

ALFA ROMEO

All Models — Check working surfaces of ball pins and their seats, and ball joint studs for damage or wear. Axial play should not exceed specifications (.04"). Replace complete ball joint unit when indicated.

BMW

All Models — With lower control arm removed, measure axial (up and down) movement of ball joint stud. If movement exceeds .0945", replace ball joint. See *BMW in SUSPENSION Section*.

COLT

All Models — With components removed from control arm and ball joint still installed, check the following: Horizontal and vertical free play (0"), and ball joint rotation starting torque 4-7 ft. lbs. (.6-1.0 mkg). Replace ball joints if correct specifications are not obtained.

COURIER

All Models — Check working surfaces of ball joints and studs for wear or damage. End play should not exceed .031" (.8 mm). If end play is excessive, replace ball joint. See *Courier in SUSPENSION Section*.

DATSUN

All Models (Exc. 620 Pickup) — Remove lower control arm. See *Datsun in SUSPENSION Section*. Measure axial movement by lifting and depressing ball joint stud. Difference between these two measurements is axial movement. Using suitable spring tension gauge attached to top of ball joint stud, measure force (INCH lbs.) required to move ball joint stud laterally. If either measurement is not within specifications, replace ball joint.

Ball Joint Specifications

Application	Axial	Lateral
		INCH Lbs. (cmkg)
B210004-.012" (.1-.3 mm)	52 (60)
610,710 & 280Z004" (.1 mm)	35 (40)

FIAT

All Models — With vehicle raised and supported under lower control arms, grasp wheel at top and bottom and try to shake wheel. If any movement is noted, control arm must be removed for further inspection. See *Fiat in SUSPENSION Section*.

HONDA

All Models — Raise and support front of vehicle. Attach dial indicator onto lower control arm with indicator tip on steering knuckle near ball joint. Place pry bar between lower control arm and steering knuckle. **NOTE** — Take care not to damage ball joint rubber boot. Push on pry bar and observe movement on dial indicator. If movement is in excess of .020" (.5 mm), ball joint must be replaced. See *Honda in SUSPENSION Section*.

JAGUAR

All Models — Upper ball joint must be replaced if signs of wear or play are evident. The lower ball joint is adjustable with shims if axial play exceeds .004-.006" (.10-.15 mm). Shims must not be removed to take up excessive wear in ball pin and socket. If parts are excessively worn, replacement is required.

LUV

With vehicle raised and supported under lower control arms, grasp wheel at top and bottom. Try to shake wheel and if any movement is noted, inspect front suspension for wear or damage.

MAZDA

All Models — Check ball joint dust seal for wear or damage and, if necessary, replace seal. Ball joint end play must not exceed .039" (1 mm). If end play exceeds specifications, replace ball joint. See *Mazda in SUSPENSION Section*.

OPEL

All Models — Raise and support front of vehicle. Inspect ball joint rubber boots for damage and replace as necessary. Using suitable gauge (J-23745) measure axial play. If axial play is more than .080" (2 mm), ball joint must be replaced. See *Opel in SUSPENSION Section*.

PEUGEOT

All Models — Inspect ball joints for roughness or excessive wear. Replace ball joints as necessary. See *Peugeot in SUSPENSION Section*.

PORSCHE

All Models — When moving ball pin some friction torque should be felt. If ball pin can be moved without resistance and end play is shown, replace ball joint.

RENAULT

All Models — Inspect ball joints for wear or excessive play. Replace ball joints as necessary.

SAAB

All Models — If ball joint exhibits excessive play, it must be replaced as a complete unit. See *Saab in SUSPENSION Section*.

SUBARU

All Models — Check ball joint for excessive play by pushing and pulling on ball joint stud. Allowable looseness is less than .012". If play exceeds this specification, ball joint must be replaced. See *Subaru in SUSPENSION Section*.