



Technical Service Bulletin

SUBJECT: SRS UPDATES TO TECHNICAL INFORMATION MANUAL – SERVICE MANUAL REVISION			No: TSB-16-52B-001	
			DATE: June, 2016	
			MODEL: 2014-15 Mirage	
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER		<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input type="checkbox"/> WARRANTY PROCESSOR		<input type="checkbox"/> SALES MANAGER

PURPOSE

This TSB updates the Supplemental Restraint System (SRS) section of the Technical Information Manual to include seat slide sensor information.

AFFECTED VEHICLES

- 2014-2015 Mirage

AFFECTED SERVICE MANUALS

2014 Mirage Technical Information Manual, Group 52B – Supplemental Restraint System (SRS)



Please make the indicated changes to the 2014 Mirage Technical Information Manual, Group 52B – Supplemental Restraint System (SRS) –> General Information.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)
GENERAL INFORMATION

SYSTEM COMPONENT PARTS

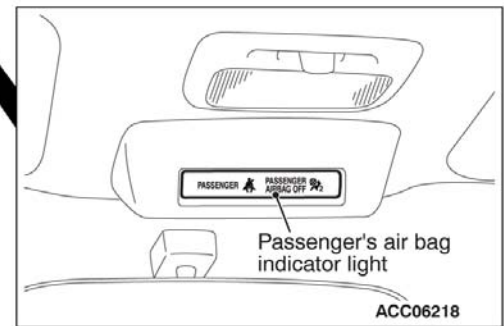
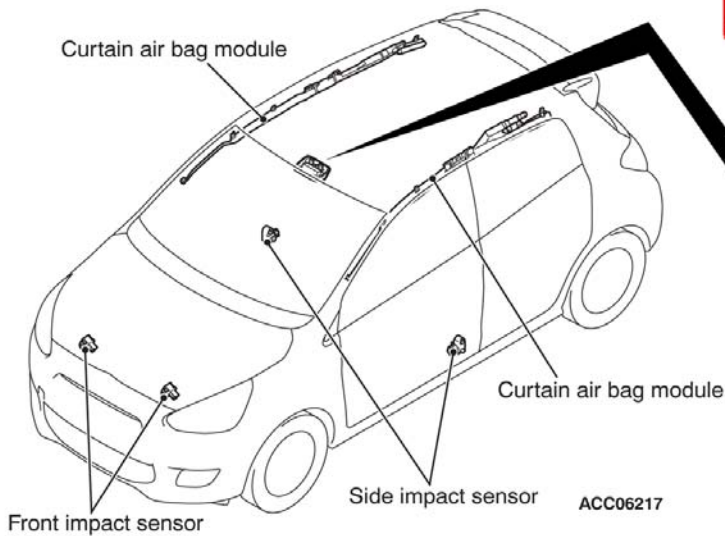
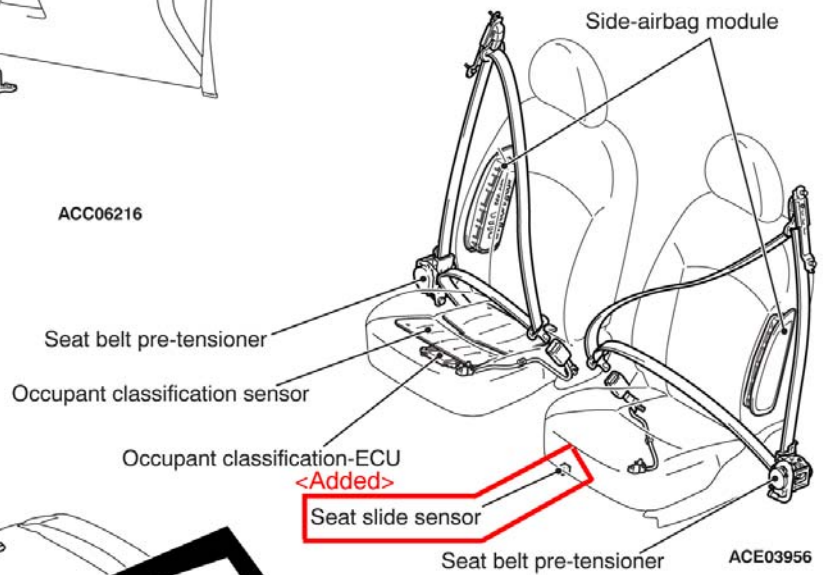
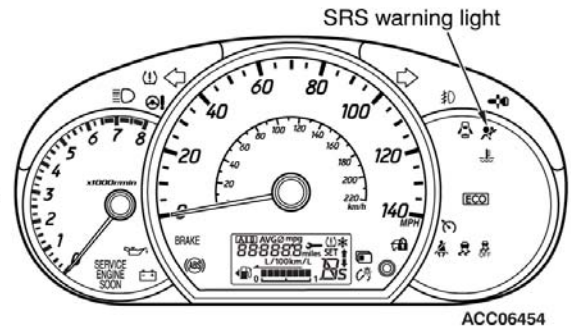
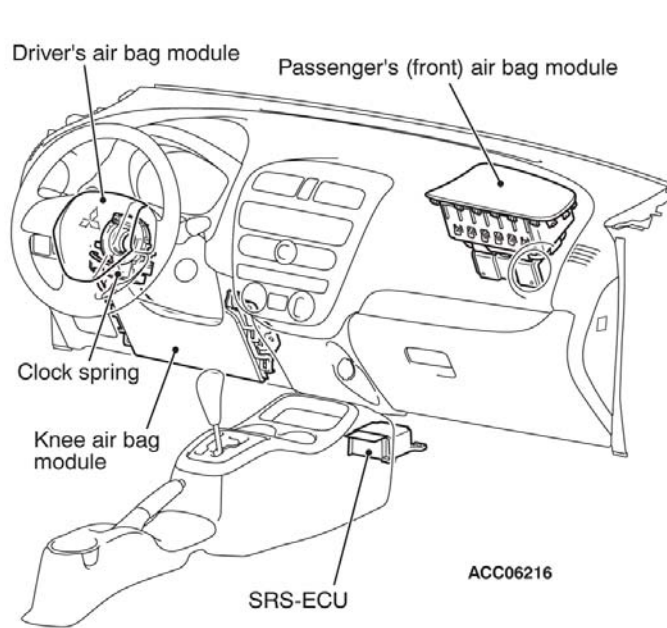
The SRS consists of driver's and passenger's (front) air bag modules, knee air bag modules, side-airbag modules, curtain air bag modules, SRS-ECU (air bag control unit), front impact sensors, side impact sensors, SRS warning light, passenger's air bag OFF indicator light, passenger's seat belt warning light, clock spring, seat belt pre-tensioner, seat belt switch, occupant classification-ECU and occupant classification sensor. Driver's and passenger's (front) air bag modules are located in the center of the steering wheel and above the glove box. The knee air bag module has been installed to the instrument panel lower section under the steering column. Side-airbags are located inside the front seatback frame. The curtain air bag module has been installed onto the roof side section (from front pillar and back end of rear pillar). Each air bag consists of a folded air bag and an inflator unit. The SRS-ECU placed on the forefront of the floor monitors the system and has front air bag analog G-sensor and a side-airbag analog G-sensor. The front impact sensor is assembled in the front end upper bar to monitor impact in case of front impact. The side impact sensors inside the center pillars monitor the shock incurred by the sides of the vehicle. The SRS warning light on the combi-

nation meter indicates the operational status of the SRS. The clock spring is installed in the steering column. The seat belt pre-tensioner is built into the driver's and passenger's front seat belt retractor. The occupant classification sensor is installed front seat cushion of the passenger seat to detect the load on the seat. The occupant classification-ECU mounted under the front passenger's seat determines the occupant class according to the signals from the occupant classification sensor and sends signals to SRS-ECU. The passenger's air bag OFF indicator light is installed to the headlining, and illuminates when the passenger's (front) air bag is inactive. The passenger's seat belt warning light is installed to the headlining, and illuminates when the passenger is not wearing the seat belt. The seat belt switch detects whether the seat belt is used. The SRS-ECU will start a squib ignition current to the driver's/passenger's (front) air bag module, knee air bag module and seat belt pre-tensioner when simultaneously detecting frontal impact with the front impact sensor, front air bag analog G-sensor. It will also supply a squib ignition current to the side-airbag module and curtain air bag module when simultaneously detecting side impact with the side impact sensor and side-airbag analog G-sensor.

<Added>
seat slide sensor,

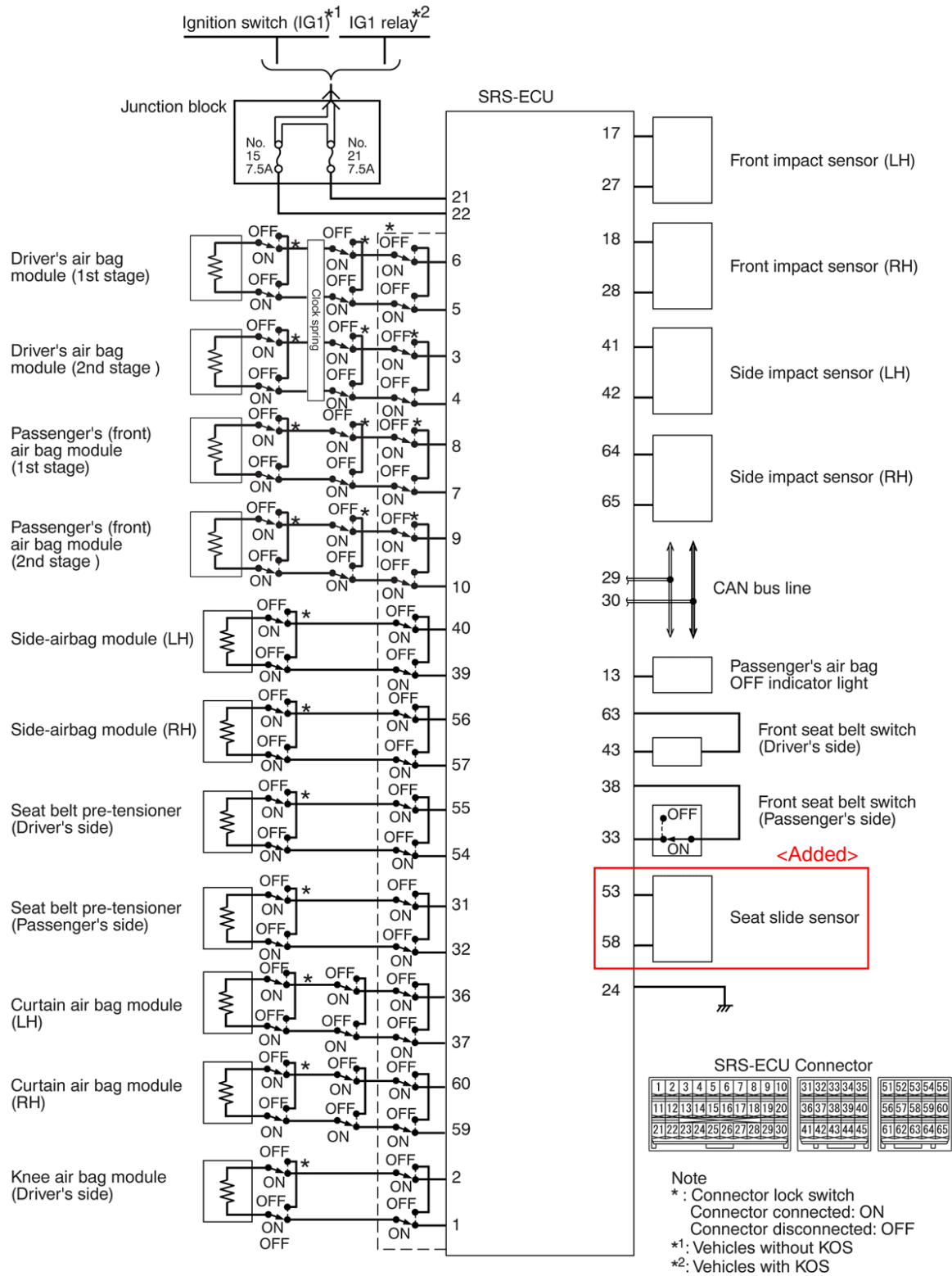
<Added>
The seat slide sensor is installed at the seat adjuster section of the driver seat in order to detect the driver seat slide position.

CONSTRUCTION DIAGRAM



ACE03996 AB

SRS SYSTEM CIRCUIT DIAGRAM



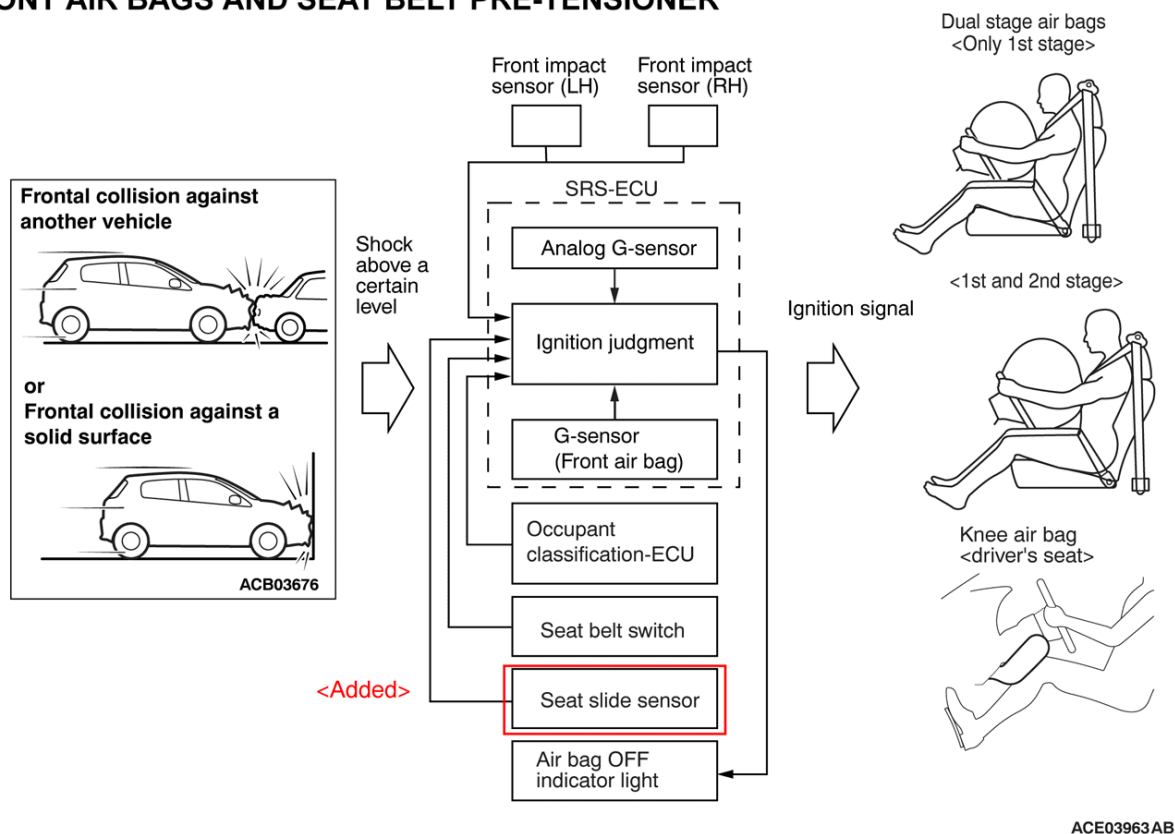
Number in system circuit diagram	Code	Circuit name	Universal harness Wire size and color
1	KDS-	Knee air bag squib (-)	Y
2	KDS+	Knee air bag squib (+)	W
3	DQ2+	Driver's air bag 2nd squib (+)	V
4	DQ2-	Driver's air bag 2nd squib (-)	P
5	DQ1-	Driver's air bag 1st squib (-)	W
6	DQ1+	Driver's air bag 1st squib (+)	Y
7	ASQ+	Passenger's (front) air bag 1st squib (+)	R
8	ASQ-	Passenger's (front) air bag 1st squib (-)	P
9	AQ2-	Passenger's (front) air bag 2nd squib (-)	P
10	AQ2+	Passenger's (front) air bag 2nd squib (+)	R
13	OFLP	Passenger's air bag OFF indicator light	R
17	FLH+	Front impact sensor (LH) (+)	Y
18	FRH+	Front impact sensor (RH) (+)	Y
21	IG1B	Ignition switch (IG1) power supply (fuse No. 21)	W
22	IG1A	Ignition switch (IG1) power supply (fuse No. 15)	P
24	GND1	Ground	B
27	FLH-	Front impact sensor (LH) (-)	L
28	FRH-	Front impact sensor (RH) (-)	T
29	CAN-	CAN-C_L	B
30	CAN+	CAN-C_H	R
31	PTA+	Passenger's seat belt pre-tensioner squib (+)	Y
32	PTA-	Passenger's seat belt pre-tensioner squib (-)	R
33	PBS-	Passenger's side seat belt switch (-)	B
36	CLS+	Left-side curtain air bag squib (+)	G
37	CLS-	Left-side curtain air bag squib (-)	W
38	PBSO	Passenger's side seat belt switch (+)	LG
39	SLS-	Left-side side-airbag squib (-)	L
40	SLS+	Left-side side-airbag squib (+)	R
41	SSL+	Left-side side impact sensor (+)	LG
42	SSL-	Left-side side impact sensor (-)	V
43	<Added> DBS-	Driver's side seat belt switch (-)	P
53	DS1-	Seat slide sensor (-)	G
54	PTD-	Driver's seat belt pre-tensioner squib (-)	GR
55	PTD+	Driver's seat belt pre-tensioner squib (+)	W
56	SRS+	Right-side side-airbag squib (+)	SB
57	<Added> SRS-	Right-side side-airbag squib (-)	BR
58	DS1+	Seat slide sensor (+)	R
59	CRS-	Right-side curtain air bag squib (-)	Y
60	CRS+	Right-side curtain air bag squib (+)	GR

Please make the indicated changes to the 2014 Mirage Technical Information Manual, Group 52B – Supplemental Restraint System (SRS) → System Operation.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SYSTEM OPERATION

SYSTEM OPERATION

FRONT AIR BAGS AND SEAT BELT PRE-TENSIONER



- In case of a frontal collision, when the front impact sensors inside the engine room and the G-sensor inside SRS-ECU simultaneously detect an impact that exceeds a certain threshold (turned ON), SRS-ECU energizes the driver's and passenger's (front) air bag modules (squibs), knee air bag module (squib) and driver's and passenger's seat belt pre-tensioners (squibs), thus deploying the air bags and triggering the seat belt pre-tensioners. Also, the advanced air bag has been adopted to optimize the air bag deployment control by adjusting the inflation pressure.

- The occupant classification-ECU has been added to recognize the passenger's seat occupant. The occupant classification-ECU identifies the occupant class based on the signals from occupant classification sensor, and sends the signal to SRS-ECU.

<Added>

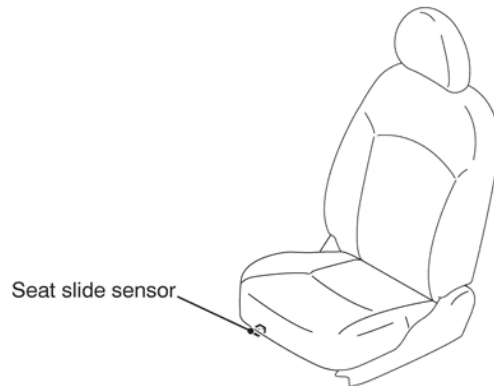
- The seat slide sensor to detect the driver's seat position judges the deployment in two stages, and deploys the driver's air bag.

Please add the following information to the 2014 Mirage Technical Information Manual, Group 52B – Supplemental Restraint System (SRS) –> System Construction, after “Side Impact Sensor.”

<Added>

SEAT SLIDE SENSOR

M2521001400147



ACE03957 AB

- The seat slide sensor is attached to the slide adjuster on the driver's seat side, and the seat is moved forward/backward by seat sliding. When the seat is slid forward, the shield plate covers the sensor, and the sensor determines that the seat slide position is set forward.
- The seat slide sensor outputs the current by switching high output current and low output current from the seat slide position as shown in the figure. Based on the output current, SRS-ECU determines the deployment stage of the front air bag, and then energizes the squib.

Shield plate position	Current value	Deployment stage
When the shield plate is in the detection range of the seat slide sensor	Low output current	Only 1 stage
When the shield plate is not in the detection range of the seat slide sensor	High output current	1st and 2nd stage