

INSTALLATION INSTRUCTIONS

APRIL 2005

FORM NUMBER

F4411A

The steering knuckle must be replaced in any and all cases of broken, bent, or loose ball joint studs in knuckle.

! CAUTION: Proper service and repair procedures are essential for safe and reliable installation of chassis parts, and require experience and tools specially designed for the purpose. These parts **MUST** be installed by a **QUALIFIED MECHANIC** in accordance with the **VEHICLE'S SERVICE MANUAL**, otherwise an unsafe vehicle and or personal injury could result.

! WARNING: Before attempting to remove the stud from the steering knuckle, make sure the stud of the old ball joint was firmly seated in the tapered hole of the steering knuckle. If the ball joint stud was loose in the steering knuckle, or if any out-of-roundness, deformation, or damage is observed, the **STEERING KNUCKLE MUST BE REPLACED**. Failure to replace a damaged or worn steering knuckle may cause loss of steering ability since the ball joint **STUD MAY BREAK** and cause the wheel to separate from the vehicle.

1. Raise and support the vehicle under the frame and remove the wheel and tire assembly.
2. Remove the front damper.
3. Remove the wheel sensor bracket nut from the upper arm. Remove the cotter pin and slotted nut from the upper ball joint stud.
4. Using a suitable too, separate the stud from the steering knuckle tapered hole. **NEVER STRIKE THE STEERING KNUCKLE WITH A HAMMER.**
5. Remove the flange bolts from the upper arm.
6. Secure upper suspension arm and ball joint assembly in a bench vice. Separate the ball joint from the upper suspension arm using a suitable press tool. Discard the old ball joint.
7. Inspect the ball joint contact area of the upper suspension arm and make sure it is clean and free of cracks.
! WARNING: IF ANY CRACKS ARE FOUND, THE UPPER SUSPENSION ARM MUST BE REPLACED. Failure to replace a cracked or damaged upper suspension arm may cause loss of steering ability because the **UPPER SUSPENSION ARM MAY BREAK** and cause the wheel to separate from the vehicle.
8. Clean the steering knuckle tapered hole. Insert the new ball joint stud through the steering knuckle tapered hole by hand and check fit of the stud taper to the knuckle. Stud should seat firmly without any rocking. Only the threads of the stud should extend through the steering knuckle. If these parts do not meet these requirements either the steering knuckle is worn and needs replacement or incorrect parts are being used.
9. After verifying that these parts are usable, proceed with installation as follows: **ALIGN MATING MARKS** of ball joint and suspension arm, and using a suitable press tool, press the ball joint squarely into the arm until the shoulder on the housing is firmly seated against the suspension arm. Do not exert pressing force on the cover plate of the ball joint. **NEVER USE A HAMMER TO DRIVE THE BALL JOINT INTO THE SUSPENSION ARM.**
! WARNING: FAILURE TO ALIGN MATING MARKS COULD RESULT IN STUD BREAKAGE. IF THE MATING MARK ON THE SUSPENSION ARM CAN NOT BE LOCATED, POSITION MARK ON BALL JOINT AWAY FROM THE WHEEL.

10. Install the supplied dust boot over the stud and into the housing groove. Secure the dust boot in the housing groove by the provided retaining ring.
11. Position upper suspension arm with attached new upper ball joint on the vehicle and secure with flange bolts. Tighten flange bolts to 47 lb. ft. (64 Nm).
12. Thoroughly clean the tapered hole of the steering knuckle before assembly of the stud with the knuckle. Insert the stud of the new ball joint through the tapered hole of the knuckle and install the new slotted nut supplied.
13. Torque the slotted nut to 29-35 lb. ft (39-47 Nm). Continue to tighten the slotted nut to the next available slot. **NEVER BACK OFF THE SLOTTED NUT TO ACHIEVE ALIGNMENT WITH THE HOLE IN THE STUD.** Install and spread the cotter pin.
14. If grease hole in the ball joint and grease fitting are provided, install the grease fitting into the ball joint and lubricate with a good grade of chassis grease.
15. Attach the wheel sensor bracket to the suspension arm. Tighten the nut to 6.9 lbf ft (9.3 Nm).
16. Install the front damper. Install the wheel and torque to O.E. specifications. Lower the vehicle to the floor.
17. Align the front end of the vehicle to specifications. A check of the wheel balance is recommended.

NOTE: The parts in this kit are designed to replace the worn or non-functioning original equipment parts in the vehicle as produced by the car factory. These parts are not designed for installation on vehicles where the suspension and/or steering systems have been modified for racing, competition, or any other purpose.

SPECIAL NOTICE

STEERING KNUCKLE DAMAGE CAN CAUSE STUD BREAKAGE OR STUD SEPARATION FROM KNUCKLE

THE STEERING KNUCKLE MUST BE REPLACED IN ANY AND ALL CASES OF STUD BREAKAGE OR STUD SEPARATION FROM KNUCKLE.

TAPER DOES NOT FIT



CASES OF STUD BREAKAGE OR STUD SEPARATION FROM KNUCKLE INDICATES AN "OUT-OF-ROUND" OR "FRETTED" TAPER.

POLISHED SPOTS SHOW MOVEMENTS



NOTE: THIS KIT MAY CONTAIN SELF TAPPING GREASE FITTING(S) FOR THE THREADED OR NON-THREADED HOLES.