HONDA (Cont.)

Accord (Rear) – Tighten spindle nut to 18 ft. lbs. (2.5 mkg) and rotate drum several times. Loosen lock nut. Tighten spindle nut to 1.1-3.6 ft. lbs. (.15-.5 mkg). Insert cotter pin.

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.

LANCIA

All Models – Front wheel bearing and rear wheel bearings are pressed into stub axle housings. Stub axle must be removed to replace bearings. Spindle nut torque not available.

LUV

All Models – While rotating wheel, tighten spindle nut to 22 ft. lbs. Turn hub through two or three turns and loosen nut until just finger tight. Check free play. Using a pull scale attached to wheel stud, measure turning torque; adjust nut until pull recorded on scale is 1.1-2.6 lbs. when wheel begins to rotate.

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 (Exc. GLC) – With vehicle raised and supported under lower control arms, tighten adjusting nut until hub locks. Back off nut until hub is just free to turn. Rotate hub several times in each direction. Attach pull scale to hub. Preload should be 1.3-2.4 lbs (Pickup) or .88-2.0 lbs. (other models). If preload is not to specifications adjust spindle nut. Align slot in spindle nut with hole in spindle and install cotter key.

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". 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 indicator and measure runout of hub at outer edge of brake rotor. If runout exceeds .006" remove rotor and reposition on hub. Torque spindle nut to 46 ft. lbs. 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)

MG (Cont.)

OPEL

All Models – Raise and support front of vehicle. While rotating wheel, torque spindle nut to 21 ft. lbs. Back off spindle nut completely. Now turn the nut all the way in using fingers only. If slot and hole are not aligned, tighten enough to align and install cotter key.

PORSCHE

All Models (Front) – Tighten adjusting nut while turning hub. Loosen adjusting nut until thrust washer can just be moved by exerting hand pressure with a screwdriver. Tighten socket head bolt (pinch bolt).

930 (Rear) – Torque axle nut to 217 ft. lbs. (30 mkg) and check axial play. Adjust axle nut in small steps until axial play is about .001" (.04 mm) (torque may be increased to 325 ft. lbs.; 45 mkg, during this procedure). Loosen axle nut. Retorque nut to 217 ft. lbs. (30 mkg) and insert cotter pin.

RENAULT

R5 (Front) – Nonadjustable. Torque stub axle nut to 90 ft. lbs. (12.4 mkg).

R5 (Rear) – Tighten stub axle nut to 25 ft. lbs. (3.5 mkg). Loosen nut about ¼ turn. Check bearing end play, it should be between .0004-.002" (.01-.05 mm). Adjust stub axle as necessary. Fit lock plate and cotter pin. Refill hub dust cover cap with ⅓ oz. of grease.

SAAB

All Models (Front) – Front wheel bearings are not adjustable. Torque front spindle nut to 246-261 ft. lbs. (34-36 mkg).

All Models (Rear) – Install washer and lock nut. Tighten lock nut to 36 ft. lbs. (5 mkg) to seat bearings. Loosen lock nut completely, then tighten nut to 1.4-2.9 ft. lbs. (.2-.4 mkg) and lock nut in place by bending flange into slot of lock nut.

SUBARU

All Models (Front) – Front wheel bearing is not adjustable. Tighten spindle nut to 174 ft. lbs.

4WD (Rear) – No adjustment required. Tighten axle nut to 174 ft. lbs. (24 mkg). After tightening nut, punch flange portion of axle nut toward groove in rear axle shaft.

All Other Models (Rear) – While rotating brake drum, snug down spindle nut to seat bearings. Back spindle nut off ⅛ turn and bend down tab of locking washer to secure spindle nut. If

adjustment is correct, a force of 2.2-3.1 lbs. (1.0-1.4 kg) will be required to rotate wheel.

NOTE – *A force of 1.9-3.2 lbs. (.85-1.45 kg) is required to rotate wheel when measured at axle nut.*

TOYOTA

Land Cruiser – Rotate drum and tighten adjustment nut to 43 ft. lbs (6 mkg). This will seat bearings. Loosen adjustment nut about 1/8 turn. If brake drum rotates properly, install lock washer and tighten lock nut.

Pickup – Tighten front axle castle nut to 36 ft. lbs. to seat bearings, then back off until nut is finger tight. Retighten nut to 36 ft. lbs. and back off 1/6-1/3 turn and install cotter key. When properly adjusted, bearing preload should be as shown in table, when checked with pull scale attached to hub bolt.

All Other Models – Tighten castle nut bearing retainer nut 18.8-23.2 ft. lbs. and turn brake drum back and forth to seat bearing. Loosen nut until can be turned with fingers. Tighten nut to finger tight using a socket without the handle. If not aligned for cotter key installation, tighten until installation possible. Preload at hub (hub rotating) should be within specifications.

Bearing Preload Specifications

Application	Preload Lbs. (kg)
Corona	.77-1.9 (.35-.86)
Pickup	.66-1.98 (.30-.90)
Corolla, Celica	.66-1.5 (.30-.68)
Cressida	2.3-3.5 (1.0-1.6)

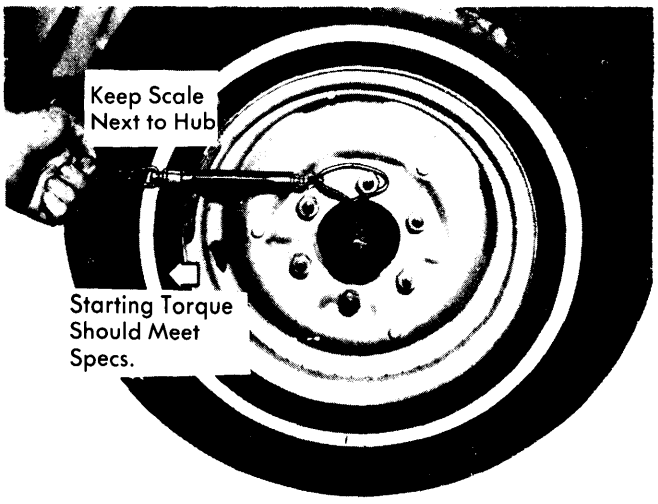

Fig. 1 Using a Pull Scale to Measure Wheel Bearing Starting Torque

TRIUMPH

TR7 – Raise and support front of vehicle, then remove wheel and tire. Check hub for excessive end play. If adjustment is necessary, remove grease cap and cotter key. Tighten spindle nut to 5 ft. lbs. (.7 mkg), then back nut off one flat and install cotter key.

All Others – Raise and support front of vehicle, then remove wheel and brake caliper. Attach a dial indicator and measure wheel bearing end play. If end play exceeds .003-.005" (.08-.13 mm), remove cotter key and loosen or tighten spindle nut until end play is within specifications. Install new cotter key.

NOTE – *Do not exceed 5 ft. lbs. (.7 mkg) when torquing spindle nut.*

VOLKSWAGEN

Type 1 (Front) – Torque adjusting nut to 7 ft. lbs. (1.0 mkg) while hand turning drum. Measure bearing play using a dial indicator. Hand tighten adjustment nut until bearing play is about .001-.005" (.03-.12 mm). Tighten retainer clamp.

Type 2 (Front) – Adjust clamp nut while rotating wheel. Adjustment is completed when thrust washer can be moved with a screwdriver and finger pressure.

All Others (Front) – Front wheel bearings are pressed into bearing housing and no adjustment is required. Tighten front axle nut on Dasher to 145 ft. lbs. (20 mkg) for M 18x1.5 nuts or 175 ft. lbs. (24 mkg) for M 20x1.5 nuts. For Rabbit and Scirocco models tighten nuts to 175 ft. lbs. (24 mkg).

Dasher, Rabbit & Scirocco (Rear) – Wheel bearings are correctly adjusted if thrust washer can be moved slightly with a screwdriver. NOTE – *This will provide axial play of approximately .001-.003".*

VOLVO

All Models – While rotating hub, torque nut to 50 ft. lbs. Loosen nut 1/3 turn and check for hub rotating freely with no end play. If necessary to align cotter key holes loosen nut and install cotter key.

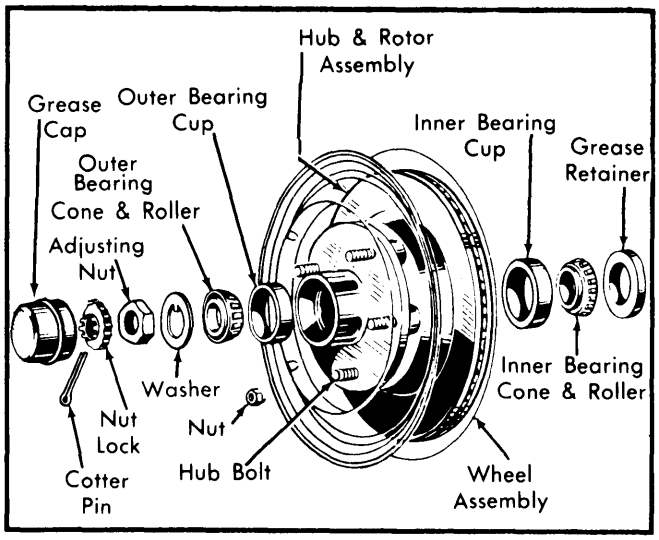

Fig. 2 Exploded View of Wheel Bearing Components with Disc Brakes