

Odor Remediation After Water Intrusion

Service Category Vehicle Interior

Section Interior Panels/Trim

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2005 - 2022	4Runner, Avalon, Avalon HV, Camry, Camry HV, Celica, Corolla, Corolla Hatchback, Corolla HV, Echo, FJ Cruiser, Highlander, Highlander HV, iM, Land Cruiser, Matrix, MR2 Spyder, Prius, Prius C, Prius PHV, Prius V, RAV4, RAV4 EV, RAV4 HV, Sequoia, Sienna, Sienna HV, Solara, Tacoma, Tundra, Venza, Yaris	

REVISION NOTICE

May 26, 2022 Rev1:

- The Required Tools & Equipment, SERVPRO™ Remediation Service Request Procedure, and Post Remediation Procedures sections have been updated.

Any previous printed versions of this bulletin should be discarded.

Odor Remediation After Water Intrusion

Introduction

Some 2005 – 2022 model year Toyota vehicles that have undergone water intrusion may exhibit a condition in which a musty smell is present. Follow the procedures in this bulletin to remediate the odor and address this condition. The purpose of this service bulletin is to provide general guidelines and procedures for odor remediation. This service bulletin provides a guide on how to prepare the interior of the vehicle prior to an odor remediation being performed, as well as contact information for an approved vendor who will arrange the remediation, and instructions on how to prepare the interior of the vehicle for reassembly once the remediation has been completed. Refer to all model and model year specific Repair Manuals and the EPA (Environmental Protection Agency) website for the most up-to-date safety and precautionary guidelines. This service bulletin is to provide a general overview and direction for the odor remediation process.

NOTE

- The procedures described in this service bulletin are NOT applicable to vehicles that have undergone a severe freshwater or saltwater intrusion. Such intrusions could be encountered with floods, storms, hurricanes, typhoons, or other incidents where the vehicle has been submerged or a significant volume of water has entered the interior of the vehicle.
- This bulletin is NOT applicable for general HVAC odor concerns. This bulletin has been developed to address water intrusion-related odors ONLY and should not be used to address HVAC-related odor concerns.
- BEFORE beginning the procedures provided in this service bulletin, the source of water intrusion MUST be identified AND repaired in conjunction with odor remediation. This bulletin does NOT apply if the source of the water leak has not been identified and repaired.
- Follow repair requirements as per Warranty Policies 4.21 and 8.14.

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Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2	SUBLET TYPE****
743991	Identify & Repair Source of Water Leak, R & R Interior, LASD* Removal, and Insulator Assembly Replacement	**	***	66	****	EC, ZZ

*Liquid Applied Sound Deadener.

**For removal of the LASD (Liquid Applied Sound Deadener), time studies have shown the following: Small vehicles and trucks ~8 – 10 hours and mid to large SUV's and vans ~10 – 12 hours. Utilize the Electronic Flat Rate Manual as a guideline to aggregate labor times associated with the removal of the interior, taking into consideration overlapping labor. Time Punches and additional documentation will be required (see Warranty Policies 4.21 and 8.14).

***The OFP should be the part number of the component that resulted in the water intrusion condition. If the root cause is NOT due to a specific component that has a part number (e.g., seam seal leak on bulk head), the part number of the related component should be used.

****Identify the appropriate T2 code.

*****Use sublet type "EC" for Servpro odor remediation services. For repairs subletted to a body shop, use sublet type "ZZ" (See Warranty Policy 8.22).

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.
- Per Warranty Policy 5.2, only one warranty claim per warrantable condition will be accepted by Toyota.

Parts Information

PART NUMBER	PART NAME	QTY
58651-22H92	Floor Silencer Sheet (1.5 mm thick sheet) (3.6 ft x 2.6 ft)	As Needed*
58651-22H91	Floor Silencer Sheet (3 mm thick sheet) (3.6 ft x 2.6 ft)	As Needed*
**	High Performance Charcoal Filter	1
***	Insulator Assy., Dash Panel	1

*Depending on the size of the vehicle and area of removed LASD.

**Refer to [T-SB-0010-20 HVAC Odor Maintenance](#) for part numbers specific to your vehicle model/model year.

***Refer to the Parts Catalog for part numbers specific to your vehicle model/model year.

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Required Tools & Equipment

REQUIRED PPE (PERSONAL PROTECTIVE EQUIPMENT)	ADDITIONAL INFORMATION
3M™ (or equivalent) N95 Certified (or higher) NIOSH Approved Respirator	As per EPA Standards*
Safety Goggles/Eye Protection	
Protective Gloves	

*Refer to EPA guidelines on the U.S. Environmental Protection Agency website.

REQUIRED TOOLS & MATERIAL	PART NUMBER	QTY
1 – 2-in. Flat Bladed Plastic Scraper	–	1
Heat Gun		1
3M™ Brushable Seam Sealer (or equivalent)	08656	1-qt. Can
3M™ General Trim Adhesive (or equivalent)	08088	18.1-oz. Spray Can
Blue Painter's Tape	–	As Needed

Procedures

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*If applicable.

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Inspection Procedure

CAUTION

ALWAYS use proper PPE per current EPA guidelines.

1. Prepare the door opening thresholds (e.g., door sills and B and C pillars).
 - A. Apply two layers of blue painter's tape to ALL door opening thresholds as shown. This will help minimize damage to the vehicle's painted surfaces during removal and reinstallation of the interior parts.

Figure 1.



2. Remove ALL parts surrounding the source of the water leak to complete a thorough inspection of the vehicle. Due to the variety of possible water leaks, this process will vary from vehicle to vehicle. In most cases, these items include but are not limited to:
 - The right and left front seat assemblies.
 - The rear seat assembly.
 - The second and third row seat assemblies (if applicable).
 - The lower trim panels (e.g., scuff plates, kick panels, pillar garnishes).

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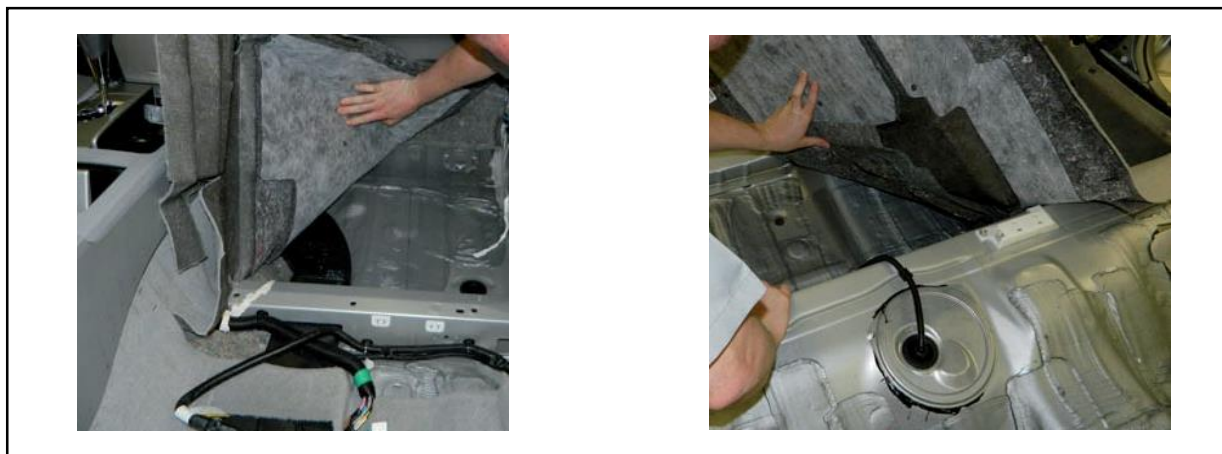
Inspection Procedure (continued)

3. Complete a thorough inspection of the entire interior floorboard areas to ensure ALL affected areas are identified.

CAUTION

ALWAYS use proper PPE per current EPA guidelines.

Figure 2. Floorboard Inspection



4. Inspect ALL soft parts for organic matter growth and/or staining that would indicate water contact.

NOTE

- Soft parts include items that DO HAVE an absorbent quality that will require them to be removed and replaced with NEW parts if they have come into contact with moisture.
- Keep ALL soft parts that will be replaced away from the parts that will be reused.
Soft parts include:
 - Floor mats.
 - Carpet/Carpet padding/Jute padding.
 - Insulated pads/Styrofoam pads.
 - Dash panel insulator assembly (located behind instrument panel/dash pad).
- These parts should NOT be reused and require replacement with NEW parts once the remediation has been completed.

Figure 3. Example of Soft Parts



Figure 4. Example of Staining/Organic Matter



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Inspection Procedure (continued)

Figure 5. Examples of Organic Matter Growth Due to Water Intrusion Found During Vehicle Inspection



5. Inspect ALL hard parts that may have been exposed to surfaces that have had direct contact with water or that have evidence of organic matter growth.

NOTE

Hard parts include items that DO NOT HAVE an absorbent quality and do NOT need to be replaced. ALL hard parts should be organized together in an accessible location near the vehicle, as they will be treated together as part of a later cleaning step performed by SERVPRO™. Hard parts include:

- Plastic garnishes/trim panels (scuff plates, kick panels, center consoles, etc.).
- Plastic ductwork.

6. Inspect the dash panel insulator assembly along the base of the instrument panel and floorboard area for ANY signs of water or organic matter growth. Perform this inspection on BOTH the driver AND passenger sides of the vehicle. If ANY sign of organic matter growth and/or staining that would indicate water contact has occurred is found, the dash panel insulator assembly will need to be replaced.

Figure 6. Driver Side Dash Panel Insulator Assembly Inspection



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Disassembly Procedure

Due to the differences in vehicle design and the various water intrusion conditions that may occur, specific steps for disassembly of the vehicle interior may vary. The purpose of the Disassembly Procedure in this service bulletin is to provide general disassembly guidelines to prepare the interior of the vehicle for remediation services.

NOTE

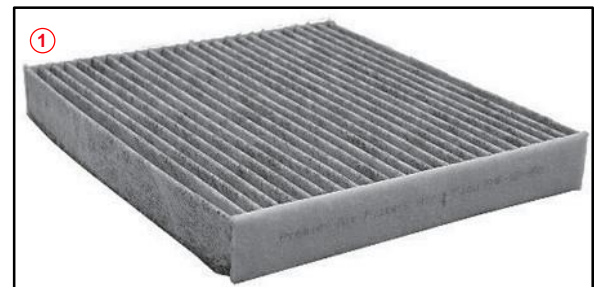
- Vehicles with second and third row seats will require removal of ALL seats in order to properly access and remove the LASD from the vehicle, as well as ensure the entire vehicle is remediated during the SERVPRO™ remediation process.
- For hybrid vehicles, the hybrid battery should be removed BEFORE the rest of the disassembly procedure. Please reference applicable Repair Manual and be sure to follow all recommended safety precautions for hybrid battery handling.

1. If equipped, remove the cabin air filter and discard.

NOTICE

- There should **NOT** be a cabin air filter installed in the HVAC during the remediation process.
- A **NEW** high-performance charcoal filter should be installed **AFTER** the entire remediation process has been completed.

Figure 7. Cabin Air Filter



1

The Cabin Air Filter Should Not Be Installed in the HVAC During the Remediation Process

2. Remove ALL remaining interior components that cover the LASD located on the floor of the vehicle. Refer to TIS, applicable model and model year Repair Manual for interior component removal.

NOTICE

If the dash panel insulator assembly requires replacement, it should be removed and replaced with a **NEW** part **BEFORE** remediation of the vehicle. On most vehicles, replacement of the dash panel insulator assembly requires removal of the instrument panel/dash pad assembly and the HVAC ducting. Do **NOT** attempt to cut out affected areas or treat the dash panel insulator assembly.

NOTE

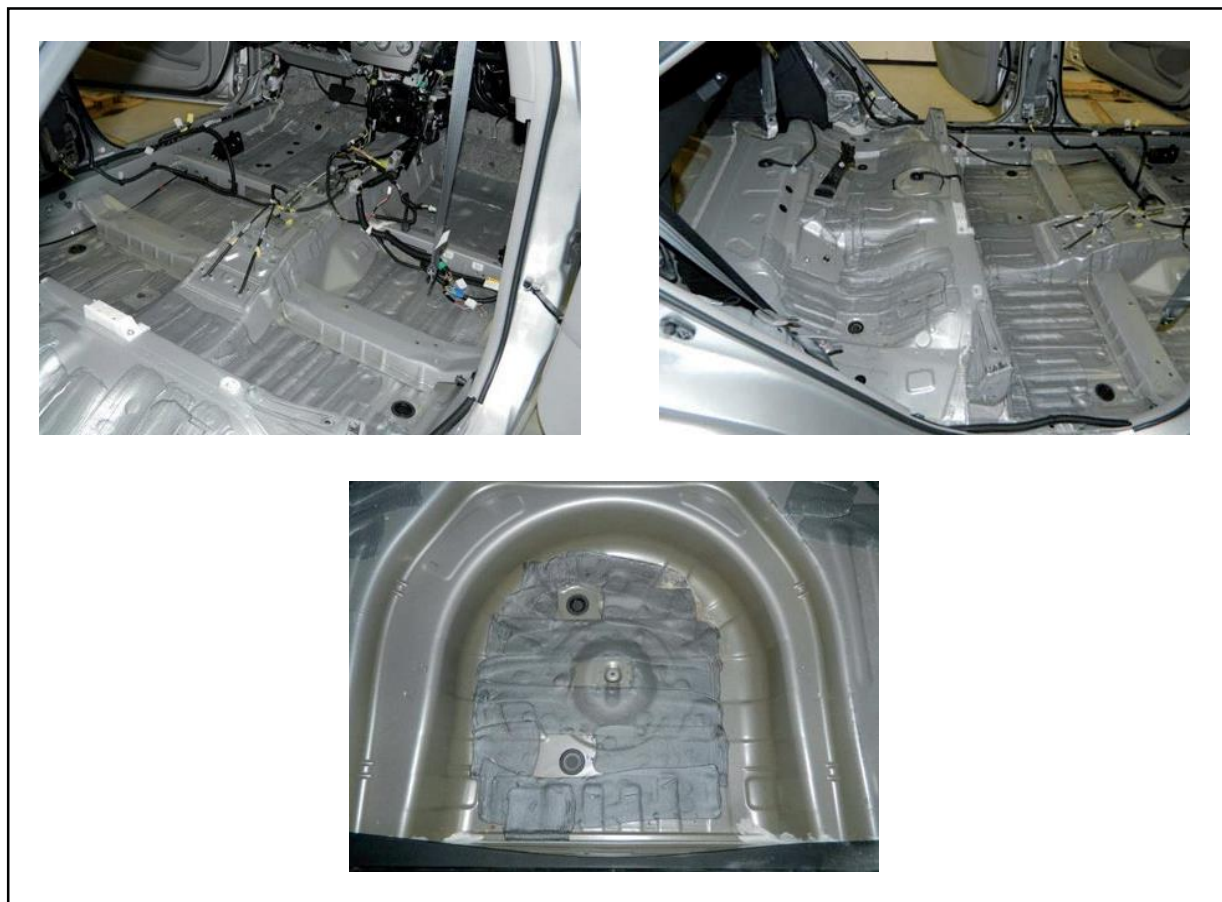
In most cases, the door panels and headliner can remain installed in the vehicle **UNLESS** they show evidence of water contact.

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Disassembly Procedure (continued)

3. If the dash panel insulator assembly was found to be affected by water contact during the initial inspection, remove and replace the dash panel insulator assembly. Refer to TIS, applicable model and model year Repair Manual for instructions.

Figure 8. Example of a Disassembled Vehicle Ready for LASD Removal



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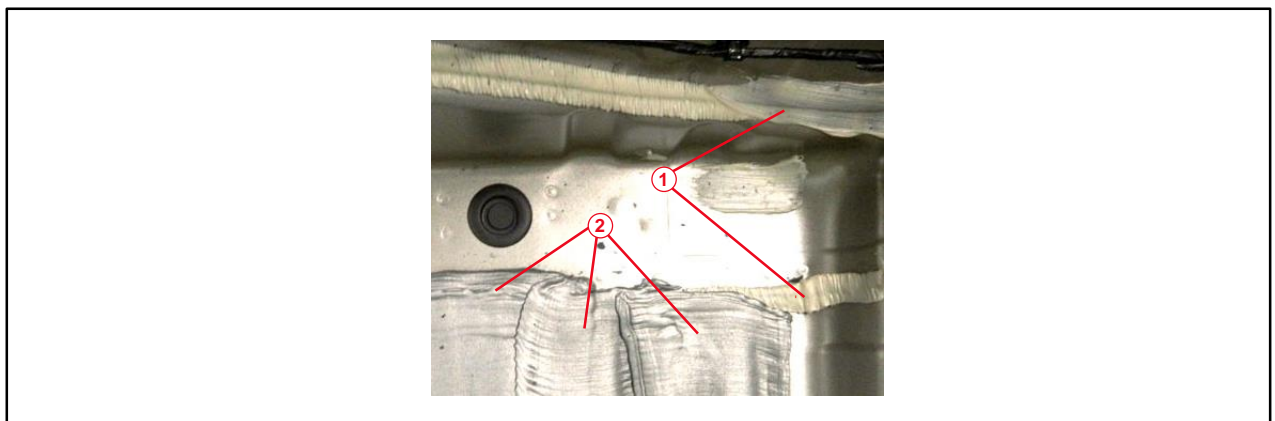
LASD Removal Procedure

LASD is a vibration damping coating that is used on the floor of vehicles to reduce road noise. To maximize the effectiveness of the remediation, LASD removal is required prior to the remediation process being performed.

CAUTION

- Wear the required PPE (N95 certified respirator, safety goggles, AND protective gloves).
- Ensure the vehicle is in a well-ventilated area, preferably in an area that has good airflow/circulation and is NOT enclosed.
- Avoid scratching or damaging the sheet metal surfaces, as these areas will need to have NEW floor silencer sheets applied once the remediation is complete.
- Do NOT use grinders, abrasive discs, or other similar tools to remove the material, as this can damage the anti-corrosion protection on the sheet metal surfaces.
- Once removed, place all LASD debris in a plastic bag, seal the bag, and dispose of as normal refuse/garbage per EPA guidelines. (Do NOT use a vacuum to remove debris or old material left over from the removal process.)
- If equipped, remove the cabin air filter and discard. A NEW high-performance charcoal filter should be installed once the entire remediation process has been completed. There should NOT be a cabin air filter installed in the HVAC during the remediation process.
- To minimize the potential for damage to the threshold areas of the vehicle, it will be necessary to protect those painted surfaces. See step 1 in the Inspection Procedure for more details on this process.
- Avoid removal of the urethane seam sealer where sheet metal panels join. If the urethane seam sealer has been removed during the LASD removal process, it will be necessary to reapply as needed AFTER the remediation process is complete.

Figure 9.



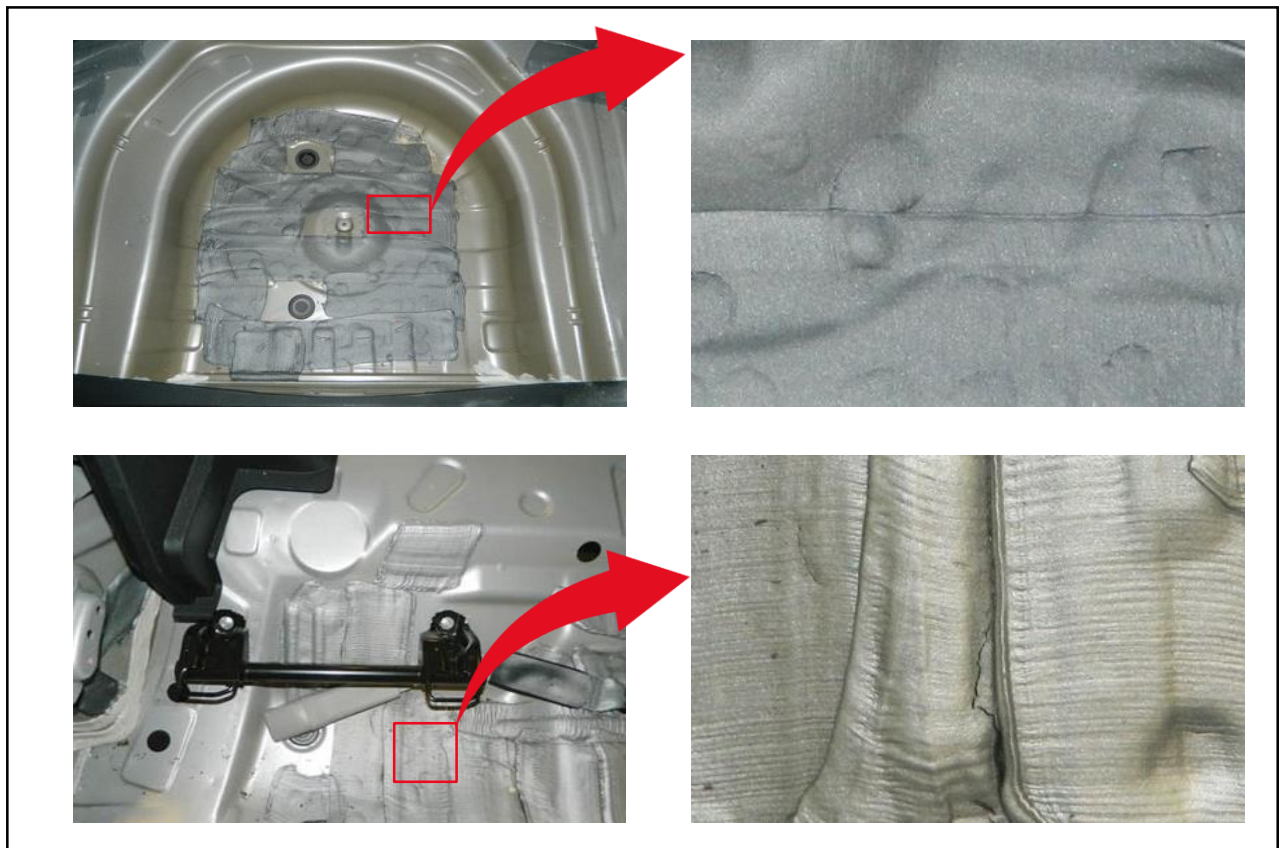
1	Urethane Seam Sealer
2	LASD

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LASD Removal Procedure (continued)

The appearance of LASD (color, texture) may vary (smooth vs. rippled) depending on the vehicle and application method.

Figure 10. Examples of LASD



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LASD Removal Procedure (continued)

1. Remove ALL LASD from the floor pan of the vehicle, including the cargo/trunk compartment, using a flat-bladed plastic scraper and a heat gun.

NOTE

- Using a flat-bladed plastic scraper and a heat gun is the **ONLY** approved method for removing LASD.
- Ensure ALL LASD is removed.

Figure 11.



1	Heat Gun
2	Plastic Scraper

- A. Select a square area approximately 6 in. by 6 in. and begin heating the LASD with the heat gun for approximately 30 seconds.
- B. Check the heated sound deadening material with the plastic scraper to determine if it is pliable enough to remove.
 - (1) If the material is soft enough to remove, use the plastic scraper and remove the selected area.
 - (2) If the material is still too hard to remove, use the heat gun for an additional 30 seconds to see if the LASD is ready for removal. Keep track of the length of time necessary for effective sound deadening removal and adjust as needed.

NOTE

Do NOT overheat the LASD. Heat the LASD just enough for it to become pliable.

Figure 12.



Odor Remediation After Water Intrusion

LASD Removal Procedure (continued)

- C. Continue this procedure until ALL LASD is removed from the vehicle, including the cargo/trunk compartment.

Figure 13. Example of Vehicle With LASD Removed Using Plastic Scraper and Heat Gun



2. Once removed, place ALL LASD debris in a plastic bag and dispose of it as normal refuse/garbage per EPA guidelines. Use a whisk broom and dustpan to remove ANY small debris on the floor of the vehicle.

CAUTION

ALWAYS use proper PPE per current EPA guidelines.

NOTICE

Do **NOT** use a vacuum to remove the debris left over from the removal process.

Figure 14. LASD Disposal



Odor Remediation After Water Intrusion

Preparation for SERVPRO™ Remediation Procedure

Prior to the remediation being performed, the instrument panel/dash pad and HVAC MUST be reinstalled and the HVAC made operational. If they were removed during the disassembly process to allow for installation of a NEW dash panel insulator assembly and have NOT been reinstalled, they must be reinstalled at this time. Reassemble the instrument panel/dash pad and confirm that the HVAC is operational. Do NOT install the center console or HVAC floor ducting/ductwork during this procedure. Refer to TIS, applicable model and model year Repair Manual for instructions.

1. Adjust the climate control settings.
 - A. Set the HVAC system vents to dash and floor vents. Do NOT set the HVAC system vents to defrost mode.
 - B. Set the temperature to the medium setting (ambient temperature).
 - C. Ensure the controls are NOT set to "Auto."
2. Prepare ALL seat belts.
 - A. Pull the seat belt from the retractor until it is fully extended.
 - B. Hold the seat belt from the point closest to the retractor and fold over approximately 12 in. of seat belt back onto itself as shown.

Figure 15. Seat Belt Folded Back Onto Itself



Odor Remediation After Water Intrusion

Preparation for SERVPRO™ Remediation Procedure (continued)

- C. Continue to fold the seat belt onto itself until the entire seat belt assembly can be held in one hand as shown.

Figure 16. Seat Belt Folded Back Onto Itself



- D. Using a plastic/rubber-tipped clamp, place the clamp onto the top of the folded seat belt so it is secured and fully extended during the remediation process as shown. For vehicles equipped with second or third row center seat belts that are housed in the seat assemblies or roof, the same process of extending, folding, and clamping the seat belt should be performed.

Figure 17. Secured Seat Belt



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Preparation for SERVPRO™ Remediation Procedure (continued)

3. Complete step 2 for ALL the remaining seat belts.

NOTE

It is recommended that the technician photograph the vehicle interior to document the preparation condition of the interior BEFORE the remediation is performed.

SERVPRO™ Remediation Service Request Procedure

NOTE

- For remediation service requests related to a field action, refer to the applicable Technical Instruction for directions on how to submit requests.
- Follow the process below if remediation is NOT related to a field action, or the corresponding Technical Instruction does NOT provide direction.
- Confirm the latest procedure on a current version of this service bulletin, as this process is subject to change.

SERVPRO™ Remediation Process

Confirm SERVPRO™ personnel are aware of and have agreed to the [Toyota Vehicle Odor Remediation Program – Training & Certification Guide](#). Toyota strongly recommends the Dealership Service Director, and ANY other dealership personnel, review this document to gain an understanding of the work process completed by SERVPRO™.

Odor Remediation After Water Intrusion

SERVPRO™ Remediation Service Request Procedure (continued)

Required Action for Dealer Technician

To arrange for remediation services to be performed, please create a TAS (Technical Assistance System) case including justification for the request and confirmation that the source of any water leak has been identified and resolved. The TAS case will be forwarded to relevant FTS (Field Technical Specialist) for review.

Required Action for Field Technical Specialist

After reviewing the TAS case and confirming the vehicle requires remediation and is fully prepped, send an email request to TMNA HQ (Toyota Motor North America Headquarters) at remediationrequests@toyota.com. Communication to TMNA HQ should include the following:

- VIN (Vehicle Identification Number)
- Make
- Model
- Model year
- TAS case
- Dealer name
- Dealer code
- Dealer address
- Email and phone number for preferred contacts below:
 - Service manager
 - Shop foreman
 - Person responsible for invoice

NOTE

- An email to TMNA HQ should NOT be sent until the vehicle has been FULLY prepped and is ready for the remediation services to be performed.
- If a request to TMNA HQ is submitted and the vehicle preparation has NOT been fully completed, the dealer/requesting facility is at risk of not being able to have the remediation services performed on the vehicle at the requested time and being charged with a service-call fee.

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Post Remediation Procedures

Once the remediation process has been performed by SERVPRO™, follow the steps below to prepare the floor pan of the vehicle for reassembly of the vehicle interior.

NOTICE

- Post remediation procedures should **NOT** be initiated until the dealer has received a clearance report from SERVPRO™ stating that vehicle has been cleared and successfully remediated.
- The invoice will be sent directly from the SERVPRO™ accounting group and will be separate from the clearance report. The invoice should be paid by the dealership within 30 days of completion of the work or risk rejection of future services.
- Post remediation procedures should be performed **AFTER** the remediation has been completed.
- Do **NOT** apply seam sealer or floor silencer sheet to the floor pan **BEFORE** the remediation process is performed.

Urethane Seam Sealer Application Procedure

1. Was urethane seam sealer removed during the LASD removal process?
 - **YES** — Continue to step 2.
 - **NO** — Go to the Floor Silencer Sheet Installation Procedure subsection.
2. Ensure the floor pan has been cleaned properly and is free of any dirt, oil, grease, or other debris.
3. Apply the urethane seam sealer using a brush to ALL locations where the urethane seam sealer was removed during the LASD removal process.
4. Allow the seam sealer to dry for a **MINIMUM** of 1.5 hours.

Figure 18.



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Post Remediation Procedures (continued)

Floor Silencer Sheet Installation Procedure

The floor silencer sheet will need to be applied in the areas where LASD was removed to restore the sound deadening function of the removed material. The floor silencer sheet comes in two different thicknesses (1.5 mm and 3.0 mm). Refer to the applicable Collision Repair Manual or New Car Features for details on the required thicknesses for specific locations.

NOTE

When the original LASD material exceeds 3 mm in thickness, application of multiple layers of floor silencer sheets may be necessary to match the original specification found in the Collision Repair Manual or New Car Features.

1. Draw a rough outline of the area to be covered onto the appropriate thickness of the floor silencer sheet.
2. Cut the floor silencer sheet slightly larger than the rough outline drawn using scissors, a utility knife, or other suitable cutting device.

CAUTION

Use caution with ANY type of cutter to avoid injury.

3. Spray 3M™ General Trim Adhesive to the back side of the floor silencer sheet and allow it to air dry for five minutes.

Figure 19.



Figure 20.



Odor Remediation After Water Intrusion

Post Remediation Procedures (continued)

Floor Silencer Sheet Installation Procedure (continued)

4. Place the floor silencer sheet onto the selected area and press it into position.

Figure 21.



5. Use a heat gun to evenly heat the floor silencer sheet over the entire surface to a temperature of 180°F – 240°F (82°C to 115°C).

Figure 22.



CAUTION

Use caution and wear proper PPE when operating a heat gun to avoid burns.

6. Force the floor silencer sheet down into the floor pan making sure to form it into ALL the recesses as shown.

Figure 23.



HINT

If available, use a rubber seam roller tool as this is an effective way to form the floor silencer sheet into the floor pan.

Odor Remediation After Water Intrusion

Post Remediation Procedures (continued)

Floor Silencer Sheet Installation Procedure (continued)

7. Trim ANY excess material from the areas where the floor silencer sheet overlaps onto the painted sheet metal.
8. Continue this process until ALL areas where LASD was removed have been completely covered with floor silencer sheets.

Figure 24.



Figure 25.



Reassembly Procedure

1. Reassemble the vehicle interior with the treated hard parts and NEW soft parts once application of the floor silencer sheet has been completed. Refer to TIS, applicable model and model year Repair Manual for instructions.
2. Install a NEW high-performance charcoal filter in the vehicle AFTER the vehicle interior has been completely reassembled and proper function of ALL interior systems/parts (e.g., HVAC, manual and power seat adjustment) have been confirmed.
3. Confirm normal vehicle operation and clear ANY DTCs AFTER reassembly is complete.