

**Part Number: PTR46-52080**

## Kit Contents

| Item # | Quantity Req'd. | Description                   |
|--------|-----------------|-------------------------------|
| 1      | 1               | TRD Shift Reduction Adaptor   |
| 2      | 1               | Spring Clip                   |
| 3      | 1               | Bracket Assembly: Cable       |
| 4      | 1               | Bolt: Hex, 5mm x 0.80 x 12    |
| 5      | 1               | 8-inch Nylon Wire Tie         |
| 6      | 1               | TRD Installation Instructions |

## Bracket Assembly Contents

| Item # | Quantity Req'd. | Description                |
|--------|-----------------|----------------------------|
| 1      | 1               | Bracket: Cable             |
| 2      | 1               | Washer: Large Area         |
| 3      | 1               | Washer: Lock               |
| 4      | 1               | Bolt: Hex, 10mm x 1.5 x 20 |

## Additional Items Required For Installation

| Item # | Quantity Req'd. | Description |
|--------|-----------------|-------------|
|        |                 |             |

## Conflicts

| PPO Code | Description |
|----------|-------------|
|          |             |

## Recommended Tools

|                           |                     |
|---------------------------|---------------------|
| <b>Safety Tools</b>       |                     |
| Safety Glasses            | or Goggles          |
|                           |                     |
| <b>Special Tools</b>      |                     |
| Vehicle Protection        | Front Seat Covers   |
| Vehicle Protection        | Blankets            |
| Telescoping Mirror        |                     |
|                           |                     |
| <b>Installation Tools</b> |                     |
| 8mm Socket                | 1/4" Drive          |
| 10mm Socket               | 1/4" Drive          |
| 10 inch Extension         | 1/4" Drive          |
| Ratchet                   | 1/4" Drive          |
| Torque Wrench             | 1/4" Drive          |
| Pliers, Standard          |                     |
| Pliers, Needle-Nose       |                     |
| Diagonal Cutters          | Flush-cut preferred |
| 17mm Socket               | 3/8" Drive          |
| Ratchet                   | 3/8" Drive          |
| Torque Wrench             | 3/8" Drive          |
| Brass Hammer              |                     |
| Flat Screwdriver          | #2                  |
|                           |                     |
| <b>Special Chemicals</b>  |                     |
|                           |                     |

### Color Applicability/Trim Level

[illegible]

## General Applicability

|   |
|---|
| Scion xB: 2008 and later with manual transmission         |
| Corolla XRS: 2009 and later with manual transmission      |
| Matrix: 2009 and later with 2.4L engine and manual trans. |

**Vehicle Service Parts** (may be required for reassembly)






| Item # | Quantity Req'd. | Description   |
|--------|-----------------|---|
| 1      | 2               | U-clips: Transmission Cables,<br>Part No. 90468-14016 |
| 2      | 2               | Spring Clips: Cable Ends,<br>Part No. 90468-14017     |

## Recommended Sequence of Application

| Item # | PPO Code | Accessory             |
|--------|----------|-----------------------|
| 1      | MU       | TRD Quick Shifter     |
| 2      | 5Y       | TRD Front Strut Brace |

\*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. These points will be audited on a completed vehicle installation
-  **GENERAL PROCESS:** This highlights specific processes to ensure a quality installation. These points will be audited during the accessory installation
-  **TOOLS & EQUIPMENT:** This calls out the specific tools and equipment required for this process

Section II – Installation Procedure

**A. Check Kit Contents**

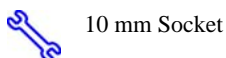
1. Check kit for contents and damage.

**B. Vehicle Preparation**

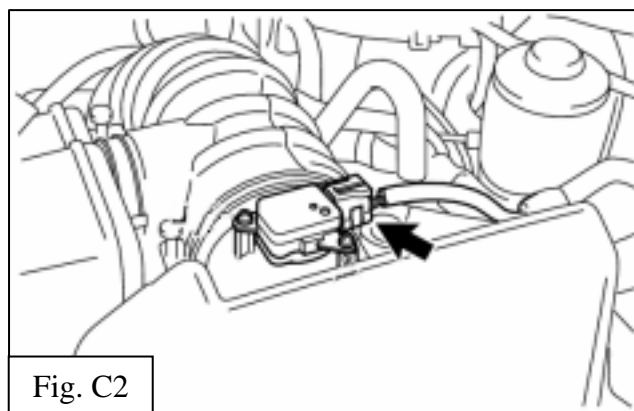
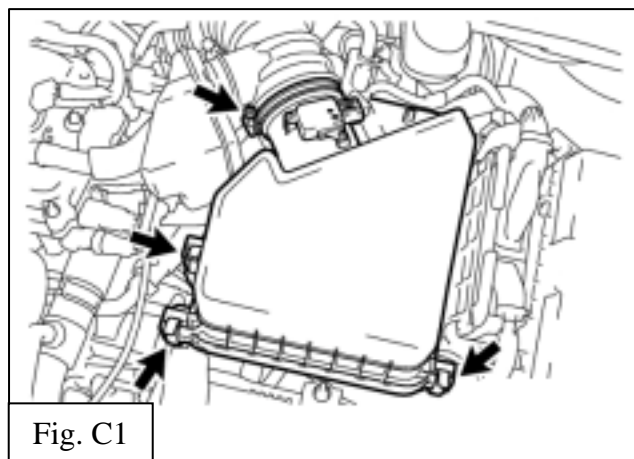
1. Open vehicle hood.
-  2. Use blankets to protect the front grille area and the front seat area.
3. Set parking brake.
4. Put transmission in Neutral.
5. Disconnect the negative battery cable from the battery at the terminal.

**C. Removal Procedure: OE Air Filter Enclosure**

1. Remove air cleaner lid.
  - i. Unfasten the 3 hook clamps. (Fig. C1)
  - ii. Loosen the hose clamp that secures the intake hose to the air cleaner lid. (Fig. C1)



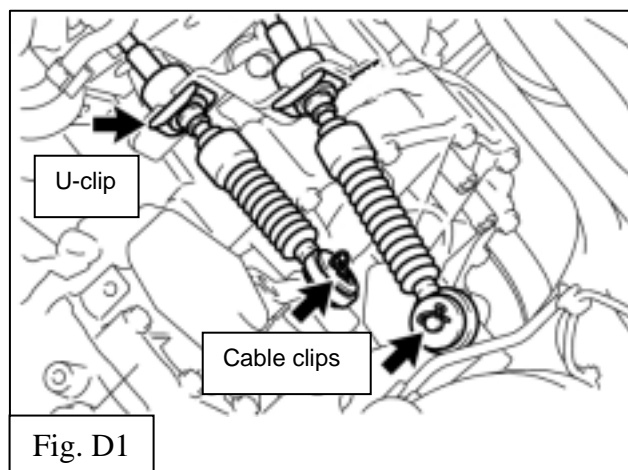
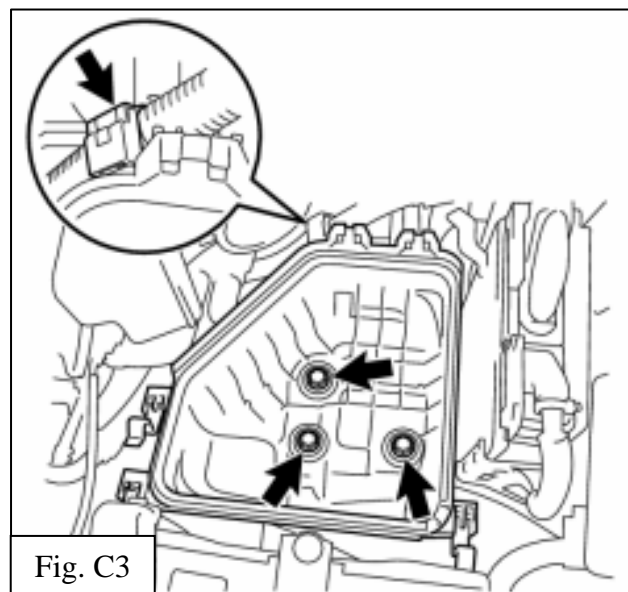
- iii. Unplug the Mass Air Flow Sensor connector. (Fig. C2)
- iv. Remove wire harness from the air cleaner lid.
- v. Remove OE air filter lid from engine bay.
- vi. Remove OE air filter.



2. Remove air filter inlet base.
  - i. Use a 10mm socket, 10" extension and 1/4" drive ratchet to remove 3 OE bolts that secure air filter inlet base. (Fig. C3)
  - ii. Lift up the tab for the wire harness tie. Remove the harness and tie from the inlet base. (Fig. C3).
  - iii. Lift air filter inlet base out of engine bay.

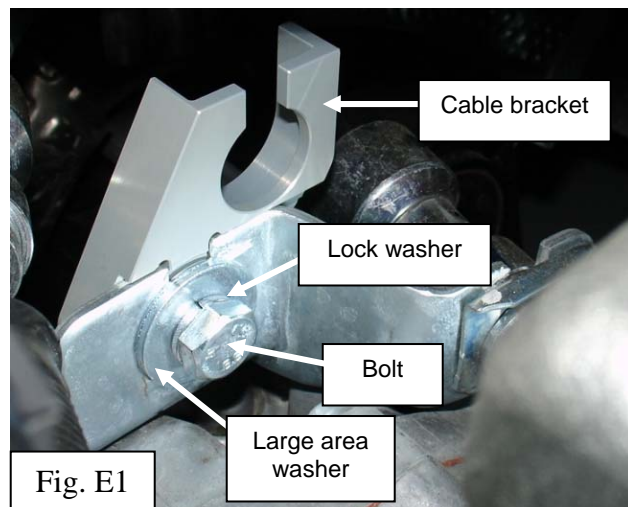
#### D. Removal Procedure: Transmission Cable Ends

1. Disconnect the transmission cable ends from the gear shift linkages on the transmission. (Fig. D1)
  - i. Remove factory transmission cable clips and save for re-use. (Fig.D1)
  - ii. Remove transmission cable ends from transmission linkages and set cable ends aside. (Fig. D1)
2. Remove U-clip from shift cable bracket. (Fig. D1)
3. Move shift cable out of OE bracket.



#### E. Installation Procedure: TRD Quick Shifter

1. Install supplied cable bracket as shown. (Fig. E1)
  - i. The large area flat washer sits against the OE steel bracket; the lock washer is next and then the bolt. (Fig. E1)
  - ii. Use a 17mm socket to tighten bolt. (Fig. E1) Torque: 23 N•m (235 kgf•cm, 17 ft•lbf)



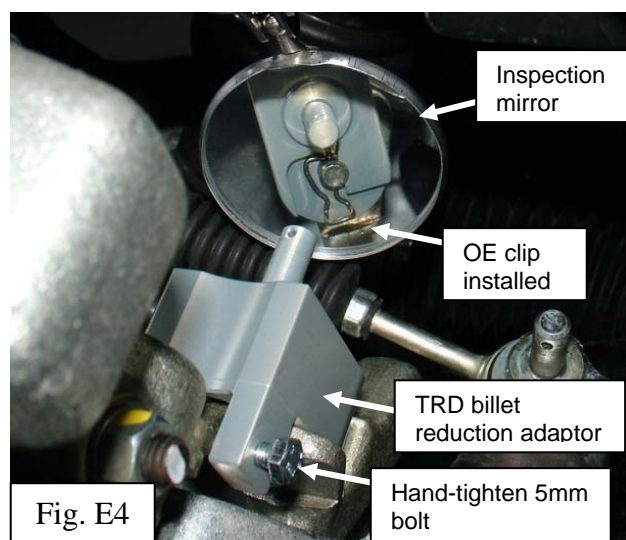
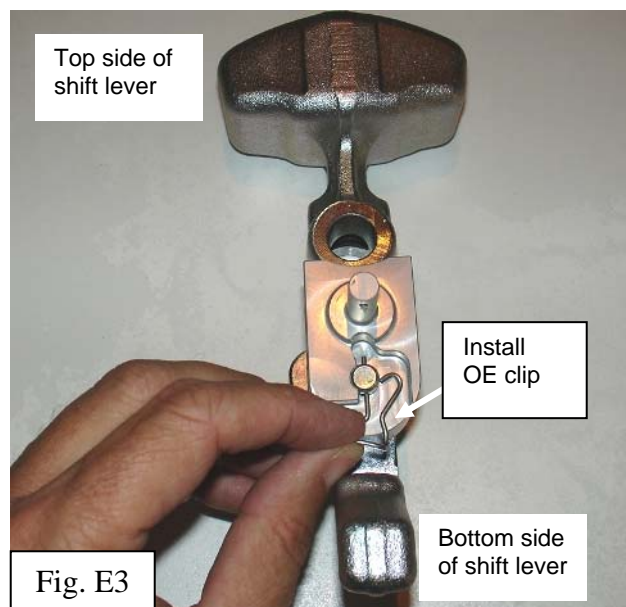
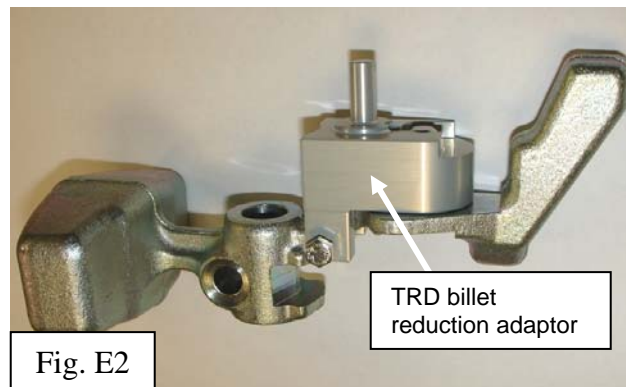
2. Install TRD Quick Shifter billet reduction adaptor as shown. (Fig. E2)
  - i. Slide TRD reduction adaptor over the post on the factory shift lever. (Fig. E2)
  - ii. Figures E2 & E3 show the factory shift lever out of the car for clarity.

- iii. Reinstall the factory transmission cable clip to secure the TRD reduction adaptor to the factory shift lever. (Fig. E3)


**Notice: The OE clip installs through the post from the bottom side of the shift lever.**

- iv. Figure E4 shows the TRD reduction adaptor as installed in the car.
  - v. Screw the 5mm bolt into the reduction adaptor.
    - (1) Tighten the bolt only until there is no free play.

**Caution: Hand-tighten the bolt only at this time.**

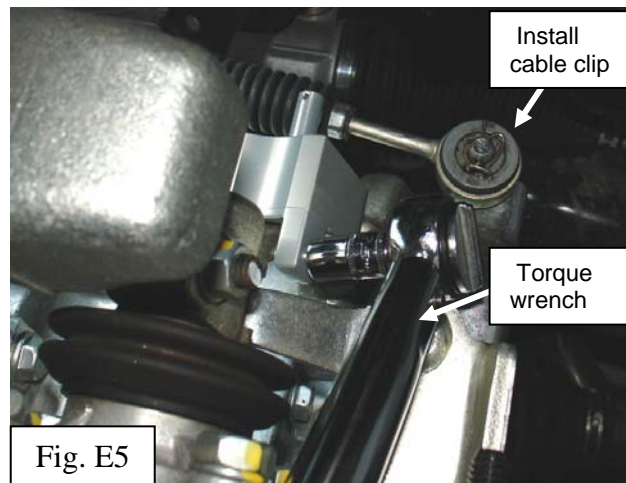




-  vi. Use an 8mm socket and 1/4-inch drive torque wrench to tighten the bolt. Torque bolt: 1.7 N•m (17 kgf•cm, 15 in•lbf) (Fig. E5)

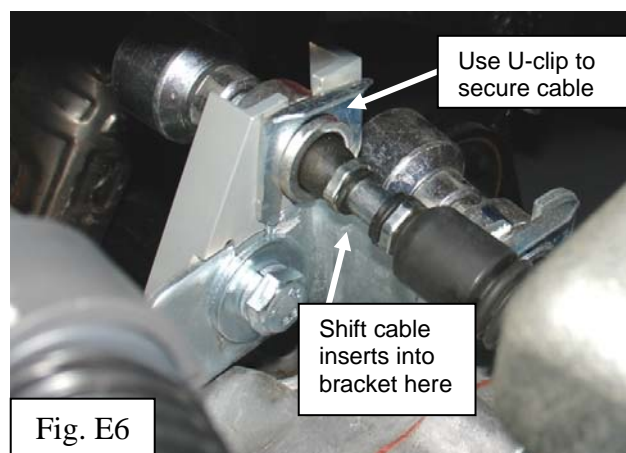
vii. Reinstall the select lever cable end.

- (1) Reinstall factory transmission cable end clip to secure cable end. (Fig. E5)



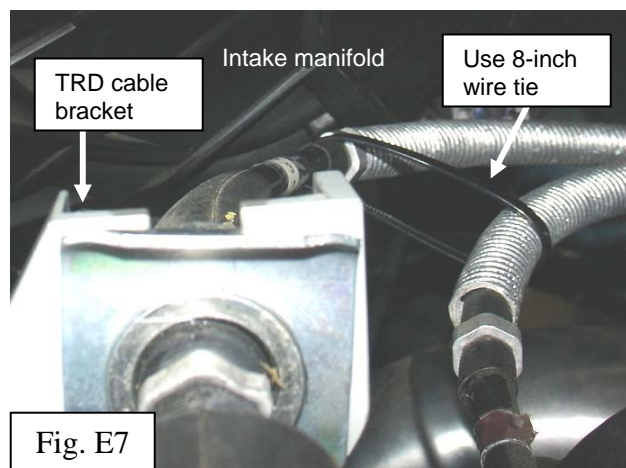
3. Install shift cable into new bracket.

- i. Insert shift cable into TRD bracket at smaller area of cable. (Fig. E6)
- ii. Use U-clip to secure cable into new bracket. (Fig. E6)

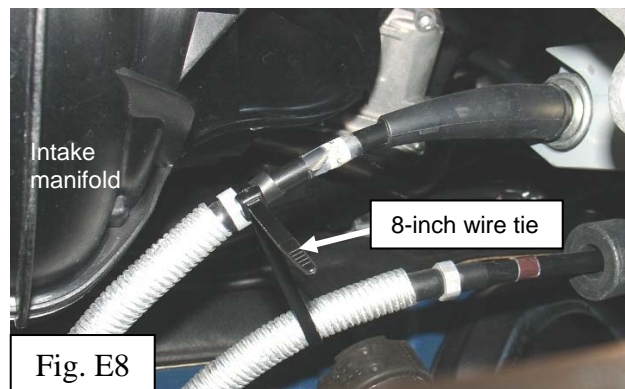


4. Check for any interference between shift cable and intake manifold.

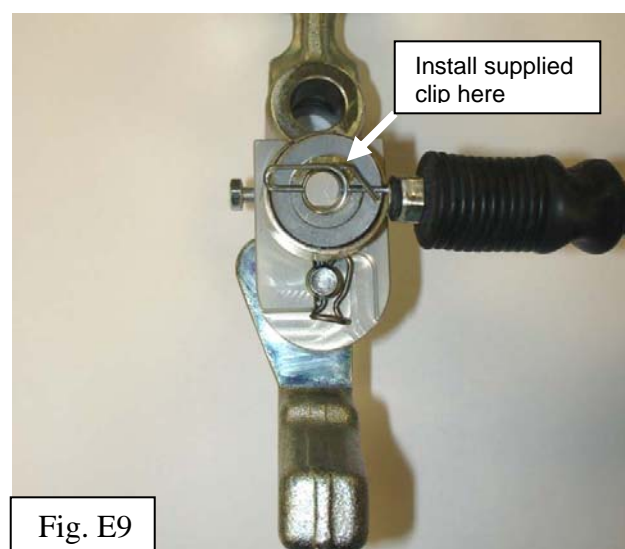
- i. If shift cable touches manifold; then route cable away from manifold.
- ii. Secure cable with supplied Nylon wire tie as shown in Figures E7 and E8.




- iii. Figure E8 shows shift cable, wire tie and intake manifold from below vehicle for proper wire tie position.
- iv. Use diagonal cutters to trim Nylon wire tie if used.



- 5. Reinstall cable end over TRD reduction adaptor. (Fig. E9)
  - i. Slide cable end over TRD reduction adaptor. (Fig. E9)
  - ii. Install supplied clip to secure cable end as shown. (Fig. E9)



## F. Gear Engagement Check

-  1. Check gear engagement in all 5 forward gears and reverse. (Fig. F1)

## G. Installation Procedure: OE Air Filter Enclosure

- 1. Reinstall air filter inlet base.
  - i. Reinstall the 3 OE bolts/washers that secure the air filter inlet base. (Fig. C3)



## Section II – Installation Procedure



- ii. Torque bolts: 7.0 N•m (71 kgf•cm, 62 in•lbf)
- iii. Reconnect the wire harness and clip to the inlet base. (Fig. C3).

2. Reinstall OE air filter.

3. Reinstall OE air filter lid.

- i. Reconnect the Mass Air Flow Sensor connector. (Fig. C2)
- ii. Re-attach wire harness to the air cleaner lid.
- iii. Reconnect intake hose to the air cleaner lid. (Fig. C1)
- iv. Fasten the 3 hook clamps. (Fig. C1)
- v. Tighten hose clamp that secures intake hose to air cleaner lid.

### H. Post Installation

1. Reconnect negative battery cable to battery.



- i. Torque 10 mm nut: 4.1 N•m (41 kgf•cm, 36 in•lbf)



- 2. Start vehicle engine to check for smooth idle.
  - i. If engine idle is smooth, shut off engine.
  - ii. If engine idle is not smooth or engine will not start; then review functional verification page and perform functional checks.
- 3. Remove vehicle protection from grille and front seat area.
- 4. Close vehicle hood.



Section III – Functional Verifications

Check: \_\_\_\_\_



Gear Engagement



Engine idle

If after you start the vehicle, or while driving, you encounter a Malfunction Indicator Lamp (MIL), check the following:

Look For: \_\_\_\_\_

- Shifter will engage all 5 forward gears and reverse.
- Smooth engine idle and no MIL.
- Full engagement of MAF sensor connector.
- Tightness of all clamps.