

Section I – Installation Preparation

Part Number: 08150-48811 (painted)
08150-48812 (unpainted)

Section I – Installation Preparation

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Rear Wind Deflector
2	1	Hardware Bag
3	2	Template
4	1	Instructions

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	2	M6×10 bolt w/ Washer
2	1	M6 Flange Nut
3	1	Rivet
4	3	Seal (unpainted Deflector only)
5	2	Pad (unpainted Deflector only)
6	1	Double Sided Adhesive Tape (unpainted Deflector only)
7	1	Tape (unpainted Deflector only)

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		
2		

Conflicts

Note:

Recommended Tools

Safety Tools	
Safety Goggles	
Vehicle Protection	Blanket/tape
Special Tools	
None	
Installation Tools	
Drill Motor	Variable-speed
Drill Bits	5.2 mm, 6.2 mm, 13.0 mm
Drill Stops	
File or Reamer	
Hexagon Socket	10 mm
Torque Wrench	6.0 N•m (53.4 lbf•ft)
Lint-free Cloth	
Measuring Tape	
Tape	
Rivet Gun	
Punch	
Hammer	

Utility Knife	
Special Chemicals	
Cleaner	3M™ Prep Solvent-70
Sealer	3M™ Ultra Pro Body Sealant

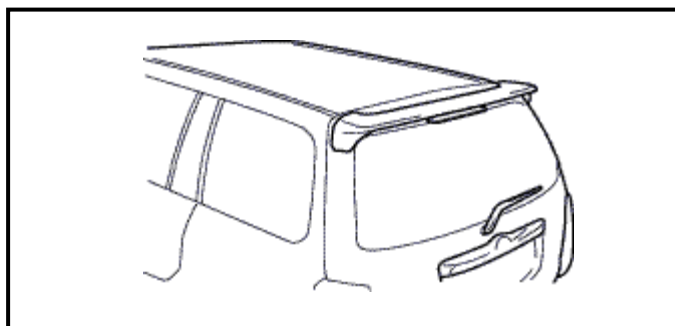
General Applicability

All Highlander models

Recommended Sequence of Application

Item #	Accessory
1	
2	
3	

*Mandatory

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.**CRITICAL PROCESS:** Proceed with caution to ensure a quality installation.**GENERAL PROCESS:** This highlights specific processes to ensure a quality installation.**TOOLS & EQUIPMENT:** Calls out the specific tools and equipment recommended for this process.

Section II – Installation Procedure

A. Painting Body of Deflector

NOTE: This process applies only to unpainted Rear Wind Deflector.



1. Apply masking tape to nut, bolt and clip (RH/LH). (Fig. A-1)



2. Securely fix tape to ensure that masked parts are not painted.
3. Apply paint to body of Rear Wind Deflector and thoroughly paint the mating surface.
4. Peel off masking tape.

B. Installing Components

NOTE: This process applies only to unpainted Rear Wind Deflector.



1. Cleaning both sides, remove all dirt from seal installation surface. Clean with 3M™ Prep Solvent 70 and wipe dry.



- i. When cleaning with 3M™ Prep Solvent-70 follow the manufacturer's directions. Do not allow cleaner to air dry.



2. Apply a seal around the base of the bolt on the RH side of the Rear Wind Deflector. (One (1) location for RH). Similarly, apply seals around the nuts of both sides of the deflector. (One (1) location for each side). (Fig. B-1)



3. Uncover one side of double-sided adhesive tape and paste it over the clip on the LH side of Rear Wind Deflector body, matching marking line.

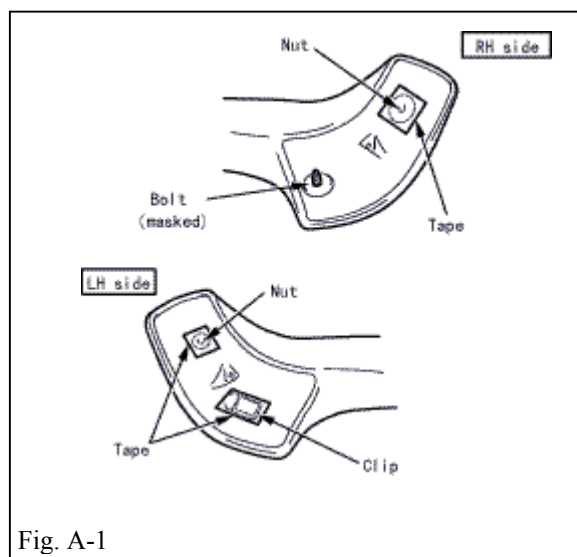


Fig. A-1

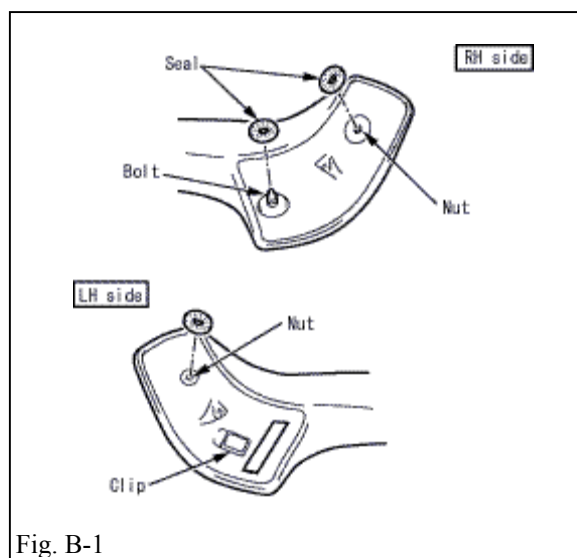


Fig. B-1

Section II – Installation Procedure



4. Remove the pad from the separator sheet and apply it to the Rear Wind Deflector as shown in Fig. B-2. Start just behind the marking line and proceed in the directions shown in the figure. Make sure that:

- i. The step difference between the outer edge and the pad is consistent throughout the pad's application.
- ii. When the pad makes its way back to the starting point, make sure that it passes the marking line.



5. Paste provided tape over blowhole on LH side of Rear Wind Deflector.

C. Removing the Vehicle Parts

NOTE: The instructions apply to both painted and unpainted Rear Wind Deflectors from this section on.

1. Open the back door.



2. Remove the hole plugs from the back door inner panel. (2 on RH side and 1 on LH side) (Fig. C-1)
 - i. Do not discard the hole plugs, as they will be needed in future steps.

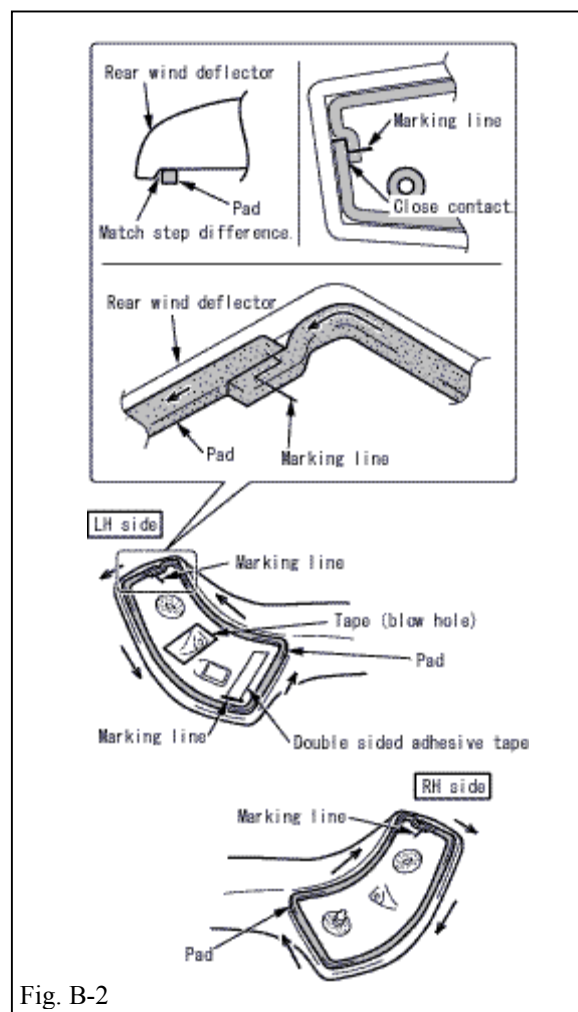


Fig. B-2

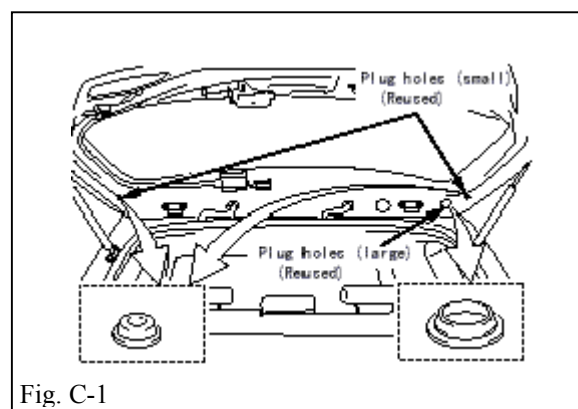










Fig. C-1

D. Preparations for Drilling

-  1. Cover the car body with a blanket for protection.
-  2. Check the hole positions. (Fig.s D-1 & D-2)
-  3. Tape the templates to the rear door after matching it relative to outer edge.
-  4. Using a punch, provide markings in the centers of the drilling positions of the template and remove the template. (2 positions on RH side and 2 positions on LH side) (Fig. D-3)

E. Drilling

-  1. Wear safety goggles.
2. Attach a drill stop at the 5 mm position of each drill tip. (Fig. E-1)
-  3. Drill the 5.2 mm hole. Be sure that the drill bits are perpendicular to the back door panel when drilling. (Fig. E-1)
-  4. Drill holes in the three remaining places with a 6.2 mm drill. (Fig. E-1)
-  5. After drilling holes with the 6.2 mm drill, bore the holes in the lower RH and LH side positions with a 13 mm drill. (Fig. E-1)

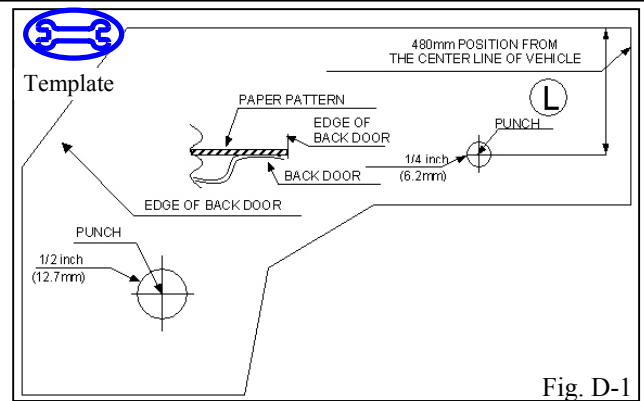


Fig. D-1

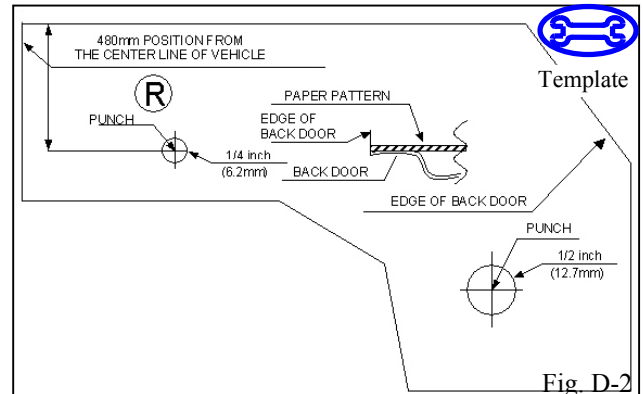


Fig. D-2

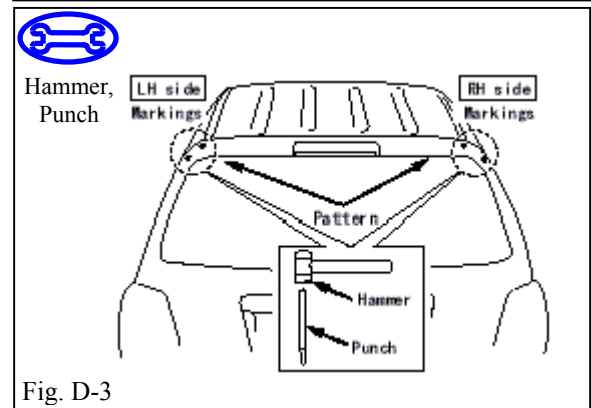


Fig. D-3

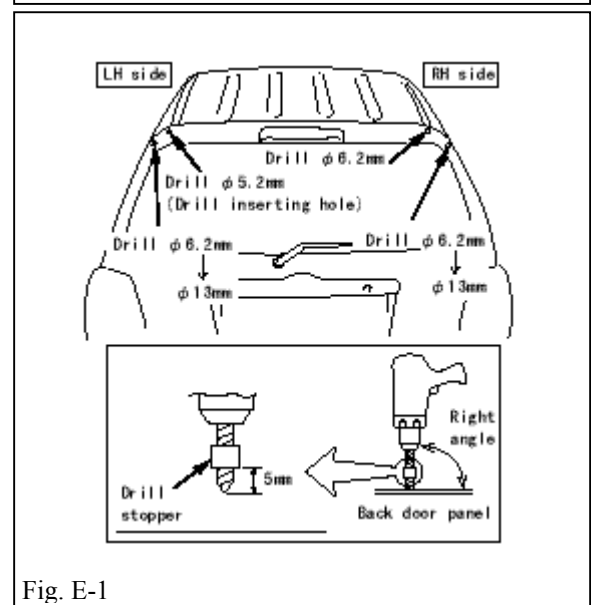


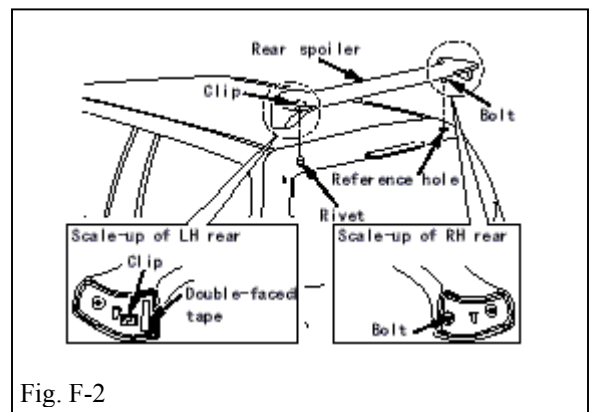
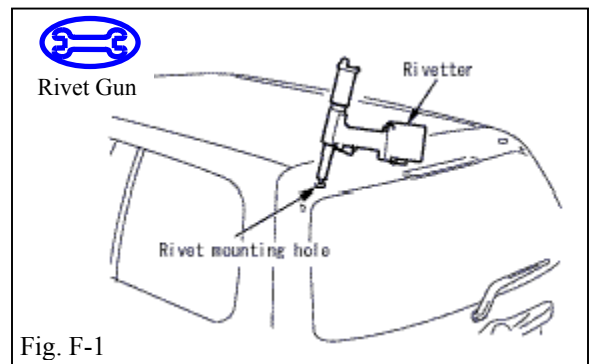
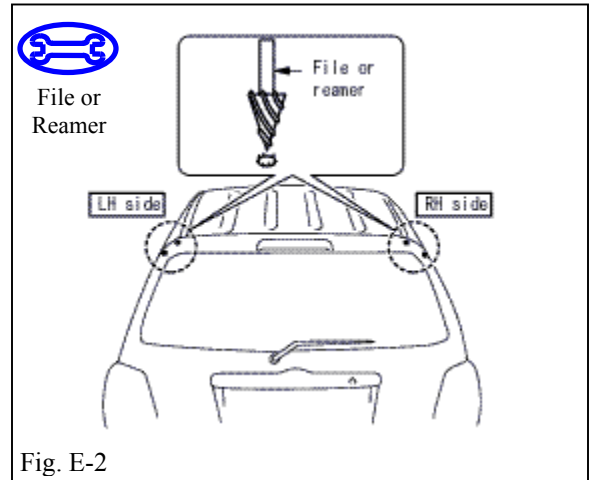
Fig. E-1

Section II – Installation Procedure

- STOP** 6. Debur all holes using a file or reamer. (The reamer may be fitted to a power tool). (Fig. E-2)
- STOP** 7. After drilling the holes, always remove remaining metal chips with a magnet or similar tool. If they are not removed completely, rust will occur.
- STOP** 8. Apply sealer to the exposed metal.

F. Mounting the Rear Wind Deflector

- 1. Before fitting the Rear Wind Deflector, clean the body side mounting surface. Clean the surface with 3M™ Prep Solvent 70. Wipe dry.
- i. When cleaning with 3M™ Prep Solvent-70 follow the manufacturer's directions. Do not allow cleaner to air dry.
2. Using a rivet gun, rivet the LH upper side rivet mounting hole of the car body. (Fig. F-1)
- 3. Remove the covering on the double-sided tape for both LH and RH sides.
4. Insert the bolt of the Rear Wind Deflector into the RH side reference hole of the vehicle. Fit the LH side clip into the rivet. (Fig. F-2)
- 5. Make sure that the gaps are equal on the RH and LH sides.
- 6. Apply enough pressure to the LH side double-sided tape, so that the tape fully contacts the vehicle body. (Fig. F-2)



Section II – Installation Procedure



7. Open the back door, being careful that the Rear Wind Deflector does not drop. (Fig. F-3)
8. Secure the bolt in the reference hole with a nut from the back door inner hole.



- i. Tightening torque 6.0 N•m (53.4 lbf•ft)

9. Mount the Rear Wind Deflector with bolts from the back door inner holes. (Fig. F-3)



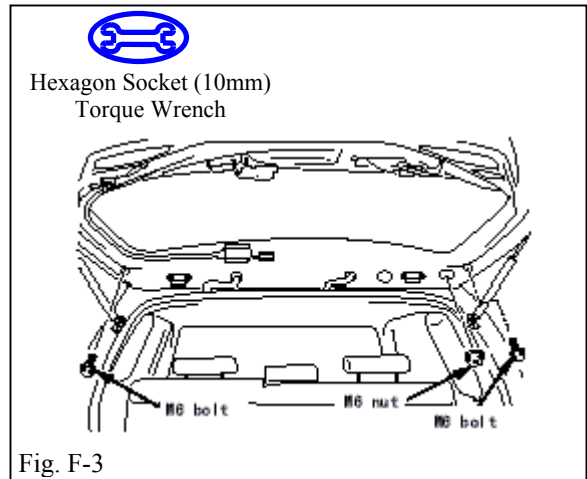
- i. Tightening torque 6.0 N•m (53.4 lbf•ft)



10. Reinstall the plug holes to the original positions.



11. Check that the Rear Wind Deflector is mounted securely.





Section III – Functional Verifications

Check: _____

- ☐ Verify rear door operation
- ☐ Verify gap fit
- ☐ Verify alignment fit

Look For: _____

Open rear door, the wind deflector must not interfere with the top of the vehicle roof.

Gap spec at stanchion equals 1 mm +/- 1 mm.

Rear Wind Deflector must be centered on back door to within ± 2.5 mm of door edges.