



1980
DATSUN
280ZX

SERVICE MANUAL



DATSUN 280ZX

Model S130 Series

FOREWORD

This service manual has been prepared primarily for the purpose of assisting service personnel in providing effective service and maintenance of the 1980 DATSUN 280ZX.

This manual includes procedures for maintenance, adjustments, removal and installation, disassembly and assembly of components, and trouble-shooting.

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. If your DATSUN model differs from the specifications contained in this manual, consult your NISSAN/DATSUN dealer for information.

The right is reserved to make changes in specifications and methods at any time without notice.

NISSAN MOTOR CO., LTD.

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HOW TO USE THIS MANUAL

- ▶ This Service Manual is designed as a guide for servicing cars.
- ▶ This manual is divided into 19 sections. The first half of the manual presents sections which concern the engine, and the second half presents sections which deal with the chassis and body.
- ▶ A **QUICK REFERENCE INDEX** is provided on the first page. Refer to this index along with the index of the particular section you wish to consult.
- ▶ The first page of each section lists the contents and gives the page numbers for the respective topics.
- ▶ **SERVICE DATA AND SPECIFICATIONS** are contained in each section.
- ▶ **TROUBLE DIAGNOSES AND CORRECTIONS** are also included in each section. This feature of the manual lists the likely causes of trouble and recommends the appropriate corrective actions to be taken.
- ▶ A list of **SPECIAL SERVICE TOOLS** is included in each section. The special service tools are designed to assist you in performing repair safely, accurately and quickly. For information concerning how to obtain special service tools, write to the following address:

Kent-Moore Corporation
29784 Little Mack
Roseville, Michigan 48066

Kent-Moore of Canada, Ltd.
2395 Cawthra
Mississauga, Ontario
Canada L5A 3P2

- ▶ The measurements given in this manual are primarily expressed with the SI unit (International System of Unit), and alternately expressed in the metric system and in the yard/pound system.
- ▶ The back cover of the manual provides maintenance data for quick reference.
- ▶ In the text, the following abbreviations are used:

| | | | |
|---------|---------------------------------|-------------|---|
| S.D.S.: | Service Data and Specifications | L.H., R.H.: | Left Hand, Right Hand |
| (T): | Tightening Torque | M/T, A/T: | Manual Transmission, Automatic Transmission |

- ▶ The captions **CAUTION** and **WARNING** warn you of steps that must be followed to prevent personal injury and/or damage to some part of the car.



IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the mechanic and the efficient functioning of the car.

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

Special service tools have been designed to permit safe and proper performance of service. Be sure to use them.

Service varies with the procedures used, the skills of the mechanic 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 car's safety will be jeopardized by the service method selected.

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: 280ZX 1980

ENGINE TUNE-UP DATA

| | California | | Non-California | |
|--|---|---|-------------------------------------|-------------------------|
| | | | For U.S.A. | For Canada |
| Engine model | L28E | | | |
| Firing order | 1-5-3-6-2-4 | | | |
| Idle speed rpm | M/T | 700 ±100 | | |
| | A/T | 700 ±100 (in "D" position) | | |
| Ignition timing* (degree B.T.D.C. at idle speed) | 10 ±2° | | | |
| "CO" % at idle % | Idle mixture screw is preset and sealed at factory. | 1.0 ±0.8 (No air, with full enrichment) | 5.0 ±1.0 (With full enrichment) | |
| B.C.D.D. operating pressure [At sea level] kPa (mmHg, inHg) | -70.6 ±2.7 (-530 ±20, -20.87 ±0.79) | -76.0 ±2.7 (-570 ±20, -22.44 ±0.79) | -74.6 ±2.7 (-560 ±20, -22.05 ±0.79) | |
| Valve clearance (Hot) mm (in) | Intake | 0.25 (0.010) | | |
| | Exhaust | 0.30 (0.012) | | |
| Drive belt deflection [Applied pressed force 98N (10 kg, 22 lb)] mm (in) | 8 - 12 (0.31 - 0.47) | | | |
| Radiator cap relief pressure kPa (kg/cm ² , psi) | 88 (0.9, 13) | | | |
| Cooling system leakage testing pressure kPa (kg/cm ² , psi) | 157 (1.6, 23) | | | |
| Compression pressure kPa (kg/cm ² , psi)/rpm | Standard | 1,177 (12.0, 1711)/350 | | |
| | Minimum | 883 (9.0, 128)/350 | | |
| High tension cable resistance kΩ | Less than 30 | | | |
| Spark plug | Type | BP6ES-11 | | BPR6ES-11 |
| | Gap mm (in) | 1.0 - 1.1 (0.039 - 0.043) | | |
| Battery | | | | |
| Type | N50Z | | N70Z | |
| Capacity | V-AH | 12 - 60 | | 12 - 70 |
| Full charging specific gravity | 1.26 | | 1.28 | |
| Distributor | | | | |
| Vacuum advance [Maximum distributor degree/distributor kPa (mmHg, inHg)] | M/T | 15°/40.0 (300, 11.81) | 9°/41.3 (310, 12.20) | 12.5°/46.7 (350, 13.78) |
| | A/T | | 7.5°/37.3 (280, 11.02) | |
| Centrifugal advance [Maximum distributor degree/distributor rpm] | 8.5°/1,250 | | | |
| Tightening torque | N-m | | kg-m | ft-lb |
| Fuel hose clamp | 1.0 - 1.5 | | 0.10 - 0.15 | 0.7 - 1.1 |
| Cylinder head | 69 - 83 | | 7.0 - 8.5 | 51 - 61 |
| Rocker cover bolt | 10 - 16 | | 1.0 - 1.6 | 7 - 12 |
| Manifold bolt and nut | M8 bolt | 15 - 25 | 1.5 - 2.5 | 11 - 18 |
| | M10 bolt | 34 - 44 | 3.5 - 4.5 | 25 - 33 |
| | M8 nut | 12 - 16 | 1.2 - 1.6 | 9 - 12 |

*: On non-California models for U.S.A., ignition timing should be checked with distributor vacuum hose disconnected and plugged up.

BRAKE

Unit: mm (in)

| Disc brake | Front | Rear |
|---------------------------------------|-------------------------|-------------------------|
| Pad minimum thickness | 2.0 (0.079) | |
| Rotor repair limit | | |
| Runout | Less than 0.10 (0.0039) | Less than 0.15 (0.0059) |
| Parallelism circumferential direction | Less than 0.03 (0.0012) | |
| Minimum thickness | 18.0 (0.709) | 8.6 (0.339) |

CLUTCH PEDAL

Unit: mm (in)

| | |
|-----------|---------------------|
| Height | 203 (7.99) |
| Free play | 1 - 5 (0.04 - 0.20) |

WHEEL ALIGNMENT (Unladen)*

| | | | |
|---------------|----------------------------------|--------------------------|-----------------------|
| Camber | degree | -35' - 55' | |
| Caster | degree | 4° 10' - 5° 40' | |
| Toe-in | mm (in) | 1 - 3 (0.04 - 0.12) | |
| | degree | 6' - 16' (On both sides) | |
| Turning angle | degree | Power steering model | Manual steering model |
| | Toe-out - turns (Inside/Outside) | 20°/18.1° | 20°/18.7° |
| | Inside | 32° - 36° | 33½° - 37½° |
| | Outside | 24½° - 28½° | 29° - 33° |

*: Tankful of fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools, mats in designed position.

FRONT WHEEL BEARING

| | | |
|-------------------|-------------------|------------------------------|
| Tightening torque | N-m (kg-m, ft-lb) | 25 - 29 (2.5 - 3.0, 18 - 22) |
| Return angle | degree | 60° |

WHEEL AND TIRE

| Tire size | 195/70HR-14 | C78-14 *1 | | |
|-----------------------------|----------------------|---------------------------|----------------|---------------|
| Inflation pressure *2 | Car speed km/h (MPH) | Under 160 (100) | Over 160 (100) | Under 80 (50) |
| | Pressure psi (kPa) | 28 (200) | 32 (230) | 28 (200) |
| Wheel nut tightening torque | N-m (kg-m, ft-lb) | 78 - 98 (8 - 10, 58 - 72) | | |

*1: Space Saver Spare tire or Foldable Spare tire.

*2: Tire pressure should be checked when tires are cold.

REFILL CAPACITIES

| | Unit | Liter | US measure |
|-------------------------------|--------------------|--------------|--------------|
| Fuel tank | | 80 | 21-1/8 gal |
| Coolant | With reservoir | 10.5 | 11-1/8 qt |
| | Without reservoir | 9.7 | 10-1/4 qt |
| Engine oil | With oil filter | 4.5 | 4-3/4 qt |
| | Without oil filter | 4.0 | 4-1/4 qt |
| Transmission | M/T | 2.0 | 4-1/4 pt |
| | A/T | 5.5 | 5-7/8 qt |
| Differential carrier | R200 | 1.3 | 2-3/4 pt |
| | R180 | 1.0 | 2-1/8 pt |
| Power steering system | | 1.1 | 1-1/8 qt |
| Windshield washer tank | | 2.8 | 3 qt |
| Headlight cleaner washer tank | | 2.0 | 2-1/8 qt |
| Air conditioning system | Compressor oil | 150 ml | 5.1 fl oz |
| | Refrigerant | 0.9 - 1.1 kg | 2.0 - 2.4 lb |

EXPORT SERVICE DEPARTMENT
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