

Preparation

Part Number: PT738-48080

NOTE: Part number of this accessory may not be the same as the part number shown.

Kit Contents

Item #	Quantity Req'd.	Description
1	1	Driver Side Running Board
2	1	Passenger Side Running Board
3	4	Front/Middle Mount Bracket
4	2	Rear Mount Bracket
5	2	Rear Tie Down Bracket
6	6	Pinch Weld Bracket
7	2	Front Bracket Shim Plate
8	1	Pinch Weld Drill Template
9	1	LH Front Cover Trim Template
10	1	LH Rear Cover Trim Template
11	1	RH Front Cover Trim Template
12	1	RH Rear Cover Trim Template
13	1	Jacking Stickers

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	4	M8 x 30mm Carriage Bolt
2	10	M8 Nut w/Washer
3	4	M8 Helical Wire
4	4	M8 Bolt Plate
6	4	Retaining Washer
7	2	M12 Bolt Plate
8	2	M12 X 50mm Carriage Bolt
9	2	M12 Helical Wire
10	2	M12 Flange Nut
11	6	M5 x 20mm Carriage Bolt
12	6	M5 Flange Nut
13	6	M8 x 25mm Carriage Bolt
14	12	M6 Flange Nut
15	2	Zip Ties

Additional Items Required For Installation

Item #	Quantity Req'd.	Description

Conflicts

Note:

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Installation Tools	Notes
Ratchet	3/8"
Socket	8mm, 10mm, 13mm, 18mm
Torque Wrench	0-100 ft.-lbs., 0-144 in.-lbs.
Torque Adaptor	13mm
Allen Key	6mm
Deburr Tool	
Drill	Regular & Right Angle
Drill Bits	5.5mm, UNIBIT
Center Punch	
Flat Head Screw Driver	
Gasket Scraper	
Cutting Tool	
Grease Pencil	
Needle Nose Pliers	
Special Chemicals	Notes
Sealer	3M Pro Auto Body Sealant

General Applicability

Recommended Sequence of Application






Item #	Accessory
1	Mudguard
2	Running Board

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description
1	As required	Under Cover Clips P/N 51455-48020
2		

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.

Procedure

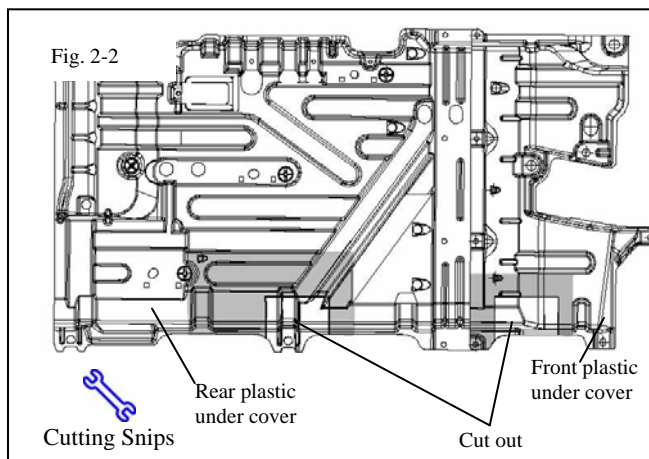
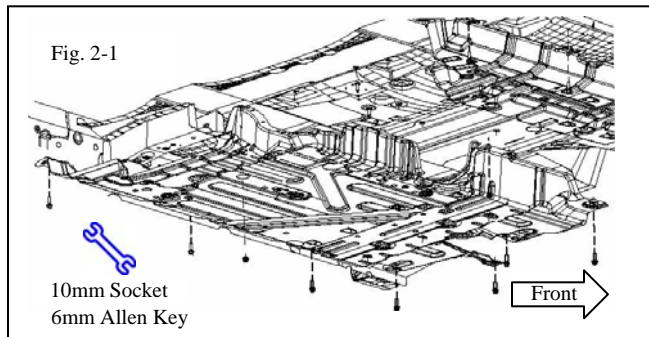
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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.



Caution: Use care to prevent breaking clips upon removal of plastic under covers. If any clips do break, refer to "Vehicle Service Parts" list to replace.

1. Preparation

(a) Layout parts to check for damage. Check hardware bag contents for correct type and quantity listed in Section 1.

+ (b) Parts are heavy and may require 2 people for installation. Take care when lifting.

(c) Read and understand the entire installation instructions prior to beginning.

2. Remove and Modify Vehicle Plastic Under Covers.

(a) Driver side assembly instruction shown. Refer to packaging dunnage to determine driver side Running Board.

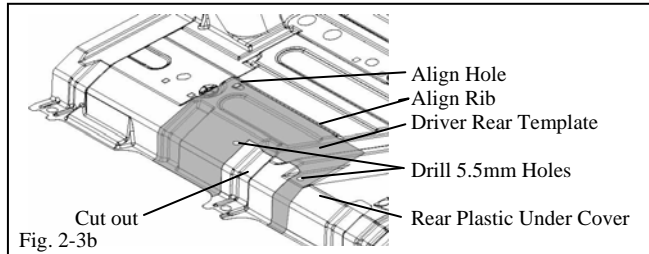
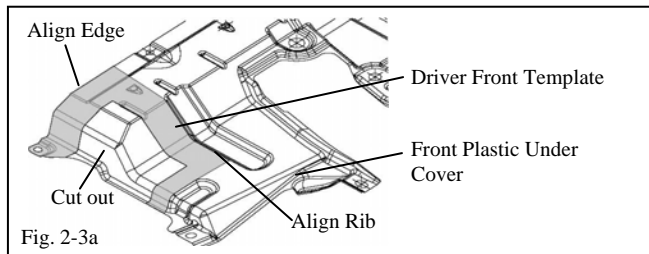
(b) Remove driver front plastic under cover. Use 10mm socket to remove screws (6) first, then use 6mm allen key to detach plastic retainers (2). Pull out remaining push pin by hand (may require flat head screw driver). Note: Save hardware for re-installation of plastic under cover. (Fig. 2-1)




(c) Remove driver rear plastic under cover. Use 10mm socket to remove screws first (2 screws, 1 nut). Use 6mm allen key to detach plastic retainers (4). Note: Save hardware for re-installation of plastic under cover. (Fig. 2-1).

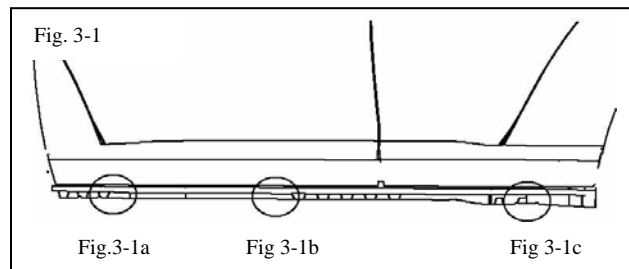


Procedure

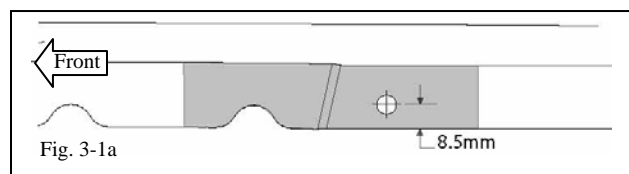



- (d)  Cutout and tape templates to plastic under covers (Figs. 2-2, 2-3a, & 2-3b). Mark cutout using grease pencil. Use cutting tool to cut away plastic (these cutouts will allow for re-installation).
- (e) Driver rear, drill two 5.5mm holes into plastic under cover. (Fig. 2-3b).

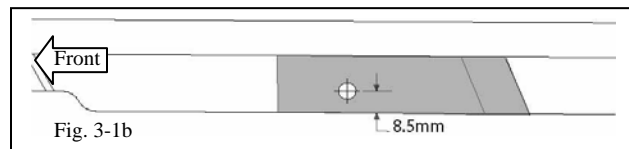
3. Installation. Driver Side First



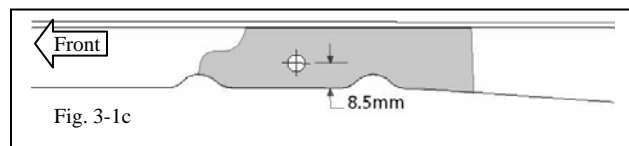
- (a) Peel and stick drilling templates along pinch weld using raised features and bottom of pinch weld to align them properly. Use cross hairs to mark holes with center punch for all three locations (front, middle, rear). Ensure center of hole is at least 8.5mm above bottom of pinch weld (Fig. 3-1).



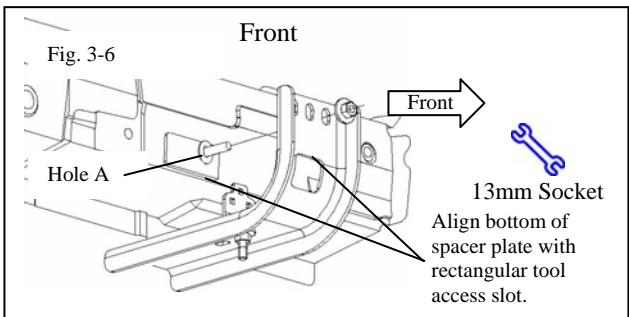
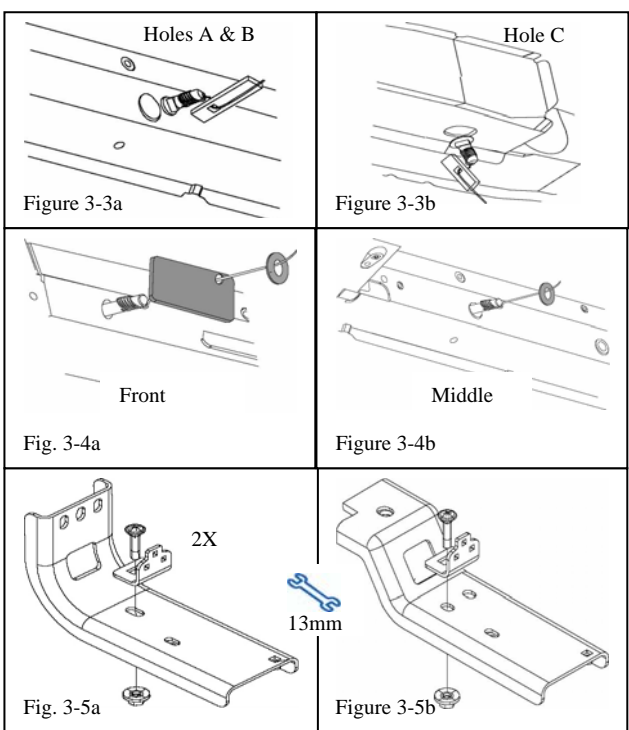
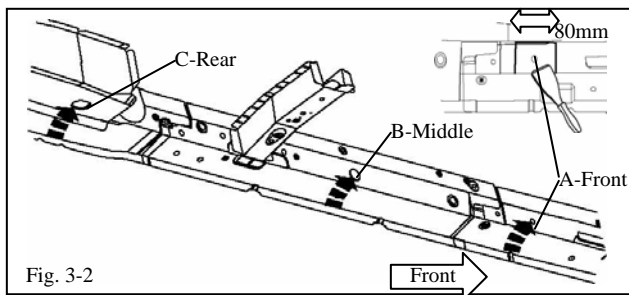
- (b)  Open doors and apply masking tape to bottom of rocker locally near drilling locations to protecting vehicle from scratching.



- (c) Drill holes using a 5.5mm dia drill bit. Remove templates. Deburr holes and apply sealer.



Procedure



(d) Scrape away undercoating at front hole location and peel away sticker. Enlarge front inner rocker hole, labeled “A”, using unibit to 18mm dia. De-burr and apply sealer to hole. (Fig. 3-2).

(e) Remove plug from middle mounting hole, labeled “B”, from inner rocker (Fig. 3-2).

(f) Assemble M8 x 30 Carriage Bolt, 8mm backing plate and M8 Helical Wire. Feed bolt then backing plate through front and middle rocker hole (A & B) (Fig. 3-3a). Pull on wire to expose bolt threads from rocker. Install front shim plate on front bolt only (Fig. 3-4a). Install retaining washer on to bolt to prevent falling into vehicle. Use needle nose pliers to assist with holding onto bolt. Remove wire. (Fig. 3-4a & Fig. 3-4b).

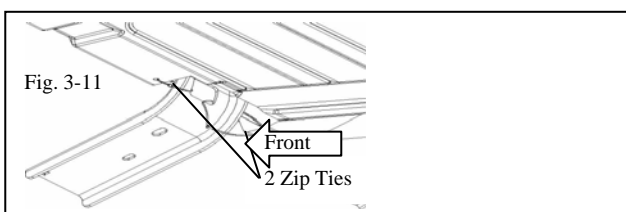
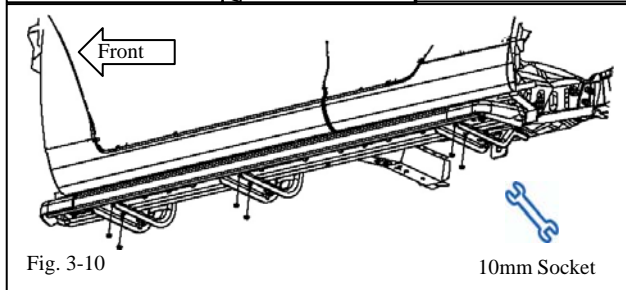
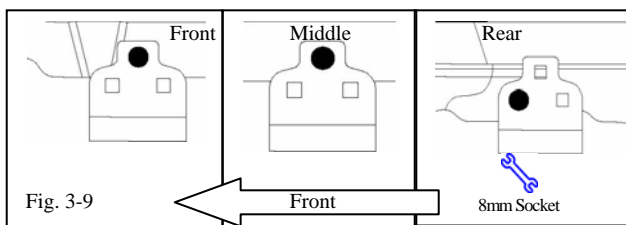
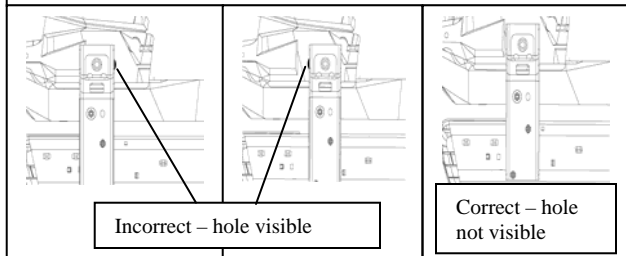
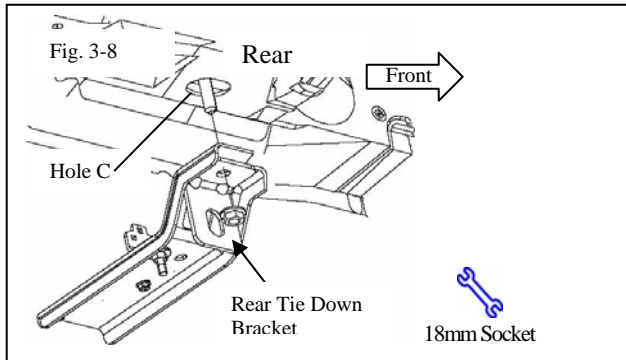
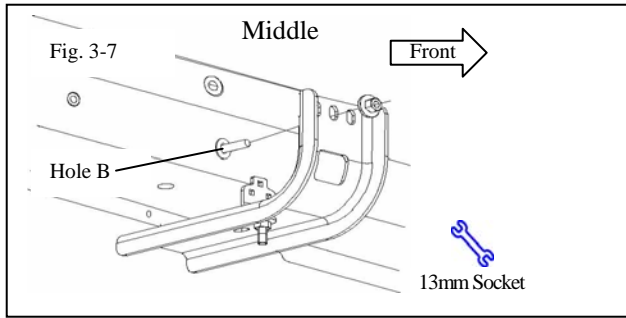


(g) Repeat step (f) with M12 Carriage Bolt, 12mm Backing Plate, and M12 Helical Wire using rear tie down slot labeled “C”. (Fig. 3-3b). Remove Wire.

(h) Loosely attach pinch weld brackets to body mount brackets using M8 x 25 Carriage Bolt (large head) and M8 Nut with Washer (Figs. 3-5a & 3-5b).

(i) Loosely attach front mount bracket assembly to inner rocker, hole “A”, of vehicle, using M8 nut w/washer. Use rectangular tooling access hole in mount bracket to ensure proper orientation of spacer plate when tightening. Note: Use figure 3-6 to ensure that proper vertical slot in bracket is used for attachment to vehicle.

Procedure



- (j) Loosely attach middle mount bracket assembly to inner rocker of vehicle, hole "B", using M8 nut w/washer. Note: Use Fig. 3-7 to ensure that proper vertical slot in bracket is used for attachment to vehicle.
- (k) Loosely attach rear mount bracket assembly and rear tie down bracket to hole "C", using M12 Flange nut. (Fig. 3-8).
- (l) Loosely attach pinch weld bracket assembly to pinch weld using M5 Carriage bolt, and M5 Flange Nut. (Fig. 3-9). Align pinch weld bracket to outside of pinch weld. Ensure proper square hole is aligned to drilled hole.
- (m) Loosely attach running boards to brackets using M6 Flange nuts. (Fig. 3-10).
- (n) Torque Mount Brackets to pinch weld. 5mm Fasteners to 7 ft-lbs. (9 N-m). (Fig. 3-9). Note: For rear bracket, rotate rear tie down bracket 90° to access fastener. (Fig. 3-8)
- (o) Reposition rear tie down bracket to shown position until no gap in hole C is visible. (Fig. 3-8). Torque Mount Brackets to Inner Rocker. 8mm Fasteners to 20ft-lbs (27 N-m). 12mm Fasteners to 85 ft-lbs (115 N-m). (Figs. 3-6, 3-7, 3-8).
 - ⚠ Note: Ensure no part of hole C is visible.
- (p) Torque Pinch Weld Brackets to Mount Brackets. 8mm Fasteners to 20 ft-lbs (27 N-m). (Fig. 3-5).
- (q) Torque Running Board. 6mm Fasteners to 9 ft-lbs (12 N-m). (Fig. 3-10).
- (r) Install Modified Rear Driver plastic under cover followed by Front plastic under cover using previously removed hardware. Torque to 48 in-lbs (5.5 N-m). Note Rear undercover will not require middle fastener.

Procedure

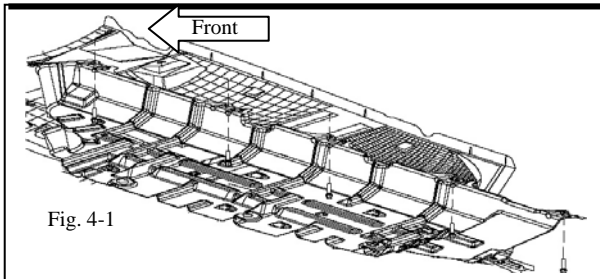


Fig. 4-1

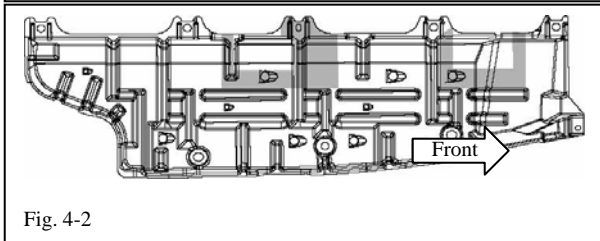


Fig. 4-2

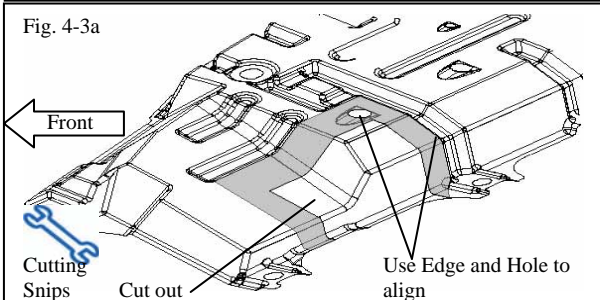


Fig. 4-3a

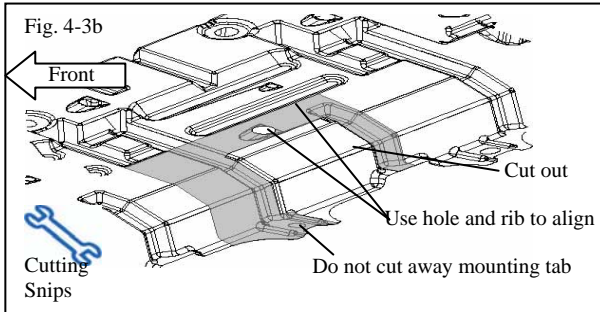


Fig. 4-3b

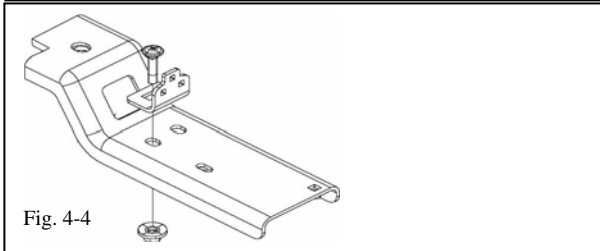


Fig. 4-4

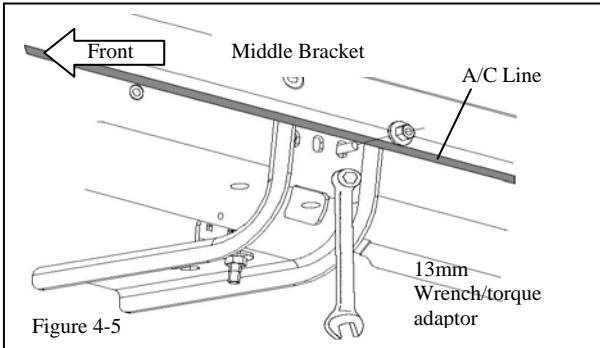


Figure 4-5

(s) Secure plastic under cover to middle bracket using 2 zip ties, feeding through rectangular tooling access hole. (Fig. 3-11).

4. Installation Passenger Side

(a) Repeat all steps for passenger side, but reference steps below for variances.

(b) Remove passenger plastic under cover. Use 10mm socket to remove screws (6) first, then use 6mm allen key to detach plastic retainers (3). Note: Save hardware for re-installation of plastic under cover. (Fig. 4-1 & 4-2).



(c) Cutout and tape templates to plastic under cover (Fig. 4-3a & 4-3b). Use snips to cut away plastic (these cutouts will allow for re-installation).



(d) Refer to Fig. 4-4 for rear bracket sub-assembly.



(e) Refer to Fig. 4-5 for middle bracket installation to vehicle. Note: Use Fig. 4-5 to ensure that proper vertical slot in bracket is used for attachment to vehicle. Pinch weld hole location slightly different than Driver side (See drilling template)



(f) **NOTE:** For vehicles with rear A/C lines only, use 13mm open end wrench to tighten and a torque adaptor to torque middle bracket on passenger side. Make sure there is as least 5mm clearance between end of the bracket bolt and the AC line.

Procedure

TABLE OF CONTENTS

- Before driving Adjusting and operating features such as door locks, mirrors, and steering column.
- When driving Driving, stopping and safe driving information.
- Interior features Air conditioning and anti-theft, as well as other interior features for a comfortable driving experience.
- Maintenance and care Cleaning and protecting your vehicle, performing Do's and Don'ts, and maintenance information.
- When trouble arises What to do if the vehicle needs to be towed, gets a flat tire, or is involved in an accident.
- Vehicle specifications Vehicle specifications.
- For US owners Reporting safety defects for US owners.
- Index Alphabetical listing of information contained in the manual.

Fig. 5-1

- 4.2 Maintenance 404
- 4.3 Do-it-yourself 410
- 4.4 When trouble arises 416
- 4.5 Vehicle specifications 422
- 4.6 For US owners 428
- 4.7 Index 434
- 5.1 General information 476
- 5.2 Before to take in an emergency 489
- 5.3 Replacing a flat tire 495
- 5.4 Replacing a tire 501
- 5.5 Towing 507
- 5.6 Jacking up the vehicle 513
- 5.7 Towing 519
- 5.8 Vehicle specifications 525
- 5.9 For US owners 531
- 5.10 Index 537

Fig. 5-2

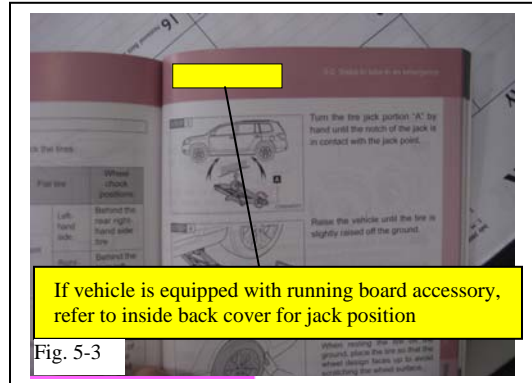


Fig. 5-3

5. Owner's Manual Sticker Placement

- (a) Retrieve Vehicle Owner's manual from glove compartment.
- (b) Open to Table of Contents. Go to section 5: "WHEN TROUBLE ARISES". (Fig. 5-1)
- (c) In section 5-2, go to "If you have a flat tire". (Fig. 5-2)
- (d) Go to the "Replacing a flat tire" section, step 3. (Fig. 5-3)
- (e) In this section, locate this image and place the 1/2" x 2-1/2" yellow sticker on the page as shown. (Fig. 5-3)
- (f) Go to inside back cover of the vehicle owner's manual.
- (g) Place the 4" x 3" white sticker on the inside of the cover as shown. (Fig. 5-4)

6. Jack Sticker Placement

- (a) Remove the jack. If required reference vehicle owner's manual "Location of the spare tire, jack and tools" for jack location.
- (b) Make sure Jack is free from dirt and Grease.
- (c) Place the 1" x 1-1/2" yellow sticker on the jack as shown. (Fig. 6-1)
- (d) Replace the Jack.
- (e) Replace the Owner's Manual.

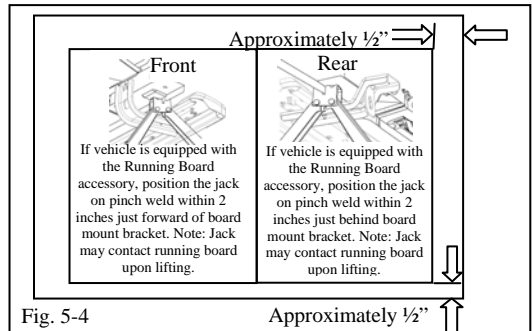


Fig. 5-4

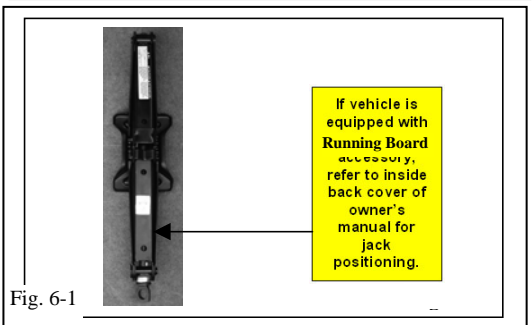


Fig. 6-1

TOYOTA HIGHLANDER 2008 - RUNNING BOARD

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

Check:

Look For:

Accessory Function Checks

Visual Alignment

Ensure Running Board is level and parallel to vehicle rocker.

Vehicle Function Checks