

**TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL C0M
POWER WINDOW MASTER SWITCH PHASE 1 & 2
CERTAIN
2007 – 2009 MODEL YEAR CAMRY
2007 – 2009 MODEL YEAR CAMRY HYBRID
2009 – 2010 MODEL YEAR COROLLA
2008 – 2011 MODEL YEAR HIGHLANDER
2008 – 2011 MODEL YEAR HIGHLANDER HV
2009 – 2010 MODEL YEAR MATRIX
2006 – 2010 MODEL YEAR RAV4
2008 – 2011 MODEL YEAR SCION xB
2008 – 2011 MODEL YEAR SCION xD
2008 – 2011 MODEL YEAR SEQUOIA
2007 – 2011 MODEL YEAR TUNDRA
2006 – 2010 MODEL YEAR YARIS**

Technician Training Requirements

The training requirements that were in effect at the initial launch of C0M in October, 2012 will remain applicable until November 30, 2015. In late October, 2015 an updated elearning module SCC0M2 will be available, an announcement will be sent informing technicians when this course is available. Starting on December 1, 2015 the training requirements will be updated and all technicians performing C0M **MUST** meet the updated training requirements.

Initial Training Requirements

In order to perform this campaign, technician must have completed training course SCC0M. Training courses 623, 652 are prerequisites to completing SCC0M. There are two ways to receive credit for SCC0M:

1. Review training video and technical instructions, then complete a survey.
(This survey is no longer available, option 2 must be utilized)
2. Receive hands on training from the region.

If you have questions regarding training, contact your regional representative.

Updated Training Requirements – In effect starting 12/1/2015

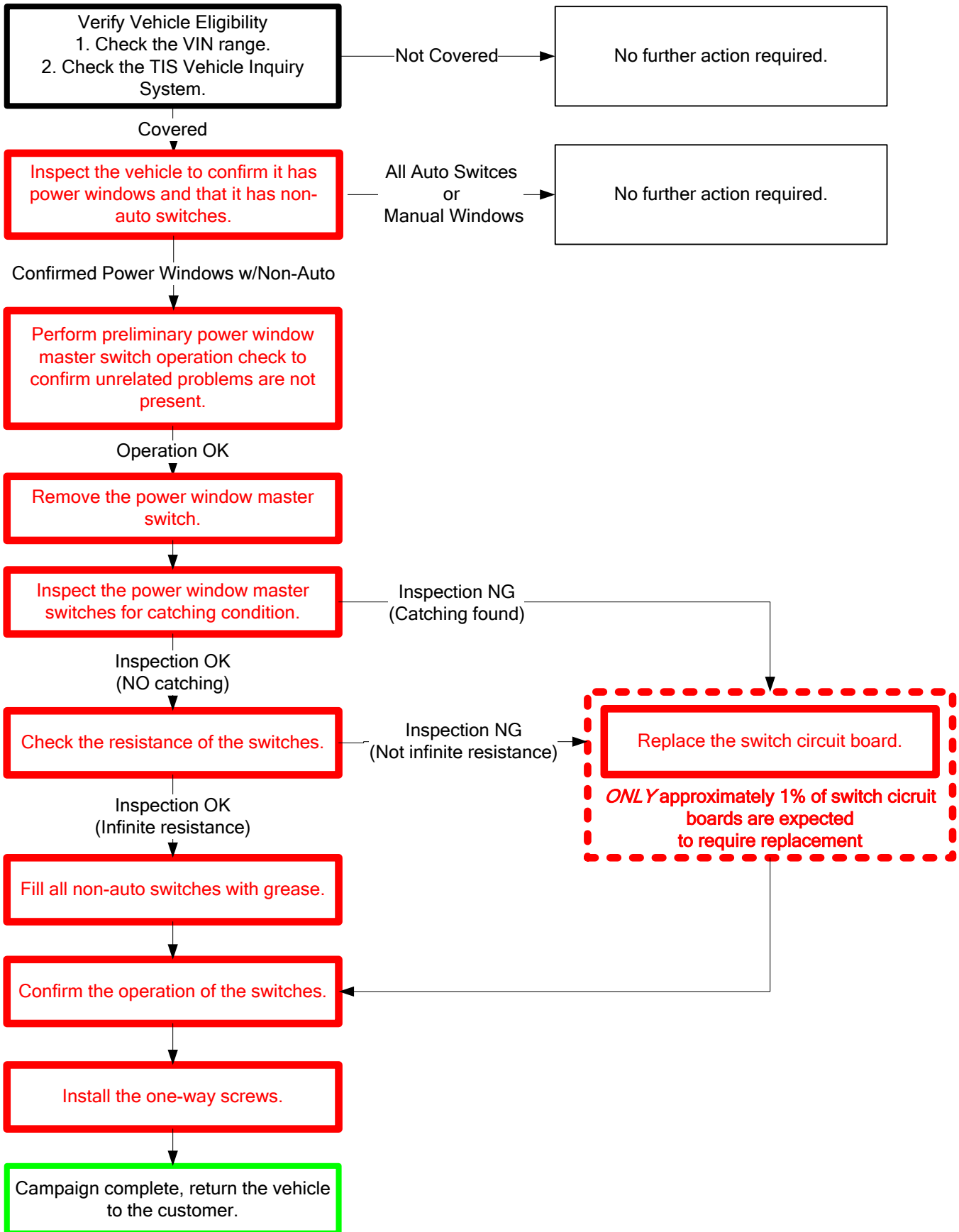
The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this repair are required to successfully complete the most current version of the E-Learning course “Safety Recall and Service Campaign Essentials”. To ensure that all vehicles have the repair performed correctly; technicians performing this repair **must successfully complete elearning SCC0M2 AND** are required to currently hold at least one of the following certification levels:

- Certified Technician (any specialty)
- Expert Technician (any specialty)
- Master Technician
- Master Diagnostic Technician

It is the dealership’s responsibility to select technicians with the above certification level or greater to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

[Complete C0M Technical Video Supplement](#)

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

- 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. PARTS

The large majority of vehicles will require these parts (approximately 99%).

Part Number	Part Description	Quantity	Note
04002-18242	Grease*	1	-
04002-18342	One-Way Screw**	3	With power rear windows
		2	Without power rear windows

*Approximately 0.5 to 0.9 ml is needed per vehicle (One tube contains 50 ml)

**The one-way screw is a quantity pack that contains 75 screws, each PWMS will use 2 or 3 screws

Only a small number of vehicles (approximately less than 1%) will require the replacement of the window switch circuit board. Follow the inspection process in these instructions to determine if replacement is necessary. If it is identified that a window switch circuit board requires replacement, use the following website to identify the part needed. Due to the part number complexities, this website has been created to assist with parts identification. <http://c0m-lookup.imagespm.info>

B. TOOLS & EQUIPMENT

- Standard hand tools
- Molding removal set
- DVOM
- Protective tape

Campaign Tools – These tools are provided to the dealership.

Part Number	Part Name	Quantity
-	Syringe Set	1

Part Number	Part Name	Quantity
-	Syringe	2
-	Adapter	1
-	Nozzle	2

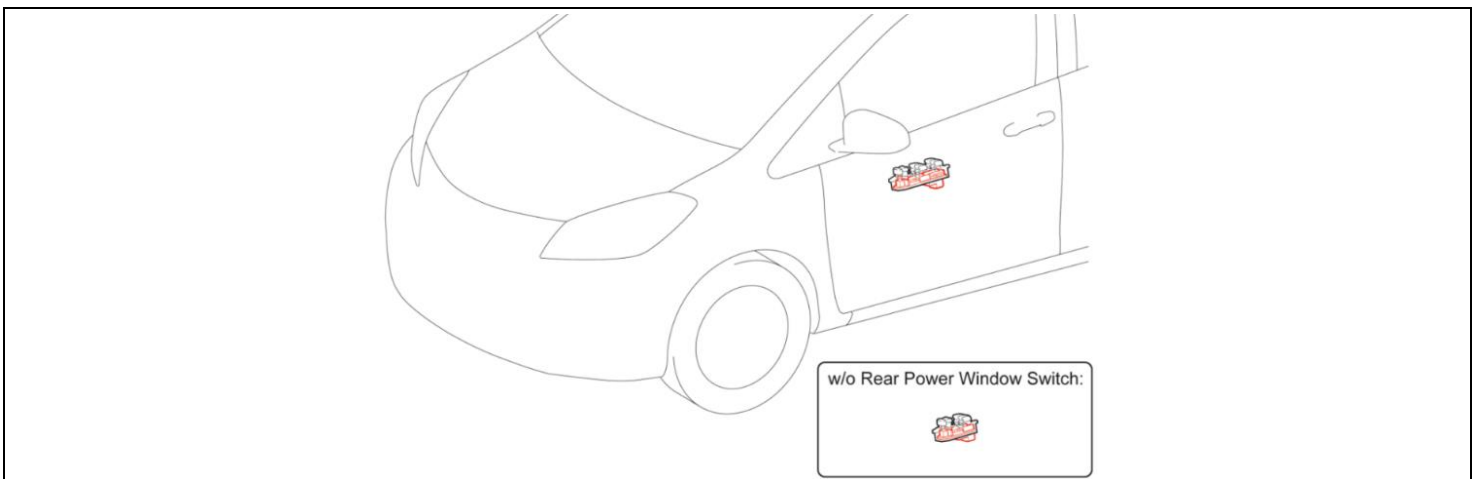
NOTE: These tools **CANNOT** be ordered through the parts system. If additional tools are needed, contact your regional representative.

IV. BACKGROUND

The Power Window Master Switch in the Phase 2 vehicles may have been manufactured with insufficient lubricant grease. If sufficient grease is not applied, under certain conditions the switch may develop a short circuit that can cause the switch assembly to overheat and melt. A melting switch can produce smoke and potentially lead to a fire.

Toyota previously recalled certain 2007 – 2009 model year vehicles for a similar condition. This Safety Recall adds vehicles not previously involved in the prior action that utilized an alternative lubricant application method.

V. COMPONENTS



VI. VEHICLE CONFIGURATION INSPECTION

INSPECT THE VEHICLE WINDOW CONTROLS TO CONFIRM APPLICABILITY



With the expansion of COM a small number of vehicles may indicate on TIS that they are involved in COM that do not contain the affected switches or have manual/hand crank windows. Perform the following inspection to confirm that the vehicle needs to have the remedy performed.

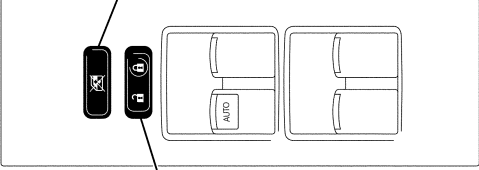
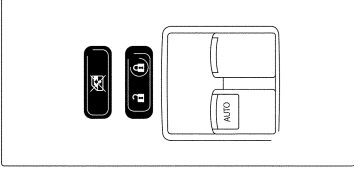
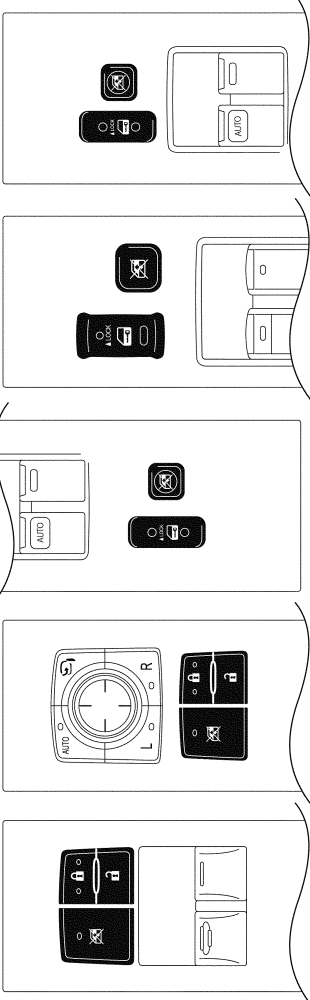


A. CHECK THE VEHICLE FOR HAND CRANK WINDOWS

CONDITION	ACTION REQUIRED
<i>Vehicle contains power windows</i>	Proceed to STEP B. CHECK PWMS CONFIGURATION
<i>Vehicle contains hand crank windows</i>	No further action required, vehicle not affected by this recall.

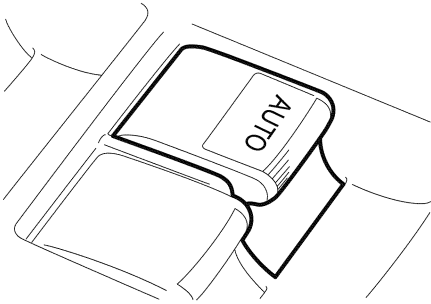
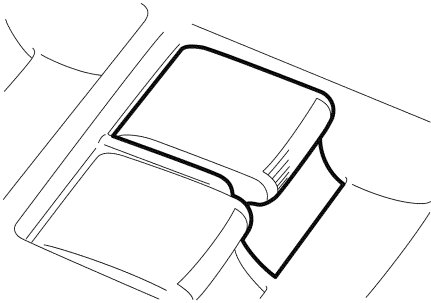
B. CHECK THE PWMS CONFIGURATION

1. Check the position and orientation of the window lock and door lock switch.

PWMS Configuration	ACTION REQUIRED
<p>w/ Rear Power Window Switch:</p> <p>Window Lock Switch</p>  <p>Door Lock Switch</p>	<p>PWMS affected, proceed to step C on the next page.</p>
<p>w/o Rear Power Window Switch:</p> 	
	<p>PWMS not affected, no further action is required.</p> <p>Vehicle is not affected by this recall.</p>

C. CONFIRM IF THE DRIVER'S WINDOW HAS AUTO DOWN FUNCTION

1. Inspect the driver's side window switch to confirm that it has auto imprinted onto the switch.

PWMS Configuration	ACTION REQUIRED
	<p>PWMS affected, proceed to section VII for preliminary PWMS switch operation check.</p>
	<p>PWMS not affected, no further action is required.</p> <p>Vehicle is not affected by this recall.</p>

VII. PRELIMINARY POWER WINDOW MASTER SWITCH OPERATION CHECK

1. CHECK THE FOLLOWING OPERATIONS OF THE POWER WINDOW MASTER SWITCH

- a) Lock and unlock switch operation.
- b) Up and down operation for each window.
- c) Auto function of AUTO switch(s).
- d) Window lock switch operation.
- e) Illumination of 'AUTO' on auto switches (headlights must be on to confirm this)

2. IF ANY OF THE ABOVE OPERATIONS DO NOT PERFORM CORRECTLY, DIAGNOSE AND REPAIR AS OUTLINED IN THE REPAIR MANUAL.

NOTE: If an issue is found in a component other than the PWMS, the repair of that component *WILL NOT* be covered under this campaign.

VIII. POWER WINDOW MASTER SWITCH REMOVAL

1. REMOVE THE POWER WINDOW MASTER SWITCH AS OUTLINED IN THE REPAIR MANUAL ON TIS

- [CAMRY](#)
- [CAMRY HYBRID](#)
- [COROLLA](#)
- [HIGHLANDER](#)
- [HIGHLANDER HV](#)
- [MATRIX](#)
- [RAV4](#)
- [SCION xB](#)
- [SCION xD](#)
- [SEQUOIA](#)
- [TUNDRA](#)
- [YARIS LIFTBACK](#)
- [YARIS SEDAN](#)

NOTE:

- To prevent the window from moving unexpectedly, open and close the door after turning the ignition off to stop power-window key-off operation.
- Apply protective tape to interior panels to avoid damage.

IX. POWER WINDOW MASTER SWITCH OPERATION INSPECTION

[Video Supplement: Introduction & Switch Catching Inspection steps](#)

PWMS ASSEMBLY REPLACEMENT CRITERIA



- Damage (hole or deformation) is visible on the outside of the switch housing.
- Damage confirmed on the inside of the housing preventing smooth operation of the switch levers.
- Damage confirmed on the base to which the circuit board mounts.

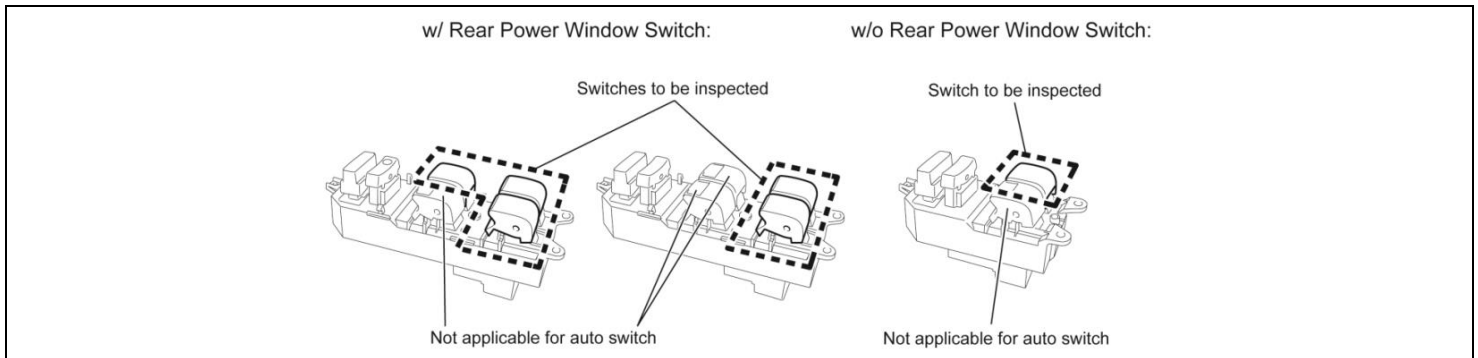


If none of these conditions are found during the inspection, **DO NOT** replace the PWMS assembly. The PWMS assembly **DOES NOT** need to be replaced if the visible damage is isolated to the circuit board. A very small number of vehicles will require PWMS assembly replacement.

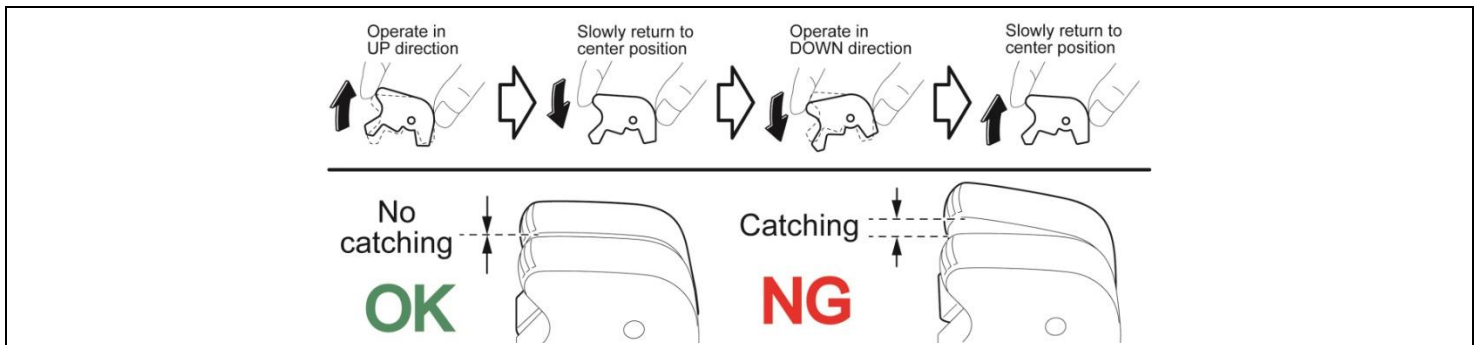
A. CHECK THE SWITCHES FOR CATCHING CONDITION

1. Check all switches that do not have the AUTO function.

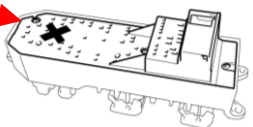
NOTE: The AUTO switch is of a different design; therefore, no inspection is necessary.



2. Operate each switch in the up direction, then slowly return the switch using two fingers. **Perform this operation several times.**
3. Operate each switch in the down direction, then slowly return the switch using two fingers. **Perform this operation several times.**

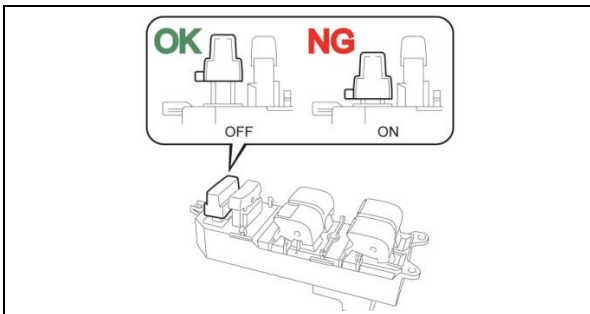


- **ALL** switches that **ARE NOT AUTO MUST** be inspected.
- The switches **MUST** be operated slowly, otherwise the catching cannot be noticed.
- The switches **MUST** be operated with two fingers, otherwise the catching cannot be noticed.
- The switches may feel unsmooth, this **DOES NOT** mean the switch is NG.
- Only a small number of vehicles (approx. 1%) will require the replacement of this part.

CONDITION	ACTION REQUIRED
NONE of the switches are catching.	Proceed to STEP B. CHECK THE RESISTANCE OF THE SWITCHES
One or more of the switches are catching.	<ol style="list-style-type: none"> 1. Mark the NG circuit board with an 'X' so that it is not reused. 2. Replace the power window master switch circuit board. <p>Proceed to STEP B, 1-2 for switch disassembly instructions. NOTE: There is NO NEED to apply grease to the new circuit board.</p> 

B. CHECK THE RESISTANCE OF THE SWITCHES

[Video Supplement: Switch Resistance Inspection steps](#)

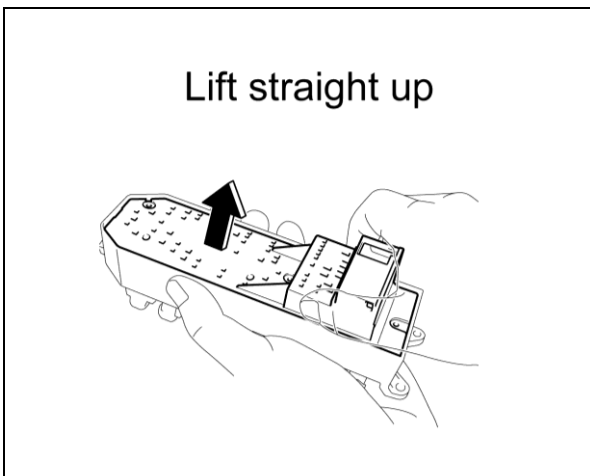


1. REMOVE THE WINDOW LOCK BUTTON

- Turn the window lock switch to the OFF position.
- Pull the button up to remove it from the switch assembly.



- Removing the lock button while it is turned ON may damage the switch.
- To prevent damage, **DO NOT** use tools.



2. REMOVE THE SWITCH CIRCUIT BOARD

- Remove the screws.
- Lift the switch board straight up to remove it.

NOTE: There are 3 screws for switches with power rear windows, 2 screws for switches without power rear windows.



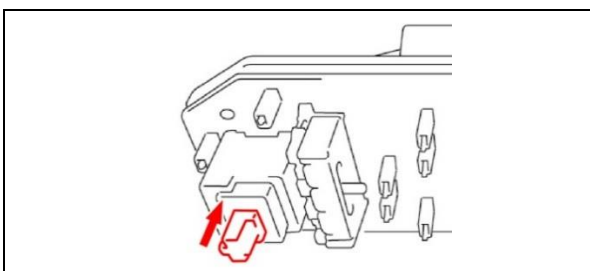
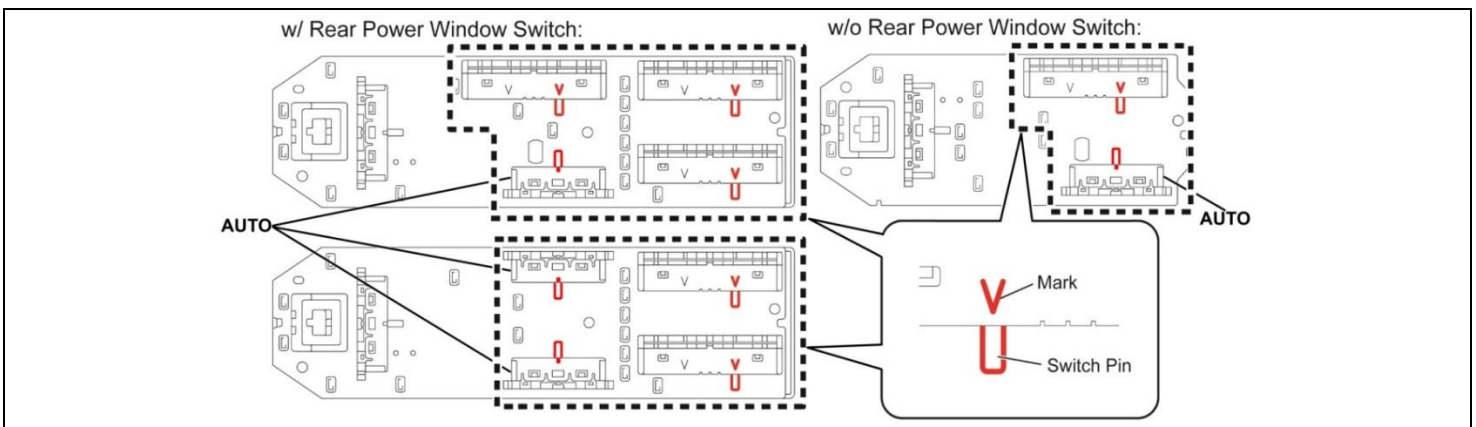
- If the circuit board is being replaced due to a catching condition found in STEP A, proceed to SECTION X. SWITCH REASSEMBLY.
- DO NOT** reuse the screws that have been removed, new one-way screws **MUST** be used.

3. POSITION THE SWITCHES

- Align each switch pin with the 'V' mark on all switches that do not have AUTO function.
- Align the switch pin with the center line on all AUTO function switches.



- If the AUTO switches are not aligned correctly, the readings may be inaccurate.
- The switches **MUST** be in this position when checking the resistance. This is the OFF position, if the switch is in any other position, the reading will be incorrect.
- ALL** switches that **ARE NOT** AUTO **MUST** be checked.



- Push the window lock button so that it is in the down position.



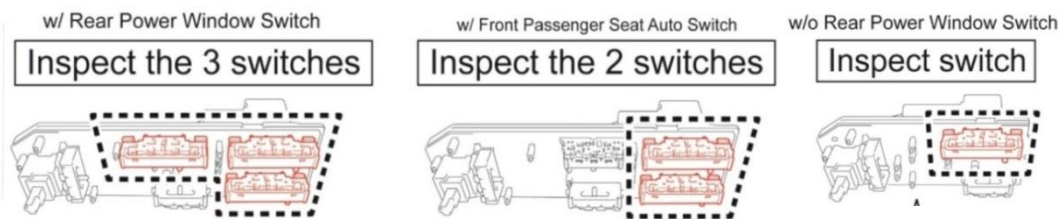
- If the window lock button is not in the down position, the readings may be inaccurate.

4. CHECK THE RESISTANCE OF THE SWITCHES

- Perform the ZERO calibration function on the DVOM.
- Measure the resistance between points A-B and points B-C.



- If the the ZERO calibration function is not performed, the readings may be inaccurate.
- Set the DVOM to the maximum resistance range.
- DO NOT** touch any metal other than points A, B, C on the circuit board when checking resistance.
- The points being checked are small, confirm the probes are contacting the correct points.
- ALL** switches that **ARE NOT AUTO MUST** be checked.



CAUTION: Shaded areas are resin.

OK

Correctly measure A-B and B-C.

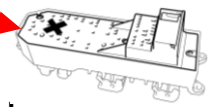
NG

Do not touch any areas other than the specified metal portions

NG

Do not touch metal portions of the board.

CONDITION	ACTION REQUIRED
Resistance value for ALL switches is infinite.	Fill the switches with grease. Proceed to SECTION IX. GREASE APPLICATION
One or more resistance value IS NOT infinite.	1. Mark the NG circuit board with an 'X' so that it is not reused. 2. Replace the power window master switch circuit board. Proceed to Section X for switch reassembly instructions. NOTE: There is NO NEED to apply grease to the new circuit board.



PWMS ASSEMBLY REPLACEMENT CRITERIA



- Damage (hole or deformation) is visible on the outside of the switch housing.
- Damage confirmed on the inside of the housing preventing smooth operation of the switch levers.
- Damage confirmed on the base to which the circuit board mounts.

If none of these conditions are found during the inspection, **DO NOT** replace the PWMS assembly. The PWMS assembly **DOES NOT** need to be replaced if the visible damage is isolated to the circuit board. A very small number of vehicles will require PWMS assembly replacement.

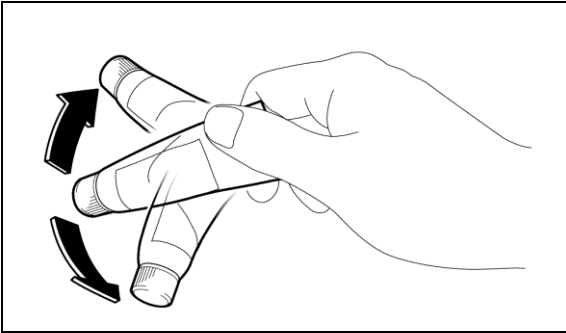


X. GREASE APPLICATION

[Video Supplement: Grease Application steps](#)



- Approximately 0.5 to 0.9 ml of grease will be needed for each circuit board assembly.
- One tube contains 50 ml of grease and will remedy approximately 50 vehicles.



A. PREPARE THE SYRINGE

1. FILL THE SYRINGE WITH GREASE

- a) With the cap on, shake the tube of grease to confirm the grease is at the mouth of the tube.

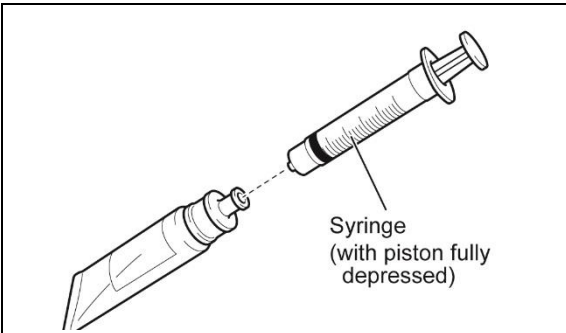
NOTE:

- Air bubbles in the grease will make filling the syringe and greasing the switches difficult.
- Wear safety glasses when filling the switches with grease.

- b) Attach the adapter to the tube of grease.

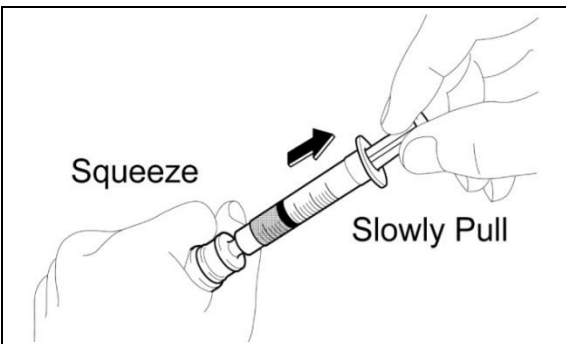
- c) Screw the syringe onto the adapter.

NOTE: Confirm the plunger is depressed prior to screwing it to the adapter.

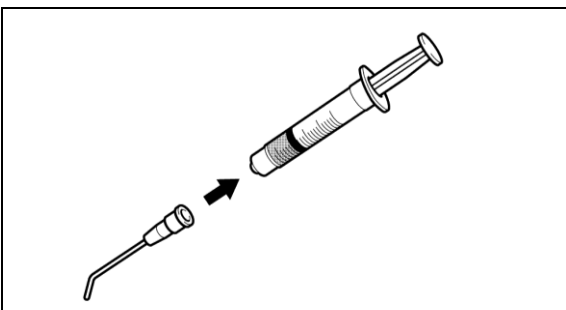


- d) Gently squeeze the tube while pulling up on the plunger to fill the syringe.

NOTE: Each circuit board assembly will require 0.5 to 0.9 ml of grease.



- e) Remove the syringe from the adapter and screw on the nozzle.



DO NOT move the plunger forcefully or rapidly



- Never forcefully or rapidly move the syringe plunger, always gently and slowly operate the plunger.
- If the grease or syringe assembly is cold there is a higher risk of tool damage due to the plastic being brittle and the viscosity of the grease, use extra caution when cold.
- The threads are made of resin so ensure not to overtighten the needle in the syringe housing.
- Do not use needle with deformation or damage at the base.

B. FILL THE SWITCHES WITH GREASE

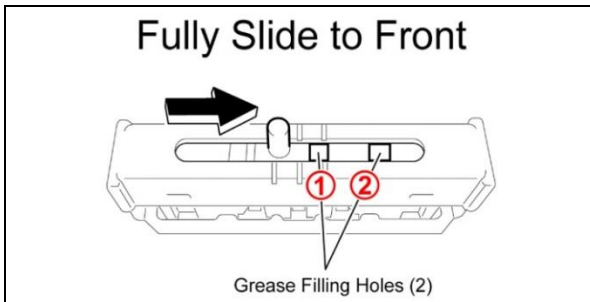


- **ALL switches that ARE NOT AUTO MUST be greased.**
- **Approximately 0.5 to 0.9 ml of grease will be needed for each circuit board assembly.**
- **Confirm a previously diagnosed NG circuit board is not being used.**

GREASING PROCEDURE OVERVIEW (for full details, follow steps 1 - 4 below)

Slide switch pins forward → Fill hole 1 → Fill hole 2

Slide switch pins rearward → Fill hole 3 → Fill hole 4



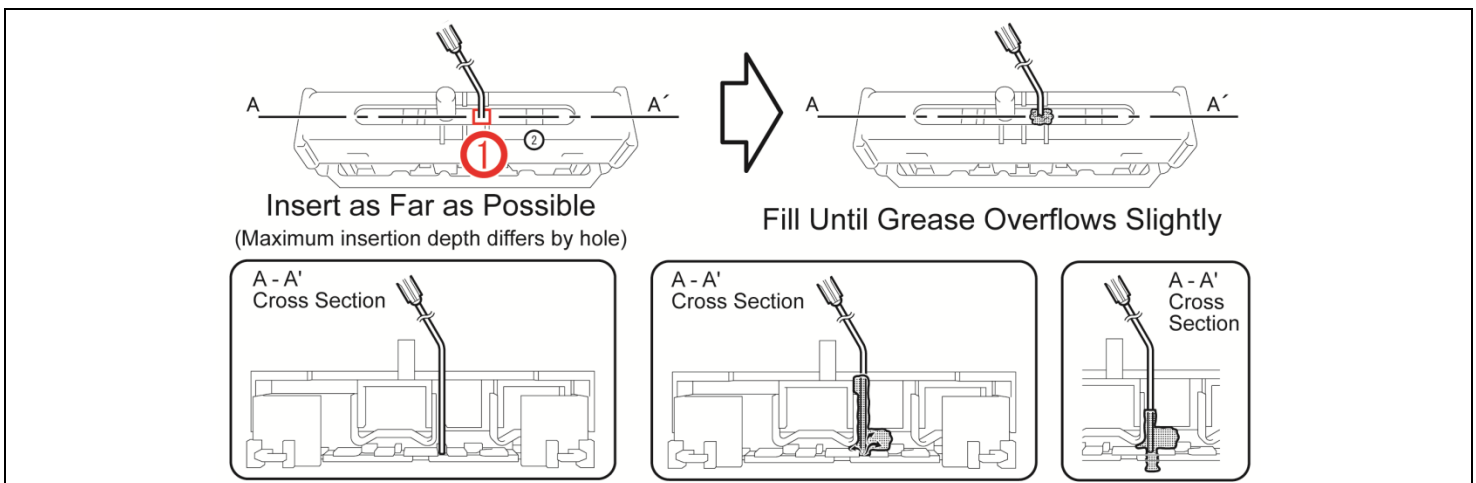
1. POSITION THE SWITCHES

- Slide the switch pins all the way to the front.

2. FILL THE SWITCHES

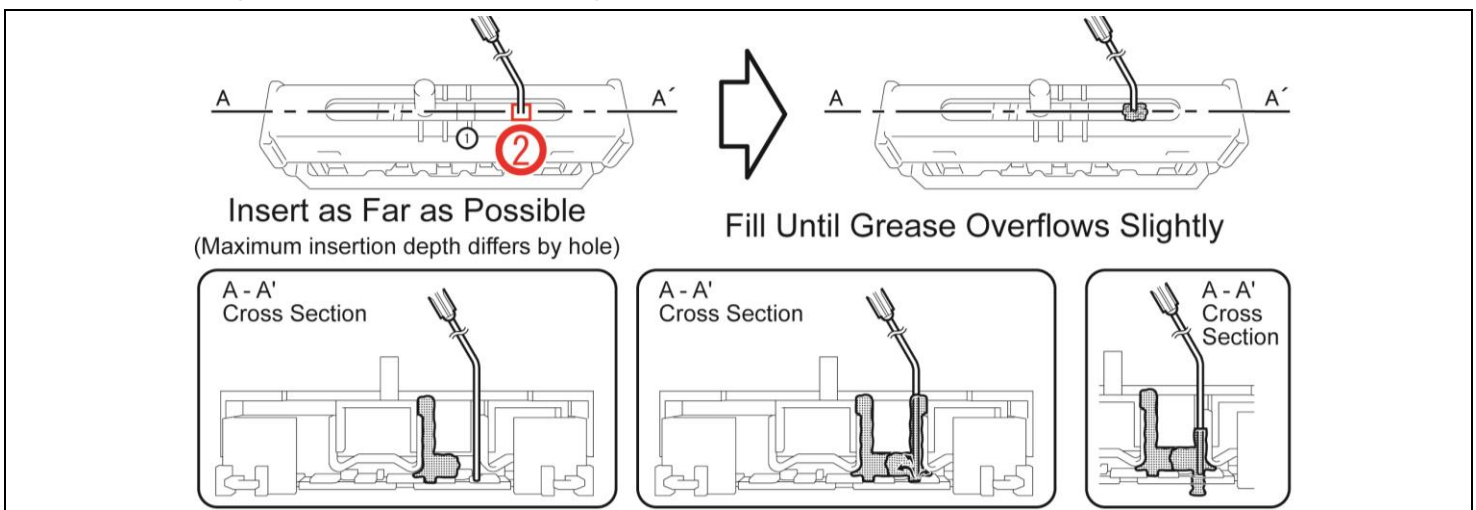
- Insert the nozzle in hole 1 as far as it will go and fill the hole with grease.
- Fill the switch until the grease begins to slightly overflow.

NOTE: The grease may overflow through the back side of the switch, this is acceptable.

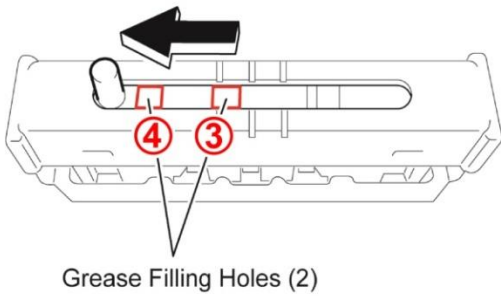


- Insert the nozzle in hole 2 as far as it will go and fill the hole with grease.
- Fill the switch until the grease begins to slightly overflow.

NOTE: The grease may overflow through the back side of the switch, this is acceptable.



Fully Slide to Rear



3. REPOSITION THE SWITCHES

- a) Slide the switch pins all the way to the rear.

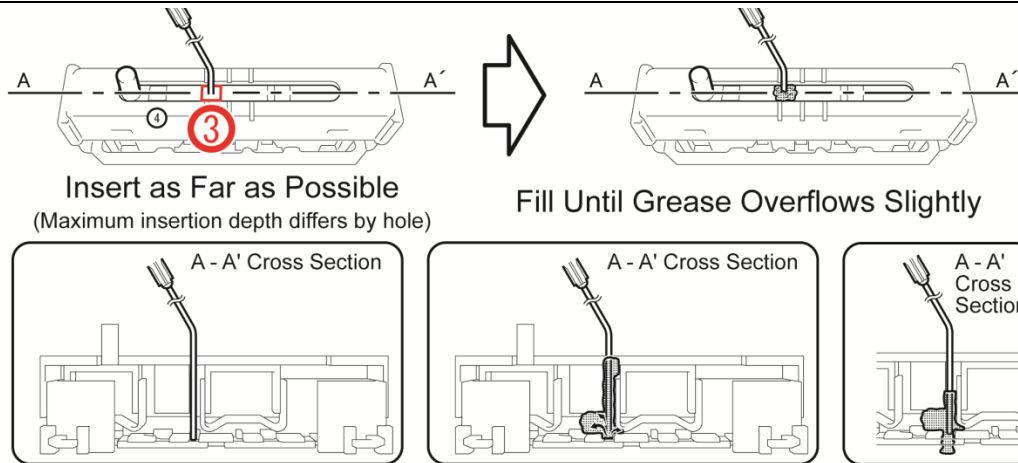


For position 3 and 4 you will be filling grease in the same holes as before, but in a different position on the switch.

4. FILL THE SWITCHES AGAIN

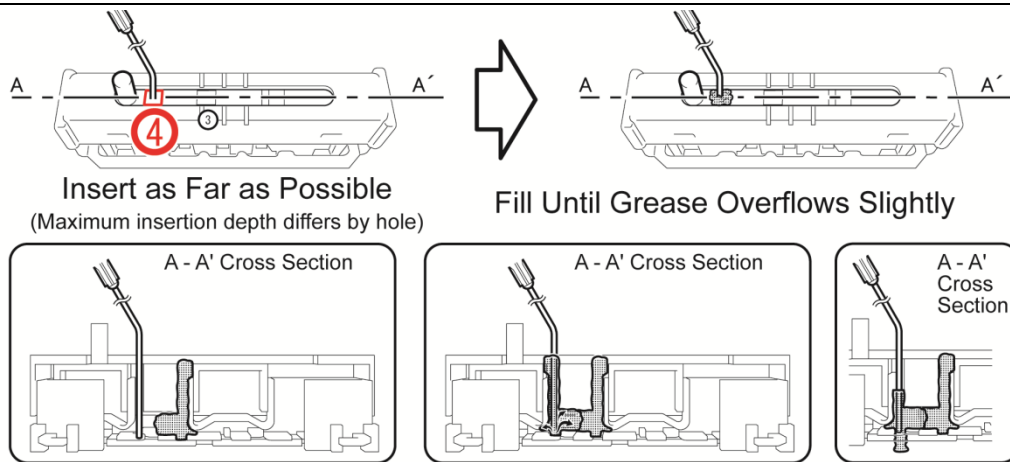
- a) Insert the nozzle in hole 3 as far as it will go and fill the hole with grease.
 b) Fill the switch until the grease begins to slightly overflow.

NOTE: The grease may overflow through the back side of the switch, this is acceptable.



- c) Insert the nozzle in hole 4 as far as it will go and fill the hole with grease.
 d) Fill the switch until the grease begins to slightly overflow.

NOTE: The grease may overflow through the back side of the switch, this is acceptable.




- **ALL switches that ARE NOT AUTO MUST be greased.**
- **Wipe up any excess grease from the switches.**

5. STORE THE SYRINGE SET TO BE REUSED ON FUTURE VEHICLES

- a) Store the syringe set in a location free from dust and debris.

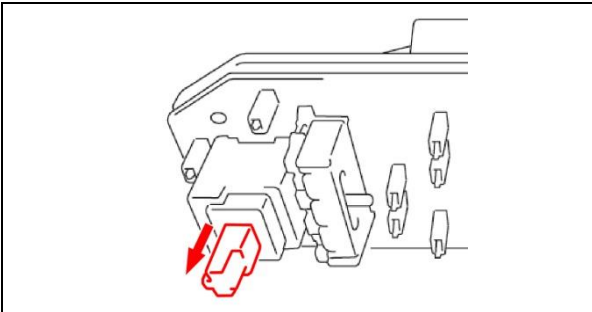
XI. SWITCH REASSEMBLY

[Video Supplement: PWMS Reassembly steps](#)



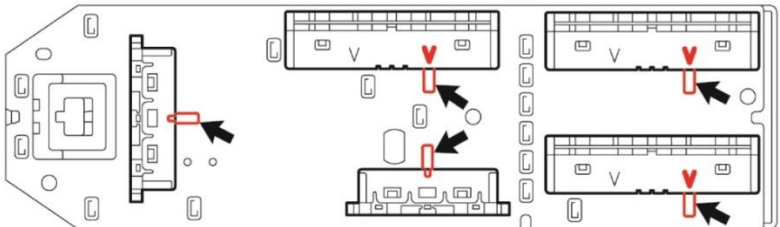
- Complete this section if grease application has been completed or if the circuit board is being replaced.
- If the switch pins are not aligned, the switches will not operate correctly after reassembly.

1. POSITION THE SWITCHES

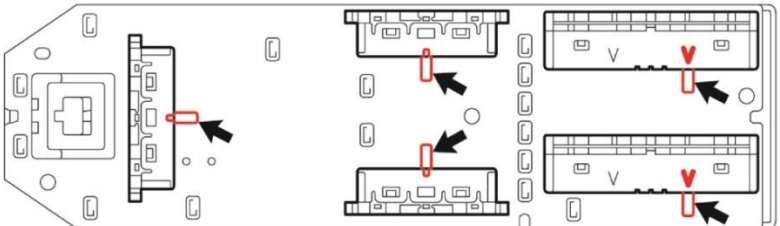


- a) Place the window lock button in the up position.
- b) Align all switch pins with the marks as shown in the illustration below.

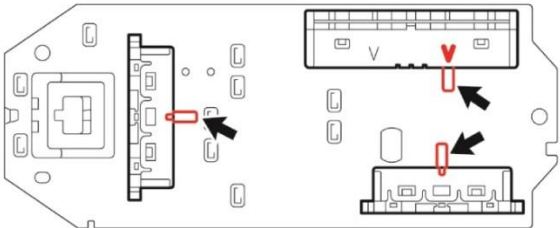
PWMS (w/AUTO driver and power rear windows)



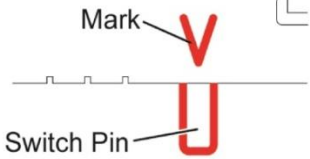
PWMS (w/AUTO driver and passenger and power rear windows)



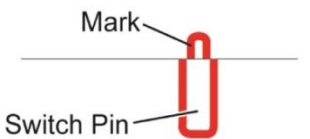
PWMS (w/AUTO driver and w/o power rear windows)

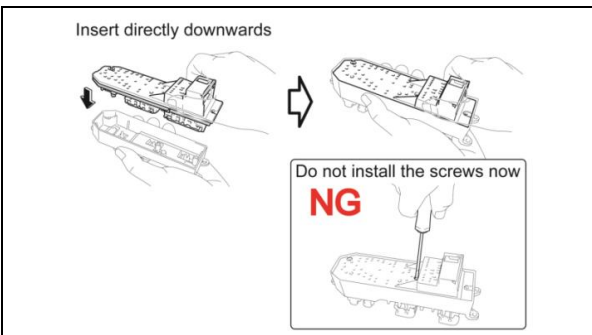


Manual switch:




Auto/Lock switch:





2. INSERT THE CIRCUIT BOARD TO THE SWITCH CASE

- a) Carefully position the circuit board in the switch case to avoid misaligning the switch pins.



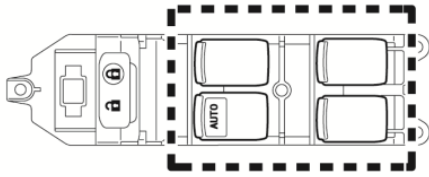
- **DO NOT** install the screws to secure the circuit board until completing the operation checks.
- **DO NOT** use the original screws.

3. CONFIRM THE OPERATION OF THE SWITCHES

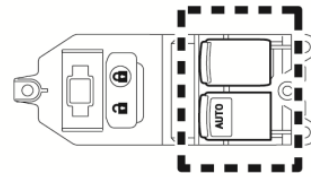
- a) While holding the circuit board in the switch case, check the operation of the switches. The movement up/down and lock/unlock position should be equal in both directions.

Window Switch

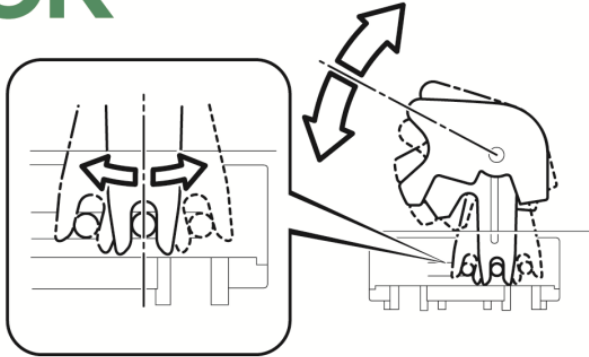
w/ Rear Power Window Switch:



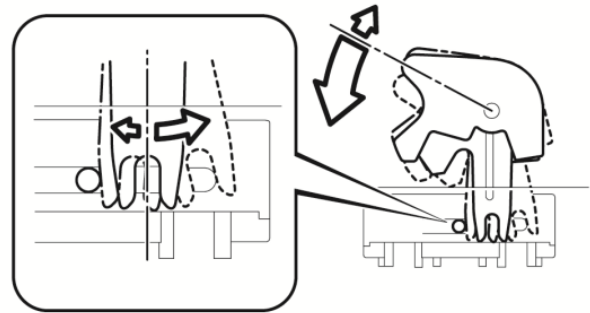
w/o Rear Power Window Switch:



OK Same Movement Amount

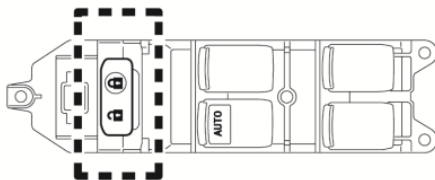


NG Movement Amount is Different

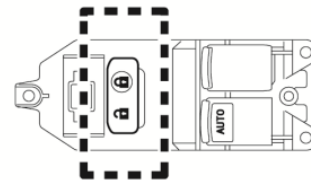


Door Control Switch

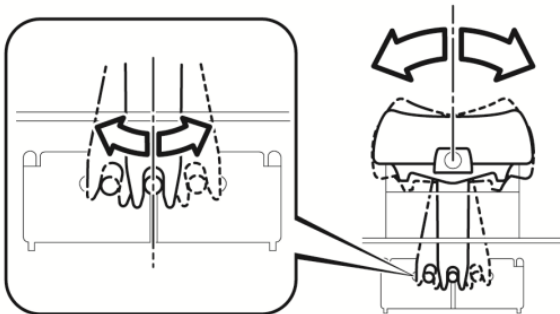
w/ Rear Power Window Switch:



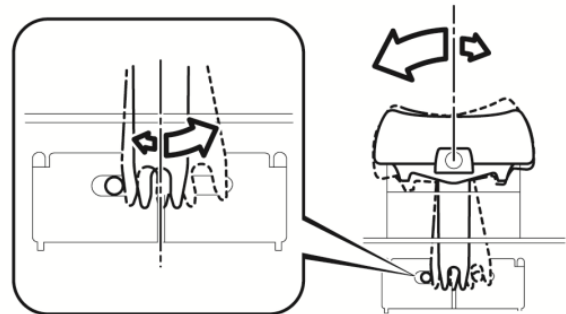
w/o Rear Power Window Switch:



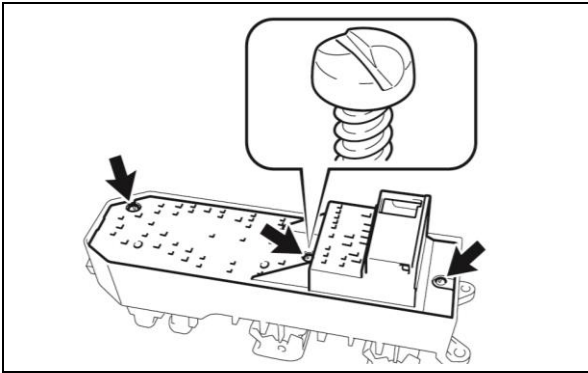
OK Same Movement Amount



NG Movement Amount is Different



CONDITION	ACTION REQUIRED
Movement is equal in ALL switches.	The circuit board is positioned correctly. Proceed to STEP 4. INSTALL THE ONE-WAY SCREWS
Movement in one or more switch IS NOT equal.	One or more switch pin is misaligned. Repeat STEPS 1-3

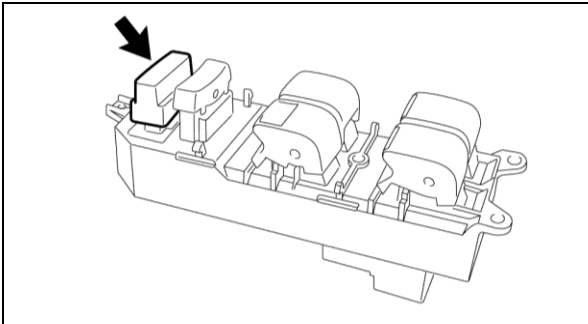


STOP **DO NOT** install the screws to secure the circuit board until completing the operation checks.

4. INSTALL THE ONE-WAY SCREWS

- a) Install the one-way screws.

NOTE: There are 3 screws for switches with power rear windows, 2 screws for switches without power rear windows.



5. INSTALL THE WINDOW LOCK BUTTON

- a) Press the lock button firmly until a snap is heard.

XII. POWER WINDOW MASTER SWITCH INSTALLATION

1. INSTALL THE POWER WINDOW MASTER SWITCH AS OUTLINED IN THE REPAIR MANUAL ON TIS

- [CAMRY](#)
- [CAMRY HYBRID](#)
- [COROLLA](#)
- [HIGHLANDER](#)
- [HIGHLANDER HV](#)
- [MATRIX](#)
- [RAV4](#)
- [SCION xB](#)
- [SCION xD](#)
- [SEQUOIA](#)
- [TUNDRA](#)
- [YARIS LIFTBACK](#)
- [YARIS SEDAN](#)

XIII. POWER WINDOW MASTER SWITCH OPERATION CHECK

1. CHECK THE FOLLOWING OPERATIONS OF THE POWER WINDOW MASTER SWITCH

- a) Lock and unlock switch operation.
- b) Up and down operation for each window.
- c) Auto-up and auto-down operation of auto switch(s).
- d) Window lock switch operation.
- e) Illumination of 'AUTO' on auto switches (headlights must be on to confirm this)

NOTE: System initialization is not necessary.

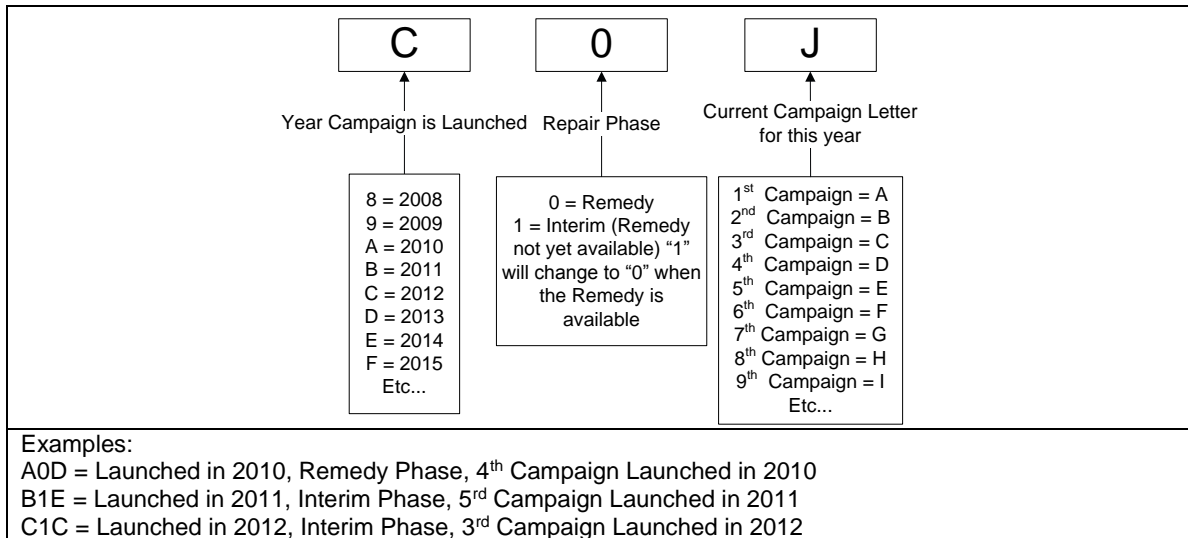
◀ VERIFY REPAIR QUALITY ▶

- Confirm **ALL** inspection steps are followed **EXACTLY** as described in these instructions
- Confirm the grease is applied as described in these instructions
- Confirm the switch assembly operates correctly before installing the one-way screws
- Confirm new one-way screws are installed when reassembling the switch assembly

If you have any questions regarding this update, please contact your regional representative.

XIV. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***