

OUTSIDE VEHICLE

GENERAL MAINTENANCE

9900V-28

Performing these 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 perform 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 miles driven or time (month) 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 increase exhaust emissions.

2. TIRES

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

3. WHEEL NUTS

- (a) Check for nuts that are loose or missing. Tighten them 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. FLUID LEAKS

- (a) Check under the vehicle for leaking fuel, oil, water and other fluids.
- (b) If you smell gasoline fumes or notice any leaks, locate the cause and correct it.

7. DOORS AND ENGINE HOOD

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

INSIDE VEHICLE

9900W-28

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2. LIGHTS

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

3. WARNING LIGHTS AND BUZZERS

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

4. HORN

- (a) Check if the horn is working.

5. WINDSHIELD GLASS

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

6. WINDSHIELD WIPER AND WASHER

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

7. WINDSHIELD DEFROSTER

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

8. REAR VIEW MIRROR

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

9. SUN VISORS

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

10. STEERING WHEEL

- (a) Check if the steering wheel has the proper freeplay. Also check for steering difficulty, freeplay in the steering wheel and unusual noises.

11. SEATS

- (a) Check if the seat adjusters, seatback recliner and other front seat controls operate smoothly.
- (b) Check if all the latches lock securely in all positions.
- (c) Check if the locks hold securely in all latched positions.
- (d) Check if the head restraints move up and down smoothly and if the locks hold securely in all latched positions.
- (e) When the rear seatbacks are folded down, check if the latches lock securely.

12. SEAT BELTS

- (a) Check that the seat belt system such as the buckles, retractors and anchors operate properly and smoothly.
- (b) Check if the belt webbing is not cut, frayed, worn or damaged. Replace if necessary.

13. ACCELERATOR PEDAL

- (a) Check the pedal for smooth operation, uneven pedal effort and catching.

14. CLUTCH PEDAL (See page 42-7)

- (a) Check the pedal for smooth operation.
- (b) Check if the pedal has the proper freeplay.

15. BRAKE PEDAL (See page 32-14)

- (a) Check the pedal for smooth operation.
- (b) Check if the pedal has the proper reserve distance and freeplay.
- (c) Start the engine and check the brake booster function.

16. BRAKES

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

17. PARKING BRAKE (See page 33-2)

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

18. AUTOMATIC TRANSAXLE "PARK" MECHANISM

- (a) Check the lock release button of the selector lever for proper and smooth operation.
- (b) On a low incline, check if the parking brake alone can stabilize the vehicle.

UNDER HOOD

9900X-15

GENERAL MAINTENANCE

1. GENERAL NOTES

- Maintenance items may vary from country to country. Check the owner's manual supplement in which the maintenance schedule is shown.
- Every service item in the periodic maintenance schedule must be performed.
- Periodic maintenance service must be performed according to whichever interval in the periodic maintenance schedule occurs first, the odometer reading (miles) or the time interval (months).
- Maintenance service after the last period should be performed at the same interval as before unless noted.
- Failure to do even one of the items can cause the engine to run poorly and increase the exhaust emissions.

2. WINDSHIELD WASHER FLUID

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

3. ENGINE COOLANT LEVEL

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

4. RADIATOR AND HOSES

- (a) Check if the front of the radiator is clean and not blocked by leaves, dirt or bugs.
- (b) Check the hoses for cracks, kinks, rot or loose connections.

5. BATTERY ELECTROLYTE LEVEL

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

6. BRAKE FLUID LEVEL

- (a) Check if the brake fluid levels are near the upper level line on the see-through reservoirs.

7. ENGINE DRIVE BELT

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

8. ENGINE OIL LEVEL

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

9. POWER STEERING FLUID LEVEL

- (a) Check the level on the dipstick.
- (b) The level should be in the "HOT" or "COLD" range depending on the fluid temperature.

10. AUTOMATIC TRANSMISSION FLUID LEVEL

- (a) Park the vehicle on a level surface.
- (b) With the engine idling and the parking brake applied, shift the selector into all the positions from "P" to "L", and then shift into the "P" position.
- (c) Pull out the dipstick and wipe off the fluid with a clean shop rag. Re-insert the dipstick and check that the fluid level is in the "HOT" range.
- (d) Perform this check with the fluid at the normal driving temperature: 70 to 80°C (158 to 176°F).

HINT:

Wait until the engine cools down (approx. 30 min.) before checking the fluid level after extended driving at high speed, in hot weather, in heavy traffic or pulling a trailer.

11. EXHAUST SYSTEM

- (a) If any change in the sound of the exhaust or the smell of the exhaust fumes is noticed, locate and correct the cause.

ENGINE

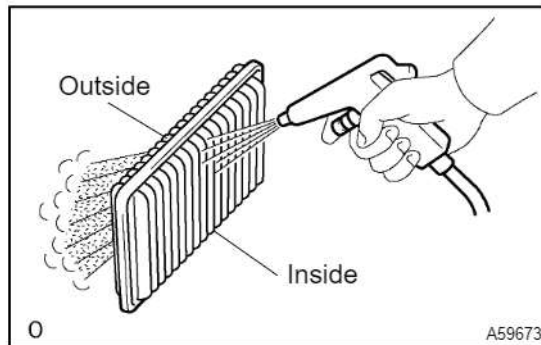
ON-VEHICLE INSPECTION

9900Y-15

HINT:

Inspect these items on a cooled down engine.

1. **REPLACE TIMING CHAIN** (2AZ-FE: [14-75](#))
2. **REPLACE TIMING BELT** (1MZ-FE/3MZ-FE: See page [14-218](#))
3. **INSPECT DRIVE BELT** (2AZ-FE: See page [14-5](#), 1MZ-FE/3MZ-FE: See page [14-140](#))
4. **REPLACE SPARK PLUGS** (2AZ-FE: See page [18-3](#), 1MZ-FE/3MZ-FE: See page [18-9](#))



5. INSPECT AIR FILTER

- (a) Remove the air filter.
- (b) Visually check that the air filter is not excessively damaged or oily.

If necessary, replace the air filter.

- (c) Clean the filter with compressed air.
First blow from the inside thoroughly, and then blow from the outside of the filter.
- (d) Reinstall the air filter.

6. REPLACE AIR FILTER

- (a) Replace the air filter with a new one.

7. REPLACE ENGINE OIL AND OIL FILTER

(2AZ-FE: See page [17-3](#), 1MZ-FE/3MZ-FE: See page [17-25](#))

8. REPLACE ENGINE COOLANT

(2AZ-FE: See page [16-6](#), 1MZ-FE/3MZ-FE: See page [16-27](#))

9. INSPECT GASKET IN FUEL TANK CAP

(2AZ-FE: See page [12-1](#), 1MZ-FE/3MZ-FE: See page [12-18](#))

10. INSPECT FUEL LINES AND CONNECTIONS AND FUEL TANK VAPOR VENT SYSTEM HOSES AND FUEL TANK BANDS

- (a) Visually check the fuel lines for cracks, leakage, loose connections, deformation or tank band looseness.

11. INSPECT EXHAUST PIPES AND MOUNTINGS

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

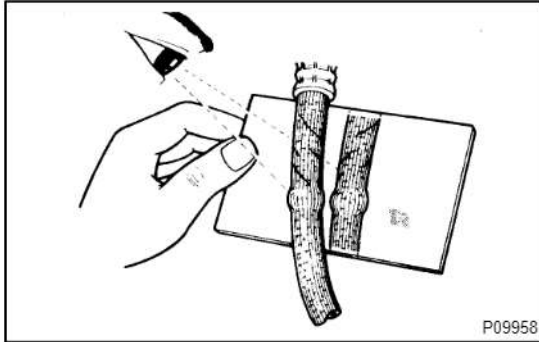
12. INSPECT VALVE CLEARANCE

(2AZ-FE: See page [14-7](#), 1MZ-FE/3MZ-FE: See page [14-142](#))

BRAKE

ON-VEHICLE INSPECTION

9900Z-22



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.

- (a) Check all 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 if the hoses and lines are not near sharp edges, moving parts and the exhaust system.
- (d) Check if the lines are installed pass through the center of the grommets.

2. INSPECT FRONT BRAKE PADS AND DISCS (See page [32-35](#))
3. INSPECT REAR BRAKE PADS AND DISCS (See page [32-44](#))
4. INSPECT REAR BRAKE LININGS, DISCS AND DRUMS (See page [32-44](#), [32-50](#))
5. INSPECT OR CHANGE BRAKE FLUID (See page [32-4](#))
Fluid: SAE J1703 or FMVSS No.116 DOT3

CHASSIS

9901A-15

ON-VEHICLE INSPECTION

1. INSPECT STEERING LINKAGE

- (a) Check the steering wheel free play. (see page 50-3)
- (b) Check the steering linkage for looseness or damage.
 - (1) Check if the tie rod ends do not have excessive play.
 - (2) Check if the dust seals and boots are not damaged.
 - (3) Check if the boot clamps are not loose.

2. INSPECT STEERING GEAR HOUSING OIL

- (a) Check the steering gear housing for oil leakage.

If oil is leaking, find the cause and repair it.

3. INSPECT BALL JOINTS AND DUST COVERS

- (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 chocks.
 - (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.

4. INSPECT DRIVE SHAFT BOOTS

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

5. CHECK TRANSAXLE OIL (FLUID)

- (a) Visually check the transaxle for oil (fluid) leakage.

If oil is leaking, find the cause and repair it.

6. ROTATE TIRES (See page 28-1)

BODY

9901B-12

ON-VEHICLE INSPECTION

1. Canada:

TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY

- (a) Tighten the bolts and nuts on the chassis parts listed below, if necessary.
 - Front axle and suspension
 - Drive train
 - Rear axle and suspension
 - Brake system
 - Engine mounting
 - Other chassis parts
- (b) Tighten the bolts and nuts on the body parts listed below, if necessary.
 - Seat belt system
 - Seats
 - Doors and hood
 - Body mountings
 - Fuel tank
 - Exhaust pipe system
 - Other body parts

2. **REPLACE AIR CONDITIONING FILTER**

- (a) Remove the glove compartment assembly.
- (b) Remove the filter case from the filter outlet.
- (c) Remove the filter from the filter case.
- (d) Replace the filter with a new one.
- (e) The installation procedures are the removal procedures in reverse order.