



10001607  
**HYUNDAI Technical Service Bulletin**

Group	BODY ELECTRICAL
Number	03-90-009
Date	APRIL, 2003
Model	2001-2003 ELANTRA

Subject  
**2001-03 ELANTRA CORROSION IN THE FRONT DOOR WIRING CONNECTOR**

*This bulletin supersedes TSB# 01-90-004 to update the door wiring harness part numbers and the effective vehicle production date range.*

**DESCRIPTION:**

A water leak between the front outer panel and cowl panels may result in corrosion of the front door wiring connector pins if the vehicle is operated in areas where road salt is used. The corrosion may affect the operation of the electrical circuits in the door, such as the speakers, power windows, etc.

To correct this condition, reseal the seams and inspect the door wiring connectors for corrosion. If necessary, replace the door wiring connector and the door wiring by following the service procedures described in this TSB.

## PARTS REQUIRED:

### Detailed List of Parts Included in the Kit:

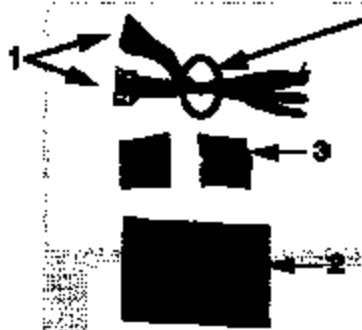
MODEL	KIT NAME	KIT PART NUMBER	PART NAME	QTY
ELANTRA produced before October 20, 2000	Floor Harness - Driver's side door wiring connector kit assembly (C)	91500-2DC00	Wiring Assy (1)	1
			Vinyl Sheet (2)	2
			Heat Shrink Tube (3)	26
	Floor Harness - Passenger's side door wiring connector kit assembly (D)	91500-2DD00	Wiring Assy (1)	1
			Vinyl Sheet (2)	2
			Heat Shrink Tube (3)	18
ELANTRA produced after November 2, 2000	Floor Harness - Driver's side door wiring connector kit assembly (A)	91500-2DA00	Wiring Assy (1)	1
			Vinyl Sheet (2)	2
			Heat Shrink Tube (3)	26
	Floor Harness - Passenger's side door wiring connector kit assembly (B)	91500-2DB00	Wiring Assy (1)	1
			Vinyl Sheet (2)	2
			Heat Shrink Tube (3)	18

**NOTE:** For vehicles produced between October 20, 2000 and November 2, 2000, the wire harness wire colors were mixed based on vehicle options. Check the wire colors on Pin #2 (Driver Side - MD01) and Pin #8 (Passenger Side - MD03) on each side to determine which kits will be color matched to the vehicle being repaired. (See Connector Kit Identification section below).

The difference between the two LH kits is the wire colors; so they can be interchanged if necessary, by splicing the wires by pin location, not color. The same applies to the RH kits.

#### KIT CONTENT:

1. Wiring Assy.
2. Vinyl Sheet
3. Heat Shrink Tube



**ID TAPE COLOR**  
**A: BLACK**  
**B: BLUE**  
**C: YELLOW**  
**D: RED**

#### CONNECTOR KIT IDENTIFICATION:

ID TAPE COLOR	BLACK (A)	BLUE (B)	YELLOW (C)	RED (D)	<CONNECTOR VIEW (MD01/MD03) - FLOOR HARNESS SIDE (FEMALE)>
	Connector P/N (91500- )				
Wire color	2DA00	2DB00	2DC00	2DD00	
Pin #2 (MD01)	Gray	-	Brown	-	
Pin #8 (MD03)	-	Gray	-	Brown	



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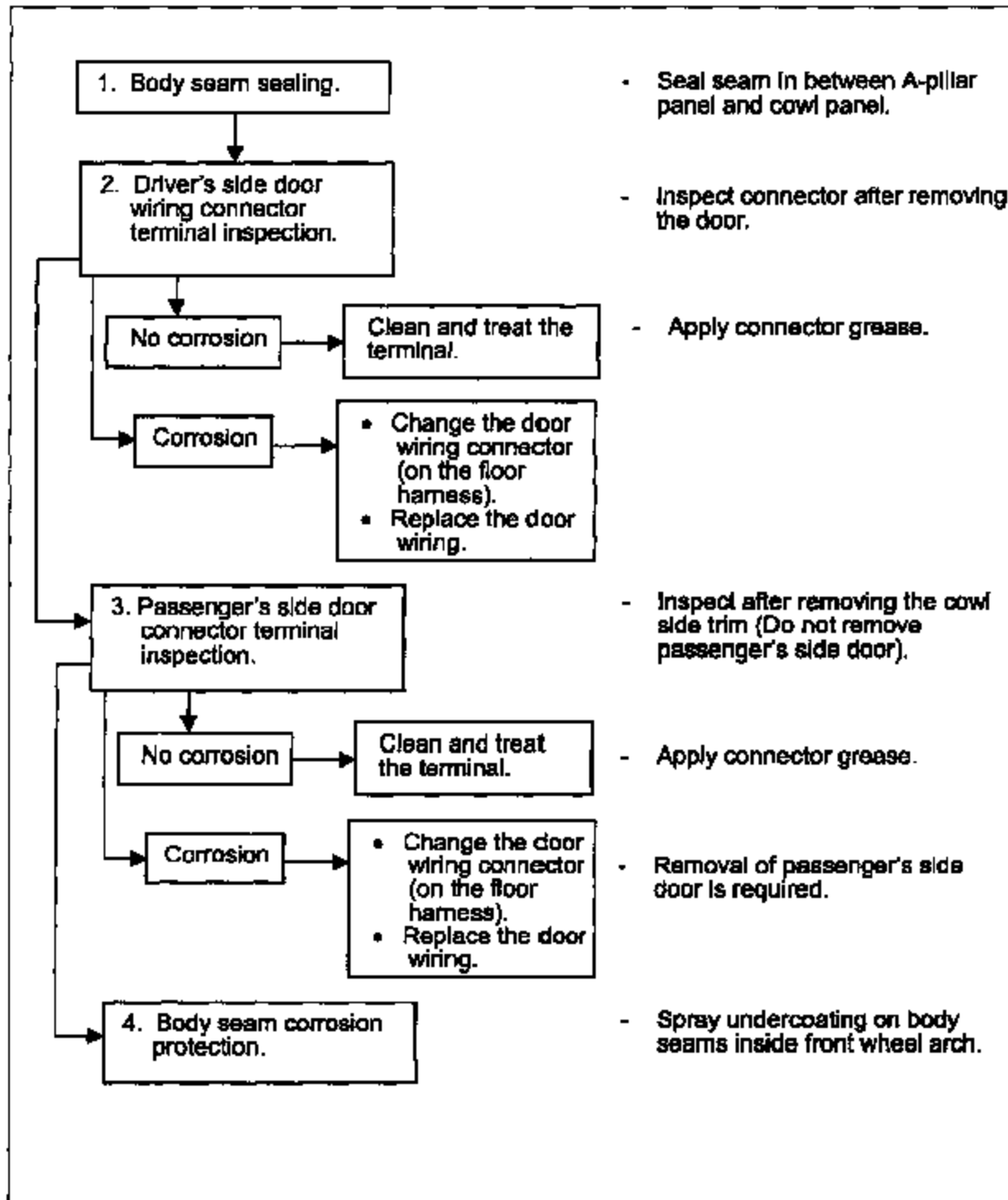
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## PARTS REQUIRED (CONTINUED):

PART NAME	PART NUMBER	FIGURE
Sealer and tube kit	08960-01000	
Undercoating: 3M underseal rubberized under-coating (PN-08883) or equivalent	Source Locality	
Contact Cleaner	Source Locality	
Connector Grease	00305-F0000-09	

## SERVICE PROCEDURE:





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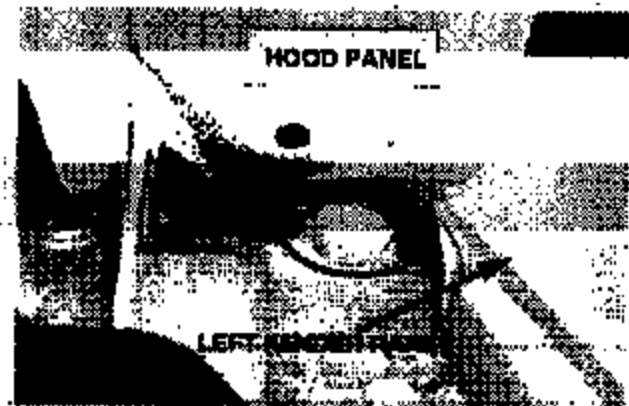
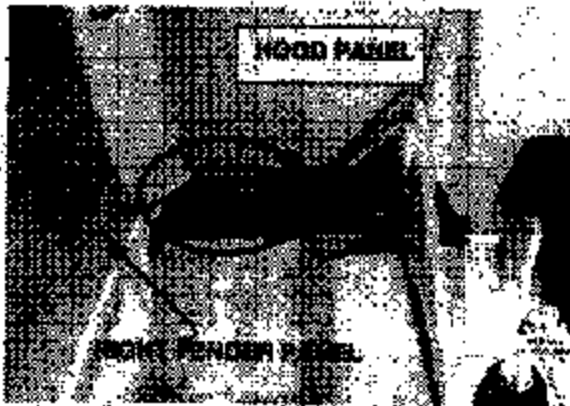
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## SEALING THE PANEL SEAMS:

**NOTE:** This sealing procedure applies to both left and right sides.

1. Open the hood.
2. Locate the "A" pillar outer panel and cowl panel seaming area at the base of the "A" pillar.



3. Lift up the lower end of windshield glass molding to obtain space for sealant application.



4. Clean the sealant application area on both the left and right sides of the vehicle (fender removed in photo for clarity).



5. Apply clear sealant along the seam line between "A" pillar panel and cowl panel from the engine compartment as shown in the photo.

**NOTE:** Apply enough sealant to completely fill the seam. Be careful not to drip excess sealant in the engine compartment or on the hood.

- Photo shows panel seams where sealant is applied on left side.
- Repeat for the right side.



6. Open the front door.

7. Apply the clear sealant to the seam between "A" pillar panel and the fender mounting bracket from inside the door opening.

8. Apply the clear sealant to the bottom of the fender mounting bracket and the top of the hinge.

**NOTE:** Apply enough sealant to completely fill the seam. Be careful not to drip excess sealant on the door trim or in the interior.

- Sealant is applied along the top edge of the fender bracket.





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- Sealant is applied along the bottom of the tender mounting bracket and the top of the hinge.

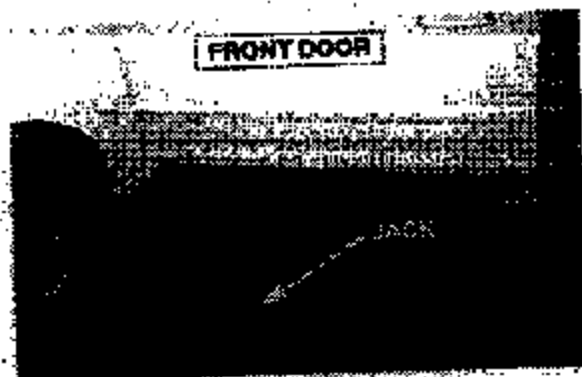


## DRIVER'S SIDE DOOR WIRING CONNECTOR INSPECTION:

1. Turn on the ignition key and lower the door glass. Record the customer's radio stations. Turn the ignition off and then remove the negative battery cable.

**NOTE:** The following procedure requires two people to perform part of the operations.

2. Open the driver's side front door. Position a floor jack under the middle of the door. Cover the top of the jack with padding. Raise the jack just enough to partially support the door.



3. Remove the front door checker mounting bolt (1EA) from the front door and remove the upper and lower door hinge mounting bolts (4EA). Balance the door on the jack.

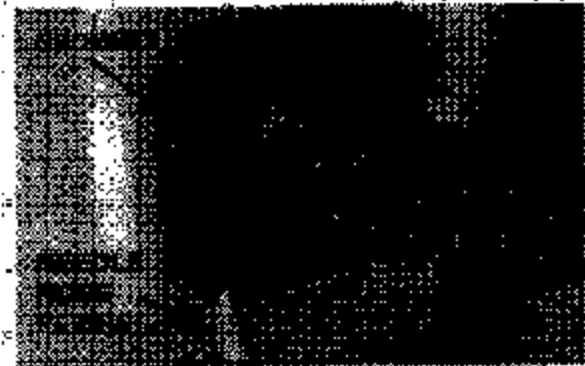
**NOTE:** Be careful not to scratch or damage the door. Be sure to support the door so it does not fall during removal.



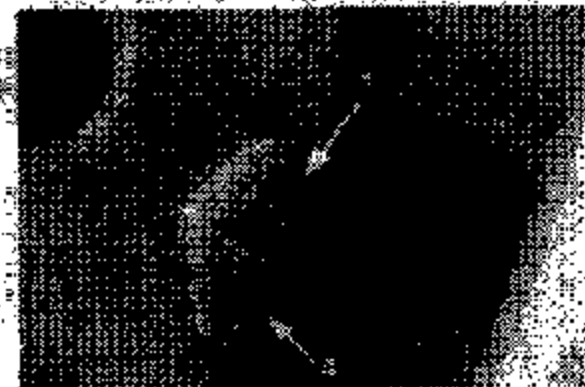
- The top hinge bolts.
- The bottom hinge bolts are similar.



4. Have a helper support the door. Use a pair of needle nose pliers to gently pull the rubber grommet off of the connector.



5. Release the 4 connector locking clips by pressing them one at a time, working around the connector.



6. Disconnect the connectors.







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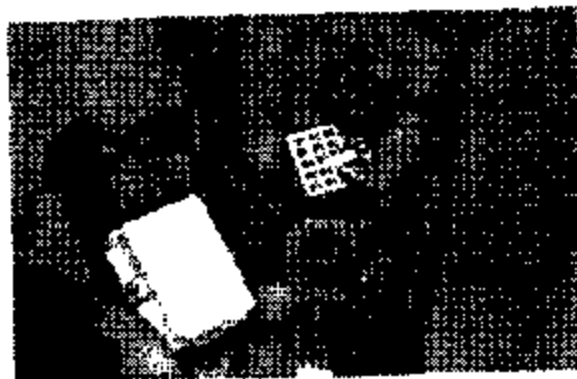
7. Remove the front door assembly. Set it on a clean soft cloth where it will not be scratched or damaged.

### NOTES:

- Be careful not to scratch or damage the door panel, fender panel or rocker panel when removing the front door assembly.
- Carefully store the removed door panel where it will not be scratched or damaged.

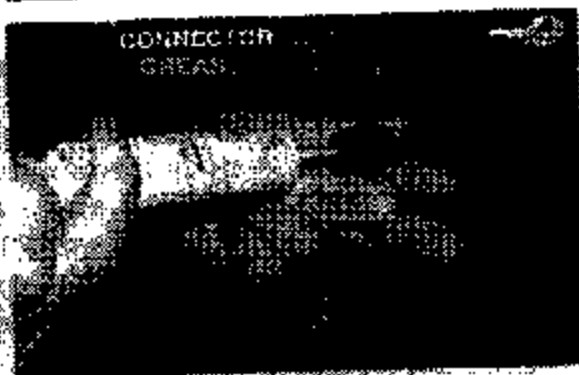


8. Check the removed connectors for corrosion and dirt.



9. If the connectors are not corroded or are just slightly corroded, use an electrical contact cleaner to flush the connectors until they are clean. Flush the door side of the connector clean as well.

Inject connector grease into each opening of the female connector terminal on the floor wire harness side.

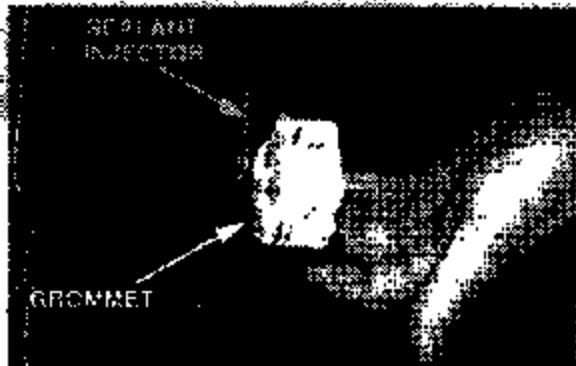


**Recommended Grease:**  
**GREASE - NYOGEL 760G**  
**P/N 00305-F0000-99**

**NOTE:** If the connector terminals have more than light corrosion, they cannot be cleaned, they must be replaced.

Proceed with driver's side door wiring connector and door wiring replacement procedure as explained in the "Driver's Side Door Wiring Connector and Door Wiring Replacement" section on page 14 of this TSB.

10. Fit the grommet over the flange on the door wire harness connector. Apply a small amount of the clear sealant around the edges of the grommet as shown in the photo.



11. Place the removed front door assembly back on the jack, lined up with the hinges. Have a helper support the door.

12. Connect the door connector to the vehicle connectors. Carefully install the door wire connector back into the mounting hole. Be careful to keep the grommet in position.

**NOTE:** If the grommet separates from the connector, remove the connector, roll the grommet in position, reapply a small amount of sealant to the grommet and reinstall the connector. The grommet must make a water tight seal to the body.

13. Install the front door assembly and install the front door checker.

**NOTE:** Check the door opening and closing effort and the door alignment to the body. Adjust the door if necessary.

14. Close the door.



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## PASSENGER'S SIDE DOOR WIRING CONNECTOR INSPECTION:

1. Open the passenger's side door.
2. Remove the door sill trim.
3. Remove the right cowi side trim.
4. Unclip the main wire harness from the connector cover. Cut the wire tie holding the MD03/MD04 connector wires to the connector cover. Remove the wiring connector cover mounting bolts (2EA) and then remove the cover.
5. Follow the MD03/MD04 connector wires up to the connectors, disconnect the connectors. The release for the top connector is on top, the release for the bottom connector is on bottom.
6. Release the 4 door wiring harness connector locking clips by pressing them one at a time, working around the connector. Push the connector out of the body hole.

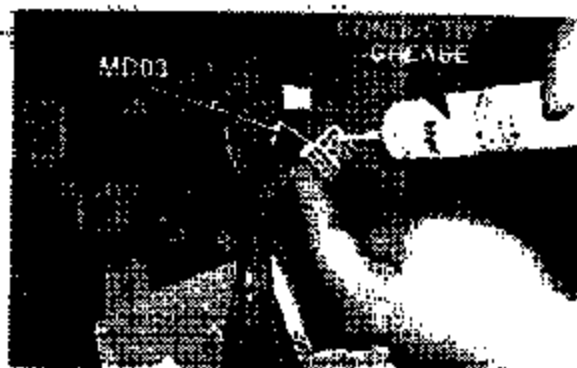


7. Inspect the removed connectors for corrosion and dirt.



8. If connectors are not corroded or are just slightly corroded, use an electrical contact cleaner to flush the connectors until they are clean. Flush the door side of the connector clean as well.

**WARNING:** Protect the inside of the vehicle so the contact cleaner will not splash onto the trim.



9. Inject connector grease into each opening of the female connector terminal on the floor wire harness side.

**Recommended Grease:**  
**GREASE - NYOGEL 760G**  
**P/N 08385-F0000-39**

**NOTE:** If the connector terminals have more than light corrosion, they cannot be cleaned, they must be replaced.

Proceed with passenger's side door wiring connector and door wiring replacement procedure as explained in the "Passenger's Side Door Wiring Connector and Door Wiring Replacement" section on page 21 of this TSB.



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10. Fit the grommet over the flange on the door wire harness connector. Apply a small amount of the clear sealant around the edges of the grommet as shown in the photo.



11. Carefully install the door wire connector back into the mounting hole. Be careful to keep the grommet in position.



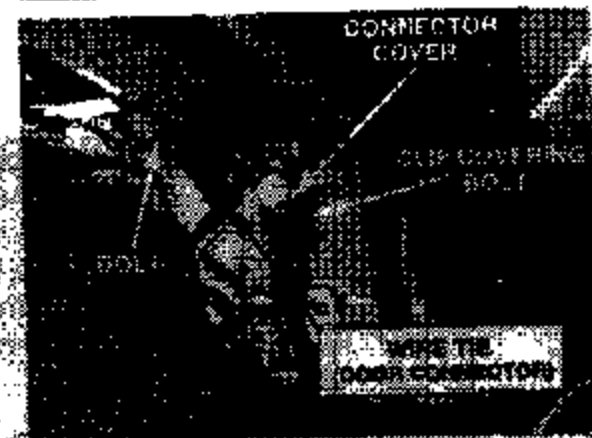
**NOTE:** If the grommet separates from the connector, remove the connector, refit the grommet in position, reapply a small amount of sealant to the grommet, and reinstall the connector.

12. Reconnect the door wiring connector.

13. Install the wiring connector cover.

14. Re-clip the main wire harness in the connector cover slip.

15. Use a wire tie to secure the door connector wires to the connector cover.



16. Install the right cowl side trim.

17. Install the door sill trim.

18. Connect the negative battery cable and reset the customer's radio stations.

19. Close the hood.



## DRIVER'S SIDE DOOR WIRING CONNECTOR AND DOOR WIRING REPLACEMENT:

**NOTE:** This procedure applies to an excessively corroded driver's side door wiring connector. Steps 1 - 8 involve replacing the connectors on the floor wire harness, and steps 9 - 19 involve replacing the door wire harness.

1. Cut and remove the first 2.5 - 3 inches (about 70 mm) of the vinyl sheathing from the door wiring. Be careful not to nick the wires.



2. Take the most corroded wire in the connector first. Cut it about 1 inch (25mm) from the connector. If it is corroded at the cut, cut an additional 1 inch. If the wire is black, it is OK. Strip the wire end about 0.25 inch (7mm).



### NOTES:

- Only cut and solder one wire at a time to avoid confusing the same color wires in each connector. If you have the wrong driver's side door wiring connector kit, you will be able to match the wires by pin location, even though the colors will not exactly match.
- Pin 17 of MD02 connector will have a smaller gauge yellow wire if the vehicle has the factory keyless entry option. Connect it to the larger red wire supplied on the connector.



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If the wires are corroded more than 2 inches from the connector, you may need to access them from inside the vehicle. The procedure for removing the cowl trim and connector cover is similar to the passenger side inspection procedure noted on page 11 of this TSB.

3. Strip the corresponding wire from the replacement connector (0.25inch, 7mm). Be sure to verify the wire position in the new connector matches the position the wire was cut from in the original connector.

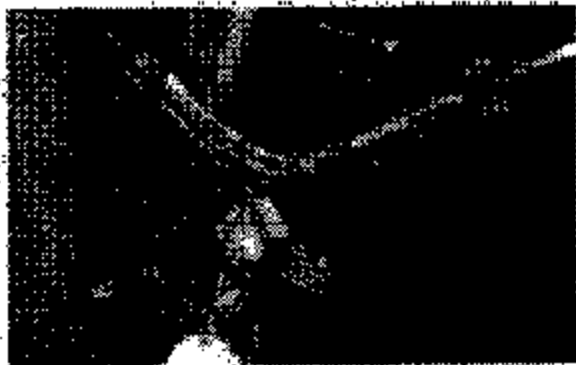


4. Slide a piece of the heat shrink tube onto the wire. Interlace the two stripped wires.



5. Solder the wires.

**WARNING:** Do not allow the solder to drip on the vehicle paint or trim. Protect the area as necessary.



6. Slide the heat shrink tube over the soldered joint and exposed wire; apply heat to the tube until it shrinks, covering the wire completely. Heat shrink tubing should extend 0.5 inch (13 mm) past the exposed wire on both ends of the joint.

**NOTE:** Apply steps 2) through 6) to the other wires in both connectors.



7. Some wires on the new door connector kit may not be used (different options). In this case, cut the unused wires 1 inch (25 mm) from the connector and tape the cut ends.



8. Wrap the spliced wire harnesses with the supplied vinyl sheet.







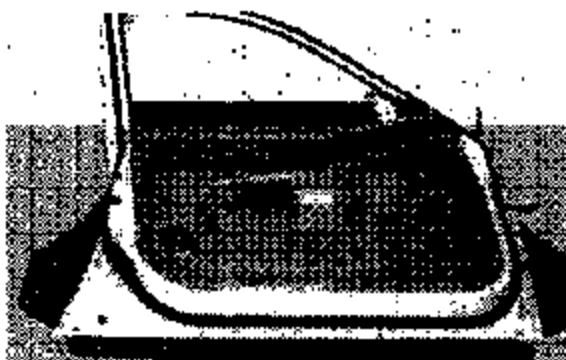
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9. Remove the front door quadrant inner cover from inside the mirror mounting area.



10. Remove the door trim mounting screws and door inside handle housing from the front door assembly. Pop the trim clips loose along the bottom edge of the door. Remove the power window switch connector and related connectors and remove the door trim panel assembly.



11. Remove the door trim seal.

**NOTE:** The door trim seal must be replaced if it is torn or damaged. Any leaks may cause door trim panel damage, or water leakage into the vehicle interior.



12. Disconnect the door speaker connector and then remove the door speaker.



13. Remove the front door wiring.



14. Replace the door wiring with a new part.

**IMPORTANT:** Verify you have the correct new door wiring assembly part number. Refer to page 19 of this TSB.





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## DOOR WIRING ASSEMBLY PART NUMBER INFORMATION:

PRODUCTION DATE RANGE	PART DESCRIPTION	PART NUMBER
Elantra produced 7/01/00 - 4/23/01 (4DR & 5DR GLS)	Driver's Side Door Harness <i>WITH</i> keyless entry	91600-2D010
Elantra produced 7/01/00 - 4/23/01 (4DR & 5DR GLS)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry	91600-2D030
Elantra produced 7/01/00 - 4/23/01 (4 DR GL)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry	91600-2D040
Elantra produced 4/23/01 - 3/13/02 (4DR & 5DR GLS)	Driver's Side Door Harness <i>WITH</i> keyless entry	91600-2D011
Elantra produced 4/23/01 - 3/13/02 (4DR GL)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry	91600-2D041
Elantra produced 3/13/02 - (4DR GL)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry	91600-2D042
Elantra produced 3/13/02 - (4DR & 5DR GLS)	Driver's Side Door Harness <i>WITH</i> keyless entry	91600-2D012
Elantra produced 3/13/02 - (4DR & 5DR GLS)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry	91600-2D032
Elantra produced 7/18/02 - (4DR & 5DR GL)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry and heated mirror	91600-2D052
Elantra produced 7/18/02 - 10/10/02 (5DR GL)	Driver's Side Door Harness <i>WITHOUT</i> keyless entry and door courtesy lamp	91600-2D280

15. Install the front door speaker.
16. Install the front door trim seal.
17. Install the front door trim panel.
18. Install the front door quadrant inner cover.

19. Apply a small amount of the clear sealant around the edges of the grommet as shown in the photo.



20. Place the removed front door assembly back on the jack, lined up with the hinges. Have a helper support the door.

21. Connect the door connectors to the vehicle connectors. Carefully install the door wire connector back into the mounting hole. Be careful to keep the grommet in position.



**NOTE:** If the grommet separates from the connector, remove the connector, refit the grommet in position, reapply a small amount of sealant to the grommet, and reinstall the connector. The grommet must make a water tight seal to the body.

22. Install the front door assembly and install the front door checker.

**NOTE:** Check the door opening and closing efforts and the door alignment to the body. Adjust the door if necessary.

23. Close the door.



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## PASSENGER'S SIDE DOOR WIRING CONNECTOR AND DOOR WIRING REPLACEMENT:

**NOTE:** This procedure applies to an excessively corroded passenger's side door wiring connector. This section will refer to the individual steps that have been covered in earlier sections.

1. Lay down a protective covering over the passenger side carpeting. Perform the same steps to solder the wiring connector kit to the vehicle wire as performed in steps 1 through 8 in the "Driver's Side Door Wiring Connector and Door Wiring Replacement" section.
2. Replace the passenger front door wire harness. Follow the procedure in steps 9 through 16 in the "Driver's Side Door Wiring Connector and Door Wiring Replacement" section. Use the following part numbers to select the correct passenger front door wire harness.

PRODUCTION DATE RANGE	PART DESCRIPTION	PART NUMBER
Elantra produced 7/01/00 - 4/23/01 (4DR & 5DR GLS)	Passenger's Side Door Harness <b>WITH</b> keyless entry	91620-2D010
Elantra produced 7/01/00 - 4/23/01 (4DR GLS)	Passenger's Side Door Harness <b>WITHOUT</b> keyless entry	91620-2D030
Elantra produced 7/01/00 - 4/23/01 (4DR & 5DR GLS)	Passenger's Side Door Harness <b>WITHOUT</b> keyless entry	91620-2D040
Elantra produced 4/23/01 - 3/13/02 (4DR & 5DR GLS)	Passenger's Side Door Harness <b>WITH</b> keyless entry	91620-2D011
Elantra produced 4/23/01 - 3/13/02 (4DR GL)	Passenger's Side Door Harness <b>WITHOUT</b> keyless entry	91620-2D031
Elantra produced 4/23/01 - 3/13/02 (4DR & 5DR GLS)	Passenger's Side Door Harness <b>WITHOUT</b> keyless entry	91620-2D041
Elantra produced 3/13/02 - (4DR GL)	Passenger's Side Door Harness <b>WITHOUT</b> keyless entry - no manual central door locking	91620-2D032
Elantra produced 3/13/02 - (4DR & 5DR GLS)	Passenger's Side Door Harness <b>WITH</b> keyless entry	91620-2D012

<b>PRODUCTION DATE RANGE</b>	<b>PART DESCRIPTION</b>	<b>PART NUMBER</b>
Elantra produced 3/13/02 - (4DR & 5DR GL & GLS)	Passenger's Side Door Harness <i>WITHOUT</i> keyless entry	91620-2D042
Elantra produced 7/18/02 - (4DR & 5DR GL)	Passenger's Side Door Harness <i>WITHOUT</i> keyless entry	91620-2D042
Elantra produced 7/18/02 - (4DR GL)	Passenger's Side Door Harness <i>WITHOUT</i> keyless entry and heated mirror	91620-2D062
Elantra produced 7/18/02 - 10/10/02 (5DR GL)	Passenger's Side Door Harness <i>WITHOUT</i> keyless entry and door courtesy lamp	91620-2D250

3. Insert the door wire harness connector back into the body hole. Follow the procedure in steps 19 and 21 in the "Driver's Side Door Wiring Connector and Door Wiring Replacement" section (Page 20).
4. Connect the connectors.
5. Finish the repair by following steps 12 through 19 in the "Passenger's Side Door Wiring Connector Inspection" section on page 13 to reassemble the vehicle.



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## INNER FENDER PANEL SEAM SEALING:

**NOTE:** This procedure applies to both left and right sides.

1. Lift up the vehicle.
2. Remove the front wheel and tire.
3. Remove the plastic front wheel guard (splash trim).



4. Spray all panel seams through the access hole inside the fender panel with 3M UNDERSEAL (3M PN-08883) undercoating or equivalent as shown in the photo.



continued →

4) continued:

Spray all panel seams with undercoating.



5. Reinstall the front wheel guard and tire.
6. Repeat for the opposite side.
7. Lower the vehicle and close the hood.

**WARRANTY INFORMATION:**

OP CODE	OPERATION	OP TIME	OP QTY	CAUSAL PART NUMBER	NATURE CODE	CAUSE CODE
91502P0*	Body sealing and corrosion protection, door/wing inspection (both sides)	1.2				
91501P0*	Body sealing and corrosion protection, door/wing inspection (both sides) and replacement (one side only)	3.5	1	71110-2DA10	**NSB	**CSB
91502P0*	Body sealing and corrosion protection, door/wing inspection (both sides) and replacement (both sides)	4.0				

\*NSB: Rust Corrosion

\*\*CSB: Water Entering