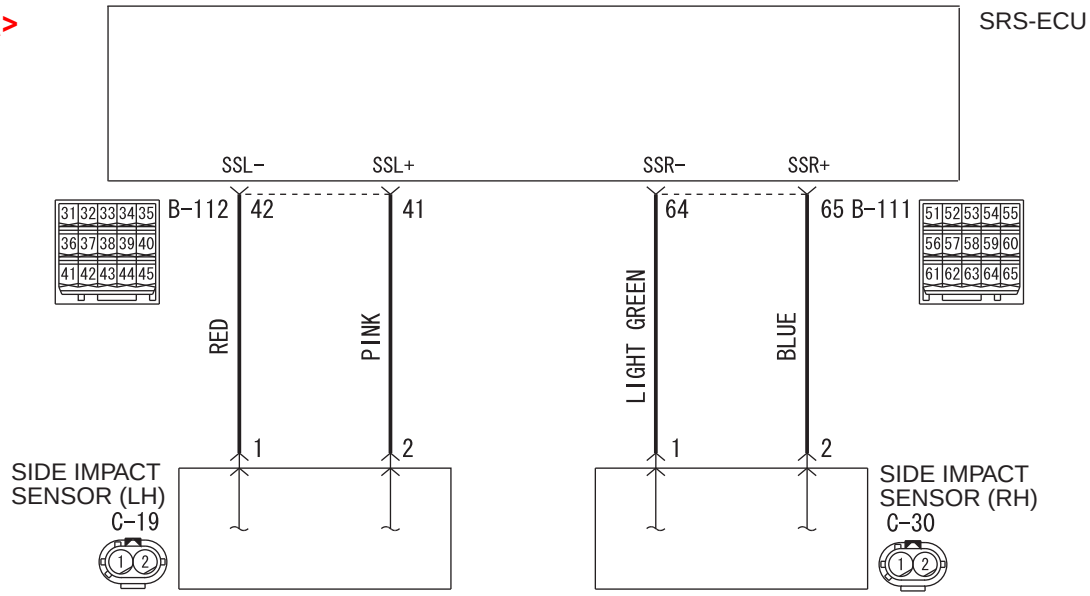
Attached sheet 6 (20/42)

DTC B1437: Side Impact Sensor (LH) Voltage Error

From attached sheet 6 (39/42 - 40/42)

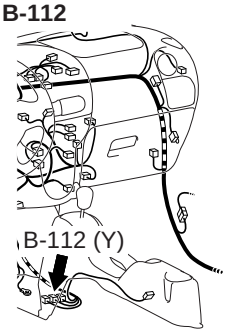
<Correct>

Side Impact Sensor Circuit



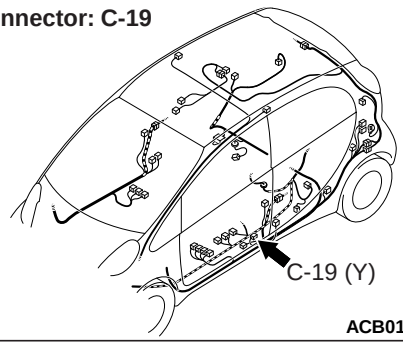
ACB01256AB

Connector: B-112



ACB01395AZ

Connector: C-19



ACB01399AN

<Incorrect>

⚠ CAUTION

If diagnostic trouble code B1437 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnostic trouble code to the SRS-ECU if a problem occurs.

DTC SET CONDITIONS

This diagnostic trouble code will set when the power supply voltage to the side impact sensor (LH) remains less than a predetermined value for one second.

TROUBLESHOOTING HINTS

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.

Attached sheet 6 (21/42)

(4) Turn the electric motor switch to the "LOCK" (OFF) position.

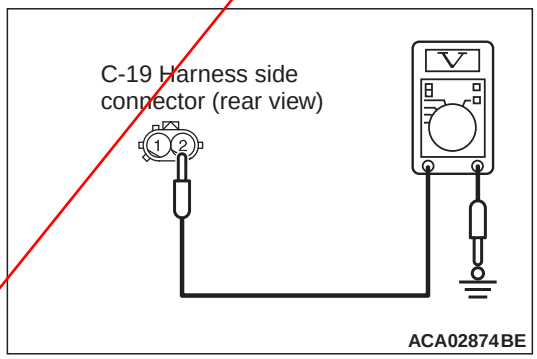
Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

STEP 3. Check the side impact sensor (LH) power supply circuit. Measure the voltage at the side impact sensor (LH) connector C-19.
(1) Disconnect the negative auxiliary battery terminal.
(2) Disconnect side impact sensor (LH) connector C-19, and measure at the wiring harness side.
(3) Connect the negative auxiliary battery terminal.
(4) Turn the electric motor switch to the "ON" position.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



(5) Measure the voltage between C-19 harness side connector terminal 2and ground.
Voltage should measure 9 volts or more

Q: Is the measured voltage within the specified range?
YES : Replace the side impact sensor (LH) (Refer to). Then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-112 (terminal No.41) and side impact sensor (LH) connector C-19 (terminal No.2).

Q: Are the harness wires between SRS-ECU connector B-112 (terminal No.41) and side impact sensor (LH) connector C-19 (terminal No.2) in good condition?
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1427 sets, replace the SRS-ECU (Refer to). Then go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-112 and side impact sensor (LH) connector C-19. Then go to Step 5.

STEP 5. Check whether the diagnostic trouble code is reset.

Q: Is diagnostic trouble code B1437 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>

<Correct>

From attached sheet 6 (39/42 - 40/42)

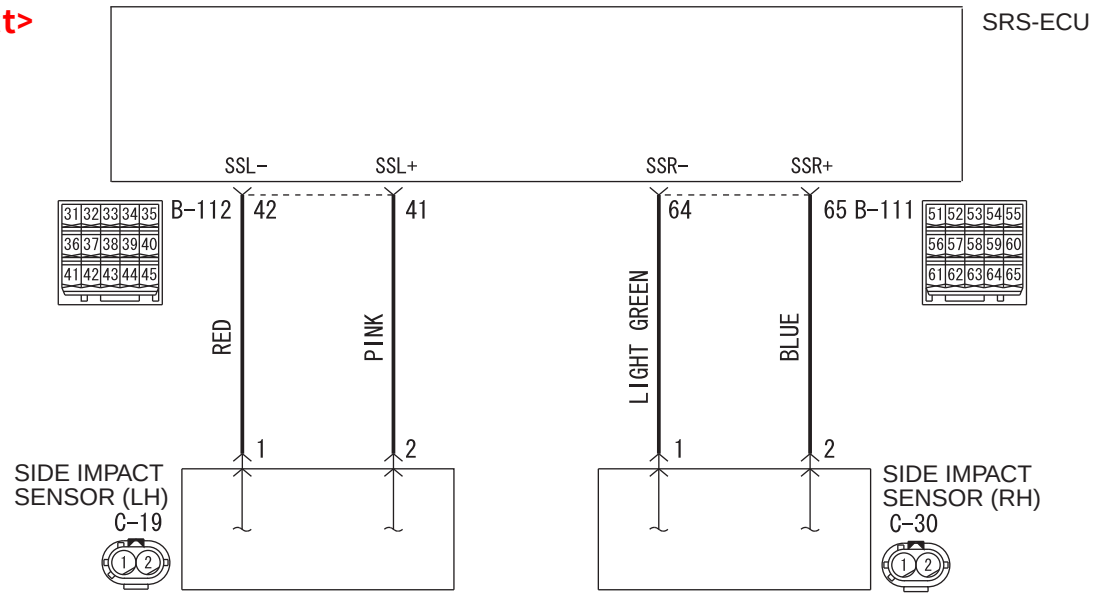
Attached sheet 6 (22/42)

DTC B1438 Side Impact Sensor (LH) Communication Error
DTC B1439 Side Impact Sensor (LH) Communication Impossible

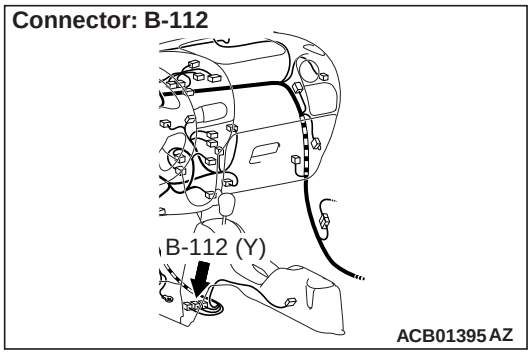
From attached sheet 6 (41/42 - 42/42)

<Correct>

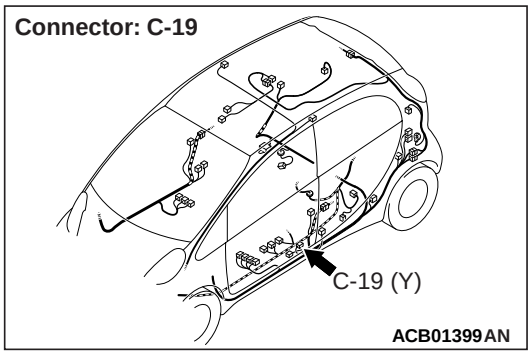
Side Impact Sensor Circuit



ACB01256AB



ACB01395AZ



ACB01399AN

<Incorrect>

⚠ CAUTION
If the diagnostic trouble code B1438 or B1439 is set to SRS-ECU, be sure to diagnose the CAN bus line.

CIRCUIT OPERATION
The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnostic trouble code to the SRS-ECU if a problem occurs.

DTC SET CONDITIONS
The diagnostic trouble code is set if the communication between the side impact sensor (LH) and SRS-ECU is abnormal (No. B1438), or impossible (No. B1439).

TROUBLESHOOTING HINTS
- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to "ON" position.

Attached sheet 6 (23/42)

(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnostic trouble code is reset.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3
NO : There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the side impact sensor (LH).
(1) Disconnect the negative auxiliary battery terminal.
(2) Alternate the side impact sensor (LH) and the side impact sensor (RH), and then install the alternated sensor.
(3) Connect the negative auxiliary battery terminal.
(4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

Q: Is diagnostic trouble code B1428 or B1429 set?
YES : Replace the side impact sensor (LH) with a new one (Refer to). Go to Step 5.
NO : Go to Step 4

STEP 4. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

Q: Are the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1) in good condition?
YES : Go to Step 5
NO : Repair the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

STEP 5. Check whether the diagnostic trouble code is reset.

Q: Is diagnostic trouble code B1438 or B1439 set?
YES : Replace the SRS-ECU (Refer to).
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Incorrect>
<Correct> From attached sheet 6 (41/42 - 42/42)

<Incorrect>

To attached sheet 6 (7/42 - 8/42)

<Correct>

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check the front impact sensor.

(1) Disconnect the negative auxiliary battery terminal.
(2) A front impact sensor is checked in the following way.
- Replace the front impact sensor (RH) {In case of code B1406 (Regardless of "Active" or "Stored" faults)} with new part.
- Replace the front impact sensor (LH) {In case of code B1416 (Regardless of "Active" or "Stored" faults)} with new part.

(3) Connect the negative auxiliary battery terminal.
(4) After erasing the diagnostic trouble code memory, check the diagnostic trouble code again.

Q: Is either DTC B1406 or B1416 set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Replace the front impact sensor.

(1) <For DTC B1406>
Replace front impact sensor (RH) (Refer to).
(2) <For DTC B1416>
Replace front impact sensor (LH) (Refer to).
(3) Turn the electric motor switch to the "ON" position.
(4) Check if the DTC is set.
(5) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is either DTC B1406 or B1416 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

<Correct>

DIAGNOSIS

<Incorrect>

To attached sheet 6 (9/42 - 10/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (RH) connector A-24. Then go to Step 4.

<Correct>

<Incorrect>

To attached sheet 6 (9/42 - 10/42)

STEP 4. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1407 set?

YES : Go to Step 5.
NO : The procedure is complete.

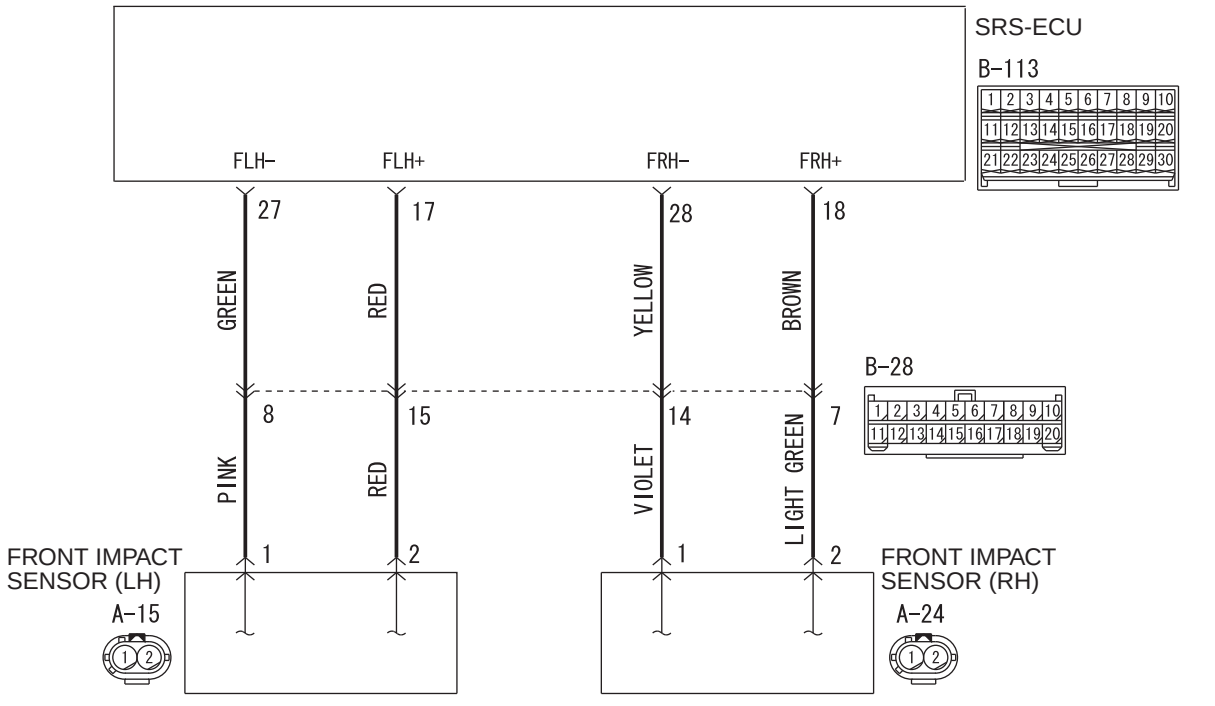
STEP 5. Replace the front impact sensor (RH).
(1) Replace front impact sensor (RH) with a new one (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

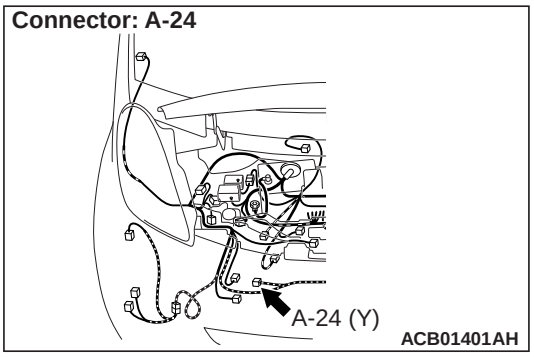
Q: Is DTC B1407 set?

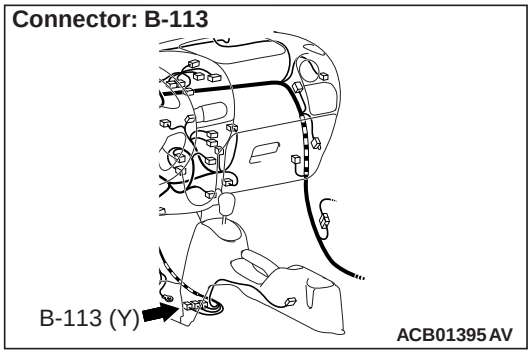
YES : Replace SRS-ECU (Refer to).
NO : The procedure is complete.

DTC B1408: Front Impact Sensor (RH) Communication Error
DTC B1409: Front Impact Sensor (RH) Communication Impossible

Front Impact Sensor Circuit







⚠ CAUTION

If DTC B1408 or B1409 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION

The front impact sensor includes a CPU, etc. The CPU monitors output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

DTC SET CONDITIONS

These DTCs are set if communication between the front impact sensor (RH) and the SRS-ECU is not possible or faulty.

TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (11/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis). Then go to Step 2.

<Correct>

<Incorrect>

To attached sheet 6 (11/42)

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-113 (terminal No.18 and 28) and front impact sensor (RH) connector A-24 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (RH) connector A-24. Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1408 or B1409 set?

YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the front impact sensor (RH).
(1) Replace the front impact sensor (RH) with a new one (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1408 or B1409 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

CIRCUIT OPERATION
The front impact sensor includes a CPU, etc. The CPU monitors output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

DTC SET CONDITIONS
This DTC will set when the power supply voltage to the front impact sensor (LH) remains less than a predetermined value for five seconds.

TROUBLESHOOTING HINTS
- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (12/42 - 13/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

<Correct>

<Incorrect>

To attached sheet 6 (12/42 - 13/42)

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-113 (terminal No.17 and 27) and front impact sensor (LH) connector A-15 (terminal No.2 and 1).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

Q: Is the check result normal?

YES : Go to Step 5.

NO : Repair the harness wires between SRS-ECU connector B-113 and front impact sensor (LH) connector A-15. Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1417 set?

YES : Go to Step 5.

NO : The procedure is complete.

STEP 5. Replace the front impact sensor (LH).

(1) Replace front impact sensor (LH) with a new one (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1417 set?

YES : Replace SRS-ECU (Refer to).

NO : The procedure is complete.

<Correct>

<Incorrect>

To attached sheet 6 (14/42)

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires between A-15 front impact sensor (LH) connector (terminal No.1 and 2) and B-113 SRS-ECU connector (terminal No.27 and 17).

NOTE: After inspecting intermediate connector B-28 inspect the wiring harness. If the intermediate connector B-28 is damaged, repair or replace it.

- Wiring harness check for open and short circuit between right front impact sensor and SRS-ECU

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the wiring harness. Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1418 or B1419 set?

YES : Go to Step 5.
NO : The procedure is complete.

TSB Revision

<Correct>

<Incorrect>

To attached sheet 6 (14/42)

STEP 5. Replace the front impact sensor (LH).

(1) Replace front impact sensor (LH) with a new one (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1418 or B1419 set?

YES : Replace SRS-ECU (Refer to).
NO : The procedure is complete.

DTC B1426: Malfunction of Side Impact Sensor (RH)
DTC B1436: Malfunction of Side Impact Sensor (LH)

⚠ CAUTION
If DTC B1426 or B1436 is set in the SRS-ECU, always diagnose the CAN main bus line.

DTC SET CONDITIONS
These DTCs are set if the following conditions are detected from the side impact sensor

- Side impact sensor is not operating.
- Side impact sensor characteristics are abnormal.
- Side impact sensor output is abnormal.

TROUBLESHOOTING HINTS
Malfunction of side impact sensor (RH) (for DTC B1426) and side impact sensor (LH) (for DTC B1436)

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (15/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

<Correct>

<Incorrect>

To attached sheet 6 (15/42)

STEP 2. Check the side impact sensor (Using scan tool MB991958, read the diagnostic trouble code).

(1) Check that the negative auxiliary battery terminal is disconnected. If the negative auxiliary battery terminal is connected, disconnect it.

(2) A side impact sensor is checked in the following way.
- Replace the side impact sensor (RH) {In case of code B1426 (Regardless of "Active" or "Stored" faults)} with the new part.
- Replace the side impact sensor (LH) {In case of code B1436 (Regardless of "Active" or "Stored" faults)} with the new part.

(3) Connect the negative auxiliary battery terminal.

(4) After erasing the diagnostic trouble code memory, check the diagnostic trouble code again.

(5) Disconnect the negative auxiliary battery terminal.

Q: Is the diagnostic trouble code No. B1426 or B1436 set?

YES : Go to Step 3.

NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Replace the side impact sensor.

(1) <For DTC B1426>
Replace the side impact sensor (RH) (Refer to).

(2) <For DTC B1436>
Replace the side impact sensor (LH) (Refer to).

(3) Turn the electric motor switch to the "ON" position.

(4) Check if the DTC is set.

(5) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the diagnostic trouble code No. B1426 or B1436 set?

YES : Replace the SRS-ECU (Refer to).

NO : The procedure is complete.

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (16/42 - 17/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (RH) connector C-30 (terminal No.1 and 2).

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-111 and side impact sensor (RH) connector C-30. Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1427 set?

YES : Go to Step 5.
NO : The procedure is complete.

<Correct>

<Incorrect>

To attached sheet 6 (16/42 - 17/42)

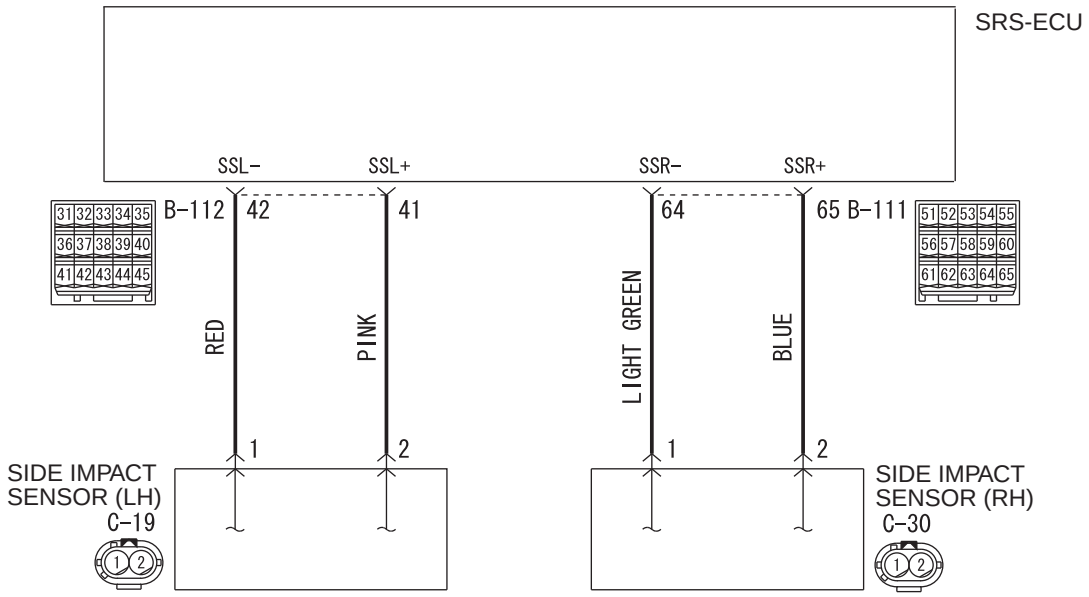
STEP 5. Replace the side impact sensor (RH).
(1) Replace the side impact sensor (RH) (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1427 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

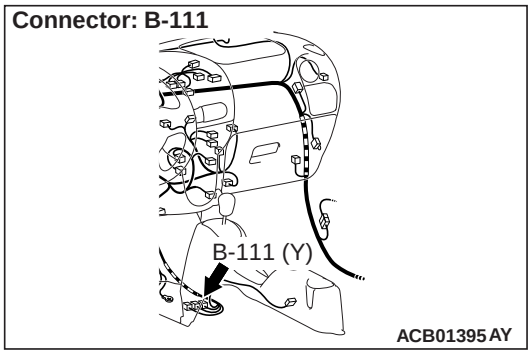
DTC B1428: Side Impact Sensor (RH) Communication Error
DTC B1429: Side Impact Sensor (RH) Communication Impossible

Side Impact Sensor Circuit



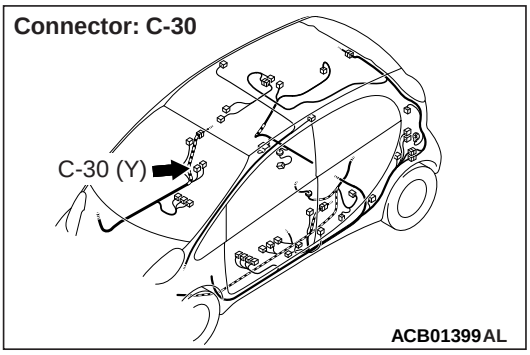
ACB01256AB

Connector: B-111



ACB01395AY

Connector: C-30



ACB01399AL

⚠ CAUTION
If DTC B1428 or B1429 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION
If an impact of set value or more is detected, the side impact sensor (RH) sends the coded acceleration data to SRS-ECU. Based on the acceleration data, SRS-ECU determines the necessity of side-airbag and curtain air bag deployment, and then turns ON the power supply circuit to the inflator.

DTC SET CONDITIONS
The diagnostic trouble code is set if the communication between the side impact sensor (RH) and SRS-ECU is abnormal (No. B1428), or impossible (No. B1429).

TROUBLESHOOTING HINTS
- Malfunction of the side impact sensor (RH)
- Damaged wiring harness and connectors
- Malfunction of SRS-ECU

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (18/42 - 19/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION
To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.
(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?
YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?
YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-111 (terminal No.64 and 65) and side impact sensor (RH) connector C-30 (terminal No.1 and 2).

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-111 and side impact sensor (RH) connector C-30. Then go to Step 4.

<Correct>

<Incorrect>

To attached sheet 6 (18/42 - 19/42)

STEP 4. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1428 or B1429 set?

YES : Go to Step 5.
NO : The procedure is complete.

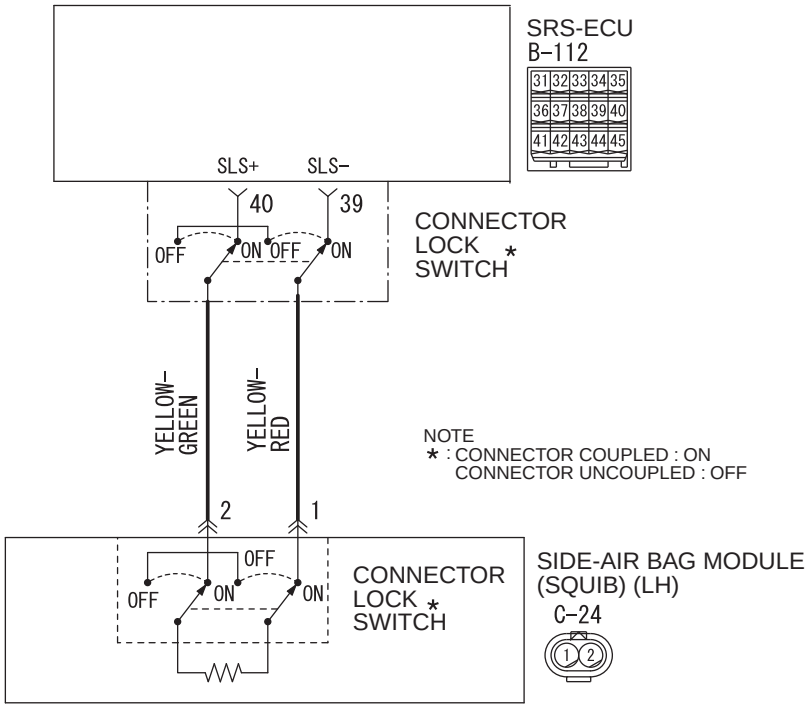
STEP 5. Replace the side impact sensor (RH).
(1) Replace the side impact sensor (RH) (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1428 or B1429 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

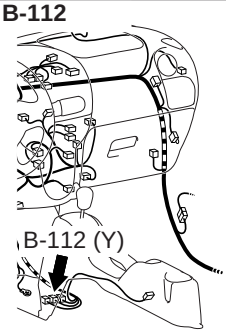
DTC B1430: Side-airbag Module (LH) (Squib) System (Short Circuit between Squib Circuit Terminals)

Side-airbag Module (Squib) (LH) Circuit



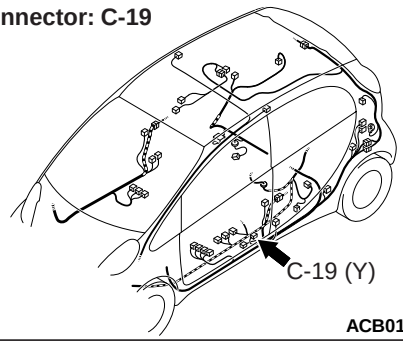
ACB01257AB

Connector: B-112



ACB01395AZ

Connector: C-19



ACB01399AN

⚠ CAUTION

If diagnostic trouble code B1437 is set in the SRS-ECU, always diagnose the CAN main bus line.

CIRCUIT OPERATION

The side impact sensor transmits acceleration data to the SRS-ECU. The SRS-ECU then determines. if the side and/or curtain air bags should be inflated, and then sends an ignition signal. The side impact sensor also diagnoses itself, and sends a diagnostic trouble code to the SRS-ECU if a problem occurs.

DTC SET CONDITIONS

This diagnostic trouble code will set when the power supply voltage to the side impact sensor (LH) remains less than a predetermined value for one second.

TROUBLESHOOTING HINTS

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (20/42 - 21/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to the "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

<Correct>

<Incorrect>

To attached sheet 6 (20/42 - 21/42)

STEP 2. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3.
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit or short circuit between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-112 and side impact sensor (LH) connector C-19. Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.
Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1437 set?

YES : Go to Step 5.
NO : The procedure is complete.

STEP 5. Replace the side impact sensor (LH).
(1) Replace the side impact sensor (LH) (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1437 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.

DIAGNOSIS

<Correct>

<Incorrect>

To attached sheet 6 (22/42 - 23/42)

STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the electric motor switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Connect scan tool MB991958. Refer to "How to connect the scan tool ."
(2) Turn the electric motor switch to "ON" position.
(3) Diagnose the CAN bus line.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the CAN bus line found to be normal?

YES : Go to Step 2.
NO : Repair the CAN bus line (Refer to GROUP 54C, Diagnosis).

STEP 2. Check whether the diagnostic trouble code is reset.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Go to Step 3
NO : An intermittent malfunction is suspected (Refer to GROUP 00, How to Cope with Intermittent Malfunction).

STEP 3. Check the harness wires for open circuit and short circuit between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1).

Q: Is the check result normal?

YES : Go to Step 5.
NO : Repair the harness wires between SRS-ECU connector B-112 (terminal No.41 and 42) and side impact sensor (LH) connector C-19 (terminal No.2 and 1). Then go to Step 4.

STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1438 or B1439 set?

YES : Go to Step 5.
NO : The procedure is complete.

TSB Revision

<Correct>

<Incorrect>

To attached sheet 6 (22/42 - 23/42)

STEP 5. Replace the side impact sensor (LH).

(1) Replace the side impact sensor (LH) (Refer to).
(2) Turn the electric motor switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the electric motor switch to the "LOCK" (OFF) position.

Q: Is DTC B1438 or B1439 set?

YES : Replace the SRS-ECU (Refer to).
NO : The procedure is complete.