

1980
DATSUN
200SX
SERVICE MANUAL



DATSUN 200SX

Model S110 Series

FOREWORD

This service manual has been prepared primarily for the purpose of assisting service personnel in providing effective service and maintenance of the 1980 DATSUN 200SX.

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.

NISSAN MOTOR CO., LTD.

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HOW TO USE THIS MANUAL

- ▶ This Service Manual is designed as a guide for servicing cars.
- ▶ This manual is divided into 19 sections. The first half of the manual presents sections which concern the engine, and the second half presents sections which deal with the chassis and body.
- ▶ 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.
2395 Cawthra
Mississauga, Ontario
Canada L5A 3P2
- ▶ 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, A/T:	Manual Transmission, Automatic Transmission
- ▶ 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 car.



IMPORTANT SAFETY NOTICE

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

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 car's safety will be jeopardized by the service method selected.

DATSUN 200SX

Model S110 Series

SECTION **GI**

GI

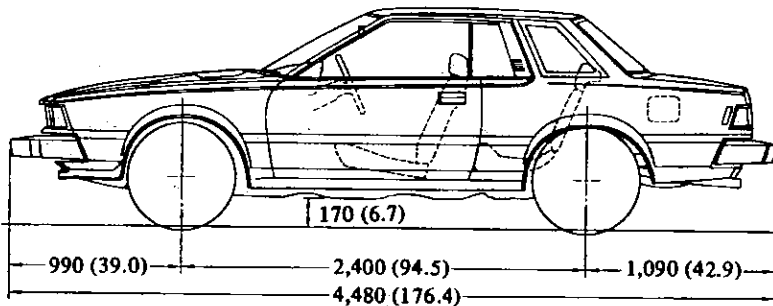
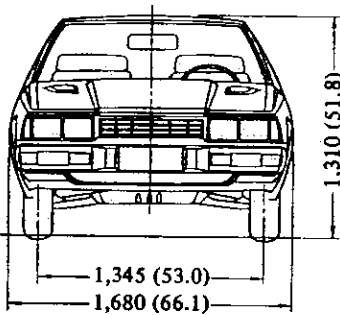
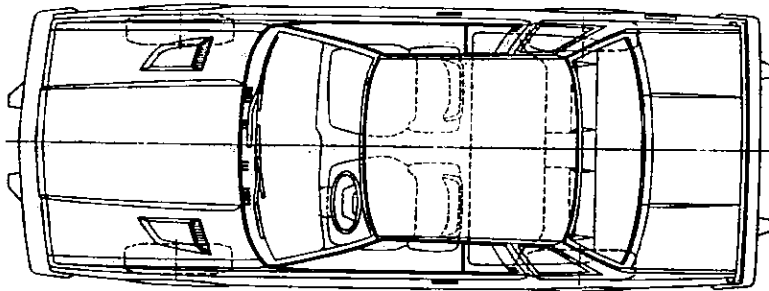
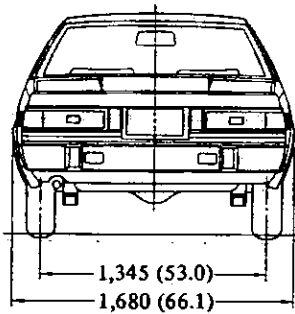
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GENERAL VIEWS

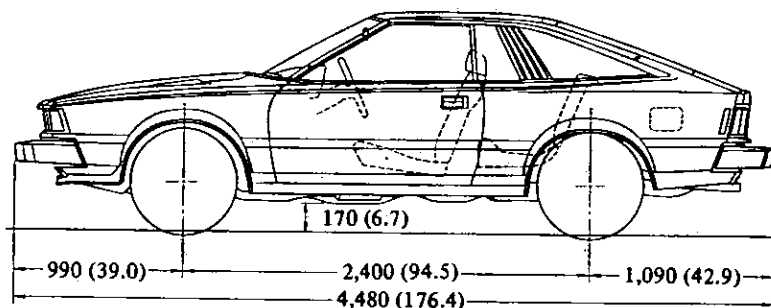
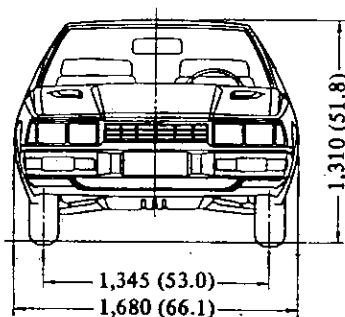
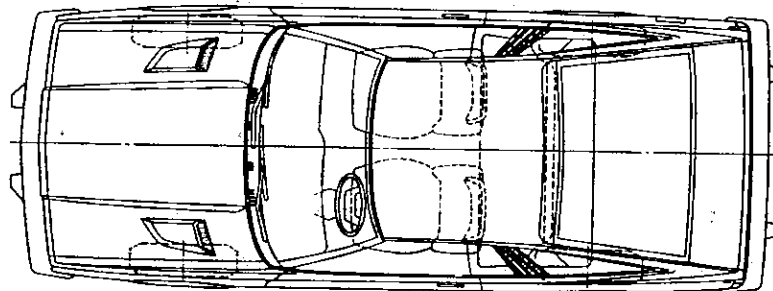
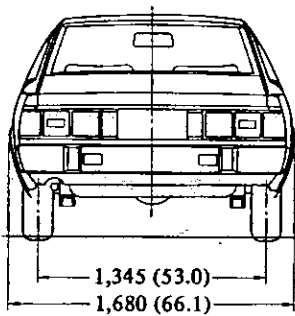
Hardtop



Unit: mm (in)

SG1002

Hatchback



Unit: mm (in)

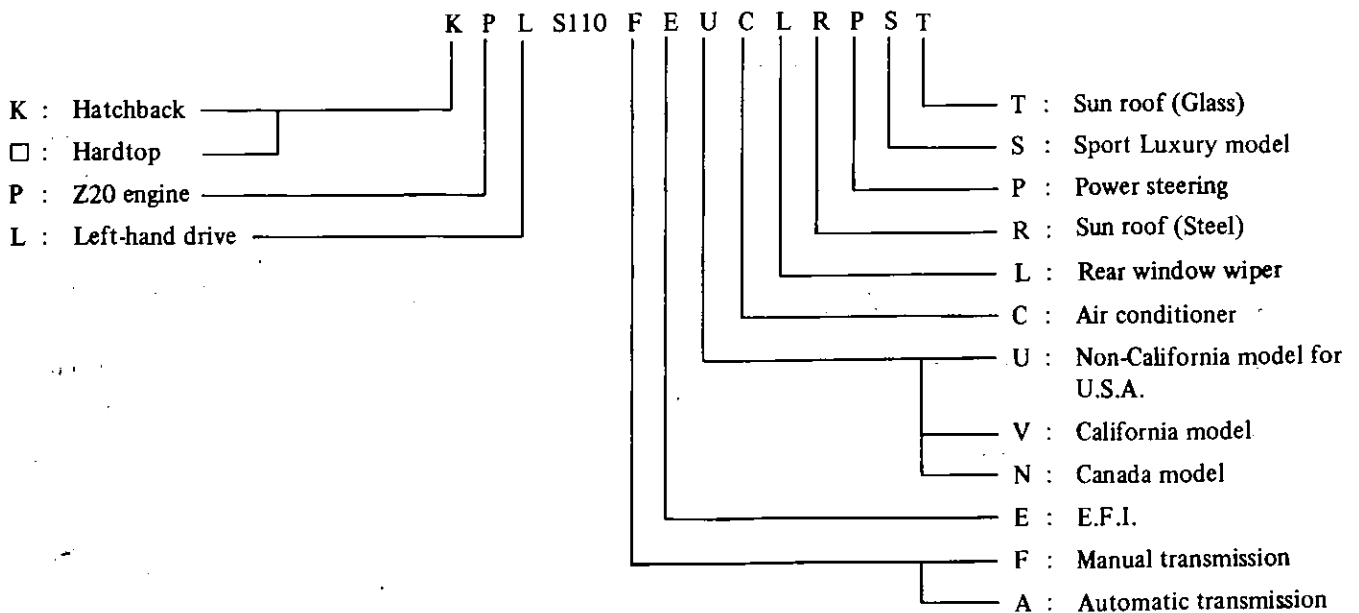
SG1003

MODEL VARIATION

Desti- nation	Class	Model		Engine	Transmission	Differential carrier	Road wheel Size Offset mm (in)	Tire size
U.S.A.	Hardtop	California	PLS110FEV	Z20E	FS5W71B	H165B	5J-14 25 (0.98)	185/ 70-SR14
			PLS110AEV		3N71B			
	Hatchback		KPLS110FEV		FS5W71B			
			KPLS110AEV		3N71B			
	Hardtop	Non-California	PLS110FEU		FS5W71B		*1 5-1/2JJ-14 25 (0.98)	185/ 70-SR14
			PLS110AEU		3N71B			
	Hatchback		KPLS110FEU		FS5W71B			
			KPLS110AEU		3N71B			
Canada	Hardtop	Non-California	PLS110FEN	FS5W71B	*2 4-T x 16 35 (1.38)	T135/ 70D16*2		
			PLS110AEN	3N71B				
	Hatchback		KPLS110FEN	FS5W71B				
			KPLS110AEN	3N71B				

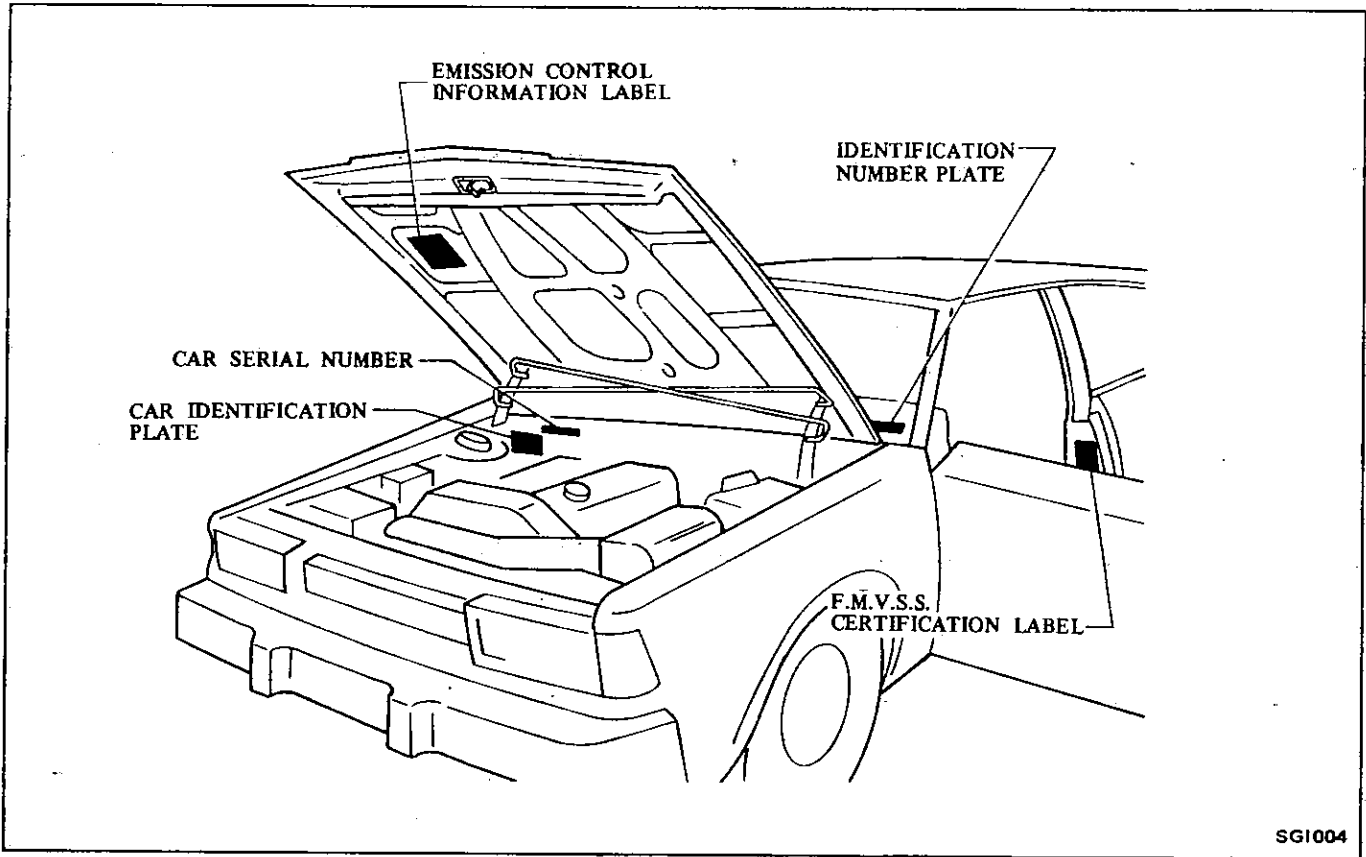
*1: Aluminum wheel (Option)
*2: Spare tire

Prefix and suffix designations:



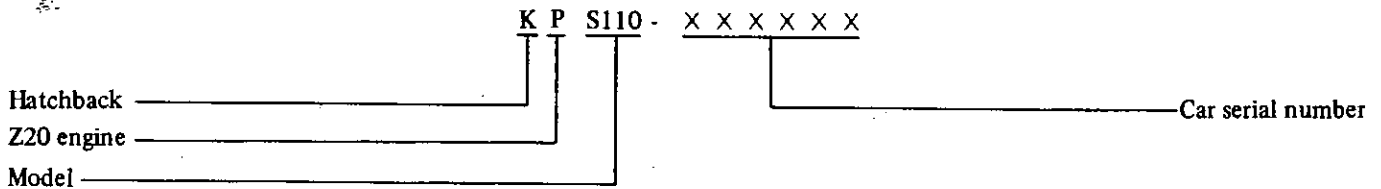
□: means no indication

IDENTIFICATION NUMBER



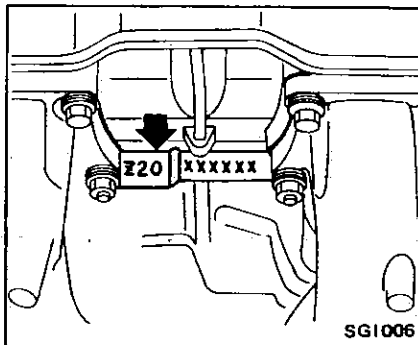
SG1004

CAR SERIAL NUMBER



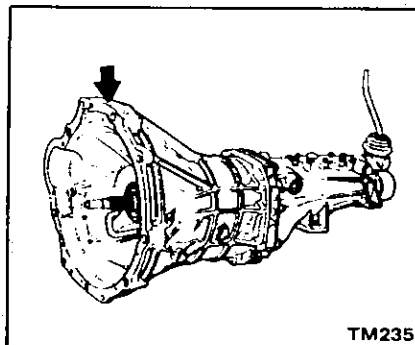
ENGINE SERIAL NUMBER

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



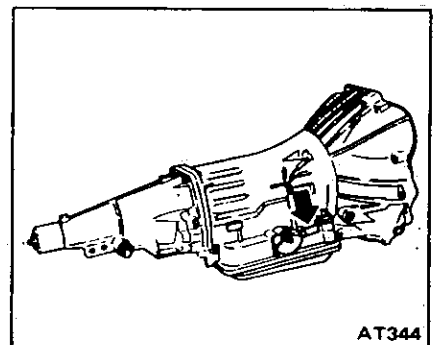
MANUAL TRANSMISSION NUMBER

The transmission serial number is stamped on the front upper face of the transmission case.

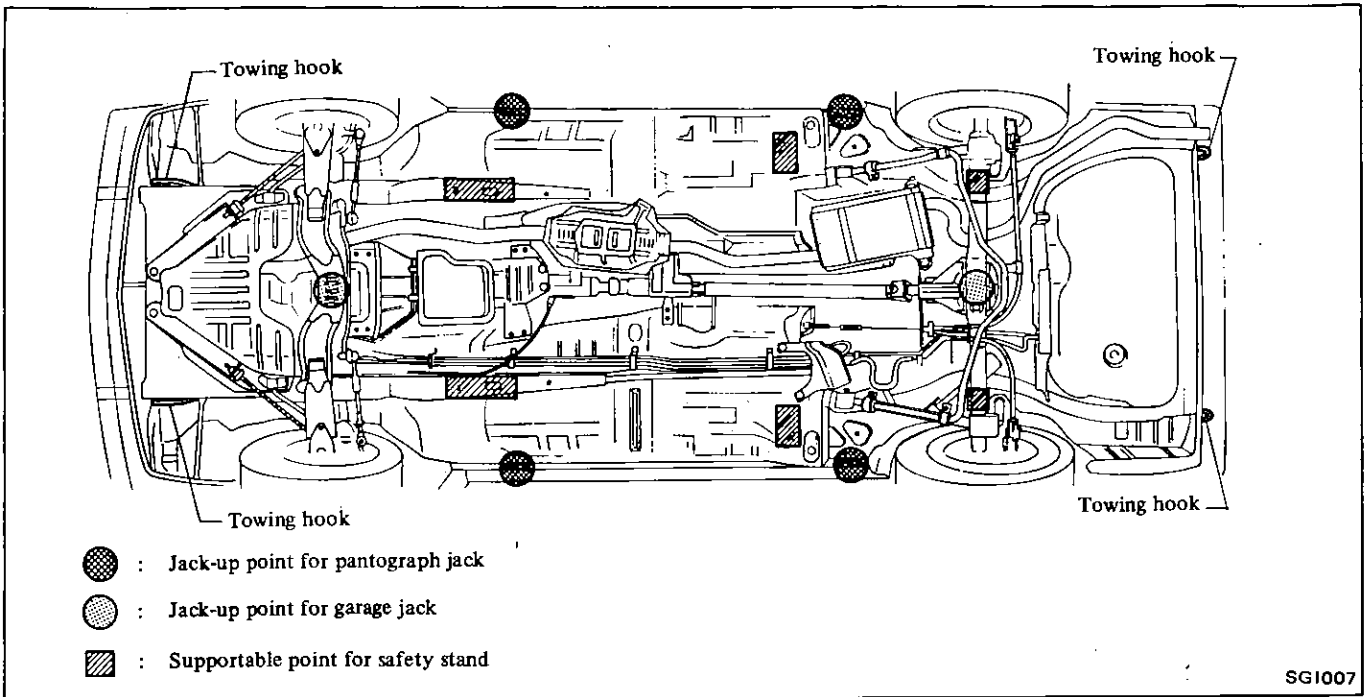


AUTOMATIC TRANSMISSION NUMBER

The transmission serial number plate is attached on the right-hand side of the transmission case.



LIFTING POINTS AND TOWING



PANTOGRAPH JACK

WARNING:

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

Apply the pantograph jack furnished with the car to the position indicated below in a safe manner.

GARAGE JACK AND SAFETY STAND

WARNING:

- a. When carrying out operations with the garage jack, be sure to support the car with safety stands.
- b. When jacking up the rear (front) of the car, 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 car body when supporting body with safety stand.

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

TIE-DOWN

FRONT SIDE

Use front towing hooks for tie-down.

REAR SIDE

Use rear towing hooks for tie-down.

TOWING

CAUTION:

- a. It is necessary to use proper towing equipment to avoid possible damage to the car 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 transmission, axles, steering system and power train are in good order. If any unit is damaged, a dolly must be used.
- d. If the transmission is inoperative, tow the car with the rear wheels off the ground, or with the propeller shaft removed.
- e. When the car 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. When towing an automatic transmission model on its rear wheels, do not exceed 30 km/h (20 MPH) and a distance of 30 km (20 miles).
- g. Release the parking brake and set the gearshift lever in "Neutral" position before starting to tow the car.

SPECIAL SERVICE TOOLS

Special Tools play very important role in the maintenance of cars. 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 computed 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 Overhauling Machine
GG00000000: General Gauge
LM00000000: Garage Tool
HT00000000: Hand Tool

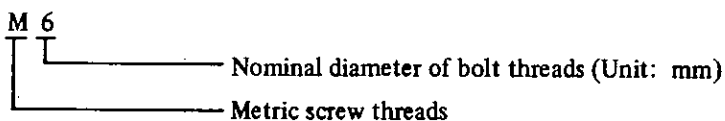
TIGHTENING TORQUE OF STANDARD BOLT

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	2.9 - 3.9 (0.3 - 0.4, 2.2 - 2.9)
			1.25	7.8 - 10.8 (0.8 - 1.1, 5.8 - 8.0)
	M8	8.0	1.0	7.8 - 10.8 (0.8 - 1.1, 5.8 - 8.0)
			1.5	16 - 22 (1.6 - 2.2, 12 - 16)
	M10	10.0	1.25	16 - 22 (1.6 - 2.2, 12 - 16)
			1.75	26 - 36 (2.7 - 3.7, 20 - 27)
M12	12.0	1.25	30 - 40 (3.1 - 4.1, 22 - 30)	
		1.5	46 - 62 (4.7 - 6.3, 34 - 46)	
7T	M6	6.0	1.0	5.9 - 6.9 (0.6 - 0.7, 4.3 - 5.1)
			1.25	14 - 18 (1.4 - 1.8, 10 - 13)
	M8	8.0	1.0	14 - 18 (1.4 - 1.8, 10 - 13)
			1.5	25 - 35 (2.6 - 3.6, 19 - 26)
	M10	10.0	1.25	26 - 36 (2.7 - 3.7, 20 - 27)
			1.75	45 - 61 (4.6 - 6.2, 33 - 45)
M12	12.0	1.25	50 - 68 (5.1 - 6.9, 37 - 50)	
		1.5	76 - 103 (7.7 - 10.5, 56 - 76)	
9T	M6	6.0	1.0	7.8 - 10.8 (0.8 - 1.1, 5.8 - 8.0)
			1.25	19 - 25 (1.9 - 2.5, 14 - 18)
	M8	8.0	1.0	20 - 27 (2.0 - 2.8, 14 - 20)
			1.5	36 - 50 (3.7 - 5.1, 27 - 37)
	M10	10.0	1.25	39 - 51 (4.0 - 5.2, 29 - 38)
			1.75	65 - 88 (6.6 - 9.0, 48 - 65)
M12	12.0	1.25	72 - 97 (7.3 - 9.9, 53 - 72)	
		1.5	109 - 147 (11.1 - 15.0, 80 - 108)	

1. Special parts are excluded.
2. 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



SECTION MA**MA****MAINTENANCE****CONTENTS**

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MAINTENANCE SCHEDULE

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.

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 (CALIFORNIA)

Intake & exhaust valve clearance	Ⓐ		Ⓐ		Ⓐ		Ⓐ	MA- 6
Drive belts	A		I		Ⓛ		I	MA- 6
Engine oil & oil filter	See NOTE: (1)							MA- 7
Engine coolant					R*			MA- 8
Idle rpm	Ⓐ							MA-12
Fuel filter	See NOTE: (3)							MA-13
Fuel lines (hoses, piping, connections, etc.)					I*			MA-13
Air cleaner filter	See NOTE: (2)							MA-14
Spark plugs					Ⓡ			MA- 9
Ignition wiring					I			MA- 9
Air induction valve filter	See NOTE: (2)							MA-14
Vapor lines					I			MA-14

Abbreviations: A = Adjust R = Replace

I = Inspect, correct, replace if necessary

- 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 the vehicle is operated under extreme adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filter might become clogged. In such an event, replace the filter immediately.
 - (4) Ⓛ, Ⓡ and Ⓐ are the maintenance intervals required by California Regulations. Ⓡ limits the warranty coverage to these replacement intervals. I* and R* are the required maintenance intervals. Other maintenance items and intervals are recommended by NISSAN MOTOR CO., LTD.

EMISSION CONTROL MAINTENANCE (NON-CALIFORNIA)

Intake & exhaust valve clearance	A		A		A		A	MA- 6
Drive belts	A		I		I		I	MA- 6
Engine oil & oil filter	See NOTE: (5)							MA- 7
Engine coolant					R			MA- 8
Idle rpm & mixture ratio	Idle rpm	A		A		A		MA-10
	Mixture ratio	I		I		I		MA-10
*Fuel filter	See NOTE: (7)							MA-13
Fuel lines (hoses, piping, connections, etc.)					I			MA-13
Air cleaner filter	See NOTE: (6)							MA-14
Ignition timing			A		A		A	MA-10
Spark plugs					R			MA- 9
*Ignition wiring					I			MA- 9
Air induction valve filter (except Canada)	See NOTE: (6)							MA-14
*Vapor lines					I			MA-14

Abbreviations: A = Adjust R = Replace

I = Inspect, correct, replace if necessary

- (5) 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.
- (6) More frequent maintenance is required under dusty driving conditions.
- (7) If the vehicle is operated under extreme adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filter might become clogged. In such an event, replace the filter immediately.
- (8) Maintenance items with "*" are recommended by NISSAN MOTOR CO., LTD. Other maintenance items are required.

MAINTENANCE OPERATION	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)	
Periodic maintenance should be performed at number of kilometers, miles or months, whichever comes first.	Months	–	6	12	18	24	30	36	

UNDERHOOD MAINTENANCE

Brake, clutch, steering gear & automatic transmission fluid or oil level & leaks			I			I			I	MA-23, 24, 28, 33
Brake fluid			R			R			R	MA-28
Brake booster vacuum hoses, connections & check valve						I				MA-28
Air conditioning system hoses, connections & refrigerant leaks						I				MA-37
Power steering fluid & lines			I			I			I	MA-33

UNDER VEHICLE MAINTENANCE

Brake, clutch, fuel & exhaust systems for proper attachment, leaks, cracks, chafing, abrasion, deterioration, etc.			I			I			I	MA-23, 28
Manual transmission & differential gear oil See NOTE: (9)			I			I			I	MA-23, 24
Steering gear box & linkage, suspension parts & propeller shaft for damaged, loose & missing parts See NOTE: (10)	I		I			I			I	MA-24, 27, 34
Underbody (flush and clean every 12 months)			I			I			I	–

OUTSIDE AND INSIDE MAINTENANCE

Rotate wheel position & inspect wheel balance & wheel alignment			I			I			I	MA-26, 30 32
Disc brake pads & other brake components for wear, deterioration & leaks See NOTE: (11)			I			I			I	MA-28
Front wheel bearing						I				MA-25
Locks, hinges & hood latch See NOTE: (11)			L			L			L	MA-35
Seat belts, buckles, retractors, anchors & adjuster			I			I			I	MA-35
Foot brake, parking brake & clutch for stroke, free play & operation			I			I			I	MA-23, 28

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

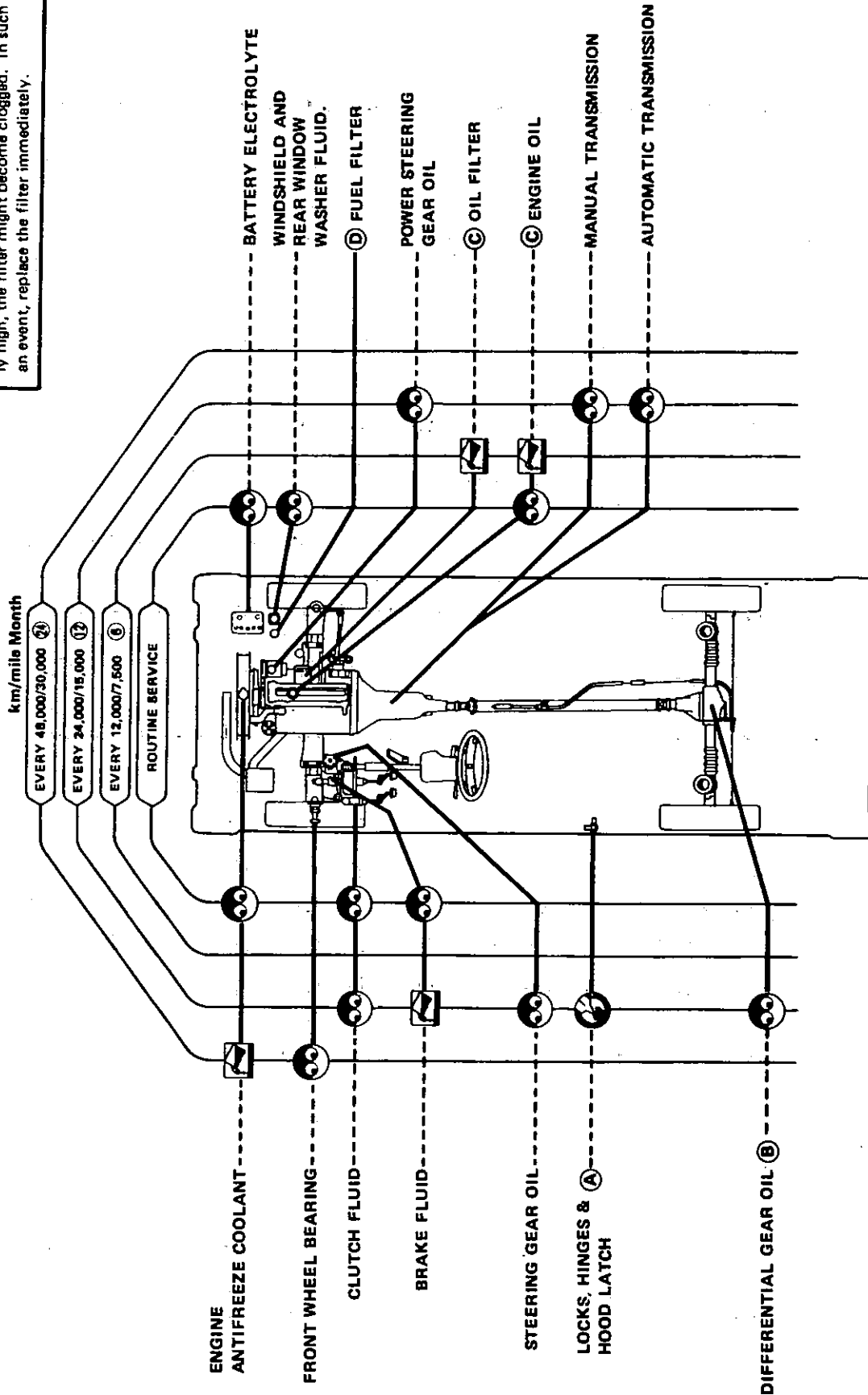
- NOTE:** (9) When towing a trailer, change oil in differential gear every 48,000 km (30,000 miles) or 24 months, whichever comes first.
 (10) Steering linkage & front suspension ball joint inspection should be performed every 96,000 km (60,000 miles) or 4 years, whichever comes first.
 (11) If vehicle 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.

LUBRICATION CHART

(D) If the vehicle is operated under extreme adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filter might become clogged. In such an event, replace the filter immediately.

(D)



(C) 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.

(C)

(B) When towing a trailer, change oil in differential gear every 48,000 km (30,000 miles) or 24 months, whichever comes first.

(B)

(A) 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.

(A)

	CHANGE		LUBRICATE
	CHECK		GREASE-UP

SMA383

RECOMMENDED FUEL AND LUBRICANTS

FUEL

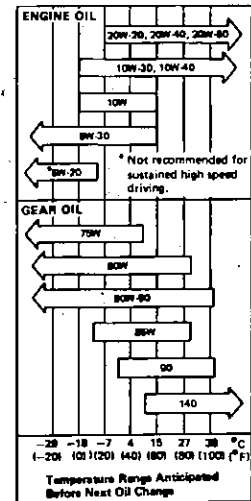
Use an unleaded gasoline only of at least 91 research octane number (Anti-knock index 87).

Under no circumstances should a leaded fuel be used since this will damage the catalytic converter.

LUBRICANTS

Lubricant		Specifications	Remarks
Gasoline engine oil		API SE	Further details, refer to recommended SAE viscosity chart.
Gear oil	Transmission and steering	API GL-4	
	Differential	API GL-5	
Automatic T/M and power steering fluid		Type DEXRON	—
Multi-purpose grease		NLGI No. 2	Lithium soap base
Brake and clutch 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	Hardtop	53	14 gal	11-5/8 gal
	Hatchback	60	15-7/8 gal	13-1/4 gal
Coolant	With heater	9.5	10 qt	8-3/8 qt
	Without heater	8.8	9-1/4 qt	7-3/4 qt
Engine	With oil filter	4.1	4-3/8 qt	3-5/8 qt
	Without oil filter	3.9	4-1/8 qt	3-3/8 qt
Transmission	M/T	2.0	4-1/4 pt	3-1/2 pt
	A/T	5.5	5-7/8 qt	4-7/8 qt
Differential carrier		1.1	2-3/8 pt	2 pt
Power steering system		1.2	1-1/4 qt	1-1/8 qt
Steering gear		0.28	5/8 pt	1/2 pt
Windshield washer tank		2.0	2-1/8 qt	1-3/4 qt
Rear window washer tank		1.0	1-1/8 qt	7/8 qt
Air conditioning system	Compressor oil	0.27	9.1 fl oz, 9.0 oz	9.5 fl oz, 9.0 oz
	Refrigerant	0.9 - 1.1 kg	2.0 - 2.4 lb	2.0 - 2.4 lb

ENGINE MAINTENANCE

BASIC MECHANICAL SYSTEM

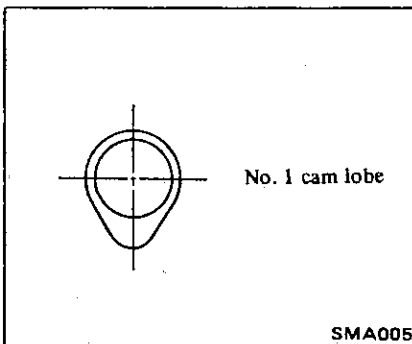
ADJUSTING INTAKE AND EXHAUST VALVE CLEARANCE

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.

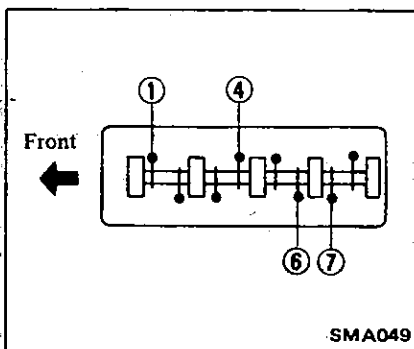
Valve clearance adjustment cannot be made while engine is in operation.

2. Remove 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.

Adjust clearance of half of the valves. Adjust only ①, ④, ⑥, and ⑦ valves.



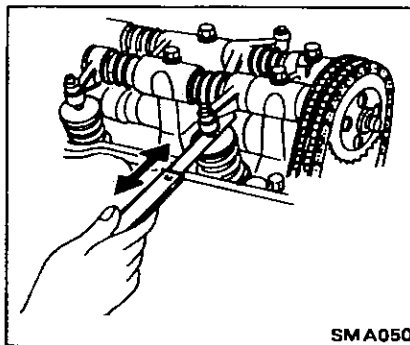
Valve clearance (Hot)

Intake ... ① ④ : 0.30 mm
(0.012 in)

Exhaust... ⑥ ⑦ : 0.30 mm
(0.012 in)

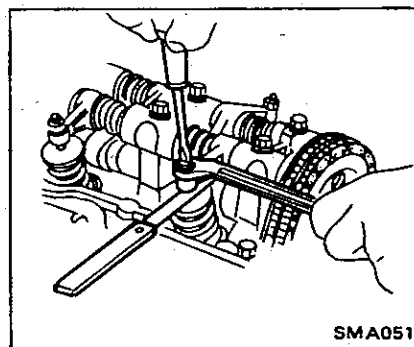
(1) Using feeler gauge, measure clearance between valve stem end and rocker arm screw.

Feeler gauge should move with a very slight drag.



(2) If the clearance is not within specified value, loosen rocker arm nut and turn rocker arm screw to provide proper clearance.

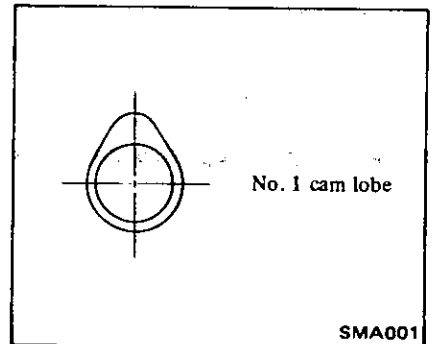
(3) Hold rocker arm screw and tighten rocker arm nut.



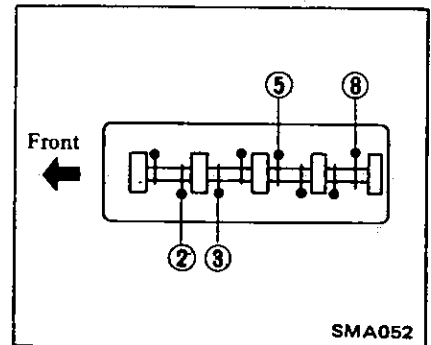
Ⓣ: Rocker arm nut
16 - 22 N-m
(1.6 - 2.2 kg-m,
12 - 16 ft-lb)

(4) Recheck clearance.

4. Turn crankshaft and set so that high point of No. 1 cam lobe points above.



Adjust ②, ③, ⑤ and ⑧ valves, using same procedure as for Step 3.



Valve clearance (Hot)

Intake ... ⑤ ⑧ : 0.30 mm
(0.012 in)

Exhaust... ② ③ : 0.30 mm
(0.012 in)

5. Install valve rocker cover.

CHECKING AND ADJUSTING DRIVE BELTS

1. Visually inspect for cracks or damage.

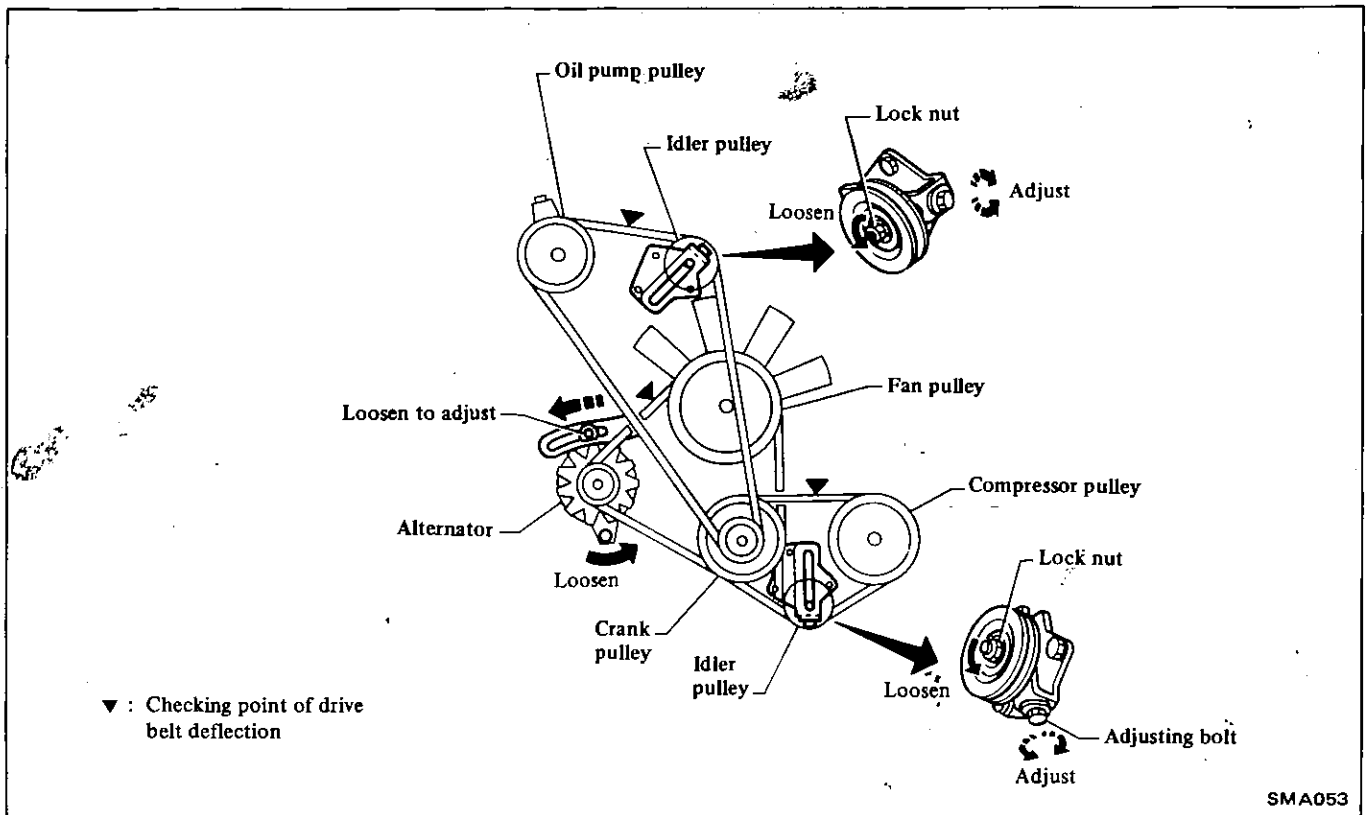
The belts should not touch the bottom of the pulley groove.

2. Check belt tension by pushing. The belts should deflect by the specified amount.

Drive belt deflection:

8 - 12 mm
(0.31 - 0.47 in)

Applied pressing force:
98 N (10 kg, 22 lb)



3. Adjust belt tension as follows:

Fan and 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 within the specified range. Then tighten the bolts securely.

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 pan drain plug and oil filler cap, 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.

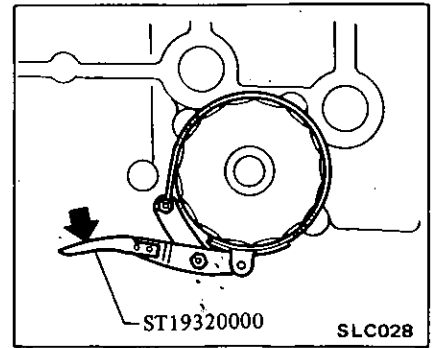
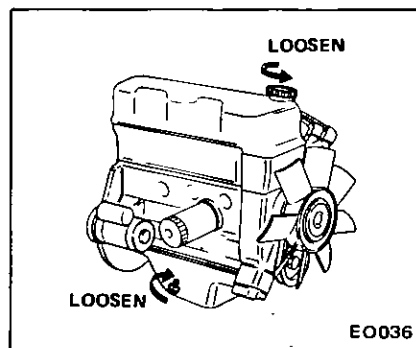
3. Clean and install oil pan drain plug with washer.

⊕ : Oil pan drain plug
20 - 29 N·m
(2.0 - 3.0 kg·m,
14 - 22 ft·lb)

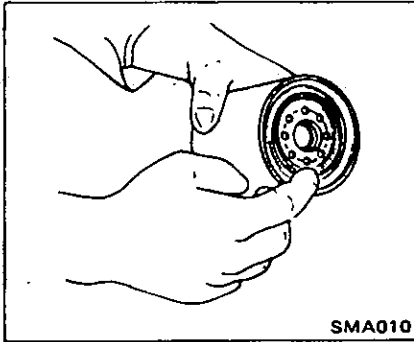
4. Using Tool, remove oil filter.

Air conditioner compressor and power steering oil pump belts

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



5. Wipe oil filter mounting surface with a clean rag.
6. Smear a little engine oil on rubber gasket of new 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.

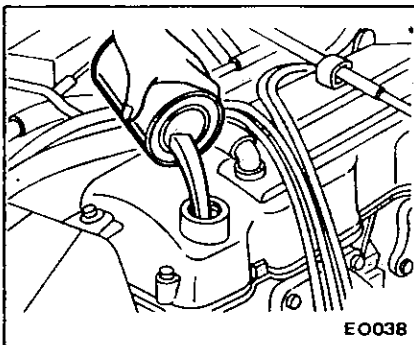
Oil Capacity:

With oil filter

4.1 liters (4-3/8 US qt,
3-5/8 Imp qt)

Without oil filter

3.9 liters (4-1/8 US qt,
3-3/8 Imp qt)

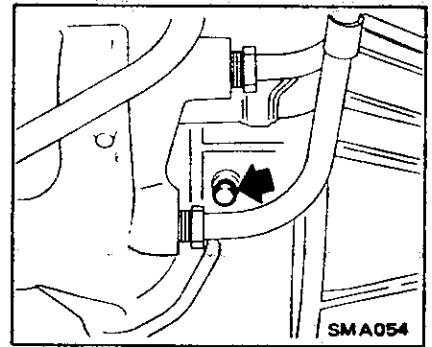
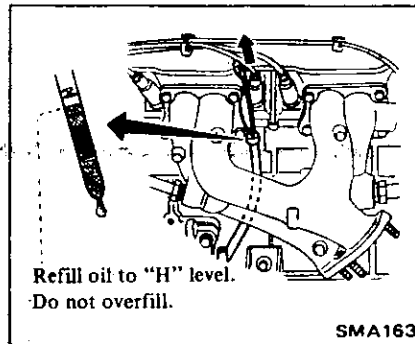


9. Start engine. Check area around drain plug and oil filter for any sign of oil leakage.

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.

When checking oil level, park the car on a level surface.



3. Drain coolant completely. Then flush cooling system.
4. Close drain cock and plug.
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:

9.5 liters (10 US qt,
8-3/8 Imp qt)

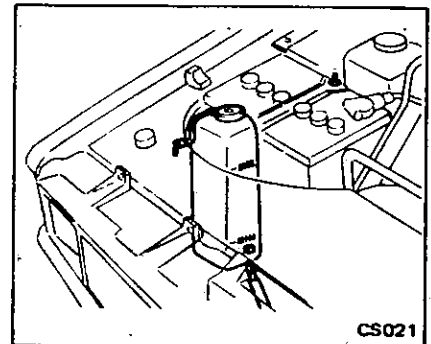
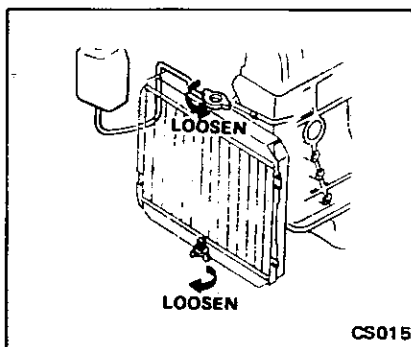
6. Run engine for a few minutes. If necessary, add coolant.
7. Fill reservoir tank with coolant up to "MAX" level.

CHANGING ENGINE COOLANT

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

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

1. Open drain cock at bottom of radiator, and remove radiator cap.



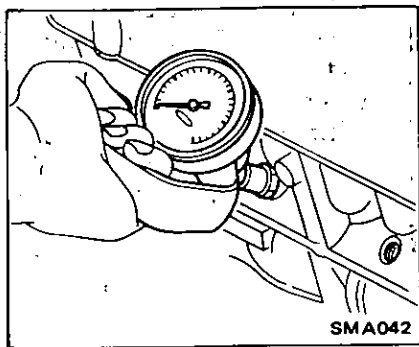
8. Install radiator cap.
Check drain valve and plug for any sign of leakage.

2. Remove cylinder block drain plug located at left rear of cylinder block.

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 for California models).
3. Disconnect all harness connectors at injector.
4. Properly attach a compression tester to spark plug hole in cylinder being tested.



5. Depress accelerator pedal to open throttle valve fully.
6. 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/cm², psi)/at rpm

Standard

1,177 (12.0, 171)/350

Minimum

883 (9.0, 128)/350

7. 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.

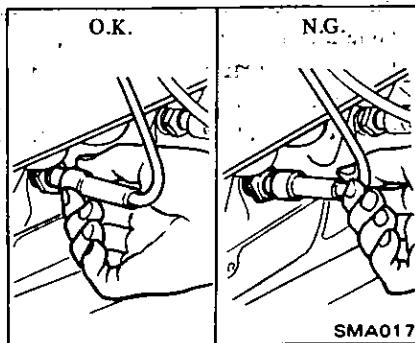
- If adding oil helps the compression pressure, chances are that piston rings are worn or damaged.
- If pressure stays low, valve may be sticking or seating improperly.
- If cylinder compression in any two adjacent cylinders is low, and if adding oil does not help the compression, there is leakage past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

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

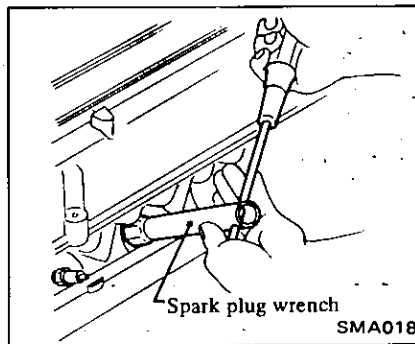
IGNITION AND FUEL SYSTEM

REPLACING SPARK PLUGS

1. Disconnect spark plug wire at boot. Do not pull on the wires.

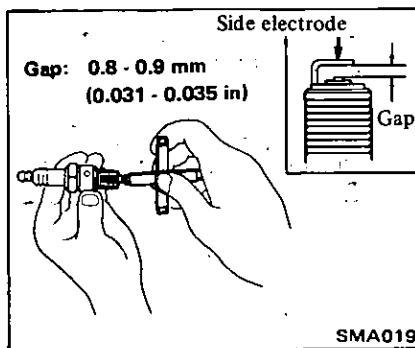


2. Remove spark plugs with spark plug wrench.



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

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



SPARK PLUG:

	Standard	Resistor built-in type
Standard type	BP6ES	BPR6ES
Hot type	BP5ES	BPR5ES
Cold type	BP7ES	BPR7ES

4. Install new spark plugs and re-connect high tension cables.

All cables are marked to identify their original locations.

Ⓡ : Spark plug

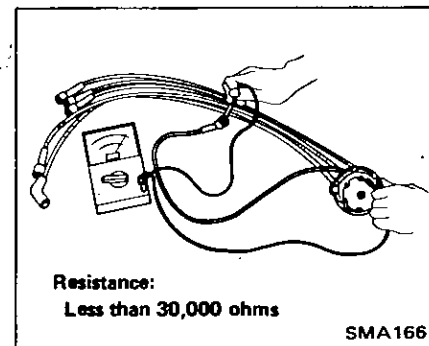
15 - 20 N·m

(1.5 - 2.0 kg·m,

11 - 14 ft·lb)

CHECKING IGNITION WIRING

1. Visually check wiring for cracks, damaged and burned terminals.
2. Using an ohmmeter, measure the resistance between cable terminal on the spark plug side and corresponding electrode inside cap.



Resistance:
Less than 30,000 ohms

Shake the wire while measuring resistance to check for intermittent breaks.

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.

**ADJUSTING IDLE RPM,
ADJUSTING IGNITION
TIMING AND
CHECKING MIXTURE RATIO
(Non-California models)**

Preparation

1. Make sure that the following parts are in good order.

- Battery
- Ignition system

- EFI harness connectors
 - Vacuum hoses
 - Air intake system (Oil filler cap, oil level gauge etc.)
2. Connect engine tachometer and timing light in their proper positions.
 3. On air conditioner equipped models, checks should be carried out while the air conditioner is "OFF".
 4. On automatic transmission equipped models, checks should be carried out while shift lever is in "D" position.

WARNING:

- a. When selector lever is shifted to "D" position, apply parking brake and block both front and rear wheels with chocks.
- b. When racing engine on automatic transmission equipped models, make sure that shift lever is in "N" or "P" position and depress brake pedal to prevent forward surge of car.
- c. After the adjustment has been made, shift the lever to the "N" or "P" position and remove wheel chocks.

Maintenance procedure

