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ARTICLE BEGINNING

1992 ENGINE PERFORMANCE
Nissan On-Vehicle Adjustments

Maxima, NX, Pathfinder, Pickup, Sentra, Stanza, 240SX, 300ZX

ENGINE MECHANICAL

Before performing any on-vehicle adjustments to fuel or ignition systems, ensure engine mechanical condition is okay.

VALVE CLEARANCE

NOTE: All engines, except KA24DE and GA16DE, are equipped with hydraulic lifters. No adjustments are required.

NX (1.6L), Sentra (1.6L) & 240SX

1) Warm engine to normal operating temperature. Remove valve cover and spark plugs. Rotate crankshaft to bring No. 1 piston to TDC on compression stroke (lifters on No. 1 cylinder should be loose).

2) Measure valve clearance on intake valves for cylinders No. 1 and 2 and valve clearance on exhaust valves for cylinders No. 1 and 3. See VALVE CLEARANCE ADJUSTMENT table.

3) Rotate crankshaft 360 degrees to bring No. 4 piston to TDC on compression stroke. Measure valve clearance on intake valves for cylinders No. 3 and 4 and valve clearance on exhaust valves for cylinders No. 2 and 4. See VALVE CLEARANCE ADJUSTMENT table. Allow engine to cool and adjust valve clearances by replacing lifter shims.

VALVE CLEARANCE ADJUSTMENT

Application	Hot - In. (mm)
NX & Sentra 1.6L (GA16DE Engine)	
Intake	**.008-.019 (.21-.49)**
Exhaust	**.012-.023 (.30-.58)**
240SX 2.4L (KA24DE Engine)	
Intake	**.012-.015 (.30-.38)**
Exhaust	**.013-.016 (.33-.41)**

IGNITION TIMING

4-CYLINDER IGNITION TIMING

NX, Sentra & 240SX

1) Start engine and warm to normal operating temperature (coolant gauge needle in middle). Run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle. Check ignition timing. See 4-CYLINDER IGNITION TIMING table. See Fig. 1. If ignition timing is correct, check idle speed and mixture.

3) If ignition timing is incorrect, disconnect throttle position sensor harness connector. Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle.

4) Loosen hold-down bolt and turn distributor to adjust ignition timing. With ignition timing correctly set, reconnect throttle position sensor. Recheck ignition timing using step 2).

4-CYLINDER IGNITION TIMING (Degrees BTDC @ RPM)

Application	Man. Trans.	(1) Auto. Trans.
Pickup	10 @ 750-850	10 @ 750-850
NX & Sentra		
1.6L	10 @ 550-650	10 @ 675-775
2.0L	15 @ 700-800	15 @ 700-800
Stanza	15 @ 650-750	15 @ 650-750
240SX	20 @ 600-700	20 @ 600-700

(1) - Automatic transmission/transaxle in Neutral.

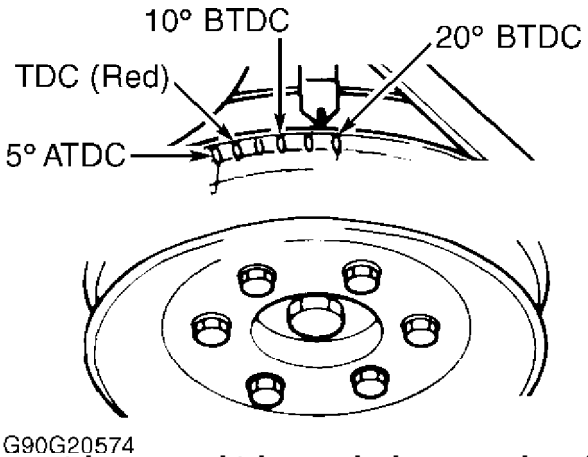


Fig. 1: Locating Ignition Timing Marks (Pickup 4-Cylinder, Stanza & 240SX; NX & Sentra Similar)
Courtesy of Nissan Motor Co., U.S.A.

Pickup & Stanza

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1) Start engine and warm to normal operating temperature (coolant gauge needle in middle). Run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle. Check idle speed and ignition timing. See 4-CYLINDER IGNITION TIMING table. See Fig. 1. If ignition timing is correct, check idle mixture.

3) If ignition timing is incorrect, disconnect throttle position sensor harness connector. If engine speed is more than 850 RPM on Pickup or 800 RPM on Stanza, reduce idle speed with idle speed adjusting screw. See Fig. 6.

4) Recheck ignition timing. If timing is incorrect, loosen hold-down bolt and turn distributor. With ignition timing correctly set, reconnect throttle position sensor. Check idle speed, oxygen sensor and idle mixture.

V6 IGNITION TIMING

Maxima (VG30E), Pathfinder & Pickup

1) Start engine and warm to normal operating temperature. Open engine compartment hood and run engine at 2000 RPM for 2 minutes.

2) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle.

3) Check ignition timing. See V6 IGNITION TIMING table. See Fig. 2. If ignition timing is incorrect, loosen hold-down bolt and turn distributor. With ignition timing correctly set, check idle speed and mixture.

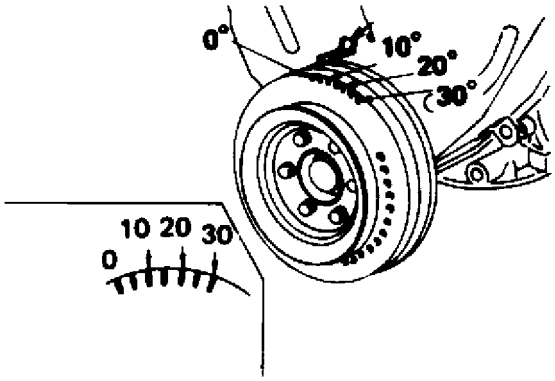


Fig. 2: Locating Ignition Timing Marks (V6)
Courtesy of Nissan Motor Co., U.S.A.

Maxima (VE30DE) & 300ZX

1) Disconnect tachometer (idle speed) check connector, located on left side of engine compartment, next to fuse/relay panel. Connect tachometer to check connector.

2) Disconnect ignition coil for No. 1 cylinder. Attach Ignition Timing Adapter Coil (KV109D0010) and Adapter Harness (KV10114200) as shown. See Fig. 3. Align inductive pick-up in direction of arrow shown on ignition timing adapter coil.

3) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes.

4) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle.

5) Check ignition timing. See V6 IGNITION TIMING table. See Fig. 2. If ignition timing is incorrect, loosen hold-down bolt and turn crank angle sensor. With ignition timing correctly set, check idle speed and mixture.

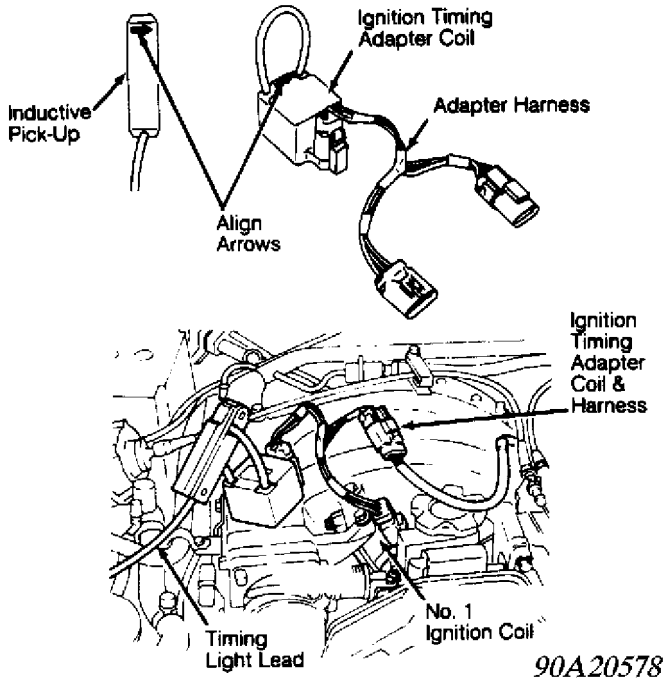


Fig. 3: Connecting Timing Adapter Coil & Harness (Maxima VE30DE & 300ZX)

V6 IGNITION TIMING (Degrees BTDC @ RPM)

Application	Man. Trans.	(1) Auto. Trans.
Maxima		
VG30E	15 @ 700-800	15 @ 700-800
VE30DE	15 @ 650-750	15 @ 650-750
Pathfinder & Pickup	15 @ 700-800	15 @ 700-800
300ZX		
Non-Turbo	15 @ 650-750	15 @ 720-820
Turbo	15 @ 650-750	15 @ 700-800

(1) - Automatic transmission/transaxle in Neutral.

IDLE SPEED & MIXTURE

NOTE: Mixture adjustment is NOT a normal tune-up procedure. DO NOT adjust unless mixture control unit is replaced or vehicle fails emissions test.

4-CYLINDER IDLE SPEED

NX, Sentra & 240SX

1) Start engine and warm to normal operating temperature. Open engine compartment hood and run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle. With ignition timing set correctly, check idle speed. See 4-CYLINDER IDLE SPEED & CO LEVEL table. If idle speed is correct, check oxygen sensor and idle mixture.

3) If idle speed is incorrect, disconnect throttle position sensor harness connector. Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle.

4) Adjust idle speed by turning idle speed adjusting screw. See Fig. 4 or 5. With idle speed correctly set, reconnect throttle position sensor and recheck idle speed using procedure in step 2).

4-CYLINDER IDLE SPEED & CO LEVEL

Application	(1) Idle RPM	(2) Idle RPM	(3) CO Level (%)
NX & Sentra			
1.6L			
Auto. Trans.	**(4) 675-775**	**(4) 750-850**	**(5) 7**
Man. Trans.	**600-700**	**550-650 .....**	**(5) 7**
2.0L			
Auto. Trans.	**(4) 700-800**	**(4) 750-850**	**(5) 10**
Man. Trans.	**750-850**	**700-800 .....**	**(5) 10**
Stanza	**(4) 600-700**	**(4) 650-750**	**(5) 5.0**

240SX ..... (4) 650-750
(4) 600-700
(5) 7.0

(1) - With throttle position sensor connected.
(2) - With throttle position sensor disconnected.
(3) - Measured in self-diagnostic mode.
(4) - Automatic transmission/transaxle in Neutral.
(5) - Maximum CO level.

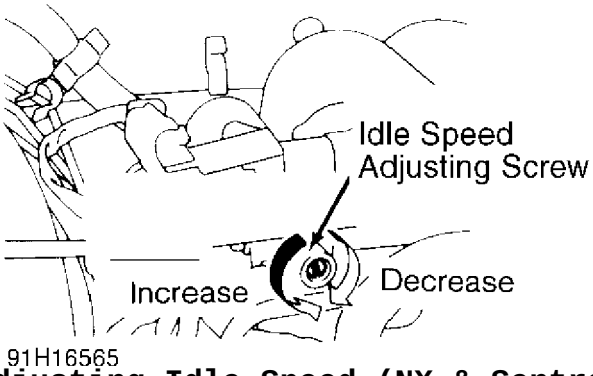


Fig. 4: Adjusting Idle Speed (NX & Sentra)
Courtesy of Nissan Motor Co., U.S.A.

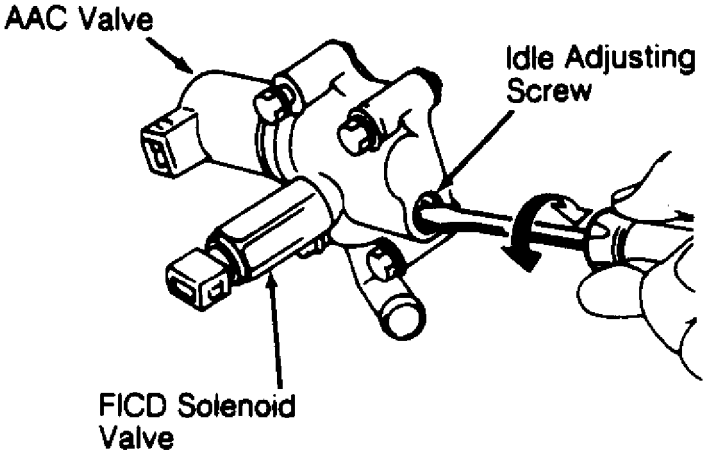


Fig. 5: Adjusting Idle Speed (240SX)
Courtesy of Nissan Motor Co., U.S.A

Pickup & Stanza

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle. Check idle speed. See 4-CYLINDER IDLE SPEED & CO LEVEL table. If idle speed is correct, check ignition

timing and idle mixture.

3) If idle speed is incorrect, disconnect throttle sensor harness connector. Ensure engine speed is less than 850 RPM (800 RPM on Stanza). If idle is not as specified, adjust by turning idle speed adjusting screw. See Fig. 6.

4) With idle speed set correctly, check ignition timing. If timing is incorrect, loosen hold-down bolt and turn distributor. With ignition timing correctly set, adjust idle speed to specification. Reconnect throttle sensor and recheck idle speed using procedure in step 2).

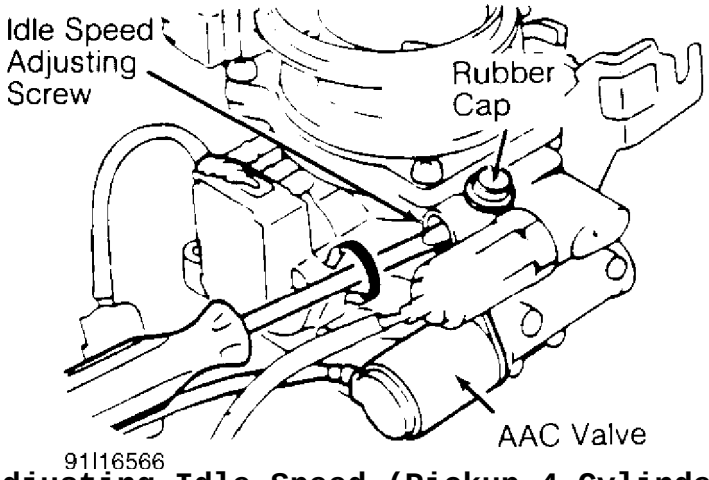


Fig. 6: Adjusting Idle Speed (Pickup 4-Cylinder; Stanza Similar) Courtesy of Nissan Motor Co., U.S.A.

4-CYLINDER IDLE MIXTURE

NX, Sentra, Stanza & 240SX

1) Start engine and warm to normal operating temperature (coolant gauge needle in middle). Run engine at 2000 RPM for 2 minutes.

2) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Check idle speed and ignition timing. With idle speed and ignition timing set correctly, locate ECU. See ECU LOCATIONS table.

3) Increase engine speed to 2000 RPM for 2 minutes. Enter and set self-diagnostic system in Mode II. See G - TESTS W/ CODES article. Ensure Red LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM.

4) If Red LED operates as indicated, idle mixture is correctly set. If Red LED does not operate as indicated, turn off engine and disconnect negative battery cable. Disconnect oxygen sensor and wiring harness from ECU. Using a jumper wire, ground wiring harness at oxygen sensor connector.

5) Check continuity between terminal No. 19 of ECU wiring harness connector and ground. If continuity exists, remove jumper

wire, reconnect ECU and go to next step. If continuity does not exist, repair wiring harness. After repairs, reconnect negative battery cable. Recheck idle speed and ignition timing.

6) Disconnect engine (coolant) temperature sensor. Connect a 2500-ohm resistor to engine (coolant) temperature sensor wiring harness. On Stanza, disconnect Air Induction Valve (AIV) and plug AIV pipe. On NX (2.0L), Sentra (2.0L) and 240SX, disconnect AIV control solenoid harness connector. Reconnect negative battery cable.

7) Start engine and warm to normal operating temperature (coolant gauge needle is in middle of gauge). Increase engine speed to 2000 RPM, 2 or 3 times. Check idle mixture (CO% level). See 4-CYLINDER IDLE SPEED & CO LEVEL table.

8) If idle mixture (CO% level) is incorrect, go to next step. If idle mixture (CO% level) is correct, replace oxygen sensor. Enter and set self-diagnostic system in Mode II. If Red LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM, recheck idle speed and ignition timing. If Red LED does not perform as indicated, go to next step.

9) Reconnect oxygen sensor. Perform self-diagnostic and repair procedures for fuel pressure regulator, airflow meter, injectors and engine (coolant) temperature sensor. See G - TESTS W/ CODES article.

10) After checking idle mixture, turn off engine. Remove 2500-ohm resistor from engine (coolant) temperature sensor wiring harness and reconnect sensor. Reconnect AIV hose to pipe or AIV control solenoid harness connector (if equipped).

ECU LOCATIONS

Application	Location
Maxima	Under Dash, Behind Center Console
NX & Sentra	Under Dash, Behind Center Console
Pathfinder/Pickup	Under Passenger Seat
Stanza	Under Center Console
240SX	Under Right Side Of Dash
300ZX	Below Glove Box, Behind Console

Pickup

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Check idle speed and ignition timing. With idle speed and ignition timing correctly set, locate ECU under passenger seat.

3) Increase engine speed to 2000 RPM for another 2 minutes. If Green LED on ECU does not go on and off more than 5 times during 10 seconds with engine running at 2000 RPM, go to step 5).

4) If Green LED goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM, enter and set self-diagnostic system to Mode II. Red and Green LEDs on ECU should blink, simultaneously. If both LEDs blink, idle mixture is correct. If both LEDs do not blink simultaneously, go to step 7).

5) Turn off engine and disconnect negative battery cable. Disconnect oxygen sensor and wiring harness from ECU. Using a jumper wire, ground wiring harness at oxygen sensor connector.

6) Check continuity between terminal No. 19 of ECU wiring harness connector and ground. If continuity exists, remove jumper wire. Reconnect ECU and go to next step. If no continuity exists, repair wiring harness. After repairs, reconnect negative battery cable. Recheck idle speed and ignition timing.

7) Disconnect engine (coolant) temperature sensor. Connect a 2500-ohm resistor to engine (coolant) temperature sensor wiring harness. Disconnect Air Induction Valve (AIV) and plug AIV pipe. Reconnect negative battery cable.

8) Start engine and warm to normal operating temperature. Increase engine speed to 2000 RPM, 2 or 3 times. Check idle mixture (CO% level). See 4-CYLINDER IDLE SPEED & CO LEVEL table.

9) If idle mixture (CO% level) is incorrect, go to next step. If idle mixture (CO% level) is correct, replace oxygen sensor. If Green LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM, recheck idle speed and ignition timing. If Green LED does not perform as indicated, go to next step.

10) Reconnect oxygen sensor. Perform self-diagnostic and repair procedures for fuel pressure regulator, airflow meter, injectors, and engine (coolant) temperature sensor. See G - TESTS W/ CODES article.

11) After checking idle mixture, turn off engine. Remove 2500-ohm resistor from engine (coolant) temperature sensor wiring harness and reconnect sensor. Reconnect AIV hose to pipe.

V6 IDLE SPEED

Maxima

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes.

2) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Check ignition timing. With ignition timing correctly set, locate ECU under dash, behind center console.

3) Check idle speed (automatic transaxle in Neutral). See V6 IDLE SPEED & CO LEVEL table. If idle speed is correct, go to step 5). If idle speed is incorrect, close Auxiliary Air Control (AAC) valve by turning diagnostic mode selector screw on ECU fully clockwise.

4) Adjust idle speed by turning idle speed adjusting screw. See Fig. 7. Operate AAC valve by turning diagnostic mode selector

screw on ECU fully counterclockwise. Idle speed should remain within specified range. With idle speed correctly set, check idle mixture.

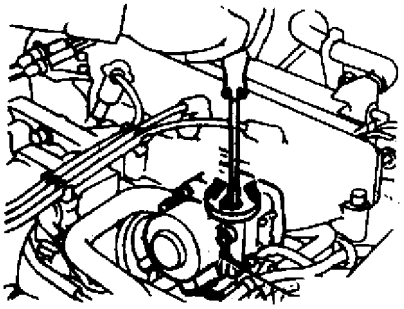


Fig. 7: Locating Idle Speed Adjusting Screw (Maxima)
Courtesy of Nissan Motor Co., U.S.A.

V6 IDLE SPEED & CO LEVEL

Application	(1) Idle RPM	(2) Idle RPM	(3) CO (%) Level
Maxima			
VG30E	(4) 650-750	(4) 700	.2-8
VE30DE	(4) 650-750	(4) 700	.2-8
Pathfinder & Pickup			
Auto. Trans.	(4) 700-800	(4) 700	.2-8
Man. Trans.	700-800	700	.2-8
300ZX			
Auto. Trans.			
Non-Turbo	(4) 720-820	(4) 720	.2-8
Turbo	(4) 700-800	(4) 700	.2-8
Man. Trans.	650-750	650	.2-8

(1) - With Auxiliary Air Control (AAC) valve connected.
(2) - With Auxiliary Air Control (AAC) valve disconnected.
(3) - Measured in self-diagnostic mode.
(4) - Automatic transmission/transaxle in Neutral.

Pathfinder & Pickup

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes.

2) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Check ignition timing. With ignition timing correctly set, locate ECU under passenger's seat.

3) Check idle speed (automatic transmission in Neutral). See V6 IDLE SPEED & CO LEVEL table. If idle speed is correct, go to step 5). If idle speed is incorrect, disconnect Auxiliary Air Control (AAC)

valve harness connector.

4) Adjust idle speed by turning idle speed adjusting screw. See Fig. 8. Reconnect (AAC) valve harness connector. Recheck ignition timing and idle speed. With idle speed correctly set, check idle mixture.

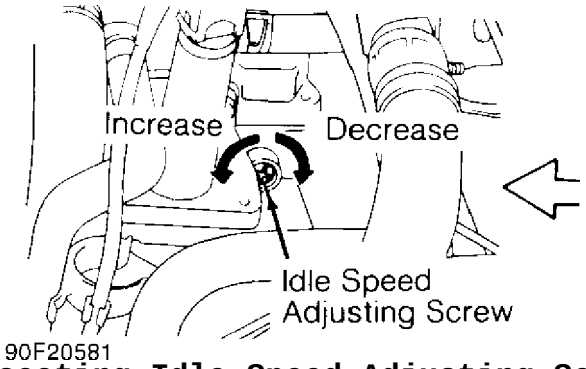


Fig. 8: Locating Idle Speed Adjusting Screw (Pathfinder & Pickup V6) Courtesy of Nissan Motor Co., U.S.A.

NOTE: On 300ZX, accel-drum unit synchronizes opening time of left and right throttle plates. If accel-drum unit is removed, it must be adjusted after installation to ensure throttle plates open at the same time. See D - ADJUSTMENTS in 3.0L V6 EXCEPT MAXIMA VE30DE article under ENGINES.

300ZX

1) Disconnect tachometer (idle speed) check connector. Connector is located on left side of engine compartment, next to fuse/relay panel. Connect tachometer to check connector.

2) Disconnect ignition coil for No. 1 cylinder. Attach Ignition Timing Adapter Coil (J-36777-1) and Adapter Harness (J-38386) as shown. See Fig. 3. Align inductive pick-up in direction of arrow shown on ignition timing adapter coil.

3) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes.

4) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Check ignition timing. With ignition timing correctly set, locate ECU under right side of dash (behind glove box).

5) Check idle speed (automatic transmission in Neutral). See V6 IDLE SPEED & CO LEVEL table. If idle speed is correct, check oxygen sensors and idle mixture. If idle speed is incorrect, disconnect Auxiliary Air Control (AAC) valve harness connector.

6) Adjust idle speed by turning idle speed adjusting screw. Reconnect (AAC) valve harness connector. Recheck ignition timing and idle speed. With idle speed correctly set, check oxygen sensor and idle mixture.

V6 IDLE MIXTURE

NOTE: No provision for idle mixture adjustment is given. If idle mixture is incorrect, a faulty component is responsible and must be replaced.

Maxima, Pathfinder & Pickup

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes. Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation.

2) Check engine idle speed and timing. With idle speed and timing correctly set, locate ECU under passenger seat (under center of dash, behind center console on Maxima).

3) Increase engine speed to 2000 RPM for another 2 minutes. Ensure Green LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM. If not, go to step 5).

4) If Green LED operates as stated, increase engine speed to 2000 RPM, 2 or 3 times. Allow engine to return to idle. Enter and set self-diagnostic system to Mode II. See G - TESTS W/ CODES article. Red and Green LEDs on ECU should blink simultaneously. If so, idle mixture is correct. If not, go to step 10).

5) Turn off engine and disconnect negative battery cable. Disconnect oxygen sensor and wiring harness from ECU. Using a jumper wire, ground wiring harness (center terminal) at oxygen sensor connector.

6) Check continuity between terminal No. 19 (terminal No. 29 on Maxima) of ECU wiring harness connector and ground. If no continuity exists, repair or replace wiring harness. Reconnect negative battery cable. Repeat idle speed and ignition timing adjustment procedures and check idle mixture.

7) If continuity exists, remove oxygen sensor jumper wire and reconnect ECU. Disconnect engine coolant temperature sensor connector. Connect a 2500-ohm resistor to engine coolant temperature sensor wiring harness. Reconnect negative battery cable.

8) Start engine and warm to normal operating temperature. Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle. Check idle mixture (CO% level). See V6 IDLE SPEED & CO LEVEL table.

9) If idle mixture (CO% level) is incorrect, go to next step. If idle mixture (CO% level) is correct, replace oxygen sensor. Ensure Green LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM. If so, recheck ignition timing and idle speed. If not, go to next step.

10) Reconnect oxygen sensor. Perform self-diagnostic and repair procedures for fuel pressure, airflow meter, injectors, and engine coolant temperature sensor. See G - TESTS W/ CODES article.

11) After checking idle mixture, turn off engine. Remove 2500-ohm resistor from engine coolant temperature sensor wiring

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harness and reconnect sensor.

300ZX

1) Start engine and warm to normal operating temperature. Run engine at 2000 RPM for 2 minutes.

2) Perform self-diagnostic procedure. See G - TESTS W/ CODES article. Check for smooth engine operation. Check engine idle speed and timing. With idle speed and timing correctly set, locate ECU under right side of dash (behind glove box). Increase engine speed to 2000 RPM for another 2 minutes.

3) Enter and set self-diagnostic system to Mode II. See G - TESTS W/ CODES article. Ensure Red LED on ECU goes on and off more than 5 times during 10 seconds with engine running at 2000 RPM. If not, replace left oxygen sensor and repeat idle mixture procedure. If Red LED does not come on at all, go to step 7). If Red LED operates as stated, go to next step.

NOTE: If idle mixture is still incorrect (Red LED on ECU does not go on and off more than 5 times during 10 seconds) after replacing left oxygen sensor, perform self-diagnostic and repair procedures for fuel pressure, airflow meter, injectors and engine coolant temperature sensor.

4) Increase engine speed to 2000 RPM, 2 or 3 times once more. Red LED on ECU should go on and off more than 5 times during 10 seconds with engine running at 2000 RPM. If not, replace right oxygen sensor and repeat test procedure starting at step 3). If Red LED does not come on at all, go to next step. If Red LED operates as stated, oxygen sensors and idle mixture are correct.

5) Check right oxygen sensor wiring harness. To do so, turn off engine. Disconnect negative battery cable. Disconnect right oxygen sensor wiring harness connector and ECU 76-pin connector.

6) Check continuity between terminal No. 29 of ECU 76-pin connector and center terminal of oxygen sensor wiring harness connector. If continuity exists, go to step 9). If not, repair wiring harness and repeat idle mixture procedure starting at step 3).

7) Check left oxygen sensor wiring harness. To do so, turn off engine. Disconnect negative battery cable. Disconnect left oxygen sensor wiring harness connector and ECU 76-pin connector.

8) Check continuity between terminal No. 55 of ECU 76-pin connector and center terminal of oxygen sensor wiring harness connector. If continuity exists, go to next step. If not, repair wiring harness and repeat idle mixture procedure starting at step 3).

9) Reconnect ECU 76-pin connector. Disconnect engine coolant temperature sensor connector. Connect a 2500-ohm resistor to engine coolant temperature sensor wiring harness. Disconnect Air Injection Valve (AIV) wiring harness connector.

10) Reconnect negative battery cable. Start engine and warm

to normal operating temperature (coolant gauge needle in middle). Increase engine speed to 2000 RPM, 2 or 3 times, then allow engine to return to idle.

11) Check idle mixture (CO% level). See V6 IDLE SPEED & CO LEVEL table. If idle mixture (CO% level) is correct, replace left oxygen sensor and repeat procedure starting at step 3).

12) If idle mixture (CO% level) is incorrect, reconnect oxygen sensor. Perform self-diagnostic and repair procedures for fuel pressure, airflow meter, injectors, and engine coolant temperature sensor.

13) After checking idle mixture, turn off engine. Remove 2500-ohm resistor from engine coolant temperature sensor wiring harness and reconnect sensor. Reconnect AIV wiring harness connector.

THROTTLE POSITION SENSOR & IDLE SWITCH ADJUSTMENT

THROTTLE POSITION SENSOR (4-CYLINDER ENGINES)

NX, Sentra & 240SX

1) Disconnect throttle position sensor. Connect ohmmeter between terminals "E" and "F". See Fig. 9. Resistance should vary from approximately 2000 ohms with throttle closed to approximately 10,000 ohms with throttle fully open. If resistance does not vary as specified, replace throttle position sensor.

2) To adjust throttle position sensor, reconnect TPS, start engine and warm to normal operating temperature. Connect voltmeter between ECU terminal No. 20 and ground. With ignition on, adjust TPS output voltage to 0.45-0.55 volt by rotating TPS body. Tighten mounting bolts. Disconnect TPS connector for a few seconds, then reconnect it. Turn ignition off.

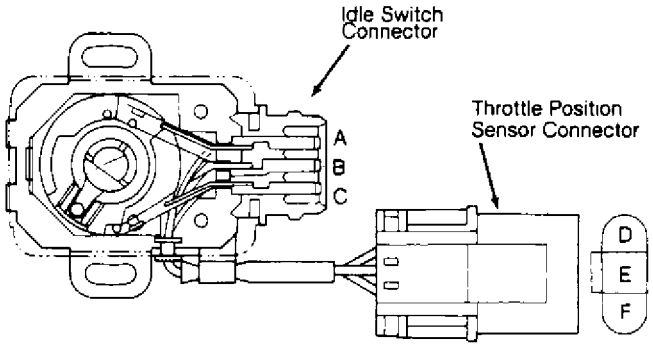


Fig. 9: Idle Switch & TPS ID Connector Terminals
Courtesy of Nissan Motor Co., U.S.A.

Pickup

1) Disconnect throttle position sensor. Connect ohmmeter

between terminals "E" and "F". See Fig. 9. Ensure resistance varies as throttle is opened and closed. If resistance does not vary, replace throttle position sensor.

2) Reconnect throttle position sensor. Start engine and warm to normal operating temperature. Connect voltmeter between ECU terminal No. 20 and ground. With ignition on, adjust TPS output voltage to 0.4-0.6 volt. Disconnect TPS for a few seconds, then reconnect. Turn ignition off.

Stanza

1) Disconnect throttle position sensor. Connect ohmmeter between terminals "E" and "F". See Fig. 9. Resistance should vary from approximately 1000 ohms with throttle closed to approximately 9000 ohms with throttle fully open. If resistance does not vary as specified, replace throttle position sensor.

2) To adjust throttle position sensor, reconnect TPS, start engine and warm to normal operating temperature. Connect voltmeter between ECU terminal No. 20 and ground. With ignition on, adjust TPS output voltage to 0.4-0.5 volt by rotating TPS body. Tighten mounting bolts. Disconnect TPS connector for a few seconds, then reconnect it. Turn ignition off.

THROTTLE POSITION SENSOR (V6 ENGINES)

300ZX

1) Disconnect throttle position sensor. Connect ohmmeter between terminals "E" and "F". See Fig. 9. Resistance should vary from approximately 1000 ohms with throttle valve closed to approximately 9000 ohms with throttle valve fully open. If resistance does not vary as specified, replace Throttle Position Sensor (TPS).

2) To adjust TPS, reconnect TPS and start engine, warming to normal operating temperature. Connect voltmeter between ECU terminal No. 38 and ground. With ignition on, adjust TPS output voltage to 0.4-0.5 volt by rotating TPS body. Tighten mounting bolts. Disconnect TPS for few seconds, then reconnect. Turn ignition off.

THROTTLE POSITION SENSOR/IDLE SWITCH (V6 ENGINES)

NOTE: Idle switch and throttle position sensor are an assembly.

Maxima, Pathfinder & Pickup

1) Disconnect Throttle Position Sensor (TPS). Connect ohmmeter between terminals "E" and "F". See Fig. 9. Resistance should vary from approximately 1000 ohms with throttle valve closed to approximately 9000 ohms with throttle valve fully open. If resistance is not as indicated, replace TPS.

2) To check idle switch, start engine and warm to normal operating temperature. On Pathfinder and Pickup, disconnect Auxiliary

Air Control (AAC) valve sub-harness connector. On Maxima, turn diagnostic mode selector screw on ECU fully clockwise.

3) On all models, disconnect idle switch. Connect ohmmeter between terminals "C" and "B" on Maxima and between "A" and "B" on Pathfinder and Pickup. See Fig. 9. Check idle switch off/on speed, while closing throttle valve.

4) Idle switch should turn on at 100-400 RPM (800-1100 RPM on Maxima VE30DE). If idle switch does not perform as indicated, loosen idle switch hold-down screws and rotate switch body to set off/on speed to specification.

END OF ARTICLE