

# OUTSIDE VEHICLE

## 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 miles driven or time (month) 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 increase exhaust emissions.

### 2. TIRES

- (a) Check the tire inflation 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 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 whenever 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 that all of the doors and the hood 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.

# INSIDE VEHICLE

## 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.

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### 2. LIGHTS

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

### 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 if the windshield washers are aimed properly. Also, check that the center stream of washer fluid sprays on the windshield within the operating range of the wipers.
- (b) Check that the wipers streak or not.

### 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, free play 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 that the belt webbing is not cut, frayed, worn or damaged. Replace if necessary.

**13. ACCELERATOR PEDAL**

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

**14. CLUTCH PEDAL**

HINT:

See page [CL-4](#).

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

**15. BRAKE PEDAL**

HINT:

See page [BR-8](#).

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

**16. BRAKES**

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

**17. PARKING BRAKE**

HINT:

See page [PB-14](#).

- (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 shift lever for proper and smooth operation.
- (b) On a low incline, check if the parking brake alone can stabilize the vehicle.

# UNDER HOOD

## 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 miles driven or time 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 increase 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 not blocked by leaves, dirt or bugs.
- (b) Check the hoses for cracks, kinks, rot or loose connections.

### 5. BATTERY ELECTROLYTE LEVEL

- (a) Check that 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 that the brake fluid levels are near the upper level lines 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 stopped.

### 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

## GENERAL MAINTENANCE

### HINT:

Inspect these items on a cooled down engine/

#### 1. INSPECT DRIVE BELT

2AZ-FE	See page <a href="#">EM-5</a>
3MZ-FE	See page <a href="#">EM-6</a>

#### 2. REPLACE SPARK PLUGS

2AZ-FE	See page <a href="#">IG-3</a>
3MZ-FE	See page <a href="#">IG-3</a>

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#### 3. INSPECT AIR FILTER

- (a) Remove the air filter.
- (b) Visually check if the air filter is not excessively damaged, dirty or oily. Replace the air filter if necessary.

#### 4. REPLACE AIR FILTER

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

#### 5. REPLACE ENGINE OIL AND OIL FILTER

2AZ-FE	See page <a href="#">LU-3</a>
3MZ-FE	See page <a href="#">LU-3</a>

#### 6. REPLACE ENGINE COOLANT

2AZ-FE	See page <a href="#">CO-8</a>
3MZ-FE	See page <a href="#">CO-7</a>

#### 7. INSPECT FUEL TANK CAP GASKET

2AZ-FE	See page <a href="#">EC-10</a>
3MZ-FE	See page <a href="#">EC-10</a>

#### 8. 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.

#### 9. INSPECT EXHAUST PIPES AND MOUNTINGS

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

#### 10. INSPECT VALVE CLEARANCE

2AZ-FE	See page <a href="#">EM-7</a>
3MZ-FE	See page <a href="#">EM-9</a>

# BRAKE

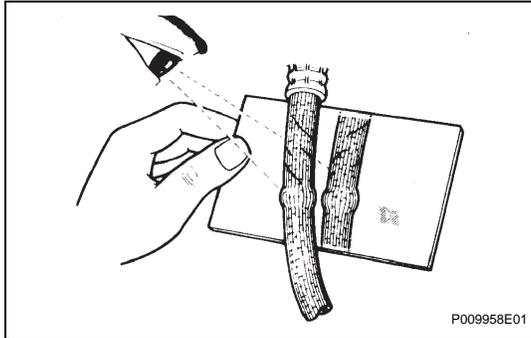
## GENERAL MAINTENANCE

### 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 FRONT BRAKE PADS AND DISCS

#### HINT:

See page [BR-24](#)

### 3. INSPECT REAR BRAKE PADS AND DISCS

#### HINT:

See page [BR-30](#)

### 4. INSPECT OR CHARGE BRAKE FLUID

#### HINT:

See page [BR-3](#)

# CHASSIS

## GENERAL MAINTENANCE

### 1. INSPECT STEERING LINKAGE

- (a) Check the steering wheel free play (See page [SR-2](#)).
- (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 no 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 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 tire.
  - (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.

### 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

HINT:

See page [TW-4](#)

# BODY

## GENERAL MAINTENANCE

### 1. 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.