Part Number:
PTR20-35110-BK Matte Black
PTR20-35110-GR Graphite Gray

Kit Contents

Item #	Quantity Reqd.	Description
1	4 for 4Runner 5 for FJ Cruiser	17" x 7.0" x 4 mm 6-Spoke Painted Alloy Wheel
2	1 per wheel	TRD Center Cap **PTR20-35111-BK** Black or **PTR20-35111-GR** Gray

Hardware Box Contents

Item #	Quantity Reqd.	Description
N/A		

Additional Items Required For Installation

Item #	Quantity Reqd.	Description
1	As Required	Low-Profile, Lead-Free Balance Weights **3M TN-4023** (or equivalent) Stick-on Type and/or (inboard) Clip-on Type
2	4Runner = 4 FJ Cruiser = 5	OE Tire P265/70R17 113S
3	1	Tire Pressure Label Re-uses OE 17" Pressure Label
4	1	Owner's Manual Label MDC# **00602-35061**
5	0-5 as needed	20 degree TPMS P/N **42607-33021** 4Runner P/N **42607-33011** FJ Cruiser
6	0-5 as needed	TPMS Fit kit P/N **04423-0E010**
7	1 optional PPO or optional DIO	Vinyl Pouch **PT276-06999** Vinyl Pouch MDC#**00602-06999**
8	As Required	OE Flat-Seat Lugnuts

Conflicts

Note:

Recommended Tools

Personal & Vehicle Protection	**Notes**
Safety Glasses	
Seat Protection	Blanket
Special Tools	**Notes**
Tire Changing Machine	Hunter TC3200, or Corghi Artiglio Master 26 or equivalent.
Wheel Balancing Machine	Hunter GSP9700, or equivalent.
Centering Cone	**BACK-SIDE** collet Hunter **192-169-2** or equiv.
Wing Nut	Hunter **76-433-1** or equiv.
6.0 inch Cup w/ Sleeve	Hunter **175-392-1** or equiv.
6.0 inch protector Sleeve	Hunter **106-157-2** or equiv.
Foot Brake Application Tool	Snap-on B240A Pedal Jack or equivalent.
Techstream 2.0	
Installation Tools	**Notes**
Lug Nut Wrench	21 mm wrench flat
Rubber Mallet	Philips head screwdriver
Torque Wrench	20-150 ft-lbf (27-204 N-m)
Torque Wrench	30-150 in-lbf (3.3-17 N-m)
Sockets	10mm, 11mm, 12mm, and 21 mm Deep Well, ThinWall
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 locally approved
Cleaner (for rework of stick on weights if needed)	**PPO/DIO**: locally approved cleaner.

General Applicability

Applicable to 2007+ FJ Cruiser and 2010+ 4Runner. Use only with tire size P265/70R17 113S

Recommended Sequence of Application

Item #	Accessory
1	TRD 17" Alloy Wheel & OE Tire
2	Optional Wheel Locks PPO
2	Optional Wheel Locks DIO
3	Optional Port Brochure for Wheel Locks PPO

Vehicle Service Parts (May be required for reassembly)

Item #	Quantity Reqd.	Description
1	0 – 5 as needed	Valve Stem Fit Kit (if required) P/N **04423-0E010**
2	0 – 5 as needed 4Runner FJ Cruiser	TPMS 20 degree (if required) Single P/N **42607-33021** 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.
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 local dealer for a copy of this document.

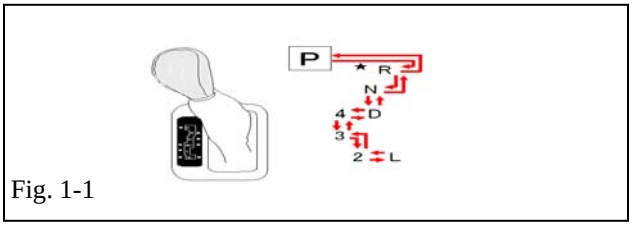


Fig. 1-1

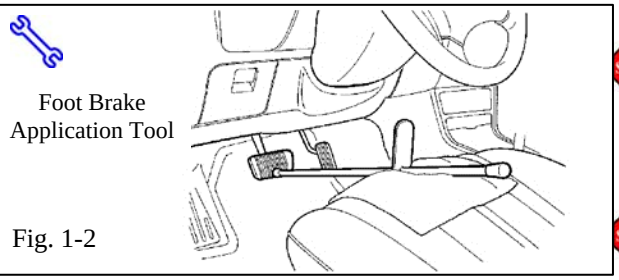

Foot Brake Application Tool
Fig. 1-2


Fig. 1-3

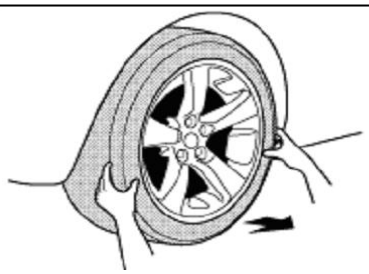
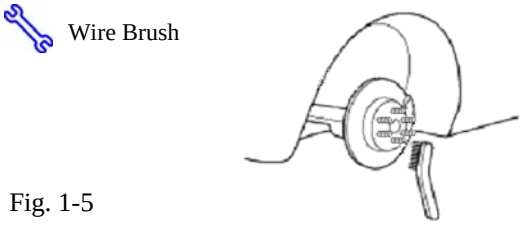


Fig. 1-4


Wire Brush
Fig. 1-5

1. Vehicle Preparation.

(a) Verify that all components are present before beginning accessory installation. See page 1 Kit Contents, Hardware, Additional Items Required, and Recommended Tools, etc.

(b) Firmly apply parking brake.

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

(d) Put manual transmission in "R".

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

(f) For FJ Cruiser only, remove OE spare wheel and tire assembly. (Fig. 1-3) Wear safety glasses while removing wheels.

(g) Carefully raise vehicle on lift.

(h) Remove remaining 4 OE wheel and tire assembly from vehicle (Fig. 1-4). Wear safety glasses while removing wheels.

(i) Keep ALL OE lug nuts with the OE take off wheels, for use/disposition later, per local regulations.

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. 1-5).

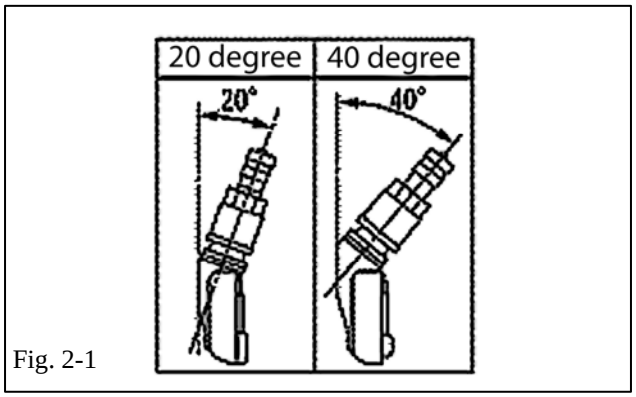


Fig. 2-1

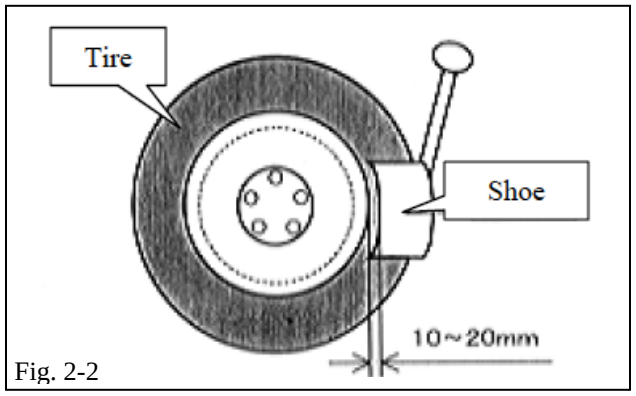


Fig. 2-2

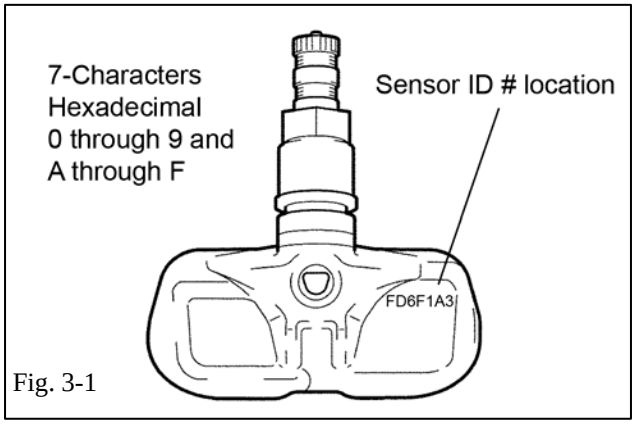


Fig. 3-1

2. Remove Tire Pressure Monitor Valve Sub-assembly.

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

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

(a) Remove valve core and release pressure from tire.

(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, you must install new 20 degree sensors into accessory wheels. When installing new 20 degree sensors, you **MUST** record sensor ID codes for all 4/5 wheels and register these 4/5 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-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 (4Runner) or five (FJ Cruiser) <u>new</u> 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**.

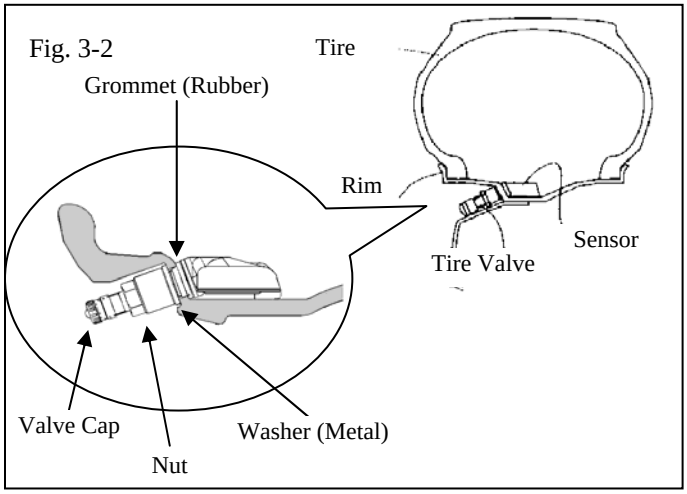


Fig. 3-2

(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 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. (Fig. 3-2).

(f) 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).

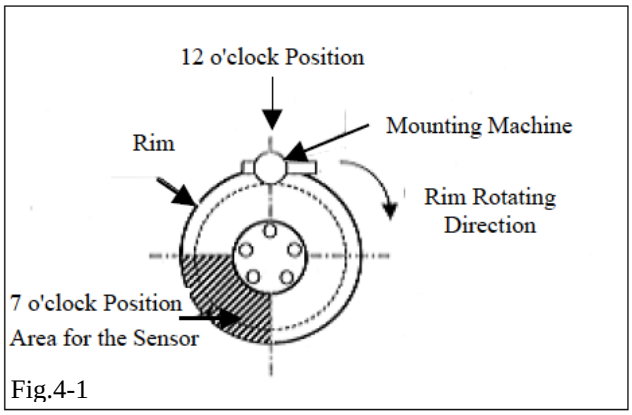


Fig.4-1

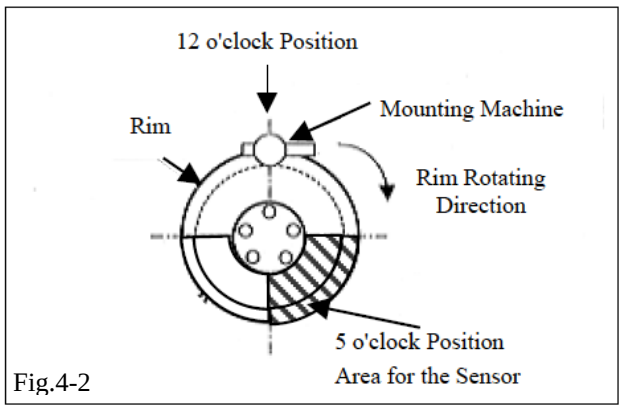


Fig.4-2

4. Tire Mounting.

(a) Mount P**265/70R17** tires on 17" TRD accessory alloy wheels.

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

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

Mount/dismount head is considered as the 12 o'clock Position.

(d) 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.

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

(f) 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 the sensor.

To seat tire bead, inflate tire beyond **35 PSI** but not more the than the maximum tire bead seat pressure indicated on the tire sidewall. If it is not indicated use 40 PSI as a limit. If tire bead is not seated when pressure registers 40 PSI, deflate the tire and re-inflate to seat the bead. Regulate tire pressure to the OE pressure for 17" Tires as found on the Vehicles OE Tire Pressure Label e.g. FRONT & REAR **32 PSI** (220 kPa)

(g) Remove any tire labels from tire tread prior to balancing. Be sure to Re-Check Torque on TPMS Nuts, and install valve stem caps.

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 & balance in DYNAMIC MODE. Enable the LOAD ROLLER, if applicable, to ensure proper bead seating. Use 3M brand TN-4023 or equivalent low-profile stick-on type weights. (Figs. 5-1, 5-2, & 5-3) Weights should be no taller than 4 ~ 5 mm in height. **DO NOT stack weights on top of each other, nor side by side. This is REQUIRED for proper brake caliper clearance**.

(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. Use a rubber mallet, if required, to achieve complete adhesion of stick-on type weight(s).

NOTE: Maximum stick-on type 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.

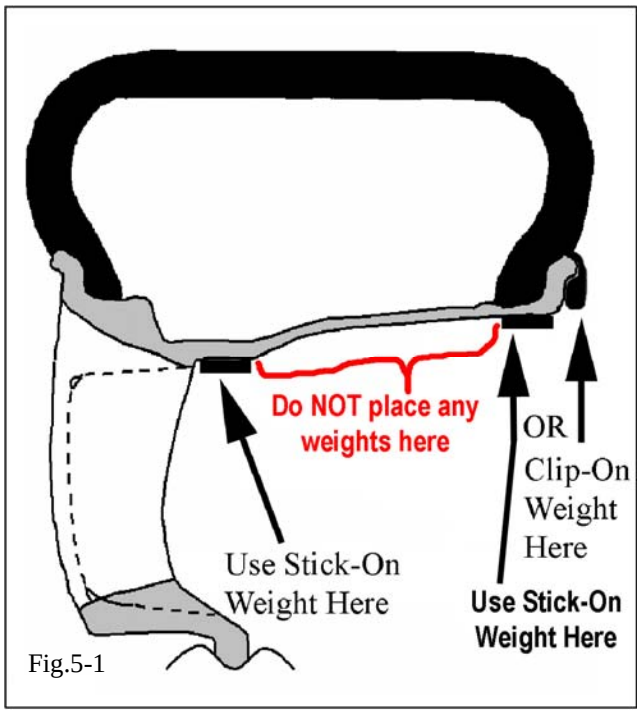


Fig.5-1

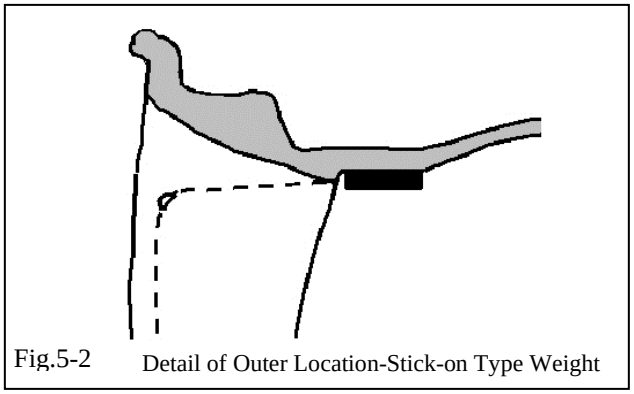


Fig.5-2 Detail of Outer Location-Stick-on Type Weight


Fig.5-3

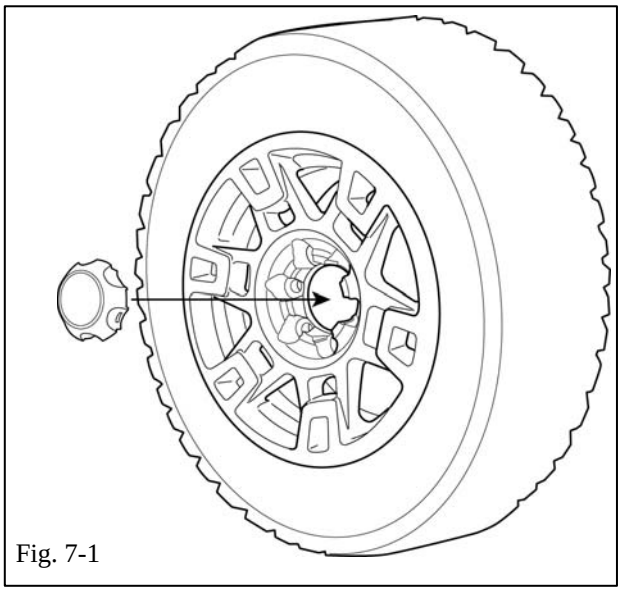


Fig. 7-1

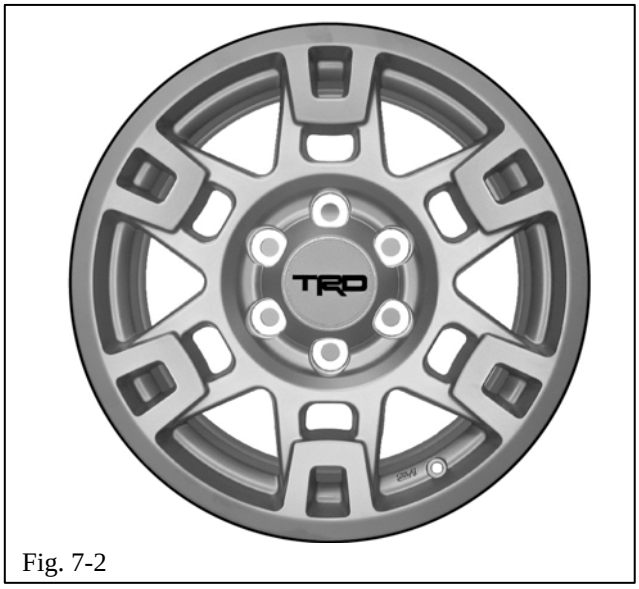


Fig. 7-2

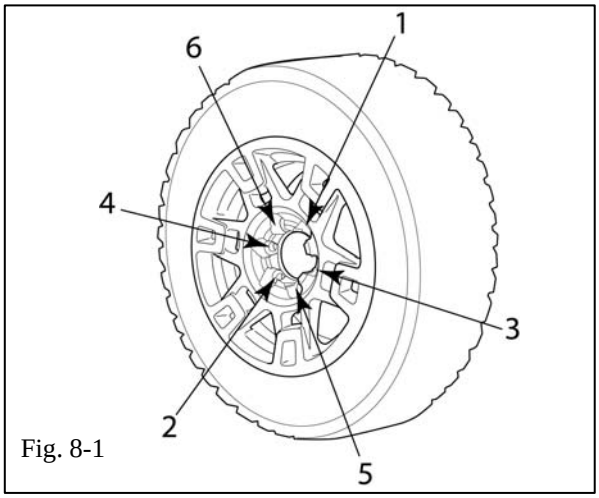


Fig. 8-1

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** new Tire Identification Numbers (TINs) from the **four** or **five** new tires installed onto the vehicle. Record these TINs with the Vehicle Identification Number (VIN) per VDC process. The TIN for the tire is an 11 or 12-character string located after the "DOT" symbol on the sidewall of the tire. Refer to **CAD PPO Bulletin** database as needed. Reusing the same OE tires that came on the same vehicle need not be recorded.

⚠ **For DIO** - Record **ALL** new Tire Identification Numbers (TINs) from the **four** or **five** new tires installed onto the vehicle. Record these TINs with the Vehicle Identification Number (VIN). Provide the tire information to your tire vendor as required by law. Reusing the same OE tires that came on the same vehicle need not be recorded.

7. Center Cap Installation.

(a) Install TRD center caps onto all **four** or **five** wheels. (Fig. 7-1) Align center cap as shown in Fig 7-2 and then gently push cap into wheel until cap snaps into place.

(b) NOTE: Be sure that the TRD text on the center cap for the FJ spare wheel is installed in it's upright position, as shown in Fig 7-2.

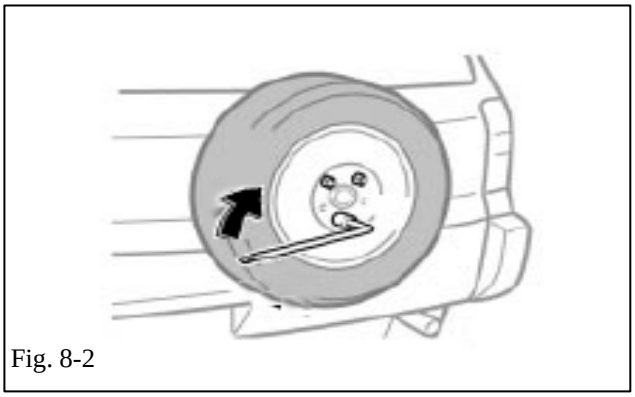


Fig. 8-2

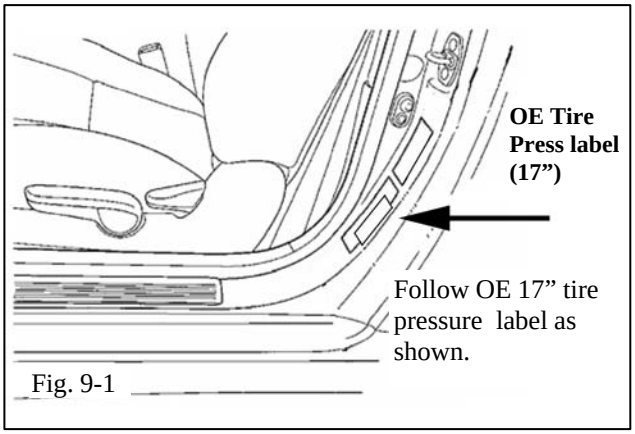


Fig. 9-1

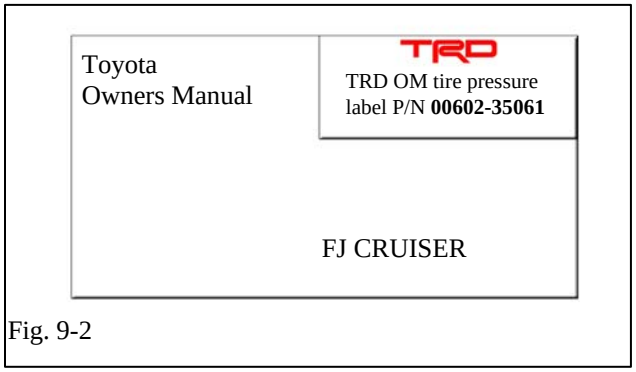


Fig. 9-2

(c) **NOTE**: If the vehicle has a back-up camera located in the spare wheel hanger, place the 5th spare TRD wheel center cap into the vehicle glove compartment. Do NOT cover camera!

8. Wheel/Tire Assembly Installation.

(a) Install 4/5 TRD wheel and tire assemblies on vehicle. Hand-start the Flat-Seat OE lug nuts during installation. NOTE: Do NOT use Conical-Seat Acorn lug nuts. These Wheels require Flat-Seat Lugnuts. Tighten lug nuts in sequence 1 through 6 (Fig. 8-1). Ensure that the socket does not scuff the wheels.
Using a torque wrench, tighten to
4Runner: **83 ft-lbf** (112 N-m)
FJ Cruiser: **83 ft-lbf** (112 N-m)

(b) Lower the vehicle.

(c) **Re-Torque all lug nuts in sequence 1 through 6 (Fig 8-1).**

(d) **FJ Only**: Install spare wheel/tire on the vehicle using OE lug nuts. (Fig 8-2) Tighten to **65 ft-lbf** (88 N-m) using a torque wrench.

(e) Discard the OE take-off wheels per local regulations.

9. Tire Pressure Labels.

(a) These 17" wheels are designed to re-use the OE 17" tires P265/70R17 113S. Be sure to use & follow the OE 17" Tire Pressure label, located on the driver's side door jamb, for proper inflation pressure. Fig 9-1.

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

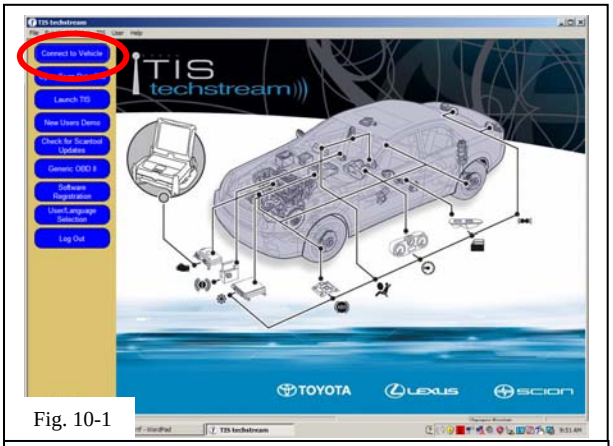


Fig. 10-1

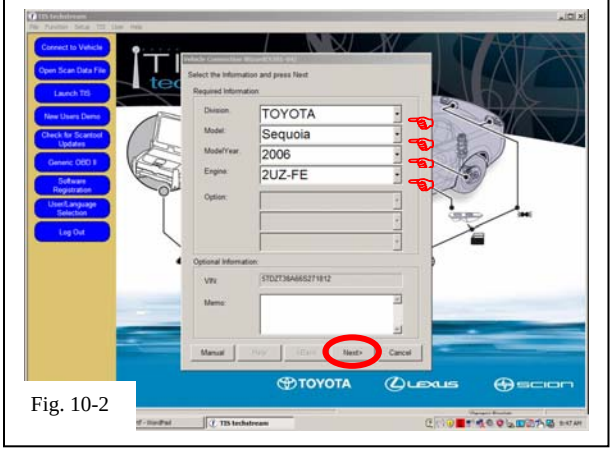


Fig. 10-2

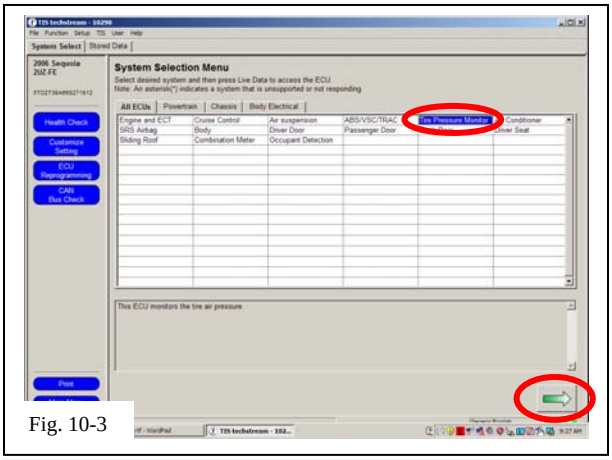


Fig. 10-3

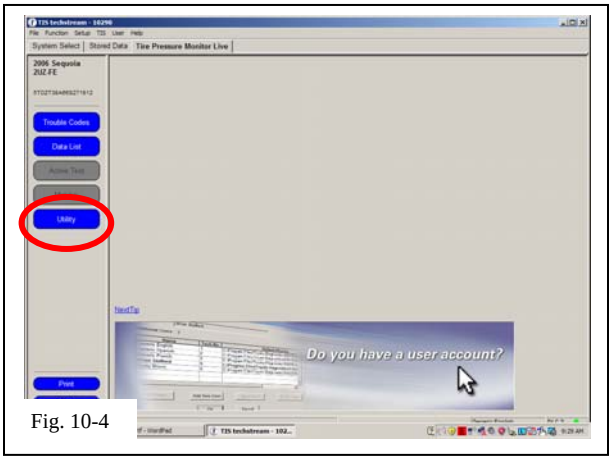


Fig. 10-4

10. 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. 10-1)

(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. 10-2)

(f) Select "**Tire Pressure Monitor**" then click the green arrow located on the bottom right. (Fig. 10-3)

(g) Select "**UTILITY**" to begin input of new TPMS ID codes (Fig. 10-4).

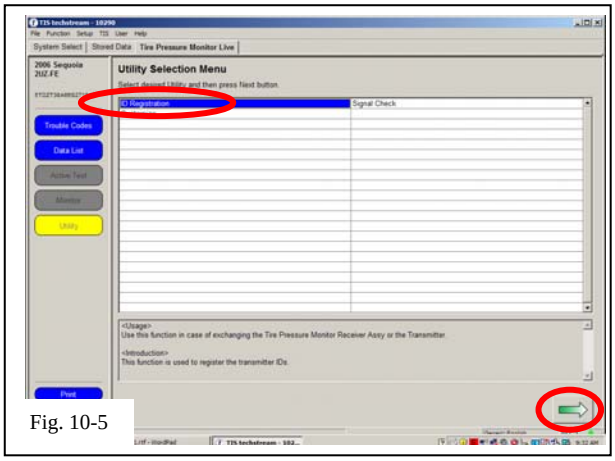


Fig. 10-5

(h) Select "**ID Registration**" then click the green arrow located at the bottom right corner. (Fig. 10-5)

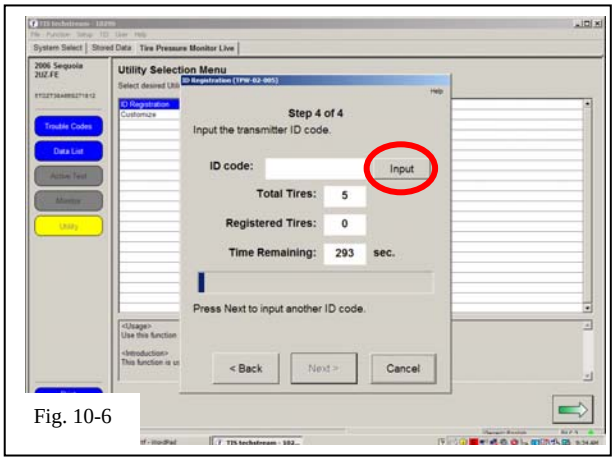


Fig. 10-6

(i) Select "**Next**" for Steps 1 through 3. Select "**Input**" in Step 4 to begin TPMS ID registration. (Fig. 10-6)

(j) Input the TPMS ID code then click "**OK**" Repeat the same procedure for all other TPMS ID codes. (Fig. 10-7)

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 **10** (g).

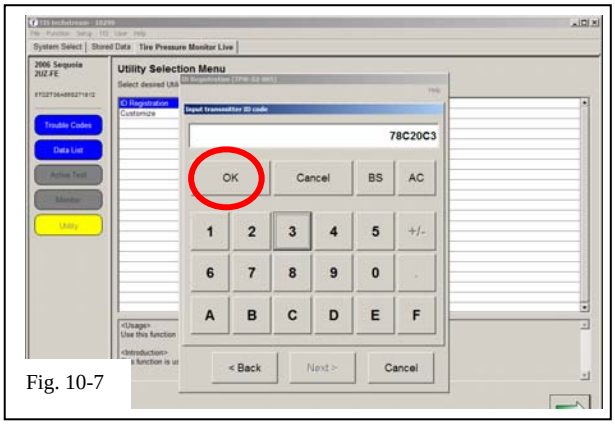


Fig. 10-7

(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. 10-8)

(l) Select "**DATA LIST**" to view and confirm the TPMS ID numbers have been correctly registered (Fig 10-9).

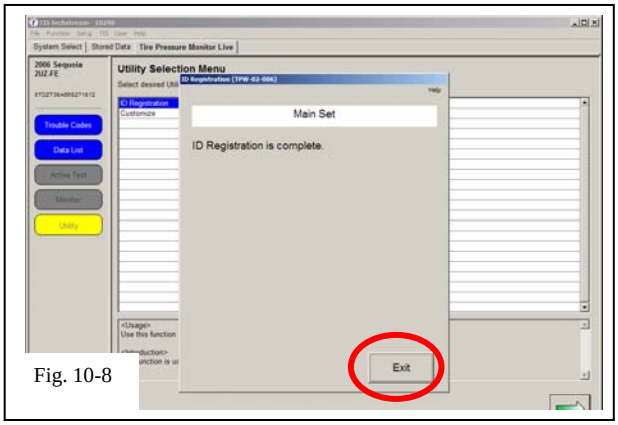


Fig. 10-8

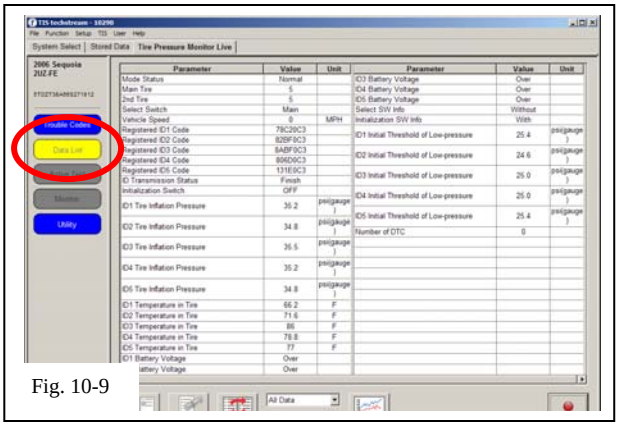


Fig. 10-9

11. Breakdown of OE Tire & Wheel Assembly.

For PPO

(a) Sort product properly per local regulations.

(b) Take-Off Wheels get salvaged according to local regulations.

For DIO

(a) Sort product properly per local regulations.

12. Lugnut Tool Placement.

IF optional wheel locks were installed, attach wheel lock key tool to vehicle lug wrench using optional cable tie. Trim cable tie, and replace lug wrench into lug wrench tool bag. Place associated wheel lock paperwork into plastic bag and into vehicle glove compartment.

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

Check:	Look For:
☐ Inspect lug nuts.	Six (6) lug nuts must be installed on each wheel, while only Three (3) lug nuts hold on the spare wheel to its carrier for FJ. Chassis wheels should be tightened using a torque wrench to
☐ Lug nut tightness.	**83 ft-lbf** (112 N-m) for 4Runner or **83 ft-lbf** (112 N-m) for FJ Cruiser and
	Spare wheel for FJ should be tightened to **65 ft-lbf** (88 N-m).
☐ Tire Pressure Labels	Verify OE Tire Pressure Label and TRD Owner’s Manual Labels are in place.
☐ Correct Tire Pressure	Verify tire pressure is set to the value specified on the OE 17” Tire Pressure Label.
☐ Tire Identification Numbers	**PPO**: Ensure any <u>new</u> accessory Tire Identification Numbers are recorded with the Vehicle Identification Number per regulations. Refer to **CAD PPO Bulletin** as needed. **DIO**: Provide the tire information to your tire vendor as required by law.
☐ Center Caps	Verify center caps are securely in place on all chassis wheels. Ensure TRD spare wheel Center Cap is installed with the TRD logo in the upright position. For vehicles with back up camera, ensure 5th center cap is placed into the glove box and not over the camera.
☐ <u>Optional</u> Wheel Locks	Verify optional wheel lock key tool is attached to vehicle lug wrench in vehicle and paperwork is placed into vehicle glove compartment.
☐ Wheel Balance Weights	Verify all Wheel Balance Weights are free and clear of all brake components when wheels are spun through at least one full revolution.

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

Check:	Look For:
Vehicle Appearance Check ☐ 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.)

FOR TORQUE AUDIT PURPOSES ONLY

Fastener Description	Audit Torque Range	Target	Page #
Valve Stem Nuts	S 2.4-6.0 N·m (21.5-54 in·lbf)	4.0 N-m (36 in-lbf)	4
Spare Tire Lugs (FJ)	S 76-126 N·m (56-93 ft·lbf)	88 N-m (65 ft-lbf)	7
4Runner Lugs/Locks	S 97-161 N·m (72-119 ft·lbf)	112 N·m (83 ft·lbf)	7
FJ Lugs/Locks	S 97-161 N·m (72-119 ft·lbf)	112 N·m (83 ft·lbf)	7
NOTE: Wheel Lug/Lock torques can only be audited at the time of installation.			