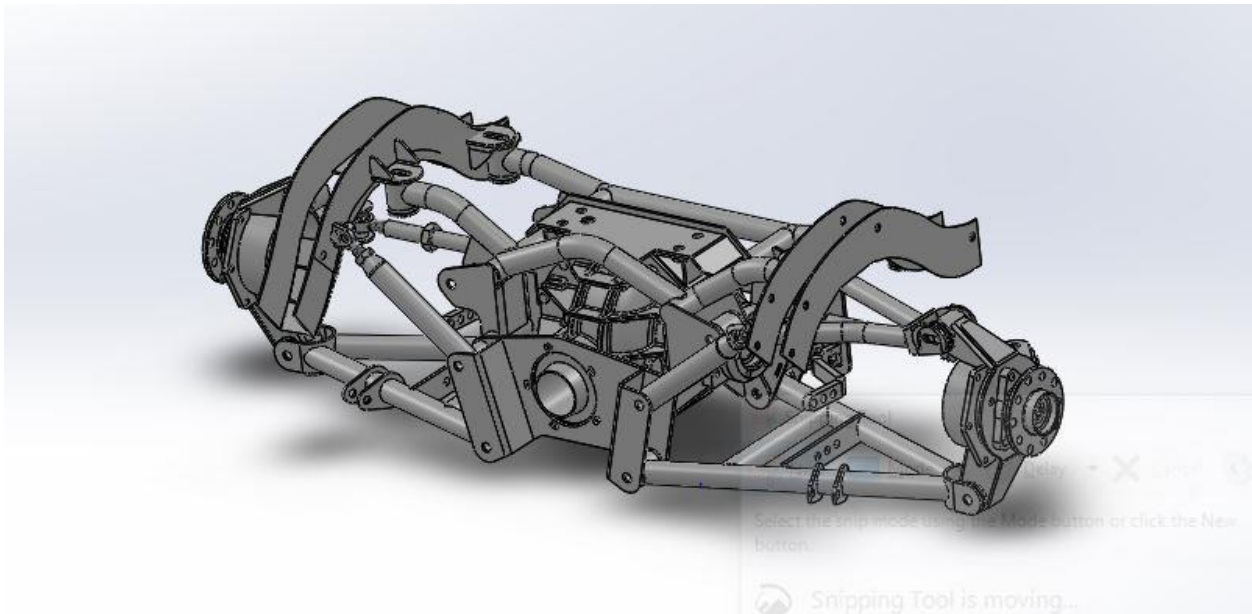




INSTALLATION INSTRUCTIONS

68-70 MOPAR B-BODY

Independent Rear Suspension



Please read these instructions *completely*
before starting your installation.

Assemble suspension on vehicle before powder-coating to ensure proper fitment, and to make modifications if necessary.

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Main Cradle Assembly

5/8"-11 x 4" Hex Bolt	(4)
5/8" Washer, SAE	(4)
5/8"-11 Nylock Nut	(4)
1.38 Inch OD Bushings	(8)
7 Gauge washer	(4)

Front Pinion Support Tube

1/2"-20 x 1-1/2" Hex Bolt	(2)
1/2"-20 Nylock Nut	(2)
5/8"-11 x 4" Hex Bolt	(2)
5/8"-11 Nylock Nut	(2)
5/8" Washers	(4)

Upper & Lower Control Arm Hardware

5/8"-11 x 4" Hex Bolt	(6)
5/8"-11 x 6" Hex Bolt	(2)
5/8"-11 Nylock Nut	(8)
5/8" Washers	(16)
5/16"-24 x 1" Hex Bolt	(4)
5/16" AN Washers	(4)

Steering Arm Hardware

5/8"-11 x 4" Hex Bolt	(2)
5/8"-11 x 3.25" Hex Bolt	(2)
5/8" Washer	(8)
5/8"x1/2" High Misalignment Rod End Bushings	(8)
5/8"-11 Nylock Nuts	(4)
3/4-16 Jam Nut, RH	(2)
3/4-16 Jam Nut, LH	(2)
Rod End, 3/4" Spherical Bearing 3/4-16 RH Thread	(2)
Rod End, 3/4" Spherical Bearing 3/4-16 LH Thread	(2)

Uprights, Left & Right

1/2" Cam Bolt Adjuster Assembly	(2)
5/8"-11 x 4" Hex Bolt	(2)
5/8" Washers	(2)
5/8"-11 Nylock Nuts	(2)

Hardware Kit (Continued)**Sway Bar, Rear**

1/2"-20 RH Male Rod End W/ Stud	(2)
1/2"-20 LH Female Rod End W/ Stud	(2)
1/2" Jam Nut	(2)
1/2"-20 x 2" Hex Bolt	(2)
1/2"-20 Nylock Nut	(4)
7/8" Diameter Anti-Roll Bar, Rear	(1)

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Sway Bar Bushing Bracket & Bushings, Rear (2)
3/8"-16 x 1.25" Hex Bolt (4)
3/8" AN Washer (8)

Brake Bracket Adapter

3/8"-16 x 1.25" Button Head Bolt (6)
3/8" AN Washers (12)
3/8"-16 Nylock Nuts (6)

C-4 Corvette Brake Option #1:

C-4 Brake Caliper w/ integral parking Brake (2)
C-4 Brake Caliper Bracket (2)
Brake Bracket Adapter, C-4 Caliper to Upright (2)

Wilwood Brake Caliper Option #2:

Wilwood Forged Dynalite Brake Kit (2)
Brake Bracket Adapter, Single Caliper (2)

Wilwood Brake Caliper and Mechanical Parking Brake Option #3:

Wilwood Forged Dynalite Brake Kit (2)
MC4 Mechanical Parking Brake Calipers (2)
Brake Bracket Adapter, Dual Caliper (2)

Rotor Options:

C-4 Plain Rotors, Steel (2)
Dimple Drilled & Slotted, Coated, Black
Wilwood, Plain Rotors
Wilwood, Drilled & Slotted Rotors

High HP CV Shafts (2)

CV Shaft Hardware

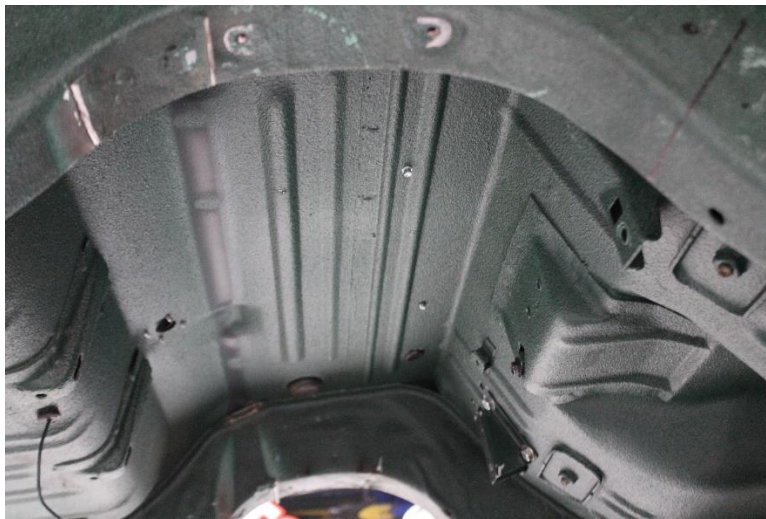
M10X1.5X 80MM Socket Head Cap Screws (12)
M10 Split Lock Washers (12)

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NOTE.. This IRS requires you modify the gas tank or replace with an aftermarket one that is 4 inches shorter.

- 1) Start by jacking up your car and supporting it on sturdy jack stands. Remove the exhaust, gas tank, driveshaft, axle, and any associated suspension/ brake components. Be sure to clean the frame rails and any areas surrounding the mounting points for the IRS.
- 2) Next you will need to remove the factory shock crossmember and bump stop attachment points from the vehicle. You can use a spt weld cutter or cutting wheel for this.



- 3) Position the left and right saddles onto the rear frame rails as seen below. To properly locate the right and left saddles slide them up on to the frame rail and locate them by using the back plate to align with the existing hole in the frame rail as seen below. This should get you very close to the factory wheelbase Do not drill your holes until you have completely mocked up the IRS and checked wheel base.

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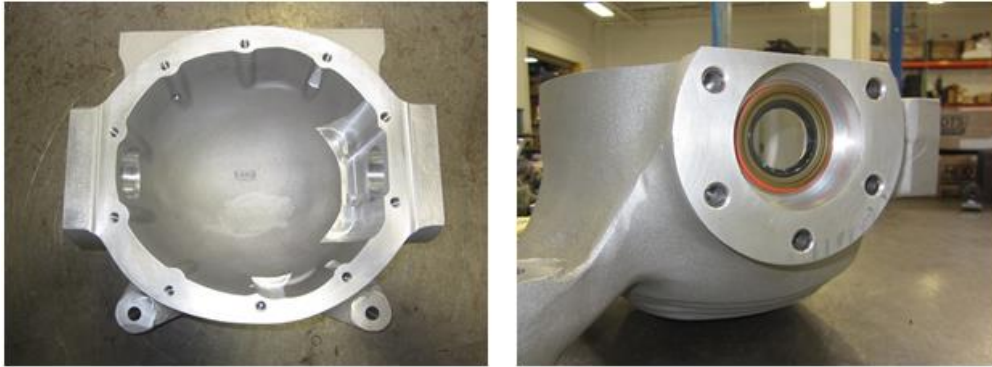




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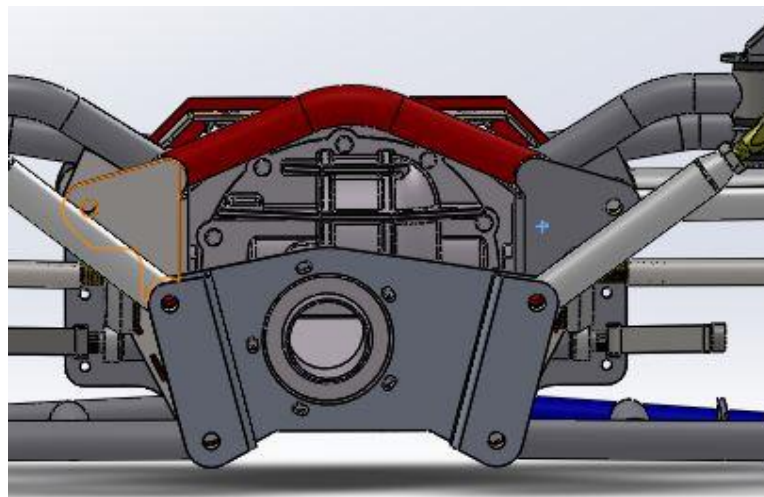


- 4) Next assemble the rear end center section. Install the stub axle seals into the housing. Insert one seal into each side of the housing ends, with lips of the seal pointing inward, slowly tap the seals in until they bottom out on the shoulder of the bore. A seal installation tool will ensure that the seals are installed square and flush to the housing step. Do not tap on the seal directly, as the mallet could deform the seal.



- 5) Install the 3RD member into the housing using the 3/8" x 1-1/4" long threaded bolts and AN washers. Install using the Ford 9" third member gasket and/or gasket sealer. **Torque to 40 ft-lbs.** The front pinion plate can be installed after the 3rd member sealant has cured.

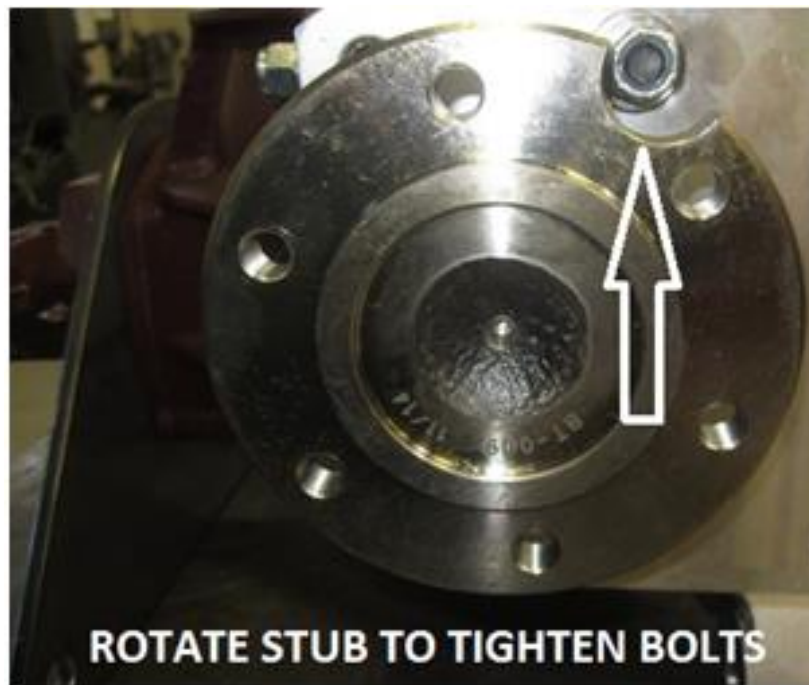
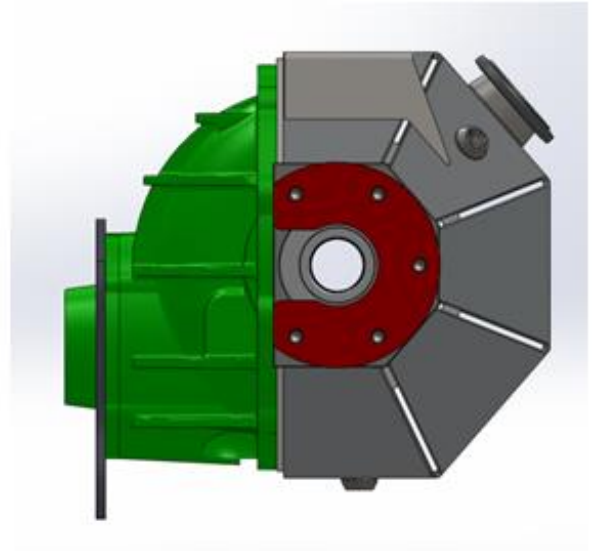
Remove the five front bolts from the pinion retainer cover. Install the pinion mounting plate on the pinion carrier as shown below. Reuse bolts and washers that were just removed. Use thread locker on the bolts. **Torque the 3/8 bolts 35-40 ft-lbs**



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- 6) Now install the stub axles into the housing using white grease on the splines. The longer stub axle goes into the passenger side. Slide the stub axle into the housing until the bearing bottoms out in the housing bore. Install the bearing retainer plates using the 3/8"-16 x1" long bolts and washers to hold the axles in place. **Torque the 3/8" bolts to 40 ft-lbs.**



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- 7) Install the Center section into the IRS Cradle.



- 8) Assemble the bushings and sleeves into the upper cradle mounts and install the vent and drain plugs. NOTE this would now be a good time to fill the center section.

- 9) Install the upper and lower control arms onto the IRS cradle.



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- 10) Next install the aluminum CV adapter spacer, to the end of the half shafts and use the twelve M10 x 80mm long bolts and split lock washer to fully install the CV joint axles to the axle stubs. Use thread locker on the bolt and **Torque to 51-57 ft-lbs**



- 11) Install the outer bearing hub assemblies using the six M12 x 60mm long bolts and washers on the uprights. If the hub assembly does not seat flush against upright, carefully open the hole using a barrel sander. Use thread locker on the M12 x 60mm bolts. **Torque bolts to 65 ft-lbs**



- 12) Next insert the eight polyurethane bushings in to the left and right uprights. Then insert the four bushing sleeves, use grease to help installation. **Note:** If you opted for the bearing upgrade you will be installing them at this time

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- 13)** Install the upright to the lower control arm. Apply grease to the splines of the CV axles. Install the axles into the bearing assemblies until the CV joint bottoms out against the hubs. Place the nut back onto the threads but DO NOT tighten.



- 14)** Next use the Cam adjuster bolts to attach the upper control arms to the uprights. Make sure the Cam bolt washers fit into the "C" shaped grooves welded on each side of the uprights. At this time you can tighten the axle nut

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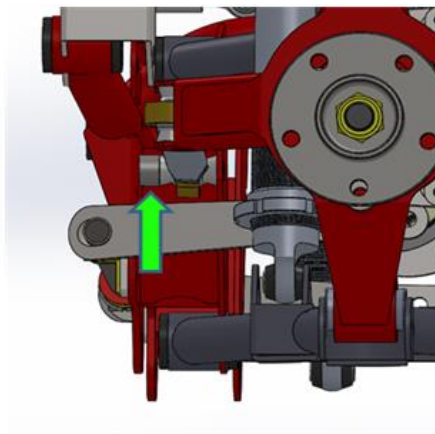




- 15) Then install the steering arms, placing the steel spacer on the rear side, and the two misalignment spacers on each end of the rod ends. Attach the steering arms to the main cradle and then the uprights where you will only have the misalignment spacers.



Drivers Side



Passenger Side

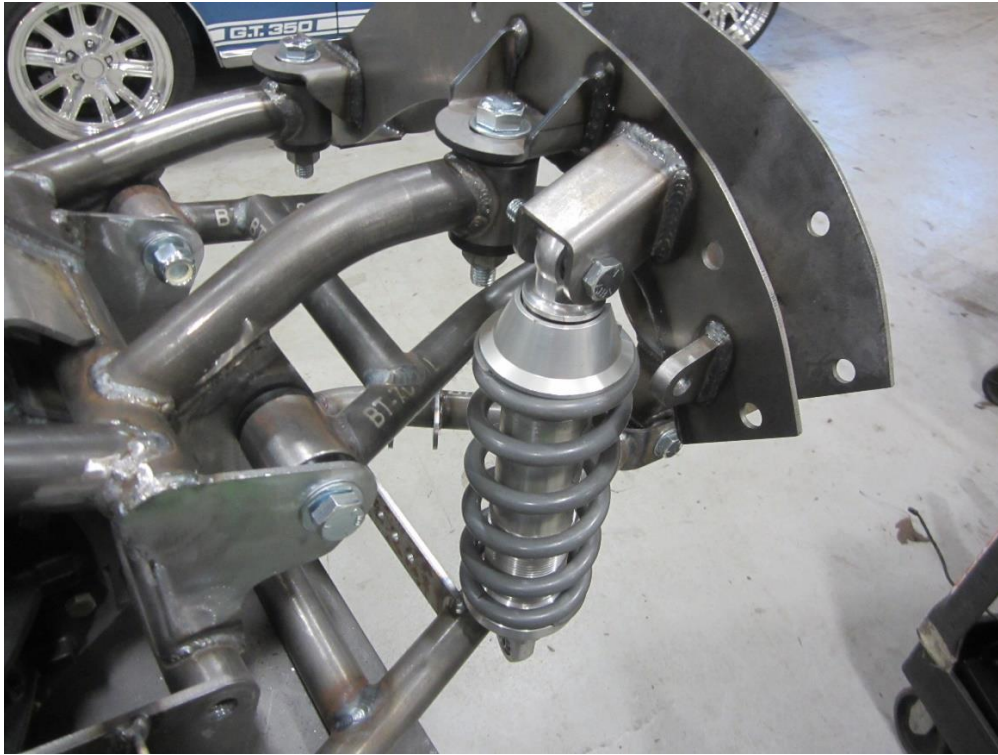


Drivers Side

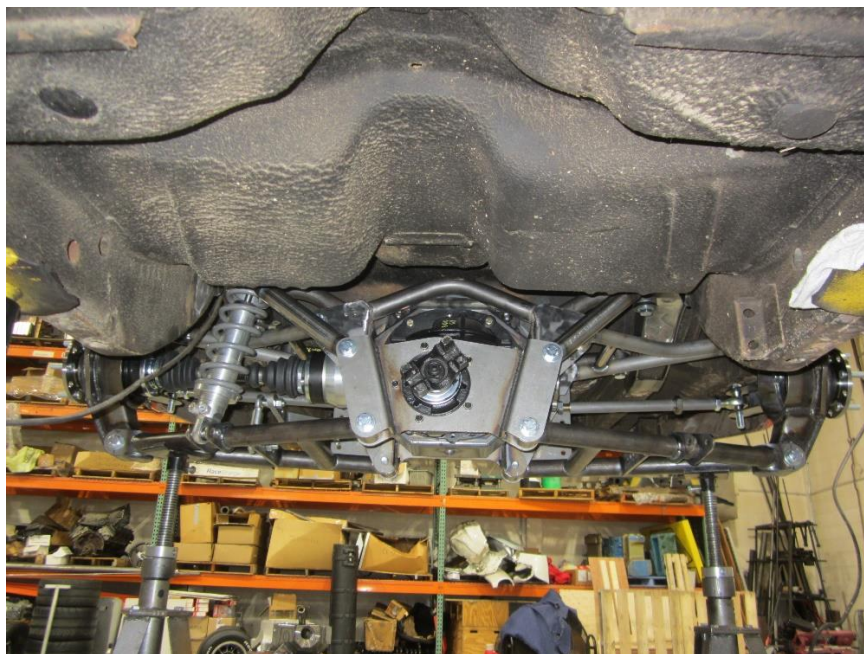
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- 16)** Position the IRS assembly under the vehicle and bolt to the 4 upper mounting brackets. At this time check the wheelbase and make sure it is correct. You can then drill your mounting holes for the saddles and bolt them in.** Picture shown out of the car for bolt orientation reference**



- 17)** You can now install your assembled coil overs



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- 18) Assemble the front pinion supports and install them to the IRS assembly. Then position them on the saddle tab located on the saddle and bolt them in. Some adjustment may be necessary



- 19) At this point be sure to recheck and tighten all your bolts you can also reinstall your driveshaft, and any other ancillary components you removed.

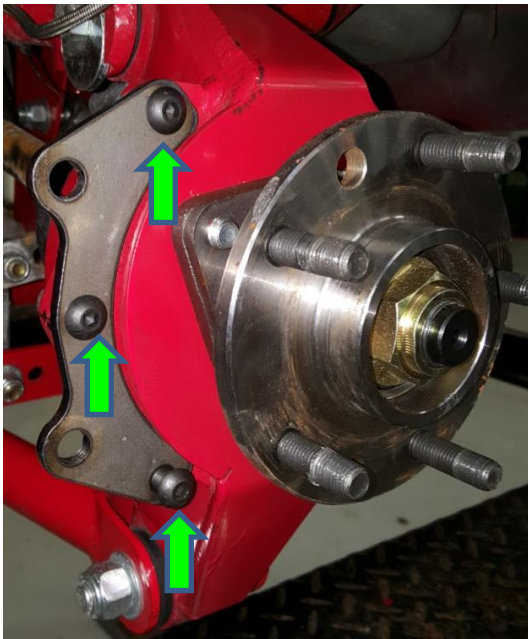
There are three different brake options that are available for the IRS. The first option includes: the C-4 Corvette calipers with integrated parking brake. The second option includes the Wilwood calipers, no parking brake. The third is option is the Wilwood brake calipers with mechanical parking brake caliper. Each option has its own brake caliper mount, make sure your kit has the correct mount.

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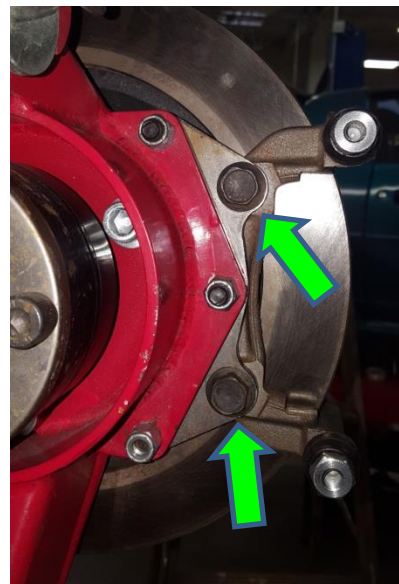


Brake Option 1:

The following are instructions to install the C-4 calipers. Use the six 3/8"-16 x 1.25" button head screws, washers and nylock nuts. Fasten the brake caliper adapter to the outside side mount located on the front side of the uprights. **Torque the 3/8" bolts to 20 ft-lbs.** Next slide the rear rotors on over the wheel studs, then install the C-4 brake caliper brackets. Note the rear rotor are fastened though the clamping force of the lug nuts after you install the rear wheels. Use the four supplied M12x20mm Flange bolts to fasten the C-4 Caliper mount brackets to the adapter. **Torque bolts to 131 ft-lbs**



Brake Caliper Adapter



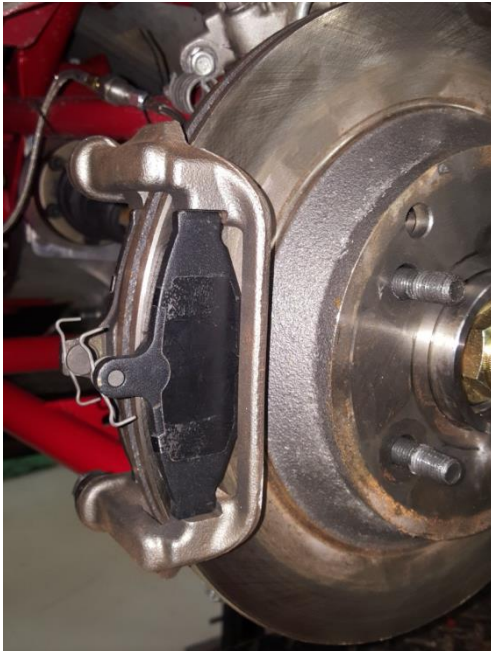
C-4 Brake Caliper Mount

Install the brake pads as shown note the pad with the anti-rattle clip goes on the inside of the rotor. Next install the brake caliper, make sure that the two torsional springs on the pads are preloaded evenly against the underside of the brake caliper. Note the torsional springs hold the pads down into the caliper bracket and are necessary so the pads don't get knocked out of

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place and wear unevenly. Use the two M8x20mm long bolts to attach the brake caliper to the caliper pin sliders. We recommend you use thread locker on these bolts or safety wire the bolts so they don't come loose.



Brake Option 2:

The following instructions are for mounting Wilwood brake calipers. We recommend reading through the instructions that come with the Wilwood brake kit. First use the six supplied 3/8"-16 x 1.25" long button head screws, washers and nylock nuts to mount the caliper adapter to the outside side mount located on the uprights. **Torque these 3/8" bolts to 20 ft-lbs,**

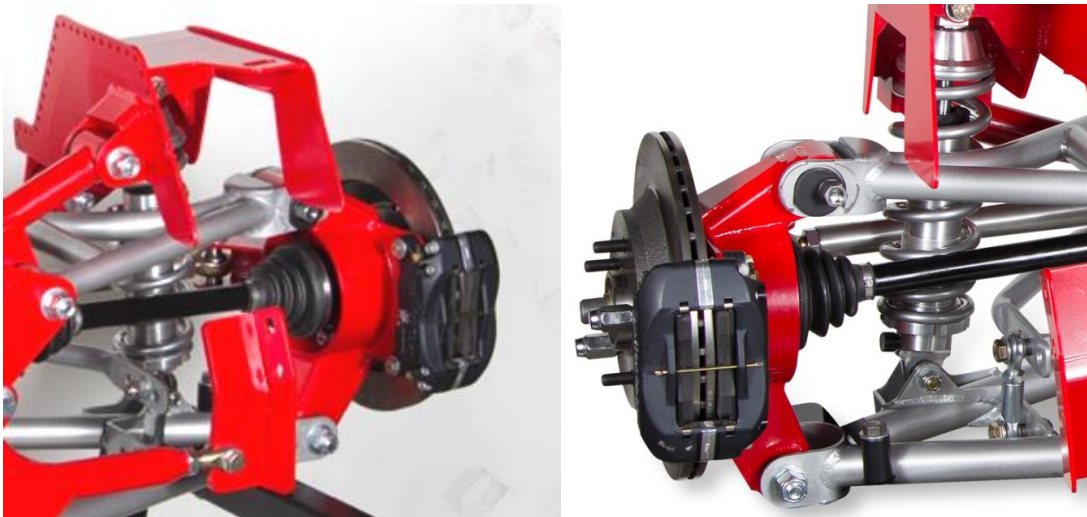
Then slide the rear rotors on over the wheel studs. Next install the brake calipers, use the four 3/8"-24 x 1.25" long hex bolts, .063" thick washers and .032" shim washers to mount the

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calipers, to the caliper adapter bracket. Use the .032" shim washers to space the caliper it is positioned on center with the brake rotor. Use thread locker on the caliper bolts. Thread the bolts into the caliper brackets. Spread the end of the cotter pin in. **Torque bolts to 20 ft-lbs..**

Reference the Wilwood instructions for correct caliper spacing diagram and verify the alignment is correct. Note each caliper adapter bracket should have two clinch nuts that are pressed into it. Make sure the clinch nuts are facing away from the center of the car. See the Wilwood instruction diagrams for more details. These instructions can also be found online if they are missing from your kit. Don't forget to slide in the brake pads and cotter pin and spread the cotter pin ends.

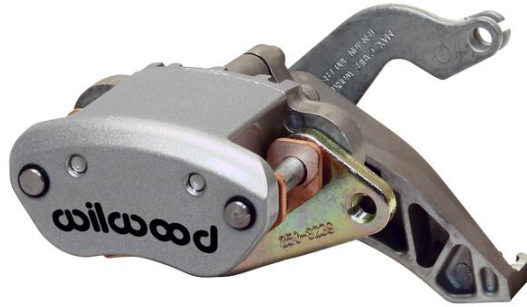


Option 3:

The third option uses both the Wilwood brake caliper and MC4 Mechanical parking brake. Both calipers mount on the same adapter bracket. Follow the instructions listed above in [Option 2](#) for mounting the brake calipers. Then refer to the Wilwood instructions for mounting MC4 parking brake calipers.

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2nd Brake Rotor Options If you have the dimple drilled and slotted rotors, pay close attention to the arrow on the rotors. The wide aperture slots on these brakes are designed to draw cool air under the brake pad and rotor interface and help cool the temperature of the brake pad during heavy braking.

If you have the Spec 37 Rotors look for the small directional arrow located on the inside of the rotor and mount accordingly. When attaching the C-4 brake hat to the rotor use removable thread locker on the 5/16-18 button head Torx head screws. Follow the recommended break in procedure provided in Wilwood instructions.

After you have installed your brake choice you can run your new lines and bleed the system.

Finally, you are ready to set the alignment of your vehicle. Be sure to do so with the arms and shocks set at ride height. You may want to take the car to an alignment shop for. If you have a digital angle finder and toe plate and want to align it yourself it's pretty easy. Start by loosening the cam bolt adjuster nut located in the top upright adjuster to set camber. The cam bolts are on eccentric cams, so when the bolts are rotated about the center, the cams will tilt the upright and vary your camber. When you achieve your desired camber setting; tighten the cam nut assembly down to lock the setting in place. Just be sure that both sides have equal camber settings, or the car will tend to pull to one side and have uneven tire wear.

To set the vehicle toe, loosen up the jam nut on each side of the steering arm. Turn the steering arm to set the toe to the specification below. Use the machined flats on steering arms to lengthen or shorten the link. When you achieve your desired toe setting, lock both jam nuts down while holding the steering arm across the machined flats.

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Here are the recommended alignment specifications:

Alignment Specifications:

Camber: 0° - .5° Negative

Toe: 0 - 1/16 Toe-In

Since you are now to the point where you have a finished, running car it is time to test drive it. After a few hundred miles, double check the ride height and the alignment. The springs may have settled, which would change the ride height. Re-adjust the ride height before changing the alignment. After this initial setting period, the springs and bushings should have pretty much taken their final set. Recheck all your nuts and bolts to make sure none have loosened.

****If you purchased a sway bar for your IRS please see the instructions that are included with it for install****

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