

Front Upper Control Arm-to-Frame Mounting Bracket Attachment

Initial Inspection

1. With the vehicle on the ground, check the upper control arm-to-frame bracket bolt torque. **If the torque is 135-190 N-m (100-140 ft-lb) no further action is required.** If torque is below 135 N-m (100 ft-lb), proceed with Mounting Bracket Inspection.

Mounting Bracket Inspection

1. Loosen adjustment cam lock nuts and adjust cams to their neutral positions. Refer to Figure 1.

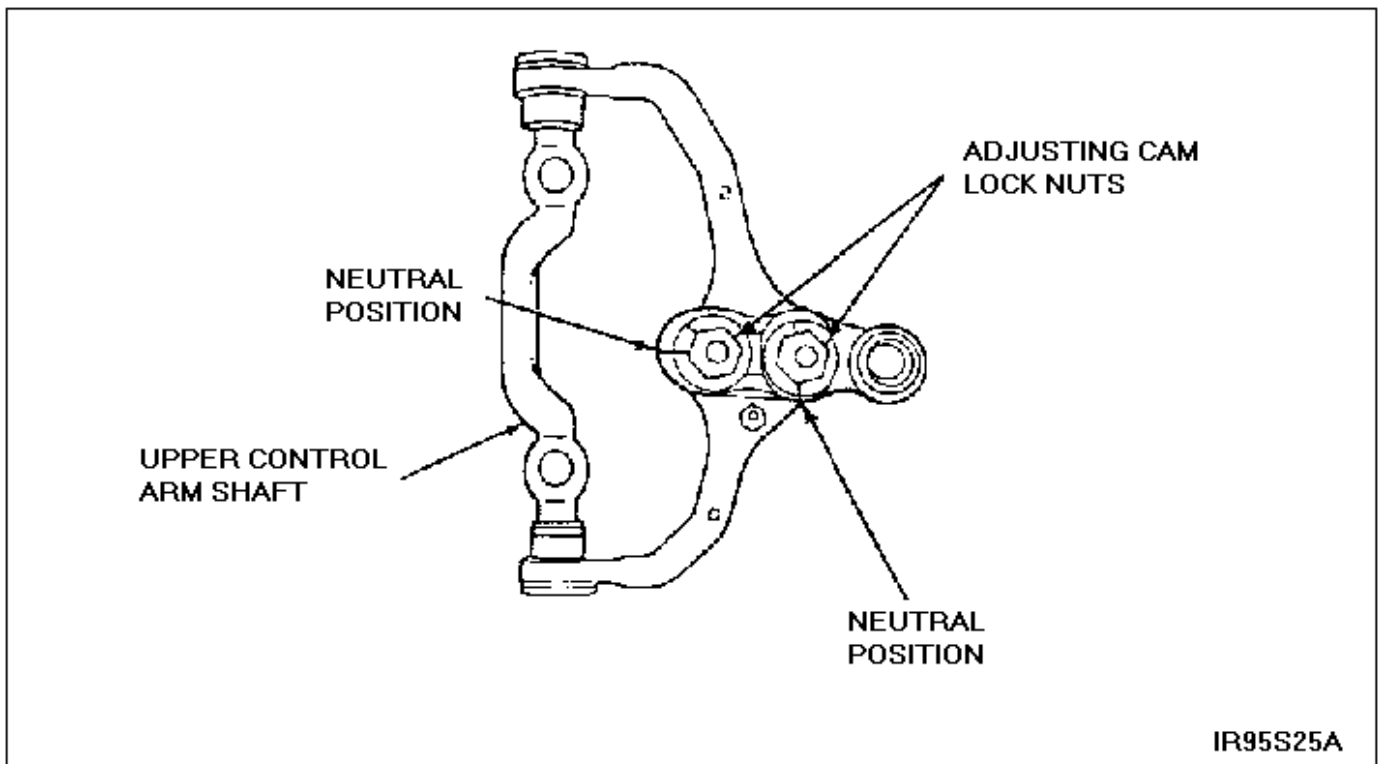


Figure 1

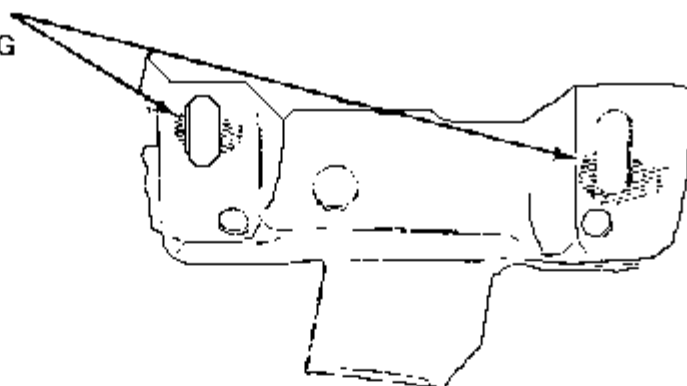
2. Raise the front of the vehicle, and position safety stands under both sides of the frame just behind front suspension lower arm.

CAUTION

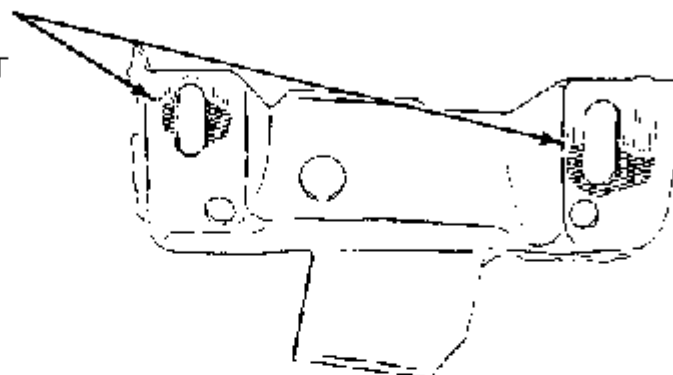
The floor jack will support the spring load on the front suspension lower arm.

3. Position a floor jack under the front suspension lower arm, and raise jack to support front suspension lower arm.
4. Remove upper arm-to-frame retaining bolts, then position arm away from frame bracket.
5. Inspect the frame "mounting" bracket. It should have a distinct diamond-shaped pattern formed into it from the hardened serration on the upper control arm shaft. Refer to Figure 2.

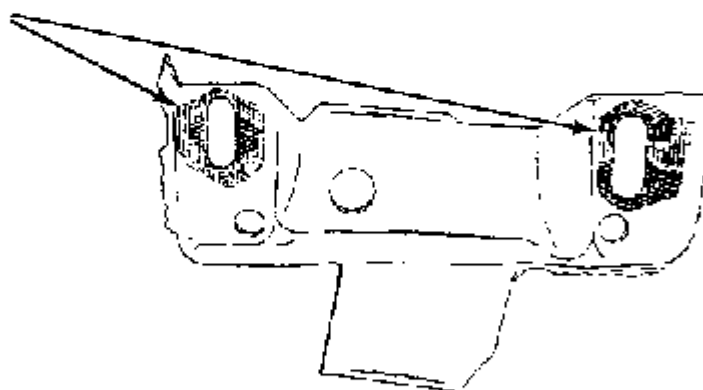
GOOD CONDITION
RETORQUE RETAINING
BOLTS, SET FRONT
WHEEL ALIGNMENT
AND RELEASE
VEHICLE



SLIGHTLY DAMAGED
INSTALL SUPPORT
WASHERS, SET FRONT
WHEEL ALIGNMENT
AND RELEASE
VEHICLE



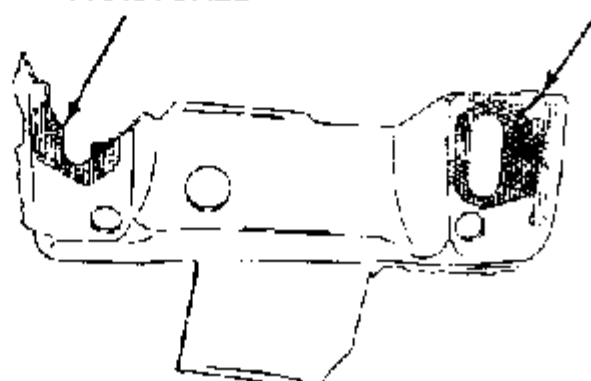
BADLY DAMAGED
INSTALL SUPPORT
WASHERS, SET
FRONT WHEEL
ALIGNMENT AND
RELEASE VEHICLE



BRACKET
FRACTURED

BRACKET
CRACKED

REPLACE BRACKET
SET FRONT WHEEL
ALIGNMENT AND
RELEASE VEHICLE



IR95S25B

Figure 2

6. If distinct diamond pattern is visible and not marred in any fashion, reassemble the upper control arm to the mounting bracket. Position the upper arm shaft near the center of the slot adjustment range and install bolts and nuts. Tighten to 163-190 N-m (120-140 ft-lb). Move the vehicle to alignment rack and set front end alignment to specification. Release the vehicle.
7. If the frame "mounting" bracket is worn, gouged, exhibit signs of metal thinning or other forms of metal removal or wear indicating there has been movement between the front suspension upper arm shaft and the mounting bracket, repair the bracket by installing support washers. Go to **SUPPORT WASHER INSTALLATION**.
8. If the bracket is cracked, split or torn, replace the bracket.

NOTE:

Replacement brackets are to be ordered through Renkim Corporation by calling 1-800-325-5621.

Brackets will come with a support washer and fastener kit. Discard the support washer from this kit and use only the bolt, lock washer and nut assembly to reattach upper arm to bracket.

Only repair or replace bracket where required. If only one mounting bracket shows signs of damage, repair only that side.

Support Washer Installation

CAUTION

Perform this repair only if directed here from MOUNTING BRACKET INSPECTION. Make sure vehicle is properly supported as directed above.

CAUTION

The floor jack will support the spring load on the front suspension lower arm.

NOTE:

The following procedure applies to support washer installation for both right and left sides of the vehicle. Individual steps that are specific to either side will be identified.

1. Set parking brake. Remove tire and wheel assembly.
2. Place a drain pan under the radiator and drain the cooling system (right side only).
3. Remove radiator coolant recovery reservoir (right side only).
4. If installing support washers on the right side mounting bracket, it will be necessary to remove the evaporator case assembly for access. Refer to either the appropriate year Town Car, Crown Victoria, Grand Marquis Service Manual, Section 12-03A, and remove evaporator case assembly.
5. Remove retaining nut from upper ball joint stud to front wheel spindle pinch bolt. Refer to Figure 3.

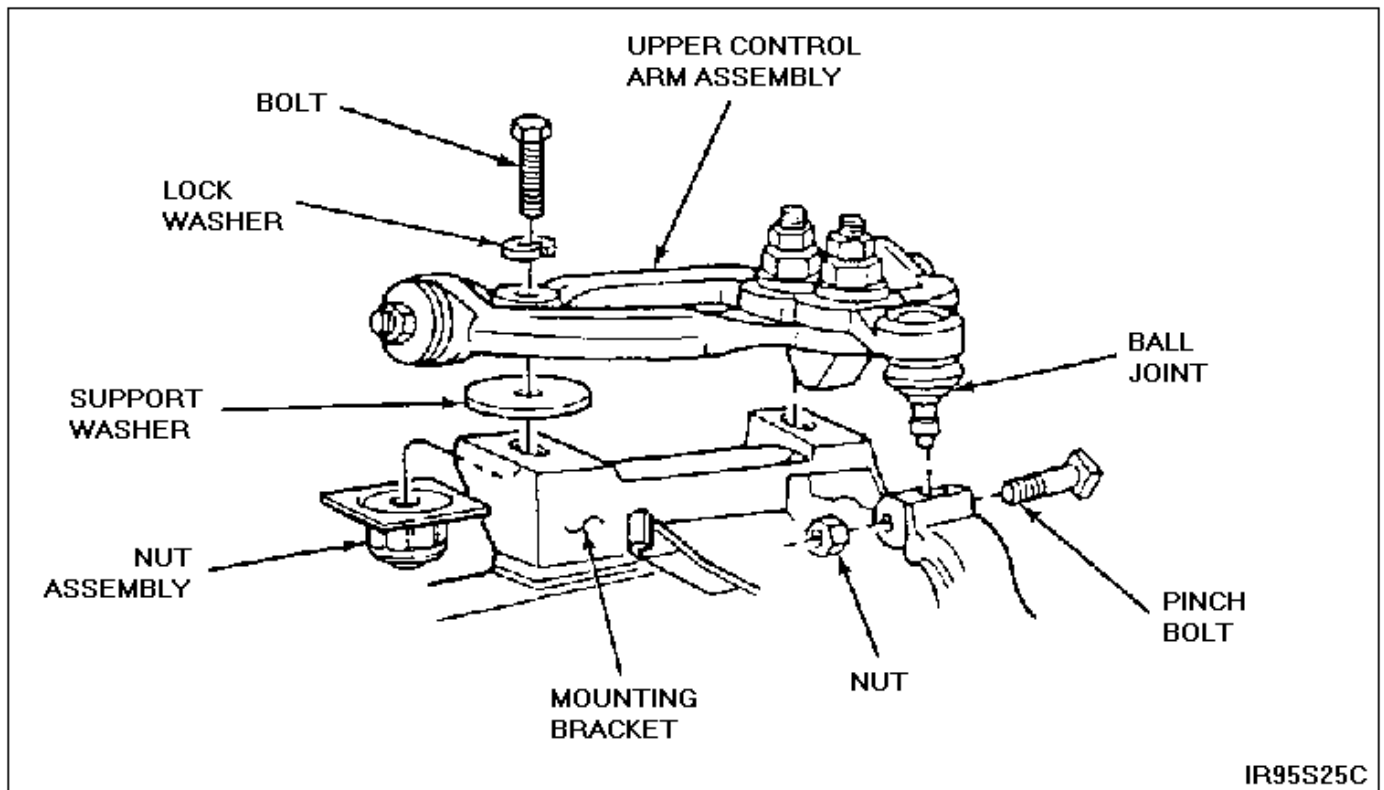


Figure 3

6. Tap pinch bolt to remove from front wheel spindle.
7. Using a suitable pry bar, spread slot to allow ball joint stud to release out of front wheel spindle and remove upper control arm from vehicle.
8. Using a wire wheel, clean the attaching points on the mounting bracket.

CAUTION

Install both washers, one for each upper arm shaft attaching bolt, between the upper arm shaft and the mounting bracket. Lock washers are to be placed between the head of the bolt and the upper arm shaft.

9. Reinstall the front suspension upper arm with supplied bolts, support washers, lock washers and nut assemblies. Position upper arm shaft near the center of the slot adjustment range. Position the support washer between the upper arm shaft and the mounting bracket, and the lock washer between the head of the bolt and the upper arm shaft. Tighten the bolts to 163-190 N-m (120-140 ft-lb). See Figure 3.
10. Connect the upper ball joint stud to the front wheel spindle and install the retaining pinch bolt and nut. Tighten the nut to 87-119 N-m (64-88 ft-lb).
11. Install wheel and tire assembly. Tighten lug nuts to 115-142 N-m (85-105 ft-lb).

CAUTION

If installing support washers on the right-hand mounting bracket, the vehicle must be pushed to the alignment rack due to the absence of coolant in the cooling system. Close radiator drain valve prior to moving vehicle.

NOTE:

The slots in the mounting bracket are used primarily during vehicle assembly to obtain initial alignment

settings. These are generally not to be used for setting alignment specifications in the field. If alignment specifications cannot be achieved by means of the adjustment cams during this repair, it will be necessary to loosen slightly the upper arm shaft bolts and move the shaft in or out to bring the front end into specification.

12. Move vehicle to the alignment rack and align front end to specifications.
13. Move vehicle off alignment rack.
14. Disconnect battery and remove from vehicle.
15. Using a MIG welder, tack weld the support washers to the mounting bracket.

CAUTION

As a precaution against damage to electrical components, disconnect the battery negative cable before using any welding equipment. Also it is advisable to connect the ground clamps close to the work area as possible. Perform all welding using Rotunda MIG Wire Feed Welder 066-00051 or equivalent, and welding wire meeting AWS-E70S specification. It is essential that repair welds particularly on load bearing parts or parts contributing to the strength of the assembly, are equivalent to the original in size, type and strength.

16. Raise the front of the vehicle, and position safety stands under both sides of the frame just behind front suspension lower arm.

CAUTION

The floor jack will support the spring load on the front suspension lower arm.

17. Position a floor jack under the front suspension lower arm, and raise jack to support front suspension lower arm.
 18. Remove upper arm-to-frame retaining bolts.
 19. Swing upper control arm towards the outside of vehicle.
 20. MIG weld the entire circumference of the washers to the mounting bracket.
 21. Clean welds of all slag.
 22. Grind off any weld material present on top of the support washers to ensure smooth, flat surface to reattach the upper arm shaft so as not to disturb the alignment.
 23. Reinstall the front suspension upper arm. Tighten the bolts to 163-190 N-m (120-140 ft-lb).
 24. Install tire and wheel assembly. Tighten lug nuts to 115-142 N-m (85-105 ft-lb).
 25. Install evaporator case assembly (right side only). Refer to either the 1993 or 1994 Town Car, Crown Victoria, Grand Marquis Service Manuals, Section 12-03A.
 26. Install radiator coolant recovery reservoir (right side only).
 27. Install and connect battery.
 28. Fill and bleed cooling system (right side only).
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