

1974-79 TUNE-UP PROCEDURES

Datsun 4-Cylinder

**B210, F10, Pickup, 200SX,
210, 310, 510, 610, 620, 710**

ENGINE IDENTIFICATION

Engine code followed by engine serial number is stamped on right side of cylinder block, just below the No. 4 spark plug.

1974 ENGINE CODES

Application	Code
B210	A13
610	L20B
620	L18
710	L18

1975-78 ENGINE CODES

Application	Code
B210	A14
F10	A14
200SX	L20B
610 & 710	L20B
510 & Pickup	L20B

1979 ENGINE CODES

Application	Code
200SX	L20B
210	
Except Wagon With Auto. Trans.	A14
Wagon With Auto. Trans.	A15
310	A14
510	L20B
Pickup	L20B

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Vehicle Identification Number is stamped on a plate attached to instrument panel and is visible through windshield from outside of vehicle. Number on Pickup is on upper face of right side member. An identification plate also is found inside the engine compartment.

ENGINE COMPRESSION

Check compression pressure with engine at normal operating temperature, all spark plugs disconnected, electrical lead to anti-dieseling solenoid disconnected, choke and throttle valves wide open and engine at cranking speed (350 RPM). Lowest cylinder pressure should be at least 80% of the highest cylinder pressure.

COMPRESSION SPECIFICATIONS

Application	psi (kg/cm ²)
A13, A14 & A15	178-192 (12.5-13.5)
L18 & L20B	128-171 (9-12)

VALVE CLEARANCE

A13, A14 & A15 Engines - 1) Adjust valve clearance to specifications with engine off and at normal operating temperature. Rotate crankshaft to bring No. 1 cylinder to TDC on compression stroke.

A13, A14 & A15 VALVE ADJUSTMENT SEQUENCE

Location No. In Fig. 1	Valves to Adjust
1	Exhaust Valve No. 1
2	Intake Valve No. 1
3	Intake Valve No. 2
5	Exhaust Valve No. 3
4 ¹	Exhaust Valve No. 2
6 ¹	Intake Valve No. 3
7 ¹	Intake Valve No. 4
8 ¹	Exhaust Valve No. 4

¹ - Adjust valve with No. 4 cylinder at TDC of compression stroke.

2) Adjust valves as specified while engine is still hot. See A14 & A15 VALVE ADJUSTMENT SEQUENCE table. Rotate crankshaft until No. 4 cylinder is at TDC of compression stroke. Adjust remaining valves. After adjustment, tighten lock nuts firmly.

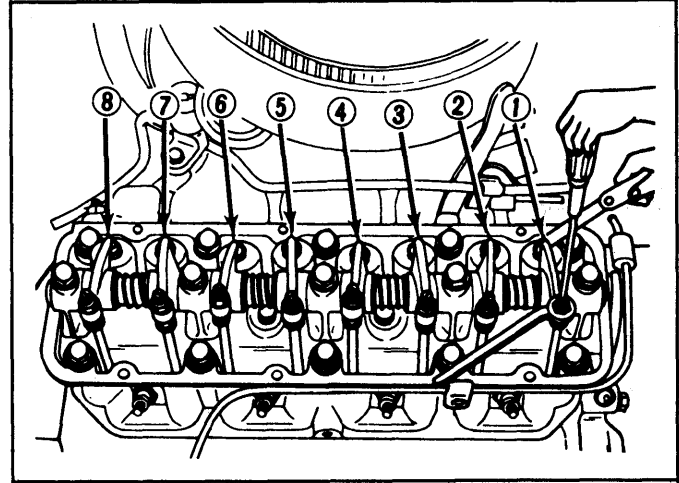


Fig. 1: A13, A14 & A15 Engine Valve Clearance Adjustment

L18 Engine - Adjust valves with engine off and at normal operating temperature. Loosen pivot locking nut and turn pivot screw until specified clearance is obtained. Tighten locking nut and recheck clearance.

L20B Engine - Adjust valves with engine off and at normal operating temperature. Insert feeler gauge between end of cam and pivot arm from valve side of head. Use Wrench (ST1064001) to loosen pivot locking nut and a second wrench to turn pivot adjuster until specified clearance is obtained. Tighten locking nut and recheck clearance.

VALVE CLEARANCE SPECIFICATIONS

Application	Intake	Exhaust
A13, A14 & A15014" (.35 mm)	.014" (.35 mm)
L18 & L20B010" (.25 mm)	.012" (.30 mm)

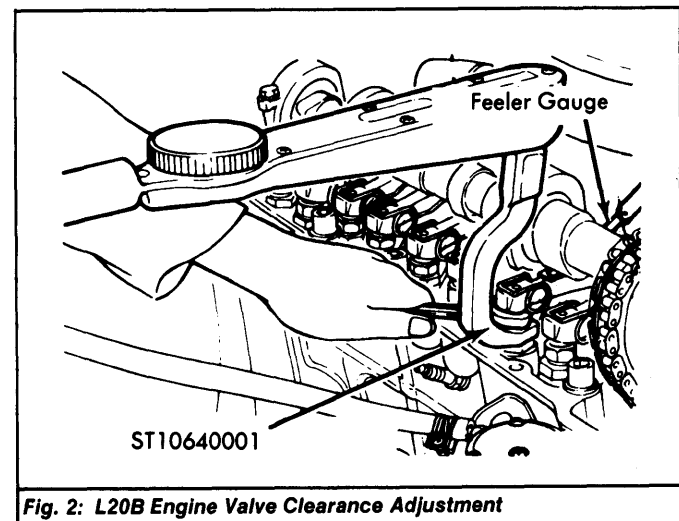


Fig. 2: L20B Engine Valve Clearance Adjustment

VALVE ARRANGEMENT

E-I-I-E-E-I-I-E - Front-to-rear.

1974-79 TUNE-UP PROCEDURES

Datsun 4-Cylinder (Cont.)

SPARK PLUGS

1974 SPARK PLUG SPECIFICATIONS

Application	Specification
Gap	
B210 & Pickup	.031-.035" (.8-.9 mm)
All Others	.039-.043" (1.0-1.1 mm)
Torque	11-14 ft. lbs. (15-19 N.m)

1975-77 SPARK PLUG SPECIFICATIONS

Application	Specification
Gap	
Pickup (Federal)	.031-.035" (.8-.9 mm)
All Others	.039-.043" (1.0-1.1 mm)
Torque	11-14 ft. lbs. (15-19 N.m)

1978-79 SPARK PLUG SPECIFICATIONS

Application	Specification
Gap	
B210 & 210 5-Speed Hatchback	.043-.051" (1.1-1.3 mm)
All Others	.039-.043" (1.0-1.1 mm)
Torque	11-14 ft. lbs. (15-19 N.m)

1974 SPARK PLUG TYPE

Application	NGK No.
B210	BP5ES
610 & 710	BP6ES-11
Pickup	BP6ES

1975-77 SPARK PLUG TYPE

Application	NGK No.
B210 & F10	BP5ES-11
Pickup (Federal)	BPR6ES
All Others	BPR6ES-11

1978-79 SPARK PLUG TYPE

Application	NGK No.
B210 & 210	
5-Spd. Hatchback	BP5EQ-13
200SX, 510 & Pickup	BP6ES-11
All Others	BP5ES-11

HIGH TENSION WIRE RESISTANCE

Remove distributor cap from distributor but DO NOT disconnect high tension wires from cap. Disconnect high tension wires from spark plugs. Using an ohmmeter, check resistance from contact at spark plug end of wires to contact inside of distributor cap. Resistance should be less than 30,000 ohms. If resistance is more, disconnect wire from cap and recheck resistance. Replace wire if resistance still exceeds specification.

DISTRIBUTOR

Engines use Hitachi single point distributors or Hitachi electronic ignition system.

DISTRIBUTOR SPECIFICATIONS

Application	Specification
Air Gap ¹	.008-.016" (.2-.4 mm)
Point Gap	.018-.022" (.45-.55 mm)
Dwell Angle	49-55°
Breaker Arm Spring Tension	14-19 ozs. (450-550 g)
Condenser Capacity	.20-24 mfd.

¹ - Electronic ignition system only.

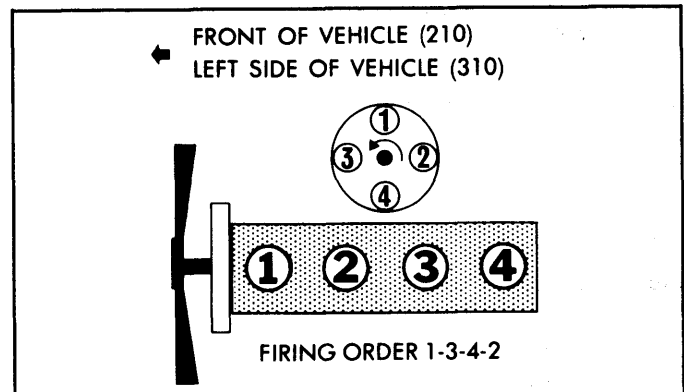


Fig. 3: B210, F10, 210 & 310
Firing Order & Distributor Rotation

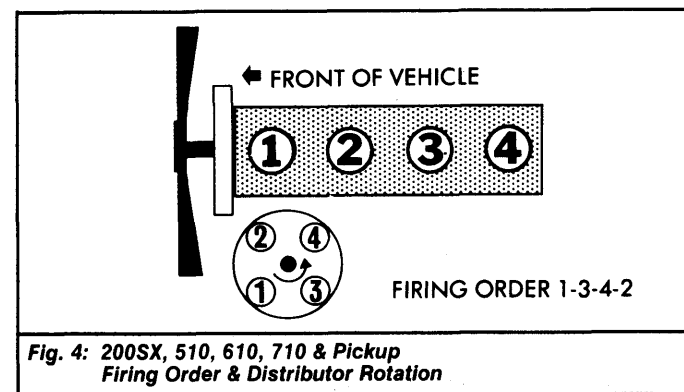


Fig. 4: 200SX, 510, 610, 710 & Pickup
Firing Order & Distributor Rotation

IGNITION TIMING

Check or adjust ignition timing with engine at normal operating temperature, dwell angle or air gap set within specifications and engine idle speed correct. To adjust, loosen distributor set screw and rotate distributor until correct timing is achieved. Tighten set screw and recheck timing setting.

1974-77 IGNITION TIMING SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
F10	10°BTDC	
B210		
Federal	10°BTDC	10°BTDC
Calif.	10°BTDC	8°BTDC
Pickup		
Federal	12°BTDC	12°BTDC
Calif.	10°BTDC	12°BTDC
200SX, 610 & 710	12°BTDC	12°BTDC

1978 IGNITION TIMING SPECIFICATIONS

Application	Man. Trans.	¹ Auto. Trans.
F10	10°BTDC	
B210		
Federal	² 10°BTDC	8°BTDC
Calif.	² 10°BTDC	10°BTDC
All Others	12°BTDC	12°BTDC

¹ - With transmission in Drive.

² - Set to 5°BTDC on 5-speed hatchback.

1974-79 TUNE-UP PROCEDURES

Datsun 4-Cylinder (Cont.)

1979 IGNITION TIMING SPECIFICATIONS

Application	Man. Trans.	¹ Auto. Trans.
200SX	9° BTDC	12° BTDC
210		
Federal	10° BTDC	8° BTDC
Calif.	² 5° BTDC	5° BTDC
310		
Federal	10° BTDC	
California	5° BTDC	
510		
Federal	11° BTDC	12° BTDC
California	12° BTDC	12° BTDC
Pickup	12° BTDC	12° BTDC

¹ - With transmission in Drive.

² - Disconnect and plug distributor vacuum hose on 5-speed hatchback.

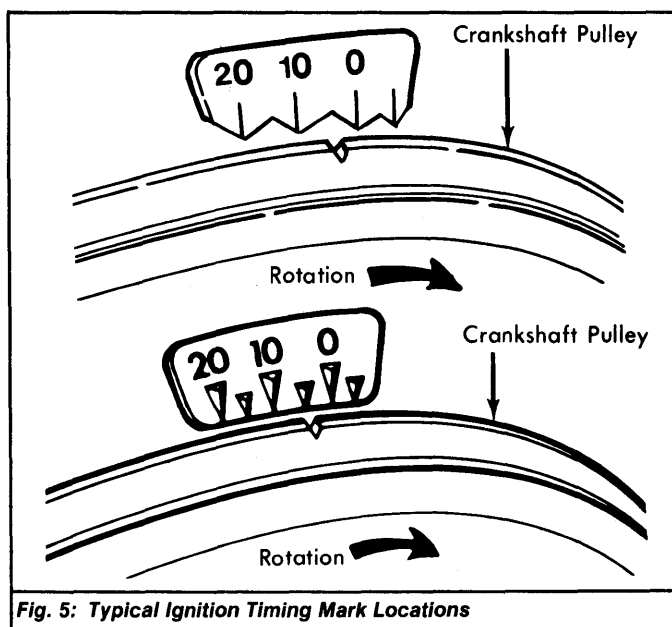


Fig. 5: Typical Ignition Timing Mark Locations

IDLE SPEED & MIXTURE

EXHAUST GAS ANALYZER METHOD

NOTE: The following adjustment procedures should be performed with engine at normal operating temperature, A/C off (if equipped), ignition timing set to specifications and air cleaner installed. Set parking brake, block drive wheels and with automatic transmission in Drive (if equipped).

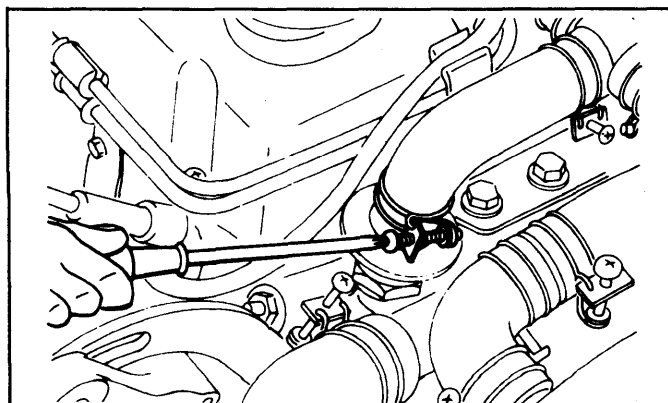


Fig. 6: B210 & F10 Air Hose/Check Valve Location

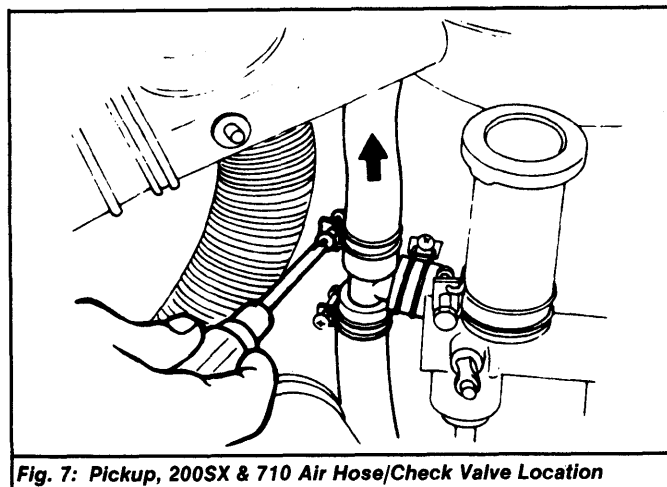


Fig. 7: Pickup, 200SX & 710 Air Hose/Check Valve Location

1974-77 - Disconnect and plug air hose at check valve. See Figs. 6 and 7. Connect tachometer and exhaust gas analyzer to vehicle. Adjust idle speed until specified RPM is reached. Adjust air/fuel ratio until specified CO% level is obtained. Reconnect air hose to check valve.

1978-79 - 1) On 210 5-speed hatchback, disconnect air hose from air induction pipe and cap off pipe. Also, disconnect and plug distributor vacuum advance hose.

2) On other 210 models and 310, disconnect air injection hose at check valve and cap off check valve. On all other models, disconnect and plug air injection hose between connector and check valve.

3) On all models, start engine and accelerate to 1500 RPM several times under a no-load condition. Then, run engine at idle for 1 minute and check idle speed. Adjust idle speed screw to obtain specified idle speed RPM (if necessary). Reconnect distributor vacuum advance hose (210 5-speed hatchback).

4) Insert exhaust analyzer probe into exhaust. With idle speed correct, check CO% level. Adjust idle mixture adjusting screw to obtain specified CO% value (if necessary). With idle speed and idle CO% level set to specifications, reconnect air injection lines and remove exhaust gas analyzer probe.

1974-76 IDLE SPEED & CO% LEVEL SPECIFICATIONS

Application	Idle RPM	CO%
F10	700	1.0-3.0
B210		
Man Trans.	700	1.0-3.0
Auto. Trans.	650	1.0-3.0
All Others		
Man Trans.	750	1.0-3.0
Auto. Trans.	650	1.0-3.0

1977-78 IDLE SPEED & CO% LEVEL SPECIFICATIONS

Application	Idle RPM	CO%
F10	700	1.0-3.0
B210		
Man Trans.	700	¹ 1.0-3.0
Auto. Trans.	650	1.0-3.0
All Others	600	0.3-3.0

¹ - Set to 0.3-2.0 percent on 5-speed hatchback.

1979 IDLE SPEED & CO% LEVEL SPECIFICATIONS

Application	Idle RPM	CO%
210 & 310		
Man. Trans.	700	1.0-3.0
Auto. Trans.	650	1.0-3.0
200SX, 510 & Pickup	600	0.3-0.2

1974-79 TUNE-UP PROCEDURES

Datsun 4-Cylinder (Cont.)

TACHOMETER (LEAN DROP) METHOD

1977 - 1) Disconnect and plug air hose at check valve. See Figs. 6 and 7. Connect tachometer to engine. Turn idle speed and air/fuel mixture screws until lean best idle is obtained at specified RPM.

2) Now turn idle speed adjusting screw clockwise until engine speed drops as specified in ENRICHED IDLE SPEED & SPEED DROP RPM table. Reconnect air hose to check valve. If engine RPM rises, reset RPM to correct dropped speed.

1978-79 - 1) On 210 5-speed hatchback, disconnect air hose from air induction pipe and cap off pipe. Also, disconnect and plug distributor vacuum advance hose.

2) On other 210 models and 310, disconnect air injection hose at check valve and cap off check valve. On all other models, disconnect and plug air injection hose between connector and check valve.

3) On all models, start engine and accelerate to 1500 RPM several times under a no-load condition. Then, run engine at idle for 1 minute and check idle speed. Adjust idle speed screw to obtain specified idle speed RPM (if necessary). Reconnect distributor vacuum advance hose (210 5-speed hatchback models).

4) Adjust idle mixture screw to obtain maximum RPM. Readjust idle speed screw to obtain enriched idle speed as specified in ENRICHED IDLE SPEED & SPEED DROP RPM table.

5) Turn mixture screw clockwise until engine speed drop is as specified in table. Reconnect all hoses, then recheck idle speed and if necessary, reset speed to RPM indicated in appropriate IDLE SPEED & CO% LEVEL SPECIFICATIONS table.

1977-78 ENRICHED IDLE SPEED & SPEED DROP RPM

Application	Idle RPM	Speed Drop RPM
B210		
Man. Trans.	740	¹ 35-45
Auto. Trans.	665	10-20
F10	740	35-45
All Others	650	45-55

¹ - Speed drop should be 60-70 RPM on 210 5-speed hatchback.

1979 ENRICHED IDLE SPEED & SPEED DROP RPM

Application	Idle RPM	Speed Drop RPM
210 & 310		
Man. Trans.	¹ 740	² 35-45
Auto. Trans.	665	10-20
200SX, 510 & Pickup		
Man. Trans.	650	45-55
Auto. Trans.	630	25-35

¹ - Set to 765 RPM on 210 5-speed hatchback.

² - Speed drop should be 60-70 RPM on 210 5-speed hatchback.

COLD (FAST) IDLE RPM

With engine at normal operating temperature, transmission in Neutral and fast idle arm on second highest step of fast idle cam, turn fast idle screw as required to obtain specified fast idle RPM.

1974-76 FAST IDLE RPM SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
B210	2450-2650	2700-2900
F10	2450-2650	
All Others	1900-2100	2300-2500

1977-78 FAST IDLE RPM SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
B210	1900-2700	
F10	1900-2700	2400-3200
All Others	1900-2800	2200-3200

1979 FAST IDLE RPM SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
210 & 310	1900-2700	2400-3200
All Others	1900-2800	2200-3200

DASHPOT ADJUSTMENT

With engine at normal operating temperature and idle speed and mixture correctly set, turn throttle valve by hand and read engine speed when dashpot just contacts stop lever. Adjust position of dashpot by turning nut until engine speed is in specified range. Tighten lock nut and make sure that engine decelerates smoothly from 2000 RPM to 1000 RPM in about 3 seconds.

1974-78 DASHPOT ADJUSTMENT SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
F10		
Federal	2300-2500	
Calif.	1900-2100	
B210		
Federal	¹ 2300-2500	1900-2100
Calif.	1900-2100	1900-2100
All Others	1900-2100	1650-1850

¹ - Should be 1900-2100 RPM on 210 5-speed hatchback.

1979 DASHPOT ADJUSTMENT SPECIFICATIONS

Application	Man. Trans.	Auto. Trans.
210 & 310		
Federal	¹ 2300-2500	1900-2100
California	1900-2100	1900-2100
All Others	1900-2100	1650-1850

¹ - Should be 1900-2100 RPM on 210 5-speed hatchback.

FUEL PUMP

When performing tests on fuel pump output volume and output pressure, use a fuel line with an inside diameter of 1/4" (6 mm). Improper size of test hose could cause incorrect delivery pressure and volume.

FUEL PUMP SPECIFICATIONS

Application	Specification
Pressure	
Pickup	4.6 psi (.32 kg/cm ²)
All Others	3.0-3.8 psi (.21-.27 kg/cm ²)
Volume (at 1000 RPM)	
B210, F10, 210 & 310	1 pt. per minute
200SX & 510	3.6 pts. per minute
Pickup	
With A/C	3 pts. per minute
Without A/C	2 pts. per minute

EXHAUST EMISSION SYSTEMS

See appropriate articles in EXHAUST EMISSION SYSTEMS section.

IGNITION SYSTEM

DISTRIBUTOR

Engines are equipped with Hitachi single point distributors or Hitachi electronic ignition system.

Other Data & Specifications - See Hitachi single point distributor or Hitachi Electronic Ignition article in DISTRIBUTORS & IGNITION SYSTEMS section.

1974-79 TUNE-UP PROCEDURES

Datsun 4-Cylinder (Cont.)

IGNITION COIL

1974-77 IGNITION COIL SPECIFICATIONS

Application	Resistance (Ohms)
Primary	
Calif.45-.55
Federal	1.08-1.32
Secondary	8200-12,400

1978-79 IGNITION COIL SPECIFICATIONS

Application	Resistance (Ohms)
Primary84-1.02
Secondary	8200-12,400

FUEL SYSTEM

CARBURETORS

CARBURETORS

Application	Model
F10, 210 & 310	Hitachi DCH 306 2-Bbl.
All Others	Hitachi DCH 340 2-Bbl.

Other Data & Specifications - See appropriate Hitachi Carburetor article in FUEL SYSTEMS section.