

# Strange

THE Ultra 4-Link Rear



## ***RaceStrange***

- Fully machined lightweight aluminum housing & components
- 16", 17", 18" and 19" center to center 4-link widths
- 3/4" thick and internally ribbed faceplate
- Integral wheelie bar mounts
- Housing and 4-link plates are lugged for greater strength
- Pre-loaded spindle bearings with billet spindle nut and pre-load spacer
- Available for full floating or 2-piece axles
- Steel or carbon brake kits

Instruction packet:

|          |                                           |
|----------|-------------------------------------------|
| pg. 3 -  | Kit overview                              |
| pg. 4 -  | 4-Link plate dimensions                   |
| pg. 5 -  | Housing dimensions                        |
| pg. 6 -  | Face plate and end bell stud installation |
| pg. 7 -  | Endbell and mounting brackets assembly    |
| pg. 8 -  | Full floating axle assembly               |
| pg. 9 -  | Full floating axle parts list             |
| pg. 10 - | 2-Piece axle assembly                     |
| pg. 11 - | Brake kit options                         |

**8300 North Austin Ave.  
Morton Grove, IL  
60053**

**📞 847-663-1701**

**📠 847-663-1702**

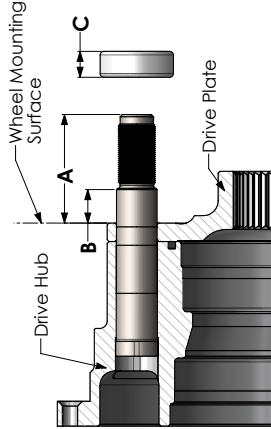
Kit overview

Full Floating Axle Assembly Options

| Wheel to wheel widths | 4-Link CTC<br>(Center to Center) | 4-link plate                                     | Brakes                                            | Bolt circles | Lug nuts  |
|-----------------------|----------------------------------|--------------------------------------------------|---------------------------------------------------|--------------|-----------|
| 31.75"                | 16                               | Standard                                         | 11.50" Steel                                      | 4.75         | Aluminium |
| 32.75"                | 17                               | Reinforced                                       | 11" Carbon                                        | 5.00         | Steel     |
| 33.25"                | 16                               | No plates<br>Adjustable<br>Shock Height<br>Mount | Only available for<br>WTW widths<br>31.75"-40.75" | 5.50         |           |
| 33.75"                | 16, 18                           |                                                  |                                                   |              |           |
| 34.25"                | 17                               |                                                  |                                                   |              |           |
| 34.75"                | 17, 19                           |                                                  |                                                   |              |           |
| 35.25"                | 18                               |                                                  |                                                   |              |           |
| 35.75"                | 18,20                            |                                                  |                                                   |              |           |
| 36.25"                | 19                               |                                                  |                                                   |              |           |
| 36.75"                | 19,21                            |                                                  |                                                   |              |           |
| 37.25"                | 20                               |                                                  |                                                   |              |           |
| 37.75"                | 20,22                            |                                                  |                                                   |              |           |
| 38.25"                | 21                               |                                                  |                                                   |              |           |
| 38.75"                | 21,23                            |                                                  |                                                   |              |           |
| 39.25"                | 22                               |                                                  |                                                   |              |           |
| 39.75"                | 22                               |                                                  |                                                   |              |           |
| 40.25"                | 23                               |                                                  |                                                   |              |           |
| 40.75"                | 23                               |                                                  |                                                   |              |           |
| 41.00"                | 16                               |                                                  |                                                   |              |           |
| 42.00"                | 17                               |                                                  |                                                   |              |           |
| 43.00"                | 18                               |                                                  |                                                   |              |           |
| 44.00"                | 19                               |                                                  |                                                   |              |           |
| 45.00"                | 20                               |                                                  |                                                   |              |           |
| 46.00"                | 21                               |                                                  |                                                   |              |           |
| 47.00"                | 22                               |                                                  |                                                   |              |           |
| 48.00"                | 23                               |                                                  |                                                   |              |           |

Note: All WTW widths have the option to be shortened by 1/2" by taking material off from the Endbells

Full Floating Axle Wheel Studs

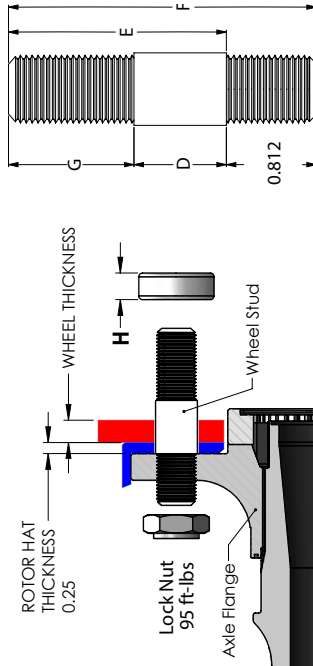


| Studs    | A     | B     | C      | Lug nuts  |
|----------|-------|-------|--------|-----------|
| F2058BSP | 1.90" | 0.65" | 0.250  | steel     |
| F2058BAP | 1.90" | 0.65" | n/a    | aluminium |
| F2058BLP | 2.65" | 1.65" | 0.4375 | steel     |

For wheel stud replacement please contact Strange Engineering

Steel & aluminium lug nut torque: 130 ft-lbs

2 Piece Axle Wheel Studs



| Studs   | D     | E     | F     | G     | H      |
|---------|-------|-------|-------|-------|--------|
| A1036   | 0.775 | 1.550 | 2.362 | 0.775 | 0.250  |
| A1037   | 0.875 | 2.063 | 2.875 | 1.188 | 0.4375 |
| A1037MD | 0.875 | 1.760 | 2.572 | 0.885 | 0.250  |

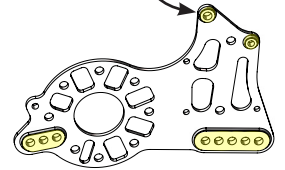
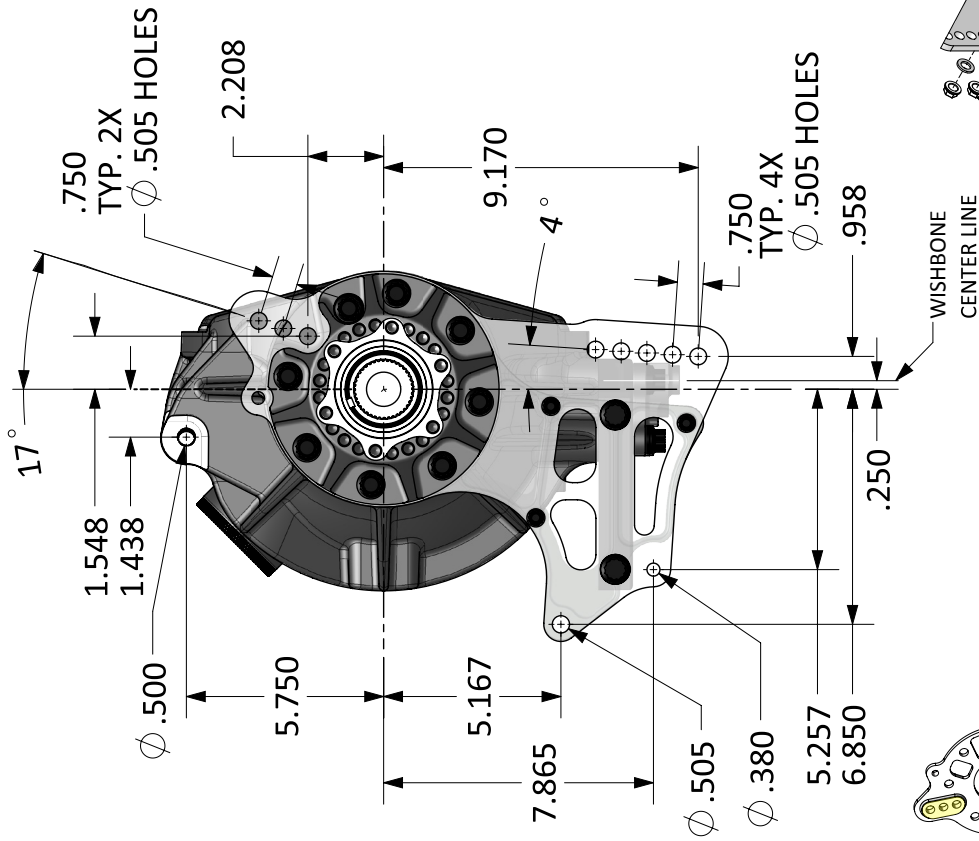
Ensure measurement "D" is able to fully engage into the wheel. The "D" dimension needs to be slightly greater than combined thickness of the brake rotor hat and thickness of the wheel

Lug nut torque: 130 ft-lbs  
Wheel Stud Torque: 50 ft-lbs  
Lock Nut Torque: 95 ft-lbs

2-Piece axle assembly options

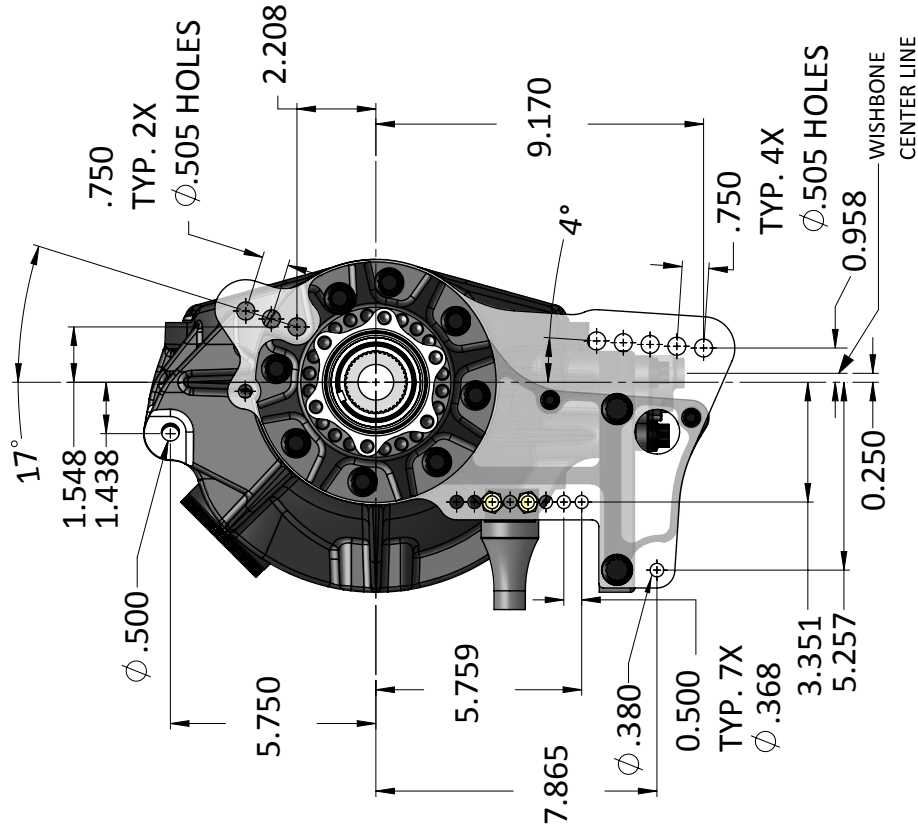
| Wheel to wheel widths | 4-Link CTC<br>(Center to Center) | 4-link plate           | Brakes        | Bolt circles | Lug nuts     | Bearing       |
|-----------------------|----------------------------------|------------------------|---------------|--------------|--------------|---------------|
| 31.50"                | 16                               | standard               | Steel         | 4.75         | Aluminium    | Dual row ball |
| 32.50"                | 16,17                            | reinforced             | (2 pc. rotor) | 5.00         | Steel        | Spherical     |
| 33.50"                | 17,18                            | no plates              | Carbon        | Custom       | misalignment |               |
| 34.50"                | 18,19                            | Adj Shock Height Mount |               | B.C          |              |               |
| 35.50"                | 19,20                            |                        |               | Available    |              |               |
| 36.50"                | 20,21                            |                        |               |              |              |               |
| 37.50"                | 21,22                            |                        |               |              |              |               |
| 38.50"                | 22,23                            |                        |               |              |              |               |
| 39.50"                | 23                               |                        |               |              |              |               |

### Standard 4 Link Plate



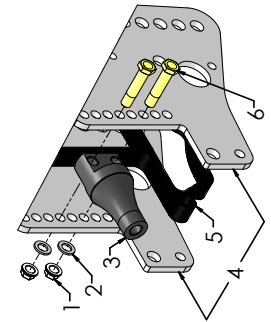
reinforced 4-link plate option  
- weld-on bosses double plate thickness  
at mounting points to increase strength

### 4-Link Plate with Adjustable shock mount

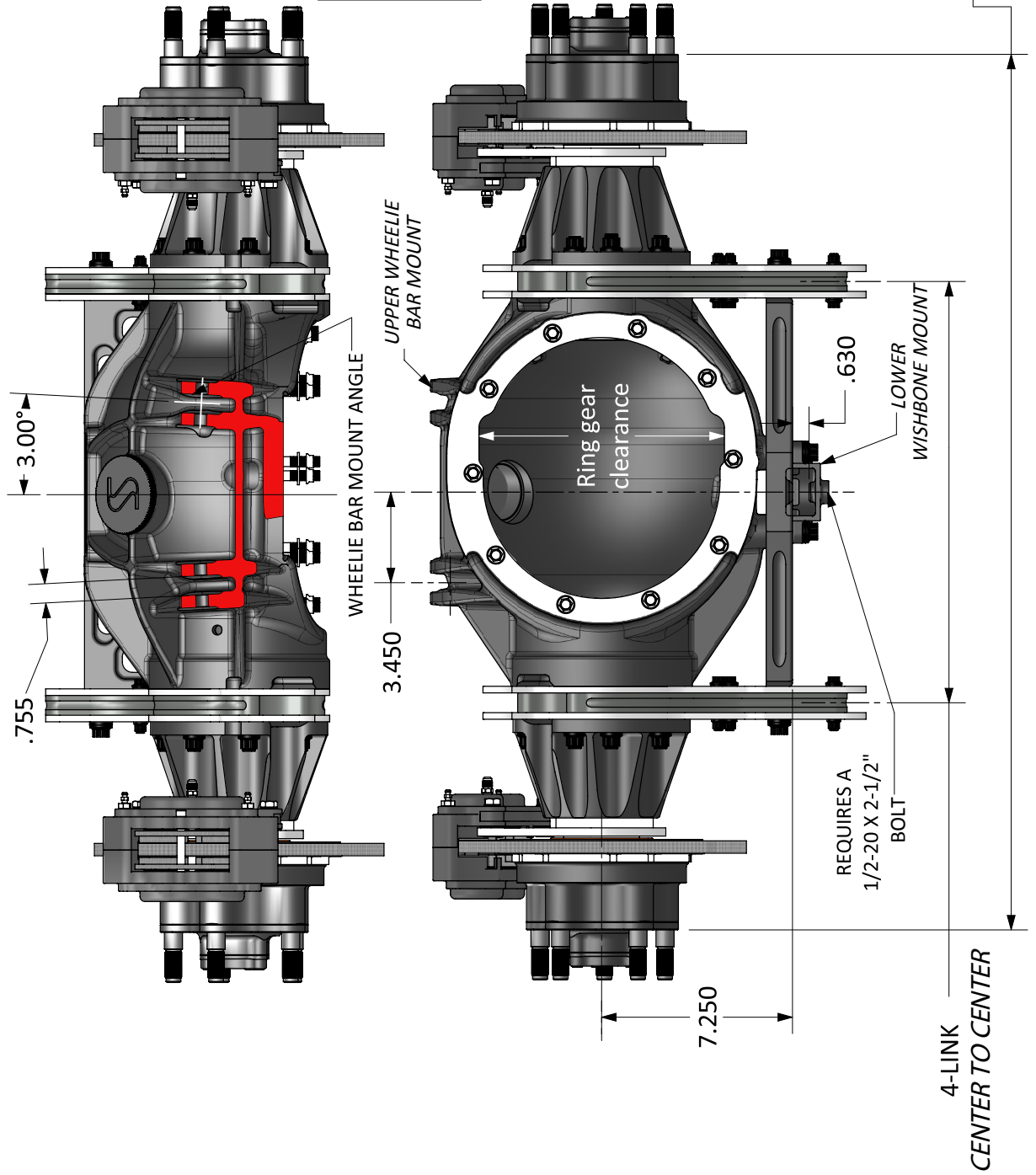


#### Adjustable shock mount plate parts list

| Component | Part #     | Qty | Description                                  |
|-----------|------------|-----|----------------------------------------------|
| 1         | F1282      | 4   | 3/8-24 Jet Nut                               |
| 2         | S3420N     | 4   | 3/8 AN Washer                                |
| 3         | H1180V     | 2   | Shock mount 0.750                            |
| 4         | H1180MP1AS | 1   | HD 4-Link mount plates(4x) -Adj. Shock mount |
| 5         | H1180U     | 2   | 4-Link spacer plate Adj. Shock mount         |
| 6         | H1180VA    | 4   | 3/8-24 x 1.641" Bolt                         |







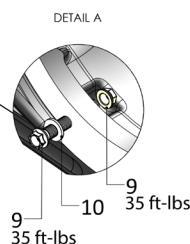
| Ring gear clearance revisions |                     |  |
|-------------------------------|---------------------|--|
| Date manufactured             | Ring gear clearance |  |
| 2/11 - 10/11                  | 9.195               |  |
| 11/11 - present               | 9.446               |  |

**Notes:** SAE 85W-140 nonsynthetic gear oil is recommended H1180 housings require 3 quarts of gear oil.

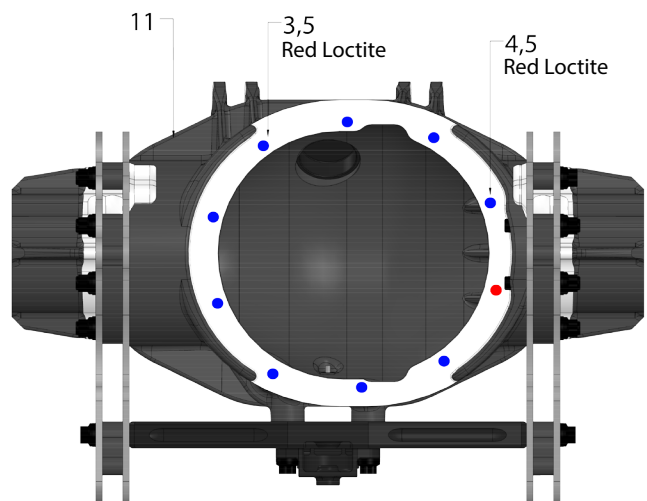
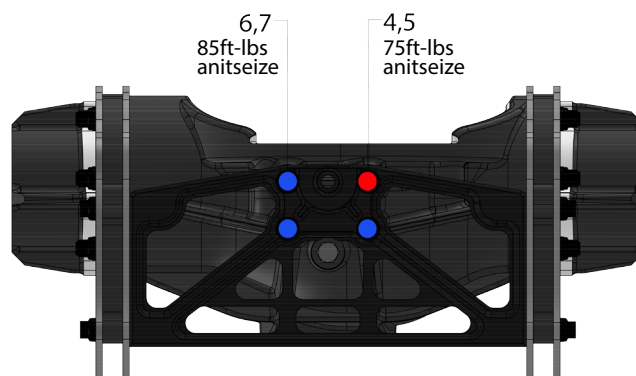
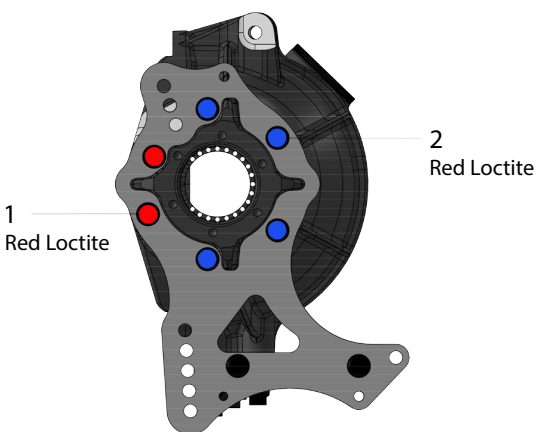
If the housing end bell studs (1,2) or face plate studs (3,4) have not been pre-installed by Strange Engineering refer to the diagrams below to ensure the proper length studs are installed in corresponding locations. The blue and red colors indicate the variations of stud and bolt lengths.

- red Loctite must be used on the studs (not nuts)

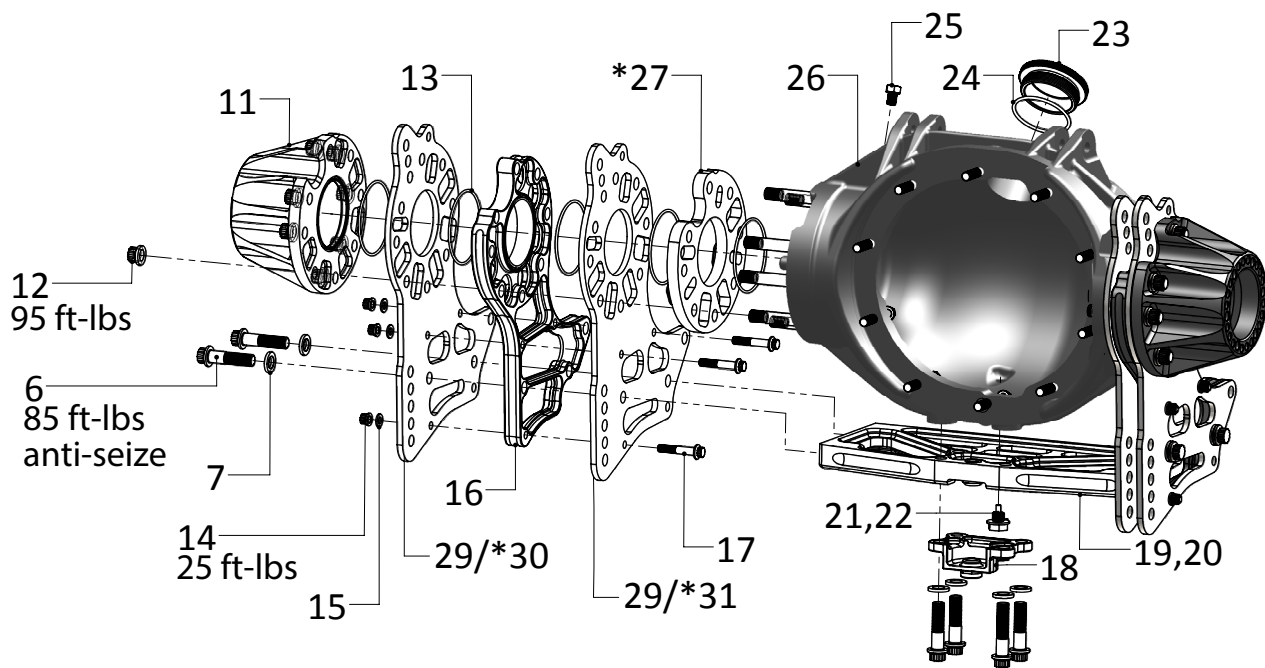
⚠ note:  
face plate studs must  
be hand tightened  
**DO NOT** torque them



⚠ note: jets nuts are not installed from the inside of the flange in locations of L4000B (4)



| Component | Part #  | Quantity | Description                                |
|-----------|---------|----------|--------------------------------------------|
| 1a        | H1180D  | 3        | Housing Tube Stud 2.906" Long              |
| 1b        | H1180D1 | 3        | Housing Tube Stud 3.781" Long (34.75" WTW) |
| 2a        | H1180C  | 13       | Housing Tube Stud 3.312" Long              |
| 2b        | H1180C1 | 13       | Housing Tube Stud 4.187" Long (34.75" WTW) |
| 3         | L4000B1 | 8        | Face Plate Stud 3/8-24 x 2.125"            |
| 4         | L4000B  | 2        | Face Plate Stud 3/8-24 x 1.50"             |
| 5         | H1150E  | 10       | 3/8-24 x 0.520 Thread Inserts              |
| 6         | H1180J  | 7        | 1/2-13 x 2.25" 12 Point Screw              |
| 7         | A1026B  | 8        | 1/2" Flat Washer                           |
| 8         | H1180K  | 1        | 1/2-13 x 2" 12 Point Screw                 |
| 9         | F1282   | 18       | 3/8-24 Jet Nut                             |
| 10        | S3402N  | 10       | 3/8" Washer                                |



| Component | Part #      | Quantity | Description                           | Component | Part #       | Quantity | Description                        |
|-----------|-------------|----------|---------------------------------------|-----------|--------------|----------|------------------------------------|
| 11a       | F2094CR3175 | 1        | 3.00" End Bell (RH)                   | 23        | H1180F       | 1        | Fill Plug                          |
| 11b       | F2094CR     | 1        | 3.75" End Bell (RH)                   | 24        | H1180H       | 1        | Fill Plug O-Ring                   |
| 11c       | F2094CR3375 | 1        | 4.00" End Bell (RH)                   | 25        | H1180P       | 1        | 1/8" NPT Breather                  |
| 12        | H1180Q      | 16       | 1/2-20 12 Point Nut                   | 26a       | H1180A       | 1        | 14.75" Modular Housing             |
| 13        | H1180O      | 8        | -151 O-Ring End Bell                  | 26b       | H1180T       | 1        | 16.75" Modular Housing             |
| 14        | H1180M      | 6        | 5/16-24 12 Point Nut                  | 27        | H1180RR      | 1        | Housing Extension Spacer (RH)      |
| 15        | S3800W      | 6        | 5/16" Washer 1/16" Thick              | 28        | H1180RL      | 1        | Housing Extension Spacer (LH)      |
| 16        | H1180B      | 2        | Four Link Spacer Plate                | 29        | H1180MP1A    | 4        | 4-Link Mount Plate                 |
| 17        | H1180L      | 6        | 5/16-24 x 1.75 12 Point Screw         | 30        | H1180MP1HDRO | 1        | HD 4-Link Mount Plate (RH outside) |
| 18        | H1180G      | 1        | Wishbone Retainer                     | 31        | H1180MP1HDRI | 1        | HD 4-Link Mount Plate (RH inside)  |
| 19a       | H1180E      | 1        | Bottom Brace for 16" Center to center | 32        | H1180MP1HDLO | 1        | HD 4-Link Mount Plate (LH outside) |
| 19b       | H1180E1     | 1        | Bottom Brace for 17" Center to center | 33        | H1180MP1HDLI | 1        | HD 4-Link Mount Plate (LH inside)  |
| 19c       | H1180E2     | 1        | Bottom Brace for 18" Center to center | 34a       | F2094CL3175  | 1        | 3.00" End Bell (LH)                |
| 19d       | H1180E3     | 1        | Bottom Brace for 19" Center to center | 34b       | F2094CL      | 1        | 3.75" End Bell (LH)                |
| 20        | H1180N      | 1        | 1/2-20 X 0.650" Big Sert              | 34c       | F2094CL3375  | 1        | 4.00" End Bell (LH)                |
| 21        | H1180I      | 1        | Drain Plug                            |           |              |          |                                    |
| 22        | H1108IW     | 1        | Drain Plug Gasket                     |           |              |          |                                    |

### 1 Spindle Retainer Nut Installation

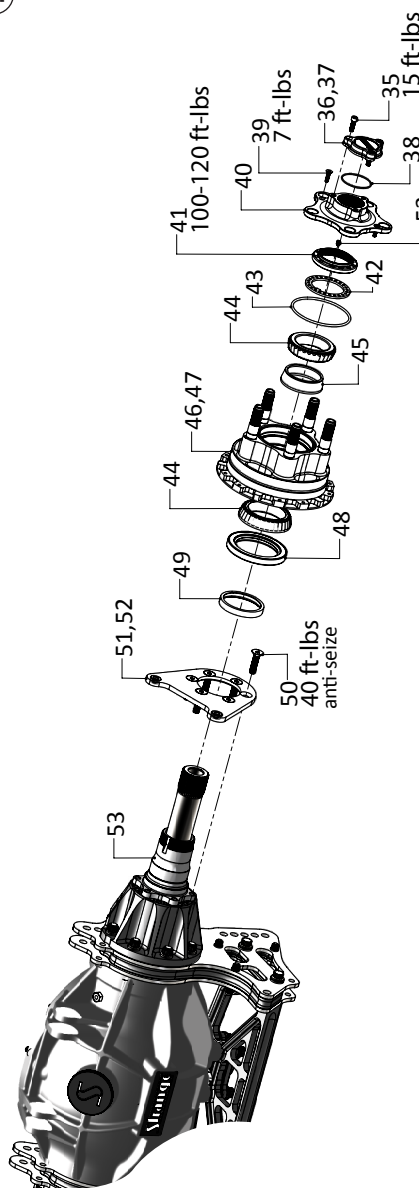
Tools (included with all kits)

F2058W- Spindle Nut Wrench for 4-3/4" & 5" B.C.

F2056M- Spindle Nut Wrench for 5-1/2" B.C.

1. Press the spindle (53) into the endbell and align the threaded holes. Then slide the caliper bracket (51) on.
2. Align the threaded holes in the endbell with the holes in the caliper bracket and spindle flange.
3. Install the six flat head screws (50) and torque to 40 ft.-lbs.
4. The spindle retainer nut (55) is installed using the provided wrench. Apply anti-seize on the threads of the spindle retainer nut.
5. Torque spindle retainer nut to 150 ft.-lbs and align two opposing holes in the retainer nut to mate with the threaded holes in the housing.
6. Apply loctite to a set screw (54) and hand tighten to secure assembly.

! note: pack the bearings (44) with grease



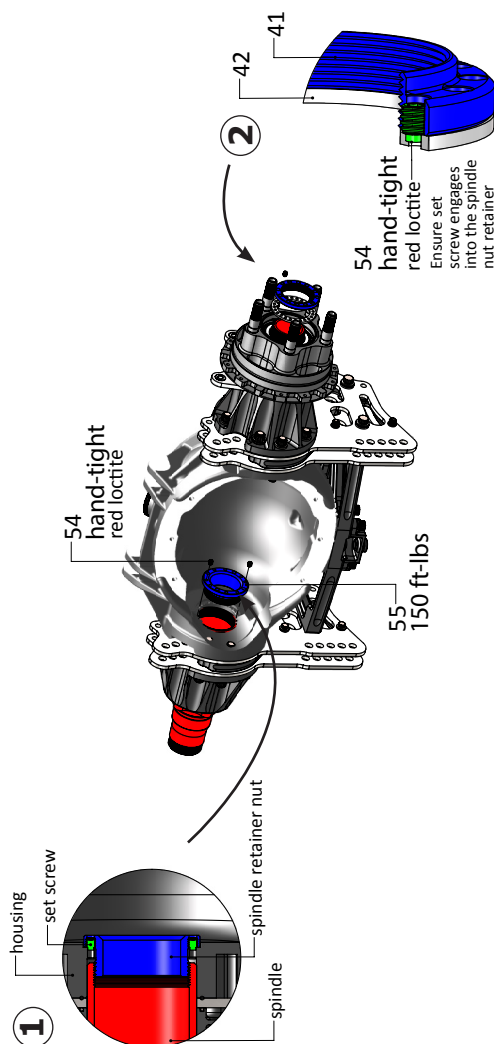
### 2 Spindle Nut Installation

Tools (included with all kits)

F2058W- Spindle Nut Wrench for 4-3/4" & 5" B.C.

F2056M- Spindle Nut Wrench for 5-1/2" B.C.

1. Slide the spindle nut retainer (42) onto the spindle ensuring the notches on the retainer and slots on the spindle are oriented properly.
2. Install the spindle nut (41) using the provided wrench. Spindle nuts are torqued to 100-120 ft.-lbs.
3. Ensure to align two opposite holes on the spindle nut and retainer for installation of set screws.
4. Thread the set screws opposite one another into the spindle nut. Ensure screws engage into spindle nut retainer.
5. Rotate hub several times to ensure everything is seated.





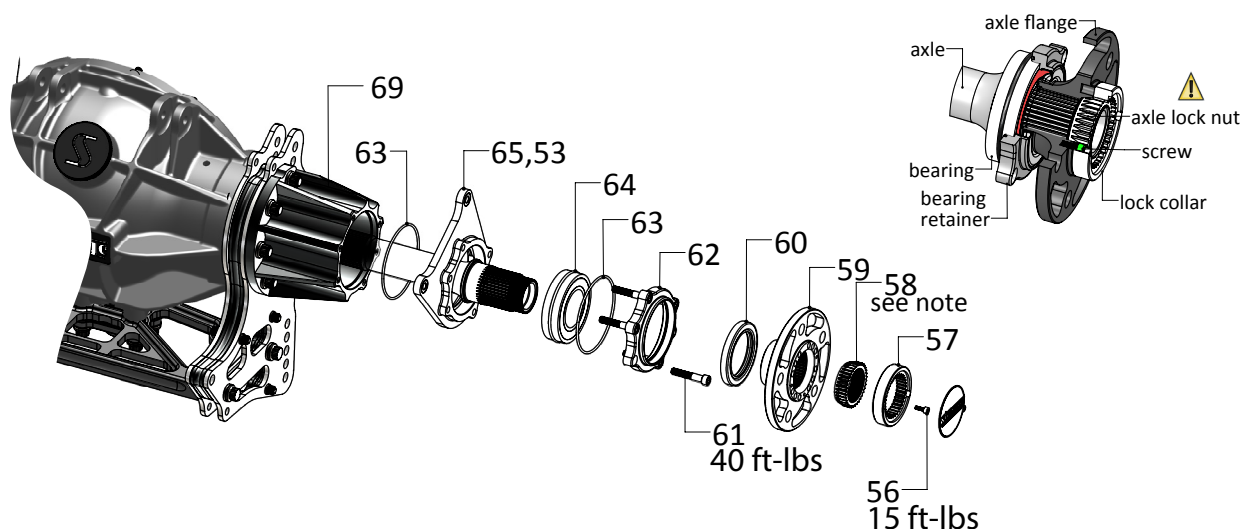


## Full floating axle assembly

| Component | Part #     | Quantity | Description                                   |                |
|-----------|------------|----------|-----------------------------------------------|----------------|
| 35        | A1050D     | 6        | 1/4-28 x 3/4 SHCS                             |                |
| 36        | A1RS       | 2        | Race Decal                                    |                |
| 37        | F2054B     | 2        | 40 Spline Floater Cap                         |                |
| 38        | F2200B     | 2        | Drive Cap O-Ring #032                         |                |
| 39        | F2200C     | 4        | 10-24 x 3/4" FHSCS                            |                |
| 40a       | F2060A     | 2        | 4.75" B.C. Scalped Driveplate                 |                |
| 40b       | F2058A     | 2        | 5.00" B.C. Scalped Driveplate                 |                |
| 40c       | F2056A     | 2        | 5.50" B.C. Scalped Driveplate                 |                |
| 41a       | F2058C     | 2        | 4.75" & 5.00" B.C. Spindle Nut                |                |
| 41b       | F2056C     | 2        | 5.50" B.C. Spindle Nut                        |                |
| 42a       | F2058D     | 2        | 4.75" & 5.00" B.C. Spindle Nut Retainer       |                |
| 42b       | F2056D     | 2        | 5.50" B.C. Spindle Nut Retainer               |                |
| 43a       | F1209C     | 2        | 4.75" & 5.00" B.C. Hub O-Ring                 |                |
| 43b       | F1277      | 2        | 5.50" B.C. Hub O-Ring                         |                |
| 44a       | F1270      | see note | 4.75" & 5.00" B.C. Outer Bearing Cone L507949 |                |
| 44b       | F2056I     | see note | 5.50" B.C. Inner & Outer Bearing Cone L610549 |                |
| 45a       | F2058E     | 2        | 4.75" & 5.00" B.C. Preload Spacer             |                |
| 45b       | F2056E     | 2        | 5.50" B.C. Preload Spacer                     |                |
| 46a       | F2060H     | 2        | 4.75" B.C. Floater Drive Hub                  |                |
| 46b       | F2058H     | 2        | 5.00" B.C. Floater Drive Hub                  |                |
| 46c       | F2056P     | 2        | 5.50" B.C. Floater Drive Hub                  |                |
| 47a       | F1271      | see note | 4.75" & 5.00" B.C. Outer Bearing Cup L507910  |                |
| 47b       | F2056J     | see note | 5.50" B.C. Inner & Outer Bearing Cup L610510  |                |
| 48        | F2056K     | 2        | Hub Seal SKF 28745                            |                |
| 49        | F2056B     | 2        | Spindle Ring                                  |                |
| 50        | F2058G     | 12       | 3/8-16 x 1-1/2 FHSCS                          |                |
| 51a       | F2056O     | 2        | Caliper Mounting Bracket (Steel Brakes)       |                |
| 51b       | F2056F     | 2        | Caliper Mounting Bracket (Carbon Brakes)      |                |
| 52        | B1301E     | 4        | 3/8-24 Press Nut                              |                |
| 53a       | F2094A3175 | 2        | 9.25" Spindle                                 | 4.75" & 5" B.C |
| 53b       | F2094A3275 | 2        | 9.75" Spindle                                 |                |
| 53c       | F2094A     | 2        | 10.00" Spindle                                |                |
| 53d       | F2094A3375 | 2        | 10.25" Spindle                                |                |
| 53e       | F2092A3425 | 2        | 10.50" Spindle                                |                |
| 53f       | F2094A3475 | 2        | 10.75" Spindle                                |                |
| 53g       | F2092A3175 | 2        | 9-11/32" Spindle                              | 5.5" B.C       |
| 53h       | F2092A3275 | 2        | 9-27/32" Spindle                              |                |
| 53i       | F2092A3325 | 2        | 10-3/32" Spindle                              |                |
| 53j       | F2092A3375 | 2        | 10-11/32" Spindle                             |                |
| 53k       | F2092A3425 | 2        | 10-19/32" Spindle                             |                |
| 53l       | F2092A3475 | 2        | 10-27/32" Spindle                             |                |
| 54        | F2056L     | 8        | 1/4-20 x 5/16" Dog Pt. Set Screw              |                |
| 55        | F2094B     | 2        | Spindle Retainer                              |                |

**Note:** 5.50" B.C. Kits include a quantity of 4 F2056I & F2056J

4.75" & 5.00" B.C. Kits include a quantity of 2 F2056I, F2056J, F1270 & F1271



**⚠** Axle lock nut (52) should be torqued to **250 ft-lbs**. Then add additional torque until holes in the lock collar match either pair of threaded holes in the flange. Check and retorqued axle lock nut periodically!

### Tools:

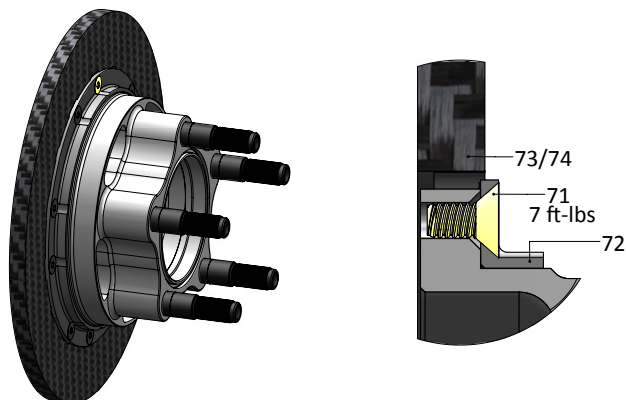
WJ11 - Axle lock nut tool (included with kit)

WJ13 - Axle holder (optional)

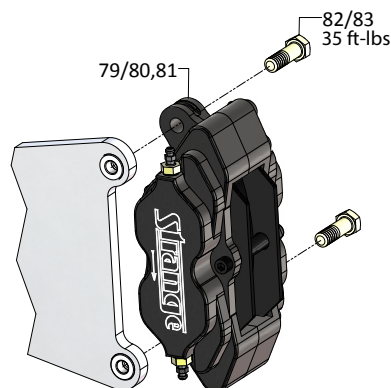
If the optional WJ13 tool is not being used install the axle in the spool and then torque the axle nut.

| Component | Part #  | Quantity | Description                                             |
|-----------|---------|----------|---------------------------------------------------------|
| 56        | WJ10    | 4        | 10-32 x 1/2" SHCS                                       |
| 57        | WJ08    | 2        | Lock Collar                                             |
| 58        | WJ04    | 2        | Axle Lock Nut                                           |
| 59a       | WJ024   | 1        | 4.75" B.C. Axle Flange Passenger Side                   |
| 59b       | WJ030   | 1        | 5.00" B.C. Axle Flange Passenger Side                   |
| 60        | WJ01    | 2        | Seal National #411394                                   |
| 61        | WJ100D  | 12       | 5/16-18 x 1-3/4 SHCS                                    |
| 62        | WJ100AR | 1        | Passenger Side Bearing Retainer                         |
| 63        | WJ036   | 4        | O-Ring #153                                             |
| 64a       | WJ00    | 2        | Spherical Misalignment Bearing                          |
| 64b       | WJBB    | 2        | Ball Bearing                                            |
| 65a       | WJ02BR  | 1        | Passenger Side Caliper Mounting Bracket (Steel Brakes)  |
| 65b       | WJ100BR | 1        | Passenger Side Caliper Mounting Bracket (Carbon Brakes) |
| 66a       | WJ02BL  | 1        | Driver Side Caliper Mounting Bracket (Steel Brakes)     |
| 66b       | WJ100BR | 1        | Driver Side Caliper Mounting Bracket (Carbon Brakes)    |
| 67        | WJ100AL | 1        | Driver Side Bearing Retainer                            |
| 68a       | WJ023   | 1        | 4.75" B.C. Axle Flange Driver Side                      |
| 68b       | WJ029   | 1        | 5.00" B.C. Axle Flange Driver Side                      |
| 69a       | WJ100CR | 1        | 5.00" 2pc. Axle End Bell Passenger Side                 |
| 69b       | WJ102CR | 1        | 4.50" 2pc. Axle End Bell Passenger Side                 |
| 70a       | WJ100CL | 1        | 5.00" 2pc. Axle End Bell Driver Side                    |
| 70b       | WJ102CL | 1        | 4.50" 2pc. Axle End Bell Driver Side                    |

### Full Floating Axle Steel & Carbon Brake Assembly

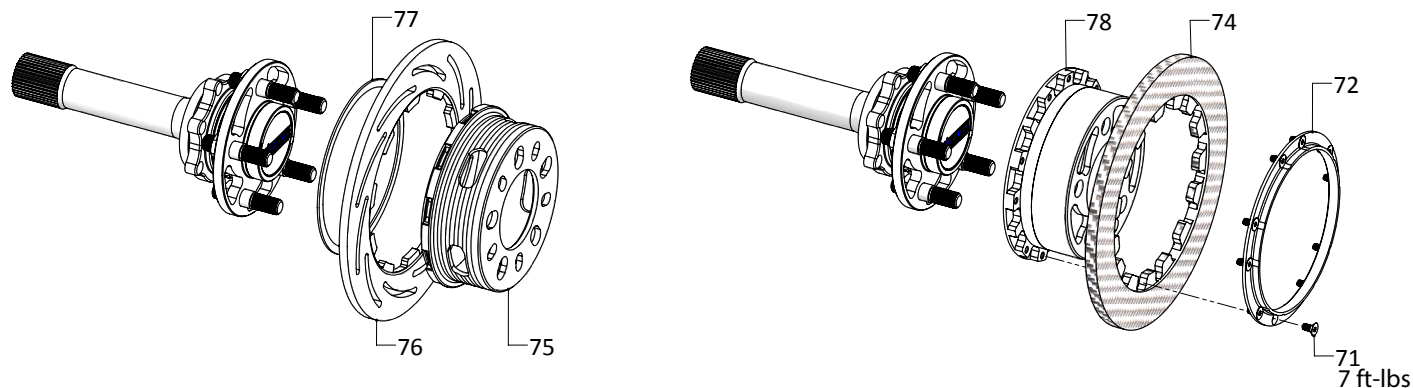


### Brake Caliper



**Notes:**  
- Consult B1850 B1855 Strange Four Piston Directional Caliper and Ultra Caliper (Black Calipers) B5044, B5045, B5046, B5040, B5042 instructions

### 2-Piece Axle Steel & Carbon Brake Assembly



| Component | Part #  | Quantity | Description                                  |
|-----------|---------|----------|----------------------------------------------|
| 71        | C1700D  | 20       | 1/4-20 x 1/2" FHSCS                          |
| 72        | C1700H  | 2        | Retainer Ring                                |
| 73a       | F2056NR | 1        | 11.5" Rear Rotor RH                          |
| 73b       | F2056NL | 1        | 11.5" Rear Rotor LH                          |
| 74        | C1790   | 2        | 11" Carbon Rotor                             |
| 75        | B2794B  | 2        | Rotor Adapter                                |
| 76        | B2794A  | 2        | Brake Rotor                                  |
| 77        | B2794D  | 2        | Spirolock                                    |
| 78a       | C1700B  | 1        | 4.75 B.C. Carbon Adapter RH                  |
| 78b       | C1700C  | 1        | 4.75 B.C. Carbon Adapter LH                  |
| 78c       | C1700F  | 1        | 5.00 B.C. Carbon Adapter RH                  |
| 78d       | C1700G  | 1        | 5.00 B.C. Carbon Adapter LH                  |
| 79        | B1855   | 1        | Four Piston Caliper w/ Metallic Pads         |
| 80        | B5040   | 2        | Four Piston Carbon Caliper                   |
| 81        | L4050HS | 4        | Carbon Soft Pad                              |
| 82        | B5000Y  | 4        | 3/8-24 x 1.125" HHSC (included in B1855 kit) |
| 83        | B5000X  | 4        | 3/8-24 x 1.27" Bolt                          |