

NISSAN 240SX

MODEL S13 SERIES

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FOREWORD

This manual contains maintenance and repair procedures for the 1993 Nissan 240SX.

In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the technician and the efficient functioning of the vehicle.

The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately.

Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first completely satisfy himself that neither his safety nor the vehicle's safety will be jeopardized by the service method selected.



NISSAN MOTOR CO., LTD.

Overseas Service Department

Tokyo, Japan

INCH TO METRIC CONVERSION TABLE

(Rounded-off for automotive use)

| inches | mm | inches | mm |
|--------|-------|--------|--------|
| .100 | 2.54 | .610 | 15.49 |
| .110 | 2.79 | .620 | 15.75 |
| .120 | 3.05 | .630 | 16.00 |
| .130 | 3.30 | .640 | 16.26 |
| .140 | 3.56 | .650 | 16.51 |
| .150 | 3.81 | .660 | 16.76 |
| .160 | 4.06 | .670 | 17.02 |
| .170 | 4.32 | .680 | 17.27 |
| .180 | 4.57 | .690 | 17.53 |
| .190 | 4.83 | .700 | 17.78 |
| .200 | 5.08 | .710 | 18.03 |
| .210 | 5.33 | .720 | 18.29 |
| .220 | 5.59 | .730 | 18.54 |
| .230 | 5.84 | .740 | 18.80 |
| .240 | 6.10 | .750 | 19.05 |
| .250 | 6.35 | .760 | 19.30 |
| .260 | 6.60 | .770 | 19.56 |
| .270 | 6.86 | .780 | 19.81 |
| .280 | 7.11 | .790 | 20.07 |
| .290 | 7.37 | .800 | 20.32 |
| .300 | 7.62 | .810 | 20.57 |
| .310 | 7.87 | .820 | 20.83 |
| .320 | 8.13 | .830 | 21.08 |
| .330 | 8.38 | .840 | 21.34 |
| .340 | 8.64 | .850 | 21.59 |
| .350 | 8.89 | .860 | 21.84 |
| .360 | 9.14 | .870 | 22.10 |
| .370 | 9.40 | .880 | 22.35 |
| .380 | 9.65 | .890 | 22.61 |
| .390 | 9.91 | .900 | 22.86 |
| .400 | 10.16 | .910 | 23.11 |
| .410 | 10.41 | .920 | 23.37 |
| .420 | 10.67 | .930 | 23.62 |
| .430 | 10.92 | .940 | 23.88 |
| .440 | 11.18 | .950 | 24.11 |
| .450 | 11.43 | .960 | 24.38 |
| .460 | 11.68 | .970 | 24.64 |
| .470 | 11.94 | .980 | 24.89 |
| .480 | 12.19 | .990 | 25.15 |
| .490 | 12.45 | 1.000 | 25.40 |
| .500 | 12.70 | 2.000 | 50.80 |
| .510 | 12.95 | 3.000 | 76.20 |
| .520 | 13.21 | 4.000 | 101.60 |
| .530 | 13.46 | 5.000 | 127.00 |
| .540 | 13.72 | 6.000 | 152.40 |
| .550 | 13.97 | 7.000 | 177.80 |
| .560 | 14.22 | 8.000 | 203.20 |
| .570 | 14.48 | 9.000 | 228.60 |
| .580 | 14.73 | 10.000 | 254.00 |
| .590 | 14.99 | 20.000 | 508.00 |
| .600 | 15.24 | | |

METRIC TO INCH CONVERSION TABLE

(Rounded-off for automotive use)

| mm | inches | mm | inches |
|----|--------|-----|--------|
| 1 | .0394 | 51 | 2.008 |
| 2 | .079 | 52 | 2.047 |
| 3 | .118 | 53 | 2.087 |
| 4 | .157 | 54 | 2.126 |
| 5 | .197 | 55 | 2.165 |
| 6 | .236 | 56 | 2.205 |
| 7 | .276 | 57 | 2.244 |
| 8 | .315 | 58 | 2.283 |
| 9 | .354 | 59 | 2.323 |
| 10 | .394 | 60 | 2.362 |
| 11 | .433 | 61 | 2.402 |
| 12 | .472 | 62 | 2.441 |
| 13 | .512 | 63 | 2.480 |
| 14 | .551 | 64 | 2.520 |
| 15 | .591 | 65 | 2.559 |
| 16 | .630 | 66 | 2.598 |
| 17 | .669 | 67 | 2.638 |
| 18 | .709 | 68 | 2.677 |
| 19 | .748 | 69 | 2.717 |
| 20 | .787 | 70 | 2.756 |
| 21 | .827 | 71 | 2.795 |
| 22 | .866 | 72 | 2.835 |
| 23 | .906 | 73 | 2.874 |
| 24 | .945 | 74 | 2.913 |
| 25 | .984 | 75 | 2.953 |
| 26 | 1.024 | 76 | 2.992 |
| 27 | 1.063 | 77 | 3.031 |
| 28 | 1.102 | 78 | 3.071 |
| 29 | 1.142 | 79 | 3.110 |
| 30 | 1.181 | 80 | 3.150 |
| 31 | 1.220 | 81 | 3.189 |
| 32 | 1.260 | 82 | 3.228 |
| 33 | 1.299 | 83 | 3.268 |
| 34 | 1.339 | 84 | 3.307 |
| 35 | 1.378 | 85 | 3.346 |
| 36 | 1.417 | 86 | 3.386 |
| 37 | 1.457 | 87 | 3.425 |
| 38 | 1.496 | 88 | 3.465 |
| 39 | 1.535 | 89 | 3.504 |
| 40 | 1.575 | 90 | 3.543 |
| 41 | 1.614 | 91 | 3.583 |
| 42 | 1.654 | 92 | 3.622 |
| 43 | 1.693 | 93 | 3.661 |
| 44 | 1.732 | 94 | 3.701 |
| 45 | 1.772 | 95 | 3.740 |
| 46 | 1.811 | 96 | 3.780 |
| 47 | 1.850 | 97 | 3.819 |
| 48 | 1.890 | 98 | 3.858 |
| 49 | 1.929 | 99 | 3.898 |
| 50 | 1.969 | 100 | 3.937 |

QUICK REFERENCE CHART : 240SX 1993

ENGINE TUNE-UP DATA

| | | | |
|----------------------------------------------------|-----------------------------------------------------|-----------------------------|------------------------------|
| Engine model | KA24DE | | |
| Firing order | 1-3-4-2 | | |
| Idle speed | rpm | 700±50 | |
| M/T | | 700±50 | |
| A/T (in "N" position) | | 700±50 | |
| Ignition timing (degree B.T.D.C. at idle speed) | 20°±2° | | |
| Idle "CO" (% at idle speed) | idle mixture screw is preset and sealed at factory. | | |
| Valve clearance (Hot) | mm (in) | | |
| Intake | | 0.31 - 0.39 (0.012 - 0.015) | |
| Exhaust | | 0.33 - 0.41 (0.013 - 0.016) | |
| High tension cable resistance | kΩ | Less than 30 | |
| Spark plug | | | |
| Standard | BKR5E-11 | | |
| Type | | | |
| Cold | BKR6E-11 | | |
| | BKR7E-11 | | |
| Gap | mm (in) | 1.0 - 1.1 (0.039 - 0.043) | |
| Drive belt deflection (Cold) | mm (in) | Used belt deflection | |
| | | Limit | Deflection after adjustment |
| Alternator | | 11 (0.43) | 7 - 8 (0.28 - 0.31) |
| Air conditioner compressor | | 12 (0.47) | 7.5 - 8.5 (0.295 - 0.335) |
| Power steering pump | | | 5.5 - 6.5 (0.217 - 0.256) |
| with super HICAS | | 9 (0.35) | 6.5 - 7.5 (0.256 - 0.295) |
| without super HICAS | | 13 (0.51) | 7.5 - 8.5 (0.295 - 0.335) |
| Applied pressed force | N (kg, lb) | 98 (10, 22) | |
| Tightening torque | | N·m | kg·m |
| Spark plug | | 20 - 29 | 2.0 - 3.0 |
| Oil pan drain plug | | 29 - 39 | 3.0 - 4.0 |
| | | | ft·lb |
| | | | 14 - 22 |
| | | | 22 - 29 |

CLUTCH PEDAL

| | | |
|-----------------|-------------------------|--|
| | Unit: mm (in) | |
| Pedal height | 186 - 196 (7.32 - 7.72) | |
| Pedal free play | 1 - 3 (0.04 - 0.12) | |

FRONT WHEEL ALIGNMENT (Unladen*)

| | | |
|----------------|---------|---------------------------|
| Camber | degree | -1°30' to 0° |
| Caster | degree | 6°00' - 7°30' |
| Toe-in | | |
| A-B | mm (in) | 0.3 - 2.3 (0.012 - 0.091) |
| Total angle 2θ | degree | 2' - 13' |
| Full turns | | |
| Inner wheel | | 39° - 43° |
| Outer wheel | | 33° |

* Fuel, radiator coolant and engine oil full.
Spare tire, jack, hand tools and mats in designated positions.

REAR WHEEL ALIGNMENT (Unladen*)

| | | |
|----------------|---------|---------------------------|
| Camber | degree | -1°36' to -0°36' |
| Toe-in | | |
| A-B | mm (in) | 0.5 - 4.5 (0.020 - 0.177) |
| Total angle 2θ | degree | 3' - 25' |

* Fuel, radiator coolant and engine oil full.
Spare tire, jack, hand tools and mats in designated positions.

BRAKE

| | | | |
|--------------------------|-------------------------|----------------------------------------------|--|
| Unit: mm (in) | | | |
| Disc brake | | | |
| Ped repair limit | 2.0 (0.079) | | |
| Rotor thickness | Front side | CL22VB: 18.0 (0.709), CL25VA: 20.0 (0.787)*3 | |
| repair limit | Rear side | 8.0 (0.315) | |
| Pedal free height | | | |
| M/T model | 177 - 187 (6.97 - 7.36) | | |
| A/T model | 186 - 196 (7.32 - 7.72) | | |
| Pedal depressed height*1 | 100 (3.94) or more | | |
| Parking brake | | | |
| Number of notches*2 | 6 - 8 | | |

*1: Under force of 490 N (50 kg, 110 lb) with engine running

*2: At pulling force: 196 N (20 kg, 44 lb)

*3: Models with A.B.S.

REFILL CAPACITIES

| | Unit | Liter | US measure |
|-------------------------|---------------------|--------------|--------------|
| Engine model | KA24DE | | |
| Fuel tank | | 60 | 15-7/8 gal |
| Coolant | With reservoir tank | 6.7 | 7-1/8 qt |
| | With oil filter | 3.5 | 3-3/4 qt |
| Engine | Without oil filter | 3.2 | 3-3/8 qt |
| Transmission | M/T | 2.4 | 5-1/8 pt |
| | A/T | 8.3 | 8-3/4 qt |
| Differential carrier | R200 | 1.3 | 2-3/4 pt |
| | R200V | 1.5 | 3-1/8 pt |
| Power steering system | | 0.9 | 1 qt |
| Air conditioning system | Compressor oil | 0.236 | 8.0 fl oz |
| | Refrigerant | 0.8 - 0.9 kg | 1.8 - 2.0 lb |



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