

ATTENTION:

GENERAL MANAGER
 PARTS MANAGER
 CLAIMS PERSONNEL
 SERVICE MANAGER

IMPORTANT - All
 Service Personnel
 Should Read and
 Initial in the boxes
 provided, right.



QUALITY DRIVEN® SERVICE

PRODUCT CAMPAIGN BULLETIN

APPLICABILITY: 2011 Subaru Legacy & Outback **NUMBER:** WWV-33
SUBJECT: Moonroof (Sunroof) Glass **DATE:** September 2011

INTRODUCTION

Subaru of America, Inc. has determined that certain 2011 Legacy and Outback models equipped with a power Moonroof (Sunroof) may have been produced with an insufficient amount of adhesive applied between the moonroof glass panel and frame. As a result, the glass panel could separate from its frame and potentially become loose or detach.

This recall will involve inspecting the moonroof glass and frame to ensure the proper amount of adhesive is present. If the adhesive is sufficient, no further action is required. If not, additional adhesive will need to be added at the appropriate locations. In some rare cases, it may be necessary to replace the glass.

AFFECTED VEHICLES

- 2011 Subaru Legacy and Outback

Potentially affected vehicles are identified in the VIN range chart below. Prior to performing repairs, confirm coverage by using the Vehicle Coverage Inquiry function at Subarunet.com.

MODEL		FROM	TO
2011MY	Legacy	B*215420	B*259708
	Outback	B*327519	B*435565

* Various Characters may occupy this position

Dealer Affected VIN lists: Dealers will be sent an affected VIN list around the time owner notification letters are mailed.

Affected VIN lists are created and “dealerized” as follows:

- Original vehicle owners are assigned to the original selling dealer when their current address is within a 100 mile radius of that dealer.
- If the original selling dealer code was found to be inactive, the VIN has been assigned to the nearest active dealer.
- For any new owners or when original owners live more than 100 miles from the original selling dealer, the VIN has been assigned to the nearest active dealer.

Important: Dealer affected VIN lists include owner name and address information for vehicles affected by this recall. This information will enable dealers to follow-up with owners of potentially affected vehicles. The lists contain owners’ names and addresses obtained from State Motor Vehicle Registration Records. The use of such motor vehicle registration data for any other purpose is unlawful. Accordingly, dealers are urged to limit the use of these lists for the purpose of completion of this recall.

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OWNER NOTIFICATION

SOA will prepare and mail an Owner Notification Letter to owners of the affected vehicles on or around October 3, 2011.

A copy of the Owner Notification Letter is included at the end of this bulletin.

DEALER PROGRAM RESPONSIBILITY

Dealers are to promptly perform the applicable service procedures defined in this bulletin to correct all affected vehicles in their inventory (new, used, demo). Additionally, whenever a vehicle subject to this recall is taken into dealer new or used inventory, or is in the dealership for service, necessary steps should be taken to ensure the recall correction has been made before selling or releasing the vehicle.

New or used vehicles listed in a recall/campaign that are in dealer stock must be:

- Immediately identified.
- Tagged or otherwise marked to prevent their delivery or use prior to inspection and/or repair.
- Repaired in accordance with the repair procedures outlined in this Product Campaign Bulletin.

Please be advised that it is a violation of Federal law for a dealer to deliver a new motor vehicle covered by a recall under a sale or lease until the defect is remedied. Therefore, any Authorized Subaru Dealer failing to perform the applicable service procedures as defined in this bulletin to correct all affected vehicles in their inventory (new, used, demo) prior to the vehicle being placed in service may be subject to civil penalties of up to \$6,000 per violation (i.e., for each vehicle), as provided in 49 CFR §578.6 and will also be in breach of the Subaru Dealer Agreement.

PARTS INFORMATION

Special Tools & Materials

Each dealer will automatically be shipped, at no cost, one adhesive applicator gun.

Additionally, each dealer will automatically be sent an initial supply of Lord 7150 A/B Adhesive in 50ml tubes and adhesive applicator gun nozzles. Each 50ml tube provides enough adhesive to repair two vehicles, and is packaged with two applicator gun nozzles.

Dealers will need to order any additional supply through normal parts ordering procedures.

PART NUMBER	DESCRIPTION
SOA635100	Adhesive and Nozzles – includes one 50ml tube of Lord 7150 A/B adhesive and two applicator gun nozzles.
SOA7401000	Adhesive Applicator Gun.

For claim reimbursement purposes, dealers should use the following part number, which represents 1/2 tube of adhesive and one applicator gun nozzle (per repair):

SOA635097	WVW33 Adhesive / Nozzle - One Repair
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SERVICE PROCEDURE

This recall will involve inspecting the moonroof glass and frame to ensure the proper amount of adhesive is present. If the adhesive is sufficient, no further action is required. If not, additional adhesive will need to be added at the appropriate locations. In some rare cases, it may be necessary to replace the glass.

Please proceed as follows:

Tools and Material Required

Thin flat metal ruler (mm scale)

Plastic trim tool

Pencil

¼-inch Ratchet and 10mm Socket

¼-inch Torque Wrench

Moonroof Switch Label

Applicator Gun and Slide

Note: There are also 2 different slides that come with the applicator gun; the one marked 50ml 2:1 will be used.

Applicator Gun Nozzle (1 needed for each repair)

Lord 7150 A/B Adhesive (enough to perform 2 repairs)



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Urethane Bead Inspection Procedure

- 1) Open Sunshade
- 2) Verify if the urethane beads are present (6 Beads / 40mm or more in length).

Imagine the moonroof being divided into 6 equal sections (270mm blue arrow). Inside each of the six squares there should be a 40mm or longer bead (red line) of urethane between the moonroof glass and moonroof frame in each section.



NOTE: Some vehicles may have two long urethane beads, which is also acceptable.

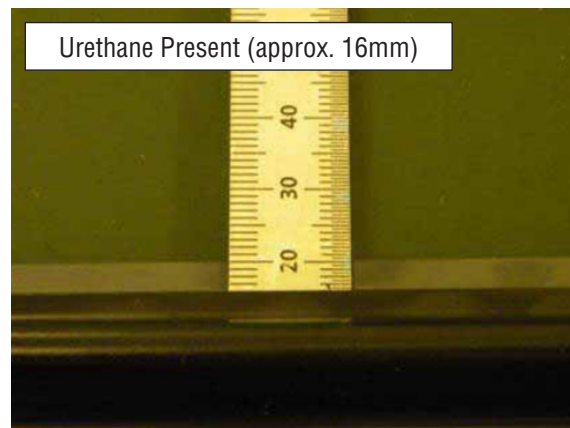


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To locate the urethane beads, a metal ruler is used as a depth gauge which is inserted between the moonroof glass and moonroof frame.

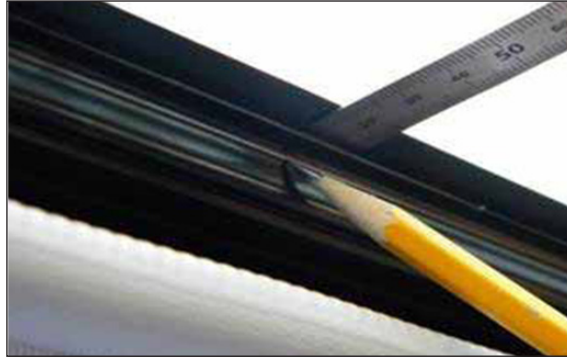


Slide the ruler between the moonroof glass and moonroof frame. Slide the ruler in a sideways motion until you locate one of the ends of the urethane bead. Using a pencil, place a small mark on the frame to mark the position.



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Slide the ruler along the bead until you can locate the other end of the urethane bead. Place a small mark on the frame to mark that position.



Measure the length of the urethane bead between the marks. The length of each bead must be at least 40mm. Repeat the step for the other five urethane beads.

If any of the six urethane beads measure less than 40mm in length, or no beads can be detected (missing), the Adhesive Repair Procedure will need to be performed. Refer to the **Adhesive Repair Procedure** in this bulletin.

- 3) Erase the pencil marks.
- 4) If all six beads are 40mm or longer the next step is to inspect the 4 corners of the moonroof glass for separation.

Moonroof Glass Corner Separation Test

- 1) Using a plastic trim tool, check all four corners of the moonroof glass.



- Insert the plastic trim tool between the frame and glass starting at the front left corner.
- Using a reasonable amount of force, attempt to rotate the plastic trim tool up to 90 degrees from the surface of the glass. While rotating the plastic trim tool, listen, look and feel for any separation of the glass from the frame.

Continued...

- If adhesion is inadequate the frame will move easily. If adhesion is adequate there will be little to no movement.
- Check the remaining three corners.
- If any separation occurs at any of the four corners, replace the moonroof glass/frame. Refer to the applicable Subaru Service Manual for the replacement procedure.



NOTE: If the moonroof passes both the Urethane Bead Inspection Procedure and the Moonroof Glass Corner Separation Test, then no further action or repair is required.

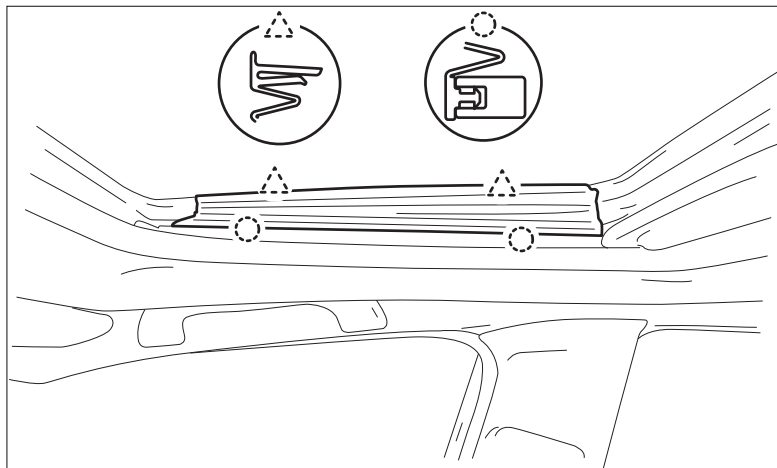
Adhesive Repair Procedure

IMPORTANT: The moonroof glass must be removed from the vehicle to perform the following procedure. **DO NOT** attempt to apply adhesive with the moonroof glass installed in the vehicle. The adhesive will not bond as intended.

- 1) Remove the moonroof glass.

CAUTION: When removing the clip, use great care not to damage the roof trim.

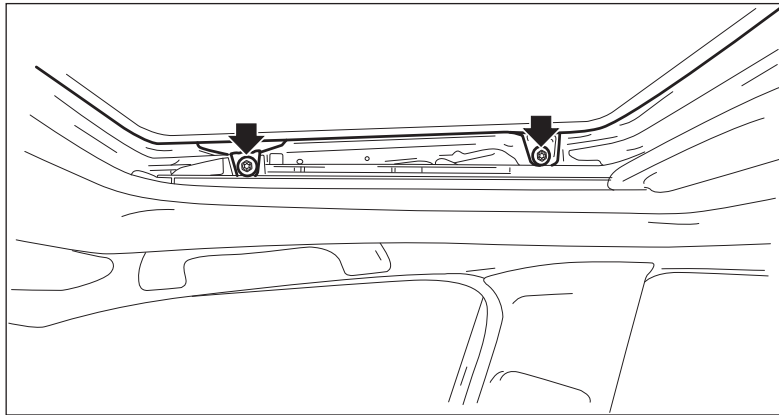
- a) Completely close the glass lid, and then open the sunshade.
- b) Disconnect the claws and then remove the lid cover.



CAUTION: Be careful not to damage or scratch the moonroof glass.

Continued...

- c) Remove the bolts and then remove the moonroof glass.



- 2) Place moonroof glass on a covered workbench frame side up.



- 3) **IMPORTANT:** To ensure proper adhesion, clean the appropriate areas of the glass and frame with a suitable cleaner such as household isopropyl alcohol.
- 4) Prepare the Adhesive Applicator.

Some Quick Facts about Lord 7150 A/B Adhesive:

- It begins to harden in 5 to 10 minutes.
- It reaches full strength in 18 to 24 hours.
- It's solvent Free and Non-Flammable.

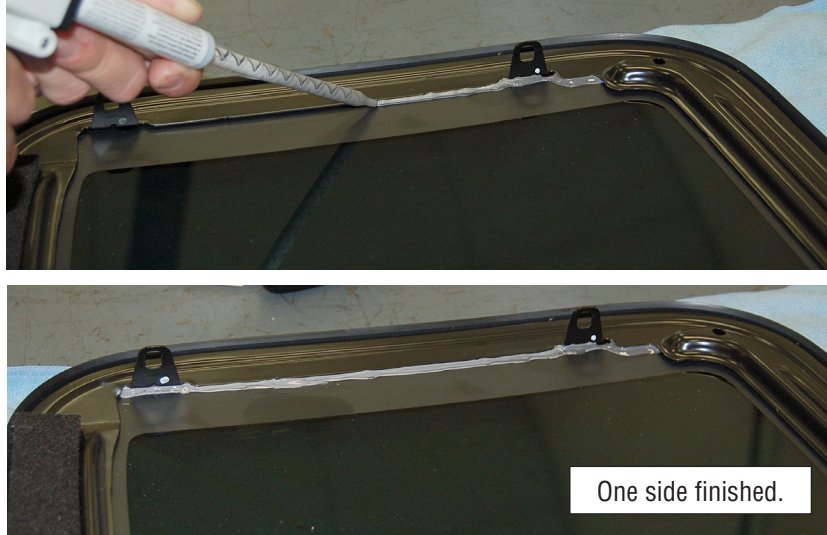
Install 50ml 2:1 slide into applicator gun and adhesive tube. **NOTE:** Do NOT remove the cap from the adhesive tube until you are ready to apply.

NOTE: The start and stop points are critical for appearance, as well as bead size. Try not to exceed a 7mm bead.

- a) Once you are ready to apply the adhesive, remove the cap and install a new nozzle. Be sure to save the cap so the tube may be sealed to preserve any remaining adhesive.

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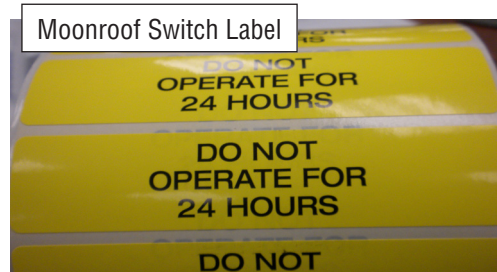
- 5) Using the applicator gun, apply adhesive to frame and glass. The material flows easily, do not apply a lot of force when squeezing the trigger.



- a) Repeat the procedure on the opposite end.

NOTE: After installing adhesive, remove nozzle and install cap to tube. The adhesion material sets up quickly. If the material in the nozzle hardens the gun could be damaged.

- 6) Use a damp cloth and clean any streaks or extra adhesive which may be on the glass.
7) Let the moonroof sit for 20 minutes after applying adhesive before installing in vehicle.
8) Install moonroof and frame in reverse order of removal. Make sure to torque all bolts to 4.5 N•m (0.46 kgf-m, 3.3 ft-lb).
9) Moonroof glass must not be opened for at least 24 hours. Install label* over switch to remind the customer.



* Each dealer will be provided a supply of switch labels. The labels will be sent with dealer affected VIN lists.

Additional labels are available through the Subaru Claims Helpline at 1-866-782-2782.

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RECALL IDENTIFICATION LABEL

Type or print the necessary information on a recall identification label. The completed label should be attached to the vehicle's upper radiator support.

Additional labels are available through the Subaru Claims Helpline at 1-866-782-2782.

SUBARU
Campaign Code
WWV-33
COMPLETED
DIST./DEALER NO.
SERIAL NO.
DO NOT REMOVE

CLAIM REIMBURSEMENT AND ENTRY PROCEDURES

Credit to perform this recall will be based on the submission of properly completed repair order information. Dealers may submit claims through Vehicle Claim Entry on Subarunet.com.

CLAIM TYPE	CAMPAIGN CODE	LABOR	LABOR OPERATION
RC	WWV-33	B185-098 0.2 hrs.	Moonroof Inspection.
		C185-096 0.4 hrs.	*Moonroof Repair, includes necessary adjustments.
		C185-091 0.3 hrs.	Moonroof Replace, includes necessary adjustments.

*For claim reimbursement purposes, dealers should use the following part number, which represents 1/2 tube of adhesive and one applicator gun nozzle (per repair):

SOA635097	WWV33 Adhesive / Nozzle - One Repair
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OWNER NOTIFICATION LETTER

Important Safety Recall Notice
Subaru Recall Campaign WVW-33
NHTSA Recall No. 11V-467
October 2011

Dear Subaru Owner:

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

Subaru of America, Inc. has decided that a defect which relates to motor vehicle safety exists in some 2011 model year Subaru Legacy and Outback vehicles equipped with a moonroof.

DESCRIPTION OF THE SAFETY DEFECT

Subaru has determined that the glass panel on your vehicle's moonroof may not have had a sufficient amount of adhesive applied to its frame during production. As a result, the glass panel could separate from its frame and potentially become loose or detach without prior warning.

DESCRIPTION OF THE SAFETY HAZARD

If the moonroof glass were to detach from its frame while the vehicle is being driven, the glass could strike another vehicle or otherwise cause a road hazard.

REPAIRS

To correct this condition, Subaru will inspect the moonroof glass and frame to ensure the proper amount of adhesive is present. If the adhesive is sufficient, no further action is required. If not, additional adhesive will be added at the appropriate locations, or it may be necessary to replace the glass. This repair will be performed at no cost to you.

WHAT YOU SHOULD DO

You should immediately contact your Subaru Dealer for an appointment to have the moonroof glass and frame inspected and possibly repaired or replaced.

There are two important precautions you should take until this repair has been performed:

- Do not operate the moonroof. It should be left in the fully closed position.
- If you notice that the moonroof glass is loose, do not operate the vehicle. Immediately contact your Subaru dealer for assistance.

HOW LONG WILL THE REPAIR TAKE?

The actual time to inspect the moonroof is approximately 12 minutes. If it is necessary to add adhesive, it will take an additional 24 minutes or if it is necessary to replace the glass, it will take an additional 18 minutes. However, it may be necessary to leave your vehicle for a longer period of time on the day of your scheduled appointment to allow your dealer flexibility in scheduling.

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Please note that if it is necessary to add adhesive, the moonroof should not be operated for 24 hours following the repair.

Please present this letter to your Subaru Dealer at the time this repair procedure is performed.

CHANGED YOUR ADDRESS OR SOLD YOUR SUBARU?

If you have moved or sold your vehicle, please complete the enclosed prepaid postcard and mail it to us.

IF YOU NEED FURTHER ASSISTANCE:

To locate the nearest Subaru Dealer you can access our website at www.subaru.com and select "Find a Dealer".

For additional information and the most Frequently Asked Questions, please go to:

- <http://www.wvw33.service-campaign.com>

If you need additional assistance, please contact us directly:

- Telephone: 1-800-SUBARU3 (1-800-782-2783) Monday through Thursday between 8:30 a.m. and 7:00 p.m. Eastern Time and Friday between 10:30 a.m. and 5:00 p.m. Eastern Time.
- E-mail: Go to www.subaru.com and select "Contact Us".
- U.S. Postal mail: Write us at Subaru of America, Inc., Attn: CDS Department, P.O. Box 6000, Cherry Hill, NJ 08034-6000.

Please contact us immediately if the dealer fails or is unable to make the necessary repairs free of charge.

You may also contact the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Ave. SE, West Building, Washington, DC 20590 or call the toll free Auto Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153) or go to <http://www.safercar.gov> if you believe the dealer has failed or is unable to remedy your vehicle without charge within a reasonable amount of time.

Your continued satisfaction with your Subaru is important to us. Please understand that we have taken this action in the interest of your safety and your vehicle's proper operation. We sincerely apologize for any inconvenience this matter may cause and urge you to schedule an appointment as soon as possible to have this repair performed.

Sincerely,

Subaru of America, Inc.

Notice to Lessors

Under Federal law the lessor of a vehicle who receives this letter must provide a copy of it to the vehicle lessee(s) within 10 business days from receipt. The lessor must also keep a record of the lessee(s) to whom this letter is sent, the date sent, and the applicable vehicle identification number (VIN). (For the purposes of this section, a lessor means a person or entity that in the last twelve months prior to the date of this notification has been the owner, as referenced on the vehicle's title, of any five or more leased vehicles. A leased vehicle is a vehicle leased to another person for a term of at least four months.)

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