Wayne Hutchinson / TMS Toyota Customer Services Product Quality and Service Support, Quality Compliance November 25, 2013 Approved By: Bob Waltz

To:All Toyota DealersFrom:Product Support Division

#### Corrosion-Resistant Compound (CRC) Campaign BXD 2000 – 2003 Model Year Tundra Vehicles

## **Supplemental Information-BZD**

\*\*\*\*\*\*URGENT\*\*\*\*\*



L

Read and understand this entire Dealer Daily Message before performing this Supplement to Campaign BXD. INCORRECT USE OF THIS SUPPLEMENTAL INFORMATION WILL LEAD TO CLAIM REJECTION OR IMMEDIATE CLAIM DEBIT.



This Supplemental Information is **only to be used** by dealerships located <u>outside</u> of the 20 Cold Climate States\* and are servicing vehicles covered by Campaign BXD.

Dealerships located in the 20 Cold Climate States *must use* the information provided in Campaign BXD when performing the remedy on covered vehicles.

Toyota dealerships in the Cold Climate States\* are currently conducting campaign BXD for certain 2000 – 2003 Model Year Tundra vehicles currently registered in and/or originally sold in the Cold Climate States.

#### For covered vehicles, campaign <u>BXD</u> involves the following:

- Replacement of the fuel tank straps.
- Inspection of the 3 rear cross members and mounting locations; replace as needed. Note:
  - The rear-cross member can be replaced separate from the frame.
  - If the 2 fuel tank mounting cross-members fail inspection, the frame will need to be replaced.
- Inspection of the spare tire lift plate; replacement as needed.
- Inspection of the Load Sensing Proportioning Valve (LSPV); replacement as needed.
- Inspection of certain surround components; replacement as needed.
- Apply Corrosion-Resistant Compound to certain locations of the frame.

#### Dealerships *located outside* of the Cold Climate States:

Customer's whose vehicles are covered by campaign BXD\*\* may request dealerships located outside of the Cold Climate States to complete this campaign. Due to state and/or local regulatory requirements, these dealerships are currently unable to perform the CRC application as required under campaign BXD.

In an effort to support customers covered by campaign BXD, but no longer living in a Cold Climate State, Toyota is creating a supplemental campaign designation known as "BZD". **Only dealerships located outside of the Cold Climate States will be able to utilize the BZD Operation Codes.** These Operation Codes have been created to assist dealerships, located outside of the Cold Climate States, when performing the inspections and repairs required by Campaign BXD, with the exception of the CRC application. As soon as a dealership completes BZD, it will be marked as completed in TIS. However campaign BXD will remain open to ensure the customer may receive the CRC application if the vehicle ever returns to a Cold Climate State.

\*Cold Climate States: CT, DE, IL, IN, KY, MA, MD, ME, MI, MN, NH, NJ, NY, OH, PA, RI, VA, VT, WI & WV \*\* Vehicles originally sold in and/or currently registered in the Cold Climate States

#### Before performing any campaign, check TIS to verify coverage.

Campaign	Perform Inspection	Replace Fuel Tank Straps	Replace Rear Cross Member	Replace Brake Tubes (Includes Brake Bleeding)	Replace LSPV (Includes Brake Bleeding)	Replace Spare Tire Carrier	Replace Rear Cross Member Incomplete (Excessive Rust Perforation)	(2WD) Frame Replacement By Dealer Rust Perforation Found	(4WD) Frame Replacement By Dealer Rust Perforation Found	(2WD) Frame Replacement By Outside Shop – Rust Perforation Found	4WD) Frame Replacement By Outside Shop – Rust Perforation Found	Op. Code	Flat Rate Hour
	✓	✓	-	-	-	-	-	-		- 🥠		2515MD	0.8
	√	✓	-	-	-	✓	-		-	-		2515ML	1.3
	✓	✓	-	-	✓	-	-		-			2515MJ	2.4
	√	✓	-	-	✓	✓	- (	-	- (		-	2515MQ	2.9
	✓	✓	-	✓	-	-		-	-		-	2515MG	1.3
	√	✓	-	✓	-	1		-	-	<b>)</b> -	-	2515MP	1.8
	✓	✓	-	✓	✓		5-	-		-	-	2515MM	2.7
	√	✓	-	✓	✓	~	-	-	-	-	-	2515MR	3.2
BZD	√	✓	✓	-	-	-	-	-	-	-	-	2516MD*	5.6
	✓	✓	✓	-		∕	-		-		-	2516ML*	6.1
	✓	✓	✓	- (	<ul> <li>✓</li> </ul>	-	-		-		-	2516MJ*	7.2
	√	✓	✓	-	~	✓		-		<b></b>	-	2516MQ*	7.7
	✓	✓	✓	1	-	-		-		-		2516MG*	6.1
	✓	✓	1	-	-	$\checkmark$	-	-		-		2516MP*	6.6
	✓	✓	~	1	✓		-			-		2516MM*	7.5
	✓	-	<ul> <li>✓</li> </ul>	1		$\checkmark$	-	-	-	-		2516MR*	8.0
If Frame Replacement is necessary, please contact the Warranty Hotline (800-421-3407 option #5) for PREAUTHORIZATION.													

Frame Replacement claims will be filed using the BXD OpCodes but will require preauthorization from TMS Warranty.

- The flat rate time above includes 0.1 hours for campaign administrative cost per unit.
- Chisel Cutters that are used for rear cross member replacement (*OpCodes Marked with* \*) may be recovered using sublet typed "YA" max of \$8.00/vehicle. State "Chisel Cutter" in the sublet description.
- **Rental Vehicles** for *the BZD* OpCodes may be claimed through the Toyota Rent-A-Car (TRAC) Program for a maximum of 2 days. Follow the Toyota Transportation Assistance Program (TTAP) Guidelines.

Fuel Tank Strap Weld Nut and Bolt Repair (as needed) In some instances it may be necessary to replace the Fuel Tank Strap Weld Nut and Bolt. Please use the following operation codes when necessary.

Repair Work #	Description of Repair Work						
1	Remove the Fuel Tank Strap Weld Nut and Bolt and smooth the frame surface (Fr. Side)						
2	Remove the Fuel Tank Strap Weld Nut and Bolt and smooth the frame surface (Rr. Side)						
3	Remove and install the cab assembly						
		4	•	<b>•</b>			

Campaign	Cab Type	1	2	3	Op. No <mark>.</mark>	Flat Rate Hours
	Regular	✓	-	-	2514MA	0.2
	Access	✓	-		2514MB	5.6
BXD	Regular/Access	-	✓		2415MC	0.2
	Regular	✓	✓	-	2514MD	0.4
	Access	✓	✓	~	2514ME	5.8

Thank you for your cooperation. TOYOTA MOTOR SALES, U.S.A., INC.

## Appendix

# I. VISUALLY INSPECT CROSS-MEMBERS FOR PERFORATION AND ADJACENT COMPONENTS FOR CORROSION DAMAGE







- a) Visually inspect the frame for perforation to confirm it is safe to rack.b) Remove the spare tire.
- c) Visually inspect the specific area highlighted in green for visual signs of perforation.

#### Note:

- If rust perforation of <u>10mm or larger</u> is found in the green areas, proceed with Frame Replacement.
- Document any vehicle damage found during the visual inspection prior to beginning work.
- d) Inspect the Rear Frame Cross-Member (red) for rust perforation that is 10mm or larger.
  - If rust perforation on the Rear Cross-Member is <u>10mm or larger</u> the Rear Cross-Member will need to be replaced.
  - Proceed with the rest of the inspection prior to replacement of any components.
- e) Inspect the Load Sensing Proportioning Valve (LSPV) for excessive rust corrosion damage.
  - With one hand using minimal force, attempt to wiggle the valve bracket and valve body.
  - If the valve bracket, valve body and/or associated components show signs of excessive rust, brake fluid leakage and/or are loose, make a note and continue with the rest of the inspection.



- f) Inspect the spare tire carrier lift plate as shown.
- g) If spare tire carrier shows deterioration as shown in box (NG), make note and continue with inspection.



- h) Inspect surrounding components and adjacent areas:
  - Brake lines
  - Fuel lines
  - Exhaust pipe brackets
  - Steering components and power steering lines
  - Suspension mounts

Notes:

- If there is perforation and/or breakage of the specified components or adjacent areas due to corrosion replacement of these part(s) will be required.
- If there is fluid leakage of the specified components replacement will be required.



- i) Inspect fuel tank straps to see if they were previously replaced.
- j) If any of the components inspected above or the frames Rear Cross-Member requires replacement, these components will need to be replaced.
- II. REAR FRAME CROSS-MEMBER & COMPONENT REPLACEMENT PROCEDURE

### A. COMPONENTS





#### C. BED REMOVAL

- 1. REMOVE THE LICENSE PLATE LIGHTS
- 2. REMOVE THE CENTER REAR BUMPER PAD
- 3. REMOVE THE REAR BUMPER ASSEMBLY
- 4. REMOVE THE TRAILER HITCH (IF EQUIPPED)



#### 5. DISCONNECT THE FRAME WIRE HARNESS

- a) Disconnect the connectors.
- b) Disconnect the clips and the frame wire harness from the bed assembly.

NOTE:

- The number of connectors may differ depending on the vehicle specification.
- Be careful not to damage the wire harness clips when removing them.
- 6. REMOVE THE REAR MUDGUARDS (IF EQUIPPED)

#### 7. REMOVE THE FUEL TANK FILLER PIPE SHIELD



#### 2. REMOVE THE CLIP





#### 3. DISCONNECT THE FRAME WIRE HARNESS

a) Remove the 5 wire harness clips.

NOTE: DO NOT damage the wire harness clip during removal.

b) Disconnect the ABS connector (if equipped).



# Careful Sharp Edge

Nut B

Bolt

#### 4. REMOVE THE SPARE TIRE CARRIER

a) Remove the 4 bolts and the spare tire carrier.

NOTE: The edge of the spare tire carrier is sharp, take care when removing.

Nut A

#### 5. REMOVE THE EXHAUST PIPE HANGER

a) Remove the exhaust pipe hanger from the frame.

#### 6. REMOVE THE REAR SHOCK ABSORBER LH

a) Remove the 2 nuts, bolt and the rear shock absorber LH.







#### 7. DISCONNECT THE LSPV AND LOAD SENSING SPRING

- a) Remove the nut, washer and bolt, and then disconnect the load sensing spring.
- b) Remove the 2 washers and collar from the load sensing spring to prevent them from falling off.
- c) Disconnect the brake line clip.
- d) Remove the 3 bolts and disconnect the LSPV assembly.

#### NOTE:

- DO NOT damage the brake line clip during removal.
- Visually inspect the LSPV for any damage of fluid leakage. Replace the LSPV if damage or fluid leakage is found.
- e) Suspend the LSPV with a rope this will protect the brake lines from damage and deformation.

When using an air chisel/air hammer wear protective eyewear, ear plugs and gloves.
Please have ALL personel near the work area wear ear plugs when the air chisel/air hammer are in use.

#### 8. REMOVE THE REAR FRAME CROSS-MEMBER

a) Using an air chisel cut off the 13 rivet heads. NOTE:

- Always wear protective eyewear, ear plugs and gloves when using an air chisel and air hammer.
- DO NOT allow personnel near the vehicle, as the rivet heads may fly off when cut.
- Cover the cab body to prevent damage from flying debris.



b) Position the air chisel in between the rivet and side member. **DO NOT** increase the angle the air chisel, doing so may damage frame side member.





Grooved Ring



g) Push the expansion bar until both guide bars contact the frame.

h) Using the frame expansion bar, expand the ends of the frame rails by 4.33 in. (110 mm).

- i) Push the rear frame cross-member towards the left of the vehicle as shown.
- j) Lower the right side of the rear frame cross-member one notch as shown.
- k) From the left side of the vehicle, slightly twist the rear frame cross-member to the right and lift up to remove as shown.

NOTES:

- Use 2 people to remove the rear frame cross member.
- DO NOT remove the expansion bar.



#### E. REAR FRAME CROSS-MEMBER INSTALLATION

#### 1. PREPARE AND CLEAN THE BOLT MOUNTING SURFACE

a) Using 80 grit sandpaper, remove any scratches and uneven areas from where the rivets were removed.

b) Sand the surfaces until they are smooth and even. NOTE:

- Any unevenness in the surface can cause the bolts to loosen.
- Make sure the surface is completely even before proceeding to the next step.





#### 2. INSTALL THE NEW FRAME REAR CROSS-MEMBER

a) From the left side of the vehicle, insert the **NEW** rear frame cross-member and set the right notches in the position shown.

#### NOTES:

#### Use 2 people to install the NEW rear frame cross-member.

- b) Slightly twist the *NEW* frame rear cross-member and set the left side in the side member as shown.
- c) Push the **NEW** frame rear cross-member towards the left and set the right side in the side member as shown.



#### 3. INSTALL THE BOLTS AND NUTS

a) While shortening the frame expansion bar, align the side member and cross-member holes and temporarily install 13 *NEW* bolts and nuts.

#### NOTES:

- DO NOT fully tighten the bolts and nuts at this time.
- For the lower section of the side member, insert the bolts from the bottom side.





- b) After temporarily installing the bolts and nuts, measure the distance between the left and right frame rails for the TOP and BOTTOM edges of the rear frame end.
- c) Compare the new measurements to the ones taken in step "D.1.
   MEASURE THE DIMENSIONS OF THE REAR FRAME END" during rear frame cross-member removal process, and adjust the frame expansion bar until they match.

#### 4. TIGHTEN THE BOLTS AND NUTS

 a) In the order illustrated, <u>tighten each bolt to specification while holding the nut.</u> Torque Specification: 54 N·m (551 kgf·cm, 40 ft·lbf)
 NOTE: DO NOT tighten the nut. Tighten the bolt while holding the nut.





:Paint Area



#### 6. RECONNECT THE LSPV AND LOAD SENSING SPRING

- a) Remove the rope supporting the LSPV.
- b) Reinstall the LSPV with the 3 bolts and tighten to specification.

#### Torque Specification: 29 N·m (296 kgf·cm, 21 ft·lbf)

- c) Reconnect the brake line clip.
- d) Reinstall the collar and 2 washers to the load sensing spring.
  e) Reinstall the load sensing spring with the bolt, washer and nut, and then tighten to specification.

Torque Specification: 18 N·m (184 kgf·cm, 13 ft·lbf)

#### 7. REINSTALL THE REAR SHOCK ABSORBER LH

a) Reinstall the rear shock absorber LH with the bolt and 2 nuts, and tighten to specification.

Torque Specification: Bolt – 87 N·m (887 kgf·cm, 64 ft·lbf) Nut A– 20 N·m (204 kgf·cm, 15 ft·lbf)

#### 8. REINSTALL THE EXHAUST PIPE HANGER

a) Reinstall the exhaust pipe hanger to the frame.

#### 9. REINSTALL THE SPARE TIRE CARRIER

a) Reinstall the spare tire carrier with the 4 bolts, and tighten to specification.

Torque Specification: 20 N·m (204 kgf·cm, 15 ft·lbf)

NOTE: The edge of the spare tire carrier is sharp, take care when installing.









#### 10. REPLACE THE FUEL TANK STRAPS (if needed)

- a) Remove the bolt, clip, pin and the fuel tank strap.
- b) Support the fuel tank before prior to removing the strap.

## **NOTE:** If the fuel tank strap bolt and weld nut breaks or cannot be removed, reference the APPENDIX for additional information on fuel tank weld nut and bolt replacement.

- c) Install the *NEW* fuel tank strap with the pin, clip and bolt, then torque to spec. Torque Specification: 62 N·m (632 kgf·cm, 46 ft·lbf)
- d) Repeat the procedure on the other fuel tank strap.



- 11. RECONNECT THE FRAME WIRE HARNESS
  - a) Reconnect the ABS connector (if equipped).
- b) Reinstall the 5 wire harness clips.

#### NOTE:

If the clip(s) indicated for the frame wire harness is damaged or broken, cut off the damaged claw and replace it with part number <u>82711-26380</u> as shown above.





**12. REINSTALL THE CLIP** 

#### F. BED REINSTALLATION

#### 1. REINSTALL THE BED ASSEMBLY

- a) Using a Torx ® T55H Tamper Resistant Socket, reinstall the Torx ® bolts to the bed assembly and tighten to specification.
  - Regular Cab: 8 Torx ® bolts
  - Access Cab: 6 Torx ® bolts

Torque Specification: 86 N·m (877 kgf·cm, 63 ft·lbf)

#### NOTE:

- If a Torx ® bolt is damaged or broken, use part number 64189-0C010. This part number is not listed in the parts catalog. Please note on side step bed vehicles, Torx ® bolt 64189-0C010 cannot be used to replace a damaged or broken bolt in location "A", use the recommended part listed in the catalog.
- Use 4 or more people to reinstall the bed assembly from the frame.
- Evenly support the bed assembly when reinstalling it.





#### 2. RECONNECT THE FUEL INLET PIPE

a) Reinstall the fuel pipe inlet with the 2 nuts and tighten to specification.

Torque Specification: 27 N·m (275 kgf·cm, 20 ft·lbf)

- 3. REINSTALL THE FUEL TANK FILLER PIPE SHIELD
- 4. REINSTALL THE REAR MUDGUARDS (IF EQUIPPED)
- 5. REINSTALL THE SPARE TIRE

#### 6. RECONNECT THE FRAME WIRE HARNESS

- a) Reconnect the frame wire harness to the bed assembly with the clips.
- b) Reconnect the connectors.

NOTE:

- The number of connectors and clips may differ depending on the vehicle specification.
- If the clip(s) indicated for the frame wire harness is damaged or broken, cut off the damaged claw and replace it with part number <u>82711-26380</u> as shown above.



#### 7. **REINSTALL THE TRAILER HITCH (IF EQUIPPED)**

- 8. REINSTALL THE REAR BUMPER ASSEMBLY
- 9. REINSTALL THE CENTER REAR BUMPER PAD
- **10. REINSTALL THE LICENSE PLATE LIGHTS**
- **11. TEST DRIVE THE VEHICLE** 
  - a) Test drive the vehicle and inspect for any issues, abnormalities, drivability concerns, etc.

#### ✓ VERIFY REPAIR QUALITY ►

- Confirm ALL inspection steps are followed EXACTLY as described in these instructions
- Confirm components replaced were torqued properly and in the correct process
- Confirm the vehicle had the fuel tank straps have been replaced or were previously replaced under 90M If you have any questions regarding this update, please contact your regional representative.

#### **III.** WELD NUT REPLACEMENT

#### A. FUEL TANK STRAP WELD NUT REPLACEMENT PROCEDURE

#### Fuel Tank Strap Weld Nut and Bolt Part Number Information

PART NUMBER	PART DESCRIPTION	QUANTITY
90080 - 11376	BOLT, W/WASHER	AS NEEDED
94151 - 81041	NUT, FLANGE	AS NEEDED

#### 1. REMOVE THE REAR BODY (BED) ASSEMBLY, CAB BODY ASSEMBLY, AND OTHER COMPONENTS AS NEEDED

Remove necessary components to gain access to the fuel tank strap bolt and weld nut in need of repair. a) Component removal is dependent on the weld nut and bolt being repaired.



#### 2. REMOVE THE WELD NUT

- a) Wear protective eyewear and ear plugs.
- b) Use an air chisel to remove the broken bolt and weld nut.
- c) Take care to ensure the air chisel blade only contacts the weld nut.

#### **NOTE:** Do not scratch the frame when removing the weld nut with an air chisel.



#### 3. SMOOTH THE FRAME SURFACE

- a) Smooth the frame surface where the weld nut has been removed with a pencil type grinder and a cone grinding stone.
  - (1) Remove paint and rust from the frame surface surrounding the bolt hole. (Approximately 0.79in. or 20mm radius from the center of the bolt hole.)
  - (2) Carefully grind the surface flat.

NOTE: Do not grind more material than necessary.

(3) If the frame was deeply scratched by the air chisel during the weld nut removal, repair the area <u>surrounding</u> the scratch.

NOTE: Attempting to completely remove a deep scratch may lead to excessive removal of material and cause the metal to be thin.

#### 4. INSTALL THE FUEL TANK BAND ASSEMBLY WITH A NEW BOLT AND NUT

- a) Degrease and clean the frame surface.
- b) Torque the nut and bolt to spec.

Torque Spec: 39 N·m (398 kgf·cm, 29 ft·lbf)

#### 5. APPLY ANTICORROSIVE TREATMENT TO THE FRAME

a) Apply an anti-corrosive paint to the frame surface, bolt, and nut shown in the figure.

#### NOTE:

Do not apply corrosion inhibitor to the frame before tightening the bolt.

Please make sure all recalled parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, *unless requested for parts recovery return.*