

# OUTSIDE VEHICLE

## GENERAL MAINTENANCE

MA001-43

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 adjustment if necessary.
- (b) Check the surfaces of tires for cuts, damage or excessive wear.

### 3. WHEEL NUTS

Check for nuts that are loose or missing. Tighten them if necessary.

### 4. TIRE ROTATION

Check the maintenance schedule in the owner's manual supplement.

### 5. WINDSHIELD WIPER BLADES

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 fluid.
- (b) If you smell gasoline fumes or notice any leak, locate the cause found and correct it.

### 7. DOORS AND ENGINE HOOD

- (a) Check that all of the doors and the trunk lid 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

MA002-51

## GENERAL MAINTENANCE

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.
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### 2. LIGHTS

- (a) Check that the headlights, stop lights, taillights, turn signal lights, and other lights are all working.
- (b) Check that the headlights are aimed properly.

### 3. WARNING LIGHTS AND BUZZERS

Check that all the warning lights and buzzers are working.

### 4. HORN

Check that the horn is working.

### 5. WINDSHIELD GLASS

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 that the wipers do not streak.

### 7. WINDSHIELD DEFROSTER

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

### 8. REAR VIEW MIRROR

Check that the rear view mirror is securely mounted.

### 9. SUN VISORS

Check that the sun visors move freely and are securely mounted.

### 10. STEERING WHEEL

Check that the steering wheel has the proper freeplay. Also check for steering difficulty, freeplay in the steering wheel and unusual noises.

### 11. SEATS

- (a) Check that the seat adjusters operate smoothly.
- (b) Check that all the latches lock securely in all positions.
- (c) Check that the head restraints move up and down smoothly and that the locks hold securely in all latched positions.
- (d) 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.

**13. ACCELERATOR PEDAL**

Check the pedal for smooth operation and uneven pedal effort and catching.

**14. BRAKE PEDAL (See page BR-6 )**

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

**15. BRAKES**

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

**16. PARKING BRAKE (See page BR-9 )**

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

**17. AUTOMATIC TRANSMISSION "PARK" MECHANISM**

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

## UNDER HOOD

MA003-51

### 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 (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. WINDSHIELD WASHER FLUID

Check that there is sufficient fluid in the tank.

#### 3. ENGINE COOLANT LEVEL

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.  
(see page [CO-15](#))
- (b) Check the hoses for cracks, kinks, rotting and loose connections.

#### 5. BATTERY ELECTROLYTE LEVEL

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

#### 6. BRAKE FLUID LEVEL

Check that the brake fluid levels are near the upper level line on the see-through reservoirs.

#### 7. ENGINE DRIVE BELT

Check the drive belt for fraying, cracks, wear or oiliness.

#### 8. ENGINE OIL LEVEL

Check if the level of engine oil is between "F" and "L" on the dipstick with the engine turned off.

#### 9. POWER STEERING FLUID LEVEL

- Check the level on the dipstick.
- 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". Then shift 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:

After extended driving under harsh conditions (high speeds, hot weather, heavy traffic or pulling a trailer), let the engine cool down for approximately 30 minutes before checking the fluid level.

#### 11. EXHAUST SYSTEM

Check for unusual exhaust sounds or abnormal exhaust fumes. Locate the cause and correct it.

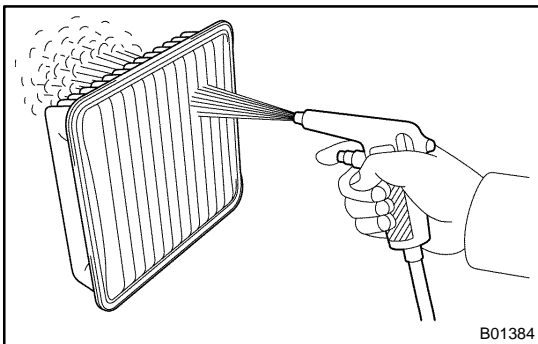
# ENGINE INSPECTION

MA004-19

## HINT:

Inspect these items on a cooled down engine.

1. **REPLACE TIMING BELT**  
(See page [EM-17](#) )
2. **INSPECT DRIVE BELT**  
(See page [CH-1](#) )
3. **REPLACE SPARK PLUGS**  
(See page [IG-1](#) )



## 4. **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 of the filter thoroughly then repeat from the outside.
- (d) Reinstall the air filter.

## 5. **REPLACE AIR FILTER**

Replace the air filter with a new one.

## 6. **REPLACE ENGINE OIL AND OIL FILTER** (See page [LU-2](#) )

## 7. **REPLACE ENGINE COOLANT** (See page [CO-2](#) )

## 8. **INSPECT GASKET IN FUEL TANK CAP** (See page [EC-7](#) )

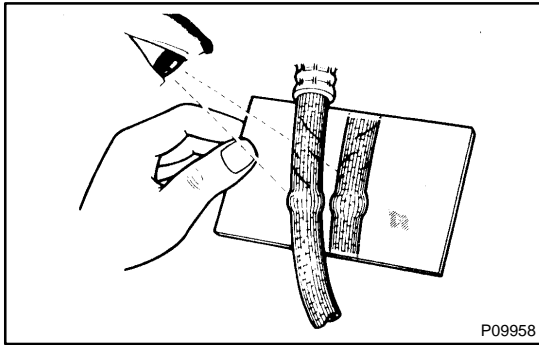
## 9. **INSPECT FUEL LINES AND CONNECTIONS, FUEL TANK VAPOR VENT SYSTEM HOSES AND FUEL TANK BAND**

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

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

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

## 11. **INSPECT VALVE CLEARANCE** (See page [EM-5](#) )



## BRAKE INSPECTION

MA01R-13

### 1. INSPECT BRAKE LINE PIPES AND HOSES

#### HINT:

Work in a well-lighted area. Check the entire circumference and length of the brake hoses using a mirror if necessary. Turn the front wheels fully to the right or left before beginning.

- (a) Check all brake lines and hoses for.
  - Damage
  - Wear
  - Deformation
  - Cracks
  - Corrosion
  - Leaks
  - Bends
  - Twists
- (b) Check all the clamps for tightness and connections for leakage.
- (c) Check that the hoses and lines are not near sharp edges, moving parts and the exhaust system.
- (d) Check that the lines are installed pass through the center of the grommets.

### 2. INSPECT FRONT AND REAR BRAKE PADS AND DISCS

(FRONT PADS: See page [BR-24](#) )

(REAR PADS: See page [BR-33](#) )

(FRONT DISCS: See page [BR-29](#) )

(REAR DISCS: See page [BR-38](#) )

### 3. INSPECT OR CHANGE BRAKE FLUID

(See page [BR-4](#) )

Fluid: SAE J1703 or FMVSS No.116 DOT3

# CHASSIS INSPECTION

MA01S-07

## 1. INSPECT STEERING LINKAGE

- (a) Check the steering wheel freeplay.  
(see page [SR-8](#))
- (b) Check the steering linkage for looseness or damage.  
Check that:
  - Check that the tie rod ends do not have excessive play.
  - Check that the dust seals and boots are not damaged.
  - Check that the boot clamps are not loose.

## 2. INSPECT STEERING GEAR HOUSING OIL

Check the steering gear housing for oil leakage.

## 3. INSPECT DRIVE SHAFT BOOTS

Check the drive shaft boots for loose clamps, leakage or damage.

## 4. INSPECT LOWER BALL JOINTS AND DUST COVERS

- (a) Jack up the front of the vehicle and support it with stands.
- (b) Make sure the front wheels are in a straight-ahead position, and depress the brake pedal.
- (c) Jack up the lower suspension arm until there is about half a load on the front coil spring.
- (d) Inspect the dust cover for damage.

## 5. CHECK AUTOMATIC TRANSMISSION AND DIFFERENTIAL

Visually check the automatic transmission and differential for oil leakage.

## 6. CHECK MANUAL TRANSMISSION AND DIFFERENTIAL

Visually check the manual transmission and differential for oil leakage.

If leakage is found, check for the cause and repair it.

## 7. LSD torque sensing type: REPLACE DIFFERENTIAL OIL (See page [SA-73](#))

## 8. Except wagon model: ROTATE TIRES (See page [SA-3](#))

## BODY INSPECTION

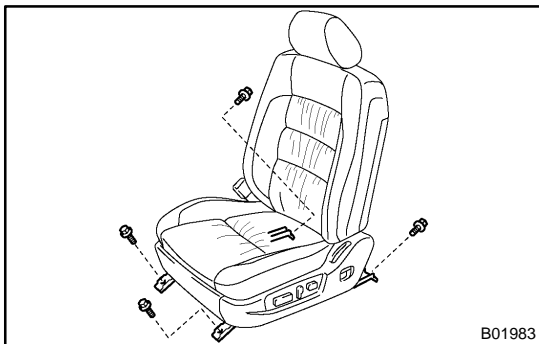
MA01T-07

### 1. CANADA:

#### TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY

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

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

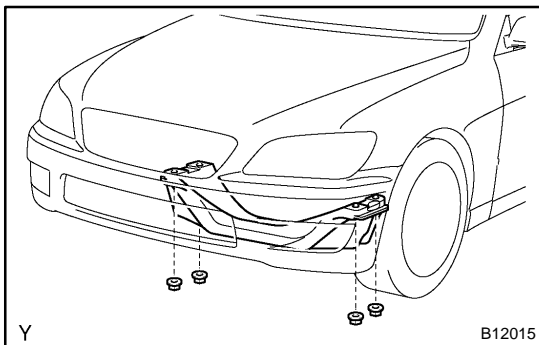


(b) Where necessary, tighten all parts of the body.

- Front seat mount bolts

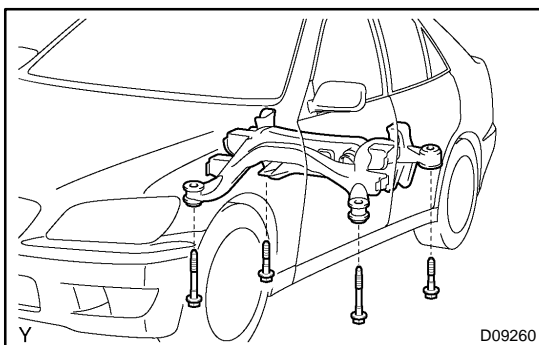
**Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)**

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



- Front suspension member-to-body mounting bolts

**Torque: 98 N·m (1,000 kgf·cm, 72 ft·lbf)**



- Rear axle beam assembly-to-body mounting nuts

**Torque: 127 N·m (1,300 kgf·cm, 94 ft·lbf)**

### 2. REPLACE AIR REFINER FILTER (See page [AC-93](#))

### 3. BODY INSPECTION

(a) Check the body exterior for dents, scratches and rust.

(b) Check the underbody for rust and damage.

If necessary, replace or repair.



**4. ROAD TEST**

- (a) Check the engine and chassis for abnormal noises.
- (b) Check that the vehicle does not wander or pull to one side.
- (c) Check that the brakes work properly and do not drag.
- (d) Do setting of the parking brake shoes and drum.