

Strange *Engineering*

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Installation instructions for B4156WC heavy-duty front brake kit for '63-'72 Dart, '61-'62 Lancer, '64-'69 Barracuda, and '60-'72 Valiant 9" drum brake spindles.

Before you begin installation: Strange Engineering brake kits are designed for **DRAG RACING ONLY!** Read these instructions thoroughly and save for future reference. If after reading these installation instructions, you have any questions or comments, please do not hesitate to call us.

Note: If using WELD "V" series wheels, a modification to either the hub or the wheel must be performed for the wheel to fit.

KIT CONTENTS

<u>Item#</u>	<u>Part#</u>	<u>Qty.</u>	<u>Description</u>
1	A1028A	10	1/2"-20 x 2.5" Wheel stud
2	A1028B	10	1/2" I.D. Wheel stud washer
3	B1301E	4	3/8"-24 Press nut (Installed in B4156A)
4	B1322C	2	Inner hub bearing cup (Timken 15520 installed in B1326A)
5	B1322D	2	Inner hub bearing cone (Timken 15580)
6	B1326A	2	Front hub "M" 4.5" B.C.
7	B1320F	2	Outer hub bearing cup (Timken LM11710 installed in B1326A)
8	B1320G	2	Outer hub bearing cone (Timken LM11749)
9	B2795	1	Right hand HD/MD tapered rotor
10	B2796	1	Left hand HD/MD tapered rotor
11	B1301H	16	3/8" I.D. x 0.025" Thick caliper shim
12	B1301J	4	3/8" I.D. x 1/16" Thick flat washer
13	B5000Y	4	3/8"-24 x 1.125" Caliper bolt
14	B5010	4	Soft Metallic 4-piston caliper pad
15	B5002	1	Right hand 4-piston caliper
16	B5004	1	Left hand 4-piston caliper
17	P2316	2	1/8" NPT x -3AN Fitting (Installed in B5002 & B5004)
18	B4154E	2	Aluminum hub cap
19	B4156A	2	Caliper mounting bracket
20	S3520F	2	#222 Buna O-ring (Installed on B4154E)
21	B1322E	2	Hub seal (C-R #14960)

<u>Item #</u>	<u>Torque Spec (ft-lbs)</u>
Caliper bracket bolts (stock hardware)	45
1	65
13	35

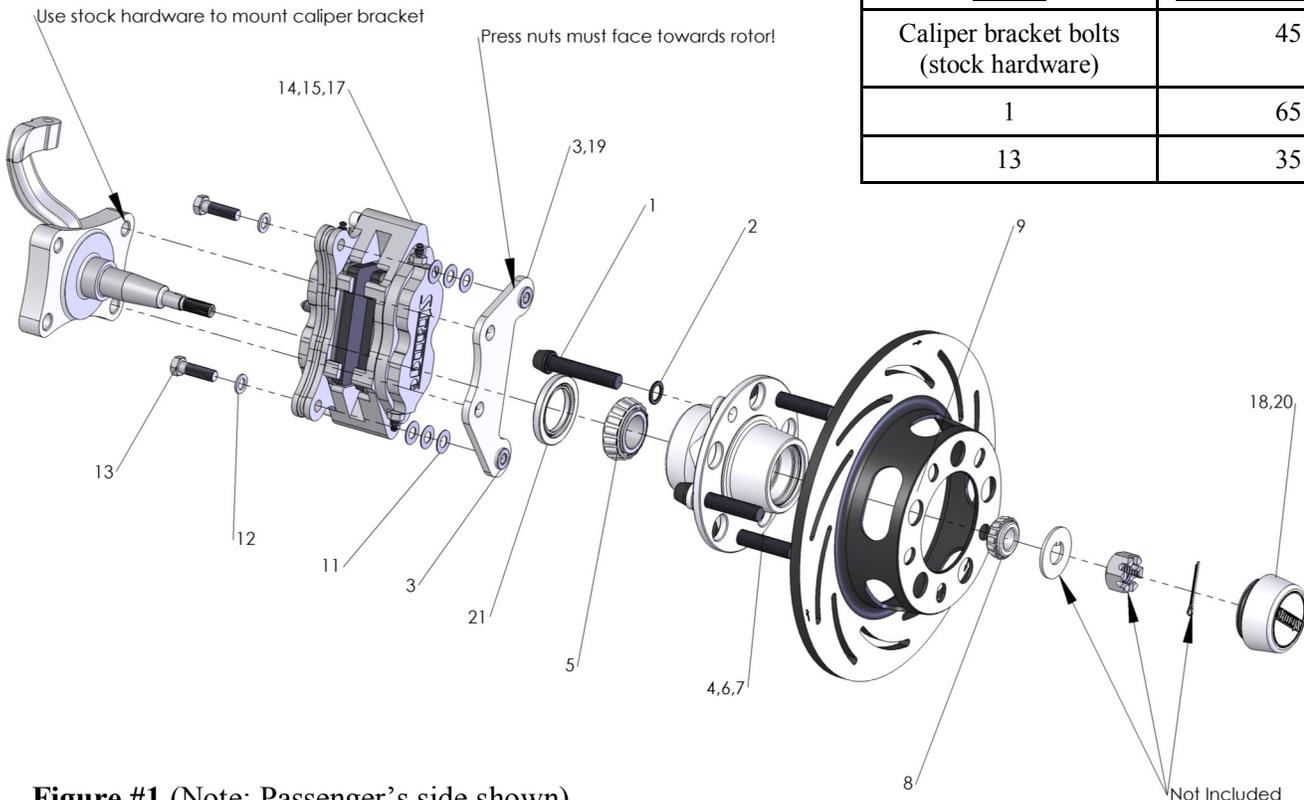


Figure #1 (Note: Passenger's side shown)

(turn over)

- 1.) Raise and support front of vehicle on a level surface using suitable equipment.
- 2.) Remove wheel, drum, and backing plate. Inspect all ball joints for excessive play and replace as needed.
- 3.) Install the caliper mounting bracket (19) to the spindle body using the OEM backing plate/ steering arm bolts. The bracket will mount with the mounting tabs either front or rear, but the press nuts (3) must face toward the outboard side of the vehicle. Torque to 45 ft.-lbs. *Note:* Check the length of the bolts to ensure proper engagement on the back side of the spindle. The nut should be engaged at least the diameter of the bolt.
- 5.) Install 1/2" Dia. wheel studs (1) in front hub (6) using 1/2" I.D. wheel stud washer (2) and a small amount of BLUE Loc-tite®. Torque all studs to 65 ft.-lbs. *Note:* Consult your wheel and/or lug nut manufacturer for proper lug nut torque.
- 6.) Pack inner (5) and outer bearing cones (8) with NLGI 1 wheel bearing grease. *Note:* A bearing packer is recommended for this procedure; If one is not available work as much grease as possible into the cage and around the rollers.
- 7.) Wipe a thin layer of wheel bearing grease on the bearing surface of the inner and outer cups (4, 7) and place the inner bearing cone (5) into the front hub (6).
- 8.) Press the hub seal (21) into the inboard side of the hub (6) flush to the outer face of the hub.
- 9.) Slide the hub assembly onto the spindle then slide the outer bearing cone (8) into the hub (6).
- 10.) Install the key washer and the spindle nut.
- 11.) Mount the wheel and tire assembly on the hub and snug the lug nuts.
- 12.) While rotating the wheel, torque the spindle nut to approximately 20 ft.-lbs. Then, loosen the spindle nut until the wheel spins freely and there is no end play.
- 13.) Install the castle nut, cotter pin, aluminum hub cap (18), and remove the wheel and tire.
- 14.) Slide the rotor (9, 10) over the wheel studs flush to the face of the hub (6). *Note:* Slotted rotors mount with the arrow pointing in the direction of normal rotation (See Figure #2).

- Please read B1850 instructions for complete caliper instructions.

- 15.) Attach caliper (15, 16) with the arrow facing in the direction of normal rotor rotation using 3/8"-24 caliper bolts (13) and 3/8" I.D. washers (12). Use 3/8" I.D. caliper shims (11) to center the caliper over the rotor, making sure pads contact the rotor evenly. The caliper bolt (13) should be fully engaged into the press nut. If the bolt is over engaged, use any remaining shims under the head of the bolt to prevent it from running into the rotor. Torque the caliper mounting bolts (13) to 35 ft.-lbs. *Note:* Because all spindles vary slightly you may not need the same amount of shim on both sides of the vehicle.
- 16.) Connect the brake lines to the calipers. Calipers are tapped to 1/8"-27 NPT and supplied with -3AN fittings. Use proper adapters to connect them to existing lines or use new -3AN braided steel line (teflon lined). Bleed the calipers with DOT 4 or DOT 5.1 brake fluid **ONLY**.
- 17.) A proper break in procedure is required to avoid brake fade and uneven rotor deposits from the pads. It consists of 8-10 brake applications increasing in harshness while allowing the brakes to cool slightly in between; do not keep the brakes applied between stops. After the last stop the brakes should be allowed to cool completely.

Note: After the initial installation of this kit, ensure that there is adequate clearance between all braking and chassis components by turning the wheels all the way left to right and moving them all the way up and down throughout the length of the wheel (suspension) travel. Additionally, make sure that the brake lines are not interfering with the wheel travel, or subject to binding or kinking. Operate the vehicle in a cautious manner until you determine that the brakes are functioning properly. Routinely check and re-torque all bolts.

**Rotors and calipers
are directional**



Figure #2

WARNING – RACING IS HAZARDOUS · STRANGE BRAKES ARE FOR LEGAL DRAG RACING ONLY

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