

## DATSUN 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 torsion bar which connects to lower control arm inner end and to frame bracket, a strut rod which connects to lower control arm outer end and a stabilizer bar. A double-acting shock absorber is also used. See Fig. 1.

### ADJUSTMENT

#### WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See *Wheel Alignment Specifications & Procedures* in *WHEEL ALIGNMENT* Section.

#### WHEEL BEARING ADJUSTMENT

**2WD — 1)** Tighten wheel bearing nut to 25-29 ft. lbs. (34-39 N•m). Turn wheel hub several times in both directions to seat wheel bearing. Retorque nut. Turn wheel bearing nut back 45°, install adjusting cap and tighten as required to line up grooves with hole in spindle.

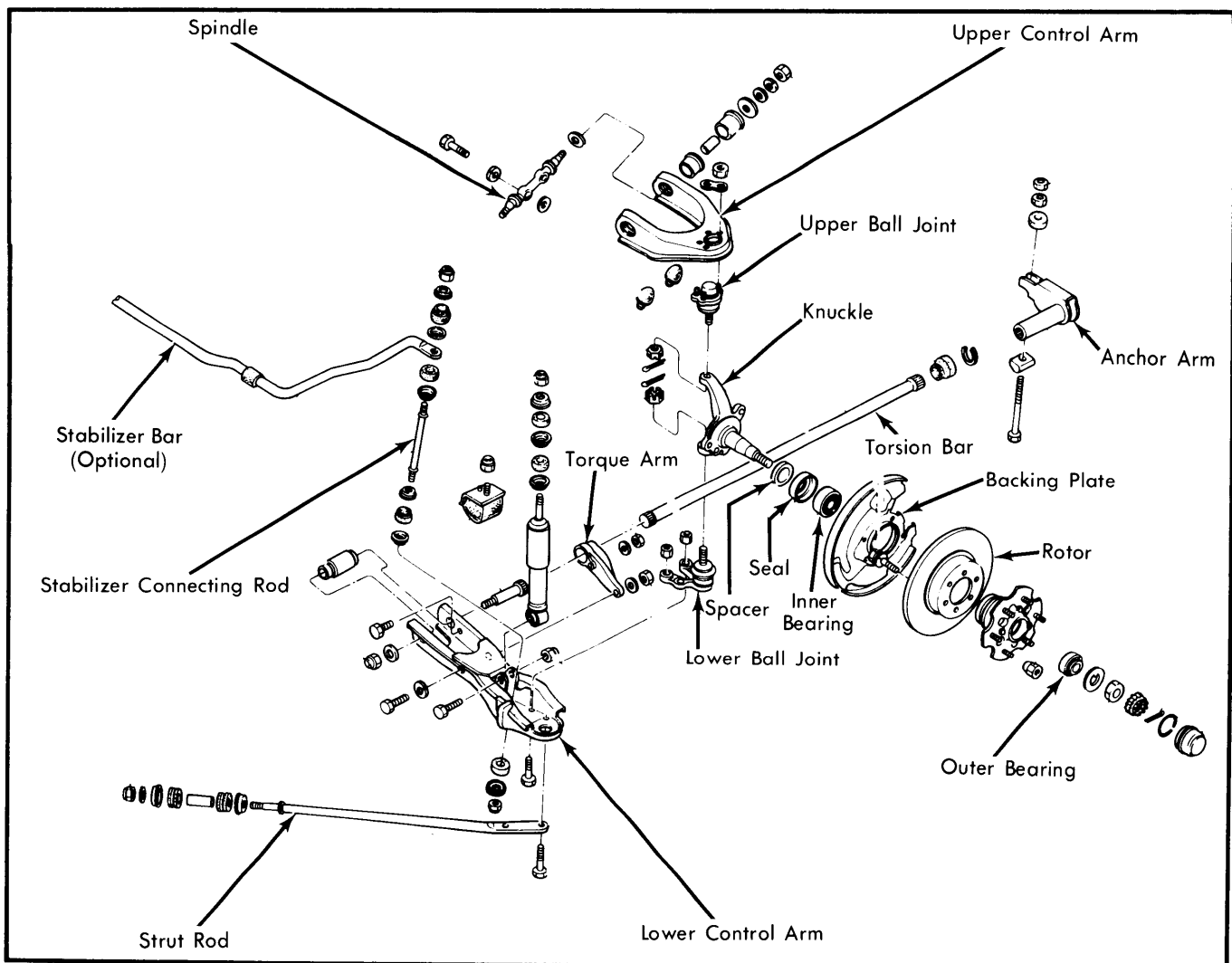
**2)** Install cotter pin and measure bearing preload and axial play. Measure preload with pull gauge on any wheel stud. Axial play should be less than .003" (.08mm) and preload should be less than 2.6 lbs. (11.8 N) with old parts and 6.4 lbs. (28.4 N) with new parts. If not to specifications, repeat procedure until correct readings are obtained.

**4WD — 1)** With vehicle supported by jack stands and wheels removed, remove free-running hub and brake pads. Measure wheel bearing preload and axial play. If end play exceeds .004-.012" (.1-.3 mm) or preload exceeds 2.2-9.5 lbs. (9.8-42.2 N), bearings require adjustment.

**2)** 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 Bearings — Removal" for procedure.

#### BALL JOINT CHECKING

**Upper Ball Joint** — With ball joint removed from vehicle and stud nut in place, check stud turning torque. If torque does not



**Fig. 1 Exploded View of Datsun Pickup Front Suspension (2-WD Shown, 4-WD Similar)**

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meet specifications, 8.7-43.4 INCH lbs. (1.0-4.9 N•m), ball joint should be replaced. If dust cover is excessively cracked, replace ball joint.

**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 excessively cracked, replace ball joint.

## REMOVAL &amp; INSTALLATION

## SHOCK ABSORBER

**Removal** — Turn steering wheel to either side to provide access to shock absorber. Disconnect upper and lower fixing nuts. Remove shock absorber, noting positions of mounting hardware.

**Installation** — To install, reverse removal procedure and tighten nuts and bolts to specifications.

## TORSION BAR

**Removal** — 1) Raise and support vehicle. 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, 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 installations with an "R" and "L" on end of bar.

2) Install anchor arm to serrations on torsion bar. Install anchor arm adjusting bolt to anchor arm. On 2-WD, install snap ring and dust cover to anchor arm. On all models, tighten anchor arm adjusting bolt to obtain specified dimension "A" when bar is in contact with rubber bumper. See Fig. 2.

3) Temporarily adjust anchor arm adjusting bolt to obtain dimensions "B" and install lock nut. See Fig. 2. On 2-WD, install snap ring and dust cover to anchor arm.

4) On all models, lower vehicle and turn anchor arm adjusting nut to obtain specified "H" dimension with vehicle unladen. See Fig. 3.

## 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)

## UPPER CONTROL ARM &amp; BALL JOINT

**Removal** — 1) Raise and support front of vehicle and remove wheel and tire. Jack up lower control arm.

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

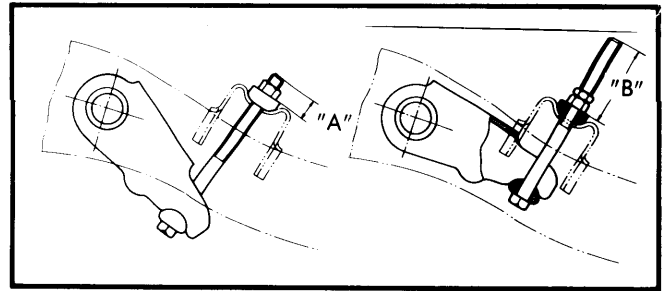


Fig. 2 View Showing Measuring Points for Installation of Anchor Pin

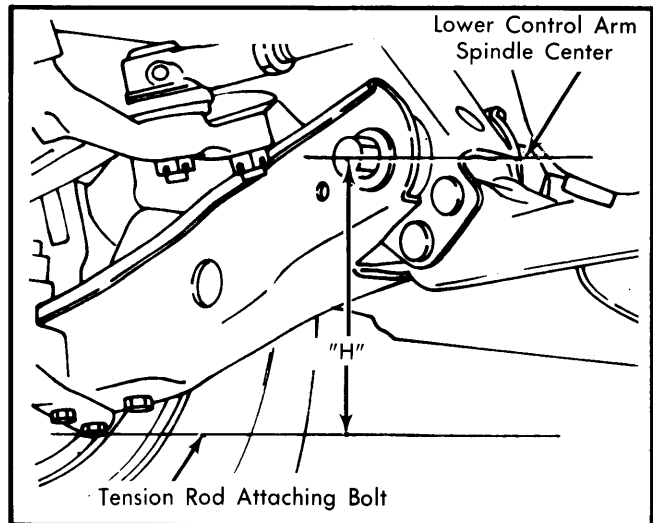


Fig. 3 View Showing Dimension "H" (Unladen Vehicle)

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

4) Remove bolts retaining upper link spindle and remove spindle and upper control arm from mounting, collecting all camber adjusting shims present.

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

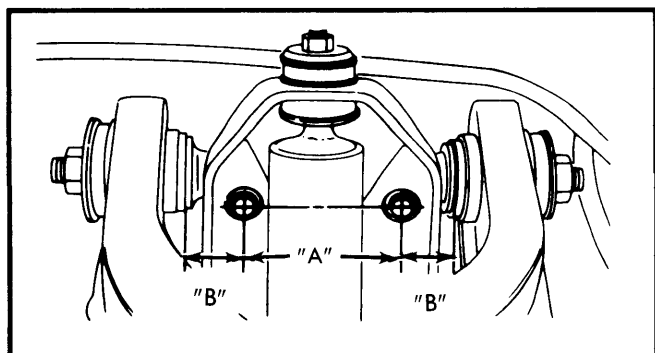
**Installation** — 1) Apply soap suds to rubber bushings and press bushings into place from outside of control arm. Flange of bushing should securely contact end surface of upper control arm collar.

2) Insert upper control arm spindle and inner washers. Install inner washers with rounded edges facing inward.

3) Press in other bushing as described in step 1). Temporarily tighten nuts. Install upper ball joint.

4) Install upper control arm to frame. Tighten upper control arm spindle with camber adjusting shims. After fitting, check dimensions "A" and "B" shown in Fig. 4. Dimension "A" should be 5.34-5.42" (135.6-137.6 mm), "B" should be 1.114" (28.3 mm).

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**Fig. 4 Upper Control Arm Spindle Dimensions**

5) 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.

6) Install tire and wheel, lower vehicle and check height "H" of lower control arm. See Fig. 3. Check and adjust wheel alignment. See appropriate article in *WHEEL ALIGNMENT* section.

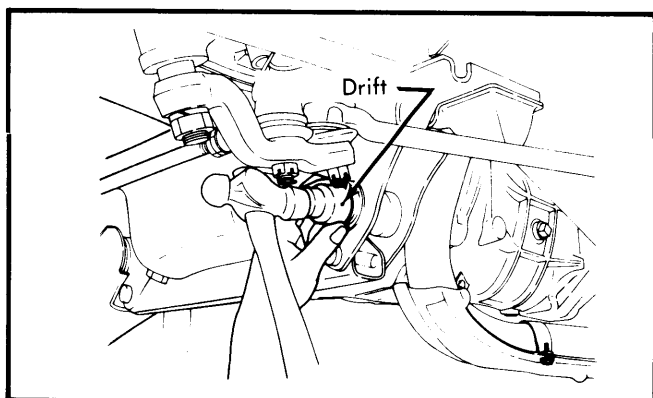
### LOWER CONTROL ARM & BALL JOINT

**Removal** — 1) Raise and support front of vehicle. 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 control arm. 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 and remove ball joint from control arm.

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



**Fig. 5 Removing Bushings from Lower Control Arm**

**Installation** — To install, reverse removal procedure, tightening 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. Turn anchor bolt adjusting nut to obtain specified "H" dimension. See Fig. 3. Check and adjust wheel alignment. See appropriate article in *WHEEL ALIGNMENT* section.

### STRUT ROD

**Removal** — Remove bolt holding strut rod to lower control arm and separate these parts. Remove nut attaching strut rod to bracket and remove rod with bushings, collar and washers.

**Installation** — To install, reverse removal procedure, noting the following: Swing strut rod a few times to settle bushings and washers; do not allow grease or oil to contact rubber bushings; tighten retaining nuts and bolts to specifications.

### STABILIZER BAR

**Removal** — Remove nut holding stabilizer connecting rod to lower control arm. Remove bolt holding stabilizer mounting bracket to frame. Remove nut attaching stabilizer and connecting rod and remove these parts.

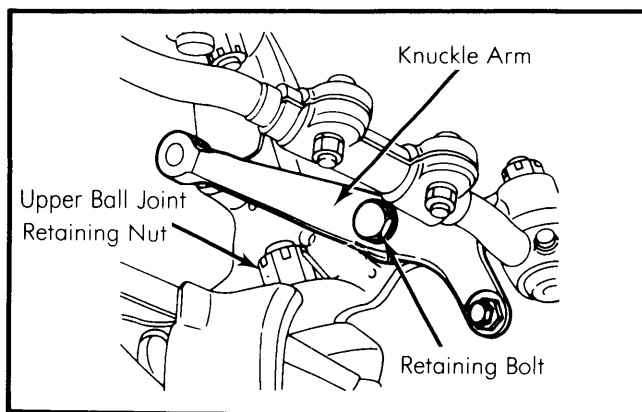
**Installation** — To install, reverse removal procedure and note the following; white mark painted on stabilizer bushing seat can be seen from both sides of vehicle when correctly installed.

### WHEEL HUB, KNUCKLE & WHEEL BEARINGS

**Removal** — 1) On 2WD models, raise and support vehicle. Remove wheel and tire. Remove brake caliper assembly and wire out of way. Remove dust cap, cotter pin, adjusting cap and adjusting nut.

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

3) Remove knuckle arm and backing plate. Loosen (do not remove) ball joint retaining nuts. Separate ball joints from knuckle with tool (ST29020001). Jack up lower control arm and remove ball joint nuts. Remove knuckle.



**Fig. 6 Knuckle Arm Location (2WD Shown, 4WD Similar)**

4) On 4WD models, raise and support vehicle. Remove wheel and tire. Remove brake caliper assembly and wire out of way. Remove free-running hub assembly. Remove snap ring, drive clutch and stabilizer connecting rod bolt from lower control arm.

5) Remove bolts holding drive shaft to differential, (do not remove boots), and remove drive shaft from knuckle.

# Front Suspension

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**NOTE** — Turn steering wheel all the way right to remove right shaft and all the way left to remove left shaft.

**6)** Remove knuckle arm retaining bolt. Loosen (do not remove) ball joint retaining nuts. Separate ball joints from knuckle with tool (ST29020001). Jack up lower control arm and remove ball joint nuts. Remove knuckle.

**7)** Straighen tangs on lock washer, remove lock nut with tool (KV40102500), and remove lockwasher and special washer. Push wheel bearing support from wheel hub.

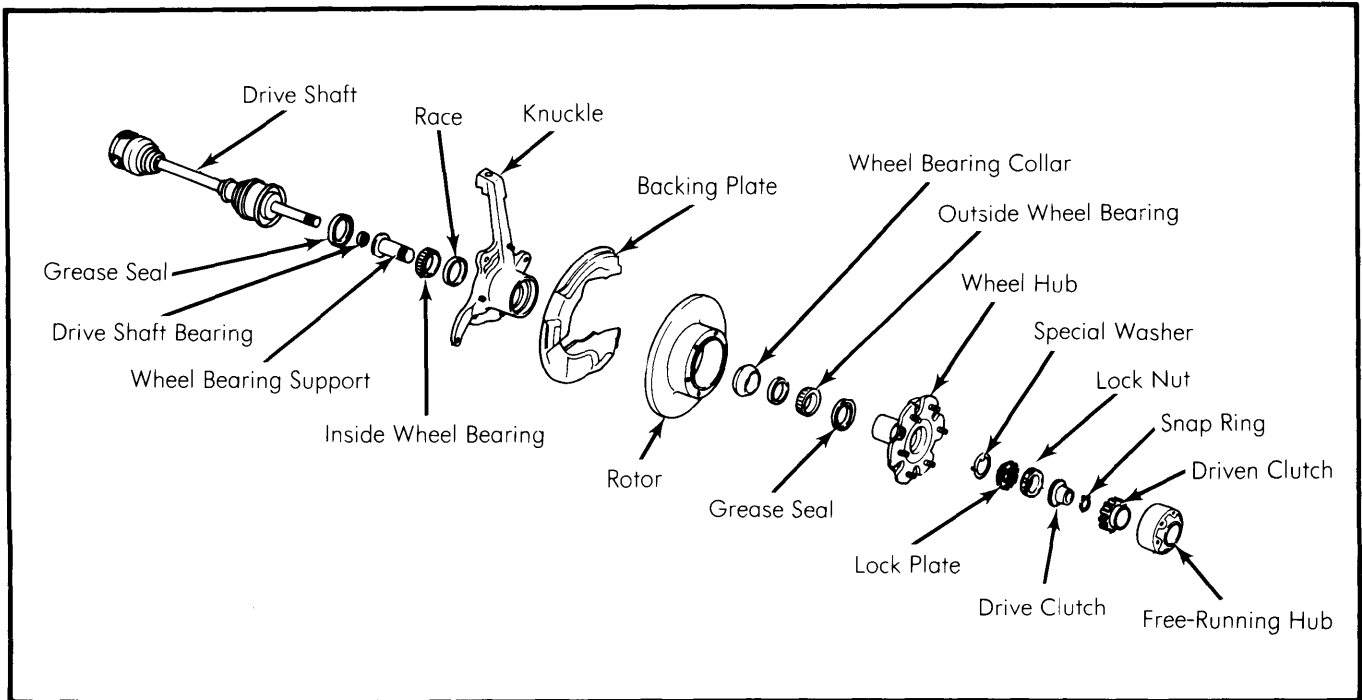
**8)** Separate knuckle from hub with puller, remove wheel bearing collar and drive out inside wheel bearing outer race. Separate wheel hub from rotor.

**9)** 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** — Reverse removal procedures to install, noting the following: On 4WD models check wheel bearing adjustment as previously outlined before installing complete assembly in vehicle. On all models, always use new lock washers, grease seals and cotter pins.

### 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 Ball Joint-to-Knuckle	
2WD .....	58-72 (78-98)
4WD .....	36-65 (49-88)
Lower Control Arm-to-Frame .....	80-108 (109-147)
Lower Ball Joint-to-Control Arm .....	23-38 (38-52)
Lower Ball Joint-to-Knuckle	
2WD .....	87-123 (118-167)
4WD .....	43-72 (59-98)
Stabilizer Bar-to-Frame .....	12-16 (16-22)
Stabilizer Bar-to-Lower Control Arm .....	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 (26-36)
Drive Shaft-to-Differential (4WD) .....	20-27 (27-37)
Free-Running Hub (4WD) .....	18-25 (25-34)



**Fig. 7 Exploded View of 4WD Front Axle Assembly**