WILWOOD REAR DPC56 CALIPER AND BRAKE PAD REPLACEMENT KIT FOR USE WITH Z06 WHEELS

BASE PART NUMBER

140-15174

DISC BRAKES SHOULD ONLY BE INSTALLED BY SOMEONE EXPERIENCED AND COMPETENT IN THE INSTALLATION AND MAINTENANCE OF DISC BRAKES

READ ALL WARNINGS

DISC BRAKES wilwood

WARNING

DO NOT OPERATE ANY VEHICLE ON UNTESTED BRAKES!

SEE MINIMUM TEST PROCEDURE WITHIN

ALWAYS UTILIZE SAFETY RESTRAINT SYSTEMS AND ALL OTHER AVAILABLE SAFETY EQUIPMENT WHILE OPERATING THE VEHICLE

IMPORTANT • READ THE DISCLAIMER OF WARRANTY INCLUDED IN THE KIT

NOTE: 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

Before any tear-down or disassembly begins, review the following information:

- **Review the wheel clearance diagram (figure 2, page 3) to verify that there is adequate clearance with the wheels you will be using with the installation.**
- **Due to OEM production differences and other variations from vehicle to vehicle, the fastener hardware and other components in this kit may not be suitable for a specific application or vehicle.**
- **It is the responsibility of the purchaser and installer of this kit to verify suitability / fitment of all components and ensure all fasteners and hardware achieve complete and proper engagement. Improper or inadequate engagement can lead to component failure.**

Photographic Tip

Important and highly recommended: Take photos of brake system before disassembly and during the disassembly process. In the event, trouble-shooting photos can be life savers. Many vehicles have undocumented variations, photos will make it much simpler for Wilwood to assist you if you have a problem.

Exploded Assembly Diagram and Parts List

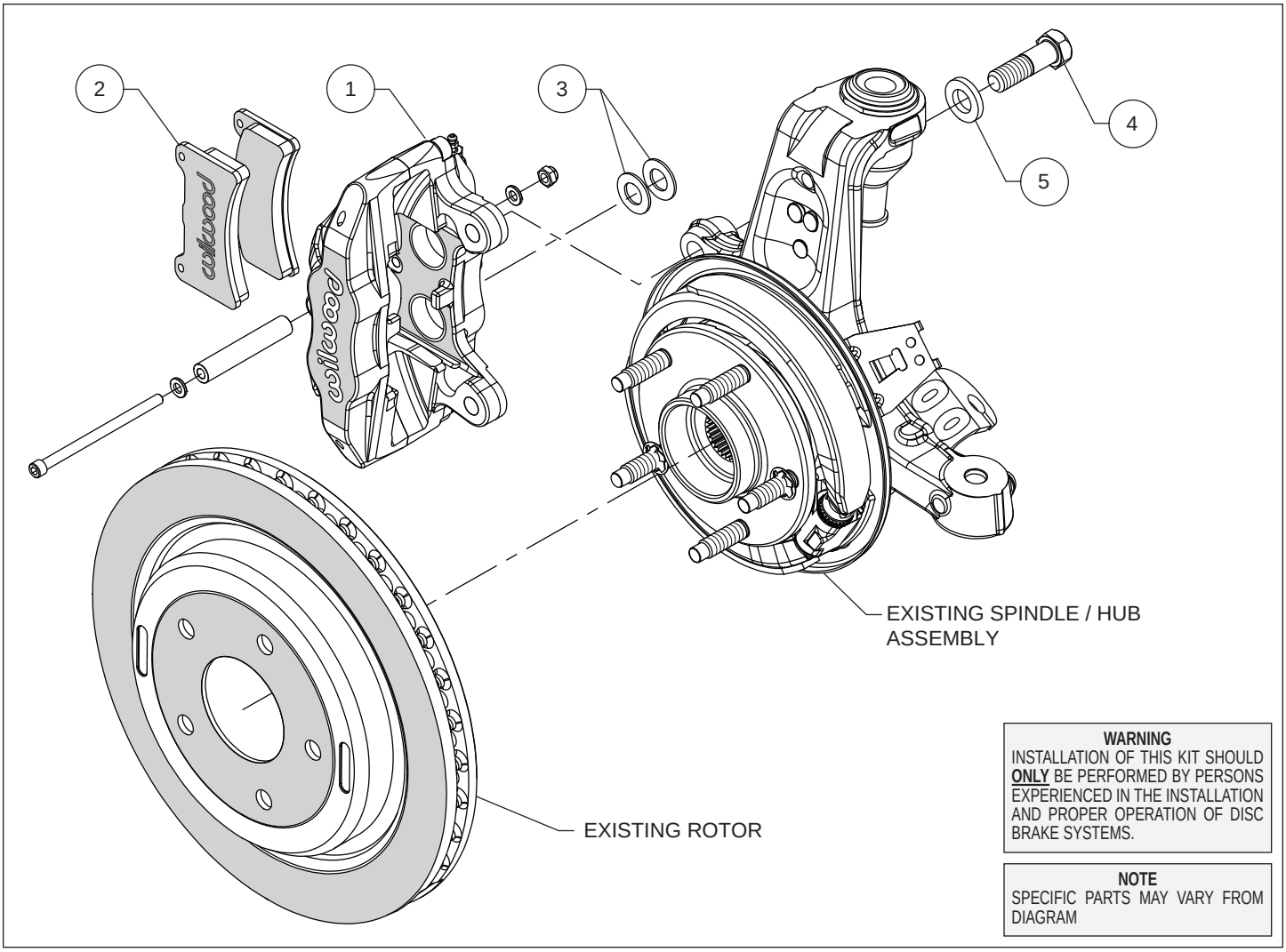

Figure 1. Typical Installation Configuration

Parts List

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	120-13916-BK	Caliper, DPC56, Black	2
1A	120-13916-RD	Caliper, DPC56, Red	2
2	150-11363K	Pad, BP-10 Compound, Axle Set	1
3	240-5227	Washer, Crush, Copper, .406 I.D. (packaged with item 1)	4
4	230-15145	Bolt, M14-2.00 x 45mm Long, Hex Head, Stepped-Shank	4
5	240-11855	Washer, .578 I.D. x 1.062 O.D. x .063 Thick	4

NOTE: Part Number 230-13910 Bracket/Spindle Bolt Kit, includes part numbers 230-15145, 240-11855 and 240-8969 (not used)
Item 1A is an optional item and is included in the (R) red caliper kits. Add "-R" to end of part number when ordering.

General Information, Disassembly, 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 hub. This kit is designed for direct bolt-on installation to 1997 through 2013 model year Chevrolet C5/C6 Corvette.

- Verify your wheel clearance using Figure 2.

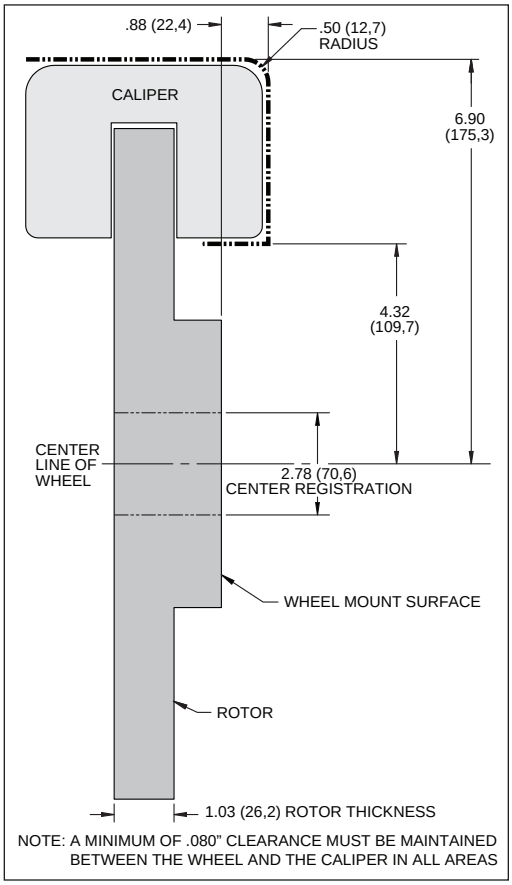

Figure 2. Wheel Clearance Diagram

Disassembly

- Disassemble the Original Equipment (OE) rear brakes:

  Raise the rear wheels off the ground and support the suspension according to the vehicle manufacturer's instructions.

  Remove the wheels and calipers.

  Clean and de-grease the caliper mounting tabs and saved components.

- Inspect existing OE rotors for proper service condition. Replace if necessary.

Assembly Instructions (numbers in parenthesis refer to the parts list and Figure 1 on the preceding page): ***CAUTION:** All mounting bolts must fully engage threaded holes.*

- Install the Wilwood DPC56 caliper (1) in the exact position as the original caliper, Photo 1. Secure the caliper to the OE mounting tabs using bolts (4) and washers (5). Apply *Loctite*® 271 on the bolt threads and torque to manufacturer's specificatiions.

- Remove the caliper center bridge pad retainer bolt, nut, and tube from the caliper. Insert the brake pads (2) into the caliper, with the friction material facing the rotor, Photo 2. Secure the brake pads in place with the center bridge pad retainer tube, bolt, and locknut, Photo 3. The locknut should be snug without play in the bolt or tube. Be cautious not to over tighten.

- Temporarily install the wheel and torque the lug nuts to the manufacturer's specification. Ensure that the wheel rotates freely without any interference.

Photo 1

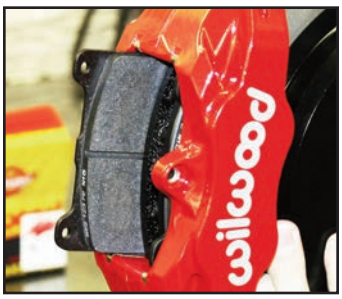

Photo 2

Assembly Instructions (Continued)

•***NOTE**: The caliper in this brake kit utilizes a 10mm x 1.0 thread inlet (same as OE caliper). OE rubber hose may be connected to the Wilwood caliper using new crush washers (3).* Wilwood offers a brake flexline hose kit to fit this application, order P/N 220-8072 for 1997-2004 (C5), or P/N 220-15195 for 2005-2013 (C6). **Carefully route hoses to prevent contact with moving suspension, brake or wheel components.** ***NOTE:** Wilwood hose kits are designed for use in many different vehicle applications and it is the installer's responsibility to properly route and ensure adequate clearance and retention for brake hose components.*

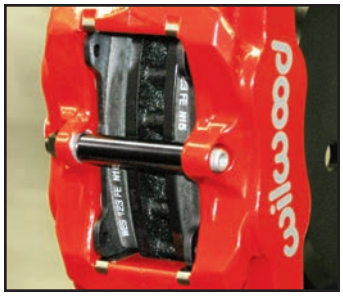

Photo 3

•Do not lubricate banjo bolt. With two new crush washers installed, torque bolt to 96 - 120 **in-lbs**. (do not exceed 144 **in-lbs**). Torque to lighter specification and check for leakage, increasing torque only to stop leakage without exceeding maximum specification. Replace crush washers and banjo bolt whenever re-assembly is required.

•***NOTE:** Specified brake hose kits may not work with all Years, Makes and Models of vehicle that this brake kit is applicable to, due to possible OEM manufacturing changes during a production vehicle's life*. It is the installer's responsibility to ensure that all fittings and hoses are the correct size and length, to ensure proper sealing and that they will not be subject to crimping, strain and abrasion from vibration or interference with suspension components, brake rotor or wheel.

•In absence of specific instructions for brake line routing, the installer must use his best professional judgment on correct routing and retention of lines to ensure safe operation. Test vehicle brake system per the 'minimum test' procedure stated within this document before driving. After road testing, inspect for leaks and interference. Initially after install and testing, perform frequent checks of the vehicle brake system and lines before driving, to confirm that there is no undue wear or interference not apparent from the initial test. Afterwards, perform periodic inspections for function, leaks and wear in a interval relative to the usage of vehicle.

•Bleed the brake system. Reference the general information and recommendations below for proper bleeding instructions. Check system for leaks after bleeding.

•Install the wheel and torque the lugs to manufacturer's specifications.

Additional Information and Recommendations

•***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.

•Please read the following concerning balancing the brake bias on 4 wheel disc vehicles.

This Corvette rear kit can be operated using the stock OEM master cylinder. However, as with most suspension and tire modifications (from OEM specifications), changing the brakes may alter the front to rear brake bias. Rear brakes should not lock up before the front. Brake system evaluation and tests should be performed by persons experienced in the installation and proper operation of brake systems. Evaluation and tests should be performed under controlled conditions. Start by making several stops from low speeds then gradually work up to higher speeds. Always utilize safety restraint systems while operating vehicle.

•For optimum performance, fill and bleed the new system with Wilwood Hi-Temp° 570 grade fluid or EXP 600 Plus. 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 for racing or performance driving*.

•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. If the caliper is fitted with bleed screws on four corners, make sure the bottom bleed screws are tight. Only bleed from the top bleed screws. ***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 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, either air may be trapped in the system, or a master cylinder with increased capacity (larger bore diameter) may be required. Wilwood offers various lightweight master cylinders with large fluid displacement capacities (custom fabricated mounting may be required).

Brake Testing

WARNING • DO NOT DRIVE ON UNTESTED BRAKES
BRAKES MUST BE TESTED AFTER INSTALLATION OR MAINTENANCE
MINIMUM TEST PROCEDURE

- Make sure pedal is firm: Hold firm pressure on pedal for several minutes, it should remain in position without sinking. If pedal sinks toward floor, check system for fluid leaks. DO NOT drive vehicle if pedal does not stay firm or can be pushed to the floor with normal pressure.
- At very low speed (2-5 mph) apply brakes hard several times while turning steering from full left to full right, repeat several times. Remove the wheels and check that components are not touching, rubbing, or leaking.
- Carefully examine all brake components, brake lines, and fittings for leaks and interference.
- Make sure there is no interference with wheels or suspension components.
- Drive vehicle at low speed (15-20 mph) making moderate and hard stops. Brakes should feel normal and positive. Again check for leaks and interference.
- Always test vehicle in a safe place where there is no danger to (or from) other people or vehicles.
- Always wear seat belts and make use of all safety equipment.

Pad and Rotor Bedding

BEDDING STEPS FOR NEW PADS AND ROTORS – ALL COMPOUNDS

Once the brake system has been tested and determined safe to operate the vehicle, follow these steps for the bedding of all new pad materials and rotors. These procedures should only be performed on a race track, or other safe location where you can safely and legally obtain speeds up to 65 MPH, while also being able to rapidly decelerate.

- Begin with a series of light decelerations to gradually build some heat in the brakes. Use an on-and-off the pedal technique by applying the brakes for 3-5 seconds, and then allow them to fully release for a period roughly twice as long as the deceleration cycle. If you use a 5 count during the deceleration interval, use a 10 count during the release to allow the heat to sink into the pads and rotors.
- After several cycles of light stops to begin warming the brakes, proceed with a series of medium to firm deceleration stops to continue raising the temperature level in the brakes.
- Finish the bedding cycle with a series of 8-10 hard decelerations from 55-65 MPH down to 25 MPH while allowing a proportionate release and heat-sinking interval between each stop. The pads should now be providing positive and consistent response.
- If any amount of brake fade is observed during the bed-in cycle, immediately begin the cool down cycle.
- Drive at a moderate cruising speed, with the least amount of brake contact possible, until most of the heat has dissipated from the brakes. Avoid sitting stopped with the brake pedal depressed to hold the car in place during this time. Park the vehicle and allow the brakes to cool to ambient air temperature.

COMPETITION VEHICLES

- If your race car is equipped with brake cooling ducts, blocking them will allow the pads and rotors to warm up quicker and speed up the bedding process.
- Temperature indicating paint on the rotor and pad edges can provide valuable data regarding observed temperatures during the bedding process and subsequent on-track sessions. This information can be highly beneficial when evaluating pad compounds and cooling efficiencies.

Pad and Rotor Bedding (Continued)

POST-BEDDING INSPECTION – ALL VEHICLES

- After the bedding cycle, the rotors should exhibit a uniformly burnished finish across the entire contact face. Any surface irregularities that appear as smearing or splotching on the rotor faces can be an indication that the brakes were brought up to temperature too quickly during the bedding cycle. If the smear doesn't blend away after the next run-in cycle, or if chatter under braking results, sanding or resurfacing the rotors will be required to restore a uniform surface for pad contact.

PRE-RACE WARM UP

- Always make every effort to get heat into the brakes prior to each event. Use an on-and-off the pedal practice to warm the brakes during the trip to the staging zone, during parade laps before the flag drops, and every other opportunity in an effort to build heat in the pads and rotors. This will help to ensure best consistency, performance, and durability from your brakes.

DYNO BEDDED COMPETITION PADS AND ROTORS

- Getting track time for a proper pad and rotor bedding session can be difficult. Wilwood offers factory dyno-bedded pads and rotors on many of our popular competition pads and ***Spec 37*** GT series rotors. Dyno-bedded parts are ready to race on their first warm up cycle. This can save valuable time and effort when on-track time is either too valuable or not available at all, Dyno-bedding assures that your pads and rotors have been properly run-in and are ready to go. Contact your dealer or the factory for more information on Wilwood Dyno-Bedding services.

NOTE:

NEVER allow the contact surfaces of the pads or rotors to be contaminated with brake fluid. Always use a catch bottle with a hose to prevent fluid spill during all brake bleeding procedures.

Associated Components

PART NO.	DESCRIPTION
260-13706	Wilwood Residual Pressure Valve (2 lb for disc brakes)
260-13707	Wilwood Residual Pressure Valve (10 lb for drum brakes)
260-8419	Wilwood Proportioning Valve, Knob Style
260-8420	Wilwood Proportioning Valve, Lever Style
260-11179	Wilwood Combination Proportioning Valve with Brake Light Switch
290-0632	Wilwood Racing Brake Fluid (Hi-Temp° 570) (12 oz)
290-6209	Wilwood Racing Brake Fluid (EXP 600 Plus) (16.9 oz)
340-13831	Wilwood Floor Mount Brake Pedal (with balance bar)
340-13832	Wilwood Swing Mount Brake Pedal (with balance bar)
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
220-7056	Stainless Steel Braided Flexline Kit, Universal, 14 Inch, Domestic, 3/8-24 IF
220-7699	Stainless Steel Braided Flexline Kit, Universal, 16 Inch, Domestic, 3/8-24 IF
220-8307	Stainless Steel Braided Flexline Kit, Universal, 18 Inch, Domestic, 3/8-24 IF
220-8338	Stainless Steel Braided Flexline Kit, Universal, 14 Inch, Metric 10mm x 1.0
220-6856	Stainless Steel Braided Flexline Kit, Universal, 18 Inch, Metric 10mm x 1.0
220-8072	Stainless Steel Braided Flexline Kit, 1997-2004 C5 Corvette, Rear
220-15195	Stainless Steel Braided Flexline Kit, 2005-2013 C6 Corvette, Rear