

Upper Ball Joint Replacement

Severe damage has been found on the upper control arms (stamped steel versions) of several GM trucks due to the ball joint hole being stretched out of round during the process of removing the worn upper ball joint.

This condition may apply to 1996-2006 Cadillac Escalade ESV, Chevrolet Avalanche (3/4 ton model), Chevrolet Suburban (3/4 ton model), Chevrolet Silverado (1/2 ton HD, 3/4 ton, and 1 ton models), Chevrolet Express Cab, Hummer H2, GMC Sierra (1/2 ton HD, 3/4 ton, and 1 ton models), and GMC Yukon XL.

In order to avoid premature ball joint wear or control arm failure due to improper installation, the ACDelco upper ball joint (ACDelco part number 45D0104) must have the ball joint housing properly indexed to the existing control arm prior to being pressed in.

Removal and Inspection

The stamped steel upper control arm may be stretched out of round when removing the worn upper ball joint. The control arm hole may measure as much as 0.018 inches larger than the original size.

Inspect the old ball joint housing prior to removal from the control arm to determine if excessive wear has caused the control arm hole to become elongated.

Pressing out an old ball joint (with a damaged housing) typically enlarges the control arm hole. The expanded hole does not allow for an adequate mechanical bond between the new ball



Inspect ball joint housing for excessive wear



Check hole diameter for elongation

joint housing and the control arm, resulting in the ball joint not being held securely in place.

Excessive corrosion, or hammering or pressing the old ball joint out at an angle also may damage the control arm.

The hole diameter specification is 45.825mm \pm 0.025mm or 1.804 inches \pm 0.001 inches.

Control arm holes that show any signs of wear, fatigue, an oblong shape or other damage must be replaced.

Repair and Installation

ACDelco now offers a complete control arm assembly (ACDelco part number 45D1083) with the ball joint installed.

If only the ball joint requires replacement, it must be properly indexed to the control arm.

INSTALL INBOARD is stamped on the bottom of the upper ball joint at a right angle to the large flat on the ball joint housing. Install the ball joint with the INSTALL INBOARD facing the engine compartment.

Also, look closely at the ball joint housing and stud. Because the ball joint is a "directional" type, the swing angle of the ball joint stud is limited in its range of motion (inboard-to-outboard).

Incorrect installation may damage the ball joint and cause premature failure.

– Thanks to Dennis Kissack



Control arm assembly with ball joint



INSTALL INBOARD is stamped on the bottom of upper ball joint