

SUSPENSION - FRONT

1992 Infiniti G20

1991-92 SUSPENSION
Front

G20

DESCRIPTION

G20 uses a 4-wheel independent multi-link suspension system. Transverse links are connected to bottom of steering knuckle. Strut assemblies are connected to top of steering knuckle. In addition bottom of strut assembly is attached to a third link and third link is attached to steering knuckle. Upper link is attached to top of third link. See Fig. 1.

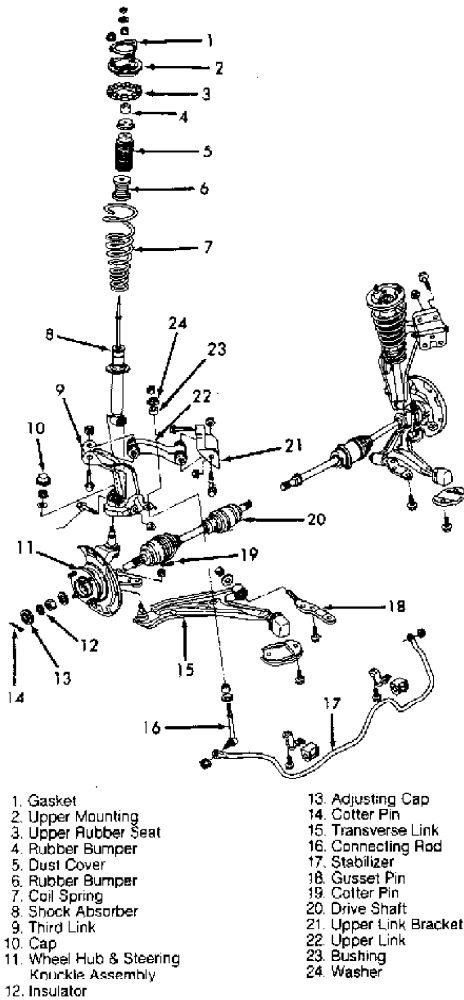


Fig. 1: Exploded View of Front Suspension
Courtesy of Nissan Motor Co., U.S.A.

ADJUSTMENTS & INSPECTION

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

NOTE: See WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES article in the WHEEL ALIGNMENT section.

WHEEL BEARING

NOTE: Wheel bearings are not adjustable, but operation and axial end play should be checked.

Check front wheel bearings for smooth operation. Using dial indicator, check axial end play. Maximum end play is .002" (.05 mm). If axial end play is not within specification or wheel bearing does not turn smoothly, replace wheel bearing assembly.

SHOCK ABSORBER/STRUT ASSEMBLY

1) Check shock absorber/strut for oil leakage and other damage. Oil oozing out around gland packing nut does not mean strut needs replacement. If oil leakage is present on spring seat, check piston rod gland packing nut and "O" ring. Check for smooth operation through a full stroke, both compression and extension.

2) If leakage is present at welded section of strut casing, replace strut assembly. Check strut insulator for separation, melting and cracks. Check thrust seat and coil spring for cracks, deformation and other damage. Replace as necessary.

BALL JOINT CHECKING

1) Check ball joint end play. Jack up front of vehicle, and set on stands. Clamp dial indicator onto transverse link, and place indicator tip on lower edge of brake caliper. Ensure front wheels are straight and brake pedal is depressed. Place a pry bar between transverse link and inner rim of wheel.

2) While pushing and releasing pry bar, observe maximum dial indicator reading. Vertical end play should be zero. Remove lower arm if end play is not within specification, and recheck ball joint. New ball joint should have no vertical play.

REMOVAL & INSTALLATION

FRONT WHEEL BEARING

1) Remove wheel bearing lock nut. Remove brake caliper assembly and rotor. DO NOT disconnect brake line from brake caliper. Disconnect tie rod end from steering knuckle using Steering Gear Arm Puller (ST29020001).

2) Remove kingpin cap and nut. Separate kingpin from knuckle. Using a wood block and hammer, separate drive shaft from steering knuckle by tapping on wheel hub.

3) Using a drift, drive out hub and inner race from knuckle. Remove inner bearing race and outer grease seal. Remove inner grease seal from knuckle. See Fig. 2. Remove inner and outer snap rings. Press out bearing outer race.

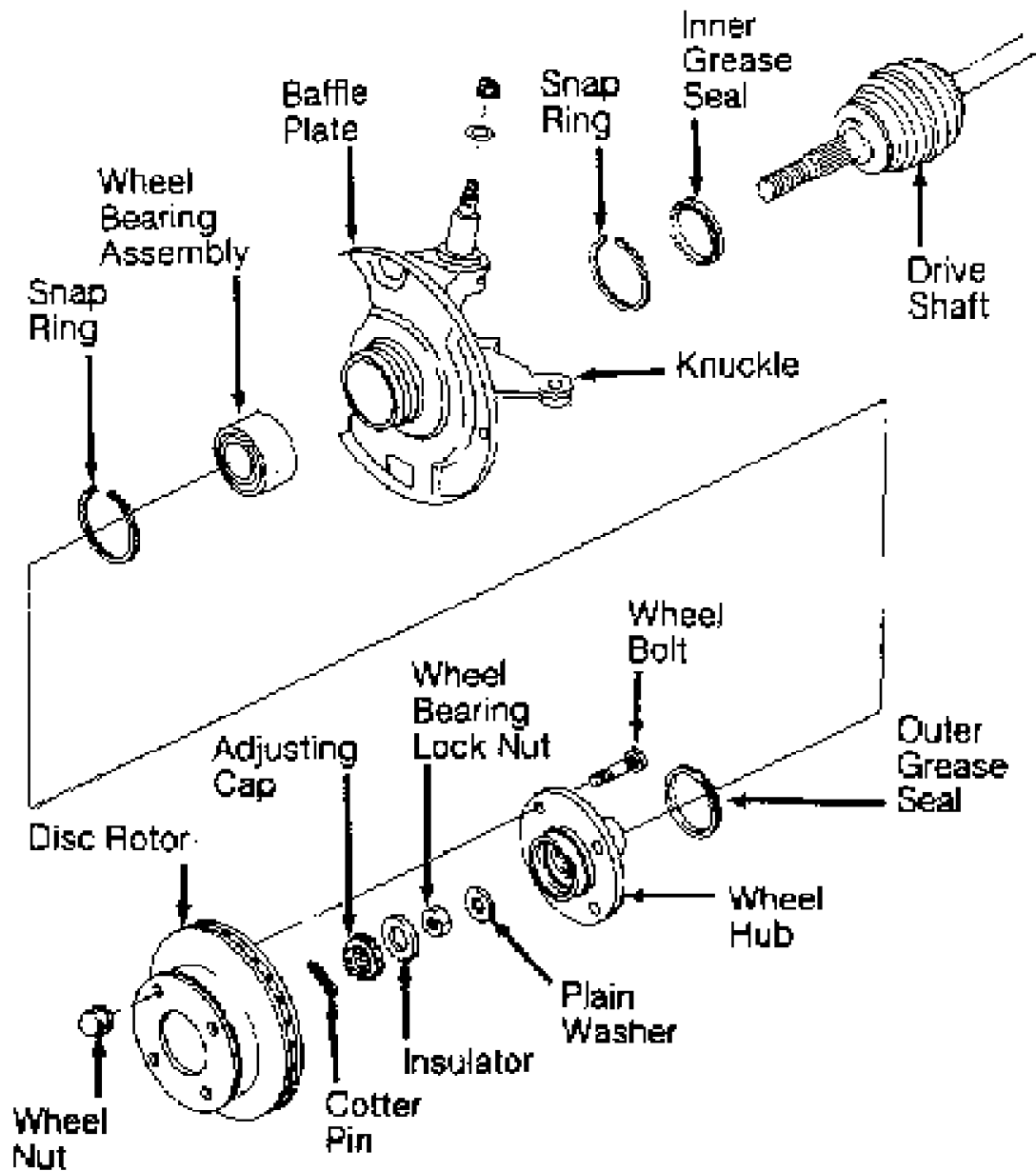


Fig. 2: Exploded View of Steering Knuckle Assembly
 Courtesy of Nissan Motor Co., U.S.A.

NOTE: When removing wheel hub or wheel bearing from knuckle, replace wheel bearing assembly (outer race, inner race and grease seals) with a new unit.

Installation

- 1) Install inner snap ring into steering knuckle groove.

Using a press with a maximum load of 11,000 lbs., press new wheel bearing assembly into steering knuckle until it contacts snap ring. Install outer snap ring into steering knuckle groove. Pack grease seal lips with grease, and install outer and inner grease seals.

CAUTION: DO NOT press against wheel bearing assembly inner race.

2) Using a maximum press load of 6600 lbs., press wheel hub into steering knuckle. Use care not to damage grease seal. Check bearing operation, and apply a 11,000 lbs. load using press. Spin knuckle several times in both directions to ensure wheel bearings operate smoothly.

SHOCK ABSORBER/STRUT ASSEMBLY

Removal

Support transverse link to remove tension from shock mount nuts/bolts. Remove upper and lower shock mount nuts/bolts. Remove shock absorber.

Disassembly

Set strut in vise using Vise Attachment (ST35652000). Loosen, but DO NOT remove, piston rod lock nut. Compress coil spring using Spring Compressor (HT71780000) until upper mounting can be turned by hand. Remove piston rod lock nut. Note positioning of coil spring for reinstallation. Remove coil spring.

Reassembly

To reassemble, reverse disassembly procedure ensuring coil spring is positioned correctly. DO NOT reverse top and bottom direction. Install upper spring seat with its cutout facing the inside of vehicle. Tighten upper lock nut to specification. See TORQUE SPECIFICATIONS table at end of article.

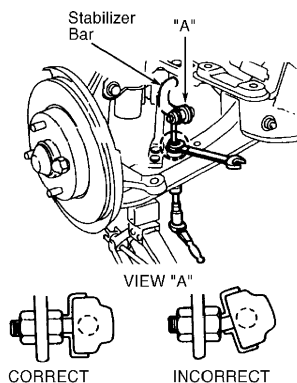
Installation

To install, reverse removal procedure.

STABILIZER BAR

Removal & Installation

Remove stabilizer bar attaching nuts and bolts. Remove stabilizer bar. When installing stabilizer bar, ensure paint mark on stabilizer bar is facing stabilizer bar mount clamp. Ensure stabilizer bar is installed with ball joint socket correctly positioned. See Fig. 3.



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Fig. 3: Aligning Stabilizer Bar Ball Joint
Courtesy of Nissan Motor Co., U.S.A.

THIRD LINK & UPPER LINK

Removal

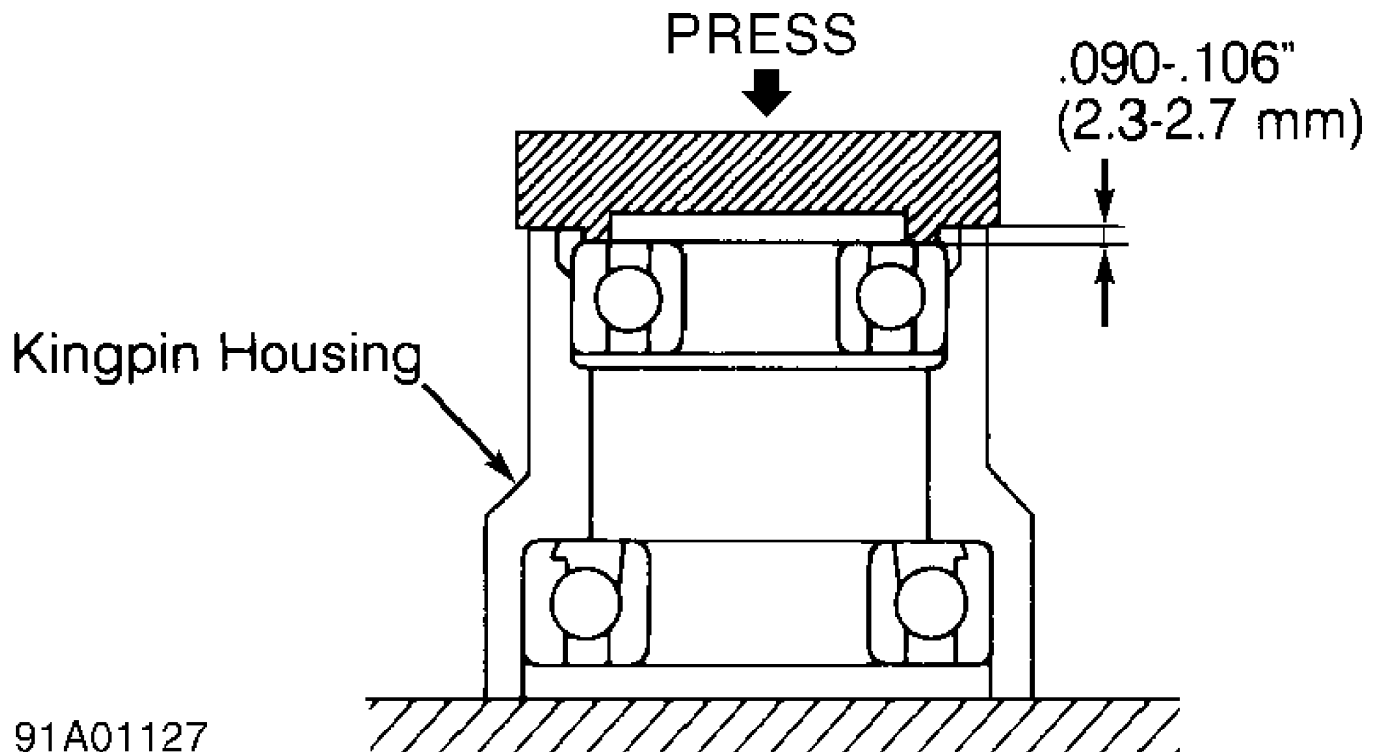
Kingpin bearing usually does not require maintenance. If kingpin bearing makes growling noise, drags or turns roughly when steering knuckle is turned by hand, replace kingpin bearing assembly. Remove cap and kingpin upper nut. DO NOT remove kingpin lower nut. Remove shock absorber mount nut and upper link mount bolts. Remove third and upper links.

Disassembly

To disassemble third link, remove upper bearing (inner race and ball) using drift and hammer. Remove kingpin grease seal. Remove lower bearing (inner race and ball). Remove upper and lower outer races. Be careful not to damage kingpin housing.

Reassembly

Install lower bearing. Install upper bearing, leaving .090-.106" (2.3-2.7 mm) of clearance between top of upper bearing and top of kingpin housing. See Fig. 4. Install lower oil seal. Apply multipurpose grease to oil seal lip.



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Fig. 4: Measuring Upper Bearing Clearance
Courtesy of Nissan Motor Co., U.S.A.

Installation

Pack kingpin housing and cap with multipurpose grease. Install third link and cap. Upper link has "L" (left) or "R" (right) marked on top surface. Upper link bushings cannot be disassembled.

TRANSVERSE LINK & LOWER BALL JOINT

Removal & Installation

Disconnect tension rod, stabilizer connecting rod and

knuckle. Remove transverse link assembly. To install, reverse removal procedure. During installation, final tightening must be done at curb weight with tires on ground. After installation, check wheel alignment.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Ball Joint	
Lower Nut	72-87 (97-118)
Upper Nut	52-63 (71-86)
Gusset Pin Bolt	87-108 (118-147)
Gusset Pin Nut	69-87 (93-118)
Shock-To-Third Link Nut	83-93 (112-126)
Shock Upper Mount Nut	31-40 (42-54)
Stabilizer Bar Clamp Bolt	30-35 (41-48)
Stabilizer Bar-To-Connecting Rod Nut	30-38 (41-51)
Third Link-To-Upper Link Nut	83-91 (112-126)
Upper Link-To-Upper Link Bracket Nut	65-90 (88-123)
Wheel Bearing Lock Nut	173-232 (235-314)