

ASSEMBLY INSTRUCTIONS

FOR

SUPERLITE 6 BIG BRAKE FRONT HAT KIT WITH 13 INCH VENTED ROTOR

1997 - 2004 CHEVROLET C-5 CORVETTE

PART NUMBER GROUP

140-8031

WARNING

INSTALLATION OF THIS KIT SHOULD **ONLY** BE PERFORMED BY PERSONS EXPERIENCED IN THE INSTALLATION AND PROPER OPERATION OF DISC BRAKE SYSTEMS. IT IS THE RESPONSIBILITY OF THE PERSON INSTALLING ANY BRAKE COMPONENT OR KIT TO DETERMINE THE SUITABILITY OF THE COMPONENT OR KIT FOR THAT PARTICULAR APPLICATION.

RACING EQUIPMENT AND BRAKES MUST BE MAINTAINED AND SHOULD BE CHECKED REGULARLY FOR FATIGUE, DAMAGE AND WEAR.



WARNING

DO NOT OPERATE ANY VEHICLE ON UNTESTED BRAKES!

BEFORE OPERATING VEHICLE, TEST THE BRAKES UNDER CONTROLLED CONDITIONS IN A SAFE AREA. TEST THE SYSTEM IN STATIC CONDITIONS FOR PROPER PEDAL HEIGHT AND THE ABILITY TO HOLD PRESSURE BEFORE ATTEMPTING TO MOVE THE VEHICLE. MAKE SEVERAL STOPS IN A SAFE AREA AT SLOW SPEEDS AND GRADUALLY WORK UP TO NORMAL OPERATING CONDITIONS. **ALWAYS** UTILIZE SAFETY RESTRAINT SYSTEMS AND ALL OTHER REQUIRED SAFETY EQUIPMENT WHILE OPERATING THE VEHICLE.

IMPORTANT

READ THE DISCLAIMER OF WARRANTY INCLUDED IN THE KIT.

WARNING: Some cleaners may stain or remove the finish on brake system components. Test the cleaner on a hidden portion of the component before general use.

Important Notice - Read This First

This kit maintains adequate clearance for use with the standard production and Z06 option original equipment wheels from model years 2000-2004. For ALL other wheels, consult the wheel clearance diagram (Figure 2, page 3) to determine compatibility. Parts that have been installed may not be returned or exchanged.

Exploded Assembly Diagram and Parts List

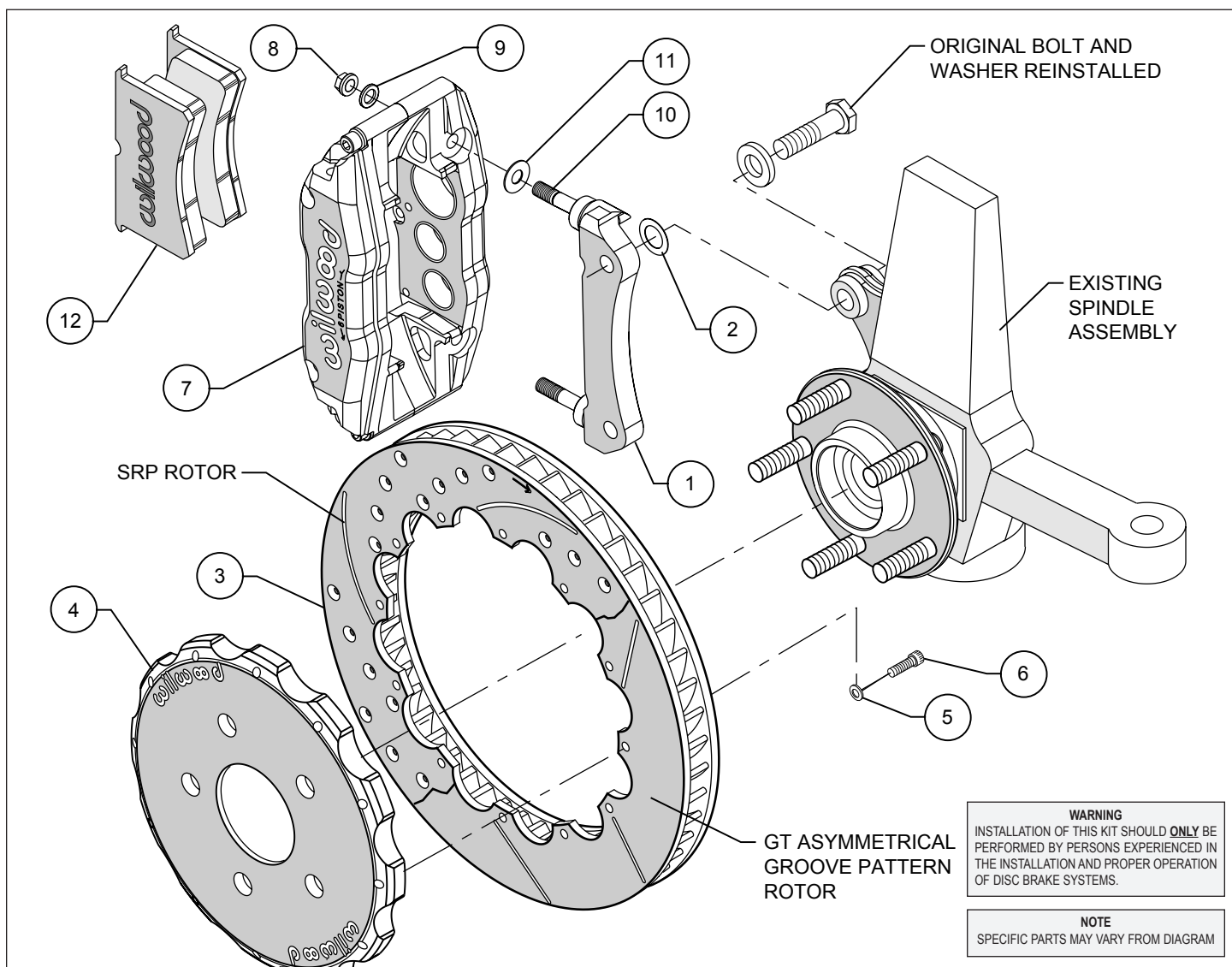


Figure 1. Typical Installation Configuration

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	250-8133	Bracket, Caliper Mounting	2
2	240-8127	Washer Flat, 1.050 inch	6
3	160-8165/66	GT Rotor - 1.25" X 13.06" Dia, 12 x 8.75" Bolt Circle (one each, right and left)	2
3A	160-7798/99	Rotor, SRP Drilled and Slotted (one each, right and left)	2
4	170-8132	Hat	2
5	240-2509	Washer, 1/2 inch	24
6	230-6737	Bolt, 1/4-20 x 1.00 Long, 12 Point Stainless	24
7	120-8000/01-RS	Caliper, Billet Superlite 6R	2
8	230-6001	Nut, Self-Locking Hex Head	4
9	240-2510	Washer, Flat, 5/8 inch	4
10	230-6232	Stud, 3/8-16 x 3/8-24 x 2.5 long (pre installed in bracket)	4
11	240-1159	Washer, Flat, 7/8 inch	16
12	150-8855K	Pad, BP-10 Compound, GT Rotor Kit, Axle Set	1
12A	15Q-6828	Pad, PolyMatrix "Q" Compound, SRP Rotor Kit, Axle Set	1

NOTES:

Part Number 230-4572 Rotor Bolt Kit, includes part numbers 230-6737 and 240-2509

Part Number 250-8134 Caliper Bracket Mounting Bolt Kit, includes P/N 230-6001, 230-6232, 240-1159, 240-2510, 240-8127 & 250-8133

Items 3A and 12A are optional item and included with the "-D" kits. Add "-D" to end of part number when ordering

Wilwood offers an optional Braided Stainless Steel Hose Kit. Order part number 220-8176 (not included in kit)

General Information and Assembly Instructions

- Installation of this kit should only be performed by individuals experienced in the installation and proper operation of disc brake systems. Prior to any attempt to install this kit, please check the following to ensure a trouble free installation.
- Inspect the contents of this kit against the parts list to ensure that all components and hardware are included.
- Make sure this is the correct kit to fit the exact make and model year of your axle. This kit is designed for direct bolt-on installation to 1997 through 2003 model year Chevrolet C-5 Corvette hubs. 2000-2004 OE C-5, Z06 or speciality aftermarket wheels. Check wheel clearance diagram.
- Verify your wheel clearance using Figure 2.
- Verify that the factory hub and stud pattern matches the stud hole pattern in the hats supplied with this kit. Hubs that have been modified with different size studs or lug patterns may require modifications to the hat that must be performed by a qualified machinist.

Disassembly

- Disassemble the original equipment front brakes: Raise the front wheels off the ground and support the front suspension according to the vehicle manufacturer's instructions.
- Remove the wheel. Remove the two bolts from the backside of the spindle that hold the stock caliper mounting bracket and lift off the bracket and stock caliper as one unit. You may have to unbolt the stock caliper from the caliper bracket before removal. Save the stock caliper mounting bracket bolts and washers, they will be utilized during reassembly, then slide off the stock hat and rotor assembly.
- Clean and de-grease the spindles as well as the stock caliper bracket bolts. Remove all nicks or burrs on the hub and threads.

Assembly Instructions (numbers in parenthesis refer to the parts list/diagram on the preceding page):

- The caliper mount bracket assembly (1) should be installed first with clean, dry threads on the mounting bolts. Install the bracket using the original caliper mount bolts. The bracket must tighten squarely against the outboard side of the caliper mount bosses on the spindle body. Inspect for interference from casting irregularities, machining ridges, burrs, etc. Use one thin shim (2) between the bracket and spindle during initial trial fitting. Later, after the caliper, pad, and rotor alignment has been checked, and any necessary shims have been put in place, the mount bolts should be coated with red *Loctite*® 271 and torqued to 65 ft-lbs.
- Assemble the rotor (3) to the hat (4) with the bolts (6) and washers (5) as indicated in the configuration pictured in Figure 1. Be sure all bolts thread in smoothly and are snug. Then, torque all bolts in an alternating sequence to 85 **in-lbs**. The rotor mounting bolts (6) must be lockwired using standard 0.032 inch diameter stainless steel safety wire as shown in Figure 3. Please refer to Wilwood's data sheet DS-386 (available at www.wilwood.org/ds386.pdf) for complete safety wire installation instructions.
- Install the hat and rotor assembly onto the hub. Check to be sure the hat seats squarely against the hub. The hub must be free from any rust, debris, casting burrs, machining irregularities, etc. Use several lug nuts to hold the rotor and hat firmly against the hub during the next phases of the installation and clearance checking procedures.

- Install one shim (11) over each stud (10) on the radial mount bracket (1). Slide the caliper (7) in place over the studs and rotors and install the washer (9) and lock nut (8) to hold the caliper in place. The caliper bleed screws should be pointing up. Snug the lock nuts (8) and check that the rotor (3) is centered in the caliper (7). Add or subtract .035" shims (2) as necessary between the mount bracket and the spindle to center the caliper.

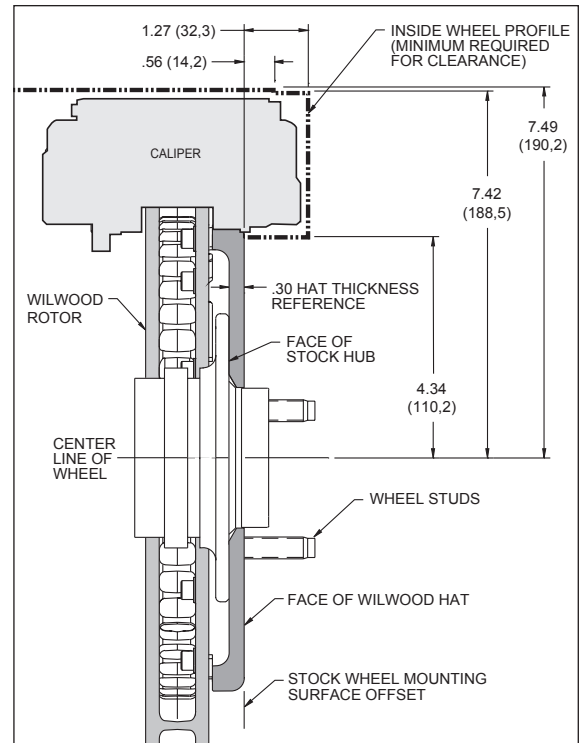


Figure 2. Wheel Clearance Diagram

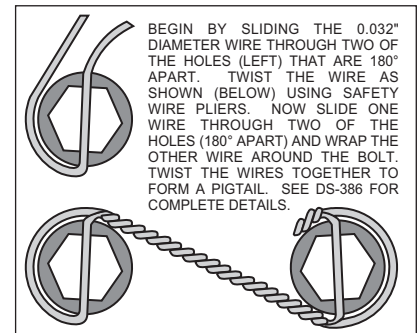


Figure 3. Safety Wire Diagram

General Information and Assembly Instructions (Continued)

Assembly Instructions (Continued)

- Remove the caliper center bridge pad retainer bolt, nut, and tube from the caliper. Slide the brake pads (12) into place. They should install easily without interference. Check that the outside radius of the brake pad is aligned with the outside diameter radius of the rotor face. Add or subtract shims (11) between the caliper and mount bracket to gain the proper alignment. Reinstall the center bridge pad retainer tube, bolt, and lock nut. The locknut should be snug without play in the bolt or tube. Be cautious not to over tighten.
- Remove the lug nuts that were holding the hat in place. Install the wheel and torque the lug nuts to specification. Check to see that the wheel rotates freely without interference.
- Once all clearances have been checked, remove the wheel, caliper, hat, and rotor from the spindle and hub. Secure the caliper mounting bracket (1) to the spindle using red *Loctite*® 271. Torque the bolts to 65 ft-lbs. Reinstall the hat and rotor assembly and again use several lug nuts to hold it in place. Reinstall the caliper and torque the caliper nuts (8) to 47 ft-lbs.

Stock Brake Line Disassembly Instructions

- Unbolt banjo bolt from back of caliper.
- Unbolt rubber hose from hard line at frame.
- Pull the clip that holds the rubber hose to the bracket at the frame.
- Install Wilwood's optional stainless steel braided flexline hose kit, part number 220-8176 (NOT included in kit), see Figure 4. **NOTE:** The caliper inlet hole has a 1/8-27 NPT thread. A steel 90° elbow fitting should be installed in the caliper. **THE ORIGINAL EQUIPMENT PRODUCTION RUBBER BRAKE HOSES WILL NOT ADAPT TO WILWOOD CALIPERS AND ARE NOT RECOMMENDED.**
- Bleed the brake system, referring to additional information on the last page as necessary.
- Remove the lug nuts that were holding the hat in place. Install the wheel and torque the lug nuts to specification.
- Repeat this entire procedure for the other wheel.

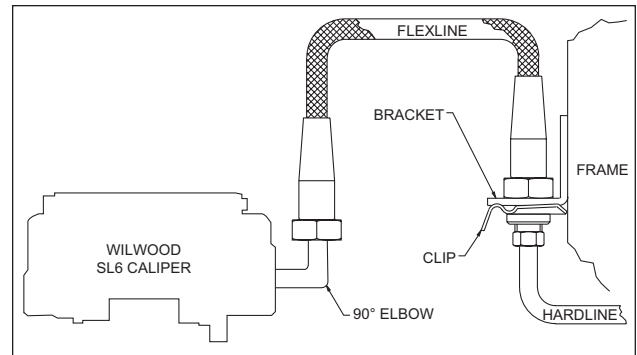


Figure 4. Brake Line Diagram

Additional Information and Recommendations

• Fill and bleed the new system with Wilwood Hi-Temp[®] 570 grade fluid or higher. For severe braking or sustained high heat operation, use Wilwood EXP 600 Plus Racing Brake Fluid. Used fluid must be completely flushed from the system to prevent contamination.
NOTE: Silicone DOT 5 brake fluid is **NOT** recommended.

• To properly bleed the brake system, begin with the caliper farthest from the master cylinder. Bleed the outboard bleed screw first, then the inboard. Repeat the procedure until all calipers in the system are bled, ending with the caliper closest to the master cylinder.
NOTE: When using a new master cylinder, it is important to bench bleed the master cylinder first.

• Test the brake pedal. It should be firm, not spongy and stop at least 1 inch from the floor under heavy load.
 If the brake pedal is spongy, bleed the system again.

If the brake pedal is initially firm, but then sinks to the floor, check the system for fluid leaks. Correct the leaks (if applicable) and then bleed the system again.

If the brake pedal goes to the floor and continued bleeding of the system does not correct the problem, a master cylinder with increased capacity (larger bore diameter) may be required. Wilwood offers various lightweight master cylinders with large fluid displacement capacities.

• **NOTE:** With the installation of after market disc brakes, the wheel track may change depending on the application. Check your wheel offset before final assembly.

• If after following the instructions, you still have difficulty in assembling or bleeding your Wilwood disc brakes, consult your local chassis builder, or retailer where the kit was purchased for further assistance.

PAD BEDDING PROCEDURE:

• Pump brakes at low speed to assure proper operation. On the race track, or other safe location, make a series of hard stops until some brake fade is experienced. Allow brakes to cool while driving at moderate speed to avoid use of the brakes. This process will properly burnish the brake pads, offering maximum performance.

Associated Components

PART NO.	DESCRIPTION
260-1874	Wilwood Residual Pressure Valve (2 lb for disc brakes)
260-1876	Wilwood Residual Pressure Valve (10 lb for drum brakes)
260-8419	Wilwood Proportioning Valve
290-0632	Wilwood Racing Brake Fluid (Hi-Temp [®] 570) (12 oz)
290-6209	Wilwood Racing Brake Fluid (EXP 600 Plus) (16.9 oz)
340-1285	Wilwood Floor Mount Brake Pedal (with balance bar)
340-1287	Wilwood Swing Mount Brake Pedal (with balance bar)
260-6764	Wilwood 3/4 inch High Volume Aluminum Master Cylinder
260-6765	Wilwood 7/8 inch High Volume Aluminum Master Cylinder
260-6766	Wilwood 1 inch High Volume Aluminum Master Cylinder
260-4893	1-1/16 inch Tandem Master Cylinder (aluminum housing)
250-2406	Mounting Bracket Kit (tandem master cylinder)
260-8555	Wilwood 1 inch Aluminum Tandem Chamber Master Cylinder
260-8556	Wilwood 1-1/8 inch Aluminum Tandem Chamber Master Cylinder
350-2038	1971 - 1973 Pinto Rack and Pinion (new, not rebuilt)
270-2016	Quick Release Steering Hub (3/4 inch shaft)
270-2017	Quick Release Steering Hub (5/8 inch shaft)
220-7056	Flexline Kit, Universal, 14 Inch, Domestic
220-7699	Flexline Kit, Universal, 16 Inch, Domestic
220-8307	Flexline Kit, Universal, 18 Inch, Domestic

Bolt Torque Specifications

BOLT SIZE	TORQUE
1/4-20	85 in-lb
1/4-28	103 in-lb
5/16-18	180 in-lb
5/16-24	198 in-lb
3/8-16	22 ft-lb
3/8-24	30 ft-lb
7/16-14	42 ft-lb
7/16-20	47 ft-lb
1/2-13	65 ft-lb
1/2-20	77 ft-lb
9/16-12	95 ft-lb
9/16-18	105 ft-lb
5/8-11	110 ft-lb
5/8-18	120 ft-lb

NOTE: This bolt torque specification list is for use with specific grades of bolts as supplied in the particular Wilwood kit and is not intended as a guide for any other application.