TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL A0G

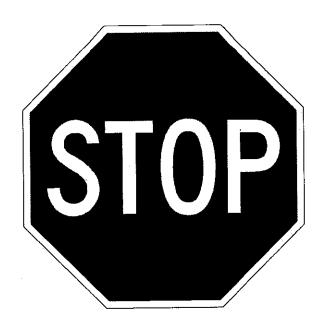
SKID CONTROL ECU CALIBRATION UPDATE

2003 MODEL YEAR SEQUOIA

TECHNICAL INSTRUCTION REVISION NOTICE:

- June 16, 2010:
 - Additional reminders NOT to cycle the key during reprogramming have been included on pages 4, 6, and 8.
- June 24, 2010:
 - The procedure requiring the GR8 battery charger has been removed from the instructions.

Previous versions of this Technical Instruction should be discarded.



Important Note 1:

Before performing this repair you must have the "2003 Sequoia VSC Calibration Update Application" installed on your Techstream Toughbook.



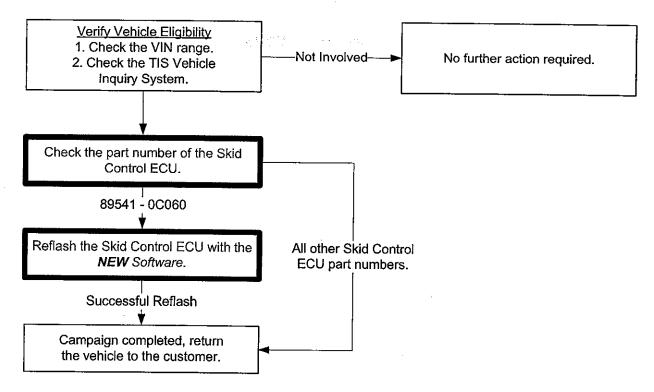
1. Click to download and read the <u>application installation instructions</u>. NOTE: You must be a certified technician to access the application.

Important Note 2:

This procedure also requires the use of a custom Techstream cable to connect and reprogram the Skid Control ECU.

2. You will not be able to reprogram the Skid Control ECU with the standard cable.

I. OPERATION FLOWCHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Model	WMI	Year	VIN Range	
	*******	i c ar	VDS	Range
Sequoia	5TD	2003	BT44A	S101211 - S187555
			BT48A	S099426 - S187569
			ZT34A	S100033 - S187571
			ZT38A	S100343 - S187568

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. TOOLS & EQUIPMENT

- Techstream Panasonic Toughbook. (Windows XP only) with A0G application software installed.
- A0G-CABLE (Special DLC3 to RS232 Connector)

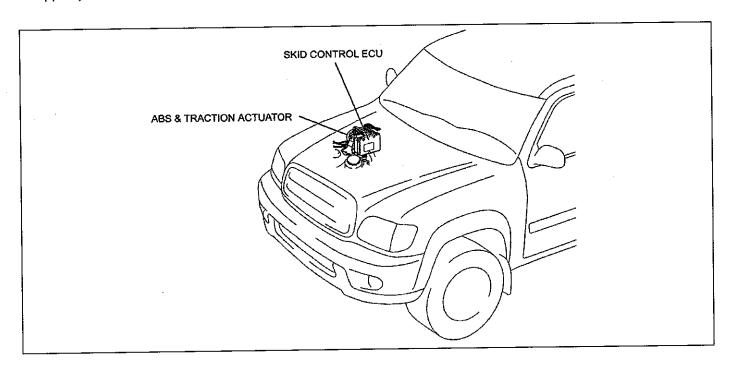
B. PARTS

No parts are required.



IV. BACKGROUND

On certain 2003 Model Year Toyota Sequoia vehicles, the center position of the Steering Angle Sensor (SAS) may not be stored correctly due to improper logic of the Skid Control ECU programming. If this occurs, in most cases the VSC/TRAC warning light will illuminate. However, in limited situations the Vehicle Stability Control (VSC) system could activate at low speed (approximately 9 mph) for a few seconds after acceleration from a stopped position, and the vehicle may not accelerate as quickly as the driver expects.



Prevent Skid Control ECU Damage During Reprogramming:

- Do NOT turn the ignition off during reprogramming.
- Do NOT allow the Techstream to shut off during reprogramming, keep it plugged in to an AC power supply.

Do NOT close the application software window during reprogramming.

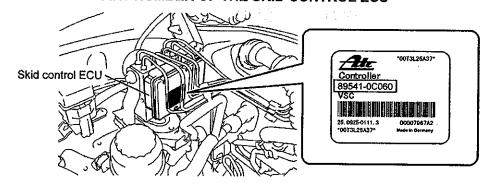
Remember:

NEVER cycle the key and

NEVER turn off the ignition during
the reprogramming process!
These actions will cause
permanent ECU damage!

V. WORK PROCEDURE

1. CHECK THE PART NUMBER OF THE SKID CONTROL ECU



SKID CONTROL ECU PART NUMBER	WORK CONTENTS	
89541-0C060	Reprogram the skid control ECU	
All other Skid Control ECU part numbers	Vehicle does NOT require reprogramming	

2. VEHICLE PREPARATION

- a) Check for any preexisting VSC codes in the Skid Control ECU memory.
 - If DTC C1231, C1247, C1310 exists you may proceed with this procedure.
 - If any other VSC codes exist except for DTC C1231, C1247, C1310 troubleshoot according to the repair manual before proceeding.
- b) Confirm the vehicle/ignition is off.
- c) Open the hood and ensure the engine compartment temperatures do not exceed 212° F.
- d) Check the battery votage. If the battery votage is lower than 12 volts, CHARGE the battery before reprogramming the skid control ECU.

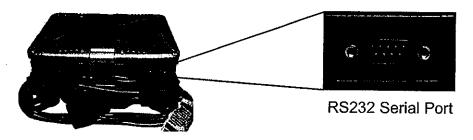
Do NOT have any battery charger installed on the vehicle when performing this reprogramming procedure.







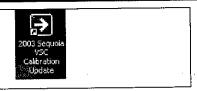
- Not using a battery charger during skid control ECU reprogramming applies to A0G reprogramming ONLY.
- e) Using the A0G-CABLE, connect one side to the RS232 Serial Port on the Techstream and the other side to the DLC3 connector on the vehicle.



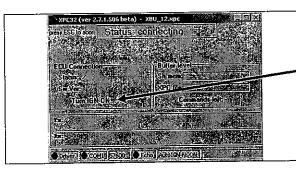
3. SKID CONTROL REPROGRAMING



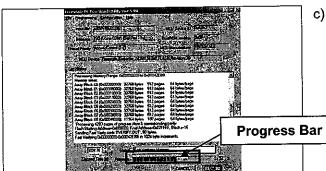
- Do NOT apply any electrical load while reprogramming. (i.e. audio, A/C, defroster...)
- Do NOT touch the mouse buttons / touch screen / or keyboard after the reprogramming has started until it completes.



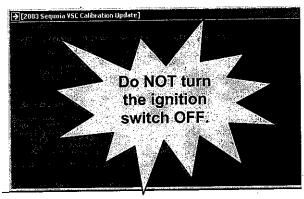
a) Confirm the ignition is off and then double click this icon from the desktop.



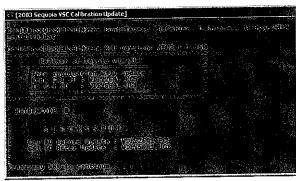
b) Turn the ignition on when prompted: Turn ten ignition on when prompted:



 Wait approximately 6-7 minutes until the reprogramming completes.



If you receive a RED screen after the reprogramming progress bar has started: **Keep the ignition ON – Confirm that NO battery charger is being used on the vehicle** and immediately skip to the appendix for instructions on how to perform the VSC Failure Recovery.



- d) A green screen will indicate the completion of the reprogramming or if the reprogramming has already been completed. (code "0" or "2073")
- e) Press any key to continue/close the reprogramming window.

NOTE: If the screen turns BLACK after reprogramming, immediately skip to the appendix for additional information.

4. CONFIRM VEHICLE CONDITION AFTER REPROGRAMMING THE SKID CONTROL ECU

- a) Turn off the ignition.
- b) Disconnect the GR8 Battery Diag. Station or PSC Power Supply Charger/Maintainer (MTRPSC550SKT).
 - STOP

Do NOT restart the vehicle until you have disconnected the GR8 from the vehicle.

c) Start the vehicle and confirm the ABS warning light turns off.

5. CHECK FOR DTC CODES

- a) Connect the Techstream to the DLC3.
- b) Confirm NO new Skid Control DTC's have occurred.

NOTE:

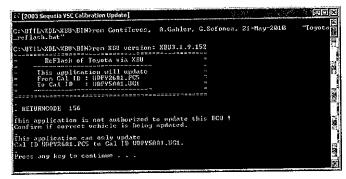
If any Pending, Current, and/or History DTCs are set, troubleshoot according to the repair manual.

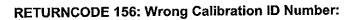
6. TEST DRIVE THE VEHICLE AND INSPECT FOR ANY PROBLEMS

- CAMPAIGN COMPLETE -

VI. APPENDIX

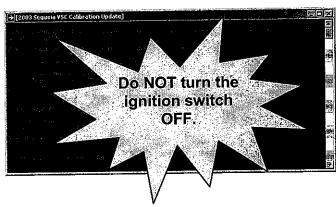
Only refer to this appendix if you have received a red or black error screen after attempting to reprogram the Skid Control ECU.





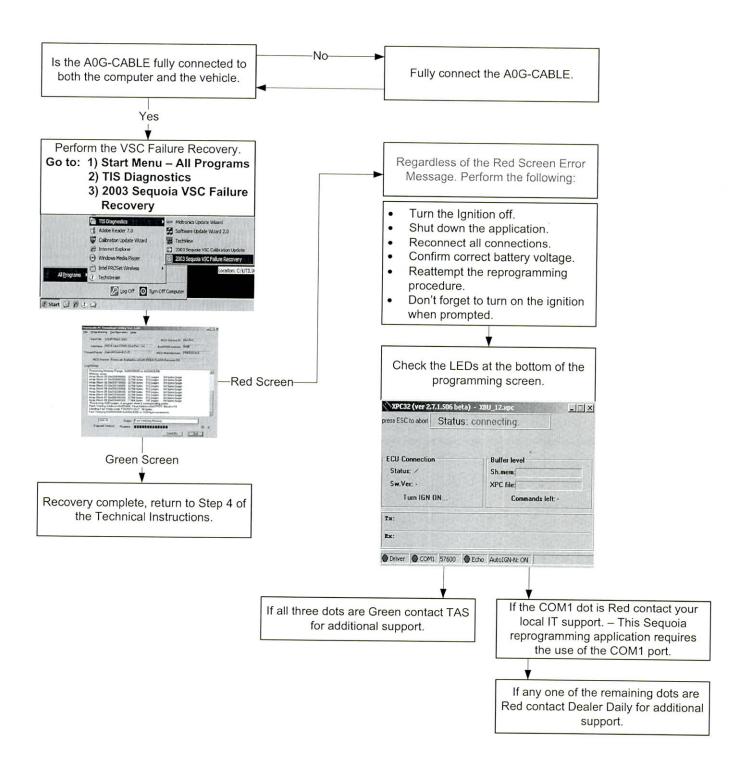
Cause:

This Skid Control ECU is not part of this safety recall.



If you received a red error screen proceed to the next page to perform the VSC Failure Recovery.

RED SCREEN Troubleshooting Chart



TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL A0G

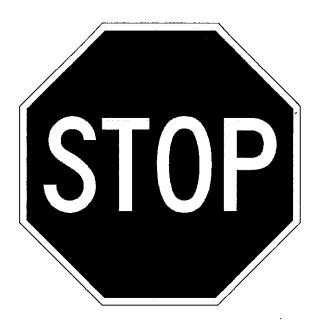
SKID CONTROL ECU CALIBRATION UPDATE

2003 MODEL YEAR SEQUOIA

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- June 16, 2010:
 - Additional reminders NOT to cycle the key during reprogramming have been included on pages 4, 6, and 8.

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Important Note 1:

Before performing this repair you must have the "2003 Sequoia VSC Calibration Update Application" installed on your Techstream Toughbook.



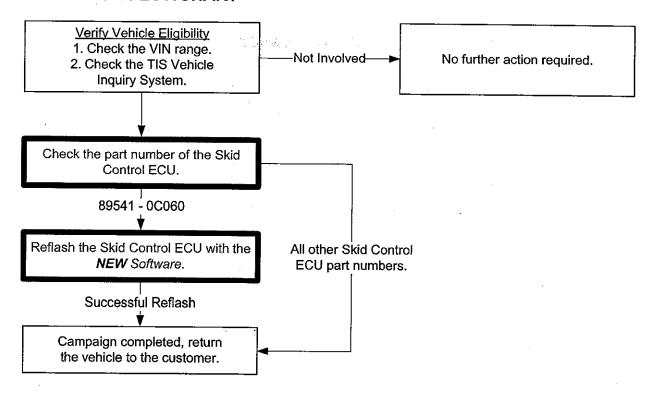
1. Click to download and read the <u>application installation instructions</u>. NOTE: You must be a certified technician to access the application.

Important Note 2:

This procedure also requires the use of a custom Techstream cable to connect and reprogram the Skid Control ECU.

2. You will not be able to reprogram the Skid Control ECU with the standard cable.

I. OPERATION FLOWCHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Model WMI	Voor	VIN Range		
	771011	Year	VDS	Range
Sequoia 5	5TD	2003	BT44A	S101211 - S187555
			BT48A	S099426 - S187569
	310		ZT34A	S100033 - S187571
			ZT38A	S100343 - S187568

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. TOOLS & EQUIPMENT

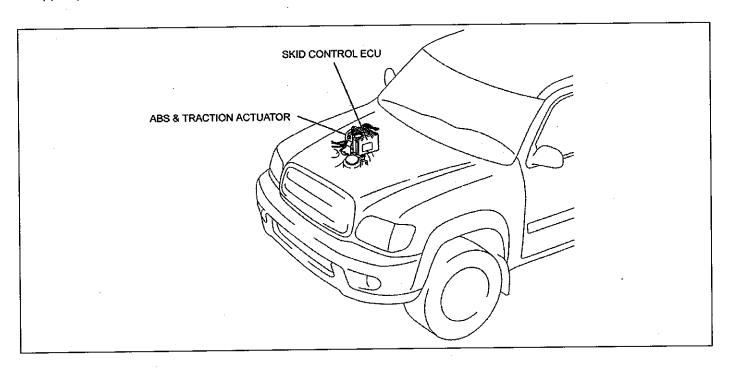
- Techstream Panasonic Toughbook. (Windows XP only) with A0G application software installed.
- GR8 Battery Diagnostic Station, if unavailable, the PSC Power Supply Charger / Maintainer (MTRPSC550SKT) may be used.
- A0G-CABLE (Special DLC3 to RS232 Connector)

B. PARTS

No parts are required.

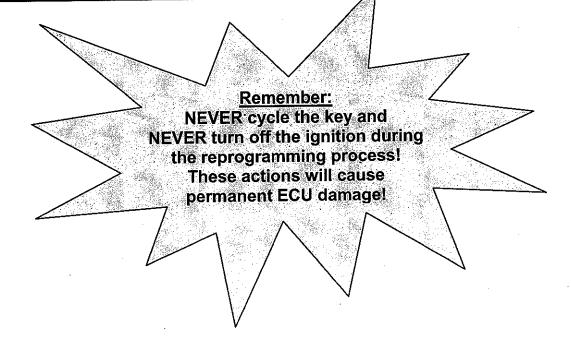
IV. BACKGROUND

On certain 2003 Model Year Toyota Sequoia vehicles, the center position of the Steering Angle Sensor (SAS) may not be stored correctly due to improper logic of the Skid Control ECU programming. If this occurs, in most cases the VSC/TRAC warning light will illuminate. However, in limited situations the Vehicle Stability Control (VSC) system could activate at low speed (approximately 9 mph) for a few seconds after acceleration from a stopped position, and the vehicle may not accelerate as quickly as the driver expects.



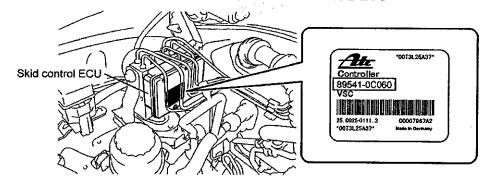
Prevent Skid Control ECU Damage During Reprogramming:

- Do NOT turn the ignition off during reprogramming.
- Do NOT allow the Techstream to shut off during reprogramming, keep it plugged in to an AC power supply.
- Do NOT close the application software window during reprogramming.



V. WORK PROCEDURE

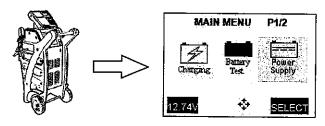
1. CHECK THE PART NUMBER OF THE SKID CONTROL ECU



SKID CONTROL ECU PART NUMBER	WORK CONTENTS	
89541-0C060	Reprogram the skid control ECU	
All other Skid Control ECU part numbers	Vehicle does NOT require reprogramming	

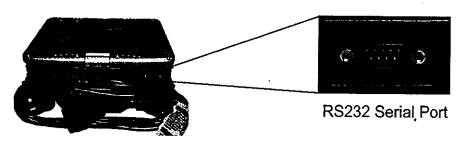
2. VEHICLE PREPARATION

- a) Check for any preexisting VSC codes in the Skid Control ECU memory.
 - If DTC C1231, C1247, C1310 exists you may proceed with this procedure.
 - If any other VSC codes exist except for DTC C1231, C1247, C1310 troubleshoot according to the repair manual before proceeding.
- b) Confirm the vehicle/ignition is off.
- c) Open the hood and ensure the engine compartment temperatures do not exceed 212° F.
- d) Connect the GR8 Battery Diagnostic Station to the vehicle and select Power Supply Mode.



NOTE

- The GR8 Battery Diagnostic Station MUST be used in Power Supply Mode to maintain battery voltage at 13.5 volts while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery Diagnostic Station, refer to the GR8 Instruction Manual located on TIS, *Diagnostics Battery*.
- If the GR8 Battery Diagnostic Station is unavailable, the PSC Power Supply Charger / Maintainer (MTRPSC550SKT) may be used.
- e) Using the A0G-CABLE connect one side to the RS232 Serial Port on the Techstream and the other side to the DLC3 connector on the vehicle.



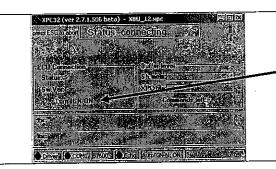
3. SKID CONTROL REPROGRAMING



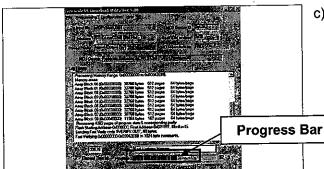
- Do NOT apply any electrical load while reprogramming. (i.e. audio, A/C, defroster...)
- Do NOT touch the mouse buttons / touch screen / or keyboard after the reprogramming has started until it completes.



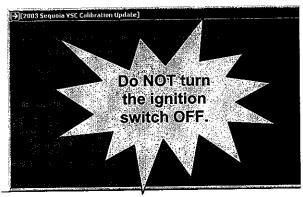
a) Confirm the ignition is off and then double click this icon from the desktop.



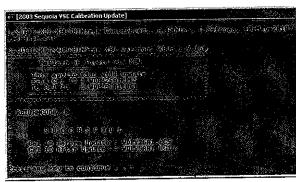
b) Turn the ignition on when prompted: Juin GN ON



c) Wait approximately 6-7 minutes until the reprogramming completes.



If you receive a RED screen after the reprogramming progress bar has started: **Keep the ignition ON** and and immediately skip to the appendix for instructions on how to perform the VSC Failure Recovery.



- d) A green screen will indicate the completion of the reprogramming or if the reprogramming has already been completed. (code "0" or "2073")
- e) Press any key to continue/close the reprogramming window.

NOTE: If the screen turns BLACK after reprogramming, immediately skip to the appendix for additional information.

4. CONFIRM VEHICLE CONDITION AFTER REPROGRAMMING THE SKID CONTROL ECU

- a) Turn off the ignition.
- b) Disconnect the GR8 Battery Diag. Station or PSC Power Supply Charger/Maintainer (MTRPSC550SKT).



Do NOT restart the vehicle until you have disconnected the GR8 from the vehicle.

c) Start the vehicle and confirm the ABS warning light turns off.

5. CHECK FOR DTC CODES

- a) Connect the Techstream to the DLC3.
- b) Confirm NO new Skid Control DTC's have occurred.

NOTE:

If any Pending, Current, and/or History DTCs are set, troubleshoot according to the repair manual.

6. TEST DRIVE THE VEHICLE AND INSPECT FOR ANY PROBLEMS

- CAMPAIGN COMPLETE -

VI. APPENDIX

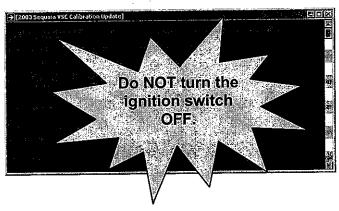
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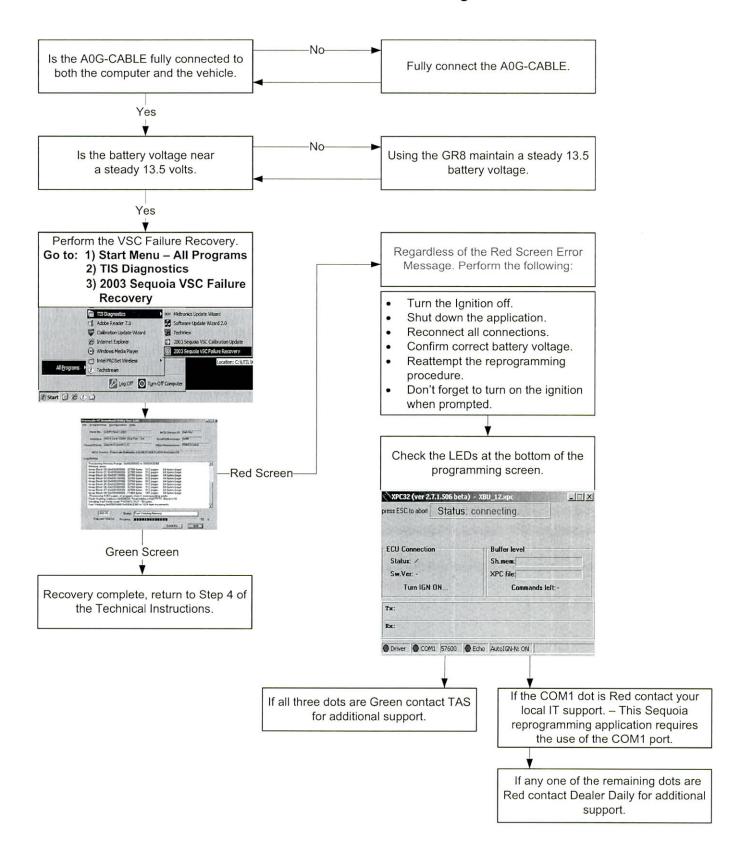
Cause:

This Skid Control ECU is not part of this safety recall.



If you received a red error screen proceed to the next page to perform the VSC Failure Recovery.

RED SCREEN Troubleshooting Chart



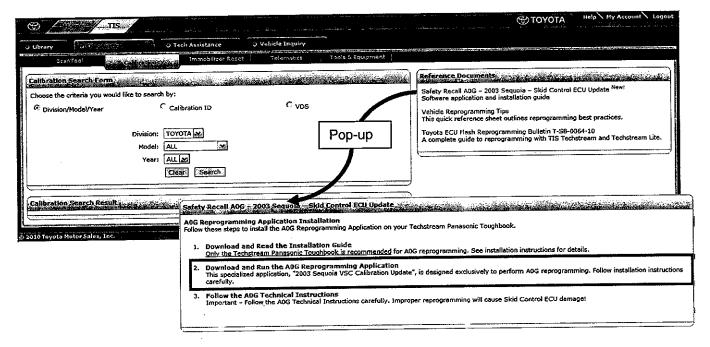
A0G SOFTWARE APPLICATION INSTALLATION GUIDE

SOFTWARE INSTALLATION

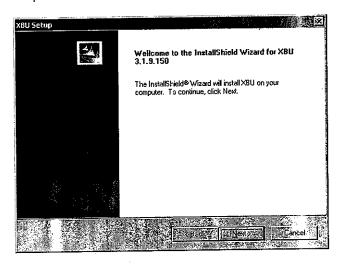
Model	Model Year	Previous version	New version
SEQUOIA	2003	WDPY26A1.PC5	WDPY5AA1.UG1

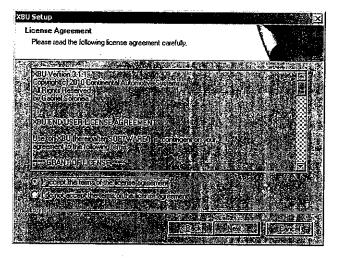
- The Techstream Panasonic Toughbook is highly recommended for this procedure. The PC used for reprogramming must use Windows XP and must have an RS232 connector with an open COM1 port.
- You must have administrator rights to successfully load the exe. file. Please contact your dealership IT staff if you are unsure of your computer access level.
 - 1. Navigate to the TIS Diagnostics Calibrations page Reference Documents.
 - Click on the "Download and Run the A0G Reprogramming Application" link.

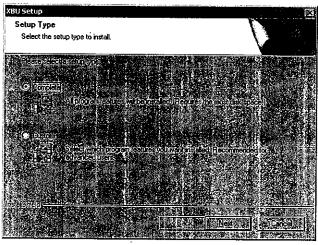
NOTE: You must be a certified technician to access this TIS location.

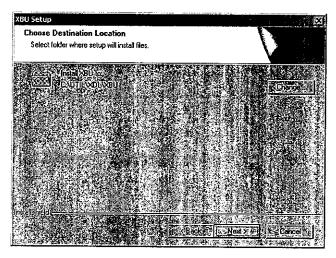


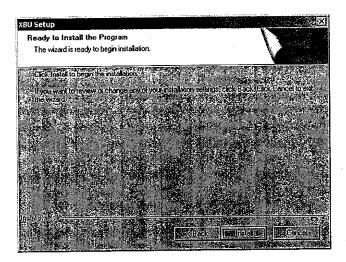
3. Continue with the Setup as illustrated.

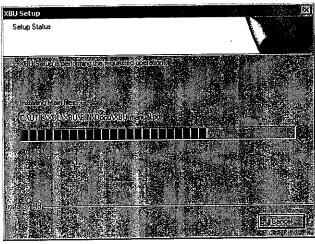


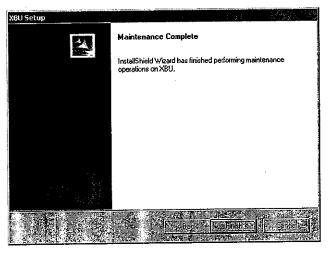










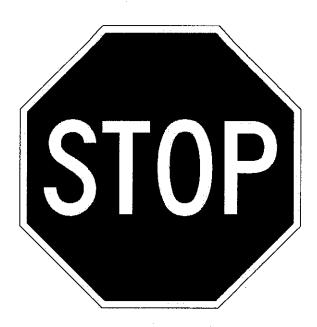


After installation the following icon will appear on the desktop:



NOTE: If this icon does not appear. Uninstall and reinstall the application software.

FOR SAFETY RECALL A0G SKID CONTROL ECU CALIBRATION UPDATE 2003 MODEL YEAR SEQUOIA



Important Note 1:

Before performing this repair you must have the "2003 Sequoia VSC Calibration Update Application" installed on your Techstream Toughbook.



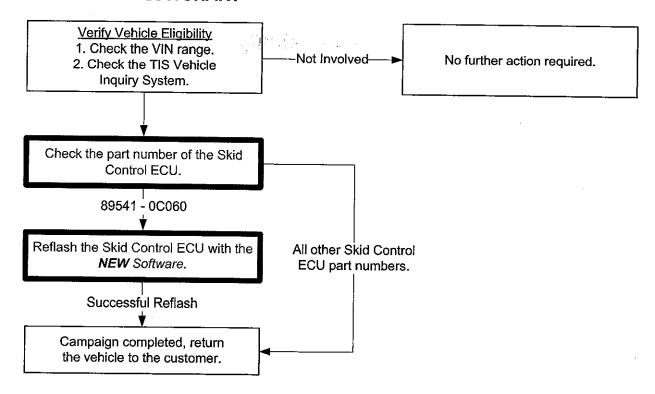
1. Click to download and read the <u>application installation instructions</u>. NOTE: You must be a certified technician to access the application.

Important Note 2:

This procedure also requires the use of a custom Techstream cable to connect and reprogram the Skid Control ECU.

2. You will not be able to reprogram the Skid Control ECU with the standard cable.

I. OPERATION FLOWCHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

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	***************************************	Teal	VDS	Range
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- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that
 the campaign has not already been completed prior to dealer shipment or by another dealer.
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III. PREPARATION

A. TOOLS & EQUIPMENT

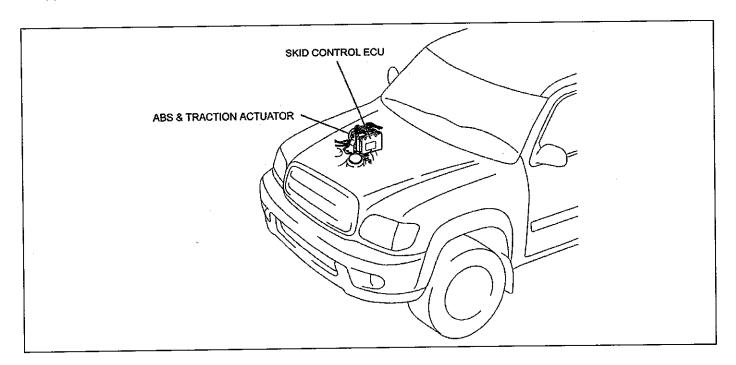
- Techstream Panasonic Toughbook. (Windows XP only) with A0G application software installed.
- GR8 Battery Diagnostic Station, if unavailable, the PSC Power Supply Charger / Maintainer (MTRPSC550SKT) may be used.
- A0G-CABLE (Special DLC3 to RS232 Connector)

B. PARTS

No parts are required.

IV. BACKGROUND

On certain 2003 Model Year Toyota Sequoia vehicles, the center position of the Steering Angle Sensor (SAS) may not be stored correctly due to improper logic of the Skid Control ECU programming. If this occurs, in most cases the VSC/TRAC warning light will illuminate. However, in limited situations the Vehicle Stability Control (VSC) system could activate at low speed (approximately 9 mph) for a few seconds after acceleration from a stopped position, and the vehicle may not accelerate as quickly as the driver expects.

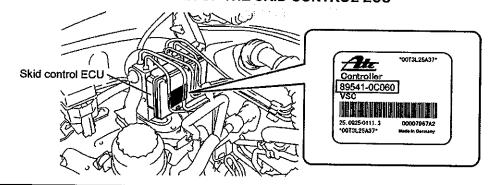


Prevent Skid Control ECU Damage During Reprogramming:

- Do NOT allow the Techstream to shut off during reprogramming, keep it plugged in to an AC power supply.
- Do NOT close the application software window during reprogramming.
- Do NOT turn the ignition off during reprogramming.

V. WORK PROCEDURE

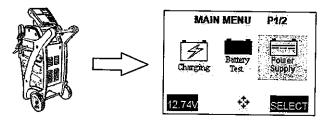
1. CHECK THE PART NUMBER OF THE SKID CONTROL ECU



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All other Skid Control ECU part numbers	Vehicle does NOT require reprogramming	

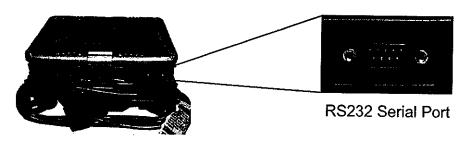
2. VEHICLE PREPARATION

- a) Check for any preexisting VSC codes in the Skid Control ECU memory.
 - If DTC C1231, C1247, C1310 exists you may proceed with this procedure.
 - If any other VSC codes exist except for DTC C1231, C1247, C1310 troubleshoot according to the repair manual before proceeding.
- b) Confirm the vehicle/ignition is off.
- c) Open the hood and ensure the engine compartment temperatures do not exceed 212° F.
- d) Connect the GR8 Battery Diagnostic Station to the vehicle and select Power Supply Mode.



NOTE

- The GR8 Battery Diagnostic Station MUST be used in Power Supply Mode to maintain battery voltage at 13.5 volts while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery Diagnostic Station, refer to the GR8 Instruction Manual located on TIS, *Diagnostics Battery*.
- If the GR8 Battery Diagnostic Station is unavailable, the PSC Power Supply Charger / Maintainer (MTRPSC550SKT) may be used.
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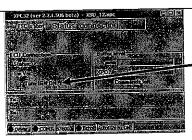
3. SKID CONTROL REPROGRAMING



- Do NOT apply any electrical load while reprogramming. (i.e. audio, A/C, defroster...)
- Do NOT touch the mouse buttons / touch screen / or keyboard after the reprogramming has started until it completes.



a) Double click this icon from the desktop.



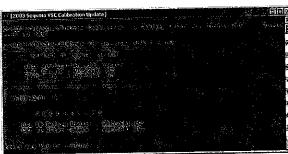
b) Turn the ignition on when prompted: It is it is in the ignition of the igni

NOTE: Failure to turn on the ignition in a timely manner will cause the application to error and time-out.

NOTE: To prevent ECU damgage, keep the ignition ON until the reprograming is complete.



c) Wait approximately 6-7 minutes until the reprogramming completes.



- d) A green screen will indicate the completion of the reprogramming or if the reprogramming has already been completed.
- e) Press any key to continue/close the reprogramming window.

NOTE: If the screen turns RED or BLACK an error has occurred! Immediately skip to the appendix for additional instructions.

4. CONFIRM VEHICLE CONDITION AFTER REPROGRAMMING THE SKID CONTROL ECU

a) Turn off the ignition.

b) Disconnect the GR8 Battery Diag. Station or PSC Power Supply Charger/Maintainer (MTRPSC550SKT).



Do NOT restart the vehicle until you have disconnected the GR8 from the vehicle.

c) Start the vehicle and confirm the ABS warning light turns off.

5. CHECK FOR DTC CODES

- a) Connect the Techstream to the DLC3.
- b) Confirm NO new Skid Control DTC's have occurred.

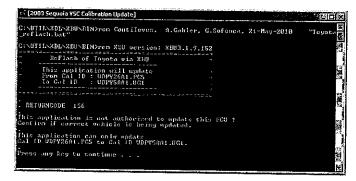
If any Pending, Current, and/or History DTCs are set, troubleshoot according to the repair manual.

6. TEST DRIVE THE VEHICLE AND INSPECT FOR ANY PROBLEMS

- CAMPAIGN COMPLETE -

VI. APPENDIX

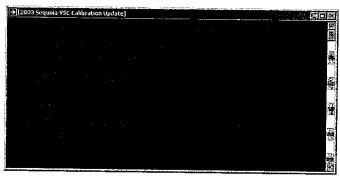
Only refer to this appendix if you have received a red or black error screen after attempting to reprogram the Skid Control ECU.



RETURNCODE 156: Wrong Calibration ID Number:

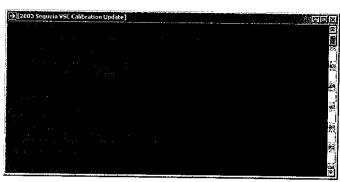
Cause:

This Skid Control ECU is not part of this safety recall.



RETURNCODE 2222: Software Corrupt

Ensure you have Windows XP admin rights. Uninstall and reinstall the software.



RETURNCODE 226: Connection time out.

Proceed with the Troubleshooting Chart on the next page:

RETURNCODE 226 Troubleshooting Chart

