Front Suspension

DATSUN/NISSAN PICKUP

DESCRIPTION

Front suspension is an independent type with upper and lower control arms which are connected by ball joints. This suspension also incorporates a tosion bar which connects to lower control arm outer end and a stabilizer bar. A double-acting shock absorber is also used. *See Fig. 1.*

ADJUSTMENTS

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See Wheel Alignment Specifications & Procedures in WHEEL ALIGNMENT section.

WHEEL BEARING

2-WD Models

1) Tighten hub nut to 25-29 ft. lbs. (34-39 N.m). Rotate hub serveral times in both directions to seat bearings. Retorque hub nut. Turn hub nut back 45°.

2) Install adjusting cap and tighten only enough to align hole for cotter pin. Install new cotter pin and measure bearing preload and axial play. Measure preload with pull gauge on one of the wheel studs.

3) Axial play should be less than .003" (.08 mm) and preload should be less than 2.6 lbs. (1.18 kg) with old parts and 6.4 lbs. (2.90 kg) with new parts. If not to specifications, repeat procedures until correct readings are obtained.

4-WD Models

1) Raise vehicle and support with safety stands. Remove free-running hubs and brake pads. Measure wheel bearing preload and axial play.

2) If end play exceeds .004-.012" (.1-.3 mm) or preload exceeds 2.2-9.5 lbs. (.99-4.31 kg), bearings require adjustment.

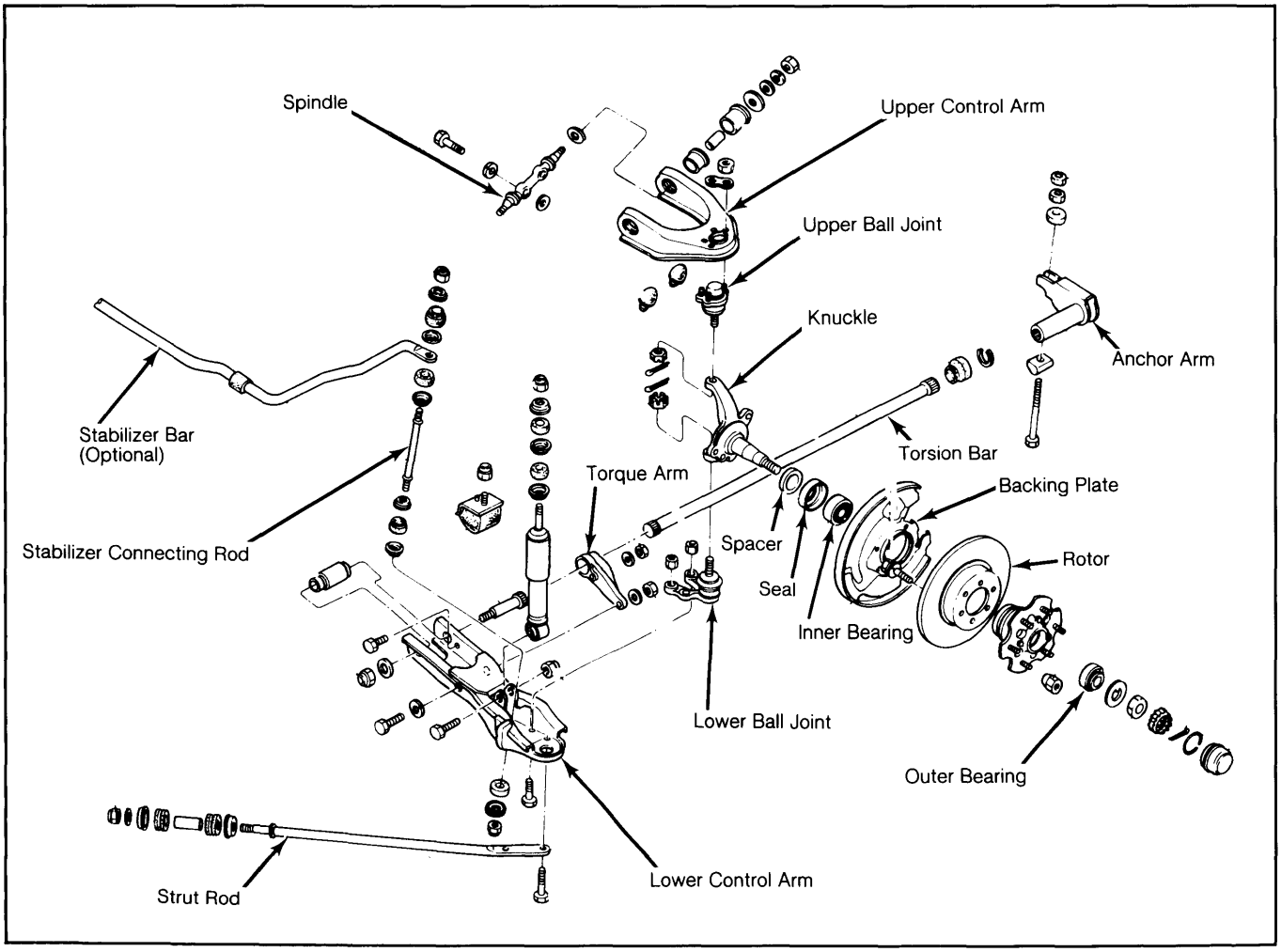
3) To adjust bearing preload, replace wheel bearing collar with a thicker one (stamped number is higher by one) when preload is too high, or a thinner one (stamped number is lower by one) when preload is too low. See Wheel Bearing Removal in this article for procedures.

BALL JOINT CHECKING

Upper Ball Joint

With ball joint removed from vehicle and stud nut in place, check stud turning torgue. If torque does not meet specifications of 8.7-43.4 INCH lbs. (1.0-4.9 N.m), ball joint should be replaced. If dust cover is excessivly cracked, replace ball joint.

Fig. 1: Exploded View of 2-WD Pickup Front Suspension



Front Suspension

DATSUN/NISSAN PICKUP (Cont.)

Lower Ball Joint

Check ball joint end play in axial direction. If play exceeds .004-.039" (.1-1.0 mm) joint should be replaced. If dust cover is cracked, replace ball joint.

REMOVAL & INSTALLATION

WHEEL BEARING, HUB & KNUCKLE

Removal (2-WD)

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 hub nut.

2) Remove hub and rotor. Remove outside bearing inner race and washer. Remove hub-to-rotor retaining bolts and separate hub form rotor. Remove wheel bearings and grease seals. Drive out bearing outer races.

3) Remove knuckle arm and backing plate. Loosen ball joint retaining nuts. Using separator tool (ST29020001) separate ball joints from knuckle. Using a floor jack raise lower control arm. Remove retaining nuts from ball joints.

Removal (4-WD)

1) Raise vehicle and support with safety stands. Remove wheel assembly. Remove caliper and support out of the way. Remove free-running hub assembly. Remove snap ring, drive clutch and stabilizer connecting rod bolt from lower control arm.

2) Remove bolts retaining drive shaft to differential, do not remove boots. Remove drive shaft from knuckle. Turn steering wheel all the way to the right to remove right shaft and all the way to left to remove left shaft.

3) Remove knuckle arm retaining bolt. Loosen ball joint retaining nuts. Using separator tool (ST29020001), separate ball joints from steering knuckles. Using a floor jack raise lower control. Remove retaining nuts from ball joints. Remove steering knuckle.

4) Straighten tangs on lock washer. Remove lock nut with removal tool (KV40102500), remove lock-washer and special washer. Push wheel bearing support from wheel hub.

5) Separate knuckle from hub with puller. Remove wheel bearing collar and drive out inside bearing outer race. Separate wheel hub from rotor.

6) Strike wheel hub projection against wood block to loosen bearing and press off bearing. Remove drive shaft bearing from wheel bearing support with drift.

Installation (All Models)

1) To install, reverse removal procedures. On 4-WD models, check wheel bearing adjustment as previously described before installing complete assembly in vehicle.

2) On all models, always use new lock washers, grease seals, and cotter pins.

UPPER CONTROL ARM & BALL JOINT

Removal

1) Raise vehicle and support with safety stands. Remove wheel assembly. Using a floor jack raise lower control arm.

2) Remove cotter pin and nut from upper ball joint and separate ball joint from steering knuckle with separator tool.

3) Loosen bolts retaining upper ball joint to upper control arm and remove ball joint.

4) Remove bolts retaining upper link spindle. Remove spindle and upper control arm. Collect all camber adjusting shims.

5) Remove nuts and washers at both ends of upper link spindle. Place assembly on a vise and press upper link spindle from one end.

6) Remove rubber bushing. Press from other end and remove other bushing. Remove spindle from upper control arm.

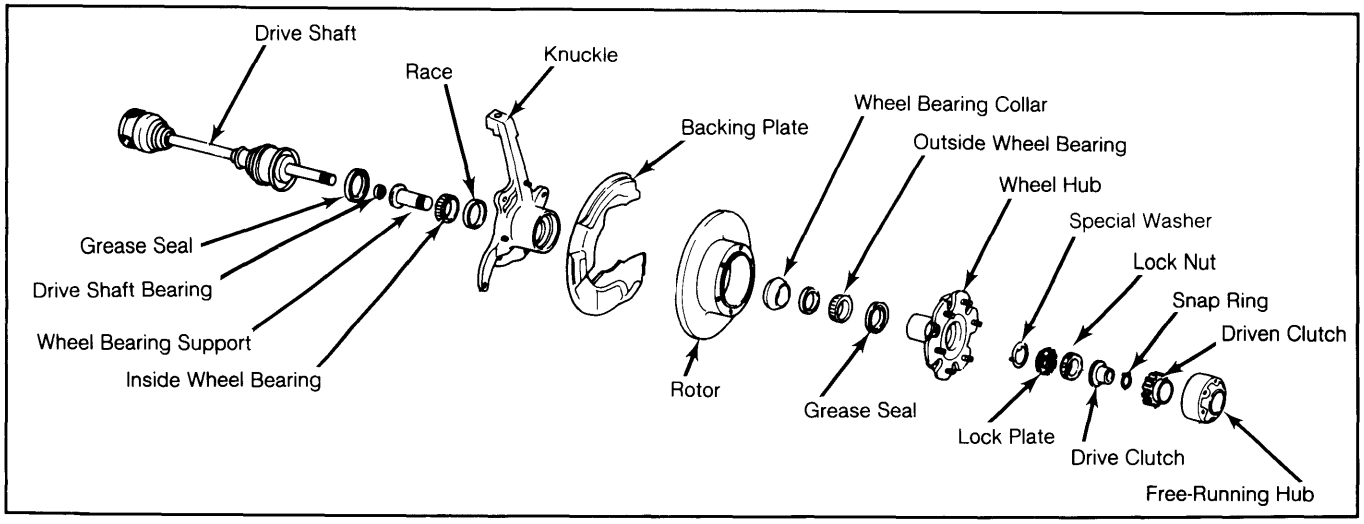
Installation

1) Apply a soapy solution to rubber bushings and press bushings into place from outside of control arm. Flange of bushing should securely contact end of control end surface of upper control arm collar.

2) Insert upper control arm spindle and inner washers. Install inner washers with rounded edges facing inward. Press in other bushing as described in step **1)**. Temporarily tighten nuts. Install upper ball joint.

3) Install upper control arm to frame. Tighten upper control arm spindle with camber adjusting shims.

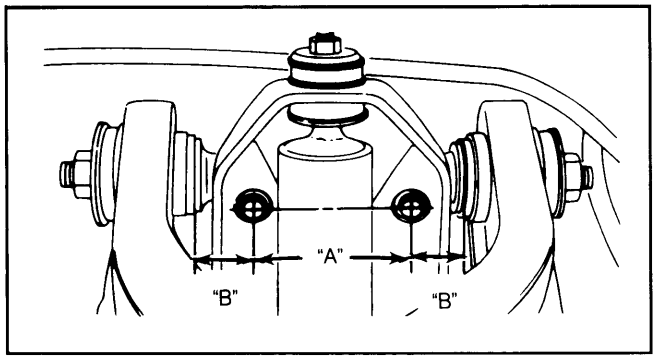
Fig. 2: Exploded View of 4-WD Front Axle Assembly



DATSUN/NISSAN PICKUP (Cont.)

After fitting, check dimensions "A" and "B". *See Fig. 3.* Dimension "A" should be 5.34-5.42" (135.6-137.6 mm), "B" should be 1.114" (28.3 mm).

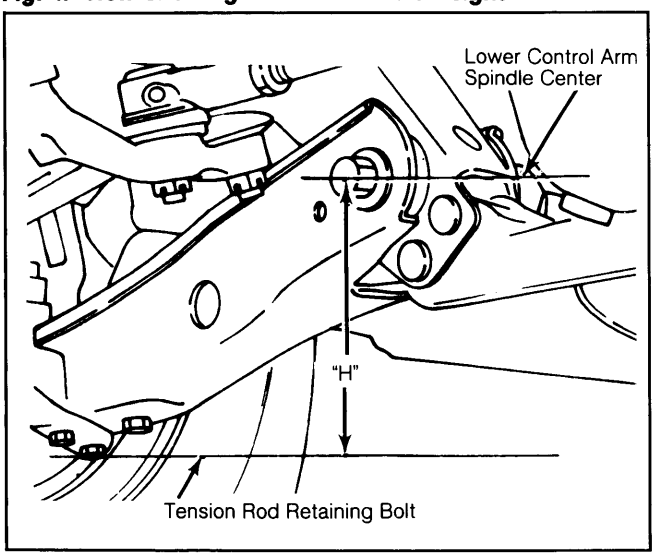
Fig. 3: Upper Control Arm Spindle Dimensions



4) Install upper ball joint to knuckle spindle. Make sure grease does not come into contact with tapered areas of ball joint knuckle spindle and threads of ball joint.

5) Install wheel assembly. Lower vehicle and check riding height "H" of lower control arm. *See Fig. 4.* Check wheel alignment. *See appropriate article in WHEEL ALIGNMENT section.*

Fig. 4: View Showing Unladen Vehicle Height



LOWER CONTROL ARM & BALL JOINT

Removal

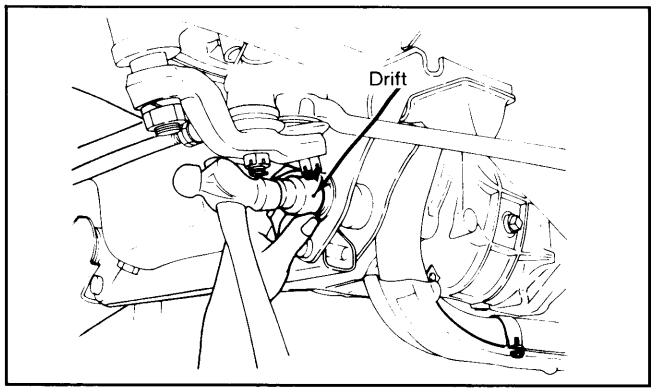
1) Raise vehicle and support with safety stands. Remove wheel assembly. Remove torsion bar, and disconnect lower end of shock absorber from control arm.

2) Press out lower ball joint from knuckle. Disconnect stabilizer bar connecting rod from frame. Remove torque arm from lower control arm.

3) Remove lower control arm spindle from control arm and remove control arm from frame. Remove lower ball joint nuts and bolts. Remove ball joints form control arm.

4) Using drift (KV40102000), drive out lower control arm bushings. *See Fig. 5.*

Fig. 5: Removing Bushings from Lower Control Arm



Installation

1) To install, reverse removal procedures. Tighten nuts and bolts to specifications. Be sure grease does not contact tapered area of ball joint stud or knuckle hole and does not contact ball joint threads.

2) Turn anchor bolt adjusting nut to obtain specified "H" dimension. *See Fig. 4.* Check wheel alignment. *See appropriate article in WHEEL ALIGNMENT section.*

TORSION BAR

Removal

1) Raise vehicle and support with safety stands. Remove torsion bar anchor bolt. On 2-WD models, remove dust cover and detach snap ring from anchor arm.

2) On all models, pull anchor arm rearward. Withdraw torsion bar rearward. Remove torsion bar torque arm.

Installation

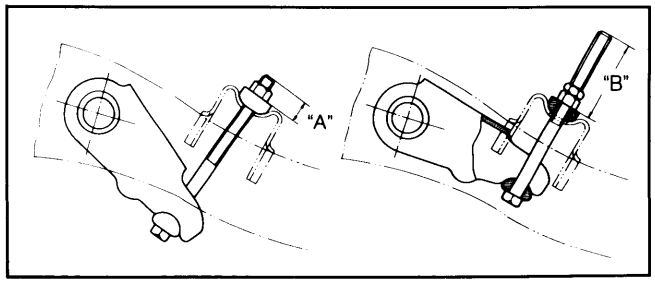
1) Install torque arm to lower control arm. On 2-WD models, set snap ring and dust cover to torsion bar. On all models, coat serrations on torsion bar with grease and install torsion bar to torque arm.

NOTE: Torsion bars are identified for left and right installation with an "R" and "L" on end of bar.

2) Install anchor arm to serrations on torsion bar. Install adjusting bolt to anchor arm. On 2-WD models, install snap ring and dust cover to anchor arm.

3) On all models, tighten adjusting bolt to obtain specified dimension "A" when bar is in contact with rubber bumper. *See Fig. 6.*

Fig. 6: Measuring Points Shown for Installation of Anchor Pin



4) Temporarily adjust anchor arm adjusting bolt to obtain dimensions "B" and install lock nut. *See Fig.*

Front Suspension

DATSUN/NISSAN PICKUP (Cont.)

6. On 2-WD models, install snap ring and dust cover to anchor arm.

5) On all models, lower vehicle and turn anchor arm adjusting nut to obtain specified "H" dimension with vehicle unladen. *See Fig. 4.*

DIMENSIONS FOR SETTING TORSION BAR

Application	In. (mm)
Dimension "A"	.28-.67 (7-17)
Dimension "B"	2.36-2.76 (60-70)
Dimension "H"	
2-WD	4.88-5.08 (124-129)
4-WD	5.28-5.47 (134-139)

STABILIZER BAR

Removal

Remove nut retaining stabilizer connecting rod to lower control arm. Remove bolt retaining stabilizer mounting bracket to frame. Remove nut retaining stabilizer and connecting rod and remove these parts.

Installation

To install, reverse removal procedures. The white mark on stabilizer bar can be seen from both sides of the vehicle when properly installed.

STRUT ROD

Removal

Remove bolts retaining strut rod to lower control arm and separate these parts. Remove nut retaining strut rod to bracket. Remove rod bushings, collar, and washers.

Installation

To install, reverse removal procedures. Swing strut rod a few times to settle bushings and washers. Do not allow grease or oil to contact rubber bushings.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Anchor Bolt	22-30 (30-41)
Shock Absorber Upper Nut	12-16 (16-22)
Shock Absorber Lower Nut	22-30 (30-41)
Knuckle Arm-to-Knuckle	53-72 (72-97)
Upper Control Arm Spindle Nut	56-76 (76-103)
Upper Control Arm	
Spindle-to-Frame	80-108 (109-147)
Upper Ball Joint-to-Control Arm	12-16 (16-22)
Upper Control Arm-to-Knuckle	
2-WD	87-123 (118-167)
4-WD	43-72 (59-98)
Stabilizer Bar	12-16 (16-22)
Strut Rod-to-Frame	87-116 (118-157)
Strut Rod-to-Lower Control Arm	28-38 (38-52)
Torque Arm-to-Lower Control Arm	
Inner Nut	26-33 (35-45)
Outer Nut	20-27 (27-37)
Drive Shaft-to-Differential (4-WD)	20-27 (27-37)
Free-Running Hub Bolts (4-WD)	18-25 (25-34)