OPEL

All Models – Raise and support front of vehicle. While rotating wheel, torque spindle nut to 21 ft. lbs. (2.9 mkg). Back off spindle nut completely. Now turn the nut all the way in using fingers only. If slot and hole are not aligned, only tighten enough to align then install cotter pin.

PEUGEOT

All Models – Raise and support front of vehicle. While rotating wheel or hub, tighten spindle nut to 22 ft. lbs. (3 mkg) on 504 models or to 29 ft. lbs. (4 mkg) on 604 models. Loosen spindle nut and retighten to 7.2 ft. lbs. (1 mkg).

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).

Turbo (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, then retorque to 217 ft. lbs. (30 mkg) and insert cotter pin.

RENAULT

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

LeCar (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 (axle shaft nut) to 145 ft. lbs. (20 mkg). If cotter pin hole is not aligned, tighten further a maximum of 30° to align hole.

4WD (Rear) – No adjustment required. Tighten axle nut to 145 ft. lbs. (20 mkg). If cotter pin hole is not aligned, tighten further a maximum of 30° to align hole.

All Other Models (Rear) – While rotating brake drum, tighten nut to 36 ft. lbs. (5 mkg). Rotate drum several times then back nut off approximately ⅛ turn. Measure rotating force at a wheel stud. Force should be 1.9-3.2 lbs. (.85-1.45 kg).

TOYOTA

Land Cruiser (Front) – Tighten spindle shaft nut snugly using appropriate tool (SST 09607-60020). Back off nut approximately ⅛ turn then install outer lock nut and tighten to 11-16 ft. lbs. (1.5-2.2 mkg).

Land Cruiser (Rear) – Rotate drum and tighten adjustment nut to 43 ft. lbs. (6 mkg). This will seat bearings. Loosen adjustment nut about ⅛ turn. Install washer and lock nut, then tighten to 58-72 ft. lbs. (8-10 mkg).

Pickup (Exc. 4WD) – Tighten spindle nut to 22 ft. lbs. (3 mkg) a couple of times to make sure bearings are seated. Retighten nut to 22 ft. lbs. (3 mkg), then back off nut until nut can just be turned by hand. Install socket (without handle) and tighten nut as tight as possible by hand. Measure rotating torque with spring gauge. Torque should be 1.1-3.7 lbs. (.55-1.7 kg). Install cotter pin. If hole does not line up, tighten nut as little as possible until hole lines up.

Pickup (4WD) – Tighten nut to 43 ft. lbs. (6 mkg) a couple of times to make sure bearings are seated. Tighten nut to 2.9-5 ft. lbs. (.4-.7 mkg). Measure rotating torque. Torque should be 6.2-12.6 lbs. (2.8-5.7 kg). Lock nut in place by bending lock washer tab inward.

All Other Models – Tighten nut to 19-23 ft. lbs. (2.6-3.2 mkg) while turning brake rotor to seat bearing. Loosen nut until it can be turned with fingers. Tighten nut finger tight using a socket without the handle. If not aligned for cotter pin installation, tighten until installation is possible. Preload at hub (while turning) should be within specifications.

Bearing Preload Specifications

Application	Preload Lbs. (kg)
Celica,Corolla	.7-1.5 (.3-.7)
Corona	.8-1.9 (.35-.87)
Cressida	.9-2.2 (.4-1)

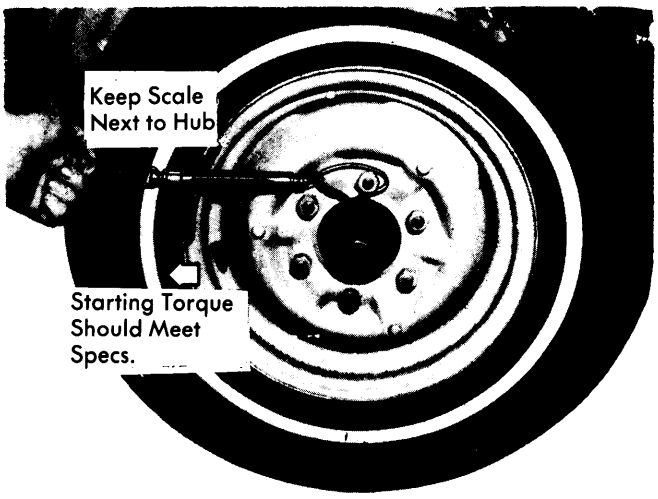

Fig. 1 Using a Pull Scale to Measure Wheel Bearing Starting Torque

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.

Spitfire – 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. (6.9 mkg). Loosen nut ⅓ turn and check for hub rotating freely with no end play. If necessary to align cotter pin holes, loosen nut and install cotter pin.

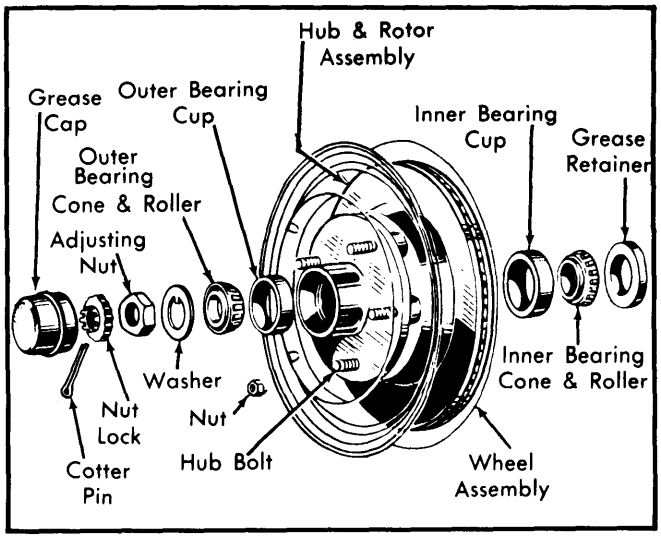

Fig. 2 Exploded View of Wheel Bearing Components with Disc Brakes