


Release Date	4/26/2022	<b>Technical Service Bulletin</b>	
<b>93N6 UPDATE</b>			 <b>Audi</b>
<b>Software Update for Battery Modules Control Unit – (NVLW)</b>			

#### Applicable Vehicles

Country	Beginning Model Year	Ending Model Year	Vehicle	Vehicle Count
USA	2019	2022	E-TRON QUATTRO	20,067
USA	2020	2022	E-TRON SPORTBACK QUATTRO	3,968
CAN	2019	2022	E-TRON QUATTRO	1,349
CAN	2020	2022	E-TRON SPORTBACK QUATTRO	505

#### Revision History

Revision	Date	Purpose
2	02/14/2024	Updated work procedure information
1	4/26/2022	Original publication

## Condition/Technical Background

This Update has been proactively released to prevent the following condition(s) from occurring in the vehicle:	
Criteria	Technical Background
S1	A software update is necessary on Audi e-tron vehicles manufactured within a specific period. The battery system of an electric vehicle consists of a large number of individual battery cells. These cells have the same capacity and slightly different cell voltages. Without a balancing function, the capacity of the entire system would align itself with the capacity of the weakest cell. In addition, individual cells could be overloaded and age more rapidly. The efficiency of the balancing function may be affected by a possible error in the cell voltage measurement. This software update optimizes the function of the control unit with respect to balancing and stabilizes the cell voltage measurement.

## Remedy

Criteria	Remedy
S1	Update of the battery modules control units and, if necessary, further control units in the system will be updated on the vehicles affected.

This Update is in effect until removed.

Vehicle must meet all of the following criteria:

- Procedure is valid only for vehicles that show the **93N6** code in the Elsa Campaign/Action Information screen on the day of repair.
- Vehicle must be within the New Vehicle Limited Warranty.
- Procedure must be performed within the allotted time frame stated in this Technical Service Bulletin.
- Procedure must be performed on applicable vehicles in dealer inventory prior to sale.

## Service

### NOTE:

- Elsa is the only valid inquiry/verification source. Check Elsa on the day this vehicle UPDATE will be performed to verify vehicle eligibility for the UPDATE. Status must show “open”. Attach an Elsa printout showing the “open” status to the repair order.
- If this UPDATE appears to have already been performed but the code still shows open in Elsa, contact Warranty before proceeding further. Another dealer may have recently performed this UPDATE but not yet entered a claim for it in the system.
- Elsa may also show additional open action(s); if so, inform your customer - this work can be done while the vehicle is in for this UPDATE.
- Contact the Warranty Helpline (U.S.) or the Warranty Campaign Specialist (Canada) if you have any questions.

Applicable criteria ID(s)	Campaign/Action Status
01 ← 2	Open ← 1

EXAMPLE

Campaign/Action	Start	Designation
← 3	2015-11-10	W-SERV_ACT -
	2018-12-13	RECALL -
	2017-05-16	A-RECALL -

EXAMPLE

- Enter the VIN in Elsa and proceed to the “Campaign/Action” screen.

#### TIP

On the date of repair, print this screen and keep a copy with the repair order.


- Confirm the Campaign/Action is open <arrow 1>. If the status is closed, no further work is required.
- Note the Applicable Criteria ID <arrow 2> for use in determining the correct work to be done and corresponding parts associated.

#### CRITICAL REPAIR STEP



If multiple software update Campaign/Actions are open, they must be performed in order of the Start date <arrow 3>. The oldest should be performed first, unless specified otherwise.

- **All Safety Recalls must be completed prior to completing this campaign.**

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## SVM Update Instructions

# IMPORTANT STEP!


## Review the open campaign list before performing this software update!

If the 93V2 or 93U9 safety recall is open, complete those campaigns before the 93N6. The software update in the 93N6 will erase the high-voltage battery historical data and will lead to an inaccurate evaluation of the high-voltage battery cell modules.

### NOTE

**Prior to launching the VAS Diagnostic Tester and starting an update, ensure the following conditions are met;**

- ✓ **The ODIS software is completely up to date.**
  - Refer to the “Alerts” section on ServiceNet home page for the current ODIS version.
- ✓ **The battery charger is connected to the vehicle battery and remains connected for the duration of the software update.**
  - Battery voltage must remain above 12.5 volts for the duration of the software update. Failure to do so may cause the update to fail, which could result in damage to the control module. Control modules damaged by insufficient voltage will not be covered.
- ✓ **The screen saver and power saving settings are off.**
  - Failure to do so may result in the tester entering power save mode during the software update, which could result in damage to the control module.
- ✓ **The VAS Diagnostic Tester is plugged in using the supplied power adapters.**
  - Under no circumstances should the tester be used on battery power alone during the software update. Failure to do so may result in the tester powering off during the update, which could result in damage to the control module.
- ✓ **Flash process through “Audi Flashing” not Guided Fault Finding (GFF).**
  - DO NOT USE Guided Fault Finding (GFF) to perform this flash. Using GFF will cause the flash to take longer. Requests for additional time will not be considered.
- ✓ **The VAS Diagnostics Interface MUST ONLY be connected to the tester with a USB cable.**
  - Performing a software update using a Bluetooth or WiFi connection increases the risk of losing connection during the update, which could result in damage to the control module. It also greatly increases the time required to perform the update. Requests for additional time or parts will be denied if the GFF log shows the update was performed using Bluetooth or WiFi.

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**TIP**

As a best practice, customer presets should be documented prior to performing any update in the event these settings are lost during the update.

**NOTE**

- All campaign software updates must be completed during a single, standalone ODIS Diagnostic Session. You must fully complete this campaign and send all logs before beginning any other campaigns or operations.
- If there are any ODIS “Hot-Fix” patches installed, they must be removed from the scan tool before beginning this operation. ODIS “Hot-Fix” patches may affect the update process.

**WARNING**

Radiator Fan(s) may cycle ON high speed during the Update Process! There is a serious risk that personal injury may result if contact is made with spinning fan blades. Keep hands and all objects away from Radiator Fan(s) during Update Process!

**TIP**

To Update-Programming using SVM, review and follow instructions in Technical Bulletin 2014603: *Software Version Management (SVM) Operating Instructions*.

The SVM Process must be completed in its entirety so the database receives the update confirmation response. A warranty claim may not be reimbursed if there is no confirmation response to support the claim.

- Open the hood.
- Open the battery cover.
- Attach the GRX3000VAS Tester/Charger (or equivalent) IN POWER SUPPLY MODE to the vehicle battery or underhood charging posts.

**NOTE**

When connecting the charger directly to the battery, connect the positive cable to the positive terminal of the battery and connect the negative cable to the grounding lug on the chassis. DO NOT connect the ground cable directly to negative terminal of the battery.

- Switch on the hazard warning lights.

**CAUTION**

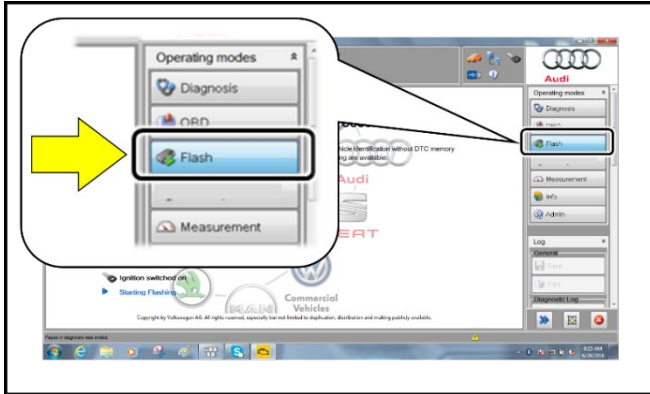
The procedure may cancel itself if the hazard warning lights are not switched on. The hazard warning lights prevent the system from switching to bus sleep mode during the update.

- Connect the VAS6150X/VAS6160X Diagnostic Tester to the vehicle.
- Start the ODIS program.
- Confirm that scan tool is communicating with the diagnostic head by USB cable.
  - If the Bluetooth or WiFi symbol is shown, then disconnect the diagnostic head from the vehicle and reconnect the USB cable to the diagnostic head and then reattach to the vehicle.



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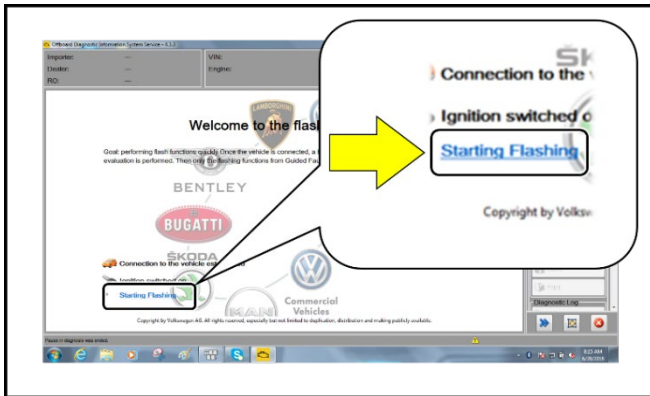
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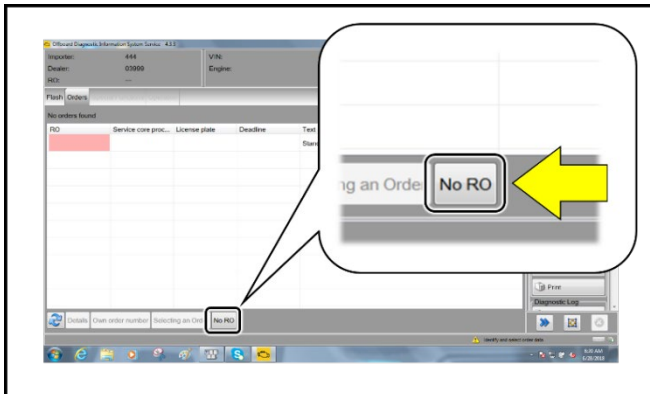
- From the home screen of the scan tool highlight “Flash” <1>.
- Follow the on-screen prompts.

**NOTE**

Operating mode “Flash” must be used. Performing this software update using “Diagnosis” (Guided Fault Finding) could result in non-payment of the claim.



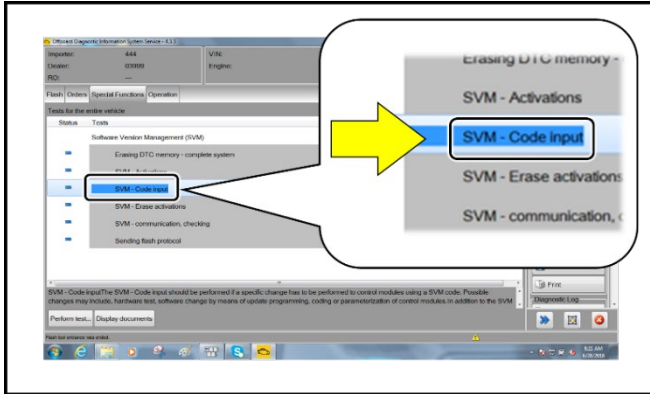
- Select “Starting Flashing” and follow the on-screen prompts.



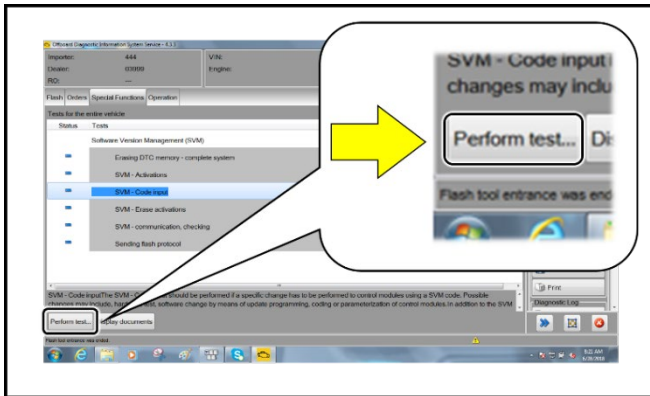
- Select “No RO”.

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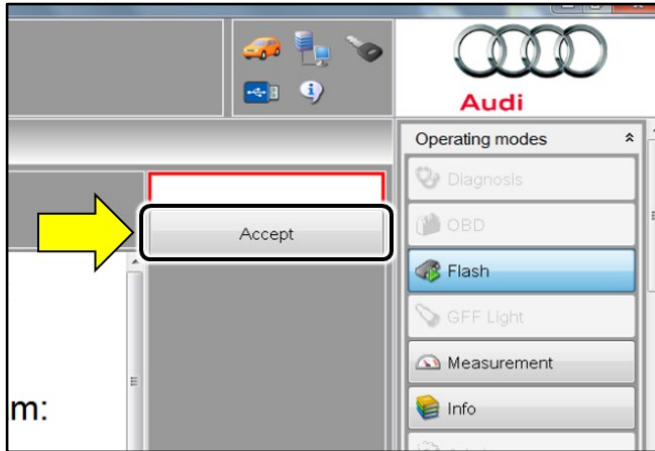
- Highlight “SVM – Code Input”.



- Select “Perform test”.

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**NOTE**

**Using Bluetooth or WiFi for this action is PROHIBITED!**

Damage caused to electronic components (e.g. ECM, TCM, etc.) during the SVM flash process is not covered.

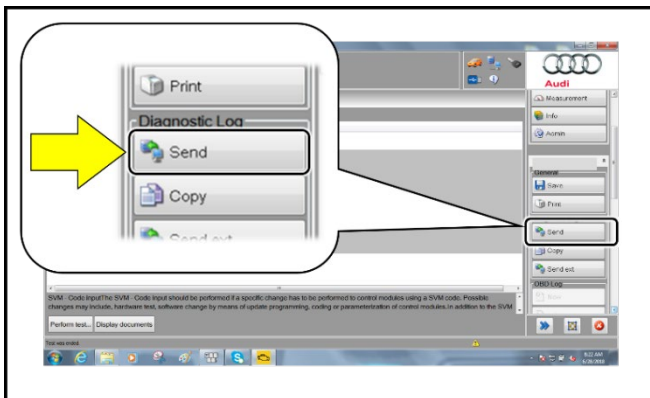
**IMPORTANT STEP!**

**Review the open campaign list before performing this software update!**

If the 93V2 or 93U9 safety recall is open, complete those campaigns before the 93N6. The software update in the 93N6 will erase the high-voltage battery historical data and will lead to an inaccurate evaluation of the high-voltage battery cell modules.

<b>SVM code</b>
<b>93N6A268</b>

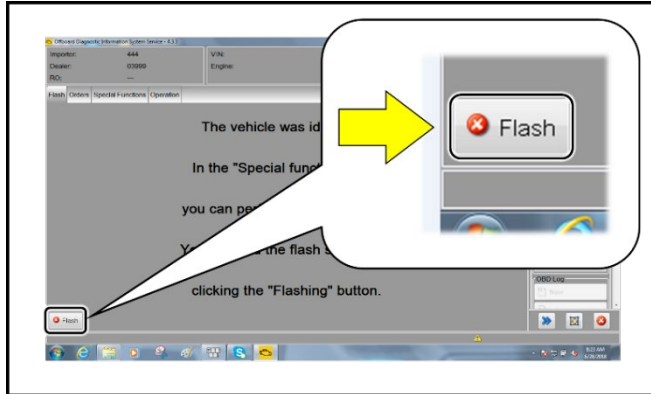
- Enter the corrective action code (SVM code) as listed above.
- Select “Accept” <arrow>.
- Follow the on-screen prompts.
- After receiving confirmation that the flash completed successfully, select “Send” <arrow> to send the diagnostic protocol online.
- Follow the on-screen prompts.






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- Click "Flash" <arrow> to exit the flash session.
- Various event memory entries may be generated after the flashing procedure on some vehicles. Put the vehicle in a corresponding bus sleep mode after performing the update in order to clear the faults.
- To put the vehicle in bus sleep mode, disconnect the diagnostic tester, remove the key from the vehicle and lock the vehicle with the remote for 6 minutes.

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## Warranty


<b>Claim Entry Instructions</b>			
After Update has been completed, enter claim as soon as possible to help prevent work from being duplicated elsewhere. Attach the Elsa screen print showing action <u>open on the day of repair</u> to the repair order.			
If customer refused campaign work or vehicle is out of the specified warranty parameter for this Update:			
<ul style="list-style-type: none"> <li>✓ <u>U.S. dealers:</u> Submit the request through Audi Warranty Online under the <u>Campaigns/Update</u> option.</li> <li>✓ <u>Canada dealers:</u> Upload the repair order to Audi WIN/Operations/Campaign Closure.</li> </ul>			
<b>Service Number</b>	93N6		
<b>Damage Code</b>	0099		
<b>Parts Vendor Code</b>	002		
<b>Claim Type</b>	Sold vehicle: 7 10 Unsold vehicle: 7 90		
<b>Causal Indicator</b>	Mark labor as causal		
<b>Vehicle Wash/Loaner</b>	Do not claim wash/loaner under this action		
<b>Criteria I.D.</b>	S1		
	<b>LABOR</b>		
	<b>Labor Op</b>	<b>Time Units</b>	<b>Description</b>
	2706 89 50	10	Connect battery charger
	9301 25 99	Time stated on diagnostic protocol	Update battery module control module software
	9035 33 99	10	Activate bus sleep mode

**Additional Actions** Some of the affected vehicles may be involved in additional Actions. Please check your Elsa Campaign/Action Information screen so that any *additional required work can be done simultaneously*.



**Verifying Vehicle Eligibility** To verify vehicle eligibility for this Update, *always* check the Elsa Campaign/Action Information screen. The Elsa system is the *only* binding inquiry and verification system; other systems are not valid and *may result in non-payment* of a claim.

**Help for Claim Entry** For questions regarding claim entry, contact Audi Warranty.

**Required Customer Notification** Inform your customer in writing by recording on the Repair Order any and all work that was conducted on the vehicle, including any and all updates completed under this Update.

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## Required Special Tools

	<p>Battery Tester/Charger</p> <p>- GRX3000VAS-</p> <p>(or equivalent)</p>		<p>Diagnostic Tester</p> <p>-VAS6150X/VAS6160X-</p> <p>(or equivalent)</p>
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## Additional Information

All parts and service references provided in this Update are subject to change and/or removal. Always check Elsa for the most current version of this document.