

Detroit Speed
S550 Rear Floater Kit
P/N: 070530DS

Thank you for purchasing the Detroit Speed S550 Rear Full Floater Kit for your Ford 9" Housing. The Detroit Speed Full Floater Kit provides improved handling through predictable and consistent brake pedal height and tire contact patch. The elimination of axle deflection reduces brake "knockback" and increases bearing life. The Detroit Speed Full Floater Kit utilizes a C6 bearing pack and is compatible with stock Ford S550 or aftermarket rear brake systems.



Item #	Description	Quantity
1	Detroit Speed Hub Assembly	2
2	Detroit Speed Hub Spacer - LH (99070029)	1
3	Detroit Speed Hub Spacer - RH (99070030)	1
4	Detroit Speed S550 Caliper Mount - LH	1
5	Detroit Speed S550 Caliper Mount - RH	1
6	Hub Shim	2
7	Detroit Speed Center Cap	2
8	Hardware Kit	1
9	Instructions	1

Hardware Checklist – Detroit Speed S550 Rear Floater Kit			
Part Number	Description	Quantity	Check
9307113	Detroit Speed Rear Floater Hardware Kit	1	
960092FS	M12-1.75 Flange Nylock Nut	6	
950093FS	7/16"-20 x 1-1/4" L Socket Head Bolt	4	
980141FS	M14-2.0 x 35mm Flanged Head Bolt	4	
970072FS	7/16" Flat Washer	4	
950088FS	10-32 x 1/2" L Socket Head Cap Screw	6	
070452DS	Inner Axle Seal	2	
99070027	Outer Axle Seal	2	
920033FS	DSE Center Cap O-Ring	2	

Fastener Torque Specifications – Detroit Speed S550 Rear Floater Kit		
Application	Torque (ft-lb)	Threads
M14-2.0 x 35mm Flanged Head Bolt	129	Red Loctite 262
M12-1.75 Flange Nylock Nut	95	
7/16"-20 x 1-1/4" L Socket Head Bolt	65	Red Loctite 262

NOTE: If you are using the factory Ford S550 rear brake system, see the table below for the complete list of parts required with the Detroit Speed S550 Rear Floater Kit.

Rear Brake Parts List		
Part Number	Description	Quantity
FR3Z-2A635-K	Parking Brake Cable (Ford)	2
LRS-2603A	1987-93 Mustang Front Adjustable Parking Brake Cable Kit (LMR)	1
LRS-2603BRKT	1993 Mustang Parking Brake Cable Bracket (LMR)	1

NOTE: When installing the parking brake cables, properly secure them to the vehicle and position them to have adequate clearance to all moving parts. Make sure the parking brake cables are clear of the driveshaft.

NOTE: All work should be performed by a qualified technician.

Installation Instructions:

1. Clean the inside of the axle housing. Use compressed air to blow any loose debris from the housing followed by brake cleaner to remove any oil or grease.
2. Install the axle seals into the Detroit Speed floater housing ends. Place a thin bead of RTV silicone on the outside edge of the seal before installing (Figure 1 on the next page). The seal installs with the flat side of the seal facing outward. Use the appropriate axle seal installer (KD-Tools P/N: 41630) to install the seals on both sides (Figure 2 on the next page). **CAUTION:** Make sure the seal installs straight.



Figure 1 – Use RTV on the Axle Seals



Figure 2 – Install Axle Seals

3. Grease the inside of the axle seal lip (Figure 3).

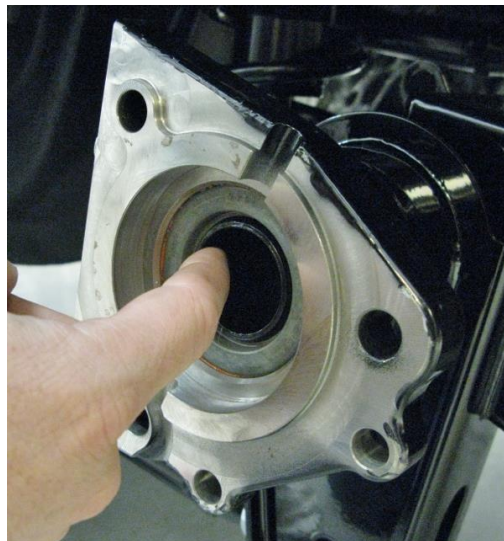


Figure 3 – Grease Axle Seal Lip

4. Place the Detroit Speed Hub Spacer onto the floater housing end (Figure 4). **NOTE:** The LH (Driver Side) hub spacer is 99070029 and the RH (Passenger Side) hub spacer is 99070030. Repeat steps 3 & 4 for the opposite side of the vehicle.



Figure 4 – Install Hub Spacer

5. Place the provided hub shim over the back side of the DSE hub assembly over the three studs (Figure 5).



Figure 5 – Install Hub Shims onto Hub Assembly

6. Install the Detroit Speed Hub Assembly onto the Detroit Speed Housing End (Figure 6).



Figure 6 – Install Hub Assembly (Driver Side)

7. Install the provided M12-1.75 flange Nylock nuts onto the three studs that are installed into the hub assembly. Torque the flanged Nylock nuts to 95 ft-lbs. using a 18m socket (Figure 7). Repeat steps 5 - 7 for the opposite side of the vehicle.



Figure 7 – Torque Hub Assembly

8. Install the Detroit Speed caliper mount to the back side of the housing end using two of the provided 7/16"-20 x 1-1/4" L socket head bolts and 7/16" washers. Before installing these two bolts, use high strength red Loctite 262 on the threads. **NOTE:** There is a left and right hand caliper mount bracket, be sure to install the correct bracket on the correct side. The caliper mount bracket will shift the caliper outboard (Figure 8).

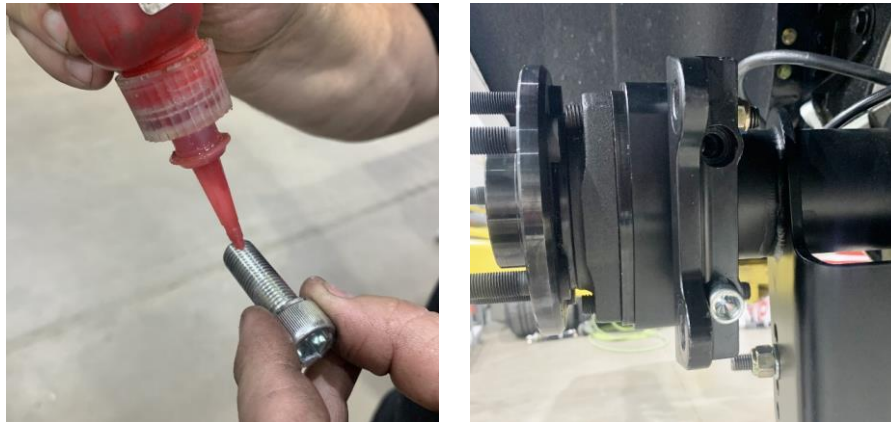


Figure 8 – Install Caliper Brackets

9. Torque the 7/16"-20 hex head bolts to 65 ft-lbs (Figure 9). Repeat Steps 8 & 9 for the opposite side of the vehicle.



Figure 9 – Torque Caliper Bracket

10. Test fit the inner axle seals before applying grease to make sure they will fit correctly. They are designed to work with a 2.560" inner axle tube diameter. **NOTE:** The flats that are machined into the seal, need to go straight up and down to clear the bead of weld between the axle tubes and the center housing. Grease the inner axle seals on the outside o-rings as well as the inside where the axle shafts will slide through. Install the axle seals into the housing tubes from the center section opening (Figure 10).



Figure 10 – Grease the Inner Axle Seals

NOTE: If you are not using a Detroit Speed axle housing or have something different than a 2.560" inner axle tube diameter see the chart below (Figure 11). Visit www.sealsit.com.

Seals-It Inner Axle Seals			
Part Number	Color	Tubing Size	Housing Size
AS9250	Gold	2.500"	2.470"
AS9218	Blue	2.560"	2.540"
AS9188	Red	2.625"	2.605"
AS9125	Silver	2.750"	2.720"

Figure 11 – Inner Axle Seals

11. Use the appropriate axle seal installer (KD-Tools P/N: 41630) to install the seals on both sides (Figure 12). **CAUTION:** Make sure the seal installs straight.



Figure 12 – Install Inner Axle Seals

12. Place the third member gasket over the studs. Use RTV silicone on both sides of the gasket. Install the third member into the axle housing. Thread the 3/8"-24 Nylock nuts onto the studs using the 3/8" AN washers. Torque the 3/8"-24 Nylock nuts to 35 ft-lbs.
13. Grease both axles on both ends at the splines as well as the the axle shaft where the inner seal will be in contact. This will be the area of the axle shaft behind the longer axle splines (Figure 13).



Figure 13 – Grease Axle Shafts

14. Slide the axle shafts into the hub assembly with the longer set of splines into the axle housing first (Figure 14). **NOTE:** The axles are specific for each side. The shorter axle is for the driver side and the longer axle is for the passenger side.



Figure 14 - Install Axle Shafts

15. In order to seat the axle shafts all the way in, you can install a 3/8"-24 bolt into the tapped hole in the end of the axle and use a rubber hammer to fully install. You should be able to feel the axle shaft bottom out into the 3rd member. You should have about an 1/8" of end play in the axle shaft between the hub face and the end of the axle (Figure 15).

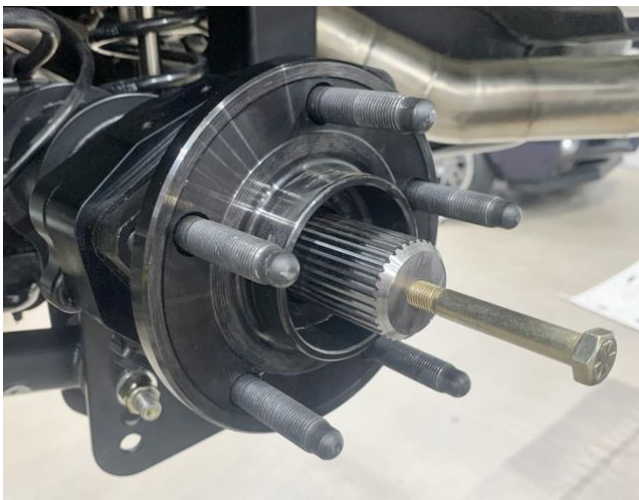


Figure 15 - Check Axle Shaft End Play

16. Grease the Hub Cap O-ring and install it into the Detroit Speed Hub Cap (Figure 16).



Figure 16- Install O-Ring

17. Install the Detroit Speed Hub Cap to the hub assembly using the three provided 10-32 x 1/2" L socket head cap screws. Before installing these bolts, use medium strength blue Loctite 242 on the threads. Tighten the 10-32 bolts. (Figure 17). Repeat steps 16 and 17 for the opposite side of the vehicle.



Figure 17 – Install Detroit Speed Hub Cap

18. Refer to your rear brake system instructions to complete your rear axle assembly. Use the provided M14-2.0 x 35mm flanged head bolts to install the brake calipers to the DSE caliper mounts. Use high strength red Loctite on the threads of the bolts and tighten. Torque the caliper mounting bolts to 129 ft-lbs (Figure 18).

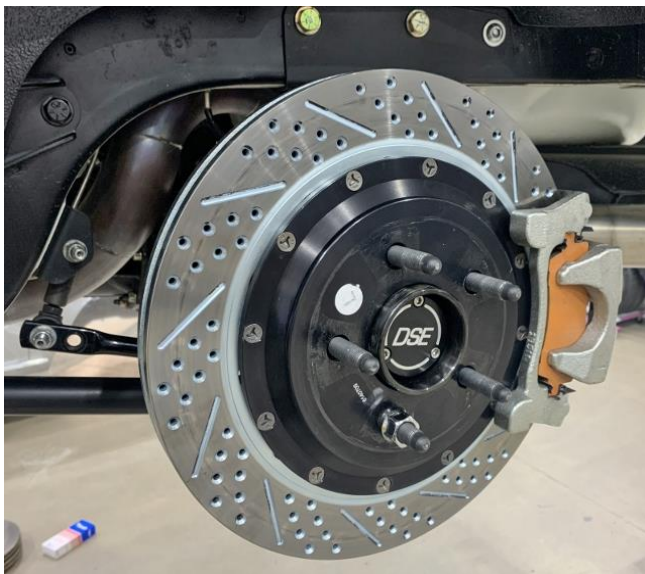


Figure 18 – Install Brakes

19. Upon completion of the rear axle and brake system assembly, Detroit Speed recommends a break-in procedure for good service life of the gear set. Some aftermarket gear sets are noisier than others. The complete break-in procedure must be performed before checking the gear set. The information below lists the step by step procedure to correctly break-in your newly purchased Ford 9" axle assembly.

CAUTION: DO NOT use any type of synthetic oil during the break-in period.

20. Fill the differential with approximately 2-1/2 to 3 quarts of conventional 80W-90 gear oil.
NOTE: The differential is full when the gear oil starts to run out of the center section side fill plug. Be sure to use the fill plug located at the side of the differential (Figure 19).

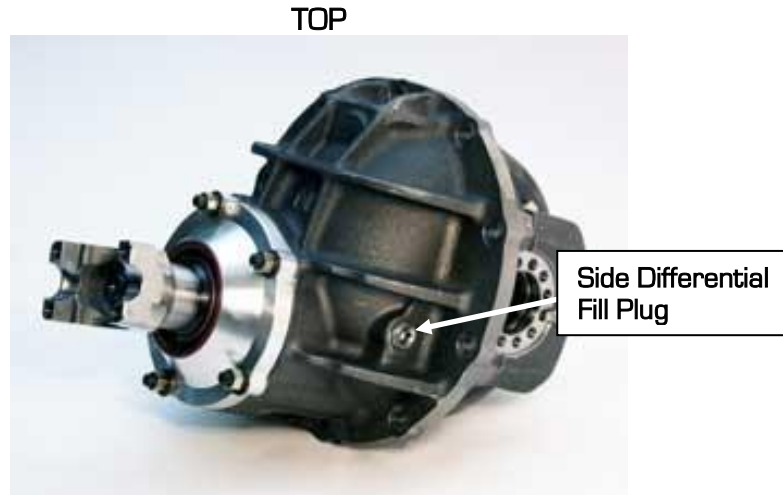


Figure 19 – Differential Fill Plug Location

21. With the rear differential full of fluid and the vehicle on jack stands, run the car in forward and reverse for approximately two to three minutes. **WARNING:** Operator must remain in the driver's seat and always make sure the front wheels are blocked and jack stands are secured before attempting this procedure. Never exceed 2,000 rpm with the wheels off the ground. Failure to follow this warning could result in serious damage or physical injury.
22. Test drive the vehicle. If no noise is heard, continue with the break-in procedure. If excessive noise is heard from the gear. DO NOT CONTINUE DRIVING. Contact your 3rd member vendor.
23. Continue driving on a ten mile round trip at normal operating speeds. Accelerate and decelerate several times conservatively.
24. After the first road trip, let the rear axle completely cool before driving again.
25. Repeat steps 21 through 24.
26. After 500 miles, the gear oil must be changed. If desired by the customer, synthetic oil may be used at this time
27. The break-in procedure is now complete.

If you have any questions before or during the installation of this product, please contact Detroit Speed at tech@detroitsspeed.com or 704.662.3272