RECALL CAMPAIGN BULLETIN

Reference:	Date:
NTB04-062a	August 13, 2004

VOLUNTARY RECALL CAMPAIGN
FUEL SENDING UNIT

IMPORTANT: THIS BULLETIN HAS BEEN REVISED.

- **The format (layout) of the Parts Information section was changed.**
- **A "NOTE" and illustration was added to help clarify the difference between the two Fuel Sending Unit part numbers.**

CAMPAIGN I.D. # / NHTSA #: R0401 & R0402 / 04V-230

APPLIED VEHICLES: 1999 - 2003 Frontier (D22)

2000 – 2003 Xterra (WD22)

APPLIED VINS: Vehicles built within the below VIN ranges:

Frontier:
1N6*D2*Y*XC300001-345558
1N6*D2*T*YC300001-437820
1N6*D2*Y*YC300002-437828
1N6*D2*T*1C300001-404427
1N6*D2*Y*1C300002-404387
1N6*D2*T*2C300002-396643
1N6*D2*X*2C300011-396637
1N6*D2*Y*2C300001-396641
1N6*D2*T*3C400001-438379
1N6*D2*X*3C400006-438371
1N6*D2*Y*3C400002-438380

Xterra:
5N1*D2*T*YC500001-612775
5N1*D2*Y*YC500005-612751
5N1*D2*T*1C500001-599018
5N1*D2*Y*1C500002-599014
5N1*D2*T*2C500000-606345
5N1*D2*Y*2C500002-606344
5N1*D2*T*3C600001-666247
5N1*D2*Y*3C600000-666244

NOTE: Use Service Comm to confirm campaign eligibility.

INTRODUCTION

Nissan has determined that some 1999-2003 model year Nissan Frontier vehicles, equipped with the 6 cylinder engine and 2000-2003 model year Nissan Xterra vehicles, equipped with the 4 and 6 cylinder engine may have a defect which relates to motor vehicle safety. There is a possibility that the fuel pump terminal on the fuel-sending unit may develop a crack in its plastic molding which could cause the terminal strip to corrode under some environmental conditions. If corrosion occurs, the terminal strip could eventually break. This will cause the fuel pump to stop operating and will result in not being able to start the engine or cause the engine to stop running without warning during vehicle operation, which could result in a crash. To prevent this condition from occurring, Nissan is conducting a Voluntary Safety Recall Campaign to replace or repair the fuel-sending unit.

IDENTIFICATION NUMBER

Nissan has assigned identification number R0401 & R0402 to this campaign. These numbers must appear on all communications and documentation of any nature dealing with this campaign.

R0401

- This PNC group is for vehicles located in the "Salt" states (shown below). Service Comm will identify these vehicles.

Salt States Include:

Connecticut	Kentucky	New Hampshire	Tennessee
Delaware	Maine	New Jersey	Vermont
District of Columbia	Maryland	New York	Virginia
Illinois	Massachusetts	Ohio	West Virginia
Indiana	Michigan	Pennsylvania	Wisconsin
Iowa	Minnesota	Rhode Island	

R0402

- This PNC group is for vehicles identified as NOT being located in the "Salt" states. Service Comm will identify these vehicles.

NUMBER OF VEHICLES POTENTIALLY AFFECTED

The number of vehicles potentially affected is approximately 590,000.

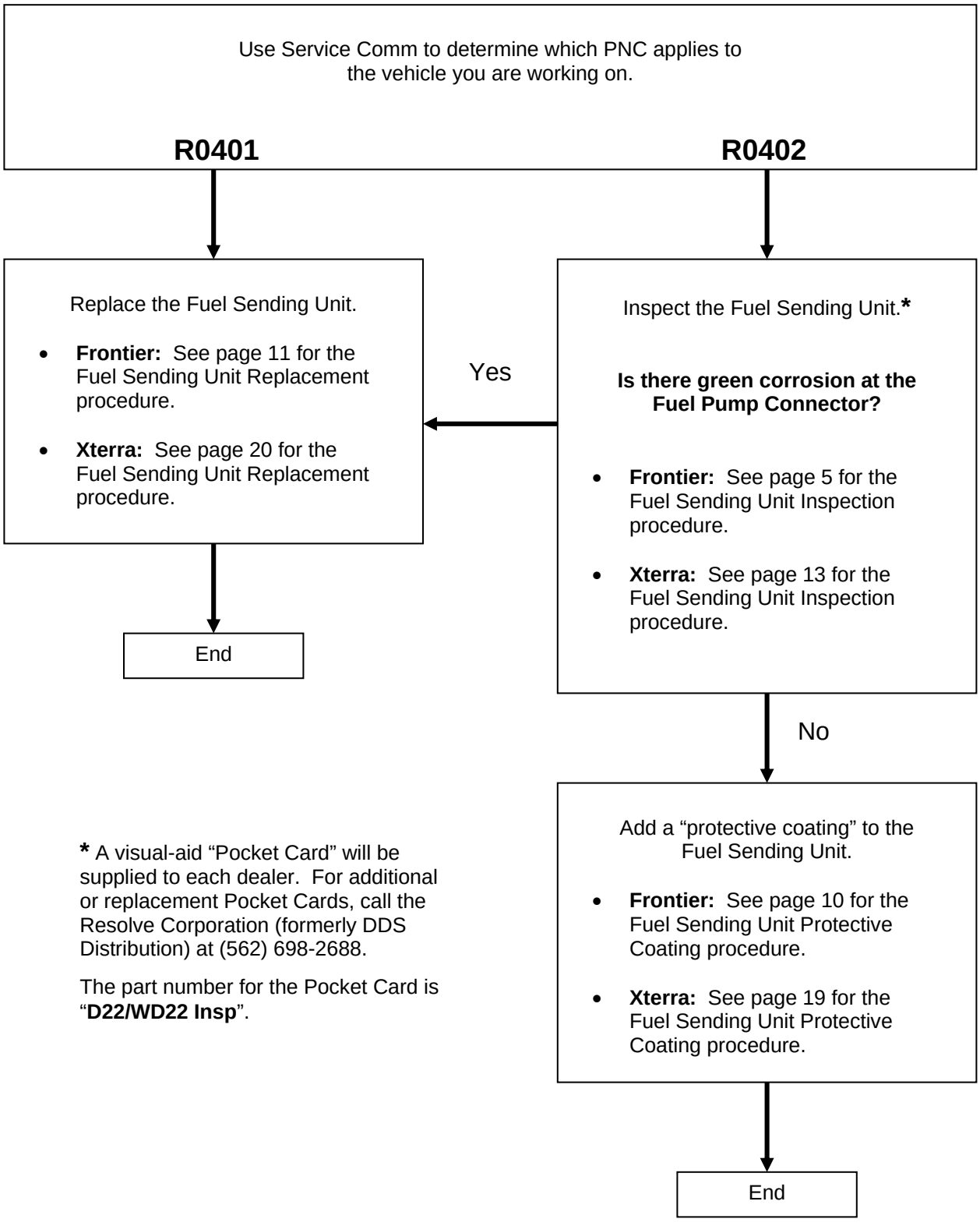
DEALER RESPONSIBILITY

It is the retailer's responsibility to check Service Comm for the campaign status on each vehicle falling within the range of this voluntary safety recall which for any reason enters the service department. This includes vehicles purchased from private parties or presented by transient (tourist) owners and vehicles in a dealer's inventory. **Federal law requires that new vehicles in dealer inventory which are the subject of a safety recall must be corrected prior to sale. Failure to do so can result in civil penalties by the National Highway Traffic Safety Administration.** While federal law applies only to new vehicles, Nissan strongly encourages dealers to correct any used vehicles in their inventory before they are retailed.

SERVICE PROCEDURE

Use this Repair Flow Chart to determine the Service Procedure.

Repair Flow Chart



***** A visual-aid "Pocket Card" will be supplied to each dealer. For additional or replacement Pocket Cards, call the Resolve Corporation (formerly DDS Distribution) at (562) 698-2688.

The part number for the Pocket Card is "**D22/WD22 Insp**".

The following items are required to perform the procedures contained in this bulletin.

- **Cleaning/Sealing Kit #B5060-79900**
  - One kit per vehicle
  - Kit contains: 1 Cleaning Adapter, 1 Sealing Adapter, and 1 Connector Cover
- **Connector Removal Tool #J-47009** (will be sent directly to your dealer)
- **Nylon Brush #J-47239** (will be sent directly to your dealer)
- **Protective Coating #KY140-9Z400** (one can good for about 40 vehicles)
- **Brake Cleaner #999MP-AH001P** (one can good for about 20 vehicles)

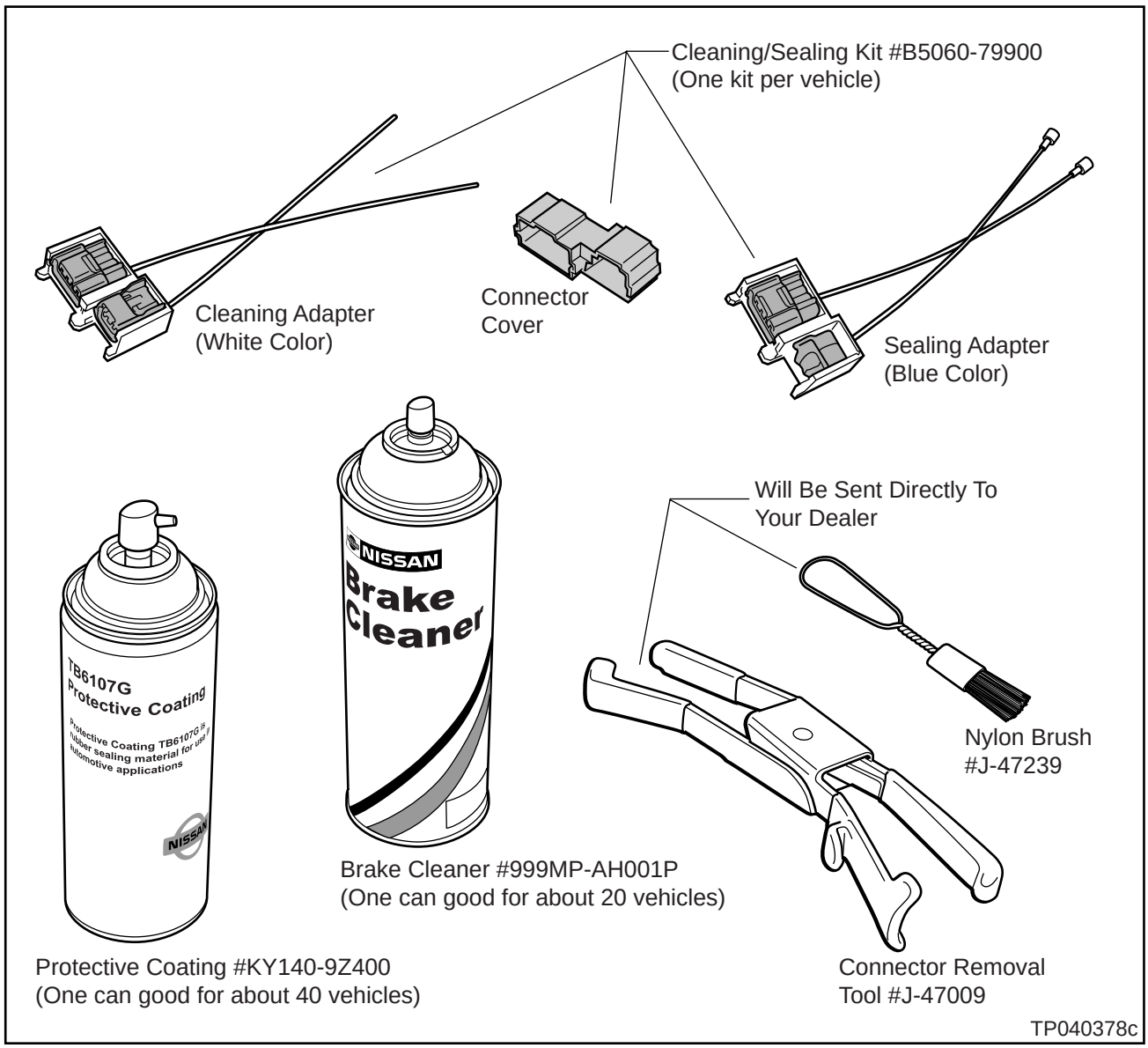


Figure 1

Frontier: Inspect Fuel Sending Unit

1. Raise the vehicle on a hoist so you can reach the Fuel Sending Unit Connectors (see Figure 2).

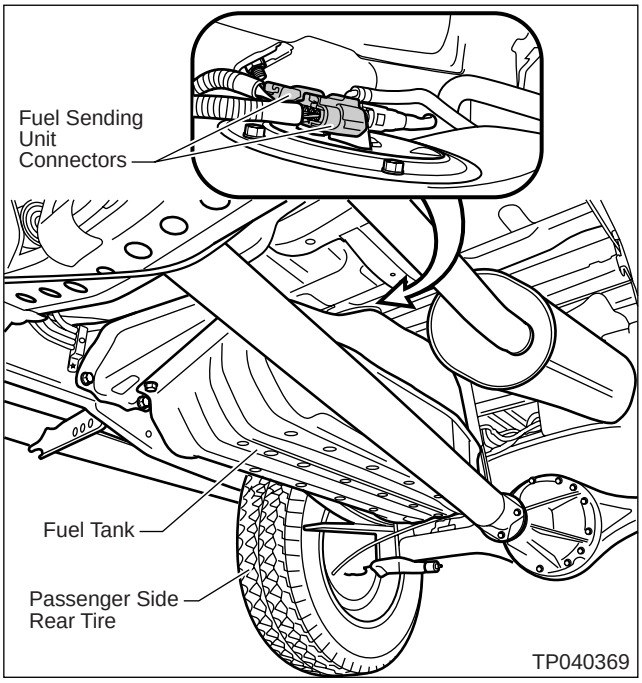


Figure 2

2. Use the Connector Removal Tool #J-47009 to disconnect the Fuel Sending Unit Connectors (4-wire connector and 2-wire connector). See Figure 3.

   NOTE: For 1999 and 2000 MY Frontier:

   - The Connector Removal Tool cannot be used on the 4-wire connector.
   - To release this connector, push forward on the Sliding Button (on top of the connector). See Figure 3.

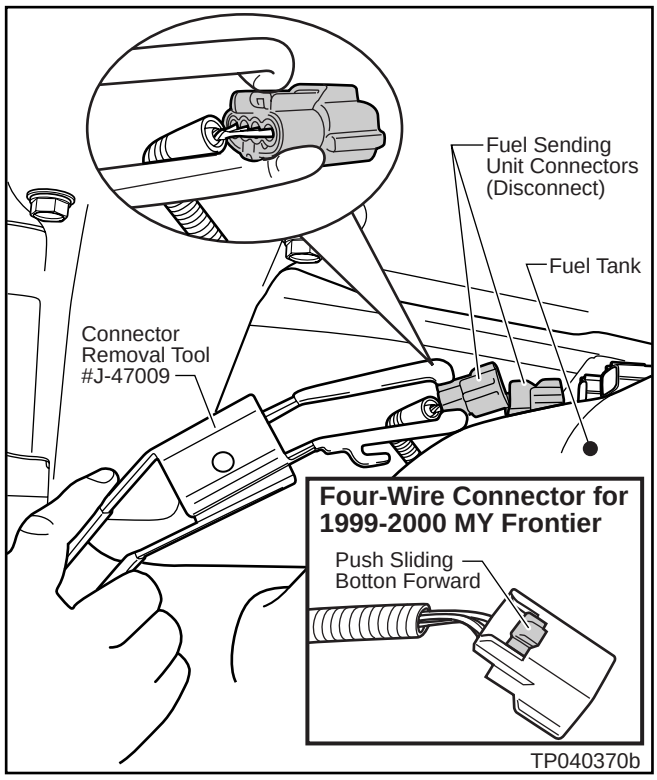


Figure 3

3. Install the Connector Cover onto the Fuel Sending Unit Connectors until it is fully seated. See Figure 4.

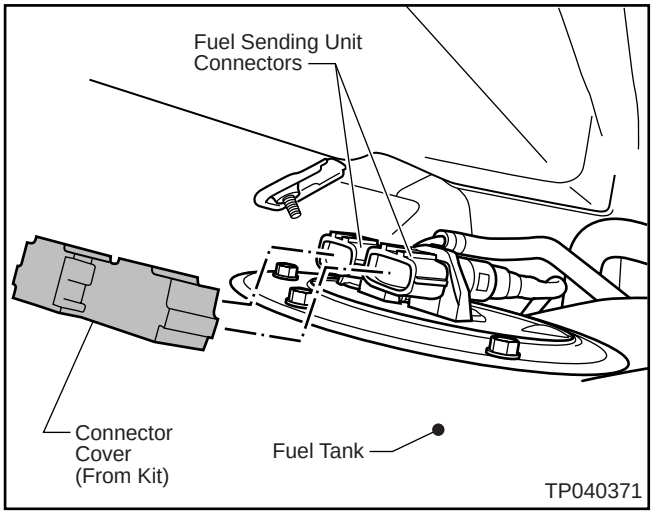


Figure 4

4. Use the Nylon Brush #J-47239 to loosen/remove dirt and debris on the vertical surface of the Fuel Sending Unit Connectors (see Figure 5).

5. Remove the Connector Cover once you're done with the above step.

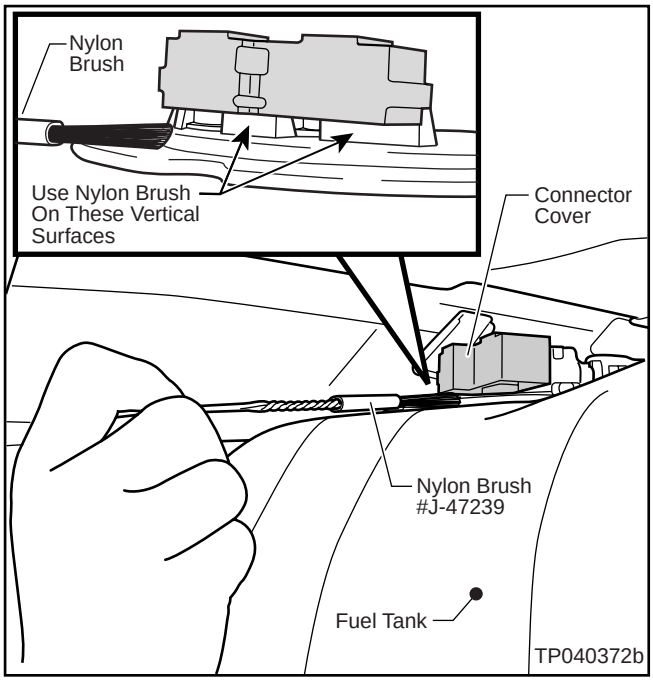


Figure 5

6. Install the Cleaning Adapter (white color adapter) onto the Fuel Sending Unit Connectors until it clicks (locks) in place. See Figure 6.

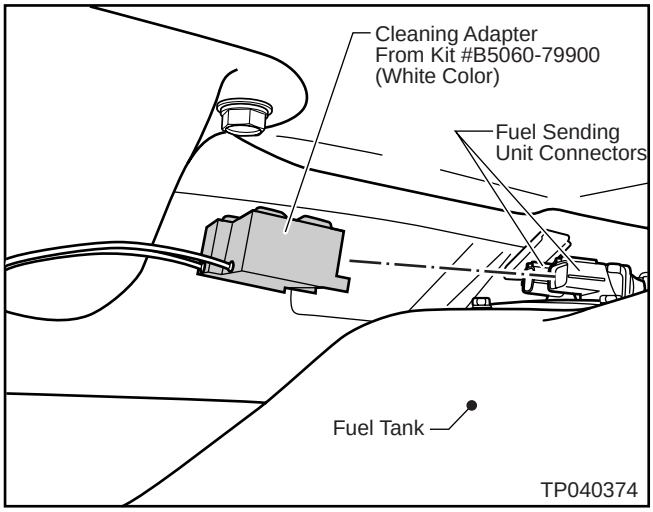


Figure 6

CAUTION: When performing the following steps, use suitable protective gloves, safety glasses, or face shield.

7. Spray Brake Cleaner #999MP-AH001P through each Adapter Tube for about two seconds (see Figure 7).
   - You will need to insert the Adapter Tube into the Brake Cleaner spray can nozzle.

8. Remove and discard the Cleaning Adapter.

   NOTE:
   - When you remove the Cleaning Adapter, one or both of the connector inserts may come out of the Adapter.
   - Make sure you remove the insert(s) from the Fuel Sending Unit connector(s).

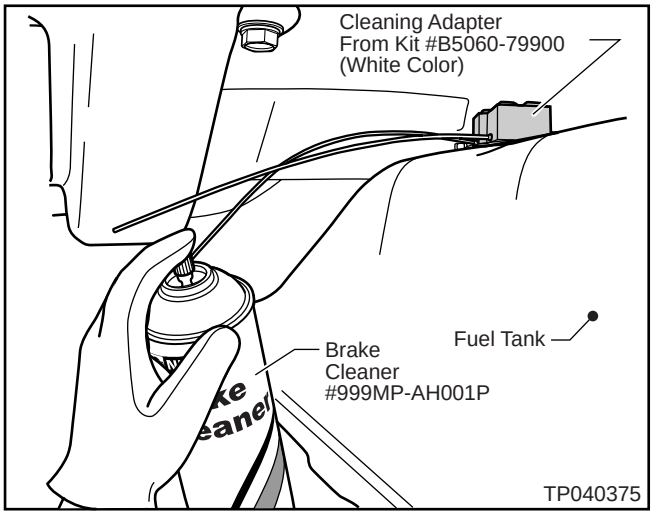


Figure 7

9. Install the Connector Cover onto the Fuel Sending Unit Connectors until it is fully seated. See Figure 8.

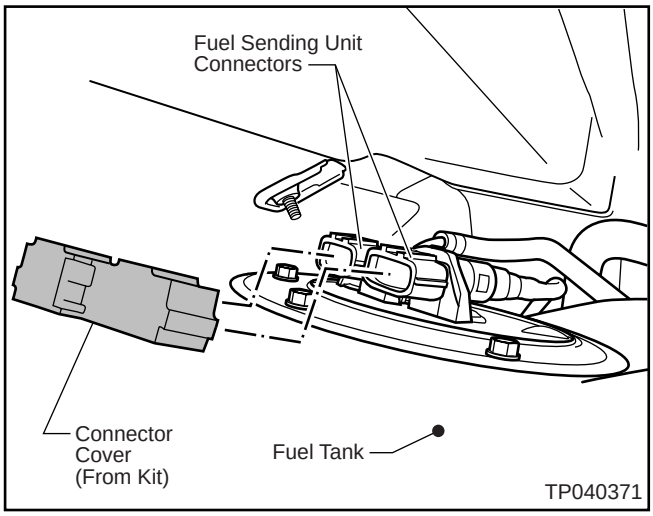


Figure 8

10. Use shop air to <u>thoroughly</u> dry the vertical surface of the Fuel Sending Unit Connectors, then remove the Connector Cover. See Figure 9.

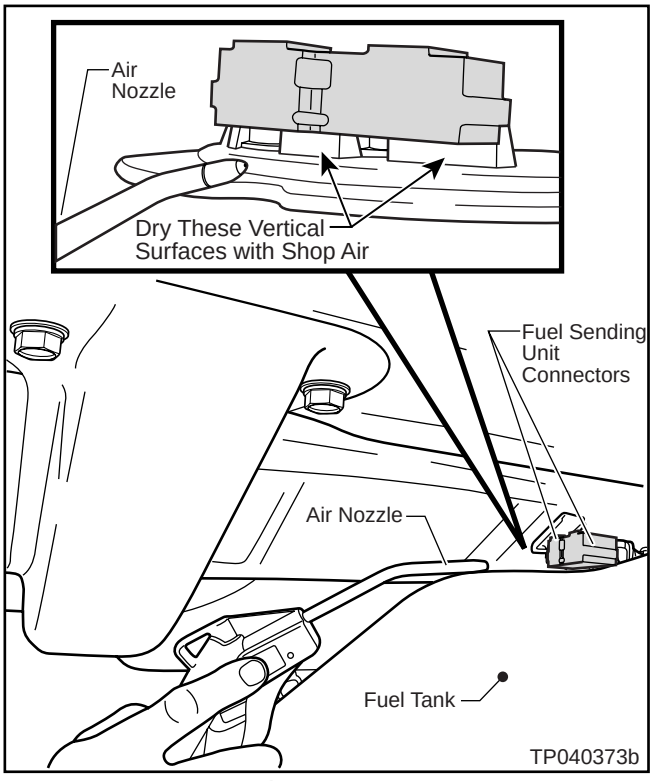


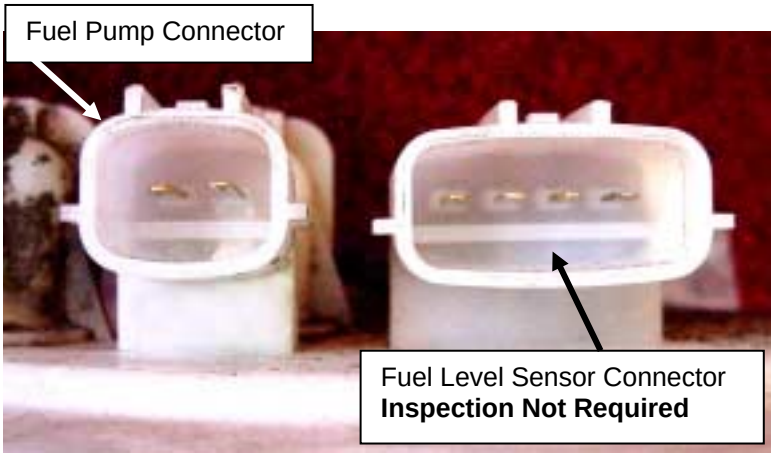
Figure 9

11. Inspect the **Fuel Pump** Connector for green corrosion.
    - Inspection is NOT required for the Fuel Level Sensor Connector.
    - Use a mirror (if needed) to look at the connector.
    - See illustrations below for examples of green corrosion.

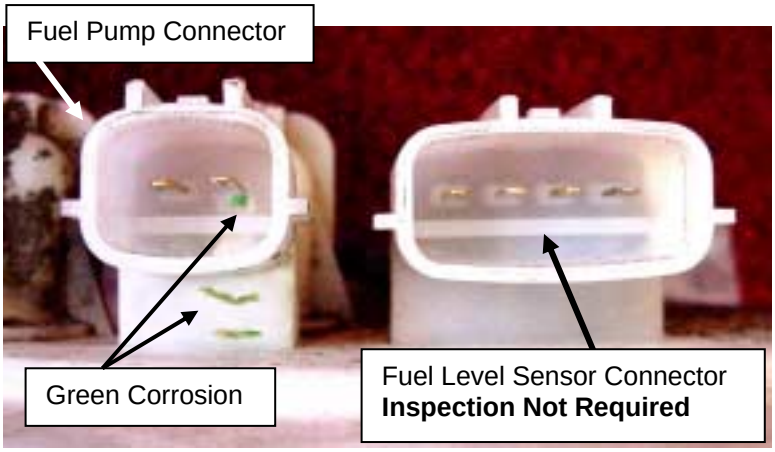
    a. If **OK**, go to “Frontier: Add Protective Coating To Fuel Sending Unit” (next page).

    b. If **NG**, go to “Frontier: Replace Fuel Sending Unit” (page 11).

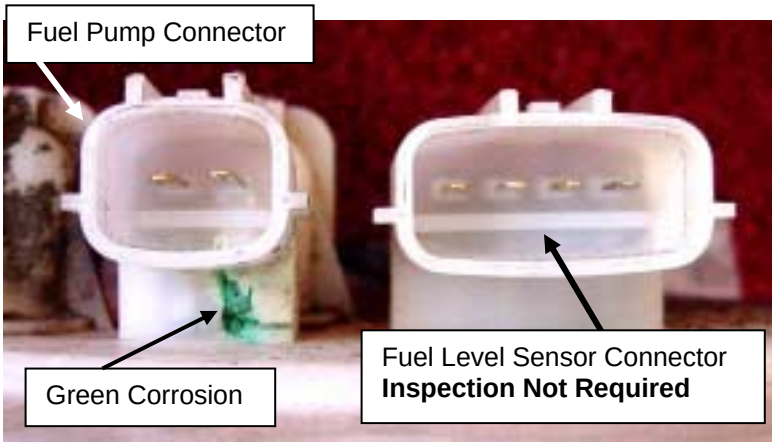
OK
(No Green Corrosion)



NG
(With Green Corrosion)



NG
(With Green Corrosion)



Frontier: Add Protective Coating To Fuel Sending Unit

1. Install the Sealing Adapter (blue color adapter) onto the Fuel Sending Unit Connectors until it clicks (locks) in place. See Figure 10.

CAUTION: When performing the following steps, use suitable protective gloves, safety glasses, or face shield.

2. Shake the Protective Coating can #KY140-9Z400 to thoroughly mix the contents.

3. Spray the Protective Coating #KY140-9Z400 through each Adapter Tube for about two seconds (see Figure 11).
   - You will need to attach the Adapter Tube onto the Protective Coating spray can nozzle.
   - You do not have to wait for the Protective Coating to dry. Proceed to the next step.

4. Remove and discard the Sealing Adapter.

   NOTE:
   - When you remove the Sealing Adapter, one or both of the connector inserts may come out of the Adapter.
   - Make sure you remove the insert(s) from the Fuel Sending Unit connector(s).

5. Re-connect the Fuel Sending Unit Harness Connectors, making sure they are securely locked into position.

6. Start the vehicle and confirm proper engine running and fuel gauge operation.

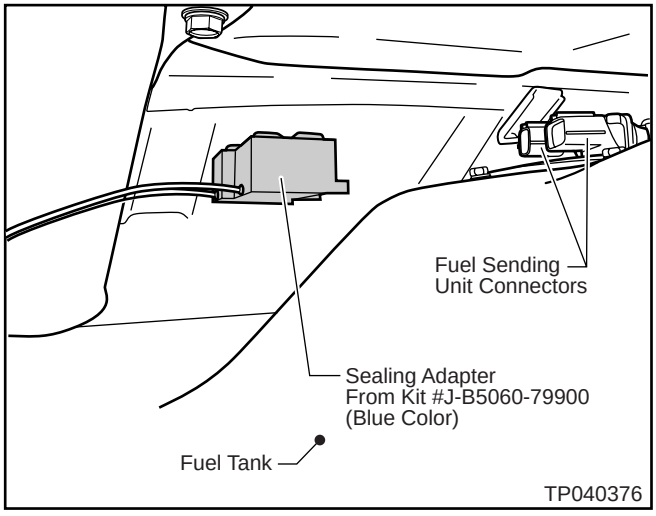


Figure 10

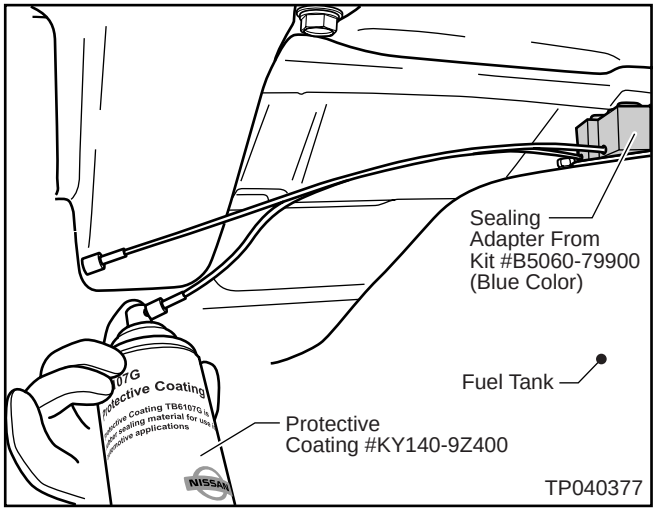


Figure 11

Frontier: Replace Fuel Sending Unit

WARNING:

- **Before performing any of the Service Procedures below, be certain there are no ignition sources (i.e., open flames, sparks, etc.) in or around the vehicle/work area.**
- **Make sure the appropriate rated fire extinguisher is available for immediate use.**
- **Use suitable protective gloves, safety glasses, or face shield.**

NOTE: The Fuel Sending Unit that you remove from the vehicle may look different from the new replacement service part (see Figure 27 on page 23).

1. Release the fuel pressure from the fuel system using CONSULT-II (or other suitable method). **Follow the procedure in the "EC" section of the Service Manual.**

2. Use a suitable device to remove the fuel from the fuel tank.

3. Remove the fuel tank:

- For detailed instructions on fuel tank removal and installation, refer to the vehicle-specific Service Manual, **Section FE (Fuel And Exhaust)/Fuel System/Removal and Installation/Fuel Tank.**

  WARNING: Follow all warnings and cautions provided in the Service Manual.

- The hoses MUST be re-connected to the same pipes they were removed from.
- If the hoses are re-connected incorrectly, refueling difficulties may occur.
- Before disassembly: use duct tape and an "indelible" marker (permanent marker), to mark the matching pipes and hoses, which are attached to the fuel filler neck (see Figure 12).

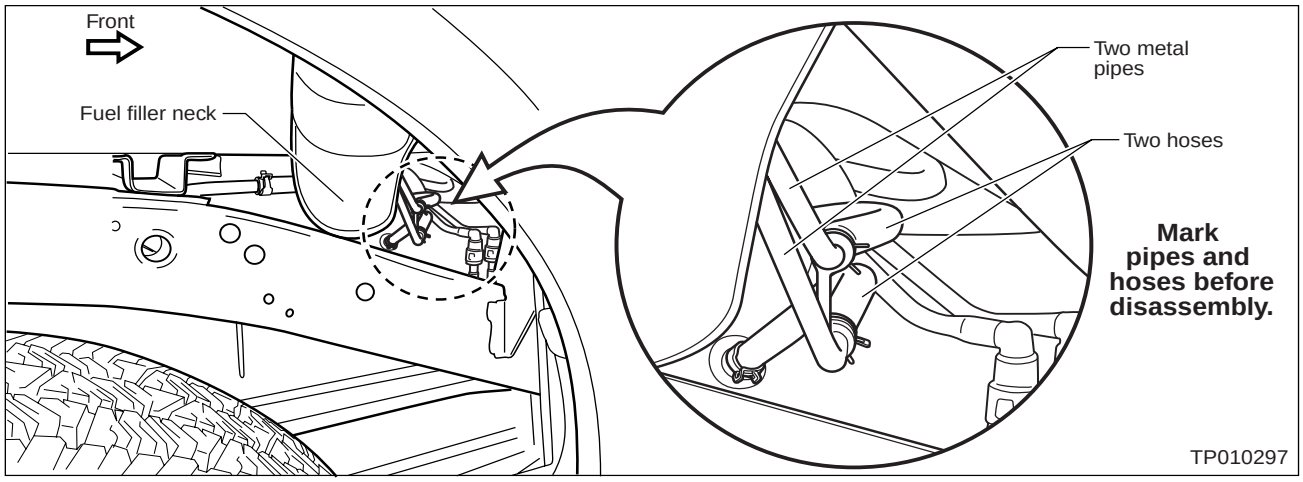


Figure 12

4. Remove the Fuel Sending Unit.
    - Refer to the “FE” section of the Service Manual for the Fuel Sending Unit removal procedure.
    - Cut and discard the **old** Fuel Sending Unit O-ring. You’ll be installing a new O-ring later.

NOTE: After releasing fuel pressure: To disconnect the fuel return hose from the Fuel Sending Unit, do the following:

- Push **UP** on the fuel return hose connector 1 to 2 mm (around 1/16-inch). See Figure 13A.
- With the hose connector pushed **UP**, hold the two plastic tabs. See Figure 13B.
- While holding the plastic tabs, pry **DOWN** on the hose connector with hose removal pliers (such as #47900, Lisle Corporation or equivalent). See Figure 13C.

NOTE: The hose removal pliers (noted above) are available from TECH-MATE at 1-800-662-2001 (option #4).

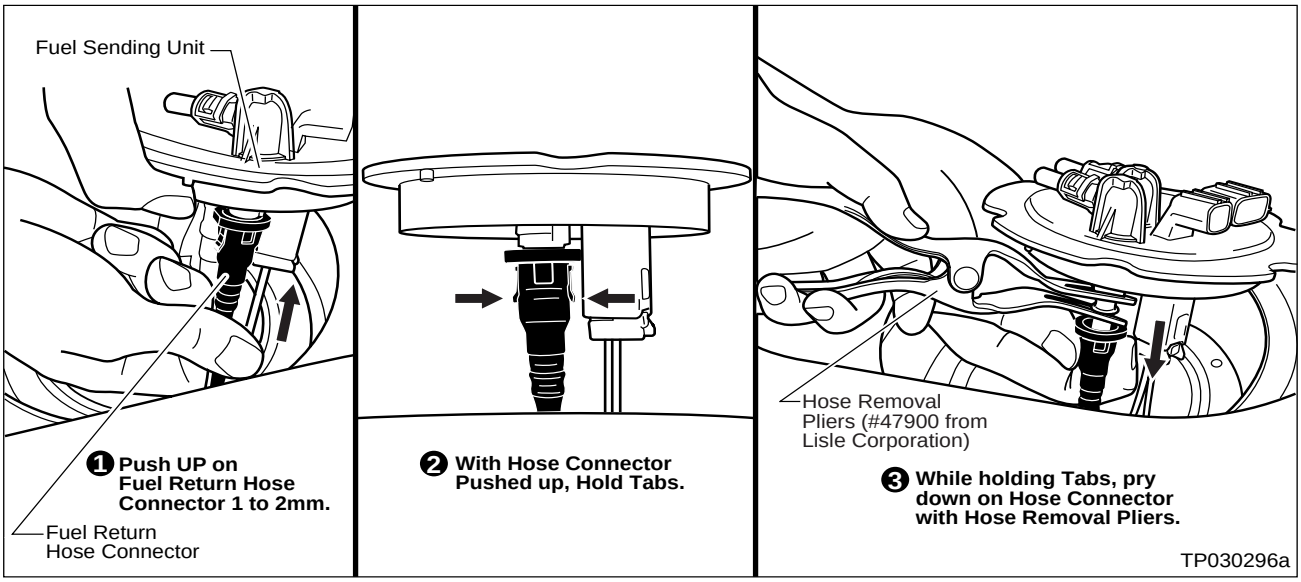


Figure 13A Figure 13B Figure 13C

5. Install the new Fuel Sending Unit O-ring in the groove on the fuel tank.
6. Use the new mounting screws to re-install the Fuel Sending Unit on the fuel tank. Refer to the “FE” section in the applicable Service Manual.
    - Tighten the Fuel Sending Unit mounting screws to **2.0 – 2.5 N-m (0.20 – 0.26 kg-m, 17.4 – 22.6 in-lb)**.
7. Re-install the fuel tank. Refer to the “FE” section in the applicable Service Manual.

IMPORTANT:

- Make sure the hoses removed from the fuel tank are correctly installed to the same pipes they were removed from.
- Make sure the Fuel Sending Unit Wire Harness Connectors are securely locked into position.

8. Re-assemble all previously removed components in the reverse order you removed them.
9. Start the vehicle and confirm proper engine running and fuel gauge operation.

Xterra: Inspect Fuel Sending Unit

CAUTION: Use suitable covers to protect carpet, upholstery, paint, etc. when performing this procedure.

1. Remove the rear, passenger-side, bottom Seat Cushion as follows:

   a. Pull on the Seat Cushion Release Straps while lifting UP on the front edge of the Seat Cushion (see Figure 14).

   b. Remove the Cushion and place it in a clean, safe location.

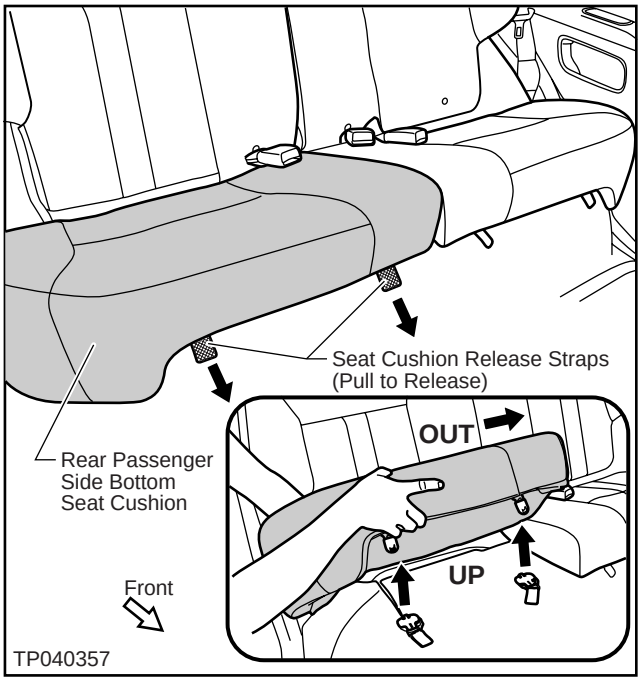


Figure 14

2. Remove four Bolts and remove the Body Cover Plate (see Figure 15).

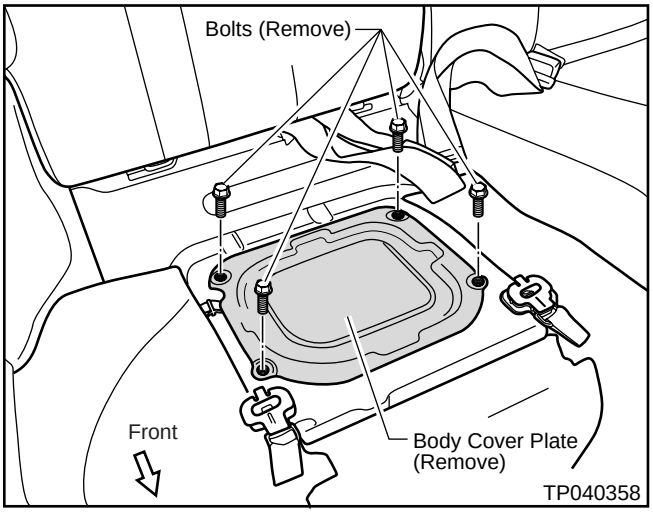


Figure 15

3. Remove three Bolts and lift the Fuel Sending Unit Inspection Cover UP (see Figure 16).

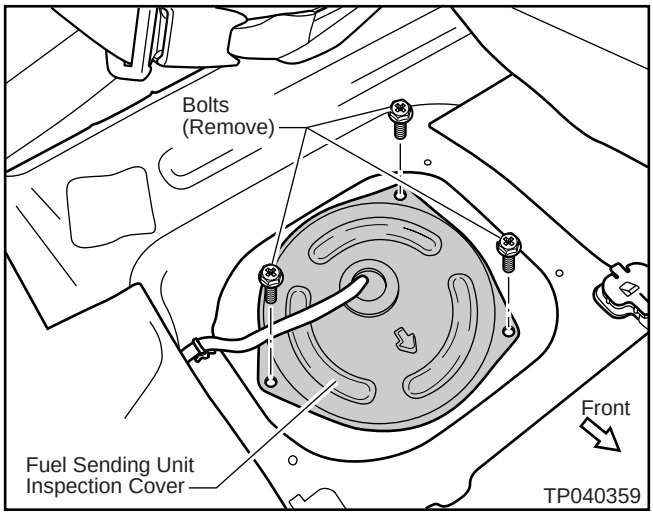


Figure 16

4. Disconnect the Fuel Sending Unit Connectors (see Figure 17).

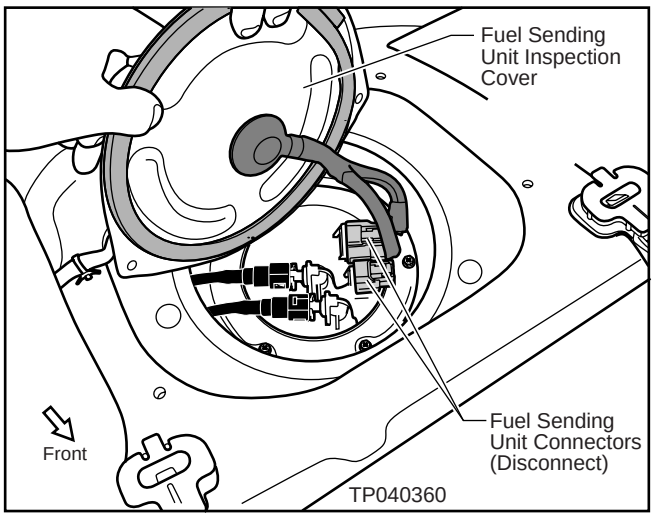


Figure 17

5. Install the Connector Cover onto the Fuel Sending Unit Connectors until it is fully seated. See Figure 18.

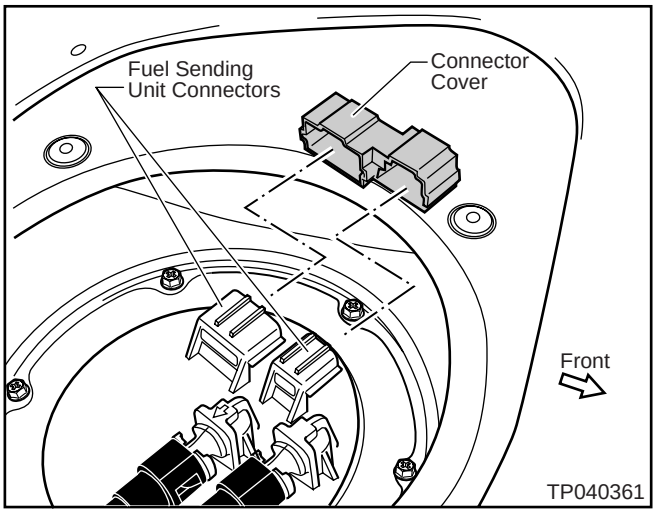


Figure 18

6. Use the Nylon Brush #J-47239 to loosen/remove dirt and debris on the vertical surface of the Fuel Sending Unit Connectors (see Figure 19).

   NOTE: If needed, you can bend the Brush to better reach the vertical surfaces.

7. Remove the Connector Cover once you're done with the above step.

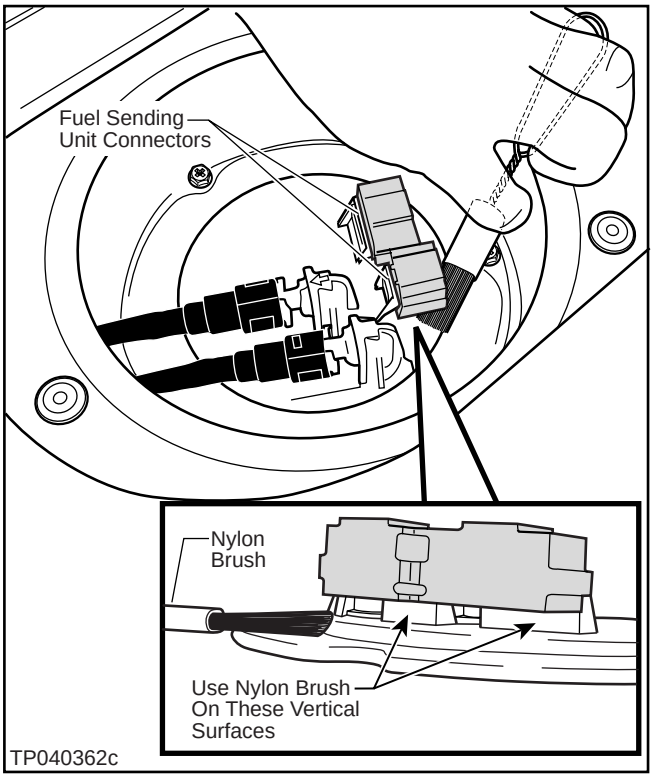


Figure 19

8. Install the Cleaning Adapter (white color adapter) onto the Fuel Sending Unit Connectors until it clicks (locks) in place. See Figure 20.

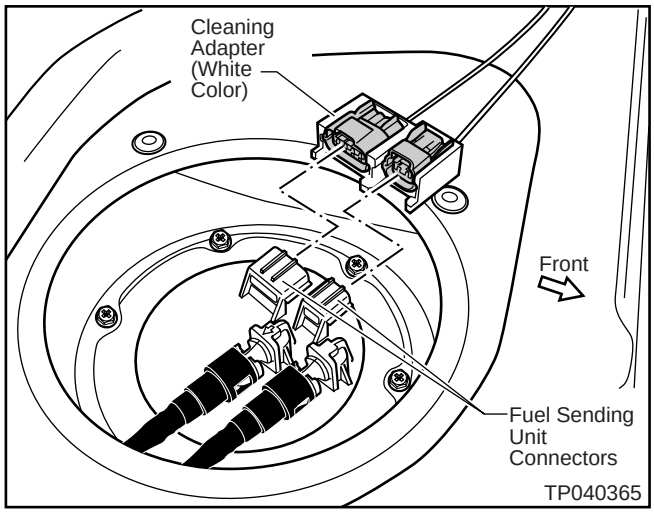


Figure 20

CAUTION: When performing the following steps:

- **Use suitable protective gloves, safety glasses, or face shield.**
- **Use suitable covers to protect carpet, upholstery, etc.**

9. Spray Brake Cleaner #999MP-AH001P through each Adapter Tube for about two seconds (see Figure 21).
    - You will need to insert the Adapter Tube into the Brake Cleaner spray can nozzle.

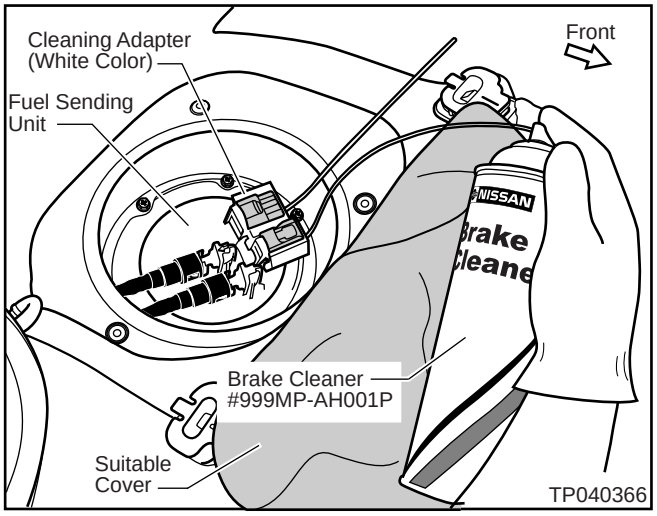


Figure 21

10. Remove and discard the Cleaning Adapter.

    NOTE:
    - When you remove the Cleaning Adapter, one or both of the connector inserts may come out of the Adapter.
    - Make sure you remove the insert(s) from the Fuel Sending Unit connector(s).

11. Install the Connector Cover onto the Fuel Sending Unit Connectors until it is fully seated. See Figure 22.

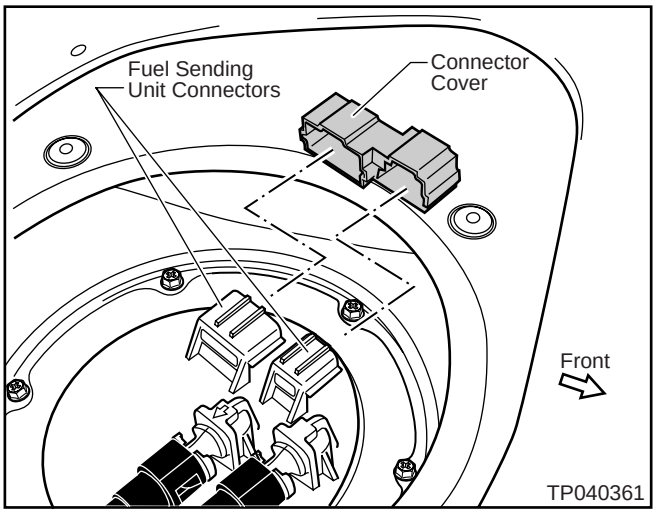


Figure 22

12. Use shop air to <u>thoroughly</u> dry the vertical surface of the Fuel Sending Unit connectors, then remove the Connector Cover. See Figure 23.

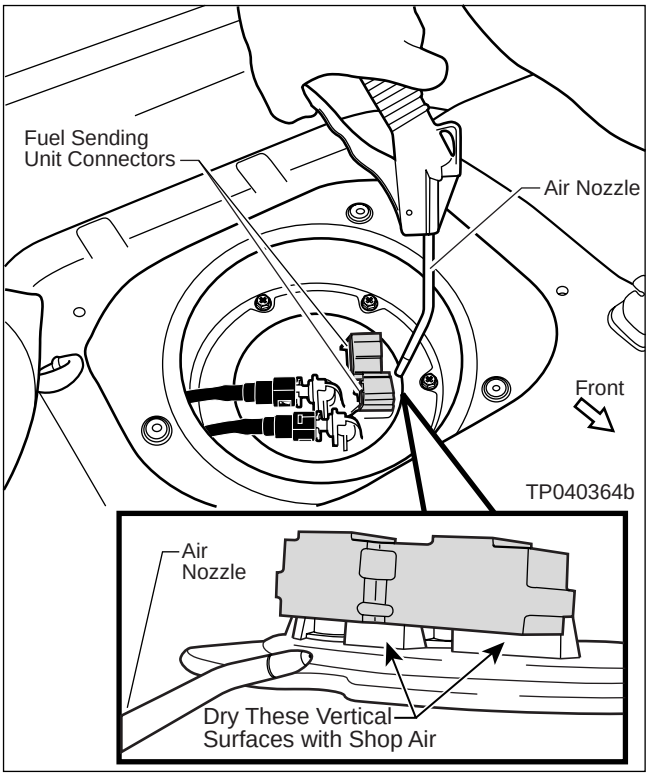


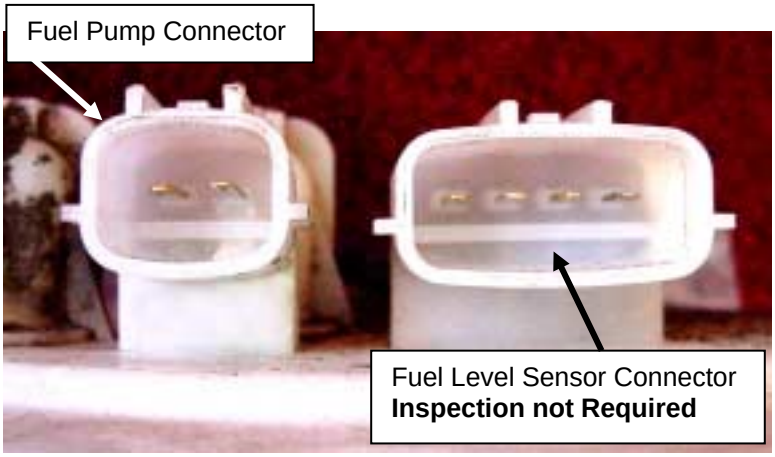
Figure 23

13. Inspect the **<u>Fuel Pump</u>** Connector for green corrosion.
    - Inspection is NOT required for the Fuel Level Sensor Connector.
    - Use a mirror to look at the connector.
    - See illustrations below for examples of green corrosion.

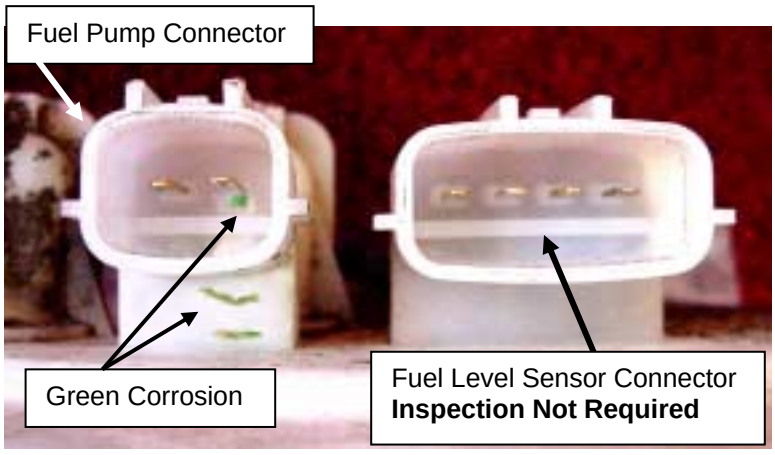
    a. If **OK**, go to “Xterra: Add Protective Coating To Fuel Sending Unit” (next page).

    b. If **NG**, go to “Xterra: Replace Fuel Sending Unit” (page 20).

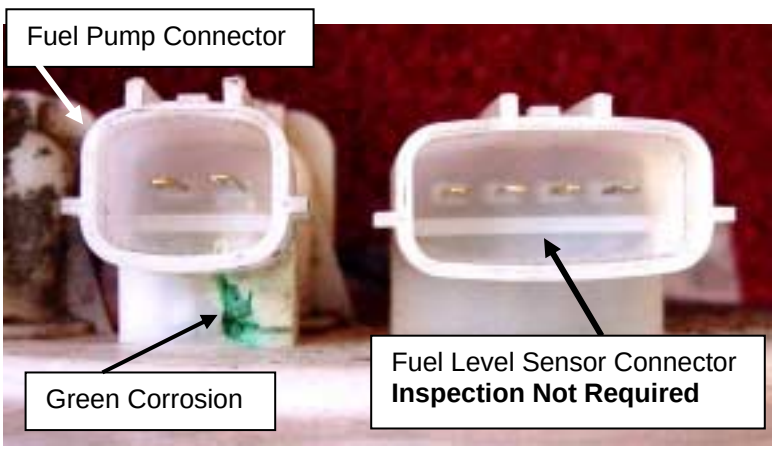
OK
(No Green Corrosion)



NG
(With Green Corrosion)



NG
(With Green Corrosion)



Xterra: Add Protective Coating To Fuel Sending Unit

1. Install the Sealing Adapter (blue color adapter) onto the Fuel Sending Unit Connectors until it clicks (locks) in place. See Figure 24.

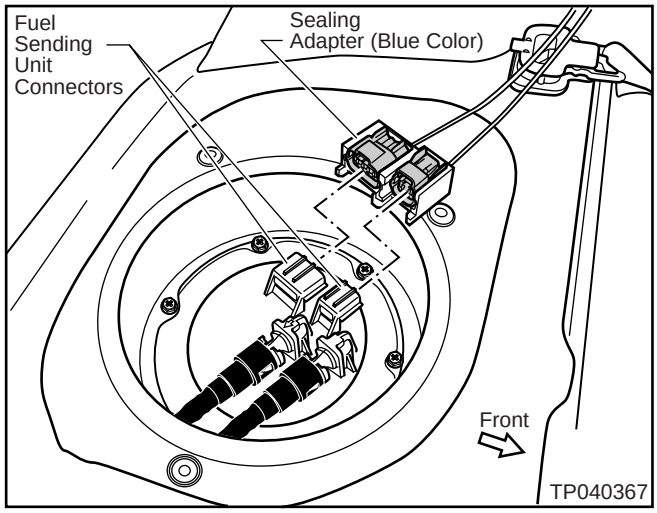


Figure 24

CAUTION: When performing the following steps:

- **Use suitable protective gloves, safety glasses, or face shield.**
- **Use suitable covers to protect carpet, upholstery, etc.**

2. Shake the Protective Coating can #KY140-9Z400 to thoroughly mix the contents.
3. Spray the Protective Coating #KY140-9Z400 through each Adapter Tube for about two seconds (see Figure 25).
    - You will need to attach the Adapter Tube onto the Protective Coating spray can nozzle.
    - You do not have to wait for the Protective Coating to dry. Proceed to the next step.
4. Remove and discard the Sealing Adapter.

    NOTE:
    - When you remove the Sealing Adapter, one or both of the connector inserts may come out of the Adapter.
    - Make sure you remove the insert(s) from the Fuel Sending Unit connector(s).
5. Re-connect the Fuel Sending Unit Harness Connectors, making sure they are securely locked into position.

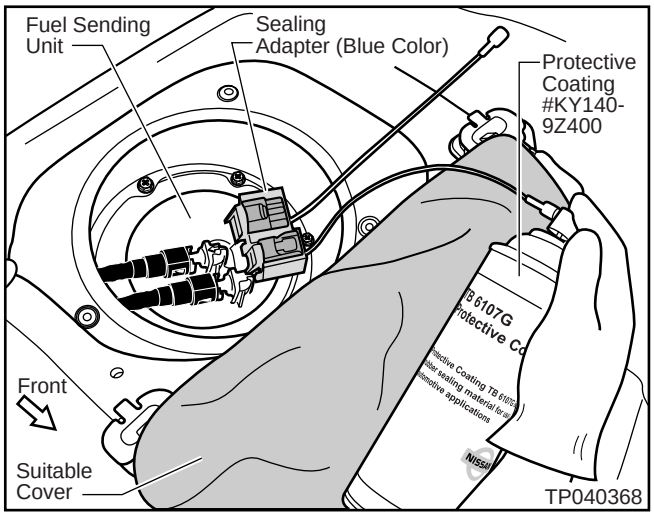


Figure 25

6. Re-assemble all previously removed components in the reverse order you removed them.
    - Tighten the Fuel Sending Unit Inspection Cover Bolts snug, being careful not to strip out the plastic inserts.
    - Tighten the Body Cover Plate Bolts to 3.7 – 5.0 N-m (0.38 – 0.51 kg-m, 33.0 – 44.3 in-lb).
7. Start the vehicle and confirm proper engine running and fuel gauge operation.

Xterra: Replace Fuel Sending Unit

WARNING:

- **Before performing any of the Service Procedures below, be certain there are no ignition sources (i.e., open flames, sparks, etc.) in or around the vehicle/work area.**
- **Make sure the appropriate rated fire extinguisher is available for immediate use.**
- **Use suitable protective gloves, safety glasses, or face shield.**

NOTE: The Fuel Sending Unit that you remove from the vehicle may look different from the new replacement service part (see Figure 27 on page 23).

1. Release the fuel pressure from the fuel system using CONSULT-II (or other suitable method). **Follow the procedure in the "EC" section of the Service Manual.**
2. If the fuel tank is more than ¾ full, use a suitable device to remove fuel from the fuel tank until the fuel level is ¾ full or less.
3. Remove the Fuel Sending Unit.
   - Refer to the "FE" section of the Service Manual for the Fuel Sending Unit removal procedure.
   - Cut and discard the **old** Fuel Sending Unit O-ring. You'll be installing a new O-ring later.

NOTE: After releasing fuel pressure: To disconnect the fuel return hose from the Fuel Sending Unit, do the following:

- Push **UP** on the fuel return hose connector 1 to 2 mm (around 1/16-inch). See Figure 26A.
- With the hose connector pushed **UP**, hold the two plastic tabs. See Figure 26B.
- While holding the plastic tabs, pry **DOWN** on the hose connector with hose removal pliers (such as #47900, Lisle Corporation or equivalent). See Figure 26C.

NOTE: The hose removal pliers (noted above) are available from TECH-MATE at 1-800-662-2001 (option #4).

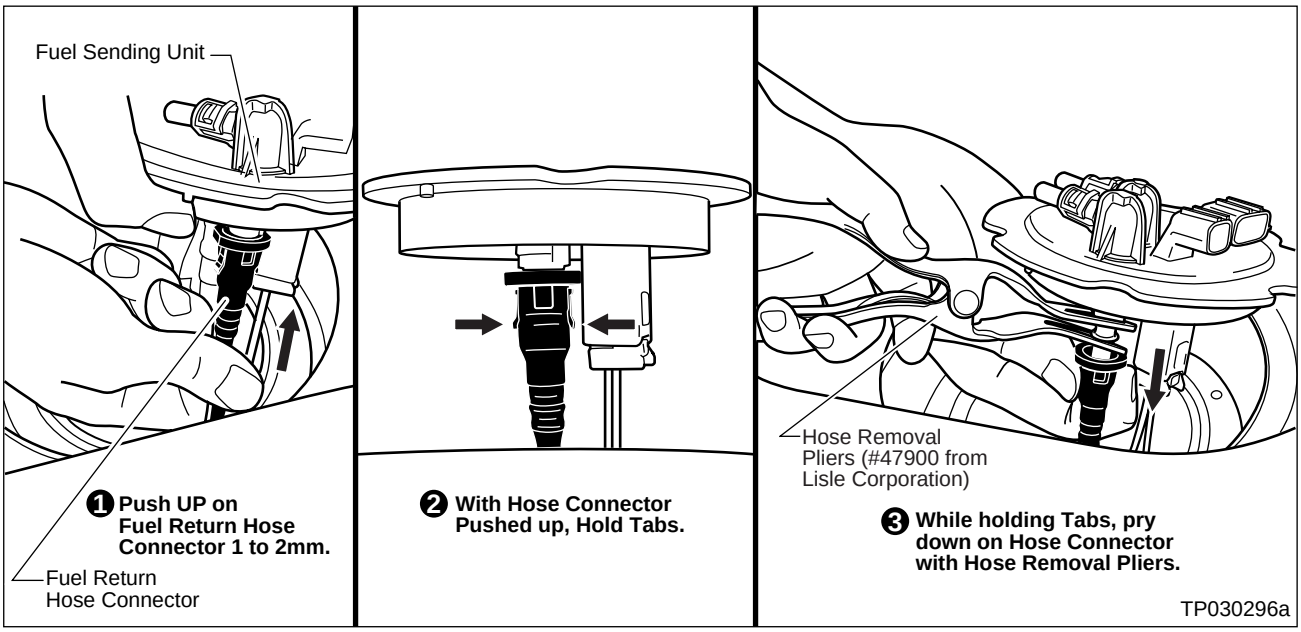


Figure 26A Figure 26B Figure 26C

4. Install the new Fuel Sending Unit O-ring in the groove on the fuel tank.
5. Use the new mounting screws to re-install the Fuel Sending Unit on the fuel tank. Refer to the "FE" section of the applicable Service Manual.
   - Tighten the Fuel Sending Unit mounting screws to **2.0 – 2.5 N-m (0.20 – 0.26 kg-m, 17.4 – 22.6 in-lb)**.

   IMPORTANT: Make sure the Fuel Sending Unit Wire Harness Connectors are securely locked into position.
6. Re-assemble all previously removed components in the reverse order you removed them.
   - Tighten the Fuel Sending Unit Inspection Cover Bolts snug, being careful not to strip out the plastic inserts.
   - Tighten the Body Cover Plate Bolts to **3.7 – 5.0 N-m (0.38 – 0.51 kg-m, 33.0 – 44.3 in-lb)**.
7. Start the vehicle and confirm proper engine running and fuel gauge operation.

PARTS INFORMATION

NOTE: The Fuel Sending Unit that you remove from the vehicle may look different from the new replacement service part (see Figure 27 on page 23).

R0401

DESCRIPTION	PART NUMBER	QUANTITY
Fuel Sending Unit **(*)** (D22 and all WD22 vehicles built after 9/1/99)	25060-4S426	1
OR		
Fuel Sending Unit **(*)** (For D22 vehicles built up to 9/1/99)	25060-4S425	1

R0402

DESCRIPTION	PART NUMBER	QUANTITY
Cleaning/Sealing Kit	B5060-79900	1 (per vehicle)
Protective Coating **(**)**	KY140-9Z400	As Needed
Genuine Nissan Brake Cleaner **(***)**	999MP-AH001P	As Needed
OR		
Cleaning/Sealing Kit	B5060-79900	1 (per vehicle)
Fuel Sending Unit **(*)** (D22 and all WD22 vehicles built after 9/1/99)	25060-4S426	1
OR		
Cleaning/Sealing Kit	B5060-79900	1 (per vehicle)
Fuel Sending Unit **(*)** (For D22 vehicles built up to 9/1/99)	25060-4S425	1

(*) Kit contains: one Fuel Sending Unit, six Screws, two yellow-green Quick Connectors, one orange Quick Connector, and one O-ring.

(**)

- Order from your local Parts Distribution Center (PDC).
- One can of Protective Coating is good for about 40 vehicles.

(***)

- Order through the Chemical Care Direct Ship Product Program which can be reached by:
  Phone; 1 (800) 811-0502
  Fax; 1 (770) 218-0148
  Internet; www.nissanchemicals.com
- One can of Brake Cleaner is good for about 20 vehicles

NOTE: P/Ns KY140-9Z400 and 999MP-AH001P are considered shop supplies – do NOT include them on your warranty claim.

NOTE: The Fuel Sending Unit that you remove from the vehicle may look different from the new replacement service part (see Figure 27 below).

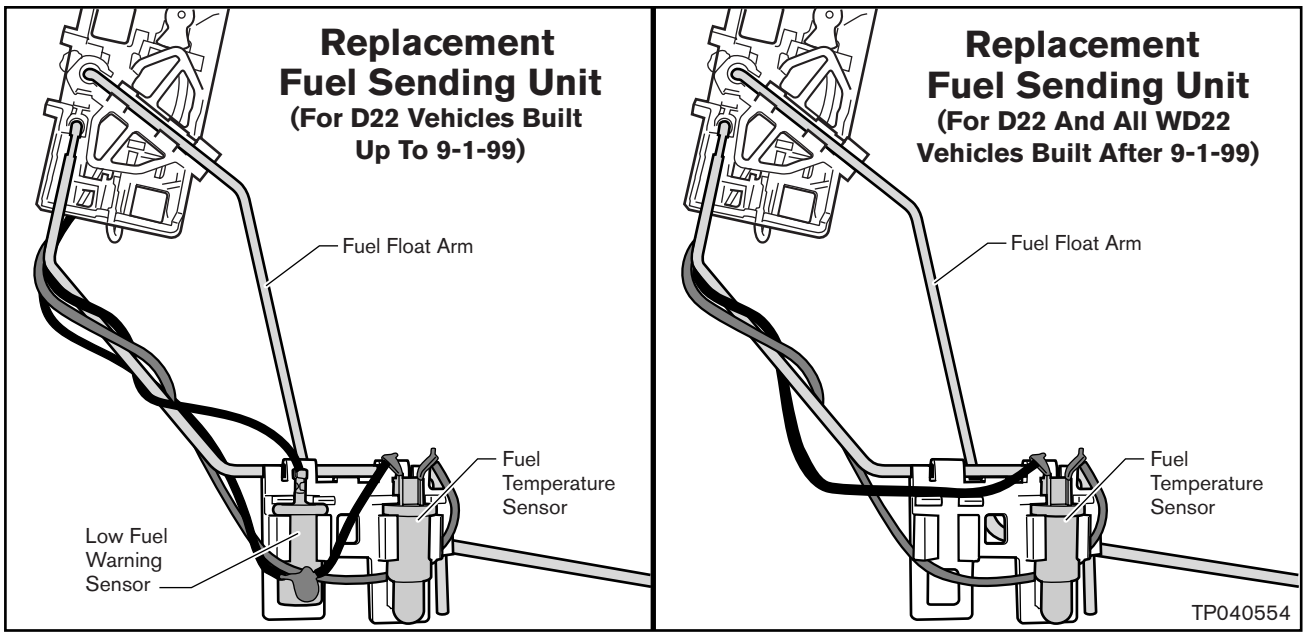


Figure 27

CLAIMS INFORMATION

Submit a Campaign "CM" line claim using the following claims coding information:

Campaign I.D.: R0401 (Salt States)

DESCRIPTION	OP CODE	FRT
RPL D22 Fuel Level Sender Unit	R04010	1.3 hrs
RPL WD22 Fuel Level Sender Unit	R04011	0.7 hrs

Campaign I.D.: R0402 (Non-Salt States)

DESCRIPTION	OP CODE	FRT
Inspect & Reseal D22 Fuel Level Sender Unit	R04020	0.5 hrs
Inspect & Reseal WD22 Fuel Level Sender Unit	R04021	0.4 hrs

OR

DESCRIPTION	OP CODE	FRT
Inspect & Replace D22 Fuel Level Sender Unit	R04022	1.4 hrs
Inspect & Replace WD22 Fuel Level Sender Unit	R04023	0.8 hrs

NOTE: P/Ns KY140-9Z400 and 999MP-AH001P are considered shop supplies – do NOT include them on your warranty claim.

ThreeBond

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name	**TB 6107G**
Supplier	Three Bond International, Inc. 6184 Schumacher Park Drive West Chester, OH 45069
Synonym	Not available.
Trade name	TB 6107G
Material Uses	Aerosol Coating.
Manufacturer	ThreeBond Co., Ltd. 1456 Hazama-cho Hachioji-shi, Tokyo 193-8533, Japan

Code	3TB-20-0483
MSDS#	0118-12-03
Validation Date	**4/14/2004**
Print Date	4/14/2004
Responsible Name	**Company**

In Case of Emergency	Monday-Friday, 830-500pm, 513-779-7300 EST. CHEMTREC - 1-800-424-9300 - 24 hours.

Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
1) Non-hazardous material		23-43	Not applicable.
2) Dimethyl ether (propellant)	115-10-6	30-40	TWA: 1000 (ppm) from DFG MAKs
3) Ethyl acetate	141-78-6	10-20	TWA: 400 (ppm) from OSHA (PEL) [United States] NIOSH IDLH: 2000 ppm LEL
4) Toluene	108-88-3	15-25	TWA: 200 (ppm), Ceiling: 300 ppm, 500 ppm (10-minute maximum peak) from OSHA TWA: 100 (ppm) from NIOSH, STEL 150 ppm, NIOSH IDLH: 500 ppm TWA: 50 (ppm) from ACGIH (TLV) (skin) [United States]
5) Carbon Black	1333-86-4	1.5-2.5	TWA: 3.5 (mg/m^3) from ACGIH (TLV) [United States] TWA: 3.5 (mg/m^3) from OSHA (PEL) [United States]
6) 2-Butoxyethanol	111-76-2	1-2.5	TWA: 50 (ppm) from OSHA (PEL)(skin) [United States] TWA: 5 (ppm) from NIOSH (skin), IDLH: 700 ppm TWA: 20 (ppm) from ACGIH (TLV) (skin), STEL: 121(mg/m^3) [United States]

Section 3. Hazards Identification

Physical State and Appearance

Aerosol

Emergency Overview

WARNING!

Flammable aerosol. Keep away from sources of heat, sparks, or flames.
May be harmful if inhaled or swallowed. "Keep away from food." Causes eye irritation. May cause respiratory tract and skin irritation. Possible birth defect hazard. Contains material which causes damage to the following organs: blood, kidneys, liver, bladder, brain, skin, eyes, central nervous system.

Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Avoid exposure during pregnancy. Wash thoroughly after handling.

Routes of Entry

Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Eye irritant. Inflammation characterized by pain, redness, and/or blurred vision.

Skin MAY BE ABSORBED (see inhalation). Skin irritant. Skin inflammation is characterized by dry skin and redness. Propellant (methy ether) as a liquid, may cause frost bite on contact with skin.

Continued on Next Page

TP040436

Inhalation	Exposure above OEL may cause death, see IDLH in Section 2. Respiratory irritant. May cause effects to central nervous system. Symptoms include cough, sore throat, confusion, drowsiness, dissiness, headache, nausea, weakness, and unconsciousness.
Ingestion	May be fatal if swallowed.
Potential Chronic Health Effects	Repeated or prolonged contact with skin may cause dermatitis or may defat the skin. Long term or repeated exposure may have effect on central nervous system, resulting in decreased learning ability and psychological disorders. Contains Carbon Black which is Classified 2B (Possible for human.) by IARC, but Classified A4 (Not classifiable for human or animal.) by ACGIH and not classified by OSHA. Contains Toluene which is a suspected teratogen for humans.
Medical Conditions Aggravated by Overexposure:	Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Overexposure /Signs/Symptoms	Not available.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easily possible, remove contact lenses. Get medical attention immediately.
Skin Contact	Remove contaminated clothes. Rinse skin with plenty of water or shower. Then wash skin with water and soap. Refer to medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Rinse mouth. In case of ingestion of large amounts give slurry of activated charcoal in water to drink. Do NOT induce vomiting. Immediatly refer to medical attention.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable.
Auto-Ignition Temperature	The lowest known value is 238 C (460.4 F) (2-Butoxyethanol).
Flash Points	<0 C (propellant)
Flammable Limits	The greatest known range is LOWER: 1.1% UPPER: 12.7% (2-Butoxyethanol)
Products of Combustion	These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks.
Explosion Hazards in Presence of Various Substances	Closed containers may explode (due to build-up pressure) when exposed to extreme heat. Isolate from heat, electrical equipment, sparks, and flame.
Fire Fighting Media and Instructions	SMALL FIRE: Shut off supply; if possible let fire burn itself out; in other cases use DRY chemical powder, carbon dioxide. LARGE FIRE: Use water spray, fog or alcohol resistant foam. Do not use water jet. Keep containers cool by spraying with water.
Protective Clothing (Fire)	Full protective equipment including self contained breathing apparatus should be used.
Special Remarks on Fire Hazards	Vapors may form explosive mixtures with air. This material is flammable and may be ignited by heat, sparks, flames, or other sources of ignition such as static electricity, pilot lihgts, and mechanical/electrical equipment. Vapors may travel considerable distances to a source of ignition where they can ignite, flashback, or explode. May create vapor/air explosion hazard indoors, outdoors, or sewers. Vapors are heavier than air and can accumulate in low areas. May polymerize explosively when heated or involved in fire.
Special Remarks on Explosion Hazards	Container explosion may occur under fire conditions.

Continued on Next Page

Section 6. Accidental Release Measures

Small Spill and Leak	Absorb with an inert material and put the spilled material in a sealable container. Do not wash away into sewer. Extinguish all ignition sources and ventilate area. Wear protective equipment during clean-up.
Large Spill and Leak	Evacuate danger area. Consult an expert. Remove all ignition sources.

Section 7. Handling and Storage

Handling	Keep away from heat, sparks, and open flames. Do not puncture, incinerate, or expose to high temperatures. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapors or spray mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep in fireproof, cool area that is separate from stong oxidants.

Section 8. Exposure Controls, Personal Protection

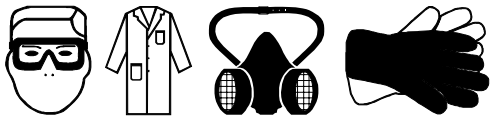
Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes	Splash goggles.
Body	Long sleeves work appearel must be worn. Depending on conditions of use, solvent resistant plastic or rubber apron should be worn.
Respiratory	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves.
Feet	Safety shoes. Chemical resistant shoes.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name	Exposure Limits
1) Non-hazardous material	Not applicable.
2) Dimethyl ether	TWA: 1000 (ppm) from DFG MAKs
3) Ethyl Acetate	TWA: 400 (ppm) from OSHA (PEL) [United States] NIOSH IDLH: 2000 ppm LEL
4) Toluene	TWA: 200 (ppm), Ceiling: 300 ppm, 500 ppm (10-minute maximum peak) from OSHA TWA: 100 (ppm) from NIOSH, STEL 150 ppm, NIOSH IDLH: 500 ppm TWA: 50 (ppm) from ACGIH (TLV) (skin) [United States]
5) Carbon Black	TWA: 3.5 (mg/m^3) from ACGIH (TLV) [United States] TWA: 3.5 (mg/m^3) from OSHA (PEL) [United States]
6) 2-Butoxyethanol	TWA: 50 (ppm) from OSHA (PEL)(skin) [United States] TWA: 5 (ppm) from NIOSH (skin), IDLH: 700 ppm TWA: 20 (ppm) from ACGIH (TLV) (skin), STEL: 121(mg/m^3) [United States]

Consult local authorities for acceptable exposure limits.

Continued on Next Page

Section 9. Physical and Chemical Properties

Physical State and Appearance	Aerosol
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH (1% Soln/Water)	Not available.
Boiling/Condensation Point	Not available.
Melting/Freezing Point	Not available.
Critical Temperature	Not available.
Specific Gravity	1.1
Vapor Pressure	Not available.
Vapor Density	Not available.
Volatility	Not available.
Odor Threshold	Not available.
Evaporation Rate	Not available.
VOC	Not available.
Viscosity	1.9
$LogK_{ow}$	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	Is not dispersed in cold water, hot water.
Solubility	Insoluble in cold water, hot water.
Physical Chemical Comments	Not available.

Odor	ether-like odor
Taste	Not available.
Color	Black

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Heating may cause violent combustion or explosion.
Incompatibility with Various Substances	Reactive with oxidizing agents, acids. Slightly reactive to reactive with alkalis, moisture.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Not available.

Section 11. Toxicological Information

Toxicity to Animals	Acute oral toxicity (LD50): 50 mg/kg [Human/30 min]. (Toluene).
Chronic Effects on Humans	Repeated or prolonged contact with skin may cause dermatitis or may defat the skin. Long term or repeated exposure may have effect on central nervous system, resulting in decreased learning ability and psychological disorders. Contains Carbon Black which is Classified 2B (Possible for human.) by IARC, but Classified A4 (Not classifiable for human or animal.) by ACGIH and not classified by OSHA. Contains Toluene which is a suspected teratogen for humans.

Continued on Next Page

Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of inhalation (lung irritant). May be fatal if ingested.
Special Remarks on Toxicity to Animals	Overexposure to Toluene has been suggested as a cause of the following in the animal laboratory: mild, reversible liver effects, cardiac sensitization, respiratory track damage (nose, throat and airways), effects on hearing, central nervous system damage.
Special Remarks on Chronic Effects on Humans	(Sh) MAK - Danger of sensitizationof the skin. (Toluene)
Special Remarks on Other Toxic Effects on Humans	May cause irritation to skin, eyes and respiratorey tract.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available.
Products of Degradation	These products are carbon oxides (CO, CO2) and water.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification	Consumer Commodity (not more than 500 ml); other, Aerosols/Flammable , Class 2.1, UN1950
	Aerosol, Flammable, Class 2.1, UN1950
Marine Pollutant	Not available.
Special Provisions for Transport	Not Available.
ADR/RID Classification	CLASS 2.1: Flammable gas. CLASS 6.1: Toxic substance.
IMO/IMDG Classification	CLASS 2.1: Flammable gas. CLASS 6.1: Toxic substance.
ICAO/IATA Classification	CLASS 2.1: Flammable gas. CLASS 6.1: Toxic substance.

Continued on Next Page

Section 15. Regulatory Information

HCS Classification

HCS Class: Flammable aerosol.
CLASS: Highly toxic.
CLASS: Target organ effects.
CLASS: Reproductive toxins.

U.S. Federal Regulations

TSCA 8 (b) inventory: All ingredients of this product are in compliance with TSCA requirements.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Di 2-Ethylhexyl phthalate [DEHP]; Toluene; 2-Butoxyethanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Carbon Black: delayed health hazard; Toluene: fire, immediate health hazard, delayed health hazard
SARA 313 toxic chemical notification and release reporting: Toluene 20%; 2-Butoxyethanol 1.75%
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: Di 2-Ethylhexyl phthalate [DEHP]
Clean air act (CAA) 112 regulated flammable substances: Toluene; Ethyl acetate
Clean air act (CAA) 112 regulated toxic substances: Dimethyl ether

International Regulations

EINECS

Not available.

DSCL (EEC)

R12- Extremely flammable.
R20/22- Harmful by inhalation and if swallowed.
R37/38- Irritating to respiratory system and skin.
R40- Possible risks of irreversible effects.
R41- Risk of serious damage to eyes.

International Lists

Australia: Carbon Black

Korea (TCCL): Carbon Black

State Regulations

Pennsylvania RTK: Di 2-Ethylhexyl phthalate [DEHP]
Minnesota: Di 2-Ethylhexyl phthalate [DEHP]
Massachusetts RTK: Di 2-Ethylhexyl phthalate [DEHP]
New Jersey: Carbon Black; Di 2-Ethylhexyl phthalate [DEHP]
Louisiana RTK reporting list: Carbon Black
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene

Section 16. Other Information

Label Requirements

Flammable aerosol. Keep away from sources of heat, sparks, or flames.
May be harmful if inhaled or swallowed. "Keep away from food." Causes eye irritation. May cause respiratory tract and skin irritation. Possible birth defect hazard. Contains material which causes damage to the following organs: blood, kidneys, liver, bladder, brain, skin, eyes, central nervous system.

Hazardous Material Information System (U.S.A.)

Health	*	2
Fire Hazard		3
Reactivity		1
Personal Protection		h

National Fire Protection Association (U.S.A.)

References Not available.

Other Special Considerations Not available.

Validated by Company on 4/14/2004.

Verified by Company.

Printed 4/14/2004.

Monday-Friday, 830-500pm, 513-779-7300 EST.
CHEMTREC - 1-800-424-9300 - 24 hours.

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TP040441

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

OWNER'S LETTER

Dear Nissan owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Nissan has decided that a defect that relates to motor vehicle safety exists in some 1999-2003 model year Nissan Frontier vehicles equipped with a six cylinder engine and in some 2000-2003 model year Nissan Xterra vehicles equipped with a four or six cylinder engine.

Reason for Recall

The fuel pump terminal on the fuel-sending unit may develop a crack in its plastic molding which could cause the terminal strip to corrode under some environmental conditions. If corrosion occurs, the terminal strip could eventually break. This will cause the fuel pump to stop operating and will result in not being able to start the engine or cause the engine to stop running during vehicle operation, which could result in a crash without warning.

What Nissan Will Do

In the states shown in the table below, where there is heavy use of road salt in the winter and corrosion is likely to occur, the dealer will replace the fuel-sending unit. In the other states, the dealer will inspect the fuel pump terminal on the sending unit for corrosion. If corrosion is present, the dealer will replace the fuel-sending unit. If there is no corrosion, the dealer will apply sealant to the terminal housing to help prevent corrosion in the future. This free service should take about two hours to complete, but your Nissan dealer may require your vehicle for a longer period of time based upon the dealer's work schedule.

Connecticut	Kentucky	New Hampshire	Tennessee
Delaware	Maine	New Jersey	Vermont
District of Columbia	Maryland	New York	Virginia
Illinois	Massachusetts	Ohio	West Virginia
Indiana	Michigan	Pennsylvania	Wisconsin
Iowa	Minnesota	Rhode Island	

What You Should Do

Contact your Nissan dealer at your earliest convenience in order to arrange an appointment to have your vehicle repaired. Please bring this notice with you when you keep your service appointment. **It will be necessary that your fuel tank be no more than one-quarter full when you bring your vehicle to the dealer in order to minimize the possibility of fuel spill during the repair**. Instructions have been sent to your Nissan dealer. If the dealer fails, or is unable to make the necessary repairs free of charge, you may contact the National Consumer Affairs Office, Nissan North America, Inc. at P.O. Box 191, Gardena, California 90248-0191. The toll free number is 1-800-NISSAN1 (1-800-647-7261). You may also contact the Administrator of the National Highway Traffic Safety Administration, 400 Seventh Street SW, Washington, D.C. 20590 or call the toll free Safety Hotline at (888) 327-4236.

If you have paid to have a fuel-sending unit replaced prior to this campaign, you may be eligible for reimbursement of the related expense. Contact Nissan Consumer Affairs at the number listed above for additional information on how to obtain a reimbursement.

Federal regulations require that any vehicle lesser receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Thank you for your cooperation. We are indeed sorry for any inconvenience this may cause you.