

Front Suspension

DATSUN/NISSAN 200SX, 210, 280ZX & MAXIMA

DESCRIPTION

A MacPherson type strut suspension is used, consisting of a vertically-mounted strut, lower control arm, stabilizer bar and, compression rod.

Strut assembly is mounted at top to chassis frame by a thrust bearing, and at bottom to lower control arm by a ball joint.

Strut assembly consists of a shock absorber built into outer strut tube, a coil spring mounted on outside of strut tube, and a wheel spindle integral with bottom of strut tube.

Compression rod is mounted between lower control arm and chassis. Stabilizer bar is mounted to front chassis member, and is connected at end of lower control arm.

ADJUSTMENTS

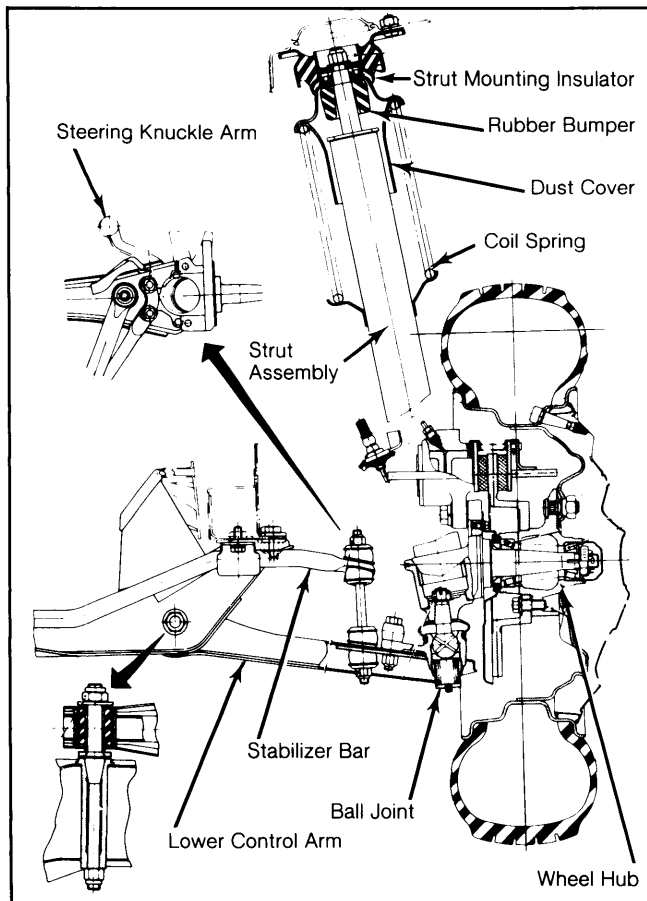
WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications & Procedures* in **WHEEL ALIGNMENT** section

WHEEL BEARING

Tighten spindle nut to torque specifications in table. Spin wheel, and retorque spindle nut. Loosen nut according to specifications in table, and tighten to align cotter pin hole.

Fig. 1: Assembled View of 210 Front Suspension



All other models are similar.

WHEEL BEARING ADJUSTMENT

Application ¹	Torque	
	Ft. Lbs. (N.m)	Loosen
200SX, Maxima	18-22 (25-29)	60°
210	22-25 (29-34)	90°
280ZX	18-22 (25-29)	60°

¹ — Figures given are for new wheel bearings.

BALL JOINT CHECKING

Remove lower control arm. Use appropriate gauge, and attach it to top of ball joint stud nut. Measure force (in INCH lbs.) required to turn ball joint stud. If measurement is not within specifications, replace ball joint.

BALL JOINT TURNING TORQUE

Application	New	Used
	INCH Lbs. (N.m)	INCH Lbs. (N.m)
200SX	35-87 (3.9-9.8)	17-69 (2.0-7.8)
210	35-87 (3.9-9.8)	17 (2.0) Or Less
280ZX	22-69 (2.5-7.8)	13 (1.5) Or Less
Maxima	35-87 (3.9-9.8)	(3.9) Or Less

REMOVAL & INSTALLATION

WHEEL BEARING

Removal

1) Raise vehicle, and support with safety stands. Remove wheel assembly. Remove caliper, and support out of the way. Remove dust cap, cotter pin, adjusting cap, and wheel bearing nut.

2) Remove wheel hub with rotor. Remove retaining bolts, and separate wheel hub from rotor. Pry out wheel bearing, washers, and grease seals. Drive out bearing races.

Installation

To install, reverse removal procedures, noting the following. Make sure bearing races are fully seated. Pack hub, cap, and bearings thoroughly with grease. Lubricate contact surface of grease seals, threaded part of spindle, and bearing washer-to-bearing contact face before final assembly. Adjust wheel bearings.

LOWER CONTROL ARM & BALL JOINT

Removal

1) Raise vehicle, and support with safety stands. Remove wheel assembly. Detach tie rod at ball socket. Remove steering knuckle arm bolts, and separate arm from bottom of strut.

2) Separate compression rod and stabilizer bar from lower control arm. Remove bolt connecting lower control arm to crossmember. Remove lower control arm with ball joint and knuckle arm.

3) Place arm in vise, loosen control arm ball joint bolts, and remove ball joint (Except Maxima). On Maxima models, ball joint is attached to steering knuckle. Place steering knuckle arm in vise, and press out ball joint. Remove bushing from lower control arm.

Installation

Press bushing into control arm, (Except Maxima). On Maxima models, press ball joint into steering

DATSUN/NISSAN 200SX, 210, 280ZX & MAXIMA (Cont.)

knuckle. To install lower control arm, reverse removal procedure. Do not tighten nuts and bolts to final torque until weight of vehicle is on front wheels.

SPRING & STRUT ASSEMBLY

Removal

1) Raise and support front of vehicle. Remove wheel assemblies. Detach brake hose from bracket on front strut (if required). Remove caliper assembly retaining bolts and remove caliper from axle.

2) Remove bolts holding strut to knuckle arm. Detach knuckle arm from bottom of strut. If necessary, pry lower control arm away from strut to ease removal. Remove strut assembly.

3) Place jack under strut to support it properly, when nuts are removed. Remove nuts holding strut to hood ledge, and remove strut and spring as an assembly.

Disassembly

1) Thoroughly clean strut assembly. Place assembly in holding fixture (KV48100300), and clamp fixture in vise.

2) With spring compressor, press spring down just far enough to permit turning of strut mounting insulator. Remove self-locking nut.

NOTE: Be sure spring tool evenly engages on at least 3 coils. Do not hit piston rod of strut with spring tool.

3) Take out strut insulator, bearing, dust seal, upper spring seat, spring and rubber bumper.

4) Push piston rod down until it bottoms. Remove gland packing using gland wrench (ST3550001). Remove "O" ring from top of piston rod guide and lift out piston rod and cylinder.

NOTE: The piston rod, piston rod guide and cylinder are furnished as a matched set with precision mating surfaces.

Reassembly

1) Install strut outer casing onto holding fixture (KV48100300). Install cylinder and piston rod assembly (shock absorber kit) in outer casing.

2) Where present, remove piston rod guide from cylinder. Pour in specified amount of new fluid (outer casing).

STRUT OIL REPLACEMENT CAPACITY

Application	Fl. oz.
200SX, 210 & Maxima	11.0
280ZX	9.3

3) Install piston rod guide (bushing), taking care not to damage guide with threaded portion of rod. On 210 and 280ZX, install new "O" ring over rod guide. Lube inner edge of sealing lips of gland packing, and install with gland packing guide (ST35520000).

4) To correctly bleed strut assembly, stand strut vertically with spindle end down. Pull piston rod up to end of stroke. Turn strut assembly until spindle end is up, and depress piston rod to end of stroke.

5) Repeat several times, until there is no variation of pressure between pushing and pulling piston rod.

6) Pull piston rod fully out, and install rubber bumper. Place spring on lower spring seat, and compress

with proper tool (ST35651001). Lubricate dust seal, and install dust cover, spring seat, dust seal, mounting bearing, and insulator.

7) Install new self-locking nut hand tight only. Tighten to specification after unit is installed in vehicle. To prevent entry of dirt, apply a thick coat of multi-purpose grease around upper seal.

8) After positioning spring between upper and lower seats, release spring compressor slowly. Raise rubber bumper to upper spring seat.

Installation

To install, reverse removal procedures.

COMPRESSION & STABILIZER BARS

Removal

1) Raise vehicle, and support with safety stands. Remove wheel assembly. Remove splash guard, and back off nuts securing compression rod to mounting bracket.

2) Remove bolts attaching compression rod to lower control rod. Remove nuts securing stabilizer bar to connecting rod. Remove stabilizer bracket bolts and brackets. Remove stabilizer bar.

Installation

To install, reverse removal procedures.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Stabilizer Bar Bracket Bolts	
210	12-15 (16-20)
200SX	23-31 (31-42)
280ZX, Maxima	20-27 (26-36)
Compression Rod-to-Lower Control Arm	
200SX, 210	37-44 (50-60)
280ZX, Maxima	33-40 (44-54)
Compression Rod Nut	33-40 (44-54)
Gland Packing Nut	
200SX, Maxima	72-87 (98-118)
210	58-80 (78-108)
280ZX	72-94 (98-127)
Strut Self-Locking Nut	43-54 (59-74)
Lower Control Arm-to-Crossmember	
200SX	46-55 (63-75)
210	37-44 (50-60)
280ZX, Maxima	58-80 (78-108)
Ball Joint-to-Lower Control Arm	
200SX, 210	37-44 (50-60)
280ZX, Maxima	33-40 (44-54)
Knuckle Arm-to-Strut	53-72 (72-97)
Ball Joint-to-Knuckle Arm	
200SX, 280ZX, Maxima	71-88 (96-120)
210	40-72 (54-98)
Tie Rod Ball Joint	
200SX, 210	22-51 (20-69)
280ZX, Maxima	40-72 (54-98)