Part Number: PTR18-35090-XX

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Cast Al Wheel 16"x7.5"x10mm

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	1 per wheel	TRD Center Cap P/N **PTR18-35092**
2	1 per wheel	Wheel Lock Ring P/N **PTR18-35091**
3	12 per wheel	Lock Ring Fasteners &Washers P/N **PTR18-35093** (pkg. of 12)

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1	1 per wheel Tacoma …… FJ Cruiser……	Tire: BFG All-Terrain T/A LT265/70R16 117S M+S LT265/75R16 123/120S M+S
2	1 per vehicle Tacoma FJ Cruiser	Lug nut set w/ spline tool & wheel locks & lock key tool P/N **PTR27-35100** P/N **PTR27-35090**
3	0 – 4 or 5 as needed Tacoma Tacoma FJ Cruiser	TPMS 20 degree angle (For Styled Steel wheel swap) Bulk **PPO** P/N **PTR42-3507B** Single **DIO** P/N **42607-06011** Single FJ P/N **42607-33011**
4	As needed	Low-Profile, Lead-Free Balance Weights **3M TN-4023** (or equivalent) Stick-on Type and/or Clip-on Type
5	1 per vehicle 2007 + All	Tire Pressure Door Jamb Label Tacoma MDC # **00602-35015** FJ Cruiser MDC #**00602-35016**
6	1	Owner's Manual Label MDC # **00602-35061**
7	1 PPO DIO	Vinyl Pouch **PT276-06999** Vinyl Pouch MDC#**00602-06999**
8	FJ Cruiser Only 1 2008~2011	Denso TPMS ECU for LT tires **PTR24-35110**

General Applicability

1995+ Tacoma 4X4 or PreRunner & 2007+ FJ Cruiser
Use w/ tire size LT**265/70R16** or **LT265/75R16**, respectively

Vehicle Service Parts (May be required for reassembly)

Item #	Quantity Reqd.	Description
1	0 – 4 or 5 as needed	Valve Stem Grommet Fit Kit (if required) P/N **04423 -0E010**
2	0 – 4 as needed	Tacoma 20°TPMS Bulk **PPO** P/N **PTR42-3507B**
2	0 – 5 as needed	FJ Cruiser 20°TPMS Single P/N **42607-33011**

Recommended Tools

Personal & Vehicle Protection	**Notes**
Safety Glasses	
Seat Protection	Seat Protection/Blanket
Special Tools	**Notes**
Tire Changing Machine	Hunter or Corghi or equiv.
Tire Bead Clip/Depressor	Corghi **801262417** or equiv.
Wheel Balancing Machine	Hunter GSP9700 or equiv.
Centering Cone	Hunter **BACK-SIDE** collet **192-169-2** or equiv.
Wing Nut	Hunter **76-371-3** or equiv.
6" Cup w/ Sleeve	Hunter **175-392-1** or equiv.
6" Protector Sleeve	Hunter **106-157-2** or equiv.
Foot Brake Application Tool	Snap-on or equivalent.
Toyota Techstream	Software Version 9.00.026 or newer required.
Tire Pressure Sensor SST	00002-TTPWS or equiv.
Installation Tools	**Notes**
Lug Nut Wrench	21 mm wrench flat
Torque Wrench	20-150 ft-lbf (27-204 N-m)
Torque Wrench	30-150 in-lbf (3.3-17 N-m)
Sockets	11mm and 21 mm Deep Well, Thin Wall
Ratchets	Air and/or manual
Extensions	1/4, 3/8, 1/2 inch as needed
TORX Male T30	TORX for lock ring
Clean Lint-free Cloth	
Nylon Panel Removal Tool	e.g. Toyota SST # 00002-06001-01 or equiv.
Valve Stem Removal Tool	Schraeder Valve Type
Valve Stem Torque Tool	Snap-On QDTPMS or equiv.
Wire Brush	Hand held size
Special Chemicals	**Notes**
Tire Lube / Paste	Myers or equivalent
Cleaner (for rework of stick on weights if needed)	**PPO/DIO**: locally approved cleaner. No stronger than a 50-50 mix of Simple Green and Water.

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.

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

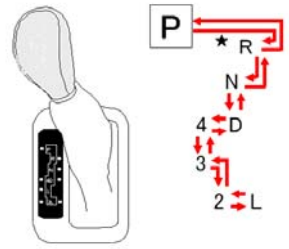

Fig. 1-1

1. Vehicle Preparation.

(a) Firmly apply the parking brake.

(b) Put automatic transmission in "P" (Fig. 1-1).

Put manual transmission in “R”.

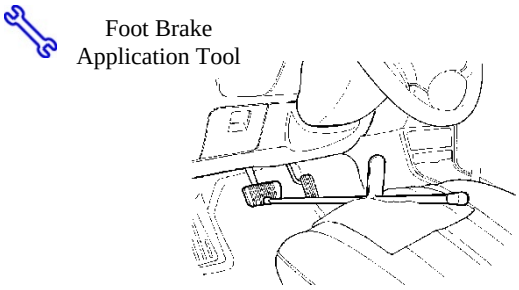

Fig. 1-2

(c) Add seat protection (blanket) and apply the foot brake using a foot brake application tool (Fig. 1-2).

(d) Lift the vehicle.

(e) If reusing the tires:

(1) Mark the tire installation position on the inward facing tire sidewall. For example, Front Right = FR, Front Left = FL, Rear Right = RR, Rear Left = RL.

(2) Later, at Step 4, install the original tires on the new wheels with the marked side facing inwards.

(3) Place the tire/wheel assemblies on the vehicle in the marked positions. Refer to T-SB-PG002-05 as needed.

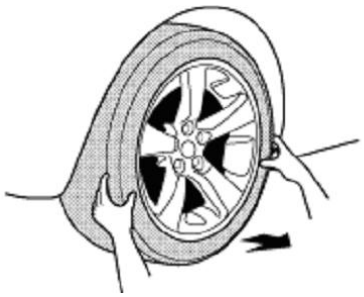

Fig. 1-3

(f) Remove the OE wheel and tire assembly from the vehicle (Fig. 1-3). Wear safety glasses while removing wheels.

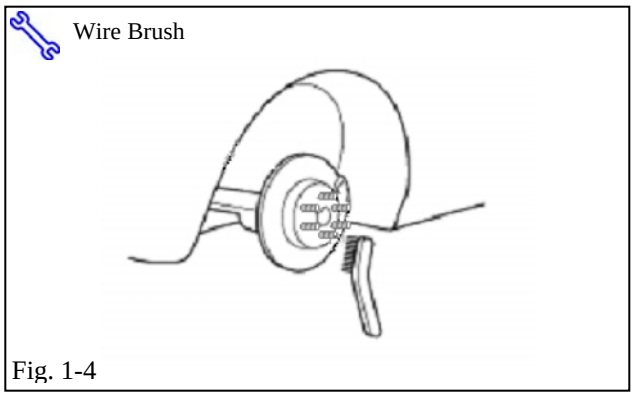

Fig. 1-4

(g) If required, remove any corrosion on the mounting surface of the vehicle with a wire brush (Fig. 1-4). Wear safety glasses to protect against any debris.

2. Remove Tire Pressure Monitor Valve Sub-assembly.

NOTE: 20 degree Tire Pressure Sensors should stay with the same vehicle!

40 degree sensors are NOT re-used on ANY TRD Accessory Alloy Wheels! (Fig. 2-1)

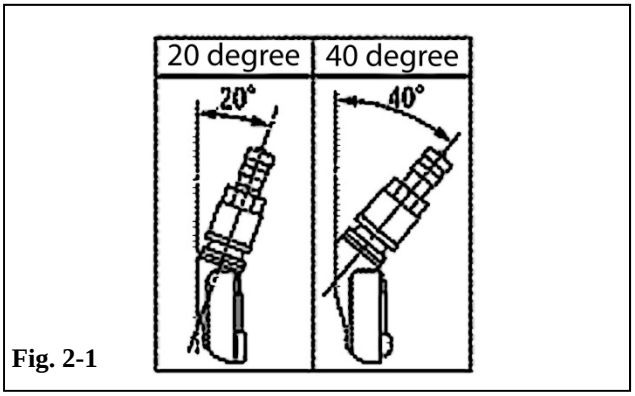

Fig. 2-1

(a) Remove the valve core and release the air from all four tires (and the spare for FJ Cruiser).

(b) Remove the nut and washer and let the pressure sensor drop inside the tire.

(c) Remove any wheel weights from the outboard flange.

(d) Carefully separate the outer tire bead from the wheel rim (Fig. 2-2).

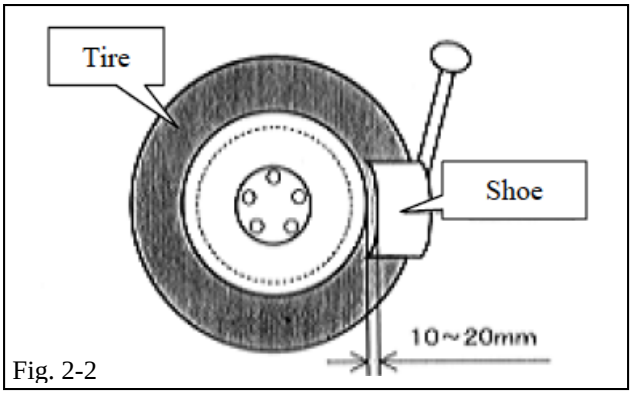

Fig. 2-2

NOTE: Be careful not to damage the tire pressure monitor due to interference between the sensor and tire bead.

(e) Remove the sensor from the tire and remove the bead on the lower/inner side as in the usual tire removal operation.

(f) Dismount the OE tire from the OE wheel.

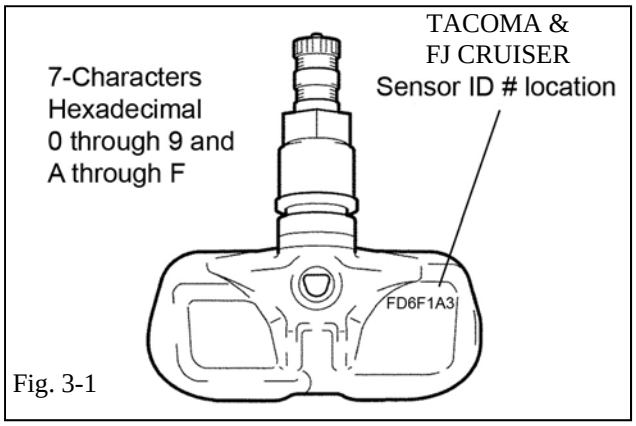

Fig. 3-1

3. Install the Tire Pressure Monitor Sensor (TPMS) Sub-assembly into TRD Accessory Wheel.

(a) If the previously removed sensor is a 20 degree sensor, proceed to step **3(c)**. If the previously removed sensor is a 40 degree sensor (e.g. Tacoma styled steel wheels), you must install new 20 degree sensors into the accessory wheels. When installing new 20 degree sensors, you **MUST** record sensor ID codes for all four wheels and register these four new ID codes (Fig. 3-1) with the vehicle ECU. Each sensor has a unique sensor ID code. The sensor ID code is a 7 or 8-character hexadecimal string comprised of numbers 0 through 9 and letters A through F. See Fig. 3-1 for example code and location.

(b) **IMPORTANT!** Record all four new TPMS ID codes onto a sheet of paper or in a shop notebook. These **MUST** be programmed into the vehicle ECU later in **Step 10**.

(c) Check that the wheel valve hole is clean and free of sharp edges or burrs.

(d) Visually check that there is no deformation or damage on the tire pressure monitor valve sub-assembly. Check that the grommet, washer and nut are all clean and in good condition.

NOTE: Replace the grommet ONLY IF the grommet is old or was damaged. A damaged grommet is NOT reusable.

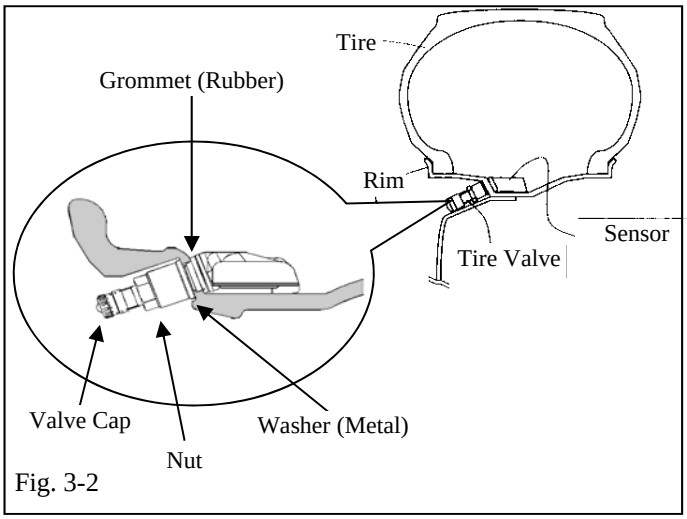

Fig. 3-2

(e) Insert the tire pressure monitor valve sub-assembly into the wheel valve hole from the inside of the rim and bring the valve stem to the outside (Fig. 3-2).

(f) Insert the tire pressure monitor valve sub-assembly so that the sensor ID number and text is visible (Fig. 3-2).

NOTE: Incorrect orientation of the pressure monitor sub-assembly may cause damage and prevent signal transmission during high-speed driving.

(g) Install the washer on the outside of the wheel and secure with the nut.

Torque: 36 in-lbf (4.0 N-m)

4. Tire Mounting.

IMPORTANT: Mount the tires <u>BEFORE</u> installing the wheel lock rings!

NOTE: Mount the tires with the raised white letters facing out on all tires.

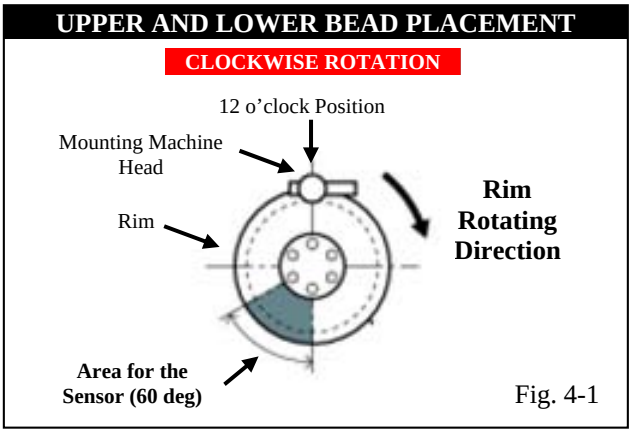

Fig. 4-1

(a) Use tire lube on the tire beads and bead locations on the wheel prior to mounting the tire.

(b) Position the wheel on the mounting machine with the sensor at ~ 7 o'clock position (shaded area in Fig. 4-1).

(1) The mount/dismount head is considered as 12 o'clock.

(c) Mount the lower tire bead.

NOTE: If the sensor is positioned outside this area, it generates interference with the tire bead, causing possible damage to the sensor.

(d) Re-position the wheel on the mounting machine with the sensor at ~ 7 o'clock position (shaded area in Fig. 4-1).

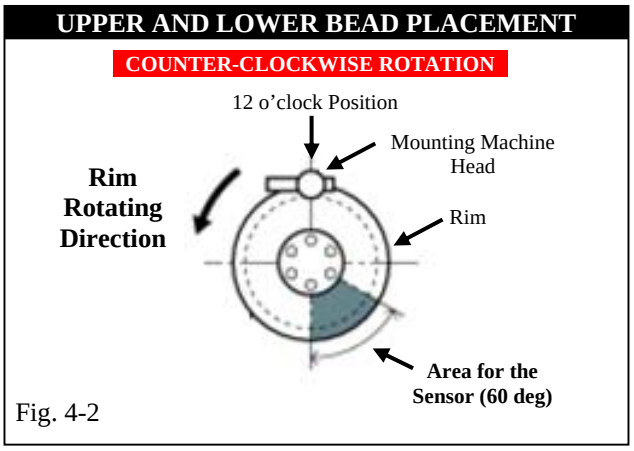

Fig. 4-2

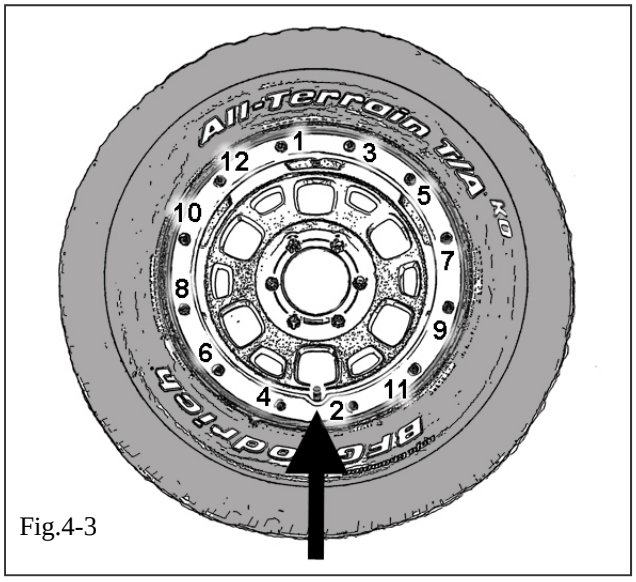

Fig.4-3

(e) Mount the upper tire bead.

NOTE: If the Mounting Machine rotates in the counterclockwise direction, refer to Fig. 4-2 for sensor placement.

NOTE: Make sure that the tire bead and tool does not interfere with the main body of the sensor and the bead does not clamp sensor.

(f) To seat the tire beads, inflate the tire to 40 PSI. If both tire beads are not seated when the pressure registers 40 PSI, deflate the tire and re-inflate it to seat the beads. Regulate the tire pressure to:

FRONT & REAR: **46 PSI** (320 kPa)

(g) Be sure to Recheck the Torque on the TPMS nuts and install the valve stem caps. Install the Lock Rings with the notch lined up with valve stem (Arrow Fig 4-3). Use the provided plastic washers under the fastener heads. Tighten the fasteners progressively in a star pattern (Fig 4-3). **Torque to 75 in-lbf (8.5 N-m).** Make sure the ring is seated parallel in its groove all the way around and does not rattle.

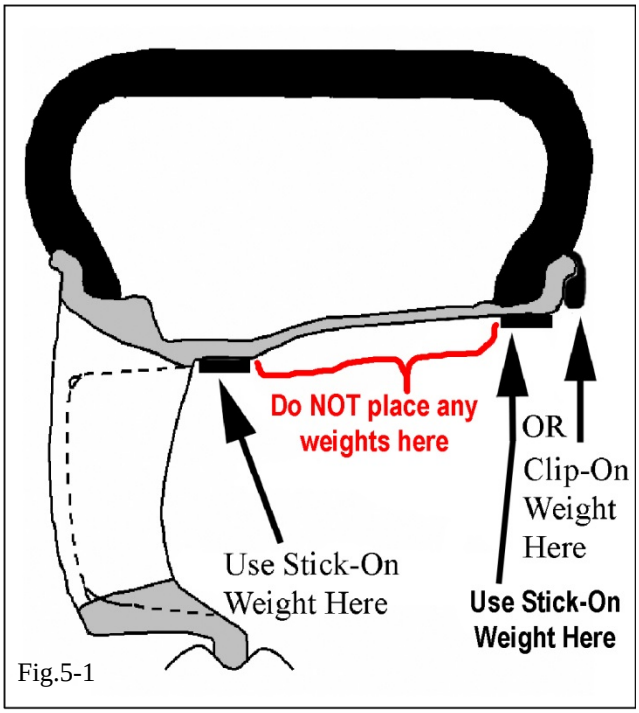

Fig.5-1

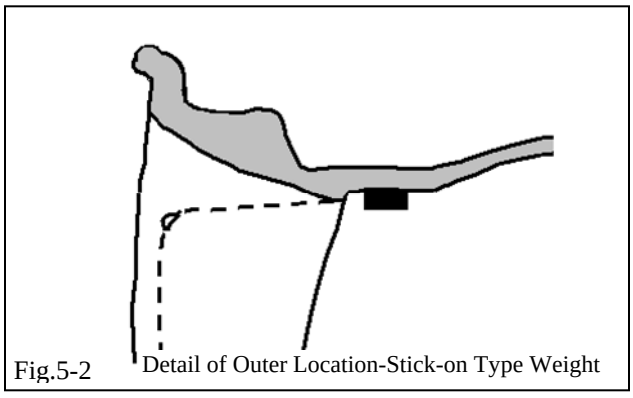
Fig.5-2 Detail of Outer Location-Stick-on Type Weight


Fig.5-3

5. Wheel Balancing.

NOTE: Application temperature for stick-on type weight is above 50°F (10°C). Weights should be no taller than 4 ~ 5 mm in height. **Remove the tire labels from the tire tread prior to balancing.**

(a) Prior to mounting stick-on weight, use VDC-approved cleaner as needed to clean the weight mounting location on the wheel, then wipe down with a clean, dry, lint-free cloth. Ensure that the location is clean and dry. Apply stick-on type weights at the perimeter location identified by the dynamic balance machine, as shown. Use a rubber mallet, if required, to achieve complete adhesion of stick-on type weight(s).

(b) Mount the wheel/tire on the wheel balance machine and balance in DYNAMIC MODE. Enable the LOAD ROLLER, if applicable, to ensure proper bead seating. Use stick-on *AND* clip-on type weights (Figs. 5-1, 5-2 & 5-3).

NOTE: Tape-on weights may be used on the inboard plane if desired.

NOTE: The maximum allowable weight is **200 g** (7.0 oz.) on the inner plane and **200 g** (7.0 oz.) on the outer plane. If weight required exceeds this, place machine in STATIC mode and proceed. If weight required still exceeds limit, rotate tire 180 degrees relative to wheel and repeat Step 5(b). If removal and replacement of stick-on type weight is necessary, remove the weight using a nylon removal tool. Clean the surface with a clean cloth using a locally approved cleaning solution. Wipe the surface dry before re-applying new weight(s). DO NOT RE-USE STICK-ON WEIGHTS.

(c) Re-spin the wheel on the machine with the LOAD ROLLER DISABLED (if applicable) and note the indicated remaining unbalance. The maximum permitted unbalance is 6 g (0.21 oz.) at the inner location and 6 g (0.21 oz) at the outer location. If the indicated unbalance is not within the permissible limit, add required additional balance weights, within specification, and re-spin the tire/wheel assembly.

6. Record Tire Identification Number (TIN).

This step is not required if reusing the OE tires.

For PPO - Record **ALL 4/5 T**ire **I**dentification **N**umbers (TINs) from the **4/5** new tires installed. Record these TINs with the Vehicle Identification Number (VIN) on respective form.

The TIN for these tires is a **12**-character string located after the "DOT" symbol on the sidewall of the tire. Provide the tire information to TRD once per month via FAX. Refer to **CAD PPO Bulletin** database as needed.

For DIO - Record **ALL 4/5** Tire Identification Numbers (TINs) from the **4/5** new tires installed. Record these TINs with the Vehicle ID Number (VIN). Provide the tire information to your tire vendor as required by law.

7. Center Cap Installation.

IMPORTANT! Be sure to install the center caps <u>BEFORE</u> installing the wheels onto the vehicle!

(a) Install the caps into the wheels as shown in Fig. 7-1. Be sure to orient the TRD text relative to the valve hole as shown.

(b) For FJ Cruiser with a back-up camera, place the spare wheel center cap in the glove box.

Fig. 7-1

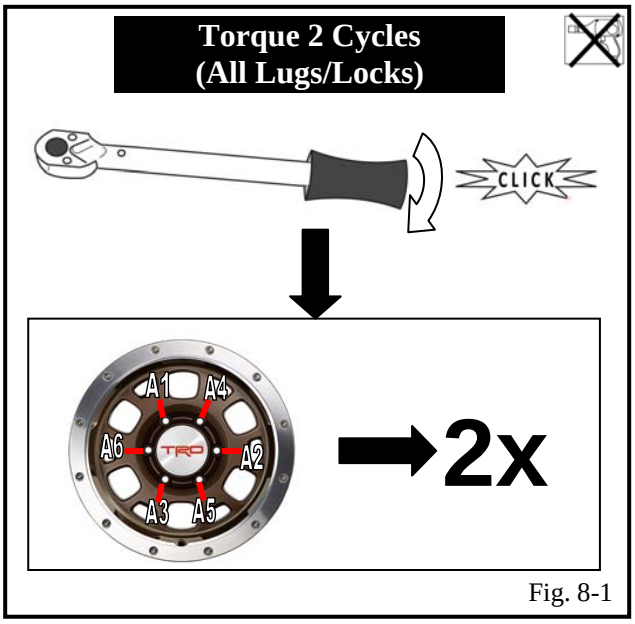

Fig. 8-1

8. Vehicle Wheel / Tire Installation.

(a) Install the wheel/tire assemblies onto the vehicle. Be sure to place the wheel/tire assemblies on the vehicle in the marked positions from Step 1. Hand start the provided lug nuts during installation. If wheel locks are being added, install one wheel lock per wheel (including spare for FJ Cruiser) at location 2 (or the 3 o'clock position) as in Fig 8-1. Tighten the lug nuts in sequence 1 through 6 or equivalent star pattern (Fig. 8-1). Ensure that the socket does not scuff the wheels. Tighten to 83 ft-lbf (113 N-m) using a torque wrench.

Torque: 83 ft-lbf (113 N-m)

(b) Re-torque all lug nuts in the same 1-6 sequence. (Fig. 8-1).

Torque: 83 ft-lbf (113 N-m)

CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.

(c) With the vehicle still on the lift, use a digital torque wrench to measure the torque of each lug nut/lock and record it on the Torque Audit Sheet (Fig. 8-2) (PPO installation only, does not apply to DIO installation).

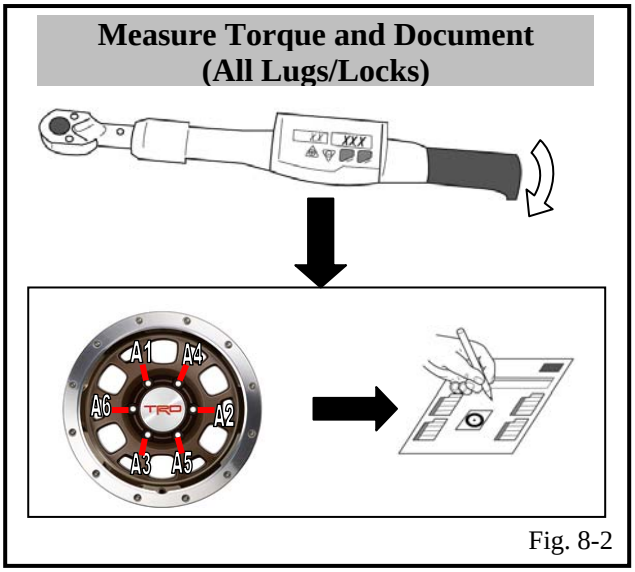

Fig. 8-2

Fig. 8-3

(d) For FJ Cruiser, install the spare tire on the vehicle using 3 TRD lug nuts provided with TRD wheel (Fig 8-3) Tighten to **65 ft-lbf** (88 N-m) using a torque wrench.

Torque: 65 ft-lbf (88 N-m)

NOTE: You will have 3 extra TRD lug nuts and all OE lug nuts remaining after TRD wheel installation. Discard the 3 extra TRD lug nuts and keep all the OE lug nuts with the OE take-off wheels per local regulations.

CAUTION: DO NOT USE AN IMPACT WRENCH TO INSTALL OR REMOVE WHEEL LOCKS.

9. Tire Pressure Labels.

This step is not required when re-using the OE tires

(a) Clean the surface and a small area around the OE tire pressure label located on the driver's side door jamb.

(b) Affix the TRD 16 inch tire pressure label
TACOMA (MDC # **00602-35015**)
FJ CRUISER (MDC # **00602-35016**) directly over the OE tire pressure label (Fig. 9-1).

NOTE: Do NOT cover any cargo or passenger capacity text.

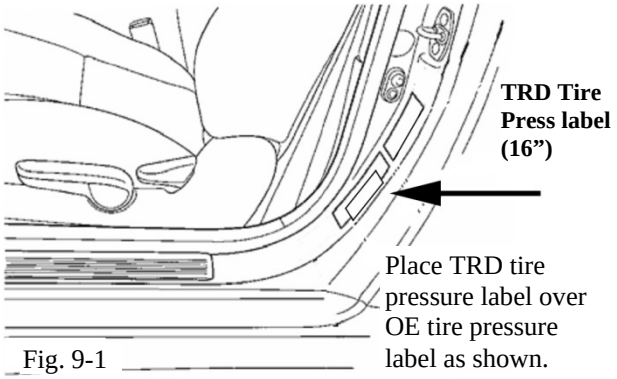

Fig. 9-1

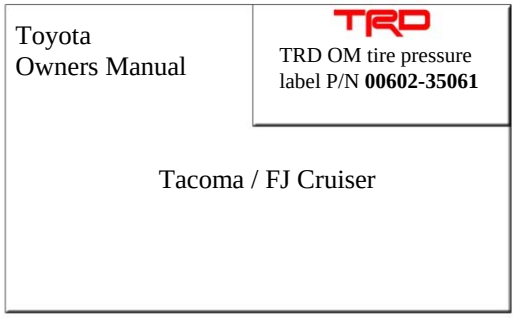

Fig. 9-2

(c) Install the Owner's Manual Label (MDC P/N **00602-35061)** onto the upper right front cover of the owner's manual (Fig. 9-2).

NOTE: Be sure NOT to cover any existing text or information. Shift the label down as needed so as not to cover any pictures or text.

10. TPMS Transmitter ID Registration Using Techstream.

(a) Connect the Techstream to DLC3.

(b) Turn the ignition switch to the ON position (do not start the vehicle) then turn the Techstream ON.

(c) Start the Techstream application by clicking on the shortcut located on the Desktop.

(d) Click "**Connect to Vehicle**" button (Fig. 11-1).

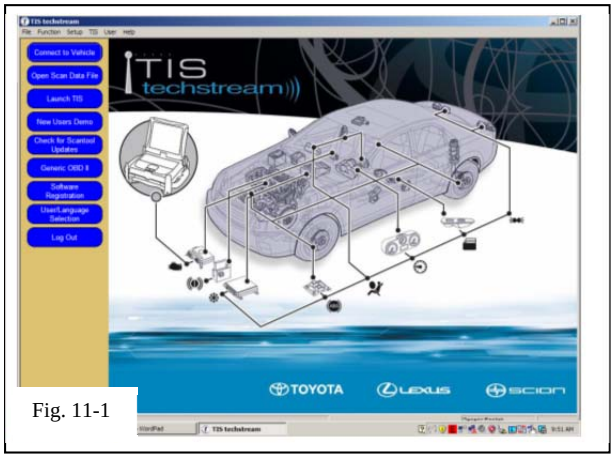

Fig. 11-1

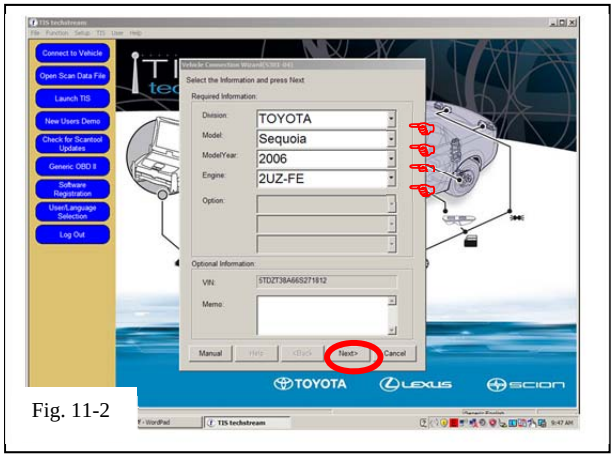

Fig. 11-2

(e) Confirm that the information displayed on the Vehicle Connection Wizard is correct. If not, make the appropriate selections from the Drop Down Menus, then click "**Next"** (Fig. 11-2).

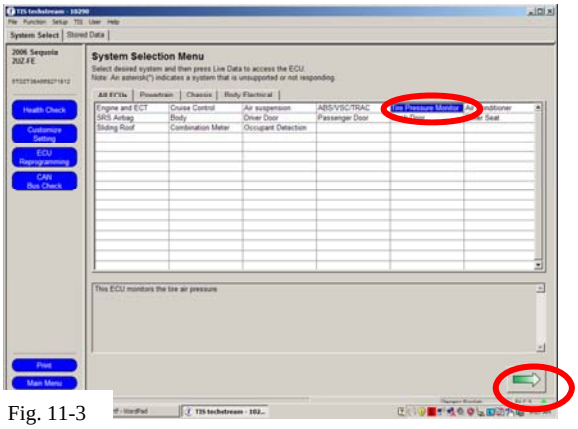

Fig. 11-3

(f) Select "**Tire Pressure Monitor**" then click the green arrow located on the bottom right (Fig. 11-3).

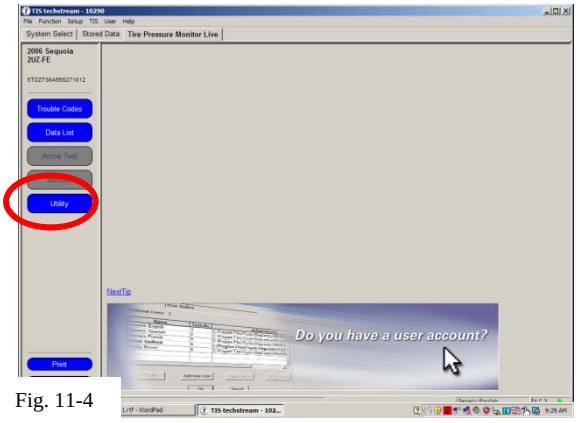

Fig. 11-4

(g) Select "**UTILITY**" to begin input of new TPMS ID codes (Fig. 11-4).

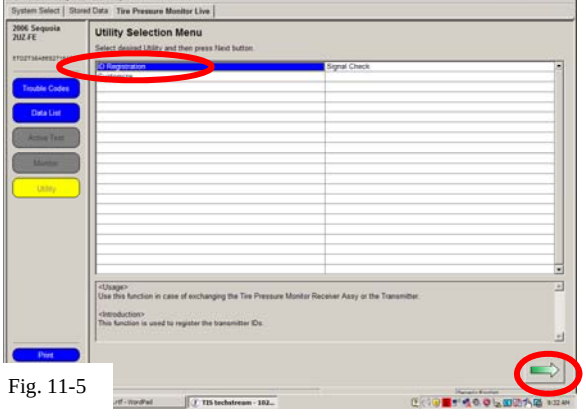

Fig. 11-5

(h) Select "**ID Registration**" then click the green arrow located at the bottom right corner (Fig. 11-5).

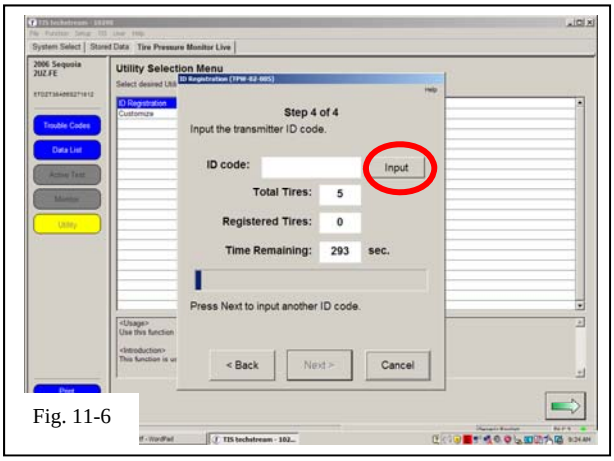

Fig. 11-6

(i) Select "**Next**" for Steps 1 through 3. Select "**Input**" in Step 4 to begin TPMS ID registration (Fig. 11-6).

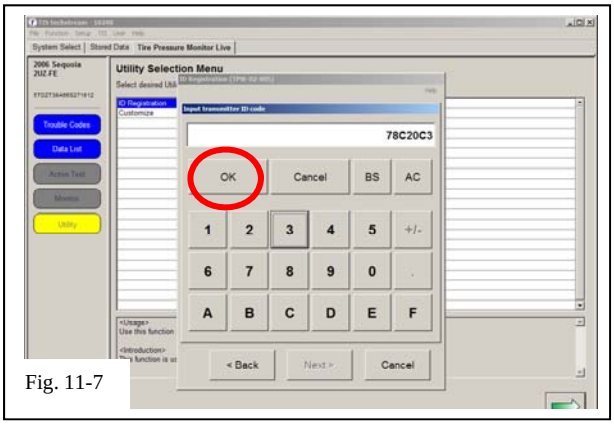

Fig. 11-7

(j) Input the TPMS ID code then click "**OK**" Repeat the same procedure for all other TPMS ID codes (Fig. 11-7).

NOTE: If this process is not completed within 5 minutes, the transmitter will return to normal operation mode and process will need to be started over at Step 11 (g).

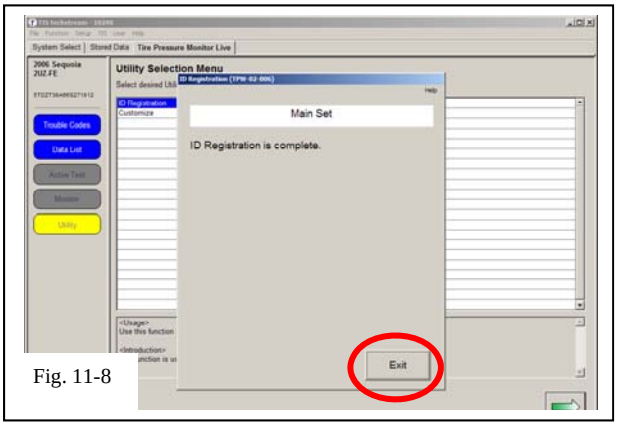

Fig. 11-8

(k) After all TPMS ID numbers have been registered, "**ID Registration is complete**" text should be displayed. Click "**Exit**" to finish the registration process (Fig. 11-8).

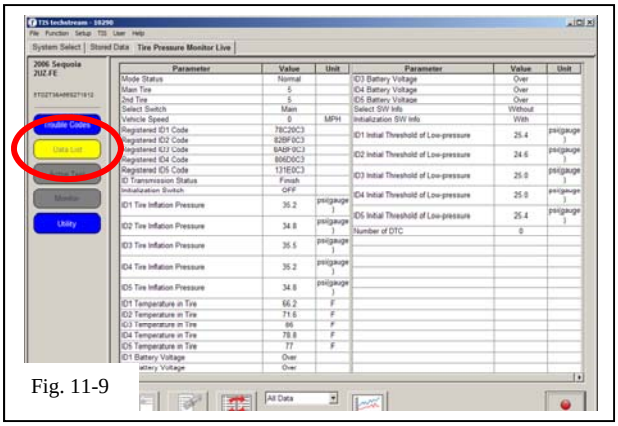

Fig. 11-9

(l) Select "**DATA LIST**" to view and confirm the TPMS ID numbers have been correctly registered (Fig 11-9).

11. Disposition of OE Tire & Wheel Assembly

PPO: Aluminum take-off wheels AND All take-off tires get picked up by Dealer Tire. Aluminum wheels must be in a wheel box. All steel take-off wheels get salvaged according to local regulations.

DIO: Sort product properly according to local regulations.

12. Lug Nut Tool Placement.

(a) Place the Spline-Drive Lug Nut Tool and Wheel Lock Key Tool along with the lock instruction card into vinyl pouch (PPO# PT276-06999 / DIO# 00602-06999) and secure it inside or next to the OE tool bag with the OE rubber strap & hook. Place all associated wheel lock paperwork into the vehicle glove compartment.

13. Initialize the Tire Pressure Warning System.

(a) For 2008 to 2011 FJ Cruiser (consult the OE Repair Manual as needed):

(1) Record in a notebook all five OE TPMS ID codes with a Techstream.

(2) Disconnect the battery negative terminal.

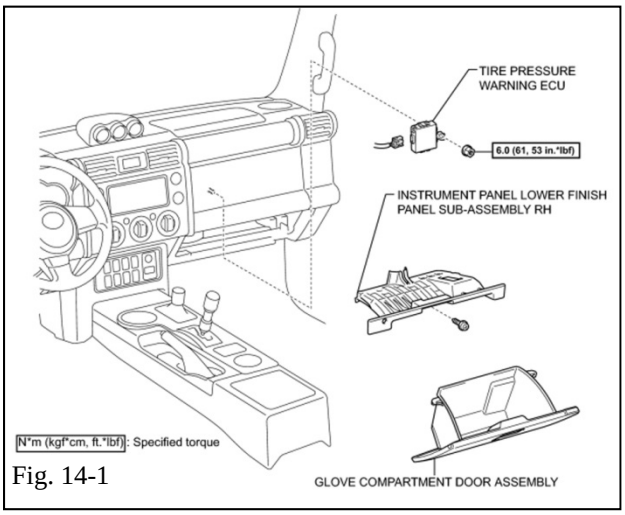

Fig. 14-1

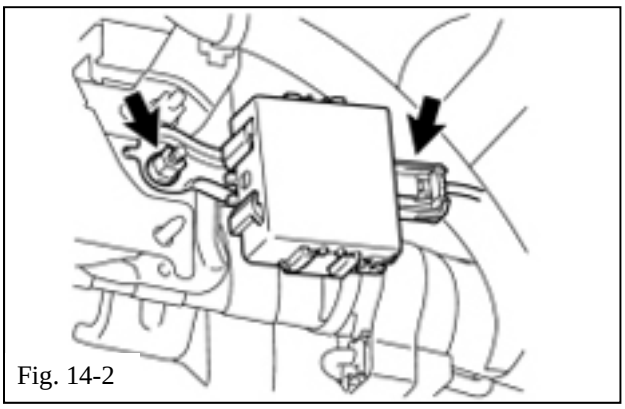
Fig. 14-2

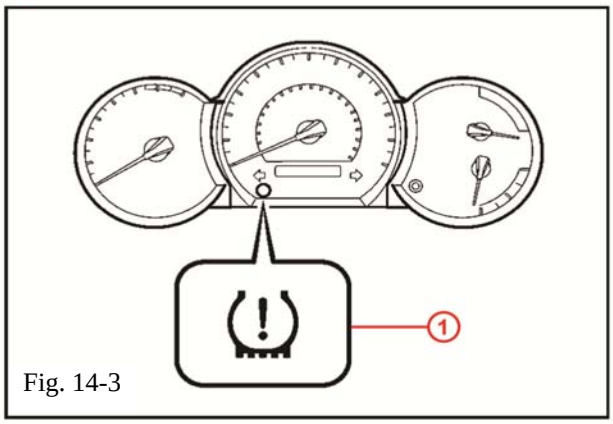

Fig. 14-3

1	Low Tire Pressure Warning Light

(3) Remove the OE TPMS ECU and replace it with a new grey Denso TPMS ECU **PTR24-35110** (Fig. 14-1 & 14-2).

(4) Torque the nut to **53 in-lbf** (6.0 N-m).

(5) Reconnect the battery negative terminal.

Torque: 5.4 Nm (48 in-lbf)

(6) Verify all five tires are inflated to **46** PSI.

(7) Reregister all five TPMS ID codes to the vehicle.

(8) **DIO**: Perform any required PDS as needed, e.g. compass, auto windows, etc.

(b) For 2006 to 2012 Tacoma:

(1) After all tires (except the spare tire) have been adjusted to proper pressure (as called out by the tire pressure label found on the driver's side door jamb), cycle the ignition to the "IG-ON" position and check that the Low Tire Pressure Warning Light is OFF (Fig. 14-3).

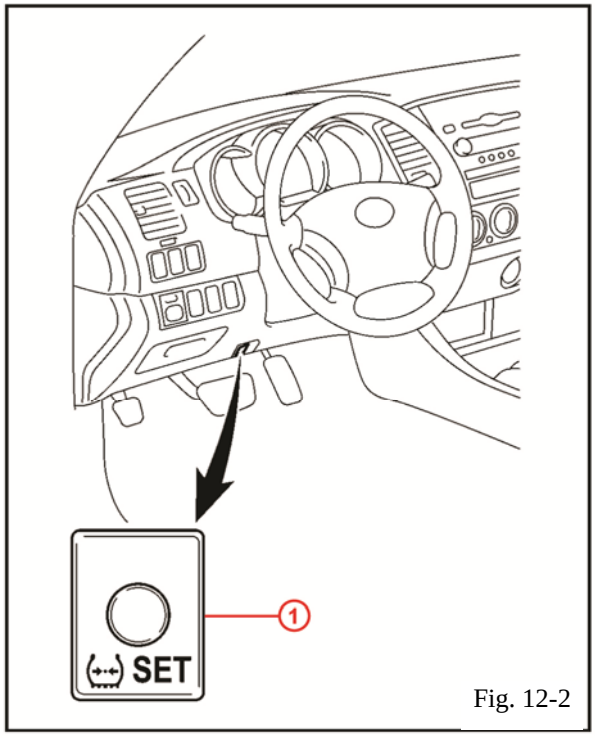

Fig. 12-2

1	Tire Pressure Warning “SET” Switch

(2) Push and hold the Tire Pressure Warning “SET” switch for 3 seconds until the Low Tire Pressure Warning light blinks 3 times and then turns OFF, indicating the system is now initialized (Fig. 14-4).

(3) Refer to T-SB-0120-10 or equivalent, for the proper make and model year.

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

Check:	Look For:
☐ Inspect Lug Nuts & Torque	Verify that six lug nuts/locks are installed on each wheel (FJ Spare uses 2 lugs & 1 lock) and the wheel lock is in the correct position. Torque must be **83 ft-lbf (113 N-m)**.
☐ TPMS Torque	TPMS nut must be torqued to **36 in-lbf (4.0 N-m)**.
☐ Record Lug & Lock Torque	Measure the torque of each lug/lock on all wheels and record it on the Torque Audit Sheet (PPO installation only, does not apply to DIO installation).
☐ Center Caps	Verify center caps are securely in place on all four wheels & oriented correctly. Verify the FJ spare wheel center cap is in the glove box.
☐ Tire Pressure Labels	Verify Tire Pressure Label and Owner's Manual Labels are in place.
☐ Correct Tire Pressure	Verify tire pressure is set to the value specified on the OE Tire Pressure Label.
☐ Driver Instrument Panel	Verify "TPMS warning light" is <u>not</u> ON.
☐ Tire Identification Numbers	**PPO**: Ensure all **4/5** accessory **T**ire **I**dentification **N**umbers are recorded with the **V**ehicle **I**dentification **N**umber on the appropriate sheet. Refer to **CAD PPO Bulletin** as needed **DIO**: Provide the tire information to your tire vendor as required by law.
☐ Lug Nut & Lock Tools Placement	Verify the Lug Nut Tool and the Wheel Lock Key Tool are in the appropriate location in the vehicle. Ensure paperwork is placed into the vehicle glove compartment.
<u>Vehicle Appearance Check</u> ☐ After accessory installation and removal of protective cover(s), perform a visual inspection.	Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)