

MM Rear Lower Control Arms (MMRLCA-5 and Variants)



Fits 1999-2004 Mustangs with solid rear axle.

These instructions cover MM's Heavy-Duty series control arms, part numbers MMRLCA-5 and related versions (-5.1, -5.2, -5.3). Most of the installation steps are the same between the different versions. When there are differences affecting the install the differences are noted.

The Heavy-Duty series of rear lower control arms improves performance for daily-driven Mustangs and are also suitable for open-track use. These are for Mustangs with a moderate power level (up to about 400 rwhp). They improve handling and traction with only a very minimal change in NVH (Noise, Vibration, Harshness).

MMRLCA-5

- Has a spring perch.
- Has a swaybar mount.

MMRLCA-5.1

- Has a spring perch.
- NO swaybar mount.

MMRLCA-5.2

- NO spring perch.
- NO swaybar mount.

MMRLCA-5.3

- NO spring perch.
- Has a swaybar mount.

Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

Required Tools

- 17mm, 18mm, & 19mm Socket
- 15mm, 18mm, & 19mm Wrench
- Standard Hand Tools
- Handfile and sandpaper
- Floor Jack
- 2 Jack Stands
- 100+ ft-lb Torque Wrench
- Socket for Lug Nuts
- Half-in. Drive
- Pry Bar

Installation Time

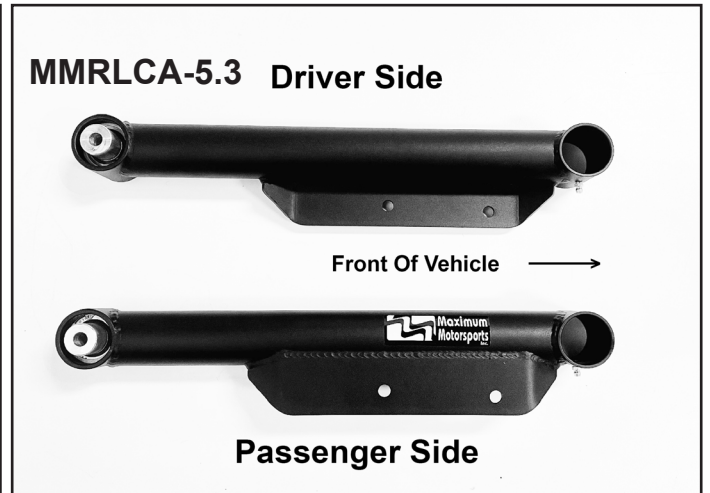
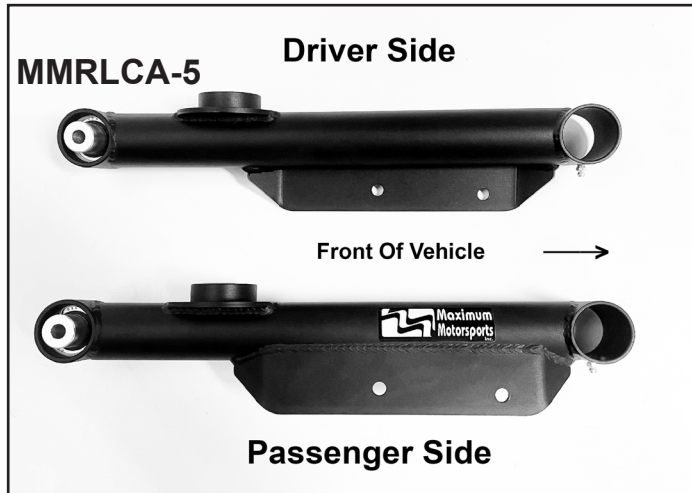
Shop: 2 Hours

Home Mechanic: 2-4 Hours

This Kit Contains

Description	QTY
Control Arm Assembly, Driver	1
Control Arm Assembly, Passenger	1
Crush Sleeve, Urethane Bushing, 1999-2004.	2
Urethane Bushing, Inner	2
Urethane Bushing, Outer	4
Urethane End Cap for Spherical Bearing	4
Grease Packet	2
Hardware Kit	1
Spacer Plate	1
Installation Instructions	1

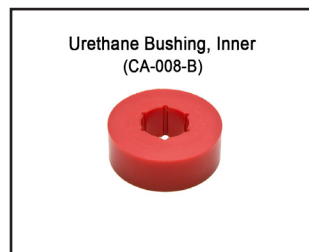
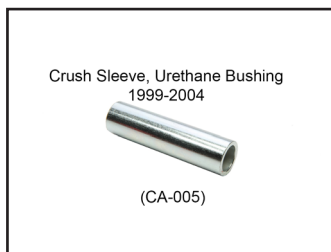
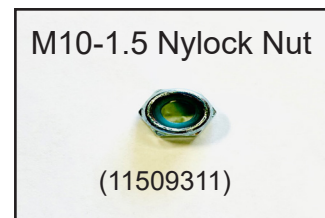
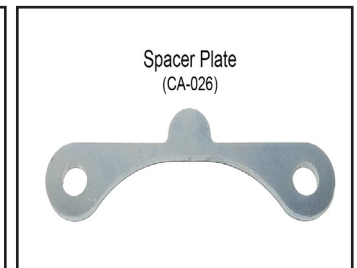
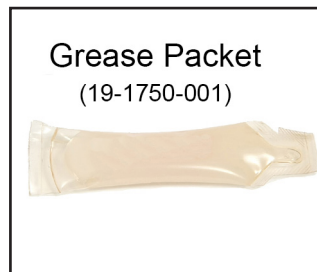
Parts and Components Identification



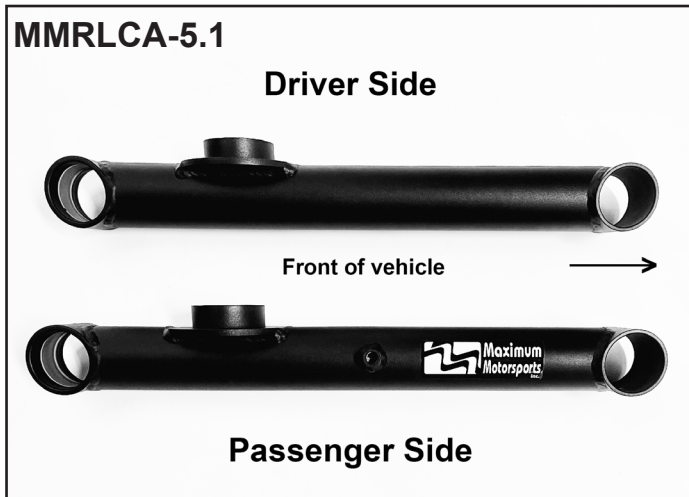
Hardware Kit Identification for:

- **MMRLCA-5**
- **MMRLCA-5.3**

Part #	Description	Quantity
CA-005	Crush Sleeve, Urethane Bushing, 14mm ID	2
CA-008-B	Urethane Bushing, Inner of 3-piece set	2
CA-009-B	Urethane Bushing, Outer of 3-piece set	4
CA-015	Urethane End Cap for spherical bearing	4
19-1750-001	Grease Packet, 5 gram	2
11115681	M10-1.5 x 35mm Hex Flange Bolt, G10.9	4
11509311	M10-1.5 Nylock Nut	4
33815	10mm G8 Flat Washer	4
CA-026	Swaybar Spacer Plate	1



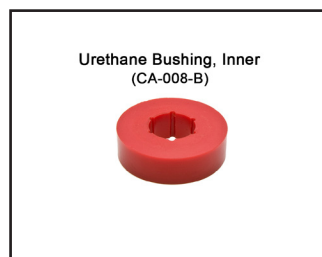
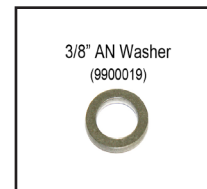
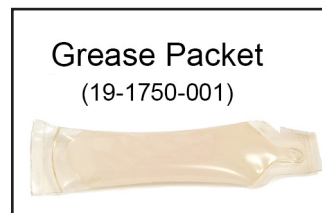
Parts and Components Identification



Hardware Kit Identification for:

- MMRLCA-5.1
- MMRLCA-5.2

Part #	Description	Quantity
CA-005	Crush Sleeve, Urethane Bushing, 14mm ID	2
CA-008-B	Urethane Bushing, Inner of 3-piece set	2
CA-009-B	Urethane Bushing, Outer of 3-piece set	4
CA-015	Urethane End Cap for spherical bearing	4
19-1750-001	Grease Packet, 5 gram	2
17102	3/8-24 x 5/8 G5 bolt	2
9900019	3/8 AN washer	2



Prepare the MM control arms for installation

1. Unpack the control arms.
2. Confirm the control arms are the correct part number and identify the Passenger side and Driver sides. For each side, also identify which end mounts to the chassis and which end mounts to the axle. For the Heavy-Duty series, the spherical bearing mounts to the rear axle. See the Parts and Components Identification pages.
3. Confirm all listed components are present. See the Parts and Components Identification page.
4. Install the 3-piece polyurethane bushing set into the chassis-end tube of the control arm. Apply a very *light* coating of the supplied grease to the outside of the urethane pieces where they will contact the inside of the chassis-end tube. *Tip: wear disposable gloves to keep the grease off your hands.*
5. Install an Outer Flanged Bushing into the chassis-end tube.
6. From the other side of the tube, install an Inner Bushing, pushing it in to seat it against the previously installed Outer Flanged Bushing.
7. Install the second Outer Flanged Bushing, seating it against the Inner Bushing.
8. Apply a thin coating of grease to the inside of the bushings. Use a small screwdriver or other tool to work the grease into the flutes of the bushings.
9. Insert a Steel Crush Sleeve through the center of the urethane bushings.
10. Apply a light coating of grease to the outside surface of the flange of each Outer Flanged Bushing, where the flange will contact the chassis after installation.
11. The next steps detail installation of the urethane End Cap Bushings. These seal the spherical bearings from dirt and moisture. Note: apply only a *very light* coating of grease to the urethane, and only where it will make contact as detailed in the next steps. Use very little grease. Do NOT allow any grease to get into the spherical bearing.
12. Apply a very light coating of grease to the inside of the center hole of the bushing, where it will contact the reducer bushing of the spherical bearing.
13. Apply a very light coating of grease to the inside of the bushing flange, only where it will contact the chassis-end tube holding the spherical bearing.
14. Install the End Cap onto the spherical bearing.
15. Install a second End Cap bushing on the other side of the spherical bearing.
16. Apply a light coating of grease to the outside surface of the flange of each End Cap Bushing, where the flange will contact the axle mounting bracket after installation.
17. Repeat for the other control arm.

Notes about Urethane Bushings

- Only a light coating of grease is required. Excess grease will be forced out when the bushing is installed, and therefore wasted.
- Urethane only squeaks when it is not properly greased.
- The supplied grease typically lasts for years.
- Do NOT lubricate urethane with a petroleum-based grease.

Removal and Installation

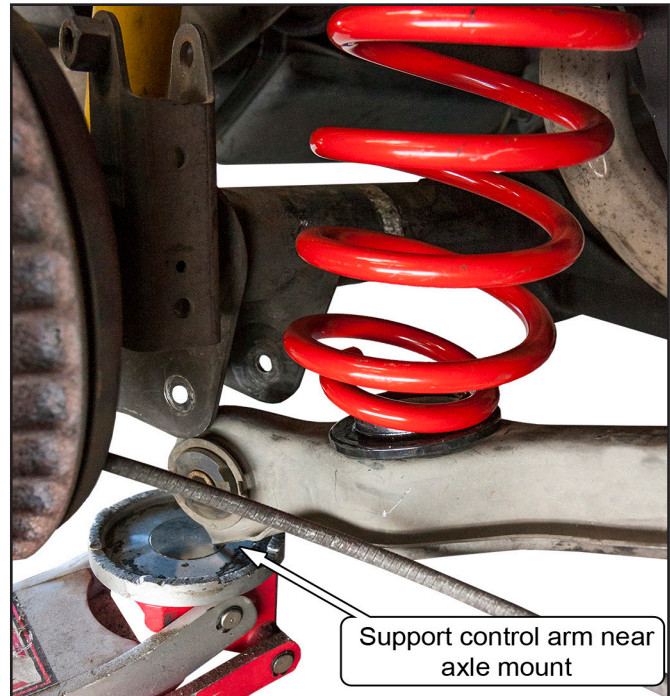
18. Block the front wheels to keep the car from rolling.
19. Jack up the rear of the car and safely support the chassis on jack stands.
20. Lower the rear axle to a height just above full droop.
21. Support the axle on jack stands.
22. Remove the rear wheels.
23. Remove the rear swaybar. There are four bolts, two per side.
Note: On 1994 and later Mustangs with rear disc brakes, the parking brake cable bracket is attached to the rearmost swaybar attachment bolt. Mustangs with drum brakes in the rear do not have this bracket.



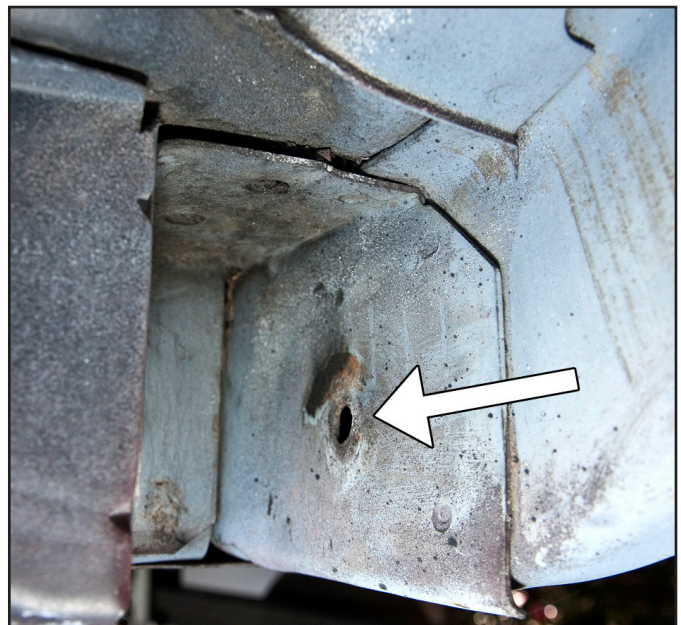
24. If so equipped, unclip the ABS sensor wire from the parking brake cable bracket.

NOTE: *Work on one side of the car at a time; remove one rear lower control arm and replace it with the MM control arm, then move to the opposite side of the car and repeat.*

25. Loosen the lower control arm pivot bolts, 2 bolts per control arm.
26. Remove the rear spring: Support the control arm near the axle mount with a jack. Remove the lower control arm pivot bolt from the axle end. Slowly lower the jack to release the spring tension. Be careful not to lower it too quickly or the spring may become dislodged and fly out, causing injury and/or damage. Once the control arm is lowered far enough the spring will be completely uncompressed and can be removed. Note the upper spring isolator; it may remain stuck in place on the chassis, or it may come out with the spring.



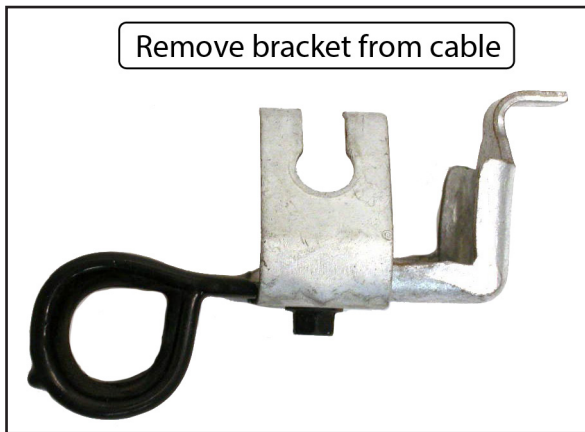
27. Remove the lower control arm pivot bolt from the chassis end and remove the control arm from the car.
28. After moving the stock control arm, check for any weld spatter or burrs on the surfaces on each side of the torque-box, around the bolt holes, where the MM urethane bushings will make contact. Use sandpaper, a file, or a flap wheel to remove any spatter or burrs. The goal is to provide a smooth surface for the outer surface of the Outer Flanged Bushing to ride against.



Reconfiguring the Parking Brake Cable Bracket

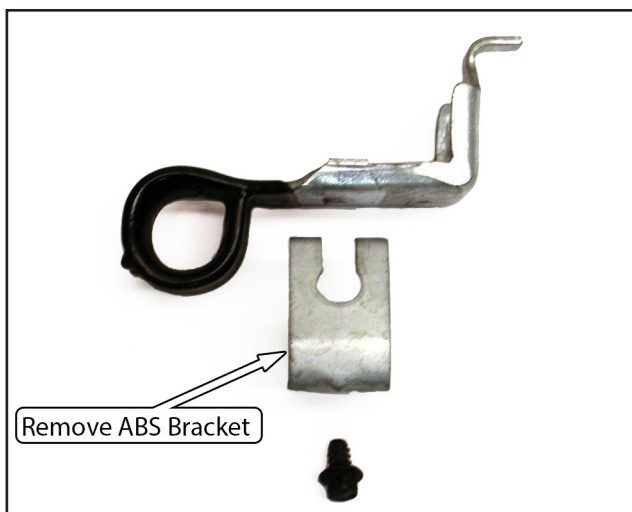
The parking brake cable bracket must be removed from the cable and flipped upside down to attach it to the MM control arm (except MMRLCA-5.1 and -5.2). *Make sure the parking brake is off (not engaged)* before starting to remove the parking brake cable bracket. If equipped with an ABS sensor wire bracket on the parking brake cable bracket, orientation of the ABS sensor wire bracket must also be changed.

29. Remove the E-clip securing the parking brake cable housing to the caliper.
30. Pull on the end of the inner cable with pliers to unseat the cable end from the actuating lever of the caliper.
31. Pull the cable housing away from the caliper.
32. Slide the parking brake cable bracket off the cable.

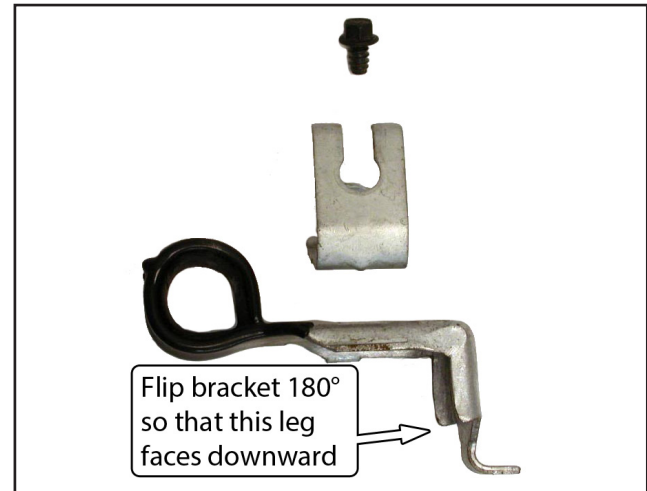


NOTE: Steps 33-36 apply to MMRLCA-5 and MMRLCA-5.3. Skip these steps for MMRLCA-5.1 and MMRLCA-5.2

33. Remove the ABS sensor wire bracket from the bottom side of the parking brake bracket.



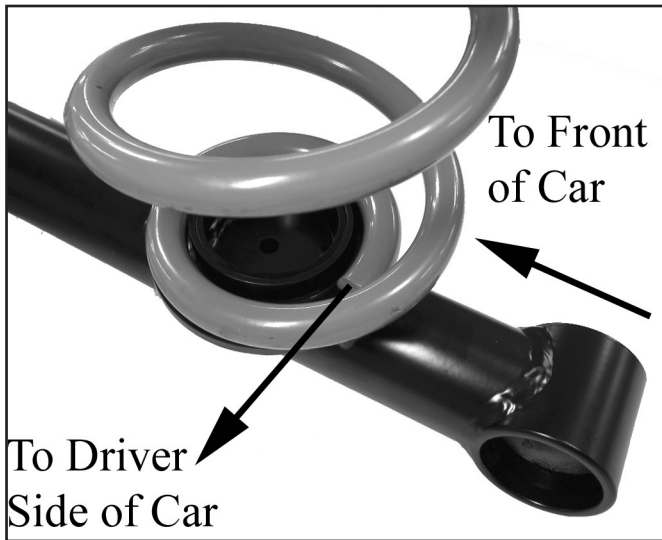
34. Flip the parking brake bracket 180 degrees.
35. Place the ABS sensor wire bracket on top of the parking brake bracket.



36. Attach the ABS bracket with the original screw, coming down from above.

Installing the Control Arm

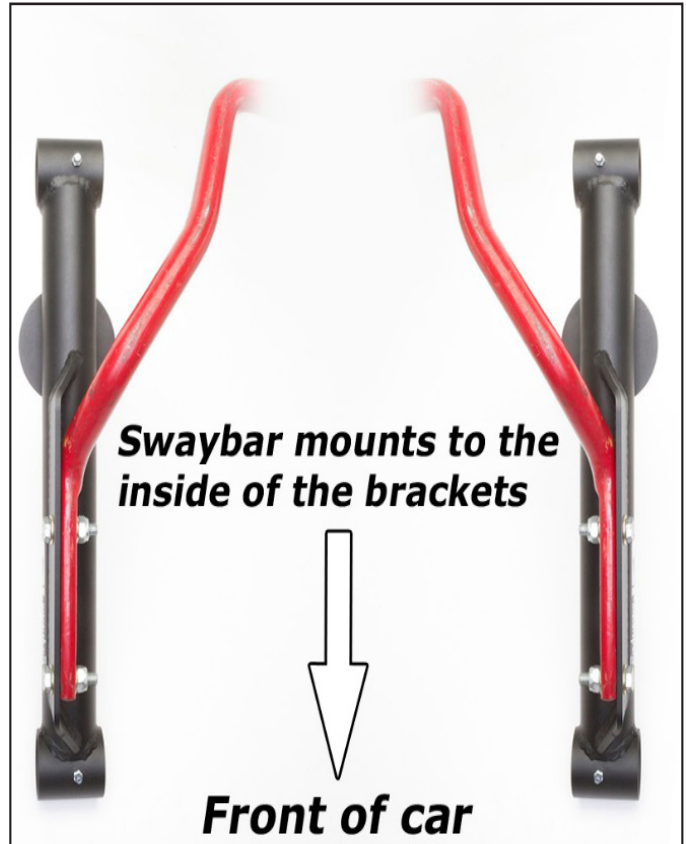
37. Slide the parking brake bracket back into place on the parking brake cable.
38. Install a lower spring isolator onto the spring register (except MMRLCA-5.2 and -5.3).
39. Slide the chassis end of the MM control arm into the control arm mount (also called a torque box) on the chassis.
40. Insert the control arm mounting bolt into place, and thread the nut on.
41. Place the rear spring in position on the control arm spring register (except MMRLCA-5.2 and -5.3, which require a rear coil-over conversion). Be sure the spring is correctly seated on the lower spring perch, with the "pigtail" oriented at the rear, as shown in the photo below.



- 42. Use the jack to raise the control arm into place on the axle. Be sure the top of the spring is correctly seated in the upper spring isolator on the upper spring perch.
- 43. Install the pivot bolt and nut to secure the control arm to the axle housing.
- 44. Unlike with rubber-bushed control arms, the car does not need to be at normal ride height to torque the pivot bolts.
- 45. Torque the chassis-end 14mm pivot bolt to 111 ft-lb.
- 46. Torque the axle-end 14mm pivot bolt to 111 ft-lb.
- 47. Repeat for the other MM control arm.

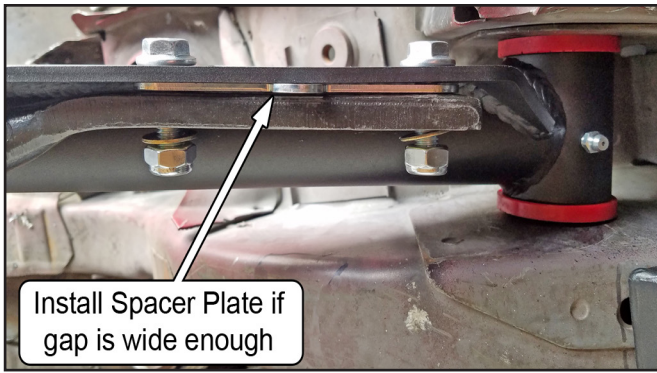
Final Assembly

- 48. Reinstall the rear swaybar (except MMRL-CA-5.1 and -5.2). Using the supplied 10mm flange headed bolts, 10mm lock nuts, and 10mm flat washers.



- 49. If needed, use the supplied Swaybar Spacer Plate. There is a surprisingly wide production tolerance range for Mustang rear swaybars, both OEM Ford and aftermarket. The MM Swaybar Spacer Plate helps mount swaybars that were made on the narrow end of the production tolerance. It does not matter which control arm the spacer plate is mounted with.





50. Attach the parking brake cable bracket to the rearward swaybar mounting bolt on each control arm, as in photo on next page (*except MMRLCA-1.1 and -1.2. See the next step*). Tighten the swaybar mounting bolts to 41 ft-lb.

51. MMRLCA-5.1 and -5.2: attach the parking brake cable bracket to the nut welded to the control arm. It's located on the outboard side of the control arm, toward the axle end. Use the supplied 3/8-24 G5 bolt and 38/” AN washer. Torque these bolts to 35 ft-lb. Note that with these control arms the bracket should not be flipped as previously described.
52. Reattach the ABS sensor wire to both ABS brackets.
53. Reattach the parking brake cable to the caliper.
54. Verify the parking brake works correctly. If necessary, consult a service manual to adjust to factory specifications.
55. Reinstall the rear wheels.
56. Lower the car to the ground.
57. Torque the lug nuts.
58. Drive and enjoy!