

Installation
Instructions

Kit # S3423 (pair)
Billet Aluminum Height
Adjustable Front Spindle

Applications: Funny Cars
Utilizes Anglia Style Spindle Mount Wheels.
Utilizes Strange Carbon or Steel Front
Brake Kits

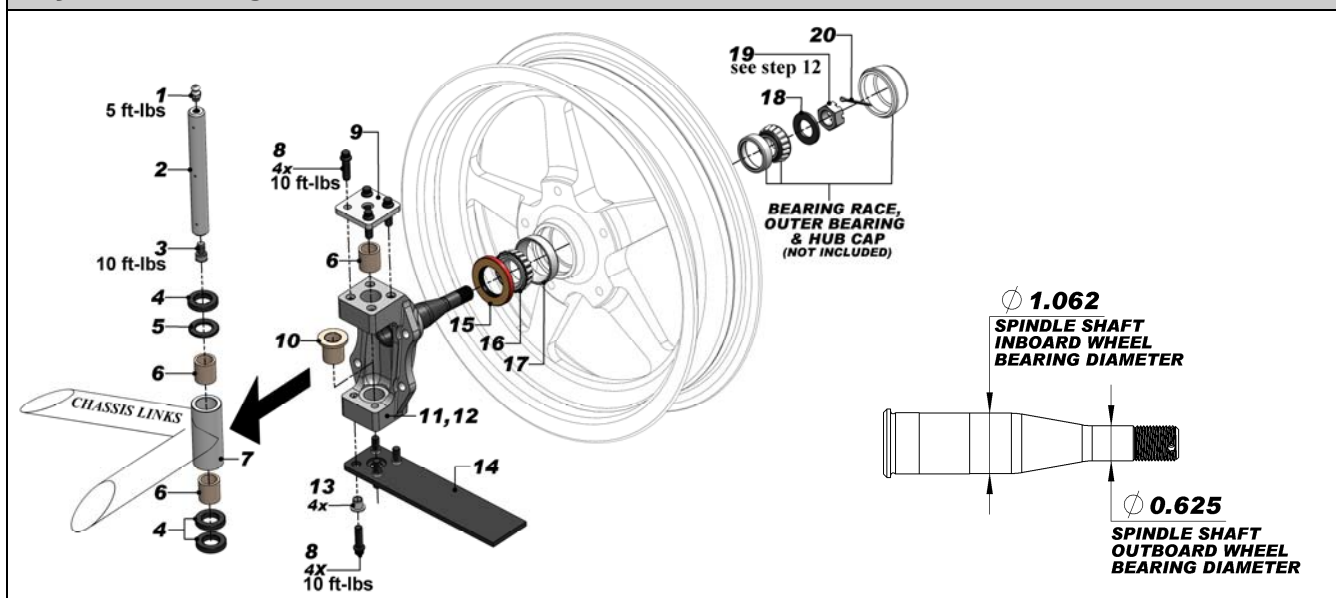
Features & Benefits:

- ◆ At-the-track chassis preload adjusting by simply relocating spacers
- ◆ Spindle body designed from high strength and fatigue resistant aluminum used in aircraft structure
- ◆ Durable Phosphor Bronze Kingpin bushings with excellent resiliency
- ◆ Easily-accessible grease fittings for quick maintenance
- ◆ Undrilled steering arms provides builders with wide range of steering geometry
- ◆ Flanged bushings in the steering arm help eliminate steering wobble and free play in steering links.
- ◆ Lightweight and heat treated steel spindle shaft.

Kit Contents

Item #	Part #	Qty.	Description
1	S3422O	2	5/16"-24 Grease Fitting
2	S3422C3	2	Kingpin
3	S3422P	2	5/16"-24 x 1/2" Screw
4	S3422H	6	1/4" Thick Adjustment Shim
5	S3422G	2	1/8" Thick Adjustment Shim
6	S3422J2	6	Spindle Body and Kingpin Boss Bronze Bushing
7	S3422F	2	Weld-on Kingpin Boss
8	S3422K3	16	5/16"-24 x 1" 12 Point Screw
9	S3422E3	2	Spindle Cap Plate
10	S3422I2	2	Flanged Kingpin Brass Bushing (<i>preinstalled in spindle body</i>)
11	S3422A3	2	Spindle Body (<i>Gen III</i>)
12	S3422B3	2	Spindle Shaft (<i>preinstalled in spindle body</i>)
13	S3422M3	12	Steering Arm Flanged Bushing
14	S3422D3	3	Steering Arm
15	B4600G	2	Wheel Seal
16	B4600F	2	Timken Bearing L44649
17	B4600E	2	Timken Cup L44613
18	S3403E	2	11/16" I.D. Flat Washer
19	S3422L	2	5/8"-18 Slotted Half Nut
20	S3400L	2	3/32" x 1.25" Cotter Pin

Adjustable Height Spindle Assembly



Note: Quantity is per side. Steering arm (10) can be installed in multiple orientations and locations.

Installation **Instructions**

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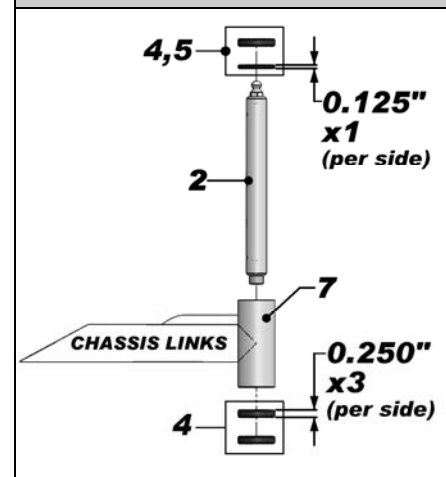
Applications: Funny Cars

1. The kingpin boss (7) must be welded to the chassis by a professional and qualified shop. Refer to welding information below.
2. After welding is complete the two bronze bushings (6) must be pressed in from both sides of the kingpin boss. See spindle assembly.
3. An align hone is necessary to ensure concentricity between the two bronze bushings. **Size after honing should be 0.688" (+0.0005/-0)**
4. The grease fitting (1) and screw (3) must be installed into the kingpin.
5. Refer to adjusting chassis preload for information on determining the proper amount and arrangement of shims (4,5). See side figure.

Notes:

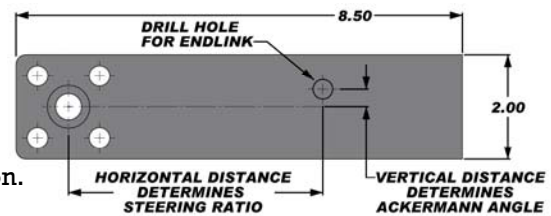
- Adjust chassis preload by rearranging the adjustment shims.
 - A total of two 0.125" and six 0.250" thick adjustment shims are included.
6. Position the spindle body (11) over the kingpin boss and install the kingpin assembly (1,2,3) and adjustment shims.
 7. Secure the assembly with the top plate (9) and bottom steering arm (14) to the spindle body using the 12 point screws (8). Refer to steering arm information.
 8. Consult brake kit instructions for brake assembly.
 9. Pack the wheel bearings with NLGI1 wheel bearing grease.
 10. Press the bearing cup (17), bearing (16) and seal (15) into the wheel.
 11. Install the bearing race and outer bearing provided by the wheel manufacturer.
 12. Install the wheel and secure assembly with the washer (18), slotted spindle locknut (19) and cotter pin (20).
Note: While rotating the wheel, torque the spindle locknut to 20 ft-lbs.
Then loosen the spindle nut until the wheel spins freely and there is no end play.
 13. Lastly, install the hub cap provided by the wheel manufacturer.

Adjusting Chassis Preload



Steering Arm Information

- Steering arms must be drilled with holes for the end link.
- A total of three steering arms are provided and can be mounted on either the top or bottom of the spindle body and parallel or perpendicular to the spindle shaft.
- Two spindle cap plates are provided to be used on the bottom or top of the spindle body depending on the application.



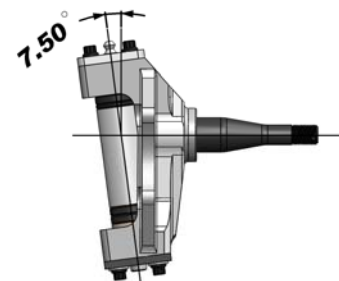
Welding Information

- Use figures on the side for reference to the built in kingpin angle and the recommended caster angle.
- Weld-on kingpin boss(7) is manufactured from 4130 cold rolled steel.
- The only welding method recommended by Strange Engineering is TIG welding using a mild steel rod or 4130 steel rod.
- Before final welding the front end should be mocked up by tack welding the assembly together. Once proper alignment and steering geometry is verified completely weld the mating surfaces of the chassis links and kingpin boss.

Maintenance

- Maintenance includes a yearly inspection of wheel bearings and seals.
- General purpose grease such as white lithium can be used for spindle body and kingpin boss bushings.
- Inspect for excessive play that may indicate worn bronze bushings.
- Worn bushings must be replaced. If replacing kingpin boss bushings an align hone is required. See step 3 above.

Kingpin Angle



Caster Angle

