

READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.  
CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.

# INSTALLATION GUIDE



## 8331

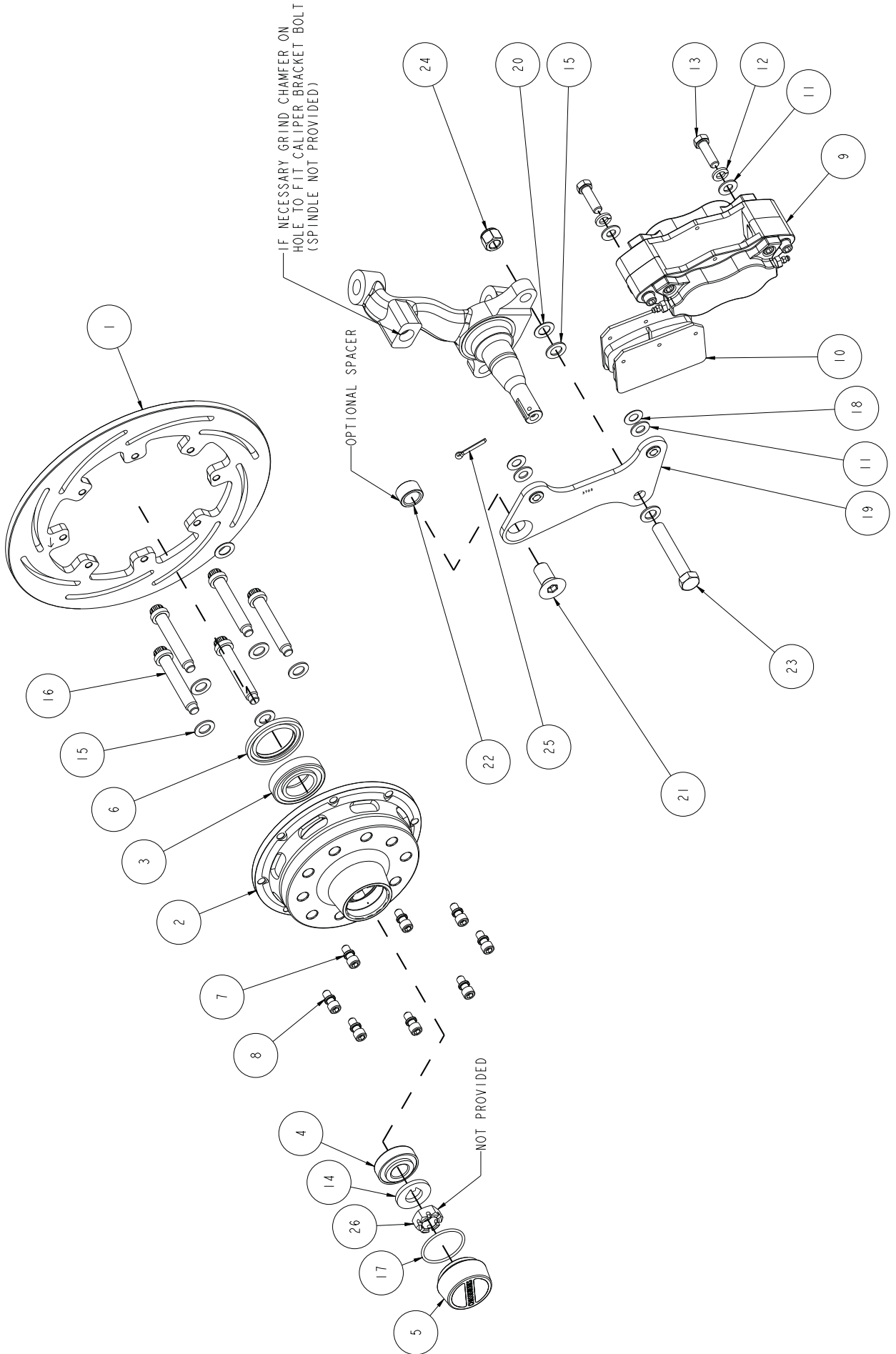
**Drag Race 11-3/4" Front Brake Kit for A-, F-, X-Body Spindle  
Camaro 67-69, Chevelle 64-72, Nova 64-72**



**Description:** Drag Race 11-3/4" Front Brake Kit for A-, F-, X-Body Spindle

**Includes:** 11-3/4" x .35" slotted rotor, billet-aluminum hat, 4-piston caliper, caliper mounting bracket, brake pads, and aircraft grade mounting hardware.

**Note:** Modification required for early-model spindles.



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1510	ROTOR, .38 x 11.75 8 ON 6.875 BC, SLOTTED
2	1	1313	HUB WITH HAT, CHASSISWORKS SPINDLE, PLAIN
3	1	3375-3376	TIMKEN BEARING, CUP=LM67010, CONE=LM67048
4	1	3377-3378	TIMKEN BEARING, CUP=LMI1910, CONE=LMI1949
5	1	1306	FRONT HUB CAP
6	1	3650	GREASE SEAL 2.500 x 1.75 x .250
7	8	3108-031H-S	HIGH COLLAR LOCKWASHER, 5/16 INCH 18-8 STAINLESS
8	8	3103-031C0.75C	SOCKET HEAD CAP SCREW, 5/16-18 x 3/4, CLEAR ZINC
9	1	WW 120-1051 LH	DYNALITE 11 .38 WIDE CALIPER, LEFT HAND, 1.75 PIST. DIA.
10	2	WW 15D-4331K	WILWOOD POLYMATRIX BRAKE PAD
11	4	3157-038S-S	WASHER, 3/8 SAE, STAINLESS, .812 OD x .406 ID x 1/16 THICK
12	2	3108-038L-C	LOCKWASHER, 3/8 MEDIUM, PLATED
13	2	3100-038FI.25Y	HEX BOLT, 3/8-24 x 1 1/4, GRADE 8, YELLOW ZINC
14	1	2056	SPINDLE WASHER Ø 1 1/2 x Ø 3/4 .180 THICK, .180 x .080 KEY TANG
15	7	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
16	5	3130-050F3.00Y	12 POINT CAP SCREW 1/2-20 x 3, GRADE 8, YELLOW ZINC
17	1	3537	O-RING, HUB CAP 1.943 x 1.737 x .103
18	2	3157-038T-S	WASHER, 3/8 THIN, STAINLESS, 13/32 ID x 13/16 OD x 1/32 THICK,
19	1	3705	CALIPER BKT ASSY M/D, DRV CAMARO/CHEVELLE/NOVA 64-72
20	2	3109-050-S-1-Y	AIRCRAFT WASHER 1/2 x .032 THICK
21	1	3105-063FI.25B	FLAT HEAD SOCKET SCREW, 5/8-18 x 1 1/4, BLACK OXIDE
22	1	1023	SLEEVE Ø 1 x .156 x .556 LONG CALIPER BRACKET SPACER
23	1	3100-050F3.00Y	HEX BOLT, 1/2-20 x 3, GRADE 8, YELLOW ZINC
24	1	3101-050-20C	LOCKNUT, 1/2-20, GRADE 5, NYLON INSERT, CLEAR ZINC
25	1	3145.156-1.00	COTTER PIN, 5/32 x 1
26	1	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE

DESCRIPTION	<b>M/D CAMARO/CHEVELLE/NOVA 64-72 4 PISTON CALIPER, 11.75 x .35 ROTOR</b>	
	Chris Adams's CHASSISWORKS INC. 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295	PART NO. <b>8331</b>
		4/12/17 DWG: 918331

# PARTS LIST

## 8331 - Drag Race 11-3/4" Front Brake Kit for A-, F-, X-Body Spindle

1	3904	Drag race slotted rotor set, bare
1	3910	Hubs billet-aluminum, anodized
1	3912	Caliper brackets and hardware

## 3904 - Drag Race Slotted Rotor Set

2	1510	Rotor 11.75 x .35", slotted
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## 3910 - Hubs and Hardware

2	3376	Cone bearing 1.25" ID, inner
2	3378	Code bearing .75" ID, outer
2	3650	Grease seal 2.5 x 1.75 x .25"
2	3759	Front hub assembly, GM bearing races
1	903910	Hub hardware bag

## 903910 - Hub Hardware Bag

2	2056	Spindle washer
16	3103-031C0.75C	Socket head cap screw, 5/16-18 x 3/4", clear zinc
16	3108-031H-S	High-collar lock washer, stainless
10	3109-050-S-2-Y	Aircraft washer, 1/2" x 1/16" thick, yellow zinc
10	3130-050F3.00Y	12-point head cap screw 1/2-20 x 2-1/4", yellow zinc (wheel studs)
2	3145.156-1.00C	Cotter pin 5/32 x 1"

## 3912 - Caliper Brackets and Hardware

1	3705	Bracket assembly for 4-piston caliper, driver side
1	3706	Bracket assembly for 4-piston caliper, passenger side
1	903912	Hardware bag

## 903912 - Hardware for Caliper Brackets

2	1023	Sleeve 1" diameter
4	3100-038F1.25Y	Hex head cap screw, 3/8-24 x 1-1/4" Grade 8, yellow zinc
2	3100-050F3.00Y	Hex head cap screw, 1/2-20 x 3" Grade 8, yellow zinc
2	3101-050-20C	Locknut 1/2-20 nylon insert, clear zinc
2	3105-063F1.25B	Flat head cap screw, 5/8-18 x 1-1/4", black oxide
4	3108-038H-C	High-collar lock washer, 3/8"
4	3109-050-S-2-Y	Aircraft washer, 1/2" x 1/16" thick, yellow zinc
8	3157-038S-S	Flat washer, 3/8" x 1/16" thick, stainless steel

## OPTION - 3989 - Black Forged Dynalite Calipers

2	WW 120-6818	Forged billet Dynalite 4-piston calipers, black
1	WW 150-8850K	Brake pads

## OPTION - 3990 - Black Forged Dynalite Calipers

2	WW 120-6798-P	Forged billet Dynalite 4-piston calipers, polished
1	WW 150-8850K	Brake pads

# INSTRUCTIONS

1. The 11 3/4 x 3/8 inch slotted rotors are directional. The arrow points to the front of the car. If you have the solid rotors, the driver and passenger sides are the same. These brakes require at least a 15" diameter wheel; however, even some 15" wheels may not clear. Verify you have at least 1/4" of wheel clearance from all brake components. Set the rotors on the backside of the hub. Secure the rotor to the hub with the 5/16 x 3/4 socket head screws. Use a lockwasher on each screw.
2. The billet aluminum hubs have threaded-stud-mounting holes for both 4-1/2 and 4-3/4 inch bolt circles. Choose the bolt circle that matches your wheels and chase the threads with a 1/2-20 tap. After chasing the threads, it is a good idea to blow them out with an air hose making sure no debris remains in the holes.
3. Line up the bolt circles on the hub with those on the rotor. Add a drop of Loctite™ to the threads of the 1/2-20 x 3 -12 point wheel studs, up near the head and insert the studs through the proper series of holes. Insert all the wheel studs and tighten them from the backside of the assembly.
4. The bearing races are pressed in the billet hub from the factory. You must pack the wheel bearing before installing it. Use a wheel-bearing packer to do this. If you do not have one available, hand packing the bearing is okay. If you are unsure how to pack the bearing, refer to an auto repair manual for assistance.
5. After the bearing is packed, drop it in the bearing race. The inner wheel bearing seal is then positioned on the hub.
6. Place the hub on a wood surface before installing the seal. Using a hammer and seal installer, drive the seal into the hub making sure it's fully seated.
7. Install the caliper bracket. It bolts to the spindle in the 5/8-18-pivot pin hole in the top of the spindle and the 1/2-inch rear steering arm hole. On '64-'65 spindles, the spindle and steering arm holes will have to be drilled out to 1/2 inch. Attach the caliper bracket so the caliper will be behind the axle centerline. Remove the rear steering arm bolt and install the caliper bracket with the 1/2 x 3 bolt provided. Use two 1/2 aircraft washers as shims between the spindle and the rear of the caliper bracket.
8. Mount the bracket to the spindle upright using the 5/8" flathead screw; use Loctite™. Torque to 60 lb-ft after the lower end of bracket is secured.

DISC BRAKE SPINDLES: Use the additional 1" OD spacer between the bracket and spindle upright.

DRUM BRAKE SPINDLES: Omit the 1" OD spacer. Grind a small chamfer along the edge of the 5/8" tapped hole to clear the base of the flat head cap screw

9. Reinstall the 1/2" lower steering arm bolt with two 1/16" thick aircraft washers to correctly space the flat bracket away from the spindle body.
10. Trial fit the hub with rotor on the spindle and verify that the flat caliper bracket is parallel to the rotor. Changing the shim pack thickness using a combination of 1/32" and 1/16" washers may be required.
11. With the inner bearing and seal in place, slide the hub and rotor assembly onto the correct spindle (remember, the slotted rotors are directional).
12. Pack the outer wheel bearing as you did the inner one. Slide the bearing into the race.
13. Slide the thick washer over the spindle shaft and install the castle nut.
14. To fully seat the bearings, tighten the castle nut to 12-ft. lbs. while turning the rotor assembly forward by hand. This will remove any grease that could cause excessive wheel bearing play. Back off the castle nut to the "just loose" position and then hand tighten. There will be .001 to .005 inches of endplay when the wheel bearings are properly adjusted.

15. After the wheel bearings are tight, insert the cotter pin through the castle nut and the hole in the end of the spindle shaft. Do not tighten the castle nut when aligning the cotter pin; only loosen it. Fold the cotter pin legs to secure the castle nut.
16. Apply anti-seize to the threads of the screw-on dust cap. Screw the dust cap onto the hub. It only needs to be hand tightened, the o-ring inside will keep it from coming loose.
17. Install the Wilwood brake calipers and pads. Start by inserting the brake pads into the caliper, one on each side of the rotor slot with the metal backing toward the pistons.
18. Slide the caliper with the pads installed over the rotor and the caliper mounting pads on the spindle. Use the 3/8-24 x 1-1/4 bolts, lockwashers, and flat washers provided in your brake kit to mount the calipers. The lockwasher goes against the head of the fastener.
19. Use a wrench to tighten the mounting bolts. Rotate the rotor assembly slowly to check for any clearance problems between the rotor and the caliper. Make sure the rotor does not drag on the brake pads. The caliper can be shimmed where it attaches to the caliper bracket to adjust the pad clearance in relation to the rotor. Four extra thin washers are provided for use as shims between the caliper and the caliper brackets. Due to OEM tolerances, it may be necessary to adjust the shims and spacer lengths that spaces the caliper bracket against the spindle. The caliper bracket must be parallel to the rotor.
20. Finally, bolt your wheel and tire on the hub and check again to be sure there is at least 1/4" clearance between the caliper and the wheel. There are differences in wheel manufacturer's tolerances. Make sure your wheel turns freely and does not rub on the caliper.

**NOTES:**

**WARRANTY NOTICE:**

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