MACURA - INSTALLATION

INSTRUCTIONS

Accessory

BACK-UP SENSORS 2013

2012 TL

Application

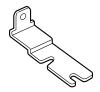
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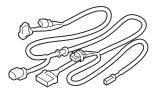
PARTS LIST

Back-up Sensors Attachment Kit P/N 08V67-TK4-200B

Control unit bracket



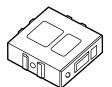
Sensor harness



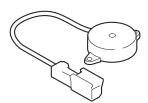
Fuse label



Control unit



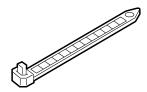
Buzzer



4 Sensor clips



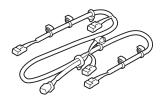
9 Wire ties



5 Aluminum tapes



Subharness



Holder



Urethane tape

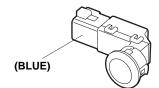


Accessory User's Information Manual

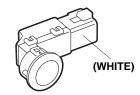


Back-up Sensors Kit P/N 08V67-TK4-200K

2 Center sensors



2 Corner sensors



TOOLS AND SUPPLIES REQUIRED

Phillips screwdriver

Flat-tip screwdriver

Small flat-tip screwdriver

Ratchet

8 mm and 10 mm Sockets

Scissors

Pushpin

Drill

3 mm Drill bit

24 mm and 26 mm Hole saws

(T/N: AKS052507 hole saw kit)

Eye protection (face shield, safety goggles, etc.)

File

Diagonal cutters

Isopropyl alcohol

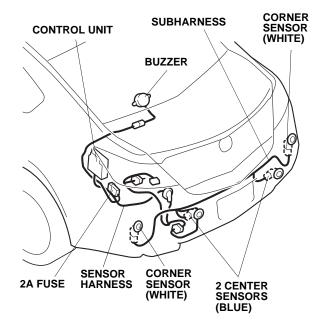
Shop towel

Plastic Trim Tool (T/N SILTRIMTL10)

Blanket

Ruler

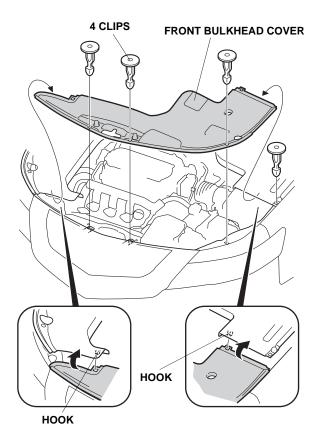
Illustration of the Back-up Sensors Installed in the Vehicle



INSTALLATION

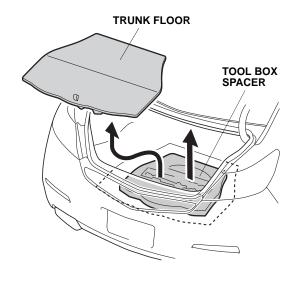
Client Information: The information in this installation instruction is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely add equipment to your vehicle. These procedures should not be attempted by "do-it-yourselfers."

- 1. Make sure you have the anti-theft codes for the audio and navigation system (if equipped), then write down the audio presets.
- 2. Open the hood. Remove the front bulkhead cover (four clips and two hooks).

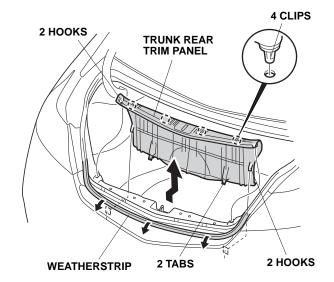


3. Disconnect the negative cable from the battery.

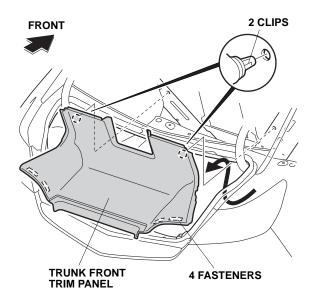
4. Open the trunk lid. Remove the trunk floor and the tool box spacer.



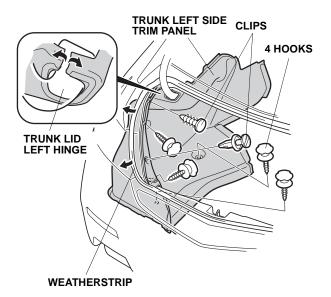
5. Pull away the weatherstrip, and remove the trunk rear trim panel (four clips, four hooks, and two tabs).



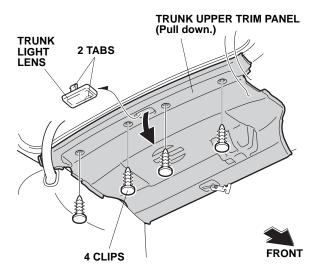
6. Remove the trunk front trim panel (two clips and four fasteners).



7. Pull away the weatherstrip, and remove the trunk left side trim panel (two clips and four hooks).

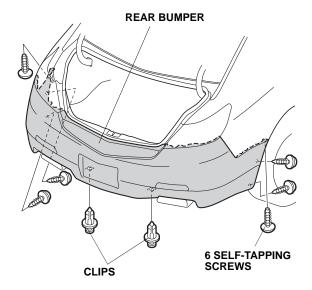


8. Remove the trunk light lens (two tabs).

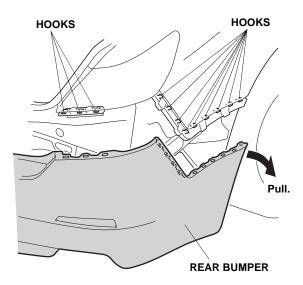


- 9. Pull down the trunk upper trim panel (four clips).
- 10. Remove the six self-tapping screws and two clips from the rear bumper.

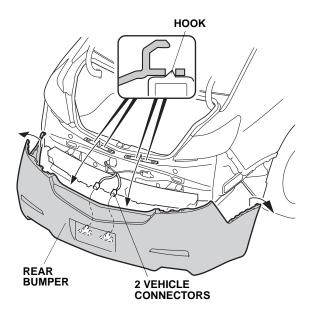
NOTE: If equipped, remove the rear splash guards.



11. On each side, release the 12 hooks by gently pulling the rear bumper away from the body.

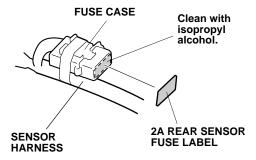


 With the help of an assistant, remove the rear bumper (four hooks, and unplug the two vehicle connectors). Place the rear bumper on a blanket to prevent damage.



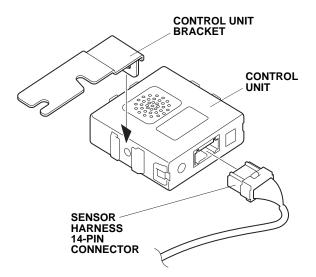
Installing the Control Unit and Buzzer

13. Using isopropyl alcohol on a shop towel, clean the area where the 2A rear sensor fuse label will attach.



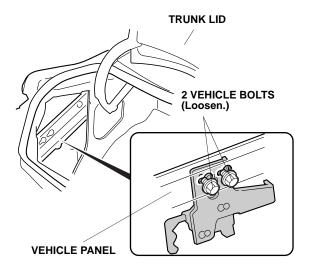
- 14. Attach the 2A rear sensor fuse label to the sensor harness fuse case.
- 15. Attach the control unit bracket to the control unit.

 Note the direction of the control unit and control unit bracket.

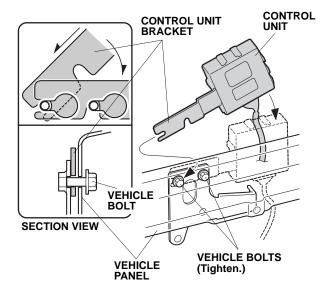


16. Plug the sensor harness 14-pin connector into the control unit.

 Loosen the two vehicle bolts on the left side of the trunk.

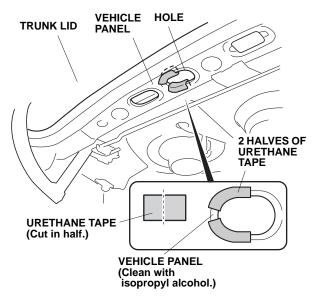


18. Slide the control unit bracket over the two vehicle bolts.

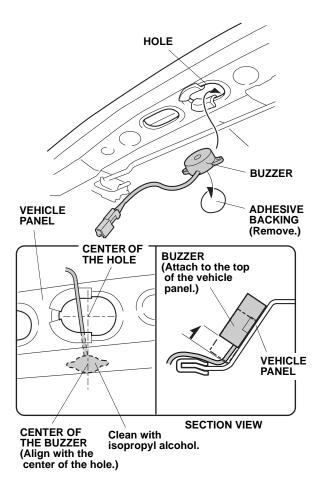


19. Tighten the two vehicle bolts.

20. Using isopropyl alcohol on a shop towel, clean the area where the urethane tape will attach.



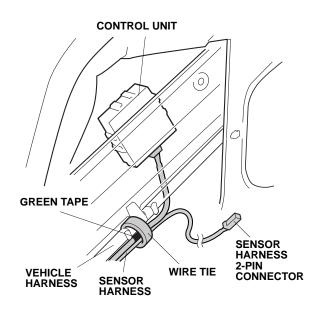
 Cut one urethane tape in half. Attach the two halves of the urethane tape around the vehicle panel hole as shown. 22. Using isopropyl alcohol on a shop towel, clean the area where the buzzer will attach.



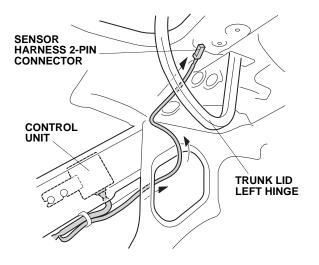
- 23. Remove the adhesive backing from the buzzer.
- 24. Align the center of the buzzer with the center of the vehicle panel hole, and attach the buzzer to the top of the vehicle panel.

Routing the Sensor Harness

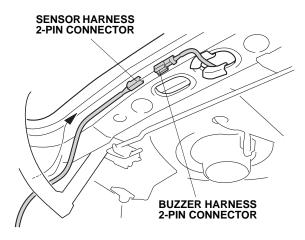
25. Secure the sensor harness to the vehicle harness using one wire tie.



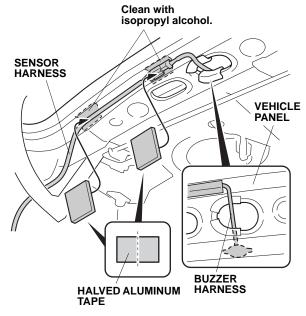
26. Route the sensor harness 2-pin connector as shown.



27. Plug the sensor harness 2-pin connector into the buzzer harness 2-pin connector.

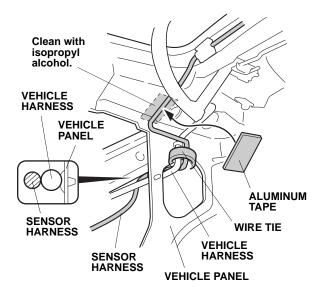


28. Using isopropyl alcohol on a shop towel, clean the areas where the aluminum tape will attach.

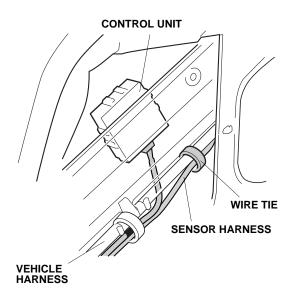


29. Cut one aluminum tape in half. Secure the sensor harness and buzzer harness to the vehicle panel using the two halves of the aluminum tape.

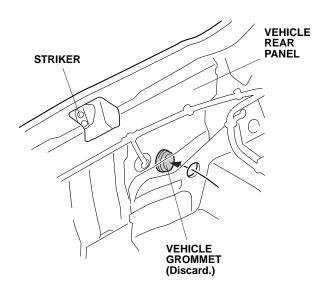
30. Using isopropyl alcohol on a shop towel, clean the area where the aluminum tape will attach.



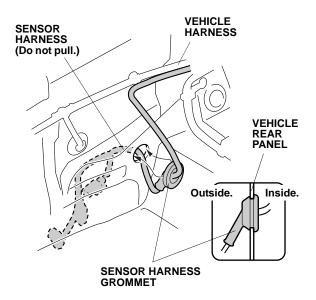
- 31. Secure the sensor harness to the vehicle panel using one aluminum tape. Secure the sensor harness to the vehicle harness with one wire tie.
- 32. Secure the sensor harness to the vehicle harness using one wire tie.



33. Remove the vehicle grommet from the vehicle rear panel.

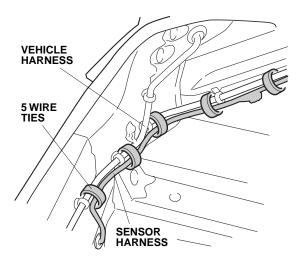


34. Route the sensor harness along the vehicle harness.

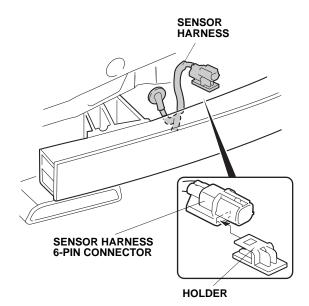


35. Route the sensor harness through the vehicle grommet hole, and seat the sensor harness grommet in the vehicle rear panel as shown. NOTE: Do not pull on the sensor harness when installing the grommet.

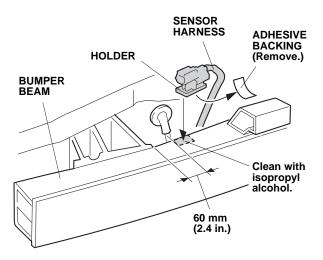
36. Secure the sensor harness to the vehicle harness using five wire ties.



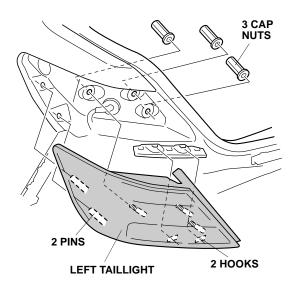
37. Install the holder to the sensor harness 6-pin connector.



38. Using isopropyl alcohol on a shop towel, clean the area where the holder will attach.

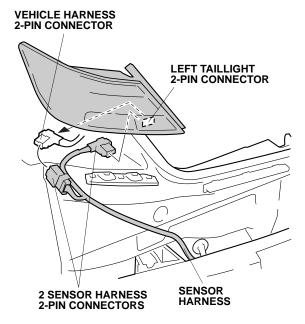


- 39. Remove the adhesive backing from the holder, and attach the holder at the position shown.
- 40. Remove the three cap nuts from the left taillight.

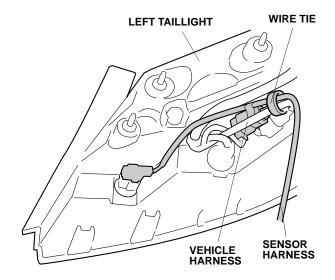


41. Release the two hooks and two pins, and pull the left taillight out toward you.

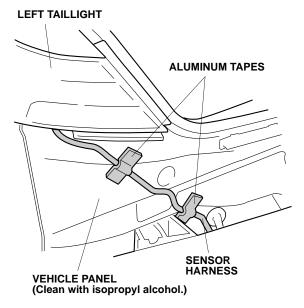
42. Unplug the vehicle harness 2-pin connector from the left taillight 2-pin connector.



- 43. Plug the sensor harness 2-pin connector into the left taillight 2-pin connector, and plug the vehicle harness 2-pin connector into the sensor harness 2-pin connector.
- 44. Secure the sensor harness to the vehicle harness using one wire tie, and reinstall the left taillight.



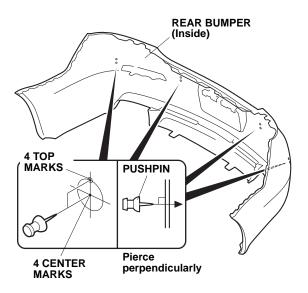
45. Using isopropyl alcohol on a shop towel, clean the areas where the aluminum tapes will attach.



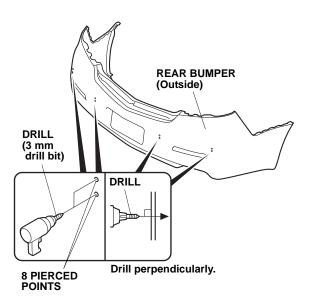
46. Secure the sensor harness to the vehicle panel using two aluminum tapes.

Installing the Sensors

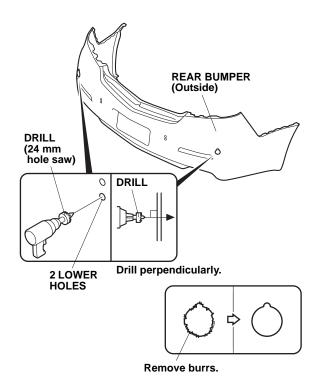
47. On the inside of the rear bumper, locate the four preset marks. Using a pushpin, pierce the bumper at the center and the top of each of the four preset marks.

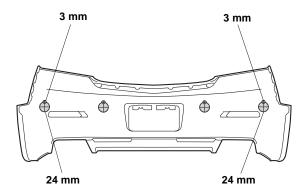


48. While wearing eye protection, use a 3 mm drill bit to drill all eight pierced points from the outside of the rear bumper.

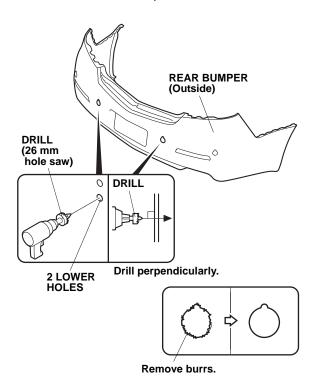


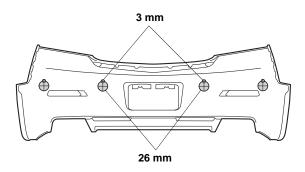
49. While wearing eye protection, use a 24 mm hole saw to enlarge the two outboard lower holes from the outside of the rear bumper.





 Remove any burrs from the drilled holes.
 NOTE: The sensors will not seat properly unless the burrs are removed. 51. While wearing eye protection, use a 26 mm hole saw to enlarge the two inboard lower holes from the outside of the rear bumper.

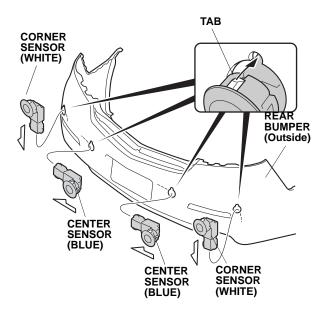




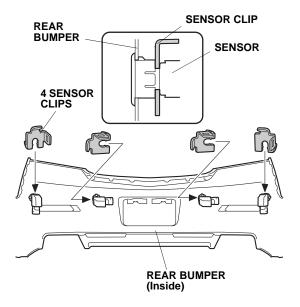
52. Remove any burrs from the drilled holes.
NOTE: The sensors will not seat properly unless the burrs are removed.

53. Install two center sensors (blue) and two corner sensors (white) into the rear bumper.

NOTE: The sensor tab must be positioned at the 12 o'clock position for the sensor to operate correctly.

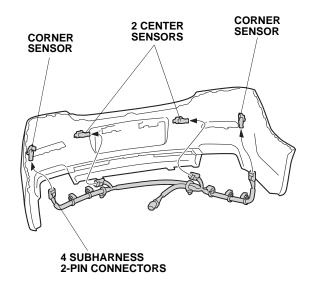


54. Install the four sensor clips.

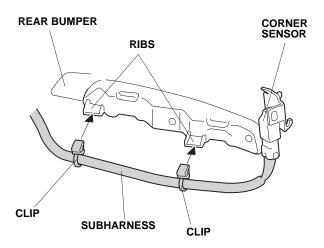


Routing the Subharness

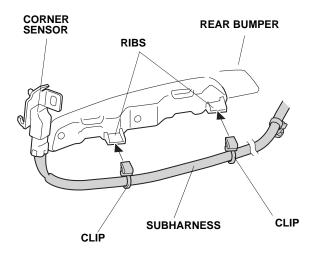
55. Plug in the four subharness 2-pin connectors to the two center sensors and the two corner sensors.



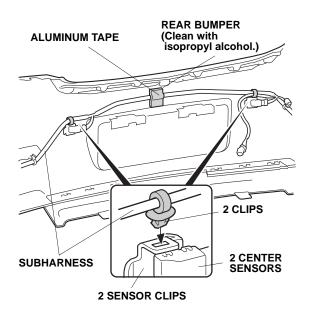
56. Secure the two clips on the subharness to the ribs on the rear bumper.



57. Repeat step 56 on the other end of the rear bumper.

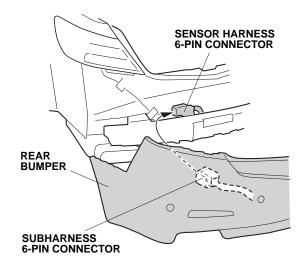


58. Secure the two clips on the subharness to the center sensor clips.



- 59. Using isopropyl alcohol on a shop towel, clean the area where the aluminum tape will attach.
- 60. Secure the subharness to the rear bumper using one aluminum tape.

61. With the help of an assistant, move the rear bumper close to the vehicle. Plug the subharness 6-pin connector into the sensor harness 6-pin connector, and reinstall the rear bumper.



- 62. Check that all wire harnesses are routed properly and all connectors are plugged in.
- 63. Reinstall all removed parts except for the front bulkhead cover.
- 64. Reconnect the negative cable to the battery and check the operation of all of the lights.
- 65. Reinstall the front bulkhead cover.
- 66. Enter the anti-theft codes for the audio system and the navigation system (if equipped).
- 67. Reset the clock on vehicles without navigation.
- 68. Check that the back-up sensors work properly as described in the user's information manual supplied with the back-up sensors attachment kit.

Buzzer Volume Control

The original volume setting is turned to maximum. The volume level can be adjusted by turning the volume control knob on the control unit using a small flat-tipped screwdriver.

NOTE: Do not turn the volume control excessively, it may damage the control unit.

