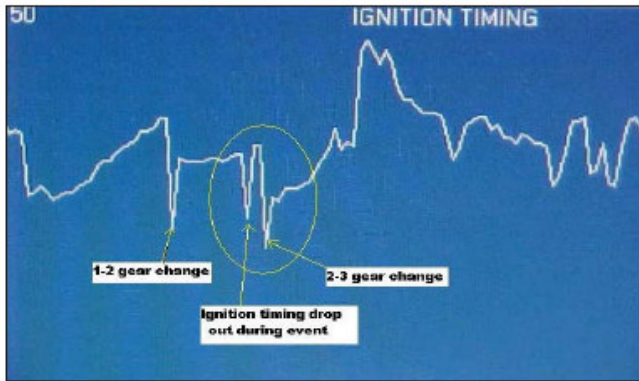



TSB No.	KT2006120701	TSB Type	General
Language	English	Published	12/7/2006
Model	Sorento [BL](2005) Sorento [BL](2006)	Area	N. America
Gr./Sys./Comp	Automatic Transaxle / Automatic Transaxle Control System / TCM		
Symptom	<a href="#">EN5000</a> - poor engine power/acceleration <a href="#">TR1000</a> - engine stalling <a href="#">TR5000</a> - shift delay <a href="#">TR6000</a> - shift shock <a href="#">TR7000</a> - abnormal shift <a href="#">TR8000</a> - slip when shifting <a href="#">TRN001</a> - Noise <a href="#">TRN003</a> - Others		
Subject	<b>Sorento Transmission Shift Hesitation (Trans/Drive - 017) (Updated 2007-01-17)</b>		
Description	<p>This service bulletin provides information related to replacing the vehicle speed sensor wire with a shielded cable. The shielded cable to be replaced is routed from the vehicle speed sensor to the TCM. Some 2005~2006 MY Sorento equipped with a 5 speed automatic transmission (A5SR1) may exhibit a vehicle hesitation and shift shock resulting from an engine rpm drop during the 1-2 and / or 2-3 upshift at approximately 4000 rpm. When this event occurs the TCM engages Engine Torque Reduction (ETR) Mode due to abnormal electrical noise created from the internal vehicle speed sensor located in the transmission assembly.</p> <p>To correct the customer concern, please follow instruction exactly as described in this TSB.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>★ NOTICE</b></p> <p>If this condition can be duplicated in Sports Mode concern is likely of a different nature, the transmission should be inspected for proper operation.</p> </div> <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0; text-align: center;"> <p>Screen Shows Example of Unwanted Torque Reduction Mode on the 2-3 Gear Change.</p> </div>		
Parts Information	Part Name	New Part Number	Quantity
	Wiring Kit - TCU	91175 3E010FFF	1
			

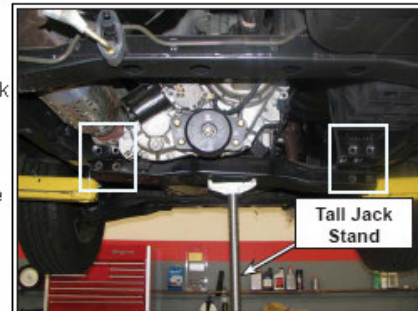
1. Record the radio presets, open the hood and disconnect the negative battery cable.



2. Raise and properly support the vehicle.



3. Support the transmission cross-member with tall jack stand as shown.

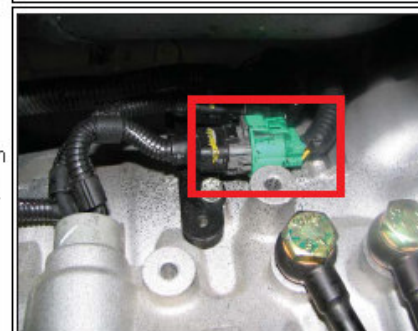


a) Remove four bolts retaining the cross-member to the vehicle.

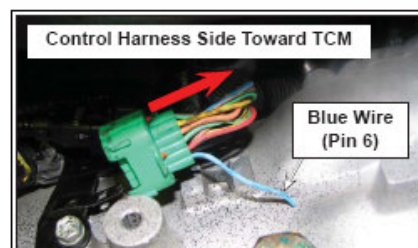
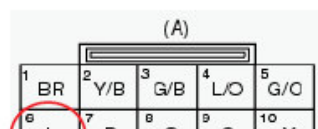
4. Disconnect the exhaust hanger from the cross-member and lower the transmission assembly 3~4 inches for better access to the wiring harness on the right side of Transmission Assembly.



5. Disconnect the green transmission connector 'A' from the mounting bracket on the right side of Transmission.



6. Peel back electrical harness conduit. Cut wire back on the harness side approximately 3 inches from terminal A6, blue corner wire.

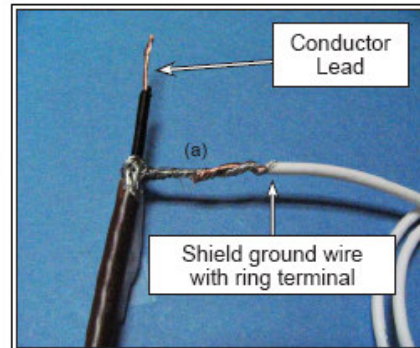




#### Transmission A Connector

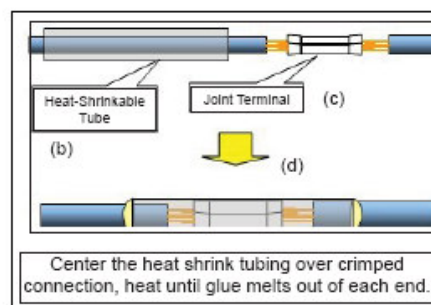
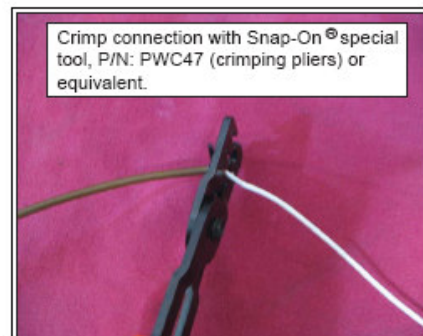
7. Prepare the supplied shielded cable end by stripping the end of shield cable insulation back by 1.00 ~1.25 inches.

- a) Separate and twist the shield ground wire from the conductor. Strip back the insulation 0.5 inch on the conductor lead.
- b) Slide the heat shrink tubing over the wire and attach the ground ring terminal to the shield ground wire. c) Install splice clip over the exposed wires, crimp and solder the connection as required.
- c) Install splice clip over the exposed wires, crimp and solder the connection as required.
- d) Slide the heat shrink tubing over the splice clip and seal using a butane solder iron with hood attachment.

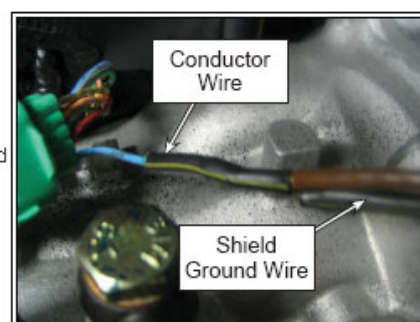


Caution: Careful not to damage the heat shrink tubing and the wire covering from excessive heat.

- e) Perform steps b~d on the conductor lead, no ring terminal required, attach to cut pigtail from vehicle control harness.



8. Shown is the completed repair on both conductor and shield ground.

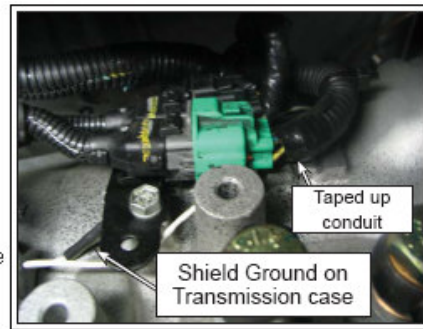




9. Install the removed conduit shield around exposed wire harness.

10. Clip the green connector back onto the transmission connector mounting bracket.

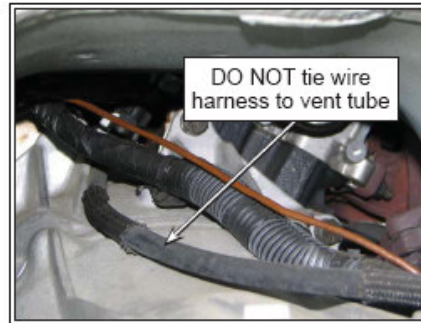
11. Remove the lower mounting bracket retaining bolt, install ground ring terminal between the bracket and the transmission case. Tighten this bolt to 96 inch lbs. (10.8 Nm).



12. The shield cable should be routed along the OEM wire harness. Install the supplied wire tie straps every 8~10 inches to prevent any interference between hot or moving parts.

**\* NOTICE**

A coat hanger can be used to assist in getting the shielded cable up into the engine compartment.



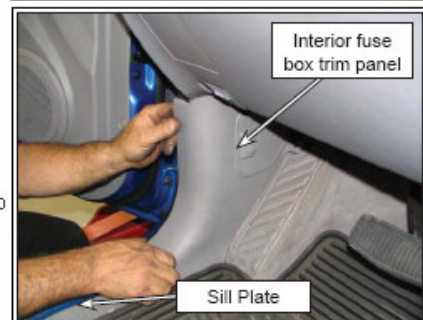
13. Raise the transmission cross-member into position and secure using four bolts and nuts, tighten to 45 lbs. Ft. (61 Nm). Install exhaust hanger as required.

14. Remove the engine cover as shown for access to control wiring harness.



15. Remove sill plate from drivers door opening by disengaging the retaining clips.

16. Remove interior fuse box trim panel by removing two (2) screws and disengaging two retaining clips.



17. Remove the lower crash pad for access to the TCM and pass-through harness.

a) Remove OBD-II connector from the lower panel



b) Remove 2 screws for the hood release lever

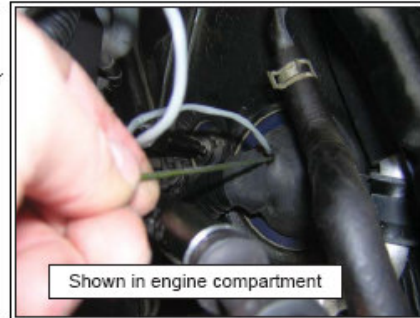
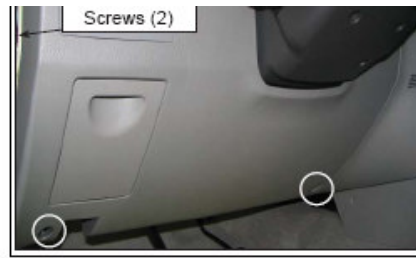
c) Remove side panel for access to two (2) retaining screws

d) Disconnect the electrical connectors from dimmer switch, if equipped remove connectors from the 4WD switch and cruise control switch then remove panel by disengaging retaining clips.

18. Using a coat hanger, gently pierce a hole approximately .25 inches from the edge in the pass-through bulk-head rubber grommet near the brake booster assembly.

#### **\* NOTICE**

When passing the coat hanger through to the interior be extremely careful not to damage any wires on the interior side. Failure to follow this direction may cause other concerns and/or repeat repairs.



### Service Procedure

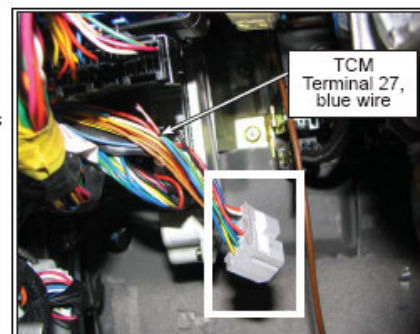
19. Follow the control harness and fasten cable using tie straps every 8~10 inches. Route wiring above the pedal assemblies and over to the TCM. Install the engine cover when completed.



20. Locate the TCM on the left side under dash to the left of the brake pedal. The TCM can be identified as having 3 vertical electrical connectors (green, grey and white). Disconnect the Grey middle electrical connector then locate terminal 27, (blue wire), cut this wire three (3) inches from the plastic connector. This pigtail will connect to the conductor lead on the shielded cable routed into the passenger compartment.

#### **\* NOTICE**

Shielded cable length should be cut to fit as required.

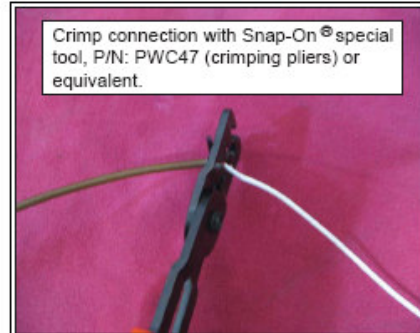
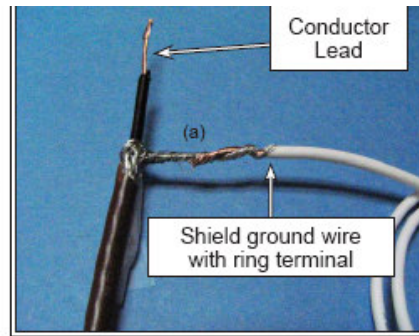


21. Prepare the supplied shielded cable end by stripping the end of shield cable insulation back by 1.00 ~1.25 inches.

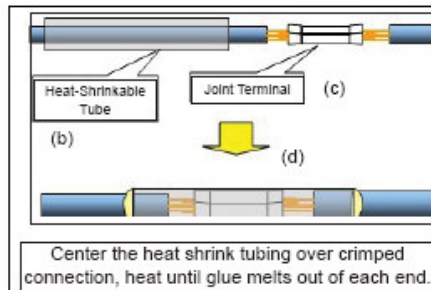
- a) Separate and twist the shield ground wire from the conductor. Strip back the insulation 0.5 inch on the conductor lead.
- b) Slide the heat shrink tubing over the wire and attach the ground ring terminal to the shield ground wire.
- c) Install splice clip over the exposed wires, crimp and solder the connection as required.
- d) Slide the heat shrink tubing over the splice clip and seal using a butane solder iron with hood attachment.

### CAUTION

Caution: Careful not to damage the heat shrink tubing and the wire covering from excessive heat.



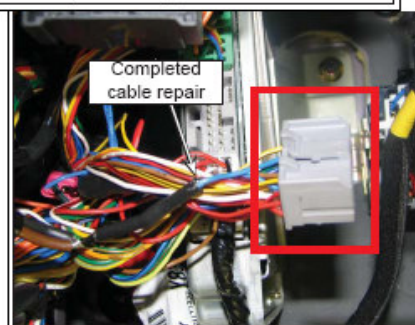
- e) Perform steps b~d on the conductor lead, no ring terminal required, attach to cut pigtail from vehicle control harness.



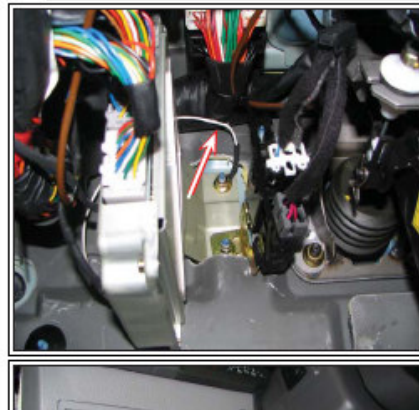
22. Connect the grey middle TCM electrical connector.

33	R/B	29	★	31	Y/B	30	BR	29	★	27	L	35	Y/B	25	★
42	R/B	41	W	40	L/O	38	Y/O	38	R/B	37	★	36	G	34	G/B
48	R	47	W/O	46	B					45	G/O	44	★	43	★

TCM H-01 Connector (Grey)



23. Connect the shielded ground ring terminal to the TCM mounting point as shown.





24. Re-assemble the lower crash pad and related components as described in step 17.



25. Connect the negative battery cable and set the customer's preset radio stations and clock time.



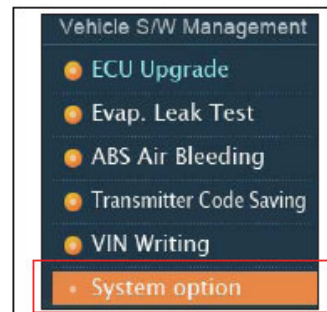
a) If equipped with overhead console, convert to US measurements by pressing the Up/Down button for 1 second.

b) If equipped with Automatic Climate Control, convert to US measurements by depressing the temperature down button and AMB button for 3 seconds.

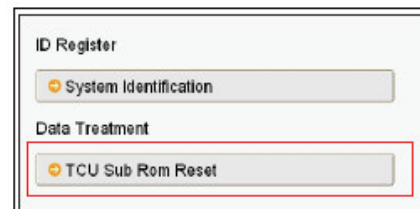
26. Install GDS and re-set the 'Sub-Rom' data in the automatic transmission. Select 'System Option'

### \* NOTICE

Disconnecting the battery will not erase the data on the Sub-Rom, this scan tool function must be used.

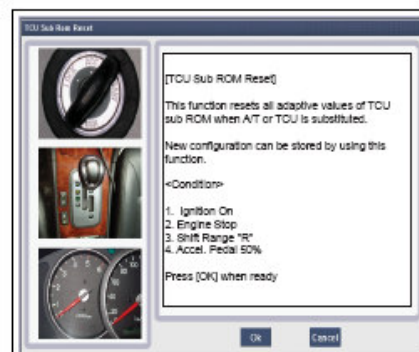


27. Select TCU Sub ROM Reset.

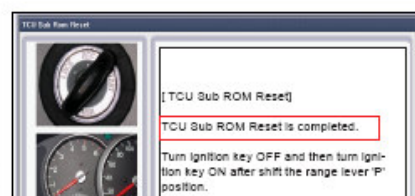


Apply parking brake and warm engine to operating temperature.

- Ignition ON
- Engine OFF
- Shifter in 'R' position
- Accelerator pedal depressed 50%



Press OK when ready

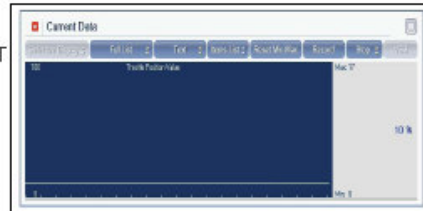


29. Successful TCU Sub ROM reset shown on display.



30. Road test the vehicle while monitoring the throttle angle to reset adaptive values.

a) Drive the vehicle at 10~11% throttle opening, DO NOT exceed 12% as adaptive learning will not take place.



b) Run the vehicle through gears 1st~4th, this cycle needs to be performed four times to ensure learning of the base values. Proceed to Static Engagement Learning.

c) Idle vehicle for static gear engagement adaptive learning.

d) Shift into Neutral for 3 seconds, then into Drive for 3 seconds. Complete this procedure 3 times.

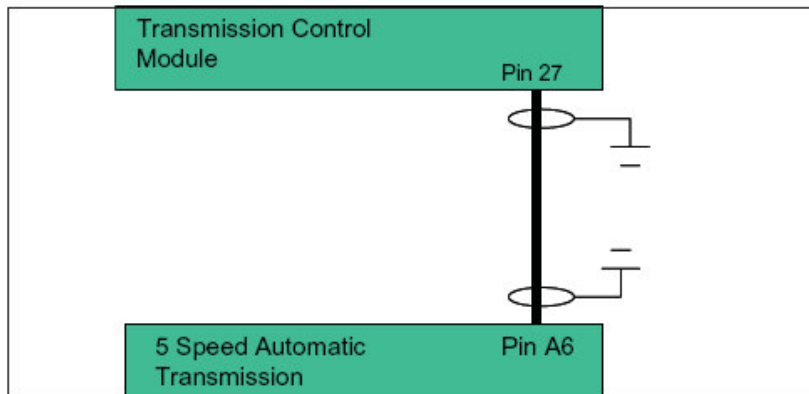
### \* NOTICE

Do NOT Exceed 12% throttle angle as adaptive learning will not take place and customer complaints for shift flare may occur.

e) Shift into Neutral for 3 seconds, then into Reverse for 3 seconds. Complete this procedure 3 times.

f) Turn engine OFF for 20 seconds. Repair is completed.

#### Sample Circuit:



#### Warranty Information

Claim Type	Causal P/N	Part Qty	Cond. Code	Cause Code	Repair Description	Labor OP Code	Time	Related	Qty
W	91480 3E091	0	N43	C99	Installation TCM Ground Wire Kit	91190F02	1.3	91175 3E010FFF	1









