



BMR A-ARM INSTALLATION INSTRUCTIONS FOR GENERAL MOTORS TYPE SUSPENSIONS

NOTE: *This installation is recommended for experienced installers only. Improper spring removal techniques can result in serious injury or death. If you are unfamiliar with any portion of this installation, consult a reputable alignment shop.*

LOWER A-ARMS

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. **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.
22. Lower vehicle.



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UPPER A-ARMS with OE SPINDLE

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. Turn the spindle in one direction to gain access to the castle nut of the upper 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.
4. Position a floor jack under the lower A-arm and lift the A-arm until there is no spring tension on the ball joint. Remove the castle nut. Pivot the upper A-arm up until the ball joint comes out of the spindle.
5. Remove the two nuts that attach the upper A-arm to the frame. Remove the shims located between the A-arm cross shaft and frame and set aside in proper order for re-assembly. Slide the A-arm towards the motor until the cross shaft clears the mounting studs and remove the A-arm. *NOTE: In some instances, aftermarket headers may need to be removed in order to remove and install the upper A-arm.*
6. Install the BMR upper A-arm over the studs using the original shims. Tighten the nuts.
7. Pivot the A-arm down until the ball joint goes through the spindle. Tighten the castle nut and install a new cotter pin.
8. Re-install the caliper.
9. Repeat steps 2-8 for the other side.
10. Insert 2-3 pumps of grease into each ball joint.
11. Re-install the wheels and tires. Lower vehicle.

BMR recommends having the car aligned after the A-arm installation (See recommended alignment settings on Page 3). For optimum life, re-grease the ball joints after 500 miles and then every other oil change. Grease lower A-arm bushings every 5000 miles.

BMR A-ARM INSTALLATION INSTRUCTIONS FOR GENERAL MOTORS TYPE SUSPENSIONS

UPPER A-ARMS with TALL SPINDLE – AA018

These instructions only apply to those cars that are being converted to larger disc brakes and taller spindles. **Part Number AA018 will not work with OE spindles.**

1. Lift the vehicle to an appropriate work height and support with jack stands. Remove both front wheels/tires.
 2. Remove shocks.
 3. Start on one side of the vehicle. Remove the cotter pin and castle nut on the outer tie rod end and separate the tie rod from the spindle. Remove the brake line from the caliper and secure.
 4. Turn the spindle in one direction to gain access to the castle nuts of both ball joints. Remove the cotter pins and loosen the castle nuts but DO NOT remove them. 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.
 5. Position a floor jack under the A-arm and lift the A-arm until there is no spring tension on the ball joints. Remove both castle nuts. Pivot the upper A-arm upward until the spindle/rotor/caliper assembly can be lifted up off the lower ball joint and removed.
 6. Remove the two nuts that attach the upper A-arm to the frame and remove the A-arm from the vehicle. NOTE: Remove the shims located between the A-arm cross shaft and frame and set aside in proper order for re-assembly
- Tall spindles may be used from a 1970-1976 F-Body (Camaro/Firebird) for 11" brake rotors or from a 1978+ B-Body (Caprice/Impala) for 12" brake rotors. Regardless of which spindle is used, the lower ball joints must be matched to the spindle. In order for these ball joint to work in the OE lower A-arm, the ball joint must be machined to the A-arm hole dimension of 2.010". These modified ball joints may also be purchased directly from BMR under Part# BJ001.
7. Carefully lower the jack as far as possible to remove spring tension. WARNING: stock front springs are long and may require a spring compressor to remove safely. If a spring compressor is not available, carefully pry the spring out of the A-arm and remove.
 8. Press the modified ball joint into the lower A-arm and reinstall the arm.
 9. Locate the factory upper bump stop and remove it from the frame. Install the BMR supplied polyurethane bumpstop.
 10. Install the BMR upper A-arm (to properly identify the correct side, the short leg of the A-arm goes towards the front of the vehicle). Re-install the correct shims and tighten the mounting nuts.
 11. Install the new spindle assembly onto the upper and lower ball joints. Install both castle nuts and tighten. Insert new cotter pins.
 12. Install the new brake rotor with new bearings and seals.
 13. Install the new caliper and rubber brake line.
 14. Re-install shock. Repeat steps 3-13 for other side.
 15. Install wheels/tires and align.

Recommended alignment settings for performance street handling applications

VEHICLE	LEFT	RIGHT
1967-1969 F-Body	Caster - 3 degrees positive Camber – ¾ degree negative Toe-in - 3/32" total	Caster – 3.5 degrees positive Camber – ¾ degree negative Toe-in - 3/32" total
1970-1981 F-Body	Caster - 4 degrees positive Camber – ½ -¾ degree negative Toe-in - 3/32" total	Caster – 4.5 degrees positive Camber – ½-¾ degree negative Toe-in - 3/32" total
1964-1972 A-Body stock spindle	Caster - 3 degrees positive Camber – ¾ degree negative Toe-in - 3/32" total	Caster – 3.5 degrees positive Camber – ¾ degree negative Toe-in - 3/32" total
1964-1972 A-Body tall spindle	Caster – 4 degrees positive Camber – 0 degrees Toe-in – 1/16" total	Caster – 4.5 degrees positive Camber – 0 degrees Toe-in – 1/16" total
1978-1987 G-Body	Caster - 4 degrees positive Camber – 1 degree negative Toe-in – 1/16" total	Caster – 4.5 degrees positive Camber – 1 degree negative Toe-in – 1/16" total