

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

# INSTALLATION GUIDE



## 8333-13

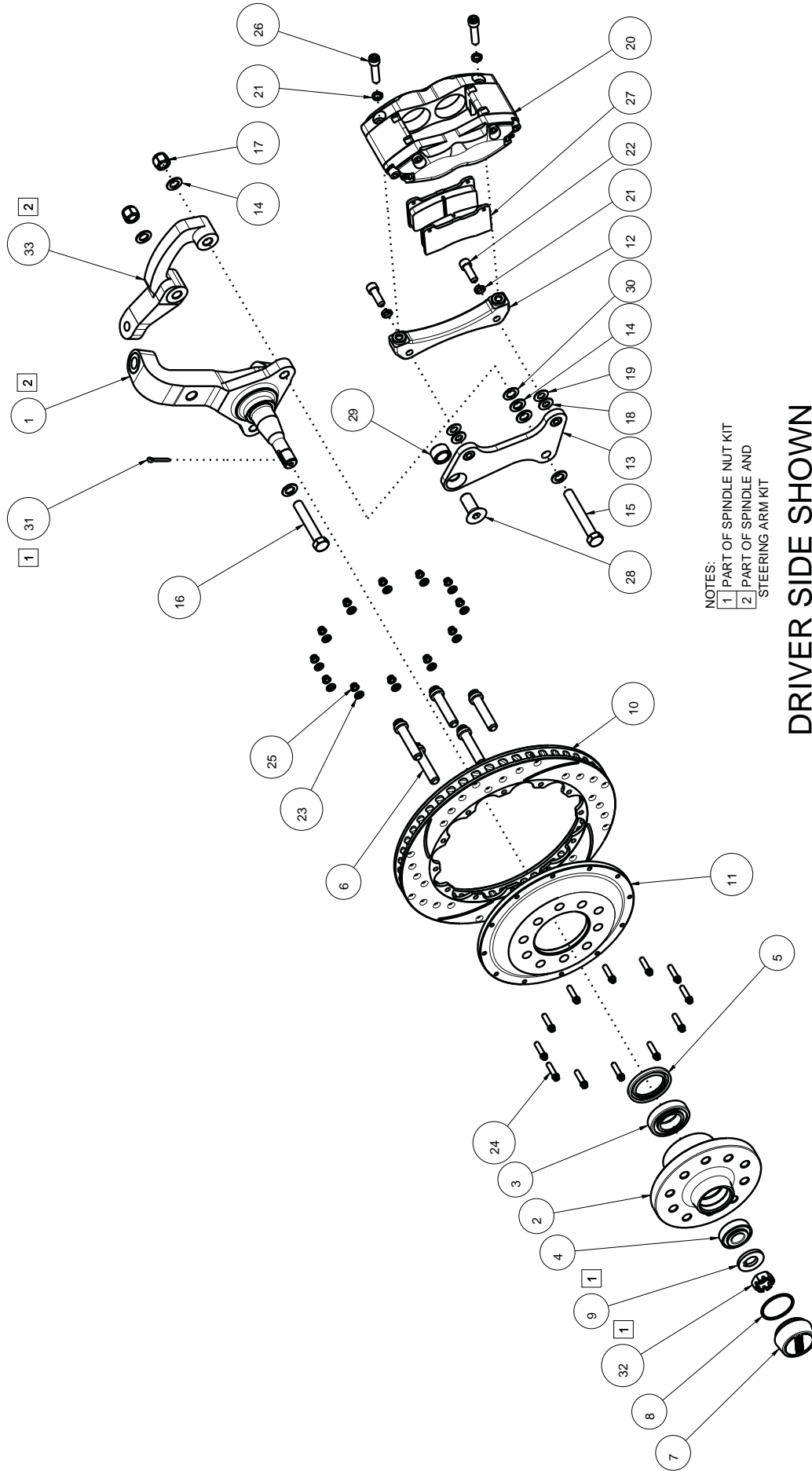
**g-Street 13" Front Brake Kit for A-, F-, X-Body Spindle  
Camaro 67-69, Chevelle 64-72, Nova 64-72**



**Description:** g-Street 13" Front Brake Kit for A-, F-, X-Body Spindle

**Includes:** 13" x 1" vented rotor, billet-aluminum hat, 4-piston radial mount caliper, caliper mounting bracket, brake pads, and aircraft grade mounting hardware.

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



NOTES:  
 1 / PART OF SPINDLE NUT KIT  
 2 / PART OF SPINDLE AND STEERING ARM KIT

## DRIVER SIDE SHOWN

DESCRIPTION: **G-STREET 13 x 1 BRAKES, BILLET DYNAPRO CALIPER, CAMARO / CHEVELLE / NOVA 64-72**

*Chris Aston's* **CHASSISWORKS INC.**  
 8661 YOUNGER CREEK DRIVE  
 SACRAMENTO, CA 95828  
 (916) 388-0288 FAX 388-0295

PART NO.

**8333-13**

4/10/17

DWG: 918333-13

ITEM	QTY	PART NO.	DESCRIPTION
1	1	7964-5001	SPINDLE ASSEMBLY, AFX, NO DROP, 1.250 x .750 SHAFT
2	1	1317	HUB FOR CHASSISWORKS SPINDLE
3	1	3375-3376	TIMKEN BEARING, CUP=LM67010, CONE=LM67048
4	1	3377-3378	TIMKEN BEARING, CUP=LM11910, CONE=LM11949
5	1	3650	GREASE SEAL 2.500 x 1.75 x .250
6	5	3130-050F2.25B	12 POINT CAP SCREW, 1/2-20 x 2 1/4, GRADE 8, BLACK OXIDE
7	1	1306	FRONT HUB CAP
8	1	3537	O-RING, HUB CAP 1.943 x 1.737 x .103
9	1	2056	SPINDLE WASHER $\phi$ 1 1/2 x $\phi$ 3/4 .180 THICK, .180 x .080 KEY TANG
10	1	160-8006	$\phi$ 12.88 x 1.00 SRP ROTOR 12 x $\phi$ 8.75 HAT MNT, WILWOOD
11	1	1331	HAT, 12 x 1/4-28 x 8 7/8 BC, .988 OFFSET, 5 x 1/2 x 4.5/4.75 BC
12	1	1473	CALIPER ADAPTER, DYNAPRO 4 PISTON, 12.9 x 1.0 ROTOR
13	1	7964-5007	CALIPER BRKT ASSY, DRV 3/8, CAMARO / CHEVELLE / NOVA 64-72
14	6	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
15	1	3100-050C3.50Y	HEX BOLT, 1/2-13 x 3 1/2, GRADE 8, YELLOW ZINC
16	1	3100-050C3.00Y	HEX BOLT, 1/2-13 x 3, GRADE 8, YELLOW ZINC
17	2	3101-050-13C	LOCKNUT 1/2-13, GRADE 5, NYLON INSERT, CLEAR ZINC
18	2	3157-038S-S	WASHER, 3/8 SAE, STAINLESS, .812 OD x .406 ID x 1/16 THICK
19	2	3157-038T-S	WASHER, 3/8 THIN, STAINLESS, 13/32 ID x 13/16 OD x 1/32 THICK,
20	1	120-7381	CALIPER, DYNAPRO 4 PISTON n 12.19 x 1.00 ROTOR
21	4	3108-038H-C	HIGH COLLAR LOCKWASHER, 3/8 STEEL, CLEAR ZINC
22	2	3103-038F1.13B	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-24 x 1 1/8, BLACK OXIDE
23	12	3109-025-S-2-Y	AIRCRAFT WASHER 1/4 x .062 THICK
24	12	3122-025F1.00Y	12 POINT CAP SCREW, HIGH TORQUE, 1/4-28 x 1.0, GRADE 8, YELLOW ZINC
25	12	3188-025-028Y	FLANGED LOCKNUT, 12 POINT H20, 1/4-28, YELLOW ZINC
26	2	3103-038C1.75C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-16 x 1 3/4, CLEAR ZINC
27	2	WW 15Q-7268K	WILWOOD POLYMATRIX BRAKE PAD
28	1	3105-063F1.50B	FLAT HEAD SOCKET SCREW, 5/8-18 x 1 1/2, BLACK OXIDE
29	1	1023	SLEEVE $\phi$ 1 x .156 x .556 LONG CALIPER BRACKET SPACER
30	1	3109-050-S-1-Y	AIRCRAFT WASHER 1/2 x .032 THICK
31	1	3145.156-1.00	COTTER PIN, 5/32 x 1
32	1	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE
33	1	7964-5017	STEERING ARM, DRIVER, BSI A-BODY, AFX SPINDLE

# PARTS LIST

## 8333-13 - gStreet 13" Front Brake Kit for A-, F-, X-Body Spindle

Qty	Part Number	Description
1	3921	Hubs and hardware
1	3939	Caliper hardware
2	WW 120-7381	Wilwood Billet Dynapro 4-piston caliper, black
1	WW 15Q-7268K	Brake pads for Dynapro calipers, Polymatrix-Q
1	WW 160-13358-BK	Rotor SRP 12.88" x 1", passenger side
1	WW 160-13359-BK	Rotor SRP 12.88" x 1", driver side

## 3921 - 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	3755	Front hub assembly, GM bearing races
1	903921	Hub hardware bag

## 903921 - Hub Hardware Bag

2	2056	Spindle washer
10	3130-050F2.25B	12-point head cap screw 1/2-20 x 2-1/4", black oxide
2	3145.156-1.00C	Cotter pin 5/32 x 1"

## 3939 - Caliper Hardware

2	1331	Hat, billet-aluminum .988" offset with 5-on-4.5" and 5-on-4.75" bolt circles
2	1473	Caliper adapter, 5.98" radial mount for 12.88 x 1" rotor
1	7964-5007	Caliper bracket, driver side
1	7964-5009	Caliper bracket, passenger side
1	903939	Caliper hardware bag

## 903939 - Caliper Hardware Bag

2	1023	Sleeve 1" diameter
2	3100-050C2.00Y	Hex head cap screw, 1/2-13 x 3" Grade 8, yellow zinc (drop-spindles only)
2	3100-050C3.50Y	Hex head cap screw, 1/2-13 x 3-1/2" Grade 8, yellow (non-dropped spindles)
2	3101-050-13C	Locknut 1/2-13 nylon insert, clear zinc
4	3103-038F1.13B	Socket head cap screw, 3/8-24 x 1-1/8"
4	3103-038C1.75C	Socket head cap screw, 3/8-16 x 1-3/4", clear zinc
2	3105-063F1.50B	Flat head cap screw, 5/8-18 x 1-1/2", black oxide
8	3108-038H-S	High collar lock washer, 3/8"
24	3109-025-S-2-Y	Aircraft washer, 1/4" x 1/16" thick, yellow zinc
2	3109-050-S-1-Y	Aircraft washer, 1/2" x 1/32" thick, yellow zinc
8	3109-050-S-2-Y	Aircraft washer, 1/2" x 1/16" thick, yellow zinc
24	3122-025F1.00Y	Flanged bolt 12-point, 1/4-28 x 1", yellow zinc
12	3157-038S-S	Flat washer, 3/8" x 1/16" thick, stainless steel
4	3157-038T-S	Flat washer, 3/8" x 1/32" thick, stainless steel
24	3188-025-28Y	Flanged locknut 12-point, 1/4-28, yellow zinc

# INSTRUCTIONS

NOTE: Wheel clearance with the 13"-diameter rotor is critical. Most 17"-diameter wheels will fit. You must check the wheel to be sure you have proper clearance. The caliper will extend .380" toward the wheel from the hub surface and the minimum diameter at this position is 14.50". Check your wheel before trying them over the brake kit. Verify you have at least 1/4" of wheel clearance from all brake components. Scratched or damaged hubs, rotors, calipers or mounts are non-returnable for any reason.

1. The rotors are directional. There is an arrow on the flat side of the rotor that points toward the front of the car with the rotor installed.
2. Thread the 1/4" 12-point bolts into the hat. Tighten to 8.5 lb-ft or 103 lb-in of torque. Set the driver-side rotor onto the bolts; flat side of rotor goes against the hat. Secure with aircraft washers and 12-point flanged locknuts. Tighten to 14 lb-ft or 168 lb-in of torque. Hold the bolts with a wrench while tightening the locknuts. Repeat steps for the passenger side rotor.
3. 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.
4. Set the driver side hat and rotor assembly on the backside of the billet hub. Line up the bolt circles on the hub with those on the rotor. Up near the head of each wheel stud add a drop of Loctite™ and then insert the studs through the proper series of holes. Insert all the wheel studs and tighten them from the backside of the assembly. Tighten to 40 lb-ft of torque. Optional 3" studs can be used if you have thick wheels (our part number 8031).
5. The bearing races are pressed in the billet hub from the factory. Pack the inner wheel bearing with grease before placing it into the bearing race.
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 its fully seated.
7. With the inner bearing and seal in place, slide the hub and rotor assembly onto the correct spindle (remember, the slotted rotors are directional).
8. Pack the outer wheel bearing with grease. Place the bearing over the spindle and into the outer race.
9. Slide the washer over the spindle shaft and install the castle nut.
10. To fully seat the bearings, tighten the castle nut to 12 lb-ft 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" of endplay when the wheel bearings are properly adjusted.
11. 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.
12. Apply anti-seize to the threads of the dust cap before screwing onto the hub hand tight. The o-ring inside the dust cap prevents it from coming loose.
13. EARLY SPINDLES: Drill out the two steering arm holes to 1/2" diameter.
14. Remove the rear steering arm bolt in order to install the caliper bracket.
15. Orient the bracket to place the caliper rearward of the axle centerline.

16. 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.

17. 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.
18. 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.
19. Mount the billet caliper adapters to the flat mounting bracket. Use the 3/8" x 1-1/8" long socket head cap screws and high-collar lock washers.
20. Install the caliper using 3/8" x 1-3/4" long socket head cap screws with high-collar lock washers. The caliper position must be adjusted using a combination of 1/16" and 1/32" shims between the flat bracket and caliper adapter to move the caliper as close to centered as possible over the rotor.
21. Verify that the 3/8 x 1-1/8" bolt does not extend past the flat bracket more than .020" so it does not rub the rotor. If the bolts are too long, grind them shorter. Tighten to 30 lb-ft of torque after all adjustments have been finalized.
22. Install the brake pads in each caliper, then install the caliper using 3/8" x 1-3/4" long socket head cap screws with high-collar lockwashers. Tighten until snug, then rotate the rotor assembly slowly to check for any clearance problems between the rotor and the caliper.
23. If the rotor drags on the brake pads, add or subtract washers between the caliper bracket and billet adapter as needed. Tighten caliper bolts to 30 lb-ft.
24. 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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