TOYOTA 07+Tundra/08+Sequoia/Land Cruiser (17") TRD ALLOY WHEEL

Preparation

Part Number: PTR45-34120 & PTR45-34070

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Forged Al Wheel 17 x 8 x 50mm

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	1 per wheel	TRD Center Cap P/N **PTR45-34071**
2	1 per wheel	Wheel Lock Ring P/N **PTR45-35110**
3	12 per wheel	Lock Ring Fasteners (pkg. of 12) P/N **PTR45-34073**

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1	1 per wheel	Tire BFG All-Terrain T/A LT285/70R17 121/118R M + S **(Recommended)**
2	1 per vehicle	Lug nut Set w/ Spline Tool & 4 Wheel Locks & Lock Key Tool P/N **PTR27-60110**
3	0 – 4 as needed 2007~ Jan 2010 Feb 2010 +	TPMS 20 degree angle Single **DIO** P/N **42607-0C050** Single **DIO** P/N **42607-08010** (For Tundra & Sequoia Styled Steel wheel swap) Single LandC P/N **42607-33011**
4	As needed	Balance Weights Stick-on Type and **"MC" style** Clip-on Type
5	1	Tire Pressure Door Jamb Label Tundra MDC # **00602-34116** Sequoia MDC # **00602-34116** L-Cruiser MDC # **00602-60110**
6	1	Owner's Manual Label MDC # **00602-35061**
7	1 PPO DIO	Vinyl Pouch **PT276-06999** Vinyl Pouch MDC#**00602-06999**

Conflicts

L6, L7, WL, WB, A1, C9

Recommended Tools

Personal & Vehicle Protection	**Notes**
Safety Glasses	
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 **192-170-2** 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 Diagnostic Tester or Techstream Device	Software Version 13.2a or newer required.
Installation Tools	**Notes**
Lug Nut Wrench	22 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, 12mm, and 22 mm Deep Well, Thin Wall
TORX Male T30	TORX for lock ring
Clean Lint-free Cloth	
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Valve Stem Removal Tool	Schraeder Valve Type
Wire Brush	Hand held size
Special Chemicals	**Notes**
Tire Lube	Myers or equivalent
Cleaner (for rework of stick on weights if needed)	**PPO/DIO**: VDC approved cleaner.

General Applicability

Applicable to 2007+ Tundra, 2008+Sequoia &LandCruiser.
Use only with tire size LT**285/70R17 M+S**

Recommended Sequence of Application

Item #	Accessory
1	TRD 17" Alloy Wheel & Tire
2	Port Brochure for Wheel Locks **00276-00890**

Vehicle Service Parts (May be required for reassembly)

Item #	Quantity Reqd.	Description
1	0 – 4 as needed	Valve Stem Grommet Fit Kit (if required) Tundra/Sequoia P/N **04423-0C170**or LC-**0E010**
2	0 – 4 as needed 2007~ Jan 2010 Feb 2010 +	TUNDRA/SEQUOIA 20°TPMS Single **DIO** P/N **42607-0C050** Single **DIO** P/N **42607-08010**
2	0 – 4 as needed	**L-CRUISER** 20° TPMS Single P/N **42607-33011**

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.

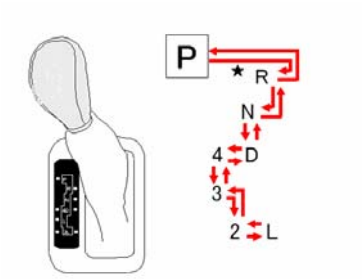

Fig. 1-1

1. Vehicle Preparation.

(a) Firmly apply parking brake.

(b) Put automatic transmission in "P". (Fig. 1-1).
Put manual transmission in “R”.

Foot Brake Application Tool

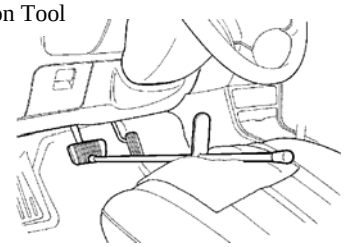
Fig. 1-2

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

(d) Lift vehicle.

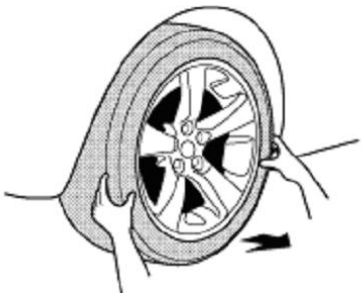
Fig. 1-3

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

Wire Brush

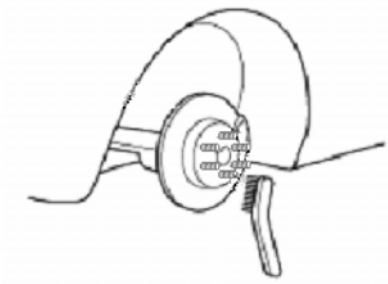
Fig. 1-4

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

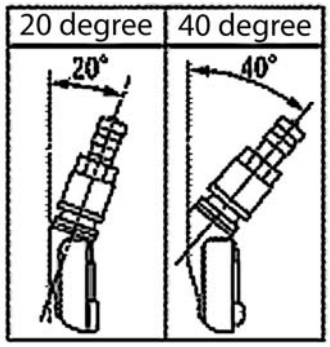

Fig. 2-1

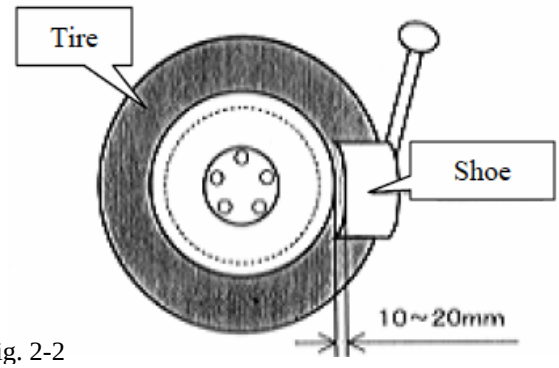

Fig. 2-2

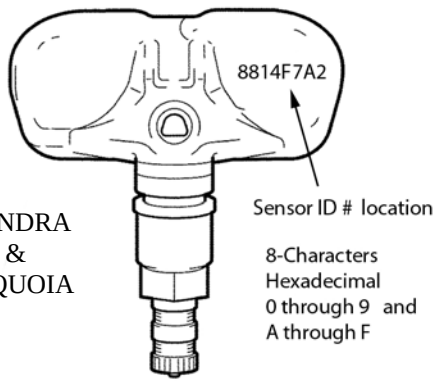

Fig. 3-1

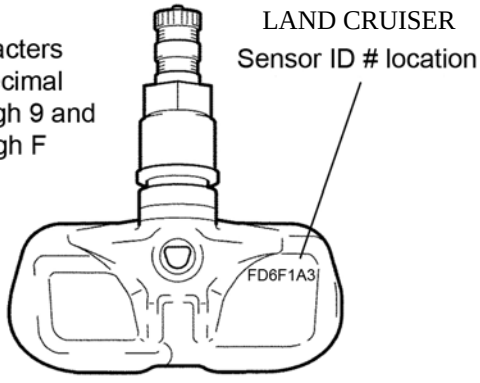

Fig. 3-2

2. Remove Tire Pressure Monitor Valve Sub-assembly.

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

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

(a) Remove the valve core and release pressure from the tires, except spare.

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

(c) Carefully separate the upper tire bead from the wheel rim. (Fig. 2-2).

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

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

(e) Dismount OE tire from the OE wheel.

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

(a) If previously removed sensor is 20 degree sensor, proceed to step **3 (c)**. If previously removed sensor is 40 degree sensor (e.g. Tundra styled steel wheels), you must install new 20 degree sensors into accessory wheels. When installing new 20 degree sensors, you **MUST** record sensor ID codes for all 4 wheels and register these 4 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 or Fig. 3-2 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 good.

NOTE: Change grommet to a new one ONLY IF the grommet is or was damaged. A damaged grommet is NOT re-usable.

(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. See Fig. 3-3.

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

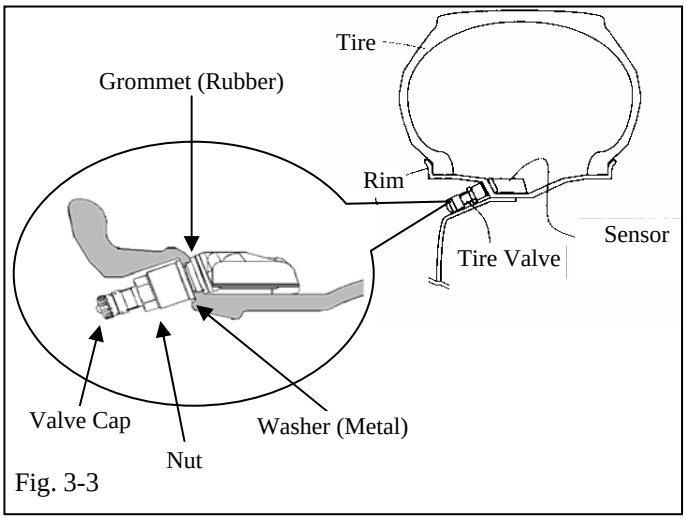

Fig. 3-3

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

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

Torque the nut to **36 in-lbf** (4.0 N-m).

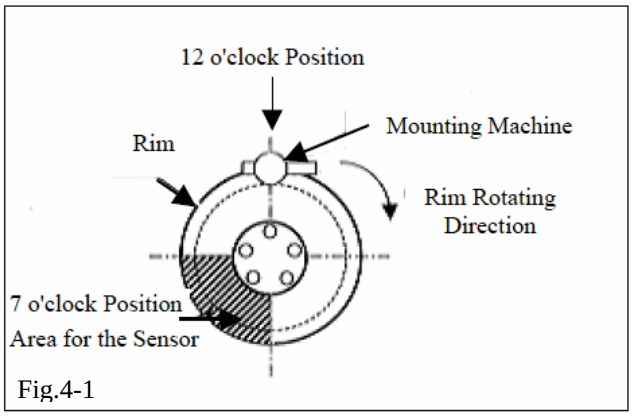

Fig.4-1

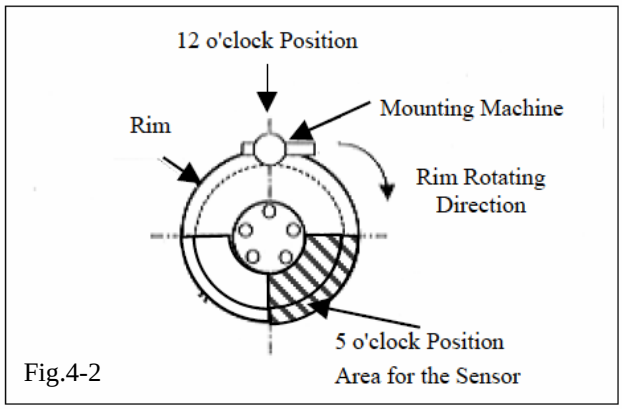

Fig.4-2

Fig.4-3

4. Tire Mounting.

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

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

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

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

(1) Mount/dismount head is considered as 12 o'clock Position.

(c) Mount the lower tire bead.

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

(d) Re-position the wheel on the mounting machine with the sensor at ~ 5 o'clock position (shaded area in Fig. 4-2)

(e) Mount upper tire bead.

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 tire beads, inflate tire to 40 PSI. If both tire beads are not seated when pressure registers 40 PSI, deflate the tire and re-inflate to seat the beads.

Regulate tire pressure to:
FRONT & REAR: **46 PSI** (320 kPa)

(g) Re-torque TPMS valve nuts and install valve stem caps. Install Lock Rings with notch lined up with valve (See Arrow Fig 4-3). Tighten fasteners progressively in a star pattern (Fig 4-3).Torque to **45 ~ 50 in-lbf** (5.0 N-m). Make sure the ring is seated parallel in its grove all the way around.

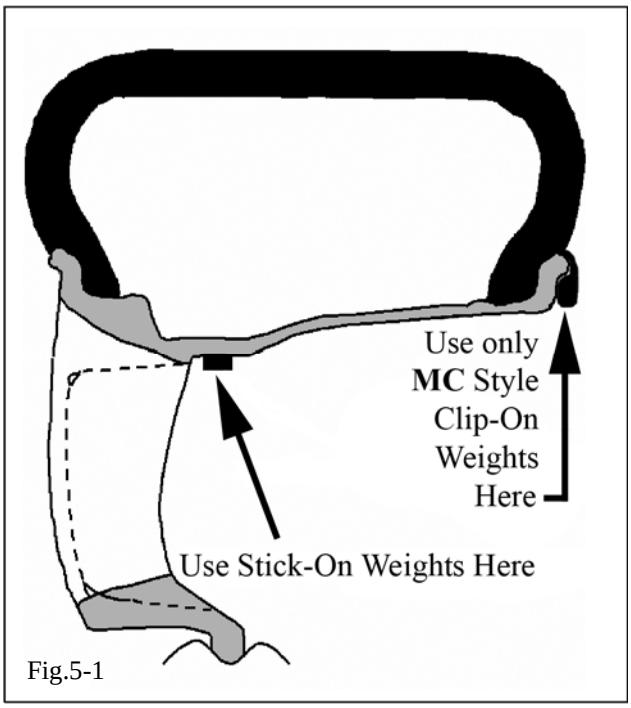

Fig.5-1

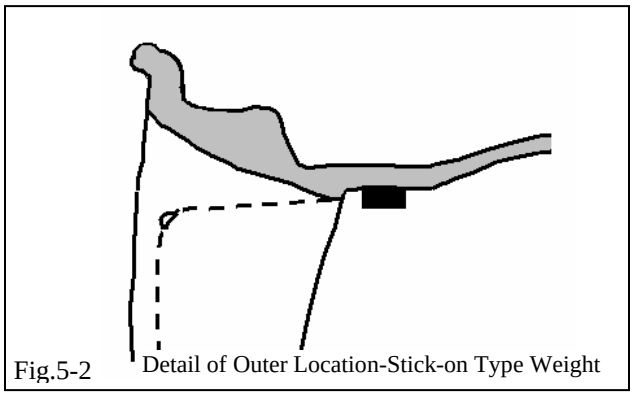
Fig.5-2 Detail of Outer Location-Stick-on Type Weight

5. Wheel Balancing.

NOTE: Application temperature for stick-on type weight is above 50°F (10°C).

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

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

NOTE: Maximum allowable weight is **200 g** (7.0 oz.) inner and **200 g** (7.0 oz.) outer. If removal and replacement of stick-on type weight is necessary, then remove the weight using a nylon removal tool. Clean the surface with a clean cloth using 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 LOAD ROLLER DISABLED (if applicable) and note the indicated remaining unbalance. The maximum permitted unbalance is 6 g (0.21 oz.) at inner and 6 g (0.21 oz) at outer location. If the indicated unbalance is not within permissible limit, add required additional balance weights, within specification, and re-spin the tire/wheel assembly.

6. Tire Identification Number (TIN) Recording

For PPO - Record **ALL 4 T**ire **I**dentification **N**umbers (TINs) from the **4** new tires installed. Record these TINs with the Vehicle Identification Number (VIN) on respective form
TRD_Tundra_17in_Tire_ID_Numbers_RevA.xls
TRD_Sequoia_17in_Tire_ID_Numbers_RevA.xls
TRD_LC_17in_Tire_ID_Numbers_RevA.xls

The TIN for the tire 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** Tire Identification Numbers (TINs) from the **4** new tires installed. Record these TINs with the Vehicle ID Number (VIN). Provide the tire information to your tire vendor as required by law.

Fig. 7-1

7. Center Cap Installation.
IMPORTANT! Be sure to install center caps <u>BEFORE</u> installing wheels onto vehicle!

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

Fig. 8-1

8. Vehicle Wheel / Tire Installation.

(a) Install wheel/tire assemblies onto vehicle. Hand start the provided lug nuts during installation. If wheel locks are being added, install one wheel lock per wheel (not including spare) at location 2 in Fig 8-1. Tighten lug nuts in sequence 1 through 5 (Fig. 8-1). Ensure that the socket does not scuff the wheels. Tighten to **97 ft-lbf** (131 N-m) using a torque wrench. DO NOT USE an Impact Gun to install or damage may occur to Lugnuts! Air ratchets are OK.

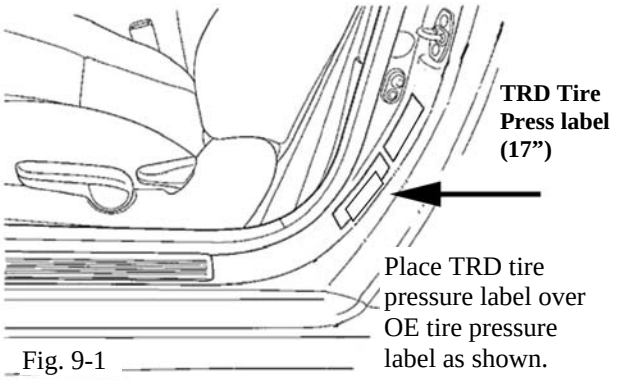

Fig. 9-1

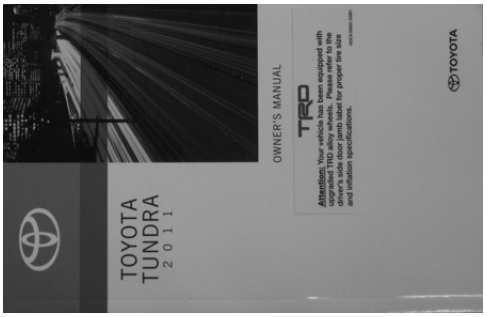

Fig. 9-2

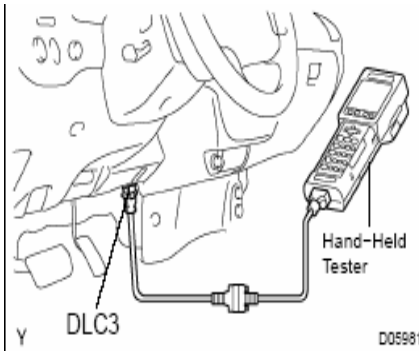

Fig. 10-1

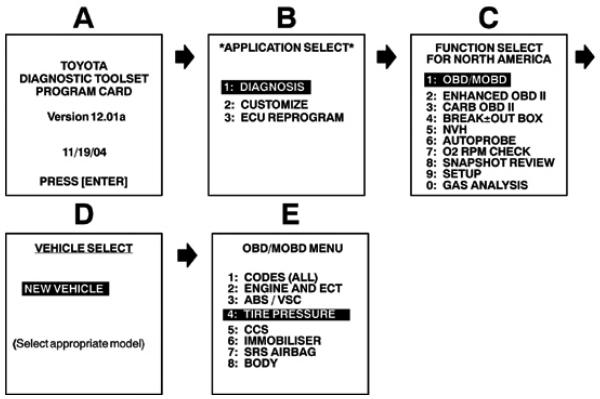

Fig. 10-2

9. Tire Pressure Labels

(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 17 inch tire pressure label TUNDRA (MDC # **00602-34116**) SEQUOIA (MDC # **00602-34116**) L-CRUISER (MDC # **00602-60110**) directly over the OE tire pressure label. (Fig. 9-1)

(c) Install Owner’s Manual Label (MDC P/N **00602-35061)** onto front cover of owner’s manual. (Fig. 9-2) NOTE: Be sure NOT to cover any existing text or information.

10. TPMS Transmitter ID Registration

Perform ONLY when replacing sensors.
Skip to step 12 if re-using same 20 degree sensors in same vehicle.
Skip to Step 11 if using a Techstream Device.

(a) Complete this section after all four wheels have been installed.

(b) Connect the hand-held tester to DLC3. (Fig. 10-1)

(c) Turn the ignition switch to the ON position.

(d) Turn on Tester and Select UTILITY - REGIST TIRE following the hand-held tester screen prompts. (Fig. 10-2 & Fig. 10-3)

(e) Input the TPMS ID codes (ID1 to ID4) from Step **3**(b) using the hand-held tester to transmit them to the tire pressure monitor ECU. NOTE: Tundra Spare does NOT have TPMS, but Land Cruiser DOES.

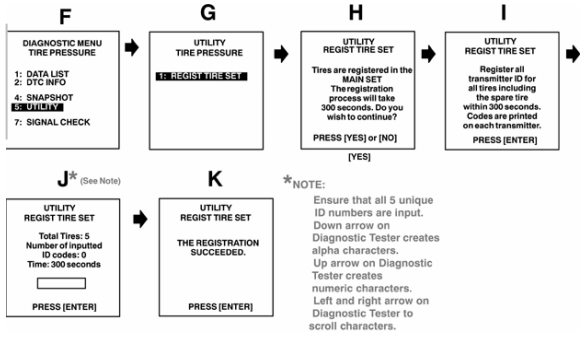

Fig. 10-3

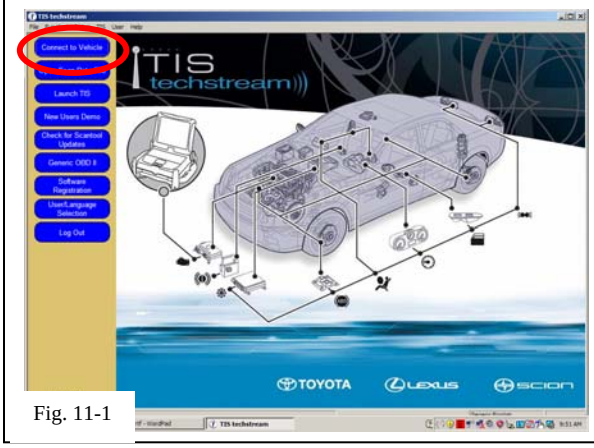

Fig. 11-1

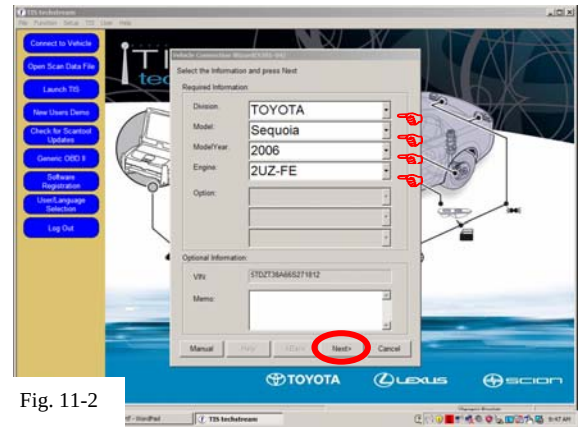

Fig. 11-2

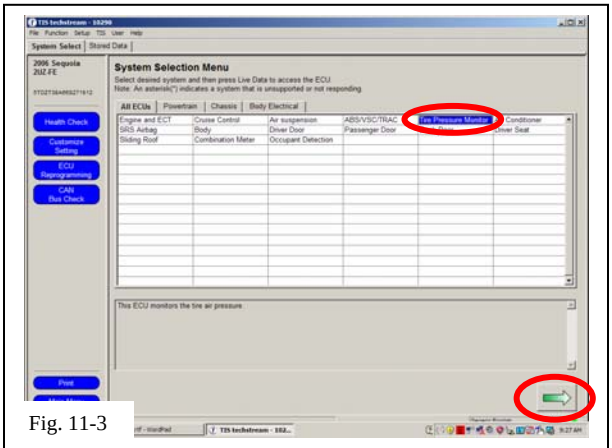

Fig. 11-3

(f) Make sure that the ID transmission condition “SUCCEEDED” is achieved.

(g) Confirm all the tire pressures are set to values recommended on the tire pressure label (Section 9.) for this vehicle.

NOTE: If this process is not completed within 5 minutes, the transmitter will return to normal operation mode and the process will need to be started over at step **10** (d).

11. TPMS Transmitter ID Registration Using Techstream.

(a) Connect the Techstream to DLC3, as in Fig. 10-1.

(b) Turn the ignition switch to 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)

(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)

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

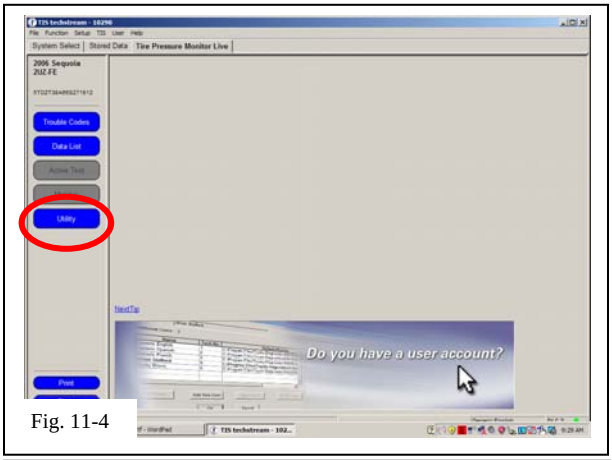

Fig. 11-4

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

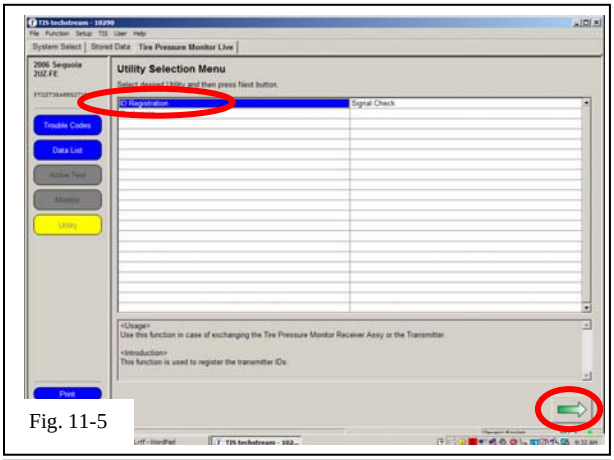

Fig. 11-5

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

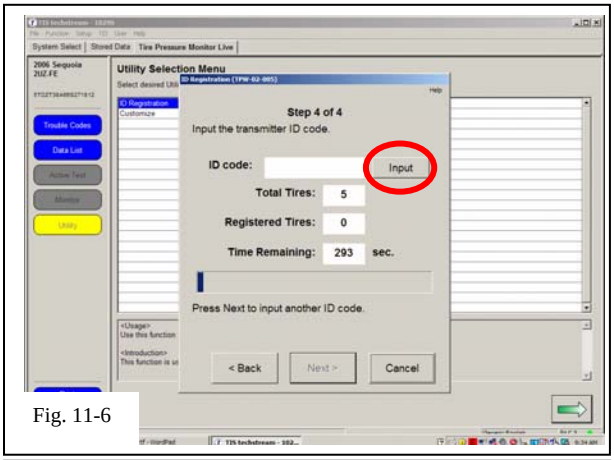

Fig. 11-6

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

(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).

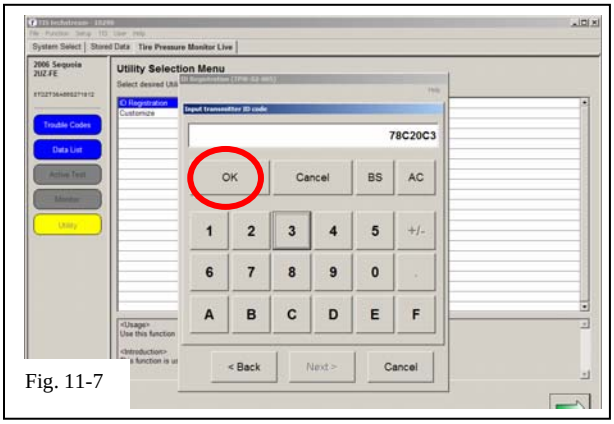

Fig. 11-7

(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)

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

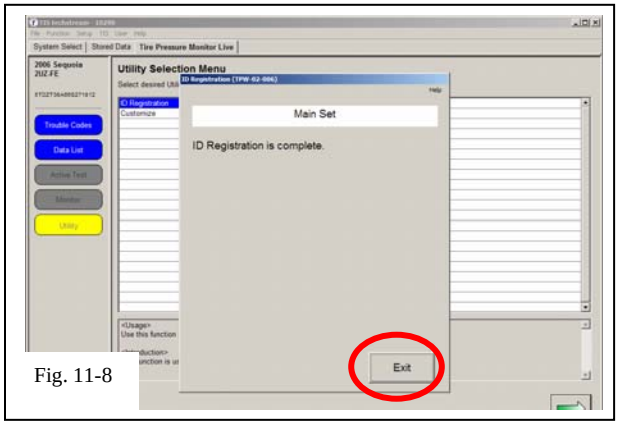

Fig. 11-8

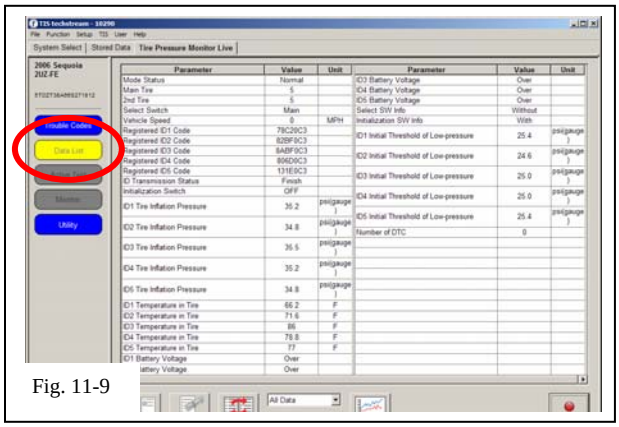
Fig. 11-9

12. Disposition of OE Tire & Wheel Assembly

PPO: Aluminum Take-Off Wheels AND All Take-Off Tires get picked up by Dealer Tire. All Steel Take-Off Wheels get salvaged according to local regulations.

DIO: Sort product properly according to local regulations.

13. Lugnut Tool Placement.

(a) **TUNDRA/SEQUOIA:** Place the Spline-Drive Lugnut Tool and Lock Key Tool (if locks are installed) along with the lock instruction card into vinyl pouch (PPO# PT276-06999 / DIO# 00602-06999) and then place into/next to the Factory Tool Bag.

(b) **LAND CRUISER:** Place the Spline-Drive Lugnut Tool AND Wheel Lock Key Tool (if locks are installed) AND 5 OE flat-seat lugnuts along with the lock instruction card into vinyl pouch and then place into the passenger-side, rear storage compartment. Secure vinyl pouch inside compartment with strap to prevent movement of pouch so as to eliminate vibration and/or noise caused by shifting of pouch inside compartment while driving. Replace compartment cover.

(c) Place associated wheel lock paperwork into plastic zip lock bag (if available) and into vehicle glove compartment. Discard zip tie if not used.

14. Tire Pressure Initialization.

Perform Tire Pressure Warning System Initialization per PDS/TIS for the vehicle using the tire pressure reset button located on the dashboard area in the cabin. Follow example T-SB-0177-10 or equivalent, for your make and model year.

Check:	Look For:
☐ Inspect lug nuts.	Verify five lug nuts must be installed on each wheel.
☐ Lug nut tightness.	Verify Torque is **97 ft-lbf** (131 N-m).
☐ Center Caps.	Verify center caps are securely in place on all 4 wheels in correct orientation.
☐ 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 TRD Tire Pressure Label.
☐ Tire Identification Numbers	**PPO**: Ensure all **4** accessory **T**ire **I**dentification **N**umbers are recorded with the **V**ehicle **I**dentification **N**umber on the appropriate sheet **TRD_Tundra_17in_Tire_ID_Numbers_RevA.xls** **TRD_Sequoia_17in_Tire_ID_Numbers_RevA.xls** **TRD_LC_17in_Tire_ID_Numbers_RevA.xls** Refer to **CAD PPO Bulletin** as needed. **DIO**: Provide the tire information to your tire vendor as required by law.
☐ Lugnut tool placement.	Verify Lugnut Tool, and Wheel Lock Key Tool if applicable, are in the appropriate location in vehicle. Ensure paperwork is placed into vehicle glove compartment.