SECTION : 0B

GENERAL INFORMATION

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SPECIFICATIONS

TECHNICAL DATA

Performance – Manual Transaxle

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Maximum Speed	175 km/h (108.7 mph)	187 km/h (116.2 mph)	194 km/h (120.5 mph)
Minimum Turning Radius	5.2 m (17.1 ft)	←	←

Performance – Automatic Transaxle

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Maximum Speed	–	175 km/h (108.7 mph)	184 km/h (114.3 mph)
Minimum Turning Radius	–	5.2 m (17.1 ft)	←

Engine

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Engine Type	Dual Overhead Cam L–4	←	←
Bore	77.9 mm (3.06 in.)	79 mm (3.11 in.)	81.6 mm (3.21 in.)
Stroke	73.4 mm (2.89 in.)	81.5 mm (3.21 in.)	86 mm (3.38 in.)
Total Displacement	1399 cm^3 (85.4 $in.^3$)	1598 cm^3 (97.5 $in.^3$)	1799 cm^3 (109.7 in^3)
Compression Ratio	9.5 : 1	←	9.8 : 1
Maximum Power	69.5 kw (93.2 hp) (at 6,300 rpm)	80 kw (107.3 hp) (at 5,800 rpm)	90 kw (120.7 hp) (at 5,800 rpm)
Maximum Torque	131 N_m (96.6 lb–ft) (at 4,400 rpm)	150 N•m (110.6 lb–ft) (at 4,000 rpm)	165 N•m (121.7 lb–ft) (at 4,000 rpm)

Ignition System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Ignition Type	Direct Ignition System	←	←
Ignition Timing (BTDC)	4˚	5˚	←
Ignition Sequence	1–3–4–2	←	←
Spark Plug Gap	1.0 ~ 1.1 mm (0.039 ~ 0.043 in.)	←	0.9 ~ 1.1 mm (0.035 ~ 0.043 in.)
Spark Plug Maker	Woojin	←	Boach
Spark Plug Type	BKR6E–11	←	FLR8LDCU

Clutch

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Type	Single Dry Plate	←	←
Outside Diameter	215 mm (8.5 in.)	←	←
Inside Diameter	145 mm (5.7 in.)	←	←
Thickness	8.4 mm (0.331 in.)	←	←
Fluid	Common Use: Brake Fluid	←	←

Manual Transaxle

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Maker	GMDAT	GMDAT	←
Type or Model	D–16 (C/R)	D–16 (C/R)	←
Gear Ratio :			
1st	3.818 : 1	3.545 : 1	←
2nd	2.158 : 1	2.158 : 1	←
3rd	1.478 : 1	1.478 : 1	←
4th	1.129 : 1	1.129 : 1	←
5th	0.886 : 1	0.886 : 1	←
Reverse	3.333 : 1	3.333 : 1	←
Final Drive Ratio	3.722 : 1	3.722 : 1	←
Oil Capacity	1.8L (2 qts)	←	←

Automatic Transaxle

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Maker	–	AISIN	ZF
Type or Model	–	81–40LE	4HP16
Gear Ratio :			
1st	–	2.875:1	2.719:1
2nd	–	1.568:1	1.487:1
3rd	–	1.000:1	1.000:1
4th	–	0.697:1	0.717:1
Reverse	–	2.300:1	2.529:1
Final Drive Ratio	–	3.750:1	3.945:1
Oil Capacity	–	5.77±0.2L (6.1±0.2 qts)	6.9±0.2L (7.3±0.2 qts)

Brake

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Booster Size :			
Single	241.3 mm (9.5 in.)	←	←
Dual	177.8 and 203.2 mm (7 and 8 in.)	←	←
Master Cylinder Diameter	22.22 mm (0.875 in.)	←	←
Booster Ratio	5.5 : 1	←	←
Front Brake :			
Disc Type	Ventilated	←	←
Disc Size	256 mm (10 in.)	←	←
Rear Brake (Drum) :			
Drum Inside Diameter	200 mm (7.9 in.)	←	←
Wheel Cylinder Diameter	20.64 mm (0.813 in.)	←	←
Rear Brake (Disc) :			
Disc Type	Solid	←	←
Disc Size	258 mm (10.2 in.)	←	←
Fluid Capacity	0.5L (0.5 qts)	←	←

Tire and Wheel

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Tire Size	195/55R15	←	←
Standard Wheel Size	6Jx15 (Steel)	←	←
Optional Wheel Size	6Jx15 (Alloy)	←	←
Inflation Pressure at Full Load	30 psi (207 kPa)	←	←

Steering System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Gear Type	Power Rack and Pinion	←	←
Overall Gear Ratio			
Power Steering	16 : 1	←	←
Wheel Diameter			
W/ Air Bag	380 mm (15.0 in.)	←	←
W/O Air Bag	370 mm (14.5 in.)	←	←
Wheel Alignment :			
Front :			
Toe–In	0˚ ± 10’	←	←
Caster	4˚ ± 45’	←	←
Camber	20’ ± 45’	←	←
Rear :			
Toe–In	12’ ± 10’	←	←
Camber	–1˚ ± 45’	←	←
Oil Capacity	1.1L (1.2 qts)	←	←

Suspension

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Front Type	Macpherson Strut	←	←
Rear Type	Dual Link	←	←

Fuel System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Fuel Delivery	MPI	←	←
Fuel Pump Type	Electric Motor Pump	←	←
Fuel Filter Type	Cartridge	←	←
Fuel Capacity	60L (15.85 gal)	←	←

Lubricating System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Lubricating Type	Forced Feed	←	←
Oil Pump Type	Rotary (Trochoid)	←	←
Oil Filter Type	Cartridge (Full Flow)	←	←
Oil Pan Capacity			
Including Oil Filter	3.75L (4 qts)	←	4.0L (4.2 qts)

Cooling System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Cooling Type	Forced Water Circulation	←	←
Radiator Type	Cross–flow	←	←
Water Pump Type	Centrifugal	←	←
Thermostat Type	Pellet Type	←	←
Coolant Capacity	7.0L (7.49 qts)	7.2L (7.6 qts)	7.4L (7.8 qts)

Electric System

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Battery	12V–55 AH	←	←
	610 CCA (Cold Cranking Amps)	←	←
Alternator	85 Amps	←	95 Amps
Starter	1.2 KW	←	1.4 KW
No–Load Test @ 12.2 volts	90 Amps Max	←	85 Amps Max
Drive Pinion Speed at :	Min. 2,600 rpm	←	Min. 2,550 rpm

VEHICLE DIMENSIONS AND WEIGHTS

Vehicle Dimensions

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Overall Length			
4 Door	4,500 mm (177.2 in.)	←	←
5 Door H/B	4,295 mm (169.1 in.)	←	←
Overhang :			
4 Door			
Front	885 mm (34.8 in.)	←	←
Rear	1,015 mm (40.0 in.)	←	←
5 Door H/B			
Front	902 mm (35.5 in.)	←	←
Rear	793 mm (31.2 in.)	←	←
Overall Width	1,725 mm (67.9 in.)	←	←
Overall Height	1,445 mm (56.9 in.)	←	←
Minimum Ground Clearance	160 mm (6.3 in.)	←	←
Wheel Base	2,600 mm (102.4 in.)	←	←
Tread :			
Front	1,480 mm (58.3 in.)	←	←
Rear	1,480 mm (58.3 in.)	←	←

Vehicle Weights – 4 Door

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Manual :			
Curb Weight :			
Standard	1,175 kg (2,590 lb)	1,180 kg (2,601 lb)	1,210 kg (2,668 lb)
Optional	1,225 kg (2,701 lb)	1,230 kg (2,712 lb)	1,260 kg (2,778 lb)
Gross Vehicle Weight	1,660 kg (3,660 lb)	1,665 kg (3,671 lb)	1,695 kg (3,737 lb)
Automatic :			
Curb Weight :			
Standard	–	1,190 kg (2,624 lb)	1,235 kg (2,723 lb)
Optional	–	1,240 kg (2,734 lb)	1,285 kg (2,833 lb)
Gross Vehicle Weight	–	1,675 (3,693 lb)	1,720 kg (3,792 lb)
Passenger Capacity	5	←	←

Optional Weight : ABS, Sun Roof, A/C

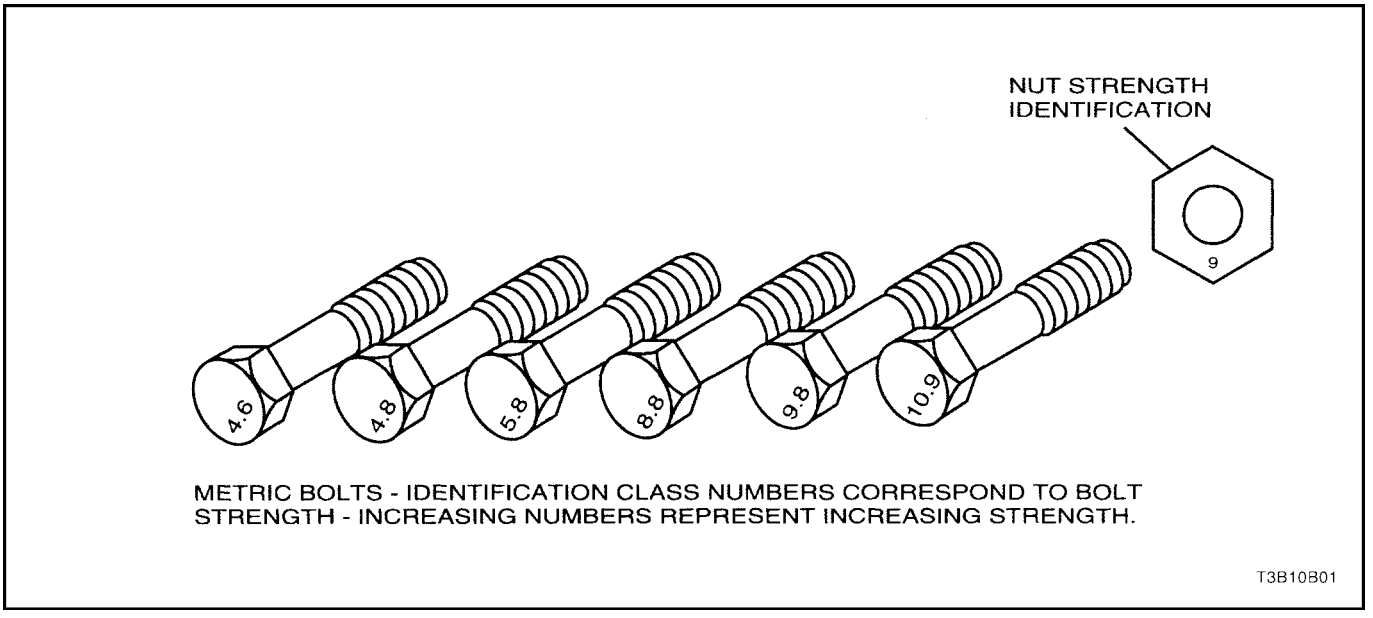
Vehicle Weights – 5 Door H/B

Application	1.4L DOHC	1.6L DOHC	1.8L DOHC
Manual :			
Curb Weight :			
Standard	1,170 kg (2,580 lb)	1,175 kg (2,590 lb)	1,205 kg (2,657 lb)
Optional	1,220 kg (2,690 lb)	1,225 kg (2,701 lb)	1,255 kg (2,767 lb)
Gross Vehicle Weight	1,645 kg (3,627 lb)	1,650 kg (3,638 lb)	1,680 kg (3,704 lb)
Automatic :			
Curb Weight :			
Standard	–	1,185 kg (2,612 lb)	1,230 kg (2,712 lb)
Optional	–	1,235 kg (2,723 lb)	1,280 kg (2,822 lb)
Gross Vehicle Weight	–	1,660 kg (3,660 lb)	1,705 kg (3,759 lb)
Passenger Capacity	5	←	←

Optional Weight : ABS, Sun Roof, A/C

STANDARD BOLT SPECIFICATIONS

Bolt*	4T – Low Carbon Steel	7T – High Carbon Steel	7T – Alloy Steel
M6 X 1.0	4.1–8.1 N•m (36–72 lb–in)	5.4–9.5 N•m (48–84 lb–in)	–
M8 X 1.25	8.1–17.6 N•m (72–156 lb–in)	12.2–23.0 N•m (108–204 lb–in)	16–30 N•m (12–22 lb–ft)
M10 X 1.25	20–34 N•m (15–25 lb–ft)	27–46 N•m (20–34 lb–ft)	37–62 N•m (27–46 lb–ft)
M10 X 1.5	19–34 N•m (14–25 lb–ft)	27–45 N•m (20–33 lb–ft)	37–60 N•m (27–44 lb–ft)
M12 X 1.25	49–73 N•m (36–54 lb–ft)	61–91 N•m (45–67 lb–ft)	76–114 N•m (56–84 lb–ft)
M12 X 1.75	45–69 N•m (33–51 lb–ft)	57–84 N•m (42–62 lb–ft)	72–107 N•m (53–79 lb–ft)
M14 X 1.5	76–115 N•m (56–85 lb–ft)	94–140 N•m (69–103 lb–ft)	114–171 N•m (84–126 lb–ft)
M14 X 2.0	72–107 N•m (53–79 lb–ft)	88–132 N•m (65–97 lb–ft)	107–160 N•m (79–118 lb–ft)
M16 X 1.5	104–157 N•m (77–116 lb–ft)	136–203 N•m (100–150 lb–ft)	160–240 N•m (118–177 lb–ft)
M16 X 2.0	100–149 N•m (74–110 lb–ft)	129–194 N•m (95–143 lb–ft)	153–229 N•m (113–169 lb–ft)
M18 X 1.5	151–225 N•m (111–166 lb–ft)	195–293 N•m (144–216 lb–ft)	229–346 N•m (169–255 lb–ft)
M20 X 1.5	206–311 N•m (152–229 lb–ft)	270–405 N•m (199–299 lb–ft)	317–476 N•m (234–351 lb–ft)
M22 X 1.5	251–414 N•m (185–305 lb–ft)	363–544 N•m (268–401 lb–ft)	424–636 N•m (313–469 lb–ft)
M24 X 2.0	359–540 N•m (265–398 lb–ft)	431–710 N•m (318–524 lb–ft)	555–831 N•m (409–613 lb–ft)
* Diameter X pitch in millimeters			



MAINTENANCE AND REPAIR

MAINTENANCE AND LUBRICATION

NORMAL VEHICLE USE

The maintenance instructions contained in the maintenance schedule are based on the assumption that the vehicle will be used for the following reasons:

- To carry passengers and cargo within the limitation indicated on the tire placard located on the edge of the driver's door.
- To be driven on reasonable road surfaces and within legal operating limits.

EXPLANATION OF SCHEDULED MAINTENANCE SERVICES

The services listed in the maintenance schedule are further explained below. When the following maintenance services are performed, make sure all the parts are replaced and all the necessary repairs are done before driving the vehicle. Always use the proper fluid and lubricants.

Drive Belt Inspection

When a separate belt drives the power steering pump, the air conditioning compressor and the generator, inspect it for cracks, fraying, wear and proper tension. Adjust or replace the belt as needed.

Engine Oil and Oil Filter Change

API Classifications of Engine Oil

The International Lubricant Standardization and Approval Committee (ILSAC) and American Petroleum Institute classifies engine oils according to their performance quality. Always use oil rated API–SL (ILSAC GF–III) or better.

Engine Oil Viscosity

Engine oil viscosity (thickness) has an effect on fuel economy and cold weather operation. Lower viscosity engine oils can provide better fuel economy and cold weather performance; however, higher temperature weather conditions require higher viscosity engine oils for satisfactory lubrication. Using oils of any viscosity other than those viscosities recommended could result in engine damage.

Cooling System Service

Drain, flush and refill the system with new coolant. Refer to "Recommended Fluids And Lubricants" in this section.

Fuel Micro–Filter Replacement

Replace the engine fuel filter every 45,000 km (27,000 miles).

Air Cleaner Element Replacement

Replace the air cleaner element every 45,000 km (27,000 miles).

Replace the air cleaner more often under dusty conditions.

Throttle Body Mounting Bolt Torque

Check the torque of the mounting bolts.
Tighten the throttle body mounting bolts to 15 N•m (11 lb–ft) if necessary.

Spark Plug Replacement

Replace spark plugs with the same type.

Spark Plug Wire Replacement

Clean wires and inspect them for burns, cracks or other damage. Check the wire boot fit at the DIS module and at the spark plugs. Replace the wires as needed.

Brake System Service

Check the disc brake pads and the drum brake linings every 15,000 km (9,000 miles) or 12 months. Check the pad and the lining thickness carefully. If the pads or the linings are not expected to last to the next scheduledmaintenance service, replace the pads or the linings. Check the breather hole in the brake fluid reservoir cap to be sure it is free from dirt and the passage is open.

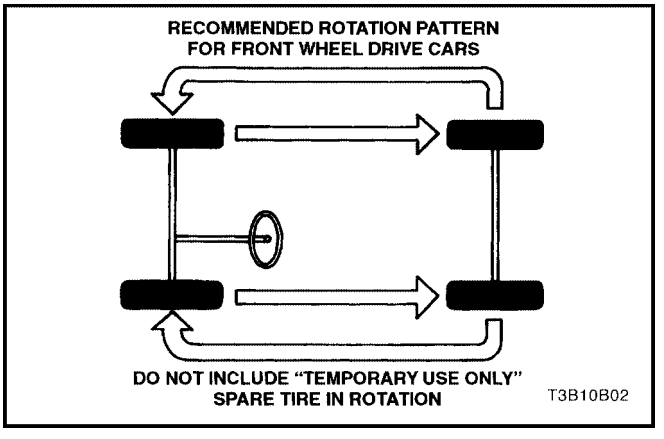
Transaxle Service

The manual transaxle fluid does not require changing. For automatic transaxles, refer to "Scheduled Maintenance Charts" in this section.

Tire and Wheel Inspection and Rotation

Check the tires for abnormal wear or damage. To equalize wear and obtain maximum tire life, rotate the tires. If irregular or premature wear exists, check the wheel alignment and check for damaged wheels. While the tires and wheels are removed, inspect the brakes. Refer to "Each Time The Oil Is Changed" in this section.

Tire Rotation



SCHEDULED MAINTENANCE CHARTS

Engine

Maintenance Item	Maintenance Interval								
	Kilometers or time in months, whichever comes first								
x 1,000 km	**1**	**15**	**30**	**45**	**60**	**75**	**90**	**105**	**120**
x 1,000 miles	**0.6**	**9**	**18**	**27**	**36**	**45**	**54**	**63**	**72**
Months	**–**	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**
Drive belts (Alternator, power steering and A/C belt)			I		I		I		I
Engine oil & engine oil filter (1) (3)	I	R	R	R	R	R	R	R	R
Cooling system hose & connections		I	I	I	I	I	I	I	I
Engine coolant (3)	I	I	I	R	I	I	R	I	I
Fuel filter				R			R		
Fuel line and connections		I	I	I	I	I	I	I	I
Air cleaner element (2)		I	I	R	I	I	R	I	I
Spark plugs (1.4D/1.6D)		I	R	I	R	I	R	I	R
Spark plugs (1.8D)			I		R		I		R
Spark plug wires	Replace every 90,000 km(54,000 miles)								
EVAP canister, vapor lines & solenoid valve filter				I			I		
PCV system			I		I		I		I
Timing belt			I		R		I		R

Chart Symbols:
I –Inspect, and if necessary correct, clean, replenish or adjust.
R – Replace or change:
(1) Change the engine oil and oil filter every 7,500 km (4,500 miles) or 6months, whichever comes first, if the vehicle is operated under any of the following conditions:

- Short distance driving.
- Extensive idling.
- Driving on dusty roads.

(2) Inspect the air cleaner element every 7,500 km (4,500 miles) or 6 months if driving under dusty conditions. If necessary, correct, clean or replace.
(3) Refer to ”Recommended Fluids And Lubricants”

Note : Check the engine oil and radiator coolant levels every week.

Chassis and Body

Maintenance Item	**Maintenance Interval**								
	Kilometers or time in months, whichever comes first								
x 1,000 km	**1**	**15**	**30**	**45**	**60**	**75**	**90**	**105**	**120**
x 1,000 miles	**0.6**	**9**	**18**	**27**	**36**	**45**	**54**	**63**	**72**
Months	**–**	**12**	**24**	**36**	**48**	**60**	**72**	**84**	**96**
Interior air filter (A/C)		R	R	R	R	R	R	R	R
Exhaust pipes & mountings		I	I	I	I	I	I	I	I
Brake/Clutch fluid (1) (4)	I	I	R	I	R	I	R	I	R
Front brake pads and discs(3)		I	I	I	I	I	I	I	I
Rear brake pads & discs or drums and linings (3)		I	I	I	I	I	I	I	I
Parking brake	I	I	I	I	I	I	I	I	I
Brake line and connections (Including booster)		I	I	I	I	I	I	I	I
Manual Transaxle Oil *(1)		I	I	I	I	I	I	I	I
Automatic transaxle fluid *(1) (5)		I	I	I	I	I	I	I	I
Tighten chassis and underbody bolts and nuts		I	I	I	I	I	I	I	I
Tire condition and inflation pressure	I	I	I	I	I	I	I	I	I
Wheel alignment (2)	Inspect when abnormal condition is noted								
Steering wheel and linkage		I	I	I	I	I	I	I	I
Power steering fluid & lines* (1)	I	I	I	I	I	I	I	I	I
Drive shaft boots		I	I	I	I	I	I	I	I
Seat belts, buckles and anchors		I	I	I	I	I	I	I	I
Lubricate locks, hinges and hood latch		I	I	I	I	I	I	I	I

Chart Symbols:
I – Inspect and if necessary correct, clean, replenish, or adjust.
R – Replace or change:
(1) Refer to Recommended Fluids And Lubricants.
(2) And if necessary, rotate and balance wheels.
(3) More frequent if operated under severe conditions: short distance driving, extensive idling, frequent low–speed operaion in stop and go traffic, or driving in dusty conditions.
(4) Change the brake/clutch fluid every 15,000 km (9,000 miles), if the vehicle is mainly driven under the following severe conditions: driving in hilly or mountainous terrain, or towing a trailer/caravan frequently.
(5) 1.8 DOHC model (ZF 4HP16 Automatic Transaxle): Change automatic transaxle fluid every 60,000 Km (36,000 miles) if the vehicle is mainly driven under any of the following severe conditions:

- In heavy city traffic where the outside temperature regularly reaches 32˚C (90˚F) or higher, or
- In hilly or mountainous terrain, or
- When doing frequent trailer towing, or
- Uses such as taxi, police or delivery service.

OWNER INSPECTIONS AND SERVICES

WHLE OPERATING THE VEHICLE

Horn Operation
Blow the horn occasionally tomake sure it works. Check all the button locations.

Brake System Operation
Be alert for abnormal sounds, increased brake pedal travel or repeated pulling to one side when braking. Also, if the brake warning light goes on, or flashes, something may be wrong with part of the brake system.

Exhaust System Operation
Be alert to any changes in the sound of the system or the smell of the fumes. These are signs that the system may be leaking or overheating. Have the system inspected and repaired immediately.

Tires,Wheels and Alignment Operation
Be alert to any vibration of the steering wheel or the seats at normal highway speeds. This may mean a wheel needs to be balanced. Also, a pull right or left on a straight, level road may show the need for a tire pressure adjustment or a wheel alignment.

Steering System Operation
Be alert to changes in the steering action. An inspection is needed when the steering wheel is hard to turn or has too much free play, or if unusual sounds are noticed when turning or parking.

Headlight Aim
Take note of the light pattern occasionally. Adjust the headlights if the beams seem improperly aimed.

AT EACH FUEL FILL
A fluid loss in any (except windshield washer) system may indicate a problem. Have the system inspected and repaired immediately.

Engine Oil Level
Check the oil level and add oil if necessary. The best time to check the engine oil level is when the oil is warm.

1. After stopping the engine, wait a few minutes for the oil to drain back to the oil pan.
2. Pull out the oil level indicator (dip stick).
3. Wipe it clean, and push the oil level indicator back down all the way.
4. Pull out the oil level indicator and look at the oil level on it.
5. Add oil, if needed, to keep the oil level above the MIN line and within the area labeled ”Operating Range.” Avoid overfilling the engine, since this may cause engine damage.
6. Push the indicator all the way back down into the engine after taking the reading.

If you check the oil level when the oil is cold, do not run the engine first. The cold oil will not drain back to the pan fast enough to give a true oil level reading.

Engine Coolant Level and Condition
Check the coolant level in the coolant reservoir tank and add coolant if necessary. Inspect the coolant. Replace dirty or rusty coolant.

Windshield Washer Fluid Level
Check the washer fluid level in the reservoir. Add fluid if necessary.

AT LEAST MONTHLY

Tire And Wheel Inspection and Pressure Check
Check the tires for abnormal wear or damage. Also check for damaged wheels. Check the tire pressure when the tires are cold (check the spare also, unless it is a stowaway). Maintain the recommended pressures that are on the tire placard that is in the glove box.

Light Operation
Check the operation of the license plate light, the headlights (including the high beams), the parking lights, the fog lights, the taillight, the brake lights, the turn signals, the backup lights and the hazard warning flasher.

Fluid Leak Check
Periodically inspect the surface beneath the vehicle for water, oil, fuel or other fluids, after the vehicle has been parked for a while. Water dripping from the air conditioning system after use is normal. If you notice fuel leaks or fumes, find the cause and correct it at once.

AT LEAST TWICE A YEAR

Power Steering System Reservoir Level
Check the power steering fluid level. Keep the power steering fluid at the proper level. Refer to *Section 6A, Power Steering System.*

Brake Master Cylinder Reservoir Level
Check the fluid and keep it at the proper level. A low fluid level can indicate worn disc brake pads which may need to be serviced. Check the breather hole in the reservoir cover to be free from dirt and check for an open passage.

Clutch Pedal Free Travel
Check clutch pedal free travel and adjust as necessary. Measure the distance from the center of the clutch pedal to the outer edge of the steering wheel with the clutch pedal not depressed. Then measure the distance from the center of the clutch pedal to the outer edge of the steering wheel with the clutch pedal fully depressed. The difference between the two values must be greater than 130 mm (5.19 inches).

Weather–Strip Lubrication
Apply a thin film silicone grease using a clean cloth.

EACH TIME THE OIL IS CHANGED

Automatic Transaxle Fluid
Refer to fluid level service procedure of *Section 5A, ZF 4HP16 Automatic Transaxle.*

Manual Transaxle
Check the fluid level and add fluid as required. Refer to *Section 5B, Five–Speed Manual Transaxle.*

Brake System Inspection
This inspection should be done when the wheels are removed for rotation. Inspect the lines and the hoses for proper hookup, binding, leaks, cracks, chafing, etc. Inspect the disc brake pads for wear. Inspect the rotors for surface condition. Also inspect the drum brake linings for wear and cracks. Inspect other brake parts, including the drums, the wheels cylinders, the parking brake, etc., at the same time. Check the parking brake adjustment. Inspect the brakes more often if habit or conditions result in frequent braking.

Steering, Suspension and Front Drive Axle Boot And Seal Inspection
Inspect the front and rear suspension and the steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect the power steering lines and the hoses for proper hookup, binding, leaks, cracks, chafing, etc. Clean and inspect the drive axle boot and seals for damage, tears or leakage. Replace the seals if necessary.

Exhaust System Inspection
Inspect the complete system (including the catalytic converter if equipped). Inspect the body near the exhaust system. Look for broken, damaged, missing, or out–of–position parts as well as open seams, holes, loose connections, or other conditions which could cause heat buildup in the floor pan or could let exhaust fumes seep into the trunk or passenger compartment.

Throttle Linkage Inspection
Inspect the throttle linkage for interference or binding, damaged, or missing parts. Lubricate all linkage joints and throttle cable joints, the intermediate throttle shaft bearing, the return spring at throttle valve assembly, and the accelerator pedal sliding face with suitable grease. Check the throttle cable for free movements.

Engine Drive Belts
Inspect all belts for cracks, fraying, wear and proper tension. Adjust or replace the belts as needed.

Hood Latch Operation
When opening the hood, note the operation of the secondary latch. It should keep the hood from opening all the way when the primary latch is released. The hood must close firmly.

AT LEAST ANNUALLY

Lap and Shoulder Belts Condition and Operation
Inspect the belt system including: the webbing, the buckles, the latch plates, the retractor, the guide loops and the anchors.

Movable Head Restraint Operation
On vehicles with movable head restraints, the restraints must stay in the desired position.

Spare Tire and Jack Storage
Be alert to rattles in the rear of the vehicle. The spare tire, all the jacking equipment, and the tools must be securely stowed at all times. Oil the jack ratchet or the screw mechanism after each use.

Key Lock Service
Lubricate the key lock cylinder.

Body Lubrication Service
Lubricate all the body door hinges including the hood, the fuel door, the rear compartment hinges and the latches, the glove box and the console doors, and any folding seat hardware.

Transaxle Neutral Switch Operation on Automatic Transaxle
CAUTION : Take the following precautions because the vehicle could move without warning and possibly cause personal injury or property damage:

- Firmly apply the parking brake and the regular brakes.
- Do not use the accelerator pedal.
- Be ready to promptly turn off the ignition if the vehicle starts.

On automatic transaxle vehicles, try to start the engine in each gear. The starter should crank only in P (Park) or N (Neutral).

Parking Brake and Transaxle P (Park) Mechanism Operation
CAUTION : In order to reduce the risk of personal injury or property damage, be prepared to apply the regular brakes promptly if the vehicle begins to move.

Park on a fairly steep hill with enough room for movement in the downhill direction. To check the parking brake, with the engine running and the transaxle in N (Neutral), slowly remove foot pressure from the regular brake pedal (until only the parking brake is holding the vehicle).
To check the automatic transaxle P (Park) mechanism's holding ability, release all brakes after shifting the transaxle to P (Park).

Underbody Flushing
Flushing the underbody will remove any corrosive materials used for ice and snow removal and dust control. At least every spring clean the underbody. First, loosen the sediment packed in closed areas of the vehicle. Then flush the underbody with plain water.

Engine Cooling System

Inspect the coolant and freeze protection fluid. If the fluid is dirty or rusty, drain, flush and refill the engine cooling system with new coolant. Keep the coolant at the proper mixture in order to ensure proper freeze protection, corrosion protection and engine operating temperature. Inspect the hoses. Replace the cracked, swollen, or deteriorated hoses. Tighten the clamps. Clean the outside of the radiator and the air conditioning condenser. Wash the filler cap and the neck. Pressure test the cooling system and the cap in order to help ensure proper operation.

RECOMMENDED FLUIDS AND LUBRICANTS

Usage	Capacity	Fluid/Lubricant
Engine Oil	3.75L (4.0 qt) : 1.4L DOHC 3.75L (4.0 qt) : 1.6L DOHC 4.0L (4.2 qt) : 1.8L DOHC	API SL (ILSAC GF–III) grade or better SAE 5W–30, SAE10W–30, SAE15W–40 (Cold area : SAE5W–30 Hot area : SAE 15W–40)
Engine Coolant	7.0L (7.49 qt) : 1.4L DOHC 7.2L (7.6 qt) : 1.6L DOHC 7.4L (7.8 qt) : 1.8L DOHC	Mixture of water and good quality ethylene glycol base antifreeze (year–round coolant)
Brake Fluid and Clutch Fluid	0.5L (0.5 qt)	DOT–3 or DOT–4
Power Steering System	1.1L (1.2 qt)	DEXRON®–III or DEXRON®–IID
Automatic Transaxle	5.77 ± 0.2L (6.1 ± 0.2 qts) : 1.6L DOHC (AISIN 81–40LE)	ESSO JWS 3309 or ISU DEXRON III
	6.9 ± 0.2L (7.3 ± 0.2 qts) : 1.8L DOHC (ZF 4HP16)	ESSO LT 71141 or TOTAL ATF H50235
Manual Transaxle	1.8L (2.0 qt)	Manual Transaxle Fluid SAE80W (Cold Area : SAE 75W)
Manual Transaxle Shift Linkage	As required	Multipurpose type grease meeting requirements NLGI No. 1 or 2
Key Lock Cylinders	As required	Silicone lubricant
Automatic Transaxle Shift Linkage	As required	Engine oil
Clutch Linkage Pivot Points	As required	Engine oil
Floor Shift Linkage Points	As required	Engine oil
Hood Latch Assembly a. Pivots and Spring Anchor b. Release Pawl	As required	a. Engine oil b. Multipurpose type grease meeting requirements NLGI No. 1 or 2
Hood and door hinges Fuel door hinge Rear compartment lid hinges	As required	Engine oil
Weatherstrips	As required	Silicone grease

GENERAL DESCRIPTION AND SYSTEM OPERATION

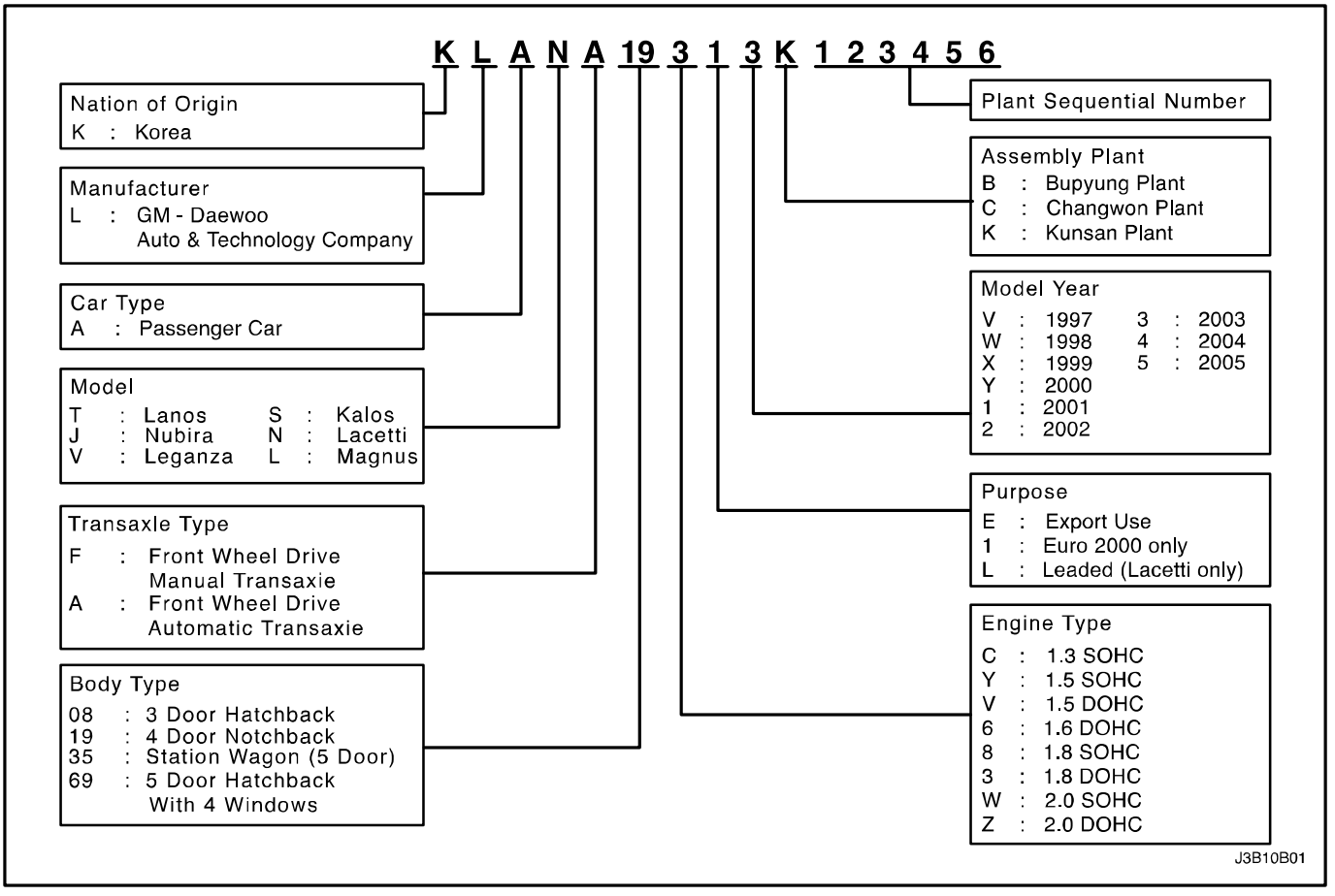
GENERAL REPAIR INSTRUCTIONS

- If a floor jack is used, the following precautions are recommended.
- Park the vehicle on level ground, “block” the front or rear wheels, set the jack against the frame, raise the vehicle and support it with chassis stands and then perform the service operation.
- Before performing the service operation, disconnect the negative battery cable in order to reduce the chance of cable damage and burning due to short–circuiting.
- Use a cover on the body, the seats and the floor to protect them against damage and contamination.
- Handle brake fluid and antifreeze solution with care as they can cause paint damage.
- The use of proper tools, and the recommended essential and available tools where specified, are important for efficient and reliable performance of the service repairs.
- Use genuine DAEWOO parts.
- Discard used cotter pins, gaskets, O–rings, oil seals, lock washers and self–locking nuts. Prepare new ones for installation. Normal function of these parts cannot be maintained if these parts are re-used.
- Keep the disassembled parts neatly in groups to facilitate proper and smooth reassembly.
- Keep attaching bolts and nuts separated, as they vary in hardness and design depending on the position of the installation.
- Clean the parts before inspection or reassembly.
- Also clean the oil parts, etc. Use compressed air to make certain they are free of restrictions.
- Lubricate rotating and sliding faces of parts with oil or grease before installation.
- When necessary, use a sealer on gaskets to prevent leakage.
- Carefully observe all specifications for bolt and nut torques.
- When service operation is completed, make a final check to be sure service was done properly and the problem was corrected.

GENERAL DESCRIPTION

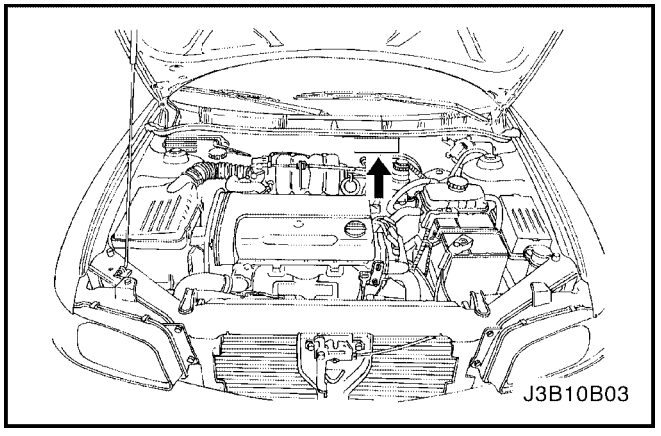
VEHICLE AND COMPONENT IDENTIFICATION

Passenger Car Vehicle Identification Number

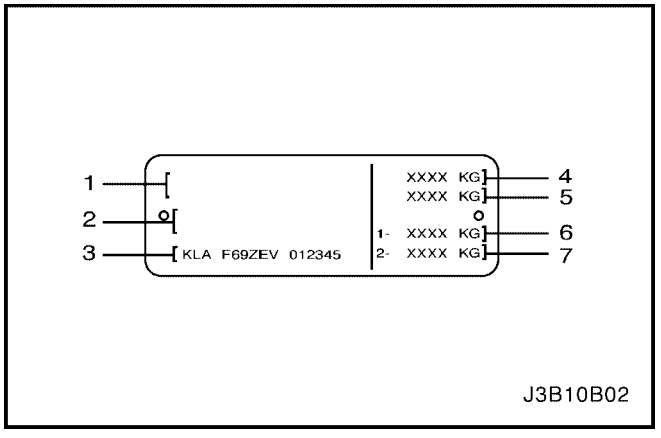


VIN Plate Location

The vehicle identification number (VIN) plate is attached to the top of the front panel support.

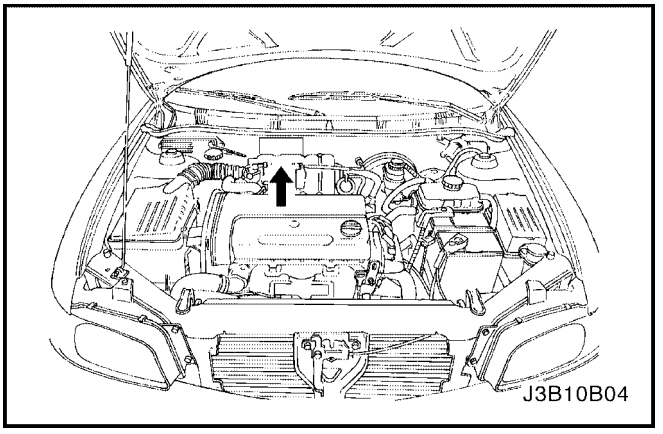


VIN Plate



1. Manufacturer's Name
2. Whole Vehicle Type Approval No.
3. VIN (Vehicle Identification No.)
4. GVW
5. Combination Weight (GVW + Braked Trailer Weight)
6. Maximum Permissible Axle Weight – Front
7. Maximum Permissible Axle Weight – Rear

Engraved VIN Location

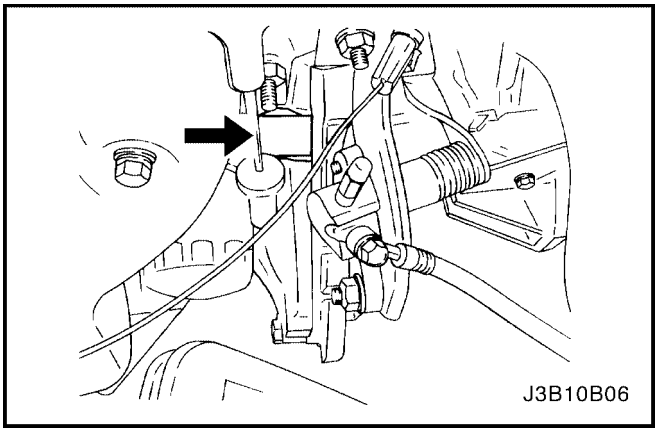


The vehicle identification number (VIN) is engraved in the top of the bulkhead.

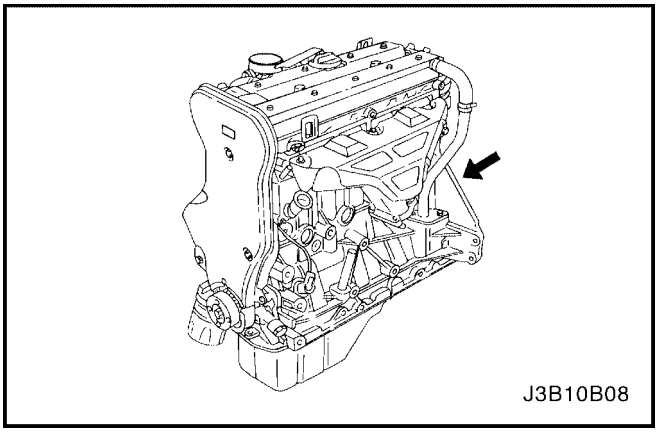
Engine Number Location

The engine number is stamped on the cylinder block under the No. 4 exhaust manifold of the engine.

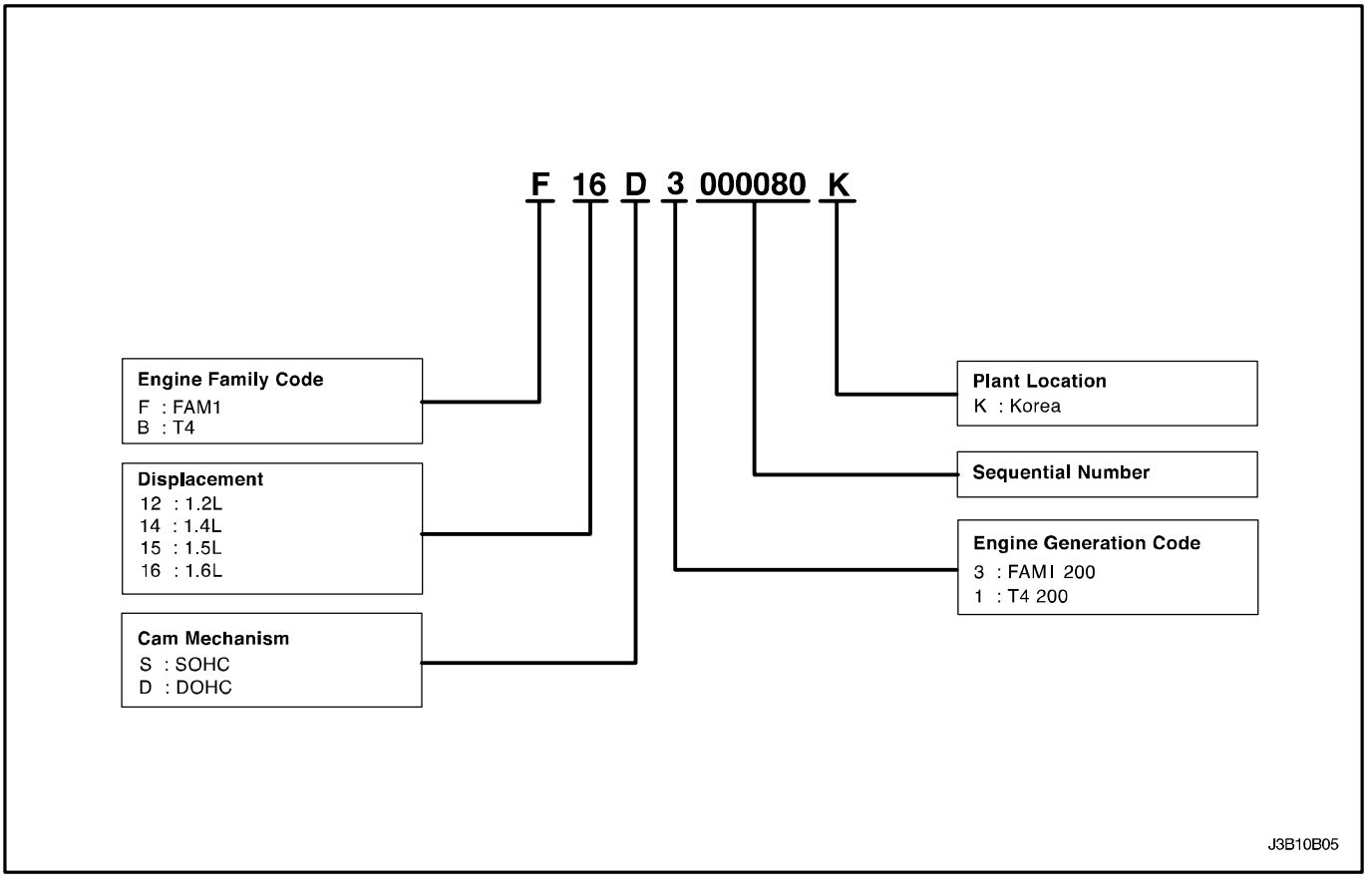
1.4L/1.6L DOHC Engine



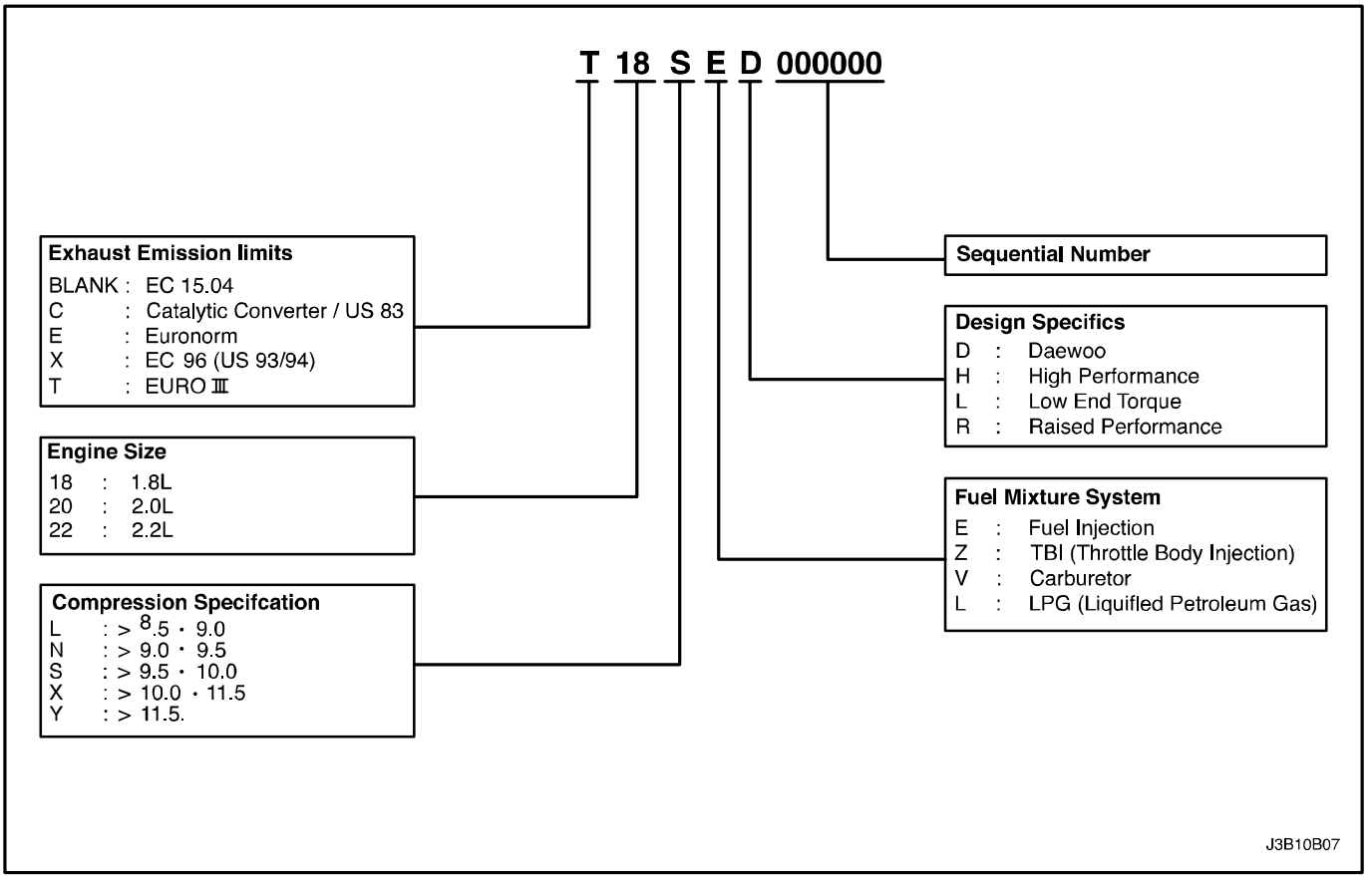
1.8L DOHC Engine



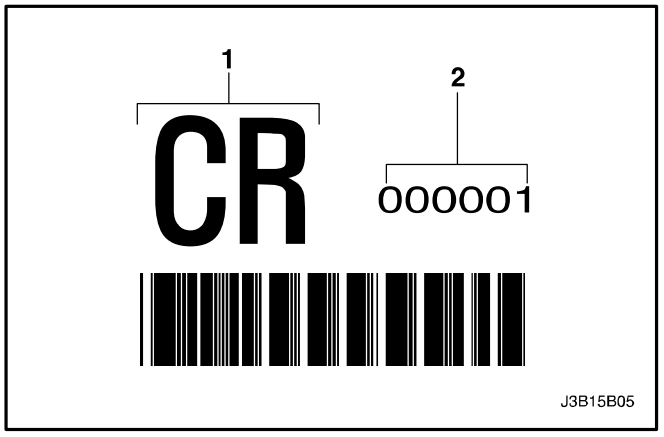
Engine Number – Family I (1.4L/1.6L DOHC Engine)



Engine Number – Family II (1.8L DOHC Engine)



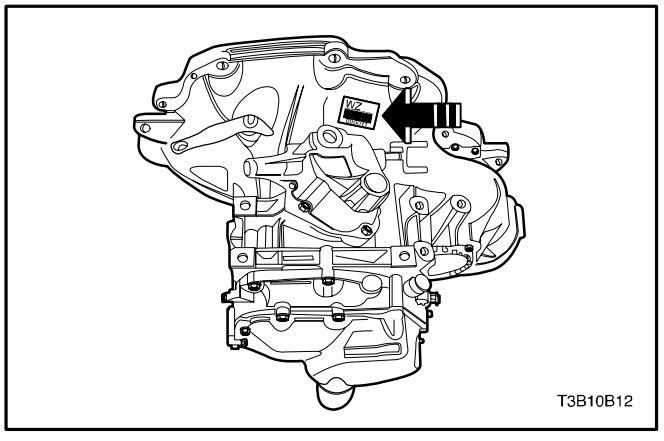
Manual Transaxle Identification Number Plate (D16)



1. Identification Code
2. Sequential Number

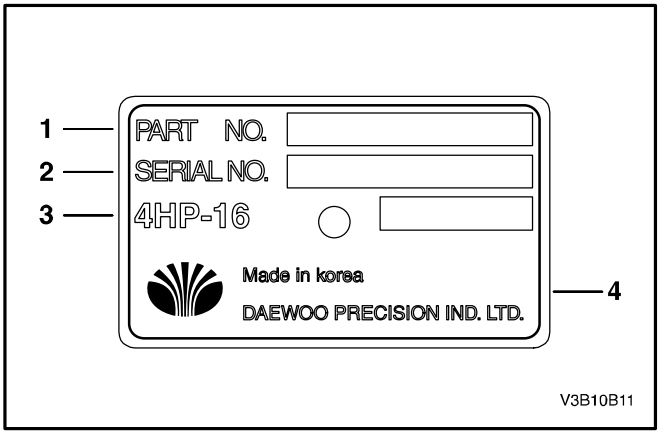
Identification Code	Engine	Gear Ratio
SY	1.4L DOHC	3.722 CR
CR	1.6L DOHC	3.722 CR
CV	1.8L DOHC	3.722 CR

Manual Transaxle Identification Number Plate Location (D16)



The manual transaxle identification number is attached to the top of the transmission case near the engine.

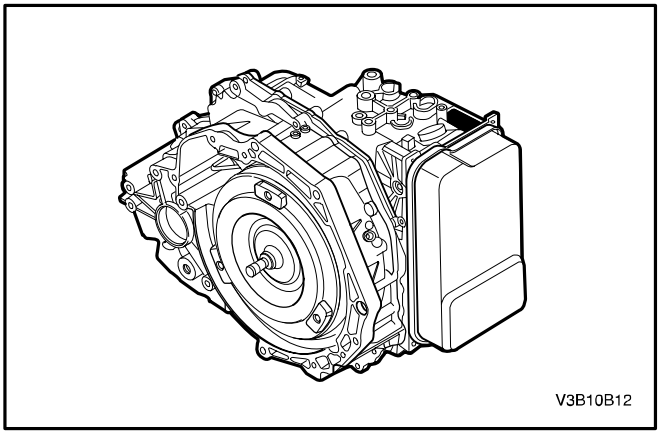
Automatic Transaxle Identification Number Plate (ZF 4HP16)



1. Part Number
2. Sirial Number
3. Model Code
4. Manufactured Nation and Company

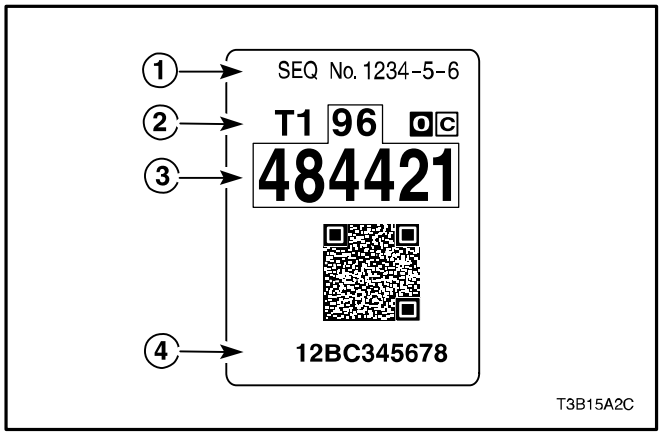
Part Code	Engine
AW	1.8L DOHC

Automatic Transaxle Identification Number Plate Location (ZF 4HP16)



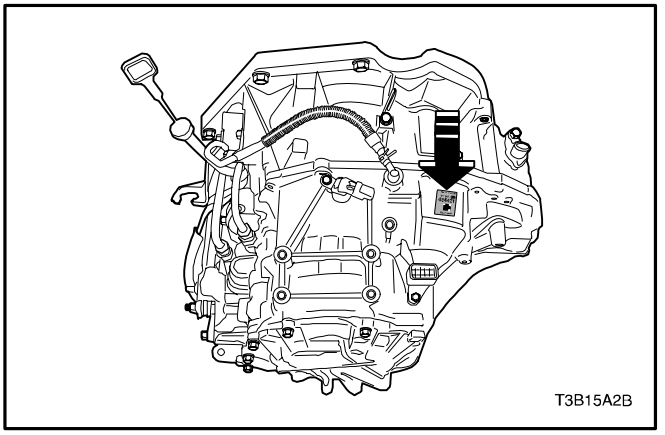
The automatic transaxle identification number plate is attached on the rear bottom side of the transaxle case near the bulk head.

Automatic Transaxle Identification Number Plate (AISIN : 81–40LE)



1. AW's Lot Number
2. Part ID Code
3. DW's Part Number
4. AW's Serial Number

Automatic Transaxle Identification Number Plate Location (AISIN : 81–40LE)

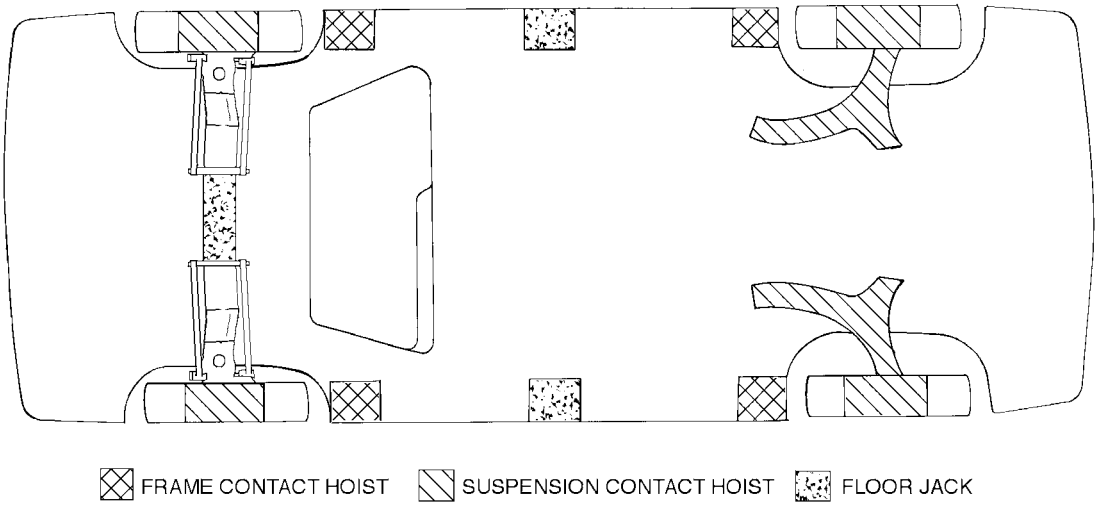


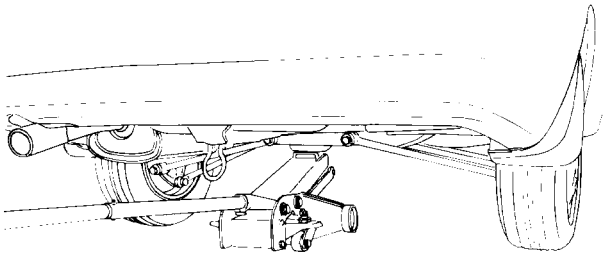
The automatic transaxle identification number plate is attached on the upper side of the transaxle case.

VEHICLE LIFTING PROCEDURES

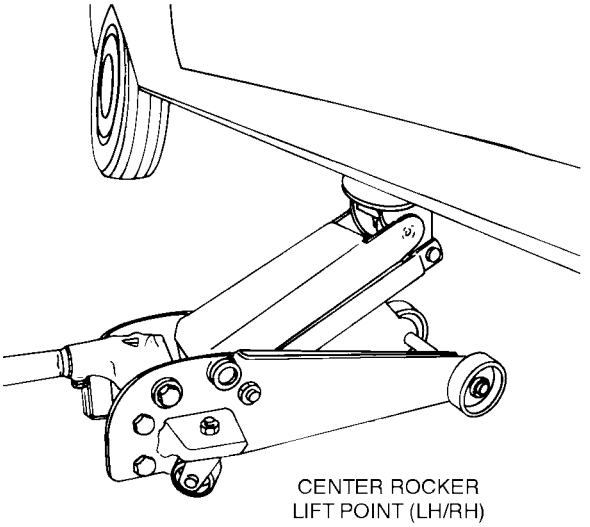
Notice : To raise the vehicle, place the lifting equipment only at the points indicated. Failure to use these precise positions may result in permanent vehicle body deformation. Many dealer service facilities and service stations are equipped with automotive hoists that bear upon some parts of the frame in order to lift the vehicle. If any other hoist method is used, use special care to avoid damaging the fuel tank, the filler neck, the exhaust system, or the underbody.

Vehicle Lifting Points





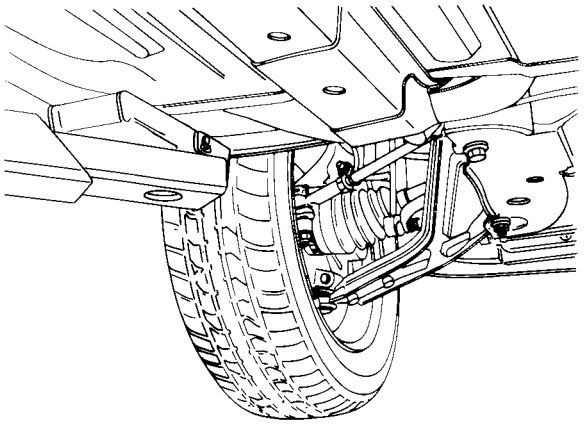
REAR SUSPENSION
AXLE LIFT POINT



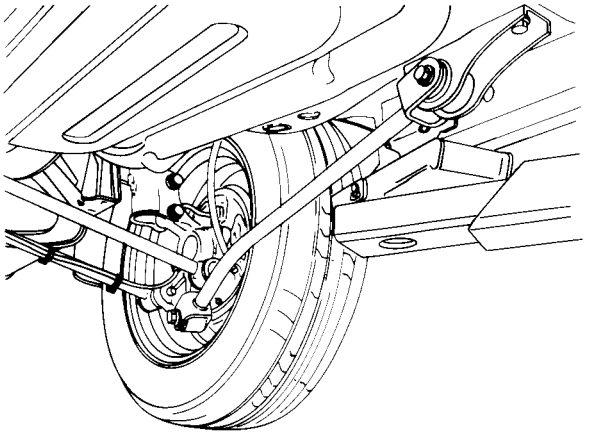
CENTER ROCKER
LIFT POINT (LH/RH)

J3B10B12

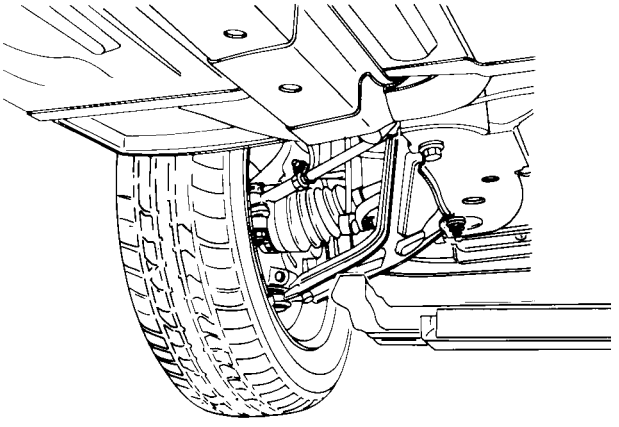
Vehicle Lifting Points



FRAME CONTACT HOIST
REARWARD OF FRONT TIRE



FRAME CONTACT HOIST
FORWARD OF REAR WHEEL



SUSPENSION CONTACT HOIST
UNDER FRONT LOWER CONTROL ARM

J3B10B13