



Installation Instructions for EMPI Type 2 Front Disc Brake Kits

Part # 22-2935-0 (55-63) - Part # 22-2937-0 (64-66) - Part # 22-2938-0 (1967) Part # 22-2940-0 (68-70)

Please Read First

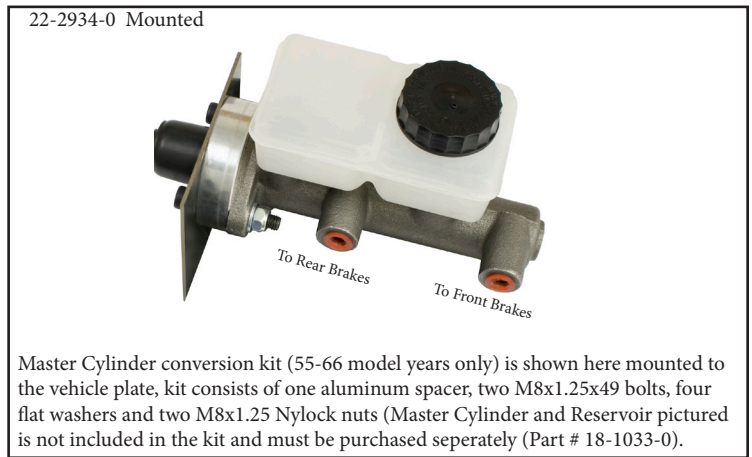
These instructions are for the four Type 2 disc brake conversion kits that EMPI offers. Please read this entire set of instructions before proceeding with the installation. Any instructions that are Safety related are listed in ***Bold Italic*** typeface and must be strictly adhered to. These kits will not work with EMPI 22-2948 Drop Spindles.

These step by step instructions should be read before you start to do any work and you should be able to understand them completely. If you do not have the resources to do this installation, then have it performed by a qualified mechanic. ***Failure to follow these directions could result in damage to your vehicle or possible bodily injury.***

Master Cylinders

All four EMPI Type 2 disc brake conversion kits listed within these instructions are supplied with a new OEM design master cylinder that does not have a residual check valve (except kit 22-2938-0 for 1967 model year which does have a rear brake residual check valve). On other kits we have placed an 'inline' residual check valve and a 7.5" steel brake line. These items are to be placed inline for rear brakes if they are Drum Brake design. If the rear brakes are Disc Brake design the residual valve is not necessary.

On the early Type 2 (55-63 and 64-66) a single circuit OEM design master cylinder is supplied in the kits. If you wish to upgrade to a late model dual circuit master cylinder you must also use a conversion kit for correct spacing between the master cylinder and the pedal rod. Both these items are available from your EMPI dealer. The Master Cylinder part number is 18-1033-0 which includes the reservoir that attaches directly for easy installation. The conversion kit number is 22-2934-0 which includes the spacer, dust boot and longer bolts to complete the installation.



The four different kits for Type 2 that EMPI offers are pictured below and on the next page

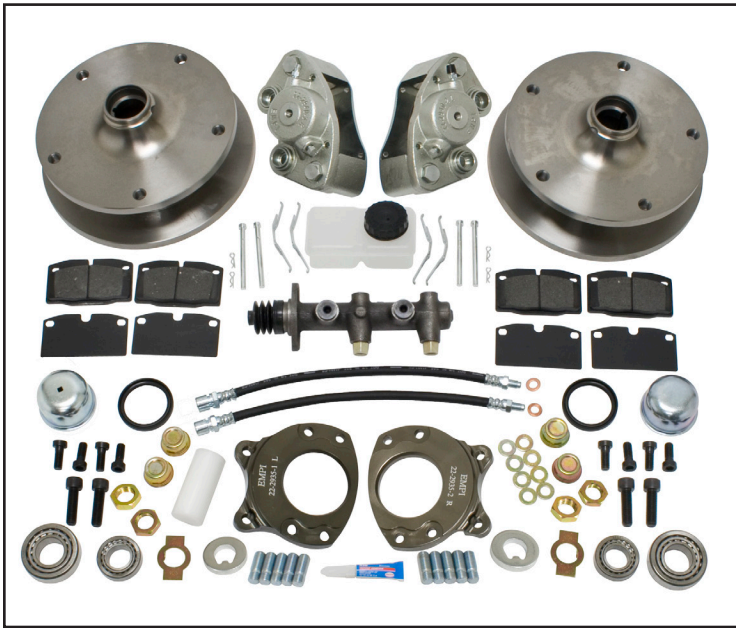
Part # 22-2935-0 (55-63 Model Years, LH and RH Drive)



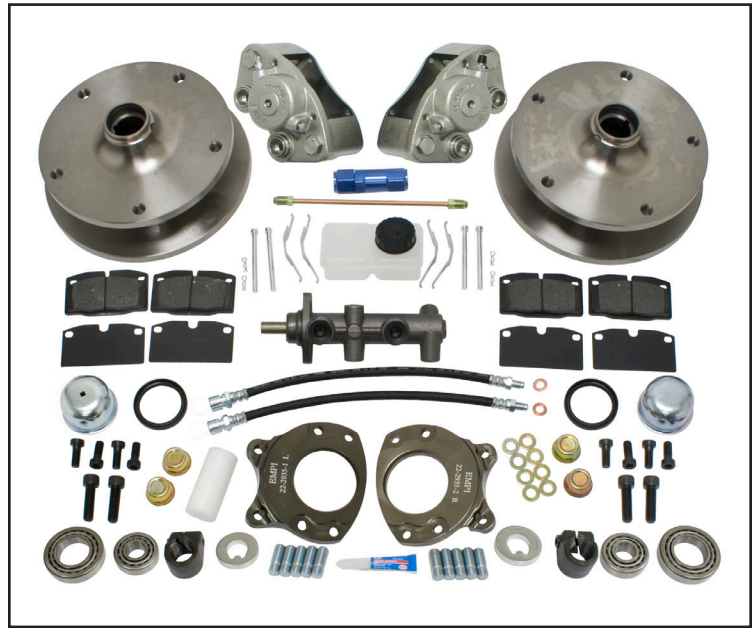
Part # 22-2937-0 (64-66 Model Years, LH and RH Drive)



Part # 22-2938-0 (1967 Model Year, LH Drive Only)



Part # 22-2940-0 (68-70 Model Years, LH Drive Only)



Please use the checklist below to ensure that there are no missing parts before you begin, then proceed to step #1 (This checklist covers all four type 2 disc brake kits, there may be items listed on the checklist that do not apply to your particular kit, in those cases the applicable years are listed behind the description).

Master Cylinder information. When converting from 4 wheel drum brakes to front disc/rear drum combination the master cylinder must be replaced. *Failure to replace the master cylinder may lead to premature wear of the front disc pads and disc rotors due to excessive residual pressure from the check valve found in drum brake master cylinders (front disc pads will continually make contact with the disc brake rotor).* Failure to utilize these components will void the warranty of this brake conversion kit.

DO NOT DISCARD ANY PARTS until the installation is complete.

Qty.	Description
2	Inner Wheel Bearing and Race (Race already installed)
2	Inner Grease Seal
2	Outer Wheel Bearing and Race (Race already installed)
2	Wheel Bearing Thrust Washer
2	Wheel Bearing Spacer* (55-63 models only)
4	Spindle Nut* (55-67 models only)
2	Spindle Nut Lock Plate* (55-67 models only)
2	Spindle Lock Nuts (68-70 models only)
2	Front Grease Cap (left & right are different)
2	Disc Brake Rotor
10	M14x1.5 Lug Studs
2	Caliper (left & right are different)
2	Caliper Brackets (left & right are different)

Qty.	Description
8	M10x1.5x25 Caliper Bracket Bolt
8	3/8" Hardened Flat Washer
4	M12x1.5x40 Caliper Mounting Bolts
4	Caliper Bolt Dust Cover
2	355mm Flexible Brake Hose
4	Disc Brake Pads w/adhesive backing plate
1	Residual Check Valve*
1	7.5" Steel Brake Line*
1	Caliper Hardware Kit
1	Master Cylinder
1	Master Cylinder Reservoir
1	Reservoir Sealing Washer (55-66 models only)
1	Caliper Bolt Dust Cover Installation Tool
1	Loctite 430

*Specified Kits

Installation Instructions

- STEP 1: To start, secure the vehicle on a level, hard surface. Block the rear wheels and set the emergency brake, loosen the front lug nuts while the front wheels are still on the ground, but do not remove yet.
- STEP 2: Elevate the complete front suspension off of the ground and *use approved jack stands to support the weight of the vehicle. (Do not use the jack only to support the vehicle.)*
- STEP 3: Remove both front wheels.
- STEP 4: Remove the front brake drum on the driver's or left side, making sure you remove the inner wheel bearing and old grease seal.
- STEP 5: Loosen and remove the rubber brake hoses from metal brake line at the pan.
- STEP 6: Remove the four bolts that hold the drum brake backing plate to the spindle. Remove the complete backing plate (Including brake shoes and wheel cylinder with hose).
- STEP 7: Clean and inspect your drum spindle, making sure that the spindle stub is in good condition. *If the spindle is damaged or shows signs of excessive wear, you should replace it before you install your new brake kit.*
- STEP 8: It is very important that you thoroughly clean the mounting surface of the spindle before installing the new caliper bracket. This surface must be free from anything that will cause the bracket to bind or not sit flat on the spindle. Check to ensure that the M10 bolts will thread all the way down easily, if they do not then the threads must be chased with a M10x1.5mm tap *Bolting the bracket to an uneven surface will cause it to crack or break and possibly cause the caliper to bind.*
- STEP 9: Install the caliper bracket with four M10 Bolts and washers so that caliper will face to the rear of the spindle. (Apply loctite to the bolts before installing). The bracket should go on easily, *DO NOT hammer or force the bracket in place, DO NOT use the bolts to "pull" the bracket in place. (Doing this could cause damage to the bracket or spindle).* Torque the bolts to 54 ft. lbs.

- STEP 10: If you are using stock wheels the use of the M14x1.5 Lug Studs are not required. If you are using aftermarket wheels install the M14x1.5 Lug Studs on the rotors, be sure to apply loctite to the threads that will mate to the rotor. Note: Lug Nuts are not supplied in these kits.
- STEP 11: Pack the bearings with suitable hi-temp wheel bearing grease.
- STEP 12: Install the greased wheel bearings and the inner seal in the new rotors.
- STEP 13: Install the new rotor on the existing drum brake spindle - bearing, thrust washer, spindle nut lock plate (55-67 models only) and spindle nut(s). Adjust to factory specifications. **(Be careful not to over tighten adjuster nut. This will cause overheating of the bearings, resulting in damage to spindle, bearings and rotor.)** Install the grease cap, speedometer cable and clip.
- STEP 14: Choose the correct caliper to install on the particular side of the vehicle you are working on. Caliper 22-2940-2 is for the drivers side, Caliper 22-2940-3 is for the passenger side. When properly installed the bleeder screw will be facing upward (see Figure #1), this is necessary in order to remove all of the air from the system during the bleeding procedure. Mount the correct caliper to the bracket (Apply loctite to the bolts before installing) using the M12x1.5x40 bolts and torque to 58 ft. lbs.
- STEP 15: Install the pads and hardware on the caliper. Note that the long arms on the anti-rattle clips face the center of the caliper and will be mounted underneath the pad mounting pins (see figure #2). Slide the caliper so the outer pads are making contact with the rotor (the inner pads will be brought into the correct position during the bleeding procedure).
- STEP 16: Install the two caliper bolt dust covers using the tool supplied in the kit. (see figure #3)
- STEP 17: Install the brake hose to the caliper first using the copper gasket supplied in the kit, once hose is secured to the caliper then attach the other end of the hose to the metal brake line at the pan.
- STEP 18: You are now ready to repeat this procedure on the passenger side.
- STEP 19: Remove original master cylinder from the vehicle. **(For 55-63 and 64-66 model years, the master cylinder supplied will fit on left and right hand drive vehicles, the master cylinder supplied in the 1967 only and 68-70 model year, will only fit left hand drive vehicles).**
- STEP 20: Install the reservoir supplied in the kit on the new master cylinder, for 55-63 and 64-66 model year kits the reservoir threads directly onto the master cylinder. Be sure to place the aluminum sealing washer provided in the kit on the reservoir before installing to prevent leakage. For the 1967 and 68-70 kits the reservoirs press into the grommets on the master cylinder. Place a small amount of clean brake fluid on the grommet openings to ease in pressing the reservoir on.
- STEP 21: Install the new master cylinder in the vehicle and check the clearance between the pushrod and the master cylinder piston. The correct clearance is 1mm (.040"). To check and adjust this clearance remove the cover plate that is beneath the pedal cluster. Operate the lever by hand and see whether the pushrod travels into the master cylinder the prescribed .040" before encountering resistance. If clearance is not adequate adjust the brake pedal stop to achieve the correct clearance. If the proper clearance cannot be achieved by adjusting the brake pedal stop remove the pushrod and check the length between the centerline of the mounting hole and the tip of the pushrod. This dimension must be 106mm (4.173 in.). Adjust length if necessary, reinstall rod and recheck clearance. **Failure to have the correct clearance could result in dragging brakes, abnormally high pedal and brakes that lock up while driving and fail to release.** You are now ready to bleed the system.
- STEP 22: To bleed the complete hydraulic system begin by filling the brake fluid reservoir with fresh DOT 3 disc brake fluid.
- STEP 23: Start at the master cylinder loosening each metal brake line to bleed air there first, recheck the fluid level.
- STEP 24: Bleed the passenger side caliper first and then driver's side. Remembering to not allow the reservoir to run dry!
- STEP 25: Do the final system bleed. Start with the passenger side rear then driver side rear. Move to the front and bleed the passenger side front, and finally the driver front. Do the final fill of the brake fluid.
- STEP 26: Rinse any spilled brake fluid off with water (brake fluid is water-soluble). Be careful not to let brake fluid get on any painted surfaces.
- STEP 27: Re-install the front tires and wheels. Remove the jack stands and lower the vehicle to the ground. Give the lug nuts a final tightening and torque to specification.

Note

When test driving, be sure to make a few slow short stops first, to familiarize yourself with the vehicles new braking power and making sure that everything is functioning properly.

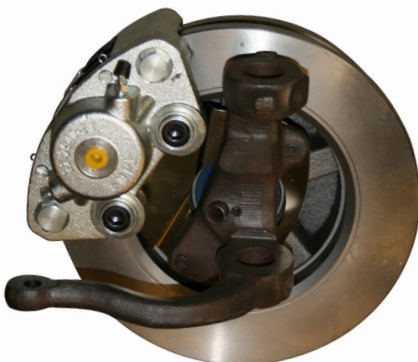


Figure #1

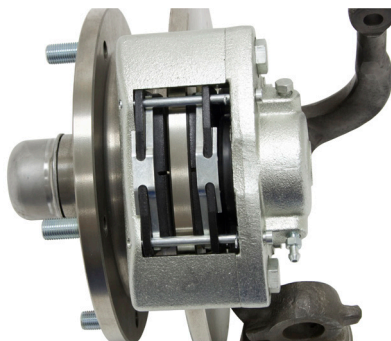
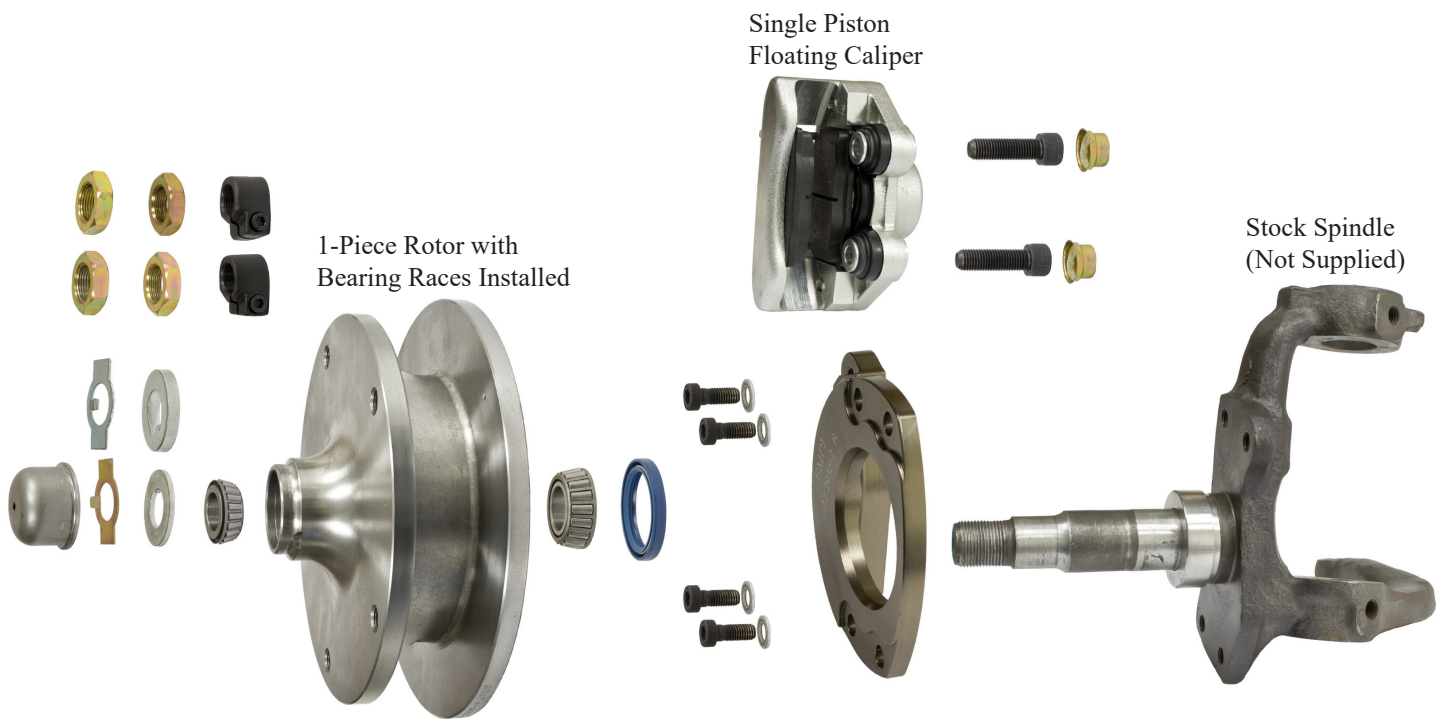


Figure #2



Figure #3



These four brake kits fit a variety of EMPI wheels with a 5 on 205mm bolt pattern as well as stock 14" and 15" OEM wheels. Listed below are the EMPI wheels that can be used with these kits, some modification may be necessary to achieve proper fitment, these modifications will be listed in the notes column of the table below.

These four brake kits will also affect the track width of the front wheels from the OEM width, the difference (per side) is shown in the table below.

EMPI Wheel #	Wheel Size (Inches)	Notes (if Applicable)
9761	15x4	
9762	15x6.5	
9822	15x5	Must Use Tall Cap 9704
9676	15x5	Must Use Tall Cap 9704
9675	15x5	Must Use Tall Cap 9704
9730	15x6.5	Must Use Tall Cap 9704
9729	15x6.5	Must Use Tall Cap 9704
10-1087	17x7	Must Use Tall Cap 9704
10-1086	17x7	Must Use Tall Cap 9704
10-1108	15x4.5	Must Use Dust Cap 10-1107, Cap must be machined on the I.D. from 58mm to 60mm
10-1109	15x4.5	Must Use Dust Cap 10-1107, Cap must be machined on the I.D. from 58mm to 60mm
10-1110	15x5.5	Must Use Dust Cap 10-1107, Cap must be machined on the I.D. from 58mm to 60mm
10-1111	15x5.5	Must Use Dust Cap 10-1107, Cap must be machined on the I.D. from 58mm to 60mm
10-1121	15x5.5	
9750	15x5.5	
9751	15x5.5	
9754	15x5	
9755	15x5	
9747	15x5.5	
9686	15x5.5	
9687	15x5.5	
9690	15x5.5	
9691	15x5.5	

Model	EMPI Kit #	Moves Inward Track Width Change
55-63 Type 2	22-2935-0	- 2.09mm
64-66 Type 2	22-2937-0	-3.41mm
1967 Type 2	22-2938-0	-3.41mm
68-70 Type 2	22-2940-0	-2.80mm