

**Installation Kit # P1018**  
**Instructions** Axle Kit with  
 Misalignment  
 Bearing

**Applications: Symmetrical Housing End**  
 F-Dimension 2-5/8  
 (measured from outside face of housing  
 end to outside face of axle flange)

**IMPORTANT NOTES:**

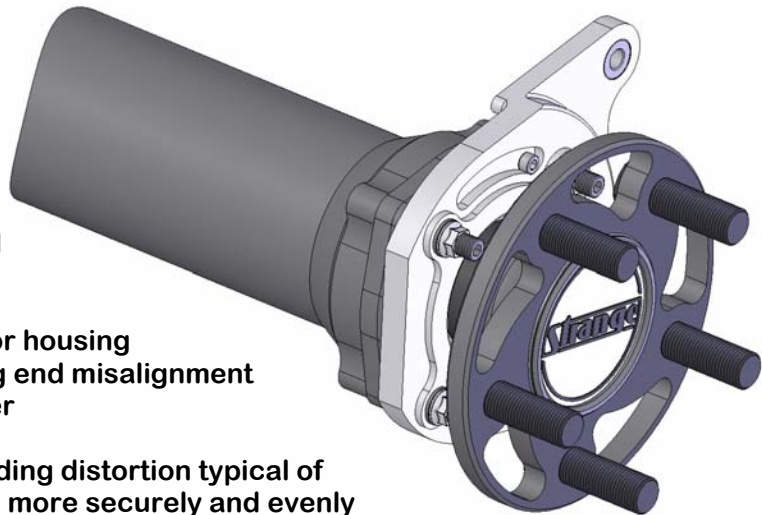
- Axles (item # 1) are unique to each order providing choice of length and bolt circle.
- All axles for this kit are gun-drilled Strange 40 spline Pro Race Axles made from hy-tuf ultra-strength alloy and include 1" lightning holes in the flange (thru-hardened providing a consistent hardness from center to surface of shaft)
- Strange Ultra Light flange is available with this kit.
- Variety of wheel stud kits (item #2) are offered with the P1018 kit. Please refer to page 15 of the Strange Engineering catalog or contact a sales representative for further information.

**BEFORE YOU BEGIN INSTALLATION:**

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.

**FEATURES AND BENEFITS:**

- Heat treated wedding ring provides superior bearing retention
- High load capacity double row spherical roller axle bearing
- Internal surfaces of bearing have been optimized to promote roller guidance and reduce friction
- Misalignment feature of bearing allows for housing tube flex, axle shaft deflection, or housing end misalignment without binding or consuming horsepower
- Bearing cartridge is unaffected from welding distortion typical of housing ends therefore holds the bearing more securely and evenly



### Kit Contents

Item #	Part #	Qty.	Description
1	—	—	40 Spline Axle
2	—	—	Stud Kit
3	B1710G	2	Axle Bearing Sleeve for <b>Strange Brakes</b>
4	B1710GMW	2	Axle Bearing Sleeve for <b>Mark Williams Brakes</b>
5	F1282	8	3/8-24 Jet Nut
6	S3402N	8	3/8 AN Washer
7	B1710I	4	10-32 x 7/16 Screw
8	C1710E	2	Symmetrical Housing End Caliper Mount for <b>Carbon Brakes</b>
9	B1710E	2	Symmetrical Housing End Caliper Mount for <b>Steel Brakes</b>
10	B1301E	4	3/8-24 Press Nut ( <i>pre-installed in caliper mount</i> )
11	WJ036	2	Caliper Mount O-Ring
12	A1100F	2	Axle Seal
13	B1710H	2	Symmetrical End Misalignment Bearing
14	A2000C	2	Wedding Ring
15	B1710F	2	Symmetrical End Bearing Cartridge
16	B1710J	2	Housing End O-Ring
17	A1092C	8	3/8-24 x 2.50" Long Stud

**Note:** Only one type of axle bearing sleeves and caliper mounts are included. Customer must specify the type of brakes.

**Installation Instructions**

**Kit # P1018**

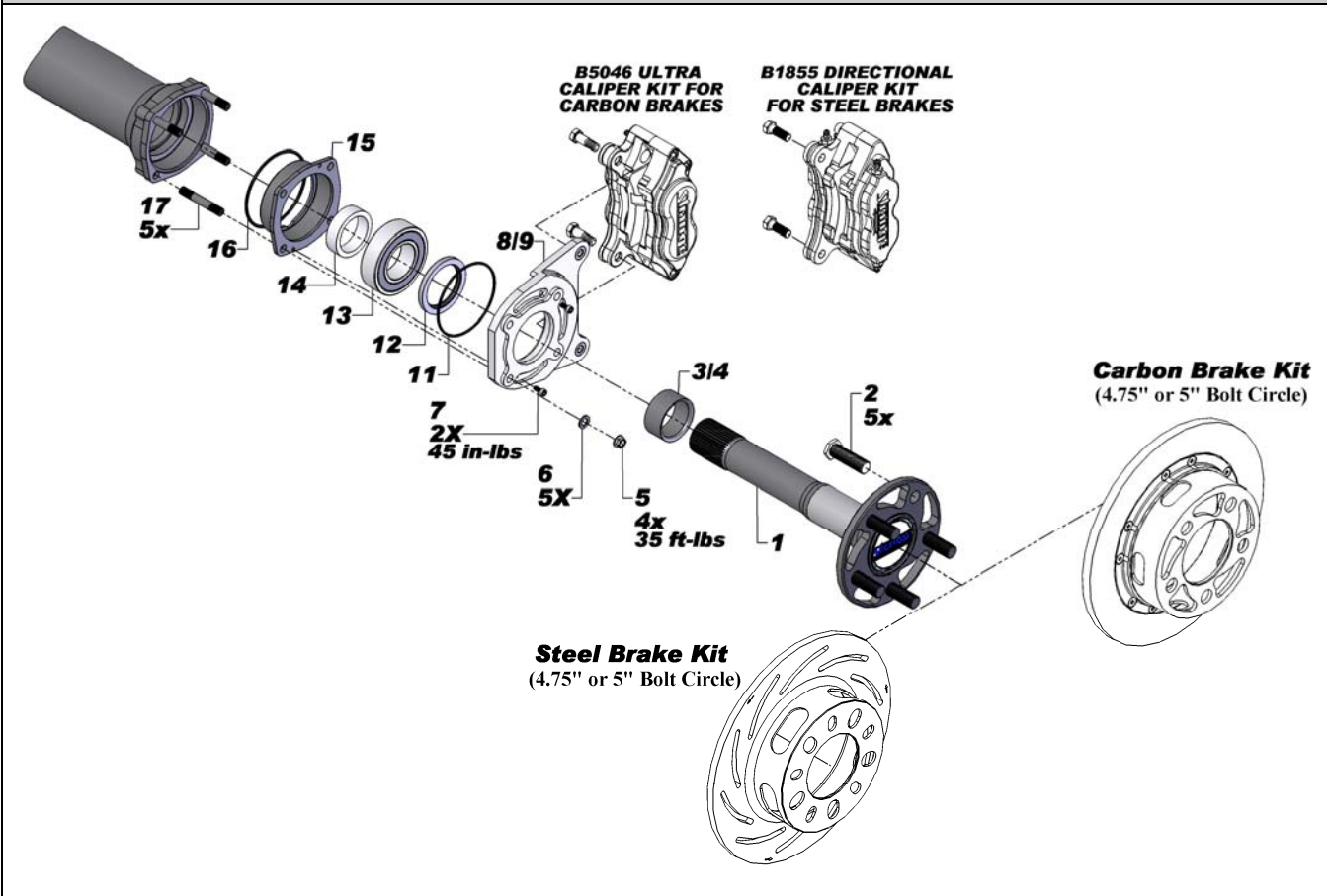
**Applications: Symmetrical Housing End**

<b>Carbon Brake Kits (sold separately)</b> C18104NBUC (4.75" Bolt Circle) & C18105NBUC (5" Bolt Circle)			
Item #	Part #	Qty.	Description
Carbon Brake Kits	C1700C	1	Carbon Rotor Hat Adapter ( <i>Driver Side 4.75 B.C.</i> )
	C1700B	1	Carbon Rotor Hat Adapter ( <i>Passenger Side 4.75 B.C.</i> )
	C1700G	1	Carbon Rotor Hat Adapter ( <i>Driver Side 5 B.C.</i> )
	C1700F	1	Carbon Rotor Hat Adapter ( <i>Passenger Side 5 B.C.</i> )
	C1790	2	11" Dia. Carbon Brake Rotor
	C1700H	2	11" Carbon Rotor Retainer Ring
	C1700D	20	1/4-20 x 1/2" Flat Head Socket Cap Screw
	B5046	1	Strange Ultra Four Piston Brake Calipers w/ Slotted Carbon Brake Pads

**Notes:** Carbon rotor hat adapters are unique to each kit and bolt circle. All other listed parts are included in both carbon kits.

<b>Steel Brake Kit (sold separately)</b> B1711NBM (4.75" & 5" Bolt Circle)			
Item #	Part #	Qty.	Description
Steel Brake Kit	B2793	1	Slotted Steel Rotor Driver Side
	B2792	1	Slotted Steel Rotor Passenger Side
	B1855	1	Strange Four Piston Directional Calipers w/ Metallic Brake Pads

**Figure #1: P1018 Assembly**



## **Installation Instructions**

**Kit # P1018****Applications: Symmetrical Housing End**

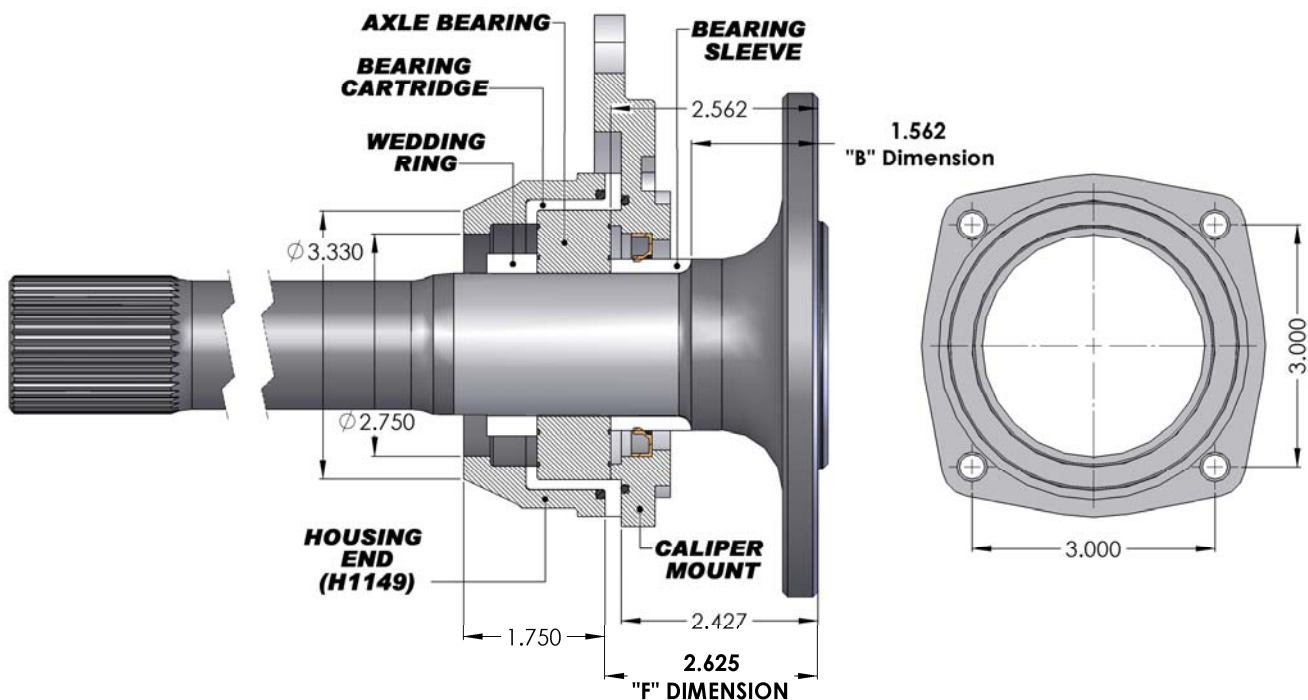
### **WELDING GUIDELINES:**

A professional and qualified chassis shop **MUST** perform the welding of the housing ends to the housing tubes.

1. All housing ends are constructed from 4130 hot rolled steel. The housing ends are black oxidized for appearance purposes which does not affect the welding process.
2. A line up bar must be used when welding housing ends to the housing tubes to verify straightness.
3. Weld the housing end 360 degrees to the end of the housing tube. The weld must be leak free.

## **Assembly & Housing End Dimensions**

(assembly is shown with axle bearing sleeve for Strange Engineering brakes)



**Note:** "F" dimension is measured from the outboard face of the axle flange to the outboard face of the housing end and **NOT** the bearing cartridge.

### **Installation Instructions:**

1. Begin by pressing the axle bearing (13) into the bearing cartridge (15) until it is fully seated in the bottom of the cartridge. Make sure to press only on the outer race of the bearing.  
**Note:** The bearing is symmetric and can be installed in either direction.
2. Stretch the bearing cartridge o-ring (16) over the outside diameter of the bearing cartridge and slide it flush against the flange on the cartridge.
3. Next, press the axle seal (12) into the caliper mount (8/9) until it is fully seated.  
**Note:** The part# on the seal must face outboard when the caliper mount is installed in the car.
4. Push the caliper mount o-ring (11) by hand into the groove in the caliper mount.
5. Before anything is pressed onto the axle, several things must be verified first to make sure everything will fit:
  - a. The distance from the outside face of the axle flange to the bearing shoulder is 1.562" ("B" dim.)
  - b. Axle flange O.D. is 6.245" or smaller
  - c. Bearing journal diameter is 1.773" ("H" dimension)
  - d. Maximum total indicated runout (TIR) of axle must not exceed 0.015".  
If the axle is bent beyond 0.015" it must be replaced.

## **Installation** **Instructions**

**Kit # P1018****Applications: Symmetrical Housing End**

6. Once everything has been verified with the axle and it suitable to use, the wheel studs can be installed in the flange first. Refer to axle and wheel stud instructions for installation and torquing procedures.
7. Press the bearing sleeve (3/4) onto the axle shaft making sure that the large radius on the I.D. of the sleeve is facing the axle flange. It must fully seat against the shoulder on the axle.
8. Next, slide the caliper mount (8/9) over the axle with the caliper mount o-ring (11) facing away from the axle flange.
9. Press the axle bearing and cartridge assembly onto the axle making sure the cartridge flange is orientated towards the caliper mount. Press only on the inner race of the bearing until it is fully seated against the bearing spacer on the axle.
10. Slide the caliper mount up against the bearing cartridge and attach with two 10-32 x 7/16" SHCS (5) using blue Loctite. Torque to 45 ***in-lbs.***
11. Finally, press the wedding ring (14) onto the axle until it seats flush against the bearing. It can be installed in either orientation.
12. Turning your attention to the housing end, install the housing end studs (17) hand tight until they bottom out.
13. Then, slide the axle assembly into the housing end until the bearing cartridge flange seats against the housing end.
14. Install the 3/8" AN washers (6) and the 3/8"-24 jet nuts (5) onto the housing end studs and torque to 35 ft-lbs.
15. Slide rotor (carbon or steel) assembly over the wheel studs until it seats flush against the axle flange.
16. • **For steel brakes refer to B1855 Strange Four Piston Directional Caliper Kits instructions. (Steel rotors and calipers are directional)**  
• **For carbon brakes refer to B5046 Strange Ultra Four Piston Brake Caliper Kits instructions.**
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 to existing lines or use new -3AN braided steel line (teflon lined). Bleed the brake system with DOT 4 or DOT 5.1 brake fluid.
18. Install wheel, wheel washers, and lug nuts. Consult your wheel manufacturer for proper lug nut torque.

### **Carbon Brakes:**

- **L4050H1/2** Carbon brake pads have **0.200"** minimum thickness.
- **C1790** Carbon rotors have **0.300"** minimum thickness.
- Keep carbon away from all chemicals. If contamination occurs the carbon component must be baked for 8 hours at 500° F - (Bake carbon only! Remove aluminum hat and hardware before baking)- If badly contaminated an odor will occur.
- The hotter the rotors become, the more effective braking becomes. Carbon brakes will stop your vehicle far better at the "top end" and will not "hold" as well at the starting line, compared to steel brakes. We recommend that when you first drive or "tow" your vehicle to the starting line, you apply the brakes several times to get the "feel" of carbon at low speeds. After you become comfortable with the vehicle at "pit area" speeds, you may want to "drag" the brakes to create rotor and pad heat to better hold the vehicle at the starting line. We recommend a few 1/2 or 3/4 passes, so as to become aware of how your carbon brakes perform at higher M.P.H.. Remember carbon works better at higher temperatures. The longer the brakes are applied the more aggressive braking will become.

*Rotors wear concave and pads wear convex; therefore, measure rotor thickness in the middle of the rotor and pad thickness in the area where there are not pistons.*

### **Steel Brakes:**

- **B5020** metallic brake pads have **0.200"** minimum thickness.
- **B2792 & B2793** steel rotors have a **0.312"** minimum thickness.
- A proper break in procedure is required for steel brakes 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.

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

Disclaimer of Warranty – Purchasers using Strange Engineering racing components and equipment any and all inventory services, purchasers acknowledge that due to differing conditions and circumstances under which all equipment and parts are installed and used, purchasers are not relying on Strange Engineering Co. skill or judgment to select or furnish the proper part or equipment. Purchasers expressly affirm they are relying upon their own skill or judgment to select and purchase suitable goods. Strange Engineering Co. makes no warranties whatsoever, expressed or implied, oral or written, to purchasers. There is no warranty of merchantability made to purchasers. Strange Engineering Co., further excludes any implied warranty of fitness with respect to racing and equipment, any and all inventory and service.