



200SX 1996 Quick Reference SR Engine Mark Actual **Notes** to Confirm SR20DE **Engine Oil** SAE 5W-30 API SG, Energy Conserving Oil With Oil Filter 3 5/8 at Without Oil Filter 3 3/8 qt Tune up Spark Plugs (Platinum) Plug Gap 0.039 - 0.043 in (1.0 - 1.1mm) Standard **Platinum** PFR5B-11 Standard Type BKR6E BKR5E PFR6B-11 Hot Type Cold Type BKR7E PFR7B-11 **Ignition Timing** 15° ± 2° BTDC **Base Idle** $750 \pm 50 \text{ rpm}$ **Curb Idle (Target)** $800 \pm 50 \text{ rpm}$ **Idle Mixture Ratio** Less Than 11 % CO Valve Clearance Less Than 0.001 in (0.025 mm) **Throttle Position Sensor** T/V Closed Approx. 0.15 - 0.85 v T/V Open Approx. 3.5 - 4.7 v Idle Voltage Between Open & Closed **Radiator Fill** Coolant Type Ethylene Glycol **Coolant Capacity** M/T 6 1/2 qts **A/T** 7 qts Compression Standard 178 psi Minimum 149 psi Diff Between Cyl 14 psi **Fuel System** Recommended Fuel 87 Octane Fuel Pressure @ Idle Vacuum applied at fuel pressure regulator 34 psi Vacuum released at fuel pressure regulator 43 psi Fuel Pump Ω $0.2 - 5.0 \Omega$ Fuel Injector Ω $10 - 14 \Omega$ Sensors **Crank Position Sensor**

166 - 204Ω

11 - 14 v

1.3 - 1.7 v

71°F(25°C)

Supply Voltage

Output Volt. Idle

Mass Air Flow Sensor

Mass Air Flow			
At Idle	2.5 - 5.0 gm/sec		
2500 RPM	7.1 - 12.5 gm/sec		
Coolant Town Concer			
Coolant Temp Sensor	21 2010		
68°F (20°C) 122°F (50°C)	2.1 - 2.9 kΩ 0.68 - 1.0 kΩ		
194°F (90°C)	0.06 - 1.0 kΩ 0.236 - 0.260 kΩ		
EGR Temp Sensor	0.230 - 0.200 RS2		
32°F (0°C)	7.9 - $9.7~\text{m}\Omega$		
122°F (50°C)	0.57 - 0.70 mΩ		
212°F (100°C)	$0.08 - 0.10 \text{ m}\Omega$		
IACV-AAC Valve	10.0 Ω		
Intake Air Temperature			
68°F (20°C)	2.1 - 2.9 kΩ		
176°F (80°C)	0.27 - 0.38 kΩ		
Et 02 Concer Heat			
Ft 02 Sensor Heat	22.626		
77°F (25°C) Rr 02 Sensor Heat	3.3 - 6.3 Ω		
77°F (25°C)	5.2 - 8.2 Ω		
Cam P/Sen (OBD)	166 - 204 Ω		
cam i youn (ODD)	100 20111		
Electrical			
Electrical Ignition System			
Ignition System Firing Order	1-3-4-2		
Ignition System Firing Order Ignition Coil			
Ignition System Firing Order Ignition Coil Primary Volt	12 V		
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω	12 V 0.5 -1.0 Ω		
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω	12 V 0.5 -1.0 Ω approx. 25.0 kΩ		
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω	12 V 0.5 -1.0 Ω		
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω	Canada	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs.	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω	Canada 24F	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω	24F	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs.	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω USA 21F 12V / 60AH	24F 12v / 65AH	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω	24F	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ $2.2 k\Omega$ USA $21F$ $12V / 60AH$ 490 A	24F 12v / 65AH 550 A	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ 2.2 kΩ USA 21F 12V / 60AH 490 A 88 min	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ $2.2 k\Omega$ USA $21F$ 12V / 60AH 490 A 88 min 245 A LR180-741H	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ $2.2 k\Omega$ USA $21F$ 12V / 60AH 490 A 88 min 245 A LR180-741H 12V / 80A	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out Regulated Volts	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ $2.2 k\Omega$ USA $21F$ 12V / 60AH 490 A 88 min 245 A LR180-741H 12V / 80A 14.1 - 14.7 V	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out	12 V $0.5 - 1.0 \Omega$ approx. 25.0 kΩ $2.2 k\Omega$ USA $21F$ $12V / 60AH$ 490 A $88 min$ $245 A$ LR180-741H $12V / 80A$ $14.1 - 14.7 V$ More than $23A/1300 rpm$	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out Regulated Volts	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω USA 21F 12V / 60AH 490 A 88 min 245 A LR180-741H 12V / 80A 14.1 - 14.7 V More than 23A/1300rpm More than 63A/2500rpm	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out Regulated Volts Hot Output Amps	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω USA 21F 12V / 60AH 490 A 88 min 245 A LR180-741H 12V / 80A 14.1 - 14.7 V More than 23A/1300rpm More than 77A/5000rpm More than 77A/5000rpm	24F 12v / 65AH 550 A 113 min	
Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps Charging System Alternator Type Nom. Rated Out Regulated Volts	12 V 0.5 -1.0 Ω approx. 25.0 k Ω 2.2 k Ω USA 21F 12V / 60AH 490 A 88 min 245 A LR180-741H 12V / 80A 14.1 - 14.7 V More than 23A/1300rpm More than 77A/5000rpm More than 77A/5000rpm	24F 12v / 65AH 550 A 113 min	





200SX 1996 Quick Reference SR Engine

PREPARATION

Make sure that the following parts are in order.

- 1. Battery
- 2. Ignition system
- 3. Engine oil and coolant levels
- 4. Fuse
- 5. ECM harness connector
- 6. Vacuum hoses
- 7. Air intake system (Oil filler cap, oil level, etc.)
- 8. Fuel pressure
- 9. Engine compression
- 10. EGR valve operation (if equipped)
- 11. Throttle valve
- 12. Evaporative emission canister purge control valve.

Note:

- On A/C equipped vehicles, turn A/C "Off" for testing.
- Transmission should be in "Park" or "Neutral".
- "CO" probe should be inserted into exhaust approximately 16 inches.
- Turn off headlamps, heater blower, rear defogger, etc.
- Front wheels pointed straight.
- Perform inspection with cooling fans "Off".





200SX 1996 Quick Reference GA Engine

Mark Actual Notes

GA16DE			to Confirm	Notes
Engine Oil With Oil Filter Without Oil Filter	SAE 5W-30 API SG, Ener 3 3/8 qt 3 qt	rgy Conserving Oil		
Tune up Spark Plugs Plug Gap Standard Type Hot Type Cold Type Cold Type	0.039 - 0.043 in (1.0 - 1.1 BKR5E-11 BKR4E-11 BKR6E-11 BKR7E-11	mm)		
Ignition Timing Base Idle	$8^{\circ} \pm 2^{\circ}$ BTDC M/T 625 ± 50 RPM	A/T 725 ± 50 RPM		
Curb Idle (Target) Auto Trans	USA 800 ± 50 rpm	Canada 800 ± 50 rpm		
Manual Trans Idle Mixture Ratio Valve Clearance Cold Approx 68°F (20°C) Hot Approx 176°F	675 ± 50 rpm 7 % CO Intake 0.010 - 0.013 in (0.25 - 0.33 mm) 0.008 - 0.019 in	750 ± 50 rpm Exhaust 0.013 - 0.016 in (0.32 - 0.40 mm) 0.012 - 0.023 in		
(80°C) Throttle Position Sen		(0.30 - 0.58 mm)		
T/V Closed T/V Open Idle Voltage	Approx. 0.15 - 0.85 v Approx. 3.5 - 4.7 v Between Open & Closed			
Radiator Fill Coolant Type Coolant Capacity	Ethylene Glycol M/T 5 1/2 qts	A/T 6 qts		
Compression Standard Minimum Diff Between Cyl	199 psi 171 psi 14 psi			
Fuel System Fuel Pressure @ Idle				
- 25. 1 . 1000 and (6) half	Vacuum applied at fuel pr 34 psi Vacuum released at fuel p 43 psi	•		
Recommended Fuel Fuel Pump Ω Fuel Injector Ω	87 Octane 0.2 - 5.0 Ω 10 - 14 Ω			

Sensors Mass Air Flow Sensor Supply Volt. Output Volt. Idle Mass Air Flow At Idle 2500 RPM Coolant Temp Sensor 68°F (20°C) 122°F (50°C) 194°F (90°C)	11 - 14v 1.0 - 1.7v 1.0 - 4.0 gm/sec 5.0 - 10.0 gm/sec 2.1 - 2.9 kΩ 0.68 - 1.0 kΩ 0.236 - 0.260 kΩ		
Ft 02 Sen Heater Ω Rr 02 Sen Heater Ω	3.3 - 6.3 Ω 5.2 - 8.2 Ω		
EGR Temp Sensor Ω	At 212°F (100°C) 76.8 - 93.8 kΩ		
Intake Air Temp. Sensor 68°F (20°C) 122°F (50°C) Cam P/Sen (OBD) F/Tank Temp Sen IACV-AAC Valve Ω	2.1 - 2.9 kΩ 0.68 - 1.00 kΩ M/T 432 - 528Ω 68°F (20°C) 122°F (50°C) 50 - 100 Ω	Α/T 166 - 204 Ω 2.3 - 2.7 kΩ 0.79 - 0.90 kΩ	
Electrical Ignition System Firing Order Ignition Coil Primary Volt Primary Ω Secondary Ω Ignition Coil Resistor	1-3-4-2 11 - 14V 1.0Ω 10.0 kΩ 2.2 kΩ		
Battery Specs. Group Capacity Cold Crank Amps Reserve Capacity Discharge Amps	USA 21F 12 / 60 V/AH 490 A 88 minutes 245 A	Canada 24F 12 / 65 V/AH 550 A 113 minutes 275 A	
Charging System Alternator Type Nom. Rated Out Regulated Volt Hot Output Amps (Amps/rpm)	LR180-748 12V / 70 A 14.1 - 14.7V More than 23A/1300 rpm More than 65A/2500 rpm More than 77A/5000 rpm		
EPA Mileage Estimate (0			

EPA Mileage Estimate (GA Engine) (city/highway) 27/35 (MT) 26/33 (AT)





200SX 1996 Quick Reference GA Engine

PREPARATION

Make sure that the following parts are in order.

- 1. Battery
- 2. Ignition system
- 3. Engine oil and coolant levels
- 4. Fuse
- 5. ECM harness connector
- 6. Vacuum hoses
- 7. Air intake system (Oil filler cap, oil level, etc.)
- 8. Fuel pressure
- 9. Engine compression
- 10. EGR valve operation (if equipped)
- 11. Throttle valve
- 12. Evaporative emission canister purge control valve.

Note:

- On A/C equipped vehicles, turn A/C "Off" for testing.
- Transmission should be in "Park" or "Neutral".
- "CO" probe should be inserted into exhaust approximately 16 inches.
- Turn off headlamps, heater blower, rear defogger, etc.
- Front wheels pointed straight.
- Perform inspection with cooling fans "Off".





200SX 1996 Quick Reference SR-A/T

RE4F03V			to Confirm	Notes
A/T Fluid Type Oil Capacity A/T Cooler Type	Nissan Matic 'D' 7 3/8 qt Fin Type Structure			
Up-Shift Schedule Ranç	ge (at normal operating te Half Throttle	mp.) MPH(km/h) Full Throttle		
$D_1 \rightarrow D_2$ $D_2 \rightarrow D_3$ $D_3 \rightarrow D_4$	18 - 23 (29 - 37) 40 - 45 (64 - 72) 68 - 73 (110 - 118)	35 - 40 (56 - 64) 66 - 71 (107 - 115) 105 - 110 (169 - 177)		
Lock-Up Clutch (Approx	x. 1/4 Throttle) MPH(km/h			
Gear Pos. D4 OD/on Gear Pos. D4 OD/off	Lock-up ON 65 - 70 (104 - 112) 53 - 58 (86 - 94)	Lock-up OFF 57 - 62 (92 - 100) 52 - 57 (83 - 91)		
Stall RPM R, D, 2, 1 position	1,850 - 2,150 rpm			
Line Pressure	PSI (kg/cm²) At Curb Idle	At Stall ram		
R - Position D, 2, 1 - Position	124 (8.7) 73 (5.1)	At Stall rpm 255 (17.9) 149 (10.5)		
Shift Solenoids Gear 1st 2nd 3rd 4th	Solenoid A ON OFF OFF ON	Solenoid B ON ON OFF OFF		
Solenoid Valves Shift Solenoid A Shift Solenoid B Ovr. Clutch Solenoid Line Pres. Solenoid T/Conv. Clutch Sol	Resistance $20 - 30 \Omega$ $20 - 30 \Omega$ $20 - 30 \Omega$ $25 - 5 \Omega$ $20 - 30 \Omega$	Pin Number 6 7 8 1 5		
ATF Temperature Sense				
68°F (20°C) 176°F (80° C) Rev Sensor	2.5 kΩ 0.3 kΩ 500 - 650 Ω			
Drop Resistor	11.2 - 12.8 Ω			
Brake Band Anchor end pin torq. Num of return turns	35 - 52 in lbs. 2.5 23 - 27 ft lbs			





200SX 1996 Quick Reference SR-A/T

PRECAUTIONS

- Before performing any diagnostic test, vehicle should be driven for approximately 10 minutes to raise transmission to the proper operating temperature of 122° to 176°.
- During stall testing, never hold throttle wide open for more than 5 seconds at a time. Extended stall testing can overheat transmission and cause serious damage.
- Nissan Matic 'D' ATF is the only fluid accepted for warranty, service contracts and goodwill repairs.
- Before performing any internal repairs, thoroughly clean the outside of the transmission case to prevent contamination.
- Use lint free cloth or towels for wiping parts. Common shop towels can leave contaminating fibers on the transmission parts and cause improper transmission operation.
- When servicing the valve body, valves, sleeves, plugs, etc. should slide along the bores in the valve body under their own weight.
- Before assembly, apply a coat of ATF to all internal transmission parts. Use petroleum jelly to protect o-rings and seals, or to hold bearings and washers in place during assembly.

Important Note: Nissan Matic 'D' must be used in performing repairs paid by Nissan/Infiniti, such as warranty, service contract, or good-will repairs. There will not be reimbursement for repairs when non-genuine Nissan Matic 'D' is used.





200SX 1996 Quick Reference GA-A/T

RL4F03A			Mark Actual to Confirm	Notes
A/T Fluid Type Oil Capacity A/T Cooler Type Up-Shift Schedule Rang				
$\begin{array}{l} D_1 \rightarrow D_2 \\ D_2 \rightarrow D_3 \\ D_3 \rightarrow D_4 \end{array}$	Half Throttle 18 - 23 (29 - 37) 32 - 37 (52 - 60) 63 - 68 (101 - 109)	Full Throttle 32 - 37 (51 - 59) 60 - 65 (97 - 105) 85 - 90 (136 - 145)		
Lock-Up Clutch (Approx. 1/4 Throttle) Gear Position D4	MPH(km/h) Lock-up ON 47 - 52 (75 - 83)	Lock-up OFF 42 - 47 (68 - 76)		
Stall RPM R, D, 2, 1 position Line Pressure R - Position D - Position 2, 1 - Position	2,450 - 2,750 rpm PSI (kg/cm²) At Curb Idle 128 (9.0) 92 (6.5) 166 (11.7)	At Stall rpm 256 (18.0) 185 (13.0) 185 (13.0)		
Governor Pres	MPH (km/h) 0 (0) 10 (16) 20 (32) 50 (80)	PSI (kg/km²) 0 (0) 9 - 10 (0.6 - 0.7) 16 - 18 (1.1 - 1.3) 41 - 50 (2.9 - 3.5)		
Solenoid Valves O/D Cancel Solenoid Torq. Conv. Clutch Sol.	Resistance Approx. 25 Ω Approx. 25 Ω			
Throttle Wire Adjustme Throttle Wire Stroke	nt 1.57 - 1.65 in (40 - 42 r	mm)		
Brake Band Anchor end pin torq. Num of return turns	35 - 52 in lbs. 2.5 +/- 0.125			

23 - 27 ft lbs.

Lock nut torque





200SX 1996 Quick Reference GA-A/T

PRECAUTIONS

- Before performing any diagnostic test, vehicle should be driven for approximately 10 minutes to raise transmission to the proper operating temperature of 122° to 176°.
- During stall testing, never hold throttle wide open for more than 5 seconds at a time. Extended stall testing can overheat transmission and cause serious damage.
- Nissan Matic 'D' ATF is the only fluid accepted for warranty, service contracts and goodwill repairs.
- Before performing any internal repairs, thoroughly clean the outside of the transmission case to prevent contamination.
- Use lint free cloth or towels for wiping parts. Common shop towels can leave contaminating fibers on the transmission parts and cause improper transmission operation.
- When servicing the valve body, valves, sleeves, plugs, etc. should slide along the bores in the valve body under their own weight.
- Before assembly, apply a coat of ATF to all internal transmission parts. Use petroleum jelly to protect o-rings and seals, or to hold bearings and washers in place during assembly.

Important Note: Nissan Matic 'D' must be used in performing repairs paid by Nissan/Infiniti, such as warranty, service contract, or good-will repairs. There will not be reimbursement for repairs when non-genuine Nissan Matic 'D' is used.





200SX 1996 Quick Reference SR-M/T **Mark Actual Notes** to Confirm RS5F32V Clutch Pedal height "H" 6.02 - 6.42 in (153 - 163 mm) 0.433 - 0.591 in (11 - 15 mm) Pedal free play "A" Flywheel Run-out Less than 0.0059 in (0.15 mm) Clutch Disc Run-out 0.039 in (1.00 mm) Clutch Cover Torque 7 - 14 ft/lbs (1 - 2 kg/m) (Two Stages) 16 - 22 ft/lbs (2.2 - 3.0 kg/m) **Refill Capacity** (80W-90 API GL-4) 77/8 - 81/4 pt Oil Level Check 1.34 - 1.57 in (34 - 40 mm) **Gear End Play** 1st gear 0.0071 - 0.0122 in (0.18 - 0.31 mm) 2nd gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 3rd gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 4th gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 0.0071 - 0.0122 in (0.18 - 0.31 mm) 5th gear Clearance Between Baulk Ring And Gear Standard **Wear Limit** 0.0374 - 0.0571 in 1st Gear 0.028 in (0.95 - 1.45 mm) $(0.7 \, \text{mm})$ 4th Gear 0.0354 - 0.0571 in 0.028 in (0.9 - 1.45 mm) $(0.7 \, \text{mm})$ 5th Gear 0.035 - 0.059 in 0.028 in (0.9 - 1.5 mm) $(0.7 \, \text{mm})$ 2nd & 3rd Outer (A) 0.028 - 0.035 in 0.008 in (0.7 - 0.9 mm)(0.2 mm)2nd & 3rd Inner (B) 0.024 - 0.043 in 0.008 in (0.6 - 1.1 mm) (0.2 mm)**Reverse Check Plugs Turning Torque** 43 - 65 in/lb (50 - 75 kg/cm) Input Shaft Front Bearing Snap Ring **Specified Clearance** 0 - 0.004 in (0 - 0.1mm) Input Shaft 5th Synchronizer Hub Snap Ring **Specified Clearance** 0 - 0.004 in (0 - 0.1mm) **Mainshaft Bearing Adjusting Spacer** Bearing Distance "C" 9.0610 - 9.0649 in (230.15 - 230.25 mm) Mainshaft C Ring Specified Clearance 0 - 0.004 in (0 - 0.1 mm) **Differential Side Gear Thrust Washer Specified Clearance** 0.004 - 0.008 in (0.1 - 0.2 mm) **Differential Side Bearing Preload** Preload Dimension 0.0098 - 0.0118 in (0.25 - 0.30 mm)

 Final Drive Turning Torque

 Final drive only
 26 - 61 in/lb (30 - 70 kg/cm)

 Torq. variation per rev.
 8.7 in/lb (10 kg/cm)

 Input Shaft Braking Mechanism

 Maximum height "H"
 2.6441 - 2.6630 in (67.16 - 67.64 mm)

 Clearance "C"
 0.0020 - 0.0049 in (0.05 - 0.125 mm)

 Mainshaft Bearing End Play

 Allowable End play
 0 - 0.004 in (0 - 0.1 mm)

Total Turning Torque

Total Torque 26 - 61 in/lb (30 - 70 kg/cm)





200SX 1996 Quick Reference SR-M/T

PRECAUTIONS

- Nissan does not recommend flywheel resurfacing. If flywheel is not within specification, replacement is recommended.
- Refill transmission with the proper viscosity and amount of gear lube for the anticipated temperatures.
- To help prevent clutch judder, avoid excessive grease to clutch disc splines, input shaft and throwout bearing. Be sure to clean off any excessive grease.
- On rear wheel drive vehicles, inspect the shift control lever bushing for wear and proper alignment prior to reinstallation of a removed transmission.
- To avoid transmission contamination, inspect the shift lever dust boot for cracks or damage, and replace if needed. Install plastic wire ties to insure a tight fit of the boot to the shifter and housing.
- Before reinstallation of a removed transmission, inspect the engine to transmission alignment dowels for damage. Damaged dowels can cause misalignment of the engine to transmission, and this can cause the transmission to jump out of gear.





200SX 1996 Quick Reference GA-M/T **Mark Actual Notes** to Confirm RS5F31A Clutch Pedal height "H" 6.02 - 6.42 in (153 - 163 mm) Pedal free play "A" 0.433 - 0.591 in (11.0 - 15.0 mm) Flywheel Run-out Less than 0.0059 in (0.15 mm) Clutch Disc Run-out 0.039 in (1.00 mm) Clutch Cover Torque 7.0 - 14 ft/lbs (1 - 2 kg/m) (Two Stages) 16 - 22 ft/lbs (2.2 - 3.0 kg/m) **Refill Capacity** (80W-90 API GL-4) 6 1/8 - 6 3/4 pt **Oil Level Check** 2.24 - 2.60 in (57 - 66 mm) **Gear End Play** 1st gear 0.0071 - 0.0122 in (0.18 - 0.31 mm) 2nd gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 3rd gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 4th gear 0.0079 - 0.0118 in (0.20 - 0.30 mm) 0.0071 - 0.0122 in (0.18 - 0.31 mm) 5th gear Clearance Between Baulk Ring And Gear **Standard Wear Limit** 0.0394 - 0.0531in 0.028 in 1st - 5th Gear (1.0 - 1.35 mm) $(0.7 \, \text{mm})$ **Reverse Check Plugs Turning Torque** 43 - 65 in/lb (50 - 75 kg/cm) Input Shaft Front Bearing Snap Ring **Specified Clearance** 0 - 0.004 in (0 - 0.1mm) Input Shaft 5th Synchronizer Hub Snap Ring Specified Clearance 0 - 0.004 in (0 - 0.1mm) Mainshaft C Ring Specified Clearance 0 - 0.004 in (0 - 0.1 mm) **Differential Side Gear Thrust Washer Specified Clearance** 0.004 - 0.008 in (0.1 - 0.2 mm) **Differential Side Bearing Preload** Preload Dimension 0.0094 - 0.0126 in (0.24 - 0.32 mm) **Final Drive Turning Torque** Final drive only 17 - 69 in/lb (20 - 80 kg/cm) Torq. variation per rev. 8.7 in/lb (10 kg/cm) **Mainshaft Bearing Preload** Preload dimension 0.0071 - 0.0106 in (0.18 - 0.27 mm) **Total Turning Torque**

35 - 122 in/lb (40 - 140 kg/cm)

Total Torque





200SX 1996 Quick Reference GA-M/T

PRECAUTIONS

- Nissan does not recommend flywheel resurfacing. If flywheel is not within specification, replacement is recommended.
- Refill transmission with the proper viscosity and amount of gear lube for the anticipated temperatures.
- To help prevent clutch judder, avoid excessive grease to clutch disc splines, input shaft and throwout bearing. Be sure to clean off any excessive grease.
- On rear wheel drive vehicles, inspect the shift control lever bushing for wear and proper alignment prior to reinstallation of a removed transmission.
- To avoid transmission contamination, inspect the shift lever dust boot for cracks or damage, and replace if needed. Install plastic wire ties to insure a tight fit of the boot to the shifter and housing.
- Before reinstallation of a removed transmission, inspect the engine to transmission alignment dowels for damage. Damaged dowels can cause misalignment of the engine to transmission, and this can cause the transmission to jump out of gear.





200SX 1996 Quick Reference

Heater & A/C

AIR CONDITIONER

Mark Actual to Confirm

Notes

Compressor

Model DKV-14D Type Vane Rotary

Compressor Clutch
Disc-to-Pulley Clearance

0.012 - 0.024 in (0.3 - 0.6 mm)

Refrigerant

Type HFC-134a (R134a) Capacity 1.32 - 1.54 lb.

Refrigerant Oil

Type Nissan Type "R" Lub.

Capacity 6.8 fl oz

Oil to AddPer Evaporator 2.5 oz (75 ml)

Condenser 2.5 oz (75 ml)
*Liquid Tank 0.2 oz (5 ml)
Large Refrig. Leak 1.0 oz (30 ml)

Compressor

Recirc .Air Temp. at

(*Add only if comp. is not replaced.)

Engine Idle with A/C On GA16DE SR20DE

Approx. 900 rpm Approx. 850 rpm

Discharge Air Temp. at

Performance Test

Recirculating-to-Discharge Air Temp

	Player Assy Inlet	Center Ventilator	
Relative Humidity	Blower Assy. Inlet F° (C°)	F° (C°)	
50 - 60 %	68° (20°)	40 - 45° (4 - 7°)	
	77° (25°)	46 - 52° (8 - 11°)	
	86° (30°)	53 - 60° (12 - 16°)	
	95° (35°)	60 - 69° (15 - 20°)	
	104° (40°)	67 - 79° (20 - 26°)	
60 - 70 %	68° (20°)	45 - 49° (7 - 9°)	
	77° (25°)	52 - 58° (11 - 15°)	
	86° (30°)	60 - 68° (16 - 20°)	
	95° (35°)	69 - 79° (20 - 26°)	
	104° (40°)	79 - 92° (26 - 34°)	

Ambient Air Temp-to-	Operating Pressure		
Air temperature	Relative Humidity 50-70°	%	
F°(C°)	High-pres.	Low-pres.	
68°(20°)	146 - 191 psi	16 - 30 psi	
77°(25°)	179 - 232 psi	17 - 33 psi	
86°(30°)	213 - 273 psi	20 - 38 psi	
95°(35°)	274 - 314 psi	23 - 47 psi	
104° (40°)	279 - 356 psi	28 - 57 psi	
Thermo Control Amp	F°(C°)		
Decreasing	37-38 (3 - 4)	Off (12V)	
Increasing	39-41 (4 - 5)	On (0V)	
Thermal Protector	F°(C°)		
Increasing	293-311 (145-155)	Compressor Off	
Decreasing	266-284 (130-140)	Compressor On	
Dual Pressure Switch PSI	On / Continuity	Off / No Continuity	
Low Pres. Side	23 - 31 inc.	23 - 28 dec	
High Pres. Side	270 - 327 dec	384 - 412 inc.	
A/C Drive Belt Deflection			
	Used Belt	New Belt	
SR20DE			
Deflection Limit	0.45 - 0.49 in (12 - 13 mm	•	
Deflection After Adj.	0.28 - 0.31 in	0.26 - 0.30 in	
CAACDE	(7 - 8 mm)	(7 - 8 mm)	
GA16DE	0.274 in (0.5 mm)		
Deflection Limit	0.374 in (9.5 mm) 0.24 - 0.26 in	0.20 - 0.24 in	
Deflection After Adj.	0.24 - 0.26 in (6 - 6.5 mm)	0.20 - 0.24 m (5 - 6 mm)	
	(0 - 0.3 11111)	(0 - 0 111111)	



200SX 1996 Quick Reference Heater & A/C

PERFORMANCE TEST CONDITIONS

- Vehicle indoors or in the shade
- Doors closed
- Windows open
- Hood open
- Temperature on "Max" setting
- Discharge air on "Face Vent"
- Recirculation switch on "Recirc"
- Fan speed on "High"
- A/C switch "On" and verify A/C Clutch engagement
- Engine speed at 1500 RPM
- · Verify heater cock is closed
- Operate the A/C system for 10 minutes before taking measurements

Precautions:

- 1. When removing the compressor, store it in the same position as it is mounted in the vehicle. Failure to do so may cause lubricant to enter the low pressure chamber and cause compressor damage.
- 2. Allow components stored in cool areas to warm to area temperatures before removing seals. This prevents condensation from forming inside A/C components.





200SX 1996 Quick Reference Suspension **Mark Actual Notes** to Confirm WHEEL ALIGNMENT (UNLADEN) **Nominal** Toe-in Range Total toe-in (A - B) 0.00 - 0.16 in 0.08 in (0 - 4 mm)(2 mm) Total toe-in angle 0.00° - 0.40° 0.20° (left plus right) (0' - 24') (12')Front Wheel Turning Angle (full turn) **Manual Steering Power Steering** 38.00° - 42.00° In/Wheel Range 34.00° - 38.00° (38° 00' - 42° 00') (34° 00' - 38° 00') In/Wheel Nominal 41.00° (41° 00') 37.00° (37° 00') 31.00° (31° 00') Out/Wheel Nominal 34.00° (34° 00') Camber Range -1.33° to 0.17° (-1° 20' to 0° 10') -0.58° (-0° 35') Nominal Left/Right Difference 1.00° (1° 00') Caster Range 0.67° - 2.17° (0° 40' - 2° 10') Nominal 1.42° (1° 25') Left/Right Difference 1.00° (1° 00') Kingpin Inclination 14.00° - 15.50° (14° 00' - 15° 30') Range Nominal 14.75° (14° 45') Set Back 0.0 in +/- (0.0 mm +/-)Wheelbase 99.8 in (2,535 mm) **Rear Wheel Alignment Nominal** Toe-in Range Total toe-in (A - B) 0.04 in -0.12 in to 0.20 in (-3 to 5 mm) (1 mm) Total toe-in angle -0.30° to 0.50° 0.10° (-0° 18' to 0° 30') (left plus right) $(0^{\circ} 6')$ Camber -1.75° to -0.25° (-1° 45' to -0° 15') Range Nominal -1.00° (-1° 00') **Thrust Angle** 0.0° +/- $(0^{\circ}00'$ +/-) **Ball Joint End Play** 0 in(0 mm) Vertical End Play Front Wheel Bearing **Axial End Play** 0.0020 in (0.05 mm) or less Lock nut torque 145 - 202 ft/lb (20 - 28 kg/m)

Rear Wheel Bearing Axial End Play Lock nut torque	0.0020 in (0.05 mm) or les 137 - 188 ft/lb (19 - 26 kg/		
Wheel Runout Max. Lateral Run out: Max. Radial Run out:	Aluminum Wheel 0.012 in (0.3 mm) 0.012 in (0.3 mm)	Steel Wheel 0.031 in (0.8 mm) 0.020 in (0.5 mm)	
Wheel arch Height (Unla Tire Size 155SR13 175/70R13 175/65R14 195/55R15	rden) Front Height (Hf) 25.94 in (659 mm) 25.94 in (659 mm) 26.22 in (666 mm) 26.34 in (669 mm)	Rear Height (Hr) 25.20 in (640 mm) 25.28 in (642 mm) 25.51 in (648 mm) 25.59 in (650 mm)	

W/Lug Nut Torque 72-87 ft/lb (10-12 kg/m)





200SX 1996 Quick Reference Suspension

PRELIMINARY INSPECTION

- Check tires for wear and proper inflation
- Check wheel runout
- Check front wheel bearings excessive play
- Check front suspension for excessive play
- Check steering linkage for excessive play
- Check struts for leakage and condition
- Check vehicle for proper ride height

Precautions

- 1. When installing rubber parts, final tightening must be carried out under unladen conditions with the tires on the ground.
- 2. Recheck alignment after installing removed suspension components.





200SX 1996 Quick Reference **Brakes Mark Actual Notes** to Confirm **BRAKE SYSTEM Brake Model Code** SR20DE GA16DE CL22VD AD22VE DOT 3 (Recommended) **Brake Fluid** Master Cyl. Bore Dia. W/O ABS 13/16 in (20.64 mm) W/ABS 7/8 in (22.22 mm) GA16DE 10/16/95 2/967/8 in(22.22 mm) Frt Caliper Bore Dia. 2.126 in (54.0 mm) 2.126 in (54.0 mm) **Frt Brake Pad Dimensions** Length 4.17 in (106 mm) 4.17 in (106 mm) Width 1.555 in (39.5 mm) 1.555 in (39.5 mm) **Thickness** 0.43 in (11.0 mm) 0.43 in (11.0 mm) **Frt Brake Pad Wear Limit** Min. Thickness 0.079 in (2.0 mm) 0.079 in (2.0 mm) **Frt Brake Rotor Dimensions** Outer Diameter 9.13 in (232.0 mm) 9.72 in (247.0) Standard Thickness 0.71 in (18.0 mm) 0.71 in (18.0 mm) Frt Brake Rotor Repair/Wear Limits Max. Runout 0.0028 in (0.07 mm) 0.0028 in (0.07 mm) Min. Thickness 0.630 in (16.0 mm) 0.630 in (16.0 mm) Max. Thk. Variation 0.0008 in (0.02 mm) 0.0008 in (0.02 mm) **Rear Drum Rear Disc Rear Brake Code** LT18C CL7HB Rear Cylinder/Caliper 5/8 in (15.87 mm) 1 1/4 in (30.23mm) **Rear Pad/Shoe Dimensions** Length 6.80 in (172.8 mm) 3.7 in (94mm) Width 1.18 in (30 mm) 1.14 in (29) **Thickness** 0.16 in (4.0 mm) 0.39 in (10 mm) Rr Pad/Shoe Min Thk 0.059 in (1.5mm) 0.059 in (1.5 mm) **Rear Drum/Rotor Dimensions** Drum inside diameter 7.09 in (180mm) Rotor Thickness 0.28 in (7 mm) Rotor outside diameter 9.21 in (234 mm)

Rear Brake Drum/Rotor Max. Inside Dia.	Repair/Wear Limits 7.13 in (181 mm)		
Max Out-of-Round Minimum Thickness Maximum Runout Maximum Thickness Varia	0.0012 in (0.03 mm)	0.236 in (6.0 mm) 0.0028 in (0.07 mm) 0.0008 in (0.02 mm)	
Brake Pedal Dimen. Free Height 'H' Depressed Height 'D' Switch Clearance 'C' Pedal Free Play 'A'	Manual Trans 5.83 - 6.22 in (148 - 158 mm) 2.95 in (75 mm) 0.012 - 0.039 in (.3 - 1.0 n 0.039 - 0.118 in (1.0 - 3.0	,	
Brake Booster Output Rod Length Clevis Length	S205 or C205 or M195T 0.404 - 0.414 in (10.275 - 4.9 in (125 mm)	10.525 mm)	
Proportioning Valve Pre GA16DE SR20DE	Applied Pressure (Front Brakes) 1067 psi (75 kg/cm²) 924 psi (65 kg/cm²)	Output Pressure (Rear Brakes) 739 - 796 psi (52-56 kg/cm²) 597 - 654 psi (42-46 kg/cm²)	
Parking Brake Control Number of Notches	Drum 7 - 8 [Under force of 44 lb (20 kg)	Disc 8 - 9 (g)]	
ABS Wheel Sensor Clearance Frt/Rr Resistance	0.004 - 0.043 in (0.1 -1.1 o.8 - 1.2 kΩ	mm)	

Wheel Lug Nut 72-87 ft lb (10-12 kg-m)





200SX 1996 Quick Reference Brakes

PRECAUTIONS

- 1. Never reuse drained brake fluid.
- 2. Be careful not to splash brake fluid on painted surfaces.
- 3. Use clean brake fluid to clean or wash master cylinder wheel cylinders, and disc brake calipers parts.
- **4.** Mineral oils such as gasoline and kerosene should not be used. They can cause damage to rubber parts of the hydraulic system.
- 5. Use flare nut wrench when removing or installing brake line fittings.
- 6. Always torque brake lines.
- 7. Always replace brake pad shims when replacing brake pads.

Warning:

Clean brake pads and shoes with a dust collector to minimize the hazard of airborne particles or other materials.





200SX 1996 Quick Reference Electrical

ELECTRICAL

Mark Actual to Confirm

Notes

Wire Color Code

 $\begin{array}{lll} B = Black & BR = Brown \\ W = White & OR = Orange \\ R = Red & P = Pink \\ G = Green & PU = Purple \\ L = Blue & GY = Gray \\ Y = Yellow & SB = Sky Blue \\ LG = Light Green & CH = Dark Brown \end{array}$

DG = Dark Green

When a wire color is striped, the base color is given first, followed

by the stripe color. Example L/W = Blue with white stripe

Battery specification:

Group size 21F

Capacity 12 V / 60 AH

Battery charging rates:

 Amps
 Time

 50
 1 hour

 25
 2 hours

 10
 5 hours

 5
 10 hours

Do not charge battery over 50 ampere rate. Do not "quick charge" a full discharged battery.

If battery electrolyte temperature rises above 140°F, stop charging

Starter: (Engine GA)

	M0T80281ZC	M2T49283ZC	S114-802A
Type	MITSUBISHI		HITACHI
	Reduction	Non-reduction	Reduction
Applied Model	M/T		A/T
	Federal	California	
No-load Current	90 A Max.	53 A Max.	90 A Max.
No-load RPM	2750 Min.	6000 Min.	2750 Min

Starter: (Engine SR)

	M1T72985A	S114-701C
Type	MITSUBISHI	HITACHI
	Reduction	Reduction
No-load Current	90 A Max.	90 A Max.
No-load RPM	3000 Min.	2950 Min

Alternator: (Engine GA)

Type HITACHI LR170-748

Nominal Rating 12 V / 70 A Regulated Output Voltage 14.1 - 14.7

Output Current A/RPM More Than 22 / 1,300 (with 13.5 V applied) More Than 50 / 2,500 More Than 67 / 5,000

Alternator: (Engine SR)

Type HITACHI LR180-741H

Nominal Rating 12 V / 80 A Regulated Output Voltage 14.1 - 14.7

Output Current A/RPM More Than 23 / 1,300 (with 13.5 V applied) More Than 63 / 2,500 More Than 77 / 5,000

Thermal Transmitter (Water Temp. Sensor For Gauge)

Water TemperatureResistance $140^{\circ}F$ (60°C)Approx. 70 - 90 Ω $212^{\circ}F$ (100°C)Approx. 21 - 24 Ω

Oil Pressure Switch:

Oil pressure PSI Continuity

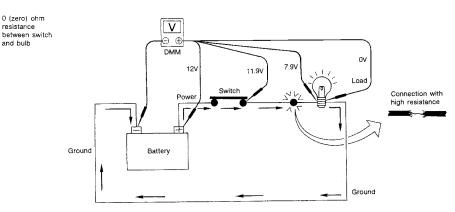
More Than 10 - 20 NO Less Than 10 - 20 YES

Bulb Specifications:

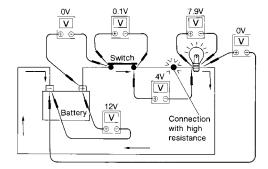
Item	Wattage (12V)	Bulb No.
Headlamp High/Low	65/45	HB9004
Front Combination Lamp	27/8	1157NA
Front Fog Lamp	35	H3 (special)
Rear Turn Signal	27	1156
Stop/Tail Lamp	27/8	1157
Center Stop Lamp	13	912
Back-up Lamp	27 (200SX)	1156
License Plate Lamp	5	168

How to perform voltage drop test: See Illustrations

Symptom: Dim bulb or no operation



AGI069



- Connect the voltmeter as shown, starting at the battery and working your way around the circuit.
 An unusually large voltage drop will indicate a component or wire that needs to be repaired. In the illustration, the poor connection causes a 4 volt drop.

The chart that follows illustrates some maximum allowable voltage drops. These values are given as a guideline, the exact value for each component may vary.

VOLTAGE DROP negligible <.001 volts Approx. 0.1 volts Approx. 0.3 volts COMPONENT Wire Ground Connections Switch Contacts

AGI055





200SX 1996 Quick Reference Electrical

BATTERY CONDITION

Battery Sulphation:

A battery will be completely discharged if it is left unattended for a long time and the specific gravity becomes less than 1.100. This may result in sulphation on the cell plates. To determine if a battery has been sulfated, note its voltage and current when charging. If low current and higher voltage are observed in the initial stages of charging a sulfated battery is likely. A sulfated battery may sometimes be brought back into service by means of a long slow charge, 12 hours or more.

Checking Battery Specific Gravity With Hydrometer

Hydrometer temperature correction

Battery electrolyte temp. °C (°F)	Add to specific gravity reading
71 (160)	0.032
66 (150)	0.028
60 (140)	0.024
54 (129)	0.020
49 (120)	0.016
43 (110)	0.012
38 (100)	0.008
32 (90)	0.004
27 (80)	0
21 (70)	-0.004
16 (60)	-0.008
10 (50)	-0.012
4 (39)	-0.016
-1 (30)	-0.020
-7 (20)	-0.024
-12 (10)	-0.028
-18 (0)	-0.032

Corrected specific gravity	Approximate charge condition
1.260 - 1.280	Fully charged
1.230 - 1.250	3/4 charged
1.200 - 1.220	1/2 charged
1.170 - 1.190	1/4 charged
1.140 - 1.160	Almost discharged

- Do not quick charge a fully discharged battery.
- After charging, if the specific gravity of any two cells varies more then .050, the battery should be replaced.