



## Front Control Arm Installation Instructions

### Lower Control Arm Instructions (AAL311):

1. Lift vehicle and support with jack stands under the frame locations. Remove wheels and tires.
2. Begin with one side of the vehicle. Remove the two caliper bolts and slide the caliper off the rotor. Leaving the brake line connected, tie the caliper up out of the way using a bungee cord or zip tie.
3. Remove the cotter pin from the outer tie rod end where it attaches to the spindle. Loosen the castle nut and remove it. Using a brass hammer, hit the spindle around the tie rod mounting hole until the tie rod breaks loose. Lower the tie rod out of the way.
4. Loosen the shock upper mounting nut and remove the bushing and washer. Loosen the two lower shock bolts and remove the shock through the bottom of the A-arm.
5. Locate the outer swaybar end link where it attaches to the A-arm. Remove the end link mounting bolts from the A-arm.

**NOTE:** An inside spring compressor is the recommended tool for removing coil springs. Disregard steps 6 & 8 if you are using a spring compressor.

6. Turn the spindle in one direction to gain access to the castle nut of the lower ball joint. Remove the cotter pin and loosen the castle nut but **DO NOT** remove it. Using a brass hammer, hit the spindle around the ball joint mounting hole until the ball joint pops loose. A pickle fork may also be used for loosening the ball joint.
7. Position a floor jack under the A-arm and lift the A-arm until there is no spring tension on the ball joint. Remove the castle nut.
8. Carefully lower the A-arm as far as it will go. Using a pry-bar, carefully pop the spring out of the spring pocket and set it aside.
9. Loosen and remove both A-arm mounting bolts and remove the lower A-arm.
10. Lightly sand or wire wheel the bushing surfaces inside the frame to remove all dirt and scale. Once cleaned, apply supplied grease to both inner sides of the mounting points.
11. Identify the proper side BMR A-arm replacement by comparing the swaybar and bump-stop locations with the OE arms. Apply grease to the outside mating surfaces of the BMR A-arm bushings but do not fill the grease fittings until the installation is complete. Mount the A-arms to the frame but do not tighten.

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**NOTE:** BMR A-arms use polyurethane bushings that are much more resistant to flex than rubber. This resistance may make it necessary to tap the A-arms into place using a rubber mallet.

12. Disregard this step if using a spring compressor. Swing the A-arm up and position a hydraulic jack underneath the A-arm. Lift the spring up and position it onto the upper spring pocket, allowing the bottom of the spring to rest on the A-arm pocket. Using a long pry-bar, pry the spring until it pops into position in the spring pocket.

**NOTE:** It may be necessary to lift the A-arm in order to get the spring pocket at the correct angle for the spring to pop into place. With the spring in position, the end of the spring should butt up against the stop in the spring cup.

13. Once the spring is seated properly in the cup, carefully lift the A-arm until the ball joint seats into the spindle. Install the castle nut and tighten. Insert a new cotter pin.

14. Re-install shock.

15. Re-connect the outer tie rod end to the spindle. Install a new cotter pin.

16. Re-install the caliper.

17. Repeat steps 2-16 for the other side.

18. To reconnect the swaybar, it is necessary to have the suspension loaded. The simplest way to do this is to drive the vehicle onto ramps. Install the wheels and tires

19. With the suspension loaded, tighten the lower control arm bushings.

**NOTE:** the vehicles weight must be on the suspension before tightening the control arm bolts. Failure to do so will result in improper bushing preload causing irregular ride height and accelerated bushing wear.

20. Re-install the swaybar end links. Tighten the bolt until the bushings just start to bulge.

21. Insert 5-6 pumps of grease into the lower ball joint. Insert 3-4 pumps of grease into each control arm bushing.

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### Upper Control Arm Instructions (AAU311):

#### Assembly:

1. Using a **7/16" wrench and socket**, install the ball joint into the ball joint mount using the provided hardware. Install the lock washer under the nut.

#### INSTRUCTIONS:

1. Lift vehicle and support with jack stands.
2. Using a jack, or by lowering the vehicle on blocks in addition to securing with jack stands, compress the lower A-Arm to ensure that the spring does not experience unintended decompression.
3. Remove the front brake caliper using a **3/8" hex key socket**, use a hanger or bungee cord to take tension off of the brake line and hold the caliper in a position that is out of the way.
4. Using a **22mm wrench**, remove the nut securing the ball joint to the steering knuckle.
5. If the ball joint remains secured to the steering knuckle, use a brass hammer or a dead blow to break the ball joint's tapered seat.
6. Using an **18mm wrench** remove the two nuts securing the A-arm's cross shaft to the frame.
7. Install the new upper control arm cross shaft to the frame using the factory hardware. Torque to **48 ft-lbs**
8. Align and insert the ball joint into the tapered hole in the steering knuckle, tighten provided castle nut and torque to **52ft-lbs**.
9. Insert cotter pin and bend the long arm of the pin over the castle nut.
10. Re-install the brake caliper and torque to **35 lb-ft**.
11. Lower vehicle.

**Please note:** the socket head cap screws in the end of the cross shaft have been torqued by BMR during assembly.

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