

ARROW, CHALLENGER, COLT SAPPORO

All Models – With components removed from control arm and ball joint still installed, check following: Horizontal and vertical free play (0"), and ball joint rotation starting torque 4-6 ft. lbs. (.83 mkg). Replace ball joints if correct specifications are not obtained.

AUDI

Fox – Movement of ball joint with pressure applied by leverage should be about .098" (2.5 mm). If not within specifications, replace ball joint.

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

Remove lower control arm. See *Datsun in SUSPENSION Section*. Use appropriate spring tension gauge and attach it to top of ball joint stud nut. Measure force (INCH lbs.) required to move ball joint stud laterally. If measurement is not within specifications, replace ball joint.

Ball Joint Lateral Movement[ⓐ]

Application	New		Used	
	In. Lbs. (cmkg)	In. Lbs. (cmkg)	In. Lbs. (cmkg)	In. Lbs. (cmkg)
510	35-87	(40-100)	17	(20)
810	52-104	(6-120)	35	(40)
200SX, B210, 280Z	65-109	(75-125)	50	(43)
Pickup				
Upper	8.7-43.3	(10-50)	More Than 8.7	(10)
Lower	8.7-34.7	(10-40)	More Than 8.7	(10)

[ⓐ] – For F10 models 30.4 INCH lbs. (35 cmkg) is standard 8.7 INCH lbs. (10 cmkg) is minimum.

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 – Ball joints must be replaced if signs of wear are evident. Lower ball joint does use shims. These shims are not to be used to compensate wear. The shims are designed to provide adjustment for ball joints during overhaul reassembly.

LANCIA

All Models – If ball joint shows excessive amounts of wear (play), replace ball joints. See *Lancia in SUSPENSION Section*.

LUV

With vehicle raised and supported under lower control arms, grasp wheel at top and bottom, then try to move wheel. Replace lower ball joint or upper control arm with ball joint if movement exceeds .06" (1.52 mm).

MERCEDES-BENZ

There should be no lateral movement of ball joint. Vertical movement is adjusted by adding or removing washers.

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

Raise and support front of vehicle. Inspect ball joint boots for damage and replace if necessary. If lower ball joints exceed maximum permissible axial play of .040" (1.0 mm) components must be replaced. Specification refers generally to older ball joints.

PORSCHE

924 – Measure distance between upper edge of control arm and lower edge of steering knuckle using a vernier caliper. Place a lever under ball joint and pry upward. Record any movement. New ball joints should have no play. Wear limit for other ball joints is about .098" (2 mm).

RENAULT

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