AUDI

5000 (Front) – Adjustment not required. Torque spindle nut to 203 ft. lbs. (28 mkg).

5000 (Rear) – Tighten adjustment nut firmly while rotating wheel. Make sure bearing is fully seated. Back off nut until thrust washer can be moved with screwdriver. Insert cotter key.

Fox (Front) – Adjustment not required. Torque spindle nut to 145 ft. lbs. (20 mkg) for M 18x1.5 nuts or 175 ft. lbs. (24 mkg) for M 20x1.75 nuts

Fox (Rear) – Remove grease cup, cotter pin and castle nut. Tighten spindle nut and loosen for adjustment. Adjust by lightly tightening spindle nut until plain washer (beneath spindle nut) can just be moved from side to side, using screwdriver. This adjustment will correspond to .0012-.0027" (.03-.06 mm) wheel bearing play.

BMW

320i Models – While rotating wheel hub, tighten castle nut to 22-24 ft. lbs. (3.0-3.3 mkg), then rotate hub at least 2 more times. Loosen castle nut until bearing end play is noticed. Tighten castle nut to a maximum of about 2 ft. lbs. (.3 mkg), then loosen to nearest hole and install cotter pin.

NOTE – *After adjustment, slotted washer should move easily, without noticeable resistance.*

528i, 633CSi & 733i Models – Tighten castle nut to 22-24 ft. lbs. (3.0-3.3 mkg), while continuously rotating wheel. Loosen castle nut until there is visible axial bearing play. Again rotate wheel and tighten bearing, this time to 2 ft. lbs. (.3 mkg). Insert cotter pin. Thrust washer should have movement with only slight resistance after adjustment.

CHRYSLER CORP. IMPORTS

All Models (Exc. Champ & Colt FWD) – Tighten adjusting nut to 14.5 ft. lbs. (2.0 mkg) on Arrow, Challenger, Colt (exc. FWD) and Sapparo models or to 21.7 ft. lbs. (3.0 mkg) on pickup models. After seating bearing components, loosen nut to 0 torque reading. Now make final adjustment to 3.6 ft. lbs. (.5 mkg) on all except pickup models. On pickup models tighten nut to 5.8 ft. lbs. (.8 mkg). Insert cotter pin.

NOTE – *Do not loosen adjusting nut more than 30° on pickup models or 15° on all other models.*

Champ & Colt FWD – 1) To obtain the correct bearing preload spacer, install special tool (Spacer Selection Gauge MB 990768) to hub and tighten the nut to 14 ft. lbs. (1.9 mkg).

2) Rotate hub and special tool assembly to seat wheel bearings. Install dial indicator on special tool and load approximately .2" (5 mm) of travel on dial indicator. Zero dial indicator.

3) Measure travel by holding threaded stud of special tool with a wrench, then back off nut slowly until travel no longer registers on dial indicator. Note reading.

4) Repeat procedure to ensure accurate reading. Average the readings and select a spacer of the correct thickness. Install spacer, with chamfered side toward steering knuckle.

COURIER

All Models – While rotating wheel, hub and drum assembly, tighten adjusting nut to 17-25 ft. lbs. (2.4-3.5 mkg). Back adjusting nut off ¼ turn and retighten nut where castellations on lock nut are aligned with cotter pin hole in spindle. Install new cotter pin and check wheel rotation.

DATSUN

All Models (Except 310) – Tighten spindle nut to torque specifications in table. Spin wheel and retorque spindle nut. Loosen nut according to specifications in table and then tighten to align cotter pin hole. Insert cotter pin.

Wheel Bearing Adjustment

Application	Torque Ft. Lbs. (mkg)	Loosen
210, 510	22-25 (3.0-3.5)	90°
200SX, 810, 280ZX	18-22 (2.5-3.0)	60°
Pickup	25-29 (3.5-13)	45°

310 – 1) With vehicle raised and supported, remove wheel and steering knuckle. Disassemble components. Determine required thickness of bearing spacer as follows: Place outer bearing on base (KV40100700-3) and place steering knuckle over it so bearing seats in outer race. Then slide inner bearing over dummy shaft (KV40100700-1) and place shaft bearing in knuckle with end of shaft in outer bearing and inner bearing in inner race.

2) Slide weight (KV40100700-2) over dummy shaft and down onto knuckle. Turn knuckle back and forth to seat bearing. Assemble suitable dial indicator with contact button resting on top of dummy shaft, and set indicator to zero. Pull upward on shaft until it reaches end of travel, rotate it 1 revolution and record maximum deflection of indicator needle.

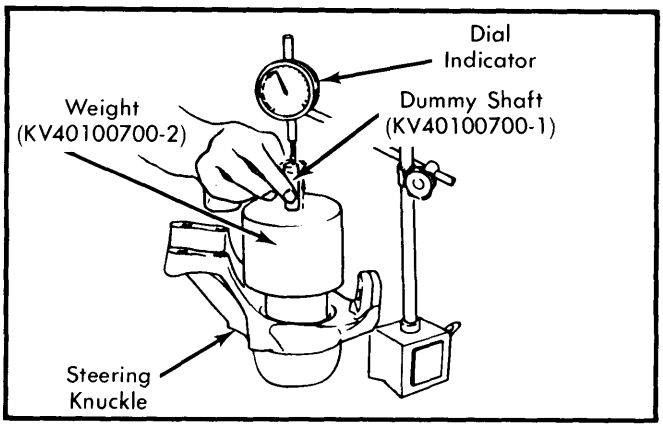

Fig. 1 Determining Required Spacer Thickness

3) To determine required spacer thickness, add recorded dial indicator reading to metric thickness dimension stamped on side of flange on end of dummy shaft.

EXAMPLE — Determine required spacer thickness as follows:

Dial Indicator Reading ..... .094" (2.38 mm)
Thickness Stamped on Shaft ..... .203" (5.16 mm)

EQUALS

Required Spacer Thickness ..... .297" (7.54 mm)

4) Select required spacer. Spacers are available in 18 sizes, ranging from .291-.293" (7.38-7.44 mm) to .331-.333" (8.408-8.460 mm) in .002" (.06 mm) increments. For size identification, spacers are numbered "05" (smallest size) through "20" (largest size).

5) Pack grease seals and bearings with suitable bearing grease. Install outer grease seal and press outer bearing onto stub axle. Install rotor on stub axle. Place knuckle in position on stub axle, install spacer and press inner bearing onto stub axle and knuckle assembly until it just bottoms. Install inner seal, then reinstall knuckle and wheel to vehicle.

FIAT

Brava & Spider 2000 — While rotating hub, torque spindle nut to 14.5 ft. lbs. (2 mkg). Completely loosen nut and retighten to 5 ft. lbs. (.7 mkg). Loosen nut 30° and stake collar of spindle nut into machined slot on spindle. Attach dial indicator with magnetic base on brake drum and actuating foot on spindle. Hub end play should not exceed .004" (.1 mm).

NOTE — *Whenever spindle nut has been removed it must be replaced with a new nut.*

X1/9 & 128 — Tighten front and rear spindle nuts to 112 ft. lbs. (15.5 mkg). When spindle nuts are properly tightened, stake collar of spindle nut into machined slot on spindle.

Strada — Tighten front and rear spindle nuts to 159 ft. lbs. (22 mkg), then stake collar of spindle nut to spindle.

FIESTA

Front — No adjustment is required. Tighten front spindle nut to 180-200 ft. lbs. (24.8-27.7 mkg).

Rear — Adjust rear bearing by tightening nut to 15-18 ft. lbs. (2.1-2.5 mkg) while rotating drum. Loosen nut ½ turn and fit nut retainer with cotter pin.

HONDA

All Models (Front) — Front wheel bearings are not adjustable. Torque front spindle nut to 84-130 ft. lbs. (11.6-18 mkg) on Civic and Accord or 109 ft. lbs. (15.1 mkg) on CVCC and Prelude.

All Except Accord and Prelude (Rear) — Rear wheel bearings are not adjustable. Torque rear spindle nut to 72-94 ft. lbs. (10.2-13 mkg) on Civic or 83 ft. lbs. (11.5 mkg) on CVCC.

Accord and Prelude (Rear) — Tighten spindle nut to 18 ft. lbs. (2.5 mkg) and rotate drum several times. Loosen lock nut. Tighten spindle nut to 2-4 ft. lbs. (.3-.6 mkg) on Accord or 3-6 ft. lbs. (.4-.83 mkg) on Prelude.

JAGUAR

All Models — While rotating hub, tighten nut until no end play is evident. Loosen nut 1 or 2 flats to line up cotter key and install cotter key. End play should be measured with a dial indicator and should be .002-.006". If not within specifications, adjust axle nut to correct end play.

LUV

All Models — On 4x4, place transfer case in "2H" and free wheeling hub in "FREE", then remove hub cover, snap ring, shims, free wheeling hub body and lock washer. On all models, rotate wheel or hub and tighten nut. On 4x4, tighten nut until wheel locks. On 2 wheel drive, torque nut to 22 ft. lbs. (3 mkg). Loosen nut until it can be turned by fingers, then tighten nut with fingers. No play should be felt at this point. Using an accurate spring tension gauge, adjust nut so starting force is 2.6-4 lbs. (1.2-1.8 kg) on 4x4 or 1.1-2.6 lbs. (.5-1.2 kg) on 2 wheel drive models.

MAZDA

GLC — Tighten adjustment nut to 14-18 ft. lbs. (2.0-2.5 mkg). Rotate brake discs several times in both directions. Loosen adjustment nut. Using a spring pull scale, set bearing preload (using adjustment nut) to .33-1.32 lbs. (.15-.60 kg).

All Models (Except GLC) — With vehicle raised and supported under lower control arms, remove wheel. Torque wheel nut to 14-18 ft. lbs. (2-2.5 mkg). Rotate hub to seat bearings. Loosen nut, then using spring tension gauge, tighten nut until correct starting force is obtained. Starting force should be .77-1.92 lbs. (.35-.87 kg) on 626, .99-1.43 lbs. (.45-.65 kg) on RX7, or 1.3-2.4 lbs. (.59-1.1 kg) on pickup.

MERCEDES-BENZ

All Models — While rotating hub, tighten clamping nut until hub can just be turned. Loosen clamping nut and release bearing tension by striking steering knuckle spindle with plastic hammer. Using a suitable dial indicator, check wheel bearing end play. End play should be .0004-.0008" (.01-.02 mm). Adjust clamping nut until end play is within limits. Tighten socket bolt of clamping nut. Washer between outer bearing and clamping nut should rotate with light pressure applied to it.

MG

Midget — Raise front of vehicle and remove each wheel. Remove caliper assembly, but do not disconnect hydraulic brake hose. Support caliper to prevent damage to hose. Attach suitable dial indicatior and measure runout of hub at outer edge of brake rotor. If runout exceeds .006, (.015 mm), remove rotor and reposition on hub. Torque spindle nut to 46 ft. lbs. (6.4 mkg) and recheck runout.

MGB — Raise front of vehicle and remove front wheels. Using suitable dial indicator, measure hub end play. Correct end play is .002-.004" (.05-.10 mm). If not within specifications, remove spindle nut, washer, and outer bearing. Add or remove shims behind outer bearing until correct end play is obtain with spindle nut torqued to 40 ft. lbs. (5.5 mkg)