

# MAINTENANCE

|                                       |             |
|---------------------------------------|-------------|
| <b>MAINTENANCE REQUIREMENTS .....</b> | <b>MA-2</b> |
| <b>MAINTENANCE SCHEDULE .....</b>     | <b>MA-3</b> |
| SCHEDULE FOR NORMAL DRIVING .....     | <b>MA-3</b> |
| SCHEDULE FOR SEVERE DRIVING .....     | <b>MA-5</b> |
| <b>MAINTENANCE OPERATION .....</b>    | <b>MA-6</b> |
| TRANSFER OIL .....                    | <b>MA-6</b> |
| REAR DIFFERENTIAL OIL .....           | <b>MA-6</b> |
| PROPELLER SHAFT .....                 | <b>MA-7</b> |

MMA00001-00000

## **MAINTENANCE REQUIREMENTS**

The scheduled maintenance service is important to ensure trouble-free, safe and economical driving. Failure to perform the scheduled maintenance may cause an accident or serious damage.

If you conduct the periodical maintenance, Daihatsu car owners may reduce the chance of accidents or car problems. Furthermore, it becomes possible for you to find at an earlier stage malfunctions which may lead to serious damages. Consequently, potential vehicle damage can be prevented or the degree of the damage can be minimized.

Therefore, all of the persons who are concerned with servicing the Daihatsu vehicles should offer the periodical maintenance service to Daihatsu car owners in order that they may be protected from accidents or unexpected problems.

To prevent malfunctions in advance, however, conducting the periodical maintenance service only is insufficient. It is essential that owners themselves perform maintenance, such as the pre-starting check described in the owner's manual, so that the vehicle exhibits no abnormal change or phenomenon. Hence, please explain to owners about the necessity of maintenance performed by them. However, malfunction may occur on those vehicles which are always checked by their owners. For instance, if a part instructed to be replaced periodically should be used beyond the replacement intervals and the life of the part has expired, there are cases where malfunction occurs suddenly despite the fact that no malfunction has taken place until yesterday. To prevent such malfunction in advance, be sure to replace the parts recommended to be replaced periodically at the specified replacement intervals.

This section describes those items of the scheduled maintenance service recommended by the Daihatsu and their intervals. Be sure to observe the maintenance schedule.

MMA00002-00000

## MAINTENANCE SCHEDULE

### NOTE:

- Perform the periodical maintenance at the specified mileage or the time whichever comes first, unless otherwise specified.
- Continue to perform the periodical maintenance after 100,000 km (60,000 miles) at the same intervals as before 100,000 km.
- If the vehicle should be operated under severe driving conditions, operated occasionally, operated in dusty areas, operated for repeated short trips, operated under extremely cold climate and/or on salted roads, it is necessary to perform some maintenance items more frequently than the regular maintenance schedule.
- This maintenance schedule has been prepared based on requirements mentioned in the owner's manual which are to be performed by the Daihatsu vehicle owner thoroughly.

MMA00003-00000

## SCHEDULE FOR NORMAL DRIVING

○...Check or inspect. ●...Change or replace.

| Section                         | Item                                                                    | What to do                                               | Inspection interval | ×1000 km          | 1   | 10  | 20 | 30  | 40 | 50  | 60 | 70  | 80 | 90  | 100 |
|---------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------|---------------------|-------------------|-----|-----|----|-----|----|-----|----|-----|----|-----|-----|
|                                 |                                                                         |                                                          |                     | ×1000 miles       | 0.6 | 6   | 12 | 18  | 24 | 30  | 36 | 42  | 48 | 54  | 60  |
|                                 |                                                                         |                                                          |                     | Years             | —   | 0.5 | 1  | 1.5 | 2  | 2.5 | 3  | 3.5 | 4  | 4.5 | 5   |
| Engine                          | Air cleaner element                                                     | Cleaning<br>Check<br>● Damage                            |                     |                   |     |     | ○  |     | ●  |     | ○  |     | ●  |     | ○   |
|                                 | Valve clearance                                                         | Check & Adjustment                                       |                     |                   |     |     |    |     | ○  |     |    |     | ○  |     |     |
|                                 | Engine oil & Oil filter                                                 | Change (Use API: SH or higher grade)                     |                     | Every 15,000 km   |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Fuel line & Connections<br>(Including fuel hoses)                       | Check<br>● Crack<br>● Tightness<br>● Leakage<br>● Damage |                     | Every 40,000 km   |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Coolant (Long-life coolant)                                             | Change                                                   |                     | Every two years   |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Drive belt<br>(Alternator, water pump, power steering)                  | Check<br>● Tension<br>● Crack<br>● Damage                |                     |                   |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                                 | Timing belt                                                             | Change                                                   |                     | Every 100,000 km  |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Spark plug                                                              | Cleaning & Check<br>● Condition<br>● Gap<br>● Damage     |                     |                   |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                                 | Ignition timing                                                         | ● Check                                                  |                     |                   |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
| Exhaust emission control system | Blow-by gas recirculation hose<br>(Positive crankcase ventilation hose) | Check<br>● Connection<br>● Damage                        |                     |                   |     |     |    |     | ○  |     |    |     | ○  |     |     |
|                                 | Charcoal canister                                                       | Check<br>● Function<br>● Damage                          |                     |                   |     |     |    |     | ○  |     |    |     | ○  |     |     |
|                                 | Evaporative emission hoses                                              | Change                                                   |                     | Every eight years |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Exhaust pipe & Muffler mounting                                         | Check<br>● Tightness<br>● Damage                         |                     |                   |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |

\* Replace every 12,000 km when API SG grade oil is used.

MMA00004-00000

○...Check or inspect. ●...Change or replace.

| Section            | Item                                                                               | What to do                                                                   | Inspection interval | ×1000 km        | 1   | 10  | 20 | 30  | 40 | 50  | 60 | 70  | 80 | 90  | 100 |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------|-----------------|-----|-----|----|-----|----|-----|----|-----|----|-----|-----|
|                    |                                                                                    |                                                                              |                     | ×1000 miles     | 0.6 | 6   | 12 | 18  | 24 | 30  | 36 | 42  | 48 | 54  | 60  |
|                    |                                                                                    |                                                                              |                     | Years           | —   | 0.5 | 1  | 1.5 | 2  | 2.5 | 3  | 3.5 | 4  | 4.5 | 5   |
|                    |                                                                                    |                                                                              |                     |                 |     |     |    |     |    |     |    |     |    |     |     |
| Power train system | Clutch                                                                             | Check<br>• Free travel<br>• Reserve travel<br>• Damage                       |                     |                 |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                    | Manual transmission                                                                | Change<br>• Oil                                                              |                     |                 |     |     |    |     | ●  |     |    |     | ●  |     |     |
|                    | Automatic transmission                                                             | Change<br>• Fluid                                                            |                     | Every 80,000 km |     |     |    |     |    |     |    |     |    |     |     |
|                    | Automatic transmission<br>Oil cooler hose                                          | Check<br>• Crack, scratch, cut, twist and swelling                           |                     | Every 40,000 km |     |     |    |     |    |     |    |     |    |     |     |
|                    | Transfer                                                                           | Change<br>• Oil                                                              |                     |                 |     |     |    |     | ●  |     |    |     | ●  |     |     |
|                    | Differential (Rear)                                                                | Change<br>• Oil                                                              |                     |                 |     |     |    |     | ●  |     |    |     | ●  |     |     |
|                    | Propeller shaft                                                                    | Check<br>• Tightness<br>• Rattle<br>• Damage                                 |                     |                 |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                    | Drive shaft boot                                                                   | Check<br>• Damage                                                            |                     |                 |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
| Suspension system  | Shock absorber                                                                     | Check<br>• Function<br>• Oil leakage (Shock absorber)<br>• Damage            |                     |                 |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                    | Suspension arm (Front)<br>Control arm (Rear)<br>Dust boots<br>Spring<br>Stabilizer | Check<br>• Tightness<br>• Damage<br>• Rattle                                 |                     |                 |     |     |    |     | ○  |     |    |     | ○  |     |     |
| Running system     | Wheel bearing                                                                      | Check<br>• Tightness<br>• Damage<br>• Rattle                                 |                     |                 |     |     |    |     | ○  |     |    |     | ○  |     |     |
| Steering system    | Steering linkage, gear box                                                         | Check<br>• Free play (Steering wheel)<br>• Tightness<br>• Rattle<br>• Damage |                     |                 |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                    | Wheel alignment                                                                    | Check<br>• Toe-in                                                            |                     |                 |     |     |    |     | ○  |     |    |     | ○  |     |     |
|                    | Fluid hose                                                                         | Check<br>• Crack, scratch, cut, twist and swelling                           |                     | Every 4 years   |     |     |    |     |    |     |    |     |    |     |     |

○...Check or inspect. ●...Change or replace.

| Section        | Item                              | What to do                                                                                               | Inspection interval | ×1000 km      | 1   | 10  | 20 | 30  | 40 | 50  | 60 | 70  | 80 | 90  | 100 |
|----------------|-----------------------------------|----------------------------------------------------------------------------------------------------------|---------------------|---------------|-----|-----|----|-----|----|-----|----|-----|----|-----|-----|
|                |                                   |                                                                                                          |                     | ×1000 miles   | 0.6 | 6   | 12 | 18  | 24 | 30  | 36 | 42  | 48 | 54  | 60  |
|                |                                   |                                                                                                          |                     | Years         | —   | 0.5 | 1  | 1.5 | 2  | 2.5 | 3  | 3.5 | 4  | 4.5 | 5   |
|                |                                   |                                                                                                          |                     |               |     |     |    |     |    |     |    |     |    |     |     |
| Brake system   | Brake pedal & Parking brake       | Check<br>• Free play (Brake pedal)<br>• Reserve travel (Brake pedal)<br>• Working travel (Parking brake) |                     |               |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                | Disc & Disc pad                   | Check<br>• Wear<br>• Damage                                                                              |                     |               |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                | Brake hose, tube and P & B valve  | Check<br>• Leakage (Fluid level, connection)<br>• Loose clamp<br>• Damage                                |                     |               |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                | Brake fluid                       | Change                                                                                                   |                     | Every 2 years |     |     |    |     |    |     |    |     |    |     |     |
|                | Brake drum & Lining               | Check<br>• Wear<br>• Damage                                                                              |                     |               |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |
|                | Brake booster vacuum hose         | Check                                                                                                    |                     | Every 4 years |     |     |    |     |    |     |    |     |    |     |     |
|                | Master & Wheel cylinder           | Check<br>• Leakage                                                                                       |                     | Every 2 years |     |     |    |     |    |     |    |     |    |     |     |
| Chassis & Body | Wheel hub nut, other bolts & Nuts | Check<br>• Tightness                                                                                     |                     |               |     |     | ○  |     | ○  |     | ○  |     | ○  |     | ○   |

MMA00006-00000

## SCHEDULE FOR SEVERE DRIVING

○...Check or inspect. ●...Change or replace.

| Section                         | Item                      | What to do                             | Inspection interval | ×1000 km                                                           | 1   | 10  | 20 | 30  | 40 | 50  | 60 | 70  | 80 | 90  | 100 |
|---------------------------------|---------------------------|----------------------------------------|---------------------|--------------------------------------------------------------------|-----|-----|----|-----|----|-----|----|-----|----|-----|-----|
|                                 |                           |                                        |                     | ×1000 miles                                                        | 0.6 | 6   | 12 | 18  | 24 | 30  | 36 | 42  | 48 | 54  | 60  |
|                                 |                           |                                        |                     | Years                                                              | —   | 0.5 | 1  | 1.5 | 2  | 2.5 | 3  | 3.5 | 4  | 4.5 | 5   |
|                                 |                           |                                        |                     |                                                                    |     |     |    |     |    |     |    |     |    |     |     |
| Engine                          | Engine oil & Oil filter   | Change (Use API: SH or higher grade)   |                     | Every 5,000 km                                                     |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Air cleaner element       | Check & Cleaning<br>• Damage<br>Change |                     | Check and cleaning: Every 5,000 km<br>Replacement: Every 20,000 km |     |     |    |     |    |     |    |     |    |     |     |
| Exhaust emission control system | Exhaust pipe and mounting | Check<br>• Tightness<br>• Damage       |                     |                                                                    |     | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○   |
| Power train system              | Manual transmission       | Change<br>• Oil                        |                     | Every 25,000 km                                                    |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Automatic transmission    | Change<br>• Fluid                      |                     | Every 50,000 km                                                    |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Transfer                  | Change<br>• Oil                        |                     | Every 25,000 km                                                    |     |     |    |     |    |     |    |     |    |     |     |
|                                 | Differential (Rear)       | Change<br>• Oil                        |                     | Every 25,000 km                                                    |     |     |    |     |    |     |    |     |    |     |     |
| Steering system                 | Steering linkage          | Check<br>• Tightness<br>• Damage       |                     |                                                                    |     | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○   |
| Brake system                    | Disc & Disc pad           | Check<br>• Wear<br>• Damage            |                     |                                                                    |     | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○   |
|                                 | Brake drum & Lining       | Check<br>• Wear<br>• Damage            |                     |                                                                    |     | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○  | ○   | ○   |

MMA00007-00000

## MAINTENANCE OPERATION

### TRANSFER OIL

1. Change the transfer oil every two years or 40,000 kilometer running, whichever comes first.
2. If the vehicle has been run under severe driving environments, change the transfer oil every 25,000 kilometer running.
3. Place a suitable container under the drain plug of transfer.
4. Remove the drain plug and the filler plug, and drain the oil.
5. Install the drain plug to the transfer with a new gasket interposed.

Tightening Torque: 29.4 - 48.0 N·m

6. Fill the specified oil from the filler plug hole.  
Grade: API GL-5  
Viscosity: SAE 80W-90  
Filling Amount: Approx. 0.4 liters
7. Install the filler plug to the transfer with a new gasket interposed.

Tightening Torque: 29.4 - 48.0 N·m

#### NOTE:

- For details of the operation, refer to the other service manual for transfer (T1E-N1).

### REAR DIFFERENTIAL OIL

1. Change the rear differential oil every two years or 40,000 kilometer running, whichever comes first.
2. If the vehicle has been run under severe driving environments, change the rear differential oil every 25,000 kilometer running.
3. Place a suitable container under the drain plug of rear differential.
4. Remove the drain plug and the filler plug, and drain the oil.
5. Install the drain plug to the rear differential with a new gasket interposed.

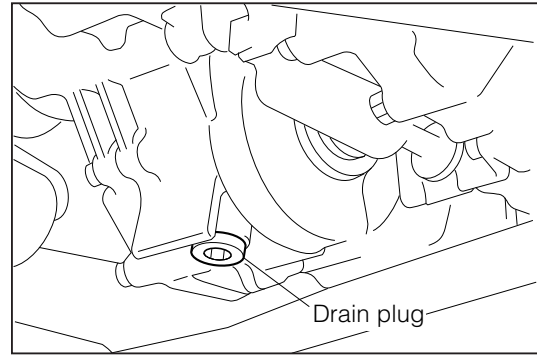
Tightening Torque: 53.9 - 68.6 N·m

6. Fill the specified oil from the filler plug hole.  
Grade: Hypoid gear oil API GL-5  
Viscosity: SAE 75W-85  
Filling Amount: Approx. 1.3 liters
7. Install the filler plug to the rear differential with a new gasket interposed.

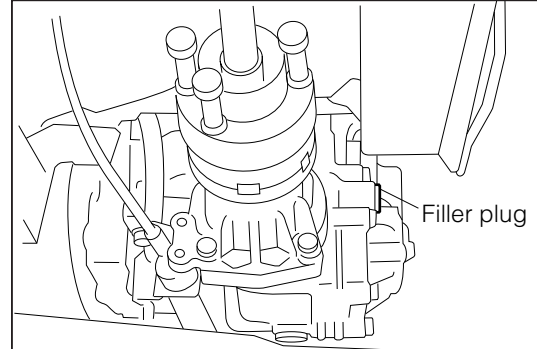
Tightening Torque: 53.9 - 68.6 N·m

#### NOTE

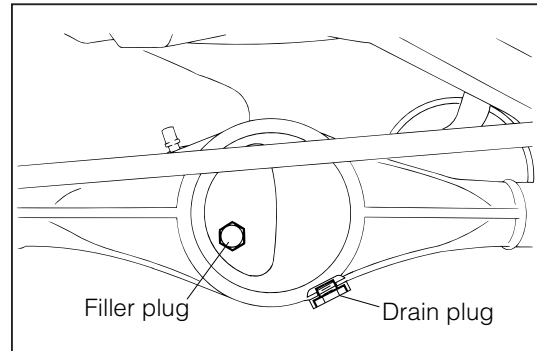
- For details of the operation, refer to section RD.



MMA00008-00001



MMA00009-00002



MMA00010-00003

## PROPELLER SHAFT

### CHECK OF PROPELLER SHAFT

1. Ensure that no looseness exists on the attaching bolts of the universal joint flange yokes which were connected to the transfer, rear differential and propeller shaft, using a torque wrench.

Tightening Torque:

Front Side: 29.4 - 44.1 N·m

Rear Side: 39.2 - 53.9 N·m

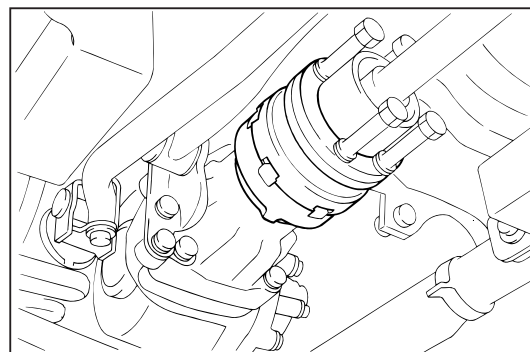
If any looseness exists, retighten the attaching bolts as required.

(Refer to the PR section.)

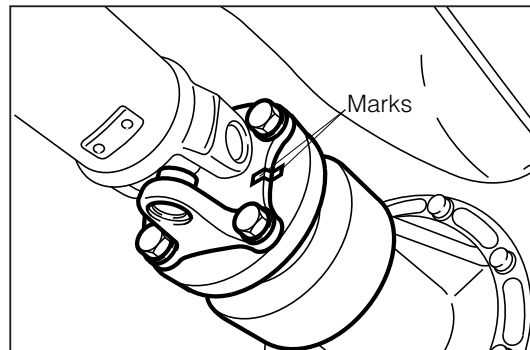
2. Ensure that no excessive play exists on the universal joints.

If any excessive play exists, repair the universal joint by replacing the spider kit or replace the propeller shaft with a new one.

(Refer to the PR section.)



MMA00011-00004



MMA00012-00005