

Preparation

Part Number: PT478-11170-09

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Rear Spoiler
2	1	Hardware Kit

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	4	M5 Nut
2	4	Clip
3	4	Hole Plug

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1	1	Outer Drill Fixture (Part number ?) Part No. Access hole Drill Fixture (Part number ?)

Conflicts

Retractable Rear Deck Lid Spoiler equipped vehicles

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Special Tools	Notes
Installation Tools	Notes
Panel Pry Tool	
Scissors	
Tape Measure	<i>Metric</i>
Masking Tape	
Panel Pry Tool	<i>Plastic</i>
Center Punch	<i>Spring Loaded</i>
Power Drill	
Drill Stop	
Drill Bits	<i>3.0(1/8"), 6.0 (1/4"), 8.0 (5/16")</i>
Hole Saw	<i>19.0 (3/4")</i>
Deburring Tool	
Ratchet	<i>1/4" drive</i>
Socket (Deep)	<i>8.0mm 1/4" drive</i>
Universal Joint	<i>1/4" drive</i>
Long Extension	<i>1/4" drive</i>
Torque Wrench	<i>1/4" drive</i>
Vacuum	
Lint-free cloth	<i>Micro Fiber</i>
Hot Air Blower	
1/4" Collet	<i>9/16" body diameter drill bit extension – part #3016A251</i>
Drill bit extension	<i>body, 4" length, 3/8" shank</i>

	diameter, 9/16" body diameter – part #3016A15
5/16" Collet	9/16" body diameter drill bit extension
Drill bit extension	body, 4" length, 3/8" shank diameter, 9/16" body diameter
Special Chemicals	Notes
Cleaner	VDC Approved Cleaner

General Applicability

Rear Spoiler can be installed on all models **except** those with the retractable Rear Deck Lid Spoiler.

Recommended Sequence of Application







Item #	Quantity Req'd.	Description
1		
2		
3		

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description
1		
2		
3		

Legend

-  **STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.
-  **OPERATOR SAFETY:** Use caution to avoid risk of injury.
-  **CAUTION:** A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
-  **TOOLS & EQUIPMENT:** Used in Figures calls out the specific tools and equipment recommended for this process.
-  **REVISION MARK:** This mark highlights a change in installation with respect to previous issue.
-  **SAFETY TORQUE:** This mark indicates that torque is related to safety.

Procedure

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

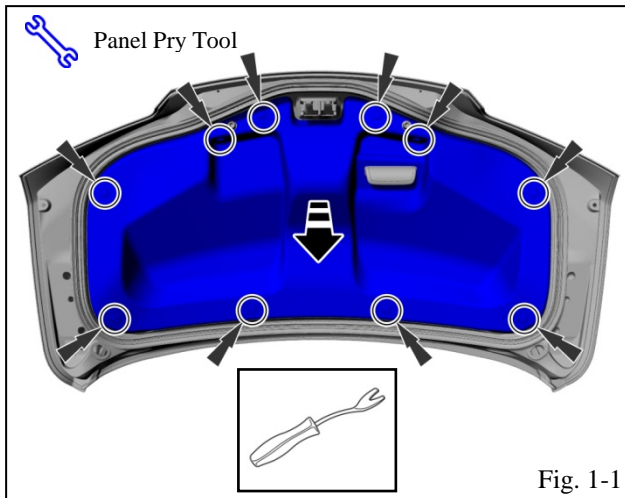
These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:-


- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

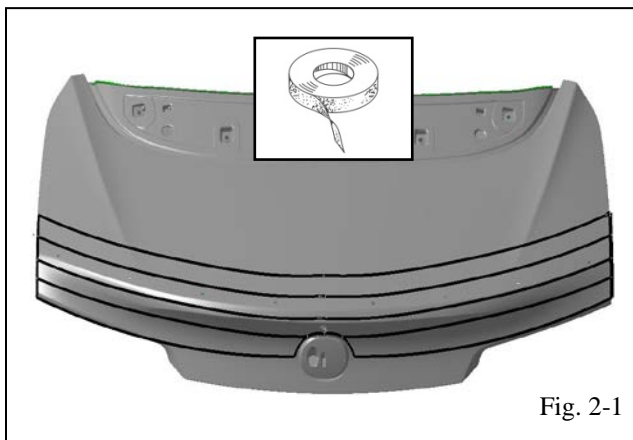
Please see your Toyota dealer for a copy of this document.

⚠ Vehicle mating surface temperature must be within a temperature range of 60°F - 90°F (16°C - 32°C). ⚠



1. Inner Trunk Liner Removal.

- (a) Open trunk lid.
- (b) Place drop cloth in trunk to cover and protect inside against debris.
-  (c) Remove and retain (10) fasteners using a panel pry tool (Fig 1-1).
- (d) Remove liner.
- (e) Close trunk lid.



2. Securing Drill Fixture.

- a) If the vehicle still has Wrap Guard in place, do not remove it. Otherwise, apply tape to **the entire rear deck lid (Fig.2-1)**.



Fig. 2-2

- b) Place the drill fixture on the rear door (Fig. 2-2). Make sure the vacuum and air supply are connected.

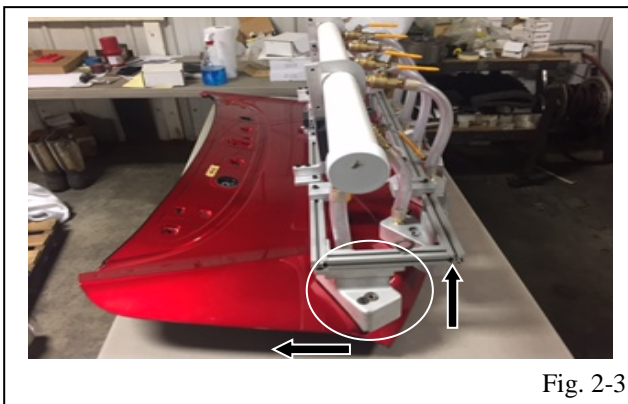


Fig. 2-3

- c) Align the fixture in position on the rear deck lid by ensuring the side and front locators fit into the door gap and seat the fixture fully forward and to the left (Fig. 2-3). Once the fixture is located, turn on the vacuum to secure it in place.

3. Outer Deck Lid Drilling Procedure.

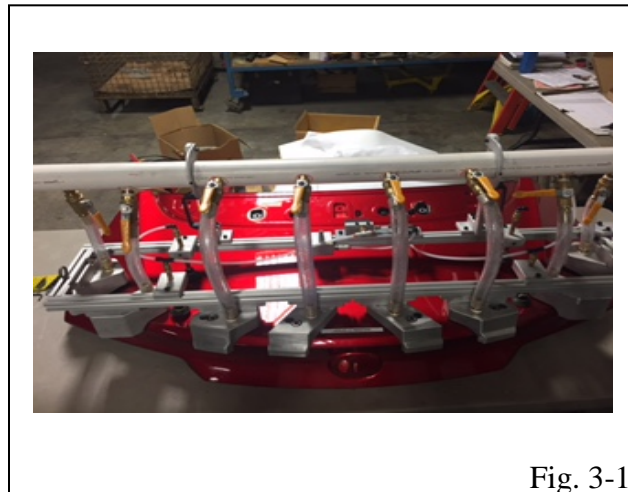
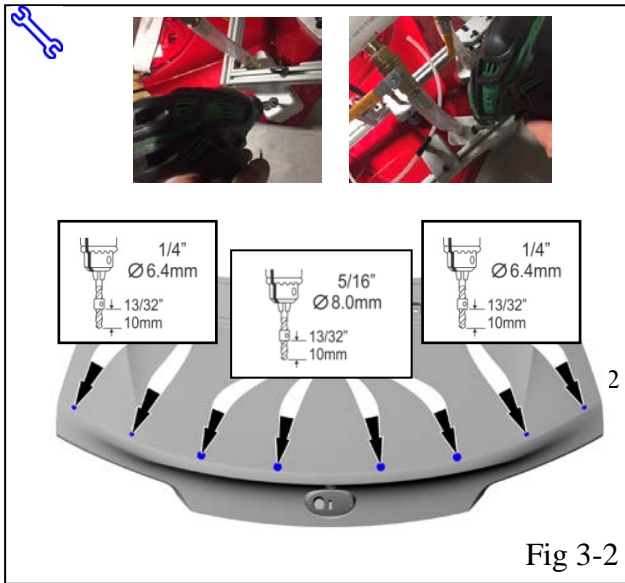


Fig. 3-1

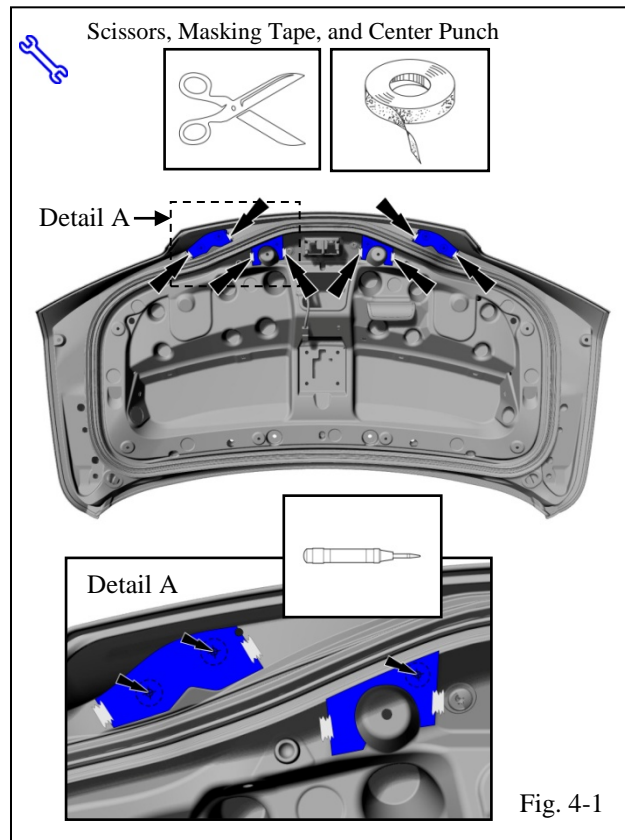
- a) Starting with all chip vacuum valves closed, turn on the vacuum one valve at a time and drill the hole in the location where the valve is opened (Fig. 3-1).



- (1) Drill the 2 outboard holes using a 6.4 mm drill bit with a drill stop set at 58mm. (Fig. 3-2).
- (2) Drill the four inboard holes using a 7.9mm drill bit with a drill stop set at 48mm. (Fig. 3-2).



CAUTION: Eye protection must be worn during all hole drilling.



4. Securing Inner Access Hole Templates (back drilling)



(a) Locate and cut out inner access hole templates (Part No. PT478-11170-TL).



(b) Position the LH and RH inboard and outboard access hole templates. Align templates to trunk lid inner as specified on template and tape in place (Fig. 4-1).



(c) Mark centers using a center punch at 6x crosshairs on the drill templates (Fig. 4-1).

(d) Remove templates.

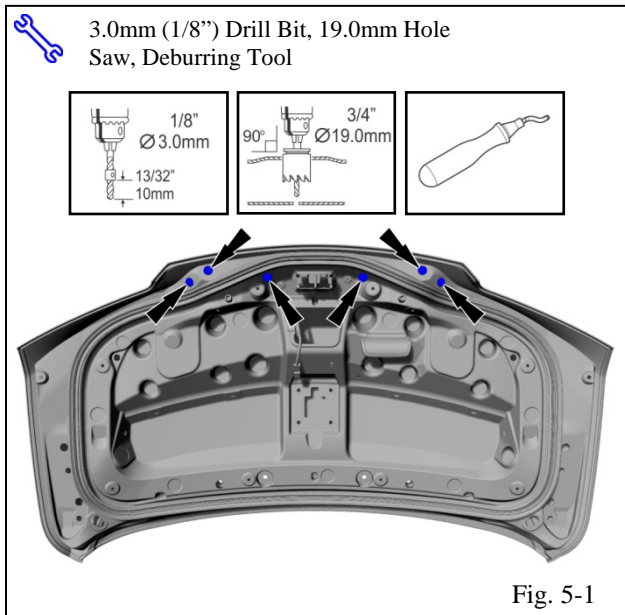


Fig. 5-1

5. Inner Access Hole Drilling Procedure.



CAUTION: Eye protection must be worn during all hole drilling.



Make sure the blankets fully cover the vehicle interior below each back drill location.



ATTENTION: Do not allow drill bit and hole saw to contact the outer trunk panel.



(a) Being careful not to allow drill to contact the outer trunk panel, drill 3.0mm (1/8 inch) pilot holes at 6x center punch marks (Fig. 5-1).



(b) Using a 19.0mm (3/4 inch) hole saw, drill holes to final size.



(c) Use deburring tool to clean sharp edges of 6x access holes.



(d) Vacuum and remove all debris after drilling.

(e) Close trunk lid.

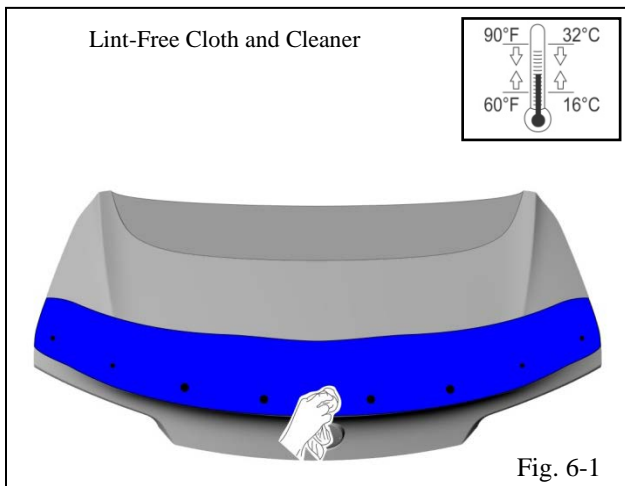


Fig. 6-1

6. Trunk Lid Surface Preparation.



(a) Thoroughly clean surface area where part will be mating to the trunk lid with VDC approved Cleaner and allow to dry (Fig. 6-1).



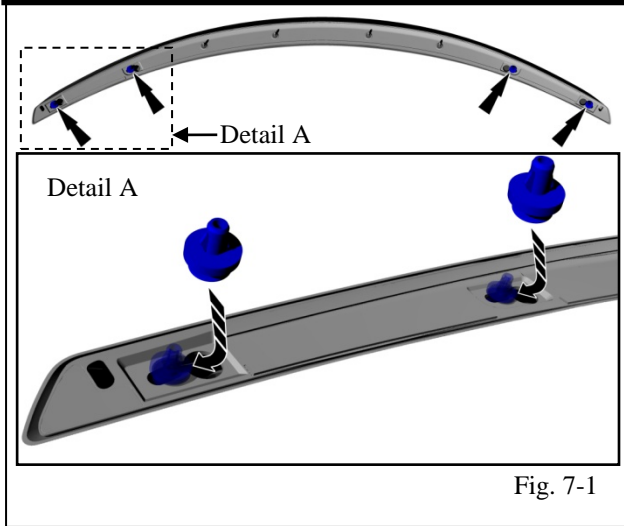
ATTENTION: Part WILL NOT adhere properly if surface has not been completely cleaned of any contaminates.

Note: Once cleaned do not contaminate the vehicle mating surface by touching it with your bare hands



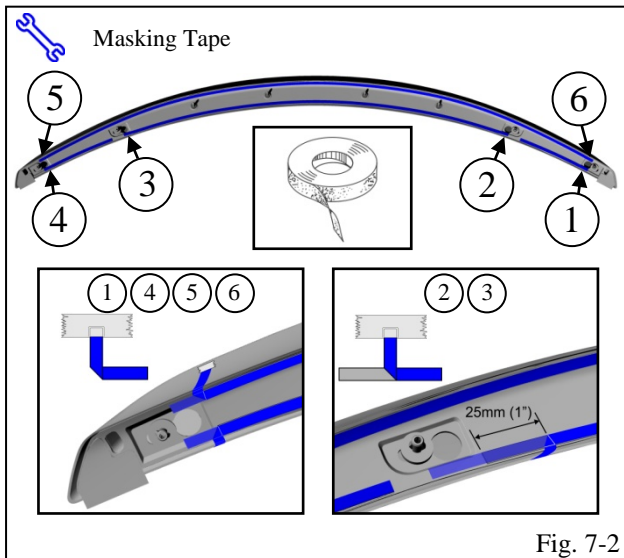
(b) Trunk lid temperature range should be between 60°F - 90°(16°C - 32°C) for proper start-up adhesion of the tape. Use a hot air blower if temperature is below 60°F (16°C).

Procedure

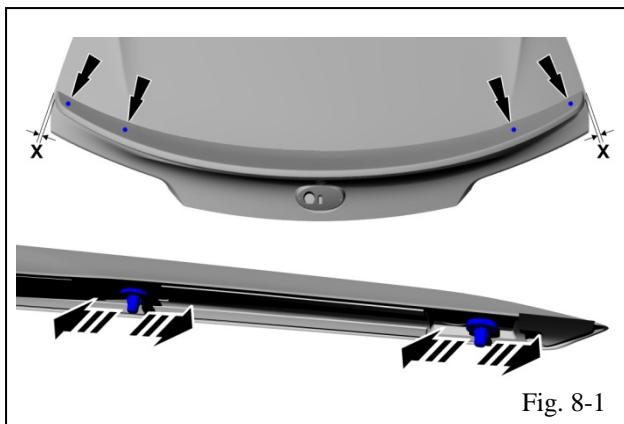


7. Rear Spoiler Preparation.

- (a) Attach supplied plastic push clips in keyhole slot at 4x locations on the spoiler as shown (Fig. 7-1).



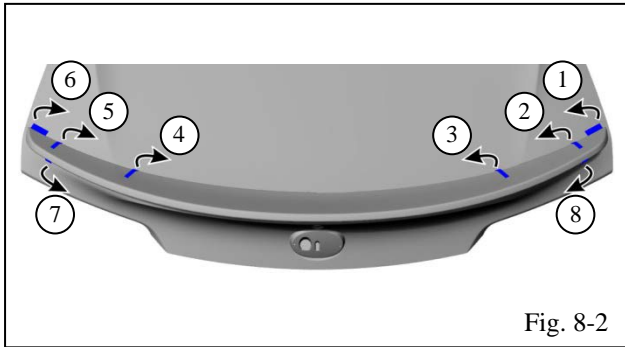
- (b) Carefully peel back liner tabs and tape to spoiler using masking tape. Ensure liner tabs are folded as shown (Fig. 7-2).
- (c) When folding the back tape liners, expose 25mm (1") of adhesive tape ONLY at locations 2 and 3 to hold spoiler in place after positioning correctly as shown (Fig. 7-2).



8. Attaching Rear Spoiler To Trunk Lid.

- (a) Adjust 4 sliding clips into holes. Confirm even spacing LH and RH at outboard edges of spoiler to the trunk lid.
- (b) Before contacting tape to trunk lid, verify that the spoiler is centered to trunk lid (Fig. 8-1).

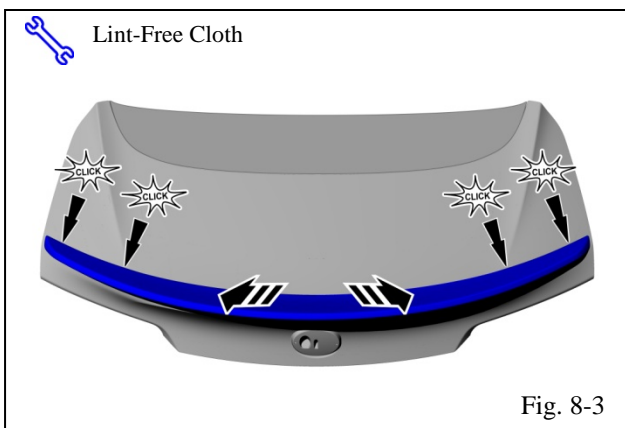
After ensuring spoiler is positioned correctly inboard/outboard, press spoiler to trunk lid.



(c) Remove tape liners in numerical order and direction and shown (Fig. 8-2).



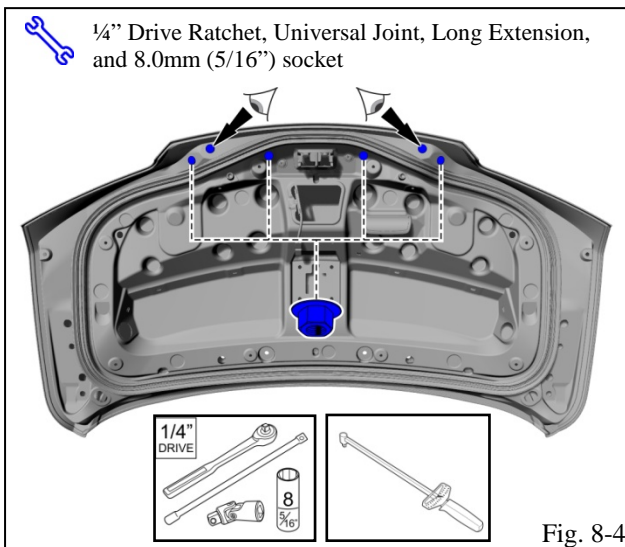
Ensure spoiler is properly aligned prior to removing tape liners and pressing spoiler in place. If tape liners are difficult to remove, slightly pull spoiler away from the trunk lid to assist.



(d) Using a lint-free cloth, apply 15 lbs. of pressure to the spoiler ensuring adhesive tape contacts the trunk lid all around. Apply pressure starting from the center and move outboard (Fig. 8-3).

(e) Ensure clips are engaged with 'click' sound at 4x clip locations (Fig. 8-3).

Open trunk.



(f) Using a 1/4" drive ratchet, universal joint, extension, and 8.0mm (5/16") deep socket, install M5 nuts to the studs through the access holes (Fig. 8-4).



(g) Tighten 4x M5 nuts to 2.35Nm torque using a 1/4" drive torque wrench, universal joint, long extension, and 8.0mm (5/16") deep socket.



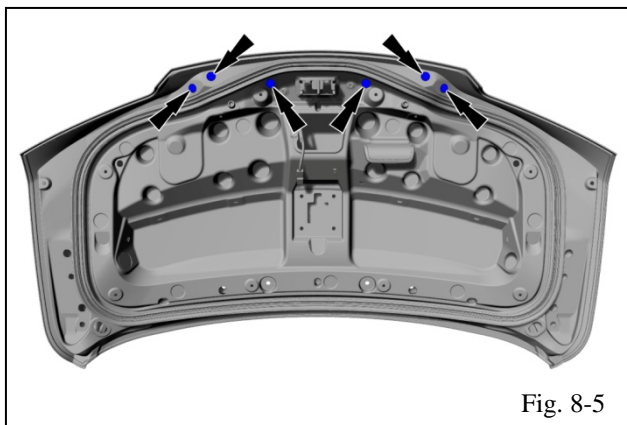


Fig. 8-5

- (h) Install 4x Hole Plugs back into deck lid after applying torque to nuts (Fig. 8-5).

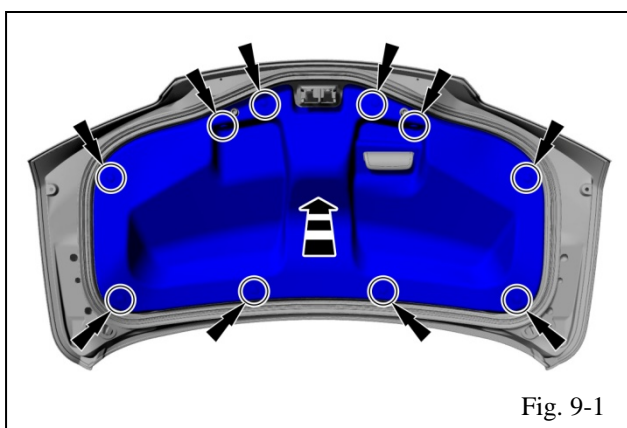


Fig. 9-1

9. Reinstall Inner Trunk Lid Liner.

- (a) Using the (10) fasteners previously removed, reinstall inner trunk liner (Fig 9-1).

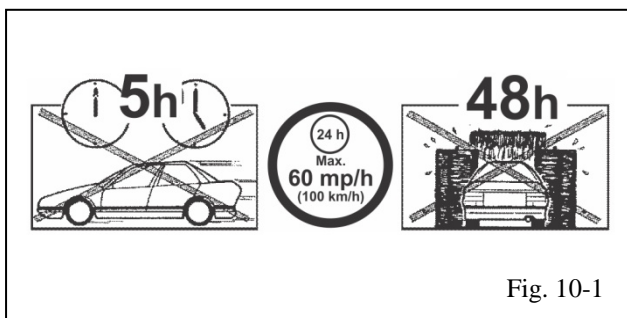


Fig. 10-1

10. Post-Installation Requirement.

- (a) Do not drive vehicle for 5 hours. (Fig 10-1).
- (b) Do not exceed 60mp/h (100km/h) within 24hrs. (Fig 10-1).
- (c) Do not use high pressure water or an automated car wash machine within 48hrs. (Fig 10-1).

Checklist - these points **MUST** be checked to ensure a quality installation.

<u>Check:</u>	<u>Look For:</u>
<p><u>Accessory Function Checks</u></p> <p><input type="checkbox"/> Verify acceptable gaps between spoiler and attaching base including vehicle trunk lid.</p>	
<p><u>Vehicle Function Checks</u></p> <p><input type="checkbox"/> Verify trunk lid operation.</p> <p><input type="checkbox"/> Verify rear camera operation.</p>	<p>When opened, the trunk lid should initially pop up fully and remain in the fully raised position.</p> <p>Ensure operation when backing up.</p>
<p><u>Vehicle Appearance Check</u></p> <p><input type="checkbox"/> After accessory installation and removal of protective cover(s), perform a visual inspection.</p> <p><input type="checkbox"/> Check the rear spoiler for proper fitment.</p> <p><input type="checkbox"/> Ensure that rear spoiler is centered left to right +/-3.0mm.</p> <p><input type="checkbox"/> Ensure all adhesive is properly adhered. (max. gap of 0.8mm)</p>	<p>Ensure no damage (including scuffs and scratches) were caused during the installation process.</p> <p>(For VDC installations, refer to TMS Accessory Quality Shipping Standard.)</p>