

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.

BMW

All Models — Axial movement of ball joint with pressure applied by leverage should be .055" (1.4 mm) or less. If play exceeds specifications, replace control arm assembly.

CHRYSLER CORP. IMPORTS

All Models (Exc. Pickup) — With components removed from control arm and ball joint still installed, check following: Axial and radial play should be 0", rotating torque should be 2.2-4.3 ft. lbs. (.3-.6 mkg) on Champ and Colt FWD models. Starting torque should be 9 ft. lbs. (1.2 mkg) on Champ and Colt FWD models and 4-7 ft. lbs. (.55-.97 mkg) on Arrow, Challenger, Sapporo and Colt (exc. FWD). If not to specifications, replace components.

Pickup Models — With components removed from vehicle, check upper ball joint for starting torque and lower ball joint for axial play. Starting torque should be .6-2.5 ft. lbs. (.08-.35 mkg). Axial play should be .02" (.5 mm) or less. Replace components as necessary.

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. Use appropriate gauge and attach it to top of ball joint stud nut. Measure force (INCH lbs.) required to turn ball joint stud. If measurement is not within specifications, replace ball joint.

Ball Joint Turning Torque

Application	New		Used	
	In. Lbs. (cmkg)		In. Lbs. (cmkg)	
210, 510	35-87		17	
	(40-100)		(20)	
310	26-87		More Than 8.7	
	(30-100)		(More Than 10)	
810	52-104		35	
	(60-120)		(40)	
200SX	65-109		50	
	(75-125)		(43)	
280ZX	22-69		13	
	(25-80)		(15)	
Pickup				
Upper	8.7-43.3		More Than 8.7	
	(10-50)		(More Than 10)	
Lower	8.7-34.7		More Than 8.7	
	(10-40)		(More Than 10)	

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.

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, replace if necessary. If lower ball joints exceed maximum permissible axial play of .008" (.2 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 .078" (2 mm).