Detroit Speed
C6 Rear Floater Kit
P/N: 070510DS & 070511DS

Thank you for purchasing the Detroit Speed C6 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 GM C6 or aftermarket C6 rear brake systems.

Figure 1 – 070510DS

Item #	Description	Quantity
1	Detroit Speed Hub Axle End, LH and RH (P/N: 070510DS Only)	2
2	Detroit Speed C6 SKF Hub Assembly	2
3	Detroit Speed C6 Hub Spacer – LH (99070019)	1
4	Detroit Speed C6 Hub Spacer – RH (99070020)	1
5	Detroit Speed C6 Caliper Mount – LH (99070021)	1
6	Detroit Speed C6 Caliper Mount – RH (99070022)	1
7	Hub Shim (not shown above)	2
8	Detroit Speed Center Cap Assembly	2
9	Hardware Kit	1
10	Instructions	1

Hardware Checklist – Detroit Speed C6 Rear Floater Kit			
Part Number	Description	Quantity	Check
9307102	Detroit Speed Rear Floater Hardware Kit	1	
960092FS	M12-1.75 Flange Nylock Nut	6	
980091FS	M10-1.5 x 65mm Flange Head Bolt	4	
980130FS	7/16"-20 x 2" L Hex Head Bolt	4	
970072FS	7/16" Flat Washer	4	
950088FS	10-32 x 1/2" L Socket Head Bolt	6	
070436	Inner Axle Seal	2	
99070027	Outer Axle Seal	2	
920033FS	DSE Center Cap O-Ring	2	

Fastener Torque Specifications – Detroit Speed C6 Rear Floater Kit		
Application	Torque (ft-lb)	Threads
M12-1.75 Flange Nylock Nut	95	
M10-1.5 x 65mm Flange Head Bolt	40	Blue Loctite 242
7/16"-20 x 2" L Hex Head Bolt	65	Red Loctite 262
3/8"-24 Nylock Nut	35	

NOTE: If you are using the factory GM C6 rear brake system, see that table below for the complete list of parts required with the Detroit Speed C6 Rear Floater Kit.

GM C6 Z51 (J55) Rear Brake Parts List			
Part Number	Description	Quantity	Check
GM 19208039	C6 Z51 (J55) Rear Caliper, LH	1	
GM 19208040	C6 Z51 (J55) Rear Caliper, RH	1	
GM 88964167	C6 Z51 (J55) Rear Caliper Bracket	2	
GM 88955515	C6 Caliper Pin Kit	2	
GM 14084051	C6 Caliper Mounting Bolts (M14 x 2.0 x 47mm)	4	
	Caliper Mounting Bolt Washers (M14 din 125 HV300)	4	
GM 89060329	C6 Z51 (J55) Rear Rotor	2	
GM 88909668	C6 Rear Pad Set	1	
C6 Rear Park Brake Parts			
Baer B610-123	C6 Rear Park Brake Assembly, LH	1	
Baer B610-124	C6 Rear Park Brake Assembly, RH	1	
GM 25693149	C6 Rear Park Brake Cable Bracket, LH	1	
GM 25693150	C6 Rear Park Brake Cable Bracket, RH	1	

NOTE: Optional Wheel Stud Kit – ARP 100-7708 – M12-1.5 x 2.5" L GM Wheel Stud Kit

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

Installation Instructions:

1. If you have purchased Detroit Speed P/N: 070511DS proceed to step 2. For Detroit Speed P/N: 070510DS, weld the left and right hand Detroit Speed C6 Hub Axle Ends to your rear axle tubes (Figure 2). **NOTE:** The caliper mount bracket surface should be facing the front of the vehicle.

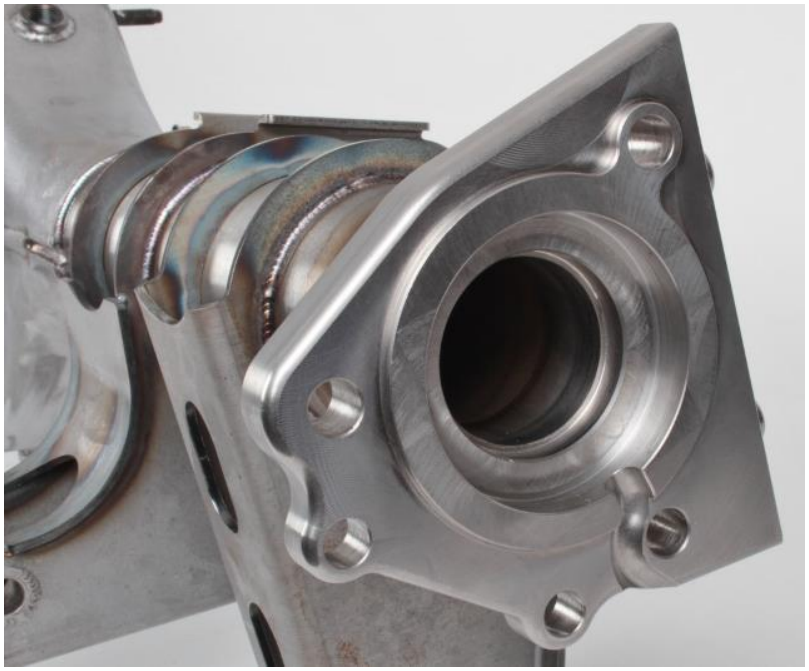

Figure 2 – Detroit Speed C6 Hub Axle End

2. 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.

3. 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 3). 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 4). **CAUTION:** Make sure the seal installs straight.

Figure 3 – Use RTV on the Axle Seals

Figure 4 – Install Axle Seals

4. Grease the inside of the axle seal lip (Figure 5).

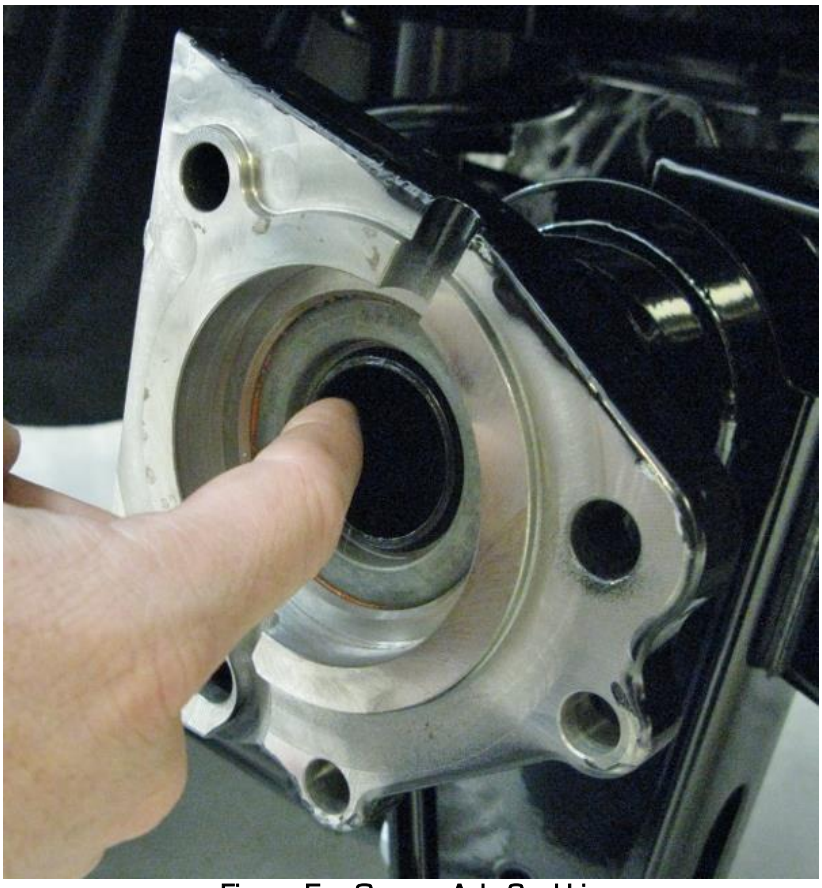

Figure 5 – Grease Axle Seal Lip

5. Next, you will need your park brake assembly from your C6 rear brake system. **NOTE:** If you are not using the park brake assembly, continue to the next step. Remove the 2 bolts holding the park brake piston to the brake shield (Figure 6). These bolts will not be re-used and will be replaced with the hardware provided in the Detroit Speed Floater Kit. **CAUTION:** The park brake assembly will be loose on the shield with only the wires holding it in place. Be careful to note how it has been installed on the shield in case it comes apart so you can re-assemble it correctly before the next step.

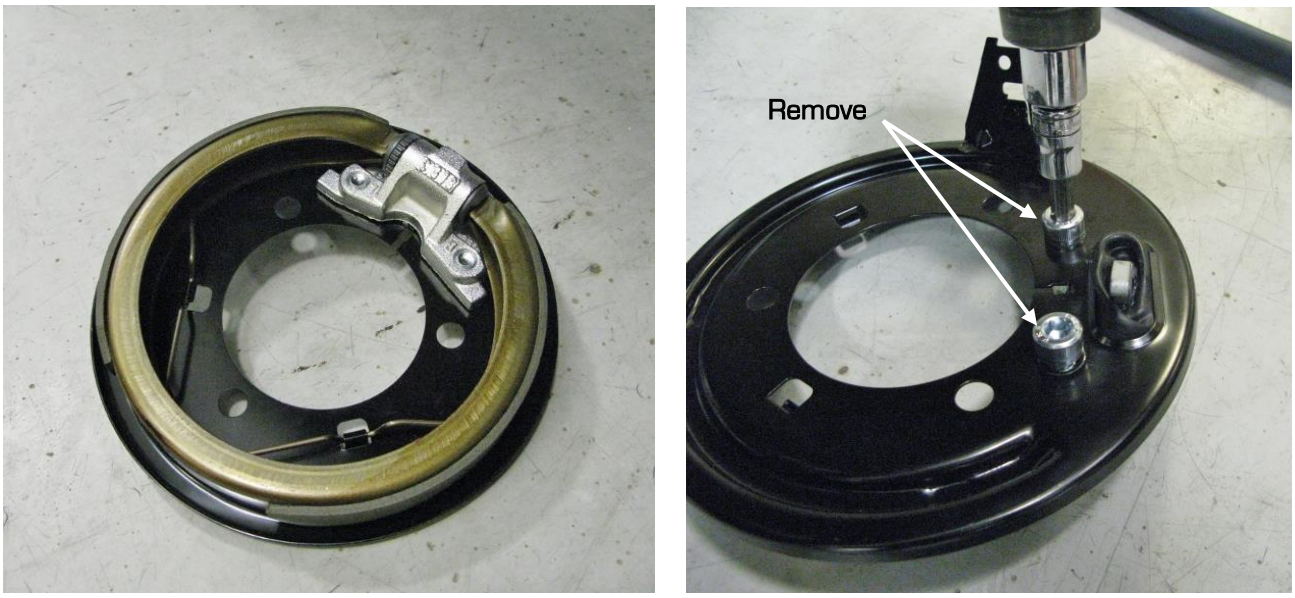

Figure 6 – Remove Park Brake Piston Bolts

6. Place the C6 park brake assembly onto the Detroit Speed hub assembly. **NOTE:** If you are not using a park brake assembly, install the provided hub shim onto the Detroit Speed hub assembly.

7. Place the Detroit Speed C6 Hub Spacer onto the park brake/hub assembly. **NOTE:** The LH (Driver Side) hub spacer is 99070019 and the RH (Passenger Side) hub spacer is 99070020. Repeat steps 5-7 for the opposite side of the vehicle.

8. Install the Detroit Speed Hub Assembly onto the Detroit Speed Housing End. On the driver side of the vehicle, the ABS sensor bracket will be at the 7 o'clock position (Figure 7). On the passenger side the ABS sensor bracket, will be located at the 5 o'clock position.

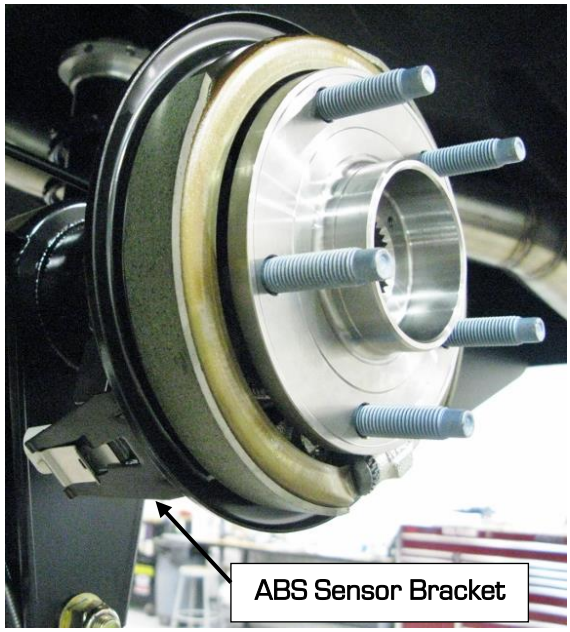

Figure 7 – Install Hub Assembly (Driver Side)

9. Install the provided M12-1.75 flange Nylock nuts onto the three studs that are installed into the hub assembly. Leave the Nylock nuts loose at this time.

10. Locate your park brake cable bracket in your C6 brake system and install it to the back side of the housing end using two of the provided M10-1.5 x 65mm flange head bolts. Before installing these two bolts use medium strength blue Loctite 242 on the threads. These bolts will pass through the park brake cable bracket, housing end, hub spacer and thread into the park brake piston on the shield where we removed the two bolts in Step 5. **NOTE:** The park brake bracket should have the cable mount located under the ABS sensor mount. (Figure 8).

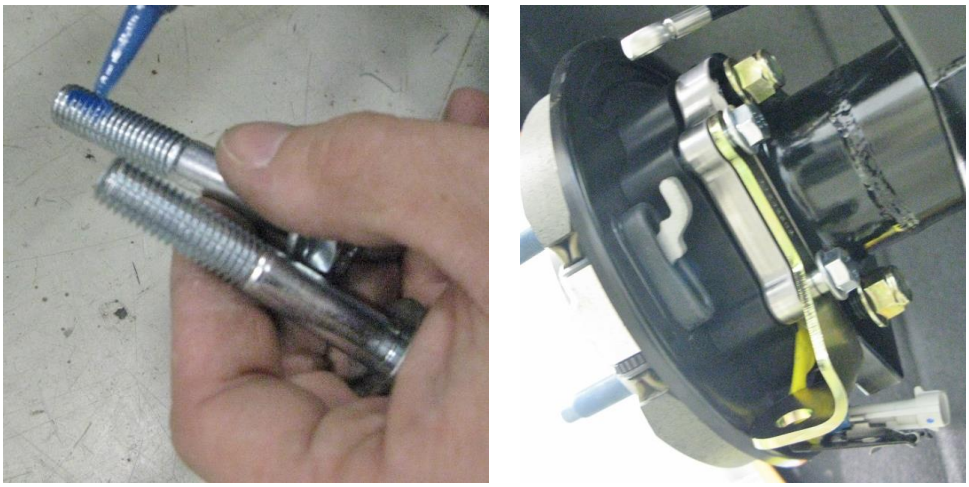
Figure 8 – Install Park Brake Cable Bracket (Driver Side)

11. With the M10 flange head bolts and M12 Nylock nuts started, you can now tighten and torque the hardware. Torque the M10 bolts to 40 ft-lbs using a 15mm socket and the M12 Nylock nuts can be torqued to 95 ft-lbs with an 18mm socket (Figure 9). Repeat steps 8-11 for the opposite side of the vehicle.

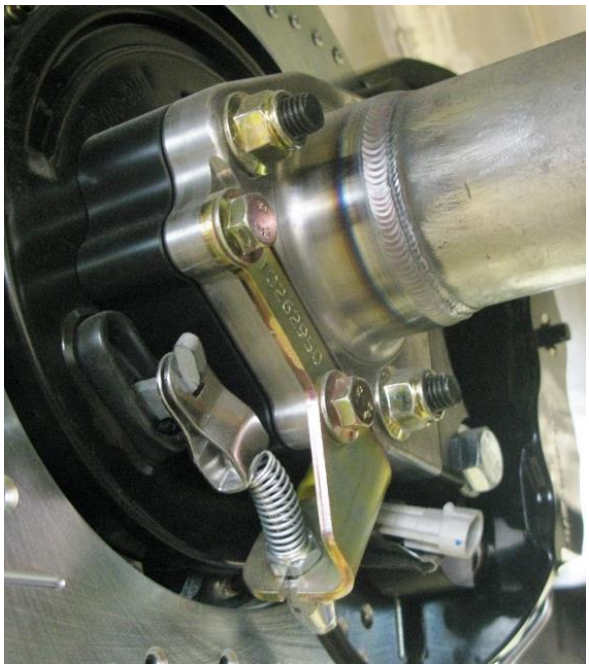

Figure 9 – Torque Hub Assembly (Driver Side)

12. Install the Detroit Speed C6 caliper mount to the front side of the housing end using the two of the provided 7/16"-20 x 2" L hex 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 LH (Driver Side) caliper mount is PN: 99070021 and the RH (Passenger Side) caliper mount is PN: 99070022. The caliper mount bracket will shift the caliper outboard.

13. Torque the 7/16"-20 hex head bolts to 65 ft-lbs. Repeat Steps 12 & 13 for the opposite side of the vehicle.

14. 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

15. 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

16. 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.

17. 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).

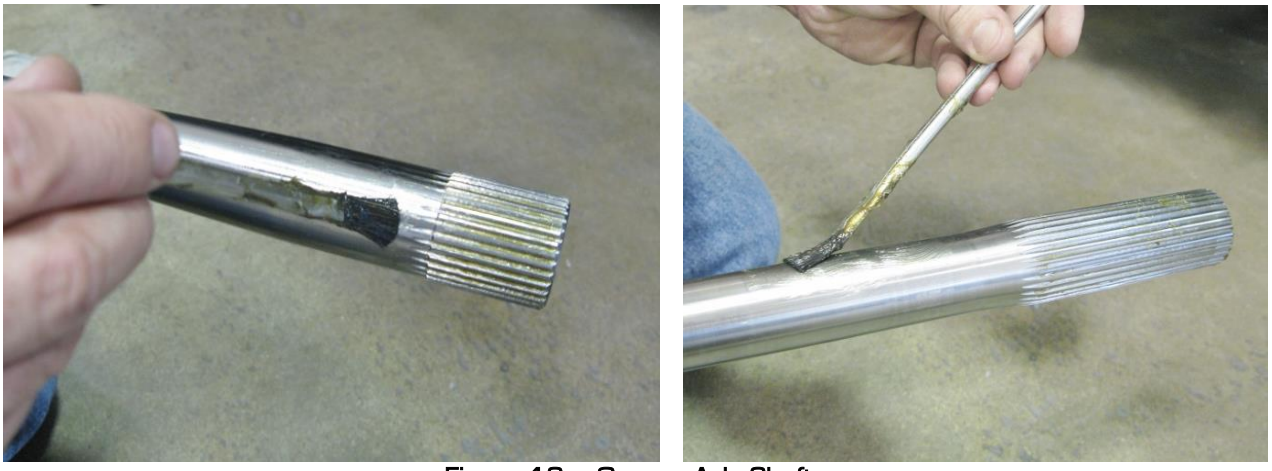

Figure 13 – Grease Axle Shafts

18. Slide the axle shafts into the C6 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.

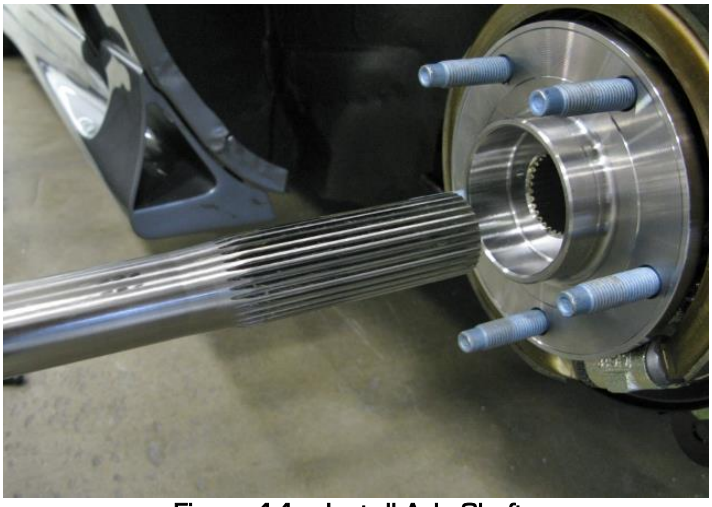

Figure 14 – Install Axle Shafts

19. 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).

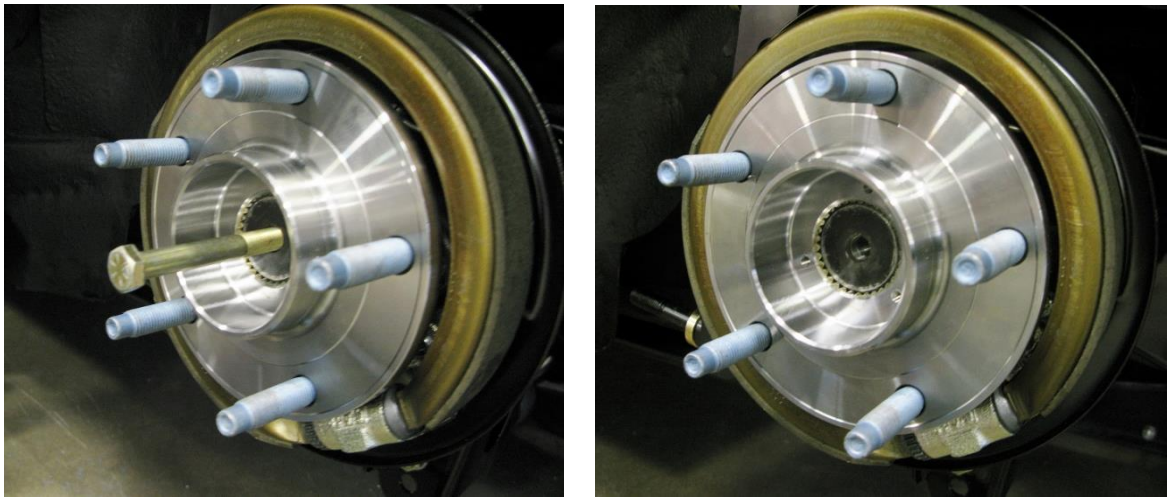

Figure 15 – Check Axle Shaft End Play

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

Figure 16– Install O-Ring

21. 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 20 and 21 for the opposite side of the vehicle.

Figure 17 – Install Detroit Speed Hub Cap

22. Refer to your rear brake system instructions to complete your rear axle assembly. **NOTE:** It will be easier to install your rotor over the park brake assembly if you center the the park brake to the hub (Figure 18).

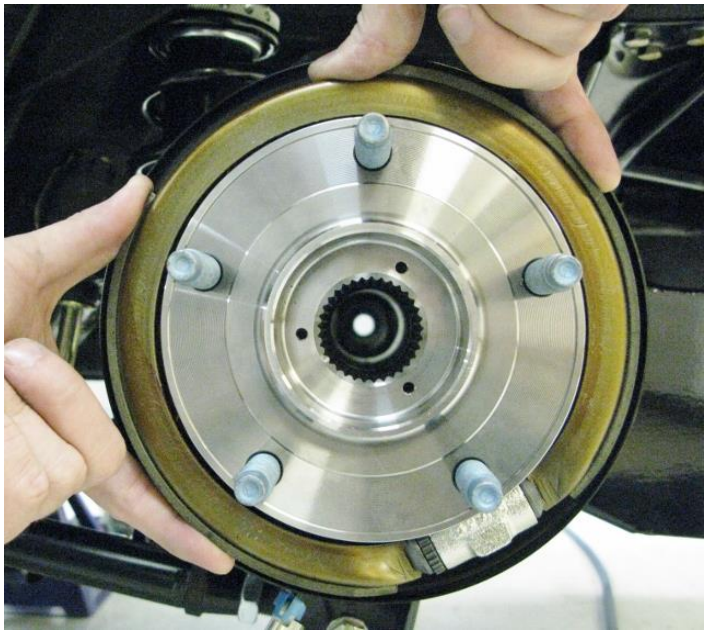

Figure 18 – Center Park Brake

23. 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.

24. 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).

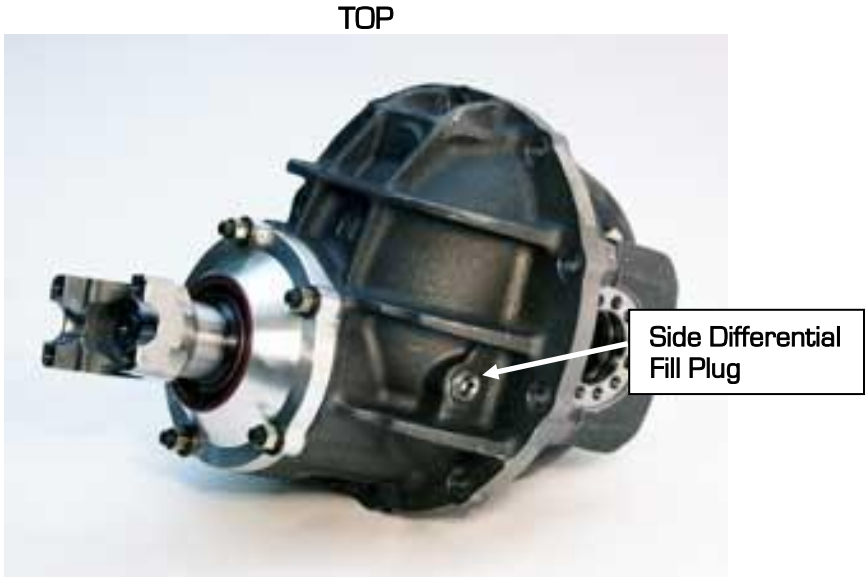

Figure 19 – Differential Fill Plug Location

25. 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.

26. 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.

27. Continue driving on a ten mile round trip at normal operating speeds. Accelerate and decelerate several times conservatively.

28. After the first road trip, let the rear axle completely cool before driving again.

29. Repeat steps 25 through 28.

30. After 500 miles, the gear oil must be changed. If desired by the customer, synthetic oil may be used at this time

31. 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@detroitspeed.com or 704.662.3272