

Part Number: PTS27- 21051

Kit Contents

| Item # | Quantity Req. | Description |
|--------|---------------|----------------|
| 1 | 1 | DS Mount Plate |
| 2 | 1 | PS Mount Plate |
| 3 | 1 | Cross Bar |
| 4 | 1 | Hardware Bag |

Hardware Bag Contents

| Item # | Quantity Req. | Description |
|--------|---------------|-----------------------|
| 1 | 4 | 8mm Screws |
| 2 | 4 | 8mm Washers |
| 3 | 1 | 6-inch Nylon Wire Tie |

Additional Items Required For Installation

| Item # | Quantity Req. | Description |
|--------|---------------|-------------|
| 1 | | |

Conflicts

| |
|--|
| |
|--|

Recommended Tools

| Personal & Vehicle Protection | Notes |
|--------------------------------------|--------------------------------------|
| Blanket/Fender Covers | |
| | |
| Special Tools | Notes |
| | |
| Installation Tools | Notes |
| Ratchet | 3/8 Dr. |
| Socket | 14mm, 3/8 Dr. |
| 5mm Ball End Socket | Snap On #FABL1M5E2 |
| Open End Wrench | 14mm |
| Torque Wrench | Lbf-ft, 3/8 Dr. |
| Torque Wrench (Interchangeable Head) | Lbf-ft |
| 14 mm Open End Torque Head for above | QAOM14J |
| Hemostat | McMaster-Carr #5383A36 or equivalent |
| Diagonal Cutters | |
| Special Chemicals | Notes |
| Glass Cleaner | |

General Applicability

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

Recommended Sequence of Application

If any other accessories are to be installed, it is recommended they be installed in the order described below to ease installation and/or avoid redundant work.


| Item # | Accessory |
|--------|-----------------|
| 1 | CF Engine Cover |
| 2 | Cold Air Intake |
| 3 | Strut Tie Bar |
| 4 | Oil Cap |


*Mandatory


Vehicle Service Parts (may be required for reassembly)


| Item # | Quantity Req. | Description |
|--------|---------------|-------------|
| 1 | | |


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.

Please see bottom of page 5 for important “Care and Maintenance” information!

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.

1. Vehicle Preparation.

- ⊘ (a) Apply protection to engine compartment and front of vehicle

2. Vehicle Disassembly.

- ⚠ (a) Cycle wipers once to ensure wipers are in the "parked" position.

- ⚠ (b) Apply tape to windshield to mark wiper locations. (Fig. 2-1)

- (c) Use a non-scratch pry tool to remove wiper mounting nut covers. (Fig. 2-2)

- (d) Remove wiper mounting nuts. (Fig. 2-3)

- (1) Hold the wiper arm while loosening the nuts.

- (e) Remove wipers.

- ⚠ (1) Slightly lift hinged end of wiper arm and slightly wiggle wiper at mounting stud to remove. (Fig. 2-4)

- (f) Remove cowl cover.

- (1) Remove the push pin fasteners (2 per side) and the seal retainer (1 per side). (Fig. 2-5)

- (2) Push center of push pin fasteners to release. Push in one click to release. Do not push pin too far. (Fig. 2-6)

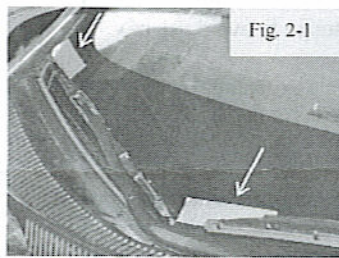


Fig. 2-1

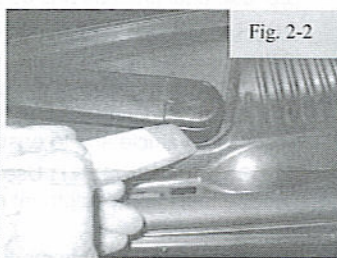


Fig. 2-2

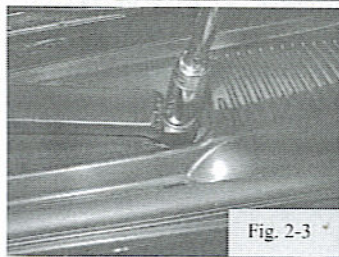


Fig. 2-3

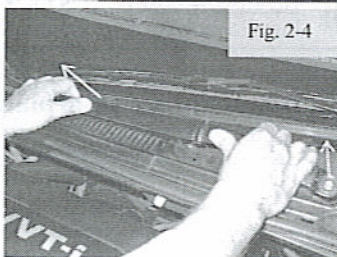


Fig. 2-4

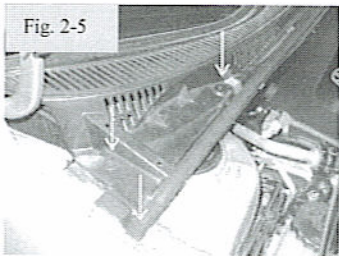


Fig. 2-5

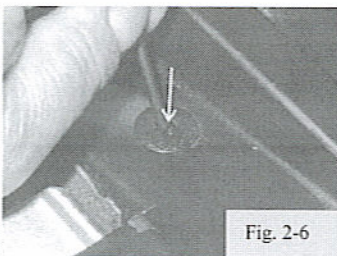


Fig. 2-6

(3) Remove the outer seal retainer clips.

(1) Carefully slide the seal off the retainer

(2) Using a hemostat squeeze the clip to remove from cowl.

(3) Reinstall seal retainer clips back into the seal

(4) Push up on the (4) tabs under the cowl. (Fig. 2-7)

(5) Push up on the (2) seal retainers. (Fig. 2-7)

(6) Remove the cowl cover.

(1) Pull the cowl cover forward, lift at the middle and let the ends “droop” to gain clearance. (Fig. 2-8)

(2) Remove the (2) cover halves and the seal as one piece.

(g) Remove the inner strut mounting nuts (2 per side). (Figs. 2-9 & 2-10)

(1) On the driver side, the black metal cover may have to be lifted slightly to remove the rearward nut. (Fig. 2-11)

3. Pre-assemble the Strut Tie Bar

(a) Using the supplied (4) screws and (4) washers, assemble the Mounting Plates to the Cross Bar as shown. (Fig. 3-1)

(1) The bend of the bar and the “notches” on the Mounting Plates face forward. The “Hotchkis” logo faces up. (Fig. 3-2)

(2) The screws should be tightened enough that the plates are not loose but can still rotate slightly.

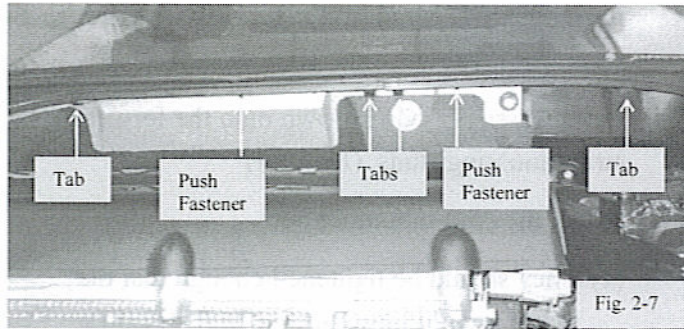


Fig. 2-7



Fig. 2-8



Fig. 2-9

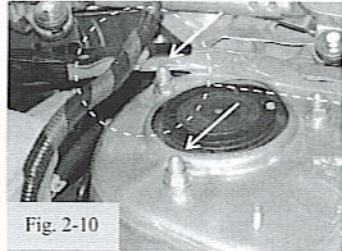


Fig. 2-10

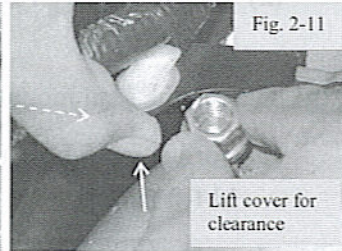
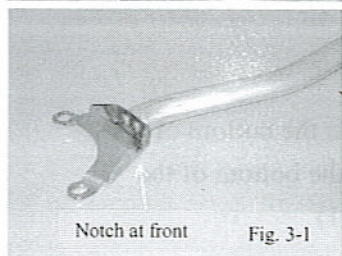


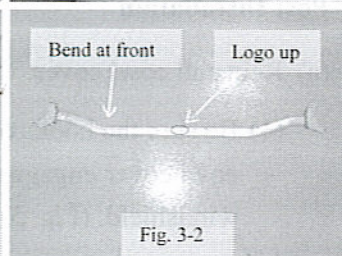
Fig. 2-11

Lift cover for clearance



Notch at front

Fig. 3-1



Bend at front

Logo up

Fig. 3-2

4. Install the Strut Tie Bar

- (a) Starting with the driver side mounting plate, insert the Mounting Plate under the wire harness. (Fig. 4-1)
- (b) First, engage the rear mount plate hole with the rear strut mounting stud. (Fig. 4-2)
- (c) Then, rotate the assembly to engage the rear passenger side Mounting Plate hole with the rear strut mounting stud. (Fig. 4-3)
- (d) Let the assembly drop down onto the forward strut mounting studs. (Fig. 4-4)
- (e) Install the strut mounting nuts.

- ⚠ (1) They should be tightened enough that the plates are not loose but can still slide in the slots. (Fig. 4-5)

- (f) Tighten the Tube to Mounting Plate screws.

- ⚠ (1) Pull bar up while tightening to gain maximum clearance. (Fig. 4-6)

- ⚠ (2) Torque to 12 Lbf-ft (10 Lbf-ft min./15 Lbf-ft max.)

- (g) Tighten the strut mounting nuts.

- ⚠ (1) Torque to 35 Lbf-ft (30 Lbf-ft min./40 Lbf-ft max.).

5. Post Installation

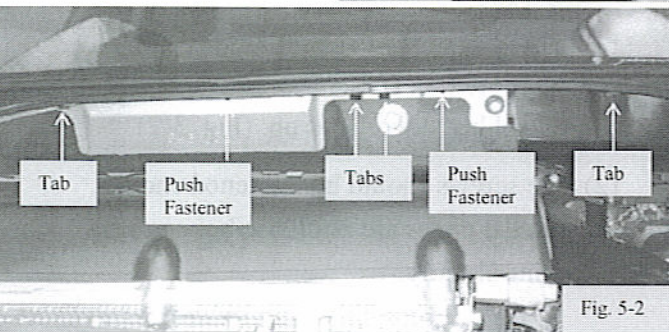
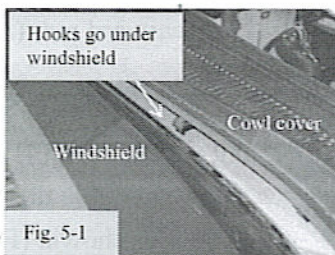
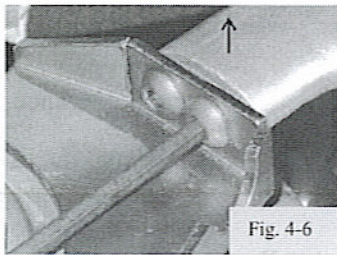
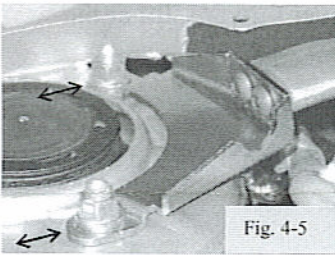
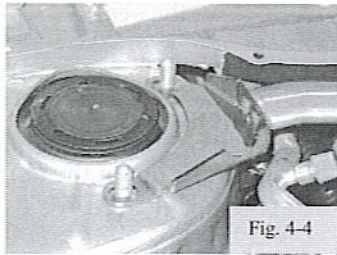
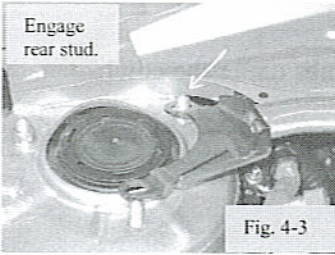
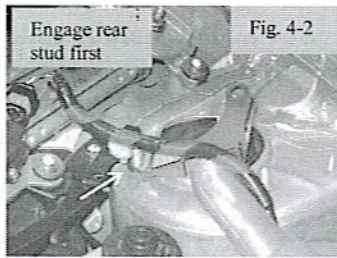
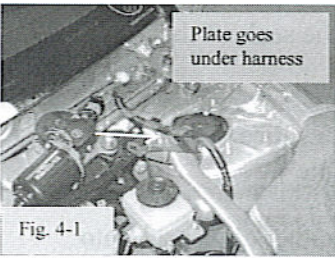
- (a) Reinstall cowl cover.

- ⚠ (1) Be sure the hooks on the bottom of the cowl cover engage the bottom of the windshield. (Fig. 5-1)

- (2) Push cover toward windshield.

- (3) Be sure to re-engage all (4) tabs and (2) seal retainers under the cowl. (Fig. 5-2)

- (b) Reinstall push pin fasteners (2 per side).




(1) Pull the center pin back out, insert the fastener assembly into the hole and push the center pin in flush with the fastener head.

(c) Re-engage outer seal retainers.

(d) Reinstall wipers.


(1) Align wipers with tape marks.

(2) Install wiper mounting nuts.

 (e) Torque wiper mounting nuts to 15 Lbf-ft (12 Lbf-ft min./18 Lbf-ft max.)

(1) Hold the wiper arm while tightening.

(f) Reinstall wiper mounting nut caps.

 (g) Use the 6-inch wire tie to secure the Vacuum Switched Valve (VSV) connector wires to the VSV. Position wires as shown. (Fig 5-3 and 5-4) **Note: Maximize the clearance between the VSV wires and the Strut Tie Bar**

(h) Use diagonal cutters to trim the wire tie. (Fig 5-4)

(i) Clean Strut Tie Bar with glass cleaner.

(j) **Installer** – The installation manual contains important **“Care and Maintenance”** information. Place the instruction manual in the glove box for future customer reference.

Care and Maintenance

- Your Hotchkis Strut Tie Bar has a brilliant powdercoat/anodized finish that ensures a maintenance free shine.
- To clean your Strut Tie Bar simply spray with window cleaner and wipe with a soft, clean terry-cloth towel.

NEVER use harsh chemicals or metal polish on your Strut Tie Bar.

