

C - SPECIFICATIONS

1990 Nissan 240SX

1990 ENGINE PERFORMANCE
Nissan - Service & Adjustment Specifications

Nissan; 240SX, 300ZX, Axxess, Maxima, Pathfinder,
Pickup, Pulsar NX, Sentra, Stanza, Van

INTRODUCTION

Use this article to quickly find specifications related to servicing and on-vehicle adjustments. This article provides a quick reference when you are familiar with an adjustment procedure and only need a specification.

CAPACITIES

BATTERY SPECIFICATIONS

BATTERY SPECIFICATIONS

Application & Group	Amp Hr. Rating
All Models	60

FLUID CAPACITIES - 4-CYLINDER

FLUID CAPACITIES - 4-CYLINDER

Application	Quantity
Crankcase (Includes Filter)	
Axxess	3.75 qts. (3.5L)
Pathfinder & Pickup	
2WD	4.1 qts. (3.9L)
4WD	3.5 qts. (3.3L)
Pulsar NX	3.4 qts. (3.2L)
Sentra	3.4 qts. (3.2L)
Stanza	3.75 qts. (3.5L)
Van	4.3 qts. (4.1L)
240SX	3.7 qts. (3.5L)
Cooling System (Includes Heater)	
Axxess	7.9 qts. (7.5L)
Pathfinder & Pickup	
2WD	10.4 qts. (9.8L)
4WD	11.5 qts. (10.9L)
Pulsar NX	
Automatic Transmission	6.2 qts. (5.9L)
Manual Transmission	5.7 qts. (5.4L)
Sentra	
Automatic Transmission	
2WD	5.7 qts. (5.4L)
4WD	6.2 qts. (5.9L)
Manual Transmission	5.7 qts. (5.4L)
Stanza	7.7 qts. (7.3L)
Van	
With Front Heater	9.2 qts. (8.7L)
With Front & Rear Heater	9.6 qts. (9.1L)
240SX	7.1 qts. (6.7L)

Manual Transaxle (SAE 80W-90/API GL-4)		
Axxess	10 pts.	(4.7L)
Pulsar NX	6.0 pts.	(2.8L)
Sentra	5.7 pts.	(2.7L)
Stanza	10 pts.	(4.7L)
Manual Transmission (SAE 80W-90/API GL-4)		
Pathfinder & Pickup (1)		
2WD	4.2 pts.	(2.0L)
4WD	8.5 pts.	(4.0L)
Van	4.2 pts.	(2.0L)
240SX	5.1 pts.	(2.4L)
Automatic Transaxle (Dexron-II) (2)		
Axxess	7.9 qts.	(7.4L)
Pulsar NX	6.5 qts.	(6.2L)
Stanza	7.2 qts.	(6.8L)
Sentra	6.6 qts.	(6.3L)
Automatic Transmission (Dexron-II) (2)		
Pathfinder & Pickup (2)		
Van	8.3 qts.	(7.8L)
Van	8.7 qts.	(8.2L)
240SX	8.7 qts.	(8.2L)
Differential (SAE 80W-90/API GL-5)		
Axxess	2.2 pts.	(1.0L)
Pathfinder & Pickup (1)		
2WD	3.1 pts.	(1.5L)
4WD		
Rear	2.7 pts.	(1.3L)
Front	2.7 pts.	(1.3L)
Sentra	2.1 pts.	(1.0L)
Van	2.7 pts.	(1.3L)
240SX	3.8 pts.	(1.8L)
Transfer Case		
Pathfinder & Pickup	2.3 qts.	(2.2L)
Sentra	2.3 pts.	(1.1L)

(1) - Start capacity. Fill to top of filler plug.

(2) - Start capacity. Fill to FULL mark on dipstick.

FLUID CAPACITIES - V6

FLUID CAPACITIES - V6

Application	Quantity	
Crankcase (Includes Filter)		
Maxima	4.5 qts.	(4.3L)
Pathfinder & Pickup		
2WD	4.2 qts.	(4.0L)
4WD	3.6 qts.	(3.4L)
300ZX	4.3 qts.	(4.1L)
Cooling System (Includes Heater)		
Maxima	9.5 qts.	(9.0L)
Pathfinder & Pickup		
2WD	10.4 qts.	(9.8L)
4WD	11.5 qts.	(10.9L)
300ZX	9.6 qts.	(9.1L)
Manual Transmission (API GL-4/SAE 90)		
Maxima & 300ZX	4.3 pts.	(2.0L)
Pathfinder & Pickup (1)		
2WD	5.1 pts.	(2.4L)
4WD	7.6 pts.	(3.6L)
300ZX	6.0 pts.	(2.8L)
Manual Transaxle (API GL-4)		

Maxima	10 pts. (4.7L)
Automatic Transmission (Dexron-II) (2)	
Pathfinder & Pickup	
2WD	16.7 pts. (7.9L)
4WD	18.0 pts. (8.5L)
300ZX	16.3 pts. (7.7L)
Automatic Transaxle (Dexron-II) (2)	
Maxima	15.4 pts. (7.3L)
Differential (SAE 80W-90/API GL-5)	
Pathfinder & Pickup (1)	
2WD Rear	5.9 pts. (2.8L)
4WD	
Front	3.2 pts. (1.5L)
Rear	5.9 pts. (2.8L)
300ZX	3.2 pts. (1.5L)
Transfer Case	
Pathfinder & Pickup	4.6 pts. (2.2L)

- (1) - Start capacity. Fill to top of filler plug.
(2) - Start capacity. Fill to FULL mark on dipstick.

QUICK-SERVICE

SERVICE INTERVALS & SPECIFICATIONS

REPLACEMENT INTERVALS

Component	Interval (Miles)
Oil & Filter	(1) 7500
Air Filter	30,000
Coolant	30,000
Fuel Filter	30,000
Spark Plugs	30,000
Timing Belt	60,000

- (1) - Every 3000 miles for severe service.

BELT ADJUSTMENT - 4-CYLINDER

BELT ADJUSTMENT - 4-CYLINDER

Application	(1) Deflection In. (mm)
Alternator	
Axxess	7/32 (6)
Pathfinder & Pickup	3/8 (9)
Pulsar NX	9/32 (7)
Sentra	5/16 (8)
Stanza	1/4 (6)
Van	5/16 (8)
240SX	1/4 (6)
A/C Compressor	
Axxess	3/16 (5)
Pathfinder & Pickup	3/8 (9)
Pulsar NX	3/16 (5)
Sentra	3/16 (5)
Stanza	3/16 (5)
Van	13/32 (10)
240SX	1/4 (6)

Power Steering Pump		
Axxess	7/32	(6)
Pathfinder & Pickup	11/32	(9)
Pulsar NX	3/16	(5)
Sentra	3/16	(5)
Stanza	5/16	(8)
Van	11/32	(9)
240SX	5/16	(8)

(1) - Deflection is with 22 lbs. (10 kg) pressure applied midway on longest belt run.

BELT ADJUSTMENT - V6

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Application	(1) Deflection In. (mm)
Alternator	
Maxima	5/16 (8)
Pathfinder & Pickup	13/32 (10)
300ZX	9/32 (7)
A/C Compressor	
Maxima	9/32 (7)
Pathfinder & Pickup	3/8 (9)
300ZX	5/16 (8)
Power Steering Pump	
Maxima	13/32 (10)
Pathfinder & Pickup	11/32 (9)
300ZX	7/16 (11)

(1) - Deflection is with 22 lbs. (10 kg) pressure applied midway on longest belt run.

MECHANICAL CHECKS

ENGINE COMPRESSION

COMPRESSION SPECIFICATIONS - 4-CYLINDER

Application	Specification
Compression Ratio	
Axxess	8.6:1
Pathfinder & Pickup	8.6:1
Pulsar NX	9.4:1
Sentra	9.4:1
Stanza	8.5:1
Van	8.3:1
240SX	9.1:1
Compression Pressure	
Axxess	175 psi (12.3 kg/cm ²)
Pathfinder & Pickup	192 psi (13.5 kg/cm ²)
Pulsar NX	181 psi (12.7 kg/cm ²)
Sentra	181 psi (12.7 kg/cm ²)
Stanza	175 psi (12.3 kg/cm ²)
Van	173 psi (12.2 kg/cm ²)
240SX	192 psi (13.5 kg/cm ²)
Minimum Compression Pressure	
Axxess	146 psi (10.3 kg/cm ²)

Pathfinder & Pickup	142 psi (10.0 kg/cm ²)
Pulsar NX	142 psi (10.0 kg/cm ²)
Sentra	142 psi (10.0 kg/cm ²)
Stanza	146 psi (10.3 kg/cm ²)
Van	128 psi (9.0 kg/cm ²)
240SX	142 psi (10.0 kg/cm ²)
Maximum Variation Between Cylinders ..	14 psi (1.0 kg/cm ²)

COMPRESSION SPECIFICATIONS - V6

Application	Specification
Compression Ratio	
Maxima, Pathfinder & Pickup	9.0:1
300ZX	10.5:1
Compression Pressure	
Maxima, Pathfinder & Pickup	173 psi (12.0 kg/cm ²)
300ZX	186 psi (13.1 kg/cm ²)
Minimum Compression Pressure (1)	
Maxima, Pathfinder & Pickup	128 psi (9.0 kg/cm ²)
300ZX	142 psi (10.0 kg/cm ²)
Maximum Variation Between Cylinders ..	14 psi (1.0 kg/cm ²)

(1) - Minimum compression at 300-350 RPM.

VALVE CLEARANCE

NOTE: All engines, except Z24i, are equipped with hydraulic lifters. No adjustments are required.

VALVE CLEARANCE ADJUSTMENT - VAN Z24i ENGINE

Application	Cold		Hot	
	In. (mm)		In. (mm)	
Intake	N/A		.012 (.30)	
Exhaust	N/A		.012 (.30)	

4-CYLINDER VALVE ARRANGEMENT

Right Side - All intake.
Left Side - All exhaust.

V6 VALVE ARRANGEMENT

Intake Manifold Side - All intake.
Exhaust Manifold Side - All exhaust.

IGNITION SYSTEM

IGNITION COIL

IGNITION COIL RESISTANCE - 4-CYLINDER (Ohms @ 68°F (20°C))

Application	Primary	Secondary
Axxess .....	.7	(1)
Pathfinder & Pickup .....	.7	(1)
Pulsar NX .....	.8-1.0	8200-12,400

Sentra	.8-1.0	8200-12,400
Stanza	.8-1.0	7600-11,400
Van	.8-1.0	7600-11,400
240SX	.7	(1)

(1) - Secondary resistance cannot be read on Axxess, Pickup/Pathfinder and 240SX.

IGNITION COIL RESISTANCE - V6 (Ohms @ 68°F (20°C))

Application	Primary	Secondary
Maxima	1.0	8200-12,400
Pathfinder & Pickup	1.0	10,000
300ZX	.7	(2)

(1) - Secondary resistance cannot be read on Axxess, Pickup/Pathfinder and 240SX.

(2) - Information not available at time of publication.

HIGH TENSION WIRE RESISTANCE

HIGH TENSION WIRE RESISTANCE

Application (1)	Ohms
Plug Wires	30,000 Maximum
Coil Wire	7000 Maximum

(1) - Not applicable to Direct Ignition Systems (DIS).

SPARK PLUGS - 4-CYLINDER

SPARK PLUG TYPE - 4-CYLINDER

Application	NGK
Axxess	ZFR5E-11
Pathfinder & Pickup	ZFR5E-11
Pulsar NX	BCPR5ES-11
Sentra	BCPR5ES-11
Stanza	BCPR5ES-11
Van	BPR5ES
240SX	ZFR5E-11

SPARK PLUG SPECIFICATIONS - 4-CYLINDER

Application	Gap		Torque
	In.	(mm)	
Axxess	.039	(1.0)	14-22 (20-29)
Pathfinder & Pickup	.033	(.84)	14-22 (20-29)
Pulsar NX	.041	(1.04)	14-22 (20-29)
Sentra	.041	(1.04)	14-22 (20-29)
Stanza	.041	(1.04)	14-22 (20-29)
Van	.033	(.84)	14-22 (20-29)
240SX	.041	(1.04)	14-22 (20-29)

SPARK PLUGS - V6

SPARK PLUG TYPE - V6

Application	NGK
Maxima	BKR6ES-11
Pathfinder & Pickup	BKR6EY
300ZX	PFR6B-11

SPARK PLUG SPECIFICATIONS - V6

Application	Gap		Torque	
	In.	(mm)	Ft. Lbs.	(N.m)
Maxima .....	.041	(1.04)	14-22	(20-29)
Pathfinder & Pickup .....	.041	(1.04)	14-22	(20-29)
300ZX .....	.041	(1.04)	14-22	(20-29)

FIRING ORDER & DISTRIBUTOR ROTATION

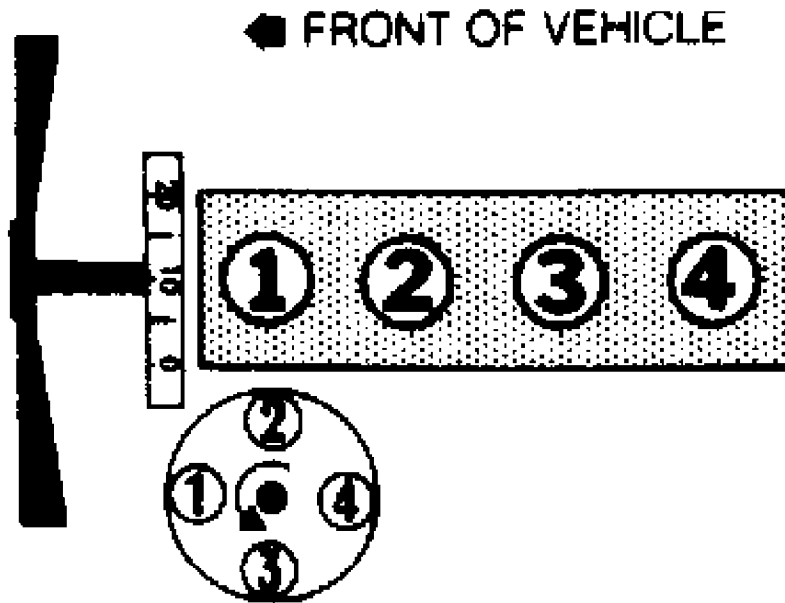


Fig. 1: Firing Order & Distributor Rotation (Pathfinder, Pickup 4-Cyl)

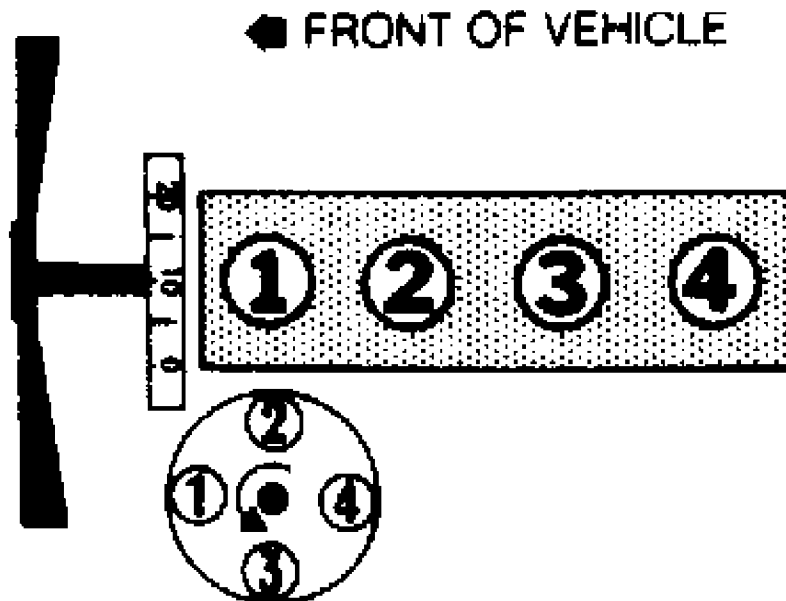
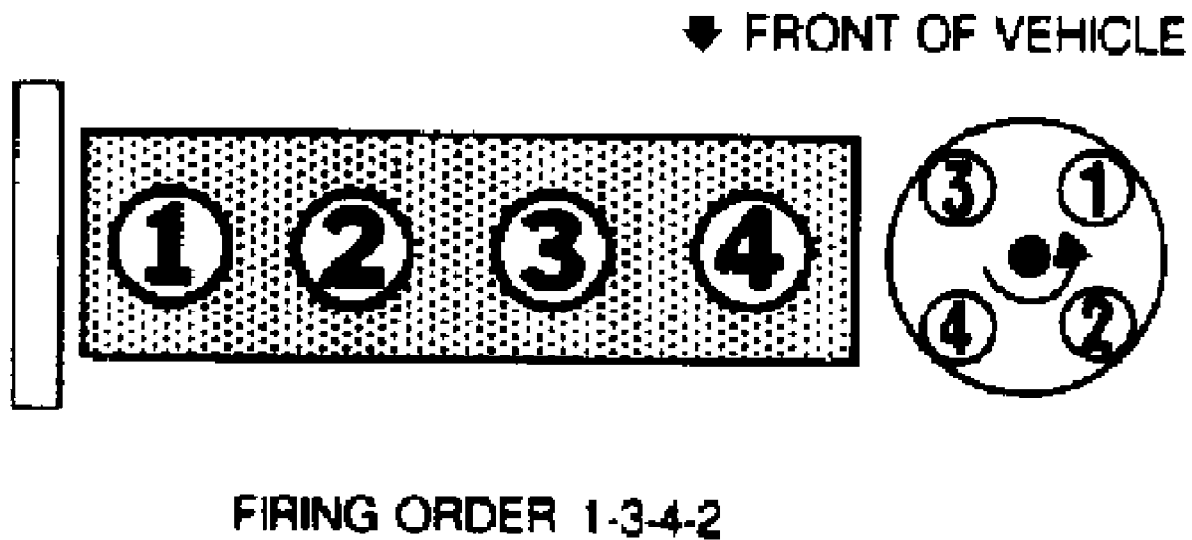
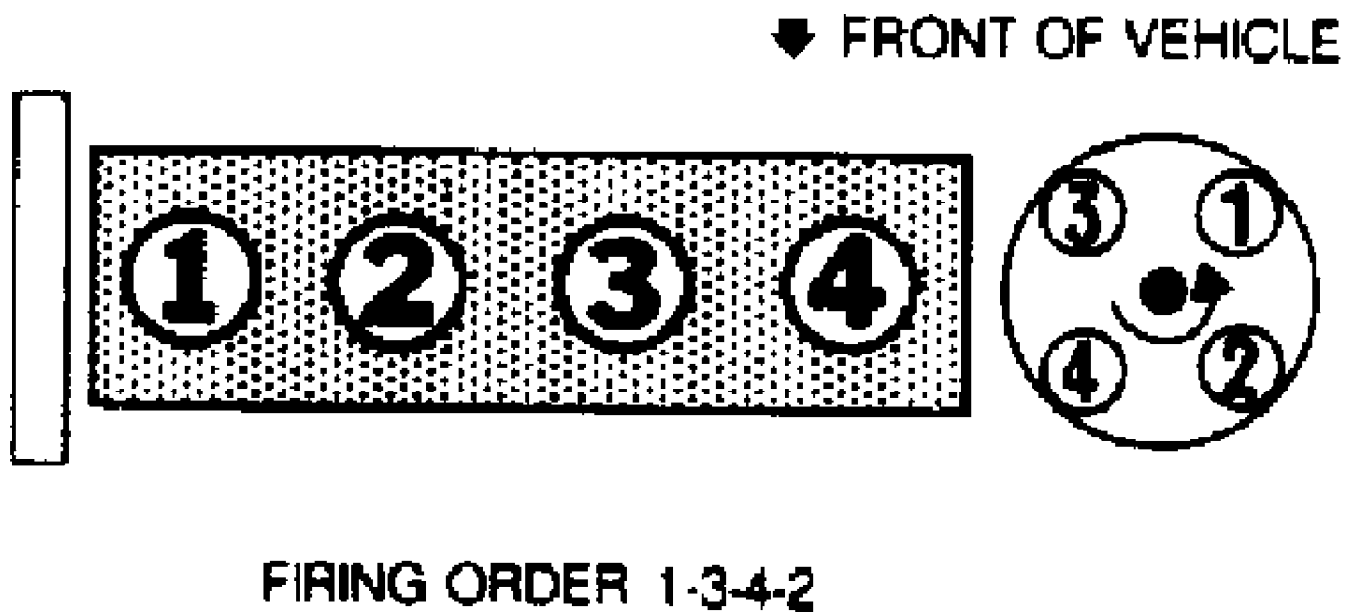


Fig. 2: Firing Order & Distributor Rotation (Axxess, 240SX 4-Cyl)



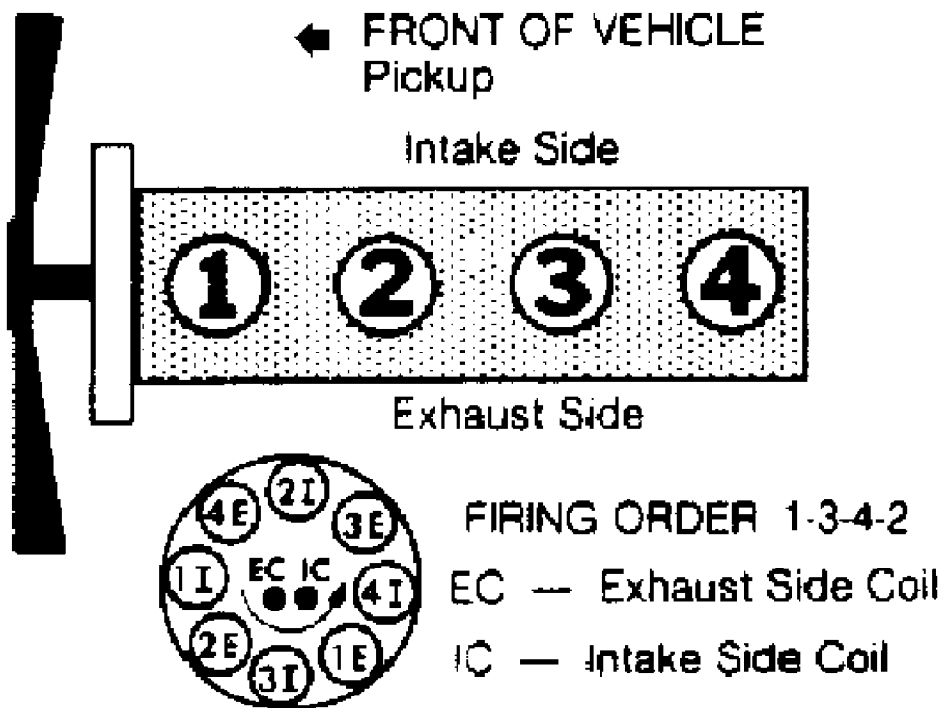
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Fig. 3: Firing Order & Distributor Rotation (Pulsar NX 4-Cyl)



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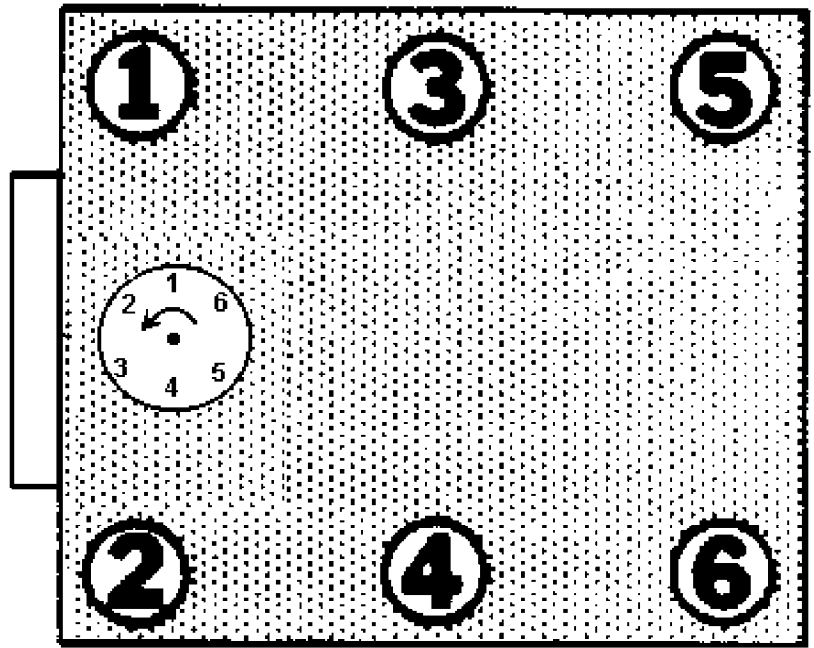
Fig. 4: Firing Order & Distributor Rotation (Sentra, Stanza 4-Cyl)



Note: Dual rotor set at 135° fires both plugs simultaneously

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Fig. 5: Firing Order & Distributor Rotation (Van 4-Cylinder)



FIRING ORDER 1-2-3-4-5-6

Fig. 6: Firing Order & Distributor Rotation (V6)

IGNITION TIMING

NOTE: For ignition timing adjustment procedures, see D - ADJUSTMENTS article.

IGNITION TIMING

IGNITION TIMING - 4-CYLINDER (Degrees BTDC @ RPM)

Application	Manual Transmission	Automatic Transmission
Axxess	15 @ 650-750	(1) 15 @ 650-750
Pathfinder & Pickup	10 @ 750-850	(1) 10 @ 750-850
Pulsar NX	7 @ 700-900	(1) 7 @ 800-1000
Sentra	7 @ 700-900	(1) 7 @ 800-1000
Stanza	15 @ 650-750	(1) 15 @ 650-750
Van	10 @ 750-850	(1) 10 @ 850-950
240SX	15 @ 700-800	(1) 15 @ 700-800

(1) - Automatic transmission in Neutral.

V6 IGNITION TIMING (Degrees BTDC @ RPM)

Application	Manual Transmission	Automatic Transmission
Maxima	15 @ 650-750	(1) 15 @ 650-750
Pathfinder & Pickup	15 @ 700-800	(1) 15 @ 700-800
300ZX	15 @ 650-750	(1) 15 @ 720-820

(1) - Automatic transmission in Neutral.

FUEL SYSTEM

REGULATED FUEL PRESSURE

REGULATED FUEL PRESSURE SPECIFICATIONS - 4-CYLINDER

Application	At Idle w/o Vacuum psi (kg/cm ²)	At Idle w/Vacuum psi (kg/cm ²)
Axxess	43 (3.0)	33 (2.3)
Pathfinder & Pickup	43 (3.0)	33 (2.3)
Pulsar NX	43 (3.0)	34 (2.4)
Sentra	43 (3.0)	34 (2.4)
Stanza	44 (3.1)	37 (2.6)
Van	(1)	36 (2.5)
240SX	43 (3.0)	33 (2.3)

(1) - Information not available at time of publication.

REGULATED FUEL PRESSURE SPECIFICATIONS - V6

Application	At Idle w/o Vacuum psi (kg/cm ²)	At Idle w/Vacuum psi (kg/cm ²)
Maxima	44 (3.1)	36 (2.5)
Pathfinder & Pickup	44 (3.1)	36 (2.5)
300ZX	43 (3.0)	36 (2.5)

INJECTOR RESISTANCE

INJECTOR RESISTANCE SPECIFICATIONS

Application	Ohms
Axxess	10-14
Maxima	10-14
Pathfinder & Pickup	10-15
Pulsar NX	1-2
Sentra	1-2
Stanza	10-15
Van	1-2
240SX	10-15
300ZX	10-14

IDLE SPEED & MIXTURE

NOTE: For idle speed and mixture adjustment procedures, see
D - ADJUSTMENTS article.

IDLE SPEED & CO LEVEL

IDLE SPEED & CO LEVEL - 4-CYLINDER

Application	(1) Idle RPM	(2) Idle RPM	CO Level
Axxess			
A/T	(3) 650-750	(3) 600-700	(5) 5%
M/T	650-750	600-700	(5) 5%
Pathfinder & Pickup			

A/T	.....	(3)	750-850	...	(3)	700-800	.....	(5)	5%
M/T	.....		750-850	.....		700-800	.....	(5)	5%
Pulsar NX									
A/T	.....	(3)	800-1000	....	(3)	750-850	.....	3-10%	
M/T	.....		700-900	.....		675-775	.....	3-10%	
Sentra									
A/T	.....	(3)	800-1000	...	(3)	750-850	.....	3-10%	
M/T	.....		700-900	.....		675-775	.....	3-10%	
Stanza									
A/T	.....	(3)	650-750	....	(3)	600-700	.....	(5)	5%
M/T	.....		650-750	.....		600-700	.....	(5)	5%
Van									
A/T	.....	(3)	850-950	.....	(4)		.....	1-7%	
M/T	.....		750-850	.....	(4)		.....	1-7%	
240SX									
A/T	.....	(3)	700-800	....	(3)	650-750	.....	(5)	5%
M/T	.....		700-800	.....		650-750	.....	(5)	5%

- (1) - With throttle position sensor connected.
(2) - With throttle position sensor disconnected.
(3) - Automatic transmission in Neutral.
(4) - Idle speed is adjusted only with TPS connected.
(5) - Set CO level to less than 5 percent.

V6 IDLE SPEED & CO LEVEL

Application	(1) Idle RPM	(2) Idle RPM	CO Level
Maxima			
A/T	..... (3) 650-750	..... (3) 700	.2-8%
M/T	..... 650-750	..... 700	.2-8%
Pathfinder & Pickup			
A/T	..... (3) 700-800	..... (3) 700	.2-8%
M/T	..... 700-800	..... 700	.2-8%
300ZX			
A/T	..... (3) 720-820	..... (3) 720	.2-8%
M/T	..... 650-750	..... 650	.2-8%

- (1) - With Auxiliary Air Control (AAC) valve connected.
(2) - With Auxiliary Air Control (AAC) valve disconnected.
(3) - Automatic transmission in Neutral.

IDLE SWITCH ON-OFF (OFF-ON) SPEED

IDLE SWITCH ON-OFF (OFF-ON) SPEED SPECIFICATIONS - 4-CYLINDER

Application	Engine RPM
Axxess	850-1150
240SX	850-1150
Pathfinder & Pickup	(1)
Pulsar NX	(1)
Sentra	(1)
Van	(1)

- (1) - In self-diagnostic Mode IV. The ECU Green LED comes on when vehicle speed exceeds 12 MPH.

IDLE SWITCH ON-OFF (OFF-ON) SPEED SPECIFICATIONS - V6

Application	Engine RPM
Maxima	800-1150
Pathfinder & Pickup	800-1100

THROTTLE POSITION SENSOR

For adjustment specifications, see the adjustment procedures in D - ADJUSTMENTS article.