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2015 MAZDA CX-9 OEM Service and Repair Workshop Manual

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Diagnostic procedure

Warning

- Handling the component parts improperly can accidentally operate (deploy) the air bag modules, pre-tensioner seat belts and lap pre-tensioner seat belts, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See **AIR BAG SYSTEM SERVICE WARNINGS [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.]**.) (See **AIR BAG SYSTEM SERVICE WARNINGS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.)

Step	Inspection		Action
1	INSPECT BATTERY • Measure the voltage of battery. • Is the voltage 8.1 V or more?	Yes	Go to the next step.
		No	Battery is weak. Inspect charge/discharge system, then go to Step 8. (See BATTERY INSPECTION .)
2	VERIFY THAT SAS CONTROL MODULE CONNECTOR IS CONNECTED • Switch the ignition off. • Disconnect the negative battery terminal and wait for 1 min or more. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Verify that the all SAS control module connectors are securely connected. (See SAS CONTROL MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) • Are all SAS control module connectors securely connected?	Yes	Go to the next step.
		No	Reconnect the connector properly, then go to Step 8.
3	VERIFY THAT INSTRUMENT CLUSTER CONNECTOR IS CONNECTED • Disconnect the instrument cluster connector. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) • Are all instrument cluster connectors securely connected?	Yes	Go to the next step.
		No	Reconnect the connector properly, then go to Step 8.
4	INSPECT DTCs IN SAS CONTROL MODULE • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition ON (engine off or on). • Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].) (See CLEARING DTC [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].) • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)].) (See DTC INSPECTION [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)].) • Have DTCs been recorded in memory?	Yes	Perform the applicable DTC inspection, then go to Step 8. (See DTC TABLE [SAS CONTROL MODULE (STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.)] .) (See DTC TABLE [SAS CONTROL MODULE (TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.)] .)
		No	Go to the next step.
5	INSPECT DTCs IN INSTRUMENT CLUSTER • Inspect the DTC for the instrument cluster on-board diagnostic system. (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Have DTCs been recorded in memory?	Yes	Perform the applicable DTC inspection, then go to Step 8. (See DTC TABLE [INSTRUMENT CLUSTER] .)
		No	Go to the next step.

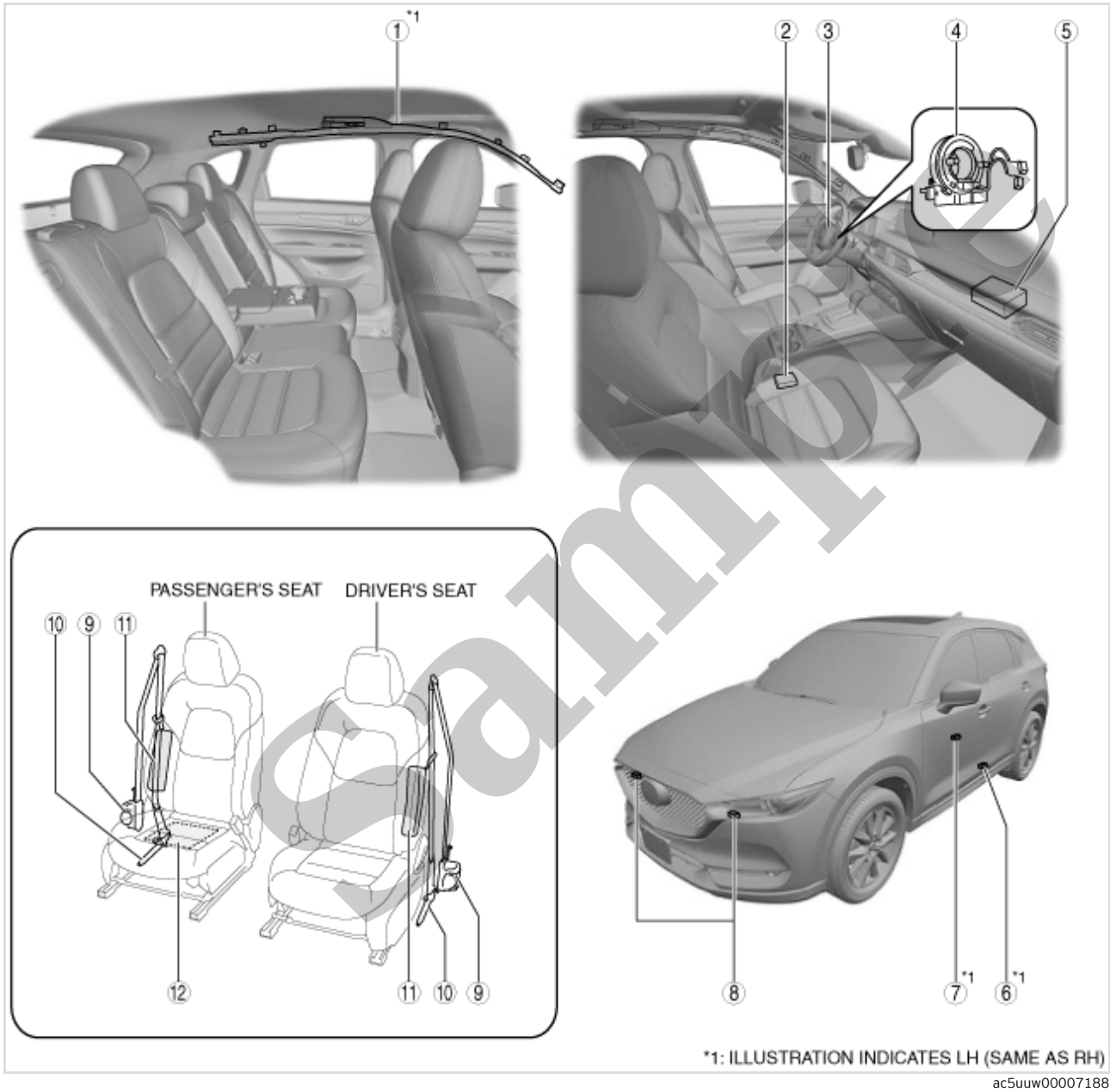
Step	Inspection	Action
		Inspect the SRS1 7.5 A fuse. • If the fuse is blown: — Refer to the wiring diagram and verify whether or not there is a common connector between SRS1 7.5 A fuse and SAS control module terminal. If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground. • Repair or replace the malfunctioning part. If there is no common connector: • Repair or replace the wiring harness which has a short to ground. — Replace the fuse. • If the fuse is damaged: — Replace the fuse. • If the fuse is normal: — Refer to the wiring diagram and verify whether or not there is a common connector between IG1 relay terminal and SAS control module terminal. If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit. • Repair or replace the malfunctioning part. If there is no common connector:

AIR BAG SYSTEM LOCATION INDEX [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]

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Structural View



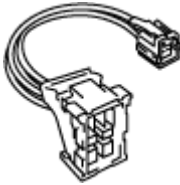
1	Curtain air bag module (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]) (See AIR BAG MODULE AND PRE-TENSIONER SEAT BELT DEPLOYMENT PROCEDURES [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.])
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AIR BAG MODULE AND PRE-TENSIONER SEAT BELT DEPLOYMENT PROCEDURES [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]

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Special Service Tool (SST)

49 H066 002 Deployment tool		49 B066 004 Adapter harness		49 L066 002 Adapter harness	
49 G066 003 Adapter harness		-	-	-	-

Warning

- A live (undeployed) air bag module, pre-tensioner seat belt or lap pre-tensioner seat belt may accidentally operate (deploy) when it is disposed of and cause serious injury. Do not dispose of a live (undeployed) air bag module, pre-tensioner seat belt or lap pre-tensioner seat belt. If the SSTs (Deployment tool and Adapter harness) are not available, consult the nearest Mazda representative for assistance.
- The lap pre-tensioner seat belt may not have operated (deployed) even if the pre-tensioner seat belt has due to a vehicle collision. A live (non-deployed) pre-tensioner may accidentally operate (deploy) when it is disposed of and cause serious injury. When disposing of the front seat belt, verify that the pre-tensioner seat belt and lap pre-tensioner seat belt have operated (deployed).

Caution

- Deploying the air bag modules, pre-tensioner seat belts or lap pre-tensioner seat belts inside the vehicle may cause damage to the vehicle interior. When the vehicle is not to be scrapped, always deploy the air bag modules, pre-tensioner seat belts or lap pre-tensioner seat belts outside the vehicle.
- If the vehicle is to be scrapped, or when disposing of any air bag modules, pre-tensioner seat belts or lap pre-tensioner seat belts, operate (deploy) them inside the vehicle by following the deployment procedure below and using the SST (Deployment tool).
- When disposing of an operated (deployed) air bag module, pre-tensioner seat belt and lap pre-tensioner seat belt, refer to "AIR BAG MODULE AND PRE-TENSIONER SEAT BELT DISPOSAL PROCEDURES".

Deployment Procedure for Inside of Vehicle

1. Inspect the SST (Deployment tool). (See [INSPECTION OF SST \(DEPLOYMENT TOOL\) \[TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.\]](#).)
2. Move the vehicle to an open space, away from strong winds, and close all of the vehicle doors and windows.
3. Switch the ignition off.
4. Disconnect the negative battery terminal and wait for 1 min or more. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION](#).)

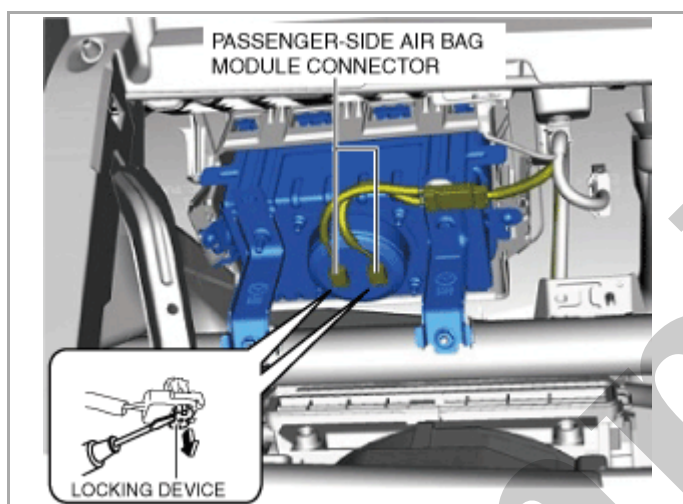
- The passenger-side air bag module is a dual inflator type. If one inflator is forced to operate (deploy), the other may operate (deploy) accidentally. To prevent injury while disposing of the air bag module, make sure to operate (deploy) both passenger-side air bag module inflators simultaneously, following the procedure below.

Note

- The SSTs, two types of adapter harnesses (for inflators No.1 and No.2) and two deployment tools are to be used to operate (deploy) the passenger-side air bag module.

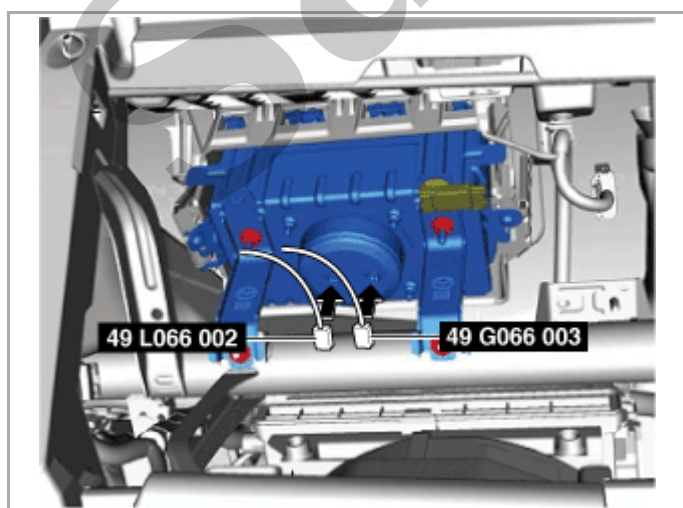
1.Remove the glove compartment. (See [GLOVE COMPARTMENT REMOVAL/INSTALLATION.](#))

2.Using a flathead screwdriver, lift the locking device carefully, however do not remove it.



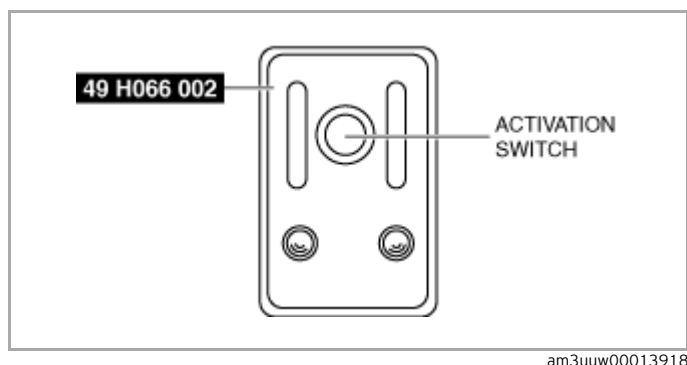
3.Disconnect the passenger-side air bag module connector.

4.Connect the SST (Adapter harness) to the passenger-side air bag module.



5.Connect the SST (Deployment tool) to the SST (Adapter harness).

7. Press the activation switch on the SST (Deployment tool) to operate (deploy) the side air bag module.



Warning

- The air bag module is very hot immediately after it is operated (deployed). You can be burned. Do not touch the air bag module for at least 15 min after deployment.

8. Disconnect the SST (Deployment tool) from the SST (Adapter harness).

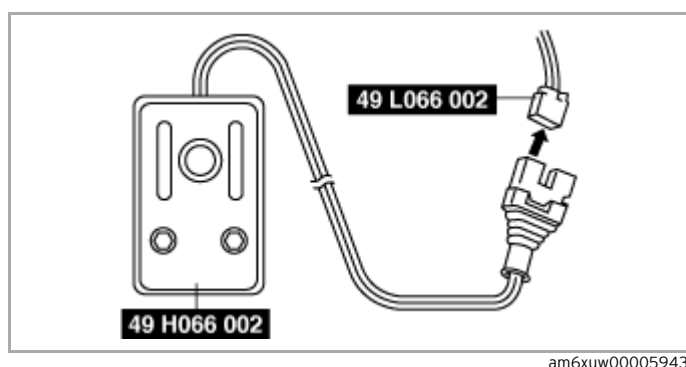
Curtain air bag module

1. Remove the following parts:

- (1) Sunroof seaming welt (with sunroof system) (See [SUNROOF UNIT REMOVAL/INSTALLATION.](#))
- (2) A-pillar trim (See [A-PILLAR TRIM REMOVAL/INSTALLATION.](#))
- (3) Front map light (See [FRONT MAP LIGHT REMOVAL/INSTALLATION.](#))
- (4) Sunvisor (See [SUNVISOR REMOVAL/INSTALLATION.](#))
- (5) Lower decoration panel (See [DECORATION PANEL REMOVAL/INSTALLATION.](#))
- (6) Front scuff plate (See [FRONT SCUFF PLATE REMOVAL/INSTALLATION.](#))
- (7) Passenger-side front side trim (See [FRONT SIDE TRIM REMOVAL/INSTALLATION.](#))
- (8) Glove compartment (See [GLOVE COMPARTMENT REMOVAL/INSTALLATION.](#))
- (9) Dashboard under cover (See [DASHBOARD UNDER COVER REMOVAL/INSTALLATION.](#))
- (10) Passenger-side lower panel (See [LOWER PANEL REMOVAL/INSTALLATION.](#))
- (11) Assist handle (See [ASSIST HANDLE REMOVAL/INSTALLATION.](#))
- (12) Rear scuff plate (See [REAR SCUFF PLATE REMOVAL/INSTALLATION.](#))
- (13) B-pillar lower trim (See [B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.](#))
- (14) Adjust anchor cover on the front seat belt (See [FRONT SEAT BELT REMOVAL/INSTALLATION.](#))
- (15) Upper anchor installation bolt on the front seat belt (See [FRONT SEAT BELT REMOVAL/INSTALLATION.](#))
- (16) B-pillar upper trim (See [B-PILLAR UPPER TRIM REMOVAL/INSTALLATION.](#))
- (17) Rear seat cushion (See [REAR SEAT CUSHION REMOVAL/INSTALLATION.](#))

4. Connect the SST (Adapter harness) to the front pre-tensioner seat belt.

5. Connect the SST (Deployment tool) to the SST (Adapter harness).

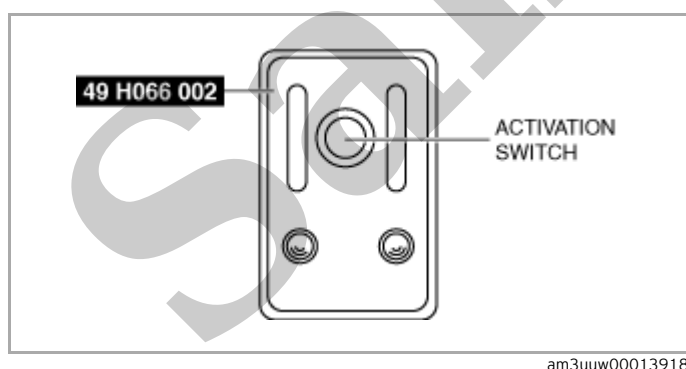


6. Connect the SST (Deployment tool) to the battery. Connect the power supply red clip to the positive battery terminal, and the black clip to the negative battery terminal.

7. Verify that the red lamp on the SST (Deployment tool) is illuminated.

8. Verify that all persons are standing at least 6 m (20 ft) away from the vehicle.

9. Press the activation switch on the SST (Deployment tool) to operate (deploy) the front pre-tensioner seat belt.



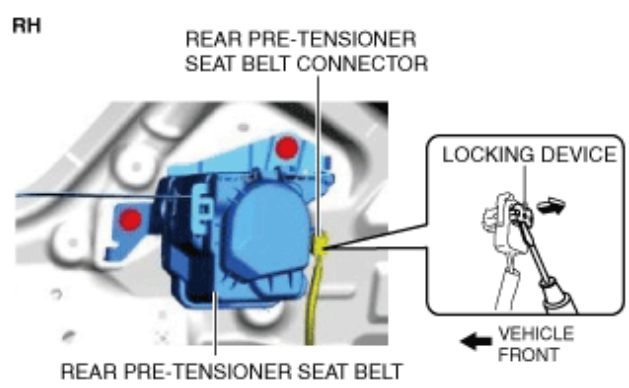
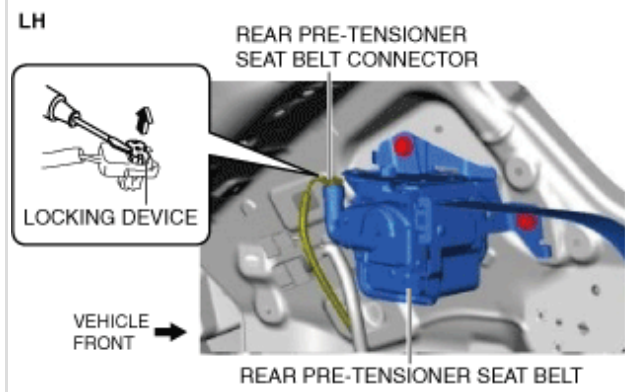
Warning

- The front pre-tensioner seat belt is very hot immediately after it is operated (deployed). You can be burned. Do not touch the front pre-tensioner seat belt for at least 15 min after deployment.

10. Disconnect the SST (Deployment tool) from the SST (Adapter harness).

Lap pre-tensioner seat belt

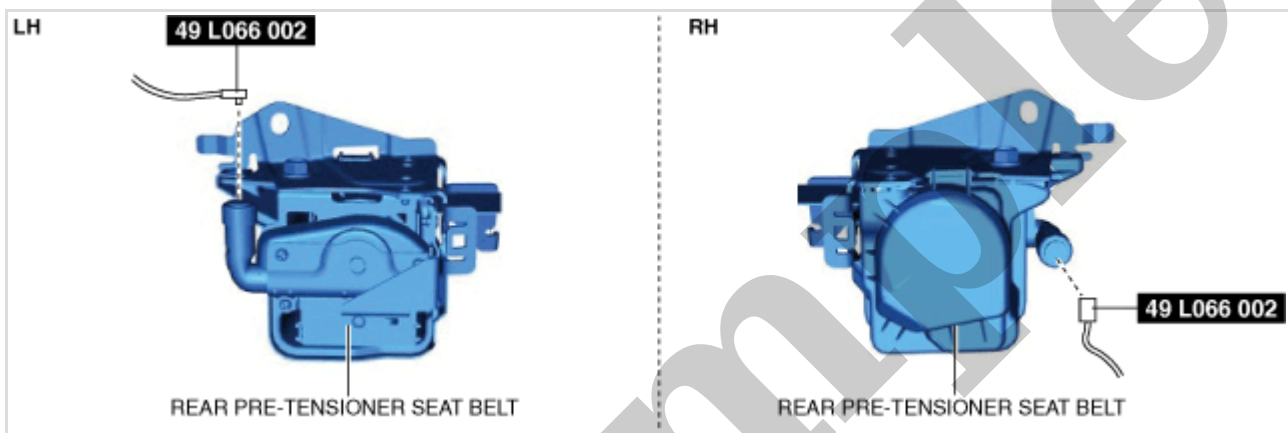
1. Remove the fastener.



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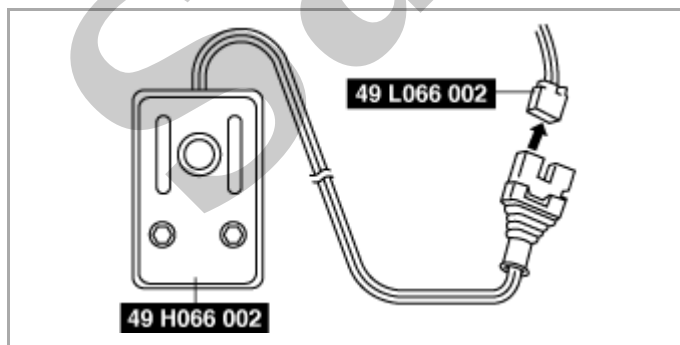
3. Disconnect the rear pre-tensioner seat belt connector.

4. Connect the SST (Adapter harness) to the rear pre-tensioner seat belt.



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5. Connect the SST (Deployment tool) to the SST (Adapter harness).



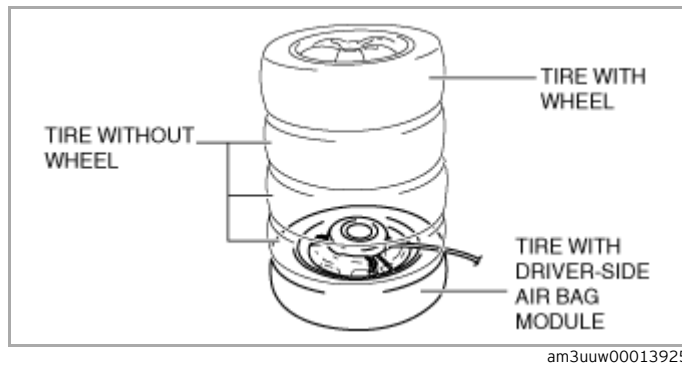
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6. Connect the SST (Deployment tool) to the battery. Connect the power supply red clip to the positive battery terminal, and the black clip to the negative battery terminal.

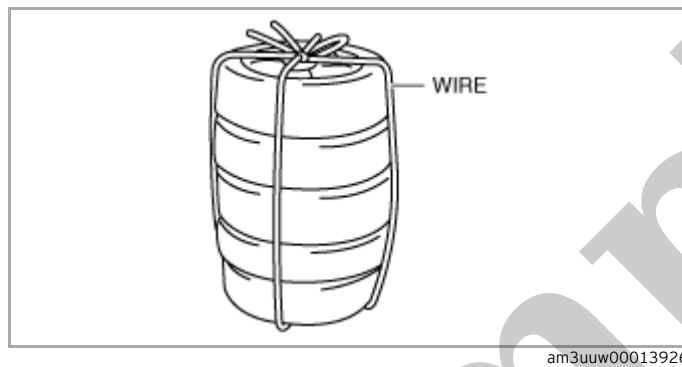
7. Verify that the red lamp on the SST (Deployment tool) is illuminated.

8. Verify that all persons are standing at least 6 m (20 ft) away from the vehicle.

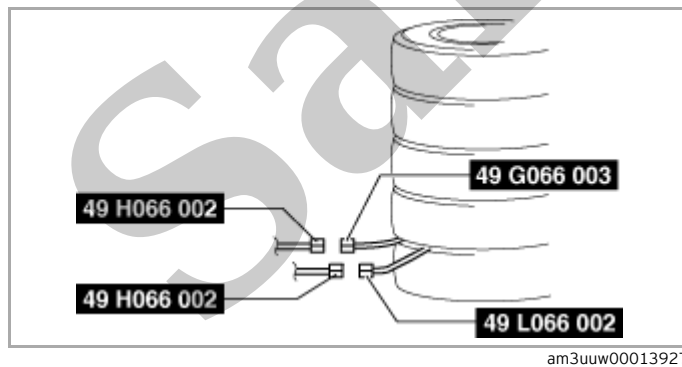
5.Stack three tires without wheels on top of the tire with the driver-side air bag module, and then stack another tire with a wheel on the very top.



6.Secure the tires with wire.



7.Connect the SST (Deployment tool) to the SST (Adapter harness).



8.Connect the SST (Deployment tool) to the battery. Connect the power supply red clip to the positive battery terminal, and the black clip to the negative battery terminal.

9.Verify that the red lamp on the SST (Deployment tool) is illuminated.

10.Verify that all persons are standing at least 6 m (20 ft) away from the driver-side air bag module.