

1982 DATSUN  
**NISSAN**  
**STANZA**

SERVICE MANUAL



# NISSAN STANZA

## Model T11 Series

### FOREWORD

This service manual has been prepared primarily for the purpose of assisting service personnel in providing effective service and maintenance of the 1982 NISSAN STANZA.

This manual includes procedures for maintenance, adjustments, removal and installation, disassembly and assembly of components, and trouble-shooting.

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. If your DATSUN model differs from the specifications contained in this manual, consult your NISSAN/DATSUN dealer for information.

The right is reserved to make changes in specifications and methods at any time without notice.

### FINLEY BROS.

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PH. 464-6189

NISSAN MOTOR CO., LTD.

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### QUICK REFERENCE INDEX

GENERAL INFORMATION.....	GI
MAINTENANCE .....	MA
ENGINE MECHANICAL.....	EM
ENGINE LUBRICATION & COOLING SYSTEMS.....	LC
ENGINE FUEL .....	EF
EMISSION CONTROL SYSTEM .....	EC
ENGINE REMOVAL & INSTALLATION .....	ER
ENGINE CONTROL, FUEL & EXHAUST SYSTEMS.....	FE
CLUTCH .....	CL
MANUAL TRANSAXLE.....	MT
FRONT AXLE & FRONT SUSPENSION.....	FA
REAR AXLE & REAR SUSPENSION.....	RA
BRAKE SYSTEM.....	BR
STEERING SYSTEM.....	ST
BODY .....	BF
HEATER & AIR CONDITIONER .....	HA
ELECTRICAL SYSTEM .....	EL




# HOW TO USE THIS MANUAL

- ▶ This Service Manual is designed as a guide for servicing vehicles.
- ▶ This manual deals with the engine, chassis, body and the electrical system.
- ▶ A **QUICK REFERENCE INDEX** is provided on the first page. Refer to this index along with the index of the particular section you wish to consult.
- ▶ The first page of each section lists the contents and gives the page numbers for the respective topics.
- ▶ **SERVICE DATA AND SPECIFICATIONS** are contained in each section.
- ▶ **TROUBLE DIAGNOSES AND CORRECTIONS** are also included in each section. This feature of the manual lists the likely causes of trouble and recommends the appropriate corrective actions to be taken.
- ▶ A list of **SPECIAL SERVICE TOOLS** is included in each section. The special service tools are designed to assist you in performing repair safely, accurately and quickly. For information concerning how to obtain special service tools, write to the following address:

Kent-Moore Corporation  
29784 Little Mack  
Roseville, Michigan 48066

Kent-Moore of Canada, Ltd.  
5466 Timberlea Blvd., Unit 2  
Mississauga, Ontario  
Canada L4W2T7

- ▶ The measurements given in this manual are primarily expressed with the SI unit (International System of Unit), and alternately expressed in the metric system and in the yard/pound system.
- ▶ The back cover of the manual provides maintenance data for quick reference.
- ▶ In the text, the following abbreviations are used:

S.D.S.:	Service Data and Specifications	L.H., R.H.:	Left Hand, Right Hand
 :	Tightening Torque	M/T:	Manual Transaxle
- ▶ The captions **CAUTION** and **WARNING** warn you of steps that must be followed to prevent personal injury and/or damage to some part of the vehicle.



## IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the mechanic and the efficient functioning of the vehicle.

The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately.

Special service tools have been designed to permit safe and proper performance of service. Be sure to use them.

Service varies with the procedures used, the skills of the mechanic and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first completely satisfy himself that neither his safety nor the vehicle's safety will be jeopardized by the service method selected.

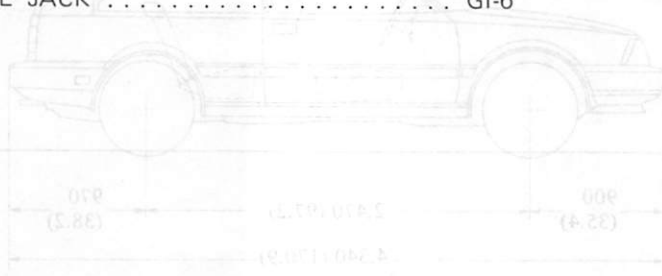
# GENERAL INFORMATION

GI

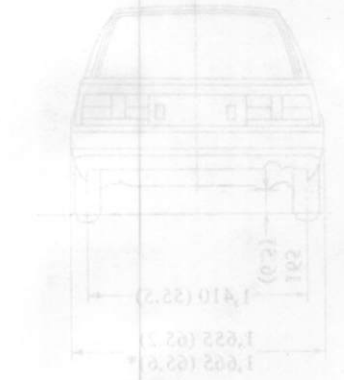
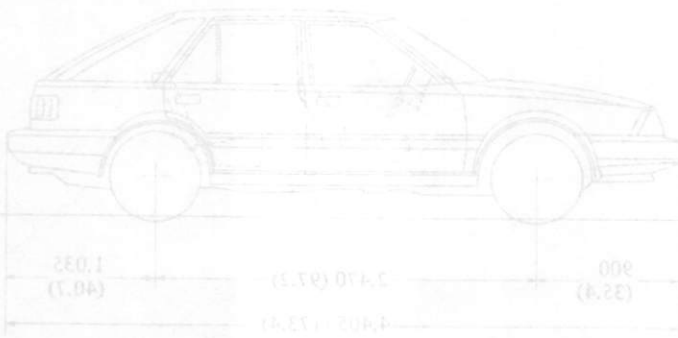
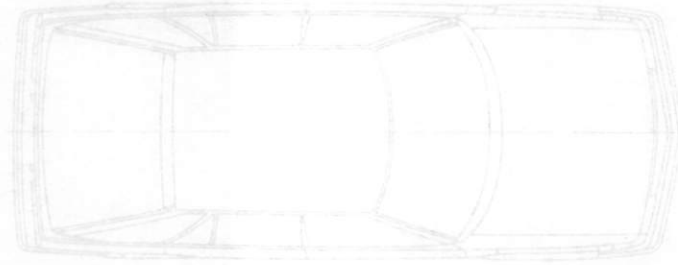
## SECTION GI

### CONTENTS

<b>GENERAL VIEWS</b> .....	GI-2	<b>TOWING</b> .....	GI-6
<b>MODEL VARIATION</b> .....	GI-3	<b>TIE-DOWN</b> .....	GI-6
<b>IDENTIFICATION NUMBERS</b> .....	GI-4	<b>SPECIAL SERVICE TOOLS</b> .....	GI-7
<b>LIFTING POINTS AND TOWING</b> .....	GI-6	<b>TIGHTENING TORQUE OF STANDARD BOLT &amp; NUT</b> .....	GI-7
PANTOGRAPH JACK .....	GI-6		
GARAGE JACK .....	GI-6		



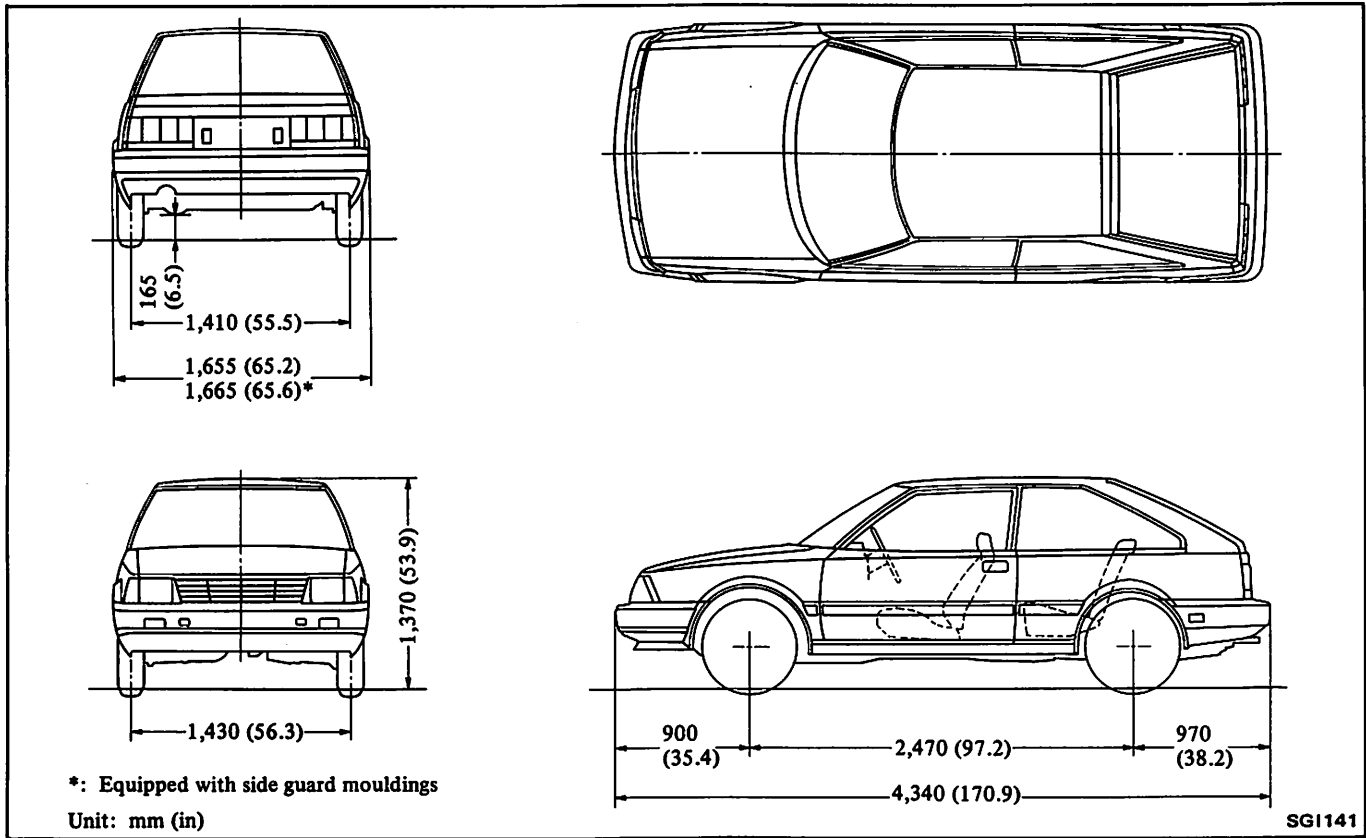
\* Equipped with side guard moldings  
Unit: mm (in)



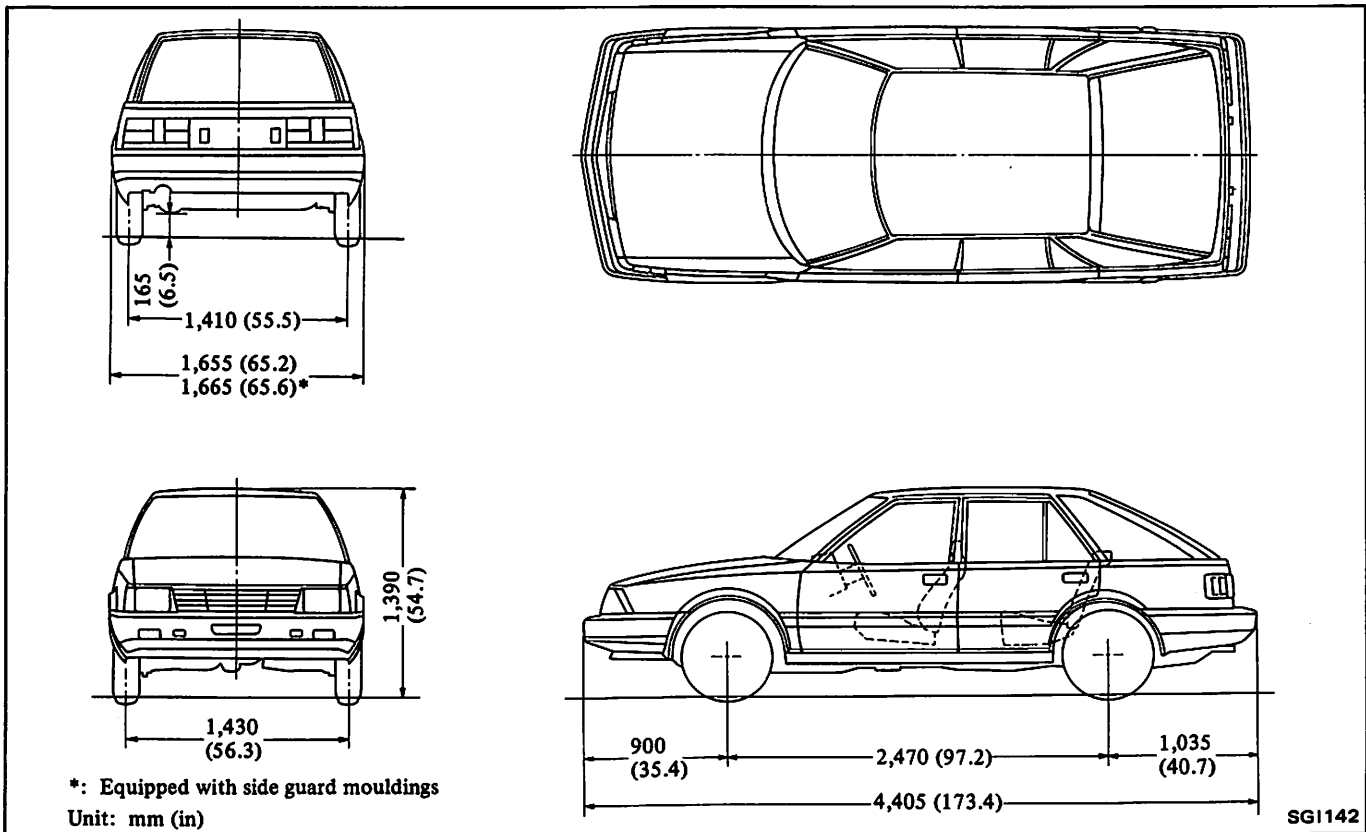
\* Equipped with side guard moldings  
Unit: mm (in)

## GENERAL VIEWS

### 2-door Hatchback Sedan



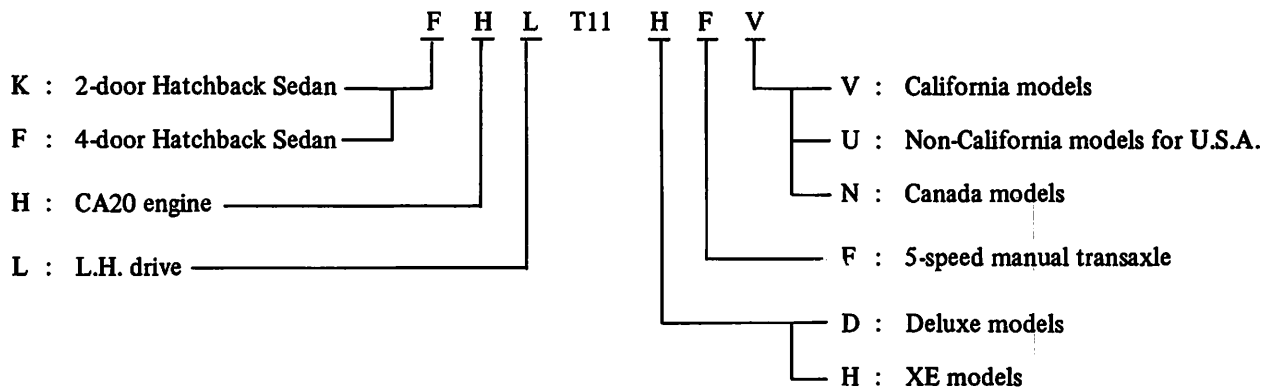
### 4-door Hatchback Sedan



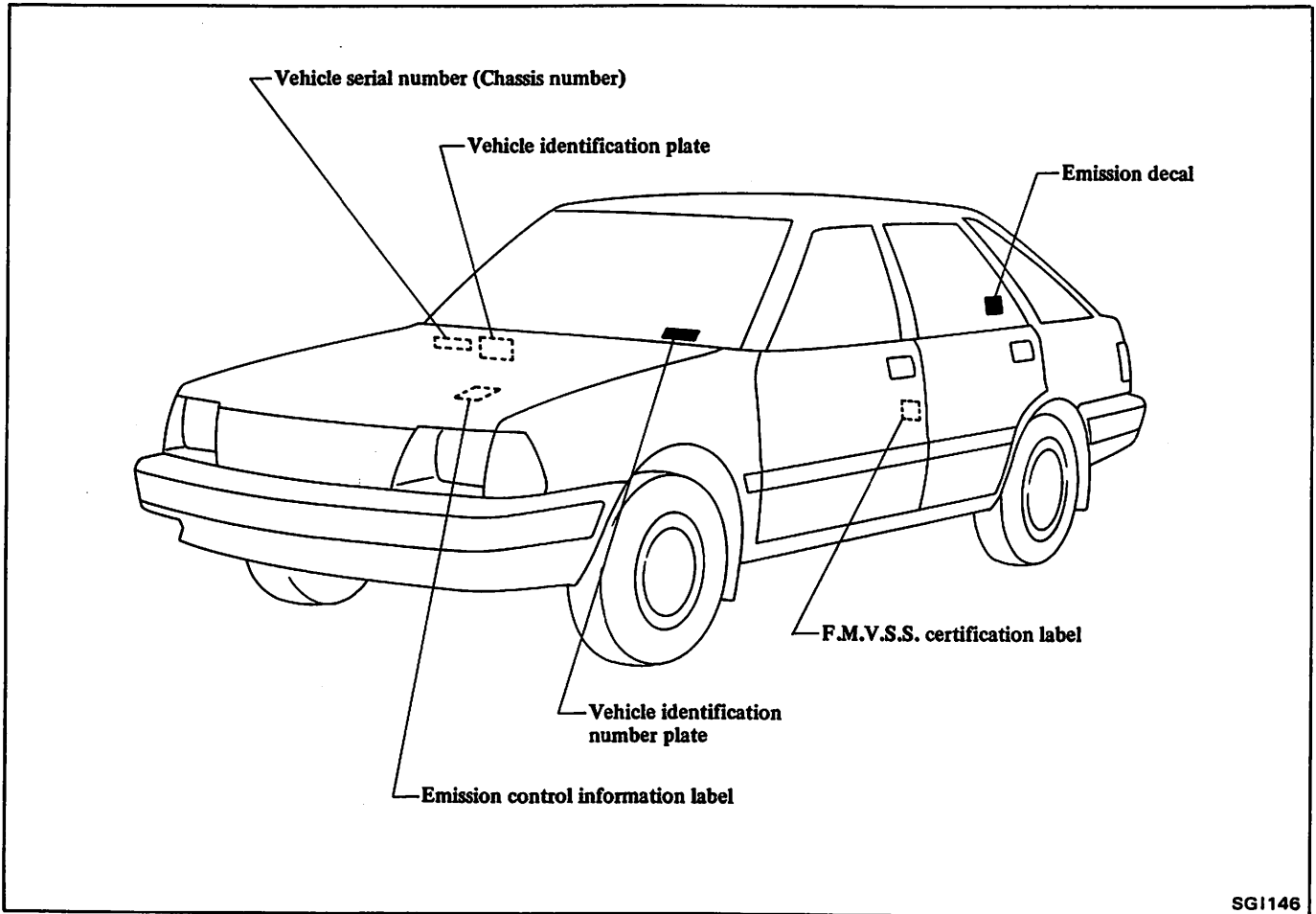
## MODEL VARIATION

Destination		Body	Model	Engine	Transaxle	Road wheel Size ... Offset mm (in)	Tire size
U.S.A	California	2-door Hatchback Sedan	KHLT11DFV	CA20	RS5F31A	5J-13 ... 45 (1.77) Steel (STD) Aluminum (opt) Spare wheel 4T-16 ... 35 (1.38)	165SR13 185/70SR13 Spare tire T125/70D16
			KHLT11HFV				
		4-door Hatchback Sedan	FHLT11DFV				
			FHLT11HFV				
	Non-California	2-door Hatchback Sedan	KHLT11DFU				
			KHLT11HFU				
		4-door Hatchback Sedan	FHLT11DFU				
			FHLT11HFU				
Canada	2-door Hatchback Sedan	KHLT11DFN					
		KHLT11HFN					
	4-door Hatchback Sedan	FHLT11DFN					
		FHLT11HFN					

Prefix and suffix designations:



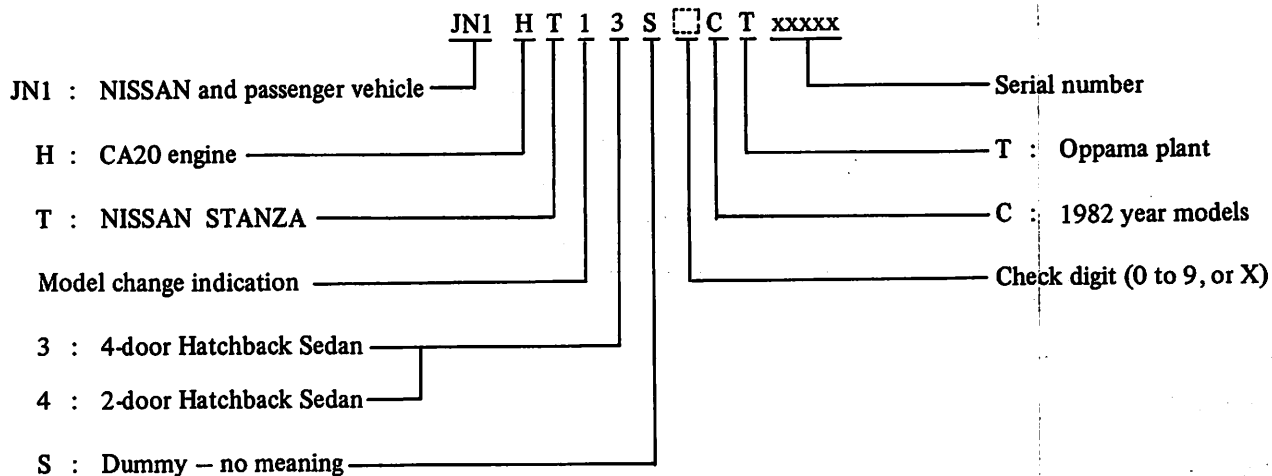
# IDENTIFICATION NUMBERS



SGI146

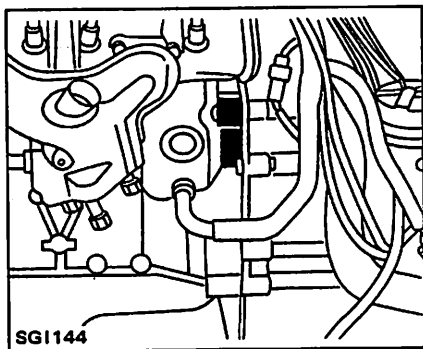
**VEHICLE IDENTIFICATION NUMBER (Chassis number)**

Prefix and suffix designations



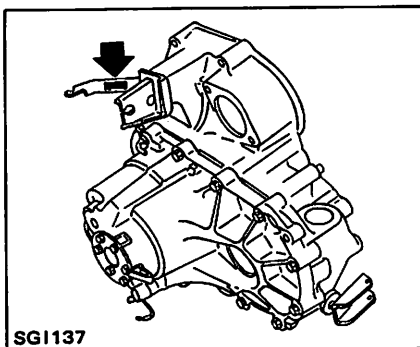
**ENGINE SERIAL NUMBER**

The engine serial number is stamped on the right side of the cylinder block.



**MANUAL TRANSAXLE NUMBER**

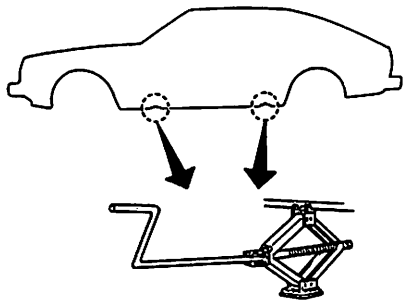
The transaxle serial number label is attached on the clutch withdrawal lever.





## LIFTING POINTS AND TOWING

### PANTOGRAPH JACK



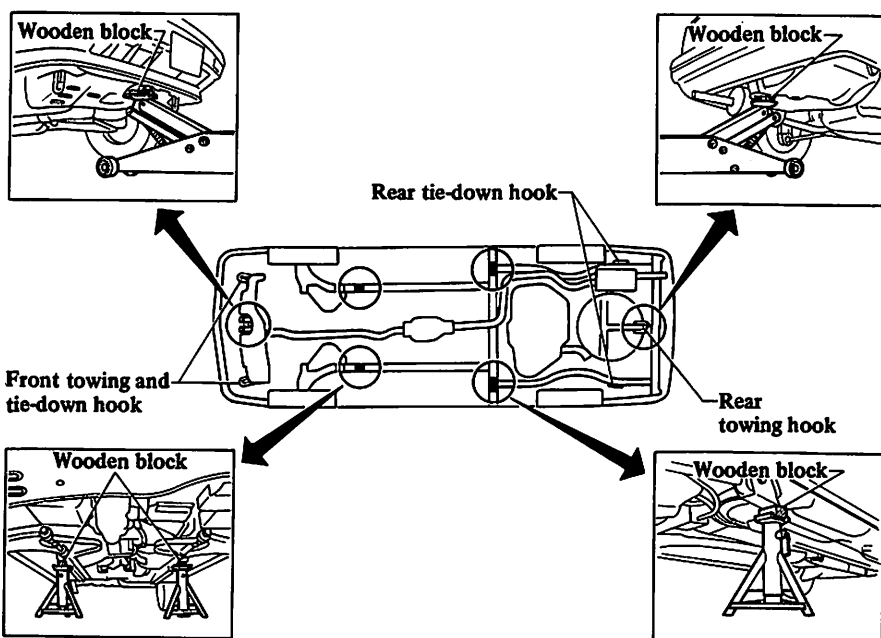
SGI154

**WARNING:**

- a. Never get under the vehicle while it is supported only by the jack. Always use safety stands to support frame when you have to get under the vehicle.
- b. Place wheel chocks at both front and back of the wheel diagonally opposite the jack position.

Apply the pantograph jack furnished with the vehicle to the position indicated in the figure in a safe manner.

### GARAGE JACK



SGI145

**WARNING:**

- a. When carrying out operations with the garage jack, be sure to support the vehicle with safety stands.
- b. When jacking up the rear (front) of the vehicle, place the chocks at the front (rear) of the front (rear) wheels to hold them.

**CAUTION:**

Always place a wood block between safety stand and vehicle body when supporting body with safety stand.

Apply the garage jack and safety stand to the position indicated in the figure in a safe manner.

### TOWING

**CAUTION:**

- a. It is necessary to use proper towing equipment to avoid possible damage to the vehicle during a towing operation.  
Towing is in accordance with Towing Procedure Manual at dealer side.
- b. All applicable State or Provincial (in Canada) laws and local laws regarding the towing operation must be obeyed.
- c. Before towing, make sure that the transaxle, steering system and power train are in good order. If any unit is damaged, a dolly must be used.

- d. If the transaxle is inoperative, tow the vehicle with the front wheels off the ground.
- e. When the vehicle is towed with its front wheels on the ground, secure the steering wheel in a straight ahead position with the ignition key turned in "OFF" position.
- f. Release the parking brake and set the gearshift lever in "Neutral" position before starting to tow the vehicle.
- g. Try to restrict towing speed below 80 km/h (50 MPH) and towing distance less than 80 km (50 miles).

- h. Do not apply force to the towing hook in a lateral direction.  
Keep the tow rope or similar device straight ahead, in line with the vehicle.

### TIE-DOWN

**CAUTION:**

Do not tow the vehicle with the rear tie-down hooks.

## SPECIAL SERVICE TOOLS

Special Tools play very important role in the maintenance of vehicles. These are essential to the safe, accurate and speedy servicing.

The working times listed in the column under FLAT RATE TIME in FLAT RATE SCHEDULE are com-

puted based on the use of Special Tools.

The identification code of maintenance tools is made up of 2 alphabetical letters and 8-digital figures.

The heading two letters roughly classify tools or equipment as:

ST00000000: Special Tool  
KV00000000: Special Tool  
EM00000000: Engine Overhaul-  
ing Machine  
GG00000000: General Gauge  
LM00000000: Garage Tool  
HT00000000: Hand Tool

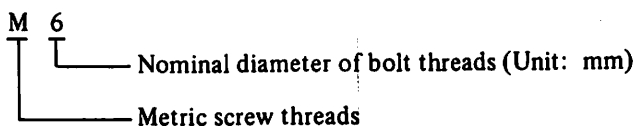
## TIGHTENING TORQUE OF STANDARD BOLT & NUT

Grade	Bolt or nut size	Bolt or nut diameter* mm	Pitch mm	Tightening torque		
				N-m	kg-m	ft-lb
4T	M6	6.0	1.0	3 - 4	0.3 - 0.4	2.2 - 2.9
	M8	8.0	1.25	8 - 11	0.8 - 1.1	5.8 - 8.0
			1.0	8 - 11	0.8 - 1.1	5.8 - 8.0
	M10	10.0	1.5	16 - 22	1.6 - 2.2	12 - 16
			1.25	16 - 22	1.6 - 2.2	12 - 16
	M12	12.0	1.75	26 - 36	2.7 - 3.7	20 - 27
1.25			30 - 40	3.1 - 4.1	22 - 30	
M14	14.0	1.5	46 - 62	4.7 - 6.3	34 - 46	
7T	M6	6.0	1.0	6 - 7	0.6 - 0.7	4.3 - 5.1
	M8	8.0	1.25	14 - 18	1.4 - 1.8	10 - 13
			1.0	14 - 18	1.4 - 1.8	10 - 13
	M10	10.0	1.5	25 - 35	2.6 - 3.6	19 - 26
			1.25	26 - 36	2.7 - 3.7	20 - 27
	M12	12.0	1.75	45 - 61	4.6 - 6.2	33 - 45
1.25			50 - 68	5.1 - 6.9	37 - 50	
M14	14.0	1.5	76 - 103	7.7 - 10.5	56 - 76	
9T	M6	6.0	1.0	8 - 11	0.8 - 1.1	5.8 - 8.0
	M8	8.0	1.25	19 - 25	1.9 - 2.5	14 - 18
			1.0	20 - 27	2.0 - 2.8	14 - 20
	M10	10.0	1.5	36 - 50	3.7 - 5.1	27 - 37
			1.25	39 - 51	4.0 - 5.2	29 - 38
	M12	12.0	1.75	65 - 88	6.6 - 9.0	48 - 65
1.25			72 - 97	7.3 - 9.9	53 - 72	
M14	14.0	1.5	109 - 147	11.1 - 15.0	80 - 108	

- Special parts are excluded.
- This standard is applicable to bolts having the following marks embossed on the bolt head.

Grade	Mark
4T .....	4
7T .....	7
9T .....	9

\*: Nominal diameter



# MAINTENANCE

# SECTION MA

MA

## CONTENTS

<b>MAINTENANCE SCHEDULE</b> .....	MA- 2	<b>CLUTCH</b> .....	MA-20
<b>LUBRICATION CHART</b> .....	MA- 4	<b>MANUAL TRANSAXLE</b> .....	MA-20
<b>RECOMMENDED FUEL AND LUBRICANTS</b> .....	MA- 5	<b>FRONT AXLE AND FRONT SUSPENSION</b> .....	MA-21
FUEL .....	MA- 5	<b>REAR AXLE AND REAR SUSPENSION</b> .....	MA-23
LUBRICANTS .....	MA- 5	<b>BRAKE SYSTEM</b> .....	MA-24
SAE VISCOSITY NUMBER .....	MA- 5	<b>WHEEL AND TIRE</b> .....	MA-26
<b>APPROXIMATE REFILL CAPACITIES</b> .....	MA- 5	<b>STEERING SYSTEM</b> .....	MA-31
<b>ENGINE MAINTENANCE</b> .....	MA- 6	<b>BODY</b> .....	MA-32
BEFORE ENGINE START .....	MA- 6	<b>HEATER AND AIR CONDITIONER</b> .....	MA-33
AFTER ENGINE WARM-UP .....	MA-10	<b>SERVICE DATA AND SPECIFICATIONS (S.D.S.)</b> .....	MA-36
<b>MINOR TROUBLE DIAGNOSES AND CORRECTIONS</b> .....	MA-13	ENGINE MAINTENANCE .....	MA-36
<b>CHASSIS AND BODY MAINTENANCE</b> .....	MA-20	CHASSIS AND BODY MAINTENANCE .....	MA-37
ENGINE CONTROL, FUEL AND EXHAUST SYSTEMS .....	MA-20		

I = Inspect, correct, replace if necessary.

R = Reinspect

Approximate: A = Actual

the required

(4) Maintenance items and intervals with "A" are recommended for vehicles with normal driving conditions.

(5) If vehicle is observed under extremely adverse weather conditions, more frequent maintenance is required under such conditions.

(6) If vehicle is operated under severe conditions, more frequent maintenance is required under such conditions.

\*Minimum maintenance interval at constant

operation, 40 to 50 mph

†Front & Rear wheel relative clearance

\*Ignition wire

‡Spark bridge

§Engine oil & oil filter

¶Engine coolant

\*Lubrication

†Lubrication (check "lubrication" comments, etc.)

‡Lubrication (check "lubrication" comments, etc.)

§Lubrication (check "lubrication" comments, etc.)

¶Lubrication (check "lubrication" comments, etc.)

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§Lubrication (check "lubrication" comments, etc.)

¶Lubrication (check "lubrication" comments, etc.)

EMISSION CONTROL

Weight (lb)

at 1000 rpm (Wet weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

Weight (lb) (Dry weight)

### MAINTENANCE OBSERVATION

Record maintenance performed on the vehicle shown in this table to help you track maintenance.

Control belt tension and optimum engine condition.

NOTE: A 1000 rpm (Wet weight) is the most important service reference for engine performance and good mechanical condition in DVL200.

The following table will help you track maintenance performed on the vehicle shown in this table.

The following tables list the periodic maintenance servicing required to ensure good emission control performance, good engine performance and good mechanical condition in DATSUN.

The first 1,600 km (1,000 miles) service is one of the most important services required to ensure the maximum emission control performance and optimum engine condition.

Periodic maintenance beyond the last period shown in the tables requires similar maintenance.

MAINTENANCE OPERATION  Periodic maintenance should be performed at number of kilometers, miles or months, whichever comes first.	MAINTENANCE INTERVAL								Reference page
	Kilometers x 1,000								
	1.6	12	24	36	48	60	72		
	(Miles x 1,000)	(1)	(7.5)	(15)	(22.5)	(30)	(37.5)	(45)	
Months	-	6	12	18	24	30	36		

### EMISSION CONTROL MAINTENANCE

Drive belts					1			MA-6
Carburetor air cleaner filter	See NOTE: (2)				R			MA-6
Air induction valve filter	See NOTE: (2)				R			MA-7
*Positive Crankcase Ventilation (P.C.V.) filter	See NOTE: (3)							MA-7
*Vapor lines					I			MA-7
*Fuel lines (hoses, piping, connections, etc.)					I			MA-8
*Fuel filter	See NOTE: (3)							MA-8
Engine coolant					R			MA-8
Engine oil & oil filter	See NOTE: (1)		R	R	R	R	R	MA-9
Spark plugs					R			MA-10
*Ignition wires					I			MA-10
Intake & Exhaust valve clearance		A		A			A	MA-11
Carburetor idle rpm		I		I*			I*	MA-12
*Automatic temperature control air cleaner					I			EF-2

- Note:**
- (1) If vehicle is operated under severe conditions: short distance driving, extensive idling or driving in dusty conditions, change engine oil every 5,000 km (3,000 miles) or 3 months, whichever comes first.
  - (2) More frequent maintenance is required under dusty driving conditions.
  - (3) If vehicle is operated under extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filters might become clogged. In such an event, replace them immediately.
  - (4) Maintenance items and intervals with "\*" are recommended by NISSAN MOTOR CO., LTD. Other maintenance items and intervals are required.

Abbreviations: A = Adjust

R = Replace

I = Inspect, correct, replace if necessary.

MAINTENANCE OPERATION	Kilometers x 1,000 (Miles x 1,000) Months	MAINTENANCE INTERVAL							Reference page
		1.6	12	24	36	48	60	72	
		(1)	(7.5)	(15)	(22.5)	(30)	(37.5)	(45)	
Periodic maintenance should be performed at number of kilometers, miles or months, whichever comes first.		—	6	12	18	24	30	36	

#### UNDERHOOD MAINTENANCE

Brake fluid level & leaks	See NOTE: (1)			I		I		I	MA-24
Brake fluid				R		R		R	MA-24
Brake booster vacuum hoses, connection & check valve						I			MA-25
Air conditioning system hoses, connection & refrigerant leaks						I			MA-33, 34, 35
Power steering fluid & lines				I		I		I	MA-31

#### UNDER VEHICLE MAINTENANCE

Brake, fuel & exhaust systems for proper (attachment, leaks, cracks, chafing, abrasion, deterioration, etc.)				I		I		I	MA-20, 25
Manual transaxle gear oil	See NOTE: (1)			I		I		I	MA-20
Steering gear box & linkage, suspension parts for damaged, loose & missing parts	See NOTE: (1)	I		I		I	I	I	MA-21, 23, 31
Underbody (flush & clean every 12 months)				I		I		I	—

#### OUTSIDE AND INSIDE MAINTENANCE

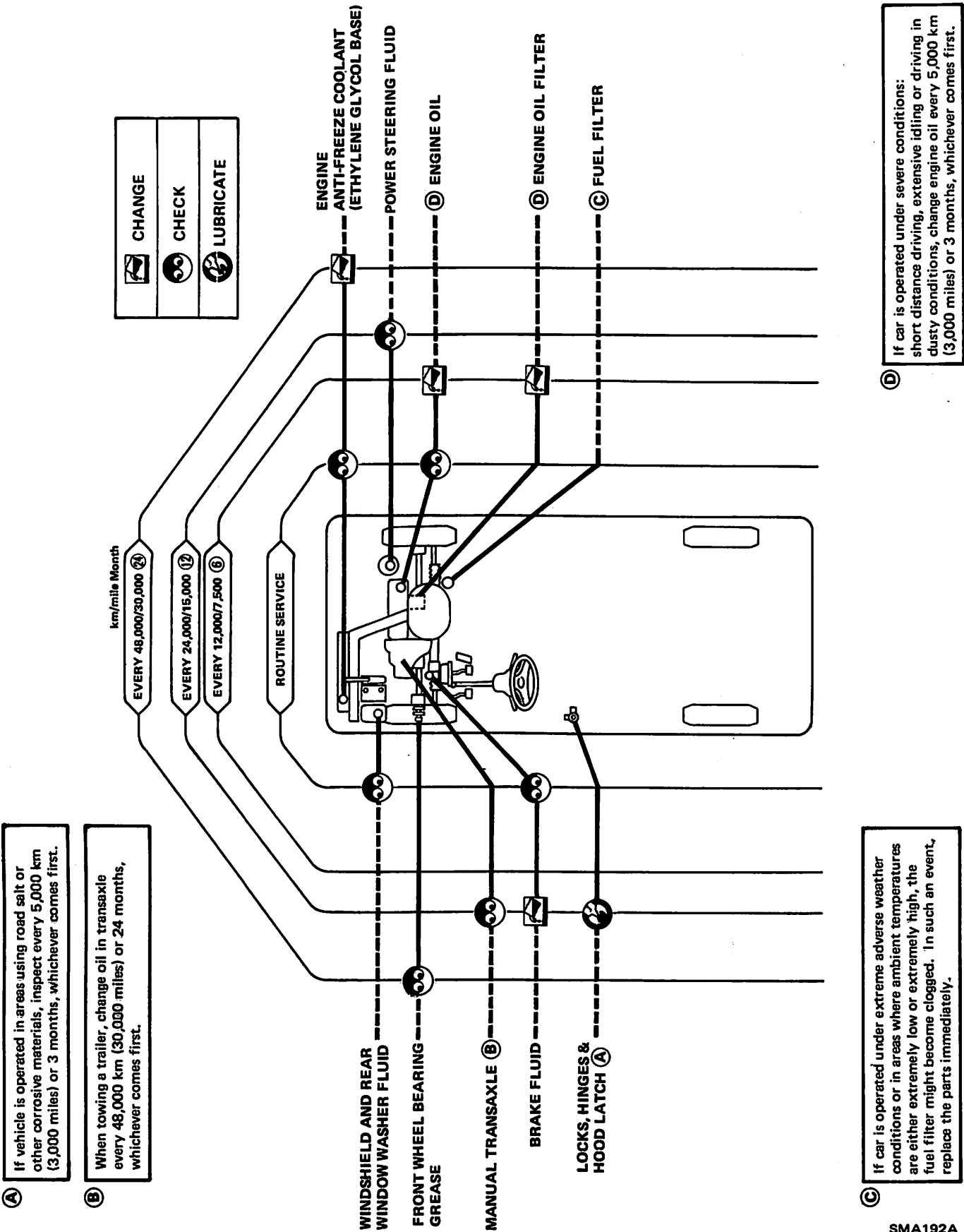
Rotate wheel position & inspect wheel balance & wheel alignment				I		I		I	MA-21,26,27,28,29,30
Disc brake pads or brake drums, linings & other brake components for wear, deterioration & leaks	See NOTE: (3)			I		I		I	MA-25
Front wheel bearing grease						I			MA-22
Locks, hinges & hood latch	See NOTE: (3)			L		L		L	MA-32
Seat belts, buckles, retractors, anchors & adjuster				I		I		I	MA-32
Foot brake, parking brake & clutch for stroke, free play & operation				I		I		I	MA-25, 26

- NOTE: (1)** When towing a trailer, change oil in transaxle every 48,000 km (30,000 miles) or 24 months, whichever comes first.
- (2)** Steering linkage & front suspension ball joint inspection should be performed every 96,000 km (60,000 miles) or 4 years, whichever comes first.
- (3)** If vehicle is operated in areas using road salt or other corrosive materials, inspect every 5,000 km (3,000 miles) or 3 months, whichever comes first.

The above charts show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

Abbreviations: L = Lubricate R = Replace  
I = Inspect, correct, replace if necessary

# LUBRICATION CHART



## RECOMMENDED FUEL AND LUBRICANTS

### FUEL

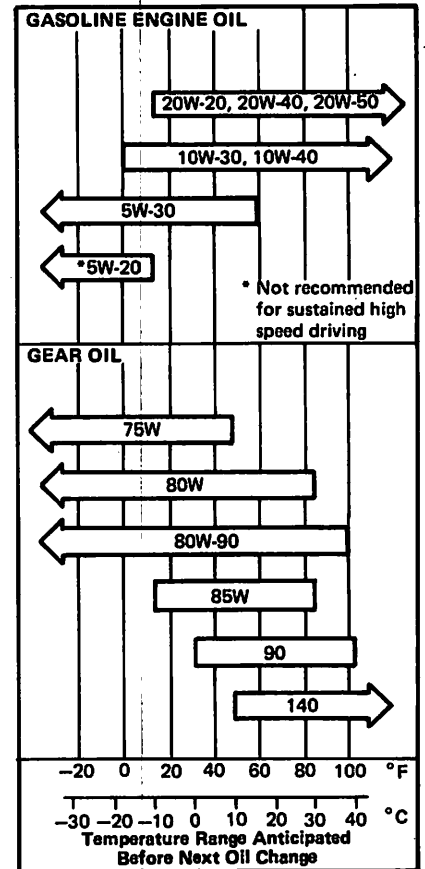
Gasoline		Gasoline octane number (minimum)	
		RON	(R + M)/2
All models	Unleaded	91	87

The fuel filler opening is designed for use with an unleaded fuel gun [nozzle diameter less than 21.3 mm (0.84 in)] only.

### LUBRICANTS

Lubricant	Specifications	Remarks
Gasoline engine oil	API SE	Further details, refer to recommended SAE viscosity chart.
Manual transaxle gear oil	API GL-4	
Power steering fluid	Type DEXRON	—
Multi-purpose grease	NLGI No. 2	Lithium soap base
Brake fluid	DOT 3	US FMVSS No. 116
Anti-freeze	—	Ethylene glycol base

### SAE VISCOSITY NUMBER



### APPROXIMATE REFILL CAPACITIES

		Liter	US measure	Imp measure
Fuel tank		54	14-1/4 gal	11-7/8 gal
Coolant	With heater	7.3	7-3/4 qt	6-3/8 qt
	Without heater	6.5	6-7/8 qt	5-3/4 qt
Engine	With oil filter	3.9	4-1/8 qt	3-3/8 qt
	Without oil filter	3.5	3-3/4 qt	3-1/8 qt
Transaxle	M/T 5-speed	2.7	5-3/4 pt	4-3/4 pt
Power steering system		1.0	1-1/8 qt	7/8 qt
Air conditioning system	Compressor oil	0.15	5.1 fl oz	5.3 fl oz
	Refrigerant	0.8 - 1.0 kg	1.8 - 2.2 lb	1.8 - 2.2 lb

# ENGINE MAINTENANCE

## BEFORE ENGINE START

### CHECKING AND ADJUSTING DRIVE BELTS

1. Visually inspect for cracks or damage.

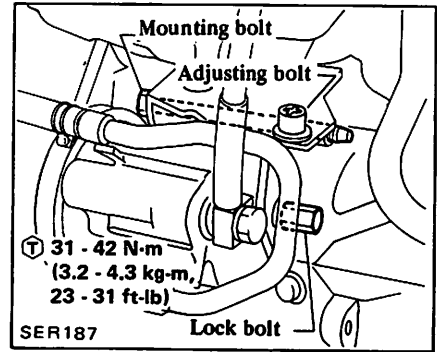
The belts should not touch the bottom of the pulley groove.

2. Check belt tension by pushing.

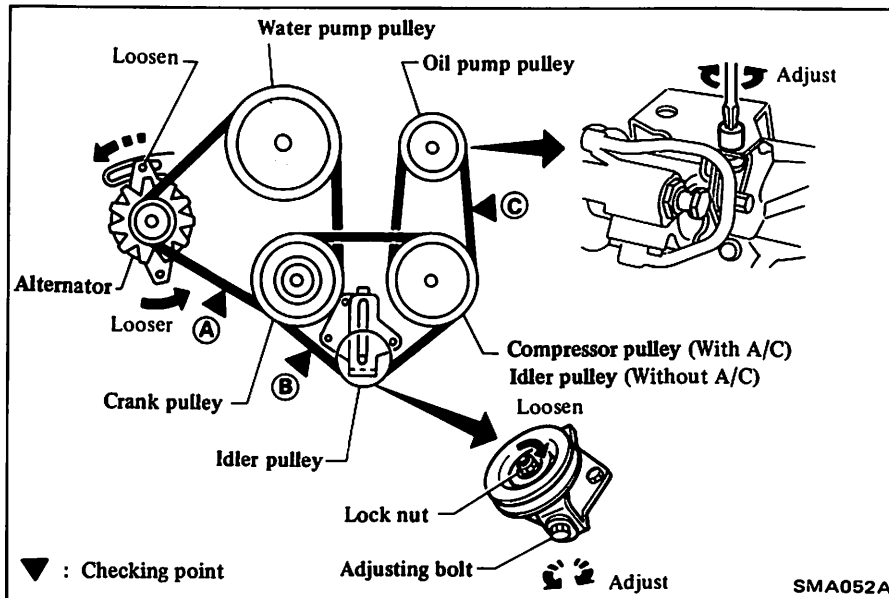
The belts should deflect by the specified amount.

Drive belt deflection	mm (in)	Adjust deflection of used belt	Set deflection of new belt
Ⓐ Alternator		11 - 14 (0.43 - 0.55)	9 - 12 (0.35 - 0.47)
Ⓑ Air conditioner compressor (with A/C) Idler pulley (without A/C)		4 - 6 (0.16 - 0.24)	3 - 5 (0.12 - 0.20)
		6 - 9 (0.24 - 0.35)	5 - 7 (0.20 - 0.28)
Ⓒ Power steering oil pump	With A/C	7 - 10 (0.28 - 0.39)	6 - 9 (0.24 - 0.35)
	Without A/C	6 - 9 (0.24 - 0.35)	5 - 8 (0.20 - 0.31)
Applied pushing force	N (kg, lb)	98 (10, 22)	

### Power steering oil pump belt



1. Loosen the adjuster lock bolt attached to the oil pump bracket.
2. Loosen the mounting bolt slightly.
3. Adjust the adjusting bolt until the belt tension is the specified amount.
4. Tighten the adjuster lock bolt and the mounting bolt securely.



3. Adjust belt tension as follows:

securely.

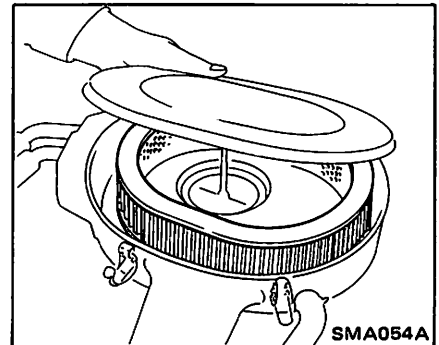
#### Alternator belt

1. Loosen the upper and lower alternator securing bolts until the alternator can be moved slightly.
2. Move the alternator with a prying bar until the belt tension is the specified amount. Then tighten the bolts

#### Air conditioner compressor belt

1. Loosen the idler pulley lock nut.
2. Adjust the adjusting bolt until the belt tension is the specified amount.
3. Tighten the idler pulley lock nut securely.

### REPLACING AIR CLEANER FILTER

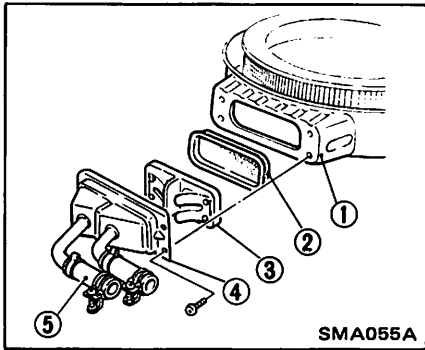


The viscous paper type air cleaner filter does not require any cleaning operation between renewal.

When installing air cleaner cover, align both marks of cover and intake pipe.



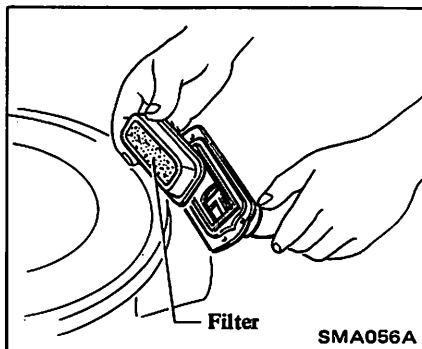
### REPLACING AIR INDUCTION VALVE FILTER



- |                       |                            |
|-----------------------|----------------------------|
| 1 Air cleaner         | 4 Air induction valve case |
| 2 Filter              | 5 Rubber hose valve        |
| 3 Air induction valve |                            |

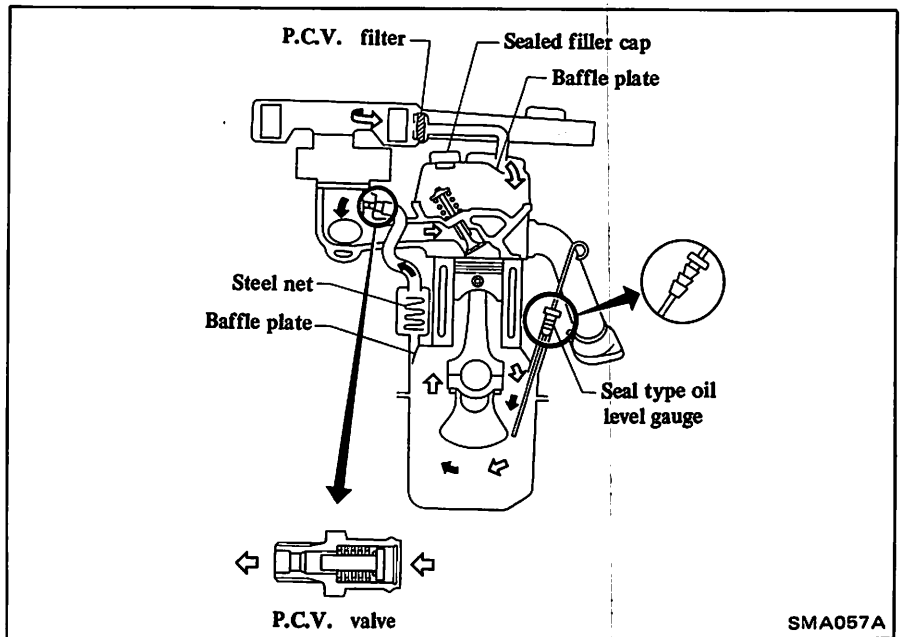
Remove air induction valve case from air cleaner, and take out air induction valve filter. Then install new air induction valve filter.

Pay strict attention to direction the valve is facing so that exhaust gas will not flow backward.



### REPLACING P.C.V. VALVE FILTER

When car is operated under severe conditions, check P.C.V. filter and replace if necessary.



### CHECKING VAPOR LINES

Check all hoses and fuel tank filler cap for leaks.

1. Disconnect the vapor vent line connecting carbon canister to fuel tank.
2. Connect a 3-way connector, a manometer and a cock (or an equivalent 3-way charge cock) to the end of the vent line.
3. Supply pressure into the vapor vent line through the cock little by little until pressure becomes to the below.

Leakage test pressure:  
 3.923 kPa (400 mmH<sub>2</sub>O,  
 15.75 in H<sub>2</sub>O)

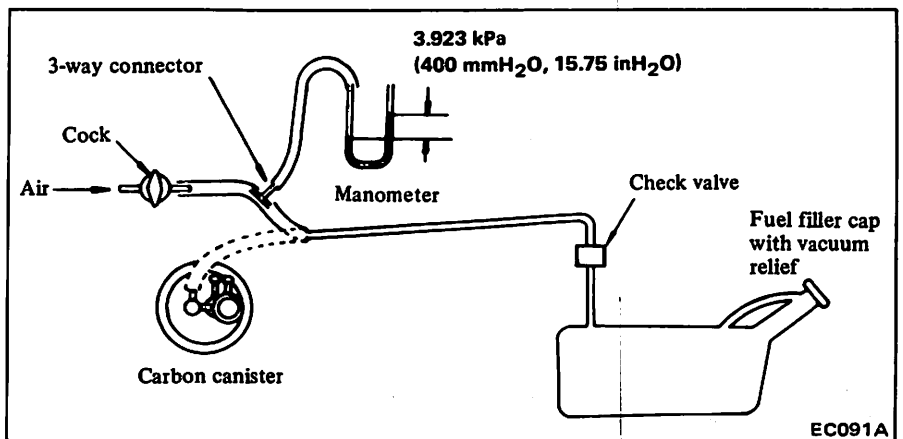
4. Shut the cock completely and leave it unattended.

5. After 2.5 minutes, measure the height of the liquid in the manometer.

Pressure variation:  
 Less than 0.245 kPa  
 (25 mmH<sub>2</sub>O, 0.98 inH<sub>2</sub>O)

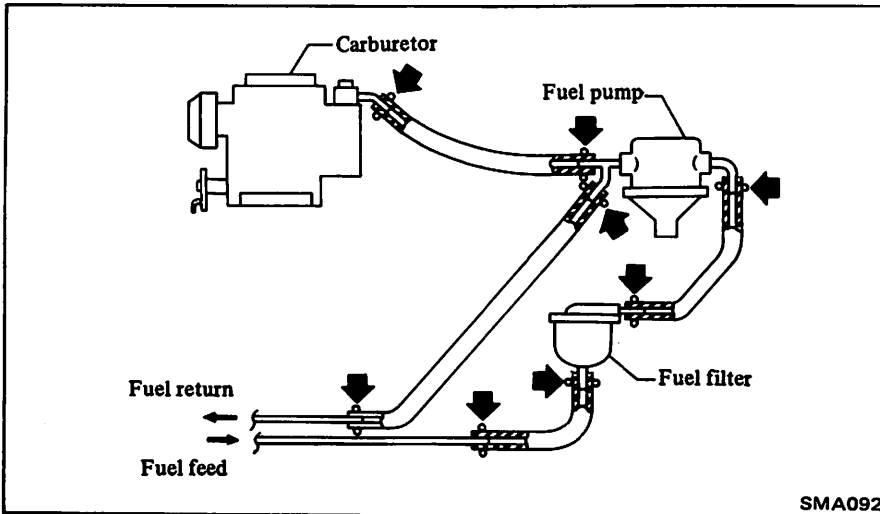
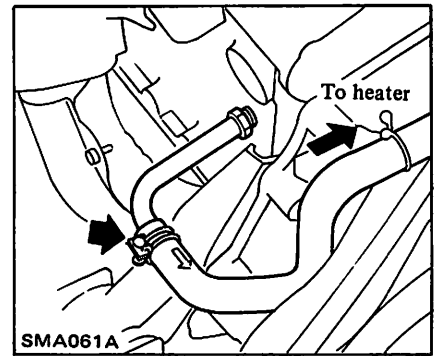
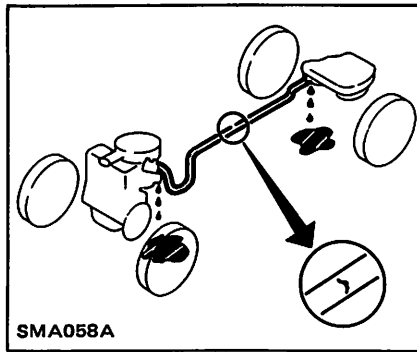
- (1) When filler cap does not close completely, the height should drop to zero in a short time.
- (2) If the height does not drop to zero in a short time when filler cap is removed, it is the cause of a stuffy hose.

In case the vent line is stuffy, the breathing in fuel tank is not thoroughly made, thus causing insufficient delivery of fuel to engine or vapor lock. It must, therefore, be repaired or replaced.



**CHECKING FUEL LINES  
(Hoses, piping,  
connections, etc.)**

1. Check fuel line for leaks, particularly around connection of fuel pipe and fuel hose.
2. Retighten loose connections and replace any damage or deformed parts.



3. Drain coolant completely. Then flush cooling system.
4. Close drain cock and connect heater inlet hose.
5. Fill radiator with coolant up to filler opening, observing instructions attached to anti-freeze container for mixing ratio of anti-freeze to water.

**Cooling water capacity:**

Unit: liter (US qt, Imp qt)

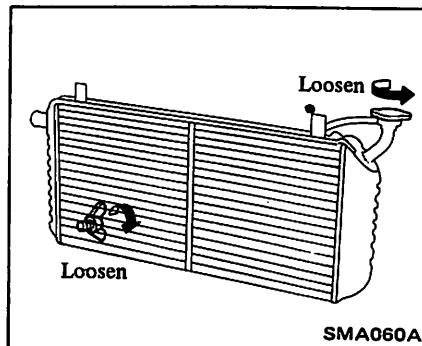
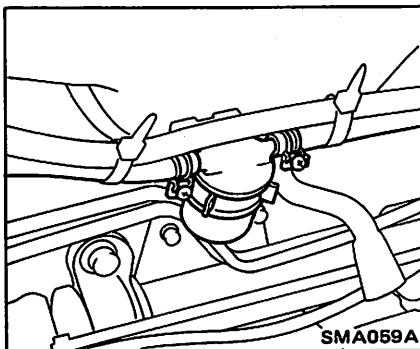
With heater	7.3 (7-3/4, 6-3/8)
Without heater	6.5 (6-7/8, 5-3/4)

**REPLACING FUEL FILTER**

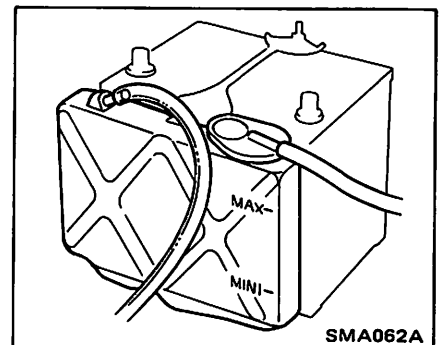
When car is operated under severe conditions, check for a contaminated filter, and water deposit. Replace if necessary.

When changing engine coolant, set heater "TEMP" control lever at fully "HOT" position.

1. Open draincock at bottom of radiator, and remove radiator cap.



6. Run engine for a few minutes. If necessary, add coolant.
7. Fill reservoir tank with coolant up to "MAX" level.



**CHANGING ENGINE  
COOLANT**

**WARNING:**  
To avoid the danger of being scalded, never attempt to change the coolant when the engine is hot.

2. Disconnect heater inlet hose from the connector pipe located at left rear of cylinder block.

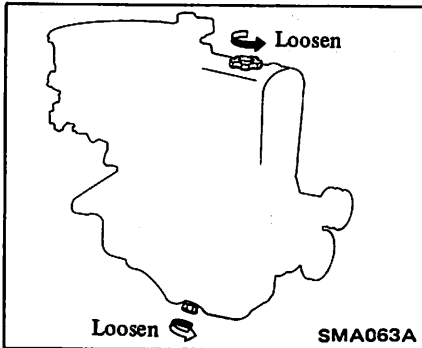
8. Install radiator cap.  
Check drain valve and hose for any sign of leakage.

### CHANGING ENGINE OIL AND OIL FILTER

1. Start engine and warm up engine until water temperature indicator points to the middle of gauge, then stop engine.
2. Remove oil filler cap and oil pan drain plug, and allow oil to drain.

**WARNING:**

Be careful not to burn yourself, as the engine oil may be hot.

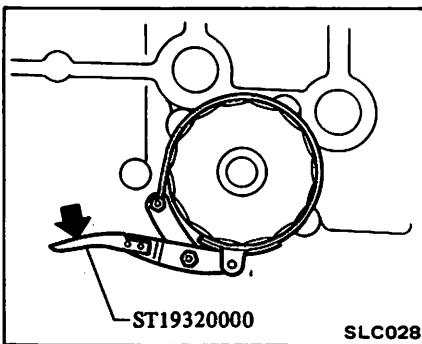


- A milky oil indicates the presence of cooling water. Isolate the cause and take corrective measure.
- An oil with extremely low viscosity indicates dilution with gasoline.

3. Clean and install oil pan drain plug with washer.

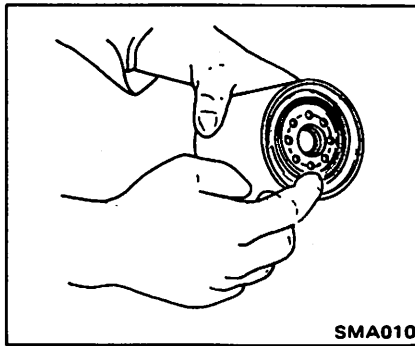
⊕ : Oil pan drain plug  
 29 - 39 N·m  
 (3.0 - 4.0 kg·m,  
 22 - 29 ft·lb)

4. Using Tool, remove oil filter.



5. Wipe oil filter mounting surface with a clean rag.

6. Smear a little engine oil on rubber gasket of new oil filter.



7. Install new oil filter. Hand-tighten ONLY. DO NOT use a wrench to tighten the filter.

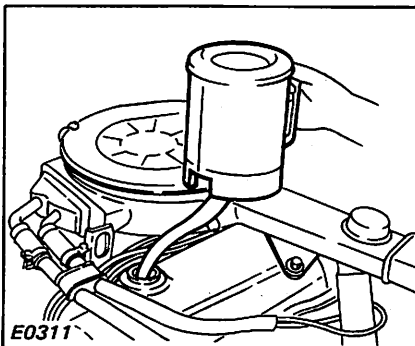
8. Refill engine with new recommended engine oil, referring to Recommended Lubricants.

Check oil level with dipstick.

Oil capacity:

Unit: liter (US qt, Imp qt)

With oil filter	3.9 (4-1/8, 3-3/8)
Without oil filter	3.5 (3-3/4, 3-1/8)

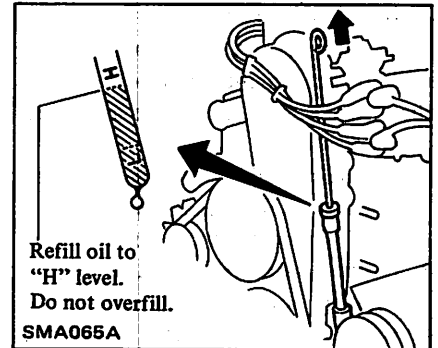


9. Start engine. Check area around drain plug and oil filter for any sign of oil leakage.

If any leakage is evident, these parts have not been properly installed.

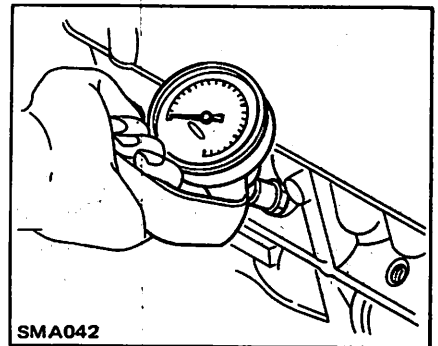
10. Run engine until it reaches operating temperature. Then turn it off and wait several minutes. Check oil level. If necessary, add engine oil.

Oil level should be checked with car parked on a level surface.



### CHECKING ENGINE COMPRESSION PRESSURE

1. Warm up engine until water temperature indicator points to the middle of gauge.
2. Remove all spark plugs on one side.
3. Properly attach a compression tester to spark plug hole in cylinder being tested.



4. Depress accelerator pedal to open throttle valve fully.
5. Crank engine and read gauge indication.

- Run engine at about 350 rpm.
- Engine compression measurement should be made as quickly as possible.

Compression pressure:

kPa (kg/cm<sup>2</sup>, psi)/at rpm

Standard 1,177  
 (12.0, 171)/350

Minimum 883  
 (9.0, 128)/350

6. Cylinder compression in cylinders should not be less than 80% of the highest reading.

If cylinder compression in one or more cylinders is low, pour a small quantity of engine oil into cylinders through the spark plug holes and retest compression.

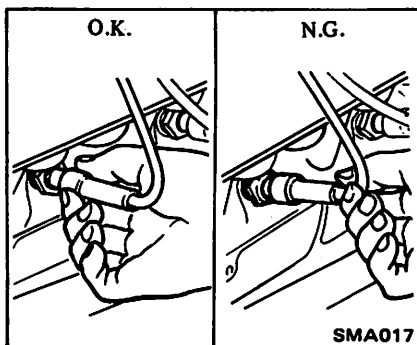
- If adding oil helps the compression pressure, chances are that piston rings are worn or damaged.
- If pressure stays low, valve may be sticking or seating improperly.
- If cylinder compression in any two adjacent cylinders is low, and if adding oil does not help the compression, there is leakage past the gasketed surface.

Oil and water in combustion chambers can result from this problem.

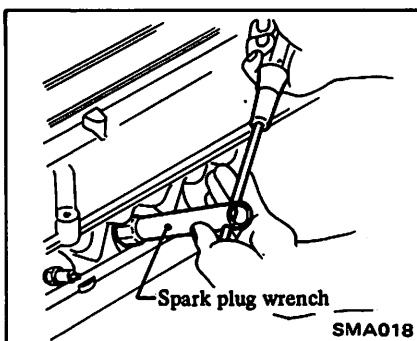
### REPLACING SPARK PLUGS

1. Remove air cleaner and high tension cable.

Do not pull on the wires.

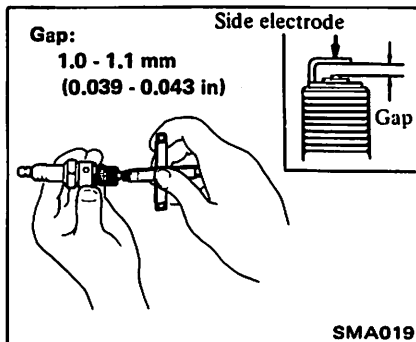


2. Remove spark plugs with spark plug wrench.



3. Using feeler gauge, check new spark plug gap.

If it is not within specified range, set gap by bending side electrode.



### SPARK PLUG:

	Intake side	Exhaust side
Standard type	BPR6ES-11	BPR5ES-11
Hot type	BPR5ES-11	
Cold type	BPR7ES-11	BPR6ES-11 BPR7ES-11

4. Install new spark plugs.  
 5. Reconnect high tension cable and install air cleaner.

All cables are marked to identify their original locations.

- ⊕ : Spark plug  
 15 - 20 N·m  
 (1.5 - 2.0 kg·m,  
 11 - 14 ft·lb)

### CHECKING IGNITION WIRE

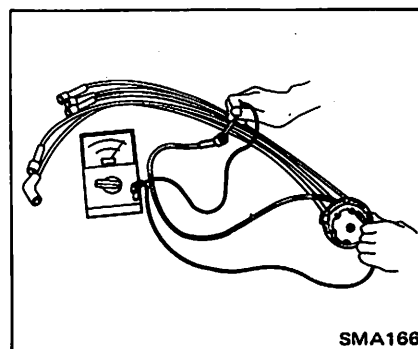
Use an ohmmeter to check resistance on high tension cables.

1. Disconnect cables from spark plugs and remove distributor cap together with high tension cables.

Do not remove cables from cap.

2. Measure resistance between cable terminal on the spark plug side and the corresponding electrode inside cap.

High tension cable resistance:  
 Less than 30,000 ohms



3. If the resistance is more than the limit, remove cable from cap and check the cable resistance only.

If resistance is still more than the limit, replace cable assembly.

### AFTER ENGINE WARM-UP

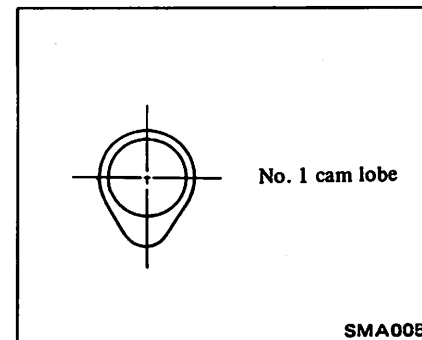
#### ADJUSTING INTAKE AND EXHAUST VALVE CLEARANCE

Adjustment should be made while engine is hot.

1. Start engine and warm up engine until water temperature indicator points to the middle of gauge, then stop engine.

Valve clearance adjustment cannot be made while engine is in operation.

2. Remove air cleaner, high tension cable and valve rocker cover.
3. Set so that high point of No. 1 cam lobe points down.



When turning crankshaft with starter, remove high tension cable from ignition coil, then turn it.