

## Maintenance

### **SCHEDULED Maintenance service**

#### G04000APA

Follow Normal Maintenance Schedule if the vehicle is usually operated where none of the following conditions apply. If any of the following conditions apply, follow Maintenance Under Severe Usage Conditions.

- Repeated short distance driving
- Driving in dusty conditions or sandy areas
- Extensive use of brakes.
- Driving on rough or muddy roads.
- Driving in mountainous areas.
- Extended periods of idling in or low speed operation.
- Driving for a prolonged period in cold temperatures and/or extremely humid climates.
- More than 50% driving in heavy city traffic during hot Weather above 32c (90F)

if your vehicle is operated under the above conditions, you should inspect, replace or refill more frequently than the following Normal Maintenance Schedule. After the periods or distance shown in the chart, continue to follow the prescribed Maintenance intervals.

## MAINTENANCE UNDER SEVERE USAGE CONDITIONS

The following items must be serviced more frequently on cars mainly used under severe during conditions. Refer to the chart below for the appropriate maintenance intervals.

R : Replace I : Inspect and if necessary, adjust, correct or replace

MAINTENANCE ITEM	Maintenance Operation	Maintenance intervals	Driving condition
Engine oil and engine oil Filer	R	Every 5,000 km or 6 Months	A,B,C,D,E,F,G,H,I,K
Air cleaner filter	R	Replace more frequently depending on the condition	C,E
Spark plugs	R	Replace more frequently depending on the condition	B,H
Engine timing belt 1.1L	R	Every 60,000 km	D,E,F,G
Manual transaxle fluid (jf equipped)	R	Every 15,000 km	C,D,E,G,H,I,K
Automatic transaxle fluid (jf equipped)	R	Every 4,000 km	G,H,I,K
Steering gear rack, Linkage and boots	I	Inspect more frequently Depending on the condition	C,D,E,F,G

<b>MAINTENANCE ITEM</b>	<b>Maintenance Operation</b>	<b>Maintenance intervals</b>	<b>Driving condition</b>
Front suspension ball joints	I	Inspect more frequently depending on the condition	C,D,E,F,G,
Disc brakes and pads, calipers and rotors	I	Inspect more frequently depending on the condition	C,D,E,G,H
Drum brakes and linings (if equipped)	I	Inspect more frequently depending on the condition	C,D,E,G,H
Parking brake	I	Inspect more frequently depending on the condition	C,D,G,H
Driveshaft and boots	I	Inspect more frequently depending on the condition	C,D,E,F,G,H,I
Climate control air filter (if equipped)	R	Replace more frequently depending on the condition	C,E

### **Severe driving conditions**

A : Repeated short distance driving

B : Extensive idling

C : Driving in dusty, rough roads

D : Driving in areas using salt or other corrosive materials or in very cold weather

E : Driving in sandy areas

F : More than 50 % driving in heavy city traffic during hot weather above 32°C (90°F)

G : Driving in mountains areas

H : Towing a trailer

I : Driving for patrol vehicle, taxi, commercial vehicle or vehicle towing

J : Driving in very cold weather

K : Driving over 170 km/h {106 mile/h}

L : Frequently driving in stop-and-go conditions

## EXPLANATION OF SCHEDULED MAINTENANCE ITEMS

G050100APA

### Engine oil and filter

The engine oil and filter (including drain plug gasket) should be changed at the intervals specified in the maintenance schedule. If the vehicle is being driven in severe conditions, more frequent oil and filter changes are required.

G050200AUN

### Drive belts

Inspect all drive belts for evidence of cuts, cracks, excessive wear or oil saturation and replace if necessary. Drive belts should be checked periodically for proper tension and adjusted as necessary.

G050500AUN

### Timing belt (if equipped)

Inspect all parts related to the timing belt for damage and deformation. Replace any damaged parts immediately.

G050300AEN

### Fuel filter (cartridge)

A clogged filter can limit the speed at which the vehicle may be driven, damage the emission system and cause multiple issues such as hard starting. If an excessive amount of foreign matter accumulates in the fuel tank, the filter may require replacement more frequently. After installing a new filter, run the engine for several minutes, and check for leaks at the connections. Fuel filters should be installed by an authorized **HYUNDAI** dealer.

G050400AEN

### Fuel lines, fuel hoses and connections

Check the fuel lines, fuel hoses and connections for leakage and damage. Have an authorized **HYUNDAI** dealer replace any damaged or leaking parts immediately.

### **WARNING – Diesel only**

**Never work on injection system with engine running or within 30 seconds after shutting off engine. High pressure pump, rail, injectors and high pressure pipes are subject to high pressure even after the engine stopped. The fuel jet produced by fuel leaks may cause serious injury, if it touch the body. People using pacemakers should not move than 30cm closer to the ECU or wiring harness within the engine room while engine is running, since the Common Rail system produce considerable magnetic fields.**

## VEHICLE MAINTENANCE REQUIREMENTS

### SCHEDULED MAINTENANCE

The following maintenance services must be performed to assure good vehicle control and performance. Keep receipts for all vehicle services to protect your warranty.

Wherever the mileage is shown, it is the maximum mileage before which periodic maintenance should be carried out.

No.	DESCRIPTION	KILOMETERS X 1000	1.5	10	20	30	40	50	60	70	80
<b>A ENGINE COMPARTMENT</b>											
1	Engine oil & Filter (Level, Leakage) API Grade SG & above		I	R	R	R	R	R	R	R	R
2	Engine Coolant (Level, Condition)		I	I	I	R	I	I	R	I	I
3	Engine Cooling system (Level, Leakage, hose connection)		I	I	I	I	I	I	I	I	I
4	Brake Oil (Level, Leakage)		I	I	I	R	I	I	R	I	I
5	Air Cleaner Element		-	I	R	I	R	I	R	I	R
6	Spark Plug (Cleaning, Gap adjustment)		-	C	C	R	C	C	R	C	C
7	High Tension Cable and spark plug cable (Cracks or Deterioration)		I	I	I	I	I	I	I	I	I
8	Battery Electrolyte (Level, Spillage, Gravity)		-	I	I	I	I	I	I	I	I
9	Ignition Timing and idle rpm adjustment		-	I	I	I	I	I	I	I	I
10	Throttle Body		-	C	C	C	C	C	C	C	C
11	Water Pump Drive Belt (Tension, Wear)-(Inspect: Replace if necessary)		-	I	I	I	I	I	I	I	I
12	Power Steering Pump Belt (Tension, Wear)-(Inspect: Replace if necessary)		-	I	I	I	I	I	I	I	I
13	Air Con Drive Belt (Tension, Wear)-(Inspect: Replace if necessary)		-	I	I	I	I	I	I	I	I
14	Air Con Refrigerant Leakage (hoses, joints/tighten)		I	I	I	I	I	I	I	I	I
15	Power Steering Pump noise and oil Level (if installed)		-	I	I	I	I	I	I	I	I

Use Hyundai Genuine Engine oil, Transmission oil, Power oil, Brake oil & Coolant.

Note : Time Interval between any two consecutive services should not exceed more than six months.

I: Inspect, R: Replace, C: Clean (After Inspection, Adjust, Repair, Clean or Replace if necessary)

## VEHICLE MAINTENANCE REQUIREMENTS

No.	DESCRIPTION	KILOMETERS X 1000	1.5	10	20	30	40	50	60	70	80
17	Accelerator / Clutch Cable route & condition		-	I	I	I	I	I	I	I	I
18	Cylinder Head / Tappet Cover Bolts tighten		I	I	I	I	I	I	I	I	I
19	All hoses for kinks, bends or crack		I	I	I	I	I	I	I	I	I
20	Positive Crankcase Ventilation valve		-	I	I	I	I	I	I	I	I
21	Camshaft timing belt (damage & wear)		-	-	I	-	I	-	I	-	R
22	Valve Clearance		-	-	-	I	-	-	-	-	-
<b>B BODY – CHASSIS -INTERIORS</b>											
23	Headlights Operation & Aim		I	I	I	I	I	I	I	I	I
24	Lighting System Operation & Stains (Turn signal, Tail light etc.)		I	I	I	I	I	I	I	I	I
25	Electric Horn (Damage)		-	I	I	I	I	I	I	I	I
26	Door windows & Locks for Proper Operation		-	I	I	I	I	I	I	I	I
27	Cigarette Lighter (if installed)		-	I	I	I	I	I	I	I	I
28	Trunk, Hood & Fuel Filter Door Operation		-	I	I	I	I	I	I	I	I
29	Air Con Ducts (Crack, operation)		-	I	I	I	I	I	I	I	I
30	Steering Wheel, Clutch Pedal & Brake Pedal free play		-	I	I	I	I	I	I	I	I
31	Seat Belt Condition and Operation		-	I	I	I	I	I	I	I	I
32	Parking Brake Lever Operation		-	I	I	I	I	I	I	I	I
<b>C UNDER VEHICLE</b>											
33	Manual T/Mission Oil (Level, Leak)		-	I	I	R	I	I	R	I	I
34	Automatic T/Mission Oil (Level, Leak)		I	I	I	I	I	I	I	I	I

Camshaft timing belts shall be replaced at every 80,000 Km.

I: Inspect, R: Replace, C: Clean (After Inspection, Adjust, Repair, Clean or Replace if necessary)

Note: Time Interval between any two consecutive services should not exceed more than six months.

## VEHICLE MAINTENANCE REQUIREMENT

No.	DESCRIPTION	KILOMETERS X 1000	1.5	10	20	30	40	50	60	70	80
35	Drive Shaft (bent, boots damage)		-	I	I	I	I	I	I	I	I
36	Fuel Filer		-	I	I	R	I	I	R	I	I
37	Damage on Oil sump		I	I	I	I	I	I	I	I	I
38	All bolts tightening condition under vehicle		I	I	I	I	I	I	I	I	I
39	Exhaust system for proper alignment / clearance		I	I	I	I	I	I	I	I	I
40	Proper Tie Rod Clamp position		I	I	I	I	I	I	I	I	I
41	Steering Rack & Pinion (Leaks & damages)		I	I	I	I	I	I	I	I	I
42	Brake disc & pads for Unusual wear		-	I	I	I	I	I	I	I	I
43	Rear Brake drum & shoes (Wear)		-	I	I	I	I	I	I	I	I
44	Suspension Strut (Oil leak & Damage)		I	I	I	I	I	I	I	I	I
45	Shock Absorbers (Oil leak & Damage)		I	I	I	I	I	I	I	I	I
46	Wheel Alignment / Balancing if required (On Chargeable Basis		-	-	I	-	-	I	-	-	I
47	Type condition & rotation (if required)		-	TR	TR	TR	TR	TR	TR	TR	TR
48											
<b>D ROAD TEST &amp; APPEARANCE</b>											
49	Clutch Slipping (Dragging or damage)		-	-	I	-	I	-	I	-	I
50	Instrument Panel Gauges		-	-	I	-	I	-	I	-	I
51	Unusual Sounds & Body Rattling		-	-	I	-	I	-	I	-	I
52	Brake Performance		-	-	I	-	I	-	I	-	I
53	Transmission Gear shift		-	-	I	-	I	-	I	-	I
54	Overall vehicle performance		-	-	I	-	I	-	I	-	I

Note: Time Interval between any two consecutive services should not exceed more than six months.

I : Inspect, R: Replace, C : Clean, TR: Type Rotation (After Inspection, Adjust, Repair, Clean or Replace if necessary)

## VEHICLE MAINTENANCE REQUIREMENTS

F060A01A-AAT

### **EXPLANATION OF SCHEDULED MAINTENANCE ITEMS**

F060M01A-AAT

#### **Engine oil and filter**

The engine oil and filter should be changed at the intervals specified in the maintenance schedule. If the car is being driven in severe conditions, more frequent oil and filter changes are required.

F060B01A-AAT

#### **Drive belts**

Inspect all drive belts for evidence of cuts, cracks, excessive wear or oil and replace if necessary. Drive belts should be checked periodically for proper tension and adjusted as Necessary.

F060C01A-AAT

#### **Fuel filter**

A clogged filter can limit the speed at which the vehicle may be driven, damage the emission system and Cause hard starting. If an excessive amount of foreign matter accumulates in the fuel tank, the Filter may require replacement more frequently.

After installing a new filter, run the engine for several minutes, and Check for leaks at the connections.

F060D01A-AAT

#### **Fuel lines, fuel hoses and connections**

Check the fuel lines, fuel hoses and connections for leakage and Damage. Replace any damaged or leaking parts immediately.

F060E01A-AAT

#### **Timing belt**

Inspect all parts related to the timing belt for damage and deformation. Replace any damaged parts Immediately.

F060G01A-AAT

#### **Vapor hose and fuel filter cap**

The vapor hose and fuel filter cap should be inspected at those intervals Specified in the Maintenance schedule. Make sure that a new vapor hose or fuel filter cap is correctly replaced.

F060F01A-AAT

#### **Vacuum, crankcase Ventilation hoses**

Inspect the surface of hoses for Evidence of heat And/ or Mechanical Damage. Hard and brittle rubber, cracking, tears, cuts, abrasions, and excessive swelling indicate deterioration Particular attention should be paid to examine those hose surfaces nearest to high heat sources, such as the exhaust manifold. Inspect the hose routing to assure that the hoses does not come in contact with any heat source, sharp edges or moving component which might cause heat damage or mechanical wear. Inspect all hose connections, such as clamps and Couplings, to make sure they are secure, and that no leaks are present.

Hoses should be replaced immediately if there is any evidence of deterioration or damage.

F060H01A-AAT

#### **Air cleaner filter**

A Genuine Hyundai air cleaner filter is recommended when filter is replaced.

F060N01X-GAT

#### **Valve clearances**

Incorrect valve clearance will not only result in unsteady engine operation, will also cause excessive noise and reduced engine Performance. Inspect valve clearance and adjust as required while the engine is hot

Valve-to-rocker arm clearance - Hot  
Intake valves I.....0.2 mm  
Exhaust valves E.....0.25 mm

Valve-to-rocker arm clearance – Hot  
Intake valves I.....0.1 mm  
Exhaust valves E ....0.17 mm



## VEHICLE MAINTENANCE REQUIREMENTS

F070601A-GAT

### **Cooling System**

Check the cooling system part, such as radiator, coolant reservoir, hoses and Connections for leakage and Damage. Replace any damaged parts.

F070C01A-AAT

### **Engine coolant**

The coolant should be changed at the Intervals specified in the maintenance Schedule.

F070Q01X-GAT

### **Manual or semi-automatic Transaxle oil**

Inspect the manual or semi-automatic Transaxle oil according to the maintenance schedule.

#### **NOTE:**

**If the oil level is low, check for possible leaks before adding oil. Do not overfill.**

F070E01X-GAT

### **Automatic transaxle fluid**

The fluid level should be in the "HOT" range of the dipstick, after the engine and transaxle are at normal operating Temperature. Check the Automatic Transaxle Fluid level with the engine Running and the transaxle in neutral, With the parking property applied. Use ESSO, JWS-3314 when adding or Changing fluid.

F070F01A-AAT

### **Brake hoses and lines**

Visually check for proper installation, Chafing cracks, deterioration and any Leakage. Replace any deteriorated or Damaged parts immediately.

F070G01A-AAT

### **Brake fluid**

Check brake fluid level in the brake fluid Reservoir. The level should be between "MIN" and "MAX" marks on the side of the reservoir. Use only hydraulic brake fluid conforming to DOT 3.

F070H01A-AAT

### **Rear brake drums/linings, Parking brake**

Check the rear brake drums and linings for scoring, burning, leaking fluid, broken parts, and excessive wear. Inspect the parking brake system including the parking brake lever and cables. For detailed service procedures, refer to the Shop Manual.

F070J01A-AAT

### **Brake pads, calipers and rotors**

Check the pads for excessive wear, discs for run out and wear, and calipers for fluid leakage.

F070K01A-AAT

### **Exhaust pipe and muffler**

Visually inspect the exhaust pipes muffler And hangers for cracks, deterioration, or damage. Start the engine and listen Carefully for any exhaust gas leakage. Tighten Connections or replace parts as necessary.

F070L01A-AAT

### **Suspension mounting bolts**

Check the suspension connections for Looseness or damage. Retighten to the specified torque.

F070M01A-AAT

### **Steering gear box, linkage & boots/ lower arm ball joint**

With the vehicle stopped and engine off, Check for excessive free-play in the steering wheel Check the linkage for bends or damage. Check the dust boots and ball joints for deterioration, cracks, or damage. Replace any damage parts.

F070N01A-AAT

### **Power steering pump, belt and hoses (if installed)**

Check the power steering pump and Hoses for leakage and damage. Replace any damaged or leaking parts Immediately. Inspect the power steering belt for evidence of cuts, cracks, excessive wear, oiliness and proper Tension. Replace or adjust it if necessary.

## VEHICLE MAINTENANCE REQUIREMENTS

F070P01A-AAT

- **Driveshaft and boots**

Check the drive shafts, boots and clamps for cracks, deterioration, or damage. Replace any damaged parts and, if necessary repack the grease.

F070Q01A-AAT

- **Air conditioning refrigerant**

Check the air conditioning lines and connections for leakage and damage. Check air conditioning performance according to the relevant shop manual if necessary.

F070R02X-GAT

- **Rear wheel bearing grease**

Check rear wheel bearing grease whenever the brake drums are removed to inspect the rear brake system.