

02V314

December, 2003

TO: ALL VOLVO RETAILERS - US & CANADA
RE: RECALL CAMPAIGN 112 (RELAUNCH)

Volvo Cars of North America, LLC and Volvo Cars of Canada Ltd. have decided to relaunch Recall Campaign 112. Volvo Cars of North America, LLC and Volvo Cars of Canada Ltd. decided that a defect related to motor vehicle safety existed in the seat heater wiring of certain model year 1996 and 1997 850 sedans and wagons.

Under certain circumstances, it is possible that excessive compression of the seat cushions may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

If the seat heater is currently not operating, this corrective action may not restore full functionality.

Approximately 34,220 vehicles in the US and 6,194 vehicles in Canada have not had this campaign repair performed.

OWNER NOTIFICATION

A second notification letter will be sent directly to the vehicle owners that have not had this campaign repair performed.

RETAILER RESPONSIBILITIES

Retailers must perform this campaign on eligible vehicles regardless of miles/kilometers or vehicle age. All work performed under this Recall Campaign is free of charge to the owner.

In the event that a customer does not have a notification letter, the owner is not to be refused this important campaign work. Your regional representative will follow up to ensure that this campaign is proceeding smoothly.

The Technician Competency requirement for this repair is Level 2.

A complete description of the campaign requirements and claim submission procedures are attached. A revised "Retailer Vehicle Campaign List" will be sent under separate cover identifying the specific vehicles, retailed by your facility, that are eligible for this campaign. It is the retailer's responsibility to review the details provided in the materials listed below with all involved personnel.

- Service Manager Bulletin 85-112 (revised)
- Service Bulletin 85-028
- TNN #85-22 (added)
- Parts Bulletin #85-112
- Owner Notification Letter (revised)

Your cooperation in completing this important campaign is greatly appreciated.

Drive Safely,

Volvo Cars of North America, LLC / Volvo Cars of Canada Ltd.

VOLVO				TITLE: RECALL CAMPAIGN 112	GROUP: 85	NO: 112
				Rerouting Seat Heater Cable Harness	ISSUING DEPARTMENT: Warranty	
				850 MY 1996 & 1997	CAR MARKET: North America	
				REFERENCE BULLETINS: TNN85-22 SB 85-028 PB 85-112 Supersedes SMB85-112 issued 2003-02-12	DATE: YEAR MONTH DAY 2003 12 05	
				Service Personnel: read and initial.	SERVICE MANAGER	SERVICE WRITER

BULLETIN REFERENCE

- A. RECALL CAMPAIGN 112 DESCRIPTION
- B. VEHICLES INVOLVED
- C. PARTS INFORMATION/PARTS RETURN
- D. OWNER NOTIFICATION
- E. VEHICLES IN RETAILER INVENTORY
- F. RETAILER RESPONSIBILITY
- G. CAMPAIGN REIMBURSEMENT PROCEDURES
- H. TECHNICIAN COMPETENCY REQUIREMENT
- L. RETAILER ALLOWANCE
- J. CUSTOMER REIMBURSEMENT

A. RECALL CAMPAIGN 112 DESCRIPTION

Volvo Cars of North America, LLC and Volvo Cars of Canada Ltd. have decided that a defect related to motor vehicle safety exists in the seat heater wiring of certain model year 1996 and 1997 850 sedans and wagons.

Under certain circumstances, it is possible that excessive compression of the seat cushions may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

If the seat heater is currently not operating, this corrective action may not restore full functionality. Approximately 66,200 vehicles in the US and 8,294 vehicles in Canada are affected in the first mailing. The second customer mailing for the Recall campaign 112 will affect approximately 34,220 vehicles in the US and 6,194 vehicles in Canada.

"Fixed Right — First Time"



B. VEHICLES INVOLVED

NOTE: RETAILER MUST CONFIRM VEHICLE ELIGIBILITY PRIOR TO BEGINNING REPAIR FOR THIS CAMPAIGN.

Vehicle eligibility should be confirmed:

- 1) Refer to DCS Vehicle Inquiry
- 2) Refer to the Vehicle Campaign Listing

All vehicles should be checked for any other incomplete recalls or service campaigns.

RETAILER VEHICLE CAMPAIGN LIST

"A Retailer Vehicle Campaign List" will be sent separately identifying the specific vehicles eligible for this campaign. This list details all affected vehicles that are on record as being retailed or currently in stock at your facility. This Vehicle Campaign List will be the only written material you will receive from Volvo.

C. PARTS INFORMATION/PARTS RETURN

<u>Part Number</u>	<u>Part Description</u>	<u>Qty</u>
8884989	Service Kit	1
1161731	Cold Atomizer	0.1 (when required)

PARTS RETURN

Return of any campaign part(s) is not required.

D. OWNER NOTIFICATION

The first mailing occurred during the week of February 17, 2003. The second mailing for Recall Campaign 112 will occur during the 1st week of December, 2003.

E. VEHICLES IN RETAILER INVENTORY

All vehicles in retailer's inventory and qualifying for this Recall Campaign must be repaired prior to a customer taking possession of the vehicle.

F. RETAILER RESPONSIBILITY

Prior to the repair being performed, the functionality of the seat heater MUST be confirmed. If the seat heater is currently not operating, this corrective action may not restore full functionality.

Retailers are to perform this campaign on eligible vehicles regardless of mileage/kilometers or vehicle age. The campaign work covered under Recall Campaign 112 is free of charge to the owner. In the event that the original announcement letter is lost or misplaced, the owner is not to be refused this important campaign work. Your Aftersales Area Manager will follow up to ensure that this campaign is proceeding smoothly.

G. CAMPAIGN REIMBURSEMENT PROCEDURES

All claims should be submitted using the short form application. A repair code has been established for this repair that will automatically reimburse the retailer for the proper labor and parts amount for each claim.

H. TECHNICIAN COMPETENCY REQUIREMENT

The technician competency requirement for this campaign repair is: Level 2

I. RETAILER ALLOWANCE

<u>Claim Type</u>	<u>Repair Code</u>	<u>Repair Description</u>	<u>Labor Time</u>	<u>Part Amount</u>
112	02	Install Service Kit	0.7	US: \$ 71.89 CA: \$ 108.21
112	03	Install Service Kit Using Cold Atomizer	0.7	US: \$ 72.32 CA: \$ 108.66

J. CUSTOMER REIMBURSEMENT

Please follow the instructions as outlined in the WARRANTY POLICY & PROCEDURES MANUAL, Chapter 6, Page 6.4.

**Recall Campaign no. 112, Rerouting Seat Heater Cable
Harness****Background:**

Under certain circumstances, it is possible that excessive compression of the seat cushions may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

Material

Description	Quantity	P/N
Service kit	1	888 4988
Cold atomizer*	0.1	115 1731
* when needed		

Special tool

Description
Ohm meter

"Fixed Right - First Time"

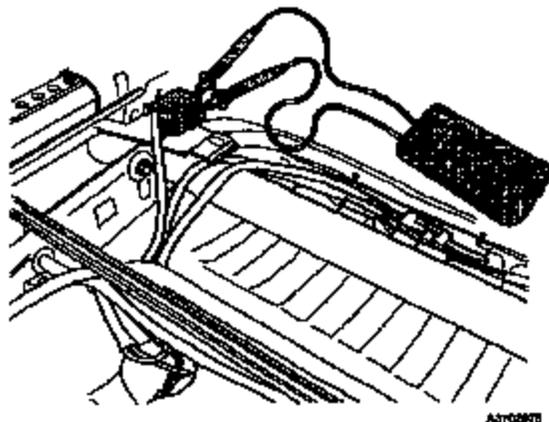
Service personnel: Please circulate, read and initial

Service Manager	Parts Manager	Workshop Manager	Workshop Foreman	Service Technicians						



Front seats

Seat heater cable harness rerouting

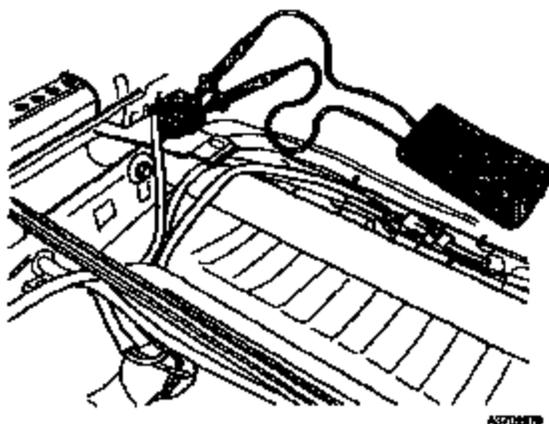


1

Functional checks

Check the functionality by turning on the seat heater and checking whether the back and seat cushions are being heated.

If it is not functioning properly, proceed to step 2.



2

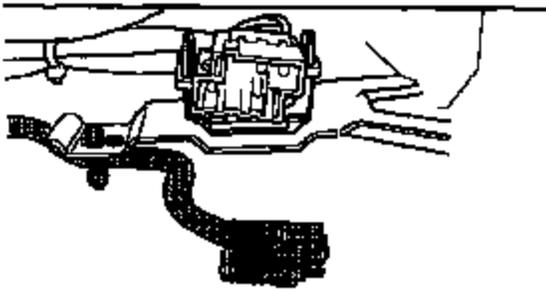
Checking the heating coil in the element

Connect an ohmmeter to the terminal pin for the heating elements in the connector block that connects to the car's cable harness.

If the meter reacts, then there is a connection through the coils and the elements are functioning electrically.

If the meter does not react, cool down the thermostat with cold atomizer in order to verify seat heater function.

If the seat heater does not function, it should be noted on the Repair Order.



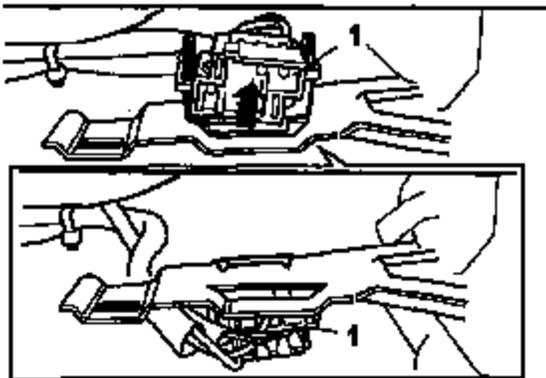
A292281

Preparations, mechanically adjusted seats 3

Fully raise the seat at the front edge. Fully lower the rear edge of the seat. Slide the seat as far back as possible.

Hint: This operation is easier if the front-rear adjustment-mounting bracket is removed from the seat.

Disconnect the connector between the car cable harness and the seat heater under the seat.

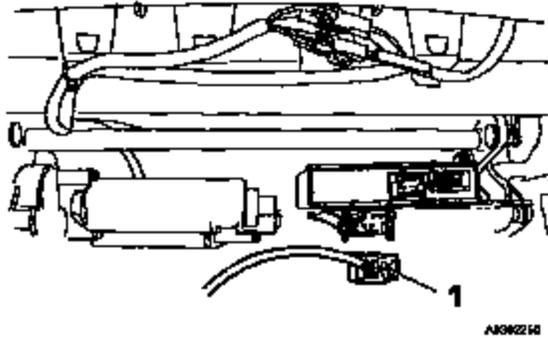


A292282

Changing the location of the connector, mechanically adjusted seats 4

Disconnect the 8-pin connector (1) and the clip on the seat cable harness from the bracket on the seat.

Install the 8-pin connector (1) on the underneath of the bracket, pointing towards the back of the car.

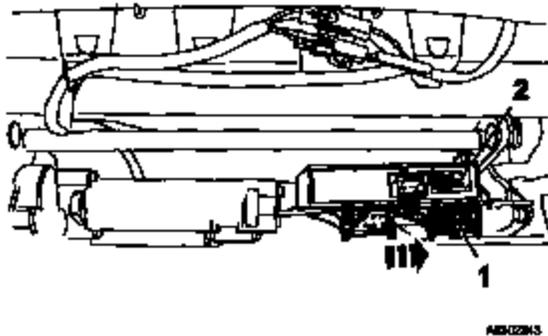


Preparations, power seats

5

Fully raise the seat at the front edge. Fully lower the rear of the seat. Slide the seat as far back as possible.

Disconnect the connector (1) between the car cable harness and the seat heater under the seat.

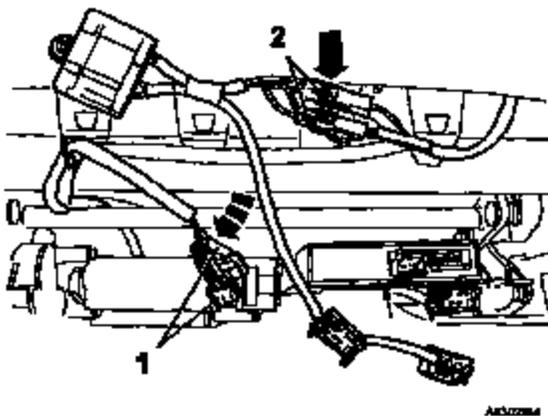


Changing the location of the connector, power seats

6

Disconnect the 6-pin connector and the clip on the seat cable harness from the bracket on the seat.

Install the connector (1) on the bracket under the green connector (2) for the control module.



Installing a new cable harness

7

Disconnect the grey and black 2-pin connector (1) for the heater pad.

Connect the new cable harness to the 2-pin grey and black connector (2) for the heater pad.

Note! Only a power seat is shown.

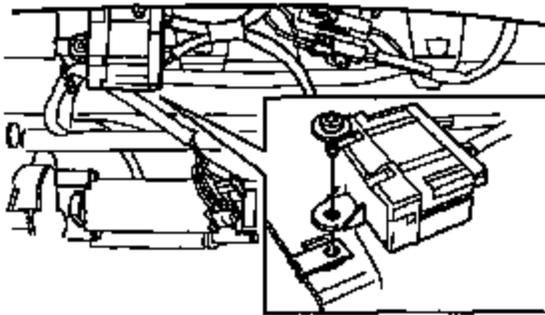
8

Installing the electronic thermostat (TCU-T)

Install the clip from the kit in the rectangular hole on the inner most tab.

Screw the electronic thermostat into place on the clip.

Note! Ensure that the existing cable is not trapped.



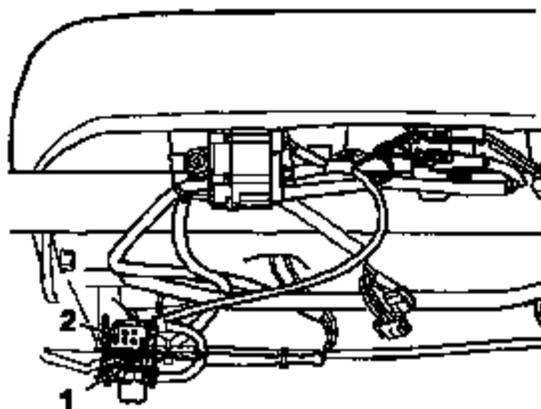
A88028-1

9

Manual seat: Connecting the electronic thermostat (TCU-T) to the car cable harness

Connect the 6-pin connector (with 2 cables) from the new cable harness to the existing connector (1) on bottom of the bracket.

Install the new 6-pin connector (2) from the thermostatic relay to top of the bracket.

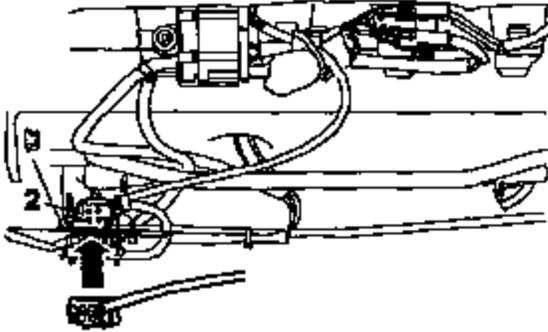


A88028-2

10

Manual seat: Connection to the new 6-pin connector

Connect the car cable harness to the new 6-pin connector (2).



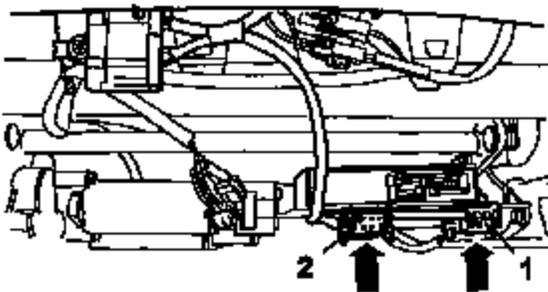
AJ842213

11

Power seat: Connecting the electronic thermostat (TCU-T) to the car cable harness

Connect the 6-pin connector (with 2 cables) from the new cable harness to the existing connector (1).

Install the 6-pin connector (2) and mounting on the bracket for the connectors in the same place as the connector (2), which was moved.

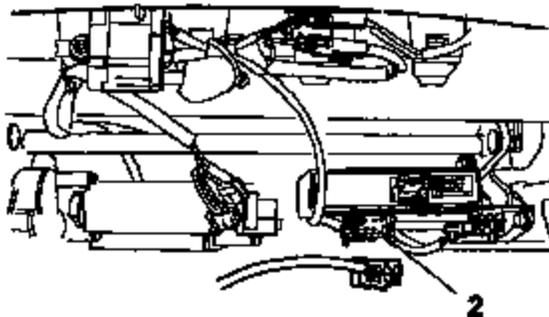


AJ842214

12

Power seat: Connecting to the new 6-pin connector

Connect the car cable harness to the new 6-pin connector (2).

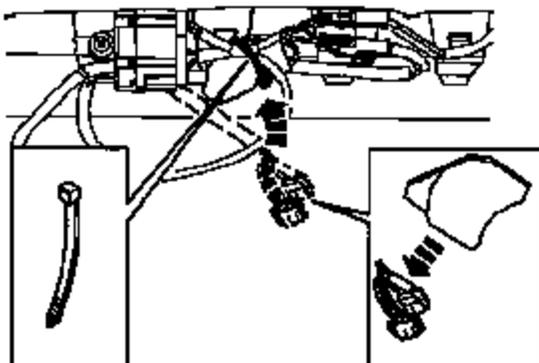


AK50226

13

Securing the loose connectors

Install the foam rubber around the 2-pin connectors.
Secure the connectors through the bracket on the seat and around the cable harnesses. Use a tie strap.
See the illustration.



AK50227

Functional checks

Check the functionality by turning on the seat heater and checking whether the back and seat cushions are being heated.

If the heater does not function connect an ohmmeter to the terminal pin for the heating elements in the connector block that connects to the car's cable harness.

If the meter reacts, then there is a connection through the coils and the elements are functioning electrically.

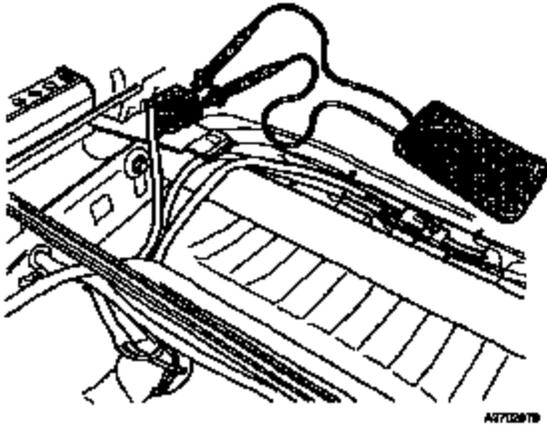
If the meter does not react, cool down the thermostat with the cold atomizer in order to verify seat heater function.

If the heater does not function, it must be noted on the Repair Order. Any further fault tracing or repairs are not included in this Recall.

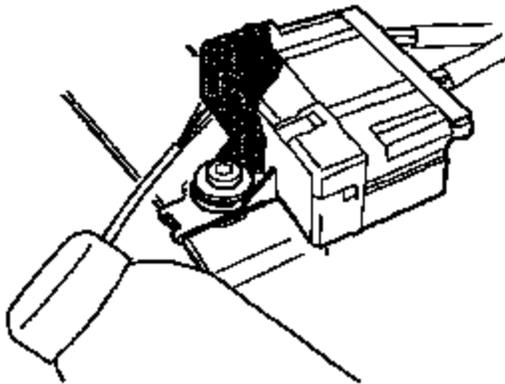
Check that no cables are trapped and that they cannot be subjected to damage by rubbing, stretching, etc. or be the cause of rattling noise.

Perform the check with the seat in all end positions.

Adjust the wirings as needed.



A670287B



A670288B

Tech-Net Notes

"Fixed Right - First Time"

Volvo Technicians, Service and Parts Managers

NO:	85-22
DATE:	12-5-2003
MODEL:	850
M. YEAR:	MY 1996-1997
SUBJECT:	New Front Seat Heater Temperature Setting
REFERENCE:	SB 85-0028 Recall Campaign 112: Rerouting front seat heater cable harness

THIS TECH NOTE SUPERSEDES THE PREVIOUS 85-22 DATED 11-17-03. PLEASE UPDATE YOUR FILES.

DESCRIPTION:

Under certain circumstances, it is possible that excessive compression of the seat cushions may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

This Tech Net Note is intended to provide additional information about the new temperature settings for the front seat heaters after performing Recall Campaign 112.

Original Seat Heater:

The original thermostat for the front seat heater maintained a **surface** temperature of the front seat at 96.8°F.

Another thermostat was available that made it possible to replace the 96.8°F (36°C) thermostat with a 113°F (45°C) unit.

Note! The temperature settings of the thermostat can be found on the thermostat housing which is located just under the heating element approximately in the middle of the seat surface.

Original thermostat:

With the 96.8°F (36°C) thermostat, together with the seat heater system in the front seat, the temperature of the **surface** would fluctuate between 78.8°F (26°C) and a maximum temperature of 113°F (45°C).

While activated, the system would turn on if the temperature in the passenger compartment is lower than 69.8°F (21°C).

Other thermostat:

The other thermostat (113°F (45°C)), together with the seat heater system in the front seat, the temperature of the surface would fluctuate between 97°F (36°C) and a maximum temperature of 130°F (54°C).

While activated, the system would turn on if the temperature in the passenger compartment is lower than 71.6°F (22°C).

Recall Campaign 112 Seat Heater:

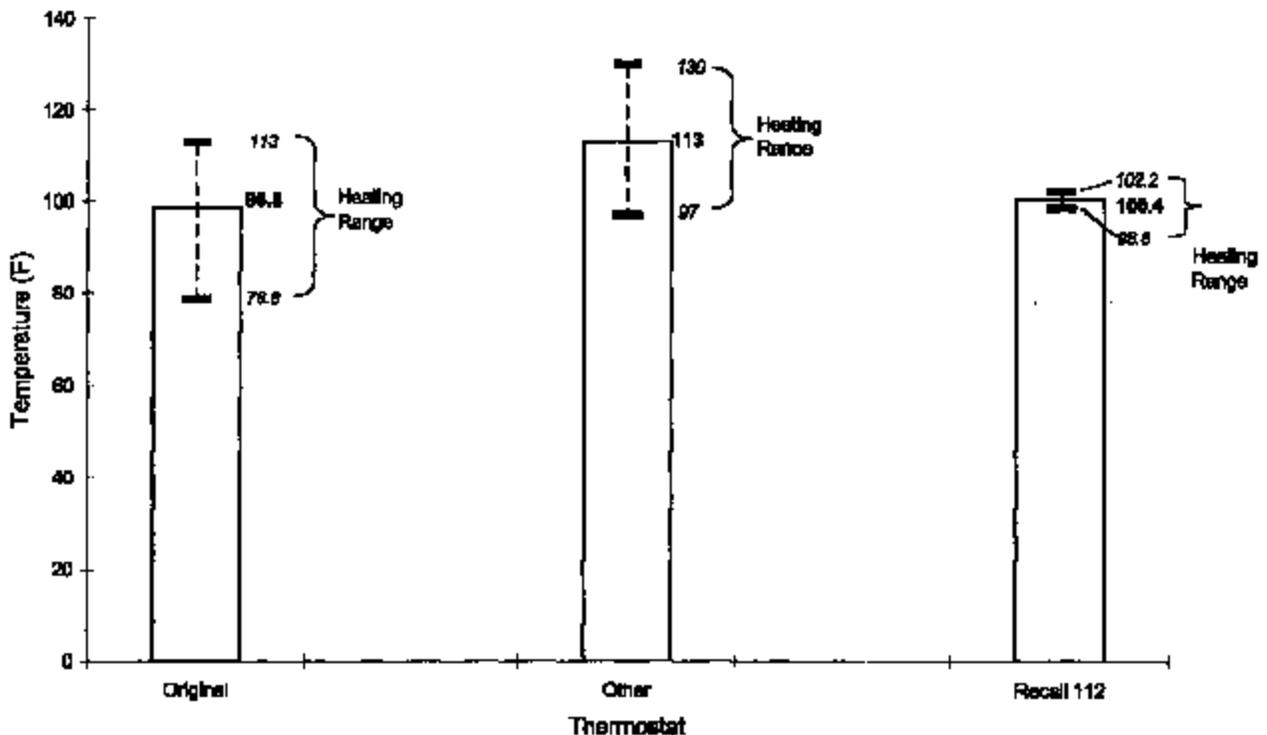
The new thermostat is much improved over the original as the accuracy has increased and temperature fluctuations have decreased (see chart below).

The new electronic thermostat is designed to keep a surface temperature of the front seat at 100.4°F (38°C).

The new electronic thermostat, together with the new front seat heater system, the temperature of the surface will fluctuate between a minimum temperature of 98.6°F (37°C) and a maximum temperature of 102.2°F (39°C).

While activated, the new system will turn on if the temperature in the passenger compartment is lower than 70°F (22°C).

Seat Heater Temperature Setting Comparison



**VOLVO for life,
Volvo Cars of North America, LLC
Technical Service**

Please circulate, read and Initial: _____ Svc Mgr _____ Parts Mgr

_____ **TECHS**

_____ **Shop Foreman** _____ **Warranty Administrator**

VOLVO

Nothing can replace them.

Parts Bulletin

SUBJECT				GROUP	NO	
Recall 112 - Electric Seat Heater 1996-1997 850				85	112	
MARKET				DATE		PAGE
North America				YEAR	MONTH	DAY
GENERAL MGR	PARTS MGR	SERVICE MGR	SALES MGR	2003	02	18
				1 of 1		

REFERENCES: Service Manager Bulletin 85-112, Service Bulletin 85-0028

Volvo Cars of North America, LLC and Volvo Cars of Canada Ltd. have decided that a defect related to motor vehicle safety exists in the seat heater wiring of certain model year 1996 and 1997 850 sedans and wagons.

Under certain circumstances, it is possible that excessive compression of the seat cushion may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

If the seat heater is currently not operating, this corrective action may not restore full functionality.

Approximately 66,200 vehicles in the US and 8,294 vehicles in Canada are affected.

The following part numbers apply:

Part Number	Description	Qty
8684989	Electronic thermostat and cable harness kit	1
1161731	Atomizer	0.1/vehicle

Because of the large number of vehicles involved, we will be announcing this recall to customers in stages. The recall will initially be launched in the Northeast region in the United States and, within 2-3 weeks, will then be launched in the rest of United States and Canada.

Volvo will allocate approximately 50% of the electronic thermostat and cable harness kits to retailers, based upon the number of 1996-1997 850 vehicles retailed. There may be more than one allocation. Each retailer, that retailed 1996-1997 850s, will also be allocated one or two bottles of the atomizer as soon as they become available. After a 50% nationwide allocation of 8684989 has been achieved, the kit and atomizer will be available for normal ordering.

Fixed Right — First Time



Printed in USA on recycled paper containing a minimum of 60% wastepaper and 10% post-consumer waste.
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IMPORTANT RECALL NOTICE

[RECALL 112 Electric Seat Heaters - MY 96-97 854,855
Re-Launch
SAMPLE OWNER NOTIFICATION LETTER
UNITED STATES]

December 2003

IMPORTANT RECALL NOTICE

Dear Volvo Customer:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Volvo Cars of North America previously launched this recall campaign in February 2003. Our current records show your vehicle has not had this recall performed. Given the nature of this defect, we strongly advise contacting your authorized Volvo retailer and having this recall performed as soon as possible.

The reason for this campaign:

Volvo has decided that a defect related to motor vehicle safety exists in the seat heater wiring of certain model year 1996 and 1997 850 sedans and wagons.

Under certain circumstances, it is possible that excessive compression of the seat cushions may cause damage to the electrical wiring of the seat heater. If this occurs, the damage may result in a short circuit and could lead to burning of the underseat materials, increasing the risk of a fire and injury to a vehicle occupant.

The corrective action will consist of disconnecting the existing wires and installing a new electronic thermostat and cable harness kit.

Please note: The improved accuracy of the new electronic thermostat results in reduced temperature fluctuations and a lower maximum temperature in the seat surface. The seat heater is enabled when the temperature in the passenger compartment is lower than 70 degrees.

If your seat heater is currently not operating, this corrective action may not restore full functionality.

What you need to do:

Please call your authorized Volvo retailer as soon as possible to schedule an appointment. This procedure will be completed at no cost and will take approximately one hour. Due to service scheduling, your Volvo retailer may require your vehicle for a longer period of time.

If you previously paid to have this underseat corrective action performed, Volvo will honor your receipt with a refund. Please contact your Volvo retailer for details.

Please contact:

If you have any questions, please contact your Volvo retailer. If your retailer is unable to answer your questions, please contact Volvo Customer Relations at 7 Volvo Drive Rockleigh, New Jersey 07647 or phone 1-800-458-1552, Monday through Friday, 8:30 A.M. to 7:00 P.M. Eastern Time. You may also e-mail us at customerservice@volvocars.com.

We have advised the National Highway Traffic Safety Administration (NHTSA) that we are conducting this recall. If you are unable to have this procedure performed without charge and within a reasonable period of time, you may contact the NHTSA Administrator at 1-888-327-4236. The address is 400 Seventh Street SW, Washington, DC 20590.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days. Lessor means a person or entity that is the owner, as reflected on the vehicle title, of any five or more leased vehicles.

Your safety and continued satisfaction with your Volvo and the Volvo organization are very important to us. We apologize for any inconvenience this may cause and we appreciate your cooperation in arranging to have this important service completed as quickly as possible.

Sincerely,

Eunice Stern
Manager, Customer Care

Please note: According to Insurance Institute for Highway Safety President Brian O'Neill, "It is very important that owners of vehicles in which safety-related problems have been identified take those vehicles back to dealerships as soon as they receive notice of a recall or service campaign. Such notices should not be ignored or taken lightly. There is just no reason to drive around in a vehicle with a safety-related defect."