



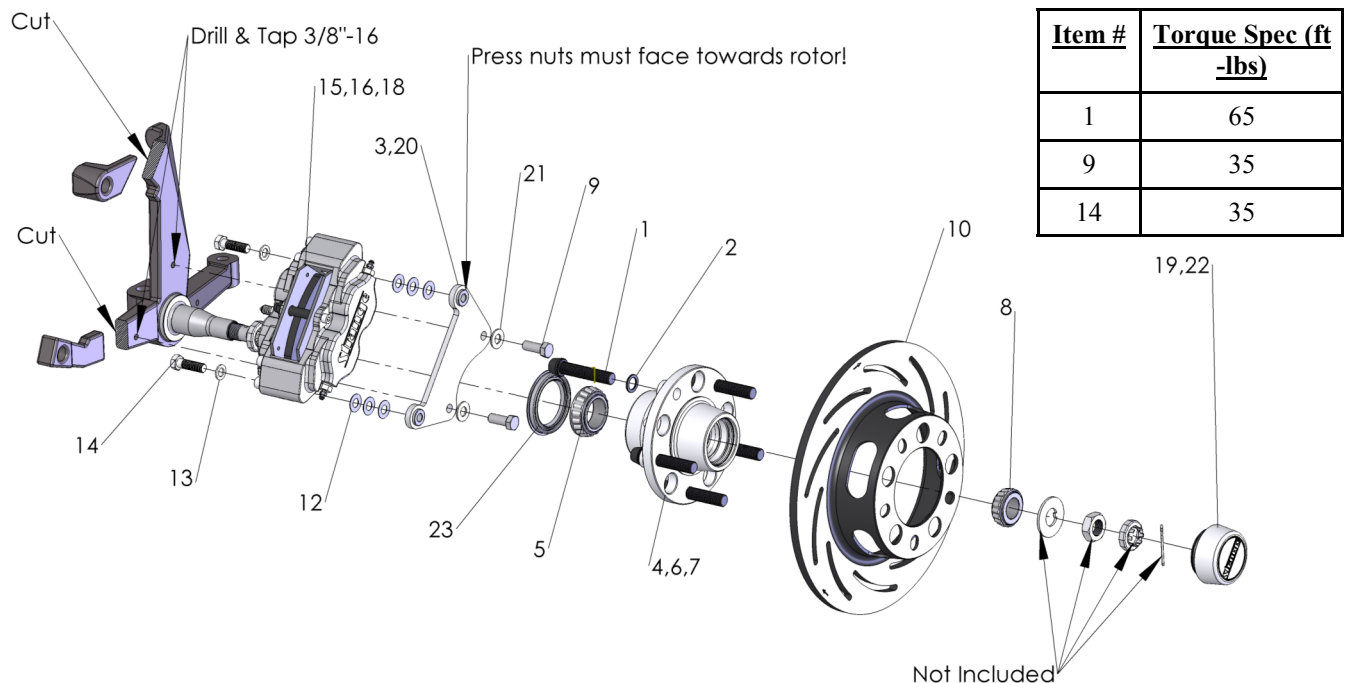
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## Installation instructions for B4144WC (4.75" b.c.) and B4145WC (4.5" b.c.) heavy duty (4-piston) front brake kit for Mustangs with '87-'93 V8 Spindles.

**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.

### 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 B4180A)
4	B1330A	2	Inner hub bearing cup (Timken LM68110 installed in B1332A/B4154SPM)
5	B1330B	2	Inner hub bearing cone (Timken LM68149)
6	B1332A	2	Front hub "SF" 4.75" B.C. (For B4144WC)
-	B4154SPM	2	Front hub "HS" - 4.50" B.C. (For B4145WC)
7	B1330C	2	Outer hub bearing cup (Timken LM12710 installed in B1332A/B4154SPM)
8	B1330D	2	Outer hub bearing cone (Timken LM12749)
9	B1381D	4	3/8"-16 x 1" caliper bracket bolt
10	B2795	1	Right hand HD/MD tapered rotor
11	B2796	1	Left hand HD/MD tapered rotor
12	B1301H	16	3/8" I.D. x 0.025" Thick caliper shim
13	B1301J	4	3/8" I.D. x 1/16" Thick flat washer
14	B5000Y	4	3/8"-24 x 1.125" Caliper bolt
15	B5010	4	Soft Metallic 4-piston caliper pad
16	B5002	1	Right hand 4-piston caliper
17	B5004	1	Left hand 4-piston caliper
18	P2316	2	1/8" NPT x -3AN Fitting (Installed in B5002 & B5004)
19	B4154E	2	Aluminum hub cap
20	B4144AR	1	Right Caliper mounting bracket
21	B4144AL	1	Left Caliper mounting bracket
22	S3402N	4	3/8" AN Washer
23	S3520F	2	#222 Buna O-ring (Installed on B4154E)
24	B1328B	2	Hub seal (National 6815)



**Figure #1** (Note: Passenger's side, Kit B4144WC shown)

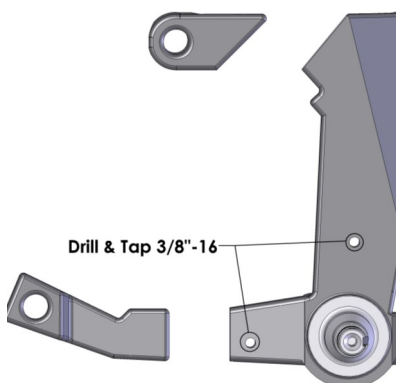
(turn over)

- 1.) Raise and support front of vehicle on a level surface using suitable equipment.
- 2.) Remove wheel, caliper, rotor, hub, and brake line. Inspect all ball joints for excessive play and replace as needed.
- 3.) Cut off upper and lower caliper mounting ears at a distance approximately 1" from the center of the original caliper mounting hole on the top and approximately 2.5" from the original caliper mounting hole on the bottom as shown in figure #2
- 4.) Drill holes to 5/16" and tap the caliper mounting bracket holes on the spindle to 3/8"-16 (see Figure #1/2).
- 5.) Install the caliper mounting bracket (20) using the 3/8" caliper bracket bolts (9) and 3/8" AN washers (21) making sure that the press nuts (3) are facing towards the rotor (10, 11). Torque to 45 ft.-lbs.
- 6.) 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.
- 7.) 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.
- 8.) Wipe a thin layer of wheel bearing grease on the bearing surface of the inner and outer cups (4, 7) and place inner bearing cone (5) into the front hub (6).
- 9.) Press the hub seal (23) into the inboard side of the hub (6) flush to the outer face of the hub.
- 10.) Slide the hub assembly onto the spindle then slide the outer bearing cone (8) into the hub (6).
- 11.) Install the key washer and the spindle nut.
- 12.) Mount the wheel and tire assembly on the hub and snug the lug nuts.
- 13.) 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.
- 14.) Install the stamped spindle nut retainer, cotter pin, aluminum hub cap (19), and remove the wheel and tire.
- 15.) Slide the rotor (10, 11) 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 #3).

**- Please read B1850 instructions for complete caliper instructions.**

- 16.) Attach caliper (16, 17) with the arrow facing in the direction of normal rotor rotation using 3/8"-24 caliper bolts (14) and 3/8" I.D. washers (13). Use 3/8" I.D. caliper shims (12) to center the caliper over the rotor, making sure pads contact the rotor evenly. The caliper bolt (14) 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 (14) 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.
- 17.) 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**.
- 18.) 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.



**Figure #2**

**Cut and drill upright as shown**



**Figure #3**

**Rotors and calipers are directional**

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

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