

# Instruction Guide

ExtReme 9" Floater Rear Axle Assembly



***Speedtech***  
PERFORMANCE

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*Figure 1: 1967 Camaro - #CFbee, features our 9" floater rear axle [photo by Scott Timmons]*

Congratulations on the purchase of your new Speedtech Performance ExtReme 9" floater rear axle assembly. Use only approved and appropriately rated jack and jack stands, and be sure to take all safety precautions required to complete the job safely and correctly. If you have uncertainties, seek the assistance of a highly qualified workshop to assist you.

Read and understand all instructions thoroughly before you begin. Your main assembly and set up of your new ExtReme 9" floater rear axle can be done in a home garage with hand tools and basic welding equipment.

Speedtech enjoys seeing the progress our customers are making as they work through their builds. Join the group, [Team Speedtech](#), on Facebook and share your pictures and your story.

Speedtech Performance sends you best wishes for your project!

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# 1.0 GENERAL INFORMATION

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## 1.1 THIS GUIDE

Thank you for purchasing your new Speedtech Performance 9" Floater Rear Axle Assembly.

## 1.2 OVERVIEW

These instructions outline the 9" Floater Rear Axle Assembly that will be installed with the Speedtech Performance Torque Arm.

## 1.3 TOOLS

Installation of the Speedtech Performance 9" Floater Rear Axle Assembly can be done on the floor with simple hand tools.

Additional things to have before you start:

- Wrench
- Socket Set
- Blue Loctite
- Red Loctite

# 2.0 CHECK IN PARTS AND HARDWARE

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## 2.1 CHECKING IN THE ORDER

Check in your order as soon as possible. To check in the order, Speedtech has provided tables which can be used as check lists, as displayed in figure 3. All bolts and nuts are NF unless otherwise noted. Hardware comes in several boxes. If you discover anything missing from your order, call your authorized dealer as soon as possible.



Figure 2: Individual parts and hardware

## 2.2 CHECK IN TABLES

X	#	Description	Size
	1	9" Housing	
	2	Axle Shafts	
	2	Park Brake Assemblies	
	2	Corvette C7 Hubs	
	2	Axle Retaining Caps	
	2	Brake Caliper Mounting Brackets	
	2	Inner Wheel Seals	
	2	Outer Wheel Seals	
	1	Assembled Third Member (If you order complete unit)	

X	#	Description	Size
	6	Socket Head Bolt	12mm x 1.75 x 40mm
	8	Socket Head Bolt	1/4 x 3/4
	4	Socket Head Bolt	10mm x 60mm
	4	Socket Head Bolt	10mm x 40mm
	4	Spacer	Short
	2	Spacer	Long
	4	Nylock Nuts	10mm

Figure 3: Check in tables with the amounts, descriptions, and sizes

**NOTE:** There may be some extra hardware that was packaged and is not accounted for in the check list. The hardware kits are made to fit multiple products; the excess is from that process.

### 3.0 GETTING STARTED / INSTALLATION

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#### 3.1 LEVELING AND SUPPORT

**WARNING:** The axle should be on a level surface before you start.

Jack up and properly support and the axle. It can be assembled on a work bench as well.

#### 3.2 POWDER COAT

If you'll be powder coating the axle housing, remove axle seals prior to powder coating.

#### 3.3 CALIPER BRACKETS

Install the Caliper brackets to the axle housing using two of the 10 mm x 40 mm bolts and lock nuts in the two top mounting holes.

**NOTE:** There is a specific driver and passenger side bracket. The brackets have a machined recessed area that mounts against the inner face of the housing flange.

**NOTE:** There is a notch for hub bolt clearance.

Figure 4: Two images and one model of caliper brackets



Be sure all holes are lined up properly before tightening. It is typically easiest to install the bolts from the inner side with the nuts on the outer side.

Tighten them to 35 ft. lbs.

Depending on your brake system, bracket design may vary from figure 5; however, all brackets mount in the same way.

*Figure 5: Mounting the bracket*



#### **4.0 CABLE BRACKET**

Loosely install the top two bolts using two of the 10x40mm bolts.

Install two of the 10x60mm bolts through the park brake bracket. One long spacer is installed on the front bolt park bracket:

- Driver Side Cable Bracket, 10262949
- Passenger Side Cable Bracket, 10262950

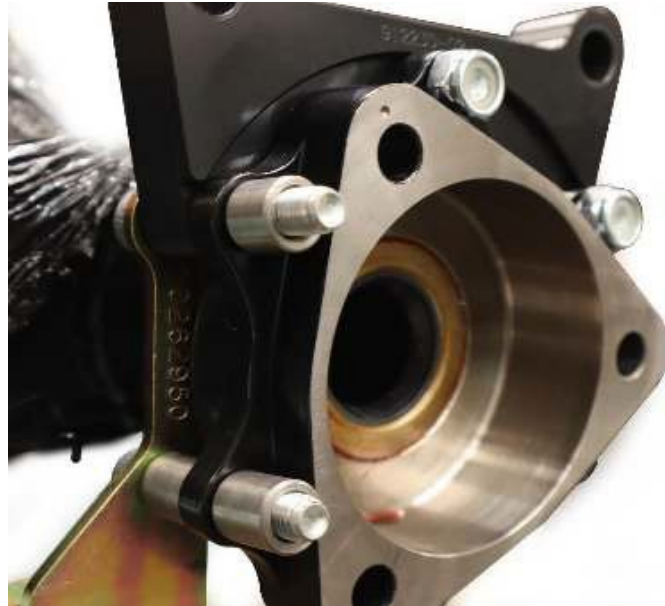
*Figure 6: Cable bracket*



#### 4.1 SHORT SPACER

Slip two of the short spacers on the hub side of the housing end.

*Figure 7: Short spacer*

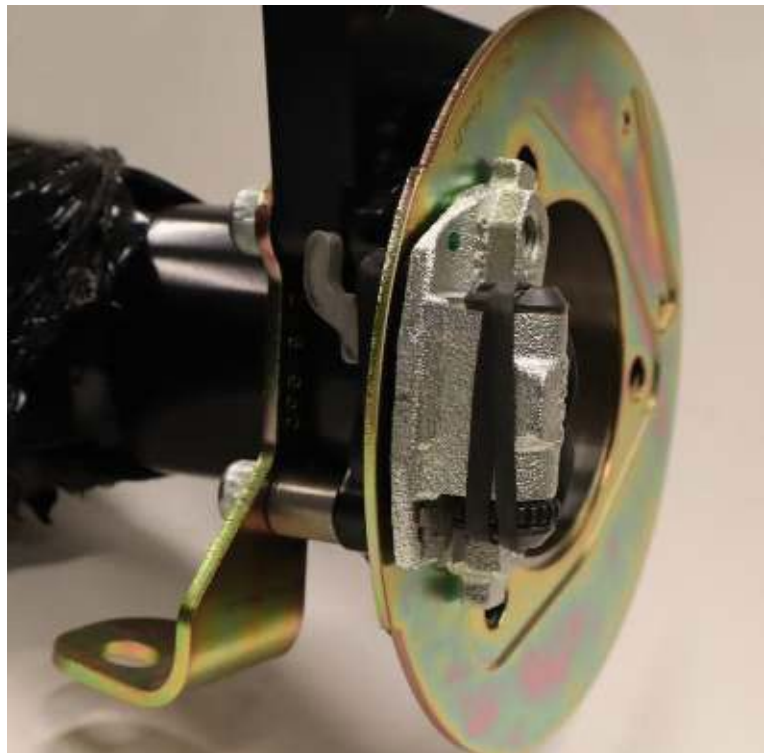


#### 4.2 BACKING PLATE

Install the park brake backing plate and activator.

- Driver Side Backing Plate, 6710267-A-8067
- Passenger Side Backing Plate, 6720267-A-8067

*Figure 8: Backing plate*



## 5.0 PARKING BRAKE KIT

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### 5.1 ASSEMBLY

The park brake kit must be assembled.



*Figure 9: Parts included in park brake kit*

## 6.0 RETAINING CLIP

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Start by installing the shoe retaining clip. It will nest into the milled recess and attach with the small socket head bolts. Use blue Loctite on the screws.

### 6.1 SHOE INSTALLMENT

The shoe will slip into the retaining clip and over the actuator as shown.

*Figure 10: Shoe installment*





## 7.0 HUB INSTALLATION

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Install the 12MM socket head bolts with red Loctite on the threads from the back side.

Install the hub from the front side and torque these three bolts into the hub to 75 ft. lbs.

At this time, tighten the remaining 10 mm bolts to 35 ft.lbs.



*Figure 11: Two images of the hub installation*

## 8.0 AXLE ASSEMBLY

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### 8.1 LUBRICATION

**WARNING:** Before installing the axles, you must use a good quality bearing grease on the axle seals as well as the axle shaft splines. Since the hub does not get any lubrication from the gear oil, they must be pre-lubed during assembly. If you do not use a generous amount of grease on the splines and axle seals, your warranty will be void.



### 8.2 AXLE SHAFT

Axle shaft outer ends are a 33-spline count and have a groove machined into them to accept the snap ring. The inner is a 31-spline count.

To install the axles, you need to be very careful that you do not damage the seal. Insert a fine thread 3/8 x 5" or longer bolt into the center hole of the axle shaft to use as a handle. This will allow you to guide the axle shaft into the housing, inner seal, and center section with more control.



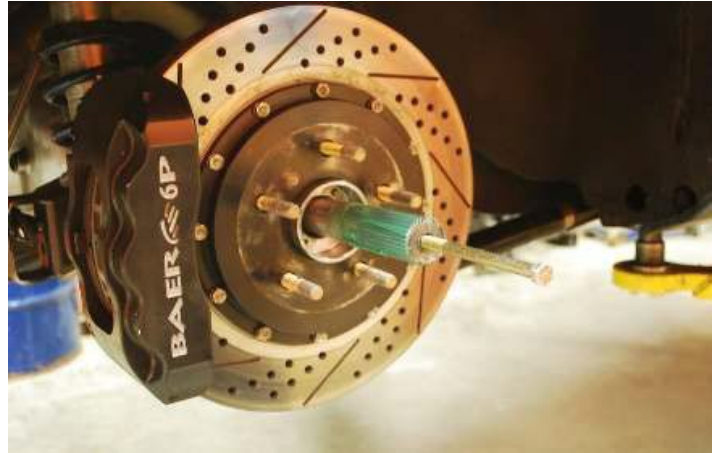
*Figure 12: Axle shaft*

### 8.3 AXLE CAP

The axle retaining cap will be the last thing to install.

Apply blue Loctite to all the bolts to help ensure they do not back out. At 2000-mile intervals recheck these bolts to ensure they remain tight.

*Figure 13: Axle cap*



**NOTE ABOUT BRAKE MOUNTING:** Not all caliper kits will have the same length caliper mounting bolts. Be sure to check that the bolts are not too long so that they protrude into the emergency brake backing plate or they are not too short and won't allow for proper alignment shimming for the brake caliper.

*Figure 14: Checking the length of the bolts*



## 9.0 WARRANTY

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### DIFFERENTIAL CARE, BREAK-IN, and WARRANTY INFORMATION

#### OIL REQUIREMENTS

For Tru Trac and Wavetrack posi units, use a quality petroleum/mineral-based oil. **The Manufacturers do not recommend synthetic oil.** Friction additive/modifier is not required. Do not use any RedLine, Shockproof, Royal Purple or similar gear oils. Specifically, any standard 75W 90 or 140 will work just fine.

#### OIL LEVEL

Many differentials are easy to fill with gear oil. However, the 9" Ford design can be difficult to fill completely. The location of the fill plug on the 9" Ford can cause oil to run back out before it is completely full. Most 9" housings hold at least 2 1/2 – 3 quarts of oil and sometimes as much as 5 quarts. It is important to take your time and be sure that the oil has settled into all the crevices and recheck the oil level to be certain that it is completely full before driving the vehicle.

#### BREAK IN

**Any overloading or overheating will cause the gear oil to break down and the ring & pinion will fail.** All new gear sets require a break-in period to prevent damage from overheating. After driving the first 15 to 20 miles, it is best to stop and let the differential cool before proceeding. Dutchman's warranty requires at least 500 miles before towing. DMI also requires towing for very short distances (less than 15 miles) and letting the differential cool before continuing during the first 45 towing miles. This may seem unnecessary, but it is very easy to damage the differential by loading it before the gear set is completely broken in. DMI recommends changing the oil after the first 500 miles. This will remove any metal particles or phosphorus coating that has come from the new gear set. The greatest damage results when a new ring & pinion has been run for several miles during the first 500 miles and the oil is very hot. Any heavy use or overloading at this time will cause irreparable damage to the gear set that can be determined by inspection and will not be warranted by DMI.

#### CLUTCH TYPE "POSITRACTIONS"

Posi-traction chatter is normal for limited slip and clutch type posi-traction differentials. Both rear tires must measure the same circumference in order for the differential to function properly without premature wear. **Limited slip additive or friction modifier for limited slip differentials must be used with the oil to reduce positraction chatter in the event that the oil is changed.**

#### LOCKERS

Mechanical Locking differentials will bang and clunk during normal operation. Both rear tires must measure the same circumference in order for a locking differential to function properly.

## **GEAR NOISE**

Richmond Gear and other aftermarket (non-OEM) gears are designed primarily for strength **and may be noisy**. This noise is especially inherent in vans and quiet passenger cars. **No gear manufacturer warrants their product or set up to be 100% quiet.**

## **SIGNS OF LUBRICATION FAILURE**

When a gear runs low on oil, damage is sure to result. The cause of damage is not always obvious. When a differential runs low on oil, the oil volume may not be sufficient to keep the gear cool. Once the oil breaks down from contact with the hot gear, wear occurs very rapidly. Material will wear off the drive side of both the ring & pinion teeth and leave a feather like pattern on both surfaces. A gear that wears from friction due to lack of lubrication and excessive heat seldom experiences a color change from heat because any discoloration is worn off the teeth during each contact. Ring & Pinion gears are heat treated separately so that the pinion, whose teeth make contact more often than the ring gear, is designed to be harder. To accomplish this, the two gears are heat treated separately and a soft gear will not cause both the ring & pinion to wear.

## **DUTCHMAN AXLE WARRANTY EXCLUSIONS**

1. Any damage due to abuse, overloading, or lubrication failure (e.g. oil deterioration, water contamination, low oil level).
2. Any vehicles used off road or for competition.
3. Mini and mid-sized vehicles with tires over 31" tall will not be warranted due to the overloading caused by tall tires.

Most items are not warranted against abuse, overloading, or improper lubrication. All rear axle parts must be returned to DUTCHMAN'S shop freight prepaid for inspection and determination. We do not authorize and will not pay for outside repairs. **Any unauthorized outside repairs or modifications void this warranty.** We will not pay for labor, inconvenience, loss of time or revenue, telephone calls, commercial losses, or loss of perishable goods. This is our only warranty expressed or implied. All returned goods must be accompanied by copy of purchase invoice within 30 days and will be charged a 20% service charge for handling.

## 10.0 CONGRATULATIONS

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Congratulations on completing your project! We know you will get many years of enjoyment from your project. Please join the group, [Team Speedtech](#), on Facebook. Team Speedtech is a community of customers, dealers, and factory employers that have a passion for pro touring muscle cars and are using Speedtech Performance products. You can ask questions and get advice from the group members and share your experience. Everyone enjoys seeing the videos and pictures during the progress of your project and Speedtech encourages you to share them!

Thank you for choosing Speedtech Performance and entrusting us with your 9" floater rear axle for your custom muscle car.

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