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| <b>Last Modified:</b> 5-10-2010                                     | 6.4 N                 | <b>From:</b> 200908            |
| <b>Model Year:</b> 2010                                             | <b>Model:</b> 4Runner | <b>Doc ID:</b> RM000003YMS001X |
| <b>Title:</b> MAINTENANCE: BODY: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## **GENERAL MAINTENANCE**

### **1. TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY**

(a) Where necessary, tighten all the parts of the chassis.

- Front axle and suspension
- Drivetrain
- Rear axle and suspension
- Brake system
- Engine mounting, etc.

(b) Where necessary, tighten all parts of the body.

- Seat belt system
- Seat
- Doors and hood
- Body mounting
- Fuel tank
- Exhaust pipe system, etc.

### **2. REPLACE AIR CONDITIONING FILTER**

(a) Remove the air conditioning filter .

(b) Visually inspect the surface of the air conditioning filter.

(c) If the air conditioning filter is contaminated with foreign matter, replace it.

### **3. TIRE ROTATION**

### **4. FINAL INSPECTION**

(a) Check the operation of the body parts.

(1) Hood

- Auxiliary catch operates properly.
- Hood locks securely when closed.

(2) Front and rear doors

- Door locks operate properly.
- Doors close properly.

(3) Back door

- Door lock operates properly.

(4) Seats

- Seat adjusts easily and locks securely in any position.
- Front seatback locks securely in any position.
- Rear seatback locks securely in any position.
- Folding-down rear seatbacks lock securely.

(5) Be sure to deliver a clean vehicle. Especially check:

- Steering wheel
- Shift lever knob
- All switch knobs
- Door handles
- Seats



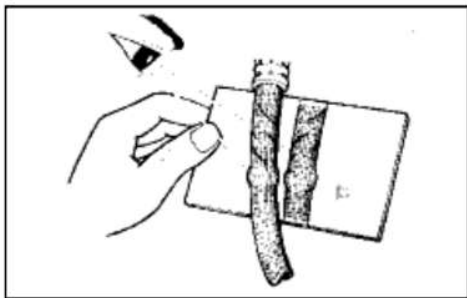
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| <b>Model Year:</b> 2010                                              | <b>Model:</b> 4Runner | <b>Doc ID:</b> RM000003YMT002X |
| <b>Title:</b> MAINTENANCE: BRAKE: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## GENERAL MAINTENANCE

### 1. INSPECT BRAKE LINE PIPES AND HOSES

#### HINT:

Work in a well-lighted area. Turn the front wheels fully to the right or left before beginning the inspection.



(a) Using a mirror, check the entire circumference and length of the brake lines and hoses for:

- Damage
- Wear
- Deformation
- Cracks
- Corrosion
- Leaks
- Bends
- Twists

(b) Check all the clamps for tightness and the connections for leakage.

(c) Check that the hoses and lines are not near sharp edges, moving parts or the exhaust system.

(d) Check that the lines are installed properly and pass through the center of the grommets.

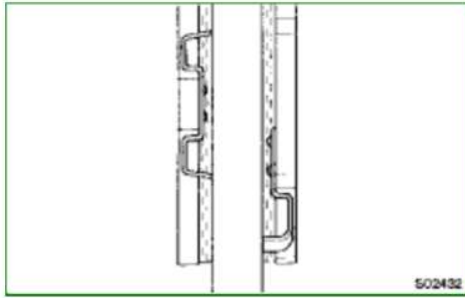
### 2. INSPECT BRAKE LININGS, DRUMS, PADS AND DISCS

(a) Check the brake linings and drums of the parking brake.

(b) Check the brake pads and discs.

| TYPE  | SEE PROCEDURE        |
|-------|----------------------|
| Front | <a href="#">INFO</a> |
| Rear  | <a href="#">INFO</a> |

#### HINT:



- If a squealing or scraping noise is heard from the brake while driving, check the pad wear indicator.
- If there are traces of the indicator contacting the disc rotor, the disc pad should be replaced.



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| <b>Title:</b> MAINTENANCE: CHASSIS: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## **GENERAL MAINTENANCE**

### **1. INSPECT STEERING LINKAGE AND GEAR HOUSING**

- (a) Check the steering wheel free play.
- (b) Check the steering linkage for looseness or damage.
  - (1) Check that the tie rod ends do not have excessive play.
  - (2) Check that the dust seals and boots are not damaged.
  - (3) Check that the boot clamps are not loose.
  - (4) Check that the steering gear housing is not damaged.
  - (5) Check that the connectors are properly connected to the steering gear housing.

### **2. INSPECT BALL JOINT AND DUST COVER**

- (a) Inspect the ball joints for excessive looseness.
  - (1) Jack up the front of the vehicle and place wooden blocks with a height of 180 to 200 mm (7.09 to 7.87 in.) under the front tires.
  - (2) Lower the vehicle until the front coil spring has about half its ordinary load. Place stands under the vehicle for safety.
  - (3) Check that the front wheels are pointing straight ahead. Use wheel chocks on all 4 wheels.
  - (4) Using a lever, pry up the end of the lower arm. Check the amount of play.

Maximum ball joint vertical play:

0 mm (0 in.)

If there is any play, replace the ball joint.

- (b) Check the dust cover for damage.

### **3. INSPECT DRIVE SHAFT BOOTS**

- (a) Check the drive shaft boots for loose clamps, grease leakage, kinks or damage.

### **4. INSPECT AUTOMATIC TRANSMISSION FLUID**

- (a) Inspect the automatic transmission fluid.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| A 750E | <a href="#">INFO</a> |
| A 750F | <a href="#">INFO</a> |
| A 343E | <a href="#">INFO</a> |

### **5. REPLACE AUTOMATIC TRANSMISSION FLUID**

- (a) Replace the automatic transmission fluid.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| A 750E | <a href="#">INFO</a> |
| A 750F | <a href="#">INFO</a> |
| A 343E | <a href="#">INFO</a> |

## 6. INSPECT TRANSFER OIL (for 4WD)

(a) Inspect the transfer oil.

| TYPE  | SEE PROCEDURE        |
|-------|----------------------|
| VF2A  | <a href="#">INFO</a> |
| VF4BM | <a href="#">INFO</a> |

## 7. REPLACE TRANSFER OIL (for 4WD)

(a) Replace the transfer oil.

| TYPE  | SEE PROCEDURE        |
|-------|----------------------|
| VF2A  | <a href="#">INFO</a> |
| VF4BM | <a href="#">INFO</a> |

## 8. INSPECT FRONT DIFFERENTIAL OIL (for 4WD)

(a) Inspect the front and rear differential oil [INFO](#).

## 9. REPLACE FRONT AND REAR DIFFERENTIAL OIL

(a) Replace the front and rear differential oil [INFO](#).

## 10. LUBRICATE PROPELLER SHAFT AND TIGHTEN BOLTS

(a) Lubricate the propeller shaft by referring to the lubrication chart. Before pumping in grease, wipe off any mud and dust on the grease fitting.

(b) Grease grade

| SPIDER                             | LITHIUM BASE CHASSIS GREASE NLGI NO. 2                       |
|------------------------------------|--------------------------------------------------------------|
| Slide yoke and double Cardan joint | Molybdenum disulphide lithium base chassis grease NLGI No. 2 |

(c) Tighten the bolts of the propeller shaft.

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| <b>Title:</b> MAINTENANCE: ENGINE: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## GENERAL MAINTENANCE

### **HINT:**

Work in a well-lighted area. Turn the front wheels fully to the right or left before beginning the inspection.

### **1. INSPECT DRIVE BELT**

(a) Inspect the drive belt.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

### **2. REPLACE ENGINE OIL AND OIL FILTER**

(a) Replace the engine oil and oil filter.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

### **3. INSPECT ENGINE COOLANT**

(a) Inspect the engine coolant.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

### **4. REPLACE ENGINE COOLANT**

(a) Replace the engine coolant.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

### **5. INSPECT EXHAUST PIPES AND MOUNTINGS**

(a) Visually check the pipes, hangers and connections for severe corrosion, leaks or damage.

## 6. REPLACE SPARK PLUGS

(a) Replace the spark plugs.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

## 7. INSPECT AIR CLEANER FILTER

(a) Remove the air cleaner filter.

(b) Visually check that the air cleaner filter is not excessively damaged or oily. If necessary, replace the air cleaner filter with a new one.

## 8. REPLACE AIR CLEANER FILTER

(a) Replace the air cleaner filter.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |

## 9. INSPECT FUEL LINES, FUEL LINE CONNECTIONS, FUEL TANK VAPOR VENT SYSTEM HOSES AND FUEL TANK BAND

(a) Visually check the fuel lines and hoses for cracks, leakage, loose connections and deformation. Also, visually check the tank bands for looseness.

## 10. INSPECT FUEL TANK CAP GASKET

(a) Inspect the fuel tank cap gasket.

| TYPE   | SEE PROCEDURE        |
|--------|----------------------|
| 1GR-FE | <a href="#">INFO</a> |
| 2TR-FE | <a href="#">INFO</a> |



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| <b>Title:</b> MAINTENANCE: INSIDE VEHICLE: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## **GENERAL MAINTENANCE**

Performing the following maintenance checks on the vehicle is the owner's responsibility. The owner may perform the maintenance or take the vehicle to a service center. Check the parts of the vehicle described below on a daily basis. In most cases, special tools are not required. It is recommended that the owner performs these checks. The procedures for general maintenance are as follows.

### **1. GENERAL NOTES**

- Maintenance requirements vary depending on the country.
- Check the maintenance schedule in the owner's manual supplement.
- Determine the appropriate time to service the vehicle using either distance driven or time (months) elapsed, whichever reaches the specification first.
- Maintain similar intervals between periodic maintenance unless noted.
- Failing to check each vehicle part could lead to poor engine performance and increased exhaust emissions.

### **2. LIGHTS**

- (a) Check that the headlights, stop lights, taillights, turn signal lights and other lights illuminate or blink. Also, check that they have enough brightness.

### **3. WARNING LIGHTS AND BUZZERS**

- (a) Check that all the warning lights and buzzers are working.

### **4. HORNS**

- (a) Check that the horn is working.

### **5. WINDSHIELD GLASS**

- (a) Check for scratches, pits or abrasions.

### **6. WINDSHIELD WIPER AND WASHER**

- (a) Check that the washers are aimed properly. Also, check that the washer fluid hits the windshield in the center of the operating range of each wiper.
- (b) Check if the wipers streak or not. Replace the wipers if necessary.

### **7. WINDSHIELD DEFROSTER**

- (a) When the heater or air conditioner is on the defroster setting, check that air comes out of the defroster outlet.

### **8. REAR VIEW MIRROR**

- (a) Check that the rear view mirror is securely mounted.

### **9. SUN VISORS**

- (a) Check that the sun visors move freely and are securely mounted.

### **10. STEERING WHEEL**

- (a) Check that the steering wheel has the proper amount of free play. Also check for steering

difficulty and unusual noises.

### **11. SEAT BELTS**

- (a) Check that the seat belt systems, components the buckles, retractors and anchors, operate properly and smoothly.
- (b) Check that the belt webbing is not cut, frayed, worn or damaged.

### **12. ACCELERATOR PEDAL**

- (a) Check that the pedal operates smoothly. In other words, check that the pedal does not have uneven pedal resistance or become stuck in certain positions.

### **13. BRAKE PEDAL**

- (a) Check that the pedal operates smoothly.
- (b) Check that the pedal has the proper reserve distance and free play.
- (c) Start the engine and check the brake system indicator.

### **14. BRAKES**

- (a) In a safe place, check that the vehicle remains straight when applying the brakes.

### **15. PARKING BRAKE**

- (a) Check that the lever has the proper range of motion.
- (b) On a low incline, check that the parking brake alone can stabilize the vehicle.

### **16. AUTOMATIC TRANSMISSION "PARK" MECHANISM**

- (a) Check the lock release button of the shift lever for proper and smooth operation.
- (b) When the shift lever is in P and all brakes are released on a low incline, check that the vehicle is stable.



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| <b>Title:</b> MAINTENANCE: OUTSIDE VEHICLE: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## GENERAL MAINTENANCE

Performing the following maintenance checks on the vehicle is the owner's responsibility. The owner may perform the maintenance or take the vehicle to a service center. Check the parts of the vehicle described below on a daily basis. In most cases, special tools are not required. It is recommended that the owner performs these checks. The procedures for general maintenance are as follows.

### 1. GENERAL NOTES

- Maintenance requirements vary depending on the country.
- Check the maintenance schedule in the owner's manual supplement.
- Following the maintenance schedule is mandatory.
- Determine the appropriate time to service the vehicle using either distance driven or time (months) elapsed, whichever reaches the specification first.
- Maintain similar intervals between periodic maintenance, unless otherwise noted.
- Failing to check each vehicle part could lead to poor engine performance and increased exhaust emissions.

### 2. TIRES

- (a) Check the tire pressure with a gauge. Make adjustments if necessary.
- (b) Check the surfaces of the tires for cuts, damage or excessive wear.

### 3. WHEEL NUTS

- (a) Check for nuts that are loose or missing. Tighten the nuts if necessary.

### 4. TIRE ROTATION

- (a) Check the maintenance schedule in the owner's manual supplement.

### 5. WINDSHIELD WIPER BLADES

- (a) Check the blades for wear or cracks when they are unable to wipe the windshield clean. Replace them if necessary.

### 6. FUEL LEAKS

- (a) Check under the vehicle for leaking fuel, oil, water or other fluids.

#### NOTICE:

If you smell gasoline fumes or notice any leaks, locate the cause and correct it.

### 7. DOORS AND ENGINE HOOD

- (a) Check that all of the doors operate smoothly, and that all the latches lock securely.
- (b) When the primary latch is released, check that the engine hood secondary latch prevents the hood from opening.



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| <b>Title:</b> MAINTENANCE: UNDER HOOD: GENERAL MAINTENANCE (2010 4Runner) |                       |                                |

## **GENERAL MAINTENANCE**

### **1. GENERAL NOTES**

- Maintenance requirements vary depending on the country.
- Check the maintenance schedule in the owner's manual supplement.
- Following the maintenance schedule is mandatory.
- Determine the appropriate time to service the vehicle using either distance driven or time elapsed, whichever reaches the specification first.
- Maintain similar intervals between periodic maintenance unless noted.
- Failing to check each vehicle part could lead to poor engine performance and increased exhaust emissions.

### **2. WINDSHIELD WASHER FLUID**

- (a) Check that there is sufficient fluid in the tank.

### **3. ENGINE COOLANT LEVEL**

- (a) Check that the coolant level is between the "FULL" and "LOW" lines on the see-through reservoir.

### **4. RADIATOR AND HOSES**

- (a) Check that the front of the radiator is clean and free of leaves, dirt and bugs.  
(b) Check the hoses for cracks, kinks, rotting or loose connections.

### **5. BATTERY ELECTROLYTE LEVEL**

- (a) Check that the electrolyte level of all the battery cells is between the upper and lower lines on the case.

#### **HINT:**

**If the electrolyte level is difficult to see, lightly shake the vehicle.**

### **6. BRAKE FLUID LEVEL**

- (a) Check that the brake fluid level is near the upper level line on the see-through reservoir.

### **7. ENGINE DRIVE BELT**

- (a) Check the drive belt for fraying, cracks, wear or oiliness.

### **8. ENGINE OIL LEVEL**

- (a) Check the oil level on the dipstick with the engine turned off.

### **9. AUTOMATIC TRANSMISSION FLUID**

- (a) Visually check the overflow plug and oil pan for fluid leaks or traces of fluid.

### **10. EXHAUST SYSTEM**

- (a) Check for unusual exhaust sounds or abnormal exhaust fumes. If problem is found, locate the cause and correct it.



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